

# SKYJACK™

## OPERATING MAINTENANCE & PARTS MANUAL

Models SJB-60TB, SJB-65TB



# SJB-60/65TB BOOM

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**CALIFORNIA**  
**Proposition 65 Warning**

**Diesel engine exhaust and some of its constituents are known to the state of California to cause cancer, birth defects, and other reproductive harm.**

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## WARNING

### ANSI/SIA (United States)

You are required by ANSI/SIA A92.5 -1992 to read and understand **YOUR RESPONSIBILITIES** in the Manual Of Responsibilities before you use or operate this work platform.

### CSA (Canada) and CE (Europe)

You are required to conform to national health and safety regulations applicable to the operation of this work platform.

**FAILURE TO COMPLY with your REQUIRED RESPONSIBILITIES in the use and operation of the work platform could result in death or serious injury.**

### OPERATOR SAFETY REMINDERS

The National Safety Council reminds us that most accidents are caused by the failure of some individuals to follow simple and fundamental safety rules and precautions. Common sense dictates the use of protective clothing when working on or near machinery. Use appropriate safety devices to protect your eyes, ears, hands, feet and body.

You, as a careful operator, are the best insurance against an accident. Therefore, proper usage of this work platform is mandatory. The following pages of this manual should be read and understood completely before operating the work platform. Any modifications from the original design are strictly forbidden without written permission from SKYJACK, Inc.

|  <b>DANGER</b>                                                                                                                                                                              | <b>VOLTAGE RANGE</b>          | <b>MINIMUM SAFE APPROACH DISTANCE</b> |                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------|-----------------|
| <b>ELECTROCUTION HAZARD</b>                                                                                                                                                                                                                                                  | <b>(PHASE TO PHASE)</b>       | <b>(FEET)</b>                         | <b>(METERS)</b> |
| <b>THIS MACHINE IS NOT INSULATED. MAINTAIN SAFE CLEARANCES FROM ELECTRICAL POWER LINES AND APPARATUS. YOU MUST ALLOW FOR PLATFORM SWAY, ROCK OR SAG. THIS WORK PLATFORM DOES NOT PROVIDE PROTECTION FROM CONTACT WITH OR PROXIMITY TO AN ELECTRICALLY CHARGED CONDUCTOR.</b> | <b>(0 TO 300V)</b>            | <b>AVOID CONTACT</b>                  |                 |
|                                                                                                                                                                                                                                                                              | <b>(Over 300V to 50KV)</b>    | <b>10</b>                             | <b>3.05</b>     |
|                                                                                                                                                                                                                                                                              | <b>(Over 50KV to 200KV)</b>   | <b>15</b>                             | <b>4.60</b>     |
|                                                                                                                                                                                                                                                                              | <b>(Over 200KV to 350KV)</b>  | <b>20</b>                             | <b>6.10</b>     |
|                                                                                                                                                                                                                                                                              | <b>(Over 350KV to 500KV)</b>  | <b>25</b>                             | <b>7.62</b>     |
|                                                                                                                                                                                                                                                                              | <b>(Over 500KV to 750KV)</b>  | <b>35</b>                             | <b>10.67</b>    |
|                                                                                                                                                                                                                                                                              | <b>(Over 750KV to 1000KV)</b> | <b>45</b>                             | <b>13.72</b>    |
| <b>FAILURE TO AVOID THIS HAZARD WILL RESULT IN DEATH OR SERIOUS INJURY!</b>                                                                                                                                                                                                  |                               |                                       |                 |

**DO NOT OPERATE THIS EQUIPMENT WITHOUT PROPER AUTHORIZATION AND TRAINING. DEATH OR SERIOUS INJURY COULD RESULT FROM IMPROPER USE OF THIS EQUIPMENT!**

## **SERVICE POLICY AND WARRANTY**

SKYJACK, Inc. warrants each new work platform to be free of defective parts and workmanship during the first 12 months. Refer to Warranty Statement on Page iv for details.

### **NOTE**

**SKYJACK, Inc. is continuously improving and expanding product features on it's equipment; therefore, specifications and dimensions are subject to change without notice.**



**This Safety Alert Symbol Means Attention!**

**Become Alert! Your Safety Is Involved.**

The Safety Alert Symbol identifies important safety messages on machines, safety signs, in manuals, or elsewhere. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

## **SCOPE OF THIS MANUAL**

This manual applies to the ANSI/SIA, CSA and CE versions of the SJB-TB work platforms. Equipment identified with "ANSI/CSA" meets the ANSI/SIA-A92.5 -1992 standards. Equipment identified with "CSA" meets the CAN3-B354.4 M82 standards. Equipment identified with "CE" meets the requirements for the European countries, i.e. Machinery Directive 89/392/EEC and EMC Directive 89/336/EEC and the corresponding EN standards.

## WARRANTY STATEMENT

SKYJACK, Inc. warrants each new work platform to be free of defective parts and workmanship. During the first full year, labor and defective parts will be provided by the local authorized Skyjack dealer without charge. For the following 48 months, structural components found to be defective will be replaced or repaired at no charge.

A warranty registration card is supplied with each work platform. The warranty is only effective when the warranty card has been completed and returned to Skyjack within 15 days from the time of billing. When work platforms are put into stock, the warranty period does not start until the work platform has been shipped to the dealer's customer. If a unit is put into service and no warranty card has been mailed to Skyjack, Inc., the warranty period will commence 15 days from the date the dealer was invoiced for the work platform.

All warranty claims are subject to approval by Skyjack's Service Department. Skyjack, Inc. reserves the right to limit or adjust claims with regard to defective parts, labor or travel time based on usual and customary guidelines. Parts purchased from sources other than Skyjack will not be covered under this warranty. Misuse or improper operation, lack of normal maintenance and inspections as outlined in this manual, alterations to original design and/or components or accidents will void all warranty. **Batteries are not covered by this warranty.**

The above mentioned warranty statement is exclusive and no other warranty whether written, oral or implied shall apply. Skyjack excludes any implied warranty of merchantability and fitness and accepted no liability for consequential damages or for other negligence.

## WARRANTY PROCEDURES

The selling distributor or authorized dealer shall be responsible for the complete handling of customer claims under this warranty. Here's what to do:

1. When a customer files a claim under this warranty, contact Skyjack's Service Department to verify warranty coverage. NOTE: The complete serial number of the work platform is required to verify the claim.
2. When Skyjack's Service Department verifies warranty coverage, they will also issue an RA (Return Authorization) number for the return of any defective component(s). All items over \$25.00 in value must be returned to Skyjack, Inc.

3. Fill out a Warranty Claim Form from dealer's supply of claim forms. Then notify Skyjack's Service Department of the warranty claim number on the form used.
4. The distributor/dealer should then file a warranty claim with Skyjack, Inc. describing the nature of the defect, probable cause, work performed, travel hours, and labor hours listed separately. Warranty labor will be paid at a rate of \$42.00 per hour. The travel allowance will be paid at the same hourly rate within the dealer's specified territory, limited to a maximum of four (4) hours. If a part has serviceable components, PLEASE replace the bad component. For instance, if you have a bad switch on a controller, please replace the switch. Hydraulic cylinders should be repacked, unless they are damaged beyond repair. Engine failures should be directed to your local engine distributor and covered by the manufacturer's warranty. Skyjack will accommodate you and your labor. Labor rates and travel allowances are subject to change without notice.
5. Warranty claims must be received by Skyjack within 15 working days from the date of the repair. Warranty claims received with insufficient information will be returned for correction or completion.
6. Materials returned for warranty inspection must have the following procedures:
  - A. Carefully packaged to prevent additional damage during shipping.
  - B. Drained of all contents and all open ports capped or plugged.
  - C. Shipped in a container tagged or marked with the RA number.
  - D. Shipped **PREPAID**. Any item(s) returned for warranty by any other means may be refused and returned unless prior approval from Skyjack is obtained.
  - E. Items shipped to the dealer will be sent freight prepaid and added to the invoice.

Failure to comply with the above procedures may delay approval and processing of the warranty claim and could result in the denial of a warranty claim. Skyjack's dealer's accounts must be kept current in order to approve and issue warranty credits. Skyjack reserves the right to withhold issuance of warranty credits to a dealer if their account is not in good standing. This is subject to change without prior notice.

# SECTION 1

## INTRODUCTION

# 1

### PURPOSE OF EQUIPMENT

The SKYJACK SJTB Boom Work Platforms are designed to transport and raise personnel and tools to overhead work areas.

### USE OF EQUIPMENT

The work platforms (Figure 1-2) are highly maneuverable work stations. The SJB-60TB and SJB -65TB Models are designed for both slab-type and rough terrain construction applications. **Lifting and elevated driving these models MUST be on a flat, level, compacted surface.**

### WARNINGS

The operator **MUST** read and completely understand the front panel labels (Figures 1-1) and **ALL** other warnings in this manual and on the work platform. Compare the labels on the work platform with the labels found throughout Sections 1 and 2 of this manual. If any labels are damaged or missing, replace them immediately.

### DESCRIPTION

The work platform consists of four major assemblies, the platform, boom assembly, turret and drive chassis. An operator's control console is located on the platform. A foot switch on the platform enables and disables the platform controls. Auxiliary and emergency controls are located on the rotating turret and platform.

**PLATFORM** - The platform is constructed of a skid-resistant see-thru deck surface and a 42" high tubular steel railing system with midrails and 6" toe boards. The platform can be entered through a sliding midrail bar at the center of the railing system or optional hinged gate. The platform can be rotated in either direction. A 110 VAC GFI outlet is also located on the platform.

**BOOM ASSEMBLY** - The boom is mounted on the turret and consists of a telescoping fly, mid and main boom assembly. This mechanism uses double-acting hydraulic cylinders with holding valves to control vertical movement. The SJB-65TB model is equipped with a 5' boom jib, controlled by a double acting hydraulic cylinder.

**TURRET** - The turret rotates 360 degrees continuously. Within the turret are two main cabinets. One cabinet contains the base control box, main hydraulic manifold and function valves, and the battery. The other cabinet contains the engine, and hydraulic pumps. The hydraulic oil and fuel tanks are also mounted on the turret with access to filler neck and level gauges through the removable covers.

**DRIVE CHASSIS** - The base is a rigid one-piece weldment. Models equipped with dual fuel option have mounting straps for a propane tank on each side. The front axle has two non-driven wheels, steerable by a hydraulic cylinder (2WD models), or a hydraulic motor driven axle with an integrated cylinder for steering the wheels and spring-applied hydraulically-released parking brakes (4WD models). The rear axle is hydraulic motor driven (2WD models), or coupled to the front axle by a drive shaft (4WD models) and has spring-applied hydraulically-released parking brakes.

**PLATFORM CONTROL CONSOLE** - Located on the platform, this control station contains controls for work platform motion and emergency stopping. Also controls for engine operation and emergency pump operation.

**OPTIONAL ACCESSORIES** - The SKYJACK SJB Telescopic Boom Work Platform is designed to accept a variety of optional accessories. These are listed in Specifications and Features found in this section. Operating instructions for these options (if required) can be found in Section 2 of this manual.

## General Work Conditions

Read and pay attention to all labels on the unit.

**DO NOT** exert excessive side forces on platform while elevated.

**DO NOT** overload, the lift relief valve does not protect against overloading when the platform is elevated.

**DO NOT** alter or disable limit switches or other safety devices.

**DO NOT** raise your platform in windy or gusty conditions.

**DO NOT** exceed the rated capacity of your unit. Make sure the load is evenly distributed on the platform.

## Jobsite Hazards

**DO NOT** operate the unit on surfaces not capable of supporting the weight of the work platform, including the rated load, e.g. covers, drains and trenches.

**BE AWARE** of overhead obstacles, especially electrical lines. Also be aware of poorly lit areas that might hide overhead obstacles.

**DO NOT** elevate the work platform if the unit is not on firm level surfaces. Avoid pot holes, loading docks, debris, drop offs and surfaces that may affect the stability of your work platform.

**DO NOT** climb or descend a grade steeper than 30% while in travel mode. Boom elevated driving must be done only on firm surfaces. (Ref. Table 1-1)

**ENSURE** that there is no person(s) in the path of travel.

## Work Platform Conditions

**An operator should not use any work platform that:**

Has ladders, scaffolding or other devices mounted on it to increase its size or work height.

Does not have a clean, uncluttered work area.

Does not appear to be working properly.

Has been damaged or appears to have worn or missing parts.

Has alterations or modifications not approved by the manufacturer.

Has safety devices which have been altered or disabled.

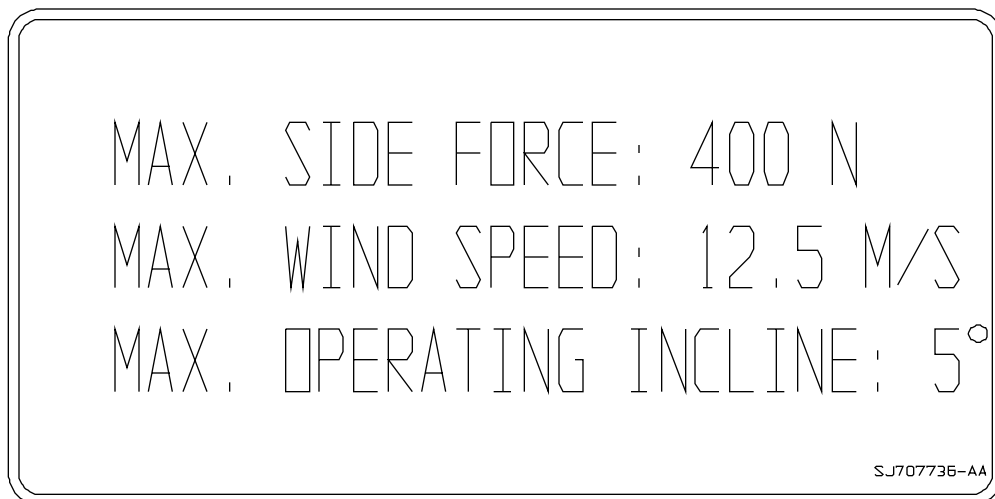


Figure 1-1. Front Panel & Platform Labels

**TABLE 1-1. SPECIFICATIONS AND FEATURES**

**Specifications**

|                                                        |                          |
|--------------------------------------------------------|--------------------------|
| <b>SJB-60TB WEIGHT (4x2)</b> .....                     | 23,440# (10632kg)        |
| <b>SJB-60TB WEIGHT (4x4)</b> .....                     | 23,440# (10632kg)        |
| <b>SJB-65TB WEIGHT (4x2)</b> .....                     | 26,900# (12202kg)        |
| <b>SJB-65TB WEIGHT (4x4)</b> .....                     | 26,900# (12202kg)        |
| <b>SJB-60TB WORK HEIGHT (Nominal)</b> .....            | 66' (20.1m)              |
| <b>SJB-65TB WORK HEIGHT (Nominal)</b> .....            | 71' (21.6m)              |
| <b>SJB-60TB RAISED PLATFORM HEIGHT (Nominal)</b> ..... | 60' (18.3m)              |
| <b>SJB-65TB RAISED PLATFORM HEIGHT (Nominal)</b> ..... | 65' (19.8m)              |
| <b>SJB-60TB HORIZONTAL REACH (CL rotation)</b> .....   | 52' 0" (15.8m)           |
| <b>SJB-65TB HORIZONTAL REACH (CL rotation)</b> .....   | 57' 0" (17.4m)           |
| <b>STOWED HEIGHT</b> .....                             | 8' 6" (2.6m)             |
| <b>SJB-60TB STOWED LENGTH</b> .....                    | 28' 10" (8.8m)           |
| <b>SJB-65TB STOWED LENGTH</b> .....                    | 26' 5" (8.1m)            |
| <b>OVERALL WIDTH</b> .....                             | 8' 0" (2.4m)             |
| <b>SJB-60TB PLATFORM CAPACITY (Unrestricted)</b> ..... | 600# (272kg)             |
| <b>SJB-65TB PLATFORM CAPACITY (Unrestricted)</b> ..... | 500# (227kg)             |
| <b>PLATFORM SIZE</b> .....                             | 30" x 72" (.76m x 1.83m) |
| <b>ELECTRICAL SYSTEM</b> .....                         | 12 Volts DC              |
| <b>GRADABILITY</b> .....                               | 30%                      |
| <b>TURRET ROTATION</b> .....                           | Continuous               |
| <b>TIRE SIZE</b> .....                                 | 15x19.5                  |

**Features**

**STANDARD EQUIPMENT**

Variable Speed Drive and Function Controls  
Continuous Drive and Steer Directional Sensing  
12 Volt DC Emergency Power  
Engine Anti-restart Protection  
Spring-Applied Hyd-Released Parking Brakes  
ANSI and CSA Standards Compliance  
110V Outlet on Platform with GFI  
Ford LRG 425-EFI (2.5L) Gasoline Engine

**OPTIONAL EQUIPMENT**

Kubota Diesel Engine  
Dual Fuel (Gas/Propane)  
Operator Horn  
All Function Motion Alarm  
Travel Alarm  
Descent Alarm  
Flashing Amber Light  
Platform or Chassis Work Lights  
Spring-Loaded Half Gate  
Spring-Loaded Full Gate  
Air or Hydraulic Line to Platform  
Cold Weather Start  
High Flotation Tires  
Foam Filled Tires  
Four Wheel Drive

## WORK PLATFORM MAJOR COMPONENT IDENTIFICATION

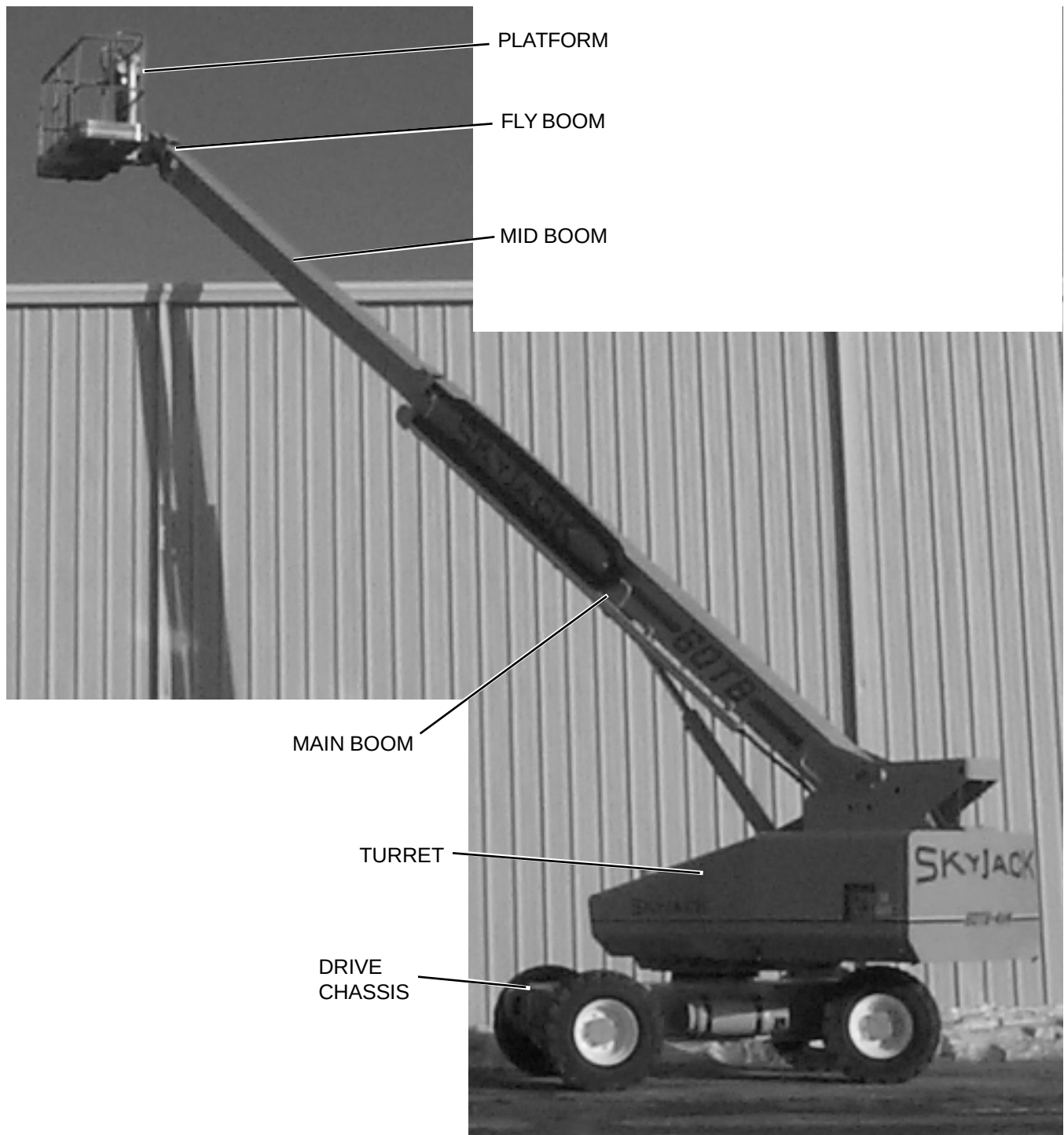


*Figure 1-2. SKYJACK SJB-60TB Telescopic Boom Work Platform*

## SECTION 2

# OPERATOR CONTROLS/INSPECTIONS

### OPERATOR QUALIFICATIONS

Only trained and authorized persons should use this work platform. Safe use of this work platform requires the operator to understand the limitations and warnings, operating procedures and operator's responsibility for maintenance. Accordingly, the operator **MUST** understand and be familiar with this operating manual, its warnings and instructions and **ALL** warnings and instructions on the work platform. Operator also **MUST** be familiar with employer's work rules and related government regulations and be able to demonstrate his/her ability to understand and operate **THIS** make and model work platform in the presence of a qualified person.

### OPERATOR'S RESPONSIBILITY FOR MAINTENANCE

Death or injury can result if the work platform is not kept in good working order. Inspection and maintenance should be performed by competent personnel who are familiar with mechanical procedures.

The operator should be assured that the work platform has been properly maintained and inspected before using it. Even if the operator is not directly responsible for the maintenance of this work platform, the operator should perform **ALL** the daily inspections found in Table 2-1. Maintenance and Inspection Schedule.

#### NOTE

**Replace all worn or damaged parts or labels discovered during this inspection.**

### MAINTENANCE AND INSPECTION SCHEDULE

The actual operating environment of the work platform governs the use of the maintenance schedule. The inspection points covered in Table 2-1. Maintenance and Inspection Schedule indicates the areas of the work platform to be maintained or inspected and at what intervals the maintenance and inspections are to be performed.

### OWNER'S ANNUAL INSPECTION RECORD

It is the responsibility of the owner to arrange daily, weekly, monthly and annual inspections of the work platform. (Refer to Table 2-2 in this manual.)

### GENERAL MAINTENANCE HINTS

- Before attempting any repair work, disconnect the battery by turning the Battery Disconnect Switch to the "OFF" position.
- Preventative maintenance is the easiest and least expensive type of maintenance.

### OPERATING CONTROL IDENTIFICATION

The following descriptions are for identification, explanation and locating purposes only. A qualified operator **MUST** read and completely understand these descriptions before operating this work platform. Procedures for operating this work platform are detailed in the "**OPERATING PROCEDURES**" section on Pages 7 through 9 in this manual.

## Base Controls - Electrical Base Control Panel

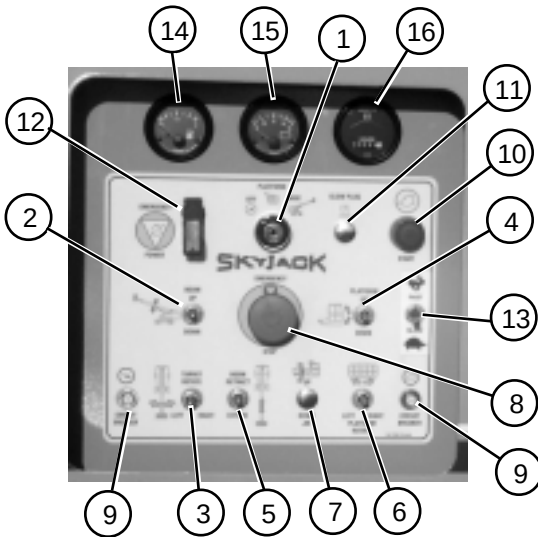


Figure 2-1. Base Control Panel and Label

1. OFF/PLATFORM/BASE SELECT KEY SWITCH
2. BOOM UP/DOWN TOGGLE SWITCH
3. TURRET ROTATION TOGGLE SWITCH
4. PLATFORM LEVELING TOGGLE SWITCH
5. BOOM RETRACT/EXTEND TOGGLE SWITCH
6. PLATFORM ROTATION TOGGLE SWITCH
7. JIB UP/DOWN TOGGLE SWITCH (SJB-65TB)
8. EMERGENCY STOP BUTTON
9. CIRCUIT BREAKERS
10. ENGINE IGNITION PUSH-BUTTON SWITCH
11. ENGINE GLOW PLUG SWITCH (Diesel)
12. EMERGENCY PUMP ENABLE SWITCH
13. THROTTLE SPEED SWITCH
14. FUEL GAUGE
15. VOLT METER
16. HOUR METER

**BASE CONTROL PANEL** - This control station is located in the main electrical enclosure on the rotating turret. It contains the following controls:

**1. OFF/PLATFORM/BASE SELECT KEY SWITCH** - Turning the key to the “⊗” (off) position disconnects power from the control circuit. When the “🏠” (platform) position is selected, power is directed to the control station on the platform. When the “🏢” (base) position is selected power is directed to the control station on the turret.

**2. BOOM UP/DOWN TOGGLE SWITCH** - This switch controls the up/down movement of the boom section. To raise the boom section, push and hold this toggle switch to the “↑” (up) position. Release switch to stop. To lower the boom section, push and hold this toggle switch to the “↓” (down) position. Release switch to stop.

**3. TURRET ROTATION TOGGLE SWITCH** - This switch controls clockwise and counterclockwise turret rotation. To rotate the turret clockwise, push and hold this toggle switch to the “↻” (cw) position. Release switch to stop. To rotate the turret counterclockwise, push and hold this toggle switch to the “↻” (ccw) position. Release switch to stop.

**4. PLATFORM LEVELING TOGGLE SWITCH** - This switch controls the leveling of the platform if adjustment is necessary. If the platform is tilted down away from the boom, push and hold this toggle switch to the “↑” (up) position. Release switch when level. If the platform is tilted up toward the boom, push and hold this toggle switch to the “↓” (down) position. Release switch when level.

**5. BOOM RETRACT/EXTEND TOGGLE SWITCH** - This switch controls the retraction and extension of the telescoping boom arm. To retract the boom arm, push and hold this toggle switch to the “↑” (retract) position. Release switch to stop. To extend the boom arm, push and hold this toggle switch to the “↓” (extend) position. Release switch to stop.

**6. PLATFORM LEFT/RIGHT ROTATION TOGGLE SWITCH** - This switch controls left and right rotation of the platform. To rotate the platform to the left, push and hold this toggle switch to the “↶” (left) position. Release switch to stop. To rotate the platform to the right, push and hold this toggle switch to the “↷” (right) position.

**7. JIB UP/DOWN TOGGLE SWITCH (SJB-65TB)** - This switch controls the up/down movement of the jib. To move the jib upward, push and hold this toggle switch to the “↑” (up) position. Release switch to stop. To move the jib downward, push and hold this toggle switch to the “↓” (down) position. Release switch to stop.

**8. EMERGENCY STOP BUTTON** - When struck, this red push-button switch disconnects power to the control circuit. In the event of an emergency or at work platform shut down, push button in. To restore power, simply pull button out.

**9. CIRCUIT BREAKERS** - In the event of a power overload or positive circuit grounding, the circuit breaker will pop out. Make the necessary corrections, then depress the push-button to reset.

**10. ENGINE IGNITION PUSH-BUTTON SWITCH** - Pressing this switch will engage the starter, once the engine starts, release the button. To stop the engine turn the key switch to the “⊗” (off) position. The engine must be running before any functions can be operated.

**11. ENGINE GLOW PLUG SWITCH (Diesel)** - This switch when held in the “ ⬆ ” (up) position, activates the glow plugs on machines equipped with the diesel engine option.

**12. EMERGENCY PUMP SELECT TOGGLE SWITCH** - In the event of an emergency, moving this toggle switch to the “ ⬆ ” up position kills the engine, enables the 12 volt emergency pump and allows all functions to be operated. To resume normal operation, move the switch to the down position by closing the switch cover.

**13. THROTTLE SPEED CONTROL SWITCH** - This switch is used to control the engine running speed, to operate with the engine at high speed this switch must be held in the “ ⬆ ” up position. Once the switch is released the engine will drop down to low speed.

**14. FUEL GAUGE** - Electronic fuel level gauge.

**15. VOLT METER** - This meter displays battery voltage.

**16. HOUR METER** - Activated by the ignition system, this gauge measures engine running time.

#### Battery Disconnect Switch



*Figure 2-2. Battery Disconnect Switch*

#### 1. BATTERY DISCONNECT SWITCH

**1. BATTERY DISCONNECT SWITCH** - This switch, located on the rotating turret at the rear of the hydraulic tank cover, disconnects power to both control stations in the event of an emergency and for work platform shut down. This switch **MUST** be turned to “ON” position to start the engine or operate any control on either of these control stations.



**DO NOT** disconnect power while engine is running, **DO NOT** use this switch to turn engine off. Damage to engine may occur.

#### Base Controls - Mechanical Manual Fuel Shut-Off Valve

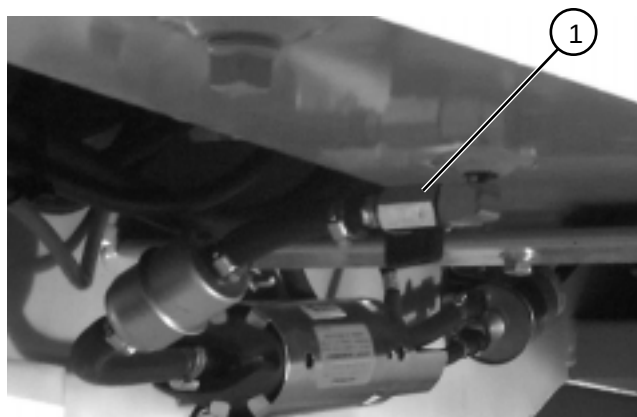


*Figure 2-3. Fuel Shut-Off Valve*

#### 1. FUEL SHUT OFF VALVE

**1. FUEL SHUT OFF VALVE** - This valve located in the fuel supply line near the bottom of the fuel tank turns off the supply of fuel to the fuel pump.

#### Manual Hydraulic Fluid Shut-Off Valve

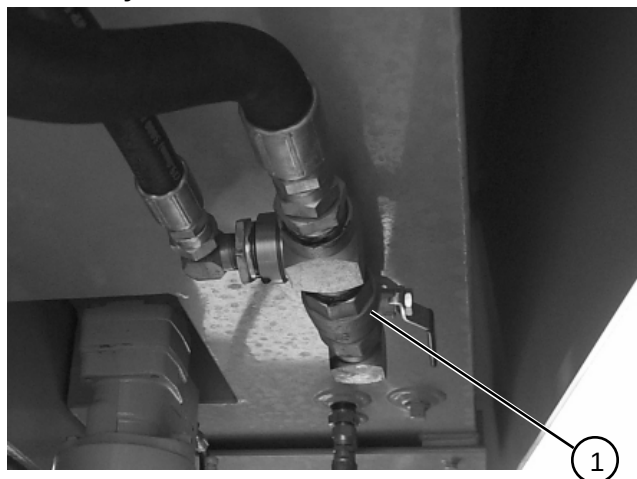


*Figure 2-4. Hydraulic Fluid Shut-Off Valve*

#### 1. HYDRAULIC FLUID SHUT OFF VALVE

**1. HYDRAULIC FLUID SHUT OFF VALVE** - This valve located in the hydraulic fluid supply line on the hydraulic tank turns off the supply of hydraulic fluid to the pumps. **DO NOT** start or run the engine with this valve closed.

## Turret Transportation Lock

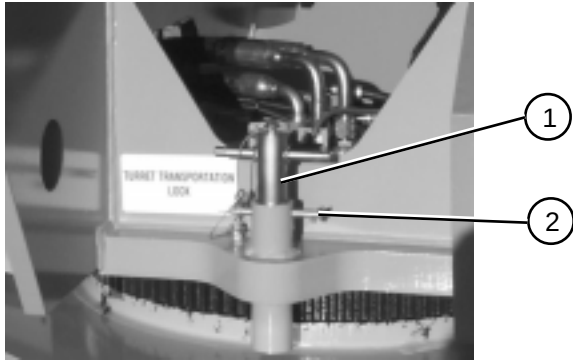


Figure 2-5. Turret Transportation Lock

1. TURRET TRANSPORTATION LOCK
2. TURRET TRANSPORTATION LOCK RETAINING PIN

**1. TURRET TRANSPORTATION LOCK** - This locking device, located on the turret base plate near the rotation gear, is used to lock the turret in place during shipping only.

**2. TURRET TRANSPORTATION LOCK RETAINING PIN** - This retaining pin is used to hold the transportation lock in either the locked or unlocked position.

## Swing-out Engine Tray

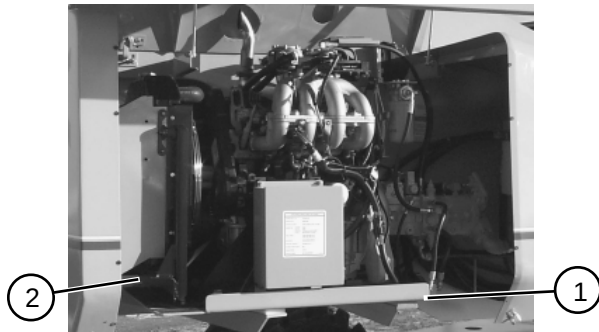


Figure 2-6. Swing-out Engine Tray

1. ENGINE TRAY RETAINING BOLTS
2. ENGINE TRAY PROP ROD

**1. ENGINE TRAY RETAINING BOLTS** - These bolts are used to securely hold the engine tray and must be removed prior to swinging the engine out for servicing.



**These bolts should only be removed for service or repair to the engine.**

**DO NOT** operate this machine without the engine tray retaining bolts in place.

**2. ENGINE TRAY PROP ROD** - This device is used to hold the engine in the “out” position while performing maintenance. Any time the engine is in the “out” position this prop rod **must** be used.



**DO NOT** swing the engine out unless the machine is on a level surface.

## Base Controls - Hydraulic Drive Relief Valve Overrides

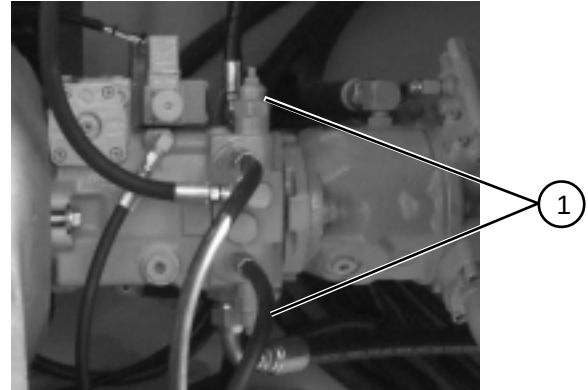


Figure 2-7. Drive Pump

1. DRIVE RELIEF VALVE WITH OVERRIDE STEM

**1. DRIVE RELIEF VALVE WITH OVERRIDE STEM.** The relief override stems, located on the top and bottom of the Drive Pump, are used to override the drive relief valves allowing the machine to be loaded or unloaded from a trailer using a winch line. To override the drive relief valve the procedure below **MUST** be followed:



**DO NOT** attempt to override the relief valves without the wheels chocked.

Step 1. Place the machine on a flat level surface and chock the wheels to prevent from rolling.

Step 2. Loosen the retaining nut on the relief valve override stem. Screw in the override stem (clockwise) until it stops. Repeat this step for both relief valves.

Step 3. Release the parking brake (see Brake Manifold in this section). The machine is now ready to be loaded or unloaded using a winch line.

Step 4. Once the machine has been loaded or unloaded unscrew the override stem (counter-clockwise) until it stops and reset the retaining nut.



**DO NOT** tow. This procedure is intended for loading and unloading the machine using a winch line and should not be used to tow the machine.

## Brake Manifold and Parking Brake Release Procedure

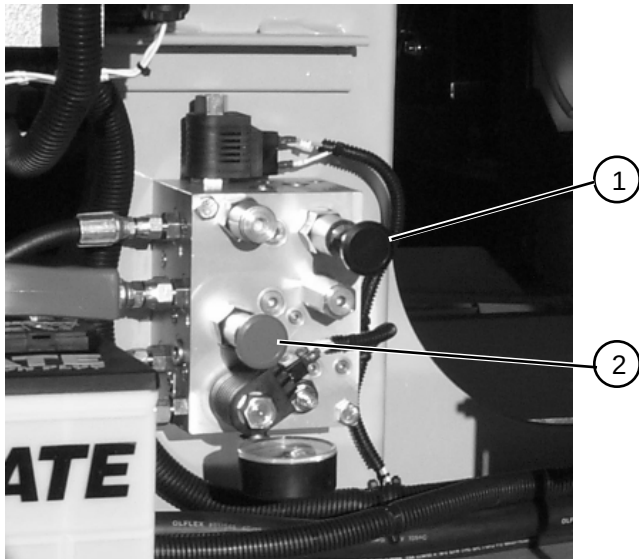


Figure 2-8. Brake Manifold

**BRAKE MANIFOLD** - This manifold is located near the Base Control Panel on the rotating turret, and accessed by opening the hydraulic/electric cabinet door. It contains the following controls:

1. PARKING BRAKE OVERRIDE VALVE PLUNGER
2. PARKING BRAKE RELEASE HAND PUMP



**DO NOT** release the brakes on an incline without the wheels chocked.

**1. PARKING BRAKE OVERRIDE VALVE PLUNGER** - When this red plunger is pulled out, the brake hydraulic circuit is isolated allowing use of the parking brake hand pump.

**2. PARKING BRAKE RELEASE HAND PUMP** - The hand pump **MUST** be used to disengage the parking brakes. To release the parking brakes the procedure below **MUST** be followed:

Step 1. Firmly pull out the red plunger on the Brake Manifold until the knob remains out.

Step 2. Grasp the black hand pump plunger and pump rapidly until firm resistance is felt and the brake pressure gauge reaches 700 psi. The brakes are now release. (Although the gauge reading may decrease the brakes will remain released until pressure drops below 300 psi.)

### NOTE

To return brakes to normal operation depress red plunger or operate any hydraulic function other than steering.

## Platform Controls - Electrical Foot Switch

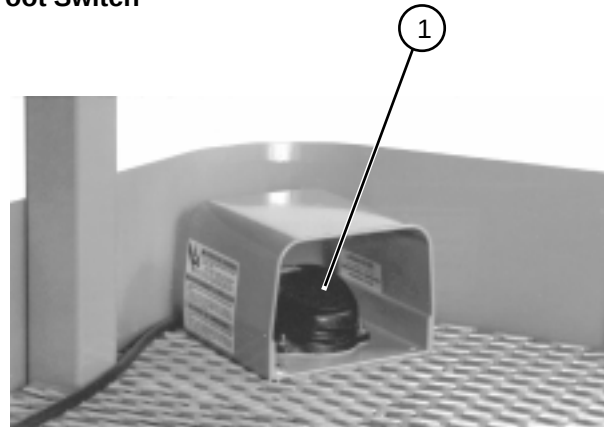


Figure 2-9. Foot Switch

### 1. FOOT SWITCH

**1. FOOT SWITCH** - The foot switch is located on the platform. When the foot switch is depressed and held, power is brought to the controls on the operator's control console. When the foot switch is released, the controls on the operator's control console are cut out.

### IMPORTANT NOTE

The foot switch **MUST** be depressed and held to use any control on the operator's control console.



Before releasing the foot switch, the controllers should be returned to the neutral position. **Work platform motion will stop when the foot switch is released.**

## Operator's Control Console

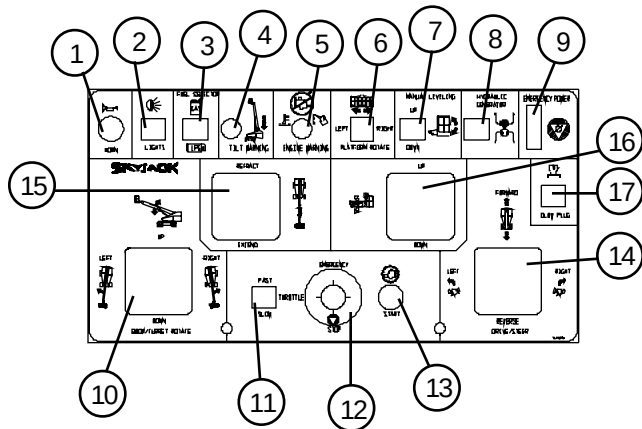


Figure 2-10. Operator's Control Console and Label

1. HORN PUSH-BUTTON (Option)
2. WORK LIGHT TOGGLE SWITCH (Option)
3. FUEL SELECT SWITCH (Dual Fuel)
4. TILT SENSOR INDICATOR LIGHT
5. ENGINE WARNING LIGHT
6. PLATFORM ROTATE TOGGLE SWITCH
7. PLATFORM LEVELING TOGGLE SWITCH
8. HYDRAULIC GENERATOR TOGGLE SWITCH (Option)
9. EMERGENCY PUMP ENABLE SWITCH
10. BOOM UP/DOWN TURRET ROTATE CONTROLLER
11. ENGINE SPEED SELECT TOGGLE SWITCH
12. EMERGENCY STOP BUTTON
13. ENGINE IGNITION PUSH-BUTTON
14. DRIVE/STEER CONTROLLER
15. BOOM EXTEND/RETRACT CONTROLLER
16. JIB UP/DOWN CONTROLLER (SJB-65TB)
17. GLOW PLUG TOGGLE SWITCH

**OPERATOR'S CONTROL CONSOLE** - This metal control station is located at the front of the platform. It contains the following controls:

### IMPORTANT NOTE

The foot switch **MUST** be depressed and held to use any control on the operator's control console. Refer to Operating Procedures for detailed instructions on operating these controls.

**1. HORN PUSH BUTTON (Option)** - If equipped with the horn option, the horn is sounded by depressing this button.

**2. WORK LIGHT TOGGLE SWITCH (Option)** - This switch controls power to the platform and/or chassis work lights.

**3. FUEL SELECT** - For machines equipped with the dual fuel option, this switch allows the operator to select the desired fuel source.

**4. TILT SENSOR INDICATOR LIGHT** - This red indicator light warns the operator that the work platform is on a slope which exceeds the limits for safe operation. A warning buzzer will also sound.

**5. ENGINE WARNING LIGHT** - This red indicator light notifies the operator that the engine oil pressure is low or the engine is overheating and should be shut off.

**6. PLATFORM ROTATE TOGGLE SWITCH** - This switch controls left and right rotation of the platform. To rotate the platform to the left, push and hold this toggle switch to the "↶" (left) position. Release switch to stop. To rotate the platform to the right, push and hold this toggle switch to the "↷" (right) position.

**7. PLATFORM LEVELING TOGGLE SWITCH** - This switch controls the leveling of the platform if adjustment is necessary. If the platform is tilted down away from the boom, push and hold this toggle switch to the "↑" (up) position. Release switch when level. If the platform is tilted up toward the boom, push and hold this toggle switch to the "↓" (down) position. Release switch when level. **NOTE: This function is not available from the platform on European models.**

**8. HYDRAULIC GENERATOR TOGGLE SWITCH (Option)** - This switch operates the optional hydraulic 110 volt generator to supply power to the platform mounted 110 volt outlet.

**9. EMERGENCY PUMP SELECT TOGGLE SWITCH** - In the event of an emergency, moving this toggle switch to the "↑" (up) position kills the engine, enables the 12 volt emergency pump and allows all functions to be operated. To resume normal operation, move the switch to the right position by closing the switch cover.

**10. BOOM UP/DOWN TURRET ROTATE CONTROLLER** - This lever-type controller allows the operator to choose the direction and vary the speed for boom up/down movement or turret right/left rotation.

**11. ENGINE SPEED SELECT TOGGLE SWITCH** - This switch allows the operator to select from low or high engine speed.

**12. EMERGENCY STOP BUTTON** - When struck, this red push-button switch disconnects power to the control circuit. In the event of an emergency or at work platform shut down, push button in. To restore power, simply pull button out.



**Depressing the Emergency Stop Button instantly engages parking brakes.**

**13. ENGINE IGNITION PUSH-BUTTON SWITCH** - Pressing this switch will engage the starter, once the engine starts, release the button. To stop the engine depress the emergency stop button. The engine must be running before any functions can be operated.

**14. DRIVE/STEER CONTROLLER** - This lever-type controller allows the operator to drive in forward and reverse and steer left and right.

**15. BOOM EXTEND/RETRACT CONTROLLER** - This lever-type controller allows the operator to extend or retract the boom and vary the speed of the function.

**16. JIB UP/DOWN CONTROLLER** - This lever-type controller allows the operator to choose the direction and vary the speed for jib up/down movement.

**17. GLOW PLUG TOGGLE SWITCH** - For machines equipped with the diesel option, this switch activates the diesel engine glow plugs.

## OPERATING PROCEDURES

***Before operating any control, read and completely understand ALL Dangers, Warnings and Cautions on the work platform and in this operator's manual.***

### OPERATORS CHECK LIST

#### **INSPECT AND/OR TEST THE FOLLOWING DAILY OR AT THE BEGINNING OF EACH SHIFT**

1. OPERATING AND EMERGENCY CONTROLS.
2. SAFETY DEVICES.
3. PERSONAL PROTECTIVE DEVICES.
4. TIRES AND WHEELS.
5. OUTRIGGERS (IF EQUIPPED) AND OTHER STRUCTURES.
6. AIR, HYDRAULIC AND FUEL SYSTEM FOR LEAKS.
7. LOOSE OR MISSING PARTS OR HARDWARE.
8. CABLES OR WIRING HARNESS.
9. PLACARDS, WARNINGS, CONTROL MARKINGS AND OPERATING MANUAL(S).
10. GUARDRAIL SYSTEM.
11. ENGINE OIL SYSTEM (IF SO EQUIPPED).
12. BATTERY FLUID LEVEL.
13. HYDRAULIC AND BRAKE FLUID RESERVOIR LEVEL.
14. COOLANT LEVEL (IF SO EQUIPPED).

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#### **Prestart Checks**

1. Check for obstacles around the work platform and in the path of travel such as holes, drop offs, debris, ditches and soft fill.
2. Check overhead clearances.
3. Check fuel level. Make sure the valve on the propane tank is in the open position (Dual Fuel Option only).

#### **Start and Operation**

##### ***At the base control panel:***

1. Turn the Battery Disconnect Switch to the "ON" position.
2. Pull out the Emergency Stop Button on the Base Control Panel.
3. Select "  " (platform) with Off/Platform/Base Select Key Switch.
4. Enter the platform by sliding the entry bar at the center of the platform upward. Make sure the entry midrail returns to midrail position. Close the gate (if so equipped).

### Using the platform controls:



**DO NOT** operate any control on the operator's control console without your safety device fastened and properly securing the safety device lanyard to the platform lanyard rings. **Failure to avoid this hazard could result in death or serious injury!**

5. Attach the safety belt lanyards of each occupant to the platform lanyard rings.
6. Pull out the Emergency Stop Button.
7. Select desired fuel source using the Fuel Source Select Switch. (Machines with dual fuel option) Press and hold Glow Plug Switch for 15 to 20 seconds, then release. (Machines with diesel engine option)
8. Press the Engine Ignition Push-Button until engine starts, then release. **DO NOT** over crank the starter. (If engine fails to start after multiple attempts, consult the TROUBLE SHOOTING section in the Operational Maintenance and Parts Manual). **NOTE Engine will not start if foot switch is depressed.**
9. To operate any functions at high engine RPM, the Engine Speed Select Toggle Switch must be held in the "↑" fast position. Releasing this switch will drop the engine back to slow engine RPM.

#### REMEMBER

The following controls on the Operator's Control Console **WILL NOT** operate unless the Foot Switch is depressed and held.

#### NOTE

When the operator is positioned over an axle, the direction the operator is facing will be **FORWARD!**

10. **TO DRIVE FORWARD:** Slowly move the Drive/Steer Controller handle to the "↑" (forward) position. Release controller handle to stop.
11. **TO DRIVE IN REVERSE:** Slowly move the Drive/Steer Controller handle to the "↓" (reverse) position. Release controller handle to stop.
12. **TO STEER:** Move the Drive/Steer Controller switch in the direction you wish to steer.
13. **TO MOVE THE BOOM UPWARD:** Slowly move the Boom Up/Down, Turret Rotate Controller to the "↑" (up) position. Release the controller to stop.

14. **TO MOVE THE BOOM DOWNWARD:** Slowly move the Boom Up/Down, Turret Rotate Controller to the "↓" (down) position. Release the controller to stop.
15. **TO ROTATE THE TURRET CLOCKWISE:** Slowly move the Boom Up/Down, Turret Rotate Controller to the "↻" (clockwise) position. Release the controller to stop.
16. **TO ROTATE THE TURRET COUNTER-CLOCKWISE:** Slowly move the Boom Up/Down, Turret Rotate Controller to the "↻" (counter-clockwise) position. Release the controller to stop.
17. **TO EXTEND THE BOOM ARM:** Slowly move the Boom Extend/Retract Controller to the "↓" (extend) position. Release the controller to stop.
18. **TO RETRACT THE BOOM ARM:** Slowly move the Boom Extend/Retract Controller to the "↑" (retract) position. Release the controller to stop. (This function is not sequenced and either boom section may retract first.)
19. **TO MOVE THE JIB UPWARD (SJB-65TB):** Slowly move the Jib Up/Down Controller to the "↑" (up) position. Release the controller to stop.
20. **TO MOVE THE JIB DOWNWARD (SJB-65TB):** Slowly move the Jib Up/Down Controller to the "↓" (down) position. Release the controller to stop.
21. **TO SOUND THE HORN (Option):** Press the horn push-button. Release the button to stop.
22. **TO TURN THE WORK LIGHTS ON OR OFF (Option):** To turn the work lights on move the Work Light Toggle Switch to the "↑" (on) position. To turn the work lights off move the Work Light Toggle Switch to the "↓" (off) position.
23. **TO ROTATE THE PLATFORM TO THE LEFT:** Press and hold the Platform Rotate Toggle Switch to the "↻" (left) position. Release the switch to stop.
24. **TO ROTATE THE PLATFORM TO THE RIGHT:** Press and hold the Platform Rotate Toggle Switch to the "↻" (right) position. Release the switch to stop.

25. **TO LEVEL THE PLATFORM (Platform is tilted away from the boom):** Press and hold the Platform Leveling Toggle Switch to the “ ↑ ” (up) position. To stop, release the switch.
26. **TO LEVEL THE PLATFORM (Platform is tilted toward the boom):** Press and hold the Platform Leveling Toggle Switch to the “ ↓ ” (down) position. To stop, release the switch.

#### NOTE

Platform leveling from platform control console is not available on European models.

27. **TO OPERATE THE 110 VOLT HYDRAULIC GENERATOR:** Move the Hydraulic Generator Toggle Switch to the “ ↑ ” (on) position. With the hydraulic generator on, all drive, boom and rotate functions are disabled. To turn the generator off simply move the toggle switch to the “ ↓ ” (off) position.
28. **TO OPERATE USING THE EMERGENCY PUMP:** Raise the cover on the Emergency Pump Select Toggle Switch. Press and hold the switch to the “ ↑ ” (up) position. When the switch is released, power to the emergency pump will be disconnected. This function is intended to be used in the event of an engine failure to lower the work platform or move the machine to an appropriate location for repairs to be made. This function is not intended to be used for an extended period of time.

#### Shutdown Procedure

1. Fully lower the platform.
2. Push in the Emergency Stop Buttons.
3. Rotate the Off/Platform/Base Key Switch to the “ ⊗ ” (off) position. Remove the key.
4. Rotate the Battery Disconnect Switch to the “OFF” position.

#### Loading and Tie Down Procedure

1. With the telescopic boom fully retracted and trailer on firm level ground. Align the tires of the boom with the back end of the trailer.
2. Slightly raise the boom for ground clearance while loading. Slowly and carefully drive the machine on to the trailer. In the event of an engine failure the Emergency Pump can be used to raise the boom, and steer the work platform while winch loading.

#### NOTE

For loading and unloading using a winch line, see the drive relief override and brake release procedures in this section.

3. With machine loaded on trailer, tie down as recommended. (Refer to Figure 2-11.)
4. Remove turret lock retaining pin. Lower turret lock into locked position and reinstall turret lock retaining pin.

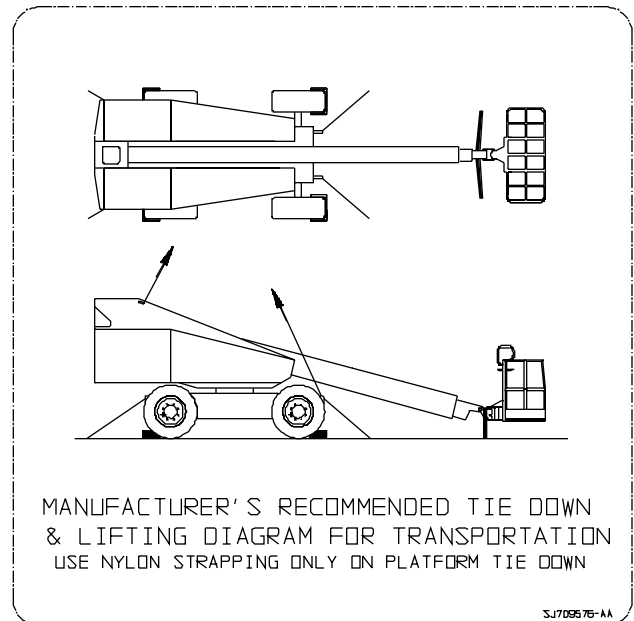


Figure 2-11. Recommended Tie Down Locations

Figure 2-12. Reach Diagram SJB-60TB

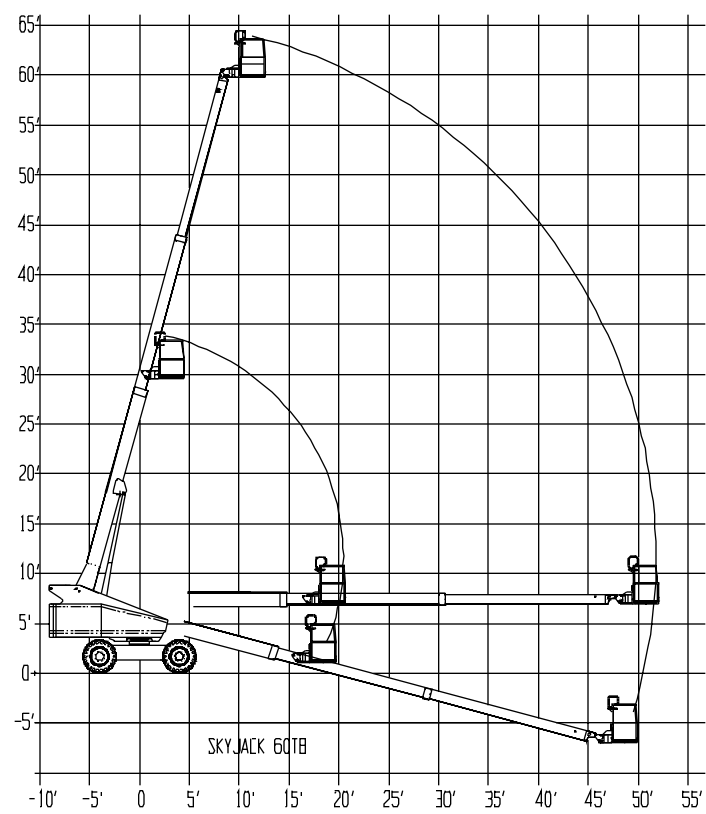


Figure 2-13. Dimensional Diagram SJB-60TB

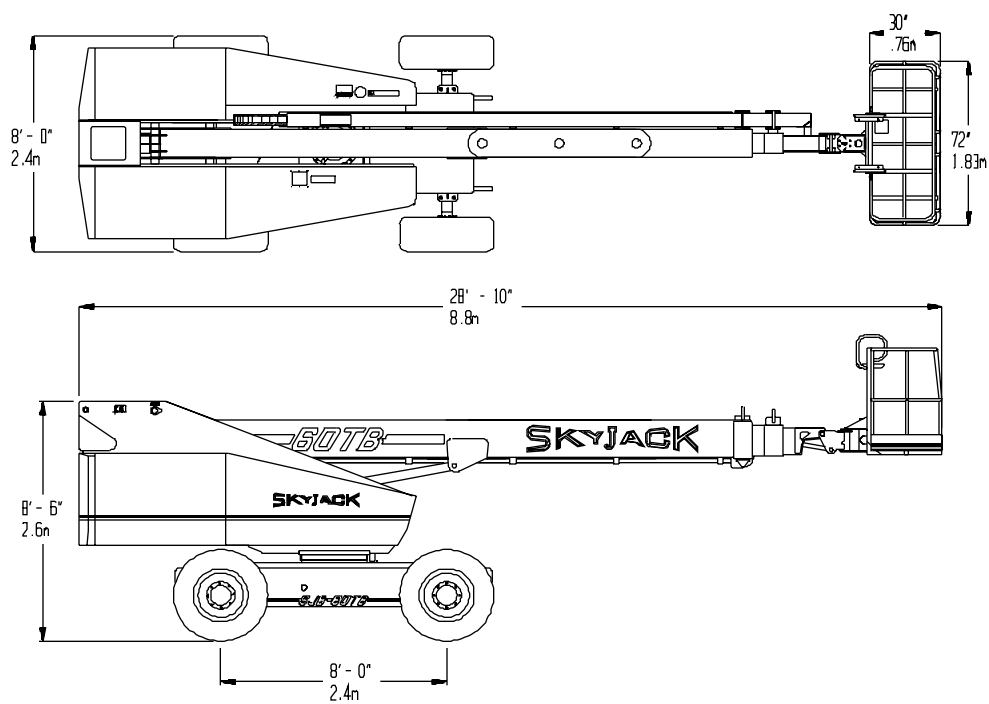


Figure 2-14. Reach Diagram SJB-65TB

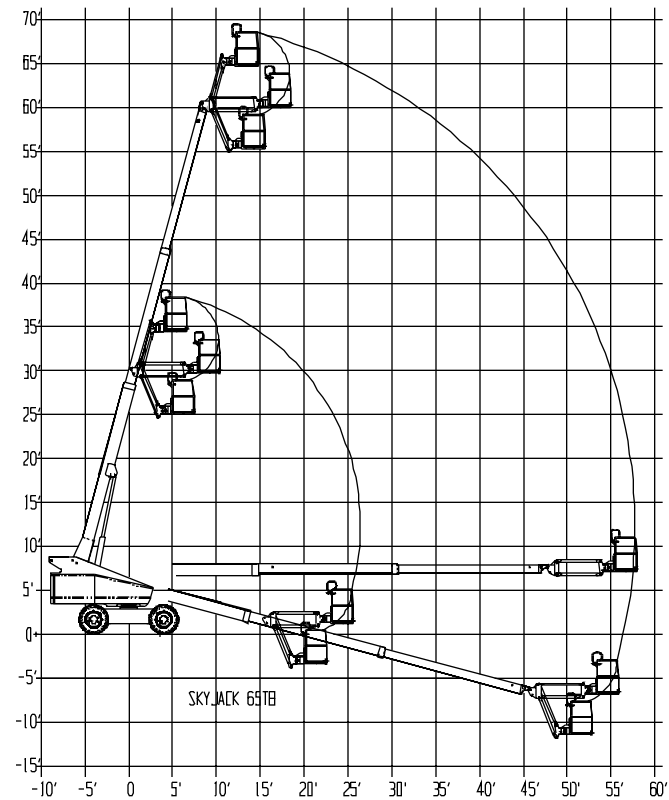


Figure 2-15. Dimensional Diagram SJB-65TB

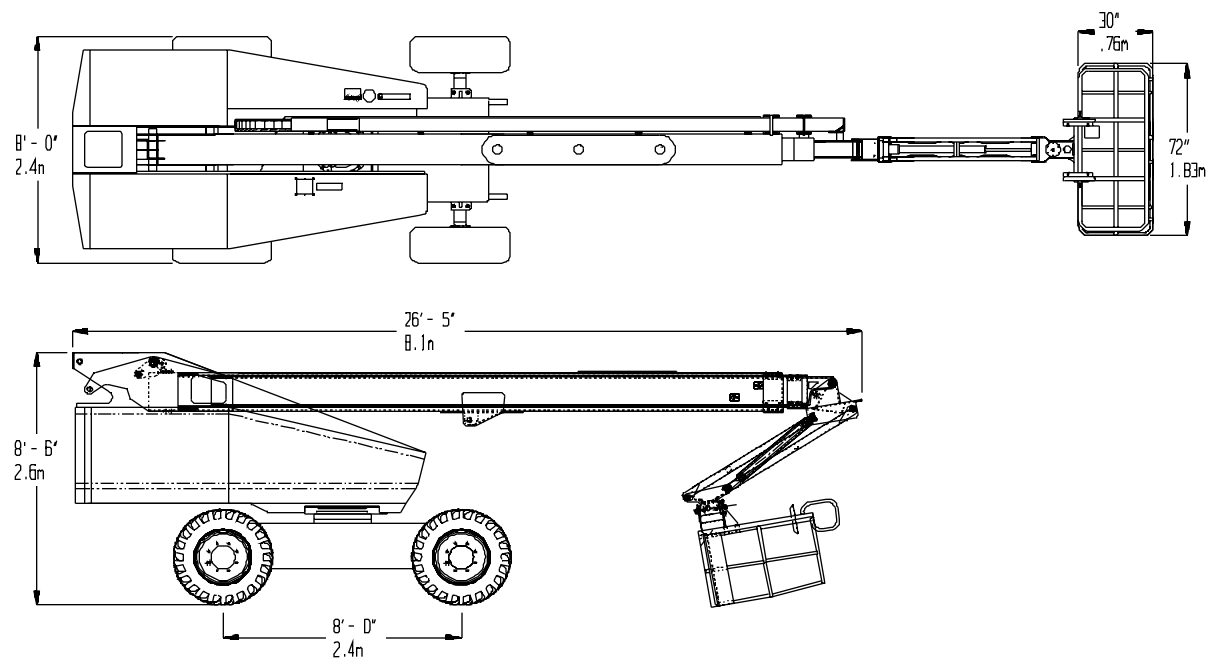


Table 2-1. Maintenance and Inspection Schedule

|                                                                                                                                                                                                                                                                                                                                                                                                                               | Daily | Weekly | Monthly | 3 Months | 6 Months | * Yearly |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|---------|----------|----------|----------|
| <b>Engine (11)</b>                                                                                                                                                                                                                                                                                                                                                                                                            |       |        |         |          |          |          |
| Fuel leaks (1)                                                                                                                                                                                                                                                                                                                                                                                                                | ✓     |        |         |          |          | ✓        |
| Engine oil (4)                                                                                                                                                                                                                                                                                                                                                                                                                | ✓     |        |         |          |          | ✓        |
| Engine RPM (8)                                                                                                                                                                                                                                                                                                                                                                                                                |       |        | ✓       |          |          | ✓        |
| Fuel filter (7)                                                                                                                                                                                                                                                                                                                                                                                                               |       |        |         |          | ✓        | ✓        |
| Muffler (2)(3)(11)                                                                                                                                                                                                                                                                                                                                                                                                            |       |        |         | ✓        |          | ✓        |
| Air cleaner (1)(7)                                                                                                                                                                                                                                                                                                                                                                                                            |       |        | ✓       |          |          | ✓        |
| Fuel tank cap (2)(3)                                                                                                                                                                                                                                                                                                                                                                                                          | ✓     |        |         |          |          | ✓        |
| Coolant level (1)(12)                                                                                                                                                                                                                                                                                                                                                                                                         | ✓     |        |         |          |          | ✓        |
| <b>Mechanical</b>                                                                                                                                                                                                                                                                                                                                                                                                             |       |        |         |          |          |          |
| Struct. damage/welds (1)                                                                                                                                                                                                                                                                                                                                                                                                      | ✓     |        |         |          |          | ✓        |
| Parking brakes (2)                                                                                                                                                                                                                                                                                                                                                                                                            | ✓     |        |         |          |          | ✓        |
| Tires and wheels (1)(2)(3)                                                                                                                                                                                                                                                                                                                                                                                                    | ✓     |        |         |          |          | ✓        |
| Guides and wear pads (1)(2)(3)                                                                                                                                                                                                                                                                                                                                                                                                | ✓     |        |         |          |          | ✓        |
| Railings and gate (2)(3)                                                                                                                                                                                                                                                                                                                                                                                                      |       | ✓      |         |          |          | ✓        |
| Bolts and fasteners (3)                                                                                                                                                                                                                                                                                                                                                                                                       | ✓     |        |         |          |          | ✓        |
| Rust (1)                                                                                                                                                                                                                                                                                                                                                                                                                      |       |        | ✓       |          |          | ✓        |
| Whl brgs (2) King pins (1)(6)                                                                                                                                                                                                                                                                                                                                                                                                 |       |        |         | ✓        | ✓        | ✓        |
| Turret gear (1)(2)(3)(6)                                                                                                                                                                                                                                                                                                                                                                                                      |       | ✓      |         |          |          | ✓        |
| Turret gear box (1)(2)(3)(4)                                                                                                                                                                                                                                                                                                                                                                                                  |       | ✓      |         |          |          | ✓        |
| Pivot pins (1)                                                                                                                                                                                                                                                                                                                                                                                                                | ✓     |        |         |          |          | ✓        |
| Steer cylinders/tie rod ends(6)                                                                                                                                                                                                                                                                                                                                                                                               |       |        |         | ✓        |          | ✓        |
| Axle gear oil (13)                                                                                                                                                                                                                                                                                                                                                                                                            |       |        |         |          |          | ✓        |
| <b>Electrical</b>                                                                                                                                                                                                                                                                                                                                                                                                             |       |        |         |          |          |          |
| Battery fluid level (1)                                                                                                                                                                                                                                                                                                                                                                                                       | ✓     |        |         |          |          | ✓        |
| Joysticks and control switches (1)(2)(3)                                                                                                                                                                                                                                                                                                                                                                                      | ✓     |        |         |          |          | ✓        |
| Cords and wiring (1)(3)                                                                                                                                                                                                                                                                                                                                                                                                       | ✓     |        |         |          |          | ✓        |
| Battery terminals (1)(3)                                                                                                                                                                                                                                                                                                                                                                                                      | ✓     |        |         |          |          | ✓        |
| Terminals and plugs (1)(3)                                                                                                                                                                                                                                                                                                                                                                                                    | ✓     |        |         |          |          | ✓        |
| Generator and receptacle (2)                                                                                                                                                                                                                                                                                                                                                                                                  | ✓     |        |         |          |          | ✓        |
| Limit switches (2)                                                                                                                                                                                                                                                                                                                                                                                                            | ✓     |        |         |          |          | ✓        |
| Tilt sensors (2)                                                                                                                                                                                                                                                                                                                                                                                                              | ✓     |        |         |          |          | ✓        |
| Directional sensing (2)                                                                                                                                                                                                                                                                                                                                                                                                       | ✓     |        |         |          |          | ✓        |
| Emergency pump (2)                                                                                                                                                                                                                                                                                                                                                                                                            |       | ✓      |         |          |          | ✓        |
| <b>Hydraulic</b>                                                                                                                                                                                                                                                                                                                                                                                                              |       |        |         |          |          |          |
| Hydraulic oil level (1)(4)                                                                                                                                                                                                                                                                                                                                                                                                    | ✓     |        |         |          |          | ✓        |
| Hydraulic leaks/hoses (1)(3)                                                                                                                                                                                                                                                                                                                                                                                                  | ✓     |        |         |          |          | ✓        |
| Lift/lowering time (8)                                                                                                                                                                                                                                                                                                                                                                                                        |       |        |         | ✓        |          | ✓        |
| Hydraulic cylinders (1)(2)(3)                                                                                                                                                                                                                                                                                                                                                                                                 |       | ✓      |         |          |          | ✓        |
| Emergency lowering (2)                                                                                                                                                                                                                                                                                                                                                                                                        | ✓     |        |         |          |          | ✓        |
| Lift capacity (5)                                                                                                                                                                                                                                                                                                                                                                                                             |       |        | ✓       |          |          | ✓        |
| Hydraulic oil/filter (7)                                                                                                                                                                                                                                                                                                                                                                                                      |       |        |         |          | ✓        | ✓        |
| <b>Miscellaneous</b>                                                                                                                                                                                                                                                                                                                                                                                                          |       |        |         |          |          |          |
| Labels (1)(9) Manuals (10)                                                                                                                                                                                                                                                                                                                                                                                                    | ✓     |        |         |          |          | ✓        |
| NOTES: (1) Visually inspect (2) Check operation (3) Check tightness (4) Check oil level (5) Check relief valve setting. Refer to<br>(6) Lubricate (7) Replace (8) See Table 5-7. General Specification Serial Number nameplate<br>(9) Replace if missing or illegible (10) Proper Operating Manual MUST be in the manual tube<br>(11) Refer to engine manual inspection (12) Check only when cooled (13) Change oil. * Record |       |        |         |          |          |          |

## NOTES

## BRAKE OPERATION AND TEST PROCEDURE

Proper operation of the parking brakes should be checked daily or at the beginning of each shift. Locate the machine in an appropriate area for testing the brakes. **IMPORTANT NOTE:** The area for testing the machine **MUST** be completely level and free of obstructions. **DO NOT** drive on an incline unless the parking brakes are working properly. With the machine fully stowed and the throttle switch in the high position (if engine powered). Drive the machine forward at full speed and remove foot from foot switch. Repeat this step driving in reverse.



### WARNING

**Parking brakes will instantly engage causing the machine to stop immediately.**

The machine should come to an instant and abrupt stop. If the machine does not stop instantly or if the machine pulls to one side while stopping, the brake adjustment **MUST** be checked before putting the machine into service.

Table 2-2. Owners Annual Inspection Record

| MODEL NUMBER _____ |          |          |          |          | SERIAL NUMBER _____ |          |          |          |
|--------------------|----------|----------|----------|----------|---------------------|----------|----------|----------|
| RECORDING DATE     |          |          |          |          |                     |          |          |          |
| RECORDING YEAR #   | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b>            | <b>6</b> | <b>7</b> | <b>8</b> |
| OWNERS NAME        |          |          |          |          |                     |          |          |          |
| INSPECTED BY       |          |          |          |          |                     |          |          |          |

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Table 2-3. Tire Specifications

| Model                                    | Tire              |        | Fill Specification |          |
|------------------------------------------|-------------------|--------|--------------------|----------|
|                                          | Size              | Rating | Type               | Pressure |
| STANDARD                                 | 40 x 15.00 x 19.5 | 16 Ply | Air                | 95 psi   |
| RIBBED FLOTATION                         | 40 x 19 x 19.5    | 14 Ply | Air                | 65 psi   |
| LUGGED FLOTATION                         | 38 x 18 x 20      | 12 Ply | Air                | 65 psi   |
| FOAM FILLED (Option)                     | 40 x 15.00 x 19.5 | 16 Ply | Solid Urethane     | *        |
| * 28 Durometer Fill installed at 55 psi. |                   |        |                    |          |

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## RECOMMENDED HYDRAULIC OILS

**DO NOT** use synthetic or fire resistant oil in this work platform. Use ATF Dexron III (ESSO) or equivalent hydraulic oil. For conditions causing oil temperatures below -31°F (-35° C) and above 122°F (50° C) consult Skyjack, Inc.

## RECOMMENDED AXLE LUBRICANT

**TWO WHEEL DRIVE:** SAE 80W90 GL-5 gear oil.

**FOUR WHEEL DRIVE:** Sunoco duragear (synthetic) SAE 75W90 gear oil or equivalent.

Table 2-4. Maximum Platform Capacities

| Model                                                                      | Platform Capacity (unrestricted) |
|----------------------------------------------------------------------------|----------------------------------|
| <b>SJB-60TB</b>                                                            | 600# (272kg) 3 occupants         |
| <b>SJB-65TB</b>                                                            | 500# (227kg) 2 occupants         |
| NOTE: Refer to capacity label on work platform for additional information. |                                  |

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Table 2-5. General Specifications

|                                                                                                                            |                                                                  |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| BATTERY (Primary/Emergency)                                                                                                | 12 Volt/850 CCA                                                  |
| AMBIENT NOISE LEVEL                                                                                                        | 83db                                                             |
| ENGINE RPM SETTINGS (Ford)<br>ENGINE RPM SETTINGS (Diesel)                                                                 | 1200(idle), 2000, 2600<br>1600(idle), 2600                       |
| FUEL (Standard)<br>FUEL (Diesel option)                                                                                    | Non-blended unleaded<br>No. 2 Diesel                             |
| GROUND CLEARANCE                                                                                                           | 14" (.36m)                                                       |
| TRAVEL SPEED (Elevated)<br>TRAVEL SPEED (Stowed)                                                                           | 0-.8mph (0-1.29kph)<br>0-3.5mph (0-5.63kph)                      |
| INSIDE TURNING RADIUS (2WD)<br>INSIDE TURNING RADIUS (4WD)<br>OUTSIDE TURNING RADIUS (2WD)<br>OUTSIDE TURNING RADIUS (4WD) | 8' 4" (2.5m)<br>11' 11" (3.6m)<br>18' 4" (5.6m)<br>19' 1" (5.8m) |
| POWER (Ford LRG 425)<br>POWER-Option(Kubota Diesel)                                                                        | 82 Horsepower<br>60 Horsepower                                   |
| HORIZONTAL REACH (SJB-60TB)<br>HORIZONTAL REACH (SJB-65TB)                                                                 | 52' 0" (15.8m)<br>57' 0" (17.4m)                                 |
| TAILSWING                                                                                                                  | 9' 3" (2.8m)                                                     |
| FLOOR LOADING                                                                                                              | Not Available at Printing                                        |
| HYDRAULIC CAPACITY                                                                                                         | 60 gallons (227.1 liter)                                         |
| FUEL CAPACITY                                                                                                              | 40 gallons (150.9 liter)                                         |
| PLATFORM ROTATION (SJB-60TB)<br>PLATFORM ROTATION (SJB-65TB)                                                               | 90° Right - 75° Left<br>90° Right - 90° Left                     |

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**NOTE: For additional specifications, refer to Section 1.**

## NOTES

# SECTION 3

## SYSTEM COMPONENT IDENTIFICATION AND SCHEMATICS

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#### HYDRAULIC SYSTEM

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**Table 3-1. Skyjack Booms, Electrical Symbols Legend**

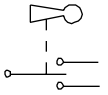
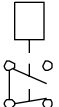
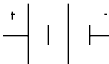
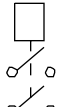
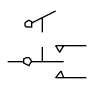
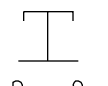
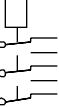
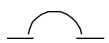
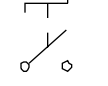
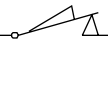
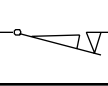
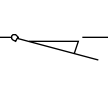
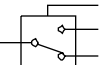
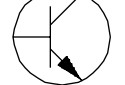
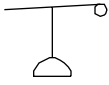
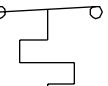
|                                                                                     |                                         |                                                                                     |                                  |                                                                                       |                                    |
|-------------------------------------------------------------------------------------|-----------------------------------------|-------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------|------------------------------------|
|    | CIRCUITS CROSSING<br>NO CONNECTION      |    | EMERGENCY STOP<br>BUTTON         |    | RELAY, SINGLE POLE<br>SINGLE THROW |
|    | CIRCUITS<br>CONNECTED                   |    | KEY SWITCH                       |    | RELAY, SINGLE POLE<br>DOUBLE THROW |
|    | BATTERY                                 |    | FOOT SWITCH                      |    | RELAY, DOUBLE POLE<br>SINGLE THROW |
|    | GROUND                                  |    | TOGGLE SWITCH                    |    | RELAY, DOUBLE POLE<br>DOUBLE THROW |
|    | FUSE                                    |    | BUSH BUTTON SWITCH               |    | RELAY, TRIPLE POLE<br>DOUBLE THROW |
|    | CIRCUIT BREAKER                         |    | ROTARY SWITCH                    |    | DIODE                              |
|    | VOLT METER                              |    | LIMIT SWITCH N.O.                |    | SILICON CONTROLLED<br>RECTIFIER    |
|  | HOURLMETER                              |  | LIMIT SWITCH N.O.<br>HELD CLOSED |  | CAPACITOR                          |
|  | LIGHT                                   |  | LIMIT SWITCH N.C.                |  | RESISTOR                           |
|  | HYDRAULIC VALVE<br>COIL                 |  | LIMIT SWITCH N.C.<br>HELD OPEN   |  | POTENTIOMETER                      |
|  | PROPORTIONAL<br>HYDRAULIC VALVE<br>COIL |  | CAM OPERATED LIMIT<br>SWITCH     |  | PROXIMITY SWITCH                   |
|  | ELECTRIC MOTOR                          |  | TILT SWITCH                      |  | PNP<br>TRANSISTOR                  |
|  | HORN                                    |  | LEVEL SENSOR                     |  | NPN<br>TRANSISTOR                  |
|  | PRESSURE/VACUUM<br>SWITCH               |  | TEMPERATURE SWITCH               |  | RHEOSTAT                           |

**Table 3-2. Skyjack Booms, Hydraulic Symbols Legend**

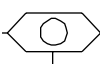
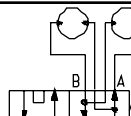
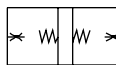
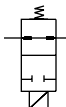
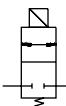
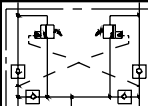
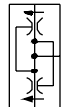
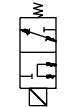
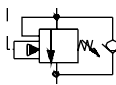
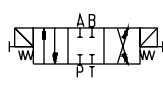
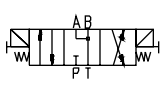
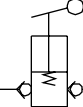
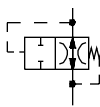
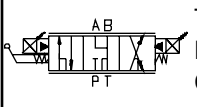
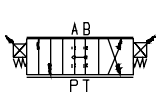
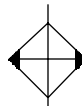
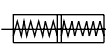
|                                                                                                                              |                                                                                                                                 |                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
|  MAIN LINES Solid                           |  ADJUSTABLE FLOW CONTROL                       |  ROTARY ACTUATOR                                     |
|  PILOT LINES Dashed                         |  CHECK VALVE                                   |  FIXED DISPLACEMENT HYDRAULIC MOTOR BIDIRECTIONAL    |
|  LINES CROSSING NO CONNECTION               |  SHUTTLE VALVE                                 |  VARIABLE DISPLACEMENT HYDRAULIC MOTOR               |
|  LINES CONNECTED                            |  ACCUMULATOR, GAS CHARGED                      |  BIDIRECTIONAL SERIES PARELLEL HYDRAULIC MOTOR       |
|  HYDRAULIC TANK                             |  CUSHION CYLINDER                              |  TWO POSITION TWO WAY NORMALLY OPEN VALVE            |
|  HYDRAULIC FILTER WITH BYPASS               |  PRESSURE SWITCH                               |  TWO POSITION TWO WAY NORMALLY CLOSED VALVE          |
|  ELECTRIC MOTOR                             |  MOTION CONTROL ASSEMBLY                       |  TWO POSITION THREE WAY VALVE                        |
|  ENGINE                                   |  FLOW DIVIDER COMBINER                       |  TWO POSITION THREE WAY VALVE                      |
|  FIXED DISPLACEMENT PUMP UNIDIRECTIONAL   |  COUNTER BALANCE VALVE                       |  THREE POSITION FOUR WAY CLOSED CENTER CLOSED PORT |
|  VARIABLE DISPLACEMENT PUMP BIDIRECTIONAL |  ELECTRICAL VALVE COIL                       |  THREE POSITION FOUR WAY CLOSED CENTER OPEN PORT   |
|  HAND PUMP                                |  VELOCITY FUSE                               |  THREE POSITION FOUR WAY CLOSED CENTER OPEN PORT    |
|  RELIEF VALVE                             |  SINGLE ACTING CYLINDER                      |  THREE POSITION FOUR WAY OPEN CENTER OPEN PORT     |
|  PRESSURE REDUCING VALVE                  |  DOUBLE ACTING CYLINDER                      |  OIL COOLER                                        |
|  FIXED ORIFICE                            |  DOUBLE ACTING DOUBLE RODDE D CYLINDER       |  SERVO                                             |
|  BRAKE CYLINDER                           |  SPRING APPLIED HYDRAULICALLY RELEASED BRAKE |                                                                                                                                         |

**Table 3-3. Relay Schedule**

| RELAY NUMBER | RELAY FUNCTION                  | WIRES           | LOCATION         | NOTES  |
|--------------|---------------------------------|-----------------|------------------|--------|
| 01CR         | Emergency Pump Relay            | 01,02,09,54,108 | Base Panel       | All    |
| 08CR1        | Starter Dissable Relay          | 02,08,57,57A    | Platform Console | All    |
| 08CR2        | Drive Enable Relay              | 02,08,09,09A    | Base Panel       | All    |
| 11CR         | Glow Plug Relay                 | 02,03,03A,11    | Engine Panel     | Diesel |
| 17CR1        | Steer Directional Relay         | 02,17,23,23A,24 | Base Panel       | All    |
| 17CR2        | Steer Directional Relay         | 02,17,23,24,24A | Base Panel       | All    |
| 20CR         | Flashing Light Relay            | 02,09,20,20A    | Base Panel       | Option |
| 21CR         | Load Sence Dump Valve Relay     | 02,09,21,21A    | Base Panel       | All    |
| 28CR         | Tilted Brake Relay              | 02,09A,28,28A   | Base Panel       | All    |
| 49CR         | Horn Relay                      | 02,09,49,49A    | Base Panel       | Option |
| 51CR1        | Tilted Drive Cutout Relay       | 02,09A,09B,51   | Base Panel       | All    |
| 51CR2        | Tilt Alarm Relay                | 02,09,27,51     | Base Panel       | All    |
| 54CR         | Run Relay                       | 02,03,54,54A    | Engine Panel     | All    |
| 57ACR        | Start Relay                     | 02,54A,57,57A   | Engine Panel     | Diesel |
| 60CR         | Ignition On Relay               | 02,07,09,60     | Base Panel       | All    |
| 78BCR        | Throttle Relay                  | 02,09,78B,78C   | Base Panel       | All    |
| 81CR         | Chassis Work Light Relay        | 02,09,81,81A    | Base Panel       | Option |
| 85CR         | Hydraulic Generator Relay       | 02,09,85,85A    | Base Panel       | Option |
| 107CR        | Manual Leveling Interlock Relay | 02,10,90,107    | Base Panel       | All    |
| 107ACR       | Manual Leveling Interlock Relay | 02,08,90A,107A  | Platform Console | All    |
| 108CR        | Emergency Pump Contactor        | 02,03,108,DCM   | Emergency Pump   | All    |

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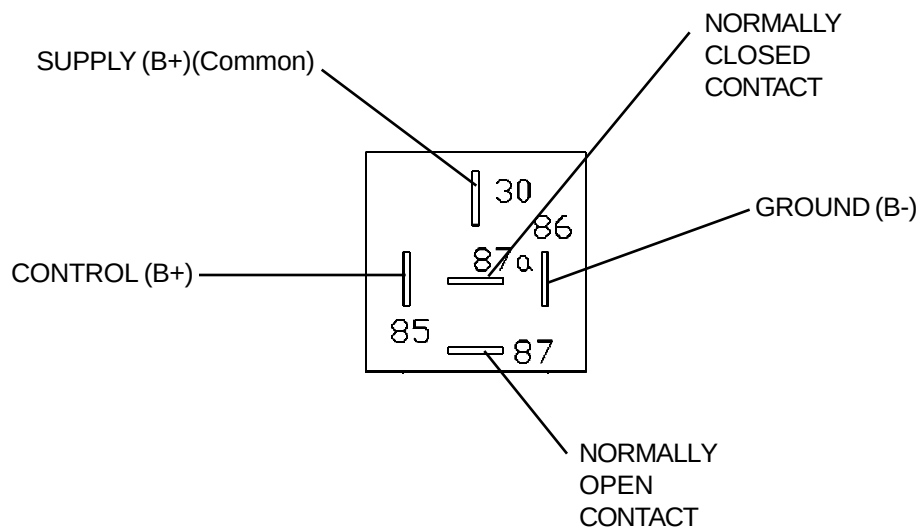


**Table 3-4. Wire Number and Color Code**

| WIRE NO. | WIRE COLOR | WIRE NO. | WIRE COLOR      | WIRE NO. | WIRE COLOR | WIRE NO. | WIRE COLOR      | WIRE NO. | WIRE COLOR |
|----------|------------|----------|-----------------|----------|------------|----------|-----------------|----------|------------|
| 00       | WHT        | 20       | ORG/BLU         | 44       | YEL/WHT    | 67       | ORG/BRN         | 92       | GRN SHLD   |
| 000      | WHT        | 21       | WHT/RED         | 45       | YEL/ORG    | 68       | GREY            | 93       | BLK SHLD   |
| B1       | BLU/PINK   | 23       | BLK/WHT         | 46       | RED/BLK    | 69       | WHT/GRN         | 96       | WHT/GREY   |
| 01       | PUR/BLK    | 24       | BLU/BLK         | 47       | PUR/ORG    | 70       | ORG/PINK        | 97       | ORG/GREY   |
| 02       | WHT        | 25       | BRN/BLK         | 48       | YEL/GREY   | 71       | RED/ORG         | 98       | RED SHLD   |
| 03       | GRN/PUR    | 26       | BLU/YEL         | 49       | GRN/RED    | 72       | RED/BRN         | 98A      | BLK SHLD   |
| 04       | RED/YEL    | 27       | RED/BLK/<br>WHT | 50       | BRN        | 73       | RED/PINK        | 99       | BLK/GREY   |
| 05       | PUR        | 28       | GRN             | 51       | BLK/GRN    | 74       | GRN/GREY        | 103      | BLK/PUR    |
| 06       |            | 29       | GREY/ORG        | 52       | GRN/BLU    | 75       | GREY/PUR        | 104      | GRN/ORG    |
| 07       | RED        | 30       | RED/GRN         | 53       | BRN/RED    | 76       | BRN/BLU         | 105      | GRN/BRN    |
| 08       | PUR/WHT    | 31       | RED/WHT         | 54       | PUR/RED    | 77       | BRN/GREY        | 106      | GRN/PINK   |
| 09       | YEL        | 32       | GRN/BLK         | 55       | YEL/PUR    | 78       | RED/BLU         | 107      | BLK/BLU    |
| 10       | BLU/WHT    | 33       | GRN/WHT         | 56       | YEL/BLK    | 79       | BRN/PUR         | 108      | YEL/BRN    |
| 11       | WHT/ORG    | 34       | ORG/BLK         | 57       | BRN/GRN    | 80       | GREY/WHT        | 109      | GRN/YEL    |
| 12       | GREY/ORG   | 35       | ORG/WHT         | 58       | WHT/PUR    | 81       | GREY/BLK        | 110A     | BLU        |
| 13       | ORG        | 36       | RED/PUR         | 59       | YEL/BLU    | 82       | BRN/WHT         | 110B     | BRN        |
| 14       | BLK        | 37       | WHT/RED/<br>BLK | 60       | WHT/BLU    | 83       | BLU/GREY        | 111      | GREY/GRN   |
| 15       | BLU        | 38       | ORG/RED         | 61       | GREY/BRN   | 84       | WHT/BLK/<br>PUR | 112      | BLU/ORG    |
| 16       | WHT/BLK    | 39       | BLK/RED         | 62       | GREY/RED   | 85       | GREY/BLU        | 113      | BLU/BRN    |
| 17       | BLU/GRN    | 40       | BLU/RED         | 63       | GREY/YEL   | 86/87    | PUR/BLU         | 114      | YEL/RED    |
| 18       | GRN/BLU    | 41       | BLU/PUR         | 64       | WHT/BRN    | 88       | BLK/ORG         | 115      | WHT/PUR    |
| 19       | ORG/GRN    | 42       | PINK            | 65       | YEL/PINK   | 90       | RED/GREY        | 118      | PUR/ORG    |
| 22       | PUR/GRN    | 43       | WHT/YEL         | 66       | ORG/YEL    | 91       | RED SHLD        |          |            |

This table is to be used as a wire number/color reference for all electrical drawings and schematics. All wire numbers will retain their original color coding, for example if wire 7 is red, wire 7A, 7B, and 7C will also be red.

**FIGURE 3-1. OPERATOR'S CONTROL CONSOLE DIAGRAM PARTS LIST**

| Index<br>No. | Skyjack<br>Part No. | Description                                | Units<br>per<br>Assy. |
|--------------|---------------------|--------------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                              |                       |
| 1            | 701930              | SWITCH, Toggle, SPDT 2 position maintained | AR                    |
| 2            | 102853              | SWITCH, Toggle, SPDT 3 position momentary  | 2                     |
| 3            | 701929              | SWITCH, Toggle, SPDT 2 position momentary  | AR                    |
| 4            | 709133              | SWITCH, Push-button, N.O.                  | 2                     |
| 5            | 709370              | CAP, Push-button (Red)                     | 1                     |
| 6            | 709802              | CAP, Push-button (Black)                   | 1                     |
| 7            | 709172              | CIRCUIT BOARD, Boom/turret controller      | 2                     |
| 8            | 709176              | TELESCOPE/JIB CONTROLLER                   | AR                    |
| 9            | 709177              | BOOM/TURRET CONTROLLER                     | 1                     |
| 10           | 709178              | DRIVE/STEER CONTROLLER                     | 1                     |
| 11           | 709180              | LIGHT, Warning                             | 2                     |
| 12           | 707144              | TERMINAL BLOCK, Ground                     | 3                     |
| 13           | 707145              | TERMINAL BLOCK, Diode                      | 4                     |
| 14           | 707143              | TERMINAL BLOCK, Through                    | 27                    |
| 15           | 707148              | TERMINAL BLOCK, Jumper                     | 3                     |
| 16           | 707147              | TERMINAL BLOCK, End stop                   | 2                     |
| 17           | 707146              | TERMINAL BLOCK, End plate                  | 1                     |
| 18           | 707149              | TERMINAL BLOCK, Dim rail                   | .134                  |
| 19           | (Ref.)              | SWITCH ASSEMBLY, Emergency stop            | 1                     |
|              | 102769              | • SWITCH HEAD                              | 1                     |
|              | 103281              | • SWITCH CONTACT                           | 1                     |
| 20           | (Ref.)              | CONNECTOR RECEPTACLE, 40 Pin               | 1                     |
|              | 707875              | • HOUSING, 40 Pin receptacle               | 1                     |
|              | 707847              | • GASKET, Connector                        | 1                     |
|              | 705256              | • PLUG, Weather seal                       | AR                    |
| 21           | 701943              | RELAY, 12 Volt sealed                      | 2                     |
| 22           | 103057              | BEEPER, Warning                            | 1                     |
| 23           | 103256              | CABLE, 18/2                                | 34"                   |
| 24           | 103567              | CONNECTOR HOUSING, 4 Pin male              | 1                     |
|              | 103569              | • CONNECTOR INSERT, 4 Pin male             | 1                     |
| 25           | 103568              | CONNECTOR HOUSING, 4 Pin female            | 1                     |
|              | 103570              | • CONNECTOR INSERT, 4 Pin female           | 1                     |

FIGURE 3-1. PLATFORM CONTROL CONSOLE WIRING DIAGRAM

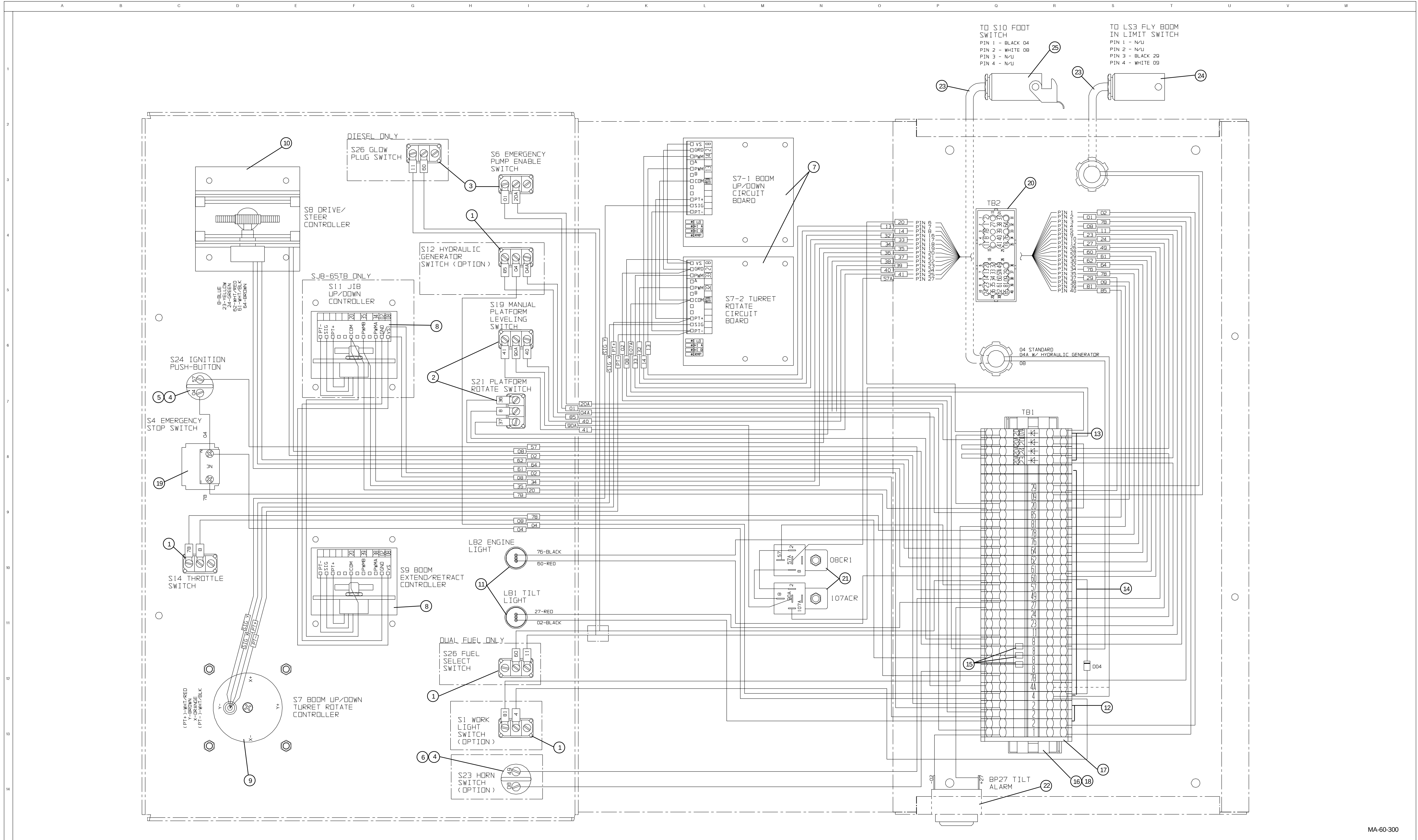


FIGURE 3-2. BASE CONTROL/ELECTRICAL PANEL WIRING DIAGRAM

ENGINE WIRE HARNESS

|     |                        |          |
|-----|------------------------|----------|
| 02  | GRND                   | WHT      |
| 02  | GRND                   | WHT      |
| 02  | GRND                   | WHT      |
| 02  | GRND                   | WHT      |
| 02  | GRND                   | WHT      |
| 02  | GRND                   | WHT      |
| 03  | EMERGENCY PUMP 12V     | GRN/PUR  |
| 11  | GLOW PLUG 12V (DIESEL) | WHT/DRG  |
| 15  | REVERSE DRIVE VALVE    | BLU      |
| 16  | FORWARD DRIVE VALVE    | WHT/BLK  |
| 21A | DUMP VALVE             | WHT/RED  |
| 26  | BRAKE VALVE            | BLU/YEL  |
| 28A | TILT BRAKE VALVE       | GRN      |
| 54A | ENGINE RUN             | PUR/RED  |
| 56  | FUEL PUMP              | YEL/BLK  |
| 57A | ENGINE START           | BRN/GRN  |
| 59  | DRIVE SPEED VALVE      | YEL/BLU  |
| 76  | ENGINE LIGHT           | BRN/BLU  |
| 77  | ENGINE HOUR METER      | BRN/GREY |
| 78C | THROTTLE "B"           | RED/BLU  |
| 79  | THROTTLE "A"           | BRN/PUR  |

TURRET/OPTIONS WIRE HARNESS

|     |                          |          |
|-----|--------------------------|----------|
| 02  | FUEL SENDER              | WHT      |
| 02  | CHASSIS LIGHT GRND       | WHT      |
| 02  | FLASHING LIGHT GRND      | WHT      |
| 02  | HYDRAULIC GENERATOR GRND | WHT      |
| 02  | ALARM GRND               | WHT      |
| 02  | HORN GRND                | WHT      |
| 09  | TILT SWITCH 12V          | YEL      |
| 20B | BOOM MOTION ALARM        | DRG/BLU  |
| 20B | FLASHING LIGHT           | DRG/BLU  |
| 26  | TRAVEL ALARM             | BLU/YEL  |
| 28  | TILT SWITCH              | GRN      |
| 46  | ALL MOTION ALARM         | RED/BLK  |
| 49A | HORN                     | GRN/RED  |
| 55  | FUEL SENSOR              | YEL/PUR  |
| 81A | CHASSIS LIGHTS           | GREY/BLK |
| 85A | HYDRAULIC GENERATOR      | GREY/BLU |
| 108 | EMERGENCY PUMP           | YEL/BRN  |

FUNCTION VALVE DISTRIBUTION BOX WIRE HARNESS

| WIRE | FUNCTION            | COLOR    |
|------|---------------------|----------|
| 41   | PLATFORM LEVEL UP   | GREY/PNK |
| 40   | PLATFORM LEVEL DOWN | WHT      |
| 36   | PLATFORM LEFT       | WHT/GRN  |
| 37   | PLATFORM RIGHT      | YEL      |
| 32   | TURRET LEFT         | BRN/GRN  |
| 33   | TURRET RIGHT        | GREY     |
| 35   | JIB UP              | WHT/YEL  |
| 34   | JIB DOWN            | PNK      |
| 39   | BOOM EXTEND         | YEL/BRN  |
| 38   | BOOM RETRACT        | RED      |
| 24A  | STEER LEFT          | WHT/GREY |
| 23A  | STEER RIGHT         | BLK      |
| 13   | BOOM DOWN           | GREY/BRN |
| 14   | BOOM UP             | PUR      |
| 09   | 12 VOLT SUPPLY      | BRN      |
| 02   | GROUND              | BLU      |
| 02   | CHASSIS GROUND      | GRN/YEL  |

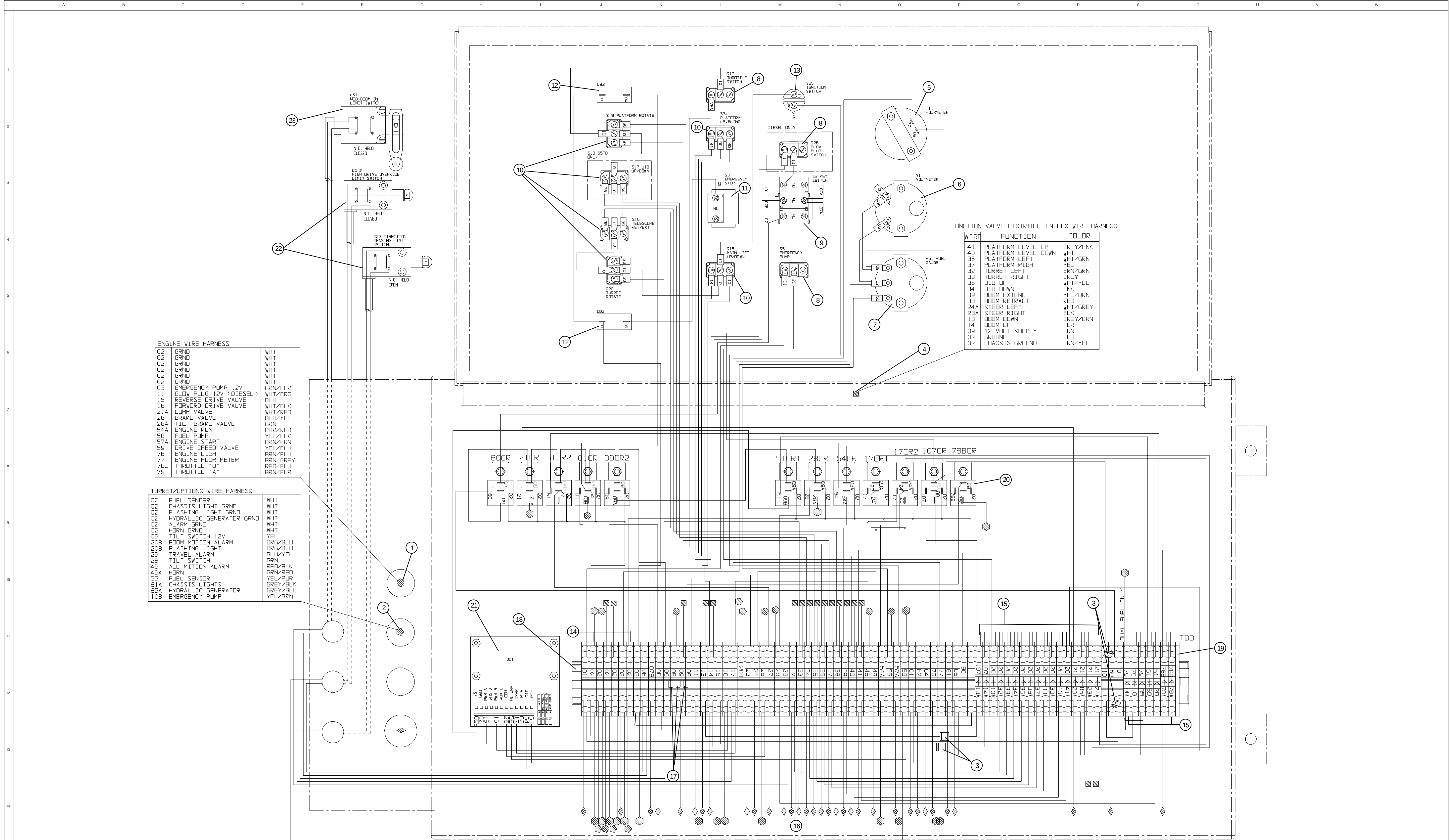


**FIGURE 3-2. BASE CONTROL/ELECTRICAL PANEL WIRING DIAGRAM**

| Index<br>No. | Skyjack<br>Part No. | Description                              | Units<br>per<br>Assy. |
|--------------|---------------------|------------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                            |                       |
| 1            | 709130              | WIRE HARNESS, Engine                     | 1                     |
| 2            | 709902              | WIRE HARNESS, Turret/options             | 1                     |
| 3            | 102921              | DIODE, 6 Amp/1000 piv                    | 4                     |
| 4            | 709899              | DISTRIBUTION BOX, Function valve         | 1                     |
| 5            | 706282              | FUEL GAUGE                               | 1                     |
| 6            | 704732              | VOLTMETER                                | 1                     |
| 7            | 701925              | HOURLMETER                               | 1                     |
| 8            | 701929              | TOGGLE SWITCH, SPDT 2 position momentary | AR                    |
| 9            | (Ref.)              | KEY SWITCH ASSEMBLY                      | 1                     |
|              | 102753              | • SWITCH HEAD                            | 1                     |
|              | 103279              | • CONTACT BASE, N.C.                     | 1                     |
|              | 103141              | • CONTACT BLOCK N.O.                     | 1                     |
| 10           | 103853              | TOGGLE SWITCH, SPST position momentary   | AR                    |
| 11           | (Ref.)              | EMERGENCY STOP SWITCH ASSEMBLY           | 1                     |
|              | 102769              | SWITCH HEAD, Emergency stop              | 1                     |
|              | 103281              | CONTACT BASE, N.C.                       | 1                     |
| 12           | 702402              | CIRCUIT BREAKER, 15 Amp                  | 2                     |
| 13           | 709133              | PUSH BUTTON SWITCH, Start                | 1                     |
| 14           | 707144              | TERMINAL BLOCK, Ground                   | 6                     |
| 15           | 707145              | TERMINAL BLOCK, Diode                    | 24                    |
| 16           | 707143              | TERMINAL BLOCK, Through                  | 50                    |
| 17           | 707148              | TERMINAL BLOCK, Jumper                   | 3                     |
| 18           | 707147              | TERMINAL BLOCK, End stop                 | 2                     |
| 19           | 707146              | TERMINAL BLOCK, End plate                | 1                     |
| 20           | 701943              | SEALED RELAY, 12 VDC                     | AR                    |
| 21           | 709128              | DRIVER CONTROL CARD                      | 1                     |
| 22           | 706294              | LIMIT SWITCH                             | 2                     |
| 23           | 708602              | LIMIT SWITCH                             | 1                     |

## NOTES

FIGURE 3-3. ENGINE WIRING DIAGRAM (Ford Dual Fuel)

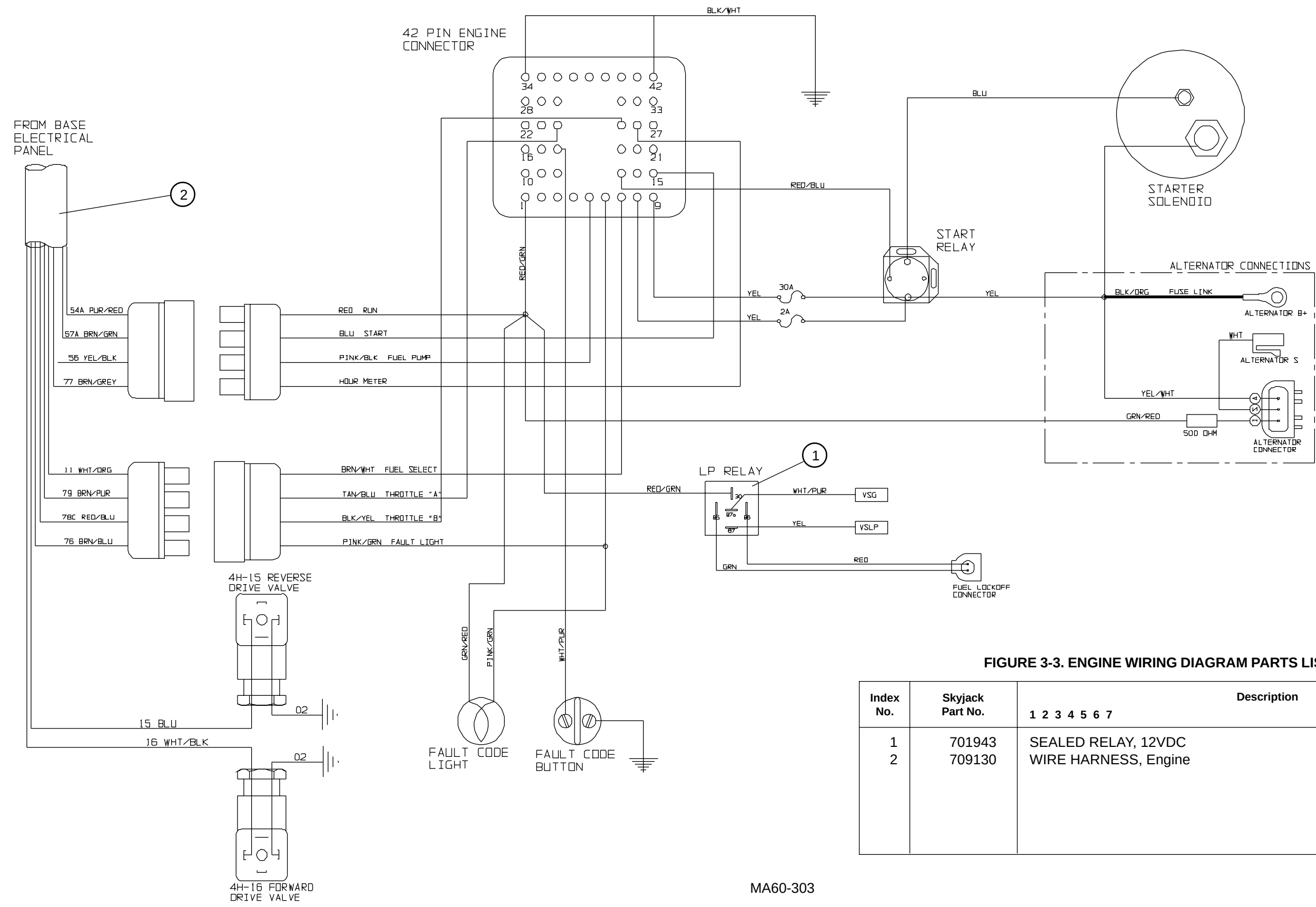


FIGURE 3-3. ENGINE WIRING DIAGRAM PARTS LIST (Ford Dual Fuel)

| Index No. | Skyjack Part No. | Description          |   |   |   |   |   |   | Units per Assy. |
|-----------|------------------|----------------------|---|---|---|---|---|---|-----------------|
|           |                  | 1                    | 2 | 3 | 4 | 5 | 6 | 7 |                 |
| 1         | 701943           | SEALED RELAY, 12VDC  |   |   |   |   |   |   | 1               |
| 2         | 709130           | WIRE HARNESS, Engine |   |   |   |   |   |   | 1               |

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FIGURE 3-4. ENGINE WIRING DIAGRAM (Kubota Diesel)

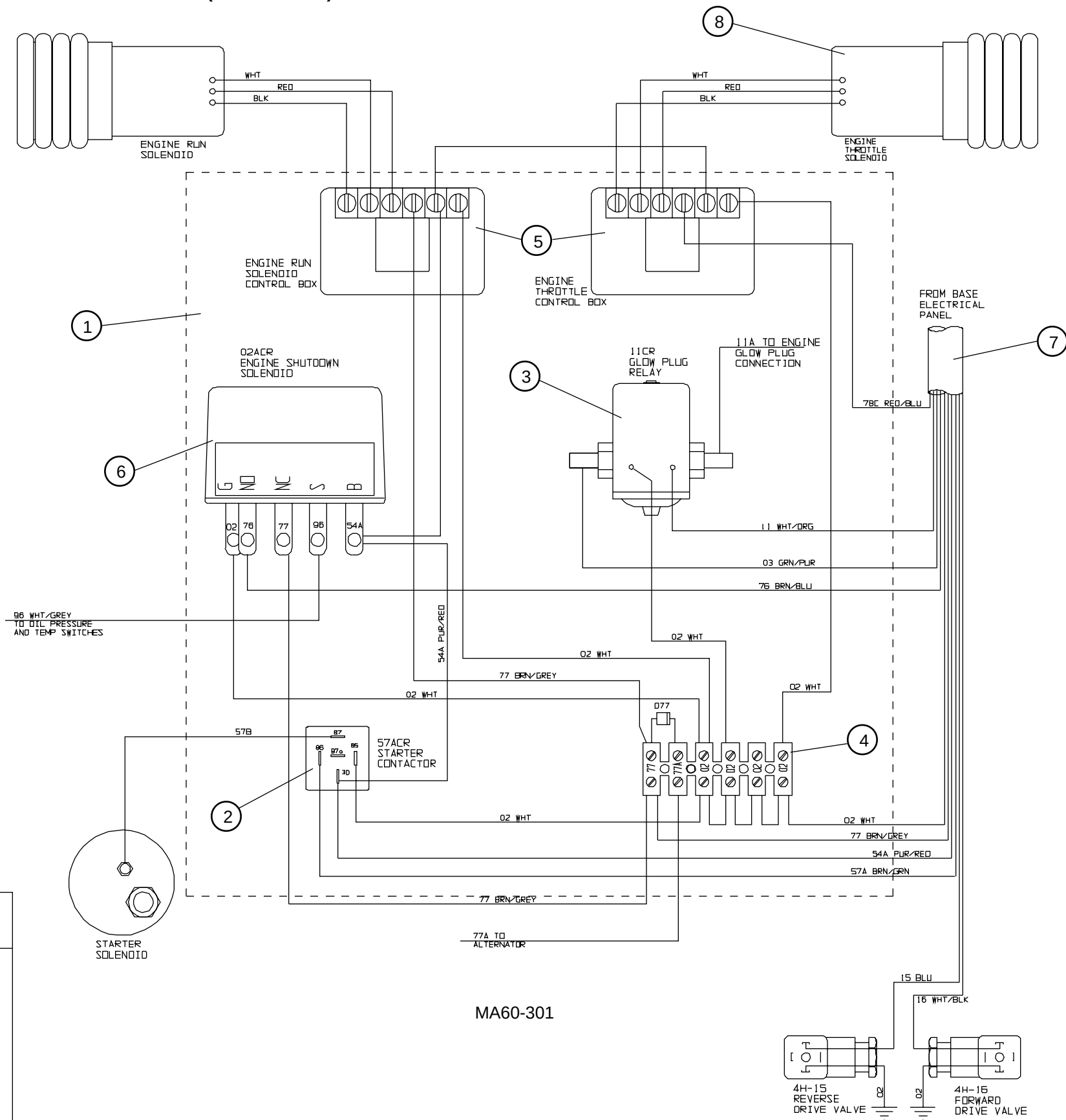


FIGURE 3-4. ENGINE WIRING DIAGRAM PARTS LIST (Kubota Diesel)

| Index No. | Skyjack Part No. | Description                    | Units per Assy. |
|-----------|------------------|--------------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7                  |                 |
| 1         | 709184           | BRACKET, Engine wiring, diesel | 1               |
| 2         | 701943           | SEALED RELAY, 12VDC            | 1               |
| 3         | 703437           | RELAY, 12VDC 80 amp            | 1               |
| 4         | 103011           | TERMINAL STRIP                 | 1               |
| 5         | 703348           | SOLENOID MODULE                | 2               |
| 6         | 703179           | SHUT DOWN SOLENOID, Engine     | 1               |
| 7         | 709130           | WIRE HARNESS, Engine           | 1               |
| 8         | 710561           | CONTROL SOLENOID, Solenoid     | 1               |

FIGURE 3-5. MAIN MANIFOLD WIRING DIAGRAM

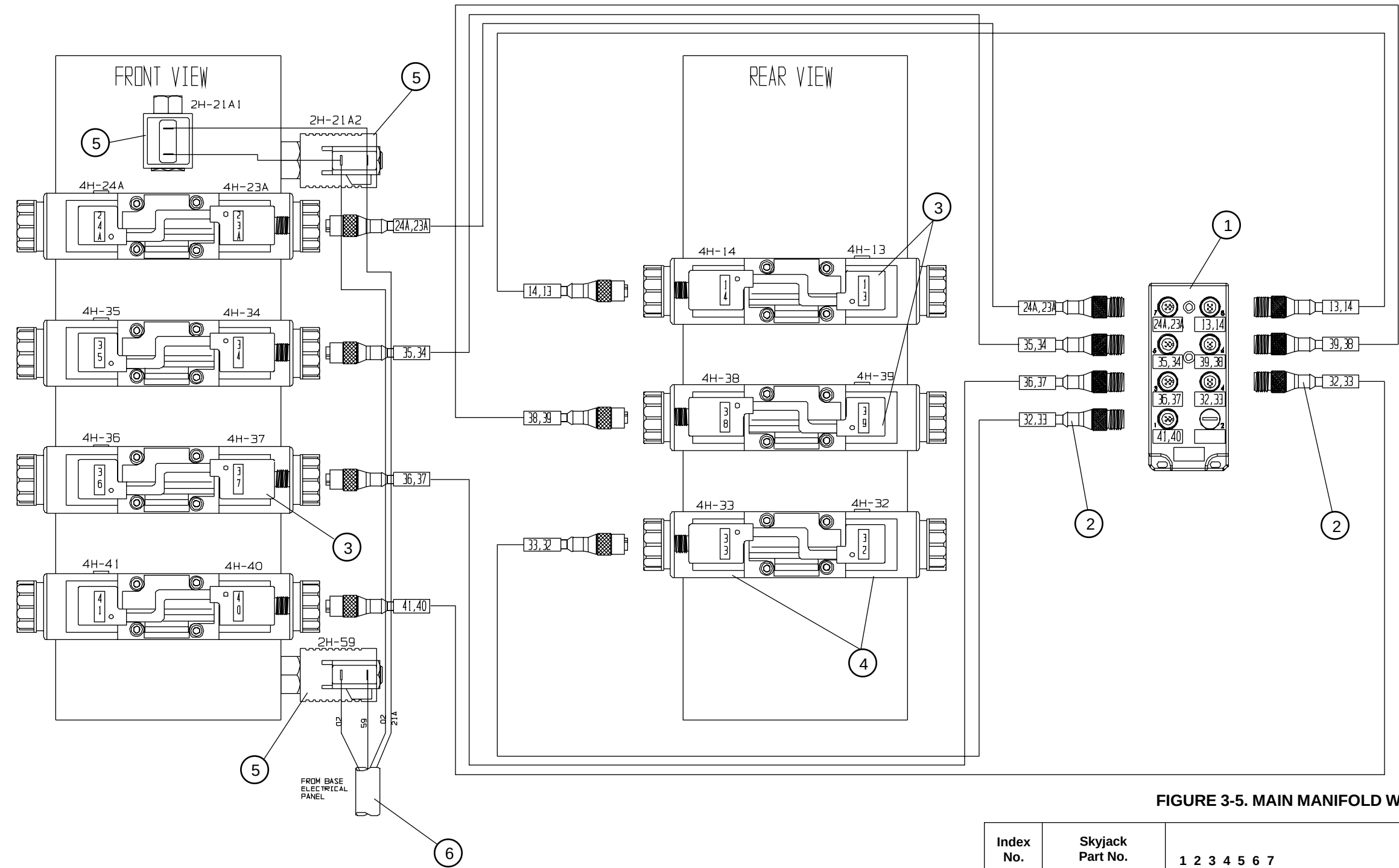


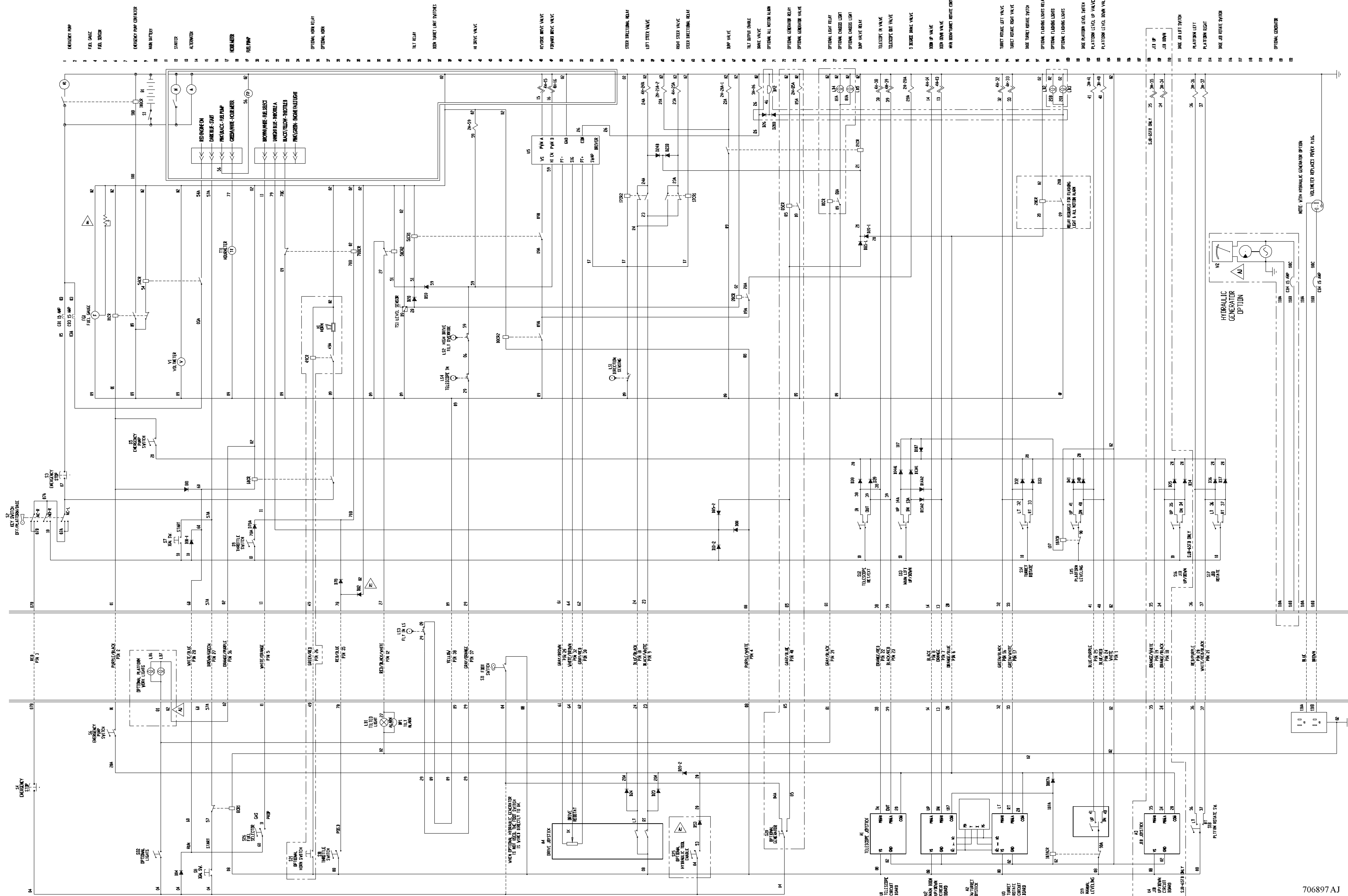
FIGURE 3-5. MAIN MANIFOLD WIRING DIAGRAM PARTS LIST

| Index No. | Skyjack Part No. | Description                        | Units per Assy. |
|-----------|------------------|------------------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7                      |                 |
| 1         | 709899           | DISTRIBUTION BOX, Valve connection | 1               |
| 2         | 709599           | CONNECTION CABLE, Valve            | AR              |
| 3         | 710030           | VALVE CONNECTOR, Dual              | AR              |
| 4         |                  | VALVE COIL,                        |                 |
| 5         | 709413           | VALVE COIL, 12 VDC Solenoid        | 3               |
| 6         | 709130           | WIRE HARNESS, Engine               | 1               |

FIGURE 3-6./FIGURE 3-7. ELECTRICAL SCHEMATIC PARTS LIST

| Ref.<br>No. | Skyjack<br>Part No. | Description                         | Units<br>per<br>Assy | Ref.<br>No. | Skyjack<br>Part No. | Description                               | Units<br>per<br>Assy |
|-------------|---------------------|-------------------------------------|----------------------|-------------|---------------------|-------------------------------------------|----------------------|
|             |                     | 1 2 3 4 5 6 7                       |                      |             |                     | 1 2 3 4 5 6 7                             |                      |
| 01CR        |                     |                                     |                      | FG1         | 706282              | FUEL GAUGE                                | 1                    |
| THRU        | 701943              | SEALED RELAY, 12 Volt               | AR                   | FL20A       | 703323              | FLASHING LIGHT (Option)                   | 2                    |
| 107CR       |                     |                                     |                      | FS1         | 706172              | FUAL SENDING UNIT                         | 1                    |
| 108CR       |                     | EMERGENCY PUMP CONTACTOR            | 1                    | H1          | 703322              | HORN (Option)                             | 1                    |
| 11CR        | 703437              | GLOW PLUG CONTACTOR (Diesel)        | 1                    | LB1         | 709180              | WARNING LIGHT                             | 1                    |
| 17CR1       |                     |                                     |                      | LB2         | 709180              | WARNING LIGHT                             | 1                    |
| THRU        | 701943              | SEALED RELAY, 12 Volt               | AR                   | LS1         | 708602              | LIMIT SWITCH, Mid boom in                 | 1                    |
| 85CR        |                     |                                     |                      | LS2         | 706294              | LIMIT SWITCH, High drive tilt override    | 1                    |
| 2H-21A-1    | 709413              | VALVE COIL, 12 Volt solenoid        | 1                    | LS22        | 706294              | LIMIT SWITCH, Turret direction sensing    | 1                    |
| 2H-21A-2    | 709413              | VALVE COIL, 12 Volt solenoid        | 1                    | LS3         | 709713              | LIMIT SWITCH, Fly boom in                 | 1                    |
| 2H-28A      | 703190              | VALVE, 5° Braking                   | 1                    | S1          | 701930              | TOGGLE SWITCH, SPDT 2 position maintained | 1                    |
| 2H-59       | 709413              | VALVE COIL, 12 Volt solenoid        | 1                    | S10         | 700187              | FOOT SWITCH                               | 1                    |
| 2H-85A      | 703867              | VALVE, Hydraulic generator (Option) | AR                   | S11         | 709176              | JIB UP/DOWN CONTROLLER (SJB-65TB)         | 1                    |
| 3H-26       | 703189              | VALVE, Brake solenoid               | 1                    | S12         |                     |                                           |                      |
| 4H-13       | 710032              | VALVE COIL, 12 Volt                 | 1                    | THRU        | 701930              | TOGGLE SWITCH, SPDT 2 position maintained | 3                    |
| 4H-14       | 710032              | VALVE COIL, 12 Volt                 | 1                    | S14         |                     |                                           |                      |
| 4H-15       |                     | DRIVE VALVE, Reverse                | 1                    | S15         |                     |                                           |                      |
| 4H-16       |                     | DRIVE VALVE, Forward                | 1                    | THRU        | 102853              | TOGGLE SWITCH, SPDT 3 position momentary  | 5                    |
| 4H-23A      | 710032              | VALVE COIL, 12 Volt                 | 1                    | S19         |                     |                                           |                      |
| 4H-24A      | 710032              | VALVE COIL, 12 Volt                 | 1                    | S2          | (Ref.)              | SWITCH ASSEMBLY, Key select               | 1                    |
| 4H-32       | 710032              | VALVE COIL, 12 Volt                 | 1                    |             | 102753              | • SWITCH HEAD                             | 1                    |
| 4H-33       | 710032              | VALVE COIL, 12 Volt                 | 1                    |             | 103279              | • SWITCH CONTACT BLOCK, N.C.              | 1                    |
| 4H-34       | 710032              | VALVE COIL, 12 Volt                 | 1                    |             | 103141              | • SWITCH CONTACT BLOCK, N.O.              | 1                    |
| 4H-35       | 710032              | VALVE COIL, 12 Volt                 | 1                    | S20         | 102853              | TOGGLE SWITCH, SPDT 3 position momentary  | 1                    |
| 4H-36       | 710032              | VALVE COIL, 12 Volt                 | 1                    | S21         | 102853              | TOGGLE SWITCH, SPDT 3 position momentary  | 1                    |
| 4H-37       | 710032              | VALVE COIL, 12 Volt                 | 1                    | S23         |                     |                                           |                      |
| 4H-38       | 710032              | VALVE COIL, 12 Volt                 | 1                    | THRU        | 709133              | PUSH BUTTON SWITCH, N.O.                  | AR                   |
| 4H-39       | 710032              | VALVE COIL, 12 Volt                 | 1                    | S25         |                     |                                           |                      |
| 4H-40       | 710032              | VALVE COIL, 12 Volt                 | 1                    | S26         | 701930              | TOGGLE SWITCH, SPDT 2 position maintained | 1                    |
| 4H-41       | 710032              | VALVE COIL, 12 Volt                 | 1                    | S3          | (Ref.)              | SWITCH ASSEMBLY, Emergency stop           | 1                    |
| BP20A       | 703321              | ALARM BEEPER, 12 Volt               | 1                    |             | 102769              | • SWITCH HEAD, Emergency stop             | 1                    |
| BP26        | 703321              | ALARM BEEPER, 12 Volt               | 1                    |             | 103281              | • SWITCH CONTACT                          | 1                    |
| BP27        | 103057              | BEEPER, Warning                     | 1                    | S34         | 102853              | TOGGLE SWITCH, SPDT 3 position momentary  | 1                    |
| BP46        | 703321              | ALARM BEEPER, 12 Volt               | 1                    | S4          | (Ref.)              | SWITCH ASSEMBLY, Emergency stop           | 1                    |
| CB2         |                     |                                     |                      |             | 102769              | • SWITCH HEAD, Emergency stop             | 1                    |
| THRU        | 702402              | CIRCUIT BREAKER, 15 Amp             | 3                    |             | 103281              | • SWITCH CONTACT                          | 1                    |
| CB4         |                     |                                     |                      | S5          | 701929              | TOGGLE SWITCH, SPDT 2 position momentary  | 1                    |
| D01         | 102921              | DIODE, 6 Amp/1000 piv               | 1                    | S6          | 701929              | TOGGLE SWITCH, SPDT 2 position momentary  | 1                    |
| D04         | 102921              | DIODE, 6 Amp/1000 piv               | 1                    | S7          | 709177              | BOOM UP/DOWN-TURRET ROTATE CONTROLLER     | 1                    |
| D08         | 707145              | TERMINAL BLOCK, Diode               | 1                    | S8          | 709178              | DRIVE STEER CONTROLLER                    | 1                    |
| D10-1       | 102921              | DIODE, 6 Amp/1000 piv               | 1                    | S9          | 709176              | BOOM EXTEND/RETRACT CONTROLLER            | 1                    |
| D10-2       | 707145              | TERMINAL BLOCK, Diode               | 1                    | TS1         | 700552              | TILT SWITCH                               | 1                    |
| D107A       | 707145              | TERMINAL BLOCK, Diode               | 1                    | TT1         | 701925              | HOUR METER                                | 1                    |
| D13A1       | 707145              | TERMINAL BLOCK, Diode               | 1                    | V1          | 704732              | VOLT METER                                | 1                    |
| D13A2       | 707145              | TERMINAL BLOCK, Diode               | 1                    | WL81        | 704779              | PLATFORM WORK LIGHT (Option)              | 2                    |
| D14A1       | 102921              | DIODE, 6 Amp/1000 piv               | 1                    | WL81A       | 703545              | CHASSIS WORK LIGHT (Option)               | 2                    |
| D14A2       | 102921              | DIODE, 6 Amp/1000 piv               | 1                    |             |                     |                                           |                      |
| D20-1       |                     |                                     |                      |             |                     |                                           |                      |
| THRU        | 707145              | TERMINAL BLOCK, Diode               | AR                   |             |                     |                                           |                      |
| D85-2       |                     |                                     |                      |             |                     |                                           |                      |
| DC1         | 709128              | DRIVER CONTROL CARD                 | 1                    |             |                     |                                           |                      |

**FIGURE 3-6. ELECTRICAL SCHEMATIC (Dual Fuel)(Serial Number 97035 and Above.)**







WIRING DIAGRAM FOR HYDRAULIC SYSTEM

**Legend:**

- 1 EMERGENCY PUMP
- 2 CIRCUIT BREAKER
- 3 FUEL LEVEL GAUGE
- 4 FUEL LEVEL SENSING UNIT
- 5 EMERGENCY PUMP RELAY
- 6 EMERGENCY PUMP CONTACTOR
- 7 BATTERY
- 8 BATTERY DISCONNECT SWITCH
- 9 STARTER
- 10 ALTERNATOR
- 11 STARTER RELAY
- 12 GLOW PLUGS
- 13 GLOW PLUG RELAY
- 14 RUN RELAY
- 15 EMERGENCY PUMP SWITCH
- 16 ENGINE PRESSURE SWITCH
- 17 ENGINE TEMPERATURE SWITCH
- 18 TILT ALARM RELAY
- 19 TILT SWITCH
- 20 TILTED DRIVE CIRCUIT RELAY
- 21 L&S LIMIT SWITCHES
- 22 HIGH DRIVE VALVE
- 23 DRIVE ENABLE RELAY
- 24 REVERSE DRIVE VALVE
- 25 FORWARD DRIVE VALVE
- 26 DRIVE CONTROL BOARD
- 27 STEER DIRECTIONAL RELAY
- 28 LEFT STEER VALVE
- 29 COMMON STEER VALVE
- 30 RIGHT STEER VALVE
- 31 STEER DIRECTIONAL RELAY
- 32 TRAVEL ALARM RELAY (OPTION)
- 33 LOAD SENSE DUMP VALVE
- 34 TILTED BRAKE RELAY
- 35 BRAKE VALVE
- 36 ALL NOTION ALARM (OPTION)
- 37 HYDRAULIC GENERATOR RELAY (OPTION)
- 38 CHASSIS WORK LIGHT (OPTION)
- 39 DUMP VALVE RELAY
- 40 TELESCOPE IN VALVE
- 41 TELESCOPE OUT VALVE
- 42 TILTED BRAKE VALVE
- 43 BEEM UP VALVE
- 44 BEEM DOWN VALVE
- 45 FLARE ROTATE LEFT
- 46 FLARE ROTATE RIGHT
- 47 FLASHING LIGHT RELAY (OPTION)
- 48 FLASHING LIGHT (OPTION)
- 49 BEEM NOTION ALARM (OPTION)
- 50 PLATFORM LEVELING UP VALVE
- 51 PLATFORM LEVELING DOWN VALVE
- 52 JIB UP VALVE
- 53 JIB DOWN VALVE
- 54 PLATFORM ROTATE LEFT
- 55 PLATFORM ROTATE RIGHT
- 56 VOLT METER (OPTIONAL GENERATOR)
- 57 HYDRAULIC GENERATOR (OPTION)

**Wiring Details:**

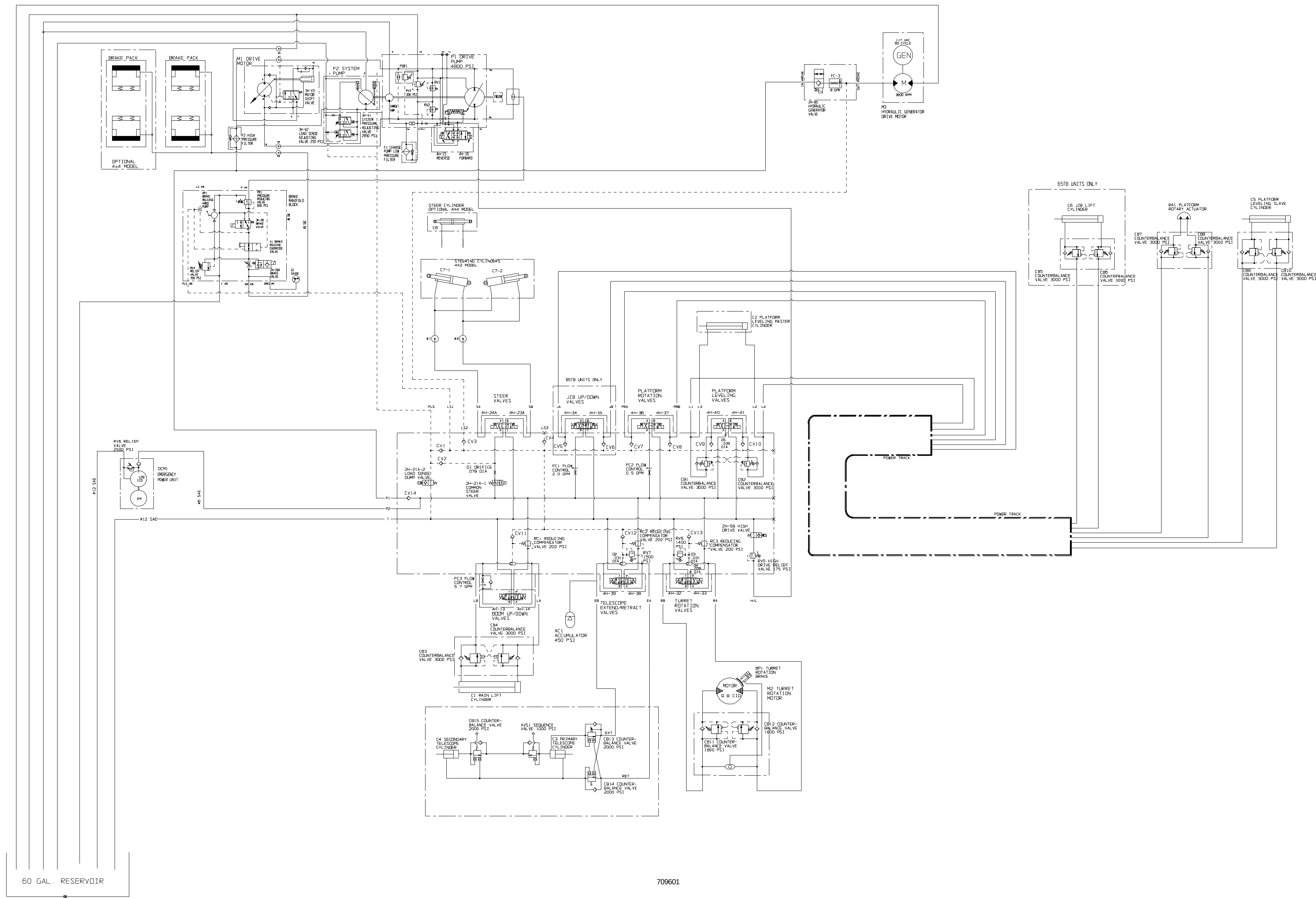
- Emergency Pump Circuit:** Emergency Pump Switch (S3) connects to Emergency Pump Relay (R1) and Emergency Pump Contactor (C1). The relay is controlled by the battery through a circuit breaker (CB1).
- Engine Control Circuit:** Fuel Level Gauge (G1) and Fuel Level Sensing Unit (U1) are connected to the engine control system. The Starter Relay (R2) is controlled by the battery through a disconnect switch (S1).
- Drive and Steering Circuit:** The Drive Control Board (CB2) receives signals from the Tilt Switch (S2), Tilted Drive Circuit Relay (R3), and L&S Limit Switches (S3, S4). It controls the High Drive Valve (V1), Drive Enable Relay (R4), Reverse Drive Valve (V2), and Forward Drive Valve (V3).
- Steering and Travel Circuit:** The Steer Directional Relay (R5) controls the Left Steer Valve (V4), Common Steer Valve (V5), and Right Steer Valve (V6). The Travel Alarm Relay (R6) is triggered by the L&S Limit Switches.
- Platform and Jib Control:** The Platform Leveling Up/Down Valves (V7, V8) and Jib Up/Down Valves (V9, V10) are controlled by their respective relays (R7, R8, R9, R10). The Platform Rotate Left/Right Valves (V11, V12) are controlled by their respective relays (R11, R12).
- Optional Features:** The diagram includes wiring for optional features such as the Hydraulic Generator (R13), Chassis Work Light (R14), and Flashing Light (R15).

**Notes:**

- NOTE: S&B-4518 ONLY
- NOTE: NOT AVAILABLE FOR EUROPEAN KEYS
- NOTE: S&B-4518 ONLY



FIGURE 3-10. HYDRAULIC SCHEMATIC

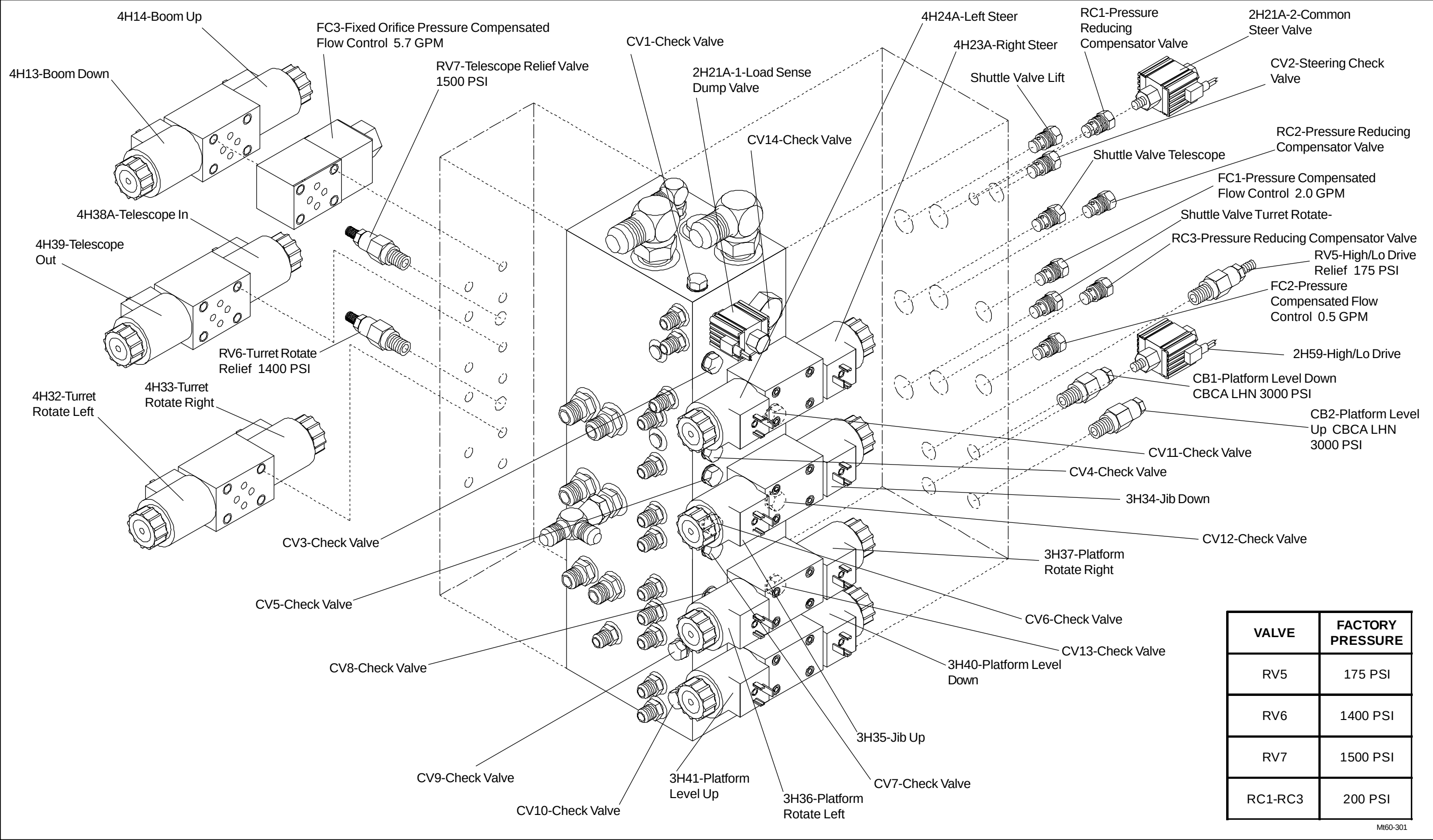


709601

FIGURE 3-10. HYDRAULIC SCHEMATIC PARTS LIST

| Ref. No. | Skyjack Part No. | Description                                               | Units per Assy | Ref. No. | Skyjack Part No. | Description                                              | Units per Assy |
|----------|------------------|-----------------------------------------------------------|----------------|----------|------------------|----------------------------------------------------------|----------------|
|          |                  | 1 2 3 4 5 6 7                                             |                |          |                  | 1 2 3 4 5 6 7                                            |                |
| AC1      | 700903           | ACCUMULATOR 450 PSI                                       | 1              | CB4      | 701827           | COUNTERBALANCE VALVE 3000 PSI                            | 1              |
| 2H-21A1  | 709412           | COMMON STEER VALVE                                        | 1              | CB5      | 701827           | COUNTERBALANCE VALVE 3000 PSI                            | 1              |
| 2H-21A2  | 709411           | LOAD SENSE DUMP VALVE                                     | 1              | CB6      | 701827           | COUNTERBALANCE VALVE 3000 PSI                            | 1              |
| 2H-28A   | 703190           | BRAKE VALVE, 5° Braking                                   | 1              | CB7      | 701827           | COUNTERBALANCE VALVE 3000 PSI                            | 1              |
| 2H-59    | 709411           | HIGH DRIVE TILT OVERRIDE VALVE                            | 1              | CB8      | 701827           | COUNTERBALANCE VALVE 3000 PSI                            | 1              |
| 2H-85A   | 703867           | HYDRAULIC GENERATOR VALVE                                 | 1              | CB9      | 701827           | COUNTERBALANCE VALVE 3000 PSI                            | 1              |
| 3H-26    | 703189           | BRAKE VALVE                                               | 1              | CV1      |                  |                                                          |                |
| 4H-13    | 709416           | HYDRAULIC VALVE, Boom down (Includes 4H-14)               | 1              | THRU     | 709406           | CHECK VALVE, Flush mounted 4±1 crack                     | 13             |
| 4H-14    | 709416           | HYDRAULIC VALVE, Boom down (Includes 4H-13)               | 1              | CV13     |                  |                                                          |                |
| 4H-23A   | 709414           | HYDRAULIC VALVE, Steer right (Includes 4H-24A)            | 1              | CV14     | 709407           | CHECK VALVE, Flush mounted 4±1 crack                     | 1              |
| 4H-24A   | 709414           | HYDRAULIC VALVE, Steer left (Includes 4H-23A)             | 1              | DCM1     | 706921           | PUMP/MOTOR ASSEMBLY, Emergency                           | 1              |
| 4H-32    | 709967           | HYDRAULIC VALVE, Turret rotate left (Includes 4H-33)      | 1              | F1       | 706814           | OIL FILTER, Low pressure                                 | 1              |
| 4H-33    | 709967           | HYDRAULIC VALVE, Turret rotate right (Includes 4H-32)     | 1              |          | 708333           | • FILTER ELEMENT                                         | 1              |
| 4H-34    | 709967           | HYDRAULIC VALVE, Jib down (Includes 4H-35)(SJB-65TB only) | 1              | F2       | 704476           | OIL FILTER, High pressure                                | 1              |
| 4H-35    | 709967           | HYDRAULIC VALVE, Jib up (Includes 4H-34)(SJB-65TB only)   | 1              |          | 704559           | • FILTER ELEMENT                                         | 1              |
| 4H-36    | 709415           | HYDRAULIC VALVE, Platform rotate left (Includes 4H-37)    | 1              | FC1      | 709965           | FLOW CONTROL, Fixed orifice pressure compensated 2.0 gpm | 1              |
| 4H-37    | 709415           | HYDRAULIC VALVE, Platform rotate right (Includes 4H-36)   | 1              | FC2      | 709408           | FLOW CONTROL, Fixed orifice pressure compensated 0.5 gpm | 1              |
| 4H-38    | 709416           | HYDRAULIC VALVE, Telescopic boom retract (Includes 4H-39) | 1              | FC3      | 703868           | FLOW CONTROL, 8 gpm Hydraulic generator (Option)         | 1              |
| 4H-39    | 709416           | HYDRAULIC VALVE, Telescopic boom extend (Includes 4H-38)  | 1              | O1       | 709962           | ORIFICE, .078 dia.                                       | 1              |
| 4H-40    | 709415           | HYDRAULIC VALVE, Platform leveling down (Includes 4H-41)  | 1              | O2       | 709916           | ORIFICE, .031 dia.                                       | 1              |
| 4H-41    | 709415           | HYDRAULIC VALVE, Platform leveling up (Includes 4H-40)    | 1              | O3       | 709916           | ORIFICE, .031 dia.                                       | 1              |
| AVS1     | 709996           | SEQUENCE VALVE, Atmospheric vent                          | 1              | O4       | 710027           | ORIFICE, .059 dia.                                       | 1              |
| BP1      | (Ref.)           | TURRET ROTATION BRAKE                                     | 1              | O5       | 710026           | ORIFICE, .039 dia.                                       | 1              |
|          | 704223           | • BRAKE PISTON                                            | 1              | POR1     | 710840           | VALVE, Pressure override                                 | 1              |
|          | 704224           | • BRAKE DISK                                              | 1              | RA1      | 709115           | ROTARY ACTUATOR, Platform (SJB-65TB)                     | 1              |
|          | 708389           | • SEAL REPAIR KIT                                         | AR             |          | 701875           | • SEAL REPAIR KIT                                        | AR             |
| C1       | 707338           | CYLINDER ASSEMBLY, Main lift                              | 1              | RA1      | 706740           | ROTARY ACTUATOR, Platform (SJB-60TB)                     | 1              |
|          | 709401           | • SEAL REPAIR KIT                                         | AR             |          | 701875           | • SEAL REPAIR KIT                                        | AR             |
| C2       | 707327           | CYLINDER ASSEMBLY, Platform leveling master               | 1              | RC1      |                  |                                                          |                |
|          | 709402           | • SEAL REPAIR KIT                                         | AR             | THRU     | 709409           | COMPENSATOR VALVE, Reducing 200 psi                      | 3              |
| C3       | 709501           | CYLINDER ASSEMBLY, Telescope (Includes C4)                | 1              | RC3      |                  |                                                          |                |
| C4       | 709501           | CYLINDER ASSEMBLY, Telescope (Includes C3)                | 1              | RV5      | 709403           | RELIEF VALVE, High speed drive 175 psi                   | 1              |
|          | 710013           | • SEAL REPAIR KIT (Includes seals for C3 and C4)          | AR             | RV6      | 709405           | RELIEF VALVE, Turret rotaation 1400 psi                  | 1              |
| C5       | 707321           | CYLINDER ASSEMBLY, Platform leveling slave                | 1              | RV7      | 709404           | RELIEF VALVE, Telescope retract 1500 psi                 | 1              |
| C5       | 709402           | • SEAL REPAIR KIT                                         | AR             |          |                  |                                                          |                |
| C6       | 709469           | CYLINDER ASSEMBLY, Jib lift (SJB-65TB only)               | 1              |          |                  |                                                          |                |
| C6       | 709400           | • SEAL REPAIR KIT                                         | AR             |          |                  |                                                          |                |
| C7-1     | 702913           | CYLINDER ASSEMBLY, Steering (2 WD)                        | 1              |          |                  |                                                          |                |
| C7-2     | 702913           | CYLINDER ASSEMBLY, Steering (2 WD)                        | 1              |          |                  |                                                          |                |
|          | 703180           | • SEAL REPAIR KIT                                         | AR             |          |                  |                                                          |                |
| C8       | 706537           | CYLINDER ASSEMBLY, Steering (4 WD)                        | 1              |          |                  |                                                          |                |
| C8       | 706538           | • SEAL REPAIR KIT                                         | AR             |          |                  |                                                          |                |
| CB1      | 701827           | COUNTERBALANCE VALVE 3000 PSI                             | 1              |          |                  |                                                          |                |
| CB10     | 701827           | COUNTERBALANCE VALVE 3000 PSI                             | 1              |          |                  |                                                          |                |
| CB11     | 706384           | COUNTERBALANCE VALVE 1800 PSI                             | 1              |          |                  |                                                          |                |
| CB12     | 706384           | COUNTERBALANCE VALVE 1800 PSI                             | 1              |          |                  |                                                          |                |
| CB13     | 709993           | COUNTERBALANCE VALVE 2000 PSI                             | 1              |          |                  |                                                          |                |
| CB14     | 709993           | COUNTERBALANCE VALVE 2000 PSI                             | 1              |          |                  |                                                          |                |
| CB15     | 709993           | COUNTERBALANCE VALVE 2000 PSI                             | 1              |          |                  |                                                          |                |
| CB2      | 701827           | COUNTERBALANCE VALVE 3000 PSI                             | 1              |          |                  |                                                          |                |
| CB3      | 701827           | COUNTERBALANCE VALVE 3000 PSI                             | 1              |          |                  |                                                          |                |

FIGURE 3-11. MAIN MANIFOLD COMPONENT AND PORT IDENTIFICATION



| VALVE   | FACTORY PRESSURE |
|---------|------------------|
| RV5     | 175 PSI          |
| RV6     | 1400 PSI         |
| RV7     | 1500 PSI         |
| RC1-RC3 | 200 PSI          |

Mt60-301

FIGURE 3-12. BRAKE MANIFOLD COMPONENT AND PORT IDENTIFICATION

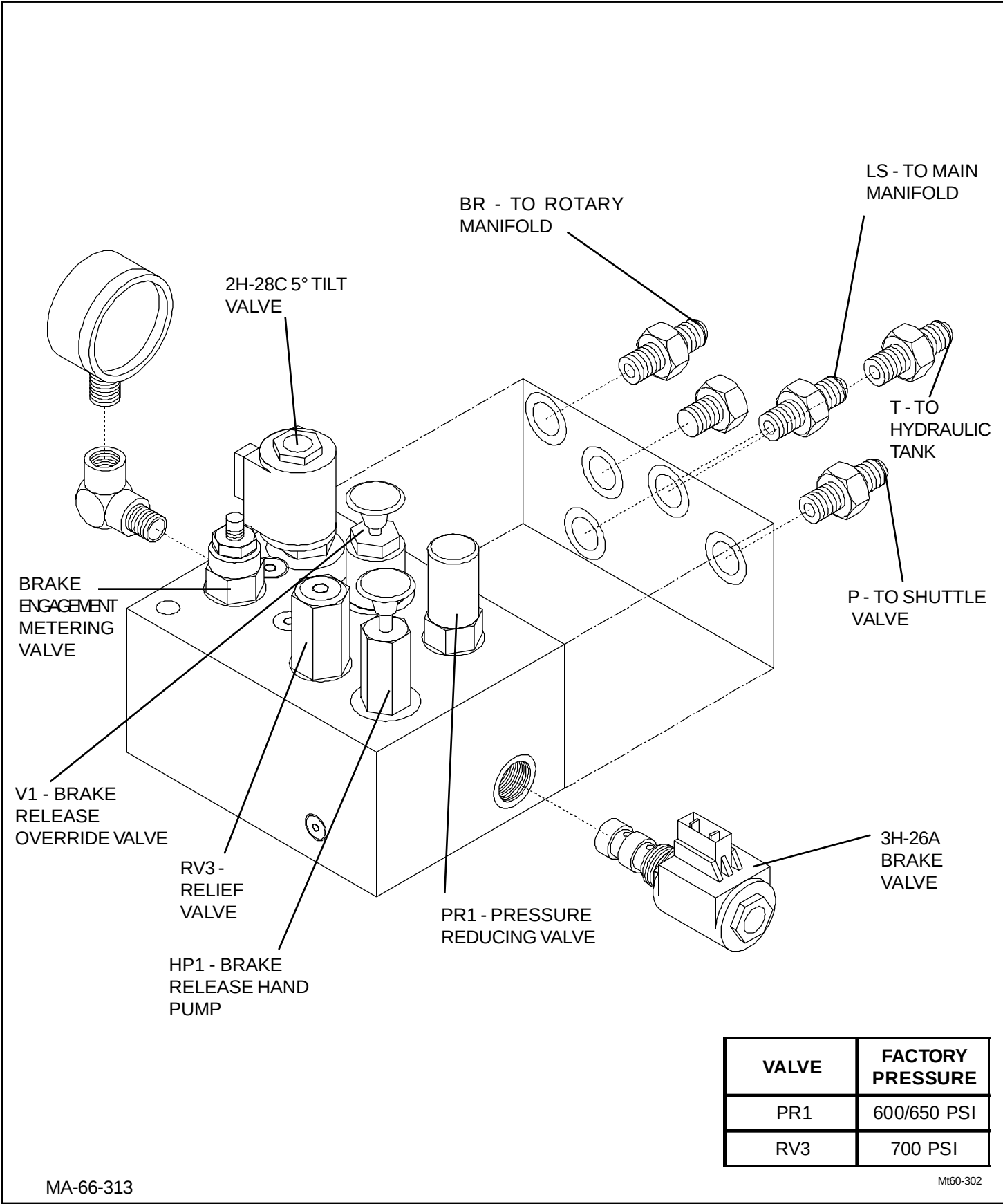
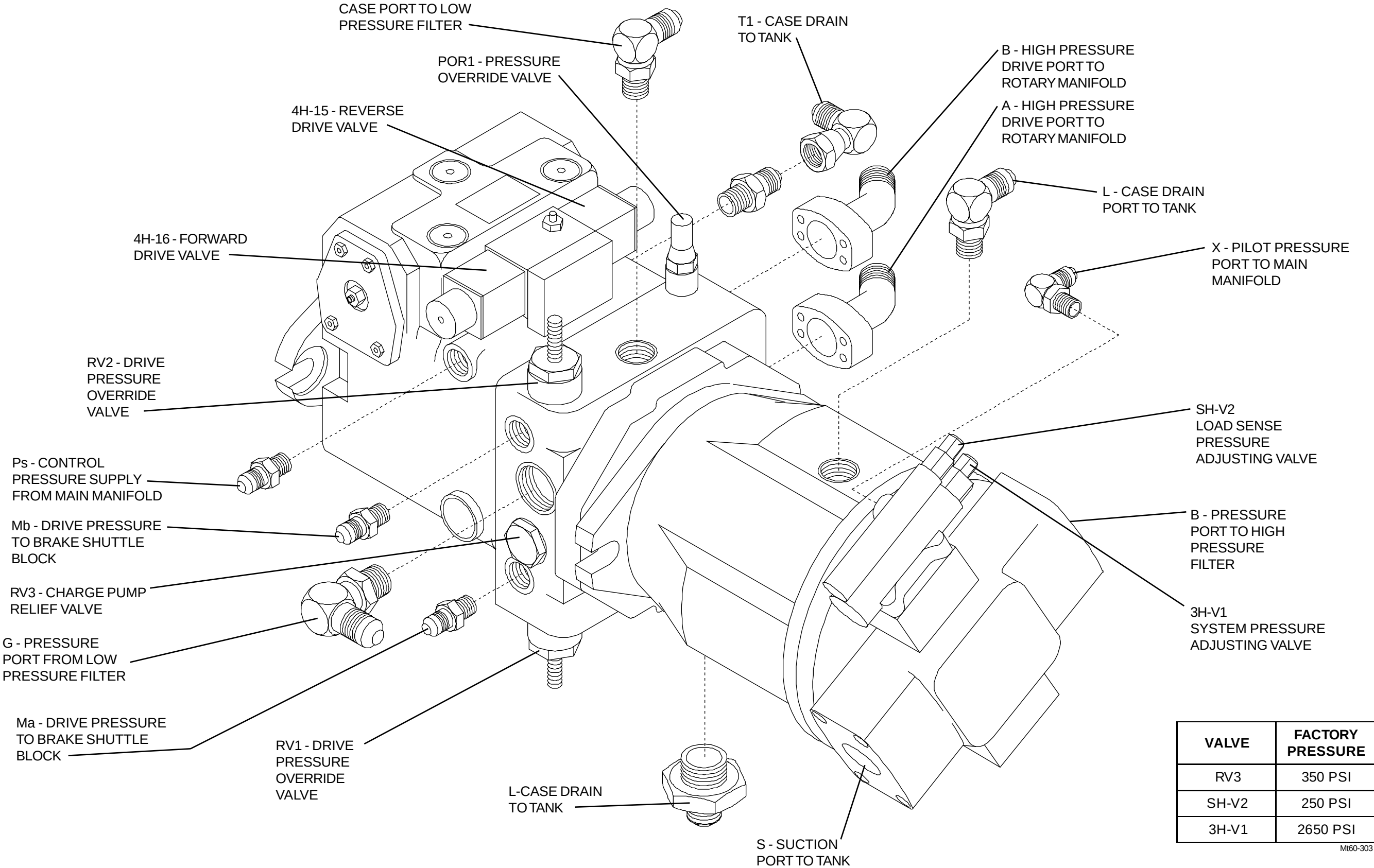


FIGURE 3-13. DRIVE AND SYSTEM PUMP COMPONENT AND PORT IDENTIFICATION



MA-66-309

M60-303

## SECTION 4 TROUBLESHOOTING

The following pages contain a Table of Troubleshooting information for locating and correcting most service trouble which can develop. Careful and accurate analysis of the system listed in the Table of Troubleshooting Information will localize the trouble more quickly than any other method. This manual can not cover all possible troubles and deficiencies that may occur. If a specific trouble is not listed, isolate the major component in which the trouble occurs, and then isolate and correct the specific problem.

| TROUBLE | PROBABLE CAUSE | REMEDY |
|---------|----------------|--------|
|---------|----------------|--------|

### ELECTRICAL SYSTEM

**NOTE: ALL TESTS SHOULD BE PERFORMED WITH BOOM OVER NON-STEERING AXLE**

|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ALL CONTROLS<br/>INOPERATIVE</b>                  | <ol style="list-style-type: none"> <li>1. Battery disconnected or discharged.</li> <li>2. Loose or broken wire #03 from battery to circuit breaker CB2.</li> <li>3. Circuit breaker CB2 tripped or defective.</li> <li>4. Loose or broken wire #05 from circuit breaker CB2 to base emergency stop switch S3.</li> <li>5. Open or defective base emergency stop switch S3.</li> <li>6. Loose or broken wire #07 from base emergency stop switch S2.</li> <li>7. Open or defective key select switch S2.</li> <li>8. Loose or broken wire #60 from base terminal block to relay 60CR.</li> <li>9. Loose or broken wire #07 to relay 60CR.</li> <li>10. Loose or broken wire #02 from relay 60CR to base terminal block.</li> <li>11. Defective relay 60CR.</li> <li>12. Loose or broken wire #02 from base terminal block to battery B1.</li> </ol> | <ol style="list-style-type: none"> <li>1. Connect battery or recharge.</li> <li>2. Check Continuity. Replace if defective.</li> <li>3. Reset breaker, check for defective wiring. Replace if defective.</li> <li>4. Check Continuity. Replace if defective.</li> <li>5. Close switch. Replace if defective.</li> <li>6. Check Continuity. Replace if defective.</li> <li>7. Close switch. Replace if defective.</li> <li>8. Check Continuity. Replace if defective.</li> <li>9. Check Continuity. Replace if defective.</li> <li>10. Check Continuity. Replace if defective.</li> <li>11. Check Relay. Replace if defective.</li> <li>12. Check Continuity. Replace if defective.</li> </ol> |
| <b>ENGINE WILL NOT<br/>CRANK FROM PLAT-<br/>FORM</b> | <ol style="list-style-type: none"> <li>1. Foot on foot switch S10.</li> <li>2. Defective ignition switch S24.</li> <li>3. Loose or broken wire #57 from ignition switch S24 to relay 8CR1</li> <li>4. Defective relay 8CR1.</li> <li>5. Loose or broken wire #57A from relay 8CR1 to base terminal block.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <ol style="list-style-type: none"> <li>1. Remove foot from foot switch.</li> <li>2. Check Continuity. Replace if defective.</li> <li>3. Check Continuity. Replace if defective.</li> <li>4. Check Continuity. Replace if defective.</li> <li>5. Check Continuity. Replace if defective.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>ENGINE WILL NOT<br/>CRANK FROM BASE</b>           | <ol style="list-style-type: none"> <li>1. Loose or broken wire #10 from key select switch S2 to base start button S25.</li> <li>2. Loose or broken wire #57A from base start button S25 to engine wiring harness.</li> <li>3. Defective base start button.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <ol style="list-style-type: none"> <li>1. Check Continuity. Replace if defective.</li> <li>2. Check Continuity. Replace if defective.</li> <li>3. Check Start Button. Replace if defective.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## TROUBLESHOOTING (Cont.)

| TROUBLE                                               | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | REMEDY                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SYSTEM (Cont.)</b>                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>NO POWER TO PLAT-FORM</b>                          | <ol style="list-style-type: none"> <li>Open or defective key select switch S2.</li> <li>Loose or broken wire #07B from key select switch S2 to base terminal block.</li> <li>Loose or broken wire #07B from base terminal block to platform terminal block.</li> <li>Loose or broken wire #07B from platform terminal block to platform emergency stop switch S4.</li> <li>Open or defective platform emergency stop switch S4.</li> </ol>                                                                                                                                                                            | <ol style="list-style-type: none"> <li>Close Switch. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Switch. Replace if defective.</li> </ol>                                                                                                                                                  |
| <b>ENGINE CRANKS BUT WILL NOT START FROM BASE</b>     | <ol style="list-style-type: none"> <li>Loose or broken wire #09 from terminal block to ignition cut out relay 01CR</li> <li>Defective ignition cut out relay.</li> <li>Loose or broken wire #54 from ignition cut out relay 01CR to ignition relay 54CR.</li> <li>Defective ignition relay 54CR.</li> <li>Loose or broken wire #02 from ignition relay 54CR to terminal block.</li> <li>Loose or broken wire #03 from circuit breaker CB3 to ignition relay 54CR.</li> <li>Tripped or defective circuit breaker CB3.</li> <li>Loose or broken wire #54A from ignition relay 54CR to engine wiring harness.</li> </ol> | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Relay. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Relay. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> </ol> |
| <b>NOTE:</b>                                          | For problems with the engine.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Consult engine manufacturers manual.                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>ENGINE CRANKS BUT WILL NOT START FROM PLATFORM</b> | <ol style="list-style-type: none"> <li>Loose or broken wire #09 from base terminal block to ignition cut out relay 01CR.</li> <li>Loose or broken wire #54 from ignition cut out relay 01CR to ignition relay 54CR.</li> <li>Defective ignition cut out relay 01CR or ignition relay 54CR.</li> <li>Loose or broken wire #54A from ignition relay 54CR to engine wiring harness.</li> </ol>                                                                                                                                                                                                                           | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Relays . Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> </ol>                                                                                                                                                                                              |
| <b>NOTE:</b>                                          | For problems with the engine.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Consult engine manufacturers manual.                                                                                                                                                                                                                                                                                                                                                                                                   |

## TROUBLESHOOTING (Cont.)

| TROUBLE | PROBABLE CAUSE | REMEDY |
|---------|----------------|--------|
|---------|----------------|--------|

### ELECTRICAL SYSTEM (Cont.)

|                                                                                             |     |                                                                                                        |     |                                         |
|---------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------|-----|-----------------------------------------|
| <b>ENGINE (Kabota Diesel)<br/>CRANKS BUT WILL NOT<br/>START FROM PLAT-<br/>FORM OR BASE</b> | 1.  | Loose or broken wire #03 from base terminal block to circuit breaker CB2.                              | 1.  | Check Continuity. Replace if defective. |
|                                                                                             | 2.  | Tripped or defective circuit breaker CB2.                                                              | 2.  | Check Continuity. Replace if defective. |
|                                                                                             | 3.  | Loose or broken wire #03A from CB2 to 54CR.                                                            | 3.  | Check Continuity. Replace if defective. |
|                                                                                             | 4.  | Loose or broken wire #54 from 01CR to 54CR.                                                            | 4.  | Check Continuity. Replace if defective. |
|                                                                                             | 5.  | Loose or broken wire #02 from 54CR to base terminal block.                                             | 5.  | Check Continuity. Replace if defective. |
|                                                                                             | 6.  | Loose or broken wire #54A from 54CR to engine terminal block.                                          | 6.  | Check Continuity. Replace if defective. |
|                                                                                             | 7.  | Defective relay 54CR.                                                                                  | 7.  | Check Relays. Replace if defective.     |
|                                                                                             | 8.  | Loose or broken wire #11 from glow plug switch #S33 to relay 11CR.                                     | 8.  | Check Continuity. Replace if defective. |
|                                                                                             | 9.  | Loose or broken wire #02 from relay 11CR to base terminal block.                                       | 9.  | Check Continuity. Replace if defective. |
|                                                                                             | 10. | Loose or broken wire #03 from alternator to relay 11CR.                                                | 10. | Check Continuity. Replace if defective. |
|                                                                                             | 11. | Loose or broken wire #03A from relay 11CR to glow plugs.                                               | 11. | Check Continuity. Replace if defective. |
|                                                                                             | 12. | Loose or broken wire #02 from glow plugs to base terminal block.                                       | 12. | Check Continuity. Replace if defective. |
|                                                                                             | 13. | Defective relay #11CR.                                                                                 | 13. | Check Relays. Replace if defective.     |
|                                                                                             | 14. | Defective glow plugs.                                                                                  | 14. | Check Glow Plugs. Replace if defective. |
|                                                                                             | 15. | Loose or broken wire #76 from base terminal block to time delay murphy switch.                         | 15. | Check Continuity. Replace if defective. |
|                                                                                             | 16. | Loose or broken wire #77 from engine terminal block to time delay murphy switch or run control board.  | 16. | Check Continuity. Replace if defective. |
|                                                                                             | 17. | Loose or broken wire #54A from engine terminal block to time delay murphy switch or run control board. | 17. | Check Continuity. Replace if defective. |
|                                                                                             | 18. | Loose or broken wire #20 from time delay murphy switch or run control board to engine terminal board.  | 18. | Check Continuity. Replace if defective. |
|                                                                                             | 19. | Blown fuse on time delay murphy switch.                                                                | 19. | Check Fuse. Replace if defective.       |
|                                                                                             | 20. | Defective time delay murphy switch.                                                                    | 20. | Check Switch. Replace if defective.     |
|                                                                                             | 21. | Defective run control board.                                                                           | 21. | Check Board. Replace if defective.      |
|                                                                                             | 22. | Loose or broken wires from run control board to run solenoid.                                          | 22. | Check Continuity. Replace if defective. |
|                                                                                             | 23. | Defective run solenoid.                                                                                | 23. | Check Solenoid. Replace if defective.   |

## TROUBLESHOOTING (Cont.)

| TROUBLE                                                 | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | REMEDY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SYSTEM (Cont.)</b>                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>CONTROLS INOPERATIVE FROM PLATFORM</b>               | <ol style="list-style-type: none"> <li>Loose or broken wire #04 from platform emergency stop switch S4 to foot switch S10.</li> <li>Open or defective footswitch S10.</li> <li>Loose or broken wire #08 from footswitch S10 to terminal block.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                       | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Switch. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> </ol>                                                                                                                                                                                                                                                                                                                             |
| <b>NO BOOM OR STEER FUNCTIONS FROM PLATFORM OR BASE</b> | <ol style="list-style-type: none"> <li>Loose or broken wire #20 at base terminal block.</li> <li>Open diode D20.</li> <li>Loose or broken wire #21 from diode D20 to load sense relay 21CR.</li> <li>Defective load sense relay 21CR.</li> <li>Loose or broken wire #02 from load sense relay 21CR to terminal block.</li> <li>Loose or broken wire #09 from terminal block to load sense relay 21CR.</li> <li>Loose or broken wire #21A from load sense relay 21CR to load sense dump valve 2H21A-1.</li> <li>Defective load sense dump valve coil 2H21A-1.</li> <li>Loose or broken wire #02 from load sense dump valve 2H21A-1 to terminal block.</li> </ol> | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Diode. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Relay. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity and Resistance through Coil. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> </ol> |
| <b>NO MAIN BOOM DOWN FROM PLATFORM OR BASE</b>          | <ol style="list-style-type: none"> <li>Loose or broken wire #13 from terminal block to main lift down valve 4H13.</li> <li>Defective main boom down valve coil 4H13.</li> <li>Loose or broken wire #02 from valve coil 4H13 to terminal block.</li> <li>Loose or defective lead from lower control box distribution box to valve connectors.</li> <li>Defective valve connector.</li> </ol>                                                                                                                                                                                                                                                                     | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity and Resistance (5 OHMS) through Coil. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Connections. Replace if defective.</li> <li>Check Valve connectors. Replace if defective.</li> </ol>                                                                                                                                                                           |
| <b>NO MAIN BOOM UP FROM PLATFORM OR BASE</b>            | <ol style="list-style-type: none"> <li>Loose or broken wire #14 from terminal block to main lift up valve 4H14.</li> <li>Defective main boom up valve coil 4H14.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity and Resistance (5 OHMS) through Coil. Replace if defective.</li> </ol>                                                                                                                                                                                                                                                                                                                                     |

## TROUBLESHOOTING (Cont.)

| TROUBLE                                              | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | REMEDY                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SYSTEM (Cont.)</b>                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>NO MAIN BOOM UP FROM PLATFORM OR BASE (Cont.)</b> | <ol style="list-style-type: none"> <li>3. Loose or broken wire #02 from main boom up valve coil 4H14 to terminal block.</li> <li>4. Loose or defective lead from lower control box distribution box to valve connectors.</li> <li>5. Defective valve connector.</li> </ol>                                                                                                                                                                                                                                                                                         | <ol style="list-style-type: none"> <li>3. Check Continuity. Replace if defective.</li> <li>4. Check Connections. Replace if defective.</li> <li>5. Check Valve connectors. Replace if defective.</li> </ol>                                                                                                                                                                                                                     |
| <b>NO BOOM FUNCTION FROM PLATFORM</b>                | <ol style="list-style-type: none"> <li>1. Loose or broken wire #08 from base terminal block to platform terminal block.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                 | <ol style="list-style-type: none"> <li>1. Check Continuity. Replace if defective.</li> </ol>                                                                                                                                                                                                                                                                                                                                    |
| <b>NO MAIN BOOM UP OR DOWN FROM PLATFORM</b>         | <ol style="list-style-type: none"> <li>1. Defective main boom joy stick S7.</li> <li>2. Defective circuit board for main boom joy stick S7.</li> <li>3. Loose or broken wire #14 from platform terminal block to base terminal block.</li> </ol>                                                                                                                                                                                                                                                                                                                   | <ol style="list-style-type: none"> <li>1. Check Joy Stick. Replace if defective.</li> <li>2. Refer to section 5 for Controller Diagnosis.</li> <li>3. Check Continuity. Replace if defective.</li> </ol>                                                                                                                                                                                                                        |
| <b>NO TURRET ROTATE LEFT OR RIGHT FROM PLATFORM</b>  | <ol style="list-style-type: none"> <li>1. Defective joy stick S7.</li> <li>2. Defective turret rotate circuit board.</li> <li>3. Loose or broken wire #32 or #33 from circuit board to platform terminal block.</li> <li>4. Loose or broken wire #08 from platform terminal block to rotate circuit board S7-2.</li> <li>5. Loose or broken wire #02 from platform terminal block to rotate circuit board S7-2.</li> <li>6. Loose or defective lead from lower control box distribution box to valve connectors.</li> <li>7. Defective valve connector.</li> </ol> | <ol style="list-style-type: none"> <li>1. Check Joy Stick. Replace if defective.</li> <li>2. Refer to section 5 for Controller Diagnosis.</li> <li>3. Check Continuity. Replace if defective.</li> <li>4. Check Continuity. Replace if defective.</li> <li>5. Check Continuity. Replace if defective.</li> <li>6. Check Connections. Replace if defective.</li> <li>7. Check Valve connectors. Replace if defective.</li> </ol> |
| <b>NO TURRET ROTATE LEFT FROM BASE</b>               | <ol style="list-style-type: none"> <li>1. Loose or broken wire #10 from base terminal block to switch S20.</li> <li>2. Loose or broken wire #32 from switch S20 to rotate valve 4H32.</li> <li>3. Defective rotate valve coil 4H32.</li> <li>4. Loose or broken wire #02 from rotate left valve 4H32 to terminal block.</li> </ol>                                                                                                                                                                                                                                 | <ol style="list-style-type: none"> <li>1. Check Continuity. Replace if defective.</li> <li>2. Check Continuity. Replace if defective.</li> <li>3. Check Continuity and Resistance (5 OHMS) through Coil. Replace if defective.</li> <li>4. Check Continuity. Replace if defective.</li> </ol>                                                                                                                                   |

## TROUBLESHOOTING (Cont.)

| TROUBLE                                        | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                | REMEDY                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SYSTEM (Cont.)</b>               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>NO TURRET ROTATE LEFT FROM BASE (Cont.)</b> | <ol style="list-style-type: none"> <li>Loose or defective lead from lower control box distribution box to valve connectors.</li> <li>Defective valve connector.</li> </ol>                                                                                                                                                                                                                                                                                                    | <ol style="list-style-type: none"> <li>Check Connections. Replace if defective.</li> <li>Check Valve connectors. Replace if defective.</li> </ol>                                                                                                                                                                                                                                          |
| <b>NO TURRET ROTATE RIGHT FROM BASE</b>        | <ol style="list-style-type: none"> <li>Loose or broken wire #10 from base terminal block to switch S20.</li> <li>Loose or broken wire #33 from switch S20 to rotate valve 4H33.</li> <li>Defective rotate right valve coil 4H33.</li> <li>Loose or broken wire #02 from rotate right valve 4H33 to terminal block.</li> <li>Loose or defective lead from lower control box distribution box to valve connectors.</li> <li>Defective valve connector.</li> </ol>               | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity and Resistance (5 OHMS) through Coil. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Connections. Replace if defective.</li> <li>Check Valve connectors. Replace if defective.</li> </ol> |
| <b>NO TELESCOPE OUT FROM BASE</b>              | <ol style="list-style-type: none"> <li>Loose or broken wire #10 from base terminal block to switch S16.</li> <li>Loose or broken wire #39 from switch S16 to telescope out valve 4H39.</li> <li>Defective telescope out valve coil 4H39.</li> <li>Loose or broken wire #02 from telescope out valve 4H39 to base terminal block.</li> <li>Loose or defective lead from lower control box distribution box to valve connectors.</li> <li>Defective valve connector.</li> </ol> | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity and Resistance (5 OHMS) through Coil. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Connections. Replace if defective.</li> <li>Check Valve connectors. Replace if defective.</li> </ol> |
| <b>NO TELESCOPE IN FROM BASE</b>               | <ol style="list-style-type: none"> <li>Loose or broken wire #10 from base terminal block to switch S16.</li> <li>Loose or broken wire #38 from switch S16 to telescope in valve 4H38A.</li> <li>Defective telescope in valve coil 4H38A.</li> <li>Loose or broken wire #02 from telescope in valve 4H38A to base terminal block.</li> </ol>                                                                                                                                   | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Switch. Replace if defective.</li> <li>Check Continuity and Resistance (5 OHMS) through Coil. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> </ol>                                                                                                              |

## TROUBLESHOOTING (Cont.)

| TROUBLE                                     | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | REMEDY                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SYSTEM (Cont.)</b>            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>NO TELESCOPE IN FROM BASE (Cont.)</b>    | 5. Loose or defective lead from lower control box distribution box to valve connectors.<br>6. Defective valve connector.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 5. Check Connections. Replace if defective.<br>6. Check Valve connectors. Replace if defective.                                                                                                                                                                                                                                                                                      |
| <b>NO TELESCOPE OUT OR IN FROM PLATFORM</b> | 1. Defective switch on telescope joy stick S9.<br>2. Defective circuit board on telescope joystick S9.<br>3. Loose or broken wire #08 from telescope joystick S9 to platform terminal block.<br>4. Loose or broken wire #02 from telescope joy stick S9 to platform terminal block.<br>5. Loose or broken wire #38(in) or #39(out) from joy stick to platform terminal block.<br>6. Loose or broken wire #02(-) #08(+) #38(in) or #39(out) from platform terminal block to base terminal block.<br>7. Loose or defective lead from lower control box distribution box to valve connectors.<br>8. Defective valve connector. | 1. Check Switch. Replace if defective.<br>2. Refer to section 5 for Controller Diagnosis.<br>3. Check Continuity. Replace if defective.<br>4. Check Continuity. Replace if defective.<br>5. Check Continuity. Replace if defective.<br>6. Check Continuity. Replace if defective.<br>7. Check Connections. Replace if defective.<br>8. Check Valve connectors. Replace if defective. |
| <b>NO JIB UP FROM BASE OR PLATFORM</b>      | 1. Loose or broken wire #10 from base terminal block to jib switch S17.<br>2. Loose or broken wire #35 from jib switch S17 to jib up valve 3H35.<br>3. Defective jib up valve coil 3H35.<br>4. Loose or broken wire #02 from jib up valve 3H35 to base terminal block.<br>5. Loose or defective lead from lower control box distribution box to valve connectors.<br>6. Defective valve connector.                                                                                                                                                                                                                          | 1. Check Continuity. Replace if defective.<br>2. Check Continuity. Replace if defective.<br>3. Check Continuity and Resistance (5 OHMS) through Coil. Replace if defective.<br>4. Check Continuity. Replace if defective.<br>5. Check Connections. Replace if defective.<br>6. Check Valve connectors. Replace if defective.                                                         |
| <b>NO JIB DOWN FROM BASE OR PLATFORM</b>    | 1. Loose or broken wire #10 from base terminal block to jib switch S17.<br>2. Loose or broken wire #34 from jib switch S17 to jib down valve 3H34.<br>3. Defective jib down valve coil 3H34.                                                                                                                                                                                                                                                                                                                                                                                                                                | 1. Check Continuity. Replace if defective.<br>2. Check Continuity. Replace if defective.<br>3. Check Continuity and Resistance (5 OHMS) through Coil. Replace if defective.                                                                                                                                                                                                          |

## TROUBLESHOOTING (Cont.)

| TROUBLE                                               | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | REMEDY                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SYSTEM (Cont.)</b>                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>NO JIB DOWN FROM BASE OR PLATFORM (Cont.)</b>      | <ol style="list-style-type: none"> <li>Loose or broken wire #02 from jib down valve 3H34 to base terminal block.</li> <li>Loose or defective lead from lower control box distribution box to valve connectors.</li> <li>Defective valve connector.</li> </ol>                                                                                                                                                                                                                        | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Connections. Replace if defective.</li> <li>Check Valve connectors. Replace if defective.</li> </ol>                                                                                                                                                                                         |
| <b>NO JIB UP OR DOWN FROM PLATFORM</b>                | <ol style="list-style-type: none"> <li>Defective switch on jib joy stick S11.</li> <li>Loose or broken wire #02(-) #08(+) #35(up) or #34(down) from jib joy stick S11 to platform terminal block.</li> <li>Defective jib up/down circuit board S11-1.</li> <li>Loose or broken wire #02(-) #08(+) #35(up) or #34(down) from platform terminal block to base terminal block.</li> </ol>                                                                                               | <ol style="list-style-type: none"> <li>Check Switch. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Refer to section 5 for Controller Diagnosis.</li> <li>Check Continuity. Replace if defective.</li> </ol>                                                                                                                                              |
| <b>NO PLATFORM ROTATE LEFT FROM BASE OR PLATFORM</b>  | <ol style="list-style-type: none"> <li>Loose or broken wire 10 from base terminal block to rotate switch S18.</li> <li>Loose or broken wire #36 from rotate switch S18 to rotate valve left 3H36.</li> <li>Defective rotate valve left coil 3H36.</li> <li>Loose or broken wire #02 from rotate valve left 3H36 to base terminal block.</li> <li>Loose or defective lead from lower control box distribution box to valve connectors.</li> <li>Defective valve connector.</li> </ol> | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity and Resistance (5 OHMS) through Coil. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Connections. Replace if defective.</li> <li>Check Valve connectors. Replace if defective.</li> </ol> |
| <b>NO PLATFORM ROTATE RIGHT FROM BASE OR PLATFORM</b> | <ol style="list-style-type: none"> <li>Loose or broken wire #10 from base terminal block to rotate switch S18.</li> <li>Loose or broken wire #37 from rotate switch S18 to rotate valve right 3H37.</li> <li>Defective rotate valve right coil 3H37.</li> <li>Loose or broken wire #02 from rotate valve right 3H37 to base terminal block.</li> </ol>                                                                                                                               | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity and Resistance (5 OHMS) through Coil. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> </ol>                                                                                                          |

## TROUBLESHOOTING (Cont.)

| TROUBLE                                                                | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | REMEDY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SYSTEM (Cont.)</b>                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>NO PLATFORM ROTATE RIGHT FROM BASE OR PLATFORM (Cont.)</b>          | 5. Loose or defective lead from lower control box distribution box to valve connectors.<br>6. Defective valve connector.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5. Check Connections. Replace if defective.<br>6. Check Valve connectors. Replace if defective.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>NO PLATFORM ROTATE LEFT OR RIGHT FROM PLATFORM</b>                  | 1. Defective platform rotate switch S21.<br>2. Loose or broken wire #02(-) or #08(+) from rotate switch S21 to platform terminal block.<br>3. Loose or broken wire #36(L) or #37(R) from rotate switch S21 to platform terminal block.<br>4. Loose or broken wire #02(-) #08(+) #36(L) or #37(R) from platform terminal block to base terminal block.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1. Check Switch. Replace if defective.<br>2. Check Continuity. Replace if defective.<br>3. Check Continuity. Replace if defective.<br>4. Check Continuity. Replace if defective.                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>PLATFORM WILL NOT MANUAL LEVEL UP OR DOWN FROM PLATFORM OR BASE</b> | 1. Loose or broken wire #107 from main lift switch S15 to platform level relay 107CR.<br>2. Loose or broken wire #02 from base terminal block to platform level relay 107CR.<br>3. Open diode D13 or D14 on wire #14(up) or #13(down) at base terminal block.<br>4. Loose or broken wire #10 from base terminal block to platform level relay 107CR.<br>5. Loose or broken wire #90 from relay 107CR to platform level switch S34.<br>6. Defective platform level switch S34.<br>7. Defective platform level relay 107CR.<br>8. Loose or broken wire #40(down) or #41(up) from platform level switch S34 to platform level valve 3H40(down) or 3H41(up).<br>9. Defective platform level valve coil 3H40(down) or 3H41(up).<br>10. Loose or broken wire #02 from platform level valve 3H40(down) or 3H41(up) to base terminal block.<br>11. Loose or defective lead from lower control box distribution box to valve connectors.<br>12. Defective valve connector. | 1. Check Continuity. Replace if defective.<br>2. Check Continuity. Replace if defective.<br>3. Check Diode. Replace if defective.<br>4. Check Continuity. Replace if defective.<br>5. Check Continuity. Replace if defective.<br>6. Check Switch. Replace if defective.<br>7. Check Relay. Replace if defective.<br>8. Check Continuity. Replace if defective.<br>9. Check Continuity and Resistance (5 OHMS) through Coil. Replace if defective.<br>10. Check Continuity. Replace if defective.<br>11. Check Connections. Replace if defective.<br>12. Check Valve connectors. Replace if defective. |

## TROUBLESHOOTING (Cont.)

| TROUBLE                                                        | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | REMEDY                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SYSTEM (Cont.)</b>                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>PLATFORM WILL NOT MANUAL LEVEL UP OR DOWN FROM PLATFORM</b> | <ol style="list-style-type: none"> <li>Loose or broken wire #107A from main boom circuit board S7-1 to platform level relay 107ACR.</li> <li>Loose or broken wire #02 from platform terminal block to platform level relay 107ACR.</li> <li>Loose or broken wire #08 from platform terminal block to relay 107ACR.</li> <li>Loose or broken wire #90A from relay 107ACR to platform level switch S19</li> <li>Defective level switch S19.</li> <li>Defective level relay 107ACR</li> <li>Loose or broken wire #40(down) or #41(up) from level switch S19.</li> <li>Loose or broken wire #40(down) or #41(up) from platform terminal block to base terminal block.</li> </ol> | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Switch. Replace if defective.</li> <li>Check Relay. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> </ol> |
| <b>UNIT WILL NOT DRIVE</b>                                     | <ol style="list-style-type: none"> <li>Loose or broken wire #61, #62 or #64 from drive joy stick S8 to platform terminal block.</li> <li>Defective drive joy stick circuit board.</li> <li>Loose or broken wire #61, #62 or #64 from platform terminal block to base terminal block.</li> <li>Loose or broken wire #61, #62 or #64 from base terminal block to drive control board.</li> <li>Defective potentiometer on drive joy stick S8.</li> <li>Defective drive control board.</li> <li>Loose or broken wire #02 from drive control board to base terminal block.</li> </ol>                                                                                            | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Board. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Potentiometer. Replace if defective.</li> <li>Refer to section 5 page 9 for Drive Control Board diagnosis.</li> <li>Check Continuity. Replace if defective.</li> </ol>                      |
| <b>NO DRIVE FORWARD</b>                                        | <ol style="list-style-type: none"> <li>Loose or broken wire #16 from drive control board to forward drive valve 4H16.</li> <li>Loose or broken wire #02 from forward drive valve 4H16 to base terminal block.</li> <li>Defective forward drive valve coil 4H16.</li> <li>Defective drive control board.</li> </ol>                                                                                                                                                                                                                                                                                                                                                           | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity and Resistance (6 OHMS). Replace if defective.</li> <li>Refer to section 5 page 9 for Drive Control Board diagnosis.</li> </ol>                                                                                                                                               |

## TROUBLESHOOTING (Cont.)

| TROUBLE                          | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | REMEDY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SYSTEM (Cont.)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>NO DRIVE REVERSE</b>          | <ol style="list-style-type: none"> <li>Loose or broken wire #15 from drive control board to reverse drive valve 4H15.</li> <li>Loose or broken wire #02 from reverse drive valve 4H15 to base terminal block.</li> <li>Defective reverse drive valve coil 4H15.</li> <li>Defective drive control board.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity and Resistance (6 OHMS) thru coil. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> </ol>                                                                                                                                                                                                                                                         |
| <b>NO HIGH DRIVE</b>             | <ol style="list-style-type: none"> <li>Loose or broken wire #09 from base terminal block to fly in limit switch LS3.</li> <li>Defective fly in limit switch LS3.</li> <li>Loose or broken wire #29 from fly in limit switch LS3 to mid in limit switch LS1.</li> <li>Defective mid in limit switch LS1.</li> <li>Loose or broken wire #06 from mid in limit switch LS1 to high drive tilt override LS2.</li> <li>Defective high drive tilt override LS1.</li> <li>Loose or broken wire #59 from high drive tilt override LS2 to drive control board.</li> <li>Loose or broken wire #59 from base terminal block high drive valve 2H59.</li> <li>Loose or broken wire #02 from high drive valve 2H59 to base terminal block.</li> <li>Defective high drive valve coil 2H59.</li> </ol> | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Switch. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Switch. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Switch. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> </ol> |
| <b>NO STEER LEFT OR RIGHT</b>    | <ol style="list-style-type: none"> <li>Loose or broken wire #99 from base terminal block to common steer valve 2H21A-2.</li> <li>Defective steer dump valve coil 2H21A-2.</li> <li>Loose or broken wire #02 from common steer valve 2H21A-2 to base terminal block.</li> <li>Loose or defective lead from lower control box distribution box to valve connectors.</li> <li>Defective valve connector.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                      | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity and Resistance (11 OHMS) thru coil. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Connections. Replace if defective.</li> <li>Check Valve connectors. Replace if defective.</li> </ol>                                                                                                                                                                                                |

## TROUBLESHOOTING (Cont.)

| TROUBLE                                      | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                               | REMEDY                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SYSTEM (Cont.)</b>             |                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>NO STEER LEFT</b>                         | <ol style="list-style-type: none"> <li>1. Defective steer left switch S8-1 in drive joy stick S8.</li> <li>2. Defective relay 17CR2.</li> <li>3. Loose or broken wire #24A from 17CR2 relay to left steer valve 4H24A.</li> <li>4. Defective left steer valve coil 4H24A.</li> <li>5. Loose or broken wire #02 from left steer valve 2H24A to base terminal block.</li> <li>6. Open diode D24B.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Check Switch. Replace if defective.</li> <li>2. Check Relay. Replace if defective.</li> <li>3. Check Continuity. Replace if defective.</li> <li>4. Check Continuity and Resistance (6 OHMS) thru coil. Replace if defective.</li> <li>5. Check Continuity. Replace if defective.</li> <li>6. Check Diode. Replace if defective.</li> </ol> |
| <b>NO STEER RIGHT</b>                        | <ol style="list-style-type: none"> <li>1. Defective right steer switch S82 in drive joystick S8.</li> <li>2. Defective relay 17CR1.</li> <li>3. Loose or broken wire #23A from 17CR1 relay to right steer valve 4H23A.</li> <li>4. Defective right steer valve coil 4H23A.</li> <li>5. Loose or broken wire #02 from right steer valve 4H23A to base terminal block.</li> <li>6. Open diode D23B.</li> </ol> | <ol style="list-style-type: none"> <li>1. Check Switch. Replace if defective.</li> <li>2. Check Relay. Replace if defective.</li> <li>3. Check Continuity. Replace if defective.</li> <li>4. Check Continuity and Resistance (6 OHMS) thru coil. Replace if defective.</li> <li>5. Check Continuity. Replace if defective.</li> <li>6. Check Diode. Replace if defective.</li> </ol> |
| <b>DRIVE STEER WILL NOT CHANGE DIRECTION</b> | <ol style="list-style-type: none"> <li>1. Loose or broken wire #09 from base terminal block to direction sensing switch LS22.</li> <li>2. Defective direction sensing switch LS22.</li> <li>3. Loose or broken wire #17 from direction sensing switch LS22 to relays 17CR1, 17CR2 and drive control board.</li> </ol>                                                                                        | <ol style="list-style-type: none"> <li>1. Check Continuity. Replace if defective.</li> <li>2. Check Switch. Replace if defective.</li> <li>3. Check Continuity. Replace if defective.</li> </ol>                                                                                                                                                                                     |
| <b>BRAKES WILL NOT RELEASE</b>               | <ol style="list-style-type: none"> <li>1. Defective circuit board on drive joy stick S8.</li> <li>2. Loose or broken wire #64 from drive joy stick S8 to platform terminal block.</li> <li>3. Loose or broken wire #64 from platform terminal block to base terminal block.</li> <li>4. Loose or broken wire #64 from base terminal block to drive control board.</li> </ol>                                 | <ol style="list-style-type: none"> <li>1. Check Board. Replace if defective.</li> <li>2. Check Continuity. Replace if defective.</li> <li>3. Check Continuity. Replace if defective.</li> <li>4. Check Continuity. Replace if defective.</li> </ol>                                                                                                                                  |

## TROUBLESHOOTING (Cont.)

| TROUBLE                                                        | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | REMEDY                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SYSTEM (Cont.)</b>                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>BRAKES WILL NOT RELEASE (Cont.)</b>                         | <ol style="list-style-type: none"> <li>Defective drive control board.</li> <li>Loose or broken wire #26 from drive control board to brake valve 3H26.</li> <li>Defective brake valve coil 3H26.</li> <li>Loose or broken wire #02 from brake valve 3H26 to base terminal block.</li> </ol>                                                                                                                                                                                                                                                                                                                                                    | <ol style="list-style-type: none"> <li>Refer to Section 5 for Drive Control Board Diagnosis.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity and Resistance (8.75 OHMS) thru coil. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> </ol>                                                                                                                                                                                      |
| <b>BRAKES APPLY TO QUICKLY ON LEVEL SURFACE</b>                | <ol style="list-style-type: none"> <li>Loose or broken wire #28 from tilt sensor TS1 to 28CR.</li> <li>Loose or broken wire #02 from 28CR to base terminal block.</li> <li>Loose or broken wire #09A from base terminal block to 28CR.</li> <li>Loose or broken wire #28A from 28CR to tilted brake valve 2H28A.</li> <li>Defective relay 28CR.</li> <li>Defective tilted brake valve coil 2H28A.</li> <li>Loose or broken wire #02 from tilted brake valve 2H28A to base terminal block.</li> </ol>                                                                                                                                          | <ol style="list-style-type: none"> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Relay. Replace if defective.</li> <li>Check Continuity and Resistance (8.75 OHMS) thru coil. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> </ol>                                                      |
| <b>NO HIGH ENGINE RPM'S FROM PLATFORM, STAYS ON IDLE RPM'S</b> | <ol style="list-style-type: none"> <li>Defective foot switch S10.</li> <li>Loose or broken wire #08 from platform terminal block to throttle switch S14.</li> <li>Defective throttle switch S14</li> <li>Loose or broken wire #78 from throttle switch S14 to platform terminal block.</li> <li>Loose or broken wire #78 from platform terminal block to base terminal block.</li> <li>Open diode D78.</li> <li>Loose or broken wire #78B from base terminal block to relay 78BCR.</li> <li>Loose or broken wire #02 from 78BCR to base terminal block.</li> <li>Loose or broken wire #09 from base terminal block to relay 78BCR.</li> </ol> | <ol style="list-style-type: none"> <li>Check Switch. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Switch. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Diode. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> <li>Check Continuity. Replace if defective.</li> </ol> |

## TROUBLESHOOTING (Cont.)

| TROUBLE                                                                | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                                                                                      | REMEDY                                                                                                                                                                                                                        |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SYSTEM (Cont.)</b>                                       |                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                               |
| <b>NO HIGH ENGINE RPM'S FROM PLATFORM, STAYS ON IDLE RPM'S (Cont.)</b> | 10. Loose or broken wire #78C from relay 78BCR to engine harness.<br>11. Defective relay 78BCR.                                                                                                                                                                                                                                                                                     | 10. Check Continuity. Replace if defective.<br>11. Check Diode. Replace if defective.                                                                                                                                         |
| <b>NOTE:</b>                                                           | For problems with engine.                                                                                                                                                                                                                                                                                                                                                           | Consult engine manufacturers manual.                                                                                                                                                                                          |
| <b>NO LOW ENGINE RPM'S</b>                                             | 1. Open foot switch S10.<br>2. Defective foot switch S10.<br>3. Loose or broken wire #08 from platform terminal block to foot switch S10.<br>4. Loose or broken wire #04 from platform terminal block to foot switch S10.                                                                                                                                                           | 1. Close Foot Switch.<br>2. Check Switch. Replace if defective.<br>3. Check Continuity. Replace if defective.<br>4. Check Continuity. Replace if defective.                                                                   |
| <b>NOTE:</b>                                                           | For problems with engine.                                                                                                                                                                                                                                                                                                                                                           | Consult engine manufacturers manual.                                                                                                                                                                                          |
| <b>LP VALVE INOPERATIVE</b>                                            | 1. Open diode D04 at platform terminal block.<br>2. Loose or broken wire #60 from diode D04 to fuel select switch S26.<br>3. Loose or broken wire #11 from fuel select switch S26 to platform terminal block.<br>4. Loose or broken wire #11 from platform terminal block to base terminal block.<br>5. Loose or broken wire #11 from base terminal block to engine wiring harness. | 1. Check Diode. Replace if defective.<br>2. Check Continuity. Replace if defective.<br>3. Check Continuity. Replace if defective.<br>4. Check Continuity. Replace if defective.<br>5. Check Continuity. Replace if defective. |
| <b>NOTE:</b>                                                           | For problems with engine.                                                                                                                                                                                                                                                                                                                                                           | Consult engine manufacturers manual.                                                                                                                                                                                          |
| <b>GASOLINE VALVE IN-OPERATIVE</b>                                     | 1. No power to gasoline shut off valve.                                                                                                                                                                                                                                                                                                                                             | 1. Consult Engine Manufacturers Manual.                                                                                                                                                                                       |
| <b>FUEL PUMP INOPERATIVE</b>                                           | 1. No voltage at fuel pump.<br>2. Loose or broken wire #02 from fuel pump to chassis ground.<br>3. Fuel pump will not run with voltage present.                                                                                                                                                                                                                                     | 1. Consult Engine Manufacturers Manual wiring diagram.<br>2. Check Continuity. Replace if defective.<br>3. Check Pump. Replace if defective.                                                                                  |

# TROUBLESHOOTING

| TROUBLE | PROBABLE CAUSE | REMEDY |
|---------|----------------|--------|
|---------|----------------|--------|

## HYDRAULIC SYSTEM

**NOTE: ALL TESTS SHOULD BE PERFORMED WITH BOOM OVER NON-STEERING AXLE**

|                                       |                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                    |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ALL FUNCTIONS INOPERATIVE</b>      | <ol style="list-style-type: none"> <li>1. Broken or defective drive pump shaft or coupling</li> </ol>                                                                                                                                                                                                            | <ol style="list-style-type: none"> <li>1. Check Pump Shaft and Coupling. Replace if defective.</li> </ol>                                                                                                                                                                                          |
| <b>ALL BOOM FUNCTIONS INOPERATIVE</b> | <ol style="list-style-type: none"> <li>1. Defective load sense dump valve 2H-21A.</li> <li>2. Defective load sense adjusting valve 3HV2.</li> <li>3. Defective system pressure adjusting valve 3H-V1.</li> <li>4. Plugged or defective high pressure filter F2.</li> <li>5. Defective system pump P2.</li> </ol> | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check Valve. Replace if defective.</li> <li>4. Check Filter. Replace if plugged defective.</li> <li>5. Refer to Section 5 to troubleshoot Pump.</li> </ol> |
| <b>NO MAIN BOOM UP</b>                | <ol style="list-style-type: none"> <li>1. Defective lift up valve 4H13.</li> <li>2. Stuck or defective lift cylinder counterbalance valves.</li> <li>3. Defective main lift cylinder.</li> </ol>                                                                                                                 | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check Cylinder. Replace if defective.</li> </ol>                                                                                                           |
| <b>NO MAIN BOOM DOWN</b>              | <ol style="list-style-type: none"> <li>1. Defective lift down valve 4H14.</li> <li>2. Stuck or defective counterbalance valves.</li> </ol>                                                                                                                                                                       | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valves. Replace if defective.</li> </ol>                                                                                                                                                            |
| <b>NO TURRET ROTATE RIGHT OR LEFT</b> | <ol style="list-style-type: none"> <li>1. Stuck or defective shuttle valve in turret rotate manifold..</li> <li>2. Defective rotate spool valve in main manifold.</li> <li>3. Turret rotate brake not releasing.</li> <li>4. Defective turret rotate motor.</li> </ol>                                           | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check Brake. Replace if defective.</li> <li>4. Check Motor. Replace if defective.</li> </ol>                                                               |
| <b>NO TURRET ROTATE LEFT</b>          | <ol style="list-style-type: none"> <li>1. Stuck or defective turret rotate spool valve 4H32 in main manifold.</li> <li>2. Stuck or defective counterbalance valve in rotate manifold.</li> </ol>                                                                                                                 | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> </ol>                                                                                                                                                             |
| <b>NO TURRET ROTATE RIGHT</b>         | <ol style="list-style-type: none"> <li>1. Stuck or defective turret rotate spool valve 4H33 in main manifold.</li> <li>2. Stuck or defective counterbalance valve in rotate manifold.</li> </ol>                                                                                                                 | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> </ol>                                                                                                                                                             |

## TROUBLESHOOTING (Cont.)

| TROUBLE                                  | PROBABLE CAUSE                                                                                                                                                                                                                                                        | REMEDY                                                                                                                                                                                                   |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HYDRAULIC SYSTEM (Cont.)</b>          |                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                          |
| <b>NO MID OR FLY TELESCOPE IN OR OUT</b> | <ol style="list-style-type: none"> <li>1. Stuck or defective spool valve 4H38A or 4H39 in main manifold.</li> <li>2. Defective counterbalance valves in cylinder manifold.</li> <li>3. Defective or mis-adjusted pressure reducing valve in main manifold.</li> </ol> | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check pressure. Adjust or replace valve if defective.</li> </ol> |
| <b>NO MID BOOM TELESCOPE OUT</b>         | <ol style="list-style-type: none"> <li>1. Stuck or defective telescope spool valve 4H38A in main manifold.</li> <li>2. Defective counterbalance valves in cylinder manifold.</li> <li>3. Defective mid telescope cylinder.</li> </ol>                                 | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valves. Replace if defective.</li> <li>3. Check Cylinder. Repair or replace if defective.</li> </ol>      |
| <b>NO MID BOOM TELESCOPE IN</b>          | <ol style="list-style-type: none"> <li>1. Stuck or defective telescope spool valve 4H39 in main manifold.</li> <li>2. Defective counterbalance valve in cylinder manifold.</li> <li>3. Defective mid telescope cylinder.</li> </ol>                                   | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check Cylinder. Repair or replace if defective.</li> </ol>       |
| <b>NO FLY BOOM OUT</b>                   | <ol style="list-style-type: none"> <li>1. Telescope pressure relief valve set to low.</li> <li>2. Defective sequence valve.</li> <li>3. Defective fly cylinder.</li> </ol>                                                                                            | <ol style="list-style-type: none"> <li>1. Check Pressure. Adjust if low.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check Cylinder. Repair or replace if defective.</li> </ol>           |
| <b>NO FLY BOOM IN</b>                    | <ol style="list-style-type: none"> <li>1. Telescope pressure relief valve set to low.</li> <li>2. Defective sequence valve.</li> <li>3. Defective fly cylinder.</li> </ol>                                                                                            | <ol style="list-style-type: none"> <li>1. Check Pressure. Adjust if low.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check Cylinder. Repair or replace if defective.</li> </ol>           |
| <b>NO JIB UP</b>                         | <ol style="list-style-type: none"> <li>1. Defective jib up valve 3H35.</li> <li>2. Defective counterbalance valve in jib cylinder manifold.</li> <li>3. Defective jib cylinder.</li> </ol>                                                                            | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check Cylinder. Repair or replace if defective.</li> </ol>       |
| <b>NO JIB DOWN</b>                       | <ol style="list-style-type: none"> <li>1. Defective jib up valve 3H34.</li> <li>2. Defective counterbalance valve in jib cylinder manifold.</li> <li>3. Defective jib cylinder.</li> </ol>                                                                            | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check Cylinder. Repair or replace if defective.</li> </ol>       |

## TROUBLESHOOTING (Cont.)

| TROUBLE                             | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                                  | REMEDY                                                                                                                                                                                                                                                                                                        |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HYDRAULIC SYSTEM (Cont.)</b>     |                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                               |
| <b>NO PLATFORM ROTATE LEFT</b>      | <ol style="list-style-type: none"> <li>1. Defective platform rotate left valve 3H36.</li> <li>2. Defective counterbalance valve in rotary actuator manifold.</li> <li>3. Defective rotary actuator.</li> </ol>                                                                                                                  | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check Actuator. Repair or replace if defective.</li> </ol>                                                                                                            |
| <b>NO PLATFORM ROTATE RIGHT</b>     | <ol style="list-style-type: none"> <li>1. Defective platform rotate left valve 3H37.</li> <li>2. Defective counterbalance valve in rotary actuator manifold.</li> <li>3. Defective rotary actuator.</li> </ol>                                                                                                                  | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check Actuator. Repair or replace if defective.</li> </ol>                                                                                                            |
| <b>PLATFORM WILL NOT LEVEL DOWN</b> | <ol style="list-style-type: none"> <li>1. Defective platform level down valve 3H40.</li> <li>2. Defective counterbalance valve in main manifold.</li> <li>3. Defective counterbalance valve in slave cylinder manifold.</li> <li>4. Defective master leveling cylinder.</li> </ol>                                              | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check Valve. Replace if defective.</li> <li>4. Check Cylinder. Repair or replace if defective.</li> </ol>                                                             |
| <b>PLATFORM WILL NOT LEVEL UP</b>   | <ol style="list-style-type: none"> <li>1. Defective platform level up valve 3H41.</li> <li>2. Defective counterbalance valve in main manifold.</li> <li>3. Defective counterbalance valve in slave cylinder manifold.</li> <li>4. Defective master leveling cylinder.</li> <li>5. Defective slave leveling cylinder.</li> </ol> | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check Valve. Replace if defective.</li> <li>4. Check Cylinder. Repair or replace if defective.</li> <li>5. Check Cylinder. Repair or replace if defective.</li> </ol> |
| <b>BRAKES WILL NOT RELEASE</b>      | <ol style="list-style-type: none"> <li>1. Defective brake valve.</li> <li>2. Defective or mis-adjusted pressure reducing valve on brake manifold.</li> <li>3. Defective or mis-adjusted pressure relief valve on brake manifold.</li> <li>4. Defective brake shuttle valve.</li> </ol>                                          | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Check Valve. Replace if defective.</li> <li>3. Check Valve. Readjust or replace if defective.</li> <li>4. Check Valve. Replace if defective.</li> </ol>                                                              |
| <b>BRAKES WILL NOT ENGAGE</b>       | <ol style="list-style-type: none"> <li>1. Defective brake valve 3H-26A.</li> <li>2. Brakes out of adjustment.</li> </ol>                                                                                                                                                                                                        | <ol style="list-style-type: none"> <li>1. Check Valve. Replace if defective.</li> <li>2. Refer to Section 5 for Brake Adjustment Procedure.</li> </ol>                                                                                                                                                        |

## TROUBLESHOOTING (Cont.)

| TROUBLE                            | PROBABLE CAUSE                                                                                                                                                                                                                                                                                                     | REMEDY                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HYDRAULIC SYSTEM (Cont.)</b>    |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                   |
| <b>NO DRIVE FORWARD OR REVERSE</b> | <ol style="list-style-type: none"> <li>Brakes not releasing.</li> <li>Defective charge pump.</li> <li>Defective relief valve RV3.</li> <li>Defective pressure override valve POR1.</li> <li>Defective drive pump P1.</li> <li>Defective drive motor M1.</li> <li>Defective directional valve 4H15-4H16.</li> </ol> | <ol style="list-style-type: none"> <li>Refer to Brake Diagnosis.</li> <li>Check Pump. Replace if defective.</li> <li>Check Valve. Replace if defective.</li> <li>Check Valve. Replace if defective.</li> <li>Check Pump. Replace if defective.</li> <li>Check Motor. Replace if defective.</li> <li>Check Valve. Replace if defective.</li> </ol> |
| <b>NO DRIVE FORWARD</b>            | <ol style="list-style-type: none"> <li>Defective directional valve 4H16.</li> <li>Defective relief valve RV1.</li> </ol>                                                                                                                                                                                           | <ol style="list-style-type: none"> <li>Check Valve. Replace if defective.</li> <li>Check Valve. Replace if defective.</li> </ol>                                                                                                                                                                                                                  |
| <b>NO DRIVE REVERSE</b>            | <ol style="list-style-type: none"> <li>Defective directional valve 4H15.</li> <li>Defective relief valve RV2.</li> </ol>                                                                                                                                                                                           | <ol style="list-style-type: none"> <li>Check Valve. Replace if defective.</li> <li>Check Valve. Replace if defective.</li> </ol>                                                                                                                                                                                                                  |
| <b>NO HIGH DRIVE</b>               | <ol style="list-style-type: none"> <li>Defective high speed drive valve 2H59.</li> <li>Defective or mis-adjusted relief valve RV6.</li> </ol>                                                                                                                                                                      | <ol style="list-style-type: none"> <li>Check Valve. Replace if defective.</li> <li>Check Valve. Readjust or replace if defective.</li> </ol>                                                                                                                                                                                                      |
| <b>NO DRIVE ELEVATED</b>           | <ol style="list-style-type: none"> <li>Defective high/low relief valve RV6.</li> </ol>                                                                                                                                                                                                                             | <ol style="list-style-type: none"> <li>Check Valve. Replace if defective.</li> </ol>                                                                                                                                                                                                                                                              |
| <b>NO STEER RIGHT OR LEFT</b>      | <ol style="list-style-type: none"> <li>Defective steer dump valve 2H114.</li> <li>Plugged steer orifice 01.</li> <li>Defective steer valve 4H23A or 4H24A.</li> <li>Steering cylinders leaking internally.</li> </ol>                                                                                              | <ol style="list-style-type: none"> <li>Check Valve. Replace if defective.</li> <li>Clean Orifice.</li> <li>Check Valve. Replace if defective.</li> <li>Check Cylinders. Repair or replace if defective.</li> </ol>                                                                                                                                |

# SECTION 5

## MAINTENANCE AND SERVICE

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## NOTES

# MAINTENANCE AND SERVICE

## GENERAL MAINTENANCE HINTS

- Before attempting any repair work, turn Battery Disconnect Switch to the “OFF” position. Refer to Section 2, Page 3.
- Preventive maintenance is the easiest and least expensive type of maintenance.

## REPLACEMENT PARTS

Use only original replacement parts. Parts such as batteries, chargers, wheels, railings, etc. with weight and dimensions different from original parts **will** affect stability of the work platform and **must not** be used without manufacturer's consent.

Use only original filled tires for models which **must** be so equipped. Consult factory.

All replacement tires **must** be of the same size and load rating as original equipment to maintain safety and stability of the work platform. Consult factory.

**Any machine that is damaged or not operating properly MUST be immediately tagged and removed from service until proper repairs are completed.**

## MAINTENANCE AND SERVICE SAFETY TIPS

- Maintenance and repair should only be performed by personnel who are trained and qualified to service this machine.
- All maintenance and service procedures should be performed in a well lighted and well ventilated area.
- Anyone operating or servicing this machine must read and completely understand all operating instructions and safety hazards in this manual.
- All tools, supports and lifting equipment to be used must be of proper rated load and in good working order before any service work begins. Work area should be kept clean and free of debris to avoid contaminating components while servicing.
- All service personnel must be familiar with employer and governmental regulations that apply to servicing this type of equipment.
- Keep sparks and flames away from all flammable or combustible materials.
- Properly dispose of all waste material, i.e. used oil, old parts etc.

## HYDRAULIC SYSTEM AND COMPONENT MAINTENANCE AND REPAIR

The following points should be kept in mind when working on the hydraulic system or any component:

1. Any structure has limits of strength and durability. To prevent failure of structural parts of hydraulic components, relief valves which limit pressure to safe operating values are included in the hydraulic circuits.
2. Tolerance of working parts in the hydraulic system is very close. Even small amounts of dirt or foreign materials in the system can cause wear or damage to components, as well as general faulty operation of the hydraulic system. Every precaution must be taken to assure absolute cleanliness of the hydraulic oil.
3. Samples of hydraulic oil should be drawn from the reservoir every six months. These samples should be about two quarts and should be taken while the oil is warmed through normal operation of the system. If possible, the sample should be analyzed by a qualified lubrication specialist to determine whether it is suitable for further use. The intervals between oil changes depend on operating conditions and on the care used in keeping the oil clean.
4. Whenever there is a hydraulic system failure which gives reason to believe that there are metal particles of foreign materials in the system, drain and flush the entire system and replace the filter cartridges. A complete change of oil must be made under these circumstances.
5. Whenever the hydraulic system is drained, check the magnets in the hydraulic reservoir for metal particles. If metal particles are present, flush the entire system and add a new change of oil. The presence of metal particles also may indicate the possibility of imminent component failure. A very small amount of fine particles is normal.
6. DO NOT use synthetic or fire resistant oil in this work platform. Use ATF Dexron III (ESSO) or equivalent hydraulic oil. For conditions causing oil temperatures below -31°F (-35° C) and above 122°F (50° C) consult Skyjack, Inc.
7. All containers and funnels used in handling hydraulic oil must be absolutely clean. Use a funnel when necessary for filling the hydraulic oil reservoir, and fill the reservoir only through the filter opening. The use of cloth to strain the oil should be avoided to prevent lint from getting into the system.
8. When removing any hydraulic component, be sure to cap and tag all hydraulic lines involved. Also, plug the ports of the removed components.
9. All hydraulic components must be disassembled in spotlessly clean surroundings. During disassembly, pay particular attention to the identification of parts to assure proper reassembly. Clean all metal parts in a clean mineral oil solvent. Be sure to thoroughly clean all internal passages. After the parts have been dried thoroughly, lay them on a clean, lint-free surface for inspection.
10. Replace all o-rings and seals when overhauling any component. Lubricate all parts with clean hydraulic oil before reassembly. Use small amounts of petroleum jelly to hold o-rings in place during assembly.
11. Be sure to replace any lost hydraulic oil when completing the installation of the repaired component, and bleed any air from the system when required.
12. All hydraulic connections must be kept tight. A loose connection in a pressure line will permit the oil to leak out or air to be drawn into the system. Air in the system can cause damage to the components and noisy or erratic system operation.

MAINTENANCE. Three simple maintenance procedures have the greatest effect on the hydraulic system performance, efficiency and life. Yet, the very simplicity of them may be the reason they are so often overlooked. What are they? Simply these:

1. Change filters regularly.
2. Maintain a sufficient quantity of clean hydraulic oil of the proper type and viscosity in the hydraulic reservoir.
3. Keep all connections tight.

**Table 5-1. Special Tools**

|                                                 |                     |
|-------------------------------------------------|---------------------|
| BRAKE ADJUSTMENT TOOL                           | SKYJACK PART 707704 |
| 17mm ALLEN WRENCH                               | PURCHASE LOCALLY    |
| PRESSURE GAUGE 0 - 5000 psi                     | PURCHASE LOCALLY    |
| PRESSURE GAUGE 0 - 1000 psi                     | PURCHASE LOCALLY    |
| CYLINDER ASSEMBLY TOOL - 2" Inside Diameter     | SKYJACK PART 706522 |
| CYLINDER ASSEMBLY TOOL - 2-1/2" Inside Diameter | SKYJACK PART 706521 |
| CYLINDER ASSEMBLY TOOL - 3-1/4" Inside Diameter | SKYJACK PART 709800 |
| CYLINDER ASSEMBLY TOOL - 3-1/2" Inside Diameter | SKYJACK PART 703872 |
| CYLINDER ASSEMBLY TOOL - 4-1/2" Inside Diameter | SKYJACK PART 703873 |
| CYLINDER ASSEMBLY TOOL - 5" Inside Diameter     | SKYJACK PART 706866 |

Tools-501

**Table 5-2. Torque Specifications**

|                                   |    |     |     |                       |     |     |     |     |
|-----------------------------------|----|-----|-----|-----------------------|-----|-----|-----|-----|
| DIRECTIONAL VALVE MOUNTING SCREWS |    |     |     | 28-32 in. lbs.        |     |     |     |     |
| TURRET ROTATE GEAR MOUNTING BOLTS |    |     |     | 375 ft. lbs.          |     |     |     |     |
| WHEEL MOUNTING BOLTS              |    |     |     | 290 ft. lbs.          |     |     |     |     |
| COUNTER WEIGHT BOLTS              |    |     |     | 240 ft. lbs.          |     |     |     |     |
| AXLE MOUNTING BOLTS               |    |     |     | 205 ft. lbs.          |     |     |     |     |
| HYDRAULIC PUMP MOUNTING BOLTS     |    |     |     | 75 ft. lbs.           |     |     |     |     |
| SPEED REDUCER MOUNTING BOLTS      |    |     |     | 175 ft. lbs.Light Oil |     |     |     |     |
| CARTRIDGE VALVES                  |    |     |     |                       |     |     |     |     |
| SIZE                              |    | 08  | 38  | 58                    | 10  | 12  | 16  |     |
| ft. lbs. (max)                    |    | 20  | 20  | 20                    | 25  | 35  | 50  |     |
| in. lbs. (max)                    |    | 240 | 240 | 240                   | 300 | 420 | 600 |     |
| COILS                             |    |     |     |                       |     |     |     |     |
| SIZE                              |    |     |     |                       |     |     |     |     |
| ft. lbs. (max)                    |    |     |     | 4 to 5                |     |     |     |     |
| in. lbs. (max)                    |    |     |     | 48 to 60              |     |     |     |     |
| SAE PLUGS                         |    |     |     |                       |     |     |     |     |
| SIZE                              | 2  | 4   | 5   | 6                     | 8   | 10  | 12  | 16  |
| ft. lbs. (max)                    | 3  | 10  | 15  | 15                    | 25  | 25  | 30  | 35  |
| in. lbs. (max)                    | 36 | 120 | 180 | 180                   | 300 | 300 | 360 | 400 |

Torques

## ELECTRICAL SYSTEM DIAGNOSTICS AND ADJUSTMENTS

### Setup Procedure for P-Q Driver Cards for Boom Functions

This procedure applies to all proportional boom functions, refer to figure 5-1.

1. Turn LO A, LO B, and RMP potentiometers fully counter-clockwise.
2. Turn HI A, and HI B potentiometers fully clockwise.
3. Start engine. Set RPM switch to HIGH. Depress foot switch.
4. Move the joystick slowly until the PWM A light just comes on and hold it at that point.
5. Adjust the LO A potentiometer until the function just starts moving.
6. Move the joystick to full stroke and hold at that point.
7. Adjust the HI A potentiometer until the function speed begins to decrease.
8. Turn the HI A potentiometer 1/4 turn clockwise.
9. Repeat steps 4 through 8 for the PWM B output.
10. Paint potentiometer screws with fingernail polish to prevent vibration from changing settings.

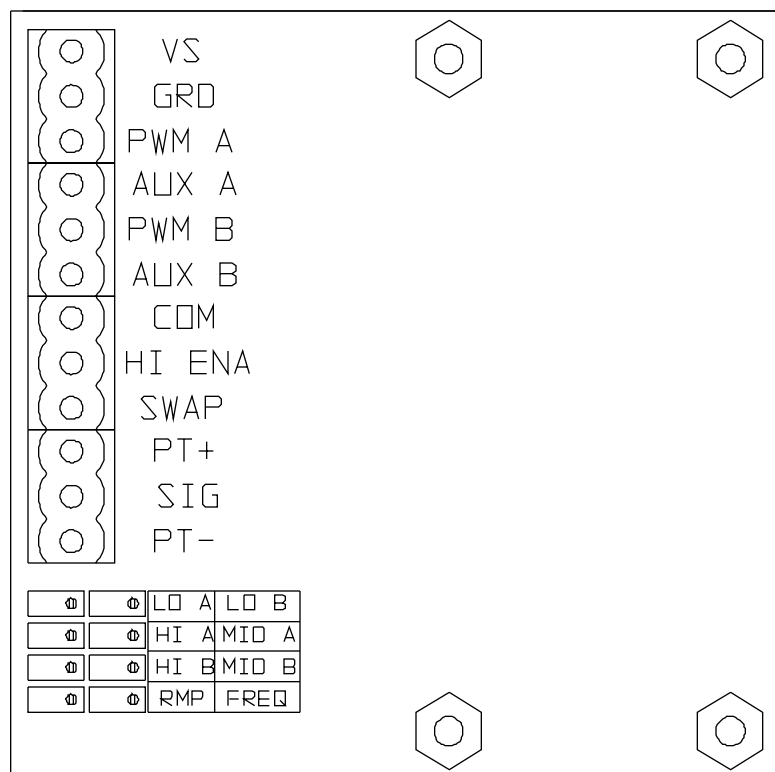


Figure 5-1. P-Q Drive Card

## **ELECTRICAL SYSTEM DIAGNOSTICS AND ADJUSTMENTS**

### **Setup procedure for P-Q Cards for Drive**

Start with the machine on flat level ground and the wheels blocked to prevent movement.

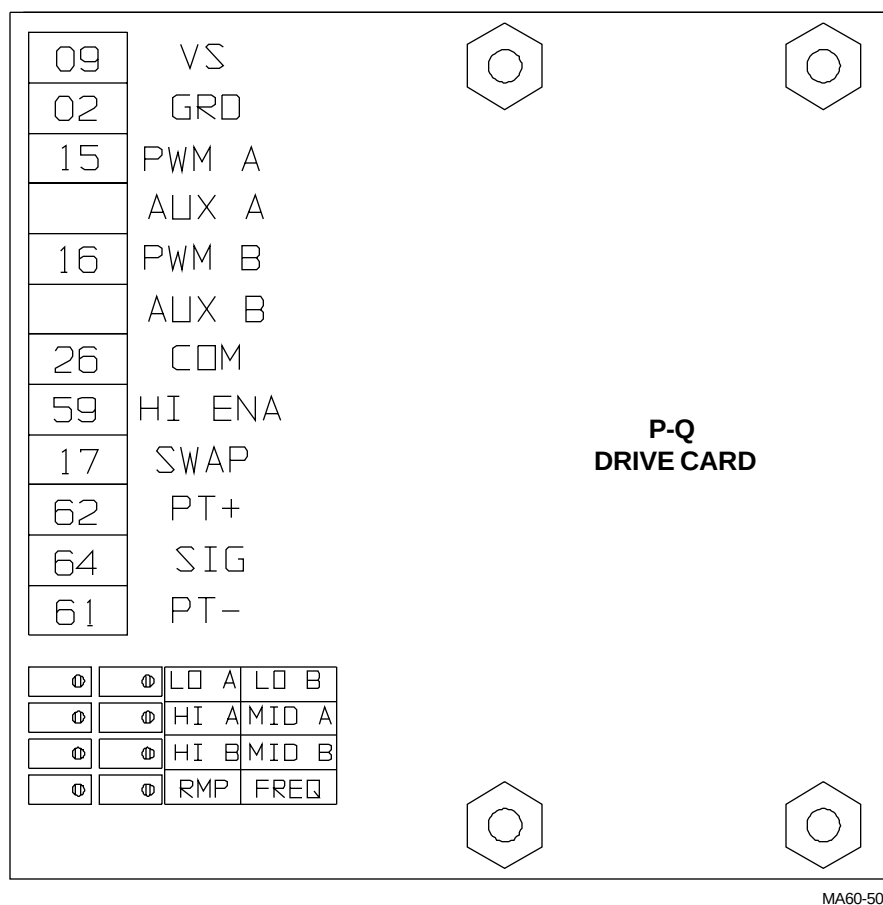
Set the boom horizontal and fully retracted (High Drive).

1. Turn LO A, LO B, MIDA, MID B, HI A, HI B, and RMP potentiometers fully counter-clockwise. (Refer to figure 5-1.)
2. Disconnect wire #15 from PWM A on drive card.
3. Attach a milliammeter from PWM A to wire #15.
4. Start engine. Set RPM switch to HIGH. Depress foot switch.
5. Move the drive joystick slowly until the PWM A light just comes on and hold it at that point.
6. Adjust the LO A potentiometer clockwise until the milliammeter reads 400 mA.
7. Turn the LOA potentiometer counter-clockwise 1/2 turn.
8. Move the joystick to full stroke and hold it at that point.
9. Adjust the HI A potentiometer until the milliammeter reads 1010 mA.
10. Extend the boom several inches (Low Drive).
11. Move the joystick to full stroke and hold it at that point.
12. Adjust the MID A potentiometer until the milliammeter reads 465 mA.
13. Reconnect wire #15 to PWM A.
14. Disconnect wire #16 from PWM B on drive card.
15. Attach a milliammeter from PWM B to wire #16.
16. Repeat steps 4 through 12 for the PWM B output.
17. Paint potentiometer screws with fingernail polish to prevent vibration from changing settings.
18. Turn brake RMP potentiometer clockwise to increase stopping distance and counter-clockwise to decrease stopping distance. Stopping distance 4-6 feet.

## NOTES

## ELECTRICAL SYSTEM DIAGNOSTICS AND ADJUSTMENTS

### TB Drive Card Troubleshooting



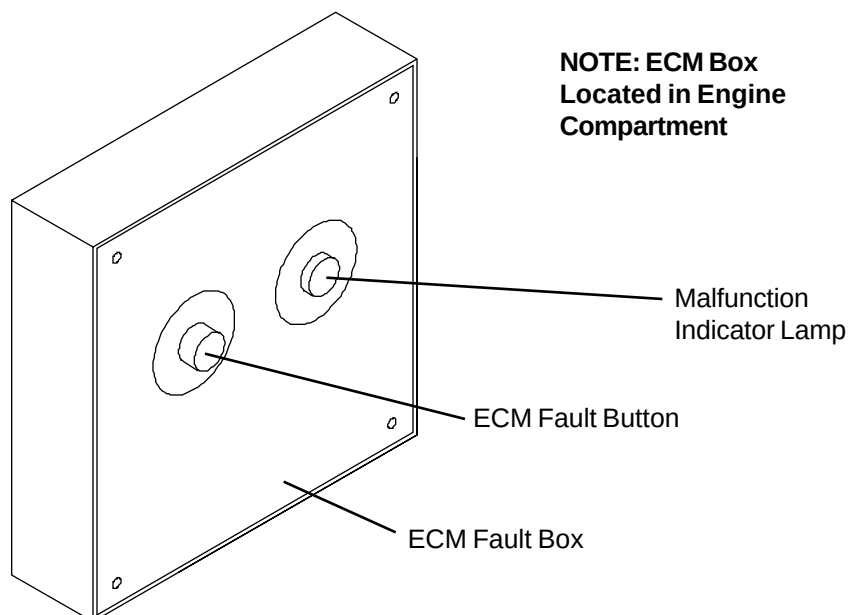
- Pin 1 (VS) Wire 09 Main power in (12 Volt input)
- Pin 2 (GRD) Wire 02 Main Ground
- Pin 3 (PWM A) Wire 15 Reverse Drive output (with 0VDC on pin 8 HI ENA) High speed 8VDC max, Low speed 3.6VDC max.
- Pin 4 (AUX A) Not used
- Pin 5 (PWM B) Wire 16 Forward Drive output (with 0VDC on pin 8 HI ENA) High speed 8VDC max, Low speed 3.6VDC max.
- Pin 6 (AUX B) Not used
- Pin 7 (COM) Wire 26 12 VDC to brakes with joystick off neutral (Approx 1/4 Stroke)
- PIN 8 (HI ENA) Wire 59 High/Low input 0VDC Low speed, 12VDC High speed
- PIN 9 (SWAP) Wire 17 Directional input from turret limit switch. 0VDC (counterweight over steer axle) 12VDC (counterweight over fixed axle)
- PIN 10 (PT+) Wire 62 4VDC with engine running foot on deadman
- PIN 11 (SIG) Wire 64 2.5VDC with engine running foot on deadman (Joystick Neutral)
- PIN 12 (PT-) wire 61 1VDC with engine running foot on deadman

## ELECTRICAL SYSTEM DIAGNOSTICS AND ADJUSTMENTS

### ECM Diagnostic Trouble codes

The following table lists the diagnostic trouble codes (DTC's) supported by this application. If any DTC's not listed here are flashed by the Malfunction Indicator Lamp (MIL) or displayed on a PC, there may be a software error. Notify Ford Power Products Customer Service Center if any DTC's are displayed that are not included in the following table.

| DTC | Description                                                                 |
|-----|-----------------------------------------------------------------------------|
| 11  | All Systems OK                                                              |
| 12  | Throttle Position (TP) Sensor Low Voltage                                   |
| 14  | Manifold Absolute Pressure (MAP) Low Voltage                                |
| 21  | Overspeed                                                                   |
| 22  | Throttle Position (TP) Sensor High Voltage                                  |
| 24  | Manifold Absolute Pressure (MAP) High Voltage                               |
| 31  | Fuel Pump Low Voltage                                                       |
| 32  | Heated Oxygen Sensor (HO2S) Low Voltage                                     |
| 33  | Engine Coolant Temperature (ECT) Sensor High Voltage                        |
| 35  | Intake Air Temperature (IAT) Sensor High Voltage                            |
| 41  | Fuel Pump High Voltage                                                      |
| 42  | Heated Oxygen Sensor (HO2S) High Voltage                                    |
| 43  | Engine Coolant Temperature (ECT) Sensor Low Voltage                         |
| 45  | Intake Air Temperature (IAT) Sensor Low voltage                             |
| 51  | Low Oil Pressure                                                            |
| 52  | Crankshaft Position (CKP) Sensor Illegal Pattern                            |
| 53  | Camshaft Position (CMP) Sensor Illegal Pattern                              |
| 54  | Engine control Module (ECM) Fault Illegal Operation                         |
| 55  | Engine Conyrol Module (ECM) Fault Illegal Interruption                      |
| 56  | Engine Control Module (ECM) Fault COP (Computer Operating Properly) Failure |
| 61  | System Voltage Low                                                          |
| 62  | System Voltage High                                                         |



## HYDRAULIC SYSTEM DIAGNOSTICS AND ADJUSTMENTS

### Mid and Fly Boom Extend Pressure Adjustment

- 1) Locate the port labeled "EA" on main manifold and tee a 3000 PSI gauge into line. Refer to Figure 5-2 for port location.
- 2) Start engine, set engine RPM's to high range.
- 3) Depress and hold telescope out toggle switch.
- 4) When boom is completely extended, while holding telescope out toggle switch, adjust boom out relief valve to 1500 PSI. Refer to figure 5-2 for valve location.
- 6) Stop engine and remove gauge.

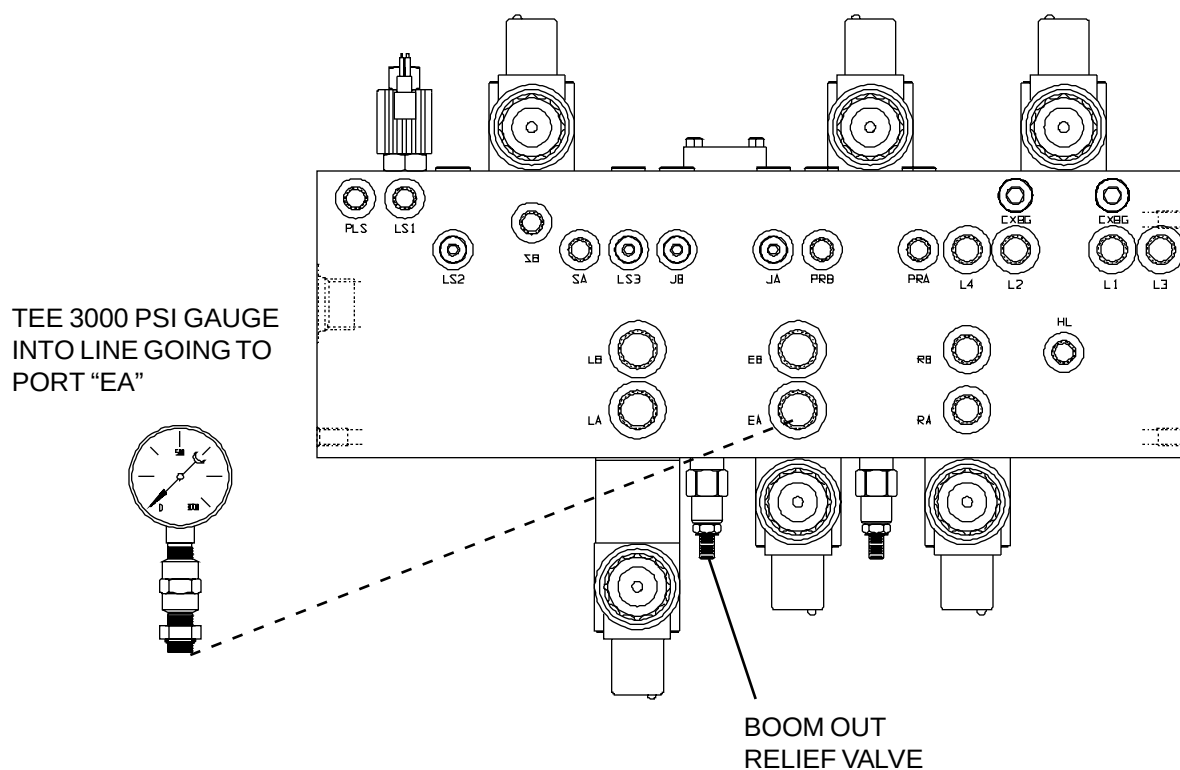


Figure 5-2. Main Manifold

## HYDRAULIC SYSTEM DIAGNOSTICS AND ADJUSTMENTS

### Low Speed Drive Pressure Adjustment

- 1) Fully lower and retract boom.
- 2) Tee a 1000 PSI gauge into port marked "Ps" on drive pump. Refer to Figure 5-3.
- 3) Start engine, and check gauge reading. It should read 350 PSI.
- 4) Extend boom approximately 6 feet. Adjust Hi/Low relief valve to 175 PSI. Refer to Figure 5-4.
- 5) Remove gauge and test drive. With boom fully lowered and fully retracted, high speed drive will be available. With boom above horizontal or extended, only low speed drive will be available.

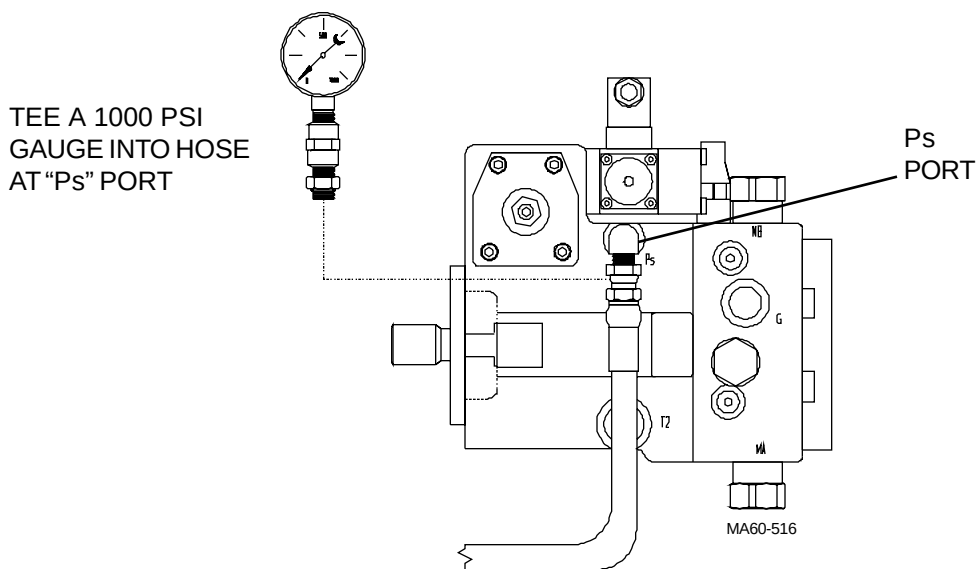


Figure 5-3. Drive Pump.

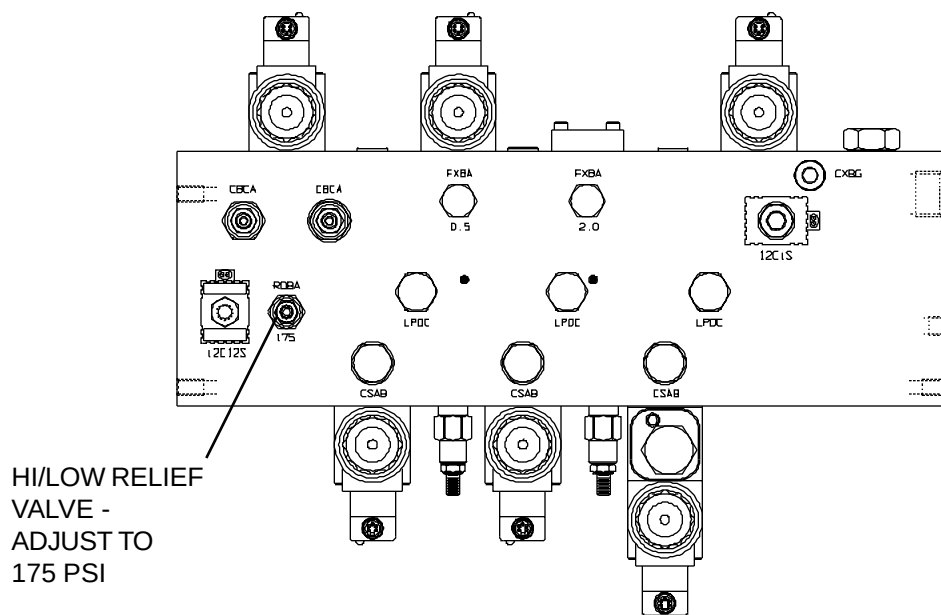


Figure 5-4. Hi/Low Drive Pressure Adjustment.

## HYDRAULIC SYSTEM DIAGNOSTICS AND ADJUSTMENTS

### Turret Rotation Pressure Adjustment

- 1) Locate the port labeled "RA" on main manifold. Remove hose and plug. Install a 3000 PSI gauge to fitting on port "RA". Refer to Figure 5-5 for port location.
- 2) Start engine, set engine RPM's to high range.
- 3) Depress and hold turret rotate toggle switch.
- 4) Adjust turret rotate relief valve to 1400 PSI. Refer to figure 5-5 for valve location.
- 6) Stop engine, remove gauge and reconnect hose removed in step 1.

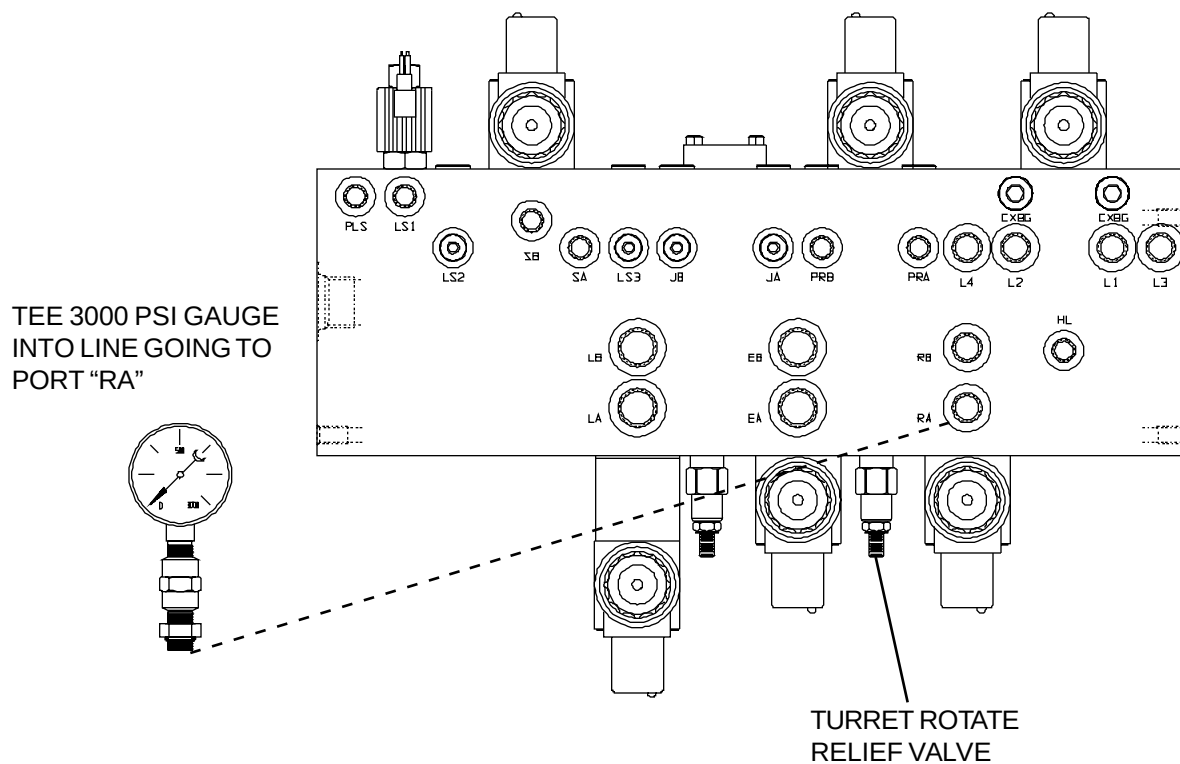


Figure 5-5. Main Manifold

## HYDRAULIC SYSTEM DIAGNOSTICS AND ADJUSTMENTS

### Dive Pump Test Procedure

**NOTE: Perform tests with basket over non-steer axle, boom below horizontal and fully retracted.**

For the following procedure refer to Figure 5-6, and Figure 5-7.

1. Locate and remove the hose attached to the port labeled "Ps" on the drive pump.
2. Cap hose to prevent contaminating hydraulic system.
3. Install a 3000 PSI gauge into the port labeled "Ps" on the drive pump.
4. Start engine from base controls.
5. Check reading on gauge. It should read 350 PSI. If 350 PSI present, move to step 9. If no pressure present, go to next step.
6. If no pressure present or below 350 PSI, replace relief valve RV3.
7. If no pressure present or below 350 PSI after replacing relief valve RV3, replace the pressure over ride valve POR1.
8. If no pressure present or below 350 PSI, replace drive pump.
9. Locate brake shuttle valve on engine tray.
10. Locate outlet to brake manifold.
11. Tee a 5000 PSI gauge into the hose.
12. Start engine from platform.
13. Select low engine RPM'S (1600 RPM'S).
14. **SLOWLY** move drive joystick in the forward direction.
15. Observe gauge reading. Gauge should read 4800 PSI. If 4800 PSI present drive pump is operating properly. If no pressure present, replace drive pump.



## HYDRAULIC SYSTEM DIAGNOSTICS AND ADJUSTMENTS

### Boom Function Pump Pressure Adjustments

1. Remove plug and install a 5000 PSI gauge into port "X" on the boom function pump. Refer to Figure 5-8 for location.
2. Remove cap off the system pressure adjusting valve.
3. Loosen lock nut on system pressure adjusting valve.
4. Start engine from base.
5. Raise jib arms above main boom.
6. Locate the main boom down toggle switch. Depress and hold in the down position.
7. Adjust system pressure adjusting valve to obtain 2650 PSI.
8. Shut off engine.
9. Tighten lock nut and reinstall cap.
10. Remove gauge from port "X" and install plug removed in step 1.
11. Install a 1000 PSI gauge into port closest to pump housing.
12. Remove cap from load sense pressure adjusting valve. Refer to Figure 5-8.
13. Loosen lock nut on load sense pressure adjusting valve.
14. Start engine. **DO NOT operate any functions.**
16. Adjust load sense pressure adjusting valve to obtain 250 PSI.
17. Tighten lock nut and reinstall cap.
18. Remove gauge from port and install plug removed in step 11.

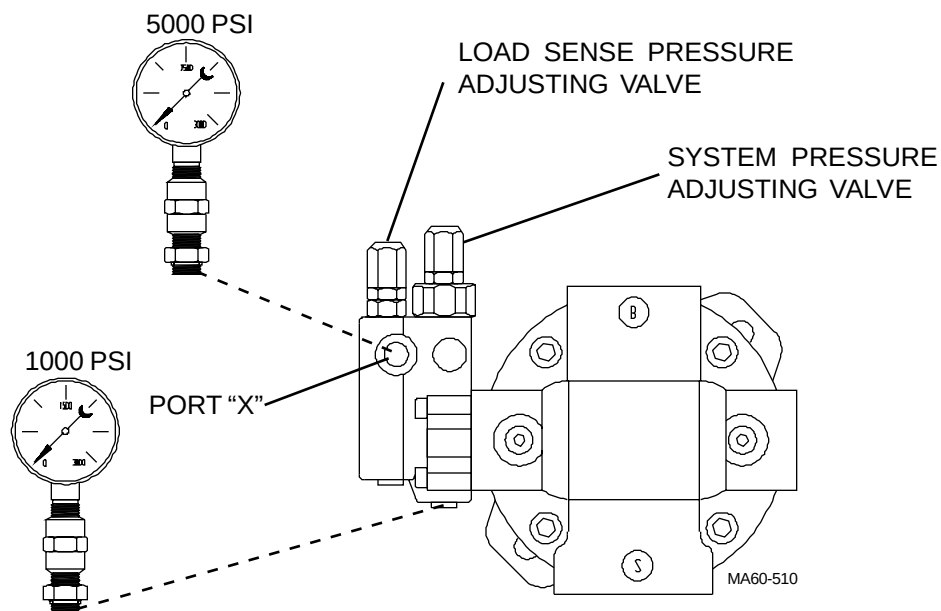


Figure 5-8. System Pressure Adjustment.

## HYDRAULIC SYSTEM DIAGNOSTICS AND ADJUSTMENTS

### Hydraulic Brake Adjustment Procedures

1. Block wheels to prevent machine from rolling.
2. Locate brake system pressure reducer. Refer to Figure 5-9 for location
3. Remove cap from pressure reducer and turn adjuster **GENTLY** clockwise until it bottoms out.



**CAUTION**

**Valve damage will occur if tightened too much!**

4. Pull out brake release override (red knob). Refer to Figure 5-9 for location.
5. Locate brake system relief valve. Refer to Figure 5-9 for location.
6. Pump brake release hand pump. See Figure 5-9. Adjust relief valve to 700 PSI on gauge.
7. Push brake release override valve in.
8. Start engine from platform controls and extend boom slightly to achieve low speed drive.
9. Drive machine forward or reverse and observe pressure gauge, should read 600 - 650 PSI.
10. Stop machine and adjust pressure reducing valve 1/4 turn at a time until 600 - 650 pressure reading is achieved. Turn clockwise to increase or counterclockwise to decrease.

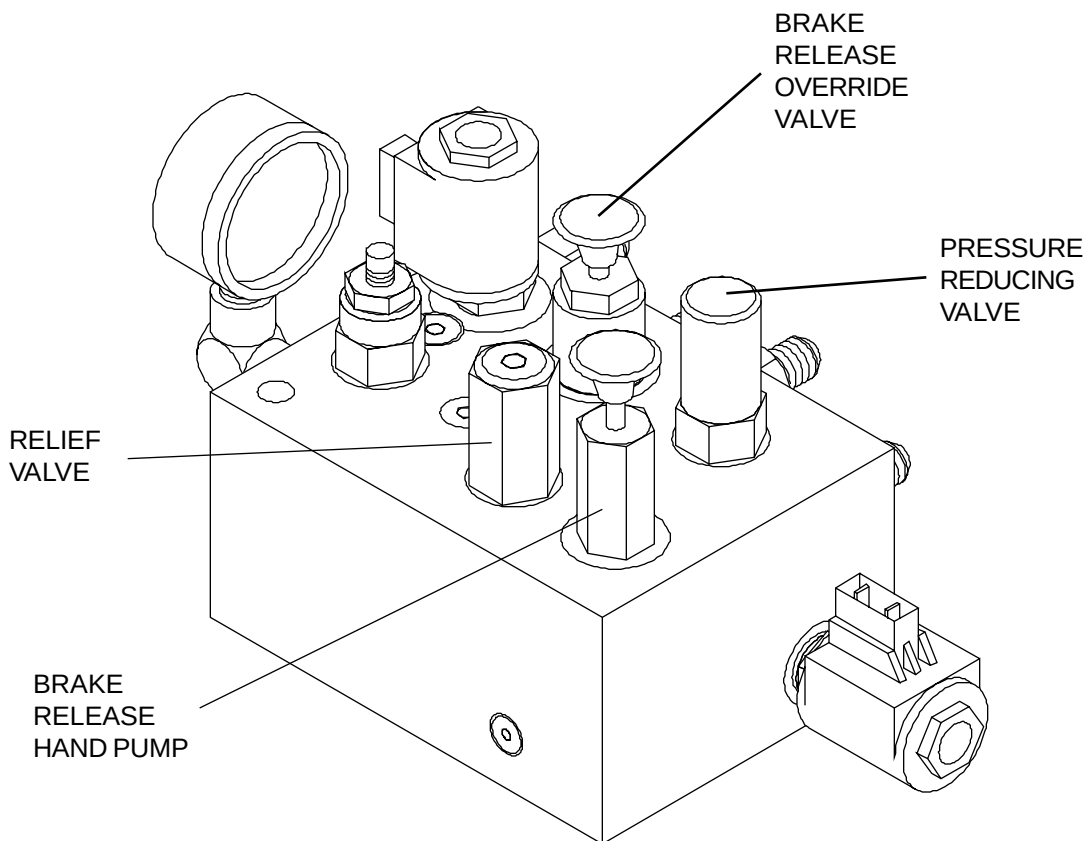


*Figure 5-9. Brake Manifold.*

## MECHANICAL ADJUSTMENTS

### Mechanical Brake Adjustment Procedures

Checking the adjustment of each brake on the axle requires the following procedure:

**NOTE - For machines with the 4 WD option this procedure must be followed for both axles.**

1. Chock the wheels to prevent the work platform from rolling when the brake is released.
2. Remove the Center Plug (17mm allen head) (Item #1) from each brake cover.
3. Starting with the left brake, insert the shaft of the Dial Indicator (Item #2, Skyjack part #707704) through the hole in the brake cover and carefully tighten the gauge holder (clockwise) until no threads are exposed.
4. Rotate the dial on the Dial Indicator to "0".
5. Locate the Parking Brake Release Procedure (refer to Section 2, Page 5). Follow the procedure to release the parking brakes.
6. Read the Dial Indicator setting. The proper setting range is 0.080" (1.8mm) to 0.085" (2.2mm). If the setting is within this range, pull out the Brake Override Valve Plunger to engage the brakes, then perform the same adjusting check on the right brake. Remove the Dial Indicator and reinstall Center Plug.

**NOTE: If setting on either brake is not within the specified range, proceed to step 7.**

7. Remove the Dial Indicator. Pull out the Brake Override Valve Plunger to engage the brakes. With a M19 socket and wrench, adjust the Actuator Shaft (Item #3) by tightening (clockwise) the Actuator Shaft Nut (Item #4) to reach a lower setting or loosening (counterclockwise) the Actuator Shaft Nut (Item #4) to reach a higher setting.
8. Repeat steps 3, 4, 5 and 6.
9. If setting is still not within the specified range, repeat steps 7 and 8 until setting is within specified range.

**NOTE: The brake will automatically return to normal operation when a drive function is selected.**

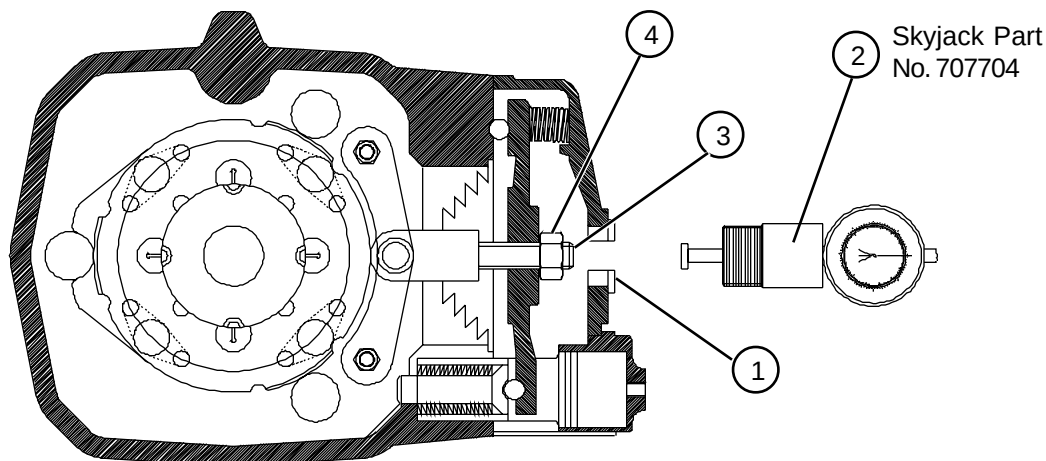


*Figure 5-10. Cross Section of Brake Assembly.*

## MECHANICAL ADJUSTMENTS

### Boom Wear Pad Clearances

1. Main Boom tip side wear pads = 0.0625" (1.5mm) - 0.125 (3mm).
2. Main Boom tip top/bottom wear pads = 0.0625" (1.5mm) - 0.125 (3mm).
3. Mid Boom base top/bottom wear pads = 0.0625" (1.5mm) - 0.125 (3mm).
4. Mid Boom base side wear pads = 0.0625" (1.5mm) - 0.125 (3mm).
5. Mid Boom tip side wear pads = 0.0625" (1.5mm) - 0.125 (3mm).
6. Mid Boom tip top/bottom wear pads = 0.0625" (1.5mm) - 0.125 (3mm).
7. Fly Boom base side wear pads = 0.0625" (1.5mm) - 0.125 (3mm).
8. Fly Boom base top/bottom wear pads = 0.0625" (1.5mm) - 0.125 (3mm).

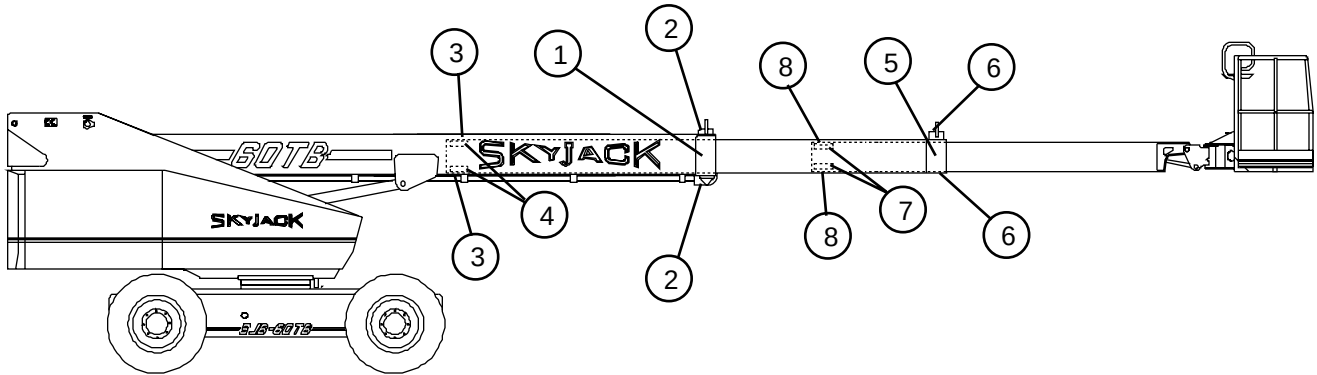


Figure 5-11. Boom Wear Pad Locations.

## STANDARD HOSE NUMBERING SYSTEM

**H1104 0081 2-0**

FITTING  
ARRANGEMENT  
(See Schedule  
Below)

HOSE SIZE  
(See Chart  
Below)

LENGTH OF HOSE  
IN WHOLE INCHES

LENGTH IN  
FRACTIONS (1/4"  
INCREMENTS) I.E.  
1=1/4"  
2=1/2"  
3=3/4"

REVISION LEVEL

Using the number above as an example (H1104 0081 2 0). This hose requires a 37° JIC, female swivel fitting on one end. A medium length 90° JIC, female swivel fitting for the other end. The Hose must meet or exceed S.A.E. 100R13 hose specification, and be a total of 81-1/2" long. NOTE: Hose ends and hose must be from same manufacturer per S.A.E. J1273 Nov. '91, Sections 3.10 and 4.2. Hose ends and hose must be of the same size i.e. #4 size fittings must be used with #4 size hose.

### HOSE SIZE CHART

| SIZE | 03    | 04   | 06   | 08   | 10   | 12   | 16 | 20     | 24     | 32 | 40     | 48 | 56     | 64 |
|------|-------|------|------|------|------|------|----|--------|--------|----|--------|----|--------|----|
| I.D. | 3/16" | 1/4" | 3/8" | 1/2" | 5/8" | 3/4" | 1" | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 3-1/2" | 4" |

### FITTING ARRANGEMENT SCHEDULE

| HOSE PREFIX | HOSE END FITTING                   | HOSE END FITTING                    | S.A.E. HOSE SPECIFICATION |
|-------------|------------------------------------|-------------------------------------|---------------------------|
| H1          | FEMALE, 37° JIC, SWIVEL            | FEMALE, 37° JIC, SWIVEL             | 100R1                     |
| H2          | FEMALE, 37° JIC, SWIVEL            | FEMALE, 37° JIC, SWIVEL             | 100R13                    |
| H3          | FEMALE, 37° JIC, SWIVEL            | 45°, FEMALE, 37° JIC, SWIVEL        | 100R1                     |
| H4          | FEMALE, 37° JIC, SWIVEL            | 45°, FEMALE, 37° JIC, SWIVEL        | 100R13                    |
| H5          | FEMALE, 37° JIC, SWIVEL            | LONG 90°, FEMALE, 37° JIC, SWIVEL   | 100R1                     |
| H6          | FEMALE, 37° JIC, SWIVEL            | SHORT 90°, FEMALE, 37° JIC, SWIVEL  | 100R1                     |
| H7          | LONG 90°, FEMALE, 37° JIC, SWIVEL  | LONG 90°, FEMALE, 37° JIC, SWIVEL   | 100R1                     |
| H8          | FEMALE, 37° JIC, SWIVEL            | FEMALE, 37° JIC, SWIVEL             | 100R4                     |
| H9          | FEMALE, 37° JIC, SWIVEL            | 45°, FEMALE, 37° JIC, SWIVEL        | 100R4                     |
| H10         | FEMALE, 37° JIC, SWIVEL            | MALE PIPE THREAD FITTING            | 100R1                     |
| H11         | FEMALE, 37° JIC, SWIVEL            | MEDIUM 90°, FEMALE, 37° JIC, SWIVEL | 100R13                    |
| H12         | SHORT 90°, FEMALE, 37° JIC, SWIVEL | SHORT 90°, FEMALE, 37° JIC, SWIVEL  | 100R1                     |
| H13         | FEMALE, 37° JIC, SWIVEL            | REUSABLE MALE PIPE THREAD FITTING   | 300 PSI                   |
| H14         | REUSABLE MALE PIPE THREAD FITTING  | NO FITTING                          | 300 PSI                   |
| H15         | REUSABLE, FEMALE, 37° JIC, SWIVEL  | REUSABLE, FEMALE, 37° JIC, SWIVEL   | 300 PSI                   |
| H16         | NO FITTING                         | NO FITTING                          | 100R4                     |
| H17         | NO FITTING                         | NO FITTING                          | 300 PSI                   |
| H18         | REUSABLE, FEMALE, 37° JIC, SWIVEL  | NO FITTING                          | 300 PSI                   |
| H19         | LONG 90°, FEMALE, 37° JIC, SWIVEL  | FEMALE, 37° JIC, SWIVEL             | 100R13                    |
| H20         | FEMALE, 37° JIC, SWIVEL            | SHORT 90°, FEMALE, 37° JIC, SWIVEL  | 100R4                     |
| H21         | FEMALE, 37° JIC, SWIVEL            | SHORT 90°, FEMALE, 37° JIC, SWIVEL  | 100R2AT                   |
| H22         | FEMALE, 37° JIC, SWIVEL            | FEMALE, 37° JIC, SWIVEL             | 100R2AT                   |
| H23         | FEMALE, 37° JIC, SWIVEL            | LONG 90°, FEMALE, 37° JIC, SWIVEL   | 100R2AT                   |
| H24         | FEMALE, 37° JIC, SWIVEL            | SHORT 90°, FEMALE, 37° JIC, SWIVEL  | 100R13                    |
| H25         | FEMALE, 37° JIC, SWIVEL            | FEMALE, 37° JIC, SWIVEL             | 100R4                     |

# SECTION 6 PARTS LIST

## GENERAL

The information contained in this section is designed to aid the user in locating and identifying replacement parts. Component parts of various assemblies and sub-assemblies comprising the work platform are illustrated and accompanied by a descriptive parts list. Exploded drawings are used to show relative location of component parts in disassembly order. If a part cannot be found in this section, order by work platform model number and serial number, giving a complete description of the part.

## PARTS ORDERING INFORMATION

When ordering replacement parts, the complete part number and description should be used to ensure proper identification and delivery of the desired item. This complete identification should also be used when requesting equipment information.

## METHOD OF LISTING

Parts are listed in order according to the reference number shown in the illustration, followed by a full description based upon the "NOUN FIRST" method. That is, the noun name of the part is listed first, then the modifying description information which serves to specifically identify the item. For example: PIN, Clevis. Assemblies or groups are shown at the beginning of a parts list and are identified with the letter references A, B, C, etc. Individual parts in these lists have corresponding letters after their description to identify which assembly or group it is used in. Individual parts without identifying letters are used in all the assemblies or group shown at the

beginning of the parts list. Descriptions preceded with an (•) indicates a serviceable component or attaching hardware for the higher level assembly.

## QUANTITIES (Units per Assy.)

The quantities of each part that are required to complete the assembly. If quantity is (AR), it is understood that the quantity may vary when machine is equipped with certain options. Order quantity as needed.

## HARDWARE

Standard screws, washers, nuts, etc. are not identified by a reference number. These parts are known as COMMON HARDWARE items and appear indented under the major items with which they are used. They should be ordered separately as listed, since they are not component parts of the pieces they attach to.

## HOW TO ORDER REPAIR PARTS

1. Address all orders to your local SKYJACK dealer.
2. Specify model and serial number of the work platform (found on the serial number plate).
3. List the quantity needed.
4. List the length needed (if bulk item).
5. List the part number and description as shown in this manual for each item.
6. Show billing and shipping address and name of individual if possible.
7. Suggest best routing.

CUSTOMER \_\_\_\_\_

DEALER \_\_\_\_\_

MODEL NUMBER \_\_\_\_\_

SERIAL NUMBER \_\_\_\_\_

DATE PURCHASED \_\_\_\_\_

**USE ONLY SKYJACK AUTHORIZED REPLACEMENT PARTS!**

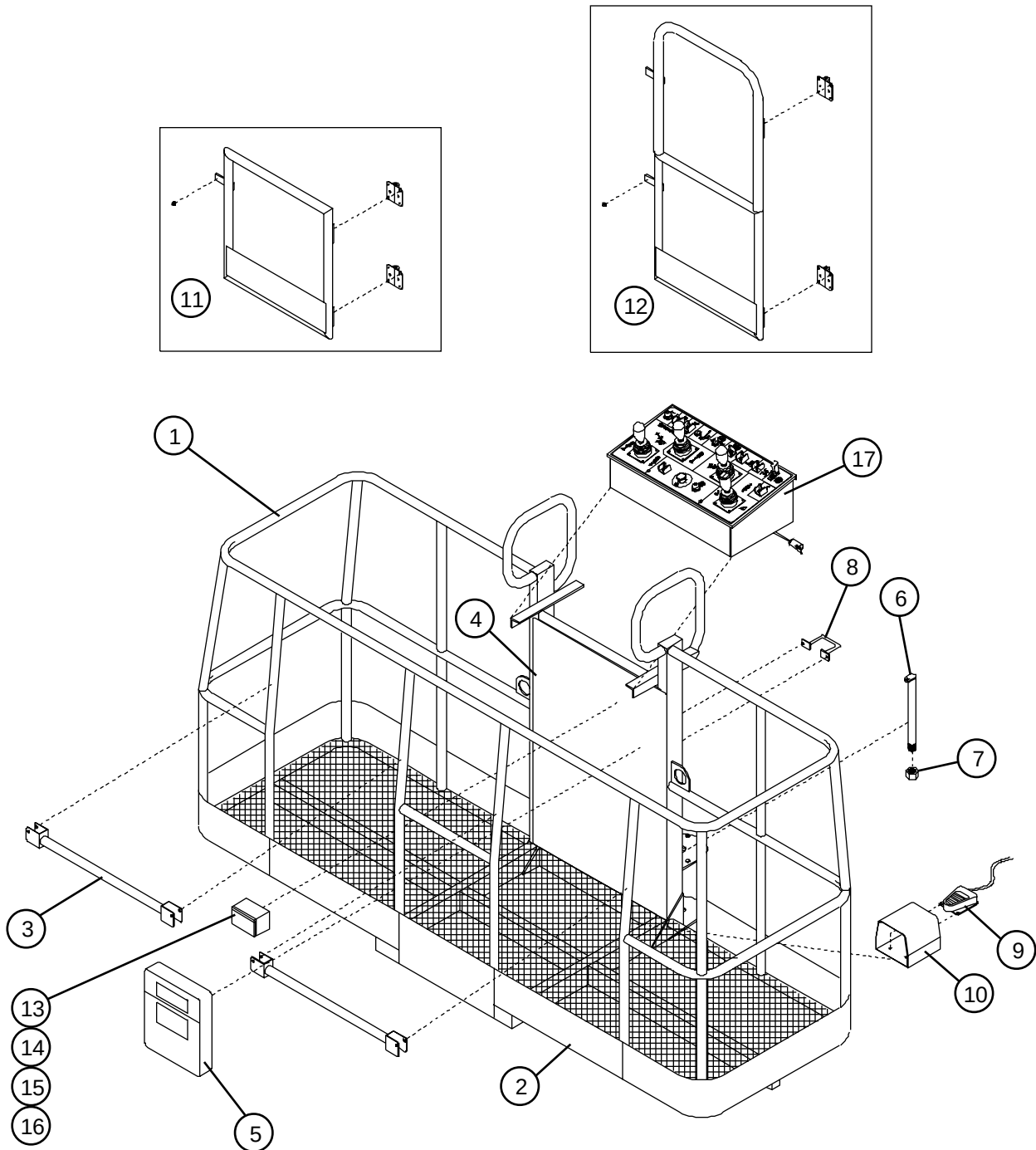
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**FIGURE 6-1. PLATFORM ASSEMBLY - 30" x 72"**

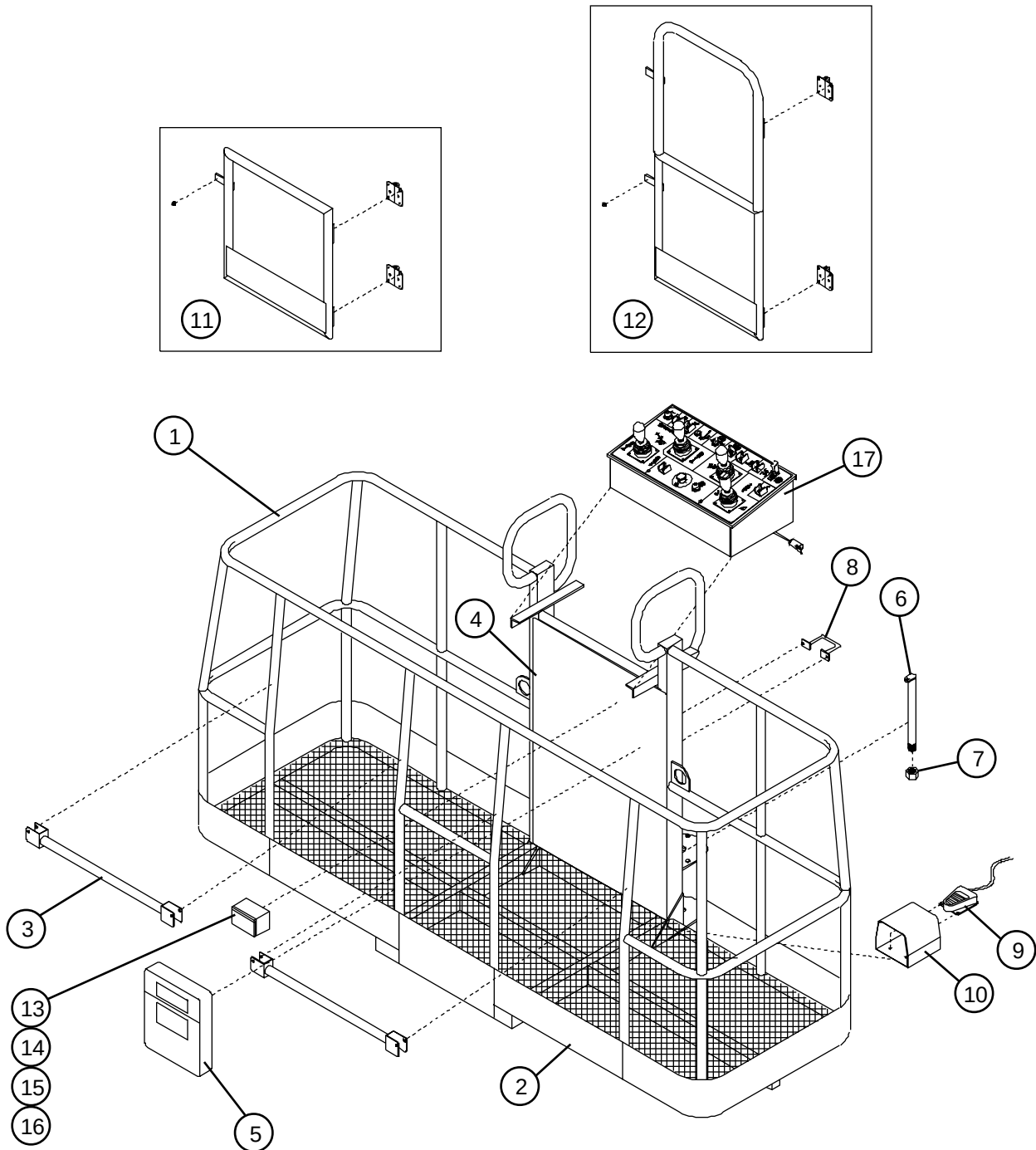


Ma60-615

**FIGURE 6-1. PLATFORM ASSEMBLY - 30" x 72"**

| Index<br>No. | Skyjack<br>Part No. | Description                                                              | Units<br>per<br>Assy. |
|--------------|---------------------|--------------------------------------------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                                                            |                       |
| <b>A</b>     | 708936              | PLATFORM ASSEMBLY, Standard                                              | -                     |
| <b>B</b>     | 708918              | PLATFORM ASSEMBLY, With half gate option                                 | -                     |
| <b>C</b>     | 708920              | PLATFORM ASSEMBLY, With full gate option                                 | -                     |
| <b>D</b>     | 708922              | PLATFORM ASSEMBLY, European, Standard                                    | -                     |
| <b>E</b>     | 708924              | PLATFORM ASSEMBLY, European, half gate option                            | -                     |
| <b>F</b>     | 708926              | PLATFORM ASSEMBLY, European, full gate option                            | -                     |
| 1            | 707997              | • WELDMENT, Platform, <b>A</b>                                           | 1                     |
|              | 708917              | • WELDMENT, Platform, <b>B</b>                                           | 1                     |
|              | 708919              | • WELDMENT, Platform, <b>C</b>                                           | 1                     |
|              | 708921              | • WELDMENT, Platform, <b>D</b>                                           | 1                     |
|              | 708923              | • WELDMENT, Platform, <b>E</b>                                           | 1                     |
|              | 708925              | • WELDMENT, Platform, <b>F</b>                                           | 1                     |
|              | 706142              | • KICK PLATE, <b>A</b>                                                   | 2                     |
| 2            | 706603              | • BOLT, BHCS 1/4"-20x1/2" stainless steel                                | 4                     |
|              | 700583              | • LOCKNUT, 1/4"x20                                                       | 4                     |
|              | 708028              | • RAIL ASSEMBLY, Entry, <b>A, D</b>                                      | 2                     |
| 3            | 708934              | • PLATE, Label                                                           | 1                     |
|              | 103632              | • SCREW, Self tapping 1/4"-14x3/4"                                       | 6                     |
| 4            | 706664              | • GROMMET, 7/16" I.D. x 1/16 mat'l                                       | 1                     |
|              | 117293              | • MANUAL BOX, Plastic                                                    | 1                     |
|              | 706857              | • BOLT, Mach. Head 1/4"-20x3/4"                                          | 4                     |
|              | 103995              | • WASHER, Flat 1/4"                                                      | 4                     |
|              | 700583              | • LOCKNUT, 1/4"x20                                                       | 4                     |
|              | 708962              | • CENTER BOLT, Actuator (Plated)                                         | 1                     |
|              | 700570              | • NUT, Hex 1"x14                                                         | 1                     |
| 5            | 706457              | • WELDMENT, Hose ring                                                    | 1                     |
|              | 103857              | • BOLT, HHCS 1/4"-20x1" gr 5                                             | 2                     |
| 6            | 104000              | • WASHER, Lock 1/4"                                                      | 2                     |
|              | 700520              | • FOOT SWITCH ASSEMBLY                                                   | 1                     |
|              | 700187              | •• SWITCH, Foot                                                          | 1                     |
|              | 103567              | •• CONNECTOR ASSEMBLY, 4 Pin male                                        | 1                     |
|              | 103569              | •• CONNECTOR ASSEMBLY, 4 Pin male                                        | 1                     |
|              | 700188              | • SWITCH COVER, Foot                                                     | 1                     |
|              | 103857              | • BOLT, HHCS 1/4"-20x1" gr 5                                             | 2                     |
| 7            | 700598              | • WASHER, Fender 1-1/4" O.D. - 9/32" I.D.                                | 2                     |
|              | (Ref.)              | GATE ASSEMBLY, Half gate (Option), <b>B, E</b>                           | 1                     |
|              | 706801              | • WELDMENT, RH gate                                                      | 1                     |
|              | 706802              | • WELDMENT, LH gate                                                      | 1                     |
|              | 710262              | • PLATE, Latch mounting                                                  | 1                     |
|              | 710274              | • LATCH, Finger bolt                                                     | 1                     |
|              | 701027              | • BUMPER, Rubber                                                         | 2                     |
| 8            | 117277              | • HINGE, Spring                                                          | 4                     |
|              | 112495              | • BOLT, HHCS 1/4"-20x3/8" gr 5                                           | 24                    |
|              | 104000              | • WASHER, Lock 1/4"                                                      | 24                    |
|              | (Ref.)              | GATE ASSEMBLY, Full gate (Option), <b>C, F</b>                           | 1                     |
|              | 706803              | • WELDMENT, Full gate                                                    | 1                     |
|              | 701027              | • BUMPER, Rubber                                                         | 2                     |
|              | 710262              | • PLATE, Latch mounting                                                  | 1                     |
| 9            | 710274              | • LATCH, Finger bolt                                                     | 1                     |
|              | 117277              | • HINGE, Spring                                                          | 2                     |
|              | 112495              | • BOLT, HHCS 1/4"-20x3/8" gr 5                                           | 12                    |
|              | 104000              | • WASHER, Lock 1/4"                                                      | 12                    |
|              | 109700              | • RECEPTACLE 110V. GFCI BOX                                              | 1                     |
|              | 112707              | • SCREW, Self tapping #10 24x5/8" lg.                                    | 4                     |
|              | 103035              | • STRAIN RELIEF, Metal 90°                                               | 1                     |
| 10           | 109698              | • RECEPTACLE 110V. GFCI, <b>A, B, C</b>                                  | 1                     |
| 11           | 109699              | • RECEPTACLE 110V. Cover Plate, <b>A, B, C</b>                           | 1                     |
| 12           | 703737              | • COVER 110V. Outlet Blank, <b>D, E</b>                                  | 1                     |
| 13           | (Ref.)              | CONSOLE ASSEMBLY, Platform control (For components refer to Figure 6-3.) | 1                     |

**FIGURE 6-2. PLATFORM ASSEMBLY - 30" x 96"**

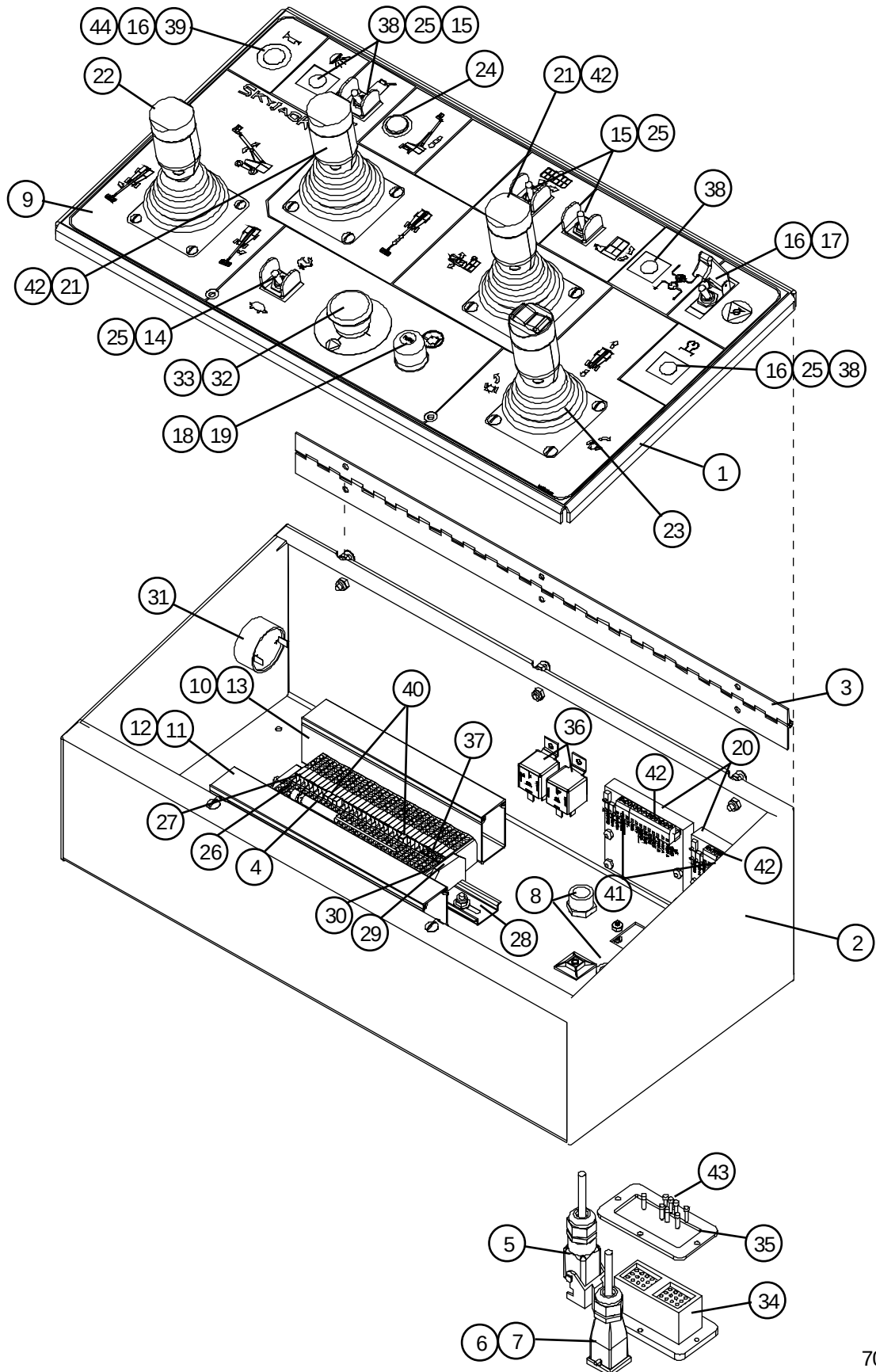


Ma60-615

**FIGURE 6-2. PLATFORM ASSEMBLY - 30" x 96"**

| Index<br>No. | Skyjack<br>Part No. | Description                                                              | Units<br>per<br>Assy. |
|--------------|---------------------|--------------------------------------------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                                                            |                       |
| <b>A</b>     | 710175              | PLATFORM ASSEMBLY, Standard                                              | -                     |
| <b>B</b>     |                     | PLATFORM ASSEMBLY, With half gate option                                 | -                     |
| <b>C</b>     |                     | PLATFORM ASSEMBLY, With full gate option                                 | -                     |
| <b>D</b>     | 711642              | PLATFORM ASSEMBLY, European, Standard                                    | -                     |
| <b>E</b>     |                     | PLATFORM ASSEMBLY, European, half gate option                            | -                     |
| <b>F</b>     |                     | PLATFORM ASSEMBLY, European, full gate option                            | -                     |
| 1            | 710174              | • WELDMENT, Platform, <b>A</b>                                           | 1                     |
|              |                     | • WELDMENT, Platform, <b>B</b>                                           | 1                     |
|              |                     | • WELDMENT, Platform, <b>C</b>                                           | 1                     |
|              | 711515              | • WELDMENT, Platform, <b>D</b>                                           | 1                     |
|              |                     | • WELDMENT, Platform, <b>E</b>                                           | 1                     |
|              |                     | • WELDMENT, Platform, <b>F</b>                                           | 1                     |
| 2            | 706142              | • KICK PLATE, <b>A</b>                                                   | 2                     |
|              | 706603              | • BOLT, BHCS 1/4"-20x1/2" stainless steel                                | 4                     |
|              | 700583              | • LOCKNUT, 1/4"x20                                                       | 4                     |
| 3            | 708028              | • RAIL ASSEMBLY, Entry, <b>A, D</b>                                      | 2                     |
| 4            | 708934              | • PLATE, Label                                                           | 1                     |
|              | 103632              | • SCREW, Self tapping 1/4"-14x3/4"                                       | 6                     |
|              | 706664              | • GROMMET, 7/16" I.D. x 1/16 mat'l                                       | 1                     |
| 5            | 117293              | • MANUAL BOX, Plastic                                                    | 1                     |
|              | 706857              | • BOLT, Mach. Head 1/4"-20x3/4"                                          | 4                     |
|              | 103995              | • WASHER, Flat 1/4"                                                      | 4                     |
|              | 700583              | • LOCKNUT, 1/4"x20                                                       | 4                     |
| 6            | 708962              | • CENTER BOLT, Actuator (Plated)                                         | 1                     |
| 7            | 700570              | • NUT, Hex 1"x14                                                         | 1                     |
| 8            | 706457              | • WELDMENT, Hose ring                                                    | 1                     |
|              | 103857              | • BOLT, HHCS 1/4"-20x1" gr 5                                             | 2                     |
|              | 104000              | • WASHER, Lock 1/4"                                                      | 2                     |
| 9            | 700520              | • FOOT SWITCH ASSEMBLY                                                   | 1                     |
|              | 700187              | • SWITCH, Foot                                                           | 1                     |
|              | 103567              | • CONNECTOR ASSEMBLY, 4 Pin male                                         | 1                     |
|              | 103569              | • CONNECTOR ASSEMBLY, 4 Pin male                                         | 1                     |
| 10           | 700188              | • SWITCH COVER, Foot                                                     | 1                     |
|              | 103857              | • BOLT, HHCS 1/4"-20x1" gr 5                                             | 2                     |
|              | 700598              | • WASHER, Fender 1-1/4" O.D. - 9/32" I.D.                                | 2                     |
| 11           | (Ref.)              | GATE ASSEMBLY, Half gate (Option), <b>B, E</b>                           | 1                     |
|              | 706801              | • WELDMENT, RH gate                                                      | 1                     |
|              | 706802              | • WELDMENT, LH gate                                                      | 1                     |
|              | 710262              | • PLATE, Latch mounting                                                  | 1                     |
|              | 710274              | • LATCH, Finger bolt                                                     | 1                     |
|              | 701027              | • BUMPER, Rubber                                                         | 2                     |
|              | 117277              | • HINGE, Spring                                                          | 4                     |
|              | 112495              | • BOLT, HHCS 1/4"-20x3/8" gr 5                                           | 24                    |
|              | 104000              | • WASHER, Lock 1/4"                                                      | 24                    |
| 12           | (Ref.)              | GATE ASSEMBLY, Full gate (Option), <b>C, F</b>                           | 1                     |
|              | 706803              | • WELDMENT, Full gate                                                    | 1                     |
|              | 710262              | • PLATE, Latch mounting                                                  | 1                     |
|              | 710274              | • LATCH, Finger bolt                                                     | 1                     |
|              | 701027              | • BUMPER, Rubber                                                         | 2                     |
|              | 117277              | • HINGE, Spring                                                          | 2                     |
|              | 112495              | • BOLT, HHCS 1/4"-20x3/8" gr 5                                           | 12                    |
|              | 104000              | • WASHER, Lock 1/4"                                                      | 12                    |
| 13           | 109700              | • RECEPTACLE 110V. GFCI BOX                                              | 1                     |
|              | 112707              | • SCREW, Self tapping #10 24x5/8" lg.                                    | 4                     |
|              | 103035              | • STRAIN RELIEF, Metal 90°                                               | 1                     |
| 14           | 109698              | • RECEPTACLE 110V. GFCI, <b>A, B, C</b>                                  | 1                     |
| 15           | 109699              | • RECEPTACLE 110V. Cover Plate, <b>A, B, C</b>                           | 1                     |
| 16           | 703737              | • COVER 110V. Outlet Blank, <b>D, E</b>                                  | 1                     |
| 17           | (Ref.)              | CONSOLE ASSEMBLY, Platform control (For components refer to Figure 6-3.) | 1                     |

**FIGURE 6-3. OPERATOR'S CONTROL CONSOLE ASSEMBLY**

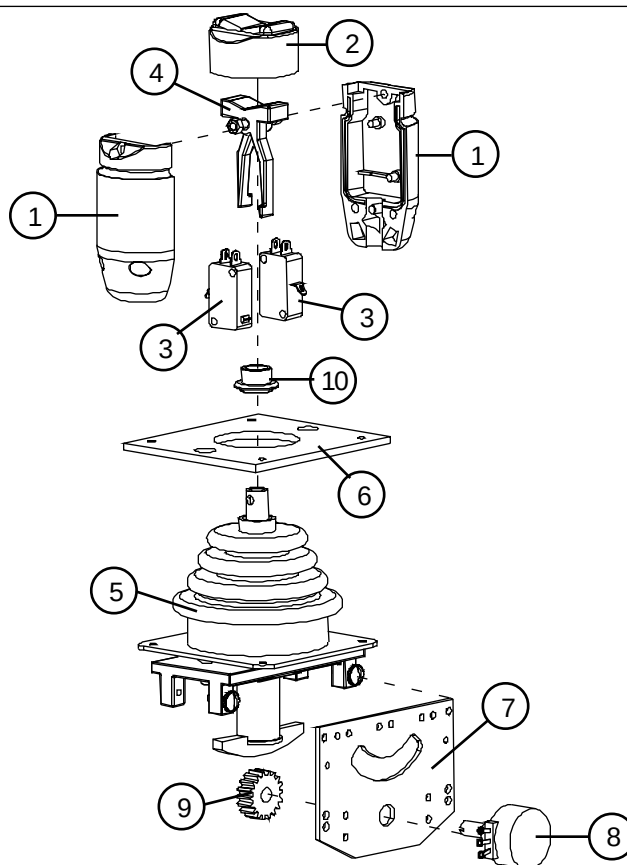


709569

**FIGURE 6-3. OPERATOR'S CONTROL CONSOLE ASSEMBLY**

| Index<br>No. | Skyjack<br>Part No. | Description                                                          | Units<br>per<br>Assy. |
|--------------|---------------------|----------------------------------------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                                                        |                       |
| <b>A</b>     | 709569              | OPERATOR'S CONTROL CONSOLE ASSEMBLY (Dual Fuel)                      | -                     |
| <b>B</b>     | 708564              | OPERATOR'S CONTROL CONSOLE ASSEMBLY (Diesel)                         | -                     |
| <b>C</b>     | 709795              | OPERATOR'S CONTROL CONSOLE ASSEMBLY (Europe Diesel)                  | -                     |
| 1            | 709099              | • CONTROL BOX LID                                                    | 1                     |
| 2            | 708652              | • CONTROL BOX WELDMENT                                               | 1                     |
|              | 710586              | • WEATHER STRIPPING, Sub assembly                                    | 3                     |
|              | 710587              | • WEATHER STRIPPING, Sub assembly                                    | 2                     |
| 3            | 708731              | • HINGE                                                              | 1                     |
| 4            | 709179              | • SUB-ASSEMBLY, Diode                                                | 1                     |
| 5            | 705441              | • ASSEMBLY, Harness, Foot pedal                                      | 1                     |
| 6            | 710810              | • HARNESS, Fly-in limit switch                                       | 1                     |
| 7            | 710952              | • CABLE, Fly in limit switch                                         | 72'                   |
| 8            | 103036              | • STRAIN RELIEF, Plastic                                             | 2                     |
| 9            | 710173              | • LABEL, Control box, non text, <b>A B C</b>                         | 1                     |
| 10           | 710347              | • COVER, Wire duct                                                   | 1                     |
| 11           | 710348              | • COVER, Wire duct                                                   | 1                     |
| 12           | 710345              | • WIRE DUCT                                                          | 1                     |
| 13           | 710346              | • WIRE DUCT                                                          | 1                     |
| 14           | 701930              | • SWITCH, Toggle 2 pos. maintained                                   | AR                    |
| 15           | 102853              | • SWITCH, Toggle 3 pos. momentary                                    | AR                    |
| 16           | 701929              | • SWITCH, Toggle 2 pos. momentary                                    | AR                    |
| 17           | 701927              | • GUARD, Toggle red bottom                                           | 1                     |
| 18           | 709133              | • SWITCH, Push button, start                                         | 1                     |
| 19           | 709370              | • COVER, Push button                                                 | 1                     |
| 20           | 709172              | • DRIVER CARD                                                        | 2                     |
| 21           | 709176              | • JOYSTICK, Single axis w/card (For components refer to Figure 6-5.) | AR                    |
| 22           | 709177              | • JOYSTICK, Dual axis (For components refer to Figure 6-6.)          | 1                     |
| 23           | 709178              | • JOYSTICK, Drive/steer (For components refer to Figure 6-4.)        | 1                     |
| 24           | 709180              | • DIALIGHT, Red                                                      | 1                     |
| 25           | 707394              | • GUARD, Toggle switch                                               | AR                    |
| 26           | 707144              | • TERMINAL BLOCK, Ground                                             | 3                     |
| 27           | 707143              | • TERMINAL BLOCK, 4 conduit, Thru                                    | 27                    |
| 28           | 710344              | • DIN RAIL                                                           | 1                     |
| 29           | 707147              | • END STOP                                                           | 2                     |
| 30           | 707146              | • TERMINAL BLOCK, End plate                                          | 1                     |
| 31           | 103057              | • BEEPER 4-28VDC                                                     | 1                     |
| 32           | 103281              | • SWITCH, Contact base n.c.                                          | 1                     |
| 33           | 102769              | • SWITCH HEAD, Emergency stop                                        | 1                     |
| 34           | 707875              | • CONNECTOR 40-PIN                                                   | 1                     |
| 35           | 707847              | • GASKET, Connector                                                  | 1                     |
| 36           | 701943              | • RELAY, 12VDC Sealed                                                | 2                     |
| 37           | 707145              | • TERMINAL BLOCK, 4conduit, diode                                    | 4                     |
| 38           | 702662              | • PLUG, Knockout 1/2"                                                | AR                    |
| 39           | 709805              | • PLUG, Knockout 5/8"                                                | AR                    |
| 40           | 707148              | • JUMPER, Terminal, Adjacent                                         | 4                     |
| 41           | 709368              | • TERMINAL BLOCK, Pluggable, 3 position                              | 2                     |
| 42           | 709367              | • TERMINAL BLOCK, Pluggable, 9 position                              | 3                     |
| 43           | 705256              | • PLUG, Seal                                                         | 8                     |
| 44           | 709802              | • CAP, Weatherproof, (Black), (Horn option)                          | 1                     |

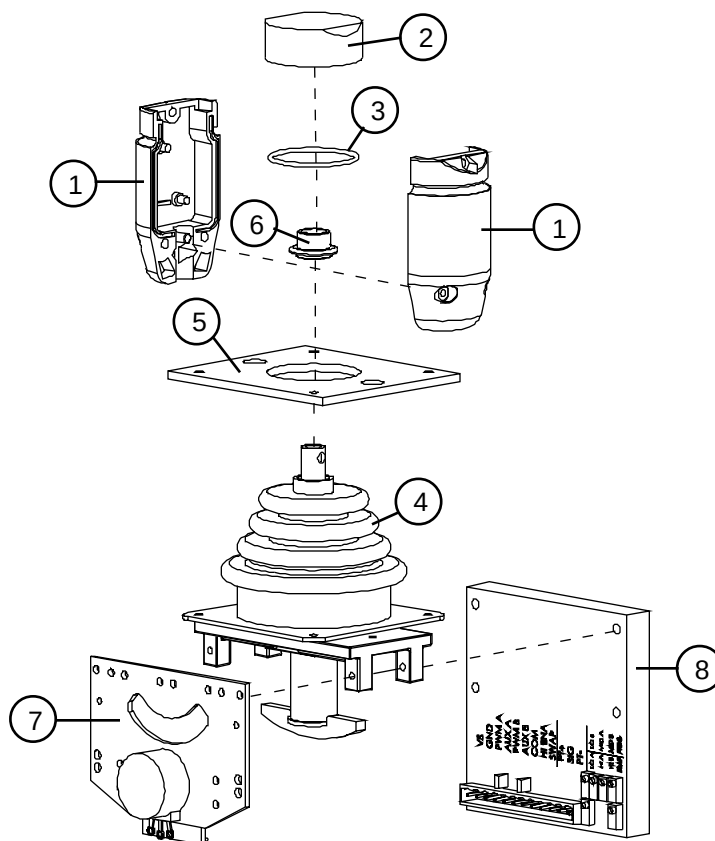
**FIGURE 6-4. DRIVE/STEER CONTROLLER ASSEMBLY**



709178

| Index No. | Skyjack Part No. | Description                          |   |   |   |   |   |   |   |   |    |    |    |    |    | Units per Assy. |
|-----------|------------------|--------------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|-----------------|
|           |                  | 1                                    | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |                 |
|           | 709178           | CONTROLLER ASSEMBLY, Drive/steer     |   |   |   |   |   |   |   |   |    |    |    |    |    | -               |
| -         | 710022           | • GRIP ASSEMBLY, Controller          |   |   |   |   |   |   |   |   |    |    |    |    |    | 1               |
| 1         | 710015           | • • ASSEMBLY, Grip half, RSG         |   |   |   |   |   |   |   |   |    |    |    |    |    | 2               |
| 2         | 105735           | • • CAP                              |   |   |   |   |   |   |   |   |    |    |    |    |    | 1               |
| 3         | 105733           | • • SWITCH                           |   |   |   |   |   |   |   |   |    |    |    |    |    | 2               |
| 4         | 105734           | • • SWITCH, Actuator                 |   |   |   |   |   |   |   |   |    |    |    |    |    | 1               |
|           | 710886           | • • NUT, HEX #6-32, small pattern    |   |   |   |   |   |   |   |   |    |    |    |    |    | 1               |
|           | 710887           | • • BOLT, SHCS #6-32 x 1" stainless  |   |   |   |   |   |   |   |   |    |    |    |    |    | 1               |
| 5         | 700978           | • BOOT, Controller handle            |   |   |   |   |   |   |   |   |    |    |    |    |    | 1               |
| 6         | 708995           | • PLATE, Transition                  |   |   |   |   |   |   |   |   |    |    |    |    |    | 1               |
| -         | 710023           | • ASSEMBLY, Electrical               |   |   |   |   |   |   |   |   |    |    |    |    |    | 1               |
| 7         | 708996           | • • PLATE, Mounting - Pot and Switch |   |   |   |   |   |   |   |   |    |    |    |    |    | 1               |
| 8         | 708997           | • • POTENTIOMETER, 500 OHM           |   |   |   |   |   |   |   |   |    |    |    |    |    | 1               |
| 9         | 708998           | • • GEAR, Pinion                     |   |   |   |   |   |   |   |   |    |    |    |    |    | 1               |
| 10        | 710018           | • SLEEVE, Retaining Spring           |   |   |   |   |   |   |   |   |    |    |    |    |    | 1               |

**FIGURE 6-5. SINGLE AXIS W/CARD CONTROLLER ASSEMBLY**

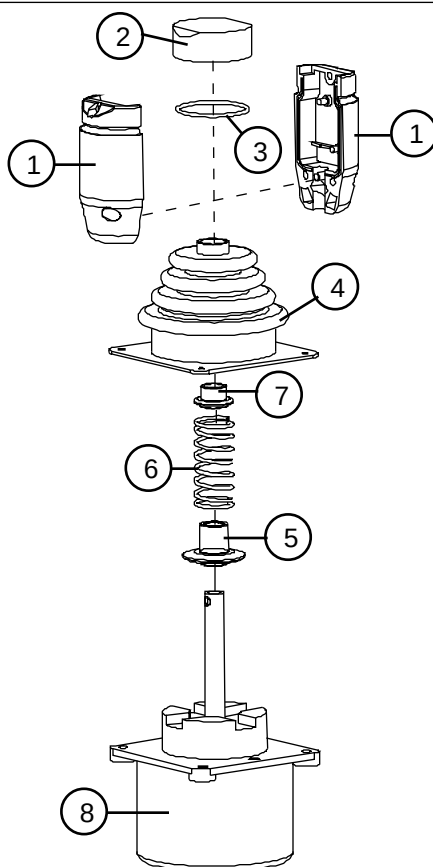


709176

| Index No. | Skyjack Part No. | Description                             | Units per Assy. |
|-----------|------------------|-----------------------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7                           |                 |
| -         | 709176           | CONTROLLER ASSEMBLY, Single axis w/card | -               |
| 1         | 710014           | • ASSEMBLY, Rocker switch, No switch    | 1               |
| 2         | 710015           | • • ASSEMBLY, Grip half, RSG            | 1               |
| 3         | 710016           | • • CAP                                 | 1               |
|           | 710879           | • • O-RING                              | 1               |
|           | 710888           | • • BOLT, SHCS, #6-32 x 5/8" stainless  | 2               |
|           | 710889           | • • WASHER, Lock, #6                    | 2               |
| 4         | 700978           | • BOOT, Controller handle               | 1               |
| 5         | 708995           | • PLATE, Transition                     | 1               |
| 6         | 710018           | • SLEEVE, Retaining spring              | 1               |
| 7         | 710870           | • ASSEMBLY, Pot and wire                | 1               |
| 8         | 709172           | • CARD, Driver control                  | 1               |
| 9         | 710871           | • KIT, Assembly hardware                | 1               |

## NOTES

**FIGURE 6-6. DUAL AXIS CONTROLLER ASSEMBLY**



709177

| Index No. | Skyjack Part No. | Description                            |   |   |   |   |   |   | Units per Assy. |
|-----------|------------------|----------------------------------------|---|---|---|---|---|---|-----------------|
|           |                  | 1                                      | 2 | 3 | 4 | 5 | 6 | 7 |                 |
|           | 709177           | CONTROLLER ASSEMBLY, Dual axis         |   |   |   |   |   |   | -               |
| -         | 710014           | • ASSEMBLY, Rocker switch, No switch   |   |   |   |   |   |   | 1               |
| 1         | 710015           | • • ASSEMBLY, Grip half, RSG           |   |   |   |   |   |   | 2               |
| 2         | 710016           | • • CAP                                |   |   |   |   |   |   | 1               |
| 3         | 710879           | • • O-RING                             |   |   |   |   |   |   | 1               |
|           | 710888           | • • BOLT, SHCS, #6-32 x 5/8" stainless |   |   |   |   |   |   | 2               |
|           | 710889           | • • WASHER, Lock, #6                   |   |   |   |   |   |   | 2               |
| 4         | 700978           | • BOOT, Controller handle              |   |   |   |   |   |   | 1               |
| 5         | 700980           | • FOOT, Centering                      |   |   |   |   |   |   | 1               |
| 6         | 700979           | • SPRING, Centering                    |   |   |   |   |   |   | 1               |
| 7         | 710018           | • SLEEVE, Retaining spring             |   |   |   |   |   |   | 1               |
| 8         | 710020           | • ASSEMBLY, Electrical, 5-8VDC         |   |   |   |   |   |   | 1               |
|           | 710021           | ASSEMBLY KIT, For M215                 |   |   |   |   |   |   | 1               |

FIGURE 6-7. BOOM ASSEMBLY

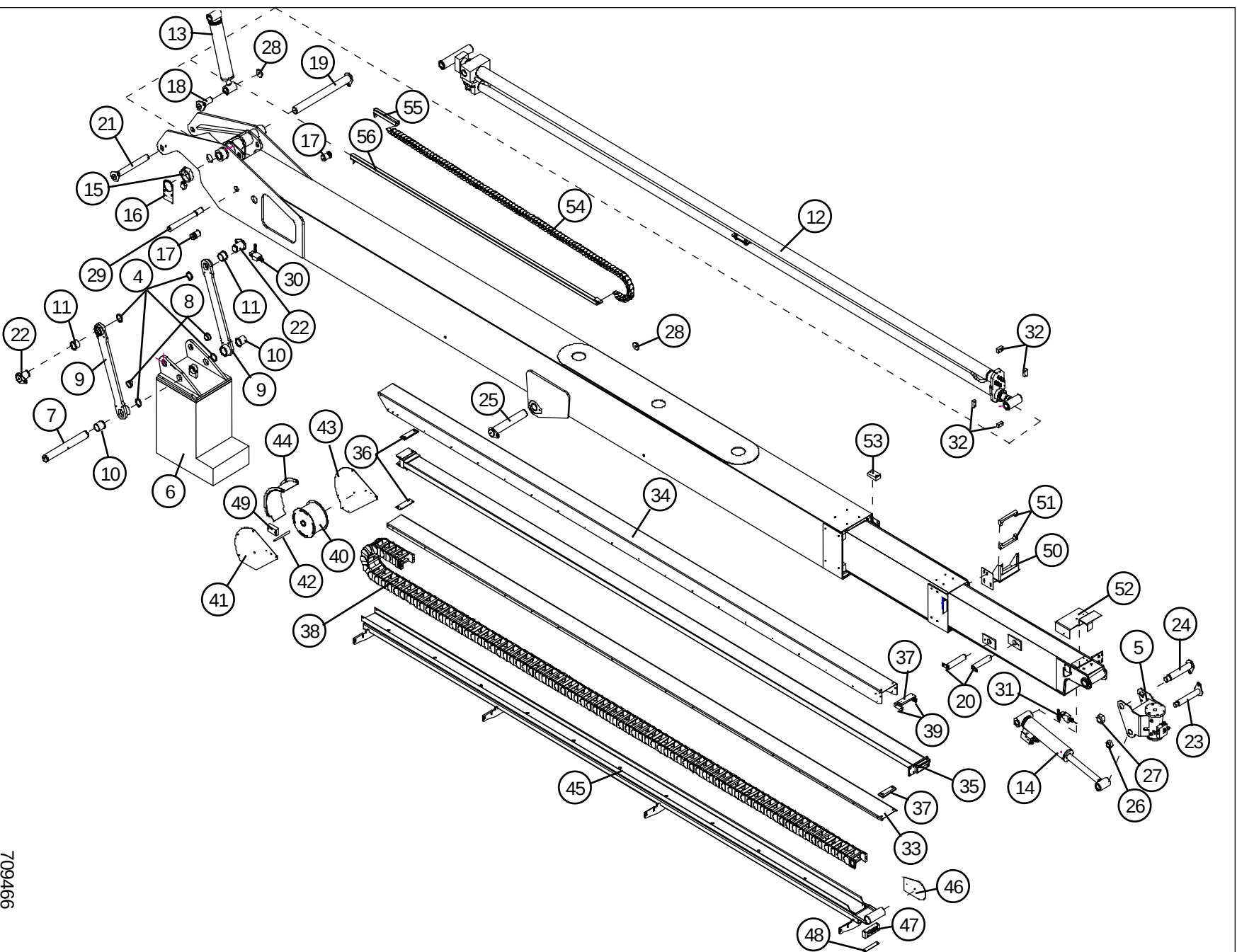
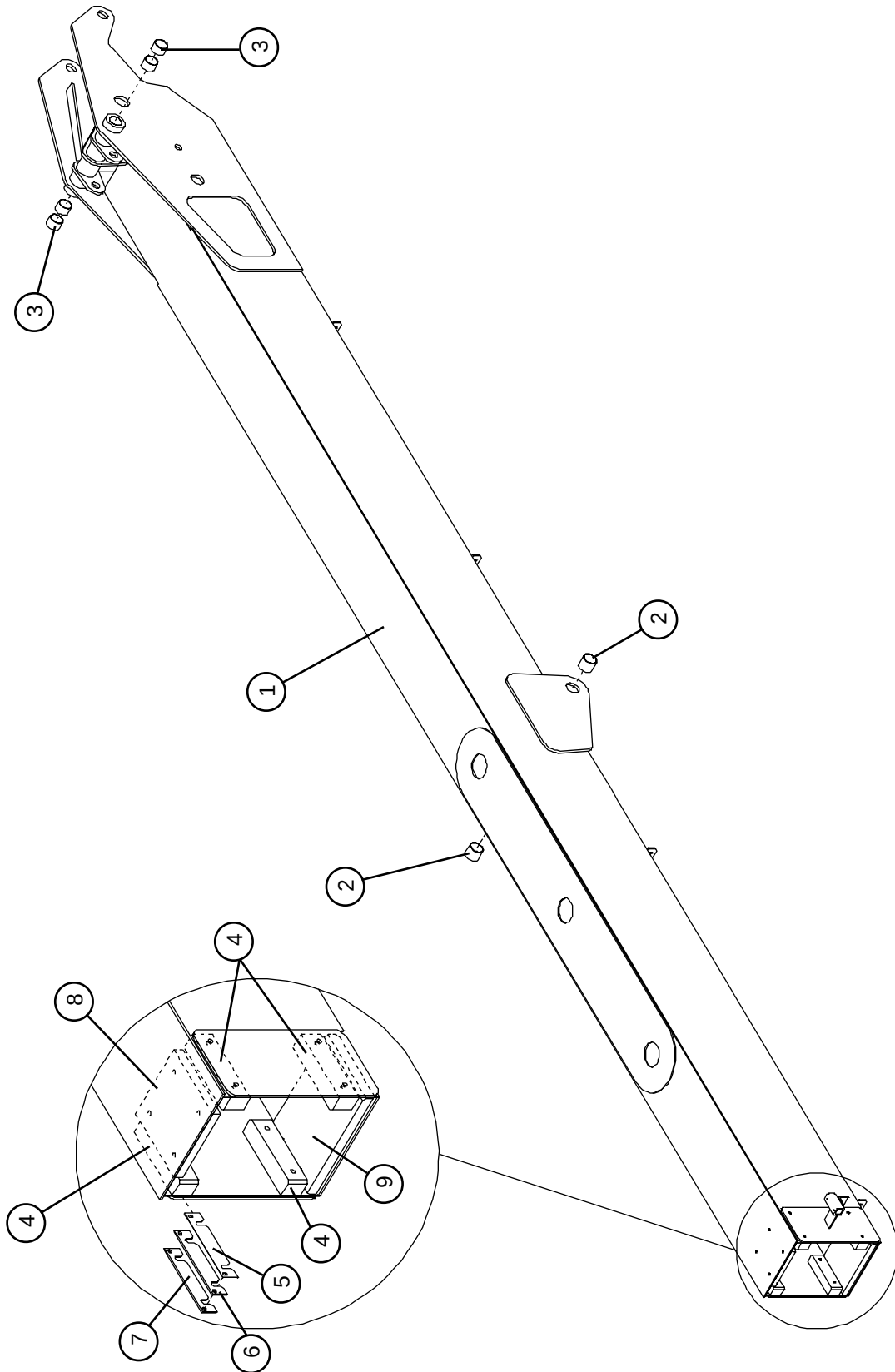


**FIGURE 6-7. BOOM ASSEMBLY**

| Index<br>No. | Skyjack<br>Part No. | Description                                                                               | Units<br>per<br>Assy. |
|--------------|---------------------|-------------------------------------------------------------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                                                                             |                       |
| 1            | 704942              | MAIN BOOM ASSEMBLY (For components refer to Figure 6-8.)                                  | 1                     |
| 2            | 704947              | MID BOOM ASSEMBLY (For components refer to Figure 6-9.)                                   | 1                     |
| 3            | 704945              | FLY BOOM ASSEMBLY (For components refer to Figure 6-10.)                                  | 1                     |
| 4            | 704012              | RING, Retaining 2"                                                                        | 4                     |
| 5            | 709537              | ROTARY ACTUATOR ASSEMBLY-SJB-60TB,<br>(For components refer to Figure. 6-11.)             | 1                     |
|              | 709541              | JIB/BACKET/ROTARY ACTUATOR ASSEMBLY.-SJB-65TB,<br>(For components refer to Figure. 6-12.) | 1                     |
| 6            | 706874              | COUNTERWEIGHT WELDMENT                                                                    | 1                     |
| 7            | 708260              | PIN, Counterweight link                                                                   | 1                     |
| 8            | 706894              | BEARING, Flange                                                                           | 2                     |
|              | 710492              | ASSEMBLY, Link Arm with Bushings                                                          | 2                     |
| 9            | 707378              | • LINK ARM                                                                                | 2                     |
| 10           | 706896              | • BEARING, Flange                                                                         | 2                     |
| 11           | 707376              | • BEARING, Flange                                                                         | 2                     |
| 12           | 710290              | CYLINDER ASSEMBLY, Telescopic (For components refer to Figure 6-15.)                      | 1                     |
| 13           | 707320              | CYLINDER ASSEMBLY, Master (For components refer to Figure 6-16.)                          | 1                     |
| 14           | 706322              | CYLINDER ASSEMBLY, Slave (For components refer to Figure 6-17.)                           | 1                     |
| 15           | 704601              | CAM, Limit switch, Main                                                                   | 1                     |
| 16           | 706353              | LIMIT SWITCH ASSEMBLY, Boom                                                               | 1                     |
|              | 706294              | • LIMIT SWITCH                                                                            | 2                     |
|              | 706336              | • LIMIT SWITCH, Plate                                                                     | 1                     |
| 17           | 708796              | PIN WELDMENT, Mid extension cylinder                                                      | 2                     |
| 18           | 708013              | PIN WELDMENT, Master cylinder                                                             | 1                     |
| 19           | 708008              | PIN WELDMENT, Turret to main boom                                                         | 1                     |
| 20           | 708001              | PIN WELDMENT, Extension cylinder-Leveling cylinder                                        | 2                     |
| 21           | 707375              | PIN WELDMENT, Counterweight                                                               | 1                     |
| 22           | 706878              | PIN WELDMENT, Counterweight swinging                                                      | 2                     |
| 23           | 708385              | PIN WELDMENT, Leveling cylinder                                                           | 1                     |
| 24           | 708491              | PIN WELDMENT, Fly boom                                                                    | 1                     |
| 25           | 709510              | PIN WELDMENT, Lift cylinder                                                               | 1                     |
| 26           | 106230              | NUT, Lock 1-1/4-12 GRC Top-lock                                                           | 1                     |
| 27           | 701288              | NUT, Lock HEX 1-1/2-12 grade C                                                            | 1                     |
| 28           | 700425              | WASHER, Retaining                                                                         | 2                     |
| 29           | 709586              | PIN WELDMENT, Extension cylinder                                                          | 1                     |
| 30           | 708602              | LIMIT SWITCH ASSEMBLY, Mid-In                                                             | 1                     |
| 31           | 709713              | LIMIT SWITCH ASSEMBLY, Fly-In                                                             | 1                     |
| 32           | 709648              | WEAR PAD, Extension cylinder                                                              | 4                     |
|              | 710233              | CARRIER ASSEMBLY, E-Chain                                                                 | 1                     |
| 33           | 709861              | • CHAIN TRAY                                                                              | 1                     |
| 34           | 709860              | • CHAIN COVER                                                                             | 1                     |
| 35           | 709858              | • EXTENSION TUBE WELDMENT                                                                 | 1                     |
| 36           | 709737              | • WEAR PAD                                                                                | 2                     |
| 37           | 709738              | • WEAR PAD                                                                                | 4                     |
| 38           | 709917              | • E-CHAIN ASSEMBLY                                                                        | 1                     |
|              | 711579              | • • LID E-CHAIN                                                                           | 170                   |
|              | 711580              | • • SEPARATOR E-CHAIN                                                                     | 56                    |
|              | 711582              | • • PLATE END E-CHAIN                                                                     | 2                     |
| 39           | 709863              | • WEAR PAD                                                                                | 2                     |
| 40           | 709297              | • ROLLER ASSEMBLY                                                                         | 1                     |
| 41           | 709661              | • SIDE PLATE                                                                              | 1                     |
| 42           | 709660              | • ROLLER PIN                                                                              | 1                     |
| 43           | 709752              | • SIDE PLATE                                                                              | 1                     |
| 44           | 709662              | • E-CHAIN FORM WELDMENT                                                                   | 1                     |
| 45           | 709914              | • LOWER E-CHAIN SUPPORT WELDMENT                                                          | 1                     |
| 46           | 710131              | • SIDE COVER                                                                              | 1                     |
| 47           | 710128              | • HOSE CLAMP                                                                              | 1                     |
| 48           | 710210              | • HOSE GUIDE PLATE                                                                        | 1                     |
| 49           | 711146              | • WEAR PAD                                                                                | 1                     |
| 50           | 709852              | E-CHAIN SUPPORT ASSEMBLY                                                                  | 1                     |
| 51           | 710086              | WEAR PAD                                                                                  | 2                     |
| 52           | 710184              | COVER, BULKHEAD                                                                           | 1                     |
| 53           | 711146              | WEAR PAD                                                                                  | 1                     |
| 54           | 710825              | ASSEMBLY, E-Chain                                                                         | 1                     |
| 55           | 710829              | WELDMENT, Catrac tube, short                                                              | 1                     |
| 56           | 710830              | WELDMENT, Catrac tube, long                                                               | 1                     |

**FIGURE 6-8. MAIN BOOM ASSEMBLY**

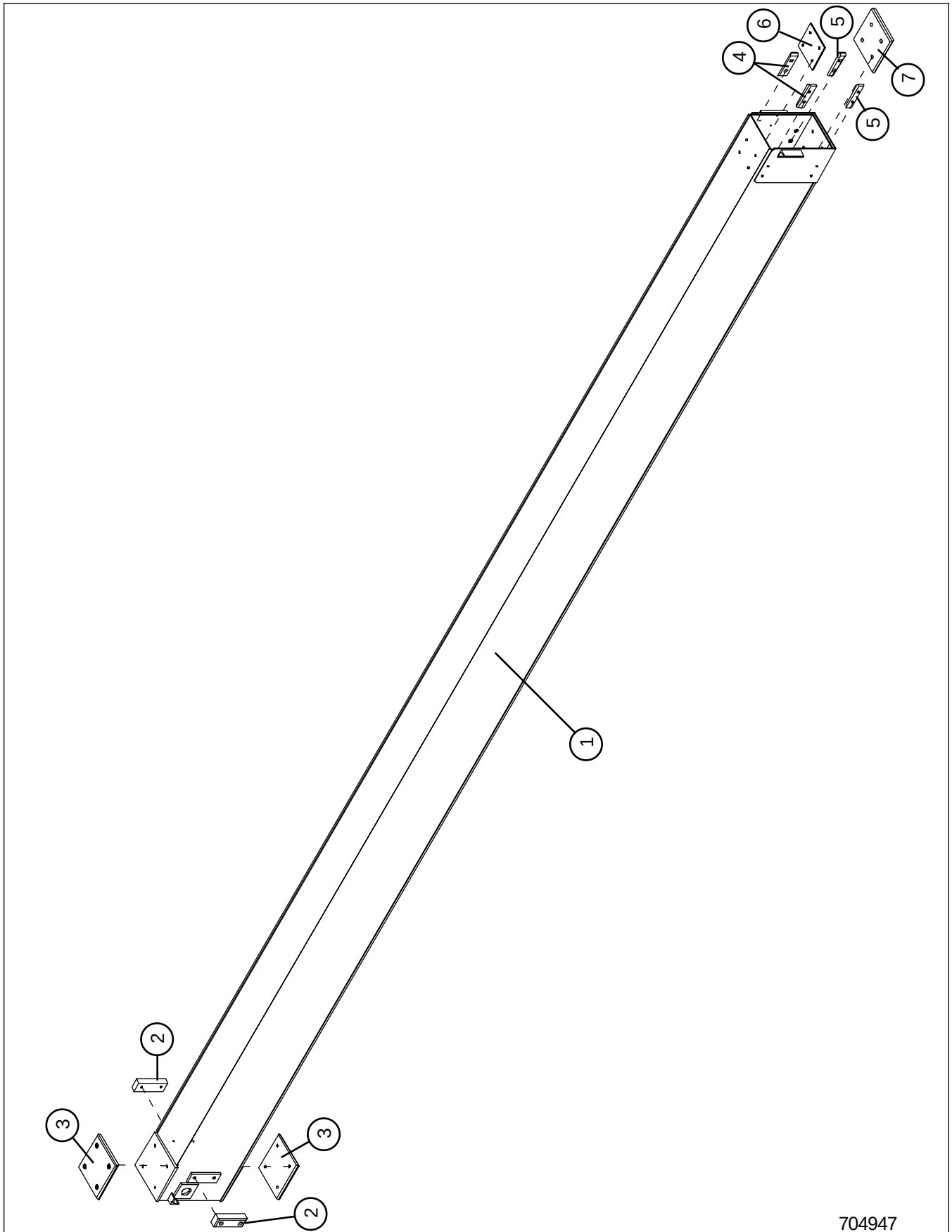


Ma60-608

**FIGURE 6-8. MAIN BOOM ASSEMBLY**

| Index<br>No. | Skyjack<br>Part No. | Description                            | Units<br>per<br>Assy. |
|--------------|---------------------|----------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                          |                       |
| 1            | 704942              | MAIN BOOM ASSEMBLY                     | -                     |
|              | 704893              | • MAIN BOOM ASSEMBLY, w/bushings       | 1                     |
| 2            | 709434              | •• BEARING                             | 2                     |
| 3            | 103208              | •• BUSHING                             | 4                     |
| 4            | 704922              | •• MAIN BOOM WELDMENT                  | 1                     |
|              | 707009              | • WEAR PAD, Sides                      | 4                     |
|              | 702195              | •• BOLT, HHCS 3/8-16x1-1/2" lg., gr. 5 | 2                     |
|              | 103978              | •• NUT, HEX 3/8-16 gr. 5               | 2                     |
|              | 103999              | •• WASHER, Lock 3/8"                   | 2                     |
| 5            | 709371              | • SHIM, 10 gauge                       | AR                    |
| 6            | 709372              | • SHIM, 12 gauge                       | AR                    |
| 7            | 709373              | • SHIM, 14 gauge                       | AR                    |
| 8            | 707015              | • WEAR PAD, Top                        | 1                     |
|              | 101297              | •• BOLT, HHCS 3/8-16x1-1/4" lg., gr. 5 | 4                     |
|              | 103978              | •• NUT, HEX 3/8-16 gr. 5               | 4                     |
|              | 103999              | •• WASHER, Lock 3/8"                   | 4                     |
|              | 707014              | • WEAR PAD, Bottom                     | 1                     |
|              | 101297              | •• BOLT, HHCS 3/8-16x1-1/4" lg., gr. 5 | 4                     |
|              | 103978              | •• NUT, HEX 3/8-16 gr. 5               | 4                     |
| 9            | 103999              | •• WASHER, Lock 3/8"                   | 4                     |

**FIGURE 6-9. MID BOOM ASSEMBLY**

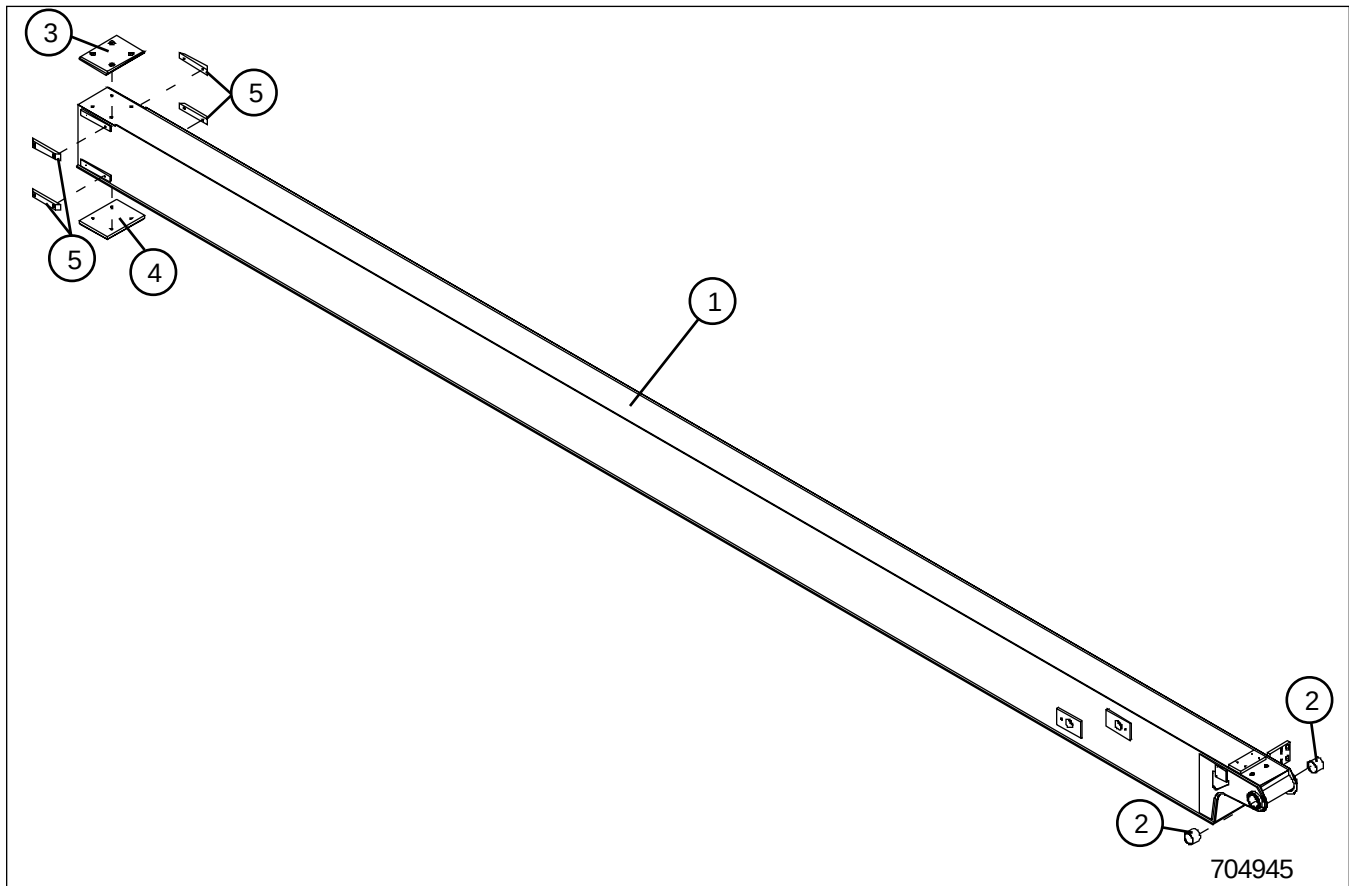


704947

**FIGURE 6-9. MID BOOM ASSEMBLY**

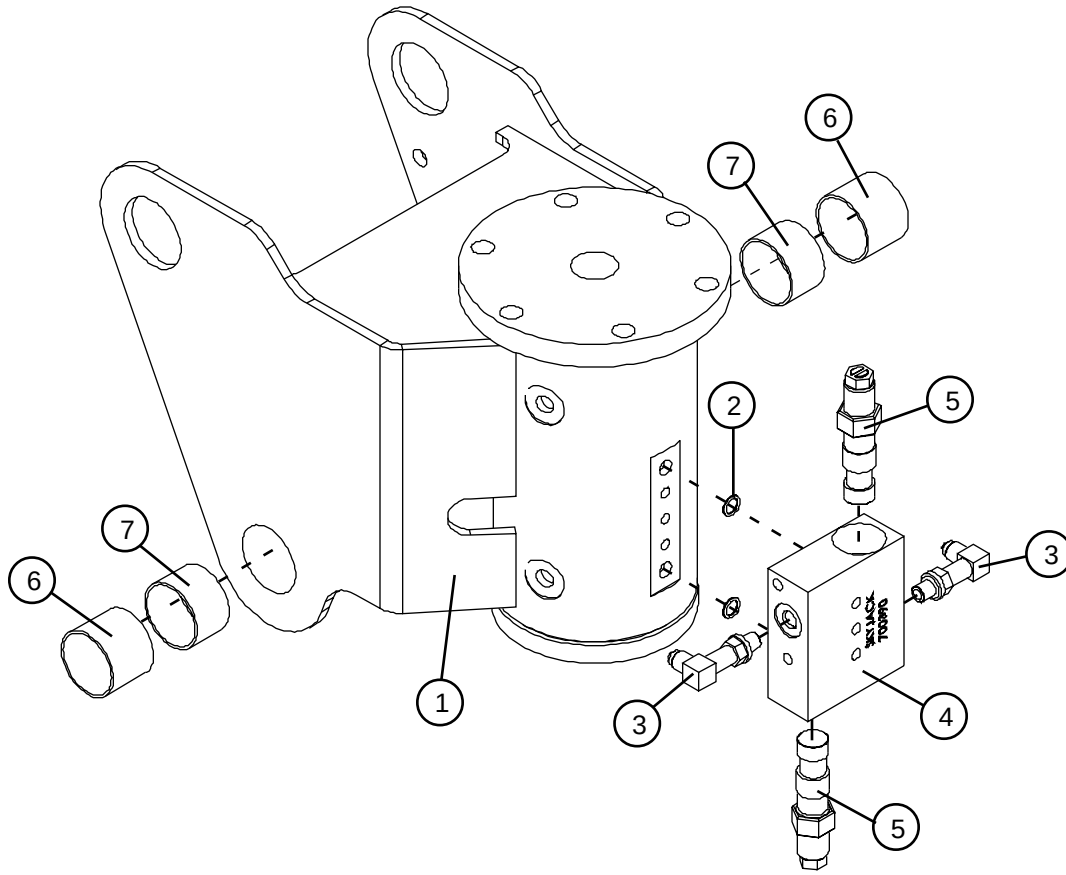
| Index<br>No. | Skyjack<br>Part No. | Description                         | Units<br>per<br>Assy. |
|--------------|---------------------|-------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                       |                       |
| 1            | 704947              | MID BOOM ASSEMBLY                   | 1                     |
|              | 704946              | • MID BOOM WELDMENT                 | 1                     |
| 2            | 710177              | • WEAR PAD, Mid boom side           | 2                     |
|              | 103473              | • BOLT, HHCS 3/8-16x1" lg., gr. 5   | 2                     |
|              | 103978              | • NUT, HEX 3/8-16 gr. 5             | 2                     |
|              | 103999              | • WASHER, Lock 3/8"                 | 2                     |
| 3            | 706047              | • WEAR PADS, MID Boom base          | 2                     |
| 4            | 706766              | • WEAR PAD, Side-top                | 2                     |
|              | 103473              | • BOLT, HHCS 3/8-16x1" lg., gr. 5   | 2                     |
|              | 103978              | • NUT, HEX 3/8-16 gr. 5             | 2                     |
|              | 103999              | • WASHER, Lock 3/8"                 | 2                     |
| 5            | 706767              | • WEAR PAD, Side-bottom             | 2                     |
|              | 103473              | • BOLT, HHCS 3/8-16x1" lg., gr. 5   | 2                     |
|              | 103978              | • NUT, HEX 3/8-16 gr. 5             | 2                     |
|              | 103999              | • WASHER, Lock 3/8"                 | 2                     |
|              | 709453              | • SHIM, 10 gauge,(not shown)        | AR                    |
|              | 709454              | • SHIM, 12 gauge,(not shown)        | AR                    |
|              | 709455              | • SHIM, 14 gauge,(not shown)        | AR                    |
|              | 706050              | • WEAR PAD, Top                     | 1                     |
| 6            | 707013              | • BOLT, HHCS 3/8-16x5/8" lg., gr. 5 | 4                     |
|              | 702929              | • NUT, HEX Jam 3/8-16 gr. 5         | 4                     |
|              | 103999              | • WASHER, Lock 3/8"                 | 4                     |
|              | 706052              | • WEAR PAD, Bottom                  | 1                     |
| 7            | 103473              | • BOLT, HHCS 3/8-16x1" lg., gr. 5   | 4                     |
|              | 103978              | • NUT, HEX 3/8-16 gr. 5             | 4                     |
|              | 103999              | • WASHER, Lock 3/8"                 | 4                     |

**FIGURE 6-10. FLY BOOM ASSEMBLY**



| Index No. | Skyjack Part No. | Description                     |   |   |   |   |   |   | Units per Assy. |
|-----------|------------------|---------------------------------|---|---|---|---|---|---|-----------------|
|           |                  | 1                               | 2 | 3 | 4 | 5 | 6 | 7 |                 |
|           | 704945           | FLY BOOM ASSEMBLY               |   |   |   |   |   |   | -               |
| 1         | 704890           | • FLY BOOM ASSEMBLY, w/bushings |   |   |   |   |   |   | 1               |
| 2         | 101564           | • • BUSHING                     |   |   |   |   |   |   | 2               |
|           | 704944           | • • FLY BOOM WELDMENT           |   |   |   |   |   |   | 1               |
| 3         | 706781           | • WEAR PAD, FLY Boom top        |   |   |   |   |   |   | 1               |
|           | 701620           | • BOLT, FHCS 3/8-16x3/4 gr. 5   |   |   |   |   |   |   | 4               |
| 4         | 706783           | • WEAR PAD, FLY Boom bottom     |   |   |   |   |   |   | 1               |
|           | 701620           | • BOLT, FHCS 3/8-16x3/4 gr. 5   |   |   |   |   |   |   | 4               |
| 5         | 702691           | • WEAR PAD, FLY Boom sides      |   |   |   |   |   |   | 4               |
|           | 703272           | • BOLT, FHCS 1/4-20x1/2 gr. 5   |   |   |   |   |   |   | 2               |

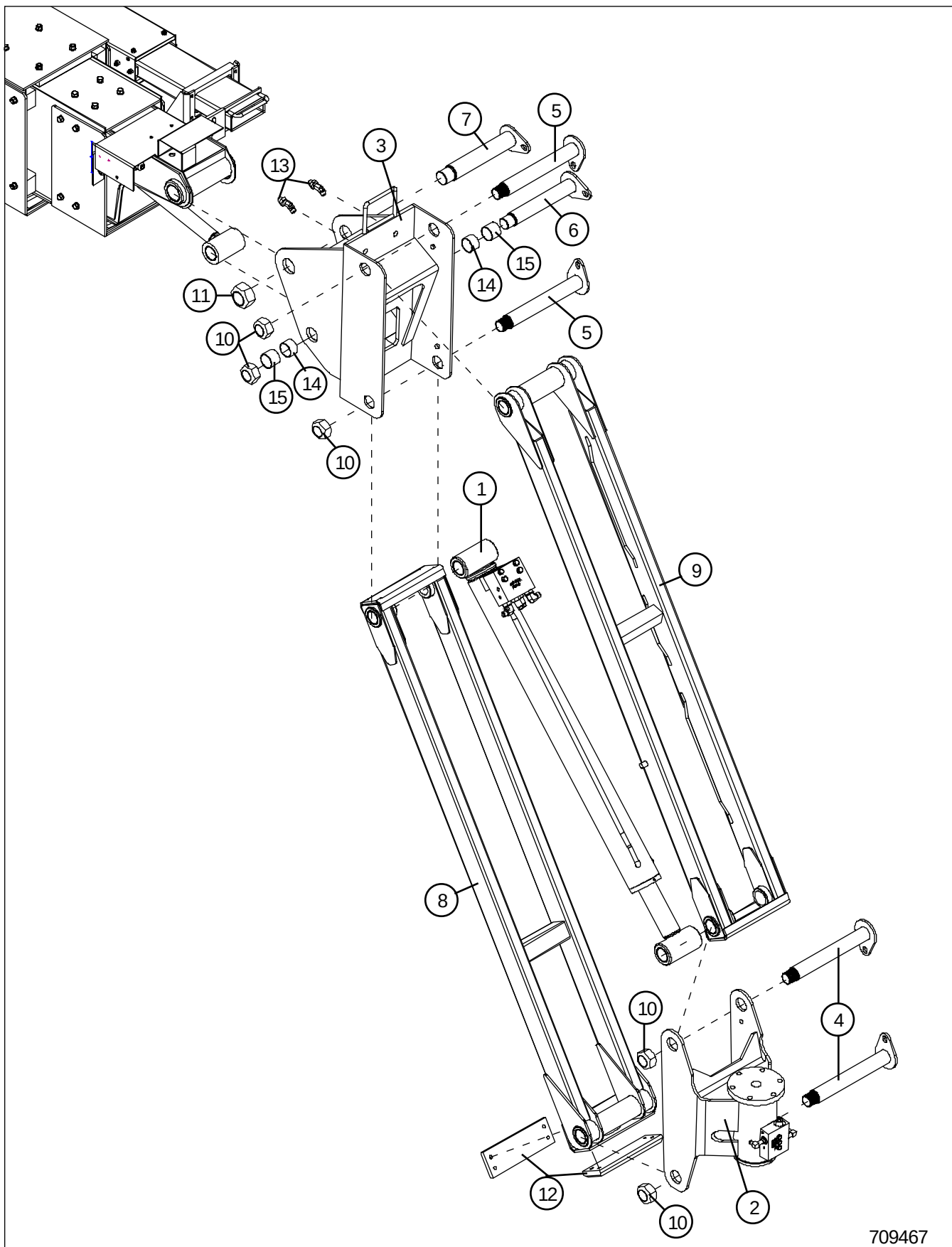
**FIGURE 6-11. ROTARY ACTUATOR ASSEMBLY (SJB-60TB)**



709537

| Index No. | Skyjack Part No. | Description                         | Units per Assy. |
|-----------|------------------|-------------------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7                       |                 |
|           | 709537           | ROTARY ACTUATOR ASSEMBLY (SJB-60TB) | -               |
| 1         | 706740           | • ACTUATOR, Assembly                | 1               |
| 2         | 701487           | • SEAL, O-Ring                      | 2               |
| 3         | 707039           | • FITTING, Elbow LL #4orb-#4        | 2               |
| 4         | 700390           | • VALVE BODY                        | 1               |
|           | 700839           | • BOLT, SHCS 1/4-20x1-5/8           | 3               |
|           | 104000           | • WASHER, Lock                      | 3               |
| 5         | 701827           | • VALVE, Counterbalance             | 2               |
| 6         | 701483           | • BUSHING, 24DU20                   | 2               |
| 7         | 100904           | • BUSHING, 24DU16                   | 2               |
|           | 701875           | KIT, Seal repair                    | AR              |

FIGURE 6-12. JIB/BRACKET/ROTARY ACTUATOR ASSEMBLY (SJB-65TB)

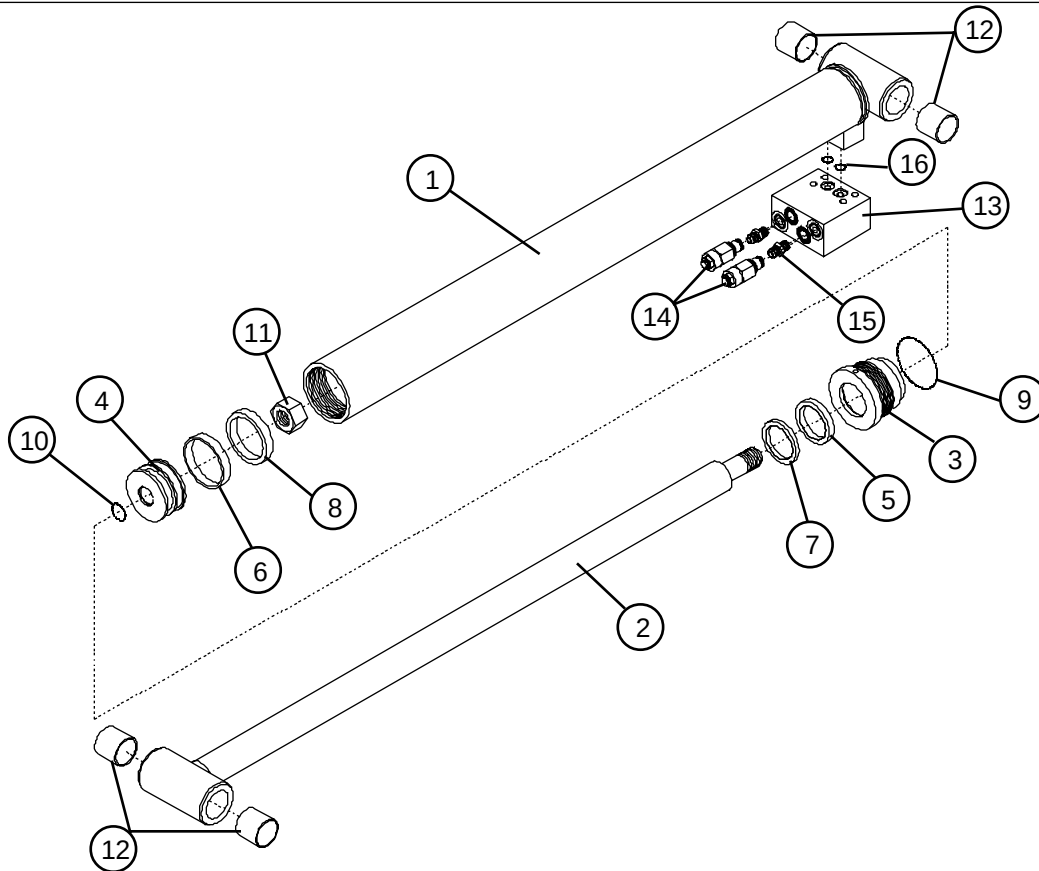


709467

**FIGURE 6-12. JIB/BRACKET/ROTARY ACTUATOR ASSEMBLY (SJB-65TB)**

| Index No. | Skyjack Part No. | Description                                                       | Units per Assy. |
|-----------|------------------|-------------------------------------------------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7                                                     |                 |
|           | 709541           | JIB/BRACKET/ROTARY ACTUATOR ASSEMBLY (SJB-65TB)                   | 1               |
| 1         | 709468           | • CYLINDER ASSEMBLY, Jib (For components, refer to Figure 6-13.)  | 1               |
| 2         | 709542           | • ACTUATOR ASSEMBLY, Rotary (For components, refer to Fig. 6-14.) | 1               |
| 3         | 709153           | • BRACKET WELDMENT, Jib mounting                                  | 1               |
| 4         | 704438           | • WELDMENT, Pin                                                   | 2               |
|           | 706872           | • BOLT, Hex-hd 1/2 x 13 x 3/4" lg.                                | 1               |
|           | 707414           | • WASHER, Hardened 1/2"                                           | 1               |
| 5         | 709553           | • WELDMENT, Pin                                                   | 2               |
|           | 706872           | • BOLT, Hex-hd 1/2 x 13 x 3/4" lg.                                | 1               |
|           | 707414           | • WASHER, Hardened 1/2"                                           | 1               |
| 6         | 709545           | • WELDMENT, Pin                                                   | 1               |
|           | 706872           | • BOLT, Hex-hd 1/2 x 13 x 3/4" lg.                                | 1               |
|           | 707414           | • WASHER, Hardened 1/2"                                           | 1               |
| 7         | 709548           | • WELDMENT, Pin                                                   | 1               |
|           | 706872           | • BOLT, Hex-hd 1/2 x 13 x 3/4" lg.                                | 1               |
|           | 707414           | • WASHER, Hardened 1/2"                                           | 1               |
| 8         | 709438           | • PARALLEL ASSEMBLY, Lower jib (w/bushings)                       | 1               |
|           | 103216           | • • BUSHING, 1-1/2" x 1-21/32" x 1-1/2" lg.                       | 4               |
|           | 100904           | • • BUSHING, 1-1/2" x 1-21/32 x 1" lg.                            | 2               |
| 9         | 709437           | • PARALLEL ASSEMBLY, Upper jib (w/bushings)                       | 1               |
|           | 103216           | • • BUSHING, 1-1/2" x 1-21/32" x 1-1/2" lg.                       | 4               |
|           | 100904           | • • BUSHING, 1-1/2" x 1-21/32 x 1" lg.                            | 2               |
| 10        | 106230           | • NUT, Lock 1-1/4-12                                              | 5               |
| 11        | 701288           | • NUT, Lock 1-1/2-12                                              | 1               |
| 12        | 703714           | • WEAR PAD, Jib parallel                                          | 2               |
|           | 103886           | • BOLT, HHCS 5/16-18x1-1/2                                        | 4               |
|           | 100397           | • NUT, Hex 5/16-18                                                | 4               |
| 13        | 710221           | • FITTING, Bulkhead Union 45° elbow #6orb-#6                      | 2               |
| 14        | 700483           | • BUSHING, 1-1/2" x 1-21/32" x 1-1/4" lg.                         | 2               |
| 15        | 100904           | • BUSHING, 1-1/2" x 1-21/32 x 1" lg.                              | 2               |

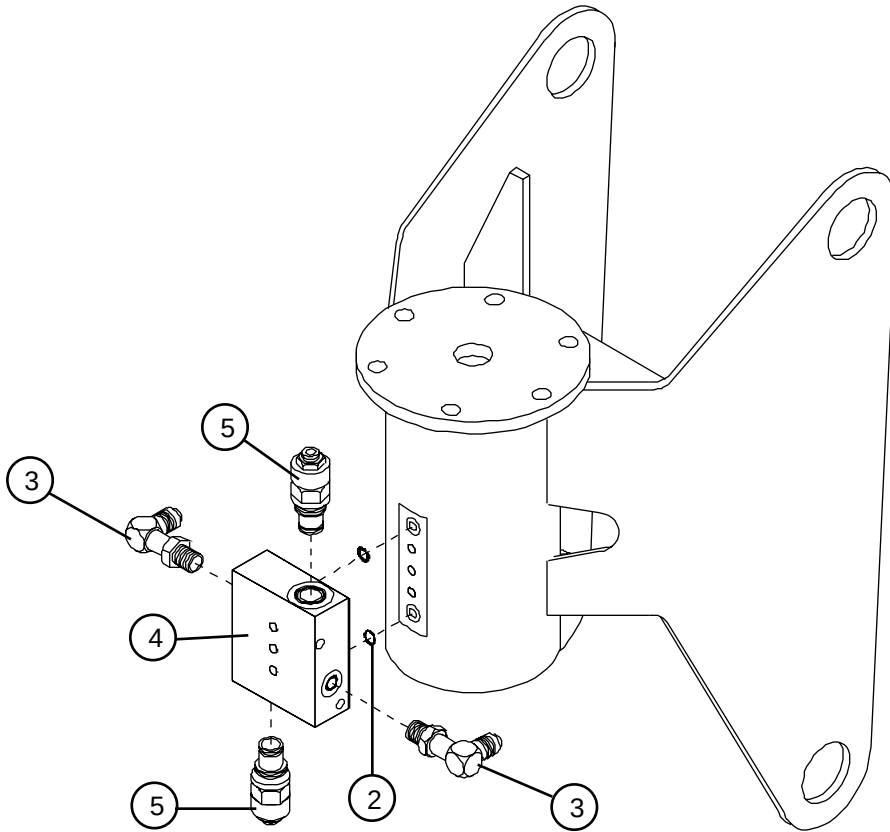
**FIGURE 6-13. JIB CYLINDER (SJB-65TB)**



Ma60-624

| Index No. | Skyjack Part No. | Description                         |   |   |   |   |   |   | Units per Assy. |
|-----------|------------------|-------------------------------------|---|---|---|---|---|---|-----------------|
|           |                  | 1                                   | 2 | 3 | 4 | 5 | 6 | 7 |                 |
|           | 709469           | CYLINDER ASSEMBLY, Jib (w/bushings) |   |   |   |   |   |   | -               |
| 1         | 709143           | • WELDMENT, Cylinder barrel         |   |   |   |   |   |   | 1               |
| 2         | 709144           | • WELDMENT, Cylinder rod            |   |   |   |   |   |   | 1               |
| 3         | 709703           | • GLAND, Cylinder                   |   |   |   |   |   |   | 1               |
| 4         | 709821           | • PISTON, Cylinder                  |   |   |   |   |   |   | 1               |
| *5        | 700571           | • SEAL, Rod                         |   |   |   |   |   |   | 1               |
| *6        | 116364           | • SEAL, Piston                      |   |   |   |   |   |   | 1               |
| *7        | 700573           | • WIPER, Rod                        |   |   |   |   |   |   | 1               |
| *8        | 110952           | • WEAR RING, Piston                 |   |   |   |   |   |   | 1               |
| *9        | 707323           | • O-RING, Gland                     |   |   |   |   |   |   | 1               |
| *10       | 706317           | • O-RING, Piston                    |   |   |   |   |   |   | 1               |
| 11        | 104400           | • NUT, Lock                         |   |   |   |   |   |   | 1               |
| 12        | 103216           | • BUSHING, 1-1/2" x 1-1/2" lg.      |   |   |   |   |   |   | 4               |
| 13        | 701969           | VALVE BLOCK, Boom lift cylinder     |   |   |   |   |   |   | 1               |
|           | 108429           | • BOLT, SHCS 5/16-18x2-1/2" lg.     |   |   |   |   |   |   | 4               |
|           | 103404           | • WASHER, Lock 5/16                 |   |   |   |   |   |   | 4               |
| 14        | 701827           | VALVE, Counterbalance               |   |   |   |   |   |   | 2               |
| 15        | 102665           | FITTING, Connector #8orb-#6         |   |   |   |   |   |   | 2               |
| 16        | 701635           | O-RING, Valve block                 |   |   |   |   |   |   | 2               |
|           | 709400           | KIT, Seal repair                    |   |   |   |   |   |   | AR              |
|           |                  | * Part of Seal Repair Kit.          |   |   |   |   |   |   |                 |

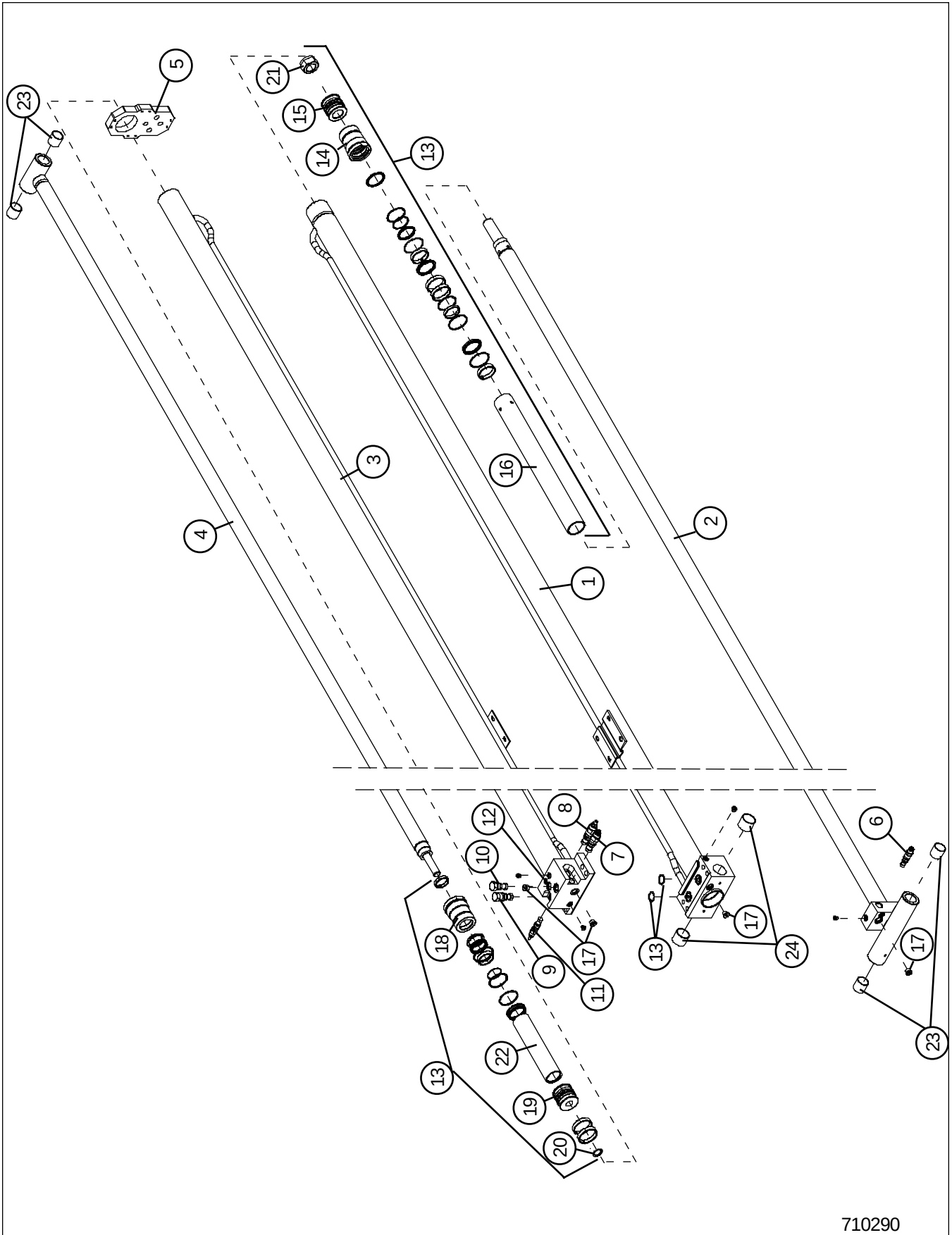
**FIGURE 6-14. ROTARY ACTUATOR ASSEMBLY (SJB-65TB)**



Ma60-630

| Index No. | Skyjack Part No. | Description                         |   |   |   |   |   |   | Units per Assy. |
|-----------|------------------|-------------------------------------|---|---|---|---|---|---|-----------------|
|           |                  | 1                                   | 2 | 3 | 4 | 5 | 6 | 7 |                 |
|           | 709542           | ROTARY ACTUATOR ASSEMBLY (SJB-65TB) |   |   |   |   |   |   | -               |
| 1         | 709115           | • ACTUATOR, Assembly                |   |   |   |   |   |   | 1               |
| 2         | 701487           | • SEAL, O-Ring                      |   |   |   |   |   |   | 2               |
| 3         | 707039           | • FITTING, Elbow LL #4orb-#4        |   |   |   |   |   |   | 2               |
| 4         | 700390           | • VALVE BODY                        |   |   |   |   |   |   | 1               |
|           | 700839           | • BOLT, SHCS 1/4-20x1-5/8           |   |   |   |   |   |   | 3               |
|           | 104000           | • WASHER, Lock                      |   |   |   |   |   |   | 3               |
| 5         | 701827           | • VALVE, Counterbalance             |   |   |   |   |   |   | 2               |
|           | 701875           | KIT, Seal repair                    |   |   |   |   |   |   | AR              |

FIGURE 6-15. BOOM TELESCOPING CYLINDER ASSEMBLY

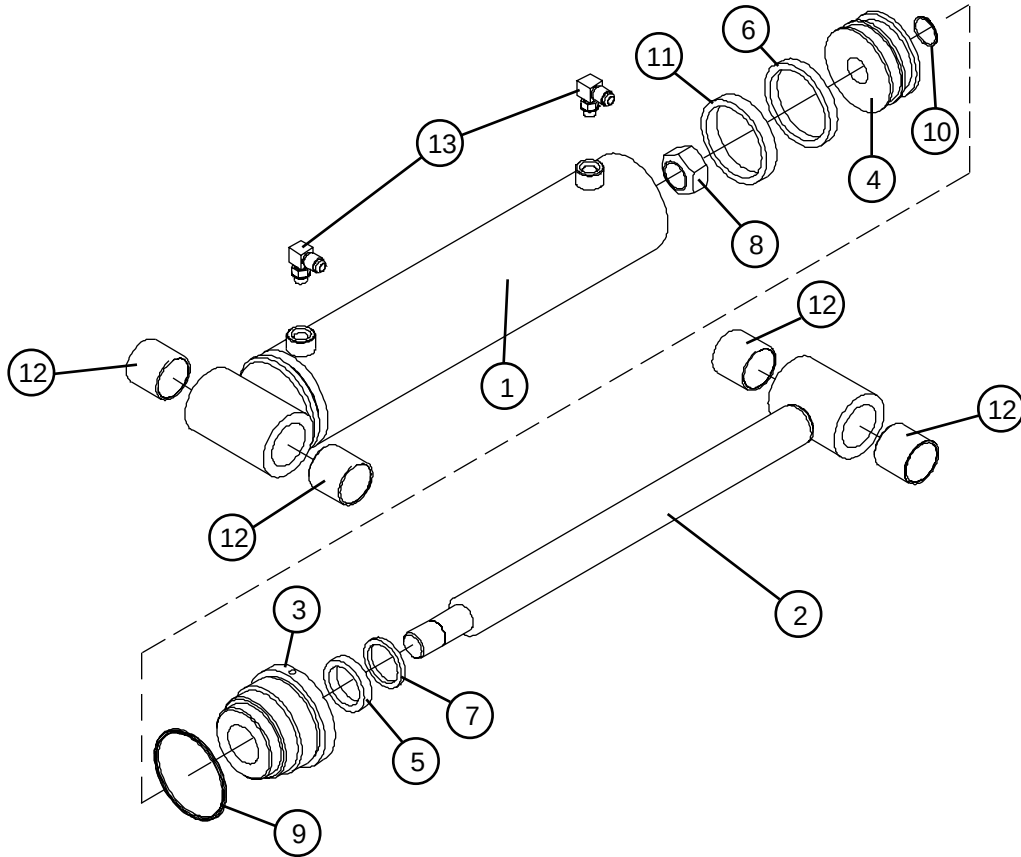


710290

**FIGURE 6-15. BOOM TELESCOPING CYLINDER ASSEMBLY**

| Index<br>No. | Skyjack<br>Part No. | Description                                | Units<br>per<br>Assy. |
|--------------|---------------------|--------------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                              |                       |
|              | 710290              | CYLINDER ASSEMBLY, Telescopic (w/bushings) | -                     |
|              | 711561              | CYLINDER, Midboom                          | 1                     |
| 1            | 711553              | • BARREL, Weldment                         | 1                     |
| 2            | 711554              | • ROD, Weldment                            | 1                     |
|              | 711591              | CYLINDER, Flyboom                          | 1                     |
| 3            | 711585              | • BARREL, Weldment                         | 1                     |
| 4            | 711586              | • ROD, Weldment                            | 1                     |
| 5            | 711592              | FLANGE MOUNT                               | 1                     |
| 6            | 710865              | VALVE, Counterbalance 2000 PSI             | 1                     |
| 7            | 710859              | VALVE, Counterbalance                      | 1                     |
| 8            | 710861              | VALVE, Sequence                            | 1                     |
| 9            | 710860              | VALVE, Check                               | 1                     |
| 10           | 710862              | VALVE, Check                               | 1                     |
| 11           | 710863              | VALVE, Sequencing                          | 1                     |
| 12           | 710864              | VALVE, Check, Flush mounted                | 1                     |
| 13           | 711608              | KIT, Seal                                  | 1                     |
| 14           | 711555              | • GLAND                                    | 1                     |
| 15           | 711556              | • PISTON                                   | 1                     |
| 16           | 711557              | • SPACER, Midboom                          | 1                     |
| 17           | 711560              | • PLUG, Hollow Hex, #8                     | 4                     |
| 18           | 711587              | • GLAND                                    | 1                     |
| 19           | 711588              | • PISTON                                   | 1                     |
| 20           | 711589              | • LOCKNUT, 1.5-12 UNF                      | 1                     |
| 21           | 711384              | • LOCKNUT, 1"-14UNS                        | 1                     |
| 21           | 711590              | • SPACER, Flyboom                          | 1                     |
| 22           | 711558              | BUSHING #45072, 24 DU24                    | 4                     |
| 23           | 711559              | BUSHING #31310, 28 DU24                    | 2                     |

**FIGURE 6-16. MASTER CYLINDER ASSEMBLY**



707320

| Index No. | Skyjack Part No. | Description                                       |   |   |   |   |   |   | Units per Assy. |
|-----------|------------------|---------------------------------------------------|---|---|---|---|---|---|-----------------|
|           |                  | 1                                                 | 2 | 3 | 4 | 5 | 6 | 7 |                 |
|           | 707320           | CYLINDER ASSEMBLY, Master (with bushings)         |   |   |   |   |   |   | -               |
| 1         | 706315           | • WELDMENT, Cylinder barrel                       |   |   |   |   |   |   | 1               |
| 2         | 706316           | • WELDMENT, Cylinder rod                          |   |   |   |   |   |   | 1               |
| 3         | 707330           | • GLAND, Cylinder                                 |   |   |   |   |   |   | 1               |
| 4         | 707331           | • PISTON, Cylinder                                |   |   |   |   |   |   | 1               |
| *5        | 701316           | • SEAL, Rod                                       |   |   |   |   |   |   | 1               |
| *6        | 709806           | • SEAL, Piston                                    |   |   |   |   |   |   | 1               |
| *7        | 701317           | • SEAL, Rod Wiper                                 |   |   |   |   |   |   | 1               |
| 8         | 104400           | • NUT, Lock                                       |   |   |   |   |   |   | 1               |
| *9        | 701280           | • O-RING, Gland                                   |   |   |   |   |   |   | 1               |
| *10       | 706317           | • O-RING, Piston                                  |   |   |   |   |   |   | 1               |
| *11       | 709807           | • WEAR RING, Piston                               |   |   |   |   |   |   | 1               |
| 12        | 103216           | • BUSHING, 1-1/2" x 1-1/2" lg.                    |   |   |   |   |   |   | 2               |
| 13        | 113348           | FITTING, Straight thread elbow connector #4orb-#6 |   |   |   |   |   |   | 2               |
|           | 709402           | KIT, Seal repair                                  |   |   |   |   |   |   | AR              |
|           |                  | * Part of Seal Repair Kit.                        |   |   |   |   |   |   |                 |

FIGURE 6-17. SLAVE CYLINDER ASSEMBLY

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| Index No. | Skyjack Part No. | Description                              | Units per Assy. |
|-----------|------------------|------------------------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7                            |                 |
|           | 707321           | CYLINDER ASSEMBLY, Slave (with bushings) | -               |
| 1         | 706324           | • WELDMENT, Cylinder barrel              | 1               |
| 2         | 707326           | • WELDMENT, Cylinder rod                 | 1               |
| 3         | 707330           | • GLAND, Cylinder                        | 1               |
| 4         | 707331           | • PISTON, Cylinder                       | 1               |
| *5        | 701316           | • SEAL, Rod                              | 1               |
| *6        | 709806           | • SEAL, Piston                           | 1               |
| *7        | 701317           | • SEAL, Rod Wiper                        | 1               |
| 8         | 104400           | • NUT, Lock                              | 1               |
| *9        | 701280           | • O-RING, Gland                          | 1               |
| *10       | 706317           | • O-RING, Piston                         | 1               |
| *11       | 709807           | • WEAR RING, Piston                      | 1               |
| 12        | 103216           | • BUSHING, 1-1/2" x 1-1/2" lg.           | 2               |
| 13        | 701969           | VALVE BLOCK, Slave cylinder              | 1               |
|           | 108429           | • BOLT, Soc-hd 5/16-18 x 2" lg.          | 4               |
|           | 103404           | • WASHER, Lock 5/16                      | 4               |
| 14        | 710088           | VALVE, Counterbalance                    | 2               |
| 15        | 103070           | FITTING, Connector #8orb-#6              | 2               |
| 16        | 701635           | O-RING, Valve block                      | 2               |
|           | 709402           | KIT, Seal repair                         | AR              |
|           |                  | * Part of Seal Repair Kit.               |                 |

FIGURE 6-18. HYDRAULIC HOSE CONNECTIONS - Boom Assembly

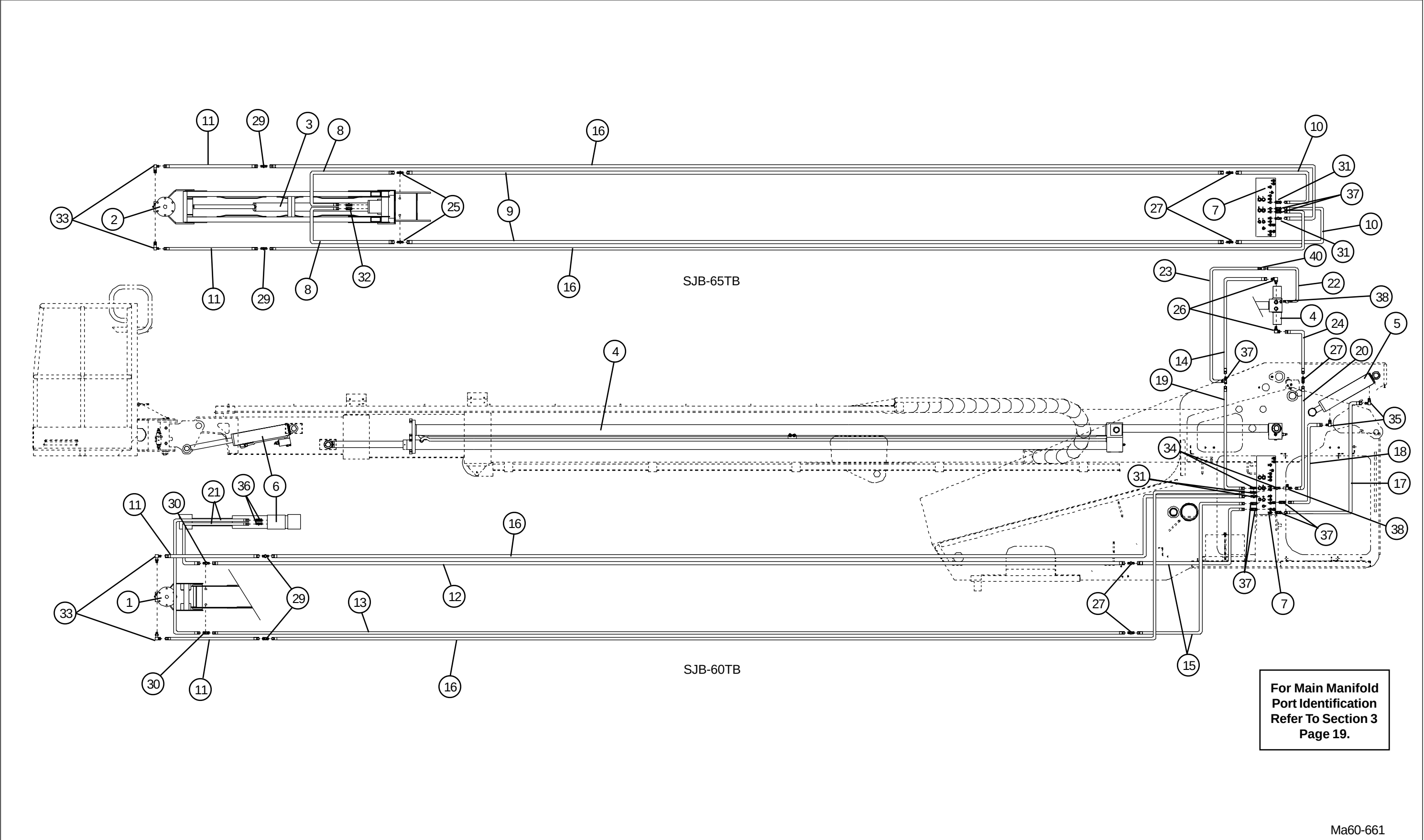
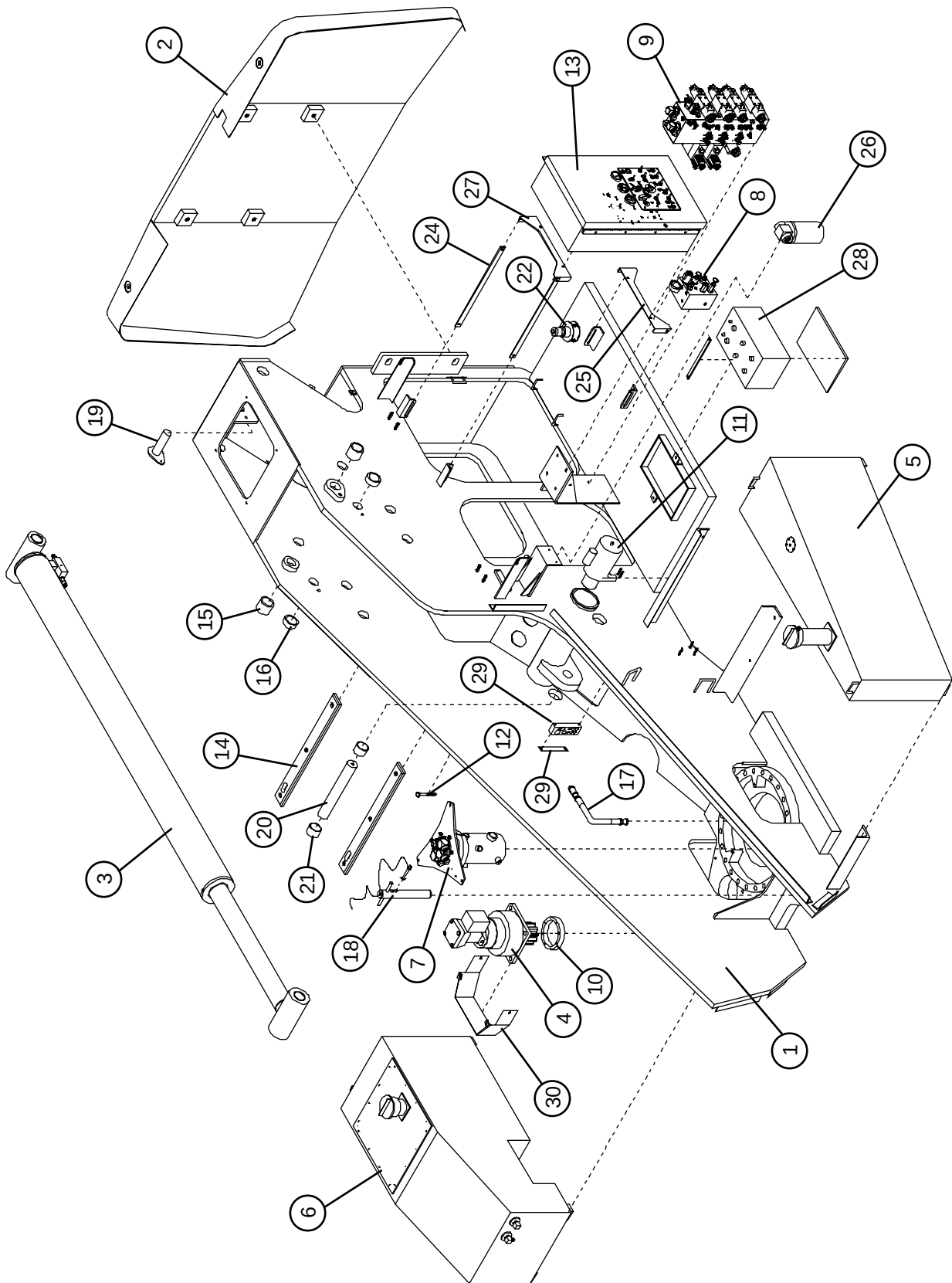


**FIGURE 6-18. HYDRAULIC HOSE CONNECTIONS - Boom Assembly**

| Index No.                                                                                                    | Skyjack Part No. | Description                                                                     | Units per Assy. |
|--------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------|-----------------|
|                                                                                                              |                  | 1 2 3 4 5 6 7                                                                   |                 |
| 1                                                                                                            | 709537           | ACTUATOR ASSEMBLY, Rotary (SJB-60TB)<br>(For components, refer to Figure 6-11.) | 1               |
| 2                                                                                                            | 709542           | ACTUATOR ASSEMBLY, Rotary (SJB-65TB)<br>(For components, refer to Figure 6-14.) | 1               |
| 3                                                                                                            | 709469           | CYLINDER ASSEMBLY, Jib (SJB-65TB)<br>(For components, refer to Figure 6-13.)    | 1               |
| 4                                                                                                            | 710290           | CYLINDER ASSEMBLY, Telescoping<br>(For components, refer to Figure 6-15.)       | 1               |
| 5                                                                                                            | 707320           | CYLINDER ASSEMBLY, Master<br>(For components, refer to Figure 6-16.)            | 1               |
| 6                                                                                                            | 706322           | CYLINDER ASSEMBLY, Slave<br>(For components, refer to Figure 6-17.)             | 1               |
| 7                                                                                                            | 709808           | MANIFOLD ASSEMBLY, Main<br>(For components, refer to Figure 6-27.)              | 1               |
| 8                                                                                                            | 711419           | BULKHEAD, (Jib mounting bracket)                                                | 2               |
| 9                                                                                                            | 709541           | HOSE ASSEMBLY (H2604 0024 00) - 65TB Only                                       | 2               |
| 10                                                                                                           | 710246           | HOSE ASSEMBLY (H106 0025 00)                                                    | 2               |
| 11                                                                                                           | 710226           | HOSE ASSEMBLY (H2804 0581 00)) - 65TB Only                                      | 2               |
|                                                                                                              | 710487           | HOSE ASSEMBLY (H2804 0512 00) - 60TB Only                                       | 2               |
| 12                                                                                                           | 710228           | HOSE ASSEMBLY (H2606 0495 00-0)                                                 | 1               |
| 13                                                                                                           | 710229           | HOSE ASSEMBLY (H2606 0500 00-0)                                                 | 1               |
| 14                                                                                                           | 711139           | HOSE ASSEMBLY (H604 0016 00 0)                                                  | 1               |
| 15                                                                                                           | 710223           | HOSE ASSEMBLY (H106 0370 00-0)                                                  | 2               |
| 16                                                                                                           | 710224           | HOSE ASSEMBLY (H104 0381 00-0) - 65TB Only                                      | 2               |
|                                                                                                              | 711238           | HOSE ASSEMBLY (H104 0370 00-0) - 60TB Only                                      | 2               |
| 17                                                                                                           | H106 0130 00-0   | HOSE ASSEMBLY                                                                   | 1               |
| 18                                                                                                           | H106 0120 00-0   | HOSE ASSEMBLY                                                                   | 1               |
| 19                                                                                                           | H108 0197 00-0   | HOSE ASSEMBLY                                                                   | 1               |
| 20                                                                                                           | H108 0206 00-0   | HOSE ASSEMBLY                                                                   | 1               |
| 21                                                                                                           | 710246           | HOSE ASSEMBLY (H106 0025 00-0)                                                  | 2               |
| 22                                                                                                           | 710834           | HOSE ASSEMBLY (H608 0018 00 0)                                                  | 1               |
| 23                                                                                                           | 710833           | HOSE ASSEMBLY (H2808 0018 00 0)                                                 | 1               |
| 24                                                                                                           | 708338           | HOSE ASSEMBLY (H108 0015 00 0)                                                  | 1               |
| 25                                                                                                           | 710221           | FITTING, Bulkhead union 45° elbow #6                                            | 2               |
| 26                                                                                                           | 701998           | FITTING, Elbow 90° #8orb - #8                                                   | 2               |
| 27                                                                                                           | 700318           | FITTING, Tube union #6                                                          | 2               |
| 28                                                                                                           | 701959           | FITTING, Bulkhead union elbow #8                                                | 2               |
| 29                                                                                                           | 702124           | FITTING, Tube union #4                                                          | 2               |
| 30                                                                                                           | 709823           | FITTING, Bulkhead union elbow #6                                                | 2               |
| 31                                                                                                           | 701954           | FITTING, Connector #4orb - #4                                                   | 2               |
| 32                                                                                                           | 102665           | FITTING, Connector #8orb - #6                                                   | 6               |
| 33                                                                                                           | 707039           | FITTING, Elbow LL #4orb - #4                                                    | 2               |
| 34                                                                                                           | 702116           | FITTING, Connector #8orb - #8                                                   | 2               |
| 35                                                                                                           | 113348           | FITTING, Elbow 90° #4orb - #6                                                   | 2               |
| 36                                                                                                           | 103070           | FITTING, Connector #8orb - #6                                                   | 2               |
| 37                                                                                                           | 706715           | FITTING, Swivel nut tee #8                                                      | 1               |
| 38                                                                                                           | 706812           | FITTING, Tube reducer #4 orb-#8                                                 | 1               |
| 39                                                                                                           | 702798           | FITTING, Elbow, extra long, #8                                                  | 1               |
| 40                                                                                                           | 702125           | FITTING, Tube union #8                                                          | 1               |
| <b>NOTE: Refer to Standard Hose Numbering System (SECTION 5, Page 18) for explanation of hose numbering.</b> |                  |                                                                                 |                 |

FIGURE 6-19. TURRET ASSEMBLY

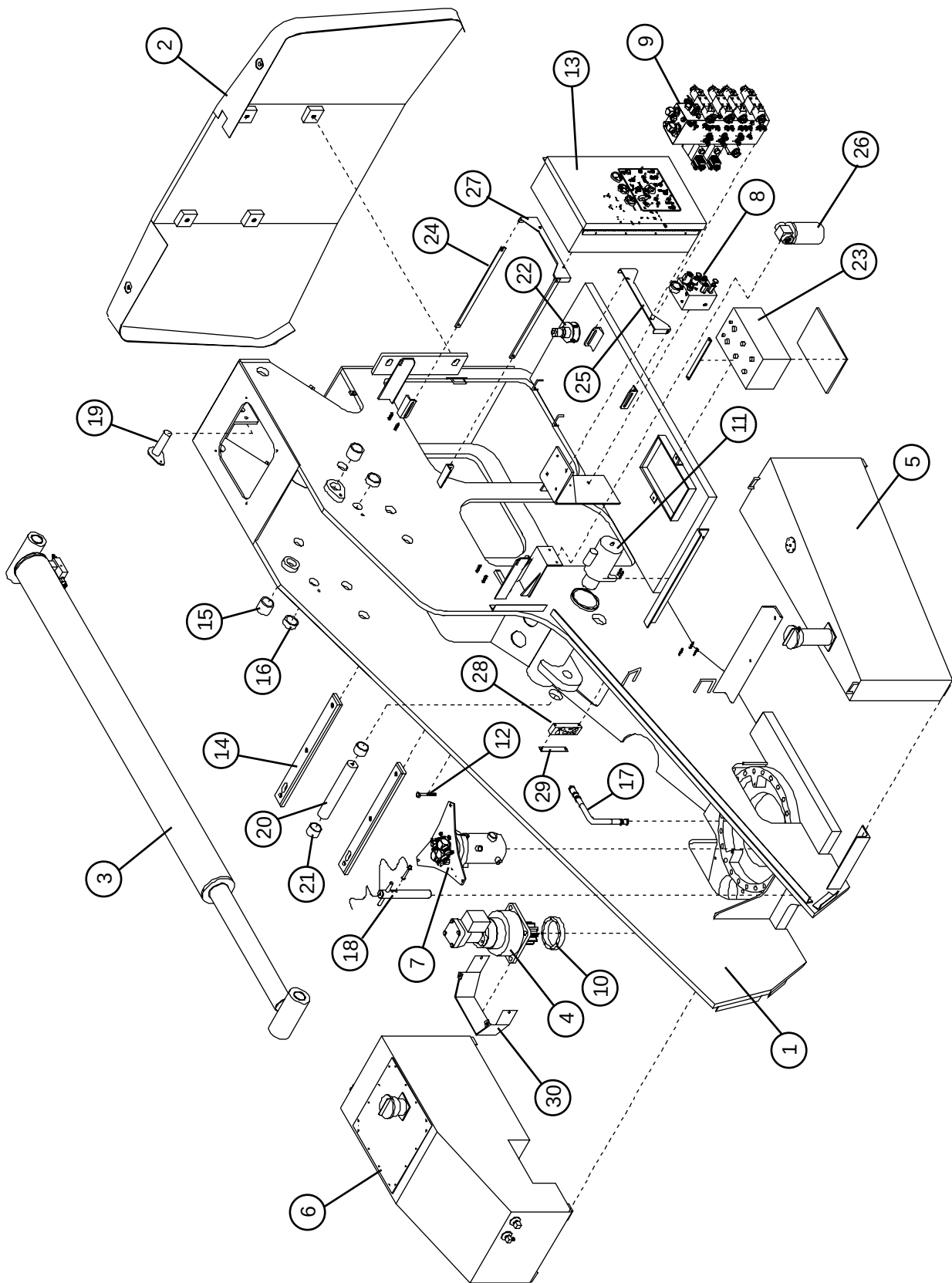


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**FIGURE 6-19. TURRET ASSEMBLY**

| Index No.                               | Skyjack Part No. | Description                                                          | Units per Assy. |
|-----------------------------------------|------------------|----------------------------------------------------------------------|-----------------|
|                                         |                  | 1 2 3 4 5 6 7                                                        |                 |
| 1                                       | 704886           | WELDMENT, Turret                                                     | 1               |
|                                         | 102600           | SWITCH, Main disconnect                                              | 1               |
|                                         | 108714           | LOCKOUT KIT, Lever                                                   | 1               |
|                                         | 703053           | • BOLT, Hex-hd 3/4-10 x 5-1/2" lg., grd. 8                           | 24              |
| 2                                       | 702194           | • WASHER, Flat 3/4" hardened                                         | 24              |
|                                         | 708762           | WELDMENT, Counterweight (SJB-60TB)                                   | 1               |
|                                         | 709591           | WELDMENT, Counterweight (SJB-65TB)                                   | 1               |
|                                         | 703448           | • BOLT, HHCS 3/4-10x2-1/4" lg.                                       | 4               |
| 3                                       | 100819           | • WASHER, Flat USS 3/4"                                              | 4               |
|                                         | 104022           | • WASHER, Lock 3/4"                                                  | 4               |
|                                         | 704888           | LIFT CYLINDER ASSEMBLY (For components, refer to Figure 6-21.)       | 1               |
|                                         | 703038           | SPEED REDUCER ASSEMBLY (For components, refer to Figure 6-22.)       | 1               |
| 4                                       | 706429           | • BOLT, SHCS 5/8-11X2"                                               | 4               |
|                                         | 103998           | • WASHER, Lock 5/8"                                                  | 4               |
|                                         | 706403           | • BOLT, SHSS 1/2-13x2.5"                                             | 6               |
|                                         | 103471           | • NUT, Hex 1/2-13                                                    | 6               |
| 5                                       | 708516           | TANK ASSEMBLY, Fuel (For components, refer to Figure 6-23.)          | 1               |
|                                         | 703594           | GEAR CLAMP, #6                                                       | 1               |
|                                         | 101632           | • BOLT, HHCS 3/8-16 x 3/4" lg.                                       | 3               |
|                                         | 103472           | • WASHER, Flat 3/8"                                                  | 3               |
| 6                                       | 103999           | • WASHER, Lock 3/8"                                                  | 3               |
|                                         | 708508           | TANK ASSEMBLY, Hydraulic (For components, refer to Figure 6-24)      | 1               |
|                                         | 101632           | • BOLT, HHCS 3/8-16 x 3/4" lg.                                       | 4               |
|                                         | 103472           | • WASHER, Flat 3/8"                                                  | 4               |
| 7                                       | 103999           | • WASHER, Lock 3/8"                                                  | 4               |
|                                         | 708878           | MANIFOLD ASSEMBLY, Rotary (For components, refer to Figure 6-25.)    | 1               |
|                                         | 702195           | • BOLT, HHCS 3/8-16x1.5"                                             | 2               |
|                                         | 702929           | • NUT, Hex jam 3/8-16                                                | 6               |
| 8                                       | 101632           | • BOLT, Hex-hd 3/8-16 x 3/4" lg.                                     | 3               |
|                                         | 103472           | • WASHER, Flat 3/8"                                                  | 3               |
|                                         | 103999           | • WASHER, Lock 3/8"                                                  | 3               |
|                                         | 709845           | MANIFOLD ASSEMBLY, Brake (For components, refer to Figure 6-26.)     | 1               |
| 9                                       | 702812           | • BOLT, HHCS 3/8-16 x 4-1/2" lg.                                     | 2               |
|                                         | 103472           | • WASHER, Flat 3/8"                                                  | 2               |
|                                         | 103999           | • WASHER, Lock 3/8"                                                  | 2               |
|                                         | 103978           | • NUT, HEX 3/8-16                                                    | 4               |
| 10                                      | 709808           | MANIFOLD ASSEMBLY, Main (For components, refer to Figure 6-27.)      | 1               |
|                                         | 103909           | • BOLT, HHCS 1/2-13 x 1-1/4" lg. gr 5                                | 2               |
|                                         | 706403           | • BOLT, SHSS 1/2-13x2-1/2"                                           | 2               |
|                                         | 103471           | • NUT, HEX 1/2-13                                                    | 4               |
| 11                                      | 103470           | • WASHER, Lock 1/2                                                   | 4               |
|                                         | 103468           | • WASHER, Flat 1/2 SAE                                               | 4               |
|                                         | 706360           | ECCENTRIC, Planetary                                                 | 1               |
|                                         | 706921           | PUMP/MOTOR ASSEMBLY, Emergency lowering                              | 1               |
| 12                                      | 101632           | • BOLT, HHCS 3/8-16 x 3/4" lg.                                       | 2               |
|                                         | 103472           | • WASHER, Flat 3/8"                                                  | 2               |
|                                         | 103999           | • WASHER, Lock 3/8"                                                  | 2               |
|                                         | 103915           | BOLT, HHCS 1/2-13x3-1/2                                              | 1               |
| 13                                      | 103468           | • WASHER, Flat 1/2 SAE                                               | 1               |
|                                         | 103470           | • WASHER, Lock 1/2"                                                  | 1               |
|                                         | 709345           | • WASHER, Flat special                                               | 2               |
|                                         | 103471           | • NUT, Hex 1/2-13                                                    | 1               |
| 14                                      | (Ref.)           | PANEL ASSEMBLY, Base control (For components, refer to Figure 6-28.) | 1               |
|                                         | 709032           | PAD, Engine tray                                                     | 2               |
|                                         | 103952           | • BOLT, FHCS 3/8-16x1"                                               | 3               |
| <b>Parts List Continued on Page 35.</b> |                  |                                                                      |                 |

**FIGURE 6-19. TURRET ASSEMBLY**



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**FIGURE 6-19. TURRET ASSEMBLY**

| Index No. | Skyjack Part No. | Description                                               | Units per Assy. |
|-----------|------------------|-----------------------------------------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7                                             |                 |
|           |                  | <b>Parts List Continued from Page 33.</b>                 |                 |
| 15        | 709434           | BEARING                                                   | 2               |
| 16        | 709436           | BEARING                                                   | 2               |
| 17        | (Ref.)           | HOSE ASSEMBLY, Grease                                     | -               |
|           | 706700           | • HOSE, Grease                                            | 1               |
|           | 703100           | • FITTING, Pipe 1/8 NPT Full coupling                     | 1               |
|           | 700509           | • ZERT, Grease                                            | 1               |
| 18        | (Ref.)           | TRANSPORTATION LOCK ASSEMBLY                              | -               |
|           | 706372           | • WELDMENT, Turret lock pin                               | 1               |
|           | 703658           | • PIN, Hitch                                              | 1               |
|           | 105807           | • LANYARD 6"                                              | 2               |
|           | 103472           | • WASHER, Flat 3/8"                                       | 4               |
|           | 103473           | • BOLT, HHCS 3/8-16x1"                                    | 1               |
|           | 103978           | • NUT, HEX 3/8-16                                         | 1               |
|           | 101632           | • BOLT, Hex-hd 3/8-16 x 3/4" lg.                          | 1               |
| 19        | 708005           | PIN, Master cylinder                                      | 1               |
|           | 706872           | • BOLT, HHCS 1/2-13x3/4 w/nylon                           | 1               |
|           | 707414           | • WASHER, Flat SAE 1/2 high strength                      | 1               |
| 20        | 709585           | PIN, Lift cylinder to Turret                              | 1               |
|           | 709345           | • WASHER, Flat, Special                                   | 2               |
|           | 707414           | • WASHER, Flat SAE 1/2 high strength                      | 2               |
|           | 706872           | • BOLT, HHCS 1/2-13x3/4 w/nylon                           | 2               |
| 21        | 709435           | BEARING                                                   | 2               |
| 22        | 708861           | TILT SWITCH                                               | 1               |
|           | 700583           | • NUT, Lock 1/4-20                                        | 2               |
|           | 103856           | • BOLT, Hex-hd 1/4-20 x 3/4" lg.                          | 2               |
| 23        | (Ref.)           | BATTERY ASSEMBLY                                          | -               |
|           | 703719           | • BATTERY, 12 Volt engine                                 | 1               |
|           | 708507           | • LINER, Battery tray                                     | 1               |
|           | 707275           | • HOLD DOWN, Engine battery                               | 1               |
|           | 708608           | • BOLT, HHCS 1/4-20x8" grd. 5                             | 2               |
|           | 104000           | • WASHER, Lock 1/4                                        | 2               |
|           | 706602           | • TERMINAL COVER, Positive                                | 1               |
|           | 707255           | • BATTERY TERMINAL, 12 volt neg.                          | 1               |
|           | 702851           | • BATTERY TERMINAL, 12 volt pos.                          | 1               |
| 24        | 709309           | TOP BRACKET, Control box support                          | 2               |
|           | 101632           | • BOLT, Hex-hd 3/8-16 x 3/4" lg.                          | 2               |
|           | 103473           | • BOLT, HHCS 3/8-16x1"                                    | 4               |
|           | 103472           | • WASHER, Flat 3/8"                                       | 6               |
|           | 103978           | • NUT, HEX 3/8-16                                         | 6               |
|           | 103999           | • WASHER, Lock 3/8"                                       | 6               |
| 25        | 709956           | BOTTOM BRACKET, Control box support (S/N 97008 and Above) | 2               |
|           | 709310           | BOTTOM BRACKET, Control box support (S/N 97007 and Below) | 2               |
|           | 101632           | • BOLT, Hex-hd 3/8-16 x 3/4" lg.                          | 2               |
|           | 103473           | • BOLT, HHCS 3/8-16x1"                                    | 4               |
|           | 103472           | • WASHER, Flat 3/8"                                       | 4               |
|           | 103978           | • NUT, HEX 3/8-16                                         | 4               |
|           | 103999           | • WASHER, Lock 3/8"                                       | 4               |
|           | 702116           | FITTING, Connector #8                                     | 1               |
| 26        | 704476           | HYDRAULIC FILTER, High pressure                           | 1               |
|           | 704559           | • ELEMENT, High pressure                                  | 1               |
|           | 710899           | • STANDOFF                                                | 2               |
|           | 702118           | • FITTING, Connector #12                                  | 1               |
|           | 702117           | • FITTING, Elbow #12                                      | 1               |
| 27        | 709957           | SUPPORT, Control box top (S/N 97008 and Above)            | 1               |
| 28        | 710128           | HOSE GUIDE, Clamp                                         | 1               |
| 29        | 710210           | HOSE GUIDE, Plate                                         | 1               |
| 30        | 704571           | GUARD, Ring gear                                          | 1               |

This exploded view diagram illustrates the assembly of a metal cabinet. The components are numbered 1 through 14. The main body of the cabinet is composed of several large panels (1, 2, 3, 4, 5, 6, 7) which are joined together using a complex system of hinges, bolts, and spacers (8, 9, 10, 11, 12, 13). A small rectangular panel (14) is shown at the bottom right, likely a base or a door panel. The diagram uses dashed lines to indicate the alignment and assembly path for each part.

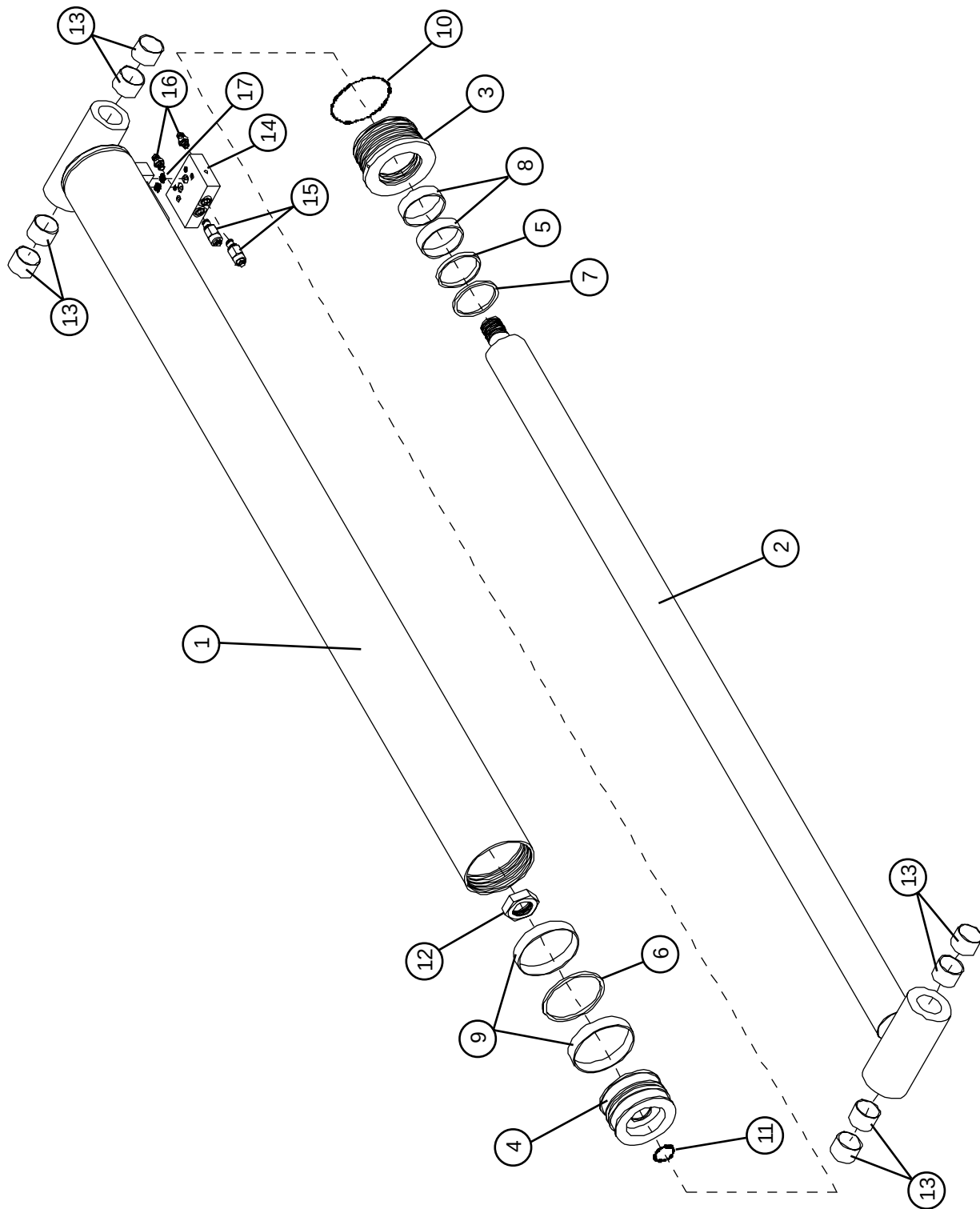
**SECTION 6, Page 36**

**SJB-60TB, SJB-65TB**

**FIGURE 6-20. TURRET COVERS AND DOORS**

| Index No.                                                   | Skyjack Part No. | Description                              | Units per Assy. |
|-------------------------------------------------------------|------------------|------------------------------------------|-----------------|
|                                                             |                  | 1 2 3 4 5 6 7                            |                 |
| 1                                                           | 708531           | COVER WELDMENT, RH Control               | 1               |
|                                                             | 702862           | • SCREW, Self-tapping 1/4 - 1" lg.       | 6               |
|                                                             | 701027           | • BUMPER, Rubber                         | AR              |
| 2                                                           | 708869           | BRACKET, Control cover                   | 1               |
|                                                             | 103887           | • BOLT, HHCS 5/16-18x3/4                 | 4               |
|                                                             | 103996           | • WASHER, Flat 5/16                      | 4               |
|                                                             | 103984           | • NUT, Lock 5/16-18                      | 4               |
| 3                                                           | 708530           | COVER WELDMENT, LH Engine                | 1               |
|                                                             | 702862           | • SCREW, Self-tapping 1/4 - 1" lg.       | 6               |
|                                                             | 701027           | • BUMPER, Rubber                         | AR              |
| 4                                                           | 704323           | FILLER DOOR, Hydraulic tank cover        | 1               |
|                                                             | 103962           | • BOLT, Mach. HD #10-32x1/2              | 8               |
|                                                             | 104003           | • NUT, Hex #10-32                        | 8               |
|                                                             | 104185           | • WASHER, lock 1/4                       | 8               |
| 5                                                           | 708870           | BRACKET, Engine cover                    | 1               |
|                                                             | 103887           | • BOLT, HHCS 5/16-18x3/4                 | 4               |
|                                                             | 103996           | • WASHER, Flat 5/16                      | 4               |
|                                                             | 103984           | • NUT, Lock 5/16-18                      | 4               |
| 6                                                           | 708379           | DOOR WELDMENT, Control                   | 1               |
|                                                             | 701027           | • BUMPER, Rubber                         | AR              |
|                                                             | 705528           | • LATCH, Rubber                          | 2               |
| 7                                                           | 710646           | DOOR WELDMENT, Engine (gas/dual fuel)    | 1               |
|                                                             | 710645           | DOOR WELDMENT, Engine (diesel)           | 1               |
|                                                             | 701027           | • BUMPER, Rubber                         | AR              |
|                                                             | 705528           | • LATCH, Rubber                          | 2               |
| 8                                                           | 704108           | WELDMENT, Hinge                          | 4               |
|                                                             | 103978           | • NUT, Hex 3/8-16                        | 3               |
|                                                             | 103472           | • WASHER, Flat 3/8                       | 2               |
|                                                             | 103999           | • WASHER, Lock 3/8                       | 2               |
|                                                             | 103873           | • BOLT, Hex-hd 3/8-16 x 2-1/2" lg.       | 1               |
|                                                             | 104606           | • NUT, Lock 3/8-16                       | 1               |
| 9                                                           | 704090           | WELDMENT, Hinge clevis                   | 4               |
|                                                             | 703715           | • WASHER, Flat 5/16 USS                  | 2               |
|                                                             | 110814           | • BOLT, Carriage 5/16-18x 3/4            | 2               |
|                                                             | 103996           | • WASHER, Flat 5/16                      | 2               |
|                                                             | 103984           | • NUT, Lock 5/16-18                      | 2               |
| 10                                                          | 703687           | SHOCK, Gas charged 250 lb. (Engine door) | 4               |
|                                                             | 703689           | • STUD, Ball 13mm                        | 2               |
|                                                             | 703691           | • CLIP, Safety 250 lb.                   | 2               |
|                                                             | 103984           | • NUT, Lock 5/16-18                      | 2               |
| 11                                                          | 704397           | LATCH                                    | 1               |
|                                                             | 103995           | • WASHER, Flat SAE 11/4                  | 2               |
| 12                                                          | 708792           | COVER, Turret top                        | 1               |
|                                                             | 703016           | • BOLT, HHCS 5/16-18x5/8                 | 4               |
|                                                             | 103404           | • WASHER, lock 5/16                      | 4               |
| 13                                                          | 708520           | PLATE, Turret front                      | 1               |
|                                                             | 103995           | • WASHER, Flat SAE 1/4                   | 5               |
|                                                             | 103855           | • BOLT, HHCS 1/4-20x1/2" lg.             | 5               |
|                                                             | 104000           | • WASHER, lock 1/4                       | 7               |
| 14                                                          | 709847           | END PLATE, Cover                         | 1               |
| <b>NOTE - Decals and labels must be ordered separately.</b> |                  |                                          |                 |

FIGURE 6-21. LIFT CYLINDER ASSEMBLY



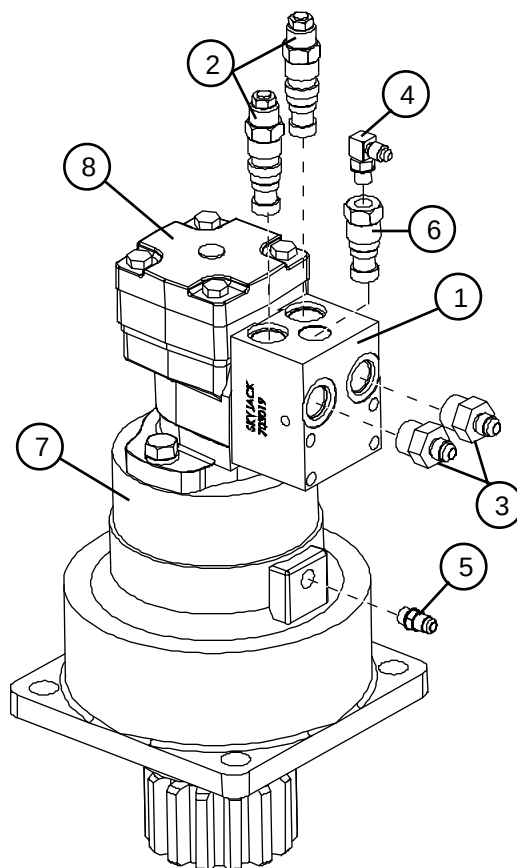
Ma60-623

**FIGURE 6-21. LIFT CYLINDER ASSEMBLY**

| Index<br>No. | Skyjack<br>Part No. | Description                             | Units<br>per<br>Assy. |
|--------------|---------------------|-----------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                           |                       |
|              | 707338              | CYLINDER ASSEMBLY, Lift (w/bushings)    | -                     |
| 1            | 704901              | • WELDMENT, Cylinder barrel             | 1                     |
| 2            | 704897              | • WELDMENT, Cylinder rod                | 1                     |
| 3            | 704923              | • GLAND, Cylinder                       | 1                     |
| 4            | 704906              | • PISTON, Cylinder                      | 1                     |
| *5           | 704934              | • SEAL, Rod                             | 1                     |
| *6           | 707136              | • SEAL, Piston                          | 1                     |
| *7           | 704935              | • WIPER, Rod                            | 1                     |
| *8           | 105689              | • WEAR RING, Gland                      | 2                     |
| *9           | 707138              | • WEAR RING, Piston                     | 2                     |
| *10          | 704964              | • O-RING, Gland                         | 1                     |
| *11          | 701963              | • O-RING, Piston                        | 1                     |
| 12           | 704932              | • NUT, Lock                             | 1                     |
| 13           | 103208              | • BUSHING, 2-1/2" x 2-1/4" x 1-3/4" lg. | 8                     |
| 14           | 701460              | VALVE BLOCK, Boom lift cylinder         | 1                     |
|              | 702819              | • BOLT, SHCS                            | 4                     |
| 15           | 701827              | VALVE, Counterbalance                   | 2                     |
| 16           | 704859              | FITTING, Connector #6orb-#8             | 2                     |
| 17           | 701635              | O-RING, Valve block                     | 2                     |
|              | 709401              | KIT, Seal repair                        | AR                    |
|              |                     | * Part of Seal Repair Kit.              |                       |

## NOTES

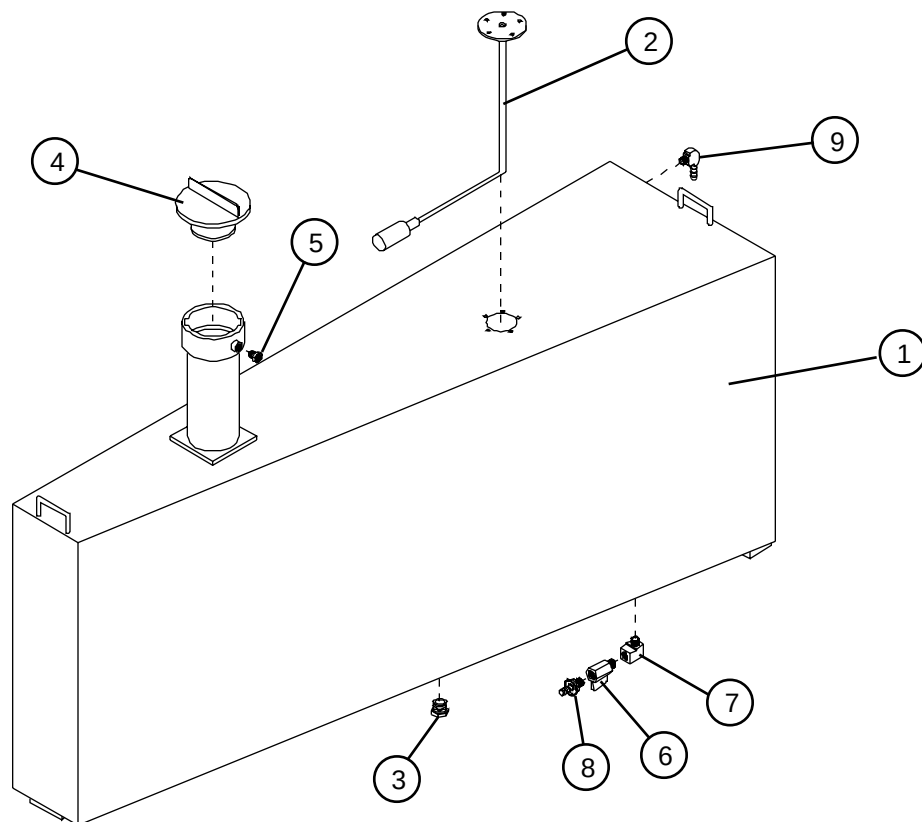
**FIGURE 6-22. SPEED REDUCER ASSEMBLY**



703038

| Index No.                                                                                            | Skyjack Part No. | Description                                  | Units per Assy. |
|------------------------------------------------------------------------------------------------------|------------------|----------------------------------------------|-----------------|
|                                                                                                      |                  | 1 2 3 4 5 6 7                                |                 |
| 1                                                                                                    | 703038           | ASSEMBLY, Speed reducer                      |                 |
|                                                                                                      | 703019           | • MANIFOLD, Rotation drive motor             | 1               |
|                                                                                                      | 707809           | • BOLT, SHCS 5/16 - 18 x 3.0 grade 5         | 4               |
|                                                                                                      | 103404           | • WASHER, Flat 5/16 SAE                      | 4               |
|                                                                                                      | 704230           | KIT, SEAL                                    | 1               |
| 2                                                                                                    | 706384           | • VALVE, Counter balance                     | 2               |
| 3                                                                                                    | 103307           | • FITTING, Hydraulic 6400-6-10               | 2               |
| 4                                                                                                    | 701850           | • FITTING, Hydraulic 6801-4                  | 1               |
| 5                                                                                                    | 701954           | • FITTING, Hydraulic 6400-4                  | 1               |
| 6                                                                                                    | 703030           | • VALVE, Shuttle cartridge                   | 1               |
| -                                                                                                    | 710869           | • ASSEMBLY,Speed reducer/Hydraulic motor     | 1               |
| 7                                                                                                    | 702989           | •• SPEED REDUCER                             | 1               |
|                                                                                                      | 704222           | ••• Gasket                                   | 1               |
|                                                                                                      | 103909           | •• BOLT, HHCS 1/2 - 13 x 1.25                | 2               |
|                                                                                                      | 103470           | •• WASHER, Lock 1/2                          | 2               |
| 8                                                                                                    | 702992           | •• MOTOR, Hydraulic                          | 1               |
|                                                                                                      | 704237           | KIT, SEAL                                    | 1               |
| 9                                                                                                    | 704504           | ASSEMBLY, Hose (H1204 0009 00-0),(Not shown) | 1               |
| NOTE: Refer to Sandard Hose Numbering System (SECTION 5, Page 18) for explanation of hose numbering. |                  |                                              |                 |

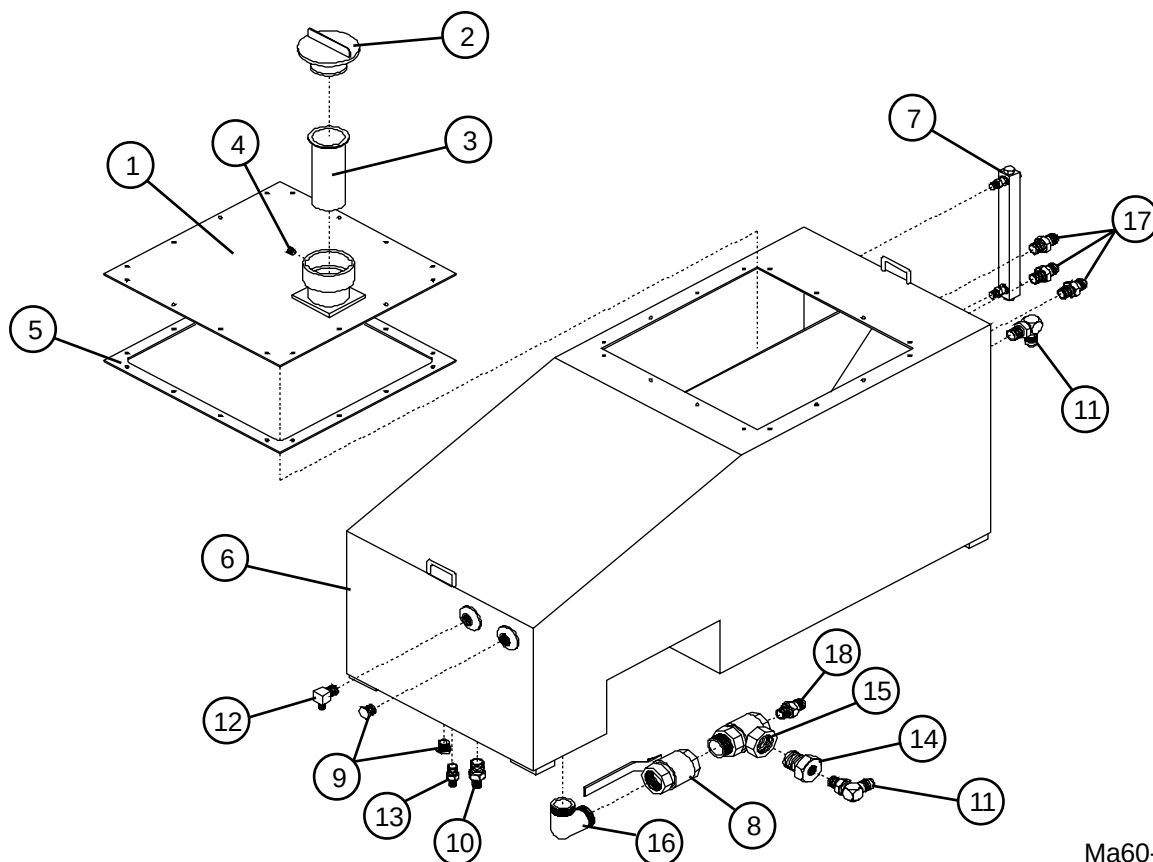
**FIGURE 6-23. FUEL TANK ASSEMBLY**



Ma60-613

| Index<br>No. | Skyjack<br>Part No. | Description                                      |   |   |   |   |   |   | Units<br>per<br>Assy. |
|--------------|---------------------|--------------------------------------------------|---|---|---|---|---|---|-----------------------|
|              |                     | 1                                                | 2 | 3 | 4 | 5 | 6 | 7 |                       |
|              | 708516              | TANK ASSEMBLY, Fuel                              |   |   |   |   |   |   | -                     |
| 1            | 708515              | • TANK WELDMENT, Fuel                            |   |   |   |   |   |   | 1                     |
| 2            | 706172              | • LEVEL GAUGE, Fuel tank                         |   |   |   |   |   |   | 1                     |
| 3            | 103339              | • PLUG, 3/4" Magnetic                            |   |   |   |   |   |   | 1                     |
| 4            | 703937              | • FILL CAP, Fuel tank (Red)                      |   |   |   |   |   |   | 1                     |
| 5            | 700506              | • FITTING, Hydraulic BV-2                        |   |   |   |   |   |   | 1                     |
| 6            | 708601              | • FITTING, Mini ball valve                       |   |   |   |   |   |   | 1                     |
| 7            | 702236              | • ELBOW, 90° 3/8 NPT                             |   |   |   |   |   |   | 1                     |
| 8            | 704801              | • FITTING, Male hose barb #4orb-#5               |   |   |   |   |   |   | 1                     |
| 9            | 703593              | • FITTING, Elbow-brass barb (Dual fuel)          |   |   |   |   |   |   | 1                     |
|              | 705248              | • FITTING, Male hose barb (Diesel)               |   |   |   |   |   |   | 1                     |
|              | 709539              | • FITTING, Hex reducer bushing #4orb-#3 (Diesel) |   |   |   |   |   |   | 1                     |
|              | 704773              | • FITTING, 90° Street elbow (Diesel)             |   |   |   |   |   |   | 1                     |

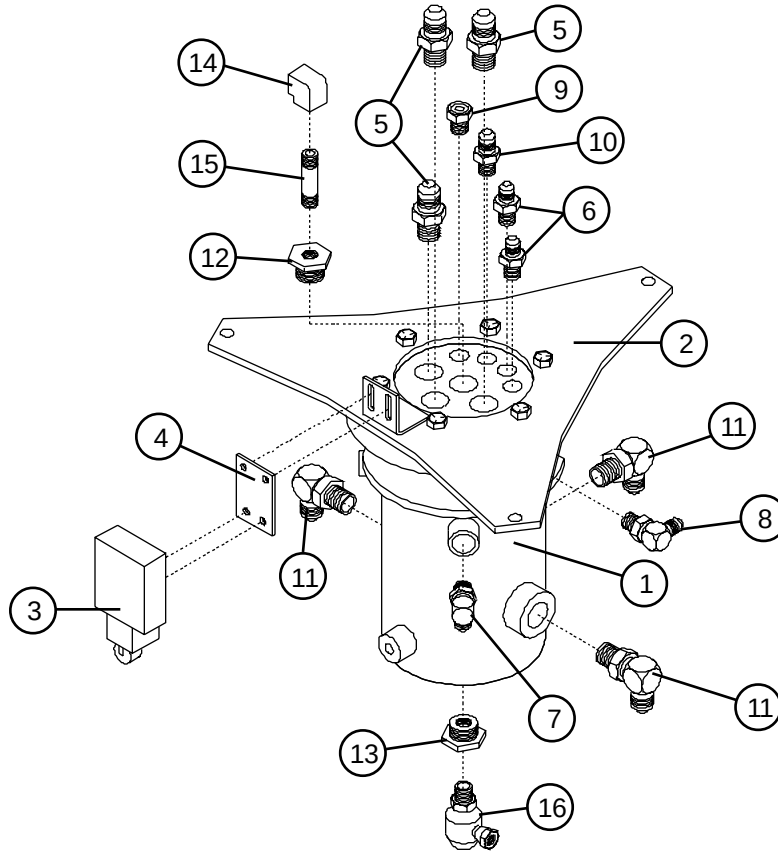
**FIGURE 6-24. HYDRAULIC TANK ASSEMBLY**



Ma60-612

| Index No. | Skyjack Part No. | Description                               | Units per Assy. |
|-----------|------------------|-------------------------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7                             |                 |
|           | 708508           | TANK ASSEMBLY, Hydraulic                  | -               |
| 1         | 706076           | • COVER WELDMENT, Hydraulic tank          | 1               |
|           | 103856           | • • BOLT, HHCS 1/4-20x3/4 gr. 5           | 16              |
|           | 103995           | • • WASHER, Flat 1/4                      | 16              |
|           | 104000           | • • WASHER, Lock 1/4                      | 16              |
| 2         | 702291           | • FILL CAP, Hydraulic tank                | 1               |
| 3         | 702290           | • STRAINER, Hydraulic tank                | 1               |
| 4         | 700506           | • FITTING, Hydraulic BV-2                 | 1               |
| 5         | 706188           | • GASKET, Hydraulic tank cover            | 1               |
| 6         | 708506           | • TANK WELDMENT, Hydraulic                | 1               |
| 7         | 708510           | • SIGHT/LEVEL/TEMP GAUGE, Hydraulic tank  | 1               |
| 8         | 704087           | • PIPE FITTING, 1 1/4" Ball valve         | 1               |
| 9         | 103339           | • PLUG, 3/4" Magnetic                     | 2               |
| 10        | 701877           | • FITTING, Male connector #12orb-#8       | 1               |
| 11        | 702541           | • FITTING, Male elbow #12orb-#12          | 2               |
| 12        | 709353           | • FITTING, Male elbow #6orb-#4.           | 1               |
| 13        | 703118           | • FITTING, Male connector #6              | 1               |
| 14        | 704792           | • FITTING, Hex reducer bushing #12orb-#20 | 1               |
| 15        | 708798           | • FITTING, Street tee                     | 1               |
| 16        | 708806           | • FITTING, Male elbow #20                 | 1               |
| 17        | 702169           | • FITTING, Male connector #12             | 3               |
| 18        | 709471           | • FITTING, Male connector #20orb-#16      | 1               |

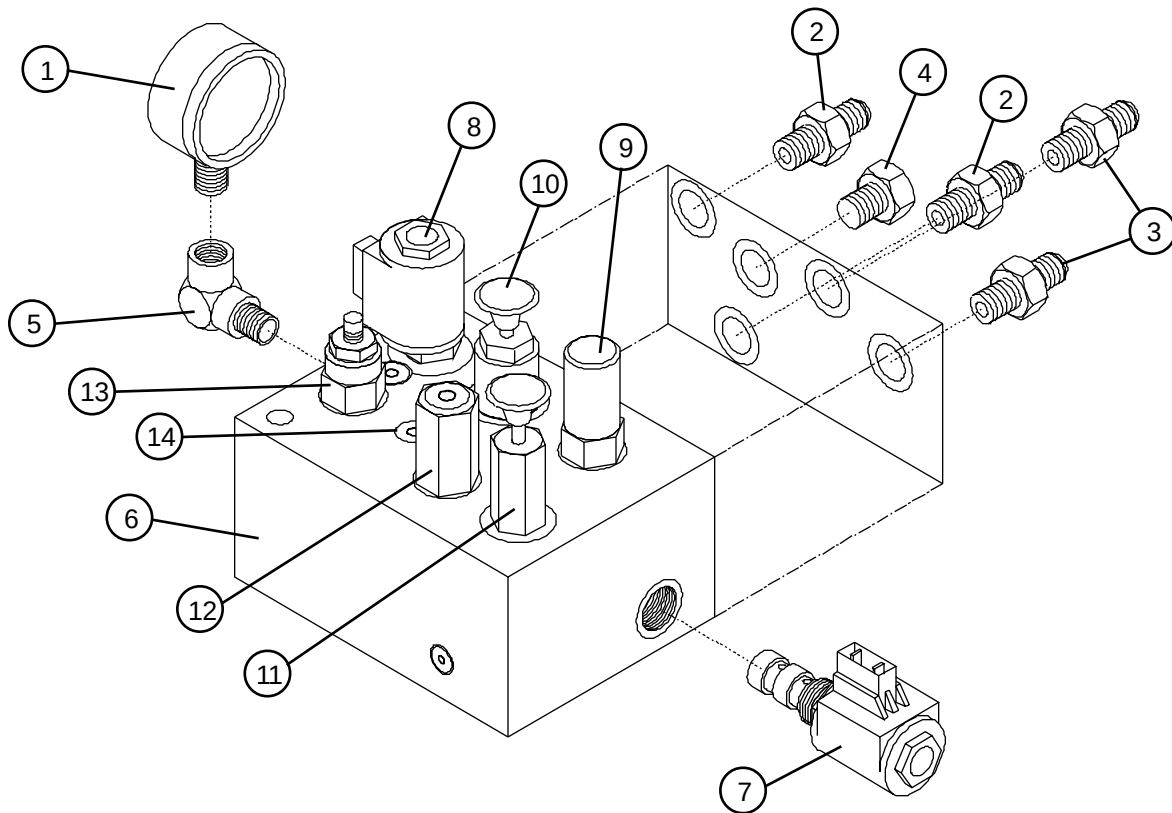
**FIGURE 6-25. ROTARY MANIFOLD ASSEMBLY**



Ma60-641

| Index<br>No. | Skyjack<br>Part No. | Description                                                                 |   |   |   |   |   |   | Units<br>per<br>Assy. |
|--------------|---------------------|-----------------------------------------------------------------------------|---|---|---|---|---|---|-----------------------|
|              |                     | 1                                                                           | 2 | 3 | 4 | 5 | 6 | 7 |                       |
| 1            | 708878              | ASSEMBLY, Rotary manifold                                                   |   |   |   |   |   |   | -                     |
| 2            | 704343              | MANIFOLD, Rotary                                                            |   |   |   |   |   |   | 1                     |
|              | 704961              | PLATE WELDMENT, Rotary Manifold mounting                                    |   |   |   |   |   |   | 1                     |
|              | 101632              | • BOLT, 3/8"x3/4" lg.                                                       |   |   |   |   |   |   | 6                     |
|              | 103999              | • WASHER, Lock 3/8"                                                         |   |   |   |   |   |   | 6                     |
| 3            | 706294              | SWITCH, Directional sensing limit                                           |   |   |   |   |   |   | 1                     |
|              | 105621              | • BOLT, Mach-hd #10-32x1" lg.                                               |   |   |   |   |   |   | 2                     |
|              | 104694              | • WASHER, Flat #10                                                          |   |   |   |   |   |   | 2                     |
|              | 104185              | • WASHER, Lock #10                                                          |   |   |   |   |   |   | 2                     |
|              | 104103              | • NUT, Hex #10-24                                                           |   |   |   |   |   |   | 2                     |
| 4            | 706332              | PLATE, Limit Switch mounting                                                |   |   |   |   |   |   | 1                     |
|              | 105621              | • BOLT, Mach-hd #10-32x1" lg.                                               |   |   |   |   |   |   | 2                     |
|              | 104694              | • WASHER, Flat #10                                                          |   |   |   |   |   |   | 2                     |
|              | 104185              | • WASHER, Lock #10                                                          |   |   |   |   |   |   | 2                     |
|              | 104103              | • NUT, Hex #10-24                                                           |   |   |   |   |   |   | 2                     |
| 5            | 702118              | FITTING, Connector #12orb - #12                                             |   |   |   |   |   |   | 3                     |
| 6            | 701956              | FITTING, Connector #6orb - #4                                               |   |   |   |   |   |   | 2                     |
| 7            | 103073              | FITTING, Elbow 90° #6orb - #6                                               |   |   |   |   |   |   | 1                     |
| 8            | 701999              | FITTING, Elbow 90° #6orb - #4                                               |   |   |   |   |   |   | 2                     |
| 9            | 104437              | FITTING, Plug #6                                                            |   |   |   |   |   |   | 2                     |
| 10           | 103069              | FITTING, Connector #6orb - #6                                               |   |   |   |   |   |   | 1                     |
| 11           | 702117              | FITTING, Elbow 90° #12orb - #12                                             |   |   |   |   |   |   | 3                     |
|              |                     | <b>NOTE - Items 12 thru 16 are for machines with Dual Fuel Option only.</b> |   |   |   |   |   |   |                       |
| 12           | 702820              | FITTING, Adaptor 3/4NPT - 1/4NPT                                            |   |   |   |   |   |   | 1                     |
| 13           | 702821              | FITTING, Adaptor 3/4NPT - 3/8NPT                                            |   |   |   |   |   |   | 1                     |
| 14           | 702500              | FITTING, Elbow 90° female 1/4NPT-1/4NPT                                     |   |   |   |   |   |   | 1                     |
| 15           | 702499              | FITTING, Pipe nipple 1/4NPT x 2" lg.                                        |   |   |   |   |   |   | 1                     |
| 16           | 702239              | FITTING, Brass swivel #6orb - #4                                            |   |   |   |   |   |   | 1                     |

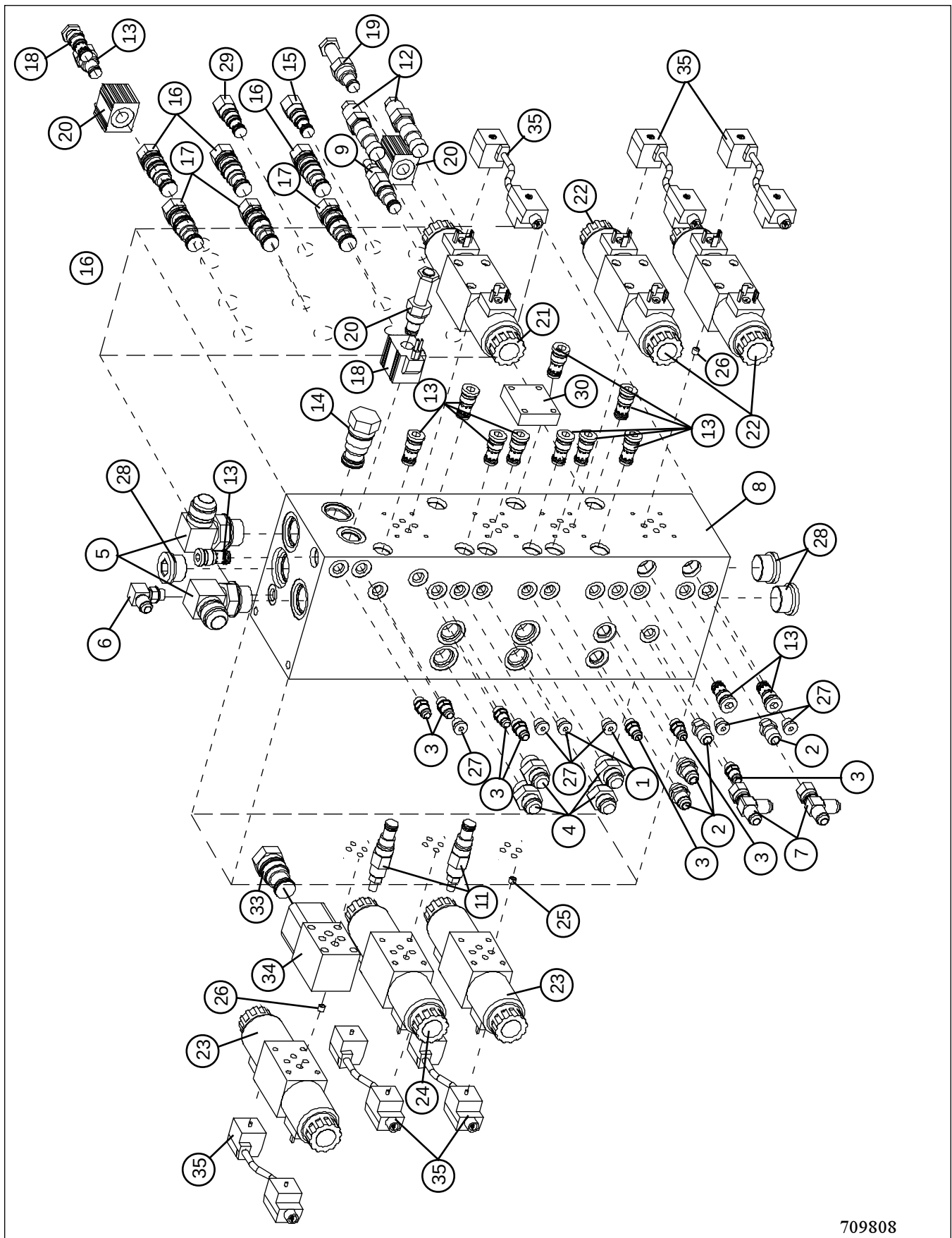
**FIGURE 6-26. BRAKE MANIFOLD ASSEMBLY**



Ma60-639

| Index No. | Skyjack Part No. | Description                               |   |   |   |   |   |   | Units per Assy. |
|-----------|------------------|-------------------------------------------|---|---|---|---|---|---|-----------------|
|           |                  | 1                                         | 2 | 3 | 4 | 5 | 6 | 7 |                 |
|           | 709845           | ASSEMBLY, Brake manifold                  |   |   |   |   |   |   | -               |
| 1         | 703725           | • GAUGE, Pressure 800 psi                 |   |   |   |   |   |   | 1               |
| 2         | 103069           | • FITTING, Connector #6orb - #6           |   |   |   |   |   |   | 2               |
| 3         | 701956           | • FITTING, Connector #6orb - #4           |   |   |   |   |   |   | 2               |
| 4         | 104437           | • PLUG, O-Ring hex head                   |   |   |   |   |   |   | 1               |
| 5         | 704773           | • FITTING, Elbow 1/4" male to 1/4" female |   |   |   |   |   |   | 1               |
|           | 704716           | • MANIFOLD, Brake                         |   |   |   |   |   |   | 1               |
| 6         | 703188           | •• BLOCK, Manifold                        |   |   |   |   |   |   | 1               |
| 7         | 703189           | •• VALVE, Brake                           |   |   |   |   |   |   | 1               |
|           | 703803           | ••• COIL, 12 Volt                         |   |   |   |   |   |   | 1               |
| 8         | 703190           | •• VALVE, Tilt braking                    |   |   |   |   |   |   | 1               |
|           | 703803           | ••• COIL, 12 Volt                         |   |   |   |   |   |   | 1               |
| 9         | 703191           | •• VALVE, Pressure reducing               |   |   |   |   |   |   | 1               |
| 10        | 703192           | •• VALVE, Brake release override          |   |   |   |   |   |   | 1               |
| 11        | 703193           | •• VALVE, Brake release hand pump         |   |   |   |   |   |   | 1               |
| 12        | 703194           | •• VALVE, Adjustable relief               |   |   |   |   |   |   | 1               |
| 13        | 706026           | •• VALVE, Needle                          |   |   |   |   |   |   | 1               |
| 14        | 703197           | •• VALVE, Shuttle                         |   |   |   |   |   |   | 2               |

FIGURE 6-27. MAIN MANIFOLD ASSEMBLY



709808

**FIGURE 6-27. MAIN MANIFOLD ASSEMBLY**

| Index<br>No. | Skyjack<br>Part No. | Description                                   | Units<br>per<br>Assy. |
|--------------|---------------------|-----------------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                                 |                       |
|              | 709808              | ASSEMBLY, Main manifold (SJB-60TB)            | -                     |
|              | 708872              | ASSEMBLY, Main manifold (SJB-65TB)            | -                     |
| 1            | 103322              | • FITTING, Connector #4orb - #6, (SJB-65TB)   | 2                     |
| 2            | 103069              | • FITTING, Connector #6orb - #6               | 4                     |
| 3            | 701954              | • FITTING, Connector #4orb - #4               | 7                     |
| 4            | 702116              | • FITTING, Connector #8orb - #8               | 4                     |
| 5            | 702117              | • FITTING, Elbow 90° #12orb - #12             | 2                     |
| 6            | 113348              | • FITTING, Elbow 90° #4orb - #6               | 1                     |
| 7            | 702382              | • FITTING, Swivel tee #6                      | 2                     |
|              | 709804              | • MANIFOLD SYSTEM (SJB-60TB)                  | 1                     |
|              | 708906              | • MANIFOLD SYSTEM (SJB-65TB)                  | 1                     |
| 8            | 709968              | •• BODY, Custom valvepac (Aluminum)           | 1                     |
| 9            | 709403              | •• VALVE, Direct acting relief (Set@175 psi)  | 1                     |
| 10           | 709404              | •• VALVE, Direct acting relief (Set@1100 psi) | 1                     |
| 11           | 709405              | •• VALVE, Direct acting relief (Set@1400 psi) | 1                     |
| 12           | 701827              | •• VALVE, Counterbalance                      | 2                     |
| 13           | 709406              | •• VALVE, Check (Flush mounted)               | 13                    |
| 14           | 709407              | •• VALVE, Check                               | 1                     |
| 15           | 709408              | •• VALVE, Flow control                        | 1                     |
| 16           | 709409              | •• VALVE, Reducing compensator                | 3                     |
| 17           | 709410              | •• VALVE, Shuttle                             | 3                     |
| 18           | 709411              | •• VALVE, Solenoid                            | 2                     |
| 19           | 709412              | •• VALVE, Solenoid                            | 1                     |
| 20           | 709413              | •• COIL, 12V DC                               | 3                     |
| 21           | 709414              | •• VALVE, Directional control                 | 1                     |
| 22           | 709415              | •• VALVE, Directional control                 | AR                    |
| 23           | 709967              | •• VALVE, Proportional directional control    | 2                     |
| 24           | 709416              | •• VALVE, Proportional directional control    | 2                     |
| 25           | 709961              | •• PLUG, Orifice .031 diameter                | 2                     |
| 26           | 709962              | •• PLUG, Orifice .078 diameter                | 1                     |
| 27           | 709963              | •• PLUG, Hollow hex 4 SAE orb                 | AR                    |
| 28           | 709964              | •• PLUG, Hollow hex 12 SAE orb                | 3                     |
| 29           | 709965              | •• VALVE, Flow control                        | 1                     |
| 30           | 709966              | •• PLATE, Blocking (SJB-60TB only)            | 1                     |
| 31           | 710026              | •• PLUG, Orifice .039 diameter                | 1                     |
| 32           | 710027              | •• PLUG, Orifice .059 diameter                | 1                     |
| 33           | 710028              | •• VALVE, Flow control                        | 1                     |
| 34           | 710029              | •• BODY, D03 Sandwich                         | 1                     |
| 35           | 710030              | •• CONNECTOR, Dual valve                      | 7                     |
| 36           | 710031              | •• CONNECTOR, Valve label                     | 14                    |

FIGURE 6-28. BASE CONTROL/ELECTRICAL PANEL ASSEMBLY

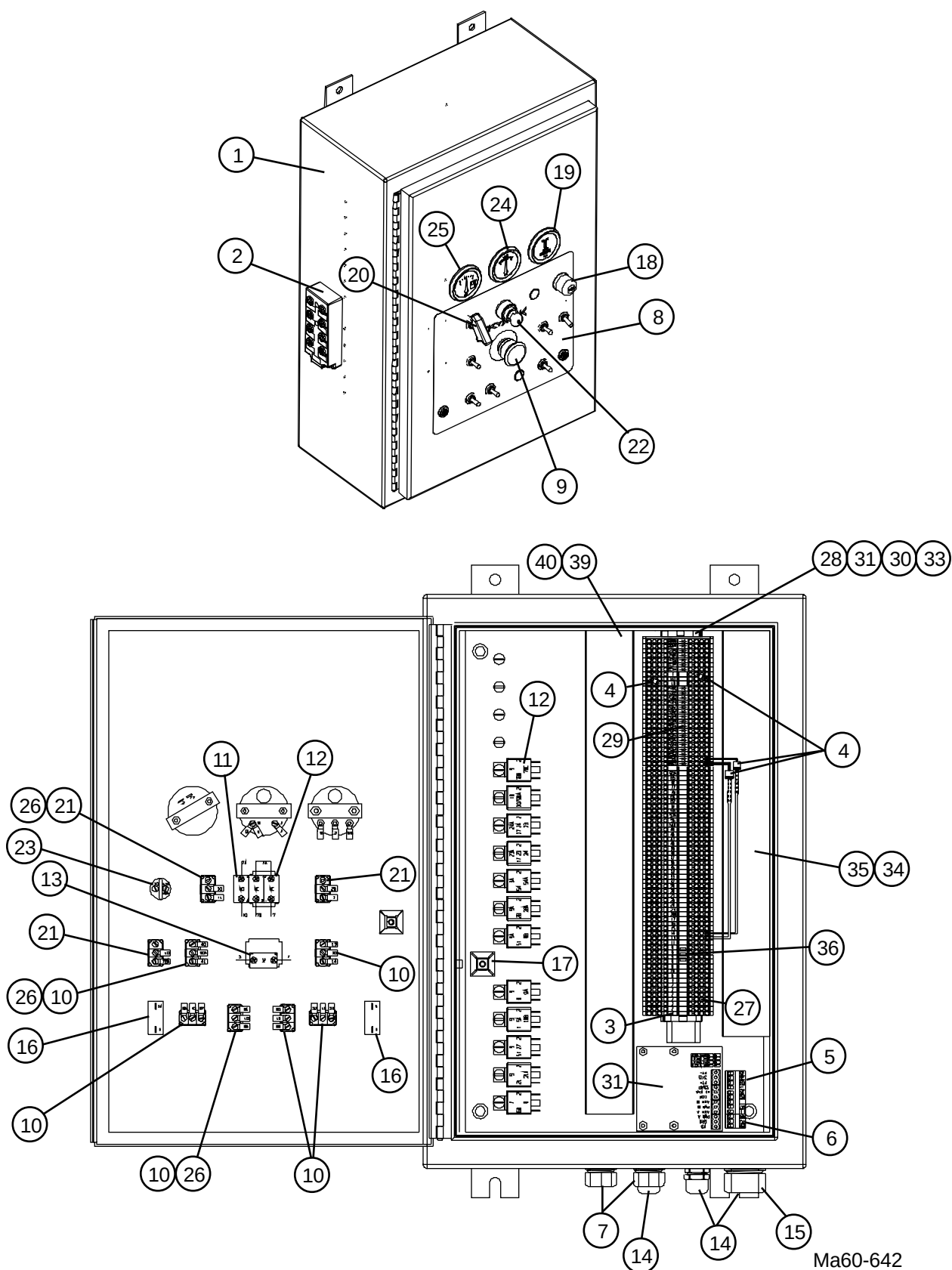
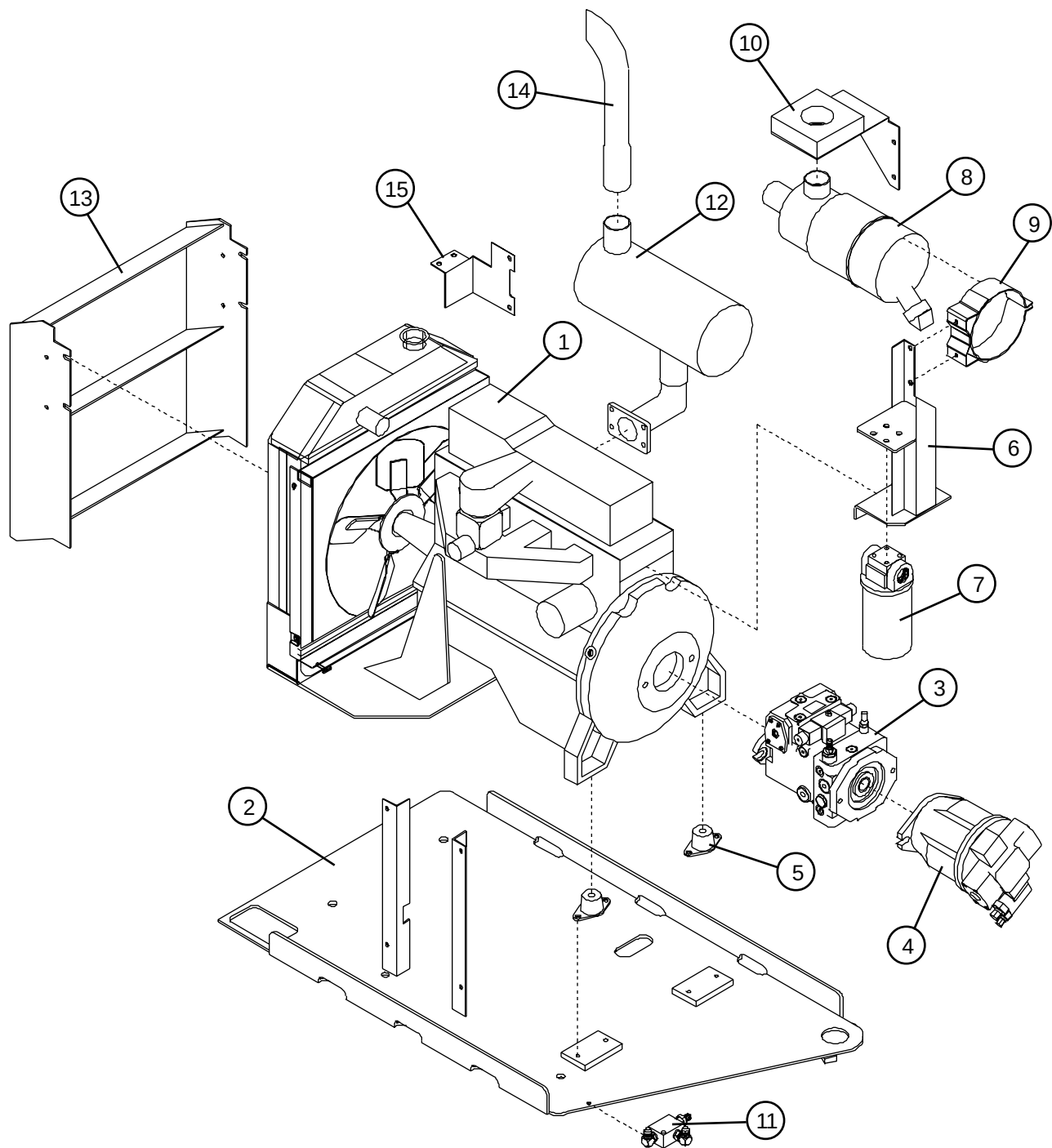


**FIGURE 6-28. BASE CONTROL/ELECTRICAL PANEL ASSEMBLY**

| Index<br>No. | Skyjack<br>Part No. | Description                            | Units<br>per<br>Assy. |
|--------------|---------------------|----------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                          |                       |
|              | (Ref.)              | PANEL ASSEMBLY, Base control           | -                     |
| 1            | 709953              | • BOX, Ground Control                  | 1                     |
| 2            | 709899              | • BOX, Distribution                    | 1                     |
| 3            | 709132              | • MARKER, Terminal strip               | 1                     |
| 4            | 102921              | • DIODE, Large                         | 4                     |
| 5            | 709367              | • TERMINAL BLOCK, Pluggable 9-position | 1                     |
| 6            | 709368              | • TERMINAL BLOCK, Pluggable 3-position | 1                     |
| 7            | 710266              | • STRAIN RELIEF, 1/2"                  | 3                     |
|              | 710354              | • LOCKNUT, 1/2" NPT                    | 3                     |
| 8            | 709794              | • LABEL, Lower control panel           | 1                     |
| 9            | 102769              | • SWITCH HEAD, Emergency stop          | 1                     |
| 10           | 102853              | • SWITCH, Toggle SPDT 3 pos mom        | AR                    |
| 11           | 103141              | • SWITCH CONTACT, N.O.                 | 1                     |
| 12           | 103279              | • SWITCH CONTACT, 2 N.C.               | 1                     |
| 13           | 103281              | • SWITCH CONTACT, N.C.                 | 1                     |
| 14           | 710267              | • STRAIN RELIEF, 1" NPT                | 1                     |
|              | 710353              | • LOCKNUT, 1" NPT                      | 1                     |
| 15           | 710265              | • STRAIN RELIEF, 3/4" NPT              | 3                     |
|              | 710352              | • LOCKNUT, 3/4"                        | 3                     |
| 16           | 702402              | • BREAKER, 15 AMP                      | 2                     |
| 17           | 701523              | • CABLE TIE MOUNT, Self-adhesive       | AR                    |
| 18           | 709370              | • COVER, Push button                   | 1                     |
| 19           | 701925              | • HOURMETER                            | 1                     |
| 20           | 701927              | • TOGGLE GUARD, Red bottom             | 1                     |
| 21           | 701929              | • SWITCH, Toggle SPDT 2 pos mom        | AR                    |
| 22           | 102753              | • SWITCH, Key (3 position)             | 1                     |
|              | 104466              | •• Key, #455                           | 1                     |
| 23           | 709133              | • PUSH BUTTON, N.O.                    | 1                     |
| 24           | 704732              | • VOLTMETER, 12V 8-15V                 | 1                     |
| 25           | 706282              | • FUEL GAUGE                           | 1                     |
| 26           | 702262              | • PLUG KNOCKOUT, 1/2"                  | AR                    |
|              | 709897              | • PANEL, Ground control assembly       | 1                     |
| 27           | 707144              | •• TERMINAL BLOCK, Ground              | 6                     |
| 28           | 707143              | •• TERMINAL BLOCK, Thru                | 50                    |
| 29           | 707145              | •• TERMINAL BLOCK, Diode               | 24                    |
| 30           | 707147              | •• END STOP                            | 2                     |
| 31           | 709895              | •• DIN RAIL                            | 1                     |
| 32           | 709128              | •• CONTROL CARD, Driver                | 1                     |
| 33           | 707146              | •• END PLATE                           | 1                     |
| 34           | 709891              | •• WIRE DUCT                           | 1                     |
| 35           | 709893              | •• WIRE DUCT COVER, 2"                 | 1                     |
| 36           | 707148              | •• ADJ. JUMPER, Terminal block         | 3                     |
| 37           | 701943              | •• RELAY, 12VDC Sealed                 | 12                    |
| 38           | 709896              | •• PANEL, Ground control               | 1                     |
| 39           | 709892              | •• WIRE DUCT COVER                     | 1                     |
| 40           | 709890              | •• WIRE DUCT                           | 1                     |

**FIGURE 6-29. ENGINE AND RELATED PARTS (Ford Gas and Dual Fuel)**

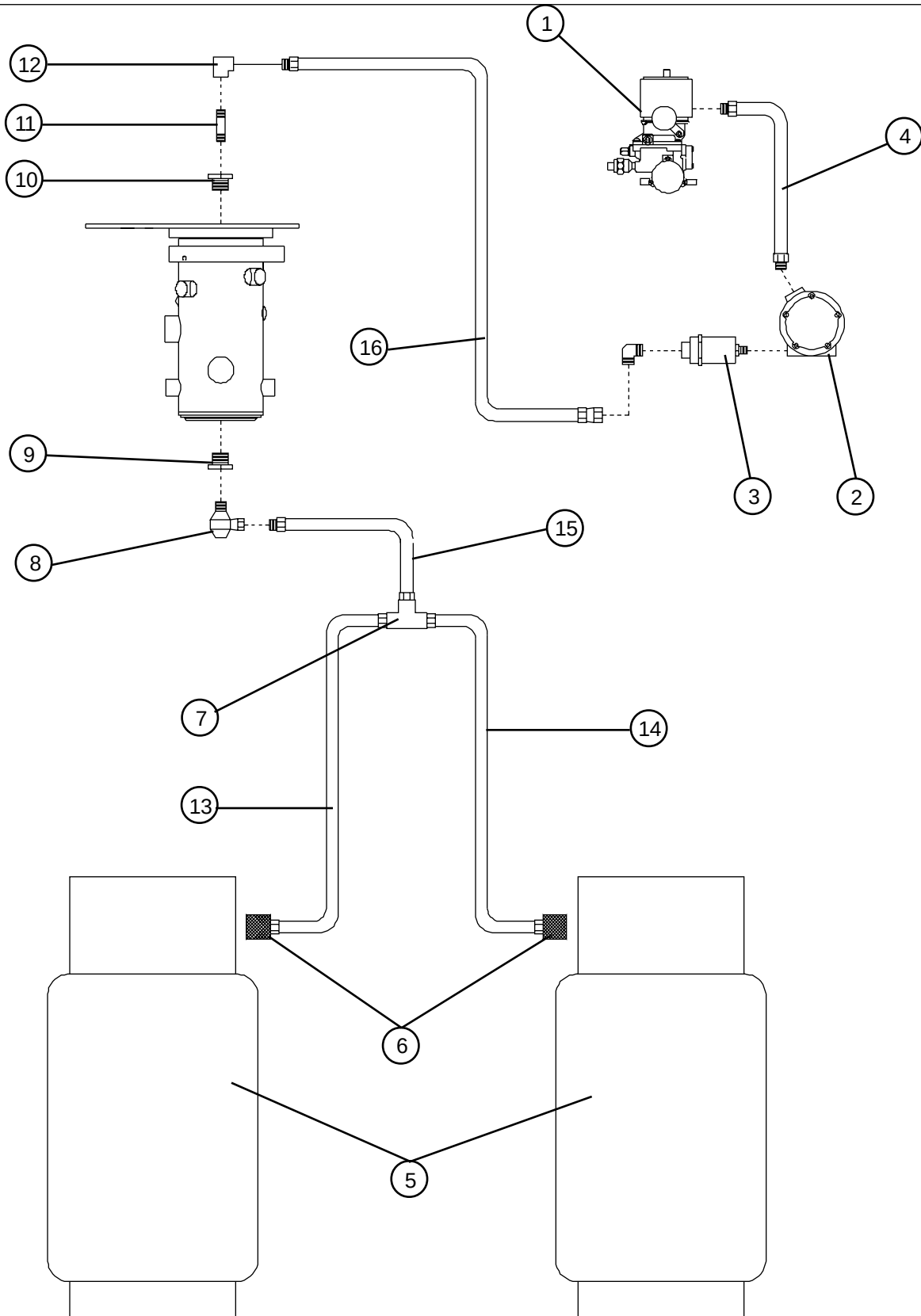


Ma60-643

**FIGURE 6-29 ENGINE AND RELATED PARTS (Ford Gas and Dual Fuel)**

| Index No. | Skyjack Part No. | Description                                             | Units per Assy. |
|-----------|------------------|---------------------------------------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7                                           |                 |
| 1         | 708020           | ENGINE, Ford 2.5 EFI ( Dual fuel)                       | 1               |
|           |                  | • FUEL PUMP                                             | 1               |
|           | 711158           | • OIL FILTER                                            | 1               |
|           | 711167           | • FUEL FILTER/REGULATOR                                 | 1               |
|           | 711457           | • FUEL FILTER, In-line                                  | 1               |
|           | 709721           | • HOSE, Gas line 1/4 I.D.                               | 32"             |
|           | 709720           | • HOSE, Gas line 5/16 I.D.                              | 6-3/4"          |
| 2         | 709719           | • HOSE, Gas line 5/16 I.D.                              | 3-1/2"          |
|           | 709507           | ENGINE TRAY                                             | 1               |
|           | 103900           | • BOLT, HHCS 5/8-11x1-1/4                               | 2               |
| 3         | 103830           | • NUT, Lock 5/8-11                                      | 2               |
|           | 701543           | PUMP, Hydraulic drive                                   | 1               |
|           | 103909           | • BOLT, HHCS 1/2-13x1-1/4                               | 2               |
| 4         | 707414           | • WASHER, Flat 1/2 SAE high strength                    | 2               |
|           | 103470           | • WASHER, Lock 1/2                                      | 2               |
|           | 701545           | PUMP, System                                            | 1               |
| 5         | 103907           | • BOLT, HHCS 1/2-13x1/2"                                | 2               |
|           | 103999           | • WASHER, Lock 3/8                                      | 2               |
|           | 706886           | • WASHER, Flat 3/8 SAE high strength                    | 2               |
| 6         | 702672           | MOUNT, Engine                                           | 2               |
|           | 103845           | • BOLT, HHCS 5/16-11x1/2                                | 2               |
|           | 103404           | • WASHER, Lock 5/16                                     | 2               |
|           | 709611           | • BOLT, HHCS 1/2-20x1"                                  | 2               |
|           | 103468           | • WASHER, Flat 1/2 SAE                                  | 2               |
| 7         | 103470           | • WASHER, Lock 1/2                                      | 2               |
|           | 708276           | BRACKET WELDMENT, Filter                                | 1               |
|           | 103404           | • WASHER, Lock 5/16                                     | 2               |
|           | 100397           | • NUT, HEX 5/16                                         | 2               |
| 8         | 103887           | • BOLT, HHCS 5/16-18x3/4                                | 2               |
|           | 706814           | FILTER, Medium pressure hydraulic 8.46 lg.              | 1               |
|           | 703047           | • ELEMENT, Medium pressure                              | 1               |
|           | 101632           | • BOLT, HHCS 3/8-16x3/4                                 | 4               |
| 9         | 103999           | • WASHER, Lock 3/8                                      | 4               |
|           | 709168           | AIR FILTER                                              | 1               |
|           | 711392           | • ELEMENT, Air filter                                   | 1               |
| 10        | 709170           | MOUNTING BRACKET, Air filter                            | 1               |
| 11        | 709162           | SEAL ASSEMBLY, Air cleaner                              | 1               |
|           | 709704           | • SEAL, Air cleaner                                     | 1               |
|           | 709161           | • BRACKET, Air cleaner seal                             | 1               |
| 12        | 709473           | VALVE ASSEMBLY, Shuttle                                 | 1               |
|           | 704949           | • SHUTTLE VALVE, 5000 PSI                               | 1               |
|           | 701954           | • FITTING, Connector #4orb-#4                           | 1               |
|           | 701850           | • FITTING, Elbow #4orb-#4                               | 2               |
| 13        |                  | MUFFLER                                                 | 1               |
| 14        | 709764           | AIR DEFLECTOR WELDMENT,(Serial Number 97007 and Below.) | 1               |
| 15        | 709705           | TUBE, Exhaust                                           | 1               |
|           | 703356           | • CLAMP, Exhaust 2-1/8                                  | 1               |
|           | 704579           | COOLANT BRACKET                                         | 1               |
|           | 103856           | • BOLT, HHCS 1/4-20x3/4"                                | 2               |
|           | 104000           | • WASHER, Lock 1/4                                      | 2               |

**FIGURE 6-30. DUAL FUEL SYSTEM (Ford Engine)(Option)**

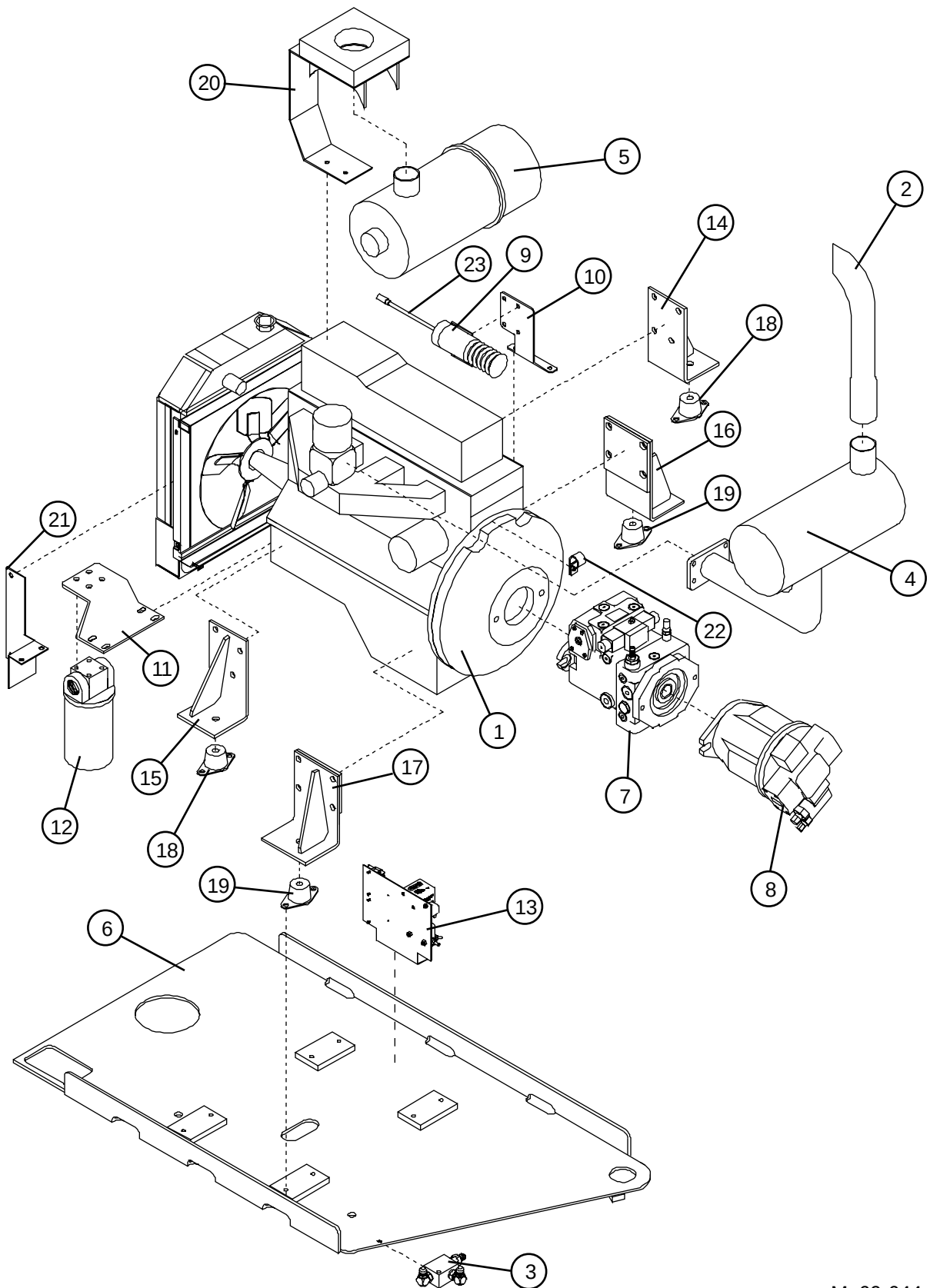


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**FIGURE 6-30. DUAL FUEL SYSTEM (Ford Engine)(Option)**

| Index No. | Skyjack Part No. | Description                           |   |   |   |   |   |   | Units per Assy. |
|-----------|------------------|---------------------------------------|---|---|---|---|---|---|-----------------|
|           |                  | 1                                     | 2 | 3 | 4 | 5 | 6 | 7 |                 |
| 1         | (Ref.)           | KIT, Dual fuel                        |   |   |   |   |   |   | -               |
|           |                  | • CARBURETOR, LP                      |   |   |   |   |   |   | 1               |
|           |                  | •• VENTURI, #30 LP                    |   |   |   |   |   |   | 1               |
| 2         |                  | • BULKHEAD, LP                        |   |   |   |   |   |   | 1               |
| 3         |                  | • LOCKOFF, LP with filter             |   |   |   |   |   |   | 1               |
| 4         |                  | • HOSE, LP Vapor                      |   |   |   |   |   |   | 1               |
| 5         | 702253           | TANK, 43.5 lb. Propane                |   |   |   |   |   |   | 2               |
| 6         | 103006           | COUPLING, Quick connect LP            |   |   |   |   |   |   | 2               |
| 7         | 702237           | FITTING, Brass female tee #4          |   |   |   |   |   |   | 1               |
| 8         | 702239           | FITTING, Brass swivel 90° #6 - #4     |   |   |   |   |   |   | 1               |
| 9         | 702821           | FITTING, Adaptor #12 - #6             |   |   |   |   |   |   | 1               |
| 10        | 702820           | FITTING, Adaptor #12 - #4             |   |   |   |   |   |   | 1               |
| 11        | 702499           | FITTING, Pipe nipple 1/4"npt x 2" lg. |   |   |   |   |   |   | 1               |
| 12        | 702500           | FITTING, Brass elbow 90° #4 - #4      |   |   |   |   |   |   | 1               |
| 13        | 704546           | HOSE ASSEMBLY, 42" Propane            |   |   |   |   |   |   | 1               |
| 14        | 704547           | HOSE ASSEMBLY, 36" Propane            |   |   |   |   |   |   | 1               |
| 15        | 704545           | HOSE ASSEMBLY, 19" Propane            |   |   |   |   |   |   | 1               |
| 16        | 709722           | HOSE ASSEMBLY, 106" Propane           |   |   |   |   |   |   | 1               |

**FIGURE 6-31. ENGINE AND RELATED PARTS (Diesel)(Option)**



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FIGURE 6-31. ENGINE AND RELATED PARTS (Diesel)(Option)

| Index<br>No. | Skyjack<br>Part No. | Description                                | Units<br>per<br>Assy. |
|--------------|---------------------|--------------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                              |                       |
| 1            | 709119              | ENGINE ASSEMBLY, Kubota                    | 1                     |
|              | 711120              | • OIL FILTER                               | 1                     |
|              | 711132              | • FUEL PUMP                                | 1                     |
|              | 711141              | • FUEL FILTER, Primary                     | 1                     |
|              | 711105              | • FUEL FILTER, Secondary                   | 1                     |
|              | 711113              | • STARTER                                  | 1                     |
|              | 711115              | • ALTERNATOR                               | 1                     |
|              | 711122              | • THERMOSTAT                               | 1                     |
|              | 711133              | • PUMP, Water                              | 1                     |
|              | 711130              | • GLOW-PLUG                                | 4                     |
| 2            | 709536              | TUBE, Exhaust                              | 1                     |
|              | 709538              | • CLAMP, Exhaust                           | 1                     |
| 3            | 709473              | • VALVE ASSEMBLY, Shuttle                  | 1                     |
|              | 704949              | •• SHUTTLE VALVE, 5000 PSI                 | 1                     |
|              | 701954              | •• FITTING, Connector #4orb-#4             | 1                     |
|              | 701850              | •• FITTING, Elbow #4orb-#4                 | 2                     |
| 4            | 711126              | • MUFFLER                                  | 1                     |
| 5            | 711461              | • TUBE, Air cleaner                        | 1                     |
|              | 711548              | •• Element                                 | 1                     |
|              | 711462              | •• SUPPORT, Air cleaner                    | 1                     |
|              | 711463              | •• STRAP, Air cleaner                      | 1                     |
| 6            | 707164              | ENGINE TRAY                                | 1                     |
| 7            | 701543              | PUMP, Hydraulic drive                      | 1                     |
| 8            | 701545              | PUMP, System                               | 1                     |
| 9            | 710261              | SOLENOID, Throttle control                 | 1                     |
| 10           | 709171              | BRACKET, Throttle control                  | 1                     |
| 11           | 709192              | BRACKET, Filter                            | 1                     |
| 12           | 706814              | FILTER, Medium pressure hydraulic 8.46 lg. | 1                     |
|              | 703047              | • ELEMENT, Medium pressure                 | 1                     |
| 13           | 709185              | PANEL, Engine electrical                   | 1                     |
|              | 709184              | • BRACKET                                  | 1                     |
|              | 701943              | • RELAY, 12VDC Sealed                      | 1                     |
|              | 703437              | • RELAY, 12VDC 80 AMP                      | 1                     |
|              | 103011              | • TERMINAL STRIP                           | 1/2"                  |
|              | 703348              | • SOLENOID CONTROL MODULE, Throttle        | 2                     |
|              | 709481              | MOUNT, Engine front RH                     | 1                     |
| 14           | 709478              | • BOLT, HHCS M12-1-1/4x30mm, gr 8.8        | 4                     |
|              | 709482              | MOUNT, Engine front LH                     | 1                     |
| 15           | 707637              | • BOLT, HHCS M10-1-1/4x30mm, gr 8.8        | 1                     |
|              | 709478              | • BOLT, HHCS M12-1-1/4x30mm, gr 8.8        | 3                     |
| 16           | 709483              | MOUNT, Engine rear RH                      | 1                     |
|              | 709478              | • BOLT, HHCS M12-1-1/4x30mm, gr 8.8        | 4                     |
| 17           | 709485              | MOUNT, Engine rear LH                      | 1                     |
|              | 709478              | • BOLT, HHCS M12-1-1/4x30mm, gr 8.8        | 4                     |
| 18           | 702672              | MOUNT, Motor                               | 2                     |
|              | 103845              | • BOLT, HHCS 5/16-11x1/2                   | 2                     |
|              | 103404              | • WASHER, Lock 5/16                        | 2                     |
| 19           | 709583              | MOUNT, Motor                               | 2                     |
|              | 103845              | • BOLT, HHCS 5/16-11x1/2                   | 2                     |
|              | 103404              | • WASHER, Lock 5/16                        | 2                     |
| 20           | 709498              | AIR CLEANER VENT ASSEMBLY                  | 1                     |
|              | 709497              | • AIR CLEANER VENT WELDMENT                | 1                     |
|              | 702795              | • SEAL, Air cleaner                        | 1                     |
| 21           | 709702              | OVERFLOW BOTTLE BRACKET                    | 1                     |
| 22           | 704101              | HOSE CLAMP, 7/8"                           | 4                     |
| 23           | 709820              | ROD, Throttle solenoid linkage             | 1                     |

FIGURE 6-32. HYDRAULIC HOSE CONNECTIONS - Turret Assembly

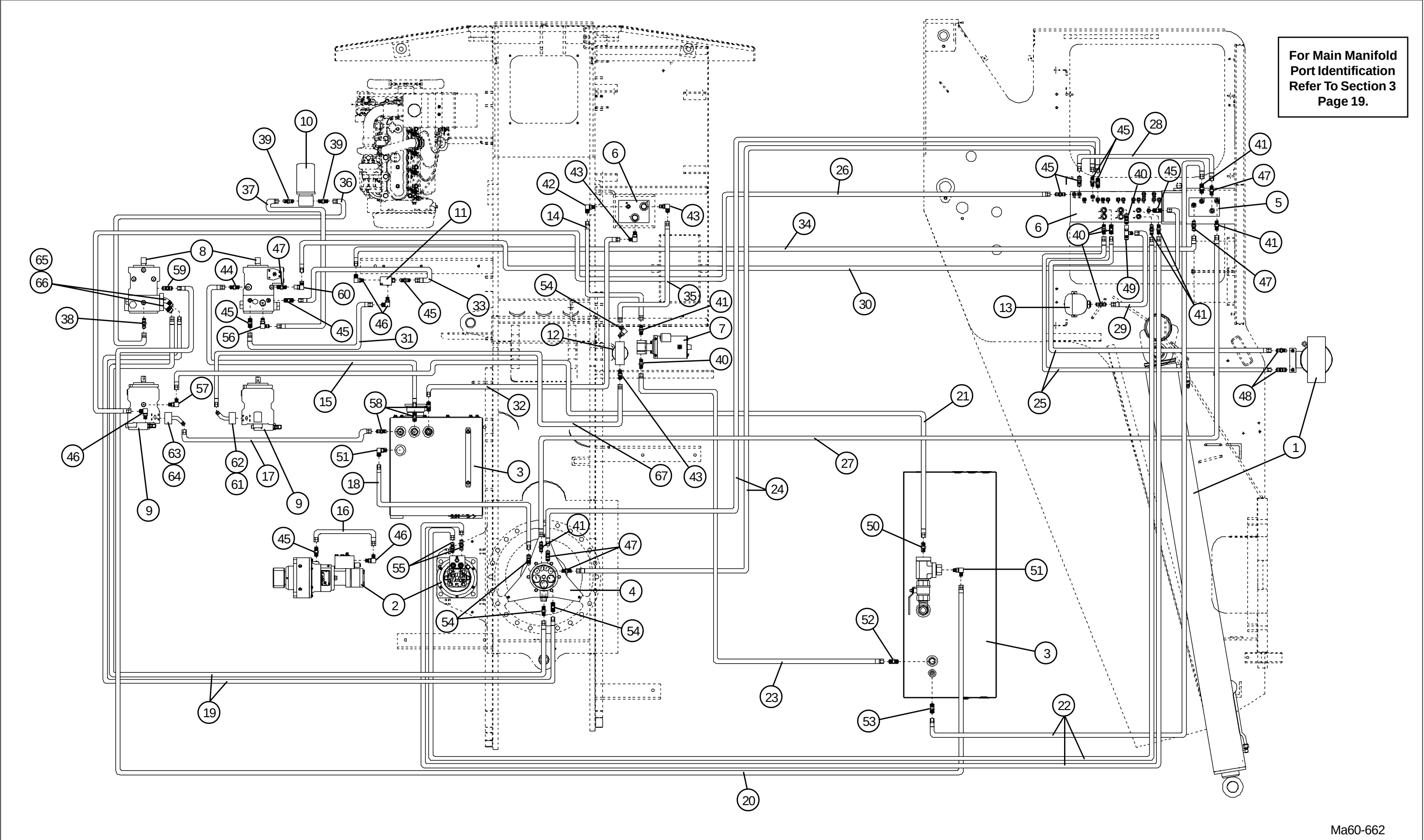
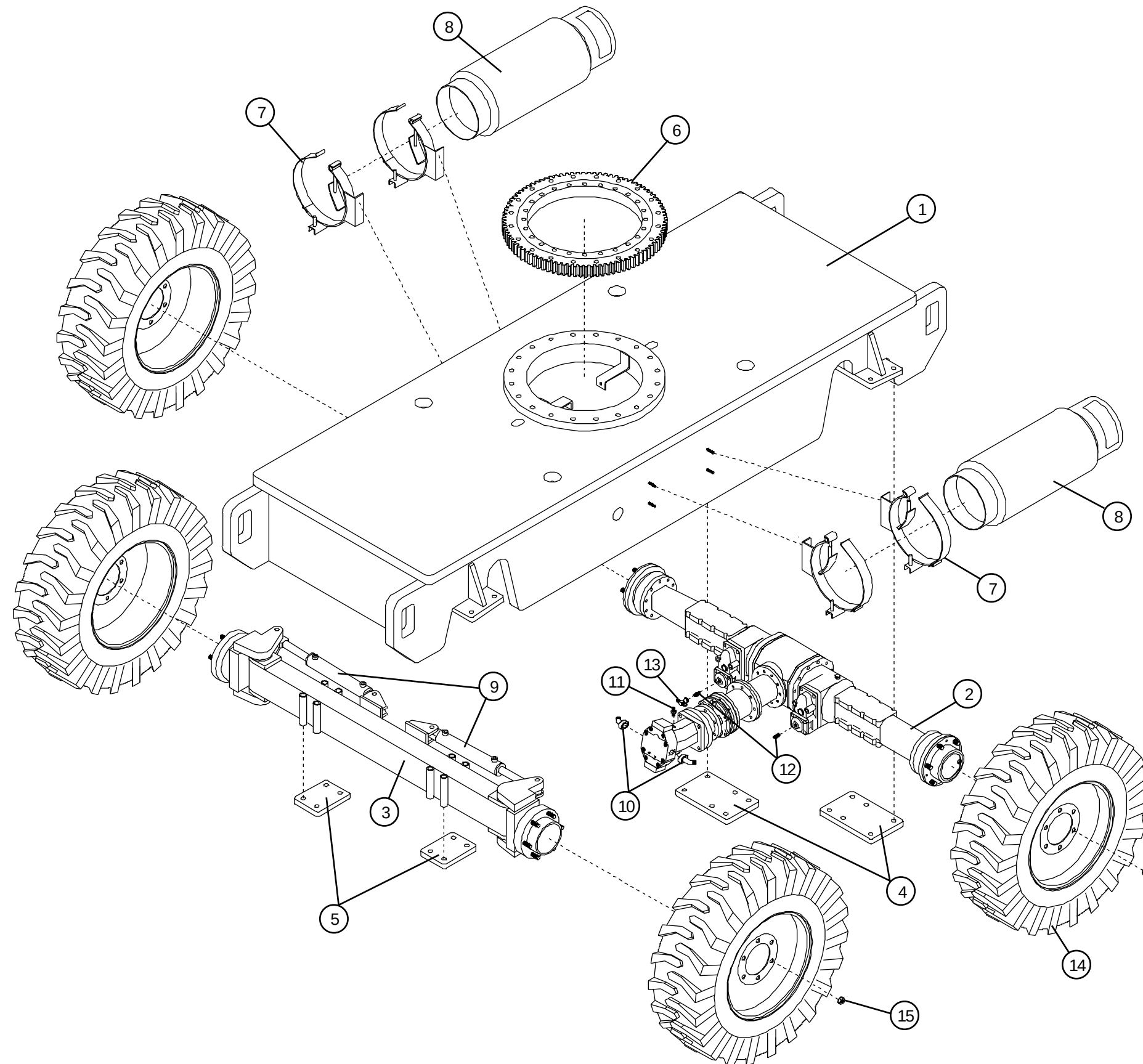


FIGURE 6-32. HYDRAULIC HOSE CONNECTIONS - Turret Assembly

| Index No. | Skyjack Part No. | Description                                                          | Units per Assy. | Index No. | Skyjack Part No. | Description                                                                                                  | Units per Assy. |
|-----------|------------------|----------------------------------------------------------------------|-----------------|-----------|------------------|--------------------------------------------------------------------------------------------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7                                                        |                 |           |                  | 1 2 3 4 5 6 7                                                                                                |                 |
| 1         | 704888           | LIFT CYLINDER ASSEMBLY<br>(For components, refer to Figure 6-21.)    | 1               | 42        | 113348           | FITTING, Elbow 90° #4orb - #6                                                                                | 1               |
| 2         | 703038           | SPEED REDUCER ASSEMBLY<br>(For components, refer to Figure 6-22.)    | 1               | 43        | 702117           | FITTING, Elbow 90° #12orb - #12                                                                              | 3               |
| 3         | 708508           | TANK ASSEMBLY, Hydraulic<br>(For components, refer to Figure 6-24.)  | 1               | 44        | 702122           | FITTING, Connector #16orb - #12                                                                              | 1               |
| 4         | 708878           | MANIFOLD ASSEMBLY, Rotary<br>(For components, refer to Figure 6-25.) | 1               | 45        | 701954           | FITTING, Connector #4orb - #4                                                                                | 9               |
| 5         | 709845           | MANIFOLD ASSEMBLY, Brake<br>(For components, refer to Figure 6-26.)  | 1               | 46        | 701850           | FITTING, Elbow 90° #4orb - #4                                                                                | 4               |
| 6         | 709808           | MANIFOLD ASSEMBLY, Main<br>(For components, refer to Figure 6-27.)   | 1               | 47        | 701956           | FITTING, Connector #6orb - #4                                                                                | 5               |
| 7         | 706921           | PUMP/MOTOR ASSEMBLY, Emergency lowering                              | 1               | 48        | 704859           | FITTING, Connector #6orb - #8                                                                                | 2               |
| 8         | 701543           | PUMP, Drive                                                          | 1               | 49        | 706715           | FITTING, Swivel-Tee #8                                                                                       | 1               |
| 9         | 701545           | PUMP, System                                                         | 1               | 50        | 709471           | FITTING, Connector #20orb - #16                                                                              | 1               |
| 10        | 706814           | FILTER, Medium pressure                                              | 1               | 51        | 702541           | FITTING, Elbow 90° #12orb - #12                                                                              | 2               |
|           | 703047           | ELEMENT, Medium pressure                                             | 1               | 52        | 701877           | FITTING, Connector #12orb - #8                                                                               | 1               |
| 11        | 709473           | VALVE ASSEMBLY, Shuttle                                              | 1               | 53        | 703118           | FITTING, Connector #6orb - #6                                                                                | 3               |
| 12        | 711476           | FILTER, Oil - high pressure                                          | 1               | 54        | 702118           | FITTING, Connector #12orb-#12                                                                                | 2               |
|           | 711477           | ELEMENT, High pressure                                               | 1               | 55        | 103307           | FITTING, Connector #10orb-#6                                                                                 | 2               |
| 13        | 700903           | ACCUMULATOR                                                          | 1               | 56        | 703255           | FITTING, Elbow 90° LL #8orb - #6                                                                             | 1               |
| 14        | H606 0050 00-0   | HOSE ASSEMBLY                                                        | 1               | 57        | 702438           | FITTING, Elbow 90° #8orb - #12                                                                               | 1               |
| 15        | 710608           | HOSE ASSEMBLY (H1512 0034 00-0)                                      | 1               | 58        | 702169           | FITTING, Connector #12orb - #12                                                                              | 3               |
| 16        | 704504           | HOSE ASSEMBLY (H1204 0009 00-0)                                      | 1               | 59        | 704582           | FITTING, Connector #10orb - #12                                                                              | 1               |
| 17        | H1512 0024 00-0  | HOSE ASSEMBLY                                                        | 1               | 60        | 702875           | FITTING, Swivel nut elbow #4                                                                                 | 1               |
| 18        | H2012 0054 02-0  | HOSE ASSEMBLY                                                        | 1               | 61        | 702880           | FITTING, W43K #20                                                                                            | 1               |
| 19        | H1912 0067 00-0  | HOSE ASSEMBLY                                                        | 2               | 62        | 710491           | FITTING, Male elbow #20orb - #16                                                                             | 1               |
| 20        | 710342           | HOSE ASSEMBLY (H612 0042 00-0)                                       | 1               | 63        | 702440           | FITTING, SFK12                                                                                               | 1               |
| 21        | H816 0029 00-0   | HOSE ASSEMBLY                                                        | 1               | 64        | 702439           | FITTING, #12 45° split flange adapter (code 61)                                                              | 1               |
| 22        | H106 0126 00-0   | HOSE ASSEMBLY                                                        | 3               | 65        | 702233           | FITTING, SFXK #12                                                                                            | 2               |
| 23        | H608 0120 00-0   | HOSE ASSEMBLY                                                        | 1               | 66        | 702234           | FITTING, #12 45° split flange adapter (code 62)                                                              | 2               |
| 24        | H604 0084 00-0   | HOSE ASSEMBLY                                                        | 2               | 67        | H112 0049 00-0   | HOSE ASSEMBLY                                                                                                | 1               |
| 25        | H108 0136 00-0   | HOSE ASSEMBLY                                                        | 2               |           |                  | <b>NOTE: Refer to Standard Hose Numbering System (SECTION 5, Page 18) for explanation of hose numbering.</b> |                 |
| 26        | H104 0066 00-0   | HOSE ASSEMBLY                                                        | 1               |           |                  |                                                                                                              |                 |
| 27        | H506 0081 00-0   | HOSE ASSEMBLY                                                        | 1               |           |                  |                                                                                                              |                 |
| 28        | H104 0046 00-0   | HOSE ASSEMBLY                                                        | 1               |           |                  |                                                                                                              |                 |
| 29        | H608 0022 00-0   | HOSE ASSEMBLY                                                        | 1               |           |                  |                                                                                                              |                 |
| 30        | H104 0088 00-0   | HOSE ASSEMBLY                                                        | 1               |           |                  |                                                                                                              |                 |
| 31        | H204 0015 00-0   | HOSE ASSEMBLY                                                        | 1               |           |                  |                                                                                                              |                 |
| 32        | H1512 0079 00-0  | HOSE ASSEMBLY                                                        | 1               |           |                  |                                                                                                              |                 |
| 33        | H204 0018 00-0   | HOSE ASSEMBLY                                                        | 1               |           |                  |                                                                                                              |                 |
| 34        | H204 0077 00-0   | HOSE ASSEMBLY                                                        | 1               |           |                  |                                                                                                              |                 |
| 35        | H312 0020 00-0   | HOSE ASSEMBLY                                                        | 1               |           |                  |                                                                                                              |                 |
| 36        | H606 0056 00-0   | HOSE ASSEMBLY (Diesel)                                               | 1               |           |                  |                                                                                                              |                 |
|           | H606 0021 00-0   | HOSE ASSEMBLY (Dual Fuel)                                            | 1               |           |                  |                                                                                                              |                 |
| 37        | H606 0060 00-0   | HOSE ASSEMBLY (Diesel)                                               | 1               |           |                  |                                                                                                              |                 |
|           | H606 0021 00-0   | HOSE ASSEMBLY (Dual Fuel)                                            | 1               |           |                  |                                                                                                              |                 |
| 38        | 103070           | FITTING, Connector #8orb-#6                                          | 1               |           |                  |                                                                                                              |                 |
| 39        | 109052           | FITTING, Elbow swivel nut #16orb-#6                                  | 2               |           |                  |                                                                                                              |                 |
| 40        | 702116           | FITTING, Connector #8orb - #8                                        | 5               |           |                  |                                                                                                              |                 |
| 41        | 103069           | FITTING, Connector #6orb - #6                                        | 6               |           |                  |                                                                                                              |                 |

FIGURE 6-33. BASE, AXLES, AND WHEELS (Standard 4x2)

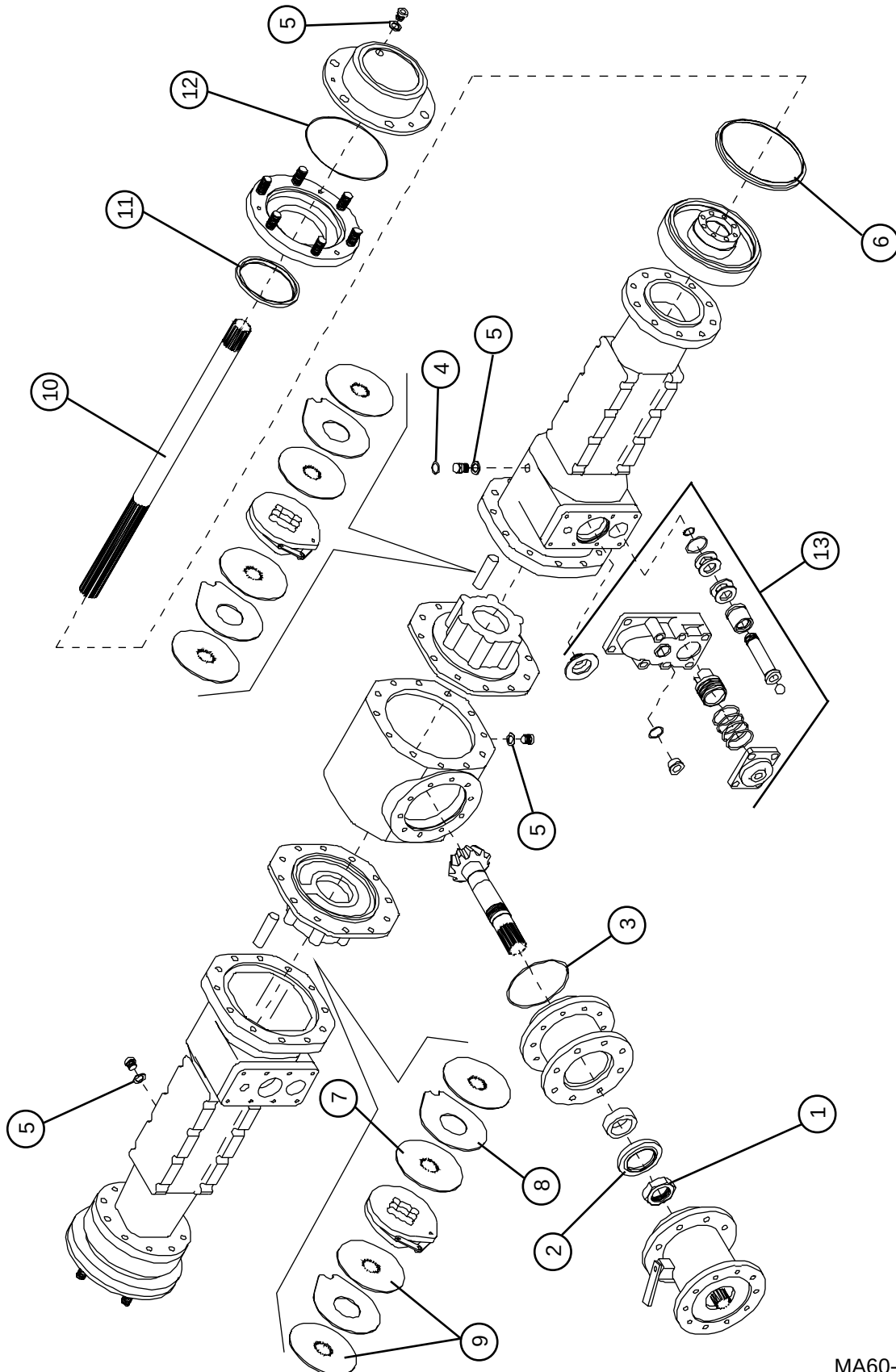


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**FIGURE 6-33. BASE, AXLES, AND WHEELS (Standard 4x2)**

| Index No. | Skyjack Part No. | Description                                                                                                                                                |   |   |   |   |   |   | Units per Assy. |
|-----------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|-----------------|
|           |                  | 1                                                                                                                                                          | 2 | 3 | 4 | 5 | 6 | 7 |                 |
| 1         | 708681           | WELDMENT, Chassis (SJB-60TB)                                                                                                                               |   |   |   |   |   |   | 1               |
|           | 709423           | WELDMENT, Chassis (SJB-65TB)                                                                                                                               |   |   |   |   |   |   | 1               |
| 2         | 709046           | AXLE ASSEMBLY, Rigid drive                                                                                                                                 |   |   |   |   |   |   | 1               |
|           | 701699           | <ul style="list-style-type: none"> <li>AXLE, Drive-w/o planetary</li> </ul> (For components, refer to Figure 6-34.)                                        |   |   |   |   |   |   | 1               |
|           | 701047           | <ul style="list-style-type: none"> <li>PLANETARY ASSEMBLY, Ratio 6.00</li> </ul> (For components, refer to Figure 6-35/36.)                                |   |   |   |   |   |   | 1               |
|           | 701544           | <ul style="list-style-type: none"> <li>MOTOR, Hydraulic drive</li> </ul>                                                                                   |   |   |   |   |   |   | 1               |
|           | 703057           | <ul style="list-style-type: none"> <li>BOLT, HHCS 9/16-12x2-1/2, gr. 5</li> </ul>                                                                          |   |   |   |   |   |   | 4               |
|           | 702192           | <ul style="list-style-type: none"> <li>WASHER, Lock 9/16</li> </ul>                                                                                        |   |   |   |   |   |   | 4               |
|           | 702899           | <ul style="list-style-type: none"> <li>NUT, HEX 9/16-12, gr. 5</li> </ul>                                                                                  |   |   |   |   |   |   | 4               |
|           | 700498           | <ul style="list-style-type: none"> <li>NUT, Lug 18mm</li> </ul>                                                                                            |   |   |   |   |   |   | 16              |
| 3         | 703217           | AXLE ASSEMBLY, Steer                                                                                                                                       |   |   |   |   |   |   | 1               |
|           |                  | (For components, refer to Figure 6-37.)                                                                                                                    |   |   |   |   |   |   |                 |
| 4         | 707343           | PLATE, Axle-Drive                                                                                                                                          |   |   |   |   |   |   | 2               |
|           | 703415           | <ul style="list-style-type: none"> <li>BOLT, Hex-hd 3/4-10 x 9" lg., gr. 8</li> </ul>                                                                      |   |   |   |   |   |   | 6               |
|           | 700575           | <ul style="list-style-type: none"> <li>NUT, Lock 3/4-10, gd. 8</li> </ul>                                                                                  |   |   |   |   |   |   | 6               |
| 5         | 701953           | PLATE, Axle-Steer                                                                                                                                          |   |   |   |   |   |   | 2               |
|           | 703415           | <ul style="list-style-type: none"> <li>BOLT, Hex-hd 3/4-10 x 9" lg., gr. 8</li> </ul>                                                                      |   |   |   |   |   |   | 4               |
|           | 700575           | <ul style="list-style-type: none"> <li>NUT, Lock 3/4-10, gd. 8</li> </ul>                                                                                  |   |   |   |   |   |   | 4               |
| 6         | 702988           | GEAR, Turret Rotate                                                                                                                                        |   |   |   |   |   |   | 1               |
|           | 703053           | <ul style="list-style-type: none"> <li>BOLT, Hex-hd 3/4-10 x 5-1/2" lg.</li> </ul>                                                                         |   |   |   |   |   |   | 20              |
|           | 702194           | <ul style="list-style-type: none"> <li>WASHER, Flat 3/4" hardened</li> </ul>                                                                               |   |   |   |   |   |   | 20              |
| 7         | 702633           | BRACKET, LP Tanks (Pair)                                                                                                                                   |   |   |   |   |   |   | 2               |
| 8         | 702253           | LP TANK, 43.5 lb. 240PSI                                                                                                                                   |   |   |   |   |   |   | 2               |
|           | 707707           | HOSE ASSEMBLY                                                                                                                                              |   |   |   |   |   |   | 1               |
|           | 707706           | FITTING, LP 49-6-4                                                                                                                                         |   |   |   |   |   |   | 1               |
|           | 103006           | FITTING, LP - Female tank                                                                                                                                  |   |   |   |   |   |   | 1               |
| 9         | 702913           | CYLINDER, Steering w/bearings                                                                                                                              |   |   |   |   |   |   | 2               |
|           |                  | (For components, refer to Figure 6-38.)                                                                                                                    |   |   |   |   |   |   |                 |
| 10        | 702232           | FITTING, 90° Split flange adapter #12                                                                                                                      |   |   |   |   |   |   | 2               |
|           | 702233           | FITTING, Hydraulic Kit SFXK #12                                                                                                                            |   |   |   |   |   |   | 2               |
| 11        | 702118           | FITTING, Connector #12                                                                                                                                     |   |   |   |   |   |   | 1               |
| 12        | 700817           | FITTING, Male connector #14orb - #6                                                                                                                        |   |   |   |   |   |   | 2               |
| 13        | 114109           | FITTING, Swivel Nut Branch Tee #6                                                                                                                          |   |   |   |   |   |   | 1               |
| 14        | 706770           | WHEEL/TIRE ASSEMBLY, Standard                                                                                                                              |   |   |   |   |   |   | 4               |
|           | 708863           | <ul style="list-style-type: none"> <li>TIRE, 15-19-1/2 NHC</li> </ul>                                                                                      |   |   |   |   |   |   | 1               |
|           | 702024           | <ul style="list-style-type: none"> <li>WHEEL</li> </ul>                                                                                                    |   |   |   |   |   |   | 1               |
|           | 708791           | WHEEL/TIRE ASSEMBLY, Ribbed flotation (Option)                                                                                                             |   |   |   |   |   |   | 4               |
|           | 708790           | <ul style="list-style-type: none"> <li>TIRE</li> </ul>                                                                                                     |   |   |   |   |   |   | 1               |
|           | 708744           | <ul style="list-style-type: none"> <li>WHEEL</li> </ul>                                                                                                    |   |   |   |   |   |   | 1               |
|           | 706771           | WHEEL/TIRE ASSEMBLY, Lugged flotation (Option)                                                                                                             |   |   |   |   |   |   | 4               |
|           | 703589           | <ul style="list-style-type: none"> <li>TIRE</li> </ul>                                                                                                     |   |   |   |   |   |   | 1               |
|           | 703590           | <ul style="list-style-type: none"> <li>WHEEL</li> </ul>                                                                                                    |   |   |   |   |   |   | 1               |
|           | 708900           | WHEEL/TIRE ASSEMBLY, Foamed filled (Option)                                                                                                                |   |   |   |   |   |   | 4               |
|           | 708863           | <ul style="list-style-type: none"> <li>TIRE, 15-19-1/2 NHC</li> </ul>                                                                                      |   |   |   |   |   |   | 1               |
|           | 702024           | <ul style="list-style-type: none"> <li>WHEEL</li> </ul>                                                                                                    |   |   |   |   |   |   | 1               |
| 15        | 700498           | NUT, Lug 18mm                                                                                                                                              |   |   |   |   |   |   | 32              |
|           |                  | <b>NOTE:</b> Size and load rating of replacement tires <b>MUST</b> be identical to that of original equipment to maintain safety and stability of machine. |   |   |   |   |   |   |                 |

**FIGURE 6-34. DRIVE AXLE ASSEMBLY (Standard 4x2)**

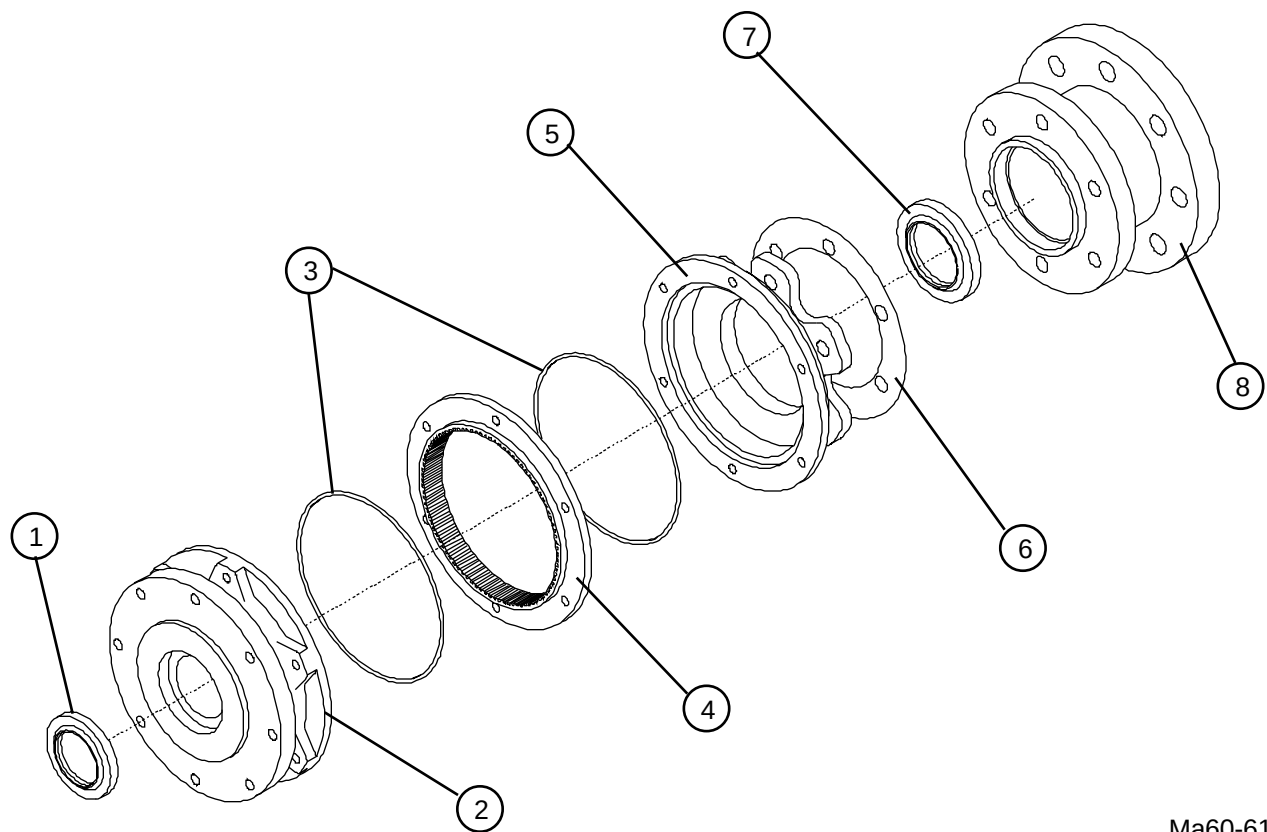


MA60-637

**FIGURE 6-34. DRIVE AXLE ASSEMBLY (Standard 4x2)**

| Index<br>No. | Skyjack<br>Part No. | Description                                              | Units<br>per<br>Assy. |
|--------------|---------------------|----------------------------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                                            |                       |
|              | 701699              | AXLE ASSEMBLY, Rigid drive                               | -                     |
| 1            | 701836              | • NUT, Pinion retaining                                  | 1                     |
| 2            | 704221              | • OIL SEAL, Pinion                                       | 1                     |
| 3            | 701848              | • SEAL, O-ring                                           | 1                     |
| 4            | 701851              | • SEAL, O-ring                                           | 1                     |
| 5            | 701843              | • WASHER, Oil plug                                       | 5                     |
| 12           | 704215              | • COVER, Dust                                            | 2                     |
| 13           | 701845              | • ACTUATOR, Brake                                        | 2                     |
| 14           | 701846              | • BRAKE DISK, Intermediate                               | 6                     |
| 15           | 701847              | • BRAKE DISK, Friction                                   | 10                    |
| 16           | 704216              | • SHAFT, Axle                                            | 2                     |
| 17           | 704217              | • SEAL, Hub oil                                          | 2                     |
| 18           | 704218              | • SEAL, O-ring                                           | 2                     |
| 13           | (Ref.)              | • BRAKE ASSEMBLY (For components, refer to Figure 6-42.) | 2                     |

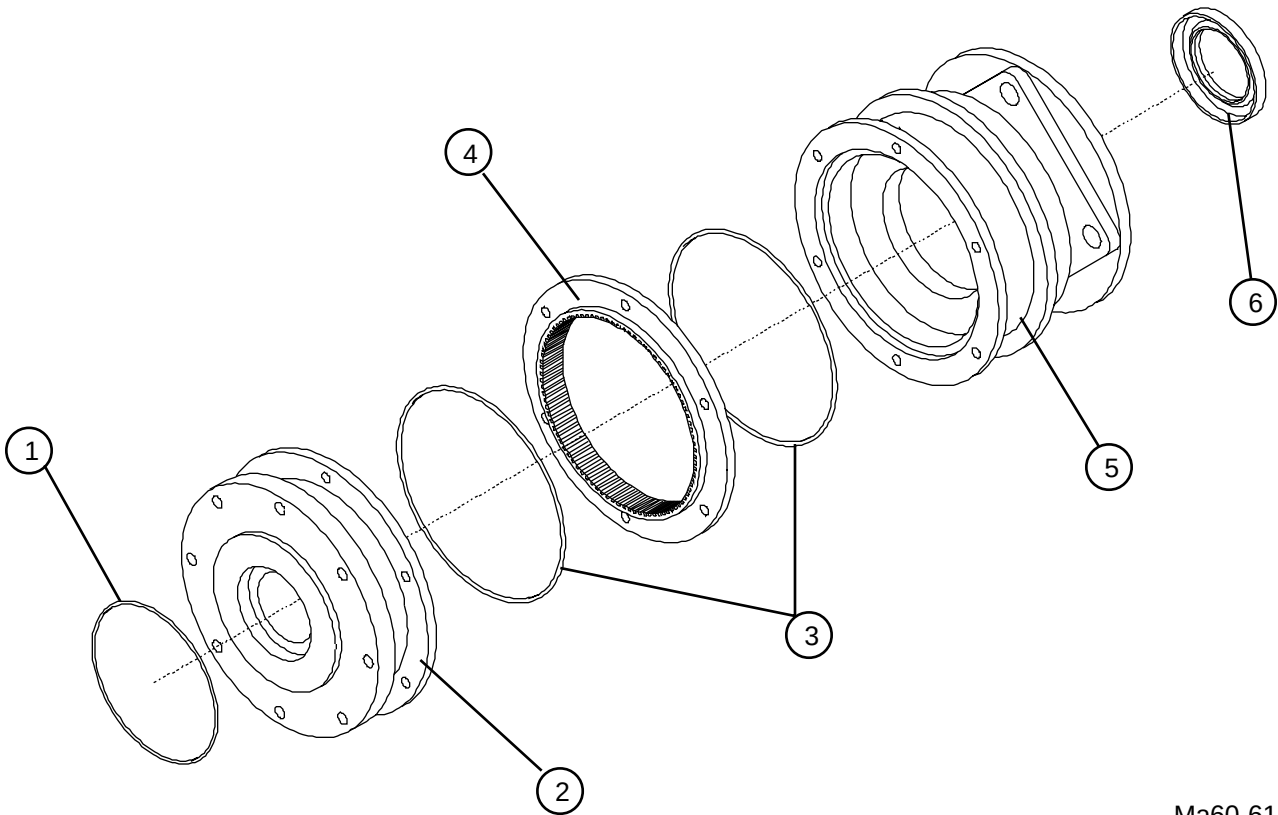
FIGURE 6-35. PLANETARY REDUCTION GEAR ASSEMBLY (Brevini)



Ma60-618

| Index No. | Skyjack Part No. | Description              |   |   |   |   |   |   | Units per Assy. |
|-----------|------------------|--------------------------|---|---|---|---|---|---|-----------------|
|           |                  | 1                        | 2 | 3 | 4 | 5 | 6 | 7 |                 |
| 1         | 701841           | LIP SEAL, Output housing |   |   |   |   |   |   | 1               |
| 2         | \$               | HOUSING, Output          |   |   |   |   |   |   | 1               |
| 3         | 701849           | O-RING SEAL              |   |   |   |   |   |   | 2               |
| 4         | \$               | RING GEAR                |   |   |   |   |   |   | 1               |
| 5         | \$               | HOUSING, Input           |   |   |   |   |   |   | 1               |
| 6         | 704233           | GASKET, Input adapter    |   |   |   |   |   |   | 1               |
| 7         | 701842           | LIP SEAL, Input adapter  |   |   |   |   |   |   | 1               |
| 8         | 701030           | HOUSING, Input adapter   |   |   |   |   |   |   | 1               |
|           |                  | \$ Consult factory       |   |   |   |   |   |   |                 |

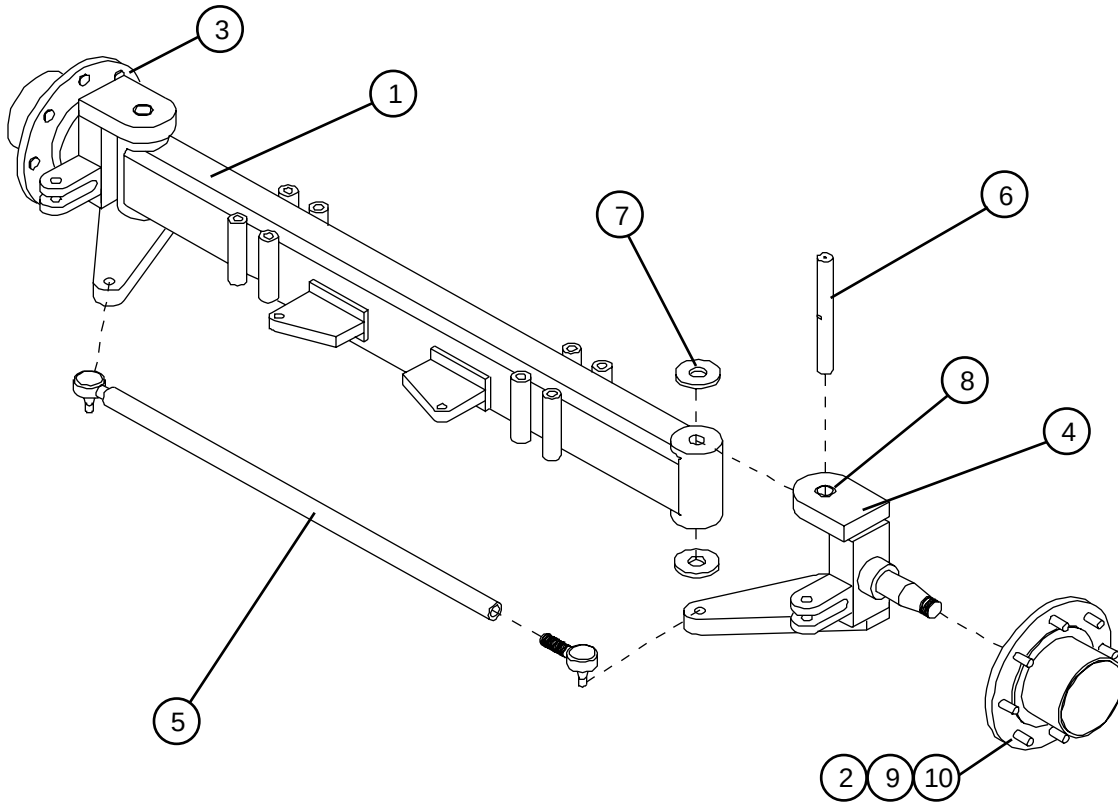
**FIGURE 6-36. PLANETARY REDUCTION GEAR ASSEMBLY (Sige)**



Ma60-619

| Index No. | Skyjack Part No. | Description             |   |   |   |   |   |   | Units per Assy. |
|-----------|------------------|-------------------------|---|---|---|---|---|---|-----------------|
|           |                  | 1                       | 2 | 3 | 4 | 5 | 6 | 7 |                 |
| 1         | 704234           | O-RING, Output housing  |   |   |   |   |   |   | 1               |
| 2         | \$               | HOUSING, Output         |   |   |   |   |   |   | 1               |
| 3         | 704235           | O-RING SEAL             |   |   |   |   |   |   | 2               |
| 4         | \$               | RING GEAR               |   |   |   |   |   |   | 1               |
| 5         | \$               | HOUSING, Input          |   |   |   |   |   |   | 1               |
| 6         | 704236           | LIP SEAL, Input housing |   |   |   |   |   |   | 1               |
|           |                  | \$ Consult factory      |   |   |   |   |   |   |                 |

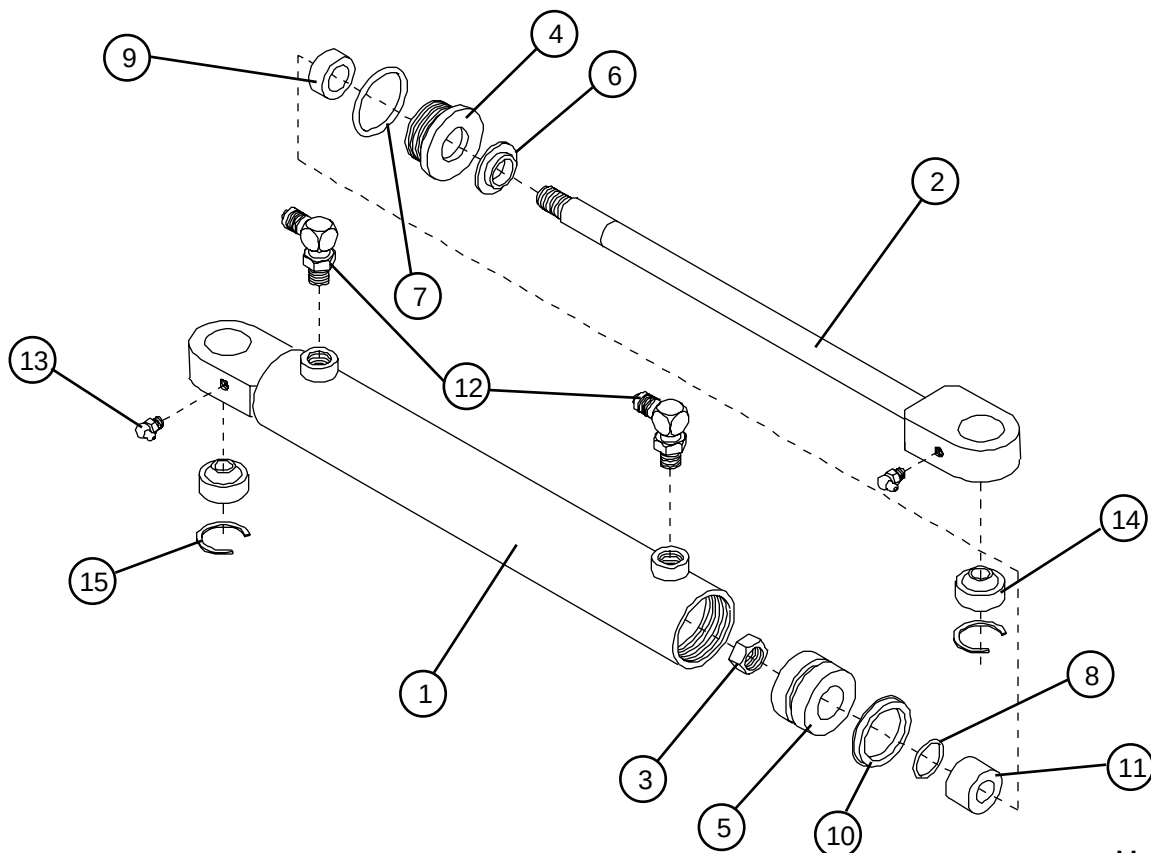
**FIGURE 6-37. STEERING AXLE ASSEMBLY (Standard 4x2)**



Ma60-620

| Index No. | Skyjack Part No. | Description                 | Units per Assy. |
|-----------|------------------|-----------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7               |                 |
|           | 703217           | AXLE ASSEMBLY, Steering 2wd | -               |
| 1         | 704180           | • AXLE WELDMENT             | 1               |
| 2         | 704181           | • WHEEL HUB                 | 2               |
|           | 704182           | • • CONE, Inner group       | 1               |
|           | 704183           | • • CUP, Inner group        | 1               |
|           | 704184           | • • CONE, Outer group       | 1               |
|           | 704185           | • • CUP, Outer group        | 1               |
|           | 704186           | • • SEAL, Dual element      | 1               |
|           | 704187           | • • HUB COVER               | 1               |
| 3         | 704188           | • L. H. YOKE & SPINDLE      | 1               |
| 4         | 704189           | • R. H. YOKE & SPINDLE      | 1               |
| 5         | 704190           | • TIE ROD ASSEMBLY          | 1               |
|           | 704191           | • • TUBE, Tie Rod           | 1               |
|           | 704192           | • • TIE ROD END, L. H.      | 1               |
|           | 704193           | • • TIE ROD END, R. H.      | 1               |
|           | 704194           | • • JAM NUT, L. H.          | 1               |
|           | 704195           | • • JAM NUT, R. H.          | 1               |
| 6         | 704197           | • ASSEMBLY, King Pin        | 2               |
| 7         | 704198           | • WASHER, Thrust            | 4               |
| 8         | 704199           | • BUSHING, Steering Yoke    | 4               |
| 9         | 701288           | • NUT, Spindle Lock         | 2               |
| 10        | 704200           | • WASHER, Flat              | 2               |

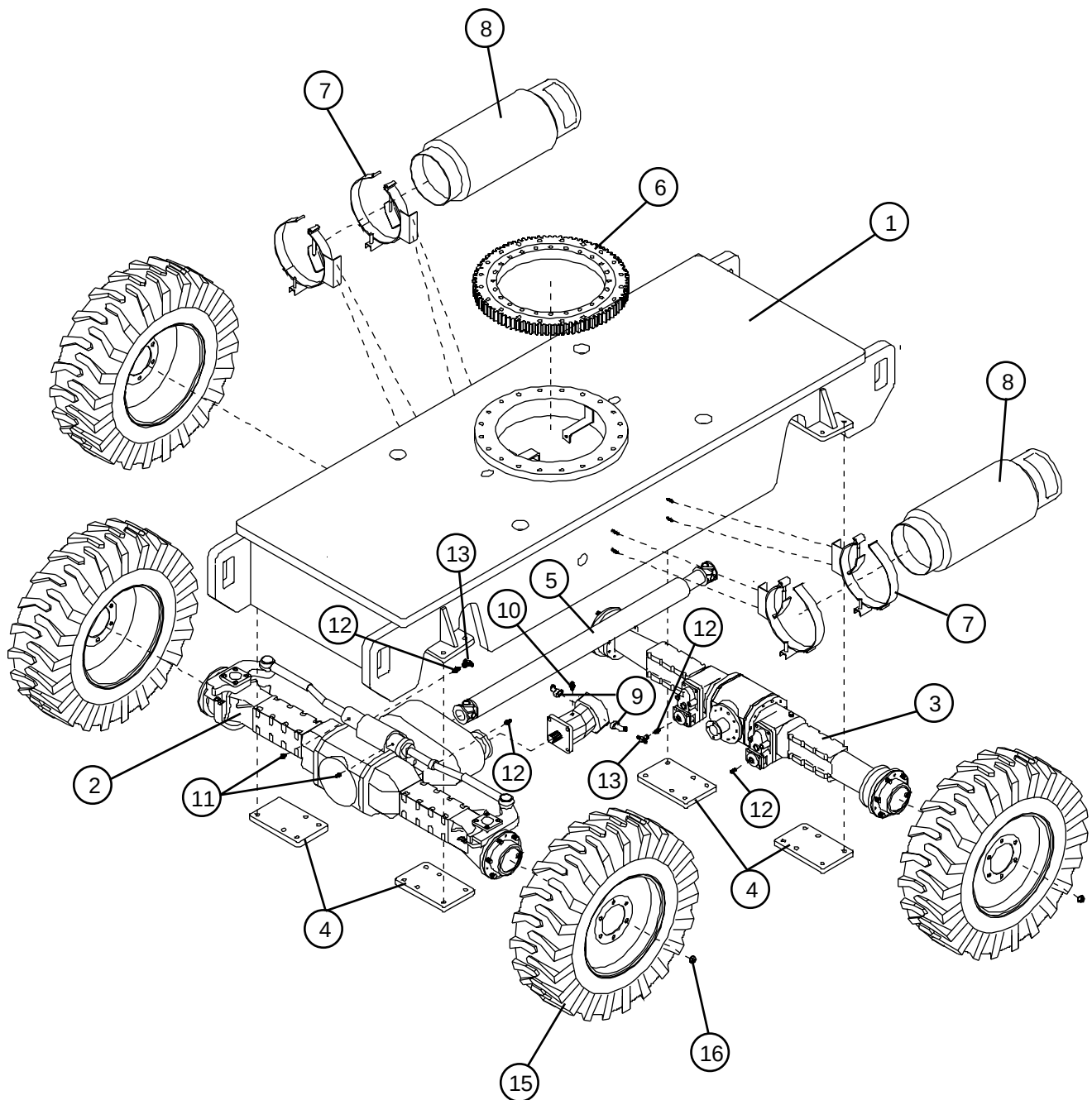
**FIGURE 6-38. STEERING CYLINDER (Standard 4x2)**



Ma60-617

| Index No. | Skyjack Part No. | Description                        | Units per Assy. |
|-----------|------------------|------------------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7                      |                 |
|           | 702913           | CYLINDER ASSEMBLY, Steer-w/bearing | -               |
| 1         | 702916           | • WELDMENT, Barrel                 | 1               |
| 2         | 702915           | • WELDMENT, Rod                    | 1               |
| 3         | 700575           | • NUT, Lock 3/4 - 10               | 1               |
| 4         | 700243           | • GLAND, Cylinder                  | 1               |
| 5         | 700242           | • PISTON, Cylinder                 | 1               |
| 6*        | 700578           | • SEAL, Wiper                      | 1               |
| 7*        | 701965           | • SEAL, O-Ring                     | 1               |
| 8*        | 701634           | • SEAL, O-Ring                     | 1               |
| 9*        | 700576           | • SEAL, Rod                        | 1               |
| 10*       | 700585           | • SEAL, Piston                     | 1               |
| 11        | 700449           | • SPACER, Cylinder                 | 1               |
| 12        | 701999           | • FITTING, Elbow 90° #6orb - #4    | 2               |
| 13        | 700510           | NIPPLE, Grease 1/8-NPT 90°         | 2               |
|           | 706711           | PLUG, 1/8 NPT (Not Shown)          | 2               |
| 14        | 102025           | BEARING, Spherical                 | 2               |
| 15        | 104114           | RING, Retaining                    | 2               |
|           | 703180           | KIT, Seal Repair                   | AR              |
|           |                  | * Part of Seal Repair Kit          |                 |

**FIGURE 6-39. BASE, AXLES, AND WHEELS (Optional 4x4)**



Ma60-600

**FIGURE 6-39. BASE, AXLES, AND WHEELS (Optional 4x4)**

| Index No.                                                                                                                                                  | Skyjack Part No. | Description                                                                                | Units per Assy. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------|-----------------|
|                                                                                                                                                            |                  | 1 2 3 4 5 6 7                                                                              |                 |
| 1                                                                                                                                                          | 704885           | WELDMENT, Chassis (SJB-60TB)                                                               | 1               |
|                                                                                                                                                            | 709424           | WELDMENT, Chassis (SJB-65TB)                                                               | 1               |
| 2                                                                                                                                                          | 709045           | AXLE ASSEMBLY, Drive steer                                                                 | 1               |
|                                                                                                                                                            | 701453           | • AXLE, Drive - Front/Steer, with transfer case<br>(For components, refer to Figure 6-40.) | 1               |
|                                                                                                                                                            | 701544           | • MOTOR, Hydraulic drive                                                                   | 1               |
|                                                                                                                                                            | 702191           | •• BOLT, HHCS M14x2.00x45mm gr. 8.8                                                        | 4               |
|                                                                                                                                                            | 702192           | •• WASHER, Lock 9/16 SAE                                                                   | 4               |
|                                                                                                                                                            | 700498           | • NUT, Lug 18mm                                                                            | 16              |
| 3                                                                                                                                                          | 701454           | AXLE ASSEMBLY, Rigid drive<br>(For components, refer to Figure 6-43.)                      | 1               |
| 4                                                                                                                                                          | 707343           | PLATE, Axle                                                                                | 4               |
|                                                                                                                                                            | 703415           | • BOLT, Hex-hd 3/4-10 x 9" lg.                                                             | 6               |
|                                                                                                                                                            | 700575           | • NUT, Lock 3/4-10                                                                         | 6               |
| 5                                                                                                                                                          | 702041           | DRIVE LINE                                                                                 | 1               |
|                                                                                                                                                            | 702956           | • BOLT, HHCS 7/16-20x1-1/4" gr. 8                                                          | 8               |
|                                                                                                                                                            | 702991           | • WASHER, Lock 7/16 heavy split                                                            | 8               |
|                                                                                                                                                            | 702960           | • NUT, HEX 7/16-20 gr. 8                                                                   | 8               |
| 6                                                                                                                                                          | 702988           | GEAR, Turret Rotate                                                                        | 1               |
|                                                                                                                                                            | 703053           | • BOLT, Hex-hd 3/4-10 x 5-1/2" lg.                                                         | 20              |
|                                                                                                                                                            | 702194           | • WASHER, Flat 3/4" hardened                                                               | 20              |
| 7                                                                                                                                                          | 702633           | BRACKET, LP Tanks (Pair)                                                                   | 2               |
| 8                                                                                                                                                          | 702253           | LP TANK, 43.5 lb. 240PSI                                                                   | 2               |
|                                                                                                                                                            | 707707           | HOSE ASSEMBLY                                                                              | 1               |
|                                                                                                                                                            | 707706           | FITTING, LP 49-6-4                                                                         | 1               |
|                                                                                                                                                            | 103006           | FITTING, LP - Female tank                                                                  | 1               |
| 9                                                                                                                                                          | 702232           | FITTING, 90° Split flange adapter #12                                                      | 2               |
|                                                                                                                                                            | 702233           | FITTING, Hydraulic Kit SFXK #12                                                            | 2               |
| 10                                                                                                                                                         | 702118           | FITTING, Connector #12                                                                     | 1               |
| 11                                                                                                                                                         | 702323           | FITTING, Connector #18orb - #4                                                             | 2               |
| 12                                                                                                                                                         | 700817           | FITTING, Connector #14orb - #6                                                             | 4               |
| 13                                                                                                                                                         | 114109           | FITTING, Swivel Nut Branch Tee #6                                                          | 2               |
| 14                                                                                                                                                         | 702921           | FITTING, Union Tee (Not Shown)                                                             | 1               |
| 15                                                                                                                                                         | 706770           | WHEEL/TIRE ASSEMBLY, Standard                                                              | 4               |
|                                                                                                                                                            | 708863           | • TIRE, 15-19-1/2 NHC                                                                      | 1               |
|                                                                                                                                                            | 702024           | • WHEEL                                                                                    | 1               |
|                                                                                                                                                            | 708791           | WHEEL/TIRE ASSEMBLY, Ribbed flotation (Option)                                             | 4               |
|                                                                                                                                                            | 708790           | • TIRE                                                                                     | 1               |
|                                                                                                                                                            | 708744           | • WHEEL                                                                                    | 1               |
|                                                                                                                                                            | 706771           | WHEEL/TIRE ASSEMBLY, Lugged flotation (Option)                                             | 4               |
|                                                                                                                                                            | 703589           | • TIRE                                                                                     | 1               |
|                                                                                                                                                            | 703590           | • WHEEL                                                                                    | 1               |
|                                                                                                                                                            | 708900           | WHEEL/TIRE ASSEMBLY, Foamed filled (Option)                                                | 4               |
|                                                                                                                                                            | 708863           | • TIRE, 15-19-1/2 NHC                                                                      | 1               |
|                                                                                                                                                            | 702024           | • WHEEL                                                                                    | 1               |
| 16                                                                                                                                                         | 700498           | NUT, Lug 18mm                                                                              | 16              |
| <b>NOTE:</b> Size and load rating of replacement tires <b>MUST</b> be identical to that of original equipment to maintain safety and stability of machine. |                  |                                                                                            |                 |

This technical drawing is an exploded view of a mechanical assembly, likely a pump or valve. It consists of 22 numbered components arranged in a hierarchical layout to show their assembly sequence and relative positions. The components include:

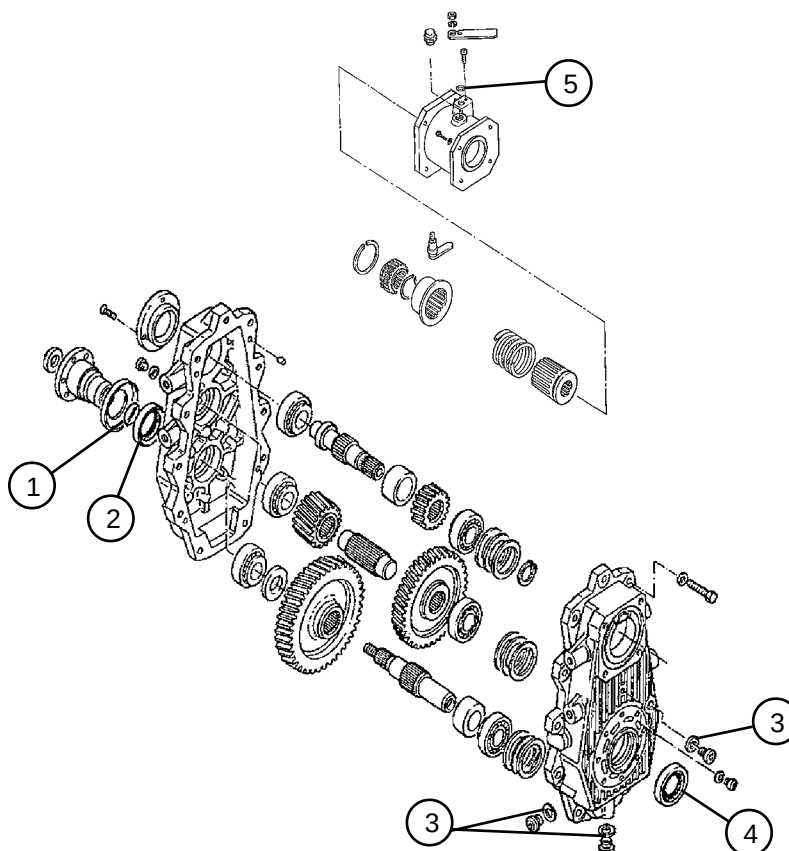
- 1**: A long, thin shaft or rod.
- 2**: A small pin or bushing.
- 3**: A small pin or bushing.
- 4**: Multiple small pins or bushings, appearing at various assembly points.
- 5**: A small pin or bushing.
- 6**: A small pin or bushing.
- 7**: A small pin or bushing.
- 8**: A small pin or bushing.
- 9**: A small pin or bushing.
- 10**: A small pin or bushing.
- 11**: Multiple small pins or bushings, appearing at various assembly points.
- 12**: A small pin or bushing.
- 13**: A small pin or bushing.
- 14**: A long, thin shaft or rod.
- 15**: A small pin or bushing.
- 16**: A small pin or bushing.
- 17**: A small pin or bushing.
- 19**: A large, rectangular plate or cover.
- 20**: A small pin or bushing.
- 21**: Multiple small pins or bushings, appearing at various assembly points.
- 22**: A small pin or bushing.

The diagram uses standard engineering conventions, with lines connecting the numbered callouts to their respective parts. The exploded view shows the assembly from a perspective that allows for a clear understanding of the component layout and assembly order.

**FIGURE 6-40. STEER AXLE ASSEMBLY (Optional 4x4)**

| Index<br>No. | Skyjack<br>Part No. | Description                                                            | Units<br>per<br>Assy. |
|--------------|---------------------|------------------------------------------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                                                          |                       |
|              | 701453              | AXLE ASSEMBLY, Rigid drive                                             | -                     |
| 1            | 701836              | • NUT, Pinion retaining                                                | 1                     |
| 2            | 704221              | • OIL SEAL, Pinion                                                     | 1                     |
| 3            | 701851              | • SEAL, O-ring                                                         | 1                     |
| 4            | 701843              | • WASHER, Oil plug                                                     | 5                     |
| 5            | 704215              | • COVER, Dust                                                          | 2                     |
| 6            | 701845              | • ACTUATOR, Brake                                                      | 2                     |
| 7            | 701846              | • BRAKE DISK, Intermediate                                             | 6                     |
| 8            | 701847              | • BRAKE DISK, Friction                                                 | 10                    |
| 9            | 704241              | • SHAFT ASSEMBLY, Axle                                                 | 2                     |
|              | 706539              | • • JOINT, Universal                                                   | 4                     |
| 10           | 704218              | • SEAL, O-ring                                                         | 2                     |
| 11           | 708406              | • SEAL, Oil                                                            | 4                     |
| 12           | 704239              | • SEAL, Shaft                                                          | 2                     |
| 13           | 704240              | • SEAL, Shaft                                                          | 2                     |
| 14           | 706537              | • CYLINDER ASSEMBLY, Steer                                             | 1                     |
|              | 706538              | • • KIT, Seal repair                                                   | AR                    |
| 15           | 704243              | • JOINT, Axial                                                         | 2                     |
| 16           | 706536              | • TIE ROD END                                                          | 2                     |
| 17           | 706535              | • NUT, Steer arm                                                       | 2                     |
| 18           | (Ref.)              | • TRANSFER CASE (not shown)<br>(For components, refer to Figure 6-41.) | 1                     |
| 19           | (Ref.)              | • BRAKE ASSEMBLY (For components, refer to Figure 6-42.)               | 2                     |
| 20           | 708395              | • BEARING/CONE ASSEMBLY                                                | 4                     |
| 21           | 708404              | • PIN, Seeger                                                          | 4                     |
| 22           | 708405              | • SPACER                                                               | 4                     |

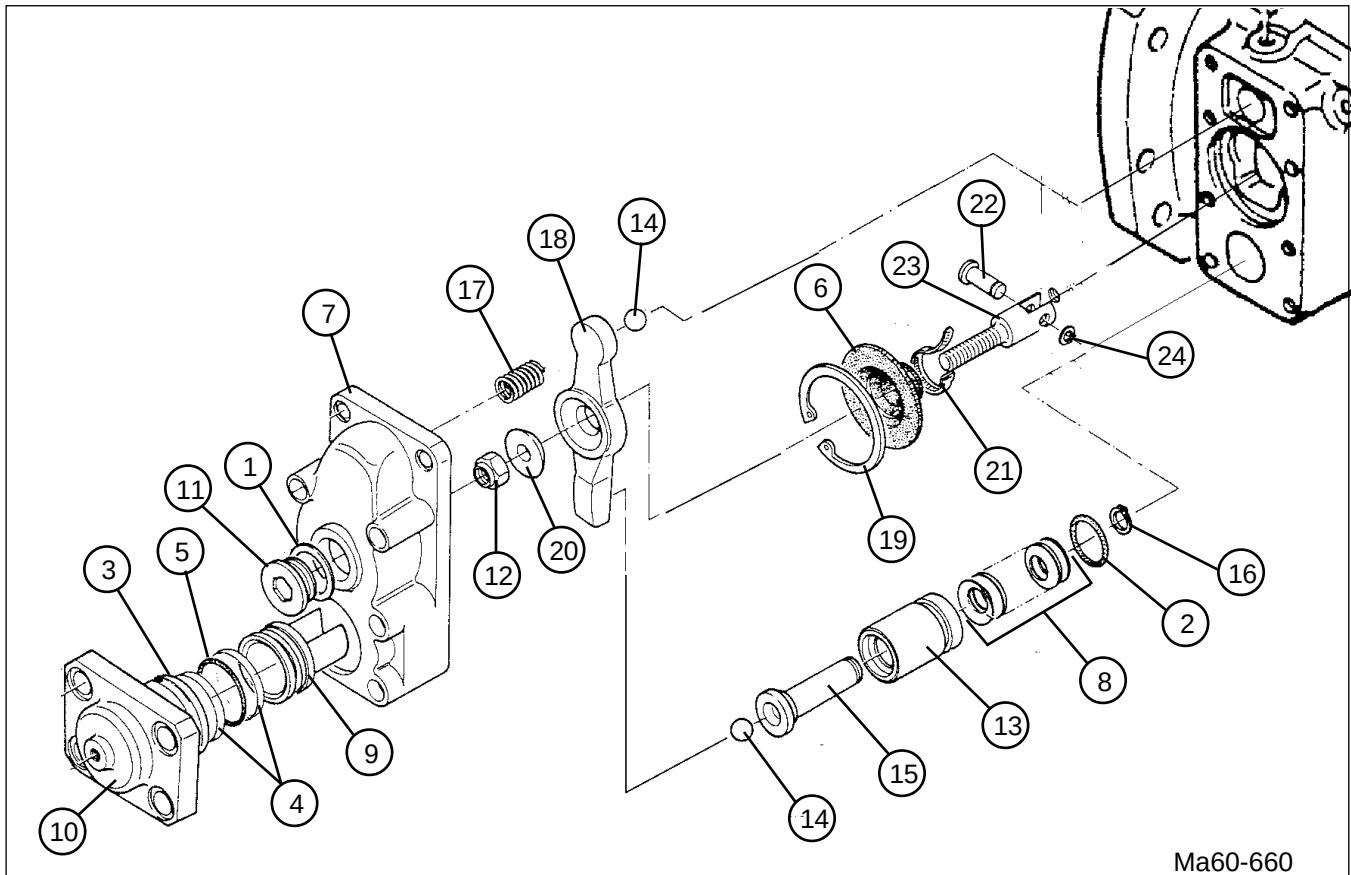
**FIGURE 6-41. TRANSFER CASE ASSEMBLY (Optional 4x4 only)**



Ma60-603

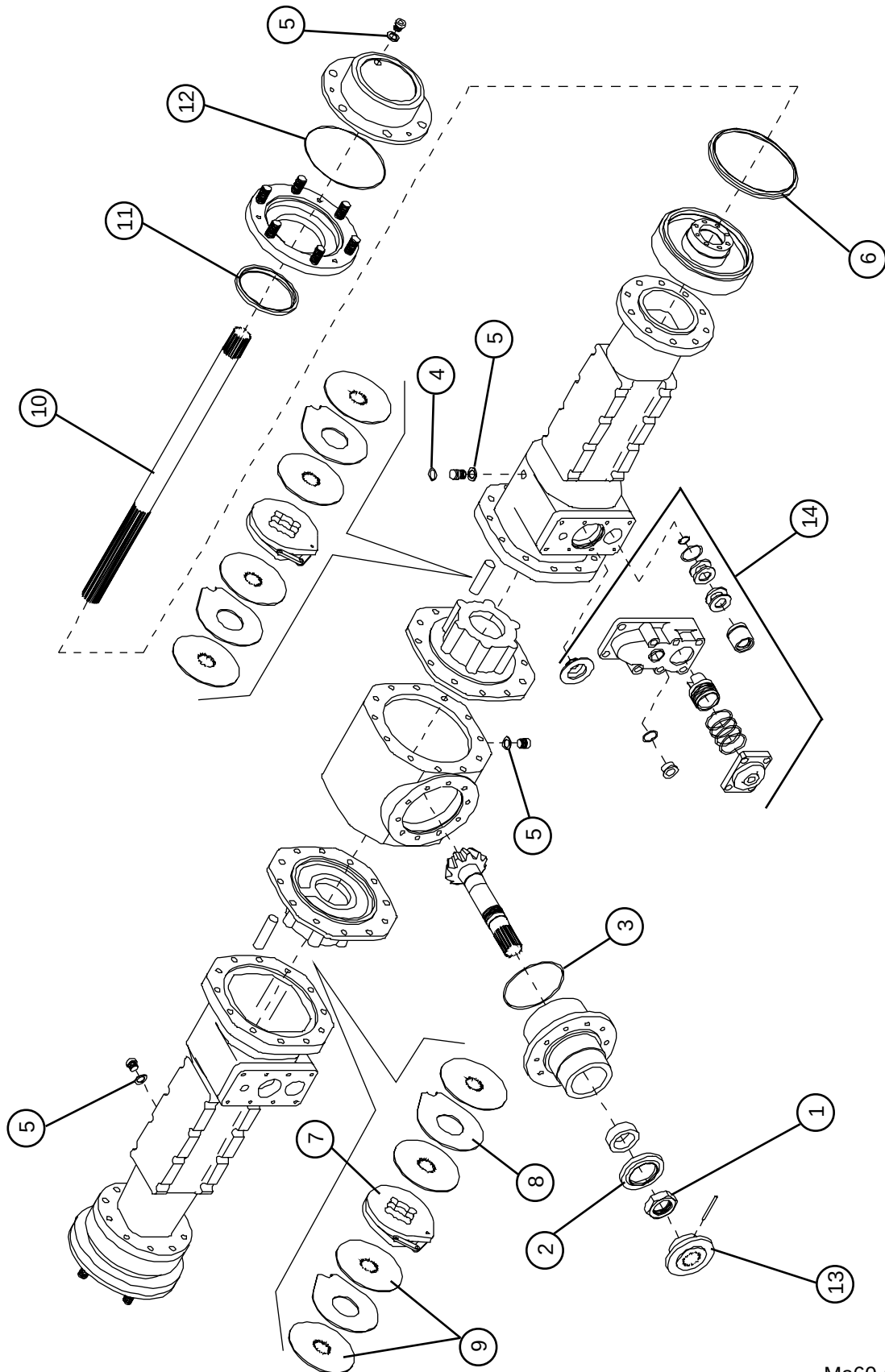
| Index No. | Skyjack Part No. | Description      |   |   |   |   |   |   | Units per Assy. |
|-----------|------------------|------------------|---|---|---|---|---|---|-----------------|
|           |                  | 1                | 2 | 3 | 4 | 5 | 6 | 7 |                 |
| 1         | 706540           | SEAL, O-ring     |   |   |   |   |   |   | 1               |
| 2         | 706541           | SEAL, Oil        |   |   |   |   |   |   | 1               |
| 3         | 701843           | WASHER, Oil seal |   |   |   |   |   |   | 2               |
| 4         | 706542           | SEAL, Oil        |   |   |   |   |   |   | 1               |
| 5         | 706543           | SEAL, O-ring     |   |   |   |   |   |   | 1               |

**FIGURE 6-42 BRAKE ASSEMBLY**



| Index<br>No. | Skyjack<br>Part No. | Description            |   |   |   |   |   |   | Units<br>per<br>Assy. |
|--------------|---------------------|------------------------|---|---|---|---|---|---|-----------------------|
|              |                     | 1                      | 2 | 3 | 4 | 5 | 6 | 7 |                       |
| 1            | 701844              | WASHER, Oil Plug       |   |   |   |   |   |   | 1                     |
| 2            | 701852              | SEAL, O-ring           |   |   |   |   |   |   | 1                     |
| 3            | 701890              | SEAL, O-ring (housing) |   |   |   |   |   |   | 1                     |
| 4            | 704231              | BACKING RING, Seal     |   |   |   |   |   |   | 2                     |
| 5            | 704219              | SEAL, O-ring (piston)  |   |   |   |   |   |   | 1                     |
| 6            | 701853              | SEAL, Spring           |   |   |   |   |   |   | 1                     |
| 7            | 703045              | COVER, Brake           |   |   |   |   |   |   | 1                     |
| 8            | 115383              | WASHER, Bellville      |   |   |   |   |   |   | 16                    |
| 9            | 706544              | PISTON, Brake          |   |   |   |   |   |   | 1                     |
| 10           | 706545              | FLANGE                 |   |   |   |   |   |   | 1                     |
| 11           | 708982              | PLUG                   |   |   |   |   |   |   | 1                     |
| 12           | 708983              | NUT, Tristop M 12      |   |   |   |   |   |   | 1                     |
| 13           | 707096              | BUSHING                |   |   |   |   |   |   | 1                     |
| 14           | 119101              | BALL                   |   |   |   |   |   |   | 2                     |
| 15           | 708984              | PIN                    |   |   |   |   |   |   | 1                     |
| 16           | 708985              | SNAP RING, E 16x1      |   |   |   |   |   |   | 1                     |
| 17           | 708986              | SPRING                 |   |   |   |   |   |   | 1                     |
| 18           | 708987              | BRAKE FORK             |   |   |   |   |   |   | 1                     |
| 19           | 708988              | SNAP RING              |   |   |   |   |   |   | 1                     |
| 20           | 708989              | THRUST WASHER          |   |   |   |   |   |   | 1                     |
| 21           | 708990              | SPRING CLIP            |   |   |   |   |   |   | 1                     |
| 22           | 708991              | PIN                    |   |   |   |   |   |   | 1                     |
| 23           | 708992              | FORK                   |   |   |   |   |   |   | 1                     |
| 24           | 708993              | SNAP RING E 9          |   |   |   |   |   |   | 1                     |

**FIGURE 6-43. RIGID AXLE ASSEMBLY (Optional 4x4)**

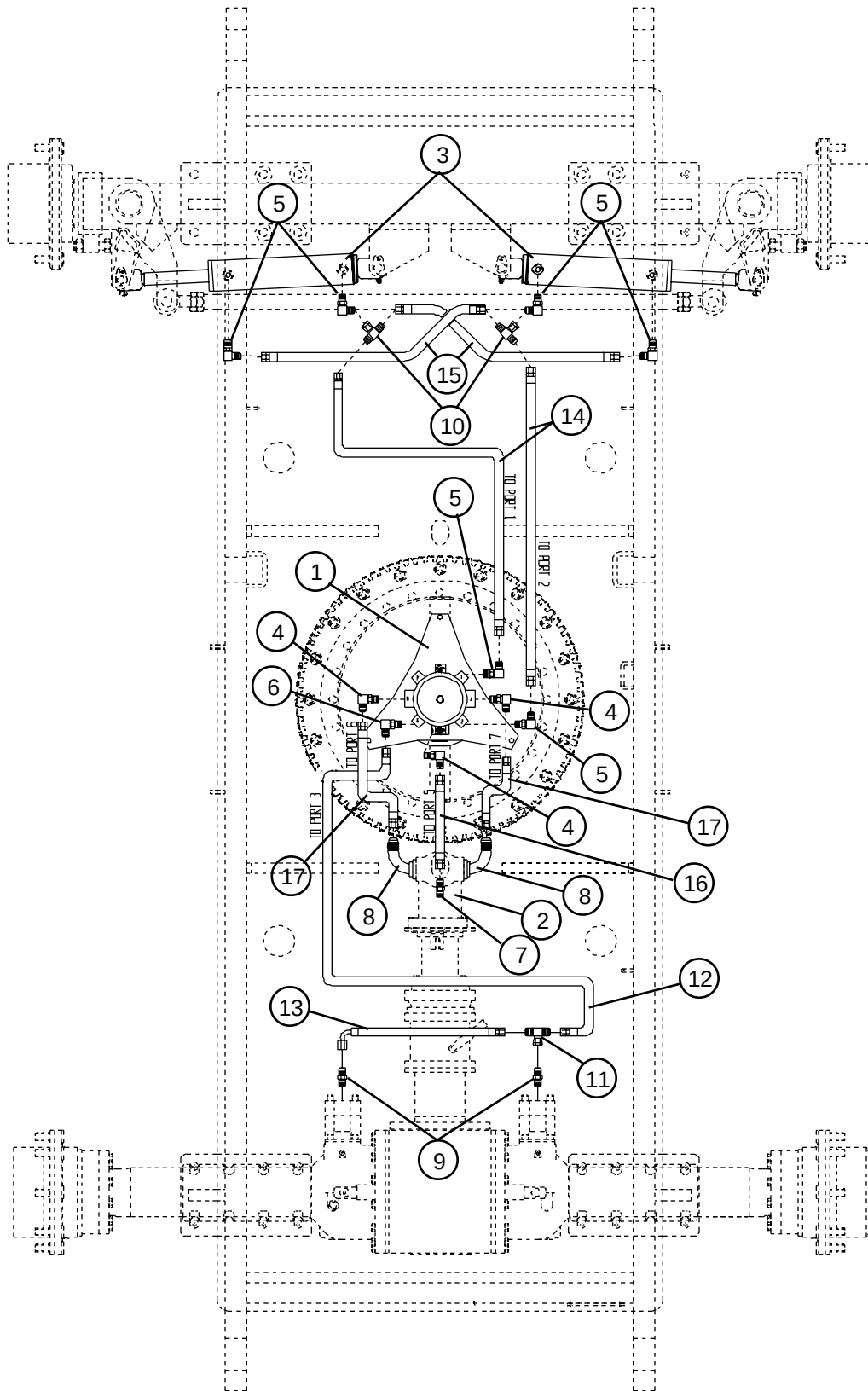


Ma60-602

**FIGURE 6-43. RIGID AXLE ASSEMBLY (Optional 4x4)**

| Index<br>No. | Skyjack<br>Part No. | Description                                              |   |   |   |   |   |   | Units<br>per<br>Assy. |
|--------------|---------------------|----------------------------------------------------------|---|---|---|---|---|---|-----------------------|
|              |                     | 1                                                        | 2 | 3 | 4 | 5 | 6 | 7 |                       |
|              | 701454              | AXLE ASSEMBLY, Rigid drive                               |   |   |   |   |   |   | -                     |
| 1            | 701836              | • NUT, Pinion retaining                                  |   |   |   |   |   |   | 1                     |
| 2            | 701837              | • OIL SEAL, Pinion                                       |   |   |   |   |   |   | 1                     |
| 3            | 701848              | • SEAL, O-ring                                           |   |   |   |   |   |   | 1                     |
| 4            | 701851              | • SEAL, O-ring                                           |   |   |   |   |   |   | 1                     |
| 5            | 701843              | • WASHER, Oil plug                                       |   |   |   |   |   |   | 5                     |
| 6            | 704215              | • COVER, Dust                                            |   |   |   |   |   |   | 2                     |
| 7            | 701845              | • ACTUATOR, Brake                                        |   |   |   |   |   |   | 2                     |
| 8            | 701846              | • BRAKE DISK, Intermediate                               |   |   |   |   |   |   | 6                     |
| 9            | 701847              | • BRAKE DISK, Friction                                   |   |   |   |   |   |   | 10                    |
| 10           | 704216              | • SHAFT, Axle                                            |   |   |   |   |   |   | 2                     |
| 11           | 704217              | • SEAL, Hub oil                                          |   |   |   |   |   |   | 2                     |
| 12           | 704218              | • SEAL, O-ring                                           |   |   |   |   |   |   | 2                     |
| 13           | 704232              | • FLANGE ASSEMBLY                                        |   |   |   |   |   |   | 1                     |
| 14           | (Ref.)              | • BRAKE ASSEMBLY (For components, refer to Figure 6-42.) |   |   |   |   |   |   | 2                     |

**FIGURE 6-44. HYDRAULIC HOSE CONNECTIONS - Base Assembly (4x2)**

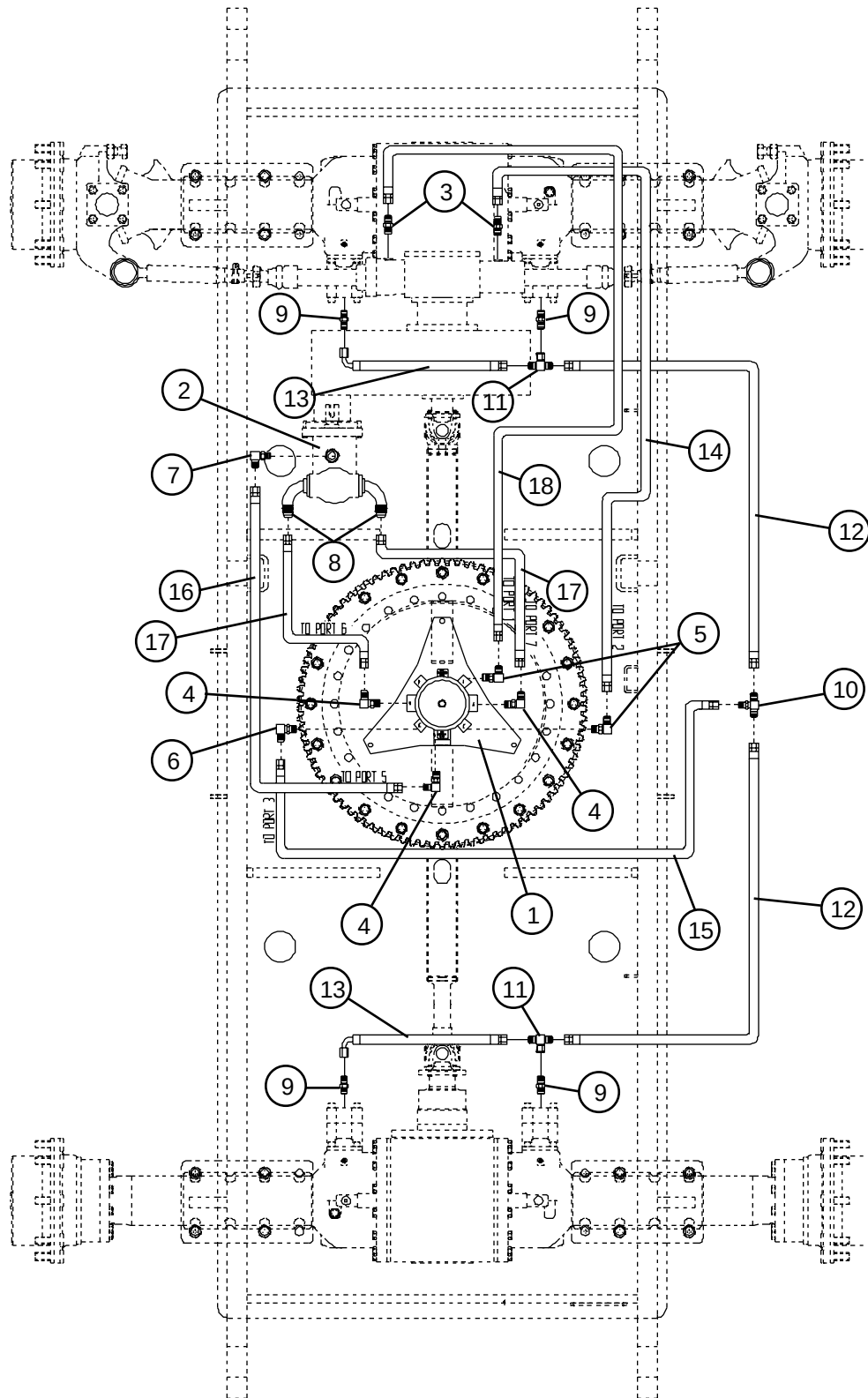


Ma60-663

**FIGURE 6-44. HYDRAULIC HOSE CONNECTIONS - Base Assembly (4x2)**

| Index No.                                                                                                           | Skyjack Part No. | Description                                                          | Units per Assy. |
|---------------------------------------------------------------------------------------------------------------------|------------------|----------------------------------------------------------------------|-----------------|
|                                                                                                                     |                  | 1 2 3 4 5 6 7                                                        |                 |
| 1                                                                                                                   | 708878           | MANIFOLD ASSEMBLY, Rotary<br>(For components, refer to Figure 6-25.) | 1               |
| 2                                                                                                                   | 701544           | MOTOR, Hydraulic drive                                               | 1               |
| 3                                                                                                                   | 702913           | CYLINDER, Steering<br>(For components, refer to Figure 6-38.)        | 2               |
| 4                                                                                                                   | 702117           | FITTING, Elbow 90° #12orb - #12                                      | 3               |
| 5                                                                                                                   | 701999           | FITTING, Elbow 90° #6orb - #4                                        | 6               |
| 6                                                                                                                   | 103073           | FITTING, Elbow 90° #6orb - #6                                        | 1               |
| 7                                                                                                                   | 702118           | FITTING, Connector, #12orb - #12                                     | 1               |
| 8                                                                                                                   | 702232           | FITTING, Elbow 90° Split flange adaptor #12                          | 2               |
|                                                                                                                     | 702233           | FITTING, Hydraulic kit SFXK #12                                      | 2               |
| 9                                                                                                                   | 700817           | FITTING, Connector #14orb - #6                                       | 2               |
| 10                                                                                                                  | 703223           | FITTING, Swivel tee #4                                               | 2               |
| 11                                                                                                                  | 114109           | FITTING, Swivel tee #6                                               | 1               |
| 12                                                                                                                  | 704522           | ASSEMBLY, Hose (H506 0068 00-0)                                      | 1               |
| 13                                                                                                                  | 704554           | ASSEMBLY, Hose (H606 0024 00-0)                                      | 1               |
| 14                                                                                                                  | 703878           | ASSEMBLY, Hose (H104 0078 00-0)                                      | 2               |
| 15                                                                                                                  | H104 0036 00-0   | ASSEMBLY, Hose (H104 0036 00-0)                                      | 2               |
| 16                                                                                                                  | 704541           | ASSEMBLY, Hose (H912 0043 02-0)                                      | 1               |
| 17                                                                                                                  | 704516           | ASSEMBLY, Hose (H212 0033 00-0)                                      | 2               |
| <p><b>NOTE: Refer to Standard Hose Numbering System (SECTION 5, Page 18) for explanation of hose numbering.</b></p> |                  |                                                                      |                 |

**FIGURE 6-45. HYDRAULIC HOSE CONNECTIONS - Base Assembly (4x4)**



Ma60-664

FIGURE 6-45. HYDRAULIC HOSE CONNECTIONS - Base Assembly (4x4)

| Index<br>No. | Skyjack<br>Part No. | Description                                                                                                 | Units<br>per<br>Assy. |
|--------------|---------------------|-------------------------------------------------------------------------------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                                                                                               |                       |
| 1            | 708878              | MANIFOLD ASSEMBLY, Rotary<br>(For components, refer to Figure 6-25.)                                        | 1                     |
| 2            | 701544              | MOTOR, Hydraulic drive                                                                                      | 1                     |
| 3            | 702323              | FITTING, Connector, #18orb - #4                                                                             | 2                     |
| 4            | 702117              | FITTING, Elbow 90° #12orb - #12                                                                             | 3                     |
| 5            | 701999              | FITTING, Elbow 90° #6orb - #4                                                                               | 2                     |
| 6            | 103073              | FITTING, Elbow 90° #6orb - #6                                                                               | 1                     |
| 7            | 702118              | FITTING, Connector, #12orb - #12                                                                            | 1                     |
| 8            | 702232              | FITTING, Elbow 90° Split flange adaptor #12                                                                 | 2                     |
|              | 702233              | FITTING, Hydraulic kit SFXK #12                                                                             | 2                     |
| 9            | 700817              | FITTING, Connector #14orb - #6                                                                              | 4                     |
| 10           | 702921              | FITTING, Union tee #6                                                                                       | 1                     |
| 11           | 114109              | FITTING, Swivel tee #6                                                                                      | 2                     |
| 12           | H106 0047 00-0      | ASSEMBLY, Hose (H106 0047 00-0)                                                                             | 2                     |
| 13           | 704554              | ASSEMBLY, Hose (H606 0024 00-0)                                                                             | 2                     |
| 14           | H104 0088 00-0      | ASSEMBLY, Hose (H104 0088 00-0)                                                                             | 1                     |
| 15           | H106 0032 00-0      | ASSEMBLY, Hose (H106 0032 00-0)                                                                             | 1                     |
| 16           | 704541              | ASSEMBLY, Hose (H912 0043 02-0)                                                                             | 1                     |
| 17           | 704516              | ASSEMBLY, Hose (H212 0033 00-0)                                                                             | 2                     |
| 18           | 703878              | ASSEMBLY, Hose (H104 0078 00-0)                                                                             | 1                     |
|              |                     | NOTE: Refer to Standard Hose Numbering System<br>(SECTION 5, Page 18) for explanation of hose<br>numbering. |                       |

FIGURE 6-46. LABELS AND NAMEPLATES

| Index No.                                                                                                                                                   | English Labels | Dutch Labels | French Labels | German Labels | Portuguese Labels | Spanish Labels | England Labels | Danish Labels | Swedish Labels | Description                                                                           | Units per Assy. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------|---------------|---------------|-------------------|----------------|----------------|---------------|----------------|---------------------------------------------------------------------------------------|-----------------|
| 1 2 3 4 5 6 7                                                                                                                                               |                |              |               |               |                   |                |                |               |                |                                                                                       |                 |
| <b>A</b>                                                                                                                                                    | 709381         | 711636       | ----          | ----          | ----              | ----           | 711652         | ----          | ----           | KIT, Service labels and nameplates (Diesel) (SJT B60)                                 | -               |
|                                                                                                                                                             | 709440         | 711657       | ----          | ----          | ----              | ----           | 711653         | ----          | ----           | KIT, Service labels and nameplates (Diesel) (SJT B65)                                 | -               |
| <b>B</b>                                                                                                                                                    | 709382         | ----         | ----          | 711654        | ----              | ----           | ----           | ----          | ----           | KIT, Service labels and nameplates (Dual Fuel) (SJT B60)                              |                 |
|                                                                                                                                                             | 709441         | ----         | ----          | 711655        | ----              | ----           | ----           | ----          | ----           | KIT, Service labels and nameplates (Dual Fuel) (SJT B65)<br>(Consists of items 1-32.) |                 |
| 1                                                                                                                                                           | 700026         | 707429       | 707495        | 702973        | 708042            | 707561         | 700026         | 708109        | 708176         | • LABEL, Danger                                                                       | 1               |
| 2                                                                                                                                                           | 700028         | 708569       | 708567        | 708566        | 708575            | 708568         | 707734         | 708576        | 708577         | • LABEL, Design standards                                                             | 1               |
| 3                                                                                                                                                           | 700032         | 707433       | 707499        | 702983        | 708046            | 707565         | 700032         | 708113        | 708180         | • LABEL, Attach safety belt                                                           | 2               |
| 4                                                                                                                                                           | 700035         | 707435       | 707501        | 702978        | 708048            | 707567         | 700035         | 708115        | 708182         | • LABEL, Annual inspection                                                            | 1               |
| 5                                                                                                                                                           | 700107         | 707437       | 707503        | 702964        | 708050            | 707569         | 700107         | 708117        | 708184         | • LABEL, Attach lanyard                                                               | 2               |
| 6                                                                                                                                                           | 700551         | 707440       | 707506        | 702984        | 708053            | 707572         | 700551         | 708120        | 708187         | • LABEL, Hazards                                                                      | 1               |
| 7                                                                                                                                                           | 108666         | 707426       | 707492        | 702975        | 708039            | 707558         | 108666         | 708106        | 708173         | • LABEL, Use original parts                                                           | 1               |
| 8                                                                                                                                                           | 106691         | 707424       | 707490        | 702977        | 708037            | 707556         | 106691         | 708104        | 708171         | • LABEL, Checklist                                                                    | 1               |
| 9                                                                                                                                                           | 709576         | 709576E      | 709576C       | 709576D       | 709576F           | 709576B        | 709576         | 709576ZC      | 709576ZP       | • LABEL, Tie down & lift                                                              | 2               |
| 10                                                                                                                                                          | 706425         | 707487       | 707553        | 706735        | 708099            | 707619         | 706425         | 708166        | 708233         | • LABEL, Warning disconnect power                                                     | 1               |
| 11                                                                                                                                                          | 706028         | 707481       | 707547        | 706223        | 708093            | 707613         | 706028         | 708160        | 708227         | • LABEL, Pressure override valve                                                      | 1               |
| 12                                                                                                                                                          | 106705         | 707425       | 707491        | 702963        | 708038            | 707557         | 106705         | 708105        | 708172         | • LABEL, Do not alter                                                                 | 3               |
| 13                                                                                                                                                          | 702005         | 707451       | 707517        | 702969        | 708064            | 707583         | 702005         | 708131        | 708198         | • LABEL, Danger brake release                                                         | 1               |
| 14                                                                                                                                                          | 703727         | 707472       | 707538        | 706257        | 708084            | 707604         | 703727         | 708151        | 708218         | • LABEL, ATF only                                                                     | 1               |
| 15                                                                                                                                                          | 117294         | 707428       | 707494        | 706860        | 708041            | 707560         | 117294         | 708108        | 708175         | • LABEL, Manuals                                                                      | 1               |
| 16                                                                                                                                                          | 702013         | 707452       | 707518        | 706262        | 708065            | 707584         | 702013         | 708132        | 708199         | • LABEL, Explosive                                                                    | 1               |
| 17                                                                                                                                                          | 702737         | 707455       | 707521        | 706249        | 708068            | 707587         | 702737         | 708135        | 708202         | • LABEL, Emergency lowering                                                           | 2               |
| 18                                                                                                                                                          | 702782         | 707461       | 707527        | 706252        | 708073            | 707593         | 702782         | 708140        | 708207         | • LABEL, Unleaded only (Gas\Dual fuel only), <b>B</b>                                 | 1               |
|                                                                                                                                                             | 702781         | 707460       | 707526        | 706251        | 708072            | 707592         | 702781         | 708139        | 708206         | • LABEL, Diesel only (Diesel only), <b>A</b>                                          | 1               |
| 19                                                                                                                                                          | 710497         | 710617       | 710620        | 710609        | 710619            | 710618         | 710497         | 710616        | 710621         | • LABEL, Pinch point                                                                  | 2               |
| 20                                                                                                                                                          | 706410         | 707485       | 707551        | 706733        | 708097            | 707617         | 706410         | 708164        | 708231         | • LABEL, Transportation lock                                                          | 2               |
| 21                                                                                                                                                          | 709073         | 709073E      | 709073C       | 709073D       | 709073F           | 709073B        | 709073         | 709073ZC      | 709073ZP       | • LABEL, Misuse of boom                                                               | 1               |
| 22                                                                                                                                                          | 709074         | 709074E      | 709074C       | 709074D       | 709074F           | 709074B        | 709074         | 709074ZC      | 709074ZP       | • LABEL, Shutoff valve                                                                | 1               |
| 23                                                                                                                                                          | 709075         | 709075E      | 709075C       | 709075D       | 709075F           | 709075B        | 709075         | 709075ZC      | 709075ZP       | • LABEL, Remove battery cable                                                         | 1               |
| 24                                                                                                                                                          | 709599         | 709599E      | 709599C       | 709599D       | 709599F           | 709599B        | 709599         | 709599ZC      | 709599ZP       | • LABEL, Battery disconnect                                                           | 1               |
| 25                                                                                                                                                          | 704497         | 707477       | 707543        | 706222        | 708089            | 707609         | 704497         | 708156        | 708223         | • LABEL, Brake Manifold                                                               | 1               |
| 26                                                                                                                                                          | 704498         | 707478       | 707544        | 706217        | 708090            | 707610         | 707478         | 708157        | 708224         | • LABEL, Pinch point                                                                  | 1               |
| 27                                                                                                                                                          | 709489         | 709489E      | 709489C       | 709489D       | 709489F           | 709489B        | 709489         | 709489ZC      | 709489ZP       | • LABEL, Engine specification, gas (Gas\Dual fuel only), <b>B</b>                     | 1               |
|                                                                                                                                                             | 709490         | 709490E      | 709490C       | 709490D       | 709490F           | 709490B        | 709490         | 709490ZC      | 709490ZP       | • LABEL, Engine specification, diesel (Diesel only), <b>A</b>                         | 1               |
| 28                                                                                                                                                          | 711244         | ----         | ----          | ----          | ----              | ----           | 711244         | ----          | ----           | • LABEL, ATF oil level                                                                | 1               |
| 29                                                                                                                                                          | 709577         | 710749       | 710747        | 710748        | 710750            | 710751         | 709577         | 710746        | 710752         | • MANUAL, Operator (Not Shown)                                                        | 1               |
| 30                                                                                                                                                          | ----           | 117023       | 117023        | 117023        | 117023            | 117023         | 117023         | 117023        | 117023         | • LABEL, CE Approval (European only)                                                  | 4               |
| 31                                                                                                                                                          | 709383         | 709383       | 709383        | 709383        | 709383            | 709383         | 709383         | 709383        | 709383         | • DRAWING, Label placement (Not Shown)                                                | 1               |
| 32                                                                                                                                                          | ----           | 708838       | 708836        | 708835        | 708838            | 708837         | 707736         | 708840        | 708841         | • LABEL, European loads                                                               | 2               |
| 33                                                                                                                                                          | 701605         | 707448       | 707514        | 706247        | 708061            | 707580         | 707448         | 708128        | 708195         | LABEL, Platform capacity 600 lbs. (60TB Only)                                         | 3               |
|                                                                                                                                                             | 700031         | 707432       | 707498        | 702979        | 708045            | 707564         | 707432         | 708112        | 708179         | LABEL, Platform capacity 500 lbs. (65TB and 60TB 8' Platform)                         | 3               |
| 34                                                                                                                                                          | 701612         | 701612       | 701612        | 701612        | 701612            | 701612         | 701612         | 701612        | 701612         | LABEL, SKYJACK 12"x72-1/2"                                                            | 3               |
| 35                                                                                                                                                          | 709021         | 709021       | 709021        | 709021        | 709021            | 709021         | 709021         | 709021        | 709021         | LABEL, 60TB (60TB Only)                                                               | 2               |
|                                                                                                                                                             | 709163         | 709163       | 709163        | 709163        | 709163            | 709163         | 709163         | 709163        | 709163         | LABEL, 65TB (65TB Only)                                                               | 2               |
| 36                                                                                                                                                          | 709020         | 709020       | 709020        | 709020        | 709020            | 709020         | 709020         | 709020        | 709020         | LABEL, SJB-60TB (60TB Only)                                                           | 3               |
|                                                                                                                                                             | 709166         | 709166       | 709166        | 709166        | 709166            | 709166         | 709166         | 709166        | 709166         | LABEL, SJB-65TB (65TB Only)                                                           | 3               |
| 37                                                                                                                                                          | 709432         | 709432       | 709432        | 709432        | 709432            | 709432         | 709432         | 709432        | 709432         | LABEL, SERIAL 60TB (60TB Only) (Consult factory)                                      | 1               |
|                                                                                                                                                             | 709433         | 709433       | 709433        | 709433        | 709433            | 709433         | 709433         | 709433        | 709433         | LABEL, SERIAL 65TB (65TB Only) (Consult factory)                                      | 1               |
| 38                                                                                                                                                          | 709439         | 709439       | 709439        | 709439        | 709439            | 709439         | 709439         | 709439        | 709439         | LABEL, TB 4" High                                                                     | 1               |
| 39                                                                                                                                                          | 709022         | 709022       | 709022        | 709022        | 709022            | 709022         | 709022         | 709022        | 709022         | LABEL, 60TB-4x4 (60TB-4x4 Only)                                                       | 1               |
|                                                                                                                                                             | 709024         | 709024       | 709024        | 709024        | 709024            | 709024         | 709024         | 709024        | 709024         | LABEL, 60TB-4x2 (60TB-4x2 Only)                                                       | 1               |
|                                                                                                                                                             | 709164         | 709164       | 709164        | 709164        | 709164            | 709164         | 709164         | 709164        | 709164         | LABEL, 65TB-4x2 (65TB-4x2 Only)                                                       | 1               |
|                                                                                                                                                             | 709165         | 709165       | 709165        | 709165        | 709165            | 709165         | 709165         | 709165        | 709165         | LABEL, 65TB-4x4 (65TB-4x4 Only)                                                       | 1               |
| 40                                                                                                                                                          | 102631         | 102631       | 102631        | 102631        | 102631            | 102631         | 102631         | 102631        | 102631         | LABEL, SKYJACK 6"x36-1/4"                                                             | 2               |
| 41                                                                                                                                                          | 103125         | 103125       | 103125        | 103125        | 103125            | 103125         | 103125         | 103125        | 103125         | LABEL, Blue/White Strip                                                               | 590"            |
| NOTE: Items 33 thru 41 not included in Service Label Kit, order separately.<br>Supply Model Number and Serial Number when ordering complete machine labels. |                |              |               |               |                   |                |                |               |                |                                                                                       |                 |

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FIGURE 6-47. HYDRAULIC GENERATOR OPTION

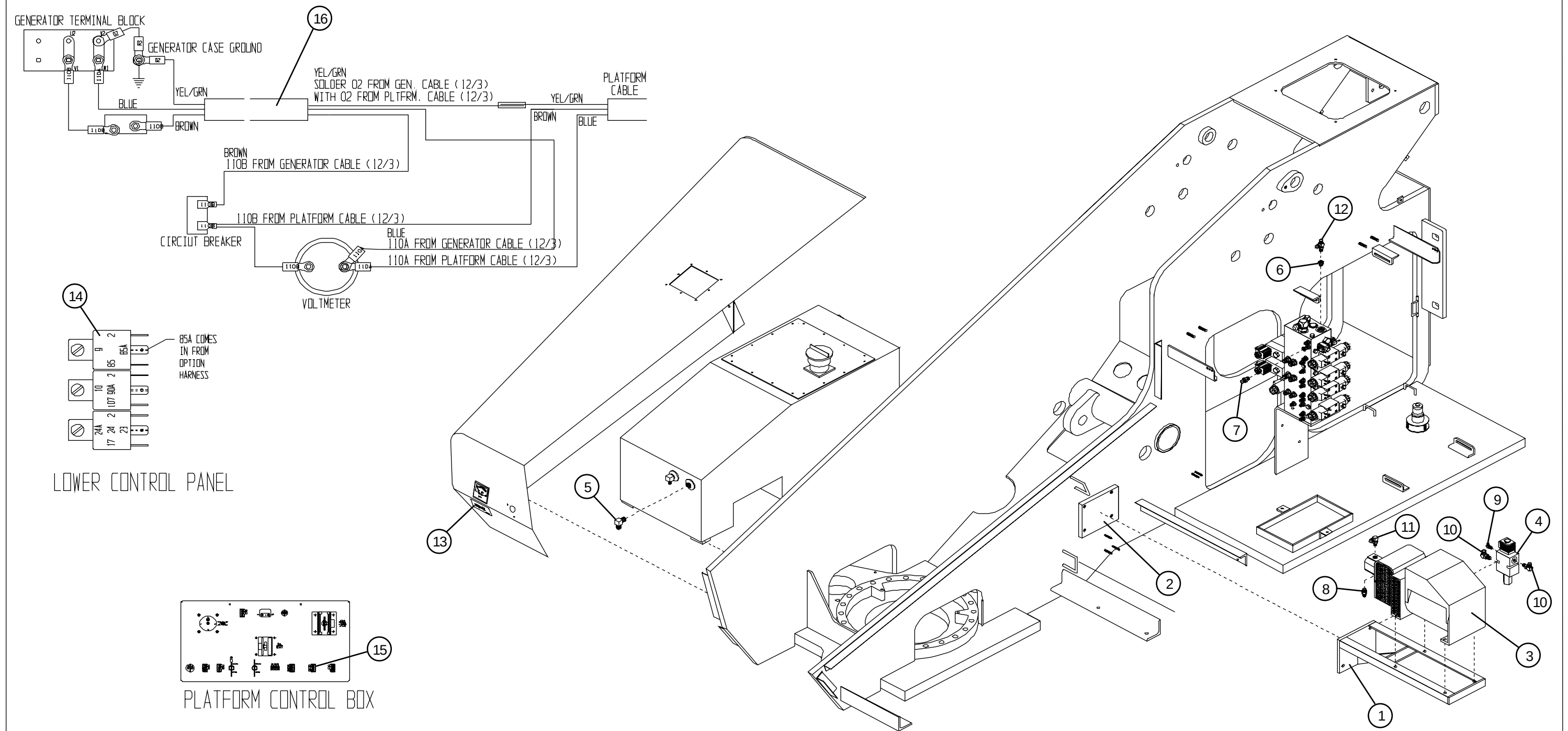
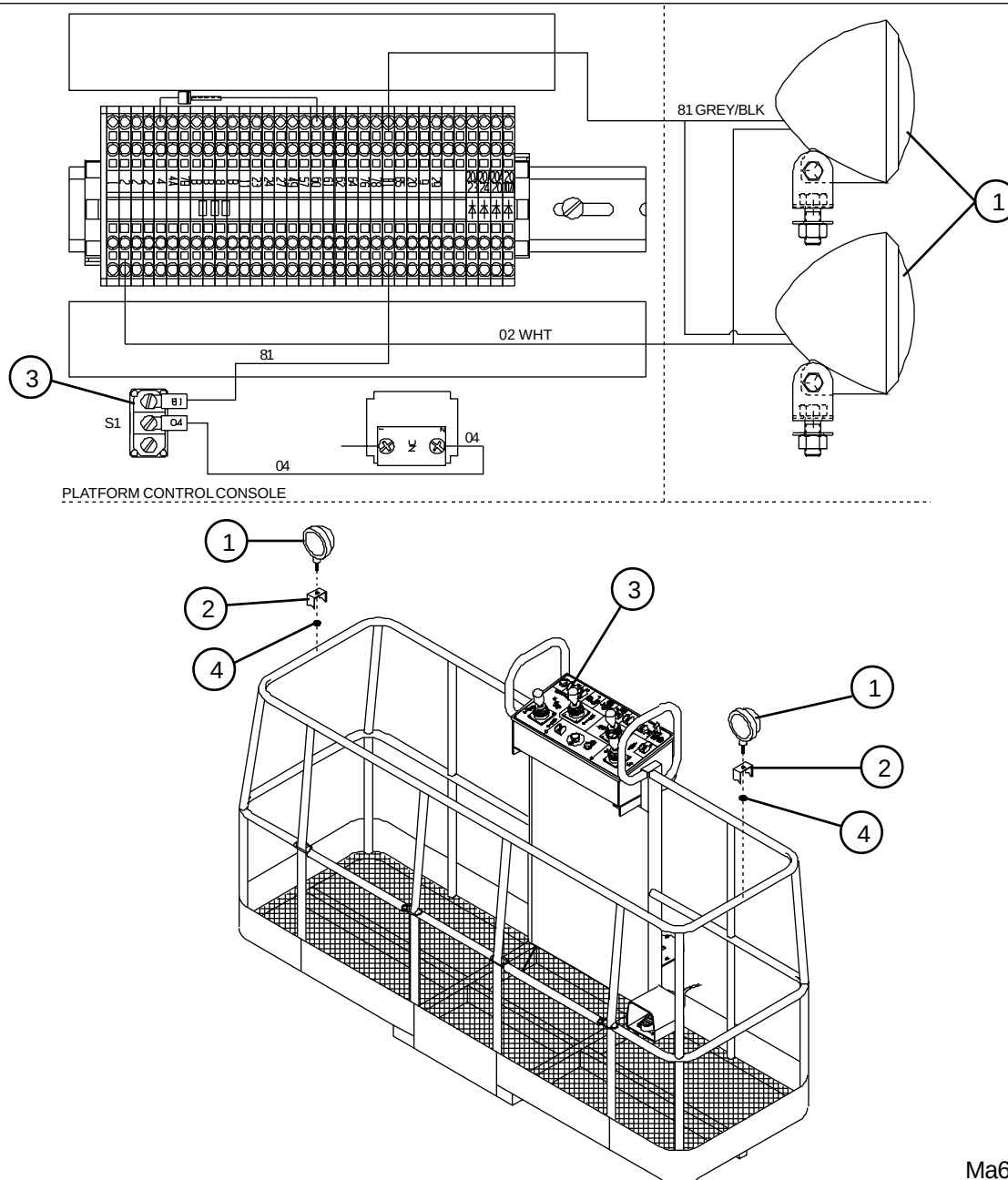


**FIGURE 6-47. HYDRAULIC GENERATOR OPTION**

| Index<br>No. | Skyjack<br>Part No. | Description                                          | Units<br>per<br>Assy. |
|--------------|---------------------|------------------------------------------------------|-----------------------|
|              |                     | 1 2 3 4 5 6 7                                        |                       |
|              | 709836              | HYDRAULIC GENERATOR OPTION, 115 VAC - 60 HZ          | -                     |
|              | 710380              | HYDRAULIC GENERATOR OPTION, 230 VAC - 50 HZ          | -                     |
| 1            | 703364              | • MOUNT WELDMENT                                     | 1                     |
|              | 704101              | •• HOSE, Clamp 7/8"                                  | 2                     |
|              | 103856              | •• BOLT, HHCS 1/4-20x3/4 gr 5                        | 2                     |
|              | 103980              | •• NUT, HEX 1/4-20                                   | 2                     |
|              | 103995              | •• WASHER, Flat SAE 1/4                              | 2                     |
|              | 104000              | •• WASHER, Lock 1/4                                  | 2                     |
|              | 103864              | •• BOLT, HHCS 5/16-18x1 gr 5                         | 4                     |
|              | 100397              | •• NUT, HEX 5/16-18                                  | 4                     |
|              | 103996              | •• WASHER, Flat SAE 5/16                             | 4                     |
|              | 103404              | •• WASHER, Lock 5/16                                 | 4                     |
| 2            | 703502              | • WELD PLATE                                         | 1                     |
|              | 103909              | •• BOLT, HHCS 1/2-13x1-1/4                           | 4                     |
|              | 103468              | •• WASHER, Flat SAE 1/2                              | 4                     |
|              | 103470              | •• WASHER, Lock 1/2                                  | 4                     |
| 3            | 703516              | • HYDRAULIC GENERATOR, 115 VAC - 60 HZ               | 1                     |
|              | 708877              | • HYDRAULIC GENERATOR, 230 VAC - 50 HZ               | 1                     |
| 4            | 703297              | • VALVE, Hydraulic Generator                         | 1                     |
|              | 103856              | •• BOLT, HHCS 1/4-20x3 gr 5                          | 2                     |
|              | 103980              | •• NUT, HEX 1/4-20                                   | 2                     |
|              | 103995              | •• WASHER, Flat SAE 1/4                              | 2                     |
|              | 104000              | •• WASHER, Lock 1/4                                  | 2                     |
| 5            | 701877              | • FITTING, Male connector #12orb-#8                  | 1                     |
| 6            | 703412              | • FITTING, Tube reducer                              | 1                     |
| 7            | 701954              | • FITTING, Straight thread connector #4              | 1                     |
| 8            | 703414              | • FITTING, Straight thread connector #10orb-#8       | 1                     |
| 9            | 701850              | • FITTING, Straight thread elbow connector #4        | 1                     |
| 10           | 701998              | • FITTING, Straight thread elbow connector #8        | 2                     |
| 11           | 703533              | • FITTING, Straight thread elbow connector #10orb-#8 | 1                     |
| 12           | 704568              | • FITTING, Straight thread run tee                   | 1                     |
| 13           | 703468              | • LABEL, Hydraulic generator                         | 1                     |
| 14           | 701943              | • RELAY, 12VDC sealed                                | 1                     |
| 15           | 701930              | • SWITCH, Toggle SPDT 2pos-maint                     | 1                     |
| 16           | 704086              | • CABLE, 12/3 Cabtire                                | 150"                  |

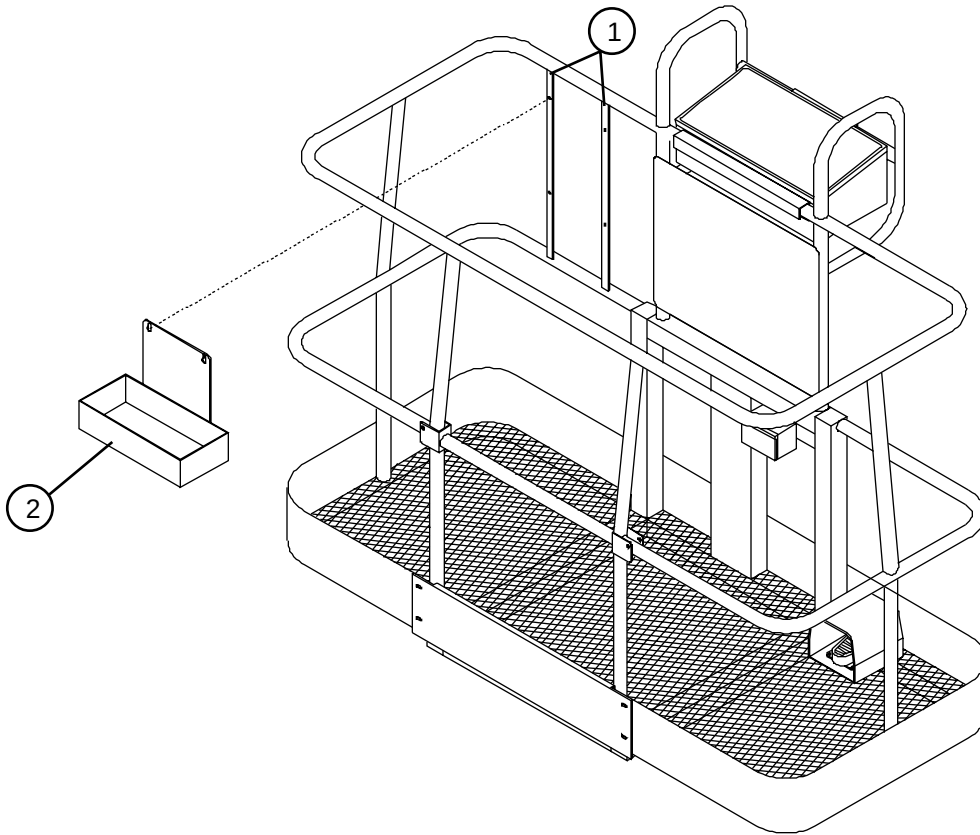
**FIGURE 6-48. PLATFORM WORK LIGHT OPTION**



Ma60-670

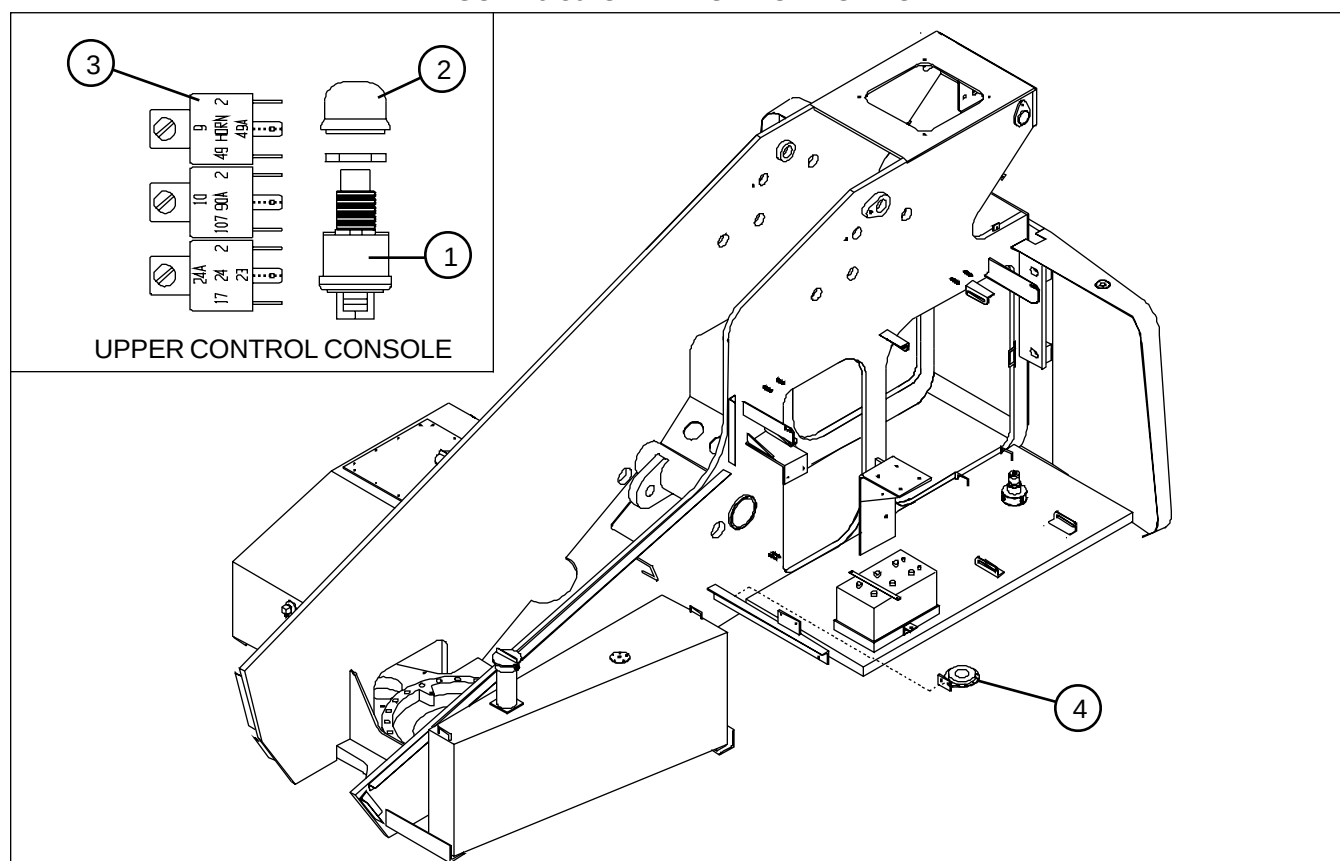
| Index No. | Skyjack Part No. | Description                          | Units per Assy. |
|-----------|------------------|--------------------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7                        |                 |
|           | 711535           | PLATFORM WORKLIGHT OPTION            | -               |
| 1         | 703545           | • LIGHT, Work                        | 2               |
| 2         | 703544           | • BRACKET, Work light (Weld On)      | 2               |
| 3         | 701930           | • SWITCH, Toggle SPDT 2Position main | 1               |
|           | 707394           | • GUARD, Toggle switch               | 1               |
| 4         | 109598           | • NUT, Jam 1/2"-20                   | 2               |
|           | 700583           | • NUT, Lock 1/4"-20                  | 2               |
|           | 103995           | • WASHER, Flat 1/4"                  | 4               |
| 5         | 710531           | • CABLE Assembly (Not Shown)         | 2               |

**FIGURE 6-49. PLATFORM TOOL TRAY OPTION**



| Index No. | Skyjack Part No. | Description                                       |   |   |   |   |   |   | Units per Assy. |
|-----------|------------------|---------------------------------------------------|---|---|---|---|---|---|-----------------|
|           |                  | 1                                                 | 2 | 3 | 4 | 5 | 6 | 7 |                 |
|           | 710060           | PLATFORM TOOL TRAY OPTION (30x66 and larger only) |   |   |   |   |   |   | -               |
| 1         | 200525           | • TOOL TRAY WELDMENT                              |   |   |   |   |   |   | 1               |
|           | 700583           | •• NUT, lock 1/4"-20                              |   |   |   |   |   |   | 4               |
|           | 703273           | •• BOLT, BHCS 1/4"-20x1.00 SS                     |   |   |   |   |   |   | 4               |
| 2         | 710061           | • TOOL TRAY SUPPORT                               |   |   |   |   |   |   | 1               |

**FIGURE 6-50. OPERATOR HORN OPTION**



Ma60-669

| Index No. | Skyjack Part No. | Description                     | Units per Assy. |
|-----------|------------------|---------------------------------|-----------------|
|           |                  | 1 2 3 4 5 6 7                   |                 |
|           | 709801           | OPERATOR HORN OPTION            | -               |
| 1         | 709133           | • PUSH BUTTON, N.O./no cap      | 1               |
|           | 102936           | • TERMINAL, 16 ga x #10 ring    | 2               |
| 2         | 709802           | • CAP, Black rubber             | 1               |
| 3         | 701943           | • RELAY, 12VDC Sealed           | 1               |
|           | 702000           | • TERMINAL, 16 ga x 1/4" spd F  | 2               |
| 4         | 703322           | • HORN, 12V                     | 1               |
|           | 702000           | • TERMINAL, 16 ga x 1/4" spd F  | 2               |
|           | 100397           | • NUT, 5/16-18                  | 1               |
|           | 103845           | • BOLT, HHCS 5/16-18x1/2" grd 5 | 1               |
|           | 103404           | • WASHER, Lock 5/16             | 1               |
|           | 702479           | • WIRE, 16 ga Green/Red         | 44"             |
|           | 702472           | • WIRE, 16 ga Purple/White      | 35"             |
|           | 702478           | • WIRE, 16 ga Yellow            | 17"             |



