

SKYJACK™

OPERATING MAINTENANCE & PARTS MANUAL

Model SJKB-33, Serial Number 91117 and Above.

Model SJKB-40, Serial Number 92525 and Above.



SJKB-33, -40 BOOM

For Service in North America and Asia please call 800 275-9522

Skyjack Inc. Service Center 3451 Swenson Ave., St. Charles, IL. 60174 **FAX 630 262-0006**

For Parts in North America and Asia please call 800 965-4626

Skyjack Inc. Parts Center 990 Vernon Rd., Wathena, KS, 66090 ... **FAX 888 782-4825**

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Skyjack Europe Communicatieweg 29, 3641 SG Mijdrecht Netherlands **FAX 31 297 256 948**

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.

 DANGER	VOLTAGE RANGE	MINIMUM SAFE APPROACH DISTANCE	
ELECTROCUTION HAZARD	(PHASE TO PHASE)	(FEET)	(METERS)
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.	(0 TO 300V)	AVOID CONTACT	
	(Over 300V to 50KV)	10	3.05
	(Over 50KV to 200KV)	15	4.60
	(Over 200KV to 350KV)	20	6.10
	(Over 350KV to 500KV)	25	7.62
	(Over 500KV to 750KV)	35	10.67
	(Over 750KV to 1000KV)	45	13.72
FAILURE TO AVOID THIS HAZARD WILL RESULT IN DEATH OR SERIOUS INJURY!			

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 SJKB-33, -40 work platform. 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 replacement 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

PURPOSE OF EQUIPMENT

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

USE OF THE EQUIPMENT

The work platform (Fig. 1-2) is a highly maneuverable, mobile work station. Models SJKB-33i and SJKB-40i are designed for slab type industrial applications. **Lifting and driving these models MUST be on a flat, level, compact surface.** Models SJKB-33C and SJKB-40C 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 (Figure 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.

PLATFORM - The platform is constructed of a skid-resistant see-thru deck surface and a 42" high tubular steel railing system with mid-rails and 6" toe boards. The platform can be entered through a sliding mid-rail bar at the center of the railing system or optional hinged gate. The platform can be rotated 90 degrees from center 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 4 foot hydraulic boom jib, telescoping boom assembly and riser arm. This mechanism uses double-acting hydraulic cylinders with holding valves to control vertical movement. Manual lowering valves at the base of the riser, boom and jib cylinders allow the mechanism to lower in the event of an emergency or electrical system failure.

TURRET - The turret rotates 365 degrees non-continuous. Within the turret are two cabinets. One cabinet contains the main hydraulic manifold. The other cabinet contains the boom function pump/motor assembly, the brake manifold with emergency release valve, and the base control panel. The 48 volt, 25 amp battery charger is located at the rear of the turret. A hinged panel above the battery charger houses the electronic control units. The hydraulic oil tank is located at the front of the turret.

DRIVE CHASSIS - This weldment supports two battery compartments each holding four six volt, deep-cycle batteries. An electric motor coupled with a drive locking differential is used for driving the work platform. Dynamic braking as well as spring-applied hydraulically-released parking brakes are located on the drive axle. The front axle has two non-driven wheels steerable by a double-acting steer cylinder.

PLATFORM CONTROL CONSOLE - Located on the platform, this removable control station contains control for work platform motion and emergency stopping.

OPTIONAL ACCESSORIES - The SKYJACK SJKB Boom Work Platforms are designed to accept a variety of optional accessories. These are listed in Table 1-1. Specifications and Features found later in this section. Operating instructions for these options (if required) can be found in Section 2 of this manual.

1

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.

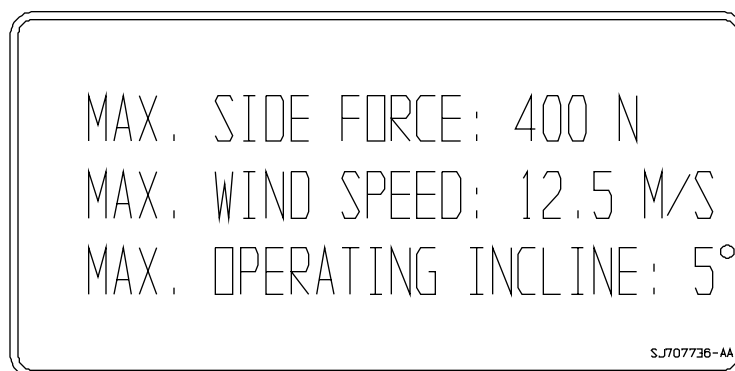


Figure 1-1. Front Panel Labels

TABLE 1-1. SPECIFICATIONS AND FEATURES

Specifications

WEIGHT (SJKB-33i, -33C)	9,920# (4500kg)
WEIGHT (SJKB-40i, -40C)	13,440# (6096kg)
WORK HEIGHT (nominal)(SJKB-33i, -33C)	39' (11.89m)
WORK HEIGHT (nominal)(SJKB-40i, -40C)	46' (14.02m)
RAISED PLATFORM HEIGHT (nominal)(SJKB-33i, -33C)	33' (10.06m)
RAISED PLATFORM HEIGHT (nominal)(SJKB-40i, -40C)	40' (12.19m)
STOWED HEIGHT (SJKB-33i, -40i)	6' 8" (2.03m)
STOWED HEIGHT (SJKB-33C,-40C)	6' 7" (2.0m)
OVERALL WIDTH (SJKB-33i, -40i)	5' 10" (1.78m)
OVERALL WIDTH (SJKB-33C,-40C)	5' 10" (1.78m)
STOWED LENGTH (SJKB-33i, -33C)	15' 2" (4.62m)
STOWED LENGTH (SJKB-40i, -40C)	18' 3" (5.56m)
PLATFORM CAPACITY (Unrestricted)	500# (227kg)
PLATFORM SIZE (SJKB-33i, -40i)	30.00" x 48.00" (.76m x 1.22m)
PLATFORM SIZE (SJKB-33C, -40C)	30.00 x 66.00" (.76m x 1.68m)
ELECTRICAL SYSTEM	48 Volts DC
GRADABILITY	30%
TURRET ROTATION	365° (Non-continuous)
TIRE SIZE (SJKB-33i, -40i) (Ribbed)	11 x 16.5 Air Filled
TIRE SIZE (SJKB-33C, -40C) (Lugged)	10" x 16.5 Air Filled

Features

STANDARD EQUIPMENT

- 4 Foot Hydraulically Controlled Boom Jib
- Variable Speed Drive and Function Controls
- In-Line Elevating Assembly
- Continuous Drive and Steer Directional Sensing
- Electrical Dynamic Braking System
- Two Spring-Applied Hydraulically Released Parking Brakes
- ANSI and CSA Standards Compliance

OPTIONAL EQUIPMENT

- Operator Horn
- All Function Motion Alarm
- Descent Alarm
- Travel Alarm
- Flashing Amber Light
- Spring-Loaded Half Gate
- Spring-Loaded Full Gate
- On-Board 110VAC Generator
- 30" x 66" Platform (Optional for SJKB-33i, 40i)
- Lifting Lugs
- Additional Battery Boxes
- High speed drive
- High Flotation Tires

WORK PLATFORM MAJOR COMPONENT IDENTIFICATION

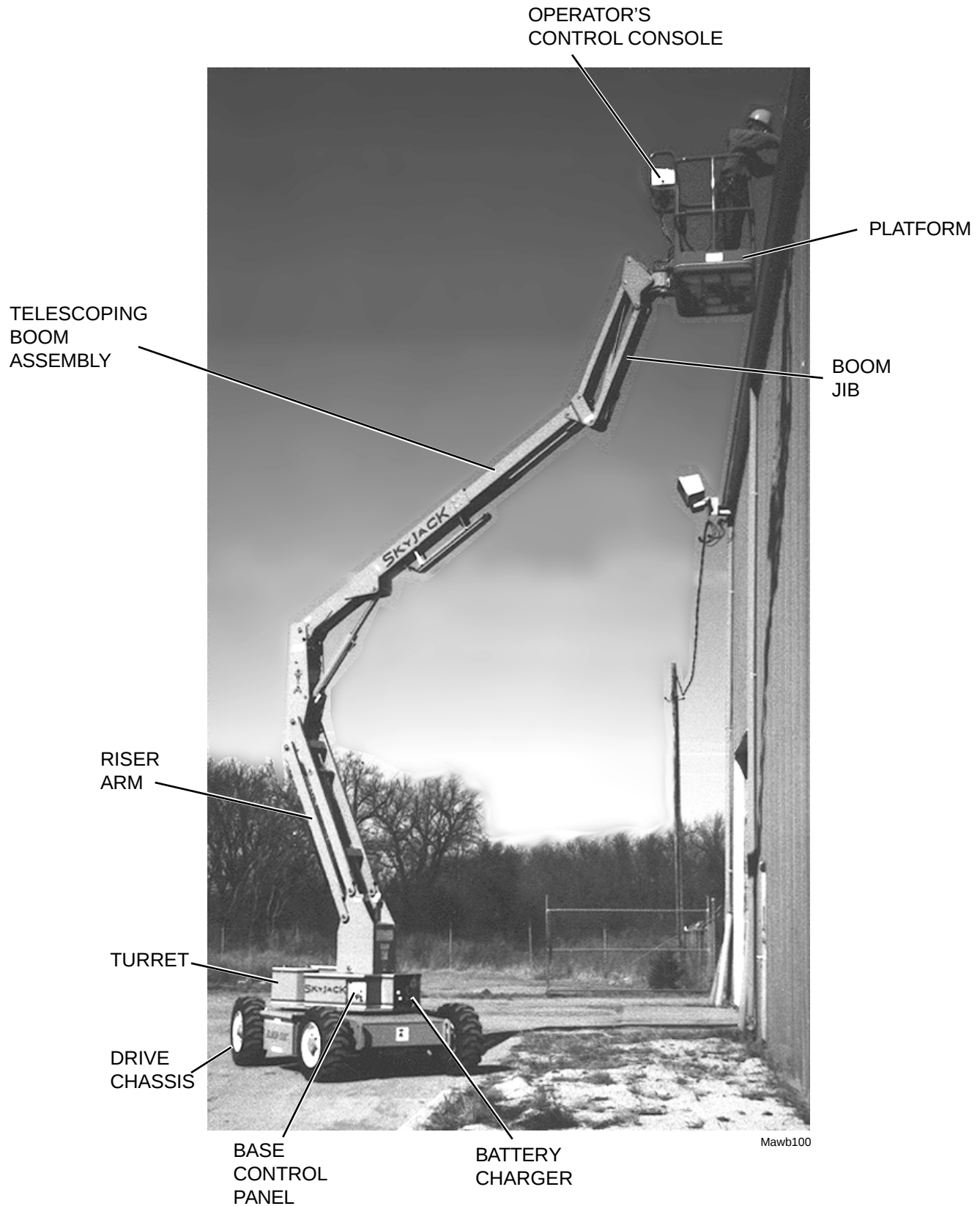


Figure 1-2. SKYJACK SJKB Boom Work Platform (Model SJKB-33C Shown)

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 batteries separating the 350A connectors.
- 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 6 through 9 in this manual.

Base Controls - Electrical Base Control Panel

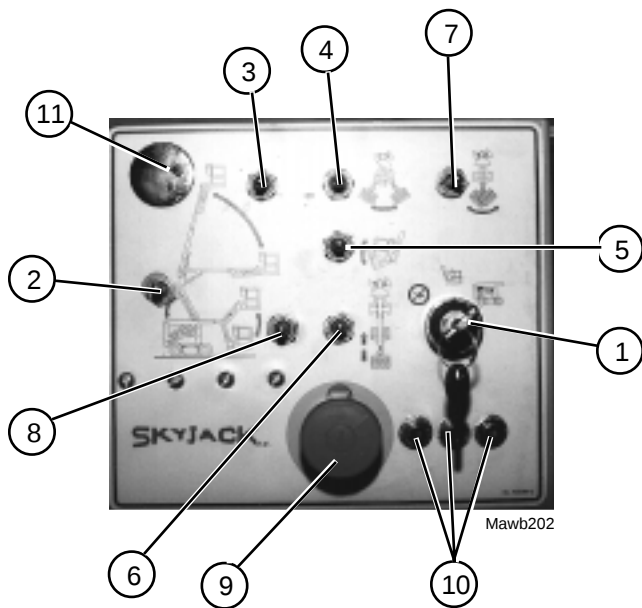


Figure 2-1. Base Control Panel and Label

1. OFF/PLATFORM/BASE SELECT KEY SWITCH
2. RISER UP/DOWN TOGGLE SWITCH
3. BOOM UP/DOWN TOGGLE SWITCH
4. TURRET ROTATION TOGGLE SWITCH
5. PLATFORM LEVELING TOGGLE SWITCH
6. BOOM RETRACT/EXTEND TOGGLE SWITCH
7. PLATFORM ROTATION TOGGLE SWITCH
8. JIB UP/DOWN TOGGLE SWITCH
9. EMERGENCY STOP BUTTON
10. CIRCUIT BREAKERS
11. BEEPER ALARM (option)

BASE CONTROL PANEL - This control station is located on the rotating turret in the hydraulic/electric cabinet cover. 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 switch is held in the “🏠” (base) position power is directed to the control station on the base.

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

3. 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.

4. 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.

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

6. 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.

7. 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.

8. JIB UP/DOWN TOGGLE SWITCH - 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.

9. 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.

10. 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.

11. BEEPER ALARM - This optional audible pulse device can be setup as a motion alarm, or as an all function alarm.

350 Amp Battery Connectors



Figure 2-2. 350 Amp Battery Connectors

1. 350 AMP BATTERY CONNECTORS

1. 350 AMP BATTERY CONNECTORS - These connectors, located adjacent to the battery charger, disconnects the batteries and all power to both control stations in the event of an emergency and for work platform shut down. This connection **MUST** be made to operate any control on either control station. The battery charger works independently of this connection and the batteries may still be charged while these connectors are separated.

Base Controls - Mechanical Emergency Turret Rotating Mechanism

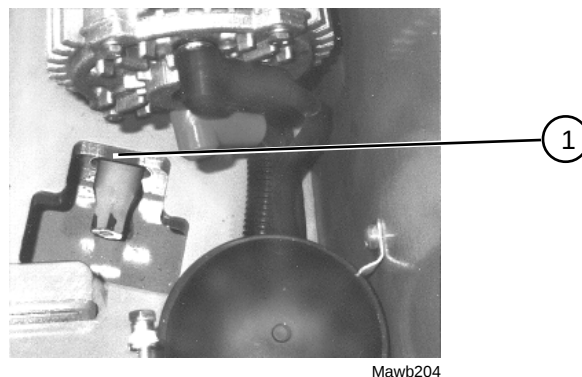


Figure 2-3. Emergency Turret Rotating Mechanism

1. EMERGENCY TURRET ROTATING MECHANISM

1. EMERGENCY TURRET ROTATING MECHANISM - This mechanism is located on the rotation gear under the turret. Using a 7/8" 6-point socket with ratchet to rotate the turret back to center. **NOTE:** On European models a 7/8" 6-point ratcheting wrench (SKYJACK #701517) is located inside the hydraulic/electric cabinet.

Base Controls - Hydraulic Turret Rotation Speed Control Valve

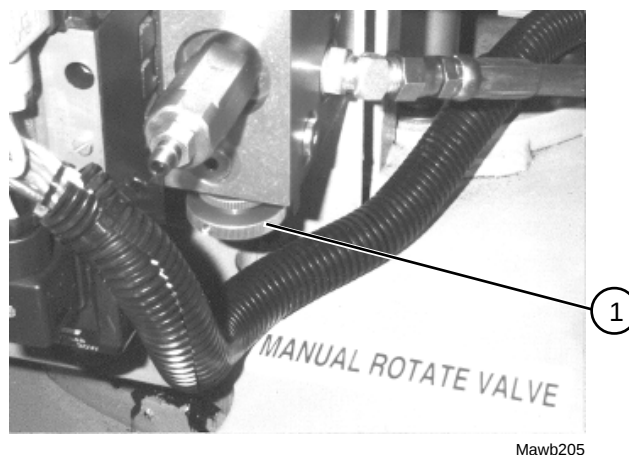


Figure 2-4. Turret Rotation Speed Control Valve

1. TURRET ROTATION SPEED CONTROL VALVE

1. TURRET ROTATION SPEED CONTROL VALVE - Located on the bottom of the main manifold in the hydraulic cabinet, this rotary valve when rotated to a fully closed position (clockwise) allows maximum turret rotation speed. By opening the valve (counterclockwise) the turret rotation speed can be reduced.

Emergency Lowering Valves

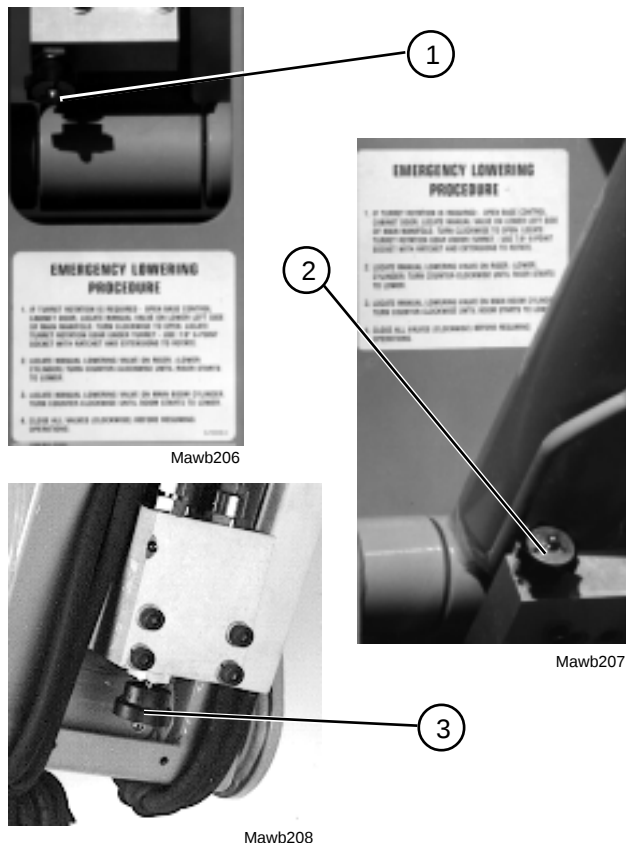


Figure 2-5. Emergency Lowering Valves and Procedure Label

1. EMERGENCY LOWERING VALVE ON RISER
2. EMERGENCY LOWERING VALVE ON BOOM
3. EMERGENCY LOWERING VALVE ON JIB

1. EMERGENCY LOWERING VALVE ON RISER - Located at the base on the riser cylinder, this valve allows riser lowering in the event of an emergency or an electrical system failure. Turning the valve knob counterclockwise allows the riser to gradually lower. Valve **MUST** be fully closed (clockwise) to restore normal operation.

2. EMERGENCY LOWERING VALVE ON BOOM - Located at the base on the boom cylinder, this valve allows boom lowering in the event of an emergency or an electrical system failure. Turning the valve knob counterclockwise allows the boom to gradually lower. Valve **MUST** be fully closed (clockwise) to restore normal operation.

3. EMERGENCY LOWERING VALVE ON JIB - Located at the base on the jib cylinder, this valve allows boom lowering in the event of an emergency or an electrical system failure. Turning the valve knob counterclockwise allows the jib to gradually lower. Valve **MUST** be fully closed (clockwise) to restore normal operation.

NOTE:

On European models, the manual lowering valve knobs are located inside the hydraulic/electric cabinet on the turret.

Parking Brake Release Plunger

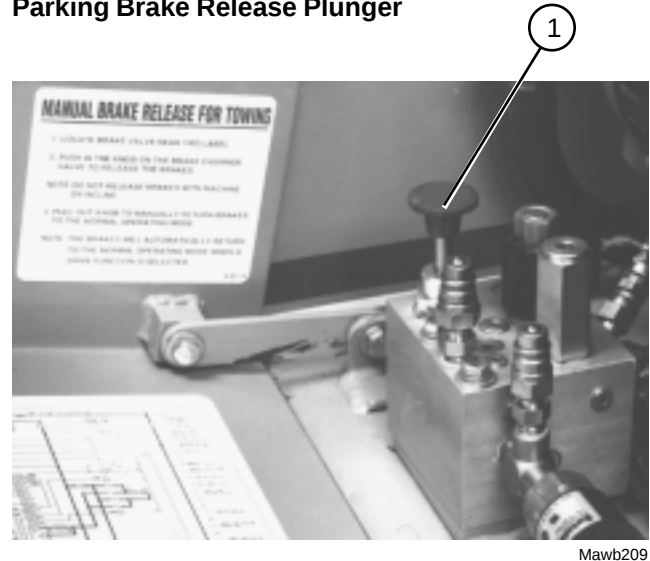


Figure 2-6. Parking Brake Release Plunger

1. PARKING BRAKE RELEASE PLUNGER



DANGER

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

1. PARKING BRAKE RELEASE PLUNGER - Located on the brake manifold in the hydraulic/electric cabinet, when this red plunger on the brake valve is depressed, the brake valve opens allowing accumulator pressure to immediately disengage the parking brakes.

Step 1. Disconnect the batteries by separating the 350 Amp Battery Connectors.

Step 2. Firmly depress the red plunger knob on the brake manifold. The brakes are now released.

NOTE

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

NOTE

When towing, **DO NOT** exceed 2 mph.

Platform Controls - Electrical Foot Switch

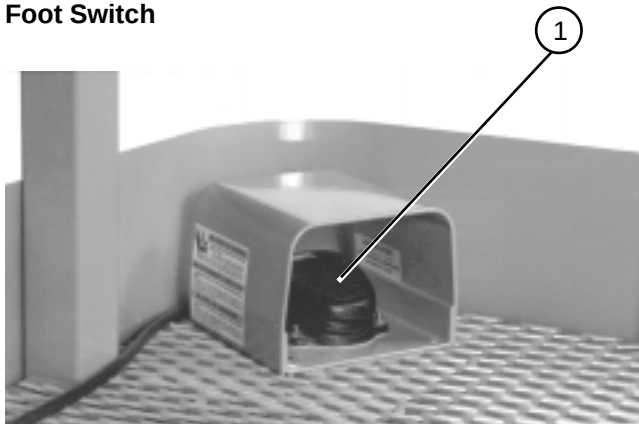


Figure 2-7. Foot Switch

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.



WARNING

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. When driving and foot switch is released, parking brake engages instantly.**

Operator's Control Console

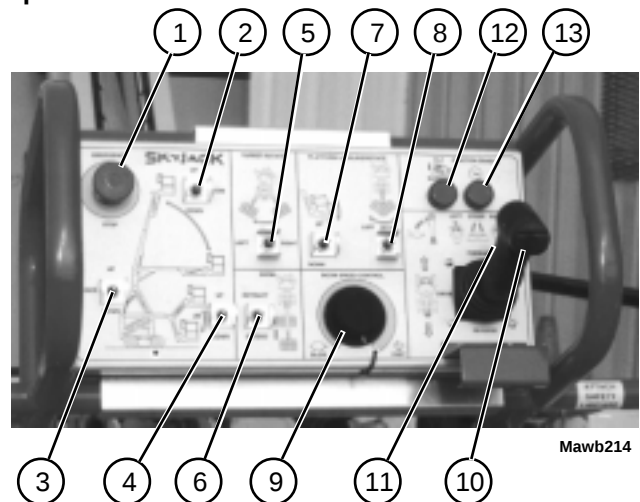


Figure 2-8. Operator's Control Console and Label

1. EMERGENCY STOP BUTTON
2. BOOM UP/DOWN TOGGLE SWITCH
3. RISER UP/DOWN TOGGLE SWITCH
4. JIB UP/DOWN TOGGLE SWITCH
5. TURRET ROTATE TOGGLE SWITCH
6. BOOM EXTEND/RETRACT TOGGLE SWITCH
7. PLATFORM LEVELING TOGGLE SWITCH
8. PLATFORM ROTATE TOGGLE SWITCH
9. BOOM SPEED CONTROL ROTARY SWITCH
10. DRIVE/STEER CONTROLLER
11. HORN PUSH-BUTTON
12. TILT SENSOR INDICATOR LIGHT
13. FUNCTION ENABLE LIGHT

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. EMERGENCY STOP BUTTON - This red mushroom-shaped button is designed to cut power to the platform controls when struck in the event of an emergency or at work platform shutdown. To restore power, simply pull button out.



WARNING

Depressing the Emergency Stop Button instantly engages the parking brakes.

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

4. JIB UP/DOWN TOGGLE SWITCH - 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.

5. 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 “↶” (left) position. Release switch to stop. To rotate the turret counterclockwise, push and hold this toggle switch to the “↷” (right) position. Release switch to stop.

6. 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.

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

8. 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. Release switch to stop.

9. BOOM SPEED CONTROL ROTARY SWITCH - This rotary switch allows the operator to control the speed of the lifting, lowering and rotation functions. To reduce the speed of the functions turn the knob counter-clockwise. To increase the speed of the functions turn the knob clockwise.

10. DRIVE/STEER CONTROLLER - This lever-type controller allows the operator to drive in forward or reverse and by using the rocker on top of the controller to steer left or right

11. HORN PUSH BUTTON (Option) - If equipped with the horn option, the horn is sounded by depressing the red button on the Drive/Steer controller handle.

12. 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.

13. FUNCTION ENABLE LIGHT - This red indicator light tells the operator that the foot switch has been depressed and power is available to operate the controls on the operator's control console.

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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Pre-start Checks

1. Check for obstacles around the work platform and in the path of travel such as holes, drop off's, debris, ditches and soft fill.
2. Check overhead clearances.
3. Make sure that the batteries are fully charged. Disconnect battery charger from external power source.
4. Make sure emergency lowering valves at the base of the riser, boom and jib cylinders are fully closed.

Start and Operation

1. Make sure that the 350 Amp Battery Connectors are not separated.
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.



DO NOT operate any control on the operator's control console without your safety belt fastened and properly securing the safety belt 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. Depress and hold the Foot Switch.

REMEMBER

The 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!

8. **TO DRIVE FORWARD:** Slowly move the Drive/Steer Controller handle to the " ⬆ " (forward) position. Release controller handle to stop.
9. **TO DRIVE IN REVERSE:** Slowly move the Drive/Steer Controller handle to the " ⬇ " (reverse) position. Release controller handle to stop.
10. **TO STEER:** Depress the rocker on the Drive/Steer Controller handle in the direction you wish to steer.
11. **TO ADJUST BOOM FUNCTION SPEED:** Turn the Boom Speed Control Knob counter-clockwise to decrease function speed or clockwise to increase function speed. The Boom Speed Control will affect all lifting, lowering and rotate functions but will not affect drive or steer speed.
12. **TO MOVE THE JIB UPWARD:** Press and hold the Jib Up/Down Toggle Switch to the " ⬆ " (up) position. Release the switch to stop.
13. **TO MOVE THE JIB DOWNWARD:** Press and hold the Jib Up/Down Toggle Switch to the " ⬇ " (down) position. Release the switch to stop.
14. **TO MOVE THE RISER UPWARD:** Press and hold the Riser Up/Down Toggle Switch to the " ⬆ " (up) position. Release the switch to stop.
15. **TO MOVE THE RISER DOWNWARD:** Press and hold the Riser Up/Down Toggle Switch to the " ⬇ " (down) position. Release the switch to stop.
16. **TO MOVE THE BOOM UPWARD:** Press and hold the Boom Up/Down Toggle Switch to the " ⬆ " (up) position. Release the switch to stop.
17. **TO MOVE THE BOOM DOWNWARD:** Press and hold the Boom Up/Down Toggle Switch to the " ⬇ " (down) position. Release the switch to stop.
18. **TO ROTATE THE TURRET LEFT:** Press and hold the Turret Rotate Toggle Switch to the " ⬅ " (left) position. Release the switch to stop.
19. **TO ROTATE THE TURRET RIGHT:** Press and hold the Turret Rotate Toggle Switch to the " ➡ " (right) position. Release the switch to stop.
20. **TO LEVEL THE PLATFORM (Platform is tilted away from the jib):** Press and hold the Platform Leveling Toggle Switch to the " ⬆ " (up) position. To stop release the switch. Platform leveling is not available on European models.
21. **TO LEVEL THE PLATFORM (Platform is tilted toward the jib):** Press and hold the Platform Leveling Toggle Switch to the " ⬇ " (down) position. To stop release the switch. Platform leveling is not available on European models.
22. **TO ROTATE THE PLATFORM TO THE LEFT:** Press and hold the Turret Rotate Toggle Switch to the " ⬅ " (left) position. Release the switch to stop.
23. **TO ROTATE THE PLATFORM TO THE RIGHT:** Press and hold the Turret Rotate Toggle Switch to the " ➡ " (right) position. Release the switch to stop.
24. **TO RETRACT THE BOOM ARM:** Press and hold the Boom Extend/Retract Toggle Switch to the " ⬆ " (retract) position. Release the switch to stop.

25. **TO EXTEND THE BOOM/ARM:** Press and hold the Boom Extend/Retract Toggle Switch to the "↕" (extend) position. Release the switch to stop.
26. **TO SOUND THE HORN:** Depress the red push-button on the Drive/Steer Controller.

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. Separate the 350 amp battery connectors.

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 jib for ground clearance while loading. Slowly and carefully drive the machine on to the trailer.

NOTE

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

3. With machine loaded on trailer, tie down as recommended. (Refer to Figure 2-9.)



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Figure 2-9. Recommended Tie Down Locations

BATTERY SERVICE AND CHARGING PROCEDURES

Battery Service



Keep flames and sparks away. **DO NOT** smoke near batteries.



Contact with electrolytic acid can cause skin irritation and damage clothing. Wear a protective apron, gloves and goggles when working with batteries.

FIRST AID

Immediately flush eyes with cold water if electrolytic acid is splattered into them. Seek medical attention if discomfort continues.

1. **Disconnect the batteries by separating the 350 Amp battery connectors.**



DO NOT service the batteries without **first** separating the 350 Amp battery connectors. Vapors emitted by batteries can be ignited by a spark or arc.

2. Check battery fluid level in each battery. If plates are not covered, add distilled or demineralized water.
3. Check each battery case for damage.
4. Clean battery terminals and cable ends thoroughly with a terminal cleaning tool or wire brush.
5. Thoroughly clean tops of batteries and battery boxes of acid and corrosion.
6. Make sure all battery connections are tight.
7. Replace any battery that is damaged or incapable of holding a lasting charge.
8. Reconnect the 350 Amp battery connectors.

Battery Charging Procedures



Chargers can ignite flammable materials and vapors. **DO NOT** use near fuels, grain dust, solvents, or other flammables.



To reduce the risk of electrical shock, connect charger only to a properly grounded single phase outlet. **DO NOT** use a extension cord longer than 25 feet.

1. Select “⊗” (off) or “” (platform) position with the Off/Platform/Base Key Select Switch.

NOTE

The battery charger **WILL NOT** operate if the Off/Platform/Base Key Select Switch is in the “” (base) position.

NOTE

When the battery charger is operating all machine functions are disabled.

2. Connect charger AC plug to proper voltage source. Refer to charger nameplate for voltage requirements.
3. Charge batteries. **DO NOT** leave charger unattended for more than two consecutive days. Severe overcharging and battery damage will result if charger fails to turn off.
4. Disconnect charger from external power source.

BATTERY CHARGER OPERATION

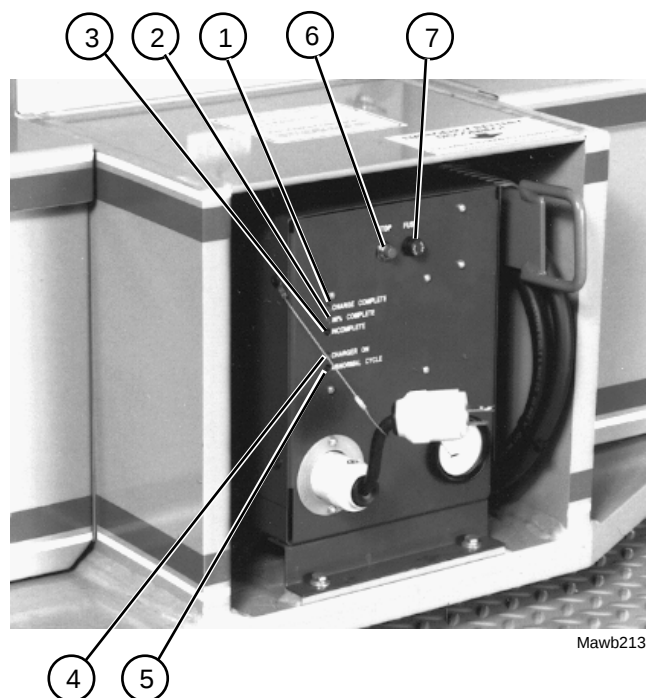


Figure 2-10. Automatic Battery Charger

BATTERY STATUS

1. GREEN LED CHARGE COMPLETE
2. YELLOW LED 80% CHARGE
3. RED LED INCOMPLETE

CHARGER STATUS

4. YELLOW LED CHARGER ON
5. RED LED ABNORMAL CYCLE
6. CHARGER STOP SWITCH
7. FUSE HOLDER

OPERATION OF THE COMPLETELY AUTOMATIC BATTERY CHARGER

This charger is equipped with an electronic circuit that will completely recharge the batteries and automatically turn off after the charge cycle is complete.

The function of the LED indicators is as follows:

When the AC power is connected to the charger, the LED's will flash several times then flash independently to check the light circuits. After the flashing sequence is complete the “INCOMPLETE” light will come on. Five seconds later, the “CHARGER ON” light will come on and at the same time, the ammeter will indicate how much current is going to the batteries.

As the charge cycle continues, which can last between 1-1/2 hours and 16 hours for a complete cycle, depending on the state of charge of the batteries, the “80% CHARGE” light will come on and the “INCOMPLETE” light will go off. When voltage of the batteries reaches approximately 60 volts, the “80% CHARGE” light will go off and the “CHARGE COMPLETE” light will come on. This light will remain on even after the charger is turned off by the electronic control. After the charger turns off, the “CHARGE COMPLETE” light will indicate to the operator that the batteries are healthy and are fully charged.

If the “80% CHARGE” light continues to stay on after the charge cycle is complete, this indicates to the operator that the batteries are not capable of attaining a full charge.

If the “INCOMPLETE” light remains on after the charge cycle is complete, this indicates to the operator that the batteries are not capable of attaining even an 80% charge.

If either the “80% CHARGE” or “INCOMPLETE” light remain on after the charge cycle is complete, the batteries should be inspected for problems.

Your standard good watering procedures should be used at all times.

Figure 2-11. Reach Diagram SJKB-33i, 33C

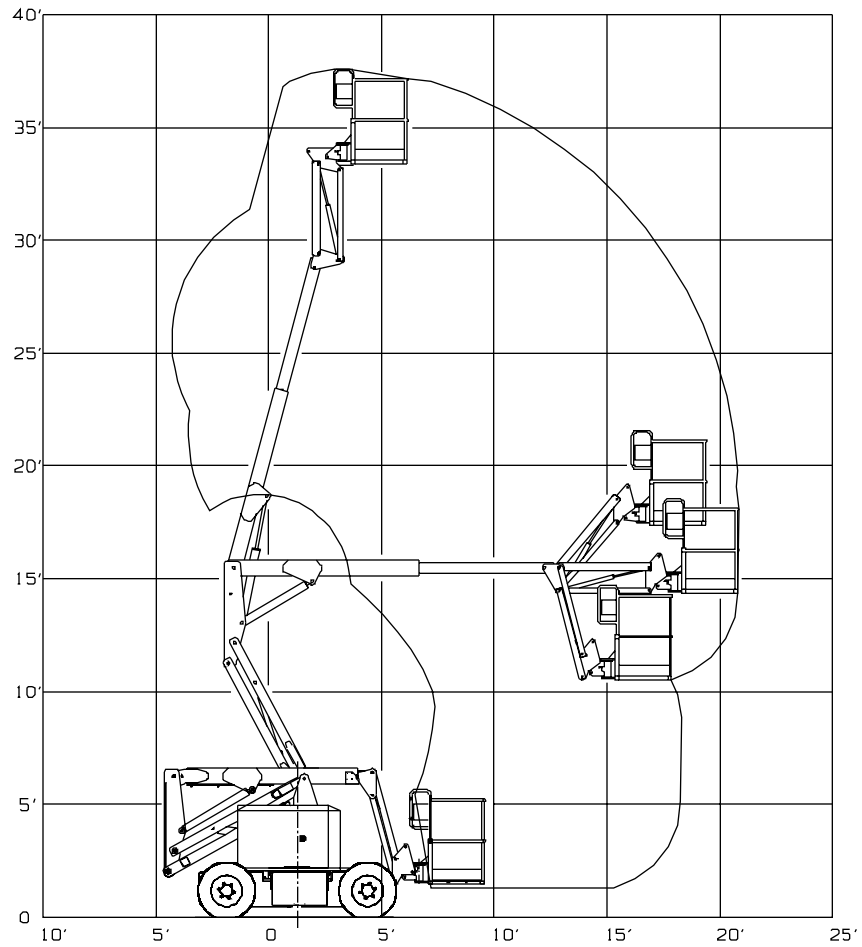


Figure 2-12. Dimensional Diagram SJKB-33i, 33C

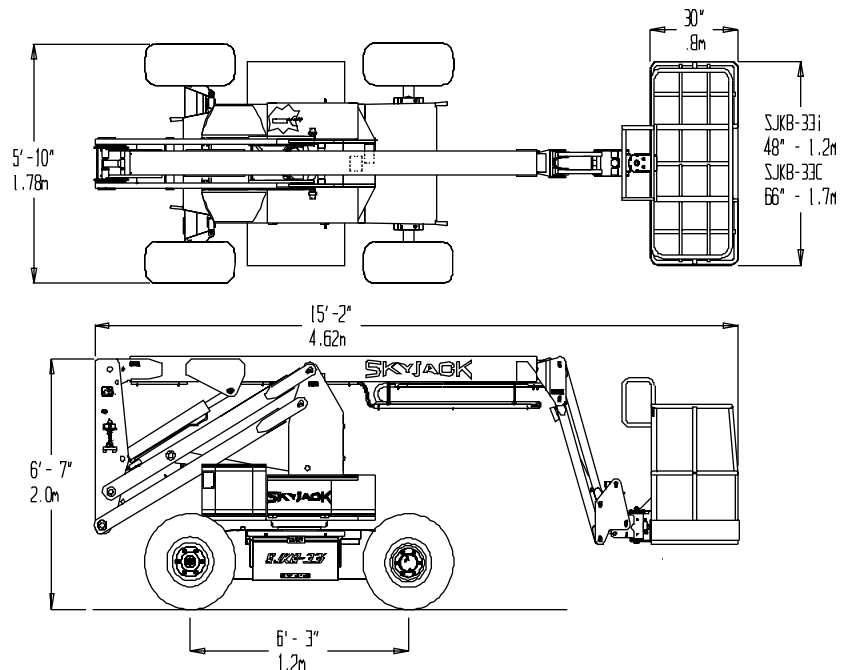


Figure 2-13. Reach Diagram SJKB-40i, 40C

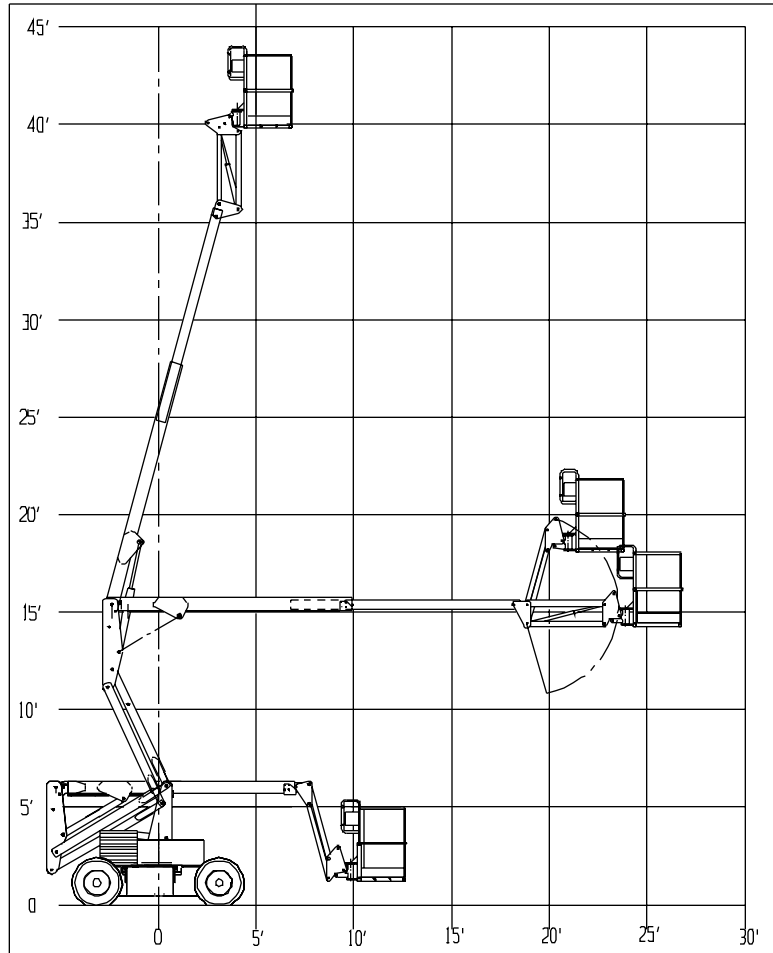


Figure 2-14. Dimensional Diagram SJKB-40i, 40C

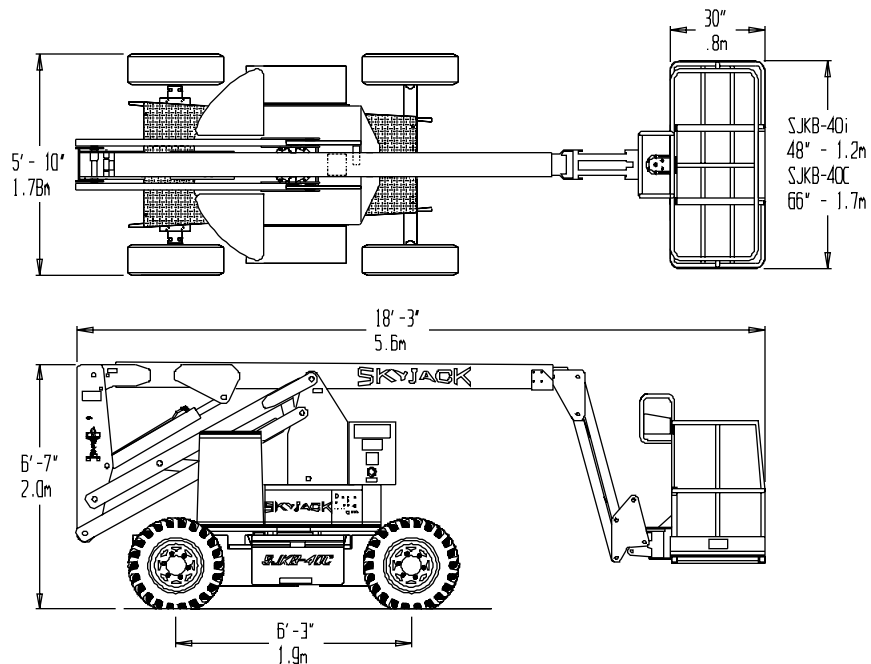


Table 2-1. Maintenance and Inspection Schedule

	Daily	Weekly	Monthly	3 Months	6 Months	*Yearly
MECHANICAL						
Struct. damage/welds (1)	✓					✓
Parking brakes (2)	✓					✓
Tires and wheels (1)(2)(3)	✓					✓
Guides and slides (1)(2)	✓					✓
Railings and gates (2)(3)		✓				✓
Bolts and fasteners (3)	✓					✓
Rust (1)			✓			✓
Wheel bearings (2) and king pins (1)(6)					✓	✓
Turret gear (1)(2)(3)(6)		✓				✓
Turret gear box (1)(2)(3)		✓				✓
Pivot pins (1)	✓					✓
Steer cylinder ends (6)				✓		✓
Axle gear oil (12)						✓
ELECTRICAL						
Battery fluid level (1)	✓					✓
Control switches (1)(2)(3)	✓					✓
Cords and wiring (1)	✓					✓
Battery trays (11)			✓			✓
Battery terminals (1)(3)(11)	✓					✓
Terminals and plugs (1)(3)(11)	✓					✓
Generator and recepticals (2)	✓					✓
Limit switches (2)	✓					✓
Tilt sensor (2)	✓					✓
Directional sensing (2)	✓					✓
HYDRAULIC						
Hydraulic fluid level (1)	✓					✓
Hydraulic leaks/hoses (1)(3)	✓					✓
Lift/lowering time (8)				✓		✓
Hydraulic cylinders (1)(2)(3)		✓				✓
Emergency lowering (2)	✓					✓
Lift capacity (5)			✓			✓
Hydraulic oil filter (7)					✓	✓
MISCELLANEOUS						
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 Serial Number Nameplate. (6) Lubricate (7) Replace			(8) See Table 2-5. General Specifications. (9) Replace if missing or illegible. (10) Proper Operation Manual MUST be in manual enclosure. (11) Clean (12) Change oil.			
			Mtwb500 *Record inspection date.			

BRAKE OPERATION 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. Owner's Annual Inspection Record

MODEL NUMBER _____					SERIAL NUMBER _____			
RECORDED DATE								
RECORDING YEAR #	1	2	3	4	5	6	7	8
OWNERS NAME								
INSPECTED BY								

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Table 2-3. Tire Specifications

Model	Tire		Fill Specification	
	Size	Rating	Type	Pressure
SJKB-33i, 40i	15 x 19.5	14 Ply	Air	105 PSI
SJKB-33i, 40i (Option)	11 L 16	12 Ply	Solid Urethane	*
SJKB-33C, 40C	30 x 10.00 x 16.5	10 Ply	Air	55 PSI
SJKB-33C, 40C (Option)	30 x 10.00 x 16.5	10 Ply	Solid Urethane	*
SJKB-33i, 40i (Flotation Option)	31 x 13.5 x 15	8 Ply	Air	40 PSI
HIGH FLOTATION (Optional)	31 x 15.5 x 15	8 PLY	Air	40 PSI

* 55 Durometer Fill installed at 105 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.

Table 2-4. Maximum Platform Capacities

Model	Platform Capacity (unrestricted)
ALL MODELS	500# (227kg) 2 occupants
NOTE: Refer to capacity label on work platform for additional information.	

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Table 2-5. General Specifications - SJKB-33i, 33C and SJKB-40i, 40C

ELECTRICAL SYSTEM	48 Volts DC
BATTERIES (8)	6 Volt, 305AH
TIRES	Refer to Table 2-3
INSIDE TURNING RADIUS	7' (2.13m)
OUTSIDE TURNING RADIUS	14'-6" (4.42m)
UNDERCLEARANCE (SJKB-33i, 33C)	9" (22.86cm)
UNDERCLEARANCE (SJKB-40i, 40C)	8" (20.32cm)
FLOOR LOADING (SJKB-33i, 33C)	21psi (1.48 kg/cm ²)
FLOOR LOADING (SJKB-40i, 40C)	25psi (1.76 kg/cm ²)
PIVOTAL HEIGHT	15'-0" (4.6m)
TAILSWING AT PIVOTAL HEIGHT	ZERO
TURRET ROTATION (non-continuous)	365 degrees
LIFT TIME (minimum)(entry height to maximum platform height)(SJKB-33i, 33C)	95 seconds
LOWERING TIME (minimum)(maximum platform height to entry height)(SJKB-33i, 33C)	80 seconds
LIFT TIME (minimum)(entry height to maximum platform height)(SJKB-40i, 40C)	124 seconds
LOWERING TIME (minimum)(maximum platform height to entry height)(SJKB-40i, 40C)	92 seconds
SYSTEM RELIEF PRESSURE (R1)	2600 psi
PUMP (boom function)	.194 ci./rev.
TRAVEL SPEED (maximum at stowed height)	3.0 mph (4.8kph)
TRAVEL SPEED (maximum at elevated height)	0.8mph (1.3kph)
RETURN FILTER	20 micron
HYD-RESERVOIR CAPACITY (33i, 33C, 40i, 40C)	8.8 gal.(33.3 liters)
HYD-SYSTEM CAPACITY (33i, 33C, 40i, 40C)	15.8 gal.(59.8 liters)
AMBIENT NOISE LEVEL	56 db26'-3" (8m)

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Table 2-6. Standard Operating Times - SJKB-33i, 33C and SJKB-40i, 40C

FUNCTION TEST	SECONDS
Riser Up	32-36
Riser Down	24-26
Boom Up	16-18
Boom Down	24-26
Boom Extract (SJKB 33i, 33C)	19-23
Boom Retract (SJKB 33i, 33C)	14-16
Boom Extract (SJKB 40i, 40C)	30-34
Boom Retract (SJKB 40i, 40C)	20-22
Jib Up	12-14
Jib Down	10-12
Platform Rotate Left	7-9
Platform Rotate Right	7-9
Turret Rotate Clockwise	57-63
Turret Rotate Counter Clockwise	57-63

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SECTION 3

SYSTEM COMPONENT IDENTIFICATION AND SCHEMATICS

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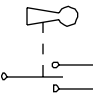
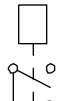
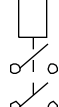
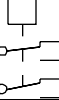
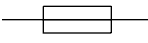
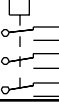
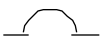
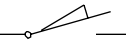
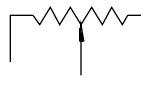
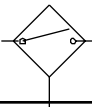
ELECTRICAL SYSTEM

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HYDRAULIC SYSTEM

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Table 3-1. Skyjack Booms, Electrical Symbols Legend

	CIRCUITS CROSSING NO CONNECTION		EMERGENCY STOP BUTTON		RELAY, SINGLE POLE SINGLE THROW
	CIRCUITS CONNECTED		KEY SWITCH		RELAY, SINGLE POLE DOUBLE THROW
	BATTERY		FOOT SWITCH		RELAY, DOUBLE POLE SINGLE THROW
	GROUND		TOGGLE SWITCH		RELAY, DOUBLE POLE DOUBLE THROW
	FUSE		BUSH BUTTON SWITCH		RELAY, TRIPLE POLE DOUBLE THROW
	CIRCUIT BREAKER		ROTARY SWITCH		DIODE
	BATTERY CHARGE INDICATOR		LIMIT SWITCH N.O.		SILICON CONTROLLED RECTIFIER
	HOURMETER		LIMIT SWITCH N.O. HELD CLOSED		CAPACITOR
	LIGHT		LIMIT SWITCH N.C.		RESISTOR
	HYDRAULIC VALVE COIL		LIMIT SWITCH N.C. HELD OPEN		POTENTIOMETER
	PROPORTIONAL HYDRAULIC VALVE COIL		CAM OPERATED LIMIT SWITCH		PROXIMITY SWITCH
	ELECTRIC MOTOR		TILT SWITCH		PNP TRANSISTOR
	HORN		LEVEL SENSOR		NPN TRANSISTOR

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Table 3-2. Skyjack Booms, Hydraulic Symbols Legend

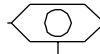
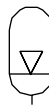
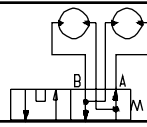
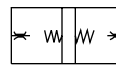
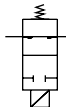
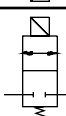
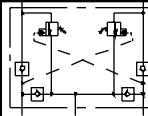
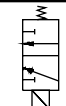
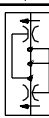
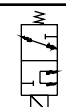
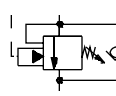
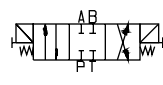
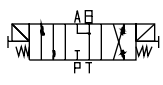
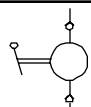
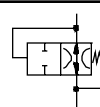
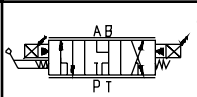
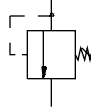
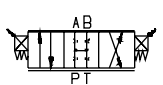
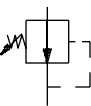
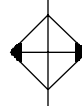
 MAIN LINES Solid	 ADJUSTABLE FLOW CONTROL	 ROTARY ACTUATOR
 PILOT LINES Dashed	 CHECK VALVE	 FIXED DISPLACEMENT HYDRAULIC MOTOR BIDIRECTIONAL
 LINES CROSSING NO CONNECTION	 SHUTTLE VALVE	 VARIABLE DISPLACEMENT HYDRAULIC MOTOR
 LINES CONNECTED	 ACCUMULATOR, GAS CHARGED	 BIDIRECTIONAL SERIES PARELLEL HYDRAULIC 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 RODDEED CYLINDER	 SERVO
 BRAKE CYLINDER	 SPRING APPLIED HYDRAULICALLY RELEASED BRAKE	

Table 3-3. Relay Schedule

RELAY NUMBER	RELAY FUNCTION	WIRES	LOCATION	NOTES
09ACR	Line Contactor	01B,01C,09A,00	Sevcon Panel	
09BCR1	Pump Motor Contactor	01D,09B,DCM3,SV2	Sevcon Panel	
09BCR2	Drive Relay	01C,01F,02,09B	Sevcon Panel	
15ACR	Reverse Drive Contactor	01E,S1,15A,09B	Sevcon Panel	
16ACR	Forward Drive Contactor	01E,S2,16A,09B	Sevcon Panel	
17CR1	Steer Directional Relay	17,02,23A,24,24A	Base Panel	
17CR2	Steer Directional Relay	17,02,23,23A,24A	Base Panel	
20CR	Flashing Light Relay	02,09,20,22A	Base Panel	Option
21CR	Dump Valve Relay	02,09,21,21A	Base Panel	
28CR	Tilted Lift Dissable Relay	02,08,27,28	Platform Console	
30ACR	Lift/Level Interlock Relay	02,10,10A,B30A	Platform Console	
30BCR	Lift/Level Interlock Relay	02,08,08A,30B	Platform Console	
49CR	Horn Option Relay	49,02,09,49A	Base Panel	Option

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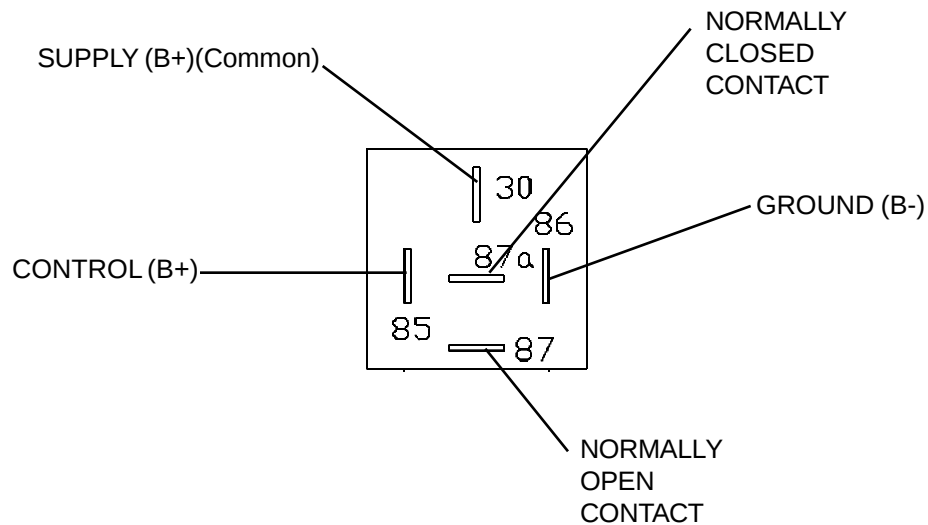


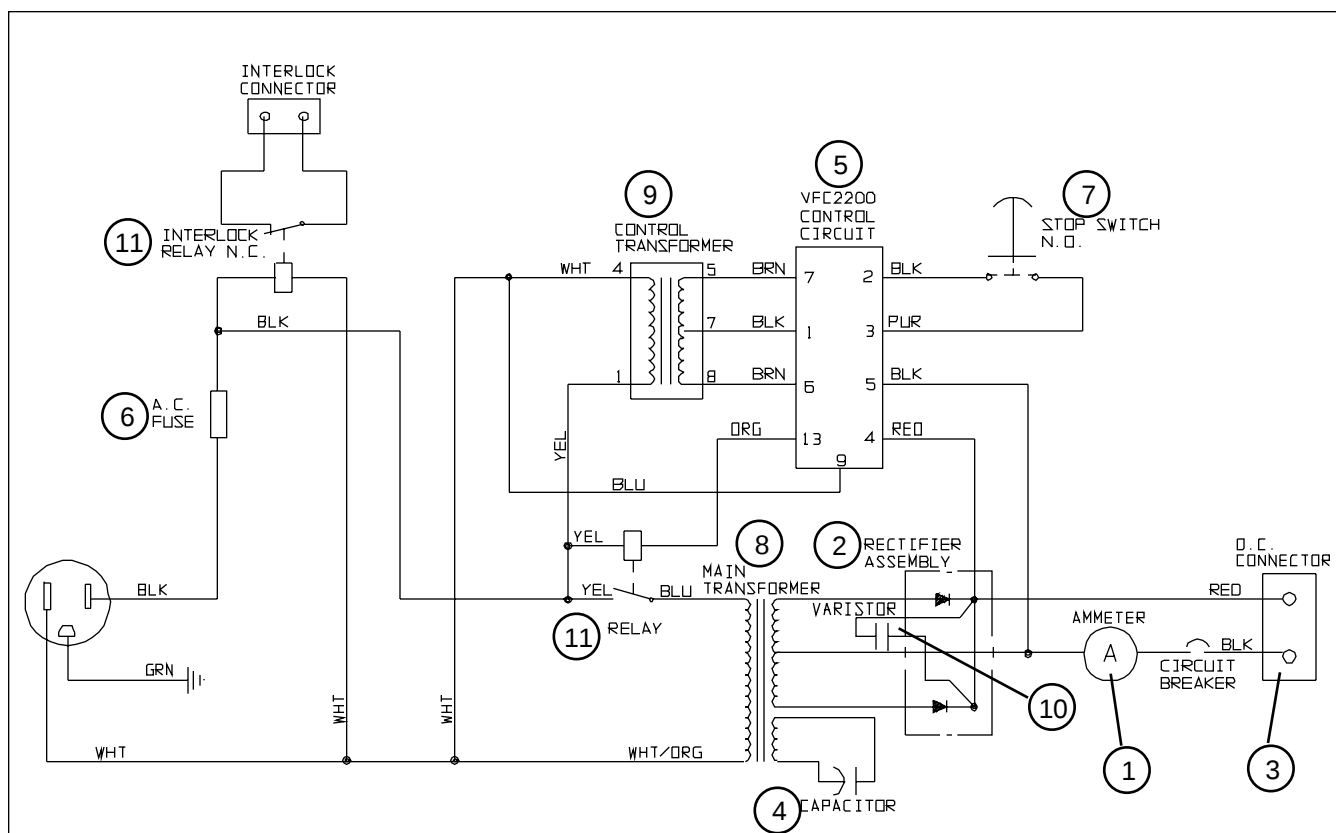
Table 3-4. Wire Number and Color Code

WIRE NO.	WIRE COLOR	WIRE NO.	WIRE COLOR	WIRE NO.	WIRE COLOR	WIRE NO.	WIRE COLOR	WIRE NO.	WIRE COLOR
1	PUR/BLK	20	ORG/BLU	39	BLK/RED	64	WHT/BRN	93	BLK SHLD
2	WHT	21	WHT/RED	40	BLU/RED	68	GREY	94	YEL/GRE-Y
3	GRN/PUR	22	PUR/GRN	41	BLU/PUR	69	WHT/GRN	96	WHT/GR-EY
4	RED/YEL	23	BLK/WHT	46	RED/BLK	74	GRN/GREY	97	ORG/GRE-Y
5	PUR	24	BLU/BLK	47	PUR/ORG	75	GREY/PUR	98	RED SHLD
6		25	BRN/BLK	48	YEL/GREY	76	BRN/BLU	98A	BLK SHLD
7	RED	26	BLU/YEL	49	GRN/RED	77	BRN/GREY	99	BLK/GREY
8	PUR/WHT	27	RED/BLK/ WHT	50	BRN	78	RED/BLU	103	BLK/PUR
9	YEL	28	GRN	51	BLK/GRN	79	BRN/PUR	107	BLK/BLU
10	BLU/WHT	29	GREY/ORG	53	BRN/RED	80	GREY/WHT	108	YEL/BRN
11	WHT/ORG	30	RED/GRN	54	PUR/RED	81	GREY/BLK	109	GRN/YEL
12	GREY/ORG	31	RED/WHT	55	YEL/PUR	82	BRN/WHT	110A	BLU
13	ORG	32	GRN/BLK	56	YEL/BLK	83	BLU/GREY	110B	BRN
14	BLK	33	GRN/WHT	57	BRN/GRN	84	WHT/BLK/ PUR	111	GREY/GR-N
15	BLU	34	ORG/BLK	59	YEL/BLU	85	GREY/BLU	114	YEL/RED
16	WHT/BLK	35	ORG/WHT	60	WHT/BLU	88	BLK/GRN	115	WHT/PUR
17	BLU/GRN	36	RED/PUR	61	GREY/BRN	90	RED/GREY	118	PUR/ORG
18	GRN/BLU	37	WHT/RED/ BLK	62	GREY/RED	91	RED SHLD		
19	ORG/GRN	38	ORG/RED	63	GREY/YEL	92	GRN SHLD		

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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.

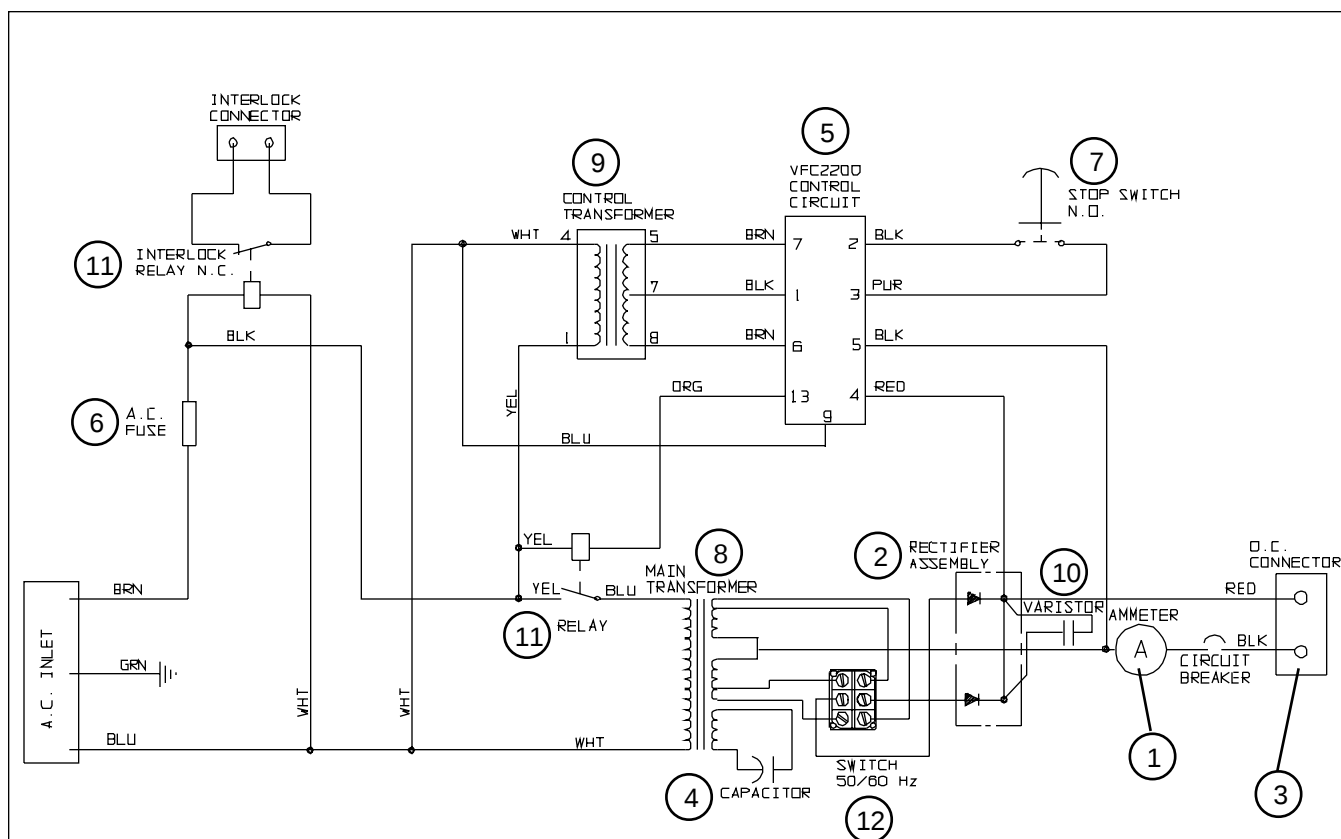
FIGURE 3-1. BATTERY CHARGER DIAGRAM AND PARTS LIST 120VAC/60Hz



MAWB305

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	707681	BATTERY CHARGER ASSEMBLY (MAC #BA821)	-
1	108554	• AMMETER, 0-30	1
2	700689	• RECTIFIER ASSEMBLY	1
	108556	• DIODE, 70 Amp	2
3	708976	• CORD ASSEMBLY, D.C.	1
	103364	• PLUG, 50 Amp gray	1
4	708974	• CAPACITOR, 10MFD 440 VDC	1
5	708975	• CONTROL CIRCUIT, 48 VDC 120V VAC	1
6	108558	• FUSE HOLDER, A.C.	1
	700688	• FUSE, 25 Amp A.C.	1
7	110857	• STOP SWITCH, N.O.	1
8	700691	• TRANSFORMER, 48 VDC 23 Amp 120 VAC/60Hz	1
9	108564	• CONTROL TRANSFORMER	1
10	700692	• VARISTOR	1
11	115315	• RELAY, 120 VAC/30 Amp	2

FIGURE 3-2. BATTERY CHARGER DIAGRAM AND PARTS LIST 220VAC/50-60Hz

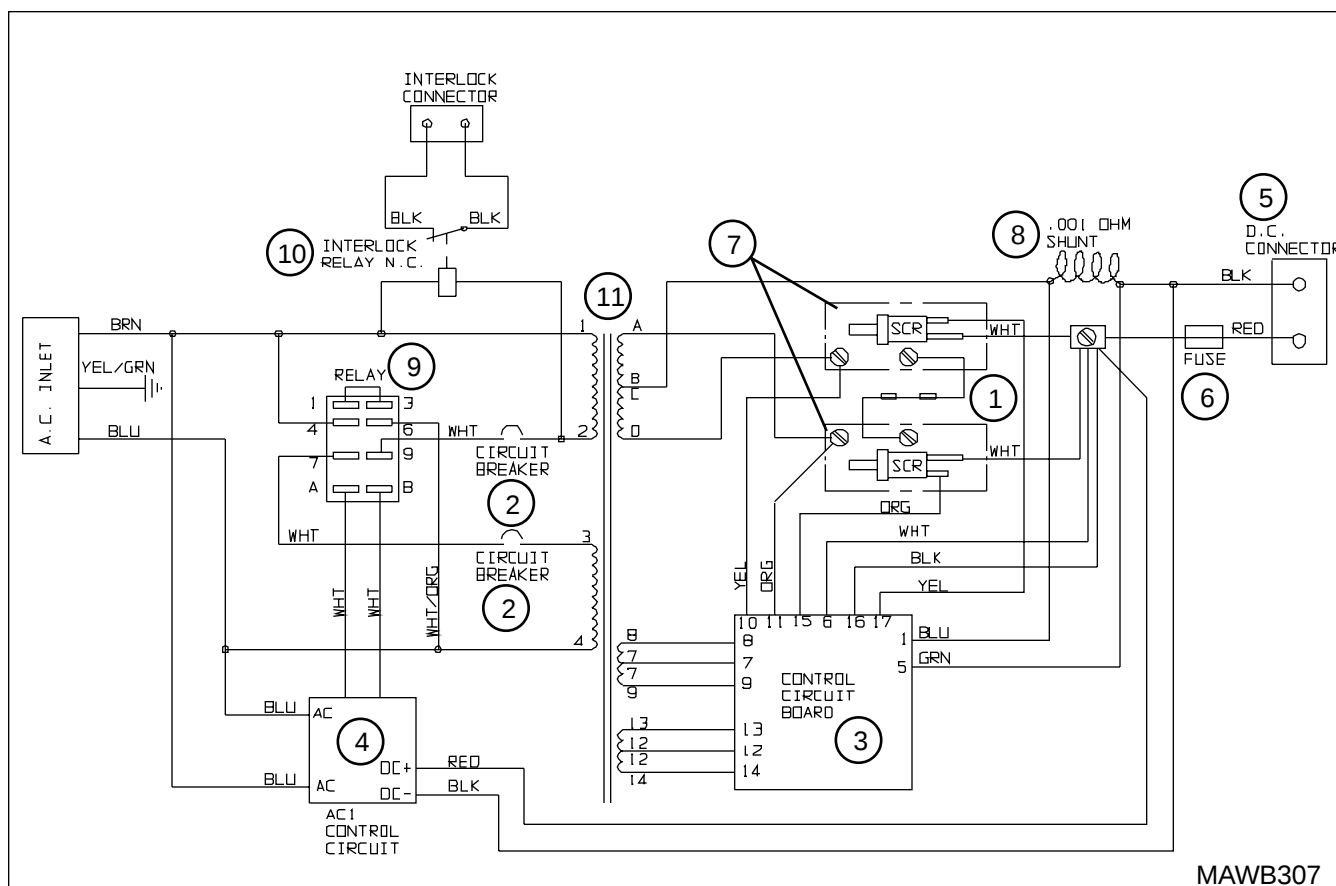


MAWB306

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	707682	BATTERY CHARGER ASSEMBLY (MAC #BA842)	-
1	108554	• AMMETER, 0-30	1
2	708978	• RECTIFIER ASSEMBLY	1
	108556	• DIODE, 70 Amp	2
3	708976	• CORD ASSEMBLY, D.C.	1
	103364	• PLUG, 50 Amp gray	1
4	700877	• CAPACITOR, 10MFD TX 660 VAC	1
5	708977	• CONTROL CIRCUIT, 48 VDC 240V VAC	1
6	108558	• FUSE HOLDER, A.C.	1
	700688	• FUSE, 25 Amp A.C.	1
7	110857	• STOP SWITCH, N.O.	1
8	700879	• TRANSFORMER, 48 VDC 25 Amp 240 VAC/50-60Hz	1
9	111907	• CONTROL TRANSFORMER	1
10	700692	• VARISTOR	1
11	708979	• RELAY, 240 VAC	2
12	708980	• SWITCH, Toggle DPDT	1

NOTES

FIGURE 3-3. BATTERY CHARGER DIAGRAM AND PARTS LIST *DUAL VOLTAGE*



Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	120075	BATTERY CHARGER ASSEMBLY (MAC #BA1045)	-
1	119157	• CAPACITOR ASSEMBLY	2
2	119143	• CIRCUIT BREAKER, 10 Amp AC	2
3	119151	• CONTROL CIRCUIT, 48 Volt 21 Amp	1
4	119160	• AC CONTROL	1
5	119152	• CORD ASSEMBLY, DC	1
	103206	• PLUG, 50 Amp red	1
6	117178	• FUSE HOLDER, DC	1
	117177	• FUSE, 80 Amp DC	1
7	119148	• RECTIFIER ASSEMBLY	2
	119150	• SCR, 35 Amp	1
8	119149	• SHUNT ASSEMBLY, Spiral .001 ohm	1
9	119155	• RELAY, 24 VDC 30 Amp	1
10	119156	• RELAY, 120 VAC	1
11	119145	• TRANSFORMER, 48 VDC/20 Amp 120/240 VAC 50/60Hz	1

FIGURE 3-4. OPERATOR'S CONTROL CONSOLE DIAGRAM PARTS LIST

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
1	702662	SWITCH, Toggle, DPDT 3 position momentary	3
2	(Ref.)	SWITCH ASSEMBLY, Emergency stop	1
	102769	• SWITCH HEAD	1
	103281	• SWITCH CONTACT	1
3	102853	SWITCH, Toggle, SPDT 3 position momentary	4
4	(Ref.)	POTENTIOMETER ASSEMBLY	1
	708933	• POTENTIOMETER	1
	707253	• KNOB, Potentiometer	1
5	702406	JOYSTICK ASSEMBLY, Drive/steer	1
	701044	JOYSTICK ASSEMBLY, Drive/steer with horn option	1
6	(Ref.)	INDICATOR LIGHT ASSEMBLY	2
	102671	• LIGHT BASE	1
	103202	• LIGHT HEAD	1
	102771	• BULB	1
7	108589	RELAY, 40 Amp sealed	2
8	103057	BEEPER, 4-28VDC Alarm	1
9	704733	GAUGE, Battery "fuel" (optional)	1
10	707148	JUMPER, Terminal block	2
11	103256	CABLE, 18/2	34"
12	(Ref.)	CONNECTOR ASSEMBLY, 4 Pin Female	1
	103568	• HOUSING, Connector female	1
	103570	• INSERT, Female 4 pin connector	1
13	(Ref.)	CONNECTOR ASSEMBLY, 4 Pin male	1
	103567	• HOUSING, Connector male	1
	103569	• INSERT, Male 4 pin connector	1
14	700187	FOOT SWITCH	1
15	(Ref.)	CONNECTOR RECEPTACLE, 40 Pin	1
	707875	• HOUSING, 40 Pin receptacle	1
	707847	• GASKET, Connector	1
	705256	• PLUG, Weather seal	AR
16	707147	END STOP, Terminal block	2
17	707146	END PLATE, Terminal block	1
18	707145	TERMINAL BLOCK, Diode	2
19	707143	TERMINAL BLOCK, Through	15
20	707149	DIN RAIL, Terminal block	.05

FIGURE 3-4. OPERATOR'S CONTROL CONSOLE DIAGRAM

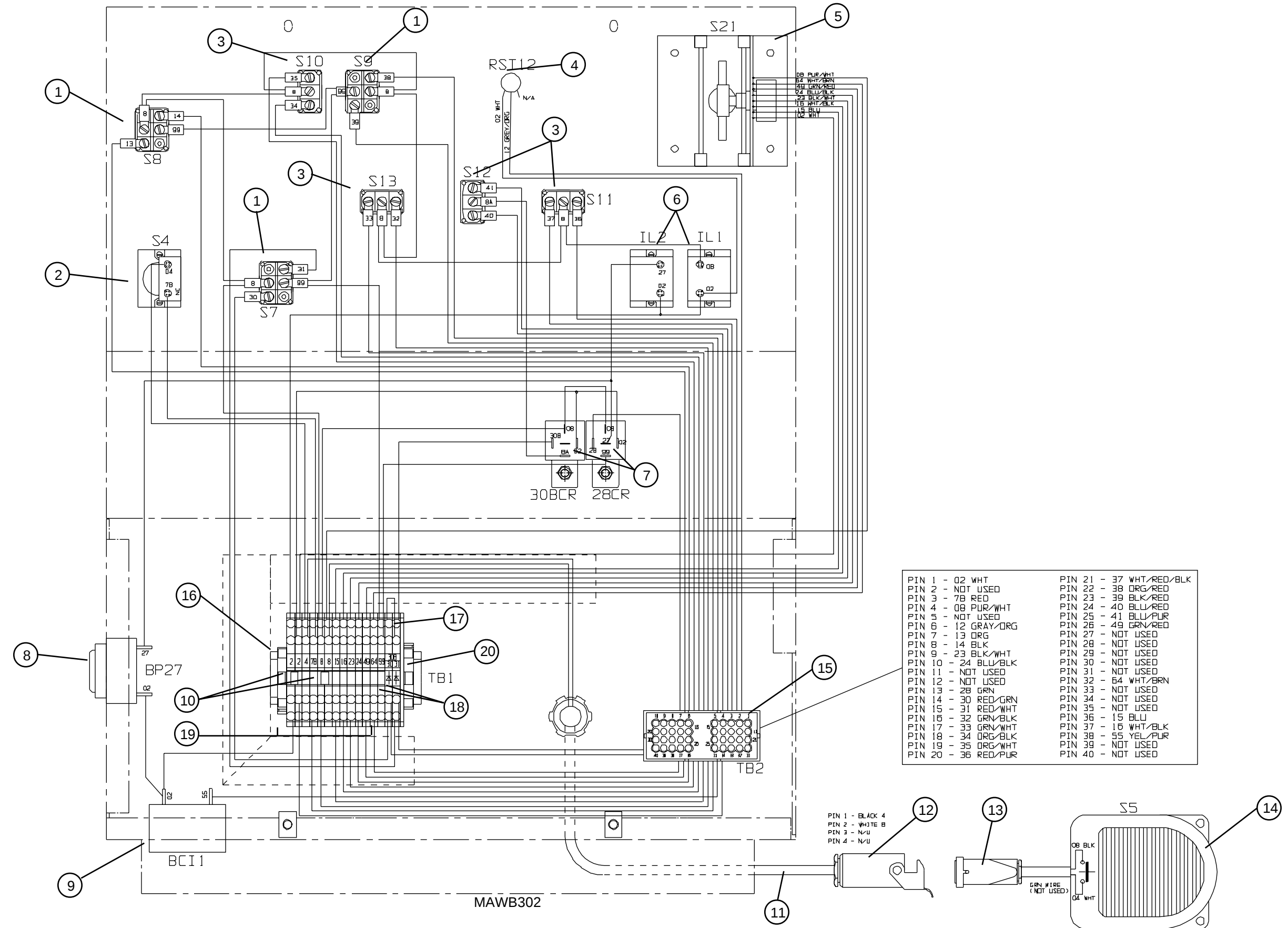


FIGURE 3-5. BASE CONTROL/ELECTRICAL DIAGRAM

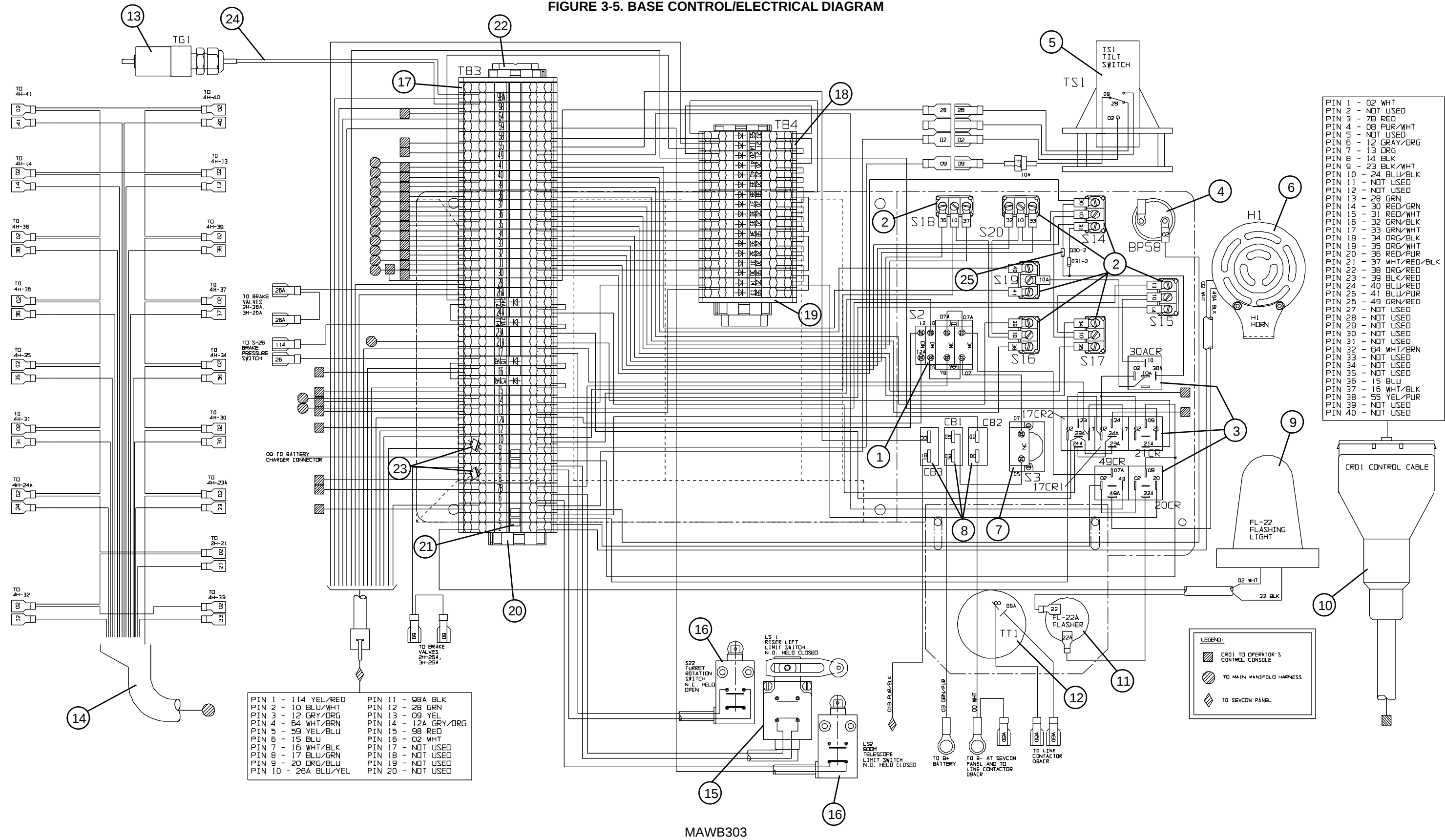


FIGURE 3-5. BASE ELECTRICAL/CONTROL PANEL DIAGRAM PARTS LIST

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
1	(Ref.)	SWICH ASSEMBLY, Key select	1
	702395	• SELECT SWITCH, Key	1
	103279	• CONTACT BASE, Switch (2 N.C.)	1
	103141	• CONTACT BASE, Switch N.O.	2
2	102853	SWITCH, Toggle SPDT 3 position momentary	7
3	108589	RELAY, 40 Amp sealed	AR
4	103057	BEEPER, Alarm 24 volt (optional)	1
5	700552	SENSOR, Tilt	1
6	102860	HORN, 24 Volt (optional)	1
7	(Ref.)	SWITCH ASSEMBLY, Emergency stop	1
	102769	• SWITCH HEAD, Emergency stop	1
	103281	• CONTACT BASE, Switch N.C.	1
8	703632	BREAKER, 10 Amp	AR
9	106756	LIGHT ASSEMBLY, Flashing (optional)	1
10	708866	CABLE ASSEMBLY, Control (SJKB-33i, 33C)	1
	708867	CABLE ASSEMBLY, Control (SJKB-40i, 40C)	1
	707874	• HOUSING, Connector	1
	705255	• SOCKET, Contact	40
	707846	• BOOT, Connector	1
	704677	• CABLE, 18/40 Control (SJKB-33i, 33C)	528"
		• CABLE, 18/40 Control (SJKB-40i, 40C)	612"
11	103267	FLASHER, 24 Volt (optional)	1
12	701925	HOUR METER	1
13	700227	TACHOMETER GENERATOR	1
14	708901	WIRE HARNESS, Main manifold	1
15	708604	LIMIT SWITCH ASSEMBLY	1
16	700160	LIMIT SWITCH, Sealed	2
17	707143	TERMINAL BLOCK, Through	42
18	707145	TERMINAL BLOCK, Diode	20
19	707146	END PLATE, Terminal block	2
20	707147	END STOP, Terminal block	4
21	707148	JUMPER, Terminal block	4
22	707149	DIN RAIL, Terminal block	.20
23	102921	DIODE, 6 Amp 1000PIV	2
24	700165	CABLE, 22 GA Shielded	98"
25	700166	DIODE, 1 Amp 400PIV	AR

FIGURE 3-6. SEVCON PANEL DIAGRAM PARTS LIST

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
1	700837	SEVCON PANEL ASSEMBLY	-
	700214	• CONTROLLER ASSEMBLY, Pump	1
	701082	•• RESISTOR ASSEMBLY, 2.2 K 3 Watt	1
2	700990	• CONTROLLER ASSEMBLY, Drive	1
	708484	• KIT. Connector and pins	AR
3	102756	• FUSE, 200 Amp pump	1
4	700228	• FUSE, 300 Amp drive	1
5	700219	• CONTACTOR, Pump	1
6	700218	• CONTACTOR, Drive	2
7	700222	• FUSE HOLDER, Double	1
	110855	• FUSE, AGC 10	2
	108589	• RELAY, Sealed 40 amp	1
9	700217	• TACHOMETER CARD	1
	700776	•• FUSE, 250 Volt/6.3 amp	1
	700777	•• FUSE, 250 Volt/20 amp	1
10	701078	• LINE CONTACTOR	1
11	701081	• RESISTOR ASSEMBLY	1

MAWB304

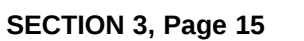


FIGURE 3-7. ELECTRICAL SCHEMATIC PARTS LIST

Ref. No.	Skyjack Part No.	Description	Units per Assy
		1 2 3 4 5 6 7	
09ACR	701078	LINE CONTACTOR	1
09BCR1	700219	PUMP MOTOR CONTACTOR	1
09BCR2	108589	RELAY, Sevcon panel	1
15ACR	700218	REVERSE DRIVE CONTACTOR	1
16ACR	700218	FORWARD DRIVE CONTACTOR	1
17CR1			
THRU	108589	RELAY, 40 Amp sealed	AR
28CR			
2H-21A	702754	COIL, Dump valve	1
2H-26A	708981	BRAKE VALVE ASSEMBLY	1
30ACR	108589	RELAY, Interlock	1
30BCR	108589	RELAY, Interlock	1
3H-26A	701298	BRAKE VALVE ASSEMBLY	1
4H-13			
THRU	702755	COIL, DIRECTIONAL VALVE	16
4H-41			
B1 - B8	700193	BATTERY, 6 Volt 350AH	8
BCI1	704733	BATTERY "FUEL" GAUGE (option)	1
BP-27	103057	BEEPER, Alarm	1
BP-58	103057	BEEPER, Alarm (option)	1
CB1 - CB2	703632	CIRCUIT BREAKER	2
CB3	703632	CIRCUIT BREAKER (option)	1
CRD1	708865	CONTROL CABLE ASSEMBLY	1
D08-C10-1	102921	DIODE, 6 Amp 1000 piv	2
D10-2	700166	DIODE, 1 Amp 400 piv	1
D114	707145	TERMINAL BLOCK DIODE	1
D13	707145	TERMINAL BLOCK DIODE	1
D13-1	700166	DIODE, 1 Amp 400 piv	1
D14	707145	TERMINAL BLOCK DIODE	1
D15	700166	DIODE, 1 Amp 400 piv	1
D15-1	707145	TERMINAL BLOCK DIODE	1
D15-2-D16	700166	DIODE, 1 Amp 400 piv	2
D16-1	707145	TERMINAL BLOCK DIODE	1
D16-2	700166	DIODE, 1 Amp 400 piv	1
D20-1	707145	TERMINAL BLOCK DIODE	1
D20-2-D21	700166	DIODE, 1 Amp 400 piv	2
D23A-D30-1	707145	TERMINAL BLOCK DIODE	3
D30-2	700166	DIODE, 1 Amp 400 piv	1
D30-3	707145	TERMINAL BLOCK DIODE	1
D30-4	700166	DIODE, 1 Amp 400 piv	1
D31-1	707145	TERMINAL BLOCK DIODE	1
D31-2	700166	DIODE, 1 Amp 400 piv	1
D31-3-D34	707145	TERMINAL BLOCK DIODE	4
D34-1	700166	DIODE, 1 Amp 400 piv	1
D35 - D38	707145	TERMINAL BLOCK DIODE	4
D38-1	700166	DIODE, 1 Amp 400 piv	1
D39 - D41	707145	TERMINAL BLOCK DIODE	3
DCM1	701007	DRIVE MOTOR	1
DCM3	700668	PUMP MOTOR	1
F1 - F2	110855	FUSE, AGC 10	2

Ref. No.	Skyjack Part No.	Description	
		1 2 3 4 5 6 7	
F3	700228	FUSE, 300 Amp drive	1
F4	102756	FUSE, 200 Amp pump	1
F5	700777	FUSE, 20 Amp	1
F6	700776	FUSE, 6.3 Amp	1
F7	114866	FUSE, 1 Amp tilt	1
FL22	106756	FLASHER (option)	1
FL22A	103267	FLASHING LIGHT (option)	1
H1	102860	HORN (option)	1
LB5-LB6	(Ref.)	INDICATOR LIGHT ASSEMBLY	1
	102671	LIGHT BASE	1
	103202	LIGHT HEAD	1
	102771	BULB	1
LS1	708604	LIMIT SWITCH, Riser lift	1
LS2	700160	LIMIT SWITCH, Boom telescope	1
RST12	708933	POTENTIOMETER	1
RST1B	701081	RESISTOR ASSEMBLY	1
RST1D	701082	RESISTOR ASSEMBLY	1
S10 - S20	102853	TOGGLE SWITCH, SPDT momentary	AR
S2	(Ref.)	KEY SWITCH ASSEMBLY	1
	702395	KEY SELECT SWITCH	1
	103279	CONTACT BASE, Switch (2N.C.)	1
	103141	CONTACT BASE, Switch N.O.	1
S21	702406	DRIVE/STEER CONTROLLER without horn	1
	701044	DRIVE/STEER CONTROLLER with horn	1
S22	700160	LIMIT SWITCH, Turret position	1
S26	708677	BRAKE PRESSURE SWITCH	1
S3 - S4	(Ref.)	EMERGENCY STOP BUTTON ASSEMBLY	1
	102769	SWITCH HEAD	1
	103281	CONTACT BASE	1
S5	700187	FOOT SWITCH	1
S7 - S9	702662	TOGGLE SWITCH, DPDT momentary	3
SV1	700990	DRIVE MOTOR CONTROLLER	1
SV2	700214	PUMP MOTOR CONTROLLER	1
TC1	700217	TACHOMETER CIRCUIT CARD	1
TG1	700227	TACHOMETER GENERATOR	1
TS1	700552	TILT SENSOR	1
TT1	701925	HOUR METER	1

FIGURE 3-7. ELECTRICAL SCHEMATIC

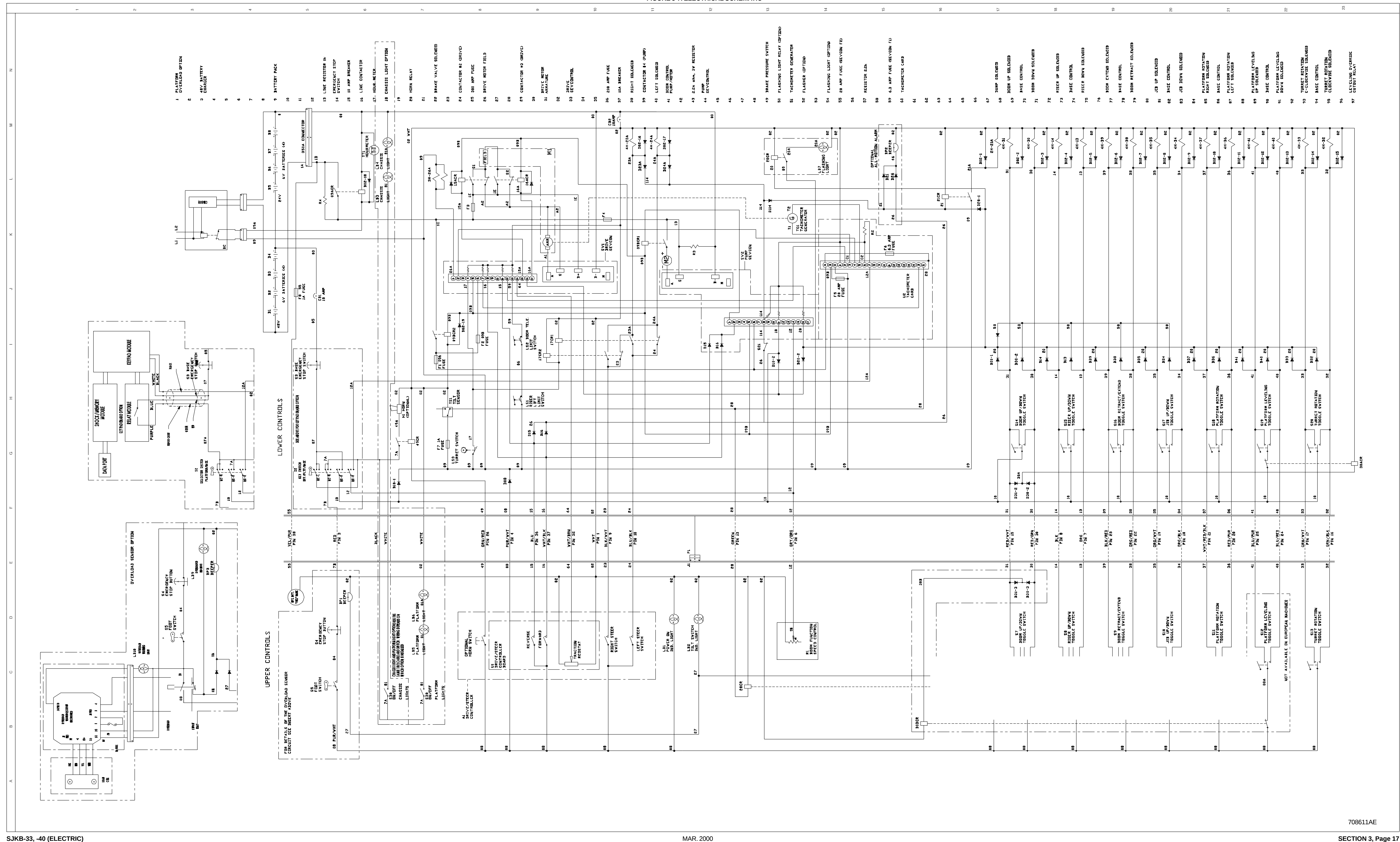


FIGURE 3-8. HYDRAULIC SCHEMATIC

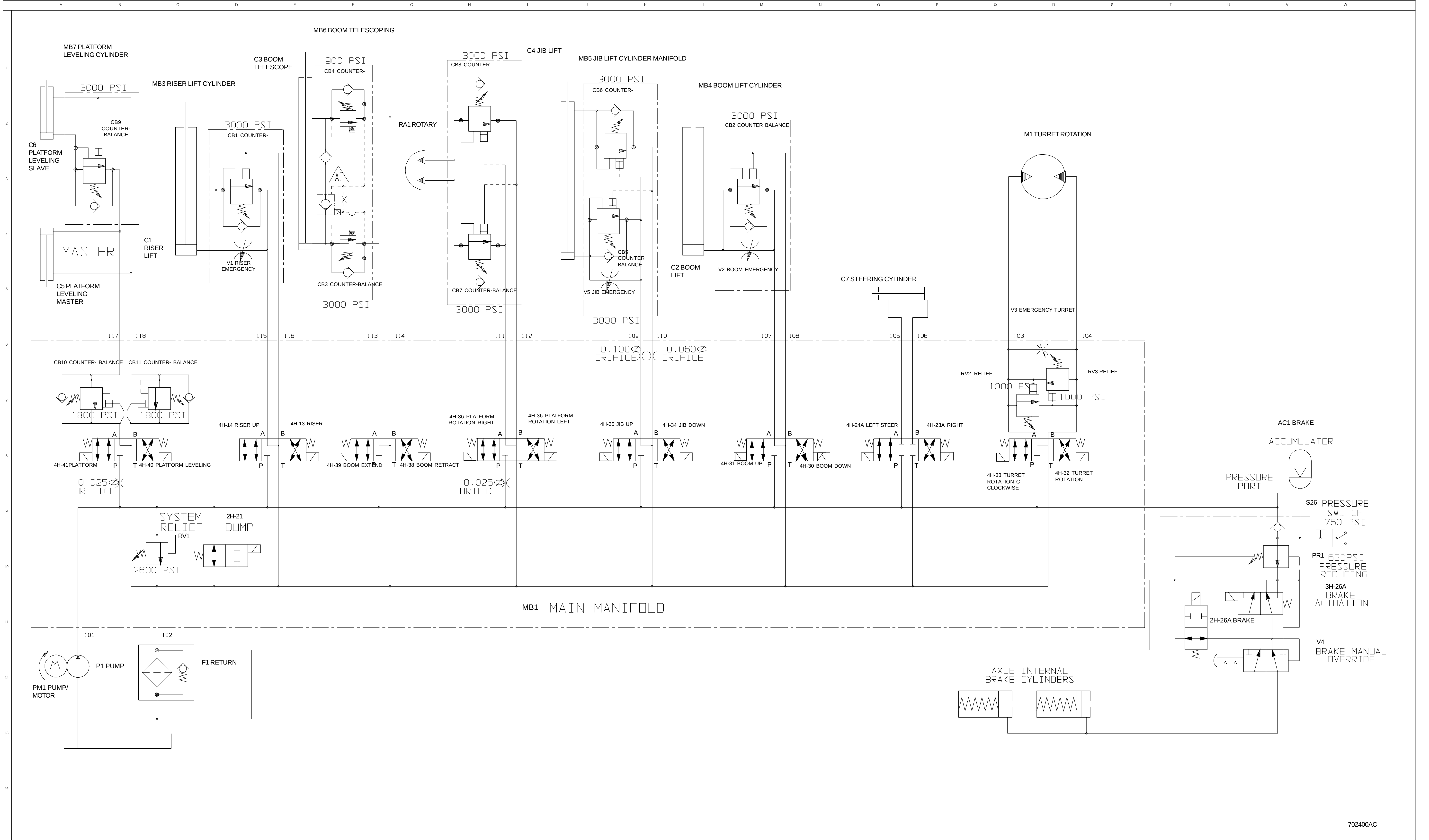
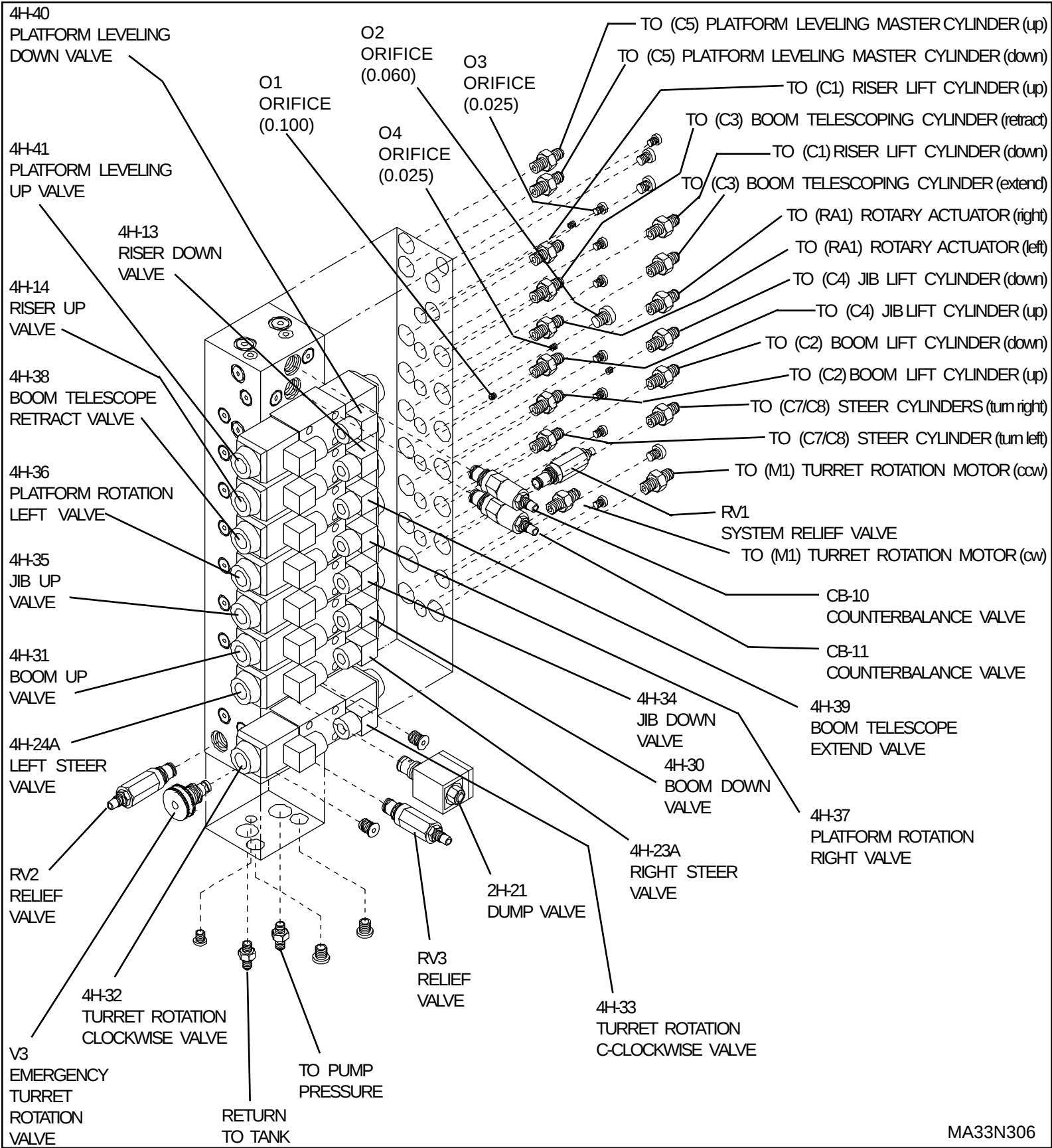


FIGURE 3-8. HYDRAULIC SCHEMATIC PARTS LIST

Ref. No.	Skyjack Part No.	Description	Units per Assy
		1 2 3 4 5 6 7	
AC1	700903	PRESSURE ACCUMULATOR, Brake (450 PSI)	1
C1	700328	CYLINDER ASSEMBLY, Riser lift	1
	700452	• KIT, Seal repair	AR
C2	700989	CYLINDER ASSEMBLY, Boom lift	1
	700452	• KIT, Seal repair	AR
C3	700827	CYLINDER ASSEMBLY, Boom telescoping	1
	700455	• KIT, Seal repair	AR
C4	708655	CYLINDER ASSEMBLY, Jib lift	1
	700456	• KIT, Seal repair	AR
C5	700333	CYLINDER ASSEMBLY, Platform levelling master	1
	700454	• KIT, Seal repair	AR
C6	700388	CYLINDER ASSEMBLY, Platform levelling slave	1
	700454	• KIT, Seal repair	AR
C7	700299	CYLINDER ASSEMBLY, Steer	1
	700451	• KIT, Seal repair	AR
CB1-CB9	700568	COUNTERBALANCE VALVE (3000 PSI)	9
CB10	700670	COUNTERBALANCE VALVE (1800 PSI)	1
CB11	700670	COUNTERBALANCE VALVE (1800 PSI)	1
F1	704488	FILTER ASSEMBLY, Return	1
	104254	• ELEMENT, Filter	AR
2H-21	700677	VALVE, Dump	1
2H-26A	708981	VALVE, Brake	1
3H-26A	701298	VALVE, Brake	1
4H-13	701860	VALVE, Riser down (includes 4H-14)	1
4H-14	701860	VALVE, Riser up (includes 4H-13)	1
4H-23A	701861	VALVE, Right steer (includes 4H-24A)	1
4H-24A	701861	VALVE, Left steer (includes 4H-23A)	1
4H-30	701860	VALVE, Boom down (includes 4H-31)	1
4H-31	701860	VALVE, Boom up (includes 4H-30)	1
4H-32	701860	VALVE, Turret rotation clockwise (includes 4H-33)	1
4H-33	701860	VALVE, Turret rotation c-clockwise (includes 4H-32)	1
4H-34	701860	VALVE, Jib down (includes 4H-35)	1
4H-35	701860	VALVE, Jib up (includes 4H-34)	1
4H-36	701860	VALVE, Platform rotation left (includes 4H-37)	1
4H-37	701860	VALVE, Platform rotation right (includes 4H-36)	1
4H-38	701860	VALVE, Boom retract (includes 4H-39)	1
4H-39	701860	VALVE, Boom extend (includes 4H-38)	1
4H-40	701860	VALVE, Platform levelling down (includes 4H-41)	1
4H-41	701860	VALVE, Platform levelling up (includes 4H-40)	1

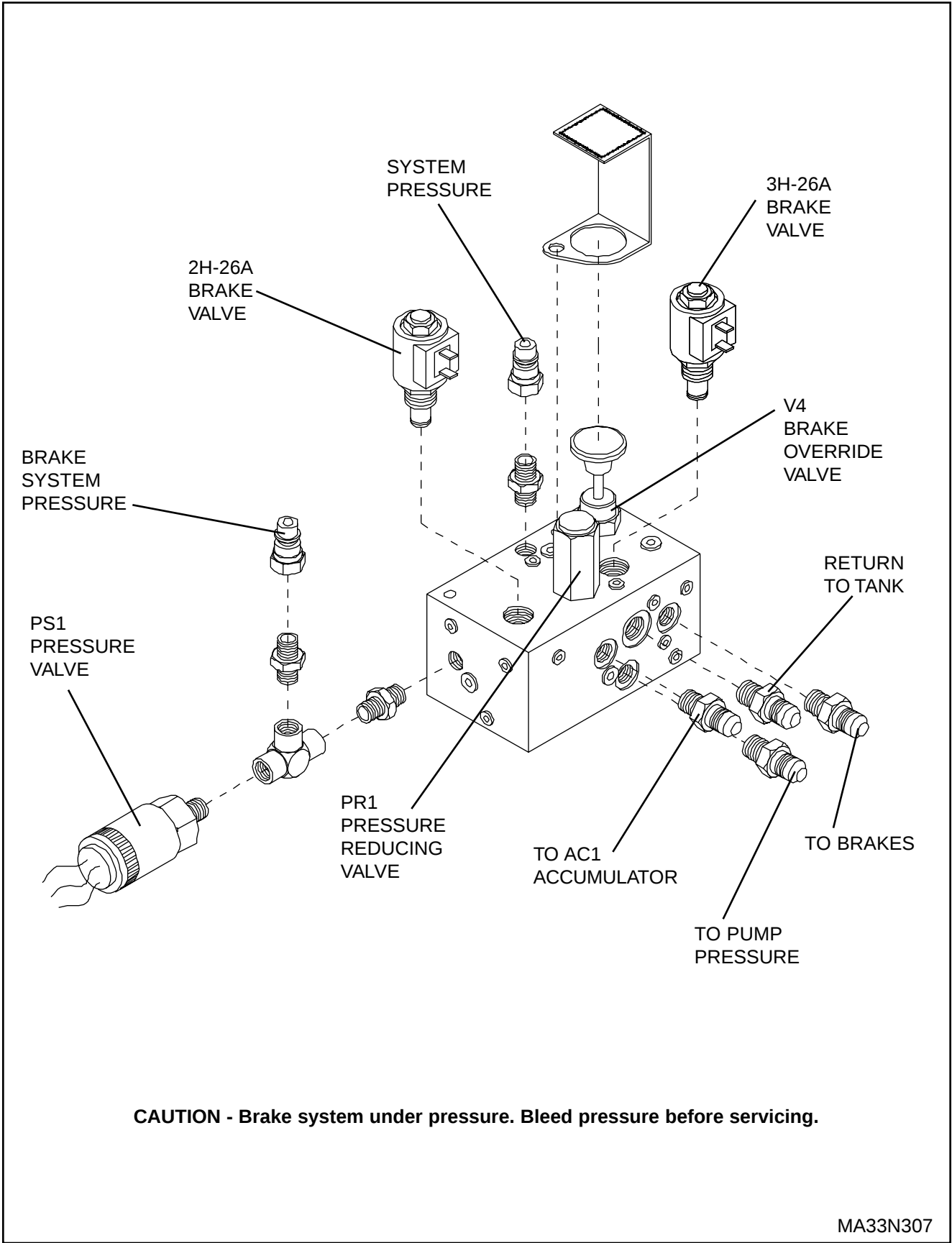
Ref. No.	Skyjack Part No.	Description	Units per Assy
		1 2 3 4 5 6 7	
M1	700316	MOTOR, Turret rotation	1
	704237	• KIT, Seal Repair	AR
O1	700679	ORIFICE, 0.100 diameter	1
O2	700680	ORIFICE, 0.060 diameter	1
O3	700682	ORIFICE, 0.025 diameter	1
O4	700682	ORIFICE, 0.025 diameter	1
P1	700669	PUMP, Hydraulic .194 ci/rev	1
PM1	700224	PUMP/MOTOR ASSEMBLY, Boom function	1
PR1	701296	PRESSURE REDUCING VALVE, Brake (650 PSI)	1
PS1	701194	PRESSURE SWITCH (off at 750 PSI)	1
RA1	700448	ROTARY ACTUATOR	1
	701875	• KIT, Seal repair	AR
RV1	700673	RELIEF VALVE, System (2600 PSI)	1
RV2	700672	RELIEF VALVE, Turret rotation (1000 PSI)	1
RV3	700672	RELIEF VALVE, Turret rotation (1000 PSI)	1
V1	103136	VALVE, Riser cylinder emergency lowering	1
V2	103136	VALVE, Boom cylinder emergency lowering	1
V3	103136	VALVE, Emergency turret rotation	1
V4	701297	VALVE, Brake override	1
V5	103136	VALVE, Jib cylinder emergency lowering	1

FIGURE 3-9. MAIN MANIFOLD COMPONENT AND PORT IDENTIFICATION



MA33N306

FIGURE 3-10. BRAKE MANIFOLD COMPONENT AND PORT IDENTIFICATION



CAUTION - Brake system under pressure. Bleed pressure before servicing.

MA33N307

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.

TROUBLESHOOTING INFORMATION

TROUBLE	PROBABLE CAUSE	REMEDY
ELECTRICAL SYSTEM		
All Controls Inoperative	1A. Batteries disconnected.	1A. Connect batteries.
	1B. Batteries not fully charged.	1B. Check each cell with hydrometer; reading should be 1.275 (fully charged). Recharge if low reading. Replace if reading difference between cells is 0.050.
	1C. Dirty or loose battery terminals or connector pins.	1C. Clean and/or tighten.
	2. Charger plugged in.	2. Unplug charger.
	3. Broken or loose wire #01B on main disconnect.	3. Check continuity. Replace if defective.
	4. Broken or loose wire #03 to (CB2).	4. Check continuity. Replace if defective.
	5. Circuit Breakers (CB1) or (CB2) tripped or defective.	5. Reset switch or replace if defective.
	6. Broken or loose wire #05 to (CB2) from (S3).	6. Check continuity. Replace if defective.
	7. Base Emergency Stop Switch (S3) open or defective.	7. Check continuity thru switch, replace if defective.
	8. Broken or loose wire #07 from (S3) to (S2).	8. Check continuity. Replace if defective.
	9. Base Platform Select Switch (S2) defective.	9. Check continuity thru switch, replace if defective.
	10. Defective relay (09BCR2).	10. Replace if defective.
	11. Defective Sevcon.	11. See Sevcon Troubleshooting.
	12. Line contactor (09ACR) open or defective.	12. Replace if defective.

TROUBLESHOOTING (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
ELECTRICAL SYSTEM (Cont.)		
All Controls Inoperative (cont.)	13. No power to wire #09A on line contactor (09ACR).	13. Check wire #09A on line contactor (09ACR) for 24V with foot switch depressed or base controls selected. Repair as necessary.
Controls Inoperative from Platform	- Broken or loose #07B wire in boom control cable. - Broken or loose #07B pin in plug. - Open Emergency Stop Button (S4). - Broken or loose wire #04 from (S4) to (S5) Foot Switch. - Foot Switch (S5) open or defective. - Broken or loose wire #08 from (S5) to platform controls. - Broken or loose #08 wire in boom control cable. - Broken or loose #08 pin in plug. - Diode (D8) open or defective. - Loose or broken #12 wire in control cable.	- Check continuity. Replace if open. - Replace pin if defective. - Check continuity thru switch, replace if defective. - Check continuity. Replace if open. - Check continuity thru switch, replace if defective. - Check continuity. Replace if open. - Check continuity. Replace if defective. - Replace pin if defective. - Check continuity. Replace if defective. - Check continuity. Replace if defective.
Base Controls Inoperative	- Key Selector Switch (S2) open or defective. - Loose or broken wire #10 from (S2) to function switches, or to pin #11 on Pump Sevcon (SV2). - Open or defective Diode (D10-1). - Broken or loose #12 wire, from pin #14 on Pump Sevcon to Key Switch (S2). - Broken or loose #12A wire, from pin #7 on tach board to key switch (S2). - Defective (RST12D) 2.2K resistor.	- Check continuity. Replace if defective. - Check continuity. Replace if defective. - Check continuity. Replace if defective. - Check continuity. Replace if defective. - Check resistance. Should read 2200 ohms. - Check continuity. Replace if defective.

TROUBLESHOOTING (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
ELECTRICAL SYSTEM (Cont.)		
Base Controls Inoperative (cont.)	7. Broken or loose #00 wire to battery connector.	7. Check continuity. Replace if defective.
Up Circuit Inoperative (Riser Only)	1. Tilt Switch (TS1) activated. 2. Broken or loose wire #28 from (TS1) to (28CR). 3. Defective (28CR) relay. 4. Broken or loose wire #99 from (28CR). 5. Broken or loose wire #14. 6. Defective coil (4H-14). 7. Diode (D02-4) or (D-14) shorted. 8. Defective coil (2H-21A). 9. Diode (D02-1) shorted. 10. Defective (21CR) relay.	1. Check for level. 2. Check continuity. Replace if defective. 3. Check continuity. Replace if defective. 4. Check continuity. Replace if defective. 5. Check continuity. Replace if defective. 6. Check continuity. Replace if defective. 7. Replace Diode. 8. Check continuity. Replace if defective. 9. Replace Diode. 10. Check continuity. Replace if defective.
Down Circuit Inoperative (Riser Only)	1. Broken or loose 08 wire to switch (S8). 2. Defective switch (S8). 3. Loose pin or broken wire #13 in boom control cable. 4. Defective coil (4H-13). 5. Diode (D02-5) or (D-13) shorted. 6. Defective coil (2H-21A). 7. Diode (D02-1) shorted. 8. Defective 21CR relay.	1. Check continuity. Replace if defective. 2. Check switch. If defective replace. 3. Check continuity. Replace if defective. 4. Check continuity. Replace if defective. 5. Replace Diode. 6. Check continuity. Replace if defective. 7. Replace Diode. 8. Check continuity. Replace if defective.

TROUBLESHOOTING (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
ELECTRICAL SYSTEM (Cont.)		
Up Circuit Inoperative (Boom Only)	1. Tilt switch (TS1) activated. 2. Broken or loose wire #28 from (TS1) to (28CR). 3. Defective (28CR) relay. 4. Broken or loose wire #99 from (28CR). 5. Broken or loose wire #31. 6. Defective coil (4H-31). 7. Diode (D02-2) or (D-31) shorted. 8. Defective coil (2H-21A). 9. Diode (D02-1) shorted. 10. Defective (21CR) relay.	1. Check for level. 2. Check continuity. Replace if defective. 3. Check continuity. Replace if defective. 4. Check continuity. Replace if defective. 5. Check continuity. Replace if defective. 6. Check continuity. Replace if defective. 7. Replace Diode. 8. Check continuity. Replace if defective. 9. Replace Diode. 10. Check continuity. Replace if defective.
Down Circuit Inoperative (Boom Only)	1. Broken or loose 08 wire to switch (S7). 2. Defective switch (S7). 3. Loose pin or broken wire #30 in boom cable. 4. Defective coil (4H-30). 5. Diode (D02-3) or (D-30) shorted. 6. Defective coil (2H-21A). 7. Diode (D02-1) shorted. 8. Defective (21CR) relay.	1. Check continuity. Replace if defective. 2. Check switch. If defective replace. 3. Check continuity. Replace if defective. 4. Check continuity. Replace if defective. 5. Replace Diode. 6. Check continuity. Replace if defective. 7. Replace Diode. 8. Check continuity. Replace if defective.
Telescope Out Inoperative	1. Tilt Switch (TS1) shorted. 2. Broken or loose wire #28 from (TS1) to (28CR).	1. Check for level. 2. Check continuity. Replace defective replace.

TROUBLESHOOTING (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
ELECTRICAL SYSTEM (Cont.)		
Telescope Out Inoperative (cont.)	3. Defective (28CR) relay. 4. Broken or loose wire #99 from (28CR). 5. Broken or loose wire #39. 6. Defective coil (4H-39). 7. Diode (D02-6) or (D-39) shorted. 8. Defective coil (2H-21A). 9. Diode (D02-1) shorted. 10. Defective (21CR) relay.	3. Check continuity. Replace if defective. 4. Check continuity. Replace if defective. 5. Check continuity. Replace if defective. 6. Check continuity. Replace if defective. 7. Replace Diode. 8. Check continuity. Replace if defective. 9. Replace Diode. 10. Check continuity. Replace if defective.
Telescope In Inoperative	1. Broken or loose 08 wire to switch (S9). 2. Defective switch (S9). 3. Loose pin or broken wire #38 in boom control cable. 4. Defective coil (4H-38). 5. Diode (D02-7) or (D-38) shorted. 6. Defective coil (2H-21A). 7. Diode (D02-1) shorted. 8. Defective (28CR) relay.	1. Check continuity. Replace if defective. 2. Check switch. Replace if defective. 3. Check continuity. Replace if defective. 4. Check continuity. Replace if defective. 5. Replace Diode. 6. Check continuity. Replace if defective. 7. Replace Diode. 8. Check continuity. Replace if defective.
Jib Up Inoperative	1. Broken or loose 08 wire to switch (S10). 2. Defective switch (S10). 3. Loose pin or broken wire #35 in boom control cable. 4. Defective coil (4H-35). 5. Diode (D02-8) or (D-35) shorted.	1. Check continuity. Replace if defective. 2. Check switch. Replace if defective. 3. Check continuity. Replace if defective. 4. Check continuity. Replace if defective. 5. Replace Diode.

TROUBLESHOOTING (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
ELECTRICAL SYSTEM (Cont.)		
Jib Up Inoperative (cont.)	6. Defective coil (2H-21). 7. Diode (D02-1) shorted. 8. Defective (21CR) relay.	6. Check continuity. Replace if defective. 7. Replace Diode. 8. Check continuity. Replace if defective.
Jib Down Inoperative	1. Broken or loose 08 wire to switch (S10). 2. Defective switch (S10). 3. Loose pin or broken wire #34 in boom control cable. 4. Defective coil (4H-34). 5. Diode (D02-9) or (D-34) shorted. 6. Defective coil (2H-21A). 7. Diode (D02-1) shorted. 8. Defective (21CR) relay.	1. Check continuity. Replace if defective. 2. Check switch. Replace if defective. 3. Check continuity. Replace if defective. 4. Check continuity. Replace if defective. 5. Replace Diode. 6. Check continuity. Replace if defective. 7. Replace Diode. 8. Check continuity. Replace if defective.
Platform Rotate Left or Right Inoperative	1. Broken or loose 08 wire to switch (S11). 2. Defective switch (S11). 3. Loose pin or broken wire #36 [L] or #37 [R] in boom cable. 4. Defective coil (4H-36) [L] or (4H-37) [R]. 5. Diode (D02-10) [R] or (D02-11) [L] shorted. 6. Diode (D36) [L] or (D37) [R] shorted. 7. Defective coil (2H-21A). 8. Diode (D02-1) shorted. 9. Defective (21CR) relay.	1. Check continuity. Replace if defective. 2. Check switch. Replace if defective. 3. Check continuity. Replace if defective. 4. Check continuity. Replace if defective. 5. Replace Diode. 6. Replace Diode. 7. Check continuity. Replace if defective. 8. Replace Diode. 9. Check continuity. Replace if defective.

TROUBLESHOOTING (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
ELECTRICAL SYSTEM (Cont.)		
Platform Level Up Inoperative	1. Broken or loose 08 wire to switch (S12). 2. Defective switch (S12). 3. Loose pin or broken wire #41 in boom control cable. 4. Defective coil (4H-41). 5. Diode (D02-12) or (D-41) shorted. 6. Defective coil (2H-21A). 7. Diode (D02-1) shorted. 8. Defective (21CR) relay.	1. Check continuity. Replace if defective. 2. Check switch. Replace if defective. 3. Check continuity. Replace if defective. 4. Check continuity. Replace if defective. 5. Replace Diode. 6. Check continuity. Replace if defective. 7. Replace Diode. 8. Check continuity. Replace if defective.
Platform Level Down Inoperative	1. Broken or loose 08 wire to switch (S12). 2. Defective switch (S12). 3. Loose pin or broken wire #40 in boom control cable. 4. Defective coil (4H-40). 5. Diode (D02-13) or (D-40) shorted. 6. Defective coil (2H-21A). 7. Diode (D02-1) shorted. 8. Defective (21CR) relay.	1. Check continuity. Replace if defective. 2. Check switch. Replace if defective. 3. Check continuity. Replace if defective. 4. Check continuity. Replace if defective. 5. Replace Diode. 6. Check continuity. Replace if defective. 7. Replace Diode. 8. Check continuity. Replace if defective.
Turret Rotate CW or CCW Inoperative	1. Broken or loose 08 wire to (S13). 2. Defective switch (S13). 3. Loose pin or broken wire #32 [CW] or #33 [CCW] in boom cable.	1. Check continuity. Replace if defective. 2. Check switch. Replace if defective. 3. Check continuity. Replace if defective.

TROUBLESHOOTING (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
ELECTRICAL SYSTEM (Cont.)		
Turret Rotate CW or CCW Inoperative (cont.)	4. Defective coil (4H-32) [CW] or (4H-33) [CCW]. 5. Diode (D02-14) [CCW], (D02-15) [CW], (D-32) [CW] or (D-33) [CCW] shorted. 6. Defective coil (2H-21A). 7. Diode (D02-1) shorted. 8. Defective (21CR) relay.	4. Check continuity. Replace if defective. 5. Replace Diode. 6. Check continuity. Replace if defective. 7. Replace Diode. 8. Replace if defective.
Steering Left or Right Inoperative NOTE: Steering should always remain left or right relative to boom position. See steering does not change direction with boom position.	1. Broken or loose wire #08 from Foot Switch (S5) to right switch (S21-1) or left switch (S21-2). 2. Steer switch (S21-3) [R] or (S21-2) [L] defective. 3. Loose pin or broken wire #23 [R] or #24 [L] from (S21-1) [R] or (S21-2) [L] to (17CR-2) [R] or (17CR-1)[L] relay. 4. Open N.C. contacts on (17CR-1)[L] or (17CR-2) relay. 5. Broken or loose wire #23A [R] or #24A [L] from relay (17CR-2) [R] or (17CR-1) [L] to coil (4H-23A) [R] or coil (4H-24A) [L]. 6. Defective coil (4H-23A) or (4H-24A). 7. Diodes (D02-16) [R] or (D02-17) [L] shorted. 8. Diode (D23A) [R] or (D24A) [L] open. 9. Broken or loose wire 114 from diodes (D23A) [R] or (D24A)[L] to pump Sevcon terminal 8. 10. Diode (114) open. 11. Defective coil (2H-21A).	1. Check continuity. Replace if defective. 2. Check switch. Replace if defective. 3. Check continuity. Replace if defective. 4. Check relay. If defective replace. 5. Check continuity. Replace if defective. 6. Check continuity. Replace if defective. 7. Replace Diode. 8. Replace Diode. 9. Check continuity. Replace if defective. 10. Replace Diode. 11. Check continuity. Replace if defective.

TROUBLESHOOTING (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
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ELECTRICAL SYSTEM (Cont.)

Steering Left or Right Inoperative (cont.)	12. Diode (D02-1) shorted. 13. Defective (21CR) relay.	12. Replace Diode. 13. Check continuity. Replace if defective.
Steering Does Not Change Direction With Boom Position.	1. Broken or loose wire #09 from D8 diode to turret Switch (S22). 2. Defective Turret Switch (S22). 3. Broken or loose wire #17A from Turret Switch (S22) to (17ACR1) or (17ACR2). 4. Broken or loose wire #2 from (17ACR1) or (17ACR2) to terminal strip on base.	1. Check continuity. Replace if defective. 2. Check switch. If defective replace. 3. Check continuity. Replace if defective. 4. Check continuity. Replace if defective.
Forward - Reverse Drive Inoperative	1. Defective Drive/Steer Controller (S21). 2. Broken or loose #64 wire from (S21) to drive Sevcon pin #14. 3. Loose pin or broken wire #15 [R] or #16 [F] from terminal block (TB2) on base. 4. Broken or loose wire #15 [R] or #16 [F] from terminal block (TB2) to drive Sevcon pin #11 [R] or #8 [F]. 5. Sevcon inoperative. 6. Broken or loose wire #15 [R] or #16A [F] from Sevcon pin #15 [R] or #17 [F] to contactor (15ACR) or (16ACR). 7. Defective coil (15ACR) [R] or (16ACR) [F]. 8. Broken or loose wire #09B from coil (15ACR) [R] or (16ACR) [F] to drive Sevcon pin #5. 9. Defective fuse (F3).	1. Check output. If no output replace. 2. Check continuity. Replace if defective. 3. Check continuity. Replace if defective. 4. Check continuity. Replace if defective. 5. Refer to Sevcon troubleshooting. Check 10 amp (F2) Fuse. 6. Check continuity. Replace if defective. 7. Check continuity. Replace if defective. 8. Check continuity. Replace if defective. 9. Check continuity. Replace if defective.

TROUBLESHOOTING (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
ELECTRICAL SYSTEM (Cont.)		
Forward - Reverse Drive Inoperative (cont.)	10. Broken or loose cable #01E from (F3) to contactor (15ACR) [R] or (16ACR) [F]. 11. Bad contacts in contactor (15ACR) [R] or (16ACR) {F}. 12. Defective drive motor (DCM1). 13. Defective Tach Generator (TG1). 14. Defective tach card (TC1). 15. Defective drive Sevcon (SV1). 16. Brake not releasing. 17. Defective (F5) or (F6) fuse on tach cards.	10. Check continuity. Replace if defective. 11. Replace contactor. 12. Check motor. Replace if defective. 13. See Sevcon troubleshooting. 14. See Sevcon troubleshooting. 15. Refer to Sevcon troubleshooting. 16. See brake troubleshooting. 17. Replace if defective.
Forward - Reverse Slow Speed Only	1. Broken or loose #09 wire from terminal block (TB1) on base to lift Limit Switch (LS1). 2. Lift Limit Switch (LS1) defective. 3. Broken or loose #06 wire from Limit Switch (LS1) to Limit Switch (LS2). 4. Telescope Limit Switch (LS2) defective. 5. Broken or loose #59 wire from (LS2) to drive Sevcon pin #13. 6. Defective Tilt Switch (TS1). No power to tach board wire #28. 7. Blown 1 Amp Fuse (F7) on Tilt Switch.	1. Check continuity. Replace if defective. 2. Replace Limit Switch. 3. Check continuity. Replace if defective. 4. Replace Limit Switch. 5. Check continuity. Replace if defective. 6. Replace Tilt Switch. 7. Replace Fuse.
Brake Not Releasing	1. Broken or loose wire #26 from drive Sevcon pin #1 to (3H26A) or (2H26A) Brake Valve. 2. Defective coil (3H-26A) or (2H26A).	1. Check continuity. Replace if defective. 2. Check continuity. Replace if defective.

TROUBLESHOOTING (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
ELECTRICAL SYSTEM (Cont.)		
No Boom Functions	- Loose or broken wire #09B from terminal B of Tachometer Card (TC1) to pin #5 on Sevcon (SV2). - Loose or broken wire #09B from terminal B of Tachometer Card (TC1) to Motor Contactor (09BCR1). - Loose or broken wire from pin 1 on (SV2) to (09BCR1). - Fuse (F1) open or defective. - Pump Motor (DCM3) defective. - Loose connection at terminal #20 on (TB2). - Loose or broken wire 20 from TB3 to TB2. - Open or defective Diode (D20-1). - Loose or broken wire #21 from (21CR) to Dump Solenoid (2H-21). - Defective (21CR) relay. - Open or defective Dump Solenoid (2H-21A). - Defective Pump Sevcon (SV2).	- Check continuity, repair if defective. - Check continuity, repair if defective. - Check continuity, repair if defective. - Check continuity. Replace if defective. - Replace if defective. - Repair if defective. - Check continuity. Replace if defective. - Replace if defective. - Check continuity. Replace if defective. - Check continuity. Replace if defective. - Check continuity. Replace if defective. - See Sevcon troubleshooting.
No Boom Functions From Platform (Boom Operates from Base Controls)	- Loose or broken wire #8 from platform terminal block to Boom Function Controller (S6). - Loose or broken wire #12 from Boom Function Speed Controller (RST12) to platform terminal strip. - Broken or loose #12 pin in plug. - Boom Function Speed Control Potentiometer (RST12) defective. - Loose or broken wire #12 in Boom Control Cable. - Stuck contact block at 12A on Key Switch (S2).	- Check continuity. Replace if defective. - Check continuity. Replace if defective. - Check continuity. Replace if defective. - Check potentiometer. Replace if defective. - Check continuity. Replace if defective. - Replace if defective.

DRIVE SEVCON (SV1) TROUBLESHOOTING

FLASH CODE	TROUBLE	PROBABLE CAUSE	REMEDY
------------	---------	----------------	--------

SEVCON ELECTRICAL SYSTEM

NOTE: A Steady Light on Drive Sevcon Means System is Ready to Operate			
2 Flash Fault (Procedure Fault)		1. Selecting function before power is on. 2. Broken #2 wire at drive/steer controller.	1. Turn power on and operate foot switch before selecting function. 2. Check continuity. If defective replace.
3 Flash Fault		1. Sevcon shorted. 2. Drive motor (DCM1) shorted.	1. Replace Sevcon. 2. Replace Motor.
4 Flash Fault		1. Contactor welded.	1. Replace contactor.
5 Flash Fault		1. Contactor not shifting. 2. Defective Sevcon.	1. Clean contactor. Replace if defective. 2. Replace Sevcon.
6 Flash Fault	No Drive	1. Broken #64 wire from drive/steer controller (S21) to pin 14 on Drive Sevcon (SV1). 2. Defective Drive Sevcon (SV1). 3. Defective drive/steer controller (S21).	1. Check continuity. Replace if defective. 2. Disconnect wire #64 from terminal strip in upper control box. Check voltage on wire #64 from Drive Sevcon (SV1). With foot switch depressed voltage should be approximately 8 volts. If no voltage present replace defective Sevcon (SV1). If voltage present see step 3. 3A. Remove brown wire from terminal strip in upper control box where wire #64 is located. Depress foot switch and check voltage on brown wire. It should read 3.8 to 4.2 volts DC. If voltage present replace defective Sevcon. If no voltage present move to step 3B. 3B. Locate white/red wire on drive/steer controller board. Measure voltage at white/red wire with foot switch depressed. It should read 6.1 to 6.2 volts DC. If no voltage present replace defective board. If voltage present move to step 3C.

DRIVE SEVCON (SV1) TROUBLESHOOTING (cont.)

FLASH CODE	TROUBLE	PROBABLE CAUSE	REMEDY
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SEVCON ELECTRICAL SYSTEM (cont.)

6 Flash Fault (cont.)	No Drive (cont.)	3. Defective drive/steer controller. (cont.)	3C. Locate white/black wire on drive/steer controller board. Measure voltage at white/black wire with foot switch depressed. It should read 2 volt DC. If no voltage present replace defective Potentiometer. If voltage present replace defective Sevcon. (Refer to Section 5 page 16)
7 Flash Fault		1. Low battery voltage.	1. Charge battery.
8 Flash Fault		1. Sevcon overheating.	1. Let unit cool down.
10 Flash Fault		1. Tachometer fault broken wire at pin #2 or #12 on Drive Sevcon. 2. Broken or loose T1 or T2 wires from Tach Generator (TG1) on Motor to Terminal Block (TB1).	1. Check continuity. Replace if defective. 2. Check continuity. Replace if defective.
11 Flash Fault		1. Tachometer Gen. defective. 2. Tachometer Gen. wires reversed. 3. Defective Tachometer Card. (TC1)	1. Check output - 2.5 volts per 100 RPM. (Refer to Section 5 page 14) 2. Switch wires at Tachometer Gen. 3. Check continuity. Replace if defective.
12 Flash Fault		1. Tilt condition with either boom up or boom telescoped out.	1. Lower or retract boom.

PUMP SEVCON (SV2) TROUBLESHOOTING INFORMATION

FLASH CODE	TROUBLE	PROBABLE CAUSE	REMEDY
SEVCON ELECTRICAL SYSTEM			
NOTE: A Steady Light on Pump Sevcon Means System is Ready to Operate.			
2 Flash Fault (P r o c e d u r e Fault)		1. Selecting function before power is on. 2. Broken #2 wire.	1. Turn power on and operate foot switch before selecting function. 2. Check continuity. If defective replace.
3 Flash Fault		1. Pump motor (DCM3) shorted. 2. Sevcon shorted.	1. Replace motor. 2. Replace Sevcon.
4 Flash Fault		1. Contactor welded.	1. Replace contactor.
5 Flash Fault		1. Contactor not shifting. 2. Defective Sevcon.	1. Replace contactor. 2. Replace Sevcon.
6 Flash Fault	No Boom Functions From Platform	1. Broken wire 12 from Boom Function Controller (RST12) to pin #14 on Pump Sevcon (SV2). 2. Defective Pump Sevcon (SV2). 3. Defective Boom Function Speed Control Potentiometer.	1. Check continuity. If defective replace. 2. Disconnect wire #12 from the terminal strip in upper control box. Check voltage on wire 12 from Pump Sevcon (SV2) with foot switch depressed. Voltage should be approximately 8 volts DC. If no voltage present, replace defective Sevcon. If voltage present see step 3. 3. Check potentiometer. Replace if defective.

PUMP SEVCON (SV2) TROUBLESHOOTING INFORMATION (cont.)

FLASH CODE	TROUBLE	PROBABLE CAUSE	REMEDY
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SEVCON ELECTRICAL SYSTEM (cont.)

6 Flash Fault	No Boom Function From Base Controls Only	1. Loose or broken #12 wire from key switch to terminal block (TB3) in base controls. 2. Loose or broken #12 wire from terminal block (TB3) to pin #14 on Pump Sevcon (S2). 3. Defective RST12D resistor on Tachometer Board Connector. 4. Loose or broken #12A wire from key switch (S2) to terminal block (TB3). 5. Loose or broken #12A from terminal block (TB3) to tachometer board.	1. Check continuity. Replace if defective. 2. Check continuity. Replace if defective. 3. Check resistor RST12D with Ohm-Meter. Replace if defective. 4. Check continuity. Replace if defective. 5. Check continuity. Replace if defective.
8 Flash Fault		1. Low battery voltage.	1. Charge battery.
7 Flash Fault		1. Sevcon overheating.	1. Let unit cool down.

TROUBLESHOOTING INFORMATION

TROUBLE	PROBABLE CAUSE	REMEDY
HYDRAULIC SYSTEM		
No Boom Functions	1. Dump Valve (2H-21) stuck open. 2. System Relief Valve (RV1) defective or set low. 3. Pump (P1) defective.	1. Inspect valve, replace if defective. 2. Inspect valve, replace if defective. 3. Replace pump.
Up Circuit Inoperative (Riser Only)	1. Riser Up Valve (4H-14) not shifting properly or contaminated. 2. Emergency lowering valve (V1) open.	1. Clean valve and reinstall. Replace if defective. 2. Close valve.
Down Circuit Inoperative (Riser Only)	1. Riser Down Valve (4H-13) not shifting properly or contaminated. 2. Counter Balance Valve (CB1) not shifting.	1. Clean valve and reinstall. Replace if defective. 2. Clean valve and reinstall. Replace if defective.
Riser Drifts Down	1. Emergency Lowering Valve (V1) open or contaminated. 2. Counter Balance Valve (CB1) open or defective. 3. Bad cylinder packing Riser Cylinder (C1).	1. Close or clean valve. 2. Clean valve and reinstall. Replace if defective. 3. Replace defective packing.
Up Circuit Inoperative (Boom Only)	1. Boom Up Valve (4H-31) not shifting properly or contaminated. 2. Emergency lowering valve (V2) open.	1. Clean valve and reinstall. Replace if defective. 2. Close valve.
Down Circuit Inoperative (Boom Only)	1. Boom Down Valve (4H-30) not shifting properly or contaminated. 2. Counter Balance Valve (CB2) not shifting.	1. Clean valve and reinstall. Replace if defective. 2. Clean valve and reinstall. Replace if defective.
Boom Drifts Down	1. Emergency Lowering Valve (V2) open or contaminated. 2. Counter Balance Valve (CB2) open or defective. 3. Bad cylinder packing (C2) Boom Cylinder.	1. Close or clean valve. 2. Clean valve and reinstall. Replace if defective. 3. Replace defective packing.

TROUBLESHOOTING INFORMATION (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
HYDRAULIC SYSTEM (Cont.)		
Boom Extend Inoperative	1. Boom Extend Valve (4H-39) not shifting properly or contaminated. 2. Counter Balance Valve (CB4) not shifting.	1. Clean valve and reinstall. Replace if defective. 2. Clean valve and reinstall. Replace if defective.
Boom Retract Inoperative	1. Boom Retract Valve (4H-38) not shifting properly or contaminated. 2. Counter Balance Valve (CB3) not shifting.	1. Clean valve and reinstall. Replace if defective. 2. Clean valve and reinstall. Replace if defective.
Jib Up Inoperative	1. Jib Valve (4H-35) open or defective. 2. Counter Balance Valve (CB6) not shifting. 3. Orifice (O1) plugged. 4. Emergency lowering valve (V5) open.	1. Clean valve and reinstall. Replace if defective. 2. Clean valve and reinstall. Replace if defective. 3. Clean orifice. 4. Close valve.
Jib Down Inoperative	1. Jib Down Valve (4H-34) open or defective. 2. Counter Balance Valve (CB5) not shifting. 3. Orifice (O2) plugged.	1. Clean valve and reinstall. Replace if defective. 2. Clean valve and reinstall. Replace if defective. 3. Clean orifice.
Jib Drifts Down	1. Emergency Lowering Valve (V5) open or contaminated. 2. Counter Balance Valve (CB5) open or defective. 3. Bad cylinder packing (C4) Jib Lift Cylinder.	1. Close or clean valve. 2. Clean valve and reinstall. Replace if defective. 3. Replace defective packing.
Platform Rotate Left Inoperative	1. Platform Rotate Left Valve (4H-36) not shifting or contaminated. 2. Counter Balance Valve (CB7) not shifting.	1. Clean valve and reinstall. Replace if defective. 2. Clean valve and reinstall. Replace if defective.
Platform Rotate Right Inoperative	1. Platform Rotate Right Valve (4H-37) not shifting or contaminated. 2. Counter Balance Valve (CB8) not shifting.	1. Clean valve and reinstall. Replace if defective. 2. Clean valve and reinstall. Replace if defective.

TROUBLESHOOTING INFORMATION (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
HYDRAULIC SYSTEM (Cont.)		
No Platform Rotate Either Direction	1. Orifice (04) plugged.	1. Clean orifice.
Platform Level Up Inoperative	1. Level Up Valve (4H-41) not shifting or contaminated. 2. Platform Master Leveling Cylinder (C5) or (C6) by passing. 3. Counter Balance Valve (CB11) not shifting or set to high.	1. Clean valve and reinstall. Replace if defective. 2. Reseal cylinder. 3. Adjust valve. Replace if defective.
Platform Level Down Inoperative	1. Level Down Valve (4H-40) not shifting or contaminated. 2. Platform Master Leveling Cylinder (C5) or (C6) by passing. 3. Counter Balance Valve (CB10) not shifting or set to high.	1. Clean valve and reinstall. Replace if defective. 2. Reseal cylinder. 3. Adjust valve. Replace if defective.
No Manual Platform Level	1. Plugged Orifice (03).	1. Clean Orifice.
Turret Rotate Left (Clockwise)	1. Turret Rotate Left [CW] Valve (4H-32) not shifting or contaminated. 2. Relief Valve (RV3) set to low.	1. Clean valve and reinstall. Replace if defective. 2. Adjust relief valve. Replace if defective.
Turret Rotate Right (Counter Clockwise)	1. Turret Rotate Left [CCW] Valve (4H-32) not shifting or contaminated. 2. Relief Valve (RV2) set to low.	1. Clean valve and reinstall. Replace if defective. 2. Adjust valve. Replace if defective.
No Turret Rotation Either Direction	1. Emergency Turret Rotation Valve (V3) open to much. 2. By passing or defective rotate Hydraulic Motor (M1).	1. Close valve. 2. Reseal motor. Rebuild or replace if defective.
No Steering	1. Steer Valve (4H-24A) or (4H-23A) not shifting or contaminated. 2. By passing Steer Cylinder (C7) or (C8)	1. Clean valve and reinstall. Replace if defective. 2. Reseal cylinder.

TROUBLESHOOTING INFORMATION (Cont.)

TROUBLE	PROBABLE CAUSE	REMEDY
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HYDRAULIC SYSTEM (Cont.)

Brakes Won't Release	1. Brake Valve (3H-26) or (2H-26) not shifting. 2. By passing brake assembly. 3. Defective Accumulator (AC1). 4. Pressure Reducing Valve (PR1) set to low or defective. 5. Brake over ride valve (V4) stuck or leaking.	1. Clean valve and reinstall. Replace if defective. 2. Reseal brake assembly. 3. Replace if defective. 4. Adjust to proper setting. Replace if defective. 5. Replace if defective. (Refer to Section 5 page 18)
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NOTES

SECTION 5

MAINTENANCE AND SERVICE

GENERAL MAINTENANCE HINTS

- Before attempting any repair work, disconnect the batteries by separating the 350A connectors.
- 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 manufacturer.

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.

NOTES

SECTION 5 MAINTENANCE AND SERVICE

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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 or 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. Torque Specifications

DIRECTIONAL VALVE MOUNTING SCREWS				28-32 in. lbs.													
TURRET ROTATE GEAR MOUNTING BOLTS				205 ft. lbs. / Copper based anti-sieze													
WHEEL MOUNTING BOLTS (4 x 4)				290 ft. lbs. / Dry													
WHEEL MOUNTING BOLTS (4 x 2)				220 ft. lbs. / Dry													
COUNTERWEIGHT BOLTS				240 ft. lbs. / Dry													
AXLE MOUNTING BOLTS				205 ft. lbs. / Dry													
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		420	

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Table 5-2. 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

SEVCONTROLLER ADJUSTMENT AND DIAGNOSTICS

Sevcon Calibration Tool



WARNING

All machine functions remain operational while calibrator is plugged in.

ADJUSTMENT PROCEDURE:

The following procedure is relevant for both the drive and pump controllers, except where otherwise noted. Both controllers are preset to factory specifications but may be readjusted.

A hand-held calibrator (Figure 5-1, Skyjack part #701051) can be plugged into the controller adjustment socket and used to digitally view or reset the parameters. The current value of these parameters will be shown on an LCD display. Additionally, the calibrator can perform certain measurements that can be useful for diagnostic purposes.

The calibrator has a bar display, operated by the SELECT button, showing the parameters/ measurement selected and an LCD display showing values that, provided they are parameters, may be adjusted using the +/- buttons. This unit can also be used to perform certain tests on the control wiring and controller (joystick).

1. Locate controller adjustment socket, as shown in Figure 5-2, and connect hand-held calibrator. Power up the boom by selecting base or platform controls (foot switch must be engaged for platform controls to be active) using key switch at electrical panel.
2. No LED segments on the bar display will be lit and the minutes/seconds count is displayed. The hours count is displayed by pressing the (-) button and the 1000's of hours count is displayed by pressing the (+) button as described later in this section. Pressing the select button reverts the calibrator to its normal operation and the IMax LED will be lit.
3. When the desired parameters has been selected, on the left side of the calibrator, it may be adjusted by pressing the + or - button on the right side of the calibrator. See Table 5-3 and Table 5-4. for adjustable parameters and ranges.
4. When the calibrator is unplugged the Sevcontrol will 'memorize' the new parameters settings.

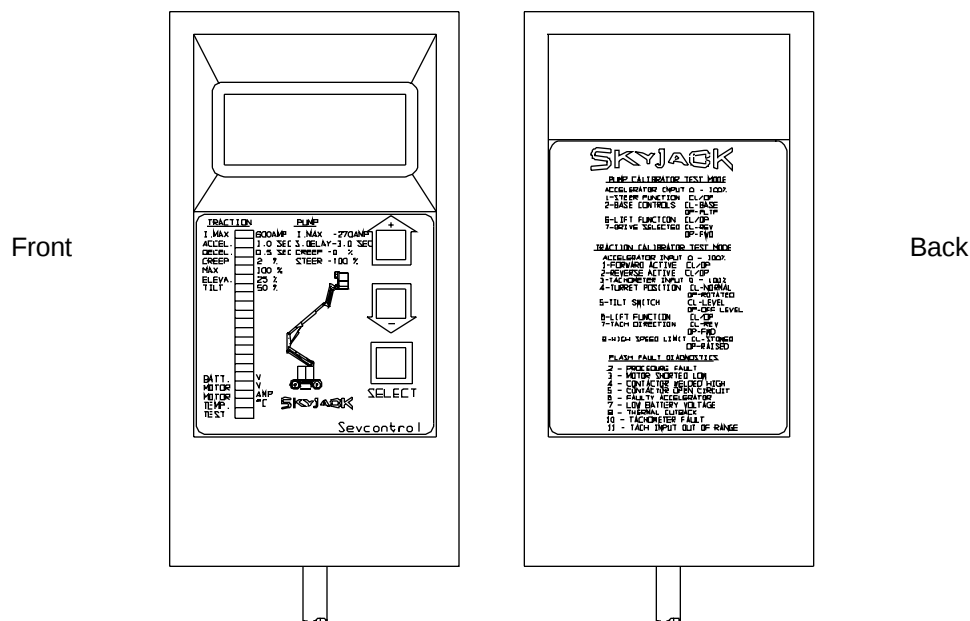


Figure 5-1. Hand Held Controller Calibrator

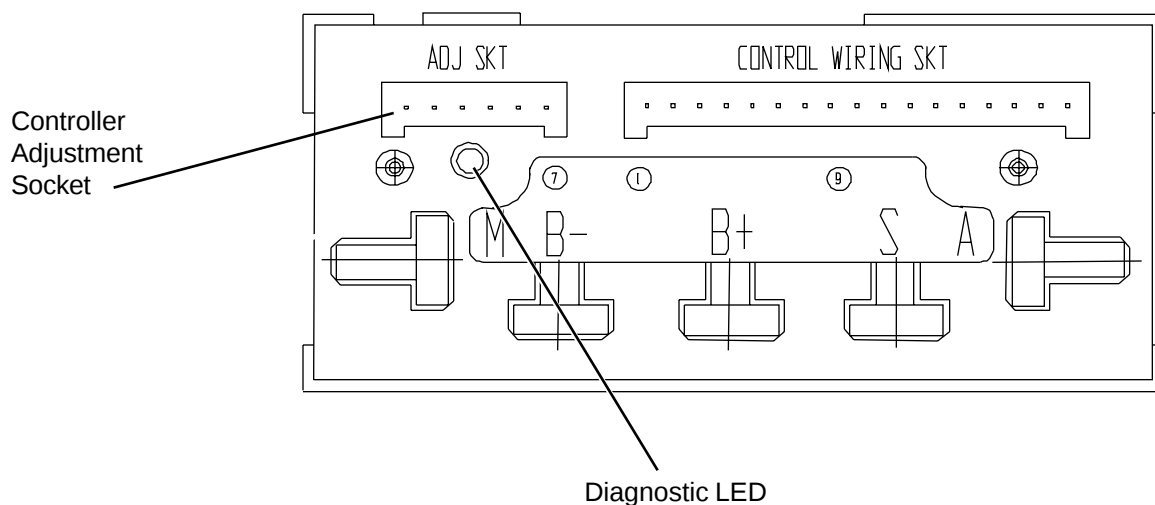


Figure 5-2. Sevcon Connection Points and Flash Fault Indicator

Table 5-3. Drive Controller Adjustable Parameters

Drive Controller				
Parameter	Min.	Max.	Units	Default
1. IMAX Maximum Controller Current	50	600	Amps	600
2. ACCEL. Acceleration Delay	1.0	3.0	Seconds	1.0
3. DECEL. Deceleration Delay	0.5	3.0	Seconds	0.5
4. CREEP Drive Creep Speed	0	10	% of Max Speed	2
5. MAX Max Allowed Speed	5	100	% of Max Possible Speed	100
6. ELEVA. Elevated Cutback Speed	5	25	% of Max Speed	25
7. TILT Tilted Cutback Speed	5	60	% of Max Speed	50
8. Through 14.	Not Used			-
15. CONFIGURATION Option Personality	0=Toggle switch operator control console. Inhibit drive and lift simultaneously. 1=Push-Button operator control console. Inhibit drive and lift simultaneously. 2=Toggle switch operator control console. Allow drive and lift simultaneously. 3=Push-Button operator control console. Allow drive and lift simultaneously.			1

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Table 5-4. Pump Controller Adjustable Parameters

Pump Controller				
Parameter	Min.	Max.	Units	Default
1. IMAX Maximum Controller Current	50	270	Amps	270
2. S.DELAY Pump Soft Start/Stop Delay	0.5	5.0	Seconds	3.0
3. CREEP Pump Creep Speed	0	30	% of Max Speed	0
4. STEER Steer Speed Base	0	100	% of Max Possible Speed	100
5. Through 14.	Not Used			-
15. CONFIGURATION Option Personality	0=Toggle switch operator control console. Inhibit drive and lift simultaneously. 1=Push-Button operator control console. Inhibit drive and lift simultaneously. 2=Toggle switch operator control console. Allow drive and lift simultaneously. 3=Push-Button operator control console. Allow drive and lift simultaneously.			1

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Sevcon Calibration Tool Cont.

HOURS COUNTER:

The hours counter records pulsing hours, and is displayed when the calibrator is first plugged in. Once the SELECT button is pressed, the calibrator reverts to normal operation.

Initially a minute/seconds count is displayed. By pressing the (-) button, hours are displayed and by pressing the (+) button 1000's of hours are displayed.

Releasing the buttons reverts back to the minute/seconds display. The decimal point blinks every second during drive. The counter will record up to 65,500 hours before rolling back to 0.

DIAGNOSTIC PROCEDURE:



All machine functions remain operational while calibrator is plugged in.

The last five segments on the bar display are as follows.

BATT	Displays the current battery voltage. Pressing the (+) button displays the highest voltage, for the machine, that the Sevcontrol has recorded.
MOTOR V.	Displays the motor voltage as the machine is being driven.
MOTOR AMP	Displays the motor current as the machine is being driven.
TEMP	Displays the temperature of the MOSFET heat sink in °C. Pressing the (+) button displays the highest temperature recorded and pressing the (-) button displays the lowest temperature recorded.
TEST	This invokes the diagnostic test routines to check machine switches, joystick, control wiring etc.

With the calibrator connected and the boom powered up, as described in the adjustment procedure. Use the SELECT button to select the test segment. If the SELECT button is pressed at any time during the test, the test will be terminated and the minute/seconds count will be displayed.

The first test displayed, for both drive and pump Sevcontrol, is the joystick input. This displays the input as 0-100% as joystick is moved from min. to max.

Pressing the (+) and (-) buttons step through the tests as shown in Table 5-5. After the final test, the sequence will loop back to the joystick input test, then test 1.

Table 5-5. Sevcontrol Test Sequence

Drive Controller Test Sequence		
Sequence No.	Test	Display
-	Controller (Joystick) Input	0 to 100%
1	Forward Switch	CL/OP
2	Reverse Switch	CI/OP
3	Tachometer Input	0 to 100%
4	Turret Position Limit Switch	CL = Rotated OP = Normal
5	Tilt Switch	CL = Level OP = Tilt
6	Boom Lift Function Selected	CL/OP
7	Actual Direction, Tachometer Output	CL = Reverse OP = Forward
8	Boom Lift Limit Switches	CL = Lowered OP = Raised
9	Not used	
10	Not used	
Pump Controller Test Sequence		
Sequence	Test	Display
-	Controller (Joystick) Input	0 to 100%
1	Steer Function	CL/OP
2	Base Controls	OP = Platform Controls CL = Base Controls
3	Not Used	
4	Not Used	
5	Not Used	
6	Boom Lift Function Selected	CL/OP
7	Drive Function Selected	CL = Reverse OP = Forward to
8	Not Used	
9	Not Used	
10	Not Used	

SEVCONTROLLER ADJUSTMENT AND DIAGNOSTICS Cont.

Pin Voltage Readings

TRACTION SEVCON CONTROLLER PIN REFERENCE

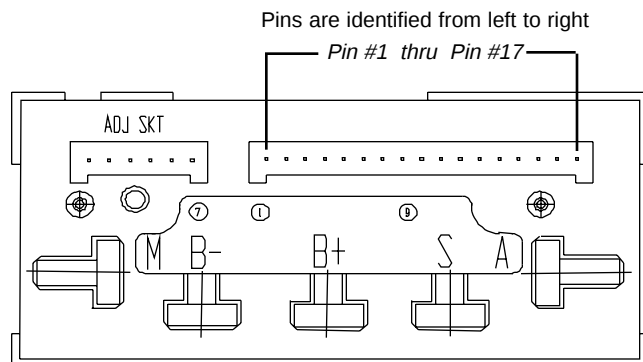


Figure 5-3. Traction Controller

- Pin 1 - Brake valve control. Brings B- through wire 26A to the 3H-26A and 2H-26A brake valve in drive.
Test between pin 1 and 09 wire (B+).
- Pin 2 - From pin 4 of tachometer board. Determines direction.
0 volts = forward
15 volts = reverse
Test between pin 2 and 02 wire (B-).
- Pin 3 - Not used
- Pin 4 - Turret position. Determines where platform is in relation to base. Changes sequencing of 15ACR and 16ACR contactors.
0 volts = platform over drive axle
24 volts = platform over steer axle
Test between pin 4 and 02 wire (B-).
- Pin 5 - 24 volt input from wire 09B.
Test between pin 5 and 02 wire (B-).
- Pin 6 - 48 volt signal from relay 09BCR2
48 volt = OK
0 volts = blown F2 fuse, bad 09BCR2 relay or broken 09B wire.
Test between pin 6 and 02 wire (B-).
- Pin 7 - Tiltswitch input.
0 volts = 50% full speed. (0% speed if off a limit switch)
24 volts = 100% full speed available,
Test between pin 7 and 02 wire (B-).
- Pin 8 - Forward direction input from drive joystick (wire 16).
24 volts = forward selected
Test between pin 8 and 02 wire (B-).
- Pin 9 - Not used
- Pin 10 - Not used
- Pin 11 - Reverse direction input from drive joystick (wire 15).
24 volts = reverse selected
Test between pin 11 and 02 wire (B-).

- Pin 12 - Signal from Pin 2 of tachometer board. Tachometer generator signal to Traction Controller. Varies with speed of machine.
Will see 7.5 volts when foot switch is depressed and joystick is in neutral position (center position).
7.5 volts to 15 volts = reverse
7.5 volts to 0 volts = forward
Test between pin 12 and 02 wire (B-).
- Pin 13 - From boom and telescope limit switches.
24 volts = full speed
0 volts = creep speed (one or more limit switches open)
Test between pin 13 and 02 wire (B-).
- Pin 14 Accelerator input. Wire #64 from drive controller.
Foot switch depressed = 3.8 to 4.2 volts
Joystick threshold = 3.5 volts = slowest speed
Joystick at full travel = 0 volts = full speed
Test between pin 14 and 02 wire (B-).
- Pin 15 - Forward contactor output.
Completes B- to 16ACR motor contactor
If platform is over steer axle operates 15ACR
Test between pin 15 and 10 wire (B+).
- Pin 16 - Drive function cutout signal.
0 volts = drive available
24 volts = drive is cutout when operating a lift function
Test between pin 16 and 02 wire (B-).
- Pin 17 - Reverse contactor output.
Completes B- to 15ACR motor contactor
If platform is over steer axle operates 16ACR
Test between 17 and 10 wire (B+).
- NOTE: Standard configuration for North American machines allow drive and lift simultaneously. This can be changed using the calibrator. European regulations prohibit lift and drive simultaneously.

Table 5-6. Traction Controller Flash Fault Pin References

	1 Flash	2 Flash	3 Flash	4 Flash	5 Flash	6 Flash	7 Flash	8 Flash	9 Flash	10 Flash
Pin 1										
Pin 2										
Pin 3										
Pin 4										
Pin 5										
Pin 6							X			
Pin 7										
Pin 8		X			X					
Pin 9										
Pin 10										
Pin 11		X			X					
Pin 12									X	X
Pin 13										
Pin 14						X				
Pin 15				X	X					
Pin 16		X				X				
Pin 17				X	X					

Pin Voltage Readings Cont.

TACHOMETER BOARD TERMINAL REFERENCE

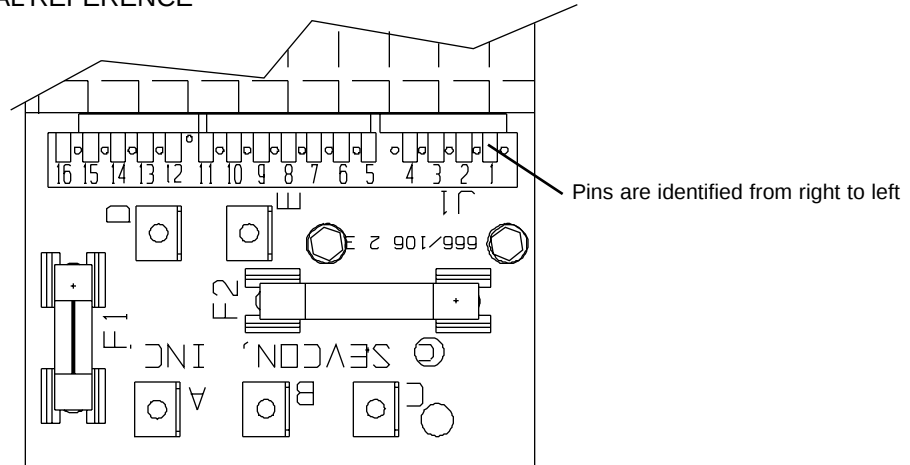


Figure 5-4. Tachometer Board.

Term A -48 volt input from 09BCR2

Test between term A and 02 wire (B-).

Term B -24 volt output to boom pump motor, forward and reverse contactors, Pin 5 of traction and boom Sevcon's. From Term C through 20Amp fuse on tachometer board. Wire 09B.

Test between term B and 02 wire (B-).

Term C -24 volt input from wire 09.

Test between term C and 02 wire (B-).

Term D -24 volt output to Pin 7 of traction Sevcon.

0 volts = 50% full drive speed. (0% if off telescope or boom limit switch)

24 volts = 100% full drive speed available.

Test between term D and 02 wire (B-).

Term E -24 volt input from tilt switch. Wire 28.

0 volts = 50% full drive speed. (0% if off telescope or boom limit switch)

24 volts = 100% full drive speed available.

Test between term E and 02 wire (B-).

Pin 1 - Battery negative. Wire 02.

Pin 2 - Speed signal to Pin 12 of traction Sevcon.

7.5 volts with foot switch depressed and drive joystick is in center position.

7.5 volts to 15 volts = reverse

7.5 volts to 0 volts = forward

Test between pin 2 and 02 wire (B-).

Pin 3 - Wire T1 from tachometer generator.

Pin 4 - To Pin 2 of traction Sevcon. Determines direction.

0 volts = forward

15 volts = reverse

Test between pin 4 and 02 wire (B-).

Pin 5 - Wire T2 from tachometer generator.

Pin 6 - Speed reducing resistor. Also attach to Pin 1.

Controls speed of boom functions when using base controls

2.2k ohm resistor

Pin 7 - Speed reducing resistor. From wire 12A.

Controls speed of boom functions when using base controls

2.2k ohm resistor

Pin 8 through Pin 16 - Spike suppression for pump and directional contactors.

TACHOMETER GENERATOR TESTING PROCEDURE

1. Jack up and support the steer axle end of the machine.



CAUTION

The supports used must have a capacity of at least 5300 lbs.

2. Locate tachometer generator on back of drive motor. Remove rubber boot from the rear of the tachometer generator.
3. Mark the location of the wires attached to the generator and remove wires. **NOTE:** Wires must be reattached to the same terminals as they were removed from or the Sevcon controller will not function when reassembled.
4. Remove the four 5/16-18 x 1-1/2" bolts securing the tachometer generator mounting plate to the rear of the motor.
NOTE: Do not attempt to remove the tachometer generator from mounting plate until it has been determined to be defective.
5. Remove the coupler half from the tachometer generator and attach generator to a drill with a 1000 RPM rating.
6. Attach a voltmeter to the terminals on the rear of the tachometer generator and set the meter for D.C. voltage.
7. Energize drill and read voltage on meter. At 1000 RPM you should read at least 20.8 volts. If reading is lower than 20.8 volts, the tachometer generator is defective.

1. DRIVE AXLE
2. DRIVE MOTOR
3. COUPLER HALF
4. TACHOMETER GENERATOR MOUNTING PLATE
5. COUPLER HALF
6. TACHOMETER GENERATOR

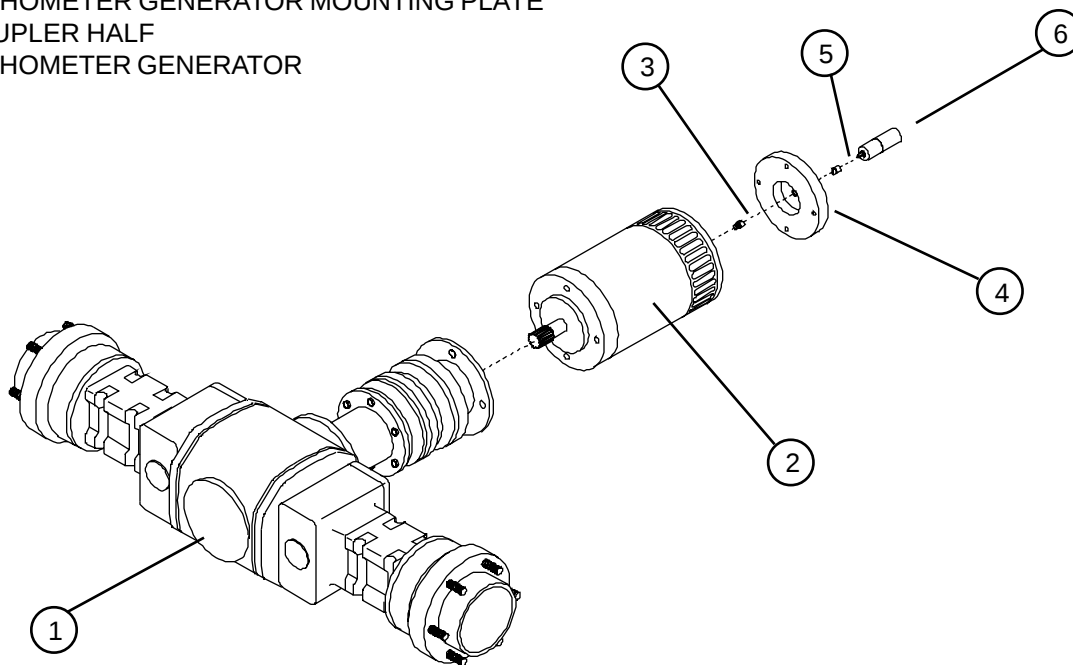


Figure 5-5. Axle Assembly

SEVCONTROLLER ADJUSTMENT AND DIAGNOSTICS Cont.

Pin Voltage Readings

BOOM FUNCTION SEVCON CONTROLLER PIN REFERENCE

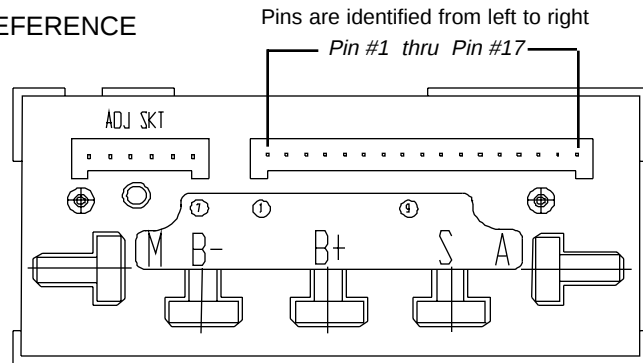
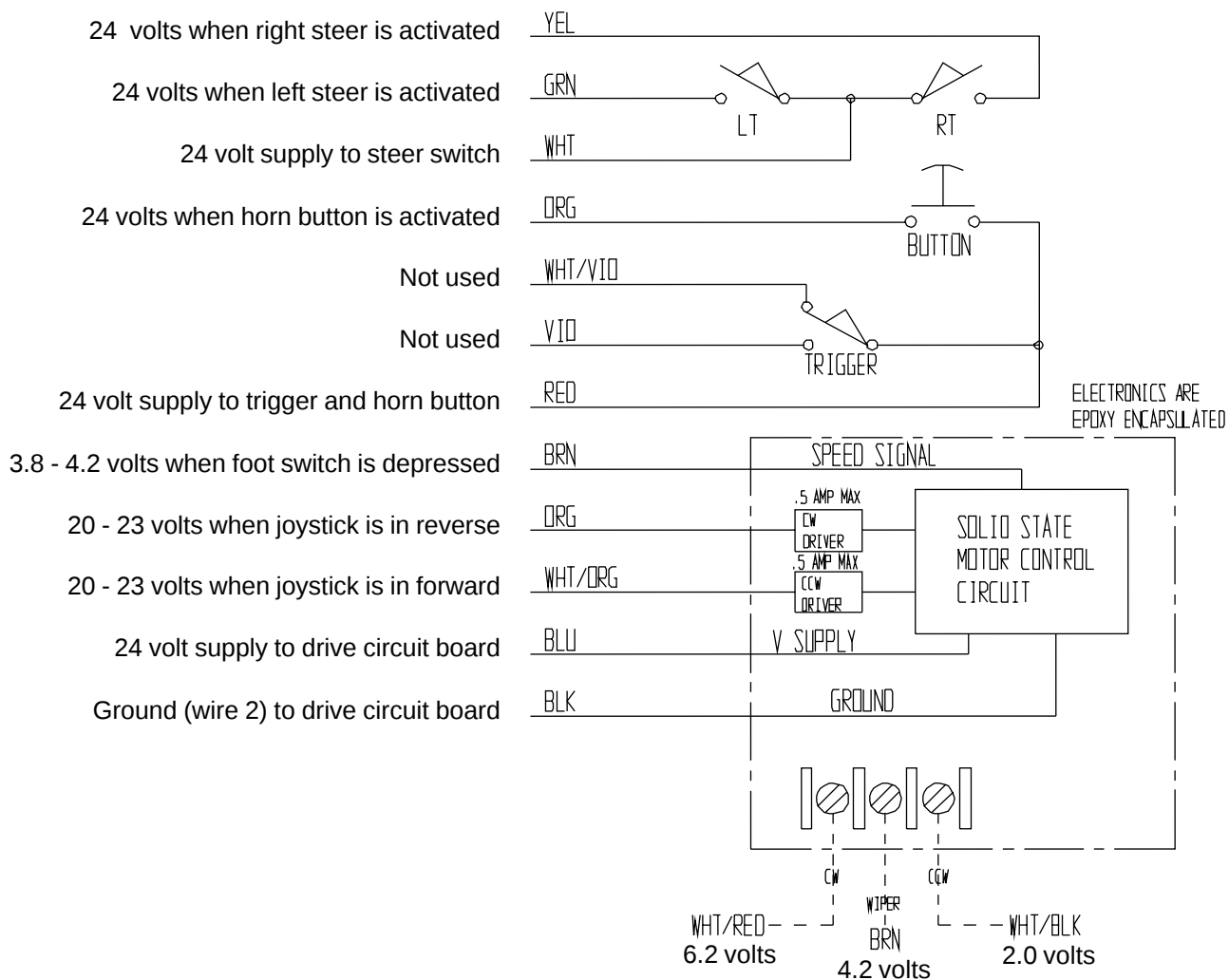


Figure 5-6. Boom Controller

- Pin 1 - Pump motor contactor control.
Brings B - to pump contactor 09BCR2
Test between pin 1 and 09B wire.
- Pin 2 - Drive activation signal
0 volts = Drive not active.
24 volts = Drive active.
Test between pin 2 and 02 wire (B-).
- Pin 3 - Not used
- Pin 4 - Not used
- Pin 5 - 24 volt input from wire 09B.
Test between pin 5 and 02 wire (B-).
- Pin 6 - 48 volt signal from relay 09BCR2
48 volts = O.K.
0 volts = blown F1 fuse, defective 09BCR2 relay or broken 09B wire.
Test between pin 6 and 02 wire (B-).
- Pin 7 - Not used
- Pin 8 - Steer select. Overrides 24 volt signal on pin 2 to allow steering while driving and allows pump run to as required to release brakes.
0 volts = steer not selected / no pressure required for brake circuit.
24 volts = steer selected / pressure required for brake circuit.
Test between pin 8 and 02 wire (B-).
- Pin 9 - Not used
- Pin 10 - Not used
- Pin 11 - 24 volt input from key switch when base selected.
Signals pump Sevcon that key switch is in base position
Test between pin 11 and 02 wire (B-).
- Pin 12 - Not used
- Pin 13 - Not used
- Pin 14 - Accelerator input. Wire 12 from boom function controller.
Threshold = 3.5 volts = slowest speed
High speed = 0 volts = full speed
Test between pin 14 and 02 wire (B-).
- Pin 15 - Not used
- Pin 16 - 24 volt signal from boom functions, wire 20.
Signal to activate boom Sevcon when boom function is selected
Test between pin 16 and 02 wire (B-).
- Pin 17 - Not used

DRIVE JOYSTICK CIRCUIT BOARD DIAGNOSTICS

All tests performed with foot switch depressed and voltages read between function and terminal on strip with wire 2.



BLACK	GROUND	TO WIRE #2
BROWN	SPEED SIGNAL	TO WIRE #6
BLUE	24 VOLT SUPPLY	FROM WIRE #8
ORANGE	REVERSE	TO WIRE #15
WHITE/ORANGE	FORWARD	TO WIRE #16
WHITE	24 VOLT TO STEER SWITCH	TO WIRE #8
YELLOW	RIGHT STEER	TO WIRE #23
GREEN	LEFT STEER	TO WIRE #24
RED	24 VOLT TO TRIGGER AND HORN BUTTON	FROM WIRE #8
ORANGE	HORN	TO WIRE #9
VIOLET	NOT USED	
WHITE/VIOLET	NOT USED	

BRAKE ADJUSTMENT PROCEDURES

Mechanical

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

1. Chock the wheels to prevent the work platform from rolling when the brake is released. Remove the thumb screws from the Rear Axle Cover and lift off to expose the rear axle.
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 Hand Pump (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 1.8mm (0.080") to 2.2mm (0.085"). 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. Repeat step 6. 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.

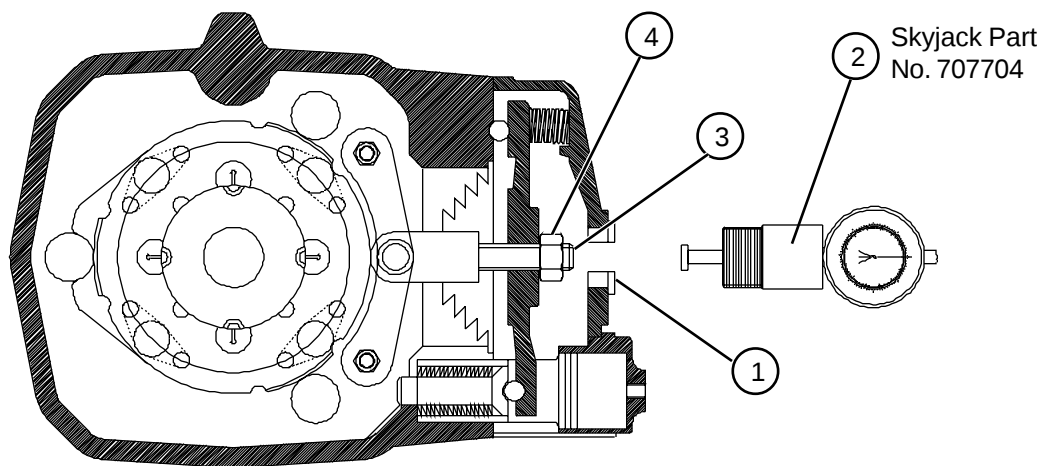


Figure 5-7. Cross Section of Brake Assembly

BRAKE ADJUSTMENT PROCEDURES Cont. Hydraulic



WARNING

**Make sure unit is on level ground with front wheels chocked.
Make sure to pull override valve out when finished.**

1. Bleed all brake pressure off by pumping the brake override valve 10 times, until system has no pressure. (Fig. 5-8)
2. Install pressure gauge at the tee in the main brake line on the drive axle. (Fig. 5-9)
3. Lift drive axle off the ground so the drive wheels don't move the machine.
4. Engage drive slowly and check pressure gauge. It should read 650 psi.
5. If the pressure is low repeat step #1.
6. Remove the cap plug from pressure reducing valve using a 5/16 allen wrench. (Fig. 5-8)
7. Using an 3/8 allen wrench turn pressure reducing valve in a 1/4 of a turn. (Fig. 5-8)
8. Repeat steps #4, 5 & 7 until pressure reaches 650 psi.
9. Replace pressure reducing valve plug cap.
10. Repeat step #1.
11. Remove pressure gauge and connect brake lines.
12. Install pressure gauge at the test port between the brake manifold and the pressure switch. (Fig. 5-8)
13. Engage drive slowly and check pressure gauge. It should read 750 psi.
14. If the pressure is low repeat step #1.
15. Turn pressure switch body a 1/4 of a turn clockwise. (Fig. 5-8)
16. Repeat steps #13-15 until pressure reaches 750 psi.
17. Repeat step #1.
18. Remove pressure gauge.
19. Pressure adjustment complete, lower machine and test drive.

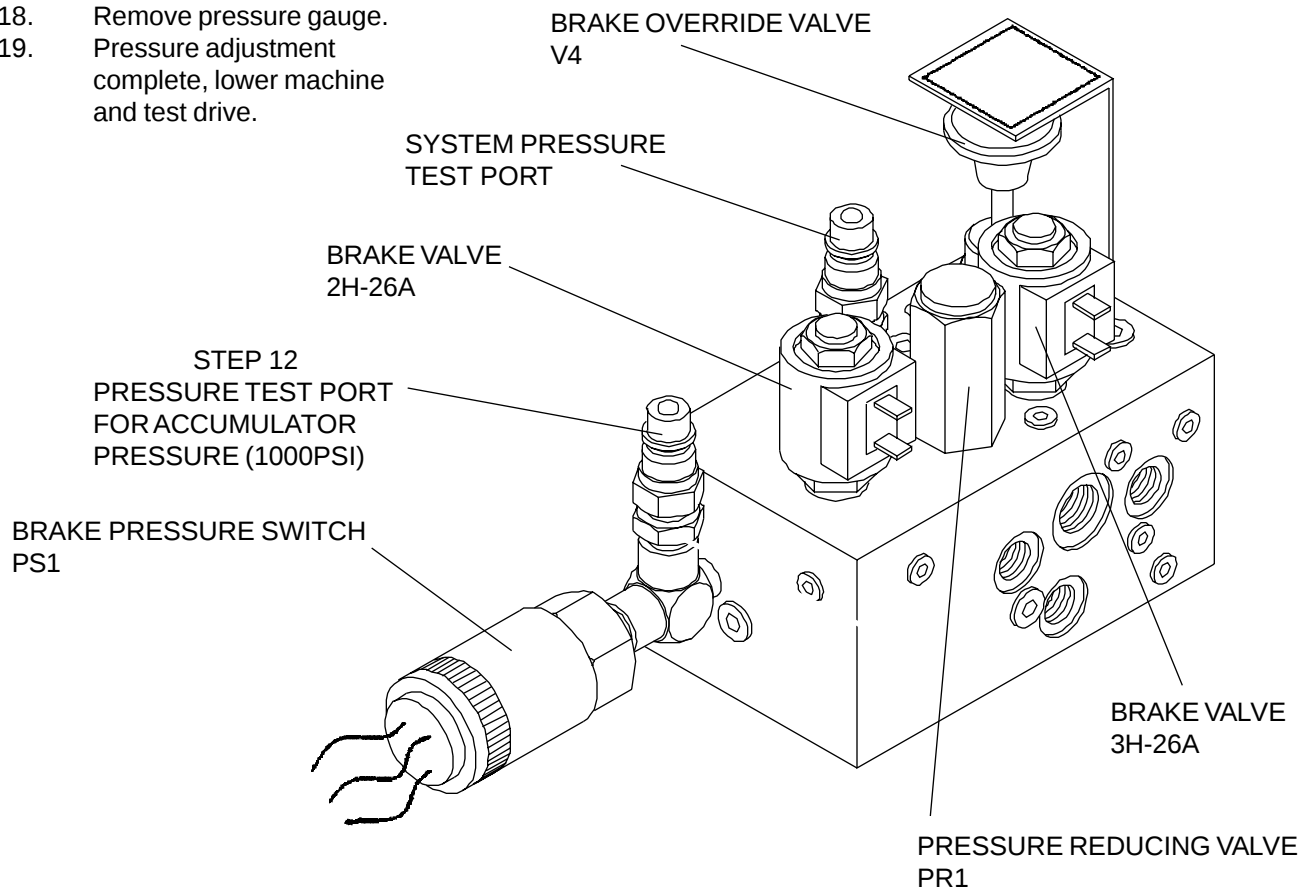
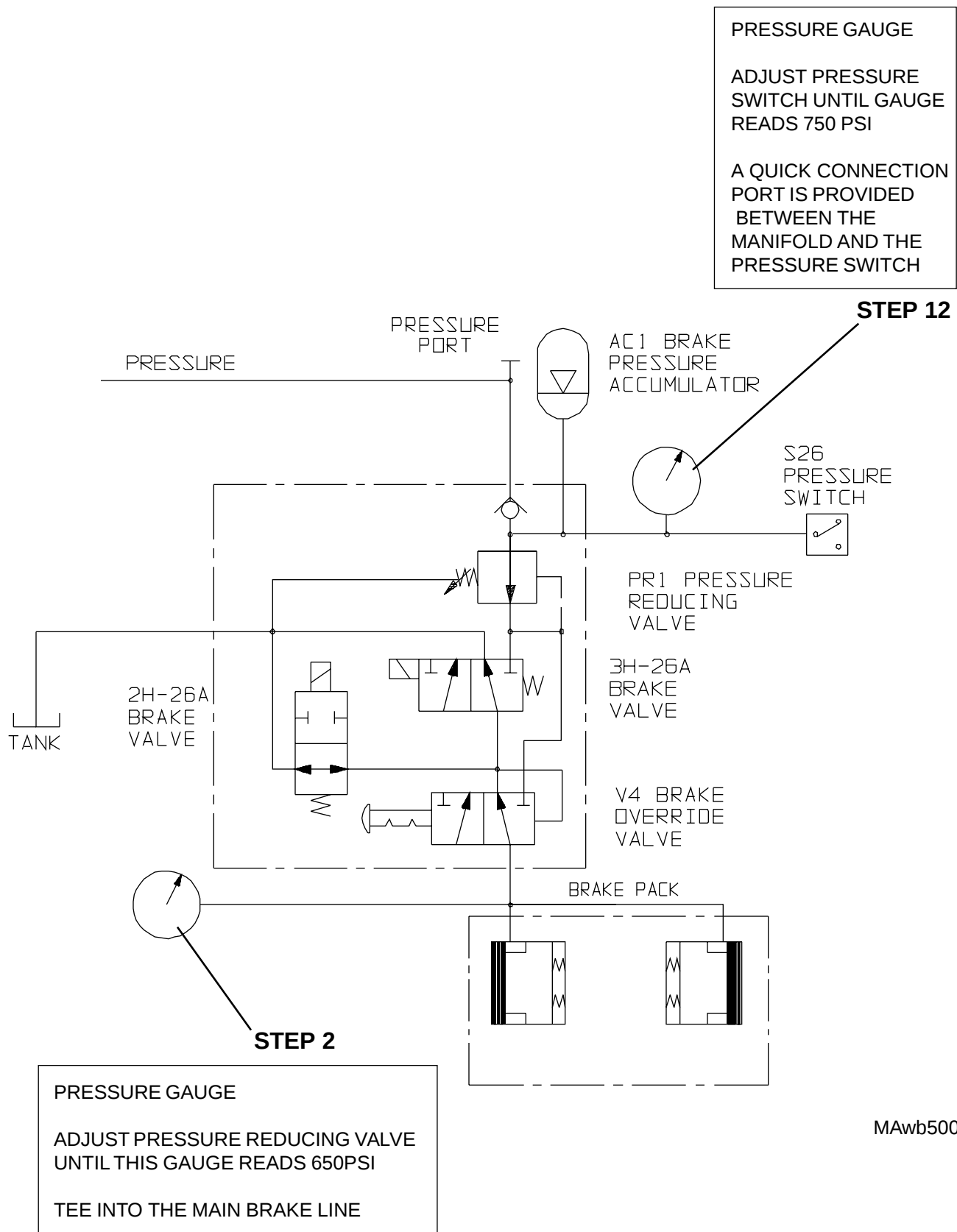


Figure 5-8. Brake Manifold MB2



MAwb500

Figure 5-9. Brake Pressure System

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!

NOTES

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This diagram is an exploded view of a scissor lift, showing the main components and their assembly points. The central part of the diagram shows the scissor mechanism with the platform (1) and mast (2). To the left, there is a control panel (14) and a safety bar (13). To the right, there is a battery pack (4) and a control unit (10). Various other components are shown, including a safety harness (17), a safety net (18), a safety door (15), a safety handle (11), a safety lock (12), a safety pin (19), a safety cable (20), a safety switch (9), a safety button (8), a safety light (7), a safety horn (6), a safety bell (5), a safety alarm (3), a safety sensor (1), a safety camera (21), and a safety microphone (16).

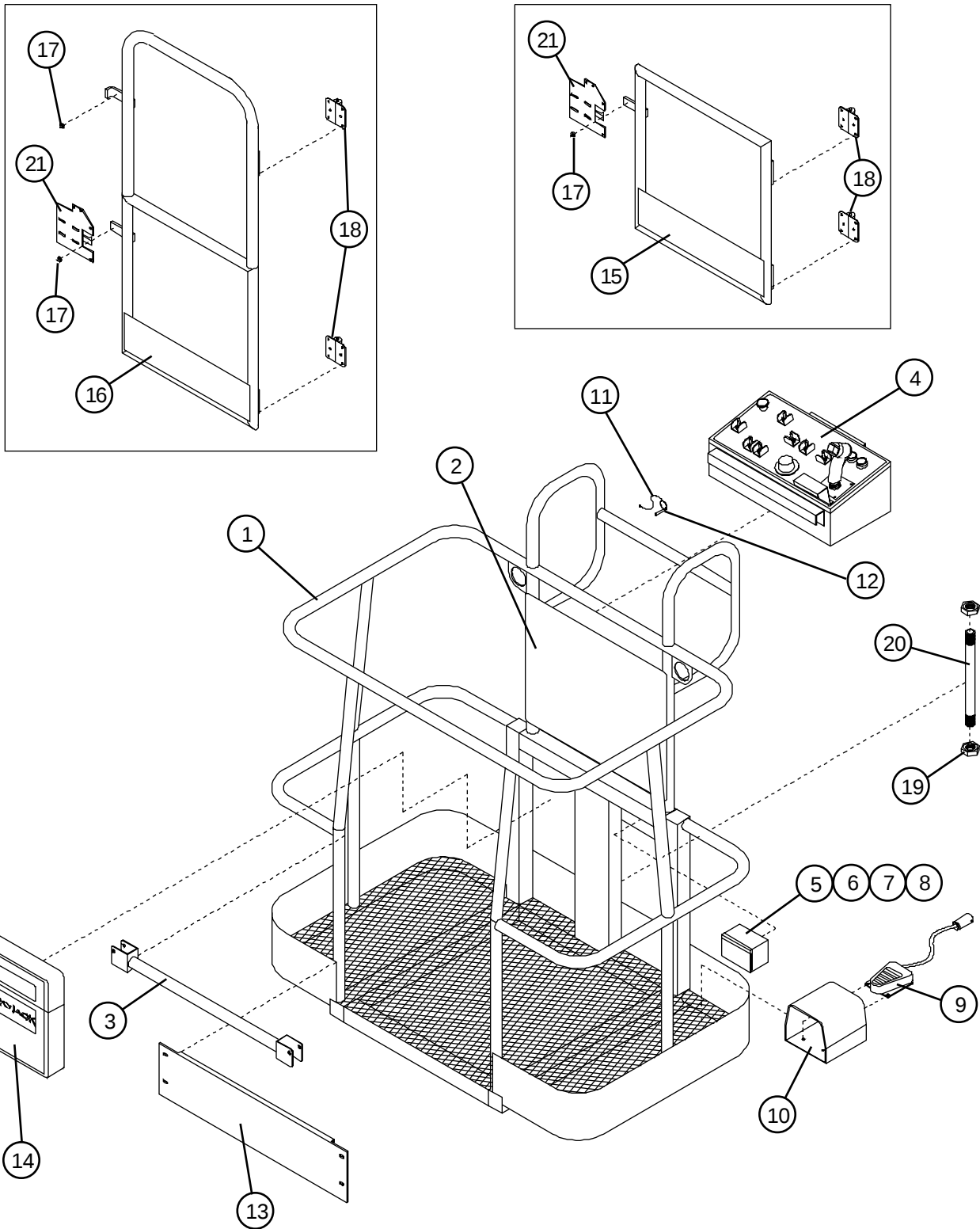
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SJKB-33, -40 (ELECTRIC)

FIGURE 6-1. PLATFORM ASSEMBLY - 30" x 48"

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
A	701287	PLATFORM ASSEMBLY, (standard)	-
B	701306	PLATFORM ASSEMBLY, (with half gate option)	-
C	703752	PLATFORM ASSEMBLY, (with full gate option)	-
D	701557	PLATFORM ASSEMBLY, Europe (standard)	-
E	701558	PLATFORM ASSEMBLY, Europe (with half gate option)	-
F	(Ref.)	PLATFORM ASSEMBLY, Europe (with full gate option)	-
G	710910	PLATFORM ASSEMBLY, (Full gate with full mesh option),(not shown)	-
1	700399	• WELDMENT, Platform, A	1
	706790	• WELDMENT, Platform, B	1
	706791	• WELDMENT, Platform, C	1
	703407	• WELDMENT, Platform, D	1
	706792	• WELDMENT, Platform, E	1
		• WELDMENT, Platform, F	1
	710866	• WELDMENT, Platform, (with full mesh), (not shown), G	1
	103909	•• BOLT, Hex-hd 1/2-13 x 1-1/4" lg.	6
	103470	•• WASHER, Lock 1/2"	6
	705541	•• CLAMP, Hose 1-1/4"	1
	103632	•• BOLT, Self tap. 1/4-14 x 3/4" lg.	1
	103995	•• WASHER, Flat 1/4"	1
	103125	•• LABEL, Blue/White stripping	163"
	2	706856 • PLATE, Info/ warning	1
	103632	•• SCREW, Self tap. 1/4-14 x 3/4" lg.	4
3	708028	• RAILING ASSEMBLY, Entry, A, D	1
	708027	•• WELDMENT, Entry rail	1
	103872	•• BOLT, HHCS 3/8-16 x 2-1/4 lg.	2
4	104606	•• NUT, Lock 3/8-16	2
	(Ref.)	OPERATOR'S CONTROL CONSOLE ASSEMBLY (For components, refer to Figure 6-3.)	1
5	109700	• RECEPTACLE 110V GFCI BOX	1
	112707	•• SCREW, Self tapping #10-24 x 5/8" lg.	4
	104694	•• WASHER, Flat #10	4
	105269	•• CORD, 14/3	48 ft.
6	109698	• RECEPTACLE 110V GFCI, A, B, C, G	1
7	109699	• RECEPTACLE 110V, Cover plate, A, B, C, G	1
8	703737	• COVER 110V., Outlet Blank, D, E, F	1
9	700520	• SWITCH ASSEMBLY, Foot	1
	700187	•• SWITCH, Foot	1
10	(Ref.)	•• CONNECTOR ASSEMBLY, 4 Pin male	1
	103567	••• HOUSING, Connector male	1
	103569	••• INSERT, Male 4 pin connector	1
	700188	• COVER, Foot switch	1
	103857	•• BOLT, Hex-hd 1/4-20 x 1" lg.	2
	103980	•• NUT, Hex 1/4-20	2
	700598	•• WASHER, Fender 9/32" x 1-1/4" x 1/16" thk.	2
	104000	•• WASHER, Lock 1/4"	2
	11	105807 • LANYARD 6" lg.	1
	706169	•• SCREW, #10-16 x 5/8" lg.	1
12	100509	• PIN, Quick release 3/8" diameter x 2" lg.	1
Parts list continued on Page 7.			

FIGURE 6-1. PLATFORM ASSEMBLY - 30" x 48"

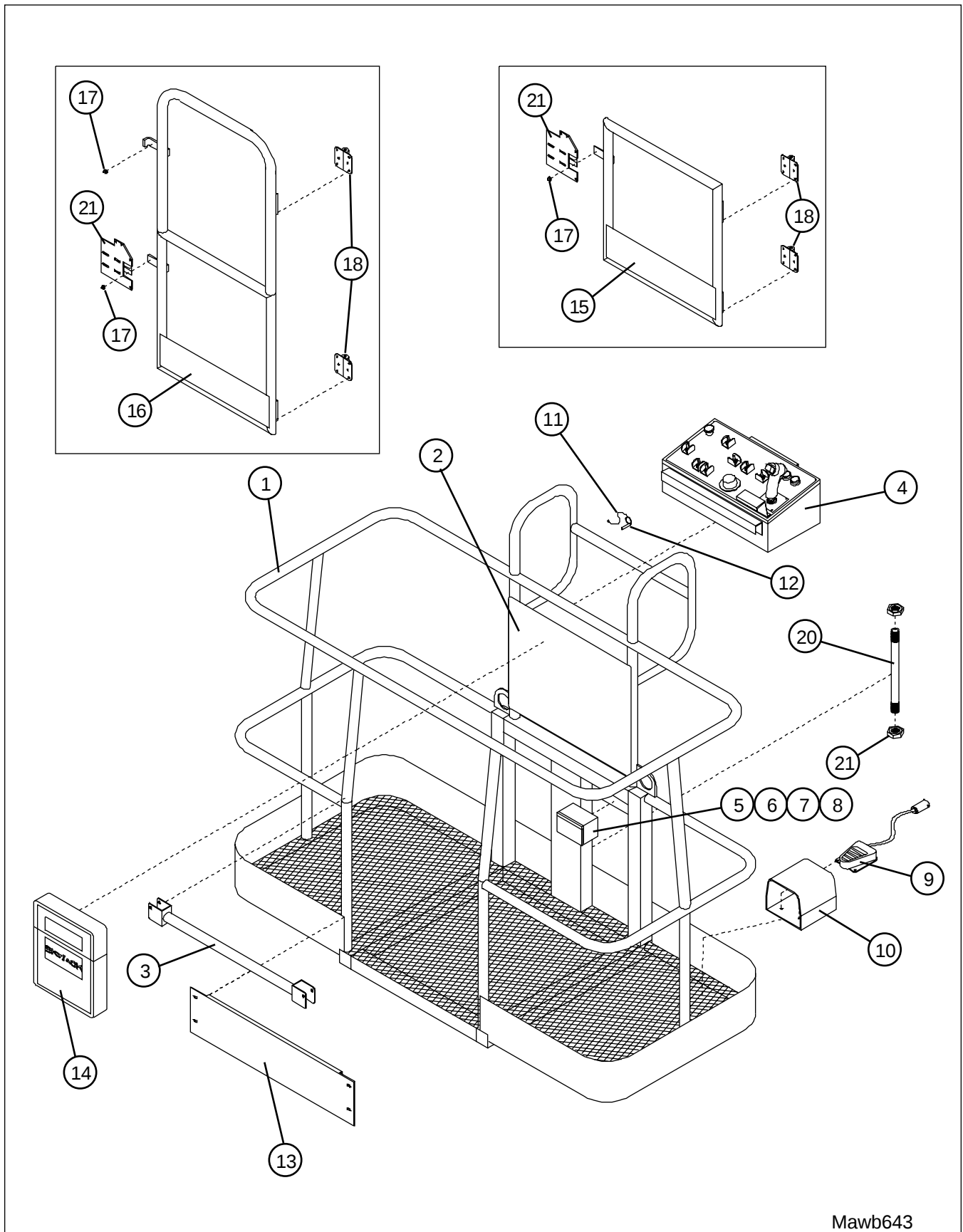


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FIGURE 6-1. PLATFORM ASSEMBLY - 30" x 48"

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
		Parts list continued from Page 5.	
13	706142	• KICK PLATE, A	1
	706603	• • BOLT, BHCS 1/4-20 x 1/2" lg. SS	4
	700583	• • NUT, Lock 1/4-20	4
14	117293	• MANUAL, Enclosure	1
	706857	• • BOLT, Machine RD HD 1/4-20 x 3/4" lg.	4
	103995	• • WASHER, Flat 1/4"	1
	700583	• • NUT, Lock 1/4-20	4
	700438	• MANUAL, ANSI A-92.5 (Not shown)	1
15	706802	• WELDMENT, Half gate, B, E	1
16	706803	• WELDMENT, Full gate, C, F	1
	710921	• WELDMENT, Full gate with mesh, (not shown), G	1
17	701027	• BUMPER, RUBBER, B, C, E, F, G	AR
18	117277	• HINGE, SPRING, B, C, E, F, G	2
	112495	• • BOLT, 1/4-20x1/8" lg.	12
	104000	• • WASHER, Lock 1/4"	12
19	700570	• NUT, Hex 1"-14	2
20	700426	• CENTER BOLT, Rotary actuator	1
21	(Ref.)	• LATCH ASSEMBLY, B, C, E, F, G	1
	710262	• PLATE, Latch mounting	1
	103632	• • SCREW, Self tapping 1/4-14x3/4"	4
	710274	• LATCH, Finger bolt	1
	705572	• • BOLT, SHCS #10-24x1/2" grade 5	4
	705571	• • NUT, HEX Lock #10-24	4

FIGURE 6-2. PLATFORM ASSEMBLY - 30" X 66"



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FIGURE 6-2. PLATFORM ASSEMBLY - 30" X 66"

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
A	701499	PLATFORM ASSEMBLY, (standard)	-
B	701500	PLATFORM ASSEMBLY, (with half gate option)	-
C	703033	PLATFORM ASSEMBLY, (with full gate option)	-
D	701559	PLATFORM ASSEMBLY, Europe (standard)	-
E	701560	PLATFORM ASSEMBLY, Europe (with half option)	-
F	(Ref.)	PLATFORM ASSEMBLY, Europe (with full gate option)	-
1	704351	• WELDMENT, Platform, A	1
	706793	• WELDMENT, Platform, B	1
	706794	• WELDMENT, Platform, C	1
	704445	• WELDMENT, Platform, D	1
	706795	• WELDMENT, Platform, E	1
		• WELDMENT, Platform, F	1
	103909	•• BOLT, HHCS 1/2-13 x 1-1/4" lg.	6
	103470	•• WASHER, Lock 1/2"	6
	705541	•• CLAMP, Hose 1-1/4"	1
	103632	•• BOLT, Self tap. 1/4-14 x 3/4" lg.	1
	103995	•• WASHER, Flat SAE 1/4"	1
	103125	•• LABEL, Blue/White stripping	184"
	2	706843 • PLATE, Info/ warning	1
		103632 •• BOLT, Self tap. 1/4-14 x 3/4" lg.	4
		103995 •• WASHER, Flat 1/4"	4
3	104000	•• WASHER, Lock 1/4"	4
	708028	• ENTRY RAIL ASSEMBLY, A, D	1
	708027	•• WELDMENT, Entry RAIL	1
	103872	•• BOLT, HHCS 3/8-16 x 2-1/4" lg.	2
4	104606	•• NUT, Lock 3/8-16	2
	(Ref.)	OPERATOR'S CONTROL CONSOLE ASSEMBLY (For components, refer to Figure 6-3.)	1
5	109700	• RECEPTACLE 110V GFCI BOX	1
	112707	•• SCREW, Self tapping #10-24 x 5/8" lg.	4
	104694	•• WASHER, Flat #10	4
	103035	•• STRAIN RELIEF, Metal 90°	1
	105269	•• CORD, 14/3	48 ft.
6	109698	• RECEPTACLE 110V, GFCI, A, B, C	1
7	109699	• RECEPTACLE 110V, Cover plate, A, B, C	1
8	703737	• COVER 110V., Outlet Blank, D, E	1
9	700520	• SWITCH ASSEMBLY, Foot	1
	700187	•• SWITCH, Foot	1
10	(Ref.)	•• CONNECTOR ASSEMBLY, 4 Pin male	1
	103567	••• HOUSING, Connector male	1
	103569	••• INSERT, Male 4 pin connector	1
	700188	• COVER, Foot switch	1
	103857	•• BOLT, Hex-hd 1/4-20 x 1" lg.	2
	103980	•• NUT, Hex 1/4-20	2
	700598	•• WASHER, Fender 9/32" x 1-1/4" x 1/16" thk.	2
	104000	•• WASHER, Lock 1/4"	2
Parts list continued on Page 11.			

Diagram illustrating the assembly of a scissor lift, showing the main structure and various components labeled with numbers 1 through 21.

The main structure includes the scissor mechanism (1, 2), the platform (3), and the control panel (4). The battery pack (5) is shown connected to the control panel. The safety features (6, 7, 8, 9, 10) are shown being installed on the platform.

Two inset diagrams show the installation of the rear door (16) and the front door (15). The rear door (16) is shown with hinges (17) and a latch (18). The front door (15) is shown with hinges (17) and a latch (18).

The diagram also shows the installation of the control panel (4) and the battery pack (5) onto the main structure.

Additional components shown include the scissor arms (2), the platform (3), and the safety features (6, 7, 8, 9, 10).

The diagram is labeled with the following numbers:

- 1: Main frame
- 2: Scissor arm
- 3: Platform
- 4: Control panel
- 5: Battery pack
- 6: Safety pin
- 7: Safety pin
- 8: Safety pin
- 9: Safety pin
- 10: Safety pin
- 11: Safety pin
- 12: Safety pin
- 13: Safety pin
- 14: Safety pin
- 15: Front door
- 16: Rear door
- 17: Hinge
- 18: Latch
- 19: Safety pin
- 20: Safety pin
- 21: Safety pin

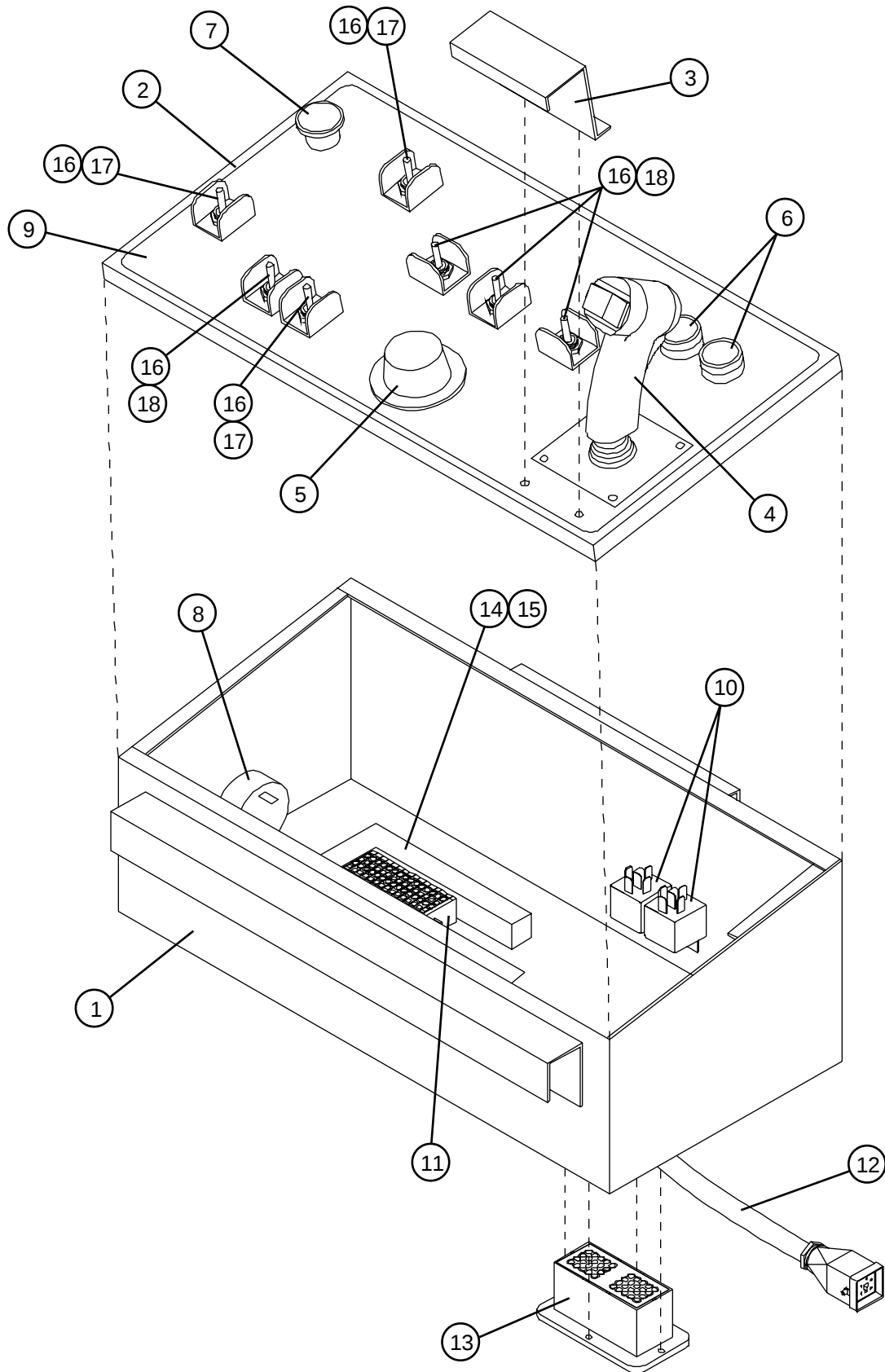
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FIGURE 6-2. PLATFORM ASSEMBLY - 30" X 66"

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
		Parts list continued from Page 9.	
11	105807	• LANYARD 6" lg.	1
	706169	•• SCREW, #10-16 x 5/8" lg.	1
12	100509	• PIN, Quick release 3/8" diameter x 2" lg.	1
13	706142	• KICK PLATE, A	1
	706603	•• BOLT, BHCS 1/4-20 x 1/2" lg. SS	4
	700583	•• NUT, Lock 1/4-20	4
14	117293	• MANUAL, Enclosure	1
	706857	•• BOLT, Machine RD HD 1/4-20 x 3/4" lg.	4
	700583	•• NUT, 1/4-20	4
	700438	• MANUAL, ANSI A-92,5 (Not shown)	1
15	706802	• WELDMENT, Half gate, B, E	1
16	706803	• WELDMENT, Full gate, C, F	1
17	701027	• BUMPER, RUBBER, B, C, E, F	AR
18	117277	• HINGE, SPRING, B, C, E, F	2
19	700570	• NUT, Hex 1"-14	2
20	707902	• CENTER BOLT, Rotary actuator	1
21	(Ref.)	• LATCH ASSEMBLY, B, C, E, F	1
	710262	• PLATE, Latch mounting	1
	103632	•• SCREW, Self tapping 1/4-14x3/4"	4
	710274	• LATCH, Finger bolt	1
	705572	•• BOLT, SHCS #10-24x1/2" grade 5	4
	705571	•• NUT, HEX Lock #10-24	4

FIGURE 6-3. OPERATOR'S CONTROL CONSOLE ASSEMBLY

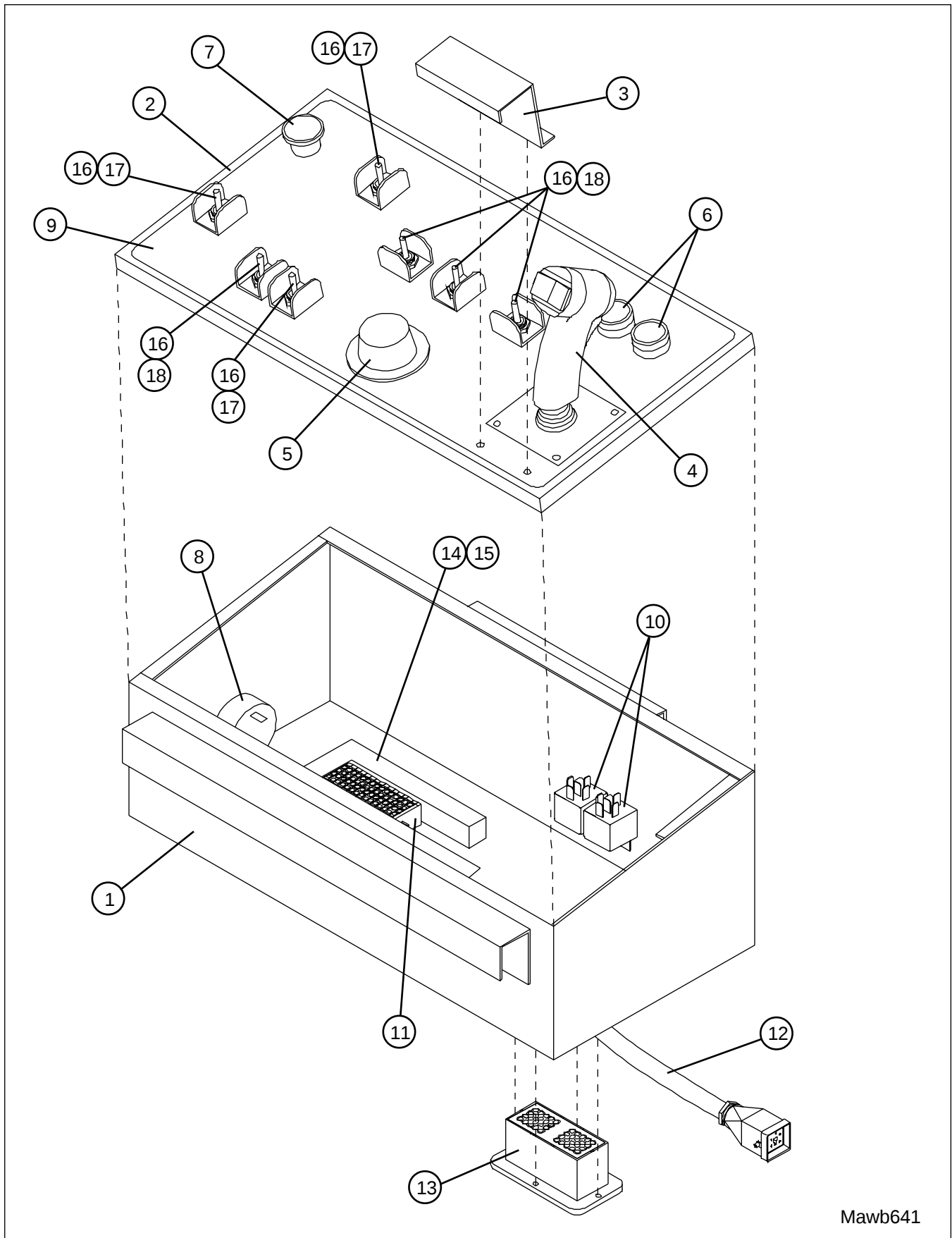


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FIGURE 6-3. OPERATOR'S CONTROL CONSOLE ASSEMBLY

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
A	708587	OPERATOR'S CONTROL CONSOLE ASSEMBLY (Machines without horn option.)	-
B	708582	OPERATOR'S CONTROL CONSOLE ASSEMBLY (Machines with factory installed horn option.)	-
C	708585	OPERATOR'S CONTROL CONSOLE ASSEMBLY (European machine.)	-
1	708824	• WELDMENT, Control box	1
2	708579	• WELDMENT, Control box lid	1
	700479	•• SCREW, Machine #10-24 x 3/4" lg.	2
	700480	•• NUT, Clip #10-24	2
3	700066	• SUPPORT, Wrist	1
	103962	•• SCREW, Machine #10-32 x 1/2" lg.	2
	104694	•• WASHER, Flat SAE #10	2
	104185	•• WASHER, Lock #10	2
	104003	•• NUT, #10-32	2
4	701044	• CONTROLLER ASSEMBLY, Drive/steer, A (For components, refer to Figure 6-4.)	1
	103962	•• SCREW, Machine #10-32 x 1/2" lg.	4
	701044	• CONTROLLER ASSEMBLY, Drive/ steer, B, C (For components, refer to Figure 6-5.)	1
	103962	•• SCREW, Machine #10-32 x 1/2" lg.	4
5	(Ref.)	• POTENTIOMETER ASSEMBLY	1
	711401	•• RESISTOR, Variable, assembly, 3.5k OHM	1
	707253	•• KNOB, Potentiometer	1
6	(Ref.)	• LIGHT ASSEMBLY, Indicator	2
	102671	•• BASE, Lighted	2
	103202	•• HEAD, Light	2
	102771	•• BULB, 24 Volt	2
7	(Ref.)	• SWITCH ASSEMBLY, Emergency stop	1
	103281	•• SWITCH, Contact base N.C.	1
	102769	•• HEAD, Emergency stop switch	1
8	103057	• BEEPER, 4-28VDC	1
9	707655	• LABEL, Control console, A, B	1
	708578	• LABEL, Control console, C	1
10	108589	• RELAY, Sealed 40 Amp	AR
	103962	•• SCREW, Machine #10-32 x 1/2" lg.	1
	104694	•• WASHER, Flat #10	1
	104185	•• WASHER, Lock #10	1
	104003	•• NUT, #10-32	1
Parts list continued on Page 15.			

FIGURE 6-3. OPERATOR'S CONTROL CONSOLE ASSEMBLY

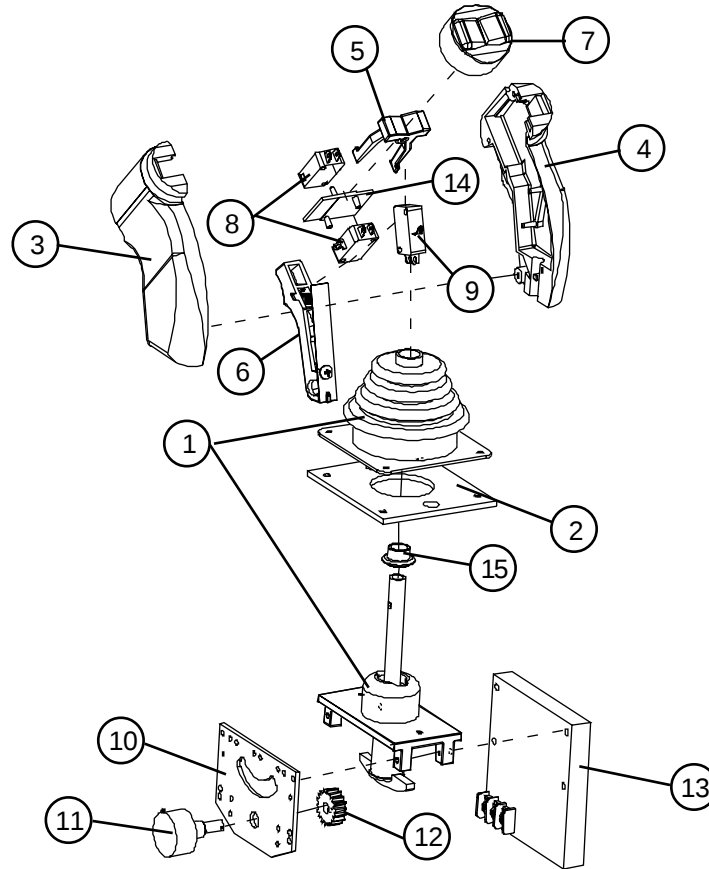


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FIGURE 6-3. OPERATOR'S CONTROL CONSOLE ASSEMBLY

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
		Parts list continued from Page 13.	
11	(Ref.)	• TERMINAL ASSEMBLY	1
	707147	•• END STOP, Terminal block	2
	707146	•• END PLATE, Terminal block	1
	707145	•• TERMINAL BLOCK, Diode	2
	707143	•• TERMINAL BLOCK, Through	AR
	707148	•• ADJ. JUMPER, Terminal blocks	2
	710140	•• DIN 35 RAIL, Terminal block	1
	702186	•• THREAD INSERT, #10-32	2
	104694	•• WASHER, Flat #10	2
	103962	•• SCREW, Machine #10-32 x 1/2" lg.	2
12	(Ref.)	• CONNECTOR ASSEMBLY, 4 Pin female	1
	705441	•• HARNESS, Foot pedal assembly	1
	710266	•• STRAIN RELIEF, 1/2 NPT	1
13	(Ref.)	• CONNECTOR RECEPTACLE, 40 Pin	1
	707875	•• RECEPTACLE, 40 Pin connector	1
	707847	•• GASKET, Connector	1
	705256	•• PLUG, Weather seal	AR
	705258	•• PIN, Contact	40
	707822	•• TOOL, Pin removal	AR
	707823	•• TOOL, Crimp	AR
	700818	•• BOLT, Machine hd. #8-32 x 1" lg.	4
	112249	•• WASHER, Lock #8	4
	103986	•• NUT, Hex #8-32	4
14	710142	• WIRE DUCT, 1" x 2"	1
	710143	• WIRE DUCT	1
	710446	• WIRE DUCT	1
15	710144	• WIRE DUCT COVER, 1"	1
	710145	• WIRE DUCT COVER	1
	710447	• WIRE DUCT COVER	1
16	707394	• GUARD, Toggle switch	7
17	702662	• SWITCH, Toggle DPDT 3 pos. momentary	3
18	102853	• SWITCH, Toggle SPDT 3 pos. momentary	4

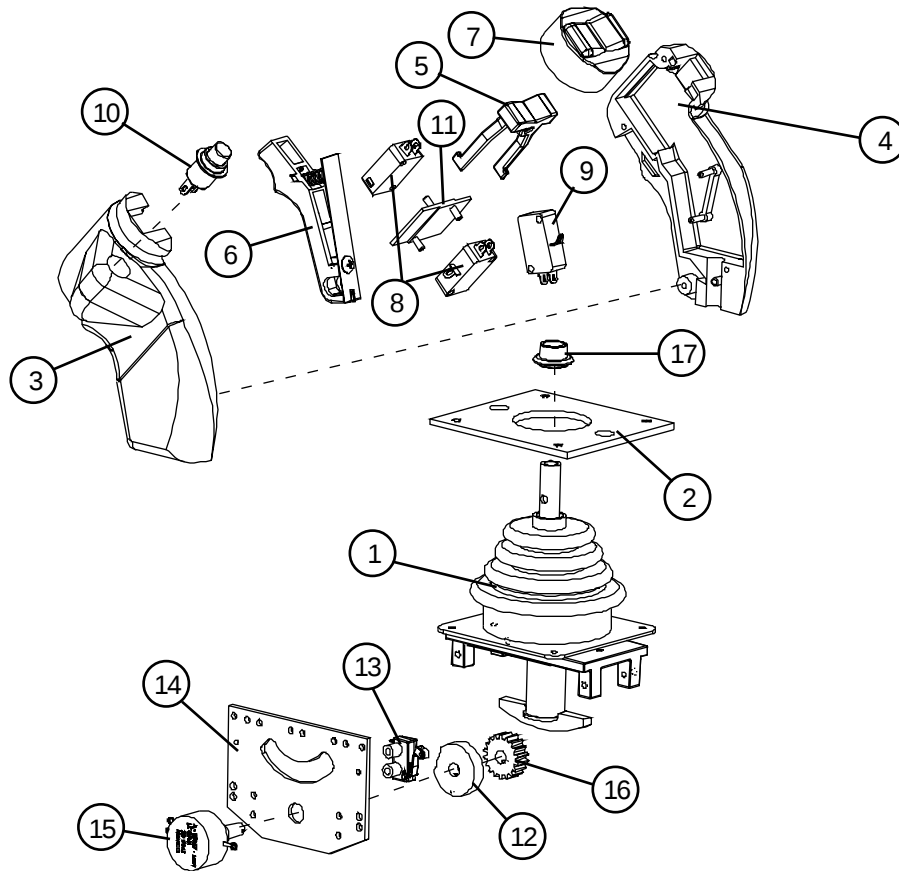
FIGURE 6-4. DRIVE/STEER CONTROLLER ASSEMBLY
(Machines without factory installed horn option).



702406

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	702406	CONTROLLER ASSEMBLY, Drive/steer	-
1	700978	• BOOT, Controller handle	1
2	708995	• MOUNTING PLATE	1
3	700953	• LEFT GRIP	1
4	700954	• RIGHT GRIP	1
5	105734	• SWITCH, Actuator	1
6	700955	• TRIGGER	1
7	105735	• CAP	1
8	105733	• SWITCH, Rocker	2
9	711082	• MOLDING, Switch separator RSTG	1
10	105733	• SWITCH, Trigger	1
11	708996	• MOUNTING PLATE	1
12	708997	• POTENTIOMETER, 500 OHM	1
13	708998	• PINION GEAR	1
14	708999	• ELECTRICAL ASSEMBLY (Potted Board)	1
15	710018	• SLEEVE, Retaining spring	1
	710871	• ASSEMBLY KIT, Hardware	1
	709000	• GRIP ASSEMBLY, No's 3-10	-
	700835	• ELECTRICAL ASSEMBLY, No's 11-15	-

FIGURE 6-5. DRIVE/STEER CONTROLLER ASSEMBLY
(Machines with factory installed horn option.)



701044

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	701044	CONTROLLER ASSEMBLY, Drive/steer	-
1	700978	• BOOT, Controller handle	1
2	708995	• MOUNTING PLATE	1
3	701239	• LEFT GRIP	1
4	709391	• RIGHT GRIP	1
5	105734	• SWITCH, Actuator	1
6	700955	• TRIGGER	1
7	105735	• CAP	1
8	105733	• SWITCH, Rocker	2
9	105733	• SWITCH, Trigger	1
10	701240	• SWITCH, Horn button	1
11	711082	• MOULDING, Switch separator, RSTG	1
12	709387	• CAM, Neutral	1
13	709386	• SWITCH WITH ROLLER	1
14	708996	• MOUNTING PLATE	1
15	708997	• POTENTIOMETER	1
16	708998	• PINION GEAR	1
17	710018	• SLEEVE, Retaining spring	1
	709390	• GRIP ASSEMBLY, No's 3-11	-
	700835	• ELECTRICAL ASSEMBLY, No's 12-17	-

This technical drawing is an exploded view of a mechanical assembly, likely a scissor lift or a similar hydraulic lifting device. It consists of 24 numbered components, each shown in its relative position to the others, with dashed lines indicating the assembly path. The components are as follows:

- 1**: Hydraulic cylinder/motor unit at the base.
- 2**: A small pin or connector near the base.
- 3**: A long, narrow structural beam.
- 4**: A small bracket or plate on the beam.
- 5**: A long, thin rod or pin.
- 6**: A small bracket or plate on the beam.
- 7**: A long, narrow structural beam, similar to component 3.
- 8**: A small pin or connector.
- 9**: A small bracket or plate.
- 10**: A small pin or connector.
- 11**: A small bracket or plate.
- 12**: A small pin or connector.
- 13**: A small bracket or plate.
- 14**: A long, thin rod or pin.
- 15**: A small pin or connector.
- 16**: A small bracket or plate.
- 17**: A long, narrow structural beam.
- 18**: A small bracket or plate.
- 19**: A small pin or connector.
- 20**: A small bracket or plate.
- 21**: A long, thin rod or pin.
- 22**: A small bracket or plate.
- 23**: A small pin or connector.
- 24**: A small bracket or plate.

The assembly is shown in a partially disassembled state, with components 1 through 24 arranged to show their relative positions and how they fit together. Dashed lines indicate the assembly path for each component.

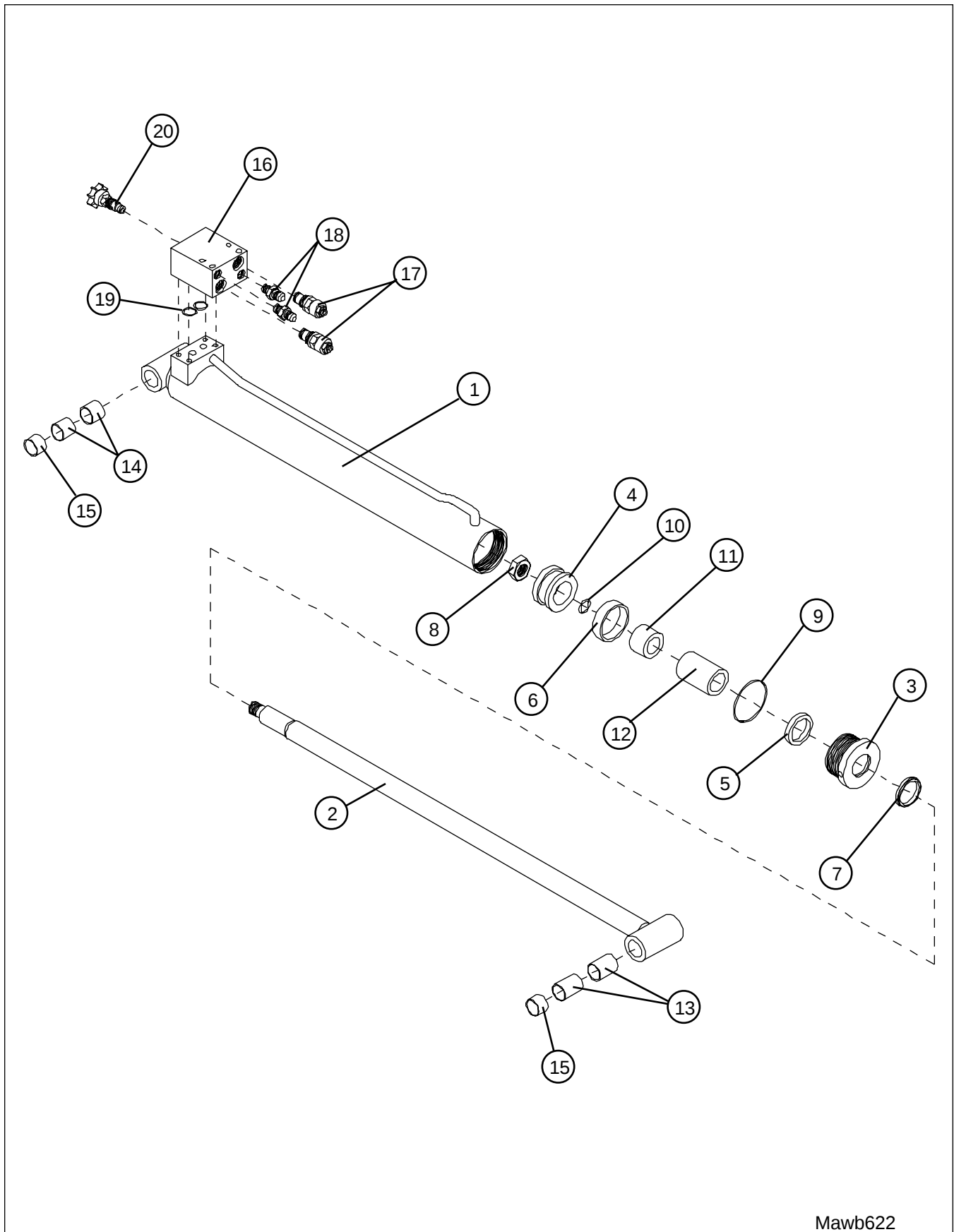
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FIGURE 6-6. BOOM ASSEMBLY

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
1	701563	ACTUATOR ASSEMBLY, Rotary (For components refer to Figure 6-11.)	1
2	700386	PIN, Jib Actuator	2
	103887	• BOLT, HHCS 5/16"-18 x 3/4" lg.	1
	103404	• WASHER, Lock 5/16"	1
3	707178	PARALLEL ASSEMBLY, Jib upper	1
	100309	• BUSHING, 1" x 1-1/8" x 1" lg.	6
	705541	CLAMP, Hose 1-1/4"	1
	102972	CLAMP, Hose, G8 Double	1
	103995	WASHER, Flat 1/4"	2
	103632	SCREW, Self tapping 1/4"-14 x 3/4"	2
4	707179	PARALLEL ASSEMBLY, Jib lower	1
	100309	• BUSHING, 1" x 1-1/8" x 1" lg.	6
	102972	• HOSE CLAMP, G8 double	2
	103995	• WASHER, Flat SAE 1/4"	2
	103632	• SCREW, Self tapping 1/4"-14 x 3/4" lg.	2
5	700968	CYLINDER/MANIFOLD ASSEMBLY, Jib lift (For components refer to Figure 6-7)	1
6	700384	PIN, Jib parallel top	2
	103887	• BOLT, HHCS 5/16"-18 x 3/4" lg.	1
	103404	• WASHER, Lock 5/16"	1
7	(Ref.)	MAIN BOOM ASSEMBLY (For components refer to Figure 6-13.)	1
	701805	RUBBER WEAR STRIP (Not shown)	7
8	700362	PIN, Lift Cylinder top	1
	103887	• BOLT, HHCS 5/16"-18 x 3/4" lg.	1
	103404	• WASHER, Lock 5/16"	1
9	700333	CYLINDER ASSEMBLY, Master (For components refer to Figure 6-8.)	1
10	700966	KNUCKLE ASSEMBLY	1
	100904	• BUSHING, 1-1/2" x 1-5/8" x 1" lg.	2
	100309	• BUSHING, 1" x 1-1/8" x 1" lg.	4
	103216	• BUSHING, 1-1/2" x 1-5/8" x 1-1/2" lg.	8
11	700364	PIN, Upper knuckle	1
	700425	• WASHER, Stop 2-1/4" DIA x 3/16"	2
	706872	• BOLT, HHCS 1/2"-13 x 1-1/4" lg.	2
	103915	• BOLT, HHCS 3/8"-16 x 3-1/2" lg.	1
	104606	• NUT, Lock 3/8"-16	1
12	700366	PIN, Master cylinder top	1
	103873	• BOLT, HHCS 3/8"-16 x 2-1/2" lg.	1
	104606	• NUT, Lock 3/8"-16	1
13	700430	PIN, Master cylinder bottom	1
	103887	• BOLT, HHCS 5/16"-18 x 3/4" lg.	1
	103404	• WASHER, Lock 5/16"	1
14	700988	CYLINDER ASSEMBLY, Lift (For components refer to Figure 6-9.)	1
15	711316	PIN, Lift cylinder bottom	1
	700425	• WASHER, Stop 2-1/4" DIA x 3/16"	2
	706872	• BOLT, HHCS 1/2"-13 x 1-1/4" lg.	2
16	709448	PIN, Upper parallel	2
	700425	• WASHER, Stop 2-1/4" DIA x 3/16"	2
	700342	WASHER, Bronze 2-1/2" DIA. x 1-1/2" I.D. (Not shown)	2
	709446	• SPACER, Pin	1
	706872	• BOLT, HHCS 1/2"-13 x 1-1/4" lg.	2
17	701102	PARALLEL UPPER ASSEMBLY, Riser	1
	100904	• BUSHING, 1-1/2" x 1-5/8" x 1" lg.	2
	103216	• BUSHING, 1-1/2" x 1-5/8" x 1-1/2" lg.	2
18	700964	PARALLEL LOWER ASSEMBLY, Riser	1
	100904	• BUSHING, 1-1/2" x 1-5/8" x 1" lg.	2
	103216	• BUSHING, 1-1/2" x 1-5/8" x 1-1/2" lg.	2
19	700994	HOSE COVER, Riser	1
20	700327	HOSE STRAP, Riser	1
21	700987	CYLINDER ASSEMBLY, Riser (For components refer to Figure 6-10.)	1
22	700347	PIN, Riser cylinder upper	1
	706872	• BOLT, HHCS 1/2"-13 x 3/4" w/nylon patch	2
	700425	• WASHER, Stop 2-1/4" diameter x 3/16"	2
23	700346	PIN, Riser cylinder lower	1
	103887	• BOLT, HHCS, 5/16"-18 x 3/4" lg.	1
	103404	• WASHER, Lock, 5/16"	1
24	700344	PIN, Turret lower parallel	2
	103887	• BOLT, HHCS 5/16"-18 x 3/4" lg.	2
	103404	• WASHER, Lock 5/16"	2

FIGURE 6-7. JIB LIFT CYLINDER ASSEMBLY



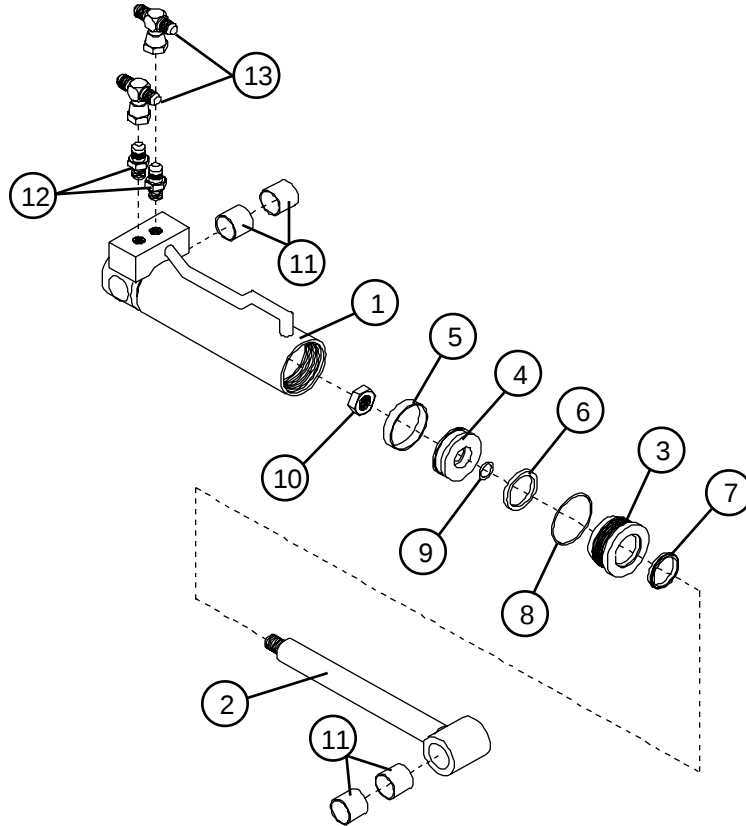
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FIGURE 6-7. JIB LIFT CYLINDER ASSEMBLY

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	708655	CYLINDER ASSEMBLY, Jib lift (w/bushings)	-
1	700245	• WELDMENT, Cylinder barrel	1
2	700244	• WELDMENT, Cylinder rod	1
3	700243	• GLAND, Cylinder	1
4	700242	• PISTON, Cylinder	1
*5	700576	• SEAL, Rod	1
*6	700585	• SEAL, Piston	1
*7	700578	• WIPER, Rod	1
8	700575	• NUT, Lock 3/4-10	1
*9	701965	• O-RING, Gland	1
*10	701634	• O-RING, Piston	1
11	700449	• SPACER, Cylinder 1-1/8" x 1-3/4" x 1-5/16" lg.	1
12	708650	• SPACER, Cylinder 1-1/4" x 1-3/4" x 2-3/4" lg.	1
13	100695	• BUSHING, 1" x 1-1/8" x 1-1/2" lg.	2
14	100309	• BUSHING, 1" x 1-1/8" x 1" lg.	2
15	100249	• BUSHING, 1" x 1-1/8" x 3/4" lg.	2
16	701029	VALVE BLOCK, Jib cylinder	1
	103884	• BOLT, HHCS 5/16-18 x 2-1/2" lg.	4
	103404	• WASHER, Lock 5/16	4
17	700568	VALVE, Counterbalance	2
18	103069	FITTING, Connector #6orb-#6	2
19	701635	O-RING, Valve block	2
20	103136	VALVE, Manual lowering	1
	700456	KIT, Seal repair	AR
		* Part of Seal Repair Kit.	

NOTES

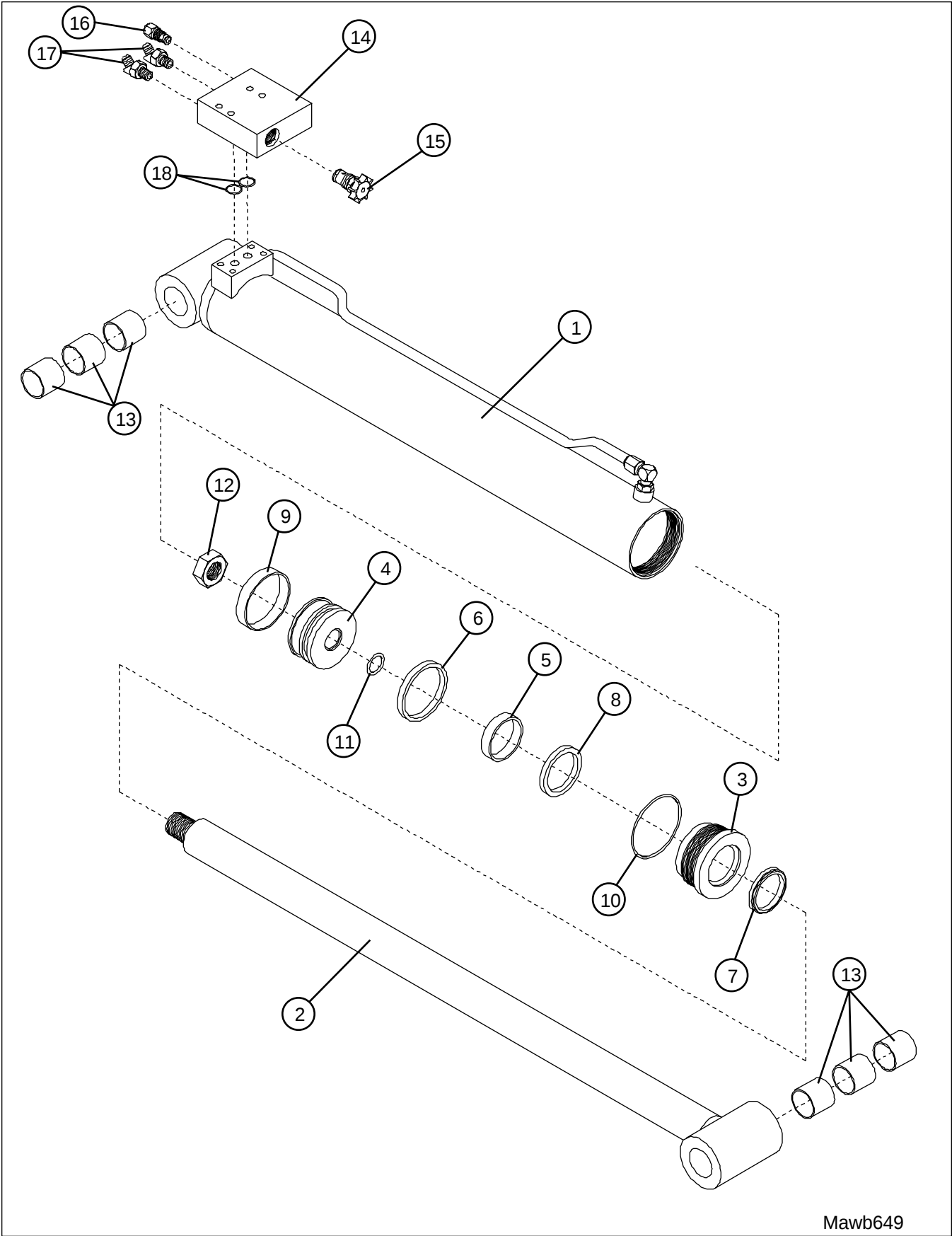
FIGURE 6-8. PLATFORM LEVELING MASTER CYLINDER ASSEMBLY



Mawb624

Index No.	Skyjack Part No.	Description							Units per Assy.
		1	2	3	4	5	6	7	
	700333	CYLINDER ASSEMBLY, Platform leveling master (w/bushings)							-
1	700334	• WELDMENT, Cylinder barrel							1
2	700337	• WELDMENT, Cylinder rod							1
3	700340	• GLAND, Cylinder							1
4	700341	• PISTON, Cylinder							1
*5	107935	• SEAL, Piston							1
*6	108798	• SEAL, Gland							1
*7	106449	• WIPER, Rod							1
*8	701964	• O-RING, Gland							1
*9	701633	• O-RING, Piston							1
10	103830	• NUT, Lock 5/8-11							1
11	100309	• BUSHING, 1" x 1-1/4" x 1" lg.							4
12	103069	FITTING, Connector #6orb-#6							2
13	114109	FITTING, Tee #6swv-#6-#6							2
	700454	KIT, Seal repair							AR
	706522	TOOL, Cylinder assembly 2"							-
		* Part of Seal Repair.							

FIGURE 6-9. BOOM LIFT CYLINDER ASSEMBLY

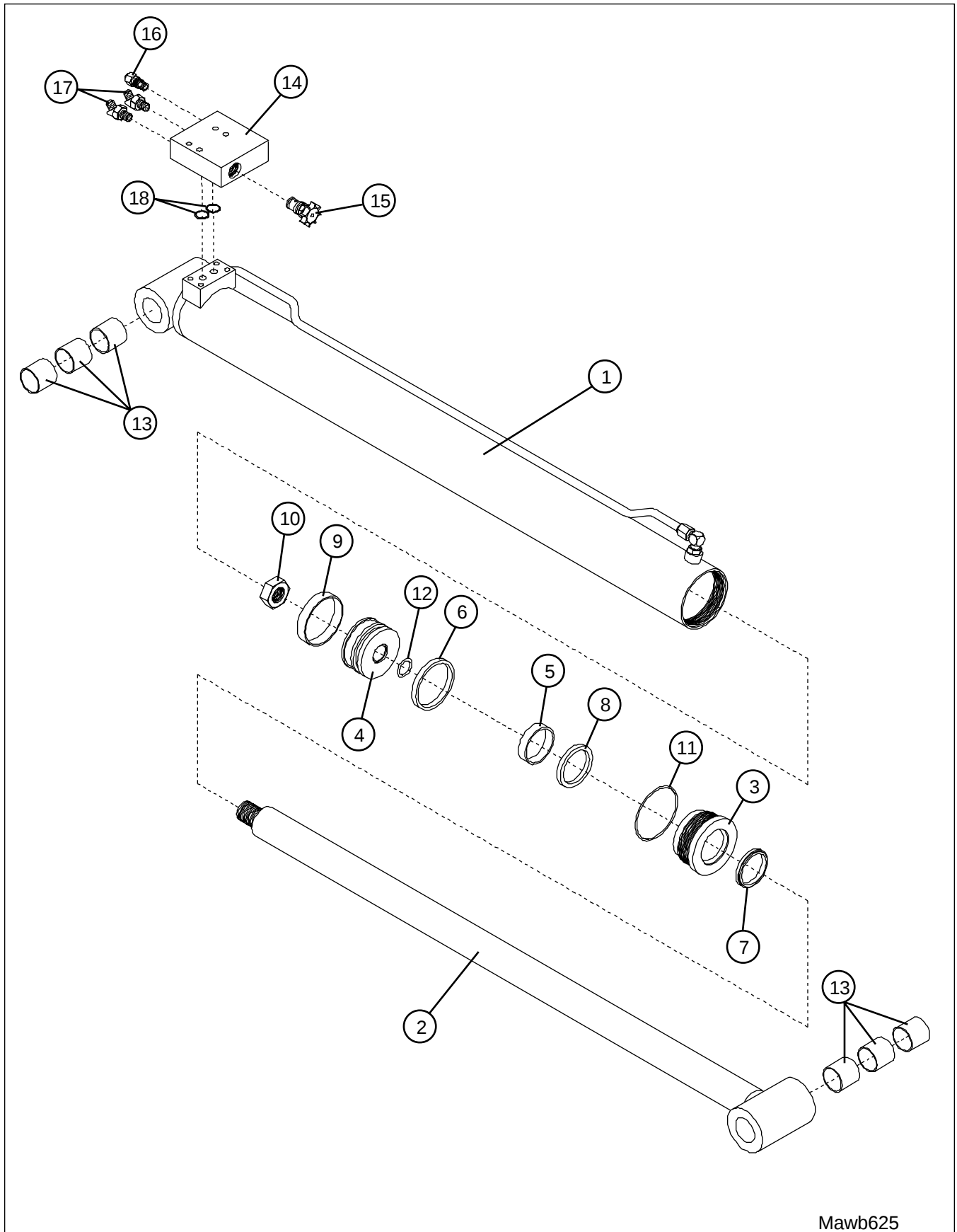


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FIGURE 6-9. BOOM LIFT CYLINDER ASSEMBLY

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	700989	CYLINDER ASSEMBLY, Boom lift (w/bushings)	-
1	700141	• WELDMENT, Cylinder barrel	1
2	700147	• WELDMENT, Cylinder rod	1
3	700995	• GLAND, Cylinder	1
4	700330	• PISTON, Cylinder	1
*5	700571	• SEAL, Rod	1
*6	106225	• SEAL, Piston	1
*7	700573	• WIPER, Rod	1
*8	700574	• WEAR RING, Gland	1
*9	106220	• WEAR RING, Piston	1
*10	701966	• O-RING, Gland	1
*11	701639	• O-RING, Piston	1
12	106230	• NUT, Lock 1-1/4-12	1
13	103216	• BUSHING, 1-1/2" x 1-11/16" x 1-1/2" lg.	6
14	700043	VALVE BLOCK, Boom lift cylinder	1
	103865	• BOLT, Soc-hd 5/16-18 x 2" lg.	4
	103404	• WASHER, Lock 5/16	4
15	103136	VALVE, Manual lowering	1
16	700568	VALVE, Counterbalance	1
17	107742	FITTING, Elbow 45° #6orb-#6	2
18	701635	O-RING, Valve block	2
	700452	KIT, Seal repair	AR
	703872	TOOL, Cylinder assembly 3-1/2"	-
		* Part of Seal Repair Kit.	

FIGURE 6-10. RISER LIFT CYLINDER ASSEMBLY

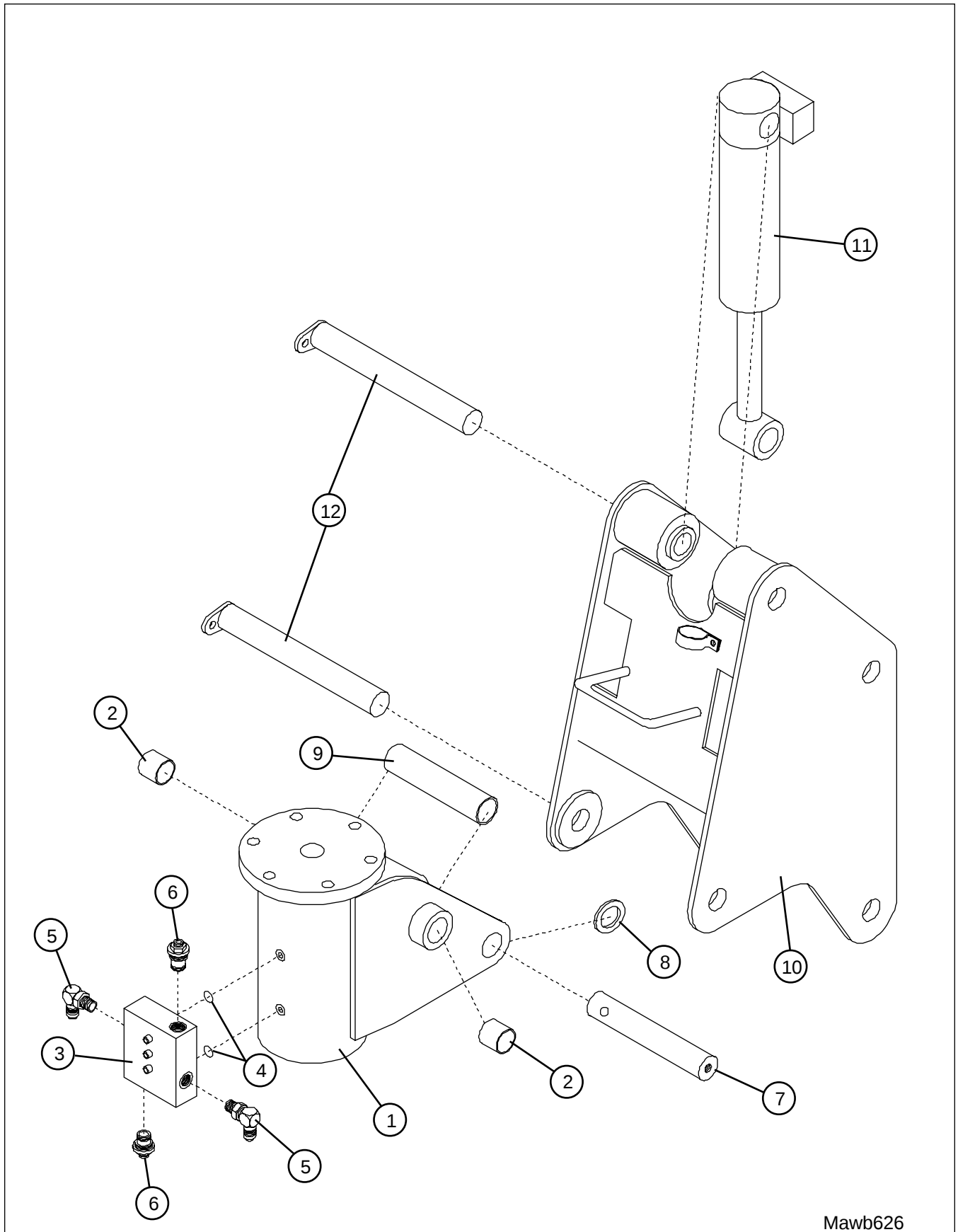


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FIGURE 6-10. RISER LIFT CYLINDER ASSEMBLY

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	700328	CYLINDER ASSEMBLY, Riser lift (w/bushings)	-
1	700135	• WELDMENT, Cylinder barrel	1
2	700145	• WELDMENT, Cylinder rod	1
3	700329	• GLAND, Cylinder	1
4	700330	• PISTON, Cylinder	1
*5	700571	• SEAL, Rod	1
*6	106225	• SEAL, Piston	1
*7	700573	• WIPER, Rod	1
*8	700574	• WEAR RING, Gland	1
*9	106220	• WEAR RING, Piston	1
10	106230	• NUT, Lock 1-1/4-12	1
*11	701966	• O-RING, Gland	1
*12	701639	• O-RING, Piston	1
13	103216	• BUSHING, 1-1/2" x 1-11/16" x 1-1/2" lg.	6
14	700043	VALVE BLOCK, Riser lift cylinder	1
	103865	• BOLT, HHCS 5/16-18 x 2" lg.	4
	103404	• WASHER, Lock 5/16"	4
15	103136	VALVE, Manual lowering	1
16	700568	VALVE, Counterbalance	1
17	107742	FITTING, Elbow 45° #6-#6	2
18	701635	O-RING, Valve block	2
	700452	KIT, Seal repair	AR
	703872	TOOL, Cylinder assembly 3-1/2"	-
		* Part of Seal Repair Kit.	

FIGURE 6-11. ROTARY ACTUATOR ASSEMBLY



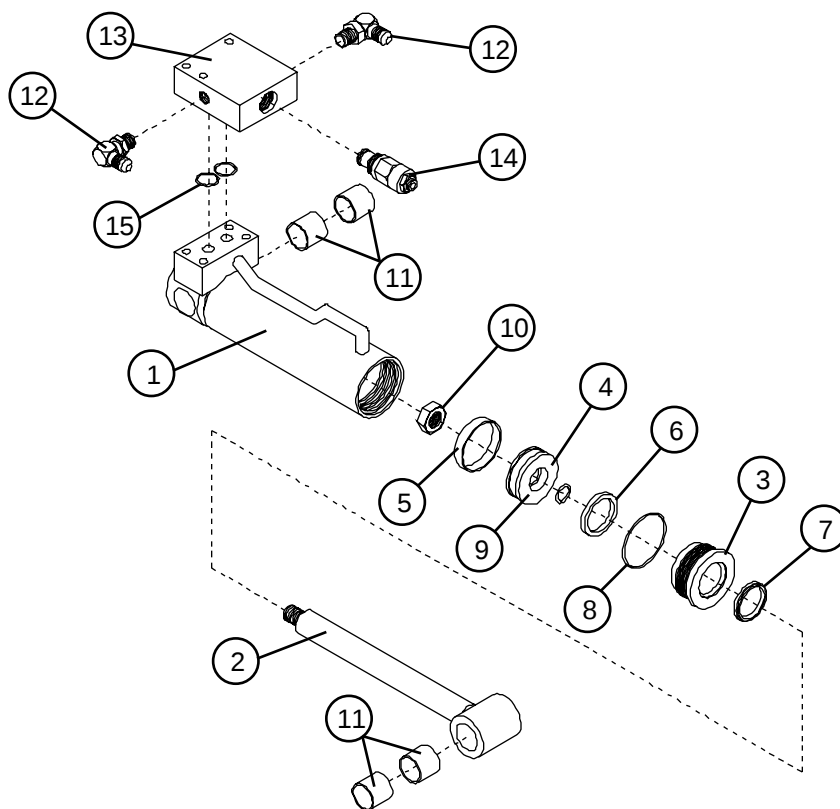
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FIGURE 6-11. ROTARY ACTUATOR ASSEMBLY

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
1	701563	ACTUATOR ASSEMBLY, Rotary	-
	701498	• ACTUATOR ROTARY, Keyed	1
	701875	•• KIT, Seal repair	AR
	103024	•• HOSE CLAMP, G8-single	2
	104000	•• WASHER, Lock 1/4	1
	103632	•• SCREW, Self tapping 1/4-14 x 3/4" lg.	1
2	100309	• BUSHING 16DU16	2
3	700390	• MANIFOLD, Rotary Actuator	1
	709835	•• BOLT, HHCS 1/4-20 x 1-5/8" lg.	3
4	701487	• SEAL, O-Ring 2-012	2
5	113348	• FITTING, Elbow 90° #4orb-#6	2
6	700568	• VALVE, Counterbalance	2
7	700432	• PIN, Slave cylinder	1
	103873	•• Bolt, HHCS 3/8-16 x 2-1/2 lg.	1
	104606	•• NUT, Lock 3/8-16	1
	700376	• WASHER, Bronze 1-3/4" OD x 1" ID	1
9	700434	• SPACER, Actuator pin	1
10	700375	• WELDMENT, Actuator bracket	1
	705541	•• HOSE CLAMP, 1-1/4"	1
	104000	•• WASHER, Lock 1/4	1
	103632	•• SCREW, Self tapping 1/4-14 x 3/4" lg.	1
11	701399	• CYLINDER ASSEMBLY, Slave (For components refer to Figure 6-12.)	1
12	700386	• PIN, Jib Actuator bracket	2
	103887	•• BOLT, HHCS 5/16-18 x 3/4" lg.	1
	103404	•• WASHER, Lock 5/16	1

NOTES

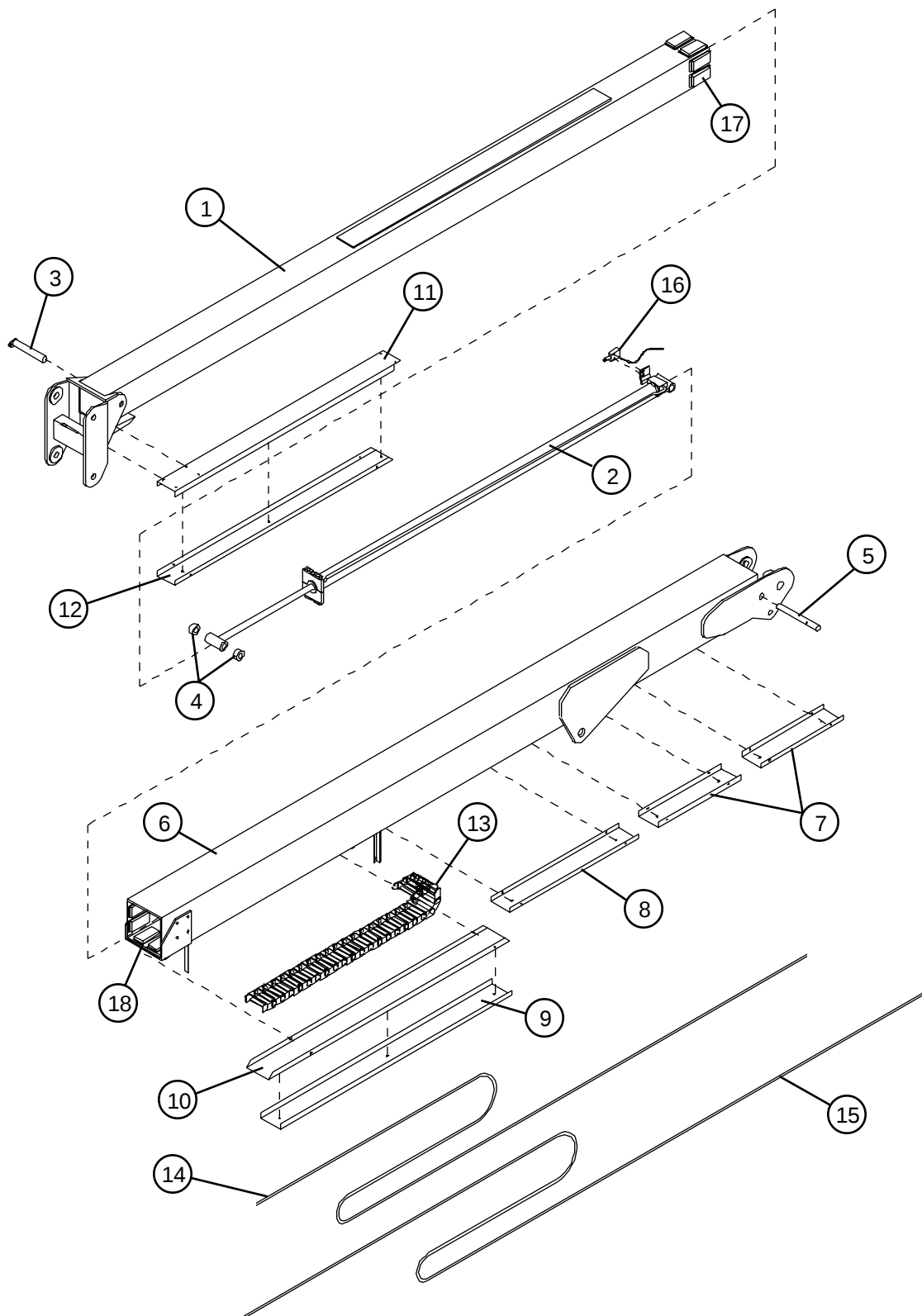
FIGURE 6-12. PLATFORM LEVELING SLAVE CYLINDER ASSEMBLY



Ma40-609

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	700388	CYLINDER ASSEMBLY, Platform leveling slave (w/bushings)	-
1	700389	• WELDMENT, Cylinder barrel	1
2	700600	• WELDMENT, Cylinder rod	1
3	700340	• GLAND, Cylinder	1
4	700341	• PISTON, Cylinder	1
*5	107935	• SEAL, Piston	1
*6	108798	• SEAL, Gland	1
*7	106449	• WIPER, Rod	1
*8	701964	• O-RING, Gland	1
*9	701633	• O-RING, Piston	1
10	103830	• NUT, Lock 5/8-11	1
11	100309	• BUSHING, 1" x 1-1/8" x 1" lg.	4
12	103073	FITTING, Elbow 90° #6-#6	2
13	700040	VALVE BLOCK, Slave cylinder	1
	103885	• BOLT, HHCS 5/16-18 x 1-3/4 lg.	4
	103404	• WASHER, Lock 5/16"	4
14	700568	VALVE, Counterbalance	1
15	701635	O-RING, Valve block	2
	700454	KIT, Seal repair	AR
	706522	TOOL, Cylinder assembly 2"	-
		* Part of Seal Repair Kit.	

FIGURE 6-13. BOOM ASSEMBLY (Main and Telescopic Section)



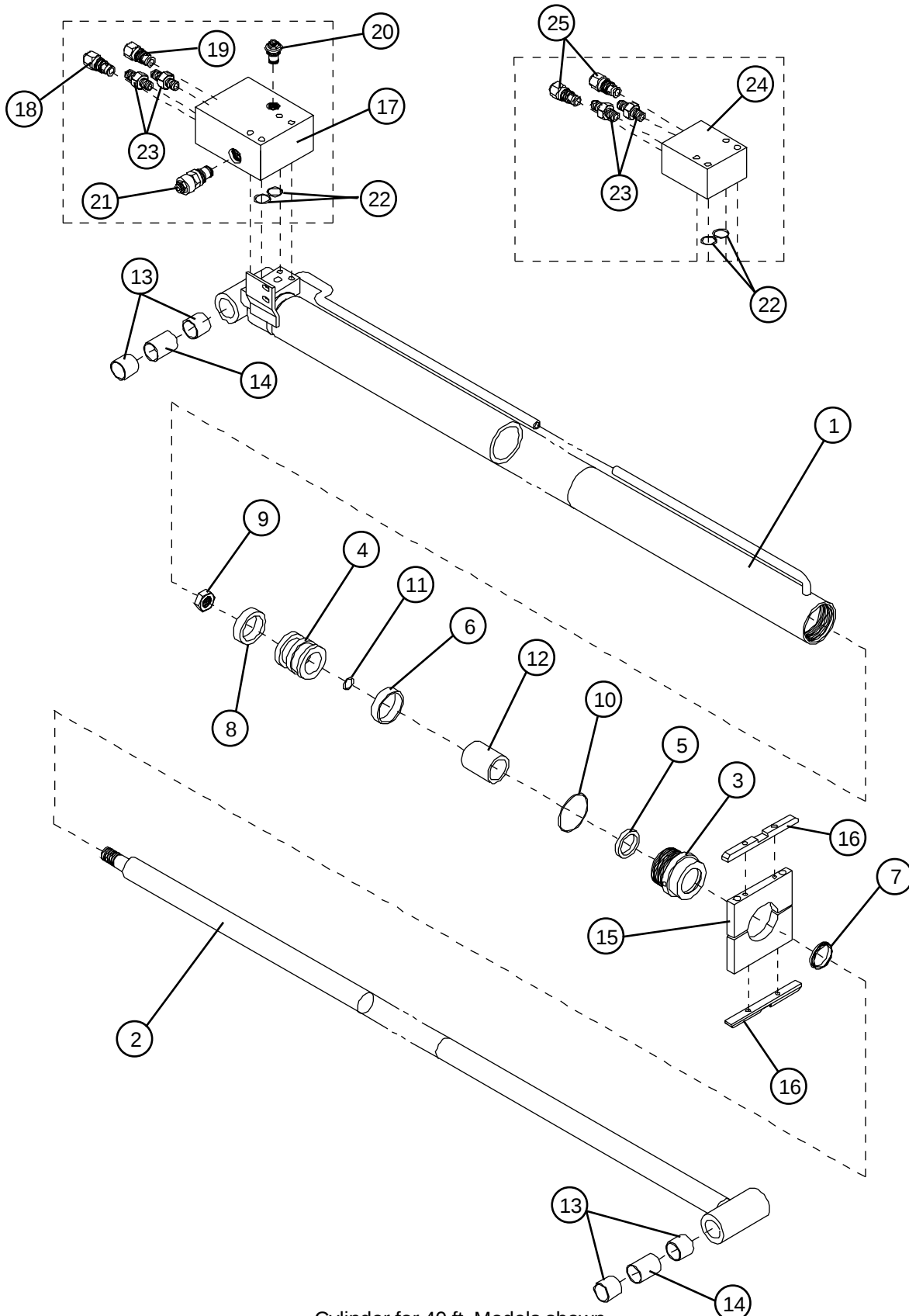
Boom for SJKB-40i, -40C shown

Mawb628

FIGURE 6-13. BOOM ASSEMBLY (Main and Telescopic Section)

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
A	701136	MAIN BOOM ASSEMBLY, SJKB-33i, 33C	-
B	701105	MAIN BOOM ASSEMBLY, SJKB-40i, 40C	-
1	700918	• WELDMENT, Telescopic boom, A	1
	700935	• WELDMENT, Telescopic boom, B	1
2	701397	• CYLINDER ASSEMBLY, Boom telescopic, A (For components, refer to Figure 6-14.)	1
	701398	• CYLINDER ASSEMBLY, Boom telescopic, B (For components, refer to Figure 6-14.)	1
3	700368	• PIN, Telescopic cylinder	1
	708574	•• BOLT, BHCS 5/16-18 x 3/4" lg.	1
	103404	•• WASHER, Lock 5/16"	1
4	700370	• SPACER, Telescopic pin	2
5	700367	• PIN, Telescopic cylinder	1
	103884	•• BOLT, Hex-hd 5/16-18 x 2-1/2" lg.	1
	103984	•• NUT, Lock 5/16-18	1
6	709328	• WELDMENT, Main boom, A	1
	704457	• WELDMENT, Main boom, B	1
7	706162	• COVER, Boom hose	2
	170583	•• NUT, Lock 1/4-20	4
8	704431	• COVER, Boom hose, B	1
	700583	•• NUT, Lock 1/4-20	2
9	708966	• SUPPORT, Boom hose, A	1
	704263	• SUPPORT, Boom hose, B	1
	700583	•• NUT, Lock 1/4-20	3
10	708967	• WELDMENT, Hose carrier support, A	1
	704940	• WELDMENT, Hose carrier support, B	1
	708574	•• BOLT, BHCS 5/16-18 x 3/4" lg.	4
	103984	•• NUT, Lock 5/16-18	4
11	708968	• WELDMENT, Hose carrier bracket, A	1
	704738	• WELDMENT, Hose carrier bracket, B	1
	700781	•• BOLT, Button hd 5/16-18 x 3/8" lg.	4
	103404	•• WASHER, Lock 5/16"	4
12	708965	• SUPPORT, Hose carrier, A	1
	706160	• SUPPORT, Hose carrier, B	1
	700583	•• NUT, Lock 1/4-20	3
13	709003	• CARRIER ASSEMBLY, Hose, A	1
	706192	• CARRIER ASSEMBLY, Hose, B	1
	700584	•• BOLT, Button hd 1/4-20x1/2" lg.	4
	104000	•• WASHER, Lock 1/4"	4
	103983	•• NUT, Hex 1/4-20"	4
	708461	•• LINK, Carrier repair	AR
	\$	•• MOUNT BRACKETS, Hose carrier	1
	708462	••• FEMALE BRACKET, Hose carrier	1
	708463	••• MALE BRACKET, Hose carrier	1
14	708866	• CABLE ASSEMBLY, Control, A	1
	708867	• CABLE ASSEMBLY, Control, B	1
	707874	•• HOUSING, Connector	1
	705255	•• SOCKET, Contact	40
	707846	•• BOOT, Connector	1
	704677	•• CABLE, 18/40 Control, A	528"
		•• CABLE, 18/40 Control, B	612"
15	105269	• CORD, 14/3 (110v Service), A	516"
		• CORD, 14/3 (110v Service), B	600"
16	710171	• SWITCH, Sealed limit	1
	700549	•• BOLT, Rnd-hd #10-32 x 3/4" lg.	2
	104694	•• WASHER, Flat #10	2
	104185	•• WASHER, Lock #10	2
17	(Ref.)	• WEAR PADS, Telescopic Boom (For components refer to Figure 6-15.)	-
18	(Ref.)	• WEAR PADS, Main Boom (For components refer to Figure 6-16.)	-

FIGURE 6-14. BOOM TELESCOPING CYLINDER ASSEMBLY



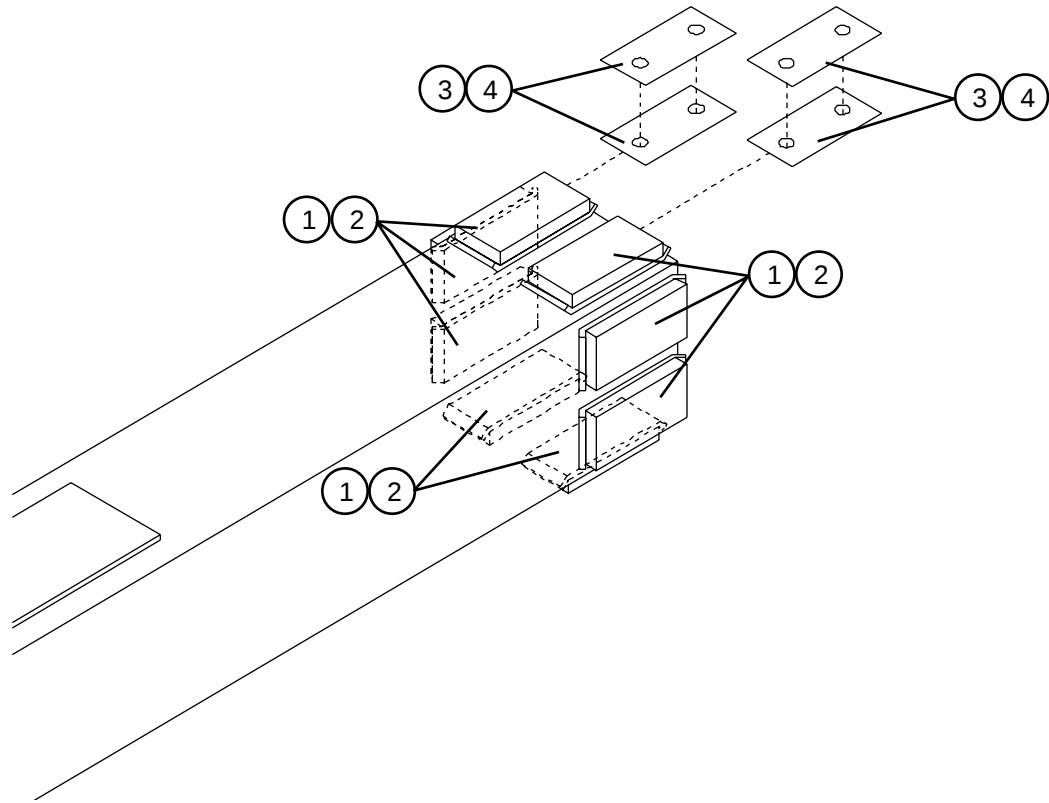
Cylinder for 40 ft. Models shown.

Mawb629

FIGURE 6-14. BOOM TELESCOPING CYLINDER ASSEMBLY

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
A	700827	CYLINDER ASSEMBLY, Boom telescopic, w/bushings (SJKB-33i, 33C)	-
B	700871	CYLINDER ASSEMBLY, Boom telescopic, w/bushings (SJKB-40i, 40C)	-
1	700351	• WELDMENT, Cylinder barrel, A	1
	700872	• WELDMENT, Cylinder barrel, B	1
2	700828	• WELDMENT, Cylinder rod, A	1
	700874	• WELDMENT, Cylinder rod, B	1
3	700359	• GLAND, Cylinder	1
4	700360	• PISTON, Cylinder	1
*5	700576	• SEAL, Rod	1
*6	700577	• SEAL, Piston	1
*7	700578	• WIPER, Rod	1
*8	110949	• WEAR RING, Piston	1
9	700575	• NUT, Lock 3/4-10	1
*10	701964	• O-RING, Gland	1
*11	701634	• O-RING, Piston	1
12	700830	• SPACER, Cylinder 1-1/4" x 1-1/2" x 13.50" lg., A	1
	700876	• SPACER, Cylinder 1-1/4" x 1-1/2" x 2.113" lg., B	1
13	100309	• BUSHING, 1" x 1-1/8" x 1" lg.	4
14	100695	• BUSHING, 1" x 1-1/8" x 1-1/2" lg.	1
	700258	SUPPORT ASSEMBLY, Telescopic cylinder	1
15	700259	• SUPPORT BRACKET, Telescopic cylinder	1
	700281	• • BOLT, SHCS 1/4-20 x 1-1/2" lg.	2
16	700260	• SUPPORT BRACKET PAD, Telescopic cylinder	2
	70282	• • BOLT, FHCS 1/4-20 x 3/4" lg.	2
NOTE - Items 17 thru 23 are for machines with S/N 91129 and above., A ALSO are for machines with S/N 92595 and above., B			
17	709824	VALVE BLOCK, Telescopic cylinder	1
	707809	• BOLT, HHCS 5/16-18 x 3" lg.	4
	103404	• WASHER, Lock 5/16"	4
18	700568	VALVE, Counterbalance, 3000 PSI	1
19	710264	VALVE, Counterbalance, 900 PSI	1
20	709825	VALVE, Check	1
21	709826	VALVE, Pilot Check	1
22	701635	O-RING, Valve block	2
23	701956	FITTING, Connector #6orb-#4	2
NOTE - Items 22 thru 24 are for machines with S/N 91128 and below., A ALSO are for machines with S/N 92594 and below., B			
24	700041	VALVE BLOCK, Telescopic cylinder	1
	108429	• BOLT, SHCS 5/16-18 x 3-1/2" lg.	4
	103404	• WASHER, Lock 5/16"	4
25	700568	VALVE, Counterbalance	2
	700455	KIT, Seal repair	AR
* Part of Seal Repair Kit.			

FIGURE 6-15. TELESCOPIC BOOM WEAR PADS

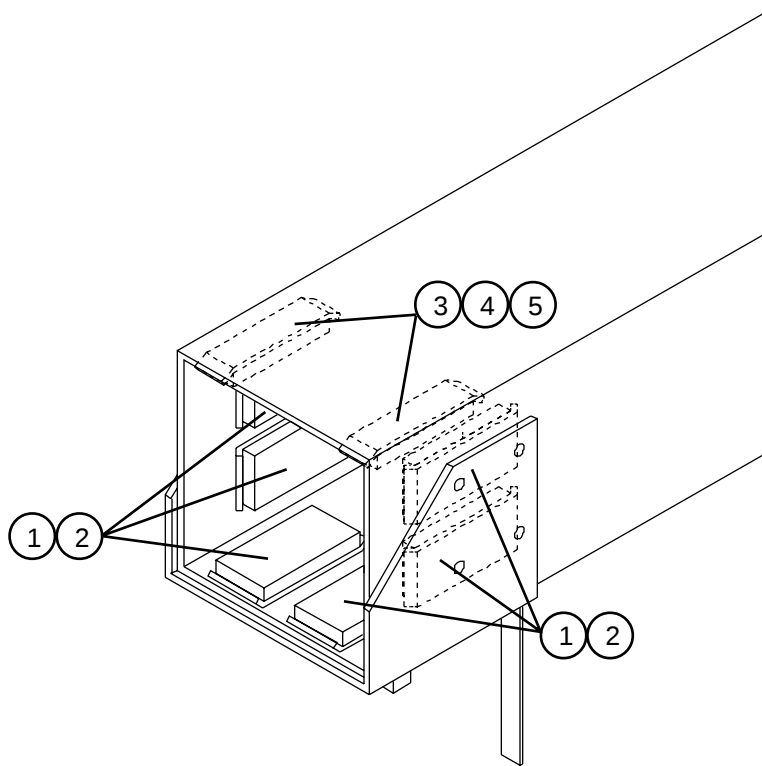


SJKB-40i, -40C shown

Mawb630

Index No.	Skyjack Part No.	Description							Units per Assy.
		1	2	3	4	5	6	7	
1	700077	WEAR PAD							8
	700579	• PIN, Roll 1/4x1/2" lg.							1
2	700098	BRACKET, Wear Pad							8
	101632	• BOLT, HHCS 3/8-16x3/4" lg.							2
	103472	• WASHER, Flat SAE 3/8"							2
	103999	• WASHER, Lock 3/8"							2
3	700097	SHIM, Wear pad (.059 thk.)							AR
4	700580	SHIM, Wear pad (.023 thk.)							AR

FIGURE 6-16. MAIN BOOM WEAR PADS

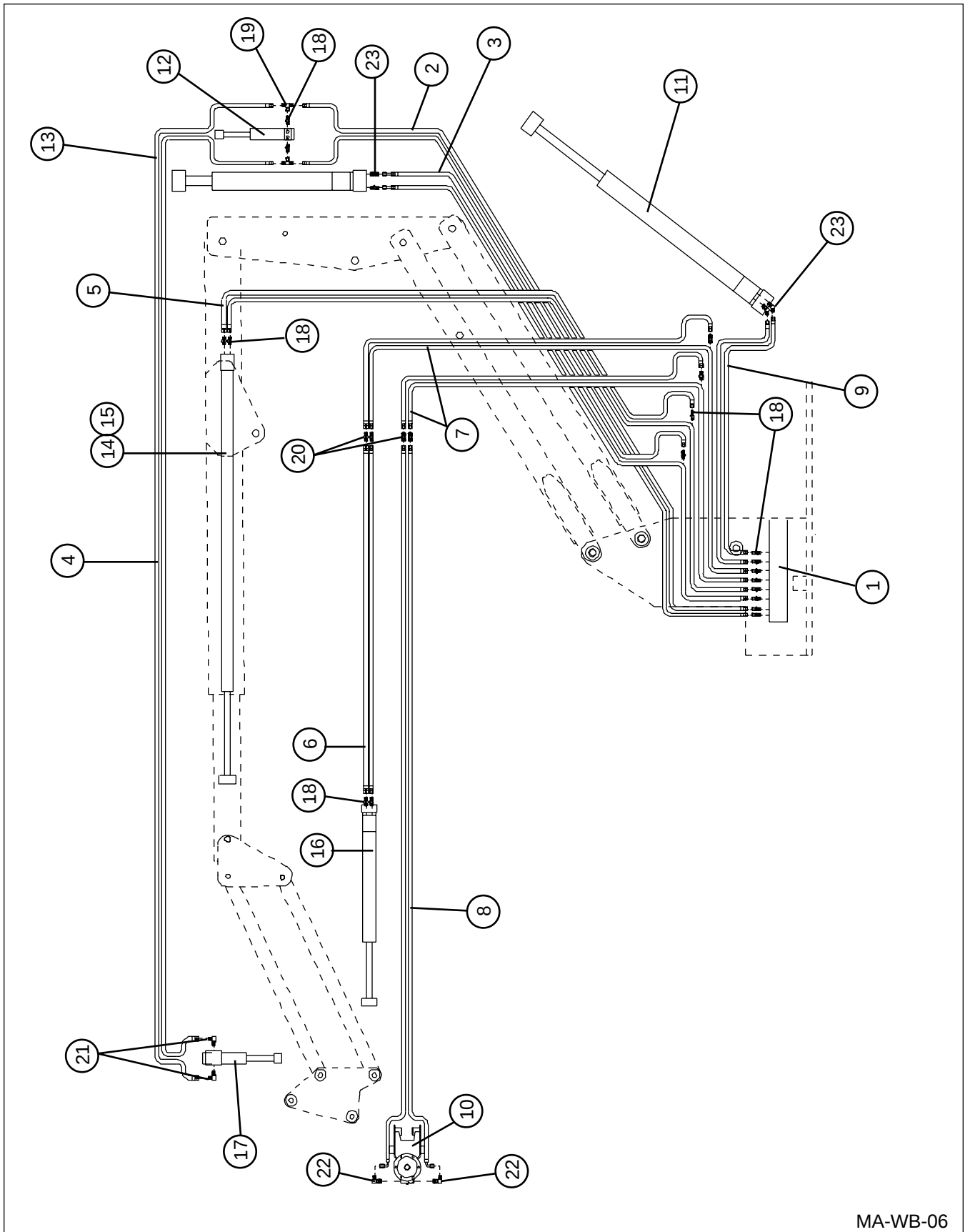


SJKB-40i, -40C shown

Mawb631

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
1	700077	WEAR PAD	6
	700579	• PIN, Roll 1/4x1/2" lg.	1
2	700098	BRACKET, Wear Pad	6
	700097	• SHIM, Wear pad (.059 thk.)	AR
	700580	• SHIM, Wear pad (.023 thk.)	AR
	101632	• BOLT, HHCS 3/8-16x3/4" lg.	2
	103472	• WASHER, Flat SAE 3/8"	2
	103999	• WASHER, Lock 3/8"	2
	701072	WEAR PAD (SJKB-40i, 40C)	2
3	700077	WEAR PAD (SJKB-33i, 33C)	2
	700579	• PIN, Roll 1/4x1/2" lg.	1
4	701071	BRACKET, Wear Pad (SJKB-40i, 40C)	2
	700098	BRACKET, Wear Pad (SJKB-33i, 33C)	2
	101632	• BOLT, HHCS 3/8-16x1" lg.	2
	103472	• WASHER, Flat SAE 3/8"	2
	103999	• WASHER, Lock 3/8"	2
5	702196	SHIM, Wear pad (.024 thk.) (SJKB-40i, 40C)	AR
	700097	SHIM, Wear pad (.059 thk.) (SJKB-33i, 33C)	AR
	700580	SHIM, Wear pad (.023 thk.) (SJKB-33i, 33C)	AR

FIGURE 6-17. HYDRAULIC HOSE CONNECTIONS - Boom Assembly

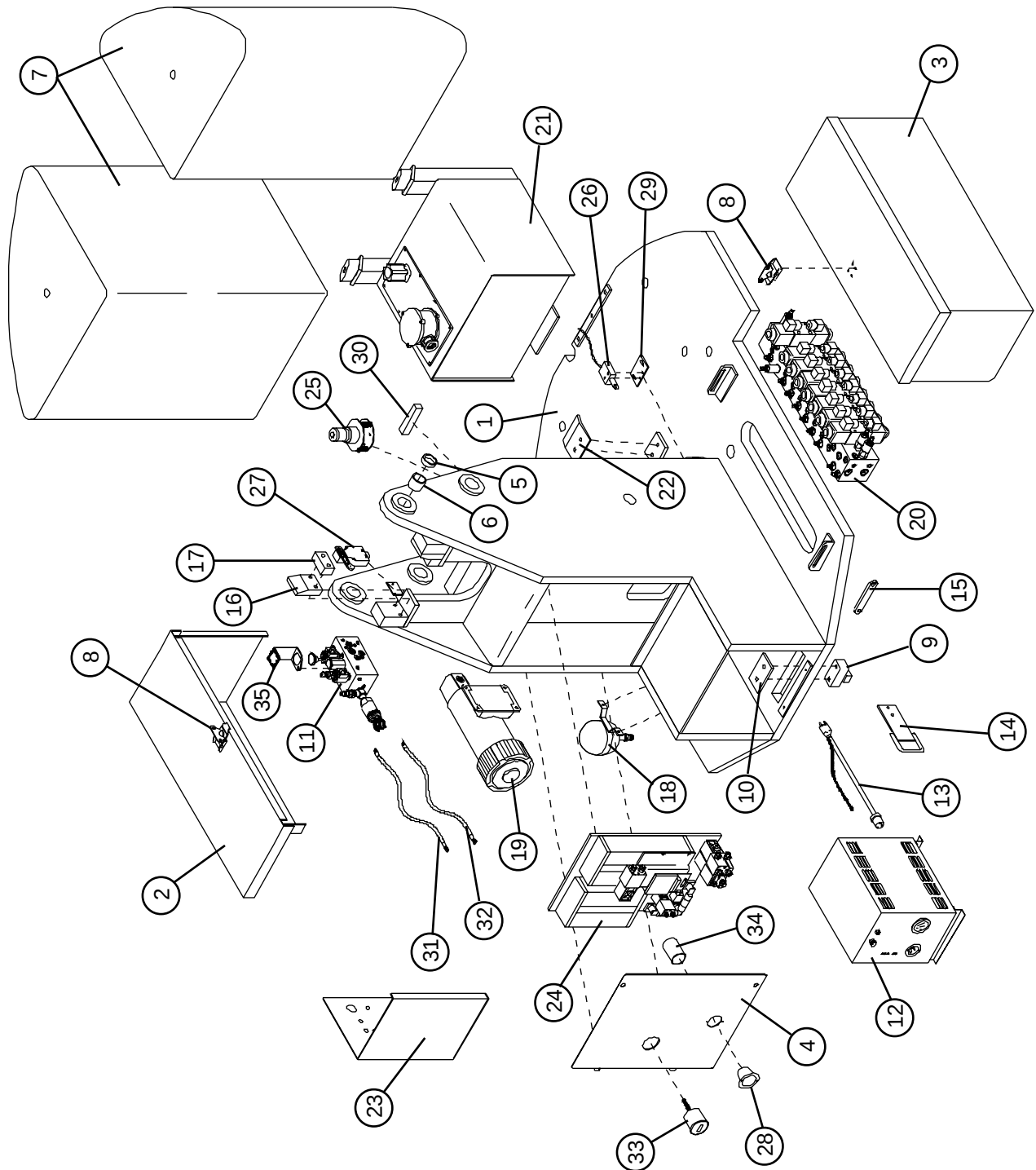


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FIGURE 6-17. HYDRAULIC HOSE CONNECTIONS - Boom Assembly

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
A		SJKB-33i, 33C HYDRAULIC COMPONENTS	-
B		SJKB-40i, 40C HYDRAULIC COMPONENTS	-
1	(Ref.)	MANIFOLD ASSEMBLY, Main (Refer to Figure 6-19.)	1
2	700392	HOSE ASSEMBLY, Manifold to master cylinder	2
3	700391	HOSE ASSEMBLY, Manifold to lift cylinder	2
4	700398	HOSE ASSEMBLY, Master cylinder to slave cylinder, A	2
	701217	HOSE ASSEMBLY, Master cylinder to slave cylinder, B	2
5	700393	HOSE ASSEMBLY, Manifold to telescopic cylinder	2
6	700393	HOSE ASSEMBLY, Union to jib cylinder, A	2
	701215	HOSE ASSEMBLY, Union to jib cylinder, B	2
7	700394	HOSE ASSEMBLY, Manifold to union	4
8	700397	HOSE ASSEMBLY, Union to rotary actuator, A	2
	701216	HOSE ASSEMBLY, Union to rotary actuator, B	2
9	701201	HOSE ASSEMBLY, Manifold to riser cylinder	2
10	701563	ACTUATOR, Rotary (For components, refer to Figure 6-11.)	1
11	700328	CYLINDER ASSEMBLY, Riser lift (For components, refer to Figure 6-10.)	1
12	700333	CYLINDER ASSEMBLY, Platform leveling master (For components, refer to Figure 6-8.)	1
13	700989	CYLINDER ASSEMBLY, Boom lift (For components, refer to Figure 6-9.)	1
14	700827	CYLINDER ASSEMBLY, Telescopic, A (For components, refer to Figure 6-14.)	1
15	700871	CYLINDER ASSEMBLY, Telescopic, B (For components, refer to Figure 6-14.)	1
16	708655	CYLINDER ASSEMBLY, Jib lift (For components, refer to Figure 6-7.)	1
17	700388	CYLINDER ASSEMBLY, Platform leveling slave (For components, refer to Figure 6-12.)	1
18	103069	FITTING, Connector #6orb-#6	18
19	114109	FITTING, Tee #6 female-#6-#6	2
20	700318	FITTING, Union #6-#6	4
21	103073	FITTING, Elbow 90° #6orb-#6	2
22	113348	FITTING, Elbow 90° #4orb-#6	2
23	107742	FITTING, Elbow 45° #6orb-#6	4

FIGURE 6-18. TURRET ASSEMBLY



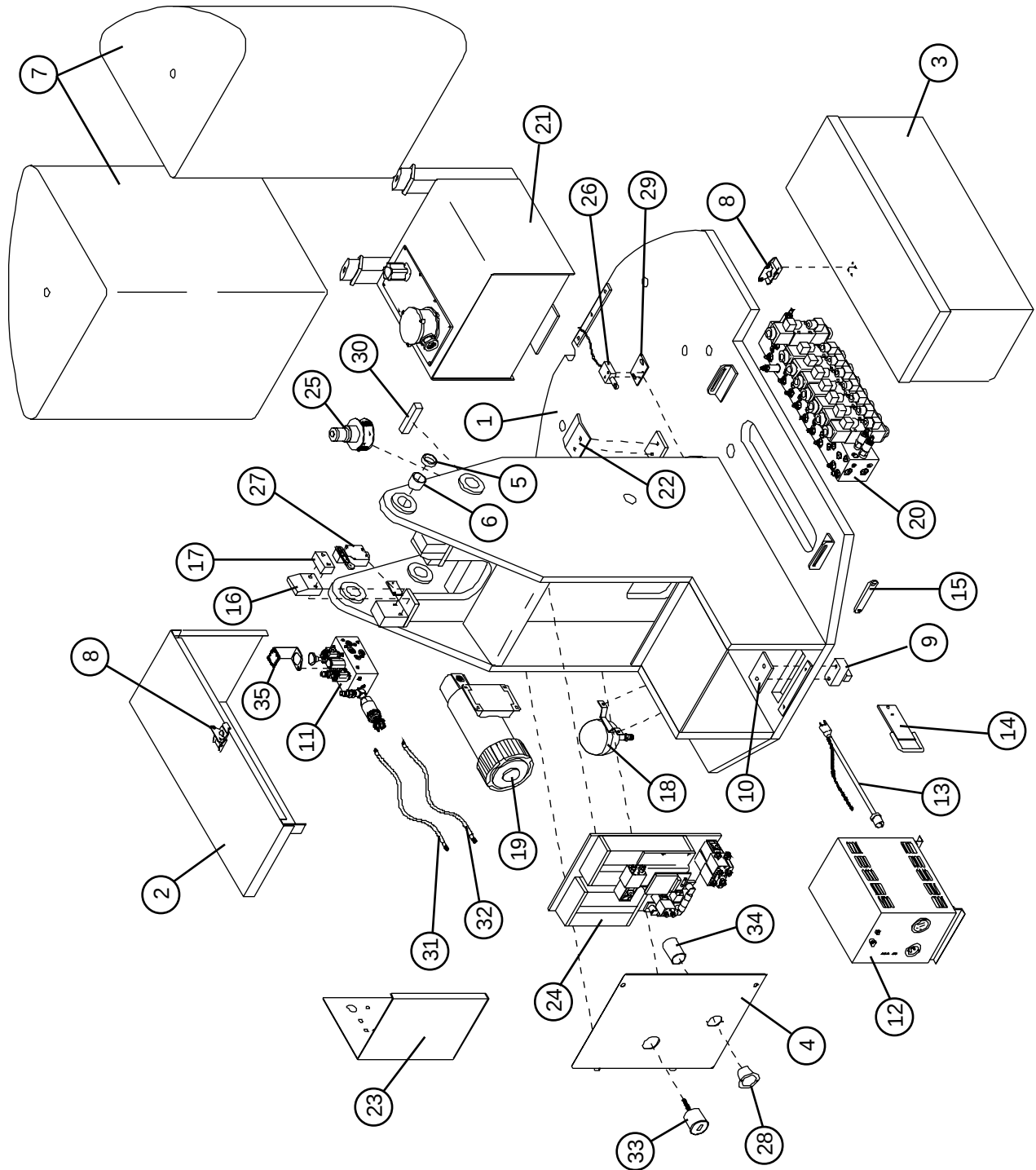
Turret for 40 ft. Models shown.

Mawb605

FIGURE 6-18. TURRET ASSEMBLY

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
1	702623	WELDMENT, Turret, SJKB-33i, 33C	1
	702624	WELDMENT, Turret, SJKB-40i, 40C	1
2	701125	• COVER WELDMENT, Pump/motor	1
3	701130	• COVER WELDMENT, Hydraulic manifold	1
4	707402	• DOOR WELDMENT, Controller	1
	700474	•• SCREW, Thumb 3/8-16 x 3/4" lg.	2
	711481	• BOLT, Hex-hd 5/8-11 x 4" lg.	20
	711511	• BOLT, Soc-hd 5/8-11 x 4" lg.	3
	700782	• WASHER, Flat-hard 5/8"	23
5	700482	BUSHING, 1-1/2" x 1-11/16" x 1/2" lg.	4
6	700483	BUSHING, 1-1/2" x 1-11/16" x 1-1/4" lg.	4
7	706990	COUNTERWEIGHT, SJKB-33i, 33C	2
	706985	COUNTERWEIGHT, SJKB-40i, 40C	2
	700501	• BOLT, Hex-hd 1.00-8 x 3-3/4" lg.	AR
	700435	• WASHER, 1"	AR
	700617	• PLUG, Plastic hole	2
8	701129	LATCH, Draw	2
	701694	•• BOLT, HHCS #10-32 x 3/8" lg.	4
	701695	•• NUT, Lock #10-32	4
9	700920	WELDMENT, Moveable stop	1
10	700923	CAP, Moveable stop	1
	103473	• BOLT, Hex-hd 3/8-16 x 1" lg.	2
	103999	• WASHER, Lock 3/8"	2
	103472	• WASHER, Flat 3/8"	2
11	706911	MANIFOLD ASSEMBLY, Brake (For components, refer to Figure 6-20.)	1
	103882	• BOLT, HHCS 5/16-18 x 4" lg.	2
	103404	• WASHER, Lock 5/16"	2
12	(Ref.)	BATTERY CHARGER (For components, refer to Figure 6-25, 6-26.)	1
13	700530	CABLE ASSEMBLY, Charger A.C.	1
	700635	• PLUG, 15A Male	1
	700597	• RECEPTACLE, 20 Amp Female	1
	105269	• CABLE, 14/3	8"
	105807	• LANYARD, 6" lg	1
14	700925	HANDLE WELDMENT, Main disconnect	1
	103859	• BOLT, Hex-hd 1/4-20 x 1-1/2" lg.	2
	103980	• NUT, Hex-hd 1/4-20	2
	104000	• WASHER, Lock 1/4"	4
15	700087	LINK, Door stop	4
	103473	• BOLT, Hex-hd 3/8-16 x 1" lg.	2
	101297	• BOLT, Hex-hd 3/8-16 x 1-1/4" lg.	2
	103472	• WASHER, Flat 3/8"	2
	103978	• NUT, Hex 3/8-16	4
16	700814	GUIDE, Main boom	2
17	700813	REST PAD, Main boom	2
	709832	• BOLT, HHCS 3/8-16 x 2" lg.	2
18	700903	ACCUMULATOR, Brake pressure	1
	700904	CLAMP, Accumulator	1
	103886	• BOLT, Hex-hd 5/16-18 x 1-1/2" lg.	2
	103404	• WASHER, Lock 5/16"	2
	100397	• NUT, Hex 5/16-18	2
	103070	•• FITTING, Connector #8orb-#6	1
19	700224	PUMP/MOTOR ASSEMBLY, Boom function	1
	700669	• PUMP, Hydraulic	1
	700668	• MOTOR, 48 Volt	1
	109174	•• BRUSH SET	1
	109175	•• SPRING, Brush	8
		Parts list continued on Page 43	

FIGURE 6-18. TURRET ASSEMBLY



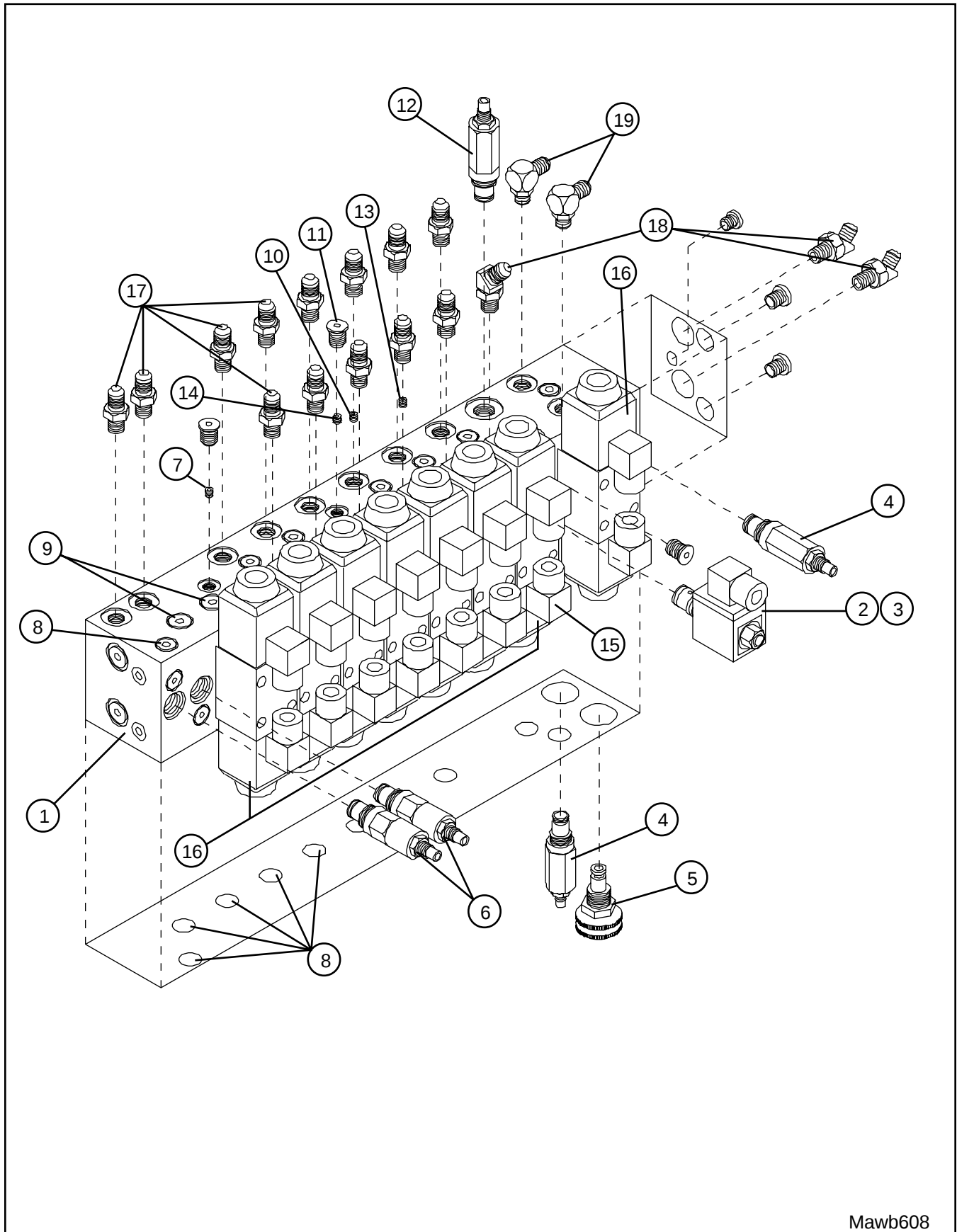
Turret for 40 ft. Models shown.

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FIGURE 6-18. TURRET ASSEMBLY

Index No.	Skyjack Part No.	Description							Units per Assy.
		1	2	3	4	5	6	7	
		Parts list continued from Page 41							
	700524	• FITTING, Hose barb 90° #12orb-#8							1
	106052	• COUPLING							1
	103865	• BOLT, Hex-hd 5/16-18 x 2" lg.							4
	103996	• WASHER, Flat 5/16"							12
	103404	• WASHER, Lock 5/16"							4
	700523	• BUSHING, Rubber							4
20	(Ref.)	MANIFOLD ASSEMBLY, Main (For components, refer to Figure 6-19.)							1
	103473	• BOLT, Hex-hd 3/8-16 x 1" lg.							4
	103999	• WASHER, Lock 3/8"							4
	103472	• WASHER, Flat 3/8"							4
21	701110	TANK ASSEMBLY, Hydraulic (For components, refer to Figure 6-22.)							1
	101632	• BOLT, Hex-hd 3/8-16 x 3/4" lg.							3
	103999	• WASHER, Lock 3/8"							3
	103472	• WASHER, Flat 3/8"							3
22	701242	TANK HOLD DOWN							1
	103887	• BOLT, Hex-hd 5/16-18 x 3/4" lg.							2
	103404	• WASHER, Lock 5/16"							2
23	(Ref.)	PANEL ASSEMBLY, Electrical (For components, refer to Figure 6-24.)							1
	103887	• BOLT, Hex-hd 5/16-18 x 3/4" lg.							2
	103404	• WASHER, Lock 5/16"							2
	103996	• WASHER, Flat 5/16"							2
24	700837	PANEL ASSEMBLY, Sevcon (For components, refer to Figure 6-23.)							1
	100397	• NUT, Hex 5/16-18							3
	103404	• WASHER, Lock 5/16"							3
25	700552	SWITCH, Tilt							1
	114866	• FUSE, 250 Volt, 1 amp							1
	103855	• BOLT, Hex-hd 1/4-20 x 1/2" lg.							4
	104000	• WASHER, Lock 1/4"							4
26	709048	SWITCH, Sealed limit (turret rotate)							1
	700549	• BOLT, Soc-hd #10-32 x 3/4" lg.							2
	104694	• WASHER, Flat #10							2
	104185	• WASHER, Lock #10							2
27	708603	SWITCH, Sealed limit (boom)							1
	104698	• BOLT, Mach-hd #10-32 x 3/4" lg.							2
	104694	• WASHER, Flat #10							2
	701695	• NUT, Lock #10-32							2
	103256	• CABTIRE CABLE, 18/2							91"
28	105271	PLUG, 110V Recessed							1
	700519	• SCREW, #6 Self-tapping							1
29	700930	MOUNT PLATE, Limit switch							1
	103887	• BOLT, HHCS 5/16-18 x 3/4" lg.							2
	103996	• WASHER, Flat 5/16"							2
	103404	• WASHER, Lock 5/16"							2
30	701427	CABLE PROTECTOR, 4" lg. • (SJKB-33, Serial Number 91146 and Below) • (SJKB-40, Serial Number 92652 and Below)							1
31	701745	CABLE ASSEMBLY, Pump motor (pos)							1
	105600	• BOOT, Red rubber							3
32	701746	CABLE ASSEMBLY, Pump motor (neg)							1
	105601	• BOOT, Black rubber							3
33	701925	HOUR METER							1
	707894	• WIRE LOOM, Hour meter							46"
34	113227	COVER, Seal tite							1
35	701986	BRACKET, Brake release							1

FIGURE 6-19. MAIN MANIFOLD ASSEMBLY



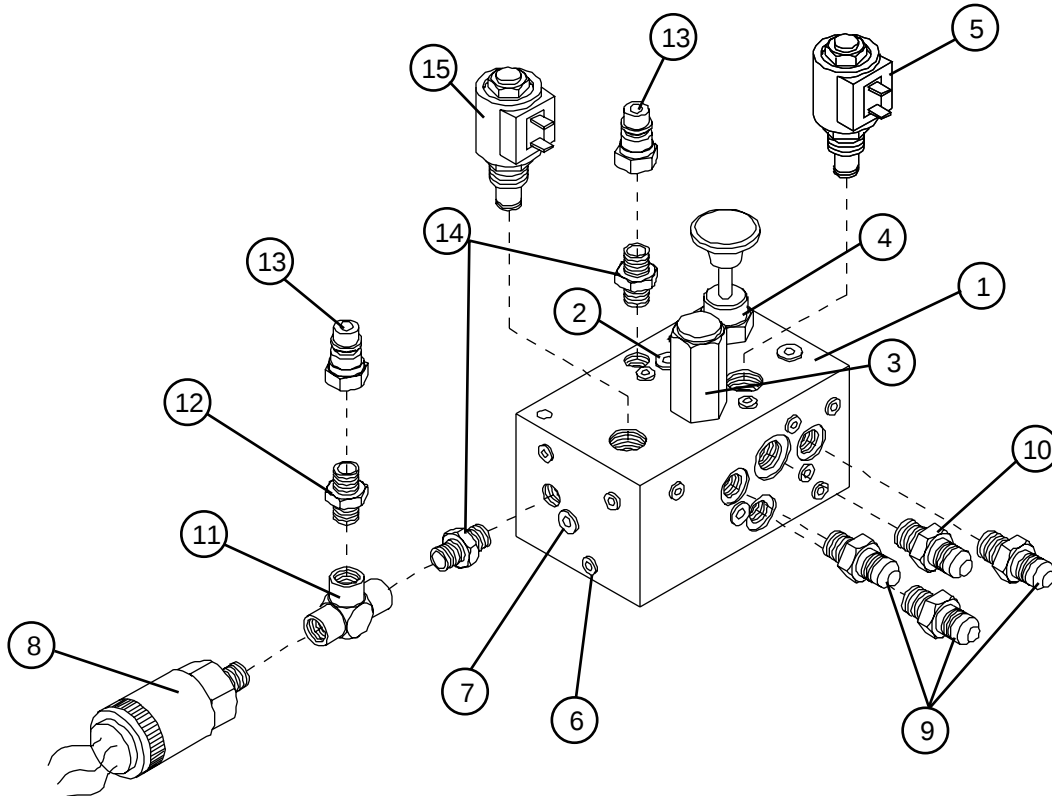
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FIGURE 6-19. MAIN MANIFOLD ASSEMBLY

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	701867	MANIFOLD ASSEMBLY, Main (MCD 4933)	-
1	700671	• BLOCK, Main manifold	1
2	700677	• VALVE, Dump	1
3	702754	• COIL, 24 Volt	1
4	700672	• VALVE, Relief (turret rotate)	2
5	700763	• VALVE, Needle (emergency turret rotate)	1
6	700670	• VALVE, Counterbalance (platform tilt)	2
7	700682	• ORIFICE, .025 dia. (platform tilt)	1
8	700764	• PLUG, Soc-hd #2orb	21
9	700765	• PLUG, Soc-hd #4orb	11
10	700679	• ORIFICE, .100 dia. (jib lift)	1
11	104437	• PLUG, Soc-hd #6orb	4
12	700673	• VALVE, Relief (dump)	1
13	700680	• ORIFICE, .060 dia. (jib lift)	1
14	700682	• ORIFICE, .025 dia (platform rotate)	1
15	701861	VALVE ASSEMBLY, 24 Volt spool (steering)	1
	702755	• COIL, 24 Volt	2
	103918	• BOLT, Soc-hd #10-24 x 1-1/4" lg.	4
16	701860	VALVE ASSEMBLY, 24 Volt spool (lift functions)	7
	702755	• COIL, 24 Volt	14
	103918	• BOLT, Soc-hd #10-24 x 1-1/4" lg.	28
17	103069	FITTING, Connector #6orb-#6	13
18	107742	FITTING, Elbow 45° #6orb-#6	3
19	103073	FITTING, Elbow 90° #6orb-#6	2

NOTES

FIGURE 6-20. HYDRAULIC BRAKE MANIFOLD ASSEMBLY

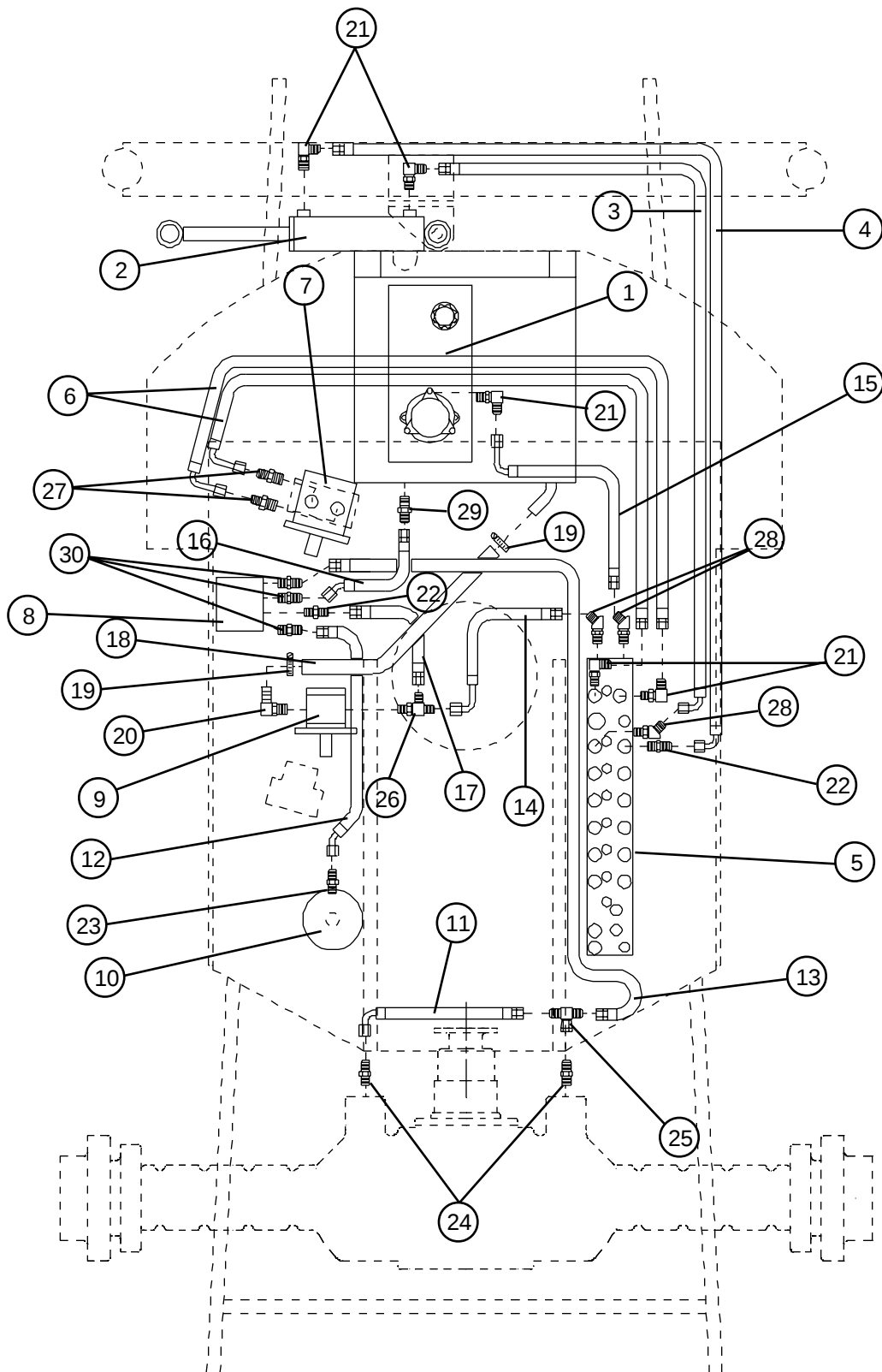


CAUTION - Brake system under pressure. Bleed pressure before servicing.

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Index No.	Skyjack Part No.	Description							Units per Assy.
		1	2	3	4	5	6	7	
	706911	BRAKE MANIFOLD ASSEMBLY							-
1	\$	• BLOCK, Brake manifold							1
2	701295	• VALVE, Check							1
3	701296	• VALVE, Pressure reducing							1
4	701297	• HAND VALVE, Brake release							1
5	701298	• SOLENOID VALVE, Brake							1
	709395	• • COIL							1
6	700764	• PLUG, #2 SAE							10
7	700765	• PLUG, #4 SAE							5
8	701194	• PRESSURE SWITCH, Brake							1
9	103322	• FITTING, Connector #4orb-#6							3
10	103069	• FITTING, Connector #6orb-#6							1
11	704064	• FITTING, Street tee 1/4NPT							1
12	701458	• FITTING, Pipe nipple 1/4NPT							1
13	114520	• FITTING, Hydraulic disconnect							2
	114521	• DUST CAP							2
14	703071	• FITTING, Adaptor #4 - 1/4 NPT							2
15	708981	• SOLENOID VALVE, Brake							1
	709395	• • COIL							1
		\$ - Consult Factory							

FIGURE 6-21. HYDRAULIC CONNECTIONS - Turret

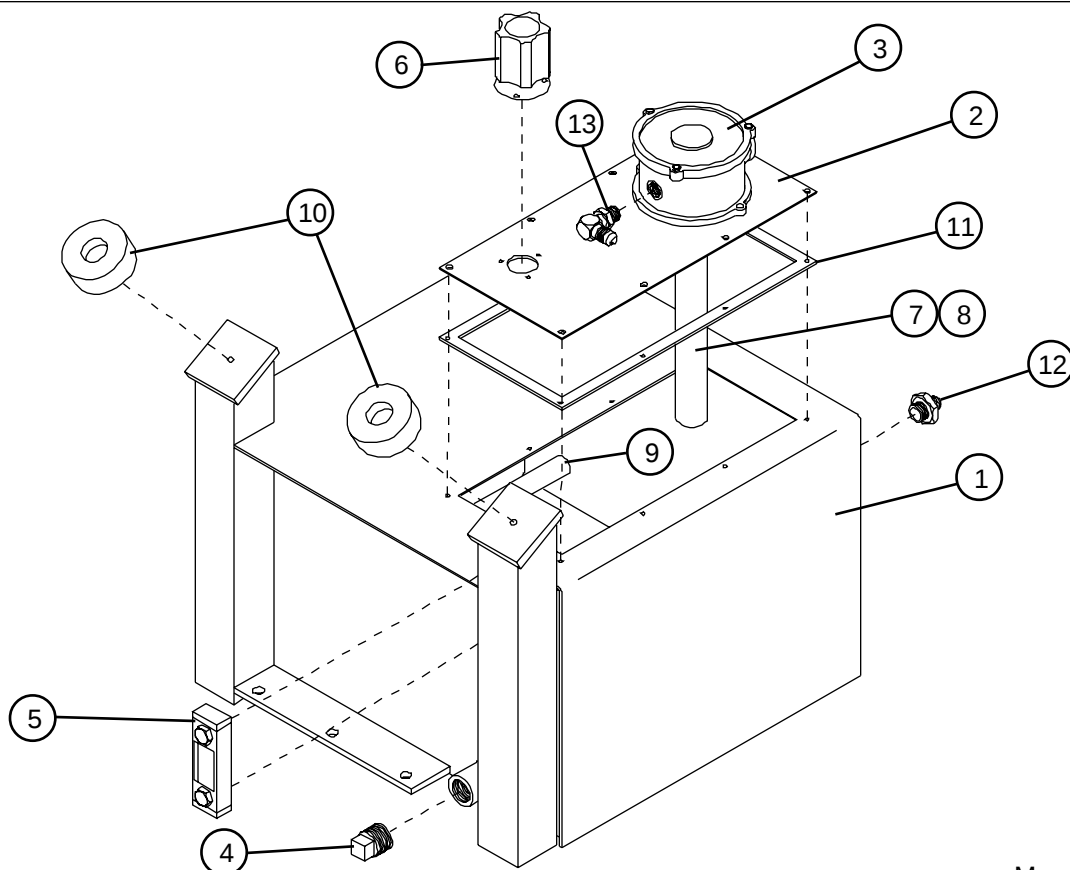


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FIGURE 6-21. HYDRAULIC CONNECTIONS - Turret

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
1	(Ref.)	TANK COVER, Hydraulic (Refer to Figure 6-22.)	-
2	700783	CYLINDER ASSEMBLY, Steering (For components, refer to Figure 6-28.)	1
3	701199	HOSE ASSEMBLY, Steering extend	1
4	701200	HOSE ASSEMBLY, Steering retract	1
5	701867	MANIFOLD ASSEMBLY, Main (For components, refer to Figure 6-19.)	1
6	701198	HOSE ASSEMBLY, Turret rotate	2
7	700316	MOTOR, Turret rotate	1
8	706911	MANIFOLD ASSEMBLY, Brake (For components, refer to Figure 6-20.)	1
9	700669	PUMP, Hydraulic	1
10	700903	ACCUMULATOR, Brake pressure	1
11	700311	HOSE ASSEMBLY, Brake crossover	1
12	701202	HOSE ASSEMBLY, Brake manifold to accumulator	1
13	701204	HOSE ASSEMBLY, Brake manifold to axle	1
14	701198	HOSE ASSEMBLY, Main manifold to pump	1
15	701198	HOSE ASSEMBLY, Main manifold to tank	1
16	701202	HOSE ASSEMBLY, Brake manifold to tank,	1
17	701203	HOSE ASSEMBLY, Brake manifold to pump	1
18	103032	HOSE, Suction	24"
19	102854	CLAMP, Gear #12	2
20	700524	FITTING, Adaptor 90° #12 - 3/4 hose barb	1
21	103073	FITTING, Elbow 90° #6orb-#6	5
22	103069	FITTING, Connector #6orb-#6	2
23	103070	FITTING, Adaptor #8-#6	1
24	700817	FITTING, Adaptor 14mm-#6	2
25	114109	FITTING, Tee #6 female -#6-#6	1
26	103072	FITTING, Tee #6orb-#6-#6	1
27	103307	FITTING, Reducer #10orb-#6	2
28	107742	FITTING, Elbow 45° #6orb-#6	3
29	109052	FITTING, Connector #12orb-#6	1
30	103322	FITTING, Connector #4orb-#6	3

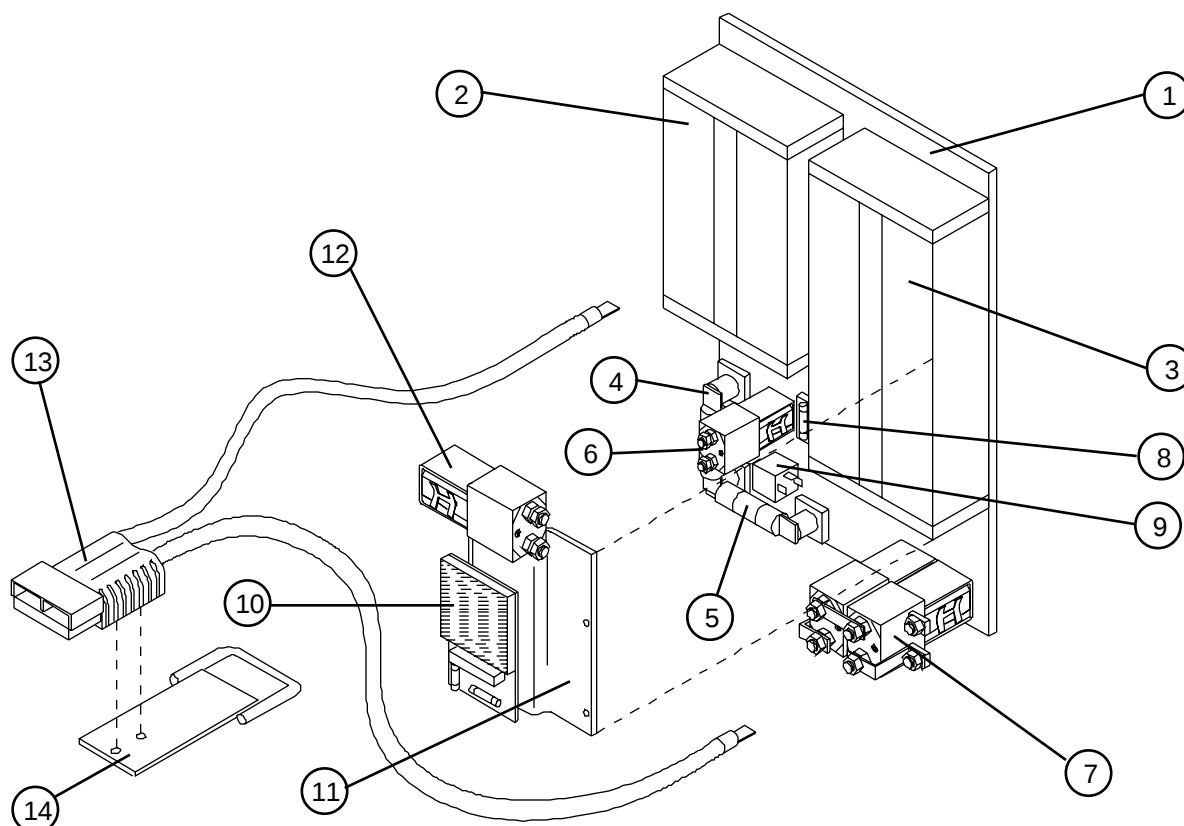
FIGURE 6-22. HYDRAULIC TANK ASSEMBLY



Mawb609

Index No.	Skyjack Part No.	Description							Units per Assy.
		1	2	3	4	5	6	7	
1	(Ref.)	TANK ASSEMBLY, Hydraulic							-
2	701443	• WELDMENT, Hydraulic tank							1
	700984	• TANK LID, Hydraulic							1
	103962	•• SCREW, Machine-hd #10-32 x 1/2" lg.							8
	104694	•• WASHER, Flat #10							8
	104185	•• WASHER, Lock #10.							8
3	704488	• FILTER ASSEMBLY, Return							1
	104254	•• ELEMENT, Filter							1
	103864	•• BOLT, Hex-hd 5/16-18 x 1" lg.							2
	103404	•• WASHER, Lock 5/16"							2
	100397	•• NUT, Hex 5/16-18							2
	708402	•• SEAL KIT							1
4	103339	• PLUG, Magnetic 3/4 NPT							1
5	103236	• GAUGE, Oil level temp							1
6	102693	• CAP W/ GASKET, Filler/breather							1
	103962	•• SCREW, Mach-hd #10-32 x 1/2" lg.							3
7	102918	• HOSE, Tank 1" x 7" lg.							1
8	103320	• CLAMP, #16 Gear							1
9	103032	• HOSE, Suction 3/4" I.D.							24"
	102854	• CLAMP, #12 Gear							2
10	111135	• REST PAD, Riser							2
	103857	•• BOLT, HHCS 1/4-20x1"							2
	104000	•• WASHER, Lock							2
11	704823	• GASKET							1
12	109052	• FITTING, Connector #12orb-#6							1
13	103073	• FITTING, Elbow 90° #6							1

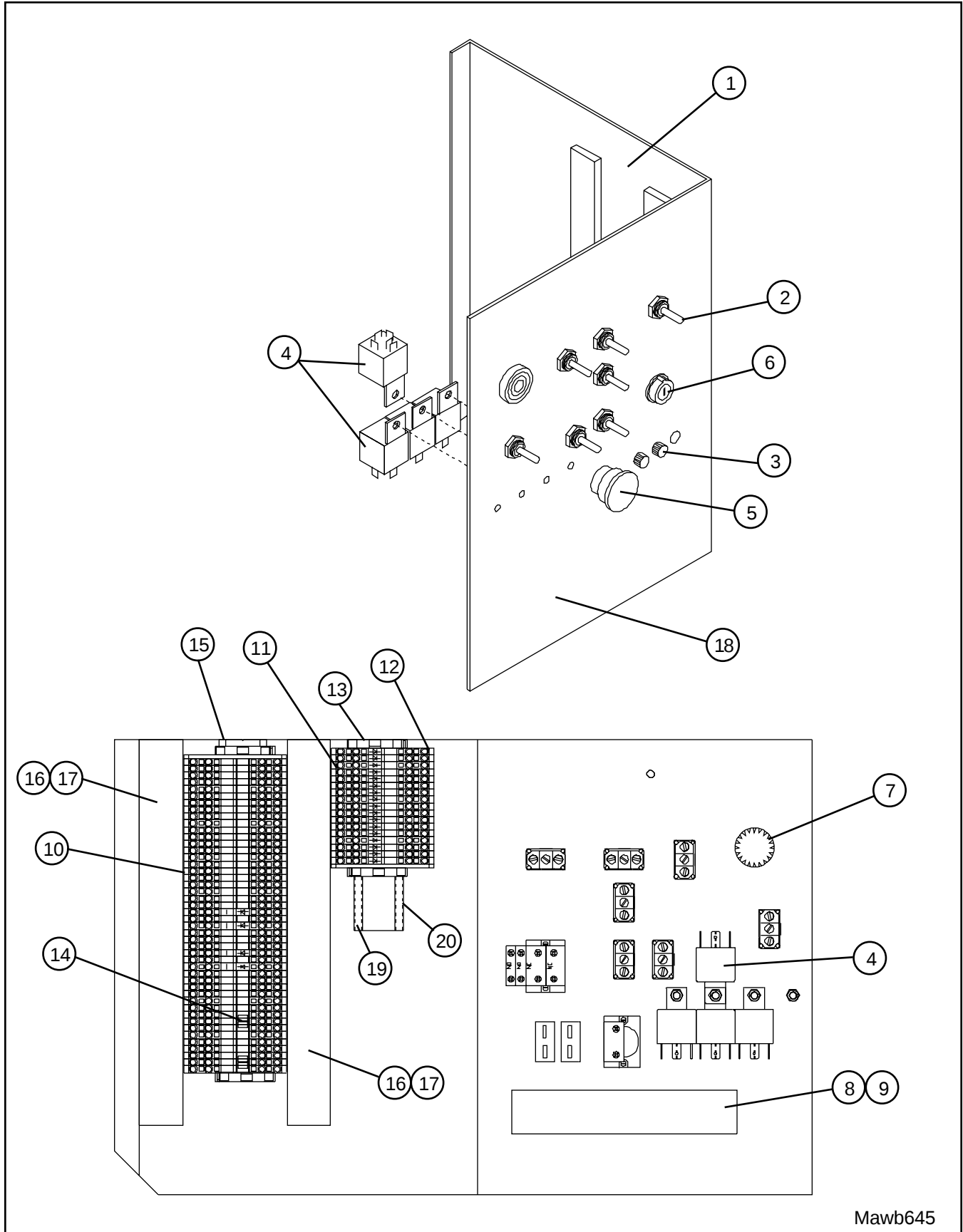
FIGURE 6-23. SEVCON PANEL ASSEMBLY



Mawb610

Index No.	Skyjack Part No.	Description	Units per Assy.
1	700837	PANEL ASSEMBLY, Sevcon	-
2	700216	• PLATE, Base	1
	700214	• CONTROLLER, Pump	1
	701082	• • RESISTOR ASSEMBLY, 2.2k - 3w	1
3	700990	• CONTROLLER, Drive	1
	708484	• KIT, Connector and pins	AR
4	102756	• FUSE, 200 Amp pump	1
5	700228	• FUSE, 300 Amp drive	1
6	700219	• CONTACTOR, Pump (boom control)	1
7	700218	• CONTACTOR, Directional	2
8	700222	• FUSE HOLDER, Double	1
	110855	• • FUSE, AGC 10	2
9	108589	• RELAY, Sealed 40 Amp	1
10	700217	• TACHOMETER BOARD	1
	701080	• • RESISTOR, 2.2 K	1
	700776	• • FUSE, 250 Volt, 6.3 Amp	1
	700777	• • FUSE, 250 Volt, 20 Amp	1
11	700991	• MOUNT PLATE, Tachometer board	1
12	701078	• LINE CONTACTOR	1
	701081	• • RESISTOR ASSEMBLY, 1k - 5w	1
	701291	• BRAIDED CABLE, 10" lg.	1
	700220	• BRAIDED CABLE, 7" lg.	3
	700229	• BRAIDED CABLE, 5" lg.	2
	701083	• CABLE ASSEMBLY, Line contactor to fuse	1
13	700963	CABLE/CONNECTOR ASSEMBLY	1
14	700925	HANDLE, Disconnect	1
---	711639	KIT, Moisture protection	1

FIGURE 6-24. BASE CONTROL/ELECTRICAL PANEL ASSEMBLY

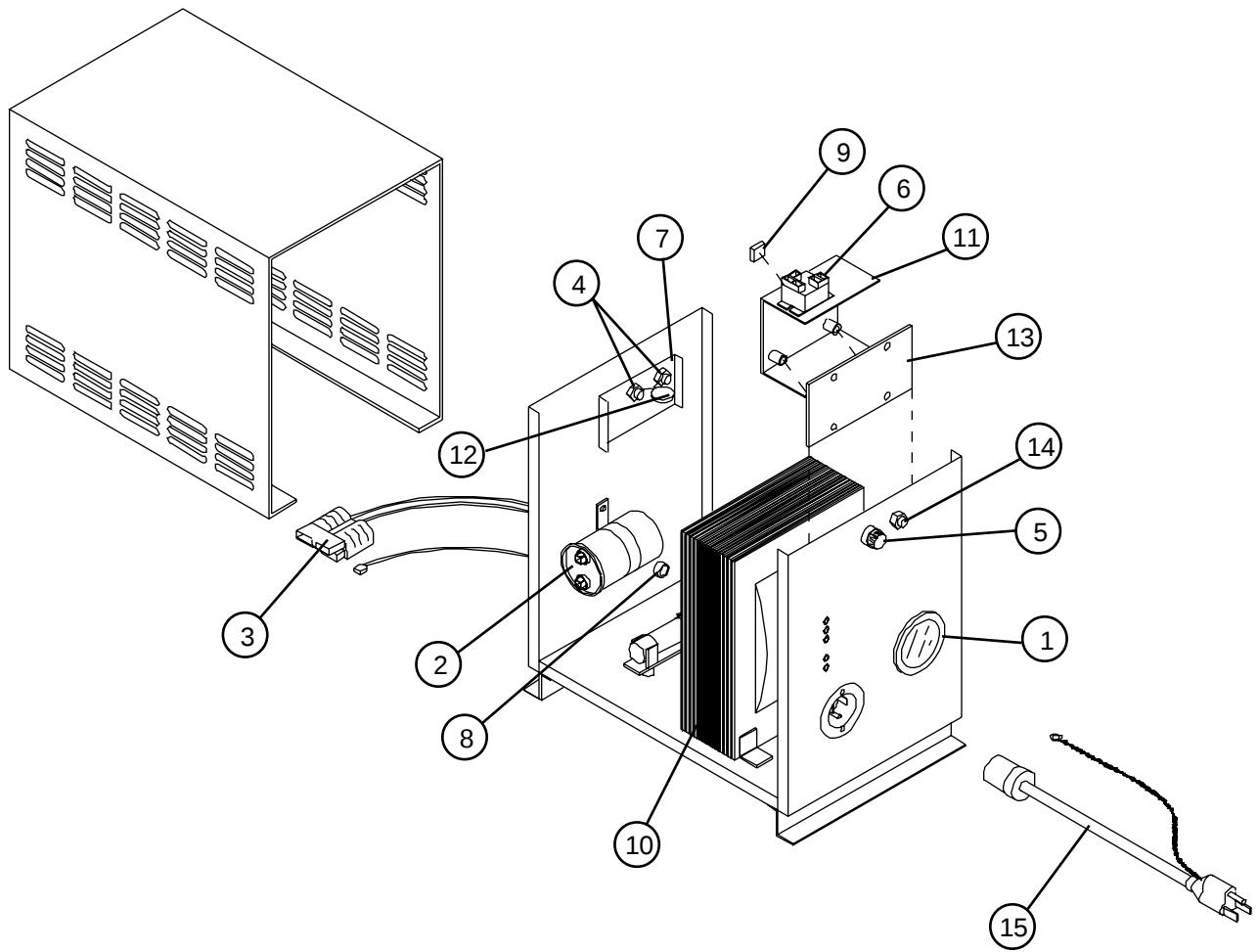


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FIGURE 6-24. BASE CONTROL/ELECTRICAL PANEL ASSEMBLY

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
1	708892	PANEL WELDMENT, Base control/electrical	1
2	102853	SWITCH, Toggle	7
3	703632	BREAKER, 10 Amp Circuit	2
4	108589	RELAY, 40 Amp sealed	4
	103962	• BOLT, Mach-hd #10-32 x ½" lg.	4
	104185	• WASHER, Lock #10	4
	104003	• NUT, Lock #10-32	4
5	(Ref.)	SWITCH ASSEMBLY, Emergency stop	1
	102769	• HEAD, Stop switch	1
	103281	• BASE, N.C. Switch contact	1
6	(Ref.)	SWITCH ASSEMBLY, Key select	1
	702395	• HEAD, 3-Position key select	1
	104466	• • KEY, #455	AR
	103279	• BASE, 2 N.C. Switch contact	1
	103141	• SWITCH, N.O. Contact	2
7	700159	PLUG, Hole 1-1/4"dia.	1
8	710163	WIRE DUCT	1
9	710164	COVER, Wire duct	1
10	707143	TERMINAL BLOCK, Thru	42
11	707145	TERMINAL BLOCK Diode	21
12	707146	PLATE, End	2
13	707147	STOP, End	4
14	707148	ADJ. JUMPER, Terminal block	4
15	710152	DIN RAIL	1
16	710162	COVER, Wire duct	2
17	710161	WIRE DUCT	2
18	708894	LABEL, SJKB Electrical panel	1
	708889	LABEL, SJKB Electrical panel (European machine)	1
19	700735	SEALED WEATHER STRIPPING	4
20	710140	DIN RAIL	1

FIGURE 6-25. BATTERY CHARGER ASSEMBLY



Mawb607

FIGURE 6-25. BATTERY CHARGER ASSEMBLY

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
A	707681	CHARGER ASSEMBLY, Battery (MAC #BA821)(North American) 48VDC, 25A, 120VAC, 60 Hz	-
B	707682	CHARGER ASSEMBLY, Battery (MAC #BA842)(Europe) 48VDC, 25A, 220VAC, 50/60 Hz	-
1	108554	• AMMETER, 0-30	1
2	708974	• CAPACITOR, 10MFD 440VAC, A	1
	700877	• CAPACITOR, 10MFD TX 660VAC, B	1
3	708976	• CORD ASSEMBLY, D.C.	1
	103364	• PLUG, 50 Amp gray	1
4	108556	• DIODE, 70 Amp	2
5	108558	• FUSE HOLDER, A.C.	1
	700688	• FUSE, 25 Amp A.C.	1
6	115315	• RELAY, 120 VAC/30 Amp, A	2
	708979	• RELAY, 240 VAC, B	2
7	700689	• RECTIFIER ASSEMBLY, A	1
	708978	• RECTIFIER ASSEMBLY, B	1
8	700690	• STRAIN RELIEF	1
9	108562	• TRIAC	1
10	700691	• TRANSFORMER, 48 VDC 23 Amp 120 VAC/60Hz, A	1
	700879	• TRANSFORMER, 48 VDC 25 Amp 240 VAC/50-60Hz, B	1
11	108564	• CONTROL TRANSFORMER	1
	111907	• TRANSFORMER, Control	1
12	700692	• VARISTOR	1
13	708975	• CONTROL CIRCUIT, 48VDC 120V VAC, A	1
	708977	• CONTROL CIRCUIT, 48VDC 240V VAC, B	1
14	110857	• STOP SWITCH, N.O.	1
15	700530	CABLE ASSEMBLY, Charger A.C., A	1
	700635	• PLUG, 15A Male	1
	700597	• RECEPTACLE, 20 Amp Female	1
	105269	• CABLE, 14/3	8"
	105807	• LANYARD, 6" lg.	1
	700913	• CABLE ASSEMBLY, Charger A.C., B (not shown)	1
	700914	• PLUG, Male	1
	108561	• STRAIN RELIEF	1
	708980	• SWITCH, Toggle DPDT, B (not shown)	1

FIGURE 6-26. BATTERY CHARGER ASSEMBLY (DUAL VOLTAGE)

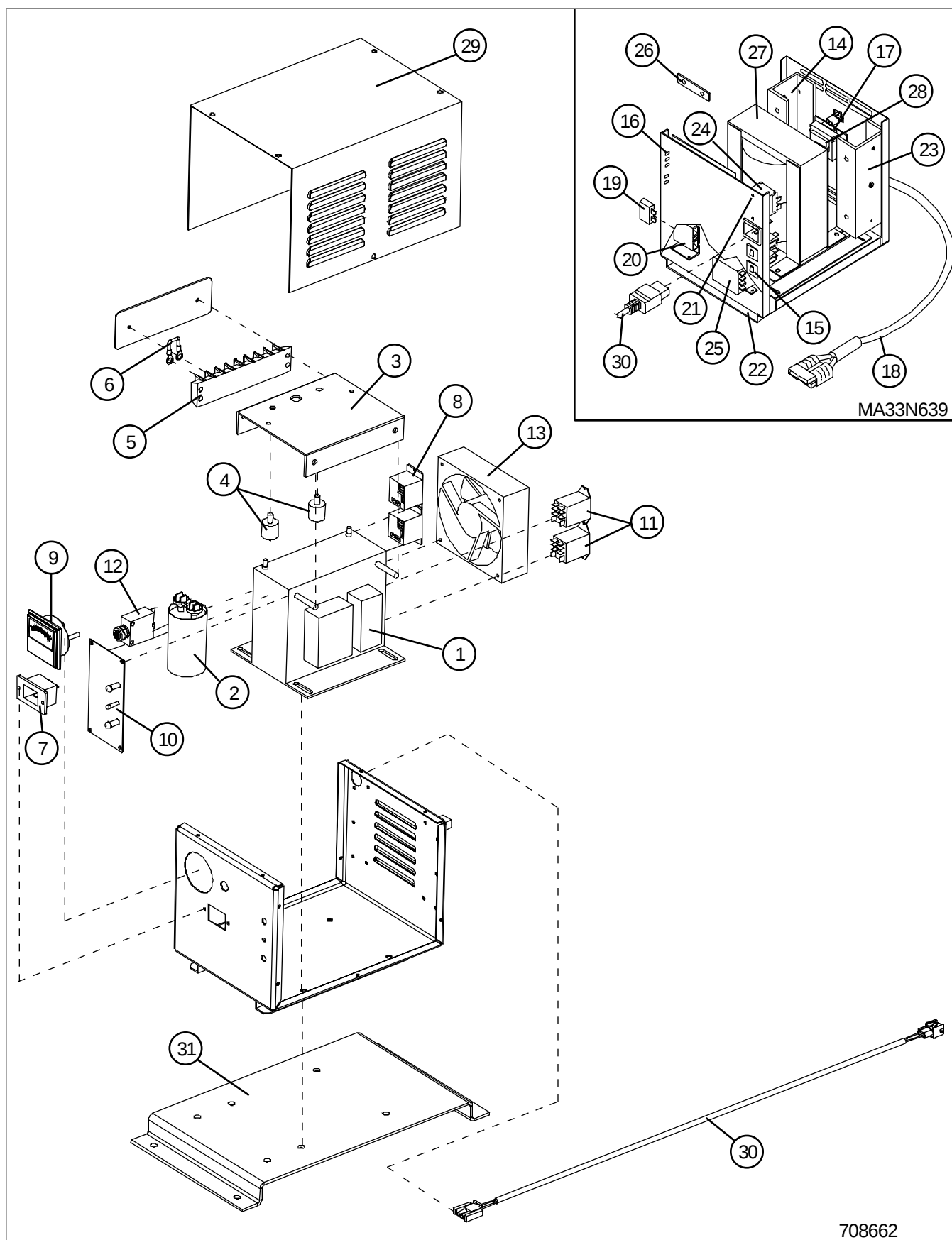


FIGURE 6-26. BATTERY CHARGER ASSEMBLY (DUAL VOLTAGE)

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	708662	BATTERY CHARGER ASSEMBLY, Dual voltage	1
-	122367	• BATTERY CHARGER, Dual voltage, (SJKB 40W, S/N 92621 and Above.) (SJKB 33W, S/N 91134 and Above.)	1
1	711073	•• TRANSFORMER, Charger	1
2	711074	•• CAPACITOR	1
3	711196	•• HEAT SINK, Charger	1
4	711197	•• RECTIFIER, Charger	2
5	711198	•• TERMINAL STRIP, Thru	1
6	711199	•• JUMPER FUSE	1
7	711200	•• RECEPTACLE, IEC 60320-C20	1
8	711201	•• RELAY, 24 VDC, 20 AMP	2
9	711202	•• GAUGE, Ammeter, 50 ADC	1
10	711203	•• CONTROLLER, Assembly Charger	1
11	711204	•• RELAY, 240 VAC	2
12	711205	•• BREAKER,CIRCUIT, 20 amp	1
13	711206	•• FAN, Cooling, 15 VAC	1
-	120075	• BATTERY CHARGER, Dual voltage (SJKB 40W, S/N 92620 and below.) (SJKB 33W, S/N 91133 and Below.)	1
14	119157	•• CAPACITOR ASSEMBLY, 400V	2
15	119143	•• CIRCUIT BREAKER, 10 Amp	2
16	119151	•• CONTROL CIRCUIT, 48V21A	1
17	119160	•• CONTROL, ACZ/48V	1
18	119152	•• CORD ASSEMBLY, DC	1
	103206	••• PLUG, 50 amp (red)	1
19	117177	•• FUSE, 80 amp DC	1
20	117178	•• HOLDER, Fuse	1
21	119162	•• INSULATOR, Relay	2
22	119161	•• PLATE, Mounting	1
23	119148	•• RECTIFIER ASSEMBLY	1
	119150	••• SCR, 35amp	2
24	119155	•• RELAY, 24VDC 30A	1
25	119156	•• RELAY, 120VAC	1
26	119149	•• SHUNT ASSEMBLY	1
27	119145	•• TRANSFORMER, Main 48V20A, 120/240/50/60	1
28	119159	•• TRANSFORMER, Control 230V16A	1
29	\$	•• COVER, Charger	1
30	708664	• PIGTAIL, DC Interlock	1
	711243	•• CABLE, Subassembly	1
31	708663	• MOUNTING PLATE, Charger	1
	103855	•• BOLT, HHCS 1/4"-20 x 1/2"	6
	104000	•• WASHER, Lock 1/4", (SJKB 40W, S/N 92621 and Above.) (SJKB 33W, S/N 91134 and Above.)	6
	700583	•• WASHER, Lock 1/4", (SJKB 40W ,S/N 992620 and Below.) (SJKB 33W, S/N 91133 and Below.)	6
		\$ Consult factory.	

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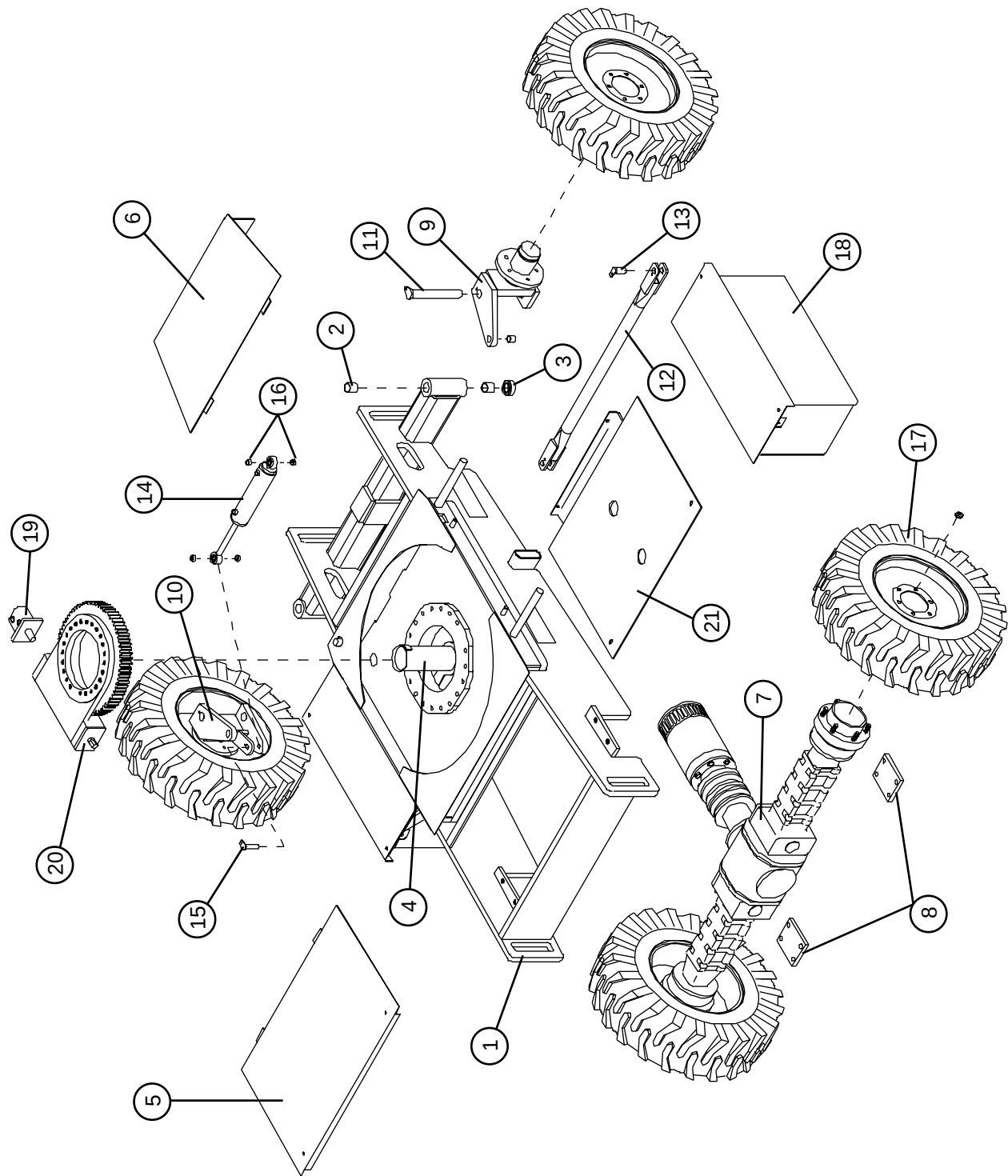
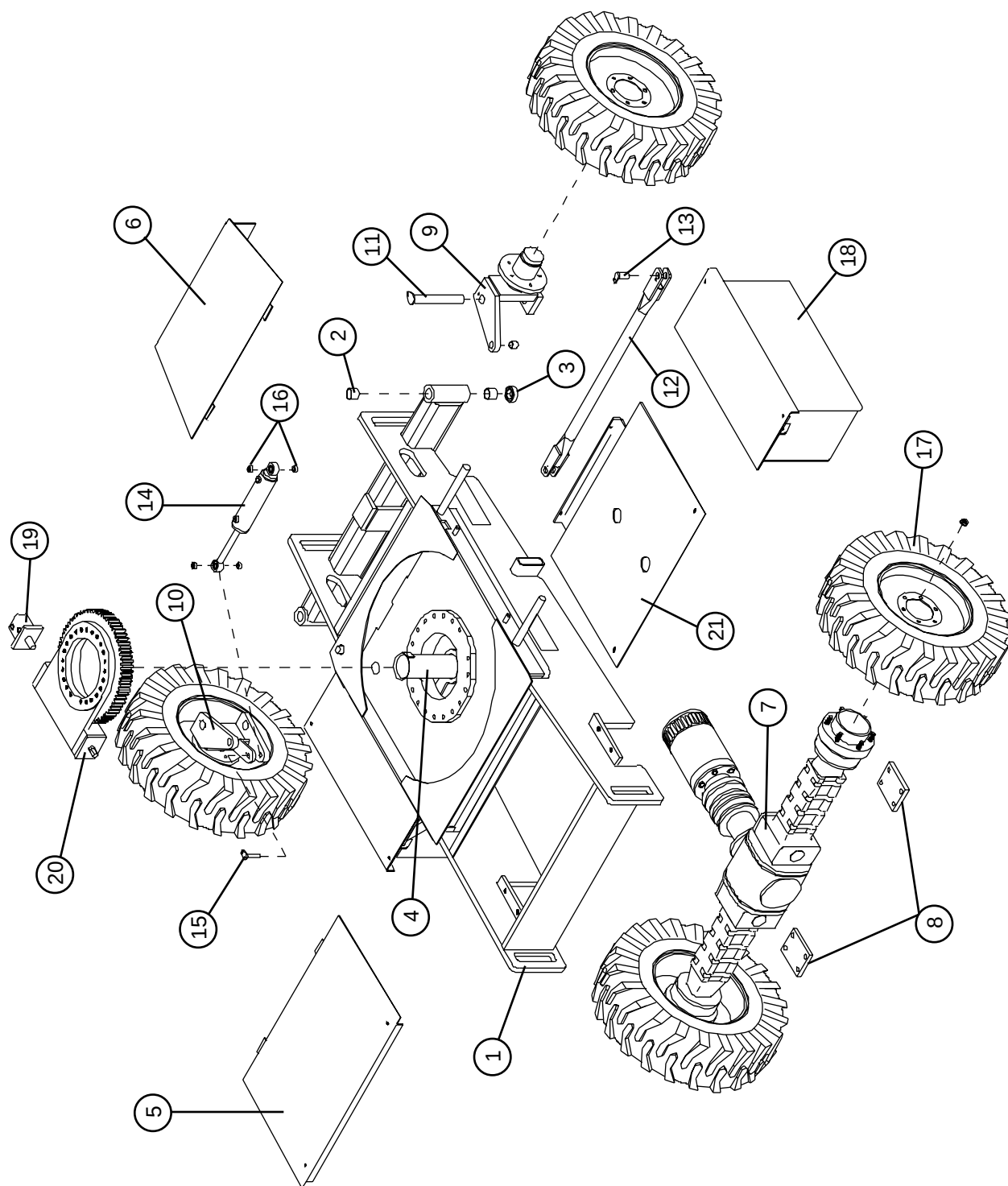


FIGURE 6-27. BASE, AXLES AND WHEELS

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
A	(Ref.)	BASE ASSEMBLY, Model SJKB-33i	-
B	(Ref.)	BASE ASSEMBLY, Model SJKB-33C	-
C	(Ref.)	BASE ASSEMBLY, Model SJKB-40i	-
D	(Ref.)	BASE ASSEMBLY, Model SJKB-40C	-
1	700659	WELDMENT, Base	1
2	103216	BUSHING, 1-1/2" x 1-11/16" x 1-1/2" lg.	4
3	700262	BEARING, Thrust	2
4	709420	WELDMENT, Hose carrier	1
		(Serial Number 91131 and above, A, B - 92605 and above, C, D)	
	700909	WELDMENT, Hose carrier	1
		(Serial Number 91130 and below, A, B - 92604 and below, C, D)	
	103473	• BOLT, Hex-hd 3/8-16 x 1" lg.	2
	103472	• WASHER, Flat 3/8"	2
	103999	• WASHER, Lock 3/8"	2
5	700936	WELDMENT, Rear cover	1
	700474	• SCREW, Thumb 3/8-16 x 1" lg.	2
6	700937	WELDMENT, Front cover	1
	700474	• SCREW, Thumb 3/8-16 x 1" lg.	2
7	(Ref.)	AXLE ASSEMBLY, Drive	1
		(For components, refer to Figure 6-31.)	
	700498	• WHEEL NUT 18x1.5MM	12
8	700536	PLATE, Axle mounting	2
	704844	• BOLT, HHCS, 3/4-10 x 8" lg.	8
	700575	• NUT, Lock, 3/4-10	8
9	701094	STEERING ASSEMBLY, Right	1
		(For component, refer to Figure 6-29.)	
10	704146	STEERING ASSEMBLY, Left	1
		(For component, refer to Figure 6-29.)	
11	700291	PIN, Spindle king	2
	103887	• BOLT, Hex-hd, 5/16-18 x 3/4" lg.	1
	103404	• WASHER, Lock 5/16"	1
12	700693	WELDMENT, Tie bar	1
13	700297	PIN, Tie bar	2
	103887	• BOLT, Hex-hd 5/16-18 x 3/4" lg.	1
	103404	• WASHER, Lock 5/16"	1
14	700783	CYLINDER ASSEMBLY, Steering	1
		(For components, refer to Figure 6-28.)	
15	700312	PIN, Steering cylinder	2
	103887	• BOLT, Hex-hd, 5/16-18 x 3/4" lg.	2
	103404	• WASHER, Lock 5/16"	2
16	700314	SPACER, Steering cylinder pin	4
Parts list continued on page 61.			

FIGURE 6-27. BASE, AXLES AND WHEELS

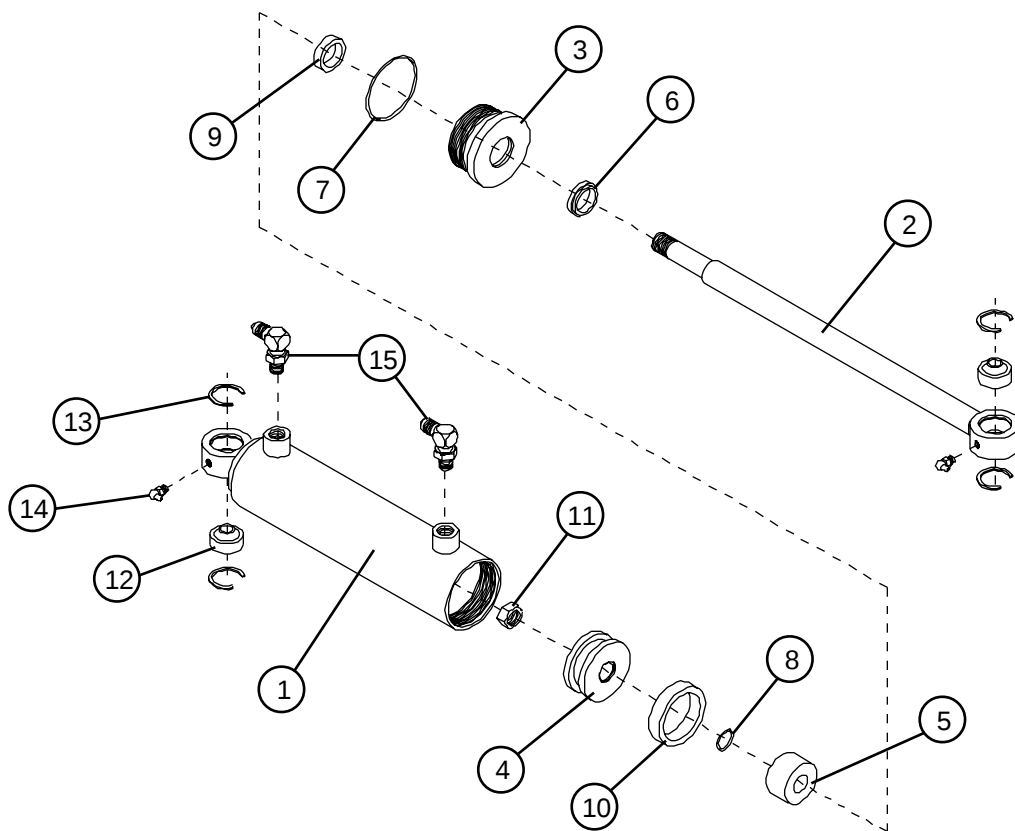


Mawb613

FIGURE 6-27. BASE, AXLES AND WHEELS

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
		Parts list continued from Page 59.	
17	701061	WHEEL/ TIRE ASSEMBLY, Lug, B, D (See note) (30 x 10.00 x 16.5, specify R or L, Air filled.)	4
	709347	• TIRE, 30 x 10.00 x 16.5	1
	701062	• WHEEL, 8.25 x 16.5, 6 Bolt	1
	702030	WHEEL/ TIRE ASSEMBLY, Option, B, D (See note) (30 x 10.00 x 16.5, Solid Urethane)	4
	701671	WHEEL/ TIRE ASSEMBLY, Rib, A, C (See note) (11 L 16SL, Air filled.)	4
	701682	• WHEEL, 8.00 x 16, 6 Bolt	1
	702029	WHEEL/ TIRE ASSEMBLY, Option, A, C (See note) (11 L 16SL, Solid Urethane)	4
	701672	WHEEL/ TIRE ASSEMBLY, Flotation lug (option), B, D (See note) (31 x 15.5 x 15, specify R or L, Air filled.)	4
	701683	• WHEEL, 13.00 x 15, 6 Bolt	1
	702615	WHEEL/ TIRE ASSEMBLY, Flotation rib (option), A, C (See note) (31 x 13.5 x 15, Air filled.)	4
	701683	• WHEEL, 13.00 x 15, 6 Bolt	1
	703034	WHEEL/ TIRE ASSEMBLY, Flotation rib (option), A, C (See note) (31 x 13.5 x 15, Solid Urethane)	4
	702745	WHEEL/ TIRE ASSEMBLY, Non-Marking (option), (See note)	1
	703660	• WHEEL/ TIRE ASSEMBLY, Non-Marking	4
	702740	• ASSEMBLY, Grounding strap	1
	103472	• WASHER, Flat 3/8"	1
	103999	• WASHER, Lock 3/8"	1
	702736	• BOLT, HHCS 10mm-1.50 x 20mm lg.	1
	18 701097	TRAY ASSEMBLY, Battery (For components, refer to Figure 6-30.)	2
	700517	• PIN, Linch 5/16"	2
19	700316	MOTOR, Turret rotate	1
	103307	• FITTING, Adaptor #10 orb-#6	2
	103907	• BOLT, Hex-hd ½-13 x 1-1/2" lg.	2
	107964	• WASHER, Lock ½"	2
20	704237	• KIT, Seal repair	1
	700317	GEAR, Turret rotate	1
	100845	• BOLT, Hex-hd, 5/8-11 x 3-1/2" lg.	20
21	100352	• WASHER, Flat 5/8"	20
	701504	SKID PLATE, B, D	1
NOTE: Size and load rating of replacement tires MUST be identical to that of original equipment to maintain safety and stability of machine.			

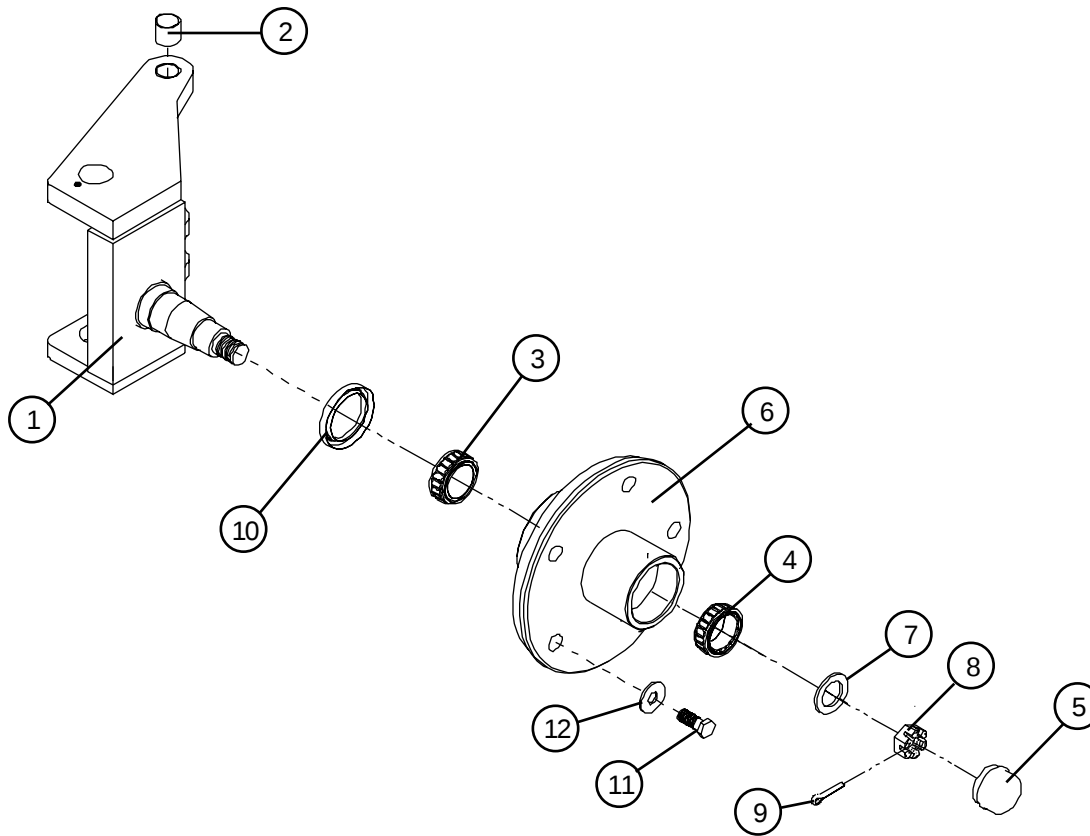
FIGURE 6-28. STEERING CYLINDER ASSEMBLY



Mawb614

Index No.	Skyjack Part No.	Description						Units per Assy.
		1	2	3	4	5	6	
	706859	CYLINDER ASSEMBLY, Steering						-
1	700784	• WELDMENT, Cylinder barrel						1
2	700992	• WELDMENT, Cylinder rod						1
3	700786	• GLAND, Cylinder						1
4	700787	• PISTON, Cylinder						1
5	700788	• SPACER, Cylinder						1
*6	106449	• WIPER, Rod						1
*7	701965	• O-RING, Gland						1
*8	701634	• O-RING, Piston						1
*9	108798	• SEAL, Gland						1
*10	700585	• SEAL, Piston						1
11	700575	• NUT, Lock 3/4-10 Grade C						1
12	102025	BEARING, Spherical						2
13	104114	RING, Retaining						4
14	700510	NIPPLE, Grease 1/8NPT - 90°						2
15	103073	FITTING, Elbow 90° #6orb-#6						2
	701076	KIT, Seal repair						AR
		* Part of Seal Repair Kit.						

FIGURE 6-29. STEERING ASSEMBLIES

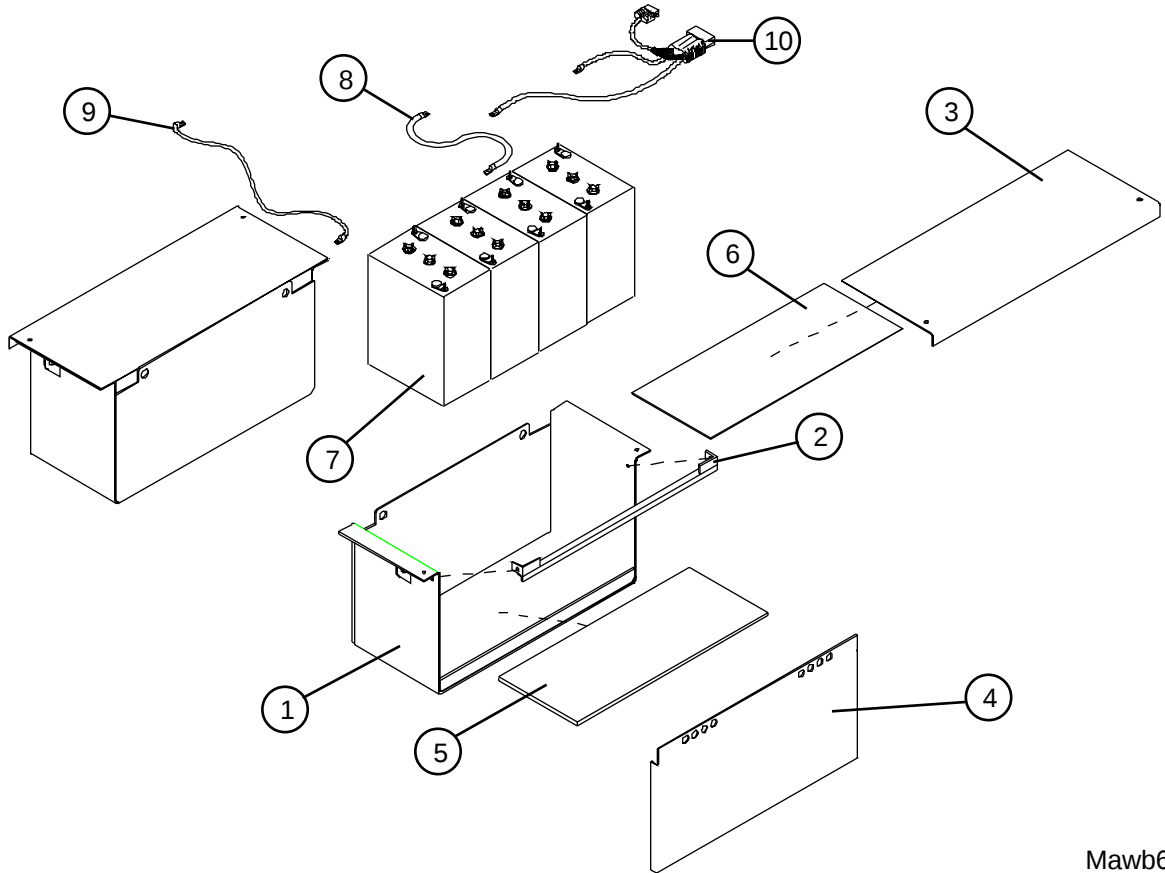


Mawb640

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
1	701095	SPINDLE WELDMENT, Left (w/bushing)	1
	701096	SPINDLE WELDMENT, Right (w/bushing)	1
2	100309	• BUSHING, 1"x1-1/8"x1" lg.	1
(Ref.)	700463	HUB ASSEMBLY	1
3	700471	• BEARING, Inner	1
	700472	•• BEARING CUP, Inner	1
4	700469	• BEARING, Outer	1
	700470	•• BEARING CUP, Outer	1
5	700467	• DUST CAP	1
6	700464	• HUB	1
7	102646	• WASHER, Flat	1
8	104351	• NUT, Castle 1"	1
9	700508	• PIN, Cotter 3/16 x 2" lg.	1
10	700466	• SEAL, Grease	1
11	700468	WHEEL BOLT, 5/8-18x1-1/2 gr. 5	6
12	700782	WASHER, Flat SAE 5/8" hard	6

NOTES

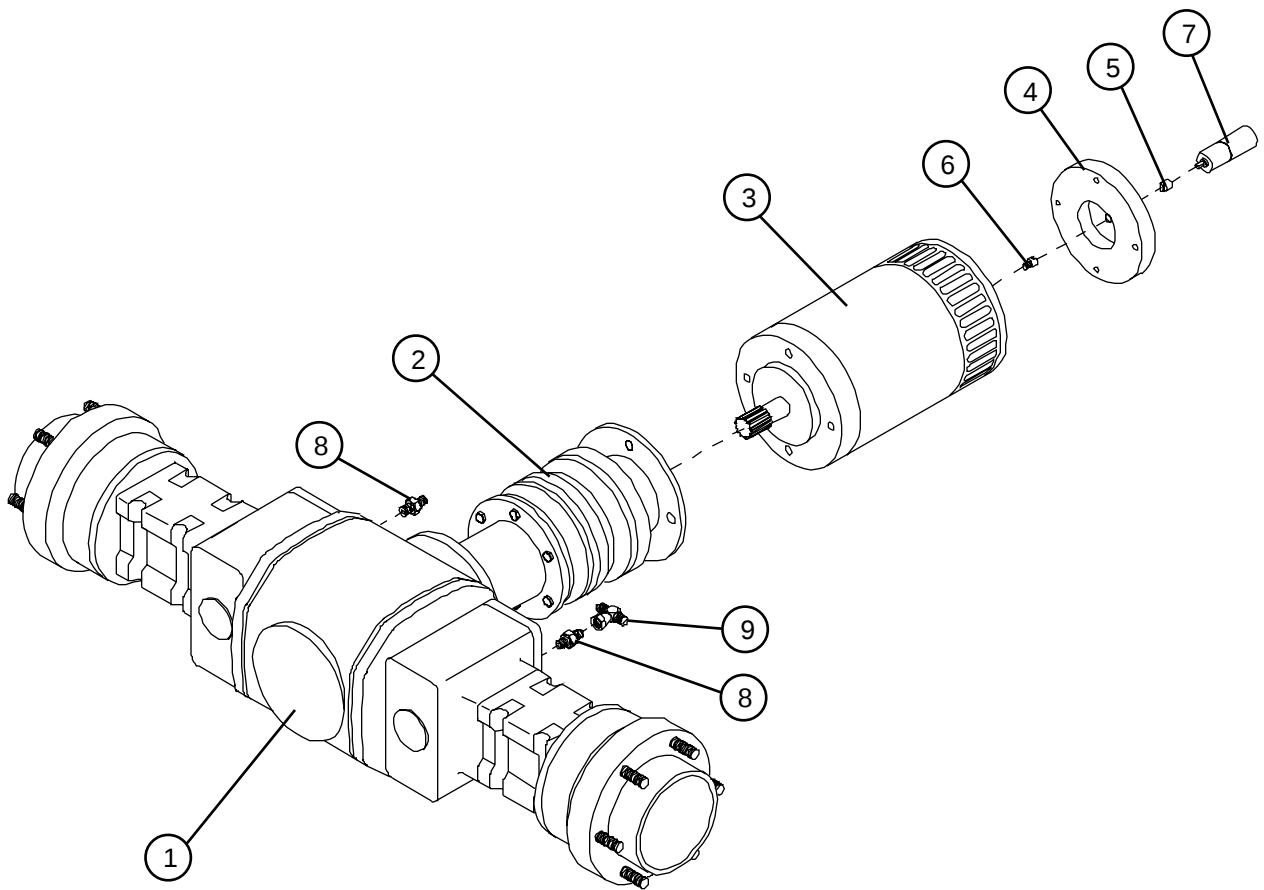
FIGURE 6-30. BATTERY TRAY ASSEMBLY



Mawb615

Index No.	Skyjack Part No.	Description						Units per Assy.
		1	2	3	4	5	6	
	(Ref.)	BATTERY TRAY ASSEMBLY						-
1	700843	• WELDMENT, Battery tray						1
2	700477	• WELDMENT, Battery tray holding bar						1
3	700762	• LID, Battery tray						1
4	700846	• WELDMENT, Battery tray front cover						1
5	700246	• TRAY LINER, Battery (plywood)						1
6	700076	• LID LINER, Battery tray (styrene)						1
7	701048	• BATTERY, 6 Volt 305AH						4
8	700753	• CABLE ASSEMBLY, Battery jumper						3
	103404	• WASHER, Lock 5/16						10
	103996	• WASHER, Flat 5/16						10
9	701099	CABLE ASSEMBLY, Battery tray jumper						1
10	701747	CABLE/CONNECTOR ASSEMBLY, 350 Amp						1
	700540	• HOUSING, 350 Amp Connector						1
	701008	• CONTACT TIP, 2/0						2
	701001	• CABLE, 2/0						AR
	103364	• CONNECTOR, 50 Amp						1

FIGURE 6-31. DRIVE AXLE ASSEMBLY



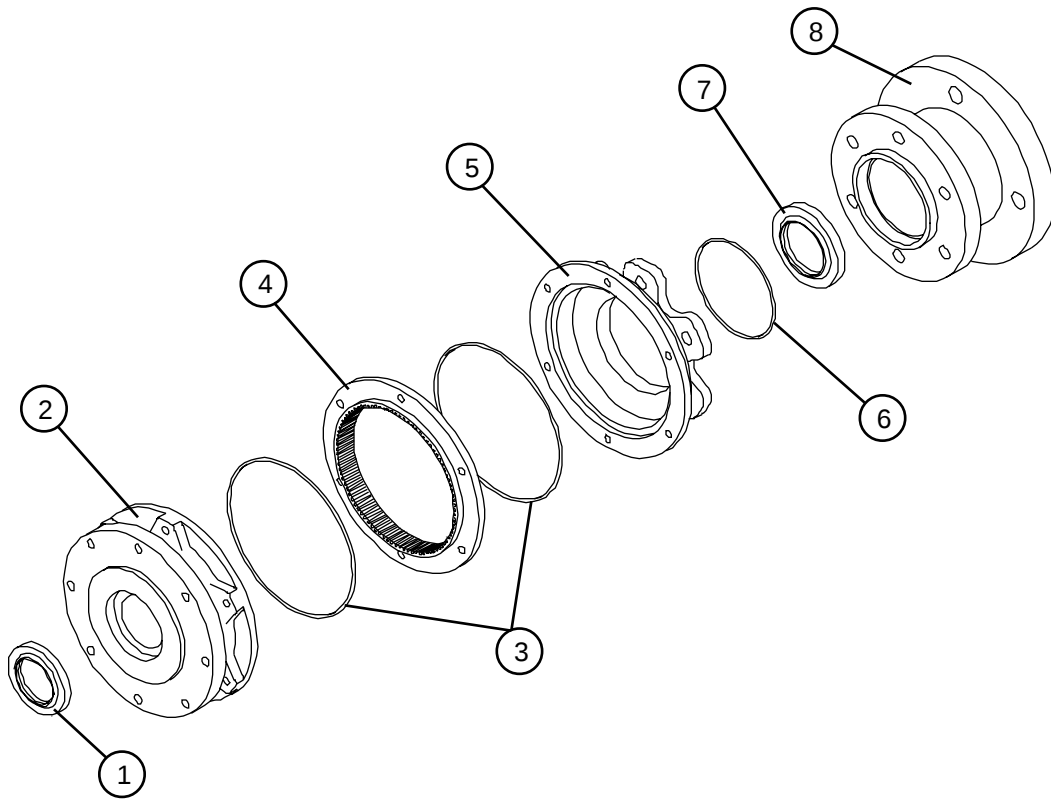
Mawb616

FIGURE 6-31. DRIVE AXLE ASSEMBLY

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	701092	AXLE ASSEMBLY, Drive	-
1	701053	• DRIVE AXLE (For components, refer to Figure 6-34.)	1
2	701047	• PLANETARY ASSEMBLY (For components, refer to Figure 6-32, 6-33.)	1
	701054	•• BOLT, Hex-hd 8mm-1.25 x 40mm lg.	8
	701055	•• NUT, Hex 8mm-1.25	8
	701056	•• WASHER, Lock 8mm	8
3	701007	• MOTOR, Traction, 9"-20 HP	1
	708387	•• BRUSH KIT (Motor #00-27003 and #00-27002.)	AR
	708398	•• SPRING, Brush (Motor #00-27003 and #00-27002.)	AR
	708399	•• BRUSH KIT (Motor #00-27001.)	AR
	708400	•• SPRING, Brush (Motor #00-27001.)	AR
	103898	•• BOLT, Hex-hd 5/8-11 x 1-3/4" lg.	4
	103998	•• WASHER, Lock 5/8"	4
4	700069	• ADAPTOR PLATE, Tachometer	1
	103886	•• BOLT, Hex-hd 5/16-18 x 1-1/2" lg.	4
	103404	•• WASHER, Lock 5/16	4
5	700487	• COUPLER, Tachometer (rubber)	1
6	700081	• COUPLER, Tachometer (steel)	1
7	700227	• GENERATOR, Tachometer	1
	700515	•• SCREW, Machine #2-56 x 3/8" lg.	3
	700516	•• WASHER, Lock #2	3
8	700817	• FITTING, Adaptor 14mm-#6	2
9	114109	• FITTING, Tee #6 female #6-#6	1
	701741	CABLE ASSEMBLY, "A1" terminal	1
	701743	CABLE ASSEMBLY, "S1" terminal	1
	701744	CABLE ASSEMBLY, "S2" terminal	1
	701742	CABLE ASSEMBLY, "A2" terminal	1

FIGURE 6-32. PLANETARY REDUCTION GEAR ASSEMBLY (Brevini)

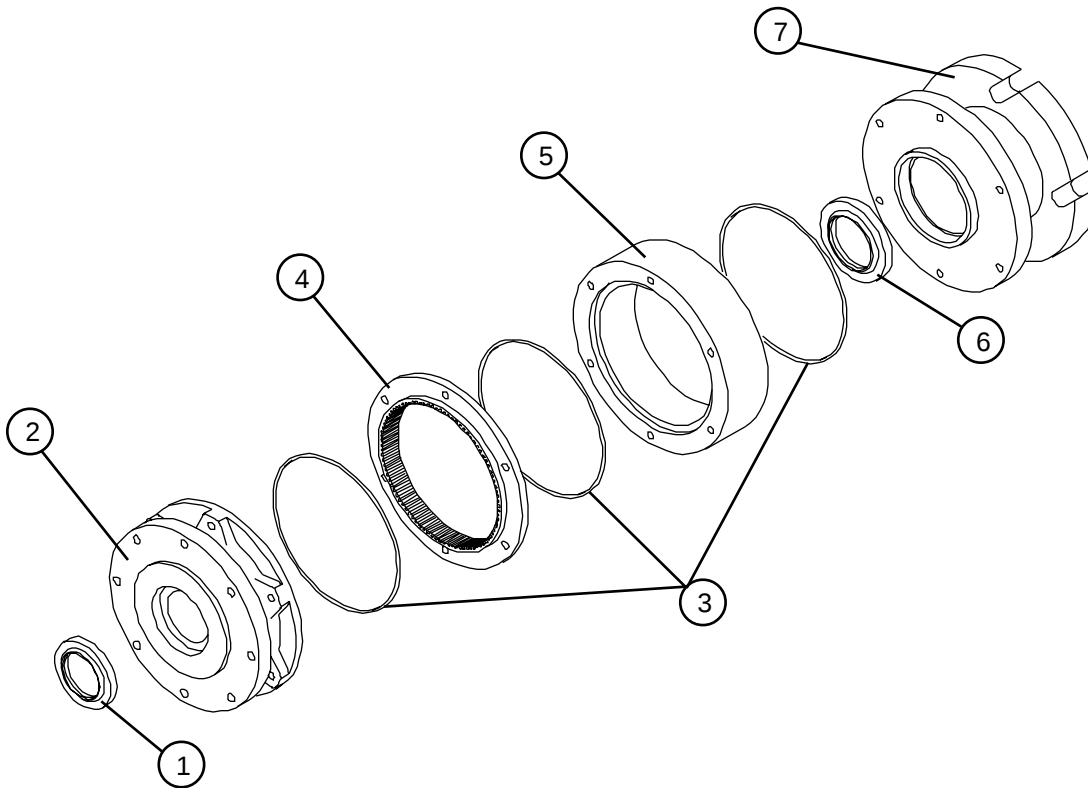
A Brevini gear assembly WILL have a Model Number Plate riveted to the side of the output housing.



Mawb617

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	701942	O-RING SEAL, Input adapter							1
7	701842	LIP SEAL, Input adapter							1
8	701030	HOUSING, Input adapter							1
		\$ Consult factory							

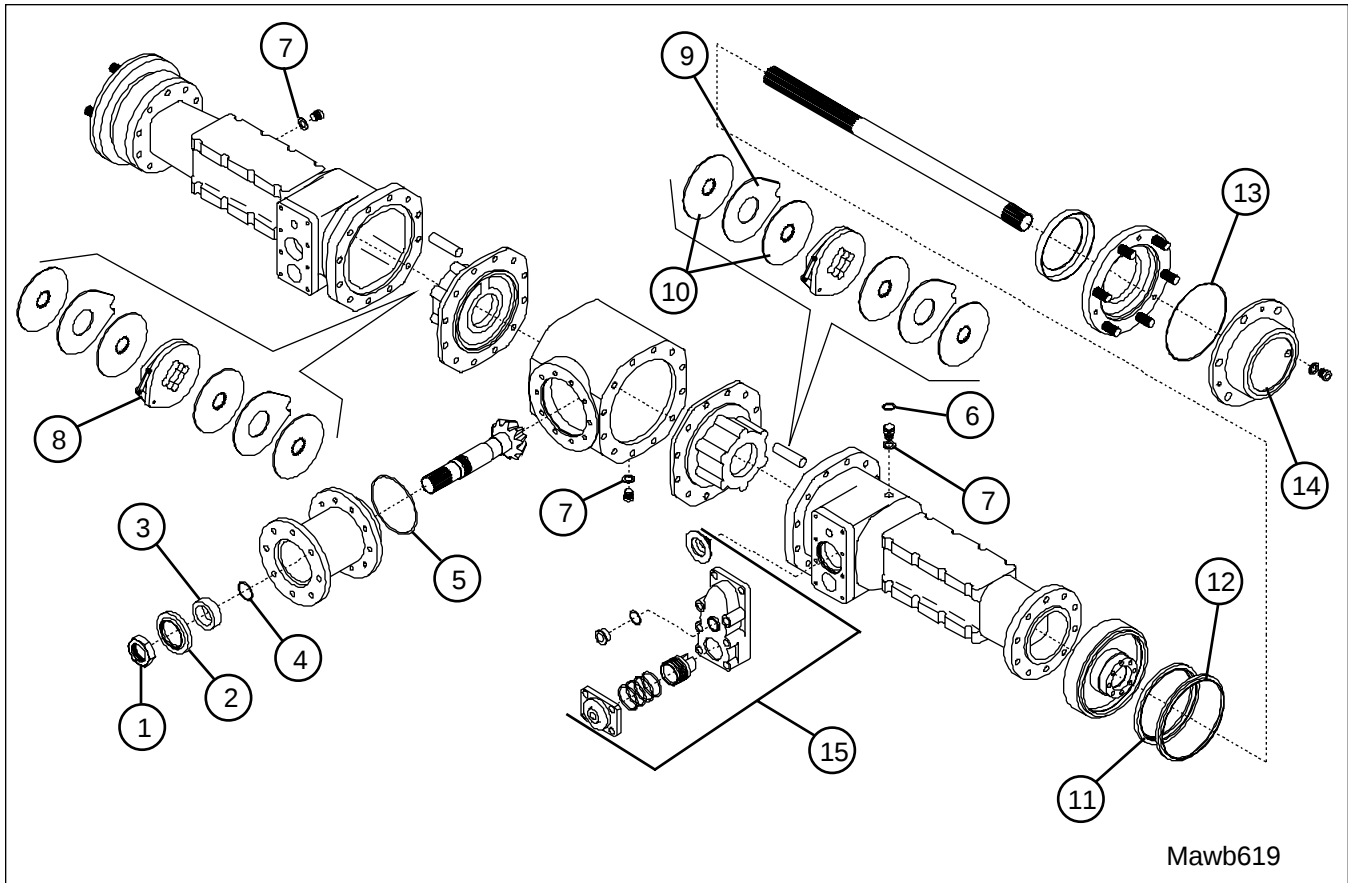
FIGURE 6-33. PLANETARY REDUCTION GEAR ASSEMBLY (Benevelli)
A Benevelli gear assembly will NOT have a Model Number Plate.



Mawb618

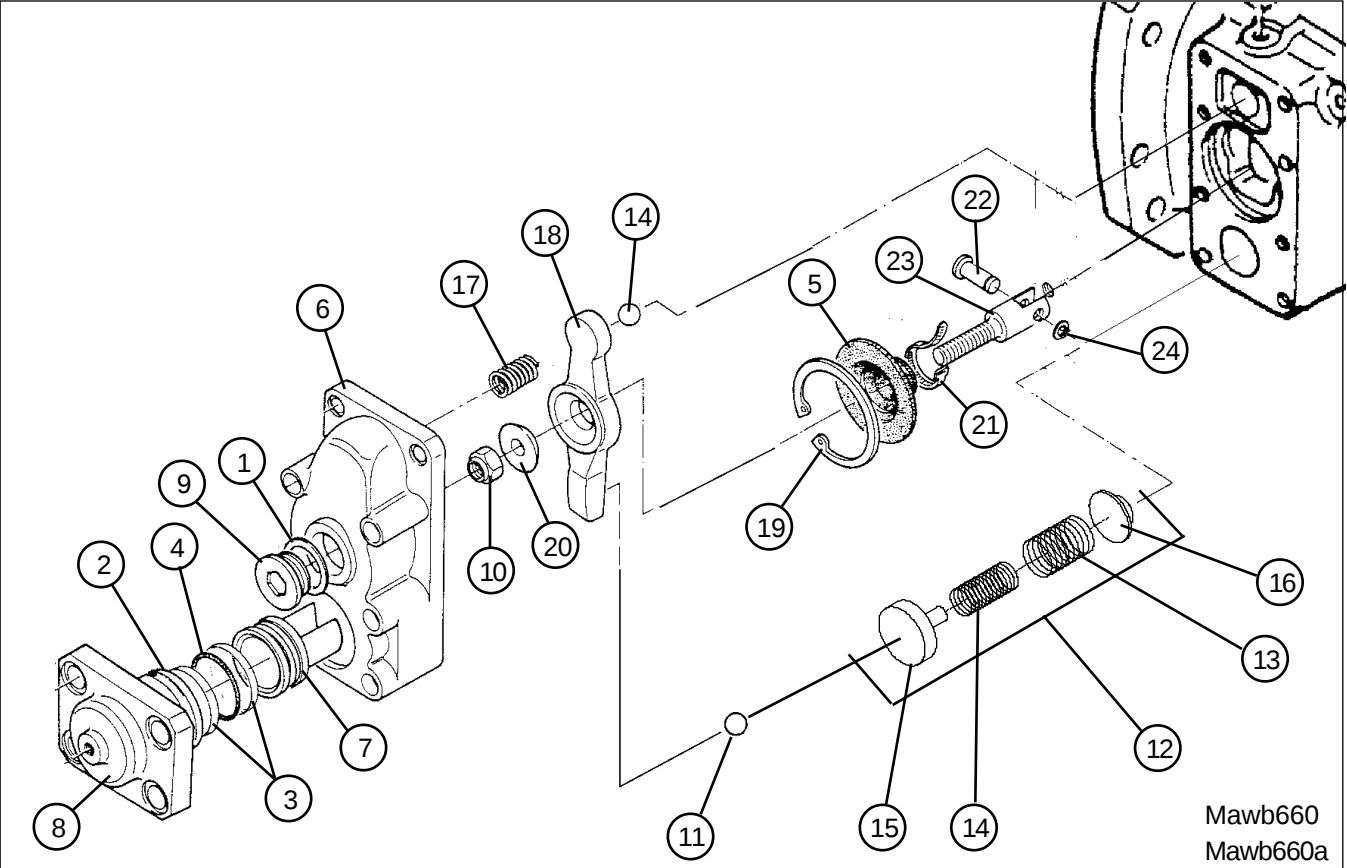
Index No.	Skyjack Part No.	Description							Units per Assy.
		1	2	3	4	5	6	7	
1	701960	LIP SEAL, Output housing							1
2	\$	HOUSING, Output							1
3	701961	O-RING SEAL							3
4	\$	RING GEAR							1
5	\$	HOUSING, Input							1
6	701962	LIP SEAL, Input adapter							1
7	\$	HOUSING, Input adapter							1
		\$ Consult factory							

FIGURE 6-34. DRIVE AXLE



Index No.	Skyjack Part No.	Description							Units per Assy.
		1	2	3	4	5	6	7	
	701053	DRIVE AXLE							-
1	701836	• RETAINING NUT, Pinion lock							1
2	701837	• OIL SEAL, Pinion shaft							1
3	701838	• OIL SEAL SPACER, Pinion shaft							1
4	701839	• O-RING, Pinion shaft							1
5	701848	• O-RING, Pinion flange							1
6	701851	• O-RING, Breather plug							1
7	701843	• WASHER, Oil plug gasket							5
8	701845	• ACTUATOR, Brake							2
9	701846	• BRAKE DISK, Intermediate							4
10	701847	• BRAKE DISK							8
11	701808	• OIL SEAL, Wheel flange							2
12	701889	• DUST COVER, Wheel flange							2
13	701809	• O-RING, Wheel flange							2
14	702003	• COVER, Torque hub							2
15	(Ref.)	• BRAKE ASSEMBLY (For components, refer to Figure 6-35.)							2

FIGURE 6-35. BRAKE ASSEMBLY



Index No.	Skyjack Part No.	Description							Units per Assy.
		1	2	3	4	5	6	7	
1	701844	WASHER, Oil Plug							1
2	701890	SEAL, O-ring (housing)							1
3	704231	BACKING RING, Seal							2
4	704219	SEAL, O-ring (piston)							1
5	701853	SEAL, Spring							1
6	703045	COVER, Brake							1
7	706544	PISTON, Brake							1
8	706545	FLANGE							1
9	708982	PLUG							1
10	708983	NUT, Tristop M 12							1
11	119101	BALL							2
12	710197	BRAKE KIT, Piston & spring							1
13	710198	• SPRING, Outer							1
14	710199	• SPRING, Inner							1
15	710200	• STEM							1
16	710201	• COVER							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 6-36. 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	
	701428	707992	707647	707410	708590	707994	707421	708676	709767	KIT, Service labels and nameplates (Consists of items 1-27)	-
1	700026	707429	707495	702973	708042	707561	700026	708109	708176	• LABEL, Danger	1
2	701814	707450	707516	702968	708063	707582	701814	708130	708197	• LABEL, Main disconnect (on charger cover)	1
3	700028	708569	708567	708566	708575	708568	707734	708576	708577	• LABEL, Design standards	1
4	700032	707433	707499	702983	708046	707565	700032	708113	708180	• LABEL, Attach safety belt (large)	1
5	700035	707435	707501	702978	708048	707567	700035	708115	708182	• LABEL, Annual inspection (inside controller door)	1
6	700473	707439	707505	702981	708052	707571	700473	708119	708186	• LABEL, Check battery level daily	2
7	700107	707437	707503	702964	708050	707569	700107	708117	708184	• LABEL, Attach safety belt (small)	2
8	700108	707438	707504	702980	708051	707570	700108	708118	708185	• LABEL, Do not lift here	2
9	700551	707440	707506	702984	708053	707572	700551	708120	708187	• LABEL, Warning harzards	2
10	701085	707442	707508	702974	708055	707574	701085	708122	708189	• LABEL, Charger (on charger cover)	1
11	110333	707427	707493	702965	708040	707559	110333	708107	708174	• LABEL, AC Supply	1
12	108666	707426	707492	702975	708039	707558	108666	708106	708173	• LABEL, Use original parts	2
13	106691	707424	707490	702977	708037	707556	106691	708104	708171	• LABEL, Operators checklist	1
14	700029	707431	707497	702976	708044	707563	700029	708111	708178	• LABEL, Tie down	2
15	709396	710713	710711	710712	710714	710715	709396	710710	710716	• MANUAL, Operator (Not shown)	1
16	700096	707446	707512	706726	708059	708670	701469	708126	708193	• LABEL, Emergency lowering (hydraulic tank)	2
17	701111	707444	707510	702967	708057	707576	701111	708124	708191	• LABEL, Manual brake release (inside door)	1
18	106705	707425	707491	702963	708038	707557	106705	708105	708172	• LABEL, Do not alter	3
19	701086	707443	707509	702962	708056	707575	701086	708123	708190	• LABEL, Jib emergency lowering	1
20	701114	707445	707511	702961	708058	707577	701114	708125	708192	• LABEL, Manual rotate valve (on turret plate near knob)	1
21	702005	707451	707517	702969	708064	707583	702005	708131	708198	• LABEL, Danger brake release (inside pump cover)	1
22	703727	707472	707538	706257	708084	707604	703727	708151	708218	• LABEL, ATF only (on hydraulic tank)	1
23	117294	707428	707494	706860	708041	707560	117294	708108	708175	• LABEL, Manual enclosed (Manual Enclosure)	1
24		707447	707513	702972	708060	707579	701470	708127	708194	• LABEL, Knob location (inside door on turret)(European based machines only)	1
25		117023	117023	117023	117023	117023	117023	117023	117023	• LABEL, CE Approval	3
26	710497	710617	710620	710609	710619	710618	710619	710616	710621	• LABEL, Pinch point (centered on jib parallel)	2
27		708838	708836	708835	708839	708837	707736	708840	708841	• LABEL, European load (both sides of platform)(European based machines only)	1
28	700025	700025	700025	700025	700025	700025	700025	700025	700025	LABEL, Skyman	2
29	102631	102631	102631	102631	102631	102631	102631	102631	102631	LABEL, Skyjack (large)	2
30	108946	108946	108946	108946	108946	108946	108946	108946	108946	LABEL, Skyjack (small)	2
31	103125	103125	103125	103125	103125	103125	103125	103125	103125	LABEL, Blue/white striping	850"
32	(Ref.)	(Ref.)	(Ref.)	(Ref.)	(Ref.)	(Ref.)	(Ref.)	(Ref.)	(Ref.)	LABEL, Serial number nameplate (Consult factory)	-
	701112	701112	701112	701112	701112	701112	701112	701112	701112	• SJKB-33i	1
	701115	701115	701115	701115	701115	701115	701115	701115	701115	• SJKB-33C	1
	701113	701113	701113	701113	701113	701113	701113	701113	701113	• SJKB-40i	1
	701116	701116	701116	701116	701116	701116	701116	701116	701116	• SJKB-40C	1
33	(Ref.)	(Ref.)	(Ref.)	(Ref.)	(Ref.)	(Ref.)	(Ref.)	(Ref.)	(Ref.)	LABEL, Model designation	-
	700899	700899	700899	700899	700899	700899	700899	700899	700899	• SJKB-33i	2
	700900	700900	700900	700900	700900	700900	700900	700900	700900	• SJKB-33C	2
	700901	700901	700901	700901	700901	700901	700901	700901	700901	• SJKB-40i	2
	700902	700902	700902	700902	700902	700902	700902	700902	700902	• SJKB-40C	2
34	700031	707432	707498	702979	708045	707564	700031	708112	708179	• LABEL, Capacity 500 lbs.	2
										NOTE: Items 28 thru 34 not included in Service Label Kit, order separately. Supply Model Number and Serial Number when ordering complete machine labels.	

FIGURE 6-36. LABELS AND NAMEPLATES

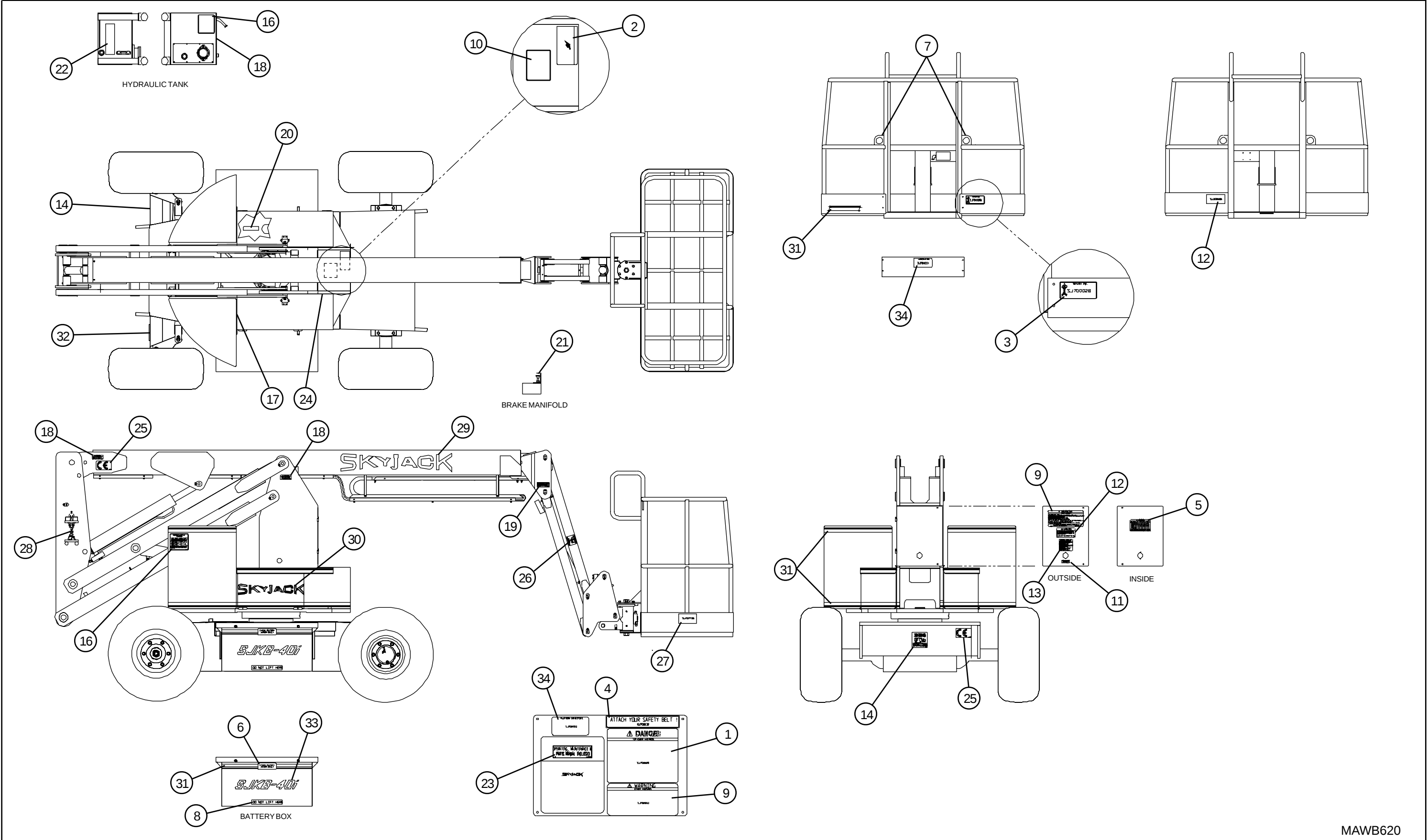


Diagram illustrating the wiring connections for the Mawb636 alarm system, showing the internal components and their connections to the external modules.

Legend:

- PIN 1 - BLACK 70
- PIN 2 - WHITE 02
- PIN 3 - GREEN 81
- PIN 4 - RED 82
- PIN 5 - ORANGE 83

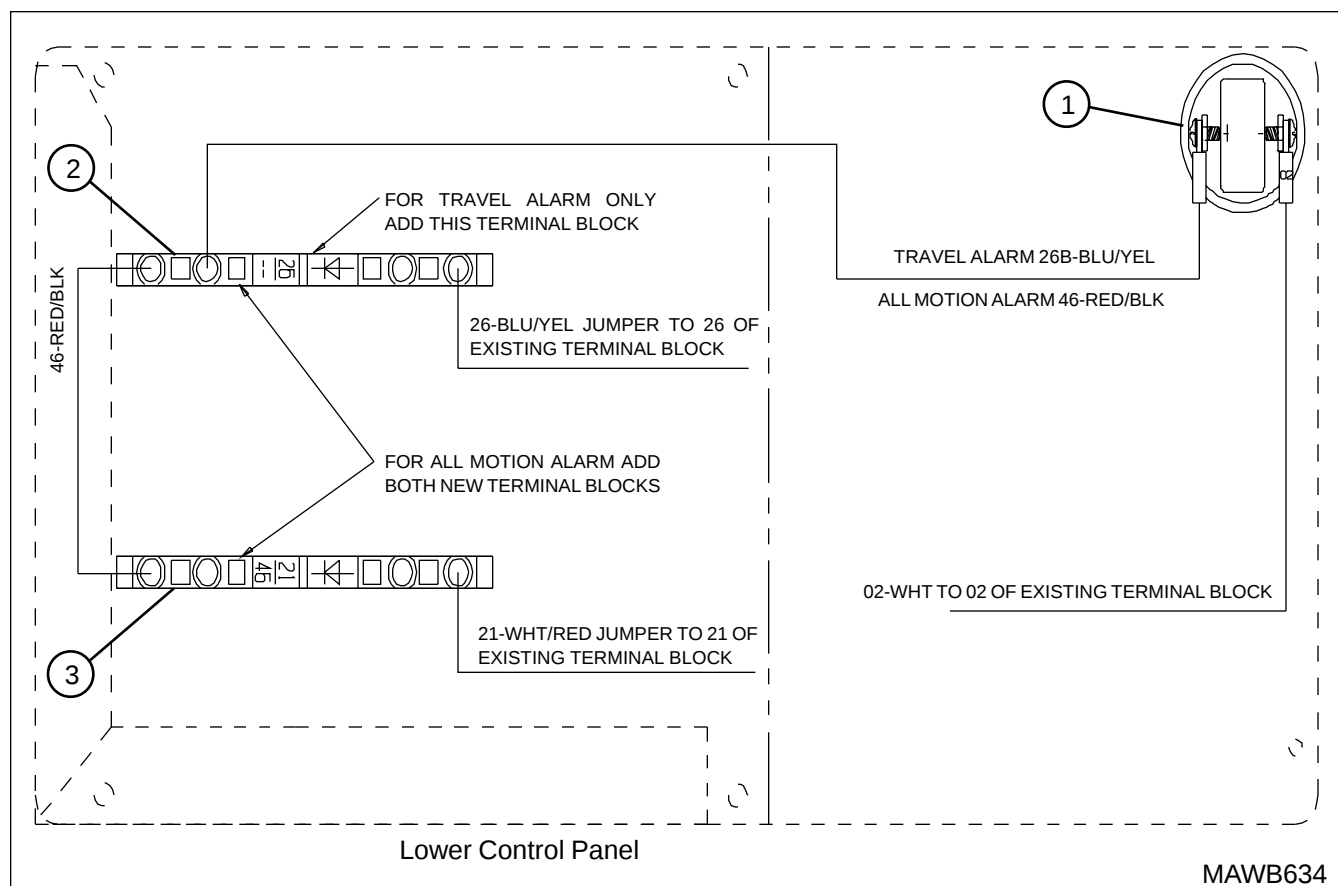
Internal Components and Connections:

- Control Panel:** Features a keypad with 16 buttons (1-16) and a siren. The keypad is connected to the control panel via a 16-pin connector.
- Modules:** The control panel contains several modules, including a 27CR module, an 81CR module, and a 70 module. These modules are connected to the external modules via a 7-pin connector.
- External Modules:** The external modules include a 27CR module, an 81CR module, and a 70 module. These modules are connected to the control panel via a 7-pin connector.
- Wiring:** The wiring is color-coded according to the legend. The connections are as follows:
 - Pin 1 (Black 70) connects to the 70 module.
 - Pin 2 (White 02) connects to the 02 module.
 - Pin 3 (Green 81) connects to the 81 module.
 - Pin 4 (Red 82) connects to the 82 module.
 - Pin 5 (Orange 83) connects to the 83 module.

FIGURE 6-37. OVERLOAD SENSING

Index No.	Skyjack Part No.	Description							Units per Assy.
		1	2	3	4	5	6	7	
	702336	PLATFORM LOAD SENSING OPTION							-
1	702305	• PROCESSOR KIT, Load sense option							1
2	702306	• ENCLOSURE, Load sense processor (not shown)							1
	702338	• COTROL BOX, Modified							1
3	103260	•• CABLE, 18/5							64"
4	103568	•• HOUSING, 4 Pin connector female							1
	103570	•• INSERT, 4 Pin connector female							1
5	103567	•• HOUSING, 4 Pin connector male							1
	103569	•• INSERT, 4 Pin connector male							1
6	103036	•• STRAIN RELIEF							1
7	108589	•• RELAY							1
8	102921	•• DIODE							2
9	702337	•• LABEL, Overload indicator (not shown)							1

FIGURE 6-38. TRAVEL ALARM/ALL MOTION ALARM



Index No.	Skyjack Part No.	Description							Units per Assy.
		1	2	3	4	5	6	7	
1	709360	TRAVEL ALARM OPTION							-
	103057	• BEEPER							1
	702465	• • WIRE, 16 GA, white							32"
	102955	• TERMINAL, 16 GA x #6 ring							2
	702482	• • WIRE, 16 GA, blue/yellow (Travel Alarm)							38"
2	702466	• • WIRE, 16 GA, red/black (All Motion Alarm)							38"
	707145	• TERMINAL BLOCK, Diode							1
	709361	ALL MOTION ALARM OPTION (Travel Alarm Option [709360] MUST Be Included)							-
3	707145	• TERMINAL BLOCK, Diode							1

FIGURE 6-39. DESCENT ALARM

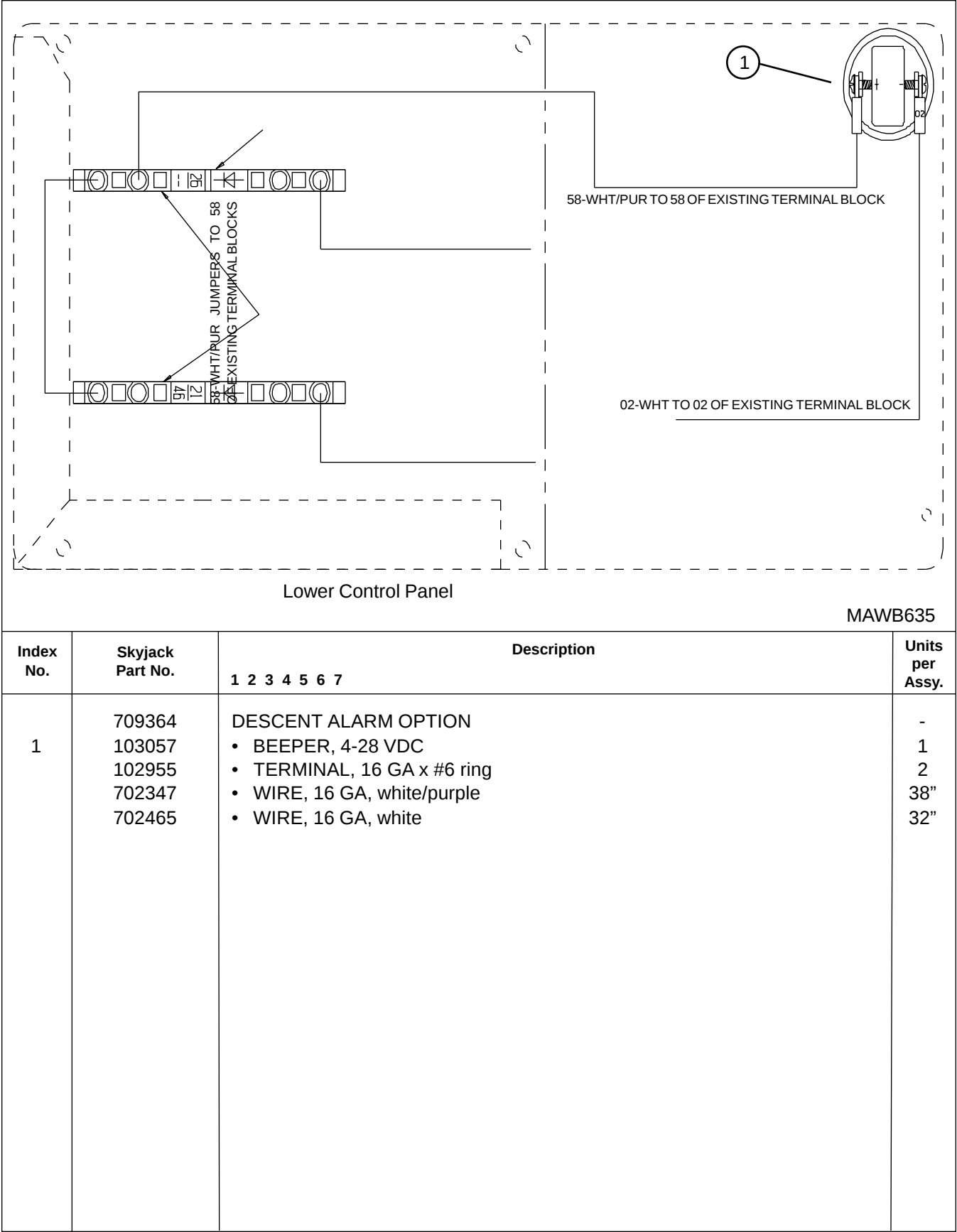
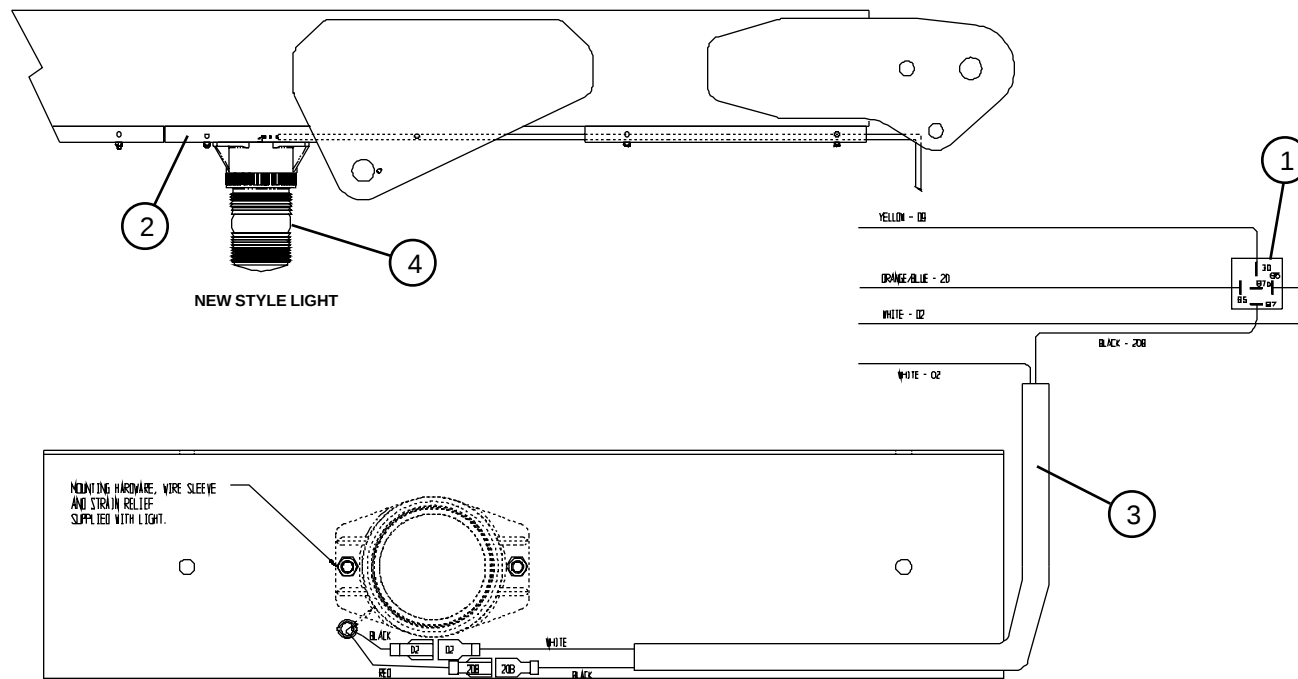


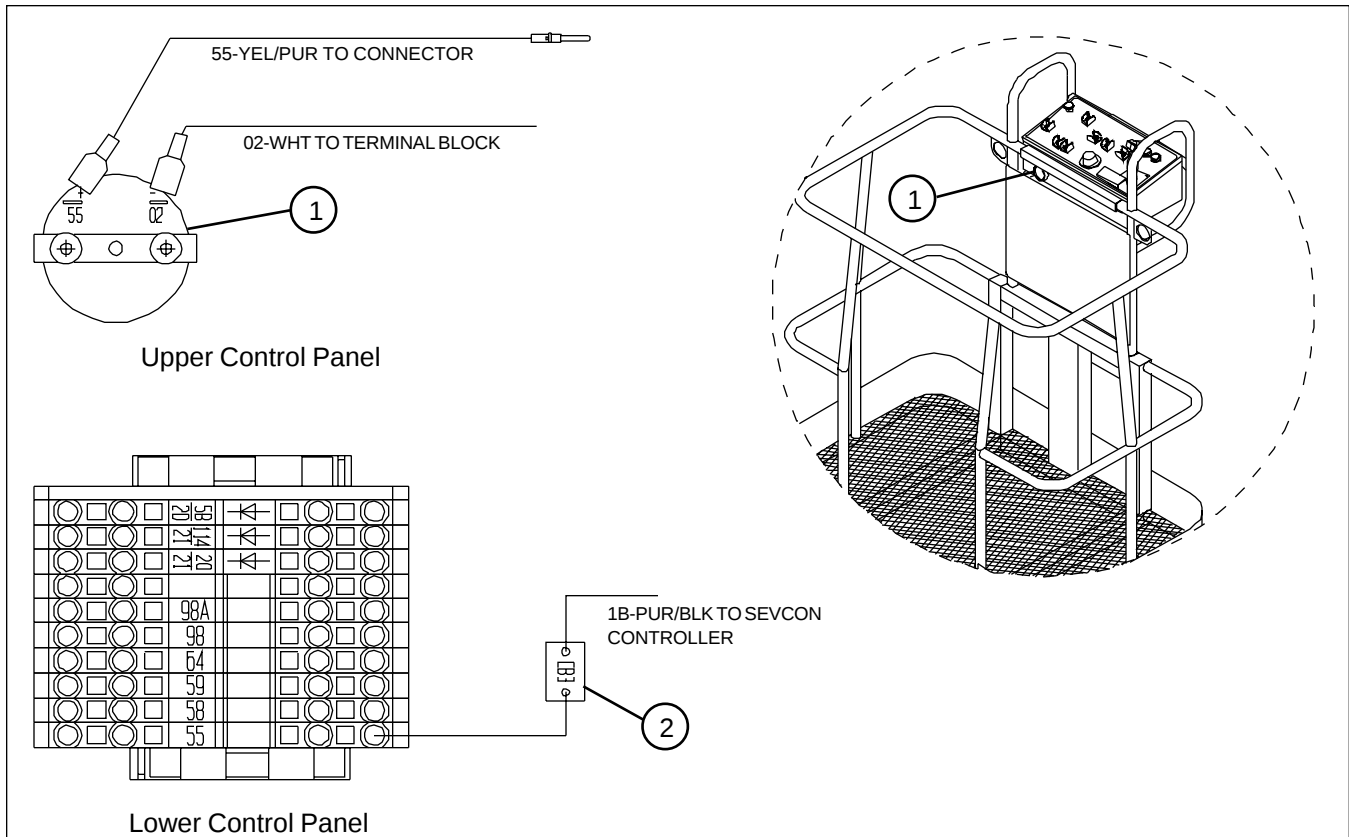
FIGURE 6-40. FLASHING LIGHT



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Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	710137	FLASHING LIGHT OPTION (New Style)	-
	709363	FLASHING LIGHT OPTION (Old Style)	-
1	108589	• RELAY, 40 AMP Sealed	1
	103962	• BOLT, Mach-hd #10-32 x 1/2" lg.	1
	104185	• WASHER, Lock #10	1
	702357	• WIRE, 16 GA Orange/Blue	AR
	702465	• WIRE, 16 GA White	AR
	702478	• WIRE, 16 GA Yellow	AR
	702000	• TERMINAL, 16 GA x 1/4 SPD F	AR
2	710136	• HOSE COVER, Flashing light (New Style)	1
	709312	• HOSE COVER, Flashing light (Old Style)	1
3	103256	• CABLE, 18/2 Cabtire	AR
	702000	• TERMINAL, 16 GA x 1/4 SPD F	4
4	710139	• LIGHT, Flashing (New Style)	1
	106756	• LIGHT, Flashing (Old Style)	1
	103267	• FLASHER (Old Style Only)	1
	701414	• BRACKET, Flasher mount (Old Style Only)	1
	700808	• LIGHT ADAPTOR, Flashing (Old Style Only)	1
	702465	• WIRE, 16 GA White	AR
	105360	• TERMINAL, 16 GA x 1/4 SPD M	2

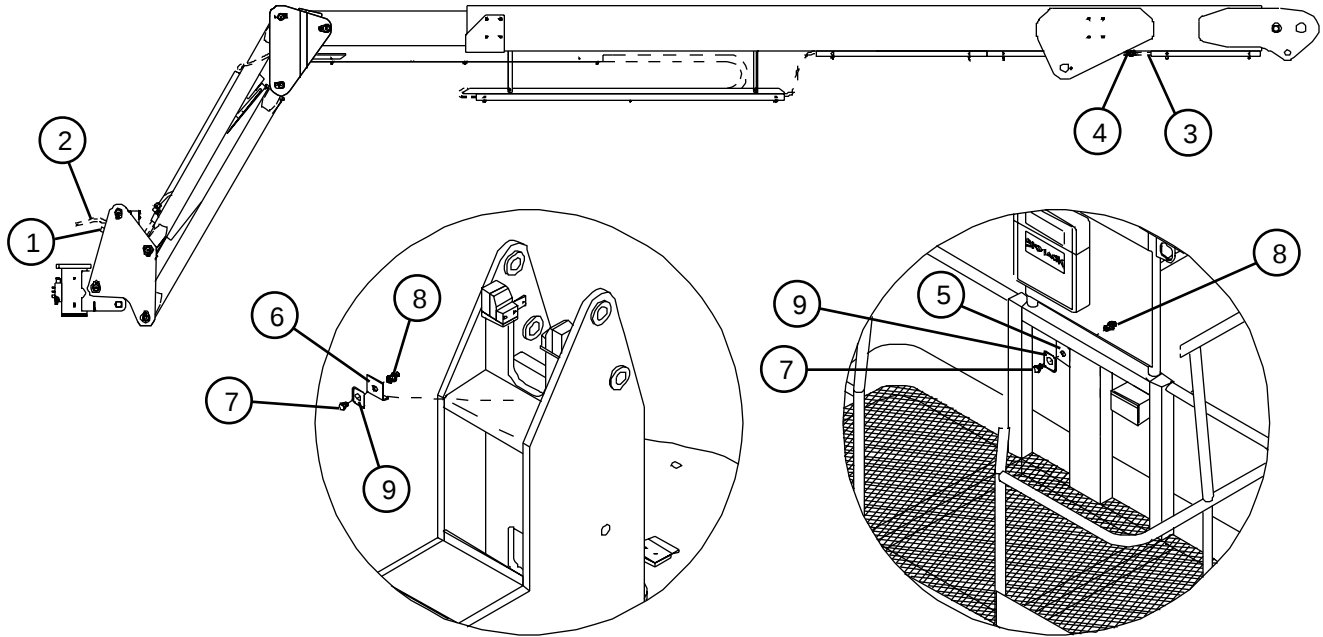
FIGURE 6-41. BATTERY FUEL GAUGE



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Index No.	Skyjack Part No.	Description							Units per Assy.
		1	2	3	4	5	6	7	
1	704743	BATTERY FUEL GAUGE OPTION							-
	704733	• GAUGE, Battery fuel							1
	702465	•• WIRE, 16 GA white							12"
	702456	•• WIRE, 16 GA yellow/purple							60"
	704026	•• WIRE SLEEVING							60"
	109210	•• TERMINAL, 16 GA x 5/16 Ring							1
	702000	•• TERMINAL, 16 GA x 1/4 QFC							2
	703769	•• TERMINAL, 16 GA x 1/4 QCMF							1
2	705258	•• CONTACT PIN							1
	703632	• CIRCUIT BREAKER, 10 AMP							1
	702000	•• TERMINAL, 16 GA x 1/4 QFC							2

FIGURE 6-42. AIR LINE TO PLATFORM (SJKB-40i, -40C, -33W)

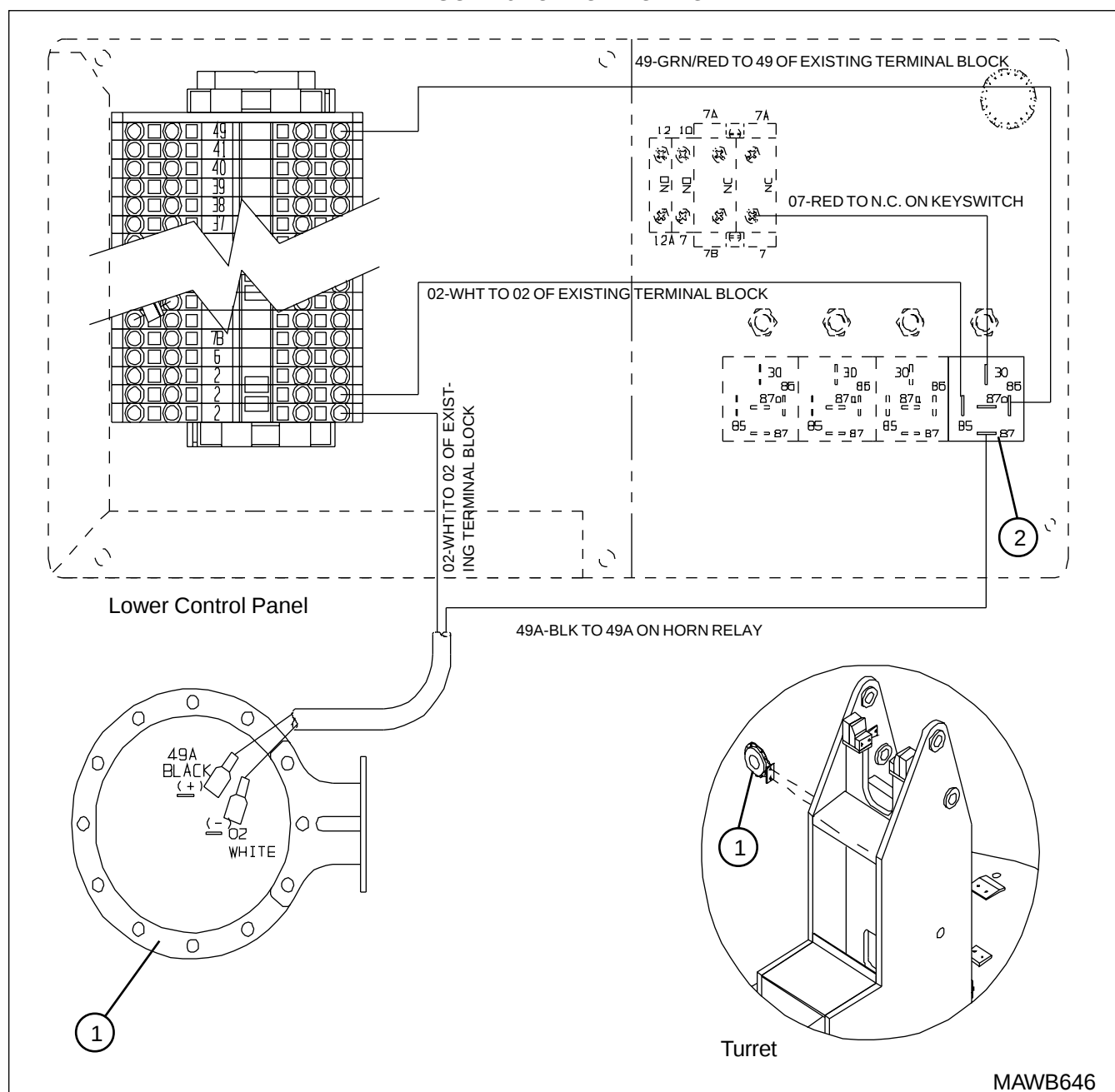


Turret

MAWB639

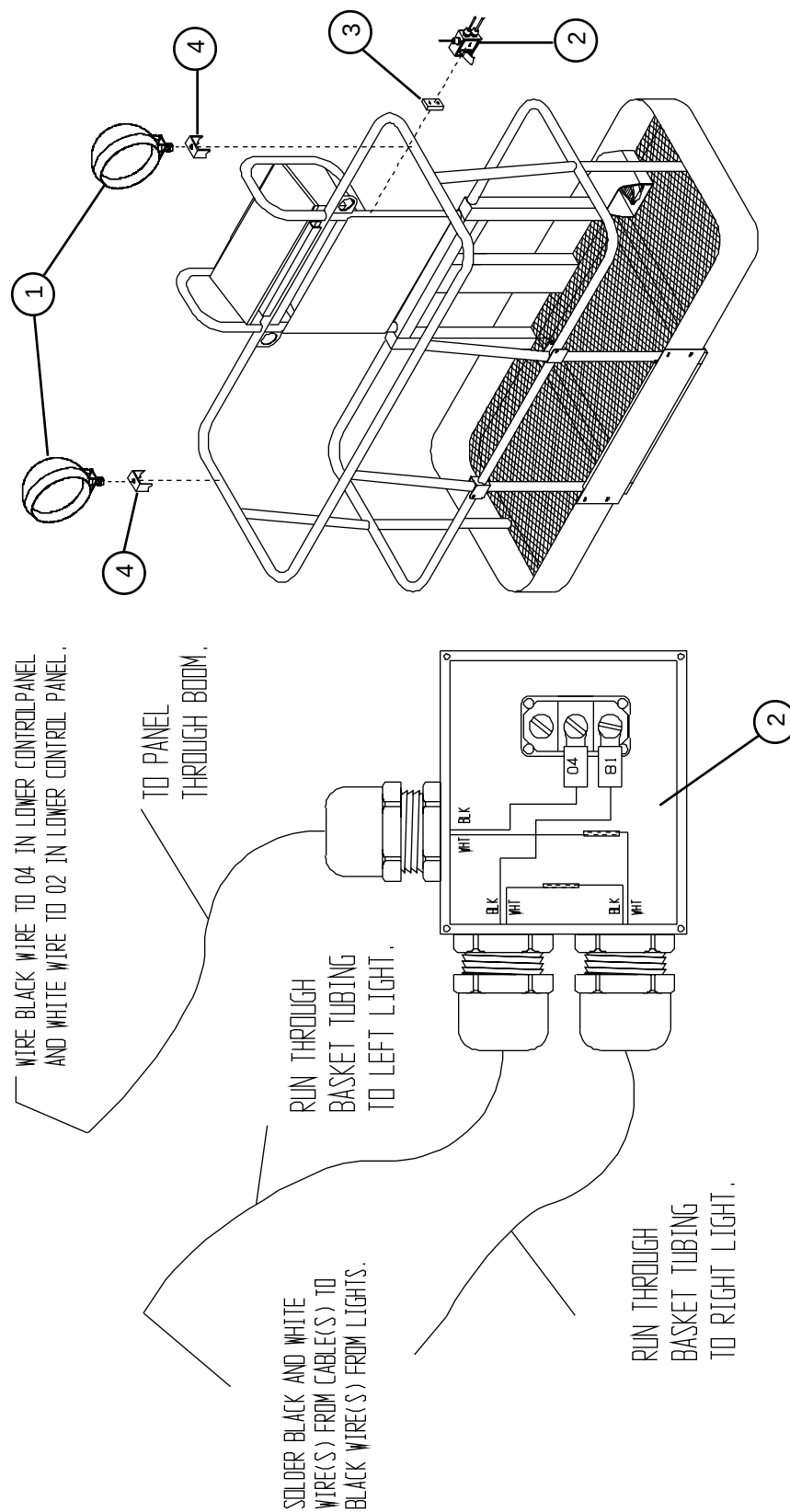
Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	706972	AIR LINE TO PLATFORM OPTION, (SJKB-40C, -40i)	-
	710906	AIR LINE TO PLATFORM OPTION, (SJKB 33W)	-
1	704036	• CLAMP, Hose	2
2	708342	• HOSE ASSEMBLY (H308 0343 00-0), (SJKB40C, -40i)	1
	710914	• HOSE ASSEMBLY (H308 0265 00), (SJKB 33W)	1
3	708343	• HOSE ASSEMBLY (H108 0173 00-0), (SJKB40C, -40i)	1
	711112	• HOSE ASSEMBLY (H1908 0185 00), (SJKB33W)	1
4	702125	• FITTING, Tube union #8	1
5	709116	• BRACKET, Air line platform	1
6	706970	• BRACKET, Air line turret	1
7	703683	• FITTING, Pipe - 1/2" NPT plug zinc	2
8	703681	• FITTING, Bulk head connector (LN8) - female	2
9	703671	• LABEL, Air line	2
NOTE: Refer to Standard Hose Numbering System (SECTION 5, Page 20) for explanation of hose numbering.			

FIGURE 6-43. HORN OPTION



Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
1	709359	HORN OPTION	-
	102860	• HORN, 24V	1
	103845	•• BOLT, HHCS 5/16-18 x 1/2" lg. Grade 5	2
	103996	•• WASHER, Flat SAE 5/16"	2
	103404	•• WASHER, Lock 5/16"	2
	702000	•• TERMINAL, 16 GA x 1/4 SPD F	2
2	103256	•• CABLE, 18/2 Cabtire	34"
	108589	• RELAY, 40 AMP Sealed	1
	702479	•• WIRE, 16 GA green/red	36"
	702465	•• WIRE, 16 GA white	26"
	702485	•• WIRE, 16 GA red	16"
	702000	•• TERMINAL, 16 GA x 1/4 SPD F	4

FIGURE 6-44. WORK LIGHT OPTION

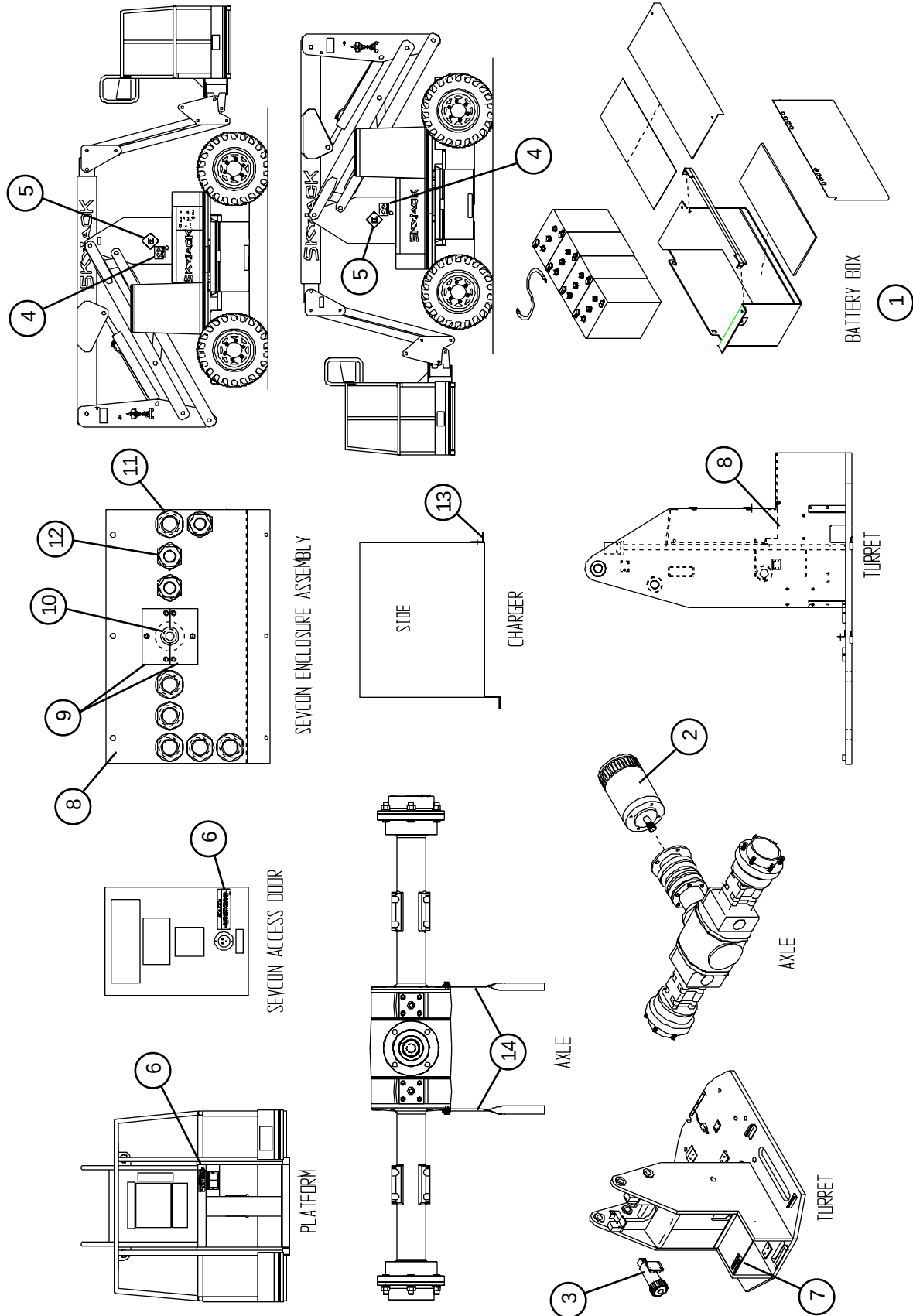


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FIGURE 6-44. WORK LIGHT OPTION

Index No.	Skyjack Part No.	Description							Units per Assy.
		1	2	3	4	5	6	7	
	710351	PLATFORM WORK LIGHTS OPTION							-
1	703545	• LIGHT, Work							2
	103995	•• WASHER, Flat 1/4" (replaces OEM star washer)							2
	700583	•• NUT, Lock 1/4"-20 (replaces OEM nut)							1
2	709904	• ASSEMBLY, Toggle switch control box							1
	710527	•• ENCLOSURE, Toggle							1
	701930	•• TOGGLE, SPDT 2 position maintained							1
	701927	•• TOGGLE GUARD RED BOTTOM							1
	103036	•• STRAIN RELIEF, Plastic							3
	710530	•• CABTIRE, 18/2 - 660"							1
	710532	•• CABTIRE, 18/2 - 41"							1
	710531	•• CABTIRE, 18/2 - 79"							1
	709844	•• LABEL, Lights							1
	102955	• TERMINAL, 16 ga., #6 ring							3
	703926	• HEATSHRINK, 3/16"							24"
	103855	• BOLT, HHCS 1/4-20 x 1/2" lg.							2
	104000	• WASHER, Lock 1/4"							2
3	707052	• PLATE, Switch box mount (Weld On)							1
4	703544	• BRACKET, Work light (Weld On)							2

FIGURE 6-45. EE OPTION (40C)

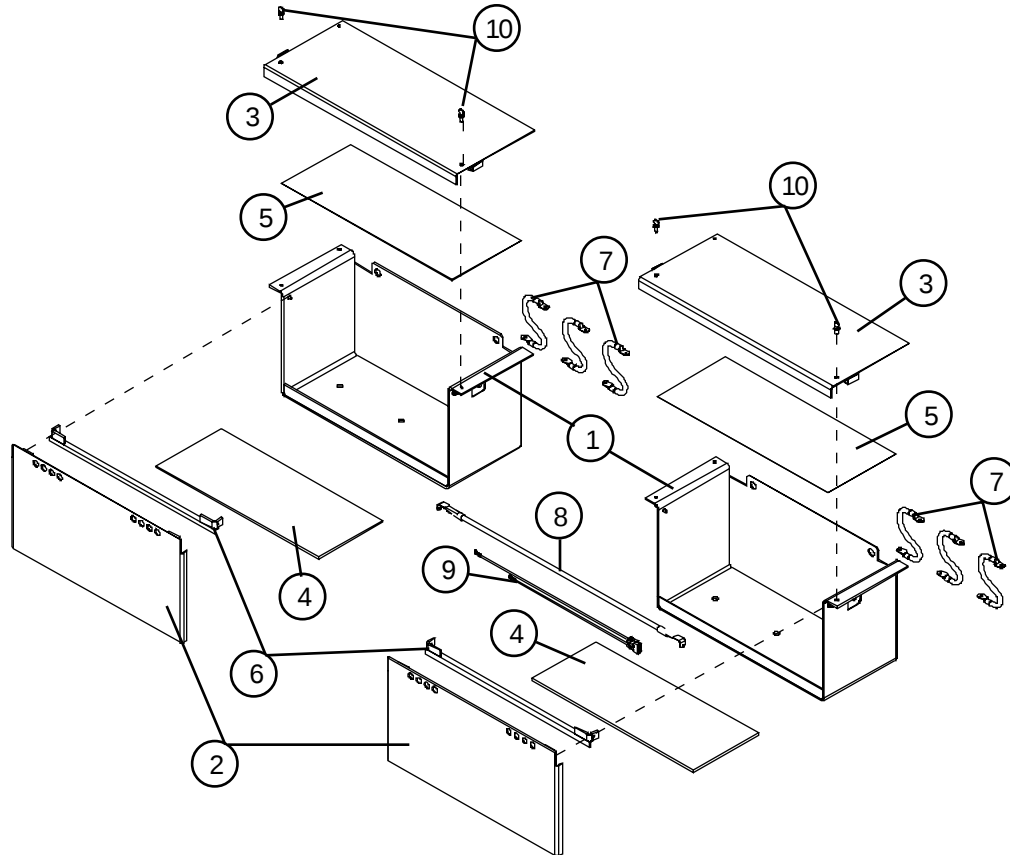


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FIGURE 6-45. EE OPTION (40C)

Index No.	Skyjack Part No.	Description	Units per Assy.
		1 2 3 4 5 6 7	
	710071	EE OPTION (40C)	-
1	707985	• BATTERY BOX ASSEMBLY	2
	707982	•• BATTERY TRAY WELDMENT	1
	700477	•• BATTERY HOLDING BAR WELDMENT	1
	706627	•• BATTERY TRAY LID WELDMENT	1
	700846	•• BATTERY TRAY FRONT COVER WELDMENT	1
	700076	•• LINER, Battery tray lid	1
	700753	•• CABLE ASSEMBLY, Battery jumper	1
	701048	•• BATTERY, 6 Volt 305 AMP	1
	700246	•• PLYWOOD, Battery tray	1
	700474	•• THUMB SCREW, 3/8-16 x 3/4"	2
	103887	•• BOLT, HHCS, 5/16-18 x 3/4" grade 5 plated	2
	103404	•• WASHER, Lock 5/16	10
	103996	•• WASHER, Flat 5/16	10
	700735	• SEAL, Closed cell weather 1/8x1/2	100"
2	706698	• TRACTION MOTOR, 9" - EE Approved	1
	701007	•• MOTOR, Electric traction 9"	1
	711534	•• COVER, EE motor enclose	1
3	710070	• LIFT MOTOR/PUMP ASSEMBLY, EE Approved	1
4	104588	• LABEL, FM	2
5	104589	• LABEL, EE	2
6	706695	• LABEL, Outlet EE	2
7	706696	• LABEL, Charger EE	2
8	707986	• TURRET, Weldment rework	1
	706625	• ENCLOSURE, Sevcon	1
	706669	• PLATE, Sevcon rework	1
	706666	•• BOLT, MACH-RD HD #8-32x1/2"	9
	112249	•• WASHER, Lock #8	9
	103986	•• WASHER, HEX #8-32	6
	103586	•• BOLT, HHCS 1/4-20x3/4" grade 5	3
	104400	•• WASHER, Lock 1/4	6
	103980	•• NUT, HEX 1/4-20	6
9	706626	• CAP, Grommet	2
	706666	•• BOLT, Machined Round Head, #8-32 x 1/2"	6
	112249	•• WASHER, Lock, #8	6
	103986	•• NUT, Hex, #8-32	6
10	706664	• GROMMET, 7/16"IDx1/16" material	1
11	706665	• STRAIN RELIEF, 1/2"	3
12	703077	• STRAIN RELIEF, 3/4"	6
13	706633	• REAR CHARGER LEG	1
14	702740	• GROUNDING STRAP ASSEMBLY	2
	702736	•• BOLT, HHCS 10MM 1-1/2"x20MM grade 8	1
	103999	•• WASHER, Lock 3/8"	1
	103472	•• WASHER, Flat SAE 3/8"	1

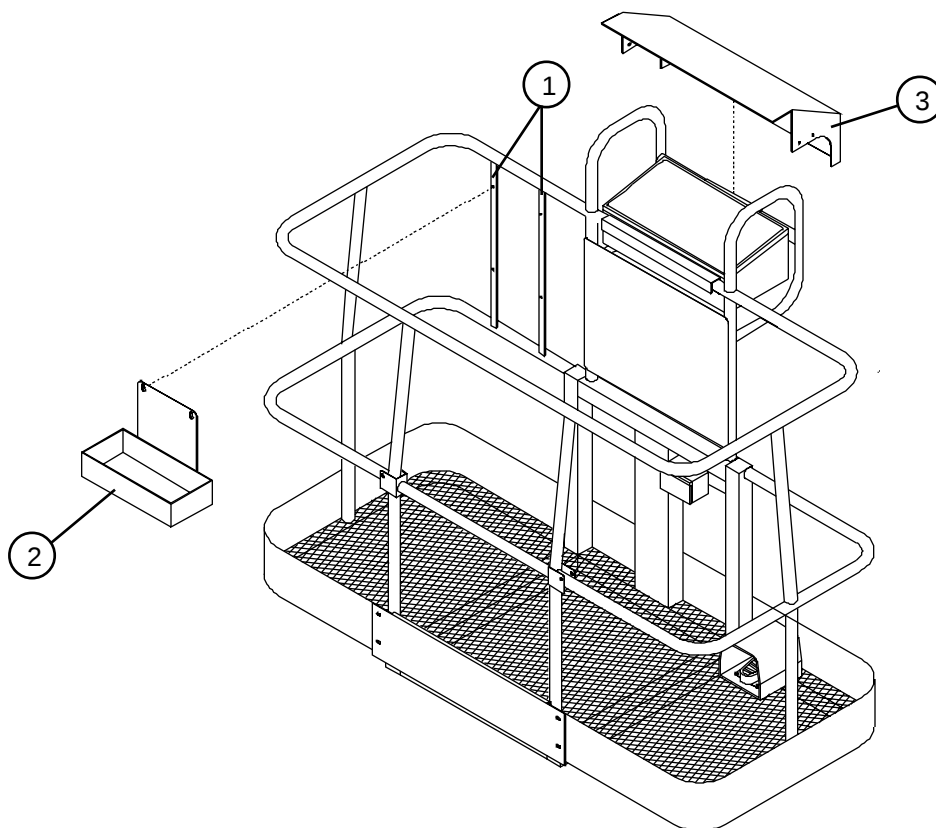
FIGURE 6-46. EXTRA BATTERY BOXES EE (WIDE), OPTION



710901

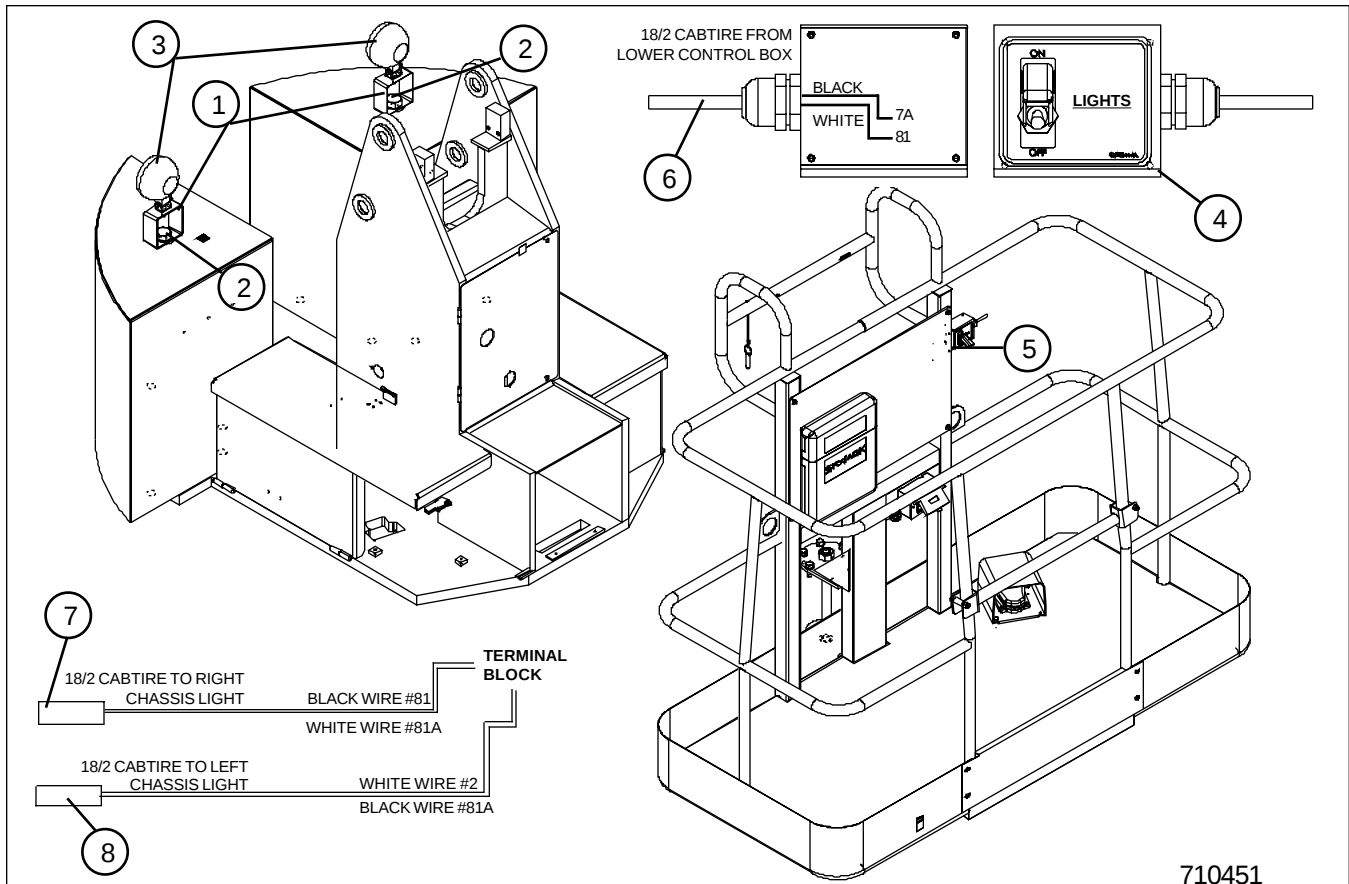
Index No.	Skyjack Part No.	Description							Units per Assy.
		1	2	3	4	5	6	7	
	710901	EXTRA BATTERY BOXES, OPTION							
1	707982	• BATTERY TRAY, Weldment							2
2	700846	• COVER, Battery tray front, weldment							2
3	706627	• LID, Battery tray, weldment							2
4	700246	• TRAY, Wood, Battery							2
5	700076	• LINER, Lid, battery							2
6	700477	• BAR, Holding Mount Battery							2
7	700753	• LEAD, Battery, 13"							6
8	700754	• CABLE ASSEMBLY, Battery crossover							1
9	700755	• CONNECTOR, Charger assembly							1
10	700474	• THUMB SCREW, 3/8-16 x 3/4"							4
	103887	• BOLT, HHCS 5/16-18 x 3/4" grade 5 plated							4
	103404	• WASHER, Lock 5/16							4
	103996	• WASHER, Flat 5/16							4
		(BATTERIES NOT INCLUDED WITH THIS OPTION.)							
	701048	BATTERY, 6 Volt 305 AMP **Batteries must be ordered separately.**							1

FIGURE 6-47. PLATFORM TOOL TRAY/CONTROL COVER OPTION



Index No.	Skyjack Part No.	Description	Units per Assy.
	710060	PLATFORM TOOL TRAY OPTION (30x66 and larger only)	-
1	200525	• TOOL TRAY WELDMENT	1
	700583	•• NUT, lock nylon insert 1/4"-20	4
	703273	•• BOLT, BHCS 1/4"-20x1.00 SS	4
2	710061	• TOOL TRAY SUPPORT	1
	710427	CONTROL COVER OPTION	-
3	710479	• CONTROL COVER WELDMENT	1
	700583	•• NUT, lock nylon insert 1/4"-20	6
	103995	•• WASHER, Flat 1/4"	12
	103860	•• BOLT, HHCS 1/4"-20x1-3/4"	6

FIGURE 6-48. CHASSIS LIGHT OPTION



Index No.	Skyjack Part No.	Description	Units per Assy.
	710451	CHASSIS LIGHT OPTION	1
1	710448	• MOUNTING BRACKET	2
2	710452	• BOLT, HHCS, 1.00 -8 x 1.5" GR 5	2
	107948	• WASHER, LOCK 1." SPECIAL	2
3	703545	• LIGHT, WORK	2
4	710534	• ASSEMBLY, TOGGLE SWITCH	2
5	707052	• PLATE MOUNT	1
	104000	• WASHER, LOCK 1/4	2
	103855	• BOLT, HHCS, 1/4-20 x .50 GR 5 PLATED	2
	707143	• TERMINAL BLOCK, 4 COND, THRU	2
6	710530	• CABLE, 18/2 CABTIRE	1
7	710531	• CABLE, 18/2 CABTIRE	1
8	710533	• CABLE, 18/2 CABTIRE	1
	701523	• STICK ON CABLE TIE MOUNT	11

NOTES

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