



Maintenance Manual - Telehandlers

GTH™-636
GTH™-844
GTH™-1044
GTH™-1056
GTH™-1244
GTH™-1256
GTH™-1544

Refer to the inside cover for a list of model serial number ranges included in this manual.

This manual includes detailed procedures for each maintenance inspection.

For Repair procedures, Fault Codes, Electrical and Hydraulic Schematics, refer to the appropriate Service and Repair Manual for your machine.

Original Instructions
Part No. 1305161GT
Rev C
June 2026

Introduction

Important

Read, understand and obey the safety rules and operating instructions in the appropriate Operator's Manual on your machine before attempting any maintenance procedure.

This manual provides detailed scheduled maintenance information for the machine owner and user.

Basic mechanical, hydraulic and electrical skills are required to perform most procedures. However, several procedures require specialized skills, tools, lifting equipment and a suitable workshop. In these instances, we strongly recommend that maintenance be performed at an authorized Genie dealer service center.

Compliance

Machine Design Life

Unrestricted with proper operation, inspection and scheduled maintenance.

Technical Publications

Genie has endeavored to deliver the highest degree of accuracy possible. However, continuous improvement of our products is a Genie policy. Therefore, product specifications are subject to change without notice.

Readers are encouraged to notify Genie of errors and send in suggestions for improvement. All communications will be carefully considered for future printings of this and all other manuals.

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Introduction

Models included in this manual

Use the following chart to identify the specific serial number for models included in this manual.

Models	Serial number
GTH-636	from GTH06T-13801
GTH-844	from GTH08T-14101
GTH-1044	from GTH1044T-10001
GTH-1056	from GTH10E-16000 to GTH10E-16500 from GTH10T-16501
GTH-1244	from GTH1244T-10001
GTH-1256	from GTH12T-10101
GTH-1544	from GTH1544T-10001

Identifying the Correct Procedure for your Model

Unless otherwise noted, each procedure will apply to all models. Procedures that only apply to specific models or options will include the information in the procedure title.

Examples of procedures that apply to specific models:

- Adjust the Boom Sequencing Chains - **GTH-636, GTH-844**
- Adjust the Boom Sequencing Chains - **GTH-1056, GTH-1256**
- Adjust the Boom Sequencing Chains - **GTH-1044, GTH-1244, GTH-1544**

Examples of procedures that apply to all models:

- Inspect the Electrical Wiring
- Inspect the Tires, Wheels and Lug Nut Torque

Find additional Manuals for your Model

Go to <http://www.genielift.com>
<https://www.genielift.com/en/support/manuals>

Use the links to locate Service Manuals, Maintenance Manuals, Service and Repair Manuals, Parts Manuals and Operator's Manuals.

Introduction

Revision History

Revision	Date	Section	Procedure / Description
A	11/2022		Initial Release
B	10/2025	Cover page	Add GTH-1044 and GTH-1244 models
		Introduction	Add GTH-1044 and GTH-1244 models to; - Models included in this manual - Identifying the Correct Procedure for your Model
		Specifications	Add GTH-1044 and GTH-1244 models to; - Fluid capacities - Air Conditioner Refrigerant Specifications - Performance Specifications - Torque Specifications - Hydraulic Specifications
		Quarterly Maintenance Procedures	Add GTH-1044 and GTH-1244 models to; - Q-4, Q-7, Q-8, Q-12
		Annual Maintenance Procedures	Add GTH-1044 and GTH-1244 models to; - A-1, A-2
		Maintenance	Add A-4 Adjust the Boom Sequencing Chains - GTH-1044, GTH-1244
C	06/2026	Cover page	Add GTH-1544 model
		Introduction	Add GTH-1544 model to; - Models included in this manual - Identifying the Correct Procedure for your Model
		Specifications	Add GTH-1544 model to; - Fluid capacities - Performance Specifications - Torque Specifications - Hydraulic Specifications
		Quarterly Maintenance Procedures	Add GTH-1544 model to; - Q-4, Q-7, Q-8, Q-12
		Annual Maintenance Procedures	Add GTH-1544 model to; - A-1, A-4
Reference Examples:			Electronic Version Click on any content or procedure in the Table of Contents to view the update.
Section – Specifications			
Section – Maintenance, (procedure)			



Safety Rules



Danger

Failure to obey the instructions and safety rules in this manual and the appropriate Operator's Manual on your machine will result in death or serious injury.

Many of the hazards identified in the operator's manual are also safety hazards when maintenance and repair procedures are performed.

Do not modify or alter a Telehandler without prior written permission from the manufacturer.

Do Not Perform Maintenance Unless:

- ☒ You are trained and qualified to perform maintenance on this machine.
- ☒ You read, understand and obey:
 - manufacturer's instructions and safety rules
 - employer's safety rules and worksite regulations
 - applicable governmental regulations
- ☒ You have the appropriate tools, lifting equipment and a suitable workshop.

Safety Rules

Personal Safety

Any person working on or around a machine must be aware of all known safety hazards. Personal safety and the continued safe operation of the machine should be your top priority.



Read each procedure thoroughly. This manual and the decals on the machine, use signal words to identify the following:



Safety alert symbol—used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



Indicates a imminently hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.



Indicates a potentially hazardous situation which, if not avoided, may result in property damage.



Be sure to wear protective eye wear and other protective clothing if the situation warrants it.



Be aware of potential crushing hazards such as moving parts, free swinging or unsecured components when lifting or placing loads. Always wear approved steel-toed shoes.

Workplace Safety

Any person working on or around a machine must be aware of all known safety hazards. Personal safety and the continued safe operation of the machine should be your top priority.



Be sure to keep sparks, flames and lighted tobacco away from flammable and combustible materials like battery gases and engine fuels. Always have an approved fire extinguisher within easy reach.



Be sure that all tools and working areas are properly maintained and ready for use. Keep work surfaces clean and free of debris that could get into machine components and cause damage.



Be sure any forklift, overhead crane or other lifting or supporting device is fully capable of supporting and stabilizing the weight to be lifted. Use only chains or straps that are in good condition and of ample capacity.



Be sure that fasteners intended for one time use (i.e., cotter pins and self-locking nuts) are not reused. These components may fail if they are used a second time.



Be sure to properly dispose of old oil or other fluids. Use an approved container. Please be environmentally safe.



Be sure that your workshop or work area is properly ventilated and well lit.

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Specifications

Fluid capacities

GTH-636	
Fuel tank	27 gallons 102,2 liters
Hydraulic tank	34 gallons 128,7 liters
Hydraulic system (including tank)	46.5 gallons 176 liters
GTH-844	
Fuel tank	32 gallons 121,1 liters
Hydraulic tank	35 gallons 132,5 liters
Hydraulic system (including tank)	50 gallons 189,3 liters
DEF tank Deutz TCD 3.6 L4, 99hp	2.6 gallons 9,8 liters
GTH-1044	
Fuel tank	30 gallons 113,6 liters
Hydraulic tank	27 gallons 102,2 liters
Hydraulic system (including tank)	52 gallons 196,6 liters
DEF tank	2.6 gallons 9,8 liters
GTH-1056	
Fuel tank	30 gallons 113,6 liters
Hydraulic tank	27 gallons 102,2 liters
Hydraulic system (including tank)	52 gallons 196,8 liters
DEF tank Deutz TCD 3.6 L4, 121hp	2.6 gallons 9,8 liters

GTH-1244	
Fuel tank	30 gallons 113,6 liters
Hydraulic tank	27 gallons 102,2 liters
Hydraulic system (including tank)	52 gallons 196,8 liters
DEF tank	2.6 gallons 9,8 liters
GTH-1256	
Fuel tank	30 gallons 113,6 liters
Hydraulic tank	27 gallons 102,2 liters
Hydraulic system (including tank)	52 gallons 196,8 liters
DEF tank Deutz TCD 3.6 L4, 121hp	2.6 gallons 9,8 liters
GTH-1544	
Fuel tank	30gallons 113,6 liters
Hydraulic tank	27 gallons 102,2 liters
Hydraulic system (including tank)	57 gallons 215,8 liters
DEF tank Deutz TCD 3.6 L4, 121hp	2.6 gallons 9,8 liters

Air Conditioner Refrigerant Specifications

System Full Charge	R134a
All models	1 lb 14 oz

Performance Specifications

GTH-636

Drive speed, maximum

Deutz TD 2.9 L4	18 mph 29,0 km/h
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Draw bar pull	15,100 lbs 6,849 kg
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Lift capacity, maximum	6,000 lbs 2,722 kg
------------------------	-----------------------

Boom function speeds, maximum

Boom up	9 - 11 seconds
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Boom down	7 - 9 seconds
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Boom extend	10 - 12 seconds
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Boom retract	8 - 10 seconds
--------------	----------------

Fork rotate	3 - 6 seconds
-------------	---------------

Fork tilt up	5 - 7 seconds
--------------	---------------

Fork tilt down	4 - 6 seconds
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Chassis sway speed	12 - 13 seconds
--------------------	-----------------

GTH-844

Drive speed, maximum

Deutz TCD 3.6 L4	15 mph 24,1 km/h
------------------	---------------------

Draw bar pull, 99 hp	20,600 lbs 9,344 kg
----------------------	------------------------

Draw bar pull, 74 hp	18,800 lbs 8,526 kg
----------------------	------------------------

Lift capacity, maximum	8,000 lbs 3,629 kg
------------------------	-----------------------

Boom function speeds, maximum

Boom up	12 - 14 seconds
---------	-----------------

Boom down	9 - 11 seconds
-----------	----------------

Boom extend	13 - 15 seconds
-------------	-----------------

Boom retract	8 - 10 seconds
--------------	----------------

Fork rotate	3 - 6 seconds
-------------	---------------

Fork tilt up	6 - 8 seconds
--------------	---------------

Fork tilt down	5 - 7 seconds
----------------	---------------

Chassis sway speed	15 - 16 seconds
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GTH-1044

Drive speed, maximum

Deutz TCD 3.6 L4, 74 hp, 3 speed	15 mph 24,1 km/h
----------------------------------	---------------------

Draw bar pull, 74 hp	23,000 lbs 10,433 kg
----------------------	-------------------------

Lift capacity, maximum	10,000 lbs 4,536 kg
------------------------	------------------------

Boom function speeds, maximum

Boom up	13 - 17 seconds
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Boom down	11 - 15 seconds
-----------	-----------------

Boom extend	25 - 27 seconds
-------------	-----------------

Boom retract	19 - 21 seconds
--------------	-----------------

Fork rotate	3 - 6 seconds
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Fork tilt up	14 - 16 seconds
--------------	-----------------

Fork tilt down	14 - 16 seconds
----------------	-----------------

Chassis sway speed	10 - 16 seconds
--------------------	-----------------

GTH-1056

Drive speed, maximum

Deutz TCD 3.6 L4, 121 hp	17 mph 27,4 km/h
--------------------------	---------------------

Deutz TCD 3.6 L4, 74 hp, 3 speed	15 mph 24,1 km/h
----------------------------------	---------------------

Deutz TCD 3.6 L4, 74 hp, 2 speed	19 mph 30,6 km/h
----------------------------------	---------------------

Draw bar pull, 121 hp	25,000 lbs 11,340 kg
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Draw bar pull, 74 hp	23,000 lbs 10,433 kg
----------------------	-------------------------

Lift capacity, maximum	10,000 lbs 4,536 kg
------------------------	------------------------

Boom function speeds, maximum

Boom up	13 - 16 seconds
---------	-----------------

Boom down	11 - 13 seconds
-----------	-----------------

Boom extend	22 - 24 seconds
-------------	-----------------

Boom retract	29 - 31 seconds
--------------	-----------------

Fork rotate	3 - 6 seconds
-------------	---------------

Fork tilt up	7.5 - 9.5 seconds
--------------	-------------------

Fork tilt down	7 - 9 seconds
----------------	---------------

Chassis sway speed	12 - 16 seconds
--------------------	-----------------

Performance Specifications

GTH-1244

Drive speed, maximum

Deutz TCD 3.6 L4, 121 hp 17 mph
27,4 km/h

Deutz TCD 3.6 L4, 74 hp, 3 speed 15 mph
24,1 km/h

Draw bar pull, 121 hp 25,000 lbs
11,340 kg

Draw bar pull, 74 hp 23,000 lbs
10,433 kg

Lift capacity, maximum 12,000 lbs
5,450 kg

Boom function speeds, maximum

Boom up 14 - 18 seconds

Boom down 13 - 17 seconds

Boom extend 21 - 23 seconds

Boom retract 25 - 27 seconds

Fork rotate 3 - 6 seconds

Fork tilt up 25 - 27 seconds

Fork tilt up 23 - 25 seconds

Chassis sway speed 15 - 21 seconds

GTH-1256

Drive speed, maximum

Deutz TCD 3.6 L4, 121 hp 17 mph
27,4 km/h

Draw bar pull, 121 hp 25,000 lbs
10,206 kg

Lift capacity, maximum 12,000 lbs
5,450 kg

Boom function speeds, maximum

Boom up 19 - 23 seconds

Boom down 17 - 21 seconds

Boom extend 35 - 37 seconds

Boom retract 28 - 30 seconds

Fork rotate 3 - 6 seconds

Fork tilt up 23 - 25 seconds

Fork tilt down 25 - 27 seconds

Chassis sway speed 14 - 20 seconds

GTH-1544

Drive speed, maximum

Deutz TCD 3.6 L4, 121 hp 17 mph
27,4 km/h

Draw bar pull, 121 hp 25,000 lbs
11,340 kg

Lift capacity, maximum 15,000 lbs
6,804 kg

Boom function speeds, maximum

Boom up 14 - 18 seconds

Boom down 13 - 17 seconds

Boom extend 21 - 23 seconds

Boom retract 25 - 27 seconds

Fork rotate 3 - 6 seconds

Fork tilt up 25 - 27 seconds

Fork tilt down 23 - 25 seconds

Chassis sway speed 15 - 21 seconds

Torque Specifications

Tires and wheels

Torque values are listed as dry.

Note: The tires on some machines are foam-filled or solid rubber and do not need air added to them.

GTH-636

Lug nut torque	465 ft-lb 630 Nm
Tire pressure	72 psi 5 bar

GTH-844

Lug nut torque	465 ft-lb 630 Nm
Tire pressure	72 psi 5 bar

GTH-1044

Lug nut torque	465 ft-lb 630 Nm
Tire pressure	105 psi 7,2 bar

GTH-1056

Lug nut torque	465 ft-lb 630 Nm
Tire pressure	72 psi 5 bar

GTH-1244

Lug nut torque	465 ft-lb 630 Nm
Tire pressure	105 psi 7,2 bar

GTH-1256

Lug nut torque	465 ft-lb 630 Nm
Tire pressure	105 psi 7,2 bar

GTH-1544

Lug nut torque	465 ft-lb 630 Nm
Tire pressure	105 psi 7,2 bar

Powertrain Specifications

Engine Operator and Maintenance Manuals

Deutz TD 2.9 L4	
Genie part number	1251561GT
Deutz TCD 3.6 L4	
Genie part number	1270991GT

Transmission Operator and Maintenance Manuals

Dana VDT12004	
Genie part number	218706GT
ZF 4 WG-98 TSC	
Genie part number	1311107GT

Axle Operator and Maintenance Manuals

Dana 212	
Genie part number	1259569GT
Dana 223	
Genie part number	1284290GT

Deutz Engine Models

TD 2.9 L4 T4F	
Low idle	1000 rpm
High idle	2600 rpm
Oil capacity (including filter)	9.4 quarts 9 liters
Units ship with 15W-40	
Engine coolant capacity	3.1 gallons
Type: Extended Life 50/50	11,7 liters

TD 2.9 L4 T3	
Low idle	1000 rpm
High idle	2600 rpm
Oil capacity (including filter)	8 quarts 7,6 liters
Units ship with 15W-40 Shell Rimula R4 L	
Engine coolant capacity	3.4 gallons
Type: Extended Life	12,9 liters

TCD 3.6 L4 T3/T4F	
Low idle	1000 rpm
High idle	2300 rpm
Oil capacity (including filter)	9.5 quarts 9 liters
Units ship with 15W-40 API CJ4 low ash oil	
Engine coolant capacity	4.5 gallons
Type: Extended Life	17 liters

Extreme operating temperatures may require the use of alternative engine oils. For oil requirements, refer to the Engine Operator Handbook on your machine.

Powertrain Specifications

Dana Transmission Models

Dana VDT12004

Transmission type: 3 speed powershift

Oil capacity, transmission	14.3 quarts 13,5 liters
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Oil capacity, drop box	1.1 quarts 1 liter
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Units ship with Chevron Ursa Hydraulic 10W

Extreme operating temperatures may require the use of alternative transmission oils. For oil requirements, refer to the Dana VDT12004 Service Manual.

ZF Transmission Models

ZF 4 WG-98 TSC

Transmission type: 4 speed powershift

Oil capacity	17 quarts 16 liters
--------------	------------------------

Oil capacity, drop box	2 quarts 1,9 liters
------------------------	------------------------

Units ship with TE-ML 03

Extreme operating temperatures may require the use of alternative transmission oils. For oil requirements, refer to the ZF 4 WG-98 TSC Maintenance Manual.

Dana Axle Models

Dana 212 drive axle

Front axle lubrication

Front differential	7.4 quarts 7 liters
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Axle planetary end (each)	0.8 quarts 0,8 liters
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Rear axle lubrication

Rear differential	8 quarts 7,6 liters
-------------------	------------------------

Axle planetary end (each)	0.8 quarts 0,8 liters
---------------------------	--------------------------

Oil viscosity requirements

Differential	Gear oil 80W/90 (API GL4 or GL5)
--------------	----------------------------------

Planetary ends	Gear oil 80W/90 (API GL4 or GL5)
----------------	----------------------------------

Dana 223 drive axle

Front axle lubrication

Front differential	12.7 quarts 12 liters
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Axle planetary end (each)	2 quarts 1,9 liters
---------------------------	------------------------

Rear axle lubrication

Rear differential	8 quarts 7,6 liters
-------------------	------------------------

Axle planetary end (each)	0.8 quarts 0,8 liters
---------------------------	--------------------------

Oil viscosity requirements

Differential	Fuchs 85W90LS (GL5)
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Planetary ends	Fuchs 85W90LS (GL5)
----------------	---------------------

Hydraulic Specifications

GTH-636

Primary Function Manifold	
System relief valve pressure, maximum	3200 psi 221 bar
Fork tilt relief valve pressure, maximum	3500 psi 241 bar
Flow regulator valve, Sway circuit	2 gpm 7,5 L/min
Secondary Function Manifold	
Steer relief valve pressure, maximum	2650 psi 182,7 bar
Parking brake relief valve pressure, maximum	350 psi 24 bar
Joystick relief valve pressure, maximum	400 psi 27,5 bar

GTH-844

Primary Function Manifold	
System relief valve pressure, maximum	3250 psi 224 bar
Fork tilt relief valve pressure, maximum	3500 psi 241 bar
Flow regulator valve, Sway circuit	2 gpm 7,5 L/min
Secondary Function Manifold	
Steer relief valve pressure, maximum	2650 psi 182,7 bar
Parking brake relief valve pressure, maximum	350 psi 24 bar
Differential lock relief valve pressure, maximum	250 psi 17,2 bar
Rear lock-up relief valve pressure, maximum	50 psi 34 bar

GTH-1044

Primary Function Manifold	
System relief valve pressure, maximum	3200 psi 221 bar
Boom extend relief valve pressure, maximum	2611 psi 180 bar
Fork tilt relief valve pressure, maximum	3481 psi 240 bar
Secondary Function Manifold	
Steer relief valve pressure, maximum	2500 psi 172 bar
Parking brake relief valve pressure, maximum	400 psi 27,5 bar
Rear lock-up relief valve pressure, maximum	50 psi 3,4 bar
Flow regulator valve, Outrigger circuit	6 gpm 22,7 L/min

GTH-1056

Primary Function Manifold	
System relief valve pressure, maximum	3200 psi 221 bar
Boom extend relief valve pressure, maximum	2611 psi 180 bar
Fork tilt relief valve pressure, maximum	3481 psi 240 bar
Secondary Function Manifold	
Steer relief valve pressure, maximum	2500 psi 172 bar
Parking brake relief valve pressure, maximum	400 psi 27,5 bar
Rear lock-up relief valve pressure, maximum	50 psi 3,4 bar
Flow regulator valve, Outrigger circuit	6 gpm 22,7 L/min

Hydraulic Specifications

GTH-1244

Primary Function Manifold	
System relief valve pressure, maximum	3200 psi 221 bar
Boom extend relief valve pressure, maximum	2611 psi 180 bar
Fork tilt relief valve pressure, maximum	3481 psi 240 bar
Secondary Function Manifold	
Steer relief valve pressure, maximum	2500 psi 172 bar
Parking brake relief valve pressure, maximum	400 psi 27,5 bar
Rear lock-up relief valve pressure, maximum	50 psi 3,4 bar
Flow regulator valve, Outrigger circuit	6 gpm 22,7 L/min

GTH-1256

Primary Function Manifold	
System relief valve pressure, maximum	3200 psi 221 bar
Boom extend relief valve pressure, maximum	2611 psi 180 bar
Fork tilt relief valve pressure, maximum	3481 psi 240 bar
Secondary Function Manifold	
Steer relief valve pressure, maximum	2500 psi 172 bar
Parking brake relief valve pressure, maximum	400 psi 27,5 bar
Rear lock-up relief valve pressure, maximum	50 psi 3,4 bar
Flow regulator valve, Outrigger circuit	6 gpm 22,7 L/min

GTH-1544

Primary Function Manifold	
System relief valve pressure, maximum	3200 psi 221 bar
Boom extend relief valve pressure, maximum	2611 psi 180 bar
Fork tilt relief valve pressure, maximum	3481 psi 240 bar
Secondary Function Manifold	
Steer relief valve pressure, maximum	2500 psi 172 bar
Parking brake relief valve pressure, maximum	400 psi 27,5 bar
Rear lock-up relief valve pressure, maximum	50 psi 3,4 bar
Flow regulator valve, Outrigger circuit	6 gpm 22,7 L/min

Hydraulic Specifications

Hydraulic Oil Specifications

Hydraulic Fluid Specifications

Genie specifications require hydraulic oils which are designed to give maximum protection to hydraulic systems, have the ability to perform over a wide temperature range, and the viscosity index should exceed 140. They should provide excellent antiwear, oxidation prevention, corrosion inhibition, seal conditioning, and foam and aeration suppression properties.

Cleanliness level, minimum	ISO 15/13
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Water content, maximum	250 ppm
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Recommended Hydraulic Fluid

Hydraulic oil type	Chevron Rando HD Premium
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ISO Grade	32
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Viscosity index, maximum	200
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Optional Hydraulic Fluids

Mineral based	Shell Tellus S2 V 32 Shell Tellus S2 V 46 Shell Tellus S4 VX 32 Shell Donax TG (Dexron III) Chevron 5606A
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Biodegradable	Petro Canada Environ MV 46
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Fire resistant	UCON Hydrolube HP-5046
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Note: Genie specifications require additional equipment and special installation instructions for the approved optional fluids. Consult Genie Product Support before use.

NOTICE

Optional fluids may not have the same hydraulic lifespan and may result in component damage.

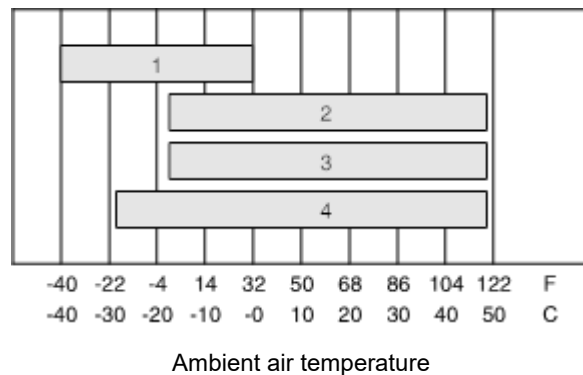
Note: Extended machine operation can cause the hydraulic fluid temperature to increase beyond its maximum allowable range. If the hydraulic fluid temperature consistently exceeds 200°F / 90°C an optional oil cooler may be required.

NOTICE

Do not top off with incompatible hydraulic fluids. Hydraulic fluids may be incompatible due to the differences in base additive chemistry. When incompatible fluids are mixed, insoluble materials may form and deposit in the hydraulic system, plugging hydraulic lines, filters, control valves and may result in component damage.

Note: Do not operate the machine when the ambient air temperature is consistently above 120°F / 49°C.

Hydraulic Fluid Temperature Range



- Ambient air temperature
- 1 Chevron hydraulic oil 5606A
 - 2 Petro-Canada Environ MV 46
 - 3 UCON Hydrolube HP-5046D
 - 4 Chevron Rando HD premium oil MV

Hydraulic Specifications

Chevron Rando HD Premium Oil MV Fluid Properties

ISO Grade	32
Viscosity index, maximum	200
Kinematic Viscosity, maximum	
cSt @ 200°F / 100°C	7.5
cSt @ 104°F / 40°C	33.5
Brookfield Viscosity, maximum	
cP @ -4°F / -20°C	1040
cP @ -22°F / -30°C	3310
Flash point	375°F / 190°C
Pour point	-58°F / -50°C
Maximum continuous operating temperature	171°F / 77°C

Note: A hydraulic oil heating system is recommended when the ambient temperature is consistently below 0°F / -18°C.

Note: Do not operate the machine when the ambient temperature is below -20°F / -29°C with Rando HD Premium MV.

Chevron 5606A Hydraulic Oil Fluid Properties

ISO Grade	15
Viscosity index, maximum	300
Kinematic Viscosity, maximum	
cSt @ 200°F / 100°C	5.5
cSt @ 104°F / 40°C	15.0
cSt @ -40°F / -40°C	510
Flash point	180°F / 82°C
Pour point	-81°F / -63°C
Maximum continuous operating temperature	124°F / 51°C

Note: Use of Chevron 5606A hydraulic fluid, or equivalent, is required when ambient temperatures are consistently below 0°F / -17°C unless an oil heating system is used.

NOTICE

Continued use of Chevron 5606A hydraulic fluid, or equivalent, when ambient temperatures are consistently above 32°F / 0°C may result in component damage

Hydraulic Specifications

Petro-Canada Environ MV 46 Fluid Properties

ISO Grade	46
Viscosity index, maximum	154
Kinematic Viscosity, maximum	
cSt @ 200°F / 100°C	8.0
cSt @ 104°F / 40°C	44.4
Flash point	482°F / 250°C
Pour point	-49°F / -45°C
Maximum continuous operating temperature	180°F / 82°C

Shell Tellus S4 VX Fluid Properties

ISO Grade	32
Viscosity index, maximum	300
Kinematic Viscosity, maximum	
cSt @ 200°F / 100°C	9
cSt @ 104°F / 40°C	33.8
Brookfield Viscosity, maximum	
cSt @ -4°F / -20°C	481
cSt @ -13°F / -25°C	702.4
cSt @ -40°F / -40°C	2624
Flash point	>100
Pour point	-76°F / -60°C
Maximum continuous operating temperature	103°F / 75°C

UCON Hydrolube HP-5046 Fluid Properties

ISO Grade	46
Viscosity index, maximum	192
Kinematic Viscosity, maximum	
cSt @ 149°F / 65°C	22
cSt @ 104°F / 40°C	46
cSt @ 0°F / -18°C	1300
Flash point	None
Pour point	-81°F / -63°C
Maximum continuous operating temperature	189°F / 87°C

Hydraulic Specifications

Hydraulic Hose and Fitting Torque Specifications

Your machine is equipped with Ryco ORFS or 37° JIC fittings and hose ends. Manufacturers specifications require that fittings and hose ends be torqued to specification when they are removed and installed or when new hoses or fittings are installed.

JIC 37° Hose End	
SAE Dash Size	Torque
-7	17 ft-lbs / 23 Nm
-8	22 ft-lbs / 30 Nm
-9	29 ft-lbs / 39 Nm
-12	57 ft-lbs / 77 Nm
-14	105 ft-lbs / 142 Nm
-17	146 ft-lbs / 198 Nm
-19	173 ft-lbs / 235 Nm
-21	194 ft-lbs / 263 Nm
-26	228 ft-lbs / 309 Nm
-30	285 ft-lbs / 386 Nm
-40	440 ft-lbs / 597 Nm

JIC 37° Port Fitting	
SAE Dash Size	Torque
-5	6 - 7 ft-lbs / 8 - 9 Nm
-6	8 - 9 ft-lbs / 11 - 12 Nm
-7	11 - 12 ft-lbs / 15 - 16 Nm
-8	14 - 15 ft-lbs / 19 - 21 Nm
-9	18 - 20 ft-lbs / 24 - 28 Nm
-12	36 - 39 ft-lbs / 49 - 53 Nm
-14	57 - 63 ft-lbs / 77 - 85 Nm
-17	79 - 88 ft-lbs / 107 - 119 Nm
-19	94 - 103 ft-lbs / 127 - 140 Nm
-21	108 - 113 ft-lbs / 147 - 154 Nm
-26	127 - 133 ft-lbs / 172 - 181 Nm
-30	158 - 167 ft-lbs / 215 - 226 Nm
-40	245 - 258 ft-lbs / 332 - 350 Nm

ORFS Hose End	
SAE Dash Size	Torque
-9	10 - 12 ft-lbs / 14 - 16 Nm
-11	18 - 20 ft-lbs / 24 - 27 Nm
-13	32 - 35 ft-lbs / 43 - 47 Nm
-16	46 - 50 ft-lbs / 60 - 68 Nm
-19	65 - 70 ft-lbs / 90 - 95 Nm
-23	92 - 100 ft-lbs / 125 - 135 Nm
-27	125 - 140 ft-lbs / 170 - 190 Nm
-32	150 - 165 ft-lbs / 200 - 225 Nm

SAE O-ring Boss Port Fitting	
SAE Dash Size	Torque
-6	8 - 10 ft-lbs / 11 - 13 Nm
-7	14 - 16 ft-lbs / 20 - 22 Nm
-8	18 - 20 ft-lbs / 24 - 27 Nm
-9	24 - 26 ft-lbs / 33 - 35 Nm
-12	50 - 60 ft-lbs / 68 - 78 Nm
-14	72 - 82 ft-lbs / 98 - 110 Nm
-17	125 - 135 ft-lbs / 170 - 183 Nm
-19	170 - 190 ft-lbs / 230 - 260 Nm
-21	200 - 220 ft-lbs / 270 - 300 Nm
-26	210 - 280 ft-lbs / 285 - 380 Nm
-30	270 - 360 ft-lbs / 370 - 490 Nm

Hydraulic Specifications

SAE Flange Clamp Bolts	
Code 61	
SAE Dash Size	Torque
-8	15 - 18 ft lbs / 20 - 25 Nm
-12	21 - 29 ft lbs / 28 - 40 Nm
-16	27 - 35 ft lbs / 37 - 48 Nm
-20	35 - 46 ft lbs / 48 - 62 Nm
-24	46 - 58 ft lbs / 62 - 79 Nm
-32	54 - 66 ft lbs / 73 - 90 Nm
-40	79 - 91 ft lbs / 107 - 124 Nm
-48	138 - 150 ft lbs / 186 - 203 Nm
Code 62	
SAE Dash Size	Torque
-8	15 - 18 ft lbs / 20 - 25 Nm
-12	25 - 33 ft lbs / 34 - 45 Nm
-16	41 - 50 ft lbs / 56 - 68 Nm
-20	63 - 75 ft lbs / 85 - 102 Nm
-24	116 - 133 ft lbs / 158 - 181 Nm
-32	200 - 217 ft lbs / 271 - 294 Nm

Torque Procedure

Seal-Lok™ fittings

- 1 Replace the O-ring. The O-ring must be replaced anytime the seal has been broken. The O-ring cannot be re-used if the fitting or hose end has been tightened beyond finger tight.

Note: The O-ring in Parker Seal Lok™ fittings and hose end are custom-size O-rings. They are not standard size O-rings. They are available in the O-ring field service kit (Genie part number 49612).

- 2 Lubricate the O-ring before installation.
- 3 Be sure the O-ring face seal is seated and retained properly.
- 4 Position the tube and nut squarely on the face seal end of the fitting, and tighten the nut finger tight.
- 5 Tighten the nut or fitting to the appropriate torque. Refer to the appropriate torque chart in this section.
- 6 Operate all machine functions and inspect the hose, fittings and related components to confirm there are no leaks.

Hydraulic Specifications

JIC 37° fittings

- 1 Align the tube flare (hex nut) against the nose of the fitting body (body hex fitting) and tighten the hex nut to the body hex fitting to hand tight, approximately 30 in-lbs / 3.4 Nm.
- 2 Using a permanent ink marker, make a reference mark on one the flats of the hex nut and continue the mark onto the body of the hex fitting. Refer to Illustration 1.

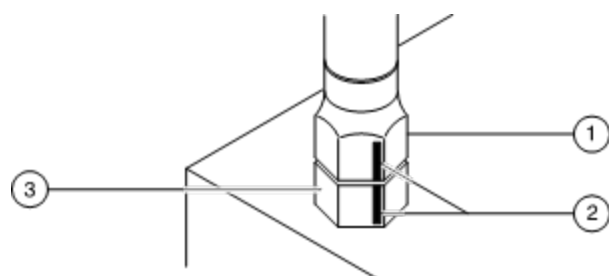


Illustration 1

- 1 hex nut
- 2 reference mark
- 3 body hex fitting

- 3 Working clockwise on the body hex fitting, make a second mark with a permanent ink marker to indicate the proper tightening position. Refer to Illustration 2.

Note: Use the JIC 37° Fitting table in this section to determine the correct number of flats, for the proper tightening position.

Note: The marks indicate the correct tightening positions have been determined. Use the second mark on the body hex fitting to properly tighten the joint after it has been loosened.

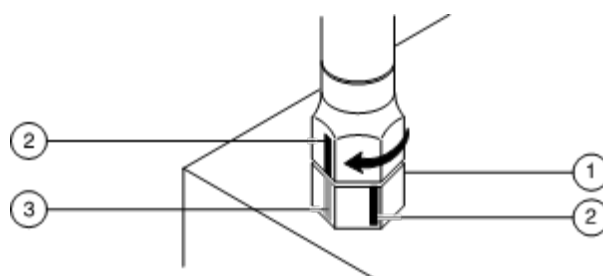


Illustration 2

- 1 body hex fitting
- 2 reference mark
- 3 second mark

- 4 Tighten the hex nut until the mark on the hex nut is aligned with the second mark on the body hex fitting.
- 5 Operate all machine functions and inspect the hose, fittings and related components to confirm there are no leaks.

Maintenance Procedures



Observe and Obey:

- ☑ Maintenance inspections shall be completed by a person trained and qualified on the maintenance of this machine.
- ☑ Scheduled maintenance inspections shall be completed as specified on the *Maintenance Inspection Reports*. The frequency and extent of periodic examinations and tests may also depend on national regulations.

⚠ WARNING

Failure to perform each procedure as presented and scheduled may cause death, serious injury or substantial damage.

- ☑ Immediately tag and remove from service a damaged or malfunctioning machine.
- ☑ Repair any machine damage or malfunction before operating the machine.
- ☑ Use only Genie approved replacement parts.
- ☑ Machines that have been out of service for a period longer than 3 months must complete the quarterly inspection.

Machine Configuration:

- ☑ Unless otherwise specified, perform each procedure with the machine in the following configuration:
 - Machine parked on a firm, level surface
 - Boom in the stowed position
 - Key switch in the off position with the key removed
 - Wheels chocked

Maintenance Procedures

About This Section

This section contains detailed procedures for each scheduled maintenance inspection.

Each procedure includes a description, safety warnings and step-by-step instructions.

Symbols Legend



Safety alert symbol—used to alert personnel to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



Indicates a imminently hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.



Indicates a potentially hazardous situation which, if not avoided, may result in property damage.

- ⦿ Indicates that a specific result is expected after performing a series of steps.
- ⊗ Indicates that an incorrect result has occurred after performing a series of steps.

Maintenance Symbols Legend

Note: The following symbols have been used in this manual to help communicate the intent of the instructions. When one or more of the symbols appear at the beginning of a maintenance procedure, it conveys the meaning below.



Indicates that tools will be required to perform this procedure.



Indicates that new parts will be required to perform this procedure.



Indicates that dealer service will be required to perform this procedure.



Indicates that a cold motor/pump or engine will be required to perform this procedure.



Indicates that a warm engine will be required to perform this procedure.

Maintenance Procedures

Maintenance Schedule

The maintenance procedures have been divided into subsections that include: Commissioning, Quarterly, Annually and Programmed maintenance intervals. The maintenance inspection report has been divided into general areas of the machine that include: Drive Chassis, Booms and Fork, Functions and Controls and Powertrain.

Failure to perform these procedures may result in poor performance, component damage and unsafe operating conditions. They are essential to safe operation, machine performance and service life.

Commissioning: A series of required one time maintenance procedures to be performed at 50 and 150 hour intervals.

Quarterly and Annually: A series of maintenance procedures to be performed quarterly or annually.

Programmed: A series of maintenance procedures to be performed during a Pre-Delivery Preparation or based on machine operating hours.

Maintenance Inspection Report

The maintenance inspection report contains checklists for each type of scheduled inspection.

Make copies of the *Maintenance Inspection Report* to use for each inspection. Maintain completed forms for a minimum of 4 years or in compliance with your employer, jobsite and governmental regulations and requirements.

Instruction Examples

Commissioning Example:

Commissioning		 50	 150
 Engine - all models	 PO-1		

Quarterly and Annually Example:

 Drive Chassis	 Intervals	Q	A
 Inspect the tires, wheels and Lug Nut Torque	 Q-4		 0

Programmed Example (under 1000 HRS):

Programmed Maintenance - Under 1000 HRS		Status	Enter Hours
 Check Track Tension/Fastener Torque	 P0-1		 50
 Engines - Deutz Under 1000 HRS	 P0-2		

Programmed Example:

Programmed Maintenance		 Hours are in thousands						
All models		1	2	3	4	6	12	
 Engine - all models, 1000 hrs	 P1-1		0	0	0	0	0	0

Instructions Legend

Use the following detailed descriptions to identify the intended use of the maintenance inspection reports.

 Specific Interval: blank box is the interval to be completed and the Ø marks the interval as not required.

 The description of the procedure or checklist to be completed.

 The procedure number or checklist to be completed.

 Check box to indicate status of inspection.

 Specific interval is not required for this procedure.

 General area of the machine to complete the procedure.

 If this box has a designated time interval: this is the specific time interval to complete the procedure or checklist.

If this box is empty: the maintenance checklist will include multiple time intervals, use this box to write in the specific interval for the inspection completed.

Pre-Delivery Preparation Report

Fundamentals

It is the responsibility of the owner or dealer to perform the Pre-delivery Preparation.

The Pre-delivery Preparation is performed prior to each delivery. The inspection is designed to discover if anything is apparently wrong with a machine before it is put into service.

A damaged or modified machine must never be used. If damage or any variation from factory delivered condition is discovered, the machine must be tagged and removed from service.

Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications.

Scheduled maintenance inspections shall be performed by qualified service technicians, according to the manufacturer's specifications and the requirements listed in the responsibilities manual.

Instructions

Use the operator's manual on your machine.

The Pre-delivery Preparation consists of completing the Pre-operation Inspection, the Maintenance items and the Function Tests.

Use this form to record the results. Place a check in the appropriate box after each part is completed. Follow the instructions in the operator's manual.

If any inspection receives an N, remove the machine from service, repair and re-inspect it. After repair, place a check in the R box.

Legend

Y = yes, acceptable

N = no, remove from service

R = repaired

Comments



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Pre-delivery Preparation	Y	N	R
Pre-operation inspection completed			
Maintenance items completed			
Function tests completed			

Model

Serial number

Date

Machine owner

Inspected by (print)

Inspector signature

Inspector title

Inspector company

Model		Hour meter		Date
Serial number		Inspector company		Machine owner
Inspected by (print)		Inspector signature		
Scheduled Maintenance: Inspection Type Q = quarterly or frequent inspections A = annual inspections	Legend Y = yes, acceptable N = no, remove from service R = repaired Ø = not applicable	Make copies of this report to use for each inspection. Select the appropriate procedures for the type of inspection(s) to perform.		Programmed Maintenance: Programmed maintenance will be completed based on machine hours. This program includes the onetime or commissioning procedures for new products. The onetime procedures will be completed at 50 or 150 hours.
If any inspection receives an "N," tag and remove the machine from service, repair and re-inspect it. After repair, place a "R" in the box.				

Drive Chassis	Intervals	Q	A
Inspect the Tires, Wheels and Lug Nut Torque	Q-6		
Mechanicals and Hydraulics	Intervals	Q	A
Inspect the Fuel and Hydraulic Tank Cap Venting Systems	Q-8		
Visual Inspection of the Hydraulic Oil	Q-9		
Replace the Hydraulic Return Filter	A-5	Ø	
Replace the Cab Air Intake Filter (if equipped)	A-6	Ø	
Electrical	Intervals	Q	A
Battery Inspection	Q-2		
Inspect the Electrical Wiring	Q-3		
Powertrain	Intervals	Q	A
Check the Exhaust System	Q-5		
Inspect the Engine Air Filter	Q-10		
Lubricate the Driveshaft	Q-11		
Boom(s) and Fork	Intervals	Q	A
Check the Boom Wear Pads	Q-4		
Inspect the Fork Level and Aux. Hydraulic Hoses	Q-7		
Inspect and Lubricate the Sequencing Chains	Q-12		
Inspect the Forks	A-1	Ø	
Adjust the Boom Sequencing Chains - GTH-636, GTH-844	A-2	Ø	
Adjust the Boom Sequencing Chains - GTH-1056, GTH-1256	A-3	Ø	
Adjust the Boom Sequencing Chains - GTH-1044, GTH-1244, GTH-1544	A-4	Ø	
Functions and Controls	Intervals	Q	A
Check for Open Bulletins and Owner Registration	Q-1		

Commissioning	50	150
Perform 50 Hour Service C-1		Ø
Engine Maintenance - 50 HRS C-2		Ø
Perform 150 Hour Service C-3	Ø	

Programmed Maintenance - Under 1000 HRS	Status	Enter Hours
Lubricate the Boom P0-1		8
Deutz Engine Maintenance P0-2		
Axle Maintenance P0-3		
Transmission Maintenance P0-4		

Programmed Maintenance		Hours are in thousands				
All models	Perform every:	1	2	3	5	6
Engine Maintenance	P1-1		Ø	Ø	Ø	Ø
Transmission Maintenance	P1-2		Ø	Ø	Ø	Ø
Axle Maintenance	P1-3		Ø	Ø	Ø	Ø
Test or Replace the Hydraulic Oil	P2-1	Ø		Ø	Ø	Ø
Engine Maintenance	P3-1	Ø	Ø		Ø	Ø
Engine Maintenance	P5-1	Ø	Ø	Ø		Ø
Engine Maintenance	P6-1	Ø	Ø	Ø	Ø	

Commissioning Procedures

C-1 Perform 50 Hour Service



The 50 hour maintenance procedure is a one time sequence of procedures to be performed after the first 50 hours of usage. After this interval, refer to the maintenance inspection report for continued scheduled maintenance.

- 1 Perform the following maintenance procedures:

All Models:

Q-6 Inspect the Tires, Wheels and Lug Nut Torque

A-5 Replace the Hydraulic Filters

C-2 Perform Engine Maintenance - 50 Hours



The 50 hour maintenance procedure is a one time sequence of procedures to be performed after the first 50 hours of usage. After this interval, refer to the maintenance inspection report for continued scheduled maintenance.

All Models:

- Check belt tension
- Check the engine mounts
- Check hose clamps

Required maintenance procedures and additional engine information are available in the manufacturer's manuals. Refer to Specifications, *Engine Operator and Maintenance Manuals*.

Commissioning Procedures

C-3

Perform 150 Hour Service



The 150 hour maintenance procedure is a one time sequence of procedures to be performed after the first 150 hours of usage. After this interval, refer to the maintenance tables for continued scheduled maintenance.

- 1 Perform the following maintenance procedures:

Q-9 Visual Inspection of the Hydraulic Oil

Quarterly Maintenance Procedures

Q-1 Check for Open Bulletins and Owner Registration



Genie specifications require that this procedure be performed quarterly.

Completing required bulletins is essential to safe machine operation. An important way to ensure your machine has no open bulletins is to frequently check the serial number of your Genie machine against our bulletin database. Using the links below you can view any open bulletins for your machine(s) that require mandatory and immediate work to be completed.

Note: If you are unable to access this information on our websites, please contact your local Genie representative using the contact information provided on the back cover of this manual.

- 1 Locate the serial number plate or label on your machine and document your Genie machine serial number (exactly as its displayed on the serial plate or label).
- 2 Confirm that Genie has the current machine owner information on file by contacting our warranty department at 1-800-536-1800 or use the link included in this procedure to download and complete a New Owner Registration Form.
- 3 Using the link provided, check for current bulletins for your machine(s).

Machines purchased in Australia:

Go to [Australia Bulletins](https://www.genielift.com/en-au/about-genie/contact-us)
<https://www.genielift.com/en-au/about-genie/contact-us>
 (http://genielift.com.au/contact)

- 1 Contact any one of the Genie Service centers around Australia to arrange for factory trained technicians to attend to your equipment needs.

Machines purchased in ASIA, North America and Latin America:

Go to [ASIA, North America and Latin America Bulletins](https://www.genielift.com/en/support/safety)
<https://www.genielift.com/en/support/safety>
 (https://www.gogenielift.com/en/support/safety)



- 1 Enter your machine serial number and press search to check for open bulletins.
- 2 Complete all required bulletins shown for your specific machine serial number.

Machines purchased in Europe, Middle East, Africa, and Russia:

Go to [EMEAR Bulletins](https://www.genielift.com/en-gb/support/safety)
<https://www.genielift.com/en-gb/support/safety>
 (http://www.genielift.co.uk/en/sales-and-support/bulletin-campaigns/index.htm)



- 1 Enter your machine serial number and press search to check for open bulletins.
- 2 Complete all required bulletins shown for your specific machine serial number.

Quarterly Maintenance Procedures

Q-2

Battery Inspection



Genie specifications require that this procedure be performed quarterly.

Proper battery condition is essential to good engine and machine performance and operational safety. Improper fluid levels or damaged cables and connections can result in engine and component damage and hazardous conditions.

⚠ WARNING

Electrocution/burn hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

⚠ WARNING

Bodily injury hazard. Batteries contain acid. Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water.

- 1 Verify that the battery cable connections are free of corrosion.

Note: Adding terminal protectors and a corrosion preventative sealant will help eliminate corrosion on the battery terminals and cables.

- 2 Verify that the battery retainers and cable connections are tight.
- 3 Verify that the battery separator wire connections are tight (if equipped).

Q-3

Inspect the Electrical Wiring



Genie specifications require that this procedure be performed quarterly.

Maintaining electrical wiring in good condition is essential to safe operation and good machine performance. Failure to find and replace burnt, chafed, corroded or pinched wires could result in unsafe operating conditions and may cause component damage.

⚠ WARNING

Electrocution/burn hazard. Contact with electrically charged circuits could result in death or serious injury. Remove all rings, watches and other jewelry.

- 1 Inspect the following areas for burnt, chafed, corroded and loose wires:
 - Inside of the operator's compartment
 - Underside of the chassis
 - Inside engine compartment
- 2 Inspect for a lite, even coating of dielectric grease in the following locations:
 - All harness connectors

Note: Do not apply excessive amounts of dielectric grease to harness connectors, pins or sockets.

Note: Do not apply dielectric grease to a engine ECU/ECM or engine harness connectors.

- 3 Start the engine and raise the boom so there is enough room to access and remove all the covers attached to the chassis.
- 4 Attach a lifting strap from an overhead crane to the boom. Support the boom. Do not apply any lifting pressure.

Quarterly Maintenance Procedures

- 5 Remove all engine covers, hydraulic tank covers and chassis covers.



Crushing hazard. Death or serious injury could result if the boom should unexpectedly fall while working underneath the boom. Do not stand or work beneath a boom that is not properly supported.

- 6 Inspect the following areas for burnt, chafed, corroded, pinched and loose wires:
- Engine
 - Transmission
 - Manifolds
 - Chassis
- 7 Inspect for a lite, even coating of dielectric grease in all connections between the transmission and the operator's compartment.

Note: Do not apply excessive amounts of dielectric grease to harness connectors, pins or sockets.

Note: Do not apply dielectric grease to a engine ECU/ECM or engine harness connectors.

- 8 Install all covers removed in step 5.
- 9 Remove the lifting strap from the overhead crane.
- 10 Start the engine and lower the boom to the stowed position. Turn the machine off.

Q-4

Check the Boom Wear Pads



Genie specifications require that this procedure be performed quarterly.

- 1 Extend the boom until the wear pads are accessible.

Note: It may be necessary to remove the wear pad retainer plates to expose the wear pads.

- 2 Verify the boom wear pads are within specification.
- ⊙ Result: The measurement is within specification.
 - ✗ Result: The measurement is less than specification. Replace the wear pads. Refer to the appropriate Service and Repair Manual for repair procedure, *How to Replace the Boom Wear Pads*.

Minimum wear pad specification

Top front / Lower rear pads

GTH-636 / 844 / 1044 / 1056 / 1244 / 1544 1.0 inches / 25,4 mm

GTH-1256 1.25 inches / 31,75 mm

Top rear / Lower front pads

GTH-636 / 844 1.125 inches / 28,6 mm

GTH-1044 / 1056 / 1244 / 1256 / 1544 1.375 inches / 35 mm

Side pads

All models 0.625 inches / 16 mm

Front pads = Fork end of boom

Rear pads = Pivot end of boom

Fork 3% of blade length

48 in / 122 cm 1.44 in / 3,66 cm

60 in / 152,4 cm 1.8 in / 4,6 cm

72 in / 183 cm 2.16 in / 5,5 cm

96 in / 244 cm 2.88 in / 7,3 cm

Quarterly Maintenance Procedures

Q-5 Check the Exhaust System

Genie specifications require that this procedure be performed quarterly.

Maintaining the exhaust system is essential to good engine performance and service life. Operating the engine with a damaged or leaking exhaust system can cause component damage and unsafe operating conditions.

⚠ WARNING

Bodily injury hazard. Do not inspect while the engine is running. Remove the key to secure from operation.

⚠ CAUTION

Burn hazard. Beware of hot engine components. Contact with hot engine components may result in severe burns.

- 1 Be sure that all nuts and bolts are tight.
- 2 Inspect all welds for cracks.
- 3 Inspect for exhaust leaks; i.e., carbon buildup around seams and joints.

Q-6 Inspect the Tires, Wheels and Lug Nut Torque



Genie specifications require that this procedure be performed quarterly.

Maintaining the tires and wheels, including proper wheel fastener torque, is essential to safe operation and good performance. Tire and/or wheel failure could result in a machine tip-over. Component damage may also result if problems are not discovered and repaired in a timely fashion.

⚠ WARNING

Bodily injury hazard. An over-inflated tire can explode and could cause death or serious injury.

⚠ WARNING

Tip-over hazard. Do not use temporary flat tire repair products.

Note: The tires on some machines are foam-filled or solid rubber and do not need air added to them.

Note: Refer to Specifications. *Torque Specifications, Tires and Wheels.*

- 1 Check all tire treads and sidewalls for cuts, cracks, punctures and unusual wear.
- 2 Check each wheel for damage, bends and cracked welds.
- 3 Check the pressure in each air-filled tire.
- 4 Check each lug nut for proper torque.

Quarterly Maintenance Procedures

Q-7

Inspect the Fork Level and Auxiliary Hydraulic Hose Tension



Genie specifications require that this procedure be performed quarterly.

GTH-636, GTH-844, GTH-1044, GTH-1244, GTH-1544:

- 1 Fully retract the boom.
 - 2 Fully lower the tips of the lifting forks.
 - 3 Remove the cover from the fork end of the boom.
 - 4 Inspect the fork level and/or auxiliary hydraulic hoses for proper tension. Each hose should have the same amount of droop and should not rest on the boom tube.
- ☒ Result: The hoses rest on the boom tube or have an unequal amount of droop. Refer to the appropriate Service and Repair Manual for repair procedure, *How to Adjust the Fork Level and Auxiliary Hydraulic Hose Tension*.

GTH-1056, GTH-1256:

- 1 Fully retract the boom.
 - 2 Fully lower the tips of the lifting forks.
 - 3 Remove the covers from the both ends of the boom.
 - 4 Inspect the fork level and/or auxiliary hydraulic hoses for proper tension. Each hose should rest on the bottom of the boom tube.
- ☒ Result: The hoses do not rest on the bottom of the boom tube. Refer to the appropriate Service and Repair Manual for repair procedure, *How to Adjust the Fork Level and Auxiliary Hydraulic Hose Tension*.

All models:

- 1 Inspect the hydraulic hoses for the following:
 - Chafing
 - Kinked, pinched or crushed hoses
 - Proper routing
 - Leaks

Quarterly Maintenance Procedures

Q-8 Inspect the Fuel and Hydraulic Tank Cap Venting Systems



Genie specifications require that this procedure be performed quarterly.

Perform this procedure more often if dusty conditions exist.

Free-breathing fuel and hydraulic tank caps are essential for good machine performance and service life. A dirty or clogged tank cap may cause the machine to perform poorly and continued use may cause component damage. Extremely dirty conditions may require that the caps be inspected more often.



Explosion and fire hazard.
Engine fuels are combustible.
Perform this procedure in an open, well-ventilated area away from heaters, sparks, flames and lighted tobacco. Always have an approved fire extinguisher within easy reach.

Note: Perform this procedure with the engine off.

GTH-636, GTH-844:

- 1 Identify the vent tube breather from the fuel tank under the chassis center cover.
- 2 Check for proper venting.
 - ⦿ Result: Air passes through the vent tube. Proceed to **Hydraulic Tank Breather Cap**.
 - ✗ Result: If air does not pass through the vent tube, clean or replace the tube. Proceed to step 3.

Note: When checking for positive tank cap venting, air should pass freely through the tube.

- 3 Using a mild solvent, carefully wash the tube venting system. Dry using low pressure compressed air. Repeat this procedure beginning with step 2.

GTH-1044, GTH-1056, GTH-1244, GTH-1256, GTH-1544:

- 1 Remove the fuel filler cap from the tank.
- 2 Check for proper venting.
 - ⦿ Result: Air passes through the fuel tank cap. Proceed to step 4.
 - ✗ Result: If air does not pass through the cap, clean or replace the cap. Proceed to step 3.

Note: When checking for positive tank cap venting, air should pass freely through the cap.

- 3 Using a mild solvent, carefully wash the cap venting system. Dry using low pressure compressed air. Repeat this procedure beginning with step 2.
- 4 Install the fuel tank cap onto the fuel tank.

Hydraulic Tank Breather Cap - All Models:

- 1 Remove the breather cap from the hydraulic tank.
- 2 Check for proper venting. The cap is pressurized to 3 psi.
 - ⦿ Result: Air passes through the breather cap. Proceed to step 4.
 - ✗ Result: If air does not pass through the cap, clean or replace the cap. Proceed to step 3.

Note: When checking for positive tank cap venting, air should pass freely through the cap.

- 3 Using a mild solvent, carefully wash the cap venting system. Dry using low pressure compressed air. Repeat this procedure beginning with step 2.
- 4 Install the breather cap onto the hydraulic tank.

Quarterly Maintenance Procedures

Q-9

Visual Inspection of the Hydraulic Oil



Genie specifications require that this procedure be performed quarterly.

Replacement or testing of the hydraulic oil is essential for good machine performance and service life. Dirty oil and a clogged suction strainer may cause the machine to perform poorly and continued use may cause component damage. Extremely dirty conditions may require oil changes to be performed more often. For hydraulic oil specifications, Refer to Specifications, *Hydraulic Specifications*.

Note: Before replacing the hydraulic oil, the oil may be tested by an oil distributor for specific levels of contamination to verify that changing the oil is necessary. Replace the oil when it fails the test. Refer to Maintenance Procedure, *Test or Replace the Hydraulic Oil*.

- 1 Collect a sample of hydraulic oil and place in a clear container. Visually inspect the hydraulic oil for the following:
 - Color: oil should be a clear, light-honey colored
 - Appearance, oil should be clear and not cloudy or visibly distorts the view through the sight glass or container
 - Contains no particles, foreign objects, or other contamination
 - The hydraulic oil can be inspected by smell (can smell “hot” but not “burnt”) or rubbing between fingers (should feel viscous and free of any rough feel due to particles)
- ⦿ If the hydraulic oil passes all of the above inspections, continue the scheduled maintenance intervals.
- ✕ If the hydraulic oil fails any of the above inspections, the hydraulic oil must be tested by an oil distributor or replaced.

Note: If the hydraulic oil was not replaced at or before the 2000 hour maintenance interval, the oil must be tested every quarter by an oil distributor until the oil fails the test and is replaced. After the oil has been replaced, continue the scheduled quarterly maintenance inspection.

Note: When replacing the hydraulic oil, it is recommended that all hydraulic filters be replaced at the same time.

Quarterly Maintenance Procedures

Q-10

Inspect the Engine Air Filter



Genie specifications require that this procedure be performed quarterly.

Perform this procedure more often if dusty conditions exist.

Maintaining the engine air filter in good condition is essential to good engine performance and service life. Failure to perform this procedure can lead to poor engine performance and component damage.

Note: Perform this procedure with the engine off.

- 1 Release the latches on the cover of the air cleaner assembly. Remove the cover.
- 2 Gently twist and pull out the external or primary filter element.
- 3 Remove the inner or secondary filter element.
- 4 Clean the inside of the canister and the gasket with a damp cloth.
- 5 Inspect the primary and secondary air filter elements. If needed, blow from the inside out using low pressure dry compressed air, or carefully tap out dust.
- 6 Install the secondary filter element first, then install the primary filter element.
- 7 Install the front cover onto the air cleaner assembly and secure the latches.

Q-11

Lubricate the Driveshaft



Genie specifications require that this procedure be performed quarterly.

Greasing the specified locations is essential for good machine performance and service life. Operating the machine with little or no grease may cause the machine to perform poorly and continued use may cause component damage.

- 1 Using a grease gun, thoroughly grease each driveshaft, at both ends of the driveshaft.

Grease Specifications

Chevron Ultra-duty grease, EP NLGI 2 (lithium based) or equivalent

Quarterly Maintenance Procedures

Q-12

Inspect and Lubricate the Sequencing Chains



Genie specifications require that this procedure be performed quarterly.

In extremely dusty or hostile environments, it may be necessary to lubricate the chains more often.

Maintaining the sequencing chains in good condition is essential to safe operation and good machine performance. Failure to detect damage to the chains could result in a hazardous operating condition.

Environments in which Genie Telehandlers operate can vary widely from outdoor moisture and temperature extremes, to mildly corrosive or highly corrosive industrial atmospheres, in addition to abrasive exposures such as sand and grit.

In addition, dynamic shock loading can impose abnormal loads above the endurance limit of the chains. Examples of dynamic shock loading are:

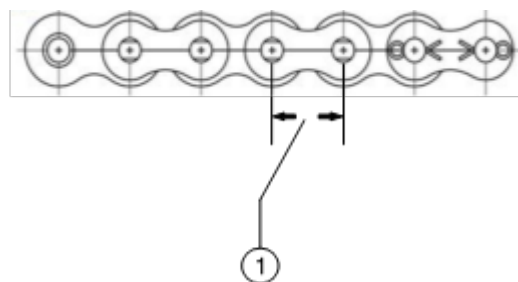
- High velocity movement of load, followed by sudden abrupt stops.
- Carrying loads in suspension over irregular surfaces and rough terrain.
- Attempting to "inch" loads which are beyond the rated capacity of the vehicle.

The load cycles and environmental conditions make it impossible to predict chain life. It is therefore necessary to conduct regular inspections.

- 1 Park the machine on a firm level surface, level the boom and engage the parking brake.
- 2 Fully extend the boom.
- 3 Inspect the chains for the following conditions:

GTH-636, GTH-844:

- Elongation
- Measure 16 pitches of the extend / retract chains



1 chain pitch

Note: The pitch of the boom BL666 chains is 0.75 inches / 19,5 mm.

Note: Both the extend and retract chains should be measured.

Note: Measurement should be taken in the area where the chain articulates most frequently over the sheaves.

- ⊙ Result: The distance measures 12.36 inches / 313 mm or less. The chain is within specifications. Continue with inspection.
- ⊗ Result: If the distance is greater than 12.36 inches / 313 mm, the machine shall be removed from service until the chain is replaced.

Note: The boom chain's normal life expectancy can be expressed as a maximum percent of elongation of 3%.

Quarterly Maintenance Procedures

GTH-1056:

- Elongation
- Measure 16 pitches of the extend / retract chains

Note: The pitch of the boom BL666 chains is 0.75 inches / 19,5 mm.

Note: The pitch of the boom BL866 chains is 1 inch / 25,4 mm.

Note: Both the extend and retract chains should be measured.

Note: Measurement should be taken in the area where the chain articulates most frequently over the sheaves.

⊙ Result: The distance measures 12.36 inches / 313 mm (BL666 chain) or 16.48 inches / 418,6 mm (BL866 chain) or less. The chain is within specification. Continue with inspection.

⊗ Result: The distance is greater than 12.36 inches / 313 mm (BL666 chain) or 16.48 inches / 418,6 mm (BL866 chain). The machine shall be removed from service until the chain is replaced.

Note: The boom chain's normal life expectancy can be expressed as a maximum percent of elongation of 3%.

GTH-1256:

- Elongation
- Measure 16 pitches of the extend / retract chains

Note: The pitch of the boom BL866 chains is 1 inch / 25,4 mm.

Note: The pitch of the boom BL1066 chains is 1.25 inches / 31,75 mm.

Note: Both the extend and retract chains should be measured.

Note: Measurement should be taken in the area where the chain articulates most frequently over the sheaves.

⊙ Result: The distance measures 16.48 inches / 418,6 mm (BL866 chain) or 20.6 inches / 523,2 mm (BL1066 chain). The chain is within specification. Continue with inspection.

⊗ Result: The distance is greater than 16.48 inches / 418,6 mm (BL866 chain) or 20.6 inches / 523,2 mm (BL1066 chain). The machine shall be removed from service until the chain is replaced.

Note: The boom chain's normal life expectancy can be expressed as a maximum percent of elongation of 3%.

Quarterly Maintenance Procedures

GTH-1044, GTH-1244

- Elongation
- Measure 16 pitches of the extend / retract chains

Note: The pitch of the boom BL866 chains is 1 inch / 25,4 mm.

Note: Both the extend and retract chains should be measured.

Note: Measurement should be taken in the area where the chain articulates most frequently over the sheaves.

⊙ Result: The distance measures 16.48 inches / 418,6 mm (BL866 chain) or less. The chain is within specification. Continue with inspection.

⊗ Result: The distance is greater than 16.48 inches / 418,6 mm (BL866 chain). The machine shall be removed from service until the chain is replaced.

Note: The boom chain's normal life expectancy can be expressed as a maximum percent of elongation of 3%.

GTH-1544

- Elongation
- Measure 16 pitches of the extend / retract chains

Note: The pitch of the boom BL1066 chains is 1.25 inch / 31,75 mm.

Note: Both the extend and retract chains should be measured.

Note: Measurement should be taken in the area where the chain articulates most frequently over the sheaves.

⊙ Result: The distance measures 20.6 inches / 523,2 mm (BL1066 chain). The chain is within specification. Continue with inspection.

⊗ Result: The distance is greater than 20.6 inches / 523,2 mm (BL1066 chain). The machine shall be removed from service until the chain is replaced.

Note: The boom chain's normal life expectancy can be expressed as a maximum percent of elongation of 3%.

Quarterly Maintenance Procedures

All models:

- **Edge wear:**

Check the chains for wear on the link plate edges caused by running back and forth over the sheave. The maximum reduction of material should not exceed 5%.

- **Cracked plates:**

Check link side plates for any cracks. These are generally a sign of chain fatigue.

- **Turning pins:**

Check the pins. The position of the riveting must be parallel with the top and bottom of the side plate.

If any of these conditions are discovered during the inspection, the chain must be replaced.

After inspection and before being returned to service, the chains must be lubricated with a quality chain lubricant.

Note: Do not use grease to lubricate chains.

The chain plates should be brushed with a wire brush prior to lubrication to clear the space between the plates.

The lubricant must penetrate the chain joint to prevent wear. Applying lubricant to the external surfaces will prevent rust, but the chains should be articulated to make sure the lubricant penetrates to the working surfaces between the pins and links.

Lubricant may be applied with a brush, sprayed or poured on, but the chain should be well flooded with lubricant and the boom should be extended and retracted to insure that the lubricant penetrates all working surfaces. All excess lubricant should be wiped away from the external surfaces.

Note: Do not use solvents to remove excess lubricant.

Annual Maintenance Procedures

A-1

Inspect the Forks



Genie specifications require that this procedure be performed annually. OR whenever permanent deformation of the forks is suspected.

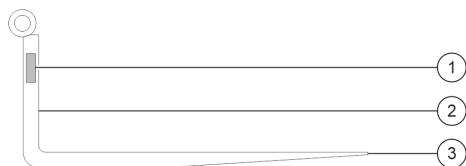
Maintaining the lifting forks in good condition is essential to safe operation and good machine performance. Failure to detect damage to the forks could result in a hazardous operating condition.

- 1 Thoroughly clean the lifting forks.
- 2 Inspect the forks for the following:
 - Surface cracks
 - Straightness of the blade and shank
 - Fork angle at 90 ± 3 degrees
 - Relative height of fork tips shall not differ more than 3% of blade length

Fork	3% of blade length
48 in / 122 cm	1.44 in / 3,66 cm
60 in / 152,4 cm	1.8 in / 4,6 cm
72 in / 183 cm	2.16 in / 5,5 cm
96 in / 244 cm (GTH-1044, GTH-1244, GTH-1544 Only)	2.88 in / 7,3 cm

- Excessive wear to the forks, fork mount or legible markings
- Load rate stamping match on both forks and is legible

☒ Result: If any of the above criteria are not met, the fork must be removed from service until it is repaired or replaced.



- 1 load rate stamping
- 2 shank
- 3 blade

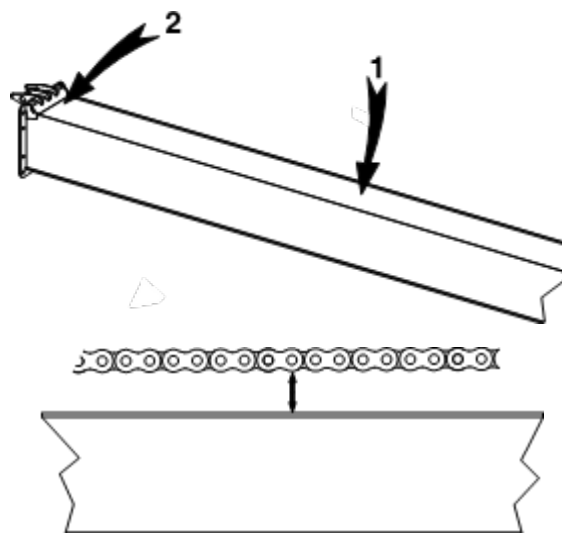
A-2

Adjust the Boom Sequencing Chains - GTH-636, GTH-844



Genie specifications require that this procedure be performed annually.

- 1 Raise the boom to the horizontal position.
- 2 Extend the boom fully, then retract the boom approximately 1 inch / 25 mm.
- 3 On either side of the middle boom section, estimate the center. Place one end of a tape measure on the top surface of the boom directly above the estimated center.
- 4 Select a reference point on the sequencing chain. Measure the distance between the chain and the top surface of the boom. Note the measurement (1). Refer to the following illustrations.



Annual Maintenance Procedures

- 5 Move to the fork end of the same boom section that was just measured.
- 6 Measure the distance between the top surface of the boom and the same reference point used on the sequencing chain in step 4. Note the measurement (2).
- ⦿ Result: The difference between measurements 1 and 2 is 0.25 - 0.5 inch / 6,35 - 12,7 mm. No adjustment to the chain is necessary. Proceed to step 10.
- ⊗ Result: The difference between measurements 1 and 2 is less than a 0.25 inch / 6,35 mm OR is greater than 0.5 inch / 12,7 mm. The chain requires adjustment. Proceed to step 7.

Note: The measurements taken in step 4 and step 6 must be taken from the same plane on the boom.

- 7 Working at the fork end of the large boom tube, locate the adjustable chain anchor on the top of boom section.
- 8 Place an adjustable wrench across the flat part of the chain, just ahead of the chain anchor. Tighten the wrench onto the chain.
- 9 Using a 1 7/16 inch wrench, adjust the nut as required to tighten or loosen the chain. Repeat this procedure for each chain beginning with step 4.

A-3

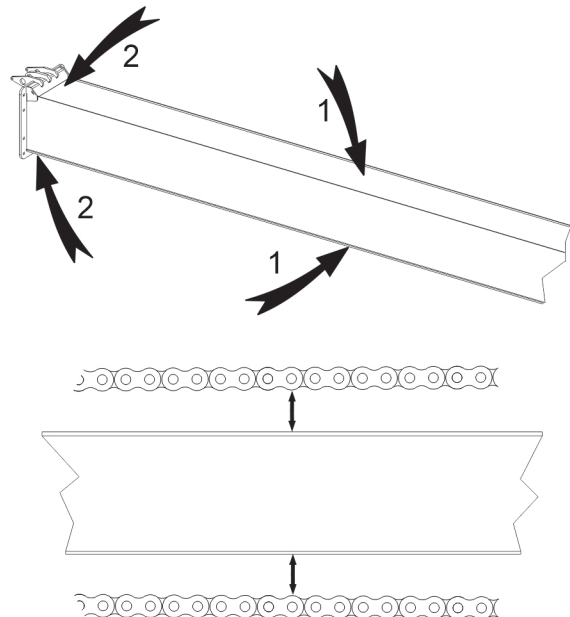
Adjust the Boom Sequencing Chains - GTH-1056, GTH-1256



Genie specifications require that this procedure be performed annually.

Note: Perform this procedure to inspect all chains.

- 1 Raise the boom to the horizontal position.
- 2 Extend the boom fully, then retract the boom approximately 1 inch / 25 mm.
- 3 On either side of the middle boom section, estimate the center. Place one end of a tape measure on the surface of the boom directly above or below the estimated center.
- 4 Select a reference point on the sequencing chain. Measure the distance between the chain and the surface of the boom. Note the measurement (1). Refer to the following illustrations.



Annual Maintenance Procedures

- 5 Move to the fork end of the same boom section that was just measured.
- 6 Measure the distance between the surface of the boom and the same reference point used on the sequencing chain in step 4. Note the measurement (2).
- ⊙ Result: The difference between measurements 1 and 2 is 0.25 - 0.5 inch / 6,35 - 12,7 mm. No adjustment to the chain is necessary.
- ⊗ Result: The difference between measurements 1 and 2 is less than a 0.25 inch / 6,35 mm OR is greater than 0.5 inch / 12,7 mm. The chain requires adjustment. Proceed to step 7.

Note: The measurements taken in step 4 and step 6 must be taken from the same plane on the boom.

- 7 Working at the fork end of the boom, locate the adjustable chain anchor on the top or bottom of boom section.
- 8 Place an adjustable wrench across the flat part of the chain, just ahead of the chain anchor. Tighten the wrench onto the chain.
- 9 Using a 1 7/16 inch wrench, adjust the nut as required to tighten or loosen the chain. Repeat this procedure for each chain.

A-4

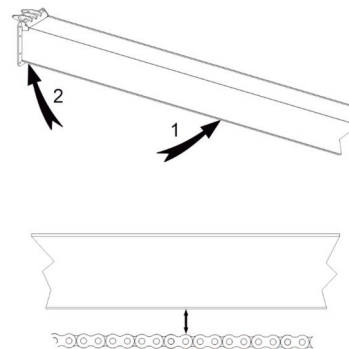
Adjust the Boom Sequencing Chains - GTH-1044, GTH-1244, GTH-1544



Genie specifications require that this procedure be performed annually.

Note: Perform this procedure to inspect all chains.

- 1 Raise the boom to the horizontal position.
- 2 Extend the boom fully, then retract the boom approximately 1 inch / 25 mm.
- 3 On either side of the middle boom section, estimate the center. Place one end of a tape measure on the surface of the boom directly above or below the estimated center.
- 4 Select a reference point on the sequencing chain. Measure the distance between the chain and the surface of the boom. Note the measurement (1). Refer to the following illustrations.



Annual Maintenance Procedures

- 5 Move to the fork end of the same boom section that was just measured.
- 6 Measure the distance between the surface of the boom and the same reference point used on the sequencing chain in step 4. Note the measurement (2).
- ⊙ Result: The difference between measurements 1 and 2 is 0.25 - 0.5 inch / 6,35 - 12,7 mm. No adjustment to the chain is necessary.
- ⊗ Result: The difference between measurements 1 and 2 is less than a 0.25 inch / 6,35 mm OR is greater than 0.5 inch / 12,7 mm. The chain requires adjustment. Proceed to step 7.

Note: The measurements taken in step 4 and step 6 must be taken from the same plane on the boom.

- 7 Working at the fork end of the boom, locate the adjustable chain anchor on the top or bottom of boom section.
- 8 Place an adjustable wrench across the flat part of the chain, just ahead of the chain anchor. Tighten the wrench onto the chain.

Using a 1 7/16 inch wrench, adjust the nut as required to tighten or loosen the chain. Repeat this procedure for each chain.

A-5

Replace Hydraulic Tank Return Filter Element



Genie specifications require that this procedure be performed annually.

Perform this procedure more often if dusty conditions exist.

Replacement of the hydraulic filters is essential for good machine performance and service life. A dirty or clogged filter may cause the machine to perform poorly and continued use may cause component damage. Extremely dirty conditions may require that the filter be replaced more often.



Bodily injury hazard. Beware of hot oil. Contact with hot oil may cause severe burns.

Note: Perform this procedure with the engine off.

- 1 Locate the hydraulic tank return filter.

Note: Location and access may vary, depending on model.

- 2 Release the pressure in the oil reservoir by loosening the filler/breather cap.
- 3 Remove the filter element from the hydraulic tank..
- 4 Install the new filter element.
- 5 Tighten the filler/breather cap.
- 6 Record the hours the filter element was replaced and keep with your maintenance records.
- 7 Clean up any oil that may have spilled during the replacement procedure.

Annual Maintenance Procedures

A-6

Replace the Cab Air Intake Filter (if equipped)



Genie specifications require that this procedure be performed annually.

Perform this procedure more often if dusty conditions exist.

Note: Location of the air intake access cover will vary, depending on specific models.

- 1 Remove the fasteners securing the cab air intake access cover and remove the cover.
- 2 Remove the air intake filter element.
- 3 Install the new filter element.
- 4 Re-install the cab air intake access cover.

Programmed Maintenance Procedures

P0-1

Lubricate the Boom



Genie specifications require that this procedure be performed every 8 hours or daily, whichever comes first.

Greasing the specified locations is essential for good machine performance and service life. Operating the machine with little or no grease may cause the machine to perform poorly and continued use may cause component damage.

- 1 Fully extend and raise the boom, then retract the boom, checking to insure it operates smoothly. There should be a light film of lubricant on wear pad contact surfaces.
- ⦿ Result: Boom operates smoothly and a thin film of lubricant is visible. Return the boom to the stowed position.
- ✗ Result: Boom does not extend or retract smoothly and no lubricant is visible on wear pad contact surfaces. Continue with this procedure.

GTH-1056, GTH-1256:

- 2 Apply a thin layer of grease to the underside of the number 4 boom tube where it makes contact with the number 3 boom tube lower wear pads.

All models:

- 3 Apply a thin layer of grease to the underside of the number 3 boom tube where it makes contact with the number 2 boom tube lower wear pads.
- 4 Apply a thin layer of grease to the underside of the number 2 boom tube where it makes contact with the number 1 boom tube lower wear pads.
- 5 Lubricate the top and side boom tube wear pads.

Grease specification

EP NLGI 2 (lithium based) or equivalent

Lube-A-Boom grease, 7 lb pail
(recommended)

Genie part number 110147GT

Chevron Ultra-Duty EP 2 grease
(alternate)

Programmed Maintenance Procedures

P0-2

Deutz Engine Maintenance – Under 1000 Hours

Additional engine maintenance is required. Refer to the *Programmed Maintenance Inspection Report* for the specific intervals that apply.

Required maintenance procedures and additional engine information are available in the manufacturer's manuals. Refer to Specifications, *Engine Operator and Maintenance Manuals*.

This maintenance schedule applies to the following engine models:

Deutz TD 2.9 L4

Deutz TCD 3.6 L4

Deutz Engines		Hour Intervals		
Procedure	Ø = Not required	Daily	250	500
Oil level - check			Ø	Ø
Coolant level - check			Ø	Ø
Oil, fuel and coolant systems - check for leaks			Ø	Ø
Fuel system filter/water separator – inspect/drain			Ø	Ø
Air filter discharge valve - clean			Ø	Ø
Engine tightness – check for leaks			Ø	Ø
Exhaust system - inspect			Ø	Ø
Fuel pre-cleaner / fuel pre-filter - clean		Ø		Ø
Cooling system - check		Ø		Ø
Engine oil and filter – replace		Ø	Ø	
Air filter - replace		Ø	Ø	
Valve clearance - check/adjust		Ø	Ø	
Engine coolant - test/add		Ø	Ø	
Air intake pipes - inspect		Ø	Ø	
V-belts - inspect		Ø	Ø	
Fuel filter / separator - replace		Ø	Ø	

Programmed Maintenance Procedures

P0-3

Axle Maintenance – Under 1000 Hours

Additional axle maintenance is required. Refer to the *Programmed Maintenance Inspection Report* for the specific intervals that apply.

Required maintenance procedures and additional axle information are available in the manufacturer's manuals. Refer to Specifications, *Operator and Maintenance Manuals*.

Dana Axles		Hour Intervals			
Procedure	Ø = Not required	Weekly	Monthly	100	500
King pin bearings and bushings - grease (severe duty perform daily)			Ø	Ø	Ø
Trunnion bushings - grease (severe duty perform daily)			Ø	Ø	Ø
Seals - grease (severe duty perform daily)			Ø	Ø	Ø
Oil level - check (all compartments)		Ø		Ø	Ø
Differential oil - change (initial, one-time interval)		Ø	Ø		Ø
Hub oil - change (initial, one-time interval)		Ø	Ø		Ø
Planetary reduction lubricating oil - change (initial, one-time interval)		Ø	Ø		Ø
Negative brake and service brake - adjust (initial, one-time interval)		Ø	Ø		Ø
Negative brake and service brake - adjust		Ø	Ø	Ø	

Programmed Maintenance Procedures

P0-4

Transmission Maintenance – Under 1000 Hours

Additional transmission maintenance is required. Refer to the *Programmed Maintenance Inspection Report* for the specific intervals that apply.

Required maintenance procedures and additional transmission information are available in the manufacturer's manuals. Refer to Specifications, *Operator and Maintenance Manuals*.

This maintenance schedule applies to the following transmissions:

Dana VDT12004 ZF 4 WG-98 TSC

Transmissions		Hour Intervals	
Procedure	Ø = Not required	Daily	100
Transmission oil level - check/add*			Ø
Drop box oil level - check/add			Ø
Drop box oil - replace, ZF models (initial, one-time interval)		Ø	
Transmission filter - replace (initial, one-time interval)		Ø	
Transmission oil - replace (initial, one-time interval)		Ø	

*check oil with engine running at idle and oil at 180 - 200° F / 65 - 93° C

Programmed Maintenance Procedures

P1-1

Perform Engine Maintenance – 1000 Hours



Engine specifications require that this procedure be performed every 1000 hours.

Required maintenance procedures and additional engine information are available in the manufacturer's manuals. Refer to Specifications, *Engine Operator and Maintenance Manuals*.

Deutz Models

All Models:

- Charge air cooler entry- drain lube oil/condensate
- Engine mounts - check
- Hoses and clamps – inspect/replace
- V-rib belt and tensioning pulley - check
- Air filter - replace
- Fuel filter cartridge - replace
- Fuel pre-filter - replace
- V-Belts - replace
- Battery and cable connectors - check
- Cold starting device (if equipped) - check

TD 2.9 L4

- SCR feed pump filter cartridge - replace

P1-2

Perform Transmission Maintenance – 1000 Hours



Transmission specifications require that this procedure be performed every 1000 hours.

Required maintenance procedures and additional transmission information are available in the manufacturer's manuals. Refer to Specifications, *Operator and Maintenance Manuals*.

- Transmission oil and filter - replace
- Drop box (gearbox) - change oil

Programmed Maintenance Procedures

P1-3

Perform Axle Maintenance – 1000 Hours



Axle specifications require that this procedure be performed every 1000 hours.

Required maintenance procedures and additional axle information are available in the manufacturer's manuals. Refer to Specifications, *Operator and Maintenance Manuals*.

Dana Models

- Hub oil level - change
- Differential oil - change

P2-1

Test or Replace the Hydraulic Oil



Genie requires that this procedure be performed every 2000 hours.

Replacement or testing of the hydraulic oil is essential for good machine performance and service life. Dirty oil and a clogged suction strainer or hydraulic filters may cause the machine to perform poorly and continued use may cause component damage. Extremely dirty conditions may require oil changes to be performed more frequently.

Note: Before replacing the hydraulic oil, the oil may be tested by an oil distributor for specific levels of contamination to verify that changing the oil is necessary. If the hydraulic oil is not replaced at the 2000 hour inspection, test the oil quarterly. Replace the oil when it fails the test.

Note: When removing a hose assembly or fitting, the O-ring (if equipped) on the fitting and/or hose end must be replaced. All connections must be torqued to specification during installation. Refer to Specifications, *Hydraulic Hose and Fitting Torque Specifications*.

Programmed Maintenance Procedures

Testing the oil:

- 1 Complete the hydraulic oil testing with an oil distributor.
- ⦿ If the hydraulic oil passes testing at the 2000 hour maintenance interval, the oil must be tested every quarter by an oil distributor until the oil fails the test and is replaced.
- ⊗ If the hydraulic oil fails testing at the 2000 hour maintenance interval, the oil must be replaced. After the oil has been replaced, continue the scheduled quarterly maintenance inspection.

Replacing the hydraulic oil:

- 1 Remove the drain plug from the hydraulic tank and completely drain the tank into a container of suitable capacity. Refer to Specifications, *Hydraulic Fluid Capacities Specifications*.
- 2 Fill the tank with the proper hydraulic oil for your machine. Refer to Specifications, *Hydraulic Specifications*.
- 3 Prime the pump. Refer to Repair Procedure in the appropriate Service and Repair Manual for your machine, *How to Prime the Pump*.
- 4 Clean up and properly dispose of any oil that may have spilled.

Note: When replacing the hydraulic oil, it is recommended that the hydraulic tank be cleaned using a mild solvent and all hydraulic filters and strainers be replaced.

Note: Always use pipe thread sealant when installing the suction hose fittings and the drain plug.

Note: After the oil has been replaced, continue the scheduled quarterly maintenance inspection.

P3-1

Perform Engine Maintenance – 3000 Hours



Engine specifications require that this procedure be performed every 3000 hours.

Required maintenance procedures and additional engine information are available in the manufacturer's manuals. Refer to Specifications, *Engine Operator and Maintenance Manuals*.

Deutz Models

- V-rib belt and tensioning pulley - replace

Programmed Maintenance Procedures

P5-1

Perform Engine Maintenance – 5000 Hours



Engine specifications require that this procedure be performed every 5000 hours.

Required maintenance procedures and additional engine information are available in the manufacturer's manuals. Refer to Specifications, *Engine Operator and Maintenance Manuals*.

Deutz Models

TD 2.9 L4

- General overhaul

P6-1

Perform Engine Maintenance – 6000 Hours



Engine specifications require that this procedure be performed every 6000 hours.

Required maintenance procedures and additional engine information are available in the manufacturer's manuals. Refer to Specifications, *Engine Operator and Maintenance Manuals*.

Deutz Models

TCD 3.6 L4

- General overhaul

California Proposition 65



WARNING

Operating, servicing and maintaining this equipment can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. These chemicals can be emitted from or contained in other various parts and systems, fluids and some component wear by-products. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your equipment and vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your equipment or vehicle and after operation. For more information go to www.P65Warnings.ca.gov/passenger-vehicle.

Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov/diesel.