Genie®
A TEREX BRAND

Service Manual

Serial number range

GTH-4016 SR
From serial n.: 20094

GTH-4018 SR
From serial n.: 19785

Part. No. 57.4400.9203
Rev A
March 2010

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REV A SPECIFICATION

Hydraulic Specifications

Hydraulic Oil Specifications (all models)	
Hydraulic oil type	SHELL TELLUS 46 DENISON HF-1 DIN51524 part2&3
ISO viscosity grade	46
Viscosity index	147

Optional Fluids	
Biodegradable	Petro Canada Environ MV46 Statoil Hydra Way Bio Pa 32
Fire resistant	UCON Hydrolube HP-5046 Quintolubric 822
Extreme Cold Oils	Chevron Oil 5606A

Function Pump	
Type:	Fixed displacement gear pump
Flow rate @ 2300 rpm	100 L/min
Pump pressure (measured at test port TP7)	193 bar

Continuous improvement of our products is a Genie policy. Product specifications are subject to change without notice.

Main Valve	
System relief valve pressure, maximum	280 bar
Forks tilt section relief valves pressure, max.	320 bar

Steering Circuit	
Steer relief valve pressure, maximum	190 bar

Braking Circuit	
Brake pump relief valve pressure, max.	150 bar

Hydrostatic Transmission Pumps	
Setting relief valve pressure, max.	450 bar
Cutting relief valve pressure, max.	430 bar
Charge pump relief valve pressure, max.	25 bar
Auxiliary circuit relief valve pressure, max.	180 bar
Outriggers retraction line relief valve P, max.	100 bar

REV A CHECKLIST A PROCEDURES

A-2
Perform Pre-operation Inspection

Completing a Pre-operation Inspection is essential to safe machine operation. The Pre-operation Inspection is a visual inspection performed by the operator prior to each work shift. The inspection is designed to discover if anything is apparently wrong with a machine before the operator performs the function tests. The Pre-operation Inspection also serves to determine if routine maintenance procedures are required.

Complete information to perform this procedure is available in the appropriate operator's manual. Refer to the Operator's Manual on your machine.

A-3
Perform Function Tests

Completing the function tests is essential to safe machine operation. Function tests are designed to discover any malfunctions before the machine is put into service. A malfunctioning machine must never be used. If malfunctions are discovered, the machine must be tagged and removed from service.

Complete information to perform this procedure is available in the appropriate operator's manual. Refer to the Operator's Manual on your machine.

REV A CHECKLIST B PROCEDURES

B-7
Block Valves

NOTICE

Genie requires that this procedure be performed every 250 hours or quarterly, whichever comes first.

The piloted blocking valves allow to held the load in position in case of burst of a flexible hose.

1. Load a weight near the maximum payload onto the boom.
2. Raise the load some centimetres above the ground (max 10 cm). To check the valve on the telescope extension cylinder move the boom to maximum height and extend it some centimetres.
3. Loosen the oil hoses to the cylinder of which you are checking the valve with caution.
4. To check the efficiency of the block valves of the outriggers, lower them to the ground and unload the weight of the tyres without raising them. Loosen the cylinder hoses to check the efficiency of the valve.

During the check, the oil will flow out of the hoses and the load shall remain blocked in position.

B-8
Tensioning The Boom Chains (Only for GTH-4018 SR)

To tighten the boom chains, follow the instructions below:

1. Fully extend the boom
2. Retract the boom by some 20/30 cm.
3. Tighten the chain up to a maximum tension value of 50 Nm
4. Check that all chains have been equally tensioned. If not, repeat the operation described above
5. Lock the chain tensioners by means of a counter-nut and locknut.

Repair Procedures

Observe and Obey:

☑ Repair procedures shall be completed by a person trained and qualified on the repair of this machine.

☑ Immediately tag and remove from service a damaged or malfunctioning machine.

☑ Repair any machine damage or malfunction before operating the machine.

Before Repairs Start:

☑ Read, understand and obey the safety rules and operating instructions in the appropriate operator's manual on your machine.

☑ Be sure that all necessary tools and parts are available and ready for use.

☑ Read each procedure completely and adhere to the instructions. Attempting shortcuts may produce hazardous conditions.

☑ Unless otherwise specified, perform each maintenance 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

About This Section

Most of the procedures in this section should only be performed by a trained service professional in a suitably equipped workshop. Select the appropriate repair procedure after troubleshooting the problem. Perform disassembly procedures to the point where repairs can be completed. To re-assemble, perform the disassembly steps in reverse order.

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.

DANGER — Used to indicate the presence of an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING — Used to indicate the presence of a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION — Used to indicate the presence of a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.

NOTICE — Used to indicate the presence of a potentially hazardous situation which, if not avoided, may result in property damage.

O 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.

7. Remove the four screws fixing the cylinder to the 3dr section boom.
8. Pull out the cylinder from the boom section and sling it with the textile bridles connected to the bridge crane. When half cylinder is out, sling it in the center so it can be in horizontal position.
9. Extract the cylinder from the boom entirely and place it on to a bench.
10. Lock the cylinder to avoid damnage for people and things.

1-11 How to Remove the Fork Level Cylinder

1. Release the attachment.
2. Remove the screw fixing the rod pin.
3. Knock out and extract the pin using a plug of soft material (aluminium, copper, wood, etc.).
4. Fix the cylinder with a textile bridle connected to the bridge crane to support its weight.
5. Place a container of suitable size under the hydraulic piping before disconnecting

Used oils must be handled and disposed of according to local regulations. Address to legally authorised centres

6. Disconnect three hydraulic hoses from the blocking valve, then plug the disconnected connectors to prevent dust and impurities from entering the circuit.
7. Drive out the lower pin.
8. Unscrew and extract the screw fixing the pin.
9. Knock out the pin using a plug of soft material (aluminium, copper, wood, etc.) and extract it through the hole on the frame.
10. Remove the cylinder from the machine using the bridge crane.

REV A HYDRAULIC PUMPS

5-5 How to Test the Auxiliary Gear Pump

1. Insert the 0-60psi manometer in the TP4 port
2. Start the engine.
3. Increase the engine up to 2000rpm
4. Close the valve placed near to the relief valve.
5. Check the pressure in the manometer. It must be 180psi.
6. If not, set the relief valve.
7. Open the valve.

Settings

Observe and Obey:

☑ Repair procedures shall be completed by a person trained and qualified on the repair of this machine.

☑ Immediately tag and remove from service a damaged or malfunctioning machine.

☑ Repair any machine damage or malfunction before operating the machine.

Before Repairs Start:

☑ Read, understand and obey the safety rules and operating instructions in the appropriate operator's manual on your machine.

☑ Be sure that all necessary tools and parts are available and ready for use.

☑ Read each procedure completely and adhere to the instructions. Attempting shortcuts may produce hazardous conditions.

☑ Unless otherwise specified, perform each maintenance procedure with the machine in the following configuration:

- Machine parked on a firm, level surface
- Boom in the stowed position
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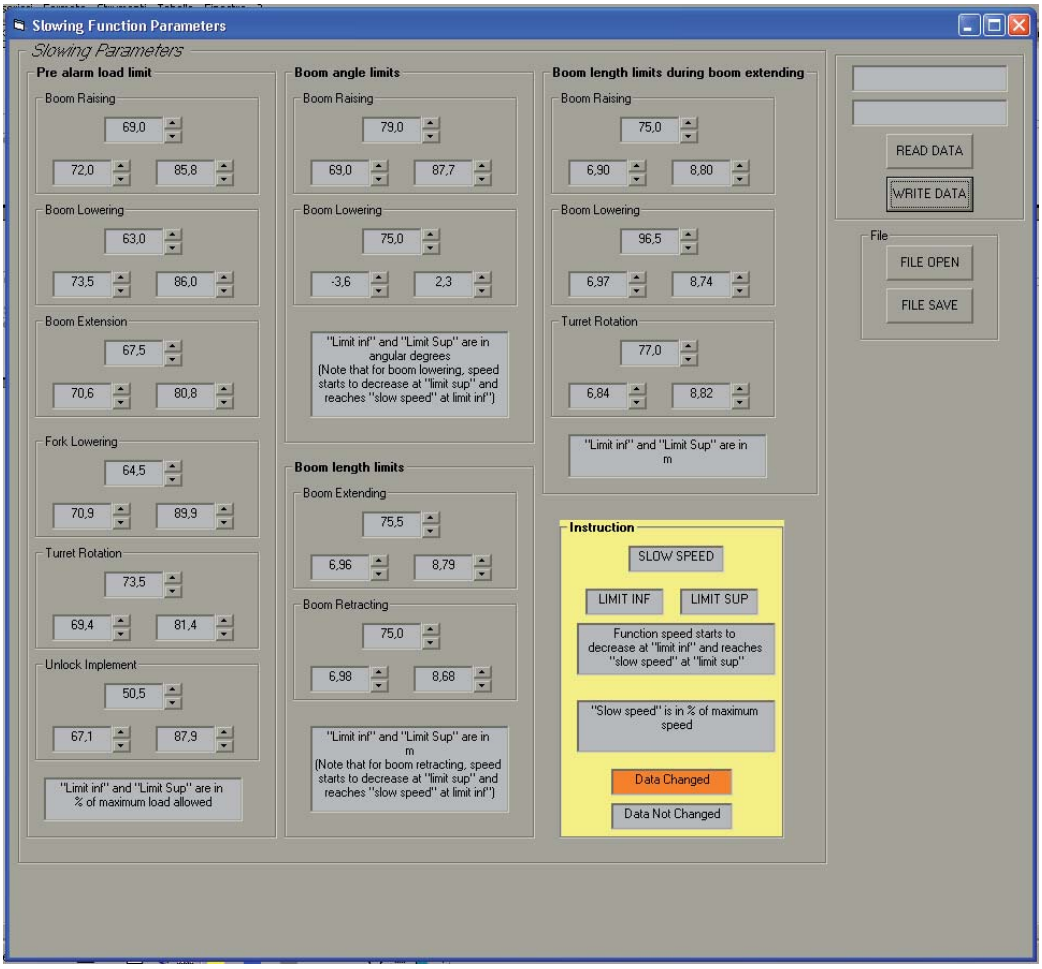
REV A SETTINGS

After opening a file or reading from display unit, all slowing parameters will be displayed



Schematics

REV A

Observe and Obey:

☑ Troubleshooting and repair procedures shall be completed by a person trained and qualified on the repair of this machine.

☑ Immediately tag and remove from service a damaged or malfunctioning machine.

☑ Repair any machine damage or malfunction before operating the machine.

Before Troubleshooting:

☑ Read, understand and obey the safety rules and operating instructions in the appropriate operator's manual on your machine.

☑ Be sure that all necessary tools and test equipment are available and ready for use.

About This Section

There are two groups of schematics in this section. An illustration legend precedes each group of drawings.

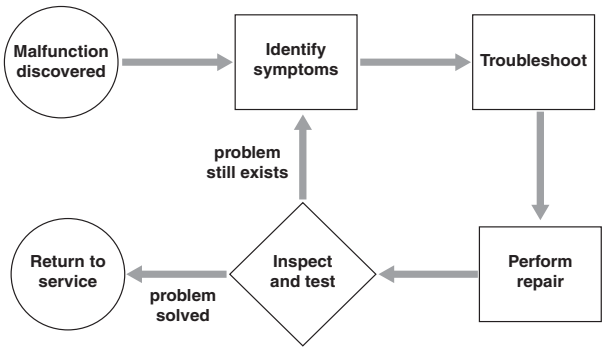
Electrical Schematics

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

Hydraulic Schematics

WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

General Repair Process



Electrical Schematic -
GTH-4016SR and GTH-4018SR

REV A