Genie®
A TEREX COMPANY

Service and Repair Manual

SX™-180

Serial Number Range
from SX180H-745

This manual includes:
Repair procedures
Fault Codes
Electrical and
Hydraulic Schematics

For detailed maintenance procedures, refer to the appropriate Maintenance Manual for your machine.

Part No. 1300670GT
Rev A
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Table of Contents

Introduction	**Introduction**	**ii**
	Important Information	ii
	Find a Manual for this Model	ii
	Revision History	iii
	Serial Number Legend	iv
Section 1	**Safety Rules**	**v**
	General Safety Rules	v
Section 2	**Specifications**	**1**
	Machine Specifications	1
	Performance Specifications	2
	Hydraulic Oil Specifications	3
	Hydraulic Component Specifications	6
	Manifold Component Specifications	7
	Deutz TD2011L04i Engine Specifications	8
	Deutz TD 2.9 Engine Specifications	9
	Perkins 1104D-44T Engine Specifications	10
	Perkins 854F-34T Engine Specifications	12
	Machine Torque Specifications	13
	Hydraulic Hose and Fitting Torque Specifications	14
	Torque Procedure	15

MidWestTech | Terex Genie SX-180 Telescopic Boom Lift Service Manual | Publication 130... Order the manual at mid-west-tech.com >

Table of Contents

Section 3 **Repair Procedures** **17**

Introduction 17

Platform Controls **19**

1-1 Platform Circuit Board 19

How to Remove the LED Circuit Board 20

1-2 Joysticks 21

How to Reset a Proportional Valve Coil Default 24

How to Set the Function Thresholds and Default Functions Speeds 25

How to Adjust the Function Speeds 27

How to Adjust the Function Ramp Rate Setting 27

Platform Components **28**

2-1 Platform 28

2-2 Platform Leveling Cylinder 29

2-3 Platform Rotator 30

How to Bleed the Platform Rotator 31

2-4 Platform Level Sensor 32

2-5 Platform Overload System 33

How to Calibrate the Platform Overload System 33

How to Replace the Platform Overload Load Cell 35

2-6 Platform Overload Recovery Message 35

Jib Boom Components **37**

3-1 Jib Boom 38

3-2 Jib Boom Lift Cylinder 39

3-3 How to Remove the Jib Boom Bellcrank 40

3-4 Jib Boom Bellcrank Angle Sensor 41

MidWestTech | Terex Genie SX-180 Telescopic Boom Lift Service Manual | Publication 130... Order the manual at mid-west-tech.com >

Table of Contents

Boom Components **43**
4-1 Cable Track 44
4-2 Primary Boom 46
4-3 Primary Boom Lift Cylinder 52
4-4 Extension Cylinder 54
4-5 Boom Extend and Retract Cables 58
How to Replace the Boom Extend/Retract Cables 62
4-6 Boom Internal Cable Track 65
4-7 Primary Boom Angle Sensor 67
4-8 Boom Length Sensor 70

Engines **72**
5-1 RPM Adjustment 72
5-2 Flex Plate 72
How to Install the Flex Plate 73

Ground Controls **74**
6-1 Bypass/Recovery Key Switch 74
6-2 Circuit Boards 76
6-3 Membrane Decal 78
6-4 Full Machine Calibration 79

Display Module **80**

Hydraulic Pumps **87**
7-1 Function Pump 87
How to Prime the Function Pump 88
How to Adjust the Function Pump Standby Pressure 88
How to Adjust the Function Pump Pressure Compensator 90
7-2 Drive Pump 91
How to Prime the Drive Pump 93

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Specifications

Hydraulic Hose and Fitting Torque Specifications

Your machine is equipped with Parker Seal-Lok™ ORFS or 37° JIC fittings and hose ends. Genie 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.

Seal-Lok™ Fittings

(hose end - ORFS)

SAE Dash Size	Torque
-4	18 ft-lbs / 25 Nm
-6	30 ft-lbs / 41 Nm
-8	40 ft-lbs / 55 Nm
-10	60 ft-lbs / 81 Nm
-12	85 ft-lbs / 115 Nm
-16	110 ft-lbs / 150 Nm
-20	150 ft-lbs / 205 Nm
-24	230 ft-lbs / 315 Nm

JIC 37° Fittings

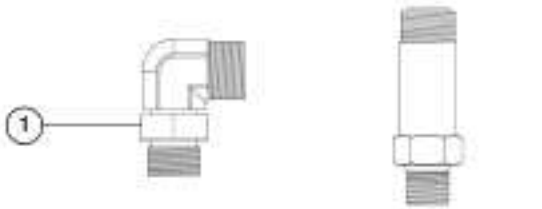
(swivel nut or hose connection)

SAE Dash Size	Thread Size	Flats
-4	7/16-20	2
-6	9/16-18	1 1/2
-8	3/4-16	1 1/2
-10	7/8-14	1 1/2
-12	1 1/16-12	1 1/4
-16	1 5/16-12	1
-20	1 5/8-12	1
-24	1 7/8-12	1

SAE O-ring Boss Port

(tube fitting - installed into Aluminum)
(all types)

SAE Dash Size	Torque
-4	14 ft-lbs / 19 Nm
-6	23 ft-lbs / 31,2 Nm
-8	36 ft-lbs / 54,2 Nm
-10	62 ft-lbs / 84 Nm
-12	84 ft-lbs / 114 Nm
-16	125 ft-lbs / 169,5 Nm
-20	151 ft-lbs / 204,7 Nm
-24	184 ft-lbs / 249,5 Nm



Adjustable Fitting

Non-adjustable fitting

1 jam nut

SAE O-ring Boss Port

(tube fitting - installed into Steel)

SAE Dash Size		Torque
-4	ORFS / 37° (Adj) ORFS (Non-adj) 37° (Non-adj)	15 ft-lbs / 20,3 Nm 26 ft-lbs / 35,3 Nm 22 ft-lbs / 30 Nm
-6	ORFS (Adj / Non-adj) 37° (Adj / Non-adj)	35 ft-lbs / 47,5 Nm 29 ft-lbs / 39,3 Nm
-8	ORFS (Adj / Non-adj) 37° (Adj / Non-adj)	60 ft-lbs / 81,3 Nm 52 ft-lbs / 70,5 Nm
-10	ORFS (Adj / Non-adj) 37° (Adj / Non-adj)	100 ft-lbs / 135,6 Nm 85 ft-lbs / 115,3 Nm
-12	(All types)	135 ft-lbs / 183 Nm
-16	(All types)	200 ft-lbs / 271,2 Nm
-20	(All types)	250 ft-lbs / 339 Nm
-24	(All types)	305 ft-lbs / 413,5 Nm

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Manifolds

8-11 Valve Coils

How to Test a Coil

A properly functioning coil provides an electromotive force which operates the solenoid valve. Critical to normal operation is continuity within the coil that provides this force field.

Since coil resistance is sensitive to temperature, resistance values outside specification can produce erratic operation. When coil resistance decreases below specification, amperage increases. As resistance rises above specification, voltage increases.

While valves may operate when coil resistance is outside specification, maintaining coils within specification will help ensure proper valve function over a wide range of operating temperatures.

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

1 Tag and disconnect the wiring from the coil to be tested.

2 Test the coil resistance.

⊙ Result: The resistance should be within specification, plus or minus 30%.

⊠ Result: If the resistance is not within specification, plus or minus 30%, replace the coil.

Valve Coil Resistance Specification

Note: The following coil resistance specifications are at an ambient temperature of 68°F / 20°C. As valve coil resistance is sensitive to changes in air temperature, the coil resistance will typically increase or decrease by 4% for each 18°F / 10°C that your air temperature increases or decreases from 68°F / 20°C.

Valve Coil Resistance Specification	
Function Manifold	
schematic item L	4.5Ω@12v
schematic item K	5.4Ω@12v
schematic item J, N, T, U	7.1Ω@12v
schematic item W, X	6.2Ω@12v
schematic item M	8.8Ω@12v
Steer Manifold	
schematic item BT, BU	5.6Ω@12v
schematic item BF, BH, BJ, BL	7.2@12v
Traction Manifold	
schematic item AX, AY	7.2Ω@12v
Jib Manifold	
schematic item EB, ED	6.2Ω@10v
Platform Manifold	
schematic item DB, DD, DG	6.2Ω@10v
Function Enable Manifold	
schematic item A	7.2Ω@12v
Generator Manifold	
schematic item FB, FD	7.1Ω@12v

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Fault Codes



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.
- ☑ Unless otherwise specified, perform each procedure with the machine in the following configuration:
  - Machine parked on a firm, level surface
  - Key switch in the off position with the key removed
  - The red Emergency Stop button in the off position at both the ground and platform controls
  - Wheels chocked
  - All external AC power supply disconnected from the machine
  - Boom in the stowed position
  - Turntable secured with the turntable rotation lock
  - Welder disconnected from the machine (if equipped with the weld cable to platform option)

Before Troubleshooting:

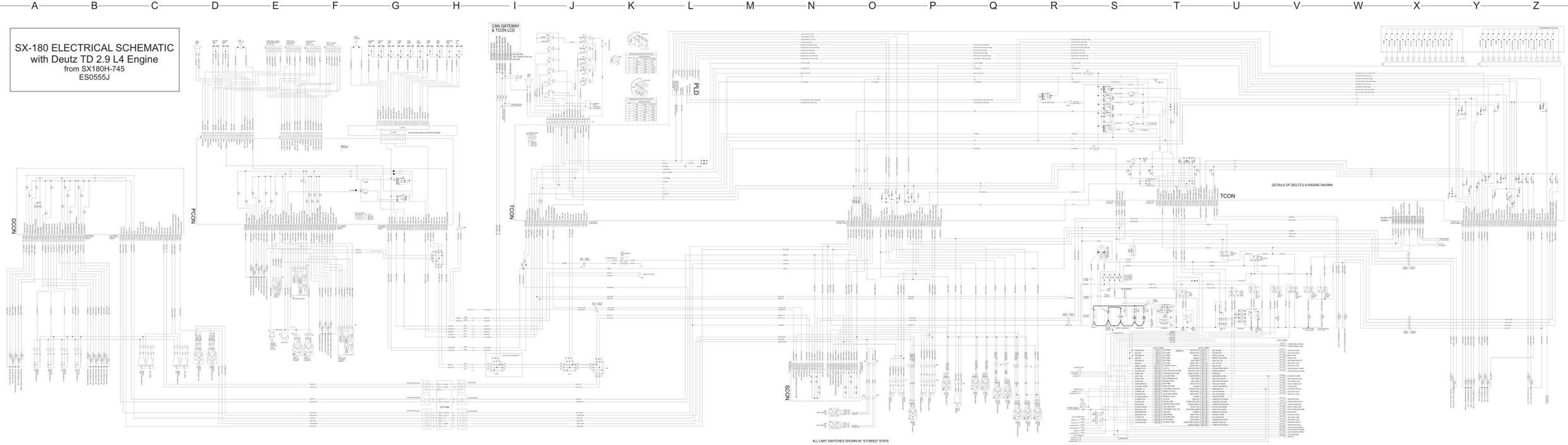
- ☑ Read, understand and obey the safety rules and operating instructions in the appropriate operator's manual on your machine.
- ☑ Be sure that all necessary tools and test equipment are available and ready for use.
- ☑ Read each appropriate fault code thoroughly. Attempting short cuts may produce hazardous conditions.
- ☑ Be aware of the following hazards and follow generally accepted safe workshop practices.

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

Note: Two persons will be required to safely perform some troubleshooting procedures.

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SX-180 ELECTRICAL SCHEMATIC
with Deutz TD 2.9 L4 Engine
from SX180H-745
ES0555J



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