A TEREX COMPANY

Service and Repair Manual

Serial Number Range

S-100HD
S-120HD

from S100HD14D - 200
to S-100HD16D-229

from S120HD14D - 201
to S-120HD16D-229

from S-100HDD-230
from S-120HDD-230

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. 1268495
Rev A1
September 2016

MidWestTech | Terex Genie S-100HD, S-120HD Telescopic Boom Lift Service Manual | Publication 1268495
Order the manual at mid-west-tech.com >

Table of Contents

Introduction

Important Information ii
Find a Manual for this Model ii
Revision History iii
Serial Number Legend iv

Section 1 **Safety Rules**

General Safety Rules v

Section 2 **Specifications**

Machine Specifications, S-100HD and S-120HD Models ..... 2 - 1
Performance Specifications, S-120HD Models ..... 2 - 2
Performance Specifications, S-100HD Models ..... 2 - 3
Hydraulic Specifications ..... 2 - 5
Hydraulic Component Specifications ..... 2 - 6
Deutz Engine TD2011L04i Specifications ..... 2 - 7
Cummins Engine B3.3T C80 Specifications ..... 2 - 9
Machine Torque Specifications ..... 2 - 10
Manifold Plug Torque Specifications ..... 2 - 10
Hydraulic Hose and Fitting Torque Specifications ..... 2 - 11
Torque Procedure ..... 2 - 12
SAE and Metric Fasteners Torque Charts ..... 2 - 14

MidWestTech | Terex Genie S-100HD, S-120HD Telescopic Boom Lift Service Manual | Pu... Order the manual at mid-west-tech.com >

TABLE OF CONTENTS

Section 3 **Repair Procedures**

Introduction ..... 3 - 1

Display Module ..... 3 - 2

Platform Controls

1-1 Circuit Boards ..... 3 - 8

1-2 Membrane Decal ..... 3 - 9

1-3 Joystick Controllers ..... 3 - 10

Platform Components

2-1 Platform ..... 3 - 17

2-2 Platform Leveling Cylinder ..... 3 - 17

2-3 Platform Rotator ..... 3 - 19

2-4 Platform Level Sensor ..... 3 - 20

2-5 Platform Overload System ..... 3 - 21

2-6 Platform Overload Recovery Message (Software V3.14 and later) ..... 3 - 24

Boom Components

4-1 Cable Track ..... 3 - 26

4-2 Boom ..... 3 - 29

4-3 Boom Lift Cylinder ..... 3 - 40

4-4 Extension Cylinders ..... 3 - 42

4-5 Boom Extend/Retract Cables ..... 3 - 46

MidWestTech | Terex Genie S-100HD, S-120HD Telescopic Boom Lift Service Manual | Pu... Order the manual at mid-west-tech.com >

TABLE OF CONTENTS

Section 3 **Repair Procedures**, continued

Engines

6-1 RPM Adjustment ..... 3 - 50

6-2 Flex Plate ..... 3 - 50

6-3 Oil Pressure and Coolant Temperature Sending Units, Cummins and Perkins Models ..... 3 - 52

6-4 Oil Pressure and Temperature Sending Units, Deutz Models ..... 3 - 52

Ground Controls

7-1 Circuit Boards ..... 3 - 53

7-2 Membrane Decal ..... 3 - 54

7-3 Control Relays ..... 3 - 55

Limit Switches

8-1 Limit Switches ..... 3 - 58

8-2 Limit Switch and Level Sensor Locations ..... 3 - 61

8-3 Limit Switch Functions ..... 3 - 62

Hydraulic Pumps

9-1 Function Pumps ..... 3 - 65

9-2 Drive Pump ..... 3 - 66

9-3 Auxiliary Pump ..... 3 - 69

MidWestTech | Terex Genie S-100HD, S-120HD Telescopic Boom Lift Service Manual | Pu... Order the manual at mid-west-tech.com >

Specifications

Machine Specifications, S-100HD and S-120HD Models

Stowed dimensions	S-100HD	S-120HD
Length, transport position	40 ft 8 in 12.4 m	40 ft 8 in 12.4 m
Length, stowed	43 ft 0 in 13.1 m	43 ft 0 in 13.1 m
Width, axles retracted	8 ft 2 in 2.49 m	8 ft 2 in 2.49 m
Width, axles extended	11 ft 3.35 m	11 ft 3.35 m
Height, stowed maximum	10 ft 3 in 3.13 m	10 ft 6 in 3.2 m
Weight	39,760 lbs 18,035 kg	45,300 lbs 20,548 kg
Ground clearance, axle	14 in 35.6 cm	14 in 35.6 cm
Tires and wheels	**S-100HD**	**S-120HD**
Tire size, solid rubber	365/65D22.5	445/65D22.5
Overall tire diameter	43 in 1.09 m	46.5 in 1.18 m
Wheel diameter	30.4 in 77.3 cm	33.8 in 85.9 cm
Wheel width	14.5 in 36.8 cm	17.8 in 45 cm
Wheel lugs		10 @ 3/4-16
Lug nut torque, dry		420 ft-lbs 570 Nm
Lug nut torque, lubricated		320 ft-lbs 434 Nm

Operational dimensions	S-100HD	S-120HD
Platform height, maximum	100 ft 30.48 m	120 ft 36.58 m
Working height, maximum	106 ft 32.48 m	126 ft 38.58 m
Horizontal reach maximum	73 ft 22.25 m	73 ft 22.25 m
Maximum load capacity	750 lb 340 kg	750 lb 340 kg
Turntable tailswing, axles retracted	5 ft 6 in 1.68 m	5 ft 6 in 1.68 m
Turntable tailswing axles extended	4 ft 1.22 m	4 ft 1.22 m
Wheelbase	12 ft 3.66 m	12 ft 3.66 m
Turning radius, outside, axles retracted (2WD)	46 ft 5 in 14.15 m	62 ft 3 in 18.98 m
Turning radius, inside, axles retracted (2WD)	36 ft 6 in 11.13 m	42 ft 4 in 12.90 m
Turning radius, outside, axles extended (2WD)	30 ft 6 in 9.30 m	32 ft 1 in 9.78 m
Turning radius, inside, axles extended (2WD)	16 ft 10 in 5.13 m	18 ft 6 in 5.62 m
uming radius, outside, axles retracted (4WD)	21 ft 7 in 6.58 m	22 ft 2 in 6.75 m
Turning radius, inside, axles retracted (4WD)	13 ft 7 in 4.14 m	13 ft 2 in 4.01 m
Turning radius, outside, axles extended (4WD)	19 ft 10 in 6.05 m	18 ft 10 in 5.74 m
Turning radius, inside, axles extended (4WD)	9 ft 2.74 m	8 ft 6 in 2.59 m
Turntable rotation (degrees)		360° continuous
Platform rotation		160°
Maximum allowable side force (ANSI and CSA)		150 lbs 667 N
Maximum allowable side force (CE)		90 lbs 400 N
Controls		12V DC proportional

MidWestTech | Terex Genie S-100HD, S-120HD Telescopic Boom Lift Service Manual | Pu... Order the manual at mid-west-tech.com >

CONTROL SYSTEM FAULT CODES

Fault Diagnostics - Control System

How to Read Control System Fault Codes

Note: Initial fault testing occurs at power-up.

Faults are abnormal conditions that exist due to component failure or System misuse. CPU, memory, LCD, LED, limited joystick and limited operator switch testing is done on power-up. If an operator switch is depressed on power-up, the display should show and error and not allow any machine functions.

Releasing the switch will clear the error and allow all machine functions. The joystick operates similarly.

All other fault testing is done continuously.

1 When a fualt is diagnosed, the PCON fault indicator will flash and a fault message will be displayed on the TCON LCD. The message will contain the fault source and type.

2 Additional information, including the occurrence counter and a time-stamp is available with a PC, connected to one of the RS232 ports. Up to 16 unique fault messages can be saved. Each fault is saved with the device identity, fault type, engine hour time-stamp and an 8-bit occurrence counter.

3 The fault code table on the following pages lists the functions or components monitored by the system.

MidWestTech | Terex Genie S-100HD, S-120HD Telescopic Boom Lift Service Manual | Pu... Order the manual at mid-west-tech.com >

Schematics



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 printed in the 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.

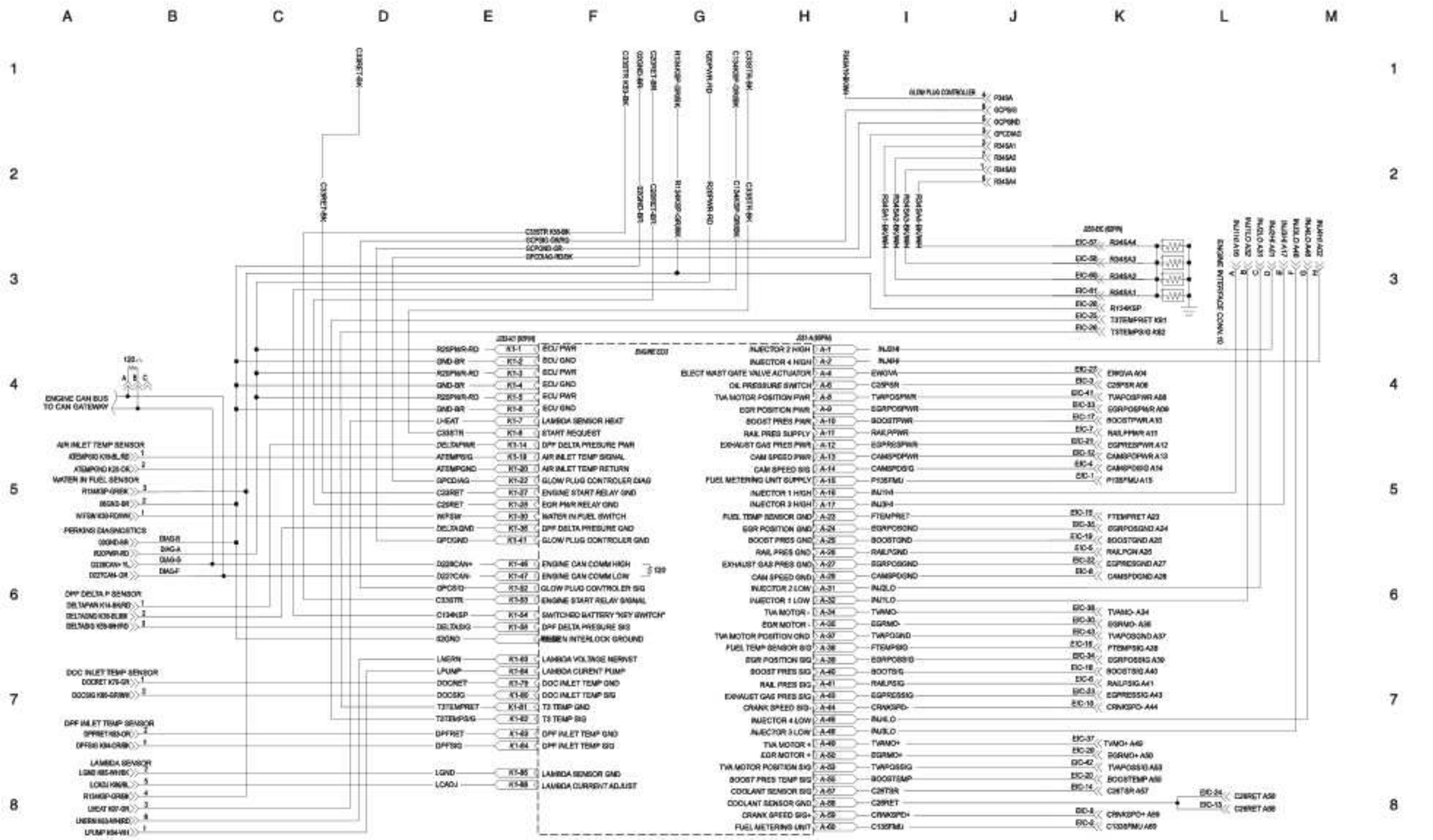
Electrical Schematics

⚠WARNING Electrocution/burn 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.

MidWestTech | Terex Genie S-100HD, S-120HD Telescopic Boom Lift Service Manual | Pu... Order the manual at mid-west-tech.com >



MidWestTech | Terex Genie S-100HD, S-120HD Telescopic Boom Lift Service Manual | Publication 1268495 Order the manual at mid-west-tech.com >