A TEREX COMPANY

Service and Repair Manual

Z®-45 XC™

Z®-45 HF

Serial Number Range

from Z4525XCF-101
from Z4525XCM-101

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. 1268197GT
Rev D
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Table of Contents

Introduction	**Introduction**	**ii**
	Important Information	ii
	Find a Manual for this Model	ii
	Revision History	iii
Section 1	**Safety Rules**	**iv**
	General Safety Rules	iv
Section 2	**Specifications**	**1**
	Machine Specifications	1
	Performance Specifications	2
	Hydraulic Oil Specifications	2
	Hydraulic Component Specifications	5
	Deutz D 2.9 L4 Engine Specifications	7
	Deutz D2011 L03i Engine Specifications	7
	Perkins 404D-22 Engine Specifications	9
	Perkins 404F-E22T Engine Specifications	10
	Ford MSG-425 EFI Engine Specifications	11
	Machine Torque Specifications	12
	Hydraulic Hose and Fitting Torque Specifications	13
	Torque Procedure	14

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Table of Contents

Section 3 **Repair Procedures** **16**

Introduction 16

Platform Controls **18**

1-1 ALC-500 Circuit Board 18

1-2 Joysticks 19

How to Adjust the Joystick Max-out Setting 19

How to Adjust the Joystick Ramp Rate Setting 20

How to Adjust the Joystick Threshold Setting 22

Platform Components **23**

2-1 Platform Leveling Slave Cylinder 23

How to Bleed the Slave Cylinder 24

2-2 Platform Rotator 24

2-3 Platform Overload System 25

How to Replace the Platform Overload Load Cell 27

2-4 Platform Overload Recovery Fault 27

Jib Boom Components **28**

3-1 Jib Boom 28

3-2 Jib Boom Lift Cylinder 29

Primary Boom Components **31**

4-1 Cable Track 31

How to Remove the Cable Track 31

How to Repair the Primary Boom Cable Track 33

4-2 Primary Boom 33

How to Disassemble the Primary Boom 35

4-3 Primary Boom Lift Cylinder 36

4-4 Primary Boom Extension Cylinder 37

4-5 Platform Leveling Master Cylinder 38

Secondary Boom Components **39**

5-1 Secondary Boom 40

5-2 Secondary Boom Lift Cylinders 44

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Table of Contents

Engines **46**
6-1 RPM Adjustment - Deutz D2011L03i Models 46
6-2 RPM Adjustment - Perkins 404D-22 Models 46
6-3 Flex Plate 46
How to Install the Flex Plate 48
How to install the Pump and Bell Housing Assembly 49
6-4 Ford MSG-425 Engine Fault Codes 50
6-5 Engine Fault Codes - Deutz D 2.9 L4 and Perkins 404F-22 Models 51

Hydraulic Pumps **52**
7-1 Lift/Steer Pump 52
7-2 Drive Pump 53
How to Prime the Pump 54

Manifolds **55**
8-1 Function Manifold Components - CE 55
8-1 Function Manifold Components - ANSI / CSA 58
8-2 Valve Adjustments - Function Manifold 63
How to Adjust the System Relief Valve 63
How to Adjust the Secondary Boom Down Relief Valve 63
8-3 Jib Boom / Platform Rotate Manifold Components 64
8-4 Turntable Rotation Manifold Components 65
8-5 Directional Valve Manifold Components 66
How to Set Up the Directional Valve Linkage 67
8-6 Traction Manifold Components, 4WD 69
8-7 Valve Adjustments, 4WD Traction Manifold 71
8-8 Hydraulic Generator Manifold Components, 2.2kW 72
8-8.1 Generator Manifold Components 73
8-9 Valve Coils 74
How to Test a Coil Diode 74

Turntable Rotation Components **76**
9-1 Turntable Rotation Assembly 76

Axle Components **77**
10-1 Oscillating Axle Cylinders 77

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Specifications

Perkins 404F-E22T Engine

Displacement	134 cu in 2.2 liters
Number of cylinders	4
Bore and Stroke	3.31 x 3.94 inches 84 x 100 mm
Horsepower	48 @ 2800 rpm 38 kW @ 2500 rpm
Firing order	1 - 3 - 4 - 2
Low idle	1500 rpm 313 Hz
High idle	2500 rpm 441.7 Hz
Compression ratio	18:1
Compression pressure	426 psi 29.4 bar
Pressure (psi) of lowest cylinder must be within 50 psi / 3.45 bar of highest cylinder	
Governor	electronic
Valve Clearance, cold	
Intake	0.008 in 0.2 mm
Exhaust	0.008 in 0.2 mm
Lubrication system	
Oil pressure (@ 2000 rpm)	40 to 60 psi 1.4 to 3 bar
Oil capacity (including filter)	9.4 - 11.2 quarts 8.9 - 10.6 liters
Oil viscosity requirements	
Below 86°F / 30°C	5W-20
-4°F to 104°F / -20°C to 40°C	10W-30
Above 14°F / -10°C	15W-40
Unit ships with 15W-40. Extreme operating temperatures may require the use of alternative engine oils. For oil requirements, refer to the Engine Operator Manual for your engine.	
Oil pressure sending unit	
Oil pressure switch point	14.2 psi 1 bar
Fuel injection system	
Injection pump make	Zexel
Injection pressure	2133 psi 147 bar
Fuel requirement	
For fuel requirements, refer to the engine Operator Manual for your engine.	
Alternator output	85A @ 12V DC
Fan belt deflection	3/8 in 10 mm
Starter motor	
Current draw, no load	140A - 200A
Brush length, new	0.7480 in 19 mm
Brush length, minimum	0.5 in 12.7 mm
Battery	
Type	12V DC
Quantity	1
Cold cranking ampere	1000A
Reserve capacity @ 25A rate	200 minutes
Engine coolant	
Capacity	7.7 quarts 7.3 liters
Coolant temperature switch	
Temperature switch point	221° F 105° C

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Fault Code Display - Deutz and Perkins Models

How to Retrieve Active Engine Fault Codes - Deutz D 2.9 L4 and Perkins 404F-E22T Models

The ECM constantly monitors the engine by the use of sensors on the engine. The ECM also uses signals from the sensors to initiate sequential fuel injection and make constant and instantaneous changes to ignition timing, fuel delivery and throttle position to maintain the engine's running condition at its highest efficiency while at the same time keeping exhaust emissions to a minimum. When a sensor fails or returns signals that are outside of set parameters, the ECM will store a fault code in memory that relates to the appropriate sensor. One or more fault LED's will illuminate on the display located at the ground control box. The active fault code will also be displayed on the LCD screen.

Note: The Perkins 404F-E22T is equipped with an engine fault LED located at the platform control box.

If an engine fault occurs that does not result in an engine shutdown, the engine rpm will go into limp home mode resulting in the loss of high rpm.

When operating from the platform, if the red Emergency Stop button is pushed in, the active fault code(s) will be erased from the display.

Start the engine from the ground control box and operate various boom functions to verify that an active engine fault occurs and is shown on the display.

Note: All faults are stored in the Previous Fault history menu. These faults will not be erased when corrective action has been completed.

With an active fault and the engine running: (preferred method)

1 At the ground controls, activate the auxiliary pump toggle switch to shut the engine off.

Note: Do not push in the red Emergency Stop button or turn the key switch to the off position.

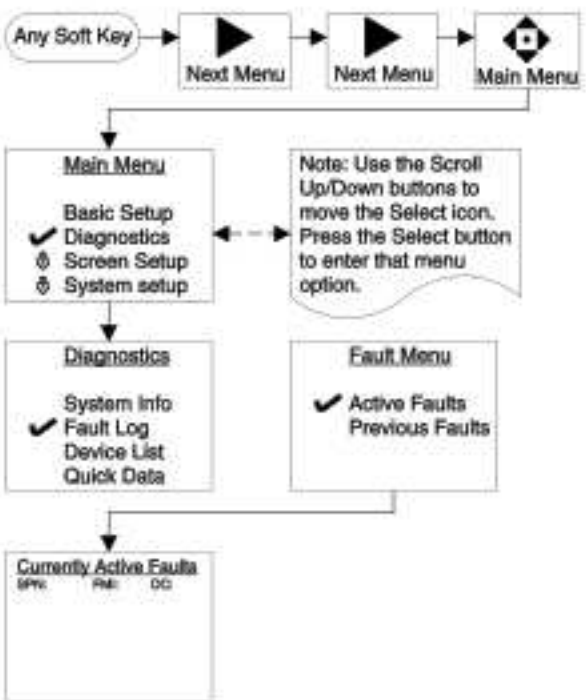
2 Press any soft key below the display.

3 Use the scroll up / down keys to check for multiple engine fault codes.

With the engine not running:

1 At the ground controls, turn the key switch to ground controls and pull out the red Emergency Stop button.

2 Navigate to the Active Fault Menu and use the scroll up / down keys to check for multiple engine fault codes.



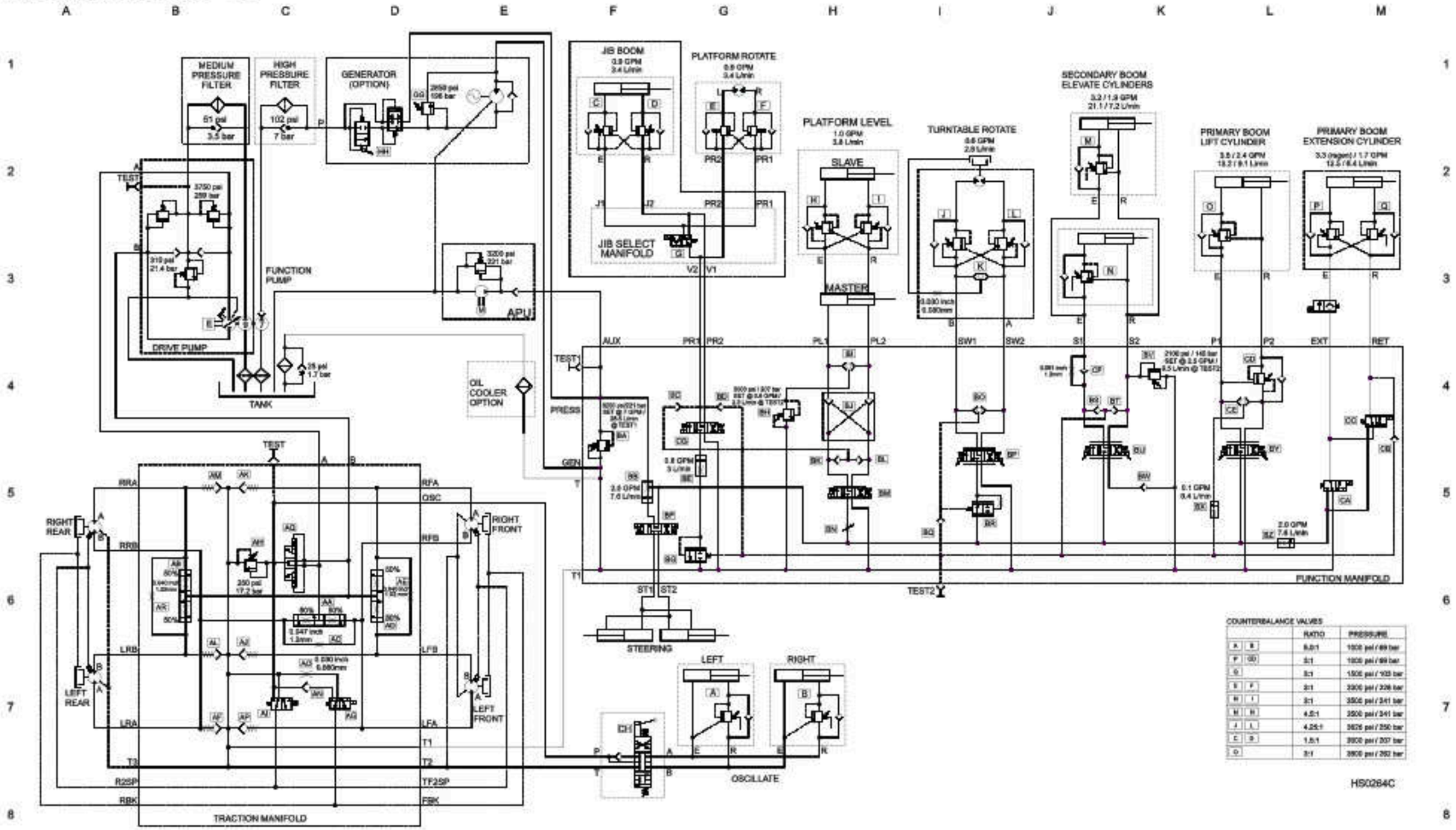
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Electrical Schematic, Options Wiring Diagram



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Hydraulic Schematic - CE



COUNTERBALANCE VALVES

		RATIO	PRESSURE
A	B	5.0:1	1000 psi / 69 bar
F	GD	5:1	1000 psi / 69 bar
G		3:1	1500 psi / 103 bar
E	F	3:1	3300 psi / 228 bar
H	I	3:1	3500 psi / 241 bar
M	N	4.5:1	3500 psi / 241 bar
J	L	4.25:1	3625 psi / 250 bar
C	D	1.5:1	3800 psi / 207 bar
O		3:1	3800 psi / 262 bar

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