A TEREX COMPANY

Service and Repair Manual

Z®-51/30J

Serial Number Range

from Z513014B-1201 to Z513016M-1999

from Z5130M-2000

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. 1268553GT
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Specifications

Hydraulic Specification

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
Water content, maximum	250 ppm
Recommended Hydraulic Fluid	
Hydraulic oil type	Chevron Rando HD Premium
Viscosity grade	32
Viscosity index	200
Optional Hydraulic Fluids	
Mineral based	Shell Tellus S2 V 32 Shell Tellus S2 V 46 Shell Tellus S4 VX 32 Shell Shell Donax TG (Dexron III) Chevron 5606A
Biodegradable	Petro Canada Environ MV 46
Fire resistant	UCON Hydrolube HP-5046

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.

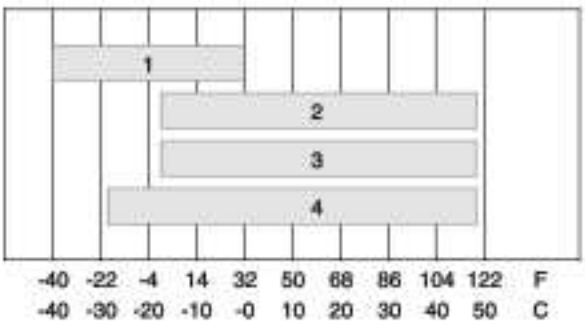
Note: Extended machine operation can cause the hydraulic fluid temperature to increase beyond it's maximum allowable range. If the hydraulic fluid temperature consistently exceeds 200°F / 90°C an optional oil cooler may be required.

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

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Control System Fault Codes

Control System

How to Retrieve Control System Fault Codes

At least one fault code is present when the alarm at the platform controls produces two short beeps every 30 seconds for 10 minutes.

Perform this procedure with the engine off, the key switch turned to platform controls and the red Emergency Stop button pulled out to the on position at both the ground and platform controls.

1 Open the platform control box lid.

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

2 Locate the red and yellow fault LEDs on the ALC-500 circuit board inside the platform control box. Do not touch the circuit board.

NOTICE Component damage hazard. Electrostatic discharge (ESD) can damage printed circuit board components. Maintain firm contact with a metal part of the machine that is grounded at all times when handling printed circuit boards OR use a grounded wrist strap.

3 **Determine the error source:** The red LED indicates the error source and will flash two separate codes. The first code will indicate the first digit of the two digit code, flashing once per second. It will then pause for 1.5 seconds and flash the second digit once per 0.5 second.

Note: When the red LED is flashing the code, the yellow LED will be on solid.

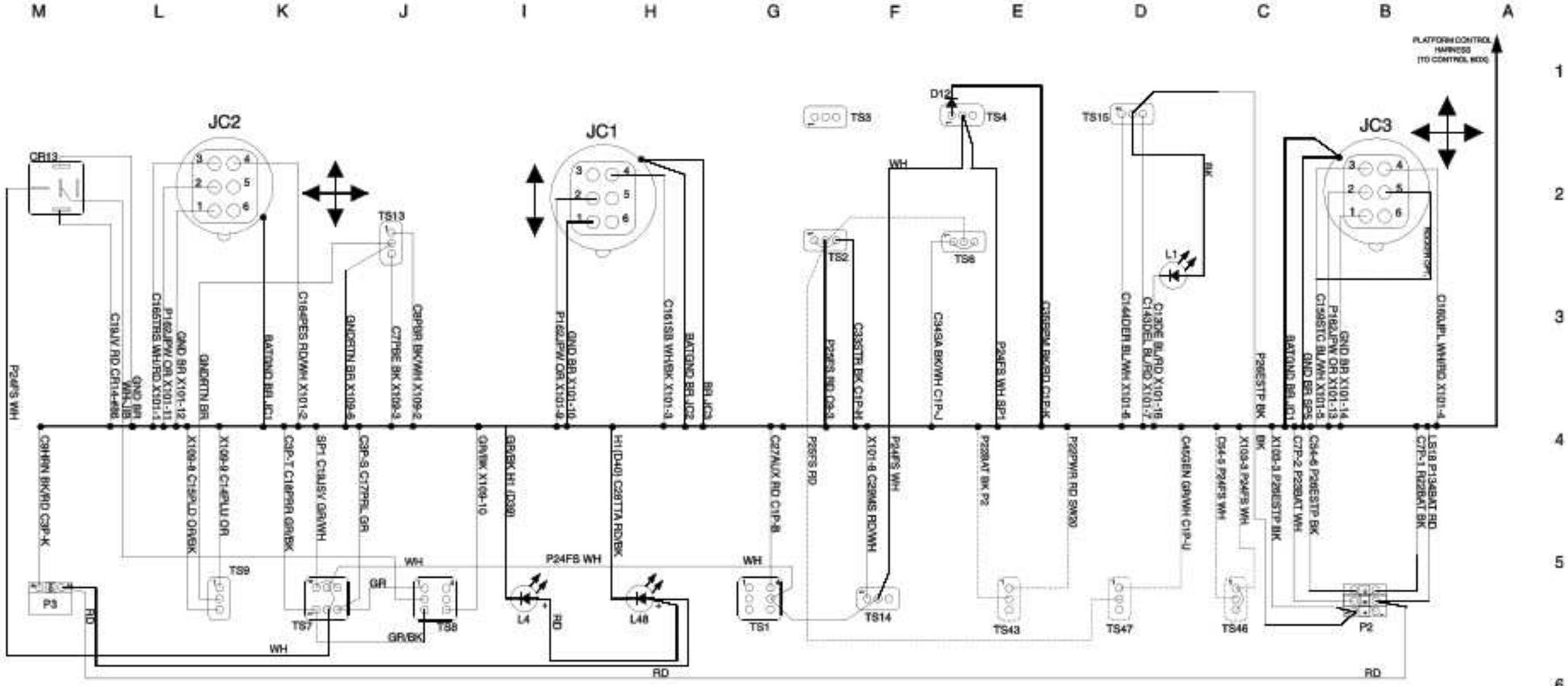
4 **Determine the error type:** The yellow LED indicates the error type and will flash two separate codes. The first code will indicate the first digit of the two digit code, flashing once per second. It will then pause for 1.5 seconds and flash the second digit once per 0.5 second.

Note: When the yellow LED is flashing the code, the red LED will be on solid.

5 Use the fault code table on the following pages to aid in troubleshooting the machine by pinpointing the area or component affected.

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Platform Control Box Switch Panel Wiring Diagram (CE)



COMPONENT INDEX

C1	JIB TIMER CAPACITOR
C1,C2	BOOM CONTROL CABLE CONNECTORS
C7	POWER TO PLATFORM, 12V CABLE CONNECTOR
C9	FOOTSWITCH INPUT CONNECTOR
C54	OPTIONS CONNECTOR
CR13	JIB RELAY
CR14	JIB RELAY
CR27	BRAKE CIRCUIT RELAY (LIFT/DRIVE OPTION)
CR30	LIMIT SWITCH RELAY (LIFT/DRIVE OPTION)
H1	TILT/LOAD SENSE ALARM
JC1	BOOM PROPORTIONAL JOYSTICK; SECONDARY BOOM UP/DOWN
JC2	BOOM PROPORTIONAL JOYSTICK; PRIMARY UP/DOWN, TURNTABLE ROTATE
JC3	DRIVE PROPORTIONAL JOYSTICK
L1	DRIVE ENABLE LED
L4	PLATFORM OVERLOAD LED
L48	TILT ALARM LED (OPTION)
LS18	QE LIMIT SWITCH
P2	EMERGENCY STOP BUTTON
P3	HORN BUTTON

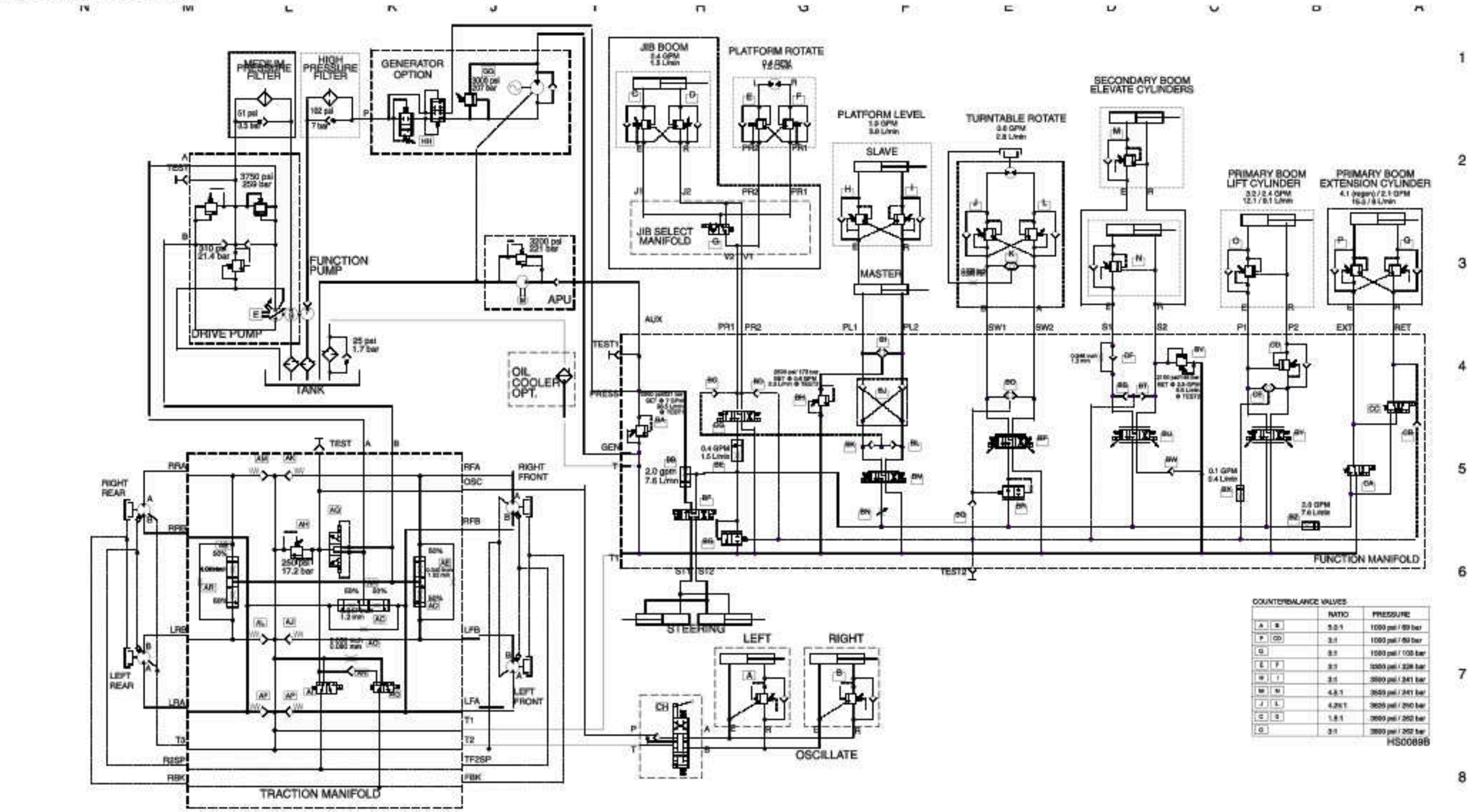
TS1	AUXILIARY SWITCH
TS2	START ENGINE SWITCH
TS4	HI/LOW RPM SWITCH
TS6	GLOW PLUG SWITCH
TS7	PLATFORM ROTATE SWITCH
TS8	JIB ROTATE SWITCH
TS9	PLATFORM LEVEL SWITCH
TS13	PRIMARY BOOM EXTEND/RETRACT SWITCH
TS14	DRIVE SPEED SWITCH
TS15	DRIVE ENABLE SWITCH
TS43	HEATER SWITCH (OPTION)
TS46	PROXIMITY KILL SWITCH (OPTION)
TS47	GENERATOR SWITCH (OPTION)
U13	ALC 900 JOYSTICK CONTROLLER CARD
U35	TIME DELAY RELAY
X1-4	CIRCUIT SPLICE
X101	ALC500 POWER CONNECTOR
X101-X109	ALC500 INPUT/OUT CONNECTORS

ES0549E

NOTE: DASHED LINES INDICATE OPTIONS.

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Hydraulic Schematic



COUNTERBALANCE VALVES

		RATIO	PRESSURE
A	B	5.0:1	1000 psi / 69 bar
P	CD	3:1	1000 psi / 69 bar
G		5:1	1500 psi / 103 bar
E	F	3:1	3300 psi / 228 bar
H	I	3:1	3500 psi / 241 bar
M	N	4.8:1	3500 psi / 241 bar
J	L	4.29:1	3625 psi / 250 bar
C	D	1.8:1	3600 psi / 252 bar
O		3:1	3600 psi / 252 bar

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