

Genie®

Service Manual

Refer to inside cover for additional serial number information

Part No. 72062
Rev A2
October 2008

S™-80
S™-85

(from serial number 966 to 3081)

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Table of Contents

Introduction

Important Information ii

Section One **Safety Rules**

General Safety Rules iii

Section Two **Specifications**

Machine Specifications ..... 2 - 1
Performance Specifications ..... 2 - 2
Hydraulic Specifications ..... 2 - 3
Ford LRG 425 EFI Engine Specifications ..... 2 - 4
Deutz F4L 1011F Engine Specifications ..... 2 - 5
Perkins 704-30 Engine Specifications ..... 2 - 6
Hydraulic Hose and Fitting Torque Specifications ..... 2 - 7

Section Three **Theory of Operation**

Power Source ..... 3 - 1
Hydraulic System ..... 3 - 1
Electrical System ..... 3 - 1
Limit Switches ..... 3 - 2
Machine Controls ..... 3 - 2

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TABLE OF CONTENTS

Section Four **Scheduled Maintenance Procedures**

Introduction ..... 4 - 1
Maintenance Inspection Report ..... 4 - 3
A-1 Inspect the Operators' and Safety Manuals ..... 4 - 5
A-2 Inspect the Decals and Placards ..... 4 - 5
A-3 Inspect for Damage and Loose or Missing Parts ..... 4 - 6
A-4 Check the Engine Oil Level ..... 4 - 7
A-5 Check the Engine Coolant Level - Liquid Cooled Models ..... 4 - 8
A-6 Check for Fuel Leaks ..... 4 - 8
A-7 Check the Hydraulic Oil Level ..... 4 - 9
A-8 Check for Hydraulic Leaks ..... 4 - 10
A-9 Check the Tire Pressure ..... 4 - 10
A-10 Test the Extendable Axles ..... 4 - 11
A-11 Test the Platform and Ground Controls ..... 4 - 12
A-12 Test the Auxiliary Power Operation ..... 4 - 13
A-13 Test the Tilt Sensor ..... 4 - 14
A-14 Test the Limit Switches ..... 4 - 14
A-15 Drain the Fuel Filter/Water Separator - Diesel Models ..... 4 - 17
A-16 Inspect the Engine Air Filter ..... 4 - 19
A-17 Perform 30 Day Service ..... 4 - 20
A-18 Inspect the Radiator - Liquid Cooled Models ..... 4 - 20
A-19 Check the Battery ..... 4 - 21
A-20 Replace the Engine Oil and Filter - Ford Models ..... 4 - 22
A-21 Inspect the Electrical Wiring ..... 4 - 24
A-22 Check the Oil Cooler and Cooling Fins - Deutz Models ..... 4 - 25
A-23 Check the Engine Belt - Ford and Perkins Models ..... 4 - 26
A-24 Replace the Fuel Filters - Ford Models ..... 4 - 28

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TABLE OF CONTENTS

Section Four **Scheduled Maintenance Procedures**, continued

B-1 Check the Exhaust System ..... 4 - 30
B-2 Check the Hydraulic Tank Return Filter Condition Indicator ..... 4 - 31
B-3 Inspect the Tires and Wheels (including lug nut torque) ..... 4 - 32
B-4 Confirm the Proper Brake Configuration ..... 4 - 33
B-5 Check the Oil Level in the Drive Hubs ..... 4 - 34
B-6 Check and Adjust the Engine RPM ..... 4 - 36
B-7 Test the Key Switch ..... 4 - 37
B-8 Test the Emergency Stop Buttons ..... 4 - 38
B-9 Test the Ground Control Override ..... 4 - 38
B-10 Test the Platform Self-leveling ..... 4 - 39
B-11 Test the Horn ..... 4 - 39
B-12 Test the Foot Switch ..... 4 - 40
B-13 Test the Engine Idle Select Operation ..... 4 - 40
B-14 Test the Fuel Select Operation - Ford Models ..... 4 - 41
B-15 Test the Drive Enable System ..... 4 - 42
B-16 Test the Drive Brakes ..... 4 - 43
B-17 Test the Drive Speed - Stowed Position ..... 4 - 44
B-18 Test the Drive Speed - Raised or Extended Position ..... 4 - 45
B-19 Test the Alarm Package (if equipped) ..... 4 - 46
B-20 Perform Hydraulic Oil Analysis ..... 4 - 47
B-21 Replace the Hydraulic Tank Return Filter ..... 4 - 47
B-22 Replace the Drive Loop Hydraulic Filter ..... 4 - 48
B-23 Inspect the Fuel Tank Cap Venting System ..... 4 - 49
B-24 Replace the Engine Air Filter Element ..... 4 - 50
B-25 Replace the Spark Plugs - Ford Models ..... 4 - 51

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SPECIFICATIONS

Perkins Engine 704-30

Displacement	183 cu in 2.9 liters
Number of cylinders	4
Bore and stroke	3.82 x 3.94 inches 97 x 100 mm
Horsepower	63 @ 2600 rpm
Firing order	1 - 3 - 4 - 2
Compression ratio	17.5:1
Compression pressure	300 to 500 psi 20.7 to 34.5 bar
Pressure (psi) of lowest cylinder must be within 50 psi (3.45 bar) of highest cylinder	
Low idle	1600 rpm
High idle	2200 rpm
Governor	centrifugal mechanical
Valve clearance, cold	
Intake	0.014 in 0.35 mm
Exhaust	0.014 in 0.35 mm
Lubrication system	
Oil pressure (at 2600 rpm)	41 psi 2.8 bar
Oil capacity (including filter)	7.3 quarts 8.3 liters
Oil viscosity requirements	
below 60°F / 15.5°C	15W-40
-10°F to 90°F / -23°C to 32°C	10W-30
above -4°F / -20°C	15W-40
Engine oil should have properties of API classification CF4. Units ship with 10-40 CC/SG.	

Injection system		
Injection pump make		Zexel PFR-KX
Injection pump pressure	2755 psi	190 bar
Injector opening pressure	3626 psi	250 bar
Fuel requirement		diesel number 2-D
Engine coolant		
Capacity		11 1/2 quarts 10.9 liters
Alternator output		65A, 12V DC
Battery		
Type		12VDC, Group 31
Quantity		1
Cold cranking ampere		1000A
Reserve capacity @ 25A rate		200 minutes
Fan belt deflection		3/8 in 10 mm

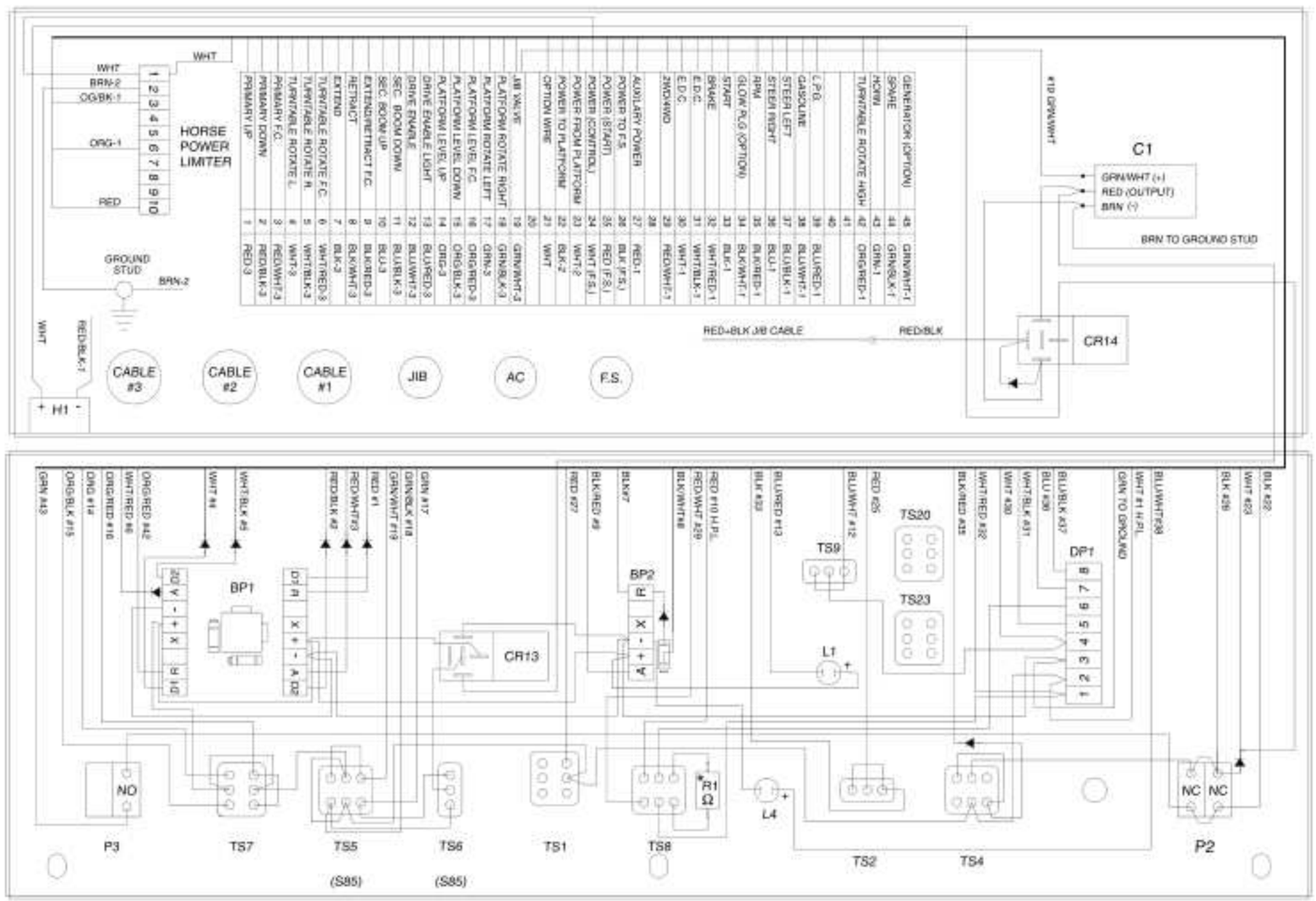
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FAULT CODE CHART

Fault Code	Problem	Cause	Solution
52	Crankshaft Position (CKP) sensor senses extra or missing pulses.	The CKP and CMP sensors work together; if one is bad, the other one won't work correctly and causes the ECM to detect a fault. The ECM uses the signal pulses from the CKP and CMP sensors to initiate sequential fuel injection.	Check for shorted wires or poor terminal connections from the CKP and CMP sensors to the ECM OR replace the CKP or CMP sensor.
53	Camshaft Position (CMP) sensor senses unknown pattern.	The CMP and CKP sensors work together; if one is bad, the other one won't work correctly and causes the ECM to detect a fault. The ECM uses the signal pulses from the CKP and CMP sensors to initiate sequential fuel injection.	Check for shorted wires or poor terminal connections from the CKP and CMP sensors to the ECM OR replace the CKP or CMP sensor.
54	ECM Fault - Illegal Operation.	The ECM received an illegal instruction signal from one or more of the sensors and has gone into a default program and then return to normal operation	Replace the ECM.

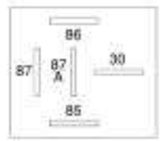
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Platform Control Box Wiring Diagram- Perkins Models



*NOTE: RESISTOR IS MOUNTED TO EXTEND/RETRACT CONTROLLER.
100 OHM RESISTOR FOR 4WD AND 150 OHM RESISTOR FOR 2WD.

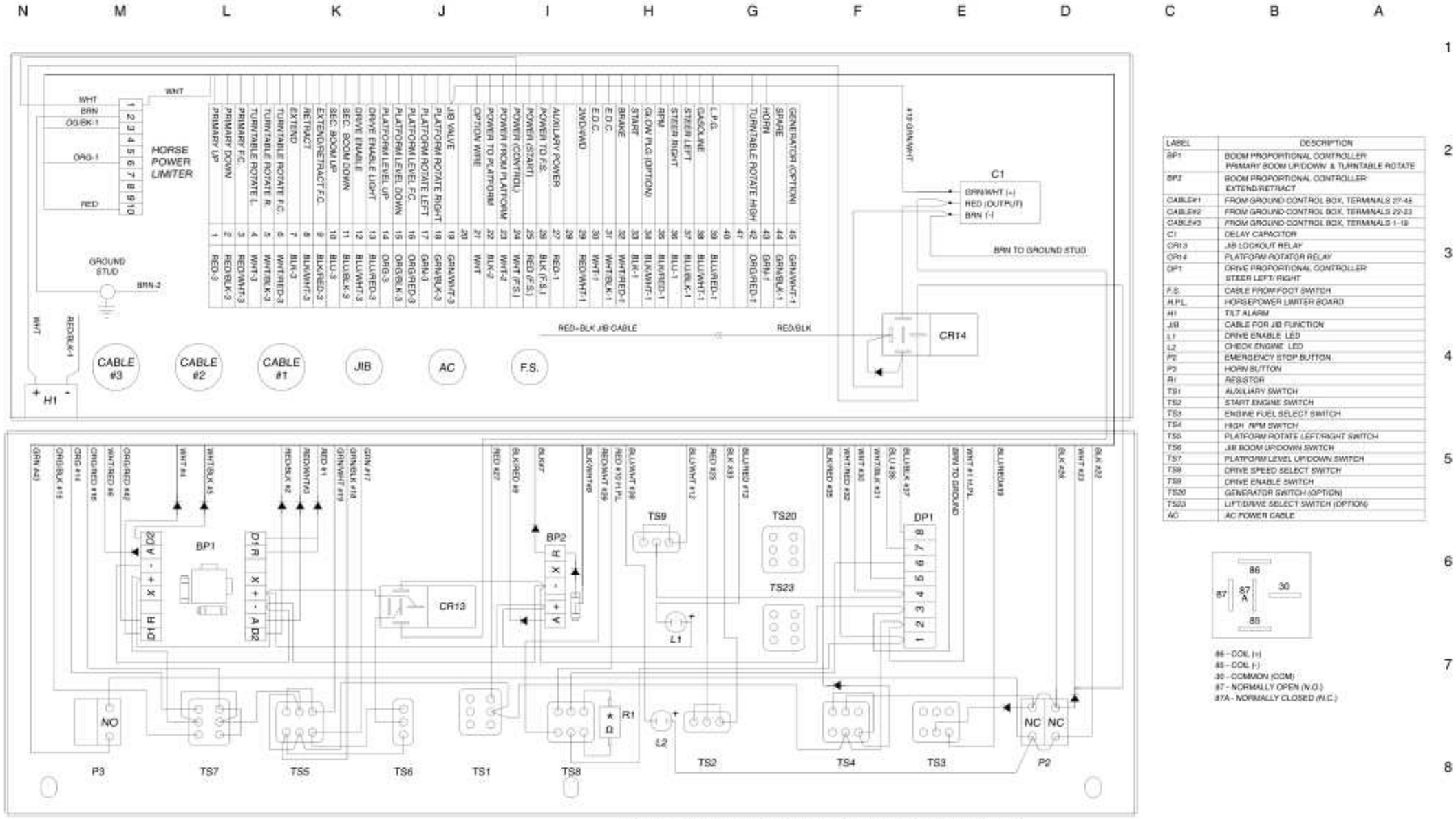
LABEL	DESCRIPTION
BP1	BOOM PROPORTIONAL CONTROLLER PRIMARY BOOM UP/DOWN & TURNTABLE ROTATE
BP2	BOOM PROPORTIONAL CONTROLLER EXTEND/RETRACT
CABLE#1	FROM GROUND CONTROL BOX, TERMINALS 27-45
CABLE#2	FROM GROUND CONTROL BOX, TERMINALS 22-23
CABLE#3	FROM GROUND CONTROL BOX, TERMINALS 1-19
C1	DELAY CAPACITOR
CR13	JIB LOCKOUT RELAY
CR14	PLATFORM ROTATOR RELAY
DP1	DRIVE PROPORTIONAL CONTROLLER STEER LEFT/ RIGHT
F.S.	CABLE FROM FOOT SWITCH
H.P.L.	HORSEPOWER LIMITER BOARD
H1	TILT ALARM
JIB	CABLE FOR JIB FUNCTION
L1	DRIVE ENABLE LED
L4	STARTING AID LED
P2	EMERGENCY STOP BUTTON
P3	HORN BUTTON
R1	RESISTOR
TS1	AUXILIARY SWITCH
TS2	START ENGINE SWITCH
TS3	STARTING AID SWITCH (OPTION)
TS4	HIGH RPM SWITCH
TS5	PLATFORM ROTATE LEFT/RIGHT SWITCH
TS6	JIB BOOM UP/DOWN SWITCH
TS7	PLATFORM LEVEL UP/DOWN SWITCH
TS8	DRIVE SPEED SELECT SWITCH
TS9	DRIVE ENABLE SWITCH
TS20	GENERATOR SWITCH (OPTION)
TS23	LIFT/DRIVE SELECT SWITCH (OPTION)
AC	AC POWER CABLE



86 - COIL (+)
85 - COIL (-)
30 - COMMON (COM)
87 - NORMALLY OPEN (N.O.)
87A - NORMALLY CLOSED (N.C.)

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Platform Control Box Wiring Diagram- Ford Models



LABEL	DESCRIPTION
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H1	TILT ALARM
JIB	CABLE FOR JIB FUNCTION
L1	DRIVE ENABLE LED
L2	CHECK ENGINE LED
P2	EMERGENCY STOP BUTTON
P3	HORN BUTTON
R1	RESISTOR
TS1	AUXILIARY SWITCH
TS2	START ENGINE SWITCH
TS3	ENGINE FUEL SELECT SWITCH
TS4	HIGH RPM SWITCH
TS5	PLATFORM ROTATE LEFT/RIGHT SWITCH
TS6	JIB BOOM UP/DOWN SWITCH
TS7	PLATFORM LEVEL UP/DOWN SWITCH
TS8	DRIVE SPEED SELECT SWITCH
TS9	DRIVE ENABLE SWITCH
TS20	GENERATOR SWITCH (OPTION)
TS23	LIFT/DRIVE SELECT SWITCH (OPTION)
AC	AC POWER CABLE

86 - COIL (+)
85 - COIL (-)
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