Genie Industries

Technical Publications

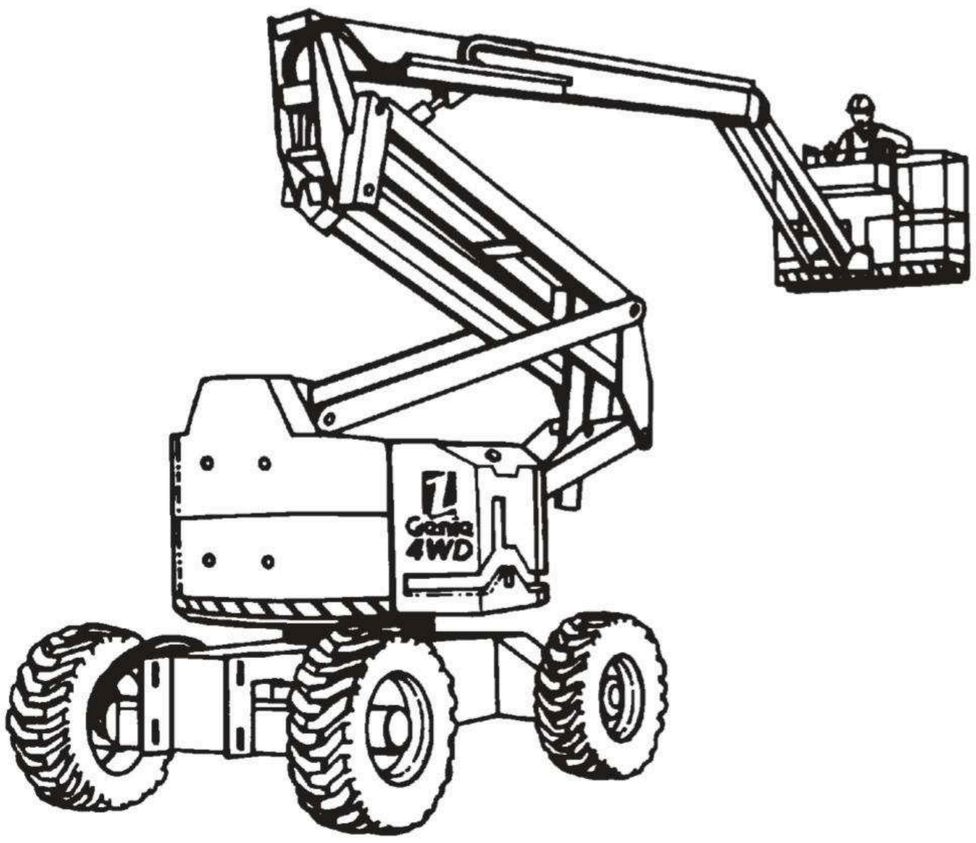
Genie®

A TEREX COMPANY

Genie® Z-60/34

Service Manual

(from serial number 1090 to 4000)



Second Edition, First Printing (Rev A1)
Part No. 52856
May 2007

MidWestTech | Terex Genie Z-60/34 Telescopic Boom Lift Service Manual | Publication 52856

Order the manual at mid-west-tech.com >

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 Engine LRG-425 EFI Specifications ..... 2 –4
Deutz Engine F4L 1011F Specifications ..... 2 –5
Hydraulic Hose and Fitting Torque Specifications ..... 2 –6

Section Three **Scheduled Maintenance Inspections**

Introduction ..... 3 –1
Table A ..... 3 –2
Table B ..... 3 –3
Table C ..... 3 –5
Table D ..... 3 –6
Maintenance Inspection Report ..... 3 –7

Section Four **Scheduled Maintenance Procedures**

Introduction ..... 4 –1
A-1 Inspect the Operator's and Safety Manuals ..... 4 –2
A-2 Inspect the Decals and Placards ..... 4 –2
A-3 Inspect for Damage, Loose or Missing Parts ..... 4 –2
A-4 Check the Engine Oil Level ..... 4 –3
A-5 Check the Engine Coolant Level –Gasoline/LPG Models ..... 4 –3
A-6 Check for Fuel Leaks ..... 4 –3
A-7 Check the Hydraulic Oil Level ..... 4 –4
A-8 Check for Hydraulic Leaks ..... 4 –5
A-9 Check the Tire Pressure ..... 4 –5
A-10 Test the Oscillate Axle Lockout (oscillating axle equipped models) ..... 4 –6

MidWestTech | Terex Genie Z-60/34 Telescopic Boom Lift Service Manual | Publication 52... Order the manual at mid-west-tech.com >

TABLE OF CONTENTS

Section Four **Scheduled Maintenance Procedures,** continued

A-11 Test the Platform and Ground Controls ..... 4 - 6
A-12 Test the Auxiliary Power Operation ..... 4 - 7
A-13 Test the Tilt Sensor ..... 4 - 8
A-14 Test the Limit Switches ..... 4 - 9
A-15 Replace the Engine Oil and Filter - Gasoline/LPG Models ..... 4 - 12
A-16 Replace the Engine Air Filter ..... 4 - 13
B-1 Check the Engine Belt ..... 4 - 15
B-2 Check the Radiator - Gasoline/LPG Models ..... 4 - 16
B-3 Check the Oil Cooler and Cooling Fins - Deutz Diesel Models ..... 4 - 16
B-4 Check the Exhaust System ..... 4 - 17
B-5 Check the Battery ..... 4 - 18
B-6 Chech the Hydraulic Return Filter Condition Indicator ..... 4 - 18
B-7 Inspect the Electrical Wiring ..... 4 - 19
B-8 Inspect the Tires and Wheels (including lug nut torque) ..... 4 - 19
B-9 Confirm the Proper Brake Configuration ..... 4 - 20
B-10 Check the Torque Hub Oil Level and Fastener Torque (**REV B**) ..... 4 - 21
B-11 Check and Adjust the Engine RPM ..... 4 - 22
B-12 Test the Key Switch ..... 4 - 23
B-13 Test the Emergency Stop Buttons ..... 4 - 23
B-14 Test the Ground Control Override ..... 4 - 24
B-15 Test the Platform Self-leveling ..... 4 - 24
B-16 Test the Horn ..... 4 - 24
B-17 Test the Foot Switch ..... 4 - 24
B-18 Test the Engine Idle Select ..... 4 - 25
B-19 Test the Fuel Select Operation - Gasoline/LPG Models ..... 4 - 26
B-20 Test the Drive Enable System ..... 4 - 26
B-21 Test the Drive Brakes ..... 4 - 27
B-22 Test the Drive Speed - Stowed Position ..... 4 - 27
B-23 Test the Alarm Package - Optional Equipment ..... 4 - 28
B-24 Perform Hydraulic Oil Analysis ..... 4 - 28
B-25 Replace the Engine Oil and Filter - Deutz Diesel Models ..... 4 - 29

MidWestTech | Terex Genie Z-60/34 Telescopic Boom Lift Service Manual | Publication 52... Order the manual at mid-west-tech.com >

TABLE OF CONTENTS

Section Four **Scheduled Maintenance Procedures**, continued

C-1 Check the Primary Boom Wear Pads ..... 4 –30
C-2 Check the Turntable Rotation Bearing Bolts ..... 4 –30
C-3 Check the Free-wheel Configuration ..... 4 –31
C-4 Grease the Turntable Rotation Bearing and Rotate Gear ..... 4 –32
C-5 Replace the Torque Hub Oil ..... 4 –32
C-6 Replace the Hydraulic Tank Return Filter ..... 4 –34
C-7 Replace the Drive Loop Hydraulic Filter ..... 4 –34
C-8 Replace the Diesel Fuel Filter/Water Separator –Deutz Diesel Models ..... 4 –35
C-9 Replace the Gasoline Fuel Filters –Gasoline/LPG Models ..... 4 –36
C-10 Replace the PCV Valve –Gasoline/LPG Models ..... 4 –37
C-11 Replace the Spark Plugs –Gasoline/LPG Models ..... 4 –37
C-12 Check and Adjust the Air/LPG Mixture –Gasoline/LPG Models ..... 4 –38
C-13 Check the Engine Valve Clearances –Deutz Diesel Models ..... 4 –38
D-1 Test or Replace the Hydraulic Oil ..... 4 –39
D-2 Change or Recondition the Engine Coolant –Gasoline/LPG Models ..... 4 –41
D-3 Change the Fuel Hoses ..... 4 –42
D-4 Check the Engine Valve Clearance –Gasoline/LPG Models ..... 4 –43
D-5 Check the Engine Cylinder Compression –Gasoline/LPG Models ..... 4 –43
D-6 Clean the PCV Hoses and Fittings –Gasoline/LPG Models ..... 4 –44
D-7 Check the Fuel Injection Pumps and Injectors –Deutz Diesel Models ..... 4 –44
D-8 Check the Toothed Belt –Deutz Diesel Models ..... 4 –44
D-9 Replace the Timing Belt –Gasoline/LPG Models ..... 4 –44
D-10 Grease the Steer Axle Wheel Bearings, 2WD Models ..... 4 –45

Section Five **Troubleshooting Flow Charts**

Introduction ..... 5 –1
Fault Codes ..... 5 –3
1 Engine Will Not Crank Over ..... 5 –6
2 Engine Cranks Over But Will Not Start –Gasoline/LPG Models ..... 5 –8
2A Engine Runs While Cranking Then Dies –Gasoline/LPG Models ..... 5 –10
3 Engine Cranks Over But Will Not Start –Deutz Diesel Models ..... 5 –11

MidWestTech | Terex Genie Z-60/34 Telescopic Boom Lift Service Manual | Publication 52... Order the manual at mid-west-tech.com >

Specifications

Machine Specifications

Stowed dimensions	2WD/Ind	2WD/RT 4WD/RT
Length	26 ft 7.92 m	26 ft 7.92 m
Width	7 ft 2.13 m	7 ft 6 in 2.29 m
Height	8 ft 1 in 2.46 m	8 ft 4 in 2.54 m
Weight	21900 lbs 9934 kg	22055 lbs 10004 kg
Ground clearance	9 in 22.9 cm	12 in 30.5 cm
Operational dimensions		
Maximum platform height	60 ft 18.3 m	60 ft 18.3 m
Maximum horizontal reach	34 ft 10.36 m	34 ft 10.36 m
Maximum turntable tailswing	0	0
Wheelbase	7 ft 11 in 2.41 m	7 ft 9 in 2.36 m
Minimum turning circle, outside	26 ft 10 in 8.2 m	38 ft 10 in 11.8 m
Minimum turning circle, inside	8 ft 2.3 m	22 ft 6.7 m
Turntable rotation	continuous	continuous
Platform rotation	180°	180°
Platform dimensions	**6 ft** (Standard)	**8 ft*** (Optional)
Length	6 ft 1.83 m	8 ft 2.44 m
Width	30 in 76.2 cm	36 in 91.4 cm
Maximum capacity	500 lbs 227 kg	500 lbs 227 kg

* 8 ft platform not available for 2WD/Ind machines.

Tires and wheels	Industrial (Ind)	Rough Terrain (RT)
Tire size	32x12-15NHS 300-15NHS	15-19.5NHS
Tire ply rating	20	12
Load range	L	F
Tire contact area	73 sq in 470 sq cm	68 sq in 439 sq cm
Overall tire diameter	32.9 in 83.6 cm	40 in 102 cm
Tire pressure	110 psi 7.58 bar	60 psi 4.14 bar
Wheel diameter	15.2 in 38.6 cm	19.5 in 49.5 cm
Wheel width	9.75 in 24.8 cm	12.25 in 31 cm
Wheel lugs	9 @ 5/8-18	9 @ 5/8-18
Lug nut torque	125 ft-lbs 169.5 Nm	125 ft-lbs 169.5 Nm
Fluid capacities		
Fuel tank		20 gallons 76 liters
LPG tank		33.5 pounds 15.2 kg
Hydraulic tank		45 gallons 170 liters
Hydraulic system (including tank)		53 gallons 201 liters
Drive torque hub		40 fl oz 1.2 liters
Turntable rotation torque hub		8 fl oz 0.24 liters

Continuous improvement of our products is a Genie policy. Product specifications are subject to change without notice.

MidWestTech | Terex Genie Z-60/34 Telescopic Boom Lift Service Manual | Publication 52... Order the manual at mid-west-tech.com >

Troubleshooting Flow Charts



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 repair procedure with the machine in the following configuration:
  - Machine parked on a flat level surface
  - Boom in stowed position
  - Turntable rotated with the boom between the non-steering wheels
  - Turntable secured with the turntable rotation lock
  - Key switch in the OFF position with the key removed
  - Wheels chocked

Before Troubleshooting:

- ☑ Read, understand and obey the safety rules and operating instructions printed in the *Genie Z-60/34 Operator's Manual.*
- ☑ Be sure that all necessary tools and test equipment are available and ready for use.
- ☑ Read each appropiate flow chart thoroughly. Attempting shortcuts may produce hazardous conditions.
- ☑ Be aware of the following hazards and follow generally accepted safe workshop practices.

⚠DANGER Crushing hazard. When testing or replacing any hydraulic component, always support the structure and secure it from movement.

⚠DANGER Electrocution hazard. Contact with electrically charged circuits may result in death or serious injury. Remove all rings, watches and other jewelry.

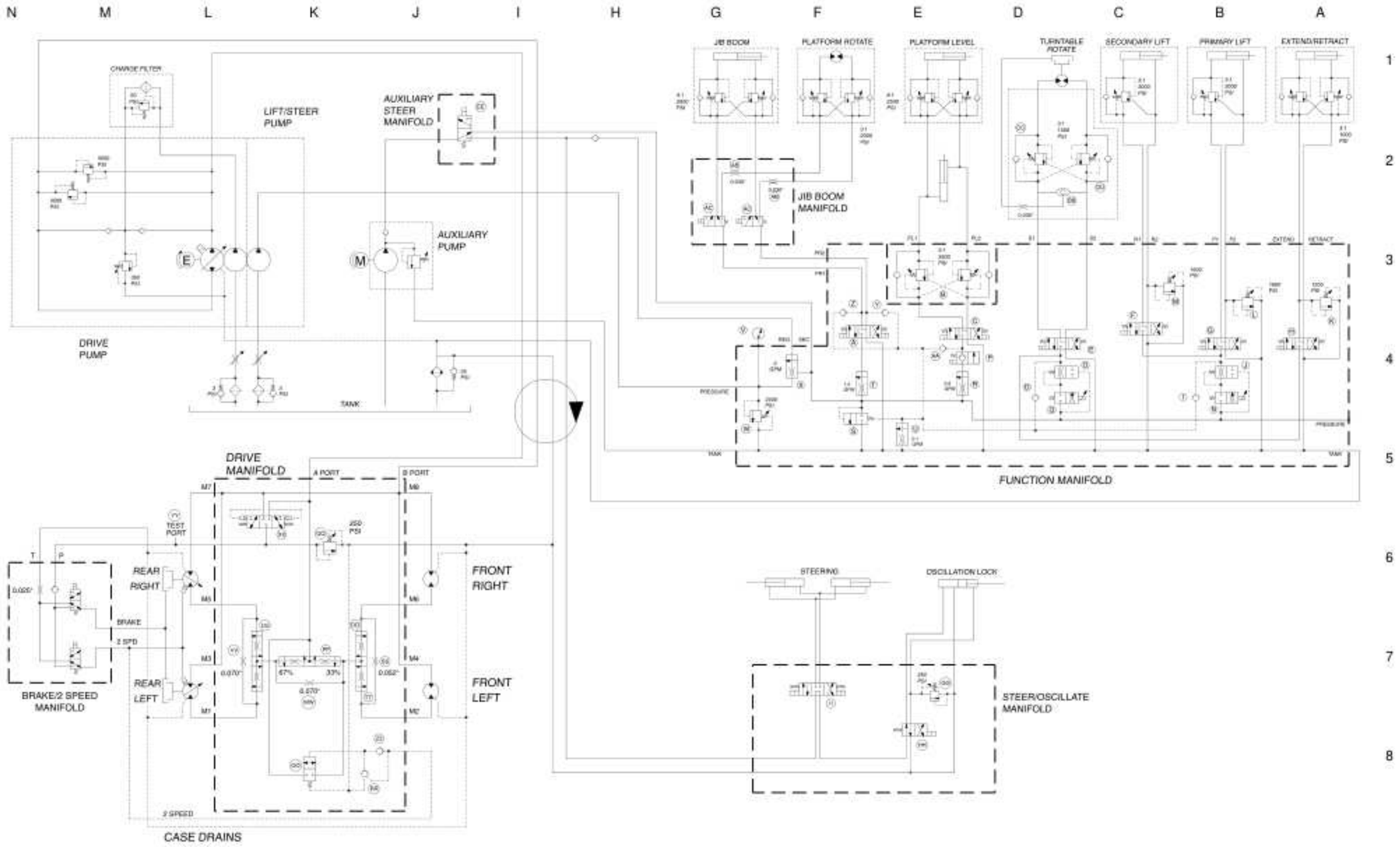
⚠WARNING Bodily injury hazard. Spraying hydraulic oil can penetrate and burn skin. Loosen hydraulic connections very slowly to allow the oil pressure to dissipate gradually. Do not allow oil to squirt or spray.

NOTICE Perform all troubleshooting on a firm level surface.

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

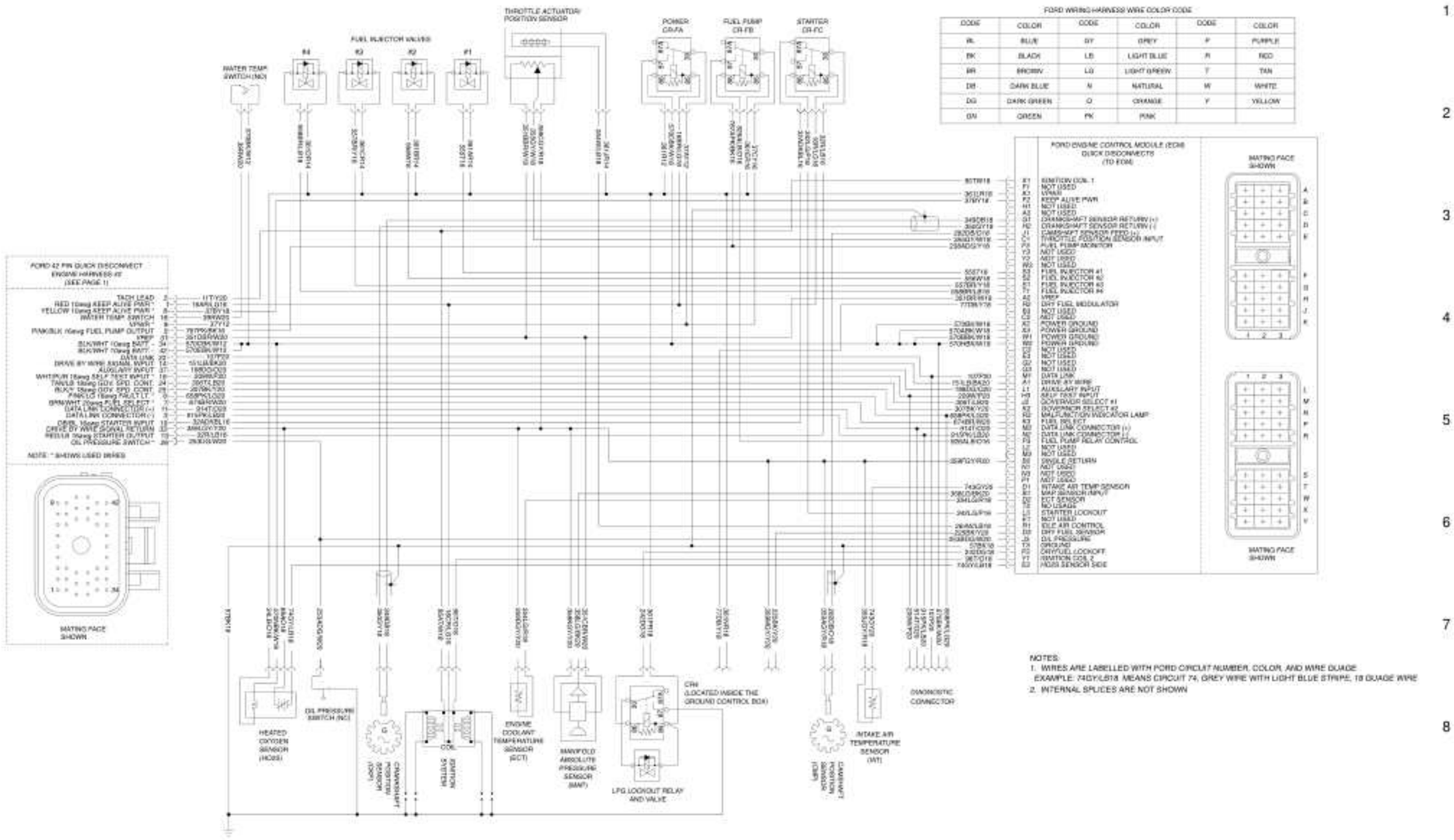
MidWestTech | Terex Genie Z-60/34 Telescopic Boom Lift Service Manual | Publication 52... Order the manual at mid-west-tech.com >

4WD Hydraulic Schematic



MidWestTech | Terex Genie Z-60/34 Telescopic Boom Lift Service Manual | Publication 52856 Order the manual at mid-west-tech.com >

Ford LRG-425 EFI
Engine Wire Harness



NOTES:
1. WIRES ARE LABELLED WITH FORD CIRCUIT NUMBER, COLOR, AND WIRE GUAGE
   EXAMPLE: 74GY/LB18 MEANS CIRCUIT 74, GREY WIRE WITH LIGHT BLUE STRIPE, 18 GUAGE WIRE
2. INTERNAL SPLICES ARE NOT SHOWN

MidWestTech | Terex Genie Z-60/34 Telescopic Boom Lift Service Manual | Publication 52856 Order the manual at mid-west-tech.com >