Genie Industries

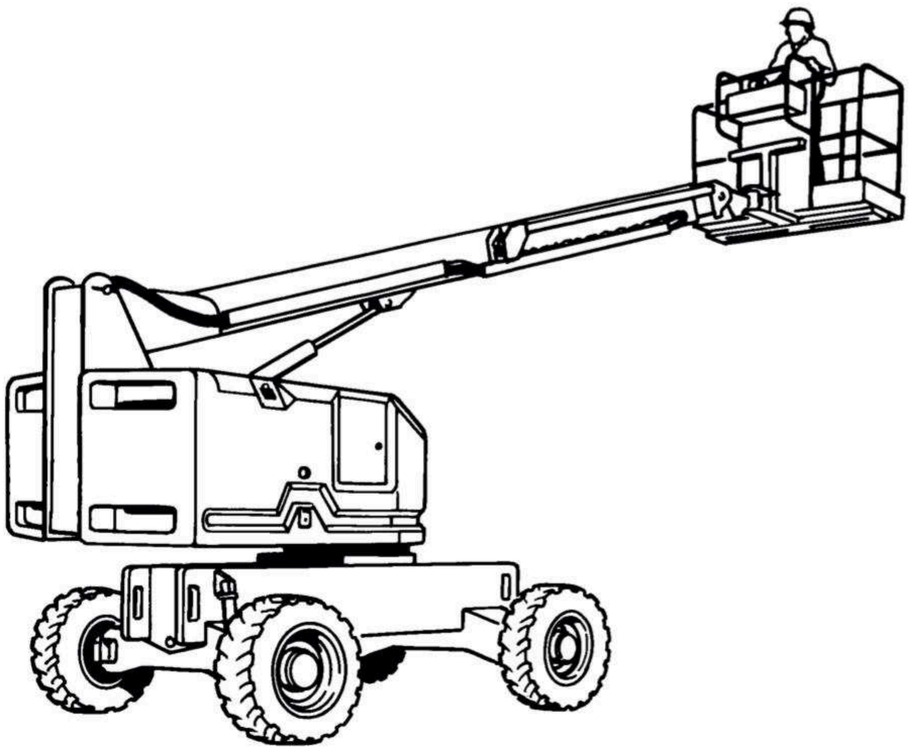
Technical Publications

Genie®

A TEREX COMPANY

Genie® S-40

Service Manual



First Edition, First Printing
Part No. 32222

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Ford Engine LSG-423

Displacement	140 cu in 2.3 liters
Number of cylinders	4
Bore & stroke	3.780 x 3.126 inches 96 x 79.4 mm
Horsepower	63 @ 4000 rpm
Firing order	1 - 3 - 4 - 2
Low idle	1600 rpm
High idle	2500 rpm
Governor	electronic
Compression ratio	9.5:1
Compression pressure (approx.)	150 to 175 psi 10 to 12 bar
Pressure (psi) of lowest cylinder must be at least 75% of highest cylinder	
Valve clearances	0.040 to 0.050 inches 1.0 to 1.3 mm

Lubrication system	
Oil pressure (operating temp. @ 2600 rpm)	40 to 60 psi 2.75 to 4.1 bar
Oil capacity (including filter)	5 quarts 4.7 liters
Oil viscosity requirements	
Temperature below 60°F / 15.5°C	5W-30
-10°F to 90°F / -23°C to 32°C	10W-30
Temperature above -10°F / -23°C	10W-40 to 10W-50
Temperature above 25°F / -4°C	20W-40 or 20W-50
Use oils meeting API classification SF (labeled SF/CC or SF/CD) as they offer improved wear protection.	

Starter motor	
Normal engine cranking speed	110 rpm
Current draw, normal load	150A
Current draw, maximum load	460A
Current draw, no load	70A
Maximum circuit voltage drop while starting (normal temperature)	0.5V DC
Brush length, new	0.50 in 12.7 mm
Brush length wear limit	0.25 in 6.35 mm
Brush spring tension	40 ounces 11 Newtons
Bolt torque through brush	55 to 75 inch-pounds 6 to 8.5 Nm
Brush mounting bolt torque	15 to 20 foot-pounds 20 to 27 Nm
Maximum commutator run-out	0.005 inches 0.127 mm

Battery	
Type	12V, Group 31
Quantity	1
Cold cranking ampere	1000A
Reserve capacity @ 25A rate	200 minutes

Fuel pump	
Static pressure	5 to 7 psi 0.34 to 0.48 bar
Minimum volume flow (in 25 seconds)	1 pint 473 cc

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TROUBLESHOOTING FLOW CHARTS

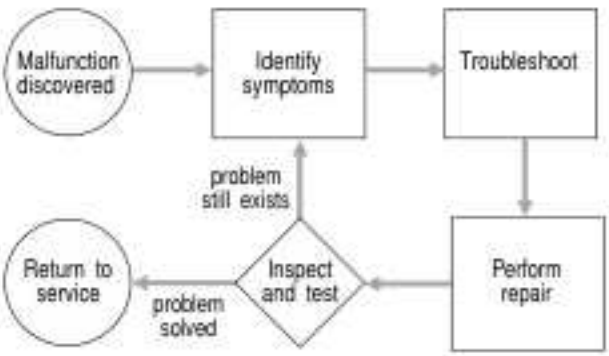
About This Section

When a malfunction is discovered, the flow charts in this section will help a service professional pinpoint the cause of the problem. To use this section, basic hand tools and certain pieces of test equipment are required–voltmeter, ohmmeter, pressure gauges.

The location of terminals mentioned in this section can be found on the appropriate electrical or hydraulic schematics provided in Section 6, *Schematics*.

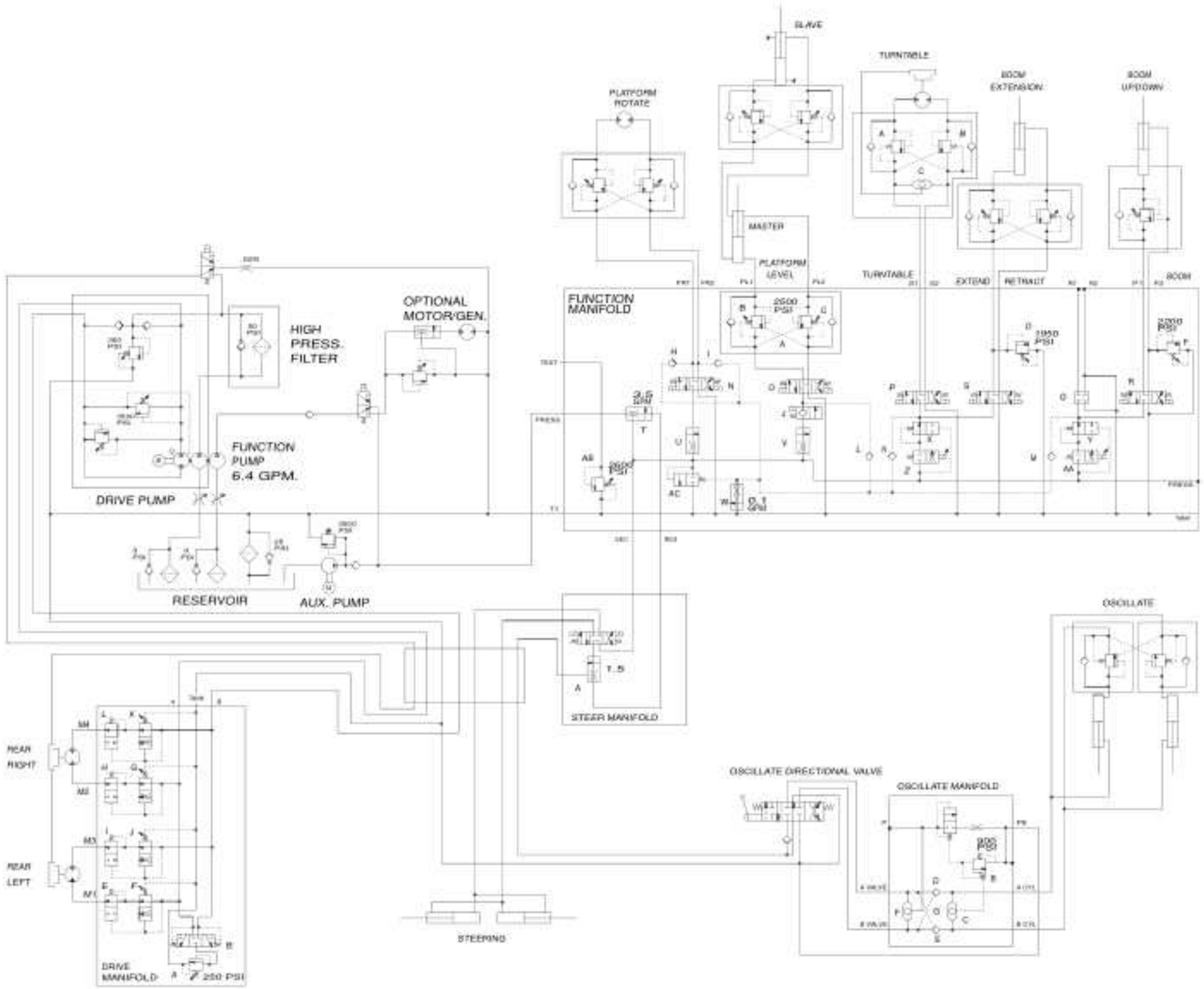
Since various degrees of a particular function loss may occur, selecting the appropriate flow chart may be troublesome. When a function will not operate with the same speed or power as a machine in good working condition, refer to the flow chart which most closely describes the problem.

General Repair Process



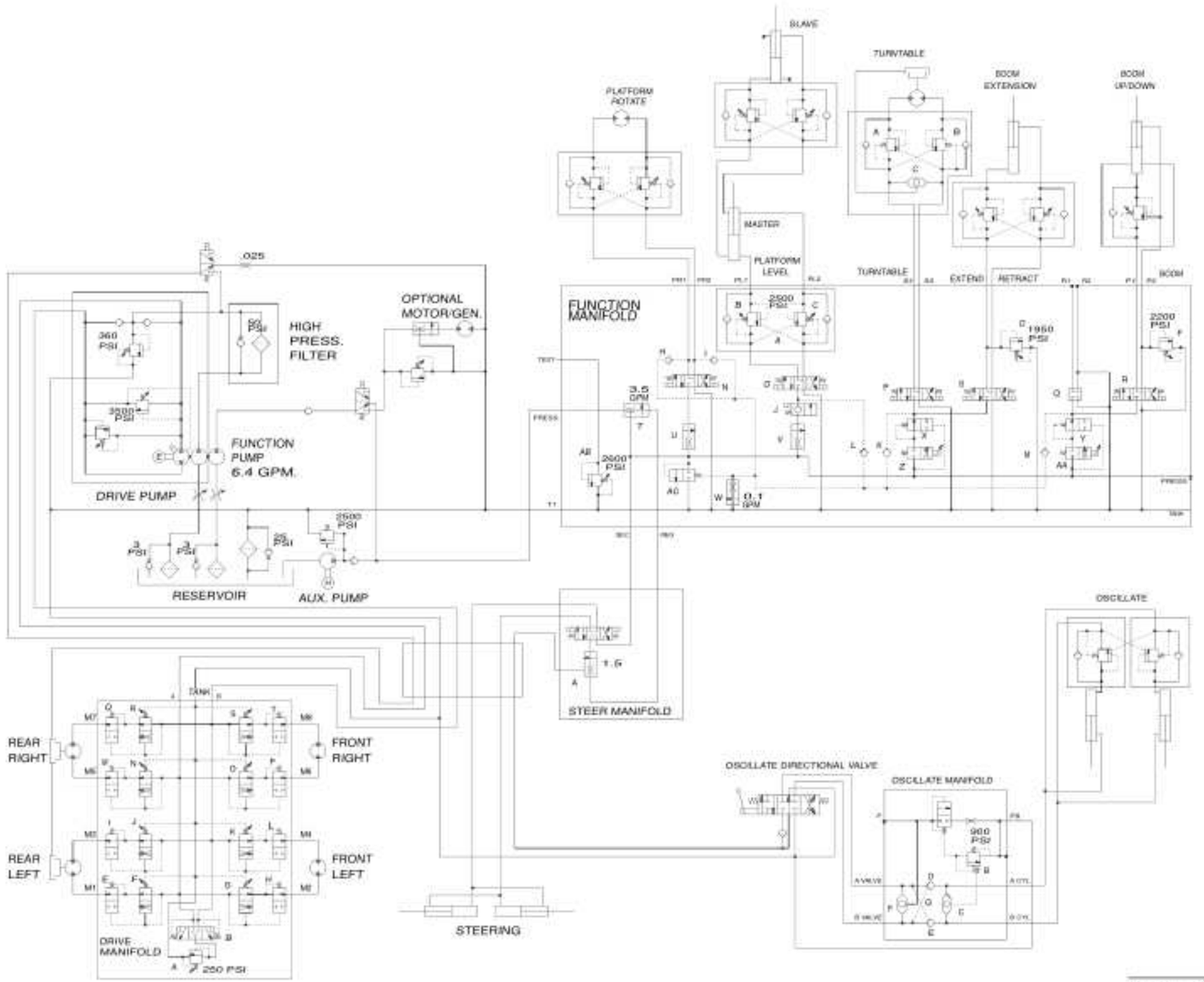
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2WD Hydraulic Schematic
Oscilating Axle



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4WD Hydraulic Schematic



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