Service and Maintenance Manual

Models

600S/SJ

660SJ

600A/AJ

Prior to
S/N 0300080000

P/N - 3120718

September 23, 2005

ANSI

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SECTION 1. SPECIFICATIONS

1.1 CAPACITIES

Fuel Tank

39 US. Gallons (147.6 l). (S Models)

30 U.S. Gallons (113.6 l). (A Models)

Hydraulic Oil Tank

Gasoline/Diesel Power - 31 U.S. Gallons (117.3 l) with 10% air space (S Models) - 30.6 Gallons (115.8 l) with 10% air space (A Models).

Hydraulic System (Including Tank)

Gasoline/Diesel Power - 37.2 U.S. Gallons (140.8 l) S Models 36.72 U.S. Gallons (139 l) A Models.

Torque Hub, Drive

17 ounces (0.50 l).

NOTE: *Torque hubs should be one half full of lubricant.*

Engine Crankcase

Ford LRG-425 Gas w/Filter - 4.5 quarts (4.25 l).

Ford LRG-423 Gas w/Filter - 5.00 quarts (4.73 l).

Deutz F4M1011F Diesel w/Filter - 11 quarts (10.5 l).

Continental TMD27 Diesel w/Filter - 7.00 quarts (6.65 l).

Caterpillar 3044C Diesel w/Filter - 10.6 quarts (10 L)

1.2 COMPONENT DATA

Engine - Ford LRG-425

Fuel - Gasoline.

Oil Capacity.

4.5 Quarts (4.25 l) w/Filter.

Idle RPM - 1000.

Low RPM - 1800.

High RPM - 2800.

Alternator - 40 Amp, Belt Drive.

Battery - 85 Amphour, 550 Cold Cranking Amps, 12 VDC.

Fuel Consumption.

Low RPM - 3.45 GPH (13.06 lph).

High RPM - 4.60 GPH (17.41 lph).

Horsepower - 54 @ 2400 RPM, full load.

Cooling System - 16 Quarts (15.14 l.).

Spark Plug - AWSF-52-C

Spark Plug Gap - 0.044 in. (1.117 mm)

Engine - Ford LRG-423

Fuel - Gasoline.

Oil Capacity.

5.00 Quarts (4.73 l) w/Filter.

4.00 Quarts (3.79 l) w/o Filter.

Idle RPM - 1000.

Low RPM - 1800.

High RPM - 2800.

Alternator - 40 Amp, Belt Drive.

Battery - 85 Amphour, 550 Cold Cranking Amps, 12 VDC.

Fuel Consumption.

Low RPM - 3.45 GPH (13.06 lph).

High RPM - 4.60 GPH (17.41 lph).

Horsepower - 54 @ 2400 RPM, full load.

Cooling System - 16 Quarts (15.14 l.).

Engine - Deutz F4M1011F

Fuel - Diesel.

Oil Capacity.

5 Quarts (4.5 l) Cooling System.

11 Quarts (10.5 l) w/Filter.

16 Quarts (15 l) Total Capacity.

Idle RPM - 1000

Low RPM - 1800.

High RPM - 2800.

Alternator - 60 Amp, belt drive.

Battery - 1000 Cold Cranking Amps, 210 Minutes Reserve Capacity, 12 VDC.

Fuel Consumption.

Low RPM - 1.90 GPH (7.19 lph).

High RPM - 2.50 GPH (9.46 lph).

Horsepower - 65 @ 3000 RPM, full load.

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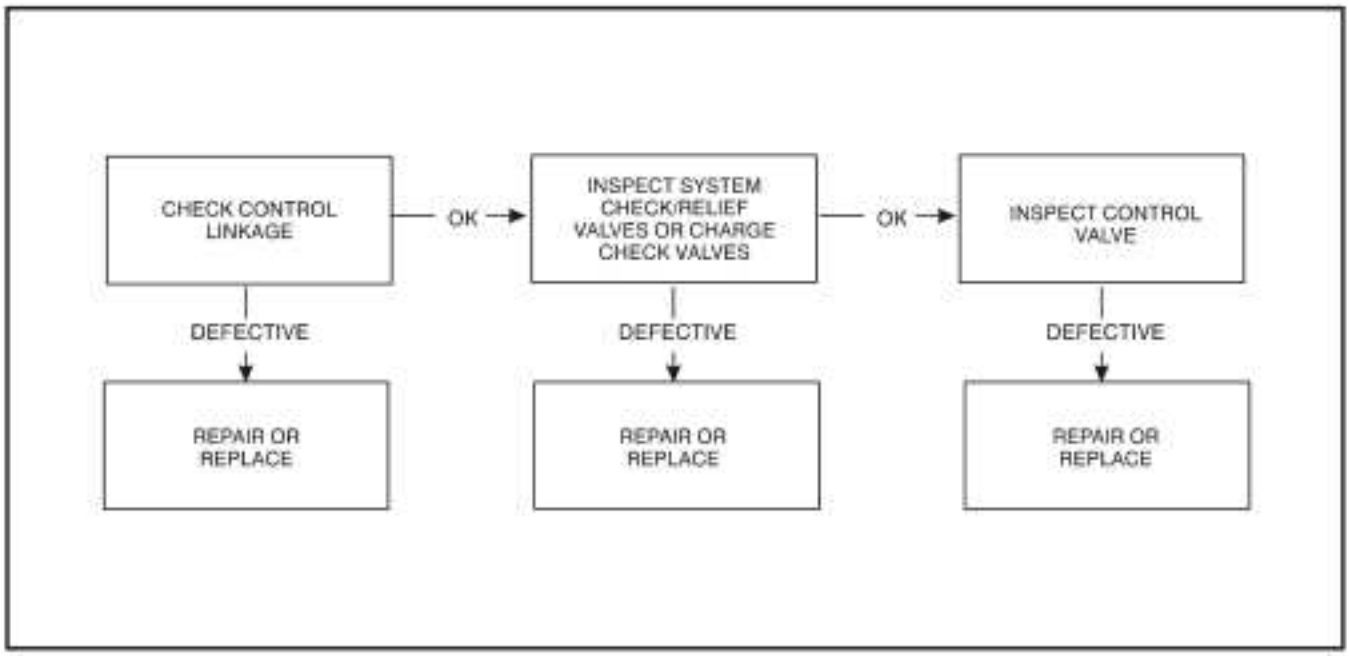
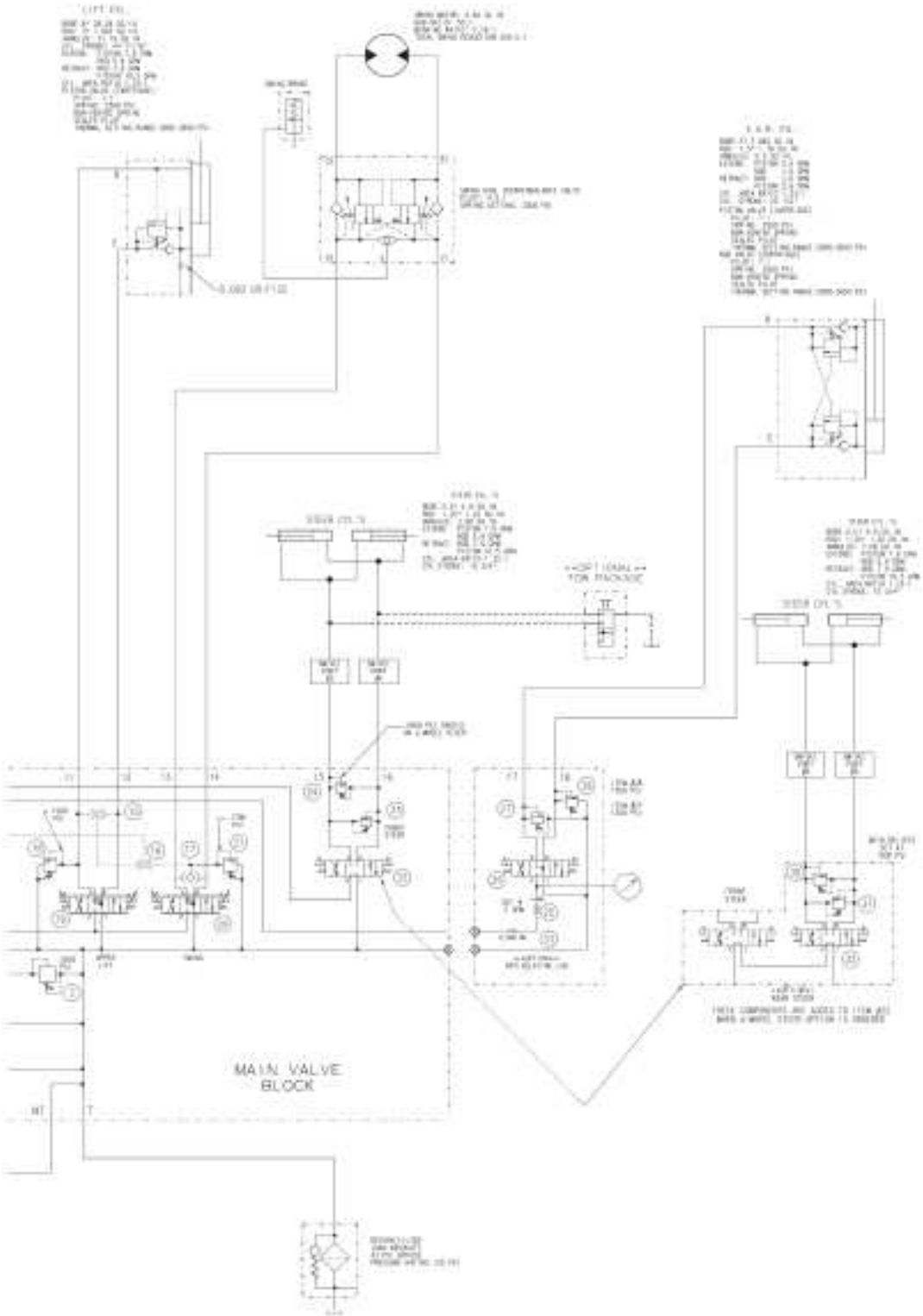


Figure 5-36. Troubleshooting - Transmission Operates in One Direction Only

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Figure 7-50. Hydraulic Schematic - S Models, S/N 75606 to Present - Sheet 2 of 6

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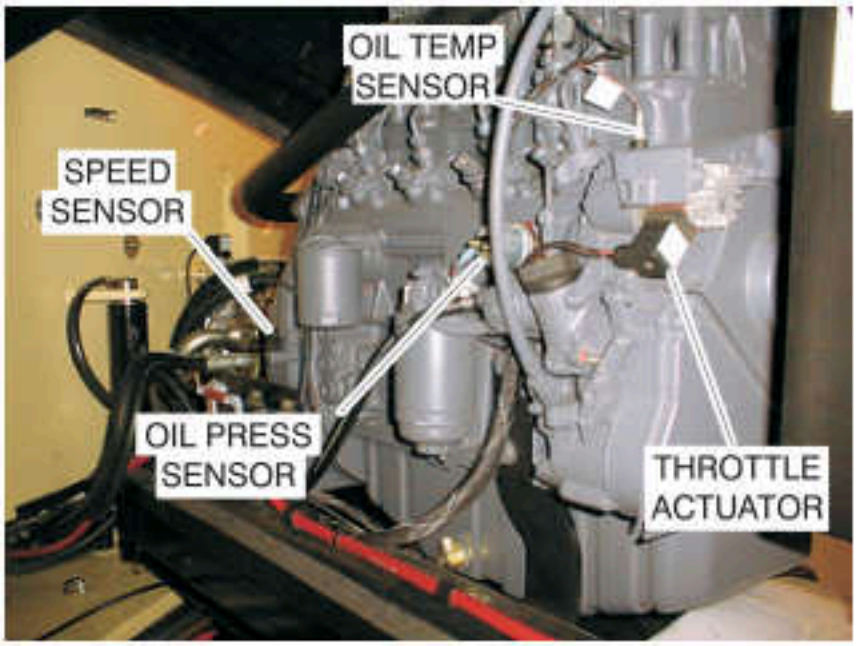


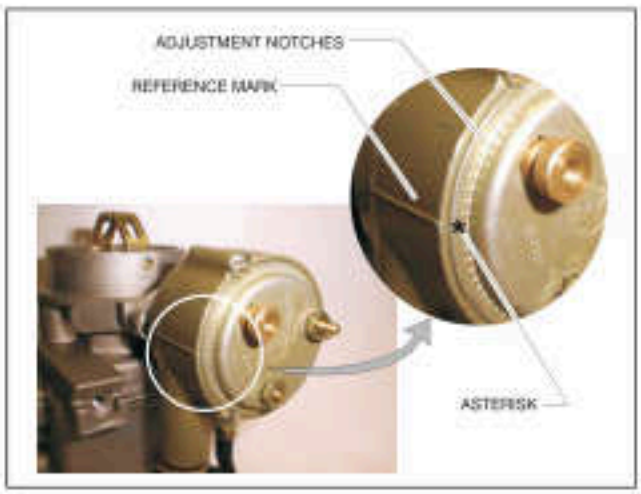
Figure 3-43. Deutz Sensors for JLG Control System

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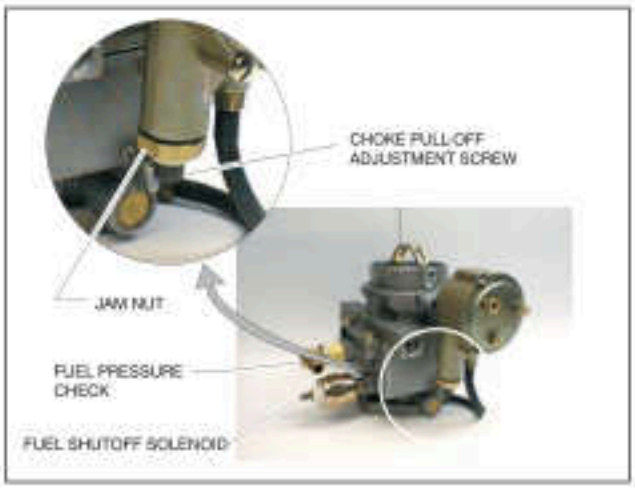
Checking the Carburetor

After cranking the engine for a period of time there may be white smoke noticed coming out of the exhaust tube. This is an indication the engine is receiving fuel and is in a "flooded" condition.

NOTE: *Make sure the choke is adjusted using the asterisk (*). There is also a zero (0) stamped on the choke. The zero (0) is used for assembly purposes and is not to be used as an adjustment reference.*



1. Check the choke for ambient temperature setting. The default ambient temperature setting is 70° F (21° C), which aligns the asterisk (*) on the choke face with the reference mark on the side of the choke housing. The choke should be set at one notch "clockwise" past the (*) asterisk for every 5 degrees below 70° F (one notch "clockwise" past the (*) asterisk for every 2.8 degrees below 21° C). This adjustment will "richen" the fuel mixture.
2. Check if the choke "butterfly" is stuck by manually opening and closing by hand.
3. Check the choke pull-off (butterfly stop) screw for proper adjustment as follows:



   a. Loosen jam nut
   b. Screw the adjustment screw all the way in, then back out 1/2 turn.
   c. Tighten jam nut.

Try to start the engine.

NOTE: *If EMS switch is pulled on for an extended period of time, i.e. 1 to 2 minutes, without attempting to start the engine, the choke will start to open due to electrical heating.*

Checking the Ignition

If the engine tries to start but spits and sputters:

1. Check the Oil Pressure Switch:
   a. Check for voltage from N.C. (normally closed) terminal to common ground while cranking the engine. (what should the voltage be?)
   b. Jump all three posts at the oil pressure switch, then see if the engine will start.
   c. If the engine starts after jumping the posts, replace oil pressure switch (JLG p/n: 4360405)

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