

Slow and Fast Idle Test

SPECIFICATIONS	
Slow Idle Speed	875—925 rpm
Fast Idle Speed	2330—2360 rpm

CAUTION: Prevent possible injury from unexpected machine movement. Machine must be in neutral when performing this test.

1. Run engine until it is at normal operating temperature.
2. Cycle engine speed control switch from slow to fast idle.
3. Move engine speed control switch to slow idle.

Check monitor display unit for slow idle rpm to verify slow idle is to specification.

Specification

Slow Idle—Speed..... 875—925 rpm

4. Move engine speed control switch to fast idle.

Check monitor display unit for fast idle rpm to verify fast idle is to specification.

Specification

Fast Idle—Speed..... 2330—2360 rpm

IMPORTANT: Engine rpm can not be adjusted.

5. If slow or fast idle is out of specifications check the following:
 - Access Diagnostic Trouble Codes (DTCs). See Access Diagnostic Trouble Codes (DTCs). (Group 9015-20.)
 - Check fuel filter and system
 - Check air cleaner elements
 - Check engine control unit. See Engine Control Unit (ECU) Circuit Theory of Operation. (Group 9015-15.)

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Fuel System Test

SPECIFICATIONS	
Loaded Rotary-Type Pump Rated Pressure	6.9 kPa 0.069 bar 1.0 psi

SERVICE EQUIPMENT AND TOOLS
Gauge 0—345 kPa (0—3.45 bar) (0—50 psi)
Copper Tube
Clear Hose

1. Connect pressure gauge with hose to left rear port on fuel filter as shown. Reading at fuel pressure inlet should be at or above specification.

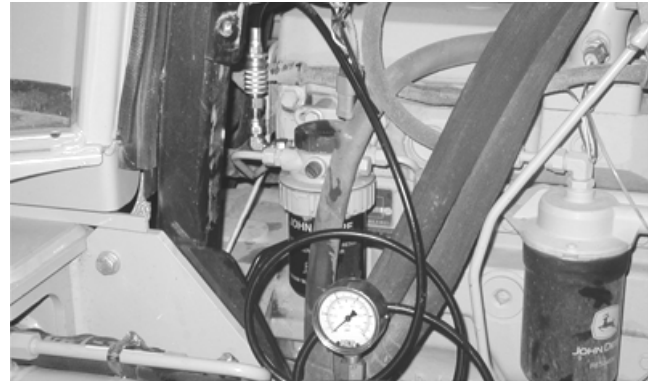
Specification

Loaded Rotary-Type
Pump—Rated Pressure..... 6.9 kPa
0.069 bar
1.0 psi (minimum)

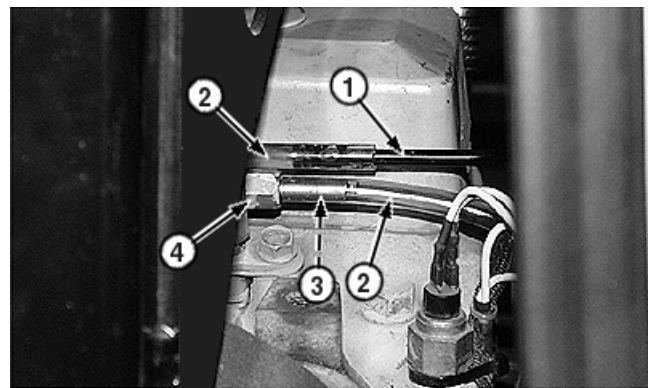
2. Disconnect fuel line (1) from tee fitting (4) near exhaust manifold.

IMPORTANT: Prevent possible damage to clear hose. Exhaust manifold may be hot. Keep clear hose away from exhaust manifold.

3. Install washer from tee fitting to copper tube (3).
4. Connect copper tube (3) with clear hose (2) to tee fitting.
5. Install remaining end of clear hose (2) to fuel line (1).
6. Position excess clear hose above system in a loop.



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1— Fuel Line
2— Clear Hose

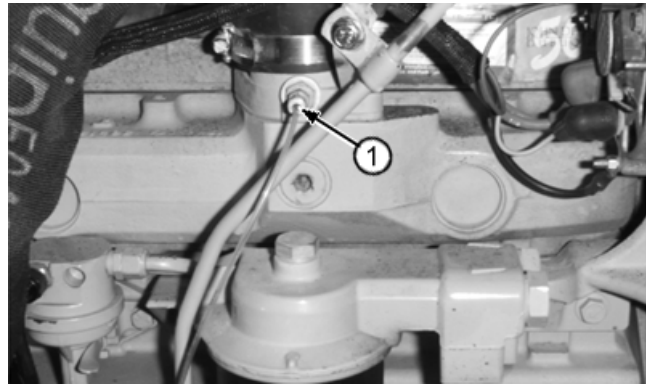
3— Copper Tube
4— Tee Fitting

7. Start machine. If air flows through fuel in clear hose there is a suction leak in fuel system.

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Turbocharger Boost Pressure Test

SPECIFICATIONS	
Engine Coolant Temperature	70—90°C 160—200°F
Engine Fast Idle Speed	2330—2360
Engine Rated Speed	2200 rpm
Transmission Speed Position	1.6
450J LT Minimum Turbocharger Boost Pressure	34.5 kPa 0.3 bar 5.0 psi
450J LGP Minimum Turbocharger Boost Pressure	41.4 kPa 0.4 bar 6.0 psi
550J LT Minimum Turbocharger Boost Pressure	41.4 kPa 0.4 bar 6.0 psi
550J LGP Minimum Turbocharger Boost Pressure	48.3 kPa 0.5 bar 7.0 psi
650J LT and LGP Minimum Turbocharger Boost Pressure	55.2 kPa 0.5 bar 8.0 psi



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1— Starting Aid Tube

SERVICE EQUIPMENT AND TOOLS	
JT07248 Manifold Pressure Test Gauge	
Hose Barb Test Fitting (10 mm x 6 mm barbed)	

This procedure is used only as a guide to determine engine condition. Test must be done in area that allows you to drive machine back and forth to circulate hydrostatic (HST) oil between test runs. If test is done in confined area machine must be supported on stands so track can turn to circulate HST oil.

IMPORTANT: New engines may not develop specified boost pressure, do not test before engine has completed 50 hours of operation. Turbocharger Boost Pressure Test should only be used as a general indicator of engine performance.

Reduce boost pressure specifications by 7% if No. 1 fuel is used.

Machines are shipped from the factory with No. 1 fuel

1. Access engine RPM on monitor display unit.
2. Remove pipe plug or starting aid nozzle, if necessary. See *Start Aid Remove and Install*. (Group 0505.) Connect manifold pressure gauge to test fitting. Place gauge in operator's compartment for ease of reading.
3. Warm engine to operating temperature.

Specification

Engine Coolant—Temperature.....70—90°C
160—200°F

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