# **Control Valve Spool Actuating Pilot Pressure Test**

## -: Specifications

SPECIFICATIONS	
Hydraulic Oil Temperature	45—55°C
	110—130°F
Engine Speed	Slow Idle and Fast Idle
Work Mode Switch Position	Bucket Mode
Power Mode Switch Position	PWR (power) Mode
Auto-Idle Switch Position	OFF
Control Valve Spool Actuating Pressure	3.4—4.0 MPa
	3400—4000 kPa
	34—40 bar
	490—580 psi

## -: Service Equipment and Tools

SERVICE EQUIPMENT AND TOOLS	
Tee (9/16-18 F SW 37° x 7/16-20 M 37° x 9/16-18 M 37°)	
JT02162 Transducer 34 000 kPa (350 bar) (5000 psi)	
JT02158 Digital Pressure and Temperature Analyzer	
Gauge 7000 kPa (70 bar) (1000 psi)	

Purpose of test is to ensure that the pilot pressure to the valve spools is enough to completely shift the spools.





TX1002098A-UN: Control Valve Spool Actuating Pilot Pressure Test <u>LEGEND:</u>

1 - Tee

#### 2 - Transducer

Release hydraulic oil tank pressure by pushing pressure release button on top of hydraulic oil tank. See Hydraulic Oil Tank Pressure Release Procedure . (Group 9025-25.)

2. Connect a vacuum pump to hydraulic oil tank to minimize oil loss. See Apply Vacuum to Hydraulic Oil Tank . (Group 3360.)

#### 3. NOTE:

Spool actuating pressure can be checked for each function by installing a tee and gauge in pilot line and then actuating that function.

Spool actuating pressure for boom, arm, and bucket functions can be viewed in the monitor. Swing and travel pressures viewable in the monitor are measured at pilot signal manifold.

Remove pilot line of choice at control valve end cap and install a tee (1) in pilot line for function being tested.

- Connect the JT02158 Digital Pressure and Temperature Analyzer and JT02162 Transducer or a 7000 kPa (700 bar) (1000 psi) gauge. See JT02156A Digital Pressure and Temperature Analyzer Kit Installation . (Group 9025-25.)
- 5. Disconnect vacuum pump.
- 6. Connect one of the following test equipment to perform test:
  - Monitor application. For instruction to actuate the service menu on monitor in cab, see Service Menu. (Group 9015-16.)

Select the following items from monitoring list:

- Boom Raise Pilot Pressure
- Bm Lower Pilot Pressure
- Arm Roll-In Pilot Pressure
- Arm Roll-Out Pilot Pressure
- Bucket Roll-In Pilot Pressure
- Bucket Roll-Out Pilot Pressure
- Hydraulic Oil Temperature
- Actual Engine Speed
- Service ADVISOR™ application. For instruction, see Service ADVISOR™ Connection Procedure . (Group 9015-20.)

Select the following items from the menu:

- Boom Raise Pilot Pressure
- Bm Lower Pilot Pressure
- Arm Roll-In Pilot Pressure
- Arm Roll-Out Pilot Pressure
- Bucket Roll-In Pilot Pressure
- Bucket Roll-Out Pilot Pressure
- Hydraulic Oil Temperature
- Actual Engine Speed
- MPDr application. For instruction, see MPDr Application . (Group 9015-20.)

Select the following items from the monitor display: