

## Testing and Adjusting

301.6C and 301.8C Mini Hydraulic Excavators Hydraulic System

Media Number -REN9155-02

Publication Date -01/03/2009

Date Updated -25/03/2009

i02374335

# General Testing and Adjusting Information

SMCS - 5050



**Sudden movement of the machine or release of oil under pressure can cause injury to persons on or near the machine.**

**To prevent possible injury, perform the procedure that follows before testing and adjusting the power train.**



**Personal injury can result from hydraulic oil pressure and hot oil.**

**Hydraulic oil pressure can remain in the hydraulic system after the engine has been stopped. Serious injury can be caused if this pressure is not released before any service is done on the hydraulic system.**

**Make sure all of the attachments have been lowered, oil is cool before removing any components or lines. Remove the oil filler cap only when the engine is stopped, and the filler cap is cool enough to touch with your bare hand.**

1. Move the machine to a smooth horizontal location. Move the machine away from other machines and personnel. Lower the blade to the ground. Lower the boom, the stick and the bucket to the ground. Stop the engine.
2. Permit only one operator on the machine. Keep all other personnel away from the machine or in the operator's view.
3. Put chocks in front of the tracks and behind the tracks.
4. Raise the blade for tests and adjustments. Properly support the blade. Raise the boom, the stick and the bucket for tests and adjustments. Properly support the boom, the stick and the bucket. The implement circuit has high oil pressure when the implements raise the front of the machine.

**Note:** Unless a system test requires the front of the machine off the ground, do not stop the engine with the front of the machine off the ground. Lower the machine to the ground and stop the engine.

5. During testing, keep personnel away from the rotating track and sprockets.
6. Relieve all hydraulic pressure before loosening a fitting, a hose or a component. Relieve all hydraulic pressure before tightening a fitting, a hose or a component. Relieve all hydraulic pressure before removing a fitting, a hose or a component. Relieve all hydraulic pressure before adjusting a fitting, a hose or a component.

During the diagnosis of the hydrostatic system, remember that correct oil flow and correct pressure are necessary for correct operation. The output of the pumps increases when engine speed increases. The output of the pumps decreases when engine speed decreases. Oil pressure is caused by resistance to the flow of oil.

When any test is made to the hydrostatic system, the hydraulic oil must be at normal temperature for operation. In order to increase the oil temperature, start the engine. Lift the blade. Turn the machine in both directions.

Before any tests are made, visually inspect the complete hydrostatic system and the implements. Check the hydrostatic system and the implements for leakage of oil. Check the hydrostatic system and the implements for parts that have damage.

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