



# Initial Setup Instructions

## Severe Duty Excavator Drum Mulcher



TOOLS NEEDED	PURPOSE
Adjustable Wrenches	Hose Connections
6,000 PSI Pressure Gauge	Pressure Measurement
Laser Tachometer and Reflective Tape	Speed Measurement
19mm Open Head Wrench	Displacement Adjustment
10mm Open Head Wrench	Shift Pressure Adjustment
19mm Socket	Guard Plate
8mm Allen Key	Hose Guard and Access Plates
6mm Allen Key	Displacement Adjustment
3mm Allen Key	Shift Pressure Adjustment


WARNING


Read and follow completely before operating or using the mulcher in any capacity.

## Hydraulic Connections

### Hydraulic Connections

P: Pressure 1" (#16) JIC

R: Return 1" (#16) JIC

D: Case Drain 3/4" (#12) JIC

MP: Working Pressure Gauge Port

MD: Case Drain Pressure Gauge Port



Figure 1

### Greasing Points

B1 & B2: Rotor

E: Overhung Load Adapter

### Hose Connection

1. Connect the case drain hose.
2. Connect the return hose.
3. Connect the pressure hose.

**NOTE:** Disconnect in the reverse order.



Figure 2

### Adjust Shift Pressure

The shift pressure of the motor may need adjusted to match the mulcher to the auxiliary pressure of the host machine. Depending on site conditions and personal preference, the shift pressure should be adjusted to 70 – 80% of the system pressure.

**! WARNING !**

**AVOID SERIOUS INJURY OR DEATH**

Keep away from moving parts.

**! WARNING !**

**AVOID SERIOUS INJURY OR DEATH**

Keep the discharge area clear of personnel, bystanders, or damageable property.

### Measure System Relief Pressure

1. Set the mulcher firmly on the ground with the rotor blocked to prevent rotation.
2. Remove the plug from the MP port, and attach the pressure gauge. For ease of installation, the guard plate may be removed from around the hydraulic connections.
3. Engage the excavator auxiliary hydraulics at full pressure to determine the maximum system pressure.

**NOTE:** DO NOT engage the hydraulics for more than 30 seconds to avoid heat build up in the hydraulic system.

**! WARNING !**

**AVOID SERIOUS INJURY OR DEATH**

Disengage the hydraulics and wait for all moving parts to stop before performing any adjustments. Place the mulcher on a firm, level surface before performing any maintenance procedures.

### Measure Shift Pressure

1. With the hydraulics disengaged and the pressure gauge still installed, lift the mulcher clear of the rotor block and anything else that might be caught or entangled in the rotor.
2. With the rotor completely still, engage the hydraulics at full flow and pressure. As the rotor builds speed, the pressure reading on the gauge will spike to the system relief pressure and then begin to fall. The gauge will slow and pause momentarily at a slightly lower reading, and then continue falling to a working pressure of around 600 – 700 PSI. The shift pressure is the level at which the gauge paused. If the shift pressure reading is not 70 – 80% of the system relief pressure, it can be adjusted for a better mulching experience.

### Adjust Shift Pressure

1. Disengage the auxiliary hydraulics, wait for all moving parts to stop, and set the mulcher on a flat, level, and firm surface.
2. Remove the top cover plate at the top of the mulcher and the cap off of the adjustment screw on top of the motor (see Figure 3, Item 1).

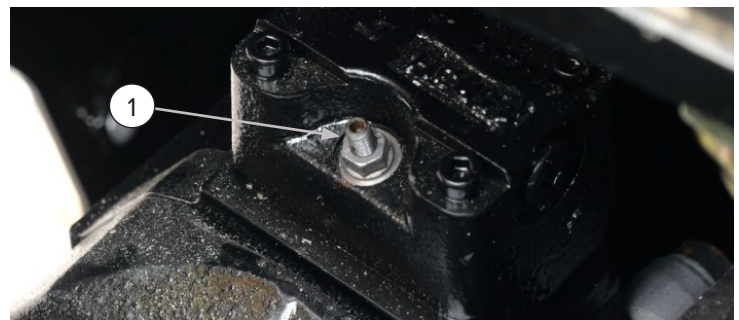


Figure 3

3. Loosen the jam nut, and turn the 3mm allen key to adjust. A half turn is equal to 1,160 PSI.

DIRECTION	SHIFT PRESSURE
Clockwise	Decrease
Counterclockwise	Increase

4. Hold the allen key in place, and tighten the jam nut. Repeat the above steps for measurement and adjustment until the desired shift pressure is reached.

## Adjust Rotor Speed

The minimum displacement of the motor may need adjusted to match the auxiliary flow of the machine.

The motor displacement varies between 55cc (factory setting) and 85cc. The lower displacement can be decreased from the factory setting.

### Measure Rotor Speed

1. Remove the front cover to access the rotor pulley.

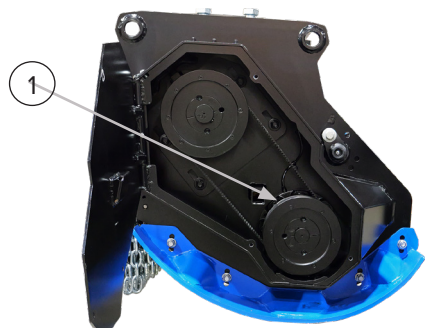


Figure 4

2. Apply reflective tape to the rotor pulley [Figure 4, Item 1].
3. Engage the rotor. Use a tachometer to measure the speed. The rotor speed should be between 2200 – 2500 rpm. If the rotor speed is not between the stated range, adjust the displacement.

**NOTE:** 2200 – 2500 RPM is for optimum performance. Maximum RPM is 2800.

**NOTE:** Rotor speed may decrease as hydraulic oil temperature increases.



## WARNING



Disengage the hydraulics and wait for all moving parts to stop before performing any adjustments. Place the mulcher on a firm, level surface before performing any maintenance procedures.

## Adjust Displacement

1. Disengage the auxiliary hydraulics, wait for all moving parts to stop, and set the mulcher on a flat, level, and firm surface.
2. Remove the access cover on the side of the mulcher to access the motor.
3. Loosen the jam nut, and turn the allen bolt to adjust the minimum displacement. Tighten the jam nut when complete [Figure 5, Item 1].

DIRECTION	MINIMUM DISPLACEMENT	ROTOR SPEED
Clockwise	Increase	Decrease
Counterclockwise	Decrease	Increase

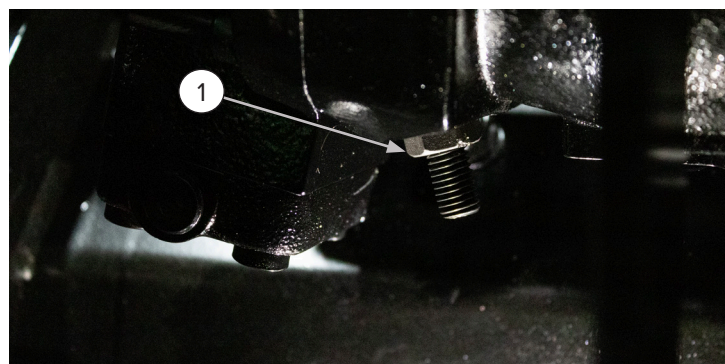


Figure 5

4. Measure the rotor speed again, and adjust as needed.



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