

INSTALLATION INSTRUCTIONS

FORESTRY DRUM MULCHER REX ROTH MOTOR CALIBRATION

DOC #15-2057

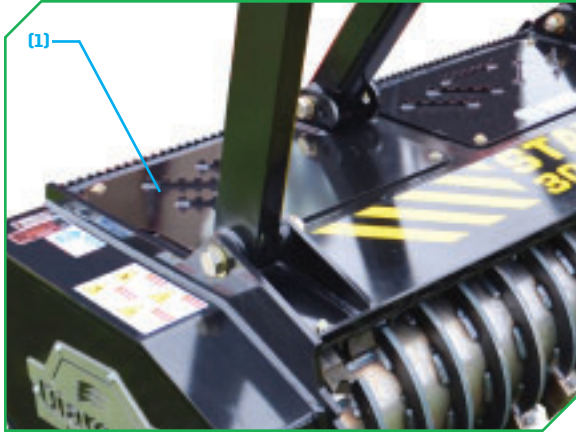
WARRANTY + SERVICE 888.960.0364

PARTS 888.960.0361



DIAMONDMOWERS.COM

PISTON MOTOR CALIBRATION

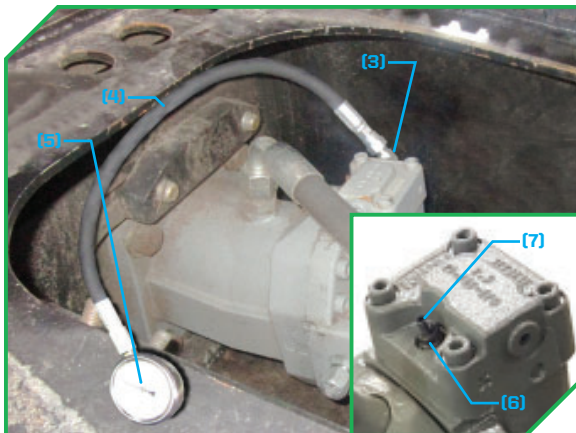
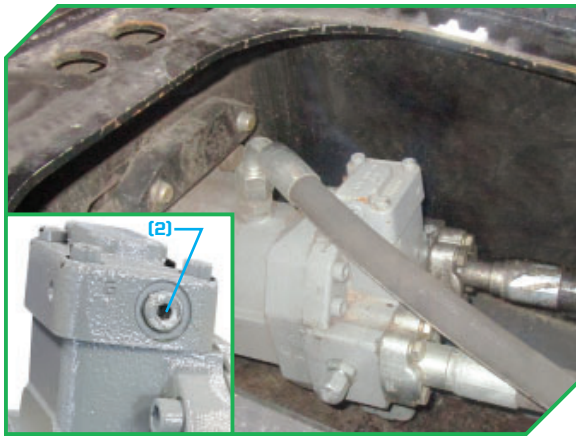


Piston to Carrier Motor Calibration:

- Remove the motor side top access cover (1).
- Temporarily remove the plug (2) marked "G" from the motor and install the adapter (3), hose (4), and 5000PSI (345Bar) rated gauge (5).
 - Use teflon tape on pipe threads.
 - Adapter (3), hose (4), and 5000PSI (345Bar) rated gauge (5) are from Diamond kit part #44-0949.
- Place the gauge (5) in a location so the dial and markings are clearly visible to the operator.
- Start the carrier and set the throttle to full speed.
 - **DO NOT** stand near the rotating drum when it is running.

⚠ WARNING

Keep away from the spinning drum when operating the unit; serious injury or death can result from contact with the drum.



- While observing the gauge (5), start the drum mulcher (engage the carrier's auxiliary hydraulics); The gauge (5) will spike to a high pressure reading then drop with readings oscillating slightly up and down. The gauge (5) will eventually **STEADY** for a short period of time (This is the motor **SHIFT POINT**), after which the pressure readings will drop off.
 - Note the pressure reading when the gauge is **STEADY** with minimal oscillation (the motor **SHIFT POINT**).
 - **NOTE:** If the test must be repeated, the drum mulcher must be shut down and come to a complete stop before repeating the test.
 - **NOTE:** If the pressure setting is too high, the motor displacement will not change, resulting in low torque and slow recovery; if too low, it will shift into high displacement too early, resulting in slow drum speed and low pressure / performance.
- The pressure reading (motor **SHIFT POINT**) noted when the gauge (5) was **STEADY** should be between 6-700PSI (42-48Bar) **BELOW** the carrier's auxiliary hydraulic relief setting (refer to the carrier's operators manual).
 - **If Adjustment Is Needed:**
 - Confirm the machine and drum mulcher are shut down and not in motion.
 - Loosen the locknut (6) on the adjustment screw (7) with a 10mm combination wrench.
 - Use a 3mm Allen wrench to turn the adjustment screw (7) clockwise to lower the **SHIFT POINT**, or counter-clockwise to raise it (adjust in 1/8 turn increments).
 - Repeat these steps until the desired **SHIFT POINT** is reached, then tighten the locknut (6) to retain the adjustment screw (7) position.
- Remove the adapter (3), hose (4), and gauge (5) and replace the plug (2) into the motor port marked "G".
- Replace the top access cover (1).

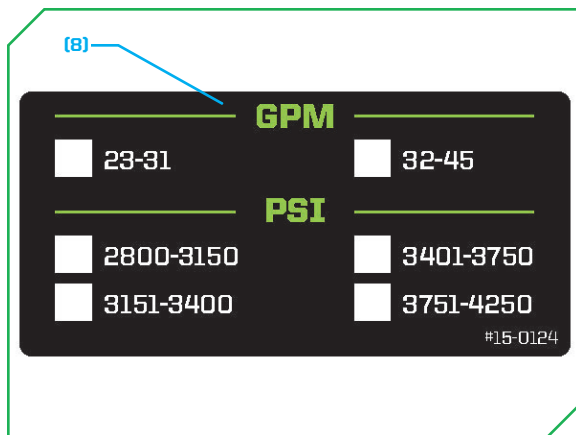
PISTON MOTOR CALIBRATION

Optimum drum RPM to gallons per minute (GPM) is shown in the below chart for both standard and high flow displacement options.

- Remove the side cover on the belt drive side of the machine.
- Run the carrier and machine up to full throttle.
- Use a tachometer to gauge the drum speed pulley RPM.

STANDARD / HIGH FLOW GPM / DRUM SPEED

STANDARD FLOW		HIGH FLOW	
GPM	PULLEY RPM	GPM	PULLEY RPM
23	1919	32	1748
24	2002	33	1802
25	2085	34	1857
26	2169	35	1911
27	2252	36	1966
28	2336	37	2021
29	2419	38	2075
30	2503	39	2130
31	2586	40	2184
-	-	41	2239
-	-	42	2294
-	-	43	2348
-	-	44	2403
-	-	45	2457



Piston to Carrier Motor Calibration:

- Remove the adapter ⁽³⁾, hose ⁽⁴⁾, and gauge ⁽⁵⁾ and replace the plug ⁽²⁾ into the motor port marked "G".
- Replace the top access cover ⁽¹⁾.
- Contact Diamond Mowers customer service at 888.960.0364 to have a new GPM/PSI tag ⁽⁸⁾ sent to you at no cost.
 - **WARNING:** The motor warranty will be voided if customer service is not contacted.
- Mark the appropriate GPM flow range and carrier PSI range on your GPM/PSI tag ⁽⁸⁾.
 - **NOTE:** The PSI range is NOT the shift point, but rather the maximum pressure of the carrier.
- Remove the protective covering on the adhesive on the back of the GPM/PSI tag ⁽⁸⁾ and mount it below or in close proximity to your serial number tag.