

Replace Theta Motor Assembly APR-TRM

REQUIRED TOOLS:

- 5/64" hex key
- 3/32" hex key
- 7/64" hex key

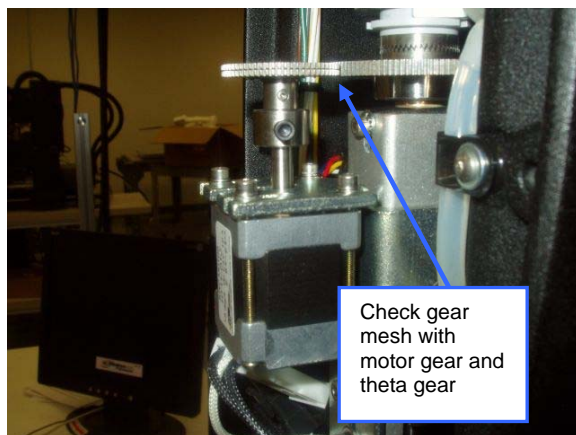
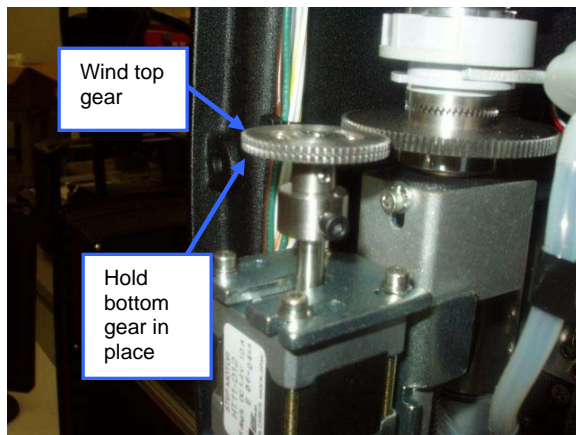
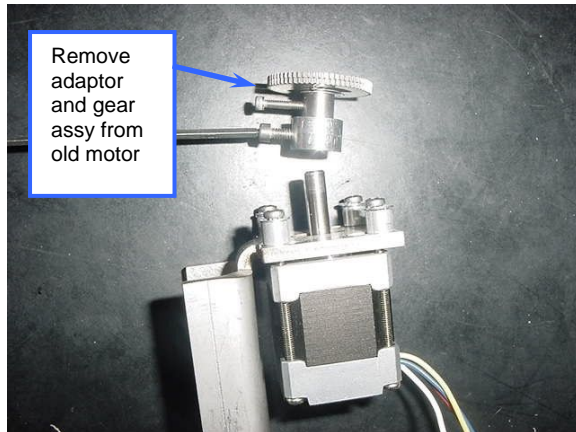
Remove theta motor Assembly

1. Remove the front cover of the head assembly.
2. Remove the two screws holding the theta motor mount bracket to the vacuum tube shield. Unplug the motor connector and remove the theta motor assembly.
3. Remove the motor shaft adaptor/anti-backlash gear and setscrew from the theta motor shaft .
4. Remove the theta motor from mounting bracket.

Install theta motor Assembly

1. Install the new motor onto the mounting bracket with four screws. Leave the screws slightly loose to allow for adjustment.
2. Reinstall the adaptor and gear assembly onto the shaft of the new motor.
3. Reattach the theta motor assembly to the vacuum tube shield with two screws. Slide the mounting bracket up or down to align the motor gears with the theta gear on the head. Once the gears are aligned tighten the two screws.
4. Wind the anti-backlash mechanism on the theta motor by doing the following: gently pull the motor gears back from the theta gear on the head. On the motor, hold the bottom anti-backlash gear in place and rotate the top gear three to five teeth counter-clockwise.
5. Gently push the wound motor gears against the theta gear. Make sure the gears mesh properly.
6. Once the gears are lightly meshed, tighten the four motor mount screws.
7. Plug in the theta motor connector.

NOTE: Check the gear mesh. The gear assembly should rotate without any resistance.



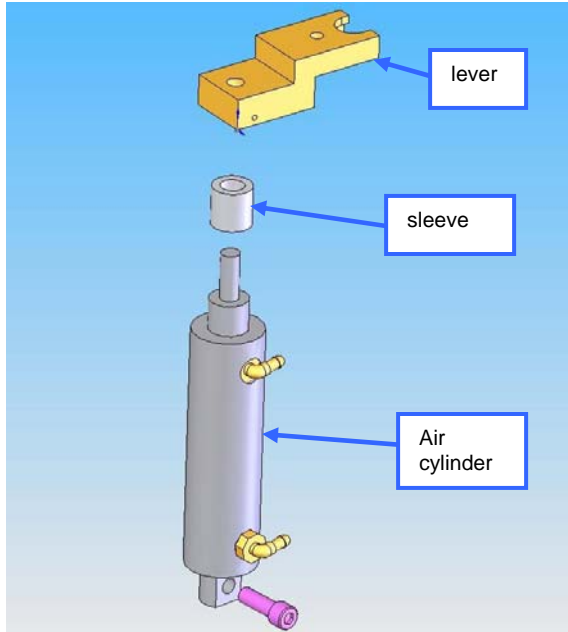
Replace Air Cylinder APR-PAC

REQUIRED TOOLS:

0.050" hex key
7/64" hex key
3/16" hex key

Remove air cylinder

1. Remove the front cover of the head assembly.
2. Remove the theta motor/vacuum tube shield assembly.
3. Remove both of the air hoses connected to the air cylinder. Note which hoses go to the two fittings. The green banded hose is on bottom and the red banded hose is on the top.
4. Remove the screw from the bottom of the air cylinder that holds the cylinder to the head casting.
5. Carefully remove the air cylinder bottom first. Be careful not to damage the gear assembly.
6. Loosen the two set screws on the sides of the air cylinder lever and remove the lever from the old cylinder.



Install air cylinder

1. Position the lever at the beginning of the flat on the threaded shaft of the air cylinder. Tighten the two set screws on the sides to hold the lever in place.
2. Carefully install new air cylinder into the head. Install the screw at the bottom of the cylinder and thread into the casting, but leave it slightly loose for adjustment.
3. Connect the two air hoses to the top and bottom inlets of the air cylinder.
4. Carefully reinstall theta motor/vacuum tube shield assembly. Make sure to wind the backlash gear of the theta motor.
5. Install the front head cover.

