Disassembly Instructions - 0.4 hp. Planetary Reduction Gears

Important: Use these instructions along with the tool, parts page or manual.

Planetary Gear Disassembly:
1. **Important**: To separate the planetary adapter or gear case from the housing core, view and follow the "Disassembly Instructions - 0.4 hp. Air Motor (Straight)".

2. Fasten the flats of the planetary adapter or gear case in a vise with aluminum or bronze jaws.

   Use a **HEAT GUN** to warm the rear exhaust cover, planetary housing or lock nut to soften the thread adhesive.

   Use the **50971 Lock Ring Tool** or adjustable wrench to separate the rear exhaust cover, planetary housing or lock nut from the adapter or gear case.

3. Use a **2 mm or 5/64" hex key** to remove the setscrew(s).
4. Remove the planetary reduction.

5. **Important:** Fasten the 96346 Bearing Separator (2") with the FLAT SIDE facing the RING GEAR and the BEVELED SIDE facing the "REAR" 54520 Bearing. Place the bearing separator and the planetary reduction in the 96232 Arbor Press (#2) with the 50782 Adapter or pinion gear pointing down.

6. Use a 5/16" flat-end drive punch as a press tool to push the planetary carrier out of the 54520 Bearing.

7. Remove the ring gear, shafts, and planet gears.

**Notice:** Gently tap the carrier on a hard surface. The shafts and gears will fall out of the carrier.
8. Use a HEAT GUN to warm the 50782 Adapter or pinion gear to soften the thread adhesive.

With the planetary carrier pointing up, carefully fasten the adapter or pinion in the vise with aluminum or bronze jaws.

Insert a screwdriver through the carrier and turn counterclockwise to remove the adapter or pinion.

9. Use the arbor press, and a 5/16" flat-end drive punch as a press tool to push the planetary carrier out of the remaining 54520 Bearing.

Planetary Gear Disassembly Complete.

Clean and inspect parts before assembling.
Planetary Gear Assembly:
1. Use the RAISED CENTER of the 96239 Bearing Press Tool and the arbor press to install the 54520 Bearing onto the front of the planetary carrier.

2. Apply a small amount of Loctite #271 (or equivalent) to the adapter or pinion thread. Carefully hold the planetary carrier in the vise with aluminum or bronze jaws and install the adapter or pinion onto the planetary carrier. (T to 17 N•m/~150 in. lbs.)

3. Apply the 95542 Grease (or equivalent) to the needle bearings in the planet gears. Install the planet gears and the 54472 Pins into the carrier.
Install the 54468 Ring Gear so that the notches will line-up with the lubricant and setscrew holes in the 53152 Adapter, 53153 Planetary Housing or gear case.

4. Use the RAISED CENTER of the 96239 Bearing Press Tool and the arbor press to install the 54520 Bearing onto the planetary carrier. IMPORTANT: Carefully press the bearing to just touch the ring gear. This will establish a snug-fit between the bearings and the ring gear.

5. Install the planetary reduction into the adapter and/or planetary housing or gear case. Apply Loctite #567 (or equivalent) to the 50784 Setscrew(s) and install.
6. Apply Loctite #7649 Primer, and a small amount of Loctite #567 (or equivalent) to the threads of the adapter or gear case.

7. Fasten the wrench flats of the 53152 Adapter, 53153 Planetary Housing or gear case in the vise, and install the rear exhaust cover, planetary housing or lock nut onto the adapter. (T to 28 N•m/~250 in. lbs.)

8. Use the 95541 Lubricant Gun to supply 2 plunges of 95542 Grease (or equivalent) through the lubricant fitting(s). It is recommended to supply 2 plunges of grease after every 50-hours of use.

Planetary Gear Assembly Complete.