

### 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).



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Telephone: 55-11-4390-0133 • Fax: 55-11-4399-1067

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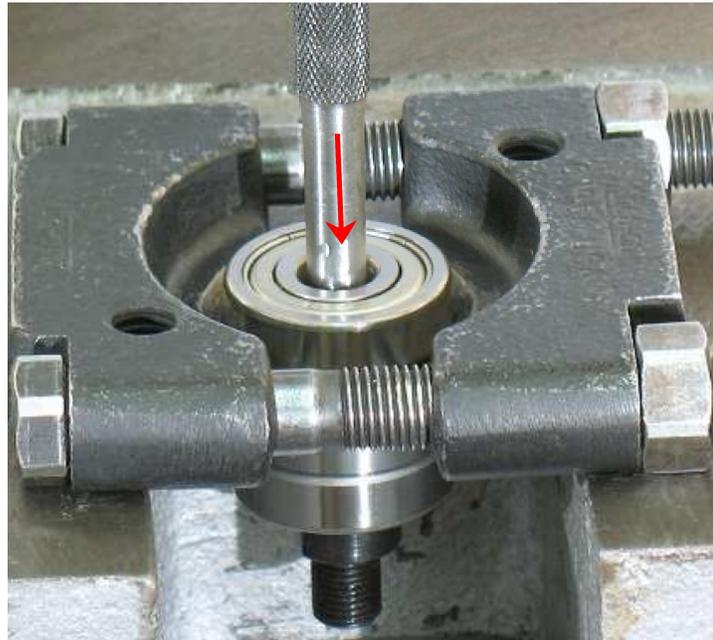
4. Remove the planetary reduction.
5. **Important:** Fasten the **96346** Bearing Separator (2") with the **FLAT SIDE** facing the RING GEAR and the **BEVELED SIDE** facing the "REAR" **54520** Bearing. Place the bearing separator and the planetary reduction in the **96232** Arbor Press (#2) with the **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.

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8. Use a **HEAT GUN** to warm the **50782** Adapter or pinion gear to soften the thread adhesive.

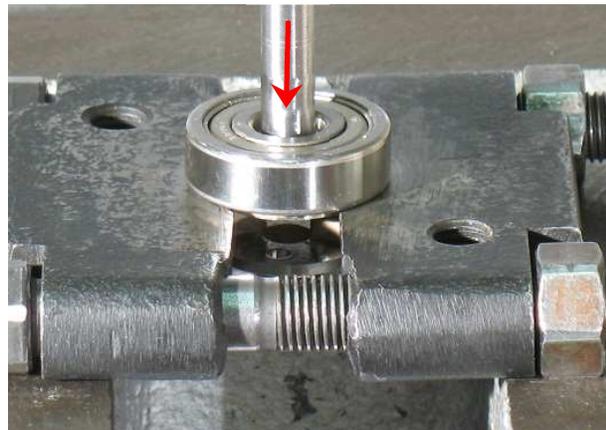
With the planetary carrier pointing up, carefully fasten the adapter or pinion in the vise with aluminum or bronze jaws.

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.**

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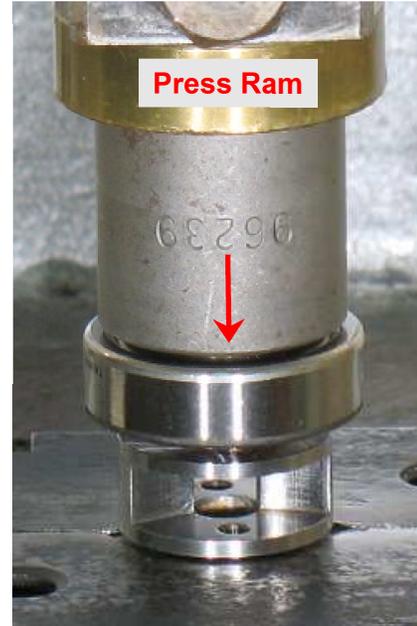
## Assembly Instructions - 0.4 hp. Planetary Reduction Gears

### 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.



← Thread at front of carrier.



Press Ram

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.



(T to 17 N•m/~150 in. lbs.)

Install the planet gears and the **54472** Pins into the carrier.

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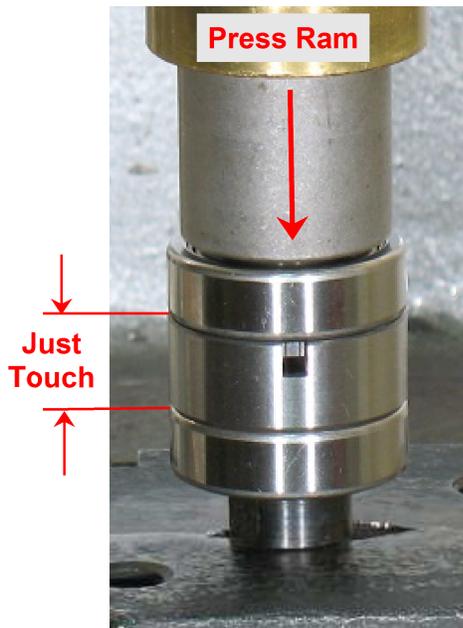
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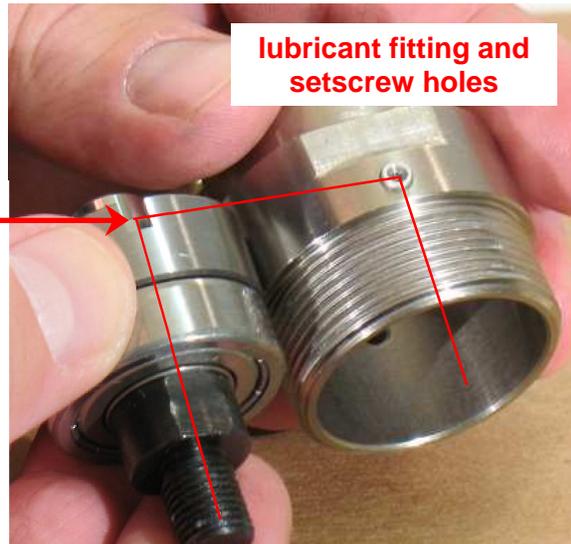
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Install the **54468** Ring Gear so that the notches will line-up with the lubricant and setscrew holes in the **53152** Adapter, **53153** Planetary Housing or gear case.

- 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.



Notch



- 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.**

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