

Fig. 7 - Removing Blower Rotors from Front End Plate Ball Bearings (Former Blower)

4. Remove the seven bolts and lock washers securing the breather body to the governor housing. Remove the breather body and gasket.
5. Remove the seven bolts and copper washers, two inside and five outside, securing the governor assembly to the blower front end plate.
6. Tap the governor housing with a plastic hammer to loosen it from the gasket and dowel pins. Then remove the governor assembly and gasket.

Disassemble Blower

Cover the air inlet and outlet openings and clean the exterior of the blower with fuel oil and dry it with compressed air.

Refer to Figs. 3 and 10 and disassemble the blower as follows:

1. Place a clean folded shop towel between the rotors and a towel between the rotor and housing to prevent the rotors from turning.
2. Remove the two bolts and pilots (43) securing the blower rotor gears to the blower rotor shafts.
3. Remove the blower rotor gears with pullers J 21672-7 (Fig. 5). Both rotor gears must be pulled at the same time as follows:
 - a. Back the center screws out of both pullers, then place the flange end of the pullers against the rotor gears. Align the large holes in the puller flanges with the 3/8"-24 tapped holes in the gears. Secure the pullers to the gears with four 3/8"-24 x 1" bolts.
 - b. With the shop towels between the blower rotors

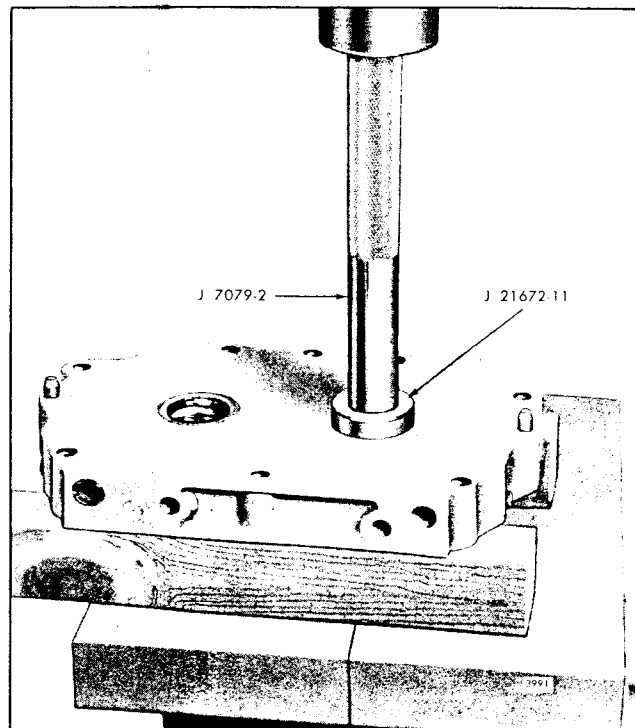


Fig. 8 - Removing Oil Seal and Roller Bearing from Rear End Plate (Former Blower)

and housing to prevent them from turning, turn the puller screws uniformly clockwise and pull the gears from the rotor shafts as shown in Fig. 5.

4. Remove the shims from the rotor shafts and note the number and thickness of the shims on one or both of the rotor shafts.
5. Remove the bolts securing the rotor shaft bearing retainers (71) to the rear end plate, then remove the retainers.
6. Remove the bolt and special washer (80) securing the ball bearing (former blower) or roller bearing (current blower) on the right-hand helix rotor shaft at the front end of the blower.
7. Bend the tang of the bearing retainer nut lock washer (81) up out of the notch in the bearing lock nut (82). Then remove the bearing lock nut with spanner wrench J 21672-17 as shown in Fig. 6.
8. Remove the bolts securing the rotor shaft bearing retainers to the front end plate, then remove the retainers.
9. Remove the socket head bolt (50) securing the blower rear end plate to the blower housing. Tap each end of the rear end plate with a plastic hammer to

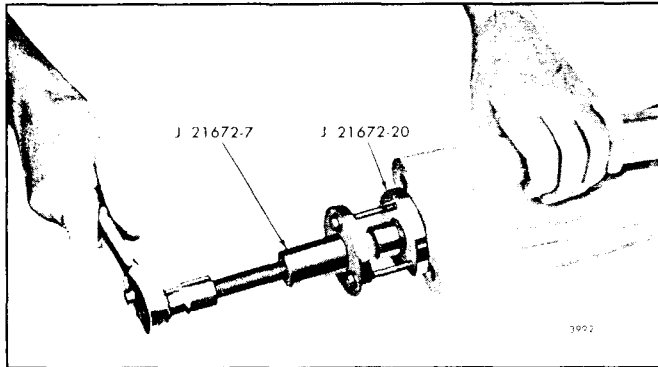


Fig. 9 - Removing Oil Seal Sleeve and Roller Bearing Inner Race from Rotor Shaft

loosen it from the blower housing, then remove the end plate and bearings from the rotor shafts.

10. Remove the blower rotors from the ball bearings (former blowers) and from the roller bearings (current blowers) in the front end plate and the blower housing as follows:

- a. Back the center screw out of both pullers J 21672-7, then attach the pullers to the blower front end plate with six 1/4"-20 x 1-1/2" or longer bolts as shown in Fig. 7.
- b. Remove the shop towels from between the blower rotors and the housing.
- c. Turn the puller screws uniformly clockwise and push the rotor shafts out of the ball bearings (former blower) or roller bearings (current blower) in the end plate. Then slide the rotors out of the blower housing.
- d. Remove the pullers from the blower front end plate.

11. Remove the socket head bolt securing the blower front end plate to the blower housing. Tap each end of the front end plate with a plastic hammer to loosen it and remove it from the blower housing.

12. Inspect the rotor shaft oil seals. If the seals are scored or hard, remove the bearings and oil seals from the blower end plates as follows:

- a. Support the blower end plate, inner face up, on two wood blocks on the bed of an arbor press as shown in Fig. 8.
- b. Place the oil seal remover J 21672-11 with handle J 7079-2 on top of the oil seal and under the ram of the press, then press the oil seal and bearing out of the end plate as shown in Fig. 8. Discard the oil seal.

- c. Remove the remaining oil seals and bearings from the end plates in the same manner as outlined in items "a" and "b" above.

CAUTION: When the roller bearings are removed from the rear end plate, each bearing must be tagged to be sure it will be installed in the same bearing bore in the end plate that it was removed from.

NOTE: Oil seal sleeves have been discontinued in the rear position of the current non-turbocharged engine blower. The oil seal sleeves will continue to be used in both the front and rear end plates (four positions) in the turbocharged engine blower.

13. If the roller bearings or the oil seal sleeves are to be replaced, the roller bearing inner races and oil seal sleeves may be removed from the rotor shafts as follows:

The roller bearing inner race may be removed separately or the oil seal sleeve and inner race may be removed together.

- a. Place the roller bearing inner race and oil seal sleeve remover J 21672-20 over the rotor shaft behind the oil seal sleeve as shown in Fig. 9.
- b. Back out the center screw of one gear puller J 21672-7, then attach the puller to the oil seal sleeve remover with three 1/4"-20 x 3" bolts and flat washers as shown in Fig. 9.
- c. Turn the puller screw clockwise and pull the roller bearing inner race and oil seal sleeve off of the rotor shaft.
- d. Remove the roller bearing inner race and oil seal sleeve from the remaining rotor shaft.

CAUTION: Be sure and tag or place each roller bearing inner race with its mating roller bearing. Do not intermix the inner races and roller bearings.

Inspection

Wash all of the blower parts in clean fuel oil and dry them with compressed air.

Examine the bearings for any indications of corrosion or pitting. Lubricate each bearing with light engine oil. Then while holding the bearing inner race from turning, revolve the outer race slowly by hand and check for rough spots.

The double-row ball bearings are pre-loaded and have