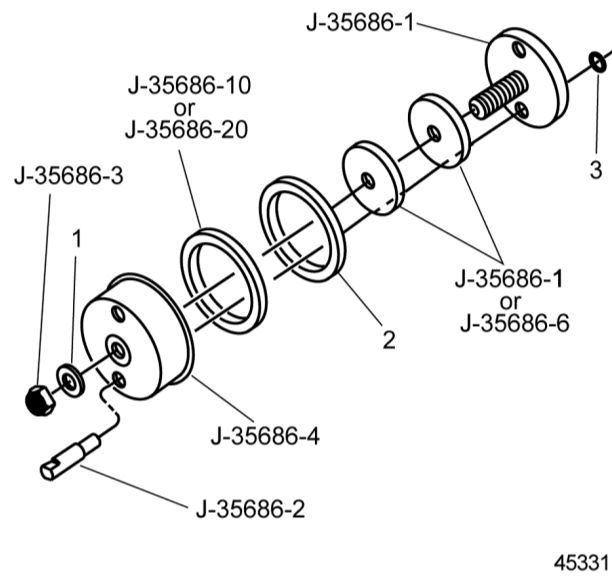


Installation of the Front and Rear Crankshaft Oil Seal and the Wear Sleeve

All replacement oil seals provide a replacement wear surface at the point of contact with the sealing lip. The oil seal assembly is installed using the crankshaft oil seal sleeve installation tool set (J-35686-B). The collar and spacer usage is dependant on the part number of the seal to be installed.



- 1. Thrust Bearing
- 2. Crankshaft Seal
- 3. Guide Stud Retaing O-ring

Fig. 1, Crankshaft Oil Seal and Sleeve Installation Tool Set (J-35686-B)

Crankshaft Seal Tool Application			
Crankshaft Seal Application	Seal Part Number	Collar	Spacers
Front	23518355	J-35686-20	J-35686-11
Rear, Dry Housing	23516969 (assembly contains seal part no. 23501544)	J-35686-10	J-35686-6 and J-35686-11
Rear, Dry Housing	23519651	J-35686-20	J-35686-6 and J-35686-11
Rear, Wet Housing	23513578	J-35686-10	J-35686-6 and J-35686-11

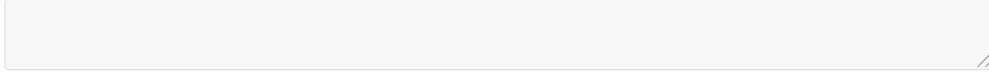
Perform the followings steps to install the front and rear oil seals and sleeves:

Notice: Ensure that the crankshaft hub and bolt surface, gear case cover, flywheel housing bore and contact surfaces of the installation tools are free of dirt, grit, rust or raised metal. Clean thoroughly with crocus cloth if needed. Ensure that an old wear sleeve is not installed onto the crankshaft hub. [Removal of the Wear Sleeve from the Crankshaft Hub](#) for wear sleeve removal instructions.

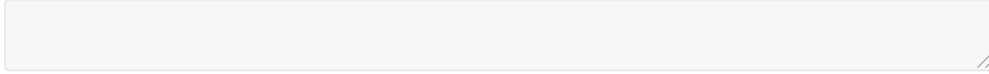
Notice: The incorrect installation of the oil seal will cause immediate seal leakage, or will reduce the life of the seal significantly.

Notice: Failure to lubricate the outside of the seal and the inside of the bore prior to installation may damage seal causing seal to leak.

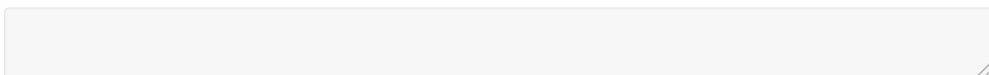
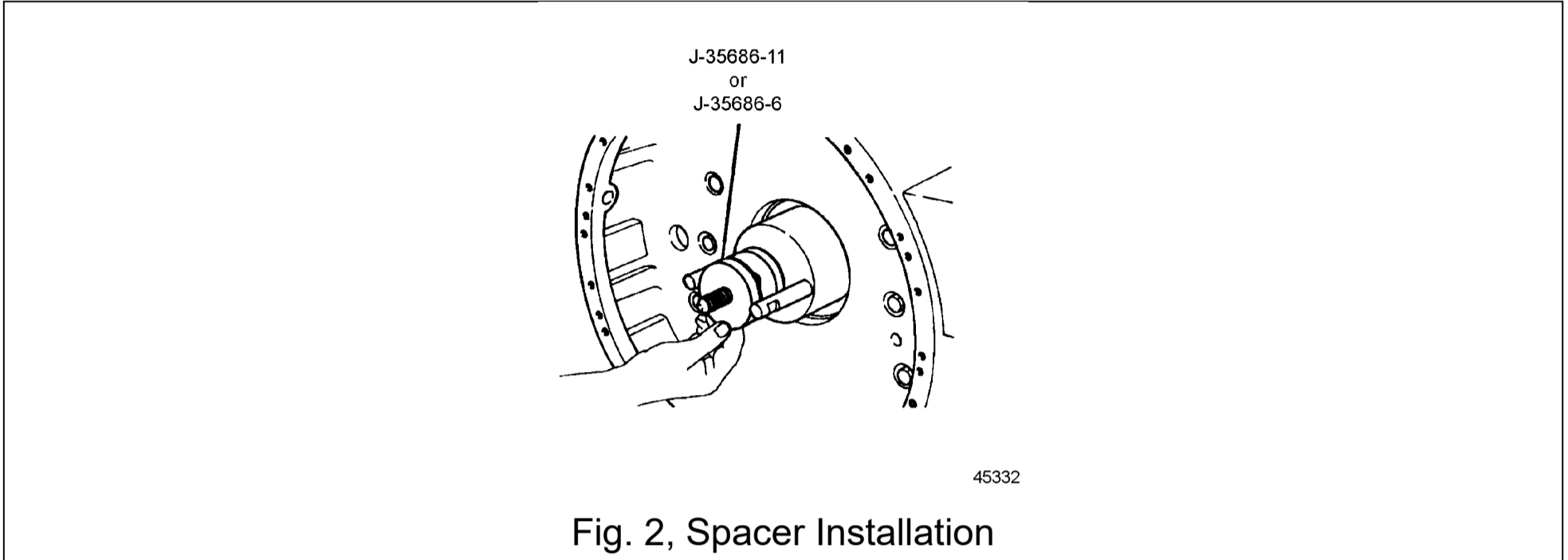
1. Lubricate the rubber outer diameter of the oil seal with clean engine oil. Lubricate the gear case cover or flywheel housing bore with clean engine oil.



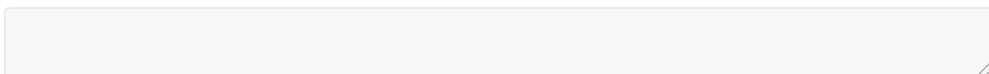
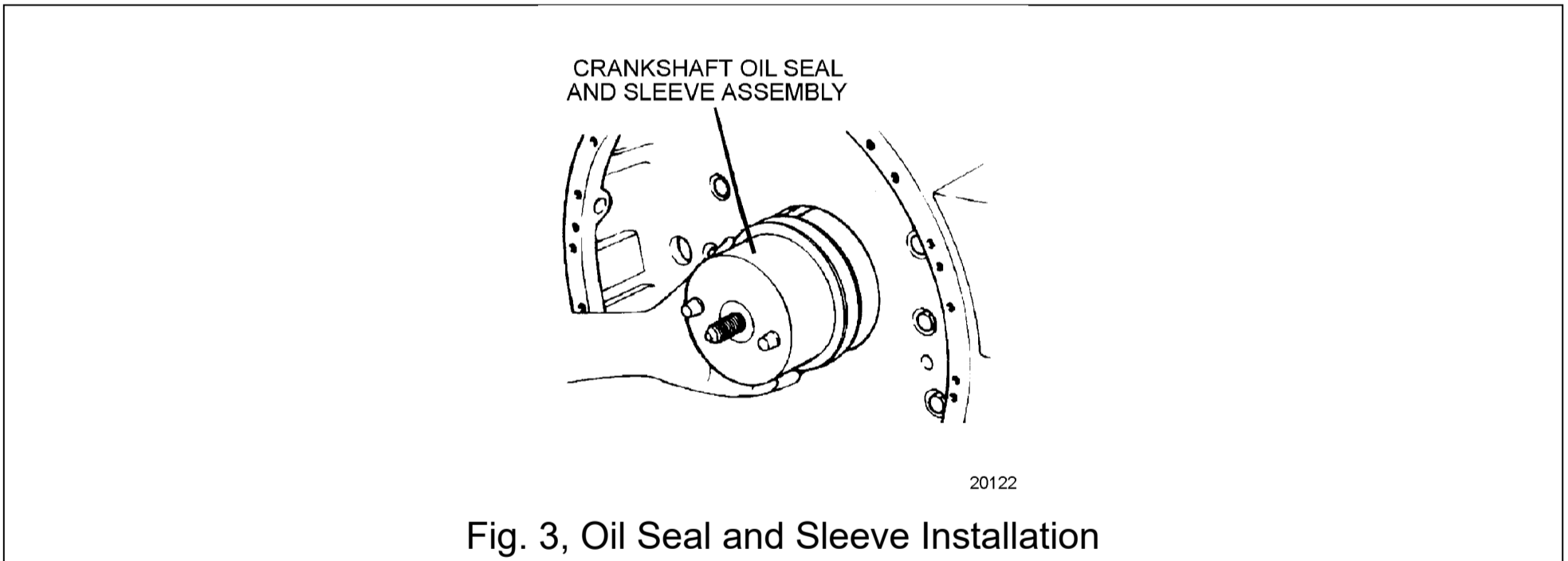
2. Install two guide studs (J-35686-2, part of tool set J-35686-B) through the holes provided in the center guide assembly (J-35686-1, part of tool set J-35686-B) and into two of the tapped holes in the crankshaft 180-degrees apart. Tighten the guide studs using the appropriate wrench on the flats of the studs. The base must be tight against the end of the crankshaft.



3. Install the spacers to the center screw of the base. Refer to above table "Crankshaft Seal Tool Application."



4. Slide the oil seal assembly over the installer base as far onto the crankshaft hub as possible. Slide collar with the stepped side contacting the seal. Slide the installer cup over the guide studs and installer base. See above table "Crankshaft Seal Tool Application."



5. Lubricate the center screw of the base with extreme pressure lubricant (J-23444-A, part of tool set J-41329). Install the thrust bearing with the case side toward the installer cup and install the hex nut to the center screw of the base.

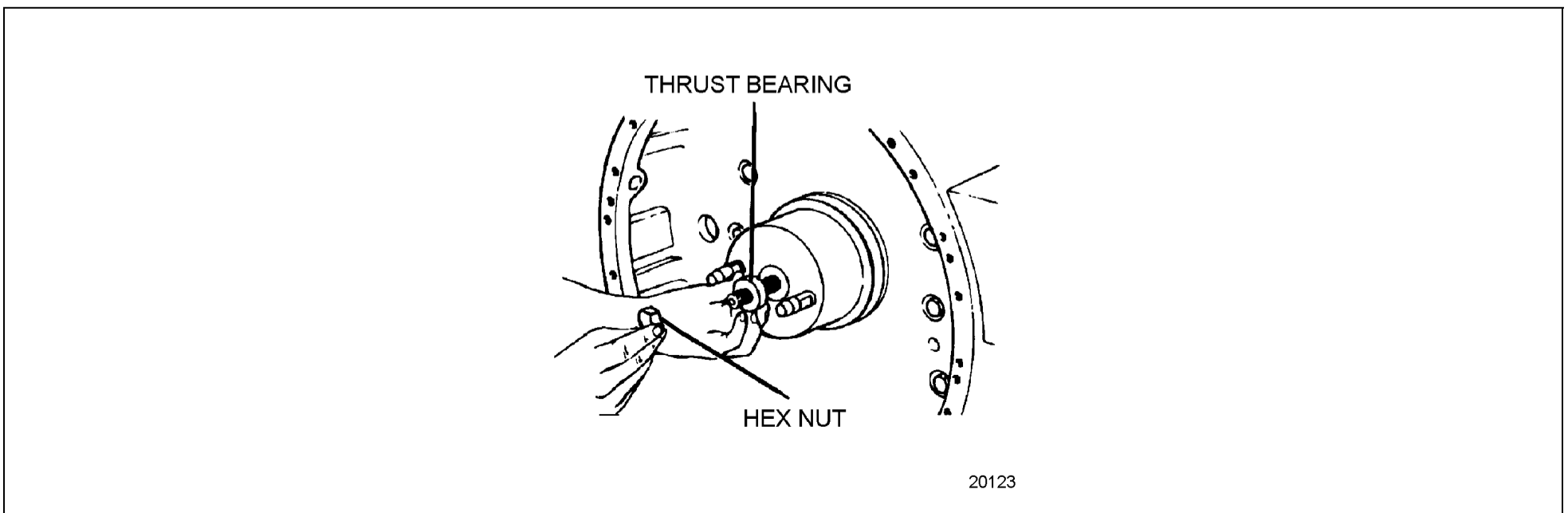


Fig. 4, Thrust Bearing Installation

6. Finger tighten the hex nut until snug.

7. Install a ratchet and socket onto the hex nut.

8. Tighten the hex nut until the oil seal and wear sleeve are pressed into the flywheel housing or gear case cover.

9. When the inside surface of the housing is seated firmly against the base and spacers the seal and sleeve are properly installed. Remove tools.

10. Measure the face squareness of the outside diameter of the crankshaft seal using a run out gage installed on the crankshaft. If the total indicator reading is more than 0.762 mm (0.030 in.) the seal must be removed and a new seal installed.

Note:

Parent topic: [Crankshaft Oil Seals](#)

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