



Installation Instructions

18SP550—Install 11.5 Inch Fan Hub Bracket Kit on Series 40 or Series 40E Engine

Introduction

This fan hub bracket kit is intended for installation on a Series 40® or Series 40E® engine. When properly installed, this hub bracket ensures proper alignment of the fan hub pulley to the engine, providing positive fan belt/pulley tracking and extended fan belt life. The kit includes the items listed in Table 1:

Part No.	Qty.	Description
23529689	1	Bracket Assembly, Fan Hub
5123922	10	Shim, 0.254 mm (0.010 in.) thick
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Table 1. Service Kit 23530052 Components

Preparations for Kit Installation

Installation of this kit requires removal of certain engine components, as follows:



CAUTION:

To avoid injury from hot surfaces, allow the engine to cool before removing any component. Wear protective gloves.



CAUTION:

To avoid injury from accidental engine start-up while servicing the engine, disconnect/disable the starting system.

1. With the engine at ambient temperature (cool to the touch) and the starting system disconnected/disabled, remove the necessary sheet metal to gain access to the fan hub bracket.
2. Refer to the *Series 40 Service Manual* (6SE40) or the *Series 40E Service Manual* (6SE410) and remove the fan drive belt and fan.
3. Remove the fan hub bracket and discard. Retain the mounting bolts.

Installation of the Fan Hub Bracket Kit

Install the fan hub bracket kit as follows:

1. Using the four (4) fan hub bracket upper mounting bolts previously removed, install the new fan hub bracket onto the engine. Torque the four (4) upper bolts to 22 N•m (16 lb-ft or 192 lb-in). See Figure 1.
2. Using a feeler gauge, measure the clearance between the lower mounting bolt holes in the the bracket and the front cover.
3. Refer to the gap measurements listed in Table 2 and determine the number of shims required for both lower bolts. The shims in the kit are 0.254 mm (0.010 in.) thick.

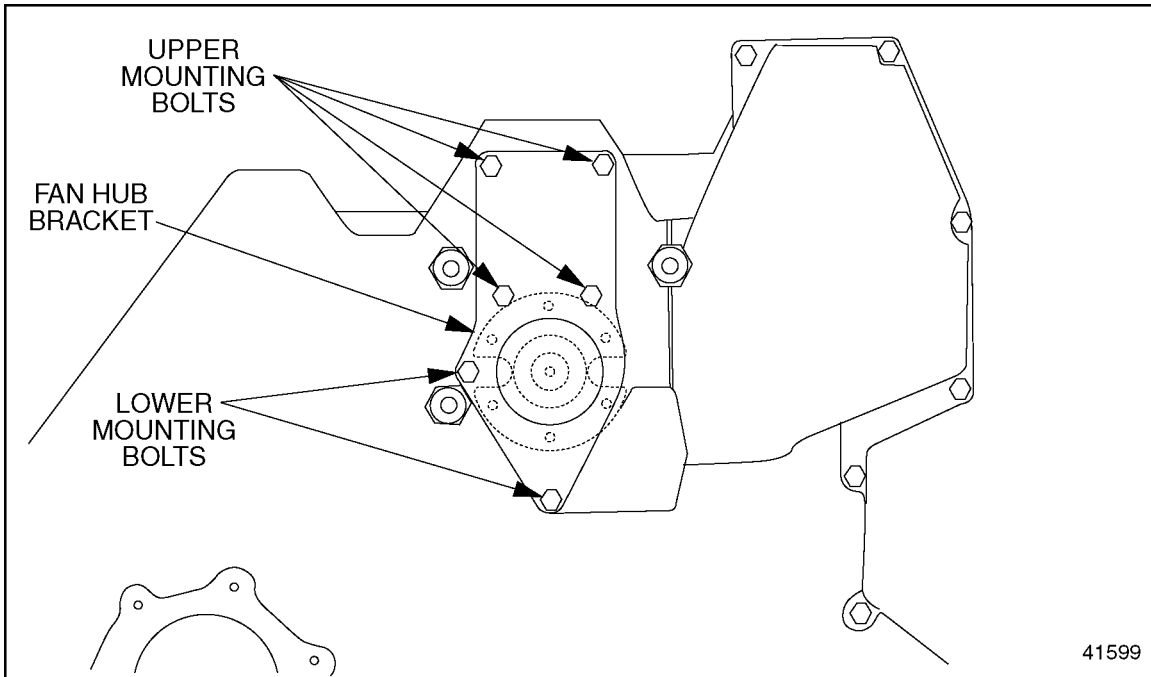


Figure 1. Location of Upper and Lower Fan Hub Bracket Mounting Bolts

Size of Gap Between Bracket and Front Cover		Shims Required Under Lower Mounting Bolts
From 0.000 mm to less than 0.127 mm	From 0.000 in. to less than 0.005 in.	0
From 0.127 mm to less than 0.381 mm	From 0.005 in. to less than 0.015 in.	1
From 0.381 mm to less than 0.635 mm	From 0.015 in. to less than 0.025 in.	2
From 0.635 mm to less than 0.889 mm	From 0.025 in. to less than 0.035 in.	3
From 0.889 mm to less than 1.143 mm	From 0.035 in. to less than 0.045 in.	4
From 1.143 mm to less than 1.397 mm	From 0.045 in. to less than 0.055 in.	5
From 1.397 mm to less than 1.651 mm	From 0.055 in. to less than 0.065 in.	6

Table 2. Shims Required for Fan Hub Bracket Lower Mounting Bolts

NOTE:

Do not use more than six (6) shims under a lower mounting bolt. If more than six (6) shims are required for a bolt, contact Detroit Diesel for technical assistance.

4. Loosen the four upper mounting bolts.
5. Place the required number of shims behind the two lower mounting bolt holes in the bracket and insert the bolts.

NOTE:

The two lower mounting holes may use a different number of shims in each location.

6. Torque **all** mounting bolts to 22 N•m (16 lb-ft or 192 lb-in).
7. Replace the fan and the fan drive belt.

NOTE:

When installing the fan drive belt, align it to the front grooves of the alternator and water pump pulleys (farthest away from the flywheel).

8. Reassemble/replace the sheet metal previously removed to gain access to the fan bracket.

**CAUTION:**

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

- **Always start and operate an engine in a well ventilated area.**
- **If operating an engine in an enclosed area, vent the exhaust to the outside.**
- **Do not modify or tamper with the exhaust system or emission control system.**

9. Start the engine and check for proper belt tracking. Shut down the engine.

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