
INSTALLATION INSTRUCTIONS

Original Issue Date: 11/99

Model: 2000 kW (Detroit Diesel 20V-149TIB)

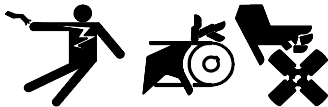
Market: Industrial

Subject: Idler Pulley Upgrade Service Kit GM11779

This service kit upgrades the 152 mm (6 in.) idler pulley with a 203 mm (8 in.) idler pulley. If the generator set is equipped with a 203 mm (8 in.) idler pulley, it is not necessary to install this kit.

Observe the following safety precautions while installing the kit:

⚠ WARNING

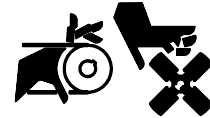


Accidental starting.
Can cause severe injury or death.

Disconnect the battery cables before working on the generator set. Remove the negative (-) lead first when disconnecting the battery. Reconnect the negative (-) lead last when reconnecting the battery.

Disabling the generator set. Accidental starting can cause severe injury or death. Before working on the generator set or connected equipment, disable the generator set as follows: (1) Move the generator set master switch to the OFF position. (2) Disconnect the power to the battery charger. (3) Remove the battery cables, negative (-) lead first. Reconnect the negative (-) lead last when reconnecting the battery. Follow these precautions to prevent starting of the generator set by an automatic transfer switch, remote start/stop switch, or engine start command from a remote computer.

⚠ WARNING



Rotating parts.
Can cause severe injury or death.

Operate the generator set only when all guards, screens, and covers are in place.

Servicing the generator set when it is operating. Exposed moving parts can cause severe injury or death. Keep hands, feet, hair, clothing, and test leads away from the belts and pulleys when the generator set is running. Replace guards, screens, and covers before operating the generator set.

Disable the Generator

1. Place the generator set master switch in the OFF position.
2. Disconnect the power to the battery charger, if equipped.
3. Disconnect the generator set engine starting battery(ies), negative (-) lead first.

Remove the Idler Pulley

1. Remove the belt guard.
2. Loosen the four nuts on the idler pulley pillow block.
3. Loosen the idler pulley pillow block adjusting bolt until the pillow block is freed. See Figure 1-1.
4. Remove the four nuts on the idler pulley pillow block.
5. Remove the idler pulley pillow block from the fan-bearing support.
6. Mark the hub-to-idler pulley shaft with a black permanent marker as a reference point for the new idler pulley.
7. Remove the four idler pulley bolts from the idler pulley hub.
8. Remove the 152 mm (6 in.) idler pulley and hub assembly.

Install the Idler Pulley

1. Align the 203 mm (8 in.) idler pulley and hub assembly to the mark on the idler shaft.
2. Apply Perma-Lok® MM-115 (blue) to the four original idler pulley bolts.
3. Install the four idler pulley bolts and hand tighten.
4. Replace the grease fittings with the 90° fittings supplied with the kit. Position the grease fittings to a convenient location for ease of service. Do not overtighten.
5. Install the idler pulley pillow block to the fan-bearing support.
6. Screw the adjusting bolts into the pillow block.
7. Attach the pillow block mounting hardware. Do not tighten.
8. Place the fan belt in the second groove on the fan and engine drive pulleys. See Figure 1-2.
9. Position the idler pulley and hub assembly in the center of the fan belt. See Figure 1-2.
10. Torque the idler pulley bolts sequentially to 21.7 Nm (16 ft-lbs.).
11. Adjust the fan tension using the idler pulley pillow block adjusting bolts located on the side of the fan-bearing support. See Figure 1-1.

12. With a belt tensiometer, set the belt tension to 2669 N (600 lbf.) on 60 Hz models and 2224 N (500 lbf.) on 50 Hz models by turning the two idler pulley adjusting bolts. See Figure 1-1.
13. Torque the nuts securing the idler pulley pillow block to the fan-bearing support to 92 Nm (68 ft-lbs.).
14. Install the belt guard.

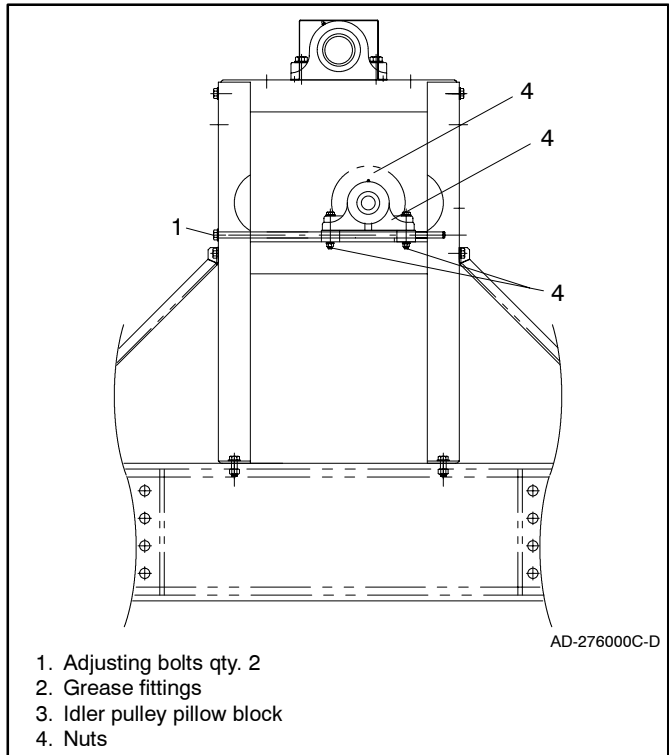


Figure 1-1 Idler Pulley Pillow Block Removal

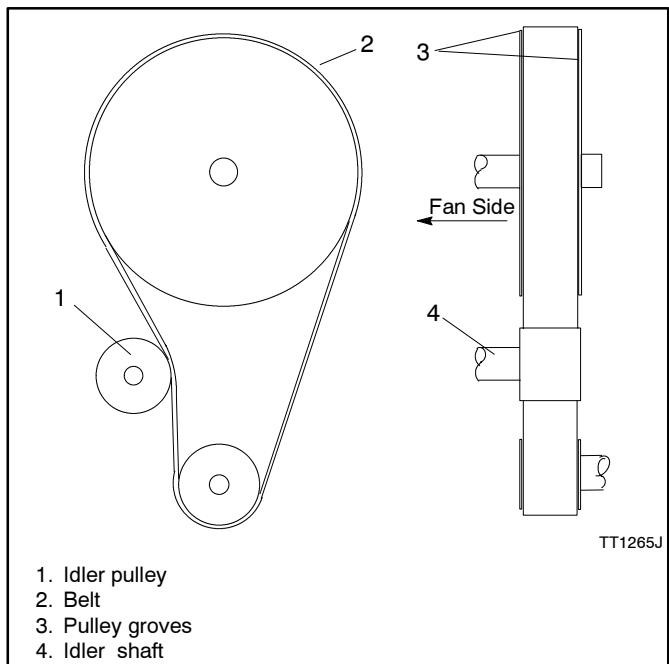


Figure 1-2 Belt Alignment

Test Run the Generator Set

1. Check that the generator master switch is in the OFF position.
2. Reconnect the generator set engine starting battery, negative (-) lead last.
3. Reconnect the power to the battery charger, if equipped.
4. Start the generator set.
5. Check for abnormal vibration and/or noise.
6. Stop the generator set immediately if abnormalities are detected.
7. If the generator set operates normally, run the generator set for 5 minutes.
8. Stop the generator set and inspect the belt and pulley assembly for abnormalities.

| Parts List | | |
|--------------|-----------------|-------------|
| Kit: GM11779 | | |
| Qty. | Description | Part Number |
| 1 | Pulley, idler | 365242 |
| 2 | Fitting, grease | GM11777 |