Form No. 3353–540 Rev. B

Gear Pump Replacement Kit

Groundsmaster® 580–D, Model 30580 & 30581

Part No. 108–8047

Installation Instructions

Note: If a Flow Combining Kit, Model 30586 is mounted to the gear pump, it must be removed and replaced by the new Flow Combining Kit, Model 30614.

1. Park the machine on a level surface, lower all the cutting units, shut the engine off and engage the parking brake
2. Open the hood and prop it up. Unlatch and remove the left and right engine panels.
3. Remove the (6) flangehead screws securing the rear panel to the frame. Set the rear panel aside.
4. Remove the (2) screws retaining the battery tray to the battery base. Slide the battery tray out to the side.
5. Place a pan below the gear pump (Fig. 2).
6. Disconnect all components from the gear pump. Retain the components for re–assembly onto the new pump.
7. Remove the (4) bolts and washers securing the pump to the engine (Fig. 2). Remove the pump.

Note: Step 8 and steps 11 thru 20 do not apply to the Groundsmaster 580–D, Model 30580. The bellhousing support and the associated hardware are not required.

8. Using the dimensions shown in figure 1, locate, mark and drill (2) .281 in. dia. holes in the battery/manifold block support bracket (Fig. 2).

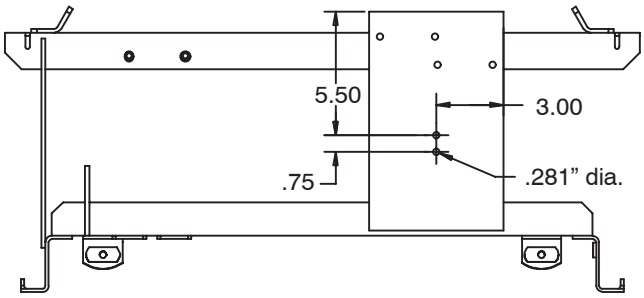


Figure 1

9. Re–install the components to the new gear pump. Make sure all the O–rings are in place.
10. Mount the gear pump to the engine with (4) new 1/2 x 1–1/4 in. bolts and thrust washers (Fig. 2). Torque the bolts to 110–130 ft–lb.
11. Secure the negative battery cable as follows:
    - Remove the bolt securing the wire harness ground wire and the negative battery cable to engine (Fig. 2). Also, remove the (3) remaining bolts from the top of the bell housing, if present.
    - Mount the short wire harness, included in the kit, to the harness ground wire with a M10 x 25 bolt, washer and locknut (Fig. 2).
    - Mount the short harness and the negative battery cable to the engine with a M10 x 35 bolt, flatwasher and lockwasher, using the location and positioning as shown in figure 2. Torque the bolt to 34–44 ft–lb.
    - Cable tie the ground harness to the main wire harness as shown in figure 2.

Important Make sure the positive battery cable does not contact any hot (muffler) or moving parts.

12. Drain approximately one gallon of coolant from the radiator. Make sure engine is cold.
13. Remove and discard the (4) bolts w/washers securing the lifting plate to the rear of the engine (Fig. 2).
14. Position the bellhousing support onto the engine so the mounting holes align and the harness is routed over it (Fig. 2).

Note: The muffler may need to be repositioned to the right or removed to allow the installation of the bell housing support.

15. Loosely mount the side of the bellhousing support, the lifting plate and the enclosed gasket to the rear of the engine with (4) M8 x 25 bolts and hardened washers (Fig. 2). The lifting plate and gasket are to be positioned between the bellhousing support and the engine.
16. Loosely mount the bottom of the bellhousing support to the top of the engine with (4) M10 x 25 bolts and hardened washers (Fig. 2). Torque the M8 bolts (side bolts) to 17–21 ft.–lb and the M10 bolts (bottom bolts) to 48–60 ft–lb.
17. Secure the wire harness to the bellhousing support with (2) R–clamps, 1/4 x 7/8 in. bolts, 17/64 x 1/2 washers and 1/4 nuts (Fig. 2).
18. Replenish the radiator coolant.

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19. Disconnect the positive battery cable from the engine starter motor. Re–route the cable as shown in figure 2 and re–connect the cable to the starter motor.

Important Make sure the positive battery cable does not contact any hot (muffler) or moving parts.

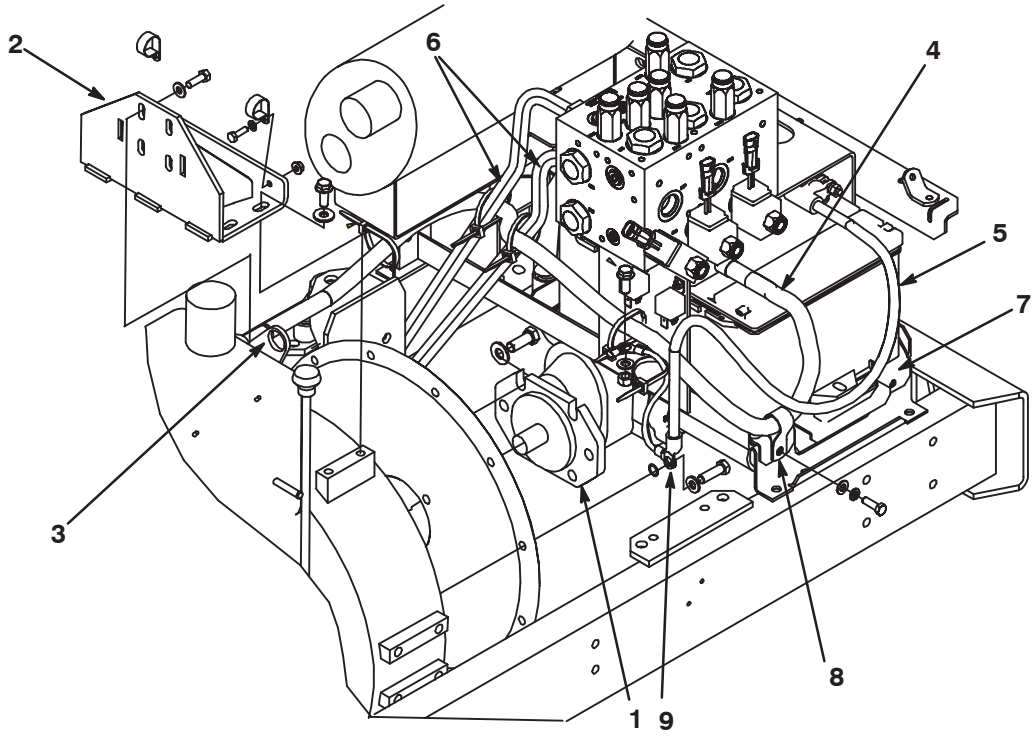


Figure 2

1. Gear pump
2. Bellhousing support
3. Lifting plate
4. Positive battery cable
5. Negative battery cable
6. Hydraulic hard lines
7. Battery tray
8. Plastic strap
9. Short wire harness (ground)

20. Secure the positive battery cable as follows:

- Cable tie the positive cable to the battery/manifold block support bracket where the two holes were previously drilled (Fig. 2).
- Cable tie the positive cable to each hydraulic hard line as shown in figure 2.

Note: If the cable cannot be routed between the hydraulic hard lines, next to the muffler, position it behind the lines as shown in figure 3. The cable tie on the positive battery cable should be linked through the cable tie on the hard line.

- Cable tie the positive cable to the main wire harness (near starter) to route the wires away from the muffler bracket as shown in figure 2.
- Slide in the battery tray. Replace the R–clamp on the positive cable with a plastic strap clamp and secure it with a 5/16 x 1 in bolt, lockwasher and flatwasher. Secure other side of battery tray and R–clamp with the fasteners removed.

Important Make sure the positive battery cable does not contact any hot (muffler) or moving parts.

21. Replace the rear and side panels. Close and latch the hood.

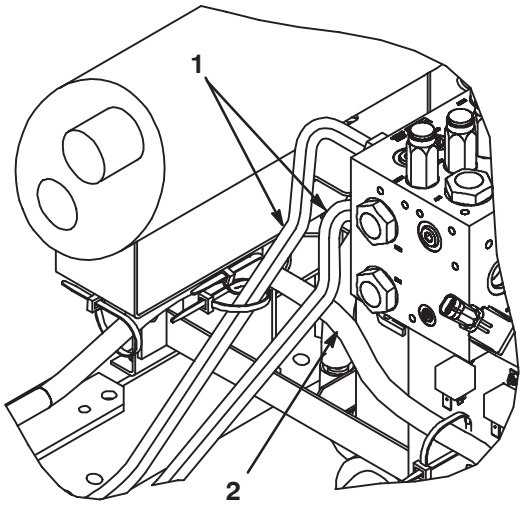


Figure 3

1. Hydraulic hard lines