



INSTRUCTION BULLETIN

No. 3803

Machine: 8400/8410 G/LP

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Rev: 04

NOTE: DO NOT DISCARD the Parts List from the Instruction Bulletin. Place the Parts List in the appropriate place in the machine manual for future reference. Retaining the Parts List will make it easier to reorder individual parts and will save the cost of ordering an entire kit.

NOTE: Numbers in parenthesis () are reference numbers for parts listed in Bill of Materials.

Installation Instructions for Kit number 370103

SYNOPSIS:

This kit contains the parts needed to replace the flywheel/ring gear on 8400/8410 machines. Please follow step-by-step instructions.

SPECIAL TOOLS / CONSIDERATIONS: Bottle jack, block of wood, Loctite® 242, Permatex®
(Estimated Time to complete: 8 hours)

PREPARATION:

(Refer to Fig. 1, Fig. 2, and Fig. 3)

1. Park the machine on a clean level surface and turn off the machine, remove the key, and set the parking brake.

FOR SAFETY: Before leaving or servicing machine, stop on level surface, turn off machine, set the parking brake, and remove key.

2. Disconnect the battery cables from the batteries.



WARNING: Always disconnect battery cables from machine before working on electrical components.

INSTALLATION:

1. Open the engine cover and side door.
2. **8400**—Prop up the engine cover. Remove the gas springs and engine side brace.
3. Remove the air cleaner assembly. Refer to Fig. 1.
4. Remove the vacuum fan assembly.
5. Disconnect the wire harness at the back of the engine.
6. Remove the duraspark and coil. Refer to Fig. 1.

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7. Remove the hydraulic oil filter from the engine mount bracket.

8. Remove the muffler and tail pipe.

9. First remove the propel pump, and then the load sensing pump assembly from the bellhousing.

NOTE: The propel pump must be removed separate from the load sensing pump.

10. Place a bottle jack and a block of wood under the oil pan to support the engine.

11. Remove the rear engine mounting hardware from the frame and bellhousing. Remove the rear mount from the machine. Refer to Fig. 2.

12. Remove the wires leading to the engine starter. Remove the starter from the bellhousing.

13. Remove the bellhousing from the engine. Refer to Fig. 3.

14. Remove and discard the hex screws holding the flywheel coupling plate to the spacer ring. Remove and retain the coupling plate. Refer to Fig. 3.

15. Pull the spacer ring off the flywheel. Retain the spacer ring. Refer to Fig. 3.

16. Remove the old flywheel/ring gear assembly from the engine. Refer to Fig. 3.

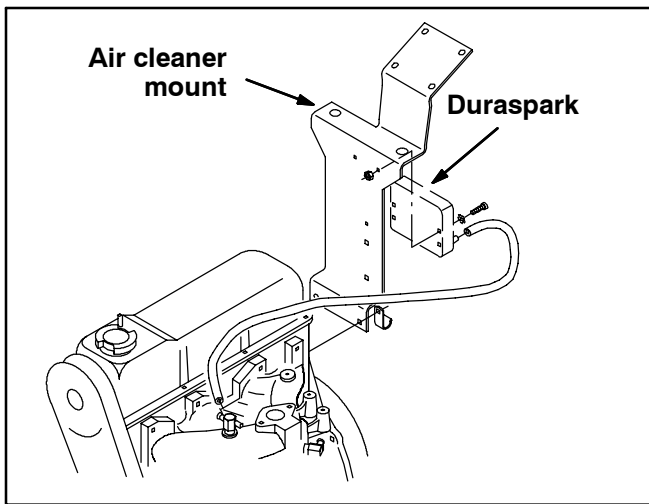


FIG. 1 - Air Cleaner Mount And Duraspark Assembly

17. Position the new flywheel/ring gear assembly (1) on the back of the engine.
18. Install the new hex bolts (3) on the new flywheel. **Use the longer bolts for the 8400s and 8410s through serial number 12574, unless the flywheel has already been replaced. Use the shorter bolts for installation on the 8410s serial number 12575 and higher.** Tighten the hardware to 54-64 ft lbs. Use a small amount of Loctite 242 on the threads.

NOTE: The flywheel and the end of the crankshaft both have symmetrical bolt patterns.

19. Position the spacer ring on the new flywheel (1). Align the three roll pins with the holes in the new flywheel (1). Refer to Fig. 3.
20. Install the coupling plate to the spacer ring and new flywheel (1). Tighten the six hex screws to 16-21 ft lbs. Use a small amount of Loctite 242 on the threads. Refer to Fig. 3.
21. Reinstall the bellhousing on the engine. Use a small amount of Permatex on the top of the bellhousing where it meets the back of the engine block. Refer to Fig. 3.
22. Reinstall the rear engine motor mount on the bellhousing and on the engine frame. Remove the bottle jack and block of wood. Refer to Fig. 2.
23. Reinstall the engine starter in the bellhousing. Reconnect the wires.

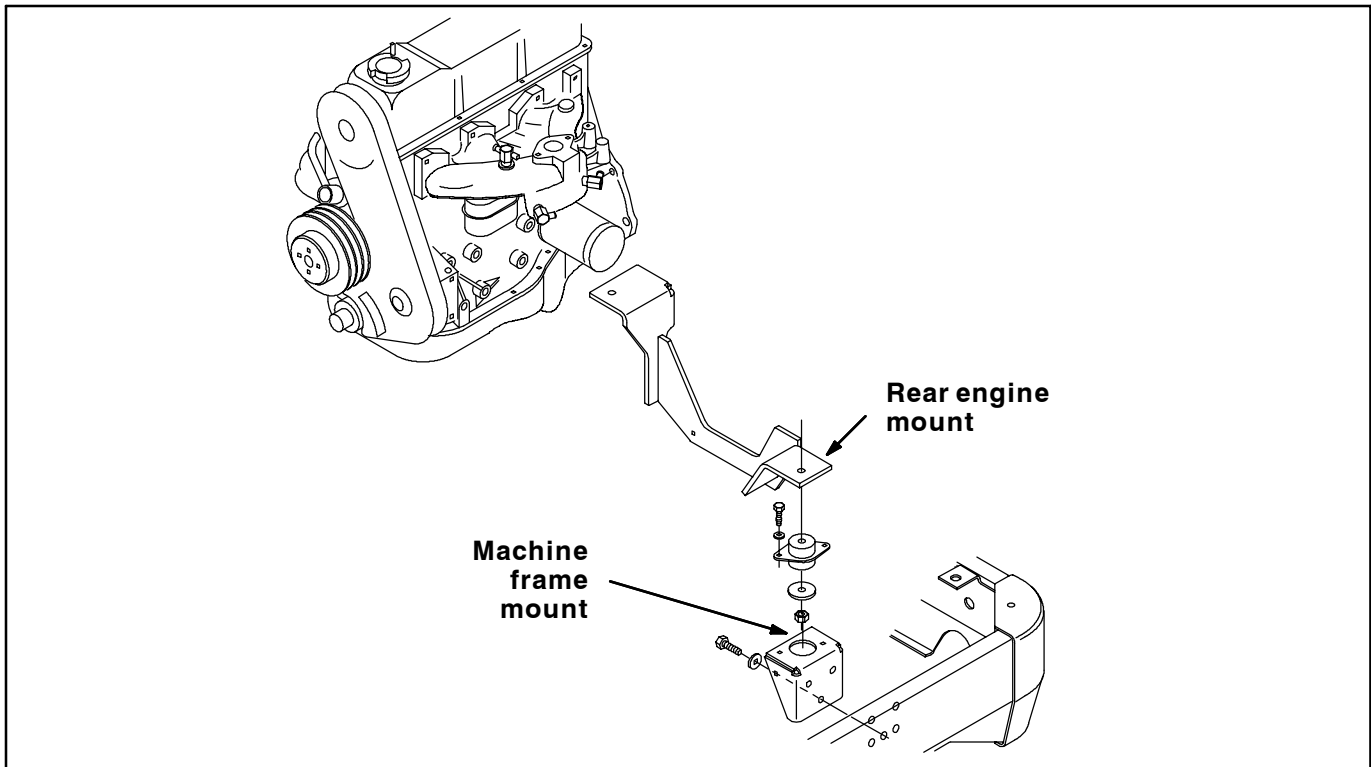


FIG. 2 - Rear Engine Mount And Frame Mount

24. Position the load sensing pump/propel pump assembly back in the bellhousing.
25. Install the new O-ring (2) between the accessory pump and propel pump.
26. Reinstall the engine muffler and tailpipe.
27. Reinstall the hydraulic oil filter on the engine mount bracket.
28. Reinstall the duraspark and coil. Reconnect the wire harness at the back of the engine. Refer to Fig. 1.
29. Reinstall the vacuum fan assembly.
30. Reinstall the air cleaner assembly. Refer to Fig. 1.
31. **8400** - Reinstall the engine side brace and the gas springs.
32. Reconnect the battery cables to the batteries.
33. Check rubber skirt located near the radiator to ensure it is properly secured. The engine cooling fan could be damaged by the rubber skirt if the skirt is not properly secured to prevent it from being sucked into the fan.
34. Start the engine and test machine.

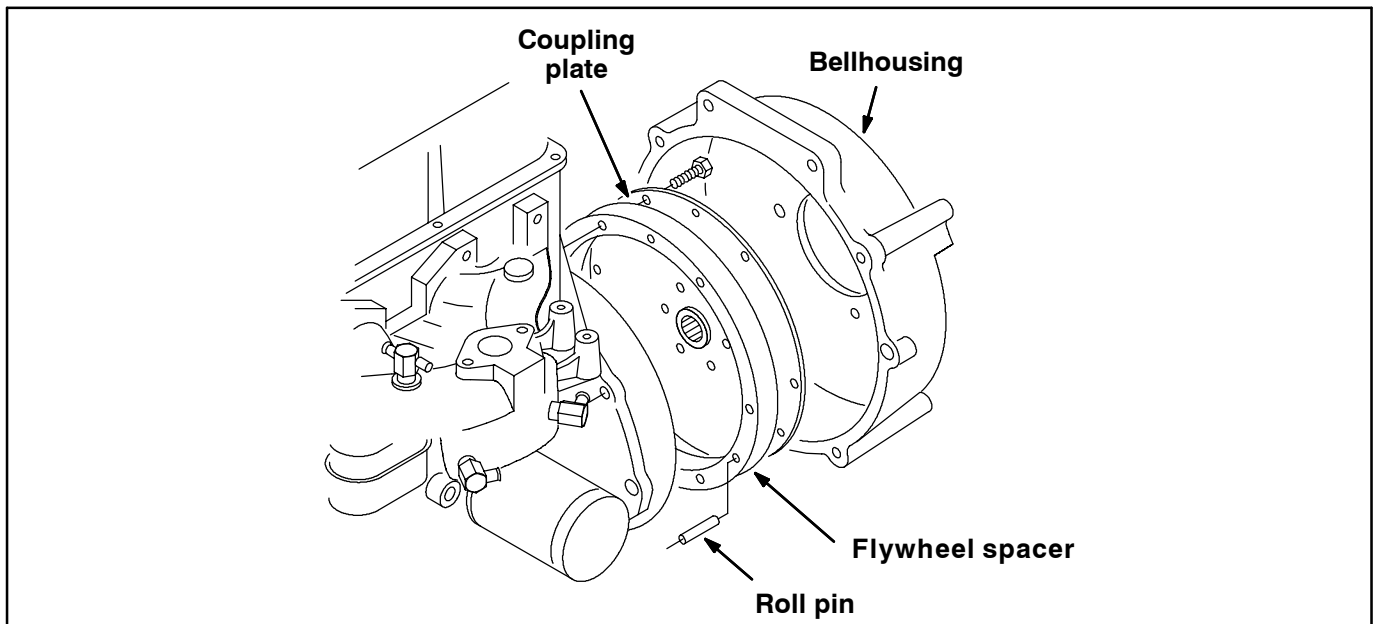


FIG. 3 - Flywheel Spacer And Coupling Plate

BILL OF MATERIALS FOR FLYWHEEL REPLACEMENT KIT 370103

Ref.	TENNANT Part No.	Description	Qty.
1	370102	Flywheel and ring gear	1
2	65145-1	Pump O-ring	1
3	375193	Screw, hex, M08 X 1.0 X 16	6
4	375228	Screw, hex, M08 X 1.0 X 30	6

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