

## Disassembly of Alternator

1. Remove the nut (1, Figure 390) from the shaft of the rotor assembly. Remove the pulley (2, Figure 390).

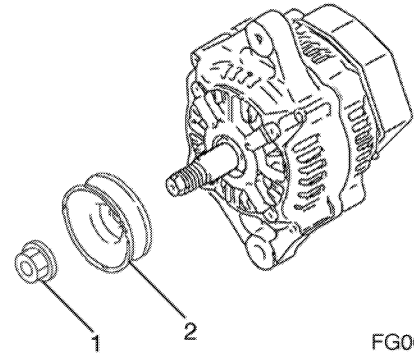


Figure 390

FG009104

2. Remove the three bolts (1, Figure 391) retaining the rear cover (2, Figure 391) to the rear frame assembly.
3. Remove the brush holder (3, Figure 391). Remove the brush springs (4, Figure 391) and brushes (5, Figure 391).

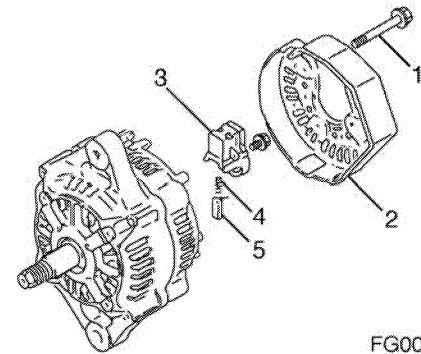


Figure 391

FG009105

4. Remove the bolt retaining the regulator assembly (1, Figure 392) to the holder (2, Figure 392).
5. Remove the bolts retaining the holder (2, Figure 392) to the rear frame housing. Remove the holder.
6. Remove the nut (3, Figure 392) retaining the insulation bushing (4, Figure 392). Remove the insulation bushing.

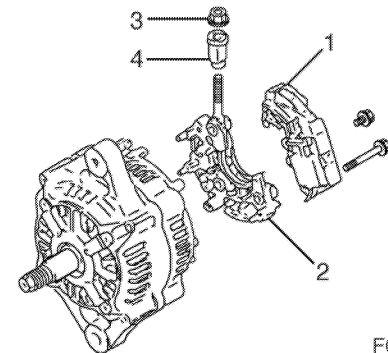


Figure 392

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7. Remove the two bolts (1, Figure 393) and two nuts (2, Figure 393) securing the rear frame housing to the front frame housing.

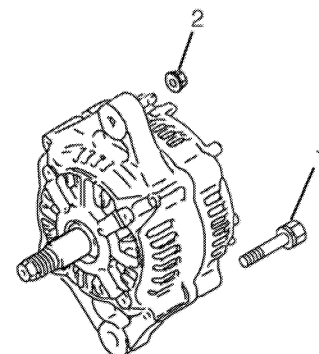
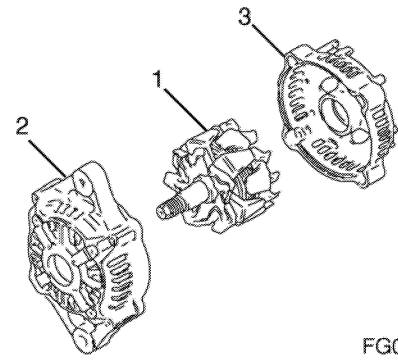


Figure 393

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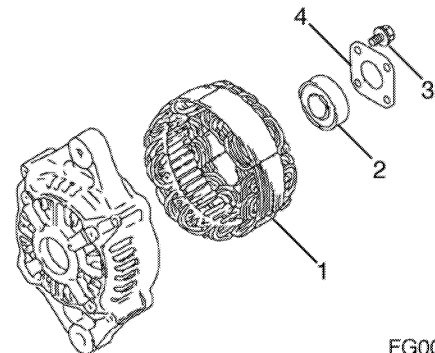
8. Using a press, remove the rotor assembly (1, Figure 394) from the front frame housing (2, Figure 394) and rear frame housing (1, Figure 394).



**Figure 394**

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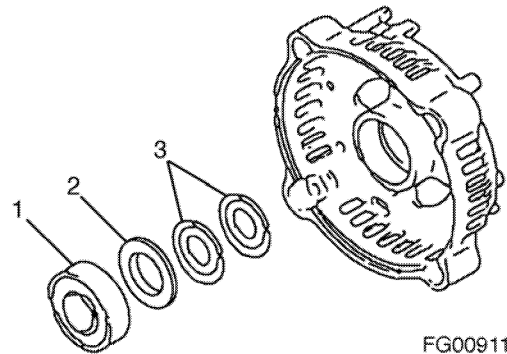
9. Remove the stator assembly (1, Figure 395) from the front frame housing.
10. If it is necessary to replace the bearing (2, Figure 395) in the front frame housing, remove the four bolts (3, Figure 395) securing the plate (4, Figure 395) to the front frame housing. Remove the plate. Use a puller to remove the bearing. Discard the bearing.



**Figure 395**

FG009109

11. If it is necessary to replace the bearing (1, Figure 396) in the rear frame housing, use a puller to remove. Discard the bearing. Remove the bearing cover (2, Figure 396) and two thrust washers (3, Figure 396).



**Figure 396**

FG009110

## Reassembly of Alternator

1. If removed, reinstall the two trust washers (3, Figure 397) and bearing cover (2, Figure 397) in the rear frame housing. Lubricate the outside diameter of a new bearing (1, Figure 397). Press the bearing into the rear frame housing.

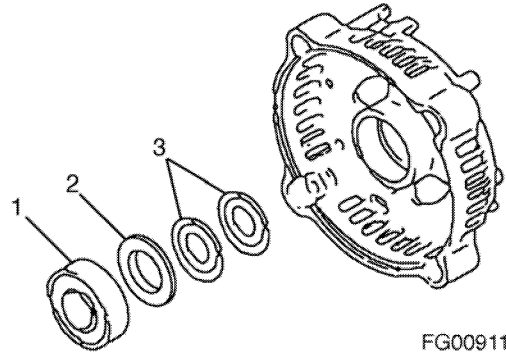


Figure 397

FG009110

2. If removed, lubricate the outside diameter of a new front frame housing bearing. Press the bearing (2, Figure 398) into the front frame housing. Reinstall the plate (4, Figure 398) to the front housing. Tighten the four bolts (3, Figure 398).
3. Position the stator assembly (1, Figure 398) on the front frame housing studs.

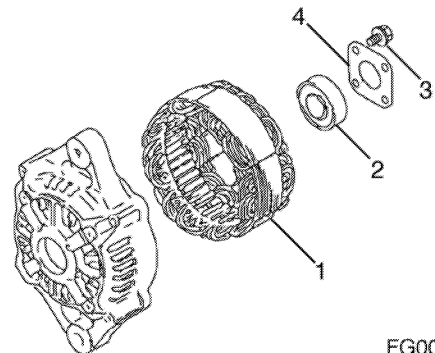


Figure 398

FG009109

4. Lubricate the shaft of the rotor assembly (1, Figure 399). Press the rotor assembly into the front frame housing (2, Figure 399) and rear frame housing (3, Figure 399).

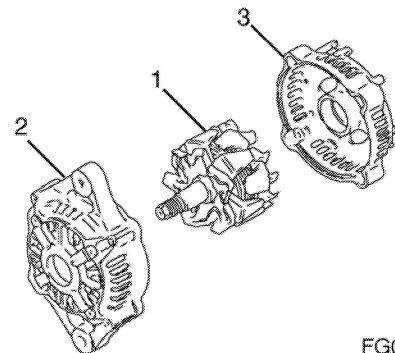


Figure 399

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5. Align the front frame housing with the rear frame housing. Reinstall the two bolts (1, Figure 400) and two nuts (2, Figure 400).

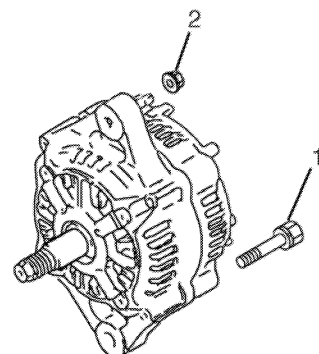
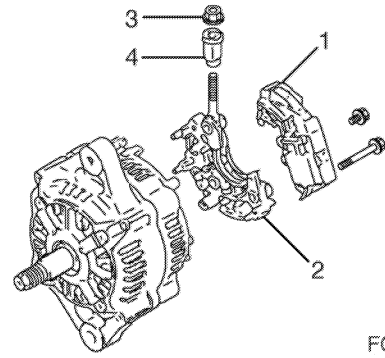


Figure 400

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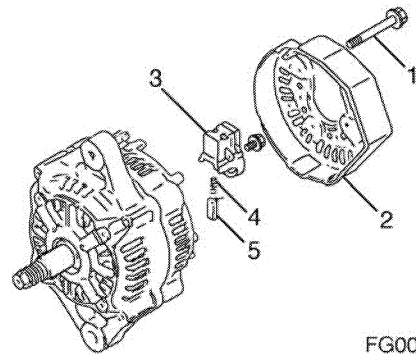
6. Reinstall the insulation bushing (4, Figure 401) and nut (3, Figure 401).
7. Reassemble the regulator assembly (1, Figure 401) to the holder (2, Figure 401).



**Figure 401**

FG009106

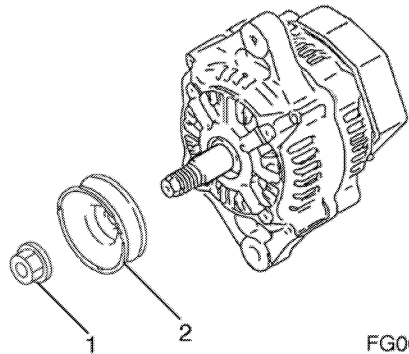
8. Reinstall the brush holder (3, Figure 402), springs (4, Figure 402) and brushes (5, Figure 402).
9. Reattach the regulator assembly and holder to the rear frame housing.
10. Reinstall the rear cover (2, Figure 402) to the rear frame housing with three bolts (1, Figure 402).



**Figure 402**

FG009105

11. Reassemble the pulley (2, Figure 403) and nut (1, Figure 403) to the shaft of the rotor assembly. Tighten the nut.



**Figure 403**

FG009104

## Installation of Alternator

1. Position the alternator on the gear case. Loosely reinstall the nut (2, Figure 404) on the gear case stud and the V-belt adjuster bolt (1, Figure 404).
2. Reconnect the electrical wires to the alternator. Tighten the nuts to 15 - 20 in.-lb (1.7 -2.3 N•m ; 17-23 kgf•m).
3. Reinstall the V-belt. Tighten the V-belt to the proper tension as described in See "" on page -70.
4. Start the engine. Listen for any unusual sounds from the alternator.

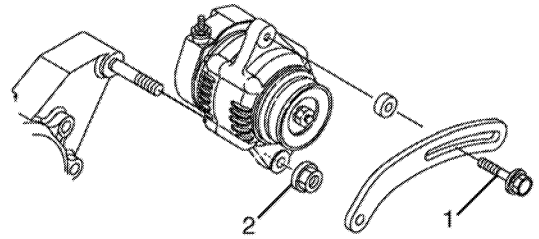


Figure 404

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## CAUTION

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**Do not operate the engine if the alternator is producing unusual sounds.**

**Damage to the alternator will result.**

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5. Verify that the charge indicator is ON while the engine is operating. If the charge indicator is not ON, repair the problem before operating the engine.

## Dynamo Component Location

Standard dynamo is used in this section to show the service procedures for the representative dynamo. For specific part detail, see the Parts Catalog for the engine you are working on.

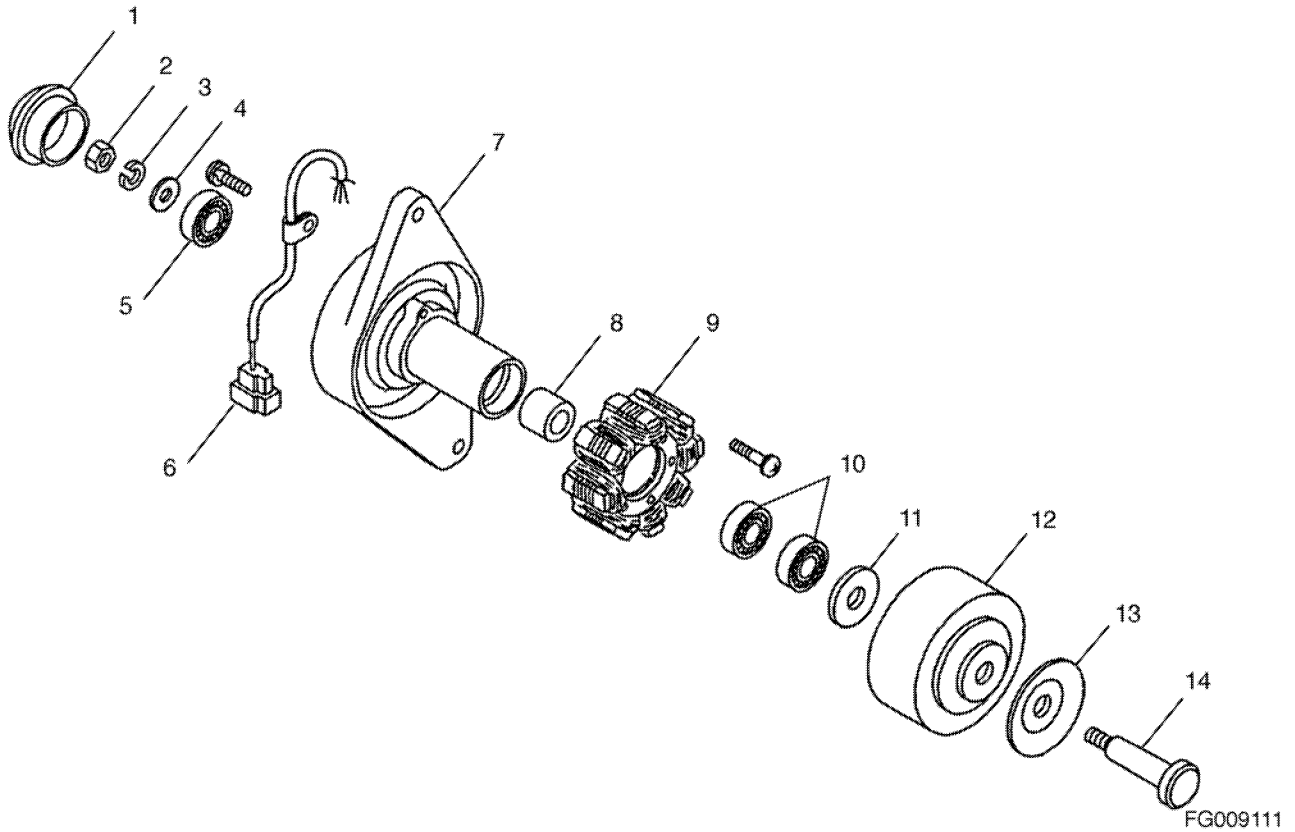
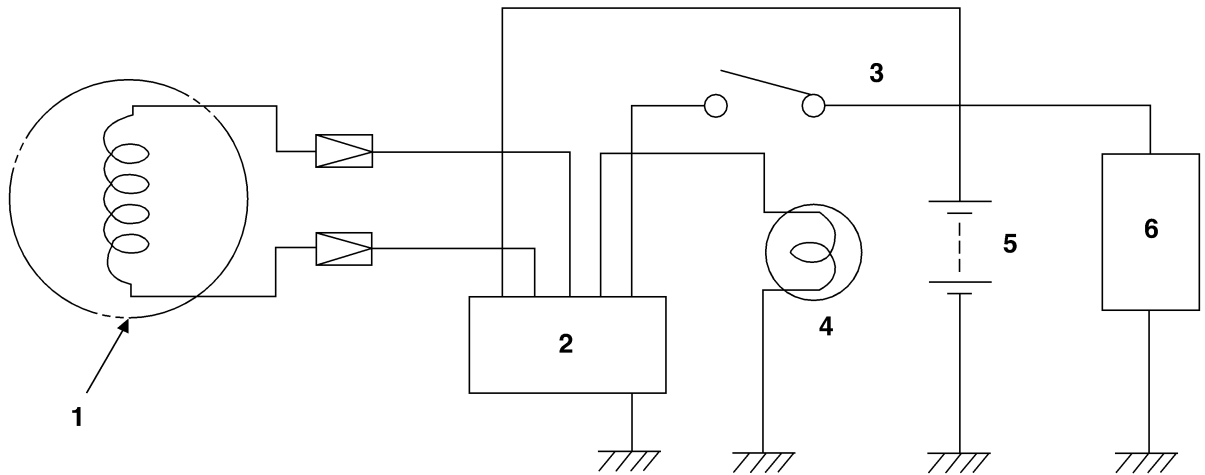


Figure 405

Reference Number	Description
1	Rear Cover
2	Nut
3	Lock Washer
4	Flat Washer
5	Rear Bearing
6	Output Wire and Connector
7	Plate

Reference Number	Description
8	Spacer
9	Stator Assembly
10	Front Bearing (2 used)
11	Flat Washer
12	Flywheel Assembly
13	Pulley Half
14	Through Bolt

## Dynamo Wiring Diagram



FG009112

Figure 406

Reference Number	Description
1	Dynamo
2	IC Regulator Assembly
3	Key Switch

Reference Number	Description
4	Charge Lamp (3.4 Watts Max.)
5	Battery
6	Load

## Operation of Dynamo

The dynamo consists of a series of permanent magnets that rotate around a stationary stator coil. The magnets are attached to the flywheel which is rotated via the engine cooling fan drive belt. The resultant output is an AC (alternating current) signal. The AC is converted to DC (direct current) in the IC Regulator. The IC Regulator outputs charging DC current to the battery.