MODULE CONTENT

| Unit of Competency | **DIAGNOSE AND REPAIR CHARGING SYSTEM** |
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| Module Title | **DIAGNOSING AND REPAIRING CHARGING SYSTEM** |
| Module Descriptor | This unit covers the knowledge, skills and attitudes required to diagnose and repair charging system and its component |
| Nominal Duration | **hours** |
| Summary of the Learning Outcomes: | |
| Upon completion of this module the student must be able to: | |
| LO1. Prepare to diagnose and repair charging system | |
| LO2. Diagnose charging system | |
| LO3. Repair charging system | |
| LO4. Complete work processes | |

**LEARNING EXPERIENCES**

**LEARNING OUTCOMES NO. 3**

**REPAIR CHARGING SYSTEM**

| **Learning Activities** | **Special Instructions** |
| --- | --- |
| Read Information Sheet 3.1-1 Repair charging system | If you have some problem with the content of the information sheet don’t hesitate to approach your Trainer.  If you feel that you are now knowledgeable on the content of the information sheet, you can now answer the self-check provided in the module. |
| Answer Self-Check 3.1-1 on Repair charging system | Try to answer the Self-check without looking at the Answer Key  Compare your answer to Answer Key 3.1-1 |
| Observe Trainer’s demonstration on Task Sheet 3.1-1 on Repair charging system | Listen carefully and attentively so that you may be able to perform a task correctly  Ask questions if are in doubt for clarification |
| Perform the Task Sheet 3.1-1 on Repair charging system | Remember the step-by-step procedure of the Repair charging system |
| Evaluate the performance using the Performance Criteria Checklist 3.1-1 | Repeat the task in case fail to meet the criteria |

**INFORMATION SHEET 1.1-1**

**REPAIR CHARGING SYSTEM**

**Learning Objectives:**

After reading this **Information Sheet**, you must be able to:

1. Inspection of alternator components operation
2. Repair and replacement of alternator
3. Inspection and repair of charging system circuit

**CHARGING SYSTEM**

**TYPICAL PROCEDURE FOR DISASSEMBLING A FORD IAR AC GENERATOR**



Always have a clean and organized work Using the torx wrench, remove the four

area. The tools required to disassemble a attaching screws that hold the regulator to

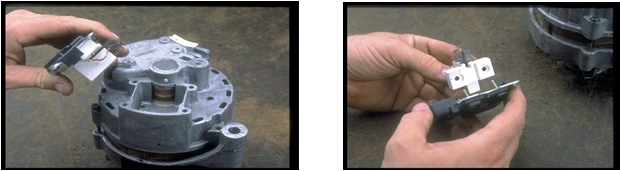
Ford IAR AC generator are rags, T20 torx the AC generator housing.

wrench, plastic hammer, arbor press, 100-

watt soldering iron, soft-jawed vise, safety

glasses, and an assortment of sockets or

nut drivers.

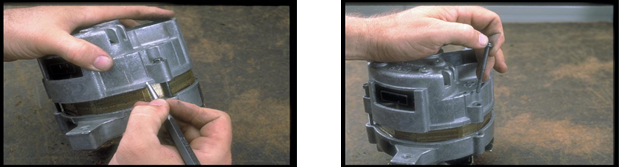


Remove the regulator and brush assembly Using the torx wrench, remove the two

as a unit. screw that attach the regulator to the holder

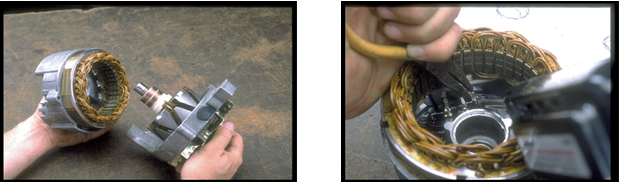
Then separate the regulator from the brush

holder.



Scribe or mark the two end housing and the Remove the three through bolts that secure

stator core for reference during reassembly. the two housings.



Separate the front housing from the rear Separate the three stator lead terminals

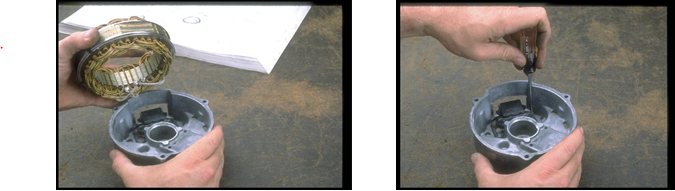
housing. The rotor will come out with the from the rectifier bridge.

front housing, and the stator will stay in the

rear housing. It may be necessary to tap

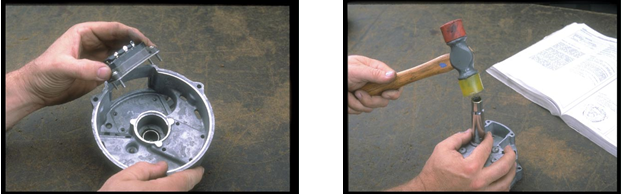
the front housing with the plastic hammer

to get the two halves to separate.



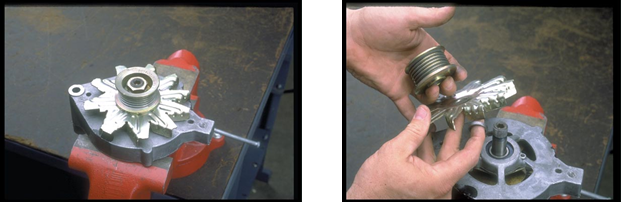
Remove the stator coil from the housing. Using the torx wrench, remove the four

attaching bolts that hold the rectifier bridge



Remove the rectifier bridge from the housing. Use a socket to tap out he bearing from the

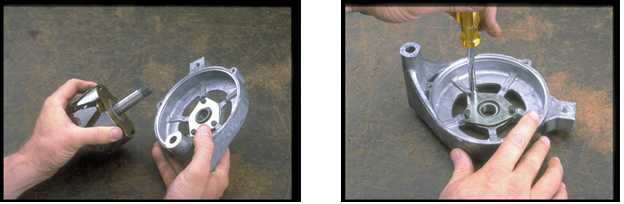
housing.



Clamp the rotor in the vise. Remove the pulley-attaching nut, flat

washer, drive pulley, fan, and fan spacer

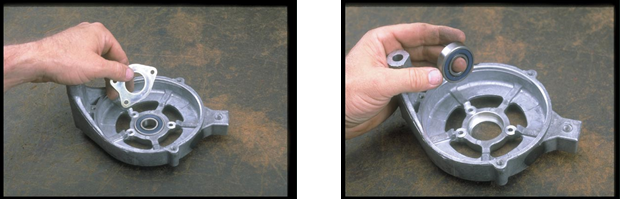
from the rotor shaft.



Separate the front housing from the rotor. If Remove the three screws that hold the

the stop ring is damaged, remove it from the bearing retainer to the front housing.

rotor. If not, leave it on the shaft.



Remove the bearing retainer. Remove the front bearing from the housing.

Test and inspect all parts. Replace any

defective ones. Reassembly is the reverse

of this procedure.