

**PART
SMART**

powered by:



NEXT LEVEL KNOWLEDGE.

INSTALLATION BEST PRACTICES

| STARTERS + ALTERNATORS



Become Part Smart Today:

<https://getpartsmart.motorcarparts.com/partsmart>



SCAN ME



FREE TECH HOTLINE
800.228.9672

M-F 5:30 am-5:00 pm • S-S 6:00 am-2:30 pm (PT)
ASE Certified Bilingual Technicians Are Available

REDUCE RETURNS WITH MPA'S

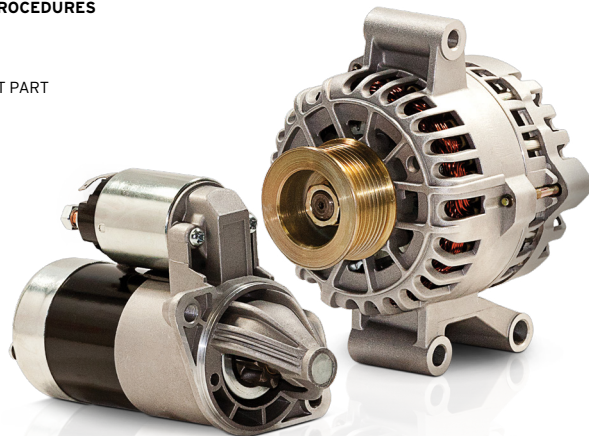
CALL BEFORE YOU RETURN PROGRAM

ASE Certified Bilingual Technicians are available to help answer installation and product questions 7 days a week. In addition to product knowledge, our team can help walk you through the installation process, help verify application information, and provide tips and guidance to help get the vehicle back on the road.

VEHICLE PREPARATION

(These Preparation Steps Apply to Both Alternators and Starters.)

- ✓ **REFER TO VEHICLE SERVICE INFORMATION FOR ANY SPECIAL TESTING, REMOVAL, OR INSTALLATION PROCEDURES**
 - A) CHECK FOR ANY RELATED TECHNICAL SERVICE BULLETINS
 - B) REFER TO ANY WARNING TAGS OR TECHNICAL BULLETINS INCLUDED IN THE BOX WITH THE REPLACEMENT PART
- ✓ **VERIFY THAT BATTERY STATE OF CHARGE IS A MINIMUM OF 12.45 VOLTS**
 - A) CHARGE BATTERY AS NEEDED
- ✓ **PERFORM LOAD TEST ON BATTERY TO DETERMINE STATE OF HEALTH**
- ✓ **VISUALLY INSPECT BATTERY CABLES FOR CORROSION**
 - A) PERFORM VOLTAGE DROP TESTS ON POSITIVE/NEGATIVE CABLES
 - B) REPLACE CABLES AS NEEDED
- ✓ **CHECK FOR FLUID LEAKS THAT MAY HAVE CAUSED THE CURRENT FAILURE**
 - A) ENGINE OIL, COOLANT, ETC.
 - B) REPAIR OR REPLACE SOURCE OF THE FLUID LEAK



STARTER STEPS

- ✓ **TURN THE IGNITION ON BUT DO NOT START THE ENGINE AND OBSERVE THE INSTRUMENT CLUSTER FOR WARNING LIGHTS**
 - A) ARE THERE ANY ANTI-THEFT, SECURITY LIGHTS OR MESSAGES DISPLAYED?
- ✓ **CONNECT SCAN TOOL AND SCAN ALL MODULES FOR RELATED DIAGNOSTIC TROUBLE CODES (DTC)**
 - A) FOLLOW SERVICE INFORMATION TO CORRECT ASSOCIATED DTC
- ✓ **PROCEED IF IT IS DETERMINED THAT THE STARTER HAS FAILED AND NEEDS REPLACEMENT**
- ✓ **OBTAIN ALL VEHICLE INFO TO ENSURE CORRECT PART APPLICATION**
 - A) MAKE, YEAR, MODEL, ENGINE, EQUIPMENT/OPTION PACKAGES, ETC.
- ✓ **DISCONNECT NEGATIVE BATTERY CABLE**
- ✓ **DISCONNECT ALL CABLES FROM STARTER BEFORE UNBOLTING STARTER FROM VEHICLE**
 - A) DO NOT ALLOW STARTER TO HANG FROM ANY ATTACHED CABLES
- ✓ **INSPECT THE OLD STARTER FOR BROKEN/CRACKED NOSE HOUSING, MILLED PINION, AND MOUNTING HOLE IRREGULARITIES, AND REPAIR THE SOURCE OF THE PROBLEM**
 - A) BACKFIRE ON STARTUP, BROKEN OR MISSING TEETH ON THE FLYWHEEL AND WORN-OUT MOUNTING BOLTS/HARDWARE
- ✓ **ENSURE STARTER MOUNTING SURFACE IS CLEAN AND FREE FROM DEBRIS, OIL, GREASE, CORROSION, PAINT, ETC.**
- ✓ **TRANSFER ANY MOUNTING HARDWARE, BRACKETS, BRACES, SPACERS, SENSORS, SWITCHES, HEAT SHIELDS FROM ORIGINAL STARTER TO REPLACEMENT IF APPLICABLE**
- ✓ **ENSURE STARTER IS FULLY SEATED BEFORE TIGHTENING MOUNTING BOLTS**
 - A) TORQUE STARTER MOUNTING BOLTS TO PROPER SPECIFICATIONS
- ✓ **VERIFY PROPER OPERATION OF STARTING SYSTEM**
 - A) TURN KEY TO CRANK POSITION AND LISTEN FOR UNUSUAL NOISE
- ✓ **ROAD TEST VEHICLE - VERIFY CORRECT FUNCTION AND OPERATION**

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ALTERNATORS STEPS



- ✓ **TURN THE IGNITION ON BUT DO NOT START THE ENGINE AND OBSERVE THE INSTRUMENT CLUSTER FOR WARNING LIGHTS**
 - A) BATTERY LIGHT ILLUMINATED KEY-ON-ENGINE-OFF (KOEO), DOES THIS TURN OFF AFTER THE ENGINE IS STARTED?
 - B) UNUSUAL NOISE COMING FROM THE ALTERNATOR?
- ✓ **CONNECT SCAN TOOL AND SCAN ALL MODULES FOR RELATED DIAGNOSTIC TROUBLE CODES (DTC)**
 - A) FOLLOW SERVICE INFORMATION TO CORRECT ASSOCIATED DTC
 - B) RETEST CHARGING SYSTEM TO DETERMINE IF FAULT HAS BEEN CORRECTED
- ✓ **CHECK BELT CONDITION, TENSION, AND ALIGNMENT**
 - A) OPERATE TENSIONER THROUGH FULL RANGE OF TRAVEL
 - B) CHECK/REPLACE BELT
- ✓ **INSPECT ALTERNATOR WIRING CONNECTIONS FOR DAMAGE AND REPAIR AS NEEDED**
- ✓ **PROCEED IF IT IS DETERMINED THE ALTERNATOR HAS FAILED AND NEEDS REPLACEMENT**
- ✓ **OBTAIN ALL VEHICLE INFO TO ENSURE CORRECT PART APPLICATION**
 - A) MAKE, YEAR, MODEL, ENGINE, EQUIPMENT/OPTION PACKAGES, ETC.
- ✓ **DISCONNECT NEGATIVE BATTERY CABLE**
- ✓ **ENSURE ALTERNATOR MOUNTING SURFACE IS CLEAN AND FREE FROM DEBRIS, OIL, GREASE, CORROSION, ETC.**
- ✓ **TRANSFER ANY MOUNTING HARDWARE, BRACKETS, BRACES, SPACERS, SENSORS, SWITCHES FROM ORIGINAL ALTERNATOR TO REPLACEMENT IF APPLICABLE**
- ✓ **TORQUE ALTERNATOR MOUNTING BOLTS TO PROPER SPECIFICATIONS**
- ✓ **VERIFY PROPER OPERATION OF CHARGING SYSTEM**
 - A) ALLOW ENGINE TO REACH OPERATING TEMPERATURE
 - B) TURN ON ACCESSORIES AND MONITOR OUTPUT IN RESPONSE TO MEASURE VOLTAGE AND AMPERAGE OUTPUT FROM ALTERNATOR
 - C) COMPARE TO VEHICLE SERVICE INFORMATION
- ✓ **ROAD TEST VEHICLE - VERIFY CORRECT FUNCTION AND OPERATION**