## **INSTALLING A BATTERY**

SAFETY NOTE: When interrupting the circuitry to remove a battery from a vehicle, first make sure that the ignition switch is off. Note which terminal is grounded. (Typically this will be the negative terminal.) Disconnect the ground cable first to minimize the risk of sparks and explosions.

- 1. Check that the replacement battery is of the recommended size and type; that it is well-charged and has passed a high-rate discharge test; and that electrolyte levels are correct and uniform.
- 2. Clean and dry the battery and verify that it is not damaged.
- 3. Thoroughly clean the battery tray. If it is metal, use a Wire brush and neutralize any corrosion with a solution of baking soda and water.
- 4. Clean the cables and connectors and check that the cables are free from corrosion at the junctions to the clamps. Replace cables if necessary, since poor cables reduce starting power significantly.
- 5. Position the replacement battery in the tray in the direction to give proper ground connection. Fitting batteries in the reverse direction can cause serious damage to the electrical system.
- 6. Position the hold-down clamps and tighten firmly.
- 7. Position the starter/solenoid cable on the proper terminal post (typically this will be the positive terminal) and secure. Make sure the cable is not putting a strain on the terminal post.
- 8. Position the ground cable (typically this will be the negative terminal) and secure. Make sure the cable is not putting a strain on the terminal post. Never go back to the hot terminal after attaching the ground cable.
- 9. Start the engine and confirm that, as engine speed is increased, the ignition warning light goes out and/or the ammeter indicates "charge".
- 10. If the ignition warning light does not go out, stop the engine and check out the alternator regulator system.
- 11. CAUTIONS: if using substitute battery types for replacement of original batteries, be especially careful to:

Check that any increase in battery height will not cause the top terminals to touch the hood of the engine compartment and short-circuit. If replacing units in a multiple battery set with series and/or parallel connections, make sure that you reconnect batteries exactly as they were originally.

Do not over-tighten connections onto terminals, especially those which have studs or nuts integrally molded in position. For side-terminals use a torque wrench setting between 5 to 10 foot-pounds. For stud terminal work, between 10 and 15 foot-pounds.

Never use screws in side-terminals which are longer than the original, since it would then be impossible to obtain good electrical contact Without damaging the terminal socket.

Never cut or drill terminal posts to adapt them for quick or auxiliary connections. In modem cars incorporating computer controlled systems, disconnection of the battery will disrupt programs. Follow manufacturers instructions for resetting.

NOTE: A memory saver that plugs into the lighter outlet can be used to save the computer and radio/clock memory. When using the memory saver, always follow the manufacturers instructions carefully.