the hub. Lubricate the lip of the seal with grease

- Loosen the adjusting nut 3 turns and rock the wheel in and out a few times to release the brake pads from the rotor.
- b. While rotating the wheel and hub assembly, tighten the adjusting nut to 17–25 ft. lbs. (23–34 Nm).
- c. Back off the adjusting nut1/zturn, then retighten to 10–28 inch lbs. (1.1–3.2 Nm).
- d. Install the nut retainer and a new cotter pin. Replace the grease cap.
- 11. Lower the vehicle. Before driving the vehicle, pump the brake pedal several times to restore normal brake pedal travel.

#### 1990-00

### TOWN CAR AND MARK

The front wheel bearings are a sealed hub design, are lubed for life, and require no maintenance. The bearings are preset and cannot be adjusted. For bearing hub removal and installation, see Section 8.

# JUMP STARTING A DEAD BATTERY

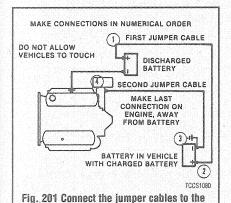
# ♦ See Figure 201

Whenever a vehicle is jump started, precautions must be followed in order to prevent the possibility of personal injury. Remember that batteries contain a small amount of explosive hydrogen gas that is a by-product of battery charging. Sparks should always be avoided when working around batteries, especially when attaching jumper cables. To minimize the possibility of accidental sparks, follow the procedure carefully.

### CAUTION

NEVER hook the batteries up in a series circuit or the entire electrical system will go up in smoke, including the starter!

Vehicles equipped with a diesel engine may utilize two 12 volf batteries. If so, the batteries are connected in a parallel circuit (positive terminal to positive terminal, negative terminal). Hooking the batteries up in parallel circuit increases battery cranking power without increasing total battery voltage output. Output remains at 12 volts. On the other hand, hooking two 12 volt batteries up in a series circuit (positive terminal to negative terminal, positive terminal to negative terminal) increases total battery output to 24 volts (12 volts plus 12 volts).



# **Jump Starting Precautions**

batteries and engine in the order shown

 Be sure that both batteries are of the same voltage. Vehicles covered by this manual and most vehicles on the road today utilize a 12 volt charging system.

- Be sure that both batteries are of the same polarity (have the same terminal, in most cases NEGATIVE grounded).
- Be sure that the vehicles are not touching or a short could occur.
- On serviceable batteries, be sure the vent cap holes are not obstructed.
- Do not smoke or allow sparks anywhere near the batteries.
- In cold weather, make sure the battery electrolyte is not frozen. This can occur more readily in a battery that has been in a state of discharge.
- Do not allow electrolyte to contact your skin or clothing.

## HOR CAUTION

Make certain that the ignition key, in the vehicle with the dead battery, is in the OFF position. Connecting cables to vehicles with on-board computers will result in computer destruction if the key is not in the OFF position. Turn the heater blower motor on the high speed setting.

### Jump Starting Procedure

- 1. Make sure that the voltages of the 2 batteries are the same. Most batteries and charging systems are of the 12 volt variety.
- Pull the jumping vehicle (with the good battery) into a position so the jumper cables can reach the dead battery and that vehicle's engine. Make sure that the vehicles do NOT touch.
- 3. Place the transmissions of both vehicles in **Neutral** (MT) or  $\bf P$  (AT), as applicable, then firmly set their parking brakes.
- If necessary for safety reasons, the hazard lights on both vehicles may be operated throughout the entire procedure without significantly increasing the difficulty of jumping the dead battery.
- Turn all lights and accessories OFF on both vehicles. Make sure the ignition switches on both vehicles are turned to the OFF position.
- 5. Cover the battery cell caps with a rag, but do not cover the terminals.
- Make sure the terminals on both batteries are clean and free of corrosion or proper electrical connection will be impeded. If necessary, clean the battery terminals before proceeding.
- 7. Identify the positive (+) and negative (-) terminals on both batteries.

8. Connect the first jumper cable to the positive (+) terminal of the dead battery, then connect the other end of that cable to the positive (+) terminal of the booster (good) battery.

9. Connect one end of the other jumper cable to the negative (-) terminal on the booster battery and the final cable clamp to an engine bolt head, alternator bracket or other solid, metallic point on the engine with the dead battery. Try to pick a ground on the engine that is positioned away from the battery in order to minimize the possibility of the 2 clamps touching should one loosen during the procedure. DO NOT connect this clamp to the negative (-) terminal of the bad battery.

## : CAUTION

Be very careful to keep the jumper cables away from moving parts (cooling fan, belts, etc.) on both engines.

- 10. Check to make sure that the cables are routed away from any moving parts, then start the donor vehicle's engine. Run the engine at moderate speed for several minutes to allow the dead battery a chance to receive some initial charge.
- 11. With the donor vehicle's engine still running slightly above idle, try to start the vehicle with the dead battery. Crank the engine for no more than 10 seconds at a time and let the starter cool for at least 20 seconds between tries. If the vehicle does not start in 3 tries, it is likely that something else is also wrong or that the battery needs additional time to charge.
- 12. Once the vehicle is started, allow it to run at idle for a few seconds to make sure that it is operating properly.
- 13. Turn ON the headlights, heater blower and, if equipped, the rear defroster of both vehicles in order to reduce the severity of voltage spikes and subsequent risk of damage to the vehicles' electrical systems when the cables are disconnected. This step is especially important to any vehicle equipped with computer control modules.
- 14. Carefully disconnect the cables in the reverse order of connection. Start with the negative cable that is attached to the engine ground, then the negative cable on the donor battery. Disconnect the positive cable from the donor battery and finally, disconnect the positive cable from the formerly dead battery. Be careful when disconnecting the cables from the positive terminals not to allow the alligator clips to touch any metal on either vehicle or a short and sparks will occur.