

STARTING AND STOPPING PROCEDURES

STARTING THE ENGINE

In normal circumstances, the engine should be started from the driver's seat. However, a rear-start panel in the engine compartment permits starting the engine from that location, mainly for maintenance purposes.

STARTING FROM THE DRIVER'S SEAT

- Apply the spring-loaded parking brakes by pulling the parking brake control button all the way up;
- Make sure that the starter selector switch located in the engine compartment is set to the *NORMAL* position;
- Make sure that the battery master switch located on the rear circuit breaker panel is set to the *ON* position;
- Place transmission in neutral;
- Turn ignition key to *START* position (refer to "Controls and Instruments" chapter), release the key after the engine starts.
- Brake pedal must be applied when selecting Drive (D) otherwise the transmission will stay in neutral (N).

CAUTION

Do not engage starter for more than 15 seconds at a time. If engine does not start within 15 seconds, release ignition key and let starter cool for one minute before attempting to restart.

CAUTION

Do not press accelerator pedal before starting. This could result in an electronic control unit fault and degrade the fuel system control.

CAUTION

Special precautions are necessary with turbocharged engines to avoid possible turbine damage. After starting, run the engine at slow idle for two minutes to allow lubricating oil to reach the turbocharger. Then run the engine at fast idle. Let oil pressure reach normal operating range before driving.

NOTE

If engine does not start, return key to *OFF* position before attempting to restart.

NOTE

If the accelerator pedal is depressed before starting, release and wait 30 seconds before attempting to restart.

Stopping the Engine

- Apply parking brake and place transmission in neutral (N);
- Allow engine to idle for at least two minutes before shutting engine *OFF*. This insures that the turbine speed drops and allows time for the engine exhaust gas temperature to drop to about 300°F (150°C);
- Turn the ignition key to the *OFF* position.

CAUTION

Do not shut *OFF* engine when running above slow idle.

CAUTION

Set the battery master switch to the *OFF* position after parking and when left unattended for an extended period of time. Refer to "Controls & Instruments" chapter.

STARTING FROM THE ENGINE COMPARTMENT

Switches to start and stop the engine from inside the engine compartment are mounted on a small panel over the engine.

WARNING

Apply parking brake and place transmission in neutral (N) before starting engine from inside the engine compartment.

- Set the battery master switch to the *ON* position;
- Set the starter selector switch to the *REAR START* position;
- Press the starter push-button switch. Release push-button after the engine starts.

⚠ WARNING ⚠

Never let the engine run in an enclosed, non-ventilated area. Engine exhaust fumes contain dangerous gases which can be fatal if inhaled. Before warming up the engine, open the door(s) or move the vehicle outside.

NOTE

The engine will reach normal operating temperature shortly after driving. Avoid driving at full throttle until engine coolant temperature reaches 140°F (60°C).

WORLD TRANSMISSION (WT) WARM-UP

When the transmission temperature falls below -20°F (-29°C), the CHECK TRANS telltale light illuminates after the engine is started. In this case, the transmission will be locked in neutral (N) until the transmission temperature rises above -20°F (-29°C) and the CHECK TRANS telltale light goes out. The transmission will only operate in first or reverse gears until it reaches normal operating temperature.

JUMP STARTING

In order to avoid damage to solid-state electrical components, it is important that jumper (booster) cables be used correctly and only in emergencies. To jump start, use another 24 volt DC, negative grounded, power source. Use only jumper cables rated at 500 cranking amperes.

⚠ WARNING ⚠

Injury, explosion, battery acid damage or charging system overload may result if these jump starting procedures are not precisely followed.

⚠ WARNING ⚠

Wear eye protection and remove rings, metal jewellery and watches with metal bands.

⚠ WARNING ⚠

The battery could rupture or explode if jump started when the run-down battery fluid is frozen or if the battery fluid level is low. Check condition of run-down battery before attempting to jump start.

⚠ WARNING ⚠

The gases given off by batteries while jump starting are explosive. Do not smoke near batteries.

⚠ CAUTION ⚠

Do not let the two vehicles touch. Keep a walk-through distance between the two vehicles. Make sure positive (red) and negative (black) jumper cable clamps do not touch.

⚠ CAUTION ⚠

Never connect the jumper cable to the negative terminal post of the run-down battery.

⚠ CAUTION ⚠

Do not jump start if a maintenance-free battery has a yellow test indicator. Have the battery replaced.

⚠ CAUTION ⚠

Before attempting to jump start, make sure the parking brake is applied and the transmission is in neutral (N). Turn off all lights, heaters and other electrical accessories.

To jump start, proceed as follows:

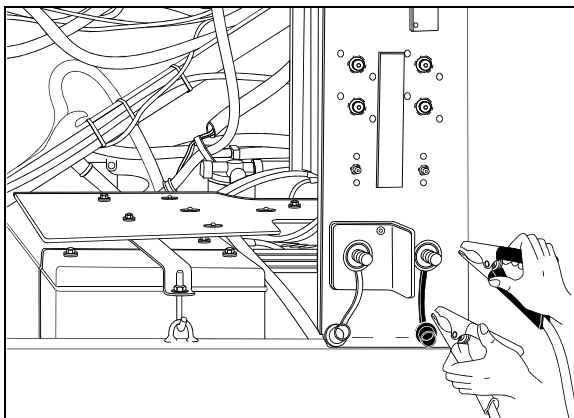
1. Remove the protective caps from the booster block terminals located in the R.H. side engine compartment;
2. Connect one end of the red jumper cable to the positive (+) post of the booster power source. If the good battery is in another vehicle, that vehicle's engine must be shut OFF before connecting;
3. Connect the other end of the same red jumper cable to the positive (+) terminal on the booster block;
4. Connect one end of the black jumper cable to the negative (-) post on the booster power source;
5. Connect the other end of the same black jumper cable to the negative (-) terminal on the booster block; If the good battery is in another vehicle, start that vehicle's engine;

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6. Let the engine run for a few minutes, then start the vehicle with the run-down battery;
7. Disconnect the jumper cables in reverse order given in steps 2 through 5;
8. Install protective caps on the booster block terminals.

NOTE

Jumper cables must be rated at 500 cranking amperes. If jumper cable length is 20 feet (6 m) or less, use 2/0 (AWG) gauge wires. If cable length is between 20 to 30 feet (6 to 9 m), use 3/0 (AWG) gauge wires.



ENGINE COMPARTMENT

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