CIRCUIT OPERATION

Condenser Fan Operation (MFI–V8)

The Condenser Fans Motors (M113, M121) on vehicles equipped with MFI–V8 engines operate when any of the following conditions occur:

8. Coolant temperature exceeds 100°C (212°F).
9. The air conditioning system is operating.
10. The Engine Control Module (ECM) (Z132) determines that fuel temperature exceeds 70°C and coolant temperature exceeds 110°C after engine shutdown. When this occurs, the fans are turned on for approximately 10 minutes after the engine is shut off.

Operation with High Coolant Temperature (MFI–V8)

When the Ignition Switch (X134) is in position II, battery voltage is applied to the Ignition Load Relay (K127). The relay is energised, applying battery voltage to the Condenser Fan Relay (K109) and the Fan Control Module (Z118). If the coolant temperature exceeds 100°C (212°F), the Condenser Fan Coolant Temperature Switch (X113) closes and energises the Condenser Fan Relay (K109) by applying ground to the relay's coil. When the relay is energised, voltage from fuse F3 is applied to the Condenser Fan Motors (M113, M121) through the relay's contacts.

Fan Operation with A/C (MFI–V8)

With the Ignition Switch (X134) in position II, battery voltage is applied to the Ignition Load Relay (K127). The relay is energised, applying battery voltage to the Condenser Fan Relay (K109). When the Front A/C Switch (X225) is turned on and the Front Fan Speed Switch (X247) is turned to positions I, II, III, or IV, ground is applied to terminal 86 of the Condenser Fan Relay. The relay energises, applying battery voltage from fuse F3 to the Condenser Fan Motors (M113, M121).

Operation with the Engine Off (MFI–V8)

The Engine Control Module (Z132) monitors fuel temperature and coolant temperature through sensors. When the ECM determines that fuel temperature is above 70°C and coolant temperature exceeds 110°C after engine shutdown, the ECM will command fan operation for approximately 10 minutes. The ECM turns on the fans by momentarily grounding the Fan Control Module (Z118) through the BG wire. When the timer unit is grounded, it starts a solid state timer and begins to apply ground from its terminal 9 to the Condenser Fan Relay (K109) through the BP wire. With the Condenser Fan Relay energised, voltage from fuse F3 is applied to the Condenser Fan Motors (M113, M121) through the relay contacts.