

## Fans

### How the Circuit Works

Battery voltage is supplied at all times through Multi-fuse 3 (Under-hood) to the contacts of the A/C Condenser Fan Relay and Radiator Fan Relay respectively. With the ignition switch in ON (II), (without Keyless Access) or the Engine Start/Stop Switch in ON mode (Keyless Access), battery voltage is supplied through fuse 16 (Driver's Under-dash) to the coils of the A/C Condenser Fan Relay and Fan Control Relay. With the engine running, battery voltage is supplied through fuse 21 (Under-hood) to the Radiator Fan Relay coil.

### Extremely High Coolant Temperatures

In extremely high coolant temperature conditions (above 206°F (97°C)), the ECM/PCM provides ground to the coils of the A/C Condenser Fan Relay, the Radiator Fan Relay, and the Fan Control Relay, energizing them. Battery voltage is supplied to the A/C Condenser Fan Motor and Radiator Fan Motor through their respective energized relays, which activates the motors at high speed.

### A/C ON

The ECM/PCM detects that the A/C is ON through an input from the A/C Pressure Sensor. Upon receiving the A/C ON information, the ECM/PCM provides ground to the coil of the Radiator Fan Relay, energizing it. Battery voltage is supplied to the A/C Condenser Fan Motor and Radiator Fan Motor in series through the energized relay, which activates the motors at low speed.

If the refrigerant pressure rises above 1520 kPa (221 psi), the A/C Pressure Sensor signals the ECM/PCM to run the fans at high speed. The ECM/PCM provides ground to the coils of the A/C Condenser Fan Relay, the Radiator Fan Relay, and the Fan Control Relay, energizing them. Battery voltage is supplied to the A/C Condenser Fan Motor and Radiator Fan Motor through their respective energized relays, which activates the motors at high speed.

### Refrigerant at Low Pressure

If the refrigerant pressure drops below 196 kPa (28 psi), the A/C Pressure Sensor signals the ECM/PCM to turn off the fans. Upon receiving the signal to turn off the fans, the ECM/PCM removes ground from the coil of the Radiator Fan Relay, deenergizing it. This removes battery voltage from the A/C Condenser Fan Motor and Radiator Fan Motor, which deactivates the motors.

### Refrigerant at High Pressure

If the refrigerant pressure rises above 3140 kPa (455 psi), the A/C Pressure Sensor signals the ECM/PCM to turn off the fans. Upon receiving the signal to turn off the fans, the ECM/PCM removes ground from the coils of the A/C Condenser Fan Relay, the Radiator Fan Relay, and the Fan Control Relay, deenergizing them. This removes battery voltage from the A/C Condenser Fan Motor and Radiator Fan Motor, which deactivates the motors.