CIRCUIT OPERATION

Compressor Control (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 Compressor Clutch Relay (K108) and the A/C Logic Relay (K170). When the Front Fan Speed Switch (X247) is turned to positions I, II, III, or IV and the Front A/C Switch (X225) is turned on, ground is provided to terminal 86 of the A/C Logic Relay (K170) through the closed contacts of the A/C Dual Pressure Switch (X102) and the Front A/C Evaporator Temperature Switch (X101).

The relay is energised, applying battery voltage to the Engine Control Module (ECM) (Z132), which signals the ECM that compressor operation has been requested. The ECM then provides ground to the coil of the Compressor Clutch Relay (K108). The relay is energised, applying battery voltage to the Compressor Clutch (K107). Compressor Clutch operation is now controlled by the status of the A/C Dual Pressure Switch (X102) and the Front A/C Evaporator Temperature Switch (X101).

The Front A/C Evaporator Temperature Switch (X101) is fitted in the airflow out of the front evaporator to sense the temperaure of the exterior fins. Should ice begin to form due to low temperature, the switch will open. The A/C Dual Pressure Switch (X102) monitors refrigerant pressure in the high pressure line. Should pressure become too high or too low, the switch will open. When one or both of these switches open, the ground supply to terminal 86 of the A/C Logic Relay (K170) will be interrupted. The relay de–energises, removing battery voltage from the Engine Control Module (ECM) (Z132), which signals the ECM that compressor operation should be turned off. The ECM removes the ground supply to the coil of the Compressor Clutch Relay (K108). The relay then de–energises, removing battery voltage from the Compressor Clutch (K107), thereby disengaging the Compressor.

Compressor Control (MFI–T16)

With the Ignition Switch (X134) in position II, battery voltage is applied to the Compressor Clutch Relay (K108) and the A/C Logic Relay (K170). When the Front Fan Speed Switch (X247) is turned to positions I, II, III, or IV and the Front A/C Switch (X225) is turned on, ground is provided to terminal 85 of the A/C Logic Relay (K170) through the closed contacts of the A/C Dual Pressure Switch (X102) and the Front A/C Evaporator Temperature Switch (X101).

The relay is energised, applying ground to terminal 35 of the Engine Control Module (ECM) (Z132), which signals the ECM that compressor operation has been requested. The ECM then provides ground to the terminal 86 of the Compressor Clutch Relay (K108). The relay is energised, applying battery voltage to the Compressor Clutch (K107). Compressor Clutch operation is now controlled by the status of the A/C Dual Pressure Switch (X102) and the Front A/C Evaporator Temperature Switch (X101).

The Front A/C Evaporator Temperature Switch (X101) is fitted in the airflow out of the front evaporator to sense the temperaure of the exterior fins. Should ice begin to form due to low temperature, the switch will open. The A/C Dual Pressure Switch (X102) monitors refrigerant pressure in the high pressure line. Should pressure become too high or too low, the switch will open. When one or both of these switches open, the ground supply to terminal 85 of the A/C Logic Relay (K170) will be interrupted. The relay de–energises, removing the ground supply from terminal 35 of the Engine Control Module (ECM) (Z132), which signals the ECM that compressor operation should be turned off. The ECM removes the ground supply to terminal 86 of the Compressor Clutch Relay (K108). The relay then de–energises, removing battery voltage from the Compressor Clutch (K107), thereby disengaging the Compressor.

Compressor Control (NAS) (SFI–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 Compressor Clutch Relay (K108). When the Front Fan Speed Switch (X247) is turned to positions I, II, III, or IV and the Front A/C Switch (X225) is turned on, ground is provided to terminal 28 of the Engine Control Module (ECM) (Z132) through the closed contacts of the A/C Dual Pressure Switch (X102) and the Front A/C Evaporator Temperature Switch (X101). The signal informs the ECM that compressor operation has been requested. The ECM then provides ground to the coil of the Compressor Clutch Relay (K108). The relay is energised, applying battery voltage to the Compressor Clutch (K107). Compressor Clutch operation is now controlled by the status of the A/C Dual Pressure Switch (X102) and the Front A/C Evaporator Temperature Switch (X101).

The Front A/C Evaporator Temperature Switch (X101) is fitted in the airflow out of the front evaporator to sense the temperaure of the exterior fins. Should ice begin to form due to low temperature, the switch will open. The A/C Dual Pressure Switch (X102) monitors refrigerant pressure in the high pressure line. Should pressure become too high or too low, the switch will open. When one or both of these switches open, the ground supply to terminal 28 of the ECM will be interrupted. This signal informs the ECM that compressor operation should be turned off. The ECM removes the ground supply to the coil of the Compressor Clutch Relay (K108). The relay then de–energises, removing battery voltage from the Compressor Clutch (K107), thereby disengaging the Compressor.

Compressor Control (300Tdi without EDC)

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 Compressor Clutch Relay (K108).

When the Front Fan Speed Switch (X247) is turned to positions I, II, III, or IV and the Front A/C Switch (X225) is turned on, ground is provided to terminal 86 of the Compressor Clutch Relay (K108) through the closed contacts of the A/C Dual Pressure Switch (X102), the Front A/C Evaporator Temperature Switch (X101), and the Compressor Clutch Cut–out Switch (X259).

The relay is energised, applying battery voltage to the Compressor Clutch (K107). Compressor Clutch operation is now controlled by the status of the A/C Dual Pressure Switch (X102), the Front A/C Evaporator Temperature Switch (X101), and the Compressor Clutch Cut–out Switch (X259).

The Front A/C Evaporator Temperature Switch (X101) is fitted in the airflow out of the front evaporator to sense the temperature of the exterior fins. Should ice begin to form due to low temperature, the switch will open. The A/C Dual Pressure Switch (X102) monitors refrigerant pressure in the high pressure line. Should pressure become too high or too low the switch will open. When one or more of these switches open, the ground supply to terminal 86 of the Compressor Clutch Relay (K108) will be interrupted. The relay de–energises, removing battery voltage from the Compressor Clutch (K107), thereby disengaging the Compressor.

Compressor Control (300Tdi with EDC)

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 Compressor Clutch Relay (K108). When the Front Fan Speed Switch (X247) is turned to positions I, II, III, or IV and the Front A/C Switch (X225) is turned on, ground is provided to terminal 44 of the Engine Control Module (ECM) (Z132) through the closed contacts of the A/C Dual Pressure Switch (X102) and the Front A/C Evaporator Temperature Switch (X101). The signal informs the ECM that compressor operation has been requested. The ECM then provides ground to the coil of the Compressor Clutch Relay (K108). The relay is energised, applying battery voltage to the Compressor Clutch (K107). Compressor Clutch operation is now controlled by the status of the A/C Dual Pressure Switch (X102) and the Front A/C Evaporator Temperature Switch (X101).

The Front A/C Evaporator Temperature Switch (X101) is fitted in the airflow out of the front evaporator to sense the temperature of the exterior fins. Should ice begin to form due to low temperature, the switch will open. The A/C Dual Pressure Switch (X102) monitors refrigerant pressure in the high pressure line. Should pressure become too high or too low, the switch will open. When one or both of these switches open, the ground supply to terminal 44 of the ECM will be interrupted. This signal informs the ECM that compressor operation should be turned off. The ECM removes the ground supply to the coil of the Compressor Clutch Relay (K108). The relay then de–energises, removing battery voltage from the Compressor Clutch (K107), thereby disengaging the Compressor.

Rear A/C Refrigerant Control Valve

When front A/C has been selected and the Compressor Clutch (K107) is engaged, the Compressor Clutch Relay (K108) is energised and voltage is applied on the BG wires to the Rear A/C Refrigerant Control Valve (K207). When rear A/C is selected a ground signal is applied to the Rear A/C Switch Amplifier (Z216). The Rear A/C Switch Amplifier (Z216) then applies a ground signal to energise the Rear A/C Control Relay (K194) and the Rear A/C Fan Speed Relay (K205). When the Passenger's Rear Fan Speed Switch (X246) is in any position other than Off,