


**MID AMERICA
MOTORWORKS™**

INSTRUCTION SHEET

Part Number

609-108
Application: 1984-1991 C4 Corvette

Part Includes

1 - Switch

Cooling Fan Switch

SKILL LEVEL



Tools Needed

Please review the following information on the operation of the engine cooling fan/s and component location. Location of the components and the control system/s for the cooling fan/s changed throughout 1984-1991 production. A basic understanding of these various control systems will make your installation easier. The following information applies only to original unaltered systems.

IMPORTANT: Other sensors, similar in appearance, are often mistaken as an existing cooling fan thermal switch. The thermal switch is the only one with a round "button" like electrical connector and single round electrical terminal. A blade type terminal or any other configuration IS NOT the thermal switch. The thermal switch, if so equipped, will only be found in one of the cylinder heads.

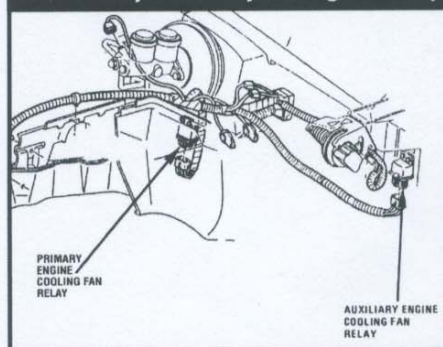
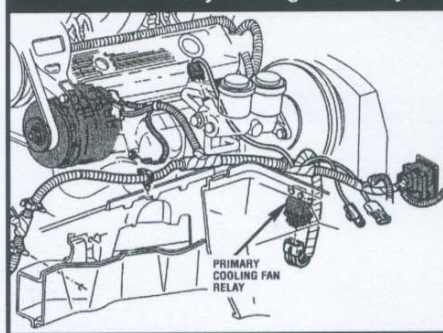
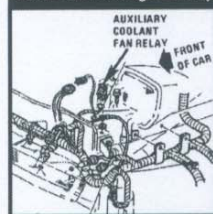
IMPORTANT: The primary and auxiliary fans are controlled by two separate and completely independent switching systems. Item **609-108 Wire Harness** will be required to cause simultaneous switching of both fans on Corvettes equipped with primary and dual fans.

IMPORTANT: 1985-1989 Corvettes without an auxiliary fan and all 1990-1991 Corvettes will require Item **609-108 Wire Harness** to connect this switch to the relay. These Corvettes were not originally equipped with a thermal switch. A threaded plug in the left cylinder head must be removed to install the thermal switch.

1984 Corvettes were produced with only a single primary (rear of radiator) cooling fan. Its operation is controlled by a thermal switch located in the cylinder head between the #6 and #8 spark plugs. The switch grounds the dark green white wire from the relay located behind the brake booster.

1985 Corvettes were produced with either one primary (rear of radiator) or an optional auxiliary (front of radiator) cooling fan. The primary fan is controlled by the ECM (computer) which grounds the dark green/white wire from the primary fan relay (see diagram for location). The auxiliary fan is controlled by a thermal switch located in the cylinder head which grounds the dark green/white wire from the auxiliary fan relay (see diagram for location). **NOTE:** In 1985 the thermal switch may be found in either left or right cylinder head between #1 and #3 or #6 and #8 spark plugs. The thermal switch is the only one with a round button-like connector.

1986-1989 Corvettes were produced with either one primary (rear of radiator) or an optional auxiliary (front of radiator) cooling fan. The primary fan is controlled by the ECM (computer) which grounds the dark green/white wire from the primary fan relay (see diagram for location). The auxiliary fan is controlled by a thermal switch located in the left cylinder head which grounds the dark green/white wire from the auxiliary fan relay (see diagram for location). The auxiliary fan thermal switch is located in the left cylinder head between the #1 and #3 spark plugs.

1985 Primary & Auxiliary Cooling Fan Relay

1986-87 Primary Cooling Fan Relay

1986-87 Aux. Cooling Fan Relay


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MidAmericaMotorworks

2900 N. Third Street, P.O. Box 1368, Effingham, IL 62401
800.500.1500 • Worldwide: 217.540.4200 • FAX: 217.540.4800
www.mamotorworks.com • mail@mamotorworks.com

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Cooling Fan Switch (cont.)

1990-91 Corvettes all have dual fans mounted side by side (rear of radiator). Each fan is controlled independently by the ECM (computer) which grounds the dark blue wire from each of the fan relays. Each fan is wired independently and has it's own relay mounted side by side on the driver's side of the fan shroud. No thermal switch is present originally on the 1990-91 Corvette. The plug between the #1 and #3 spark plug must be removed to install the thermal switch. For 90-91 models, the fan switch must be wired to each of the 2 relays. The 2 fans must run simultaneously.

INSTALLATION:

STEP 1.

Allow engine to cool and disconnect negative battery cable.

STEP 2.

Locate the cooling fan thermal switch, if your Corvette is so equipped or located the threaded plug in the driver's side cylinder head between the #1 and #3 spark plug.

STEP 3.

Place a pan beneath the engine to catch any coolant, usually less than a quart, that will leak when the existing switch or plug is removed from the cylinder head.

STEP 4.

Disconnect the wire from the existing thermal switch (if so equipped). Select the appropriate size socket or plug extractor and remove the switch or plug from the cylinder head.

STEP 5.

Install the new switch. Note: Do not use thread sealant or tape. USE CAUTION WHEN INSTALLING SWITCH INTO CYLINDER HEAD. CROSS THREADING WILL CAUSE DAMAGE TO HEAD AND/OR SWITCH. 1984 installation is complete. Reconnect wire lead from the original switch, refill coolant to correct level, and reconnect battery cable.

1985-91 WIRING CONNECTIONS:

NOTE: If your 1985-89 Corvette was not originally equipped with a thermal switch/auxiliary fan skip to step 2. If you have a 1990-91 Corvette, or want to cause simultaneous operation of both fans (if so equipped) skip to step 2 and continue through step 3.

STEP 1.

Reconnect wire lead from original switch (if so equipped). This will cause altered operation of the auxiliary fan only.

STEP 2.

Snap connector of #609-108 Wire Harness onto the new switch. Choose either of the two leads and route it to the primary fan relay (1985-89), or either relay (1990-91)(see diagram for location). Snap the T-Tap connector onto the appropriate relay switch wire (1985-89 dark green/white) (1990-91 dark blue). DO NOT CUT RELAY SWITCH WIRE. Crimp connector on new harness wire end and plug into T-Tap Connector. This will cause altered operation of the primary fan (1985-89), or one fan only (1990-91). For 1985-89 Corvettes without an auxiliary fan, you may delete the remaining lead by snipping and taping, or route and "hide" the wire for future use with Item #609110 Add-On Auxiliary Fan Kit.

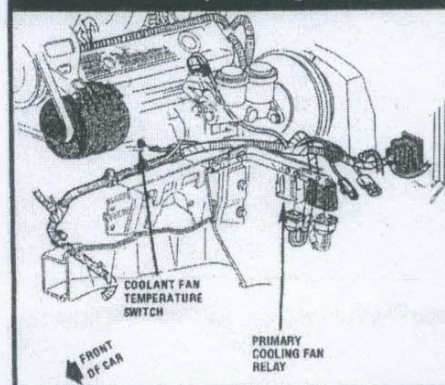
STEP 3.

For simultaneous operation of both fans: 1985-89 splice the remaining Conversion Harness lead to the original thermal switch connector wire. 1990-91 repeat routing and connection at second relay switch wire as in Step 2.

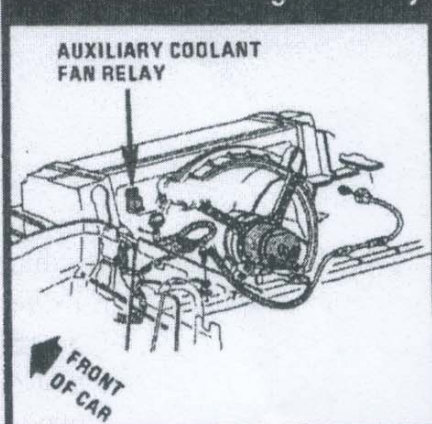
STEP 4.

Refill coolant to correct level and re-connect battery cable.

1988-89 Primary Cooling Fan Relay



1988-89 Aux. Cooling Fan Relay



1990-91 Cooling Fan Relay

