

50-8793

Underhood Performance Kit

1987-93 Ford Mustangs w/5.0L V8

To be effective, an air conditioner must remove heat from the air in a vehicle faster than it is added. It is therefore very important to reduce the added heat by insulating the roof, firewall, & floorboards. You should also seal all holes in the firewall, insure airtight door & window seals, & consider window tinting.

For maximum cooling performance a clutch style or steel six-blade fan should be installed, with a shroud, if possible. We **DO NOT** recommend flex fans. Another alternative, & a definite plus, for any system is the addition of an electric condenser fan dedicated to the A/C System. If the vehicle is equipped with only an electric radiator fan, it **MUST** be wired to engage with the A/C system. A/C head pressure increases much faster than the engine temperature, which can damage the compressor & other components. Steel Fan Blades & High Quality Electric Fans are available from Old Air Products.

Read the instructions prior to starting installation!

-See Page 5 for #50-8793 Parts List-

Vehicle Preparation

Note: If you have any questions regarding the correct application of parts included with this system, contact your supplier or Old Air Products before proceeding with installation.

1) Before beginning the installation of this update kit, start with disconnecting the Battery, evacuating the A/C system, & draining the engine coolant.

2) Once the coolant has been drained, disconnect the coolant hoses at the Radiator.

Note: If equipped with an automatic transmission, the transmission cooling lines will need to be disconnected & capped.

3) Remove the Radiator from the vehicle by removing the two upper Radiator Mounting Brackets. (**Photo 1**)

4) Remove the Air Intake from the Vehicle. (**Photo 2**)

A) Disconnect the Air Intake from the Throttle Body

B) Unplug the MAF Sensor

C) Unbolt the support bracket & the Air Filter housing.

D) Remove the Air Intake Assembly for access to the A/C lines.

5) Use a Spring Lock Tool to release the Liquid Line from the Evaporator & the Condenser. Proceed to unclip the plastic clamp holding the Liquid Line to the Shock Tower & remove the line from the vehicle.

Tip: Spring Lock Tools are available at most auto parts stores.

6) Remove the Discharge Hose assembly from the vehicle.

A) Use a Spring Lock Tool to release the Discharge Hose at the Condenser.

B) Loosen & remove the fitting at the Compressor.

C) Proceed to remove the Discharge Hose Assembly from the vehicle.

7) Remove the Accumulator & Suction Hose assembly from the vehicle (**Photo 3**)

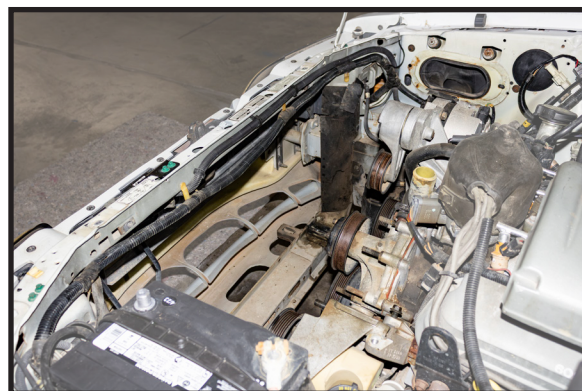


Photo 1 - Remove Radiator & other OE components



Photo 2 - Remove Air Intake from Vehicle

- A) Use a backup wrench on the Suction Fitting of the Evaporator & proceed to disconnect the Accumulator Fitting
- B) Loosen & remove the Suction Line at the Compressor
- C) Loosen the clamp bolt on the Accumulator Bracket & remove the Suction Hose Assembly.

8) Unbolt the upper Condenser mounting brackets & remove the OE Condenser.

9) Remove the Original Compressor & rear mounting bracket.

Compressor Installation

1) Remove & modify OE Compressor Bracket (**Photo 4**)

Note: This is required for clearance of the mounting bolt to the new Compressor's mounting ear.

A) Remove the Front OE Compressor Bracket from the engine.

B) Mount one of the supplied Compressor Adapter Brackets with the supplied hardware to the engine side of the front OE Compressor Bracket using the two lower mounting holes in the bracket where the OE Compressor was mounted. (**Photo 4**)

C) Mark & drill through the Adapter Bracket & the Front OE Compressor Bracket with a 7/16" drill bit

Note: Trimming the factory bracket for appearance is recommended, but it is not mandatory. (**Photo 5**)

3) Reinstall the OE Front Compressor Bracket on the engine using the original hardware (**Photo 6**)

5) Rotate the OE Rear Compressor Bracket 180° with the slotted end towards the Driver Side & reinstall the OE Rear Compressor Mounting Bracket (**Photo 7**)

6) Loosely attach the second Compressor Adapter Bracket to the front side of the OE Rear Compressor Bracket.

7) Install the supplied 3/16" spacers between the Compressor Adapter Brackets & the mounting ears of the Compressor to install the Compressor

8) Tighten all Compressor Mounting hardware & Compressor Adapter Brackets

9) Install the supplied Serpentine belt.

Note: Clutch has a 7 groove pulley & the supplied belt has 6 groove. This will leave an open groove at the front of the clutch pulley & belt will align at back of the Clutch (**Diagram 1**)

Condenser Installation

1) Using the original Condenser mounts & hardware install the new Condenser Assembly

Radiator Installation

1) Reinstall the Radiator using the original mounts & hardware. Including Coolant Hoses & Transmission Lines, if equipped.



Photo 3 - Remove Accumulator & Suction Hose



Photo 4 - Mark & drill OE Compressor Bracket to attach the Compressor Adapter Bracket



Photo 5 - Mark & trim OE Compressor Bracket

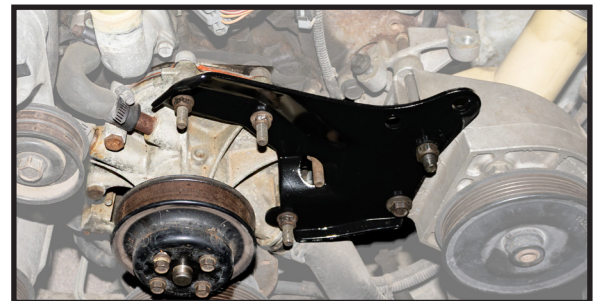


Photo 6 - Reinstall the OE Front Compressor Mounting Bracket



Photo 7 - Rotate & attach the Compressor Adapter Bracket to the OE Rear Compressor Bracket

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Evaporator Installation

Note: For the following steps to replace the Original Evaporator, refer to a vehicle shop manual if additional information or details are needed. Removal of the front seats is recommended for additional working space but not absolutely necessary for installation. It is recommended to clean the inside of the evaporator case, check heater core & replace seals if required for proper operation of the A/C & Heater System.

1) Install Heater/Evaporator box back onto the firewall.

Tip: To align the new Accumulator correctly with the new Evaporator, install the Accumulator Bracket over the mounting studs then use the factory case nuts to secure. (**Photo 8**)

Note: All O-Ring Fittings will require using an O-Ring seal. Use refrigerant oil to lubricate the O-Rings on all hose fittings & connections. Protective caps & plugs should not be removed until refrigerant hoses are ready to be connected. O-Ring fittings should be tight, but excessive tightening will crush the O-Ring seal.

Liquid Line Assembly Installation

1) Take the Liquid Line Tube with the already inserted Orifice Tube & install an oiled O-Ring.

2) Insert Tube into the Inlet of the Evaporator. Snug fittings by hand at the Evaporator & install the push mount zip tie around the tube.

3) Insert the push mount into the original mount location on the shock tower & tighten the zip tie to secure tube. (**Photo 9**)

4) Use a backup wrench to hold the fitting on the Evaporator & tighten fittings.

5) Attach the Liquid Line Hose Assembly. Install an oiled O-Ring on the fittings with the Safety Switch port & insert into the lower Condenser Tube & snug fittings by hand. (**Photo 10**)

6) Install an oiled O-Ring on opposite end & insert into the Liquid Line Tube & snug by hand.

7) Oil the O-Ring seal & install the High Pressure Safety Switch onto the Liquid Line at the Condenser side fitting. Orientate the Switch in an upwards 45° angle towards the Radiator & tighten Switch. (**Photo 11**)

8) Install the Safety Switch wiring plug onto the Safety Switch & route the wires behind the Alternator & over to the Compressor.

9) Using a backup wrench tighten both remaining fittings on the Liquid Line.

Accumulator Assembly Installation

1) Install an oiled O-ring onto the Inlet fitting of the Accumulator.

2) Insert the Accumulator into the mounting bracket & align with the outlet of the Evaporator.

3) Hand tighten the fitting at the Evaporator & tighten the clamp on the mounting bracket.

4) Use a backup wrench on the fitting to tighten fitting.

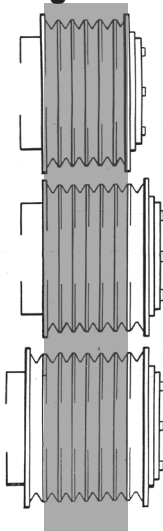
5) Oil the O-ring seal in the Pressure Cycling Switch & install on the Switch Port of the Accumulator & hand tighten. Plug the factory wiring into the switch. (**Photo 12**)



Photo 8 - Align the Accumulator to Evaporator

BELT ALIGNMENT FOR COMPRESSORS WITH POLY-V GROOVE (SERPENTINE) CLUTCH

Belt Alignment



Six Groove Clutch
All Grooves used by Belt

Seven Groove Clutch
1 Additional Groove at Front of Pulley

Eight Groove Clutch
2 Additional Grooves 1 at Front & 1 at Rear of Pulley

Diagram 1 - Serpentine Clutch Belt Alignment



Photo 9 - Install Liquid Line Tube & use Zip Tie to secure to Shock Tower

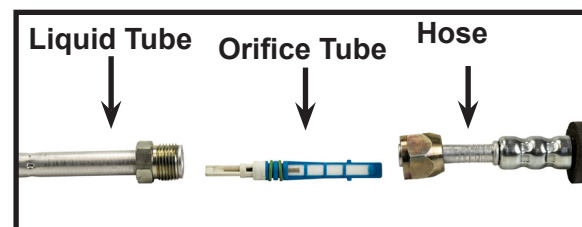


Photo 10 - Attach Liquid Line Hose Assembly to Liquid Line Tube

6) Route the Accumulator Hose around the back of the Firewall & over the Intake to the Inlet side of the Compressor. **(Photo 13)**

7) Install an oiled O-ring onto the fitting & attach to the Compressor. Align the fitting to be parallel with the front of the Intake & tighten fitting.

Discharge Hose Installation

- 1) Install an oiled O-ring at both ends of the Discharge Hose.
- 2) Insert the straight fitting into the Condensers top tube & hand tighten.
- 3) Install the opposite end into the Discharge side of the Compressor & hand tighten.
- 4) Align the Compressor side fitting so that it clears the Distributor & Radiator Hose & tighten fitting. Use a backup wrench at the Condenser to tighten the fitting.

Pressure Safety Switch Harness Installation

- 1) Install a Male Bullet Terminal on one green wire & the Female Bullet Terminal on the other green wire on the Safety Switch. Plug the Compressor Clutch Wire into the Female Bullet Connector.
- 2) Modify the Factory Compressor Plug by cutting the plug off & pull back the split loom exposing the two wires. **(Photo 14)**
- 3) Install a Female Bullet Connector onto the Black/Yellow wire. *(The solid black wire is not used)*
- 4) Plug the Male Bullet Connector from the Safety Switch into the Female Connector
- 3) Secure all the wiring & hoses away from any moving parts with provided zip ties.

Note: We recommend looming the wiring to protect the wiring & for a cleaner looking install

Freon Service

Note: No additional oil is required in this system. The compressor is shipped with the correct amount of oil for this update kit.

- 1) Connect the gauges at the Service Ports on the Compressor Fittings. Connect the Vacuum Pump to the gauges & pull a vacuum on the system.

Note: We recommend you pull a vacuum for 30-45 min to pull all moisture out of system.

- 2) Once the system is in a vacuumed state, charge the system with 32 oz of R134a refrigerant.

Note: When charging the system it will be necessary to put in about 12 to 18 ounces of refrigerant before the Pressure Safety Switch will engage the Compressor Clutch.

Tip: This should be done with the doors shut, windows closed, convertible top up, blower fan on high, & an electric fan in front of the radiator. If excessive high head pressure exists adding an electric condenser fan is recommended if space permits.

- 3) Test all A/C connections for leaks.
- 4) Place a copy of these installation instructions in glove box for future reference.



Photo 11 - Attach Pressure Safety Switch to Liquid Line Hose Assembly



Photo 12 - Attach Pressure Cycling Switch to Accumulator



Photo 13 - Route Suction & Discharge hose from the Compressor



Photo 14 - Modify Factory Compressor Plug & attach to Compressor Safety Switch



50-8793 - 1987-93 Ford Mustang w/5.0L V8 Underhood Performance Parts List

50-8793 Underhood Performance Kit

Evaporator (#10-8793)

Condenser Assembly (#11-8793)

Suction Hose & Accumulator Assembly (#95-8793S)

Discharge Hose (#95-8793D)

Liquid Line Hose (#95-8793L)

Evap to Liquid Line Tube w/Orifice Tube (#12-1035L)

Serpentine Belt (80-905K6DR)

Sanden Compressor Adapter Brackets (#40-0087)

Hardware Kit (#49-8793)

A/C O-ring Kit (#49-0093)

Pressure Cycling Switch (#24-8793)

Binary Pressure Safety Switch (#24-0102F)

Push Mount Zip Tie Kit (#60-2006)

Thank You for choosing
an Old Air Products
Underhood Performance
Kit for your classic vehicle!

We appreciate hearing
from you & seeing photos
of your vehicles!

Regards,

**The Old Air Products
Staff!**