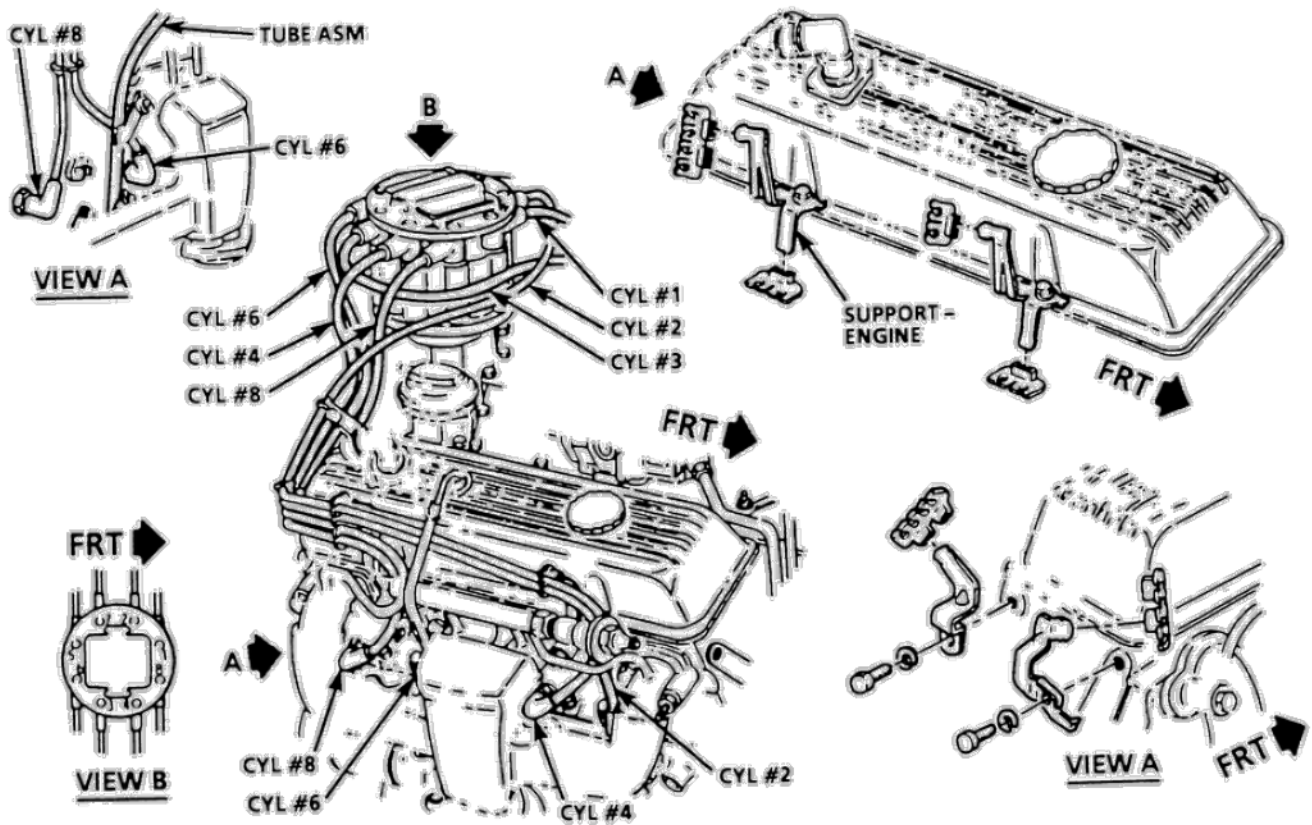
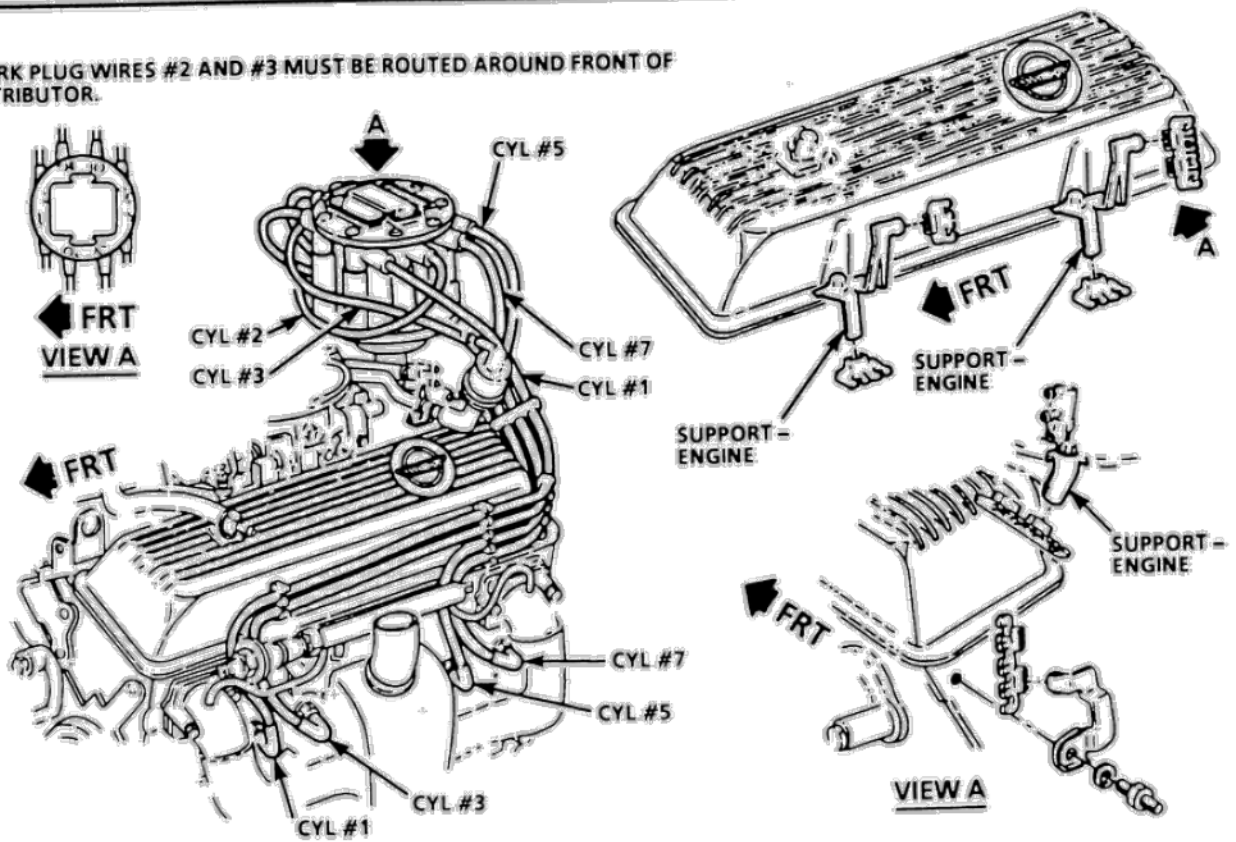
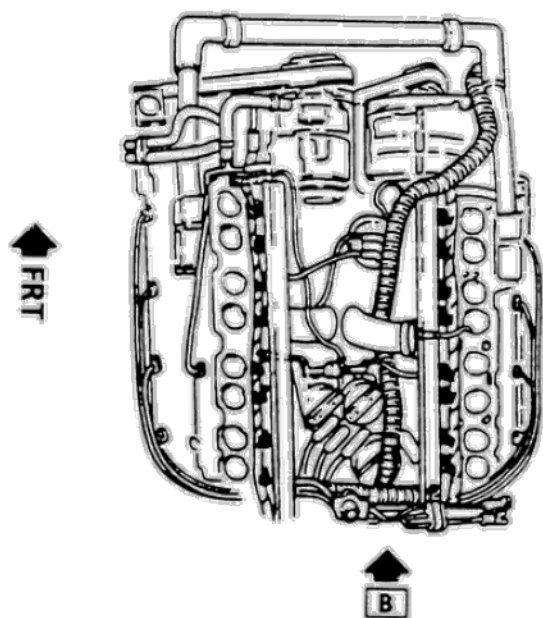
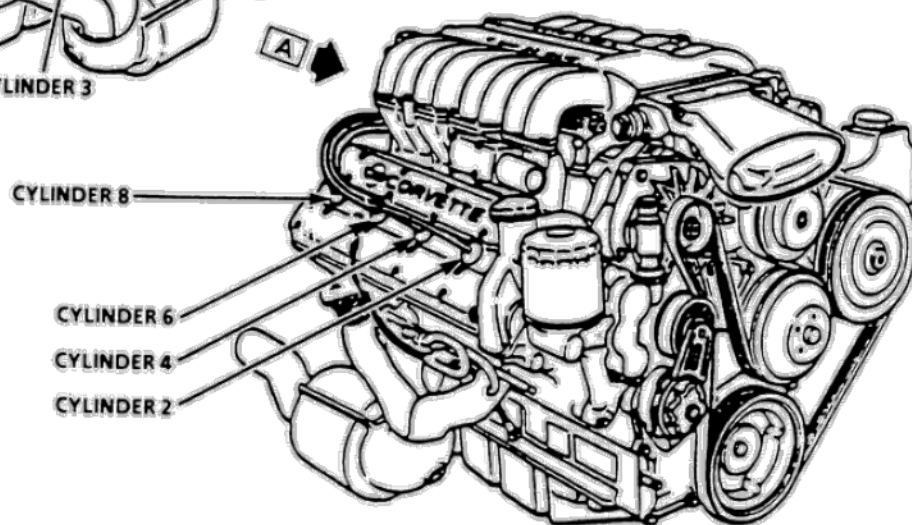
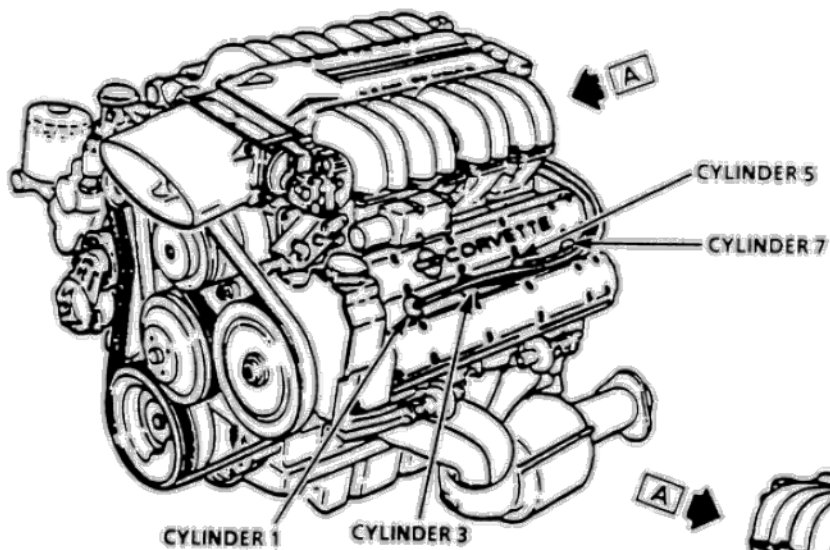


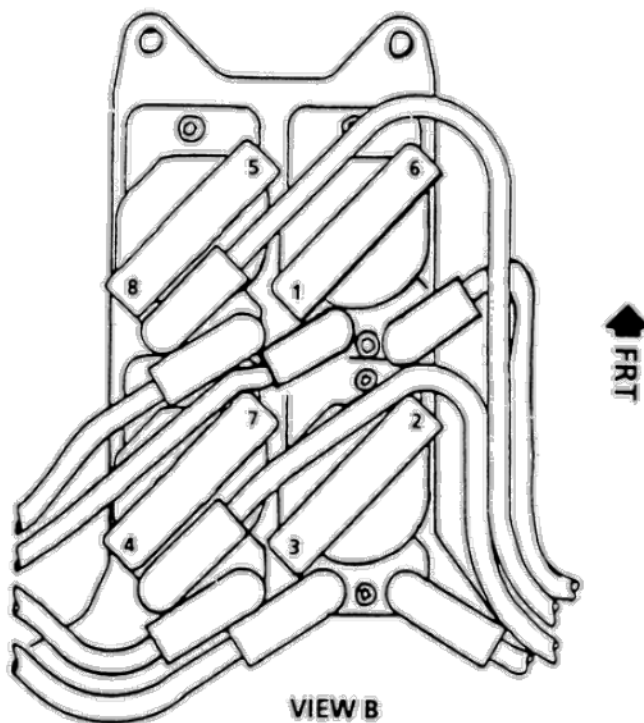


SPARK PLUG WIRES #2 AND #3 MUST BE ROUTED AROUND FRONT OF DISTRIBUTOR.

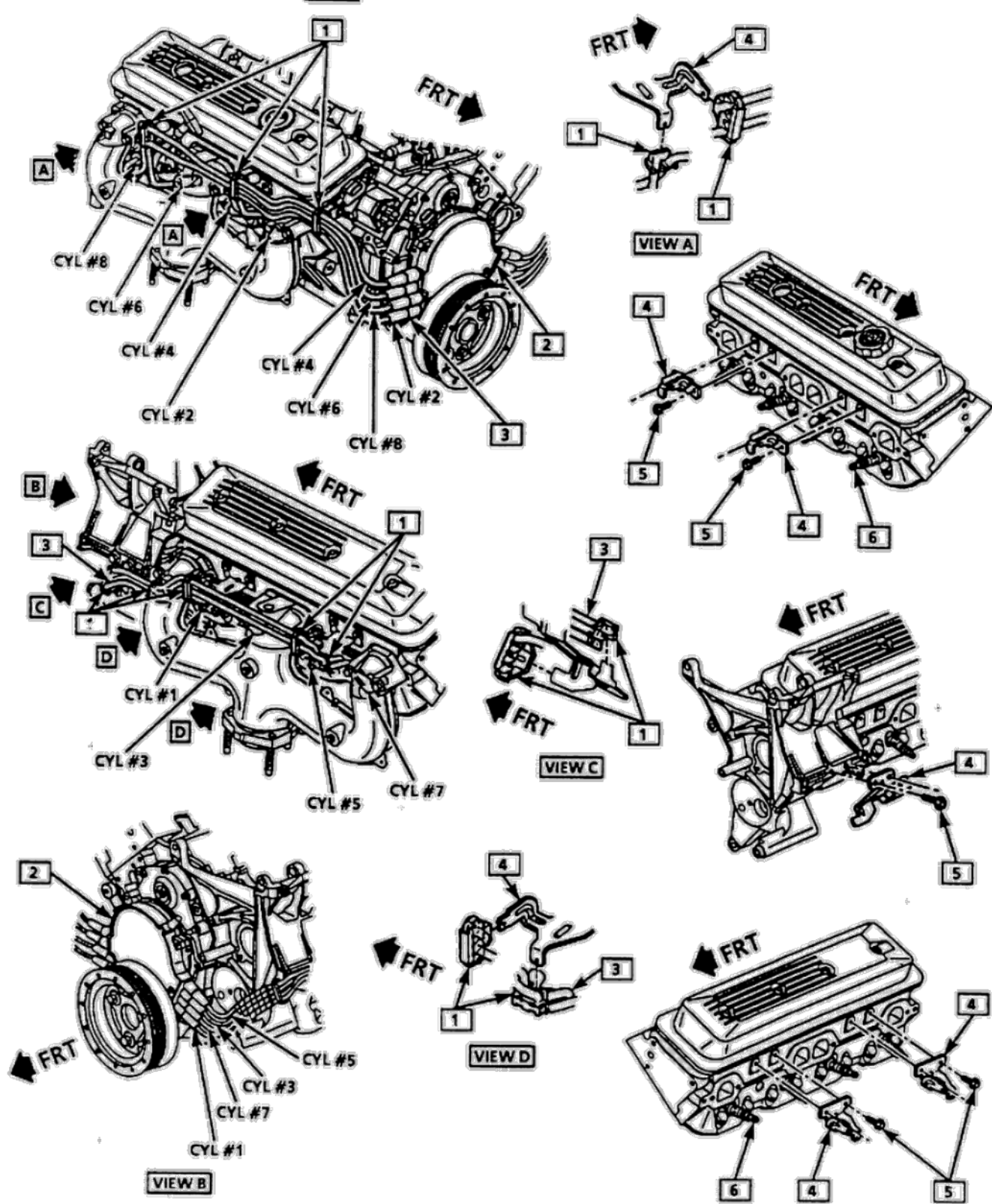




VIEW A

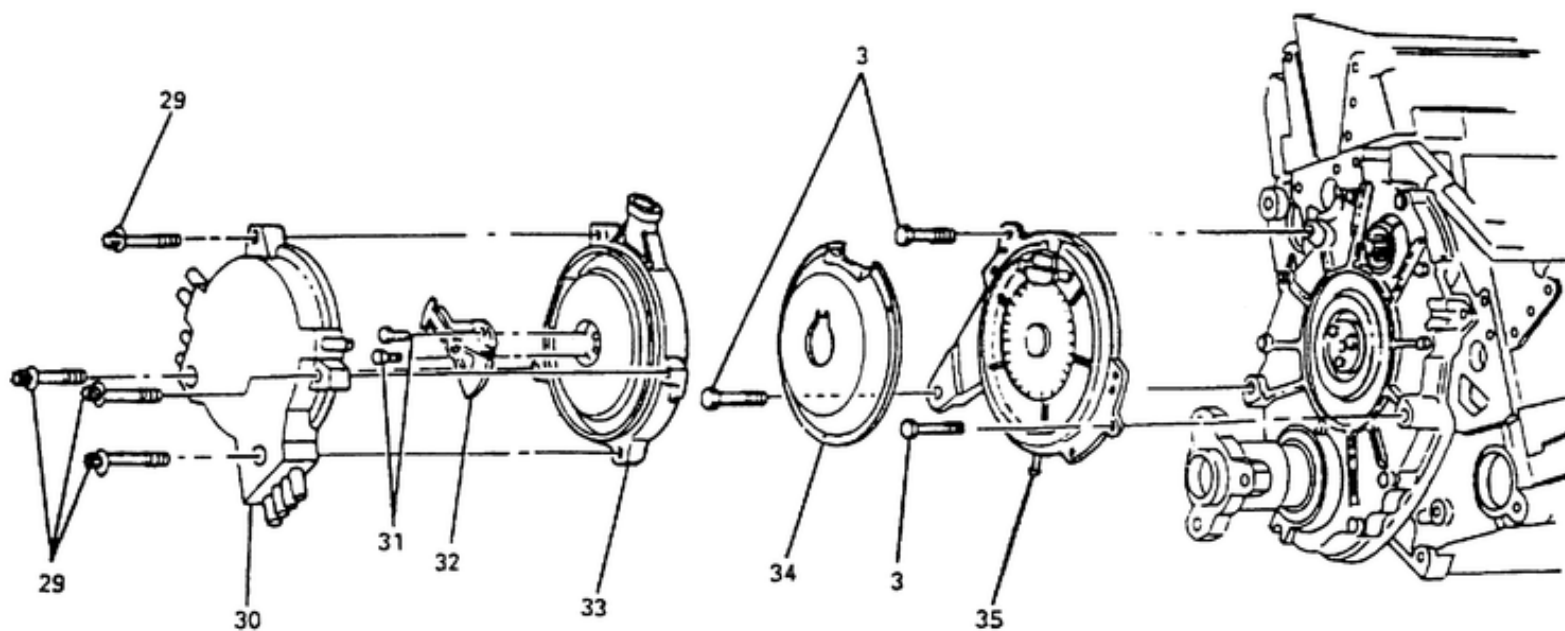


VIEW B

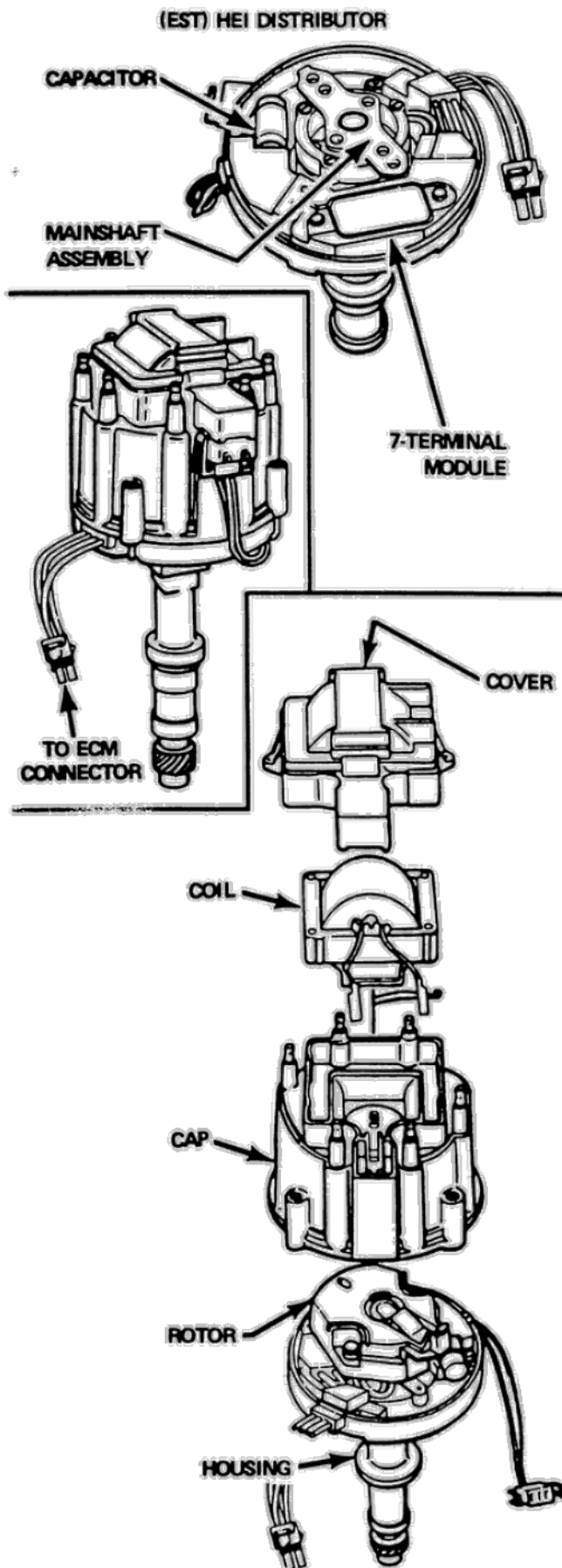


- 1 CLIP
- 2 DISTRIBUTOR
- 3 HARNESS

- 4 SUPPORT
- 5 BOLT
- 6 SPARK PLUG



- 3 BOLT/SCREW, DISTRIBUTOR
- 29 BOLT/SCREW, DISTRIBUTOR CAP
- 30 CAP, DISTRIBUTOR
- 31 BOLT/SCREW, DISTRIBUTOR ROTOR
- 32 ROTOR, DISTRIBUTOR
- 33 COVER, DISTRIBUTOR
- 34 SHIELD, DISTRIBUTOR
- 35 BASE, DISTRIBUTOR



GASOLINE ENGINE TUNE-UP SPECIFICATIONS

Year	Engine ID/VIN	Engine Displacement Liters (cc)	Spark Plugs	Ignition Timing (deg.)		Fuel Pump (psi)	Idle Speed (rpm)		Valve Clearance	
			Gap (in.)	MT	AT		MT	AT	In.	Ex.
1984	8	5.7L (5700)	0.035	①	①	9-13	450	400 ②	HYD	HYD
1985	8	5.7L (5700)	0.035	①	①	41-47	450 ③	400 ③	HYD	HYD
1986	8	5.7L (5700)	0.035	①	①	41-47	450 ③	400 ③	HYD	HYD
1987	8	5.7L (5700)	0.035	①	①	41-47	450 ③	400 ③	HYD	HYD
1988	8	5.7L (5700)	0.035	①	①	41-47	450 ③	450 ③	HYD	HYD
1989	8	5.7L (5700)	0.035	①	①	41-47	450 ③	450 ③	HYD	HYD
1990	8	5.7L (5700)	0.035	①	①	41-47	450 ③	450 ③	HYD	HYD
	J	5.7L (5700)	0.035	①	①	48-55	450 ③	450 ③	HYD	HYD
1991	8	5.7L (5700)	0.035	①	①	41-47	—	①	HYD	HYD
	J	5.7L (5700)	0.035	①	①	48-55	—	①	HYD	HYD
1992	P	5.7L (5700)	0.035	—	①	41-47	—	①	HYD	HYD
	J	5.7L (5700)	0.035	①	①	48-55	①	①	HYD	HYD
1993	P	5.7L (5700)	0.035	—	①	41-47	—	①	HYD	HYD
	J	5.7L (5700)	0.035	①	①	48-55	①	①	HYD	HYD
1994	P	5.7L (5700)	0.035	—	①	41-47	—	①	HYD	HYD
	J	5.7L (5700)	0.035	①	①	48-55	①	①	HYD	HYD
1995	P	5.7L (5700)	0.035	—	①	41-47	—	①	HYD	HYD
	J	5.7L (5700)	0.035	①	①	48-55	①	①	HYD	HYD
1996	P	5.7L (5700)	0.035	—	①	41-47	①	①	HYD	HYD
	5	5.7L (5700)	0.035	①	①	41-47	①	①	HYD	HYD

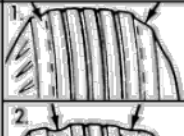
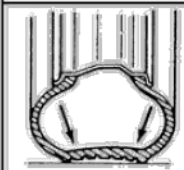
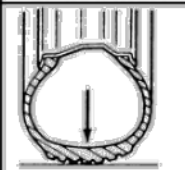
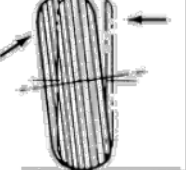
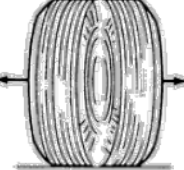
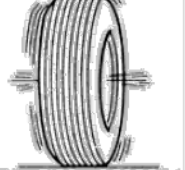
NOTE: The Vehicle Emission Control Information Label often reflects specification changes made during production. The label figures must be used if they differ from those in this chart.

HYD - Hydraulic

① Refer to the Vehicle Emission Control Information label

② In Drive

③ Minimum idle speed specification shown. Idle speed is usually a non-adjustable specification controlled by the ECM.

CONDITION	RAPID WEAR AT SHOULDERS	RAPID WEAR AT CENTER	CRACKED TREADS	WEAR ON ONE SIDE	FEATHERED EDGE	BALD SPOTS	SCALLOPED WEAR
EFFECT							
CAUSE	UNDER-INFLATION OR LACK OF ROTATION	OVER-INFLATION OR LACK OF ROTATION	UNDER-INFLATION OR EXCESSIVE SPEED*	EXCESSIVE CAMBER	INCORRECT TOE	UNBALANCED WHEEL	LACK OF ROTATION OF TIRES OR WORN OR OUT-OF-ALIGNMENT SUSPENSION.
						 OR TIRE DEFECT *	
CORRECTION	ADJUST PRESSURE TO SPECIFICATIONS WHEN TIRES ARE COOL ROTATE TIRES			ADJUST CAMBER TO SPECIFICATIONS	ADJUST TOE-IN TO SPECIFICATIONS	DYNAMIC OR STATIC BALANCE WHEELS	ROTATE TIRES AND INSPECT SUSPENSION

*HAVE TIRE INSPECTED FOR FURTHER USE.

UNDERHOOD MAINTENANCE COMPONENT LOCATIONS

- | | | |
|--|---|---|
| 1. Automatic transmission fluid dipstick | 7. Accessory drive belt routing label | 13. Upper radiator hose |
| 2. PCV valve | 8. Radiator fill cap | 14. Power steering fluid reservoir |
| 3. Spark plugs and wires | 9. Radiator overflow hose | 15. Battery |
| 4. Engine oil fill cap | 10. Coolant recovery reservoir | 16. Brake master cylinder fluid reservoir |
| 5. Engine oil dipstick | 11. Air cleaner assembly | 17. Distributor cap and rotor (located under plate) |
| 6. Accessory drive belt | 12. Vehicle Emission Control Information (VECI) label | |



1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

Regular air cleaner element replacement is a must, since a partially clogged element will cause a performance loss, decreased fuel mileage, and engine damage if enough dirt gets into the cylinders and contaminates the engine oil.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

The removal of air filter assembly will vary slightly for different year and different engine. The following procedure can be altered as you see fit for your specific vehicle.

- 1. Disconnect the negative battery cable.
- 2. If necessary to remove the air cleaner assembly cover, disconnect the air duct tube clamp to the throttle body and slip the duct off.

Fig. 1: If necessary, loosen the clamps, then remove the air intake duct from the air cleaner assembly

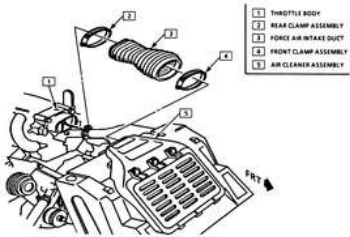


Fig. 2: On many later model vehicles, the air intake duct must be removed in order to access the air cleaner assembly

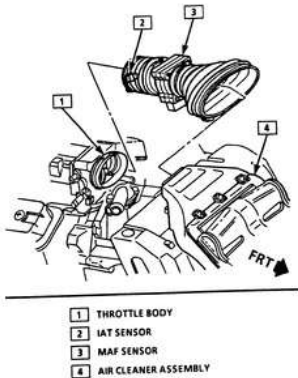


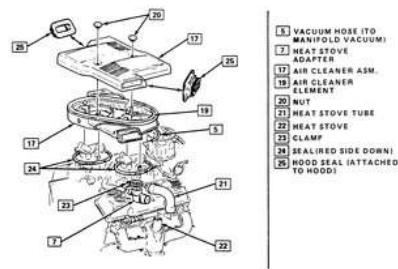
Fig. 3: On this 1986 Corvette, you must unscrew the 2 air cleaner cover retainers



Fig. 4: Then, lift the cover off and pull the air cleaner element from the housing

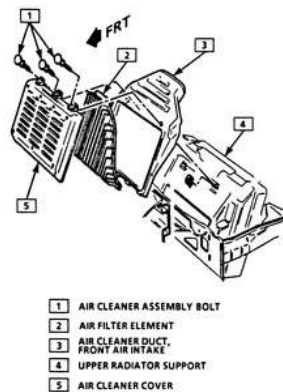


Fig. 5: Exploded view of the air cleaner assembly — 1984 vehicle shown



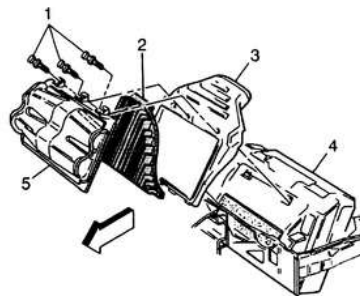
- Unfasten the bolts/screws, or retaining clips, then remove the air cleaner cover. The cover should be easy to remove, if not look to see if you missed a hidden clip or screw.

Fig. 6: On 1990–94 5.7L (VIN 8 & J) engines, the air cleaner cover is secured with 3 mounting bolts



- Remove the air cleaner cover, then lift the air cleaner element from the housing.
- Clean the air cleaner housing to remove any remaining dirt. Inspect the element for dirt, dust and/or water and replace if necessary.

Fig. 7: Exploded view of the air cleaner and related components — 1992–96 5.7L (VIN P & 5) engines



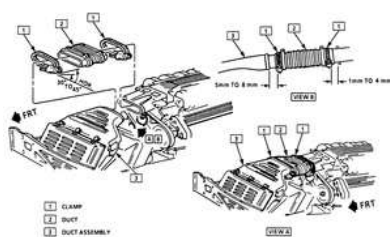
To install:

NOTE: When installing the new filter make certain not to bend or tear the paper element.

- Place the new element in the air cleaner housing.

7. Position the cover over the air cleaner assembly and secure with the retaining clips or screws, as applicable. Do not overtighten the cover retaining screws/bolts. Only tighten them finger-tight or to about 8 inch lbs. (1.1 Nm).
8. If removed, install the air cleaner assembly duct and secure the retaining clamps, as necessary.

Fig. 8: Air cleaner duct installation — 1990 5.7L (VIN J)
engine shown



9. Connect the negative battery cable.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

Although the A/C system should not be serviced by the do-it-yourselfer, preventive maintenance can be practiced and A/C system inspections can be performed to help maintain the efficiency of the vehicle's A/C system. For preventive maintenance, perform the following:

- The easiest and most important preventive maintenance for your A/C system is to be sure that it is used on a regular basis. Running the system for five minutes each month (no matter what the season) will help ensure that the seals and all internal components remain lubricated.

NOTE: Some newer vehicles automatically operate the A/C system compressor whenever the windshield defroster is activated. When running, the compressor lubricates the A/C system components; therefore, the A/C system would not need to be operated each month.

- In order to prevent heater core freeze-up during A/C operation, it is necessary to maintain proper antifreeze protection. Use a hand-held coolant tester (hydrometer) to periodically check the condition of the antifreeze in your engine's cooling system.

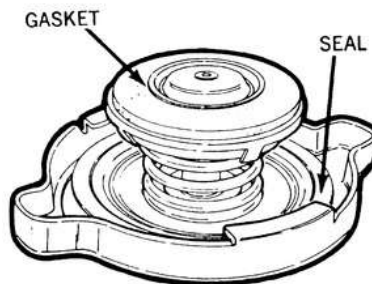
Fig. 1: A coolant tester can be used to determine the freezing and boiling levels of the coolant in your vehicle



NOTE: Antifreeze should not be used longer than the manufacturer specifies.

- For efficient operation of an air conditioned vehicle's cooling system, the radiator cap should have a holding pressure which meets manufacturer's specifications. A cap which fails to hold these pressures should be replaced.

Fig. 2: To ensure efficient cooling system operation, inspect the radiator cap gasket and seal



- Any obstruction of or damage to the condenser configuration will restrict air flow which is essential to its efficient operation. It is, therefore, a good rule to keep this unit clean and in proper physical shape.

NOTE: Bug screens which are mounted in front of the condenser (unless they are original equipment) are regarded as obstructions.

- The condensation drain tube expels any water which accumulates on the bottom of the evaporator housing into the engine compartment. If this tube is obstructed, the air conditioning performance can be restricted and condensation buildup can spill over onto the vehicle's floor.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

Although the A/C system should not be serviced by the do-it-yourselfer, preventive maintenance can be practiced and A/C system inspections can be performed to help maintain the efficiency of the vehicle's A/C system. For A/C system inspection, perform the following:

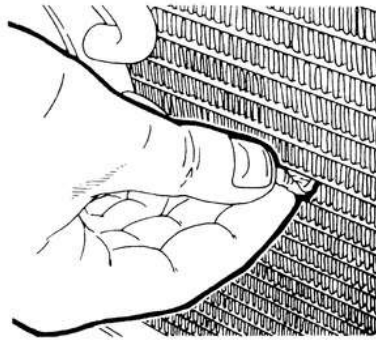
The easiest and often most important check for the air conditioning system consists of a visual inspection of the system components. Visually inspect the air conditioning system for refrigerant leaks, damaged compressor clutch, abnormal compressor drive belt tension and/or condition, plugged evaporator drain tube, blocked condenser fins, disconnected or broken wires, blown fuses, corroded connections and poor insulation.

A refrigerant leak will usually appear as an oily residue at the leakage point in the system. The oily residue soon picks up dust or dirt particles from the surrounding air and appears greasy. Through time, this will build up and appear to be a heavy dirt impregnated grease.

For a thorough visual and operational inspection, check the following:

- Check the surface of the radiator and condenser for dirt, leaves or other material which might block air flow.

Fig. 1: Periodically remove any debris from the condenser and radiator fins



- Check for kinks in hoses and lines. Check the system for leaks.
- Make sure the drive belt is properly tensioned. When the air conditioning is operating, make sure the drive belt is free of noise or slippage.
- Make sure the blower motor operates at all appropriate positions, then check for distribution of the air from all outlets with the blower on **HIGH** or **MAX**.

NOTE: Keep in mind that under conditions of high humidity, air discharged from the A/C vents may not feel as cold as expected, even if the system is working properly. This is because vaporized moisture in humid air retains heat more effectively than dry air, thereby making humid air more difficult to cool.

- Make sure the air passage selection lever is operating correctly. Start the engine and warm it to normal operating temperature, then make sure the temperature selection lever is operating correctly.

1990 Chevrolet CORVETTE

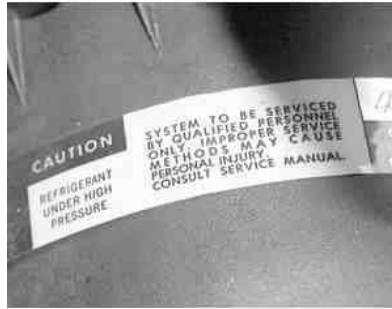
Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

NOTE: It is recommended that the A/C system be serviced by an EPA Section 609 certified automotive technician utilizing a refrigerant recovery/recycling machine.

The do-it-yourselfer should not service his/her own vehicle's A/C system for many reasons, including legal concerns, personal injury, environmental damage and cost. The following are some of the reasons why you may decide not to service your own vehicle's A/C system.

Fig. 1: Labels like this, found in the engine compartment, should be warning enough not to service your own A/C system.



According to the U.S. Clean Air Act, it is a federal crime to service or repair (involving the refrigerant) a Motor Vehicle Air Conditioning (MVAC) system for money without being EPA certified. It is also illegal to vent R-12 and R-134a refrigerants into the atmosphere. Selling or distributing A/C system refrigerant (in a container which contains less than 20 pounds of refrigerant) to any person who is not EPA 609 certified is also not allowed by law.

State and/or local laws may be more strict than the federal regulations, so be sure to check with your state and/or local authorities for further information. For further federal information on the legality of SERVICING your A/C system, call the EPA Stratospheric Ozone Hotline.

NOTE: Federal law dictates that a fine of up to \$25,000 may be levied on people convicted of venting refrigerant into the atmosphere. Additionally, the EPA may pay up to \$10,000 for information or services leading to a criminal conviction of the violation of these laws.

When SERVICING an A/C system you run the risk of handling or coming in contact with refrigerant, which may result in skin or eye irritation or frostbite. Although low in toxicity (due to chemical stability), inhalation of concentrated refrigerant fumes is dangerous and can result in death; cases of fatal cardiac arrhythmia have been reported in people accidentally subjected to high levels of refrigerant. Some early symptoms include loss of concentration and drowsiness.

NOTE: Generally, the limit for exposure is lower for R-134a than it is for R-12. Exceptional care must be practiced when handling R-134a.

Also, refrigerants can decompose at high temperatures (near gas heaters or open flame), which may result in hydrofluoric acid, hydrochloric acid and phosgene (a fatal nerve gas).

R-12 refrigerant can damage the environment because it is a Chlorofluorocarbon (CFC), which has been proven to add to ozone layer depletion, leading to increasing levels of UV radiation. UV radiation has been linked with an increase in skin cancer, suppression of the human immune system, an increase in cataracts, damage to crops, damage to aquatic organisms, an increase in ground-level ozone, and increased global warming.

R-134a refrigerant is a greenhouse gas which, if allowed to vent into the atmosphere, will contribute to global warming (the Greenhouse Effect).

It is usually more economically feasible to have a certified MVAC automotive technician perform A/C system service on your vehicle. Some possible reasons for this are as follows:

- While it is illegal to service an A/C system without the proper equipment, the home mechanic would have to purchase an expensive refrigerant recovery/recycling machine to service his/her own vehicle.
- Since only a certified person may purchase refrigerant — according to the Clean Air Act, there are specific restrictions on selling or distributing A/C system refrigerant — it is legally impossible (unless certified) for the home mechanic to service his/her own vehicle. Procuring refrigerant in an illegal fashion exposes one to the risk of paying a \$25,000 fine to the EPA.

R-12 Refrigerant Conversion

If your vehicle still uses R-12 refrigerant, one way to save A/C system costs down the road is to investigate the possibility of having your system converted to R-134a. The older R-12 systems can be easily converted to R-134a refrigerant by a certified automotive technician by installing a few new components and changing the system oil.

The cost of R-12 is steadily rising and will continue to increase, because it is no longer imported or manufactured in the United States. Therefore, it is often possible to have an R-12 system converted to R-134a and recharged for less than it would cost to just charge the system with R-12.

If you are interested in having your system converted, contact local automotive service stations for more details and information.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

Check the battery electrolyte level at least once a month, or more often in hot weather or during periods of extended vehicle operation. On non-sealed batteries, the level can be checked either through the case on translucent batteries or by removing the cell caps on opaque-cased types. The electrolyte level in each cell should be kept filled to the split ring inside each cell, or the line marked on the outside of the case.

If the level is low, add only distilled water through the opening until the level is correct. Each cell is separate from the others, so each must be checked and filled individually. Distilled water should be used, because the chemicals and minerals found in most drinking water are harmful to the battery and could significantly shorten its life.

If water is added in freezing weather, the vehicle should be driven several miles to allow the water to mix with the electrolyte. Otherwise, the battery could freeze.

Although some maintenance-free batteries have removable cell caps for access to the electrolyte, the electrolyte condition and level on all sealed maintenance-free batteries must be checked using the built-in hydrometer "eye." The exact type of eye varies between battery manufacturers, but most apply a sticker to the battery itself explaining the possible readings. When in doubt, refer to the battery manufacturer's instructions to interpret battery condition using the built-in hydrometer.

NOTE: Although the readings from built-in hydrometers found in sealed batteries may vary, a green eye usually indicates a properly charged battery with sufficient fluid level. A dark eye is normally an indicator of a battery with sufficient fluid, but one which may be low in charge. And a light or yellow eye is usually an indication that electrolyte supply has dropped below the necessary level for battery (and hydrometer) operation. In this last case, sealed batteries with an insufficient electrolyte level must usually be discarded.

[Checking the Specific Gravity](#)

A hydrometer is required to check the specific gravity on all batteries that are not maintenance-free. On batteries that are maintenance-free, the specific gravity is checked by observing the built-in hydrometer "eye" on the top of the battery case. Check with your battery's manufacturer for proper interpretation of its built-in hydrometer readings.

Fig. 1: On non-maintenance-free batteries, the fluid level can be checked through the case on translucent models; the cell caps must be removed on other models



Fig. 2: If the fluid level is low, add only distilled water through the opening until the level is correct



Fig. 3: Check the specific gravity of the battery's electrolyte with a hydrometer



CAUTION

Battery electrolyte contains sulfuric acid. If you should splash any on your skin or in your eyes, flush the affected area with plenty of clear water. If it lands in your eyes, get medical help immediately.

The fluid (sulfuric acid solution) contained in the battery cells will tell you many things about the condition of the battery. Because the cell plates must be kept submerged below the fluid level in order to operate, maintaining the fluid level is extremely important. And, because the specific gravity of the acid is an indication of electrical charge, testing the fluid can be an aid in determining if the battery must be replaced. A battery in a vehicle with a properly operating charging system should require little maintenance, but careful, periodic inspection should reveal problems before they leave you stranded.

As stated earlier, the specific gravity of a battery's electrolyte level can be used as an indication of battery charge. At least once a year, check the specific gravity of the battery. It should be between 1.20 and 1.26 on the gravity scale. Most auto supply stores carry a variety of inexpensive battery testing hydrometers. These can be used on any non-sealed battery to test the specific gravity in each cell.

The battery testing hydrometer has a squeeze bulb at one end and a nozzle at the other. Battery electrolyte is sucked into the hydrometer until the float is lifted from its seat. The specific gravity is then read by noting the position of the float. If gravity is low in one or more cells, the battery should be slowly charged and checked again to see if the gravity has come up. Generally, if after charging, the specific gravity between any two cells varies more than 50 points (0.50), the battery should be replaced, as it can no longer produce sufficient voltage to guarantee proper operation.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

Once a year (or as necessary), the battery terminals and the cable clamps should be cleaned. Loosen the clamps and remove the cables, negative cable first. On batteries with posts on top, the use of a puller specially made for this purpose is recommended. These are inexpensive and available in most auto parts stores. Side terminal battery cables are secured with a small bolt.

Clean the cable clamps and the battery terminal with a wire brush, until all corrosion, grease, etc., is removed and the metal is shiny. It is especially important to clean the inside of the clamp thoroughly (an old knife is useful here), since a small deposit of foreign material or oxidation there will prevent a sound electrical connection and inhibit either starting or charging. Special tools are available for cleaning these parts, one type for conventional top post batteries and another type for side terminal batteries. It is also a good idea to apply some dielectric grease to the terminal, as this will aid in the prevention of corrosion.

After the clamps and terminals are clean, reinstall the cables, negative cable last; DO NOT hammer the clamps onto battery posts. Tighten the clamps securely, but do not distort them. Give the clamps and terminals a thin external coating of grease after installation, to retard corrosion.

Check the cables at the same time that the terminals are cleaned. If the cable insulation is cracked or broken, or if the ends are frayed, the cable should be replaced with a new cable of the same length and gauge.

Fig. 1: Loosen the battery cable retaining nut . . .



Fig. 2: . . . then disconnect the cable from the battery



Fig. 3: A wire brush may be used to clean any corrosion or foreign material from the cable



Fig. 4: The wire brush can also be used to remove any corrosion or dirt from the battery terminal



Fig. 5: The battery terminal can also be cleaned using a solution of baking soda and water



Fig. 6: Before connecting the cables, it's a good idea to coat the terminals with a small amount of dielectric grease



1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

CAUTION

The chemical reaction which takes place in all batteries generates explosive hydrogen gas. A spark can cause the battery to explode and splash acid. To avoid serious personal injury, be sure there is proper ventilation and take appropriate fire safety precautions when connecting, disconnecting, or charging a battery and when using jumper cables.

A battery should be charged at a slow rate to keep the plates inside from getting too hot. However, if some maintenance-free batteries are allowed to discharge until they are almost "dead," they may have to be charged at a high rate to bring them back to "life." Always follow the charger manufacturer's instructions on charging the battery.

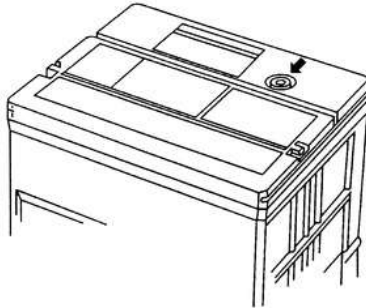
1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

A battery that is not sealed must be checked periodically for electrolyte level. You cannot add water to a sealed maintenance-free battery (though not all maintenance-free batteries are sealed); however, a sealed battery must also be checked for proper electrolyte level, as indicated by the color of the built-in hydrometer "eye."

Fig. 1: A typical location for the built-in hydrometer on maintenance-free batteries



Always keep the battery cables and terminals free of corrosion. Check these components about once a year. Refer to the removal, installation and cleaning procedures outlined in this section.

Keep the top of the battery clean, as a film of dirt can help completely discharge a battery that is not used for long periods. A solution of baking soda and water may be used for cleaning, but be careful to flush this off with clear water. DO NOT let any of the solution into the filler holes. Baking soda neutralizes battery acid and will de-activate a battery cell.

Batteries in vehicles which are not operated on a regular basis can fall victim to parasitic loads (small current drains which are constantly drawing current from the battery). Normal parasitic loads may drain a battery on a vehicle that is in storage and not used for 6–8 weeks. Vehicles that have additional accessories such as a cellular phone, an alarm system or other devices that increase parasitic load may discharge a battery sooner. If the vehicle is to be stored for 6–8 weeks in a secure area and the alarm system, if present, is not necessary, the negative battery cable should be disconnected at the onset of storage to protect the battery charge.

Remember that constantly discharging and recharging will shorten battery life. Take care not to allow a battery to be needlessly discharged.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

Always use caution when working on or near the battery. Never allow a tool to bridge the gap between the negative and positive battery terminals. Also, be careful not to allow a tool to provide a ground between the positive cable/terminal and any metal component on the vehicle. Either of these conditions will cause a short circuit, leading to sparks and possible personal injury.

Do not smoke, have an open flame or create sparks near a battery; the gases contained in the battery are very explosive and, if ignited, could cause severe injury or death.

All batteries, regardless of type, should be carefully secured by a battery hold-down device. If this is not done, the battery terminals or casing may crack from stress applied to the battery during vehicle operation. A battery which is not secured may allow acid to leak out, making it discharge faster; such leaking corrosive acid can also eat away at components under the hood.

Always visually inspect the battery case for cracks, leakage and corrosion. A white corrosive substance on the battery case or on nearby components would indicate a leaking or cracked battery. If the battery is cracked, it should be replaced immediately.

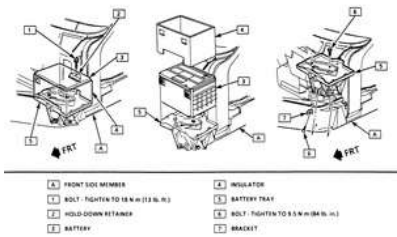
1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

When it becomes necessary to replace the battery, select one with an amperage rating equal to or greater than the battery originally installed. Deterioration and just plain aging of the battery cables, starter motor, and associated wires makes the battery's job harder in successive years. The slow increase in electrical resistance over time makes it prudent to install a new battery with a greater capacity than the old.

On these vehicles, in order to replace the battery, you must remove the left front fender. To remove the battery, perform the following:

Fig. 1: On Corvettes, the battery is located under the left front fender



1. Remove the left front fender, as outlined in Section 10 of this manual.

Fig. 2: To remove the left front fender, you must remove the Torx® bolts along the fender

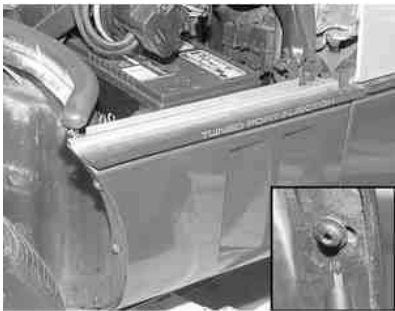


Fig. 3: There is a hidden retainer, located under the fender which must be removed or loosened to remove the fender

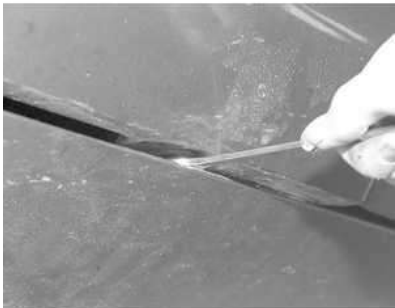


Fig. 4: After all of the retainers are removed, you can pull the fender away for access to the battery



2. Disconnect the negative, then the positive battery cables.

Fig. 5: ALWAYS disconnect the negative battery cable first!



Fig. 6: Make sure to place the cable out of the way so it doesn't accidentally contact the terminal



3. Unfasten the battery hold-down retainer, then remove the battery and insulator from the vehicle.

The battery hold-down retainer should be clean and free from corrosion before installing the battery. The retainer should be in the proper condition to securely hold the battery. Make sure there are no parts in the battery tray before installing the battery. To keep the battery from shaking and vibrating in its tray, the retainer bolt should be tight, but not overtightened.

To install:

4. Position the battery and insulator on the battery tray.
5. Install the battery hold-down retainer and tighten the bolt to 13 ft. lbs. (18 Nm).
6. Attach the positive, then the negative battery cables to the battery. Tighten the cable bolts to 11 ft. lbs. (15 Nm).
7. Install the left front fender, as outlined in Section 10 of this manual.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

Inspect the belts for signs of glazing or cracking. A glazed belt will be perfectly smooth from slippage, while a good belt will have a slight texture of fabric visible. Cracks will usually start at the inner edge of the belt and run outward. All worn or damaged drive belts should be replaced immediately. It is best to replace all drive belts at one time, as a preventive maintenance measure, during this service operation.

Fig. 1: There are typically 3 types of accessory drive belts found on vehicles today

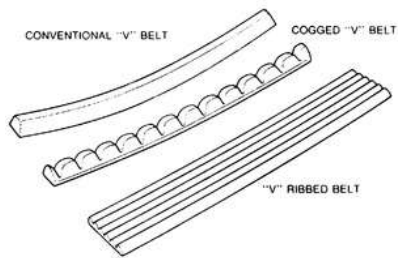


Fig. 2: An example of a healthy drive belt



Fig. 3: Deep cracks in this belt will cause flex, building up heat that will eventually lead to belt failure

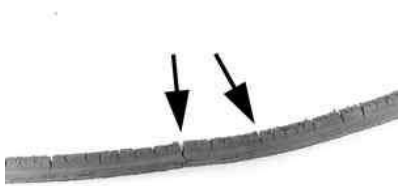


Fig. 4: The cover of this belt is worn, exposing the critical reinforcing cords to excessive wear

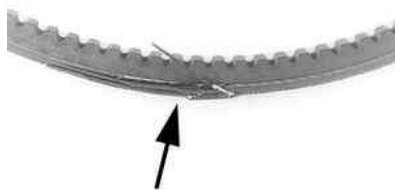


Fig. 5: Installing too wide a belt can result in serious belt wear and/or breakage



Fig. 6: There is usually an accessory drive belt routing label located in the engine compartment



1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

[1984–89 Vehicles](#)

1. To remove or install the belt, lift or rotate the tensioner using a $\frac{1}{2}$ inch breaker bar. The proper belt routing is shown in the accompanying figures.

Fig. 1: To remove the belt, insert a $\frac{1}{2}$ in. breaker bar in the square opening in the tensioner

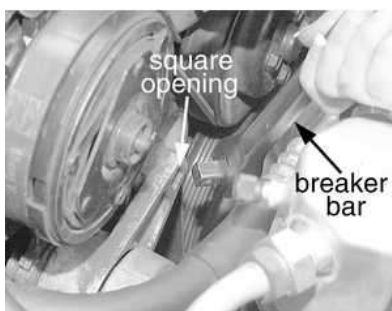


Fig. 2: Rotate the breaker bar in the tensioner toward the driver's side of the vehicle



Fig. 3: Once the tension is relieved, you can remove the unrout the drive belt from the pulleys



2. To check belt tension, install a suitable belt tension gauge, BT-7825, J-23600 or equivalent between the alternator and A.I.R. pump. The measured tension should be between 120–140 lbs. (534–623 Nm).

Fig. 4: Drive belt routing — 1984 vehicles

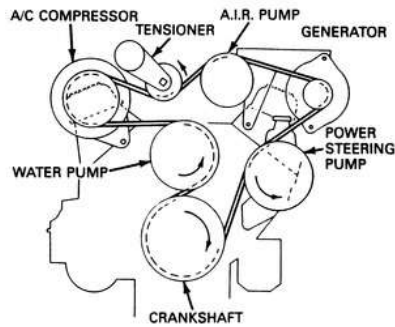
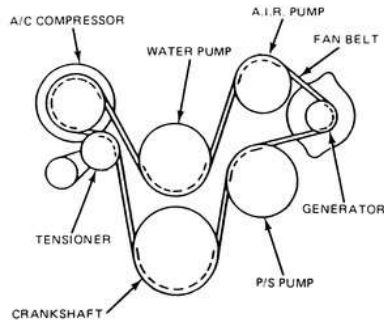


Fig. 5: Serpentine drive belt routing — 1986-89 vehicles

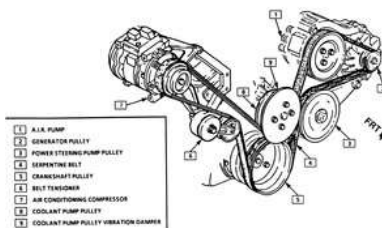


1990-96 Vehicles

1989-91 5.7L (VIN 8 ENGINE)

1. Disconnect the negative battery cable.
2. Remove the air intake duct.
3. Rotate the belt tensioner using a $1/2$ in. breaker bar.
4. Remove the belt from the vehicle.

Fig. 6: View of the serpentine drive belt routing and tensioner — 1989-91 VIN 8 engine



To install:

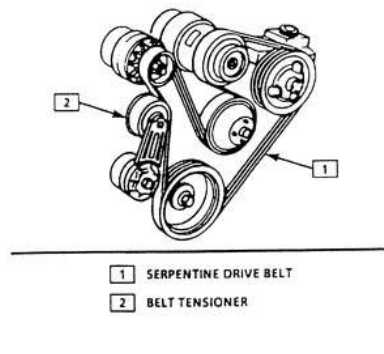
5. Install the belts on the pulleys.
6. Rotate the tensioner, using a $1/2$ in. breaker bar.
7. Install the air intake duct.
8. Connect the negative battery cable.

5.7L (VIN J) ENGINE

1. Disconnect the negative battery cable.
2. Detach the air intake duct from the throttle body extension.
3. Retract the belt tensioner using a $1/2$ in. drive ratchet.
4. Slip the belt rearward off the water pump pulley.

5. Remove the belt from the vehicle.

Fig. 7: Drive belt routing — 1990–95 5.7L (VIN J) engine



To install:

6. Slip the drive belt on the A/C compressor pulley.
7. Retract the tensioner using a $\frac{1}{2}$ in. drive ratchet.
8. Route the belt over the alternator, crankshaft, power steering pulleys, and behind the water pump pulley.
9. Check to see if the belt is in all grooves. Pull the belt forward to the water pump pulley.
10. Release the drive belt tensioner.
11. Install the air cleaner intake duct assembly.
12. Connect the negative battery cable.

5.7L (VIN P AND 5) ENGINES

1. Examine the belt length scale on the drive belt tensioner for proper installed length. If the length is not correct, install a new drive belt.
2. Disconnect the negative battery cable.
3. Lift the drive belt tensioner pulley upward (clockwise) using a socket and a handle on the tensioner pulley bolt.
4. Remove the drive belt.
5. Clean the drive belt surfaces.

Fig. 8: Serpentine drive belt routing — 1992–95 5.7L (VIN P) engines

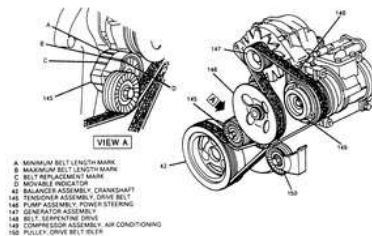
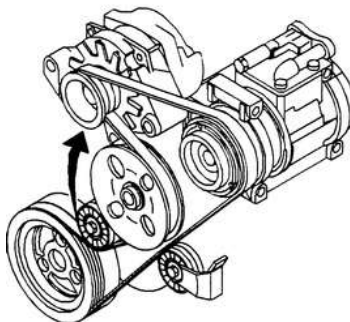


Fig. 9: Drive belt routing and tensioner rotation direction — 1996 5.7L (VIN P & 5) engines



To install:

6. Lift the drive belt tensioner pulley upward.
7. Install the drive belt under the tensioner pulley. Use a socket and a handle on the tensioner pulley bolt. Make sure you align the drive belt into the proper grooves on the drive belt pulleys.

8. Connect the negative battery cable.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

NOTE: The 5.7L (VIN J) engines uses a Direct Ignition system which uses an ignition coil in place of a distributor. The 5.7L (VIN 8) engine uses a conventional High Energy Ignition (HEI) distributor. The 5.7L (VIN P & 5) engines are equipped with a distributor that is mounted on the front of the camshaft.

5.7L (VIN 8) Engines

1. Disconnect the negative battery cable.
2. Remove the air cleaner cover and/or intake manifold plenum extension, as necessary.
3. Remove the distributor shield.

Fig. 1: Unfasten the plenum extension Torx® retaining screws



Fig. 2: Remove the plenum extension for access to the distributor cap

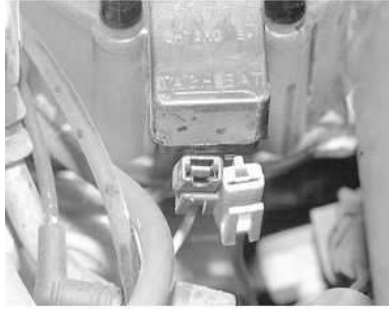


Fig. 3: Remove the distributor shield by pulling it up, off the spark plug wires



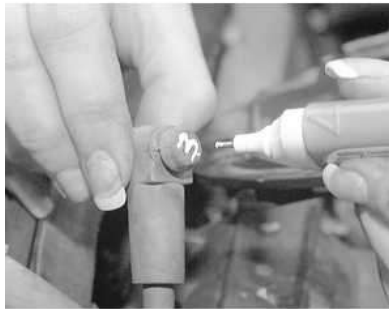
4. Disconnect the ignition switch battery feed wire and tachometer lead (if equipped) from the distributor cap.

Fig. 4: Unplug the ignition switch battery feed wire and tachometer lead from the cap



5. Tag and unplug the coil connectors from the cap. Do NOT use a screwdriver, or equivalent tool to release the locking tabs.

Fig. 6: If you are replacing the cap with a new one, label and disconnect the spark plug wires from the distributor cap



6. Remove the distributor cap by using a screwdriver to turn the 4 retaining latches counterclockwise, or unfastening the 4 retaining screws, depending upon the vehicle. Move the distributor cap out of the way.

Fig. 7: On this 1986 vehicle, use a ratchet with a long extension to loosen the distributor cap bolts



Fig. 8: Carefully lift the distributor cap up, and remove it from the vehicle



NOTE: The rotor is secured with 2 screws and has a slot which fits over a square lug on the advance weight base, so that the rotor can be installed in only one position.

7. Remove the 2 retaining screws, then lift the rotor from the distributor.

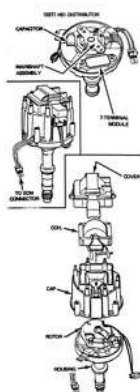
cardiagn.com



Fig. 10: . . . then pull the rotor straight up to remove it from the distributor



Fig. 11: Exploded view of the HEI distributor cap and rotor, and related components — 5.7L (VIN 8) engines



To install:

8. Place the rotor on the distributor; it can only be installed in one position. Install the 2 rotor retaining screws.
9. Position the distributor cap over the distributor and secure the 4 latches by turning them clockwise with a screwdriver, or installing the 4 retaining screws, as applicable.
10. If removed, attach the spark plug wires, as tagged during removal, then install and secure the wire retainers.
11. Attach the coil connectors to the cap, as tagged during removal. Make sure the locking tabs are fastened securely.
12. Connect the tachometer lead (if equipped) and the ignition switch battery feed wire to the distributor cap.
13. Install the distributor shield.
14. Install the air cleaner cover and/or intake manifold plenum extension, as necessary.
15. Connect the negative battery cable.

5.7L (VIN P & 5) Engines

NOTE: Removal of the distributor cap and rotor on these vehicles requires the use of two special tools; an ignition distributor cap socket (tool J 39997 or equivalent), and ignition distributor rotor socket (tool J 39998 or equivalent).

WARNING

The distributor and timing disc assembly must be kept clean and free of oil, dirt and engine coolant. Any contamination may cause engine misfire and/or distributor damage. Do not disassemble the distributor until all debris has been cleaned from the distributor and surrounding area.

1. Disconnect the negative battery cable.
2. Remove the water pump and crankshaft balancer assembly, as outlined in Section 3 of this manual.
3. Tag and disconnect the spark plug wires from the distributor assembly.
4. Unplug the 4-terminal PCM connector and vacuum harness from the distributor. Plug or cap the vacuum line to prevent any debris from entering.
5. Use a suitable distributor cap socket, tool J 39997 or equivalent, to remove the distributor cap bolts/screws. Remove the distributor cap.
6. Use a suitable distributor rotor socket, tool J 39998 or equivalent bit, to unfasten the retaining bolts/screws, then remove the rotor.

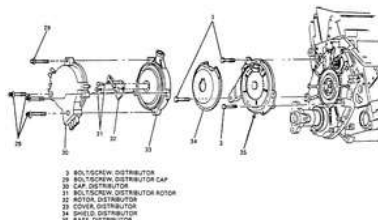
7. If necessary, remove the distributor cover and shield at this time.

WARNING

Do NOT touch the timing disk sensor or distributor base.

8. Inspect the distributor base and timing disk for damage, corrosion, or plastic particles. If you find any, the entire distributor assembly must be replaced.
9. The distributor is driven by a camshaft pin that mates to one slot in the distributor driveshaft. Align the distributor driveshaft with the distributor base timing mark.
10. Rotate the engine crankshaft until number one piston is at Top Dead Center (TDC) with the intake and exhaust valves closed. The camshaft pin will be in the 9 o'clock position.

Fig. 12: Exploded view of the distributor cap, cover, rotor and base assembly — 5.7L (VIN P & 5) engines



To install:

11. If removed, install the distributor shield and cover.
12. Position the rotor, then secure with the retaining screws/bolts. Tighten the screws to 6 inch lbs. (0.7 Nm).
13. Place the distributor cap on the distributor assembly and install the retaining bolts/screws. Tighten the cap bolts/screws to 25 inch lbs. (2.8 Nm).
14. Unplug and connect the vacuum harness to the distributor.
15. Attach the 4-terminal PCM connector to the distributor. Connect the spark plugs to the distributor, as tagged during removal.
16. Install the crankshaft balancer and water pump, as outlined in Section 3 of this manual.
17. Connect the negative battery cable.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

This system is designed to limit gasoline vapor, which normally escapes from the fuel tank and intake manifold, from discharging into the atmosphere. Vapor absorption is accomplished through the use of the charcoal canister, which stores the vapors until they can be removed and burned in the combustion process.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

The evaporative canister does not require periodic service. Check the hoses and canister for cracks and/or other damage. For canister removal and installation procedures, please refer to Section 4 of this manual.

Fig. 1: Location of the evaporative canister — 1984–90 vehicles

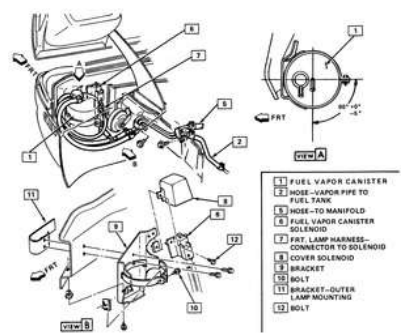
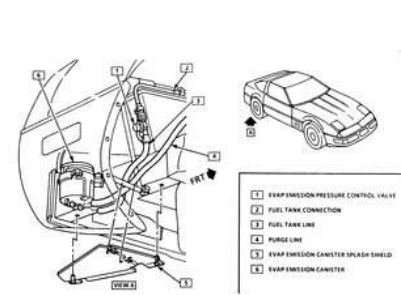


Fig. 2: On 1991–96 vehicles, the canister is located underneath the vehicle, behind the passenger's rear wheel



1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

The fuel filter is located in the fuel feed line attached to the frame rail, at the rear of the vehicle. The fuel filter is a threaded fitting type.

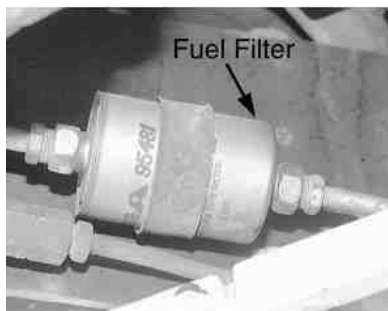
CAUTION

Observe all applicable safety precautions when working around fuel. Whenever servicing the fuel system, always work in a well ventilated area. Do not allow fuel spray or vapors to come in contact with a spark or open flame. Keep a dry chemical fire extinguisher near the work area. Always keep fuel in a container specifically designed for fuel storage; also, always properly seal fuel containers to avoid the possibility of fire or explosion. To reduce the risk of fire and personal injury, it is necessary to relieve the fuel system pressure before servicing any fuel system component. If this procedure is not performed, fuel may be sprayed out of the connection under pressure. Cover fuel hose connections with a shop towel before disconnecting to catch any residual fuel that may still be in the line. Always keep a dry chemical (Class B) fire extinguisher near the work area.

[1984-92 Vehicles](#)

1. Properly relieve the fuel system pressure, as outlined in Section 5 of this manual.
2. If not already done, disconnect the negative battery cable.
3. Raise and safely support the vehicle.

Fig. 1: Fuel filter location and mounting — 1986 vehicle shown, other years similar



4. Unfasten the fuel filter attaching screws, then remove the fuel filter shield.
5. Thoroughly clean the area around all in-line fuel filter connections and surrounding areas before disconnecting to avoid possible contamination of the fuel system.
6. Using a back-up wrench to avoid warping the lines, disconnect the fuel feed pipes from the filter.

Fig. 2: ALWAYS use a back-up wrench when loosening the fuel feed pipes from the filter

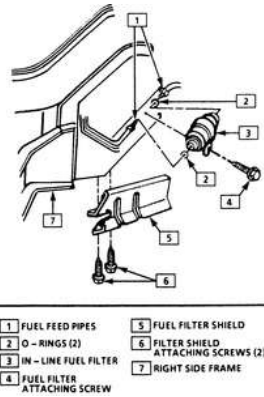


7. Unfasten the fuel filter attaching screw and remove the fuel filter from the vehicle. Check the fuel pipe O-rings for cuts, nicks swelling or distortion. Replace, if necessary.

Fig. 3: Remove the fuel filter attaching bolt, then remove the fuel filter from the vehicle



Fig. 4: Exploded view of the in-line fuel filter assembly — 1984–92 vehicles



To install:

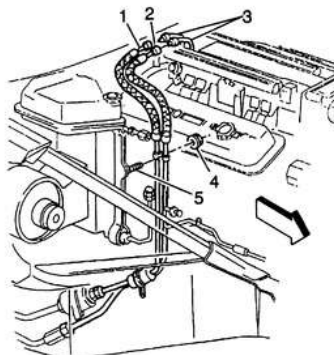
8. Loosely install the new fuel filter and secure with the attaching screw.
9. Attach the fuel feed pipes to the fuel filter. Using back-up wrench, tighten the fitting to 20–22 ft. lbs. (27–30 Nm).
10. Tighten the fuel filter attaching screw to 53 inch lbs. (6 Nm).
11. Install the fuel filter shield and secure with the attaching screw.
12. Carefully lower the vehicle.
13. Add fuel, if necessary, and tighten the fuel filler cap.
14. Connect the negative battery cable. Turn the ignition switch **ON** for 2 seconds, then turn **OFF** for 5 seconds. Turn the ignition switch to the **ON** position again, and check for fuel leaks.

1993–96 Vehicles

NOTE: There is no service interval for replacing the fuel filter. Only replace a filter that is restricted. Check the fuel tank internally and clean it a restricted fuel filter is found. Fuel tank removal and installation is outlined in Section 5 of this manual.

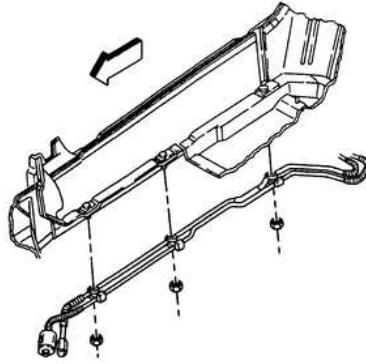
1. Properly relieve the fuel system pressure, as outlined in Section 5 of this manual.
2. If not already done, disconnect the negative battery cable.
3. Remove the fuel pipe retaining nut from the A/C evaporator and blower module stud.

Fig. 5: Unfasten the fuel line nut (4) from the evaporator and blower module stud (5)



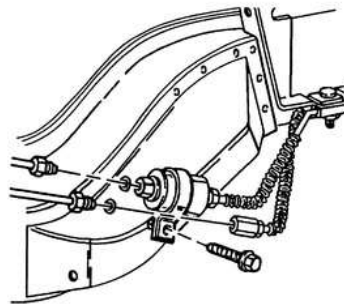
4. Raise and safely support the vehicle.
5. On convertibles, remove the lower underbody brace bolts and nuts, then remove the underbody brace.

Fig. 6: On convertibles, you must remove the retainers and the underbody brace



6. Unfasten the chassis fuel pipe retaining nuts.
7. Thoroughly clean the area around all in-line fuel filter connections and surrounding areas before disconnecting to avoid possible contamination of the fuel system.
8. Using a back-up wrench to avoid warping the lines, disconnect the fuel inlet pipe from the filter.
9. Reposition the inlet pipe for access to the fuel filter. Drain any remaining fuel into an approved container.
10. Unfasten the filter attaching screw and the fuel filter bracket.

Fig. 7: Exploded view of the fuel filter attachment



11. Hold the pipe outlet nut stationary, then turn the fuel filter to remove it.
12. Check the fuel pipe O-rings for cuts, nicks, swelling or distortion and replace the O-rings as necessary.

To install:

13. Loosely install the new fuel filter on the outlet side fuel pipe.
14. Install the inlet nut to the filter and tighten to 20 ft. lbs. (27 Nm).
15. Install the fuel filter bracket and secure with the retaining screw. Tighten the screw to 53 inch lbs. (6 Nm).
16. Install the chassis fuel pipe retaining nuts and tighten to 40 inch lbs. (4.5 Nm).
17. For convertibles, install the lower underbody brace and secure with the retaining bolts and nuts, then tighten the nuts to 20 ft. lbs. (27 Nm). and the underbody brace bolt to 46 ft. lbs. (53 Nm).
18. Carefully lower the vehicle.
19. Install the fuel feed retaining nut to the A/C evaporator and blower motor. Tighten the fuel pump retaining nut to 40 inch lbs. (4.5 Nm).
20. Add fuel, if necessary, and tighten the fuel filler cap.
21. Connect the negative battery cable. Turn the ignition switch **ON** for 2 seconds, then turn **OFF** for 5 seconds. Turn the ignition switch to the **ON** position again, and check for fuel leaks.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

Upper and lower radiator hoses along with the heater hoses should be checked for deterioration, leaks and loose hose clamps at least every 30,000 miles (50,000 km). It is also wise to check the hoses periodically in early spring and at the beginning of the fall or winter when you are performing other maintenance. A quick visual inspection could discover a weakened hose which might have left you stranded if it had remained unrepaired.

Whenever you are checking the hoses, make sure the engine and cooling system are cold. Visually inspect for cracking, rotting or collapsed hoses, and replace as necessary. Run your hand along the length of the hose. If a weak or swollen spot is noted when squeezing the hose wall, the hose should be replaced.

Fig. 1: The cracks developing along this hose are a result of age-related hardening

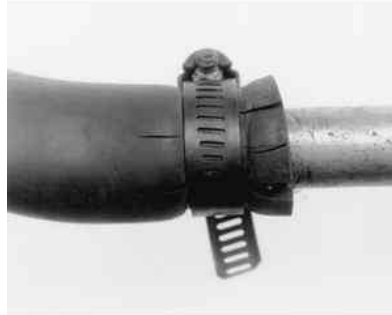


Fig. 2: A hose clamp that is too tight can cause older hoses to separate and tear on either side of the clamp



Fig. 3: A soft spongy hose (identifiable by the swollen section) will eventually burst and should be replaced



Fig. 4: Hoses are likely to deteriorate from the inside if the cooling system is not periodically flushed



1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

- 1. Remove the radiator pressure cap.

CAUTION

Never remove the pressure cap while the engine is running, or personal injury from scalding hot coolant or steam may result. If possible, wait until the engine has cooled to remove the pressure cap. If this is not possible, wrap a thick cloth around the pressure cap and turn it slowly to the stop. Step back while the pressure is released from the cooling system. When you are sure all the pressure has been released, use the cloth to turn and remove the cap.

- 2. Position a clean container under the radiator and/or engine drain cock or plug, then open the drain and allow the cooling system to drain to an appropriate level. For some upper hoses, only a little coolant must be drained. To remove hoses positioned lower on the engine, such as a lower radiator hose, the entire cooling system must be emptied.

CAUTION

When draining coolant, keep in mind that cats and dogs are attracted by ethylene glycol antifreeze, and are quite likely to drink any that is left in an uncovered container or in puddles on the ground. This will prove fatal in sufficient quantity. Always drain coolant into a sealable container. Coolant may be reused unless it is contaminated or several years old.

- 3. Loosen the hose clamps at each end of the hose requiring replacement. Clamps are usually either of the spring tension type (which require pliers to squeeze the tabs and loosen) or of the screw tension type (which require screw or hex drivers to loosen). Pull the clamps back on the hose away from the connection.
- 4. Twist, pull and slide the hose off the fitting, taking care not to damage the neck of the component from which the hose is being removed.

NOTE: If the hose is stuck at the connection, do not try to insert a screwdriver or other sharp tool under the hose end in an effort to free it, as the connection and/or hose may become damaged. Heater connections especially may be easily damaged by such a procedure. If the hose is to be replaced, use a single-edged razor blade to make a slice along the portion of the hose which is stuck on the connection, perpendicular to the end of the hose. Do not cut deep so as to prevent damaging the connection. The hose can then be peeled from the connection and discarded.

- 5. Clean both hose mounting connections. Inspect the condition of the hose clamps and replace them, if necessary.

Fig. 1: Heater hose routing — 5.7L (VIN 8) engine

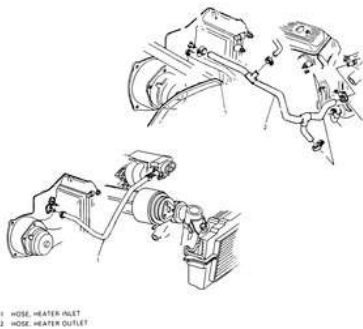


Fig. 2: Heater hose locations and routing — 5.7L (VIN J) engine

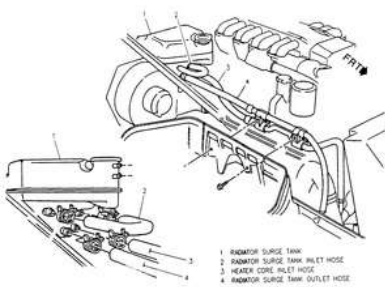
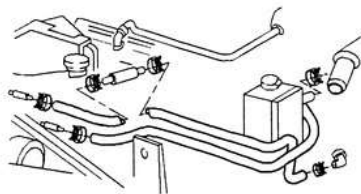


Fig. 3: Heater hose attachments — 1996 5.7L (VIN P & 5) engines



To install:

6. Dip the ends of the new hose into clean engine coolant to ease installation.
7. Slide the clamps over the replacement hose, then slide the hose ends over the connections into position.
8. Position and secure the clamps at least $\frac{1}{4}$ in. (6.35mm) from the ends of the hose. Make sure they are located beyond the raised bead of the connector.
9. Close the radiator or engine drains and properly refill the cooling system with the clean drained engine coolant or a suitable mixture of ethylene glycol coolant and water.
10. If available, install a pressure tester and check for leaks. If a pressure tester is not available, run the engine until normal operating temperature is reached (allowing the system to naturally pressurize), then check for leaks.

CAUTION

If you are checking for leaks with the system at normal operating temperature, BE EXTREMELY CAREFUL not to touch any moving or hot engine parts. Once temperature has been reached, shut the engine OFF, and check for leaks around the hose fittings and connections which were removed earlier.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

Idle speed and mixture adjustments are factory set. No adjustment is possible. If a problem exists with the vehicle's idle speed or mixture, refer to Section 4 for testing the electronic engine controls and system.

GASOLINE ENGINE TUNE-UP SPECIFICATIONS													
Year	Engine Cyls	Engine Liter (L)	Spark Plug Gap (in.)	Ignition Timing (Deg.)		Fuel Pump (psi)	Idle Speed (rpm)		Valve Clearance	In	Out	In	Out
				LT	BT		LT	BT					
1984	8	5.7 (3.705)	0.025	—	—	8-13	450	450-5	HYD	HYD	—	—	—
1985	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1986	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1987	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1988	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1989	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1990	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1991	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1992	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1993	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1994	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1995	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1996	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1997	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1998	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
1999	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2000	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2001	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2002	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2003	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2004	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2005	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2006	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2007	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2008	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2009	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2010	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2011	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2012	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2013	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2014	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2015	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2016	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2017	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2018	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2019	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2020	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2021	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2022	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2023	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2024	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2025	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2026	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2027	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2028	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2029	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—
2030	8	5.7 (3.705)	0.025	—	—	41-47	450	450-5	HYD	HYD	—	—	—

NOTES: The Vehicle Emission Control Information Label shows vehicle specifications change from during production. The label should be used 2 days after first drive in the street.

1. Refer to the Vehicle Emission Control Information Label.

2. In Blue.

3. Minimum idle speed specification shown. Idle speed is usually a non-adjustable specification controlled by the ECM.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

Ignition timing is the measurement, in degrees of crankshaft rotation, of the point at which the spark plugs fire in each of the cylinders. It is measured in degrees before or after Top Dead Center (TDC) of the compression stroke.

Because it takes a fraction of a second for the spark plug to ignite the mixture in the cylinder, the spark plug must fire a little before the piston reaches TDC. Otherwise, the mixture will not be completely ignited as the piston passes TDC and the full power of the explosion will not be used by the engine.

The timing measurement is given in degrees of crankshaft rotation before the piston reaches TDC (BTDC). If the setting for the ignition timing is 5° BTDC, the spark plug must fire 5° before each piston reaches TDC. This only holds true, however, when the engine is at idle speed.

As the engine speed increases, the pistons go faster. The spark plugs have to ignite the fuel even sooner if it is to be completely ignited when the piston reaches TDC.

If the ignition is set too far advanced (BTDC), the ignition and expansion of the fuel in the cylinder will occur too soon and try to force the piston down while it is still traveling up. This causes engine ping. If the ignition spark is set too far retarded, after TDC (ATDC), the piston will have already passed TDC and started on its way down when the fuel is ignited. This will cause the piston to be forced down for only a portion of its travel, resulting in poor engine performance and lack of power.

There are two basic types of timing lights available. The first type of light operates from the car's battery. Two alligator clips connect to the battery terminals, while a third wire connects to the spark plug with an adapter or to the spark plug wire with an inductive pickup. This type of light is more expensive, but the xenon bulb provides a nice bright flash which can even be seen in sunlight. The second type replaces the battery source with 110-volt house current. Some timing lights have other functions built into them, such as dwell meters, tachometers, or remote starting switches. These are convenient, in that they reduce the tangle of wires under the hood, but may duplicate the functions of tools you already have.

On vehicles with electronic ignition, you should use a timing light with an inductive pickup. This pickup simply clamps around the spark plug wire, eliminating the adapter. It is not susceptible to crossfiring or false triggering, which may occur with a conventional light due to the greater voltages produced by these systems.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

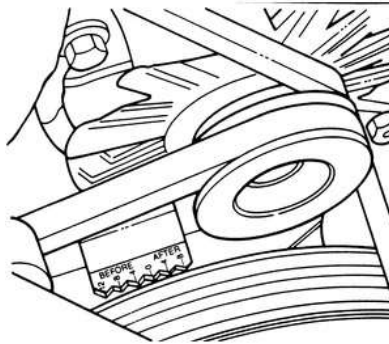
Fuel Delivery: FI | Fuel: GAS

[5.7L \(VIN 8\) Engine](#)

NOTE: On vehicles with Electronic Spark Timing (EST), it will be necessary to detach the EST connector at the distributor to cause the engine to operate in the bypass timing mode.

1. Refer to the Vehicle Emission Control Information (VECI) label located on the radiator support panel. Follow all directions given on the label.
2. With the ignition **OFF**, connect the pick-up lead of a suitable timing light to the No. 1 spark plug. Use jumper lead between the wire and plug, or an inductive type pick-up. Do NOT pierce the wire or attempt to insert a wire between the boot and the wire. Connect the timing light power leads according to the manufacturer's directions.
3. Start the engine, then aim the timing light at the timing mark (shown in the accompanying illustration). The line on the balancer or pulley will line up at the timing mark. If a change is necessary, loosen the distributor hold-down clamp bolt at the base of the distributor. While observing the mark with the timing light, slightly rotate the distributor until the line indicates the correct timing. Tighten the hold-down bolt and re-check the timing.

Fig. 1: Typical timing marks



4. Turn the engine **OFF**, and remove the timing light. If removed, reconnect the No. 1 spark plug wire.

[5.7L \(VIN J, P, and 5\) Engines](#)

The base ignition timing on these vehicles is preset when the engine is manufactured. No adjustment is possible. Timing advance and retard are accomplished through the ECM/PCM with ignition control and knock sensor systems.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

[1990-91 Vehicles](#)

The CHANGE OIL monitor light is on the left side of the instrument cluster. When changing the oil, reset the engine oil life monitor whether the CHANGE OIL light came on or not. Reset the monitor as follows:

1. Turn the ignition key to the **ON** position, but do not start the engine.
2. Press the ENG MET button on the trip monitor and release. Press the button again within 5 seconds.
3. Within 5 seconds of pressing the button the second time, press and hold the RANGE button on the trip monitor. The CHANGE OIL light will flash.
4. Hold the RANGE button until the CHANGE OIL light stops flashing and extinguishes. The monitor is reset at this point. Repeat this procedure if the light does not go out.

[1992-96 Vehicles](#)

1. Turn the ignition key to the **ON** position, but do not start the engine.
2. Press the ENG MET button on the trip monitor and release. Press the button again within 5 seconds.
3. Within 5 seconds of pressing the button the second time, press and hold the GAUGES button on the trip monitor. The CHANGE OIL light will flash.
4. Hold the GAUGES button until the CHANGE OIL light stops flashing and extinguishes. The monitor is reset at this point. Repeat this procedure if the light does not go out.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

Except 5.7L (VIN J) Engines

- 1. Disconnect the negative battery cable.

Fig. 1: Typical Positive Crankcase Ventilation (PCV) system flow — except 5.7L (VIN J) engine

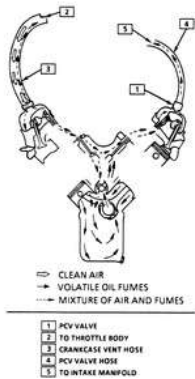
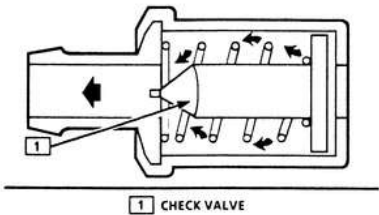


Fig. 2: Cross-sectional view of a PCV valve



- 2. Unfasten the hose clamps, if necessary, then disconnect the hoses from the PCV valve.
- 3. Remove the PCV valve from the grommet in the valve cover.

Fig. 3: Sometimes, it's easier to pull the PCV valve out of the grommet in the rocker arm cover first

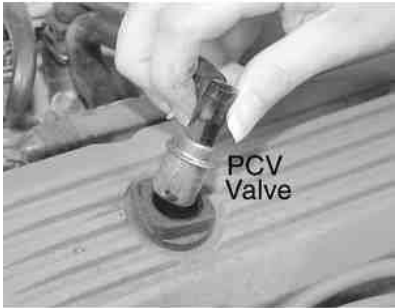


Fig. 4: . . . then pull the valve from the hose . . .



Fig. 5: . . . and remove it from the vehicle



To install:

4. Insert the PCV valve into the grommet in the valve cover.
5. Connect the hoses to the PCV valve, then install the hose clamps, if equipped.
6. Connect the negative battery cable.

5.7L (VIN J) Engine

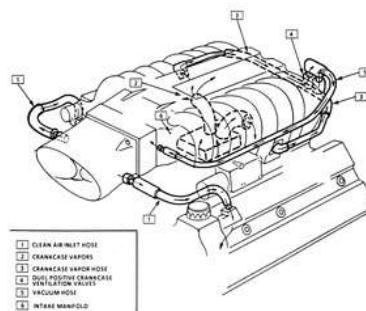
NOTE: This engine is equipped with dual PCV valves.

1. Disconnect the negative battery cable.
2. Unplug the PCV molded vacuum hose.

NOTE: Make sure to note the position of the PCV valves, because they are not interchangeable.

3. Remove the PCV valve(s).

Fig. 6: Schematic of the PCV air flow and valve location — 5.7L (VIN J) engine



To install:

4. Place the PCV valve(s) into the proper location.
5. Attach the molded vacuum hose to the valve(s).
6. Connect the negative battery cable.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS



Proper maintenance and tune-up is the key to long and trouble-free vehicle life, and the work can yield its own rewards. Studies have shown that a properly tuned and maintained vehicle can achieve better gas mileage than an out-of-tune vehicle. As a conscientious owner and driver, set aside a Saturday morning, say once a month, to check or replace items which could cause major problems later. Keep your own personal log to jot down which services you performed, how much the parts cost you, the date, and the exact odometer reading at the time. Keep all receipts for such items as engine oil and filters, so that they may be referred to in case of related problems or to determine operating expenses. As a do-it-yourselfer, these receipts are the only proof you have that the required maintenance was performed. In the event of a warranty problem, these receipts will be invaluable.

The literature provided with your vehicle when it was originally delivered includes the factory recommended maintenance schedule. If you no longer have this literature, replacement copies are usually available from the dealer. A maintenance schedule is provided later in this section, in case you do not have the factory literature.

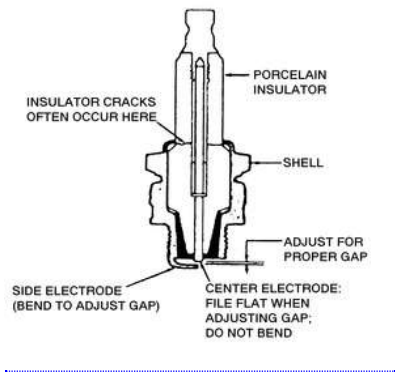
1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

A typical spark plug consists of a metal shell surrounding a ceramic insulator. A metal electrode extends downward through the center of the insulator and protrudes a small distance. Located at the end of the plug and attached to the side of the outer metal shell is the side electrode. The side electrode bends in at a 90(angle so that its tip is just past and parallel to the tip of the center electrode. The distance between these two electrodes (measured in thousandths of an inch or hundredths of a millimeter) is called the spark plug gap.

The spark plug does not produce a spark but instead provides a gap across which the current can arc. The coil produces anywhere from 20,000 to 50,000 volts (depending on the type and application) which travels through the wires to the spark plugs. The current passes along the center electrode and jumps the gap to the side electrode, and in doing so, ignites the air/fuel mixture in the combustion chamber.

Fig. 4: Cross-section of a spark plug



1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

Check the plugs for deposits and wear. If they are not going to be replaced, clean the plugs thoroughly. Remember that any kind of deposit will decrease the efficiency of the plug. Plugs can be cleaned on a spark plug cleaning machine, which can sometimes be found in service stations, or you can do an acceptable job of cleaning with a stiff brush. If the plugs are cleaned, the electrodes must be filed flat. Use an ignition points file, not an emery board or the like, which will leave deposits. The electrodes must be filed perfectly flat with sharp edges; rounded edges reduce the spark plug voltage by as much as 50%.

Check spark plug gap before installation. The ground electrode (the L-shaped one connected to the body of the plug) must be parallel to the center electrode and the specified size wire gauge (please refer to the Tune-Up Specifications chart for details) must pass between the electrodes with a slight drag.

NOTE: NEVER adjust the gap on a used platinum type spark plug.

Always check the gap on new plugs as they are not always set correctly at the factory. Do not use a flat feeler gauge when measuring the gap on a used plug, because the reading may be inaccurate. A round-wire type gapping tool is the best way to check the gap. The correct gauge should pass through the electrode gap with a slight drag. If you're in doubt, try one size smaller and one larger. The smaller gauge should go through easily, while the larger one shouldn't go through at all. Wire gapping tools usually have a bending tool attached. Use that to adjust the side electrode until the proper distance is obtained. Absolutely never attempt to bend the center electrode. Also, be careful not to bend the side electrode too far or too often as it may weaken and break off within the engine, requiring removal of the cylinder head to retrieve it.

Fig. 1: Inspect the spark plug to determine engine running conditions



Fig. 2: A variety of tools and gauges are needed for spark plug service



Fig. 3: Checking the spark plug gap with a feeler gauge

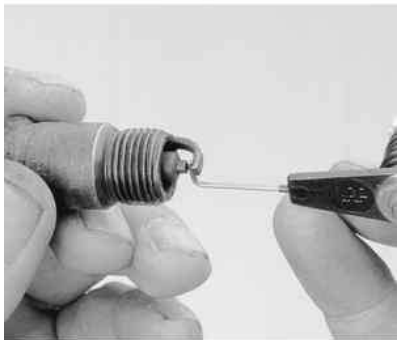
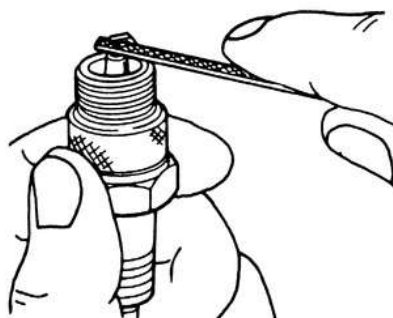


Fig. 4: Adjusting the spark plug gap



Fig. 5: If the standard plug is in good condition, the electrode may be filed flat — WARNING: do not file platinum plugs



1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7

Fuel Delivery: FI | Fuel: GAS

A set of spark plugs usually requires replacement after about 20,000–30,000 miles (32,000–48,000 km), depending on your style of driving. In normal operation plug gap increases about 0.001 in. (0.025mm) for every 2500 miles (4000 km). As the gap increases, the plug's voltage requirement also increases. It requires a greater voltage to jump the wider gap and about two to three times as much voltage to fire the plug at high speeds than at idle. The improved air/fuel ratio control of modern fuel injection combined with the higher voltage output of modern ignition systems will often allow an engine to run significantly longer on a set of standard spark plugs, but keep in mind that efficiency will drop as the gap widens (along with fuel economy and power).

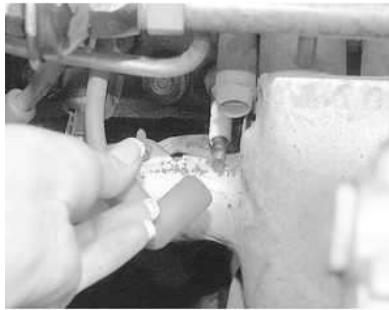
When you're removing spark plugs, work on one at a time. Don't start by removing the plug wires all at once, because, unless you number them, they may become mixed up. Take a minute before you begin and number the wires with tape.

WARNING

The engines covered by this manual are equipped with aluminum cylinder heads. Always allow the engine to thoroughly cool before removing the spark plugs, or the threads in the cylinder head may be damaged.

1. Disconnect the negative battery cable, and if the vehicle has been run recently, allow the engine to thoroughly cool.
2. Carefully twist the spark plug wire boot to loosen it, then pull upward and remove the boot from the plug. Be sure to pull on the boot and not on the wire, otherwise the connector located inside the boot may become separated.
3. Using compressed air, blow any water or debris from the spark plug well to assure that no harmful contaminants are allowed to enter the combustion chamber when the spark plug is removed. If compressed air is not available, use a rag or a brush to clean the area.

Fig. 1: Twist the spark plug boot to unseat it, then unplug the wire from the spark plug, pulling on the boot only



NOTE: Remove the spark plugs when the engine is cold, to prevent damage to the threads. If removal of the plugs is difficult, apply a few drops of penetrating oil or silicone spray to the area around the base of the plug, and allow it a few minutes to work.

4. Using a spark plug socket that is equipped with a rubber insert to properly hold the plug, turn the spark plug counterclockwise to loosen and remove the spark plug from the bore.

Fig. 2: Use a ratchet and extension with a $\frac{3}{8}$ in. spark plug socket to loosen the spark plug



Fig. 3: When the spark plug is completely loosened, pull it out carefully and inspect its condition



WARNING

Be sure not to use a flexible extension on the socket. Use of a flexible extension may allow a shear force to be applied to the plug. A shear force could break the plug off in the cylinder head, leading to costly and frustrating repairs.

5. Place the spark plugs in a tray labeled by cylinder number to help identify the spark plug and relate any unusual condition with the cylinder involved.

To install:

6. Inspect the spark plug boot for tears or damage. If a damaged boot is found, the spark plug wire must be replaced.
7. Using a wire feeler gauge, check and adjust the spark plug gap. When using a gauge, the proper size should pass between the electrodes with a slight drag. The next larger size should not be able to pass while the next smaller size should pass freely.
8. Carefully thread the plug into the bore by hand. If resistance is felt before the plug is almost completely threaded, back the plug out and begin threading again. In small, hard to reach areas, an old spark plug wire and boot could be used as a threading tool. The boot will hold the plug while you twist the end of the wire and the wire is supple enough to twist before it would allow the plug to crossthread.

WARNING

Do not use the spark plug socket to thread the plugs. Always carefully thread the plug by hand or using an old plug wire to prevent the possibility of crossthreading and damaging the cylinder head bore.

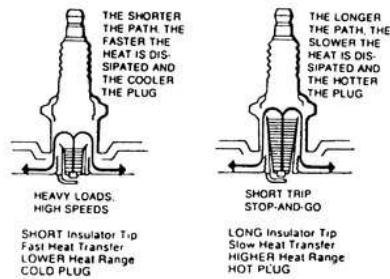
9. Carefully tighten the spark plug. If the plug you are installing is equipped with a crush washer, seat the plug, then tighten about $\frac{1}{4}$ turn to crush the washer. If you are installing a tapered seat plug, tighten the plug to specifications provided by the vehicle or plug manufacturer. Tighten the spark plugs to the following specifications:
 - A. 1984–91 VIN 8 engine: 20 ft. lbs. (27 Nm).
 - B. 1990–95 VIN J engine: 15 ft. lbs. (20 Nm).
 - C. 1992–95 VIN P engine: 11 ft. lbs. (15 Nm).
 - D. 1996 VIN P and 5 engines: 15 ft. lbs. (20 Nm).
10. Apply a small amount of silicone dielectric compound to the end of the spark plug lead or inside the spark plug boot to prevent sticking, then install the boot to the spark plug and push until it clicks into place. The click may be felt or heard, then gently pull back on the boot to assure proper contact.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

Spark plug heat range is the ability of the plug to dissipate heat. The longer the insulator (or the farther it extends into the engine), the hotter the plug will operate; the shorter the insulator (the closer the electrode is to the block's cooling passages) the cooler it will operate. A plug that absorbs little heat and remains too cool will quickly accumulate deposits of oil and carbon since it is not hot enough to burn them off. This leads to plug fouling and consequently to misfiring. A plug that absorbs too much heat will have no deposits but, due to the excessive heat, the electrodes will burn away quickly and might possibly lead to pre-ignition or other ignition problems. Pre-ignition takes place when plug tips get so hot that they glow sufficiently to ignite the air/fuel mixture before the actual spark occurs. This early ignition will usually cause a pinging during low speeds and heavy loads.

Fig. 1: Spark plug heat range



The general rule of thumb for choosing the correct heat range when picking a spark plug is: if most of your driving is long distance, high speed travel, use a colder plug; if most of your driving is stop and go, use a hotter plug. Original equipment plugs are generally a good compromise between the 2 styles and most people never have the need to change their plugs from the factory-recommended heat range.

1990 Chevrolet CORVETTE

Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

When installing new wires, replace them one at a time to avoid mix-ups. If it becomes necessary to remove all of the wires from the distributor cap or coil packs at one time, take the time to label the distributor cap/coil pack towers to denote the cylinder number of the wire for that position. When this is done, incorrect positioning of wires can more easily be avoided. Start by replacing the longest one first. Route the wire over the same path as the original and secure in place.

1. Disconnect the negative battery cable.
2. Note the locations of the spark plug wires, retainers, spark plug and distributor or ignition coil pack.
3. If removing all of the spark plug wires, make sure to label the wires and their corresponding positions on the coil or distributor with the proper cylinder number. This will greatly ease installation, preventing much confusion.
4. Twist the spark plug boot $\frac{1}{2}$ turn in each direction before removing, then pull on the boot to remove the wire from the spark plug. Always pull on the boot, never the wire itself.
5. Twist the spark plug boot $\frac{1}{2}$ turn in each direction, then pull the boot to disconnect the spark plug from the distributor or ignition coil, as applicable. Never pull on the spark plug wire, only the plug boot.
6. Remove the spark plug wire from any retainers, then remove it from the vehicle.

Fig. 1: Spark plug wire routing and cylinder identification — 5.7L (VIN 8) engine

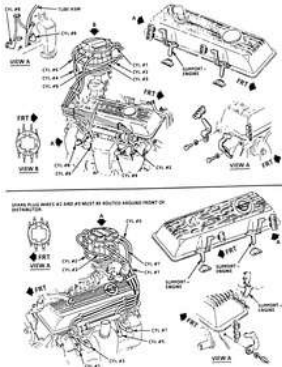


Fig. 2: Spark plug wire routing and cylinder and coil identification — 1990–95 5.7L (VIN J) engine

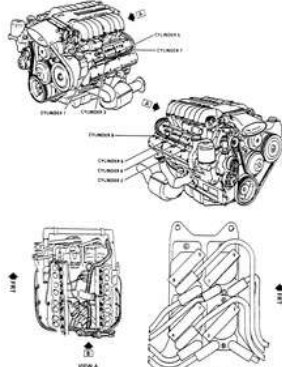


Fig. 3: Spark plug wire routing and cylinder identification — 5.7L (VIN P) engine

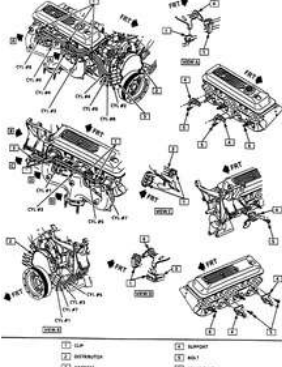
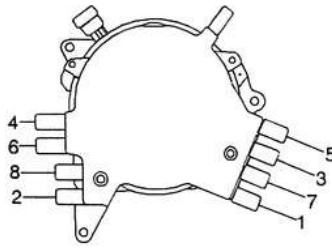


Fig. 4: Distributor cylinder identification — 1996 vehicles



To install:

7. Route the wires in the proper location as noted during removal. The wires must be properly routed; you can refer to the accompanying illustrations for spark plug wire routing and retaining clip location.
8. Apply a small amount of silicone dielectric compound to the spark plug wire boots and ignition coil or distributor towers.
9. Attach the spark plug wire to the to the ignition coil pack or distributor, and spark plug, pushing it on firmly. A click should be felt or heard when the boot is on properly.
10. Check that the boot is properly installed by pushing sideways on the installed boots; they should be stiff with only slight looseness. If the boot feels like it's not on properly, reseal the boot by twisting it $1/2$ turn, pulling the boot off, then reinstalling the boot.
11. Connect the negative battery cable.

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Fig. 1: Checking individual plug wire resistance with a digital ohmmeter



At every tune-up/inspection, visually check the spark plug cables for burns cuts, or breaks in the insulation. Check the boots and the nipples on the distributor cap and/or coil. Replace any damaged wiring.

Every 50,000 miles (80,000 Km) or 60 months, the resistance of the wires should be checked with an ohmmeter. Wires with excessive resistance will cause misfiring, and may make the engine difficult to start in damp weather.

To check resistance, connect one lead of an ohmmeter to each end of the wire. Replace any wire which shows a resistance over 30,000 ohms. Generally speaking, it is preferable that resistance be below 25,000 ohms, but 30,000 ohms must be considered the outer limit of acceptability. It should be remembered that resistance is also a function of length; the longer the wire, the greater the resistance. Thus, if the wires on your car are longer than the factory originals, resistance will be higher, quite possible outside these limits.

Wire length can therefore be used to determine appropriate resistance values:

- 0–15 in. (0–38cm) — 3,000–10,000 ohms
- 15–25 in. (38–64cm) — 4,000–15,000 ohms
- 25–35 in. (64–89cm) — 6,000–20,000 ohms
- Wire over 35 in. (89cm) — 25,000 ohms

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Submodel: | Engine Type: V8 | Liters: 5.7
Fuel Delivery: FI | Fuel: GAS

Common sense and good driving habits will afford maximum tire life. Fast starts, sudden stops and hard cornering are hard on tires and will shorten their useful life span. Make sure that you don't overload the vehicle or run with incorrect pressure in the tires. Both of these practices will increase tread wear.

NOTE: For optimum tire life, keep the tires properly inflated, rotate them often and have the wheel alignment checked periodically.

Inspect your tires frequently. Be especially careful to watch for bubbles in the tread or sidewall, deep cuts or underinflation. Replace any tires with bubbles in the sidewall. If cuts are so deep that they penetrate to the cords, discard the tire. Any cut in the sidewall of a radial tire renders it unsafe. Also look for uneven tread wear patterns that may indicate the front end is out of alignment or that the tires are out of balance.

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If you have invested money in magnesium, aluminum alloy or sport wheels, special precautions should be taken to make sure your investment is not wasted and that your special wheels look good for the life of the vehicle.

Special wheels are easily damaged and/or scratched. Occasionally check the rims for cracking, impact damage or air leaks. If any of these are found, replace the wheel. But in order to prevent this type of damage and the costly replacement of a special wheel, observe the following precautions:

- Use extra care not to damage the wheels during removal, installation, balancing, etc. After removal of the wheels from the vehicle, place them on a mat or other protective surface. If they are to be stored for any length of time, support them on strips of wood. Never store tires and wheels upright; the tread may develop flat spots.
- When driving, watch for hazards; it doesn't take much to crack a wheel.
- When washing, use a mild soap or non-abrasive dish detergent (keeping in mind that detergent tends to remove wax). Avoid cleansers with abrasives or the use of hard brushes. There are many cleaners and polishes for special wheels.
- If possible, remove the wheels during the winter. Salt and sand used for snow removal can severely damage the finish of a wheel.
- Make certain the recommended lug nut torque is never exceeded or the wheel may crack. Never use snow chains on special wheels; severe scratching will occur.

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Submodel: | Engine Type: V8 | Liters: 5.7
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The importance of proper tire inflation cannot be overemphasized. A tire employs air as part of its structure. It is designed around the supporting strength of the air at a specified pressure. For this reason, improper inflation drastically reduces the tire's ability to perform as intended. A tire will lose some air in day-to-day use; having to add a few pounds of air periodically is not necessarily a sign of a leaking tire.

Two items should be a permanent fixture in every glove compartment: an accurate tire pressure gauge and a tread depth gauge. Check the tire pressure (including the spare) regularly with a pocket type gauge. Too often, the gauge on the end of the air hose at your corner garage is not accurate because it suffers too much abuse. Always check tire pressure when the tires are cold, as pressure increases with temperature. If you must move the vehicle to check the tire inflation, do not drive more than a mile before checking. A cold tire is generally one that has not been driven for more than three hours.

Fig. 1: Tires should be checked frequently for any sign of puncture or damage



Fig. 2: Tires with deep cuts, or cuts which bulge, should be replaced immediately



Fig. 3: Examples of inflation-related tire wear patterns

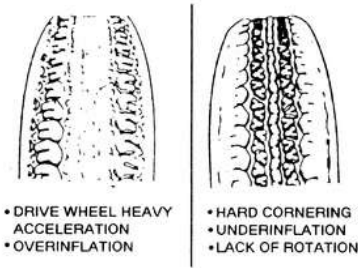


Fig. 4: Radial tires have a characteristic sidewall bulge; don't try to measure pressure by looking at the tire. Use a quality air pressure gauge

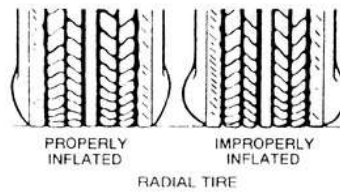


Fig. 5: Common tire wear patterns and causes

CONDITION	SHOULDER WEAR (UNDER INFLATION)	SHOULDER WEAR (OVER INFLATION)	CRACKED TREADS (OLD AGE)	WEAR ON ONE SIDE (STEERING)	FEATHERED EDGE (STEERING)	BRUISED SPOTS (HITTING CURB)	SCALLOPED WEAR (BRAKING)
EFFECT	Worn edges on both sides of the tread	Worn edges on both sides of the tread	Cracks in the tread surface	One side of the tread is worn more than the other	The edges of the tread are worn more than the center	Small, irregular spots of wear	Wavy, scalloped wear across the tread
CAUSE	UNDER INFLATION OR EXCESSIVE SPEED	OVER INFLATION	OLD AGE	EXCESSIVE CAMBER	EXCESSIVE RIDE	IMPACT	LOCK UP BRAKING OR WORN OR OILY DRUMS
CORRECTION	ADJUST PRESSURE TO SPECIFICATION WHEN HOT AND COLD	ADJUST PRESSURE TO SPECIFICATION WHEN HOT AND COLD	REPLACE TIRES	ADJUST CAMBER TO SPECIFICATIONS	ADJUST RIDE TO SPECIFICATIONS	REPAIR OR REPLACE DAMAGED WHEELS	ADJUST BRAKING

A plate or sticker is normally provided somewhere in the vehicle (door post, hood, tailgate or trunk lid) which shows the proper pressure for the tires. Never counteract excessive pressure build-up by bleeding off air pressure (letting some air out). This will cause the tire to run hotter and wear quicker.

CAUTION

Never exceed the maximum tire pressure embossed on the tire! This is the pressure to be used when the tire is at maximum loading, but it is rarely the correct pressure for everyday driving. Consult the owner's manual or the tire pressure sticker for the correct tire pressure.

Once you've maintained the correct tire pressures for several weeks, you'll be familiar with the vehicle's braking and handling personality. Slight adjustments in tire pressures can fine-tune these characteristics, but never change the cold pressure specification by more than 2 psi. A slightly softer tire pressure will give a softer ride but also yield lower fuel mileage. A slightly harder tire will give crisper dry road handling but can cause skidding on wet surfaces. Unless you're fully attuned to the vehicle, stick to the recommended inflation pressures.

All tires made since 1968 have built-in tread wear indicator bars that show up as $\frac{1}{2}$ in. (13mm) wide smooth bands across the tire when $\frac{1}{16}$ in. (1.5mm) of tread remains. The appearance of tread wear indicators means that the tires should be replaced. In fact, many states have laws prohibiting the use of tires with less than this amount of tread.

Fig. 6: Tread wear indicators will appear when the tire is worn

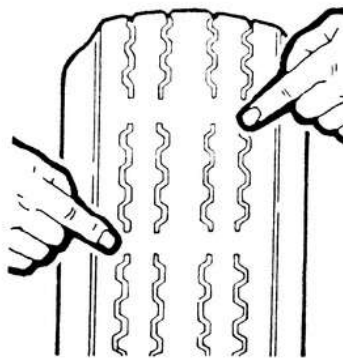
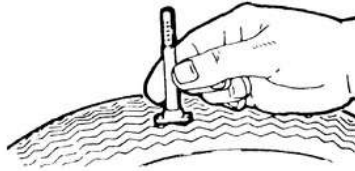
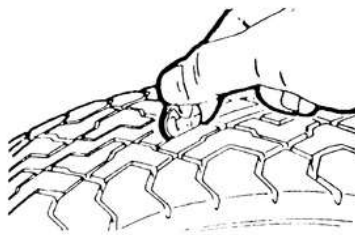


Fig. 7: Accurate tread depth indicators are inexpensive and handy



You can check your own tread depth with an inexpensive gauge or by using a Lincoln head penny. Slip the Lincoln penny (with Lincoln's head upside-down) into several tread grooves. If you can see the top of Lincoln's head in 2 adjacent grooves, the tire has less than $\frac{1}{16}$ in. (1.5mm) tread left and should be replaced. You can measure snow tires in the same manner by using the "tails" side of the Lincoln penny. If you can see the top of the Lincoln memorial, it's time to replace the snow tire(s).

Fig. 8: A penny works well for a quick check of tread depth



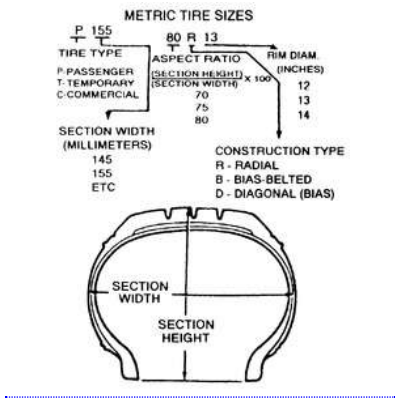
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For maximum satisfaction, tires should be used in sets of four. Mixing of different types (radial, bias-belted, fiberglass belted) must be avoided. In most cases, the vehicle manufacturer has designated a type of tire on which the vehicle will perform best. Your first choice when replacing tires should be to use the same type of tire that the manufacturer recommends.

When radial tires are used, tire sizes and wheel diameters should be selected to maintain ground clearance and tire load capacity equivalent to the original specified tire. Radial tires should always be used in sets of four.

Fig. 1: P-Metric tire coding



CAUTION
Radial tires should never be used on only the front axle.

When selecting tires, pay attention to the original size as marked on the tire. Most tires are described using an industry size code sometimes referred to as P-Metric. This allows the exact identification of the tire specifications, regardless of the manufacturer. If selecting a different tire size or brand, remember to check the installed tire for any sign of interference with the body or suspension while the vehicle is stopping, turning sharply or heavily loaded.

Snow Tires

Good radial tires can produce a big advantage in slippery weather, but in snow, a street radial tire does not have sufficient tread to provide traction and control. The small grooves of a street tire quickly pack with snow and the tire behaves like a billiard ball on a marble floor. The more open, chunky tread of a snow tire will self-clean as the tire turns, providing much better grip on snowy surfaces.

To satisfy municipalities requiring snow tires during weather emergencies, most snow tires carry either an M + S designation after the tire size stamped on the sidewall, or the designation "all-season." In general, no change in tire size is necessary when buying snow tires.

Most manufacturers strongly recommend the use of 4 snow tires on their vehicles for reasons of stability. If snow tires are fitted only to the drive wheels, the opposite end of the vehicle may become very unstable when braking or turning on slippery surfaces. This instability can lead to unpleasant endings if the driver can't counteract the slide in time.

Note that snow tires, whether 2 or 4, will affect vehicle handling in all non-snow situations. The stiffer, heavier snow tires will noticeably change the turning and braking characteristics of the vehicle. Once the snow tires are installed, you must re-learn the behavior of the vehicle and drive accordingly.

NOTE: Consider buying extra wheels on which to mount the snow tires. Once done, the "snow wheels" can be installed and removed as needed. This eliminates the potential damage to tires or wheels from seasonal removal and installation. Even if your vehicle has styled wheels, see if inexpensive steel wheels are available. Although the look of the vehicle will change, the expensive wheels will be protected from salt, curb hits and pothole damage.

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WARNING

Since the front and rear tires on the Corvette ZR-1 are different sizes, they must NOT be rotated.

Tires must be rotated periodically to equalize wear patterns that vary with a tire's position on the vehicle. Tires will also wear in an uneven way as the front steering/suspension system wears to the point where the alignment should be reset.

Rotating the tires will ensure maximum life for the tires as a set, so you will not have to discard a tire early due to wear on only part of the tread. Regular rotation is required to equalize wear.

When rotating "unidirectional tires," make sure that they always roll in the same direction. This means that a tire used on the left side of the vehicle must not be switched to the right side and vice-versa. Such tires should only be rotated front-to-rear or rear-to-front, while always remaining on the same side of the vehicle. These tires are marked on the sidewall as to the direction of rotation; observe the marks when reinstalling the tire(s).

Fig. 1: Compact spare tires must NEVER be used in the rotation pattern

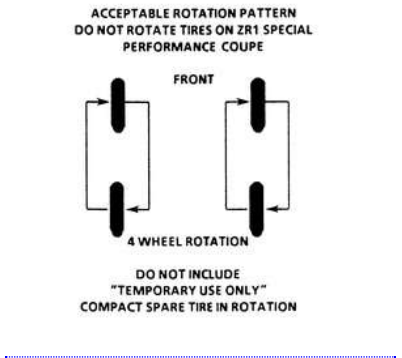


Fig. 2: Unidirectional tires are identifiable by sidewall arrows and/or the word "rotation"



Some styled or "mag" wheels may have different offsets front to rear. In these cases, the rear wheels must not be used up front and vice-versa. Furthermore, if these wheels are equipped with unidirectional tires, they cannot be rotated unless the tire is remounted for the proper direction of rotation.

NOTE: The compact or space-saver spare is strictly for emergency use. It must never be included in the tire rotation or placed on the vehicle for everyday use.

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If they are mounted on wheels, store the tires at proper inflation pressure. All tires should be kept in a cool, dry place. If they are stored in the garage or basement, do not let them stand on a concrete floor; set them on strips of wood, a mat or a large stack of newspaper. Keeping them away from direct moisture is of paramount importance. Tires should not be stored upright, but in a flat position.

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All models utilize a hydraulic valve lifter system to obtain zero lash. No periodic adjustment is necessary. An initial adjustment is required anytime that the lifters are removed or the valve train is disturbed. This procedure is covered in Section 3.

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Fuel Delivery: FI | Fuel: GAS

For maximum effectiveness and longest element life, the windshield and wiper blades should be kept clean. Dirt, tree sap, road tar and so on will cause streaking, smearing and blade deterioration if left on the glass. It is advisable to wash the windshield carefully with a commercial glass cleaner at least once a month. Wipe off the rubber blades with the wet rag afterwards. Do not attempt to move wipers across the windshield by hand; damage to the motor and drive mechanism will result.

To inspect and/or replace the wiper blade elements, place the wiper switch in the **LOW** speed position and the ignition switch in the **ACC** position. When the wiper blades are approximately vertical on the windshield, turn the ignition switch to **OFF**.

Examine the wiper blade elements. If they are found to be cracked, broken or torn, they should be replaced immediately. Replacement intervals will vary with usage, although ozone deterioration usually limits element life to about one year. If the wiper pattern is smeared or streaked, or if the blade chatters across the glass, the elements should be replaced. It is easiest and most sensible to replace the elements in pairs.

If your vehicle is equipped with aftermarket blades, there are several different types of refills and your vehicle might have any kind. Aftermarket blades and arms rarely use the exact same type blade or refill as the original equipment. Here are some typical aftermarket blades; not all may be available for your vehicle:

The Ancq(type uses a release button that is pushed down to allow the refill to slide out of the yoke jaws. The new refill slides back into the frame and locks in place.

Some Trico(refills are removed by locating where the metal backing strip or the refill is wider. Insert a small screwdriver blade between the frame and metal backing strip. Press down to release the refill from the retaining tab.

Other types of Trico(refills have two metal tabs which are unlocked by squeezing them together. The rubber filler can then be withdrawn from the frame jaws. A new refill is installed by inserting the refill into the front frame jaws and sliding it rearward to engage the remaining frame jaws. There are usually four jaws; be certain when installing that the refill is engaged in all of them. At the end of its travel, the tabs will lock into place on the front jaws of the wiper blade frame.

Another type of refill is made from polycarbonate. The refill has a simple locking device at one end which flexes downward out of the groove into which the jaws of the holder fit, allowing easy release. By sliding the new refill through all the jaws and pushing through the slight resistance when it reaches the end of its travel, the refill will lock into position.

To replace the Tridon(refill, it is necessary to remove the wiper blade. This refill has a plastic backing strip with a notch about 1 in. (25mm) from the end. Hold the blade (frame) on a hard surface so that the frame is tightly bowed. Grip the tip of the backing strip and pull up while twisting counterclockwise. The backing strip will snap out of the retaining tab. Do this for the remaining tabs until the refill is free of the blade. The length of these refills is molded into the end and they should be replaced with identical types.

Regardless of the type of refill used, be sure to follow the part manufacturer's instructions closely. Make sure that all of the frame jaws are engaged as the refill is pushed into place and locked. If the metal blade holder and frame are allowed to touch the glass during wiper operation, the glass will be scratched.

Fig. 1: Bosch(wiper blade and fit kit

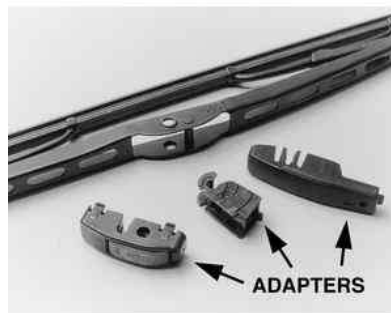


Fig. 2: Lexas(wiper blade and fit kit

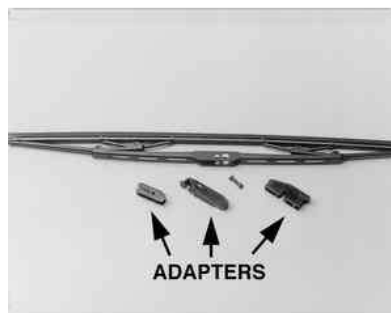


Fig. 3: Pylon(wiper blade and adapter

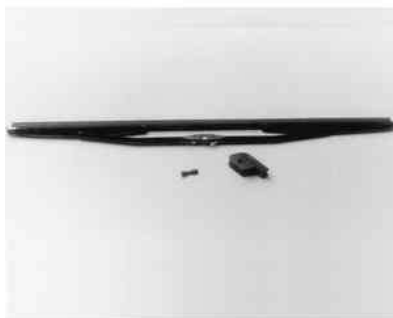


Fig. 4: Trico(wiper blade and fit kit



Fig. 5: Tripledge(wiper blade and fit kit



Fig. 6: To remove and install a Lexor(wiper blade refill, slip out the old insert and slide in a new one



Fig. 7: On Pylon(inserts, the clip at the end has to be removed prior to sliding the insert off

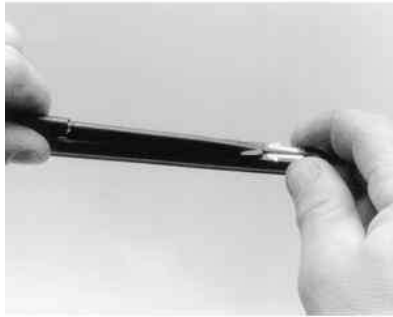


Fig. 8: On Trico® wiper blades, the tab at the end of the blade must be turned up . . .

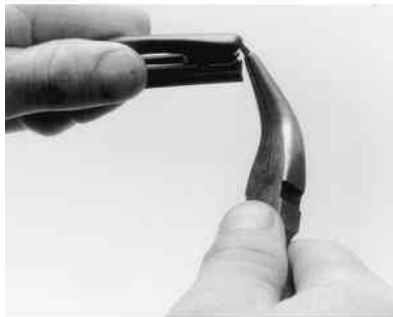


Fig. 9: . . . then the insert can be removed. After installing the replacement insert, bend the tab back



Fig. 10: The Tripledge® wiper blade insert is removed and installed using a securing clip

