

SPECIFICATIONS

Coolant:

Capacity —

1800 cc engine 5.5 litres

1600 cc engine 5.3 litres

Type Ethylene glycol

Water pump type Centrifugal impeller

Thermostat:

Type Wax pellet

Opening temperature —

1979–1981 models 88 deg C

1982–1984 and Utility
models 86.5–89.5 deg C

1985–1987 Sedan and
Station Wagon models 83.5–86.5 deg C

Fully open temperature —

1979–1982 models 101 deg C

1983–1984 and Utility models 100 deg C

1985–1987 Sedan and
Station Wagon models 98 deg C

Thermoswitch operating temperature:

1979–1984 and Utility models ... 92–100 deg C

1985 Sedan and

Station Wagon models 96–101 deg C

1986–1987 Sedan and

Station Wagon models 89–94 deg C

Radiator cap opening pressure 78–98 kPa

Radiator type Crossflow, corrugated fin

1. COOLING SYSTEM TROUBLE SHOOTING

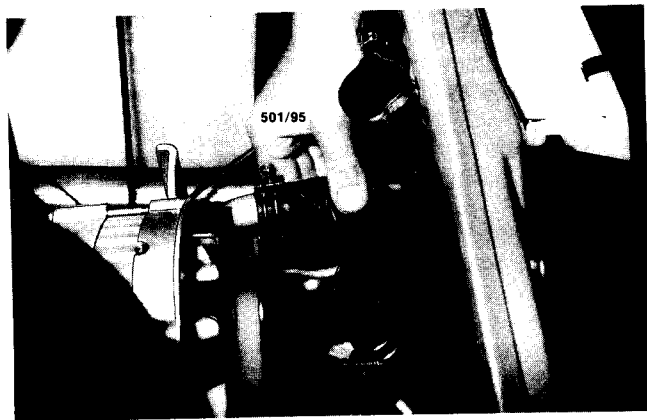
COOLANT LEAKAGE — EXTERNAL

(1) Loose hose clips or faulty hoses: Tighten hose clips or renew faulty hoses.

(2) Leaking radiator core or tanks: Repair or renew radiator.

(3) Worn or damaged water pump seal assembly: Repair or renew water pump assembly.

(4) Worn or damaged water pump bearing assembly: Repair or renew water pump assembly.



Checking for cracked or damaged radiator hoses.

(5) Loose or damaged coolant drain plugs: Inspect the coolant drain plugs and sealing washers for corrosion and damage. Renew plugs and washers as necessary. Apply suitable sealant to the plugs and tighten the plugs securely.

(6) External crack in the cylinder block or the cylinder head: Renew the faulty components.

(7) Leaks at thermostat cover, water pump or inlet manifold joint gaskets: Renew gaskets as required.

(8) Leaking heater core or valve: Repair or renew faulty components.

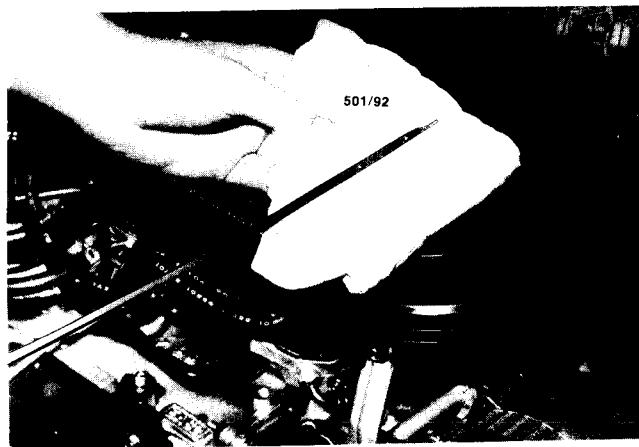
NOTE: Check the cooling system for external leakage by running the engine to operating temperature over a dry floor and checking for leak source. Also check the vehicle interior below the heater unit for moisture.

COOLANT LEAKAGE — INTERNAL

(1) Cylinder head gasket leak due to warped cylinder head or cylinder block gasket faces: Reface cylinder head or cylinder block and renew the cylinder head gasket.

(2) Crack in cylinder head or cylinder block: Renew faulty components.

NOTE: Check the engine for internal leakage by withdrawing the dipstick and inspecting for emulsified oil. Run the engine and check for excessive steam at the exhaust pipe which would indicate water leakage into the combustion chamber. Check the compressions as described in the Engine Tune-up section to locate a leaking cylinder head gasket.



Check the oil for correct level and dilution on the dipstick.

ENGINE OVERHEATING

(1) Radiator cap defective: Renew radiator cap.

(2) Insufficient coolant: Replenish the coolant, check the cooling system for leaks and repair as necessary.

(3) Obstructed air passage through the radiator core: Blow out the obstruction by applying air or water pressure from the rear to the front of the radiator.

(4) Incorrect ignition timing: Check and adjust the ignition timing as described in the Engine Tune-up section.

(5) Incorrect valve timing: Check and reset the valve timing.

(6) Water pump drive belt loose, broken or contaminated by oil: Adjust or renew the water pump drive belt.

(7) Faulty thermostat: Check and renew the thermostat.

(8) Restricted exhaust system: Remove the restrictions or renew the restricted components.

(9) Faulty water pump: Repair or renew the water pump.

(10) Engine tight after overhaul: Check and if not unduly tight, stop the engine and allow it to cool.

(11) Poor coolant circulation: Check and rectify as under Coolant Circulation Faulty.

(12) Lean fuel mixture: Check the fuel system as described in the Fuel System section and rectify as necessary.

(13) Low engine oil level: Stop the engine immediately and replenish the oil in the sump to the correct level.

(14) Incorrectly adjusted or dragging brakes: Check and rectify by adjustment or renewal of components as described in the Brakes section.

(15) Slipping clutch: Rectify as described in the Clutch section.

(16) Faulty thermostatic switch or electric cooling fan: Check and renew thermostatic switch or electric cooling fan.

(17) Incorrect grade or quantity of transaxle lubricant: Drain and refill the transaxle with the correct grade and quantity of lubricant.

(18) Blown cylinder head gasket: Check and rectify as under Coolant Leakage — Internal.

NOTE: Engine overheating is indicated by an excessive rise in temperature shown by the temperature gauge. Overheating is usually accompanied by steam emitting from the engine compartment and loss of engine power. A blown cylinder head gasket is indicated by bubbles in the radiator coolant when the engine is running.

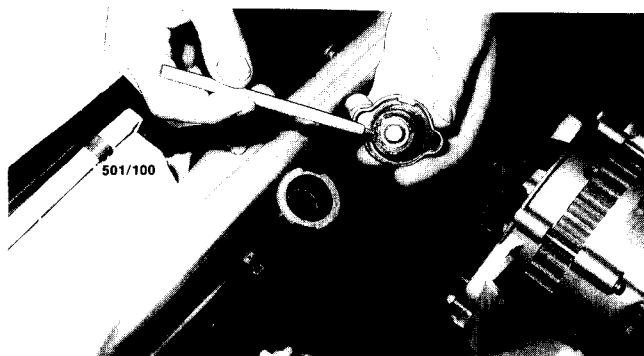
COOLANT CIRCULATION FAULTY

(1) Insufficient coolant in system: Replenish coolant and check for leaks.

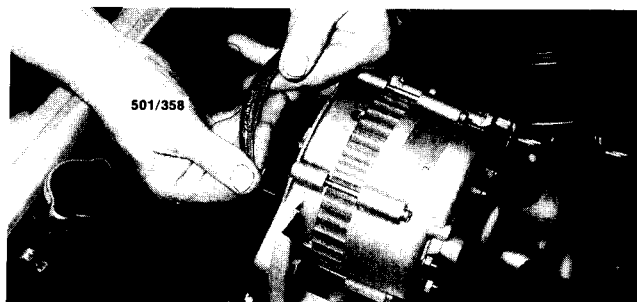
(2) Partial blockage of the radiator core tubes: Reverse flush or renew the radiator core.

(3) Sludge deposits in engine water passages: Clean and reverse flush the engine cylinder block.

(4) Water pump drive belt broken or slipping: Renew or adjust water pump drive belt.



Renew the radiator cap if the sealing rubber is suspected of leakage.



Checking the drive belt for wear and deterioration.

(5) Faulty thermostat: Check and renew thermostat.

(6) Collapsing lower radiator hose: Check and renew lower radiator hose, check radiator core tubes for blockage and rectify as necessary.

(7) Faulty water pump: Repair or renew the water pump.

NOTE: This condition is best checked by removing the radiator cap and running the engine until it reaches the normal operating temperature. Check for water turbulence in the radiator. A normal system should show turbulence at part throttle. As most adverse conditions can be caused by more than one fault, diagnosis can only be made after checking the items by process of elimination in the order shown. If blocked radiator core tubes are detected, it is recommended that the radiator be taken to a reliable radiator specialist for repair.

2. DESCRIPTION

The cooling system is of the forced circulation type with a belt driven water pump providing circulation and an electric fan and cross flow type radiator providing cooling.

The 1979-1984 and Utility models with four wheel drive have an additional engine driven fan, which is replaced by an electric fan when the vehicle is equipped with air conditioning.

The 1985-1987 Sedan and Station Wagon models with four wheel drive and equipped with air conditioning, have an additional engine driven fan mounted on the front of the air conditioning compressor drive pulley. Drive to the cooling fan is via a viscous coupling.

The cooling system is pressurised in order to raise the boiling point of the coolant within the system and so increase the efficiency of the engine.

On 1985-1987 Sedan and Station Wagon models, the radiator tanks are manufactured in a resin material to reduce weight. A drain tap is installed to the bottom of the right hand radiator tank, drain plugs are installed in the cylinder heads and the engine block to facilitate coolant drainage. On automatic transaxle models the left hand radiator tank also houses the transaxle oil cooler.

On 1985-1987 Sedan and Station Wagon models, the radiator overflow hose is connected to a reserve tank which is mounted on the left hand inner fender panel. The radiator cap has a seal between the top of the cap and the upper surface of the radiator filler neck to prevent coolant overflow at this point when the radiator cap pressure valve opens and to direct the overflowing coolant into the reserve tank.

When the engine is stopped and the temperature of the coolant falls, the radiator cap vacuum valve opens and allows the excess coolant in the reserve tank to be drawn back into the radiator, eliminating the need for frequent topping up of the coolant.

Temperature within the cooling system is controlled by a thermostat located in the inlet manifold water outlet elbow.

The function of the thermostat is to prevent the circulation of the coolant through the radiator until the engine has reached operating temperature. This restricted circulation allows the engine to warm up more quickly improving driveability and fuel economy.

The coolant is also circulated through the inlet manifold to preheat the fuel and air mixture as it flows through the manifold passages.

The water pump, driven by a 'V' belt from the crankshaft pulley, is of the centrifugal impeller type. The body of the water pump is made from an aluminium alloy to assist in engine weight reduction and contains a pre-lubricated double row ball bearing and a spring loaded seal assembly. A drain hole, located between the seal and the bearing, prevents bearing lubricant contamination if coolant leaks past the seal.

The electric cooling fan is mounted on the rear of the radiator and its operation is regulated by a thermostatic switch located in the right hand radiator tank.

Due to the aluminium alloy construction of the engine blocks and cylinder heads it is imperative that the cooling system is filled with soft, demineralised water and anti-corrosive, anti-freeze (Ethylene glycol) mixed to the proportion required to avoid freezing at

the lowest expected ambient operating temperature, whilst retaining satisfactory cooling characteristics.

When working on the cooling system, to avoid accidental scalding, exercise caution when releasing the radiator cap of an engine that is at normal operating temperature.

3. RADIATOR

TO CHECK COOLANT LEVEL

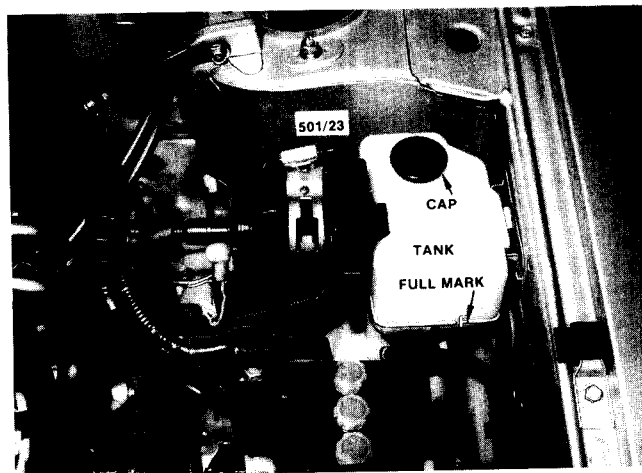
1985-1987 Sedan and Station Wagon Models

(1) With the engine cool, check the level of the coolant in the reserve tank.

If the level in the reserve tank is towards the Low mark add coolant to bring the level to the Full mark.

If the reserve tank is empty remove the radiator cap and fill the radiator with coolant. Replace the radiator cap securely and fill the reserve tank to the Full mark.

(2) Run the engine and check the cooling system for leaks, rectify leaks as necessary.



Installed view of the coolant reserve tank.

1979-1984 and Utility Models

(1) Allow the engine to cool until the radiator cap can be safely removed.

(2) Remove the radiator cap and check that the coolant is level with the plate which is visible through the radiator filler neck.

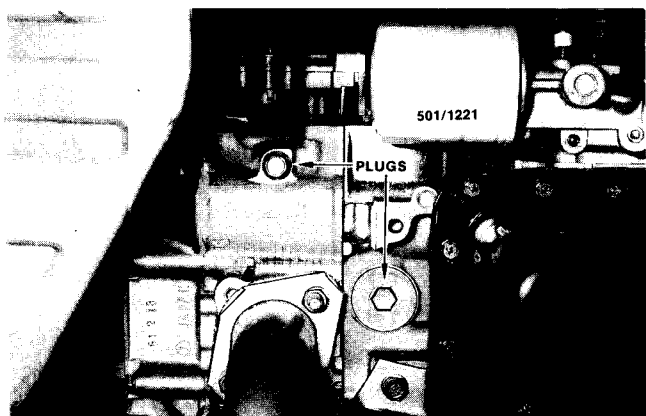
(3) If necessary, add coolant to restore the level to the plate.

(4) Run the engine and check the cooling system for leaks, rectify leaks as necessary.

TO DRAIN AND REFILL

(1) Position a suitable drain tin under the radiator drain tap, loosen the tap and drain the coolant into the drain tin. Remove the radiator cap to avoid surges from the drain tap.

(2) Remove the drain plugs from the cylinder



Installed view of the coolant drain plugs, 1986 model shown. An identical plug is installed in the cylinder head on the opposite side of the engine.

heads and drain the coolant from the engine cylinder blocks.

(3) Instal the drain plugs and radiator drain tap and tighten them securely.

(4) Slowly fill the radiator with clean water adding Ethylene glycol conditioner as necessary. Where installed, fill the reserve tank to the Full mark and replace the radiator cap securely.

(5) Start and run the engine at a fast idle speed with the heater temperature control in the Hot position until the normal operating temperature is reached. Check the system for leaks.

(6) Stop the engine and allow the coolant temperature to fall sufficiently to remove the radiator cap with safety.

(7) If necessary, add coolant until the radiator is full or to the level plate, as applicable.

(8) If necessary, where installed, fill the reserve tank to the Full mark.

(9) Instal the radiator cap and the reserve tank cap, where installed.

TO REMOVE

(1) Disconnect the negative battery terminal.

(2) Position a suitable clean drain tin under the radiator drain tap, loosen the tap and drain the coolant into the drain tin. Remove the radiator cap to avoid surges during draining.

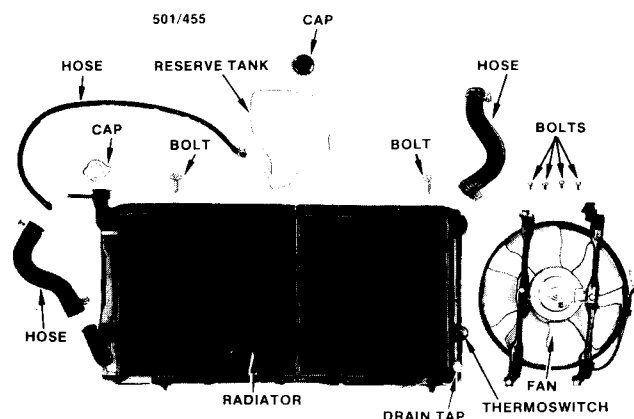
(3) Loosen the hose clips and disconnect the upper and lower radiator hoses from the radiator.

(4) On automatic transaxle models, position a drain tin under the left hand radiator tank and disconnect the hoses from the oil cooler in the left hand radiator tank. Collect the spilt oil in the drain tin.

(5) Disconnect the wiring connectors from the cooling fan and the thermoswitch.

(6) Remove the retaining bolts from the top rear of the radiator.

(7) Carefully lift the radiator and cooling fan



View of the radiator and associated components removed from the vehicle, 1986 model shown.

assembly from the engine compartment. Plug the inlet and outlet fittings and fill the radiator with clean water.

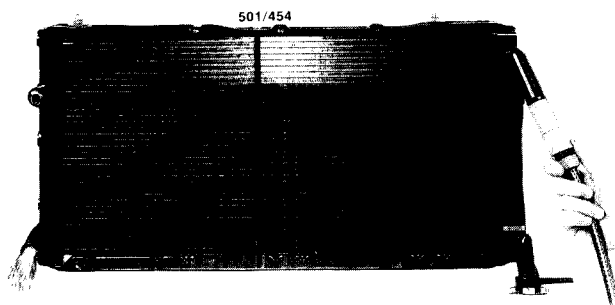
NOTE: When a radiator that has been in use for some time is removed from the vehicle to enable repairs to be carried out to the engine, it should not be allowed to stand empty for any length of time. The radiator should be immersed in a tank of fresh water or otherwise kept full. Failure to observe this precaution may result in overheating when the engine is put back into service. This caused by internal deposits in the radiator drying and flaking and so obstructing the circulation of the coolant in the system.

TO FLUSH AND CLEAN

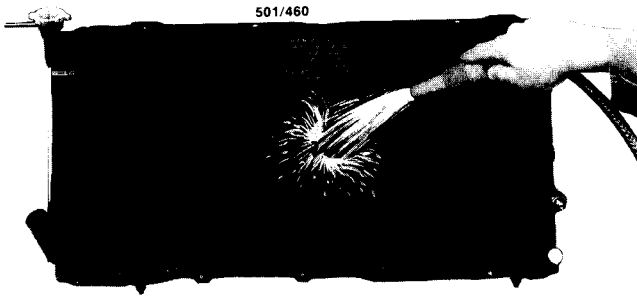
(1) With the radiator removed as previously described instal the radiator cap securely and carefully invert the radiator.

(2) Insert a hose in the radiator outlet fitting and reverse flush the radiator until the water flowing from the radiator inlet fitting is clean.

(3) Apply a stream of water or compressed air to the radiator core from the rear to the front. Maintain the procedure until all dirt and foreign matter is removed from the radiator core.



Reverse flush the radiator using water pressure.

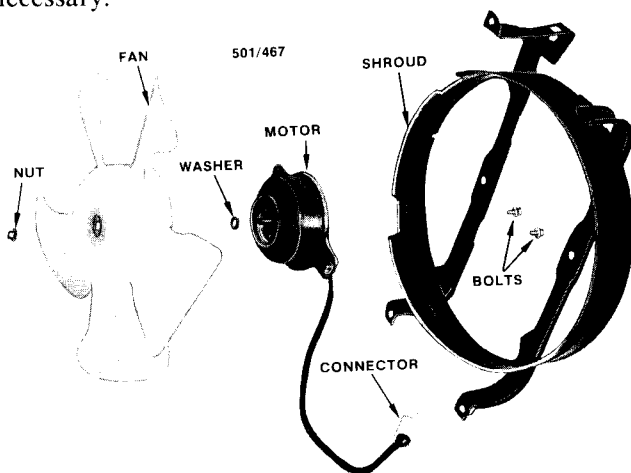


Clean obstructions from the radiator core using water pressure.

NOTE: If excessive back pressure or diminished flow indicates severely blocked radiator core tubes, which cannot be cleared by reverse flushing, it is recommended that the radiator be taken to a reliable radiator specialist for repair.

TO INSTALL

- (1) Working inside the engine compartment, position the radiator in the front panel opening ensuring that the tapered rubber mounts are correctly seated in the body panel. Install and securely tighten the retaining bolts at the top rear of the radiator.
- (2) Connect the upper and lower radiator hoses to the radiator and tighten the hose clips securely.
- (3) On automatic transaxle models connect the hoses to the oil cooler in the left hand radiator tank.
- (4) Slowly fill the radiator with clean water adding conditioner as necessary. Where installed, fill the reserve tank to the Full mark and replace the radiator cap securely.
- (5) Start and run the engine at a fast idle speed with the heater temperature control in the Hot position until the normal operating temperature is reached. Check the system for leaks and rectify as necessary.



Dismantled view of the cooling fan removed from the vehicle.

(6) Stop the engine and allow the coolant temperature to fall sufficiently to remove the radiator cap with safety.

(7) If necessary, add coolant until the radiator is full or to the level plate, as applicable.

(8) If necessary, where installed, fill the reserve tank to the Full mark.

(9) Install the radiator cap and where installed, the reserve tank cap securely.

(10) On automatic transaxle models check and, if necessary, top up the transaxle oil to the correct level on the dipstick. Refer to the automatic Transaxle section for the correct procedure.

4. COOLING FAN AND THERMOSWITCH

Special Equipment Required:

To Test Fan Motor — Ammeter

To Test Thermoswitch — Thermometer

TO TEST FAN MOTOR ON VEHICLE

- (1) Disconnect the negative battery terminal.
- (2) Disconnect the fan motor wiring connector from the engine compartment wiring loom.
- (3) Using suitable jumper leads connect 12 volts to the fan motor wiring connector with an ammeter in series and note the ammeter reading after one minute of starting the motor from cold.
- (4) The motor should run smoothly with the ammeter reading approximately 10 amps.
- (5) If the fan motor does not run smoothly or the current draw is excessive, the fan motor will have to be renewed.

TO REMOVE AND INSTALL FAN MOTOR

- (1) Disconnect the negative battery terminal.
- (2) Disconnect the fan motor wiring connector from the engine compartment wiring loom.
- (3) Support the fan shroud and remove the bolts retaining the fan shroud to the radiator.
- (4) Remove the fan, fan motor and shroud as an assembly from the vehicle.
- (5) Remove the nut retaining the fan to the motor shaft.
- (6) Remove the fan and the washer behind the fan from the motor shaft.
- (7) Remove the bolts retaining the fan motor to the fan shroud and remove the fan motor from the shroud.

Installation is a reversal of the removal procedure with attention to the following point:

Ensure that the spacer washer is installed to the motor shaft before installing the fan.

TO REMOVE AND INSTALL THERMOSWITCH

- (1) Disconnect the negative battery terminal.
- (2) Drain the radiator as previously described.

(3) Disconnect the wire connector from the thermostitch terminals.

(4) Remove the thermostitch and washer from the radiator side tank.

Installation is a reversal of the removal procedure.

TO TEST THERMOSWITCH

(1) Remove the thermostitch from the radiator as previously described.

(2) Suspend and immerse the lower half of the switch, together with a reliable thermometer in a vessel of cold water, ensuring that neither the switch nor the thermometer is touching the sides or bottom of the vessel.

(3) The continuity test is done with an ohmmeter or multimeter. Connect one lead or prod to the switch positive terminal and the second lead or prod to the negative terminal or body of the switch on 1979-1984 and Utility models.

(4) Progressively heat the water in the vessel and as the water heats, note the temperature reading on the thermometer when continuity is indicated on the ohmmeter.

(5) Continuity should occur when the water temperature is within the specified range.

(6) A switch with opening temperatures outside the specified range should be renewed.

5. THERMOSTAT

Special Equipment Required:

To Check — Thermometer

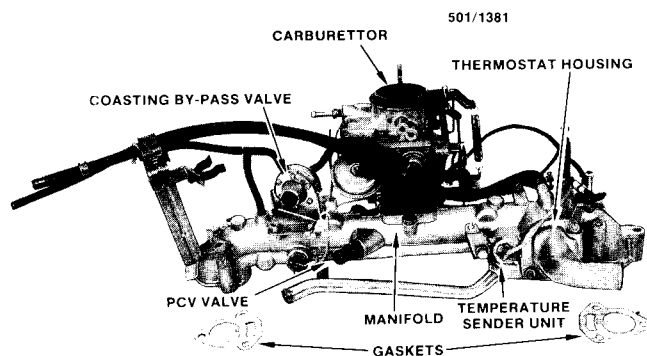
TO REMOVE AND INSTAL

(1) Drain the cooling system as previously described.

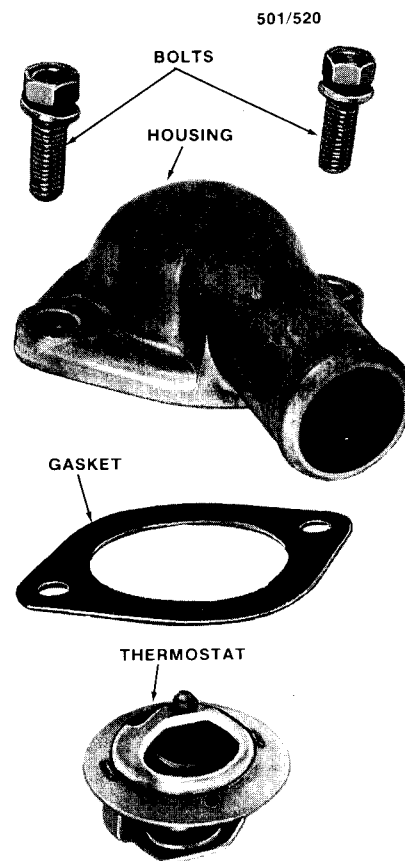
(2) Disconnect and remove the upper radiator hose.

(3) Remove the thermostat housing retaining bolts and remove the thermostat housing and gasket. Discard the gasket.

(4) Withdraw the thermostat from the inlet manifold.



View of the inlet manifold showing the location of the thermostat, 1983 model shown.



View of the thermostat removed from the vehicle, 1986 model shown.

NOTE: A visual examination of the thermostat will often determine its serviceability and obviate the necessity for testing. For instance, a thermostat with its valve fully open when removed from a cold engine is obviously faulty and should be discarded and a new unit installed.

Installation is a reversal of the removal procedure with attention to the following points:

(1) Ensure that the gasket surfaces are perfectly clean and instal a new thermostat housing gasket.

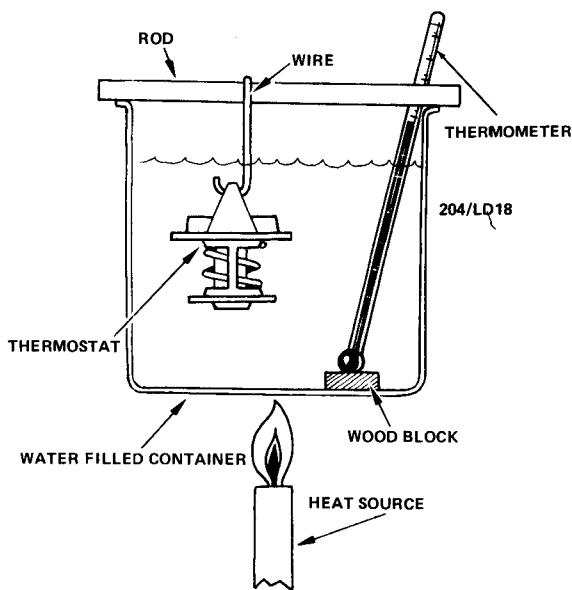
(2) Fill the cooling system as previously described.

(3) Run the engine and check for coolant leaks. Rectify leaks as necessary.

TO CHECK

(1) Check that the thermostat is closed when cold.

(2) Suspend and immerse the thermostat together with a reliable thermometer in a vessel of cold water, ensuring that neither the thermostat nor the thermometer are touching the sides or bottom of the vessel.



Line drawing showing the correct method used to test a thermostat.

(3) Progressively heat the water noting the temperature reading on the thermometer as the thermostat valve commences to open and when it is fully open.

See Specifications for opening and fully open temperatures.

A thermostat which is not opening and is not fully open at the specified temperatures should be renewed.

6. WATER PUMP

TO REMOVE AND INSTAL

(1) Drain the cooling system as previously described.

(2) Disconnect the lower radiator hose from the lower water pipe or the water pump on 1979-1984 and Utility models.

(3) On 1985-1987 Sedan and Station Wagon models, remove the lower water pipe retaining bolts and slide the lower water pipe out of the water pump. Discard the 'O' ring.

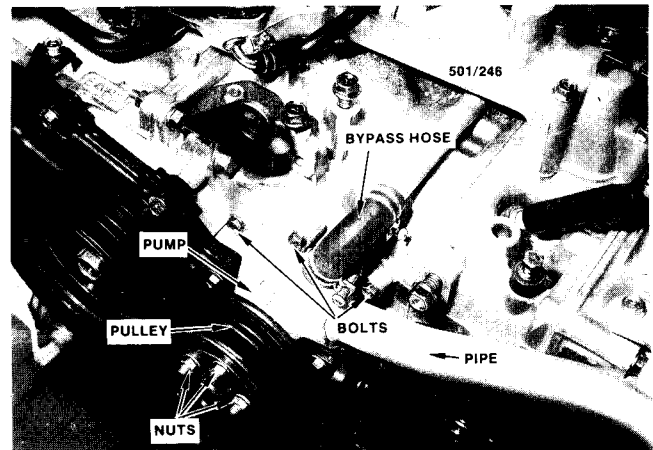
(4) Loosen the hose clip and disconnect the bypass hose from the water pump.

(5) On 1985-1987 Sedan and Station Wagon models, remove the water pump pulley retaining nuts.

(6) Loosen the alternator mounting and adjusting bolts and push the alternator towards the engine to relieve the tension on the water pump drive belt.

(7) Remove the water pump drive belt and on 1985-1987 Sedan and Station Wagon models, the water pump pulley.

(8) On 1985-1987 Sedan and Station Wagon models, remove the centre drive belt cover as described in the Engine section.



Installed view of the water pump, 1986 model shown.

(9) Remove the water pump to engine block retaining bolts and withdraw the water pump from the engine.

(10) Turn the water pump shaft by hand and check the bearing for roughness or looseness in the pump body. Check the seal for leaks and the impeller and pump body for wear and damage.

NOTE: It is economically unsound to overhaul the water pump. Therefore, if the water pump is unserviceable it is recommended that a new or rebuilt water pump is installed.

Installation is a reversal of the removal procedure with attention to the following points:

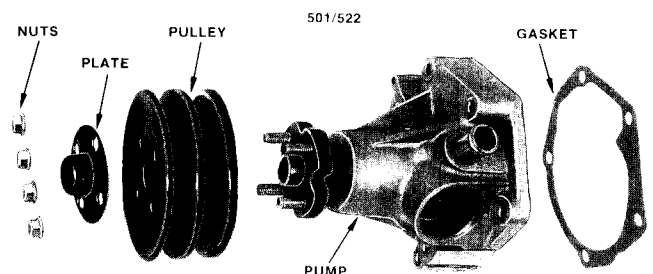
(1) Renew the water pump gasket and where fitted, the water pipe 'O' ring. Check the bypass hose and the lower radiator hose for deterioration and renew as necessary.

Where applicable, align the marks on the radiator hoses with those on the thermostat housing and water pump.

(2) Ensure that the water pump drain hole is free from obstructions.

(3) Fill the cooling system as previously described.

(4) Run the engine and check for coolant leaks. Rectify leaks as necessary.



Dismantled view of the water pump removed from the vehicle, 1986 model shown.

7. WATER PUMP DRIVE BELT

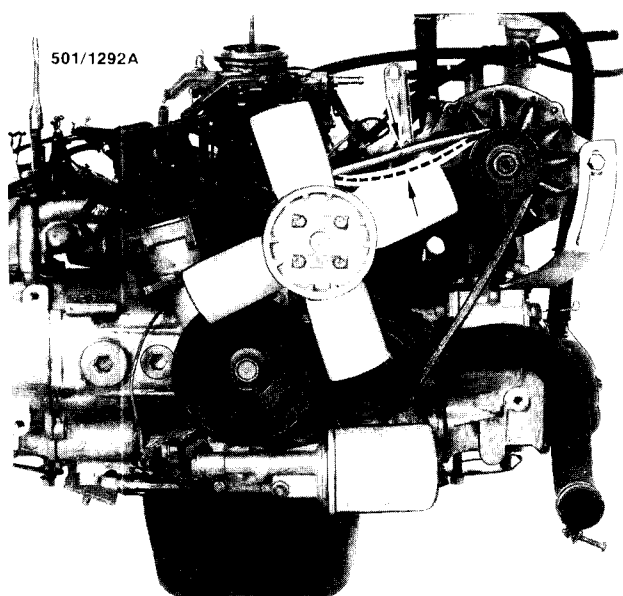
TO RENEW

(1) Loosen the alternator mounting and adjusting bolts and push the alternator towards the engine to relieve the tension on the water pump drive belt.

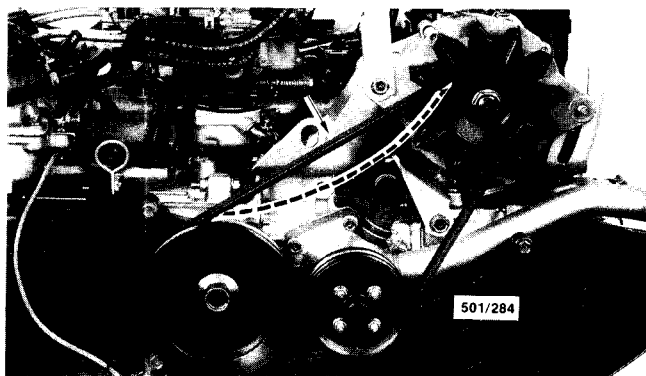
(2) Manoeuvre the old belt from the alternator pulley, the water pump pulley, where fitted the engine driven fan pulley and the crankshaft pulley and remove the old belt from the engine.

(3) Manoeuvre the new belt onto the crankshaft pulley, where fitted the engine driven fan pulley, the water pump pulley and run the belt onto the alternator pulley.

(4) The belt tension should be adjusted using the procedure described in the Engine Tune-up section.



View of the 1979-1984 and Utility model water pump drive belt, showing the point at which the drive belt deflection is measured.



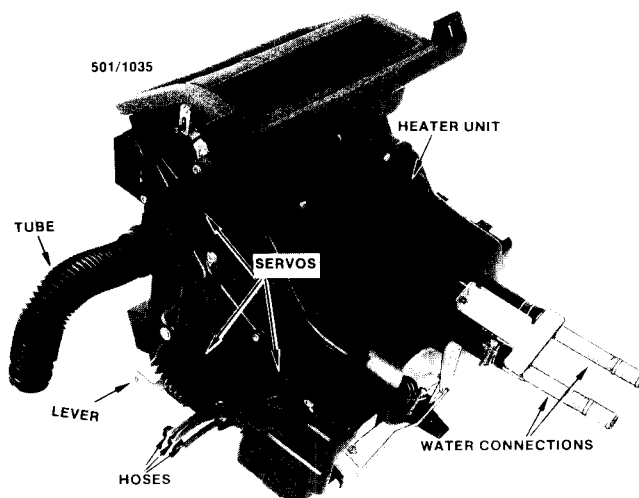
View of the 1985-1987 Sedan and Station Wagon water pump drive belt showing the point at which the drive belt deflection is measured, 1986 model shown.

8. HEATER ASSEMBLY

HEATER UNIT

To Remove and Instal 1985-1987 Sedan and Station Wagon Models

- (1) Disconnect the negative battery terminal.
- (2) Remove the self tapping screws from the bottom of the right hand side dashboard lower trim panel under the steering column.
- (3) Release the screws from the centre of the plastic plugs at each end of the right hand side dashboard lower trim panel and ease the plastic plugs out of the bottom of the dashboard.
- (4) Where necessary, lower the trim panel and remove the clip securing the trim panel to the steering column.
- (5) Disconnect the ventilation tube from the duct on the trim panel and withdraw the right hand side dashboard lower trim panel from the vehicle.
- (6) Remove the screws securing the fuse box to the dashboard and carefully suspend the fuse box on the wiring loom.
- (7) Disconnect the ventilation cable from the clip at the rear, right hand side of the dashboard.
- (8) Disconnect the ventilation cable from the ventilation control lever on the side of the dashboard.
- (9) Disconnect the heater cable from the clip on the right hand side of the heater unit and disconnect the heater cable from the heater unit lever.
- (10) Disconnect the vacuum hoses at the triple connector and the hose from the recirculation mode vacuum servo.
- (11) Disconnect the wiring harness on the right hand side of the bulkhead and remove the relays from the dashboard bracket.
- (12) Remove the steering column as described in the Steering section.
- (13) Pulling on the outer cable, disconnect the speedometer cable from the speedometer head.



Heater assembly removed from the vehicle, 1986 model shown.

(14) Remove the retaining screws from the centre console forward upper section and remove the centre console forward upper section from the vehicle.

(15) Release the screws from the centre of the plastic plugs at each end and the side of the left hand dashboard lower trim panel and remove the left hand dashboard lower trim panel from the vehicle.

(16) Remove the glovebox door hinge retaining screws, depress the glovebox door lock release buttons and withdraw the glovebox assembly from the dashboard.

(17) Disconnect the heater blower motor vacuum hose at the pipe connection near the rear top of the glovebox frame.

(18) Disconnect the wiring harness on the left hand side adjacent to the bulkhead.

(19) Pulling on the bottom edge, release the clips securing the bottom of the rectangular cover to the lower left hand edge of the dashboard, lever the cover back to release the clip securing the top of the cover and remove the cover from the dashboard.

(20) Using a suitable screwdriver, prise the covers out of the upper left hand side, upper middle and upper right hand side of the dashboard.

(21) Pull back the floor mat and disconnect the earth wire from the floor panel. Remove the bolts, washers and spacers retaining the dashboard to the vehicle body, lift and move the dashboard rearwards to gain access to the radio aerial wire.

(22) Disconnect the radio aerial wire from the rear of the dashboard and manoeuvre the dashboard from the vehicle.

(23) Drain the coolant from the radiator as previously described.

(24) Working inside the engine compartment, disconnect the hose clips and heater hoses from the fittings on the bulkhead. Plug the hoses and fittings to prevent the entry of dirt.

(25) Remove the centre console as described in the Body section.

(26) Disconnect the heater duct from the heater unit and manoeuvre the heater duct from the vehicle.

(27) Remove the retaining nuts and remove the dashboard centre support bracket from the vehicle.

(28) Remove the heater unit retaining bolts and slide the heater unit rearwards to release the heater

hose fittings from the bulkhead seals and lift the heater unit out of the vehicle.

Installation is a reversal of the removal procedure with attention to the following points:

(1) The heater hoses must be pushed 20–25 mm onto the heater unit hose fittings before tightening the hose clips.

(2) The vacuum hoses must be pushed a minimum of 8 mm onto the pipe or hose fitting.

(3) Tighten the heater unit retaining bolts to a torque of 9 Nm.

(4) Refill the cooling system with the specified coolant as previously described.

To Remove and Instal 1979–1984 and Utility Models

(1) Disconnect the negative battery terminal.

(2) Remove the retaining screws and withdraw the right hand side dashboard lower trim panel from under the steering column.

(3) Remove the retaining screws and nuts and withdraw the parcel shelf from under the left hand side of the dashboard.

(4) Remove the centre console as described in the Body section.

(5) Remove the steering column as described in the Steering section.

(6) Remove the retaining screws from the bottom of the glove box door.

(7) Rotate the glove box door upwards and detach the door stay from the glove box.

(8) Remove the retaining screws from the top of the glove box.

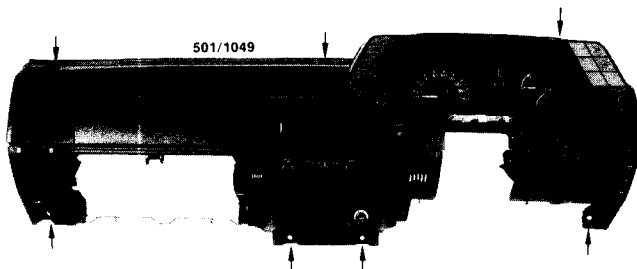
(9) Detach the vacuum hose clamp from the bottom of the glove box.

(10) Pull the glove box partially out of the dashboard and disconnect the glove box lamp and switch wiring.

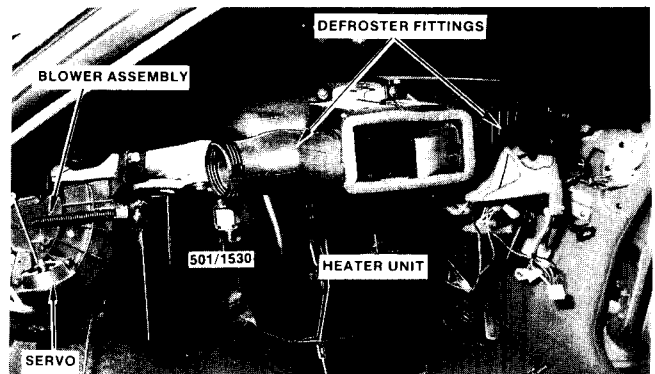
(11) Withdraw the glove box from the vehicle.

(12) Withdraw the right hand side defroster duct to gain access, suitably mark and disconnect the vacuum hoses from the heater control.

(13) Where fitted, disconnect the choke cable from the carburettor and pull the cable through the bulkhead into the vehicle.



View of the dashboard removed from the vehicle. Arrows indicate the position of the retaining screws, 1986 model shown.



Installed view of the heater unit, 1983 air-conditioned model shown.

(14) Disconnect the speedometer cable and the dashboard wiring connectors as described in the Electrical section.

(15) Suitably mark and disconnect the control cables from the heater unit.

(16) Remove the retaining nut from the right hand side dashboard mounting bracket.

(17) Remove the retaining nuts from the mounting brackets at the right and left hand sides of the dashboard.

(18) Detach the retaining clips and withdraw the demister grille strips from the top of the dashboard.

(19) Remove the retaining bolts from the top of the dashboard adjacent to the windscreen.

(20) Disconnect the ventilation tubes from both sides of the dashboard and manoeuvre the dashboard from the vehicle.

(21) Drain the coolant from the radiator as previously described.

(22) Working inside the engine compartment, release the hose clips and heater hoses from the heater fittings at the bulkhead. Plug the hoses and heater pipes to prevent entry of dirt.

(23) Detach the defroster fittings from the sides of the heater unit.

(24) Remove the heater unit mounting bolts, lift the heater unit slightly, slide the heater unit rearwards, carefully pulling the hoses through the bulkhead and withdraw the heater unit from the vehicle.

Installation is a reversal of the removal procedure with attention to the following points.

(1) Tighten the mounting hardware securely.

(2) Refill the cooling system with the specified coolant as previously described.

(3) Check the cooling system for leaks and the heater unit for correct operation.

HEATER BLOWER MOTOR

To Remove and Instal

The procedure to remove and instal the heater blower motor is fully detailed in the Electrical System section.

HEATER CONTROLS

To Remove and Instal 1985-1987 Sedan and Station Wagon Models

(1) Remove the instrument cluster surround as detailed in the Electrical System section.

(2) Remove the retaining screws, suitably mark and disconnect the vacuum hoses from the vacuum control unit.

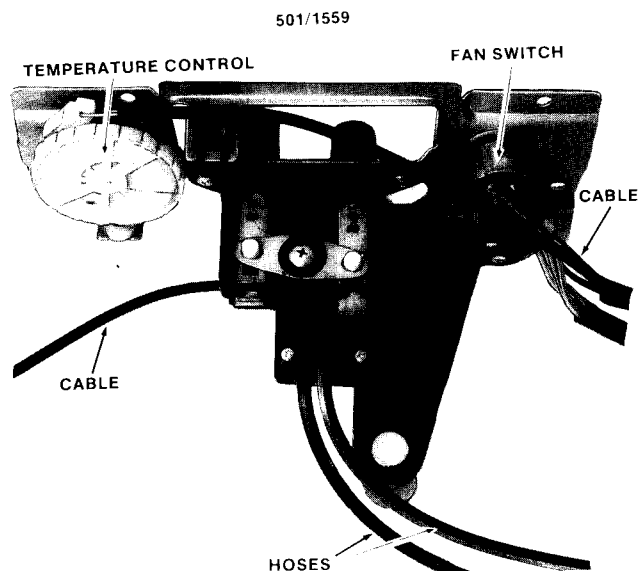
(3) Slide the vacuum control unit out of the instrument cluster surround and disconnect the heater control cable from the heater control lever.

(4) Remove the retaining screws and separate the heater temperature control assembly from the vacuum control unit.

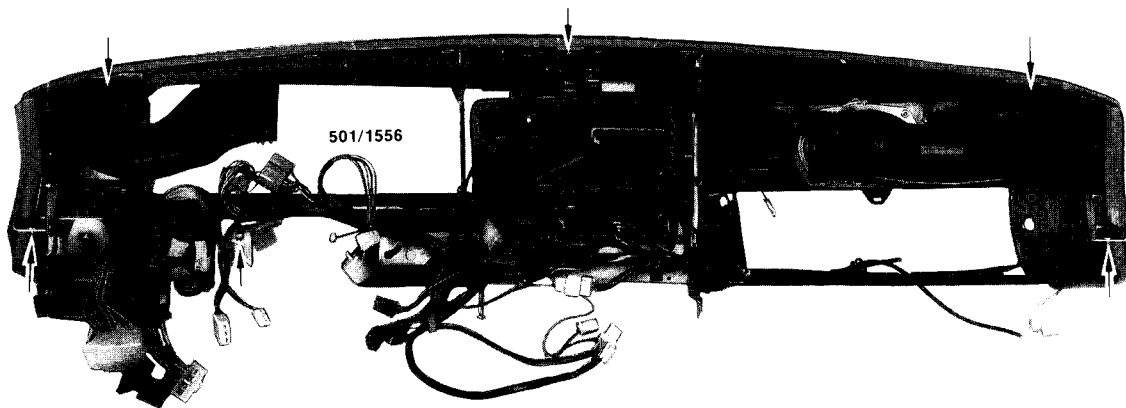
Installation is a reversal of the removal procedure with attention to the following points:

(1) Connect the vacuum hoses to the positions marked prior to disconnection.

(2) Tighten the retaining screws securely.



View of the heater controls removed from the vehicle, 1983 model shown.



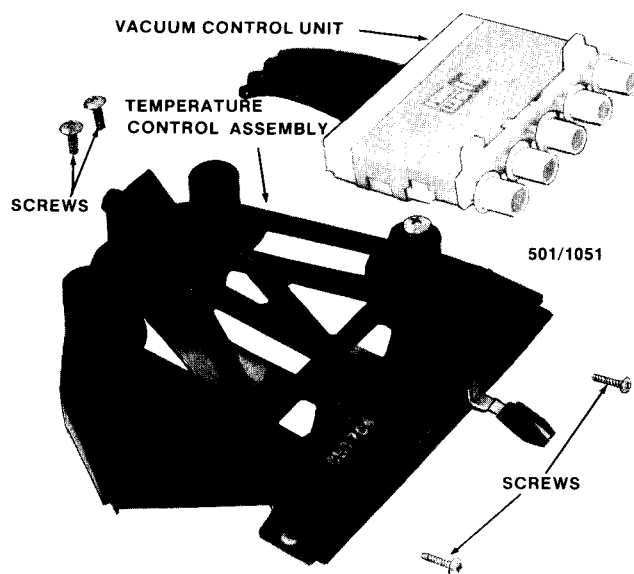
Rear view of the dashboard removed from the vehicle. Arrows indicate the position of the retaining screws and nuts, 1983 model shown.

To Remove and Instal 1979–1984 and Utility Models

- (1) Disconnect the negative battery terminal.
- (2) Remove the centre console as described in the Body section.
- (3) Prise the knobs off the fan switch and temperature control.
- (4) Remove the nuts located under the knobs previously removed.
- (5) Remove the retaining screws and withdraw the heater control cover from the dashboard.
- (6) Suitably mark and disconnect the temperature and mode control cables from the heater unit.
- (7) Remove the retaining screws from the heater control assembly, suitably mark and disconnect the wiring and vacuum hoses from the heater control assembly and withdraw the heater control assembly from the vehicle.

Installation is a reversal of the removal procedure with attention to the following points:

- (1) Connect the wiring and vacuum hoses to the positions marked prior to disconnection.
- (2) Tighten the retaining screws securely.



View of heater controls removed from the vehicle, 1986 model shown.