

84 - WIPERS AND WASHERS

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WIPER MOTOR CHECKING



NOTE: These instructions apply to Windscreen and Tailgate wiper motors.

If unsatisfactory operation of wiping equipment is experienced, a systematic check to determine fault should be carried out:

1. Check blades for signs of excessive friction. This reduces wiping speed of motor and cause increased current draw which may damage armature. Check by substitution.
2. Check windscreen wiper motor light running current and speed with motor coupling link disconnected from wiper shaft transmission linkage.

Check tailgate glass wiper motor with wiper connected and glass wet. Connect an ammeter in series with motor supply. Measure current consumption when motor is switched on. Check operating speed by timing speed of rotation of motor coupling link. The results should compare with figures given in 'General Specification Data'.



NOTE: If vehicle wiring connections are disconnected and an alternative supply source is applied it is essential that correct polarity is observed. Failure to observe this will cause motor to rotate in reverse direction, which may result in limit switch contacts being damaged.

3. If motor does not run satisfactorily or takes higher than normal current, a fault exists and must be remedied.
4. If current consumption and speed of motor are satisfactory. A check should be carried out for proper functioning of transmission linkage and wiper arm shafts.



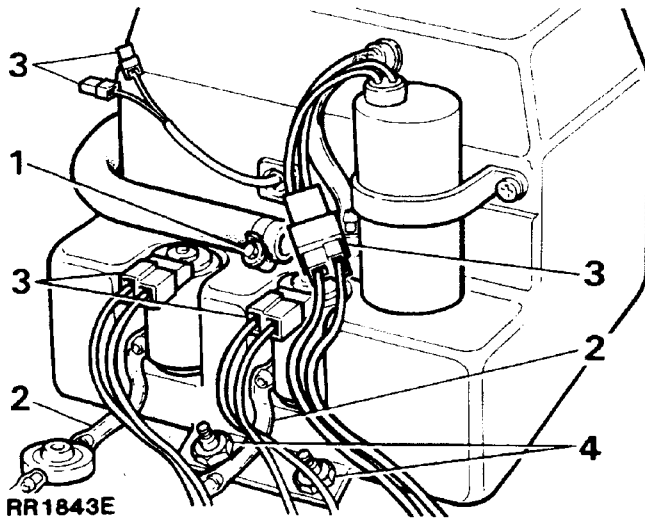
NOTE: Service parts are not available for windscreen and tailgate wiper motors with exception of windscreen wiper rotary connecting link.



WASHER RESERVOIR

Service repair no - 84.10.03.

Remove



1. Loosen hose clamp and remove power wash hose.
2. Disconnect tubing from washer pumps.
3. Disconnect electrical leads from pumps and low level warning unit.
4. Remove 3 bolts and withdraw reservoir.

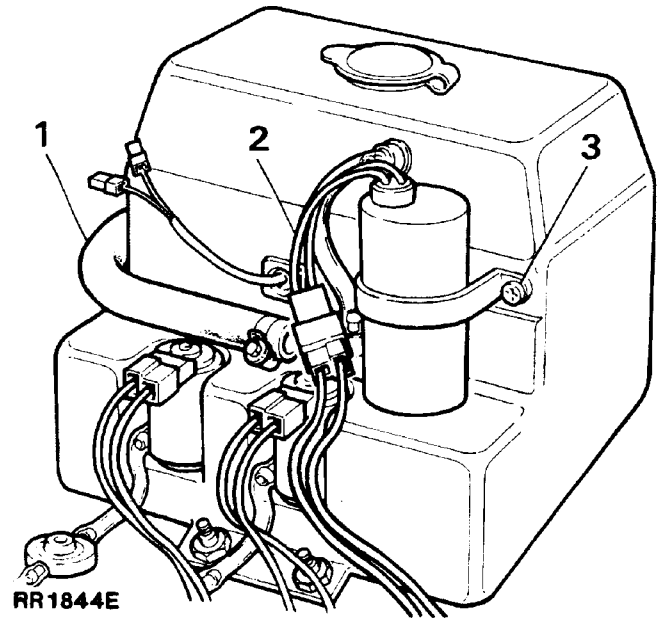
Refit

5. Reverse removal procedure.

POWER WASH PUMP

Service repair no - 84.20.21.

Remove



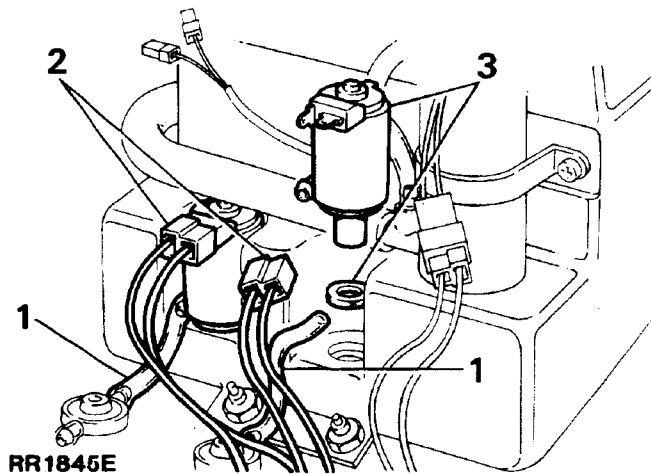
1. Disconnect hose from power wash pump.
2. Disconnect electrical leads from pump.
3. Remove two screws and withdraw power wash pump.

Refit

4. Reverse removal procedure.

WASHER PUMP - WINDSCREEN OR TAILGATE

Service repair no - 84.10. 21.

Remove

RR1845E

1. Disconnect washer tubing from pump.
2. Disconnect electrical leads from pump.
3. Pull top of pump away from its location in reservoir and remove pump. Note position of sealing gasket in reservoir.

Refit

4. Reverse removal procedure.

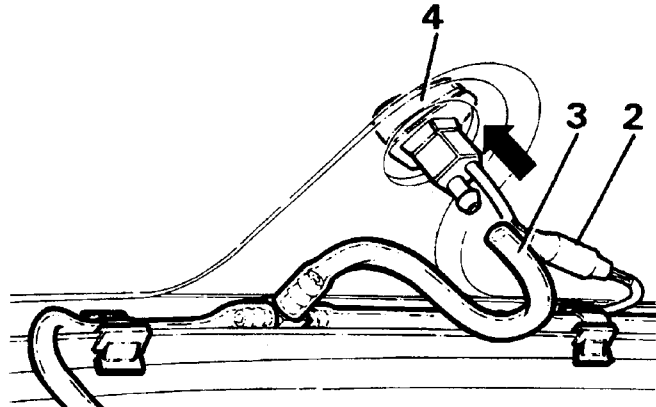
HEATED WINDSCREEN WASHER JETS

Service repair no - 84.10. 09.

Remove

NOTE: The thermostat will close at $4^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and re-open at $10^{\circ}\text{C} \pm 3^{\circ}\text{C}$.

1. Disconnect battery negative lead.



RR2549M

2. Disconnect electrical connection at plug.
3. Withdraw washer tube from jet.
4. Push jet upwards to remove from its mounting.
5. Remove washer jet mounting from bonnet[hood], if necessary.

Refit

6. Reverse removal procedure.



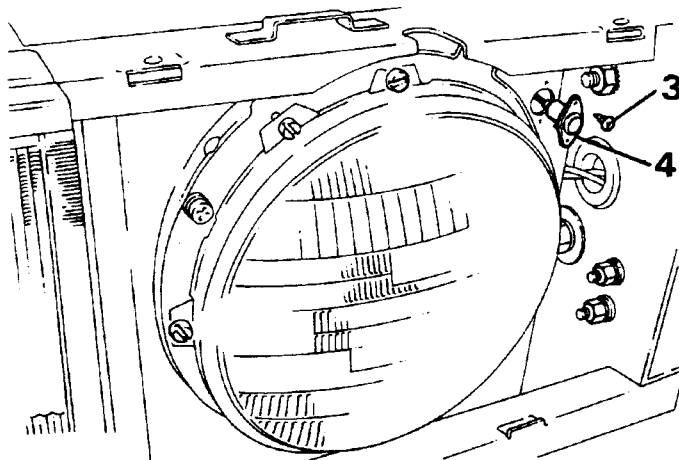
HEATED WINDSCREEN WASHER JETS THERMOSTAT

Service repair no - 84.10.12.

The thermostat is located on right headlamp mounting panel.

Remove

1. Disconnect battery negative lead.
2. Remove radiator grill. *See CHASSIS AND BODY, Repair, Radiator Grille*



RR2650M

3. Remove two screws securing thermostat to right hand headlamp mounting panel.
4. Withdraw thermostat, disconnecting electrical connector.

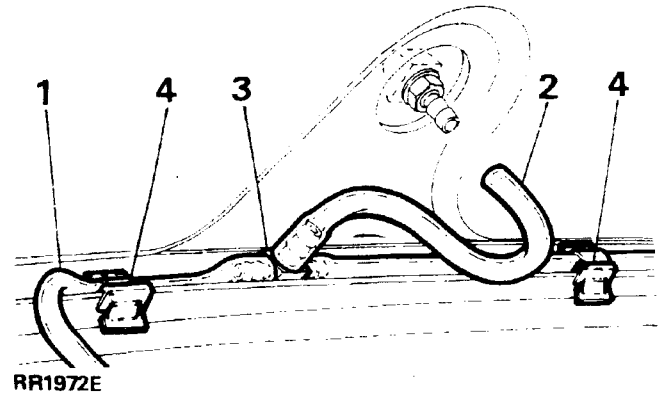
Refit

5. Reverse removal procedure.

WINDSCREEN WASHER TUBES

Service repair no - 84.10.15.

Remove



RR1972E

1. Disconnect tubing from reservoir pump.
2. Disconnect tubing from washer jets.
3. Disconnect tubing from three-way tee piece.
4. Release tubing from edge clips.

Refit

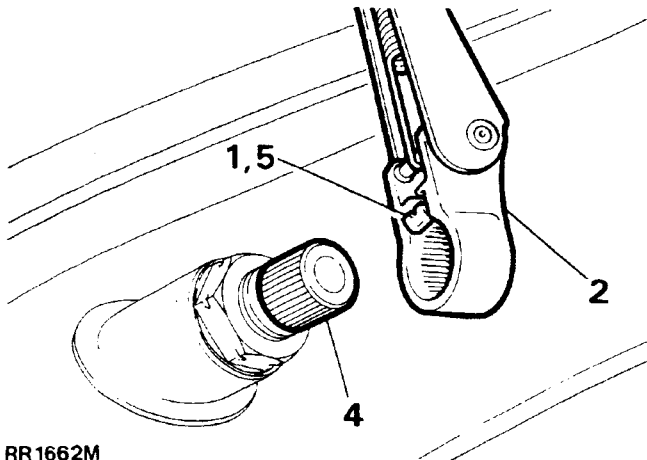
5. Reverse removal procedure.

WIPER ARMS - WINDSCREEN

Service repair no - 85.15.01

Remove

1. Hold back small spring clip which retains wiper arm on shaft boss using a suitable tool.
2. Gently pry off wiper arm from shaft boss.

**Refit**

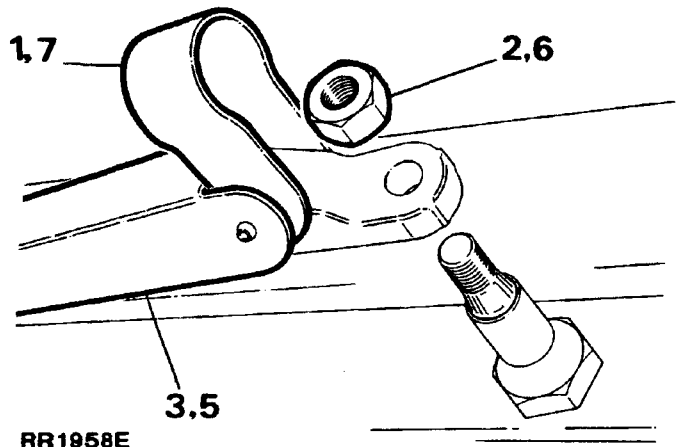
3. Allow motor to move to 'park' position.
4. Push arm on to boss, locating it on splines so that wiper blades are clear of screen rail.
5. Ensure that spring retaining clip is located in retaining groove on shaft boss.
6. Operate wiper on a wet screen to ensure blades do not over travel.

WIPER ARM - TAILGATE

Service repair no - 84.35.01.

Remove

1. Lift wiper arm end cap to access wiper motor shaft.
2. Remove wiper arm securing nut.



3. Withdraw wiper arm from shaft.

Refit

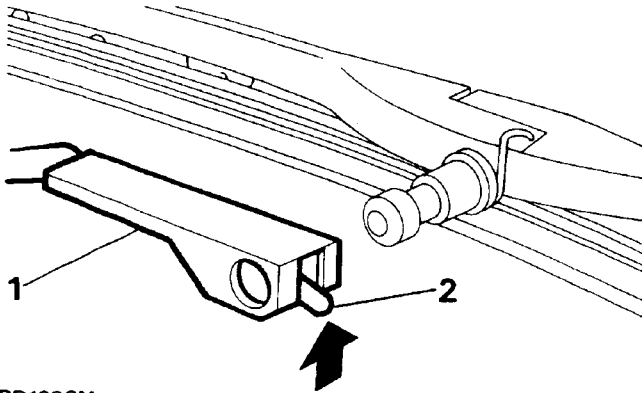
4. Allow motor to move to 'park' position.
5. Fit wiper arm to shaft, locating it on the splines so that wiper blade is clear of screen surround.
6. Fit and tighten securing nut.
7. Push end cap back into position.
8. Check correct operation of wiper.



WIPER BLADES - WINDSCREEN AND TAILGATE

Service repair no - 84.15.05.

Remove



RR1663M

1. Pull wiper arm away from glass.
2. Lift spring clip and withdraw blade from arm.

Refit

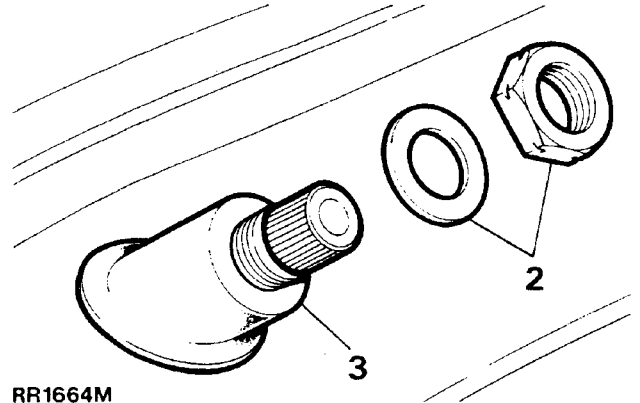
3. Reverse removal procedure.

WINDSCREEN WIPER MOTOR, LINKAGE AND WHEEL BOXES

Service repair no - 84.15.12.

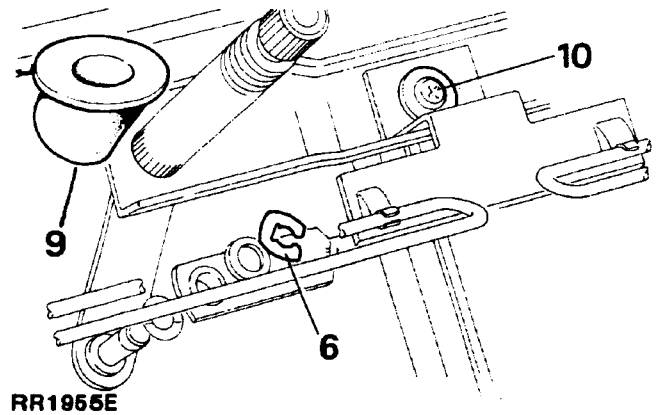
Remove

1. Disconnect battery negative lead. Remove wiper arms.



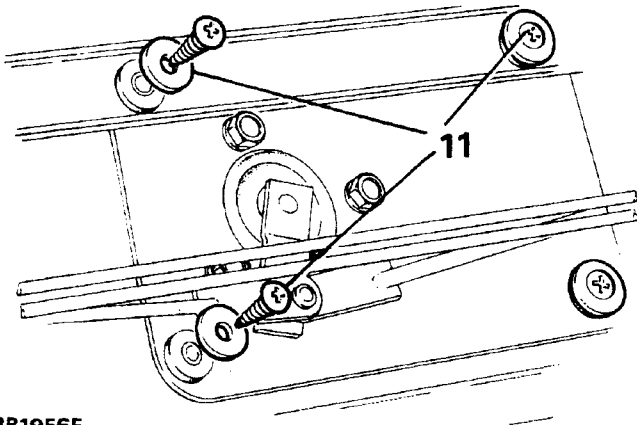
RR1664M

2. Remove locknuts from wheel boxes.
3. Remove grommet from wheel boxes.
4. Remove bonnet[hood]. *See CHASSIS AND BODY, Repair, Bonnet*
5. Remove front decker[cowl] panel. *See CHASSIS AND BODY, Repair, Decker Panel*



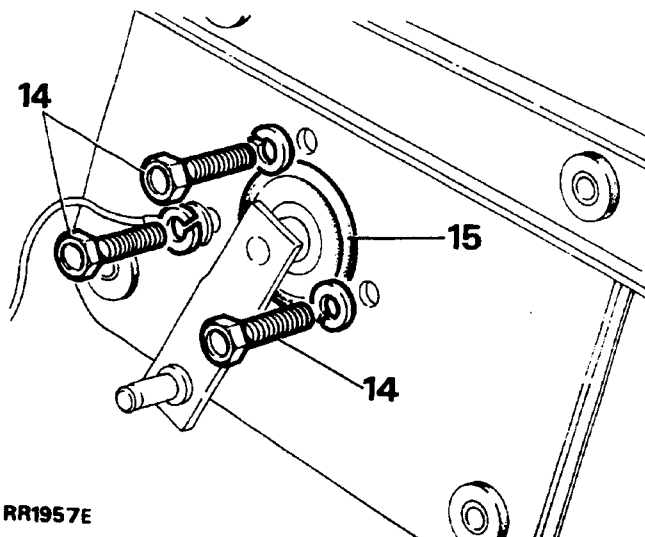
RR1955E

6. Remove spring clips securing primary links to wheelbox shaft links.
7. Remove spring clips securing primary links to motor crank.
8. Remove primary links.
9. Remove lower grommet from wheelboxes.
10. Remove screw securing bonnet[hood] torsion bar bracket. Unclip bracket from torsion bar.



RR1956E

11. Remove remaining screws securing motor and linkage assembly to bulkhead.
12. Ease unit from mounting location and disconnect electrical leads at plug and socket.
13. Withdraw unit.



RR1957E

14. Remove three bolts securing motor to mounting plate.
15. Separate motor from mounting plate by pulling motor crank through grommet.

Refit

16. Reverse removal procedure.
17. Ensure primary links are mounted with bushes on inside, towards wiper motor. The shorter primary link is mounted on driver side.
18. Replace front decker[cowl] panel.
19. Replace bonnet.
20. Replace wiper arms.

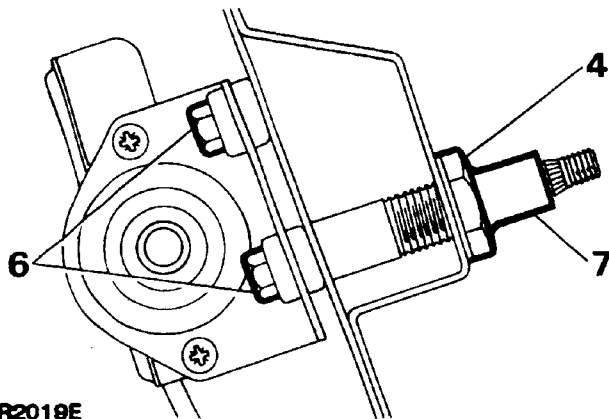


TAILGATE GLASS WIPER MOTOR

Service repair no - 84.35.12.

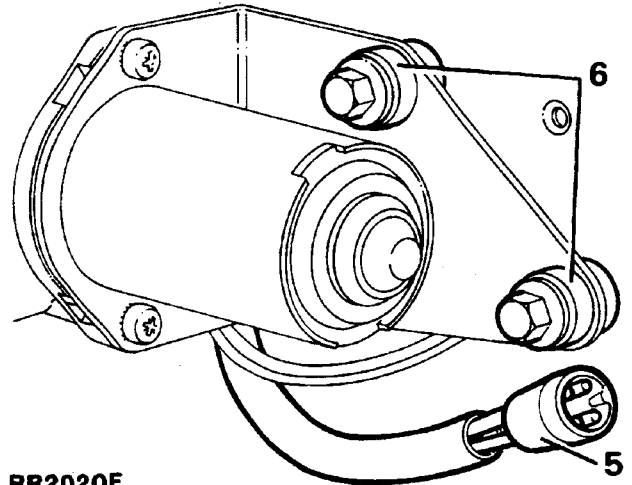
Remove

1. Disconnect battery negative lead.
2. Lower headlining rear section to access wiper motor assembly.
3. Remove wiper arm and blade.



RR2019E

4. Loosen nut securing wiper motor to body. **DO NOT** remove at this stage.



RR2020E

5. Disconnect electrical leads at multi-plug.
6. Remove two bolts securing wiper motor to inner body.
7. Support wiper motor remove nut loosened at instruction 4, complete with protective cover, washer and seal. Simultaneously withdraw wiper motor.

Refit

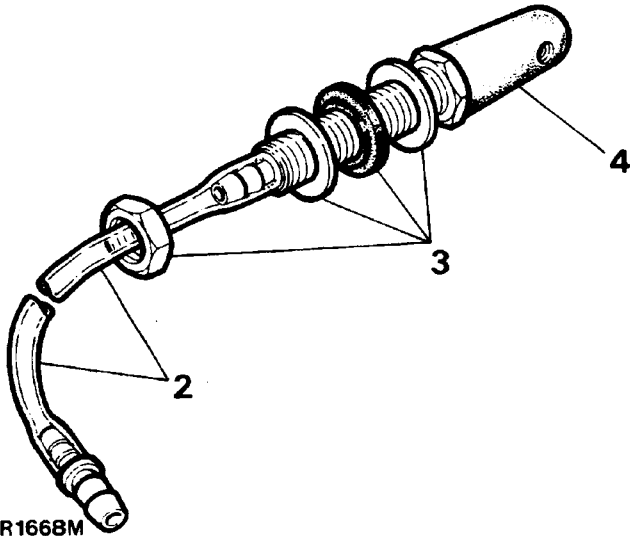
8. Reverse removal procedure. Ensuring that spacer is correctly positioned before fitting motor.

TAILGATE GLASS WASHER JET

Service repair no - 84.30.09

Remove

1. Lower or remove headlining rear section to gain access to jet securing nut and washer tube connection.



RR1668M

2. Disconnect washer tube. Remove grommet. Drain away water in tube to avoid damaging trim.
3. Hold base of jet and remove nut and washer.
4. Withdraw washer jet from outside vehicle.

Refit

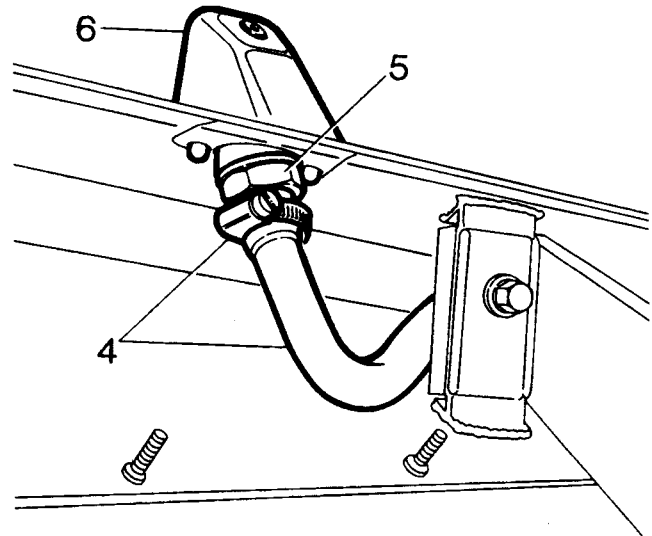
5. Reverse removal procedure.

HEADLAMP POWER WASH JET

Service repair no - 84.20.08.

Remove

1. Raise and support front of vehicle.
2. Remove engine undertray.
3. Remove front spoiler. *See CHASSIS AND BODY, Repair, Front Spoiler*



RR4181

4. Disconnect hose from power wash jet.
5. Remove nut securing jet to bumper.
6. Remove power wash jet.

Refit

7. Reverse removal procedure.



POWER WASH HOSE

Service repair no - 84.20.14

Remove

1. Disconnect hoses from jets and washer pump.
2. Release clamps locating hose.
3. Remove power wash hose.

Refit

4. Reverse removal procedure. Locating hose in its original position.