

EXTERIOR LIGHTS, DIRECTION INDICATORS,
HORN AND WINDSCREEN WIPERS
(Escort) 32A

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For Service and Repair Operations not listed here, please refer to the Escort/Orion '91 Service Microfiche.



TECHNICAL DATA

Exterior Lights, Direction Indicators, Horn and Windscreen Wipers

Headlamp alignment dimension "X"	16 cm/10 m = 0° 55' = 1,6 %
Front fog lamp alignment dimension "X"	26 cm/10 m = 1° 29' = 2,6 %

NOTE: On vehicles fitted with the headlamp levelling system the basic headlamp alignment must only be carried out in switch position "0".

Bulb Chart - Exterior Lights (12 V)

	<u>Wattage</u>	<u>Type/Fitting</u>
Headlamp - H4 (Halogen)	60/55	Retaining clip
Front fog lamp - H3 (Halogen)	55	Retaining clip
Auxiliary driving lamp - H3 (Halogen)	55	Retaining clip
Side lamp	4	Wedge base
Front indicator lamp	21	Bayonet fitting
Side indicator lamp	5	Wedge base
Rear light	5	Bayonet fitting
Brake light	21	Bayonet fitting
Reversing light	21	Bayonet fitting
Rear fog light	21	Bayonet fitting
Rear indicator lamp	21	Bayonet fitting
Licence plate lamp	10	Bayonet fitting

Tightening Torques

Bolts securing wiper motor to bracket *	.. ..	8 to 10
* Initial tightening when fitting a new wiper motor	.. ..	10 to 12
Bolts securing wiper motor bracket to bulkhead/tailgate	.. ..	6 to 8
Nuts securing pivot arm to driving spindle	.. ..	22 to 24
Wiper arm retaining nut (front and rear)	.. ..	16 to 20 **
Windscreen washer reservoir retaining bolts	.. ..	3
Headlamp retaining bolts	.. ..	5 to 6
Rear lamp retaining nuts	.. ..	2 to 3
Bolt securing horn to side member	.. ..	24 to 33
Wheelhouse cover retaining bolt	.. ..	0,7 to 0,9

** NOTE: Tighten the nut to the specified torque, wet the glass and operate the wipers at speeds 1 and 2 and then re-torque to the specified figure.

32 113 0 HEADLAMPS - ALIGN (A11)

Align the headlamps with optical beam-setting equipment, following the operating instructions provided by the equipment manufacturer. The vehicle must be standing on level ground. The vehicle and the beam-setting equipment must be lined up as specified by the equipment manufacturer.

NOTE: Before aligning the headlamps, check them for faulty lenses, reflectors and blackened bulbs and renew as necessary.

Headlamp alignment requirements:

Check the tyre pressures and rectify as necessary.

Bounce the front and rear of the vehicle several times or roll it a few metres to settle the suspension.

The vehicle must be unladen and have a full fuel tank. In addition, a person or alternatively a 75 kg weight must be in the driver's seat.

NOTE: On vehicles fitted with the headlamp levelling system, the basic headlamp alignment must only be carried out in switch position "0".

Headlamp dipped beam alignment:

Refer to Service Operation 32 113 0 in the Escort/Orion '91 Service Microfiche.

Front fog lamp alignment:

The same requirements apply as for aligning the headlamps. However, set the screen of the headlamp beam-setting equipment to the alignment setting "X" for fog lamps:

$$X = 26 \text{ cm}/10 \text{ m} - 1^\circ 29' = 2,6 \%$$

Switch on the fog lamps and align the beams as necessary by turning the adjusting screw, Fig.1.

Align the fog lamp beams so that the light/dark boundary touches the horizontal boundary line.

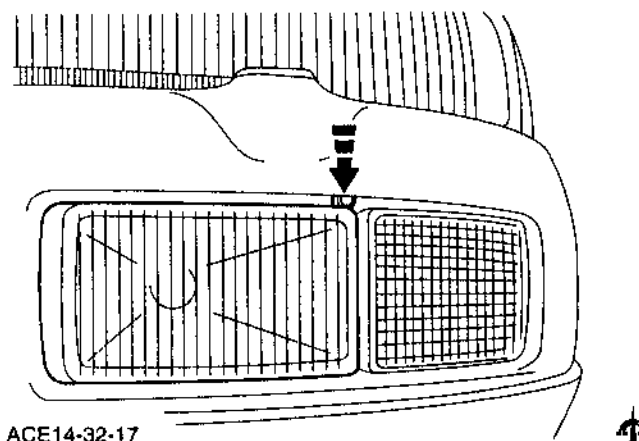


Fig.1. Fog lamp beam adjusting screw.

32 115 0 HEADLAMP ASSEMBLY - REMOVE AND INSTALL
(One Side)

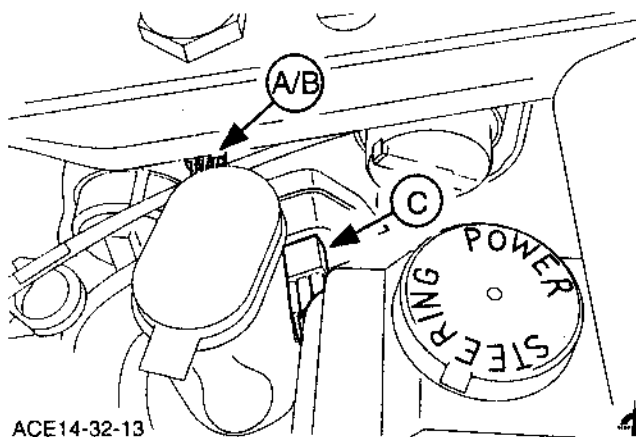
SPECIAL SERVICE TOOLS REQUIRED: NONE

To Remove

1. Remove the indicator lamp as indicated in Operation 32 225 0.
2. Remove the front fog lamp as indicated in Operation 32 281 0.
3. Working from the engine compartment, pull back and unhook the retaining spring of the side lamp (former direction indicator), pull it out towards the front and disconnect the multiplug.
4. Disconnect the multiplugs from the headlamp, auxiliary driving lamp and headlamp levelling motor, Fig.1.

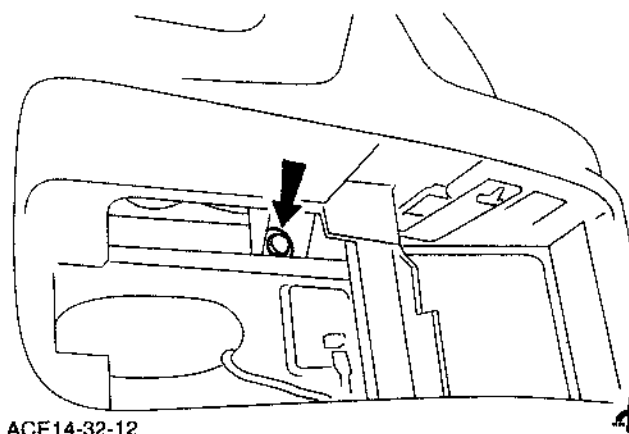
Fig.1. Multiplugs.

- A - Headlamp
- B - Auxiliary driving lamp
- C - Headlamp levelling motor



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Fig.1. Multiplugs.

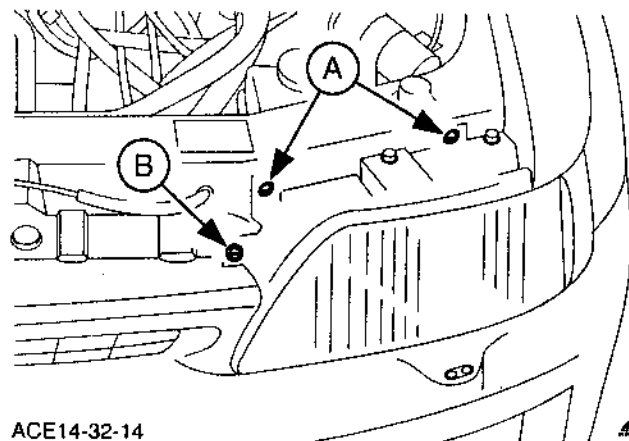


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Fig.2. Lower headlamp retaining bolt.

5. Unscrew the radiator grille retaining bolt, Fig.3.(B).
6. Unscrew the lower headlamp retaining bolt through the opening for the fog lamp, Fig.2, then unscrew the 2 upper retaining bolts, Fig.3.(A). Remove the headlamp assembly.
7. Pull the protective rubber cap off the headlamp and auxiliary driving lamp bulbs. Unhook the bulb retaining clip and remove the bulbs from the reflector. Turn the side lamp bulb holder anti-clockwise and pull it out.

NOTE: Do not touch the bulb glass with bare fingers.



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Fig.3. Retaining bolts.

- A - Headlamp
- B - Radiator grille

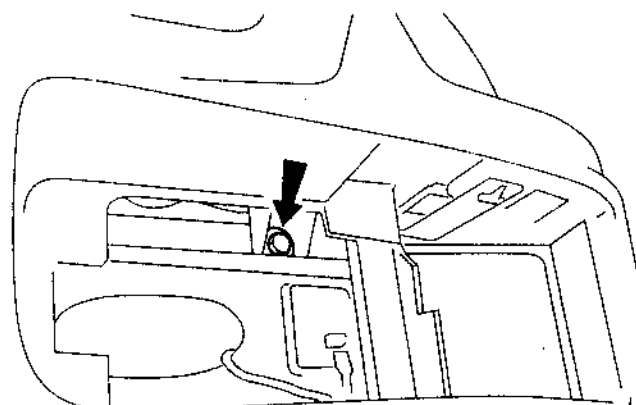
32 115 0

Exterior Lights, Direction Indicators, Horn and Windscreen Wipers

To Install

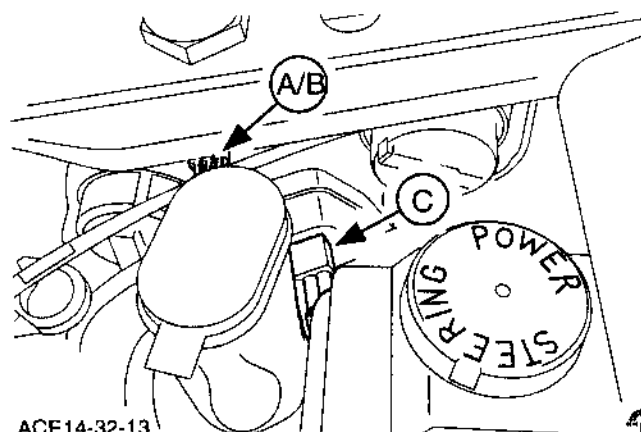
NOTE: Tighten to the torques specified in Technical Data.

8. Insert the bulbs in the new headlamp, secure them with the retaining clip and refit the protective rubber caps. Make sure the rubber caps are seated correctly.
9. Insert the headlamp assembly. The locating pin of the headlamp must be seated in the recess. Screw in the 2 upper headlamp retaining bolts and the single lower retaining bolt loosely, Fig.4.
10. Connect the multiplug.
Insert the 2 retaining lugs of the side lamp in the slots in the headlamp housing. Align the side lamp with the fender and attach the side lamp retaining spring.
11. Align the headlamp with the side lamp so that the upper and lower spacing ribs touch the side lamp. The gap between the headlamp and side lamp must be even. Tighten the 2 upper headlamp retaining bolts. Tighten the lower headlamp retaining bolt.
12. Screw in the radiator grille retaining bolt.
13. Connect the multiplugs of the headlamps, auxiliary driving lamp and headlamp levelling motor.
14. Install the fog lamp as indicated in Operation 32 281 0.
15. Install the indicator lamp as indicated in Operation 32 225 0.
16. Check the operation of the headlamp, auxiliary driving lamp and fog lamp and align the beams as indicated in Operation 32 113 0 in the Escort/Orion '91 Service Microfiche or this Section.



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Fig.4. Lower headlamp retaining bolt.



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Fig.5. Multiplugs.

- A - Headlamp
- B - Auxiliary driving lamp
- C - Headlamp levelling motor



Exterior Lights, Direction Indicators, Horn and Windscreen Wipers

32 225 0 INDICATOR ASSEMBLY - FRONT - REMOVE
AND INSTALL (One)

SPECIAL SERVICE TOOLS REQUIRED: NONE

To Remove

1. Insert a small insulated screwdriver at the top between the indicator and the retaining clip, Fig.1. Press the retaining clip up, Fig.2.(A), and pull out the indicator lamp.

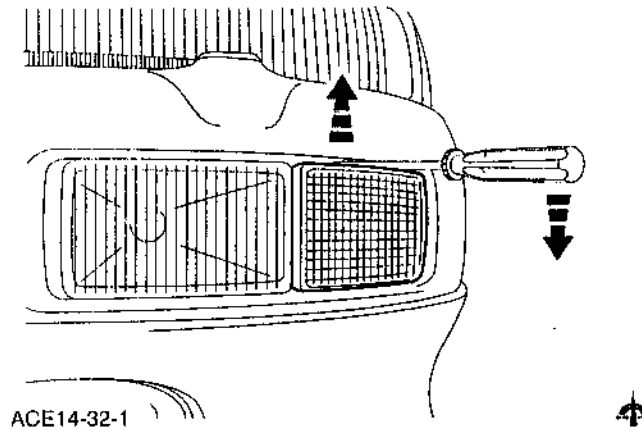


Fig.1. Remove indicator lamp.

2. Turn the bulb holder anti-clockwise and remove it from the housing, Fig.2.(B).

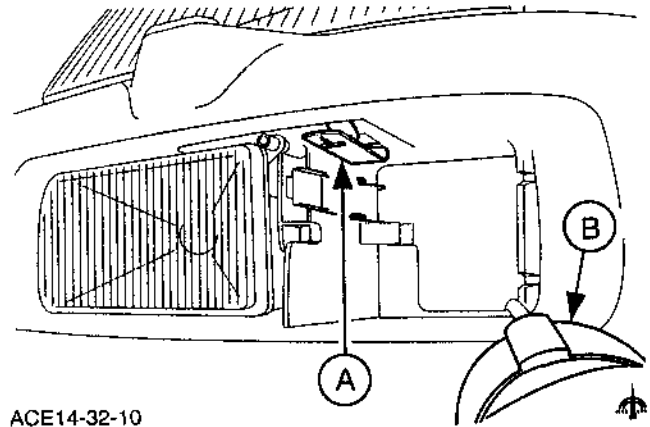


Fig.2. Indicator lamp removed.
A - Retaining clip
B - Bulb holder

To Install

3. Insert the indicator bulb holder and secure it by turning it clockwise.

4. Guide the indicator lamp into the bumper until the retaining clip engages.

5. Check the operation of the indicator lamp.

32 281 0 LAMP ASSEMBLY - FOG - REMOVE AND
INSTALL (One)

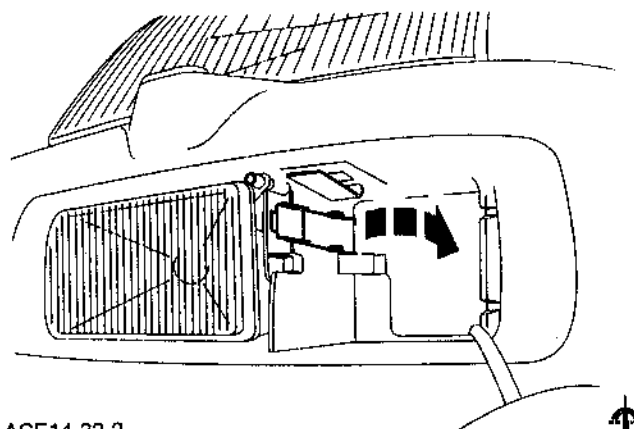
SPECIAL SERVICE TOOLS REQUIRED: NONE

To Remove

1. Remove the indicator lamp as indicated in Operation 32 225 0.
2. Swing the spring clip to the rear, Fig.1.
3. Swivel the fog lamp out on the spring clip side and pull it forwards.
4. Detach the bulb holder and remove the fog lamp.

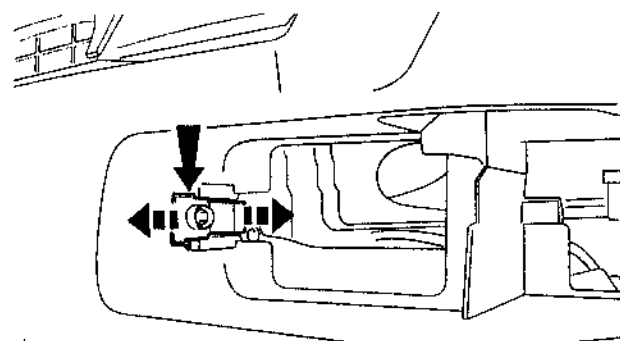
To Install

5. Remove the locating clip, Fig.2, and fit it on the fog lamp locating pin, Fig.3.
6. Fit the bulb holder.
7. Insert the fog lamp with the locating clip first.
8. Attach the spring clip to the body. Attach the fog lamp and swing it back into place.
9. Fit the indicator lamp as indicated in Operation 32 225 0.
10. Check the operation of the fog lamp and align the beams as indicated in Operation 32 113 0.



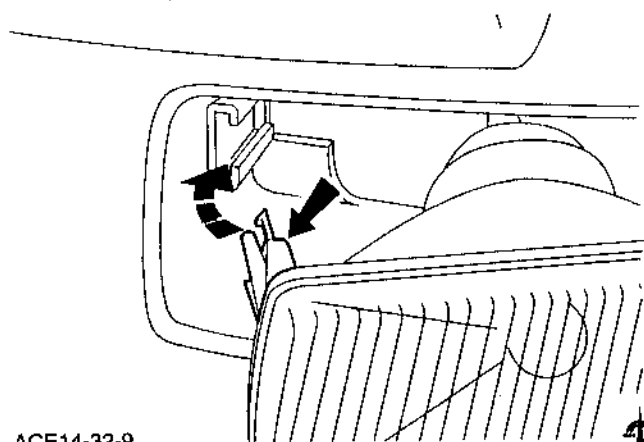
ACE14-32-2

Fig.1. Swing spring clip to the rear.



ACE14-32-11

Fig.2. Remove locating clip.



ACE14-32-9

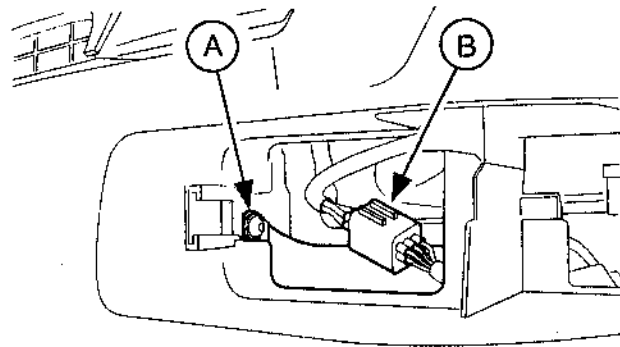
Fig.3. Locating clip fitted to fog lamp.

32 622 0 RESERVOIR - WINDSCREEN WASHER -
REPLACE

SPECIAL SERVICE TOOLS REQUIRED: NONE

To Remove

1. Drain the windscreen washer reservoir.

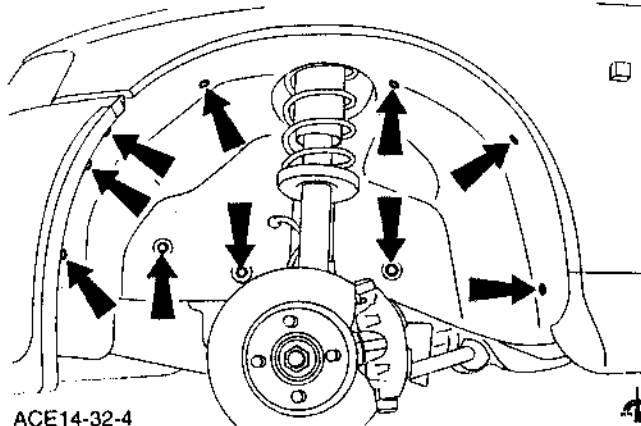


ACE14-32-3

2. Remove the left-hand indicator lamp as indicated in Operation 32 225 0.

Fig.1. A - Reservoir retaining bolt
B - Multiplug of windscreen washer and headlamp washer pumps

3. Remove the left-hand fog lamp as indicated in Operation 32 281 0.

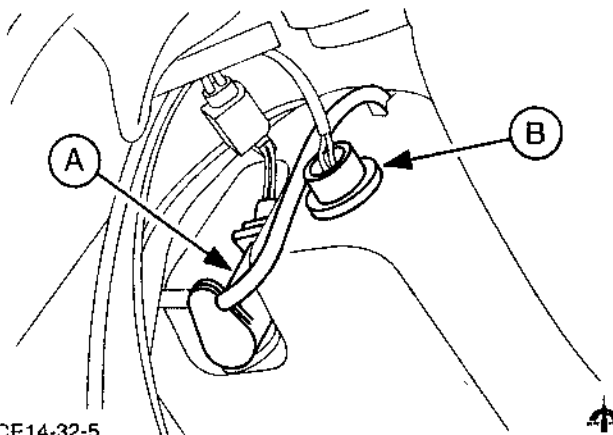


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Fig.2. Wheelhouse cover retaining bolts.

4. Working through the opening for the fog lamp, unscrew 1 reservoir retaining bolt and disconnect the multiplug from the windscreen washer and headlamp washer pumps, Fig.1.

5. Remove the left-hand wheelhouse cover: unscrew the 10 Torx bolts and remove the wheelhouse cover, Fig.2.



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Fig.3. A - Windscreen washer pump
B - Switch for low fluid level

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Exterior Lights, Direction Indicators, Horn and Windscreen Wipers

7. Prise the headlamp wash pump out from above, Fig.4.

8. Unclip and release the hoses and wiring from the guides on the reservoir. Working from the wheelhouse, unscrew the 2 reservoir retaining bolts, Fig.5, and remove the reservoir.

9. Prise out the 3 rubber grommets.

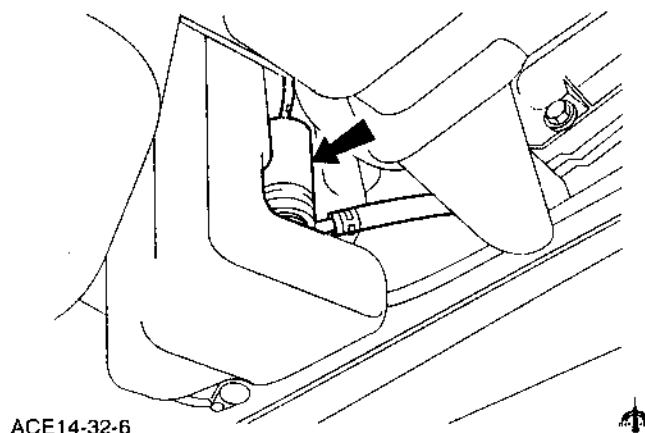


Fig.4. Headlamp wash pump.

To Install

NOTE: Tighten to the torques specified in Technical Data.

10. Insert the 3 rubber grommets.

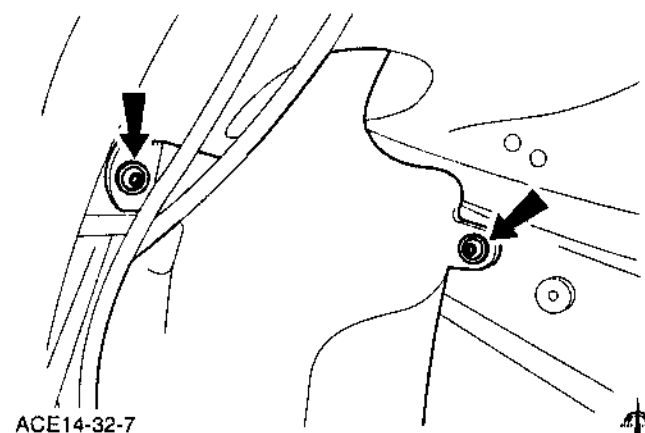
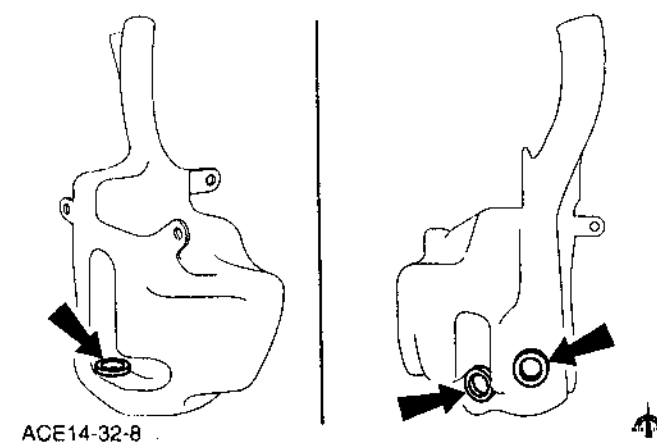


Fig.5. Reservoir retaining bolts in wheelhouse.

11. Locate the reservoir in position, working from the wheelhouse, screw in and tighten the 2 retaining bolts, Fig.5. Run the wiring and hoses in the guides on the reservoir and clip them in place securely or secure them with adhesive tape.

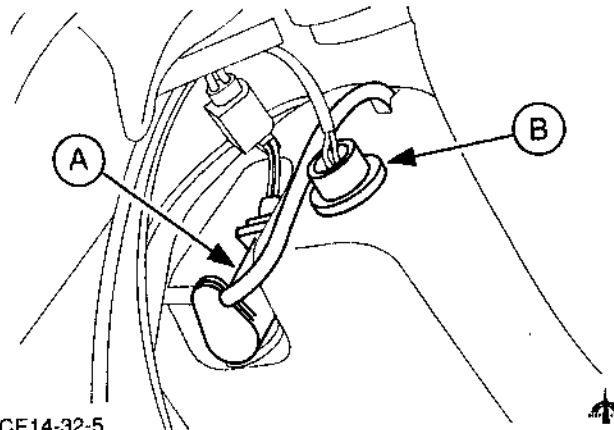
12. Insert the headlamp wash pump, Fig.4.


Fig.6. Rubber grommets.
(reservoir removed)

32 622 0

Exterior Lights, Direction Indicators, Horn and Windscreen Wipers

13. Insert the windscreen washer pump and the switch for low fluid level, Fig.7.

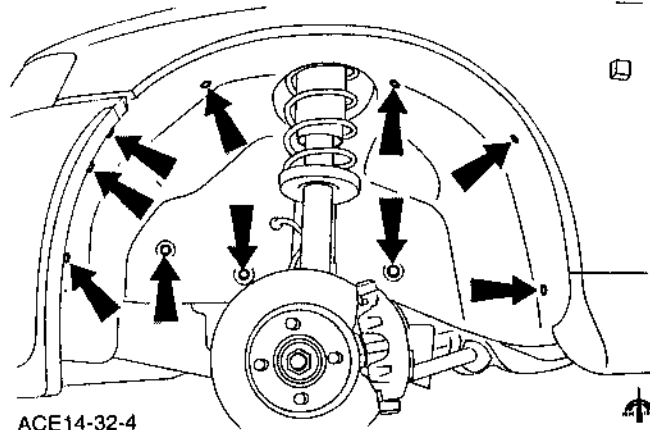


ACE14-32-5

Fig.7. A - Windscreen washer pump
B - Switch for low fluid level

14. Fit the wheelhouse cover, Fig.8.

15. Screw in the third reservoir retaining bolt and connect the multiplug, Fig.9.

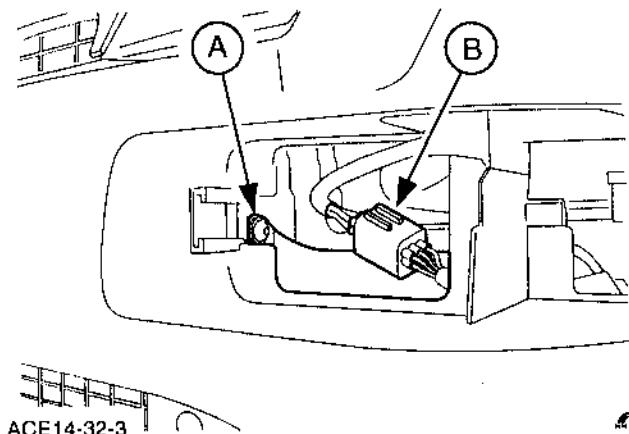


ACE14-32-4

Fig.8. Wheelhouse cover retaining bolts.

16. Fit the fog lamp as indicated in Operation 32 281 0.

17. Fit the indicator lamp as indicated in Operation 32 225 0.



ACE14-32-3

Fig.9. A - Reservoir retaining bolt
B - Multiplug of windscreen and headlamp washer pumps

18. Fill the reservoir and check the operation of the windscreen and headlamp washers.

32 624 0 PUMP - WINDSCREEN WASHER - REMOVE AND INSTALL

SPECIAL SERVICE TOOLS REQUIRED: NONE

To Remove

1. Drain the windscreen washer reservoir.
2. Disconnect the multiplug from the windscreen washer pump, Fig.1.(A).
3. Disconnect the hoses from the windscreen washer pump, Fig.1.(B).
4. Withdraw the pump from the reservoir.
5. Prise the rubber grommets out of the reservoir.

To Install

6. Fit the rubber grommet in the reservoir.
7. Insert the pump.
8. Connect the hoses to the pump.
9. Connect the multiplug to the pump.
10. Fill the windscreen washer reservoir and check the operation of the windscreen washers.

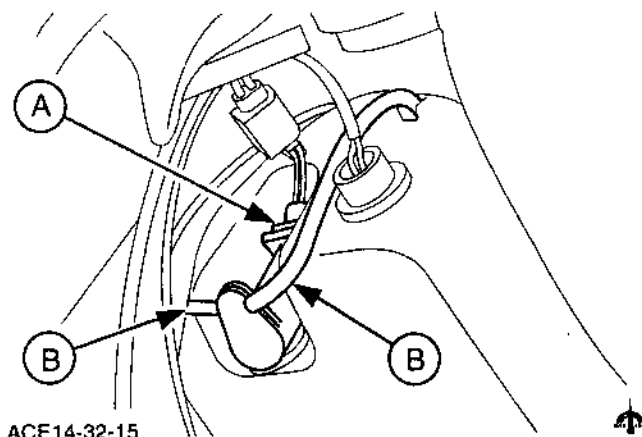


Fig.1. Windscreen washer pump.
A - Multiplug
B - Hoses

32 676 0 PUMP - HEADLAMP WASH - REMOVE AND INSTALL

SPECIAL SERVICE TOOLS REQUIRED: NONE

To Remove

1. Drain the windscreen washer reservoir.
2. Disconnect the multiplug from the headlamp wash pump, Fig.1.(A).
3. Disconnect the hose from the headlamp wash pump, Fig.1.(B).
4. Withdraw the pump from the reservoir.
5. Prise the rubber grommets out of the reservoir.

To Install

6. Fit the rubber grommet in the reservoir.
7. Fit the pump.
8. Connect the hose to the pump.
9. Connect the multiplug to the pump.
10. Fill the windscreen washer reservoir and check the operation of the headlamp washers.

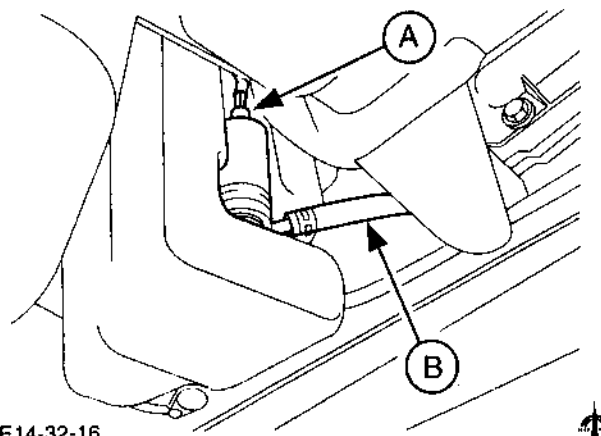


Fig.2. Headlamp wash pump.
A - Multiplug

