

LIGHTING

GROUP

17

(13000)

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VEHICLE APPLICATION

Taurus/ Sable and Taurus SHO.

DESCRIPTION AND OPERATION

Headlamps, Aerodynamic

The aerodynamically styled headlamp system uses replaceable halogen bulbs. A burned out bulb may be replaced without removing the headlamp body.

CAUTION: Do not interchange halogen headlamp bulbs with conventional bulbs.

DESCRIPTION AND OPERATION (Continued)

Daytime Running Lamps

Canadian Vehicles Only

The Daytime Running Lamp (DRL) system is designed to turn the high-beam headlamps of the vehicle on, with a reduced light output and without illuminating the high-beam indicator in the instrument panel when the following conditions are met:

- The ignition switch is in the RUN position.
- The parking brake is fully released.
- The headlamp system is in the OFF position.

The DRL system incorporates a module and bracket assembly located on the LH fender apron, directly under the battery. The wiring is connected to the 14290 wiring assembly, and is routed through a hole in front of the battery. The DRL output cannot be measured using most multi-meters nor, can the DRL module be adjusted.

The instrument panel lamp circuit is routed through a rheostat, which is controlled by rotating the thumbwheel.

A dome lamp switch is also a part of the rheostat switch. It is actuated by rotating the thumbwheel to the extreme up position. The courtesy lamps are also illuminated by the switch in the pillar when the doors are opened.

Refer to the headlamp switch diagnosis procedure before attempting to replace the headlamp switch.

Headlamps ON Warning Chime

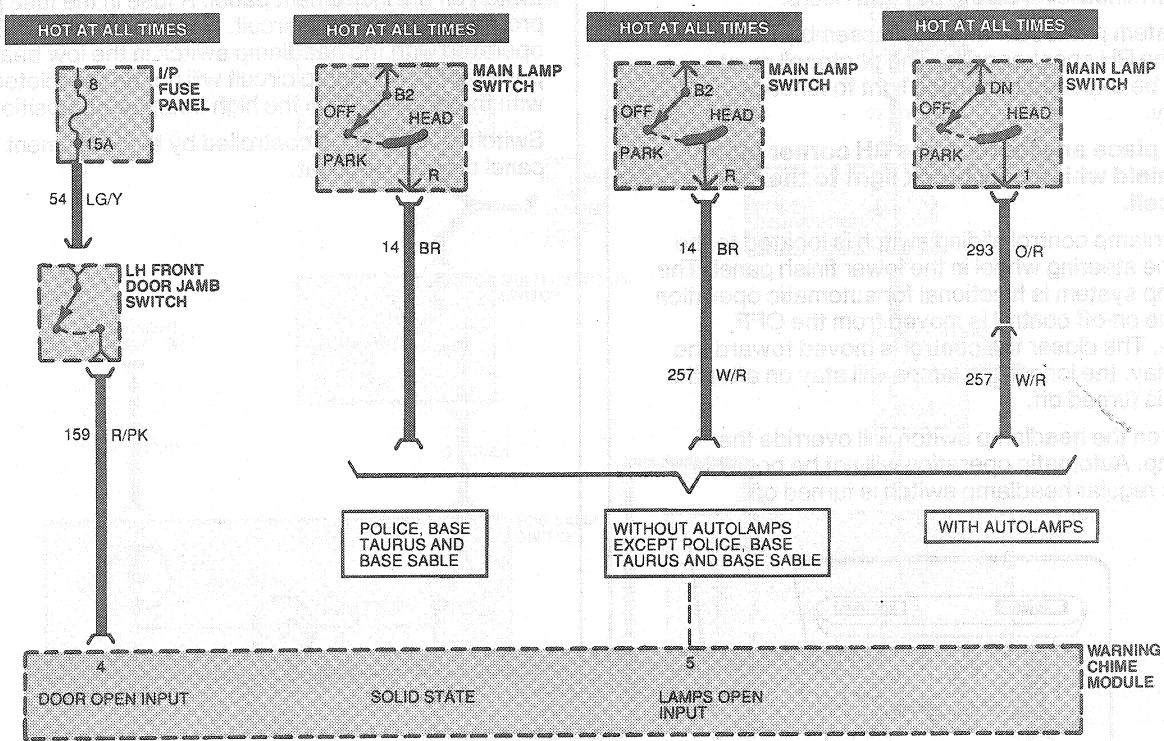
The warning chime will sound when the LH front door is opened with the headlamp switch on, and will continue until the door is closed or the headlamp switch is turned off.

Headlamp and Dimmer Switch

A combination three-position lighting switch, mounted in the instrument panel, controls circuits to the headlamps, parking lamps / marker lamps, tail lamps, license plate lamp, courtesy lamp, instrument panel lamps and ash receptacle lamps. A fuse panel protects all lamps described above except headlamps. A separate circuit breaker in the switch protects the headlamps. Refer to Section 18-01 for location of fuse and circuit breaker.

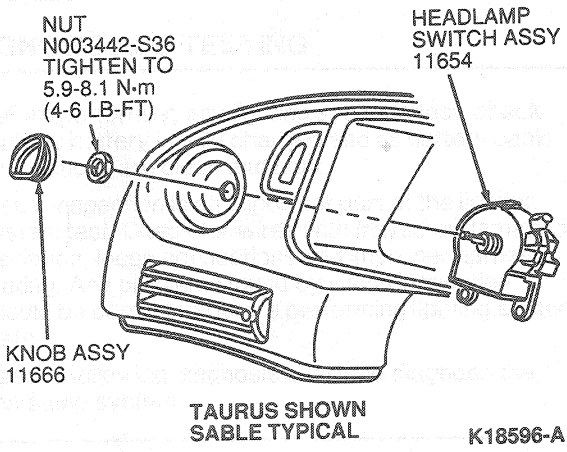
DESCRIPTION AND OPERATION (Continued)

When the headlamp switch is on and the LH front door is opened, power is supplied through Circuits 159 and 257 to the warning chime.



See EVTm for more details of this circuit

K17184-A



K18596-A

Headlamp Delay System—Autolamp

The autolamp system provides light sensitive automatic on-off control of the exterior lamps normally controlled by the regular headlamp switch. This system also provides increased visibility for occupants leaving the vehicle. The autolamp system keeps the lamps on for a preselected period of time after the ignition is turned off. The preselected time lapse can be adjusted by the operator up to approximately 3 minutes.

The system consists of a light sensitive photocell / amplifier assembly, one dual-coil relay, and a time-delay control which includes an ON/OFF switch. Connections to the vehicle lamps parallel the regular headlamp switch connections, requiring the headlamp switch be turned to the OFF position for the automatic control feature.

DESCRIPTION AND OPERATION (Continued)

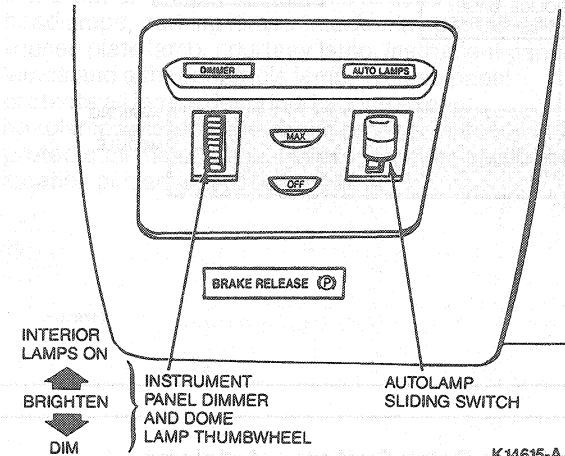
In normal operation, the system will turn the exterior lamps on when the natural outside light available to the photocell decreases below a predetermined level, such as at sunset. Also, the lamps will automatically turn off when the level of outside light exceeds a predetermined level during daylight hours.

The system photocell / amplifier assembly is mounted under the RH speaker grille. The photocell must always be exposed to outside light to function properly.

Do not place any items in the RH corner of the windshield which may block light to the photocell.

The autolamp control sliding switch is located to the left of the steering wheel in the lower finish panel. The autolamp system is functional for automatic operation when the on-off control is moved from the OFF position. The closer the control is moved toward the max-delay, the longer the lamps will stay on after the ignition is turned off.

Turning on the headlamp switch will override the autolamp. Automatic operation will not be possible until the regular headlamp switch is turned off.

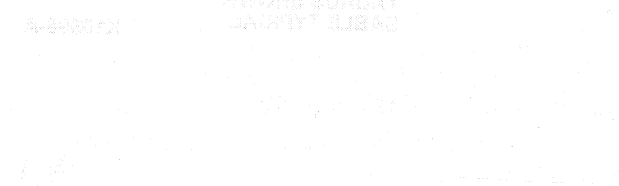
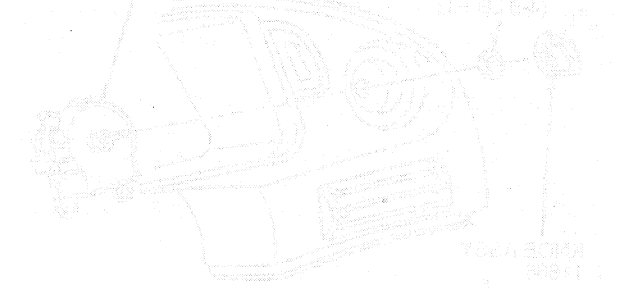
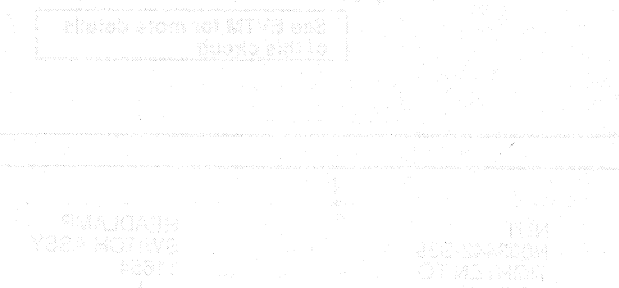
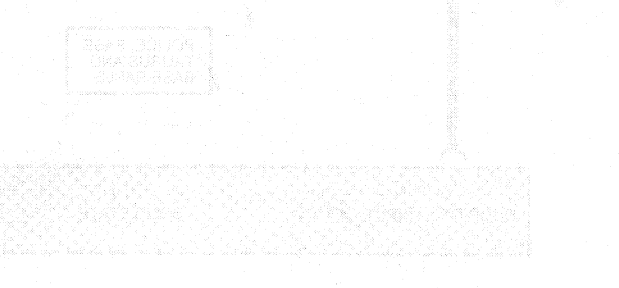
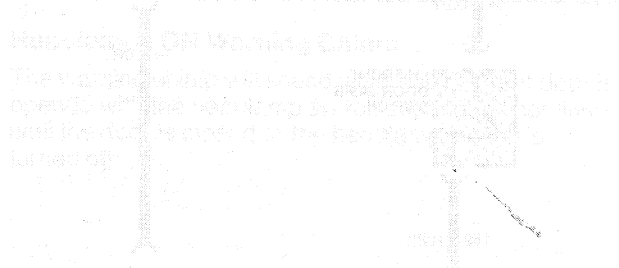


Fog Lamp and Switch

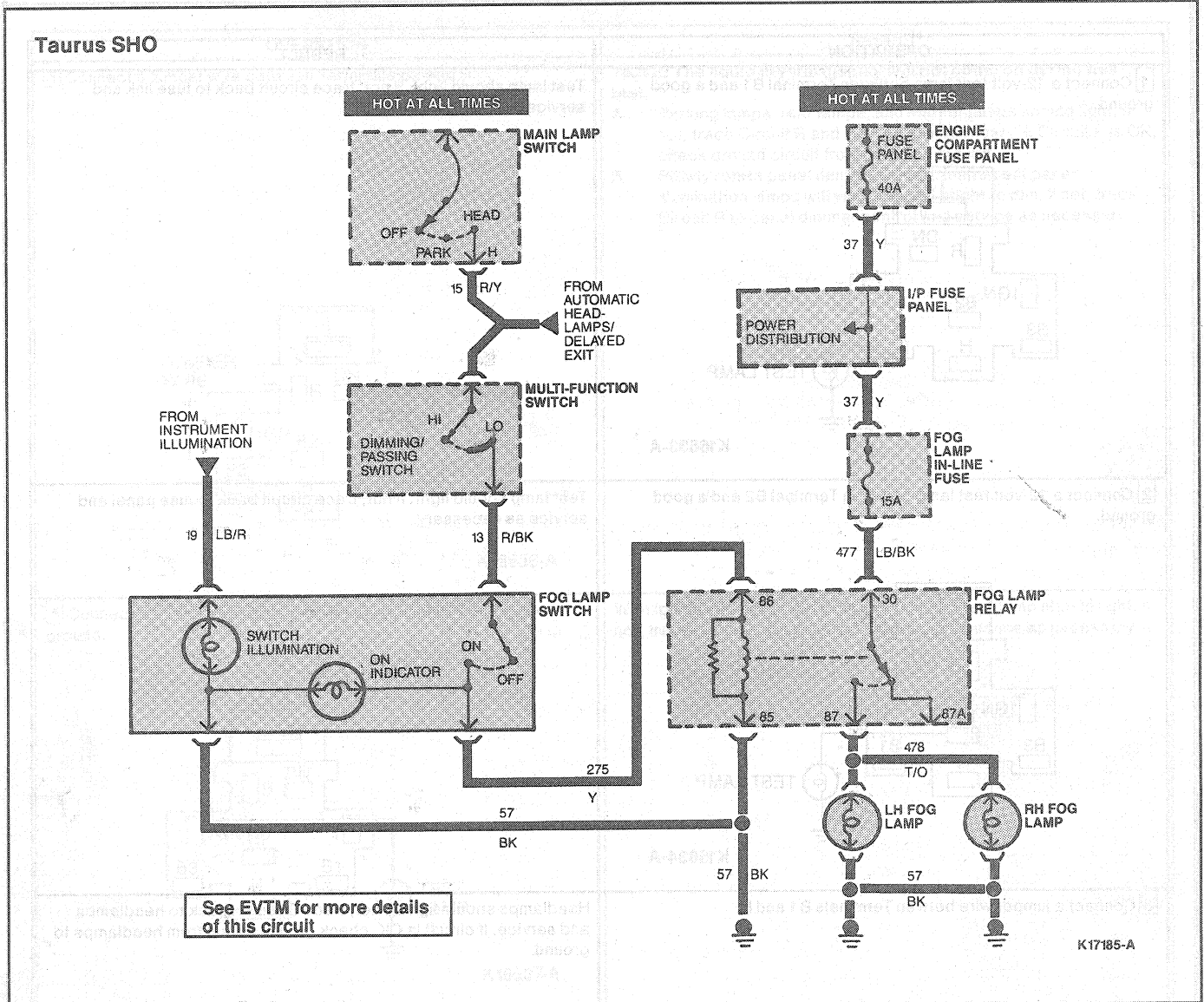
Taurus SHO

The fog lamp assembly is mounted to the front bumper fascia. The lamp circuit is controlled by a push button switch on the instrument panel. A fuse in the fuse panel protects the fog lamp circuit. Fog lamps can only be operated with the headlamp switch in the low beam position. The fog lamp circuit will not be completed with the headlamps in the high beam or off positions.

Switch illumination is controlled by the instrument panel dimmer rheostat.



DESCRIPTION AND OPERATION (Continued)



DIAGNOSIS AND TESTING

Before performing any lighting systems test, check that the battery is fully charged and all battery cable connections are clean and tight.

Visual inspection is an important part of the lighting system test. Check for wires with frayed or damaged insulation, loose connections and improper harness routing. Any problems found by visual inspection should be corrected before performing lighting system tests.

Use the following diagnosis charts to diagnose the headlamp system.

Headlamp Switch Connector Checkout

1. Replace burned out bulbs and fuses before proceeding.

2. A 12-volt test lamp and jumper wire will be required.
3. When necessary to trace and /or service the various circuits, refer to the respective vehicle wiring diagrams.
4. Terminal identification used on connector checkout procedure corresponds with actual identification on headlamp switch.
5. Perform checks in sequence as shown.

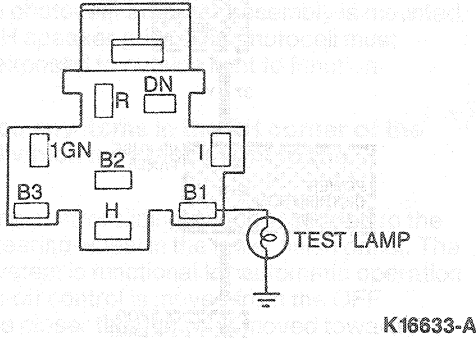
DIAGNOSIS AND TESTING (Continued)

OPERATION

RESULT

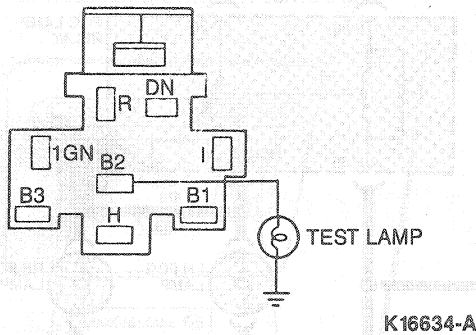
1 Connect a 12-volt test lamp between Terminal B1 and a good ground.

Test lamp should light. If not, trace circuit back to fuse link and service as necessary.



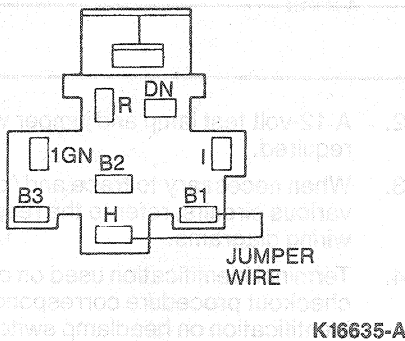
2 Connect a 12-volt test lamp between Terminal B2 and a good ground.

Test lamp should light. If not, trace circuit back to fuse panel and service as necessary.



3 Connect a jumper wire between Terminals B1 and H.

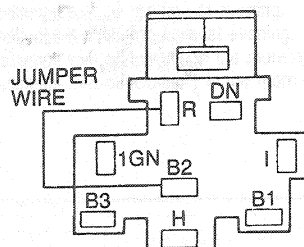
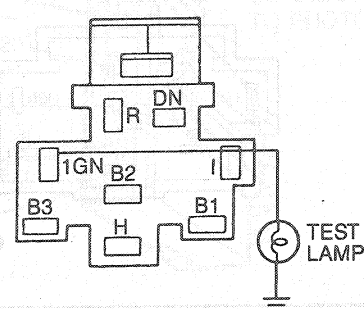
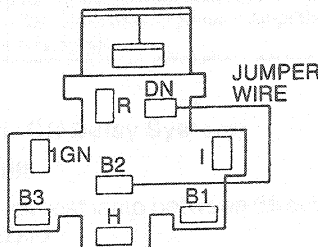
Headlamps should light. If not, trace Circuit H back to headlamps and service. If circuit is OK, check ground circuit from headlamps to ground.



(Continued)

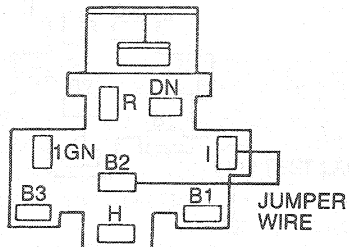
DIAGNOSIS AND TESTING (Continued)

DIAGNOSIS AND TESTING (Continued)

OPERATION	RESULT
<p>4. Connect a jumper wire between Terminals B2 and R.</p>  <p style="text-align: center;">K16636-A</p>	<p>NOTE: The liquid crystal display will not come on during this test.</p> <p>A. Parking lamps, rear lamps, and marker lamps should light. If not, trace Circuit R and service as necessary. If Circuit R is OK, check ground circuit from lamps to ground.</p> <p>B. Slowly rotate panel dimmer control. Instrument panel illumination lamps will vary from full bright to dim. If not, trace Circuit R to panel dimmer control and service as necessary.</p>
<p>5. Connect a 12-volt test lamp between Terminal 1GN and a good ground.</p>  <p style="text-align: center;">K16637-A</p>	<p>With ignition switch in the RUN position, the test lamp should light. If not, trace circuit back to ignition switch and service as necessary.</p>
<p>6. Connect a jumper wire between Terminals B2 and DN.</p>  <p style="text-align: center;">K16638-A</p>	<p>NOTE: No other instrument panel lamps will light during this test. Liquid crystal display lamps only, should come on full bright. If cluster lamps do not light, trace Circuit DN back to lamps and service as necessary. If Circuit is OK, check ground circuit from lamps to ground.</p>

(Continued)

DIAGNOSIS AND TESTING (Continued)

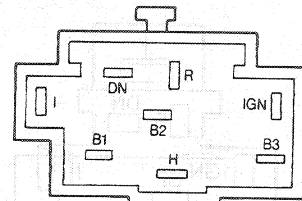
OPERATION	RESULT
<p>7 Connect a jumper wire between Terminals B2 and I.</p> <div style="text-align: center;">  <p>K16639-A</p> </div>	<p>NOTE: The liquid crystal displays will not light during this test. Instrument panel illumination lamps only, should come on, full bright. If panel lamps do not light, trace I circuit back to lamps and service as necessary. If circuit is OK, check ground circuit from lamps to ground.</p>

TK12574B

CONTINUITY TEST FOR HEADLAMP SWITCH

NOTE: A self-powered test lamp or ohmmeter will be required. Terminal identification used in test procedure corresponds to that on headlamp switch.

Switch Terminals	Switch Positions		
	Off	Park	Headlamp
B1 to H	No Cont.	No Cont.	Continuity
B2 to R	No Cont.	Continuity	Continuity
DN to 1GN	Continuity	No Cont.	No Cont.
DN to I	No Cont.	Continuity	Continuity
B1 to B3	Continuity	Continuity	Continuity
All Other Terminals	No Cont.	No Cont.	No Cont.



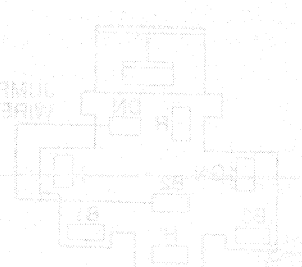
CK7422-B

Headlamp Delay System

Quick Checks

1. Make sure photocell lens of photo amplifier unit is clean and unobstructed.
2. Make sure there is a clean, tight ground connection for Circuit 57 from the potentiometer control unit at headlamp switch.

3. Make sure that headlamps operate normally from the manual headlamp switch.
4. Remember, it is normal to have a slight delay between turning the switch on or off (or covering or uncovering the photo unit lens) and the response of the headlamps.



DIAGNOSIS AND TESTING (Continued)

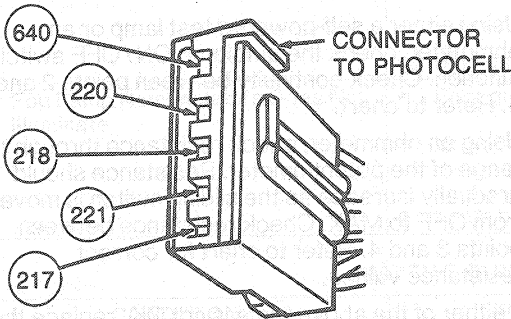
5. Make sure that autolamp relay connector is properly attached to relay.

CONDITION	RESOLUTION
<ul style="list-style-type: none"> • The autolamp system will not operate. • The autolamp system will not delay long enough after the vehicle has been shut down. 	<p>Problems resulting from Operator Error are caused by failure to follow operating procedure or sequence requirements that have been designed into the AUTOLAMP (ON/OFF DELAY SYSTEM).</p>
<p>SYMPTOMS AND QUICK CHECKS OF THE ELECTRICAL SYSTEM CONDITIONS:</p> <ul style="list-style-type: none"> • Headlamps do not turn on when it gets dark outside. • Headlamps turn on too late at evening. • Headlamps turn on too early at evening. • Headlamps turn off too late in the morning. • Headlamps turn off too early in the morning. 	<p>QUICK CHECKS:</p> <ul style="list-style-type: none"> • Place autolamp control in the OFF position. Turn on headlamps using standard headlamp switch control. • If headlamps do not operate, check out and correct the standard headlamp circuit. • If headlamp operation is OK using the standard headlamp switch, check the autolamp fuse. If the fuse is OK, proceed with a complete checkout procedure. • Refer to autolamp amplifier adjustment.

CK4062-E

Autolamp Connector (On/Off Delay System)

CIRCUIT NUMBERS



K4861-E

CIRCUIT	WIRE COLOR CODE
640	R/Y (Ignition)
220	P/O (Autolamp Sensor Amplifier to Control Switch)
218	W/P (Autolamp Sensor Amplifier to Relay)
221	O/W (Headlamp Switch to Autolamp Sensor Amplifier)
217	DB/O (Autolamp Sensor Amplifier to Rheostat)

TK4861E

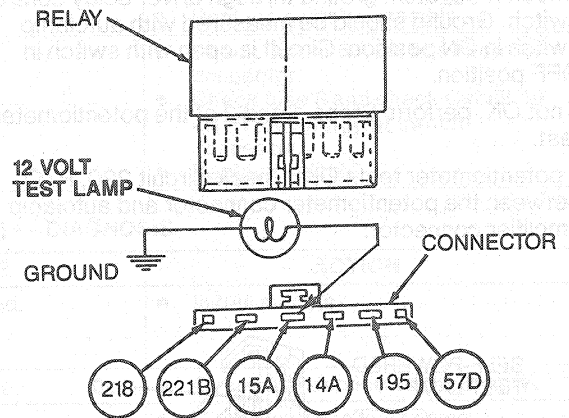
Autolamp (On/Off Delay System)

Test and Result

Connect a 12 volt test lamp between Circuit 15A, R/Y and a good ground.

With manual headlamp switch in PARK or full ON position, voltage should be measured at autolamp relay connector Circuit 15A, R/Y. This checks for correct wiring to tail lamp circuit.

If not OK, check continuity of Circuit 15A, R/Y between the autolamp relay connector and the common point with the rear lamp circuit.



K18598-A

Headlamp Circuit

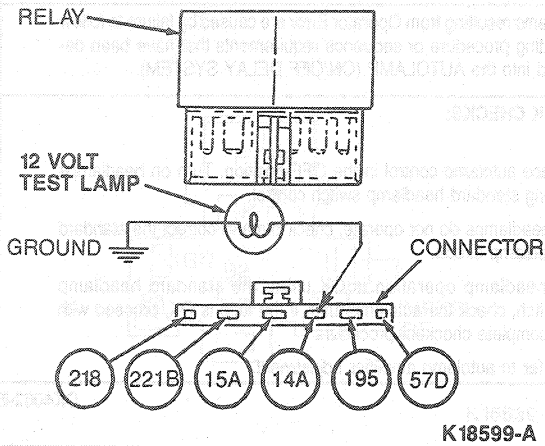
Test and Result

Connect a 12 volt test lamp between Circuit 14A, BR and a good ground.

With manual headlamp switch in full ON position, voltage should be measured at autolamp relay connector. This checks for correct wiring to headlamp Circuit 14A, BR.

DIAGNOSIS AND TESTING (Continued)

If not OK, check continuity of Circuit 14A, BR between the headlamp switch connector and the autolamp relay connector.



On-Off Control Switch

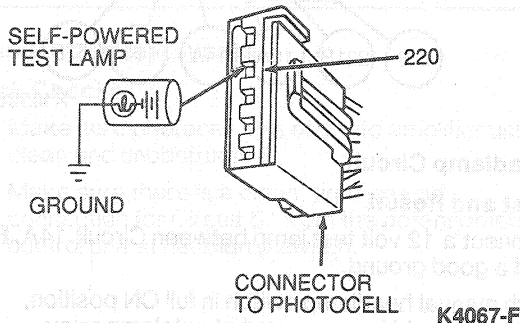
Test and Result

Connect a self-powered test lamp between Circuit 220, P/O and a good ground.

Check for system ground through driver delay control switch. Ground should be measured with autolamp switch in ON position. Circuit is open with switch in OFF position.

If not OK, perform Steps 1 and 2 of the potentiometer test.

If potentiometer tests OK. Check Circuit 220, P/O between the potentiometer connector and autolamp amplifier connector.



Delay Control Potentiometer

Test and Result

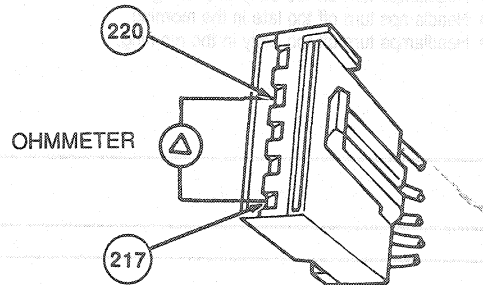
Connect an ohmmeter between Circuits 217, DB/O and 220, P/O.

Test for continuity to driver delay control with control in MAXIMUM delay position. Reading should be approximately 200,000 ohms.

If not OK, perform Step 3 of the potentiometer test. If potentiometer tests OK, check Circuit 217, DB/O between potentiometer connector and autolamp amplifier connector.

If potentiometer test not OK, replace the potentiometer assembly.

If all of the proceeding tests check out OK, and the autolamp (On / Off delay) system is malfunctioning. The autolamp amplifier is the cause of the problem. It will be necessary to replace the amplifier assembly.

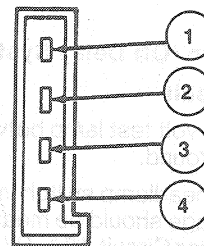


1. Using either a self-powered test lamp or an ohmmeter, check the autolamp ON / OFF switch function. Check continuity between points 2 and 4. Refer to chart.
2. Using an ohmmeter, check resistance through the range of the potentiometer. Resistance should gradually increase as the sliding switch is moved from OFF to MAX. Check resistance between points 3 and 4. Refer to chart for correct resistance values.
3. If either of the above tests is not OK, replace the potentiometer assembly.

FRONT VIEW



REAR VIEW



K12897-C

DIAGNOSIS AND TESTING (Continued)

Resistance	3 and 4	In Detent (Off Position) In Max. ON Position	2.5 Ohms to 4.5K Ohms 140K Ohms to 250K Ohms
On / Off	2 and 4	In Detent (OFF Position) Any Position Out of Detent	No Continuity Continuity—Zero Ohms

Taurus SHO

TROUBLESHOOTING FOG LAMP SYSTEM

CONDITION	POSSIBLE SOURCE	ACTION
<ul style="list-style-type: none"> Fog Lamps Do Not Operate 	<ul style="list-style-type: none"> Worn, damaged or malfunctioning switch. No voltage to fog lamps. 	<ul style="list-style-type: none"> If indicator light is also out, check fuse 7 and Circuit 477, LB/BK. If indicator light works, check Circuit 478, T/O.
<ul style="list-style-type: none"> Only One Fog Lamp Illuminates 	<ul style="list-style-type: none"> Open in circuit. 	<ul style="list-style-type: none"> Check bulb. Check for voltage at inoperative fog lamp. Check continuity of Circuit 57, BK to ground.
<ul style="list-style-type: none"> Fog Lamp Indicator Does Not Operate, Fog Lamps Do Operate 	<ul style="list-style-type: none"> Poor ground circuit. No voltage to lamp. Bulb burned out. 	<ul style="list-style-type: none"> Check fog lamp switch Circuit 57, BK for continuity. Check fuse 7 and check for voltage at switch connector Circuit 477, LB/BK. Replace switch assembly.
<ul style="list-style-type: none"> Fog Lamp Nomenclature Does Not Illuminate 	<ul style="list-style-type: none"> Poor ground circuit. No voltage to lamp. Lamp burned out. 	<ul style="list-style-type: none"> Check Circuit 57, BK at switch connector. Check fuse 8 and check Circuit 19 LB/R for voltage at switch connector. Replace switch.

DAYTIME RUNNING LAMP (DRL) — DIAGNOSIS

CONDITION	POSSIBLE SOURCE	ACTION
With ignition in Run, parking brake fully released, and the headlamp switch Off or in the parking lamp position:	<ul style="list-style-type: none"> DRL module is not installed. 	<ul style="list-style-type: none"> Install module.
<ul style="list-style-type: none"> High beams are not on at all 	<ul style="list-style-type: none"> Poor connection at module. 	<ul style="list-style-type: none"> Check and service as necessary.
<ul style="list-style-type: none"> High beam indicator ON 	<ul style="list-style-type: none"> Open or shorted wiring. 	<ul style="list-style-type: none"> Check wiring to low beams.
<ul style="list-style-type: none"> High beams are on at FULL intensity 	<ul style="list-style-type: none"> Damaged DRL module. 	<ul style="list-style-type: none"> Check for 12 volts to Pins 2 (Circuit 640, R/Y) and 4 (Circuit 296, W/P) of connector.
<ul style="list-style-type: none"> Cornering lamps are on at reduced intensity when using turn signal 	<ul style="list-style-type: none"> Multi-function switch is in high beam position. This is expected for NON AutoLamp / AutoDim vehicles. 	<ul style="list-style-type: none"> Check parking brake switch, the wire to the switch should not be grounded. Replace module. None required.
With ignition OFF, parking brake fully released, and the headlamp switch Off or in the parking lamp position: <ul style="list-style-type: none"> High beams are on at reduced intensity 	<ul style="list-style-type: none"> Damaged ignition switch. Shorted wiring. Damaged DRL module. 	<ul style="list-style-type: none"> Check the ignition switch and replace as necessary. Check Pin 2 (Circuit 640, R/Y) on DRL connector. If 12 volts exists, service wiring. Check Pin 2 (Circuit 640 R/Y) on DRL connector. If 12 volts does not exist, replace DRL module.

DIAGNOSIS AND TESTING (Continued)

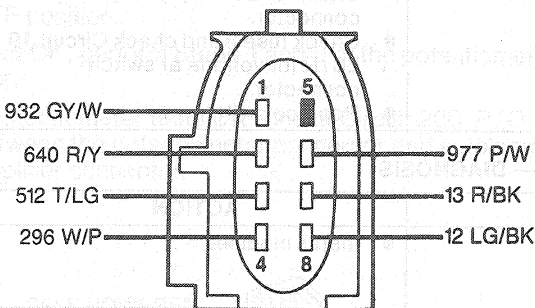
DAYTIME RUNNING LAMP (DRL) — DIAGNOSIS (Continued)

CONDITION	POSSIBLE SOURCE	ACTION
With ignition in RUN, parking brake applied, and the headlamp switch Off or in the parking lamp position: ● High beams are on at reduced intensity	● Open wiring or poor ground. ● Damaged parking brake switch. ● Damaged DRL module.	● Check wiring and connections between DRL module and parking brake switch (Pin 6 Circuit 977, P/W). ● Check switch and replace as necessary. ● Replace as necessary.
With headlamp switch On: ● High beams are on at reduced intensity	● Damaged headlamp switch. ● Damaged DRL module.	● Remove module. If no headlamps, refer to Headlamp Switch Diagnosis. ● Remove module. If headlamps are on, replace module.
With headlamps in the high beam position: ● High beams on, but there is not an indicator in instrument panel	● Burned out bulb. ● Open in wiring. ● Damaged DRL module.	● Check and replace as necessary. ● Check wiring and connections between DRL module and the indicator lamp. ● Place a jumper wire between Pins 1 (Circuit 932, GY/W) and 8 (Circuit 12, LG/BK) in the DRL connector. If indicator turns On, replace the DRL module.

TK14672C

Daytime Running Lamp (DRL) Module Harness Connector

NOTE: Prior to beginning test, turn ignition off, apply parking brake and turn off all lamps (including autolamp and auto dim).



K18592-A

DAYTIME RUNNING LAMP (DRL) WIRING — DIAGNOSIS

Test Step	Voltage by Pin Number
1. Disconnect module.	Pin 4 should be 12 volts. Pins 1, 2, 3, 6, 7 and 8 should be 0 volts.
2. Start vehicle.	Pins 2, 3 and 4 should be 12 volts. Pins 1, 6, 7 and 8 should be 0 volts.
3. Release parking brake.	Pins 2, 3 and 4 should be 12 volts. Pins 1, 6, 7 and 8 should be 0 volts.
4. Turn on headlamps (LO beams).	Pins 2, 3, 4 and 7 should be 12 volts. Pins 1, 6 and 8 should be 0 volts.
5. Turn on headlamps (HI beams).	Pins 2, 3, 4 and 8 should be 12 volts. Pins 1, 6, and 7 should be 0 volts.
6. Connect Pins 1 and 8.	Pins 1, 2, 3, 4, and 8 should be 12 volts. The HI beam indicator should be illuminated. Pins 6 and 7 should be 0 volts.

(Continued)

DIAGNOSIS AND TESTING (Continued)

DAYTIME RUNNING LAMP (DRL) WIRING — DIAGNOSIS (Cont'd)

Test Step	Voltage by Pin Number
7. Connect Pins 3 and 6.	Pins 1, 2, 3, 4, 6 and 8 should be 12 volts. The HI beam indicator should be illuminated. Pin 7 should be 0 volts.
8. Apply parking brake.	Pins 1, 2, 4 and 8 should be 12 volts. The HI beam indicator should be illuminated. Pins 3, 6 and 7 should be 0 volts.

TK14673B

HEADLAMP SWITCH DIAGNOSIS

CONDITION	POSSIBLE SOURCE	ACTION
<ul style="list-style-type: none"> ● Headlamps Do Not Work Park and Tail Lamps OK 	<ul style="list-style-type: none"> ● Open or shorted wiring. ● Poor ground connections. ● Damaged dimmer switch. ● Damaged DRL relay. ● Damaged headlamp switch. 	<ul style="list-style-type: none"> ● Check wiring and connections between power source and headlamp switch and between headlamp switch and lamps. Service as necessary. ● Check and service as necessary. ● Check dimmer switch, replace if necessary. ● Refer to DRL diagnosis. ● Check headlamp switch, replace if necessary.
<ul style="list-style-type: none"> ● All Exterior Lamps Do Not Work 	<ul style="list-style-type: none"> ● Open or shorted wiring. ● Damaged headlamp switch. 	<ul style="list-style-type: none"> ● Check wiring and connections between power source and headlamp switch and between headlamp switch and dash panel connector. ● Check headlamp switch, replace if necessary.
<ul style="list-style-type: none"> ● Headlamps Flash On and Off 	<ul style="list-style-type: none"> ● Shorted circuit. ● Overloaded headlamp switch. ● Damaged headlamp switch. ● Damaged terminals. 	<ul style="list-style-type: none"> ● Check wiring and connections between headlamp switch and headlamps. ● Check headlamp load. ● Replace headlamp switch. ● Service /replace damaged terminals.
<ul style="list-style-type: none"> ● All Exterior Lamps Do Not Work Headlamps OK 	<ul style="list-style-type: none"> ● Blown Fuse. ● Open wiring or poor ground. ● Damaged headlamp switch. 	<ul style="list-style-type: none"> ● Replace fuse. ● Check wiring and connections between power source and headlamp switch and between headlamp switch and lamps. Service as necessary. ● Check headlamp switch, replace if necessary.
<ul style="list-style-type: none"> ● Instrument Panel Lamps Do Not Work or Will Not Dim 	<ul style="list-style-type: none"> ● Blown fuse. ● Open or shorted wiring. ● Damaged headlamp switch. 	<ul style="list-style-type: none"> ● Replace fuse. ● Check wiring between headlamp switch and lamps. ● Check headlamp switch, replace if necessary.
<ul style="list-style-type: none"> ● Dome Lamps Will Not Work 	<ul style="list-style-type: none"> ● Blown fuse. ● Open or shorted wiring. ● Damaged instrument panel dimmer switch. 	<ul style="list-style-type: none"> ● Replace fuse. ● Check wiring and connections between headlamp switch and dome lamp and between headlamp switch and fuse panel. ● Check headlamp switch, replace if necessary.

TK10723C

DIAGNOSIS AND TESTING (Continued)

ELECTRICAL — LAMPS

CONDITION	POSSIBLE SOURCE	ACTION
Headlamps		
● All Exterior Lamps Do Not Light	<ul style="list-style-type: none"> ● Loose wiring connections. ● Open wiring. ● Damaged headlamp switch. 	<ul style="list-style-type: none"> ● Check and secure connection at headlamp switch and dash panel connector. ● Check power to and from headlamp switch. Service as necessary. ● Replace headlamp switch.
● One Headlamp Does Not Work	<ul style="list-style-type: none"> ● Loose connection. ● Bad ground. ● Bulb burned out. ● Corroded or damaged connector. 	<ul style="list-style-type: none"> ● Secure connection at headlamp. ● Check ground at headlamp. ● Replace bulb. ● Replace as required.
● All Headlamps Out. Park and Tail Lamps OK	<ul style="list-style-type: none"> ● Loose connections. ● Damaged dimmer switch. ● Damaged headlamp switch. ● Open wiring or poor ground. 	<ul style="list-style-type: none"> ● Check and secure connections at dimmer switch and headlamp switch. ● Check dimmer switch operation. Inspect for corroded connector. Replace if necessary. ● Replace if necessary. ● Service as necessary.
Tail Lamps		
● One Tail Lamp Out	<ul style="list-style-type: none"> ● Bulb burned out. ● Open wiring or poor ground. ● Corroded bulb socket. 	<ul style="list-style-type: none"> ● Replace bulb. ● Service as necessary. ● Service or replace socket.
● All tail lamps, park lamps, and instrument panel lamps out—headlamps OK	<ul style="list-style-type: none"> ● Blown fuse in fuse panel. ● Loose connections. ● Open wiring. ● Damaged headlamp switch. 	<ul style="list-style-type: none"> ● Service as necessary. ● Secure wiring connections where accessible. ● Service as necessary. ● Service headlamp switch.
Backup Lamps		
● Backup Lamps — One Does Not Function	<ul style="list-style-type: none"> ● Blown fuse in fuse panel. ● Bulb burned out. ● Loose connections. ● Open wiring. 	<ul style="list-style-type: none"> ● Replace fuse. ● Replace bulb. ● Tighten connectors. ● Service as necessary.
● Both Lamps Do Not Function	<ul style="list-style-type: none"> ● Fuse burned out. ● Backup lamp switch out of adjustment. ● Damaged backup lamp switch. ● Loose connections. ● Open wiring. 	<ul style="list-style-type: none"> ● Check a circuit that shares the same fuse. Replace fuse. ● Adjust switch. ● Replace switch. ● Tighten connectors. ● Service as required.
Parking Lamps		
● One Parking Lamp Does Not Light	<ul style="list-style-type: none"> ● Loose connections. ● Bulb burned out. ● Open wiring or poor ground. 	<ul style="list-style-type: none"> ● Tighten connections. ● Replace bulb. ● Check for corroded socket. Service as required.
● Both Parking Lamps Do Not Light	<ul style="list-style-type: none"> ● Loose connections. ● Open wiring. ● Bulbs burned out. 	<ul style="list-style-type: none"> ● Tighten connections. ● Check for corroded socket. Service as required. ● Replace bulbs.
Front Side Marker Lamps		
● Front Side Marker Lamp Does Not Light—Tail Lamps OK	<ul style="list-style-type: none"> ● Loose connections. ● Bulb burned out. ● Open wiring. 	<ul style="list-style-type: none"> ● Tighten connections. ● Replace bulb. ● Check socket for corrosion and good ground. Service as required.
Stoplamps		

DIAGNOSIS AND TESTING (Continued)

ELECTRICAL — LAMPS (Continued)		
CONDITION	POSSIBLE SOURCE	ACTION
● Stoplamps Do Not Light	<ul style="list-style-type: none"> ● Fuse burned out. ● Problem in turn signal circuit or switch. ● Loose connections. ● Stoplamp switch inoperative. ● Open wiring. 	<ul style="list-style-type: none"> ● Replace fuse or CB. If device blows again, check for short circuit. ● Service turn signal circuit or replace turn signal. ● Secure connections at stoplamp switch. ● Replace stoplamp switch. ● Service as required.
● Hi-Mount Stoplamp Out	<ul style="list-style-type: none"> ● Bulb burned out. ● Open wiring or poor ground. ● Corroded bulb socket. 	<ul style="list-style-type: none"> ● Replace bulb. ● Service as necessary. ● Service or replace socket.
Turn Signal Lamps		
● One or More Lamps Inoperative	<ul style="list-style-type: none"> ● Bulb burned out. ● Loose connections. ● Open wiring. ● Turn signal switch inoperative. 	<ul style="list-style-type: none"> ● Replace bulb. ● Secure connections. ● Service as required. ● Replace turn signal switch.
● All Lamps Inoperative	<ul style="list-style-type: none"> ● Fuse burned out. ● Turn signal flasher inoperative. ● Loose connections. ● Open wiring. ● Turn signal switch inoperative. 	<ul style="list-style-type: none"> ● Replace fuse or CB. If device blows again, check for short circuit. ● Replace flasher. ● Tighten connections. ● Service as required. ● Replace turn signal switch.
Hazard Flasher Lamps		
● Lamps Do Not Flash	<ul style="list-style-type: none"> ● Turn signal operation improper. ● Fuse burned out. ● Hazard flasher inoperative. ● Open wiring. ● Hazard flasher switch inoperative. 	<ul style="list-style-type: none"> ● Service turn signal system. ● Replace fuse. If fuse blows again, check for a short circuit. ● Replace flasher. ● Service as required. ● Service or replace the turn signal switch assembly, which includes the hazard flasher switch.

TK18605A

REMOVAL AND INSTALLATION

Headlamp Assembly

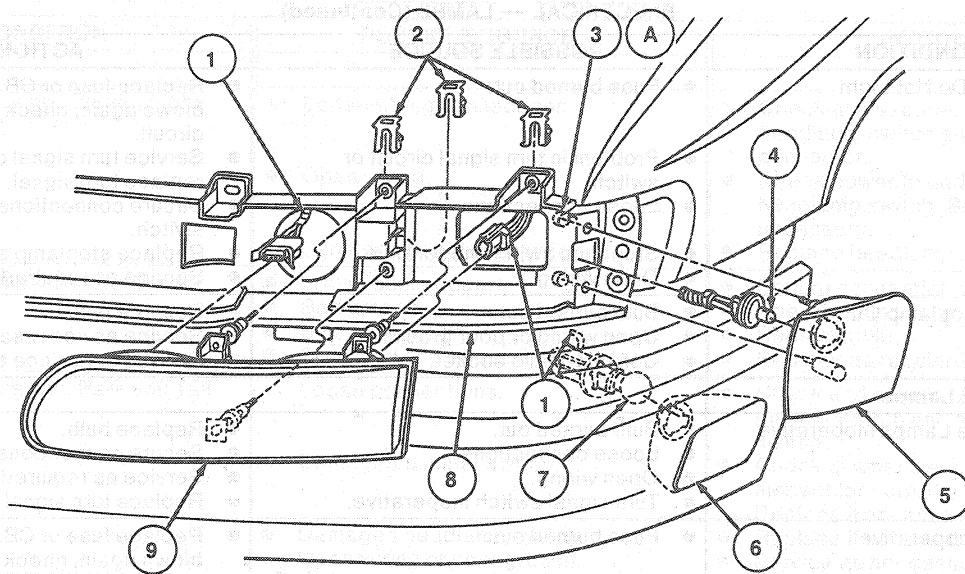
WARNING: THE REPLACEABLE HALOGEN HEADLAMP BULB CONTAINS GAS UNDER PRESSURE. THE BULB MAY SHATTER IF THE GLASS ENVELOPE IS SCRATCHED OR THE BULB IS DROPPED. HANDLE BULB CAREFULLY. GRASP BULB ONLY BY ITS PLASTIC BASE. AVOID TOUCHING GLASS ENVELOPE. KEEP BULB OUT OF REACH OF CHILDREN.

Removal and Installation

NOTE: The headlamp on this vehicle does not need replacement when the bulb burns out. Refer to Bulb Replacement, in this Section, for removal and installation of headlamp bulb.

1. Position headlamp switch in the OFF position.
2. Remove electrical connector from headlamp bulb by grasping wires firmly and snapping connector rearward.
3. Remove park / turn lamp bulb and connector.
NOTE: Use snap ring pliers to spread the retainer.
4. Remove three retainers attaching headlamp to grille opening panel.
5. To install, reverse Removal procedure.
6. Aim headlamp as outlined.

REMOVAL AND INSTALLATION (Continued)



K16709-A

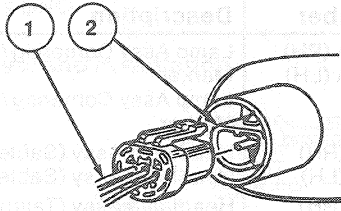
Item	Part Number	Description
1	14290	Wiring Assy
2	13N020	Headlamp Retainer (6 Req'd)
3A	N62 1906-S54	Nut (4 Req'd)
4	13465	Side Marker Bulb Assy (2 Req'd)
5	15A424 (RH) 15A425 (LH)	Front Side Marker Lamp Assy

Item	Part Number	Description
6	—	Cornering Lamp, Part of Bumper Assy
7	13465	Cornering Lamp Bulb Assy (2 Req'd)
8	—	Grille Opening Panel
9	13005 (RH) 13006 (LH)	Headlamp Assy
A		Tighten to 5.2-7.2 N·m (47-63 Lb·In)

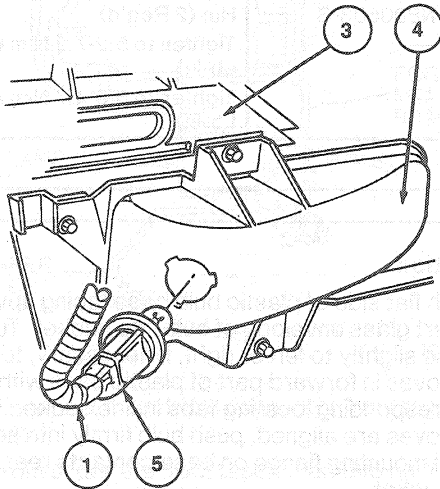
(Continued)

REMOVAL AND INSTALLATION (Continued)

Taurus Except SHO



VIEW SHOWING INSTALLATION OF WIRING ASSY TO HEADLAMP ASSY

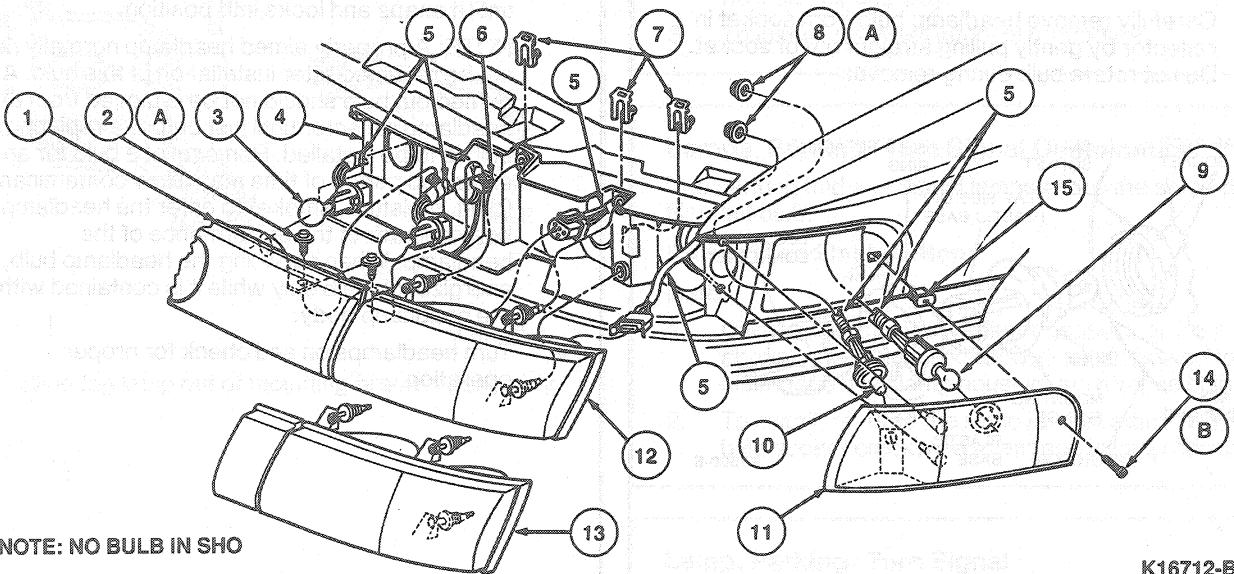


RH CORNERING LAMP SHOWN
LH TYPICAL

K12990-D

Item	Part Number	Description
1	14290	Wiring Assy
2	13005 (RH) 13006 (LH)	Headlamp Assy
3	—	Bumper Assy
4	—	Cornering Lamp Assy
5	—	Cornering Lamp Socket Assy

Sable and Taurus SHO



NOTE: NO BULB IN SHO

K16712-B

REMOVAL AND INSTALLATION (Continued)

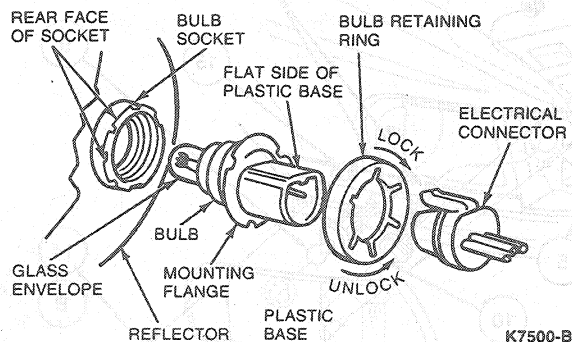
Item	Part Number	Description
1	13A278A	Lamp Assy Parking Inner (Sable)
2A	N606676-S55	Screw (4 Req'd)
3	13465A	Bulb Assy Parking (4 Req'd)
4	—	Grille Opening Panel Reinforcement
5	14290	Wiring Assy for Continuation
6	N623332-S100	Nut (4 Req'd) (Sable)
7	13N020-A	Retainer/Headlamp (6 Req'd)
8A	N621905-S54	Nut (4 Req'd)
9	13465A	Bulb Assy Cornering (2 Req'd)
10	13465A	Bulb Assy Cornering / Side Marker (2 Req'd)

(Continued)

Item	Part Number	Description
11	15A201A (RH) 15A202A (LH)	Lamp Assy Cornering / Side Marker Lamp Assy Cornering / Side Marker
12	13005A (RH) 13006A (LH)	Headlamp Assy (Sable) Headlamp Assy (Sable)
13	13005B (RH) 13006B (LH)	Headlamp Assy (Taurus SHO) Headlamp Assy (Taurus SHO)
14B	55999-S45	Screw
15	N800503-S	Nut (2 Req'd)
A	—	Tighten to 5.2-7.2 N·m (47-63 Lb·In)
B	—	Tighten to 0.8-1.7 N·m (7-15 Lb·In)

Bulb Replacement, Headlamp**Removal**

1. Make sure headlamp switch is in OFF position.
2. Lift hood and locate bulb installed in rear of headlamp body.
3. Remove electrical connector from bulb by grasping wires firmly and snapping connector rearward.
4. Remove bulb retaining ring by rotating counterclockwise (when viewed from rear) about one-eighth turn and sliding ring off plastic base. Keep ring as it may be used again to retain new bulb.
5. Carefully remove headlamp bulb from socket in reflector by gently pulling straight out of socket. Do not rotate bulb during removal.

**Installation**

1. With flat side of plastic bulb base facing upward, insert glass envelope of bulb into socket. Turn base slightly to left or right, if necessary, to align grooves in forward part of plastic base with corresponding locating tabs inside socket. When grooves are aligned, push bulb firmly into socket until mounting flange on base contacts rear face of socket.
2. Slip bulb retaining ring over rear of plastic base against mounting flange. Lock ring into socket by rotating ring clockwise. A stop will be felt when retaining ring is fully engaged.
3. Push electrical connector into rear of plastic base until it snaps and locks into position.

NOTE: A properly aimed headlamp normally need not be re-aimed after installation of this bulb. A burned out bulb should not be removed from the headlamp reflector until just before a replacement bulb is to be installed. Removal of a bulb for an extended period of time may allow contaminants (dust, moisture, smoke) to enter the headlamp body and affect the performance of the headlamp. When servicing the headlamp bulb, energize the bulb only while it is contained within the headlamp body.

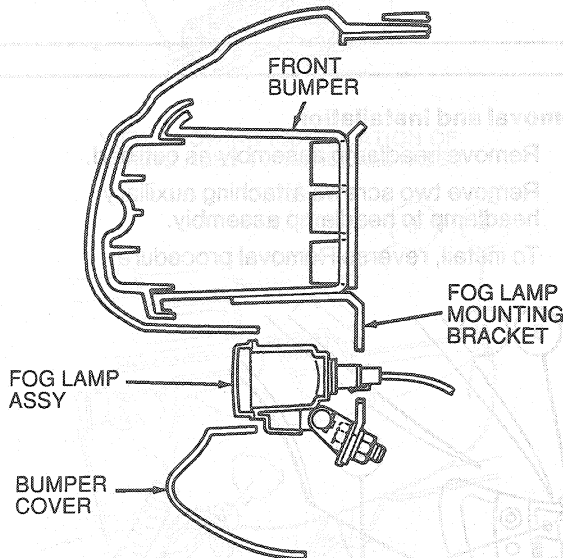
4. Turn headlamps on and check for proper operation.

REMOVAL AND INSTALLATION (Continued)

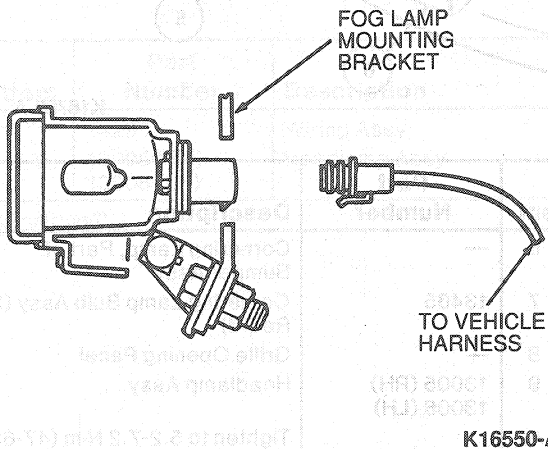
Fog Lamp Assembly

Taurus SHO

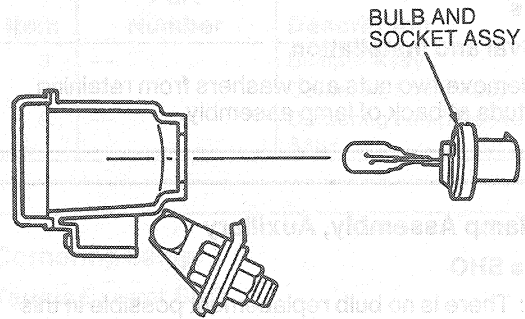
Removal and Installation



1. Disconnect electrical connector from fog lamp bulb.
2. From under the front fascia, remove nut retaining lamp to mounting bracket.



3. Slide fog lamp out of mounting bracket assembly.



4. If replacing fog lamp mounting bracket remove screw retaining bracket to bumper and retain bracket and screw for transfer of parts.
5. To install, reverse Removal procedure. Check fog lamp operation.

Bulb Assembly

Removal and Installation

NOTE: If performing bulb replacement only, it is not necessary to remove mounting bracket or lamp assembly.

1. Disconnect wiring connector from fog lamp bulb.
2. Rotate bulb and socket to remove from lamp.

CAUTION: Grasp bulb and socket by its plastic base only. Do not touch glass part of bulb.

NOTE: Socket assembly is indexed and can only be installed one way.

3. To install, reverse Removal procedure.

Lamps, Parking / Turn Signal Combination

The parking and turn signal lamps share the same dual filament bulb.

Removal and Installation

Bulb

1. Using access hole in radiator support, or from above, rotate bulb socket counterclockwise to disengage from lamp housing and remove bulb.
2. To install, reverse the removal procedure. Rotate bulb socket clockwise to engage in lamp housing.

Lamp, Parking / Turn Signal

The parking / turn signal lamp is part of the headlamp assembly. Refer to Headlamp for removal and installation.

REMOVAL AND INSTALLATION (Continued)

Side Marker Lamp, Front

Taurus

Removal and Installation

1. Remove two nuts and washers from retaining studs at back of lamp assembly.

2. Pull lamp outboard until clear of grille opening reinforcement.
3. Remove bulb socket by twisting counterclockwise and remove bulb by pulling.
4. To install, reverse Removal procedure.

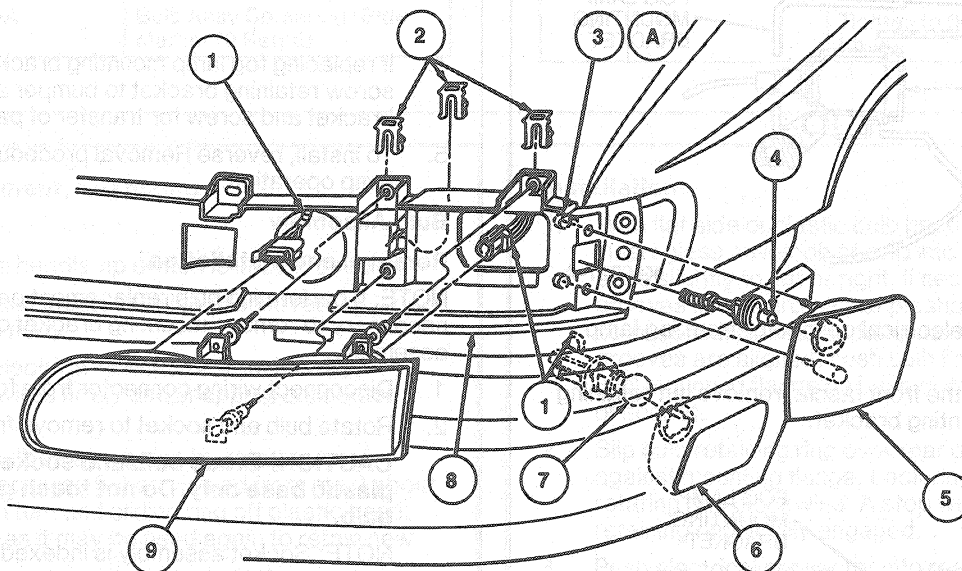
Headlamp Assembly, Auxiliary

Taurus SHO

NOTE: There is no bulb replacement possible in this assembly.

Removal and Installation

1. Remove headlamp assembly as outlined.
2. Remove two screws attaching auxiliary headlamp to headlamp assembly.
3. To install, reverse Removal procedure.



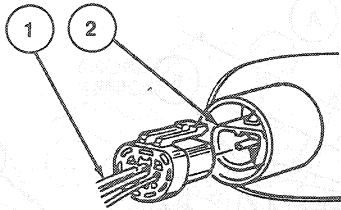
K16709-A

Item	Part Number	Description
1	14290	Wiring Assy
2	13N020	Headlamp Retainer (6 Req'd)
3A	N621906-S54	Nut (4 Req'd)
4	13465	Side Marker Bulb Assy (2 Req'd)
5	15A424 (RH) 15A425 (LH)	Front Side Marker Lamp Assy

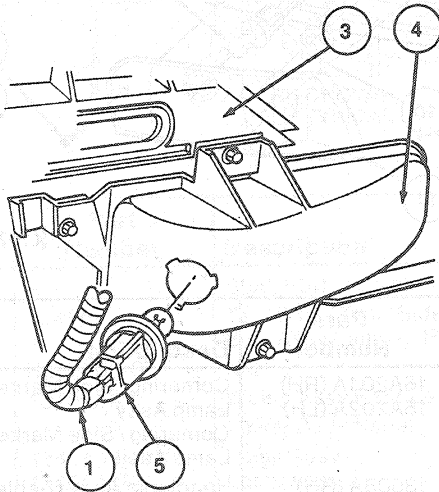
(Continued)

Item	Part Number	Description
6	—	Cornering Lamp, Part of Bumper Assy
7	13465	Cornering Lamp Bulb Assy (2 Req'd)
8	—	Grille Opening Panel
9	13005 (RH) 13006 (LH)	Headlamp Assy
A		Tighten to 5.2-7.2 N-m (47-63 Lb-In)

REMOVAL AND INSTALLATION (Continued)



VIEW SHOWING INSTALLATION OF WIRING ASSY TO HEADLAMP ASSY



**RH CORNERING LAMP SHOWN
LH TYPICAL K12990-D**

Item	Part Number	Description
1	14290	Wiring Assy
2	13005 (RH) 13006 (LH)	Headlamp Assy

(Continued)

(Continued) REMOVAL AND INSTALLATION

Item	Part Number	Description
3	—	Bumper Assy
4	—	Cornering Lamp Assy
5	—	Cornering Lamp Socket Assy

Cornering Lamp

Taurus Except SHO

Removal

1. Remove three screws retaining cornering lamp to bumper.
2. Remove bulb and socket assembly by twisting counterclockwise.

Installation

1. Install bulb, if removed and install socket assembly into cornering lamp by twisting clockwise.
2. Position cornering lamp assembly and install three retaining screws.

Sable and Taurus SHO

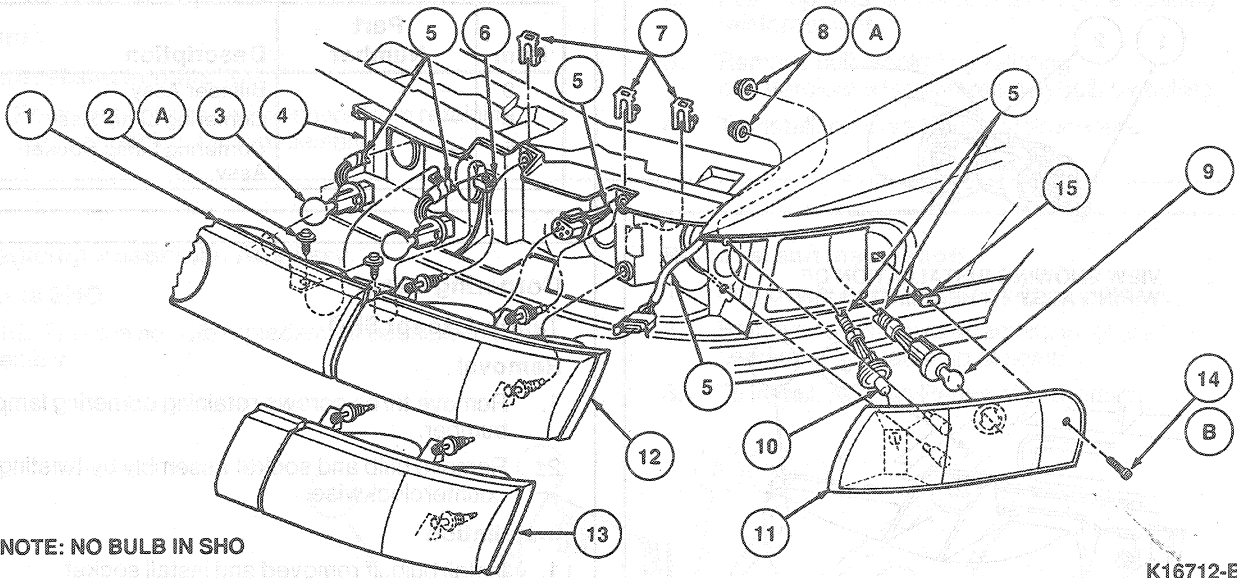
Removal

1. Remove two nuts and screw retaining cornering lamp assembly, and lift out.
2. Remove bulb and socket assembly by twisting counterclockwise.

Installation

1. Install bulb, if removed, and install socket into lamp assembly by twisting clockwise.
2. Position cornering lamp in place, and install two nuts and screw.

REMOVAL AND INSTALLATION (Continued)



NOTE: NO BULB IN SHO

K16712-B

Item	Part Number	Description
1	13A278-A	Parking Lamp Assy (Inner) (Sable)
2A	N606676-S55	Screw (4 Req'd) (Sable)
3	13465A	Bulb Assy Parking (4 Req'd)
4	—	Grille Opening Panel Reinforcement
5	14290	Wiring Assy
6	N623332-S100	Nut (4 Req'd) (Sable)
7	13N020A	Retainer/Headlamp (4 Req'd)
8A	N621905-S54	Nut (4 Req'd)
9	13465A	Cornering Bulb Assy (2 Req'd)
10	13465A	Cornering / Side Marker Bulb Assy (2 Req'd)

Item	Part Number	Description
11	15A201A (RH) 15A202A (LH)	Cornering / Side Marker Lamp Assy
12	13005A (RH) 13006A (LH)	Headlamp Assy (Sable)
13	13005B (RH) 13006B (LH)	Headlamp Assy (Taurus SHO)
14B	55999-S45	Screw
15	N800503-S	Nut (2 Req'd)
A		Tighten to 5.2-7.2 N·m (47-63 Lb·In)
B		Tighten to 0.8-1.7 N·m (7-15 Lb·In)

(Continued)

Lamp and Bulb Assembly Replacement, Rear Sedan

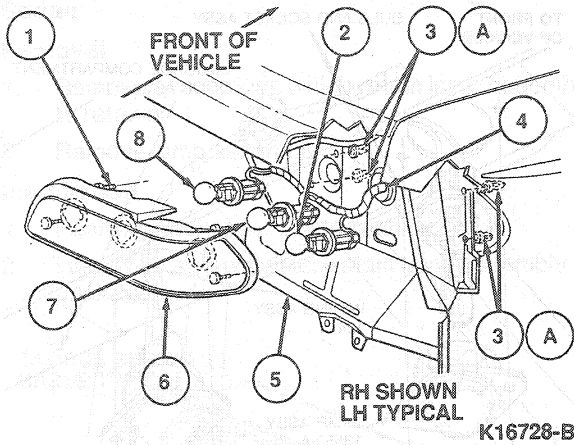
Removal and Installation

1. From inside luggage compartment, remove lower back panel trim cover, if so equipped.

2. Remove nuts retaining lamp body to lower back panel and pull lamp away from vehicle.
3. Remove lamp sockets from lamp body.
4. To install, reverse Removal procedure.

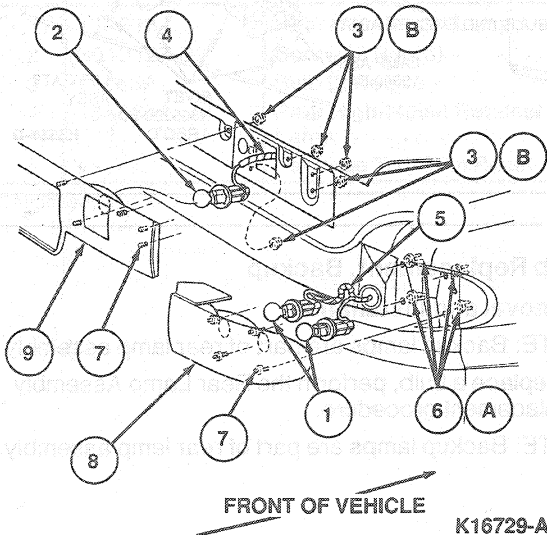
REMOVAL AND INSTALLATION (Continued)

Taurus



Item	Part Number	Description
1	—	Stud, Part of Lamp Assy
2	13465	Tail / Stop / Turn / Sidemarkers Bulb Assy Lamp (2 Req'd)
3A	N806298-S	Nut
4	13407AA	Wiring Assy Rear Lamp
5	—	Lower Back Panel
6	13404A (RH) 13405A (LH)	Lamp Assy
7	13465	Tail / Stop Bulb Assy (2 Req'd)
8	13465	Backup Bulb Assy (2 Req'd)
A		Tighten to 1.6-2.2 N·m (15-19 Lb·In)

Sable



(Continued) REMOVAL AND INSTALLATION

Item	Part Number	Description
1	13465	Bulb Assy (4 Req'd)
2	13465	Bulb Assy (2 Req'd)
3B	N620375-S36	Nut (10 Req'd)
4	13412	Wire and Socket Assy
5	13407AA	Rear Lamp Wiring Assy
6A	N806298-S	Nut (8 Req'd)
7	—	Stud
8	13404A (RH) 13405A (LH)	Lamp Assy
9	13B433A	Reflector Plate Assy
A		Tighten to 1.6-2.2 N·m (15-19 Lb·In)
B		Tighten 1.2-1.8 N·m (11-15 Lb·In)

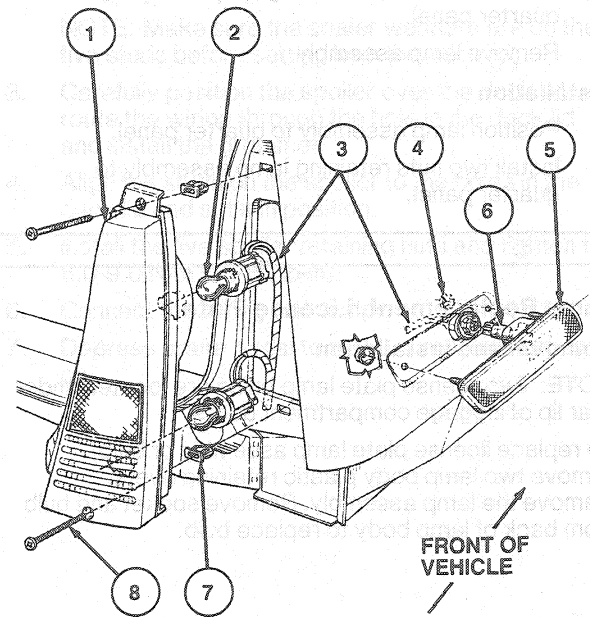
Wagon

Removal

1. Remove two screws retaining lamp assembly to quarter panel.
2. Remove lamp assembly.

Installation

1. Position new lamp assembly to quarter panel.
2. Install two screws retaining lamp assembly to quarter panel.



RH SHOWN, LH SYMMETRICALLY OPPOSITE

K8555-E

REMOVAL AND INSTALLATION (Continued)

Item	Part Number	Description
1	13404-A (RH) 13405-A (LH)	Rear Lamp Assy
2	13465-A	Bulb (2 Req'd Each Lamp Assy)
3	14405	Wiring Assy
4	N800335-S36M	Nut (2 Req'd Each Lamp Assy)
5	15A456-A (RH) 15A457-A (LH)	Side Marker Lamp Assy
6	13465-B	Bulb
7	N800503-S	Nut (2 Req'd Each Lamp Assy)
8	382886-S49	Screw (2 Req'd Each Lamp Assy)

Side Marker Lamp Replacement, Rear

Sedan

NOTE: Taurus and Sable side marker lamp assembly is an integral part of the rear lamp assembly.

Wagon

Refer to illustration under Lamp Assembly Replacement, Rear—Wagon.

Removal

1. Remove two nuts retaining lamp assembly to quarter panel.
2. Remove lamp assembly.

Installation

1. Position lamp assembly to quarter panel.
2. Install two nuts retaining lamp assembly to quarter panel.

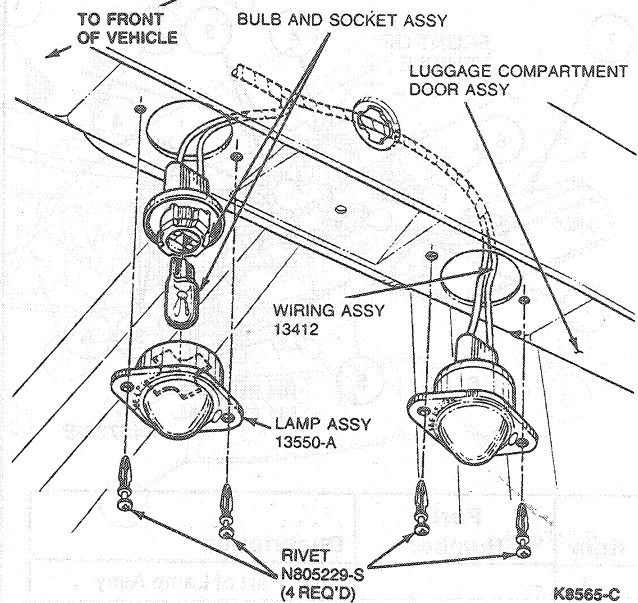
Lamp Replacement, License Plate

Removal and Installation

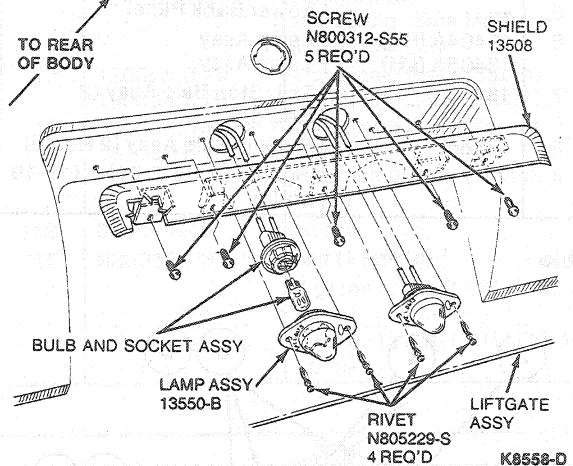
NOTE: Two license plate lamp bulbs are located under rear lip of luggage compartment doors.

To replace license plate lamp assembly or bulb, remove two lamp body plastic retaining rivets. Remove the lamp assembly. Remove socket and bulb from back of lamp body to replace bulb.

Sedan



Wagon



Bulb Replacement, Backup

Removal and Installation

NOTE: Backup lamps are part of rear lamp assembly.

To replace a bulb, perform the Rear Lamp Assembly Replacement procedure.

NOTE: Backup lamps are part of rear lamp assembly.

REMOVAL AND INSTALLATION (Continued)

High-Mount Stoplamp

Sedan

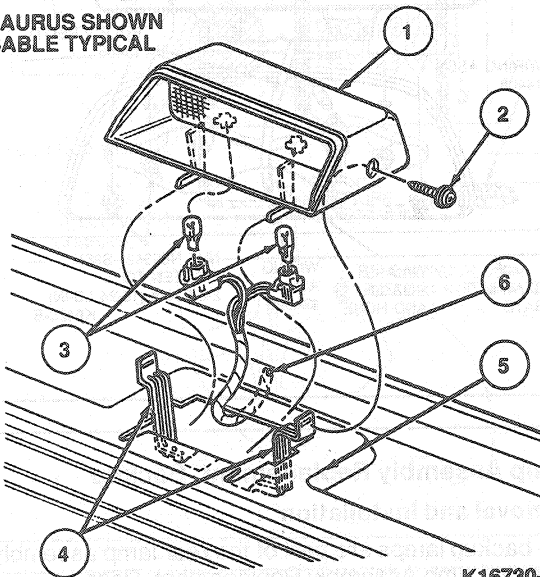
Removal

1. Remove two screws which retain lamp assembly to retainer.
2. Remove lamp assembly.

Installation

1. Position lamp assembly to retainer.
2. Install two screws which retain lamp assembly to package tray.

TAURUS SHOWN
SABLE TYPICAL



Item	Part Number	Description
1	13A613	Rear High-Mount Lamp Assy
2	N610127-S2	Screw (2 Req'd)
3	13465A	Bulb (2 Req'd)
4	13A621A	Rear High-Mount Retainer Lamp
5	—	Package Tray Trim Panel

(Continued)

REMOVAL AND INSTALLATION (Continued)

Item	Part Number	Description
6	14405	Wiring Assy

Taurus SHO

The Taurus SHO is equipped with a high mounted stoplamp that is part of the deck lid spoiler. The lamp contains Light Emitting Diodes (LED) that are integral and cannot be changed like a light bulb. If the lamp is not (functioning) lighting properly the entire lamp assembly should be replaced.

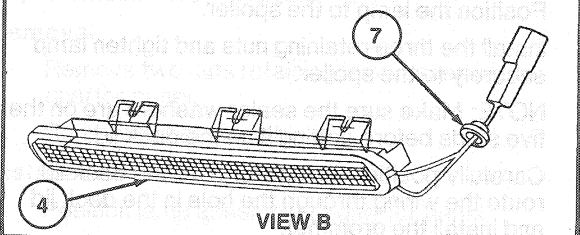
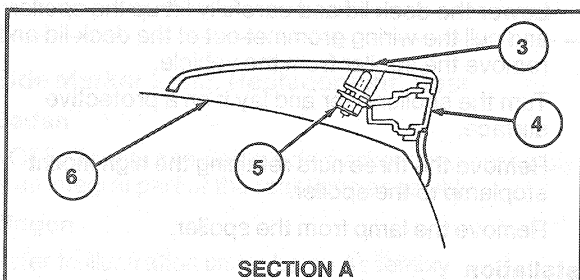
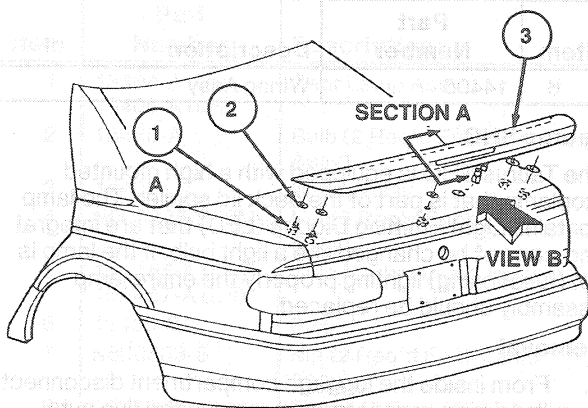
Removal

1. From inside the luggage compartment disconnect the wiring connector and remove the five nuts retaining the deck lid spoiler to the deck lid.
2. Lower the deck lid and carefully lift up the spoiler and pull the wiring grommet out of the deck lid and remove the spoiler from the vehicle.
3. Turn the spoiler over and lay it on a protective surface.
4. Remove the three nuts retaining the high mount stoplamp to the spoiler.
5. Remove the lamp from the spoiler.

Installation

1. Position the lamp to the spoiler.
 2. Install the three retaining nuts and tighten lamp securely to the spoiler.
- NOTE:** Make sure the sealer washers are on the five studs before setting it on the deck lid.
3. Carefully position the spoiler over the deck lid, route the wiring through the hole in the deck lid and install the grommet.
 4. Align the studs on the spoiler to the holes in the deck lid and set it in position.
 5. Install the five spoiler retaining nuts and tighten to 8.0-9.0 N-m (7 1-80 lb-in).
 6. Connect the wiring connector.
 7. Depress brake pedal to make sure lamp comes on.

REMOVAL AND INSTALLATION (Continued)



K18601-A

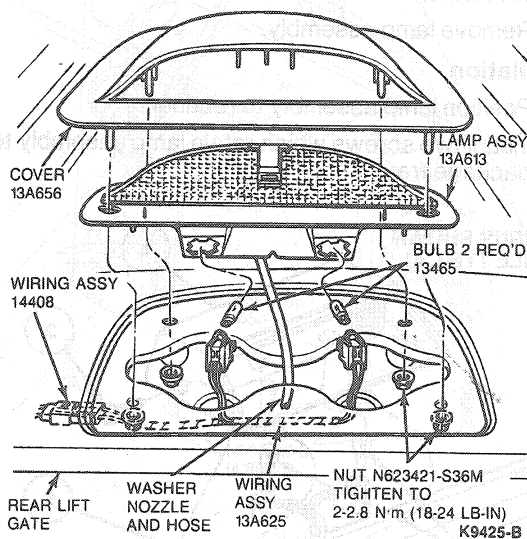
Item	Part Number	Description
1A	N621926-S36	Nut and Washer Assy (5 Req'd)
2	N805203-S	Washer Sealer (5 Req'd)
3	41602	Spoiler Assy
4	13A613	High Mount Stoplamp Assy
5	N612926-S36	Nut and Washer Assy (3 Req'd)
6	40110	Deck Lid Assy
7		Grommet, Part of 13A613 High Mount Stoplamp Assy

Wagon

Removal and Installation

1. Remove screws and trim cover, located at top of liftgate frame.
2. Remove the two plugs.

3. Remove four nuts retaining lamp trim cover.
4. Remove lamp assembly from mounting studs.
5. To install, reverse Removal procedure.



Lamp Assembly Replacement, Backup

Removal and Installation

The backup lamps are part of the rear lamp assembly. Refer to Lamp Assembly Replacement, Rear.

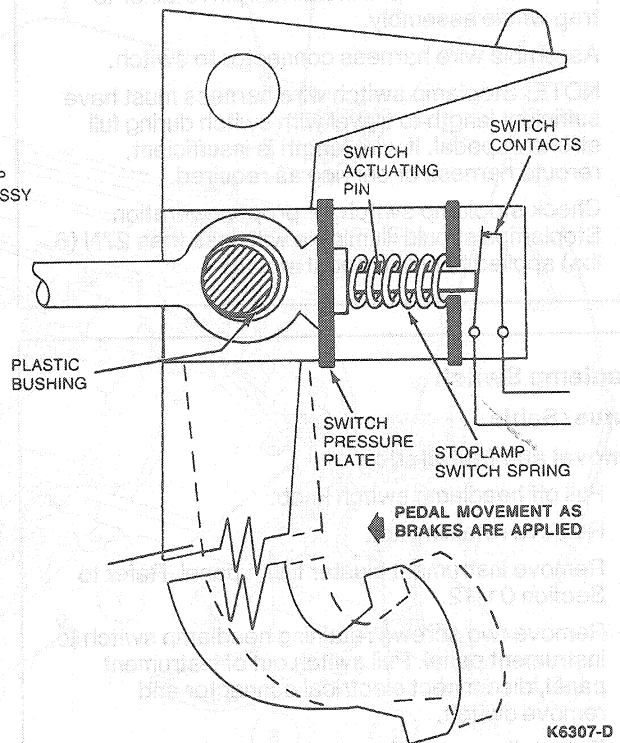
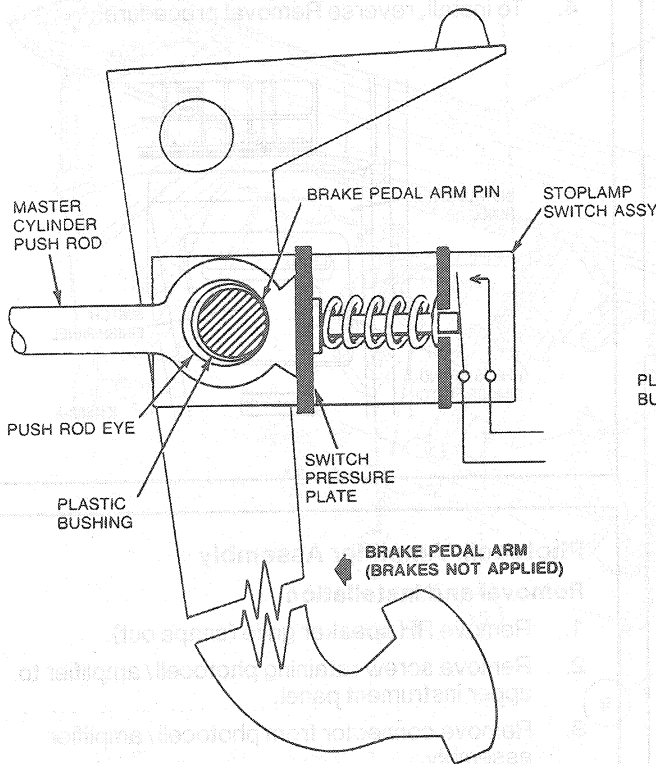
Stoplamp Switch, Mechanical

The mechanical stoplamp switch assembly is installed on the pin of the brake pedal arm, so that it straddles the master cylinder push rod. The switch assembly is slip fit on the pedal arm pin, and the switch pressure plate mates with the flat on the master cylinder push rod. The switch assembly travels with the pedal arm but maintains alignment with the flat on the push rod at all times.

The brake pedal arm pin and plastic bushing have a designed-in clearance with the eye of the master cylinder push rod. Because of this clearance, whenever the brake pedal is pushed forward, the stoplamp switch frame moves forward, pulling the whole assembly forward. During that movement, the push rod flat pushes the switch pressure plate and actuating pin rearward, closing the switch contacts. This completes the circuit to the stoplamps.

REMOVAL AND INSTALLATION (Continued)

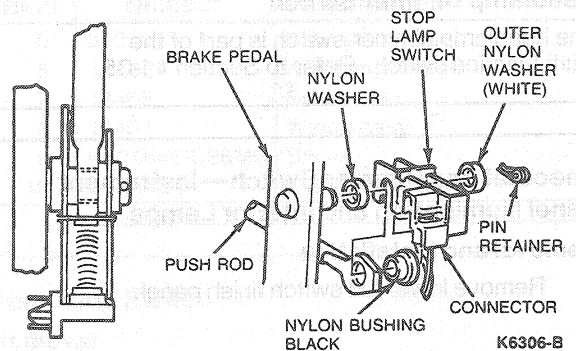
When the brake pedal is released, the spring in the stoplamp switch returns the actuating pin to its normal position and the circuit to the stoplamp opens.



Removal

NOTE: Locking tab must be lifted before connector can be removed.

1. Disconnect the wire harness at connector from the switch.
NOTE: Since the switch side plate nearest the brake pedal is slotted, it is not necessary to remove the brake master cylinder push rod black bushing and one white spacer washer nearest the pedal arm from the brake pedal pin.
2. Remove hairpin retainer and white nylon washer. Slide stoplamp switch and push rod away from pedal. Remove switch by sliding switch up/down.



Installation

1. Position switch so that U-shaped side is nearest pedal and directly over/under pin. The black bushing must be in position in push rod eyelet with washer face on side away from brake pedal arm.

CAUTION: Do not substitute other types of pin retainers. Replace only with production hairpin retainer.

REMOVAL AND INSTALLATION (Continued)

2. Slide switch up / down trapping master cylinder push rod and black bushing between switch side plates. Push switch and push rod assembly firmly toward brake pedal arm. Assemble outside white plastic washer to pin. Install hairpin retainer to trap whole assembly.
3. Assemble wire harness connector to switch.
NOTE: Stoplamp switch wire harness must have sufficient length to travel with switch during full stroke at pedal. If wire length is insufficient, reroute harness or service as required.
4. Check stoplamp switch for proper operation. Stoplamps should illuminate with less than 27N (6 lbs) applied to brake pedal at pad.

Headlamp Switch**Taurus / Sable****Removal and Installation**

1. Pull off headlamp switch knob.
2. Remove retaining nut.
3. Remove instrument cluster finish panel. Refer to Section 01-12.
4. Remove two screws retaining headlamp switch to instrument panel. Pull switch out of instrument panel, disconnect electrical connector and remove switch.
5. To install, reverse Removal procedure.

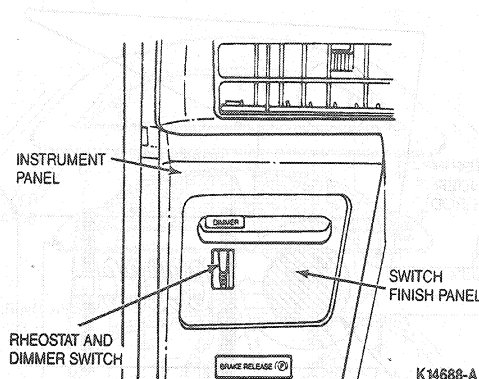
Headlamp Dimmer Switch

The headlamp dimmer switch is part of the multi-function switch. Refer to Section 11-05.

Rheostat and Dimmer Switch—Instrument Panel Illumination and Interior Lamps**Removal and Installation**

1. Remove lower LH switch finish panel.

2. Disconnect electrical connector.
3. Remove two screws retaining rheostat switch to instrument panel and remove switch.
4. To install, reverse Removal procedure.

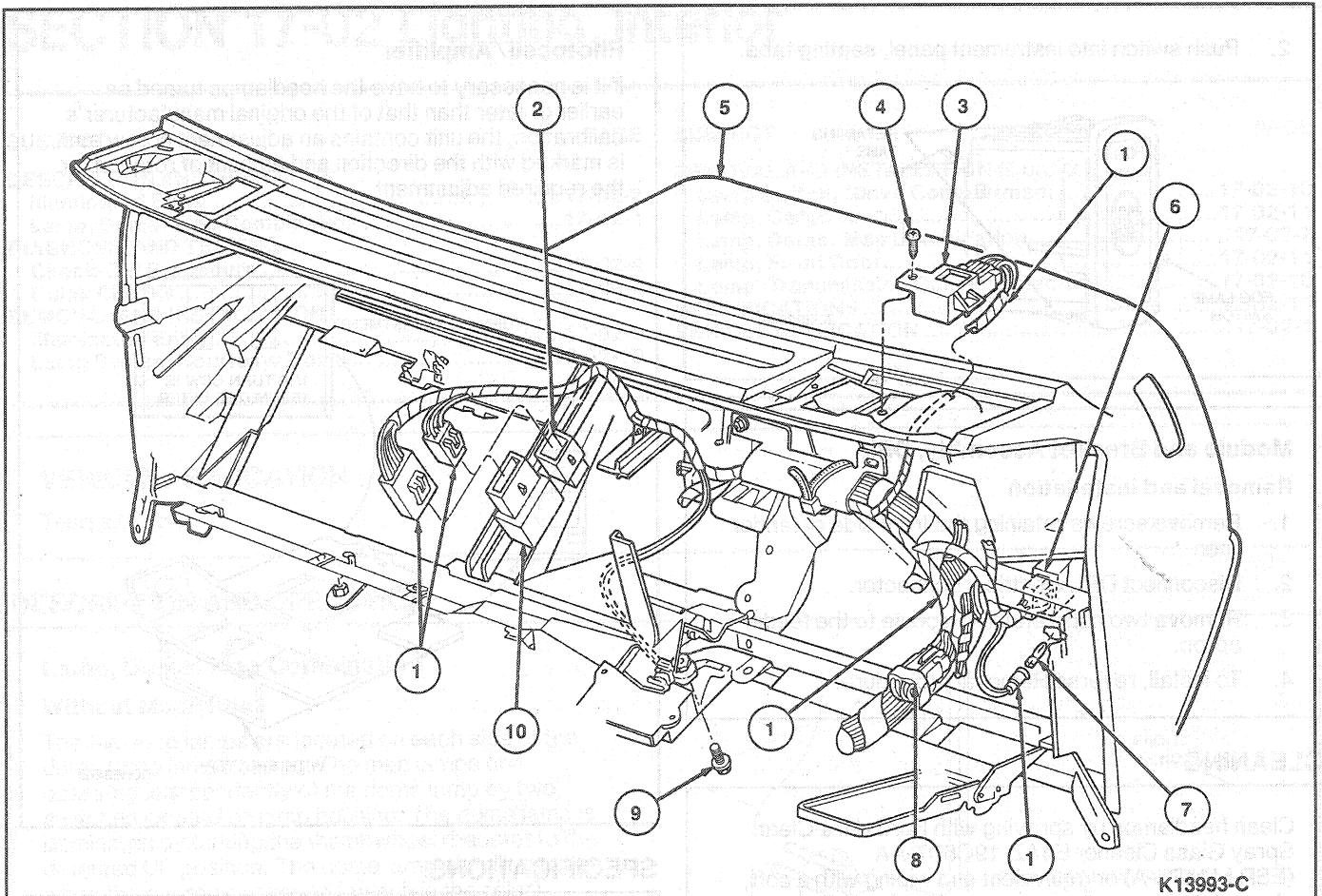
**Photocell / Amplifier Assembly****Removal and Installation**

1. Remove RH speaker grille (snaps out).
2. Remove screw retaining photocell / amplifier to upper instrument panel.
3. Remove connector from photocell / amplifier assembly.
4. To install, reverse Removal procedure.

Potentiometer**Removal and Installation**

1. Remove lower LH finish panel (snaps out).
2. Disconnect wiring connector from potentiometer.
3. Remove the two potentiometer retaining screws and remove potentiometer from finish panel.
4. To install, reverse Removal procedure.

REMOVAL AND INSTALLATION (Continued)



K13993-C

Item	Part Number	Description
1	13A090	Wiring Assy
2	14B193	Headlamp Dimmer Relay
3	14A597	Light Sensor Amplifier
4	N803876	Screw

(Continued)

Item	Part Number	Description
5	04320	Instrument Panel
6	13A024	Autolamp Switch
7	13465	Bulb Assy
8	14401	Wiring Assy
9	N801846-S36MG	Screw
10	14A672	Autolamp Relay

Headlamp Control Relay

Removal and Installation

1. Disconnect battery ground cable.
2. Remove relay from bracket mounted on instrument panel to the LH side of the glove compartment. Refer to the illustration following Potentiometer.
3. Disconnect the connector from relay.
4. To install, reverse Removal procedure.

Fog Lamp Switch

Removal

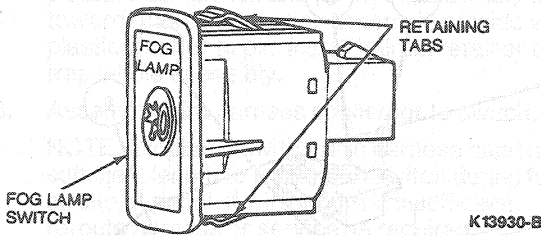
1. Using a flat-bladed tool, separate switch assembly from instrument panel.
2. Pull switch out from panel and disconnect electrical connector.

Installation

1. Connect electrical connector to switch.

REMOVAL AND INSTALLATION (Continued)

2. Push switch into instrument panel, seating tabs.



Module and Bracket Assembly, DRL

Removal and Installation

1. Remove screws retaining the front side of fender liner.
2. Disconnect DRL electrical connector.
3. Remove two nuts retaining module to the fender apron.
4. To install, reverse Removal procedure.

CLEANING

Clean headlamps by spraying with Ford Ultra-Clear Spray Glass Cleaner E4AZ-19C507-AA (ESR-M14P5-A) or equivalent and wiping with a soft, clean cloth.

ADJUSTMENTS

Headlamp Aim

Tools Required:

- Rotunda Headlamp Aiming Kit 107-00003
- Rotunda Headlamp Aiming Kit Adapter Kit 107-00011

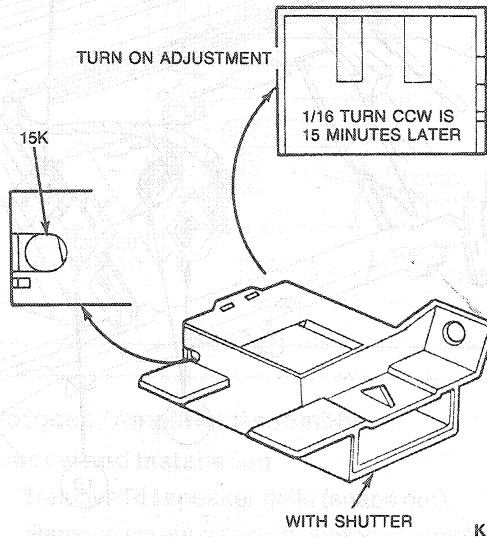
All headlamp adjustments should be made with a half full fuel tank, empty luggage compartment (except for the spare tire and jack equipment) and correct tire pressures.

To aim the aerodynamically styled headlamps, use Rotunda Headlamp Aiming Kit 107-00003 with Adapter Kit 107-00011 or equivalent. The equipment in the aiming kit can be calibrated to accommodate a slight floor slope, however, it should be reasonably flat. The adjusted adapter positions are moulded into the lower face of the headlamp lens.

Set and lock the adjustable adapter. Attach each adapter to its mechanical aimer, and aim headlamps using latest instructions in Rotunda Kit.

Photocell/Amplifier

If it is necessary to have the headlamps turned on earlier or later than that of the original manufacturer's calibration, the unit contains an adjustment screw and is marked with the direction and amount of rotation for the required adjustment.



SPECIFICATIONS

TORQUE SPECIFICATIONS

Description	N-m	Lb-In
Rear Lamp Assembly Nuts	1.6-2.2	15-19
High-Mount Stoplamp Nuts (Wagon)	2-2.8	18-24
Lamp Assy Nuts / Screws-Front	5.2-7.2	47-63
Reflector Plate Nuts-Rear	1.2-1.8	11-15
Cornering Lamp Assy Screws	0.8-1.7	7-15
Fog Lamp Bracket-to-Bumper Nuts	19-27	14-20 (Lb-Ft)
Fog Lamp-to-Bracket Nut	13.5-16.5	10-12 (Lb-Ft)
Spoiler Retaining Nuts	8-9	71-80

SPECIAL SERVICE TOOLS

ROTUNDA EQUIPMENT

Model	Description
107-00003	Headlamp Aiming Kit
107-00011	Aero-Dynamic Headlamp Aiming Adapters
107-00001	Digital Volt-Ohmmeter

SECTION 17-02 Lighting, Interior

SUBJECT	PAGE	SUBJECT	PAGE
DESCRIPTION AND OPERATION		REMOVAL AND INSTALLATION (Cont'd.)	
Illuminated Entry	17-02-2	Lamp Switch, Glove Compartment	17-02-10
Lamp, Dome/Map Combination	17-02-1	Lamp, Cargo	17-02-11
DIAGNOSIS AND TESTING		Lamp, Dome/Map Combination	17-02-7
Check-Out Procedure	17-02-4	Lamp, Front Door	17-02-11
Quick Checks	17-02-4	Lamp, Transmission Control Selector	17-02-10
REMOVAL AND INSTALLATION		SPECIFICATIONS	17-02-11
Illuminated Entry	17-02-9	VEHICLE APPLICATION	17-02-1
Lamp Switch, Courtesy/Dome	17-02-10		

VEHICLE APPLICATION

Taurus / Sable.

DESCRIPTION AND OPERATION

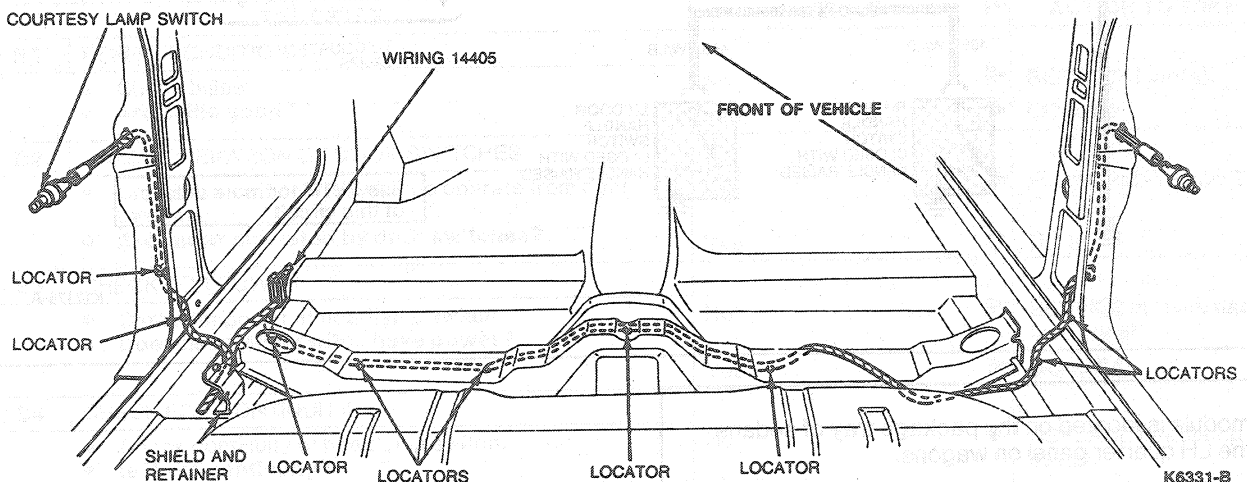
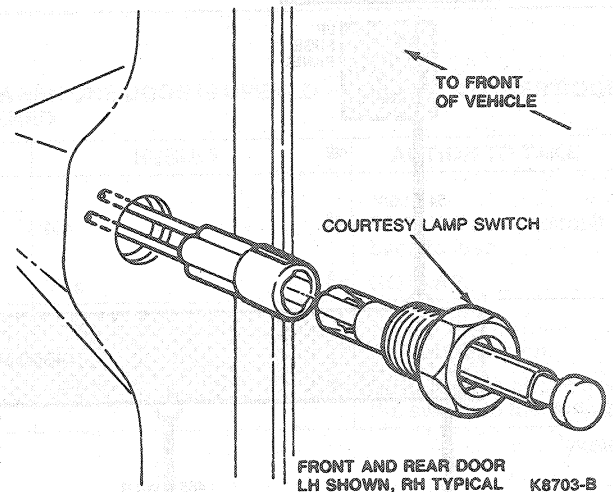
Lamp, Dome/Map Combination

Without Moon Roof

The two map lamps are located on each side of the dome/map lamp housing. The map lamps are operated independently of the dome lamp by two switches located on lamp housing. The dome lamp is illuminated by turning the thumbwheel rheostat to the detented UP position. The dome lamp also illuminates when the doors are opened (switch in the pillar).

With Moon Roof

The roof console contains two lamps which function as door courtesy lamps when the doors are open. These lamps also function as map lamps when the doors are closed and the lamp switch is activated.



DESCRIPTION AND OPERATION (Continued)

Illuminated Entry

The illuminated entry system assists vehicle entry during the hours of darkness by illuminating the door lock cylinder, so it may be easily located for key insertion. The vehicle interior will also be illuminated by the courtesy lamps.

Activation of the system is accomplished by raising the outside door handle or by pressing a code button on the keyless entry system.

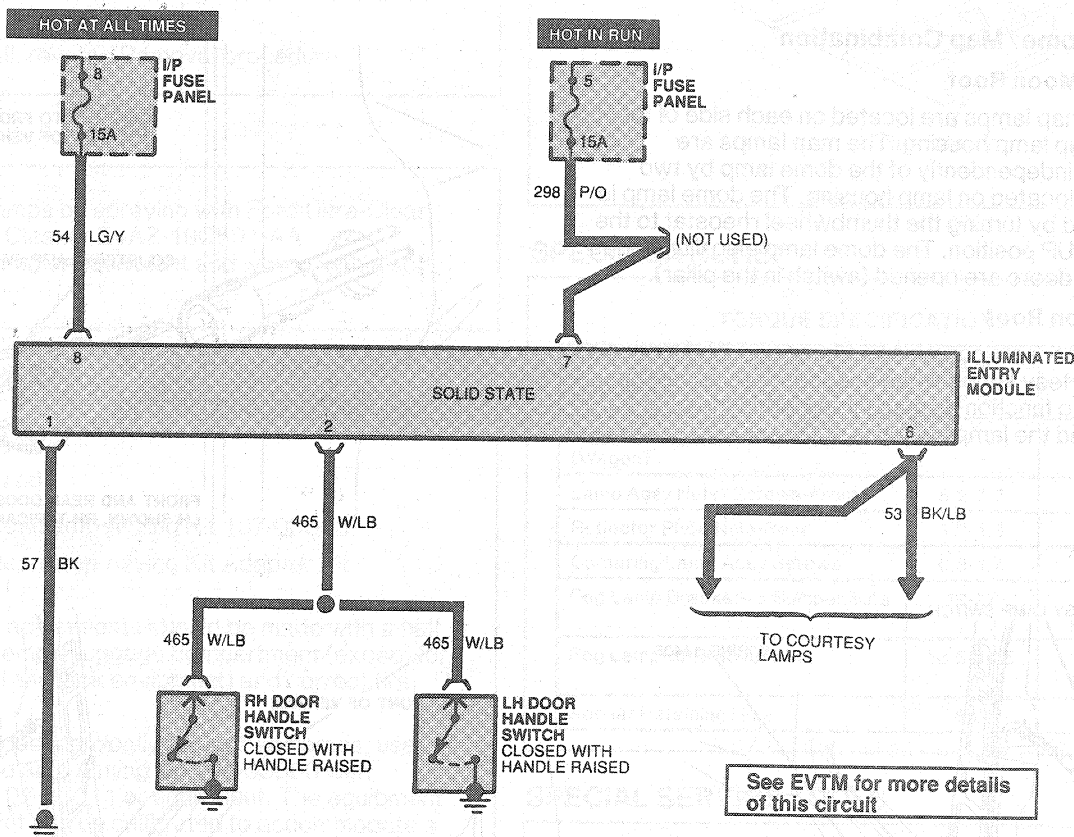
This action momentarily closes a switch mounted on the door latch mechanism, which completes the ground circuit of the electronic actuator module and switches the system on. The vehicle interior lamps turn on, and both front door lock cylinders are illuminated by a ring of light around the area where the key enters. This illumination will remain on for approximately 25 seconds, then automatically turn off. During this 25 second period, the system can be manually deactivated by turning the ignition switch to either RUN or ACC position.

The system will be activated every time the outside front door handles are operated, whether the vehicle is locked or not. Opening the doors from the inside of the vehicle will not activate the system.

If the outside door handle is held up indefinitely so that the latch switch is continuously closed, the system will operate as normal and turn off after 25 seconds. At the completion of this cycle, if the door handle is still in the raised position, the system will remain off, and it will be impossible to activate the system from the other front door handle until the raised handle is returned to its normal position. This function is built into the logic circuitry of the system to prevent battery discharge, should the outside door handle be intentionally propped up or become jammed in any way.

The system consists of four main components: electronic actuator module, illuminated door lock cylinder, door latch switch and wiring harness.

Refer to the following illustration for location of these components.



K17178-A

The module is located on the package tray of sedans and the LH quarter panel on wagons.

DESCRIPTION AND OPERATION (Continued)

Housed within the module is a printed circuit board, the logic circuitry, and a relay to switch battery positive voltage (B+) to the various circuits. The normal operating voltage is 9 to 16 volts, but the unit will withstand voltage up to 24 volts for a period of 15 minutes. It cannot be damaged by reverse voltages and is unaffected by vehicle transients.

The rectangular door lock cylinder is unique to this system. A light-emitting diode (LED) provides the light source to a lens system built into the cylinder. Normal operating voltage for the LED is 3 volts. A resistor built into the harness protects the LED. It is important when checking the lock cylinder illumination that 12 volts is applied only to the connector terminals. If the resistor is bypassed and 12 volts is applied to the wires between the resistor and the lock cylinder by the use of needle-type probes, the LED will be instantly destroyed. Correct polarity must be observed by applying B+ to the orange wire; otherwise the LED will not light. If leads are reversed, no damage will be done to the assembly.

The lens system built into the cylinder is made of clear polycarbonate with a highly polished lustrous surface and will retain its fine appearance if given proper care. A mild soap and water solution is all that is usually required to keep the lens in its original condition. Should the lens become contaminated with oil or grease, clean with approved solvents such as hexane, dry cleaning naphtha, kerosene or methanol. Since these solvents are flammable as well as toxic, use with adequate ventilation and away from open flames. Solvents such as benzene, gasoline, acetone, carbon tetrachloride or denatured alcohol should **never** be used, as they will soften and deteriorate the lens surface, causing a permanent loss in light output.

The latch switch is a grounding-type leaf switch and is retained to the latch mechanism by one screw.

DIAGNOSIS AND TESTING

PINPOINT TEST A: COURTESY LAMP(S) DOES NOT TURN ON WHEN ONE DOOR IS OPENED — OK WHEN OTHER DOORS ARE OPENED

TEST STEP		RESULT	ACTION TO TAKE
A1	CHECK POWER <ul style="list-style-type: none"> ● Check for power at door switch. ● Does power show at door switch? 	No	SERVICE power circuit back to fuse.
		Yes	GO to A2.
A2	CHECK THE DOOR SWITCH <ul style="list-style-type: none"> ● Check the door switch for proper operation. ● Does door switch operate properly? 	No	REPLACE switch.
		Yes	SERVICE the circuit from the switch to the lamp(s).

TK5998B

PINPOINT TEST B: COURTESY LAMP(S) DOES NOT COME ON WHEN ROTATING THE DIMMER SWITCH UPWARD TO STOP

TEST STEP		RESULT	ACTION TO TAKE
B1	VERIFY CONDITION <ul style="list-style-type: none"> ● Check bulbs. ● Are bulbs good? 	No	REPLACE bulb(s).
		Yes	GO to B2.
B2	CHECK OPERATION OF DOOR SWITCHES <ul style="list-style-type: none"> ● Check to see if courtesy lamps operate from door switches. ● Are lamps activated by door switches? 	No	PERFORM Pinpoint Test C.
		Yes	GO to B3.
B3	CHECK FOR POWER <ul style="list-style-type: none"> ● Check for power at headlamp switch. ● Does headlamp switch have power? 	No	SERVICE circuits back to fuse panel.
		Yes	GO to B4.
B4	CHECK FOR CONTINUITY <ul style="list-style-type: none"> ● Check continuity of headlamp switch. ● Is there continuity? 	No	REPLACE headlamp switch.
		Yes	SERVICE circuits from switch to lamp(s).

DIAGNOSIS AND TESTING (Continued)

PINPOINT TEST C: COURTESY LAMP(S) DOES NOT COME ON WHEN ALL DOORS ARE OPEN

TEST STEP		RESULT	ACTION TO TAKE
C1	VERIFY CONDITION ● Check courtesy lamps. ● Is there more than one courtesy lamp?	No	▶ GO to C2.
		Yes	▶ GO to C5.
C2	CHECK OPERATION OF FUSE CIRCUIT ● Check operation of other circuits that share the same fuse. ● Are all circuits from same fuse good?	No	▶ GO to C5.
		Yes	▶ GO to C3.
C3	CHECK FOR POWER ● Check for power to bulb. ● Does bulb illuminate?	No	▶ SERVICE circuit between bulb and common point with other circuits.
		Yes	▶ GO to C4.
C4	CHECK CONTINUITY ● Check continuity of bulb. ● Is there continuity?	No	▶ REPLACE bulb.
		Yes	▶ SERVICE bulb ground.
C5	CHECK FUSE ● Check courtesy lamp fuse(s). ● Are courtesy lamp fuse(s) good?	No	▶ REPLACE fuse. If fuse blows again, CHECK for shorted circuit(s).
		Yes	▶ GO to C6.
C6	CHECK FOR POWER ● Check for power through the fuse. ● Is there power to the fuse?	No	▶ SERVICE power feed circuit.
		Yes	▶ SERVICE open circuit between fuse and common point in courtesy lamp power circuit(s).

TK6000C

NOTE: Before performing diagnosis, verify that the system is malfunctioning. The illuminated entry module will not turn off the courtesy lamp if the lamp is turned on by the headlamp rheostat or if the door is open. For diagnosis of Illuminated Entry on vehicles with Keyless Entry, refer to Section 01-14B.

Quick Checks

1. Verify that courtesy lamp circuit is working properly. If not, check fuse.
2. With ignition switch in ACC or RUN position, verify that other systems which share same accessory fuse are functional. If not, check fuse.
3. If any above systems are not working properly, service inoperative circuit and check operation of illuminated entry system before proceeding with the following complete check-out procedure.

Check-Out Procedure

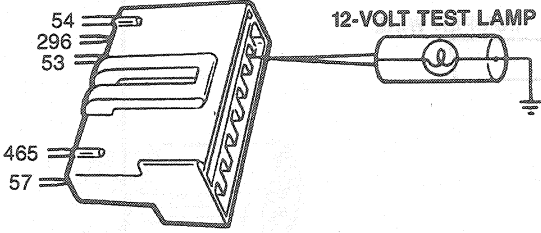
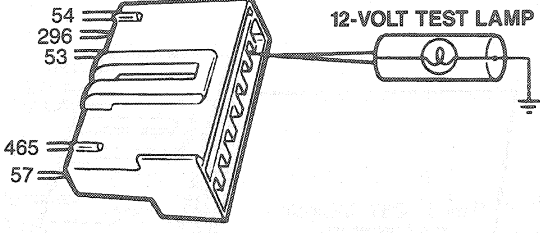
1. Terminal numbers referred to in the following procedure relate to illuminated entry actuator connector. The terminals are numbered from left to right (when the connector is held as shown).
2. Any malfunctions diagnosed in Steps 4 and 5 in the charts could be located in either front door.
3. When necessary to trace and / or service various circuits, refer to vehicle wiring diagrams in Group 18.
4. Check system fuses (two) before proceeding.

After Testing

If all of the following tests check out OK and the illuminated entry system is still malfunctioning, the actuator assembly is the cause of the concern and must be replaced.

DIAGNOSIS AND TESTING (Continued)

(Continued)

RESULT	OPERATION	RESULT
<p>Step 1 — Connect a 12-volt test lamp between terminal No. 8 and a good ground.</p>  <p style="text-align: center;">K15987-A</p>	<p>Whether ignition is on or off, the test lamp should glow. If not, trace Circuit 54 (light green with yellow stripe) back to fuse panel and service.</p>	<p>Whether ignition is on or off, the test lamp should glow. If not, trace Circuit 54 (light green with yellow stripe) back to fuse panel and service.</p>
<p>Step 2 — Connect a 12-volt test lamp between terminal No. 7 and a good ground.</p>  <p style="text-align: center;">K15988-A</p>	<p>The test lamp should glow when the ignition switch is in ACC or RUN and go out when the switch is turned to OFF or LOCK. If not, trace Circuit 296 (white with purple stripe) back to fuse panel and service.</p>	<p>The test lamp should glow when the ignition switch is in ACC or RUN and go out when the switch is turned to OFF or LOCK. If not, trace Circuit 296 (white with purple stripe) back to fuse panel and service.</p>

(Continued)

REMOVAL AND INSTALLATION

Remove the interior light assembly.

1. Disconnect the negative battery cable.

2. Remove the screws that secure the interior light assembly to the body.

3. Remove the interior light assembly.

4. Install the interior light assembly.

5. Tighten the screws.

6. Reconnect the negative battery cable.

7. Turn the ignition switch to the ON position.

8. Verify that the interior light assembly operates properly.

9. Turn the ignition switch to the OFF position.

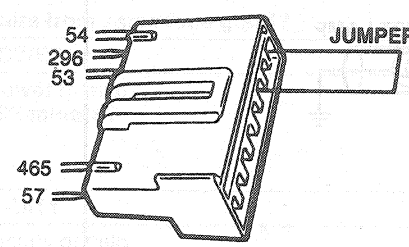
10. Verify that the interior light assembly is off.

11. Turn the ignition switch to the ON position.

12. Verify that the interior light assembly operates properly.

DIAGNOSIS AND TESTING (Continued)

DIAGNOSIS AND TESTING (Continued)

OPERATION	RESULT
<p>Step 3 — Connect a jumper wire between terminals No. 6 and 8.</p>  <p style="text-align: center;">JUMPER WIRE</p> <p style="text-align: center;">K15989-A</p>	<p>With vehicle doors closed, interior courtesy and door lock cylinder lamps should be on. If not, trace Circuit 53 (black with light blue stripe) and service.</p>

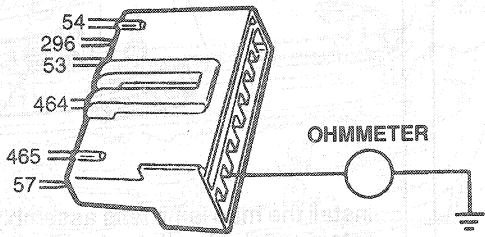
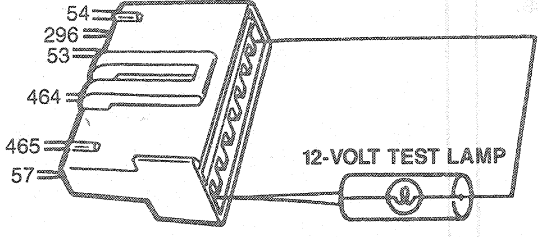
(Continued)

Quick Checks

1. Verify that circuit 1, 290 or 291 courtesy lamp is not shorted to ground.
2. With ignition key in OFF or RUN position, verify that interior courtesy lamp is not shorted to ground.
3. If any courtesy systems are not working properly, inspect the courtesy lamp and check for proper operation. If the courtesy lamp is not working properly, check for a complete lock-out of a wire.

1. Turn the ignition key to the ON position. The courtesy lamp should be on. If the lamp is not on, check for a complete lock-out of a wire.
 2. Turn the ignition key to the OFF position. The courtesy lamp should be off. If the lamp is not off, check for a complete lock-out of a wire.
 3. Check for a complete lock-out of a wire.
- After testing:
1. If the courtesy lamp is not working properly, check for a complete lock-out of a wire.
2. If the courtesy lamp is not working properly, check for a complete lock-out of a wire.

DIAGNOSIS AND TESTING (Continued)

OPERATION	RESULT
<p>Step 4 — Connect an ohmmeter between terminal No. 2 and a good ground.</p>  <p style="text-align: center;">K15991-A</p>	<p>The ohmmeter should show over 10,000 ohms (open). Then, operate each outside door handle in turn, ohmmeter should show not more than 50 ohms (closed). If either readings are incorrect, then trace Circuit 465 (white with light blue stripe) back to latch switches and service. NOTE: When operating door handle, hold in raised position.</p>
<p>Step 5 — Connect a 12-volt test lamp between terminal No. 1 and terminal No. 8.</p>  <p style="text-align: center;">K15992-A</p>	<p>The test lamp should glow. If not, trace Circuit 57 (black) back to ground and service.</p>

REMOVAL AND INSTALLATION

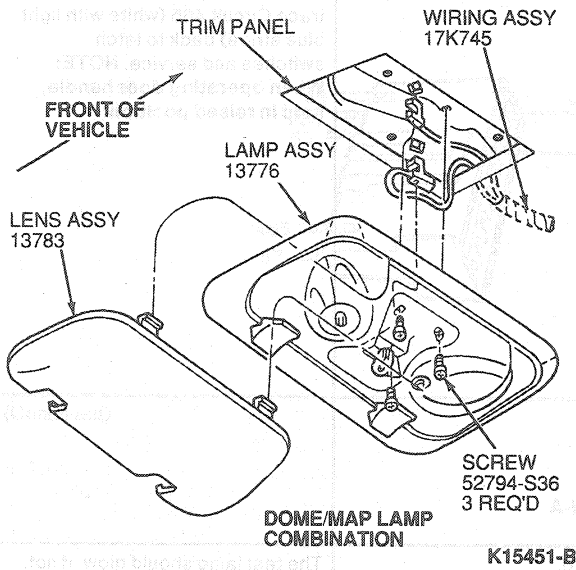
Lamp, Dome /Map Combination

Without Moon Roof

To replace the dome lamp bulb, carefully squeeze lens inward to release locking tabs and remove the lens from the lamp body. Pull the wedge base bulb directly out of its socket.

REMOVAL AND INSTALLATION (Continued)

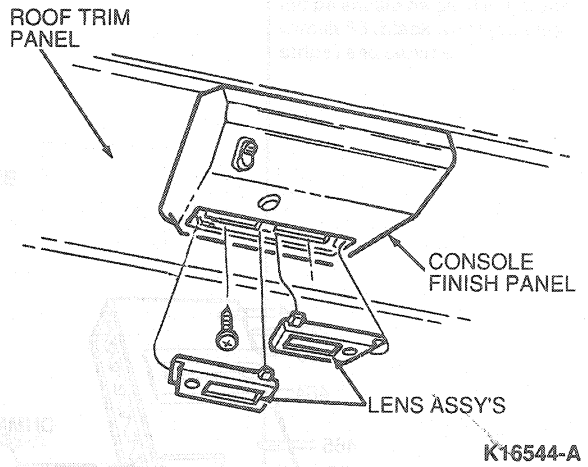
To replace the map lamp bulbs, remove the lens and three screws that retain the lamp assembly to its mounting surface. Lower the lamp assembly and replace the bulbs from rear of lamp using a thin-bladed screwdriver to remove the bulb(s).



With Moon Roof

To replace the bulb(s) remove the map lens assembly by holding lens in, switch depressed position. Use a thin-bladed screwdriver and carefully pry out lens assembly at center gap between two lens assemblies. Remove bulb from socket.

To remove lamp assembly, carefully pry out center section of lamp and remove two retaining screws. Disconnect electrical connector.

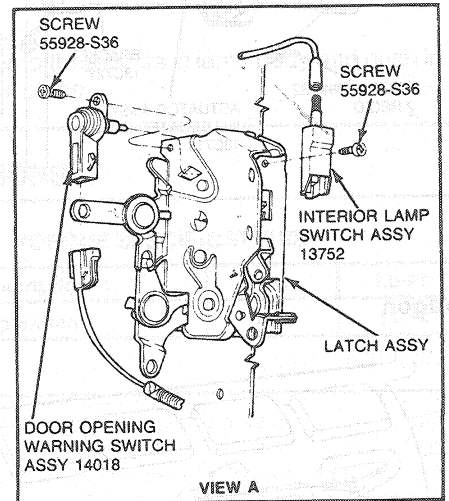
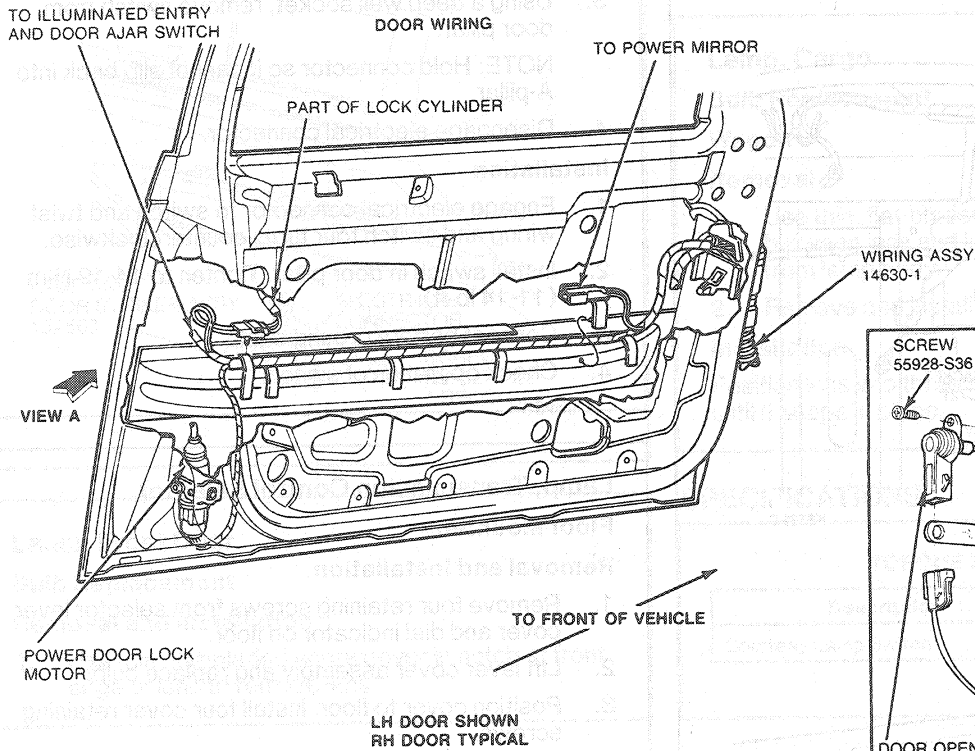


Install the map lamp lens assembly by engaging lens retaining tab at outboard edge of opening and snapping center edge of lens into console.

REMOVAL AND INSTALLATION (Continued)

Illuminated Entry

Refer to the illustrations for Removal and Installation and electrical disconnect points.

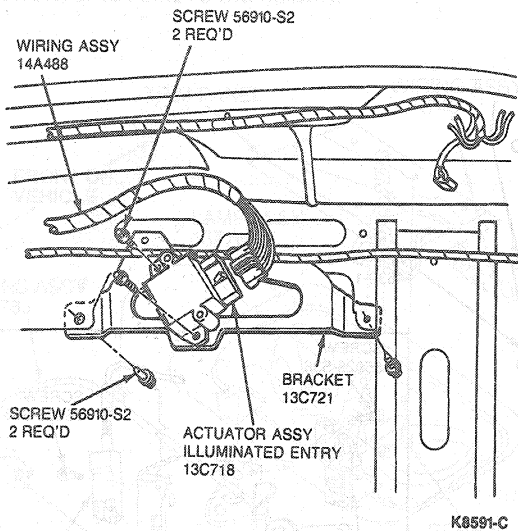


K8590-C

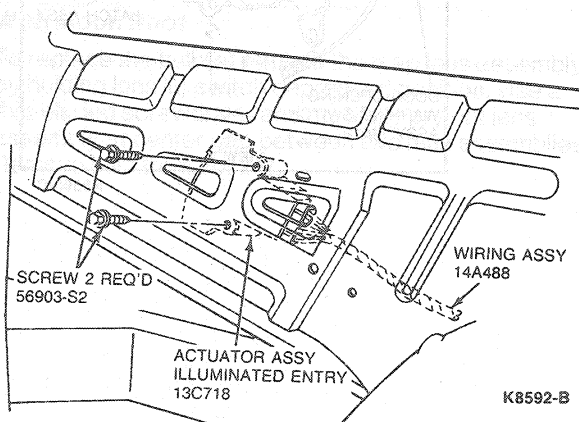
REMOVAL AND INSTALLATION (Continued)

Actuator Module

Sedan



Wagon



Lamp Switch, Courtesy /Dome

Refer to the illustrations under Description and Operation.

CAUTION: Retention of courtesy lamp switch to the wiring connector is by one of three tabs positioned 120 degrees apart on the switch. If, when the switch is disconnected from the wiring connector, the engaged locking tab breaks off, the switch must be rotated 120 degrees to engage a new tab. When all three tabs have been broken, replace the switch.

Removal

1. Disconnect battery ground cable.
2. Open door.
3. Using a deep well socket, remove switch from door pillar.

NOTE: Hold connector so it cannot slip back into A-pillar.

4. Disengage electrical connector.

Installation

1. Engage electrical connector to switch and twist wiring and switch four turns counterclockwise.
2. Install switch in door pillar. Tighten to 14-19 N·m (11-14 lb-ft).
3. Connect battery ground cable.
4. Check operation of switch.

Lamp, Transmission Control Selector

Floor Mounted

Removal and Installation

1. Remove four retaining screws from selector lever cover and dial indicator on floor.
2. Lift lever cover assembly and replace bulb.
3. Position cover to floor. Install four cover retaining screws.

Console Mounted

Removal and Installation

1. Remove finish panel from the console.
2. Remove quadrant bezel.
3. Position selector lever in first position (LOW) and remove lamp socket and bulb from its retainer.
4. Replace bulb and install socket in retainer.
5. Install quadrant bezel.
6. Position finish panel and install retaining screws.

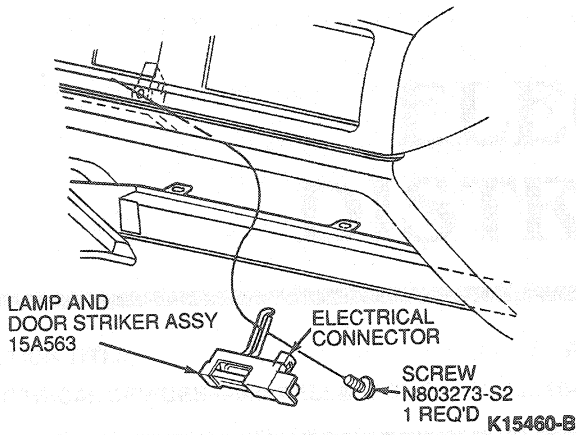
Lamp Switch, Glove Compartment

Removal and Installation

1. Remove one screw retaining lamp assembly and door striker.
2. Disconnect electrical connector.

REMOVAL AND INSTALLATION (Continued)

3. To install, reverse Removal procedure. Check and adjust door margin and fit as needed.



2. Remove and install bulb.
3. To install, position rear edge of lens under reflector and snap into position.

**Lamp, Cargo
Bulb Replacement
Wagon**

- Removal**
1. Use thin, flat-bladed screwdriver in notch between lens and lamp body to disengage lens from lamp body.
 2. Remove and install bulb.

Installation
Position lens into three slots in lamp body and push in until it snaps in place.

**Lamp, Front Door
Bulb Replacement
Removal and Installation**

1. Use thin, flat-bladed screwdriver in notch at front edge of lens to remove lens.

SPECIFICATIONS

TORQUE SPECIFICATIONS

Description	N·m	Lb·Ft
Courtesy Lamp Switch	14-19	11-14