# Partial BACKUP Service Manual

# LASER TALON

1993

Volume-2 Electrical

#### **FOREWORD**

This Service Manual has been prepared with the latest service information available at the time of publication. It is subdivided into various group categories and each section contains diagnosis, disassembly, repair, and installation procedures along with complete specifications and tightening references. Use of this manual will aid in properly performing any servicing necessary to maintain or restore the high levels of performance and reliability designed into these outstanding vehicles.

This BACKUP DSM manual is to be used ONLY as a BACKUP. Please DO NOT REDISTRIBUTE WHOLE SECTIONS. This BACKUP was sold to you under the fact that you do indeed OWN a GENUINE DSM MANUAL. It CANNOT BE considered a REPLACEMENT (Unless your original manual was lost or destroyed.)

Please See README.TXT or README.HTML for additional information.

Thank you. Gimmiemymanual@hotmail.com

# CHRYSLER CORPORATION

Chrysler Corporation reserves the right to make changes in design or to make additions to or improvements in its products without imposing any obligations upon itself to install them on its products previously manufactured.

#### **GROUP/SECTION INDEX**

NOOAA..

Electrical	
Fusible Link, Fuse and IOD or Storage Connector Location	
Inspection Terminal Location	
Grounding Location	
Relay Location	
Sensor Location	
Control Unit Location	•••
Solenoid, Solenoid Valve Location	
Diode Location	•
Junction Block	
Centralized Junction	
Harness Connector Inspection	
Trou bleshooting	
Configuration Diagrams	
Circuit Diagrams	
Engine Electrical	
Chassis Electrical	

NOTE: For Engine, Chassis & Body, refer to Volume-1 "Engine, Chassis & Body".

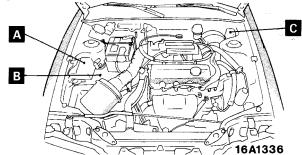
# RELAY LOCATION

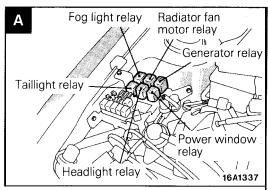
Name	Symbol	Name	Symbol
ABS motor relay	В	Headlight relay	. A
ABS power relay	1 1	Heater relay	E
ABS valve relay	В	Intermittent wiper relay (rear wiper)	ı J
Automatic seat belt motor relay	J	Intermittent wiper relay (windshield wiper)	F
Blower motor High relay	Н	Magnet clutch relay	l c
Condenser fan motor High-Low select relay	С	Power window relay	A
Condenser fan motor relay	· C	Radiator fan motor relay	* A
Dome light relay	J	Starter relay	D
Door lock relay	D	Taillight relay	Α
Fog light relay	А	Transistor relay	G
Generator relay	А	Upper beam relay	D

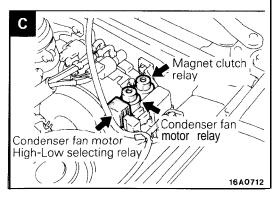
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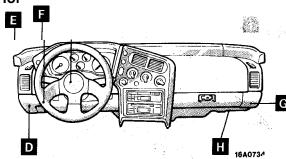


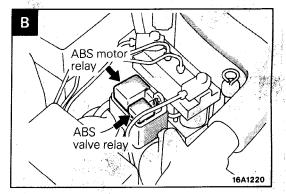


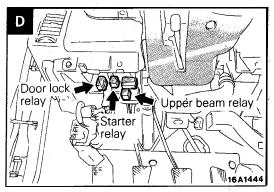


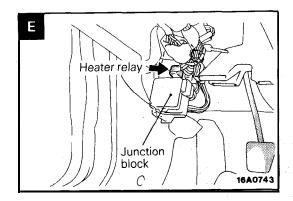


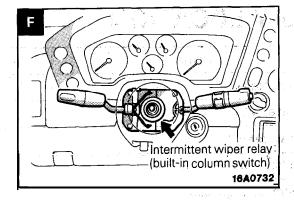


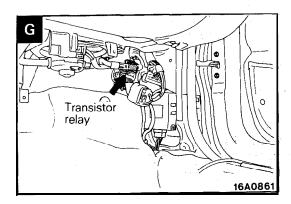


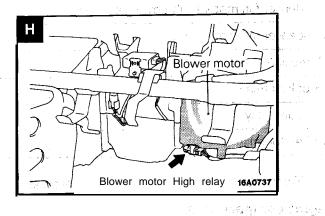


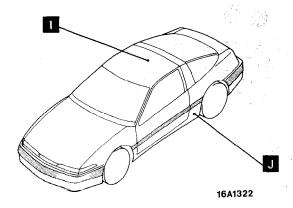


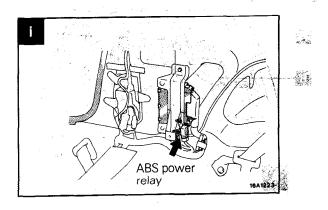


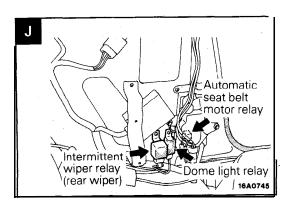












## **SENSOR LOCATION**

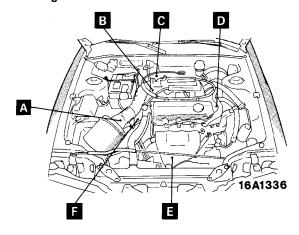
Name	Symbol	Name	Symbol
Air inlet sensor	I	ISC motor position sensor	С
Air thermo sensor	I	Intake air temperature sensor	Α
Barometric pressure sensor	А	Knock sensor	G
Camshaft position sensor	D	Oxygen sensor	E
Crankshaft position sensor	D	Rear speed sensor	L
Engine coolant temperature sensor	F	Throttle position sensor	<sub>₽</sub> В
Front speed sensor	J	Vehicle-speed sensor (Reed switch)	Н
G-sensor	K	Volume air flow sensor	Α

NOTE

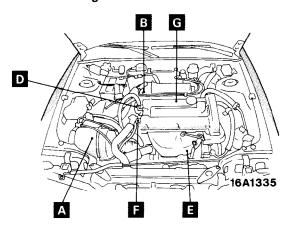
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#### **Engine compartment**

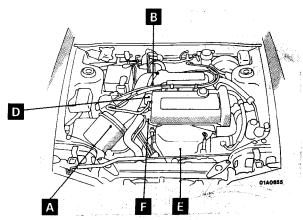
#### 1.8L Engine

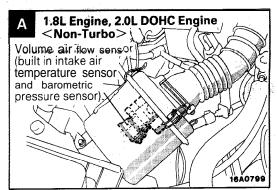


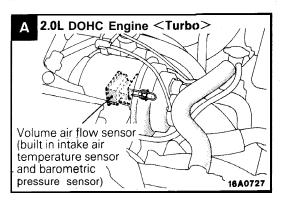
2.0L DOHC Engine <Turbo>

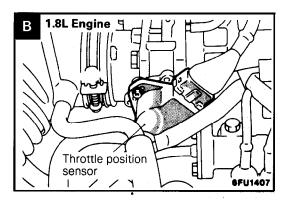


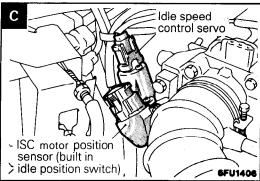
#### 2.0L DOHC Engine <Non-Turbo>

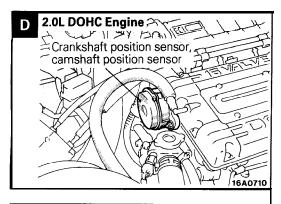


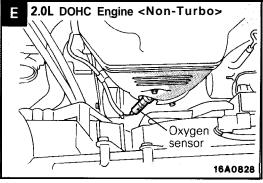


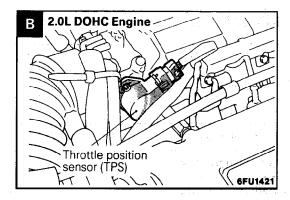


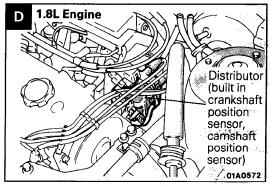


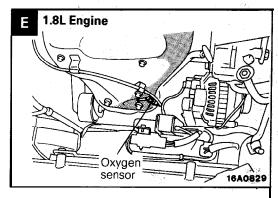


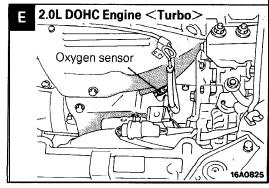


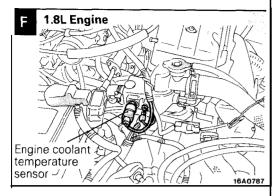


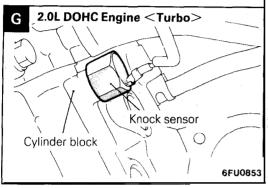


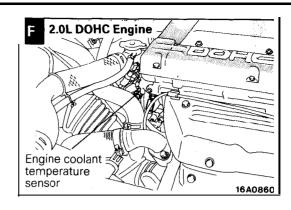




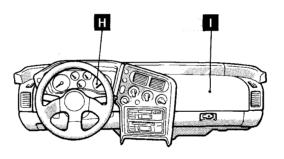




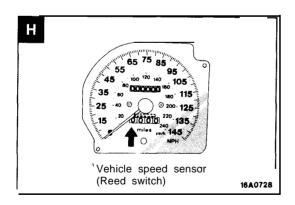


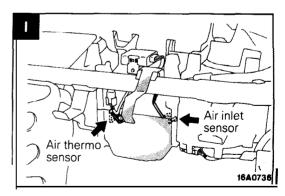


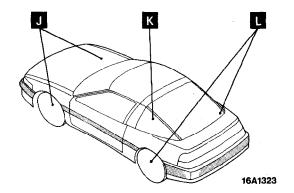
#### Interior

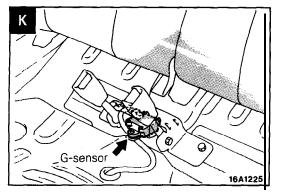


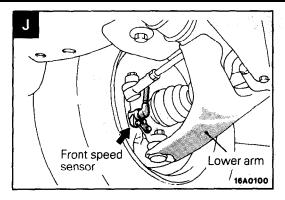
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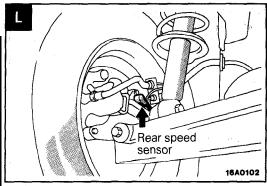










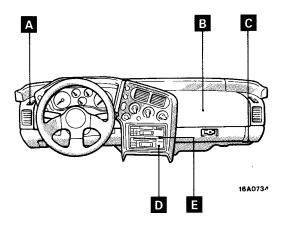


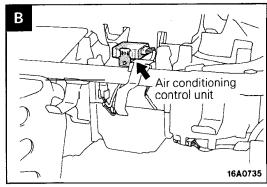
## **CONTROL UNIT LOCATION**

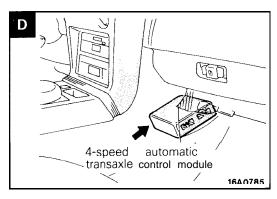
Name	Symbol
4-speed automatic transaxle control module	D
Air conditioning control unit	В
Anti-lock brake control unit	G
Automatic seat belt control unit	F
Door lock control unit	С
Engine control module	Е
Auto-cruise control unit	Α

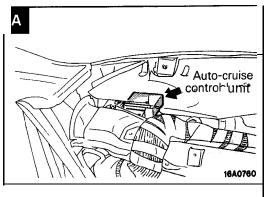
 $\ensuremath{\mathsf{NOTE}}$  The "Name" column is arranged in alphabetical order.

#### Interior

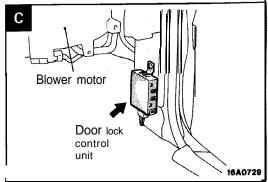


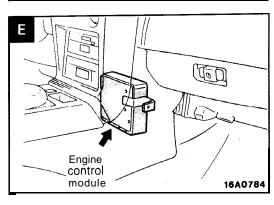


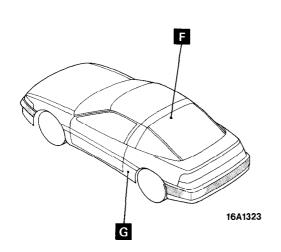


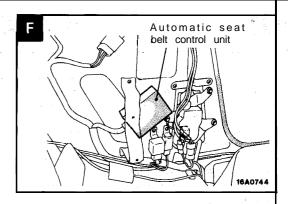


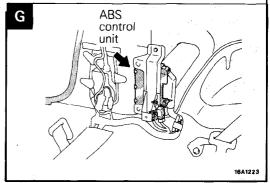
Property of the











# SOLENOID, SOLENOID VALVE LOCATION

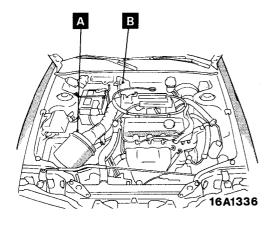
Name	Symbol
4-speed automatic transaxle control solenoid valve	А
EGR solenoid	В
Evaporative emission purge solenoid	B, C
Fuel pressure solenoid	С
Turbocharger waste gate solenoid	С

NOTE

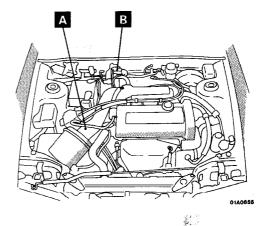
The "Name" column is arranged in alphabetical order.

#### **Engine compartment**

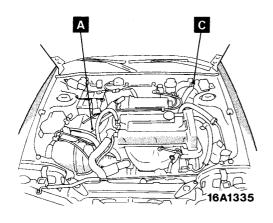
1.8L Engine

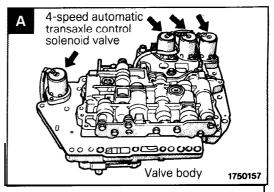


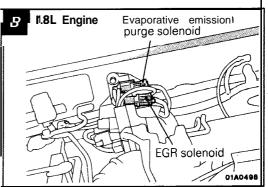
2.0L DOHC Engine <Non-Turbo>

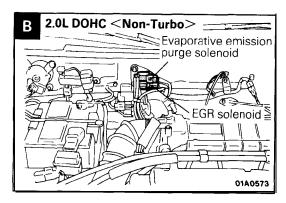


#### 2.0L DOHC Engine <Turbo>



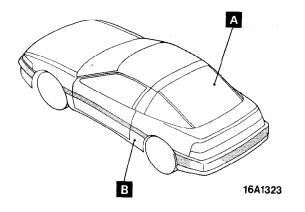


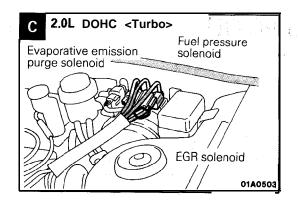




# **DIODE LOCATION**

<Interior-Rear section>

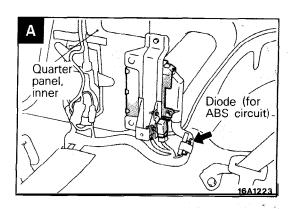


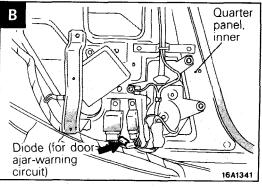


Name	Symbol
Diode (for ABS circuit)	Α
Diode (for door ajar-warning circuit)	В

NOTE

The "Name" column is arranged in alphabetical order



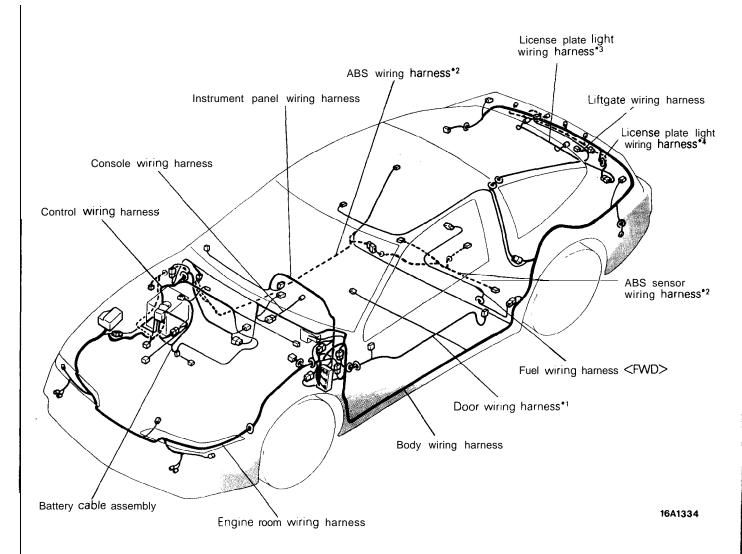


# CONFIGURATION DIAGRAMS

	ONTE	1113	MUSAY
Dash Panel	44	Engine Compartment	
Engine and Transaxle <1.8L Engine>	42	<2.0L DOHC Engine (Turbo)>  How to Read Configuration Diagrams	
Engine and Transaxle <2.0L DOHC Engine>	43	instrument Panel and Floor Console	
Engine Compartment < 1.8L Engine>	36	Interior	48
Engine Compartment	20	Overall Configuration Diagram	3

#### **OVERALL CONFIGURATION DIAGRAM**

NO8VB--



- (1) This illustration shows only the major wiring harness
  (2) I indicates also equipped at the right side.
  (3) \*2 indicates vehicles with ABS.
  (4) 3 indicates PLYMOUTH Laser.
  (5) \*4 indicates EAGLE Talon.

#### **HOW TO READ CONFIGURATION DIAGRAMS**

NO8VCAI

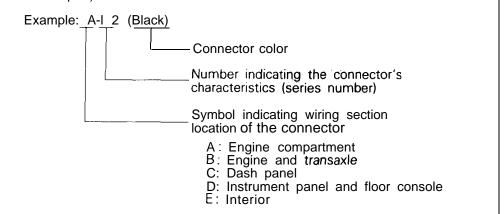
The wiring diagrams are prepared in such a way that the arrangement of connectors for each vehicle, and the routing of each harness, can be easily understood for each individual wiring section.

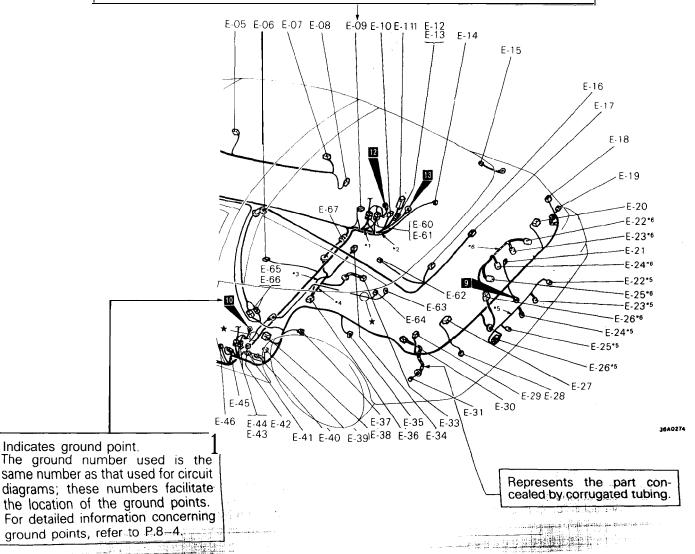
Indicates the connector number.

The connector number used is the same number as that used for circuit diagrams; these numbers facilitate the location of the connector positions.

The alphabet letter used as the prefix represents the wiring section in which that connector is used; subsequent numerals make up the number that indicates particular characteristics of that individual connector. As a general rule, numbers are assigned clockwise around the wiring diagram.

Note that, if there is a concentration of connectors with the same form (same number of pins), the connectors' colors are noted in order to facilitate identification.

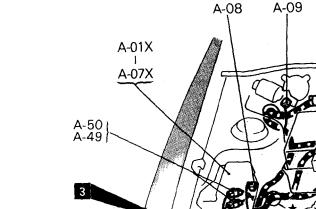


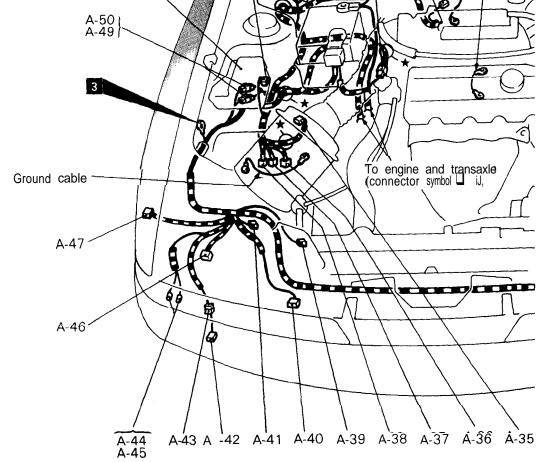


## ENGINE COMPART-MENT < 1.8L Engine>

THE STATE OF THE PARTY OF THE P

Connector symbol





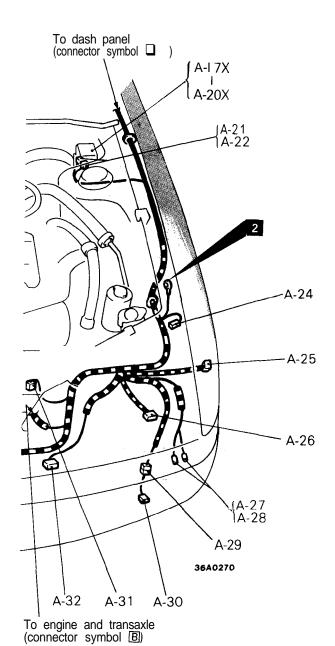
A-09

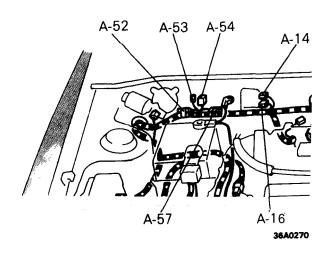
To engine and transaxle Ground (connector symbol B) cable

A-10

A-12

A-02X A-03X A-04X A-05X A-06X A-07X	IOD or storage connector Taillight relay Headlight relay Power window relay Fog light relay Radiator fan motor relay Generator relay	A-I 7X Condenser fan motor high-low changeover relay A-I 8X Condenser fan motor relay A-I 9X Magnetic clutch relay A-20X Condenser A-21 Air conditioning relay box  Refer to CENTRALIZED JUNCTION (for air conditioning circuit)
A-08	Dual pressure switch	A-23 —
A-09 A-10	(for air conditioning circuit) Wiper motor Control wiring harness and battery cable	A-24 Washer motor A-25 Front side marker light (Left side) A-26 Headlight (Left side)
.Α-I 1	assembly combination Auto-cruise control vacuum pump	A-27 A-28 Horn (Left side)
A-12 A-13	Brake fluid level sensor	A-29 Engine compartment wiring harness and fog light sub harness combination
A-I 4	Evaporative emission purge solenoid	A-30 Fog light (Left side)
A-15 A-16	EGR solenoid	A-31 Condenser fan motor
A-10	(Vehicles for California)	(for air conditioning circuit) 16.4 (16.4 A-32 Front combination light (Left side)





A-33 — A-34 —
A-35 Volume air flow sensor
A-36 Automatic transaxle fluid temperature sensor
A-37 Kickdown servo switch <a t=""></a>
A-38 Pulse generator <a t=""></a>
A-39 Radiator fan assembly
A-40 Front combination light (Right side)
A-41 Radiator water level switch
A-42 Fog light (Right side)
A-43 Engine compartment wiring harness and fog
light sub harness combination
A-44 Horn (Right side)
A-40 )
A-46 Headlight (Right side)
A-47 Front side marker light (Right side)
A-48 —

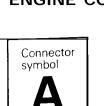
A-49 A-50	Control wiring harness and engine compartment wiring harness combination
A-51	<del>_</del>
A-52	Fuel pump check connector
A-53	Noise condenser
A-54	Defogger relay
A-55	_
A-56	<del></del>
A-57	Ignition timing adjustment connector

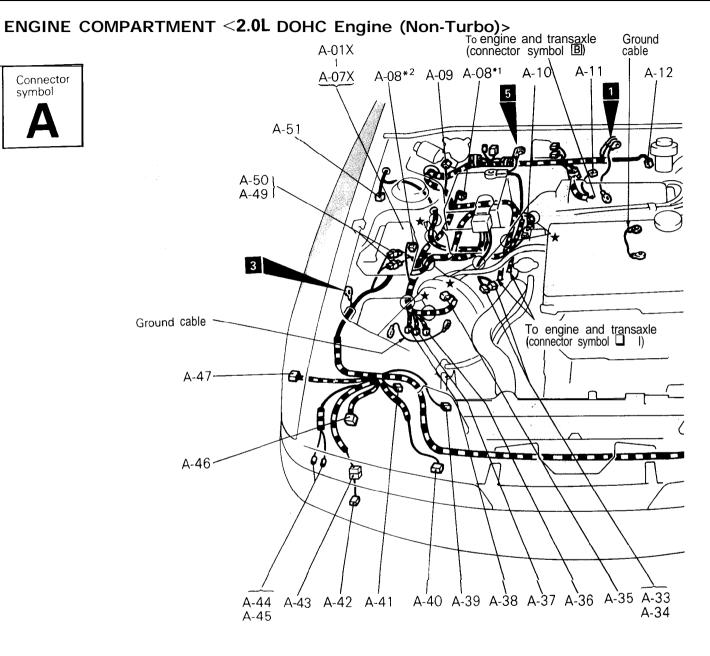
(1) The mark ★ shows the standard mounting position of wiring harness.

(2) For details concerning the ground point (example: 1), refer to P.8-4.
(3) "-" means that the connector with code-number is not used.

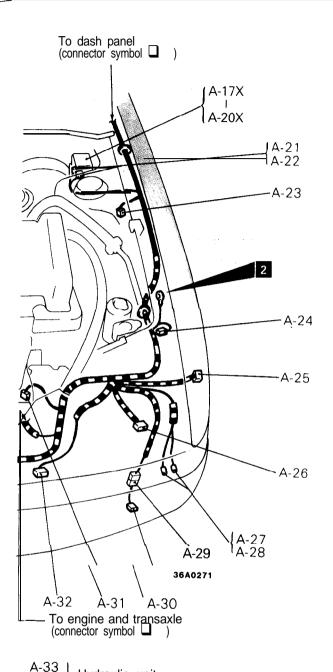
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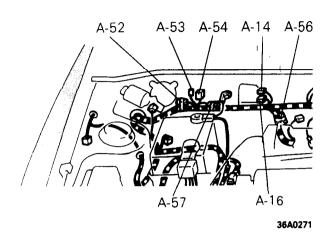
(4) IOD: Ignition Off Draw





A-01XIOD or storage connector A-02X Taillight relay A-03X Headlight relay A-04X Power window relay A-05X Fog light relay A-06X Radiator fan motor relay A-07X Generator relay	Refer to CENTRALIZED JUNCTION	A-I 8X A-I 9X A-20X A-21 A-22	Condenser fan motor high-low changeover relay Condenser fan motor relay Magnetic clutch relay Condenser Air conditioning relay box	Refer to CENTRALIZED JUNCTION (for air conditioning circuit)
A-08 Dual pressure switch (for air conditioning circuit) A-09 Wiper motor A-10 Control wiring harness and b assembly combination	attery cable	A-23 A-24 A-25 A-26	ABS front speed sensor (Left Washer motor Front side marker light (Left s Headlight (Left side)	,
A-11 Auto-cruise control vacuum p A-12 Brake fluid level sensor	oump	A-27   A-28   A-29	Horn (Left side) Engine compartment wiring h	narness and fog
A-13 — L	solenoid	A-30 A-31 A-31	light sub harness combination Fog light (Left side) Condenser fan motor (for air conditioning circuit) Front combination light (Left	n





A-34	Hydraulic unit
A-35 A-36	Volume air flow sensor Automatic transaxle fluid temperature sensor
A-37	Kickdown servo switch <a t=""></a>
A-38 I	Pulse generator <a t=""></a>
A-39 I	Radiator fan assembly
A-40	Front combination light (Right side)
A-4 1	Radiator water level switch
A-42	Fog light (Right side)
A-43	Engine compartment wiring harness and fog
	light sub harness combination
A-44	S
A-45 I	Horn (Right side)
	leadlight (Right side)
A-47	Front side marker light (Right side)
. : :	3 ( ( 3 )

A-48

Control wiring harness and engine compartment wiring harness combination A-50 A-51 A-52 ABS front speed sensor (Right side) Fuel pump check connector Noise condenser A-53 A-54 Defogger relay A-55 A-56 Engine speed adjustment connector A-57 Ignition timing adjustment connector

#### Remarks

A-49

(1) The mark ★ shows the standard mounting positron of

wiring harness

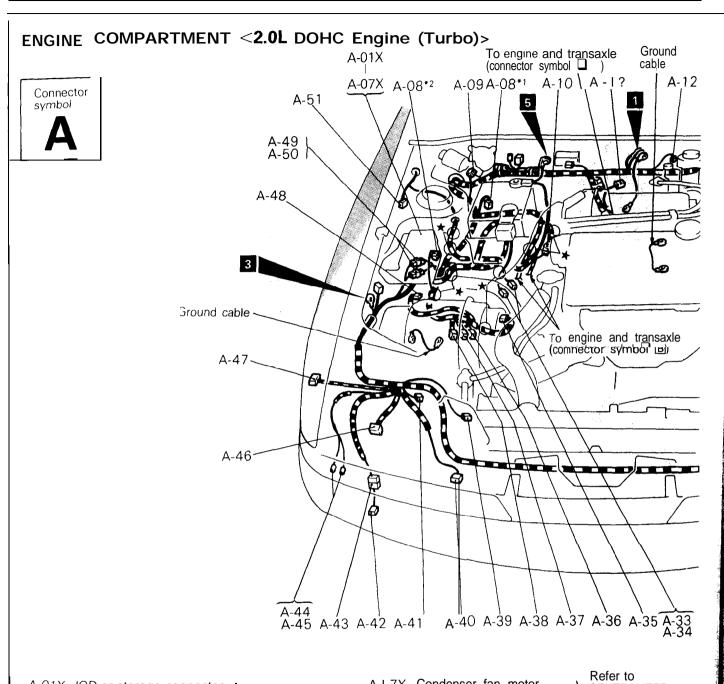
(2) For details concerning the ground point (example: 1), refer to P.8-4.

(3) "-" means that the connector with code-number is not

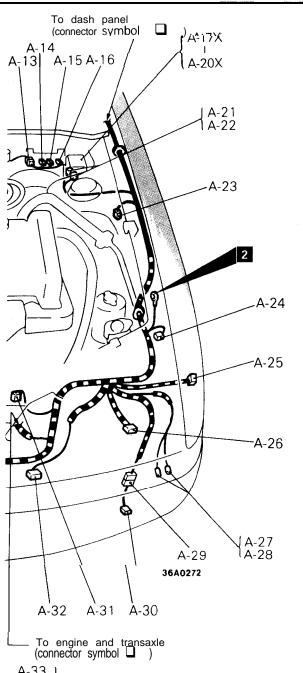
used.

(4) The wiring indicated by the • I symbol is applicable to vehicles with ABS and the wiring indicated by the symbol is applicable to vehicles without ABS.

(5) IOD : Ignition Off Draw



A-02X A-03X A-04X A-05X A-06X	IOD or storage connector Taillight relay Headlight relay Power window relay Fog light relay Radiator fan motor relay Generator relay	Refer to CENTRALIZED JUNCTION	A-I /X Condenser fan motor high-low changeover relay A-18X Condenser fan motor relay A-I 9X Magnetic clutch relay A-20X Condenser A-21 A-22 Air conditioning relay box	
A-08	Dual pressure switch		A-23 ABS front speed sensor (Left side)	
	(for air conditioning circuit)		A-24 Washer motor	
A-09	Wiper motor		A-25 Front side marker light (Left side)	
A-10	Control wiring harness and	battery cable	A-26 Headlight (Left side)	
l A-11	assembly combination Auto-cruise control vacuum	pump	A-27 A-28 Horn (Left side)	
	Brake fluid level sensor		A-29 Engine compartment wiring harness and fog	
A-13	Control wiring harness and	solenoid valve	light sub harness combination	
harness assembly combination		ion	A-30 Fog light (Left side)	
Evaporative emission purge solenoid			Δ-31 Condenser fan mótor	
	Helppressure solenoid valv	Э	(for air conditioning circuit), A-32 Front combination light (Left side)	
340	<b>Lesole</b> noid		A-32 Front combination light (Left side)	
	(childles for California)			



A-55 A-56 A-52 A-53 A-54 36A0272

A-33 } A-34 } Hydraulic unit

A-35 A-36 A-37 A-38 A-39 Volume air flow sensor

Automatic transaxle fluid temperature sensor

Kickdown servo switch <A/T>

Pulse generator <A/T>

Radiator fan assembly

A-40 Front combination light (Right side)

A-41 Radiator water level switch

A-42 Fog light (Right side)

A-43 Engine compartment wiring harness and fog light sub harness combination

A-44 Horn (Right side) A-45 I

A-46 Headlight (Right side)

A-47 Front side marker light (Right side)

A-48 Turbocharger waste gate solenoid

A-49 Control wiring harness and engine

A-50 compartment wiring harness combination

A-51 ABS front speed sensor (Right side)

Fuel pump check connector A-52

A-53 Noise condenser

A-54 Defogger relay

A-55 Resistor

A-56 Engine speed adjustment connector

A-57 Ignition timing adjustment connector

#### Remarks

(1) The mark ★ shows the standard mounting position of wiring harness.

(2) For details concerning the ground point (example: 11), refer to P.8-4.

(3) The wiring indicated by the • I symbol is applicable to vehicles with ABS and the wiring indicated by the. • 2 symbol is applicable to vehicles without ABS.

(4) IOD Ignition Off Draw

# LIGHTING SYSTEM

#### **SPECIFICATIONS**

#### **GENERAL SPECIFICATIONS**

MORIB.

Items	Specifications		
Exterior lights			
Headlight	W	65/55	
Foglight	W	25	nación del
Front combination light			
Turn-signal and position light	C F	24/2.2	
Front side marker light	СР	3	
Rear side marker light	CP	3	APPE STEPPE
Rear combination light			
Tail light*1	C F	32/2 (2057)*1	
Turn-signal, stop and taillight*1	C F	32/2 (2057)*1	a parties of
Turn-signal light*2	CP	32 (1 156)* <sup>2</sup>	24. 12. 2. 12.
'Stop and tail light"*	C F	32/2 (2057)*2	ا ما العرب الم
Back-up light*1	W	2 7 "	
Back-up light*2	СР	21*2	
License plate light	W	5	
High-mounted stop light	W	27 or 5* <sup>3</sup>	
nterior lights			
Front dome light			
Dome light	W	8	
Stop light	W	8	
Foot light	W	3.4	
Glove compartment light	W	3.4	
Luggage compartment light	W	5	

- NOTE
  1. \*1 PLYMOUTH Laser
  2. \*2 EAGLE Talon
  3. \*\* biolog with rear

- 2. \*² EAGLE Talon
  3. \*³ : Vehicles with rear air spoiler
  4. The √alues in parentheses denote SAE trade numbers.

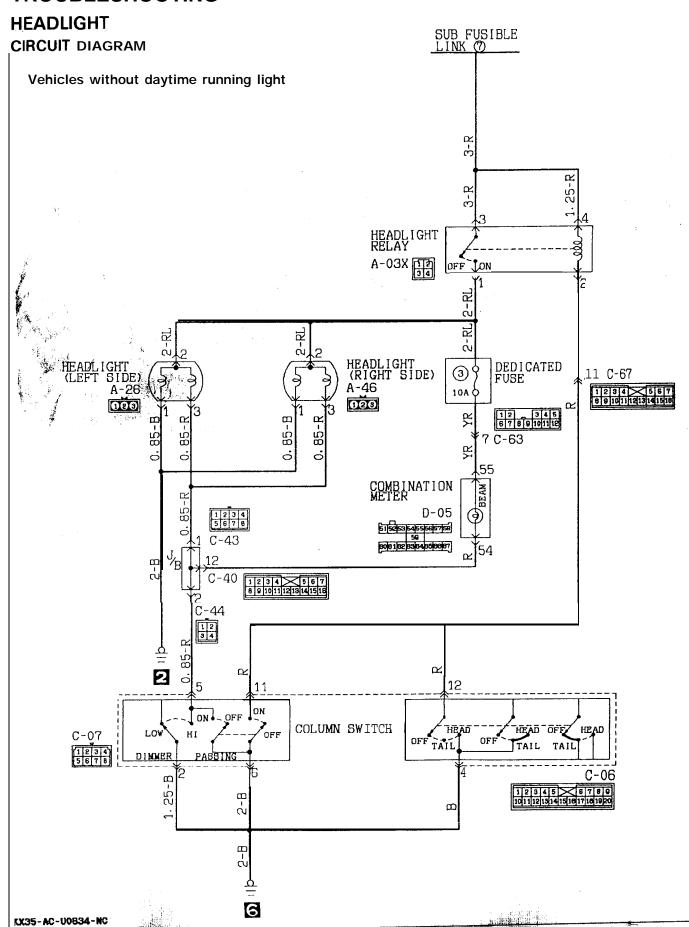
#### **SERVICE SPECIFICATIONS**

NOBIC-

Items	Specifications
Limit	
Headlight intensity	20,000 cd or more

#### **TROUBLESHOOTING**

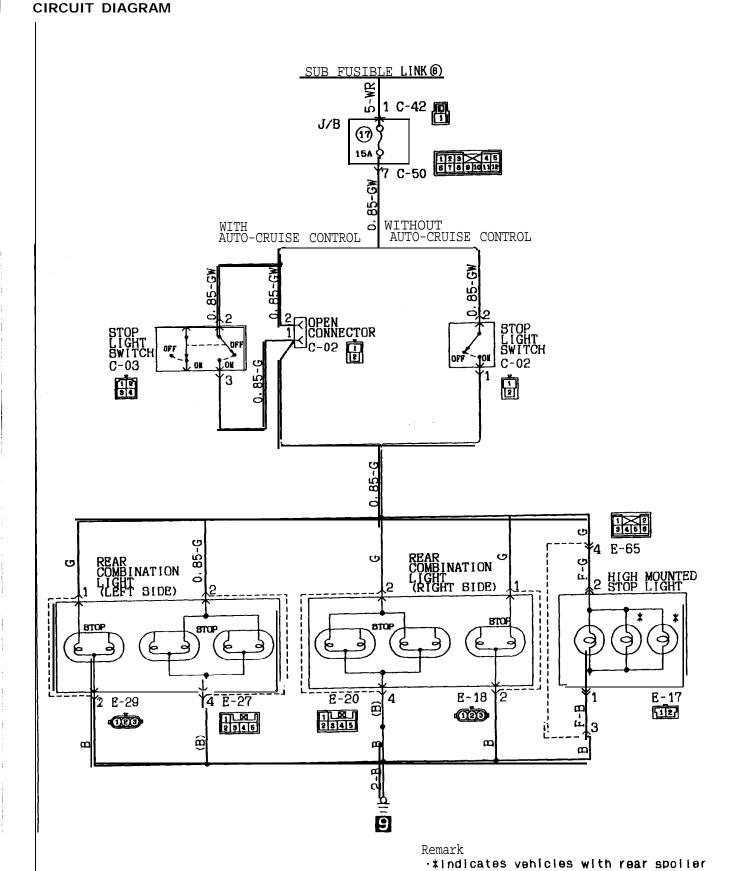
NO8IHBU

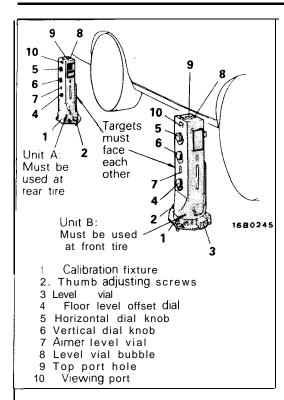


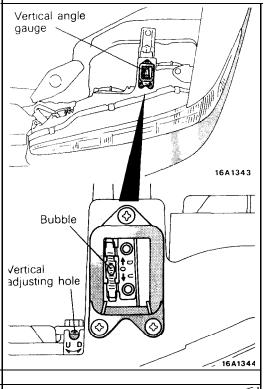
STOP **LIGHT** CIRCUIT < EAGLE Talon>

KX35-AC-U0918-NC

NOBIHHH







'O" mark

Gear (A)

Horizontal adjusting

16A134

hole

Gear (B)

Center line

Stopper

#### SERVICE ADJUSTMENT PROCEDURES

NO8IIAF

#### **HEADLIGHT AIMING**

#### PRE-AIMING INSTRUCTIONS

- 1. Test dimmer switch operation.
- 2. Observe operation of high beam light mounted in instrument cluster.
- inspect for badly rusted or faulty headlight assemblies. These conditions must be corrected before a satisfactory adjustment can be made.
- 4. Place vehicle on a level floor.
- 5. Bounce front suspension through three (3) oscillations by applying body weight to hood or bumper.
- 6. Inspect tire inflation.
- 7. Rock vehicle sideways to allow vehicle to assume its normal position.
- 8. If fuel tank is not full, place a weight in trunk of vehicle to simulate weight of a full tank [3 kg (6.5 lbs.) per gallon].
- 9. There should be no other load in the vehicle other than driver or substituted weight of approximately 70 kg (150 lbs.) placed in driver's position.
- 10. Thoroughly clean headlight lenses.

#### **VERTICAL ADJUSTING**

Insert the screwdriver into the vertical adjusting hole, and turn it clockwise or counterclockwise to bring the bubble of the vertical angle gauge to the center.

#### NOTE

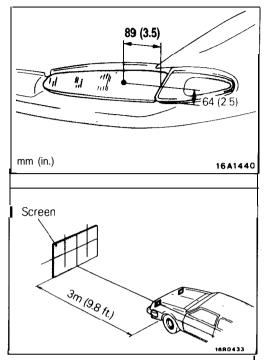
The beam angle will change about 0°19′ with one mark.

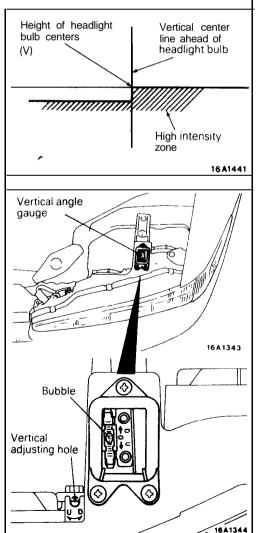
#### HORIZONTAL ADJUSTING

- 1. After pulling out the stopper upward, press gear (B) forward to disengage it from gear (A).
- 2. Insert the screwdriver into the horizontal adjusting hole, and adjust the horizontal angle.
- 3. After adjustment, align the "0" mark of gear (B) to the center line, and press in the stopper for locking.

NOTE The beam angle will change about 0°36′ with one mark.

36 With one mark.





#### AIMING WITH SCREEN HEADLIGHT AIM PREPARATION

Measure the center of the headlight bulb as shown in the illustration.

- 2 Place vehicle on a known level floor 3m (9.8 feet) from aiming screen or light colored wall. Four lines of adhesive tape or like are required on screen or wall:
  - Position a vertical tape so that it is aligned with the vehicle center line.
  - (2) Position a horizontal tape with reference to center line of headlight bulb.
  - (3) Position a vertical tape on the screen with reference to the center line of each of headlights bulb.

#### VISUAL HEADLIGHT ADJUSTMENT

- 1. A properly aimed lower beam will appear on the airning screen 3m (9.8 feet) in front of the vehicle. The shaded area as shown in the illustration indicates high intensity zone.
- 2. Adjust low beam of headlights to match the low beam pattern of the right and left headlights.

#### \*\* Caution

When adjusting one headlight, the other headlight should be turned off if possible. If this is not possible, do not cover the other headlight for more than three minutes while it is turned on. Otherwise, heat from the bulb may warp the headlight lens.\*\*

#### **Vertical Adjusting**

- 1. Check the position of the level bubble to confirm that it is within the range as shown in the illustration.
- 2. Confirm that the beam irradiated on the screen is the same as the specified beam pattern.

If it is not the same, adjust the vertical angle with the vertical adjusting screw so that it becomes the specified beam pattern.

#### NOTE

If the visual headlight adjustment at low beam is made, the adjustment at high beam is not necessary.

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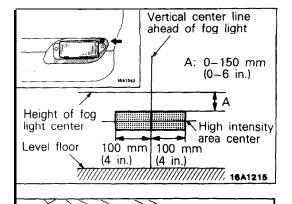
#### LUMINOUS INTENSITY MEASUREMENT

Measure the luminous intensity of headlights with a photometer in accordance with the instruction manual prepared by the manufacturer of the photometer and make sure that the luminous intensity is within the following limit.

Limit: 20,000 cd or more

#### NOTE

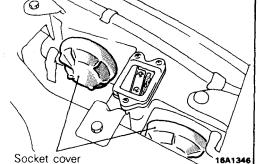
- (1) When measuring the luminous intensity of headlight, keep the engine at 2,000 rpm and have the battery charged.
- (2) If there are specific regulations for luminous intensity of headlights in the region where the vehicle is operated; make sure that the intensity conforms to the requirements of such regulations.



#### FOG LIGHT AIMING

NO8IIEA

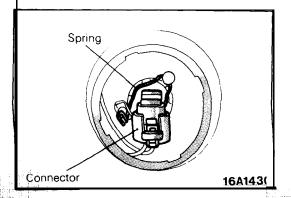
- 1. Place vehicle on a known level floor 7.6 m (25 feet) from aiming screen or light colored wall.
- 2. Use adjusting screw to adjust the top end of high intensity zone to dimension A.



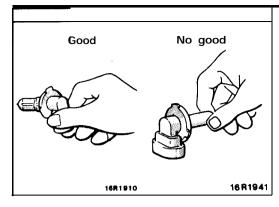
16A1346

#### HEADLIGHT BULB REPLACEMENT

Pull out the socket cover.



- 2. Remove the valve mounting spring, and pull the valve out toward you together with the connector.
- 3. Disconnect the bulb from the connector.



#### Caution

- 1. Never hold the halogen light bulb with a bare hand, dirty glove, etc.
- 2. if the glass surface is **dirty, be** sure to clean it with alcohol, paint thinner, etc., and install it after drying it thoroughly.
- 4. Be sure to attach the cap.

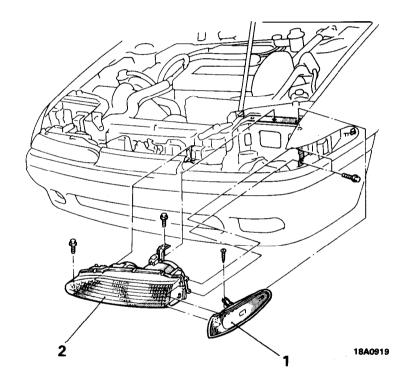
#### NOTE

Be sure to install the cap securely because, if it is not, an insecure installation could cause such problems as clouding of the lens, or intrusion of moisture to inside the light unit

#### HEADLIGHT AND FRONT SIDE MARKER LIGHT

NO8LJAQ

#### REMOVAL AND INSTALLATION

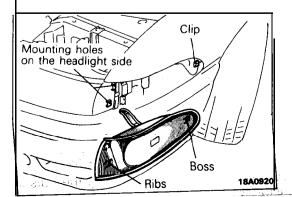


#### Removal steps

+ 1. Front side marker light2. Headlight

#### NOTE

- (1) Reverse the removal procedures to reinstall.
- (2) 4: Refer to "Service Points of Installation"



#### SERVICE POINTS OF INSTALLATION

.≱.\$4\TGSY\-

#### 1. INSTALLATION OF FRONT SIDE MARKER LIGHT

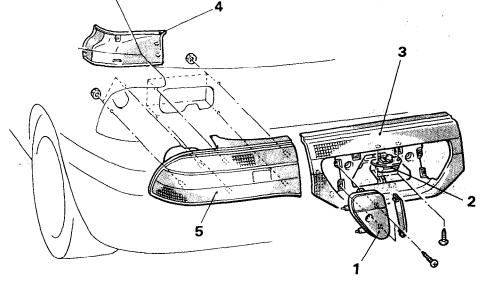
Insert the boss of the front side marker light into the clip areas of the front fender, and insert the ribs of the front side marker light into the mounting holes on the headlight side. Then, mount the front side marker light with the mounting screws.

#### **REAR COMBINATION LIGHT**

NO8IMAK

REMOVAL AND INSTALLATION

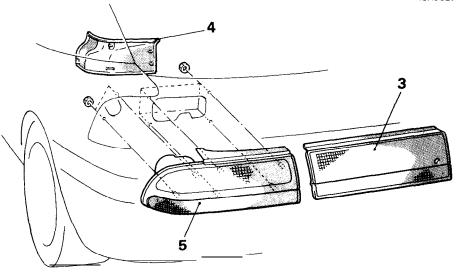
<EAGLE Talon>



18A0927

18A0926

<PLYMOUTH Laser>



#### Removal steps

- 1. Back-up light
- License platelight
   Rear panel garnish
   Lid C (Lid D when the right rear combination light is removed or installed)
  - 4 5. Rear combinationlight

- (1) Reverse the removal procedures to reinstall.
  (2) \*\* Refer to "Service Points of Removal".
  (3) \*\* Refer to "Service Points of Installation".

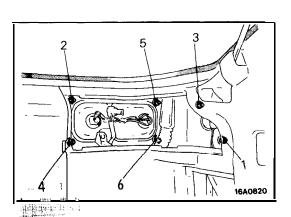
#### SERVICE POINTS OF REMOVAL

- 1. REMOVAL OF BACK-UP LIGHT Refer to GROUP 23 - Garnishes.
- 3. REMOVAL OF REAR PANEL GARNISH Refer to GROUP 23 - Garnishes.

#### SERVICE POINTS OF INSTALLATION

5. INSTALLATION **OF** REAR COMBINATION LIGHT

Mount the rear combination light by tightening the nuts in the sequence illustrated.

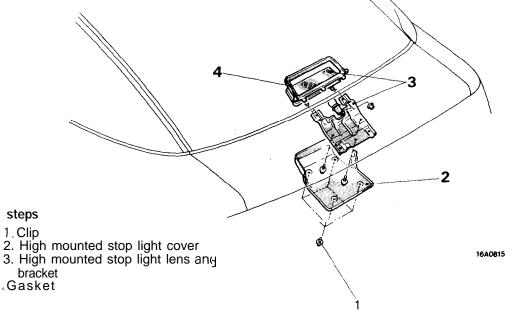


### **HIGH MOUNTED STOP LIGHT**

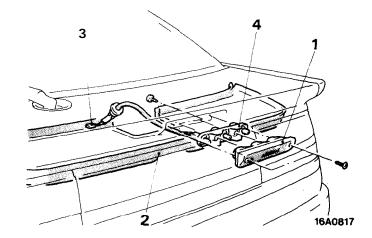
#### REMOVAL AND INSTALLATION

< Vehicles without rear air spoiler>

NO8IKAK



<Vehicles with rear air spoiler>



#### Removal steps

Removal steps

1. Clip

- 1. High mounted stop light unit
- 2. Liftgate trim3. Wiring harness connectorSocket

Reverse the removal procedures to reinstall, 2) **\*\*** Refer to "Servie Points of Removal".

#### SERVICE POINTS OF REMOVAL

2. REMOVAL OF LIFTGATE TRIM < Vehicles with rear air spoiler >

Refer to GROUP 23-Trims.