

# BODY ELECTRICAL SYSTEM

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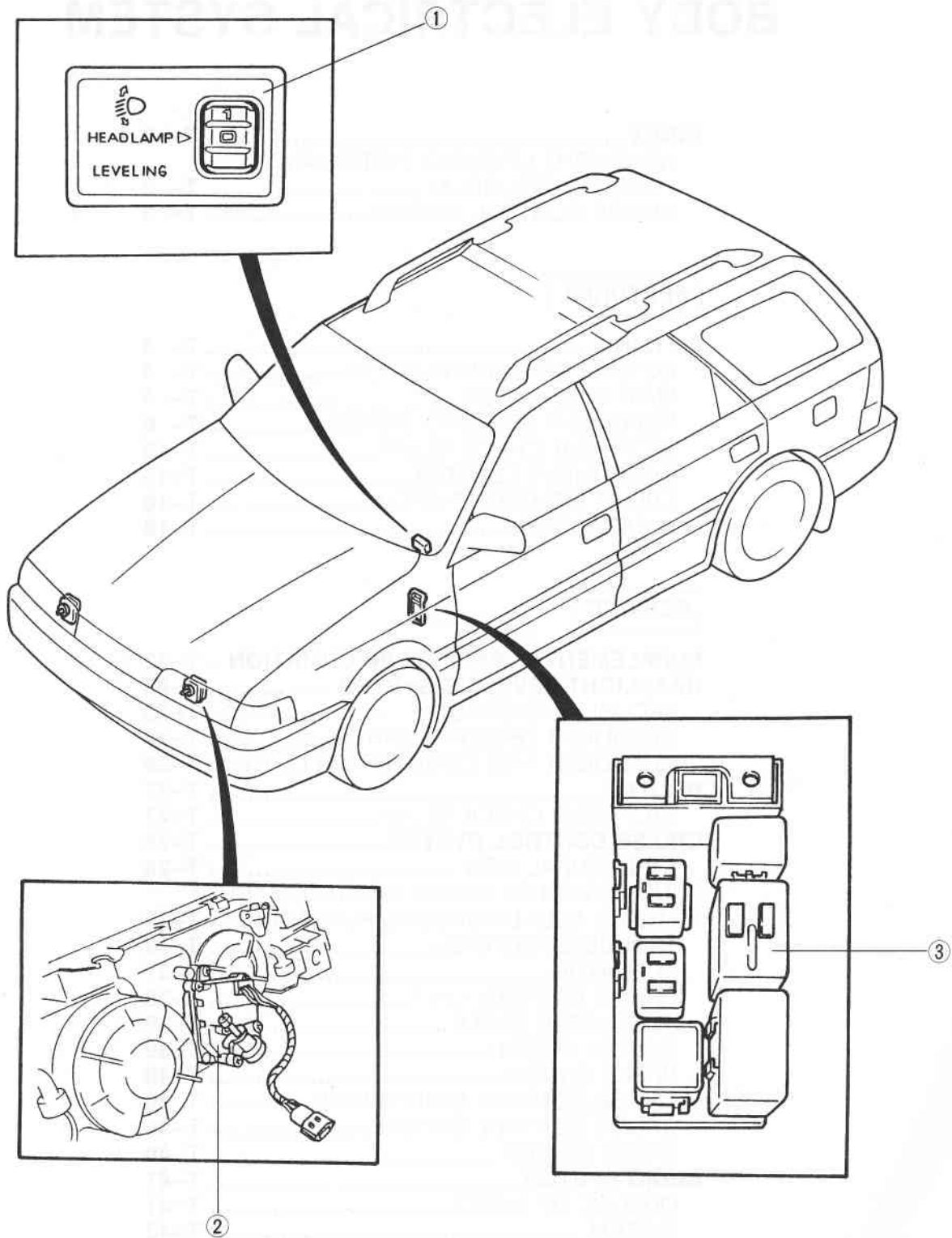
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## HEADLIGHT LEVELING SYSTEM AND LIGHT CHECK RELAY

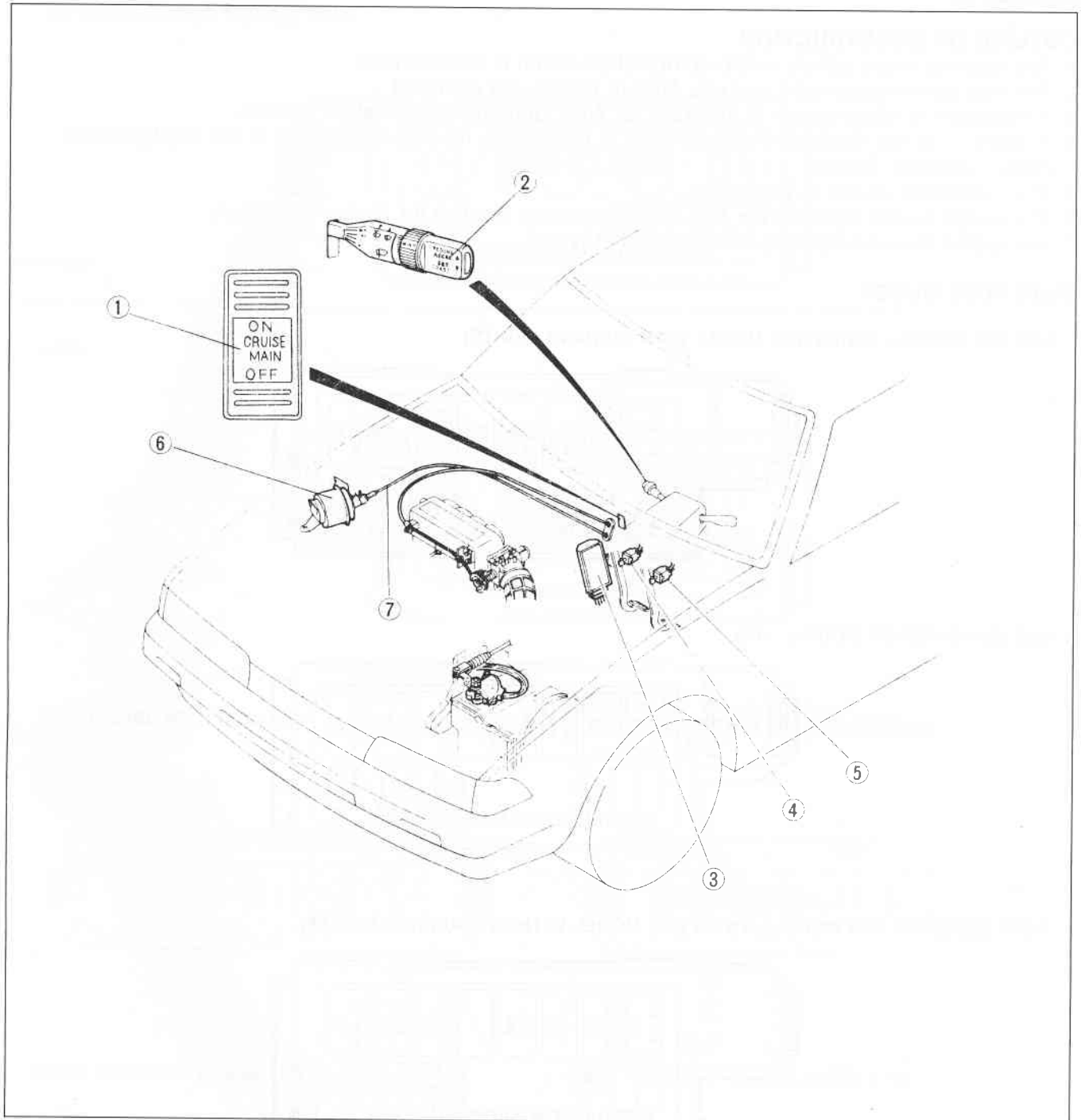


96G0TX-502

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3. Stoplight check relay  
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# CRUISE CONTROL SYSTEM



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- |                                  |           |
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### OUTLINE

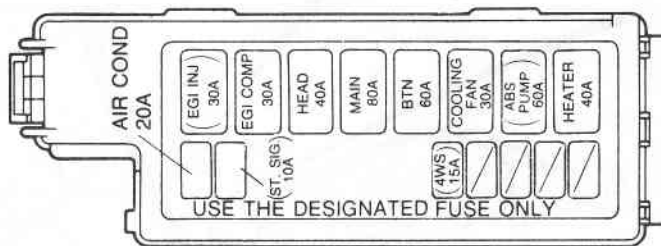
#### OUTLINE OF CONSTRUCTION

1. The steering angle sensor in the combination switch is discontinued.
2. The rear combination light and rear finisher design are changed.
3. A headlight leveling system is included for West Germany specification vehicles.
4. In addition to the stoplight check function, a fuse check function is included in the stoplight relay.  
(West Germany, Swiss)
5. The instrument cluster is upgraded.
6. The cruise control system now has a self-diagnostic function for easing inspection.
7. The available audio systems are changed (3 types).

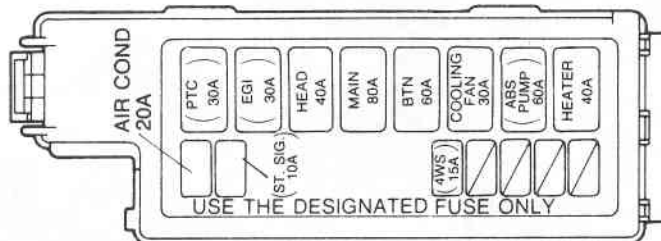
96G0TX-504

#### MAIN FUSE BLOCK

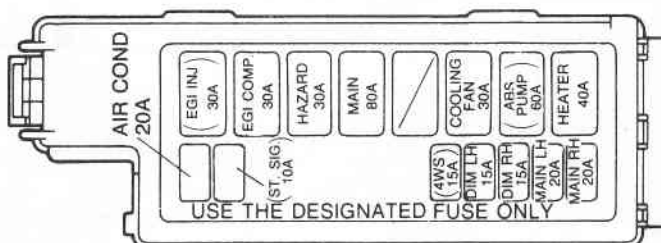
##### ECE (EGI MODEL), SWISS (EGI MODEL WITH RUNNING LIGHTS)



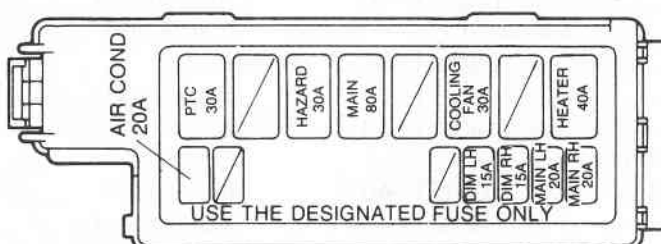
##### ECE (CARBURETOR MODEL), LHD



##### WEST GERMANY (EGI MODEL), SWISS (EGI MODEL WITHOUT RUNNING LIGHTS)

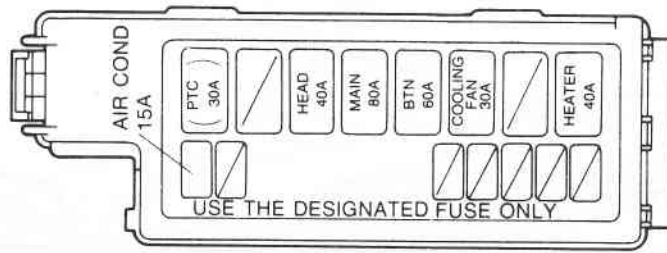


##### WEST GERMANY (CARBURETOR MODEL)

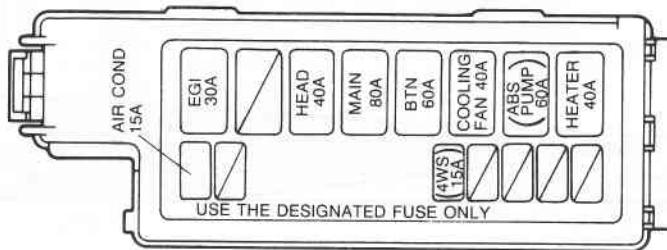


96G0TX-505

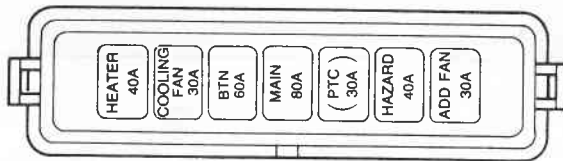
## UK (CARBURETOR MODEL), RHD



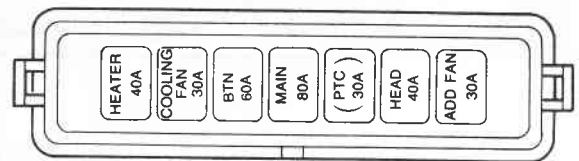
## ADR



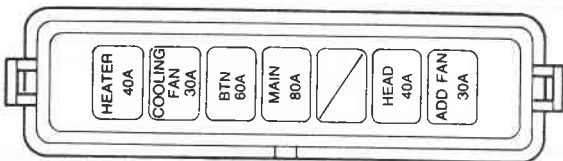
## ECE (DIESEL WITH MTX), UK



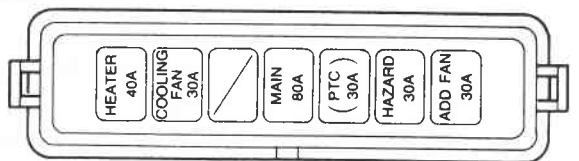
## ECE (DIESEL WITH ATX), RHD (DIESEL)



## WEST GERMANY (DIESEL WITH MTX)



## WEST GERMANY (DIESEL WITH ATX)



96E0TX-005

Slow blow type main fuses are used for improved reliability and serviceability.

## HEADLIGHT LEVELING SYSTEM

FIGURE 1  
NORMAL CONDITION

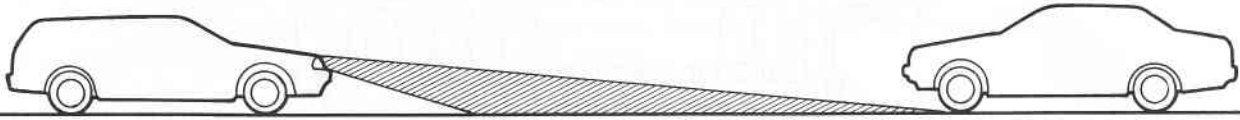


FIGURE 2  
LOADED VEHICLE

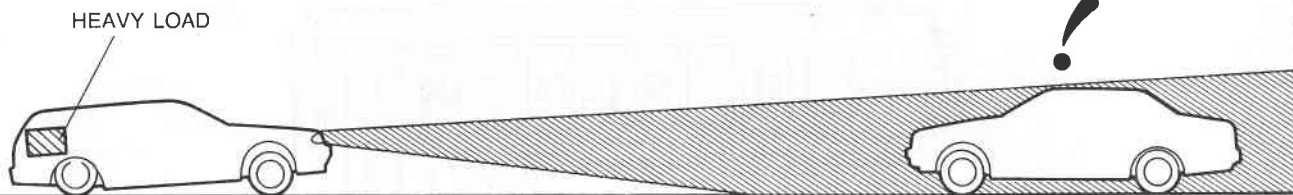
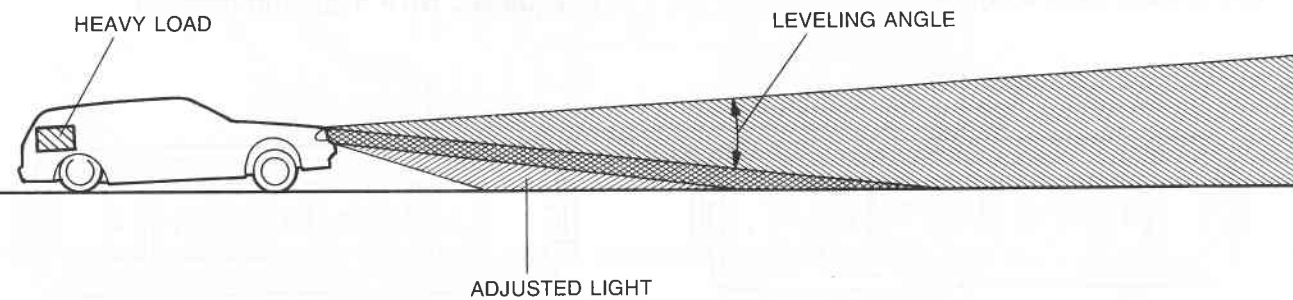
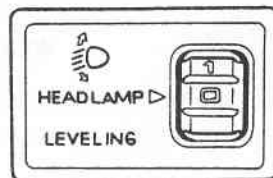


FIGURE 3  
ADJUSTED LIGHT



HEADLIGHT  
LEVELING  
SWITCH

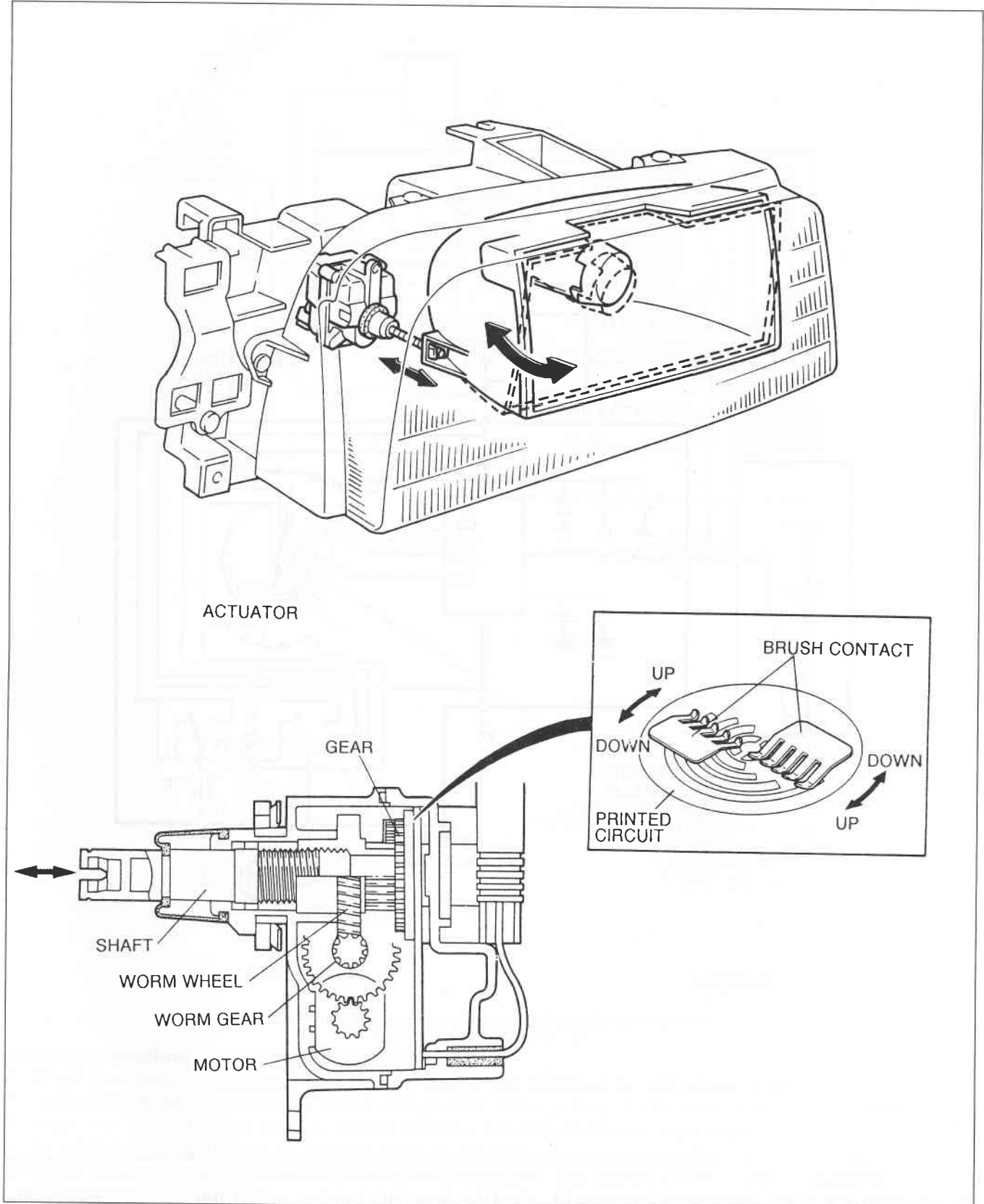


96E0TX-006

Figure 1 is an illustration of the headlight illumination pattern of a normally loaded vehicle. When additional cargo is loaded into the rear of the vehicle, the front of the vehicle will lift, causing the headlights to shine higher than usual. As illustrated in figure 2, this causes discomfort to drivers of oncoming vehicles. West Germany specification vehicles have a driver-operated headlight leveling system to prevent such an occurrence.

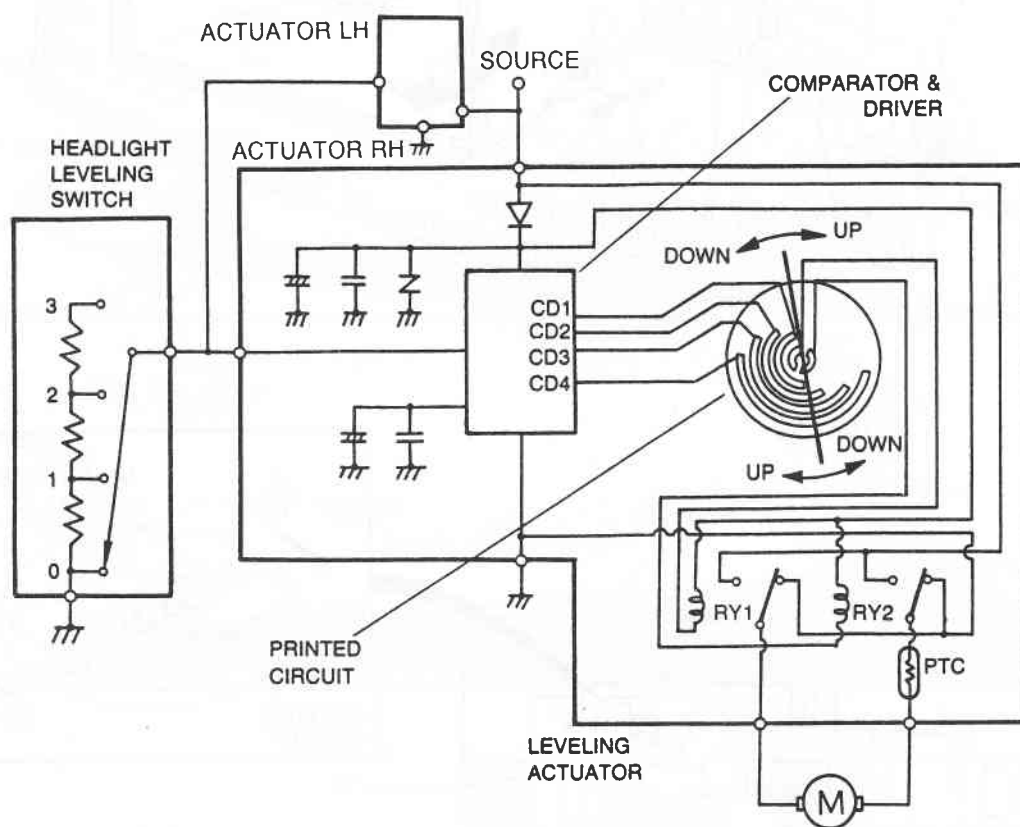
The headlight leveling switch can be used to lower the headlights in three steps.

System Operation



96E0TX-007

The actuator is connected to the headlight bracket at the bottom of the bracket to move the headlight up or down as dictated by the load carried in the vehicle. When the headlight leveling switch is activated, the motor moves the actuator shaft in or out, via the worm wheel and worm gear. The amount of in-and-out movement of the actuator shaft is regulated by the printed contact circuit on gear A.



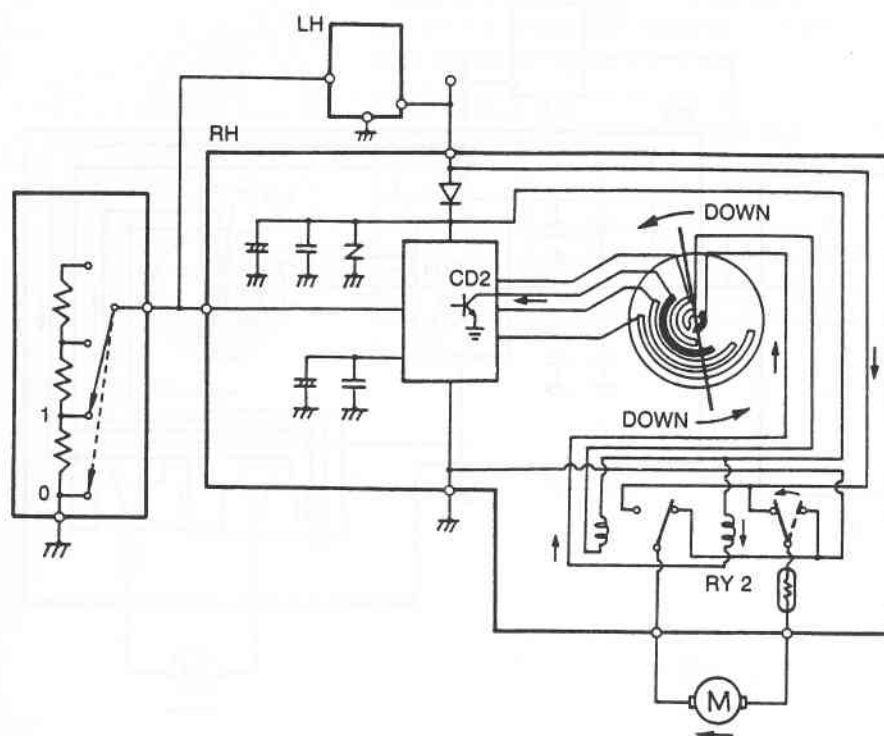
96E0TX-008



The movement of the printed circuit on gear A controls the operation of the motor and, consequently, the amount and direction of the actuator shaft movement.



# Operation



START

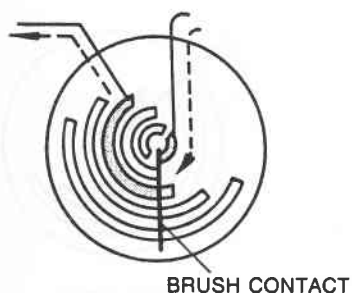


FIGURE A

FINISH

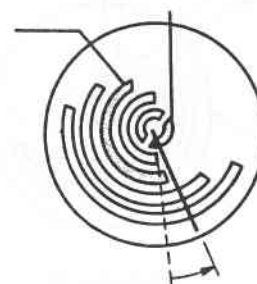


FIGURE B

96E0TX-009

## Headlight leveling switch changed from 0 to 1

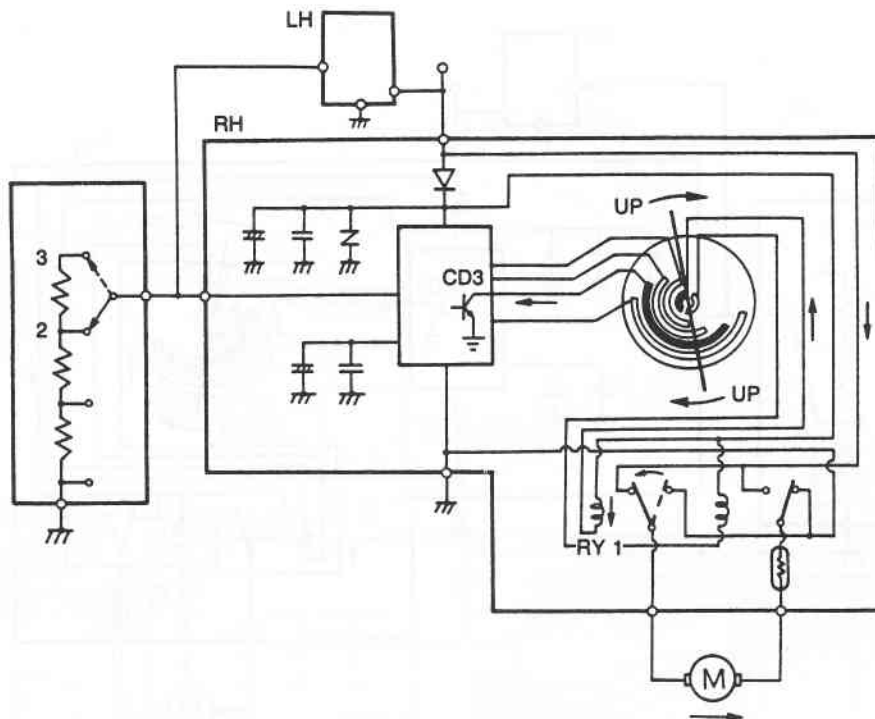
1. When the switch is changed from 0 to 1, CD2 of the comparator and driver comes ON.
2. Current flows as shown by the arrow in Figure A; turning relay 2 ON, and operating the motor.
3. When the motor rotates, gear A rotates and the actuator shaft is moved rearward.
4. As gear A rotates, the brush contact slides against the printed circuit. (Fig. B)
5. When the brush contact reaches the end of the pattern, the current to the motor is stopped, stopping the motor.

## Headlight leveling switch changed from 1 to 2

1. CD3 of the comparator and driver is turned ON, and the procedure described above takes place.

## Headlight leveling switch changed from 2 to 3

1. CD4 of the comparator and driver is turned ON, and the procedure described above takes place.



START

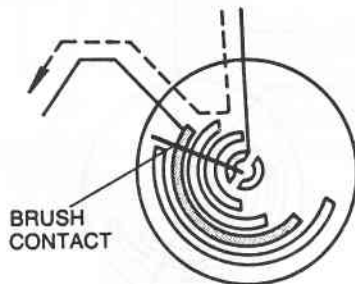


FIGURE D

FINISH

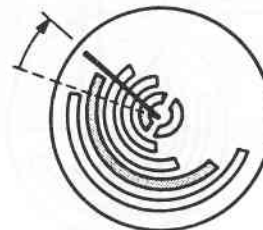


FIGURE E

96E0TX-010

### Headlight leveling switch changed from 3 to 2

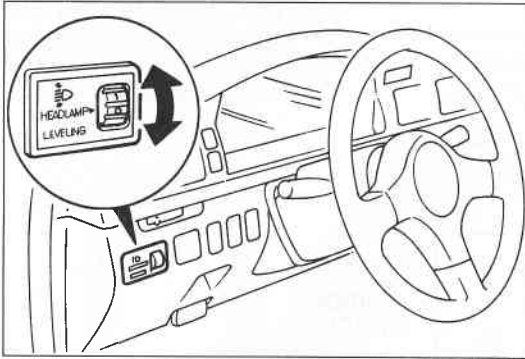
1. When the switch is changed from 3 to 2, CD3 of the comparator and driver comes ON.
2. Current flows as shown by the arrow in Figure D; turning relay 1 ON, and operating the motor.
3. When the motor rotates, gear A rotates and the actuator shaft is moved forward.
4. As gear A rotates, the brush contact slides against the printed circuit. (Fig. E)
5. When the brush contact reaches the end of the pattern, the current to the motor is stopped, stopping the motor.

### Headlight leveling switch changed from 2 to 1

1. CD2 of the comparator and driver is turned ON, and the procedure described above takes place.

### Headlight leveling switch changed from 1 to 0

1. CD1 of the comparator and driver is turned ON, and the procedure described above takes place.



96E0TX-011

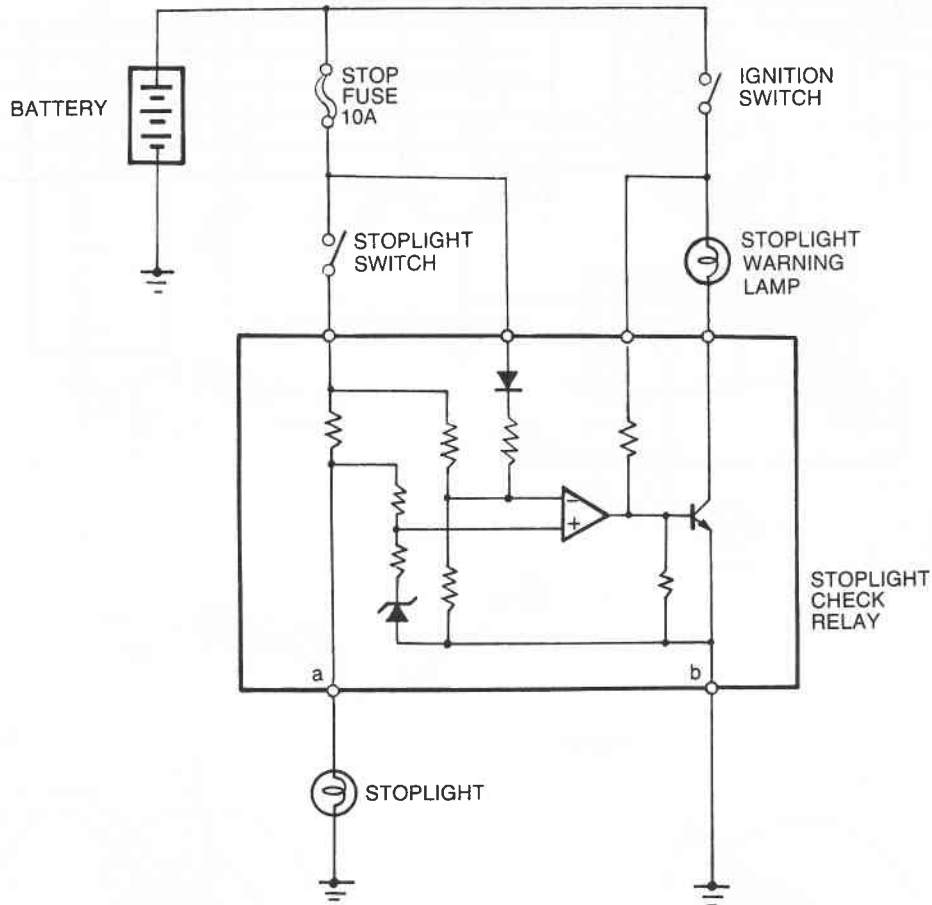
## Leveling Switch Position

The headlight projected angle changes with the number of occupants and load in the cargo area. This switch is used to adjust the projected headlight angle. Select the proper setting by referring to the chart.

Front seat		Rear seat	Load	Switch position
Driver	Passenger			
X	—	—	—	0
X	X	—	—	0
X	X	X	—	1
X	X	X	X	2
X	—	—	X	3

X: Yes —: No

STOPLIGHT CHECK RELAY (WEST GERMANY, SWISS)



g		c	a
h	f	d	b

96E0TX-012

In addition to the stoplight check function, a fuse check function is included in the relay. If a stoplight or the stoplight fuse fails, the warning indicator lamp will illuminate.

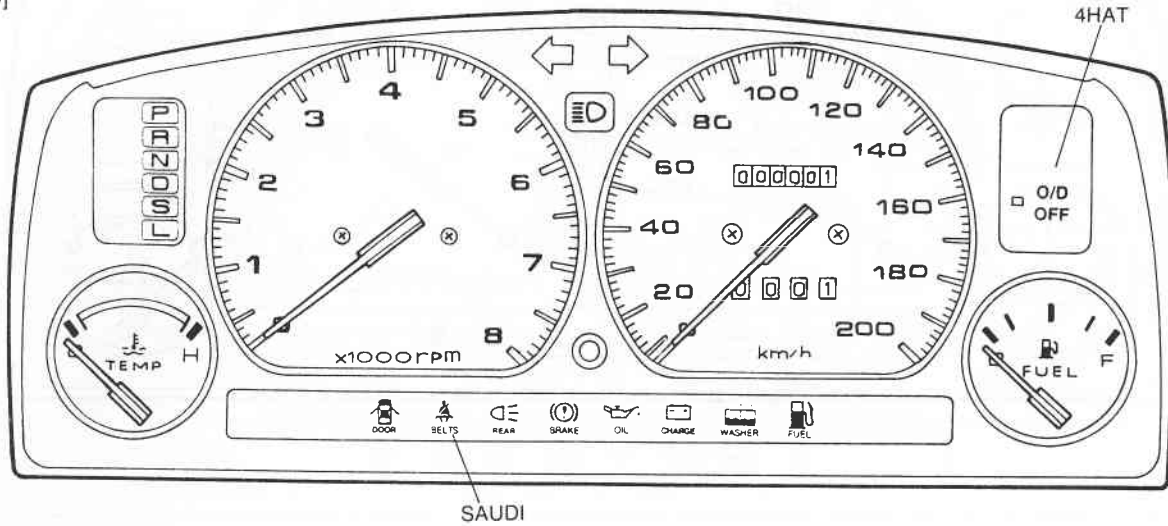
**Function**

When the ignition is switched ON and the stoplight switch is activated, current flows through the stoplight check relay and the stoplights come ON.

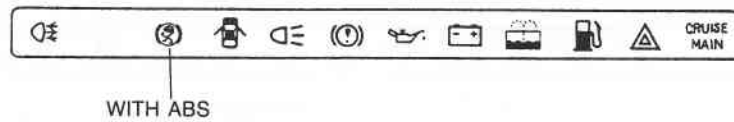
If a stoplight has failed or the fuse (10A) is burned, the current stops and the comparator allows base current to turn on the transistor and illuminate the warning lamp.

## INSTRUMENT CLUSTER Analog (Dial) Display

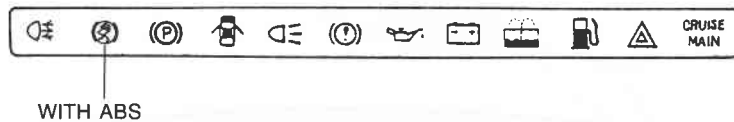
WITH TACHOMETER  
[LHD]



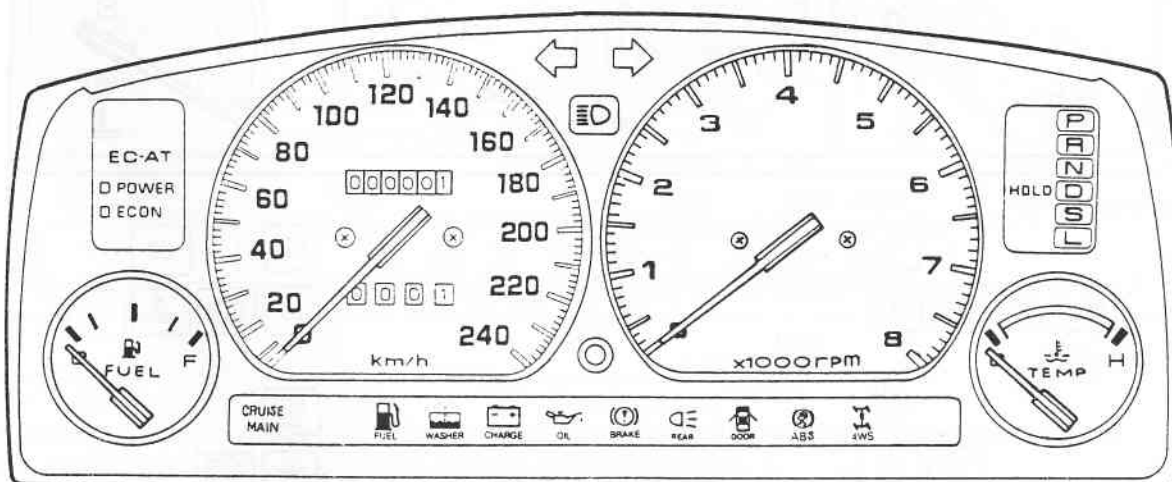
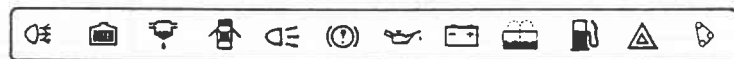
[ECE, SWISS]



[ITALY, SPAIN]

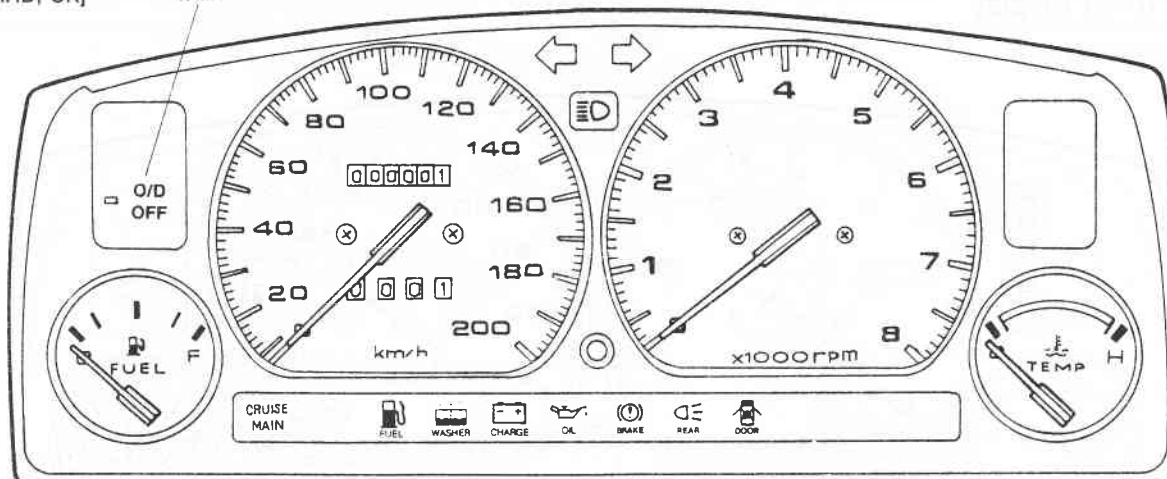


[ECE DIESEL]

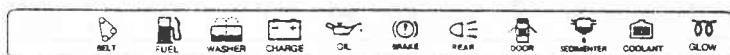


[RHD, UK]

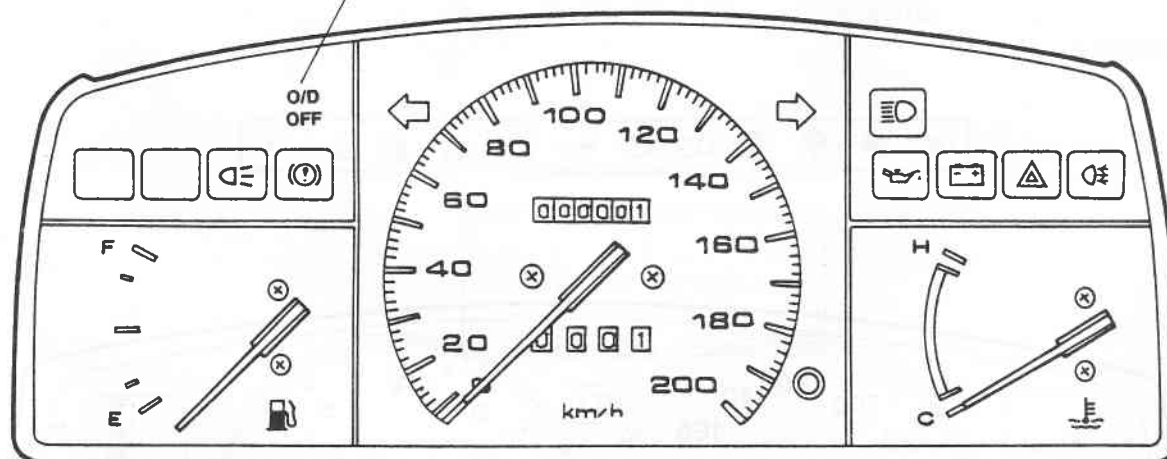
4HAT



[UK DIESEL, RHD DIESEL]

WITHOUT TACHOMETER  
[ECE]

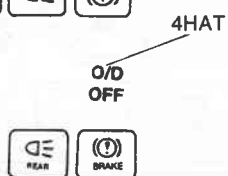
4HAT



[ECE DIESEL]

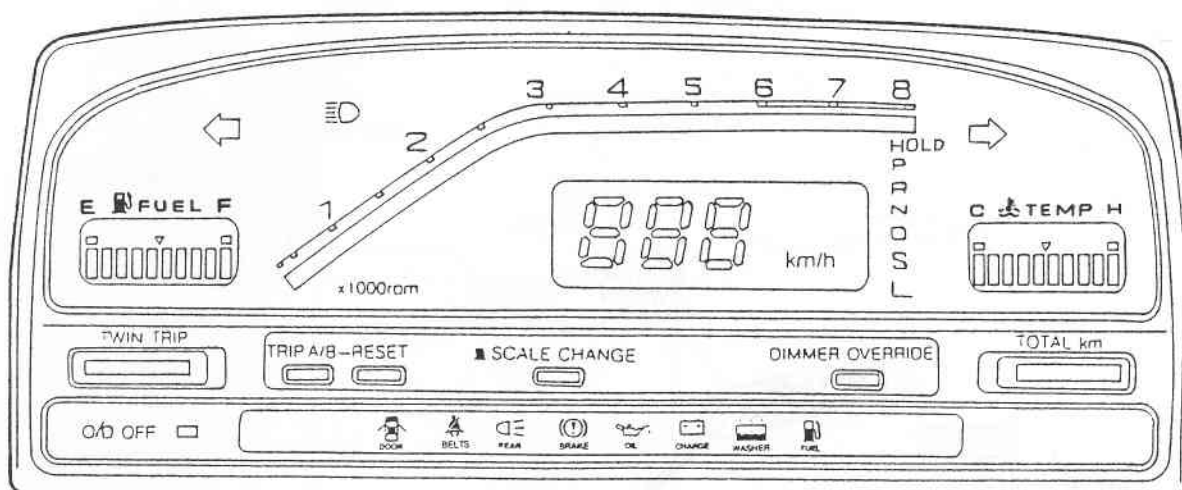


[UK, LHD, RHD]

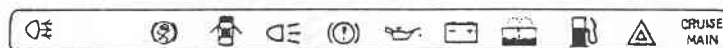


## Digital Electronic Display

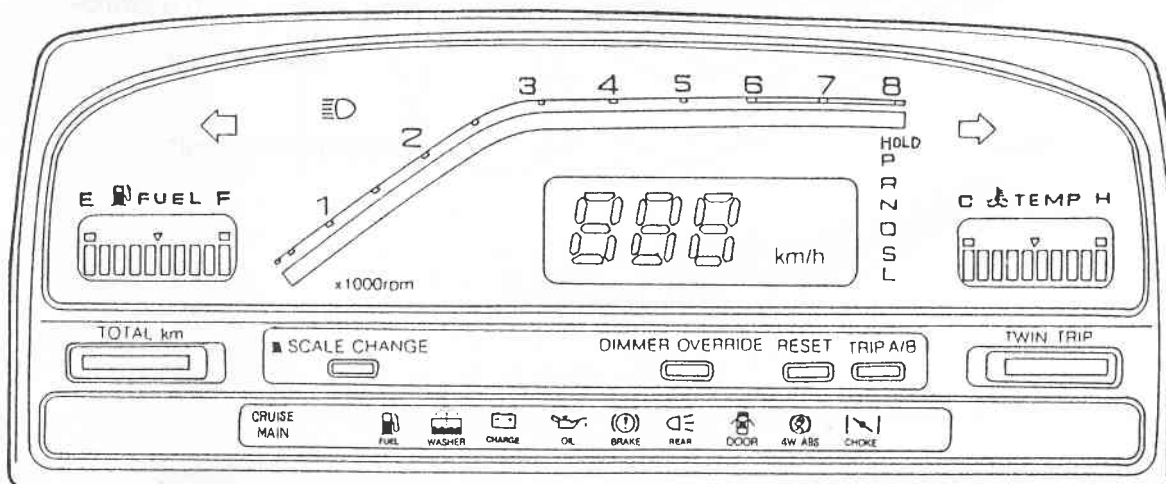
[LHD]



[ECE]



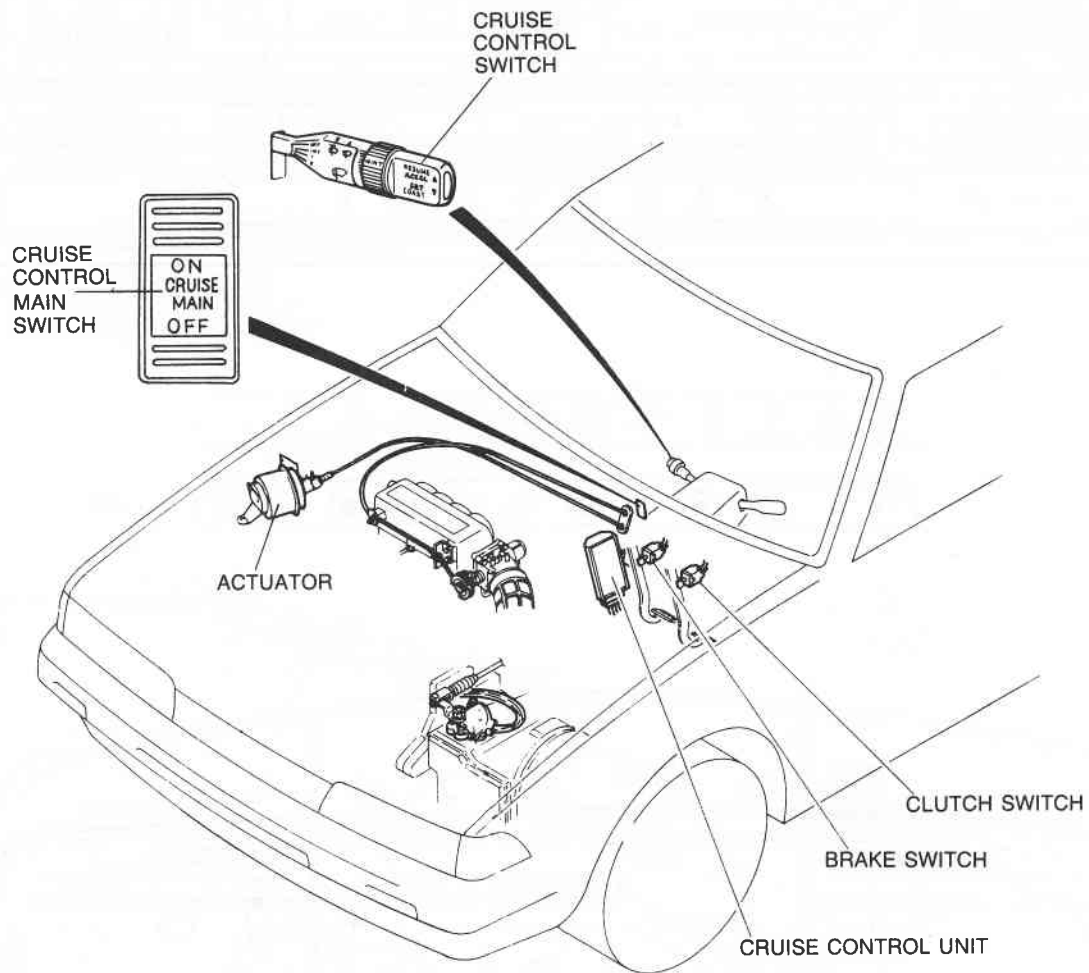
[RHD]



96G0TX-006

The instrument cluster is similar to that in the previous model; however, the arrangement of the warning and indicator lamps have been changed as shown in the illustration. The fuel gauge is designed to continue indicating the amount of fuel remaining in the fuel tank when the ignition switch is OFF. (Analog display)

## CRUISE CONTROL SYSTEM

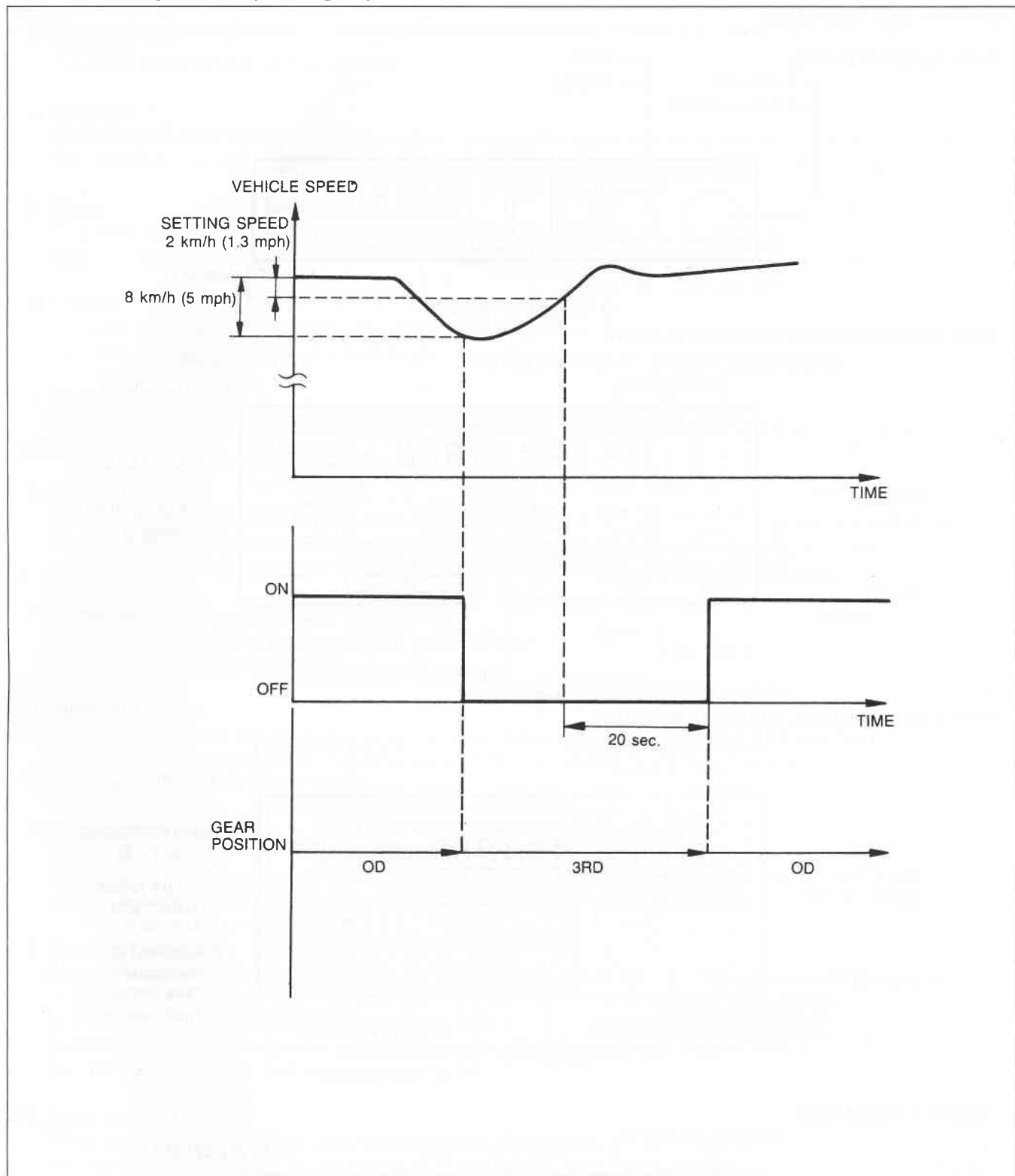


96E0TX-015

A self-diagnostic function is added for improved serviceability.



A/T Control Operation (FE Engine)



96G0TX-506

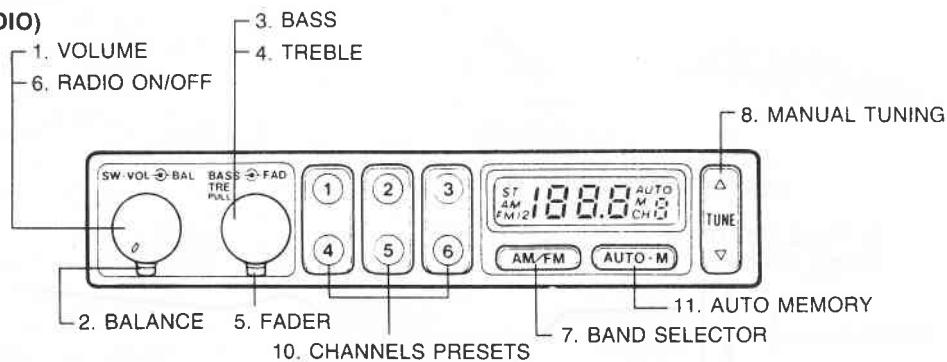
When the vehicle speed drops 8 km/h (5 mph) below the set speed, OD is canceled or prevented by the cruise control unit sending a signal to the EC-AT control unit for a downshift. After the vehicle speed returns to within 2 km/h (1.3 mph) of the set speed, and remains there for 20 seconds, OD again becomes available.

**Note**

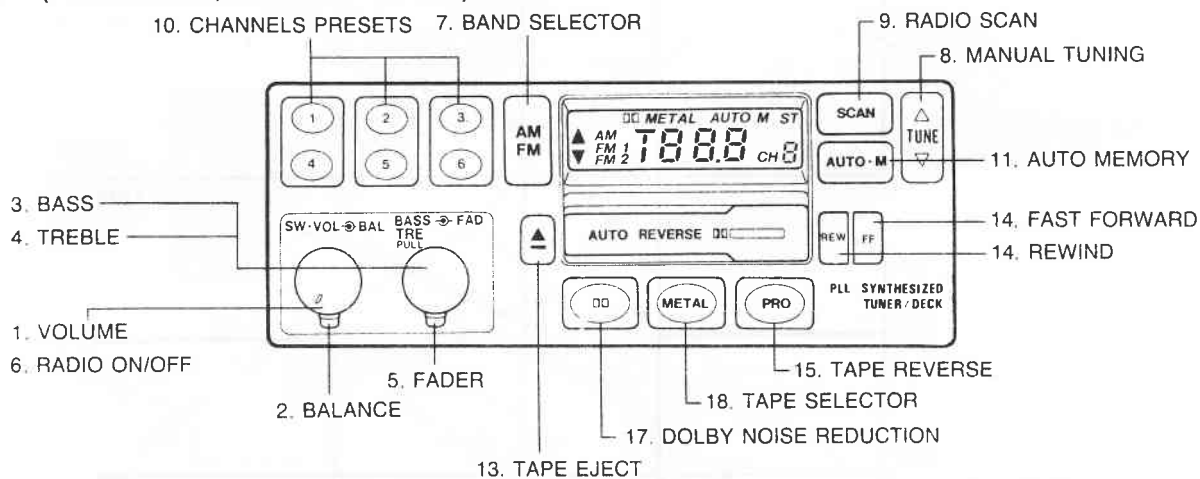
- If the vehicle speed drops 15 km/h (9.3 mph) below the set speed or the brake is depressed, cruise control operation is canceled by the cruise control unit.

### AUDIO SYSTEM Function and Operation

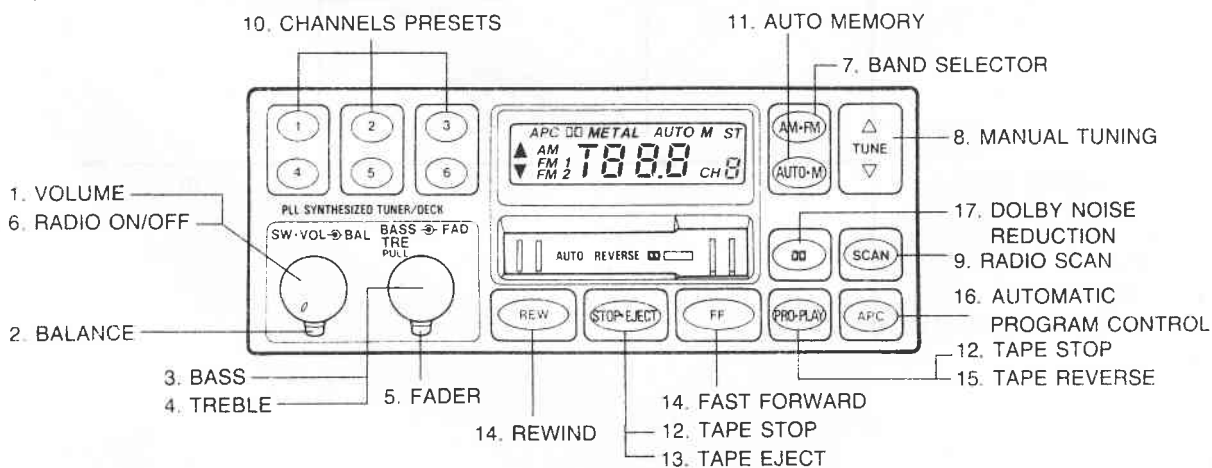
#### TYPE A (FM/AM RADIO)



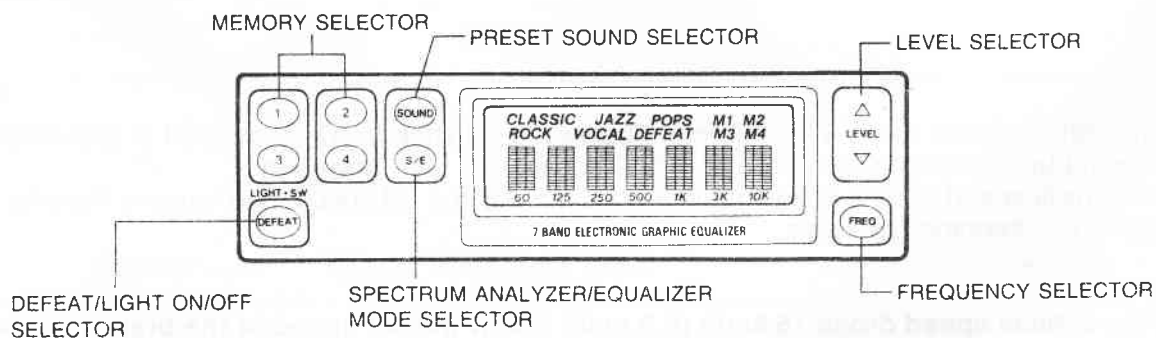
#### TYPE B (FM/AM RADIO, CASSETTE PLAYER)



#### TYPE C (FM/AM RADIO, CASSETTE PLAYER)



#### GRAPHIC EQUALIZER



## How to use audio system

### Radio

#### 1. Volume

Turn the knob to adjust the volume.

#### 2. Balance

This control adjusts the sound distribution between the right and left speakers. Turn it clockwise to shift the sound to the left speakers; counterclockwise to shift the sound to the right speakers.

#### 3. Bass

This controls the lower tonal qualities. If your listening preference is for more lows, turn the control clockwise; for less lows, turn the control counterclockwise.

#### 4. Treble

Pull and turn the knob to control the higher tonal qualities. If your listening preference is for more highs, turn the control clockwise; for less highs, turn the control counterclockwise.

#### 5. Fader

Turn the knob clockwise to gradually shift the stereo sound to the rear speakers; counterclockwise to shift it to the front.

#### 6. Radio ON/OFF

To operate the radio, turn the ignition switch to ACC or ON.

To select radio operation, press the knob (no need to eject tape), it will revert to the previously selected station and its frequency will be displayed. Press again to turn the radio OFF.

#### 7. Band selector

Press AM/FM to choose either an AM or FM. Pressing AM/FM alternates AM, FM1, and FM2. The corresponding indicator will light.

#### 8. Manual tuning

To manually tune a station, press  $\Delta$  for a higher frequency, and press  $\nabla$  for a lower frequency. Holding either switch down for more than one second before releasing will begin automatic seeking of the next receivable higher or lower frequency station.

#### 9. Radio scan

##### (Type B, Type C)

Press SCAN to automatically sample strong stations, SCAN will be displayed. Scanning stops at each station for about five seconds. To hold a station, simply press SCAN again during this five seconds.

#### 10. Channel presets

The three channel preset buttons can be used to store, 6 AM and 12 FM stations. First select AM1, FM1, or FM2 by pressing the AM/FM. AM, FM1, or FM2 will be displayed. Tune the desired station and press one of the channel preset buttons. Hold the button until a beep is heard and sound returns. The channel number and station frequency will be displayed. The station is now held in memory. Repeat this operation for other stations and bands.

#### 11. Auto memory

Press and hold AUTO M for about two seconds. The system will automatically scan and temporarily store the six strongest stations of the selected band in that area. After scanning is completed, the strongest station will be tuned and its frequency will be displayed.

### Cassette tape

#### 12. Tape PLAY/STOP

##### (Type C)

To stop tape play during playback without ejecting the tape, press STOP/EJECT. The tape will be in a pause mode. By pressing the PRO/PLAY button, tape play restarts. To listen to the tape directly from radio mode while the tape is inserted, press PRO/PLAY.

**13. Tape eject****(Type A, Type B)**

The tape can be ejected at any time by pressing TAPE EJECT.

**(Type C)**

The tape can be ejected while in the pause mode by pressing STOP/EJECT.

**14. Fast forward/Rewind****(Type B, C)**

Press FF or REW to operate. The tape direction indicator will flash while the tape is in fast forward or rewind. To stop this operation, press STOP/EJECT.

**15. Tape reverse**

To change tape play direction, press PRO/PLAY (Type C) or PRO (Type B). When the upper triangle (▲) in the display is lit, the top side of the tape is being played. When lower triangle (▼) is lit, the bottom side of the tape is being played.

**16. Automatic program control****(Type C)**

When APC is on, after 15 seconds blank space is detected, the player automatically advances the tape to the next selection.

**17. Dolby noise reduction**

When using a tape encoded with Dolby NR, press the Dolby button. To play a normal tape, push the button once again.

**18. Tape selector**

To play a metal tape, press METAL. To play a normal tape, press the button once again.

96G0TX-010

## Graphic equalizer

### 1. Spectrum analyzer/equalizer mode selector

#### Spectrum analyzer mode

Pressing the button to the spectrum analyzer mode enables the user to see the frequency band output of the music being listened to in this mode selected.

#### Equalizer mode

Pressing the button to the equalizer mode enables the user to see the selected adjustment level of the various frequency ranges in this mode selected.

### 2. Preset Sound Selector

Pressing the button to the preset sound mode allows the user to select the output characteristics for the type of music being played. There are five selections that fit the average listener's expectations.

SETTING	CHARACTERISTICS
JAZZ	Extended high range and emphasized transient response
ROCK	Characteristics adapted to high speed, intense sonic changes
CLASSIS	Balanced response for different instruments together with a sense of scale and impact of a large performance hall
POPS	Slight echo for emotional response in vocals
VOCAL	Vocals reproduced with maximum fidelity

### 3. Defeat/Light ON-OFF selector

To control operation of the graphic equalizer, press this button to select defeat mode ON or OFF. Defeat is shown in the equalizer display when selected. Hold the button for about two seconds to select ON or OFF of the graphic equalizer display.

### 4. Manual adjustment of frequency bands

1. Press the Frequency Selector to change the unit to the manual adjustment mode irregardless of the previous mode selected.
2. Select the band to be set. Each subsequent press of the button selects a band from 60 to 10K. The indicator bar of the band selected will flash for about 30 seconds.
3. Adjust the output level of the selected band up or down by pressing the Level Selector within 30 seconds.

### 5. Setting memory

Four adjustable memory selections are available to set for recall manually adjusted frequency range output patterns. These can be used in addition to the preset ranges.

96G0TX-011

**SUPPLEMENTAL SERVICE INFORMATION**

The following points shown in this section are changed in comparison with Mazda 626 Station Wagon Workshop Manual Supplement (1182-10-88B)

**Headlight leveling system**

- Troubleshooting
- Inspection
- Removal / Installation

**Stoplight check relay**

- Inspection
- Removal / Installation

**Cruise control system**

- Self-diagnostic inspection
- Troubleshooting

**Audio system**

- Troubleshooting

96G0TX-507

## HEADLIGHT LEVELING SYSTEM

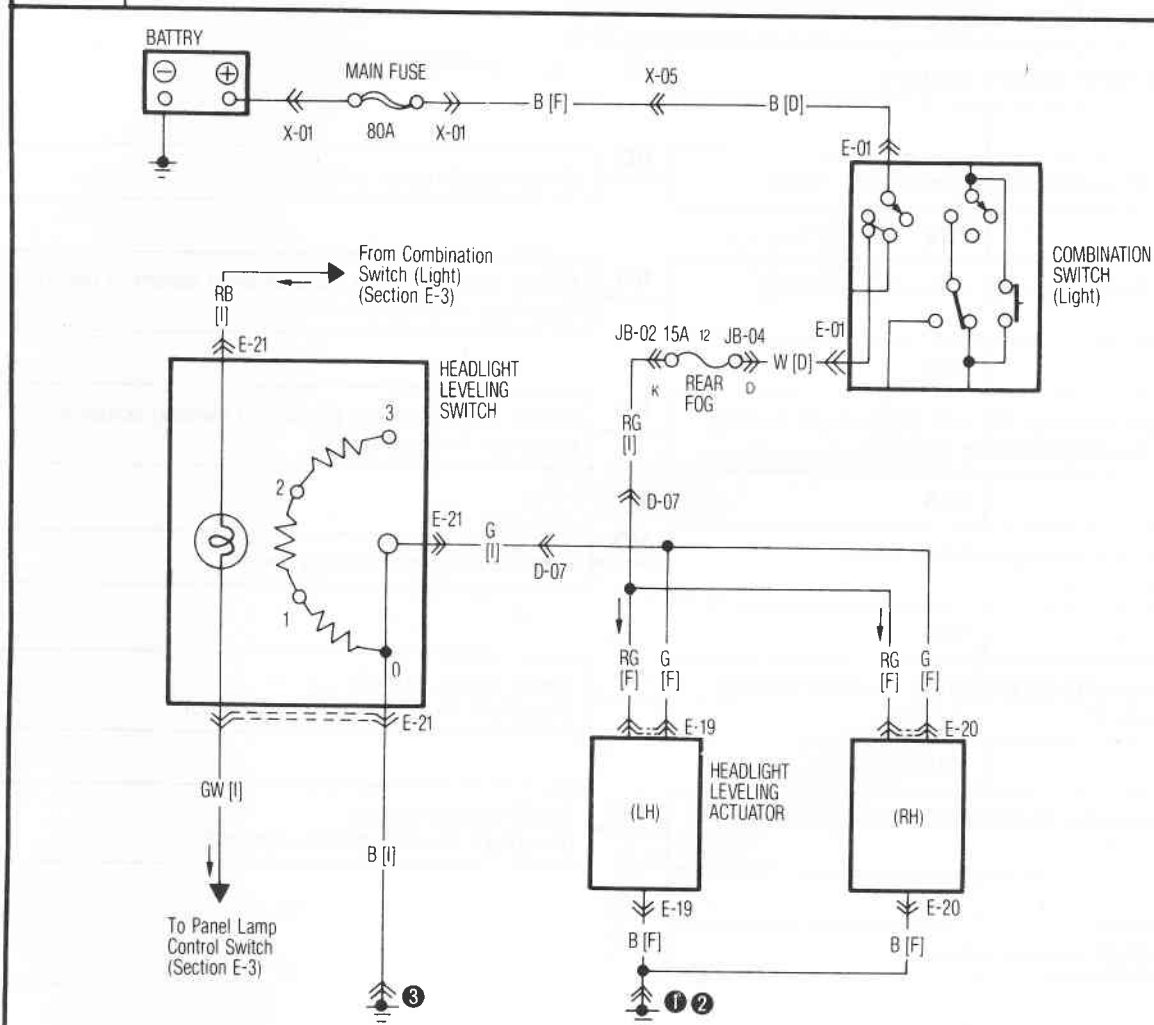
### TROUBLESHOOTING Circuit Diagram

#### FE, FE DOHC & F2 ENGINE (Fuel Injection)

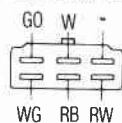
# E-4

## West Germany

### HEADLIGHT LEVELING SYSTEM



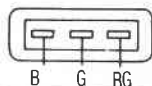
E-01 Combination Switch [D] (Light)



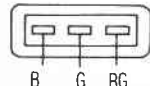
D-07 Connector Between Front [F] and Instrument Panel [I] Harness



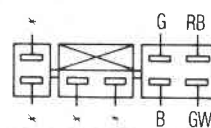
E-19 Headlight Leveling Actuator (LH) [F]

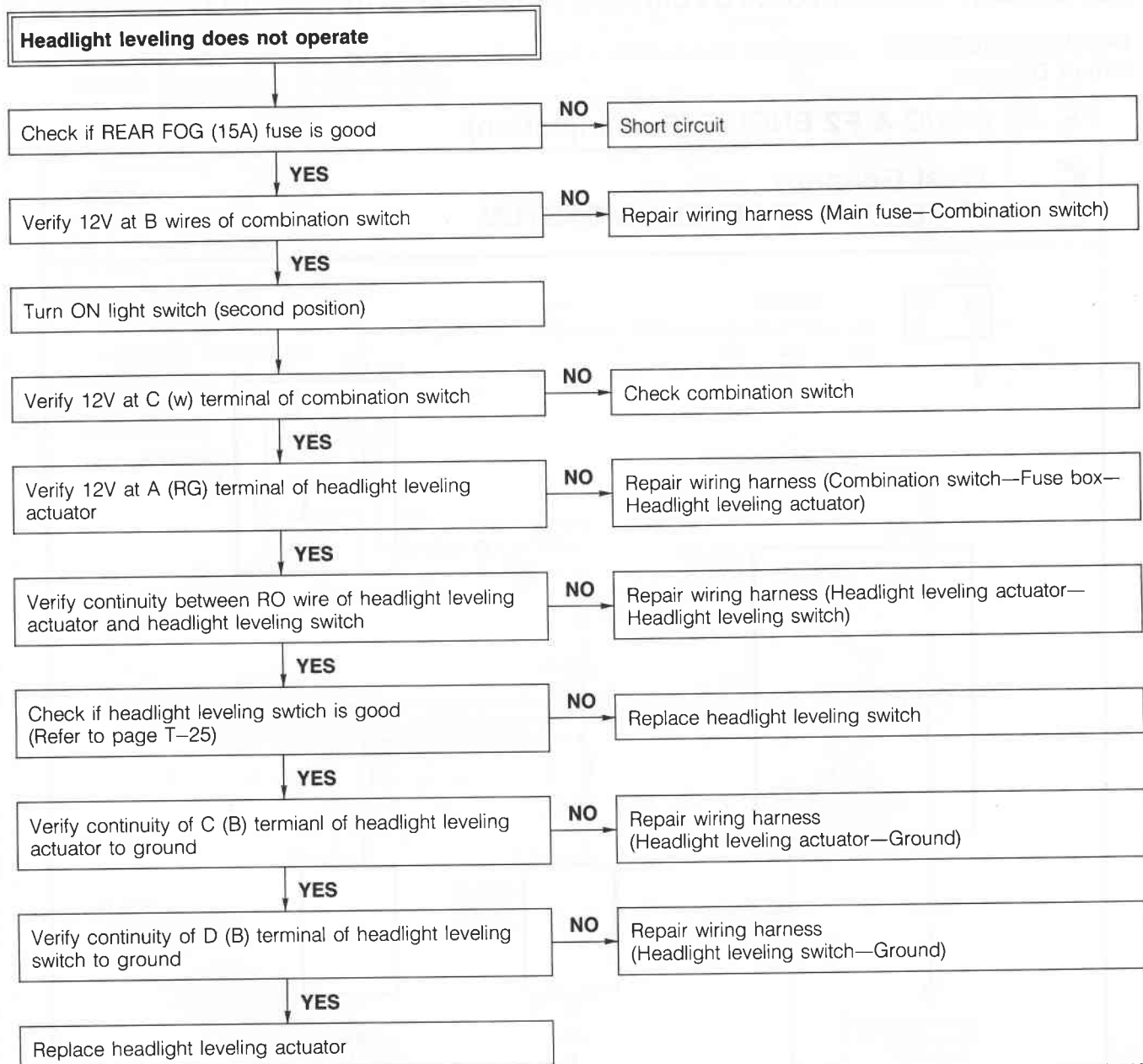


E-20 Headlight Leveling Actuator (RH) [F]



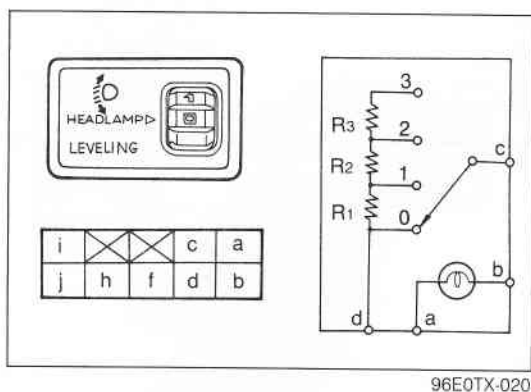
E-21 Headlight Levering Switch [I]





96G0TX-508





## HEADLIGHT LEVELING SWITCH

### Inspection

1. Disconnect the headlight leveling switch connector.
2. Measure resistance of the switch as shown.

Terminals	Scale	Resistance
c—d	0	Approx. 0Ω
	1	Approx. 300Ω
	2	Approx. 560Ω
	3	Approx. 1.6 kΩ

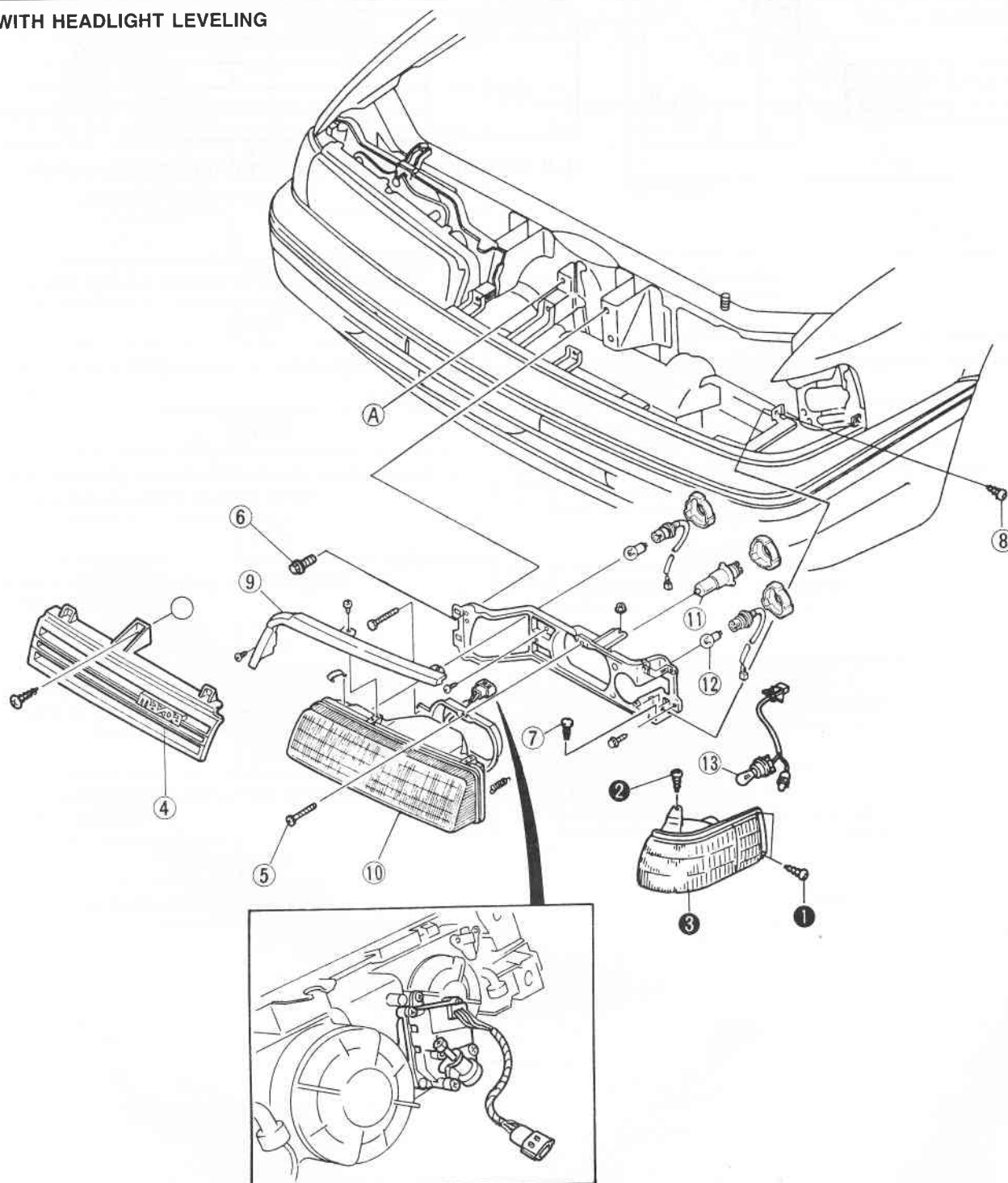
3. If resistance is not as specified, replace the switch.

## HEADLIGHT AND COMBINATION LIGHT

## Removal / Installation

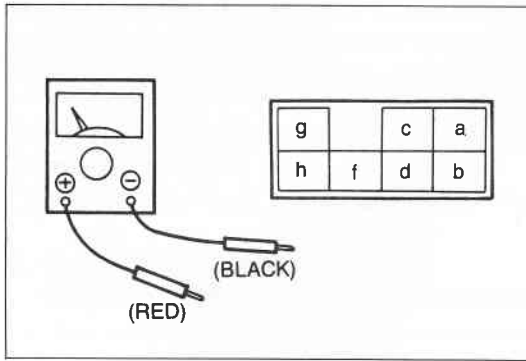
1. Remove in the order shown in the figure.
2. Install in the reverse order of removal.

## WITH HEADLIGHT LEVELING



96E0TX-021

- |                               |   |
|-------------------------------|---|
| 1. Screw                      | 8. Screw  |
| 2. Turn signal light assembly | 9. Light garnish  |
| 3. Screw                      | 10. Headlight assembly<br>(Including headlight leveling actuator) |
| 4. Radiator grille            | 11. Headlight bulb 60 + 55/55W                                    |
| 5. Bolts                      | 12. Parking light bulb 5W   |
| 6. Bolts                      | 13. Turn signal light bulb 21W                                    |
| 7. Fastener                   |   |



96E0TX-022

## RELAY

STOPLIGHT CHECK RELAY (WEST GERMANY, SWISS)  
Inspection

1. Check continuity between terminals of the stoplight check relay.

Terminal		Continuity	Terminal		Continuity	Terminal		Continuity
+	-		+	-		+	-	
a	b	○	c	a	○	g	a	○
a	c	○	c	b	○	g	b	○
a	d	X	c	d	X	g	c	○
a	g	○	c	g	○	g	d	X
a	h	○	c	h	○	g	h	○
b	a	○	d	a	○	h	a	X
b	c	○	d	b	○	h	b	X
b	d	X	d	c	○	h	c	X
b	g	○	d	g	○	h	d	X
b	h	○	d	h	○	h	g	X

○: Continuity    X: No continuity

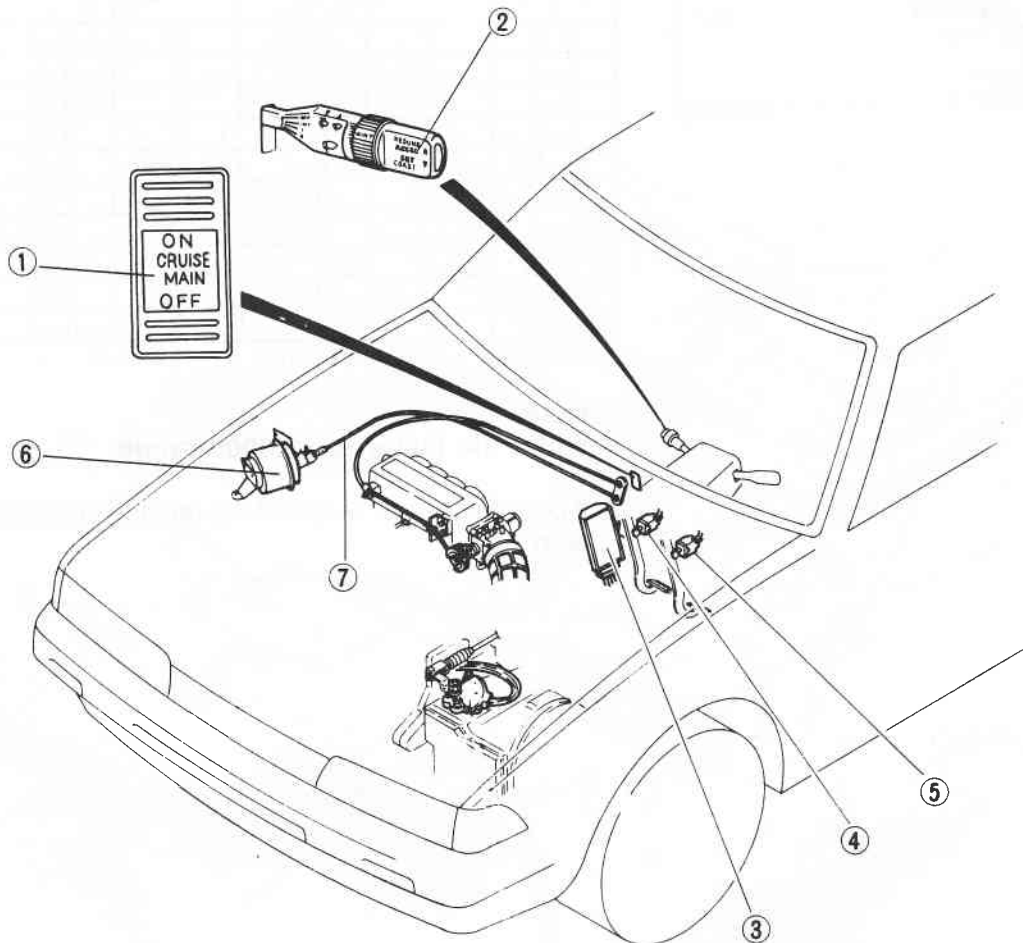
## Note

- Set the tester to  $\times 1,000\Omega$  range.

2. If continuity is not as specified, replace the stoplight check relay.

## CRUISE CONTROL SYSTEM

## STRUCTURAL VIEW



96G0TX-509

- |                                  |           |
|----------------------------------|-----------|
| 1. Cruise control main switch    |           |
| Inspection .....                 | page T-40 |
| 2. Cruise control switch         |           |
| Inspection .....                 | page T-40 |
| 3. Cruise control unit           |           |
| Removal .....                    | page T-38 |
| Installation .....               | page T-38 |
| Inspection .....                 | page T-38 |
| 4. Brake switch (Cruise control) |           |
| Removal .....                    | page T-40 |
| Installation .....               | page T-40 |
| Adjustment .....                 | page T-40 |
| Inspection .....                 | page T-40 |
| 5. Clutch switch                 |           |
| Removal .....                    | page T-39 |
| Installation .....               | page T-39 |
| Adjustment .....                 | page T-39 |
| Inspection .....                 | page T-39 |
| 6. Actuator                      |           |
| Inspection .....                 | page T-37 |
| 7. Actuator cable                |           |
| Removal .....                    | page T-39 |
| Installation .....               | page T-39 |
| Adjustment .....                 | page T-39 |

## INSPECTION OF CRUISE CONTROL SYSTEM USING SELF-DIAGNOSTIC FUNCTION

Inspection of the cruise control system may be done by using the self-diagnostic function integrated in the control unit and a test light.

96E0TX-024

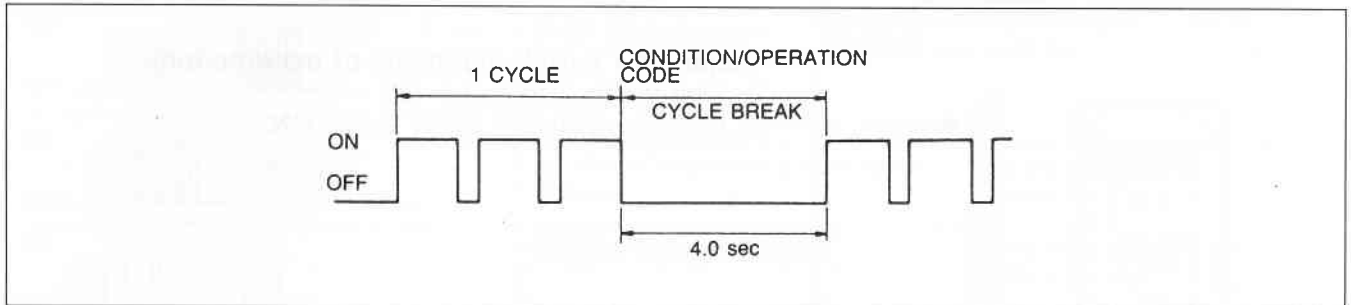
### Condition/Operation Code

#### Principle of code cycle

Condition/operation codes are determined by flashing of a test light as shown below.

#### 1. Code cycle break

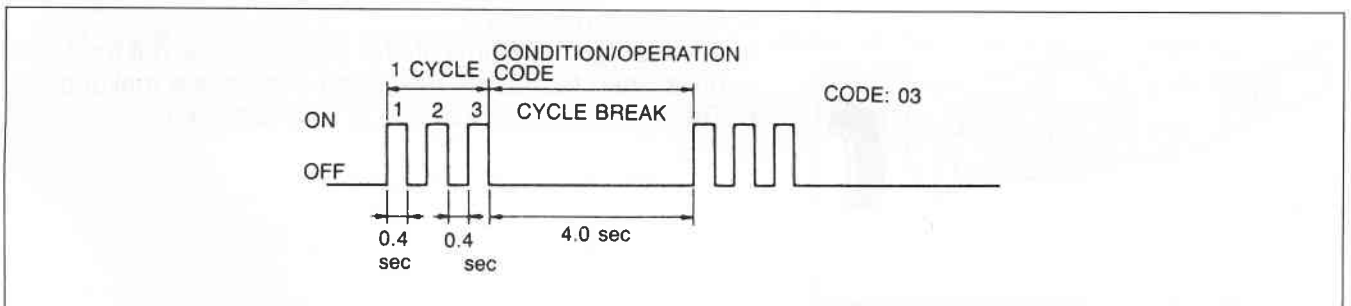
The time between condition/operation code cycles is 4.0 seconds (the time the light is off).



96E0TX-025

#### 2. Second digit of condition/operation code (ones position)

The digit in the ones position of the condition/operation code represents the number of times the light is on 0.4 second during one cycle.

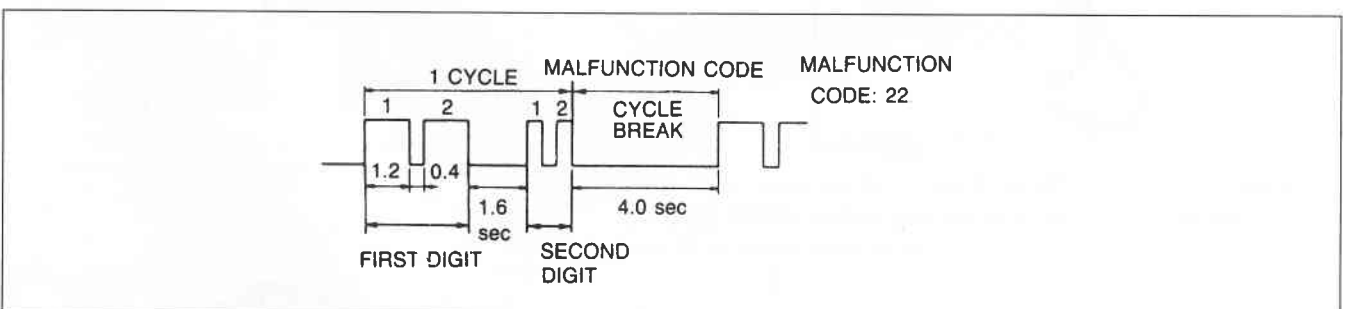


96E0TX-026

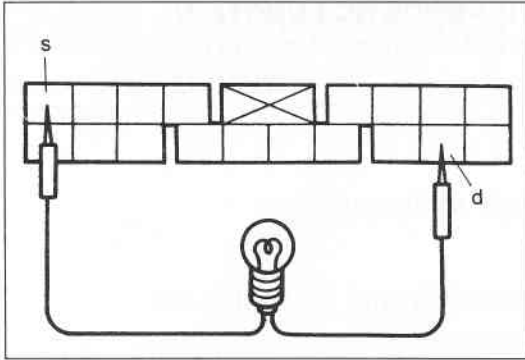
#### 3. First digit of condition/operation code (tens position)

The digit in the tens position of the condition/operation code represents the number of times the light is on 1.2 seconds during one cycle.

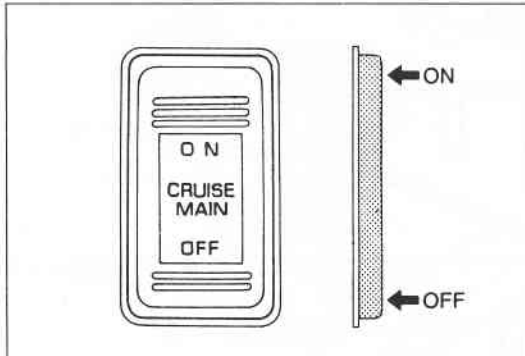
The light remains off for 1.6 seconds between the long and short flashes.



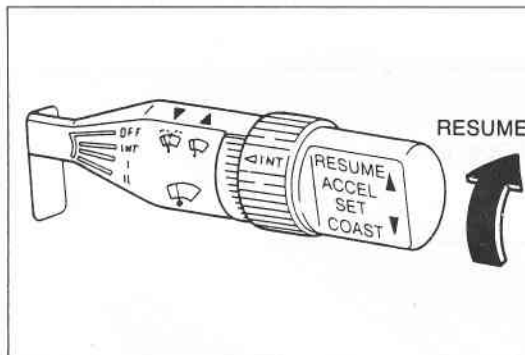
96E0TX-027



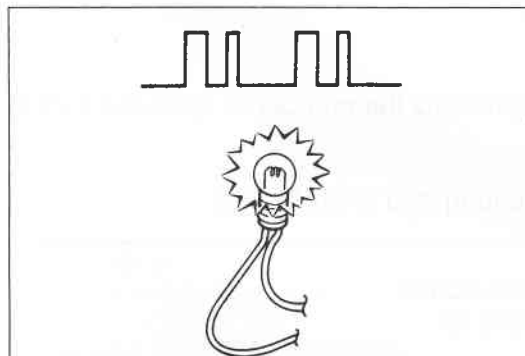
05U0TX-221



96E0TX-028



96E0TX-029



96G0TX-510

**Preparation**






1. Disconnect the cruise control unit connector.
2. Connect a test light between terminals d and s of the cruise control unit connector as shown.
3. Reconnect the cruise control unit connector.

**Inspection 1 (Self-diagnosis of malfunction)**

1. Turn the ignition switch ON.
2. Press the CRUISE MAIN switch ON.
3. Turn the cruise control switch to RESUME and hold it more than 3 seconds.
4. Release the switch.
5. The test light will illuminate for 3 seconds; go out for 2 seconds; then flashes as described if there is a malfunction.
6. The self-diagnostic function is now activated.
7. Read out and record the condition/operation code number(s). (Refer to page T-31.)
8. Turn the main switch OFF to deactivate the self-diagnostic function. (The self-diagnostic function will also be canceled if the vehicle is driven at over 16 km/h (10 mph)).
9. Check the system as per the results of the self-diagnostic inspection.

## Condition Code Numbers Self-diagnosis of malfunction

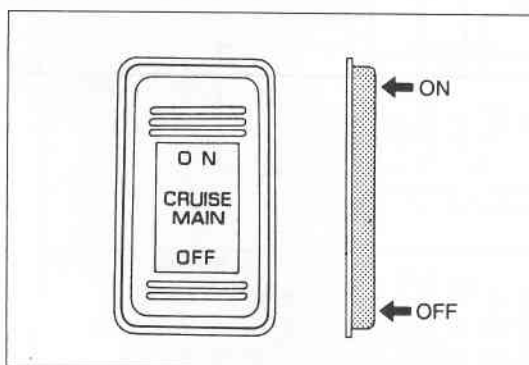
The test light will flash if a malfunction is present.

Pattern of output signal (Test light)	Code No.	Possible Cause	Action
ON OFF 	01	Defective harness (Actuator—Cruise control unit, Stoplight switch—Cruise control unit) Defective actuator Defective brake switch	Repair wiring harness Inspect actuator (Refer to page T-37)
ON OFF 	05	STOP 15A fuse blown	Replace fuse
ON OFF 	07	Both stoplight switch and brake switch (for vehicle and cruise) are ON simultaneously	Inspect stoplight switch and brake switch (Refer to page T-40)
ON OFF 	11	Defective cruise control switch	Inspect cruise control switch (Refer to page T-40)
ON OFF 	15	Defective cruise control unit	Go to troubleshooting (Refer to page T-33)

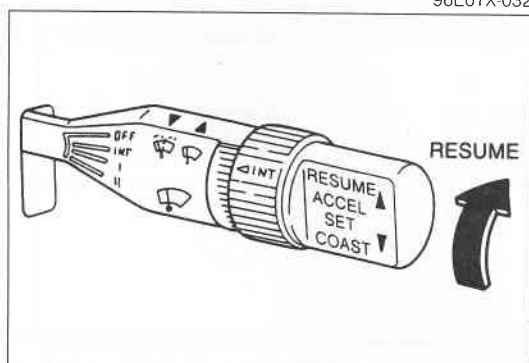
96G0TX-511

### Note

- If there is more than one malfunction, the code numbers will be indicated in numerical order.



96E0TX-032

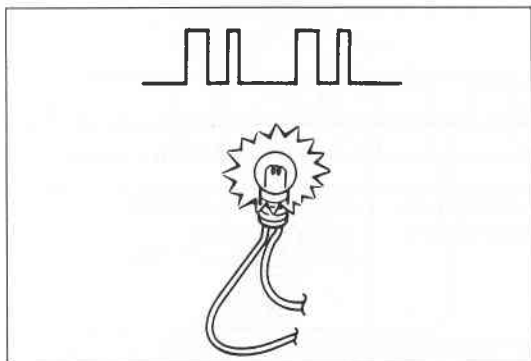


96E0TX-033

### Inspection 2

#### (Quick inspection of cruise control operation)

- Turn the ignition switch ON.
- Verify that the CRUISE MAIN switch is OFF. (The CRUISE MAIN indicator lamp off.)
- Turn the cruise control switch to RESUME and press the CRUISE MAIN switch simultaneously to activate the inspection of system operation



96G0TX-514

4. Operate each switch as described and verify the flashing of the test light. (Refer to page T-32.)
5. Press the CRUISE MAIN switch to deactivate inspection of system operation.

**Note**











- The cruise control system will not operate until the self-diagnostic function is canceled.

**Operation Code Numbers****Inspection of cruise control system**

The test light will flash if the system is operating correctly. If the light fails to flash, inspect the system.

**Note**

- Shift the selector lever to D or R range before making the inspection. (ATX)

Procedure	Pattern of output signal (Test light)	Code No.	Action to inspect
Push SET/COAST switch	ON  OFF 	21	Inspect cruise control switch (Refer to page T-40)
Push RESUME/ACCEL switch	ON  OFF 	22	Inspect cruise control switch (Refer to page T-40)
Depress brake pedal	ON  OFF 	31	Inspect stoplight switches (Refer to page T-40)
Turn ignition switch ON and shift selector lever to P or N range (ATX) Depress clutch pedal (MTX)	ON  OFF 	35	Inspect inhibitor switch (Refer to Section K) or clutch switch (Refer to Section F)
Drive vehicle above 40 km/h (25 mph)	ON  OFF 	37	Inspect speed sensor or wiring harness

96G0TX-512



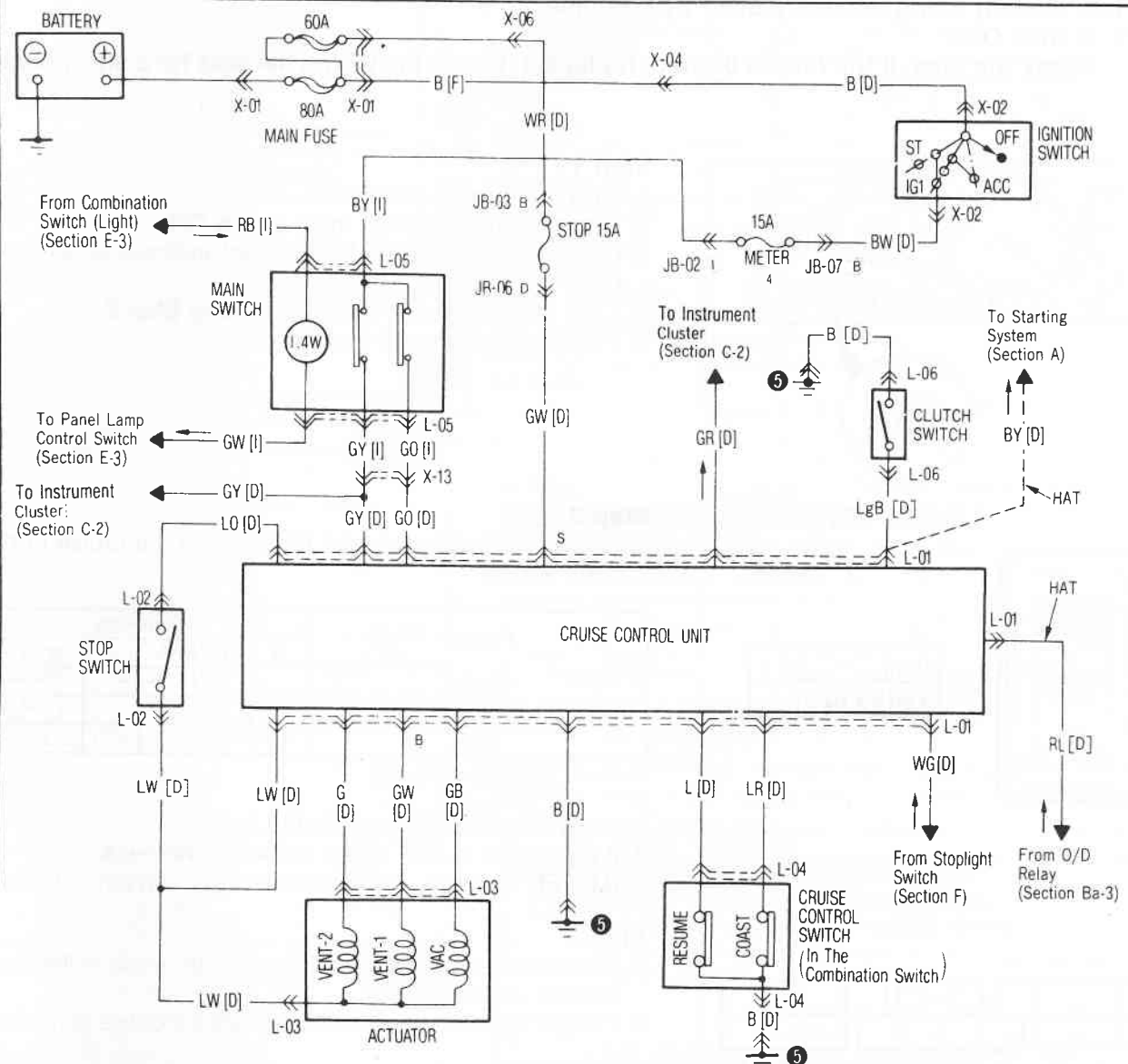
## TROUBLESHOOTING

### F6, F8 & FE ENGINE (Carburetor)

# L

## Europe (Except West Germany) CRUISE CONTROL SYSTEM

Note: [ ] HAT



<b>L-01 Cruise Control Unit [D]</b> 	<b>L-02 Stop Switch [D]</b> 	<b>L-03 Actuator [D]</b> 
<b>L-04 Cruise Control Switch [D]</b> 	<b>L-05 Main Switch [I]</b> 	<b>L-06 Clutch Switch [D]</b> 

**Symptom: Vehicle speed cannot be set. (Cruise control unit will not hold vehicle speed.)**

**Note**

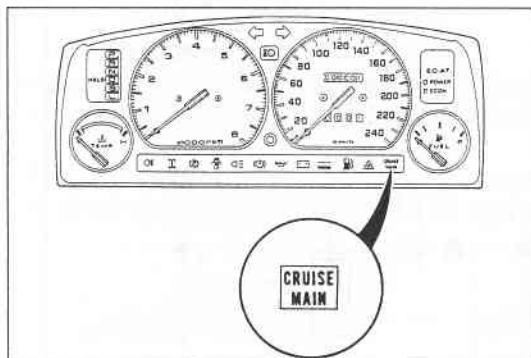
- Before troubleshooting of the system, verify the following items:

1. Is system being correctly used by customer?

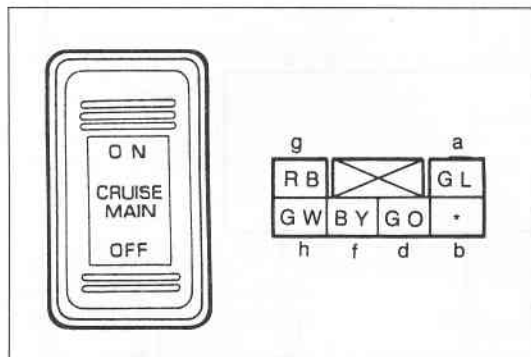
2. Is fuse OK?

Check the fuse. If the fuse is burned, replace it. Check the wiring harness for a short circuit.

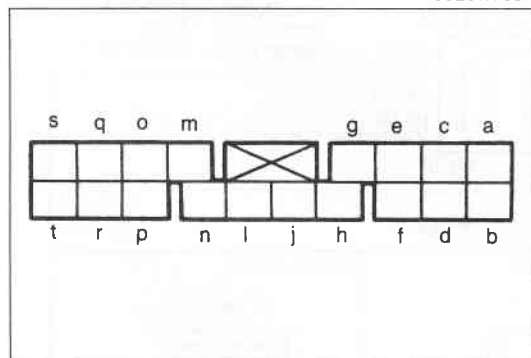
96E0TX-036



06U0TX-126



96E0TX-037



96E0TX-038

**Step 1**

- Turn the ignition switch ON.
- Turn the cruise control main switch ON.
- Check that the CRUISE MAIN switch indicator lamp comes ON.
- If the lamp does not come ON, go to Step 2.
- If the lamp comes ON, go to Step 3.

**Step 2**

- Check continuity between terminals of the cruise control main switch.

Position	Terminals					
	a	b	d	f	g	h
Neutral			○—○		○—○	
OFF					○—○	
ON	○—○		○—○	○—○	○—○	

○—○: Indicates continuity

- If not as specified, replace the switch.
- If the switch is OK, repair the wiring harness.  
(METER 10A fuse — Cruise control main switch — Ground)

**Step 3**

- Measure the voltage at the following terminals of the cruise control unit connector.
- If all terminal voltages are OK, replace the cruise control unit.

Terminal	Wire color	Connected to	Test condition	Specification	Action
a	(GB)	Actuator	Main switch OFF	0V	Go to Step 8
			Main switch ON	9V	
b	(GW)	Actuator	Main switch OFF	0V	
			Main switch ON	9V	
c	(G)	Actuator	Main switch OFF	0V	
			Main switch ON	9V	
e	(GO)	Main switch	Main switch OFF	12V	Repair wire (GO)
			Main switch ON	0V	(Main switch—Cruise control unit)
f	(GY)	Main switch	Main switch OFF	0V	Repair wire (GY)
			Main switch ON	12V	(Main switch—Cruise control unit)

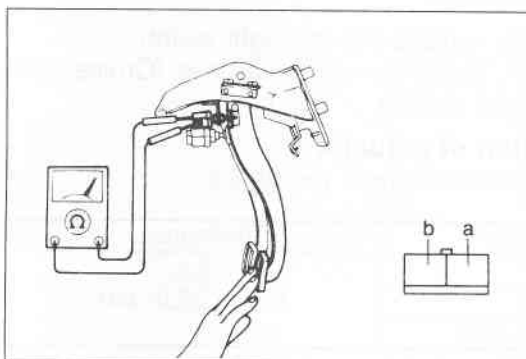
(cont'd)

Terminal	Wire color	Connected to	Test condition	Specification	Action
g	(LR)	EC-AT control unit	Ignition switch ON	12V	Check EC-AT control unit (Refer to Section K)
h	(LO)	Brake switch	Brake pedal depressed	0V	Go to Step 4
			Brake pedal released	9V	
j	(LgB)* <sup>1</sup>	Clutch switch	Clutch pedal depressed	0V	Go to Step 5
			Clutch pedal released	12V	
	(BY)* <sup>2</sup>	Inhibitor switch	"N" or "P" range	0V	Inspect Inhibitor switch (Refer to Section K)
			Other range	12V	
l	(LR)	Cruise control switch (SET switch and COAST switch)	Main switch ON	12V	Go to Step 6
			While pushing SET switch after main switch ON	0V	
m	(WG)	Stoplight switch	Brake pedal depressed	12V	Go to Step 7
			Brake pedal released	0V	
n	(L)	Cruise control switch (RESUME switch and ACCEL switch)	Main switch ON	12V	Go to Step 6
			While pushing RESUME switch after main switch ON	0V	
o	(LW)	Actuator	Main switch OFF	0V	Go to Step 8
			Main switch ON	9V	
p	(GR)	Speed sensor	While rotating rear tires	cycles 0—5V	Go to Step 9
s	(GW)	Battery	Constant	12V	Repair wire (GW)

\*1: MTX

\*2: ATX

96E0TX-039



96E0TX-040

## Step 4 — Inspection of brake switch

1. Disconnect the brake switch connector.
2. Check continuity between terminals of the switch.

Pedal position	Terminal	
	a	b
Pedal released	○	○
Pedal depressed	○	○

○—○: Indicates continuity

3. If not as specified, replace the brake switch.
4. If the switch is OK, repair the wiring harness. (Fuse — Brake switch — Control unit)

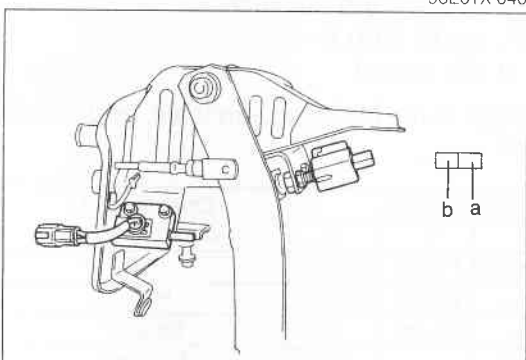
## Step 5 — Inspection of clutch switch

1. Disconnect the clutch switch connector.
2. Check continuity between terminals of the switch.

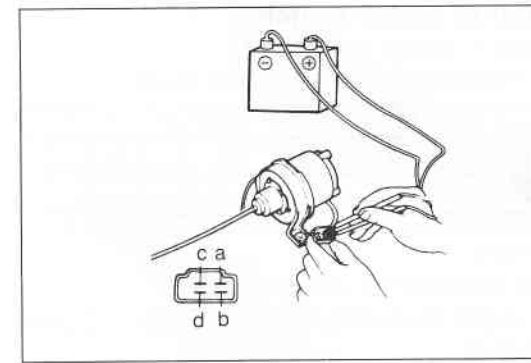
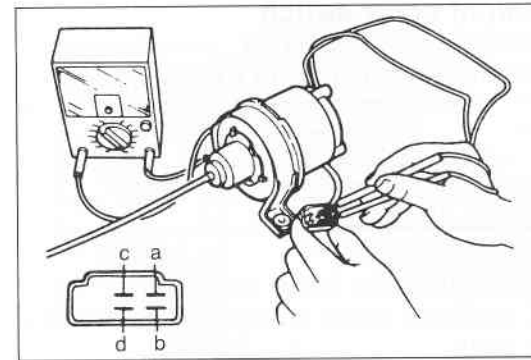
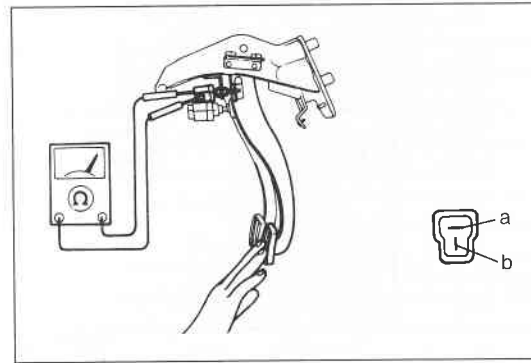
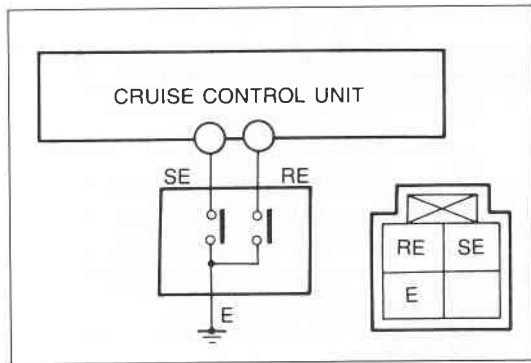
Pedal position	Terminal	
	a	b
Pedal released	○	○
Pedal depressed	○	○

○—○: Indicates continuity

3. If not as specified, replace the clutch switch.
4. If the switch is OK, repair the wiring harness. (Fuse — Clutch switch — Control unit)



96E0TX-041



### Step 6 — Inspection of cruise control switch

1. Remove the knee protector and disconnect the combination switch connector.
2. Check continuity between terminals of the combination switch connector.

Switch	Terminal		
	SE	RE	E
SET/COAST	○	—	○
RESUME/ACCEL	—	○	○

○—○: Indicates continuity

3. If not as specified, replace the cruise control switch.
4. If the switch is OK, repair the wiring harness. (Cruise control switch — Control unit)

### Step 7 — Inspection of stoplight switch

1. Disconnect the stoplight switch.
2. Check continuity between terminals of the switch.

Pedal position	Terminal	
	a	b
Pedal released	—	—
Pedal depressed	○	○

○—○: Indicates continuity

3. If not as specified, replace the stoplight switch.
4. If the switch is OK, repair the wiring harness. (Cruise control unit — Stoplight switch)

### Step 8 — Inspection of actuator

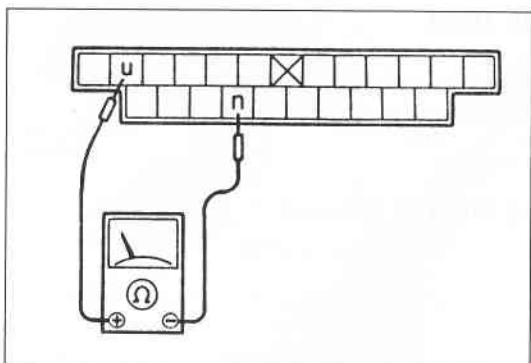
1. Measure the actuator solenoid resistance.

Check terminals	Resistance
c — a	Approx. 25 to 35Ω
c — b	
c — d	

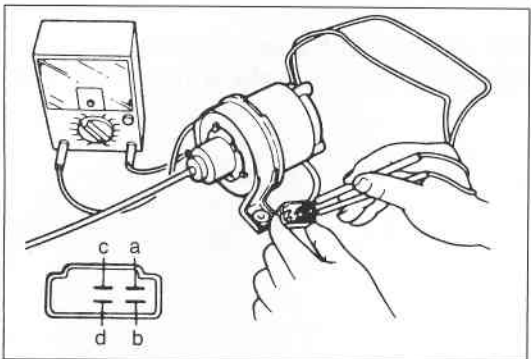
2. If not as specified, replace the actuator.
3. If continuity is OK, go to Step 8—4.
4. Run the engine at idle speed.
5. Apply battery voltage to the following terminals, and check actuator operation.

Order	Terminal condition				Operation of control cable
	a	b	c	d	
1	Ground	Ground	Power	Ground	Pull
2	Ground	—	Power	Ground	Hold
3	Ground	—	Power	—	Extend
4	—	—	—	—	Release

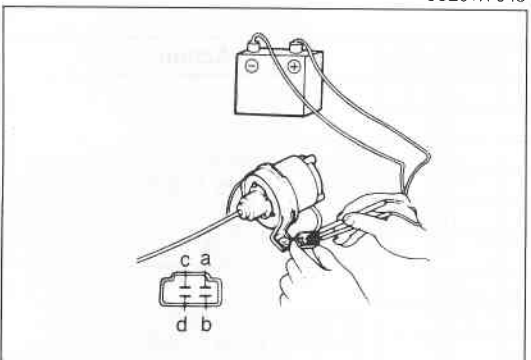
6. If not as specified, replace the actuator.



96E0TX-044



96E0TX-045



9MU0TX-261

## Step 9 — Inspection of speed sensor

1. Remove the combination meter.
2. Check continuity between terminals 1U (GR) and 1N (B) while rotating the speedometer cable.
3. If there are not four pulses per shaft rotation, replace the speed sensor.
4. If there are four pulses per rotation, check and repair the wiring harness. (Combination meter — Control unit)
5. If the wiring is OK, replace the cruise control unit.

## ACTUATOR Inspection

1. Measure the actuator solenoid resistance.

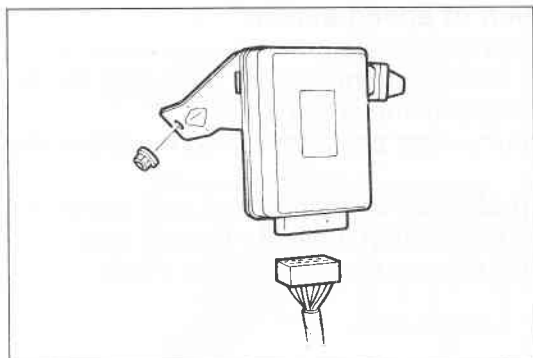
Check terminals	Resistance
c — a	Approx. 25 to 55Ω
c — b	
c — d	

2. If not as specified, replace the actuator.

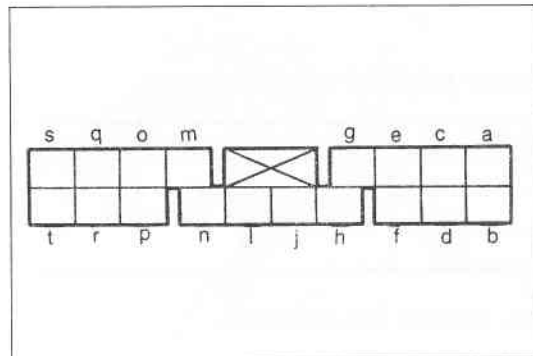
3. Apply battery voltage to the following terminals, and check the actuator operation.

Order	Terminal condition				Operation of control cable
	a	b	c	d	
1	Ground	Ground	Power	Ground	Pull
2	Ground	—	Power	Ground	Hold
3	Ground	—	Power	—	Extend
4	—	—	—	—	Release

4. If not as specified, replace the actuator.



96E0TX-046



96E0TX-047

**CRUISE CONTROL UNIT****Removal**

1. Remove the passenger side kick panel.
2. Remove the nut and remove the control unit.

**Installation**

Install in the reverse order of removal.

**Inspection**

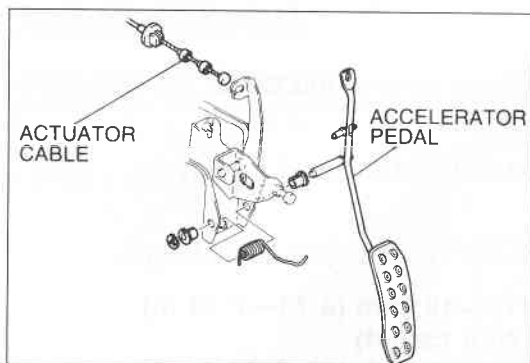
1. Check the terminal voltages of the control unit.
2. If the terminal voltages are correct, replace the control unit.

Terminal	Wire color	Connected to	Test condition	Specification	Action
a	(GB)	Actuator	Main switch OFF	0V	Check actuator (Refer to page T-37)
			Main switch ON	9V	
b	(GW)	Actuator	Main switch OFF	0V	
			Main switch ON	9V	
c	(G)	Actuator	Main switch OFF	0V	
			Main switch ON	9V	
e	(GO)	Main switch	Main switch OFF	12V	Check main switch (Refer to page T-40)
			Main switch ON	0V	
f	(GY)	Main switch	Main switch OFF	0V	
			Main switch ON	12V	
g	(LR)	EC-AT control unit	Ignition switch ON	12V	Check EC-AT control unit (Refer to Section K)
h	(LO)	Brake switch	Brake pedal depressed	0V	Check brake switch (Refer to page T-40)
			Brake pedal released	9V	
j	(LgB)* <sup>1</sup>	Clutch switch	Clutch pedal depressed	0V	Check clutch switch (Refer to page T-39)
			Clutch pedal released	12V	
	(BY)* <sup>2</sup>	Inhibitor switch	"N" or "P" range	0V	Inspect inhibitor switch (Refer to Section K)
			Other range	12V	
l	(LR)	Cruise control switch (Set switch and Coast switch)	Main switch ON	12V	Check cruise control switch (Refer to page T-40)
			While pushing set switch	0V	
			Main switch ON	0V	
m	(WG)	Stoplight switch	Brake pedal depressed	12V	Check stoplight switch
			Brake pedal released	0V	
n	(L)	Cruise control switch (Resume switch and Accel switch)	Main switch ON	12V	Check cruise control switch (Refer to page T-40)
			While pushing resume switch	0V	
			Main switch ON	0V	
o	(LW)	Actuator	Main switch OFF	0V	Check actuator (Refer to page T-37)
			Main switch ON	9V	
p	(GR)	Speed sensor	While rotating rear tires	Cycles 0—5V	Check speed sensor (Refer to page T-40)
s	(GW)	Battery	Constant	12V	Repair wire

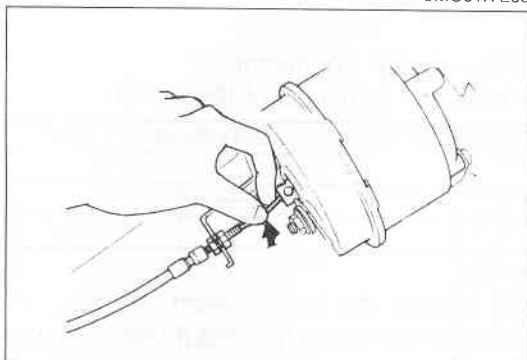
\*1: MTX

\*2: ATX

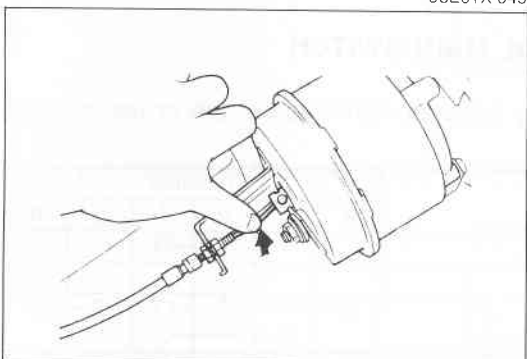
96G0TX-513



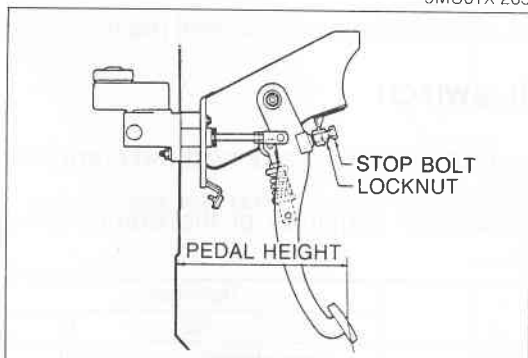
9MU0TX-263



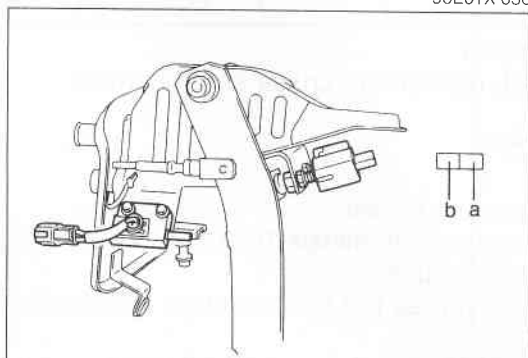
96E0TX-049



9MU0TX-265



96E0TX-050



05U0TX-229

## ACTUATOR CABLE

### Removal

1. Disconnect the actuator cable from the accelerator pedal.
2. Remove the clamp at the inside of the firewall.

3. Disconnect the actuator cable from the actuator.
4. Remove the clamps and remove the actuator cable.

### Installation

Install in the reverse order of removal.

### Adjustment

Remove the clamp and adjust the nut so that actuator cable free play is as shown when the cable is pressed lightly.

**Cable play: 1—3mm (0.04—0.12 in)**

## CLUTCH SWITCH

### Removal

Remove the locknut and remove the switch.

### Installation

Install in the reverse order of removal.

### Adjustment

Adjust the switch to set the specified pedal height.

**Pedal height: 171—181mm (6.73—7.13 in)**  
(With carpet)

**Pedal freeplay: 0.6—3.0mm (0.02—0.12 in)**

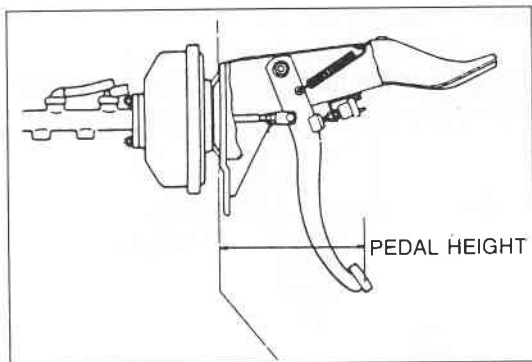
### Inspection

1. Disconnect the clutch switch connector.
2. Check continuity between terminals of the switch.

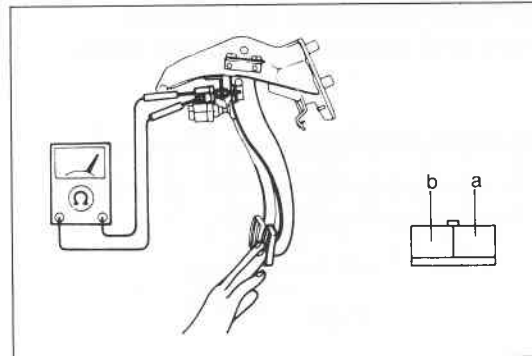
Pedal position	Terminal	
	a	b
Pedal released		
Pedal depressed	○	○

○—○: Indicates continuity

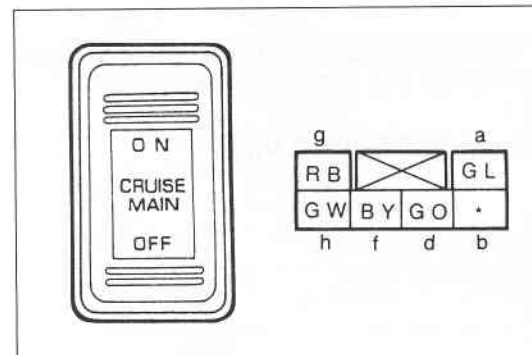
3. If not as specified, replace the clutch switch.



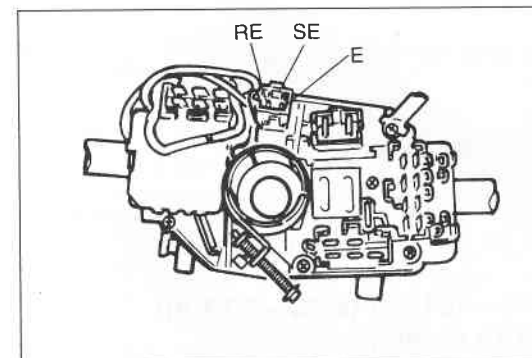
96E0TX-051



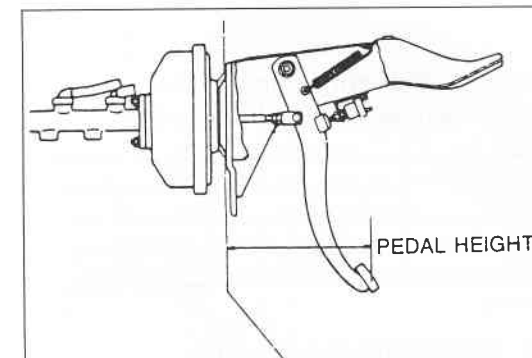
96E0TX-052



05U0TX-231



05U0TX-232



06U0TX-084

**BRAKE SWITCH****Removal**

Remove the locknut and remove the switch.

**Installation**

Install in the reverse order of removal.

**Adjustment**

Adjust the switch to set the specified pedal height.

**Pedal height: 171—181mm (6.73—7.13 in)  
(With carpet)**

**Pedal freeplay: 4—7mm (0.16—0.28 in)**

**Inspection**

1. Disconnect the brake switch connector.
2. Check continuity between terminals of the switch.

Pedal position	Terminal	
	a	b
Pedal released	○	○
Pedal depressed		

○—○: Indicates continuity

3. If not as specified, replace the brake switch.
4. If the switch is OK, repair the wiring harness (Fuse — Brake switch — Control unit).

**CRUISE CONTROL MAIN SWITCH****Inspection**

1. Check continuity between terminals of the cruise control main switch.

Position	Terminal					
	a	b	d	f	g	h
Neutral			○—○		○—○	
Off					○—○	
On	○—○	○—○	○—○	○—○	○—○	

○—○: Indicates continuity

2. If not as specified, replace the cruise control main switch.

**CRUISE CONTROL SWITCH****Inspection**

1. Remove the knee protector and disconnect the combination switch connector.
2. Check continuity between terminals of the combination switch connector.

Switch	Terminal		
	SE	RE	E
SET/COAST	○—○		○—○
RESUME/ACCEL		○—○	○—○

○—○: Indicates continuity

3. If not as specified, replace the cruise control switch.

**SPEED SENSOR****Inspection**

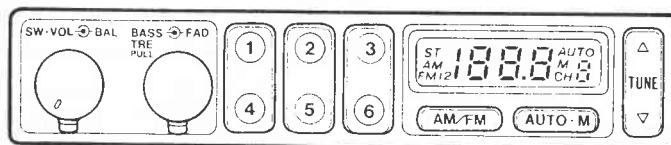
1. Remove the instrument cluster.
2. Check continuity between terminals 1L and 2A while rotating the speedometer cable.
3. If there are not four pulses per shaft rotation, replace the speed sensor.



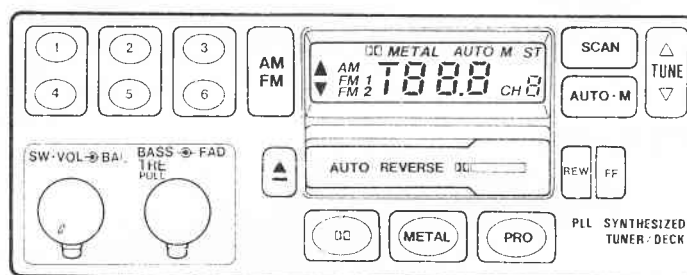
## AUDIO SYSTEM

### OUTLINE OF AUDIO

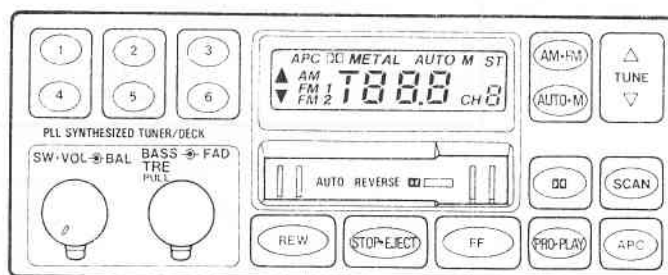
#### TYPE 1 (FM/AM RADIO)



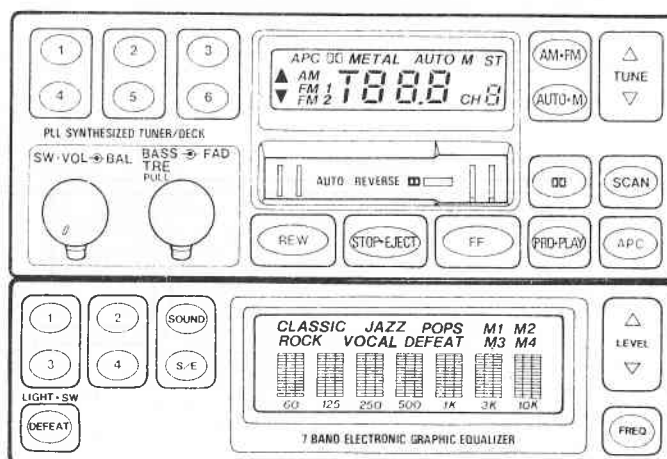
#### TYPE 2 (FM/AM RADIO, CASSETTE PLAYER)



#### TYPE 3 (FM/AM RADIO, CASSETTE PLAYER)

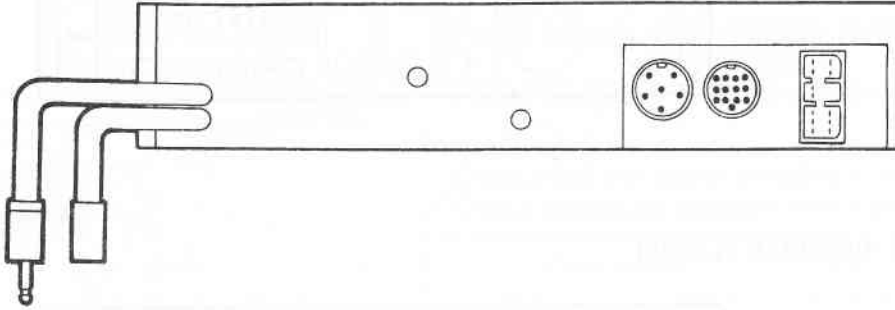


#### TYPE 4 (FM/AM RADIO, CASSETTE PLAYER + GRAPHIC EQUALIZER)

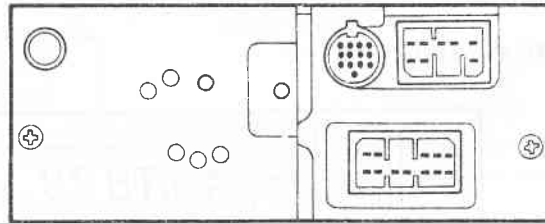


### Rear View

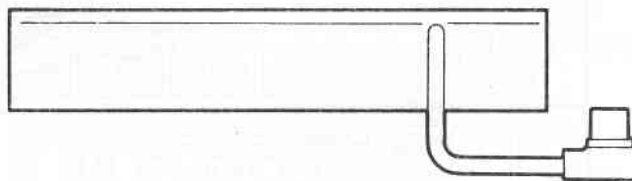
(RADIO)



(RADIO, CASSETTE PLAYER)

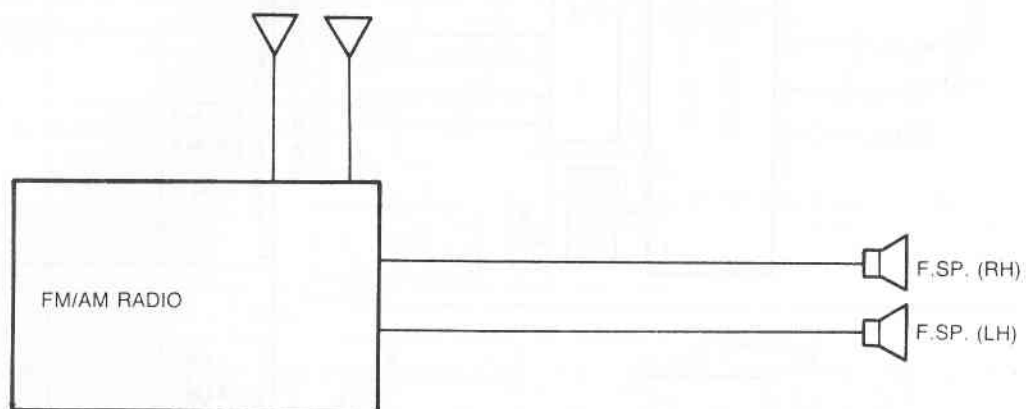


(GRAPHIC EQUALIZER)

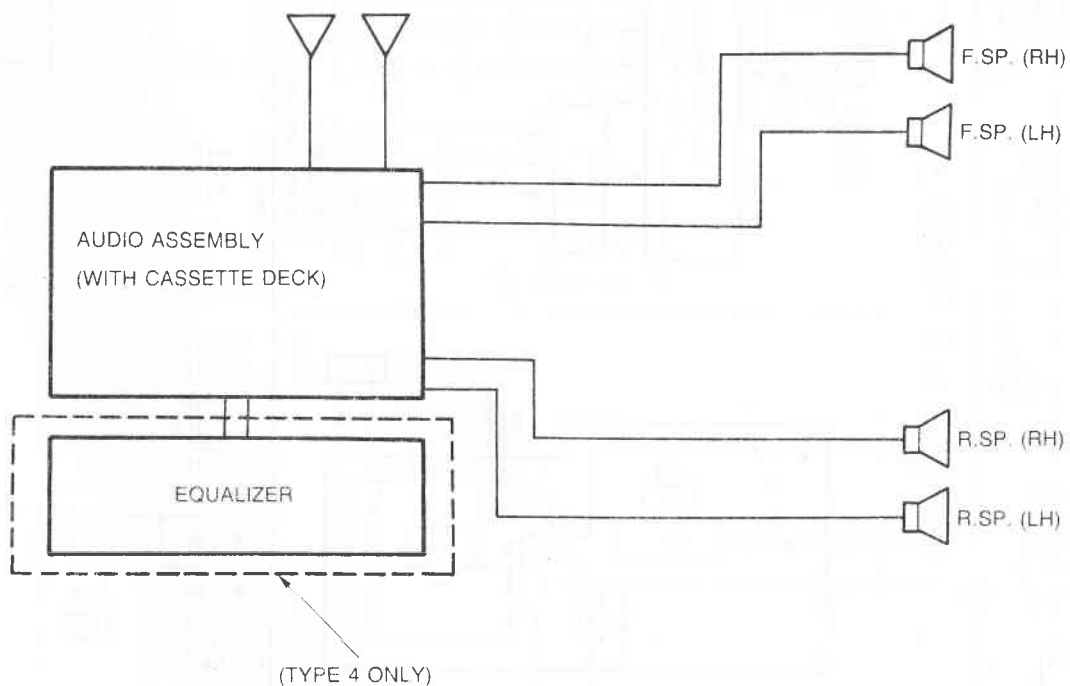


## SYSTEM

TYPE 1

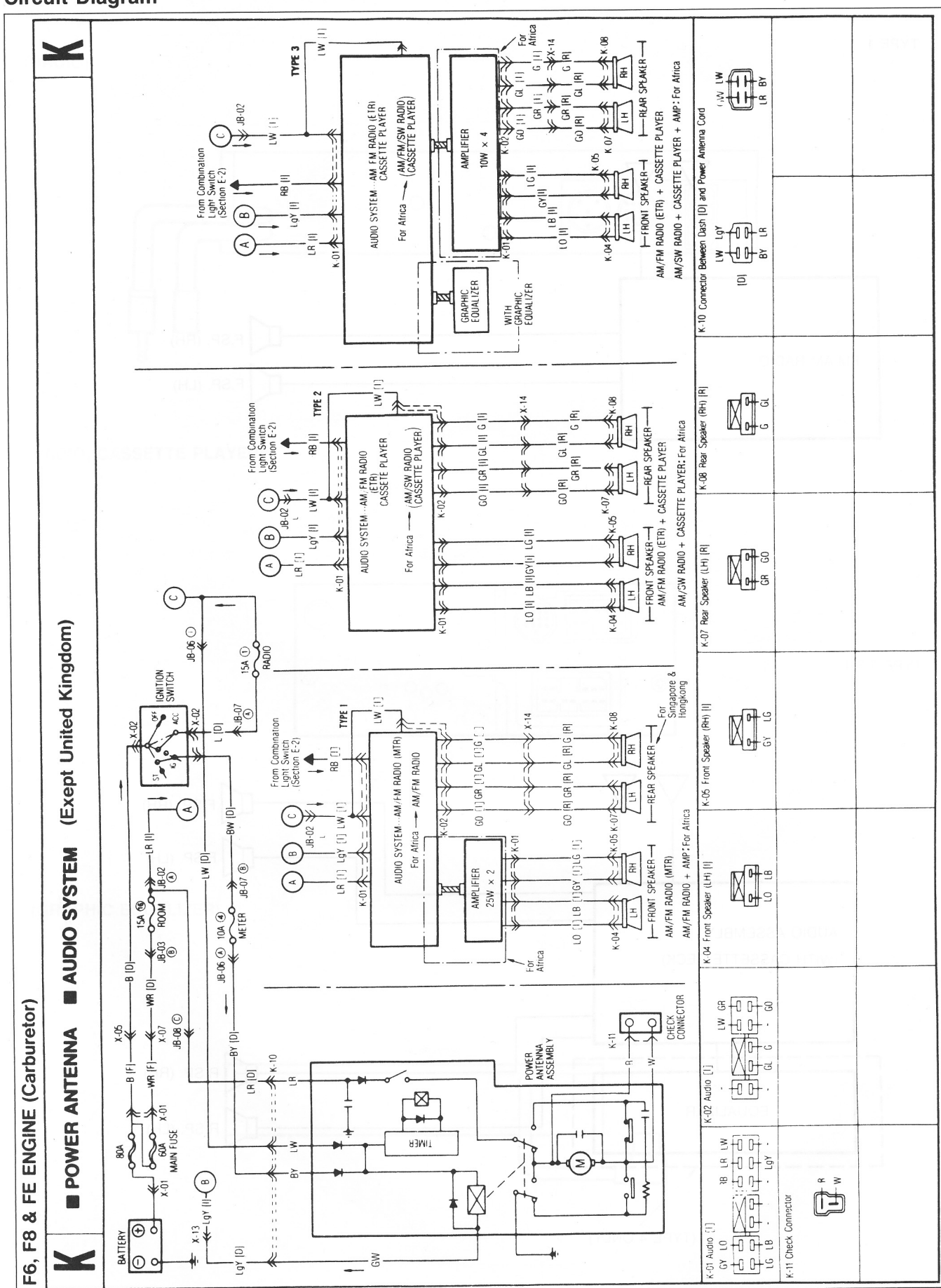


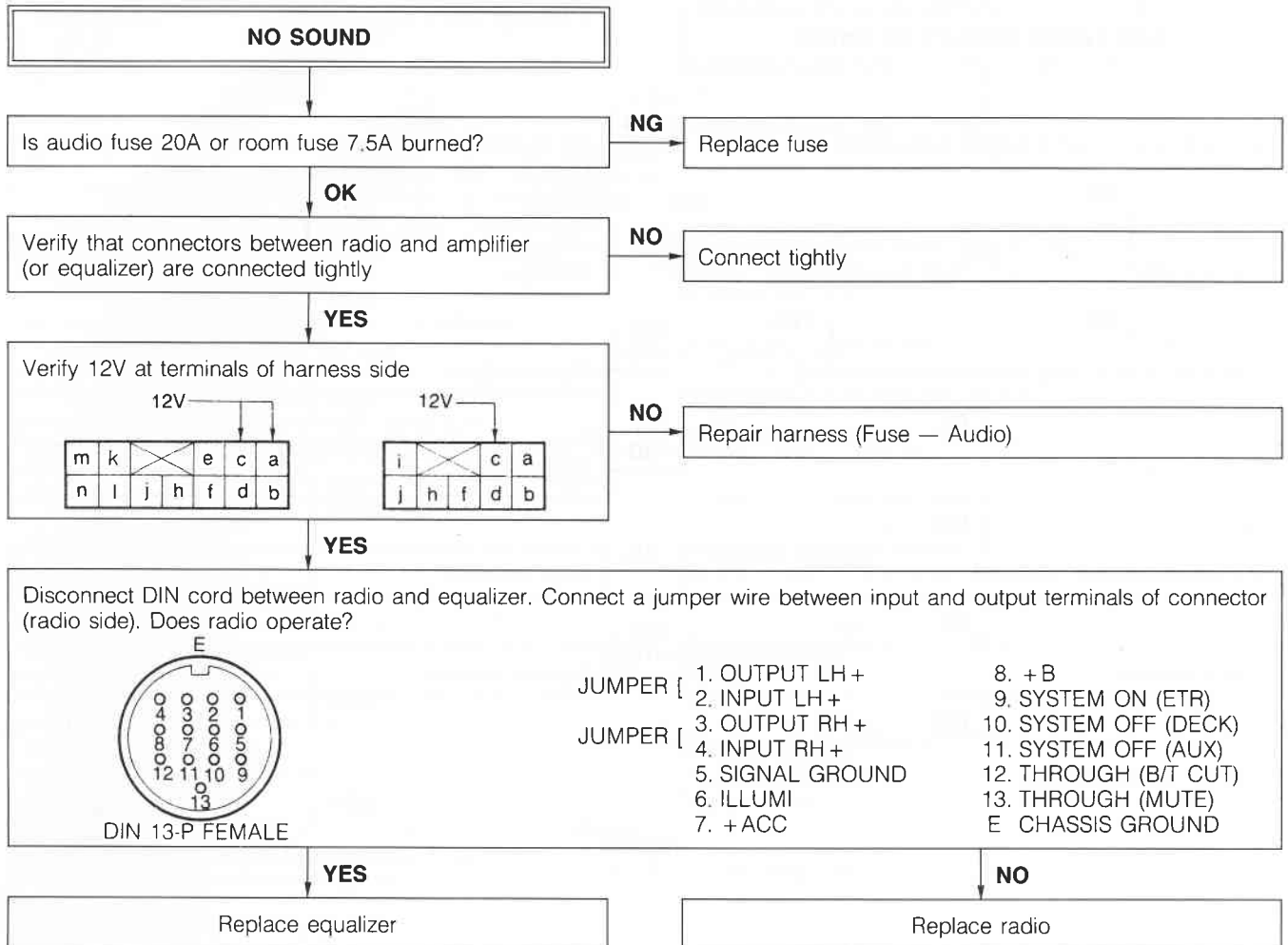
TYPE 2,3,4



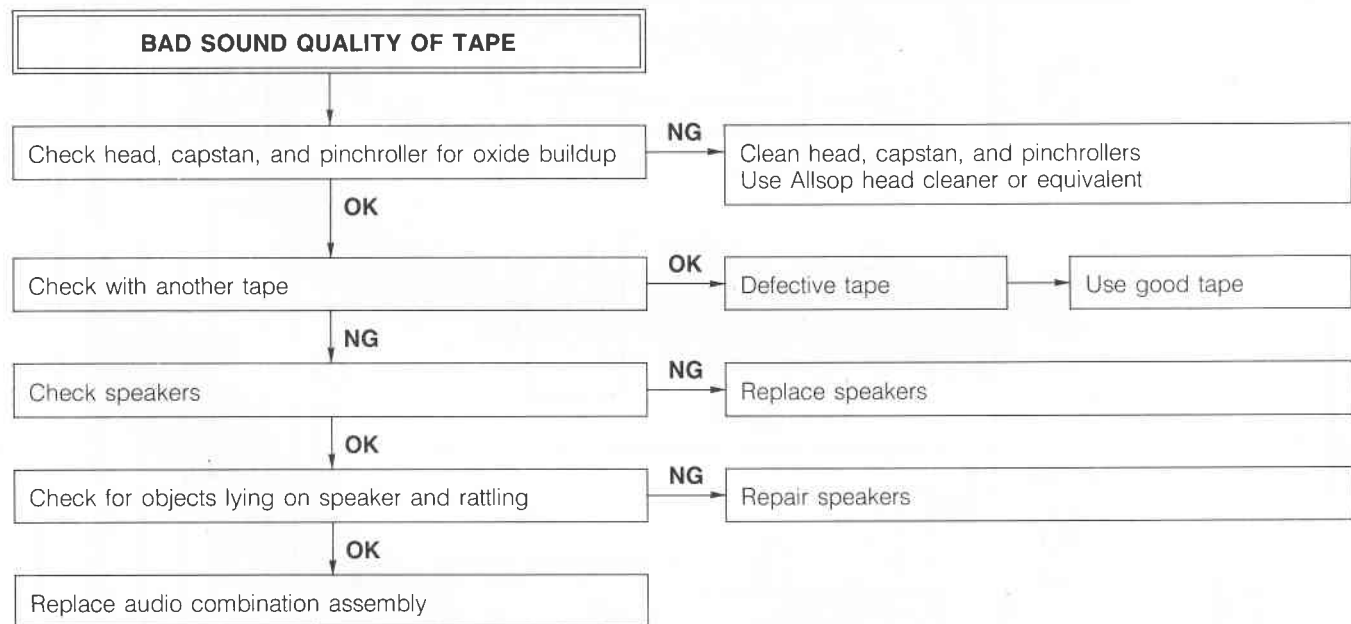
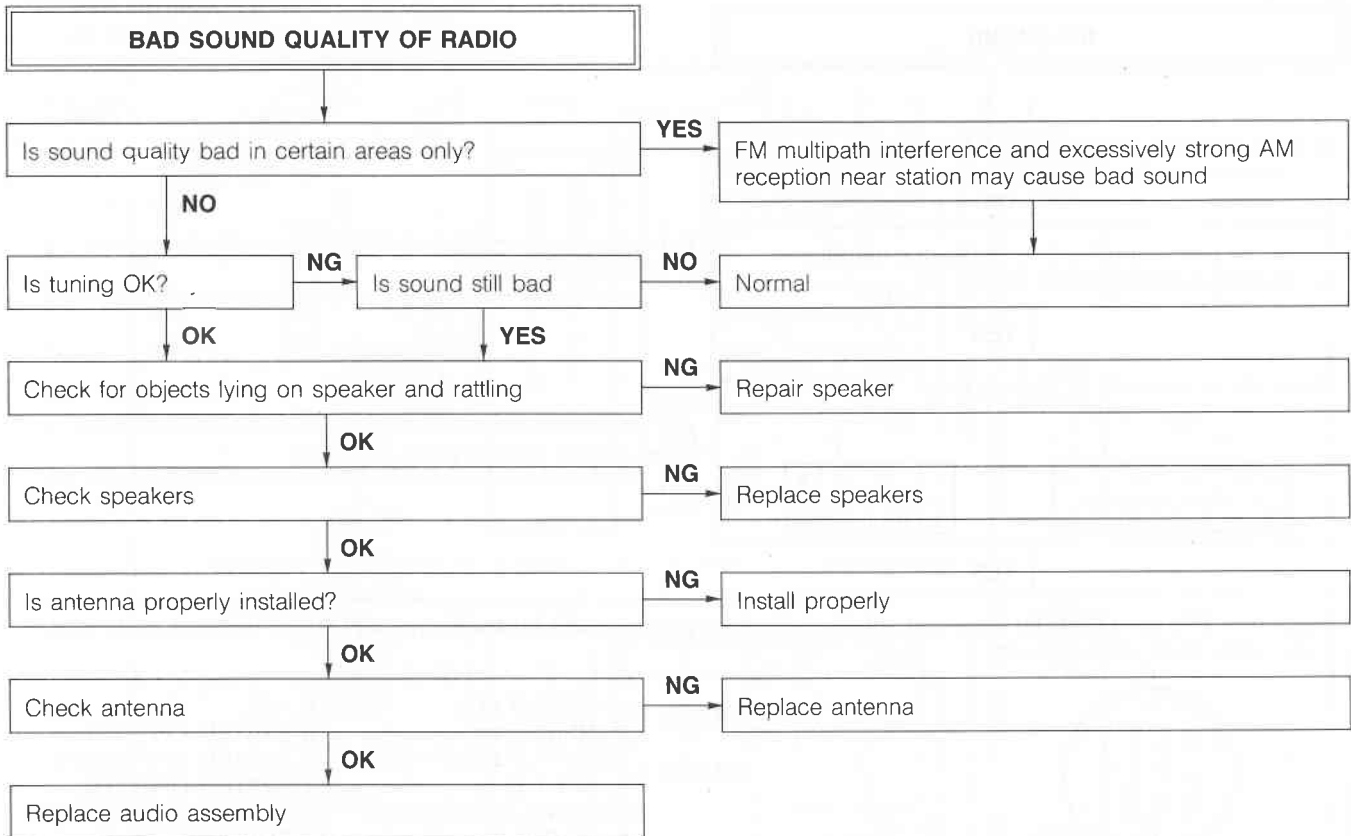
## TROUBLESHOOTING

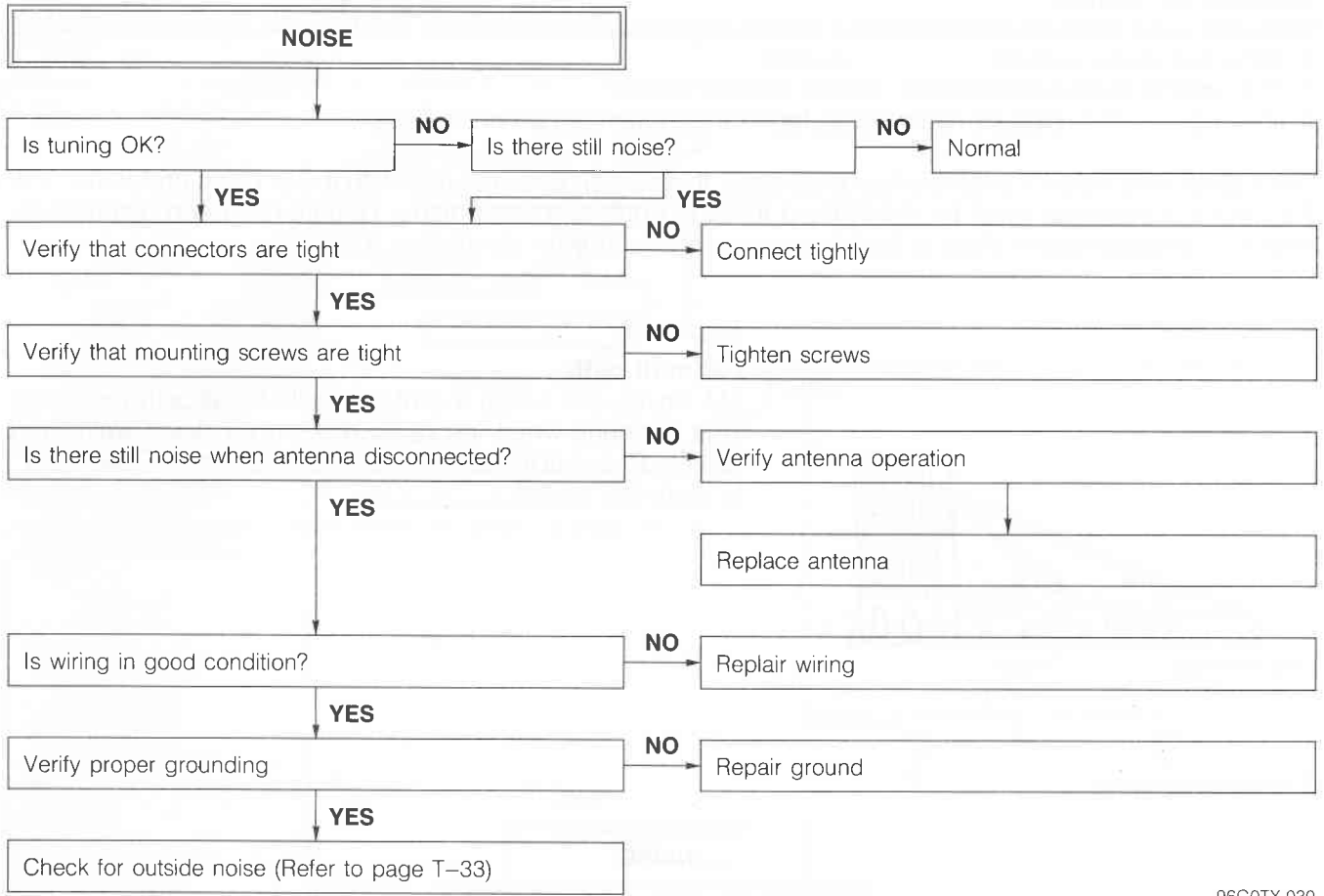
### Circuit Diagram



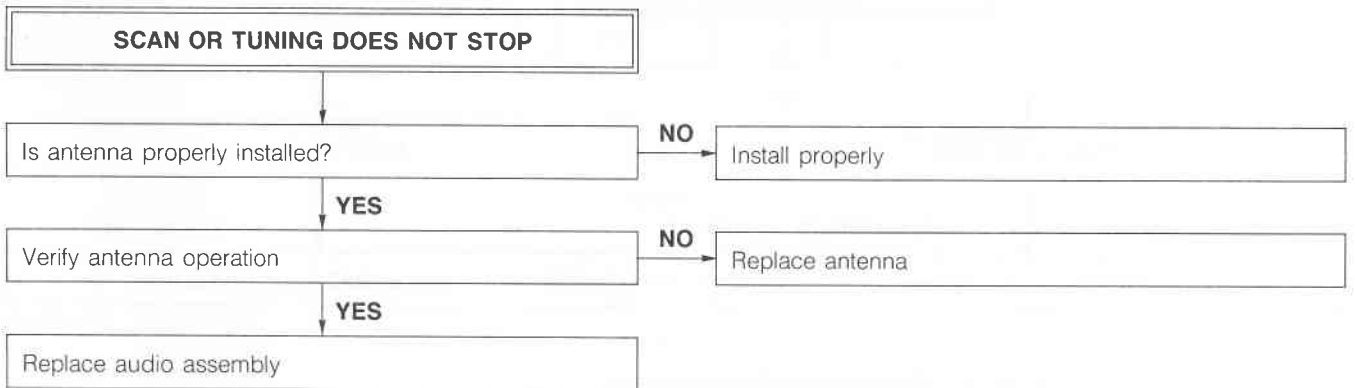


96G0TX-027





96G0TX-030



96G0TX-031

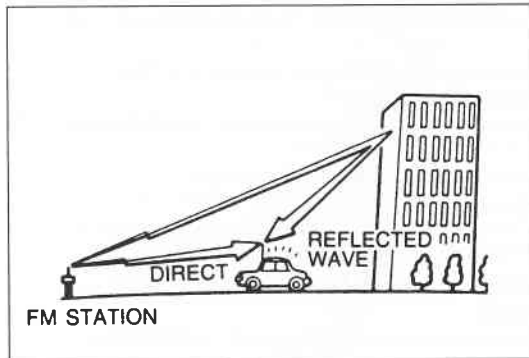
**CAUSES OF NOISE**

When the radio receives a signal from a station, there may be some noise interference. The cause could be

1. Defective audio system
2. The vehicle itself inducts noise. (called outside noise.)
3. Noise from other cars or neon signs, for example. (ambience noise.)

Since ambience noise is a temporary occurrence, this section does not deal with it. For noise problems, first, the cause of the noise must be determined through troubleshooting guide. Once it has been determined, refer to the suppression chart to find the proper procedure for eliminating the noise.

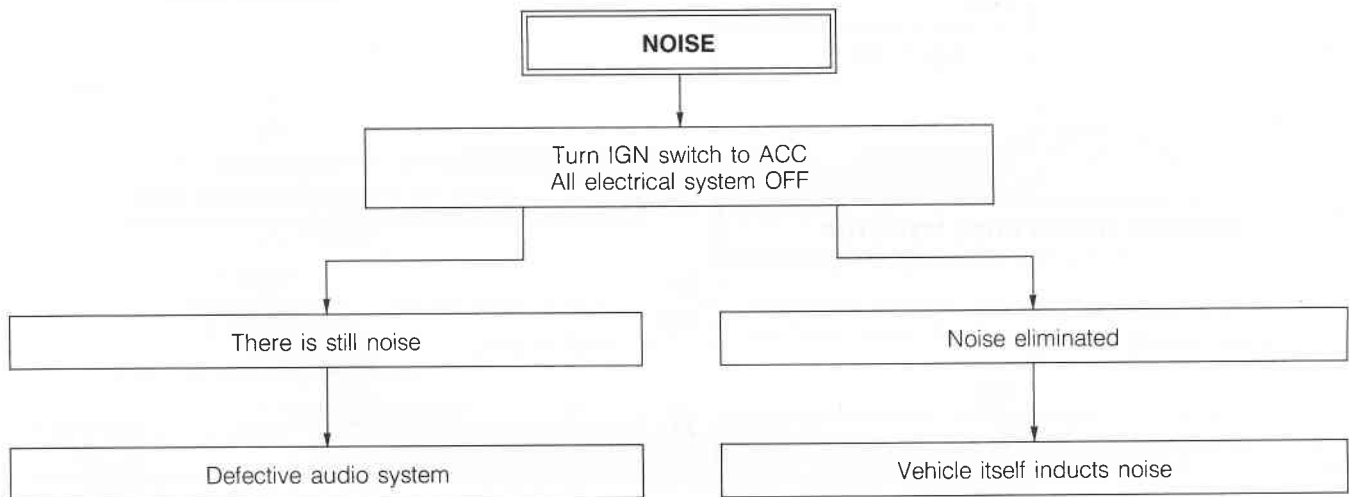
93U15X-070



93U15X-071

**FM multipath**

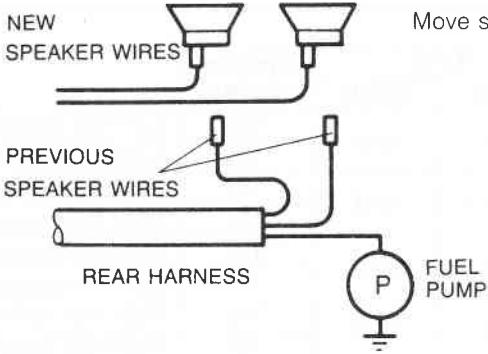
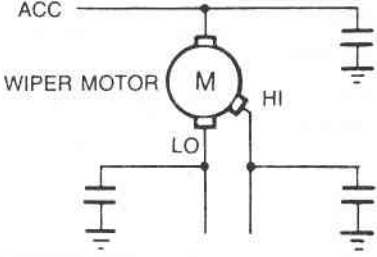
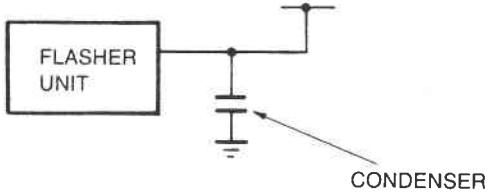
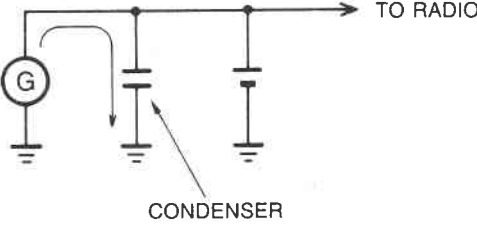
FM waves can cause a problem called multipath receiving. This happens when the radio picks up a direct wave and reflected wave at the same time. This results in a "Dead Spot" or distorted sound.

**Troubleshooting**

93U15X-072



## Noise Suppression Chart

Cause	Remedy
Fuel pump noise	<p data-bbox="954 322 1469 349">Move speaker wiring away from fuel pump wire.</p> 
Motor noise (Wiper, washer, power window, for example.)	<p data-bbox="496 703 887 757">1. Check grounding. 2. Install condensers to motor circuit.</p> 
Turn signal noise	<p data-bbox="496 1099 1070 1126">Connect condenser (0.5 <math>\mu</math>F) to power line of filter unit.</p>  <p data-bbox="794 1415 1366 1469"><b>Note</b> • Condenser should be placed near flasher unit.</p>
Alternator noise	<p data-bbox="496 1494 959 1520">Connect condenser (0.5 <math>\mu</math>F) near alternator.</p> 

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Sound is partial

Table 1

Speaker	Fader	Balance	Tone		Speaker operates	Judgement
			Bass	Treble		
Left front	Front	Left	MIN	MAX	Yes	Left front speaker OK
					No	Left front speaker circuit faulty (Go to Table 2)
Right front	Front	Right	MIN	MAX	Yes	Right front speaker OK
					No	Right front speaker circuit faulty (Go to Table 2)
Left rear	Rear	Left	MIN	MAX	Yes	Left rear speaker OK
					No	Left rear speaker circuit faulty (Go to Table 2)
Right rear	Rear	Right	MIN	MAX	Yes	Right rear speaker OK
					No	Right rear speaker circuit faulty (Go to Table 2)

Table 2

No operation	Action
Left front speaker	Inspect the speaker
Right front speaker	
Left rear speaker	
Right rear speaker	
Both front speakers	
Both rear speakers	Replace the audio component assembly
All speakers	

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