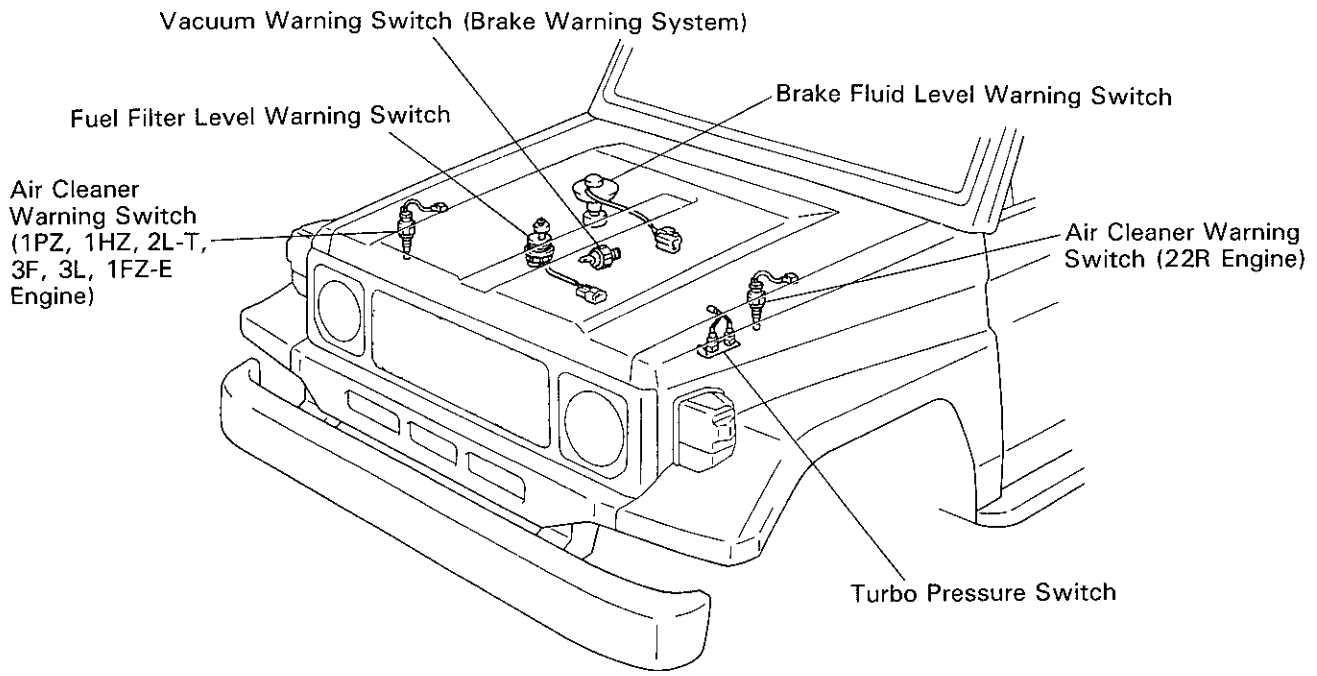
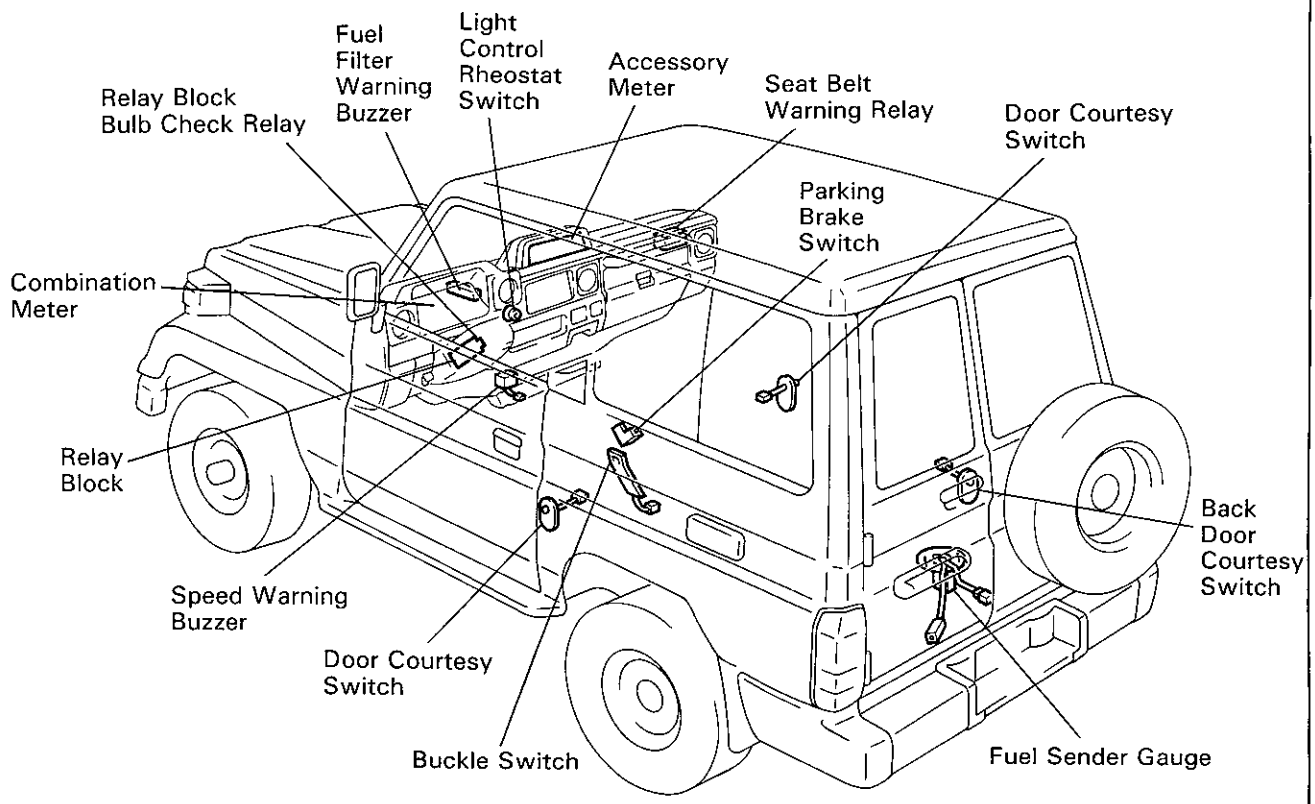
COMBINATION METER

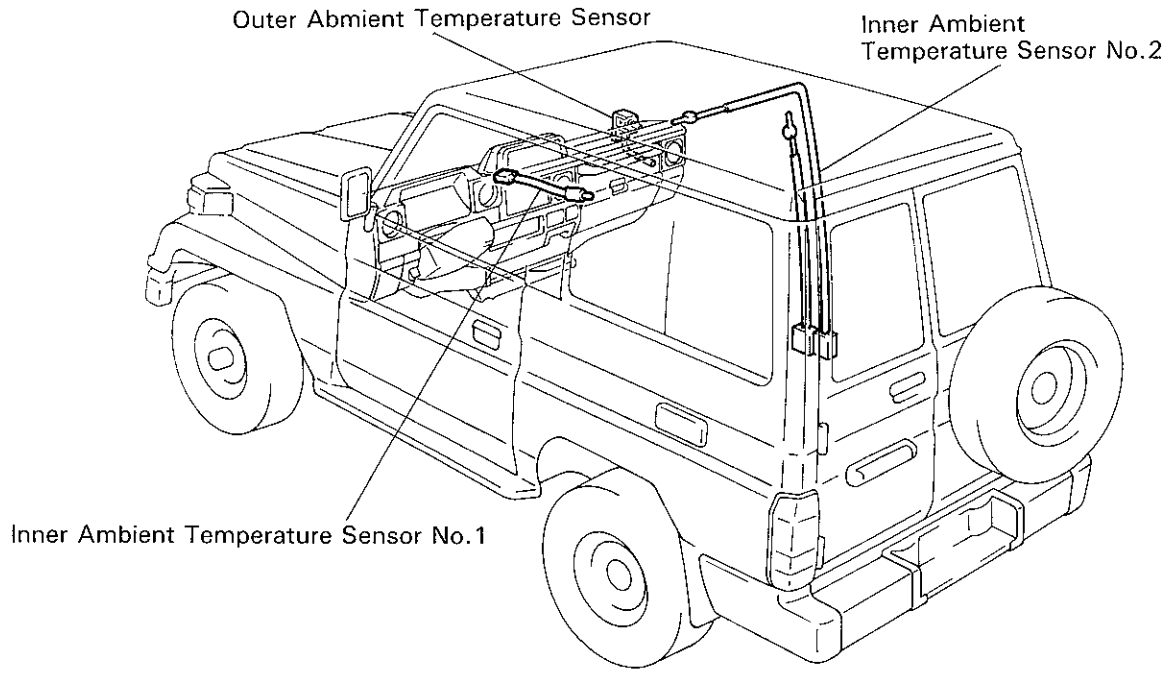
Parts Location



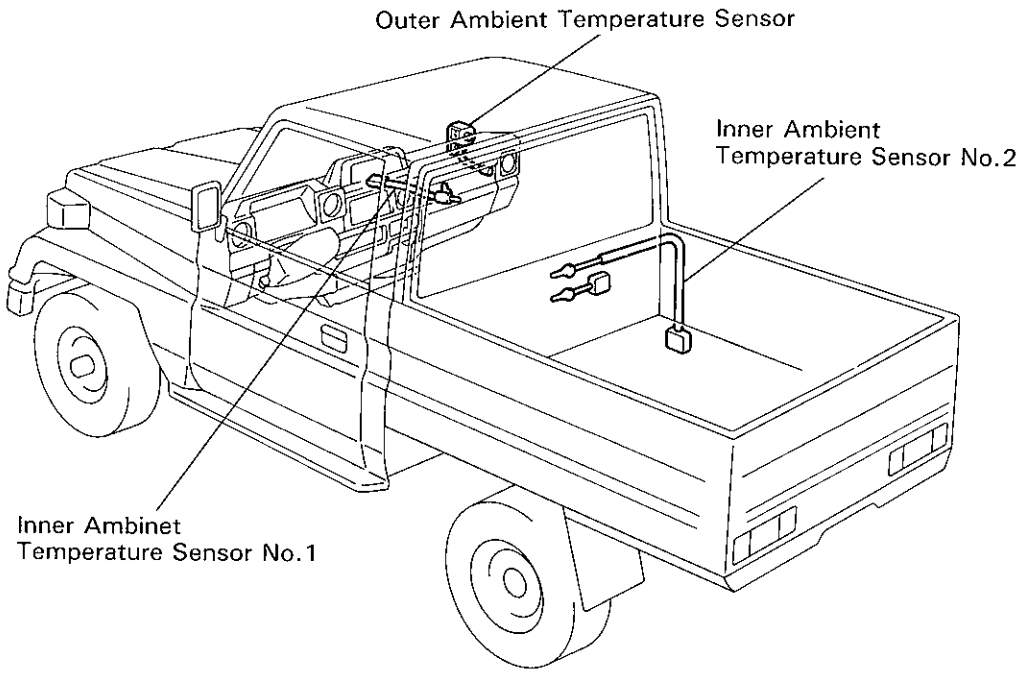


BE5350
N04070

Hard Top



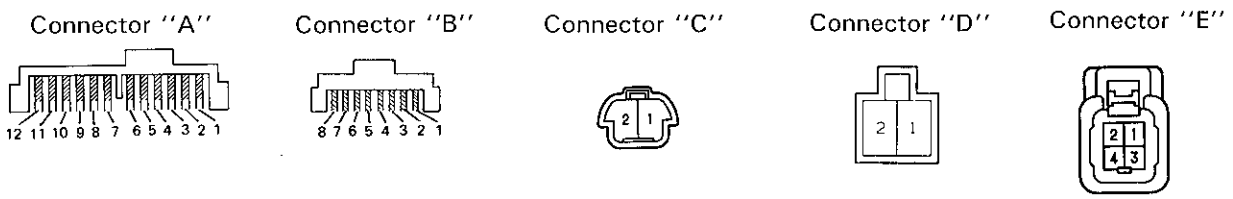
Pick UP

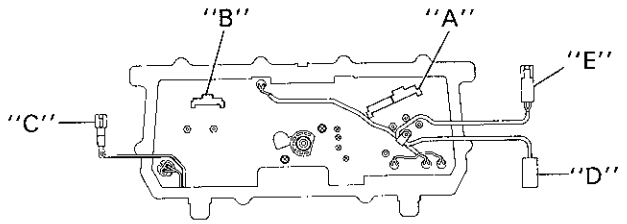


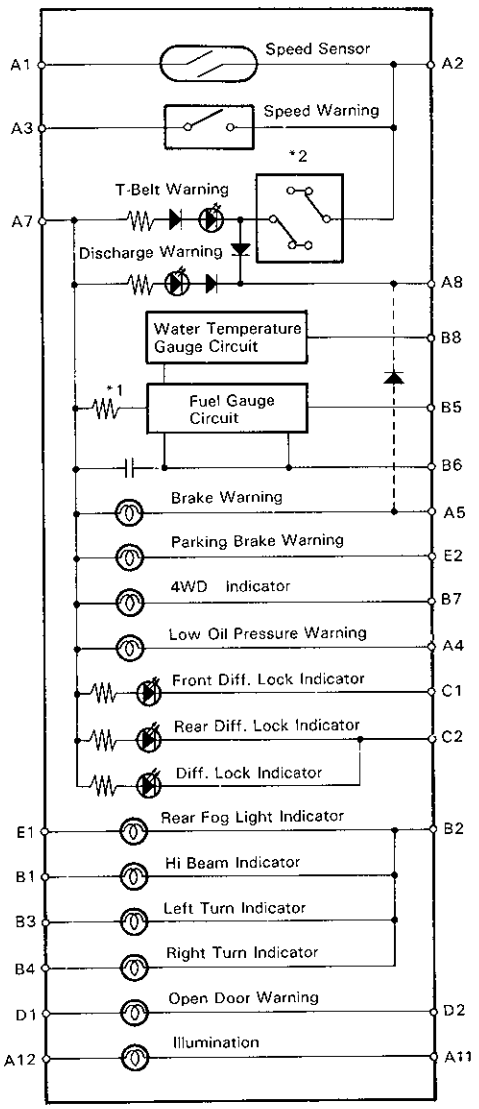
BE5383
N04071

Meter Circuit

(w/o Tachometer)







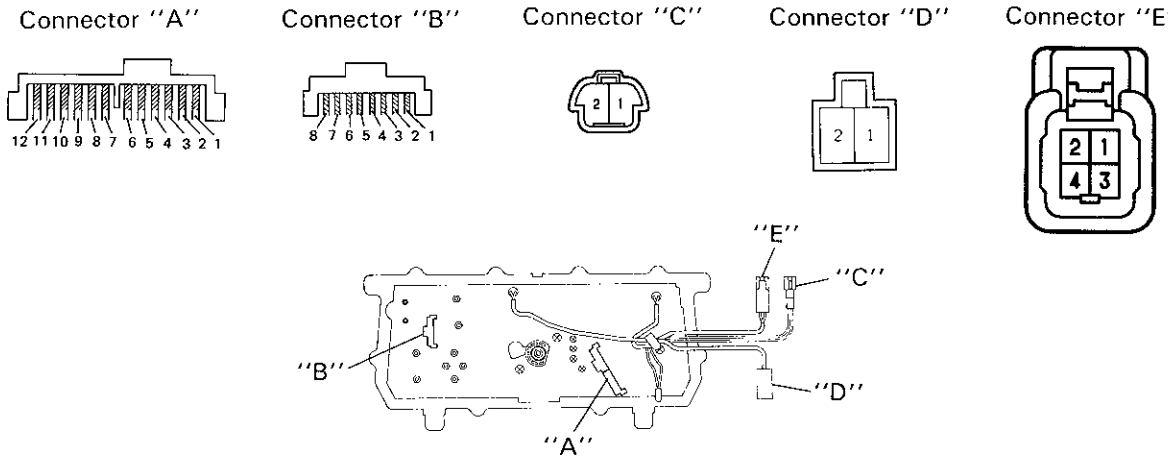
*1: 24V Vehicles
*2: Cancel Switch and Warning Switch
----: Europe

N04072

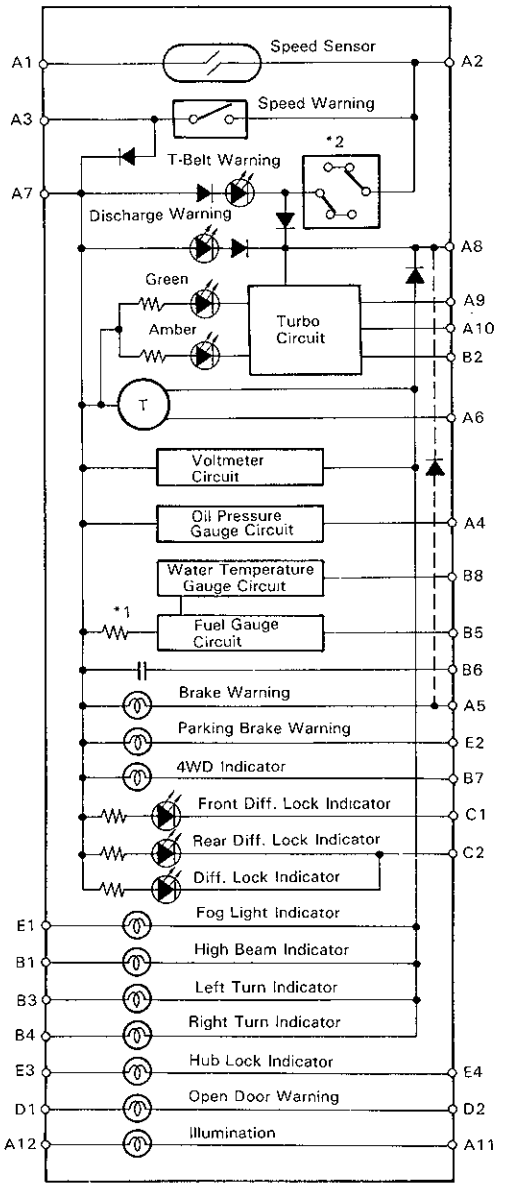
BE1267 BE2639 S-2-2-G N-2-2 e-4-2
BE5355

No.		Wiring connector side
A	1	Emission ECU
	2	Ground
	3	Speed Warning Buzzer
	4	Low Oil Pressure Warning Switch
	5	Brake Fluid Level Warning Switch, Vacuum Switch (Diesel Engine) and Parking Brake Switch (Ex. Europe)
	7	ENGINE Fuse
	8	CHARGE Fuse
	11	Light Control Rheostat or Ground
	12	TAIL Fuse
B	1	Headlight Dimmer Switch
	2	Ground
	3	Turn Signal Switch (Left)
	4	Turn Signal Switch (Right)
	5	Fuel Sender Gauge
	6	Ground
	7	4WD Switch
	8	Water Temperature Sender Gauge
C	1	Front Diff. Lock Switch
	2	Rear Diff. Lock Switch
D	1	DOME Fuse
	2	Door Courtesy Switch
E	1	Rear Fog Light Switch (Europe)
	2	Parking Brake Switch (Europe)

(w/ Tachometer)



BE1267 BE2639 S-2-2-G N-2-2 e-4-2
BE5357



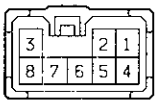
*1: 24V Vehicles
*2: Cancel Switch and Warning Switch
---: Europe

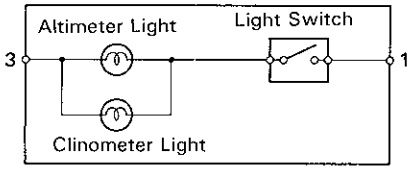
N04073

No.		Wiring connector side
A	1	Emission ECU
	2	Ground
	3	Speed Warning Buzzer
	4	Oil Pressure Sender Gauge
	5	Brake Fluid Level Warning Switch, Vacuum Switch (Diesel Engine), Parking Brake Switch (Ex. Europe) and Bulb Check Relay (Australia)
	6	Ignition Coil (Gasoline Engine) or Tacho Pick Sensor (Diesel Engine)
	7	ENGINE Fuse
	8	CHARGE Fuse
	9	Turbo Pressure Switch-terminal 2
	10	Turbo Pressure Switch-terminal 1
	11	Light Control Rheostat or Ground
	12	TAIL Fuse
B	1	Headlight Dimmer Switch
	2	Ground
	3	Turn Signal Switch (Left)
	4	Turn Signal Switch (Right)
	5	Fuel Sender Gauge
	6	Ground
	7	4WD Switch
	8	Water Temperature Sender Gauge
C	1	Front Diff. LOCK Switch
	2	Rear Diff. LOCK Switch
D	1	DOME Fuse
	2	Door Courtesy Switch
E	1	Rear Fog Light Switch
	2	Parking Brake Switch (Europe)
	3	ENGINE Fuse
	4	Free Wheel Hub ECU

(Accessory Meter/Over Head Console)

- **Altimeter and Clinometer**

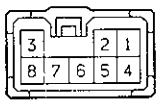


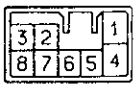


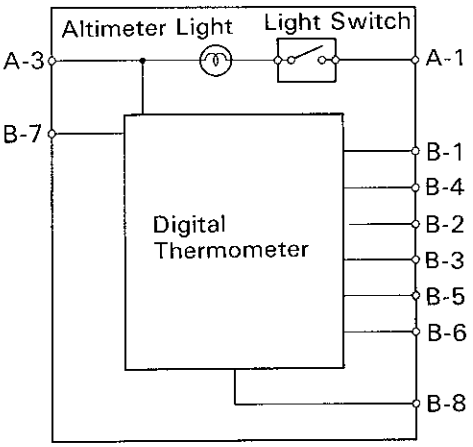
No.	Wiring connector side
1	Ground
3	TAIL Fuse

- **Thermometer and Altimeter**

Connector "A" Connecor "B"

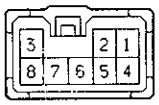


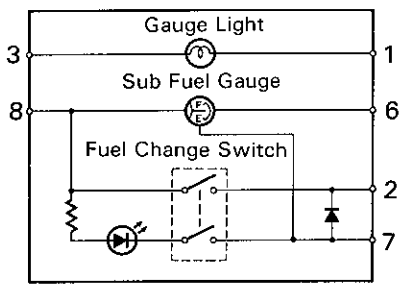




No.		Wiring connector side
A	1	Ground
	3	TAIL Fuse
B	1	Inner Ambient Temperature Sensor No.2
	2	Inner Ambient Temperature Sensor No.1
	3	Inner Ambient Temperature Sensor No.1
	4	Inner Ambient Temperature Sensor No.2
	5	Outer Ambient Temperature Sensor
	6	Outer Ambient Temperature Sensor
	7	ENGINE Fuse
	8	Ground

- Sub Fuel Gauge





No.	Wiring connector side
1	Ground
2	Fuel Transfer Solenoid Valve
3	TAIL Fuse
6	Sub Fuel Sender Gauge
7	Ground
8	ENGINE Fuse

S-8-2
BE5385
S-8-2 GS-8-2
BE5386
S-8-2
N04074

(km/h)

Standard indication	Allowable range	
	Ex. Australia	Australia
20	21 — 25	(17.5 — 21.5)
40	41.5 — 46	38 — 42
60	62.5 — 67	58 — 63
80	83 — 88	78 — 84
100	104 — 109	99 — 104.5
120	125 — 130.5	119.5 — 125.5
140	145.5 — 151.5	139.5 — 146.5
160	(166 — 173)	(159.5 — 167.5)

Figures in brackets are not official, they are for reference only.

(mph)

Standard indication	Allowable range
20	21 — 23.5
40	41.5 — 44
60	62.5 — 66
80	83 — 87
100	104 — 108.5

(rpm)
DC 13 V 25°C (77°F)/12 V Vehicles
DC 26 V 25°C (77°F)/24 V Vehicles

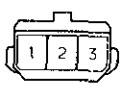
Standard	Allowable range
1000	900 — 1100
(2000)	(1875 — 2125)
3000	2850 — 3150
(4000)	(3850 — 4150)
5000	4850 — 5150
(6000)	(5820 — 6180)

Figures in brackets are not official, they are for reference only.

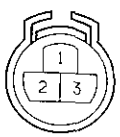
Inner Ambient Temperature Sensor No.1 (Instrument Panel Side)



Inner Ambient Temperature Sensor No.2 (Roof or Back Panel Side)



Outer Ambient Sensor



GA-2-2-C
GA-3-1
IH-3-1

Parts Inspection

Speedometer System

INSPECT SPEEDOMETER (ON-VEHICLE)

(a) Using a speedometer tester, inspect the speedometer for allowable indication error and check the operation of the odometer.

HINT: Tire wear and tire over or under inflation will increase the indication error.

If error is excessive, replace the speedometer.

(b) Check the speedometer for pointer vibration and abnormal noise.

HINT: Pointer vibration can be caused by a loose speedometer cable.

Tachometer System

INSPECT TACHOMETER (ON-VEHICLE)

(a) Connect a tune-up test tachometer, and start the engine.

NOTICE:

- **Reversing the connection of the tachometer will damage the transistors and diodes inside.**
- **When removing or installing the tachometer, be careful not to drop or subject it to heavy shocks.**

(b) Compare the tester and tachometer indications.

If error is excessive, replace the tachometer.

Thermometer System

INSPECT INNER AND OUTER AMBIENT TEMPERATURE SENSOR

Measure the resistance between terminals 1 and 2.

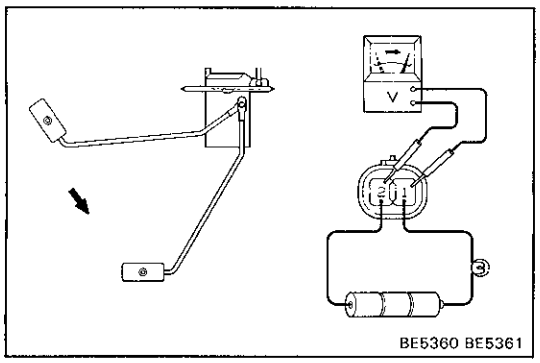
(Inner)

Temperature (°C)	−30	−20	−10	0	10	20	30	40	50	60	70
Resistance (kΩ)	6.24	3.68	2.25	1.41	0.92	0.61	0.41	0.29	0.20	0.15	0.11

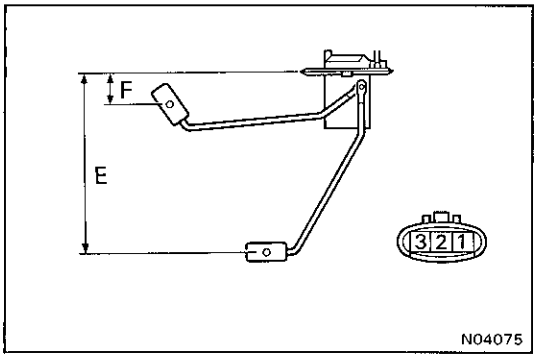
(Outer)

Temperature (°C)	−30	−20	−10	0	10	20	30	40	50	60	70
Resistance (kΩ)	12.47	7.36	4.49	2.83	1.83	1.22	0.83	0.57	0.41	0.29	0.21

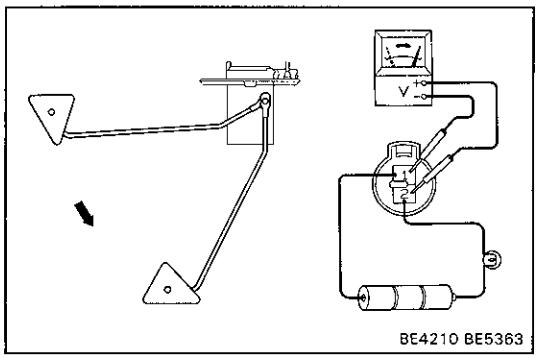
If resistance is not specified, replace inner or outer ambient temperature sensor.



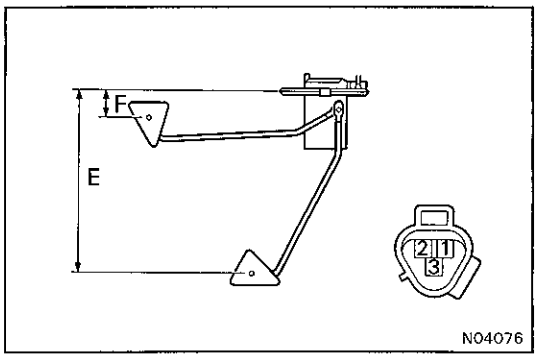
BE5360 BE5361



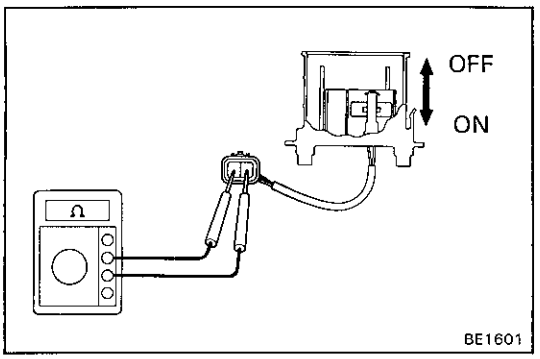
N04075



BE4210 BE5363



N04076



BE1601

Fuel Gauge

INSPECT SENDER GAUGE

Except FJ75, PZJ75, HZJ75 and FZJ75

(Operation)

(a) Connect a series of three 1.5 V dry cell batteries.

(b) Connect the positive (+) lead from the dry cell batteries to terminal 2 through a 3.4 W test bulb and the negative (−) lead to terminal 1.

(c) Check that the voltage rises between terminals 1 and 2 as the float is moved from the top to bottom position.

(Resistance)

Measure the resistance between terminals 1 and 2 for each float position.

Float position mm (in.)		Resistance (Ω)
F	Approx. 76.7 (3.020)	Approx. 3
E	Approx. 302.4 (11.905)	Approx. 110

If resistance value is not as specified, replace the sender gauge.

FJ75, PZJ75, HZJ75 and FZJ75

(Operation)

(a) Connect a series of three 1.5 V dry cell batteries.

(b) Connect the positive (+) lead from the dry cell batteries to terminal 2 through a 3.4 W test bulb and the negative (−) lead to terminal 1.

(c) Check that the voltage rises between terminals 1 and 2 as the float is moved from the top to bottom position.

(Resistance)

Measure the resistance between terminals 1 and 2 for each float position.

Float position mm (in.)		Resistance (Ω)
F	Approx. 56 (2.20)	Approx. 3
E	Approx. 259.1 (10.201)	Approx. 110

If resistance value is not as specified, replace the sender gauge.

Brake Warning System

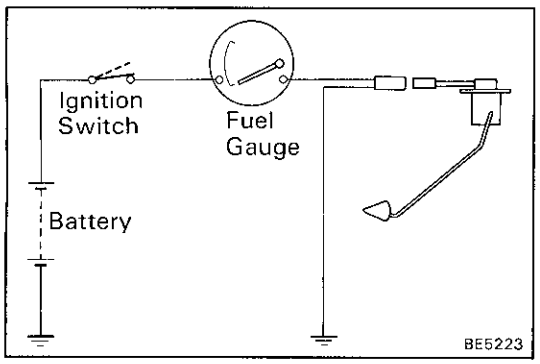
PZJ75, HZJ75 and FZJ75

(Brake Fluid Level Warning Switch)

(a) Check that there is no continuity between terminals with the switch OFF (float up).

(b) Check that there is continuity between terminals with the switch ON (float down).

If operation is not as specified, replace the switch.



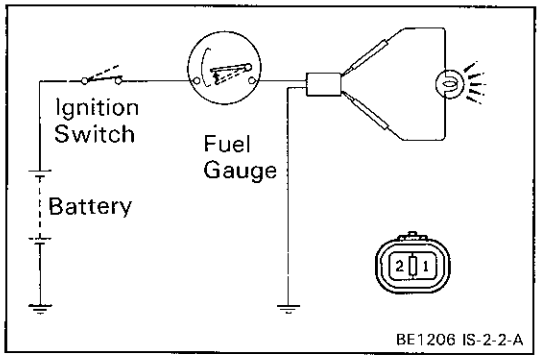
Sub Fuel Gauge System

1. INSPECT RECEIVER GAUGE

(Operation)

(a) Disconnect the connector from the sender gauge.

(b) Turn the ignition switch ON, check that the receiver gauge needle indicates EMPTY.

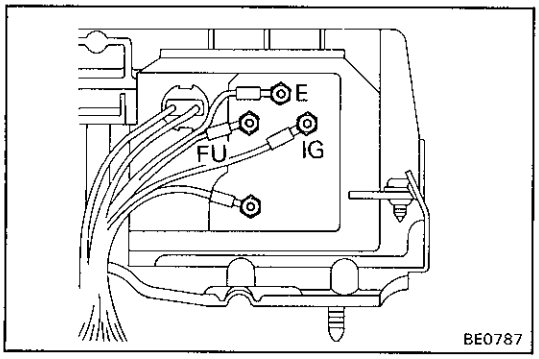


(c) Connect terminals 1 and 2 on the wire harness side connector through a 3.4 W test bulb.

(d) Turn the ignition switch ON, check that the bulb lights up and receiver gauge needle moves toward the full side.

HINT: Because of the silicon oil in the gauge, it will take a short time for the needle stabilize.

If operation is not as specified, inspect the receiver gauge resistance.



(Resistance)

Measure the resistance between terminals.

Between terminals	Resistance (Ω)
IG — FU	Approx. 86
FU — E	Approx. 155
IG — E	Approx. 241

If resistance value is not as specified, replace the receiver gauge.

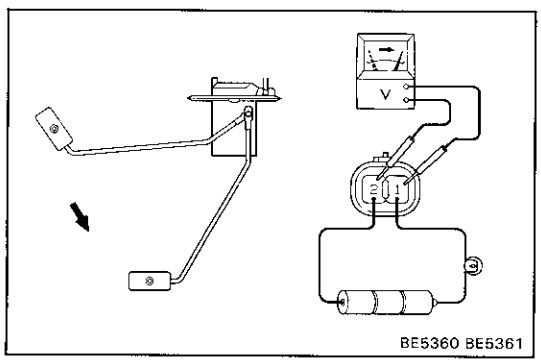
2. INSPECT SENDER GAUGE

(Operation)

(a) Connect a series of three 1.5 V dry cell batteries.

(b) Connect the positive (+) lead from the dry cell batteries to terminal 2 a through 3.4 W test bulb and the negative (—) lead to terminal 1.

(c) Check that the voltage reises between terminals 1 and 2 as the float is moved from the top to bottom position.



(Resistance)

Measure the resistance between terminals 1 and 2 for each float position.

Float position mm (in.)		Resistance (Ω)
F	Approx. 76.7 (3.020)	Approx. 3
E	Approx.302.4 (11.905)	Approx. 110

If resistance value is not as specified, replace the sender gauge.

