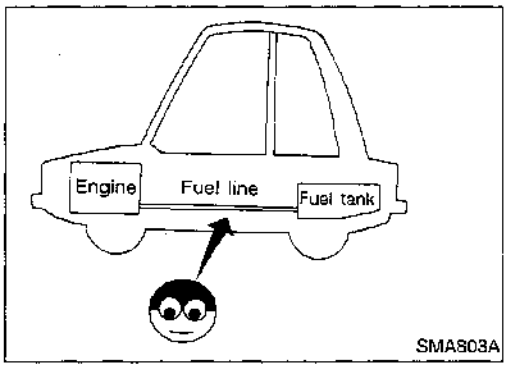
NISSAN QUEST

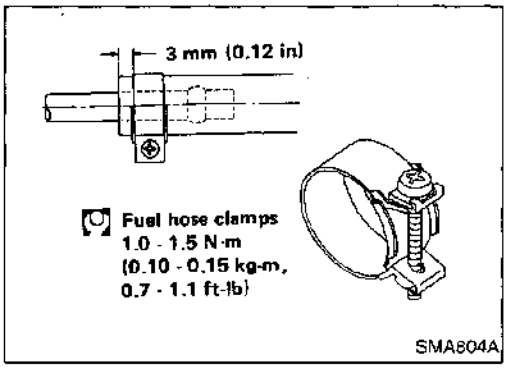
MODEL V40 SERIES

QUICK REFERENCE INDEX



Checking Fuel Lines

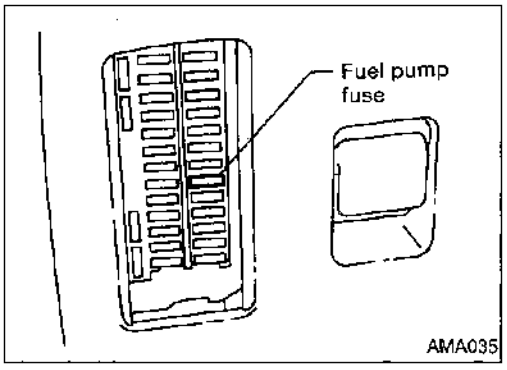
Inspect fuel lines and tank for improper attachment and for leaks, cracks, damage, loose connections, chafing and deterioration.
If necessary, repair or replace damaged parts.



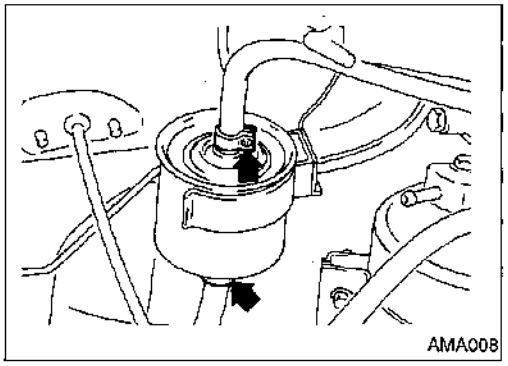
CAUTION:
Tighten high-pressure rubber hose clamp so that clamp end is 3 mm (0.12 in) from hose end.
Tightening torque specifications are the same for all rubber hose clamps.
Ensure that screw does not contact adjacent parts.

Changing Fuel Filter

WARNING:
Before removing fuel filter, release fuel pressure from fuel line to eliminate danger.



1. Remove fuel pump fuse.
2. Start engine.
3. After engine stalls, crank engine two or three times to make sure that fuel pressure is released.
4. Turn ignition switch "OFF".

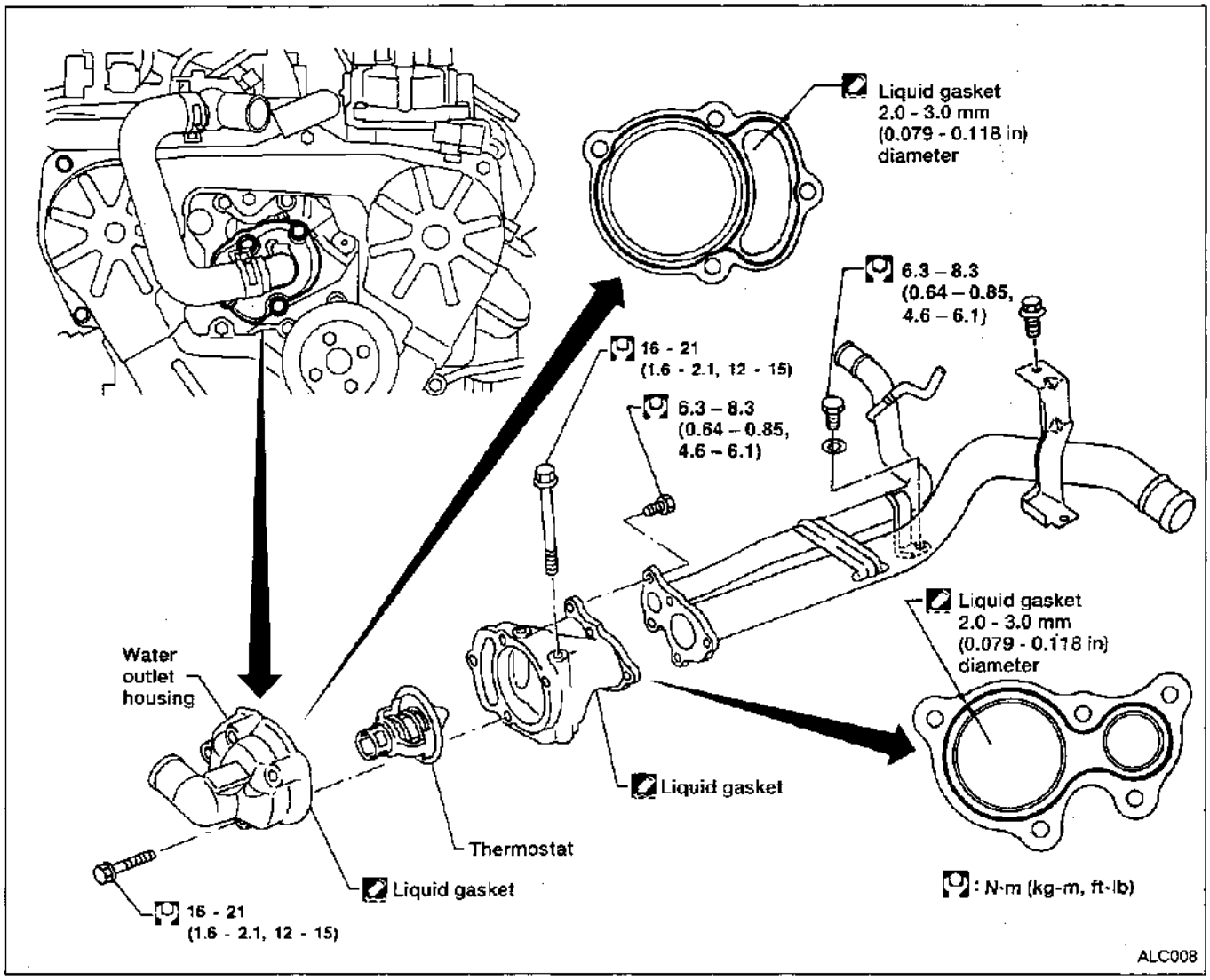


5. Loosen fuel hose clamps.
6. Replace fuel filter.
- **Be careful not to spill fuel over engine compartment. Place a shop towel to absorb fuel.**
- **Use a high-pressure type fuel filter. Do not use a synthetic resinous fuel filter.**

Fuel Hose Clamps:
: 1.0 - 1.5 (0.102 - 0.153 kg-m, 0.74 - 1.11 ft-lb)

7. Install fuel pump fuse.

Thermostat

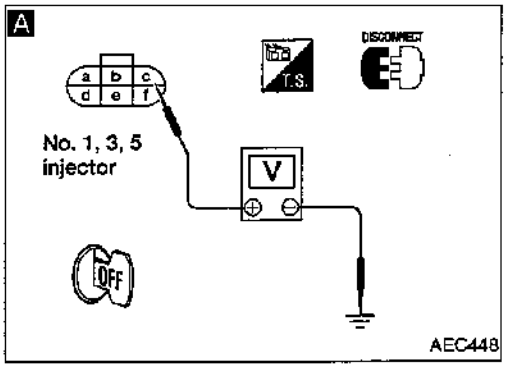


REMOVAL AND INSTALLATION

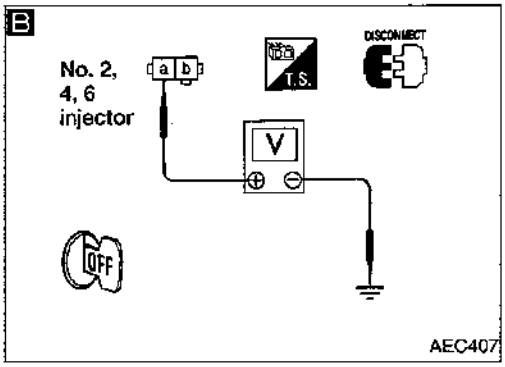
1. Drain engine coolant. Refer to MA section ("Draining Engine Coolant", "ENGINE MAINTENANCE").
2. Remove water hose from water outlet housing.
3. Remove water outlet housing, then take out thermostat.

Diagnostic Procedure For Trouble Code 51 (Cont'd)

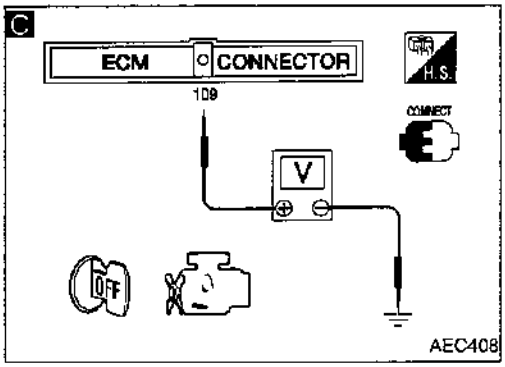
A



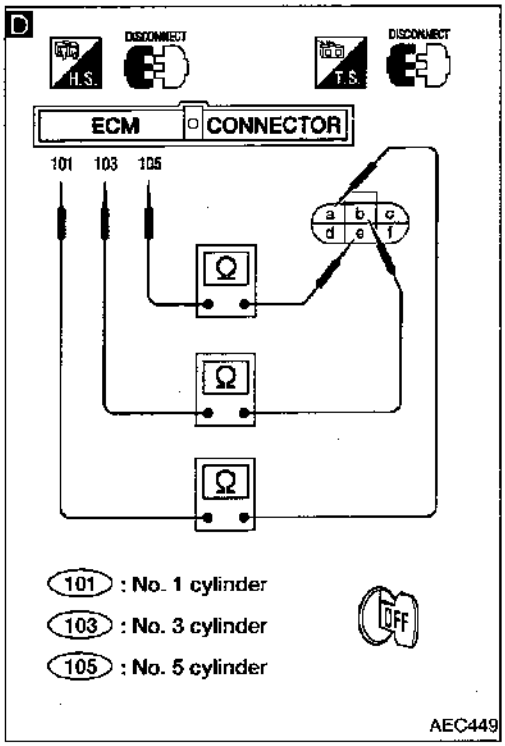
B



C



D



INSPECTION START

CHECK POWER SUPPLY.
1) Disconnect sub-harness connectors (F6), (F101) for No. 1, No. 3, No. 5 cylinders.
A 2) Check voltage between terminal (c) and ground.
Voltage: Battery positive voltage
3) Disconnect injector harness connectors for No. 2, No. 4, No. 6 cylinders.
B 4) Check voltage between terminal (a) and ground.
Voltage: Battery positive voltage
5) Turn ignition switch "ON".
C 6) Check voltage between ECM terminal (109) and ground.
Voltage: Battery positive voltage

NG → Check the following.
- Harness connectors (F28), (E30)
- Harness connectors (F1), (E1)
- 25A fusible link
- Harness continuity between battery and ECM
- Harness continuity between ECM relay and ECM

If NG, repair harness or connectors.

OK ↓

CHECK OUTPUT SIGNAL CIRCUIT.
1) Turn ignition switch "OFF".
D 2) Check harness continuity between terminal (a) and ECM terminal (101), terminal (b) and ECM terminal (103), (e) and ECM terminal (105).
Continuity should exist.
E 3) Check harness continuity between terminal (b) and ECM terminals (110), (112), (114).
Continuity should exist.

NG → Repair harness and connectors.

OK ↓

CHECK COMPONENT (Injector).
Refer to EF & EC-169.

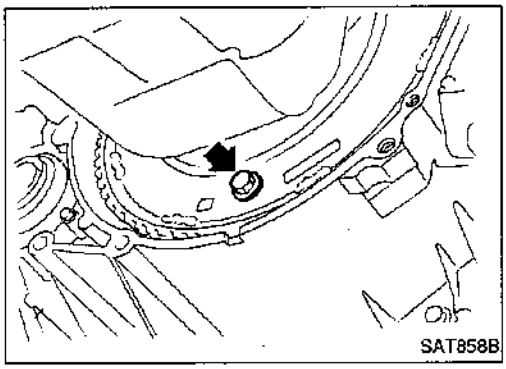
NG → Replace injector. Refer to EF & EC-172.

OK ↓

Disconnect and reconnect harness connectors in the circuit, and retest.

Trouble is not fixed. ↓

Check ECM pin terminals for damage or the connection of ECM harness connector. Refer to EF & EC-158.
Reconnect ECM harness connector and retest.

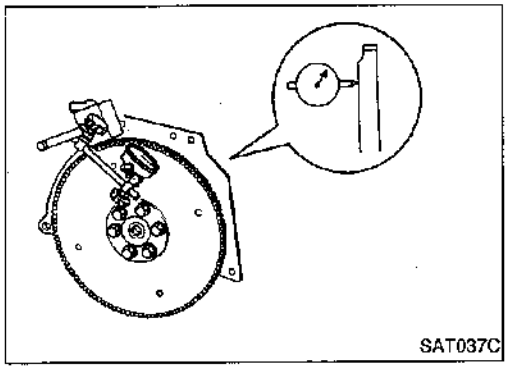

SAT858B

Removal

- Disconnect drive shafts. Refer to FA section ("Removal", "FRONT AXLE — Drive Shaft").
- Remove bolts securing torque converter to drive plate.

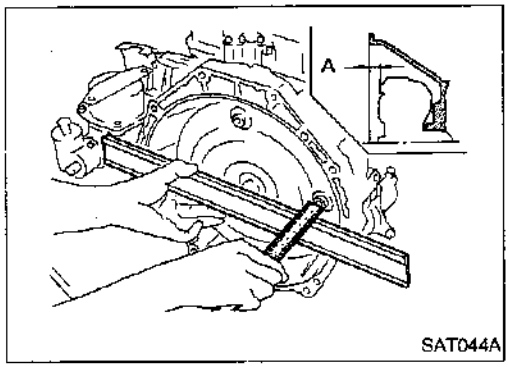
a. **Remove those bolts by turning crankshaft.**
b. **Immediately after transaxle is disconnected, inscribe matching marks on torque converter and drive plate so that they may be reinstalled in their original positions.**

- Plug up openings such as oil charging pipe, etc.


SAT037C

Installation

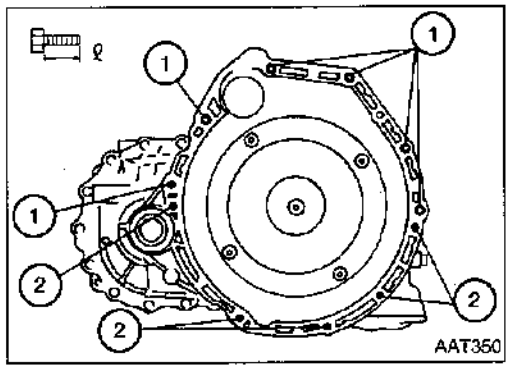
- Drive plate runout
  Maximum allowable runout:
  Refer to EM section ("Inspection", "CYLINDER BLOCK").
  If this runout is out of allowance, replace drive plate and ring gear.



SAT044A

- When connecting torque converter to transaxle, measure distance "A" to be certain that they are correctly assembled.
  Distance "A":
  14 mm (0.55 in) or more
- Install converter to drive plate.

After converter is installed, rotate crankshaft several turns and check to be sure that transaxle rotates freely without binding.

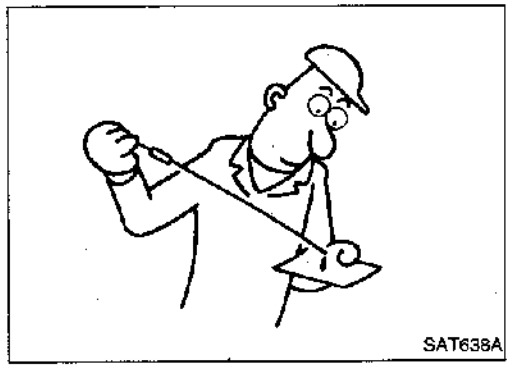


AAT350

- Tighten bolt securing transaxle.

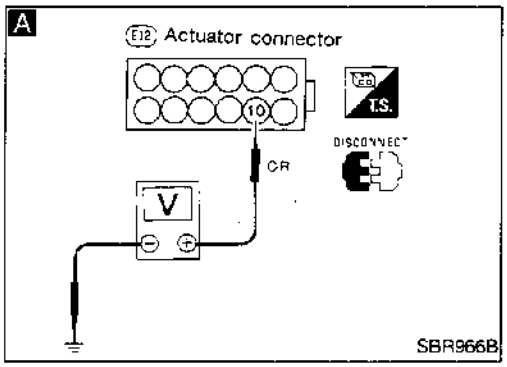
Bolt No.	Tightening torque N·m (kg-m, ft-lb)	ℓ mm (in)
1	39 - 49 (4.0 - 5.0, 29 - 36)	60 (2.36)
2	30 - 40 (3.1 - 4.1, 22 - 30)	25 (0.98)

- Reinstall any part removed.

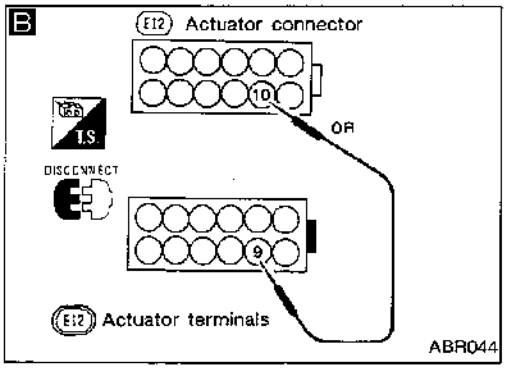

SAT638A

- Check fluid level in transaxle.
- Move selector lever through all positions to be sure that transaxle operates correctly.
  With parking brake applied, rotate engine at idling. Move selector lever through "N" to "D", to "2", to "1" and to "R" positions. A slight shock should be felt by hand gripping selector each time transaxle is shifted.
- Perform road test — See "Road Test". Refer to AT-23.

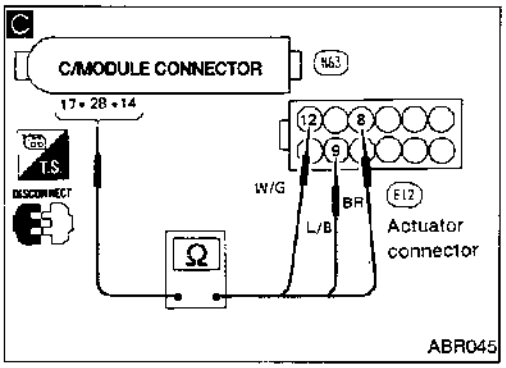
A



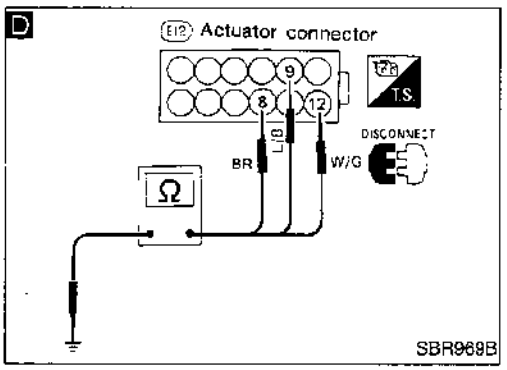
B



C



D



Diagnostic Procedure 4

MOTOR RELAY OR MOTOR

(Malfunction code No. 61)

A

MOTOR POWER SUPPLY CHECK

- Disconnect connector from actuator.
- Check voltage between terminal ⑩ and ground.

Battery positive voltage should exist.

NG → Repair harness and connectors.

OK ↓

MOTOR RELAY CHECK

See "ACTUATOR MOTOR RELAY" in "Electrical Components Inspection". Refer to BR-52.

NG → Replace motor relay.

OK ↓

B

MOTOR CHECK

Check motor by connecting terminal ⑩ for connector and terminal ⑨ for actuator terminals with a suitable harness.

Motor should operate.

Do not connect harness for more than 5 seconds.

NG →
- Check continuity between actuator and ground.
- Check and repair harness between actuator connector terminal ⑨ and control module connector terminal ⑭ for open circuit.

or

- Replace actuator.

OK ↓

C

CIRCUIT CHECK

- Disconnect connector from control module.
- Check continuity between control module connector terminals and actuator connector terminals.

Control module	Actuator
⑰	⑧
㉘	⑫
⑭	⑨

Continuity should exist.

NG → Repair harness and connectors.

OK ↓

D

Check continuity between actuator connector terminals ⑧, ⑫, ⑨ and ground.

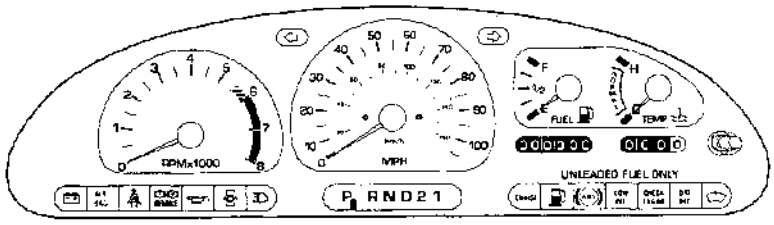
Continuity should not exist.

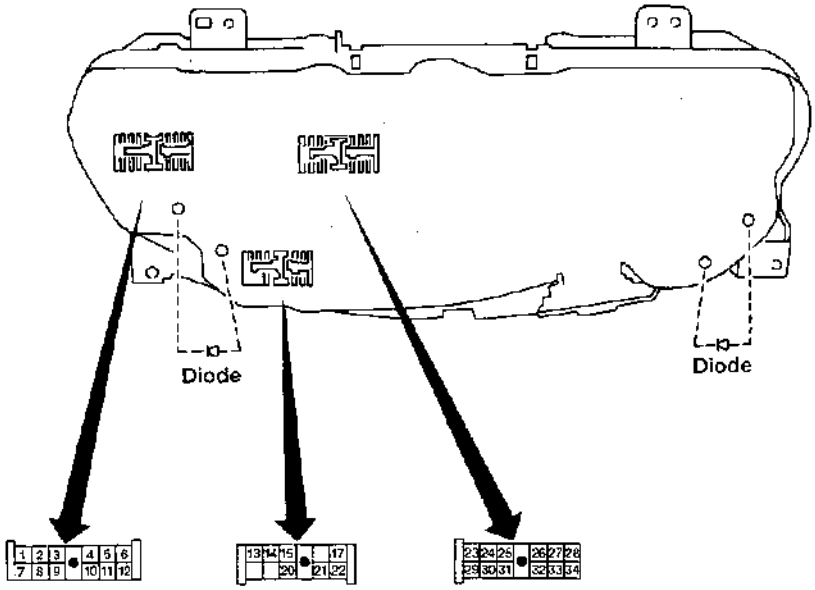
NG → Repair harness and connectors.

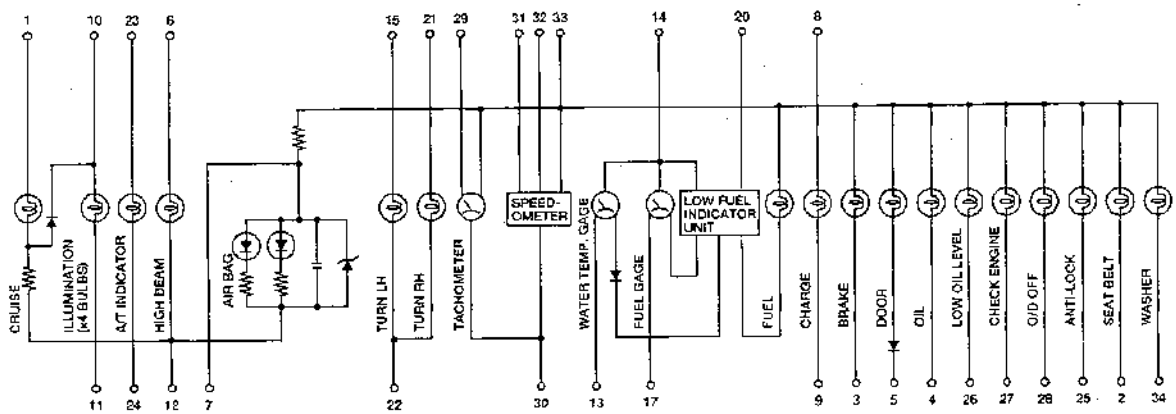
OK ↓

Replace control module.

Combination Meter

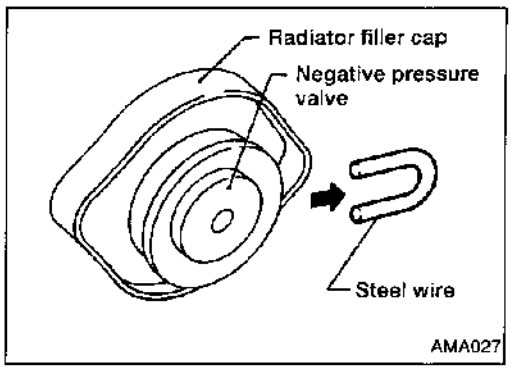






AEL354

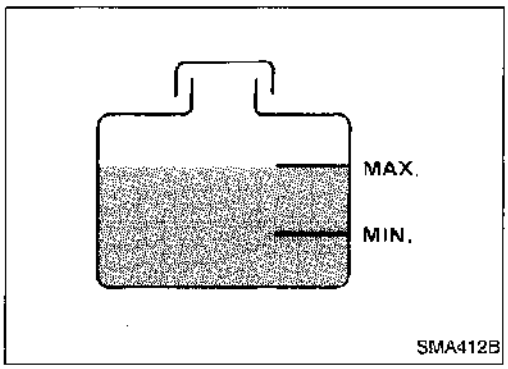
Changing Engine Coolant (Cont'd)



29. Stop engine.
30. Add coolant mixture to reservoir tank to MAX level line. If coolant overflow occurs from reservoir, decrease engine rpm or stop engine.
31. Cool down engine.
- Cool down with a fan to reduce time.

32. Remove radiator filler cap.
- **Refill radiator as necessary.**

33. Remove wire, reinstall radiator filler cap.
34. Remove hose from heater pipe, quickly reinstall cap and clamp.
35. Refill reservoir as necessary.
36. Reinstall coolant reservoir cap.
- Clean excess coolant from engine block.

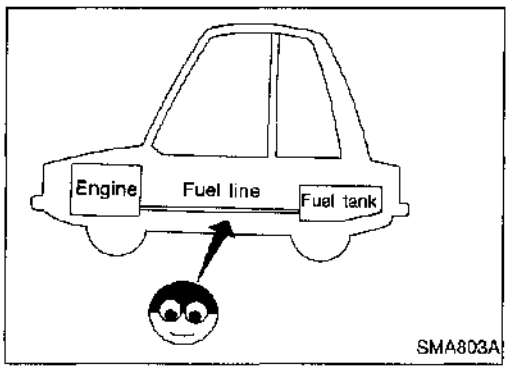


Coolant capacity (With reservoir tank):

Unit: ℓ (US qt, Imp qt)

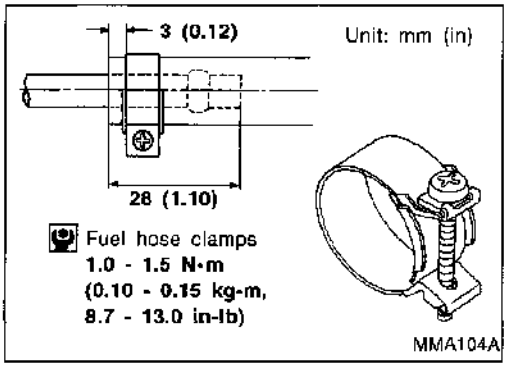
Without rear heater	10.7 (11-3/8, 9-3/8)
With rear heater	12.1 (12-3/4, 10-5/8)

[Reservoir tank capacity (for MAX level): 0.7 ℓ (3/4 US qt, 5/8 Imp qt)]



Checking Fuel Lines

Inspect fuel lines and tank for improper attachment, leaks, cracks, damage, chafing or deterioration.
If necessary, repair or replace.

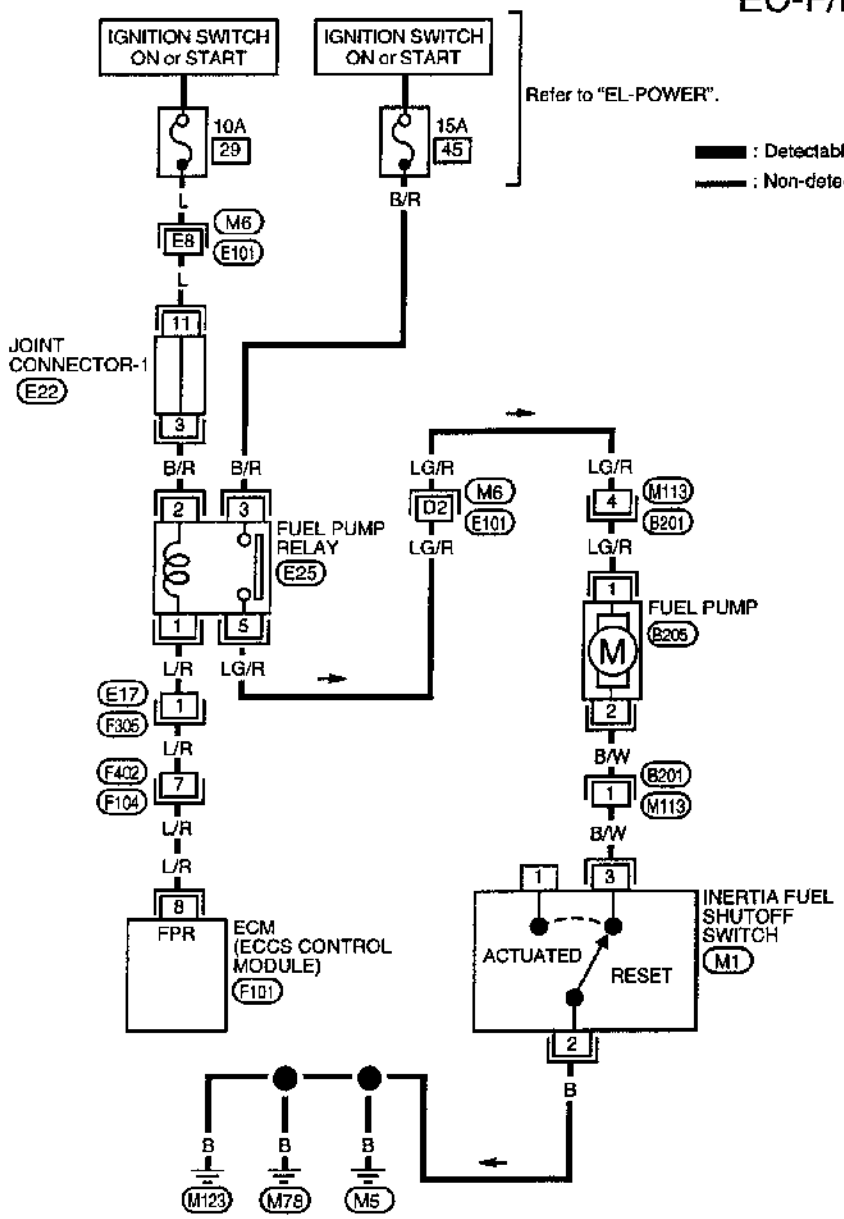


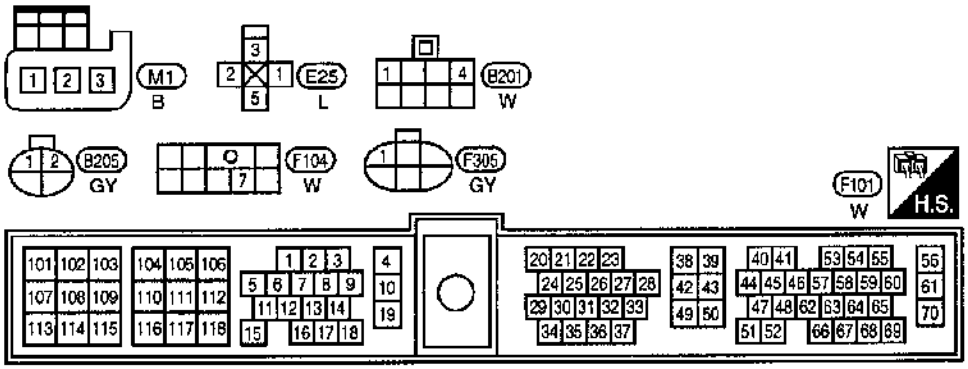
Changing Fuel Filter

CAUTION:
Tighten high-pressure rubber hose clamp so that clamp end is 3 mm (0.12 in) from hose end.
Ensure that screw does not contact adjacent parts.

Fuel Pump (Cont'd)

EC-F/PUMP-01

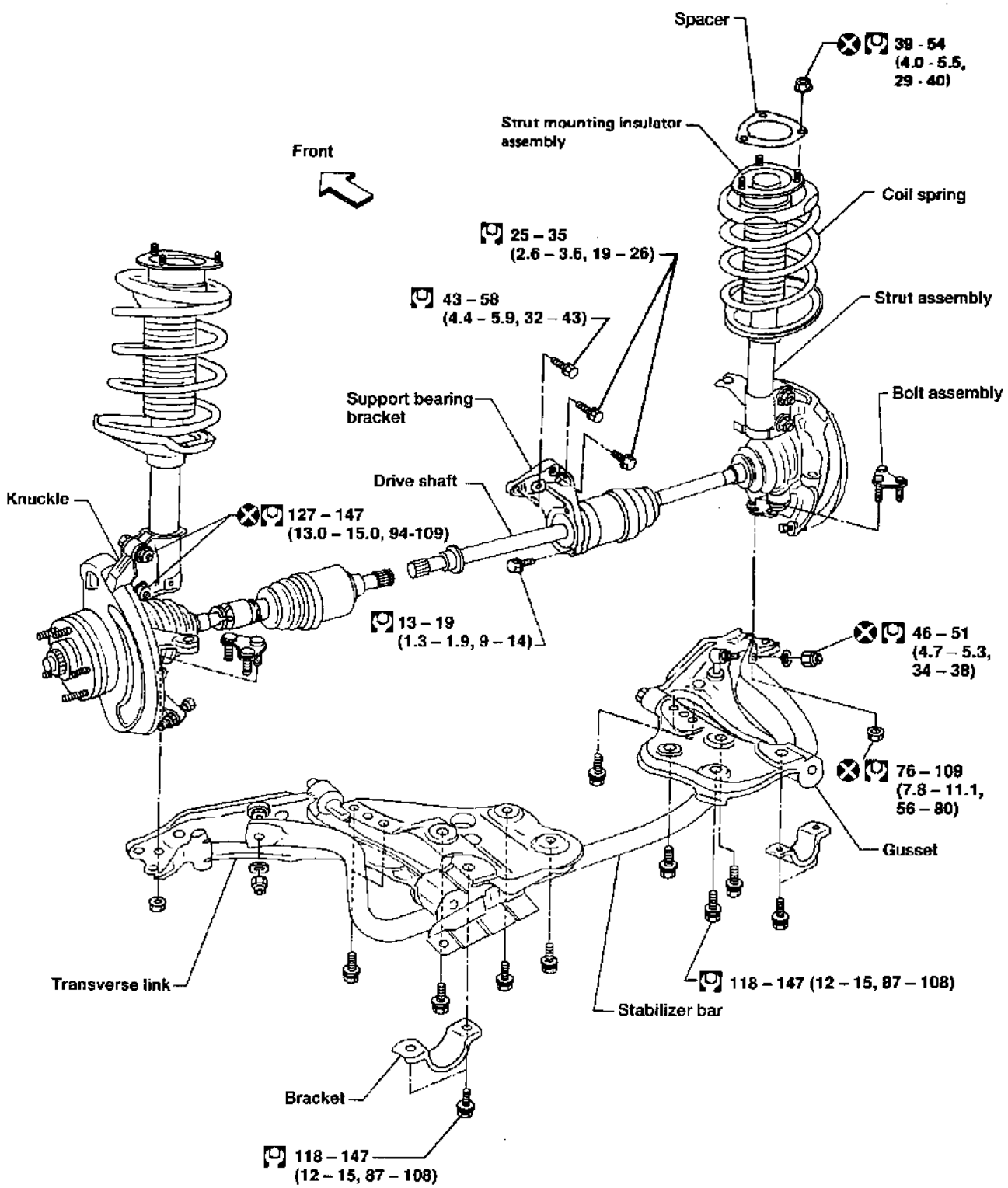




Refer to last page (Foldout page).
E22
M6, E101

AEC997

SEC. 391•400•401



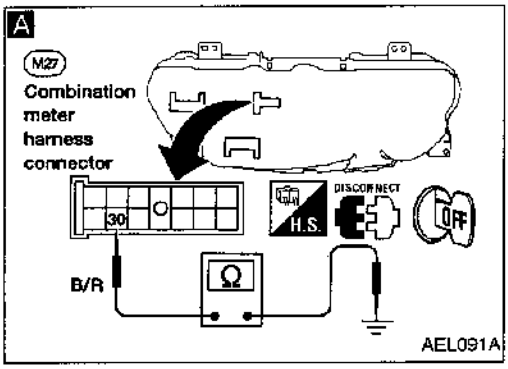
When installing rubber parts, final tightening must be carried out under unladen condition* with tires on ground.
*: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

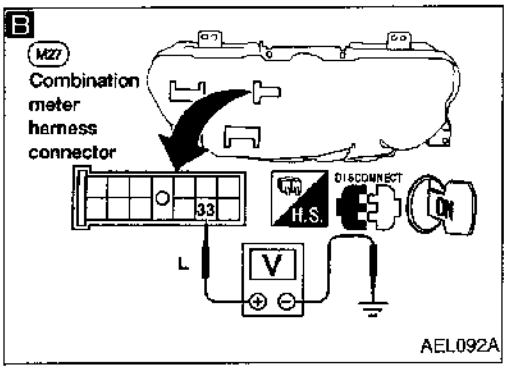
: N·m (kg-m, ft-lb)

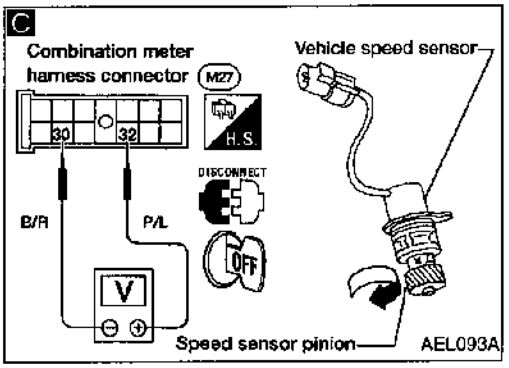
AFA090

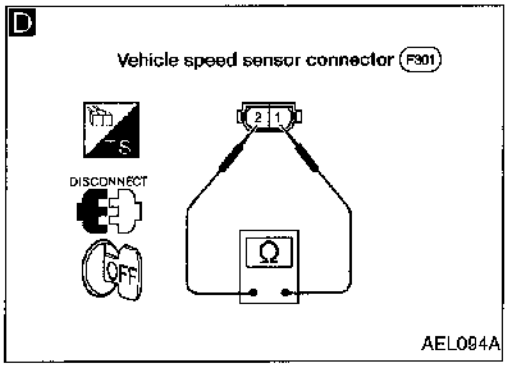
Inspection/Speedometer and Vehicle Speed Sensor

SYMPTOM: Speedometer stays at 0 km/h (0 MPH).









INSPECTION START

A

CHECK GROUND CIRCUIT OF SPEEDOMETER.
Check continuity between terminal (30) and body ground.
Continuity should exist.

NG → Repair harness or connector.

OK ↓

B

CHECK POWER SOURCE.
1. Turn ignition switch ON.
2. Check voltage between terminal (33) and body ground.
Battery positive voltage should exist.

NG → Check the following items:
- Harness continuity between battery terminal and combination meter
- Ignition relay
- Fusible link and fuse
- Ignition switch.

OK ↓

C

CHECK VEHICLE SPEED SENSOR OUTPUT.
1. Remove vehicle speed sensor from transaxle. Leave vehicle speed sensor harness connector connected.
2. Check voltage between terminals (30) and (32) while quickly turning vehicle speed sensor pinion.
Voltage: Approx. 0.5V

OK → Replace speedometer.

NG ↓

D

CHECK VEHICLE SPEED SENSOR.
Check resistance between terminals (1) and (2).
Resistance: Approx. 200Ω.

NG → Replace vehicle speed sensor.

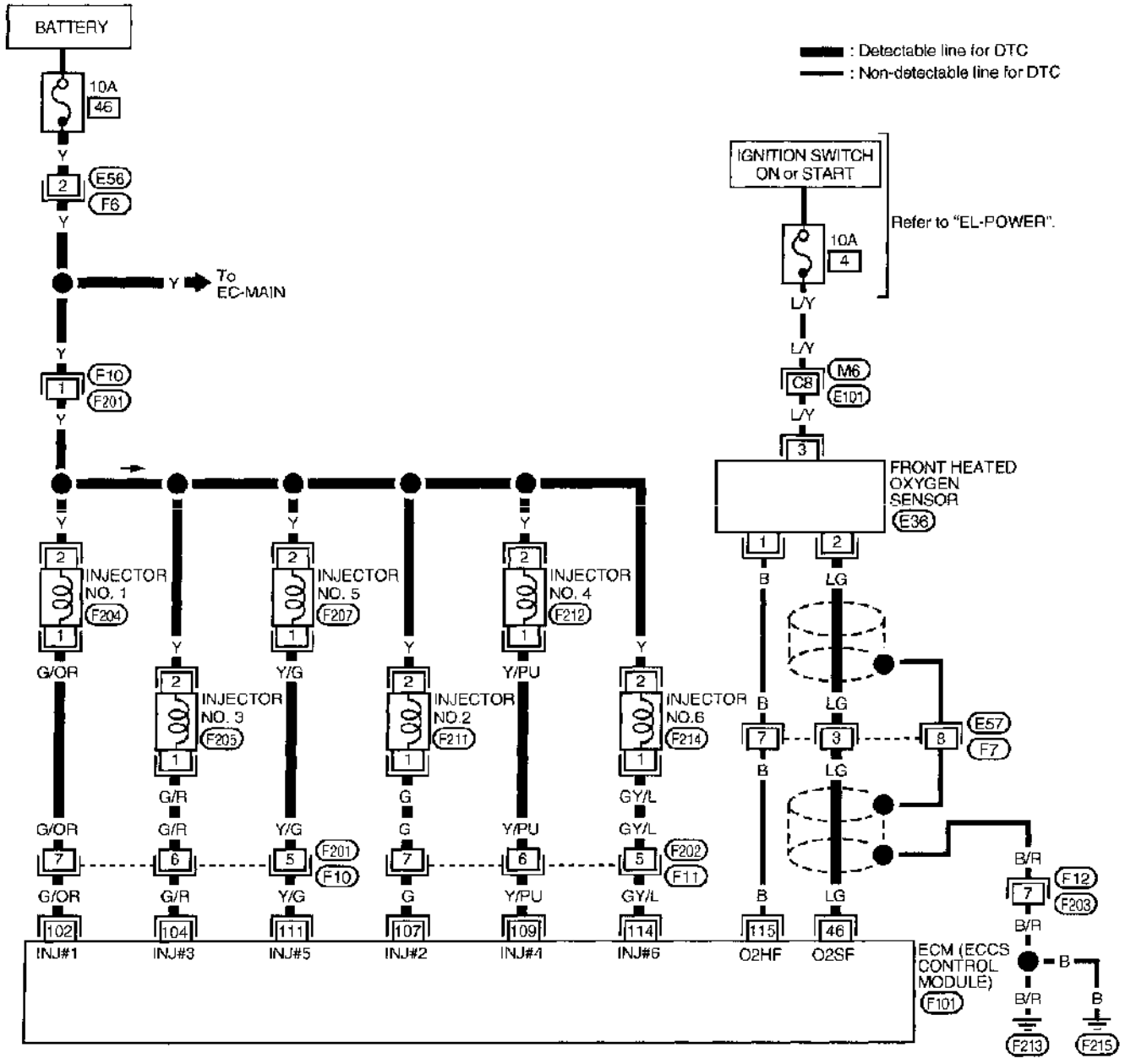
OK ↓

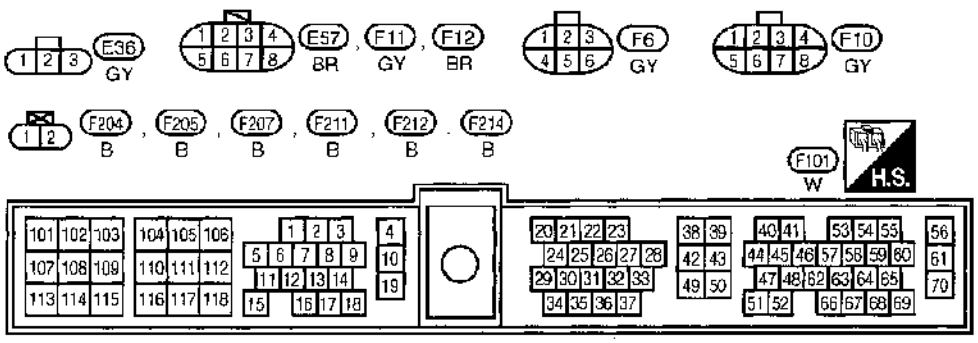
Repair harness or connector between speedometer and vehicle speed sensor.

INSPECTION END

Fuel Injection System Function (Lean side) (Cont'd)

EC-FUEL-01





Refer to last page (Foldout page).
M6, E101

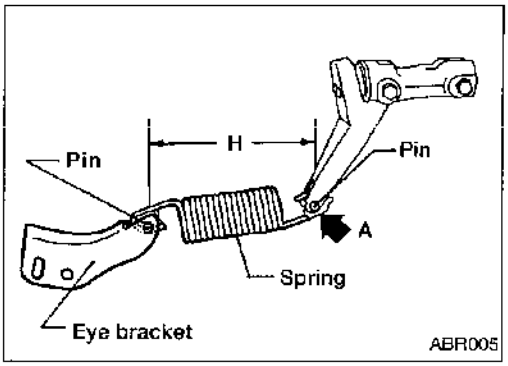
AEC182A

Dual Load Sensing Valve

INSPECTION

CAUTION:

- **Carefully monitor brake fluid level at master cylinder.**
- **Use new brake fluid "DOT 3".**
- **Be careful not to splash brake fluid on painted areas; it may cause paint damage. If brake fluid is splashed on painted areas, wash it away with water immediately.**
- **Depress pedal slowly when raising front brake pressure.**
- **Check rear brake pressure 2 seconds after front brake pressure reaches specified value.**
- **For models with ABS disconnect harness connectors from ABS actuator relay before checking.**



1. Check length "H" in unladen* condition.
   *: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

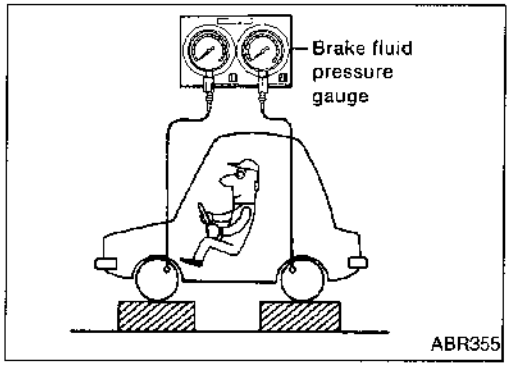
a. Have one person sit on the rear end. Then have the person slowly get off the vehicle. This is necessary to stabilize suspension deflection.

b. Measure length "H".

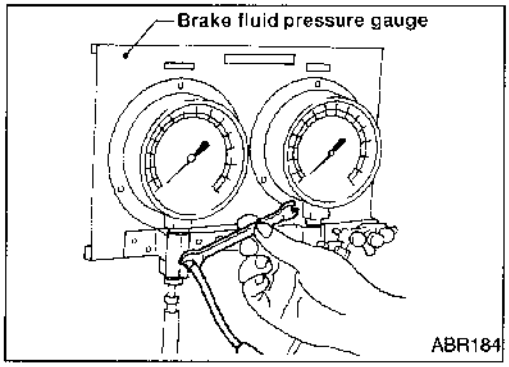
Length "H":

Approx. 160.3 ± 1.5 mm (6.311 ± 0.059 in)

- Adjust spring length by moving eye bracket while pushing lever toward **A.**



2. Connect tool to air bleeders of front and rear brakes on either LH or RH side.



3. Bleed air from Tool.

System Description (Cont'd)

Power and ground are supplied to the front power window motor LH in the same manner as outlined in "Window down".

FRONT DOOR RH

NOTE:

Figures in parentheses ( ) refer to terminal Nos. arranged in order when the UP or DOWN section of power window switch is pressed.

Operation by main switch

Power is supplied:
- from main power window and door lock/unlock switch terminal (⑬, ⑭)
- to front power window switch RH terminal (④, ③).

Subsequent operations are the same as those outlined under "Operation by front power window switch RH".

Operation by front power window switch RH Power is supplied:

- from front power window switch RH terminal ⑥
- through front power window switch RH terminal (②, ①)
- to front power window motor RH terminal (②, ①).

Ground is supplied:
- to front power window motor RH terminal (①, ②)
- through front power window switch RH terminal (①, ②)
- to front power window switch RH terminal (④, ③)
- through main power window and door lock/unlock switch terminal (⑬, ⑭)
- to main power window and door lock/unlock switch terminals ⑤ and ⑥
- through body grounds (M5), (M78) and (M123).

Lock Feature

If the main power window and door lock/unlock switch window lockout switch is in the LOCK position, the front power window switch RH ground circuit is interrupted. When this happens, the front power window motor RH cannot be operated by the front power window switch RH or the main power window and door lock/unlock switch.

REAR POWER VENT WINDOW LH

When the rear power vent window switch LEFT VENT is pressed in the OPEN position, power is supplied:
- through rear power vent window switch terminal ⑥
- to rear power vent window motor LH terminal ①.

Ground is supplied:
- through rear power vent window switch terminal ⑤
- to rear power vent window motor LH terminal ②.

With power and ground supplied, the rear power vent window motor LH will open the vent window until the switch is released.

When the rear power vent window switch LEFT VENT is pressed in the CLOSE position, power is supplied:
- through rear power vent window switch terminal ⑤
- to rear power vent window motor LH terminal ②.

Ground is supplied:
- through rear power vent window switch terminal ⑥
- to rear power vent window motor LH terminal ①.

With power and ground supplied, the rear power vent window motor will close the vent window until the switch is released.

REAR POWER VENT WINDOW RH

When the rear power vent window switch RIGHT VENT is pressed in the OPEN position, power is supplied:
- through rear power vent window switch terminal ②
- to rear power vent window motor RH terminal ①.

ECM Terminals and Reference Value (Cont'd)

TER-MINAL NO.	WIRE COLOR	ITEM	CONDITION	DATA (DC Voltage)
4	W/G	ECCS relay (Self-shut-off)	Engine is running. Ignition switch "OFF" └ For a few seconds after turning ignition switch "OFF"	0 - 1V
			Ignition switch "OFF" └ A few seconds passed after turning ignition switch "OFF"	BATTERY VOLTAGE (11 - 14V)
5	G/B	EVAP canister purge volume control valve	Engine is running. └ Idle speed	0 - 0.4V
6	L			
7	G/B	A/T check signal	Ignition switch "ON" Engine is running.	0 - 3.0V
8	L/R	Fuel pump relay	Ignition switch "ON" └ For 5 seconds after turning ignition switch "ON" Engine is running.	0.7 - 1.1V
			Ignition switch "ON" └ More than 5 seconds after turning ignition switch "ON"	BATTERY VOLTAGE (11 - 14V)
9	L/B	Air conditioner pressure switch	Ignition switch "ON".	Approximately 5V
10	B	ECCS ground	Engine is running. └ Idle speed	Engine ground
13	BR/W	Cooling fan relay (High)	Engine is running. └ Cooling fan is not operating.	BATTERY VOLTAGE (11 - 14V)
			Engine is running. └ Cooling fan (High) is operating.	0.7 - 1.1V
14	L/OR	Cooling fan relay (Low)	Engine is running. └ Cooling fan is not operating.	BATTERY VOLTAGE (11 - 14V)
			Engine is running. └ Cooling fan (Low) is operating.	0.3 - 0.8V
15	LG	Air conditioner relay	Engine is running. └ Both A/C switch and blower switch are "ON"*	0 - 2V
			Engine is running. └ A/C switch is "OFF"	BATTERY VOLTAGE (11 - 14V)
16	G/W	EVAP canister purge volume control valve	Engine is running. └ Idle speed	BATTERY VOLTAGE (11 - 14V)
17	R/G			
18	PU	Malfunction indicator lamp	Ignition switch "ON"	Approximately 0.7V
			Engine is running. └ Idle speed	BATTERY VOLTAGE (11 - 14V)

*: Any mode except "OFF", ambient air temperature above 10°C (50°F).