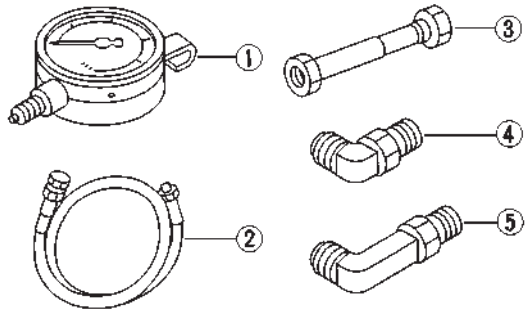
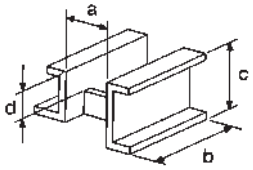
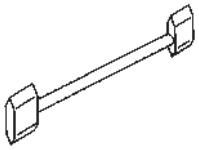
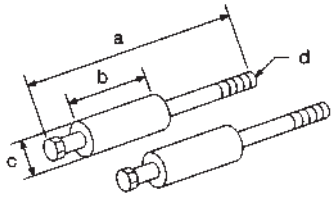
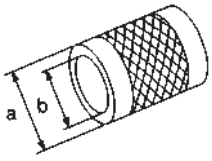
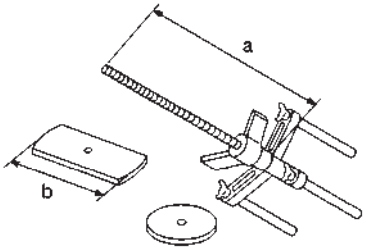
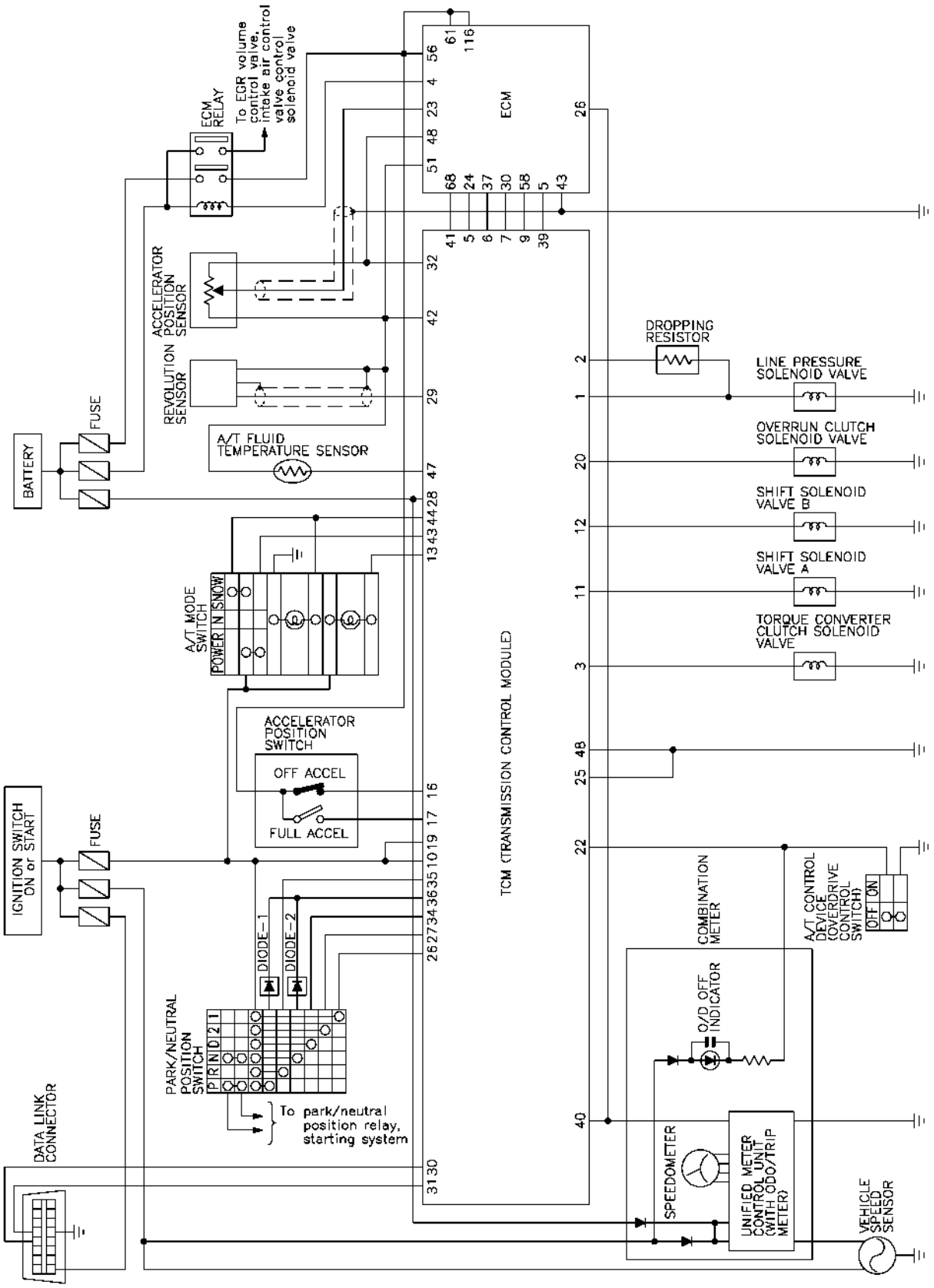
Special Service Tools

Tool number Tool name	Description	
ST2505S001 Oil pressure gauge set ① ST25051001 Oil pressure gauge ② ST25052000 Hose ③ ST25053000 Joint pipe ④ ST25054000 Adapter ⑤ ST25055000 Adapter	 NT097	Measuring line pressure
ST07870000 Transmission case stand	 NT421	Disassembling and assembling A/T **a: 182 mm (7.17 in)** **b: 282 mm (11.10 in)** **c: 230 mm (9.06 in)** **d: 100 mm (3.94 in)**
KV31102100 Torque converter one-way clutch check tool	 NT098	Checking one-way clutch in torque converter
ST25850000 Sliding hammer	 NT422	Removing oil pump assembly **a: 179 mm (7.05 in)** **b: 70 mm (2.76 in)** **c: 40 mm (1.57 in) dia.** **d: M12 x 1.75P**
ST33200000 Drift	 NT091	Installing oil pump housing oil seal Installing rear oil seal **a: 60 mm (2.36 in) dia.** **b: 44.5 mm (1.752 in) dia.**
KV31102400 Clutch spring compressor	 NT423	Removing and installing clutch return springs **a: 320 mm (12.60 in)** **b: 174 mm (6.85 in)**

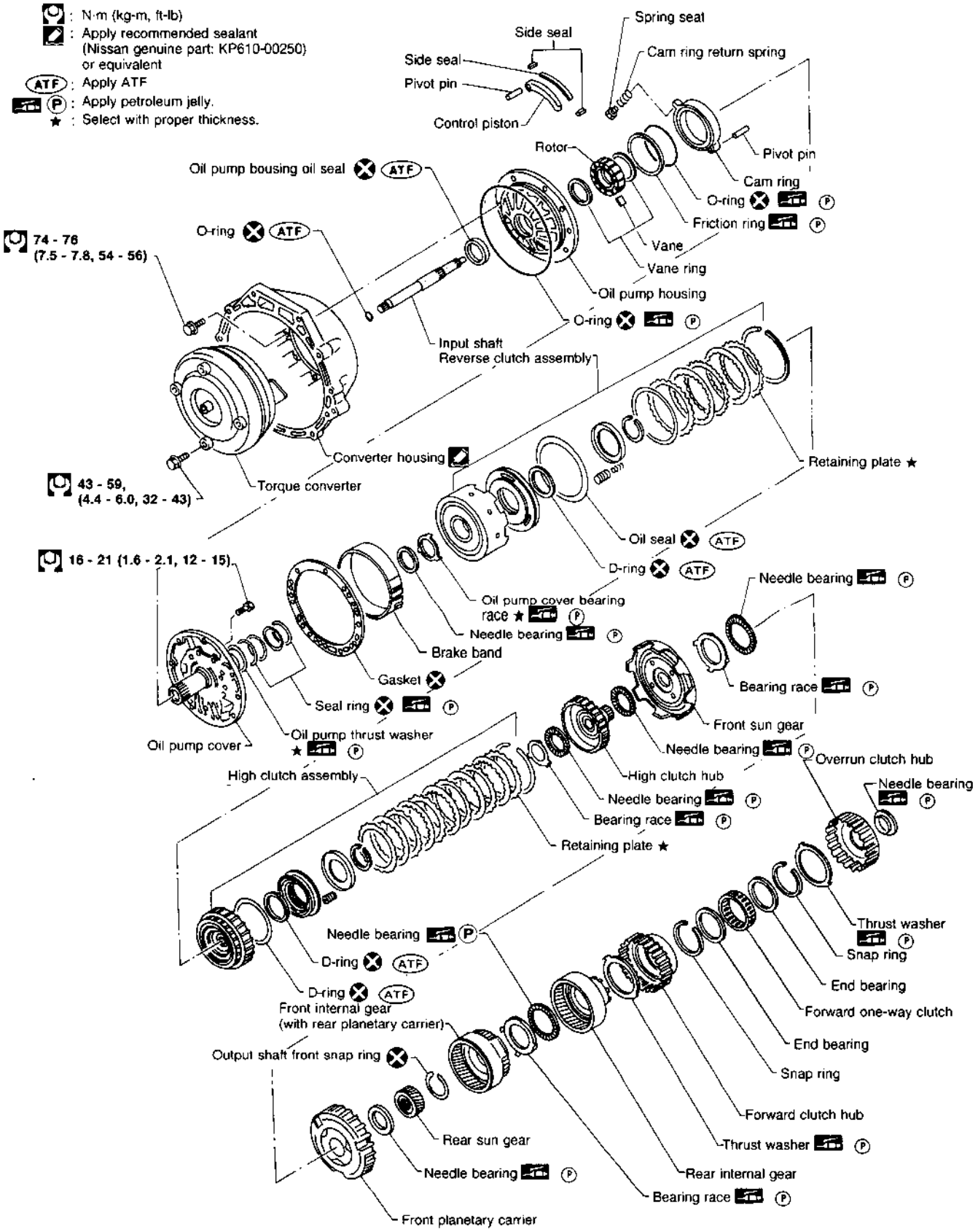
Wiring Diagram — A/T —



YAT260

SEC. 311•313•315

: N·m (kg-m, ft-lb)
: Apply recommended sealant (Nissan genuine part: KP610-00250) or equivalent
ATF : Apply ATF
P : Apply petroleum jelly.
★ : Select with proper thickness.



NAT223

Description

Intermittent incidents (I/I) may occur. In many cases, the problem resolves itself (the part or circuit function returns to normal without intervention). It is important to realize that the symptoms described in the customer's complaint often do not recur on DTC visits. Realize also that the most frequent cause of I/I occurrences is poor electrical connections. Because of this, the conditions under which the incident occurred may not be clear. Therefore, circuit checks made as part of the standard diagnostic procedure may not indicate the specific problem area.

COMMON I/I REPORT SITUATIONS

STEP in Work Flow	Situation
II	The CONSULT-II is used. The SELF-DIAG RESULTS screen shows time data other than "0".
III	The symptom described by the customer does not recur.
IV	DTC does not appear during the DTC Confirmation Procedure.
VI	The Diagnostic Procedure for XXXX does not indicate the problem area.

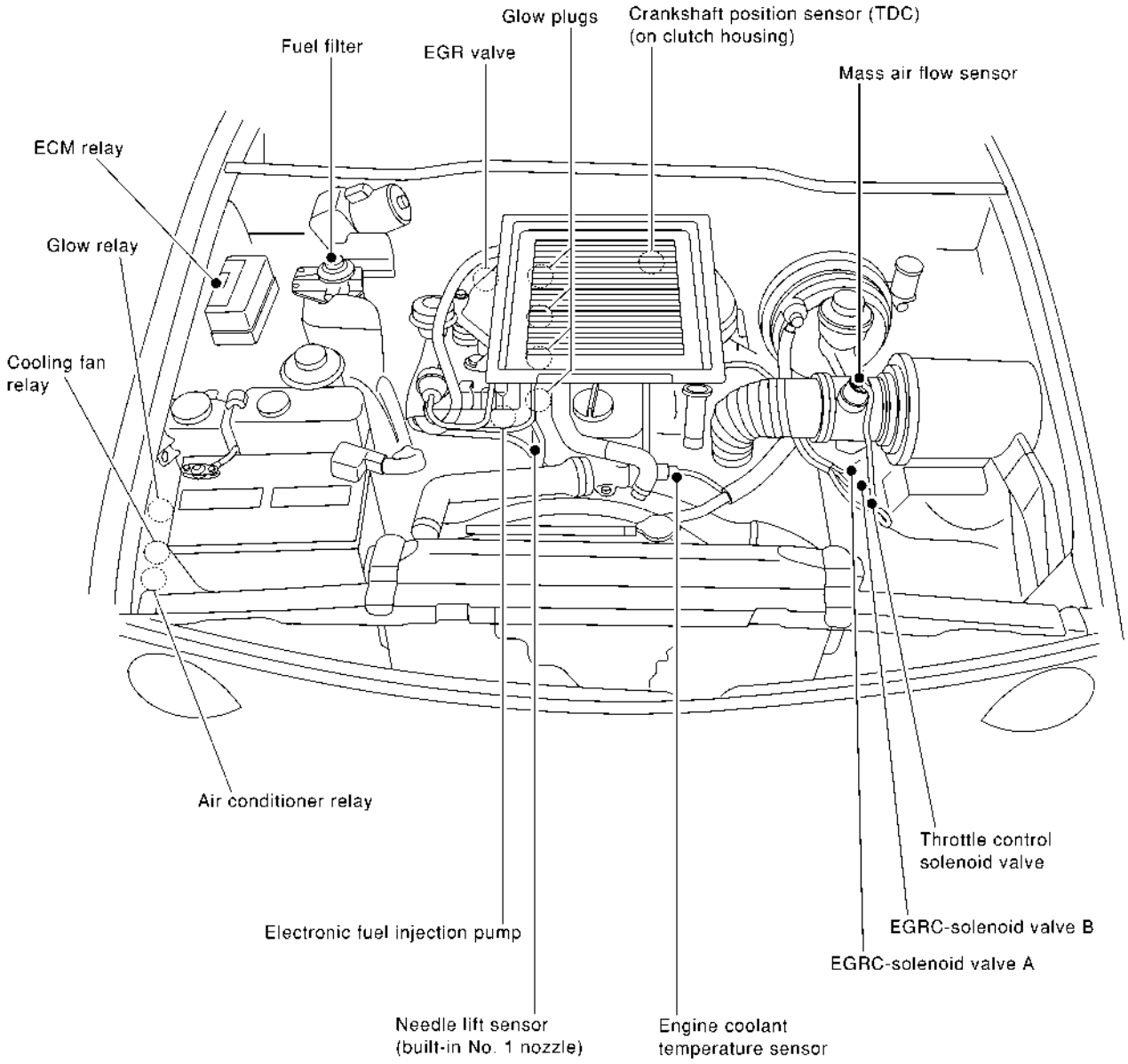
Diagnostic Procedure

1	**INSPECTION START**
Erase DTCs. Refer to "HOW TO ERASE DTC", EC-33.	
▶	GO TO 2.

2	**CHECK GROUND TERMINALS**
Check ground terminals for corroding or loose connection. Refer to GI section ("GROUND INSPECTION", "Circuit Inspection").	
OK or NG	
OK ▶	GO TO 3.
NG ▶	Repair or replace.

3	**SEARCH FOR ELECTRICAL INCIDENT**
Perform GI section, "Incident Simulation Tests".	
OK or NG	
OK ▶	**INSPECTION END**
NG ▶	Repair or replace.

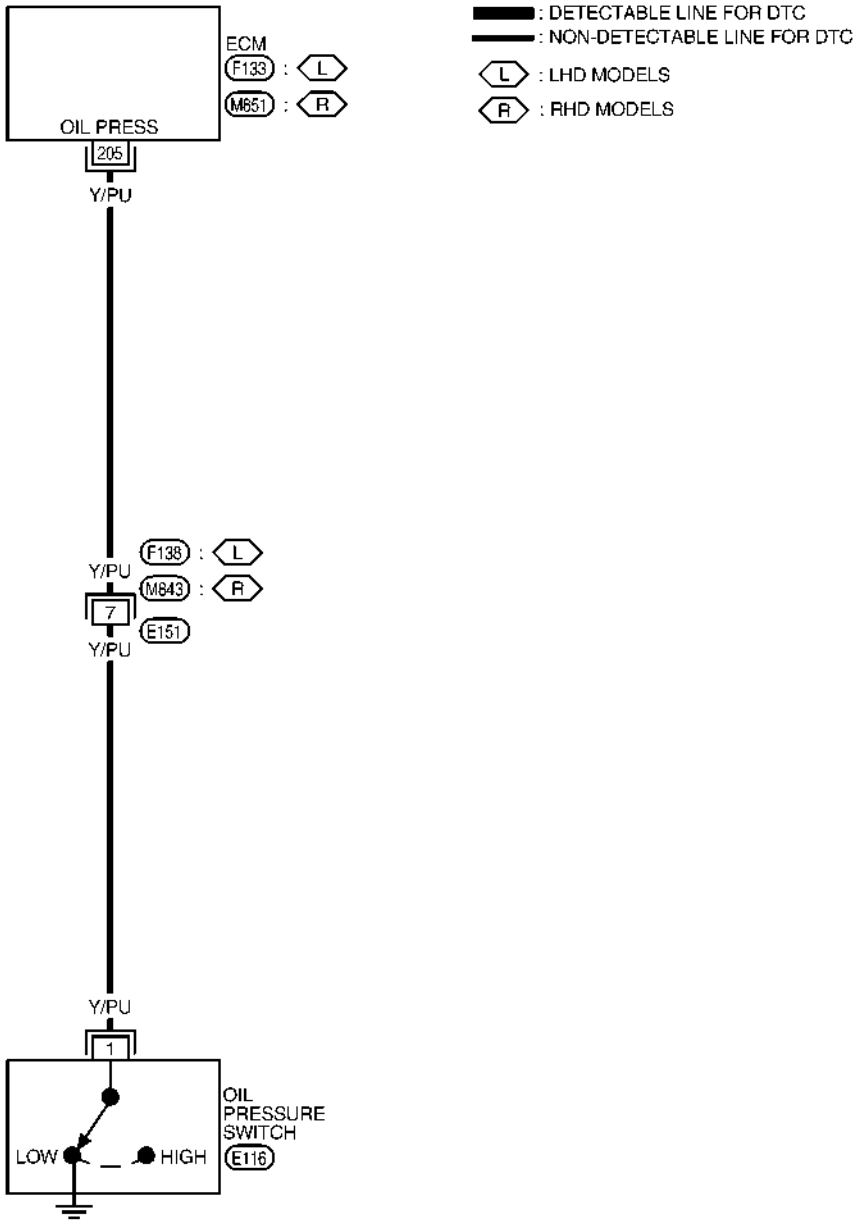
Engine Control Component Parts Location



YEC234A

Wiring Diagram

EC-OILPSW-01

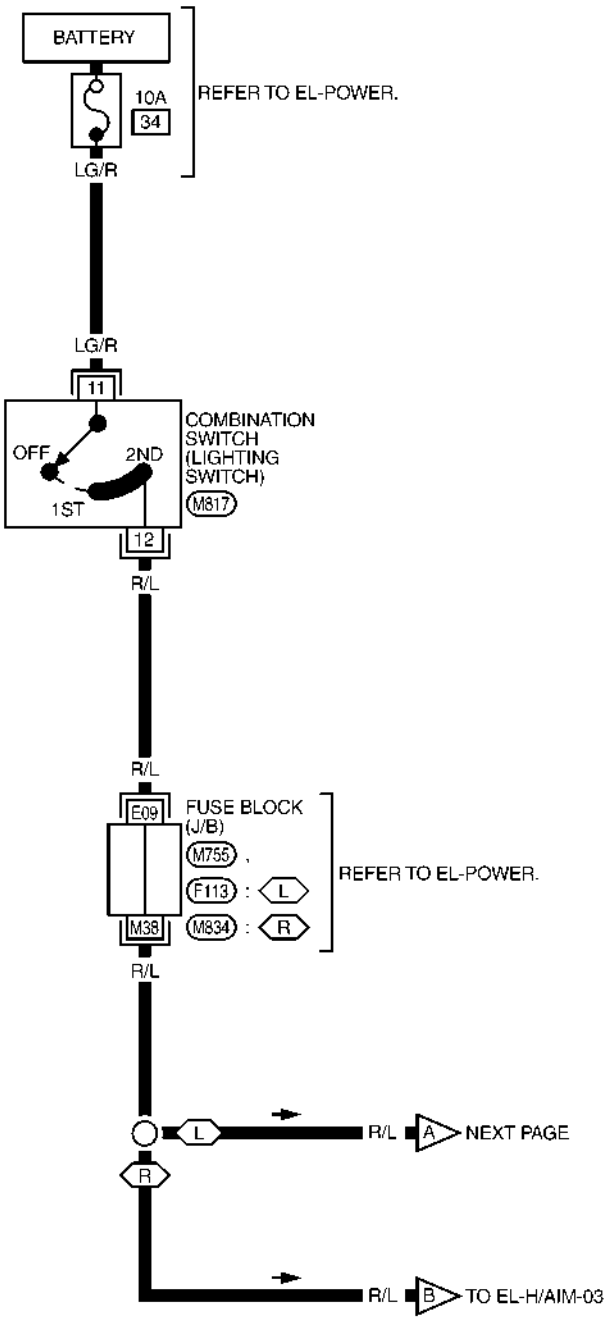


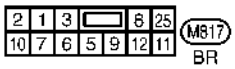
YEC162A

Wiring Diagram — H/AIM —

EL-H/AIM-01

L : LHD MODELS
R : RHD MODELS



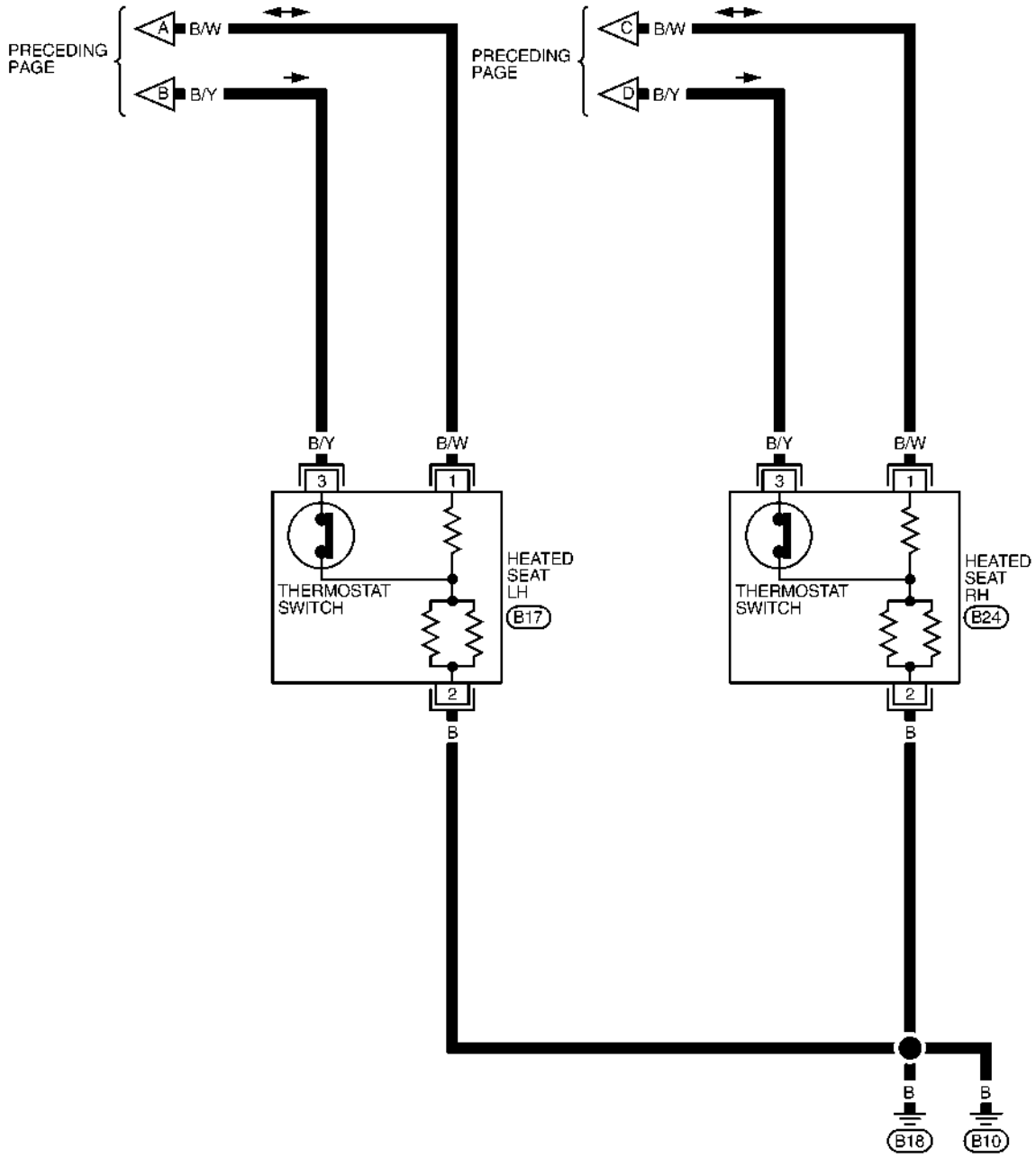


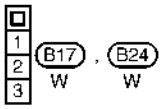
REFER TO THE FOLLOWING.
M755 , M834 , F113
-FUSE BLOCK-
JUNCTION BOX (J/B)

YEL068D

Wiring Diagram — HSEAT — (Cont'd)

EL-HSEAT-02

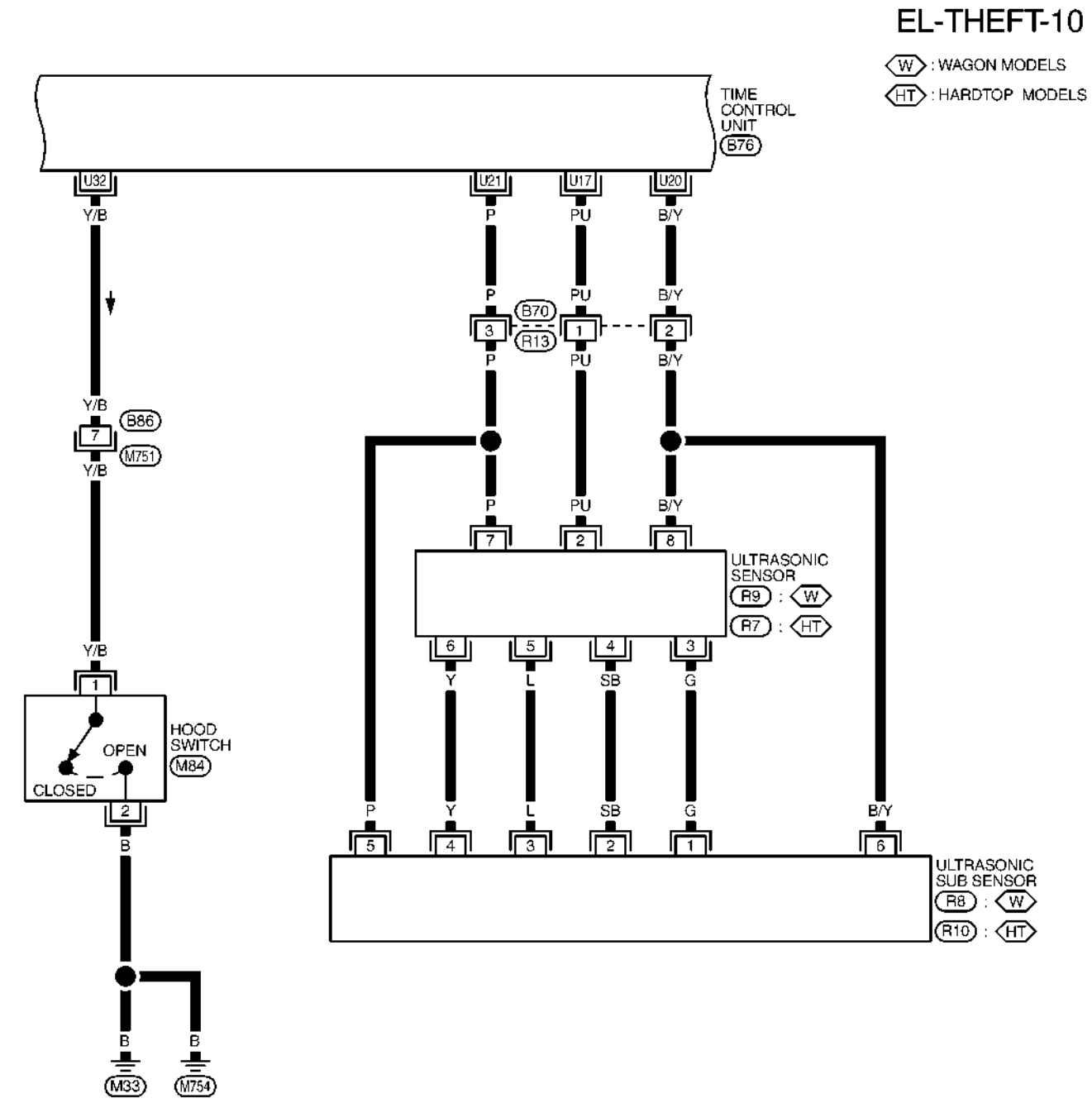


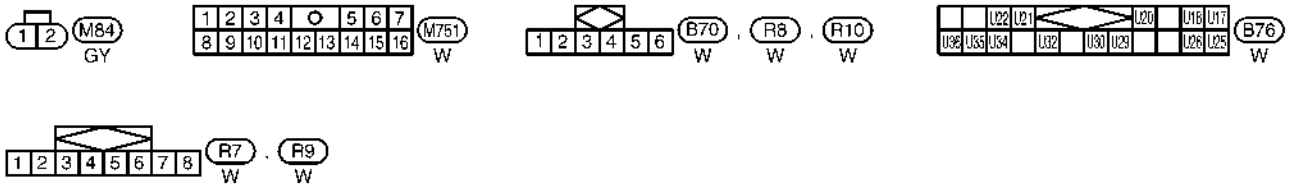


YEL134D

Wiring Diagram — THEFT — (Cont'd)

RHD MODELS





YEL180D

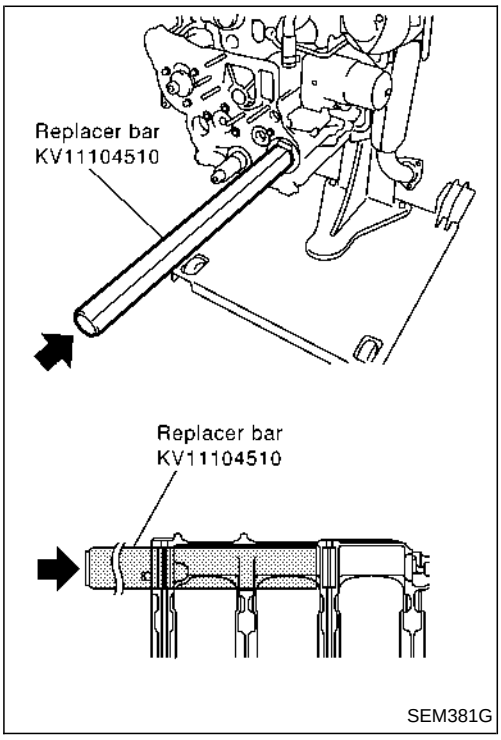
Body Harness (Cont'd)

B4	B5	BR/1	: Front door switch LH
C4	B9	BR/1	: Rear door switch LH
E4	B10	–	: Body ground
D4	B11	W/2	: To T1
E3	B14	W/2	: Stop lamp LH
E4	B15	B/6	: To C2
B3	B17	W/3	: Heated seat LH (With seat heater)
B3	B18	–	: Body ground
B3	B19	L/4	: Heated seat switch LH (With seat heater)
C2	B22	W/4	: Heated seat switch RH (With seat heater)
D2	B23	B/1	: Parking brake switch
D2	B24	W/3	: Heated seat RH (With seat heater)
E2	B25	BR/1	: Front door switch RH
E3	B29	BR/1	: Rear door switch RH
G3	B30	W/2	: Stop lamp RH
G3	B31	BR/1	: Back door switch
F3	B50	B/1	: Theft warning horn (With theft warning system)
D3	B57	BR/2	: Rear wheel sensor RH (With ABS)
D4	B58	BR/2	: Rear wheel sensor LH (With ABS)
B3	B59	BR/2	: G sensor (With ABS)
B4	B60	GY/2	: G sensor (With ABS)
C2	B63	B/4	: A/T control device (Overdrive control switch) (A/T models)
E4	B64	B/8	: To C10
D65	B65	B/2	: Front power socket
G4	B66	B/2	: Rear power socket
C3	B89	W/10	: To D57 (With super lock)
		W/10	: To D59 (Without super lock)
E2	B90	W/10	: To D77 (With super lock)
		W/10	: To D79 (Without super lock)
E4	B94	W/8	: To T11
B4	B95	Y/2	: Front LH seat belt pre-tensioner
C4	B96	–	: Body ground (With side air bag)
C4	B97	Y/2	: Satellite sensor LH (With side air bag)
A4	B98	–/2	: Front side air bag module LH (With side air bag)
A3	B99	–/1	: Front side air bag module LH (With side air bag)
C3	B100	Y/12	: Air bag diagnosis sensor unit
B1, B2	B101	Y/6	: Combination switch (Spiral cable)
C1, A2	B102	Y/2	: Front passenger air bag module
B2	B103	Y/6	: To M836 (RHD models)
C2	B104	Y/6	: To F117 (LHD models)
D3	B105	Y/12	: Air bag diagnosis sensor unit
D3	B106	Y/20	: Air bag diagnosis sensor unit
D3	B107	–/1	: Front side air bag module RH (With side air bag)
C3	B108	–/2	: Front side air bag module RH (With side air bag)
D2	B109	–	: Body ground (With side air bag)
D2	B110	Y/2	: Satellite sensor RH (With side air bag)
D2	B111	Y/2	: Front RH seat belt pre-tensioner
F3	B112	B/1	: Theft warning horn (With theft warning system)

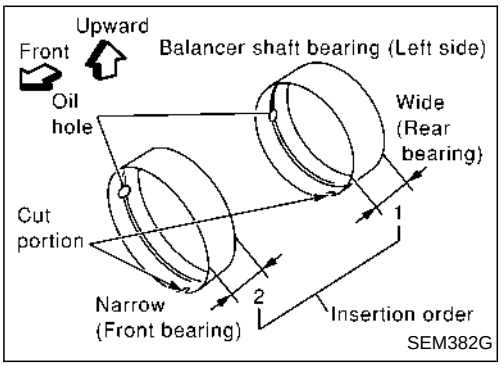
★ : Be sure to connect and lock the connectors securely after repair work. Failure to do so may cause the ECM to have diagnostic trouble codes. **Do not disconnect these connectors except in the case of working according to WORK FLOW of TROUBLE DIAGNOSES in EC and AT sections.**

YEL283D

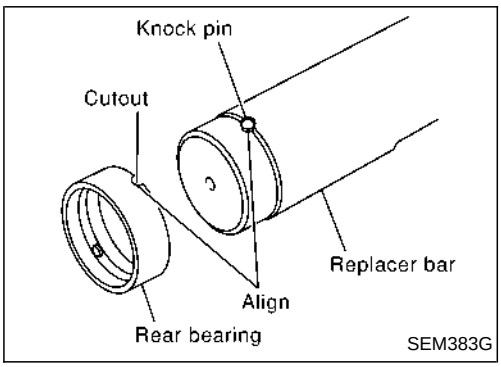
Inspection (Cont'd)



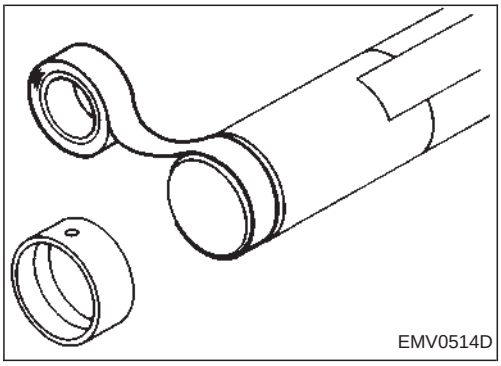
2. Using Tool, remove balancer shaft rear bearing from engine.



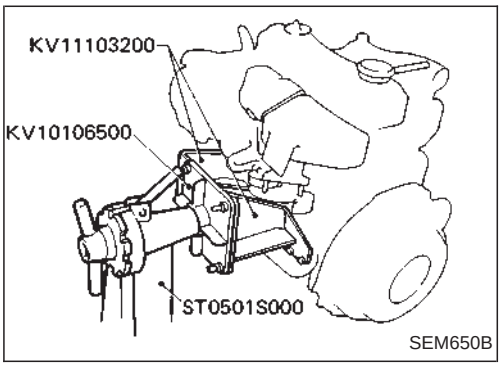
3. Install the rear and front balancer shaft bearings.
- Install from the cylinder block hole to the rear journal and then the front journal.
- Install the groove of the balancer shaft bearing facing the front and the under right direction.
  (Align the guide plate and bar knock pin and then force in the balancer shaft bearing.)



- Align the balancer shaft bearing groove with the knock pin of the bar (SST) and install the balancer shaft bearing.)



- On rear journals, so the bearing does not get out of position, wrap tape around the bar.

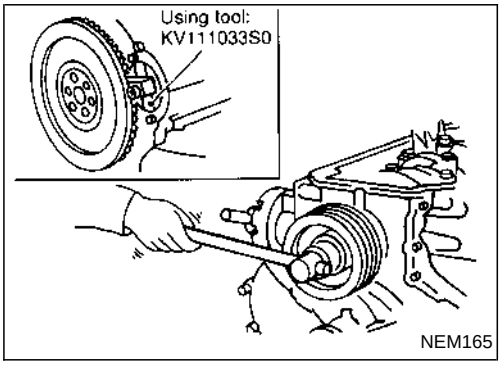


SEM650B

Disassembly

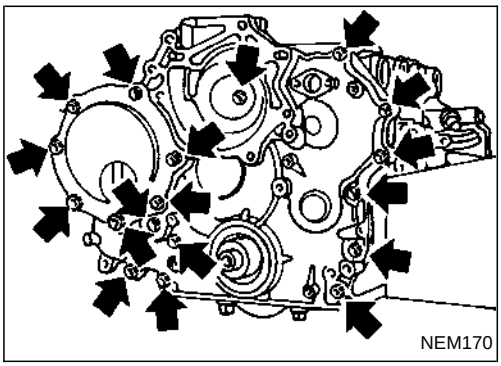
PISTON AND CRANKSHAFT

1. Remove oil filter.
2. Place engine on work stand.
3. Drain coolant and oil.
4. Remove drive belts.
5. Remove cylinder head. Refer to “CYLINDER HEAD”.
6. Remove oil pan.

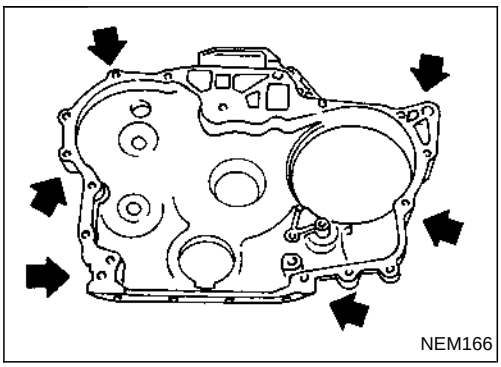


NEM165

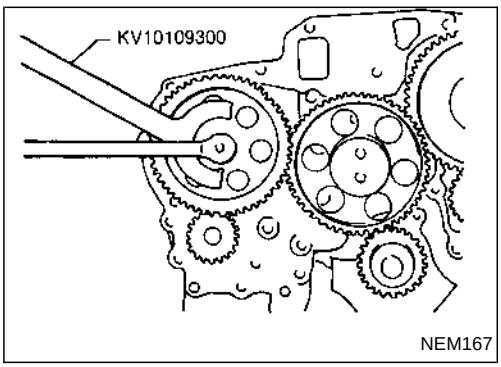
7. Remove crank pulley and timing gear plate cover.


NEM170

8. Remove water pump.
9. Remove timing gear case.


NEM166

If the timing case is hard to remove due to liquid gasket, pry it off with a suitable tool at the cutout section.

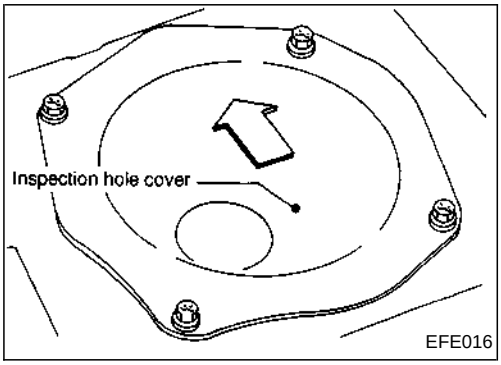


NEM167

10. Remove injection pump gear nut.

WARNING:
When replacing fuel line parts, be sure to observe the following:
- **Display a "CAUTION: INFLAMMABLE" sign in workshop.**
- **Be sure to furnish workshop with a CO_2 fire extinguisher service.**
- **Do not smoke while servicing fuel system. Keep open flames and sparks away from work area.**
- **Be sure to disconnect battery ground cable before conducting operations.**
- **Pour drained fuel into an explosion-proof container, then ensure container lid is installed securely.**

CAUTION:
- **For ECM models, release fuel pressure from fuel line. Refer to EC section ("Fuel Pressure Release", "BASIC SERVICE PROCEDURE").**
- **Do not disconnect any fuel line unless absolutely necessary.**
- **Plug hose and pipe openings to prevent entry of dust or dirt.**
- **Always replace top lid seal and hose clamps with new ones.**
- **Do not kink or twist hoses and tubes during installation.**
- **Do not tighten hose clamps excessively because this could cause damage to the hose.**
- **Ensure fuel check valve is installed in the correct orientation.**
- **Refer to EC section ("FUEL CHECK VALVE", "EVAPORATIVE EMISSION SYSTEM").**
- **After installation, run engine and check for fuel leaks at connections.**

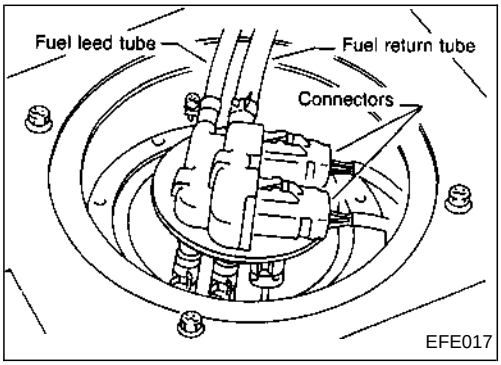


Fuel Pump and Gauge

REMOVAL

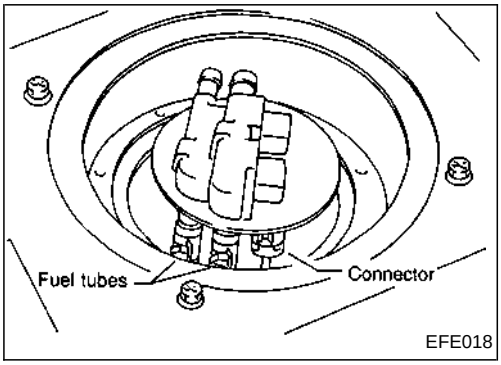
Petrol engine

1. Release fuel pressure from fuel line.
   Refer to EC section ("Fuel Pressure Release", "BASIC SERVICE PROCEDURE").
2. Remove inspection hole cover located under the luggage compartment carpet.



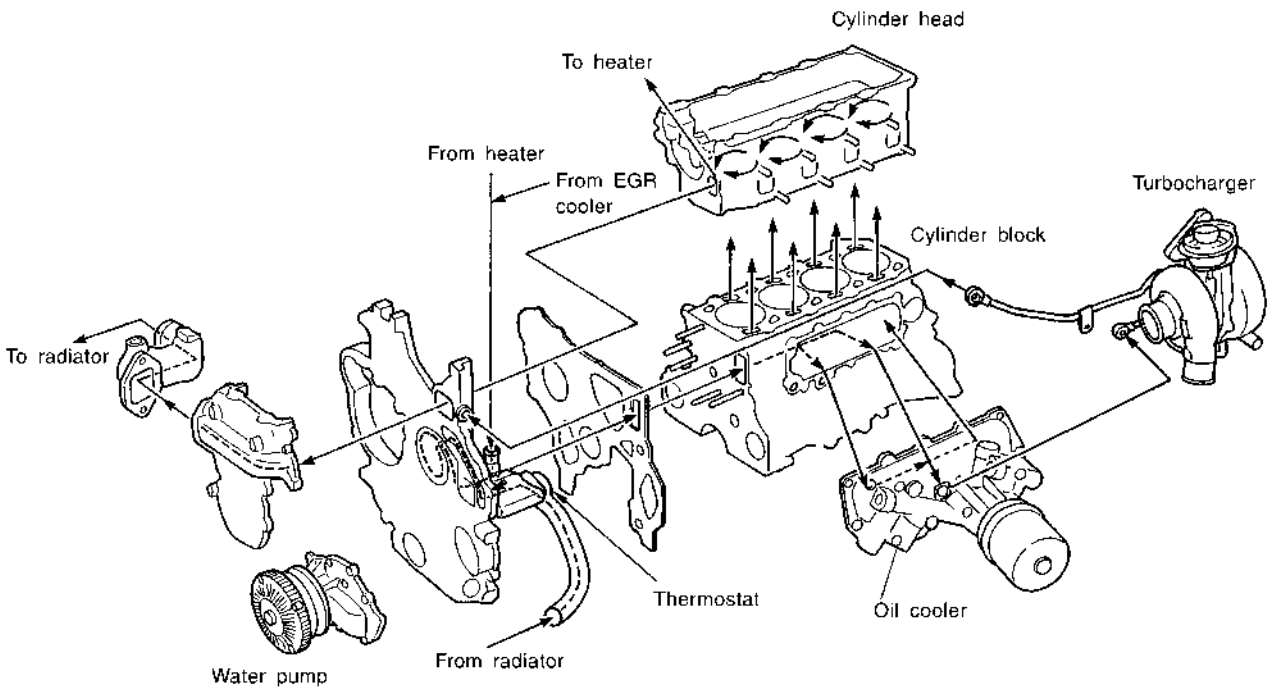
3. Remove fuel filler lid.
4. Disconnect fuel outlet, return tube and connectors.

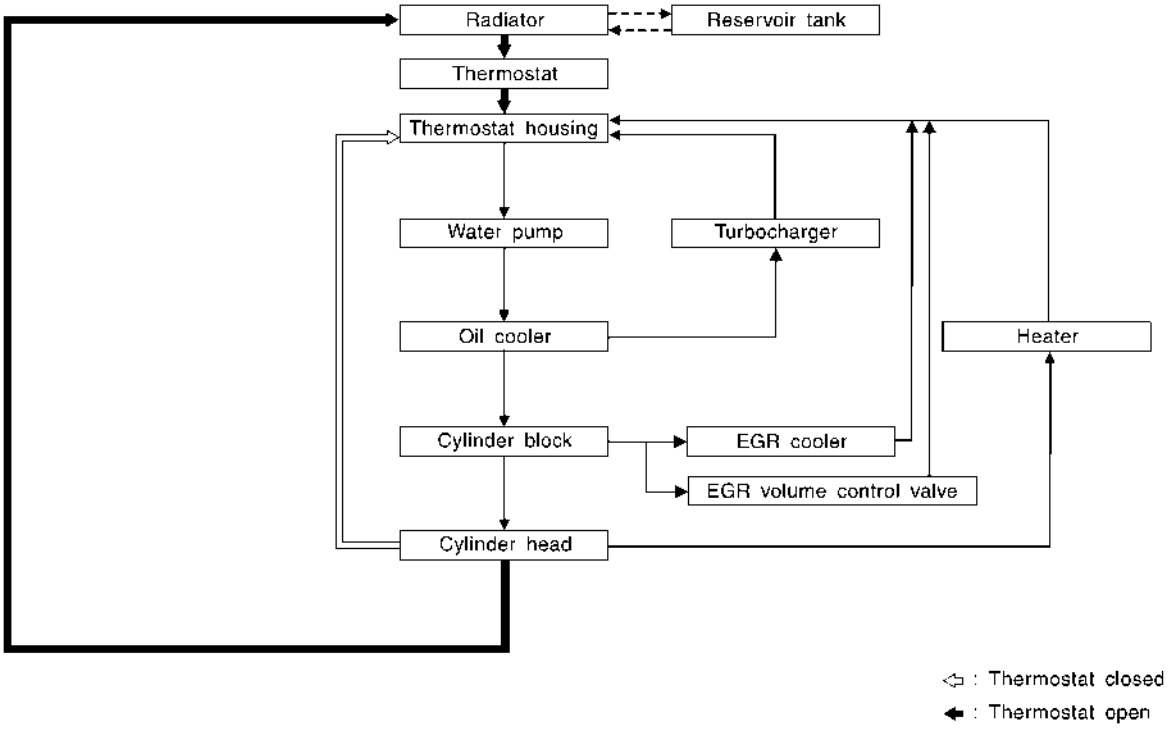
CAUTION:
Mark the fuel tubes to ensure correct position during installation.



5. Remove the fuel gauge assembly and disconnect tubes and connector.

Cooling Circuit



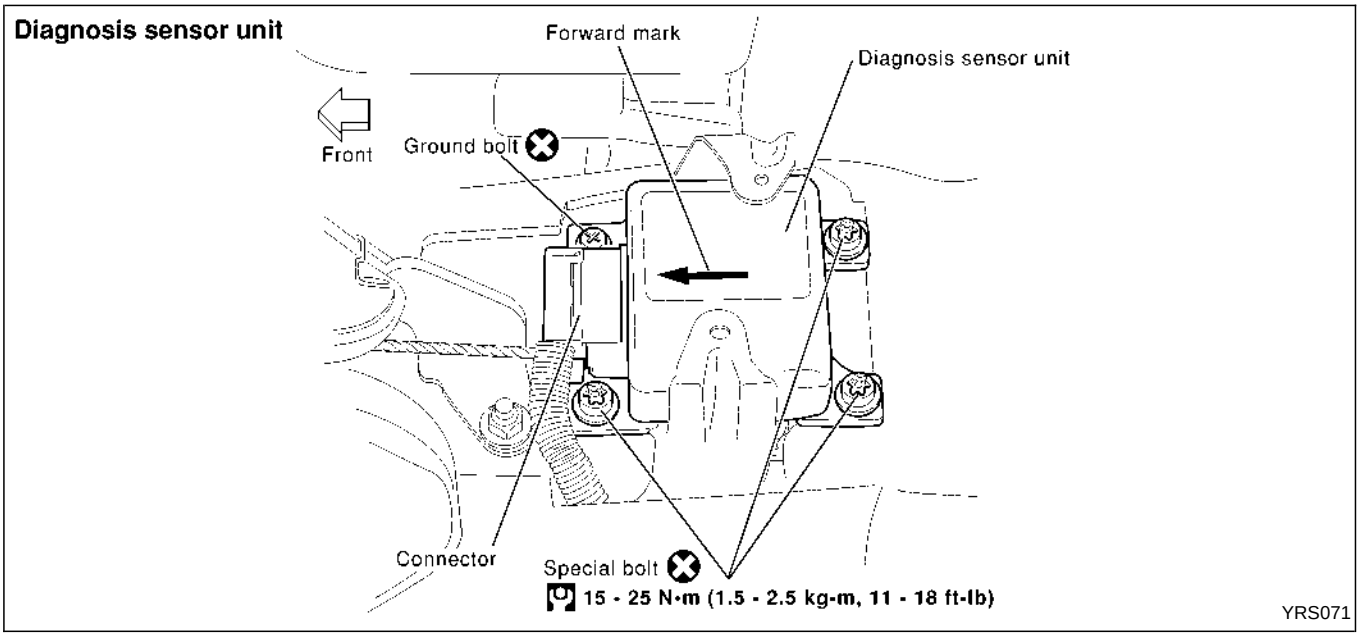


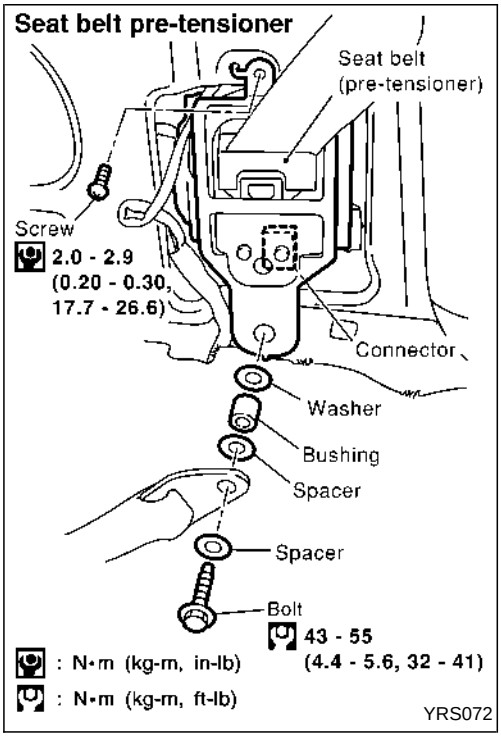
YLC031

Diagnosis Sensor Unit (Cont'd)

NOTE:

- **To install, reverse the removal procedure sequence.**





Front Seat Belt Pre-tensioner

REMOVAL AND INSTALLATION

CAUTION:

- **Before servicing SRS, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.**
- **Check front seat front belt pre-tensioner with load limiter for proper installation.**
- **After replacement of front seat belt pre-tensioner, check SRS function and perform self-diagnosis for SRS.**
- **Refer to "SRS Operation Check" for details. (RS-36)**
- **Do not attempt to disassemble front seat belt pre-tensioner with load limiter.**
- **Replace front seat belt pre-tensioner if it has been dropped or sustained an impact.**
- **Do not expose front seat belt pre-tensioner to temperatures exceeding 80°C (176°F).**

For removal of front seat belt pre-tensioner, refer to "Front Seat Belt" for details. (RS-4)

NOTE:

- **To install, reverse the removal procedure sequence.**