

HOW TO USE THIS MANUAL

IN00U-97

GENERAL INFORMATION

1. INDEX

An INDEX is provided on the first page of each section to guide you to the item to be repaired. To assist you in finding your way through the manual, the section title and major heading are given at the top of every page.

2. PRECAUTION

At the beginning of each section, a PRECAUTION is given that pertains to all repair operations contained in that section.

Read these precautions before starting any repair task.

3. TROUBLESHOOTING

TROUBLESHOOTING tables are included for each system to help you diagnose the problem and find the cause. The fundamentals of how to proceed with troubleshooting are described on page IN-20.

Be sure to read this before performing troubleshooting.

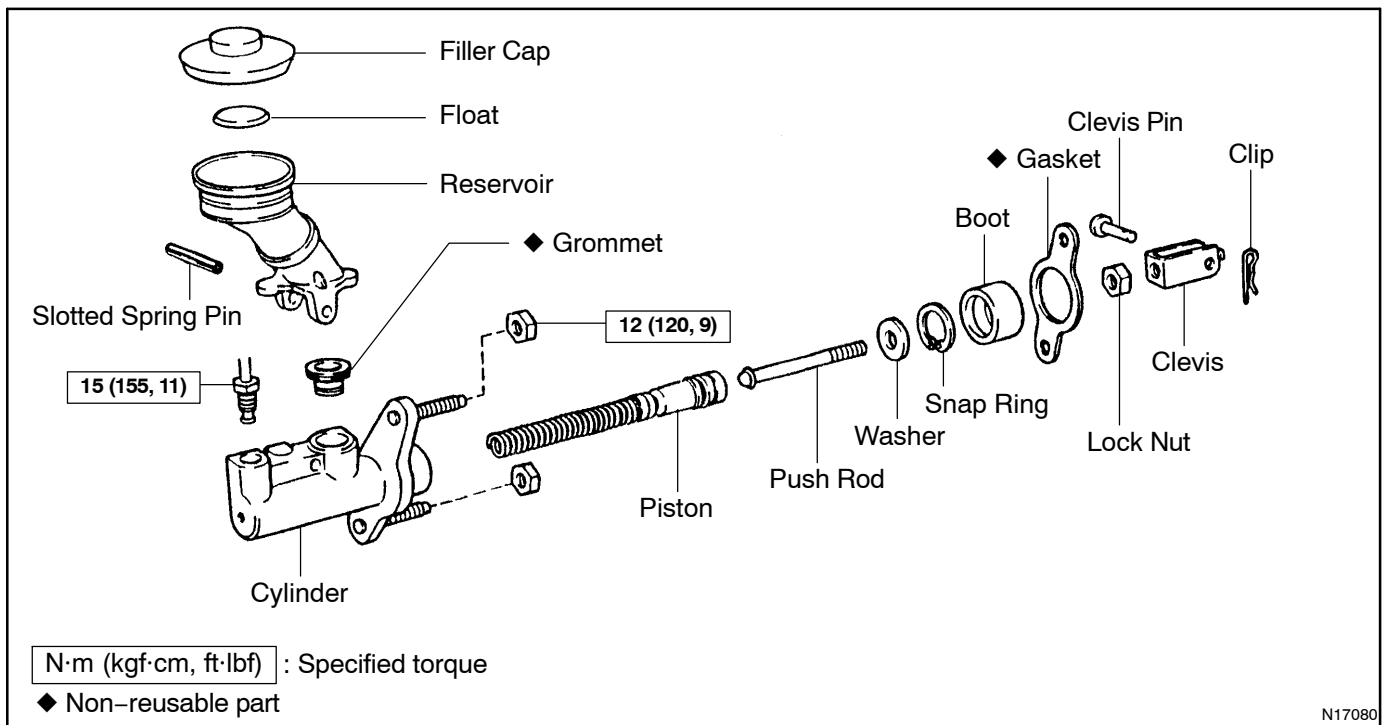
4. PREPARATION

Preparation lists the SST (Special Service Tools), recommended tools, equipment, lubricant and SSM (Special Service Materials) which should be prepared before beginning the operation and explains the purpose of each one.

5. REPAIR PROCEDURES

Most repair operations begin with an overview illustration. It identifies the components and shows how the parts fit together.

Example:



ENGINE MECHANICAL

SERVICE DATA

SS0MI-14

Compression pressure	1ZZ-FE:	at 250 rpm STD	1,500 kPa (15.3 kgf/cm ² , 218 psi)
		Minimum	1,000 kPa (10.2 kgf/cm ² , 145 psi)
	Difference of pressure between each cylinder		100 kPa (1.0 kgf/cm ² , 15 psi) or less
	2ZZ-GE:	at 250 rpm STD	1,400 kPa (14.3 kgf/cm ² , 203 psi)
		Minimum	1,000 kPa (10.2 kgf/cm ² , 145 psi)
	Difference of pressure between each cylinder		110 kPa (1.1 kgf/cm ² , 16 psi) or less
Valve clearance	1ZZ-FE:	at cold Intake	0.15 - 0.25 mm (0.006 - 0.010 in.)
		Exhaust	0.25 - 0.35 mm (0.010 - 0.014 in.)
	Valve clearance adjusting shim		
		No. 06	5.060 mm (0.1992 in.)
		No. 08	5.080 mm (0.2000 in.)
		No. 10	5.100 mm (0.2008 in.)
		No. 12	5.120 mm (0.2016 in.)
		No. 14	5.140 mm (0.2024 in.)
		No. 16	5.160 mm (0.2031 in.)
		No. 18	5.180 mm (0.2039 in.)
		No. 20	5.200 mm (0.2047 in.)
		No. 22	5.220 mm (0.2055 in.)
		No. 24	5.240 mm (0.2063 in.)
		No. 26	5.260 mm (0.2071 in.)
		No. 28	5.280 mm (0.2079 in.)
		No. 30	5.300 mm (0.2087 in.)
		No. 32	5.320 mm (0.2094 in.)
		No. 34	5.340 mm (0.2102 in.)
		No. 36	5.360 mm (0.2110 in.)
		No. 38	5.380 mm (0.2118 in.)
		No. 40	5.400 mm (0.2126 in.)
		No. 42	5.420 mm (0.2134 in.)
		No. 44	5.440 mm (0.2142 in.)
		No. 46	5.460 mm (0.2150 in.)
		No. 48	5.480 mm (0.2157 in.)
		No. 50	5.500 mm (0.2165 in.)
		No. 52	5.520 mm (0.2173 in.)
		No. 54	5.540 mm (0.2181 in.)
	No. 56	5.560 mm (0.2189 in.)	
	No. 58	5.580 mm (0.2197 in.)	
	No. 60	5.600 mm (0.2205 in.)	
	No. 62	5.620 mm (0.2213 in.)	
	No. 64	5.640 mm (0.2220 in.)	
	No. 66	5.660 mm (0.2228 in.)	
	No. 68	5.680 mm (0.2236 in.)	
	No. 70	5.700 mm (0.2244 in.)	
	No. 72	5.720 mm (0.2252 in.)	
	No. 74	5.740 mm (0.2260 in.)	

- 15** Check for open and short in harness and connector between EFI main relay (Marking: EFI) and pressure switching valve, and pressure switching valve and ECM (See page IN-30).

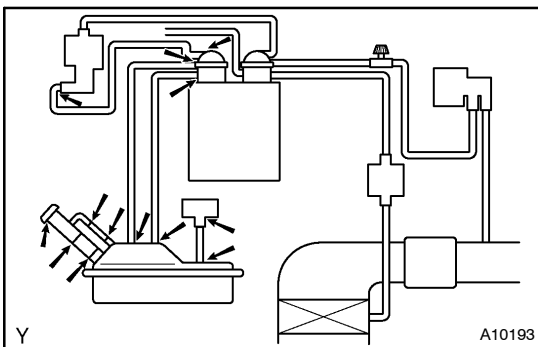
NG

Repair or replace harness or connector.

OK

Replace ECM (See page SF-78).

- 16** Check whether hose close to fuel tank has been modified, and check whether there are signs of any accident near fuel tank.

**CHECK:**

Check for cracks, deformation and loose connection of the following parts:

- Fuel tank
- Fuel tank filler pipe
- Hoses and tubes around fuel tank

NG

Repair or replace evaporative emission leak part.

OK

- 17** Check vacuum hoses between vapor pressure sensor and fuel tank, charcoal canister and pressure switching valve.

CHECK:

- (a) Check that the vacuum hose is connected correctly.
- (b) Check the vacuum hose for looseness and disconnection.
- (c) Check the vacuum hose for cracks, hole and damage.

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Repair or replace vacuum hose.

OK

(a) Preconditions

The monitor will not run unless:

- MIL is OFF
- Fuel level is approximately 1/2 to 3/4
- Altitude is 7,800 feet (2,400 m) or less
- Engine Coolant Temperature (ECT) is between 4.4°C and 35°C (40°F and 95°F)
- Intake Air Temperature (IAT) is between 4.4°C and 35°C (40°F and 95°F)
- Cold Soak Procedure has been completed
- Before starting the engine, the difference between ECT and IAT must be less than 7°C (13°F)

HINT:

Examples:

- Scenario 1
ECT = 24°C (75°F)
IAT = 16°C (60°F)
Difference between ECT and IAT is 8°C (15°F)
→ The monitor will not run because difference between ECT and IAT is higher than 7°C (13°F)
- Scenario 2
ECT = 21°C (70°F)
IAT = 20°C (68°F)
Difference between ECT and IAT is 1°C (2°F)
→ The monitor will run because difference between ECT and IAT is less than 7°C (13°F)

The readiness test can be completed in cold ambient conditions (less than 40°F / 4.4°C) and/or at high altitudes (more than 7,800 feet / 2,400 m) if the drive pattern is repeated a second time after cycling the ignition off.

(b) Drive Pattern

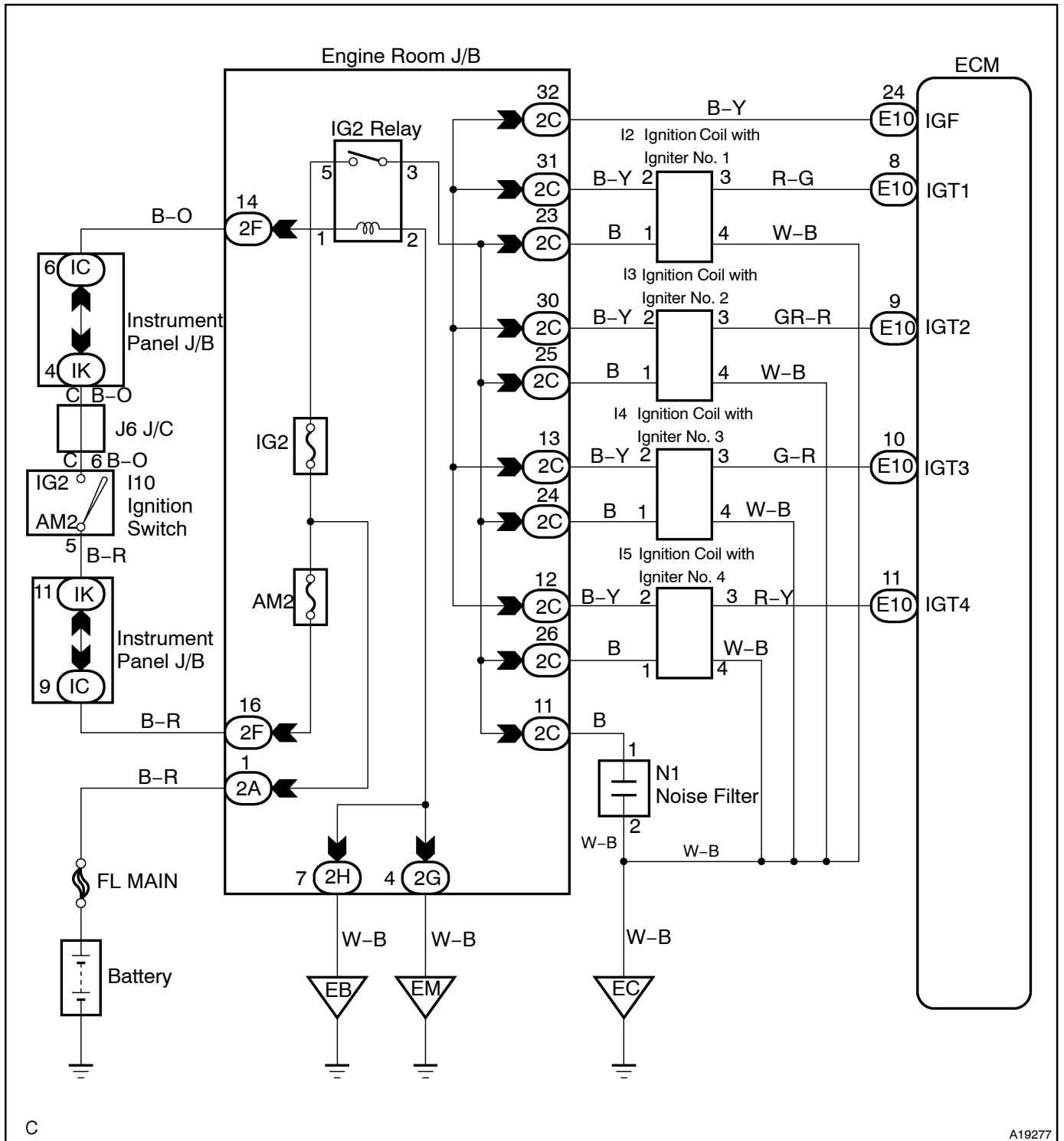
- (1) Connect the OBDII scan tool to DLC3 to check monitor status and preconditions (refer to (a)).
- (2) Release pressure in fuel tank by removing the fuel tank cap and then reinstall it.
- (3) Start the engine and allow it to idle until ECT becomes 75°C (167°F) or higher.
- (4) Run the engine at 3,000 rpm for approximately 10 seconds.
- (5) Allow the engine to idle with the A/C ON (to create slight load) for 15 to 50 minutes.

NOTICE:

If the vehicle not equipped with A/C, put a slight load on the engine by doing the following :

- **Securely set the parking brake.**
- **Block the drive wheels with wheel chocks.**
- **Allow the vehicle to idle in drive for 15 to 50 minutes.**

WIRING DIAGRAM




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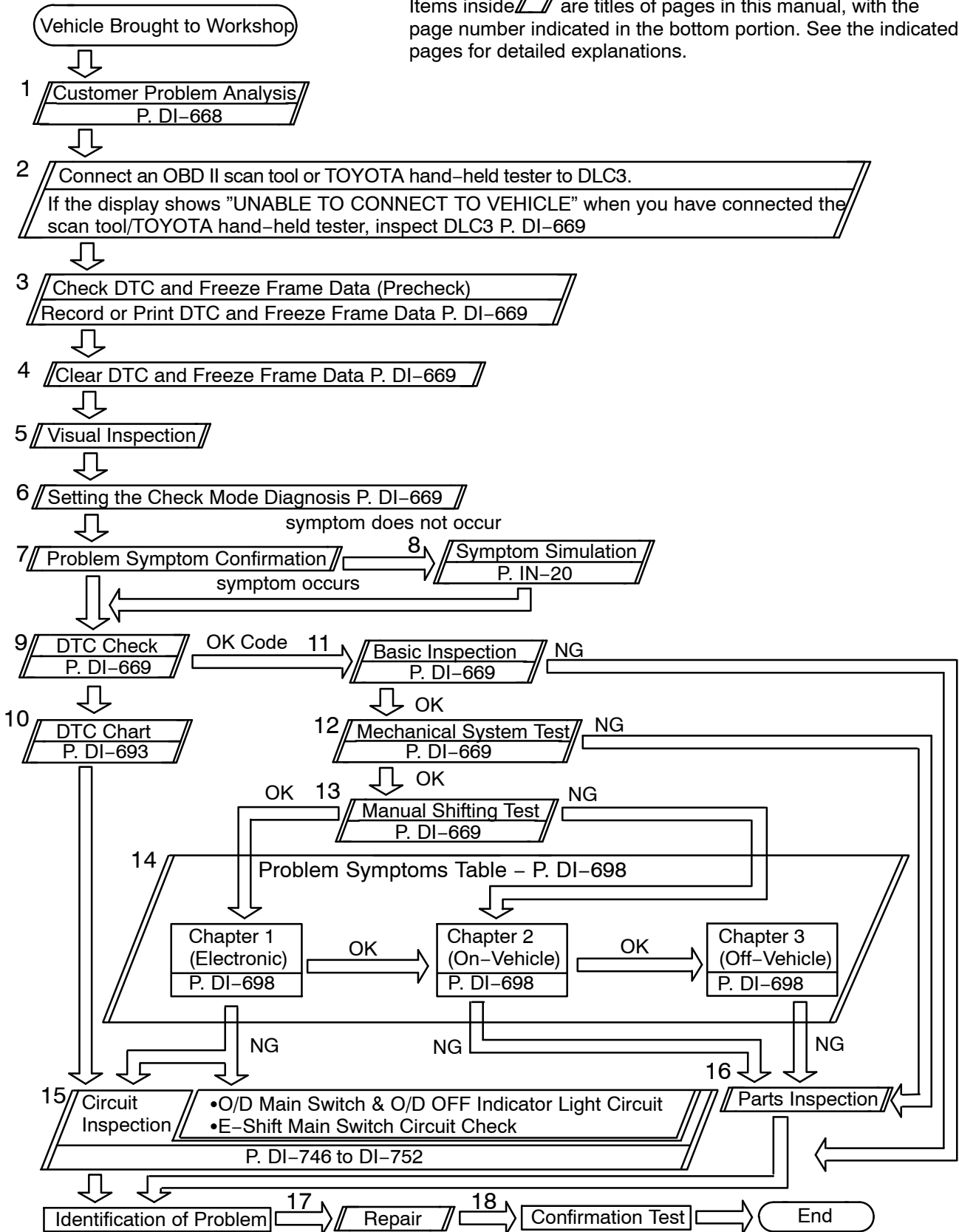
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AUTOMATIC TRANSAXLE (U240E)

DI4YY-09

HOW TO PROCEED WITH TROUBLESHOOTING

Items inside  are titles of pages in this manual, with the page number indicated in the bottom portion. See the indicated pages for detailed explanations.



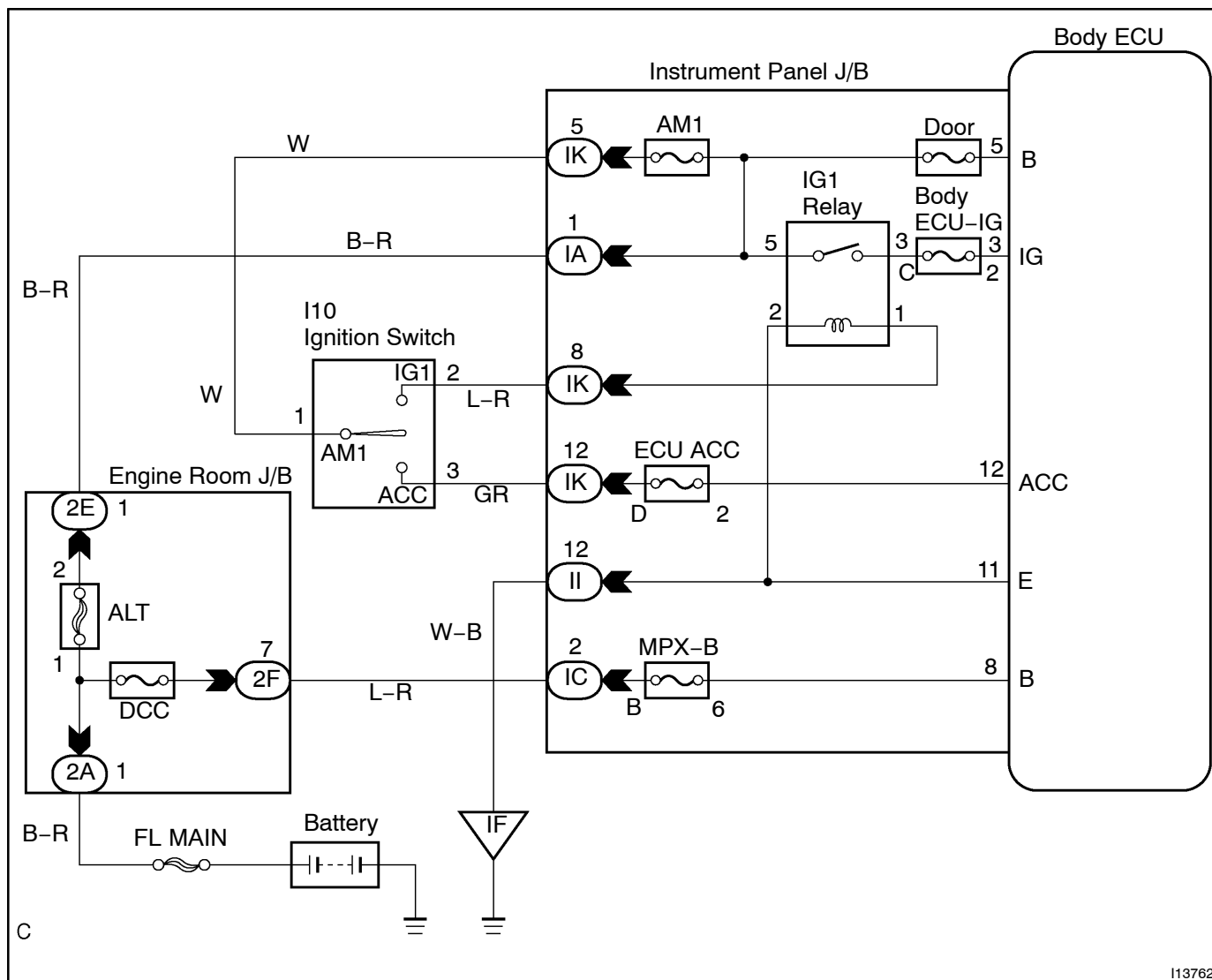
CIRCUIT INSPECTION

Power Source Circuit

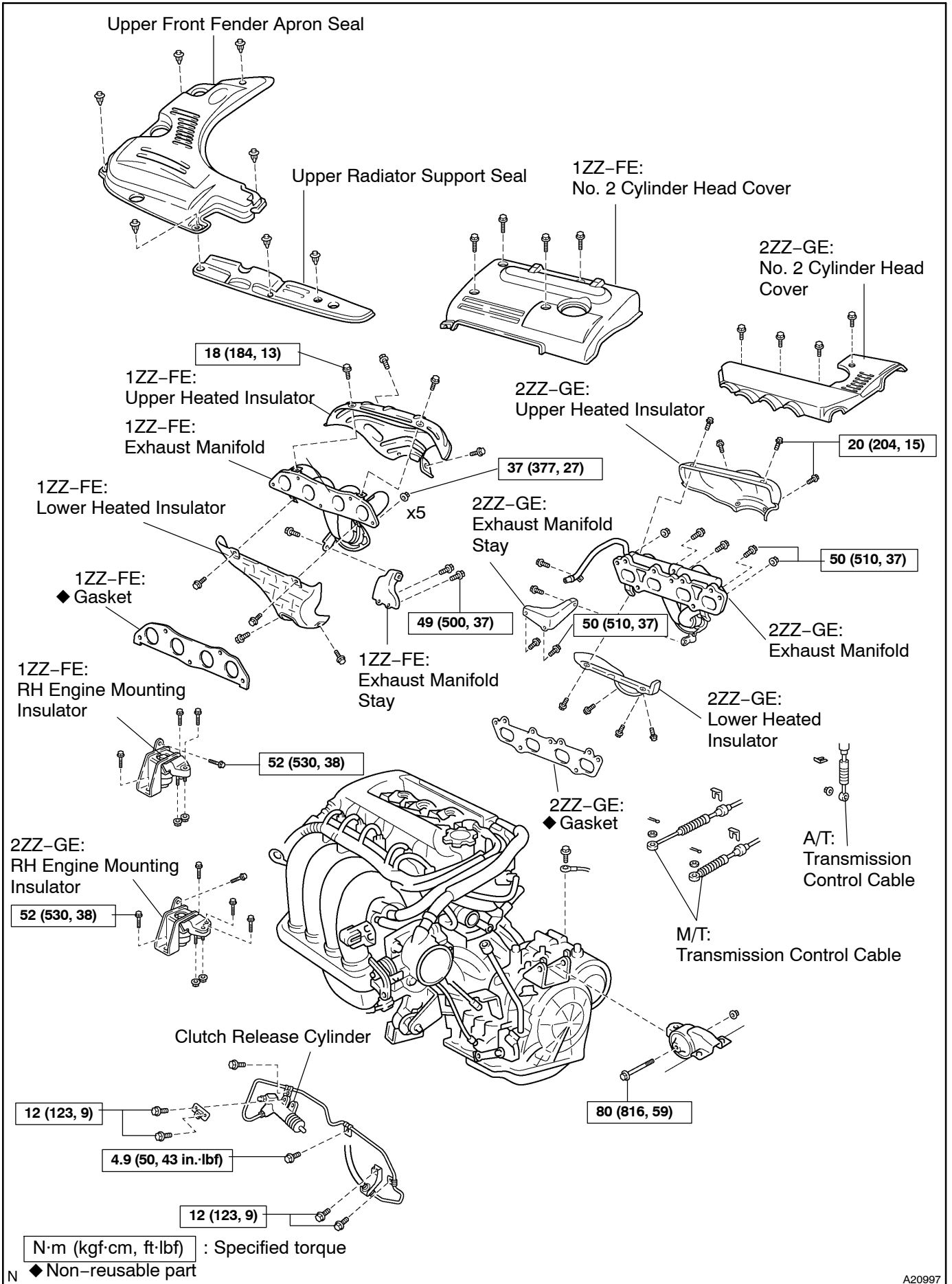
CIRCUIT DESCRIPTION

This circuit provides power to operate the Body ECU.

WIRING DIAGRAM



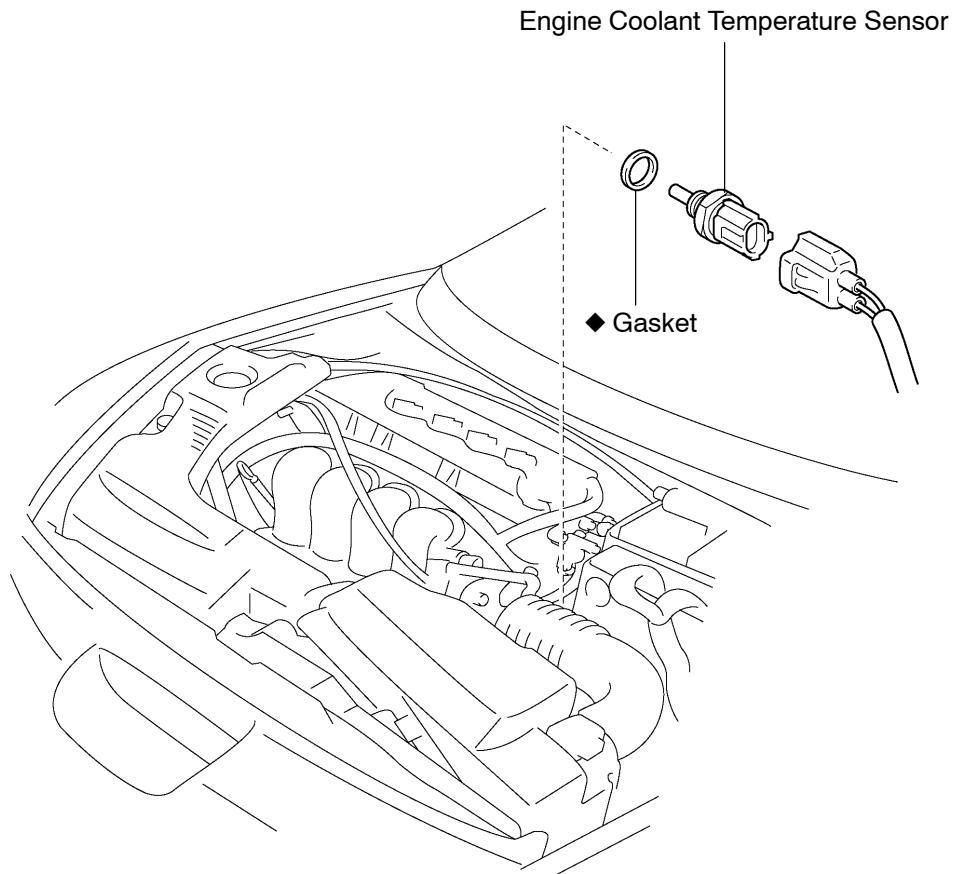
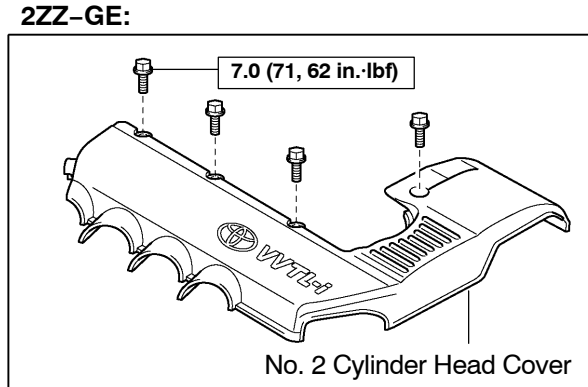
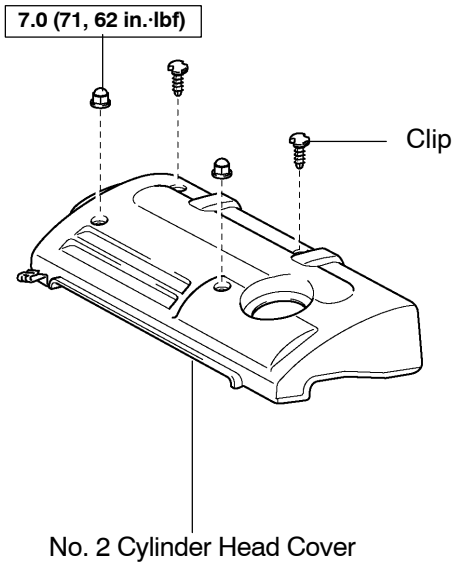
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A20997

ENGINE COOLANT TEMPERATURE (ECT) SENSOR COMPONENTS

SF162-10

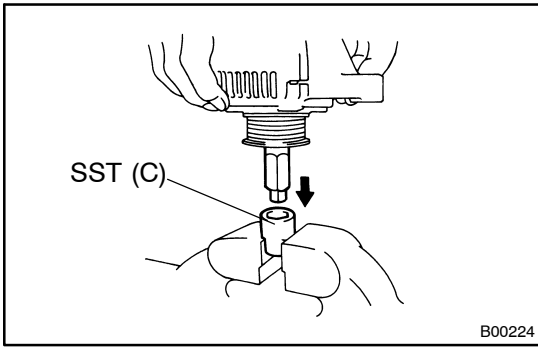


N·m (kgf·cm, ft·lbf) : Specified torque

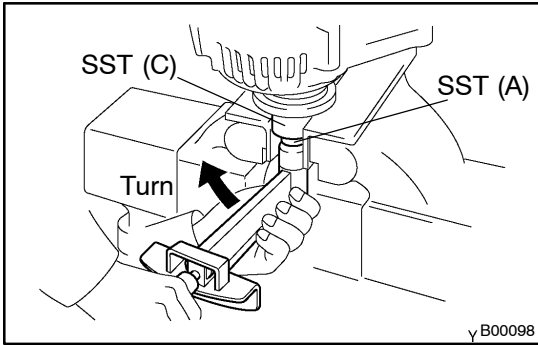
◆ Non-reusable part

Y

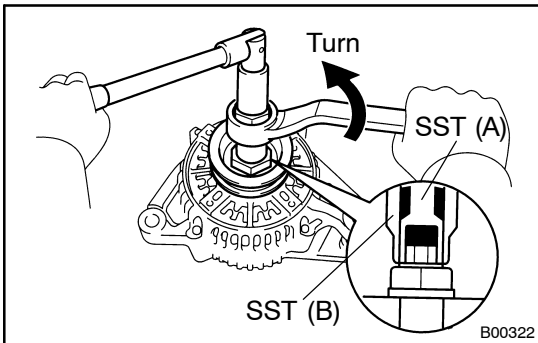
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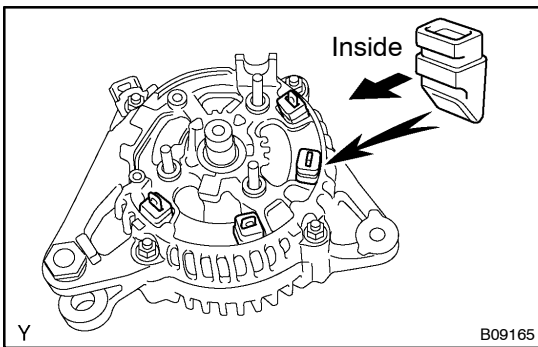
- (d) Mount SST (C) in a vise.
- (e) Insert SST (B) into SST (C), and attach the pulley nut to SST (C).



- (f) To torque the pulley nut, turn SST (A) in the direction shown in the illustration.
Torque: 111 N·m (1,125 kgf·cm, 81 ft·lbf)
- (g) Remove the generator from SST (C).



- (h) Turn SST (B), and remove SST (A and B).

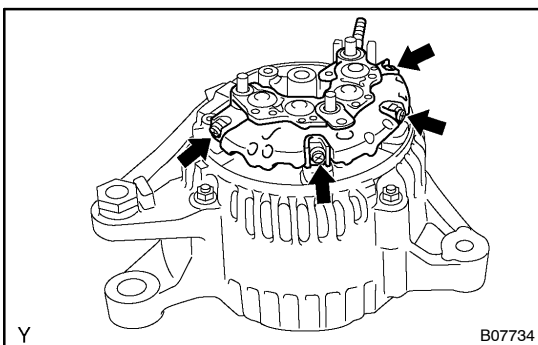


4. INSTALL RECTIFIER HOLDER

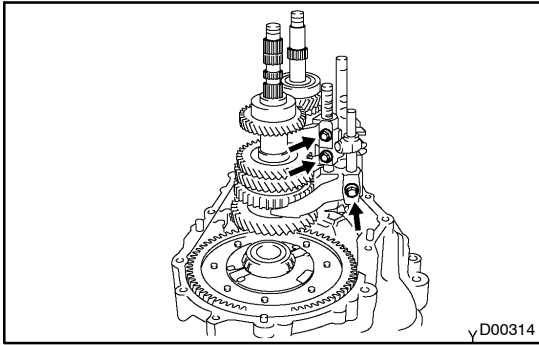
- (a) Install the 4 rubber insulators on the lead wires.

NOTICE:

Be careful of the rubber insulators installation direction.



- (b) Install the rectifier holder while pushing it with the 4 screws
Torque: 2.9 N·m (30 kgf·cm, 26 in·lbf)

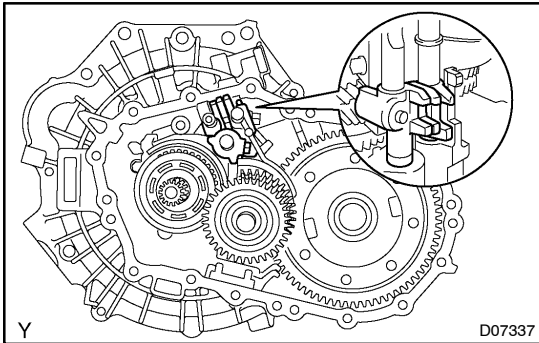


33. REMOVE NO. 1 GEAR SHIFT HEAD, NO. 1 AND NO. 2 GEAR SHIFT FORKS 3 SET BOLTS

Sealant:

Part No. 08833-00080, THREE BOND 1344, LOCTITE 242 or equivalent

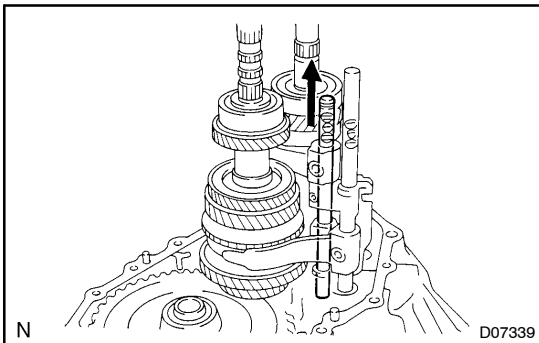
Torque: 16 N·m (160 kgf·cm, 12 ft·lbf)



NOTICE:

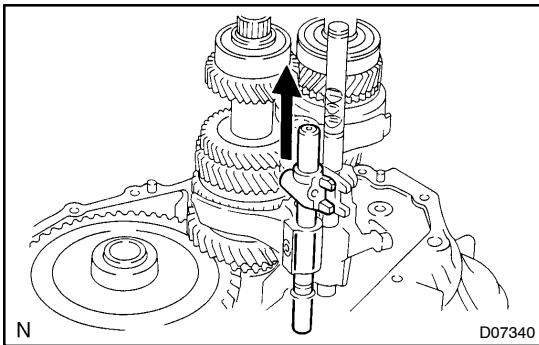
At the time of reassembly, please refer to the following item.

Make sure that the 3 gear shift heads are positioned, as shown in the illustration.



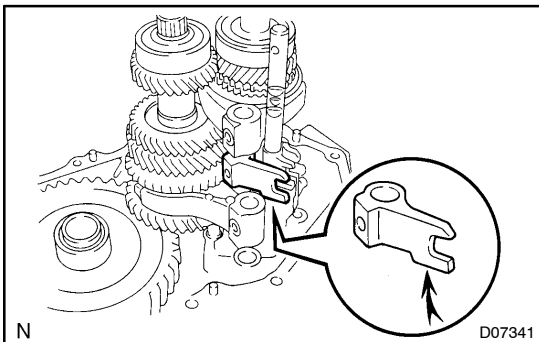
34. REMOVE NO. 2 GEAR SHIFT FORK SHAFT

Remove the No. 2 gear shift fork shaft from the No. 2 gear shift fork, No. 1 gear shift head, No. 1 gear shift fork, reverse shift fork and transaxle case.



35. REMOVE NO. 1 GEAR SHIFT FORK SHAFT

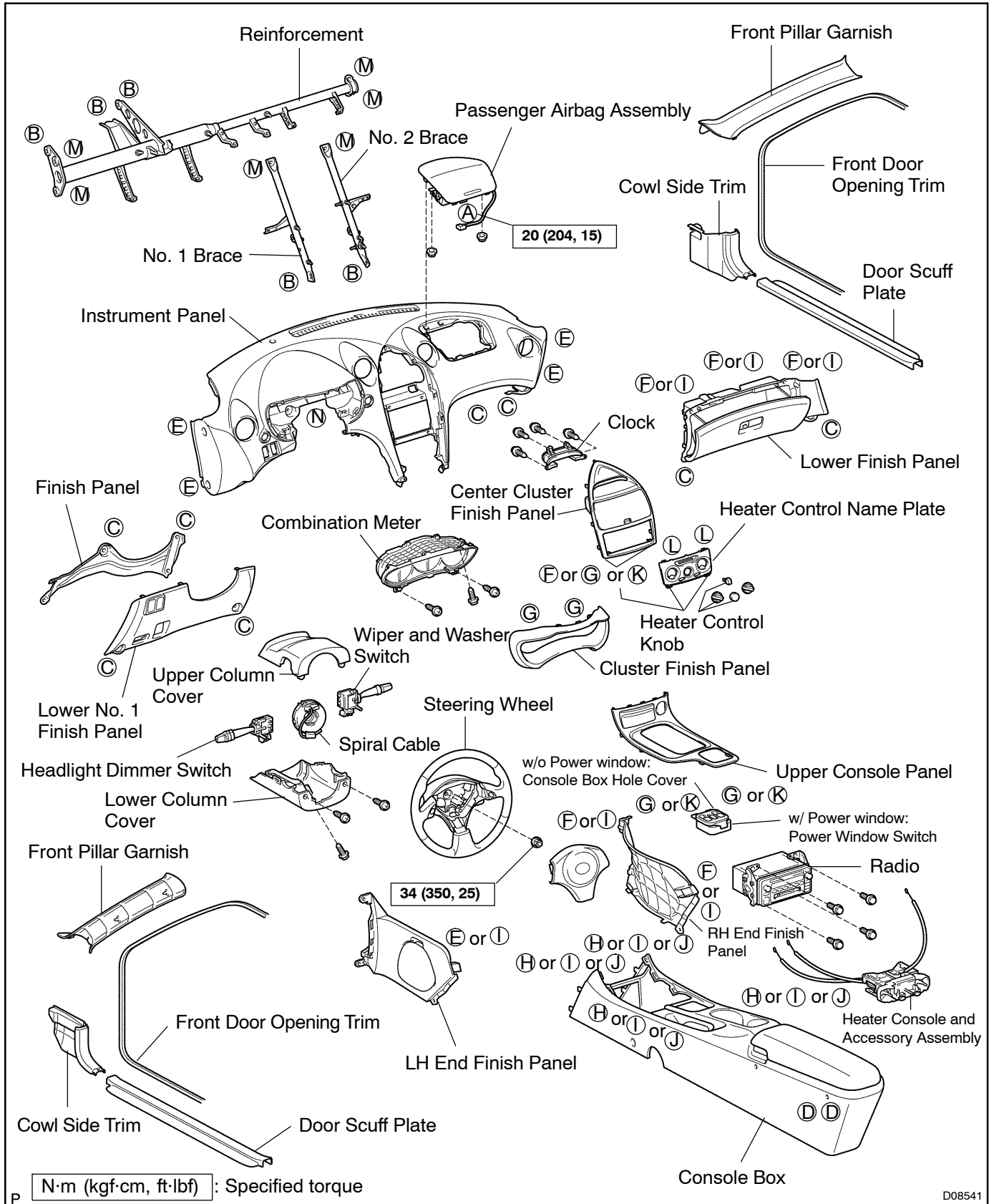
Remove the No. 1 gear shift fork shaft from the No. 1 gear shift fork and transaxle case.



36. REMOVE NO. 1 GEAR SHIFT HEAD

FLOOR SHIFT ASSEMBLY COMPONENTS

AX0LB-03



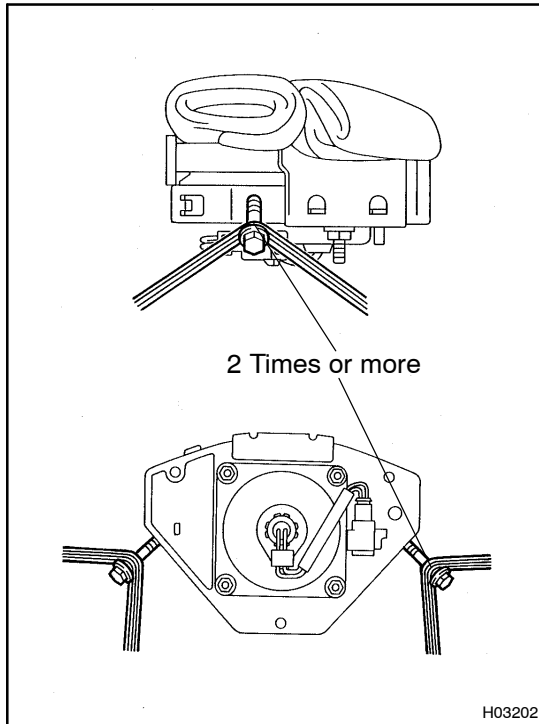
TROUBLESHOOTING

PROBLEM SYMPTOMS TABLE

BR0PX-09

Use the table below to help you find the cause of the problem. The numbers indicate the priority of the likely cause of the problem. Check each part in order. If necessary, replace these parts.

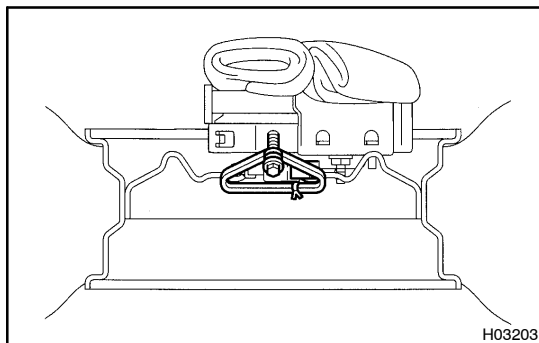
Symptom	Suspect Area	See page
Low pedal or spongy pedal	5. Fluid leaks for brake system 6. Air in brake system 7. Piston seals (Worn or damaged) 8. Rear brake shoe clearance (Out of adjustment) 9. Master cylinder (Faulty) 10. Booster push rod (Out of adjustment)	DI-881 BR-4 BR-22 BR-36 BR-28 BR-32 BR-10 BR-18
Brake drag	1. Brake pedal free play (Minimum) 2. Parking brake lever travel (Out of adjustment) 3. Parking brake wire (Sticking) 4. Rear brake shoe clearance (Out of adjustment) 5. Pad or lining (Cracked or distorted) 6. Piston (Stuck) 7. Piston (Frozen) 8. Anchor, tension or return spring (Faulty) 9. Booster push rod (Out of adjustment) 10. Vacuum leaks for booster system 11. Master cylinder (Faulty)	BR-6 BR-9 - BR-32 BR-46 BR-19 BR-33 BR-28 BR-42 BR-22 BR-36 BR-28 BR-22 BR-36 BR-28 BR-42 BR-18 BR-14 BR-10
Brake pull	1. Piston (Stuck) 2. Pad or lining (Oily) 3. Piston (Frozen) 4. Disc (Scored) 5. Pad or lining (Cracked or distorted)	BR-22 BR-36 BR-28 BR-19 BR-33 BR-28 BR-42 BR-22 BR-36 BR-28 BR-25 BR-39 BR-19 BR-33 BR-28 BR-42



- (2) Using 3 wire harnesses, wind the wire harness at least 2 times each around the bolts installed on the left and right sides of the steering wheel pad.

CAUTION:

- **Tightly wind the wire harness around the bolts so that there is no slack.**
- **If there is slackness in the wire harness, the steering wheel pad may come loose due to the shock when the airbag is deployed. This is highly dangerous.**



- (3) Face the upper surface of the steering wheel pad upward. Separately tie the left and right sides of the steering wheel pad to the disc wheel through the hub nut holes. Position the steering wheel pad connector so that it hangs downward through a hub hole in the disc wheel.

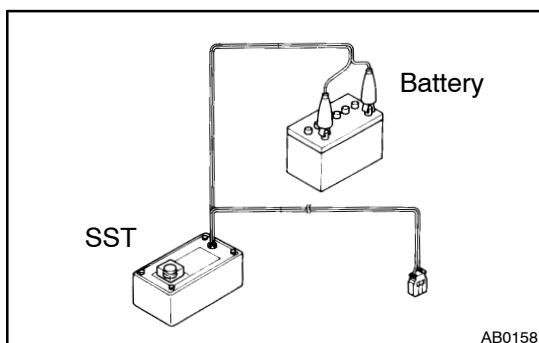
CAUTION:

- **Make sure that the wire harness is tight. It is very dangerous when looseness in the wire harness results in the steering wheel pad coming free due to the shock from the airbag deploying.**
- **Always tie down the steering wheel pad with the pad side facing upward. It is very dangerous if the steering wheel pad is tied down with the metal surface facing upward as the wire harness will be cut by the shock from the airbag deploying and the steering wheel pad will be thrown into the air.**

NOTICE:

The disc wheel will be marked by airbag deployment, so when disposing of the airbag use a redundant disc wheel.

- (e) Check functioning of the SST (See step 1-(a)).
SST 09082-00700



HORN SYSTEM LOCATION

BE0FY-33

