

SERVICE BULLETIN

APPLICABILITY 1995 - 1998 Legacy Service Manuals**DATE** 8-3-98**SUBJECT** Service Manual Corrections

Replace the following pages into the applicable Service Manuals listed below:

YEAR	VOL #	MSA #	SECTION	PAGES	REFERENCE
1995	2	MSA5T9407A	4-3	5 / 6	[C101] / [C201]
1995	2	MSA5T9407A	4-6	11 / 12	[W5A0] / [W5C0]
1995	2	MSA5T9407A	4-3	13 / 14	[W2E0] / [W300]
1995	2	MSA5T9407A	6-2	23 / 24	[W10B3] / W10B4]
1997	6	MSA5T9701A	2-3b	13 / 14	[W3C1]
1997	6	MSA5T9701A	6-3	65	[D803]
1998	9	MSA5T9802A	6-3	17 / 18	[D6C0] / [D6D1]
1998	9	MSA5T9802A	6-3	117	[D8E0]

Please perform these corrections promptly to ensure the most correct information is conveyed when the Service Manuals are used.

CAUTION**VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.**

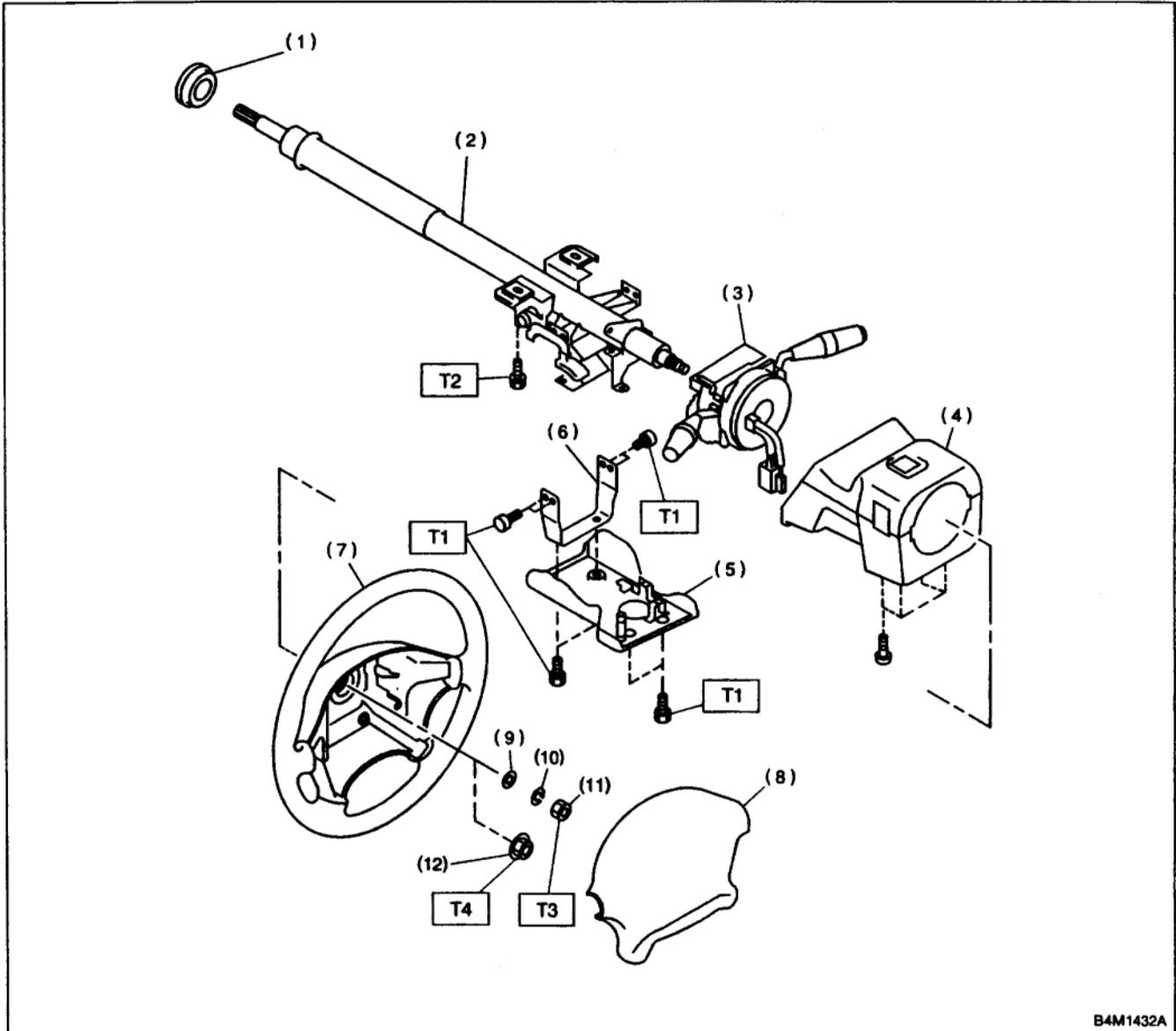
Subaru Service Bulletins are intended for use by professional technicians ONLY. They are written to inform those technicians of conditions that may occur in some vehicles, or to provide information that could assist in the proper servicing of the vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do the job correctly and safely. If a condition is described, DO NOT assume that this Service Bulletin applies to your vehicle, or that your vehicle will have that condition.

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SUBARU

1. Steering Wheel and Column (Tilt)

1. WITH AIRBAG MODEL



B4M1432A

- (1) Bushing
- (2) Column shaft
- (3) Steering roll connector
- (4) Column cover
- (5) Knee protector
- (6) Bracket absorbent

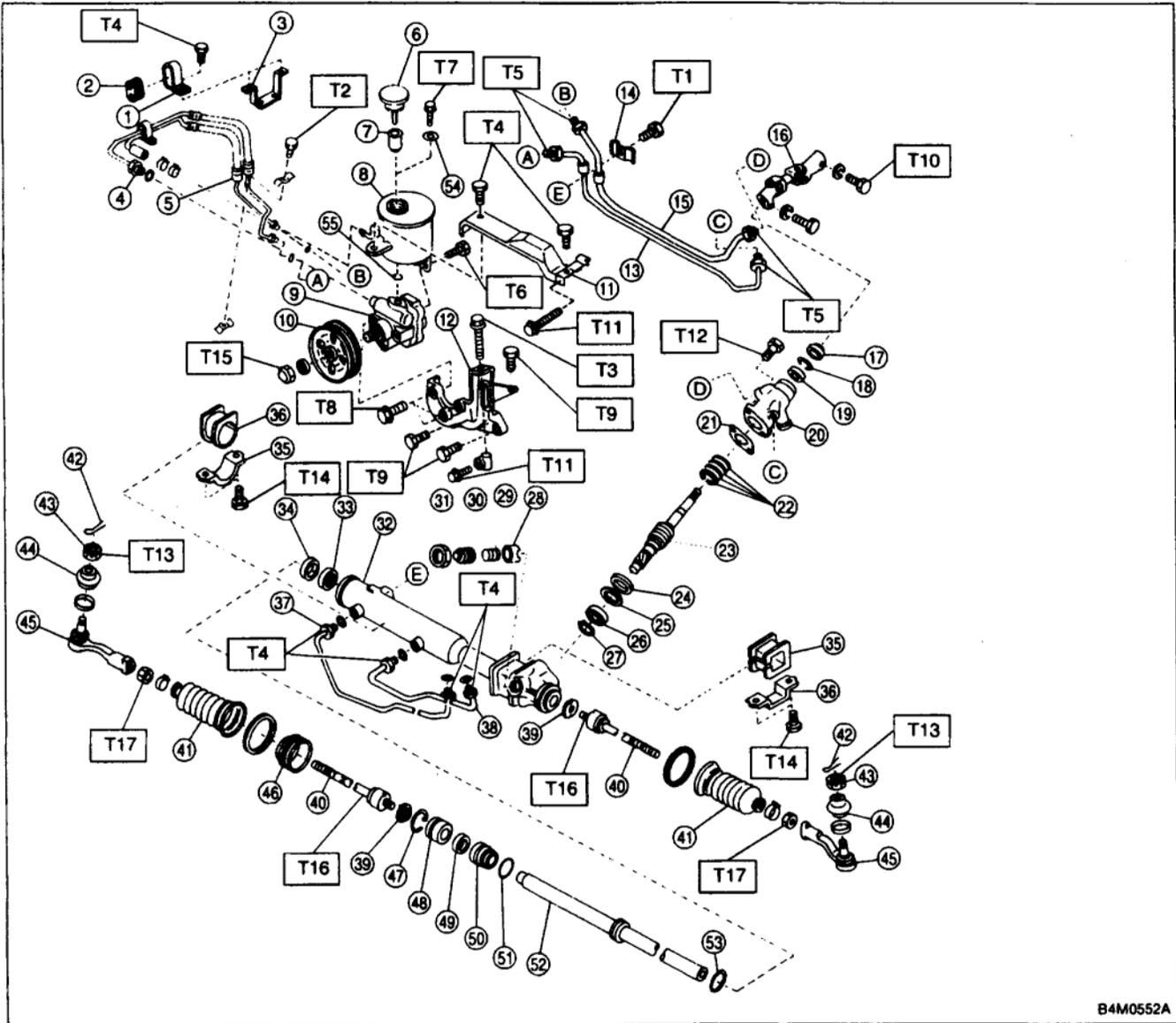
- (7) Steering wheel
- (8) Airbag module
- (9) Plain washer
- (10) Spring washer
- (11) Nut
- (12) Flange nut

Tightening torque: N·m (kg·m, ft·lb)
T1: 3.4 ± 1.0 (0.35 ± 0.1, 2.5 ± 0.7)
T2: 25 ± 5 (2.5 ± 0.5, 18.1 ± 3.6)
T3: 34 ± 5 (3.5 ± 0.5, 25.3 ± 3.6)
T4: 44 ± 5 (4.5 ± 0.5, 32.5 ± 3.6)

COMPONENT PARTS

2. Power Steering System

1. LHD MODEL

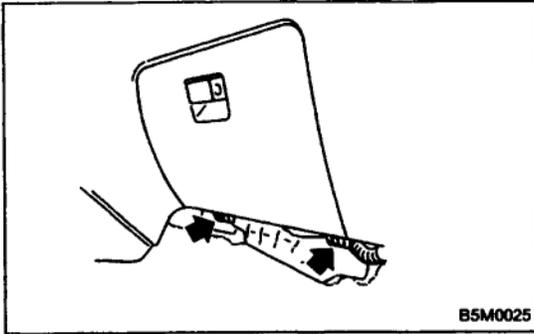


B4M0552A

Tightening torque: N·m (kg·m, ft·lb)

- T1: 5.4 ± 1.5 (0.55 ± 0.15, 4.0 ± 1.1)
- T2: 7.4 ± 2.0 (0.75 ± 0.20, 5.4 ± 1.4)
- T3: 8 ± 2 (0.8 ± 0.2, 5.8 ± 1.4)
- T4: 13 ± 3 (1.3 ± 0.3, 9.4 ± 2.2)
- T5: 15 ± 5 (1.5 ± 0.5, 10.8 ± 3.6)
- T6: 15.7 ± 2.4 (1.60 ± 0.24, 11.58 ± 1.77)
- T7: 18.1 ± 2.5 (1.85 ± 0.25, 13.35 ± 1.84)
- T8: 20.1 ± 2.5 (2.05 ± 0.25, 14.8 ± 1.8)
- T9: 22 ± 2 (2.2 ± 0.2, 15.9 ± 1.4)

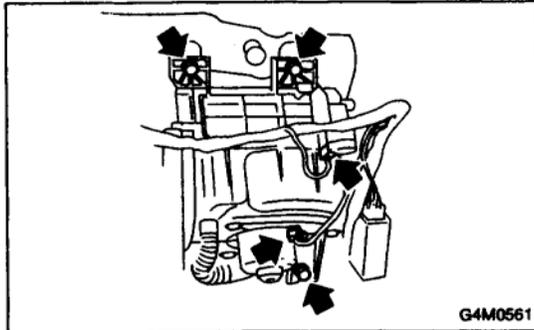
- T10: 24 ± 3 (2.4 ± 0.3, 17.4 ± 2.2)
- T11: 24.5 ± 2.0 (2.50 ± 0.2, 18.07 ± 1.48)
- T12: 25 ± 5 (2.5 ± 0.5, 18.1 ± 3.6)
- T13: 27.0 ± 2.5 (2.75 ± 0.25, 19.92 ± 1.84)
- T14: 59 ± 12 (6.0 ± 1.2, 43 ± 9)
- T15: 60.8 ± 6.9 (6.2 ± 0.7, 44.8 ± 5.1)
- T16: 78 ± 10 (8.0 ± 1.0, 58 ± 7)
- T17: 83 ± 5 (8.5 ± 0.5, 61.5 ± 3.6)



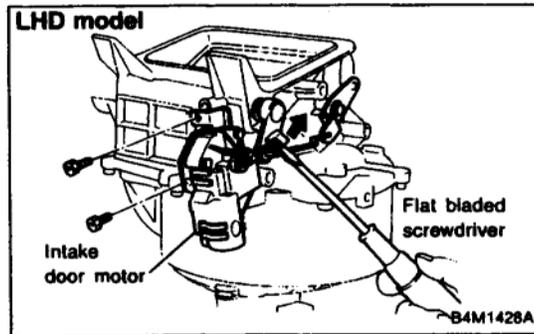
5. Intake Door Motor

A: REMOVAL

- 1) Disconnect GND cable from battery.
- 2) Remove glove box and pocket back panel. <Ref. to 5-4 [W1A0].>
- 3) Remove heater duct or evaporator. (With A/C model). <Ref. to 4-7 [W14A0].>



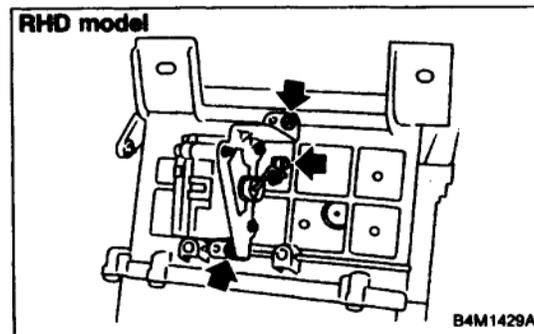
- 4) Remove intake unit from the vehicle.



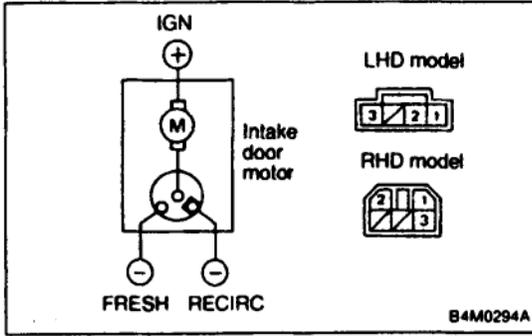
- 5) Remove screws which secure intake door motor to intake unit.

NOTE:

Ensure that RECIRC switch is set to "ON".



5. Intake Door Motor

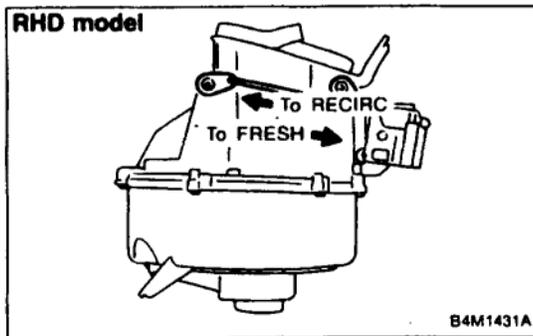
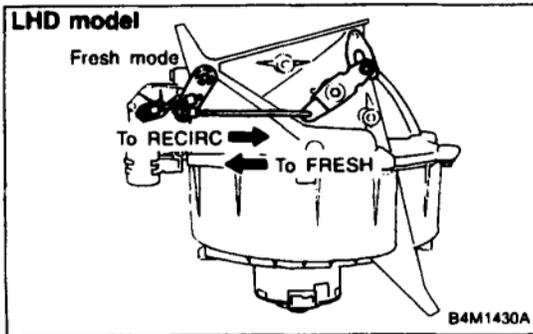


B: INSPECTION

1) When approx. 12 V is applied to the intake door motor terminals, intake door motor operates as follows:

Intake door motor position	Terminal		Intake door motor operation
	⊕	⊖	
FRESH	3*	2* 1**	Door motor moved to FRESH position.
RECIRC	2**	1* 3**	Door motor moved to RECIRC position.

*: LHD model
 **: RHD model



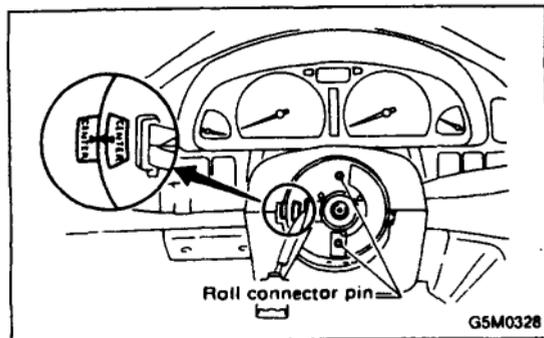
- 2) Connect harness to intake door motor.
- 3) Turn ignition switch to "ACC" and RECIRC switch to "ON" then, set to "RECIRC".

NOTE:
 Ensure that intake door motor is set in the "RECIRC" mode.

- 4) Install intake door motor on intake unit.
- 5) Secure rod holder to link, and install link to intake unit.
- 6) Manually set rod in the "RECIRC" mode, and secure to rod holder.
- 7) Operate mode selector switch to ensure that system changes from intake air to "RECIRC" and from "RECIRC" to intake air in full-stroke range.

C: INSTALLATION

Installation is in the reverse order of removal.



6) Align center of roll connector. (with airbag model)
<Ref. to 5-5 [W7B1].☆12 >

CAUTION:

Ensure that front wheels are set in straight-forward direction.

7) Set steering wheel to neutral and install it onto steering shaft.

CAUTION:

When using a flange nut, do not use a plain washer or a spring washer.

Tightening torque:

- When using plain washer, spring washer and nut;
 $34 \pm 5 \text{ N}\cdot\text{m}$ ($3.5 \pm 0.5 \text{ kg}\cdot\text{m}$, $25.3 \pm 3.6 \text{ ft}\cdot\text{lb}$)
- When using flange nut;
 $44 \pm 5 \text{ N}\cdot\text{m}$ ($4.5 \pm 0.5 \text{ kg}\cdot\text{m}$, $32.5 \pm 3.6 \text{ ft}\cdot\text{lb}$)

Column cover-to-steering wheel clearance:

2 — 4 mm (0.08 — 0.16 in)

CAUTION:

Insert roll connector guide pin into guide hole on lower end of surface of steering wheel to prevent damage.

Draw out airbag system connector, horn connector and cruise control connectors from guide hole of steering wheel lower end. (with airbag model)

8) Install airbag module to steering wheel. (with airbag model)

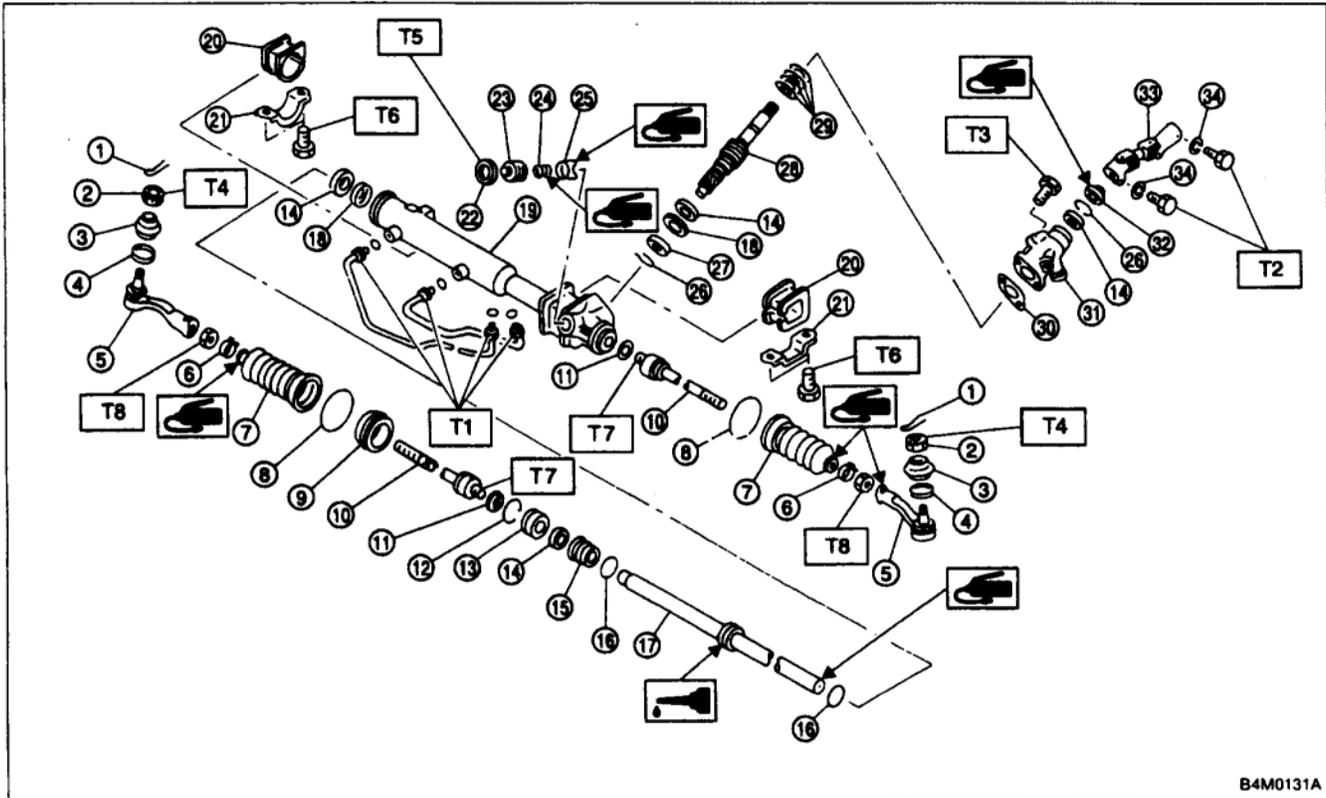
WARNING:

Always refer to 5-5 [W3B1].☆12 before performing the service operation.

3. Steering Gearbox (Power Steering System) [LHD model]

NOTE:

For disassembly and assembly of gearbox unit, refer to section Control Valve (Power Steering Gearbox).



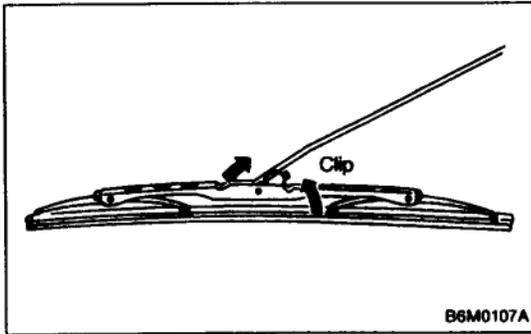
- ① Cotter pin
- ② Castle nut
- ③ Dust cover
- ④ Clip
- ⑤ Tie-rod end
- ⑥ Clip
- ⑦ Boot
- ⑧ Clip
- ⑨ Spacer
- ⑩ Tie-rod
- ⑪ Lock washer
- ⑫ Circlip
- ⑬ Rack stopper
- ⑭ Oil seal
- ⑮ Rack bushing

- ⑯ O-ring
- ⑰ Rack
- ⑱ Back-up washer
- ⑲ Rack housing
- ⑳ Adapter
- ㉑ Clamp
- ㉒ Lock nut
- ㉓ Adjusting screw
- ㉔ Spring
- ㉕ Sleeve
- ㉖ C-ring
- ㉗ Ball bearing
- ㉘ Valve
- ㉙ Seal ring
- ㉚ Packing

- ㉛ Valve housing
- ㉜ Dust seal
- ㉝ Universal joint
- ㉞ Spring washer

Tightening torque: N·m (kg·m, ft·lb)

- T1: 13 ± 3 (1.3 ± 0.3, 9.4 ± 2.2)**
- T2: 24 ± 3 (2.4 ± 0.3, 17.4 ± 2.2)**
- T3: 25 ± 5 (2.5 ± 0.5, 18.1 ± 3.6)**
- T4: 27.0 ± 2.5**
(2.75 ± 0.25, 19.9 ± 1.8)
- T5: 39 ± 10 (4.0 ± 1.0, 29 ± 7)**
- T6: 59 ± 12 (6.0 ± 1.2, 43 ± 9)**
- T7: 78 ± 10 (8.0 ± 1.0, 58 ± 7)**
- T8: 83 ± 5 (8.5 ± 0.5, 61.5 ± 3.6)**

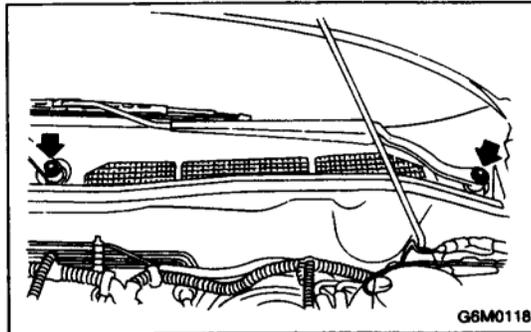


10. Front Wiper and Washer

B: REMOVAL AND INSTALLATION

1. BLADE

Pull out blade following the arrow direction from arm while pushing up locking clip.



2. WIPER ARM

- 1) Open engine hood.
- 2) Remove cap of wiper arm installation nut.
- 3) Remove the nut which secures wiper arm.
- 4) Remove wiper arm.
- 5) Installation is in the reverse order of removal.

NOTE:

Remove metal sludge from the wiper arm fixture before installing it.

Tightening torque:

$20 \pm 3 \text{ N}\cdot\text{m}$ ($2.0 \pm 0.3 \text{ kg}\cdot\text{m}$, $14.5 \pm 2.2 \text{ ft}\cdot\text{lb}$)

3. WIPER MOTOR AND LINK

- 1) Detach weatherstrip and cowl panel. <Ref. to 5-1 [W10A0].>

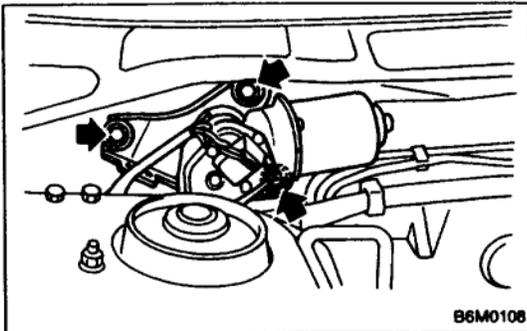
NOTE:

Apply silicone oil or soap water to both sides of cowl net to facilitate removal.

- 2) Disconnect connector of wiper motor.
- 3) Remove motor attaching bolts.

Tightening torque:

$5.9 \pm 1.5 \text{ N}\cdot\text{m}$ ($0.6 \pm 0.15 \text{ kg}\cdot\text{m}$, $4.3 \pm 1.1 \text{ ft}\cdot\text{lb}$)

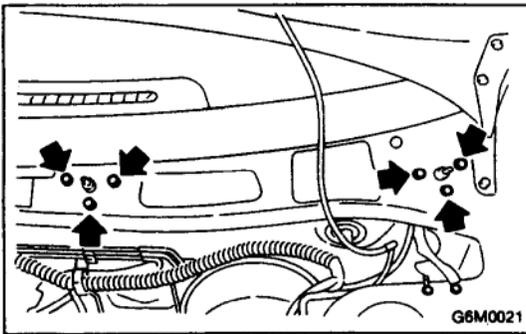


- 4) Remove wiper link from back side of wiper motor using a screwdriver inserted into service hole in front panel.

CAUTION:

Do not pry wiper link off forcefully as this may scratch vehicle body.

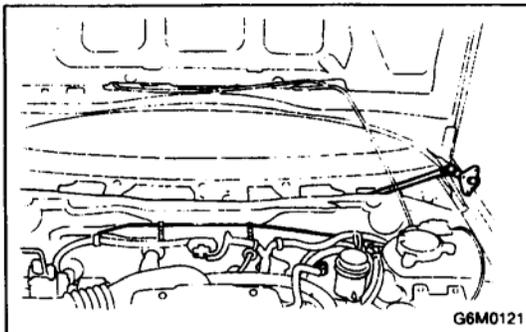
- 5) Remove wiper motor.
- 6) Separate the driver's side wiper link from back side of the passenger's side wiper sleeve unit.



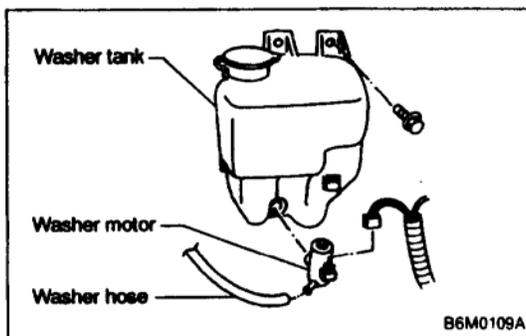
7) Remove nuts which secure sleeve unit.

Tightening torque:

$5.9 \pm 1.5 \text{ N}\cdot\text{m}$ ($0.6 \pm 0.15 \text{ kg}\cdot\text{m}$, $4.3 \pm 1.1 \text{ ft}\cdot\text{lb}$)

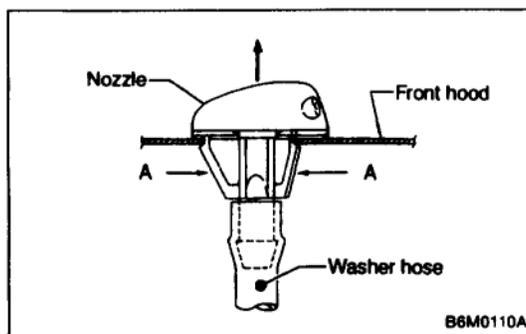


8) Remove wiper link from service hole in front panel.



4. WASHER TANK AND WASHER MOTOR

- 1) Remove washer tank attaching bolts.
- 2) Disconnect connectors of washer motors.
- 3) Disconnect washer hoses from each washer motor.
- 4) Remove washer tank and washer motor as an unit.
- 5) Separate washer motor from washer tank.



5. NOZZLE

- 1) Disconnect washer hose from nozzle.
- 2) Push nozzle clip in direction A as shown in figure.
- 3) Remove nozzle from engine hood.

CAUTION:

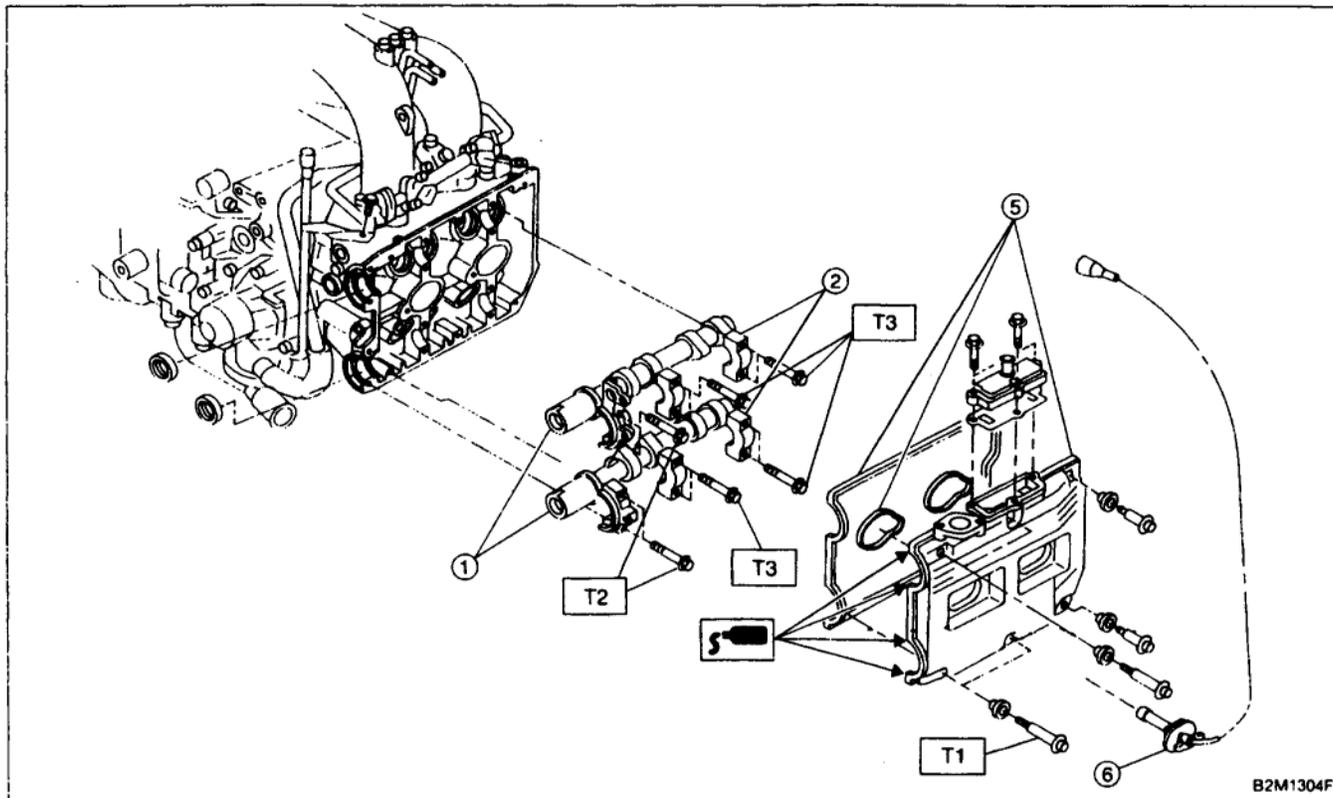
Do not pry nozzle off forcefully as this may scratch vehicle body.

6. COMBINATION SWITCH

Refer to 6-2 [W4B3] as for removal and installation of combination switch.

C: INSTALLATION

1. CAMSHAFT



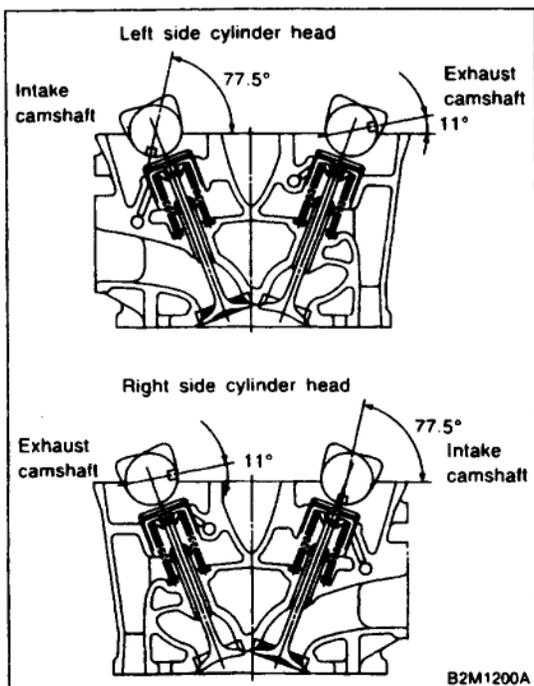
B2M1304F

Tightening torque: N·m (kg·m, ft·lb)

T1: 5 ± 0.5 (0.5 ± 0.05, 3.6 ± 0.4)

T2: 10 ± 0.7 (1.0 ± 0.07, 7.2 ± 0.5)

T3: 20 ± 2 (2.0 ± 0.2, 14.5 ± 1.4)



B2M1200A

1) Camshaft installation

Apply engine oil to cylinder head at camshaft bearing location before installing camshaft. Install camshaft so that rocker arm is close to or in contact with "base circle" of cam lobe.

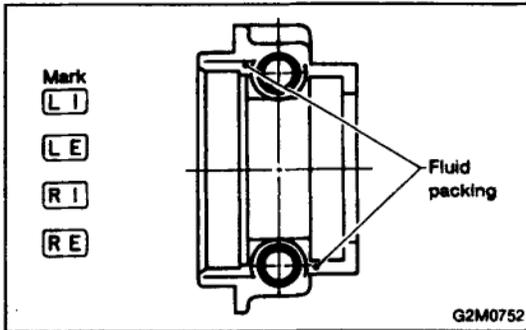
CAUTION:

● When camshafts are positioned as shown in figure, camshafts need to be rotated at a minimum to align with timing belt during installation.

● Right-hand camshaft need not be rotated when set at position shown in figure.

Left-hand intake camshaft: Rotate 80° clockwise.

Left-hand exhaust camshaft: Rotate 45° counter-clockwise.



2) Camshaft cap installation

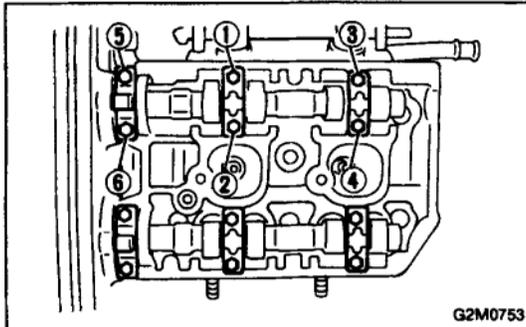
(1) Apply fluid packing sparingly to cap mating surface.

CAUTION:

Do not apply fluid packing excessively. Failure to do so may cause excess packing to come out and flow toward oil seal, resulting in oil leaks.

Fluid packing:

THREE BOND 1215 or equivalent

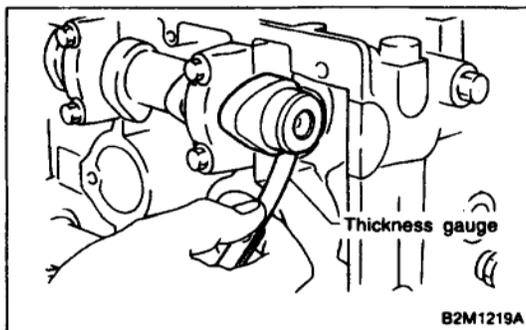


(2) Apply engine oil to cap bearing surface and install cap on camshaft as shown by identification mark.

(3) Gradually tighten cap in at least two stages in the numerical order shown in figure, and then tighten to specified torque.

(4) Similarly, tighten cap on exhaust side.

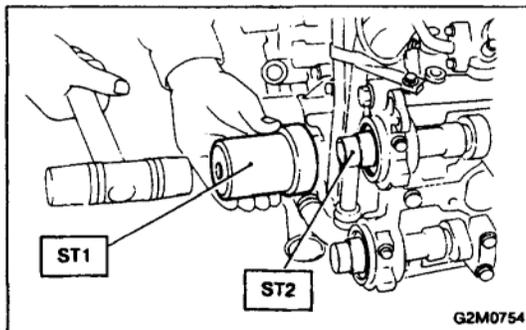
After tightening cap, ensure camshaft rotates only slightly while holding it at "base" circle.



3) Inspect for valve clearance.

Measure valve clearances using thickness gauge. <Ref. to 2-2 [07A2].☆8>

If necessary, adjust valve clearances. <Ref. to 2-2 [07B2].☆8>



4) Camshaft oil seal installation

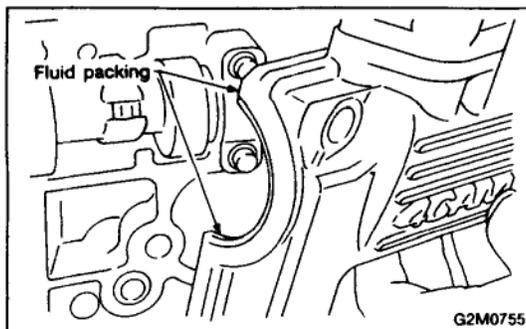
Apply grease to new oil seal lips and press onto front end of camshaft by using ST1 and ST2.

CAUTION:

Use a new oil seal.

ST1 499587100 OIL SEAL INSTALLER

ST2 499597000 OIL SEAL GUIDE



5) Rocker cover installation

(1) Install gaskets on rocker cover.

Install peripheral rocker cover gaskets.

(2) Apply fluid packing to four front open edges of peripheral gasket.

Fluid packing:

THREE BOND 1215 or equivalent

(3) Install rocker cover on cylinder head. Ensure gasket is properly positioned during installation.

8. Electrical Wiring Harness and Ground Point

Connector				Connecting to	
No.	Pole	Color	Area	No.	Name
E1	6	*	A-3	B20	Bulkhead wiring harness
E2	12	Gray	A-3	B21	
E3	16	Gray	A-3	B22	
E4	2	Blue	A-2		Purge control solenoid valve
E5	2	Light gray	A-2		Injector #1
E6	2	Dark gray	A-3		Injector #3
E7	3	Gray	A-3		Idle air control solenoid valve
E8	2	Brown	B-3		Engine coolant temperature sensor
E9	1	*	B-3		Thermometer
E10	2	Gray	B-3		Crankshaft position sensor
E11	1	*	B-3		Oil pressure switch
E12	3	Gray	A-3		Ignition coil
E13	3	Brown	A-3		Throttle position sensor
E14	2	Gray	B-3		Knock sensor
E15	2	Dark gray	B-4		Camshaft position sensor
E16	2	Light gray	B-4		Injector #2
E17	2	Dark gray	B-4		Injector #4
E18	2	Brown	B-3		EGR solenoid (AT)

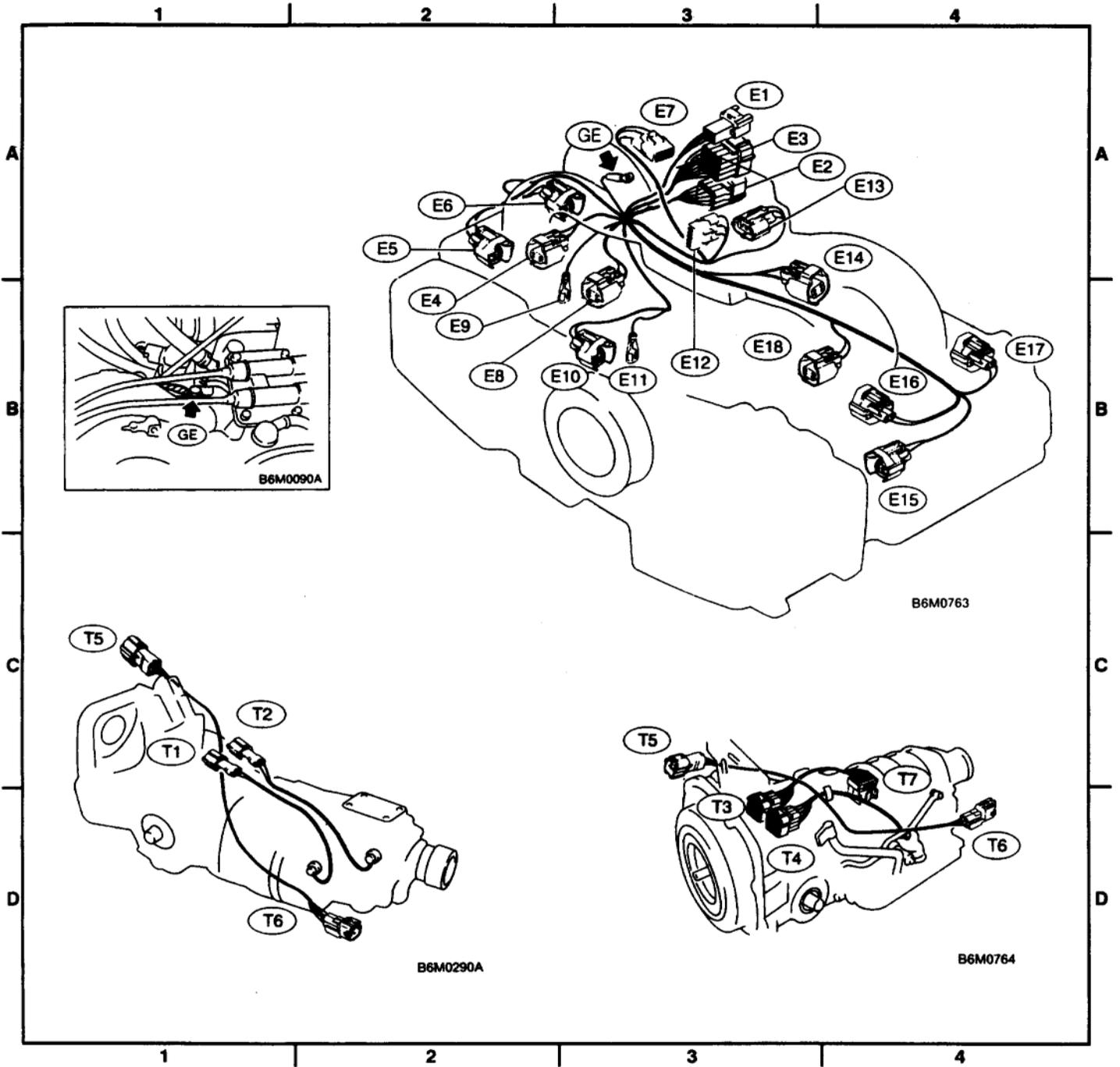
*: Non-colored

Connector				Connecting to	
No.	Pole	Color	Area	No.	Name
T1	2	Gray	C-1	B24	Bulkhead wiring harness (MT)
T2	2	Brown	C-1	B25	
T3	12	Gray	D-3	B12	Bulkhead wiring harness (AT)
T4	16	Gray	D-3	B11	
T5	4	Gray	C-1/C-3	B19	Bulkhead wiring harness
T6	4	Gray	D-2/D-4		Rear oxygen sensor
T7	12	*	C-4		Inhibitor switch (AT)

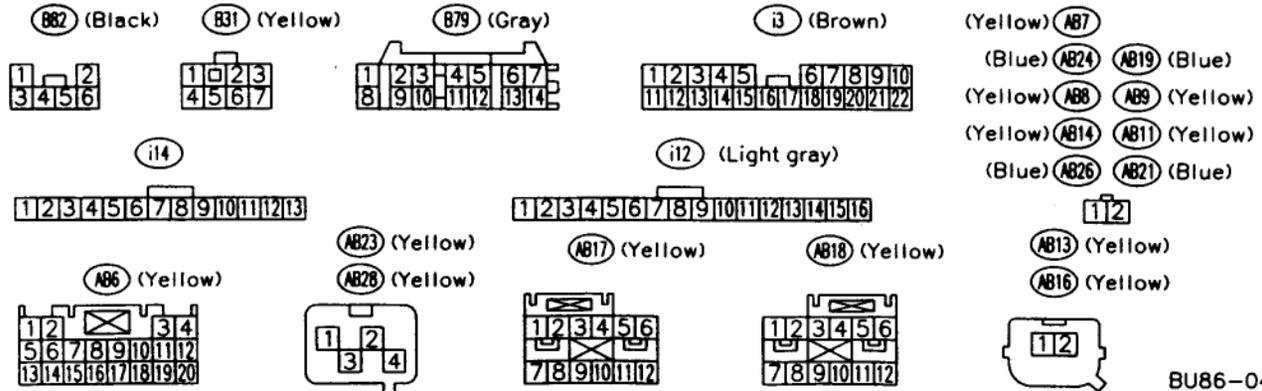
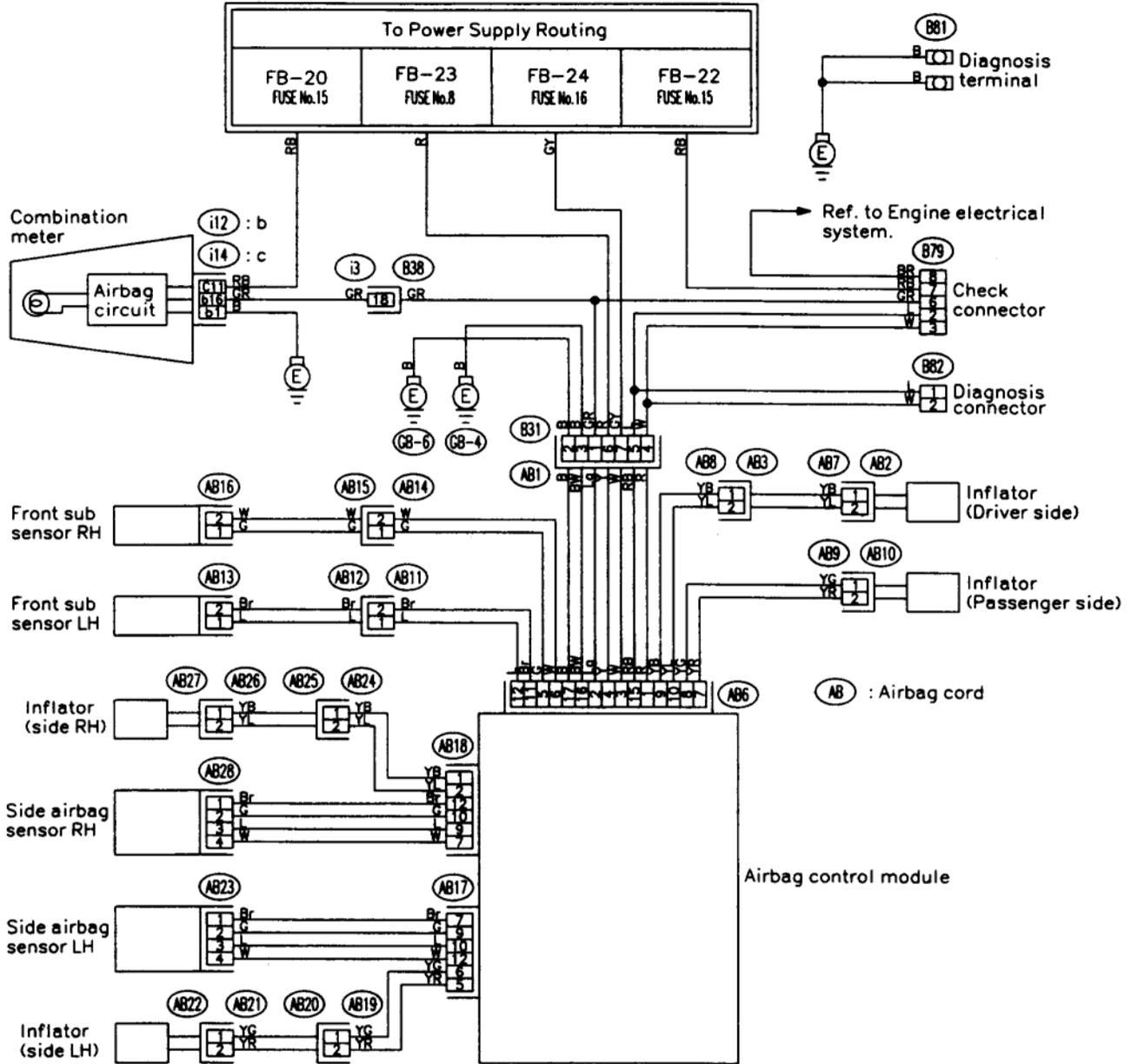
*: Non-colored

E: ENGINE WIRING HARNESS AND TRANSMISSION CORD

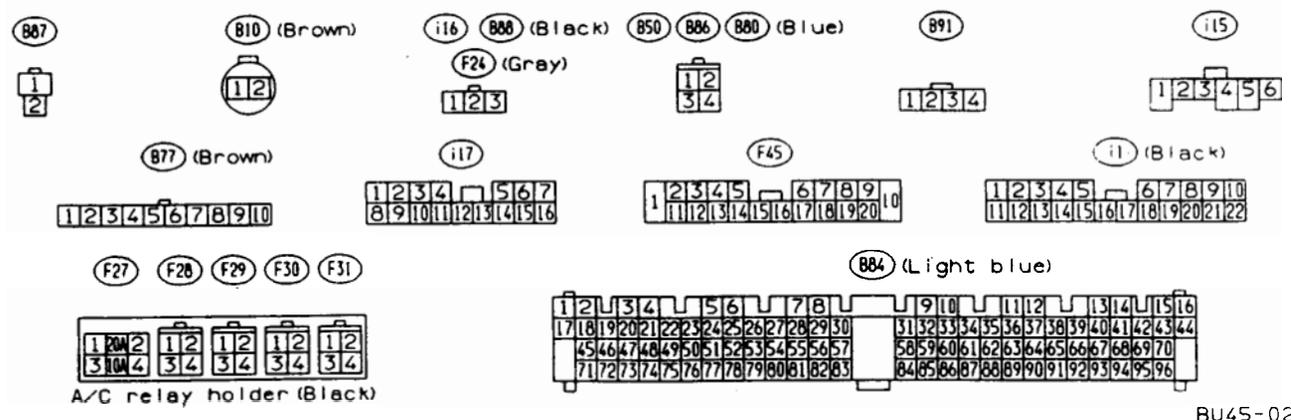
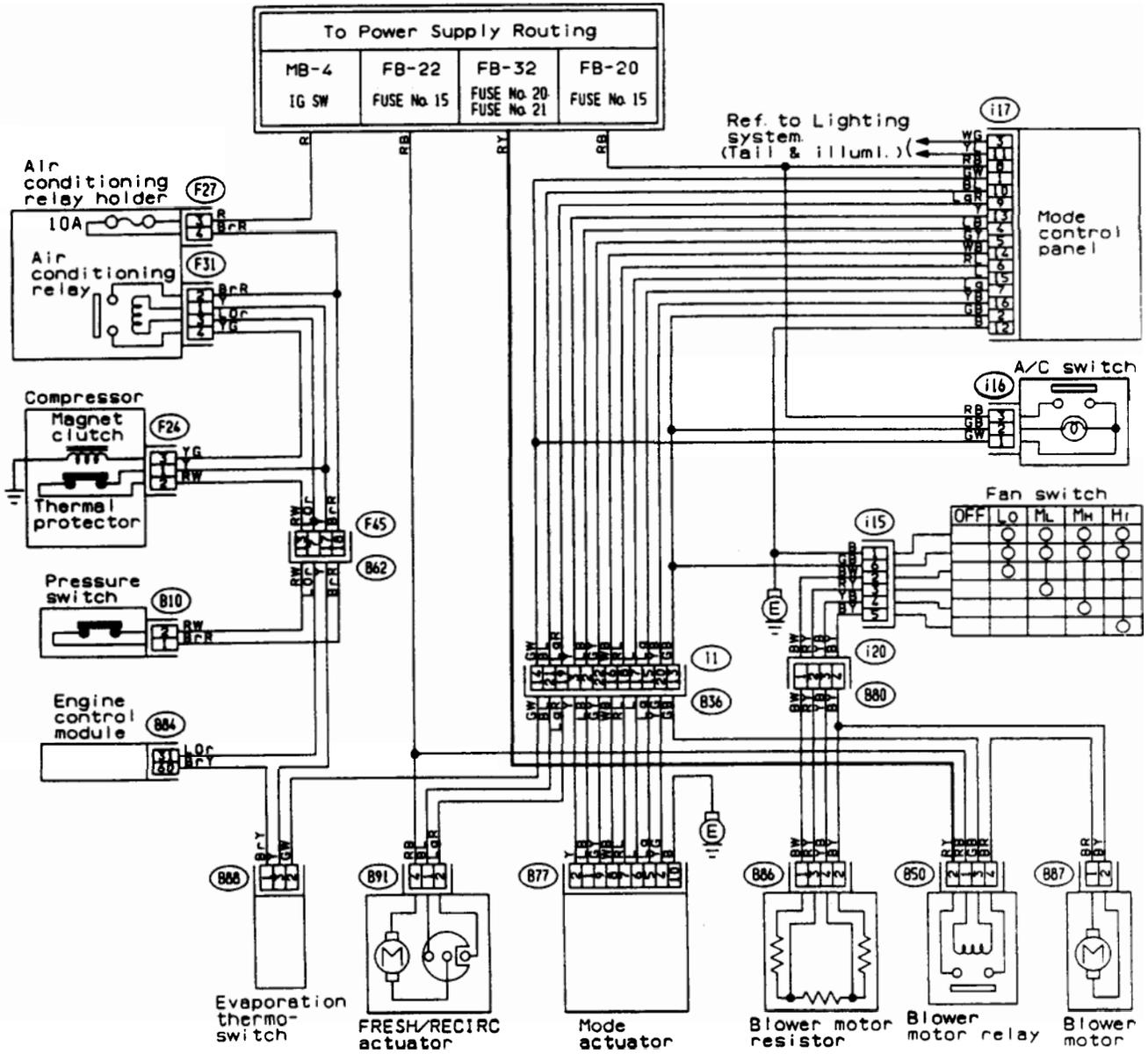
[D&E0]



C: AIRBAG SYSTEM



D: AIR CONDITIONING SYSTEM
1. LHD MODEL



Connector				Connecting to	
No.	Pole	Color	Area	No.	Name
E1	6	*	A-3	B20	Bulkhead wiring harness
E2	12	Gray	A-3	B21	
E3	16	Gray	A-3	B22	
E4	2	Blue	A-2		Purge control solenoid valve
E5	2	Light gray	A-2		Injector #1
E6	2	Dark gray	A-3		Injector #3
E7	3	Gray	A-3		Idle air control solenoid valve
E8	2	Brown	B-3		Engine coolant temperature sensor
E9	1	*	B-3		Thermometer
E10	2	Gray	B-3		Crankshaft position sensor
E11	1	*	B-3		Oil pressure switch
E12	3	Gray	A-3		Ignition coil
E13	3	Brown	A-3		Throttle position sensor
E14	2	Gray	B-3		Knock sensor
E15	2	Dark gray	B-4		Camshaft position sensor
E16	2	Light gray	B-4		Injector #2
E17	2	Dark gray	B-4		Injector #4
E18	2	Brown	B-3		EGR solenoid (AT)

*: Non-colored

Connector				Connecting to	
No.	Pole	Color	Area	No.	Name
T1	2	Gray	C-1	B24	Bulkhead wiring harness (MT)
T2	2	Brown	C-1	B25	
T3	12	Gray	D-3	B12	Bulkhead wiring harness (AT)
T4	16	Gray	D-3	B11	
T5	4	Gray	C-1/C-3	B19	Bulkhead wiring harness
T6	4	Gray	D-2/D-4		Rear oxygen sensor
T7	12	*	C-4		Inhibitor switch (AT)

*: Non-colored

E: ENGINE WIRING HARNESS AND TRANSMISSION CORD

[D&E0]

