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WIRING DIAGRAM SECTION

1. 4-door Sedan

1. DIMENSIONS

Model			1600		1800		2000
			FWD	AWD	FWD	AWD	
Overall length		mm (in)	4,350 (171.3), 4,375 (172.2)*1				4,340 (170.9)
Overall width		mm (in)	1,690 (66.5)				
Overall height (at CW)		mm (in)	1,400 (55.1)*2, 1,405 (55.3) 1,415 (55.7)*3	1,415 (55.7)	1,405 (55.3) 1,415 (55.7)*3	1,415 (55.7)	1,400 (55.1)
Compartment	Length	mm (in)	1,820 (71.7)				
	Width	mm (in)	1,385 (54.5)				
	Height	mm (in)	1,170 (46.1)				
Wheelbase		mm (in)	2,520 (99.2)				
Tread	Front	mm (in)	1,475 (58.1)*2 1,465 (57.7) 1,460 (57.5)*3	1,460 (57.5)	1,460 (57.5)	1,460 (57.5)	1,465 (57.7)
	Rear	mm (in)	1,465 (57.7)*2 1,455 (57.3) 1,450 (57.1)*3	1,455 (57.3)	1,455 (57.3) 1,450 (57.1)*3	1,455 (57.3)	1,455 (57.3)
Minimum road clearance		mm (in)	150 (5.9)	160 (6.3)	150 (5.9)	160 (6.3)	150 (5.9)

*1 : G.C.C. Countries
*2 : with 13 inch wheel
*3 : Australian model

2. ENGINE

Model		1600	1800	2000
Engine type		Horizontally opposed, liquid cooled, 4-cylinder, 4-stroke gasoline engine		
Valve arrangement		Overhead camshaft type		
Bore x Stroke	mm (in)	87.9 x 65.8 (3.461 x 2.591)	87.9 x 75 (3.461 x 2.95)	92 x 75 (3.62 x 2.95)
Displacement	cm^3 (cu in)	1,597 (97.45)	1,820 (111.06)	1,994 (121.67)
Compression ratio		9.4	9.5	8.0
Firing order		1 — 3 — 2 — 4		
Idle speed at Park/Neutral position	rpm	700		900
Maximum output	kW (PS)/rpm	66 (90)/5,600	76 (103)/5,600	155 (210)/6,000
Maximum torque	N.m (kg-m, ft-lb)/rpm	128 (13.0, 94)/4,000	147 (15.0, 108)/4,400	270 (27.6, 200)/4,800

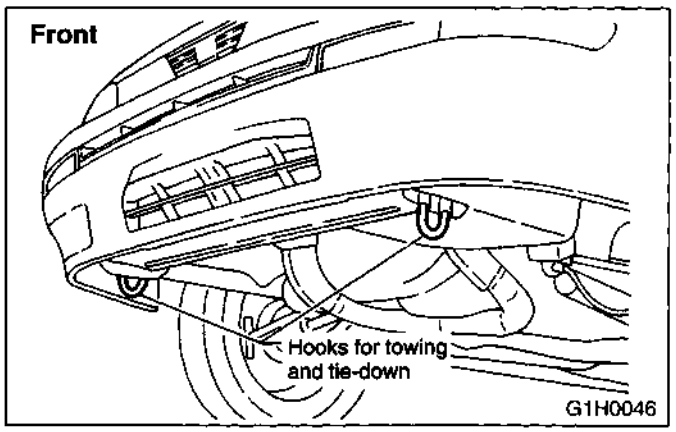
3. ELECTRICAL

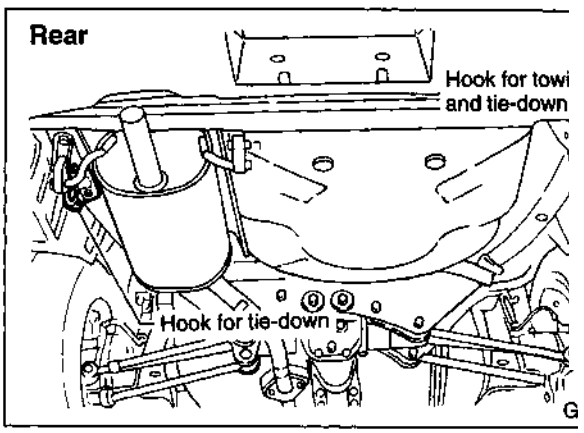
Model			1600	1800	2000
Ignition timing at idling speed		BTDC/rpm	15°/700		18°/900
Spark plug	Type and manufacturer		NGK: BKR6E (without catalyst) NGK: BKR6E-11 (with catalyst) CHAMPION: RC8YC4 (with catalyst)		NGK: PFR6G
Generator			12V — 75A		
Battery	Type and capacity (5HR)	For Europe	5MT: 12V — 48AH 4AT: 12V — 52AH		5MT: 12V — 48AH
		Others	5MT: 12V — 27AH 4AT: 12V — 36AH		5MT: 12V — 27AH or 12V — 48AH

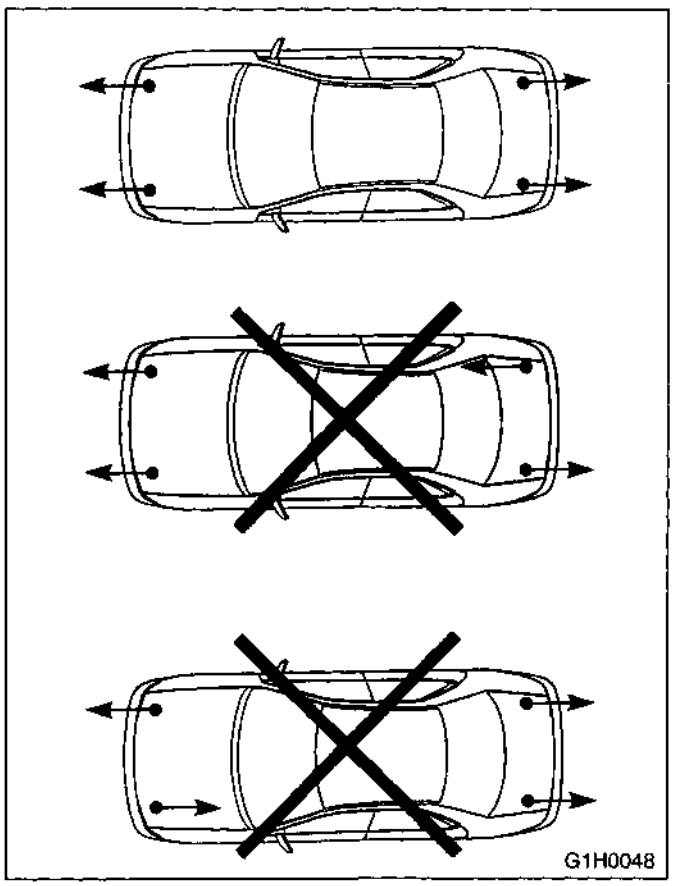
WARNING:
- **Never get under the vehicle while it is supported only by the jack. Always use safety to support body when you have to get under the car.**
- **Block the wheels diagonally by wheel chocks.**

CAUTION:
- **Make sure the jack is set at the correct position on the flange of side sill.**
- **Be careful not to set the jack at the air flap portion.**

3. TOWING AND TIE-DOWN HOOKS



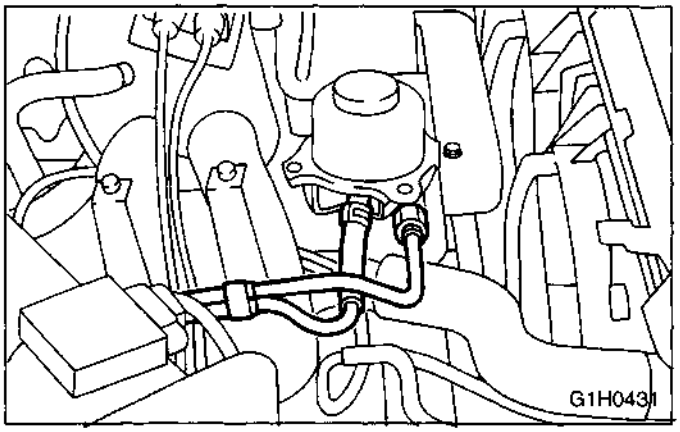




CAUTION:
- **Avoid towing another car with front t hooks.**
- **Do not tow a vehicle which is heavie towing vehicle.**
- **Do not apply excessive lateral load t ing hook.**
- **Wrap the towing rope with cloth to pr damaging bumper, etc.**
- **Keep the vehicle level during towin**
- **Tie the front and rear tie-down hook same direction.**

Recommended fluid	Manufacturer
"Dexron II or IIE" type automatic transmission fluid	B.P.
	CALTEX
	CASTROL
	MOBIL
	SHELL
	TEXACO

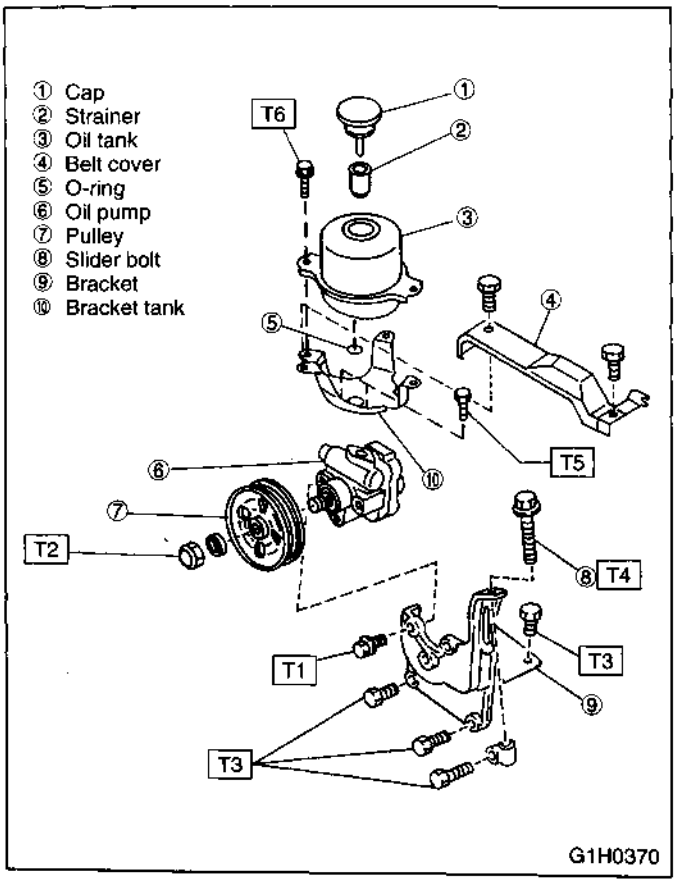
Fluid capacity:
0.7 ℓ (0.7 US qt, 0.6 Imp qt)



7. HOSES OF OIL PUMP FOR DAMAGES

Check pressure hose and return hose of pump for crack, swell or damage. Replace ho with new one if necessary.

NOTE:
Prevent hoses from revolving and/or turni when installing hoses.

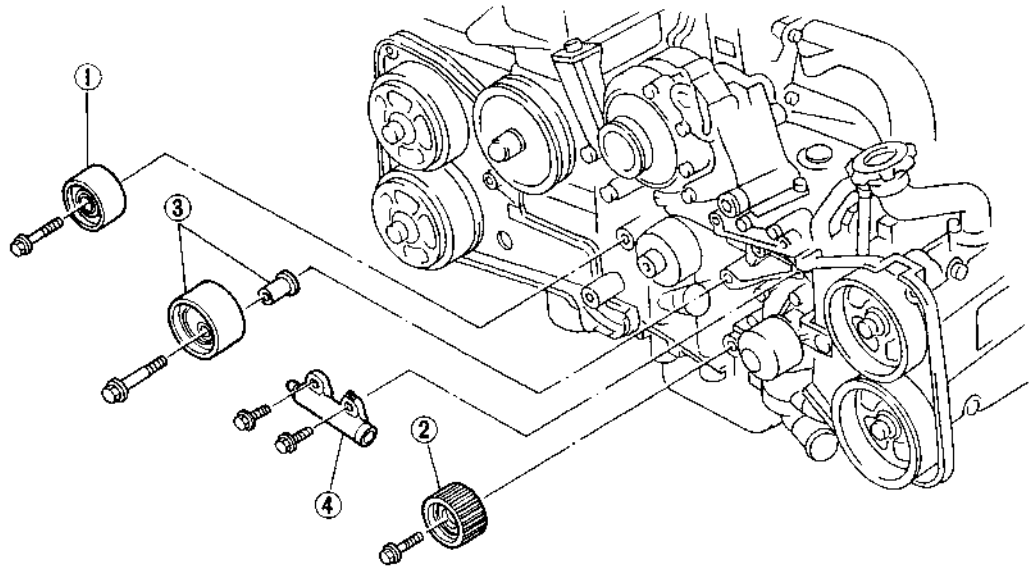


10. FITTING BOLTS AND NUTS

Inspect fitting bolts and nuts of oil pump ar bracket for looseness, and retighten them necessary.
Inspect and/or retighten them when engine cold.

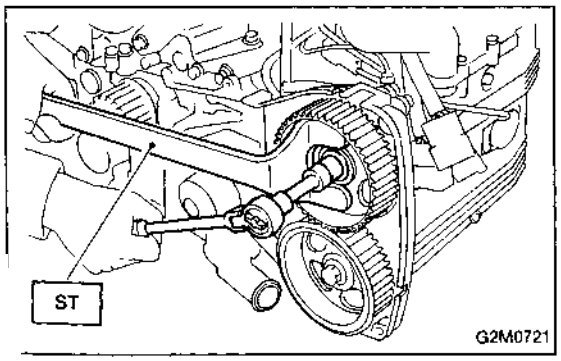
Tightening torque:
T1: 20.5 ± 2.5 N.m
(2.05 ± 0.25 kg-m, 15 ± 2 ft-lb)
T2: 52 ± 10 N.m
(5.3 ± 1.0 kg-m, 38.5 ± 7.5 ft-lb)
T3: 22 ± 2 N.m
(2.2 ± 0.2 kg-m, 15.5 ± 1.5 ft-lb)
T4: 8 ± 2 N.m
(0.8 ± 0.2 kg-m, 5.5 ± 1.5 ft-lb)
T5: 18^{+5}_{0} N.m
($1.8^{+0.5}_{0}$ kg-m, $13.0^{+3.6}_{0}$ ft-lb)
T6: 7.4 ± 2.0 N.m
(0.75 ± 0.20 kg-m, 5.4 ± 1.4 ft-lb)

3. BELT TENSIONER AND IDLER



G2M0720

1) Remove belt idler.
2) Remove belt idler No. 2.
3) Remove belt tensioner and spacer.
4) Remove belt tension adjuster.

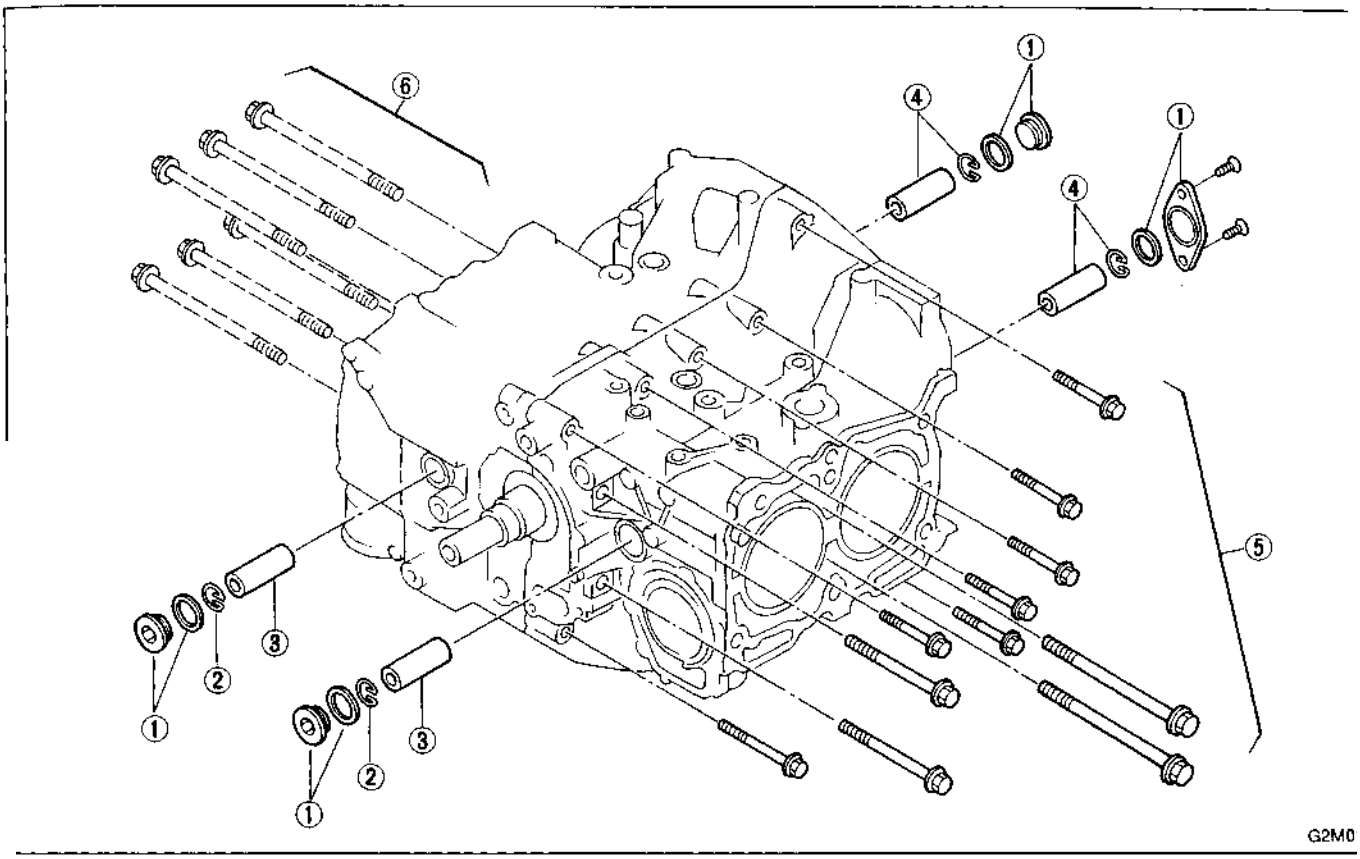


G2M0721

CAUTION:
After timing belt has been removed, never rotate intake and exhaust, camshaft sprocket.
If camshaft sprocket is rotated, the intake and exhaus valve heads strike together and valve stems are bent For this reason, when removing camshaft sprocket, locl the camshaft sprocket using ST so as to avoid turnin camshaft.
ST 499207100 CAMSHAFT SPROCKET WRENCH

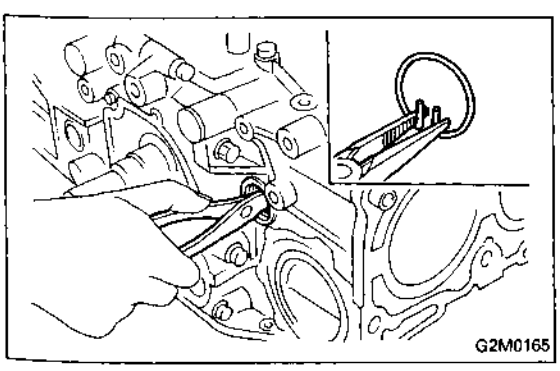
B: DISASSEMBLY

1. PISTON PIN AND CYLINDER BLOCK CONNECTIN(BOLT



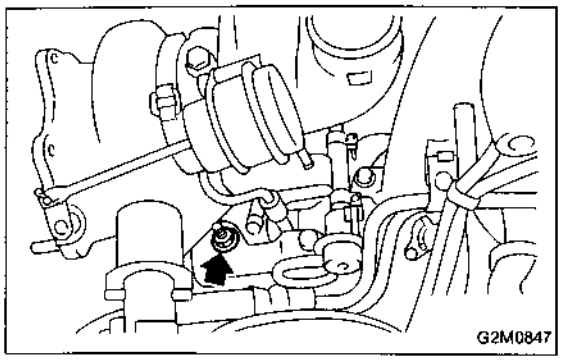
G2M0

1) Remove service hole cover and service hole plu using hexagon wrench (14 mm).



G2M0165

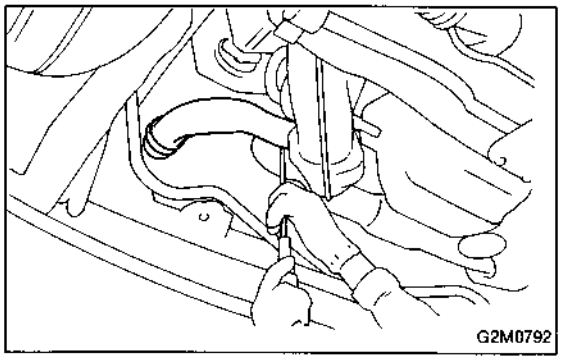
2) Rotate crankshaft to bring #1 and #2 pistons to B position, then remove piston circlip through service hole #1 and #2 cylinders.



17) Installation is in the reverse order of removal proc dure.

CAUTION:
- **When installing turbocharger unit, connect engi coolant outlet hose to turbocharger unit.**
- **Replace gasket with a new one.**

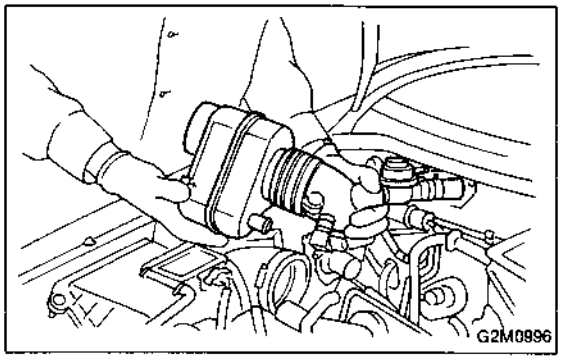
Tightening torque:
29 ± 3 N·m (3.0 ± 0.3 kg-m, 22 ± 2.2 ft-lb)



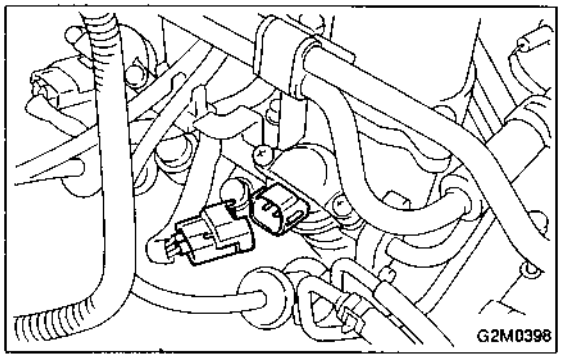
15. Fuel Injector

A: REMOVAL AND INSTALLATION

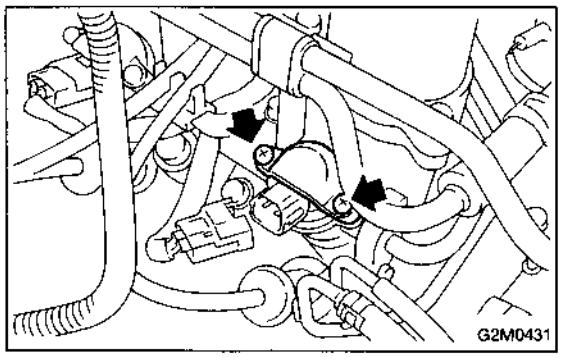
1) When removing the #1 fuel injector, remove coola filler tank.



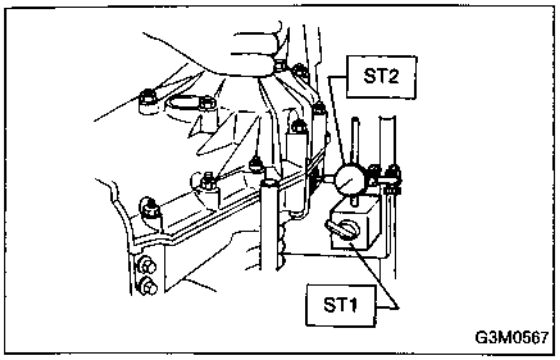
2) When removing the #3 fuel injector, remove resonat chamber and air inlet duct A.



3) Release fuel pressure.
4) Disconnect connector from fuel injector.



5) Remove fuel injector from fuel pipe assembly.



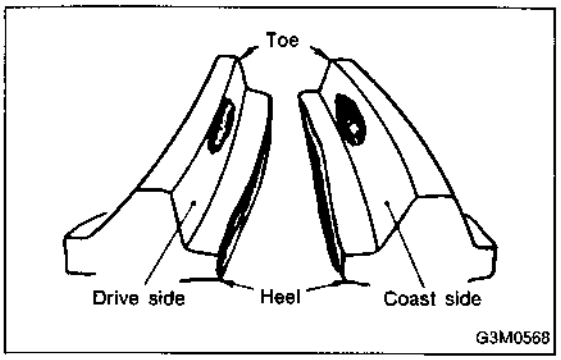
ST1 498247001 MAGNET BASE
ST2 498247100 DIAL GAUGE

Backlash:

0.13 — 0.18 mm (0.0051 — 0.0071 in)

NOTE:

- If backlash is outside specified range, adjust it by turning holder in right side case.
- Turning holder pawl 1/2 rotation changes backlash by approximately 0.04 mm (0.0016 in).

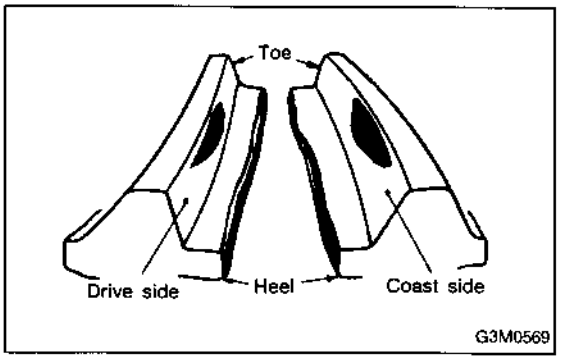


(9) Check tooth contact of hypoid gear as follows: Apply a uniform thin coat of red lead on both tooth surfaces of 3 or 4 teeth of the hypoid gear. Move the hypoid gear back and forth by turning the transmission main shaft until a definite contact pattern is developed on hypoid gear, and judge whether face contact is correct.

- Tooth contact is correct.

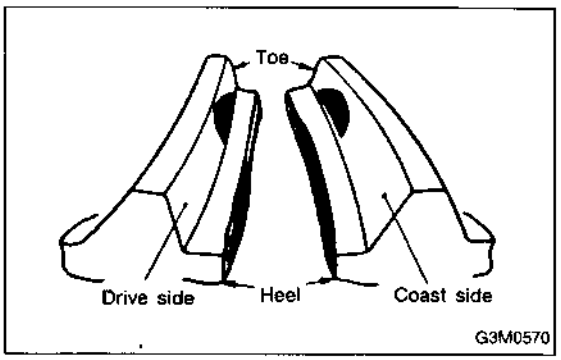
NOTE:

If it is incorrect, make the following correction.



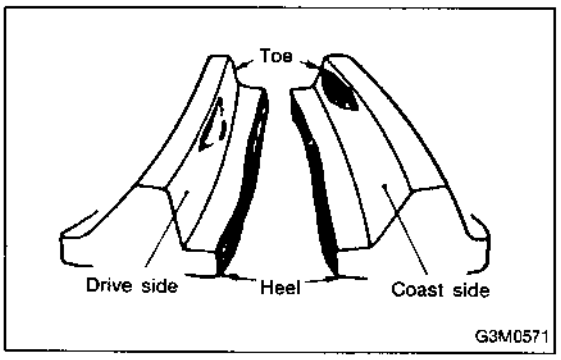
- Backlash is excessive.

To reduce backlash, loosen holder on the upper side (case right side) and turn in the holder on the lower side (case left side) by the same amount.



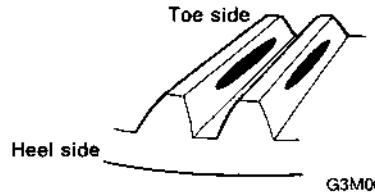
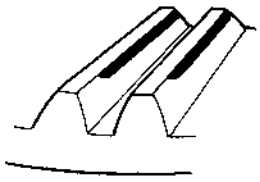
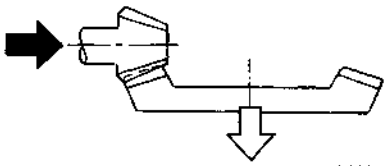
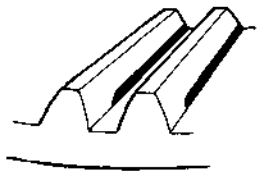
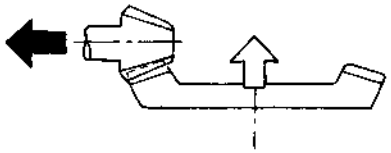
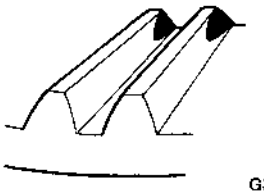
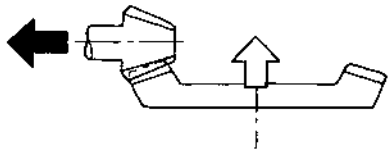
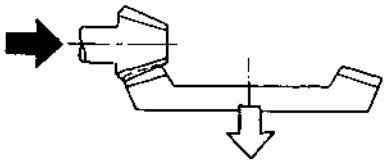
- Backlash is insufficient.

To increase backlash, loosen holder on the lower side (case left side) and turn in the holder on the upper side (case right side) by the same amount.



- The drive pinion shim selected before is too thick. Reduce its thickness.

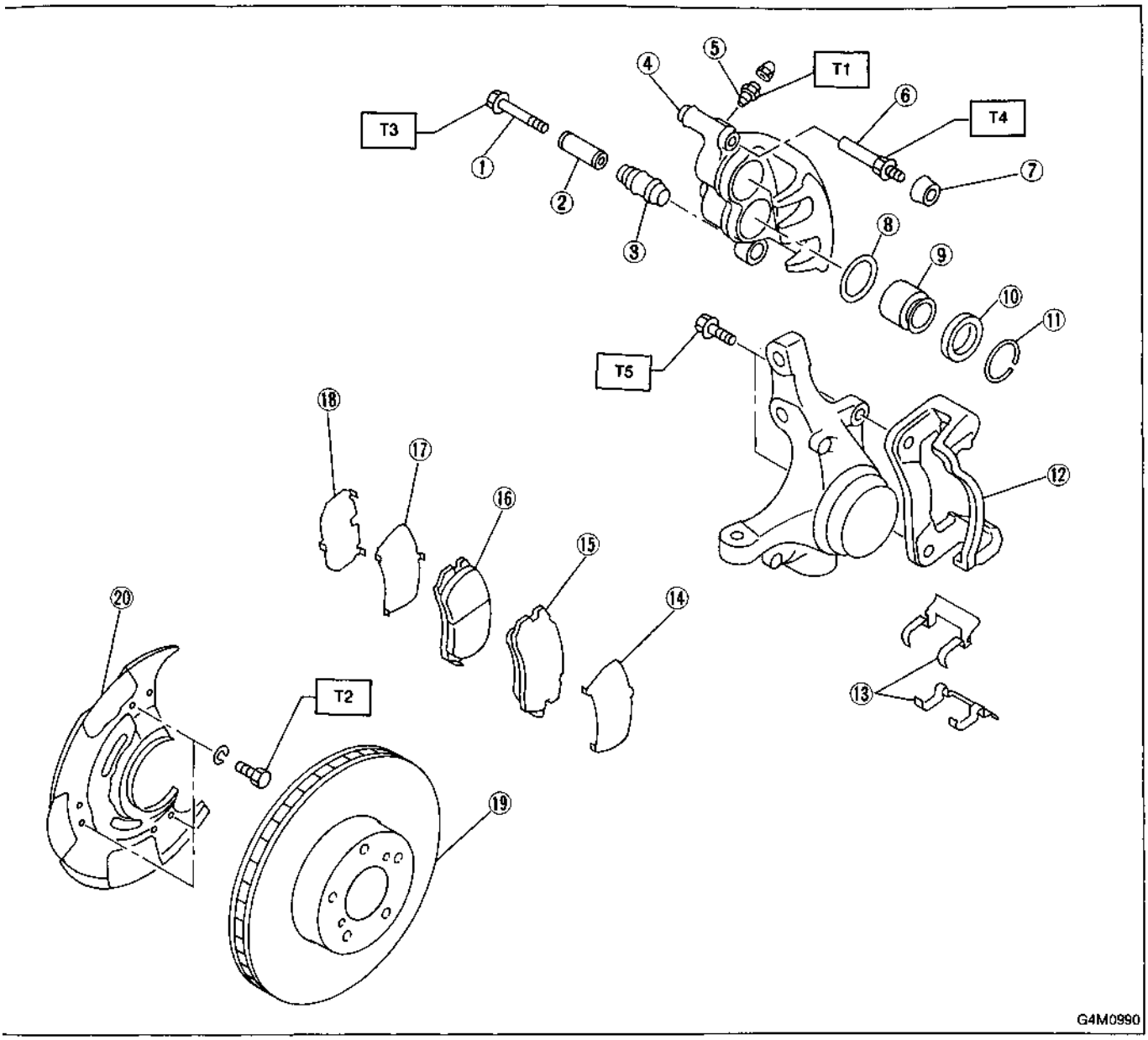
TOOTH CONTACT PATTERN

Condition	Contact pattern	Adjustment
Correct tooth contact Tooth contact pattern slightly shifted towards toe under no load rotation. (When loaded, contact pattern moves toward heel.)	 G3M0098A	
Face contact Backlash is too large.	This may cause noise and chipping at tooth ends.  G3M0098B	Increase thickness of drive pinion height adjusting shim in order to bring drive pinion closer to crown gear center.  G3M0098F
Flank contact Backlash is too small.	This may cause noise and stepped wear on surfaces.  G3M0098C	Reduce thickness of drive pinion height adjusting shim in order to move drive pinion away from crown gear.  G3M0098G
Toe contact Contact area is small.	This may cause chipping at toe ends.  G3M0098D	Adjust as for flank contact.  G3M0098G
Heel contact Contact area is small.	This may cause chipping at heel ends.  G3M0098E	Adjust as for face contact.  G3M0098F

➡ : Adjusting direction of drive pinion
⇨ : Adjusting direction of crown gear

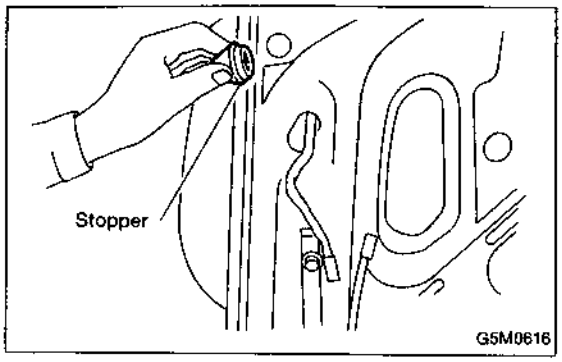
1. Front Disc Brake

2. TURBO MODEL



1 Lock pin
2 Lock pin sleeve
3 Lock pin boot
4 Caliper body
5 Air bleeder screw
6 Guide pin
7 Guide pin boot
8 Piston seal
9 Piston
10 Piston boot
11 Boot ring
12 Support
13 Pad clip
14 Outer shim
15 Pad (Outside)
16 Pad (Inside)
17 Inner shim
18 Shim
19 Disc rotor
20 Disc cover

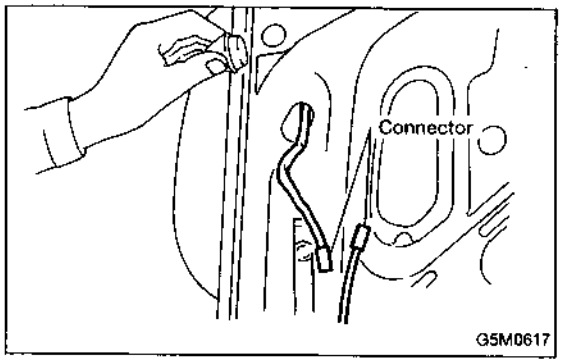
Tightening torque: N·m (kg-m, ft-lb)
T1: 8 ± 1 (0.8 ± 0.1, 5.8 ± 0.7)
T2: 14 ± 4 (1.4 ± 0.4, 10.1 ± 2.9)
T3: 36 ± 5 (3.7 ± 0.5, 26.8 ± 3.6)
T4: 49 ± 5 (5.0 ± 0.5, 36.2 ± 3.6)
T5: 78 ± 10 (8.0 ± 1.0, 58 ± 7)



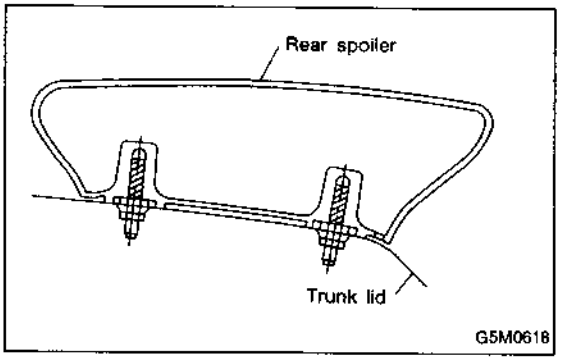
15. Rear Spoiler (4 door Sedan)

A: REMOVAL

1) Remove stoppers from both sides of trunk lid.



2) Disconnect high-mount stop lamp connector. (Stop lamp equipped vehicle only)



3) Remove nuts from rear spoiler.

CAUTION:
Be careful not to drop nuts into box section of trunk lid.

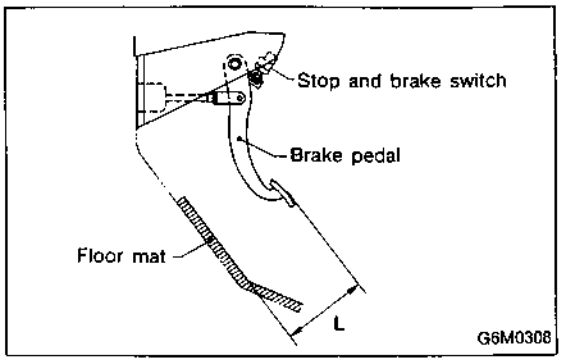
Tightening torque:
7.4 ± 2.0 N·m (0.75 ± 0.2 kg-m, 5.4 ± 1.4 ft-lb)

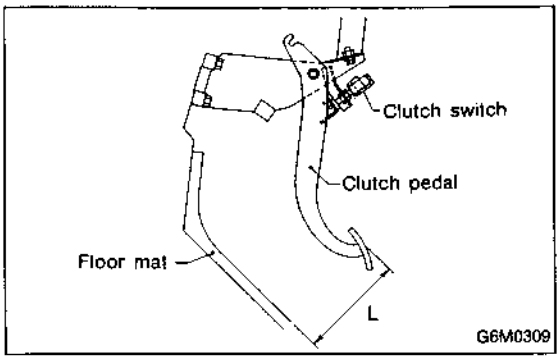
4) Lift rear spoiler and unfasten clips.
Remove spoiler from trunk lid.

CAUTION:
Be careful not to damage trunk lid.

B: INSTALLATION

Installation is in the reverse order of removal.





2. STOP AND BRAKE SWITCH

1) Disconnect stop and brake switch connector.
2) Remove stop and brake switch.

NOTE:
During installation, set brake pedal position by adjusting position of stop and brake switch.

Pedal position L:
125.9 mm (4.96 in)

Stop and brake switch tightening torque:
6 — 10 N·m (0.6 — 1.0 kg-m, 4.3 — 7.2 ft-lb)

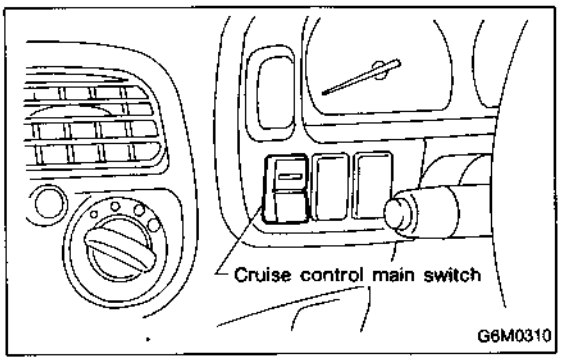
3. CLUTCH SWITCH

1) Disconnect clutch switch connector.
2) Remove clutch switch.

NOTE:
During installation, set clutch pedal position by adjusting position of clutch switch.

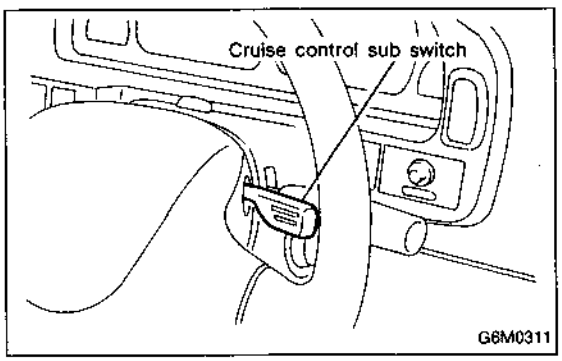
Pedal position L (distance between floor mat and pedal face):
142 — 150 mm (5.59 — 5.91 in)

Clutch switch tightening torque:
6 — 10 N·m (0.6 — 1.0 kg-m, 4.3 — 7.2 ft-lb)



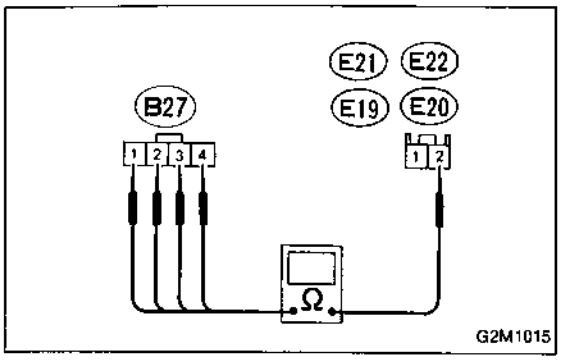
4. CRUISE CONTROL MAIN SWITCH

1) Remove meter visor.
2) Remove cruise control main switch by pushing it outward.



5. CRUISE CONTROL SUB SWITCH

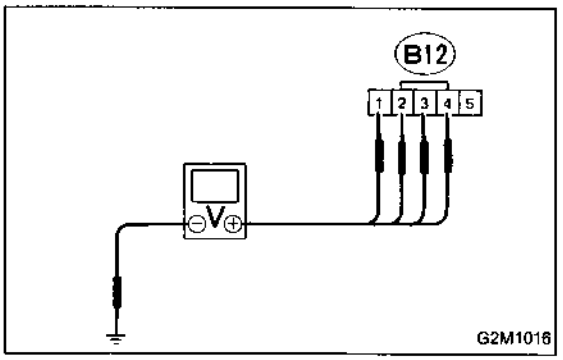
1) Remove horn pad and disconnect horn switch connector.
2) Remove attaching screws and then, remove cruise control sub switch.



4. CHECK HARNESS CONNECTOR BETWEEN IGNITOR AND EACH IGNITION COIL.

1) Turn ignition switch to OFF.
2) Disconnect connector from ignitor.
3) Measure resistance of harness connector between each ignition coil and ignitor.

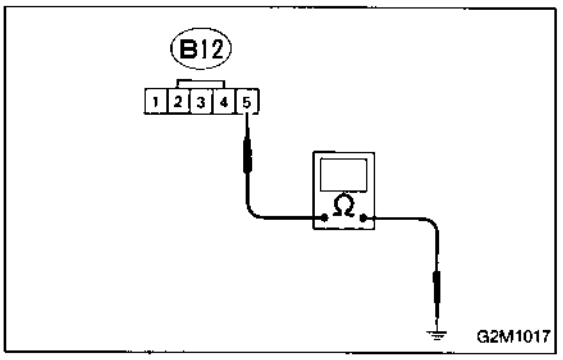
Connector & terminal / Specified resistance:
(B27) No. 1 — (E21) No. 2 / 10 Ω, max.
(B27) No. 3 — (E19) No. 2 / 10 Ω, max.
(B27) No. 2 — (E22) No. 2 / 10 Ω, max.
(B27) No. 4 — (E20) No. 2 / 10 Ω, max.



5. CHECK INPUT SIGNAL FOR IGNITOR.

Check if voltage varies synchronously with engine speed when cranking, while monitoring voltage between ignitor connector and body.

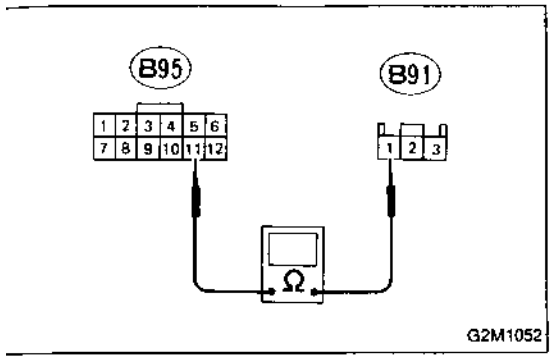
Connector & terminal / Specified voltage:
(B12) No. 1 — Body / 0.1 V, min. — 3.4 V, max.
(B12) No. 2 — Body / 0.1 V, min. — 3.4 V, max.
(B12) No. 3 — Body / 0.1 V, min. — 3.4 V, max.
(B12) No. 4 — Body / 0.1 V, min. — 3.4 V, max.



6. CHECK HARNESS CONNECTOR OF IGNITOR GROUND CIRCUIT.

1) Turn ignition switch to OFF.
2) Measure resistance between ignitor and body.

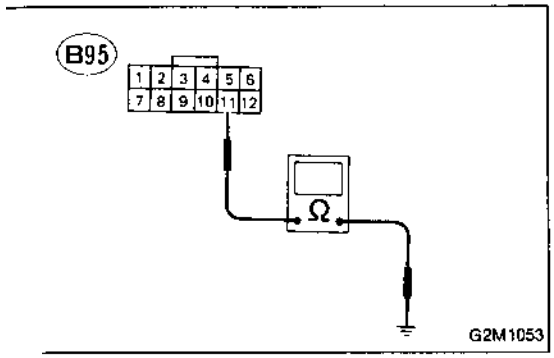
Connector & terminal / Specified resistance:
(B12) No. 5 — Body / 10 Ω, max.



2. CHECK HARNESS CONNECTOR BETWEEN ECM AND VEHICLE SPEED SENSOR 2.

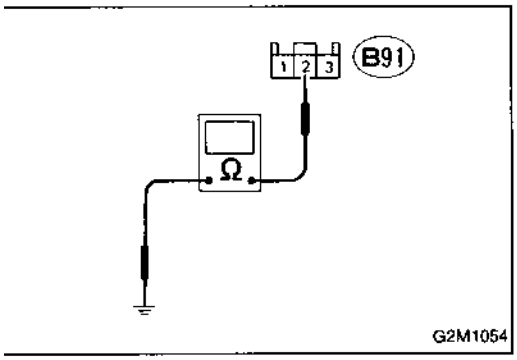
1) Turn ignition switch to OFF.
2) Disconnect connectors from ECM and vehicle speed sensor 2.
3) Measure resistance of harness connector between ECM and vehicle speed sensor 2.

Connector & terminal / Specified resistance:
(B95) No. 11 — (B91) No. 1 / 10 Ω, max.



4) Measure resistance of harness connector between ECM and body to make sure that circuit does not short.

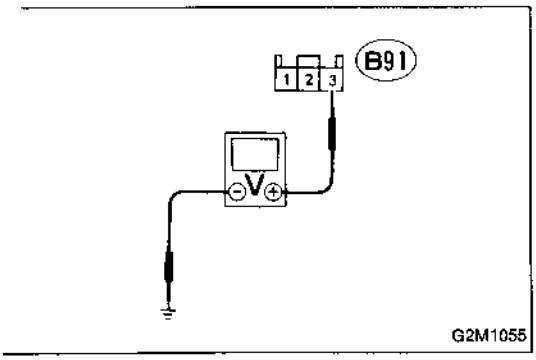
Connector & terminal / Specified resistance:
(B95) No. 11 — Body / 1 MΩ, min.



3. CHECK GROUND CIRCUIT OF VEHICLE SPEED SENSOR 2.

Measure resistance of harness connector between vehicle speed sensor 2 and body.

Connector & terminal / Specified resistance:
(B91) No. 2 — Body / 10 Ω, max.



4. CHECK POWER SUPPLY CIRCUIT OF VEHICLE SPEED SENSOR 2.

1) Turn ignition switch to ON.
2) Measure power supply voltage to vehicle speed sensor 2.

Connector & terminal / Specified voltage:
(B91) No. 3 — Body / 10 V, min.