



SUBARU®

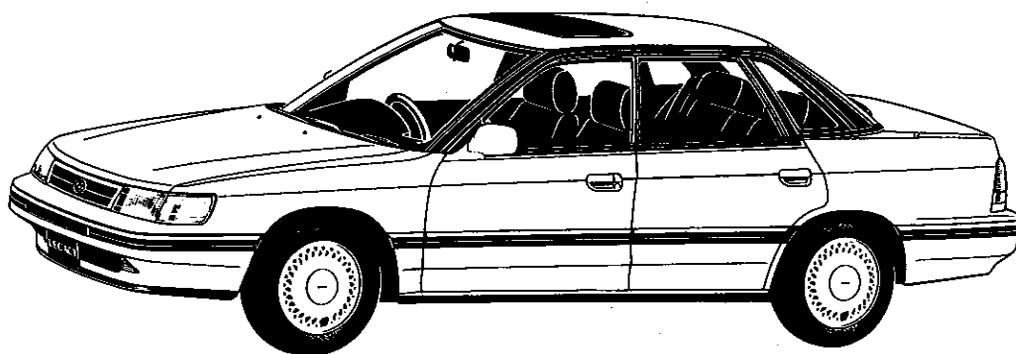
LIBERTY

1992

SERVICE

MANUAL

SECTION 1



FUJI HEAVY INDUSTRIES LTD.

QUICK REFERENCE INDEX

**SUBARU®
1992**

SERVICE MANUAL

FOREWORD

This service manual has been prepared to provide SUBARU service personnel with the necessary information and data for the correct maintenance and repair of SUBARU vehicle.

This manual include the procedures for maintenance disassembling, reassembling, inspection and adjustment of components and troubleshooting for guidance of both the fully qualified and the less-experienced mechanics. Please peruse and utilize this manual fully to ensure complete repair work for satisfying our customers by keeping their vehicle in optimum condition. When replacement of parts during repair work is needed, be sure to use SUBARU genuine parts.

All information, illustration and specifications contained in this manual are based on the latest product information available at the time of publication approval.

FUJI HEAVY INDUSTRIES LTD.

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1 GENERAL SECTION

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IMPORTANT SAFETY NOTICE

Providing appropriate service and repair is a matter of great importance in the serviceman's safety maintenance and safe operation, function and performance which the SUBARU vehicle possesses.

In case the replacement of parts or replenishment of consumables is required, genuine SUBARU parts whose parts numbers are designated or their equivalents must be utilized.

It must be made well known that the safety of the serviceman and the safe operation of the vehicle would be jeopardized if he used any service parts, consumables, special tools and work procedure manuals which are not approved or designated by SUBARU.

How to use this manual

- This Service Manual is divided into six volumes by section so that it can be used with ease at work. Refer to the Table of Contents, select and use the necessary section.
- Each chapter in the manual is basically made of the following five types of areas.

M : Mechanism and function
S : Specifications and service data
C : Component parts
W : Service procedure
(X : Service procedure)
(Y : Service procedure)
T : Troubleshooting

- The description of each area is provided with four types of titles different in size as shown below. The Title No. or Symbol prefixes each title in order that the construction of the article and the flow of explanation can be easily understood.

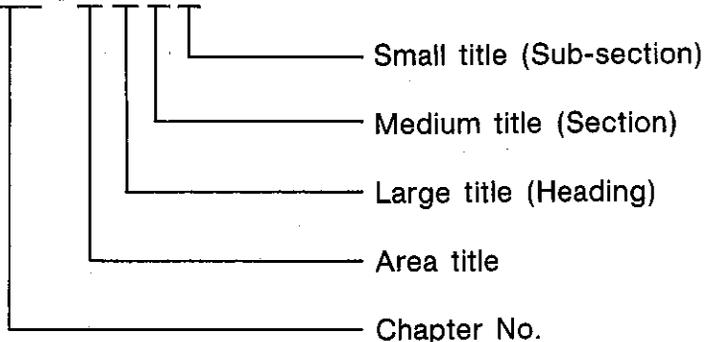
[Example of each title]

- Area title: W. Service procedure (one of the five types of areas)
- Large title (Heading): 1. Oil Pump (to denote the main item of explanation)
- Medium title (Section): A. REMOVAL (to denote the type of work in principle)
- Small title (Sub-section): 1. INNER ROTATOR (to denote a derivative item of explanation)

- The Title Index No. is indicated on the top left (or right) side of the page as the book is opened. This is useful for retrieving the necessary portion.

(Example of usage)

Refer to 2 - 4 [W 1 B 1]



Example of title placement

2-10 [W 1 A 0]

CLUTCH

W SERVICE PROCEDURE

1.General

A: PRECAUTION

When servicing clutch system, pay attention to the following items.

- 1) Check the routing of clutch cable for smoothness.
- 2) Excessive tightness or looseness of clutch cable have a bad influence upon the cable durability.
- 3) Apply grease sufficiently to the connecting portion of clutch pedal.
- 4) Apply grease sufficiently to the release lever portion.
- 5) Position clutch cable through the center of toeboard hole ... Adjustment is done by

2.RELEASE LEVER

Check lever pivot portion and the point of contact with holder for wear.

2.Release Bearing and Lever

A: REMOVAL

- In this manual, the following symbols are used.



: Should be lubricated with oil.



: Should be lubricated with grease.



: Sealing point



: Tightening torque

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6	ELECTRICAL SECTION	6-1 Engine Electrical System 6-2 Body Electrical System 6-3 Wiring Diagram and Trouble-shooting

SUBARU®

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**SERVICE
MANUAL**

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S SPECIFICATIONS

1. Except Australia

A: 4-DOOR SEDAN

ITEM	MODEL	4-DOOR SEDAN					
		1600	1800	1600	1800	2200	
		FWD					
		DL		GL		GX	
		CARB. 5MT	CARB. 5MT	CARB. 5MT	CARB. 4AT	MPFI 5MT	MPFI 4AT

1. DIMENSIONS

Overall length	mm (in)	4,545 (178.9)					
Overall width	mm (in)	1,690 (66.5)					
Overall height (at CW)	mm (in)	1,380 (54.3)			1,400 (55.1)		
Compartment	Length	1,875 (73.8)					
	Width	1,415 (55.7)					
	Height	1,155 (45.5)					
Wheelbase	mm (in)	2,580 (101.6)					
Tread	Front	1,475 (58.1)		1,485 (57.7)			
	Rear	1,465 (57.7)		1,465 (57.3)			
Minimum road clearance (at CW)	mm (in)	160 (6.3)					

2. WEIGHT

Curb weight (C.W.)	Front	kg (lb)	645 (1,420)	645 (1,420) 640 (1,410)*1	670 (1,475)	670 (1,475) 665 (1,465)*1	715 (1,575) 710 (1,565)*1	685 (1,510)	730 (1,610)
	Rear	kg (lb)	480 (1,060)	480 (1,060) 470 (1,040)*1	500 (1,105)	500 (1,105) 490 (1,080)*1	505 (1,115) 495 (1,090)*1	505 (1,115)	510 (1,125)
	Total	kg (lb)	1,125 (2,480)	1,125 (2,480) 1,110 (2,450)*1	1,170 (2,580)	1,170 (2,580) 1,155 (2,545)*1	1,220 (2,690) 1,205 (2,655)*1	1,190 (2,625)	1,240 (2,735)
Maximum permissible weight (M.P.W.)	Front	kg (lb)	950 (2,095)						
	Rear	kg (lb)	950 (2,095)						
	Total	kg (lb)	1,870 (4,125)						

3. ENGINE

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)	87.9 x 65.8 (3.461 x 2.591)	87.9 x 75 (3.461 x 2.95)		86.9 x 75 (3.415 x 2.95)
		Displacement	cm ³ (cu in)	1,597 (97.45)	1,820 (111.06)	1,597 (97.45)	1,820 (111.06)
Compression ratio		8.9	9.7	8.9	9.7	9.2	9.5
Firing order		1-3-2-4					
Idling speed at N or P position	rpm	900±50	800±50	900±50	800±50		800±100
Maximum output	kW (PS)/rpm	70 (95)/6,400	76 (103)/6,000	70 (95)/6,400	76 (103)/6,000		100 (136)/6,000
Maximum torque	N·m (kg-m, ft-lb)/rpm	123 (12.5, 90)/3,200	145 (14.8, 107)/3,200	123 (12.5, 90)/3,200	145 (14.8, 107)/3,200		189 (19.3, 140)/4,800

4. ELECTRICAL

Ignition timing at idling speed	BTDC	8°±2° (without vacuum)	4°±2° (without vacuum)	8°±2° (without vacuum)	4°±2° (without vacuum)	8°±2° (without vacuum)	23°±10°
Spark plug	Type and manufacturer	NGK: BKR6E NIPPONDENSO: K20PR-U					
Alternator		12 V—70 A					
Battery	Type and capacity (5HR)	For Europe	5MT: 55D23L-MF (12 V—48 Ah) 4AT: 75D23L-MF (12 V—52 Ah)				
		Others	5MT: 34B19L-MF (12 V—27 Ah) 4AT: 46B24L-MF (12 V—36 Ah)				

*1: Except Europe

When any of the following optional parts are installed, add the weight to the curb weight.

Weight of optional parts

kg (lb)

	A.B.S.		Power door lock	Power window	Sunroof	Power steering
	1800 & 2000 MPFI	2200 & 2000 TURBO				
Front	15 (33)	16 (35)	0 (0)	1 (2)	6 (13)	1 (2)
Rear	7 (15)	0 (0)	1 (2)	1 (2)	15 (33)	4 (9)
Total	22 (49)	16 (35)	1 (2)	2 (4)	21 (46)	5 (11)

SPECIFICATIONS

[S1A4] 1-1

4-DOOR SEDAN						
1800		2000			2200	
4WD						
GL			TURBO		GX	
CARB. 5MT	CARB. 4AT	MPFI 5MT	MPFI 4AT	MPFI 5MT	MPFI 5MT	MPFI 4AT

4,545 (178.9)						
1,690 (66.5)						
1,390 (54.7)			1,400 (55.1)			
1,875 (73.8)						
1,415 (55.7)						
1,155 (45.5)						
2,580 (101.6)						
1,460 (57.5)			1,465 (57.7)		1,460 (57.5)	
165 (6.5)				1,455 (57.3)		
					175 (6.9)	

700 (1,545) 695 (1,530)*1	730 (1,610)	710 (1,565)	740 (1,630)	785 (1,730)	725 (1,600) 715 (1,575)*1	755 (1,665) 745 (1,640)*1
565 (1,245) 555 (1,225)*1	670 (1,255)	565 (1,245)	570 (1,260)	590 (1,300)	580 (1,280) 570 (1,260)*1	585 (1,290) 575 (1,270)*1
1,265 (2,780) 1,250 (2,765)*1	1,300 (2,865)	1,275 (2,810)	1,310 (2,890)	1,375 (3,030)	1,305 (2,880) 1,285 (2,835)*1	1,340 (2,955) 1,320 (2,910)*1
950 (2,095)						
950 (2,095)						
1,870 (4,125)						

Horizontally opposed, liquid cooled, 4-cylinder, 4-stroke gasoline engine						
Overhead camshaft type						
87.9 x 75 (3.461 x 2.95)		92 x 75 (3.62 x 2.95)			96.9 x 75 (3.815 x 2.95)	
1,820 (111.06)		1,994 (121.67)			2,212 (135.0)	
9.7	9.2	9.5		8.0	9.5	
1—3—2—4						
800±50		800±100		900±100	800±100	
76 (103)/6,000		85 (116)/5,600		147 (200)/6,000	100 (136)/6,000	
145 (14.8, 107)/3,200		164 (16.7, 121)/4,400		260 (26.5, 192)/3,600	189 (19.3, 140)/4,800	

4°±2° (without vacuum)	8°±2° (without vacuum)	23°±10°		18°±10°	23°±10°	
NGK: BKR6E NIPPONDENSO: K20PR-U		NGK: BKR6E-11 NIPPONDENSO: K20PR-U11		NGK: BKR6EVX PFR6B PFR6G	NGK: BKR6E, [BKR6E-11]*2 NIPPONDENSO: K20PR-U, [K20PR-U11]*2	
12 V—70 A						
5MT: 55D23L-MF (12 V—48 Ah) 4AT: 75D23L-MF (12 V—52 Ah)						
5MT: 34B19L-MF (12 V—27 Ah) 4AT: 46B24L-MF (12 V—36 Ah)						

*1: Except Europe

*2: Catalyst equipped vehicles

ITEM	MODEL	4-DOOR SEDAN						
		1600	1800	1600	1800	2200		
		FWD						
		DL		GL		GX		
		CARB. 5MT	CARB. 5MT	CARB. 5MT	CARB. 5MT	CARB. 4AT	MPFI 5MT	MPFI 4AT

5. TRANSMISSION

Clutch type		DSPD	DSPD	DSPD	DSPD	TC	DSPD	TC	
Transmission type		*3	*3	*3	*3	*4	*3	*4	
Gear ratio	1st	3.636	3.636	3.636	3.636	2.785	3.545	2.785	
	2nd	2.105	2.105	2.105	2.105	1.483	2.111	1.483	
	3rd	1.428	1.428	1.428	1.428	1.000	1.448	1.000	
	4th	1.093	1.093	1.093	1.093	0.729	1.088	0.729	
	5th	0.885	0.885	0.885	0.885	—	0.871	—	
	Reverse	3.583	3.583	3.583	3.583	2.696	3.416	2.696	
Auxiliary transmission gear ratio		High	—	—	—	—	—	—	
		Low	—	—	—	—	—	—	
Reduction gear (Front drive)	1st reduction	Type of gear	—	—	—	Helical	—	Helical	
		Gear ratio	—	—	—	1.000	—	1.000	
	Final reduction	Type of gear	Hypoid						
		Gear ratio	4.111	3.900	4.111	3.900	4.444	3.700	4.111
Reduction gear (Rear drive)	Transfer reduction	Type of gear	—	—	—	—	—	—	
		Gear ratio	—	—	—	—	—	—	
	Final reduction	Type of gear	—	—	—	—	—	—	
		Gear ratio	—	—	—	—	—	—	

6. STEERING

Type	Rack and pinion
Turns, lock to lock	Manual steering: 4.5, Power steering: 3.3
Minimum turning circle m (ft)	Wall to wall: 11.0 (36.1)/Curb to curb: 10.2 (33.5)

7. SUSPENSION

Front	Macpherson strut type, Independent, Coil spring
Rear	Dual link strut type, Independent, Coil spring

8. BRAKE

Service brake system	Dual circuit hydraulic with vacuum suspended power unit	
Front	Ventilated disc brake	
Rear	Drum brake (Leading and trailing type)*5	Disc brake
Parking brake	Mechanical on rear brakes	

9. TIRE

Size	165R13 82T	165R13 82T 165R13 82H	175/70R14 84S	165R13 82T 165R13 82H	185/70R14 87H 185/70R14 88H
Type	Steel belted radial, Tubeless				

10. CAPACITY

Fuel tank	ℓ (US gal, Imp gal)	60 (15.9, 13.2)						
Engine oil	Upper level	ℓ (US qt, Imp qt) 4.5 (4.8, 4.0)						
	Lower level	ℓ (US qt, Imp qt) 3.5 (3.7, 3.1)						
Transmission gear oil	ℓ (US qt, Imp qt)	2.6 (2.7, 2.3)	2.6 (2.7, 2.3)	2.6 (2.7, 2.3)	2.6 (2.7, 2.3)	—	3.3 (3.5, 2.9)	—
Automatic transmission fluid	ℓ (US qt, Imp qt)	—	—	—	—	8.3 (8.8, 7.3)	—	8.3 (8.8, 7.3)
AT differential gear oil	ℓ (US qt, Imp qt)	—	—	—	—	1.2 (1.3, 1.1)	—	1.2 (1.3, 1.1)
4WD rear differential gear oil	ℓ (US qt, Imp qt)	—						
Power steering fluid	ℓ (US qt, Imp qt)	0.7 (0.7, 0.6)						
Engine coolant	ℓ (US qt, Imp qt)	Approx. MT: 6.3 (6.7, 5.5)				Approx. MT: 5.9 (6.2, 5.2)		
		AT: 6.2 (6.6, 5.5)				AT: 5.8 (6.1, 5.1)		

DSPD: Dry Single Plate Diaphragm

TC: Torque Converter

*3: 5-forward speeds with synchromesh and 1-reverse speed

*4: Electronically controlled fully-automatic, 4-forward speeds and 1-reverse speed

*5: When optional ABS is equipped, rear brake shall be a disc brake.

SPECIFICATIONS

[S1A10] 1-1

4-DOOR SEDAN						
1800		2000			2200	
		4WD				
GL					TURBO	
CARB. 5MT	CARB. 4AT	MPFI 5MT	MPFI 4AT	MPFI 5MT	MPFI 5MT	MPFI 4AT

DSPD *6	TC *4	DSPD *6	TC *4	DSPD *6	DSPD *6	TC *4
3.545	2.785	3.545	2.785	3.545	3.545	2.785
2.111	1.483	2.111	1.483	1.947	2.111	1.483
1.448	1.000	1.448	1.000	1.366	1.448	1.000
1.088	0.729	1.088	0.729	0.972	1.088	0.729
0.871	—	0.871	—	0.780	0.871	—
3.416	2.696	3.416	2.696	3.416	3.416	2.696
—	—	—	—	—	—	—
—	—	—	—	—	—	—
—	Helical	—	Helical	—	—	Helical
—	1.000	—	1.000	—	—	1.000
Hypoid						
4.111	4.444	4.111	4.444	3.900	3.900	4.111
Helical	—	Helical	—	Helical	Helical	—
1.000	—	1.000	—	1.100	1.000	—
Hypoid						
4.111	4.444	4.111	4.444	3.545	3.900	4.111

Rack and pinion
Manual steering: 4.5, Power steering: 3.3, 3.0 ... [TURBO]
Wall to wall: 11.0 (36.1)/Curb to curb: 10.1 (33.1), 10.8 (34.8) ... [TURBO]

Macpherson strut type, Independent, Coil spring
Dual link strut type, Independent, Coil spring

Dual circuit hydraulic with vacuum suspended power unit		
Ventilated disc brake		
Drum brake (Leading and trailing type)*5	Ventilated disc brake	Disc brake
Mechanical on rear brakes		

175/70R14 84T 175/70R14 84H	175/70R14 84T	205/60R15 91V	185/70R14 87H 185/70R14 88H
Steel belted radial, Tubeless			

60 (15.9, 13.2)						
4.5 (4.8, 4.0)						
3.5 (3.7, 3.1)						
3.5 (3.7, 3.1)	—	3.5 (3.7, 3.1)	—	3.5 (3.7, 3.1)	3.5 (3.7, 3.1)	—
—	8.3 (8.8, 7.3)	—	8.3 (8.8, 7.3)	—	—	8.3 (8.8, 7.3)
—	1.2 (1.3, 1.1)	—	1.2 (1.3, 1.1)	—	—	1.2 (1.3, 1.1)
0.8 (0.8, 0.7)						
0.7 (0.7, 0.6)						
Approx. MT: 6.3 (6.7, 5.5) AT: 6.2 (6.6, 5.5)		Approx. MT: 6.1 (6.4, 5.4) AT: 6.0 (6.3, 5.3)		Approx. 7.2 (7.6, 6.3)	Approx. MT: 5.9 (6.2, 5.2) AT: 5.8 (6.1, 5.1)	

*6: 5-forward speeds with synchromesh and 1-reverse speed — with center differential and viscous coupling

B: STATION WAGON AND TOURING WAGON

ITEM	MODEL	STATION WAGON						
		1600		1800		1800		
		FWD						4WD
		DL			GL			DL
CARB. 5MT	CARB. 5MT	CARB. 5MT	CARB. 5MT	CARB. 4AT	CARB. 5MT	SPFI 5MT		

1. DIMENSIONS

Overall length	mm (in)	4,620 (181.9)					
Overall width	mm (in)	1,690 (66.5)					
Overall height (at CW)	mm (in)	1,420 (55.9)					
Compartment	Length	mm (in)	1,820 (71.7)				
	Width	mm (in)	1,415 (55.7)				
	Height	mm (in)	1,165 (45.9)				
Wheelbase	mm (in)	2,595 (101.8)					
Tread	Front	mm (in)	1,475 (58.1)		1,465 (57.7)		1,460 (57.5)
	Rear	mm (in)	1,460 (57.5)		1,450 (57.1)		1,450 (57.1)
Minimum road clearance (at CW)	mm (in)	160 (6.3)					

2. WEIGHT

Curb weight (C.W.)	Front	kg (lb)	630 (1,390)	625 (1,380)	655 (1,445)	655 (1,445) 650 (1,430)*1	695 (1,530)	675 (1,490)
	Rear	kg (lb)	550 (1,210)	540 (1,190)	565 (1,245)	565 (1,245) 555 (1,225)*1	560 (1,235)	615 (1,355)
	Total	kg (lb)	1,180 (2,600)	1,165 (2,570)	1,220 (2,690)	1,220 (2,690) 1,205 (2,655)*1	1,255 (2,765)	1,290 (2,845)
Maximum permissible weight (M.P.W.)	Front	kg (lb)	950 (2,095)					950 (2,095)
	Rear	kg (lb)	950 (2,095)					1,000 (2,205)
	Total	kg (lb)	1,900 (4,190)					1,950 (4,300)

3. ENGINE

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)	87.9 x 65.8 (3.461 x 2.591)	87.9 x 75 (3.461 x 2.95)		
Displacement	cm ³ (cu in)	1,597 (97.45)	1,820 (111.06)	1,597 (97.45)	1,820 (111.06)		
Compression ratio		8.9	9.7	8.9	9.7	9.2	9.7
Firing order		1-3-2-4					
Idling speed at N or P position	rpm	900±50	800±50	900±50	800±50		850±100
Maximum output	kW (PS)/rpm	70 (95)/6,400	76 (103)/6,000	70 (95)/6,400	76 (103)/6,000		
Maximum torque	N·m (kg-m, ft-lb)/rpm	123 (12.5, 90)/ 3,200	145 (14.8, 107)/ 3,200	123 (12.5, 90)/ 3,200	145 (14.8, 107)/3,200		147 (15.0, 108)/3,200

4. ELECTRICAL

Ignition timing at idling speed	BTDC	8°±2° (without vacuum)	4°±2° (without vacuum)	8°±2° (without vacuum)	4°±2° (without vacuum)	8°±2° (without vacuum)	20°±10°
Spark plug	Type and manufacturer	NGK: BKR6E NIPPONDENSO: K20PR-U					NGK: BKR6E-11 NIPPONDENSO: K20PR-U11
Alternator		12 V—70 A					
Battery	Type and capacity (5HR)	For Europe	5MT: 55D23L-MF (12 V—48 Ah) 4AT: 75D23L-MF (12 V—52 Ah)				
		Others	5MT: 34B19L-MF (12 V—27 Ah) 4AT: 46B24L-MF (12 V—36 Ah)				

*1: Except Europe

When any of the following optional parts are installed, add the weight to the curb weight.

Weight of optional parts

kg (lb)

	A.B.S.		Power door lock	Power window	Air conditioner	Sunroof		Power steering	Roof rail
	1800 & 2000 MPFI	2200 & 2000 TURBO				Station wagon	Touring wagon		
Front	15 (33)	16 (35)	0 (0)	1 (2)	26 (57)	6 (13)	5 (11)	7 (15)	1 (2)
Rear	7 (15)	0 (0)	1 (2)	1 (2)	-2 (-4)	15 (33)	18 (35)	-1 (-2)	4 (9)
Total	22 (49)	16 (35)	1 (2)	2 (4)	24 (53)	21 (46)	21 (46)	6 (13)	5 (11)

SPECIFICATIONS

[S1B4] 1-1

STATION WAGON		TOURING WAGON							
1800	2000	1800		2000			2200		
DL		GL			TURBO		GX		
CARB. 5MT	MPFI 5MT	CARB. 5MT	CARB. 4AT	MPFI 5MT	MPFI 4AT	MPFI 5MT	MPFI 5MT	MPFI 5MT*7	MPFI 4AT

4,620 (181.9)										
1,690 (66.5)										
1,430 (56.3)		1,480 (58.3)			1,470 (57.9)		1,480 (58.3)		1,470 (57.9)	
1,820 (71.7)										
1,415 (55.7)										
1,165 (45.5)		1,205 (47.4)								
2,580 (101.8)										
1,460 (57.5)					1,465 (57.7)		1,460 (57.5)			
1,450 (57.1)				1,455 (57.3)			1,450 (57.1)		1,455 (57.3)	
165 (6.5)		175 (6.9)			165 (6.5)		175 (6.9)			

665 (1,465)	680 (1,500)	695 (1,535) 690 (1,520)*1	720 (1,590) 715 (1,575)*1	705 (1,555)	730 (1,610)	770 (1,700)	710 (1,565) 700 (1,545)*1	715 (1,575)	745 (1,640) 735 (1,620)*1
605 (1,335)	615 (1,355)	640 (1,410) 630 (1,390)*1	645 (1,420) 635 (1,400)*1	640 (1,410)	645 (1,420)	660 (1,455)	655 (1,445) 645 (1,420)*1	655 (1,445)	655 (1,445) 645 (1,425)*1
1,270 (2,800)	1,295 (2,855)	1,335 (2,945) 1,320 (2,910)*1	1,365 (3,010) 1,350 (2,975)*1	1,345 (2,965)	1,375 (3,030)	1,430 (3,155)	1,365 (3,010) 1,345 (2,965)*1	1,370 (3,020)	1,400 (3,085) 1,380 (3,045)*1
950 (2,095)		950 (2,095)							
1,000 (2,205)		1,030 (2,270)							
1,950 (4,300)		1,950 (4,300)							

Horizontally opposed, liquid cooled, 4-cylinder, 4-stroke gasoline engine							
Overhead camshaft type							
87.9 x 75 (3.461 x 2.95)	92 x 75 (3.62 x 2.95)	87.9 x 75 (3.461 x 2.95)		92 x 75 (3.62 x 2.95)		96.9 x 75 (3.815 x 2.95)	
1,820 (111.06)	1,994 (121.67)	1,820 (111.06)		1,994 (121.67)		2,212 (135.0)	
9.7	9.5	9.7	9.2	9.5	8.0	9.5	
1-3-2-4							
800±50	800±100	800±50	800±100	900±100	800±100		
76 (103)/6,000	85 (116)/5,600	76 (103)/6,000	85 (116)/5,600	147 (200)/6,000	100 (136)/6,000		
145 (14.8, 107)/3,200	164 (16.7, 121)/4,400	145 (14.8, 107)/3,200	164 (16.7, 121)/4,400	260 (26.5, 192)/3,600	189 (19.3, 140)/4,800		

4°±2° (with-out vacuum)	8°±2° (with-out vacuum)	4°±2° (with-out vacuum)	8°±2° (with-out vacuum)	23°±10°	18°±10°	23°±10°
NGK: BKR6E NIPPON-DENSO: K20PR-U	NGK: BKR6E-11 NIPPON-DENSO: K20PR-U11	NGK: BKR6E NIPPONDENSO: K20PR-U		NGK: BKR6E-11 NIPPONDENSO: K20PR-U11	NGK: BKR6EVX PFR6B PFR6G	NGK: BKR6E, [BKR6E-11]*2 NIPPONDENSO: K20PR-U, [K20PR-U11]*2
12 V—70 A						
5MT: 55D23L-MF (12 V—48 Ah) 4AT: 75D23L-MF (12 V—52 Ah)						
5MT: 34B19L-MF (12 V—27 Ah) 4AT: 46B24L-MF (12 V—36 Ah)						

*1: Except Europe

*2: Catalyst equipped vehicles

*7: Pneumatic suspension equipped vehicles

ITEM	MODEL	STATION WAGON						
		1600	1800	1600	1800		4WD	
		DL			GL			DL
		CARB. 5MT	CARB. 5MT	CARB. 5MT	CARB. 5MT	CARB. 4AT	SPFI 5MT	

5. TRANSMISSION

Clutch type		DSPD				TC	DSPD	
Transmission type		*3				*4	*8	
Gear ratio	1st	3.636				2.785	3.545	
	2nd	2.105				1.438	2.111	
	3rd	1.428				1.000	1.448	
	4th	1.093				0.729	1.088	
	5th	0.885				—	0.871	
	Reverse	3.538				2.696	3.538	
Auxiliary transmission gear ratio		High				—	1.000	
		Low				—	1.592	
Reduction gear (Front drive)	1st reduction	Type of gear	—				Helical	—
		Gear ratio	—				1.000	—
	Final reduction	Type of gear	Hypoid				—	—
		Gear ratio	4.111	3.900	4.111	3.900	4.444	4.111
Reduction gear (Rear drive)	Transfer reduction	Type of gear	—				—	Helical
		Gear ratio	—				—	1.000
	Final reduction	Type of gear	—				—	Hypoid
		Gear ratio	—				—	4.111

6. STEERING

Type	Rack and pinion	
Turns, lock to lock	Manual steering: 4.5, Power steering: 3.3	
Minimum turning circle	m (ft)	Wall to wall: 11.0 (36.1)/Curb to curb: 10.2 (33.5) ... FWD, Curb to curb: 10.1 (33.1) ... 4WD

7. SUSPENSION

Front	Macpherson strut type, Independent, Coil spring
Rear	Dual link strut type, Independent, Coil spring

8. BRAKE

Service brake system	Dual circuit hydraulic with vacuum suspended power unit
Front	Ventilated disc brake
Rear	Drum brake (Leading and trailing type)*5
Parking brake	Mechanical on rear brakes

9. TIRE

Size	165R13 82T	175/70R14 84S	175/70R14 84S 175/70R14 84T
Type	Steel belted radial, Tubeless		

10. CAPACITY

Fuel tank	ℓ (US gal, Imp gal)	60 (15.9, 13.2)	
Engine oil	Upper level	ℓ (US qt, Imp qt) 4.6 (4.8, 4.0)	
	Lower level	ℓ (US qt, Imp qt) 3.5 (3.7, 3.1)	
Transmission gear oil	ℓ (US qt, Imp qt)	2.6 (2.7, 2.3)	3.3 (3.6, 2.9)
Automatic transmission fluid	ℓ (US qt, Imp qt)	—	8.3 (8.8, 7.3)
AT differential gear oil	ℓ (US qt, Imp qt)	—	1.2 (1.3, 1.1)
4WD rear differential gear oil	ℓ (US qt, Imp qt)	—	0.8 (0.8, 0.7)
Power steering fluid	ℓ (US qt, Imp qt)	0.7 (0.7, 0.6)	
Engine coolant	ℓ (US qt, Imp qt)	Approx. MT: 6.3 (6.7, 5.5) AT: 6.2 (6.6, 5.5)	

DSPD: Dry Single Plate Diaphragm

TC: Torque Converter

*3: 5-forward speeds with synchromesh and 1-reverse speed

*4: Electronically controlled fully-automatic, 4-forward speeds and 1-reverse speed

*5: When optional ABS is equipped, rear brake shall be a disc brake.

*8: 5x2-forward speeds with synchromesh and 1-reverse speed — with selective 4WD system

SPECIFICATIONS

[S1B10] 1-1

STATION WAGON		TOURING WAGON							
1800	2000	1800			2000			2200	
4WD									
DL		GL				TURBO	GX		
CARB. 5MT	MPFI 5MT	CARB. 5MT	CARB. 4AT	MPFI 5MT	MPFI 4AT	MPFI 5MT	MPFI 5MT	MPFI 5MT*7	MPFI 4AT

DSPD *8	DSPD *8	DSPD *9	TC *4	DSPD *9	TC *4	DSPD *6	DSPD *9	TC *4	
3.545	3.545	3.545	2.785	3.545	2.785	3.545	3.545	2.785	
2.111	2.111	2.111	1.438	2.111	1.483	1.947	2.111	1.483	
1.448	1.448	1.448	1.000	1.448	1.000	1.366	1.448	1.000	
1.088	1.088	1.088	0.729	1.088	0.729	0.972	1.088	0.729	
0.871	0.871	0.871	—	0.871	—	0.780	0.871	—	
3.416	3.416	3.416	2.696	3.416	2.696	3.416	3.416	2.696	
1.000	1.000	1.000	—	1.000	—	—	1.000	—	
1.592	1.196	1.592	—	1.196	—	—	1.196	—	
—	—	—	Helical	—	Helical	—	—	Helical	
—	—	—	1.000	—	1.000	—	—	1.000	
Hypoid									
4.111	4.111	4.111	4.444	4.111	4.444	3.900	3.900	4.111	
Helical	Helical	Helical	—	Helical	—	Helical	Helical	—	
1.000	1.000	1.000	—	1.000	—	1.100	1.000	—	
Hypoid									
4.111	4.111	4.111	4.444	4.111	4.444	3.545	3.900	4.111	

Rack and pinion
Manual steering: 4.5, Power steering: 3.3, 3.2 ... [TURBO]
Wall to wall: 10.2 (33.5)/Curb to curb: 10.1 (33.1), 10.6 (34.8) ... [TURBO]

Macpherson strut type, Independent, Coil spring	*10
Dual link strut type, Independent, Coil spring	*11

Dual circuit hydraulic with vacuum suspended power unit		
Ventilated disc brake		
Drum brake (Leading and trailing type)*5	Ventilated disc brake	Disc brake
Mechanical on rear brakes		

175/70R14 84S 175/70R14 84T	175/70R14 84T	185/70R14 87H 185/70R14 88H	205/60R15 91V	185/70R14 87H 185/70R14 88H
Steel belted radial, Tubeless				

60 (15.9, 13.2)								
4.5 (4.8, 4.0)								
3.5 (3.7, 3.1)								
3.3 (3.5, 2.9)	3.3 (3.5, 2.9)	3.5 (3.7, 3.1)	—	3.5 (3.7, 3.1)	—	3.5 (3.7, 3.1)	3.5 (3.7, 3.1)	—
—	—	—	8.3 (8.8, 7.3)	—	8.3 (8.8, 7.3)	—	—	8.3 (8.8, 7.3)
—	—	—	1.2 (1.3, 1.1)	—	1.2 (1.3, 1.1)	—	—	1.2 (1.3, 1.1)
0.8 (0.8, 0.7)								
0.7 (0.7, 0.6)								
Approx. 6.3 (6.7, 5.5)	Approx. 6.1 (6.4, 5.4)	Approx. MT: 6.3 (6.7, 5.5) AT: 6.2 (6.6, 5.5)	Approx. MT: 6.1 (6.4, 5.4) AT: 6.0 (6.3, 5.3)	Approx. 7.2 (7.6, 6.3)	Approx. MT: 5.9 (6.2, 5.2) AT: 5.8 (6.1, 5.1)			

- *6: 5-forward speeds with synchromesh and 1-reverse speed — with center differential and viscous coupling
- *7: Pneumatic suspension equipped vehicle
- *9: 5x2-forward speeds with synchromesh and 1-reverse speed — with center differential and viscous coupling
- *10: Macpherson strut type, Independent, Pneumatic suspension with height control
- *11: Dual link strut type, Independent, Pneumatic suspension with height control

2. Australia

A: 4-DOOR SEDAN AND TOURING WAGON

ITEM	MODEL	4-DOOR SEDAN			
		2200			
		FWD			
		LX		GX	
		MPFI 5MT	MPFI 4AT	MPFI 5MT	MPFI 4AT

1. DIMENSIONS

Overall length	mm (in)	4,545 (178.9)	
Overall width	mm (in)	1,690 (66.5)	
Overall height (at CW)	mm (in)	1,400 (55.1)	
Compartment	Length	mm (in)	1,875 (73.8)
	Width	mm (in)	1,415 (55.7)
	Height	mm (in)	1,150 (45.3)
Wheelbase	mm (in)	2,580 (101.6)	
Tread	Front	mm (in)	1,485 (57.7)
	Rear	mm (in)	1,455 (57.3)
Minimum road clearance (at CW)	mm (in)	170 (6.7)	

2. WEIGHT

Curb weight (C.W.)	Front	kg (lb)	680 (1,500)	715 (1,575)	685 (1,510)	720 (1,590)
	Rear	kg (lb)	505 (1,115)	515 (1,135)	510 (1,125)	520 (1,145)
	Total	kg (lb)	1,185 (2,615)	1,230 (2,710)	1,195 (2,635)	1,240 (2,735)
Gross vehicle weight (G.V.W.)	Front	kg (lb)	935 (2,060)			
	Rear	kg (lb)	845 (1,865)			
	Total	kg (lb)	1,780 (3,925)			

3. ENGINE

Engine type	Horizontally opposed, liquid cooled, 4-cylinder, 4-stroke gasoline engine	
Valve arrangement	Overhead camshaft type	
Bore x Stroke	mm (in)	96.9 x 75 (3.815 x 2.95)
Displacement	cm ³ (cu in)	2,212 (135.0)
Compression ratio	9.5	
Firing order	1-3-2-4	
Idling speed at N or P position	rpm	800 ± 100
Maximum output	kW (PS)/rpm	100 (136)/6,000
Maximum torque	N·m (kg-m, ft-lb)/rpm	189 (19.3, 140)/4,800

4. ELECTRICAL

Ignition timing at idling speed	BTDC	23° ± 10°
Spark plug	Type and manufacturer	NGK: BKR6E-11 NIPPONDENSO: K20PR-U11
Alternator	12 V—70 A	
Battery	Type and capacity (6HR)	5MT: 34B19L-MF (12 V—27 Ah) 4AT: 46B24L-MF (12 V—36 Ah)

When any of the following optional parts are installed, add the weight to the curb weight.

Weight of optional parts

kg (lb)

	Power door lock & power window	Power door lock & power window & cruise control	Sunroof		Leather seats	Front fog light
			4-DOOR SEDAN	TOURING WAGON		
Front	1 (2)	3 (7)	6 (13)	5 (11)	2 (4)	2 (4)
Rear	2 (4)	2 (4)	15 (33)	16 (35)	5 (11)	0 (0)
Total	3 (7)	5 (11)	21 (46)	21 (46)	7 (15)	2 (4)

SPECIFICATIONS

[S2A4] 1-1

4-DOOR SEDAN			TOURING WAGON			
2000	2200		2200			
4WD			FWD		4WD	
TURBO	GX		GX			
MPFI 5MT	MPFI 5MT	MPFI 4AT	MPFI 5MT	MPFI 4AT	MPFI 5MT	MPFI 4AT

4,545 (178.9)			1,690 (66.5)			
1,400 (55.1)			1,480 (58.3)		1,470 (57.9)	
-			1,875 (73.8)		-	
-			1,415 (55.7)		-	
1,150 (45.3)			-		1,205 (47.4)	
-			2,580 (101.6)			
1,465 (57.7)		1,460 (57.5)		1,465 (57.7)		1,460 (57.5)
1,455 (57.3)			1,450 (57.1)		1,455 (57.3)	
165 (6.5)		175 (6.9)		180 (7.1)		175 (6.9)

770 (1,700)	705 (1,550)	740 (1,630)	675 (1,490)	710 (1,585)	700 (1,545)	735 (1,620)
585 (1,290)	575 (1,270)	580 (1,280)	575 (1,265)	585 (1,290)	640 (1,410)	645 (1,425)
1,355 (2,990)	1,280 (2,820)	1,320 (2,910)	1,250 (2,755)	1,295 (2,855)	1,340 (2,955)	1,380 (3,045)
950 (2,095)			915 (2,020)		935 (2,065)	
915 (2,015)			960 (2,115)		1,030 (2,270)	
1,865 (4,110)			1,875 (4,135)		1,965 (4,335)	

Horizontally opposed, liquid cooled, 4-cylinder, 4-stroke gasoline engine	
Overhead camshaft type	
92 x 75 (3.62 x 2.95)	96.9 x 75 (3.815 x 2.95)
1,994 (121.67)	2,212 (135.0)
8.0	9.5
1-3-2-4	
900 ± 100	800 ± 100
147 (200)/6,000	100 (136)/6,000
260 (26.5, 192)/3,600	189 (19.3, 140)/4,800

18° ± 10°	23° ± 10°
NGK: BKR6EVX PFR8B PFR8G	NGK: BKR6E-11 NIPPONDENSO: K20PR-U11
12 V—70 A	
5MT: 34B19L-MF (12 V—27 Ah) 4AT: 46B24L-MF (12 V—36 Ah)	

12 18

SPECIFICATIONS

MODEL	4-DOOR SEDAN			
	2200			
	FWD			
	LX		GX	
MPFI 5MT	MPFI 4AT	MPFI 5MT	MPFI 4AT	

5. TRANSMISSION

Clutch type		DSPD	TC	DSPD	TC
Transmission type		*3	*4	*3	*4
Gear ratio	1st	3.545	2.785	3.545	2.785
	2nd	2.111	1.483	2.111	1.483
	3rd	1.448	1.000	1.448	1.000
	4th	1.088	0.729	1.088	0.729
	5th	0.871	—	0.871	—
	Reverse	3.416	2.696	3.416	2.696
Auxiliary transmission gear ratio		High	—	—	—
		Low	—	—	Helical
Reduction gear (Front drive)	1st reduction	Type of gear	—	—	—
		Gear ratio	—	1.000	—
	Final reduction	Type of gear	Hypoid		
		Gear ratio	3.700	4.111	3.700
Reduction gear (Rear drive)	Transfer reduction	Type of gear	—	—	—
		Gear ratio	—	—	—
	Final reduction	Type of gear	—	—	—
		Gear ratio	—	—	—

6. STEERING

Type		Rack and pinion
Turns, lock-to-lock		3.3
Minimum turning circle		m (ft) Wall to wall: 11.0 (36.1)/Curb to curb: 10.2 (33.6)

7. SUSPENSION

Front	Macpherson strut type, Independent, Coil spring
Rear	Dual link strut type, Independent, Coil spring

8. BRAKE

Service brake system		Dual circuit hydraulic with vacuum suspended power unit
Front		Ventilated disc brake
Rear		Disc brake
Parking brake		Mechanical on rear brakes

9. TIRE

Size	185/70R14 87H 185/70R14 88H
Type	Steel belted radial, Tubeless

10. CAPACITY

Fuel tank		ℓ (US gal, Imp gal)		60 (15.9, 13.2)
Engine oil	Upper level	ℓ (US qt, Imp qt)		4.5 (4.8, 4.0)
	Lower level	ℓ (US qt, Imp qt)		3.5 (3.7, 3.1)
Transmission gear oil		ℓ (US qt, Imp qt)	3.3 (3.5, 2.9)	—
Automatic transmission fluid		ℓ (US qt, Imp qt)	—	3.3 (3.5, 2.9)
AT differential gear oil		ℓ (US qt, Imp qt)	—	8.3 (8.8, 7.3)
4WD rear differential gear oil		ℓ (US qt, Imp qt)	—	1.2 (1.3, 1.1)
Power steering fluid		ℓ (US qt, Imp qt)		0.7 (0.7, 0.6)
Engine coolant		ℓ (US qt, Imp qt)		Approx. MT: 5.9 (6.2, 5.2) AT: 5.8 (6.1, 5.1)

DSPD: Dry Single Plate Diaphragm

TC: Torque converter

*3: 5-forward speeds with synchromesh and 1-reverse speed

*4: Electronically controlled fully-automatic, 4-forward speeds and 1-reverse speed

SPECIFICATIONS

[S2A10] 1-1

4-DOOR SEDAN			TOURING WAGON			
2000	2200		2200		2200	
4WD			FWD		4WD	
TURBO	GX		GX		GX	
MPFI 5MT	MPFI 5MT	MPFI 4AT	MPFI 5MT	MPFI 4AT	MPFI 5MT	MPFI 4AT

DSPD *6	DSPD *6	TC *4	DSPD *3	TC *4	DSPD *9	TC *4
3.545	3.545	2.785	3.545	2.785	3.545	2.785
1.947	2.111	1.483	2.111	1.483	2.111	1.483
1.366	1.448	1.000	1.448	1.000	1.448	1.000
0.972	1.088	0.729	1.088	0.729	1.088	0.729
0.780	0.871	—	0.871	—	0.871	—
3.416	3.416	2.696	3.416	2.696	3.416	2.696
—	—	—	—	—	1.000	—
—	—	—	—	—	1.196	—
—	—	Helical	—	Helical	—	Helical
—	—	1.000	—	1.000	—	1.000
Hypoid						
3.900	3.900	4.111	3.700	4.111	3.900	4.111
Helical	Helical	—	—	—	Helical	—
1.100	1.000	—	—	—	1.000	—
Hypoid						
3.545	3.900	4.111	—	—	3.900	4.111

Rack and pinion 3.3, 3.0 ... [TURBO]
Wall to wall: 11.0 (36.1)/Curb to curb: 10.2 (33.5) ... FWD, Curb to curb: 10.1 (33.1), 10.6 (34.8) [TURBO] ... 4WD

Macpherson strut type, Independent, Coil spring	*10
Dual link strut type, Independent; Coil spring	*11

Dual circuit hydraulic with vacuum suspended power unit	
Ventilated disc brake	
Ventilated disc brake	Disc brake
Mechanical on rear brakes	

205/60R15 91V	185/70R14 87H 185/70R14 88H
Steel belted radial, Tubeless	

60 (15.9, 13.2)						
4.5 (4.8, 4.0)						
3.5 (3.7, 3.1)						
3.5 (3.7, 3.1)	3.5 (3.7, 3.1)	—	3.3 (3.5, 2.9)	—	3.5 (3.7, 3.1)	—
—	—	8.3 (8.8, 7.3)	—	8.3 (8.8, 7.3)	—	8.3 (8.8, 7.3)
—	—	1.2 (1.3, 1.1)	—	1.2 (1.3, 1.1)	—	1.2 (1.3, 1.1)
0.8 (0.8, 0.7)			—		0.8 (0.8, 0.7)	
0.7 (0.7, 0.6)						
Approx. 7.2 (7.6, 6.3)		Approx. MT: 5.9 (6.2, 5.2) AT: 5.8 (6.1, 5.1)				

- *8: 5-forward speeds with synchromesh and 1-reverse speed — with center differential and viscous coupling
- *9: 5x2-forward speeds with synchromesh and 1-reverse speed — with center differential and viscous coupling
- *10: Macpherson strut type, Independent, Pneumatic suspension with height control
- *11: Dual link strut type, Independent, Pneumatic suspension with height control

SUBARU®

1992

**SERVICE
MANUAL**

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1. General Precautions

A: BEFORE STARTING SERVICE

- 1) Be sure to perform the jobs listed in the Periodic Maintenance Schedule.
- 2) When a vehicle is brought in for maintenance, carefully listen to the owner's explanations of the symptoms exhibited by the vehicle. List the problems in your notebook, and refer to them when trying to diagnose the trouble.
- 3) All jewelry should be removed. Suitable work clothes should be worn.
- 4) Be sure to wear goggles.
- 5) Use fender, floor and seat covers to prevent the vehicle from being scratched or damaged.
- 6) Never smoke while working.
- 7) Before removing underfloor bolts (including the rear differential filler plug) coated with bituminous wax, remove old wax. Re-coat with new wax after reinstallation.

B: WHILE WORKING

- 1) When jacking up the vehicle, be sure to use safety stands.
- 2) When jacking up the front or rear end of the car body, be sure to chock the tires remaining in contact with the ground.
- 3) Keep the parking brake applied when working on the vehicle. Chock the tires remaining in contact with the ground (and set the selector lever to "P" position in AT vehicle), when the parking brake cannot be applied, such as when the brakes are being worked on.
- 4) Keep the ignition key turned "OFF" if at all possible.
- 5) Be cautious while working when the ignition key is "ON"; if the engine is hot, the cooling fan may start to operate.
- 6) While the engine is in operation, properly ventilate the workshop.
- 7) While the engine is in operation, be aware of any moving parts, such as the cooling fan and the drive belt.
- 8) Keep your hands off any metal parts such as the radiator, exhaust manifold, exhaust pipe, and muffler, to prevent burning yourself.
- 9) When servicing the electrical system or the fuel system, disconnect the ground cable from the battery.
- 10) When disassembling, arrange the parts in the order that they were disassembled.
- 11) When removing a wiring connector, do not pull the wire but pull the connector itself.
- 12) When removing a hose or tube, remove the clip first. Then, pull the hose or tube while holding its end fitting.
- 13) Replace gaskets, O-rings, snap rings, lock washers, etc. with new ones.

- 14) When tightening a bolt or nut, tighten it to the specified torque.
- 15) When performing work requiring special tools, be sure to use the designated ones.
- 16) After completing work, make certain that the hoses, tubes and wiring harnesses are securely connected.
- 17) After completing work, be sure to wash the vehicle.

C: TREATMENT FOR USED ENGINE OIL

1. ENGINE OILS

Prolonged and repeated contact with mineral oil will result in the removal of natural fats from the skin, leading to dryness, irritation and dermatitis. In addition, used engine oil contains potentially harmful contaminants which may cause skin cancer. Adequate means of skin protection and washing facilities should be provided.

2. HEALTH PROTECTION PRECAUTIONS

- 1) Avoid prolonged and repeated contact with oils, particularly used engine oils.
- 2) Wear protective clothing, including impervious gloves where practicable.
- 3) Do not put oily rags in pockets.
- 4) Avoid contaminating clothes, particularly underpants, with oil.
- 5) Overalls must be cleaned regularly. Discard unwashable clothing and oil impregnated footwear.
- 6) First Aid treatment should be obtained immediately for open cuts and wounds.
- 7) Use barrier creams, applying them before each work period, to help the removal of oil from the skin.
- 8) Wash with soap and water to ensure all oil is removed (skin cleansers and nail brushes will help). Preparations containing lanolin replace the natural skin oils which have been removed.
- 9) Do not use petrol, kerosene, diesel fuel, gas oil, thinners or solvents for washing skin.
- 10) If skin disorders develop, obtain medical advice.
- 11) Where practicable, degrease components prior to handling.
- 12) Where there is a risk of eye contact, eye protection should be worn, for example, chemical goggles or face shields; in addition an eye wash facility should be provided.

For the UK region, see also HSE Cautionary Notice SHW 397 Effects of Mineral Oil on the skin.

3. ENVIRONMENTAL PROTECTION PRECAUTIONS

It is illegal to pour used oil on to the ground, down sewers or drains, or into water courses. The burning of used engine oil in small space heaters or boilers is not recommended unless emission control equipment is

fit ted. If in doubt check with the Local Authority. Dispose of used oil through authorized waste disposal contractors, licensed waste disposal sites, or to the waste oil reclamation trade. If in doubt, contact the Local Authority for advice on disposal facilities.

D: PNEUMATIC SUSPENSION MODELS WITH HEIGHT CONTROL

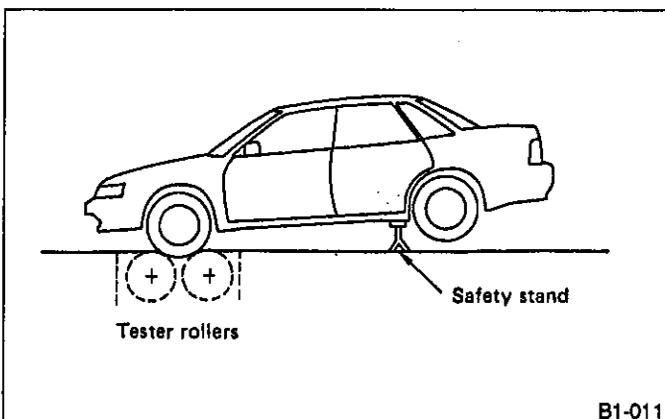
These models are provided with height control mechanisms. Be sure to return the height control to "Normal" position (low) and support the vehicle with a jack before getting under it for servicing, etc. To check any system, other than electrical, under the vehicle, disconnect cables from battery in advance.

E: FULL-TIME 4WD MT MODELS

1. SPEEDOMETER TEST

■ Jack-up Method

- 1) Position vehicle so that front wheels are placed between rollers of speedometer test machine.
- 2) Jack up vehicle until rear wheels clear the floor, and support with safety stands.
- 3) Start engine with shift lever set in 2nd gear (for safety considerations). Perform speedometer tests.
 - a. Secure a rope or wire to the front towing hook to prevent the lateral runout of front wheels.
 - b. Do not abruptly depress/release clutch pedal or accelerator pedal during tests even when engine is operating at low speeds since this may cause vehicle to jump off test machine.
 - c. Avoid abrupt braking after tests.
 - d. In order to prevent the vehicle from slipping due to vibration, do not place any wooden blocks or similar items between the safety stands and the vehicle.
 - e. Since the rear wheels will also be rotating, do not place anything near them. Also, make sure that nobody goes in front of the vehicle.

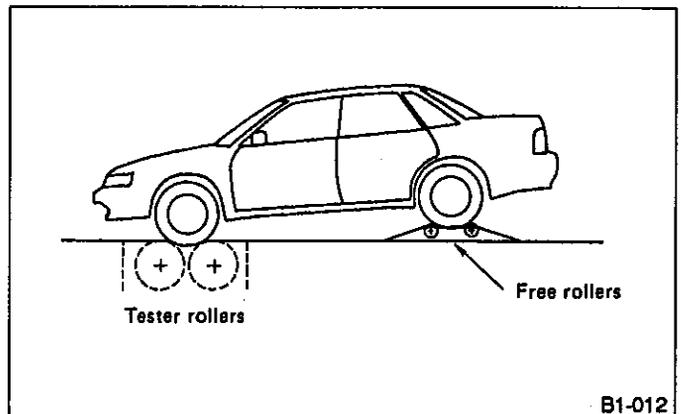


B1-011

Fig. 1

■ Free roller method

- 1) Position vehicle so that front wheels are placed between rollers of test machine.
- 2) Scribe alignment mark corresponding with centerline of rear wheels on floor.
- 3) Back up vehicle so that centerline of free rollers are aligned with mark scribed in step 2 above.
- 4) Drive vehicle onto free rollers.
- 5) Perform speedometer tests.
 - a. Secure a rope or wire to the front towing hook to prevent the lateral runout of front wheels
 - b. Do not abruptly depress/release clutch pedal or accelerator pedal during tests even when engine is operating at low speeds since this may cause vehicle to jump off test machine.
 - c. Avoid abrupt braking after tests.

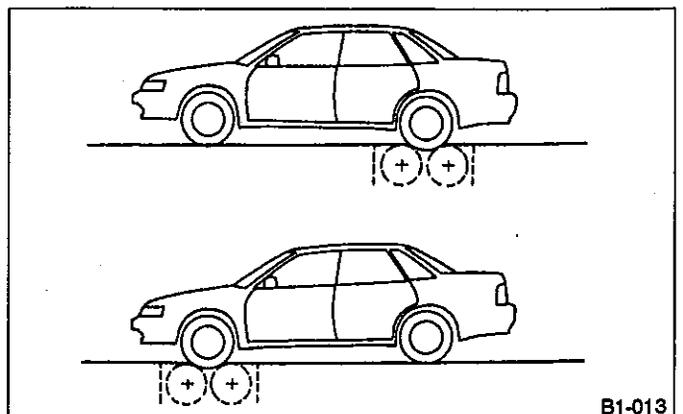


B1-012

Fig. 2

2. BRAKE TEST

- 1) Drive vehicle for a distance of several kilometers (miles) to stabilize dragging force of viscous coupling.
- 2) Place vehicle onto brake tester.
- 3) Perform brake tests.



B1-013

Fig. 3

If dragging force exceeds specifications, check brake pad or brake shoe for dragging. Abnormalities related to the viscous torque of viscous coupling unit may

cause excessive dragging force. At this point, raise vehicle so that two front or rear wheels clear floor, remove cause of abnormality and check wheel rotation.

Effect of braking force on viscous coupling torque;
Approx. 245 N (25 kg, 55 lb)

3. CHASSIS DYNAMOMETER TEST

- 1) Locate vehicle onto chassis dynamometer tester.
- 2) Locate rear wheels onto free rollers.
- 3) Perform dynamic performance tests.
 - a. Do not abruptly depress/release clutch pedal or accelerator pedal during tests.
 - b. Avoid abrupt braking tests after tests.

4. TIRE BALANCE TEST (On-car machine)

- 1) Raise vehicle so that left and right wheels to be checked clear the floor. Support wheels using pick-up stands.
- 2) Raise the other two wheels off the ground and support with a safety stand.
- 3) Attach on-car machine to wheels to be checked.
- 4) Drive wheel with engine and perform tire balance tests.
 - a. Perform tire balance tests after each tire balance has been measured.
 - b. Locate the vehicle so that its front and rear sides are equal in height.
 - c. Release parking brake.
 - d. Manually rotate each tire and check for drag.
 - e. Do not operate clutch and do not accelerate the engine abruptly.
 - f. If error occurs due to engine operation, do not operate balance's motor.

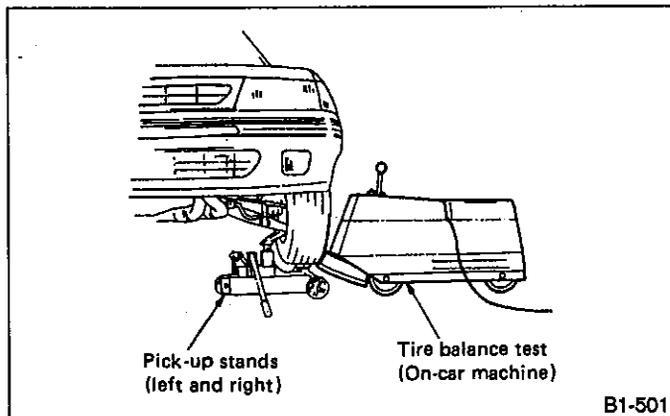


Fig. 4

5. TOWING

- 1) Loading vehicle onto dolly or flat-bed truck
 - a. Transport vehicle using a dolly or flat-bed truck whenever possible.
 - b. Move shift lever to "1st" and apply parking brake.

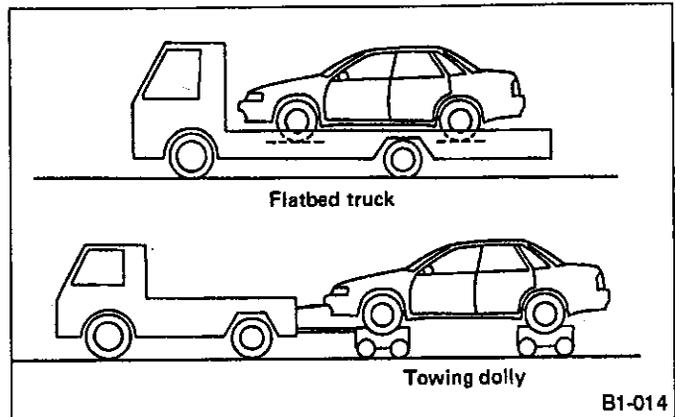


Fig. 5

- 2) Towing with a rope
 - a. Use a rope only when power train and all wheels are operating properly.
 - b. The ignition switch should be in the "ACC" position. Never have the ignition switch on "LOCK" while the vehicle is being towed because steering will not be possible, since the direction of the wheels will be locked.
 - c. Put the transmission in neutral.
 - d. Never use the tie down hooks for towing.
 - e. Remember that brake booster and power steering will not work when engine is "OFF". You will have to use greater effort for the brake pedal and steering wheel.
 - f. Before towing, check transmission oil and differential oil levels and top up to the specified level if necessary.

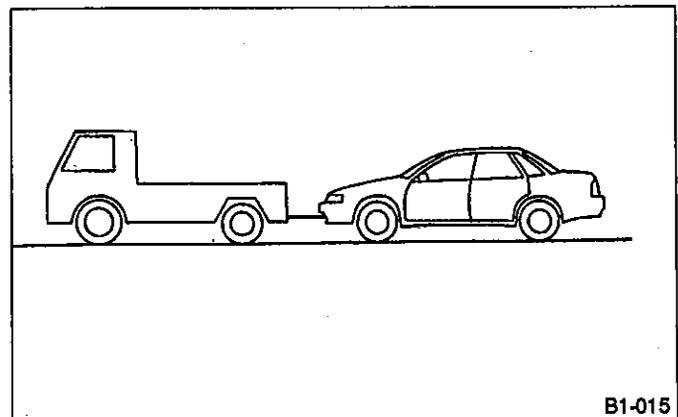
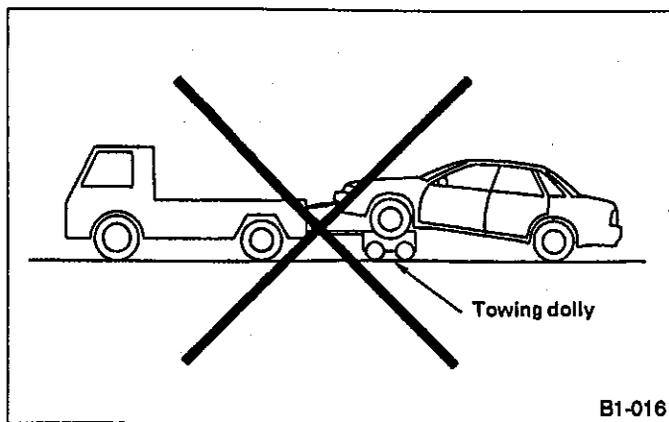


Fig. 6

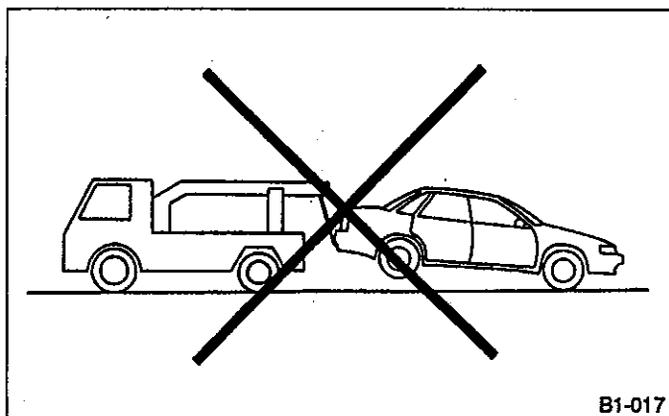
- 3) Towing with front or rear wheels raised
 - a. Do not tow vehicle with only front or rear wheels placed on towing dolly or flat-bed truck. This may degrade viscous coupling performance or cause vehicle to jump off dolly or truck.



B1-016

Fig. 7

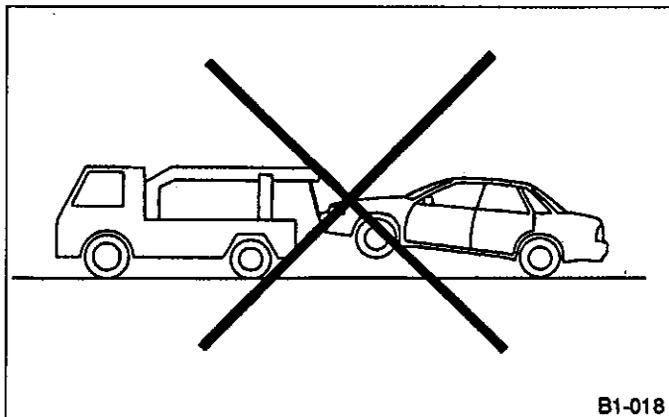
b. Do not tow vehicle with rear wheels raised under any circumstances since this will damage bumper.



B1-017

Fig. 8

c. Do not tow vehicle with front wheels raised under any circumstances since this will damage bumper.



B1-018

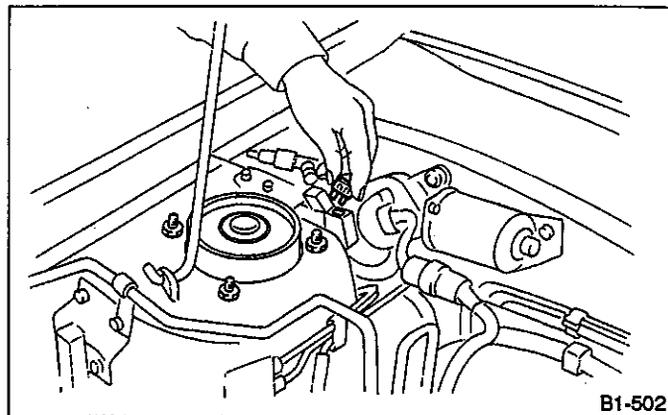
Fig. 9

F: FULL TIME 4WD AT MODELS

1. BEFORE CHECKING OR SERVICING CARS WITH THE FRONT WHEELS RAISED OR ON ROLLERS (BRAKE TESTER, CHASSIS DYNAMOMETER, ETC.)

Always set the car in the FWD mode. To set the car in the FWD mode, disconnect the 4WD circuit by inserting a fuse in the FWD connector inside the engine compartment. Also chock the rear wheels firmly.

Ensure that the FWD pilot light is on. If the car is left in the 4WD mode, it will surge abruptly when the wheels turn, possibly damaging the transfer clutch.

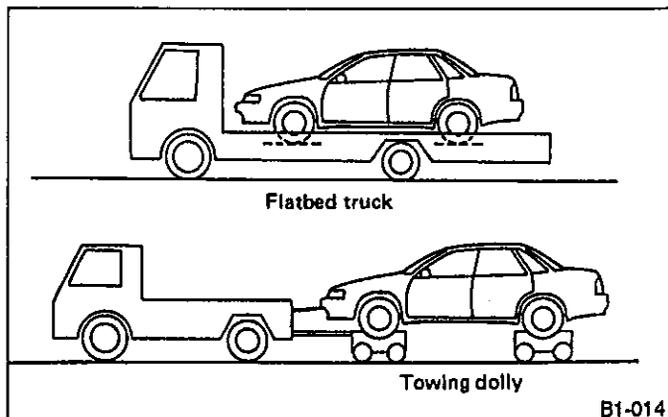


B1-502

Fig. 10

2. TOWING

- 1) Loading vehicle onto dolly or flat-bed truck
 - a. Transport vehicle using a dolly or flat-bed truck whenever possible.
 - b. Place the selector lever in "P" position and apply the parking brake.



B1-014

Fig. 11

- 2) Towing with a rope
 - a. Tow vehicle with a rope only when power train and all wheels are operating properly.

b. Put a spare fuse inside the FWD connector and never exceed 30 km/h (19 MPH). Also, do not tow for more than 10 km (6 miles).

c. Place the selector lever in "N" position.

d. The ignition switch should be in the "ACC" position while the vehicle is being towed. Never have the ignition switch on "LOCK" while the vehicle is being towed because steering will not be possible, since the direction of the wheels will be locked.

e. Never use the tie down hooks for towing.

f. Remember that brake booster and power steering will not work when the engine is "OFF". You will have to use greater effort for the brake pedal and steering wheel.

g. Before towing, check transmission oil and differential oil levels and top up to the specified level if necessary.

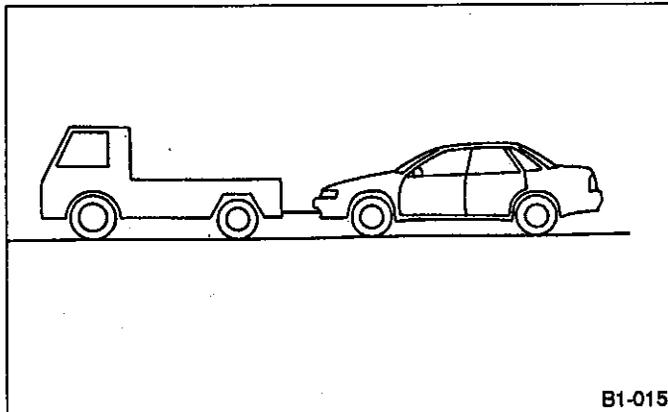


Fig. 12

3) Towing with front or rear wheels raised

Do not tow vehicle with front or rear wheels raised under any circumstances since this will damage bumper.

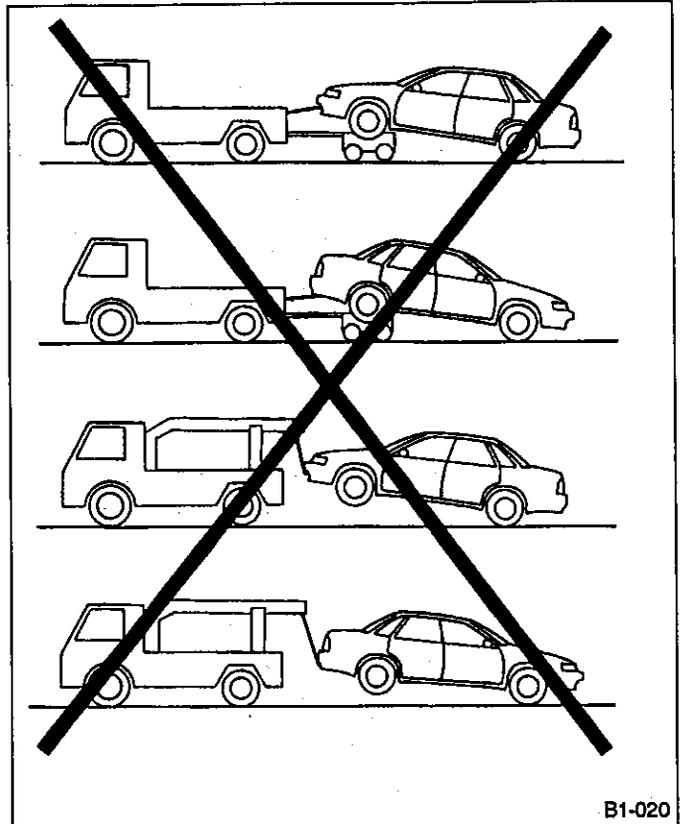


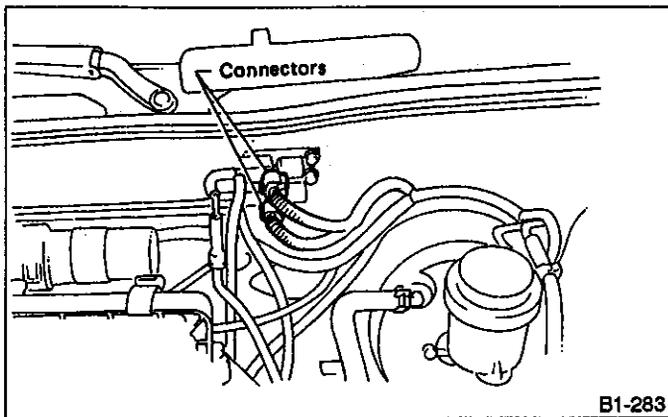
Fig. 13

G: SELECTIVE 4WD MT MODELS

1. BEFORE CHECKING OR SERVICING CARS WITH THE FRONT WHEELS RAISED OR ON ROLLERS (BRAKE TESTER, CHASSIS DYNAMOMETER, ETC.)

Always set the car in the FWD mode.

Be sure to set 4WD selector switch to OFF. In addition, disconnect harness connector for 4WD solenoid valve inside engine compartment and chock rear wheels firmly.



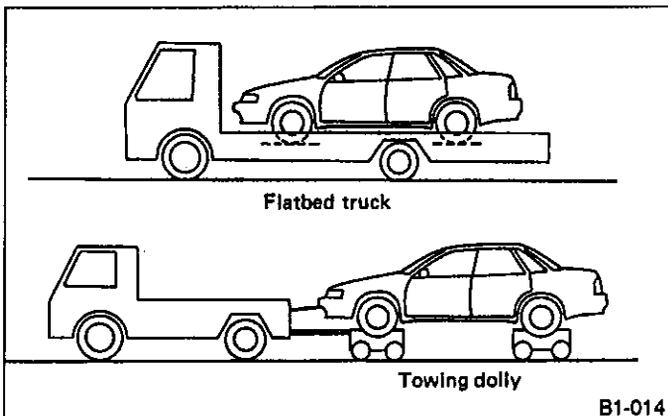
B1-283

Fig. 14

2. TOWING

1) Loading vehicle onto dolly or flat-bed truck

- a. Transport vehicle using a dolly or flat-bed truck whenever possible.
- b. Move shift lever to "1st" position and apply parking brake.

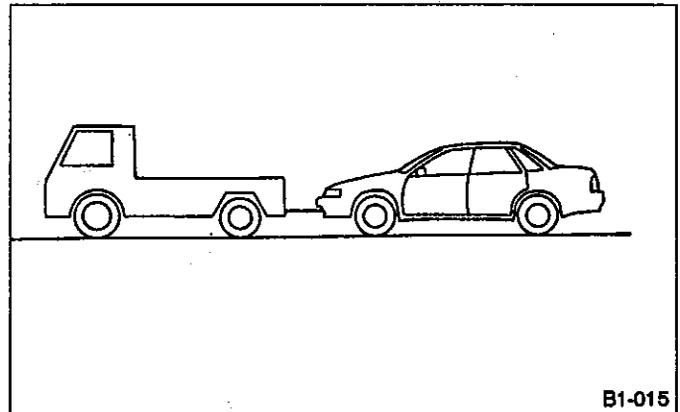


B1-014

Fig. 15

2) Towing with a rope

- a. Use a rope only when power train and all wheels are operating properly.
- b. The ignition switch should be in the "ACC" position. Never have the ignition switch on "LOCK" while the vehicle is being towed because steering will not be possible, since the direction of the wheels will be locked.
- c. Put the transmission in neutral.
- d. Never use the tie down hooks for towing.
- e. Remember that brake booster and power steering will not work when engine is "OFF". You will have to use greater effort for the brake pedal and steering wheel.
- f. Before towing, check transmission oil and differential oil levels and top up to the specified level if necessary.

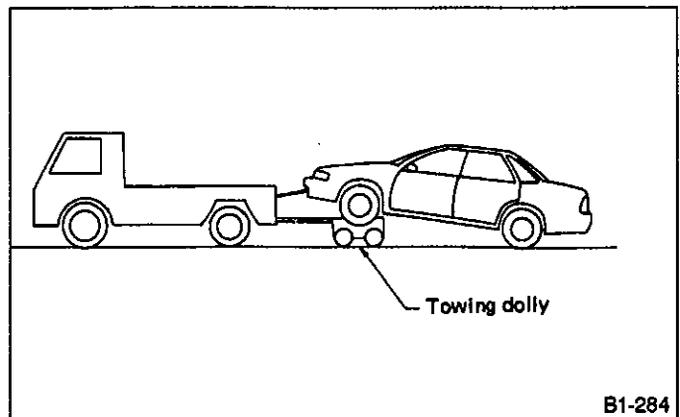


B1-015

Fig. 16

3) Towing with front or rear wheels raised

- a. When towing vehicle with only front wheels placed on towing dolly or flat-bed truck, set the vehicle in the FWD mode.



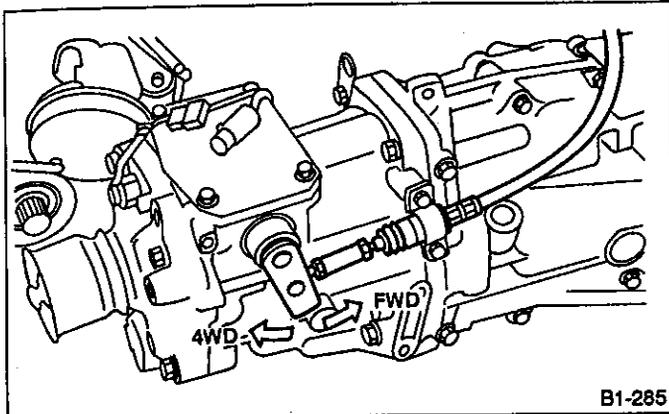
B1-284

Fig. 17

■4WD mode canceling method

1) Under normal circumstances, start the engine, turn the 4WD selector switch off and, with the tires pointed straight ahead, move the vehicle either forward or backward.

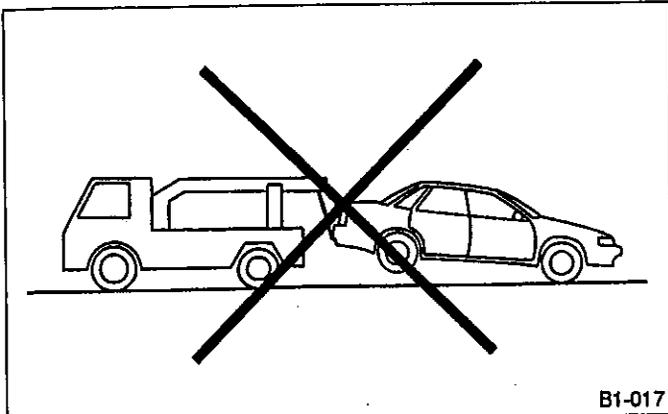
2) If the engine cannot be started, such as when the battery is dead or when the vacuum actuator is not working, raise the front (or rear) wheels and move the transfer shift lever, on the right side of the transmission, towards the rear of the vehicle.



B1-285

Fig. 18

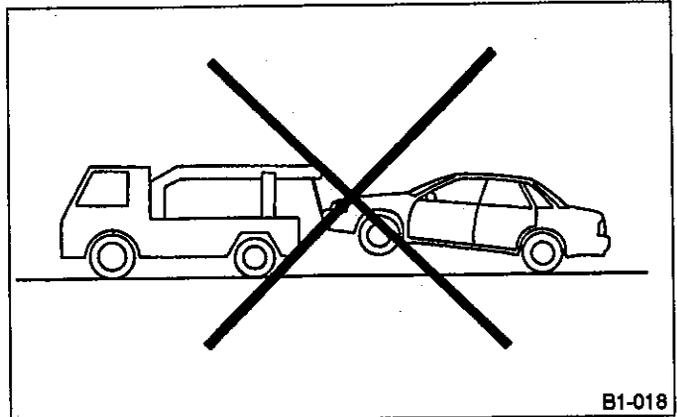
b. Do not tow vehicle with rear wheels raised under any circumstances since this will damage bumper.



B1-017

Fig. 19

c. Do not tow vehicle with front wheels raised under any circumstances since this will damage bumper.



B1-018

Fig. 20

2. Vehicle Identification Number (V.I.N.)

A: APPLICABLE V.I.N. IN THIS MANUAL

1. EXCEPT AUSTRALIA MODELS

4-DOOR SEDAN	1600 cc engine	DL	Carb., 5MT	J	F	1	B	C	H	C	R	O	C	B	0	1	5	0	0	1	and after
		GL	Carb., 5MT	J	F	1	B	C	H	C	R	O	C	B	0	1	5	0	0	1	and after
	1800 cc engine	DL	Carb., 5MT	J	F	1	B	C	2	C	R	O	C	B	0	1	5	0	0	1	and after
			Carb., 4AT	J	F	1	B	C	2	C	R	O	C	K	0	1	5	0	0	1	and after
		Full time 4WD GL	Carb., 5MT SR	J	F	1	B	C	3	C	R	O	C	G	0	1	5	0	0	1	and after
			Carb., 4AT	J	F	1	B	C	3	C	R	O	C	H	0	1	5	0	0	1	and after
	2000 cc engine	Full time 4WD GL	MPFI, 5MT SR	J	F	1	B	C	5	C	R	O	E	G	0	1	5	0	0	1	and after
			MPFI, 4AT	J	F	1	B	C	5	C	R	O	E	H	0	1	5	0	0	1	and after
	2000 cc DOHC engine	Full time 4WD TURBO	MPFI, 5MT SR	J	F	1	B	C	5	C	R	O	B	G	0	1	5	0	0	1	and after
	2200 cc engine	GX	MPFI, 5MT	J	F	1	B	C	6	C	R	O	E	B	0	1	5	0	0	1	and after
			MPFI, 4AT	J	F	1	B	C	6	C	R	O	E	K	0	1	5	0	0	1	and after
		Full time 4WD GX	MPFI, 5MT SR	J	F	1	B	C	7	C	R	O	E	G	0	1	5	0	0	1	and after
			MPFI, 4AT	J	F	1	B	C	7	C	R	O	E	H	0	1	5	0	0	1	and after
	STATION WAGON	1600 cc engine	DL	Carb., 5MT	J	F	1	B	J	H	C	R	O	C	B	0	0	4	0	0	1
GL			Carb., 5MT	J	F	1	B	J	H	C	R	O	C	B	0	0	4	0	0	1	and after
1800 cc engine		DL	Carb., 5MT	J	F	1	B	J	2	C	R	O	C	B	0	0	4	0	0	1	and after
			Carb., 4AT	J	F	1	B	J	2	C	R	O	C	K	0	0	4	0	0	1	and after
		GL	Carb., 5MT	J	F	1	B	J	2	C	R	O	C	B	0	0	4	0	0	1	and after
			Carb., 4AT	J	F	1	B	J	2	C	R	O	C	K	0	0	4	0	0	1	and after
Selective 4WD DL		Carb., 5MT DR	J	F	1	B	J	3	C	R	O	C	E	0	0	4	0	0	1	and after	
		SPFI, 5MT DR	J	F	1	B	J	3	C	R	O	E	E	0	0	4	0	0	1	and after	
2000 cc engine	Selective 4WD DL	MPFI, 5MT DR	J	F	1	B	J	5	C	R	O	E	E	0	0	4	0	0	1	and after	
TOURING WAGON	1800 cc engine	Full time 4WD GL	Carb., 5MT DR	J	F	1	B	F	3	C	R	O	C	J	0	1	2	5	0	1	and after
			Carb., 4AT	J	F	1	B	F	3	C	R	O	C	H	0	1	2	5	0	1	and after
	2000 cc engine	Full time 4WD GL	MPFI, 5MT DR	J	F	1	B	F	5	C	R	O	E	J	0	1	2	5	0	1	and after
			MPFI, 4AT	J	F	1	B	F	5	C	R	O	E	H	0	1	2	5	0	1	and after
	2000 cc DOHC engine	Full time 4WD TURBO	MPFI, 5MT SR	J	F	1	B	F	5	C	R	O	B	G	0	1	2	5	0	1	and after
	2200 cc engine	Full time 4WD GX	MPFI, 5MT DR	J	F	1	B	F	7	C	R	O	E	J	0	1	2	5	0	1	and after
			MPFI, 5MT DR	J	F	1	B	F	B	C	R	O	E	J	0	1	2	5	0	1	and after
			MPFI, 4AT	J	F	1	B	F	B	C	R	O	E	H	0	1	2	5	0	1	and after

SR: Single-range
DR: Dual-range

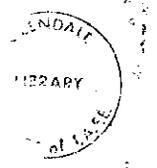
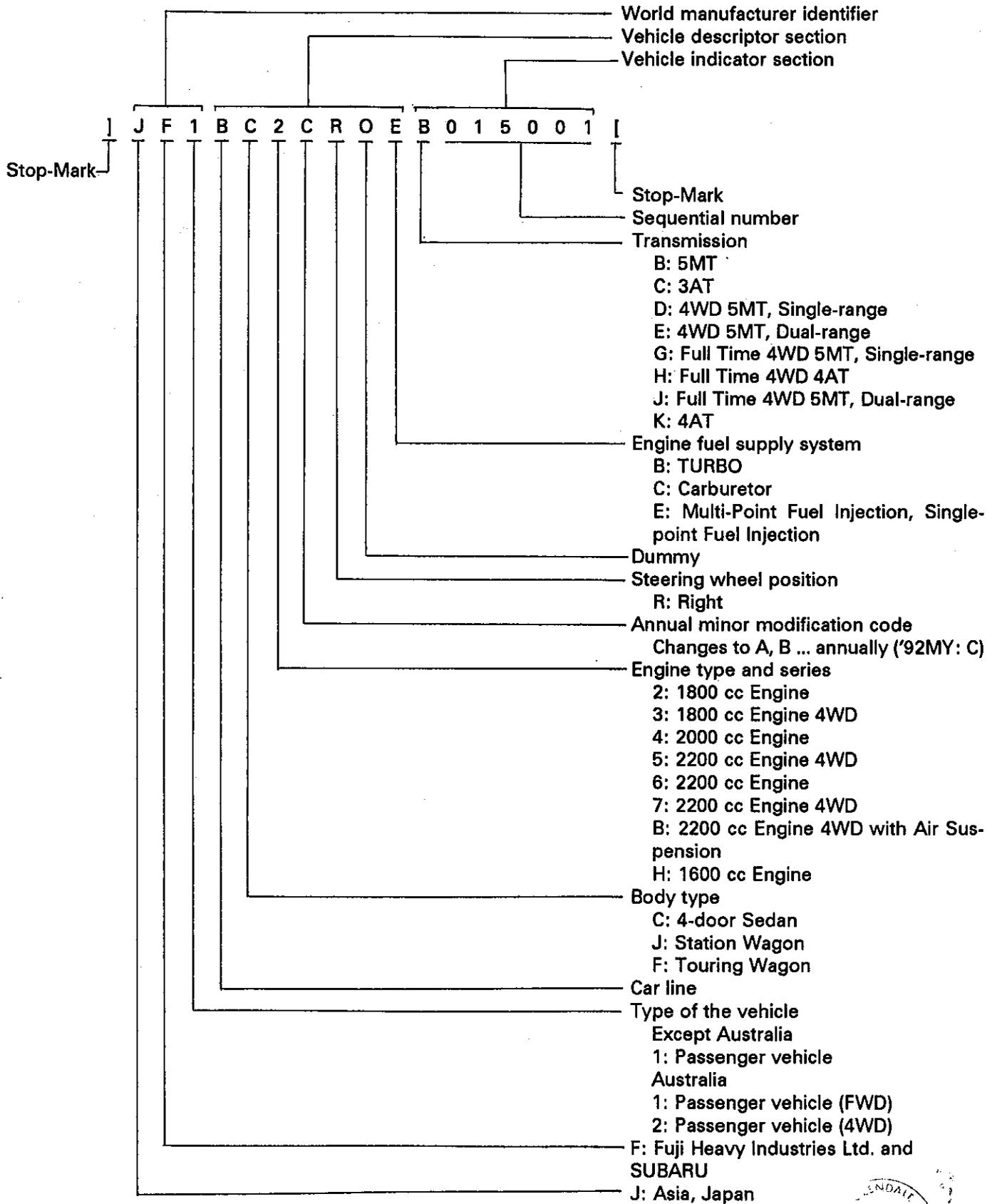
2. AUSTRALIA MODELS

4-DOOR SEDAN	2000 cc DOHC engine	Full time 4WD TURBO	MPFI, 5MT SR	J	F	2	B	C	5	C	R	O	B	G	0	1	5	0	0	1	and after
	2200 cc engine	LX	MPFI, 5MT	J	F	1	B	C	6	C	R	O	E	B	0	1	5	0	0	1	and after
			MPFI, 4AT	J	F	1	B	C	6	C	R	O	E	K	0	1	5	0	0	1	and after
		GX	MPFI, 5MT	J	F	1	B	C	6	C	R	O	E	B	0	1	5	0	0	1	and after
			MPFI, 4AT	J	F	1	B	C	6	C	R	O	E	K	0	1	5	0	0	1	and after
	Full time 4WD GX	MPFI, 5MT SR	J	F	2	B	C	7	C	R	O	E	J	0	1	5	0	0	1	and after	
MPFI, 4AT		J	F	2	B	C	7	C	R	O	E	H	0	1	5	0	0	1	and after		
TOURING WAGON	2200 cc engine	GX	MPFI, 5MT	J	F	1	B	F	6	C	R	O	E	B	0	1	2	5	0	1	and after
			MPFI, 4AT	J	F	1	B	F	6	C	R	O	E	K	0	1	2	5	0	1	and after
		Full time 4WD GX	MPFI, 5MT DR	J	F	2	B	F	B	C	R	O	E	J	0	1	2	5	0	1	and after
			MPFI, 4AT	J	F	2	B	F	B	C	R	O	E	H	0	1	2	5	0	1	and after

SR: Single-range

DR: Dual-range

B: THE MEANING OF V.I.N.



3. Identification Number and Label Locations

Engine, transmission and vehicle identification numbers are used for factory communications such as Technical information, Service bulletins and other information.

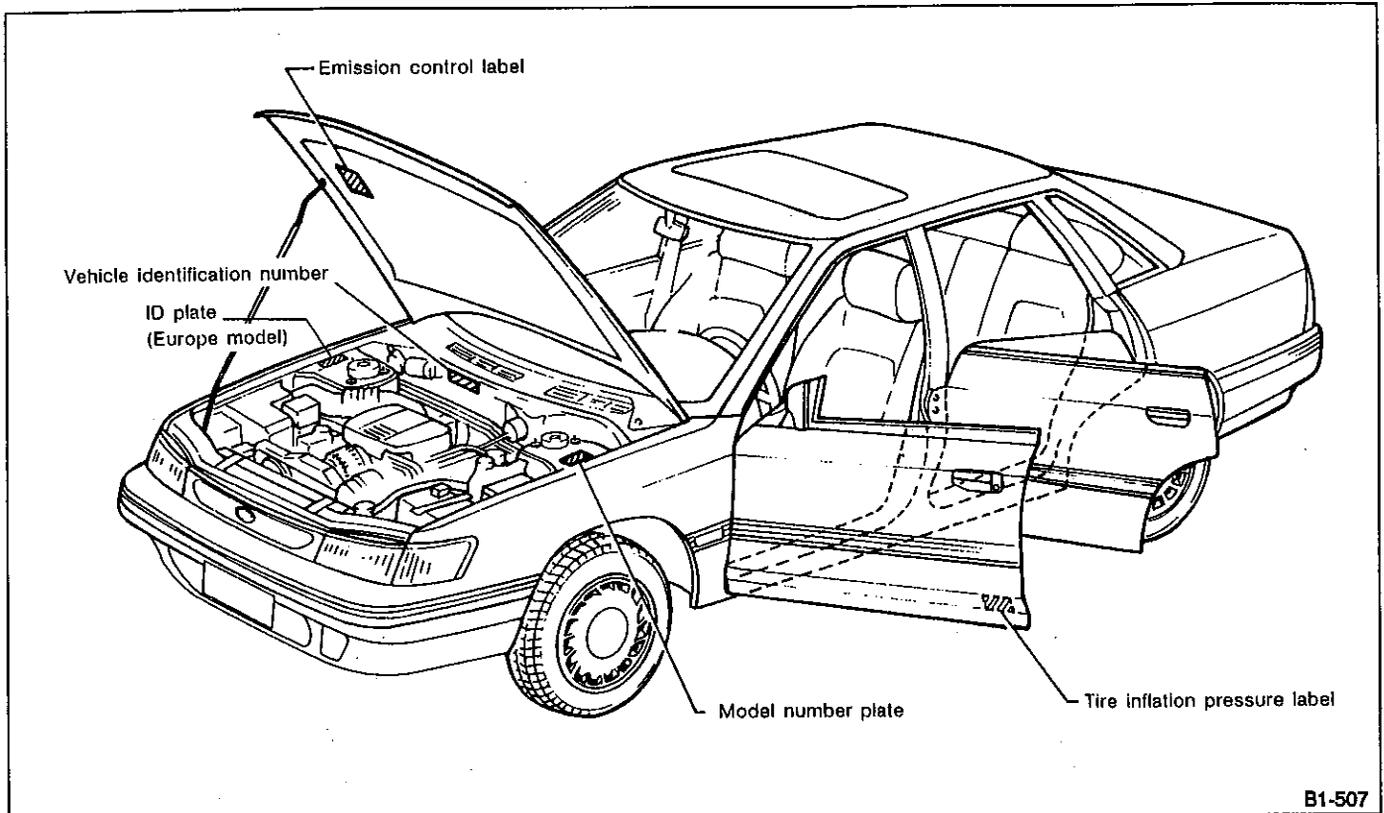


Fig. 21 For all models (except Australia)

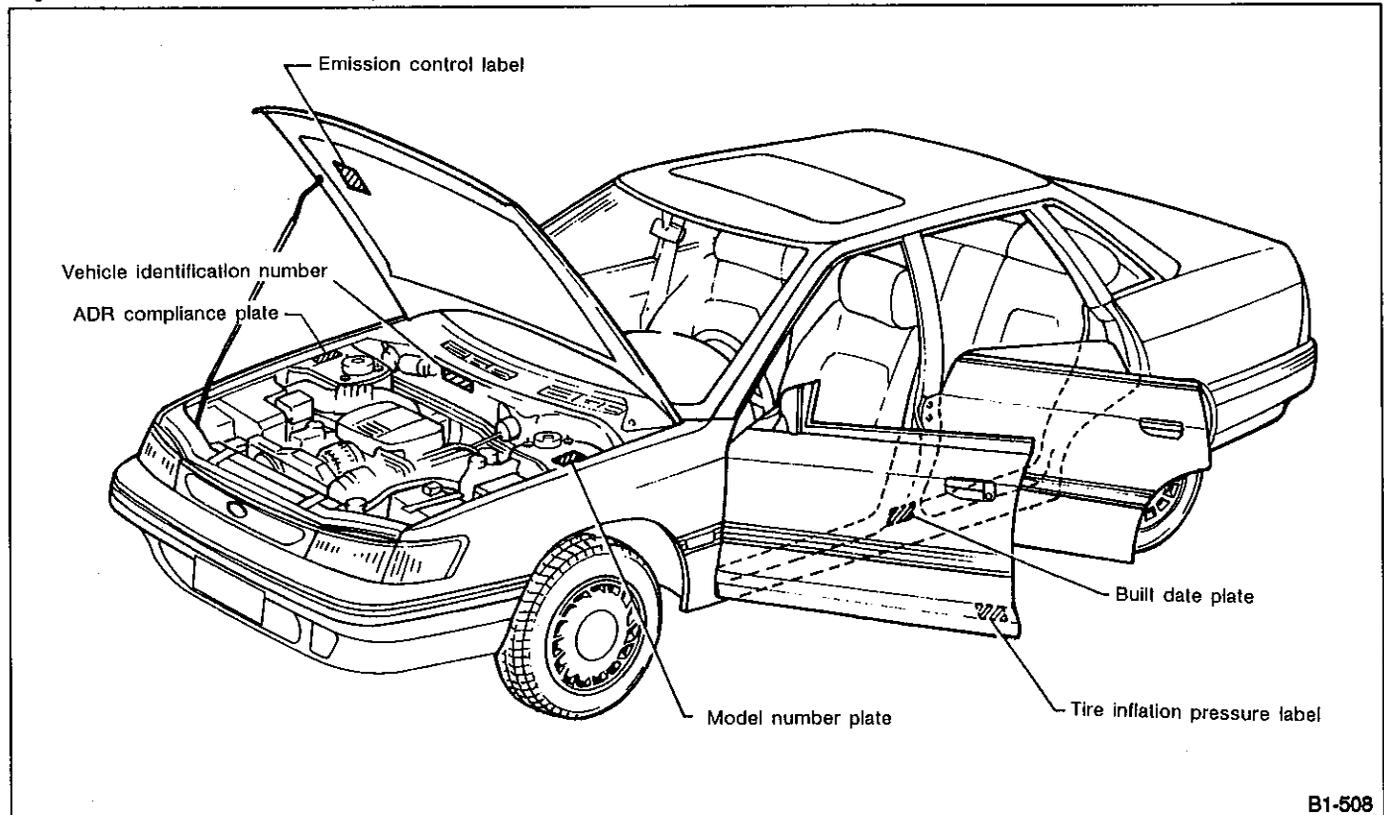


Fig. 22 For Australia model

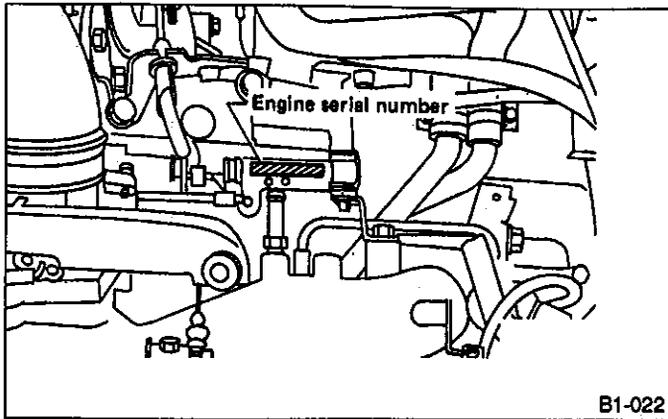


Fig. 23

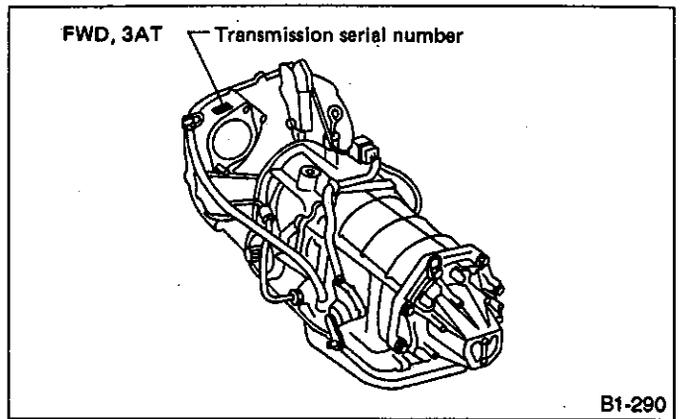


Fig. 26

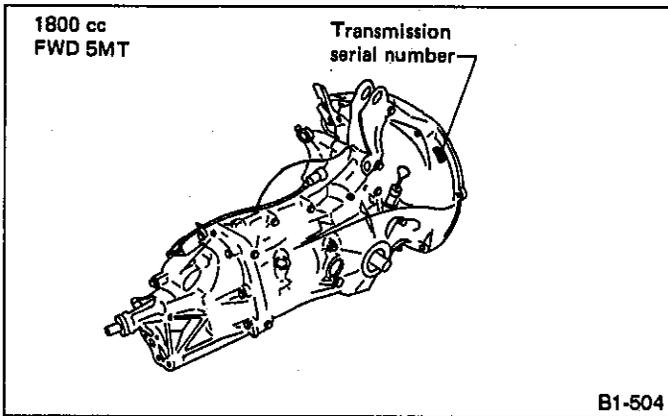


Fig. 24

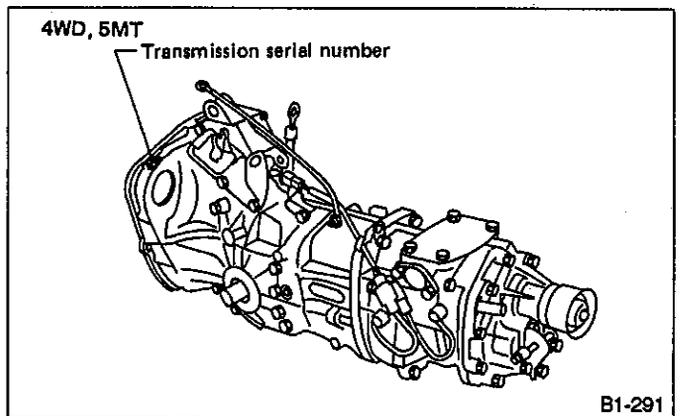


Fig. 27

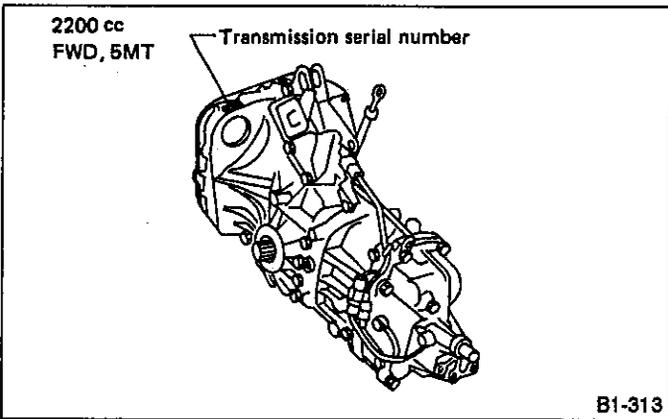


Fig. 25

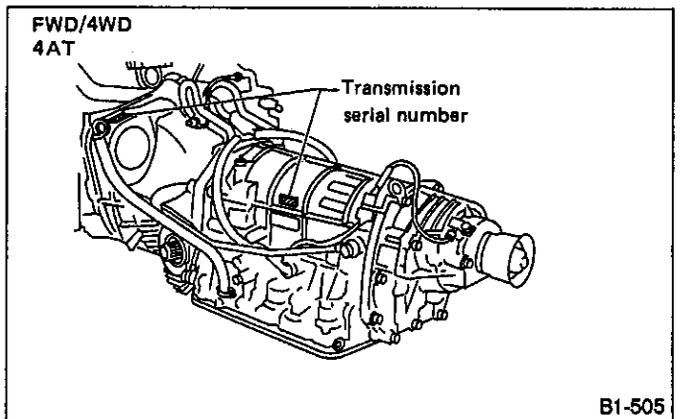


Fig. 28

4. Recommended Fuel, Lubricants, Sealants and Adhesives

1. FUEL

The SUBARU engines are designed to give satisfactory engine performance and low exhaust emissions using the following gasoline.

Carburetor	SPFI	MPFI (NON-TURBO)		TURBO
Without catalyst	With catalyst (Use unleaded gasoline only)	Without catalyst	With catalyst (Use unleaded gasoline only)	With catalyst (Use unleaded gasoline only)
90*	90	90	90	95

*: If gasoline with an octane number between 83 and 89 is used, adjust ignition timing.

- a. Use gasoline of at least the octane number (RON) indicated in the table above.
- b. For models without catalyst, either leaded or unleaded gasoline may be used.

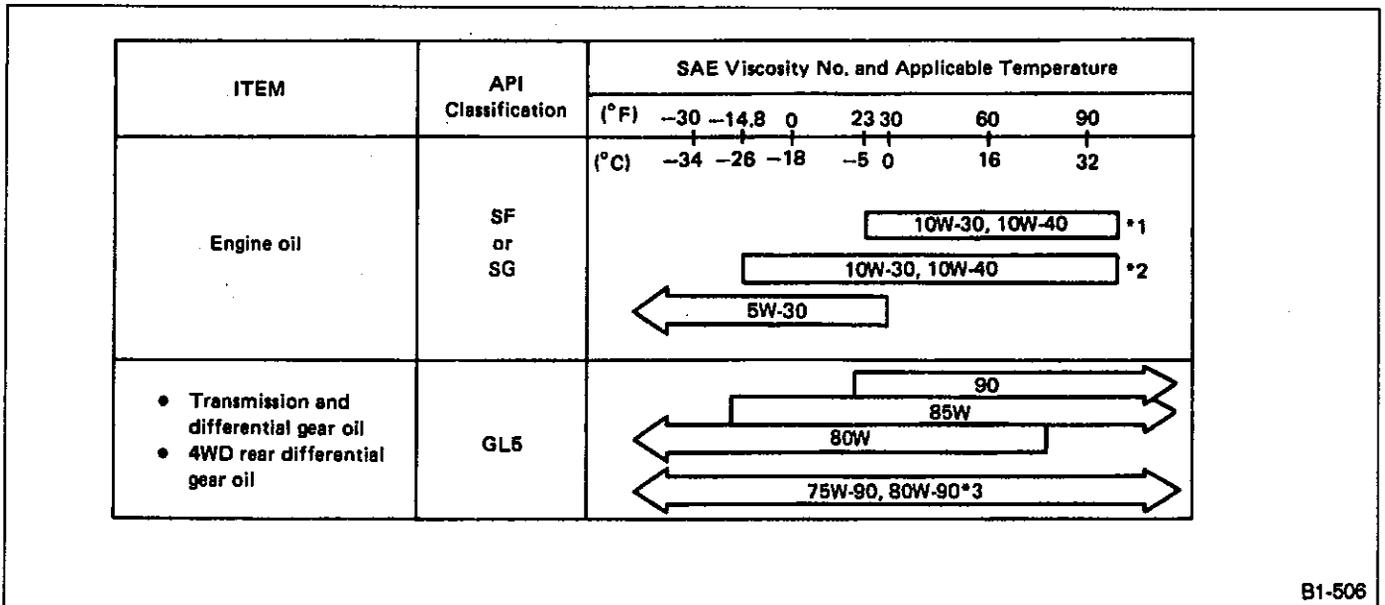
2. LUBRICANTS

Lubricants	Specifications	Remarks
<ul style="list-style-type: none"> • Engine oil 	<ul style="list-style-type: none"> • API Classification: SF or SG 	<ul style="list-style-type: none"> • For SAE viscosity number, refer to the following table.
<ul style="list-style-type: none"> • Transmission and differential gear oil • 4WD rear differential gear oil 	<ul style="list-style-type: none"> • API Classification: GL-5 	<ul style="list-style-type: none"> • For SAE viscosity number, refer to the following table.
<ul style="list-style-type: none"> • Automatic transmission and power steering fluid 	<ul style="list-style-type: none"> • DEXRON II 	—
<ul style="list-style-type: none"> • Coolant 	<ul style="list-style-type: none"> • Genuine SUBARU Coolant (Part No. 000016218) (Anti-freeze, anti-corrosive ethylene glycol base) 	<ul style="list-style-type: none"> • For further coolant specifications, refer to the following table.
<ul style="list-style-type: none"> • Brake fluid 	<ul style="list-style-type: none"> • DOT3 or DOT4 	<ul style="list-style-type: none"> • FMVSS NO. 116 • Avoid mixing brake fluid of different brands to prevent the fluid performance from degrading. • When brake fluid is added, be careful not to allow any dust into the reservoir.

GENERAL INFORMATION

[0402] 1-3

Lubricants	Recommended	Application	Equivalent
• Spray lubricants	SUBARU CRC (P/N 004301003)	O ₂ sensor, TURBO unit	
• Grease	SUNLIGHT 2 (P/N 003602010)	Steering shaft bearing, bushing for manual transmission gear shift system	—
	Valliant grease M-2 (P/N 003608001)	Steering gearbox	—
	Niglube RX-2 (P/N 003606000 or 725191040)	Piston boot of disc brake and sliding pin	—
	Molykote No. 7439 (P/N 725191460)	Contacting surfaces of drum brake shoes and shoe clearance adjuster	—
	Molylex No. 2 (P/N 723223010)	BJ and DOJ (for MT) joints of axle shafts	—
	VU-3A702 (P/N 623029980)	DOJ (for AT) joints of axle shafts	—
	FX clutch grease (P/N 000040901)	Splines of transmission main shaft	—
	Slicolube G-30M (P/N 004404002)	Control cables and carburetor linkages subject to cold weather, water-pump impeller, door latch, striker, battery terminals etc.	—



B1-506

Fig. 29

*1: For Carburetor engine
 *2: For SPFI,MPFI and TURBO engine

- a. Each oil manufacturer has its base oil and additives. Thus, do not mix two or more brands (Except engine oil).
- b. When replenishing oil, it does not matter if the oil to be added is a different brand from that in the engine, however, use oil having the API classification and SAE viscosity No. designated by SUBARU.
- c. SAE 5W-30 is not recommended for sustained high speed driving.
- d. If vehicle is used in desert areas or areas with very high temperatures or for other heavy duty applications, the following viscosity oils may be used:
30,40,10W-50,20W-40,20W-50
- e. *3 For differential gear oil (AT)

Coolant Specifications							
Lowest anticipated atmospheric temperature	SUBARU coolant-to- [*] water ratio (Volume) %	Specification gravity					Freezing point
		at 10°C (50°F)	at 20°C (68°F)	at 30°C (86°F)	at 40°C (104°F)	at 50°C (122°F)	
Above - 30°C (- 22°F)	50 — 50	1.084	1.079	1.074	1.068	1.062	- 36°C (- 33°F)
Above - 15°C (- 5°F)	30 — 70	1.053	1.049	1.044	1.039	1.034	- 18°C (- 3°F)

* It is commended that distilled water be used.

- a. Avoid using any coolant or only water other than this designated type to prevent corrosion.
- b. SUBARU's engine is aluminum alloy, and so special care is necessary.

3. SEALANTS

	Recommended	Application	Equivalent
Sealant	Three Bond 1105 (P/N 004403010)	Rear differential oil drain plug, oil pressure switch, etc.	Dow Corning's No. 7038
	Three Bond 1215 (P/N 004403007)	Matching surface of oil pump, crank case, transmission case, etc. Engine service hole plug, coolant drain plug, etc.	Dow Corning's No. 7038
	Starcalking B-33A (P/N 000018901)	Sealing against water and dust entry through weatherstrips, grommets, etc.	Butyl Rubber Sealant
	Three Bond 1207C (P/N 004403012)	Matching surface of oil pan	—

4. ADHESIVES

	Recommended	Application	Equivalent
Adhesive	Cemedine 5430L	Weatherstrips and other rubber parts, plastics and textiles except soft vinyl parts.	3M's EC-1770 EC-1368
	Cemedine 540	Soft vinyl parts, and other parts subject to gasoline, grease or oil. e.g. trim leather, gear shift boot, door inner remote cover, etc.	3M's EC-776 EC-847 EC-1022 (Spray Type)
	Cemedine 3000	Bonding metals, glass, plastic and rubber parts. Repairing slightly torn weatherstrips, etc.	Armstrong's Eastman 910
	Essex Chemical Corp's Urethane E	Windshield to body panel.	Sunstar 580

5. Tightening Torque of Standard Bolts and Nuts

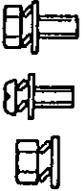
1. ENGINE AND TRANSMISSION

Unit: N*m (kg-m, ft-lb)

Dia. x Pitch (mm)	5T	7T	9T	10T
4 x 0.75	1.0 — 1.5 (0.105 — 0.155, 0.8 — 1.1)	1.5 — 2.0 (0.155 — 0.205, 1.1 — 1.5)	2.5 — 3.0 (0.255 — 0.305, 1.8 — 2.2)	3.0 — 3.5 (0.305 — 0.355, 2.2 — 2.6)
5 x 0.9	2.5 — 3.0 (0.255 — 0.305, 1.8 — 2.2)	2.9 — 3.9 (0.30 — 0.40, 2.2 — 2.9)	4.9 — 5.9 (0.50 — 0.60, 3.6 — 4.3)	5.4 — 6.4 (0.55 — 0.65, 4.0 — 4.7)
6 x 1.0	4.4 — 5.4 (0.45 — 0.55, 3.3 — 4.0)	5.9 — 6.9 (0.60 — 0.70, 4.3 — 5.1)	9.4 — 10.8 (0.955 — 1.105, 6.9 — 8.0)	10 — 12 (1.0 — 1.2, 7 — 9)
8 x 1.25	12 — 14 (1.2 — 1.4, 9 — 10)	14.2 — 17.2 (1.45 — 1.75, 10.5 — 12.7)	23 — 26 (2.3 — 2.7, 17 — 20)	25 — 28 (2.5 — 2.9, 18 — 21)
10 x 1.25	25 — 28 (2.5 — 2.9, 18 — 21)	30 — 36 (3.1 — 3.7, 22 — 27)	46 — 54 (4.7 — 5.5, 34 — 40)	49.5 — 58.4 (5.05 — 5.95, 36.5 — 43.0)
12 x 1.5	41 — 49 (4.2 — 5.0, 30 — 36)	53 — 63 (5.4 — 6.4, 39 — 46)	84 — 98 (8.6 — 10.0, 62 — 72)	88 — 106 (9.0 — 10.8, 65 — 78)
14 x 1.6	71 — 84 (7.2 — 8.6, 52 — 62)	88 — 106 (9.0 — 10.8, 65 — 78)	139 — 165 (14.2 — 16.8, 103 — 122)	147 — 175 (15.0 — 17.8, 108 — 129)

2. BODY

Unit: N*m (kg-m, ft-lb)

		Dia. (mm)	4T	7T	9T
 <p>Fig. 30</p> <p>B1-026</p>		4	1.7 — 2.6 (0.17 — 0.27, 1.2 — 2.0)	—	—
		5	2.9 — 5.9 (0.30 — 0.60, 2.2 — 4.3)	—	—
		6	5.4 — 9.3 (0.55 — 0.95, 4.0 — 6.9)	—	—
		8	12.7 — 22.6 (1.30 — 2.30, 9.4 — 16.6)	22.6 — 42.2 (2.30 — 4.30, 16.6 — 31.1)	31.4 — 51.0 (3.20 — 5.20, 23.1 — 37.6)
		10	27.5 — 47.1 (2.80 — 4.80, 20.3 — 34.7)	51.0 — 86.3 (5.20 — 8.80, 37.6 — 63.7)	62.8 — 107.9 (6.40 — 11.00, 46.3 — 79.6)
		12	52.0 — 85.3 (5.30 — 8.70, 38.3 — 62.9)	88.3 — 156.9 (9.00 — 16.00, 65.1 — 115.7)	117.7 — 196.1 (12.00 — 20.00, 86.8 — 144.7)
<p>Including bolt or nut with washer or spring washer only</p>  <p>Fig. 31</p> <p>B1-027</p>		4	1.2 — 2.2 (0.12 — 0.22, 0.9 — 1.6)	—	—
		5	2.5 — 4.4 (0.25 — 0.45, 1.8 — 3.3)	—	—
		6	4.4 — 7.4 (0.45 — 0.75, 3.3 — 5.4)	—	—
		8	9.8 — 17.7 (1.00 — 1.80, 7.2 — 13.0)	17.7 — 31.4 (1.80 — 3.20, 13.0 — 23.1)	23.5 — 39.2 (2.40 — 4.00, 17.4 — 28.9)
		10	22.6 — 36.3 (2.30 — 3.70, 16.6 — 26.8)	37.3 — 66.7 (3.80 — 6.80, 27.5 — 49.2)	48.1 — 83.4 (4.90 — 8.50, 35.4 — 61.5)
		12	39.2 — 64.7 (4.00 — 6.60, 28.9 — 47.7)	68.6 — 117.7 (7.00 — 12.00, 50.6 — 86.8)	88.3 — 147.1 (9.00 — 15.00, 65.1 — 108.5)

The mark is embossed on the bolt head as follows:

4T — 4 9T — 9
 5T — 5 10T — 10
 7T — 7

6. Lifting, Towing and Tie-down Points

Be sure to lift, tow and tie-down the vehicle at the designated positions.

1. GARAGE JACK

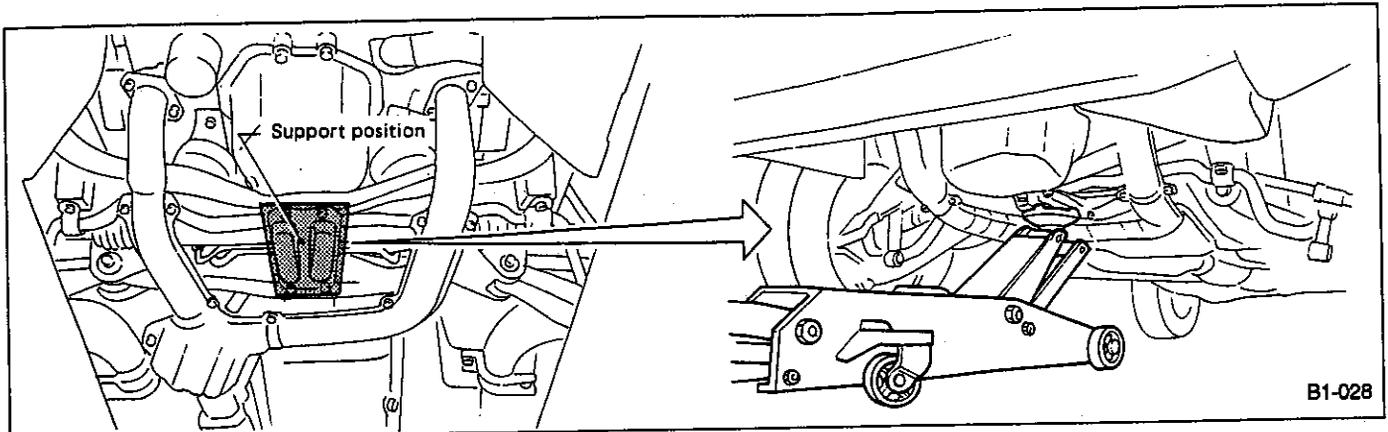


Fig. 32 Front

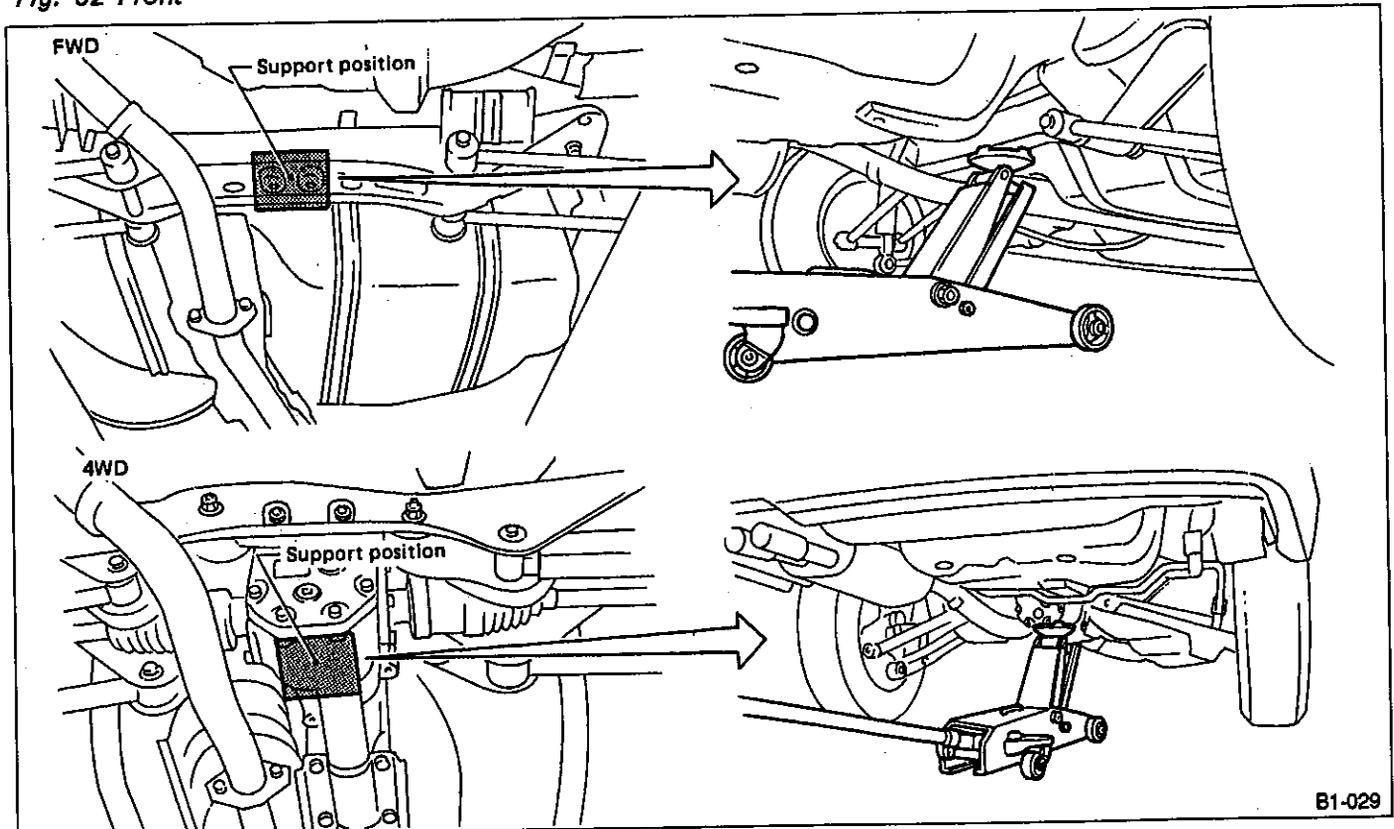
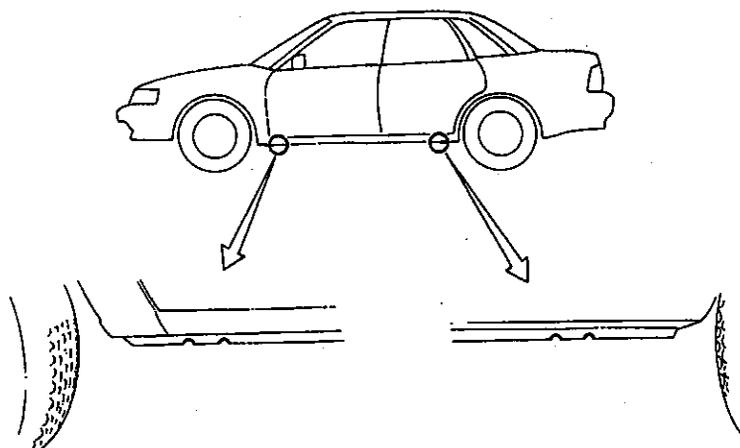


Fig. 33 Rear

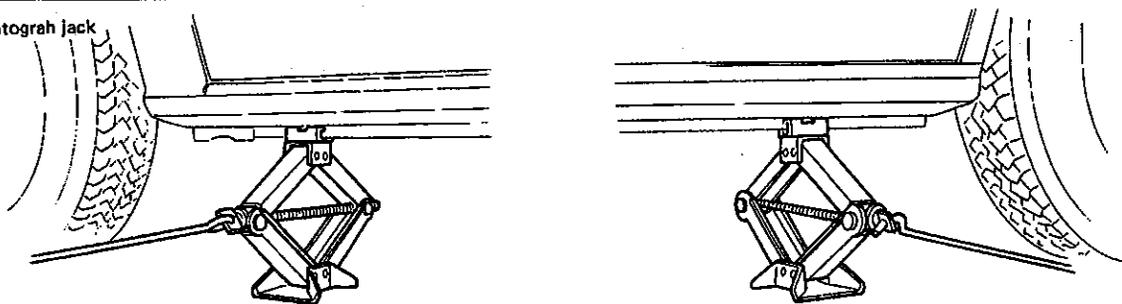
- a. Never get under the vehicle while it is supported by a jack.
- b. When jacking up the vehicle, place chocks to hold wheels.
- c. After jacking up the vehicle with garage jack, be sure to support the vehicle with stands for safety.
- d. Be sure to lift vehicle at the same four positions as those of pantograph jack.

2. PANTOGRAPH JACK, SAFETY STAND AND LIFT

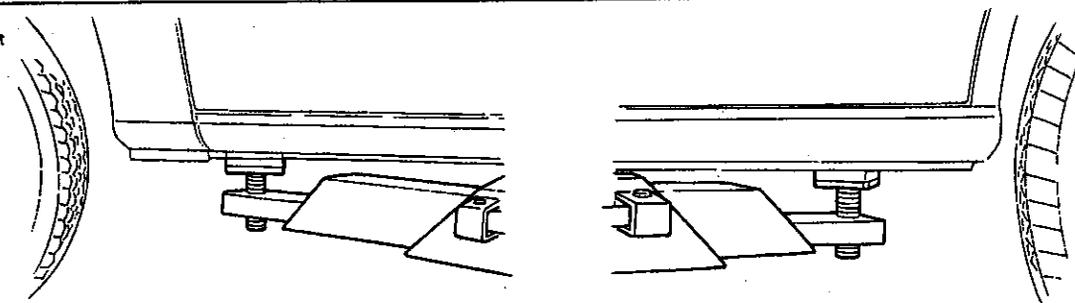
Support locations



Pantograph jack



Lift



Safety stand

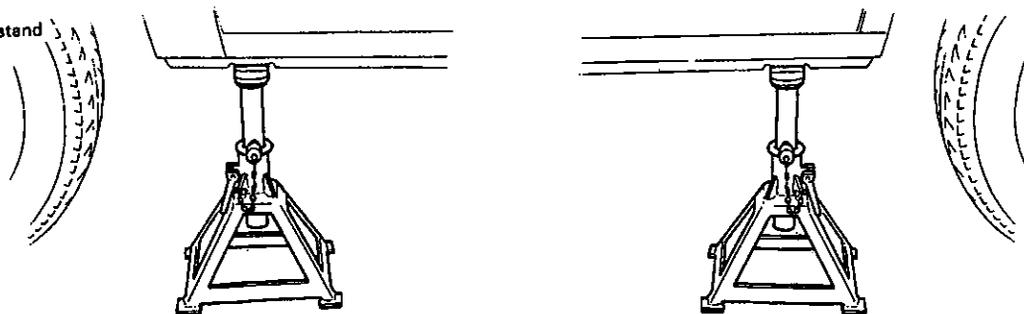
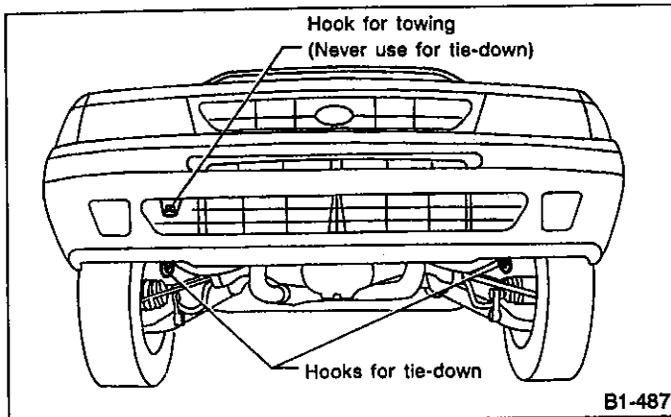


Fig. 34

B1-033A

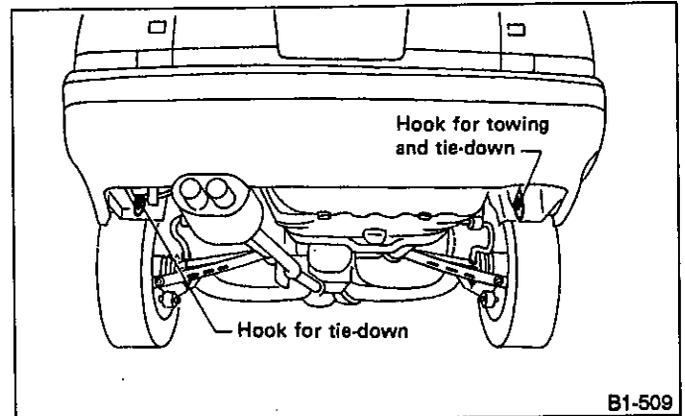
- a. Never get under the vehicle while it is supported only by the jack. Always use safety stands to support body when you have to get under the car.
- b. Block the wheels diagonally by wheel chocks.
- c. Make sure the jack is set at the correct position on the flange of side still.
- d. Be careful not to set the jack at the air flap portion.

3. TOWING AND TIE-DOWN HOOKS



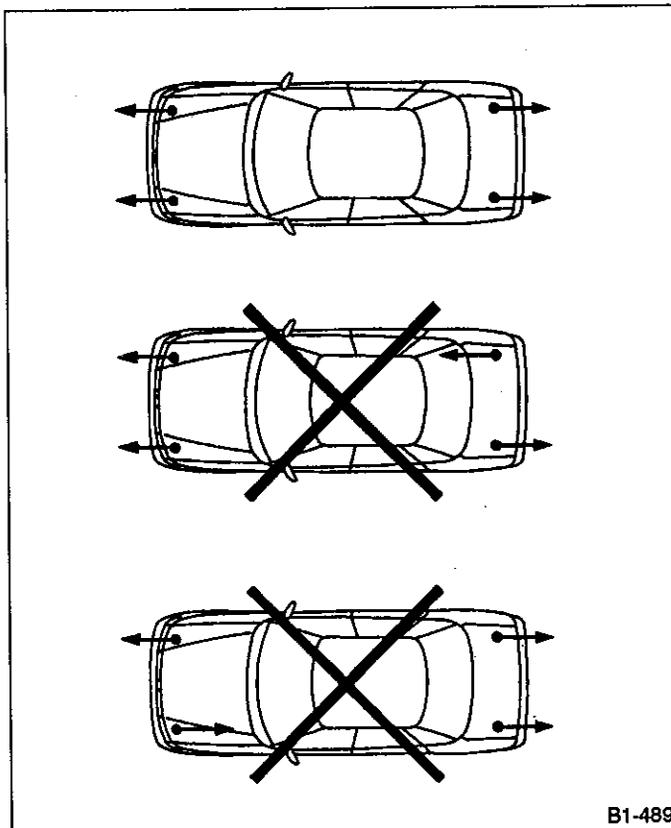
B1-487

Fig. 35



B1-509

Fig. 36



B1-489

Fig. 37

- a. Avoid towing another car with front towing hooks.
- b. Do not tow a vehicle which is heavier than towing vehicle.
- c. Do not apply excessive lateral load to towing hook.
- d. Wrap the towing rope with cloth to prevent damaging bumper, etc.
- e. Keep the vehicle level during towing.
- f. Tie the front and rear tie-down hooks in the same direction.

SUBARU®

1992

**SERVICE
MANUAL**



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1. Pre-road Test Inspection

A: HOOD OPERATION

CHECK POINTS

1. Operation of hood release and lock
2. Condition of lock
3. Fitting of hood

B: DOOR OPERATION, DOOR LOCK AND REGULATOR

CHECK POINTS

1. Door "Open-close" operation
2. Operation of door release and lock
3. Loose or damage parts
4. Regulator handle operation
5. Position of door window glass
6. Operation of power window switches
7. Power-door locking operation

C: TRUNK LID, REAR GATE AND FUEL LID OPERATION

CHECK POINTS

1. Trunk lid, rear gate and fuel lid "open-close" operation
2. Operation of trunk lid, rear gate (release and lock)
3. Fitting of trunk lid, rear gate and fuel lid
4. Operation of trunk lid opener cancel lever

D: BRAKE FLUID LEVEL AND BRAKE PIPING INSTALLATION

CHECK POINTS

1. Fluid level in brake reserve tank
2. Wiring of fluid leveller and its operation
3. Brake booster, master cylinder, hill holder and pressure control valve for proper installation; brake pipe, brake hose and connectors for proper fitting
4. Leakage in any of the above

- Check fluid leveller operation while pushing it down with a screwdriver.

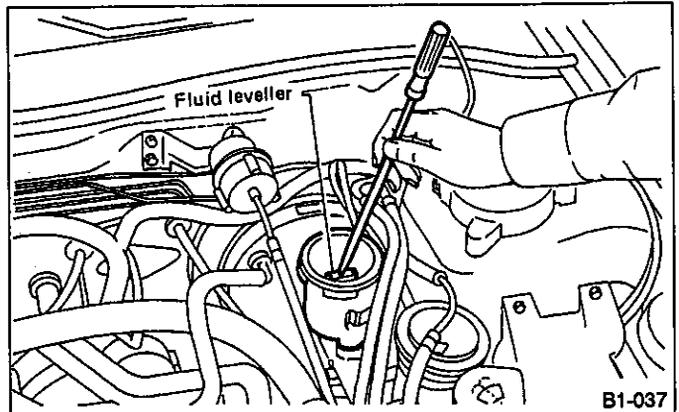


Fig. 1

Recommended brake fluid

FMVSS No. 116, fresh DOT3 or DOT4 brake fluid

- a. The fluid level must be kept at "MAX" level.
- b. Do not mix different brands of brake fluid.
- c. When adding brake fluid, be careful not to allow any dirt, water, or oil around the fluid tank to enter it.
- d. Never use engine oil, gear oil, or any mineral oil.
- e. Use extreme care not to allow any water to get into the fluid; water in the brake fluid will lower the fluid's boiling point and cause vapor-lock.
- f. Use special care not to spill any brake fluid on the vehicle's painted surfaces, because it will quickly erode them. In case of an accident, wipe it off as quickly and as cleanly as possible.
- g. If too much brake fluid is missing, check the brake line for possible leakage.
- h. After adding brake fluid, any excess must be stored in a tightly sealed container.
- i. When checking the operation of leveller, use clean screwdriver or the like and be careful not to allow dirt or dust to get into the tank.

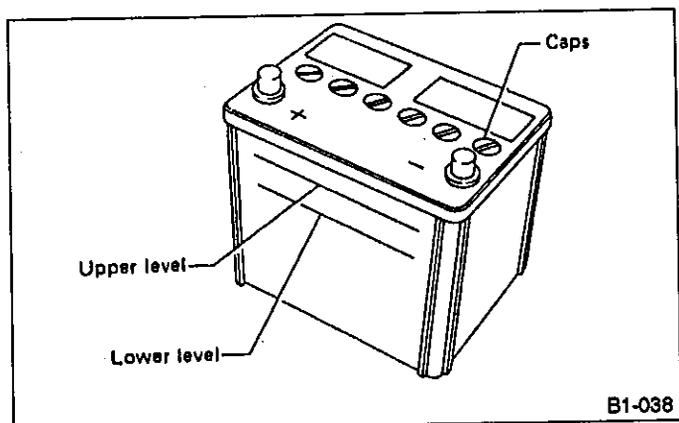
E: BATTERY FLUID LEVEL AND BATTERY INSTALLATION

CHECK POINTS

1. External parts
2. Electrolyte level
3. Specific gravity

1. Check for the existence of dirt or cracks on the battery case, top cover, vent plugs, and terminal posts. If necessary, clean with water and wipe with a dry cloth. Apply a thin coat of grease on the terminal posts to prevent corrosion.

2. Check the electrolyte level in each cell. If the level is below MIN LEVEL, bring the level to MAX LEVEL by pouring distilled water into the battery cell. Do not fill beyond MAX LEVEL.

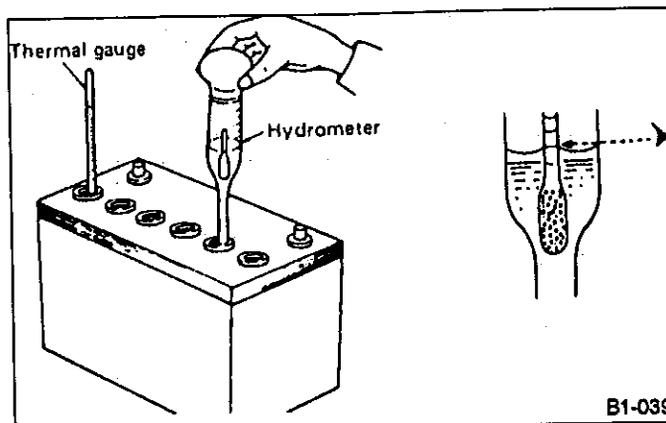


B1-038

Fig. 2

- a. Electrolyte has toxicity; be careful handling the fluid.
- b. Avoid contact with skin, eyes or clothing. Especially contact with eyes, flush with water for 15 minutes and get prompt medical attention.
- c. Batteries produce explosive gasses. Keep sparks, flame, cigarettes away.
- d. Ventilate when charging or using in enclosed space.

3. The specific gravity of electrolyte can be measured with a hydrometer. Holding the glass tube vertically, slowly draw the liquid into the tube. Take the reading on the float scale at the highest point of the liquid. When reading, the eye should be level with the surfaced of the liquid.



B1-039

Fig. 3

Serviceable specific gravity

1.220 — 1.280 at 20°C (68°F)

If the specific gravity reading is below 1.220 at 20°C (68°F), the battery must be recharged and, if necessary, the specific gravity of the electrolyte must be adjusted. The specific gravity changes according to temperature. The standard temperature is considered to be 20°C (68°F).

When measuring the specific gravity, calculate as follows:

$$S = St + 0.0007 (t - 20)$$

S = Specific gravity corrected for 20°C (68°F)

St = Measured specific gravity at t°C

t = Electrolyte temperature on centigrade scale (°C)

0.0007 = Temperature coefficient

[EXAMPLE]

A hydrometer reading of 1.273 at 30°C (86°F) is corrected to 1.280 at 20°C (68°F), indicating that the battery is fully charged. On the other hand, a reading of 1.251 at -10°C (14°F) is corrected to 1.230 at 20°C (68°F), indicating that the battery is partially charged.

F: COOLANT LEVEL AND COOLING FAN INSTALLATION

CHECK POINTS

1. Coolant level
2. Cooling fan motor and wiring
3. Water leakage and hose damage

- a. Always inspect and add at reserve tank when engine is cold.
- b. The level must be kept at "FULL" level.

- c. Use only genuine SUBARU Coolant (P/ N000016218).
- d. Avoid using any coolant or only water other than this designated type to prevent corrosion.
- e. SUBARU's engine is aluminum alloy, and so special care is necessary.
- f. If reserve tank is empty, check coolant level in radiator. Add coolant up to filler neck of radiator, if necessary. In case of TURBO model, add coolant up to coolant filler tank, if necessary.
- g. The radiator is a high pressure type. Never attempt to open the radiator cap when the coolant's temperature is high; otherwise boiling water will spurt out. Be sure to wait until the engine cools down before opening the radiator cap.
- h. When retightening the hose clamps, be careful not to over-tighten them, as doing so could damage the hose.

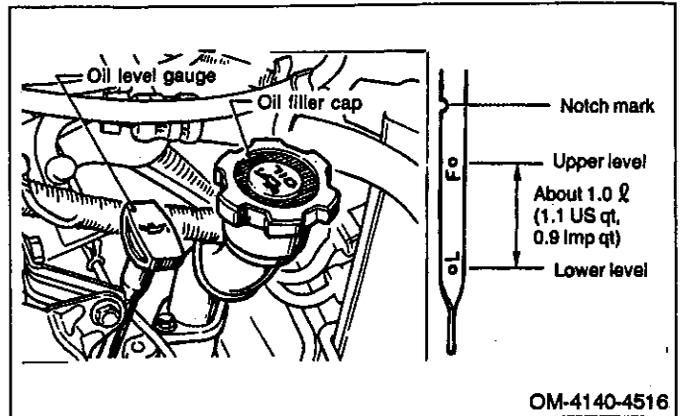


Fig. 5

- Recommended oil

API classification: SF or SG

G: ENGINE OIL LEVEL

CHECK POINTS

1. Engine oil level

- The level should be within the specified range marked on the gauge.
- a. Check engine oil level before starting the engine, when engine oil is cold, to obtain correct level reading. After stopping a hot engine, wait about 5 minutes until oil returns to oil pan before checking oil level. Oil level reading will be slightly higher than when engine is cold due to oil expansion. It is advisable to check oil level each time oil is replenished.
- b. Insert the oil level gauge into guide hole in proper direction as figure.

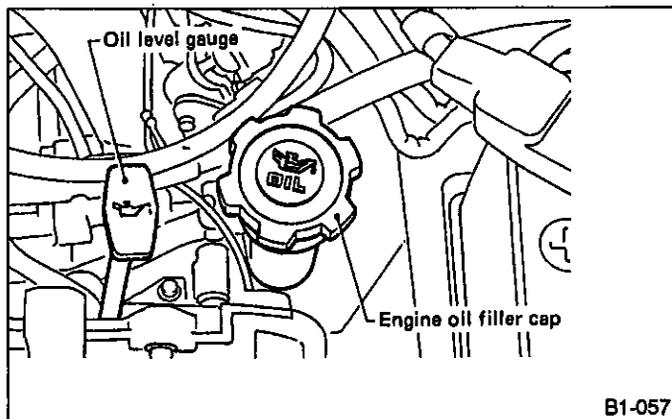


Fig. 4

B1-057

- MPFI and SPFI and TURBO

SAE viscosity No. and Applicable Temperature					
(°F)	-30	0	30	60	90
(°C)	-34	-18	0	16	32
		10W-30, 10W-40			
	← 5W-30				

- CARBURETOR

SAE viscosity No. and Applicable Temperature					
(°F)	-30	0	30	60	90
(°C)	-34	-18	0	16	32
		10W-30, 10W-40			
	← 5W-30				

B1-510

Fig. 6

- a. When replenishing oil, it does not matter if the oil to be added is a different brand from that in the engine, however, use oil having the API classification and SAE viscosity No. designated by SUBARU.
- b. SAE 5W-30 is not recommended for sustained high speed driving.

H: TRANSMISSION AND DIFFERENTIAL GEAR OIL LEVEL

CHECK POINTS

1. Level of transmission gear oil for manual transmission
2. Level of differential gear oil for automatic transmission
3. Level of rear differential gear oil for 4WD model.

- The level should be within the specified range marked on the gauge.

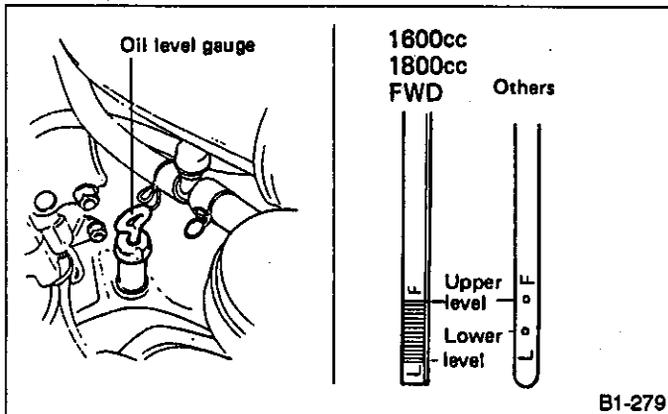


Fig. 7 Manual transmission

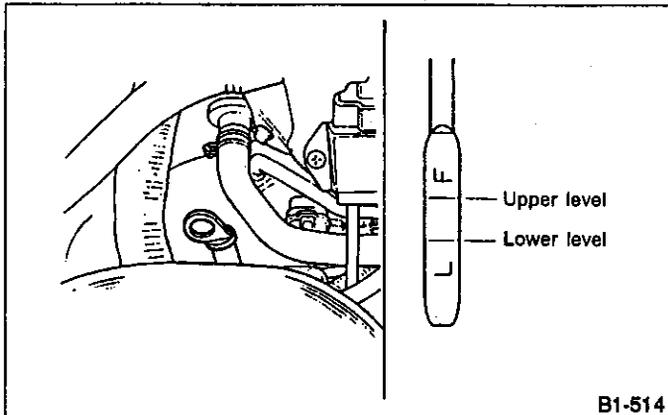


Fig. 8 Differential for automatic transmission (4AT)

When inserting the level gauge into differential for automatic transmission, align the protrusion on the side of the top part of the level gauge with the notch in the gauge hole.

- Insert a finger into the filler port to determine whether the oil is level with the port opening.

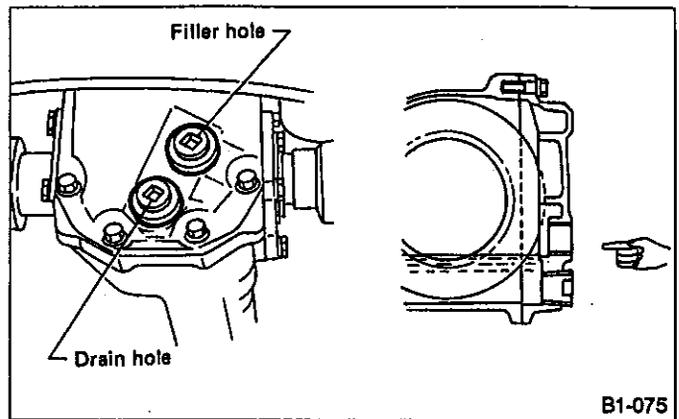


Fig. 9 4WD rear differential

- Recommended oil

ITEM	API Classification	SAE Viscosity No. and Applicable Temperature				
		(°F) -30	0	30	60	90
<ul style="list-style-type: none"> • Transmission and differential gear oil • 4WD rear differential gear oil 	GL-5	(°C) -34	-18	0	16	32

Fig. 10

- a. Each manufacturer uses different base oils and additives. Thus, do not mix brands.
- b. *For differential gear oil (AT)

J: AIR CLEANER**CHECK POINTS**

1. Contamination of air cleaner element
2. Related parts

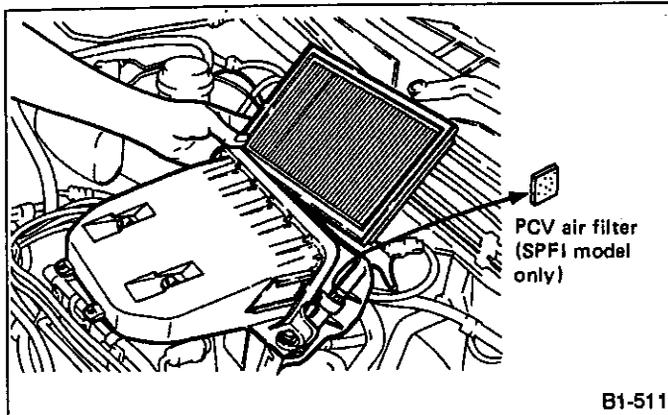


Fig. 11 1800 cc and 1600 cc

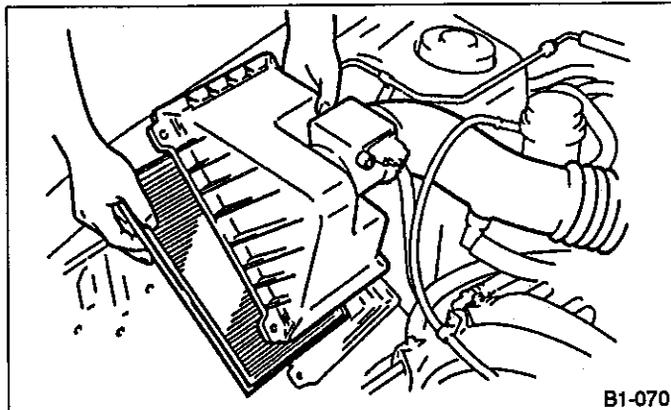


Fig. 12 2200 cc and 2000 cc

- a. The air cleaner element is a viscous type, which should not be washed or cleaned.
- b. If the air cleaner element is broken or damaged, replace it with a new one.

K: JACK INSTALLATION**CHECK POINTS**

1. Installed condition of jack

L: WINDSHIELD WASHER AND WINDSHIELD WIPERS**CHECK POINTS**

1. Installation of windshield washer tank
2. Checking of fluid level
3. Direction and quantity of windshield washer fluid sprayed
4. Operation of windshield wiper and washer

- In areas where water freezes in winter, use SUBARU windshield washer fluid (003406401) or an equivalent.

The relationship between fluid to water ratio and freezing point is as follows:

Fluid to water ratio (%)	Freezing point °C (°F)
30	-12 (10)
50	-20 (-4)
100	-45 (-49)

- a. Before checking the windshield wiper, remove the blade protective cover and clean the windshield glass.

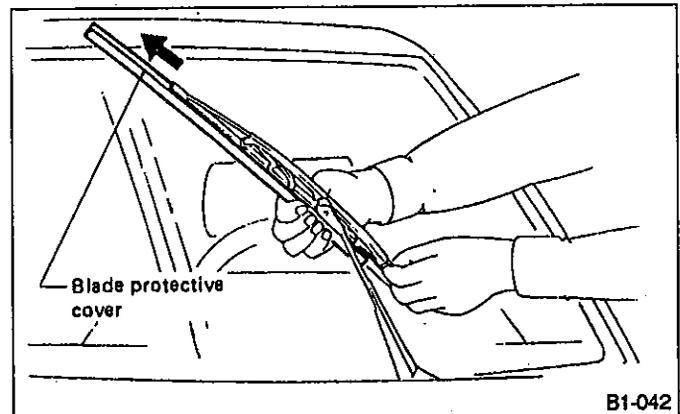


Fig. 13

- b. Do not operate the windshield wiper when the reservoir is empty.
- c. Before operating the windshield wipers, be sure to eject windshield washer fluid onto the windshield. If the windshield is dry, the wipers' operating speed and angle of operation will be different from when it is wet.
- d. If the position at which washer fluid is ejected is wrong: Using an eyelet or similar tool, adjust the direction of the nozzle, be careful not to damage the nozzle hole.
- e. Do not operate the windshield washer continuously for more than 10 seconds at a time.

M: REAR WINDOW WASHER AND WIPER

CHECK POINTS

1. Quantity of washer fluid
2. Direction and quantity of washer fluid sprayed
3. Operation of rear window washer and wiper

N: WHEEL NUTS FOR LOOSENESS AND TIRE INFLATION PRESSURE

CHECK POINTS

1. Wheel nut tightening torque
2. Tire inflation pressure and tire specification
3. Damage to tire and rim

Tightening torque:

78 — 98 N·m (8.0 — 10.0 kg-m, 58 — 72 ft-lb)

- a. When checking the wheel nuts, be sure to use a torque wrench, and tighten the nuts to the specified torque.
- b. After inspecting and adjusting the tire pressure, be sure to put the valve cap back.

O: SEAT ADJUSTER AND SEAT BELTS

CHECK POINTS

1. Front and rear seats, and their facing materials
2. Front seat operation
3. Rear seat folding operation
4. Seat belts and their fit

P: FUSES

CHECK POINTS

1. Fuse installation
2. Spare fuse

Fuse as shown in the figure is disconnected to avoid discharging the battery.

Insert fuse (10A) in the main fuse box inside the engine compartment. Use spare fuse shown by arrow.

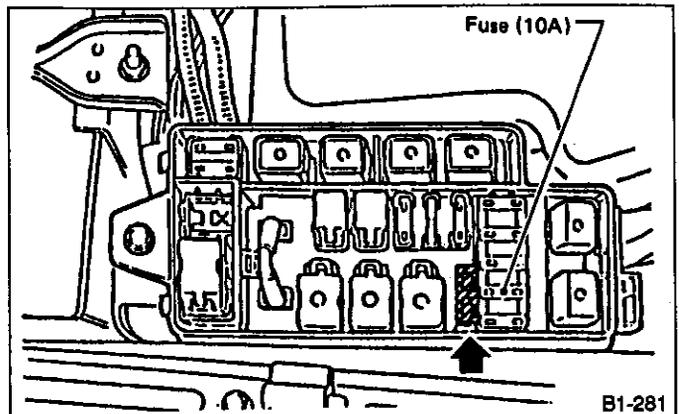


Fig. 14

Q: LIGHTS AND SWITCHES

CHECK POINTS

1. Visual inspection of lights (installation, damage, dirty lenses, water inside, etc.)
2. Operation of all lights and switches
3. Horn operation
4. Operation of heater and ventilator

S: READ MEMORY CONNECTOR (MPFI & SPFI model)

CHECK POINTS

1. Check engine light flashing.
2. Read memory connector disconnection.

- Check the check engine light flashing.
 - a. With the read memory connector connected, set the ignition switch to ON (with engine OFF and ON). Flashing of the check engine light indicates no trouble.
 - b. If the check engine light displays a trouble code when the ignition switch is set to ON (with engine OFF), or if the check engine light illuminates with engine ON, this indicates that a trouble has occurred. Check Troubleshooting. Refer to 2-7: FUEL INJECTION SYSTEM.
 - c. If engine fails to turn over when the ignition switch is set to START, check the spark plugs. Refer to 6-1: Spark Plug [W4A0].
- Check the read memory connector disconnection.
 - a. Disconnect the read memory connector after checking that there is no trouble in the engine.

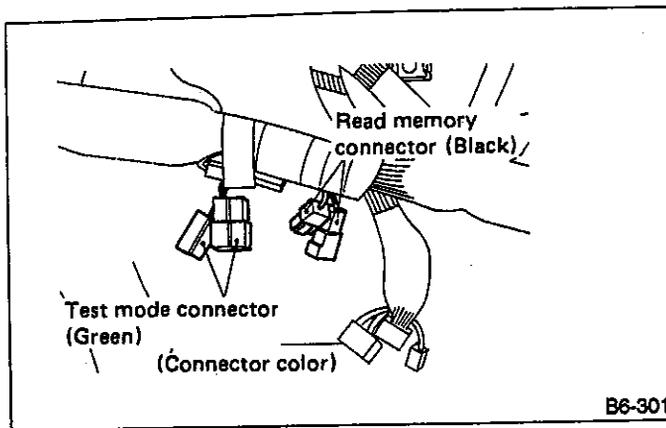


Fig. 15

T: INSTALLATION OF STEERING COMPONENTS

CHECK POINTS

1. Installation of universal joints
2. Steering gear box for looseness, play, or backlash, and boots for damage
3. Tie-rod and tie-rod end for proper installation, or damage

- 1) Check the universal joint for looseness.

When checking, turn ignition switch to "ACC" position.

Tightening torque:

21 — 26 N·m (2.1 — 2.7 kg-m, 15 — 20 ft-lb)

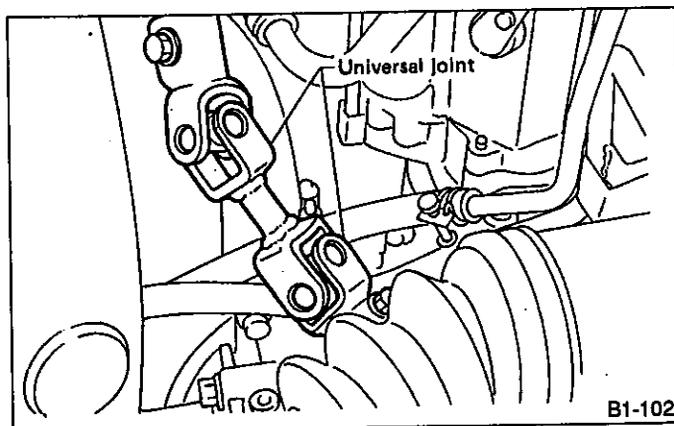


Fig. 16

- 2) Check the gear box mounting bolt for looseness.

Tightening torque:

47 — 71 N·m (4.8 — 7.2 kg-m, 35 — 52 ft-lb)

- 3) Check the tie-rod end lock nut for looseness.

Tightening torque:

78 — 88 N·m (8.0 — 9.0 kg-m, 58 — 65 ft-lb)

- 4) Carefully check the root portion of the boots, and the condition of the clips.

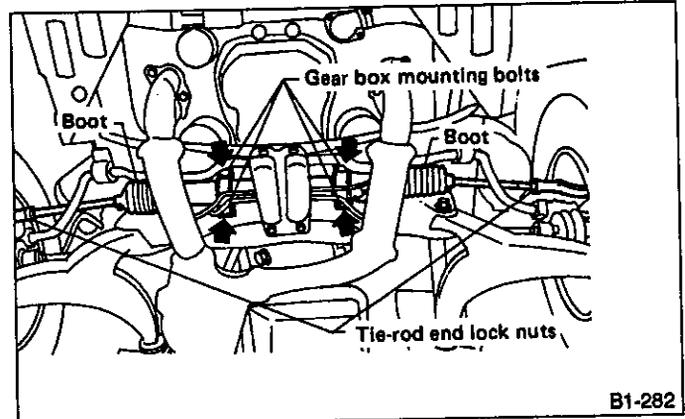


Fig. 17

U: EXHAUST PIPE AND MUFFLER

CHECK POINTS

1. Exhaust system's installation
2. Exhaust gas leakage

- 1) Check the exhaust system's installation for looseness, damage and possible interference with other parts. (Refer to Chapter 2-9 for tightening torque.)

When the engine is running, and for a short time after it is stopped, the exhaust system remains very hot; use extreme care and don't get burnt during this evolution.

V: FUEL SYSTEM FOR LEAKAGE

CHECK POINTS

1. Installation of fuel hose and pipe. And condition of clamps
2. Fuel system for leakage

- 1) Check the fuel hose's layout, and also search for interference with other parts, twists, or damage, check the condition of the clamps.

Check the fuel and air breather pipes visually or by feeling with your fingers from the underside. Retighten the clamps if necessary.

- a. When retightening the clamps, do not tighten them excessively
 - b. When checking the fuel system, use extreme care to prevent accidental fires.
- 2) Without starting the engine, turn the ignition switch to the ON position, and operate the fuel pump to pressurize the fuel system. Then check the fuel system for leakage.

W: HEIGHT CONTROL SYSTEM
Air (Pneumatic) Suspension Vehicle

CHECK POINTS

1. Function of height control changeover

- Check the function of height control changeover.
- 1) Unload the car to establish "curb weight" condition.
- 2) Start engine and operate height control switch to "NORMAL".

Ensure ground clearance is automatically set to the NORMAL value as indicated in Chapter 4-1.

- 3) Check air suspension compressor to ensure it stops. If it still is in operation, wait until it stops.

The above procedure is required to determine whether or not, car height control is in good order and should not be omitted.

- 4) After compressor stops, set height control switch to "HIGH" and check the following:
 - a) Check if car attains the specified height within 80 seconds.
 - b) Check if the HIGH pilot lamp is on.
 - c) Check if compressor stops within five minutes after setting height control switch to "HIGH".
- 5) Set height control switch to "NORMAL" after compressor has stopped. Check if car returns to the specified NORMAL position within one minute.
- 6) If abnormality is noted in steps 1) through 5) above, refer to Chapter 4-1 and repair as necessary.

X: PROTECTOR

CHECK POINTS

1. Protector removal

The following parts are covered to prevent splashing of wax. Remove protector.

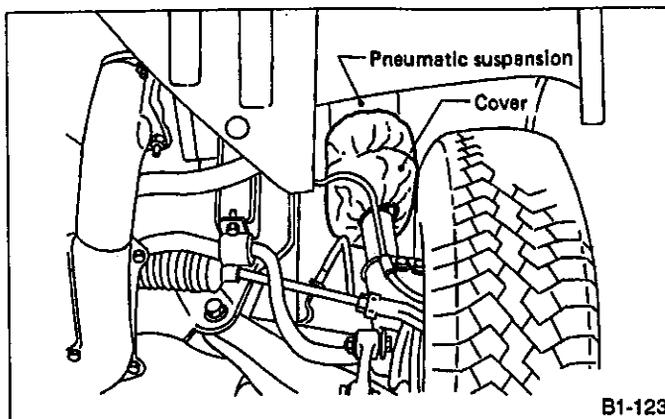


Fig. 18

Label of rear differential is covered by tape. Remove it.

2. Road Test Inspection

A: OPERATION OF INDICATOR LIGHTS AND GAUGES

CHECK POINTS

1. Operation of indicator lights
 2. Operation of gauges

Check the operation according to the "Owner's manual".

- a. Perform this inspection with the gear shift lever in the neutral position. (For automatic transmission models: Set the select lever in the "P" position.)
- b. Set the parking brake.
- c. Do not race the engine excessively.

B: TACHOMETER, RADIO, ETC.

CHECK POINTS

1. Operation of tachometer, radio, cigarette lighter, etc.

- Tachometer
 Race the engine two or three times, and check the tachometer's operation.
Do not race the engine more than necessary.
- Radio
 Check the operation according to the "Owner's manual".
- Cigarette lighter
 To operate, push in the knob completely and wait for a moment. The lighter will click out of holder automatically when ready to use.

CAUTION:

- a. To avoid the possibility of being burned, do not hold the cigarette lighter in by hand. This may also cause damage to the lighter heating element.
- b. When replacing the knob, it is recommended that you use only a genuine part. If you use either non-genuine parts or any combination of parts different from original knob-and-socket combination, it may cause overheating due to a short circuit.

C: DRIVING TEST**CHECK POINTS**

1. Operation of foot brake and parking brake
2. Inspect the clutch free play.
3. Operation of hill holder (Manual transmission model only)
4. Operation of clutch and gear shift
5. Operation of selector lever (Automatic transmission models only)
6. Operation of 4WD selector lever and switch (4WD models only)
7. Operation of steering and position of steering wheel
8. Operation of turn signal cancel cam
9. Operation of ventilation system and heater
10. Operation of air conditioner
11. Abnormal noises or vibration
12. Function of automatic vehicle height resumption Air (pneumatic) suspension vehicle
13. Operation of cruise control

1. Check the foot and parking brakes' operation.

1) Drive on a dry, level, paved road, and apply normal braking. Look for uneven or improper operation, or pulling to one side.

Be sure to perform this test in a safe area.

2) Press the brake pedal in two or three times, and keep it fully depressed. Make sure that the brake can be kept that way for at least five seconds. Also check for air in the brake system, or brake fluid leakage.

3) Perform the adjustment of operating rod ASSY as follows:

(1) Be sure engine is off. (No vacuum is applied to brake booster).

(2) There should be play between brake booster clevis and pin at brake pedal installing portion.

[Depress brake pedal pad with a force of less than 10 N (1 kg, 2 lb) to a stroke of 1 to 3 mm (0.04 to 0.12 in).]

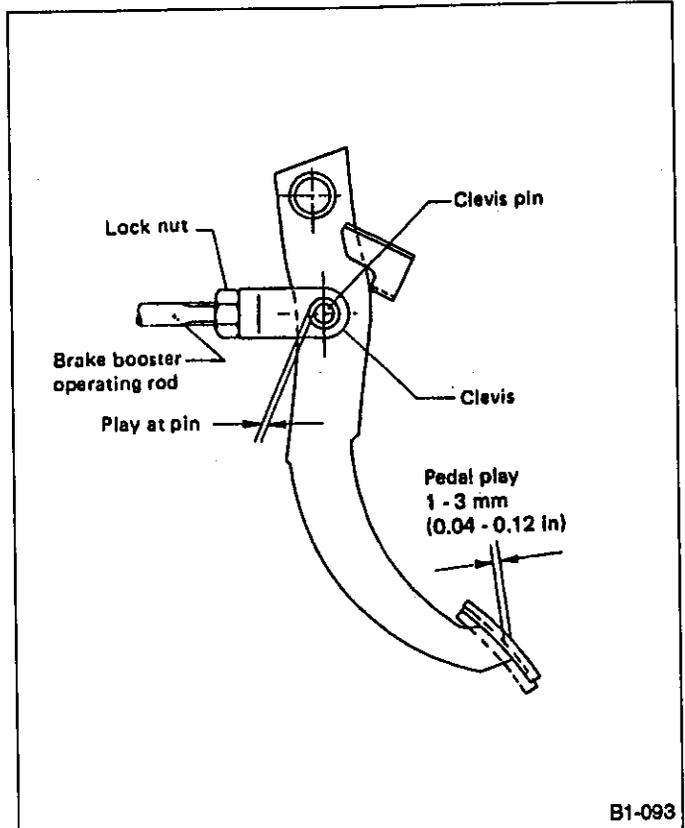


Fig. 19

(3) Depress the surface of brake pad by hand.

(4) If there is no free play between clevis pin and clevis, loosen lock nut for operating rod and adjust operating rod by turning in the direction that shortens it.

(5) After adjustment, make sure there is no brake dragging.

4) Pull the parking brake lever completely out, and check its operation. Also check the ratchet for normal functioning.

Check the parking brake lever stroke. If it is out of specification, adjust it by turning adjusting nut at parking brake lever.

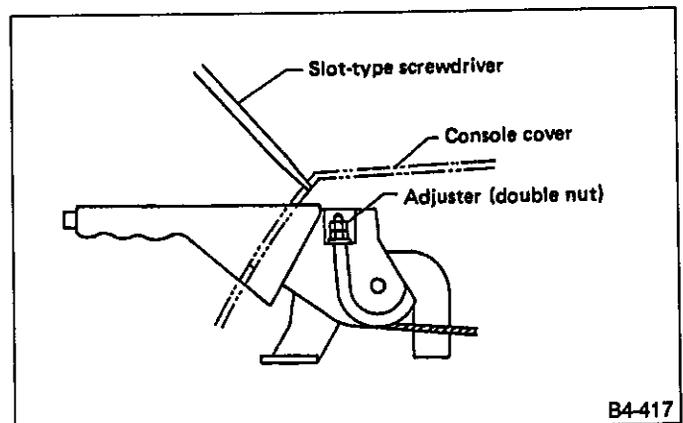


Fig. 20

Parking brake lever stroke:

Standard

7 — 8 notches/196 N (20 kg, 44 lb)

Tightening torque (Adjusting nut):

5.4 — 9.3 N•m (0.55 — 0.95 kg-m, 4.0 — 6.9 ft-lb)

2. Inspect the clutch pedal free play.

1) Mechanical application type

(1) Lightly press the clutch pedal down with a finger to check the free play.

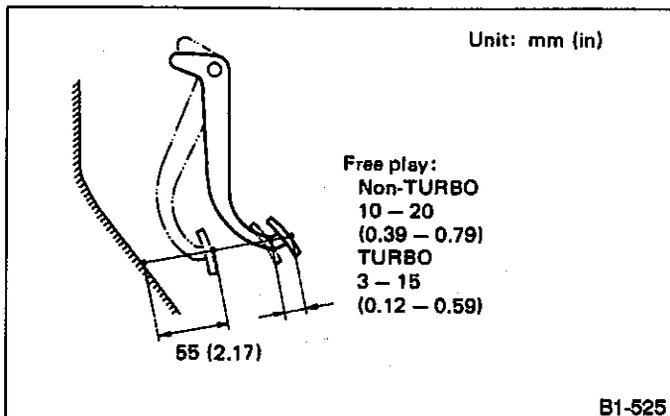


Fig. 21

(2) If it is out of specification, adjust it by turning adjusting nut on engine side end of clutch cable at release fork.

2) Hydraulic application type

(1) Lightly press the clutch pedal down with a finger to check the free play.

(2) If it is out of specification, loosen lock nut for push rod and adjust push rod by turning in the direction that shortens or lengthens it.

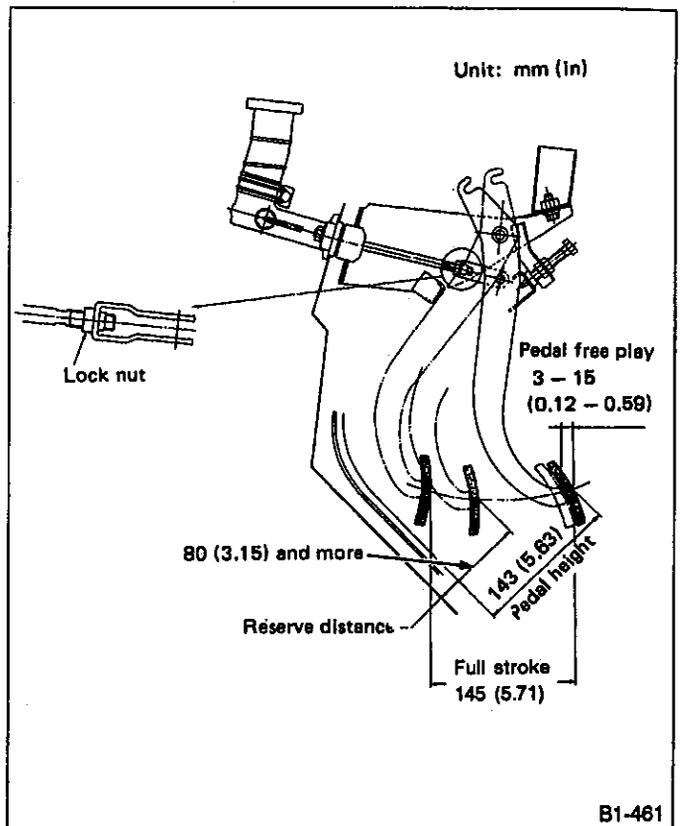


Fig. 23

Tightening torque (Adjusting nut):

9 — 11 N•m (0.9 — 1.1 kg-m, 6.5 — 8.0 ft-lb)

(3) Check the fluid level on the outside of the clutch master cylinder tank. If the level is below "MIN", add clutch fluid to bring it up to "MAX".

Recommended clutch fluid:

FMVSS No. 116, fresh DOT 3 or DOT 4 brake fluid

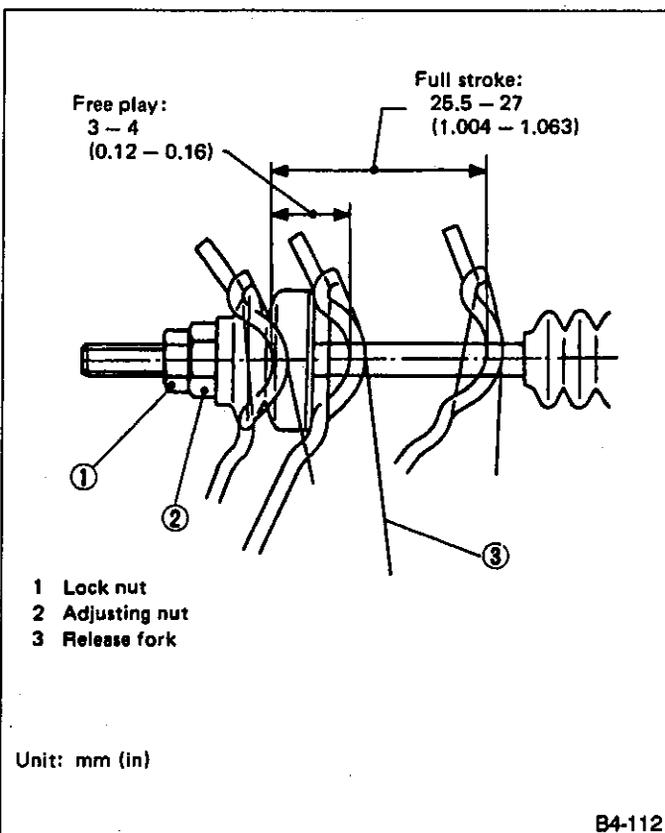


Fig. 22

3. Check the hill holder operation.

1) Confirm stopping and starting performances by activating hill holder on an uphill road of 3° or higher inclination.

- If the vehicle does not stop, tighten adjusting nut of pressure holding valve (PHV) cable.

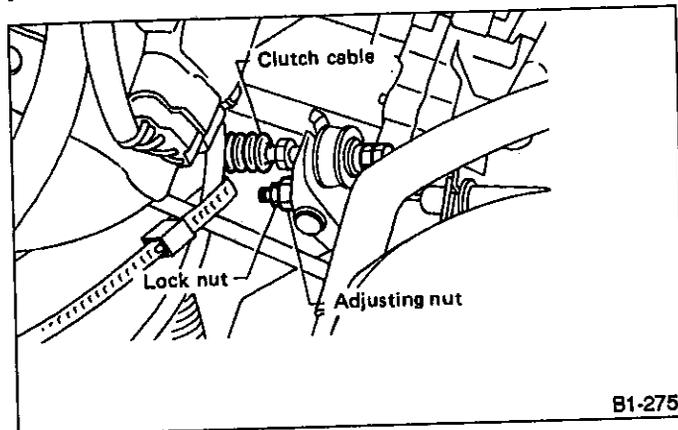
- If the vehicle does not start properly, it should be corrected by following case A or case B.

Case A: When the hill holder releases after the clutch pedal is engaged (the engine tends to stall), loosen the adjusting nut gradually until smooth starting is possible.

Case B: When the hill holder releases before the clutch pedal engages (the vehicle slips down slightly), tighten the adjusting nut so that the hill holder releases after the clutch pedal engages (case A).

Then make adjustment as in case A.

Whenever turning adjusting nut, hold inner cable with pliers so that it does not rotate.



B1-275

Fig. 24

4. Check the operation of clutch and gear shifting.

- 1) With the engine idling and the shift lever in neutral, gradually depress the clutch pedal, to see if it generates any abnormal noise.

Carefully compare a normal clutch's operating sounds to the clutch being tested.

- 2) Pull the parking brake lever completely out, and place wheel chocks under the tires. Then depress the clutch pedal completely, and place the shift lever in 4th speed.

Raise engine rpms a little, gradually engage the clutch, and see if the engine stalls.

If the engine stalls, it means that the clutch is not slipping.

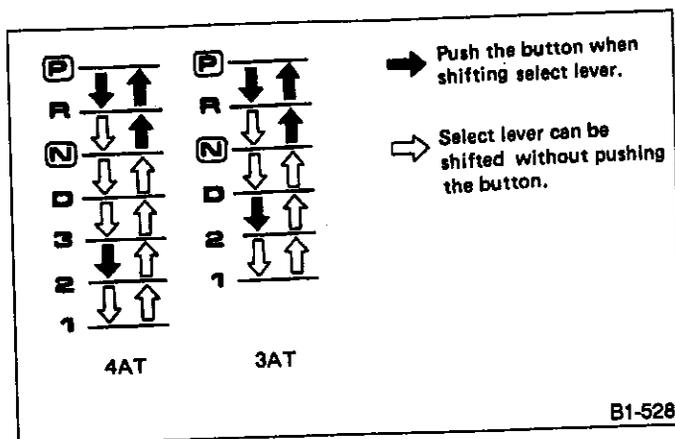
- a. Be sure to perform this test in a safe area.
- b. Do not repeat this test.

- 3) Remove the wheel chocks, and return the shift lever to neutral, then check the gear shifting mechanism for excessive play.

- 4) Drive the car at various speeds. While depressing the clutch pedal completely, move the gear shift lever into each position, and check for any unusual play or unusual resistance.

5. Operation of selector lever (Automatic transmission models only)

- 1) Place the selector lever in each position, and make sure that the pointer indicates the position of each range correctly.



B1-528

Fig. 25

6. Operation of 4WD drive selector (4WD dual-range models) and Selector switch (Selective 4WD models)

While driving, check the operation of the 4WD drive selector and selector switch. Also check that indicator light on instrument panel comes on.

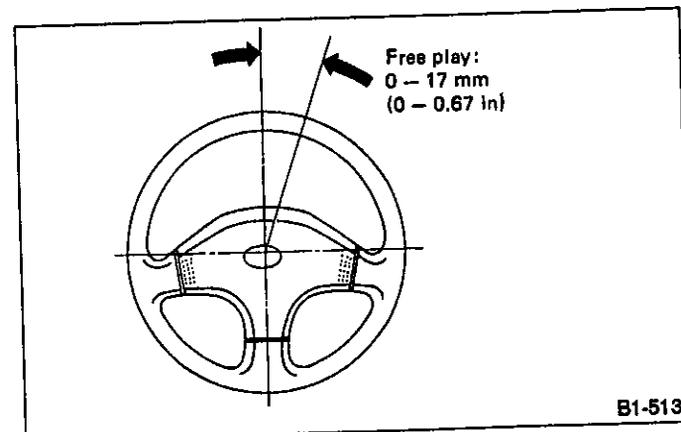
Never shift the drive selector while the wheels are spinning or slipping.

7. Operation of steering and position of steering wheel

- 1) Check the steering wheel for free play.

Steering wheel free play:

0 — 17 mm (0 — 0.67 in)



B1-513

Fig. 26

- 2) With the car moving straight ahead, check for hard steering, shimmy, or other abnormalities.
- 3) Make a turn, and check for hard or heavy steering wheel operation, or poor stability.

8. Make a right or left turn with the turn signal on, and make sure that the turn signal switch returns automatically to the OFF position when the steering wheel is returned to the straight ahead position.

9. Operation of ventilation system and heater

- 1) While driving, move the control lever and dial into each position, and check the ventilation system's operation. Also check for unusual vibration or noises.

2) Move the temperature control lever and fan switch, and make sure that warm air is discharged into the compartment.

10. Operation of air conditioner

Turn the air-conditioner switch "ON", and make sure that cool air is discharged into the compartment.

11. Abnormal noises or vibration

1) When starting the engine, and while driving the vehicle, check the engine, transmission, body, suspension, and steering system for any unusual noises or vibration.

Do this when idling the engine, accelerating, decelerating, and running at low, middle and high speeds.

2) Depress the accelerator pedal, and make sure that the engine rpms increase smoothly and that the vehicle accelerates smoothly.

3) While driving, turn the steering wheel right and left to test the vehicle's stability and response.

Be sure to perform this test in a safe area.

12. Check the function of automatic vehicle height resumption.

(1) Move height control switch to "HIGH" while operating car below 70 km (43 mile)/h to see if HIGH pilot lamp comes on.

(2) Operate car at speed higher than 90 km (56 mile)/h for at least five seconds to check if NORMAL pilot lamp instead of HIGH pilot lamp comes on.

(3) Operate car at speed lower than 56 km (35 mile)/h for at least five seconds to check if HIGH pilot lamp instead of "NORMAL" pilot lamp comes on again.

(4) Stop car and move height control switch to "NORMAL". Check if car is set to the NORMAL height position.

(5) If abnormality is noted in steps (1) through (4) above, refer to Chapter 4-1 and repair as necessary.

Be sure to conduct driving tests using a chassis dynamometer with front wheels set in operation, or test on an authorized race course or similar place.

13. Check the operation of the cruise control according to the "Owner's Manual" or "Instruction Manual".

3. Post-road Test Inspection

B: AUTOMATIC TRANSMISSION FLUID (ATF) LEVEL

CHECK POINTS

• Level of ATF

The ATF should be maintained at the proper level as follows:

1) Drive the car several miles to bring the transmission to the normal operating temperature. 60 to 80°C (140 to 176°F) is normal.

2) Park the car on a level surface.

3) While idling the engine, shift select lever to all positions. Then return it to "P".

4) Remove the level gauge and wipe it clean.

5) Reinsert the level gauge completely.

6) Remove it again and note its reading.

If the fluid level is at the lower mark or below on the "HOT" side, add the recommended automatic transmission fluid to bring the level to the high mark. ATF is added through the level gauge hole. When the fluid level has to be checked without time to warm up the automatic transmission, check to see that the fluid level is within the marks on the "COLD" side. If it is below the marks, add fluid.

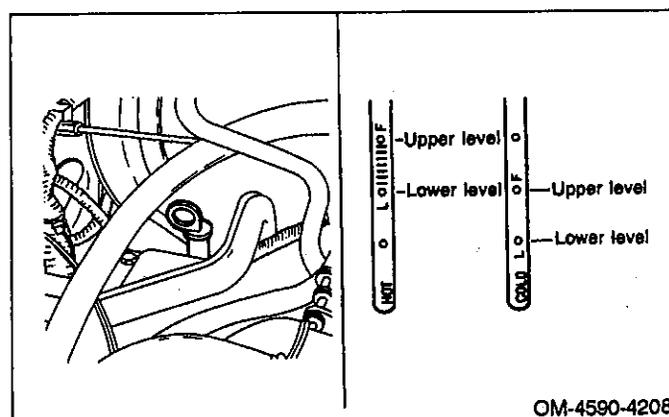


Fig. 27 4AT

Do not fill above the high mark level.

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C: POWER STEERING FLUID LEVEL**CHECK POINTS**

- Level of power steering fluid

The power steering fluid should be maintained at a proper level.

Check level as follows:

- 1) Drive the car several miles or kilometers to bring power steering system up to the normal operating temperature of about 60°C (140°F).
- 2) Park the car on a level surface and stop the engine.
- 3) Remove the level gauge and wipe it clean.
- 4) Reinstall the level gauge firmly.
- 5) Remove it again and read the level on the "HOT" side.

If the fluid level is at the lower level or below it, add recommended power steering fluid up to the high level. When the fluid level is to be checked without warming up the power steering system [at approximately 2°C (70°F)], read the fluid level at the "COLD" position of the level gauge.

- a. The available power steering fluid is ATF DEXRON II. Be sure to use the recommended fluid.
- b. When power steering fluid is added, be careful not to allow any dust into the tank.

D: TOE**CHECK POINTS**

- Toe of front and rear wheels

1) To check the toe, make sure that the spare tire, floor mats and service tool are in place. No other weight should be present.

a. Before checking wheel alignment with a sideslip tester, check the following:

- (1) Left and right tires are the same type and size.
- (2) Tires are inflated to specified pressure.

b. When driving over the sideslip tester, be sure to drive the vehicle slowly with the steering wheel fixed in the straight ahead position.

2) If the measured toe or sideslip value is not within the standard range, refer to Chapter 4-1 and adjust them.

E: UNDERSIDE**CHECK POINTS**

1. Leakage of engine oil, transmission gear oil, differential gear oil, etc.
2. Leakage of coolant
3. Leakage of brake fluid
4. Loose suspension mountings or steering mounting

Raise the vehicle body and perform these checks from the underside.

- 1) Visually check for any signs of engine oil, transmission gear oil, differential gear oil, etc. leakage.
- 2) Visually check for any sign of coolant leakage.
- 3) Visually check for any sign of brake fluid leakage.
- 4) Check the suspension mounting and steering mounting for any loose or unconnected parts.

F: WATER LEAKAGE**CHECK POINTS**

- Water leakage by pouring water

1) Before performing the water leakage test, remove anything that may obstruct the operation or which must be kept dry.

2) Close all of the windows completely, and then close all of the doors tightly. Close the hood and trunk lid before starting the test.

3) Connect a hose to a tap, and spray water on the vehicle. The rate of water discharge must be approx. 20 to 25 liters (5.3 to 6.6 US gal, 4.4 to 5.5 Imp gal) per minute. When spraying water on areas adjacent to the floor and wheel house, increase the pressure.

When directing water on areas other than the floor portion and wheel house, decrease the pressure. But the force of water must be made strong occasionally by pressing the end of the hose.

Be sure to keep the hose at least 10 cm (3.9 in) from the vehicle.

4) Check the following areas:

- (1) Front window and body framework mating portion
- (2) Door mating portions
- (3) Glass mating portions
- (4) Rear quarter windows mating portions
- (5) Rear window and body framework mating portion

- (6) Trunk lid mating portion
- (7) Around roof drips

If any dampness in the compartments is discovered after the water has been applied, check all areas that may have possibly contributed to the leak carefully.

G: EXTERNAL APPEARANCE AND EQUIPMENT

CHECK POINTS

- 1. Paint
- 2. Scratches or damage to glass
- 3. Rust formation
- 4. Contamination of interior parts
- 5. Installation of equipment

1) Check the paint after removing the paint protective agent and washing the vehicle.

Before removing the protective agent, be sure to wash the vehicle, because the painted surface may be scratched if the surface is rubbed with sand or other hard particles which may be attached to the protective agent.

- Check the whole vehicle body for stains, flaking, damage caused by transportation, rust, dirt, cracks, or blistering.

a. It is better to determine an inspection pattern in order to avoid missing an area, since the total area is not small.

b. It is desirable not to make corrections to the body paint unless absolutely needed. However, if any corrections are required to remove scratches or rust, the area to be corrected must be limited as much as possible. Re-painting and spray painting must be avoided whenever possible.

2) Carefully check each window glass for scratches. Slight damage may be removed by polishing with cerium oxide. (Half-fill a cup with cerium oxide, and add warm water to it. Then agitate the contents until it turns to wax. Apply this wax to a soft cloth, and polish the glass.)

3) Check each portion of the vehicle body and underside components for the formation of rust. If rust is discovered, remove it with #80 — #180 emery paper, and treat the surface with rust preventive. After this treatment is completed, flush the portion thoroughly, and prepare the surface for repair painting.

Care should be taken not to apply paint, undercoating agent, anti-corrosive wax, etc. to the following parts of air-suspension equipped models while refinishing the undercarriage.

- (1) Diaphragm and rolling surfaces
- (2) Air suspension compressor and dryer ASSY

- Check each portion of the body and all of the chrome parts for deformation or distortion. Also check each lamp lens for cracks.

4) Check the following interior parts for contamination.

- 1) Instrument panel and meter glass
- 2) Glove box
- 3) Sun visor
- 4) Room mirror
- 5) Assist rail
- 6) Roof trim
- 7) Door trim
- 8) Inner trim
- 9) Front and rear seats
- 10) Luggage shelf
- 11) Floor mat
- 12) Others

If the meter glass is contaminated, wipe it gently with a clean soft cloth that has been dampened with water. Do not rub the meter glass hard; otherwise, the transparent resin plate on it may become clouded due to the formation of scratches.

5) Check the interior and exterior equipment to make sure that they are installed securely. Also make sure that the equipment conforms to the vehicle's specifications.

Make sure that the spare tire, jack, spare key, tools, owner's manual, warranty & service booklet, etc. are all present.

SUBARU®

1992

**SERVICE
MANUAL**



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SCHEDULE OF INSPECTION AND MAINTENANCE SERVICES

MAINTENANCE ITEM		MAINTENANCE INTERVAL [Number of months or km (miles), whichever occurs first]						REMARKS
		Months	12	24	36	48		
		x1,000 km	1.6	25	50	75	100	
		x1,000 miles	1	15	30	45	60	
1	Drive belt(s) [Except camshaft]		I	I	I	I		
2	Camshaft drive belt (Timing belt)					R		
3	Engine oil filter	Change every 12,500 km (7,500 miles) or 6 months whichever occurs first.					See NOTE 1)	
4		Change every 12,500 km (7,500 miles) or 6 months whichever occurs first.					See NOTE 1)	
5	Replace engine coolant and inspect cooling system, hoses and connections			P		P		
6	Replace fuel filter and inspect fuel system, line and connections			P		P	See NOTE 3)	
7	Air cleaner element		I	R	I	R	See NOTE 2)	
8	Spark plugs		R	R	R	R		
	For TURBO			R		R		
9	Engine idle speed (for carburetor engine only) and Idle mixture (not necessary for catalytic converter equipped vehicles)	I	I	I	I	I		
10	Transmission/Differential (Front & rear) gear oil and Automatic transmission fluid			R		R	See NOTE 4)	
11	Brake fluid			R		R	See NOTE 5)	
12	Disc brake pads and discs/Front and rear axle boots and axle shaft joint portions		I	I	I	I	See NOTE 3)	
13	Brake linings and drums			I		I	See NOTE 3)	
14	Inspect brake lines and check operation of parking and service brake system		P	P	P	P	See NOTE 3)	
15	Clutch and hill-holder system		I	I	I	I	Adjust pedal free play at 1,600 km (1,000 miles)	
16	Steering and suspension system		I	I	I	I	See NOTE 3)	
17	Front and rear bearing lubricant					(I)		

Symbols used:

R: Replace

I: Inspect, and then adjust, correct or replace if necessary.

P: Perform

(I) : Recommended service for safe vehicle operation

Continue periodic maintenance beyond 100,000 km (60,000 miles) or 48 months by returning to the first column of the maintenance schedule and adding 100,000 km (60,000 miles) or 48 months to the column headings.

NOTES:

- 1) When the vehicle is used under severe driving conditions mentioned below*, the engine oil and oil filter should be changed more frequently.
- 2) When the vehicle is used under severe driving conditions mentioned below*, the air filter elements should be replaced more frequently.
- 3) When the vehicle is used under severe driving conditions mentioned below*, inspection should be performed at every 12,500 km (7,500 miles) or 6 months whichever occurs first.
- 4) When the automatic transmission vehicle is frequently operated under severe conditions, such as pulling trailer or driving on sand, replacement of automatic transmission fluid and front differential gear oil should be performed more frequently.
- 5) When the vehicle is used under following areas, change fluid every 25,000 km (15,000 miles) or 12 months whichever occurs first.
 - (1) High humidity areas
 - (2) Mountainous areas

***Severe driving conditions:**

- (1) Operating in extremely cold weather (Items 3, 4 and 16 only)
- (2) Pulling trailer (Items 3, 4, 12 and 13 only)
- (3) Repeated short trips (Items 3, 4, 12 and 13 only)
- (4) Driving on dusty roads (Items 7, 12, 13 and 16 only)
- (5) Driving on rough and/or muddy roads (Items 12, 13 and 16 only)
- (6) Driving in areas using road salt or other corrosive materials (Items 6, 12, 13, 14 and 16 only)
- (7) Living in coastal areas (Items 6, 12, 13, 14 and 16 only)

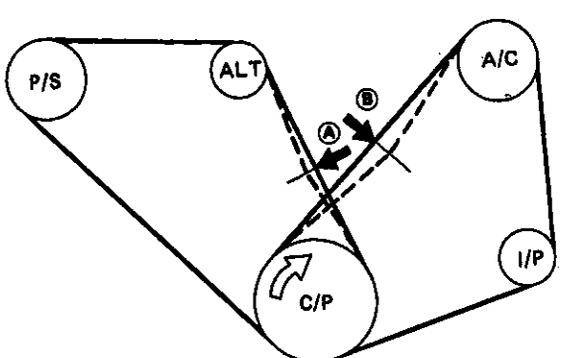
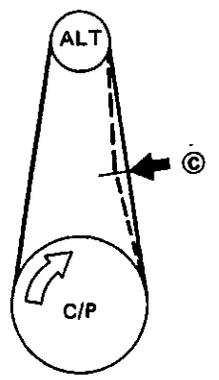
**1. Drive Belt(s)
[Except Camshaft]**

MAINTENANCE INTERVAL [Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60

A: INSPECTION

Apply a force 98 N (10 kg, 22 lb) midway between the pulleys.

- 1) Replace belts, if cracks, fraying or wear is found.
- 2) Check drive belt tension and adjust it if necessary by changing alternator installing position and/or idler pulley installing position.

Pulley arrangement	Tension mm (in)/98 N (10 kg, 22 lb)	
	A	B*
 <p>Fig. 1</p> <p>B1-294</p>	<p>New belt: 7.0 — 9.0 (0.276 — 0.354) Existing belt: 9.0 — 11.0 (0.354 — 0.433)</p>	<p>New belt: 7.5 — 8.5 (0.295 — 0.335) Existing belt: 9.0 — 10.0 (0.354 — 0.394)</p>
 <p>Fig. 2</p> <p>B1-295</p>	<p>C</p> <p>New belt: 7.0 — 9.0 (0.276 — 0.354) Existing belt: 9.0 — 11.0 (0.354 — 0.433)</p>	

C/P: Crankshaft pulley
ALT: Alternator pulley
P/S: Power steering oil pump pulley
A/C: Air conditioner compressor pulley

I/P: Idler pulley
*There is no belt [B] on models without an air conditioner.

B: REPLACEMENT

1. REMOVE V-BELT COVER.

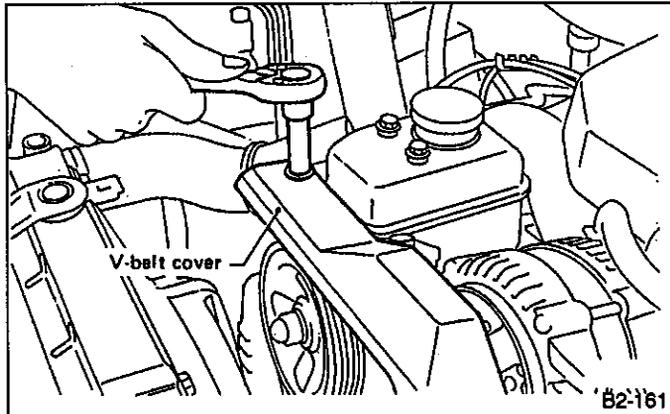


Fig. 3

**2. FRONT SIDE BELT
(Driving Power Steering Oil Pump and Alternator)**

- 1) Loosen the lock bolt on the slider bolt.
- 2) Loosen the slider bolt.

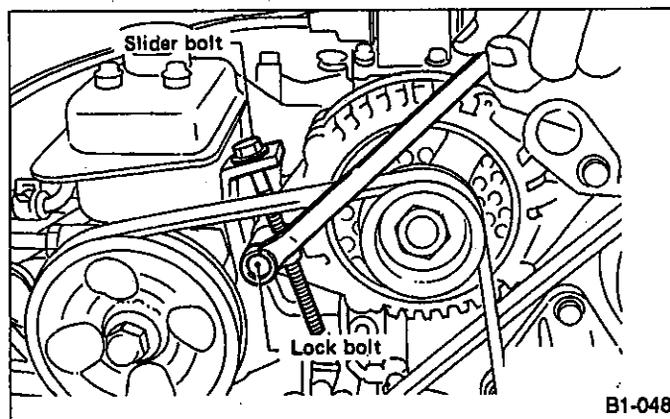


Fig. 4

- 3) Remove the front side belt.
- 4) Install a new belt, and tighten the slider bolt so as to obtain the specified belt tension shown in the above table.
- 5) Tighten the lock nut.

**Wipe off any oil or water on the belt and pulley.
(Driving Alternator only)**

- 1) Loosen alternator mounting bolts and remove belt.

- 2) Install a new belt and tighten alternator mounting bolts so as to obtain the specified belt tension shown in the above table.

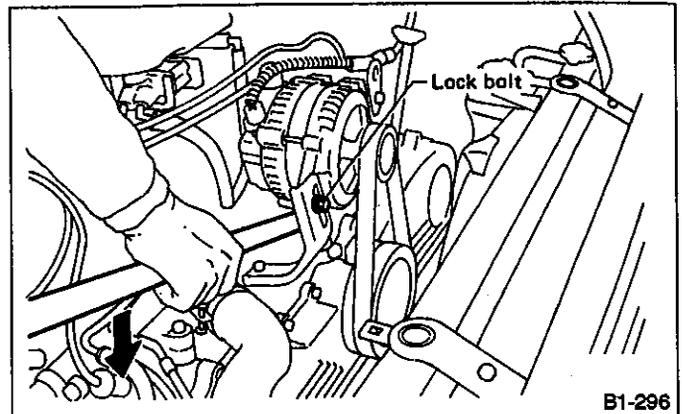


Fig. 5

- 3) Wipe off any oil or water on belt and pulleys.

**3. REAR SIDE BELT
(Driving Air Conditioner)**

Before removing the rear side belt, remove the front side belt.

- 1) Loosen the lock bolt on the slider bolt.
- 2) Loosen the slider bolt.

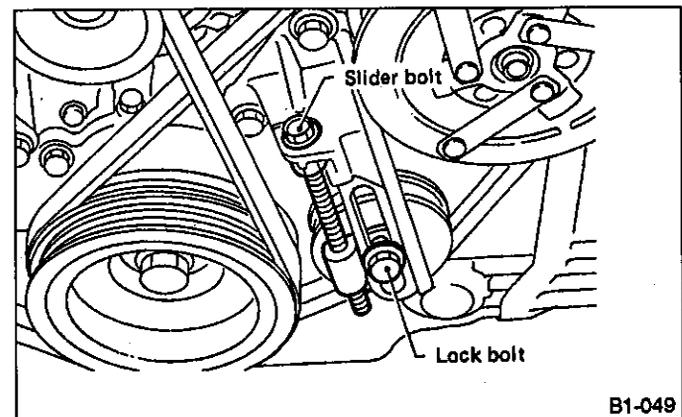


Fig. 6

- 3) Remove the rear side belt.
- 4) Install a new belt, and tighten the slider bolt so as to obtain the specified belt tension shown in the above table.
- 5) Tighten the lock nut.

Wipe off any oil or water on the belt and pulley.

2. Camshaft Drive Belt (Timing Belt)

MAINTENANCE INTERVAL					
[Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60
					R

A: REPLACEMENT

- 1) Disconnect ground cable (—) from battery.
- 2) Remove reserve tank.

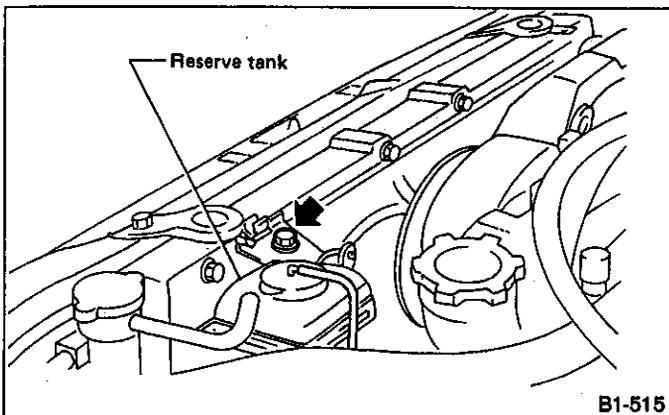


Fig. 7

- 3) Remove radiator fan motor connector and air conditioner fan motor connector.

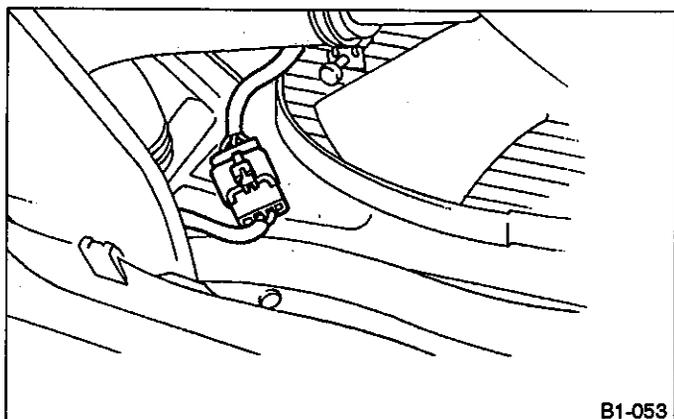


Fig. 8

- 4) Remove radiator fan ASSY.

- (1) Remove the two bolts from the upper side of the shroud.
- (2) Loosen the two bolts at the lower side of the shroud.

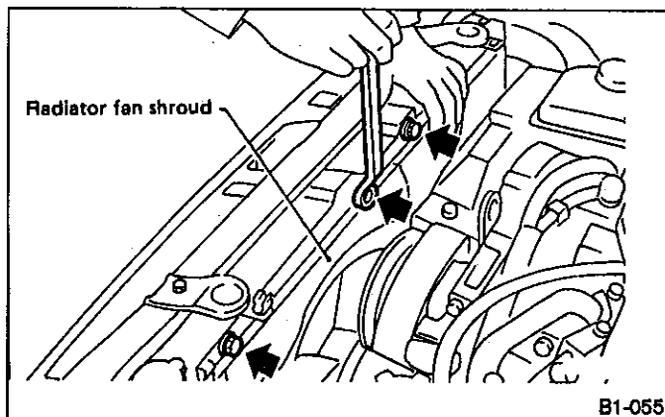


Fig. 9

- (3) Remove radiator fan ASSY.

Remove air conditioner fan ASSY in same steps described in the removal of radiator ASSY.

- 5) Remove V-belt cover.

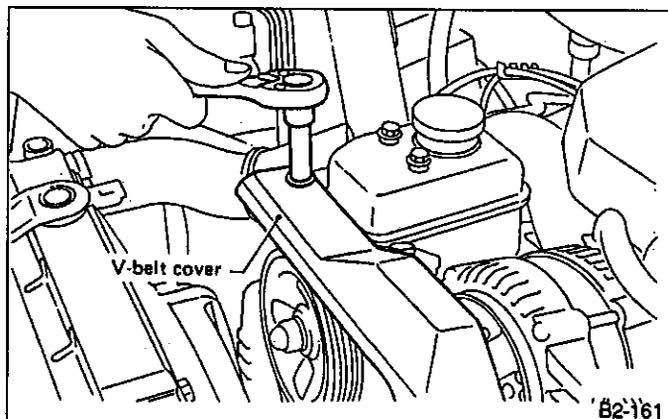


Fig. 10

- 6) Remove V-belts.
[Refer to "Drive Belt(s)."]
- 7) Remove air conditioner compressor drive belt tensioner.
- 8) Remove crankshaft pulley.
- 9) Remove front belt covers.
- 10) Loosen the 2 tensioner adjuster bolts.

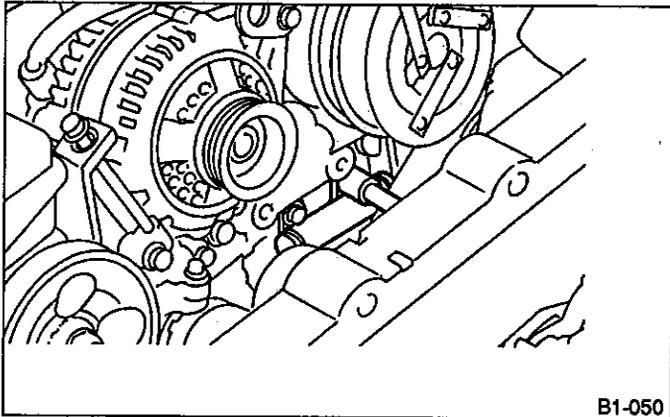


Fig. 11

- 11) Remove the 2 belt idlers.
- 12) Remove camshaft drive belt (timing belt).

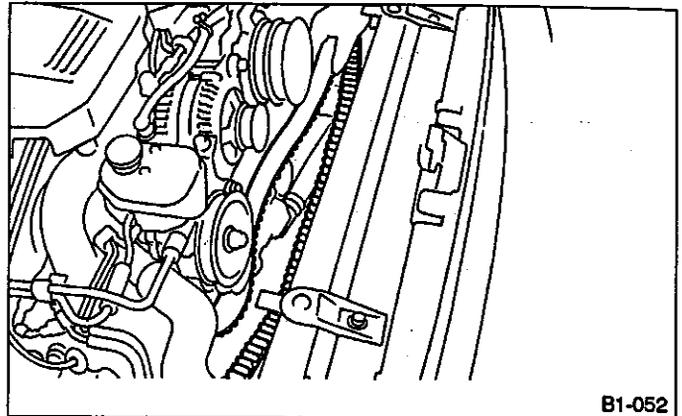


Fig. 12

For removal of camshaft drive belt, refer to "2-3 ENGINE" [W2A2].

B: INSTALLATION

To install, reverse order of removal procedures. For installation of tensioner adjuster and camshaft drive belt, refer to "2-3 ENGINE" [W2C2] [W2C3].

C: INSPECTION

1. SOHC MODEL

- 1) Remove left and right timing belt covers ① and ②.

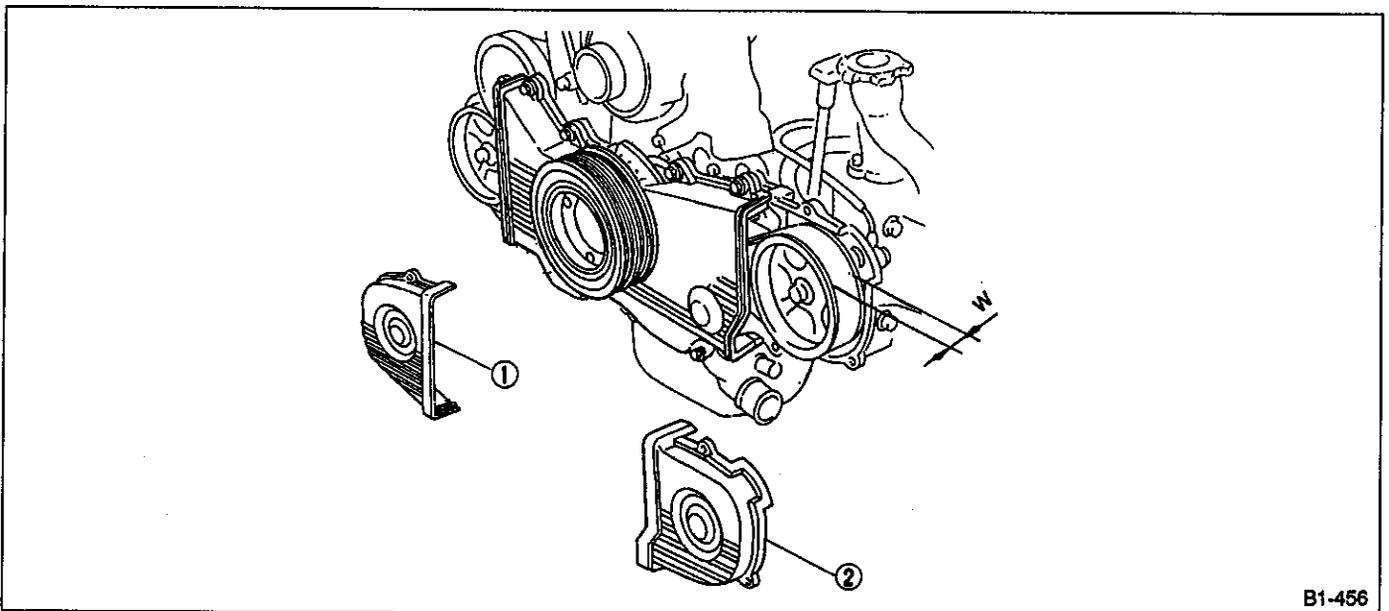


Fig. 13

- 2) While cranking engine at least four rotations, check timing belt back surface for cracks or damage. Replace faulty timing belt as needed.
- 3) Measure timing belt width W. If it is less than 27 mm (1.06 in), check idlers, tensioner, water pump pulley and

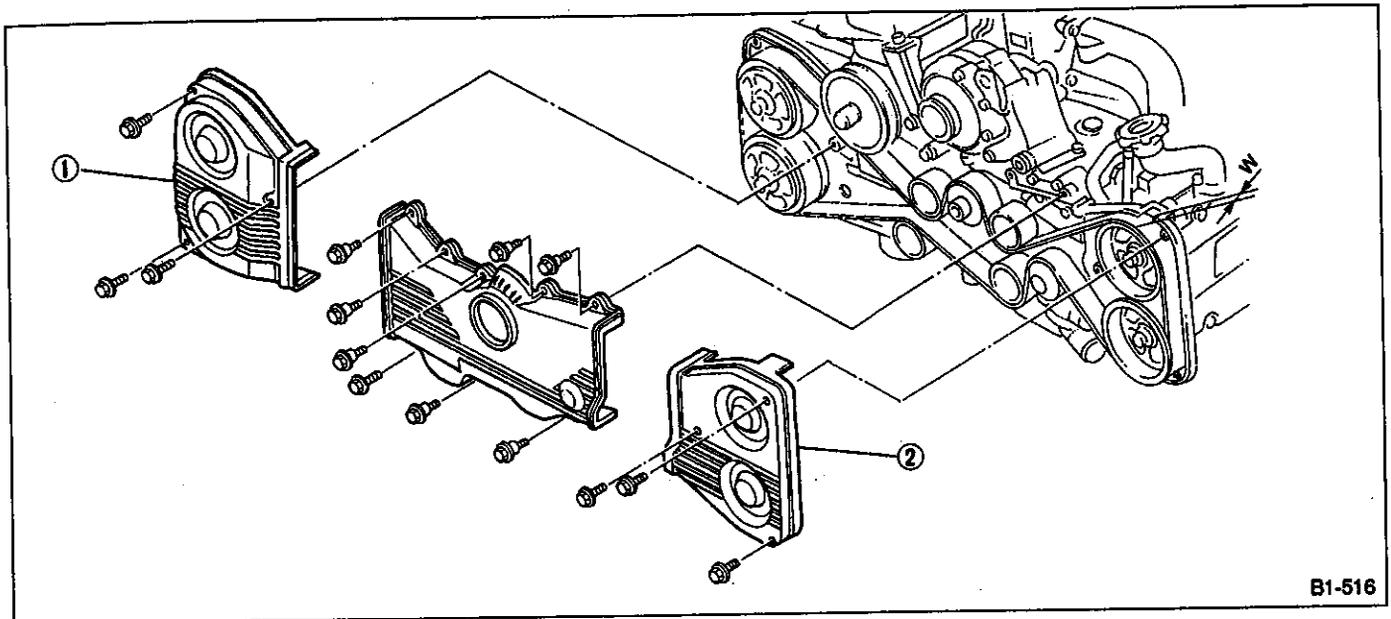
cam sprocket to determine idler alignment (squareness). Replace worn timing belt.

- 4) Install left and right timing belt covers ① and ②.

2. DOHC MODEL

- 1) Remove left and right timing belt covers ① and ②.
- 2) While cranking engine at least four rotations, check timing belt back surface for cracks or damage, if a fault is found replace the bolt with a new one.

- 3) Measure timing belt width W. If it is less than 30 mm (1.18 in), check idlers, tensioner, water pump pulley and cam sprocket to determine idler alignment (squareness). Replace worn timing belt.
- 4) Install left and right timing belt covers ① and ②.



B1-516

Fig. 14

3. Engine Oil

MAINTENANCE INTERVAL [Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60
Change every 12,500 km (7,500 miles) or 6 months, whichever occurs first.					

A: REPLACEMENT

1) Drain engine oil by loosening engine oil drain plug.

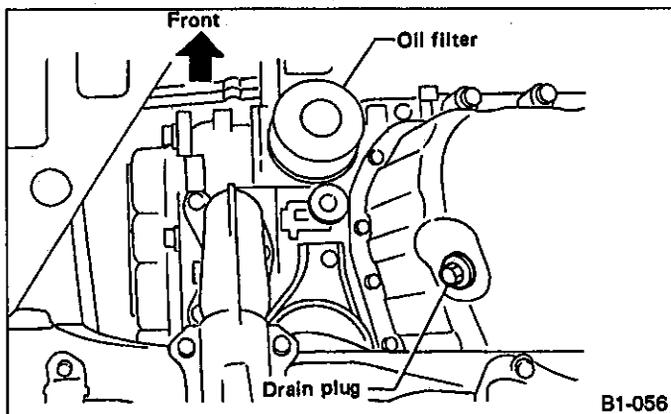


Fig. 15

2) Open engine oil filler cap for quick draining of the engine oil.

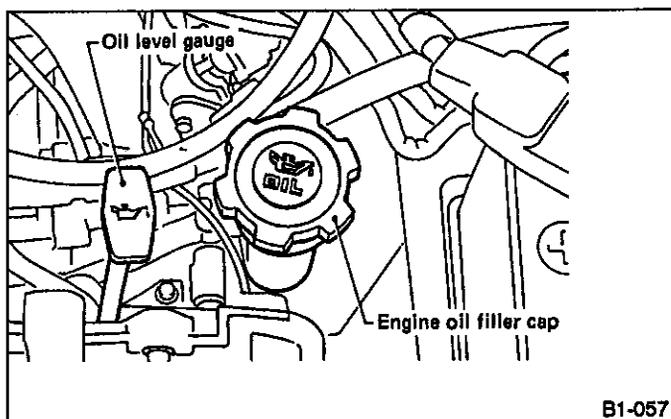


Fig. 16

3) Tighten engine oil drain plug after draining engine oil.

Tightening torque:
44 N·m (4.5 kg-m, 33 ft-lb)

4) Fill engine oil through filler pipe up to upper point on level gauge. Make sure that vehicle is placed level when checking oil level. Use engine oil of proper quality and viscosity, selected in accordance with the table below.

- Recommended oil

API classification: SF or SG

SAE Viscosity No. and Applicable Temperature							
(°F)	-30	-14.8	0	23	30	60	90
(°C)	-34	-26	-18	5	0	16	32
	10W-30, 10W-40						*1
	10W-30, 10W-40						*2
	← 5W-30						

B1-278

Fig. 17

*1: For Carburetor engine

*2: For SPFI, MPFI and TURBO engine

The proper viscosity helps car get good cold and hot starting by reducing viscous friction and thus increasing cranking speed.

- a. Insert the oil level gauge into gauge hole in proper direction as figure.
- b. When replenishing oil, it does not matter if the oil to be added is a different brand from that in the engine, however, use oil having the API classification and SAE viscosity No. designated by SUBARU.
- c. SAE 5W-30 is not recommended for sustained high speed driving.
- d. If vehicle is used in desert areas or areas with very high temperatures or for other heavy duty applications, the following viscosity oils may be used:

"30, 40, 10W — 50, 20W — 40, 20W — 50"

- 5) Close engine oil filler cap.
- 6) Recheck the oil level when the engine is cold. If necessary, add oil up to the upper pain on level gauge.

B: INSPECTION

- 1) Park vehicle on a level surface.
- 2) Remove oil level gauge and wipe it clean.
- 3) Reinsert the level gauge all the way. Be sure that the level gauge is correctly inserted and in the proper orientation, with the symbol on the top appearing as shown in the figure.
- 4) Remove it again and note the reading. If the engine oil level is below the "L" line, add oil to bring the level up to the "F" line.

5) After turning off the engine, wait a few minutes for the oil to drain back into the oil pan before checking the level.

6) Just after driving or while the engine is warm, engine oil level may show in the range between the "F" line and the notch mark. This is caused by thermal expansion of the engine oil.

7) To prevent overfilling the engine oil, do not add oil above the "F" line when the engine is cold.

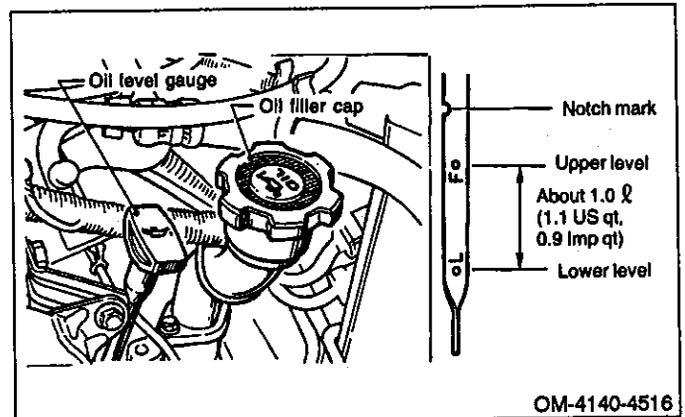


Fig. 18

Engine oil capacity:

- Upper level**
4.5 l (4.8 US qt, 4.0 Imp qt)
- Lower level**
3.5 l (3.7 US qt, 3.1 Imp qt)

4. Engine Oil Filter

MAINTENANCE INTERVAL [Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60
Change every 12,500 km (7,500 miles) or 6 months, whichever occurs first.					

A: REPLACEMENT

- 1) Remove oil filter with an oil filter wrench.
- 2) Get a new oil filter and apply a thin coat of engine oil to the seal rubber.
- 3) Install oil filter by turning it with hand, being careful not to damage seal rubber.
- 4) Tighten more approximately two thirds turn after the seal rubber contacts the oil pump case. Do not tighten excessively, or oil may leak.
- 5) After installing oil filter, run engine and make sure that no oil is leaking around seal rubber.

The filter element and filter case are permanently joined; therefore, interior cleaning is not necessary.

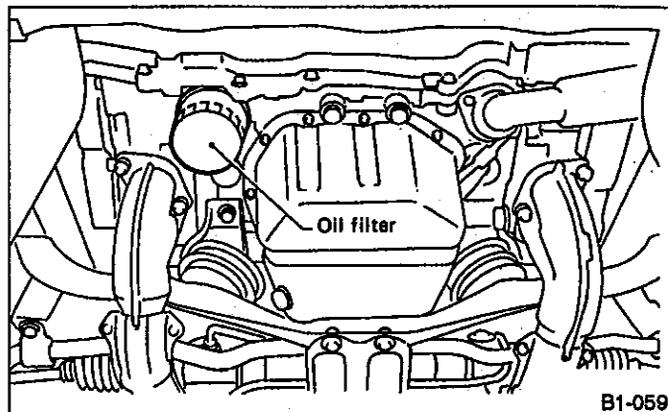


Fig. 19

B1-059

5. Replace Engine Coolant and Inspect Cooling System, Hoses and Connections

MAINTENANCE INTERVAL (Number of months or km (miles), whichever occurs first)									
Months	3	7.5	15	22.5	30	37.5	45	52.5	60
x1,000 km	4.8	12	24	36	48	60	72	84	96
x1,000 miles	3	7.5	15	22.5	30	37.5	45	52.5	60
					P				P

A: REPLACEMENT

1. REPLACEMENT OF COOLANT

• Non-TURBO model

- 1) Fit end of vinyl tube into drain pipe.

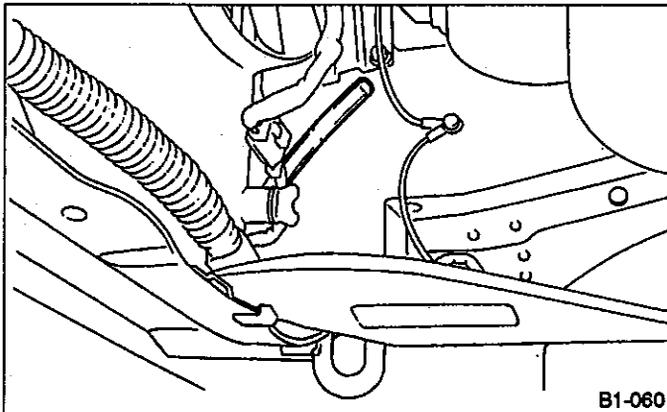


Fig. 20

- 2) Place a container under drain tube, and loosen drain plug.
- 3) Loosen radiator cap to drain coolant.
- 4) Drain coolant from reserve tank.
- 5) Remove two drain plugs on engine side, and drain coolant.

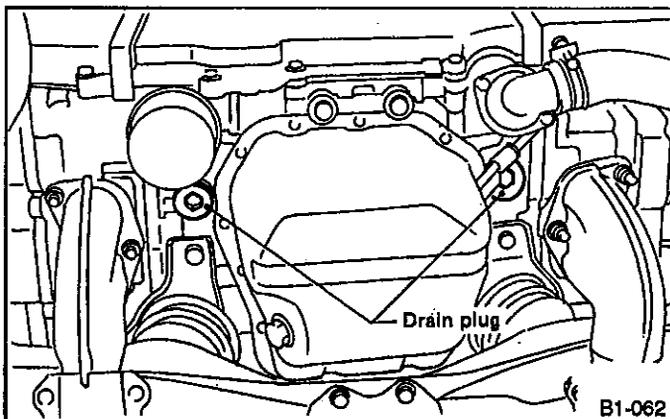


Fig. 21

- 6) Securely tighten engine side drain plugs.
 - 7) Tighten radiator drain plug securely after draining coolant. (Drain tube may face downward.)
 - 8) Install reserve tank to original position.
 - 9) Remove air vent plug.
 - 10) Slowly pour prepared coolant from radiator filler port to neck of filler, then pour into reserve tank up to "FULL" level.
 - 11) Install air vent plug.
 - 12) Securely install radiator cap.
 - 13) Run engine for more than five minutes at 2,000 to 3,000 rpm. (Run engine until radiator becomes hot in order to purge air trapped in cooling system.)
 - 14) Stop engine and wait until coolant temperature lowers. Then open radiator cap to check coolant level and add coolant up to radiator filler neck. Next, add coolant into reserve tank up to "FULL" level.
- The radiator is of the pressurized type. Do not attempt to open the radiator cap immediately after the engine has been stopped.**
- 15) After adding coolant, securely install radiator and reserve tank caps.

• TURBO model

- 1) Loosen radiator drain plug after following the same procedures 1) and 2) as described for the Non-TURBO engine.
- 2) Loosen coolant flow tank cap to drain coolant.
- 3) Remove the two drain plugs on engine side, and drain coolant.
- 4) Securely tighten engine side drain plugs after draining coolant.
- 5) Tighten radiator drain plug securely.
- 6) Slowly pour prepared coolant from coolant flow tank filler port up to the brim of port, and install cap, then pour coolant into reserve tank up to "FULL" level.
- 7) Run engine for about 15 minutes, not exceeding 2,000 rpm. (Run engine until radiator becomes hot in order to purge air trapped in cooling system.)
- 8) Stop engine and wait until coolant temperature lowers. [below 50°C (122°F) or 60°C (140°F)] Open coolant flow tank cap and add coolant up to the brim of the port.

9) Wait until coolant temperature lowers further [below 30°C (86°F)], then pour into reserve tank up to the "FULL" level.

10) Run the vehicle until the coolant temperature rises to 80°C (176°F) and check the level in the coolant flow tank, add coolant up to the "FULL" level.

The radiator for the turbo engine does not have an air vent plug.

Coolant capacity (fill up to "FULL" level):

1800 cc, 1600 cc

Approx. 6.3 ℓ (6.7 US qt, 5.5 Imp qt)

2000 cc

Approx. 6.1 ℓ (6.4 US qt, 5.4 Imp qt)

2000 cc TURBO

Approx. 7.2 ℓ (7.6 US qt, 6.3 Imp qt)

2200 cc

Approx. 5.9 ℓ (6.2 US qt, 5.2 Imp qt)

The SUBARU Genuine Coolant containing anti-freeze and anti-rust agents is especially made for SUBARU engine, which has an aluminum crankcase. Always use SUBARU Genuine Coolant, since other coolant may cause corrosion.

2. RELATIONSHIP OF SUBARU COOLANT CONCENTRATION AND FREEZING TEMPERATURE

The concentration and safe operating temperature of the SUBARU coolant is shown in the following diagram. Measuring the temperature and specific gravity of the coolant will provide this information.

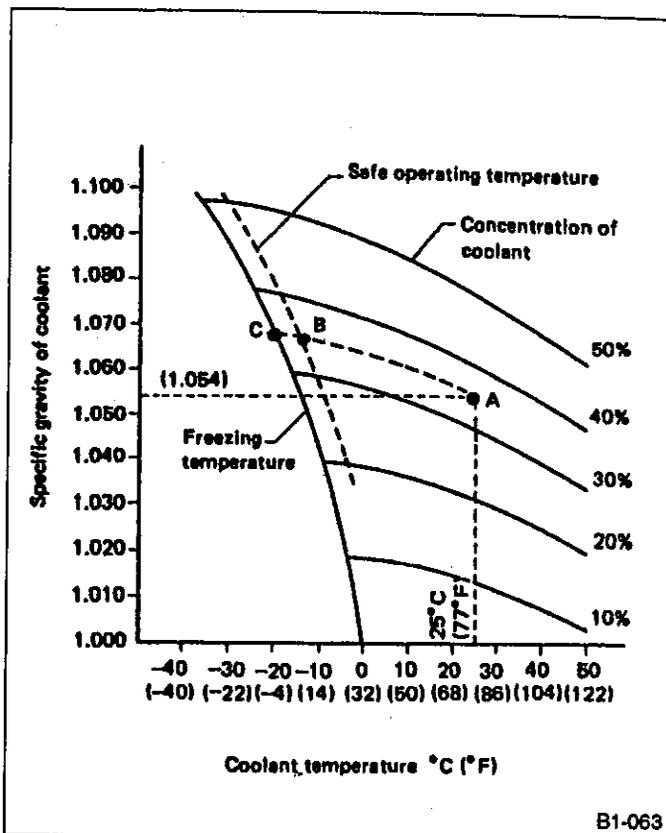


Fig. 22

[Example]

If the coolant temperature is 25°C (77°F) and its specific gravity is 1.054, the concentration is 35%(point A), the safe operating temperature is -14°C (7°F) (point B), and the freezing temperature is -20°C (-4°F) (point C).

3. PROCEDURE TO ADJUST THE CONCENTRATION OF THE COOLANT

To adjust the concentration of the coolant according to temperature, find the proper fluid concentration in the above diagram and replace the necessary amount of coolant with an undiluted solution of SUBARU genuine coolant (concentration 50).

The amount of coolant that should be replaced can be determined using the following diagram.

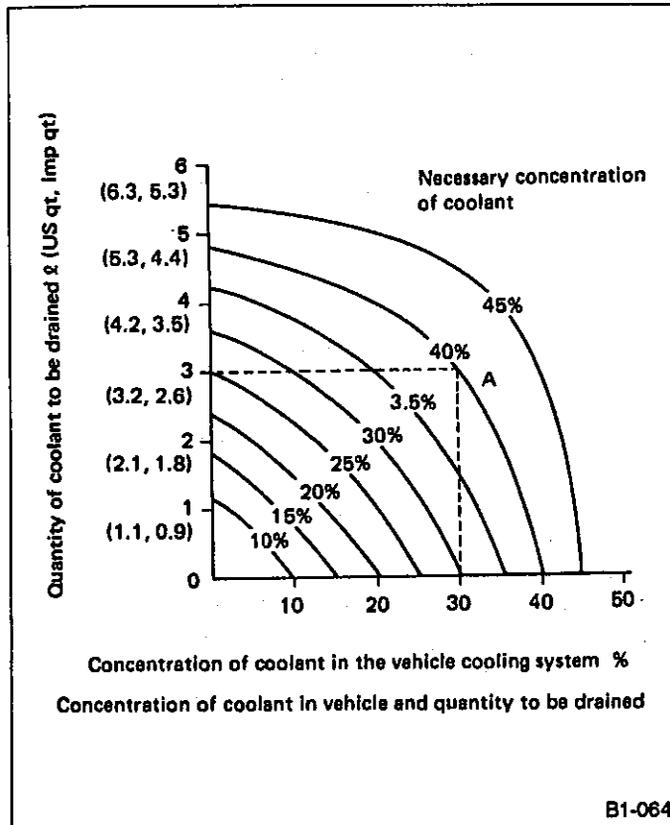


Fig. 23

[Example]

Assume that the coolant concentration must be increased from 30% to 40%. Find point A, where the 30 line of coolant concentration intersects with the 40% curve of the necessary coolant concentration, and read the scale on the vertical axis of the graph at height A. The quantity of coolant to be drained is 3.0 liters (3.2 US qt, 2.6 Imp qt). Drain 3.0 liters (3.2 US qt, 2.6 Imp qt) of coolant from the cooling system and add 3.0 liters (3.2 US qt, 2.6 Imp qt) of the undiluted solution of SUBARU coolant.

If a coolant concentration of 50% is needed, drain all the coolant and refill with the undiluted solution only.

B: INSPECTION

- 1) Check the radiator reserve tank and hoses for damage or clogging.
- 2) Check the hose connections for leakage.
- 3) Check the valve, spring and packing in the cap for damage.
- 4) Check rubber seal on cap for tears, cracks or deterioration after cleaning it.

Install the cap on a tester and if cap does not hold or does not release the specified pressure, replace cap.

Cap relief pressure:
 88 kPa (0.9 kg/cm², 13 psi)

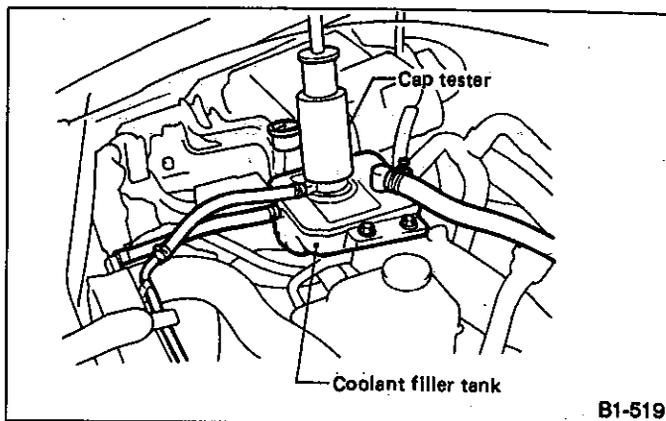
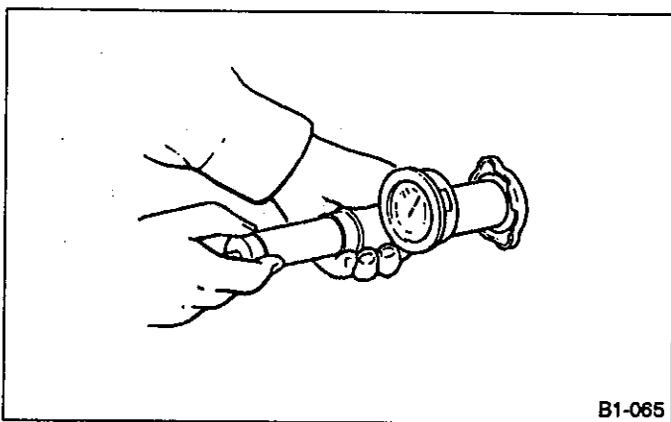


Fig. 26

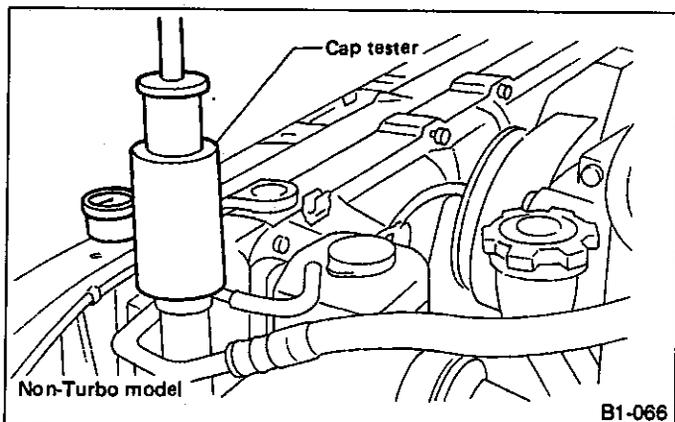
- 6) If the coolant temperature exceeds 76.0 to 80.0°C (169 to 176°F) while radiator is not so hot, check thermostat.
- 7) If thermostat does not open at 76.0 to 80.0°C (169 to 176°F), replace it with a new one.
- 8) If electric fan does not operate with coolant temperature above 90.0 to 94.0°C (194 to 201°F), check thermostat or fan motor. (carburetor equipped model only)



B1-065

Fig. 24

- 5) Check the radiator for leakage. Inspect radiator for leakage using a cap tester and applying a pressure of 157 kPa (1.6 kg/cm², 23 psi). If a leakage is detected, repair or replace the radiator.



B1-066

Fig. 25

6. Replace Fuel Filter and Inspect Fuel System, Lines and Connections

A: REPLACEMENT

a. Before starting the job, be sure to carry out the following.

- Place "No fire" signs near the working area.
 - Disconnect ground cable from battery.
- b. Be careful not to spill fuel on the floor.

1. CARBURETOR

1) Removal

- (1) Remove the fuel filter from the holder.
- (2) Unfasten the clip which connects the fuel hose to the fuel filter, and disconnects the hose.

Fuel filter can not be disassembled as it is of the cartridge type.

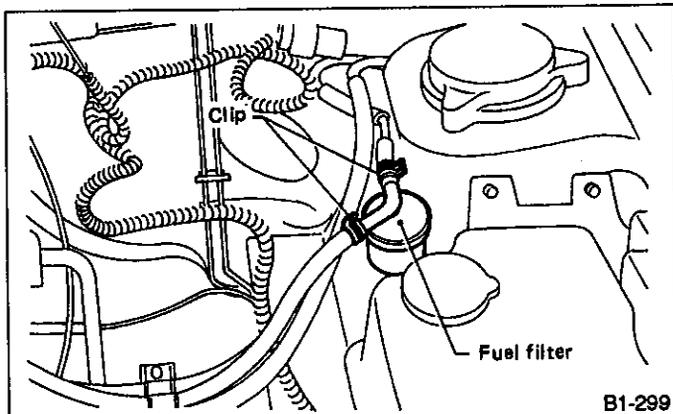


Fig. 27

MAINTENANCE INTERVAL					
[Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60
			P		P

2) Installation

- (1) Connect the hose as shown in the figure below:

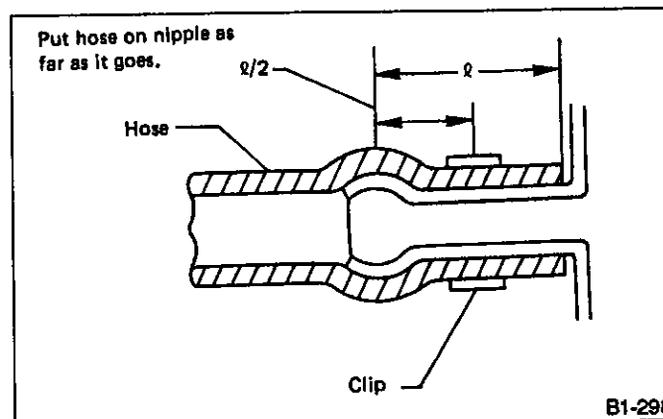


Fig. 28

- (2) Install the filter to the holder.

2. SPFI AND MPFI

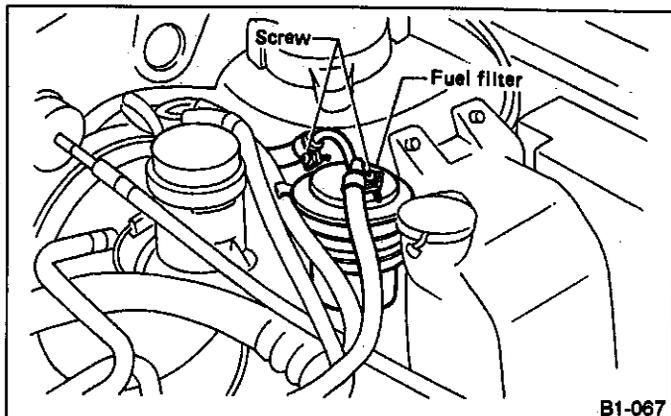
1) Removal

(1) Before removing the hose, filter, pump, etc., be sure to release the fuel pressure, as follows:

- Disconnect the wiring connector of the fuel pump.
- Crank the engine for more than five seconds. If the engine starts, let the engine run until it stops.
- After turning IG switch OFF, connect the wiring connector of the fuel pump.

- (2) Loosen the screw of the hose clamp and pull off the hose from the filter.

(3) Remove the filter from the holder.



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(3) Tighten the hose clamp screw to the specified torque.

Tightening torque:

1.0 — 1.5 N·m (0.1 — 0.15 kg-m, 0.7 — 1.1 ft-lb)

- a. If the hose is damaged at the clamping portion, replace the hose with a new one.
- b. If the hose clamp is too deformed, replace with a new one.
- c. Correct the hose position by removing any twist so that it will not interfere with the filter body or washer tank, before tightening the screw of the hose clamp.

B: INSPECTION

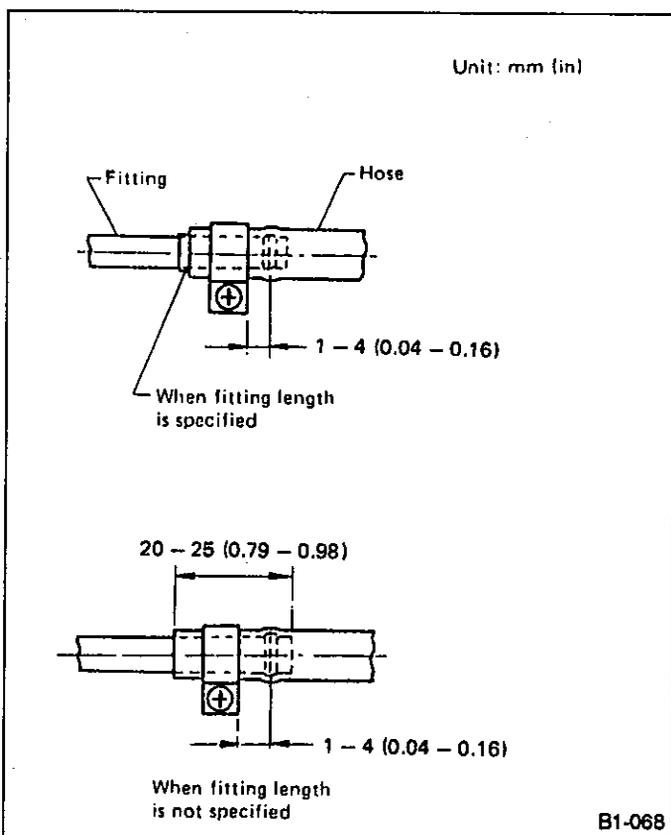
1. FUEL PIPING AND CONNECTIONS

Check fuel piping and connections for leakage, scratches, swelling and corrosion.

Fig. 29

2) Installation

- (1) Install the filter to the holder.
- (2) Connect the hose as illustrated below:



B1-068

Fig. 30

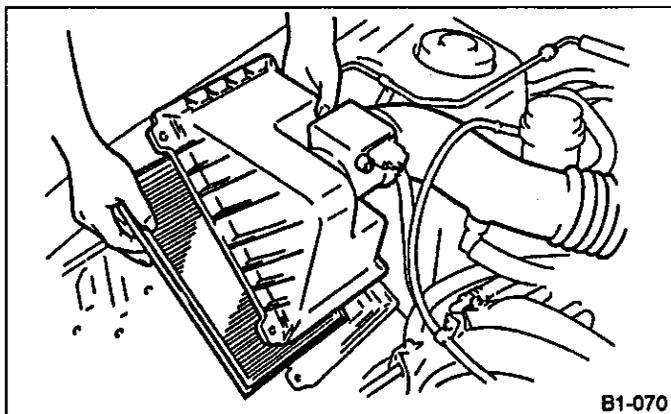
7. Air Cleaner Element

MAINTENANCE INTERVAL [Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60
		I	R	I	R

A: INSPECTION

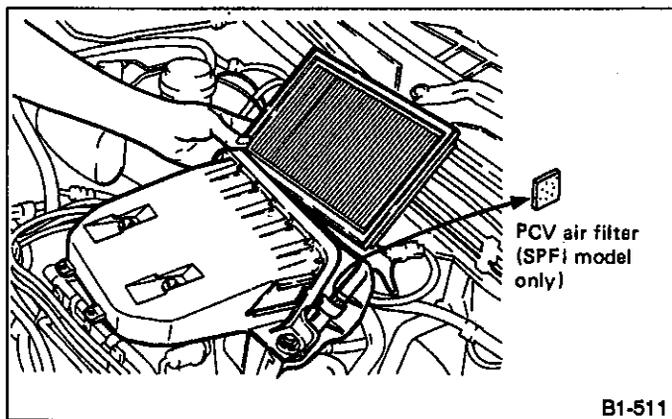
Inspect or change the elements at the specified intervals. Under extremely dusty conditions, inspect or change more often.

B: REPLACEMENT



B1-070

Fig. 31 2200 cc and 2000 cc



B1-511

Fig. 32 1800 cc and 1600 cc

- a. Do not attempt to clean the air cleaner element. The filter paper of the element is wetted with a special non-inflammable slow-evaporating viscous liquid. It is resistant to cold weather and has a long service life. Dirt adhering to this filter paper forms porous laminations with the viscous liquid, which function as a filtration layer to reduce dust penetration into the filter paper. If this filter paper is cleaned, the filtration layer thus formed will be lost along with the viscous liquid.
- b. Under extremely dusty conditions, replace it more frequently.

8. Spark Plugs

MAINTENANCE INTERVAL [Number of months or km (miles) whichever occurs first]					
Months.		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60
		R	R	R	R
For TURBO			R		R

A: REPLACEMENT

1800 cc, 1600 cc:

Carburetor

Recommended spark plug

NGK BKR6E
NIPPONDENSO K20PR-U

Spark plug gap

0.8 mm (0.031 in)

SPFI

Recommended spark plug

NGK BKR6E-11
NIPPONDENSO K20PR-U11

Spark plug gap

1.0 — 1.1 mm (0.039 — 0.043 in)

2000 cc (Turbo)

Recommended spark plug

NGK BKR6EVX

Spark plug gap

0.7 — 0.8 mm (0.028 — 0.031 in)

2200 cc, 2000 cc (Non-Turbo)

Without O₂ sensor

Recommended spark plug

NGK BKR6E
NIPPONDENSO K20PR-U

Spark plug gap

0.8 mm (0.031 in)

With O₂ sensor

Recommended spark plug

NGK BKR6E-11
NIPPONDENSO K20PR-U11

Spark plug gap

1.0 — 1.1 mm (0.039 — 0.043 in)

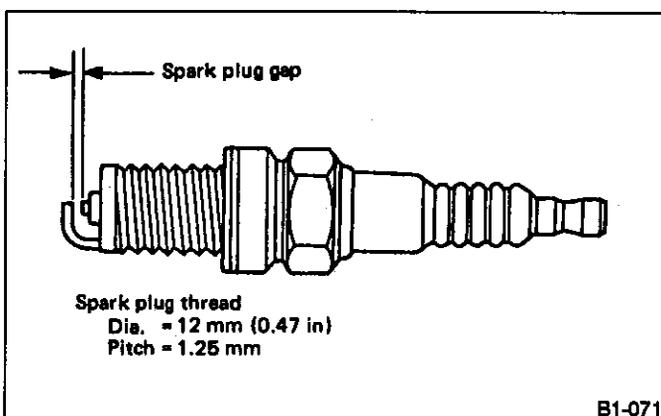


Fig. 33

When installing spark plugs on cylinder head, tighten to the specified torque.

Tightening torque:

18 — 24 N·m (1.8 — 2.4 kg-m, 13 — 17 ft-lb)

- Be sure to place the gasket between the cylinder head and spark plug.
- If torque wrench is not available, tighten spark plug until gasket contacts cylinder head; then tighten further 1/4 to 1/2 turns.

9. Engine Idle Speed (for carburetor engine only) and Idle Mixture (not necessary for catalytic converter equipped vehicles)

MAINTENANCE INTERVAL					
[Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60

A: INSPECTION AND ADJUSTMENT

1. ENGINE IDLE SPEED (for carburetor engine only)

- a. Before measuring the engine idle speed, make sure that the ignition timing is within specifications. (Refer to C.2-2 [02A0].)
- b. Make sure that vacuum hoses, blow-by hoses and other hoses which are connected to the intake system, are tight and secure.
- c. Clog the purge hose to carburetor after disconnecting it.

- 1) Set the gear position at "Neutral" for MT, or "N" or "P" for AT.
- 2) Warm up engine sufficiently until cooling fan starts to operate.
- 3) Measure the engine idle speed using the tachometer.

At this time, make sure that cooling fan, head light, air conditioner and heater are turned OFF.

Engine idle speed:	
1800 cc	800 ± 50 rpm
1600 cc	900 ± 50 rpm

- 4) If out of specifications, adjust using the throttle adjusting screw on carburetor.

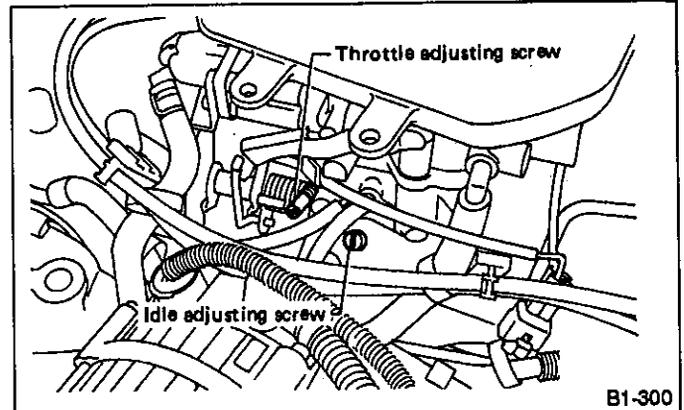


Fig. 34

2. IDLE MIXTURE (not necessary for catalytic converter equipped vehicle)

[Carburetor model]

- a. Before measuring the idle mixture, make sure that the ignition timing and the engine idle speed are within specifications.
- b. Make sure that vacuum hoses, blow-by hoses, and other hoses which are connected to the intake system, are tight and secure.

- 1) Set the gear position at "Neutral" for MT, or "N" or "P" for AT.
- 2) Warm up engine sufficiently until cooling fan starts to operate.
- 3) Measure the idle mixture with the CO meter.

Engine idle speed	CO (%)
800 ± 50 rpm	1.0 ± 0.5

- 4) If out of specification, adjust using the idle mixture adjusting screw on carburetor.

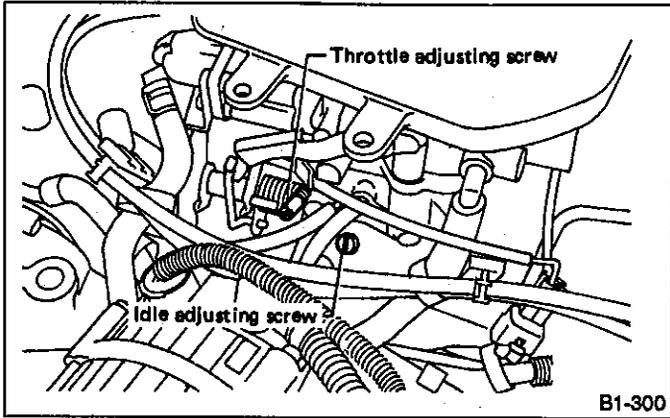


Fig. 35

[MPFI model]

Before measuring the idle mixture, make sure that the ignition timing and the engine idle speed are within specifications.

- 1) Set the gear position at "Neutral" for MT, or "N" or "P" at AT.
- 2) Warm up engine sufficiently until cooling fan starts to operate.

3) Measure the idle mixture with the CO meter.

Engine idle speed	CO (%)
800 ± 100 rpm	1.0 ± 0.5

4) If out of specification, adjust using the idle mixture adjusting screw on air flow meter.

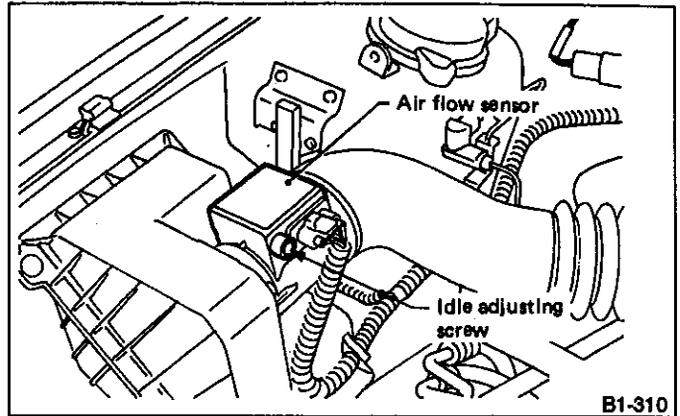


Fig. 36

10. Transmission/Differential (Front and Rear) Gear Oil and Automatic Transmission Fluid

MAINTENANCE INTERVAL					
[Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60
			R		R

A: REPLACEMENT

1. MANUAL TRANSMISSION

1) Drain oil by removing drain plug.

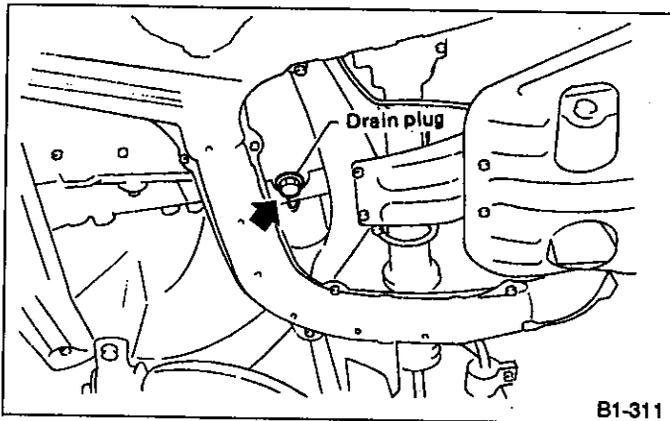


Fig. 37

2) Reinstall drain plug after draining oil and tighten it to the specified torque.

Tightening torque: N·m (kg-m, ft-lb)
 41 — 47 (4.2 — 4.8, 30 — 35)

- a. Be sure to place a gasket between the transmission case and drain plug.
- b. Replace the gasket with a new one.
- 3) Fill transmission gear oil through the oil level gauge hole up to upper point on level gauge.

Oil capacity

Unit: ℓ (US qt, Imp qt)

1800 cc	FWD	2.6 (2.7, 2.3)
1600 cc		
1800 cc	4WD (Selective)	3.3 (3.5, 2.9)
2200 cc	FWD	
1800 cc	4WD (Center differential)	3.5 (3.7, 3.1)
2000 cc		
2200 cc		

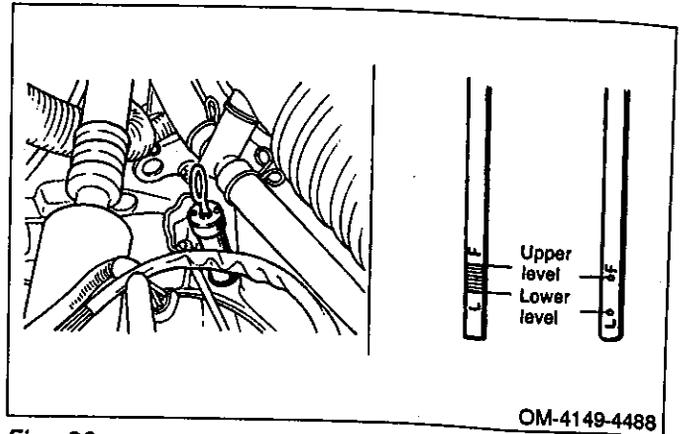


Fig. 38

OM-4149-4488

2. AUTOMATIC TRANSMISSION

1) Drain fluid by removing drain plug after allowing the engine to cool for 3 to 4 hours.

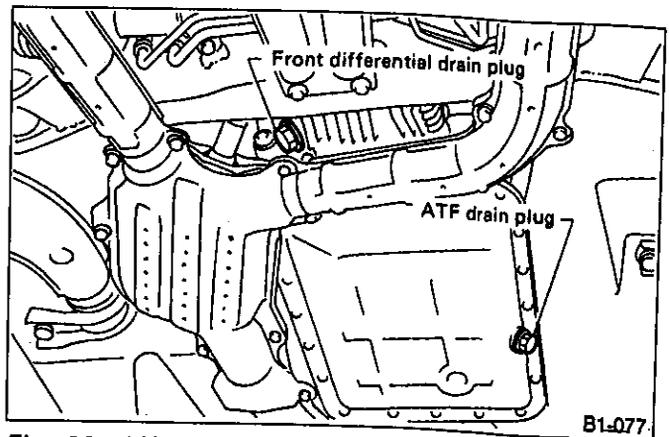


Fig. 39 4AT

B1-077

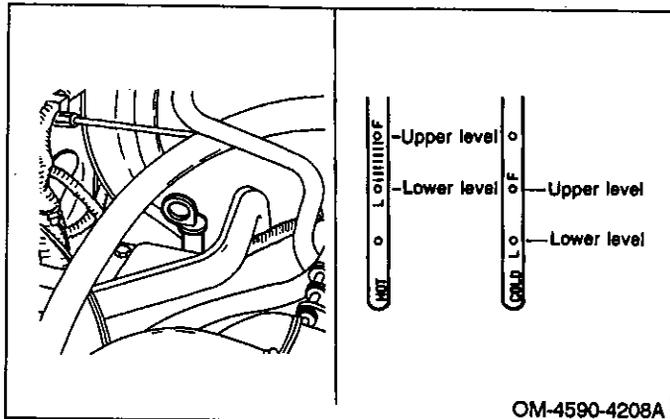
2) Reinstall drain plug after draining fluid, and tighten it to the specified torque.

Tightening torque:
 25 N·m (2.5 kg-m, 18 ft-lb)

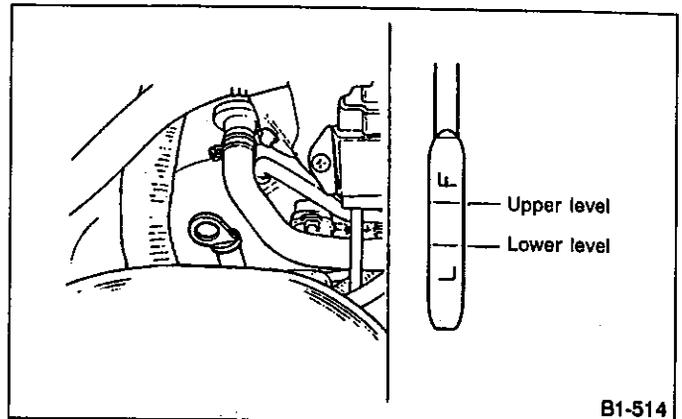
- a. Be sure to place a gasket between oil pan and drain plug.
- b. Replace the gasket with a new one.
- 3) Fill ATF through the fluid level gauge hole.

Fluid capacity: ℓ (US qt, Imp qt)
 4AT 8.0 — 8.6 (8.5 — 9.1, 7.0 — 7.6)

Oil capacity: ℓ (US qt, Imp qt)
 4AT 1.1 — 1.3 (1.2 — 1.4, 1.0 — 1.1)



OM-4590-4208A



B1-514

Fig. 40 4AT

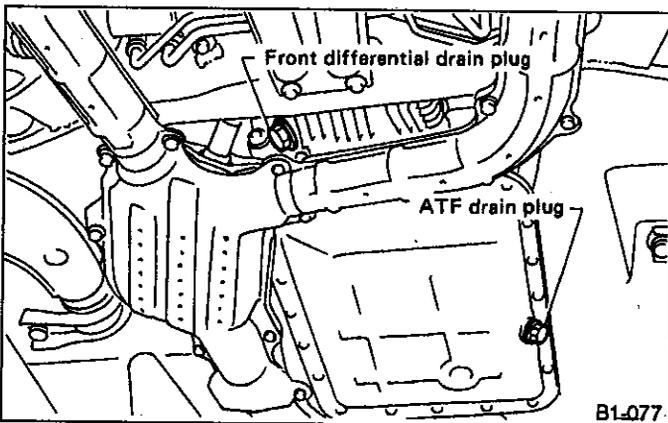
Fig. 42 4AT

4) Run the vehicle until the ATF temperature rises to 60 to 80°C (140 to 176°F) and then check the ATF level.

Recommended automatic transmission fluid:
 ATF Dexron II

3. FRONT DIFFERENTIAL (Automatic Transmission)

1) Drain oil by removing front differential drain plug.



B1-077

Fig. 41 4AT

2) Reinstall drain plug after draining oil, then tighten it to the specified torque.

Tightening torque:
 25 N·m (2.5 kg-m, 18 ft-lb)

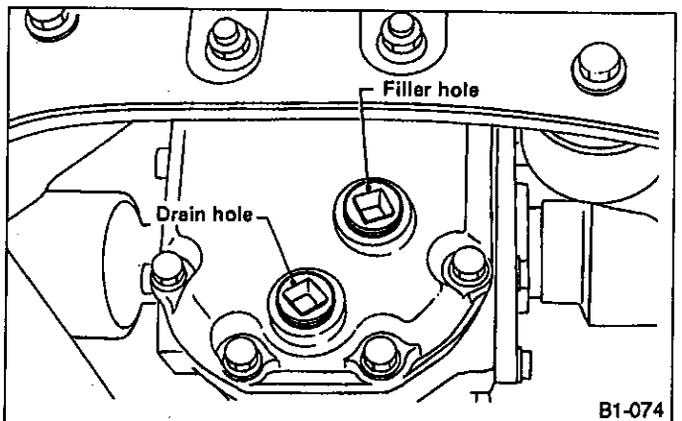
- a. Be sure to place a gasket between the differential gear case and the drain plug.
- b. Replace the gasket with a new one.
- 3) Fill differential gear oil through the oil level gauge hole up to upper point on the level gauge.

4. REAR DIFFERENTIAL (4WD Vehicle)

- 1) Drain oil by removing drain plug.
- 2) After installing drain plug onto rear differential gear case firmly, fill oil up fully to the mouth of filler hole.

Oil capacity:
 0.8 ℓ (0.8 US qt, 0.7 Imp qt)

3) Install filler hole plug onto rear differential gear case firmly.



B1-074

Fig. 43

Recommended oil

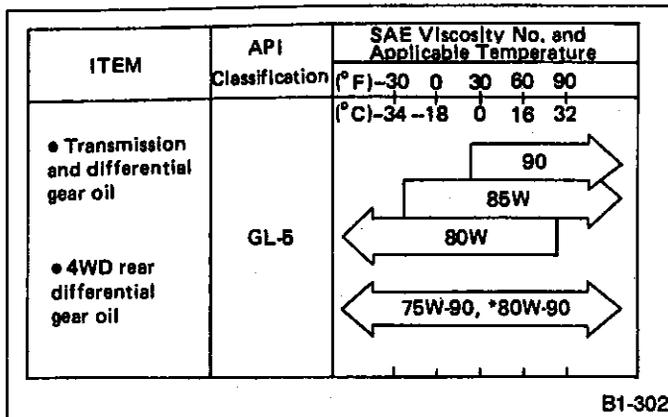


Fig. 44

- a. Each oil manufacturer has its base oil and additives. Thus, do not mix two or more brands.
- b. *For differential gear oil (AT)
- c. Apply fluid packing to drain plug threads before installation.

Fluid packing:

Three Bond 1105 or equivalent

Drain plug tightening torque:

44 N•m (4.5 kg-m, 33 ft-lb)

11. Brake Fluid

MAINTENANCE INTERVAL [Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60
			R		R

A: REPLACEMENT

- a. The FMVSS No. 116, fresh DOT3 or 4 brake fluid must be used.
- b. Cover bleeder with waste cloth, when loosening it, to prevent brake fluid from being splashed over surrounding parts.
- c. Avoid mixing different brands of brake fluid to prevent degrading the quality of the fluid.
- d. Be careful not to allow dirt or dust to get into the reservoir tank.
- e. During bleeding operation, keep the brake reserve tank filled with brake fluid to eliminate entry of air.
- f. Brake pedal operating must be very slow.
- g. For convenience and safety, it is advisable to have two man working.
- h. The amount of brake fluid required is approximately 300 ml (10.1 US fl oz, 10.6 Imp fl oz) for total brake system.

- 1) Either jack up vehicle and place a safety stand under it, or left up vehicle.
- 2) Remove both front and rear wheels.
- 3) Draw out the brake fluid from master cylinder with syringe.
- 4) Refill reservoir tank with recommended brake fluid.

Recommended brake fluid

FMVSS No. 116, fresh DOT3 or 4 brake fluid

- 5) Install one end of a vinyl tube onto the air bleeder of and insert the other end of the tube into a container to collect the brake fluid.

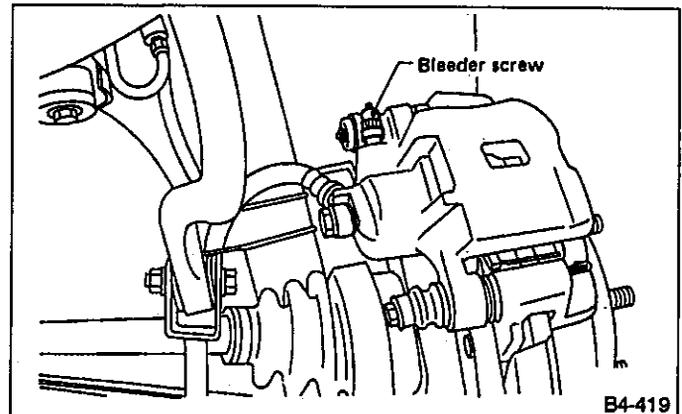


Fig. 45

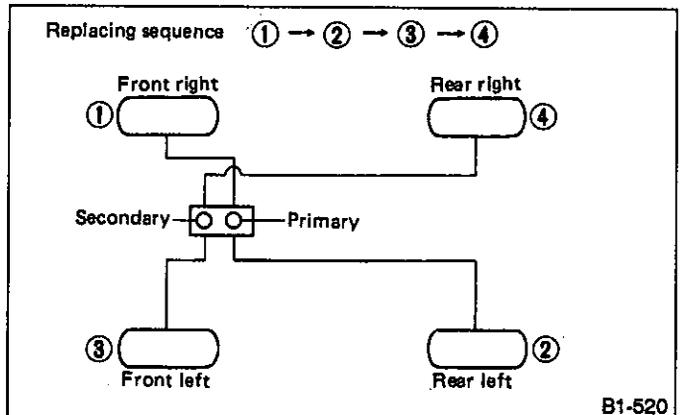


Fig. 46

- 6) Instruct your co-worker to depress the brake pedal slowly two or three times and then hold it depressed.
- 7) Loosen bleeder screw approximately 1/4 turn until a small amount of brake fluid drains into container, and then quickly tighten screw.
- 8) Repeat steps 6) and 7) above until there are no air bubbles in drained brake fluid and new fluid flows through vinyl tube.

Add brake fluid as necessary while performing the air bleed operation, in order to prevent the tank from running short of brake fluid.

- 9) After completing the bleeding operation, hold brake pedal depressed and tighten screw and install bleeder cap.

Tightening torque (Bleeder screw):**7 — 9 N·m (0.7 — 0.9 kg-m, 5.1 — 6.5 ft-lb)**

10) Bleed air from each wheel cylinder using the same procedures as described in steps 5) through 9) above.

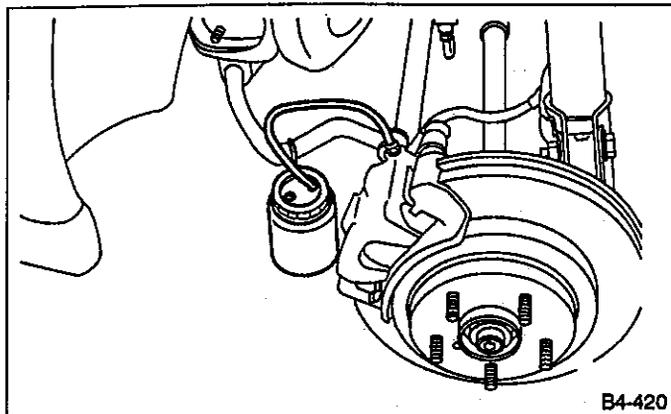


Fig. 47

11) Depress brake pedal with a force of approximately 294 N (30 kg, 66 lb) and hold it there for approximately 20 seconds. At this time check pedal to see if it shows any unusual movement.

Visually inspect bleeder screws and brake pipe joints to make sure that there is no fluid leakage.

12) Install wheels, and drive car for a short distance between 2 to 3 km (1 to 2 miles) to make sure that brakes are operating properly.

12. Disc Brake Pads and Discs /Front and Rear Axle Boots and Axle Shaft Joint Portions

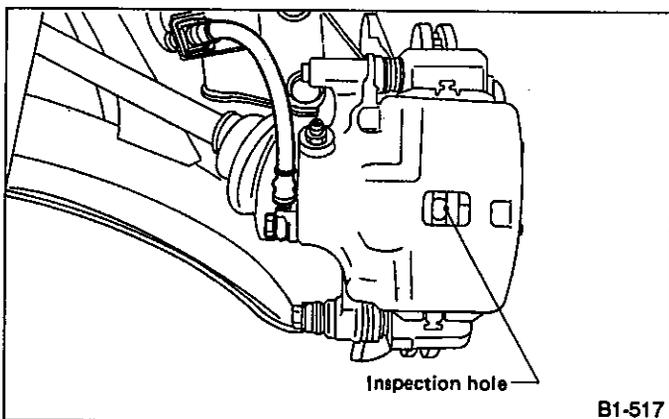
MAINTENANCE INTERVAL [Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60

A: INSPECTION

1. DISC BRAKE PAD AND DISC (Front and Rear)

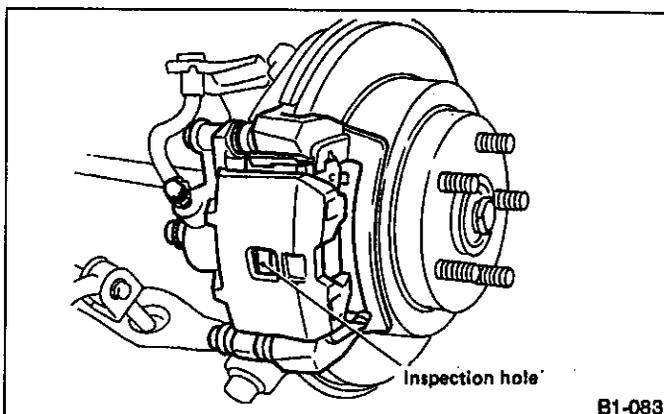
- 1) Jack up vehicle and support with rigid racks. Then remove wheels.
- 2) Visually check pad thickness through inspection hole of disc brake assembly. Replace pad if necessary.

FRONT



B1-517

REAR

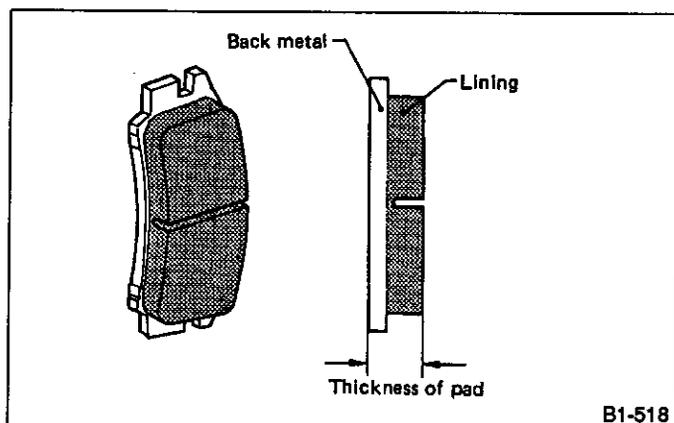


B1-083

Fig. 50

	Pad thickness including back metal mm (in)	
	Front	Rear
Standard	17 (0.67)	15 (0.59)
Wear limit	7.5 (0.295)	6.5 (0.256)
Wear limit (exclude back metal)	1.5 (0.059)	1.5 (0.059)

- a. When replacing a pad, always replace the pads for both the left and right wheels at the same time. Also replace pad clips if they are twisted or worn.
- b. The clip incorporated with pad is also used as a warning device for worn pads. When wear occurs on the pad to such an extent that the clip comes into contact with the rotor, unusual noise (squeak) is produced. If such a noise is noticed, replace the pads.



B1-518

Fig. 49

3) Disc rotor

Check for wear and damage, and correct or replace if abnormal.

Brake disc thickness mm (in)				
	Front		Rear	
	For 13" wheels	For 14" & 15" wheels	Solid	Ventilated
Standard	18 (0.71)	24 (0.94)	10 (0.39)	18 (0.71)
Wear limit	16 (0.63)	22 (0.87)	8.5 (0.335)	16 (0.63)

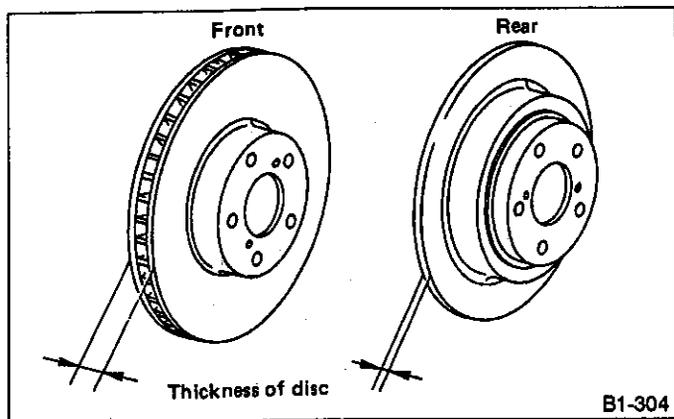


Fig. 51

Disc rotor runout:

Limit: 0.10 mm (0.0039 in)

Measure the disc rotor runout at a point less than 5 mm (0.20 in) from the outer periphery of the rotor.

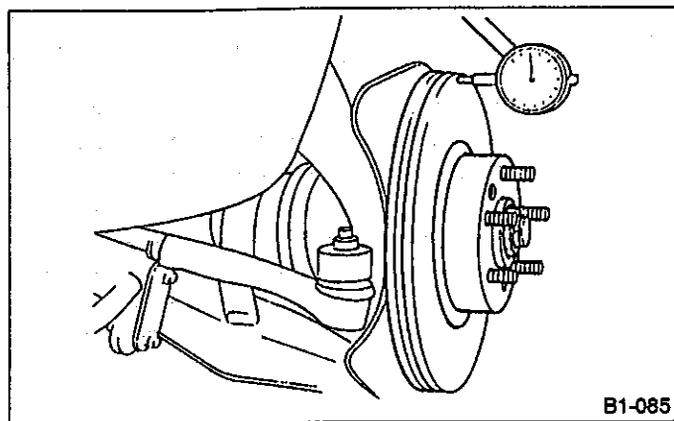


Fig. 52

2. FRONT AND REAR AXLE BOOTS

Inspect front and rear axle boots for deformation, damage or failure. If faulty, replace them with new ones.

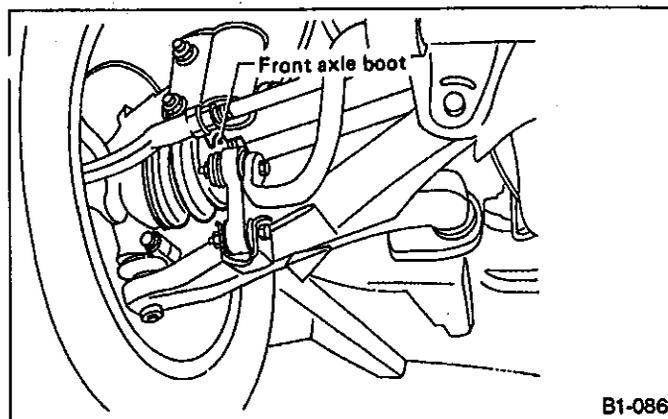


Fig. 53

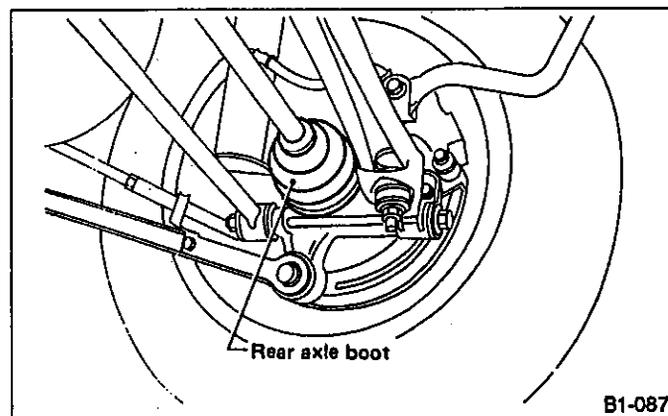


Fig. 54

13. Brake Linings and Drums

MAINTENANCE INTERVAL					
[Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60

A: INSPECTION

1. REAR DRUM BRAKE

1) Remove brake drum, and check that there is no fluid leakage from wheel cylinder.

If there is fluid leakage from wheel cylinder, replace it.

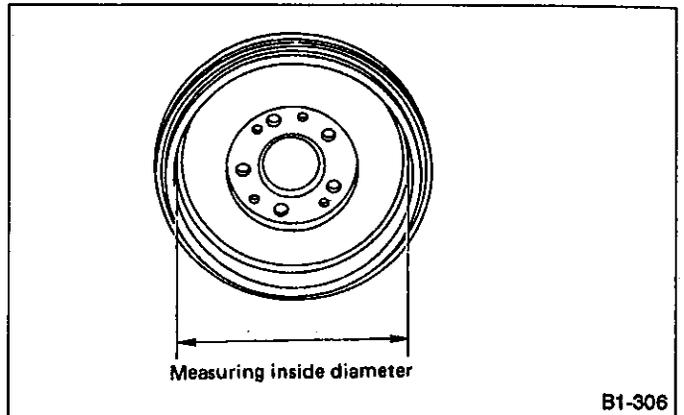
2) Inspect brake shoes for damage or deformities and check brake linings for wear.

Always replace both leading and trailing brake shoes for the left and right wheels at the same time.

Brake lining thickness excluding brake metal:

Standard: 4.1 mm (0.161 in)

Wear limit: 1.5 mm (0.059 in)



B1-306

Fig. 56

If deformation or wear on back plate, shoe etc. is notable, replace the effected parts.

2. PARKING BRAKE

Inspect brake linings and drums of both sides of the rear brake at the same time by removing brake drums.

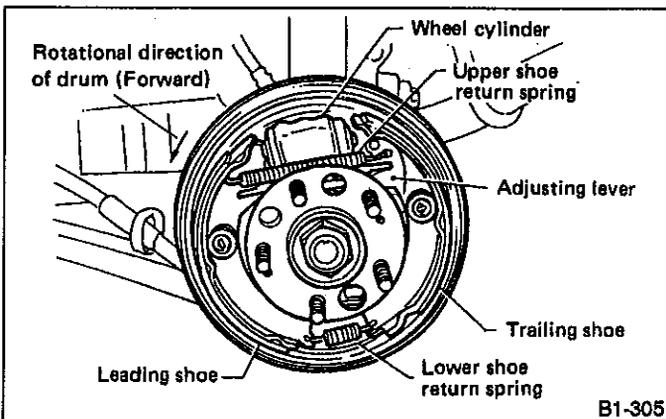
1) Inspect brake shoes for damage or deformities and check brake linings for wear.

Always replace both primary and secondary brake shoes for the left and right wheels at the same time.

Brake lining thickness excluding back metal:

Standard: 3.2 mm (0.126 in)

Wear limit: 1.5 mm (0.059 in)



B1-305

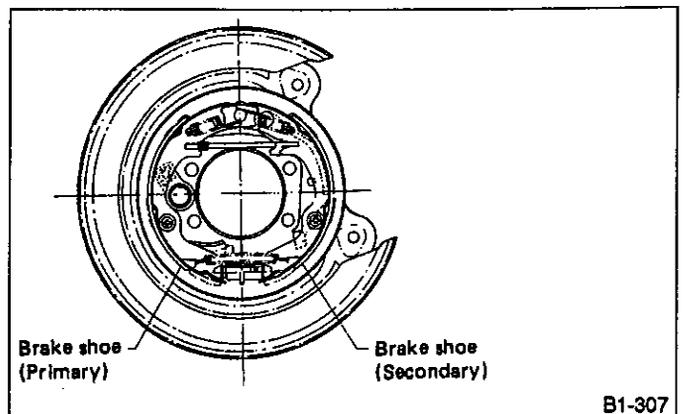
Fig. 55

3) Check brake drum for wear, dents or other damage. If the inside surface of brake drum is streaked, correct the surface with emery cloth (#200 or more). If it is unevenly worn, tapered, or the outside surface of brake drum is damaged, correct or replace it.

Brake drum inside diameter:

Standard: 228.6 mm (9 in)

Wear limit: 230.6 mm (9.08 in)



B1-307

Fig. 57

2) Check brake drum for wear, dents or other damage. If the inside surface of brake drum is streaked, correct the surface with emery cloth (#200 or more). If it is unevenly worn, tapered, or the outside surface of brake drum is damaged, correct or replace it.

Brake drum inside diameter:

Standard: 170 mm (6.69 in)

Wear limit: 171 mm (6.73 in)

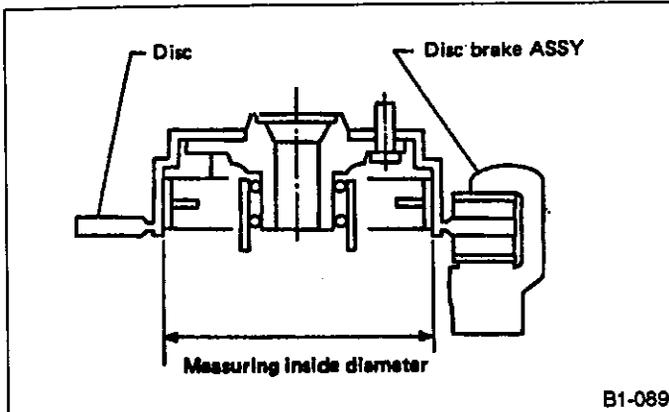


Fig. 58

3) If the deformation or wear of back plate, shoe, etc. are notable, replace them.

4) When the shoe return spring tension is excessively weakened, replace it, taking care to identify upper and lower springs.

B: ADJUSTMENT

1. REAR DRUM BRAKE

The main brake is adjusted automatically, and so there is no need to adjust it.

2. PARKING BRAKE

For rear disc brake, adjust parking brake after bleeding the air.

- 1) Remove rear cover (rubber) installed at back plate.
- 2) Turn adjuster toward allow mark (upward) until it is locked slightly, by using slot-type screwdriver as shown in illustration below.

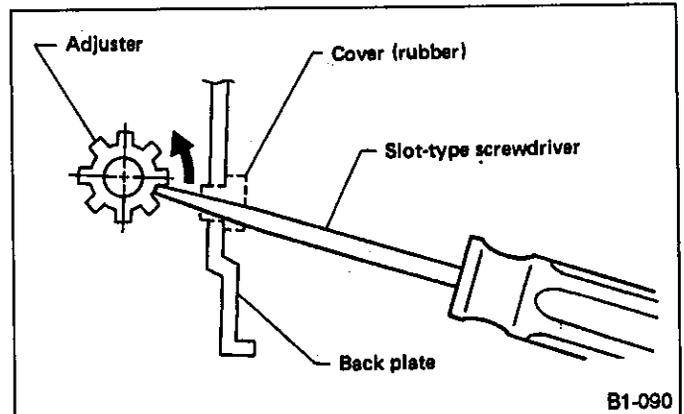


Fig. 59

3) Turn back (downward) adjuster 3 to 4 notches.

4) Install cover (rubber) at original position correctly.

14. Inspect Brake Lines and Check Operation of Parking and Service Brake System

MAINTENANCE INTERVAL					
[Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60
		P	P	P	P

A: INSPECTION

1. BRAKE LINE

1) Check scratches, swelling, corrosion and/or traces of fluid leakage on brake hoses or pipe joints.

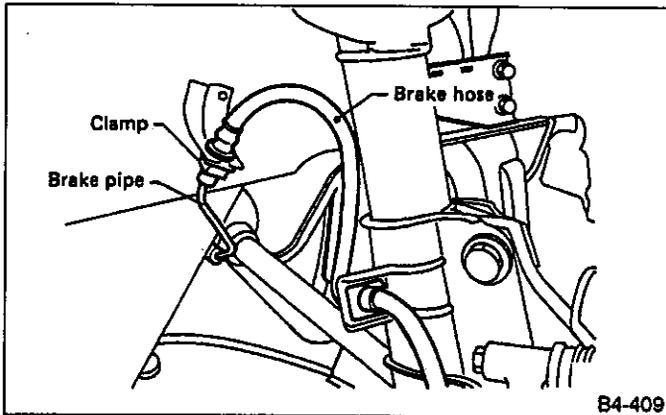


Fig. 60

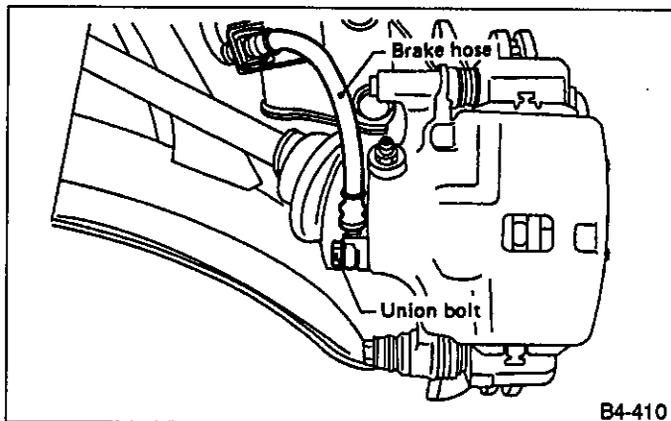


Fig. 61

2) Check the possibility of adjacent parts interfering with brake pipes/hoses during driving, and loose connections/clamps.

3) Check any trace of fluid leakage, scratches, etc. on master cylinder, wheel cylinder, pressure control valve and hill-holder.

When the brake fluid level in the reservoir tank is lower than the specified limit, the brake fluid warning light on the instrument panel will come on.

B: CHECKING

1. SERVICE BRAKE

1) Check the free play of brake pedal with a force of less than 10 N (1 kg, 2 lb).

Brake pedal free play:
1.0 — 3.0 mm (0.039 — 0.118 in)

If the free play is out of specifications above, adjust the brake pedal as follows:

- (1) Be sure engine is off. (No vacuum is applied to brake booster.)
- (2) There should be play between brake booster clevis and pin at brake pedal installing portion. (Depress brake pedal pad with a force of less than 10 N (1 kg, 2 lb) to a stroke of 1.0 to 3.0 mm (0.039 to 0.118 in).

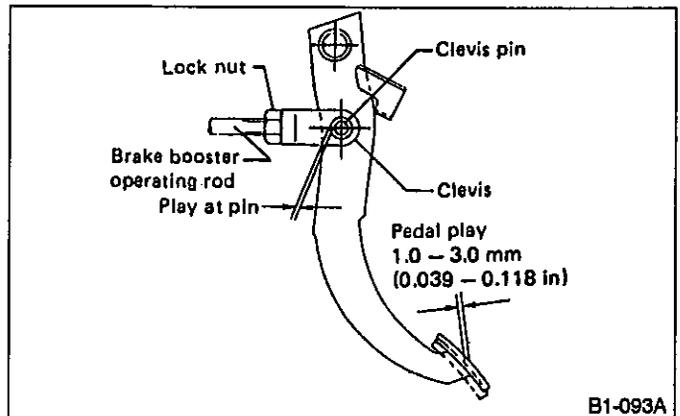


Fig. 62

- (3) Depress the surface of brake pad by hand.
- (4) If there is no free play between clevis pin and clevis, loosen lock nut for operating rod and adjust operating rod by turning in the direction that shortens it.

2) Measure the distance between brake pedal and floor when the pedal is depressed with a force of approximately 294 N (30 kg, 66 lb).

Brake pedal reserve distance:

More than 67 mm (2.64 in)/294 N (30 kg, 66 lb)

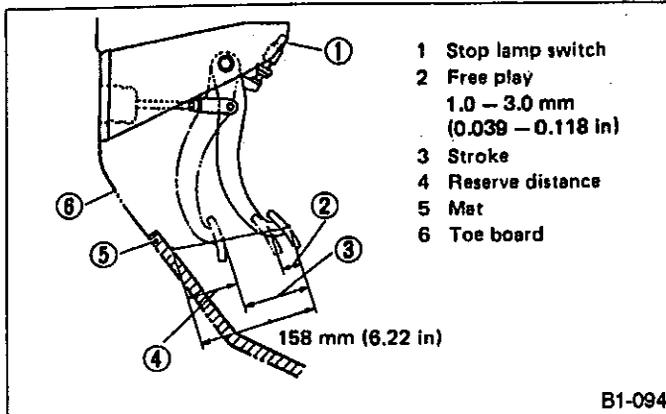


Fig. 63

3) Check to see if air is in the hydraulic brake line by the feel of pedal operation. If air appears to exist in the line, bleed it from the system.

4) Check for even operation of all brakes, using a brake tester or by driving the vehicle for a short distance on a straight road.

2. PARKING BRAKE SYSTEM

- 1) Remove front console cover.
- 2) Remove rear console cover.
- 3) Adjust parking brake lever by turning adjuster (double nut) until parking brake lever stroke is set at 7 to 8 notches with operating force of 196 N (20 kg, 44 lb).

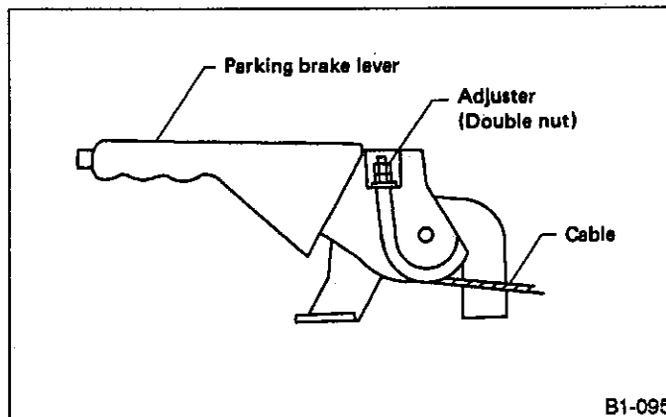


Fig. 64

3. BRAKE SERVO SYSTEM

1) With the engine off, depress the brake pedal several times applying the same pedal force: Make sure the travel distance should not change.

2) With the brake pedal depressed, start the engine: Make sure the pedal should move slightly toward the floor.

3) With the brake pedal depressed, stop the engine and keep the pedal depressed for 30 seconds: Make sure the pedal height should not change.

4) Check valve is built into vacuum hose. Disconnect vacuum hose to inspect function of check valve.

Blow air into vacuum hose from its brake booster side end: Air must flow out of engine side end of hose. Next blow air into hose from engine side: Air should not flow out of hose.

Replace both check valve and vacuum hose if check valve is faulty. Engine side of vacuum hose is indicated by marking "ENGINE" as shown.

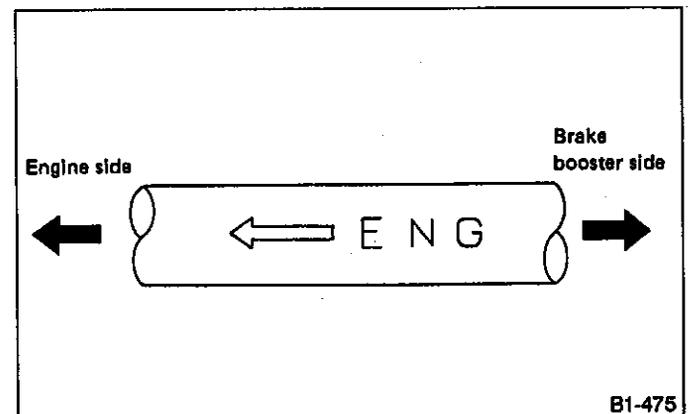


Fig. 65

5) Check vacuum hose for cracks or other damage.

When installing the vacuum hose on the engine and brake booster, do not use soapy water or lubricating oil on their connections.

6) Check vacuum hose to make sure it is tight and secure.

15. Clutch and Hill-holder System

MAINTENANCE INTERVAL [Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60

A: INSPECTION AND ADJUSTMENT

1. MECHANICAL APPLICATION TYPE

1) Inspect free play of clutch pedal by operating pedal by hand.

If it is out of the specified value, adjust it by turning adjusting nut on engine side of clutch cable at release fork.

Standard free play:

- At clutch pedal
10 — 20 mm (0.39 — 0.79 in)
- At center of cable on clutch release fork
3 — 4 mm (0.12 — 0.16 in)

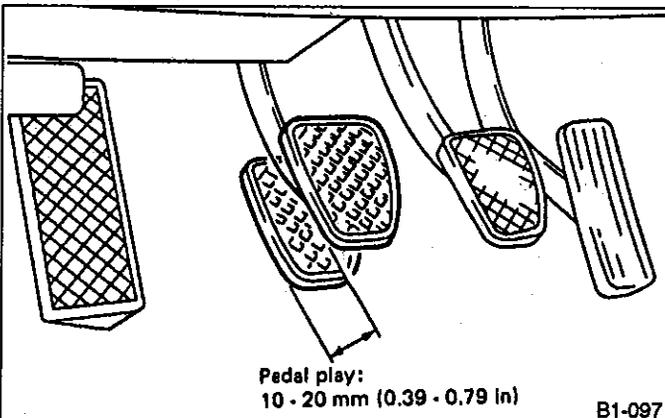


Fig. 66

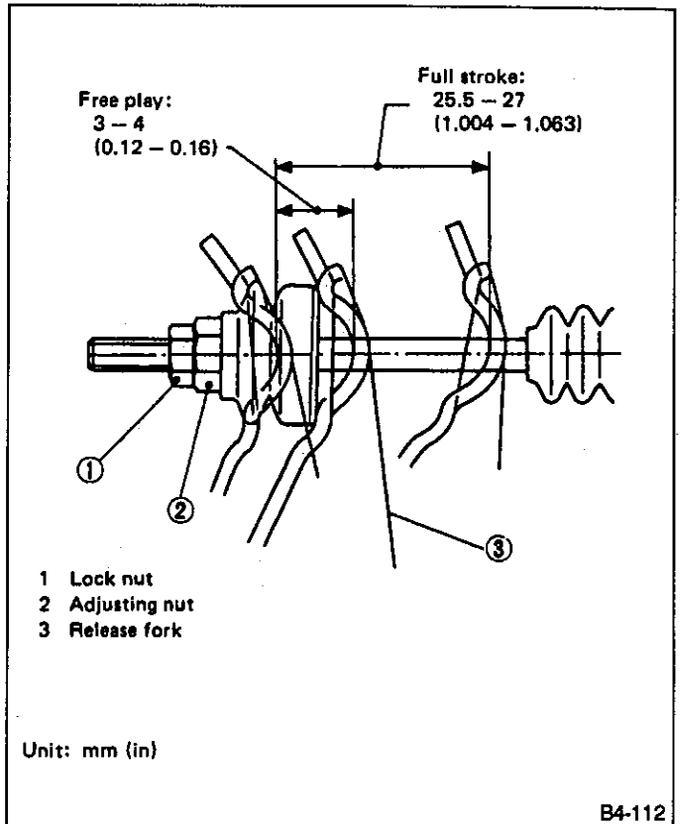


Fig. 67

Lock nut tightening torque :

5.4 — 9.3 N*m (0.55 — 0.95 kg-m, 4.0 — 6.9 ft-lb)

- a. When replacing clutch cable with a new one and/or making clutch pedal free play adjustment, make adjustment of hill-holder system without fail as follows.
- b. After replacing clutch cable and/or pressure hold valve (PHV) cable with a new one, depress clutch pedal about thirty (30) times as a running-in operation prior to this adjustment.

B: INSPECTION AND ADJUSTMENT**2. HYDRAULIC APPLICATION TYPE**

1) Inspect free play of clutch pedal by operating pedal by hand.

If it is out of the specified value, loosen lock nut for push rod and adjust push rod by turning in the direction that shortens or lengthens it.

Standard of free play:

3 — 15 mm (0.12 — 0.59 in)

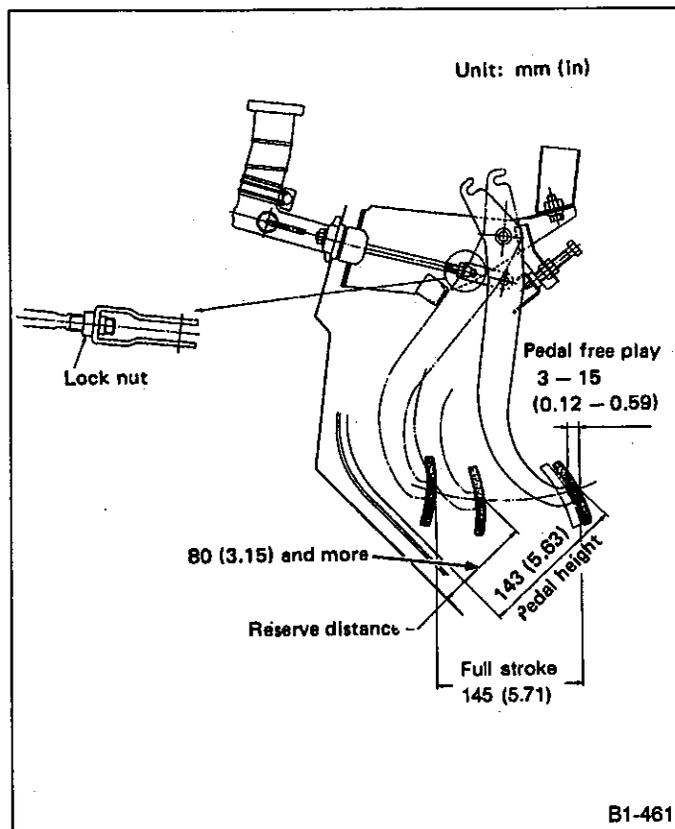


Fig. 68

Tightening torque (Adjusting nut):

9 — 11 N·m (0.9 — 1.1 kg·m, 6.5 — 8.0 ft·lb)

2) Check the fluid level using the scale on the outside of the clutch master cylinder tank. If the level is below "MIN", add clutch fluid to bring it up to "MAX".

Recommended clutch fluid:

FMVSS No. 116, fresh DOT3 or DOT4 brake fluid

- a. Avoid mixing different brands of brake fluid to prevent degradation of the fluid.
- b. Be careful not to allow dirt or dust to get into the reservoir tank.
- c. Use fresh DOT3 or DOT4 brake fluid when refilling fluid.

3. HILL-HOLDER

1) Confirm stopping and starting performance by activating hill-holder on an uphill road of 3° or higher inclination.

- (1) If vehicle does not stop;
Tighten adjusting nut of PHV cable.

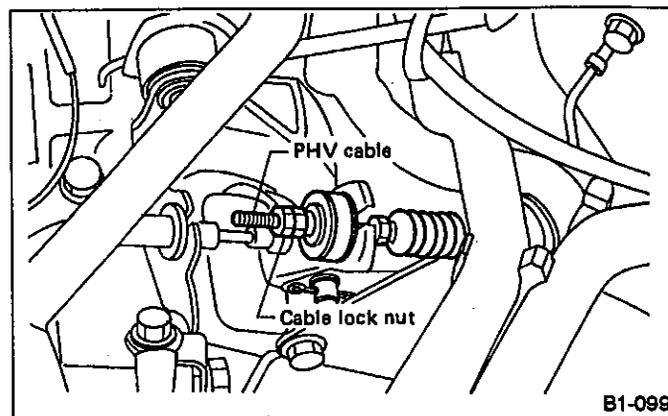


Fig. 69

(2) If vehicle does not start properly;

- Case A — When hill-holder is released later than engagement of clutch (engine tends to stall):
Loosen adjusting nut gradually until smooth starting is enabled.
- Case B — When hill-holder is released earlier than engagement to clutch (vehicle slips down slightly):
Tighten adjusting nut so that hill-holder is released later than engagement of clutch (status in Case A).
Then make adjustment the same as in Case A.

a. Whenever turning adjusting nut, hold inner cable with pliers to prevent it from turning.

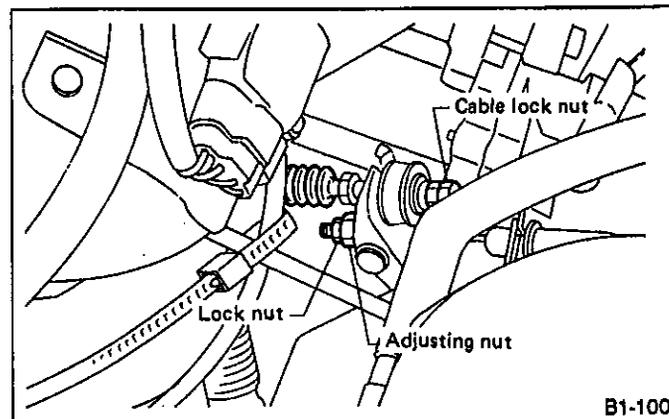


Fig. 70

b. Replace pressure hold valve (PHV), return spring of PHV or PHV cable with new ones, if they are defective and/or damaged.

2) Make sure that the automatic adjuster is operating.

- Check if the cable is able to be pulled out as shown in the figure below.

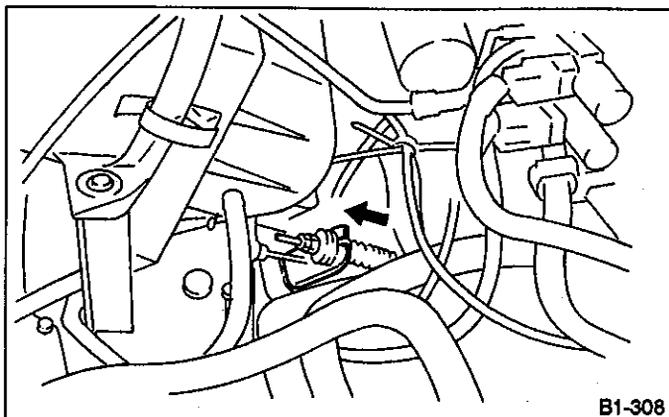


Fig. 71

16. Steering and Suspension System

MAINTENANCE INTERVAL [Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60

A: INSPECTION

1. STEERING WHEEL

- 1) Set steering wheel in a straight-ahead position, and check wheel spokes to make sure they are correctly set in their specified positions.
- 2) Lightly turn steering wheel to the left and right to determine the point where front wheels start to move. Measure the distance of the movement of steering wheel at the outer periphery of wheel.

Steering wheel free play:

0 — 17 mm (0 — 0.67 in)

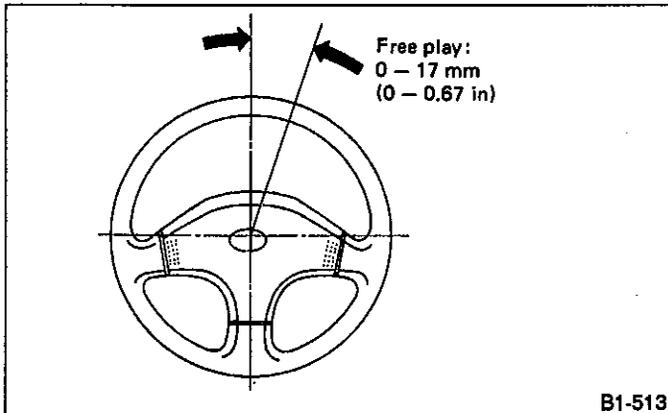


Fig. 72

- 3) Move steering wheel vertically toward the shaft to ascertain if there is play in that direction.

Maximum permissible play:

0.5 mm (0.020 in)

- 4) Drive vehicle and check the following items during operation.

- (1) Steering force
The effort required for steering should be smooth and even at all points, and should not vary.
- (2) Pull to one side
Steering wheel should not be pulled to either side while driving on a level surface.

- (3) Wheel runout
Steering wheel should not show any sign of runout.
- (4) Return factor
Steering wheel should return to its original position after it has been turned and then released.

2. STEERING SHAFT JOINT

- 1) When steering wheel free play is excessive, disconnect universal joint of steering shaft and check it for any play and yawing torque (at the point of the crossing direction). Also inspect for any damage to sealing or worn serrations.

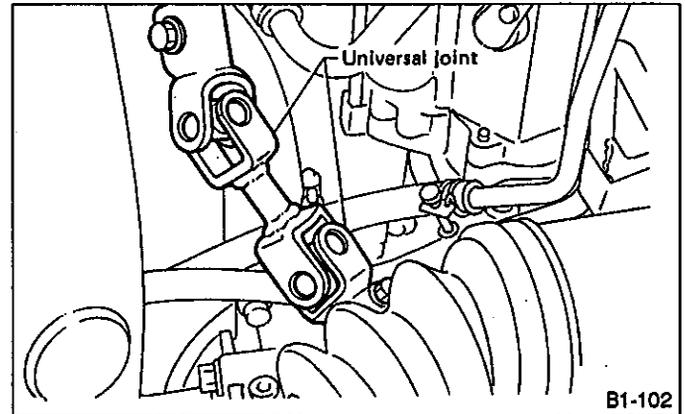


Fig. 73

If the joint is loose, retighten the mounting bolts to the specified torque.

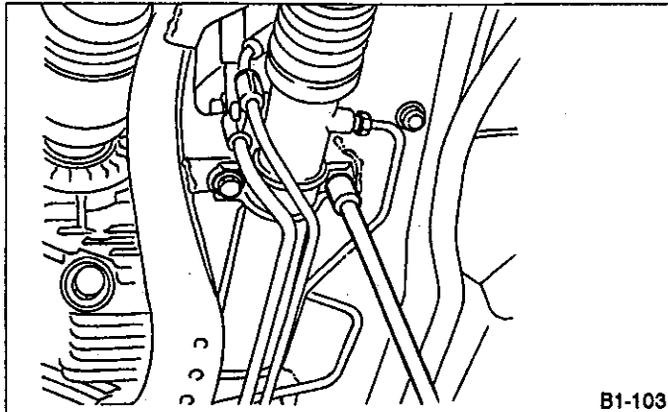
Tightening torque:

21 — 26 N·m (2.1 — 2.7 kg·m, 15 — 20 ft·lb)

3. GEARBOX

1) With wheels placed on a level surface, turn steering wheel 90° in both the left and right directions. While wheel is being rotated, reach under vehicle and check for looseness in gearbox.

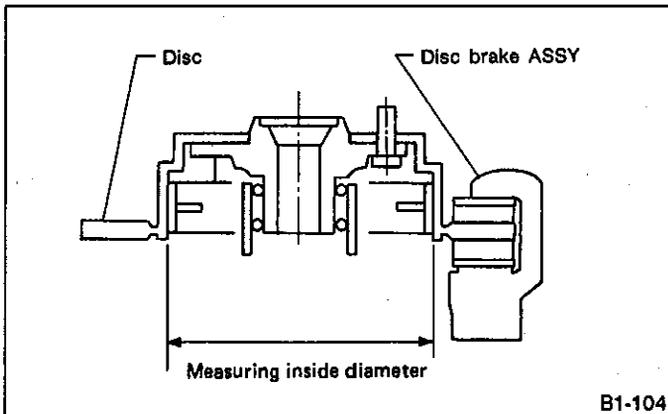
Tightening torque:
 47 — 71 N•m (4.8 — 7.2 kg-m, 35 — 52 ft-lb)



B1-103

Fig. 74

2) Check boot for damage, cracks or deterioration.

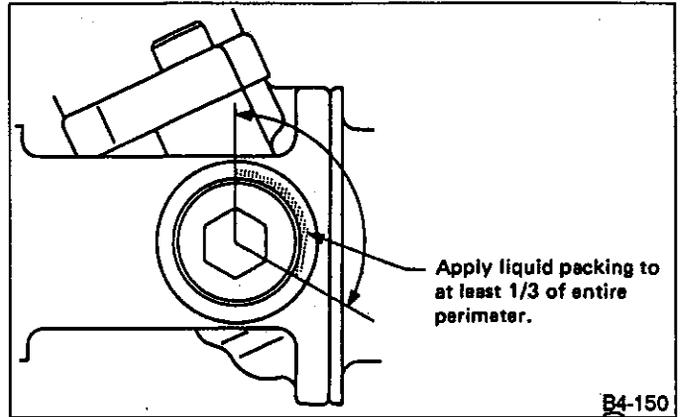


B1-104

Fig. 75

3) With vehicle on a level surface, quickly turn steering wheel to the left and right. While steering wheel is being rotated, check the gear backlash. If any unusual noise is noticed, adjust the gear backlash in the following manner.

- (1) Tighten adjusting screw to 5 N•m (0.5 kg-m, 3.6 ft-lb) and then loosen. Repeat this operation twice.
- (2) Retighten adjusting screw to 5 N•m (0.5 kg-m, 3.6 ft-lb) and back off 30°.
- (3) Apply liquid packing to at least 1/3 of entire perimeter of adjusting screw thread.



B4-150

Fig. 76

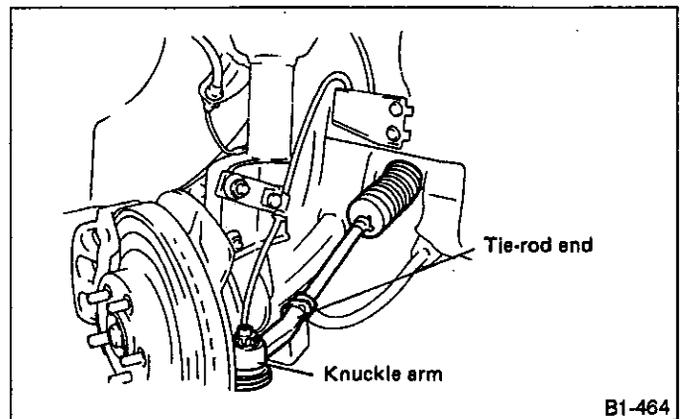
(4) Install lock nut. While holding adjusting screw with a wrench, tighten lock nut using SPANNER (926230000).

Tightening torque (Lock nut):
 29 — 49 N•m (3.0 — 5.0 kg-m, 22 — 36 ft-lb)

Hold the adjusting screw with a wrench to prevent it from turning while tightening the lock nut.

4. TIE-ROD

- 1) Check tie-rod and tie-rod ends for bends, scratches or other damage.
- 2) Check connections of knuckle ball joints for play, inspect for damage on dust seals, and check the free play of ball studs.
- 3) Make sure that the cotter pin is installed correctly in the castle nut of the tie-rod end.



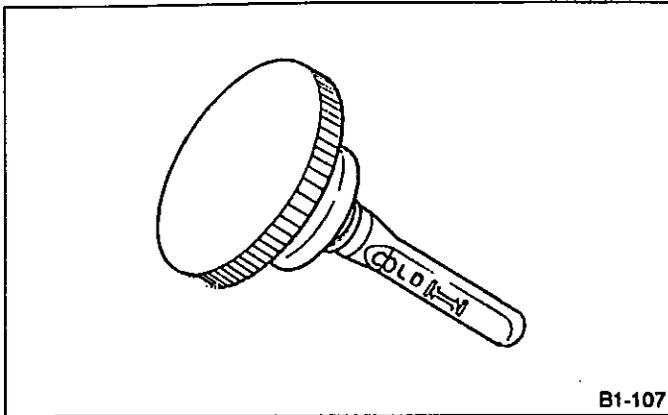
B1-464

Fig. 77

5. POWER STEERING FLUID LEVEL

- 1) Place vehicle with engine "off" on the flat and level surface.
- 2) Check the fluid level by removing filler cap of oil pump.

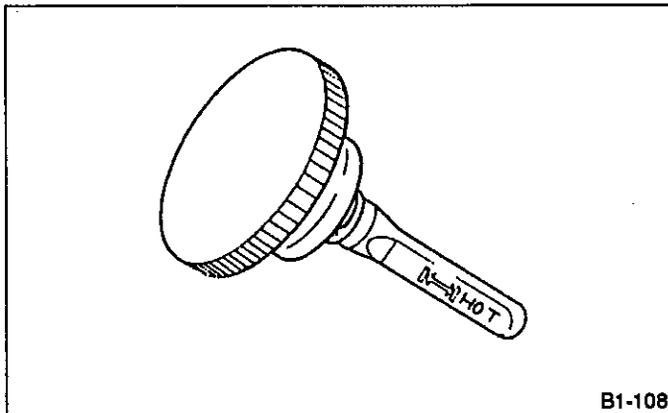
(1) Check at temperature 21°C (70°F) of fluid temperature.



B1-107

Fig. 78

(2) Check at temperature 60°C (140°F) of fluid temperature.



B1-108

Fig. 79

3) Fluid level should be maintained in the each specified range on the indicator of filler cap. If fluid level is at lower point or below, add fluid to keep the level in the specified range of indicator. If fluid level is at upper point or above, drain fluid to keep the level in the specified range of indicator by using a syringe or the like.

Recommended fluid	Manufacturer
ATF Dexron II	B.P.
	CALTEX
	CASTROL
	MOBIL
	SHELL
	TEXACO

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

6. POWER STEERING FLUID FOR LEAKS

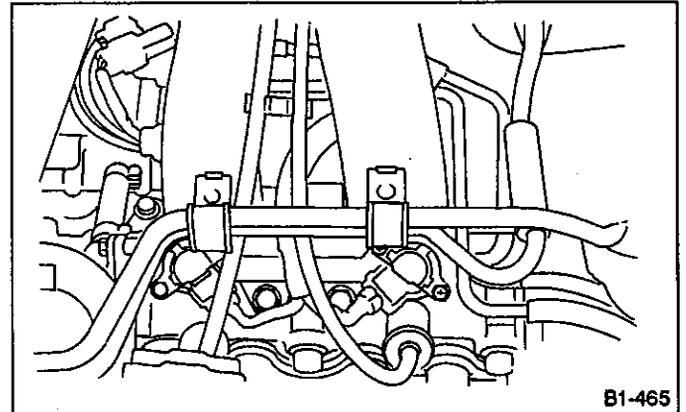
Inspect the underside of oil pump and gearbox for power steering system, hoses, piping and their couplings for fluid leaks.

If fluid leaks are found, correct them by retightening their fitting bolts (or nuts) and/or replacing their parts.

a. Wipe the leakage fluid off after correcting fluid leaks, or a wrong diagnosis is taken later.

b. Also pay attention to clearances between hoses (or pipings) and other parts when inspecting fluid leaks.

7. HOSES OF OIL PUMP FOR DAMAGES



B1-465

Fig. 80

Check pressure hose and return hose of oil pump for crack, swell or damage. Replace the hoses with new ones if necessary.

Prevent hoses from revolving and/or turning when installing hoses.

8. POWER STEERING PIPES FOR DAMAGE

Check power steering pipes for corrosion and damage. Replace pipes with new ones if necessary.

9. GEARBOX BOOTS

Inspect both sides of gearbox boots as follows, and correct the defects if necessary.

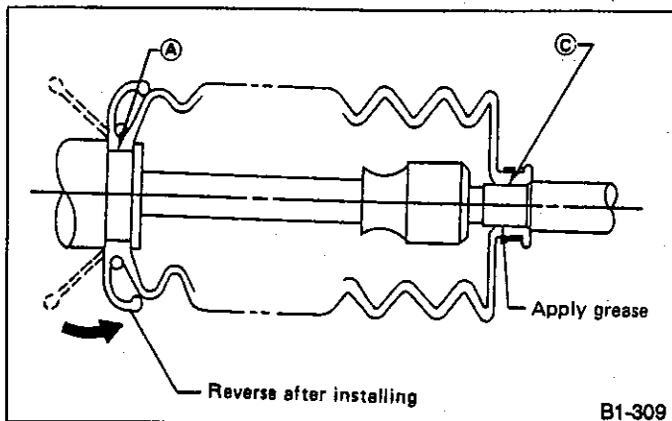


Fig. 81

- 1) A and C position of gearbox boot are fitted correspondingly in A and C grooves of gearbox and the rod.
- 2) Clips are fitted outside of A and C positions of boot.
- 3) Boot does not have crack, hole.

Rotate C position of gearbox boot against twist of it produced by adjustment of toe-in, etc.

10. FITTING BOLTS AND NUTS

Inspect fitting bolts and nuts of oil pump and bracket for looseness, and retighten them if necessary.

Inspect and/or retighten them when engine is cold.

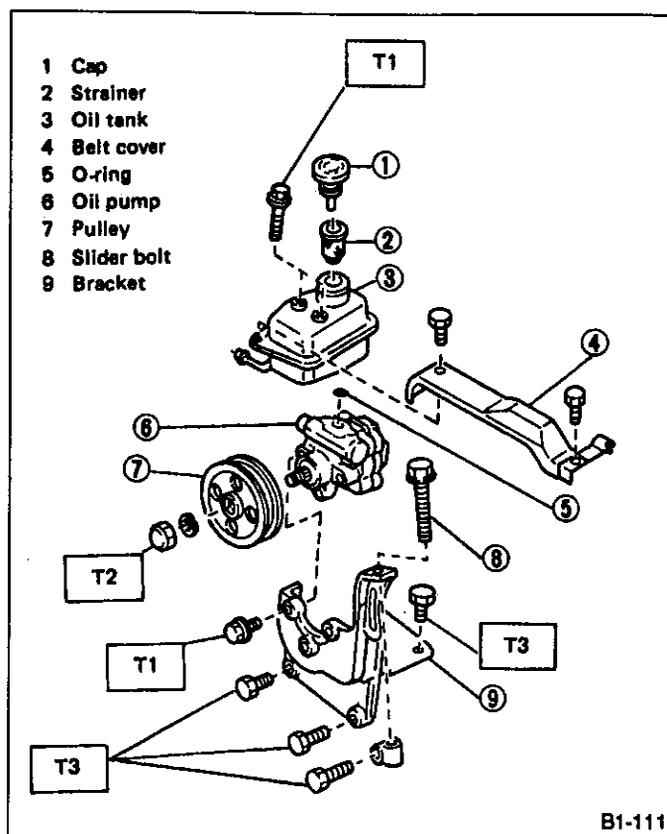


Fig. 82

Tightening torque: N·m (kg-m, ft-lb)

T1: 18 — 23 (1.8 — 2.3 , 13 — 17)

T2: 42 — 62 (4.3 — 6.3 , 31 — 46)

T3: 20 — 24 (2.0 — 2.4 , 14 — 17)

11. SUSPENSION SYSTEM

Care should be taken not to apply paint, undercoating agent, anti-corrosive wax, etc. to the following parts of air-suspension equipped models while refinishing the undercarriage.

- (1) Diaphragm and rolling surfaces
- (2) Air suspension compressor and dryer assembly

1) Play of front ball joint Inspect every 25,000 km (15,000 miles) or 12 months, whichever occurs first.

- (1) Jack up vehicle until front wheels are off ground.
- (2) Next, grasp bottom of tire and move it in and out. If relative movement is observed between brake disc cover and end of transverse link, ball joint may be excessively worn.

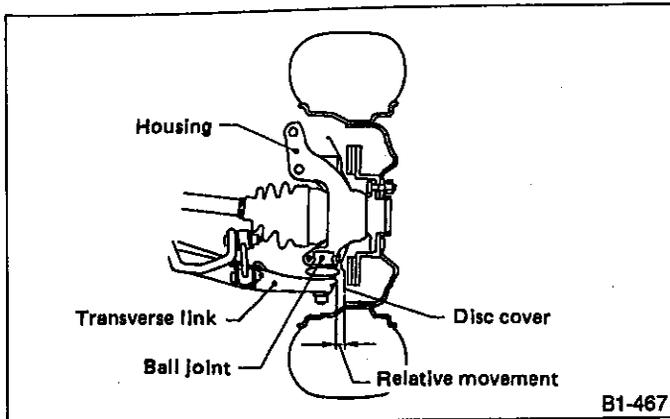


Fig. 83

(3) Next, grasp end of transverse link and move it up and down. Relative movement between housing and transverse link boss indicates ball joint may be excessively worn.

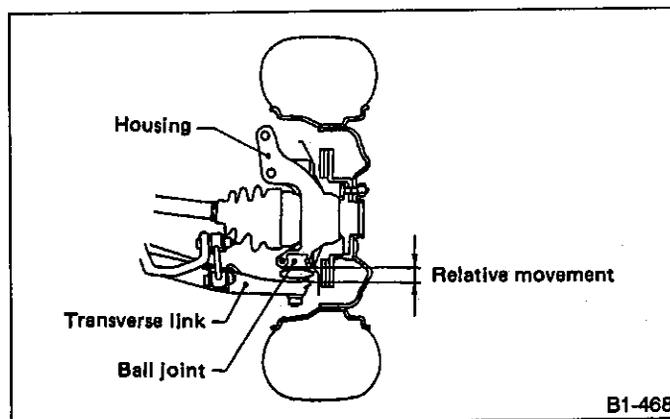


Fig. 84

(4) If relative movement is observed in tests (2) and (3) above, remove and inspect ball joint according to chapter 4-1. If looseness exceeds standard, replace ball joint.

2) Damage of dust seal Inspect every 25,000 km (15,000 miles) or 12 months, whichever occurs first. Visually inspect ball joint dust seal. If it is damaged, remove ball joint as instructed in chapter 4-1 and measure looseness of ball joint.

(1) When looseness exceeds standard value, replace ball joint.

(2) When looseness is less than standard value, wipe off old grease, apply the proper amount [about 3 g (0.11 oz)] of designated grease (SUNLIGHT 2, P/N 003602010), and install a new dust seal.

When transverse link ball joint has been removed or replaced, check toe-in (or side slip) of front wheel. If front wheel toe-in (or side slip) is not at specified value, adjust according to chapter 4-1 so that toe-in conforms to service standard.

3) Transverse link's liquid-filled bushing
Check oil leaks at or around liquid-filled bushing. If oil leaks, replace bushing.

4) Wheel alignment and ground clearance Inspect every 50,000 km (30,000 miles) or 24 months, whichever occurs first.

(1) Unload cargoes and set vehicle in curb weight (empty) condition.

(2) Then, check ground clearance of front and rear suspensions to ensure that they are within specified values.

(Adjusting procedure) — Ground clearance

When ground clearance is out of standard, visually inspect following components and replace deformed parts.

- Suspensions components [Front: strut assembly, crossmember, transverse link, etc. Rear: shock absorber, lateral links, trailing link, etc.]

- Body parts to which suspensions are installed.

When no components are deformed, adjust ground clearance by replacing coil spring in the suspension whose ground clearance is out of standard.

(3) Check alignment of front suspension to ensure that following items conform to standard values provided in chapters 4-1 and 4-3.

- Toe-in (or side slip)
- Camber angle
- Caster angle
- Turning angle of tire

(Adjusting procedure) — Front suspension alignment

(a) Camber and caster angles are not adjustable. When camber or caster angle does not conform to standard value, visually inspect following components and replace deformed parts.

- Suspension components [Strut assembly, crossmember, transverse link, etc.]

- Body parts to which suspensions are installed.

(b) When toe-in (or side slip) is out of standard value, adjust by the method described in chapter 4-1 so that it conforms to service standard.

(c) When right-and-left turning angles of tire are out of standard, adjust to standard value by method described in chapter 4-3.

(4) Check alignment of rear suspension to ensure that following items are within standard values.

- Toe-in (or side slip)
- Camber angle

(Adjusting procedure) — Rear suspension alignment

When toe (or side slip) or camber angle does not conform to standard value, visually inspect parts listed below. If deformation is observed, replace damaged parts.

- Suspension components [Shock absorber, lateral links, trailing link, crossmember, etc.]
- Body parts to which suspensions are installed.

When no components are deformed, adjust alignment by the method described in chapter 4-1 so that it conforms to service standard.

5) Oil leakage of shock absorber Inspect every 50,000 km (30,000 miles) or 24 months, whichever occurs first.

Remove tire and visually inspect shock absorber for oil leakage as instructed in chapter 4-1. Replace shock absorber if oil leaks excessively.

6) Tightness of bolts and nuts Inspect every 50,000 km (30,000 miles) or 24 months, whichever occurs first. Check bolts shown below for looseness. Retighten bolts to specified torque. Further, check that cotter pin in place as shown below. If not, install new cotter pin.

FRONT

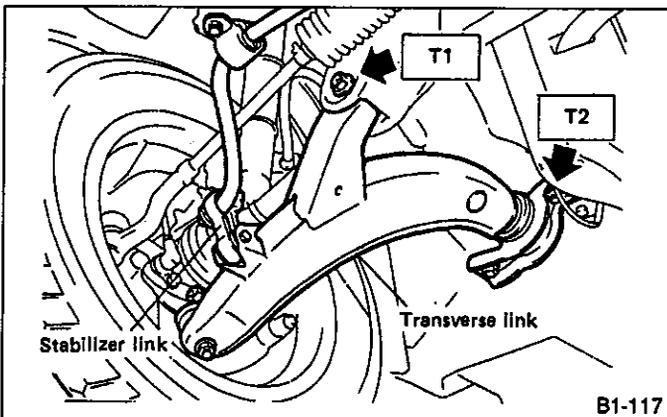


Fig. 85

REAR

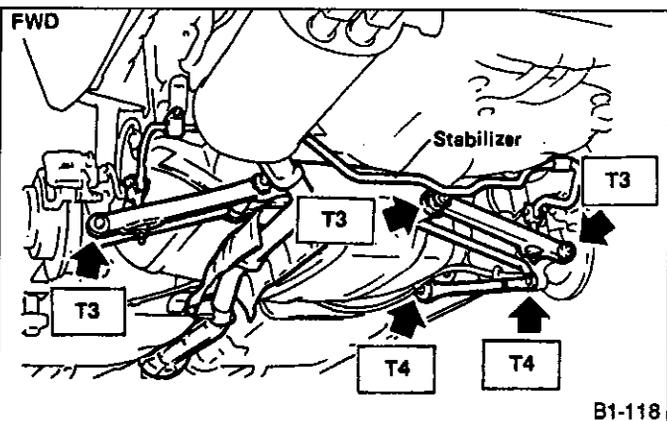


Fig. 86

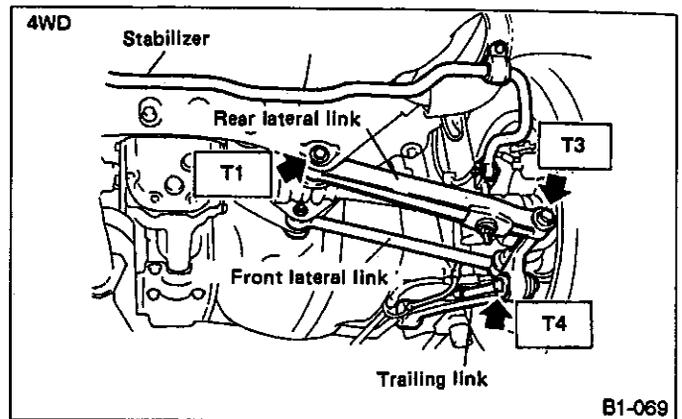


Fig. 87

Tightening torque: N·m (kg-m, ft-lb)

- T1: 83 — 113 (8.5 — 11.5, 61 — 83)
- T2: 196 — 294 (20 — 30, 145 — 217)
- T3: 118 — 157 (12 — 16, 87 — 116)
- T4: 98 — 127 (10 — 13, 72 — 94)

7) Dirt on and damage to rolling diaphragm of air suspension Inspect every 25,000 km (15,000 miles) or 12 months, whichever occurs first.

- (1) After loosening wheel nuts, jack up vehicle until all four wheels are off ground according to instructions in "Pre-Delivery Inspection." Remove tires.
- (2) Visually inspect rolling diaphragm. If dirty, remove dirt from diaphragm. Be careful not to damage diaphragms.
- (3) Visually inspect rolling diaphragm. Replace air suspension ASSY if damaged. However, replacement is not required if only fine scratches on diaphragm surface caused by sand. These do not present a problem.
- (4) Visually inspect rolling diaphragm for rust. If rusty, remove rust and touch up.

When touching up diaphragm, be careful paint does not adhere to diaphragm. (Lower jack after touch-up paint has dried completely.)

8) Damage to suspension parts

Check the following parts and the fastening portion of the car body for deformity or excessive rusting which impairs the suspension. Replace faulty parts. If minor rust formation, pitting, etc. are noted, remove rust and apply remedial anti-corrosion measures.

- (1) Front suspension
 - Transverse link
 - Crossmember
 - Strut (including air suspension)
- (2) Rear suspension
 - Crossmember
 - Lateral links
 - Trailing link
 - Strut (including air suspension)

17. Front and Rear Wheel Bearing Lubricant

MAINTENANCE INTERVAL					
[Number of months or km (miles) whichever occurs first]					
Months		12	24	36	48
x1,000 km	1.6	25	50	75	100
x1,000 miles	1	15	30	45	60
					(l)

A: INSPECTION

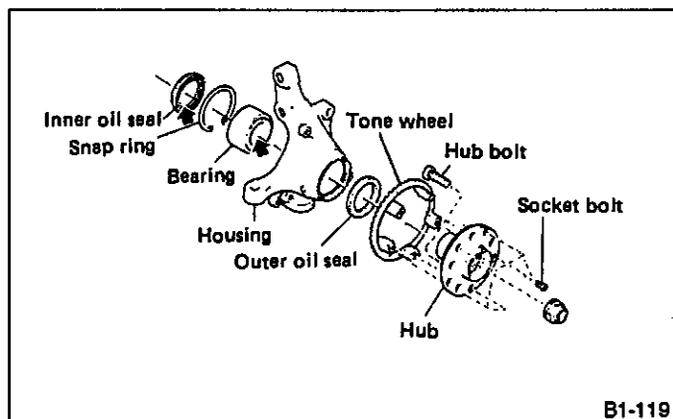
Inspect the condition of front and rear wheel bearing grease as follows:

1. FRONT WHEEL BEARING

- 1) Jack up the front of vehicle.
- 2) While holding front wheel by hand, swing it in and out to check bearing free play.
- 3) Loosen wheel nuts and remove front wheel.
- 4) If bearing free play exists in step 2) above, attach a dial gauge to hub and measure axial displacement in axial direction.

Service limit:

Straight-ahead position within 0.05 mm (0.0020 in)



B1-119

Fig. 88

- 5) Remove bolts and self-locking nuts, and extract transverse link from front crossmember.
- 6) While lightly hammering spring pin which secures D.O.J. to transmission spindle, remove it.
- 7) Extract D.O.J. from transmission spindle.
- 8) While supporting front drive shaft horizontally with one hand, turn hub with the other to check for noise or binding.

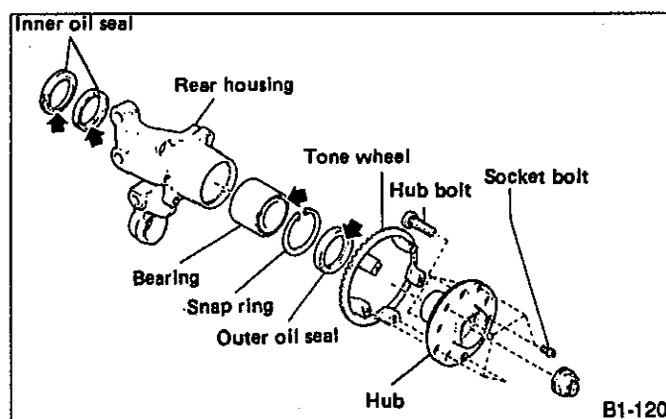
If hub is noisy or binds, disassemble front axle and check condition of oil seals, bearing, etc.

2. REAR WHEEL BEARING

- 1) Jack up the rear of vehicle.
- 2) While holding rear wheel by hand, swing it in and out to check bearing free play.
- 3) Loosen wheel nuts and remove rear wheel.
- 4) If bearing free play exists in step 2) above, attach a dial gauge to hub and measure axial displacement in axial direction.

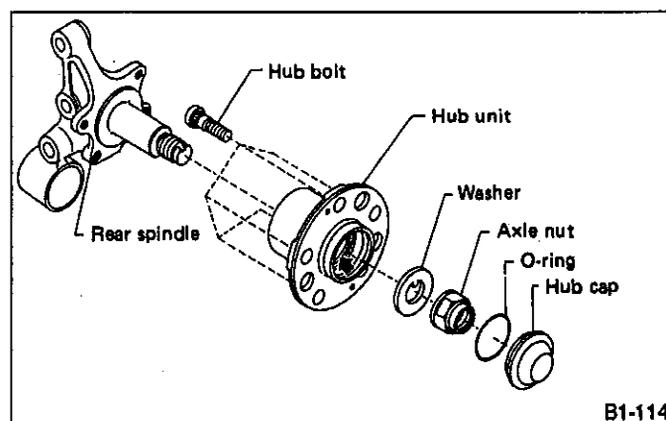
Service limit:

Straight-ahead position within 0.05 mm (0.0020 in)



B1-120

Fig. 89 4WD



B1-114

Fig. 90 FWD

- 5) Turn hub by hand to check for noise or binding. If hub is noisy or binds, disassemble front axle and check condition of oil seals, bearings, etc.

When the vehicle is a 4WD model, remove bolts and self-locking nuts, and remove front lateral link from crossmember.

Lightly hammer spring pin which secures D.O.J. to rear differential spindle, to remove it.

Extract D.O.J. from rear differential spindle. While supporting rear drive shaft horizontally with one hand, turn hub with the other hand to check for noise or binding. If hub is noisy or binds, disassemble rear axle and check condition of oil seals, bearing, etc.

SUBARU®

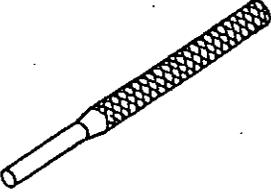
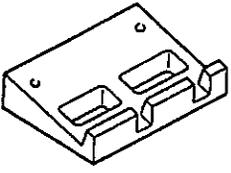
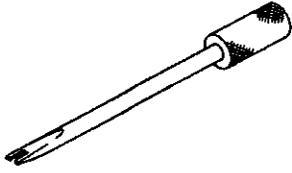
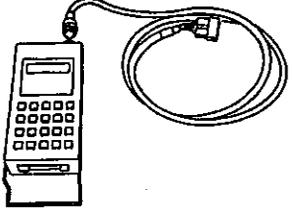
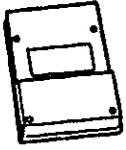
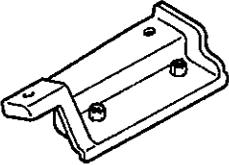
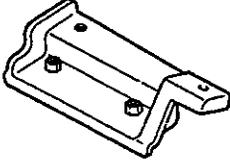
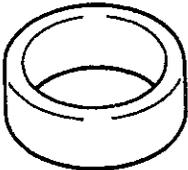
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**SERVICE
MANUAL**

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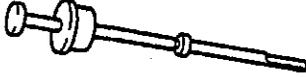
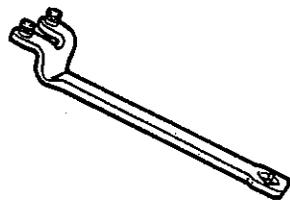
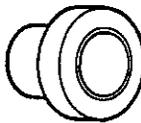
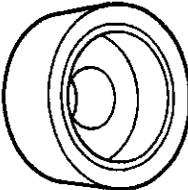
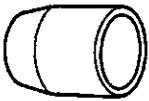
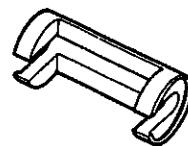
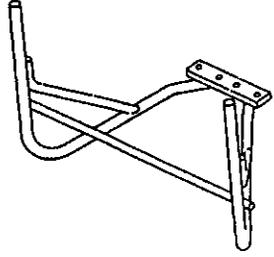
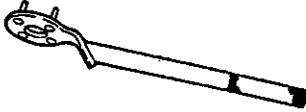
1. Engine Tools

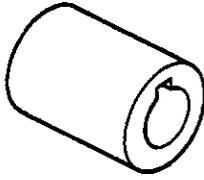
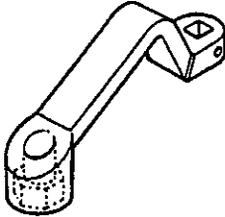
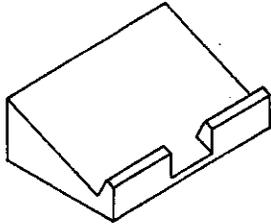
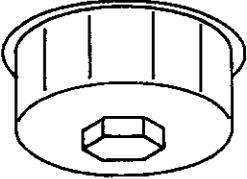
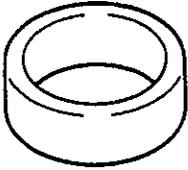
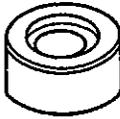
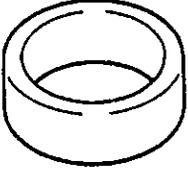
498017000	498267200	498297100	498307500
MAIN JET SCREWDRIVER	CYLINDER HEAD TABLE	IDLE ADJUST DRIVER	SELECT MONITOR KIT
Used to remove and install main jet on carburetor.	<ul style="list-style-type: none"> For replacing valve guides. Used to remove and install valve springs. 	Used to turn idle adjusting screw on carburetor.	Troubleshooting for electrical systems.
			
B1-314	B1-126	B1-315	B1-316
498348800★	498457000	498457100	498497100
CARTRIDGE	ENGINE STAND ADAPTER RH	ENGINE STAND ADAPTER LH	CRANKSHAFT STOPPER
Used with SELECT MONITOR KIT (498307500).	Used with ENGINE STAND (499817000).	Used with ENGINE STAND (499817000).	Used to stop rotation of flywheel when loosening and tightening crankshaft pulley bolt, etc.
			
B1-317	B1-127	B1-128	B1-129
498747100	498857100	498017100	499037100
PISTON GUIDE	VALVE OIL SEAL GUIDE	PISTON PIN GUIDE	CONNECTING ROD BUSHING REMOVER & INSTALLER
<ul style="list-style-type: none"> Used to install piston in cylinder. For 2200 cc engine. 	For press-fitting of intake and exhaust valve guide oil seals.	Used to install piston and connecting rod.	Used to remove and install connecting rod bushing.
			
B1-130	B1-131	B1-132	B1-133

★ Newly adopted tool.

SPECIAL TOOLS

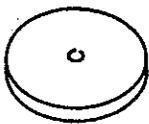
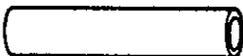
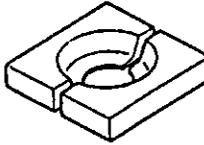
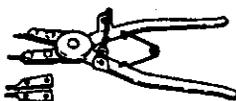
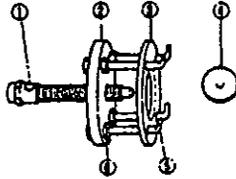
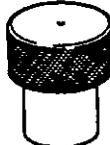
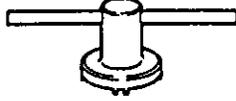
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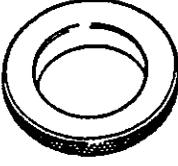
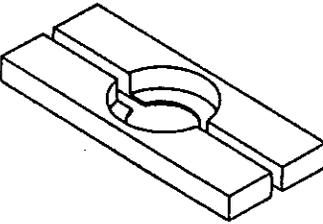
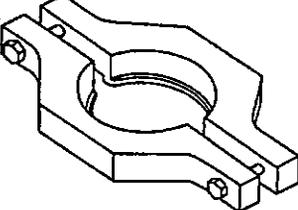
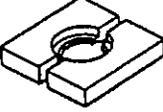
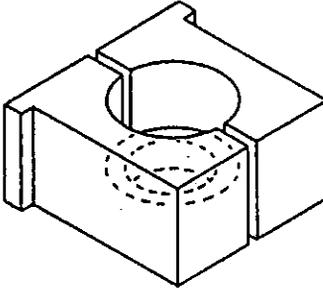
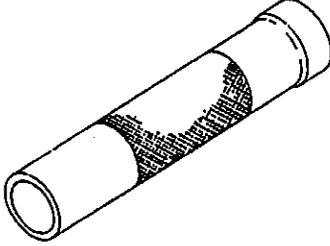
499097500	499207100	499587100	499587200
PISTON PIN REMOVER ASSY	CAMSHAFT SPROCKET WRENCH CP	CAMSHAFT OIL SEAL INSTALLER	CRANKSHAFT OIL SEAL INSTALLER
Used to remove piston pin	Used to remove and install camshaft sprocket.	<ul style="list-style-type: none"> • Used to install crankshaft oil seal. • Used with CAMSHAFT OIL SEAL GUIDE (499597000). 	<ul style="list-style-type: none"> • Used to install crankshaft oil seal. • Used with CRANKSHAFT OIL SEAL GUIDE (499587100).
 B1-134	 B1-135	 B1-136	 B1-137
499597000	499597100	499718000	499767000
CAMSHAFT OIL SEAL GUIDE	CRANKSHAFT OIL SEAL GUIDE	VALVE SPRING REMOVER	VALVE GUIDE ADJUSTER
<ul style="list-style-type: none"> • Used to install camshaft oil seal. • Used with CAMSHAFT OIL SEAL INSTALLER (499587100). 	<ul style="list-style-type: none"> • Used to install crankshaft oil seal. • Used with CRANKSHAFT OIL SEAL INSTALLER (499587200). 	Used to remove and install valve spring.	Used to install intake and exhaust valve guides.
 B1-138	 B1-139	 B1-140	 B1-141
499767200	499767400	499817000	499977000
VALVE GUIDE REMOVER	VALVE GUIDE REAMER	ENGINE STAND	CRANK PULLEY WRENCH CP
For removing valve guides.	For reaming valve guides.	<ul style="list-style-type: none"> • Stand used for engine disassembly and ASSY. Two pieces are needed. • Used with ENGINE STAND ADAPTER RH (498457000) & LH (498457100). 	Used to stop rotation of crankshaft pulley when loosening and tightening crankshaft pulley bolts.
 B1-170	 B1-171	 B1-172	 B1-142

<p>499987500</p>	<p>499990110</p>	<p>498267300★</p>	<p>498547000</p>
<p>CRANKSHAFT SOCKET</p> <p>Used to rotate crankshaft.</p>	<p>O₂ SENSOR SOCKET</p> <p>Used to remove and install oxygen (O₂) sensor.</p>	<p>CYLINDER HEAD TABLE</p> <ul style="list-style-type: none"> • For replacing valve guides. • Used to remove and install valve springs. • For DOHC engine. 	<p>OIL FILTER WRENCH</p> <p>Used to remove and install oil filter.</p>
 <p>B1-143</p>	 <p>B1-173</p>	 <p>B1-521</p>	 <p>C1-110</p>
<p>398744300★</p>	<p>498857200★</p>	<p>499767100★</p>	<p>499767300★</p>
<p>PISTON GUIDE</p> <ul style="list-style-type: none"> • Used to install piston in cylinder. • For 2000 cc engine. 	<p>VALVE OIL SEAL GUIDE CP</p> <ul style="list-style-type: none"> • For press-fitting of intake and exhaust valve guide oil seals. • For DOHC engine. 	<p>VALVE GUIDE ADJUSTER</p> <ul style="list-style-type: none"> • Used to install intake and exhaust valve guides. • For DOHC engine. 	<p>VALVE GUIDE REMOVER</p> <ul style="list-style-type: none"> • For removing valve guides. • For DOHC engine.
 <p>B1-130</p>	 <p>B1-131</p>	 <p>B1-141</p>	 <p>B1-170</p>
<p>499767500★</p>	<p>498747000★</p>		
<p>VALVE GUIDE REAMER</p> <ul style="list-style-type: none"> • For reaming valve guides. • For DOHC engine. 	<p>PISTON GUIDE</p> <ul style="list-style-type: none"> • Used to install piston in cylinder. • For 1800 cc, 1600 cc engine. 		
 <p>B1-171</p>	 <p>B1-130</p>		

★ Newly adopted tool.

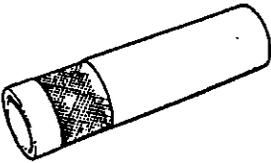
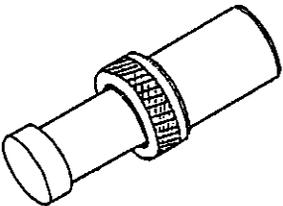
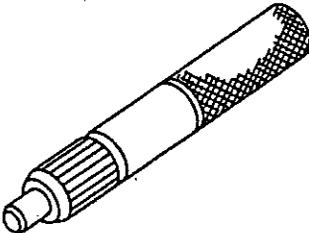
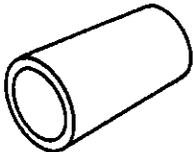
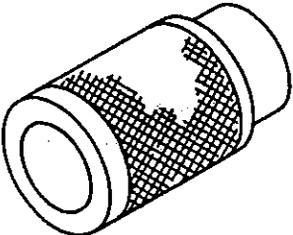
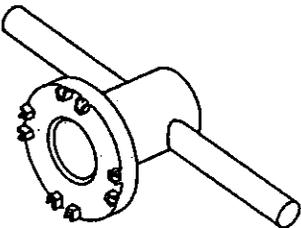
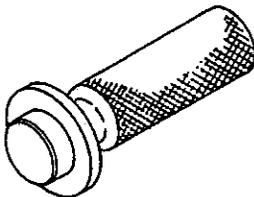
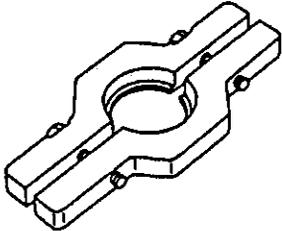
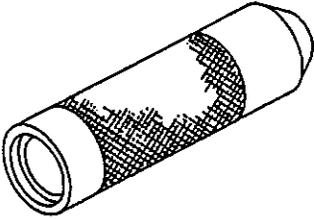
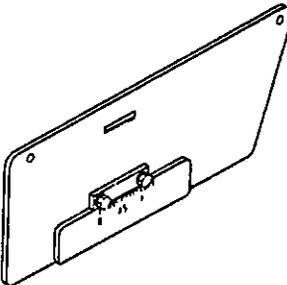
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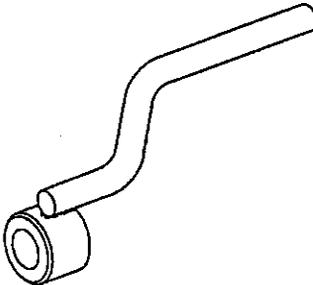
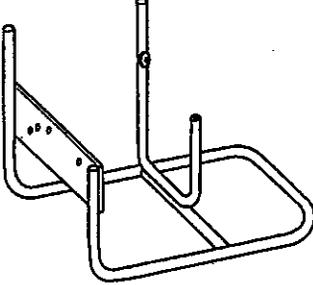
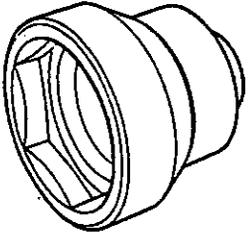
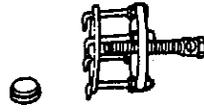
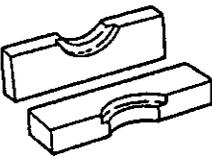
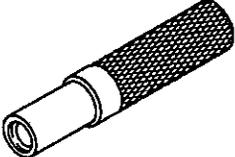
398497701	398507703	398517700	398663600
ADAPTER	DUMMY COLLAR	REPLACER	PLIERS
<ul style="list-style-type: none"> Used to install roller bearing onto differential case. Used with INSTALLER (499277100). 	Used to install input shaft holder oil seal.	Used when replacing ball bearing on rear drive shaft.	Used to remove and install input shaft snap ring.
			
B1-318	B1-319	B1-320	B1-321
398791600	398791700	399411700	399513600
REMOVER II	REMOVER II	INSTALLER	INSTALLER
Used to remove and install straight pin (5 mm).	Used to remove and install spring pin (6 mm).	Used to install reverse shifter rail arm.	Used to install extension rear oil seal. 4WD
			
B1-174	B1-175	B1-176	B1-177
399520105	399527700	399780104	399780111
SEAT	PULLER SET	WEIGHT	WRENCH
Used to install roller bearing (Differential).	Used to remove and install roller bearing (Differential).	Used when measuring preload on roller bearing.	Used to install differential side retainer.
	 <ol style="list-style-type: none"> BOLT (899521412) PULLER (399527702) HOLDER (399527703) ADAPTER (398497701) BOLT (899520107) NUT (021008000) 		
B1-322	B1-178	B1-179	B1-363

399790110	498077000	498077300	498147000
INSTALLER	5TH DRIVEN GEAR REMOVER	CENTER DIFFERENTIAL BEARING REMOVER	DEPTH GAUGE
Used to remove and install roller bearing (Differential).	Used to remove 5th driven gear.	Used to remove center differential cover ball bearing.	Used to adjust main shaft axial end play.
			
B1-325	B1-180	B1-144	B1-181
498247001	498247100	498427100	498517000
MAGNET BASE	DIAL GAUGE	STOPPER	REPLACER
<ul style="list-style-type: none"> Used to measure backlash between side gear and pinion, and hypoid gear. Used with DIAL GAUGE (498247100). 	<ul style="list-style-type: none"> Used to measure backlash between side gear and pinion, and hypoid gear. Used with MAGNET BASE (498247001). 	For securing the drive pinion shaft ASSY and driven gear ASSY when removing the drive pinion shaft ASSY lock nut.	Used to remove drive pinion thrust plate and needle bearing race.
			
B1-182	B1-183	B1-145	B1-184
498787100	498937000	499277000	499277100
MAIN SHAFT STOPPER	TRANSMISSION HOLDER	INSTALLER	BUSH 1-2 INSTALLER
Used to remove and install transmission main shaft.	Used to remove and install transmission main shaft lock nut.	Used to assemble needle bearing onto drive pinion shaft.	Used to install 1st driven gear thrust plate and 1st- 2nd driven gear bushing.
			
B1-185	B1-186	B1-326	B1-187

SPECIAL TOOLS

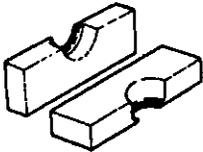
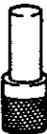
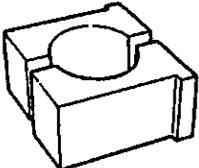
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499277200	499547300	499747100	499757001
INSTALLER	INSTALLER SET	CLUTCH DISC GUIDE	SNAP RING GUIDE
For press fitting the 2nd driven gear, roller bearings, & 5th driven gear onto the driven shaft.	Used to install viscous coupling needle bearing.	Used when installing clutch disc to flywheel.	Used to install snap ring (OUT 25), 4WD Dual-range
			
B1-188	B1-327	B1-189	B1-328
499757002	499787000	499797000	499827000
SNAP RING PRESS	WRENCH ASSY	OIL SEAL INSTALLER	PRESS
Used to install snap ring (OUT 25), and ball bearing (25 x 26 x 17).	Used to remove and install differential side retainer.	Used to install differential side retainer.	For installing speedometer oil seal when installing speedometer cable to transmission.
			
B1-190	B1-191	B1-192	B1-193
499857000	499877000	499917500	499927000
REMOVER ASSY	RACE 4-5 INSTALLER	DRIVE PINION GAUGE ASSY	HANDLE
Used to remove 5th driven gear.	<ul style="list-style-type: none"> • Used to install 4th needle bearing race and ball bearing onto transmission main shaft. • Used with REMOVER (899714110). 	Used to adjust drive pinion shim.	Used to remove and install transmission main shaft.
			
B1-194	B1-195	B1-196	B1-329

499927100	499937100	499987003	499987300
HANDLE	TRANSMISSION STAND	SOCKET WRENCH (35)	SOCKET WRENCH (35)
Used to fit transmission main shaft.	Stand used for transmission dis-assembly and ASSY.	Used to remove and install driven pinion lock nut and main shaft lock nut (4WD).	Used to remove and install driven gear ASSY lock nut.
 B1-197	 B1-146	 B1-198	 B1-199
899938600	899474100	899524100	899580100
HOLDER	EXPANDER	PULLER SET	INSTALLER
Used to disassemble and assem-ble gears onto transmission main shaft.	Used to remove and install snap ring.	Used to remove roller bearing (Differential). 1800 cc	Used when installing transmis-sion main shaft, drive pinion and ball bearing (Rear drive shaft).
 B1-330	 B1-331	 B1-332	 B1-333
899714110	899754110	899754112	899824100
RETAINER	PRESS ASSY	PRESS	PRESS
For fixing transmission main shaft, drive pinion, rear drive shaft.	Used when installing transmis-sion main shaft, needle bearing (transfer case) and rear drive shaft.	Used to install 5th driven gear.	Used to install speedometer shaft oil seal.
 B1-200	 B1-334	 B1-335	 B1-336

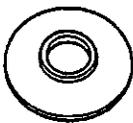
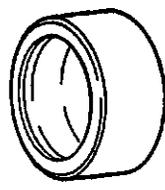
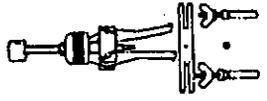
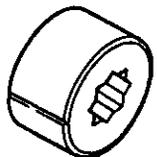
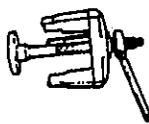
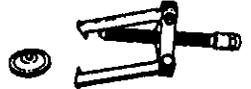
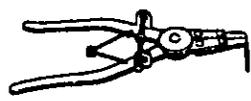
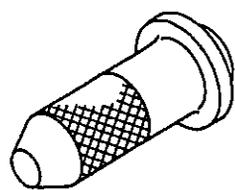
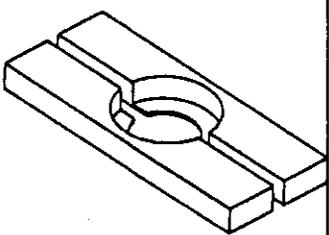
SPECIAL TOOLS

[0200] 1-6

899858600	899864100	899874100	899884100
RETAINER II	REMOVER	INSTALLER	HOLDER
Used when installing transmission main shaft and drive pinion.	Used to remove parts on transmission main shaft and drive pinion.	Used when installing transmission main shaft, drive pinion and transfer drive gear bushing.	Used to tighten lock nut on sleeve.
			
B1-337	B1-201	B1-339	B1-202
899904100	899988608		
REMOVER	SOCKET WRENCH (27)		
Used to remove and install straight pin.	Used to remove and install transmission main shaft lock nut (FWD) and rear drive shaft (4WD).		
			
B1-203	B1-204		

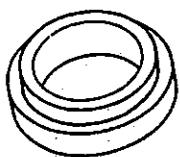
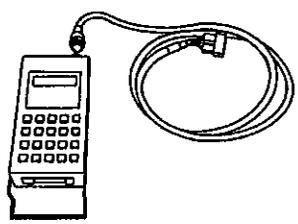
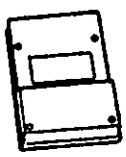
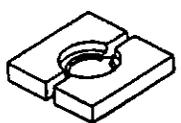
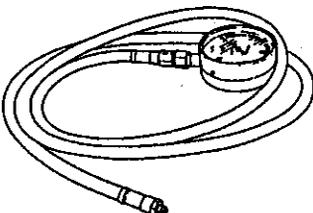
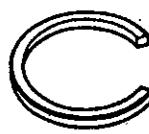
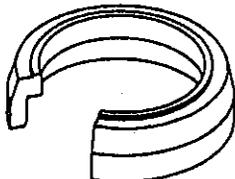
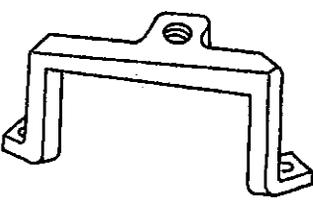
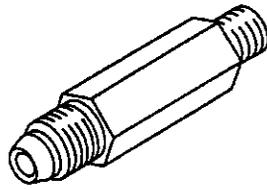
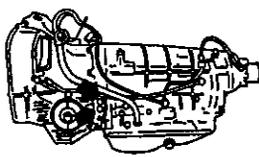
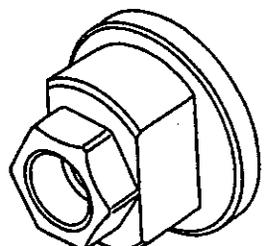
3. Automatic Transmission and Differential Tools

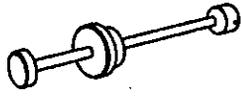
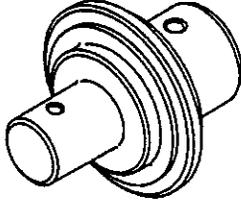
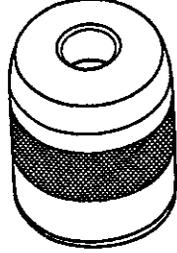
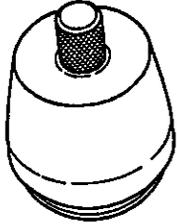
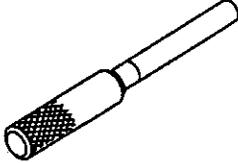
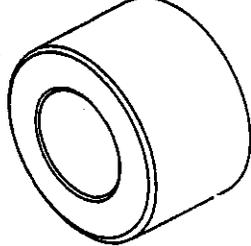
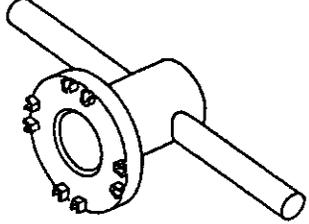
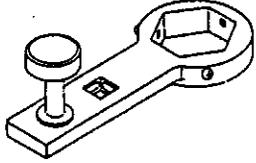
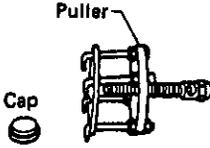
1. 4-SPEED AT

398177700	398437700	398487700	398527700
INSTALLER	DRIFT	DRIFT	PULLEY ASSY
Used to install reverse clutch and high clutch snap rings.	Used to remove and install drive pinion front bearing cup.	Used to remove and install transmission case roller bearing.	Used to remove and install extension case roller bearing.
			
B1-205	B1-223	B1-206	B1-207
398803610	398643600	398673600	399703600
SOCKET	GAUGE	COMPRESSOR	PULLER
Used to remove and install brake band.	Low & reverse brake, total end play, oil pump, drive pinion height.	Used to remove and install reverse clutch, forward clutch and low & reverse brake.	Used to remove axle shaft bearing cup.
			
B1-340	B1-341	B1-342	B1-343
399893600	498057300	498077000	498247001
PLIERS	INSTALLER	REMOVER	MAGNET BASE
Used to remove and install reverse clutch, forward clutch and low & reverse brake.	Used to install extension oil seal.	For removing differential taper roller bearing.	<ul style="list-style-type: none"> • Used when measuring backlash of gears. • Used with DIAL GAUGE (498247100).
			
B1-344	B1-208	B1-210	B1-182

SPECIAL TOOLS

[0301] 1-6

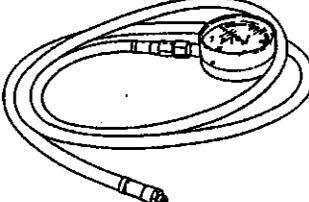
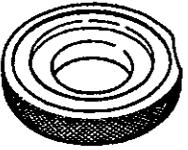
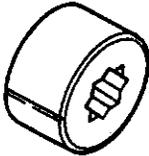
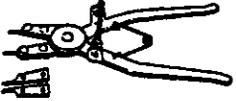
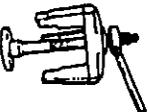
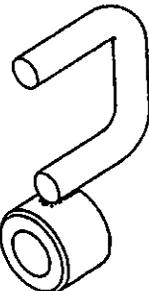
498247100	498267400	498307500	498348800★
DIAL GAUGE	TABLE	SELECT MONITOR KIT	CARTRIDGE
<ul style="list-style-type: none"> • Used when measuring backlash of gears • Used with MAGNET BASE (498247001). 	Used to remove transfer piston seal.	Troubleshooting for electrical systems.	Used with SELECT MONITOR KIT (498307500).
			
B1-183	B1-147	B1-316	B1-317
498517000	498575400	498627000	498627100
REPLACER	OIL PRESSURE GAUGE ASSY	SEAT	SEAT
Used to remove and install drive pinion front bearing core.	Used when measuring oil pressure.	Used to install center support snap ring.	Used to hold overrunning clutch piston retainer (return spring) when installing snap ring.
			
B1-184	B1-211	B1-345	B1-346
498677010	498897200		498937100
COMPRESSOR	ADAPTER CP		HOLDER
Used to remove band piston servo.	Used on oil pump housing when measuring reverse clutch pressure and line pressure.	Used when measuring oil pressure at the following two points.	Used to loosen and tighten M30 lock nut for drive pinion.
			
B1-212	B1-213	C1-112	B1-347

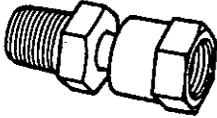
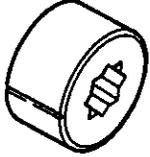
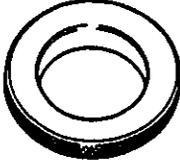
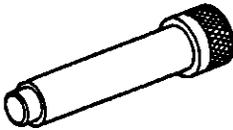
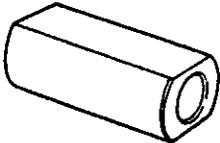
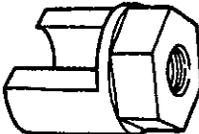
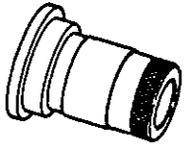
499095500	499247300	499247400	499257300
REMOVER ASSY	INSTALLER	INSTALLER	GUIDE
<ul style="list-style-type: none"> • Used to extract axle drive shaft from differential ASSY. • Used with INSTALLER (499247300) 	<ul style="list-style-type: none"> • Used to install drive pinion oil seal. • Used with REMOVER ASSY (499095500). 	<ul style="list-style-type: none"> • Used to install transfer outer snap ring. • Used with GUIDE (499257300). 	<ul style="list-style-type: none"> • Used to install transfer outer snap ring. • Used with INSTALLER (499247400).
			
B1-348	B1-349	B1-148	B1-149
499257400	499267300	499577000	499787000
GUIDE	STOPPER PIN	GAUGE	WRENCH ASSY
Used to install transfer piston seal.	Used to align range selector lever/ inhibitor switch.	Used when measuring the transmission case mating surface to the reduction gear end surface.	Used to remove and install differential side retainer.
			
B1-150	B1-350	B1-351	B1-215
499787100	499827000	899524100	899580100
WRENCH ASSY	PRESS	PULLER SET	INSTALLER
Used to loosen and tighten M30 lock nut for drive pinion.	Used to install speedometer shaft oil seal.	Used to remove roller bearing (Differential).	Used to install drive pinion.
		 <p>Puller</p> <p>Cap</p>	
B1-352	B1-193	B1-353	B1-235

SPECIAL TOOLS

[0302] 1-6

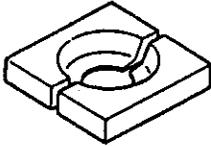
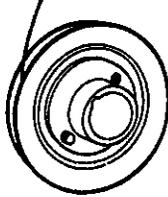
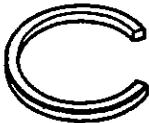
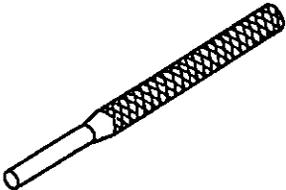
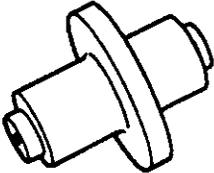
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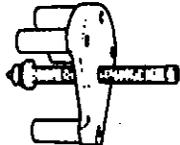
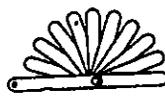
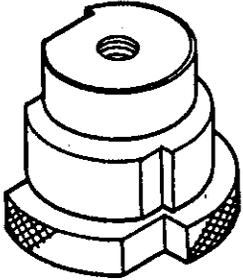
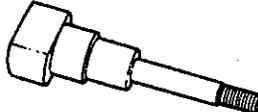
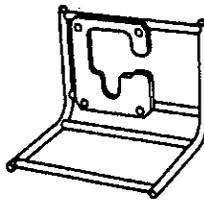
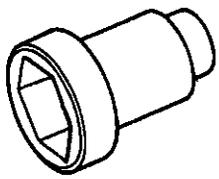
398308700	398437700	398573600	398583600
PULLER	DRIFT	OIL PRESSURE GAUGE ASSY	GAUGE
Used to remove transmission case oil seal.	Used to remove drive pinion front bearing cup.	Used when measuring line pressure and governor pressure.	Used to install reduction drive gear assembly.
			
B1-354	B1-223	B1-211	B1-355
398603610	398643600	398653600	398663600
SOCKET	GAUGE	SHAFT	PLIERS
Used to remove band brake.	Low & reverse brake, total end play, oil pump, drive pinion height.	Used to install drive pinion and reduction drive gear.	Used to remove and install governor valve.
			
B1-340	B1-341	B1-357	B1-358
398673600	398781600	398833600	398863600
COMPRESSOR	STOPPER	GUIDE	INSTALLER 2
Used to remove and install reverse clutch, forward clutch and low & reverse brake.	Used to remove reduction drive gear.	Used to install needle bearing.	Used to install needle bearing on oil pump carrier.
			
B1-342	B1-185	B1-359	B1-360

398893600	399513600	399543600	399703600
ADAPTER	INSTALLER	INSTALLER	PULLER
Used when measuring line pressure and governor pressure.	Used to install drive pinion rear bearing cup.	Used to install needle bearing and bushing on oil pump housing.	Used to remove axle shaft bearing cup.
			
B1-361	B1-177	B1-362	B1-340
399780111	399793600	399790110	399893600
WRENCH	INSTALLER	INSTALLER	PLIERS
Used to remove axle shaft oil seal holder.	Used to install final reduction case.	Used to install roller bearing on axle shaft oil seal.	Used to remove and install reverse clutch, forward clutch and low & reverse brake.
			
B1-363	B1-364	B1-365	B1-344
399903600	399913601	399913603	399913604
REMOVER 2	MASTER	HOLDER	SPACER
Used to remove needle bearing and bushing on oil pump carrier.	Drive pinion.	Used to remove and install drive pinion.	Drive pinion.
			
B1-366	B1-367	B1-368	B1-369

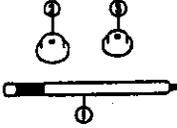
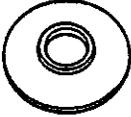
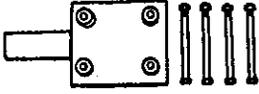
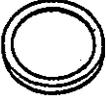
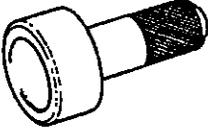
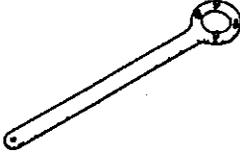
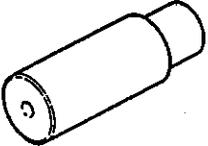
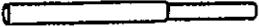
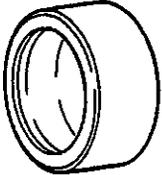
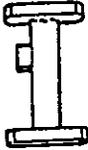
SPECIAL TOOLS

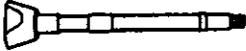
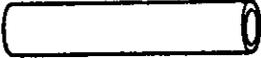
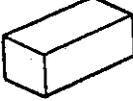
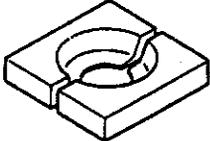
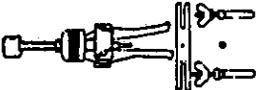
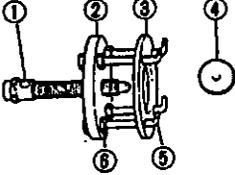
[0302] 1-6

498107000	498147000	498247001	498247100
REPLACER	DEPTH GAUGE	MAGNET BASE	DIAL GAUGE
Used to remove and install impeller bushing on converter housing.	Low & reverse brake.	<ul style="list-style-type: none"> • Used when measuring backlash of gears. • Used with DIAL GAUGE (498247100). 	<ul style="list-style-type: none"> • Used when measuring backlash of gears. • Used with MAGNET BASE (498247001).
			
B1-370	B1-181	B1-182	B1-183
498477000	498517000	498567000	498597000
HANDLE	REPLACER	PULLEY	SOCKET WRENCH (7)
Bearing cup, needle bearing, drive pinion front bearing, retainer and impeller bushing.	Used to remove and install drive pinion front bearing core.	Used when checking preload.	
			
B1-371	B1-231	B1-372	B1-373
498627000	498797000	498897000	499247000
SEAT	REMOVER	ADAPTER	INSTALLER
Used to install center support snap ring.	Used to remove pin for bushing of oil pump shaft.	Used when measuring line pressure.	Drive pinion oil seal.
			
B1-345	B1-374	B1-375	B1-376

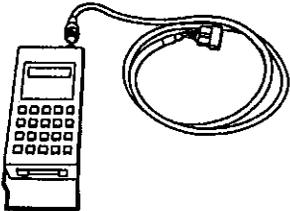
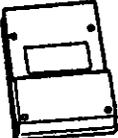
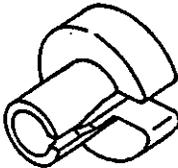
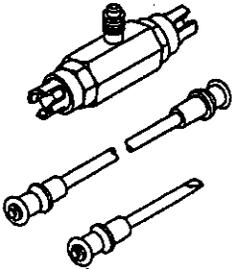
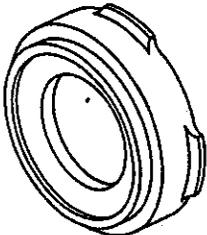
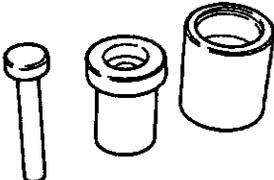
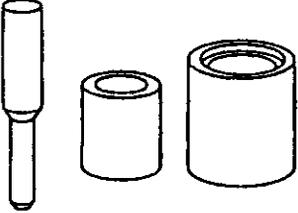
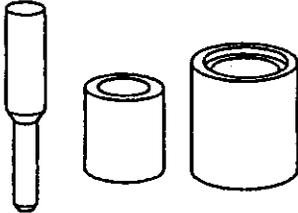
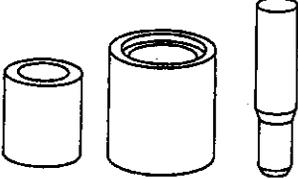
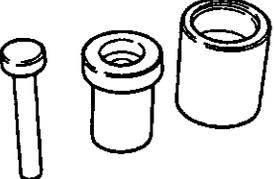
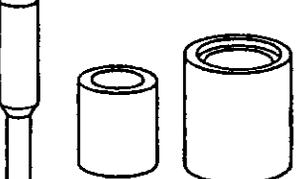
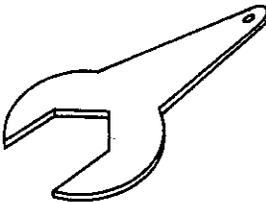
499257100	499527000	499667000	499827000
OIL SEAL GUIDE	PULLER SET	THICKNESS GAUGE	PRESS
Drive pinion oil seal.	Used to remove and install final reduction case.	Forward clutch, reverse clutch low & reverse brake and oil pump etc.	Used to install speedometer shaft oil seal.
			
B1-377	B1-378	B1-379	B1-193
499867000	499917400	499937000	499987100
REMOVER	MASTER 2	DIFFERENTIAL STAND	SOCKET WRENCH (35)
Used to remove needle bearing at reduction drive gear.	Drive pinion.	Final reduction section.	Used to remove and install drive pinion.
			
B1-380	B1-381	B1-382	B1-383
899580100	899874100	899924100	
INSTALLER	INSTALLER	HANDLE	
Used to install drive pinion.	Used to install companion flange.	Used to remove and install reduction drive gear.	
			
B1-235	B1-384	B1-385	

4. Rear Wheel Drive System (4WD Models) Tools

397471600	398177700	398217700	398227700
HANDLE & DRIFT KIT	INSTALLER	ATTACHMENT SET	WEIGHT
Front and rear bearing cup.	Rear bearing cone.	Differential case.	Side bearing.
 <p>1 HANDLE (398477701) 2 DRIFT (398477702) 3 DRIFT 2 (398477703)</p> <p>B1-216</p>	 <p>B1-217</p>	 <p>B1-218</p>	 <p>B1-219</p>
398237700	398417700	398427700	398437700
GAUGE	DRIFT	FLANGE WRENCH	DRIFT
Side bearing.	Oil seal.	Companion flange.	Oil seal.
 <p>B1-220</p>	 <p>B1-221</p>	 <p>B1-222</p>	 <p>B1-223</p>
398457700	398467700	398487700	398507701
ATTACHMENT	DRIFT	DRIFT	GAUGE
Side bearing retainer.	Drive pinion, Pilot bearing, Front bearing cone.	Side bearing cone.	Pinion height adjustment.
 <p>B1-224</p>	 <p>B1-225</p>	 <p>B1-226</p>	 <p>B1-227</p>

398507702	398507703	398507704	398517700
DUMMY SHAFT	DUMMY COLLAR	BLOCK	REPLACER
Pinion height and Preload adjustment.	Pinion height and Preload adjustment.	Pinion height and Preload adjustment.	Rear bearing cone.
			
B1-228	B1-229	B1-230	B1-231
398527700	398527700	399780104	899580100
PULLEY ASSY	PULLER SET	WEIGHT	INSTALLER
Oil seal, Side bearing cup.	Side bearing cone.	Front bearing cone, Pilot bearing, Companion flange.	Front bearing cone, Pilot bearing.
	 <p>1 BOLT (899521412) 2 PULLER (398527702) 3 HOLDER (398527703) 4 ADAPTER (398497701) 5 BOLT (899520107) 6 NUT (021008000)</p>		
B1-232	B1-233	B1-234	B1-235
899874100	899904100	925580000	
INSTALLER	STRAIGHT PIN REMOVER	WRENCH	
Companion flange.	Differential pinion shaft lock pin.	Differential spindle set bolt.	
			
B1-236	B1-237	B1-238	

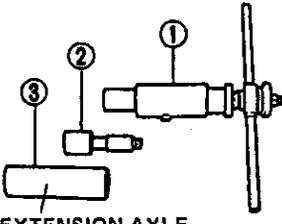
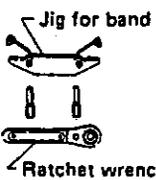
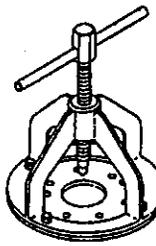
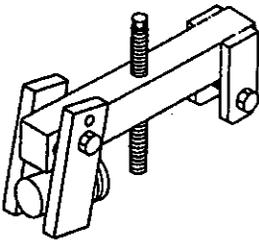
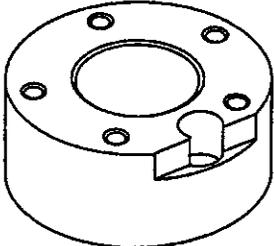
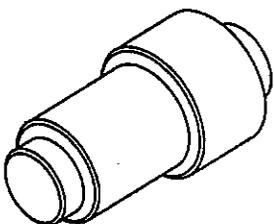
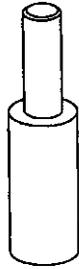
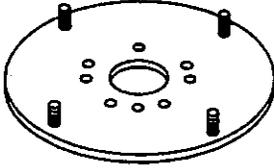
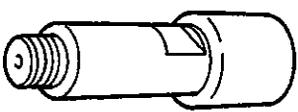
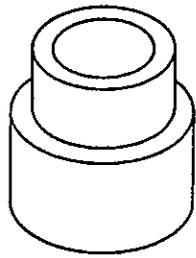
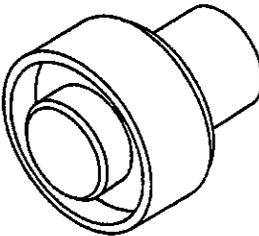
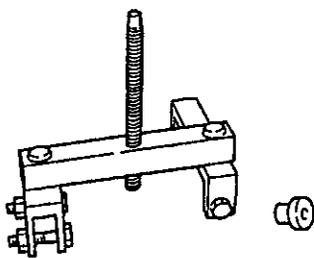
5. Suspension Tools

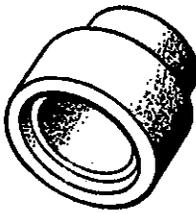
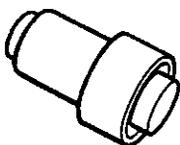
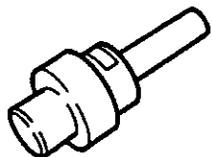
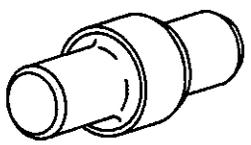
498307500	498347700	926520000	926940000
SELECT MONITOR KIT	CARTRIDGE	AIR PIPE REMOVER	3-WAY JOINT ASSY
Troubleshooting for electrical system.	Used with SELECT MONITOR KIT (498307500).	Used to disassemble air pipe from joint. For Air Suspension	Used as an adapter for gauge manifold of air conditioning system to measure pressure. For Air Suspension
			
B1-316	B1-317	B1-240	B1-388
927380000	927680000	927690000	927700000
ADAPTER	INSTALLER & REMOVER	INSTALLER & REMOVER	INSTALLER & REMOVER
Used as an adapter for Camber & Caster Gauge when measuring camber and caster.	Used to replace transverse link bushing.	Used to replace lateral link bushing (12 dia.).	Used to replace lateral link bushing (14 dia.).
			
B1-241	B1-151	B1-389	B1-389
927710000	927720000	927730000	927750000
INSTALLER & REMOVER	INSTALLER & REMOVER	INSTALLER & REMOVER	SPANNER
Used to replace lateral link bushing (23 dia.).	Used to replace trailing link bushing.	Used to replace rear housing bushing.	Used to disassemble and assemble front air suspension ASSY.
			
B1-390	B1-151	B1-389	B1-391

927760000
STRUT MOUNT SOCKET
Used to disassemble and assemble strut mount.
Except Air Suspension

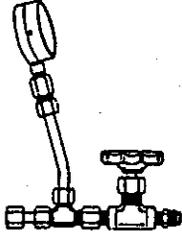
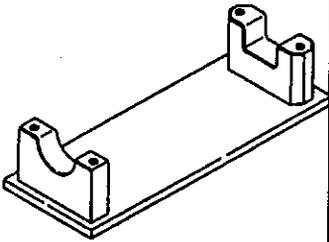
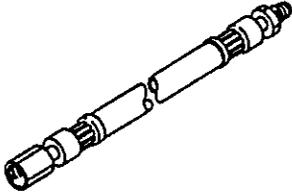
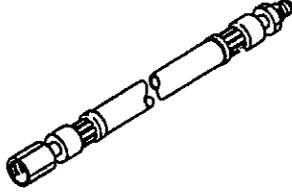
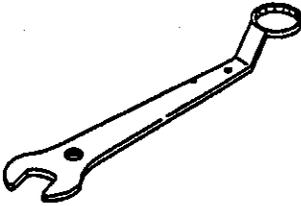
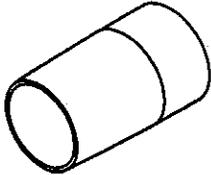
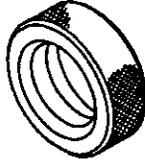
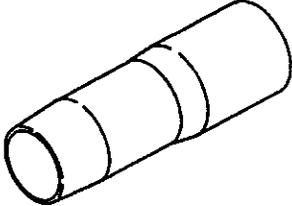
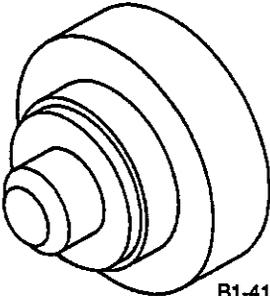
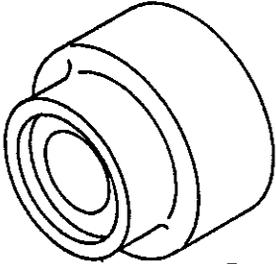
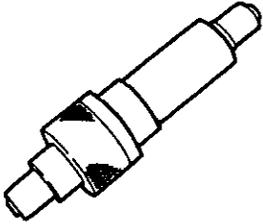
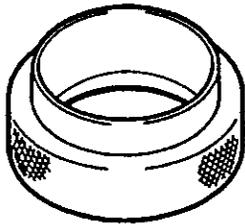
B1-152

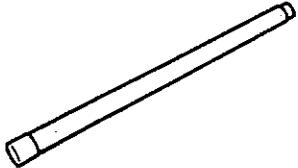
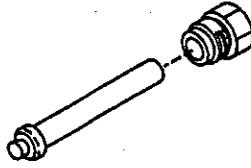
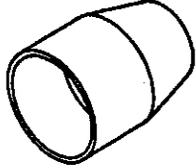
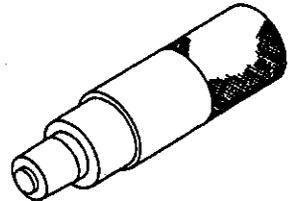
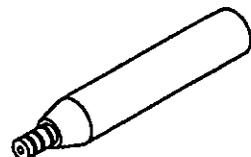
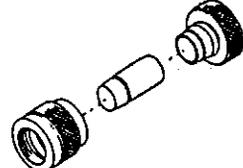
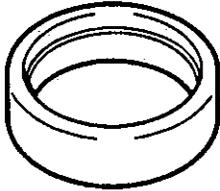
6. Wheels and Axles Tools

<p>922431000</p>	<p>92509100</p>	<p>926470000</p>	<p>927060000</p>
<p>AXLE SHAFT INSTALLER</p>	<p>BAND TIGHTENING TOOL</p>	<p>AXLE SHAFT PULLER</p>	<p>HUB PULLER</p>
<ul style="list-style-type: none"> Used to install axle shaft into housing. Used with ADAPTER (927390000). 	<p>For tightening boot band.</p>	<p>Used to remove front axle shaft.</p>	<p>Used to remove front hub.</p>
 <p>EXTENSION AXLE SHAFT INSTALLER</p> <p>B1-242</p>	 <p>Jig for band</p> <p>Ratchet wrench</p> <p>B1-243</p>	 <p>B1-245</p>	 <p>B1-244</p>
<p>927080000</p>	<p>927100000</p>	<p>927120000</p>	<p>927140000</p>
<p>HUB STAND</p>	<p>BEARING PULLER</p>	<p>HUB INSTALLER</p>	<p>AXLE SHAFT PULLER PLATE</p>
<p>Used to disassemble and assemble hub bolt in rear hub CP.</p> <p>FWD</p>	<ul style="list-style-type: none"> Used to disassemble and assemble front housing bearing. Used with HOUSING STAND (927400000). 	<p>Used to install hub.</p>	<p>Same as plate 2 included in AXLE SHAFT PULLER (927070000).</p>
 <p>B1-246</p>	 <p>B1-247</p>	 <p>B1-392</p>	 <p>B1-248</p>
<p>927390000</p>	<p>927400000</p>	<p>927410000</p>	<p>927420000</p>
<p>ADAPTER</p>	<p>HOUSING STAND</p>	<p>OIL SEAL INSTALLER</p>	<p>HUB REMOVER</p>
<p>Used as an adapter for AXLE SHAFT INSTALLER (922431000).</p>	<ul style="list-style-type: none"> Used to disassemble and assemble front housing bearing. Used with BEARING PULLER (927100000). 	<p>Used to install oil seal into front housing.</p>	<p>Used to remove rear hub CP.</p>
 <p>B1-153</p>	 <p>B1-249</p>	 <p>B1-250</p>	 <p>B1-154</p>

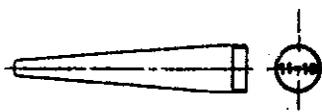
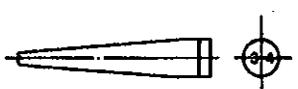
927430000	927440000	927450000	927460000
HOUSING STAND	BEARING REMOVER	HUB INSTALLER	OIL SEAL INSTALLER
<ul style="list-style-type: none"> ● Used to disassemble and assemble rear housing bearing. ● Used with BEARING PULLER (927440000). 	<ul style="list-style-type: none"> ● Used to disassemble and assemble rear housing bearing. ● Used with HOUSING STAND (927430000). 	<ul style="list-style-type: none"> ● Used to press rear hub CP into housing ASSY. ● Used with HOUSING STAND (927430000). 	<ul style="list-style-type: none"> ● Used to install outer bearing and sub bearing into housing. ● Used with HOUSING STAND (927430000).
 <p style="text-align: right;">B1-155</p>	 <p style="text-align: right;">B1-156</p>	 <p style="text-align: right;">B1-157</p>	 <p style="text-align: right;">B1-407</p>

7. Steering System Tools

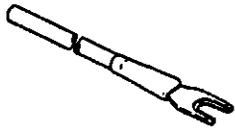
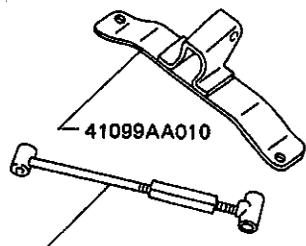
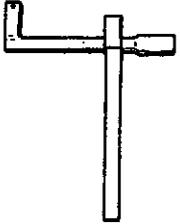
925711000	926200000	926210000	926220000
PRESSURE GAUGE	STAND	ADAPTER A	ADAPTER B
For measuring oil pump pressure.	Used when inspecting characteristic of gearbox ASSY and disassembling it. Vise this tool and secure gearbox ASSY using gearbox clamps.	Used with PRESSURE GAUGE (925711000).	Used with PRESSURE GAUGE (925711000).
		 To Gauge	 To Gauge
B1-251	B1-252	B1-254	B1-263
926230000	926270000	926280000	926450000
SPANNER	COVER	FORMER	COVER
<ul style="list-style-type: none"> For the lock nut when adjusting backlash of gearbox. Measurement of rotating resistance of gearbox ASSY. 	Used to install oil seal	Seal ring	Used to install oil seal
			
B1-255	B1-408	B1-409	B1-410
926970000	926980000	927540000	927600000
INSTALLER	GUIDE	REMOVER	FORMER
Used to install oil seal	<ul style="list-style-type: none"> Used to install shaft to bearing Used to install shaft ASSY into body 	Used to remove bearing, seal, etc. for valve ASSY	Seal ring
			
B1-411	B1-412	B1-413	B1-414

927580000	927590000	926420000	926250000
REMOVER	WRENCH	PLUG	GUIDE
Used to remove back-up ring and oil seal.	Used to remove wire from boot.	Used to close the oil circuit after removing pipe ASSY from the housing.	Used to install holder ASSY into rack housing.
 <p style="text-align: right;">B1-415</p>	 <p style="text-align: right;">B1-416</p>	 <p style="text-align: right;">B1-165</p>	 <p style="text-align: right;">L1-190</p>
926300000	926310000	927490000	927580000
INSTALLER	GUIDE	INSTALLER A, B, C	SPACER
Used to install dust seal, Y-packing, back-up washer into valve housing.	Used to install valve ASSY into valve housing ASSY.	Used to install oil seal into rack ASSY.	Used to install ball-bearing into valve housing ASSY.
 <p style="text-align: right;">L1-195</p>	 <p style="text-align: right;">L1-196</p>	 <p style="text-align: right;">B1-477</p>	 <p style="text-align: right;">B1-478</p>

8. Brakes Tools

925460000	926460000
WHEEL CYLINDER 11/16' ADAPTER	WHEEL CYLINDER 3/4' ADAPTER
Used to install cup onto wheel cylinder piston (Size 11/16 in).	Used to install cup onto wheel cylinder piston (Size 3/4 in)
	
B1-403	B1-404

9. Body Tools

925580000	925610000	41099AA000	927780000
PULLER	WRENCH	ENGINE SUPPORT ASSY	REMOVER
Trim clip. All models	Door hinge. All models	For supporting engine.	Used to remove and install trunk torsion bar. 4-Door Sedan only
			
B1-267	B1-268	B1-522	B1-169