1992 Mazda B2200 B2600i Workshop Manual

FOREWORD

This workshop manual is intended for use by service technicians of Authorized Mazda Dealers to help them service Mazda vehicles.

For proper repair and maintenance, a thorough familiarization with this manual is important, and it should always be kept in a handy place for quick and easy reference.

All the contents of this manual, including drawings and specifications, are the latest available at the time of printing. As modifications affecting repair or maintenance occur, relevant information supplementary to this volume will be made available at Mazda dealers. This manual should be kept up-to-date.

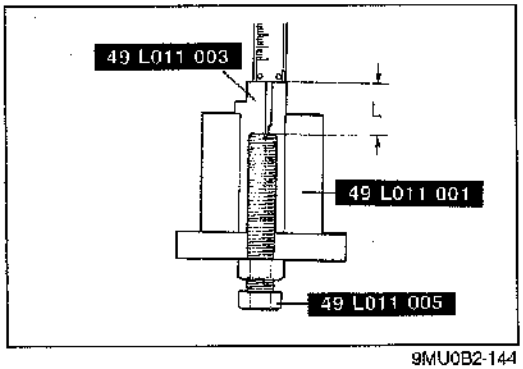
Mazda Motor Corporation reserves the right to alter the specifications and contents of this manual without obligation or advance notice.

Mazda Motor Corporation
HIROSHIMA, JAPAN

APPLICATION:
This manual is applicable to vehicles beginning with the Vehicle Identification Numbers (VIN) shown on the following page.

CONTENTS

Title		S
General Information		
Pre-Delivery Inspection and Scheduled Maintenance Services		
Engine	B2200	
	B2600I	
Lubrication System		
Cooling System		
Fuel and Emission Control Systems	Carburetor	
	EGI	
Engine Electrical System		
Clutch		
Manual Transmission	B2200	
	B2600I	
	Transfer Case	
Automatic Transmission	Hydraulically-Controlled	
	Electronically-Controlled	
	Transfer Case	
Propeller Shaft		
Front and Rear Axles		
Steering System		
Braking System		
Wheels and Tires		
Suspension		
Body		
Body Electrical System		
Heater and Air Conditioner Systems		
Technical Data		
Special Tools		

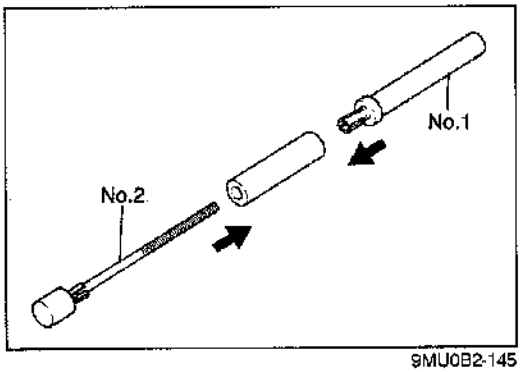


9MU0B2-144

2. Set the **stopper bolt** (49 L011 005) so that the depth **L** is as specified.

   Depth L: 59.5—59.7mm (2.342—2.450 in)

3. Tighten the locknut.



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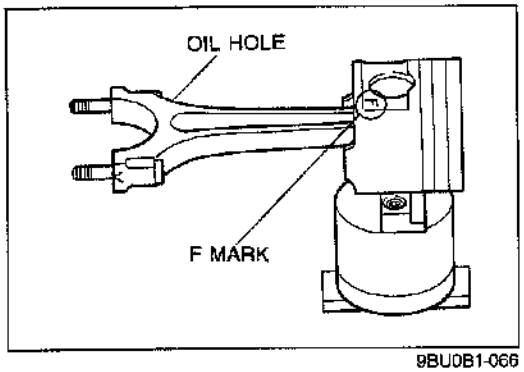
4. Insert the **SST** No.2 into the piston pin as shown and fully screw in the **SST** No.1.
5. Apply engine oil to the piston pin.



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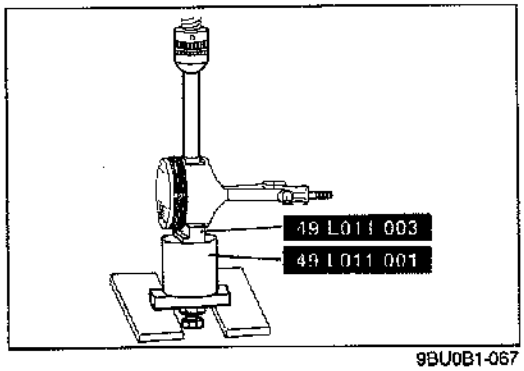
6. Set the piston on the **SST** with the **F** mark facing upward.
7. Align the oil hole of the large end of connecting rod and **F** mark on the piston as shown in the figure.



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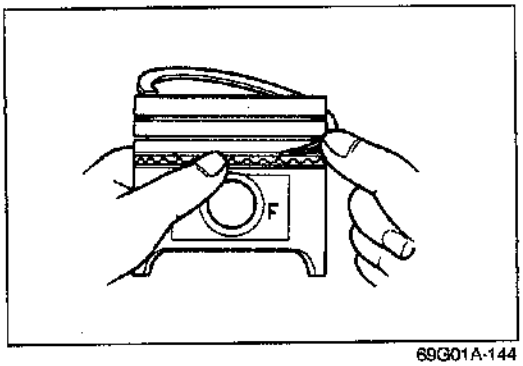
8. Press the piston pin into the piston and connecting rod until the **SST** contacts the stopper bolt.
9. While inserting the piston pin, check the pressure force. If it is less than specified, replace the piston pin or the connecting rod.

   Pressure force:
   4,905—14,715 N (500—1,500 kg, 1,100—3,300 lb)

10. Check the oscillation torque of the connecting rod. (Refer to page B1–32.)



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Piston Ring

1. Install the three-piece oil rings on the pistons.
   (1) Apply engine oil to the oil ring spacer and rails.
   (2) Install the oil ring spacer so that the opening faces upward.
   (3) Install the upper rail and lower rail.

   Note
   a) The upper rail and lower rail are the same.
   b) Each rail can be installed with either face upward.

1. Clean all parts before reinstallation.
2. Apply new engine oil to all sliding and rotating parts.
3. Replace plain bearings if they are peeling, burned, or otherwise damaged.
4. Tighten all bolts and nuts to the specified torques.

Caution
Do not reuse gaskets or oil seals.

CYLINDER BLOCK
Torque Specifications

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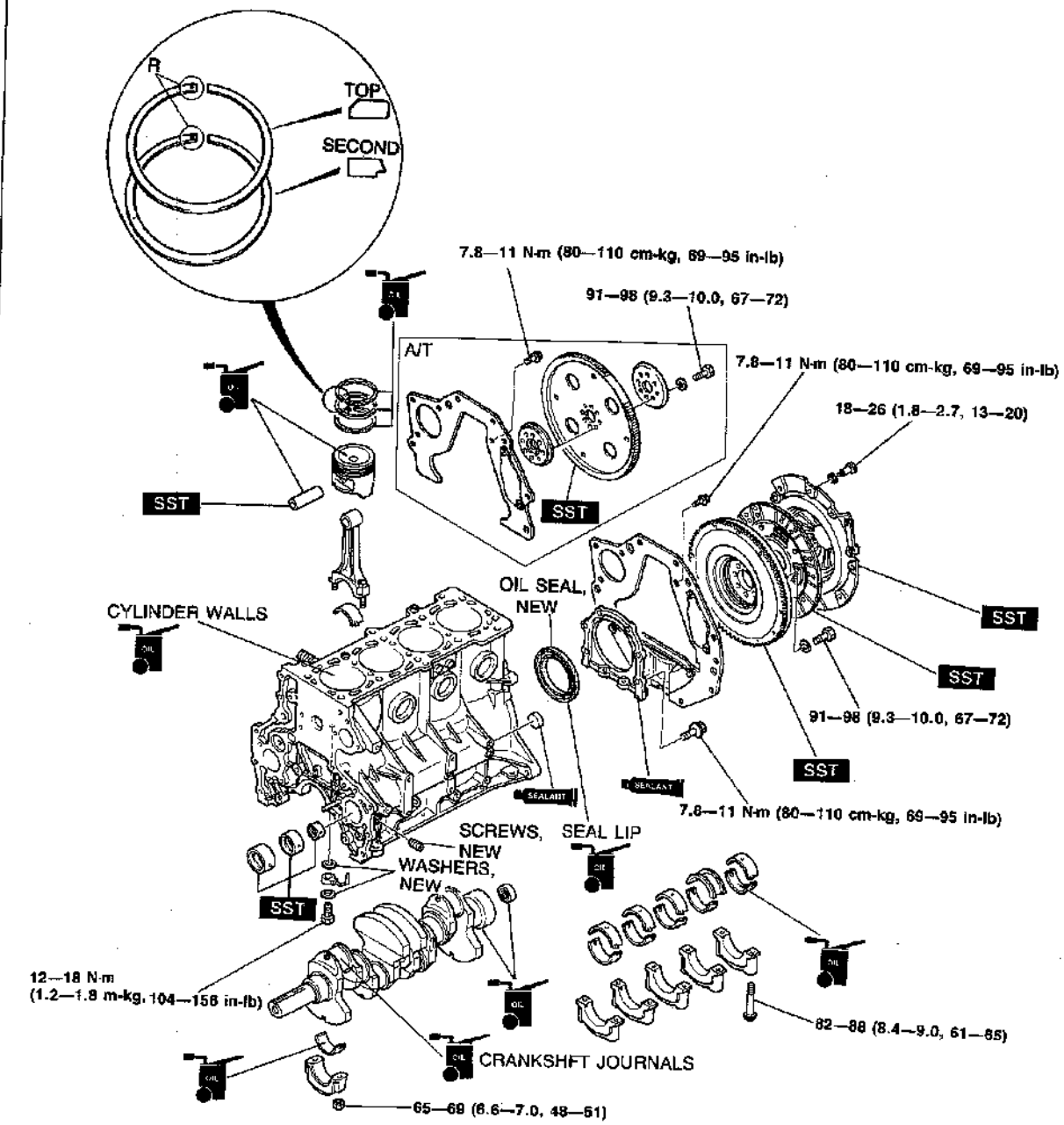
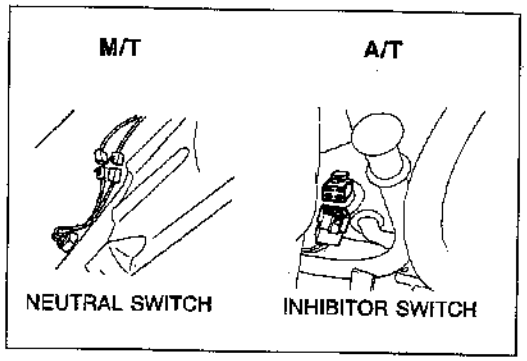


N·m (m-kg, ft-lb)

STEP 6 (1)



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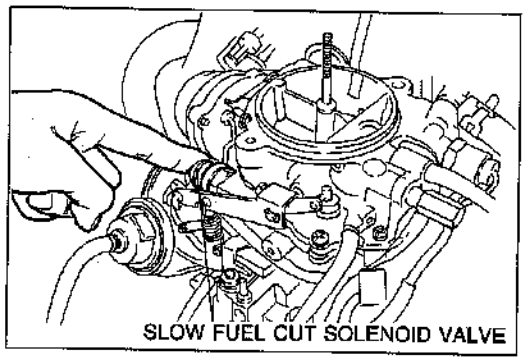

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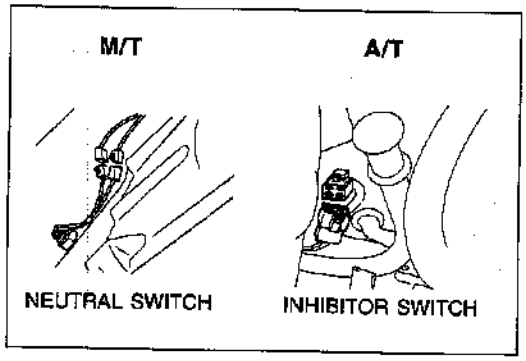

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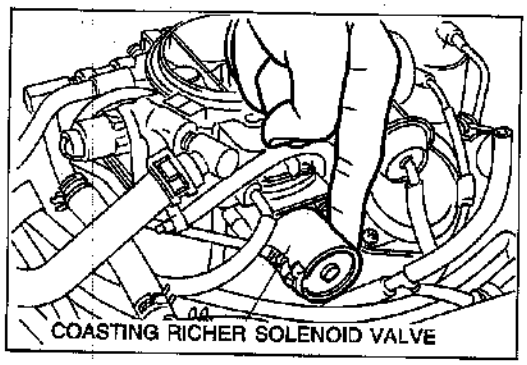

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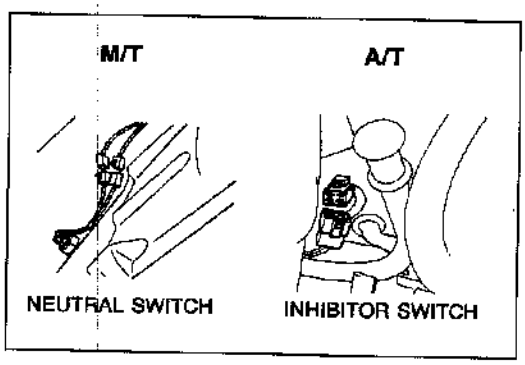

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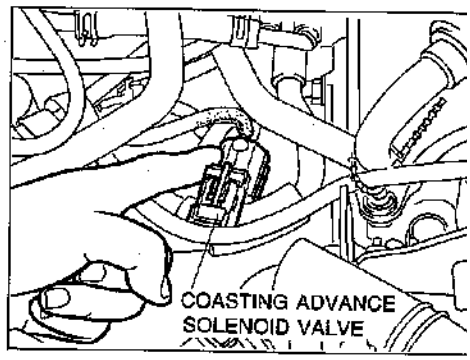

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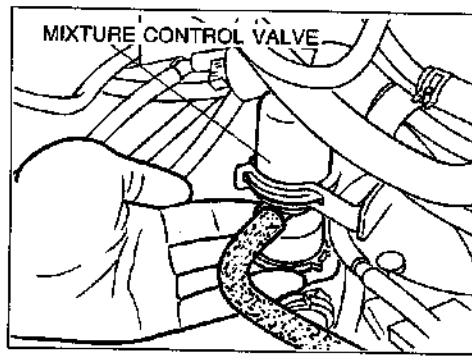

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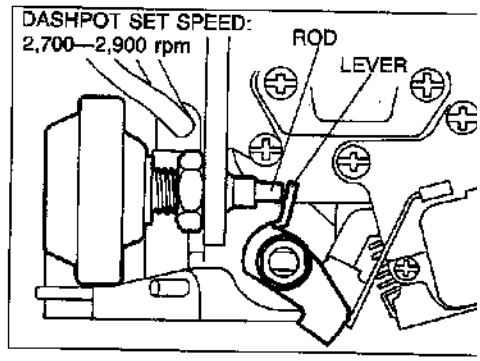
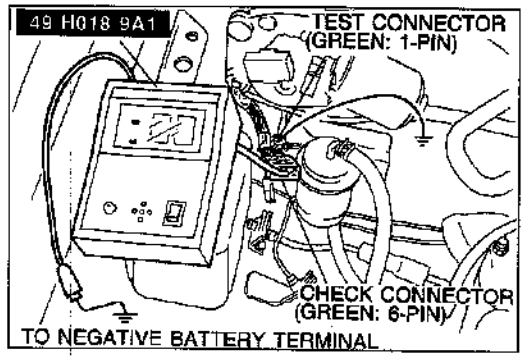


STEP 1



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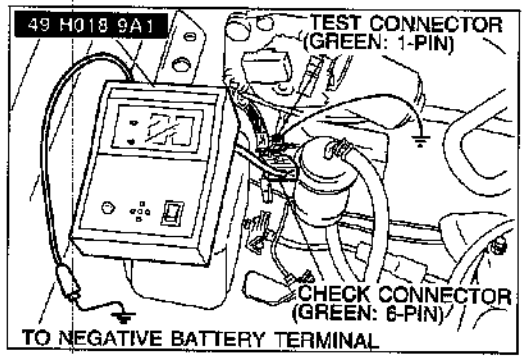

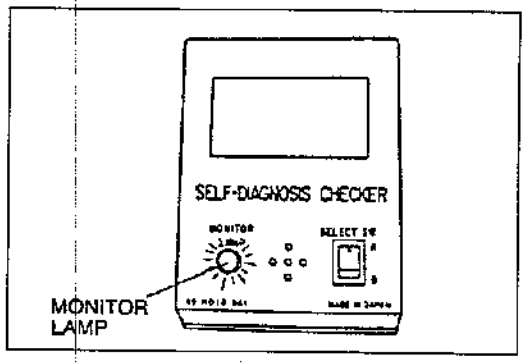

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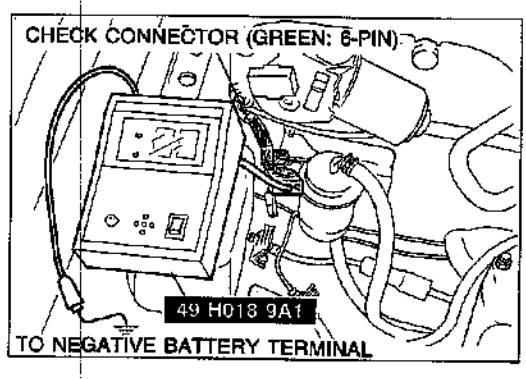

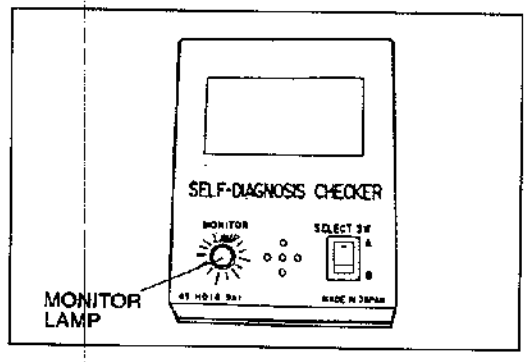

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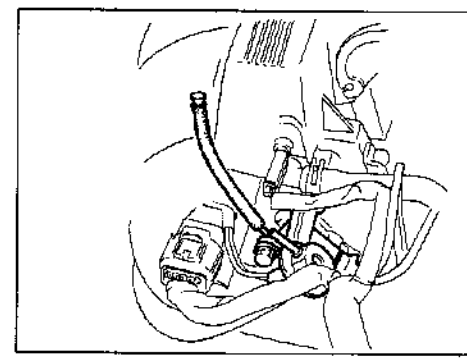
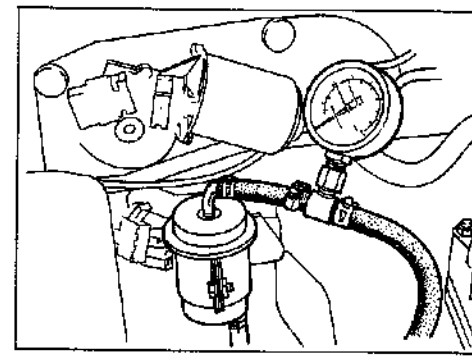
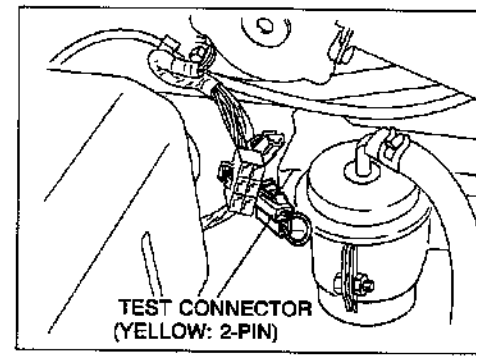


STEP 5

WARNING
BEFORE CONNECTING FUEL PRESSURE GAUGE, RELEASE FUEL PRESSURE FROM FUEL SYSTEM TO REDUCE POSSIBILI OF INJURY OR FIRE
(REFER TO PAGE F2–144)





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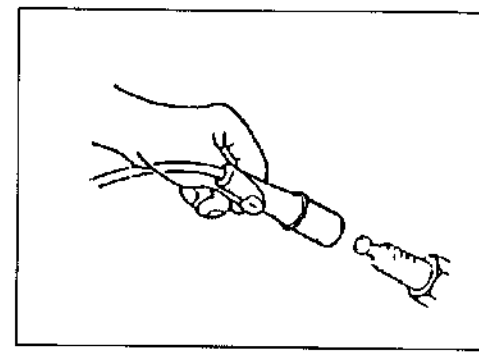
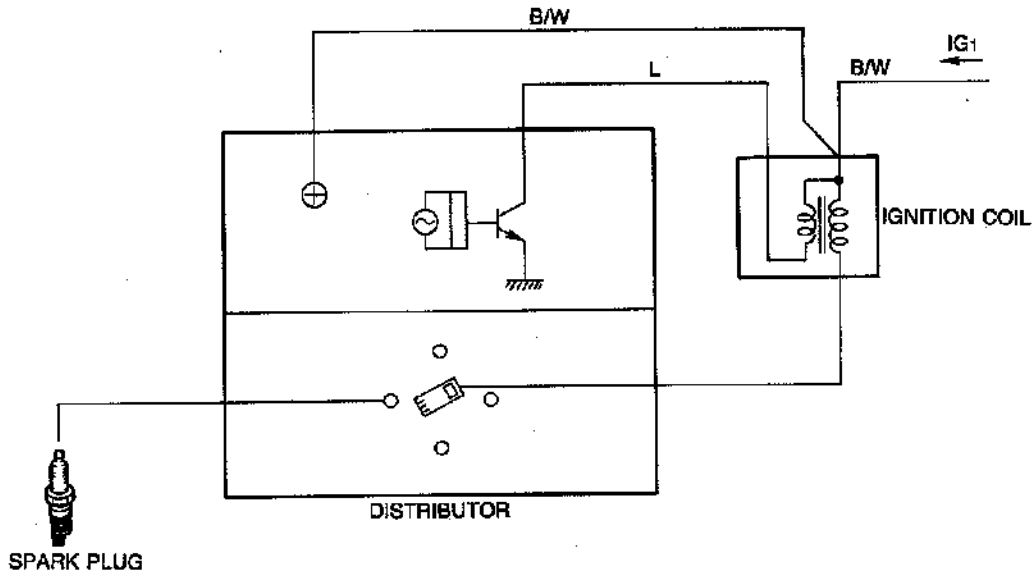
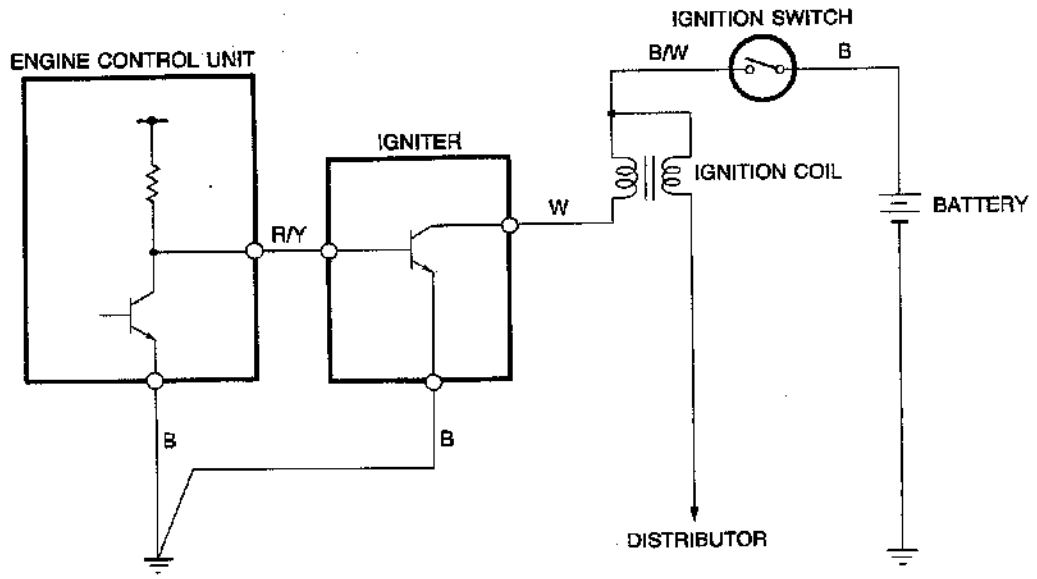


F2 CARBURETOR



F2 EGI, G6



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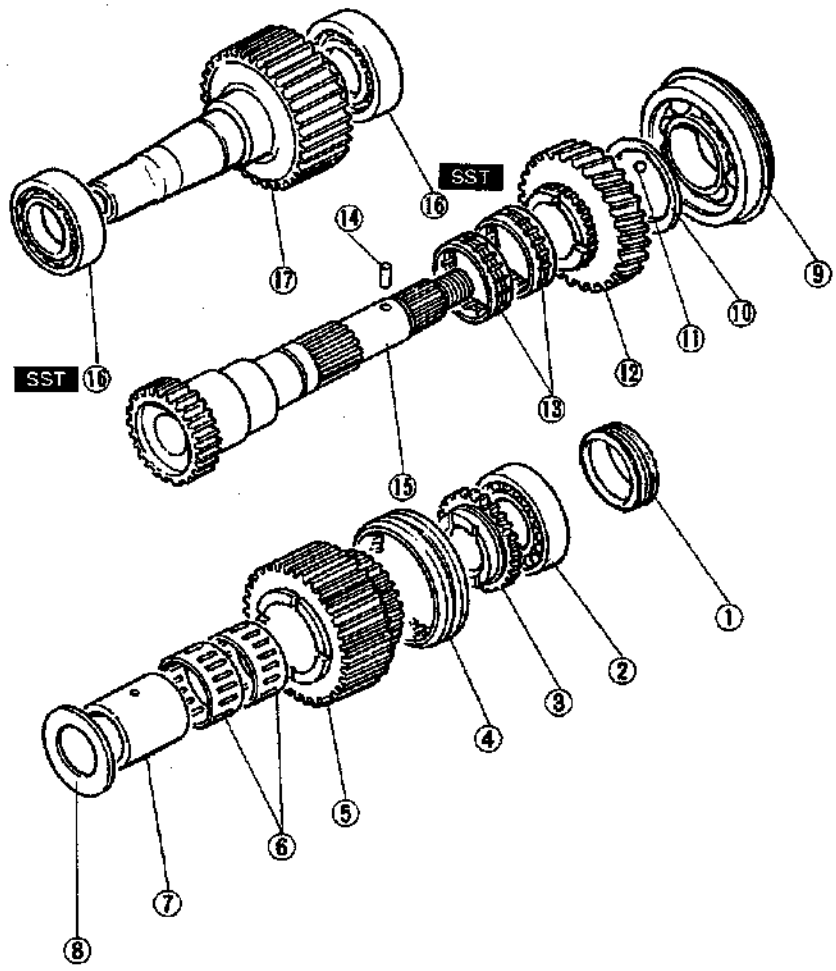
tput Shaft Components

APPLY INDIVIDUAL PARTS TO SPECIFIED OIL



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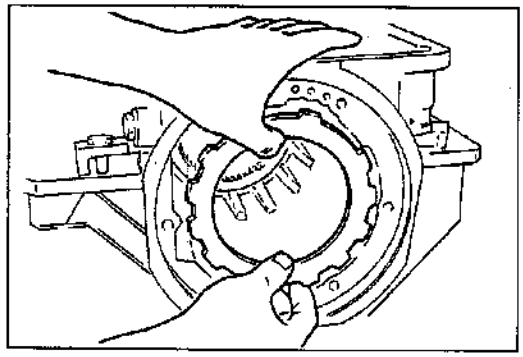
1. Speedometer drive gear
2. Bearing
3. 2W-4W clutch hub
4. 2W-4W hub sleeve
5. Drive sprocket
6. Needle bearing
7. Spacer
8. Thrust washer
9. Bearing
10. Thrust lock washer
11. Steel ball
12. Low gear
13. Needle bearing
14. Roll pin
15. Output shaft
16. Bearing
17. Front drive sprocket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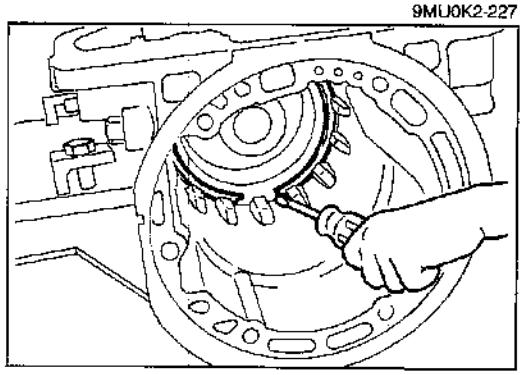
9. Install the retaining plate.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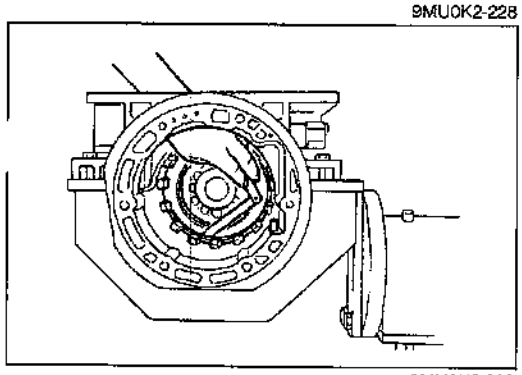
Caution
Do not deform the snap ring.

10. Install the snap ring with a screwdriver.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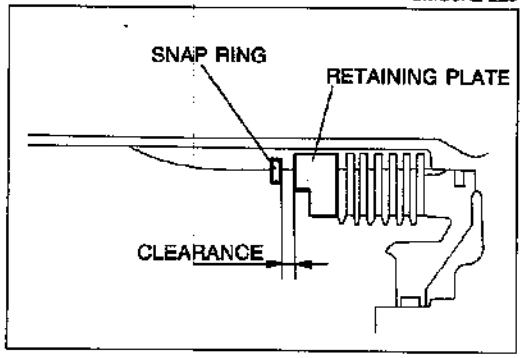
11. Measure the clearance between the snap ring and the taining plate with a feeler gauge. If not within specifica adjust the clearance by installing the proper retaining pl

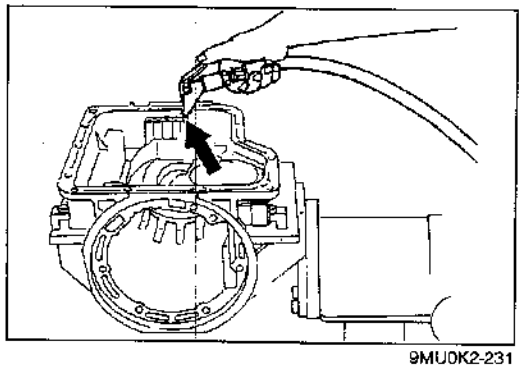
Clearance: 0.8—1.05mm (0.031—0.041 in)

Retaining plate sizes

mm

7.8 (0.307)	8.0 (0.315)	8.2 (0.323)
8.4 (0.331)	8.6 (0.339)	8.8 (0.346)

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Caution
Apply air for no more than three(3) seconds.

12. Check operation of the piston by applying compressed through the oil passage of the low and reverse brake

Air pressure: 392 kPa (4.0 kg/cm^2, 57 psi) max.

Vehicle Speed at Shiftpoint Table

Mode	Range	Throttle condition (Throttle sensor voltage)	Shift	Vehicle speed km/h (mph)
Normal (Power)	D	Fully opened (4.4 volt)	$D_1 \rightarrow D_2$	47—51 (29—32)
			$D_2 \rightarrow D_3$	87—95 (54—59)
			$D_3 \rightarrow OD$	129—139 (80—86)
		Half throttle (1.6—2.2 volt)	$D_1 \rightarrow D_2$	39—43 (24—27)
			$D_2 \rightarrow D_3$	66—72 (41—45)
			Lockup ON (D_3)	96—104 (60—64)
			$D_3 \rightarrow OD$	111—119 (69—74)
			Lockup ON (OD)	128—136 (79—84)
			Lockup OFF (OD)	96—104 (60—64)
			$OD \rightarrow D_3$	71—79 (44—49)
			Lockup OFF (D_3)	86—94 (53—58)
			$D_3 \rightarrow D_2$	42—48 (26—30)
		Kickdown	$OD \rightarrow D_3$	124—134 (77—83)
			$OD \rightarrow D_2$	81—89 (50—55)
			$OD \rightarrow D_1$	41—45 (25—28)
			$D_3 \rightarrow D_2$	81—89 (50—55)
			$D_3 \rightarrow D_1$	41—45 (25—28)
			$D_2 \rightarrow D_1$	41—45 (25—28)
Normal (Economy)		Fully opened (4.4 volt)	$D_1 \rightarrow D_2$	47—51 (29—32)
			$D_2 \rightarrow D_3$	87—95 (54—59)
			$D_3 \rightarrow OD$	129—139 (80—86)
		Half throttle (1.6—2.2 volt)	$D_1 \rightarrow D_2$	30—34 (19—21)
			$D_2 \rightarrow D_3$	52—58 (32—36)
			$D_3 \rightarrow OD$	96—104 (60—64)
			Lockup ON (OD)	96—104 (60—64)
			Lockup OFF (OD)	81—89 (50—55)
			$OD \rightarrow D_3$	43—51 (27—32)
			$D_3 \rightarrow D_2$	22—28 (14—17)
		Kickdown	$OD \rightarrow D_3$	124—134 (77—83)
			$OD \rightarrow D_2$	81—89 (50—55)
			$OD \rightarrow D_1$	41—45 (25—28)
			$D_3 \rightarrow D_2$	81—89 (50—55)
			$D_3 \rightarrow D_1$	41—45 (25—28)
			$D_2 \rightarrow D_1$	41—45 (25—28)
Normal	S	Fully opened (4.4 volt)	$S_1 \rightarrow S_2$	47—51 (29—32)
			$S_2 \rightarrow S_3$	87—95 (54—59)
			$S_3 \rightarrow S_2$	82—88 (51—55)
			$S_2 \rightarrow S_1$	41—45 (25—28)
		Half throttle (1.6—2.2 volt)	$S_1 \rightarrow S_2$	39—43 (24—27)
			$S_2 \rightarrow S_3$	66—72 (41—45)
			$S_3 \rightarrow S_2$	41—47 (25—29)
Normal	L	Fully opened (4.4 volt)	$L_1 \rightarrow L_2$	47—51 (29—32)
			$L_2 \rightarrow L_1$	41—45 (25—28)
		Half throttle (1.6—2.2 volt)	$L_1 \rightarrow L_2$	39—43 (24—27)
HOLD	D	—	$D_2 \rightarrow D_3$	18—22 (11—14)
			$D_3 \rightarrow D_2$	7—13 (4—8)
	S	Fully closed (0.4 volt)	$OD \rightarrow D_3$	138—148 (86—92)
			$S_3 \rightarrow S_2$	88—96 (55—60)
	L		$L_2 \rightarrow L_1$	44—48 (27—30)

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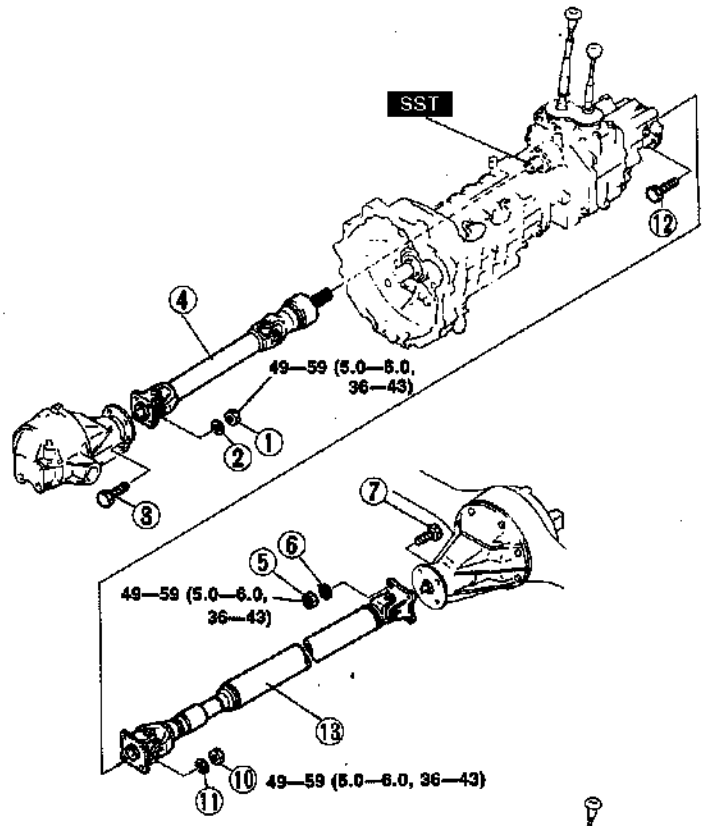
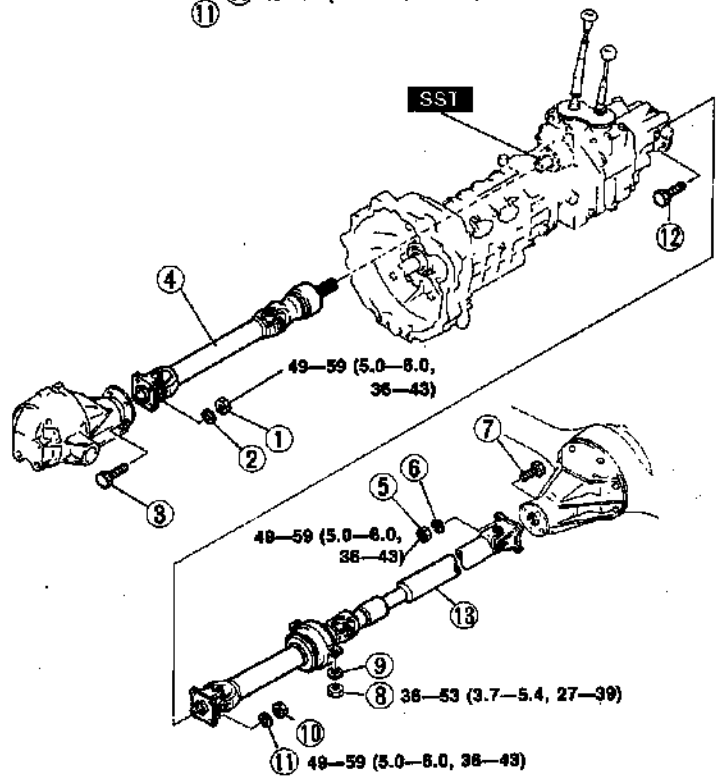
SHORT BED (4x4)



LONG BED (4x4)



N·m (m-kg, ft-lb)

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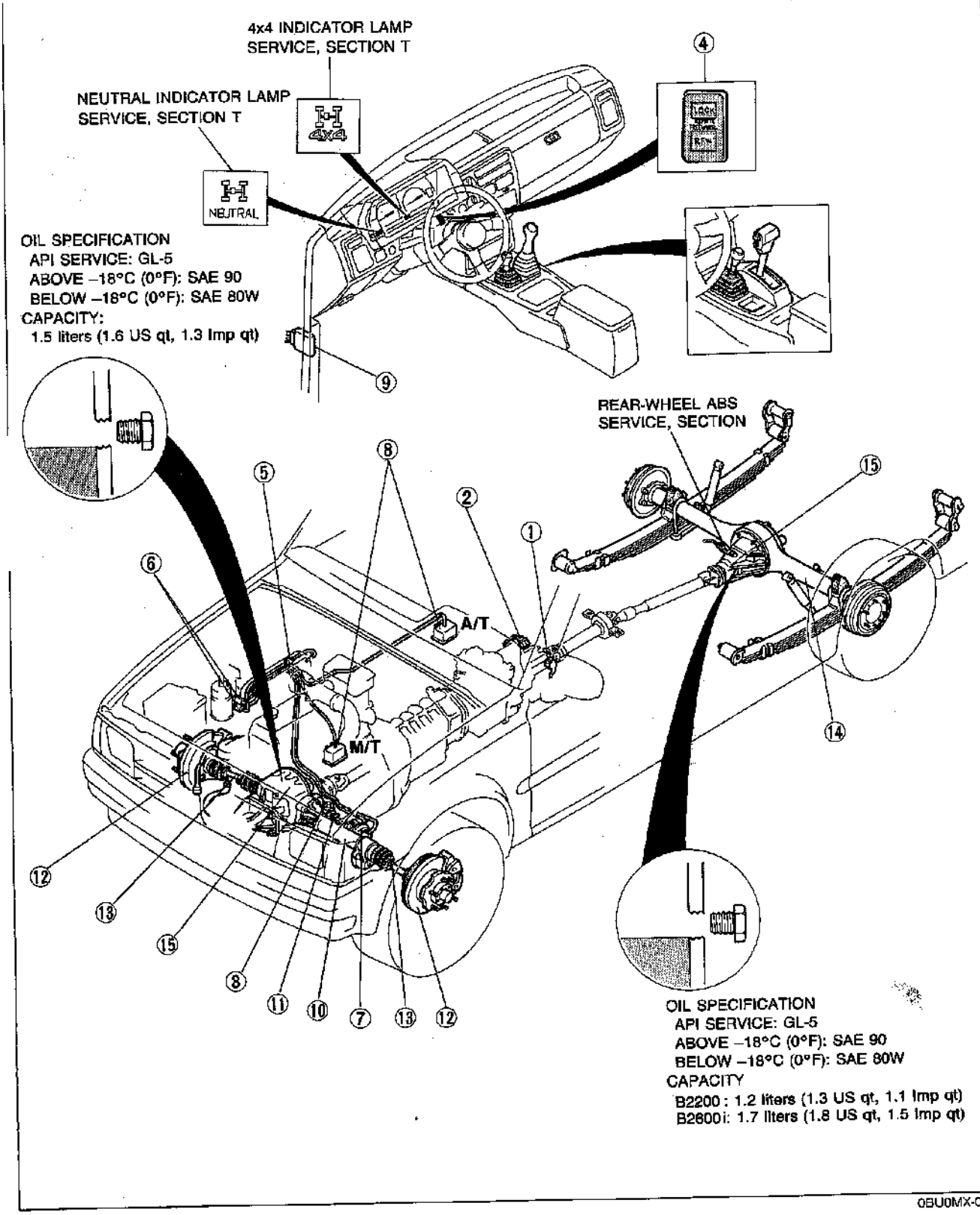
1. Nut
2. Lock washer
3. Bolt
4. Front propeller shaft
   Removal ..... page L–7
   Installation ..... page L–7
5. Nut
6. Lock washer
7. Bolt
8. Nut
9. Washer
10. Nut
11. Lock washer
12. Bolt
13. Rear propeller shaft
    Removal ..... page L–7
    Installation ..... page L–7

INDEX



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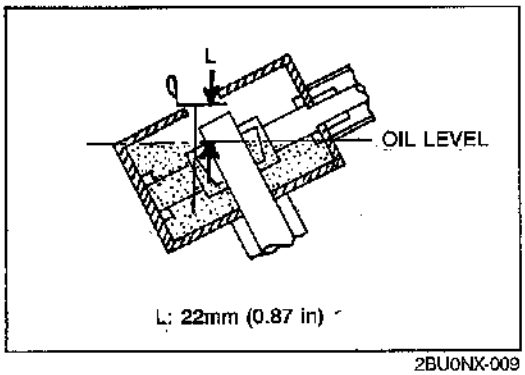

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STEERING GEAR AND LINKAGE

On-vehicle Inspection

Steering gear oil level

1. Remove the oil filler port plug.
2. Prepare a simple wire dipstick.
3. Insert the dipstick through the oil filler port.
4. Pull out the dipstick and measure the L dimension. Add the specified gear oil if necessary.

Standard L dimension: 22mm (0.87 in)
Specified gear oil: API service GL-4 SAE 90

5. Install the oil filler port plug.

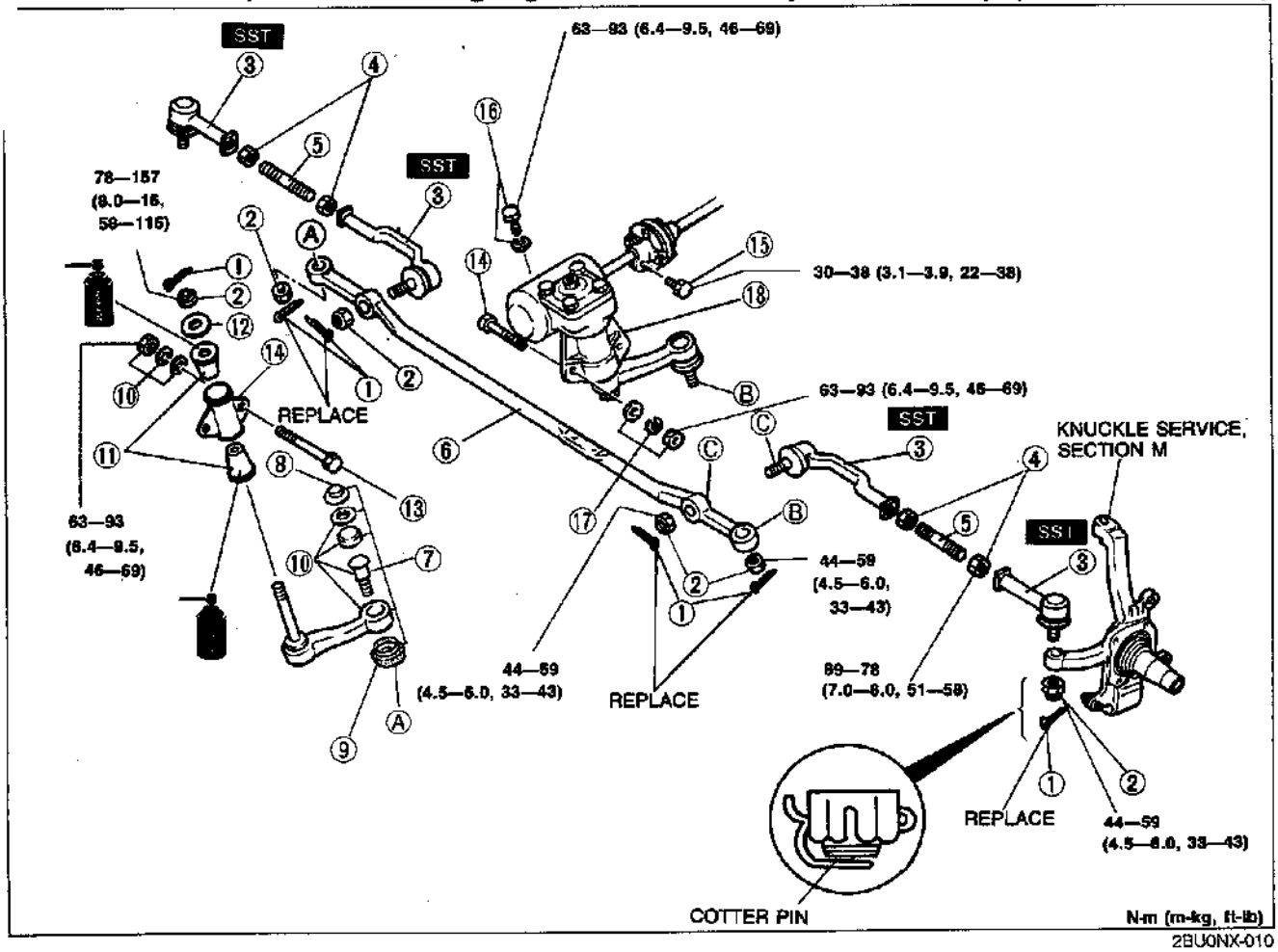
Removal, Inspection, and Installation

1. Loosen the wheel lug nuts.
2. Jack up the front of the vehicle and support it with safety stands.
3. Remove the wheels.
4. Remove in the order shown in the figure, referring to **Removal Note**.
5. Install in the reverse order of removal.
6. Install the wheel.

Tightening torque: Non-styled wheel 88—118 N·m (9—12 m-kg, 65—87 ft-lb)
Styled wheel 118—147 N·m (12—15 m-kg, 87—108 ft-lb)

7. Inspect all parts and repair or replace as necessary.

Note
After installation, check the turning angle and toe-in and adjust if necessary. (Refer to Section R.)



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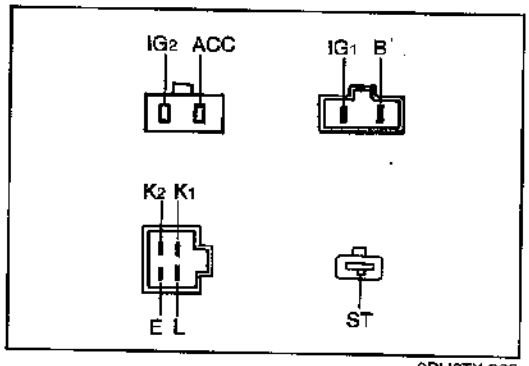
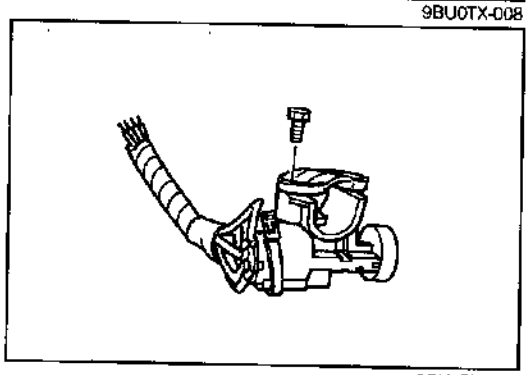
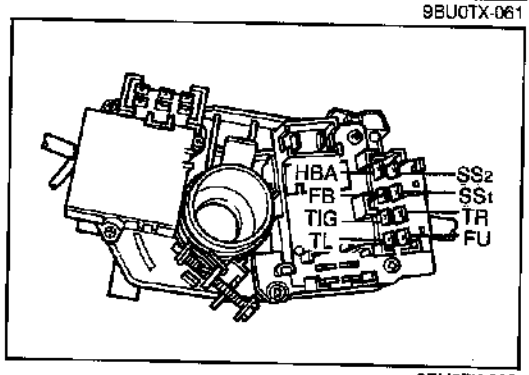
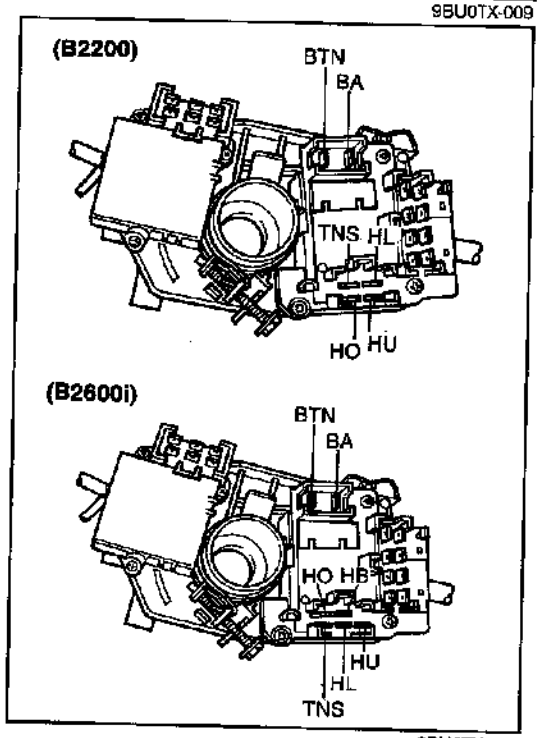


9BU0TX-008


9BU0TX-061



9BU0TX-009



9BU0TX-010

SWITCHES

IGNITION KEY SWITCH

Inspection

Check continuity between terminals of the switch with ohmmeter.
If continuity is not as specified, replace the switch.

Position \ Terminal	B	ACC	IG1	IG2	ST	L	E	K1
LOCK								○
ACC	○	○						○
ON	○	○	○	○				○
START	○		○		○	○	○	○

○—○: Indicates continuity

Replacement

1. Disconnect the negative battery cable.
2. Remove the column covers.
3. Disconnect the connectors from the wiring harness.
4. Loosen the attaching screw.
5. Install in the reverse order of removal.

COMBINATION SWITCH

Inspection

Check continuity between terminals of the switch with ohmmeter.
If continuity is not as specified, replace the switch.

Turn signal and hazard switch

Hazard \ Turn \ Terminal		FU	TL	TR	TIG	HBA	FB	SS1	S
OFF	Left	○	○		○		○		
	N				○		○		
	Right	○		○	○		○		
ON		○	○	○		○	○	○	

○—○: Indicates continuity

Light, dimmer, and passing switch

Position \ Terminal		BTN	TNS	BA	HL	HU	HI
Tail, parking		○	○				
Head-light	Low beam	○	○	○	○		○
	High beam	○	○	○		○	○
Pass-ing	Tail, parking			○		○	

○—○: Indicates continuity

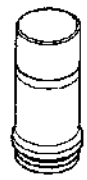
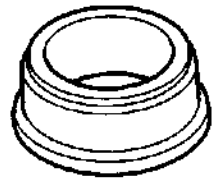
Item \ Transmission			R4AX-EL
Low and reverse brake	Number of drive/driven plates		6/6
	Drive plate thickness mm (in)	Standard	2.0 (0.079)
		Minimum	1.8 (0.071)
	Brake clearance mm (in)	With new drive/driven plates	0.7—1.1 (0.028—0.043)
		When reusing drive/driven plates	0.7—2.3 (0.028—0.091)
	Retaining plate size mm (in)		9.0 (0.354), 9.2 (0.362), 9.4 (0.370), 9.6 (0.378), 9.8 (0.386), 10.0 (0.394)
	Seal ring clearance mm (in)	Standard	0.10—0.25 (0.0039—0.0098)
		Maximum	0.25 (0.0098)
Total end play	Standard mm (in)		0.25—0.55 (0.010—0.022)
	Bearing race size mm (in)		0.8 (0.031), 1.0 (0.039), 1.2 (0.047), 1.4 (0.055), 1.6 (0.063), 1.8 (0.071), 2.0 (0.079)
Reverse clutch drum end play	Standard		0.55—0.90 (0.022—0.035)
	Thrust washer size mm (in)		0.7 (0.028), 0.9 (0.035), 1.1 (0.043), 1.3 (0.051), 1.5 (0.059), 1.7 (0.067), 1.9 (0.075)

Spring Specification

Spring \ Item			Outer dia. mm (in)	Free length mm (in)	No. of coil	Wire dia. mm (in)
Upper control valve body	Torque converter relief valve		9.0 (0.354)	38.0 (1.496)	12.7	1.4 (0.055)
	Pressure regulator valve		14.0 (0.551)	44.0 (1.732)	7.9	1.4 (0.055)
	Pressure modifier valve*	A	6.8 (0.268)	31.95 (1.258)	15.5	0.8 (0.031)
		B	6.9 (0.272)	32.60 (1.283)	22.2	0.9 (0.035)
		C	6.9 (0.272)	32.80 (1.291)	15.6	0.9 (0.035)
	Shuttle shift valve D		6.0 (0.236)	26.5 (1.043)	12.0	0.7 (0.028)
	4-2 sequence valve		6.95 (0.274)	29.1 (1.146)	11.0	0.55 (0.022)
	Shift valve B		7.0 (0.276)	25.0 (0.984)	9.5	0.65 (0.026)
	4-2 relay valve		6.95 (0.274)	29.1 (1.146)	11.0	0.55 (0.022)
	Shift valve A		7.0 (0.276)	25.0 (0.984)	9.5	0.65 (0.026)
	Overrunning clutch control valve		7.0 (0.276)	23.6 (0.929)	7.9	0.6 (0.024)
	Overrunning clutch reducing valve		7.0 (0.276)	32.5 (0.984)	12.6	0.85 (0.033)
	Shuttle shift valve S		5.5 (0.217)	43.0 (1.693)	22.2	0.85 (0.033)
	Pilot valve		9.1 (0.358)	25.7 (1.012)	8.3	1.1 (0.043)
	Lockup control valve		13.0 (0.512)	18.5 (0.728)	3.5	0.75 (0.030)
Lower control valve body	Modifier accumulator piston		9.8 (0.386)	30.5 (1.201)	8.75	1.3 (0.051)
	1st reducing valve		6.75 (0.266)	25.4 (1.000)	12.5	0.75 (0.030)
	Servo charger valve		6.5 (0.256)	33.2 (1.307)	12.0	0.5 (0.020)
	3-2 timing valve		6.75 (0.266)	20.55 (0.809)	7.5	0.75 (0.030)
Oil pump	Cam ring		13.7 (0.539)	39.8 (1.567)	7.8	2.3 (0.091)
Accumulator	N-D accumulator piston		18.0 (0.709)	43.0 (1.693)	12.3	2.3 (0.091)
	1-2 accumulator piston		29.3 (1.154)	45.0 (1.772)	3.6	4.0 (0.157)
	2-3 accumulator piston		20.0 (0.787)	66.0 (2.598)	11.4	3.5 (0.138)
	3-4/N-R accumulator piston		17.3 (0.681)	58.4 (2.299)	12.3	2.3 (0.091)
Reverse clutch	Return		11.6 (0.457)	19.69 (0.775)	4.0	1.3 (0.051)
High clutch	Return		11.6 (0.457)	22.10 (0.870)	6.0	1.3 (0.051)
Forward & overrunning clutch	Return		9.7 (0.382)	35.8 (1.409)	10.3	1.3 (0.051)
Low and reverse brake	Return		11.6 (0.457)	23.7 (0.933)	5.0	1.1 (0.043)
Band servo	Return A		34.3 (1.350)	45.6 (1.795)	3.0	2.3 (0.091)
	Return B		40.3 (1.587)	53.8 (2.118)	3.0	2.3 (0.091)
	Return C		27.6 (1.087)	29.7 (1.169)	3.2	2.6 (0.102)

*: Either A, B or C type spring is installed at shipment. Only A type spring is available for replacement.

AIR CONDITIONER SYSTEM (CONT'D)

TOOL NUMBER & DESCRIPTION	PRIORITY	ILLUSTRATION
0000-41-0804-43 Installer, clutch rotor bearing	A	
0000-41-0810-59 Driver clutch rotor	A	

TOOL NUMBER & DESCRIPTION	PRIORITY	ILLUSTRATIO
0000-41-0804-12 Remover, O-ring	A	
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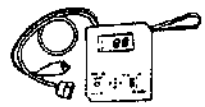
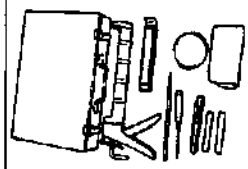
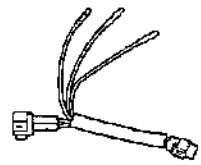
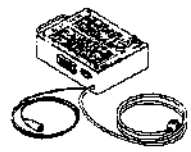
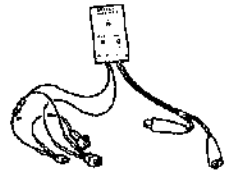
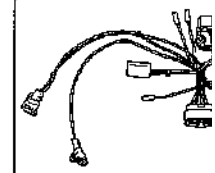
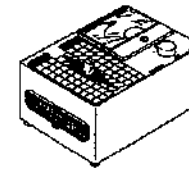
CHECKER AND OTHER EQUIPMENT

TOOL NUMBER & DESCRIPTION	PRIORITY	ILLUSTRATION
49 H018 9A1 Checker, Self-diagnosis	A	
49 0305 870A Tool set, window	A	
49 G018 901 Adapter harness (Throttle sensor)	A	
49 G019 901A EC-AT tester	A	
49 F018 002 Igniter checker	A	

TOOL NUMBER & DESCRIPTION	PRIORITY	ILLUSTRATIO
49 0259 866A Inserting tool, seal pusher & blade	B	
49 G019 901 EC-AT tester 49 H019 902 Adapter unit	A	
49 N018 001 Adapter harness (Igniter checker)	A	
49 9200 162 Monitor, engine signal	A	
49 G018 903 Adapter harness (Engine signal monitor)	A