

FE.FG

SERVICE MANUAL

FOREWORD

This Service Manual contains maintenance and repair methods for all those who are involved in the maintenance and repair of Mitsubishi Fuso Truck FE.FG Series. Read this manual carefully as an aid to providing correct, efficient and fast maintenance. Please note, however, that due to continued vehicle improvements the specifications and numerical given for use in maintenance may change without notice. If you have any question, or encounter a problem, please do not hesitate to contact your nearby Mitsubishi Fuso Dealer or Distributor.

May 1991

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MANUAL LAYOUT – GROUP CLASSIFICATIONS

1. GROUP CLASSIFICATIONS

This Manual is divided into Groups, one for each system of the vehicle.

Gr. No.	Group Name	Description
00	General	External views, major specifications, power train table, operation performance curves, engine performance curves, servicing precautions, standard bolt and nut tightening torque table, towing precautions, vehicle identification numbers.
01	Maintenance Schedule	Maintenance schedule, simple maintenance, lubrication chart, oils and greases to use.
11	Engine	Engine remove and installation, cylinder head, valve mechanism, camshaft, pistons, crankshaft, timing gear, flywheel.
12	Lubrication	Oil pump, oil filter, oil cooler.
13	Fuel and Engine Control	Pre-stroke control injection pump system injection nozzles, fuel filter, fuel tank, water separator, engine control, accelerator pedal, throttle button.
14	Cooling	Water pump, thermostat, radiator, fan, auto-cool fan coupling.
15	Intake and Exhaust	Air cleaner, intake shutter, turbocharger, intercooler.
16	Engine electrical	Starter, alternator, vacuum pump, glow system, idle up system.
21	Clutch	Clutch, clutch control (master cylinder, power cylinder).
22	Manual Transmission	Transmission, transmission control.
23	Automatic Transmission	Maintenance and inspection, removal, installation, oil seal replacement.
24	Transfer	Transfer, transfer control.
25	Propeller Shaft	Propeller shaft, universal joint, center bearing, double cardin propeller shaft.
26A	Front Axle <FE series>	Front axle, kingpins, knuckles, hub bearings.
26B	Front Axle <FG series>	Front axle, wheel hub and brake drum, knuckle and drive shaft, reduction and differential.
27	Rear Axle	Rear axle, reduction and differential, hub bearings.
31	Wheels and Tires	Tire, disc wheel.
33	Front Suspension	Front suspension, leaf springs, shock absorbers, stabilizer.
34	Rear Suspension	Rear suspension, leaf springs, shock absorbers, stabilizers.
34	Rear suspension	Rear suspension, leaf springs, shock absorbers, stabilizers.
35	Brake	Brake pedal, master-vac, wheel brake(wheel cylinder, brake drum, brake shoes), exhaust brake(exhaust brake valve, power chamber).
36	Parking Brake	Parking brake(brake drum, brake shoe), parking brake control.
37	Steering	Steering wheel, power steering booster, power steering oil pump, steering linkage, tie-rods.
41	Frame	Frame inspection and maintenance.
42	Cab	Cab, cab mounting, window glass, doors, seats, trim.
54	Chassis electrical	Meters, gauges, switches, lamps, warning and indicator lamps, wipers.
55A	Air Conditioner	Air conditioner ventilation system.
55B	Heater	Heater, ventilation.

2. DEFINITIONS OF TERMS AND UNITS USED

Terms and units used commonly throughout this manual have specific meanings, as defined below.

(1) Front and rear

When the vehicle is travelling forward, that part of the vehicle which is in a leading position is referred to as the front; the opposite end of the vehicle referred to as the rear, or back.

(2) Left and Right

When an observer is facing in the same direction as the vehicle's forward direction of motion, the observer's right and left correspond to the right and left sides of the vehicle; i.e., that part of the car which is on the observer's right when facing forward is referred to as the right side of the car.

(3) Maintenance standards terms

- Norminal value

Indicates the design dimensions of the vehicle body and individual parts, the standard clearance between assembled parts, and the standard performance of assemblies. Values in brackets are basic diameters.

- Limit

Indicates the dimension limit of a part, at which point the part is no longer serviceable from the view point of both performance as well as strength, and requires replacement.

(4) Tightening torque

Tightening bolts and nuts too much or too little can have a large influence on performance and function.

Thus, tightening torque is specified for each location that must be tightened in a particular range. When tightening must be performed under wet conditions, this is specified. If not specified, tightening is performed dry.

When tightening torque is not specified, tighten according to the standard bolts and nuts tightening torque table.

(5) Units

Length, weight, surface area and capacity are given in International Systems of Units, with foot pounds units indicated in brackets. Temperatures are given in degrees Celsius, with degrees in Fahrenheit in brackets.



FE/FG

Service Manual

1995 Model Changes
1994 Minor Change
1993 Minor Change
1992 Group 00 - General

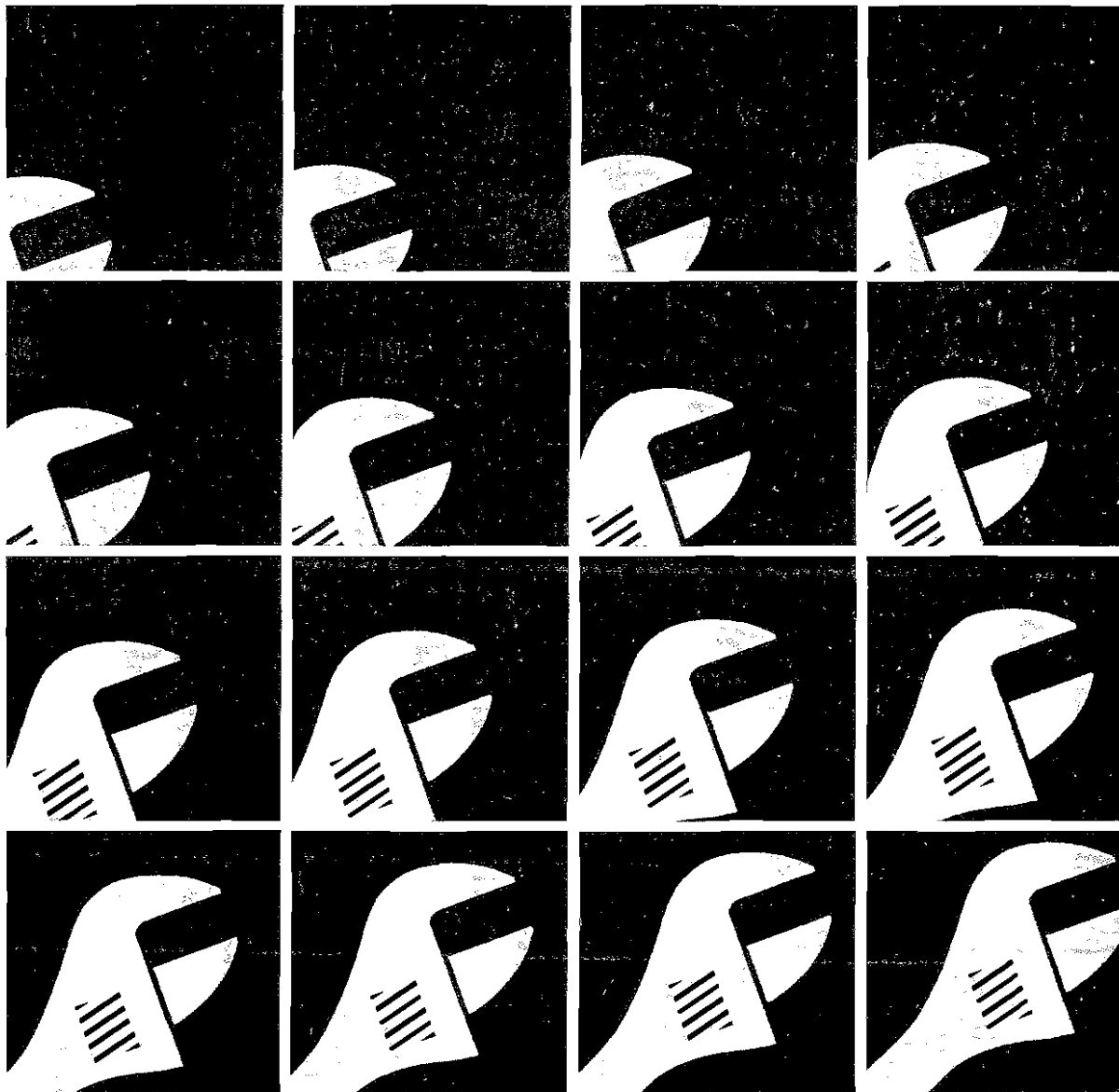
 **MITSUBISHI FUSO TRUCK OF AMERICA, Inc.**



Service Manual

'95 Model Changes

FE



FOREWORD

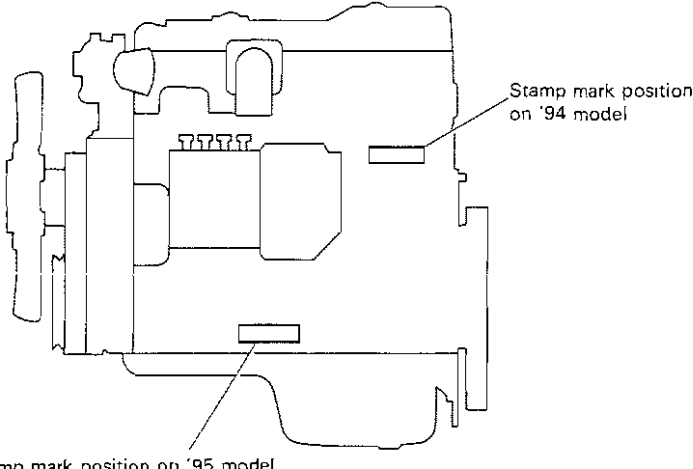
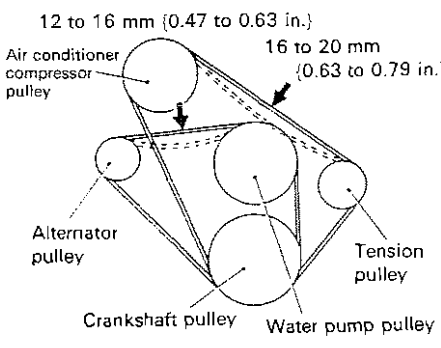
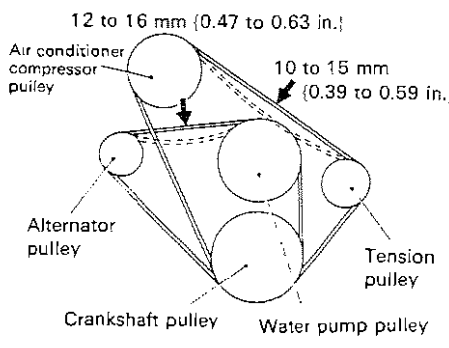
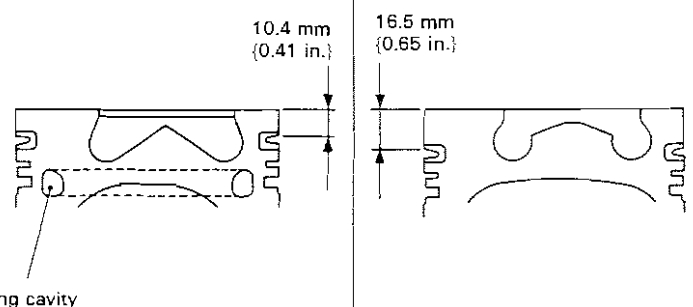
Text of this manual describes only what is new with '95 model from that of '94. When you may need any information which is not found in the text, refer to following documents.

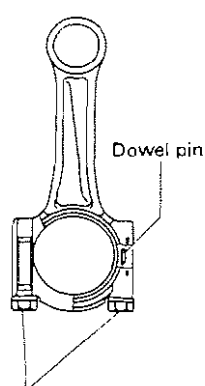
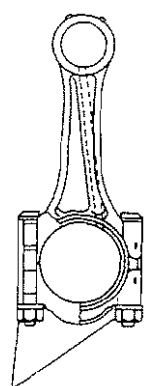
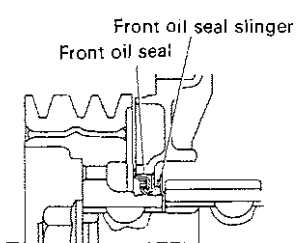
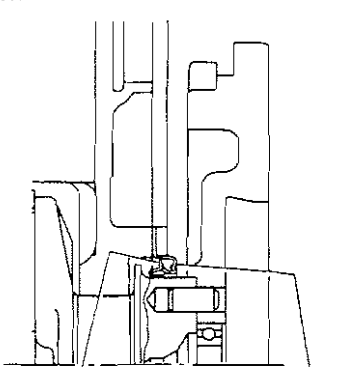
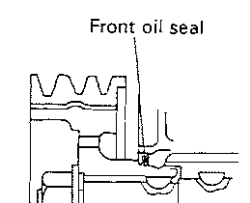
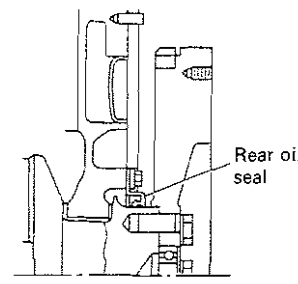
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- '93 model: Service Manual FE.FG 1993, Minor Change Pub. No. TWSE9203
- '94 model: Service Manual FE. FG 1994 Minor Change Pub. No. TWSE9306

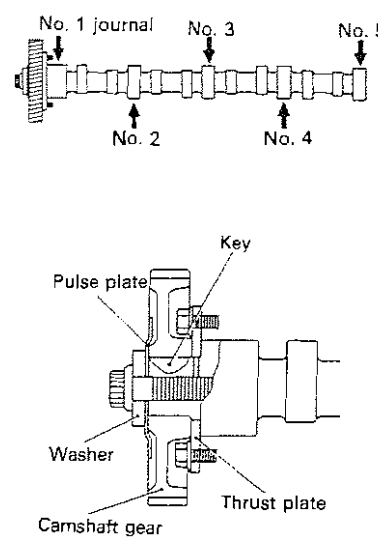
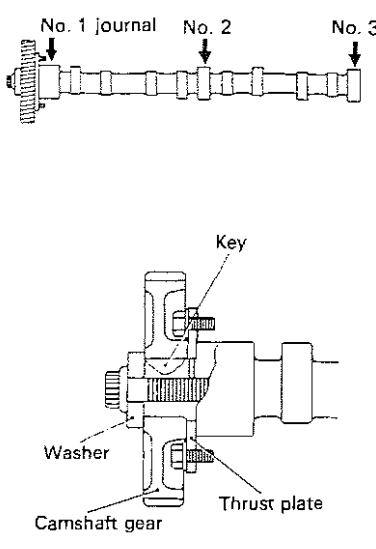
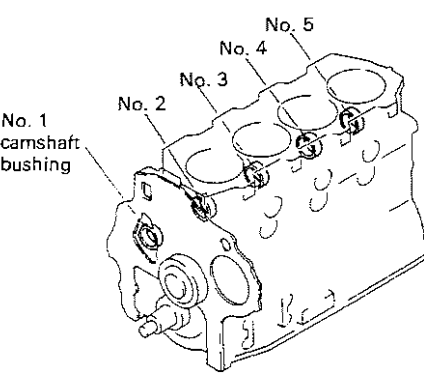
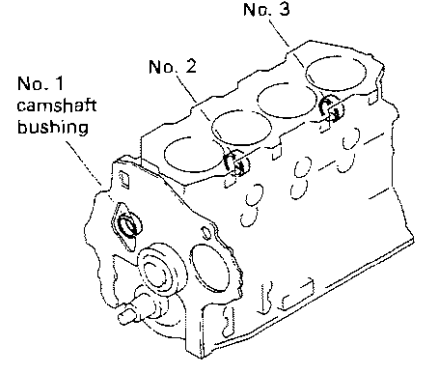
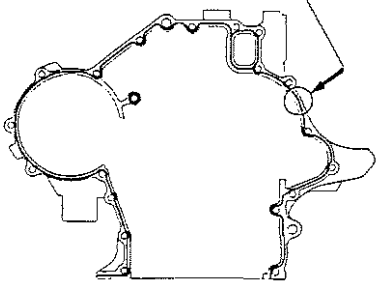
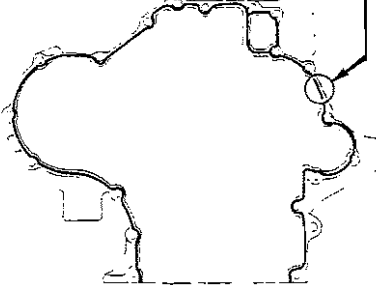
OUTLINE OF THE '95 MODEL CHANGE

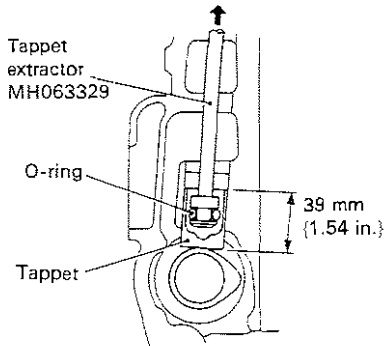
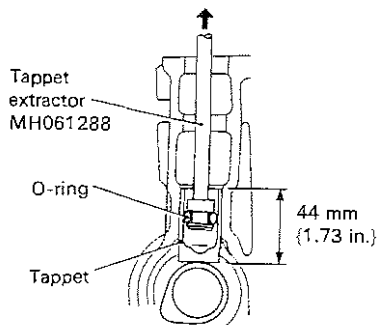
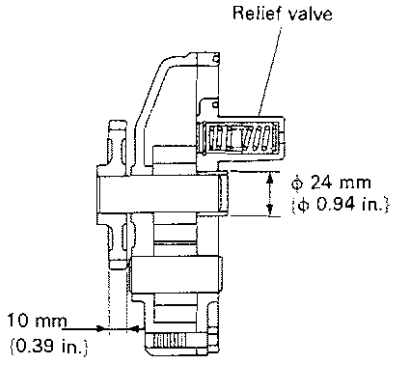
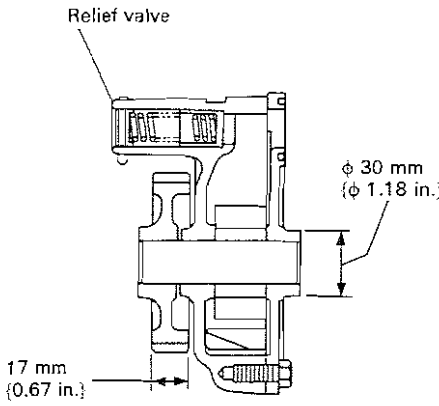
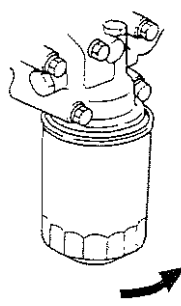
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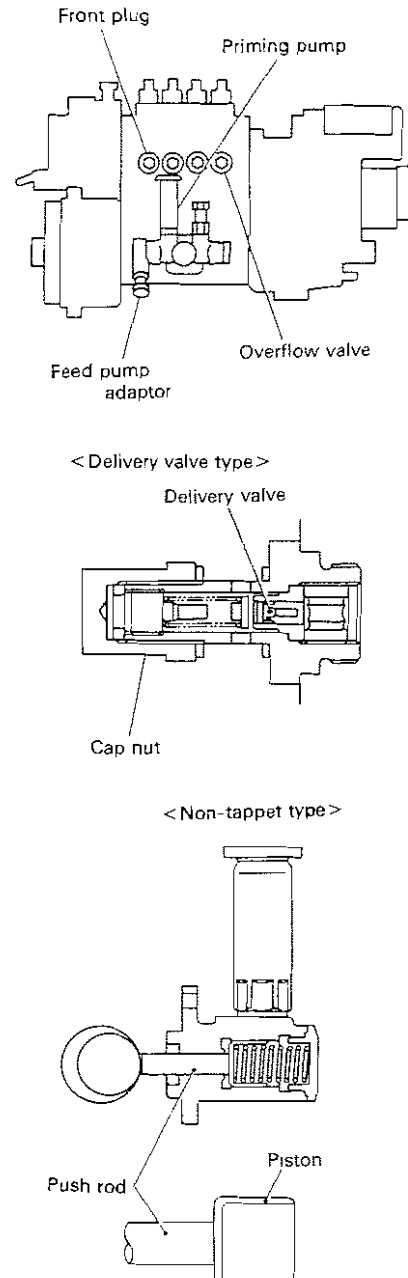
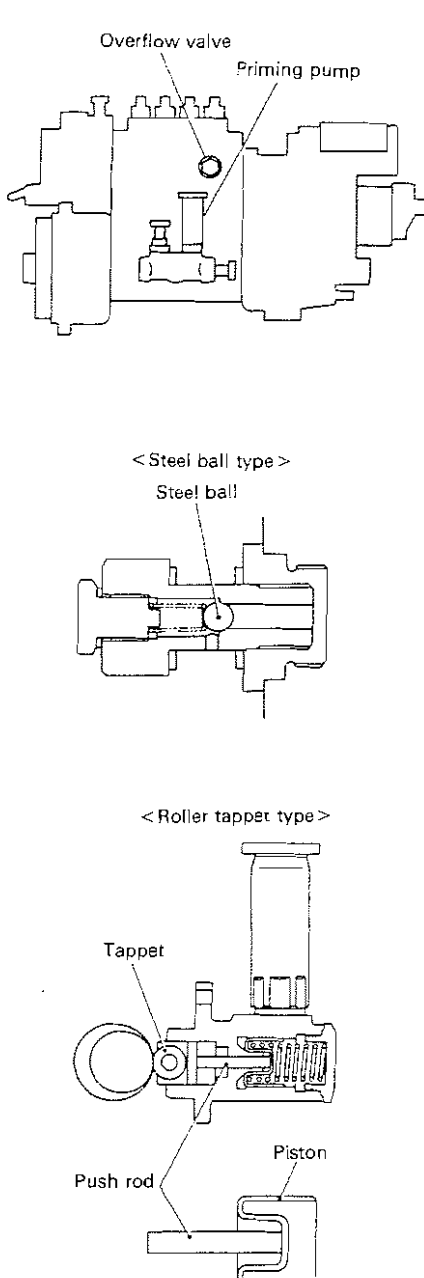
'95 MODEL CHANGES

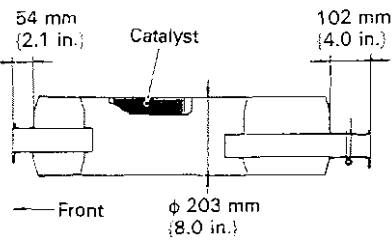
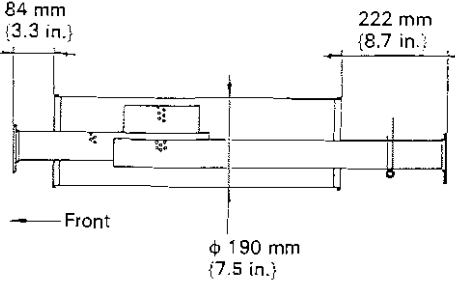
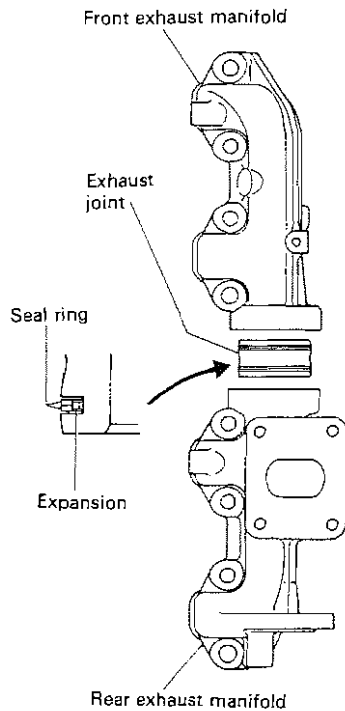
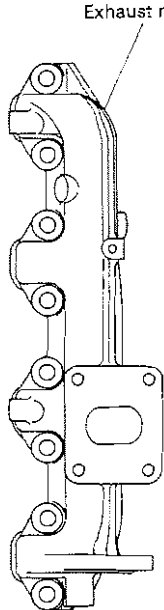
Item	'95 Model	'94 Model
(1) FG Series is deleted.	Delete	FG Series
<p>GROUP 00 GENERAL See page 17</p>		
(2) Engine stamp mark position is changed.	 <p>Stamp mark position on '94 model</p> <p>Stamp mark position on '95 model</p>	
(3) Air conditioner belt tension is changed. (No change on the fan belt tension.)	 <p>12 to 16 mm (0.47 to 0.63 in.)</p> <p>16 to 20 mm (0.63 to 0.79 in.)</p> <p>Air conditioner compressor pulley</p> <p>Alternator pulley</p> <p>Crankshaft pulley</p> <p>Water pump pulley</p> <p>Tension pulley</p>	 <p>12 to 16 mm (0.47 to 0.63 in.)</p> <p>10 to 15 mm (0.39 to 0.59 in.)</p> <p>Air conditioner compressor pulley</p> <p>Alternator pulley</p> <p>Crankshaft pulley</p> <p>Water pump pulley</p> <p>Tension pulley</p>
<p>(4) Piston is changed as follows:</p> <ul style="list-style-type: none"> ● Cooling cavity is newly provided. ● 1st compression ring is moved upwards. ● Form of combustion chamber is changed. ● Values of service procedures are changed. <p>GROUP 11 ENGINE See page 25.</p>	 <p>10.4 mm (0.41 in.)</p> <p>16.5 mm (0.65 in.)</p> <p>Cooling cavity</p>	

Item	'95 Model	'94 Model
<p>(5) Connecting rod is changed to the pushing bolt type rod. Along with this change, a special socket wrench is newly specified to tighten the connecting rod.</p> <p>GROUP 11 ENGINE See page 25.</p>	 <p>Dowel pin</p> <p>Connecting rod bolt Tighten to 30 N·m (22 lbf.ft, 3 kgf·m) and then tighten further by $90 \pm 5^\circ$.</p>	 <p>Nut</p> <p>100 N·m (76 lbf.ft, 10.5 kgf·m) (Wet)</p>
<p>(6) Front and rear oil seals are changed to axial lip type seals. Along with the change, a special tool Rear Oil Seal Slinger Installer is newly specified to install the rear oil seal.</p> <p>GROUP 11 ENGINE See page 27.</p>	<p><Front></p>  <p>Front oil seal slinger Front oil seal</p> <p><Rear></p>  <p>Rear oil seal slinger Rear oil seal</p>	<p><Front></p>  <p>Front oil seal</p> <p><Rear></p>  <p>Rear oil seal</p>

Item	'95 Model	'94 Model
<p>(7) Camshaft is changed as follows:</p> <ul style="list-style-type: none"> • A pair of journals are added which makes 5 journals in total. • A pulse plate is newly installed between the camshaft gear and the washer. <p>GROUP 11 ENGINE See page 29.</p>		
<p>(8) Number of camshaft bushings is increased from 3 to 5 pieces. Number of camshaft bushing retainers is changed to 5 retainers accordingly.</p> <p>GROUP 11 ENGINE See page 29.</p>		
<p>(9) Sealer application procedure is changed.</p> <p>Service procedures are unchanged except the sealant applying procedure.</p>	<p>Sealer application procedure for '95 Model:</p> <p>$\phi 1 \text{ to } 1.5 \text{ mm}$ (0.039 to 0.059 in.)</p> <p>THREEBOND 1207C or equivalent</p> 	<p>Sealer application procedure for '94 Model:</p> <p>Sealant: THREEBOND 1207C or equivalent</p> <p>The sealant bead diameter to be approx. 2mm. (0.079 in.)</p> 

Item	'95 Model	'94 Model
<p>(10) A light weight, compact tappet is employed. Along with this change, the special tool Tappet Extractor is changed.</p> <p>Service procedures are unchanged.</p>	 <p>Tappet extractor MH063329</p> <p>O-ring</p> <p>Tappet</p> <p>39 mm (1.54 in.)</p>	 <p>Tappet extractor MH061288</p> <p>O-ring</p> <p>Tappet</p> <p>44 mm (1.73 in.)</p>
<p>(11) Oil pump is changed. Along with this change, the relief valve position is changed.</p> <p>GROUP 12 LUBRICATION See page 37.</p>	 <p>Relief valve</p> <p>10 mm (0.39 in.)</p> <p>ϕ 24 mm (ϕ 0.94 in.)</p>	 <p>Relief valve</p> <p>17 mm (0.67 in.)</p> <p>ϕ 30 mm (ϕ 1.18 in.)</p>
<p>(12) Oil filter tightening procedure is changed.</p> <p>Any other service procedures are unchanged.</p>	 <p>Screw in till the gasket seats on the oil cooler body. Then, tighten further by 3/4 turn.</p>	<p>Screw in till the gasket seats on the oil cooler body. Then, tighten further by 5/8 turn.</p>

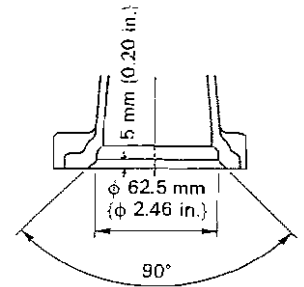
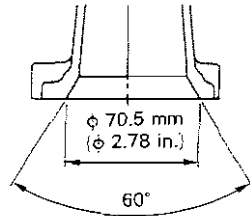
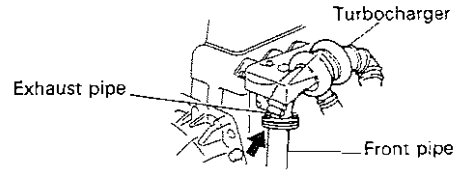
Item	'95 Model	'94 Model
<p>(13) Injection pump is changed as follows:</p> <ul style="list-style-type: none"> ● Pump housing is changed to the front plug type housing. ● Priming pump is moved forward. ● Feed pump adaptor is newly added. <ul style="list-style-type: none"> ● Overflow valve is changed from the steel ball type to the delivery valve type. <ul style="list-style-type: none"> ● Tappet of feed pump piston is eliminated. <p>Service procedures are unchanged.</p>	 <p>Front plug</p> <p>Priming pump</p> <p>Feed pump adaptor</p> <p>Overflow valve</p> <p>< Delivery valve type ></p> <p>Delivery valve</p> <p>Cap nut</p> <p>< Non-tappet type ></p> <p>Push rod</p> <p>Piston</p>	 <p>Overflow valve</p> <p>Priming pump</p> <p>< Steel ball type ></p> <p>Steel ball</p> <p>< Roller tappet type ></p> <p>Tappet</p> <p>Push rod</p> <p>Piston</p>
<p>(14) Inspection procedure which uses the pre-stroke control type injection pump MUT is added.</p> <p>GROUP 13 FUEL AND ENGINE CONTROL</p> <p>See page 43</p>		

Item	'95 Model	'94 Model
<p>(15) Muffler is now equipped with a catalyst converter.</p> <p>Service procedures are unchanged.</p>	 <p>54 mm (2.1 in.) Catalyst 102 mm (4.0 in.)</p> <p>Front ϕ 203 mm (8.0 in.)</p> <p>WARNING</p> <ol style="list-style-type: none"> 1. Don't kick or thump the muffler. Otherwise, the catalyst filled in it may be broken. 2. Small quantity of acid water may accumulate in the muffler. Be careful not to contact fluid discharged from the muffler. When contacted, wash off completely with running water. 	 <p>84 mm (3.3 in.) 222 mm (8.7 in.)</p> <p>Front ϕ 190 mm (7.5 in.)</p>
<p>(16) Exhaust manifold is changed from the one piece type to the divided type.</p>	 <p>Front exhaust manifold</p> <p>Exhaust joint</p> <p>Seal ring</p> <p>Expansion</p> <p>Rear exhaust manifold</p>	 <p>Exhaust manifold</p>

GROUP 15 INTAKE AND EXHAUST
See page 69.

Item	95 Model	94 Model
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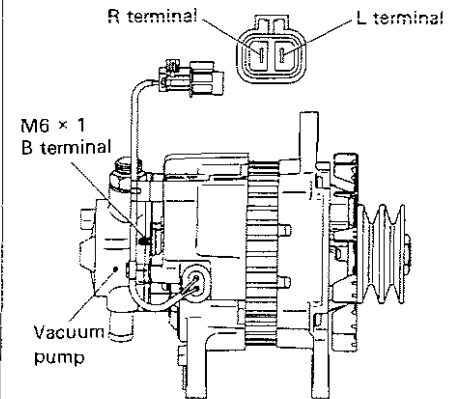
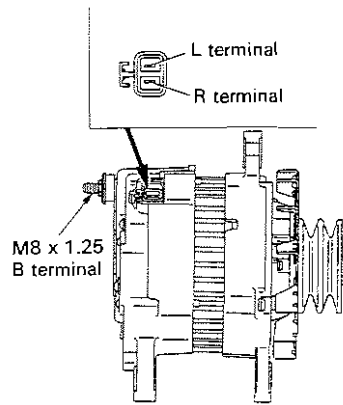
(17) Connection between the exhaust pipe and the front pipe is changed to improve the sealing effect.



Service procedures are unchanged.

(18) Alternator is changed as follows:

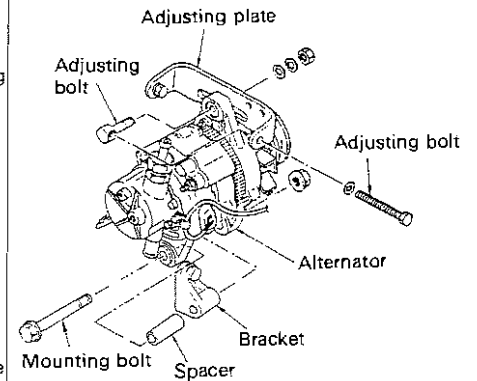
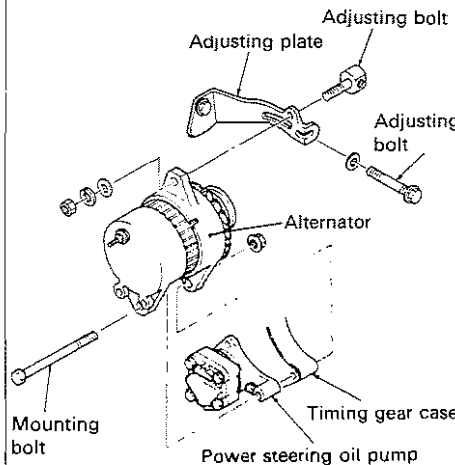
- Harnesses of L, R connectors are eliminated.
- Diameter of B terminal screw is enlarged.
- Vacuum pump is eliminated (Vacuum pump is now driven by the gear so that it is assembled on the engine main body).



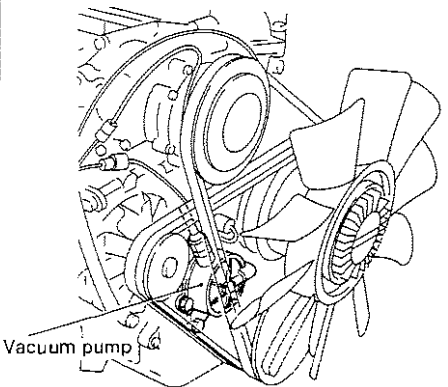
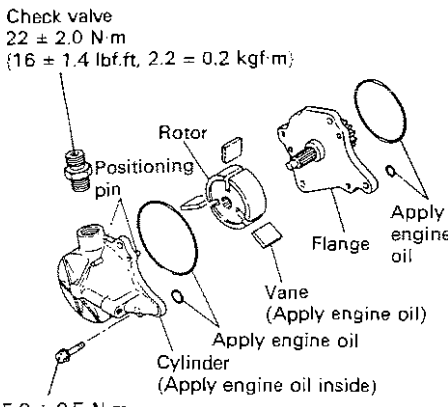
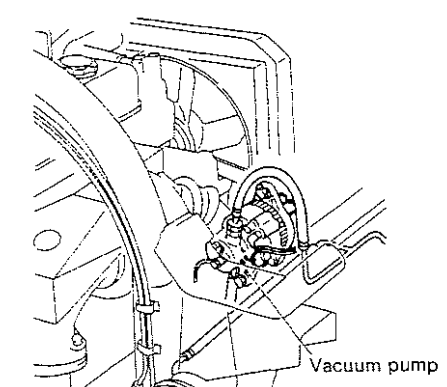
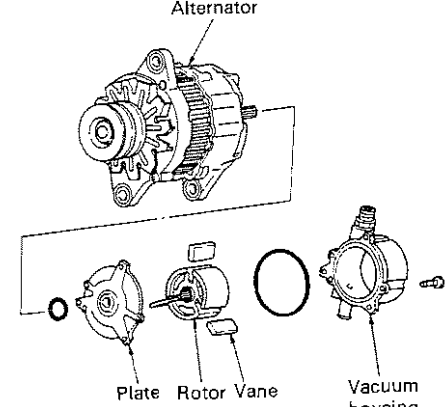
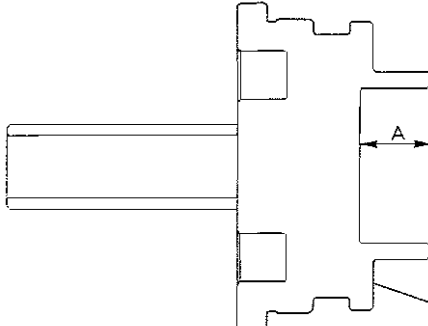
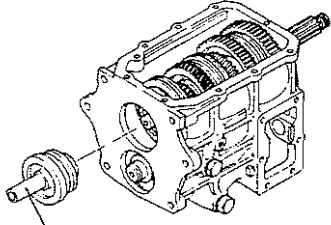
- Resistance value of field coil is changed.

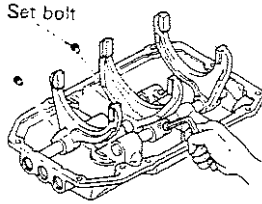
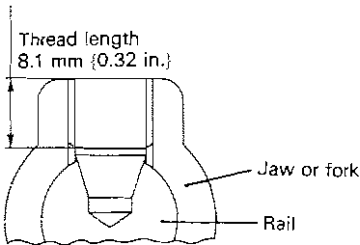
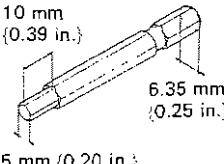
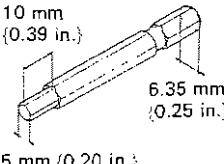
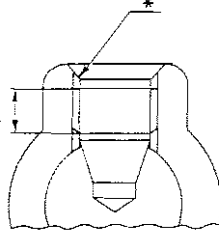
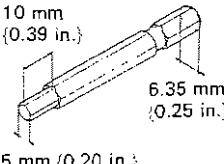
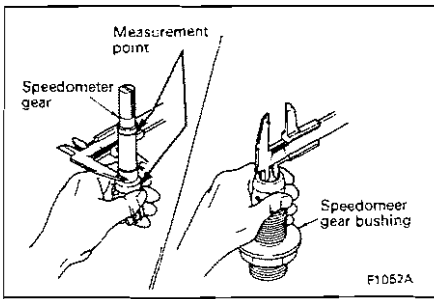
Type	A4TU0088	A4T25788
Field coil resistance	2.7 to 3.3 Ω	3 Ω

- Adjusting plate is changed.
- Spacer on the alternator retaining fulcrum is eliminated and is now secured together with the power steering oil pump (has an integrated spacer).

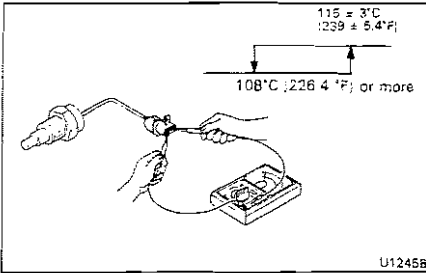
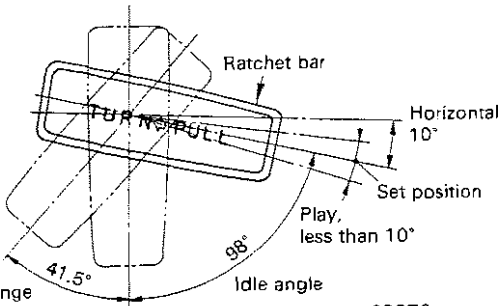
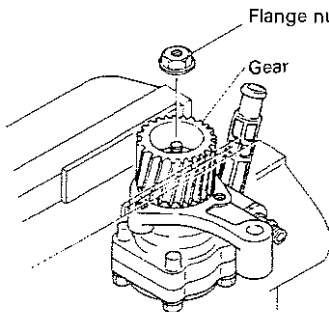
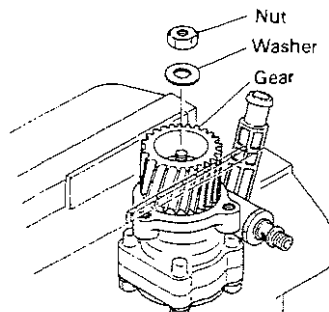


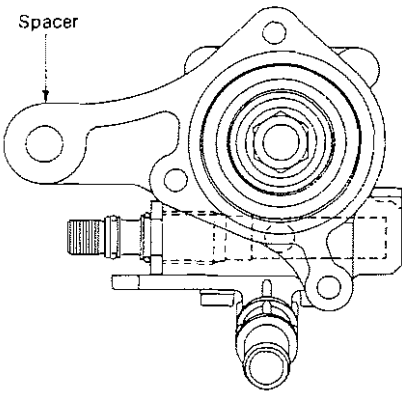
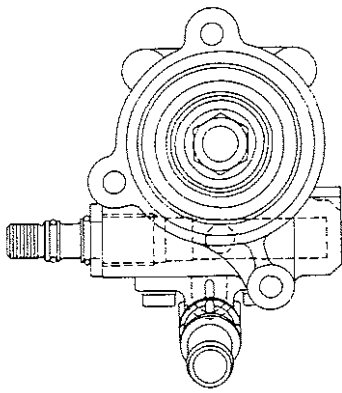
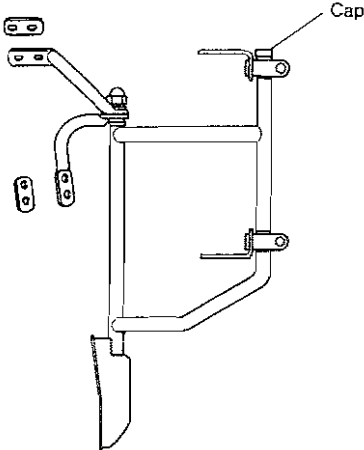
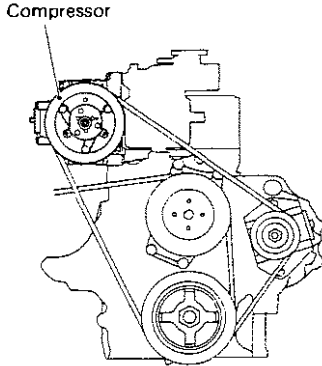
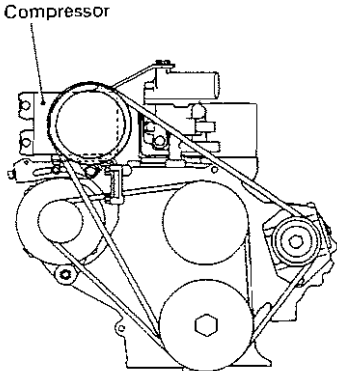
Service procedures are unchanged.

Item	'95 Model	'94 Model						
<p>(19) Vacuum pump is changed as follows:</p> <ul style="list-style-type: none"> ● Mounting position is changed. <ul style="list-style-type: none"> ● Vacuum pump main unit is changed. <p>Service procedure is unchanged.</p>	 <p>Vacuum pump</p> <p>B3028N</p>  <p>Check valve 22 ± 2.0 N·m {16 ± 1.4 lbf.ft, 2.2 = 0.2 kgf-m}</p> <p>5.9 ± 0.5 N·m {4.3 ± 0.4 lbf.ft, 0.6 ± 0.05 kgf-m}</p> <p>05412</p>	 <p>Vacuum pump</p> <p>B3028M</p>  <p>Alternator</p> <p>Plate Rotor Vane Vacuum housing</p> <p>B2751B</p>						
<p>(20) Dimension ("A" in right sketch) of the special tool, pinion dummy bearing, which is used to remove and install the main shaft, is changed to make it more appropriate.</p> <p>If the old part is assembled as it is, the pilot bearing on top of the main shaft may be broken when the drive pinion is tapped in because, when the main shaft bearing is pressed in, the main shaft moves forward excessively.</p> <p>Therefore, it is necessary to rework the "A" dimension of the old part to that of new part as shown at right.</p> <p>Service procedures are unchanged excepting the above.</p>	  <p>Pilot bearing dummy bearing</p> <table border="1" data-bbox="627 1686 1270 1778"> <tr> <td>Dimension A</td> <td>20.5 mm {0.81 in.}</td> <td>24.5 mm {0.96 in.}</td> </tr> <tr> <td>Part No.</td> <td>MH063334</td> <td>MH062197</td> </tr> </table>		Dimension A	20.5 mm {0.81 in.}	24.5 mm {0.96 in.}	Part No.	MH063334	MH062197
Dimension A	20.5 mm {0.81 in.}	24.5 mm {0.96 in.}						
Part No.	MH063334	MH062197						

Item	'95 Model	'94 Model																								
<p>(21) Shift fork set bolt and jaw set bolt are changed. As a result, the tightening torque is also changed. Further, a special tool Hexagon Bit is newly specified.</p> <p>When changing the set bolts on the currently used transmission, these new bolts can be used. In such occasion, it is necessary to rework the threaded section of the shift fork or the jaw using a tapping tool in order to avoid the effect of calked section. Where the same set bolts as those specified at this time have already been in use, replace them with new bolts when they are removed at disassembly. In such occasion, make sure to remove completely old locking material left over on the threaded section of the shift fork or jaw.</p> <p>Service procedures are unchanged excepting the above.</p>	 <p>Set bolt</p>  <p>Thread length 8.1 mm {0.32 in.}</p> <p>Jaw or fork</p> <p>Rail</p> <table border="1" data-bbox="644 772 1318 1304"> <tr> <td>Tightening torque</td> <td>29 to 36 N·m {22 to 28 lbf.ft, 3.0 to 3.7 kgf·m}</td> <td>29 N·m {22 lbf.ft, 3.0 kgf·m}</td> </tr> <tr> <td>Locking</td> <td>Locking material is applied to the set bolt.</td> <td>Calked at more than 3 places on the thread (* marked in above sketch) with a punch.</td> </tr> <tr> <td>Special tool</td> <td>Hexagon bit MH063060</td> <td>None</td> </tr> <tr> <td></td> <td>  </td> <td></td> </tr> <tr> <td>Reuse</td> <td>Prohibited (Replace when disassembled)</td> <td>Allowable</td> </tr> </table>	Tightening torque	29 to 36 N·m {22 to 28 lbf.ft, 3.0 to 3.7 kgf·m}	29 N·m {22 lbf.ft, 3.0 kgf·m}	Locking	Locking material is applied to the set bolt.	Calked at more than 3 places on the thread (* marked in above sketch) with a punch.	Special tool	Hexagon bit MH063060	None				Reuse	Prohibited (Replace when disassembled)	Allowable	 <p>Tread length 5.1 mm {0.20 in.}</p> <p>Inspection Clearance between the speedometer gear shaft and bushing.</p> <p>Measure the outer diameter of the speedometer gear shaft and bushing, and then calculate the clearance.</p> <table border="1" data-bbox="639 1729 1313 1888"> <tr> <td>Basic diameter</td> <td>12 mm {0.47 in.}</td> <td>12 mm {0.47 in.}</td> </tr> <tr> <td>Nominal value</td> <td>0.04 to 0.09 mm {0.0016 to 0.0035 in.}</td> <td>0.02 to 0.07 mm {0.00079 to 0.0028 in.}</td> </tr> <tr> <td>Limit</td> <td>0.15 mm {0.0059 in.}</td> <td>0.15 mm {0.0059 in.}</td> </tr> </table>	Basic diameter	12 mm {0.47 in.}	12 mm {0.47 in.}	Nominal value	0.04 to 0.09 mm {0.0016 to 0.0035 in.}	0.02 to 0.07 mm {0.00079 to 0.0028 in.}	Limit	0.15 mm {0.0059 in.}	0.15 mm {0.0059 in.}
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<p>(22) Speed meter gear is changed to make the oil clearance on the speed meter gear bearing more appropriate.</p> <p>Service procedures are unchanged.</p>	 <p>Measurement point</p> <p>Speedometer gear</p> <p>Speedometer gear bushing</p> <p>F1052A</p>	<table border="1" data-bbox="639 1729 1313 1888"> <tr> <td>Basic diameter</td> <td>12 mm {0.47 in.}</td> <td>12 mm {0.47 in.}</td> </tr> <tr> <td>Nominal value</td> <td>0.04 to 0.09 mm {0.0016 to 0.0035 in.}</td> <td>0.02 to 0.07 mm {0.00079 to 0.0028 in.}</td> </tr> <tr> <td>Limit</td> <td>0.15 mm {0.0059 in.}</td> <td>0.15 mm {0.0059 in.}</td> </tr> </table>	Basic diameter	12 mm {0.47 in.}	12 mm {0.47 in.}	Nominal value	0.04 to 0.09 mm {0.0016 to 0.0035 in.}	0.02 to 0.07 mm {0.00079 to 0.0028 in.}	Limit	0.15 mm {0.0059 in.}	0.15 mm {0.0059 in.}															
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Limit	0.15 mm {0.0059 in.}	0.15 mm {0.0059 in.}																								

Item	'95 Model	'94 Model			
<p>(23) Tightening torque of automatic transmission manual lever attaching nut is changed for improvement.</p>	<div data-bbox="838 177 1251 548" data-label="Image"> </div> <table border="1" data-bbox="642 560 1317 635"> <tr> <td data-bbox="642 560 780 635">Tightening torque</td> <td data-bbox="780 560 1047 635">43 N·m {32 lbf.ft, 4.4 kgf·m}</td> <td data-bbox="1047 560 1317 635">58 to 83 N·m {43 to 61 lbf.ft, 6 to 8.5 kgf·m}</td> </tr> </table>	Tightening torque	43 N·m {32 lbf.ft, 4.4 kgf·m}	58 to 83 N·m {43 to 61 lbf.ft, 6 to 8.5 kgf·m}	
Tightening torque	43 N·m {32 lbf.ft, 4.4 kgf·m}	58 to 83 N·m {43 to 61 lbf.ft, 6 to 8.5 kgf·m}			
<p>Service procedures are unchanged.</p>					
<p>(24) A by-pass circuit is added on the midway of oil cooler pipe between the automatic transmission and the oil cooler in order to make appropriate the ATF temperature.</p> <p>Along with this change, an oil bypass valve is also added to switch the circuit. When T/M OIL TEMP warning lamp lights continuously or lights repeatedly, inspect the oil temperature sensors (for electric motor fan and warning lamp) and electric fan motor as well as the oil by-pass valve pipe.</p>	<p>Under low temperature (75°C {167°F} or less)</p> <div data-bbox="639 796 1382 1179" data-label="Diagram"> </div> <p>Under high temperature (80°C {176°F} or more)</p> <div data-bbox="639 1280 1382 1663" data-label="Diagram"> </div>				
<p>GROUP 23 AUTOMATIC TRANSMISSION See page 71.</p>					

Item	'95 Model	'94 Model
<p>(25) Operating temperature of the automatic transmission oil cooler fan oil temperature sensor is changed.</p>	 <p>Operating temperature</p> <p>97 ± 3°C (206.6 ± 5.4°F) ON 90°C (194°F) or more OFF</p>	<p>Check the switch turns ON and OFF at specified oil temperature. Replace switch if defective. Oil cooler fan and warning lamp connectors are differently shaped. (See illustrations for correct shape.) Determining correct connectors.</p> <p>Operating temperature</p> <p>115 ± 3°C (239 ± 5.4°F) ON 108°C (226.4°F) or more OFF</p>
<p>Service procedures are unchanged.</p> <p>(26) Exhaust brake circuit is illustrated correctly.</p> <p>GROUP 35 BRAKE See page 73.</p>	<p>-</p>	<p>-</p>
<p>(27) Parking brake is changed to the simplified 2-step release type.</p> <p>To release, turn the parking knob while it is pulled to this side. However, even if the knob is not pulled to this side, it can be released if it is turned beyond the idle angle 98°.</p> <p>Any other service procedures are unchanged.</p>	 <p>Make sure to position the ratchet bar within the angle as shown in the figure.</p>	<p>08370</p>
<p>(28) Installation of power steering oil pump gear is changed as follows:</p> <ul style="list-style-type: none"> Retaining nut is substituted with a flange nut. Lock washer is eliminated. Tightening torque is changed. <p>Service procedures are unchanged.</p>	<p>34 to 45 N·m {25 to 33 lbf.ft, 3.5 to 4.6 kgf·m}</p> 	<p>29 to 39 N·m {22 to 29 lbf.ft, 3 to 4 kgf·m}</p> 

Item	'95 Model	'94 Model
<p>(29) Form of power steering oil pump body is changed to integrate the alternator retaining spacer. Along with this change, the model No. of power steering oil pump is also changed.</p> <p>Service procedures are unchanged.</p>	 <p>Model Number 20210-70925</p>	 <p>Model Number 20210-60980</p>
<p>(30) Outside mirror stay cap retaining adhesive is changed.</p> <p>Service procedures are unchanged.</p>	<p>Cemedine SUPER X No. 8008</p> 	<p>THREEBOND 1521C</p>
<p>(31) Air conditioner compressor is changed. Refrigerant is changed simultaneously.</p> <p>See separate Air Conditioner Service Manual.</p>	<p>< Scroll type ></p>  <p>Refrigerant: R134a</p>	<p>< Reciprocal type ></p>  <p>R12</p>

MAJOR SPECIFICATIONS

Model	FE439CZSLSUA	FE439CZSLSUB
Engine	4D34-T3	
Specification Transmission	M3S5	M030A4
Type	Forward control, tilt cab	
Drive system	4 × 2	
Dimension mm {in.}		
Overall length	★ 4880 {192.1}	★ 4880 {192.1}
Overall width	1995 { 78.5}	1995 { 78.5}
Overall height	2250 { 88.6}	2250 { 88.6}
Wheel base	2750 {108.3}	2750 {108.3}
Tread Front	1615 { 63.6}	1615 { 63.6}
Tread Rear	1495 { 58.9}	1495 { 58.9}
Mass kg {lb}		
Vehicle mass	2170 { 4785}	2205 { 4860}
Vehicle gross mass (GVM)	5260 {11600}	5260 {11600}
Seating capacity	3	3
Performance		
Maximum speed km/h {mph}	111 {69.0}	113 {70.0}
Climbing ability with Max. GVM tanθ (%)	49.5	66.0
Min. turning radius m {ft.}	5.6 {18.4}	5.6 {18.4}
Engine	4 stroke-cycle water cooled direct injection diesel engine with turbocharger	
Max. output HP/rpm (SAE, Gross)	135/3000	
Max. Torque lbf.ft./rpm (SAE, Gross)	253/1800	
Clutch	C4W30 Hydraulic control, single dry plate woven	Torque converter Three element, single stage, multi phase with lock up clutch
Transmission	M3S5 5-forward and 1-reverse speed, 2nd to 5th synchromesh, 1st-rev. constantmesh gears Floor shift, mechanical remote control	M030A4 4-forward and 1-reverse speed, Electronic controlled automatic Floor shift
Propeller shaft	P3	
Front axle	Reverse Elliot "I" beam	
Rear axle	Full floating type D033H Single reduction, hypoid gear	
Wheels and tires	LT215/85R16 (D) 16 × 6K	
Front suspension	Semi-elliptic, laminated leaf spring with stabilizer and shock absorbers	
Rear suspension	Semi-elliptic, laminated leaf spring with stabilizer and shock absorbers	
Brakes	Hydraulic with vacuum servo assistance, divided line and with pressure control valve	
Main brake	controlling service force at rear wheel.	
Auxiliary brake	Exhaust brake	
Parking brake	Internal expanding type at rear of transmission	
Steering	Left hand steering, ball nut type with hydraulic power booster, adjustable steering column	
Frame	Parallel tapered channel section with reinforcements and crossmembers	
Cab	All steel, tilt cab	
Electrical	12V, regulated control	
Heater and air-conditioner	Combined inside and outside air, hot water system (option: air conditioner)	

★: Changed on '95 model