

WORKSHOP MANUAL

NHR · NKR · NPR · NQR · NPS

GENERAL INFORMATION

SECTION 0

ISUZU

ISUZU



International Service & Parts
Tokyo, Japan

NOTICE

Before using this Workshop Manual to assist you in performing vehicle service and maintenance operations, it is recommended that you carefully read and thoroughly understand the information contained in Section 0A under the headings "GENERAL REPAIR INSTRUCTIONS" and "HOW TO USE THIS MANUAL".

All material contained in this Manual is based on latest product information available at the time of publication.
All rights are reserved to make changes at any time without prior notice.

Applicable Model

N-Series		
NHR55	NPR55	NQR66
NHR69	NPR69	NQR70
NKR55	NPR65	NQR71
NKR69	NPR66	NPS66
NKR58	NPR70	NPS71
NKR66	NPR71	

This manual is applicable to 1999 year model.

THIS MANUAL INCLUDES THE FOLLOWING SECTIONS:

SECTION NO.	CONTENTS
0A	General Information
0B	Maintenance and Lubrication

SECTION 0A
GENERAL INFORMATION

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GENERAL REPAIR INSTRUCTIONS

1. Park the vehicle on level ground and chock the front or rear wheels before lifting the vehicle.
2. Use covers on the vehicle body, seats, and floor to prevent damage and/or contaminations.
3. Disconnect the grounding cable from the battery before performing service operations. This will prevent cable damage or burning due to shortcircuiting.
4. Raise the vehicle with a jack set against the axle or the frame.
5. Support the vehicle on chassis stands.
6. Handle brake fluid and antifreeze solution with great care. Spilling these liquids on painted surfaces will damage the paint.
7. The use of the proper tool(s) and special tool(s) where specified is essential to efficient, reliable, and safe service operations.
8. Always use genuine ISUZU replacement parts.
9. Discard used cotter pins, gasket, O-rings, oil seals, lock washers, and self-locking nuts at disassembly. Normal function of these parts cannot be guaranteed if they are reused.
10. Keep the disassembled parts neatly in groups. This will facilitate smooth and correct reassembly.
11. Keep fixing nuts and bolts separate. Fixing nuts and bolts vary in hardness and design according to installation positions.
12. Clean all parts before inspection or reassembly.
13. Clean the oil ports and other openings with compressed air to make certain that they are free of dirt and obstructions.
14. Lubricate the rotating and sliding faces of all moving parts with oil or grease before installation.
15. Use the recommended liquid gasket to prevent leakage.
16. Be sure to tighten bolts and nuts to the specified torque, using a properly maintained torque wrench.
17. When service operation is completed, make a final check to be sure service has been done properly and problem has been corrected.
18. When removing or replacing parts that require refrigerant to be discharged from the Air conditioning system, be sure to use the ACR⁴ or equivalent to recover and recycle Refrigerant-134a, to promote the movement for the protection of the ozone layer covering the earth.
19. To assure safety, always slowly release air pressure from the air tanks before disconnecting pipes, hoses or other parts from any unit under pressure.

HOW TO USE THIS MANUAL

1. The "GENERAL INFORMATION" includes collectively the following items ① to ⑪ which have relations with all the sections. These items should be read and understood fully before starting each service operations.
 - ① General Repair Instruction
 - ② How To Use This Manual
 - ③ Model Change Information
 - ④ Lifting Instruction
 - ⑤ Torque Specification
 - ⑥ Recommended Liquid Gasket
 - ⑦ Liquid Gasket Application Procedure
 - ⑧ Maintenance Schedule
 - ⑨ Recommended Fluids, Lubricants and Fuels
 - ⑩ Oil Viscosity Chart
 - ⑪ Lubrication Chart
2. The "SERVICE INFORMATION" at the beginning of each service operation section, describes the following information and data ① to ⑥ necessary for the service operation.
 - ① Troubleshooting
 - ② Main Data and Specifications
 - ③ Service Standard
 - ④ Servicing
 - ⑤ Fixing Torque
 - ⑥ Special Tools
3. The description of each service operation section consists of Removal and Installation, Disassembly, Inspection and Repair and Reassembly.

4. Each service operation section begins with a disassembly view of the unit of equipment (with exception of Inspection and Repair).	This illustration is useful for finding components, service procedure, etc.
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CYLINDER HEAD AND VALVE MECHANISM

REMOVAL

Based on ***** model

1. Cylinder head cover and gasket
2. Camshaft upper bracket
3. Camshaft
4. Rocker arm shaft and rocker arm with camshaft lower bracket
5. Cylinder head
6. Cylinder head gasket

Removal Steps

1. Cylinder head cover and gasket
2. Camshaft upper bracket
3. Camshaft
4. Rocker arm shaft and rocker arm with camshaft lower bracket
5. Cylinder head
6. Cylinder head gasket

Note indicating what model the illustration is based on.

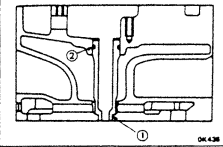
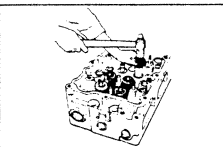
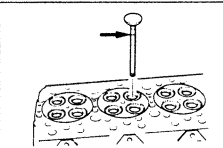
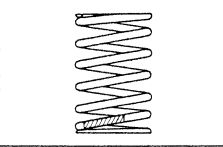
The number represents the service operation sequence.

Parts within a square frame are to be removed and installed as a single unit.

Removal of the parts without numbers (excluding bolts, nuts, washers, gaskets, cotter pins, etc.) is unnecessary except when replacement is needed. Where parts replacement requires specific note, instructions are given in "Inspection and Repair".

Listed here are parts names arranged in the order of the service operation procedure, and used as the title of each service operation in the detailed explanation followed. (Parts names are printed in singular form.)

5. Service operation procedure.

Reassembly Steps

1. **Cylinder Head**
2. **Nozzle Sleeve and O-Ring**
 - 1) Clean the nozzle sleeve circumference and the cylinder head nozzle sleeve fitting faces.
 - 2) Apply the recommended liquid gasket (LOCTITE T.L290 or its equivalent) to the nozzle sleeve outer circumference.
 - 3) Apply engine oil to the O-ring.
 - 4) Install the O-ring to the nozzle sleeve O-ring groove.
 - 5) Use a bench press to install the nozzle sleeve. Apply pressure to the nozzle sleeve gradually.
3. **Valve Spring Lower Seat**
4. **Valve Stem Oil Seal**
 - 1) Apply engine oil to the oil seal inner face.
 - 2) Use the oil seal installer to install the oil seal to the valve guide. Oil Seal Installer: 9-8522-1289-0
5. **Intake and Exhaust Valve**
6. **Valve Spring**
 - 1) Apply engine oil to each valve stem before installation.
 - 2) Install the intake and exhaust valves.
 - 3) Turn the cylinder head up to install the valve springs. Take care not to allow the installed valves to fall free.
 - 4) Install the valve springs with their fine pitched end facing down.

810 All	Intake	Unpainted
	Exhaust	Unpainted
980 P-I All	Intake	Unpainted
	Exhaust	Painted
980 P-II All	Intake	Unpainted
	Exhaust	Painted

Service operation procedure :
When a detailed explanation is required or when special tools have to be used in the removal (and installation) operation, drawings and symbols are also given.

This symbol indicates the type of service operation to be performed.
A more detailed explanation of the various symbols follows.

Service operation procedure :
When the removal (and installation) operation is uncomplicated, only a removal number and a parts name are given.

Special tools are identified with the tool names and tool numbers.
The drawing illustration shows how the tool is used.

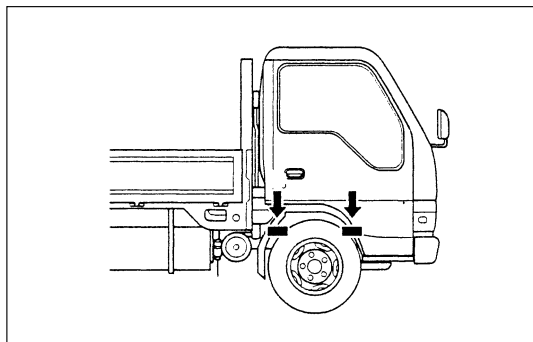
6. In this manual, the following symbols are used to give a full understanding of the service operation to be performed.

... Remove ... Install ... Disassemble ... Reassemble ... Align the marks ... Correct direction ... Inspect ... Take measurement ... Adjustment	... Clean ... Pay close attention ... Tighten to specified torque ... Use special tool(s) (Isuzu's tool(s)) ... Use special tool(s) (parts manufacturer's tool(s)) ... Lubricate with oil ... Lubricate with grease ... Apply liquid gasket
---	--

7. The service standard is indicated in terms of "Standard" and "Limit".
The "Standard" means the assembly standard and standard range within which the parts are

considered serviceable. "Limit" indicates the limit value (Correction or replacement is necessary when measurement is beyond this limit).

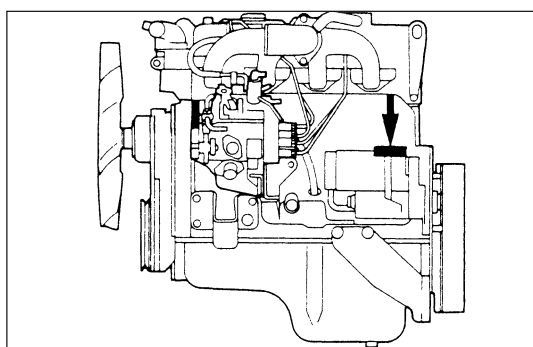
IDENTIFICATION



Chassis Number:

It is stamped on the front right-hand side face of the chassis side member.

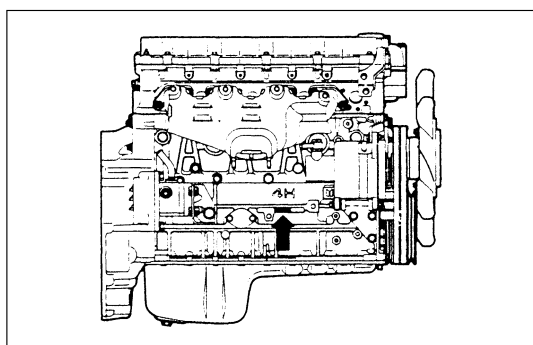
- ①: NHR and NKR models with independent front suspension.
- ②: NPR, NQR and NPS models with rigid axle front suspension.



Engine Number:

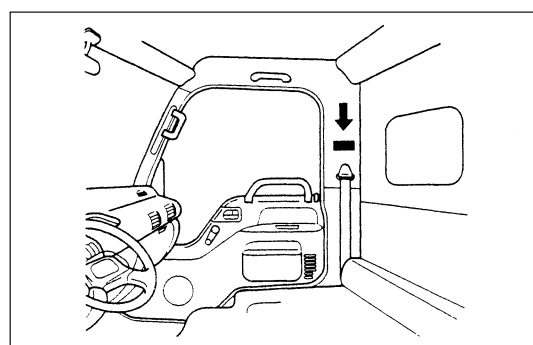
4J Series Engine

It is stamped on the left side rear of the cylinder body.



4H Series Engine

The engine number is stamped on the right side of the cylinder body.



Vehicle Identification plate

The vehicle identification plate is attached to the interior side of the cab side panel on the right side.

LIFTING INSTRUCTION

If it is necessary to use a lifting device other than the original equipment jack, see illustration for acceptable lifting points.

Lifting should only be done at the positions indicated to prevent possible damage to the vehicle.

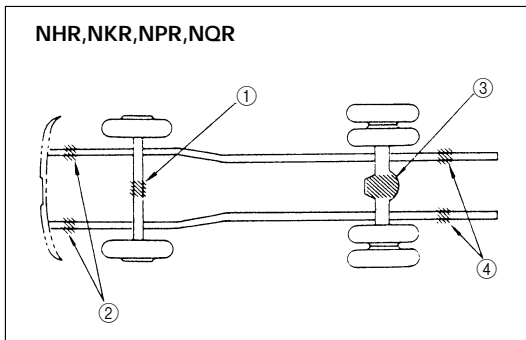


CAUTION:

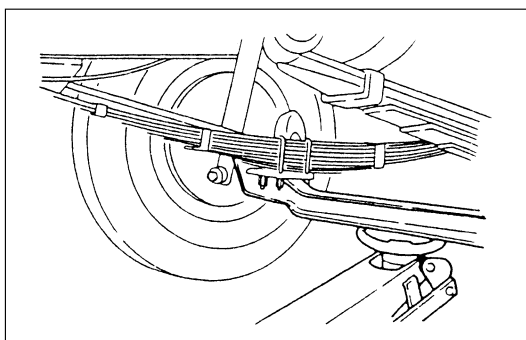
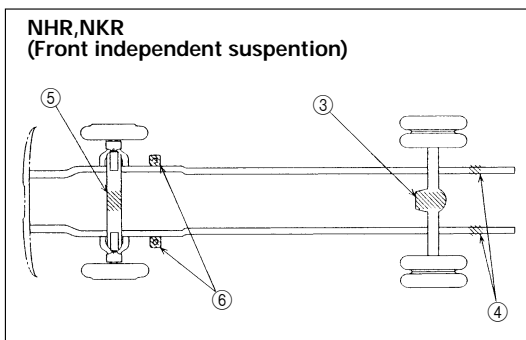
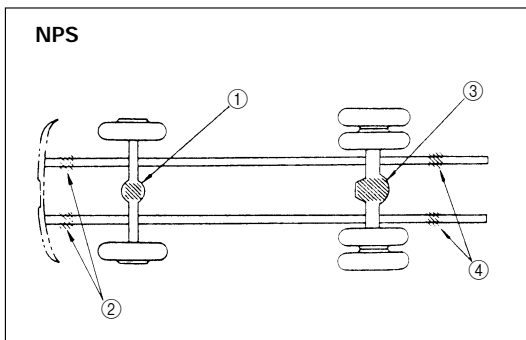
Failure to observe the acceptable lift points may result in unsatisfactory vehicle performance or a durability failure which may result in loss of control of the vehicle.

Garage Jack and Safety Stand

Lifting point and supportable point location



- ① Front axle
- ② Side frame front side
- ③ Rear axle center
- ④ Side frame rear side
- ⑤ Suspension cross member
- ⑥ Jack up bracket



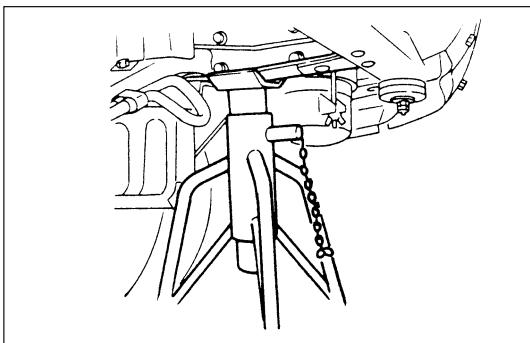
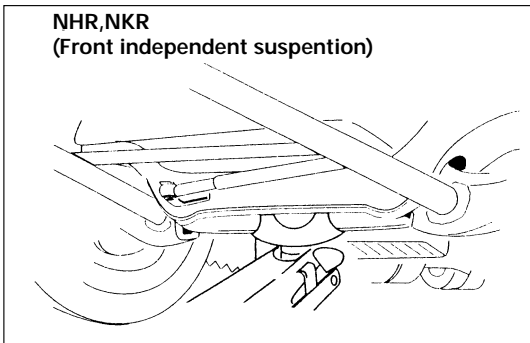
Front Side; Lifting Point

Note:

Do not lift or support on engine oil pan.

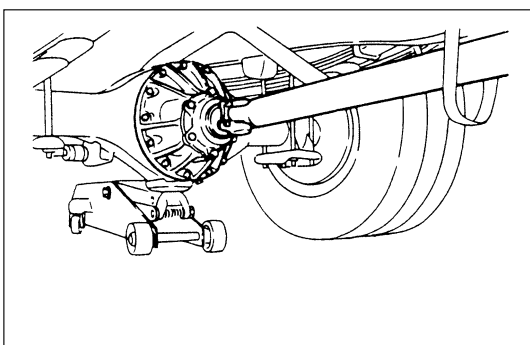
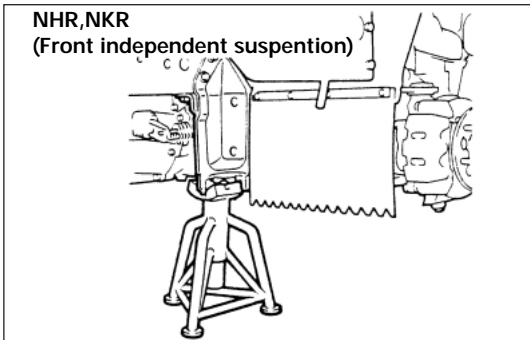
0A-8 GENERAL INFORMATION

NHR,NKR
(Front independent suspension)



Front Side Supportable Point

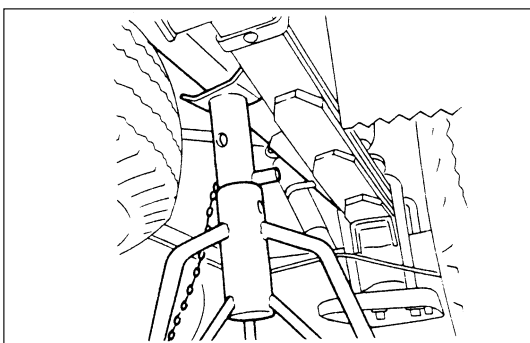
NHR,NKR
(Front independent suspension)



Rear Side Lifting Point

Note:

Do not lift or support on rear axle tube.



Rear Side Supportable Point





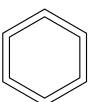

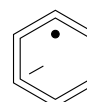
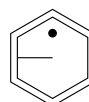
TORQUE SPECIFICATIONS

STANDARD BOLTS

The torque values given in the following table should be applied where a particular torque is not specified.

N·m (kg·m / lb·ft)

N·m [kg·cm / lb·in]

<div>Strength Class</div> <div>Bolt Identification</div> <div>Bolt Diameter x Pitch (mm)</div>	4.8	8.8		9.8
		Refined	Non-Refined	
				
	 No mark			
M 6x1.0	6 [60 / 52]	7 [75 / 65]		–
M 8x1.25	13 [130 / 113]	17 [175 / 152]		24 [240 / 208]
M10x1.25	27 (2.8 / 20)	37 (3.8 / 27)		50 (5.1 / 37)
M12x1.25	61 (6.3 / 45)	76 (7.8 / 56)		95 (9.7 / 70)
M14x1.5	96 (9.8 / 71)	116 (11.9 / 86)		142 (14.5 / 105)
M16x1.5	130 (13.3 / 96)	170 (17.3 / 125)		200 (20.4 / 148)
M18x1.5	188 (19.2 / 139)	244 (24.9 / 180)		287 (29.3 / 212)
M20x1.5	258 (26.3 / 190)	337 (34.4 / 249)		396 (40.4 / 292)
M22x1.5	332 (33.9 / 245)	453 (46.3 / 335)		530 (54.1 / 391)
M24x2.0	449 (45.8 / 331)	570 (58.2 / 421)		692 (70.6 / 511)
*M10x1.5	26 (2.7 / 20)	36 (3.7 / 27)		48 (4.9 / 35)
*M12x1.5	57 (5.8 / 42)	71 (7.2 / 52)		89 (9.1 / 66)
*M14x2.0	89 (9.1 / 66)	110 (11.2 / 81)		133 (13.6 / 98)
*M16x2.0	124 (12.7 / 92)	162 (16.5 / 119)		191 (19.5 / 141)

The asterisk * indicates that the bolts are used for female-threaded parts that are made of soft materials such as casting, etc.

FLARE NUTS

N·m (kg·m / lb·ft)

Pipe diameter mm (in)	Torque	Pipe diameter mm (in)	Torque
4.76 (0.187)	16 (1.6 / 12)	10.00 (0.394)	54 (5.5 / 40)
6.35 (0.250)	26 (2.7 / 20)	12.00 (0.472)	88 (9.0 / 65)
8.00 (0.315)	44 (4.5 / 33)	15.00 (0.591)	106 (10.8 / 78)

RECOMMENDED LIQUID GASKET

TYPE	BRAND NAME	MANUFACTURER	APPLICATION PARTS (EXAMPLE)
RTV* Silicon Base	ThreeBond 1207B ThreeBond 1207C ThreeBond 1215 ThreeBond 1216 ThreeBond 1281	ThreeBond ThreeBond ThreeBond ThreeBond ThreeBond	Engine Oil Seal Retainer Engine Oil Pan Timing Gear Case Cylinder Head Cover Fuel Pump Water Pump Rear Axle etc.
Water Base	ThreeBond 1141E	ThreeBond	
Solvent	ThreeBond 1104 BelcoBond 4 BelcoBond 401 BelcoBond 402	ThreeBond Isuzu Isuzu Isuzu	
Anaerobic	LOCTITE 515 LOCTITE 518	LOCTITE LOCTITE	Engine Oil Seal Retainer Water Pump Transaxle etc.

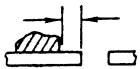

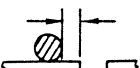



*RTV: Room Temperature Vulcanizer

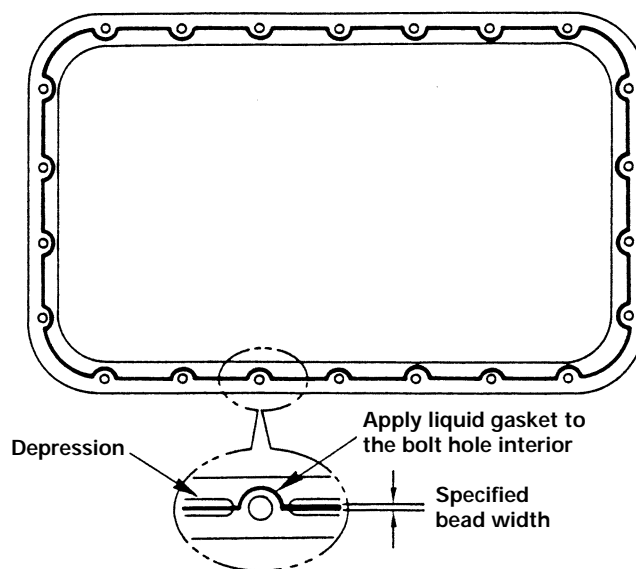
NOTE:

1. It is very important that the liquid gaskets listed above or their exact equivalent be used on the vehicle.
2. LOCTITE 515 and LOCTITE 518 harden upon contact with a metal surface.
Do not apply LOCTITE 515 or LOCTITE 518 between two metal surfaces having a clearance of greater than 0.25 mm (0.001 in). Poor adhesion will result.
3. Be careful to use the specified amount of liquid gasket.
Follow the manufacturer's instructions at all times.

Application Procedure

1. Completely remove lubricant and moisture from the connecting surfaces.
The surfaces must be perfectly dry.
2. Apply specified bead width of liquid gasket to one of the connecting surfaces.

mm (in.)		
SCREW HOLE	DEPRESSION	JUDGEMENT
1-3 (0.04-0.12) 		OK
1-3 (0.04-0.12) 	More than 2(0.08) 	OK
		NG

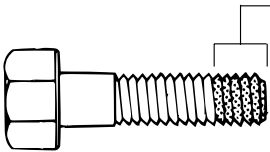


Example
 Anaerobic Type : 2-3mm (0.08-0.12 inch)
 Others : 2-6mm (0.08-0.24 inch)

NOTE:

When the application procedures are specified in this Workshop manual, follow them.

RECOMMENDED THREAD LOCKING AGENT

TYPE	COLOR	APPLICATION STEPS
LOCTITE 242	Blue	<ol style="list-style-type: none"> 1. Completely remove all lubricant and moisture from the bolts and the female threaded surfaces of the parts to be joined. The surfaces must be perfectly dry. 2. Apply LOCTITE to the bolts.
LOCTITE 262	Red	 <p>Apply LOCTITE to at least 1/3 of the bolt's threaded area</p>
LOCTITE 271	Red	<ol style="list-style-type: none"> 3. Tighten the bolts to the specified torque. <p>NOTE: After tightening, be sure to keep the bolts free from vibration and torque for at least an hour until LOCTITE hardens.</p>

NOTE:

When the application procedures are specified in this Workshop manual, follow them.

SECTION 0B

MAINTENANCE AND LUBRICATION

CONTENTS

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Lubrication Chart	0B-18

MAINTENANCE SCHEDULE

(For Europe only)

When performing the checks on the following items, regular inspection items should also be checked.

ABBREVIATIONS USED IN THIS MANUAL

- I : Inspect, clean and correct or replace as necessary
- A : Adjust
- R : Replace or change
- T : Tighten to specified torque
- L : Lubricate
- V

Variation (optional on some models).
- OPT

Optional equipment.
- 4J

For 4JB1-TC engine model.
- 4H

For 4HE1-TC engine model.

[illegible]

0B-4 MAINTENANCE AND LUBRICATION

Maintenance schedule

Use odometer reading or months whichever comes first

SERVICE INTERVAL: x 1,000 km. x 1,000 miles or months	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
TRANSMISSION																				
* Manual Transmission oil	-	-	I	-	-	I	-	-	R	-	-	I	-	-	R	-	-	I	-	-
Gear control mechanism for looseness	-	-	-	-	-	-	-	I	-	-	-	-	-	-	-	I	-	-	-	-
Gear control cable	-	-	A	-	-	-	-	-	A	-	-	-	-	-	A	-	-	-	-	-
PROPELLER SHAFT																				
* Universal joints and sliding sleeve	-	-	L	-	-	-	-	-	L	-	-	-	-	-	L	-	-	-	-	-
Loose connections	-	-	I	-	-	I	-	-	I	-	-	I	-	-	I	-	-	I	-	-
Splines for excessive wear	-	-	-	-	-	-	-	-	I	-	-	-	-	-	I	-	-	-	-	-
Bearings and related parts for looseness	-	-	-	-	-	-	-	-	I	-	-	-	-	-	I	-	-	-	-	-
Center bearing	-	-	L	-	-	-	-	-	L	-	-	-	-	-	L	-	-	-	-	-
REAR AXLE																				
* Differential gear oil	-	-	I	-	-	I	-	-	R	-	-	I	-	-	I	-	-	R	-	-
FRONT AXLE																				
* Kingpin	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L
STEERING																				
Power steering system oil leakage	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Power steering fluid	-	-	-	-	-	-	-	R	-	-	-	-	-	-	-	R	-	-	-	-
* Power steering system for looseness or damage	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Fitting of knuckles and front axle for looseness	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Steering mechanism for looseness or damage	-	-	-	-	-	-	-	I	-	-	-	-	-	-	-	I	-	-	-	-
Ball joint boots for damage (Independent suspension model only)	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Ball joint for excessive play (Independent suspension model only)	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Relay lever shaft for excessive play (Independent suspension model only)	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Steering wheel play	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Steering function	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Wheel alignment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	I	-	-	-	-
Power steering hose	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R	-	-	-	-

[illegible]

0B-6 MAINTENANCE AND LUBRICATION

Maintenance schedule

Use odometer reading or months whichever comes first

SERVICE INTERVAL:	x 1,000 km.	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
	x 1,000 miles	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
	or months	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
ELECTRICAL EQUIPMENT																					
Specific gravity of battery electrolyte		-		-		-		-		-		-		-		-		-		-	
OTHERS																					
Lights, horn, windshield, wiper and washer		-		-		-		-		-		-		-		-		-		-	
Bolts and nuts on chassis and body		-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-	-

Maintenance schedule under severe driving conditions

Severe driving conditions

A : Repeated short trips

B : Driving on rough roads

C : Driving on dusty roads

D : Driving extremely cold weather and/or on salted roads

Item	Interval	Condition				
		A	B	C	D	A+D
4J Engine oil and oil filter	Change every 5,000 km (3,000 miles)			●		●
4H Engine oil and oil filter	Change every 7,500 km (4,500 miles)			●		●
Exhaust pipes and mounting	Inspect every 10,000 km (6,000 miles)	●	●		●	
Air cleaner element	Replace every 20,000 km (12,000 miles)			●		
Steering system for looseness or damage	Inspect every 5,000 km (3,000 miles)		●			
Universal joints and sliding sleeve grease	Lubricate every 10,000 km (6,000 miles)		●			
Manual transmission and differential gear oil	Change every 20,000 km (12,000 miles)		●			
Brake lining and drum for wear	Inspect every 10,000 km (6,000 miles)	●	●	●		
Disc brake pads and discs for wear	Inspect every 5,000 km (3,000 miles)	●	●	●		

MAINTENANCE SCHEDULE (EXCEPT EUROPE)

When performing the checks on the following items,
regular inspection items should also be checked.

ABBREVIATIONS USED IN THIS MANUAL

- I : Inspect, clean and correct or replace as necessary
- A : Adjust
- R : Replace or change
- T : Tighten to specified torque
- L : Lubricate
- VVariation (optional on some models).
- OPTOptional equipment.
- 4JGFor 4JG2 engine model.
- 4JFor 4J engine models.
- 4HF1-2For 4HF1-2 engine model.
- 4HFor 4H engine model.
- MTFor manual transmission model only.
- ATFor automatic transmission model only.

SERVICE INTERVAL:		x 1,000 km.	1	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
		x 1,000 miles	0.6	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	
		or months	1	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60	
<div>4J</div> ENGINE																								
*Engine oil			-	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
*Oil filter			-	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	
Fuel filter			-	-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R	
*Air cleaner element			-	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	
Idling speed and acceleration			-	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	
Valve clearances			I	-	-	-	-	-	-	-	A	-	-	-	-	-	-	-	A	-	-	-	-	
Fuel tank cap & fuel pipes for loose connections or damage			-	-	-	-	-	-	-	-	I	-	-	-	-	-	-	-	I	-	-	-	-	
<div>OPT</div> <div>4JG</div> Timing belt			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R	
Drive belt tension and damage			I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	
Radiator coolant (Ethylene glycol antifreeze)			-	-	-	-	-	-	-	-	R	-	-	-	-	-	-	-	R	-	-	-	-	
*Exhaust pipes and mounting damage or looseness			-	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	
Cooling system			-	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	
Engine operation condition			-	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	
<div>4H</div> ENGINE																								
*Engine oil			-	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	
*Oil filter			-	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	-	R	
Fuel filter: Main Fuel filter			-	-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R	-	-	-	R	
<div>OPT</div> Main Fuel filter and Sub Fuel filter: With Sub fuel filter			-	-	-	-	-	-	-	-	R	-	-	-	-	-	-	-	R	-	-	-	-	
*Air cleaner element			-	-	I	-	I	-	I	-	R	-	I	-	I	-	I	-	R	-	I	-	I	
Idling speed and acceleration			-	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	
Valve clearances			I	-	-	-	-	-	-	-	A	-	-	-	-	-	-	-	A	-	-	-	-	
Feed pump strainer (Except <div>4HF1-2</div>)			-	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	
Fuel tank cap & fuel pipes for loose connections or damage			-	-	-	-	-	-	-	-	I	-	-	-	-	-	-	-	I	-	-	-	-	
Drive belt tension and damage			I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	
Radiator coolant (Ethylene glycol antifreeze)			-	-	-	-	-	-	-	-	R	-	-	-	-	-	-	-	R	-	-	-	-	
*Exhaust pipes and mounting damage or looseness			-	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	
Cooling system			-	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	-	-	-	I	
Engine operation condition			-	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	
<div>MT</div> CLUTCH																								
Clutch fluid			-	-	I	-	I	-	I	-	R	-	I	-	I	-	I	-	R	-	I	-	I	
Clutch pedal travel and free play			-	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	

0B-10 MAINTENANCE AND LUBRICATION

Maintenance schedule

Use odometer reading or months whichever comes first

SERVICE INTERVAL: x 1,000 km. x 1,000 miles or months	1	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
	0.6	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
	1	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
TRANSMISSION																					
* <input type="checkbox"/> MT Manual Transmission oil	-	-	I	-	I	-	I	-	R	-	I	-	I	-	I	-	R	-	I	-	I
* <input type="checkbox"/> AT Automatic Transmission fluid	-	-	-	-	-	-	-	-	R	-	-	-	-	-	-	-	R	-	-	-	-
Gear control mechanism for looseness	-	-	-	-	-	-	-	-	I	-	-	-	-	-	-	-	I	-	-	-	-
Gear control cable	-	-	-	-	A	-	-	-	A	-	-	-	A	-	-	-	A	-	-	-	A
TRANSMISSION WITH TRANSFER CASE (NPS model only)																					
* Transmission with transfer case oil	-	-	I	-	I	-	I	-	R	-	I	-	I	-	I	-	R	-	I	-	I
Gear control mechanism for looseness	-	-	-	-	-	-	-	-	I	-	-	-	-	-	-	-	I	-	-	-	-
Gear control cable	-	-	-	-	A	-	-	-	A	-	-	-	A	-	-	-	A	-	-	-	A
PROPELLER SHAFT																					
* Universal joints and sliding sleeve	-	-	-	-	L	-	-	-	L	-	-	-	L	-	-	-	L	-	-	-	L
Loose connections	-	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I	-	I
Splines for excessive wear	-	-	-	-	-	-	-	-	I	-	-	-	-	-	-	-	I	-	-	-	-
Bearings and related parts for looseness	-	-	-	-	-	-	-	-	I	-	-	-	-	-	-	-	I	-	-	-	-
Center bearing	-	-	-	-	L	-	-	-	L	-	-	-	L	-	-	-	L	-	-	-	L
REAR AXLE																					
* Differential gear oil	-	-	I	-	I	-	I	-	R	-	I	-	I	-	I	-	R	-	I	-	I
FRONT AXLE																					
* Kingpin	-	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L
Differential gear oil (NPS model only)	-	-	I	-	I	-	I	-	R	-	I	-	I	-	I	-	R	-	I	-	I

Maintenance schedule

Use odometer reading or months whichever comes first

SERVICE INTERVAL: x 1,000 km. x 1,000 miles or months	1	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
	0.6	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
	1	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
STEERING																					
Manual steering gear oil	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-
<input type="checkbox"/> OPT Power steering system oil leakage	-	-		-		-		-		-		-		-		-		-		-	
<input type="checkbox"/> OPT Power steering fluid	-	-	-	-	-	-	-	-	R	-	-	-	-	-	-	-	R	-	-	-	-
* <input type="checkbox"/> OPT Power steering system for looseness or damage	-	-		-		-		-		-		-		-		-		-		-	
Fitting of knuckles and front axle for looseness	-	-		-		-		-		-		-		-		-		-		-	
Steering mechanism for looseness or damage	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-
Ball joint boots for damage (Independent suspension model only)	-	-		-		-		-		-		-		-		-		-		-	
Ball joint for excessive play (Independent suspension model only)	-	-		-		-		-		-		-		-		-		-		-	
Relay lever shaft for excessive play (Independent suspension model only)	-	-		-		-		-		-		-		-		-		-		-	
Steering wheel play	-																				
Steering function	-																				
Wheel alignment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-
<input type="checkbox"/> OPT Power steering hose	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R	-	-	-	-
SERVICE BRAKES																					
Brake fluid	-	-		-		-		-	R	-		-		-		-	R	-		-	
<input type="checkbox"/> V Hydro booster fluid (ATF)	-	-		-		-		-	R	-		-		-		-	R	-		-	
Brake system for fluid leakage	-	-		-		-		-		-		-		-		-		-		-	
* Brake lining and drum for wear	-	-	-	-		-	-	-		-	-	-		-	-	-		-	-	-	
* Disc brake pads and discs for wear	-	-		-		-		-		-		-		-		-		-		-	
Brake pedal travel and free play																					
Pipes and hoses for loose connections or damage	-	-		-		-		-		-		-		-		-		-		-	
PARKING BRAKE																					
Parking brake cables	-	-		-		-		-		-		-		-		-		-		-	
Parking brake function	-	-		-		-		-		-		-		-		-		-		-	
Parking brake lever travel	-	-		-		-		-		-		-		-		-		-		-	
Lining for wear	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-
Drum for wear or damage	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-
Ratchet for wear or damage	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-

0B-12 MAINTENANCE AND LUBRICATION

Maintenance schedule

Use odometer reading or months whichever comes first

SERVICE INTERVAL: x 1,000 km. x 1,000 miles or months	1	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
	0.6	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
	1	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54	57	60
SUSPENSION																					
Spring leaves for damage	-	-		-		-		-		-		-		-		-		-		-	
Torsion bar Spring (Independent suspension model only)	-	-		-		-		-		-		-		-		-		-		-	
Ball joint boots for damage (Independent suspension model only)	-	-		-		-		-		-		-		-		-		-		-	
Mount for looseness or damage	-	-		-		-		-		-		-		-		-		-		-	
Spring pin (NPS model only)	-	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L	-	L
Shock absorbers for oil leakage	-	-		-		-		-		-		-		-		-		-		-	
Shock absorbers mount for looseness	-	-		-		-		-		-		-		-		-		-		-	
Ball joint for excessive play (independent suspension model only)	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-
Upper links (Independent suspension model only)	-	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
WHEELS																					
Wheel pins and nuts	T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	-	T
Wheel disc for damage	-	-	-	-		-	-	-		-	-	-		-	-	-		-	-	-	
Hub bearing grease	-	-	-	-	-	-	-	-	R	-	-	-	-	-	-	-	R	-	-	-	-
Tire pressure and damage	-	-		-		-		-		-		-		-		-		-		-	
ELECTRICAL EQUIPMENT																					
Specific gravity of battery electrolyte	-	-		-		-		-		-		-		-		-		-		-	
OTHERS																					
Lights, horn, windshield, wiper and washer	-	-		-		-		-		-		-		-		-		-		-	
Drive shaft dust boots for damage (NPS model only)	-	-	-	-		-	-	-		-	-	-		-	-	-		-	-	-	
Bolts and nuts on chassis and body		-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-

Maintenance schedule under severe driving conditions

Severe driving conditions

- A : Repeated short trips
- B : Driving on rough roads
- C : Driving on dusty roads
- D : Driving extremely cold weather and/or on salted roads

Item	Interval	Condition				
		A	B	C	D	A+D
4J Engine oil: with Partial-flow oil filter	Change every 2,500 km (1,500 miles)			●		●
4H Engine oil: with Partial-flow oil filter	Change every 5,000 km (3,000 miles)			●		●
Engine oil filter	Replace every 5,000 km (3,000 miles)			●		●
Exhaust pipes and mounting	Inspect every 10,000 km (6,000 miles)	●	●		●	
Air cleaner element	Replace every 20,000 km (12,000 miles)			●		
Steering system for looseness or damage	Inspect every 5,000 km (3,000 miles)		●			
Universal joints and sliding sleeve grease	Lubricate every 10,000 km (6,000 miles)		●			
Manual transmission and differential gear oil	Change every 20,000 km (12,000 miles)		●			
Automatic transmission gear fluid	Change every 20,000 km (12,000 miles)		●			
Transmission with transfer case gear oil (NPS model)	Change every 20,000 km (12,000 miles)		●			
Brake lining and drum for wear	Inspect every 10,000 km (6,000 miles)	●	●	●		
Disc brake pads and discs for wear	Inspect every 5,000 km (3,000 miles)	●	●	●		

RECOMMENDED FLUIDS, LUBRICANTS AND DIESEL FUELS

In order to obtain maximum performance and longest service life from your ISUZU vehicles, it is very important to select and use correctly best lubricants and diesel fuels.

When lubricating, be sure to use ISUZU genuine lubricants or recommended lubricants listed below, according to the maintenance schedule for each vehicle model.

The lubrication intervals in the maintenance schedule and the coverage and period of new vehicle warranty are based on the use of ISUZU genuine lubricants or recommended lubricants as given in the chart which will serve as a guide for selecting lubricants of proper brand name.

LUBRICATION	MAKE	BRAND / TYPE	GRADE	
			API	ACEA
Diesel engine crankcase	ISUZU GENUINE ISUZU GENUINE ISUZU GENUINE EXXON / ESSO EXXON / ESSO MOBIL CALTEX/CHEVRON SHELL ELF TOTAL	BESCO MULTI – Z TYPE CE (10W-30) BESCO MULTI – Z (10W-30) BESCO S – 3 (10W, 20W, 30, 40) ESSOLUBE XD-3+ (15W-40) ESSOLUBE XT331 (15W-40) DELVAC HP (15W-40, 20, 30, 40) DELO CXJ (15W-40, 30, 40) RIMURA D (15W-40, 30, 40) PERFORMANCE TROPHY (15W-40) RUBIA XT (15W-40)	CE CD CD CG-4/CF CG-4/CF CF/CE CF CD/CF CE CF-4	E2/B2 E2/B2 E3 E2
Manual transmission Transfer case	ISUZU GENUINE EXXON / ESSO EXXON / ESSO MOBIL CALTEX / TEXACO SHELL ELF TOTAL	BESCO GEAR OIL TRANSAXLE (5W-30) ESSOLUBE XD-3+ (15W-40) ESSOLUBE XT331 (15W-40) MOBIL SUPER (10W-30) HAVOLINE FORMULA-3 (15W-40, 20W-50) RIMURA D (15W-40) SUPER SPORTI S (15W-40) QUARTZ 5000 (15W-40, 20W-50)	SG CG-4/CF CG-4/CF SH SH CD/CF SG/CD SJ/CF	E2/B2 E2/B2 A2/B2
Differential	ISUZU GENUINE EXXON / ESSO MOBIL CALTEX SHELL ELF TOTAL	BESCO GEAR OIL SH (80W-90, 90, 140) GEAR OIL GX (85W-90) MOBILUBE HD (80W-90, 85W-140) THURBAN GL-5 EP (80W-90, 85W-140) SPIRAX HD (90, 140) TRANSELF TYPE B (80W-90, 85W-140) TRANSMISSION TM (80W-90, 85W-140)	GL-5 GL-5 GL-5 GL-5 GL-5 GL-5 GL-5	
Automatic transmission Power steering Hydro brake booster	ISUZU GENUINE EXXON / ESSO MOBIL CALTEX SHELL ELF TOTAL	BESCO ATF II, ATF III ESSO ATF D (DEXRON® II-D) MOBIL ATF (DEXRON® III) ATF HD (DEXRON® II) SHELL DONAX TA (DEXRON® II-D) ELFMATIC G3 (DEXRON® III) TOTAL FLUID IID (DEXRON® II-D)		
Center bearing King pin Upper links (General purpose grease)	ISUZU GENUINE EXXON / ESSO MOBIL CALTEX / TEXACO SHELL TOTAL	BESCO L-2 GREASE (No.2), L-3 GREASE (No.3) RONEX MP (No.2) MOBILGREASE HP 222 (No.2) STARPLEX-2 (No.2) SHELL RETINAX A (No.2) MULTIS EP2, EP3 (No.2, No.3)		

LUBRICATION	MAKE	BRAND / TYPE	GRADE	
			API	ACEA
Propeller shaft sliding yoke Universal joint (General purpose grease) (in Molybdenum)	ISUZU GENUINE EXXON / ESSO EXXON / ESSO CALTEX TOTAL	ONE LUBER MO GREASE BEACON Q2 (No.2) MULTIPURPOSE GREASE (Moly) (No.2) MOLYTEX GREASE EP2 (No.2) TOTAL MULTIS MS2 (No.2)		
Engine cooling system	ISUZU GENUINE TEXACO / CALTEX	BESCO LLC SUPER TYPE E HAVOLINE EXTENDED LIFE ANTIFREEZE COOLANT HAVOLINE XLC EXTENDED LIFE COOLANT 6280		

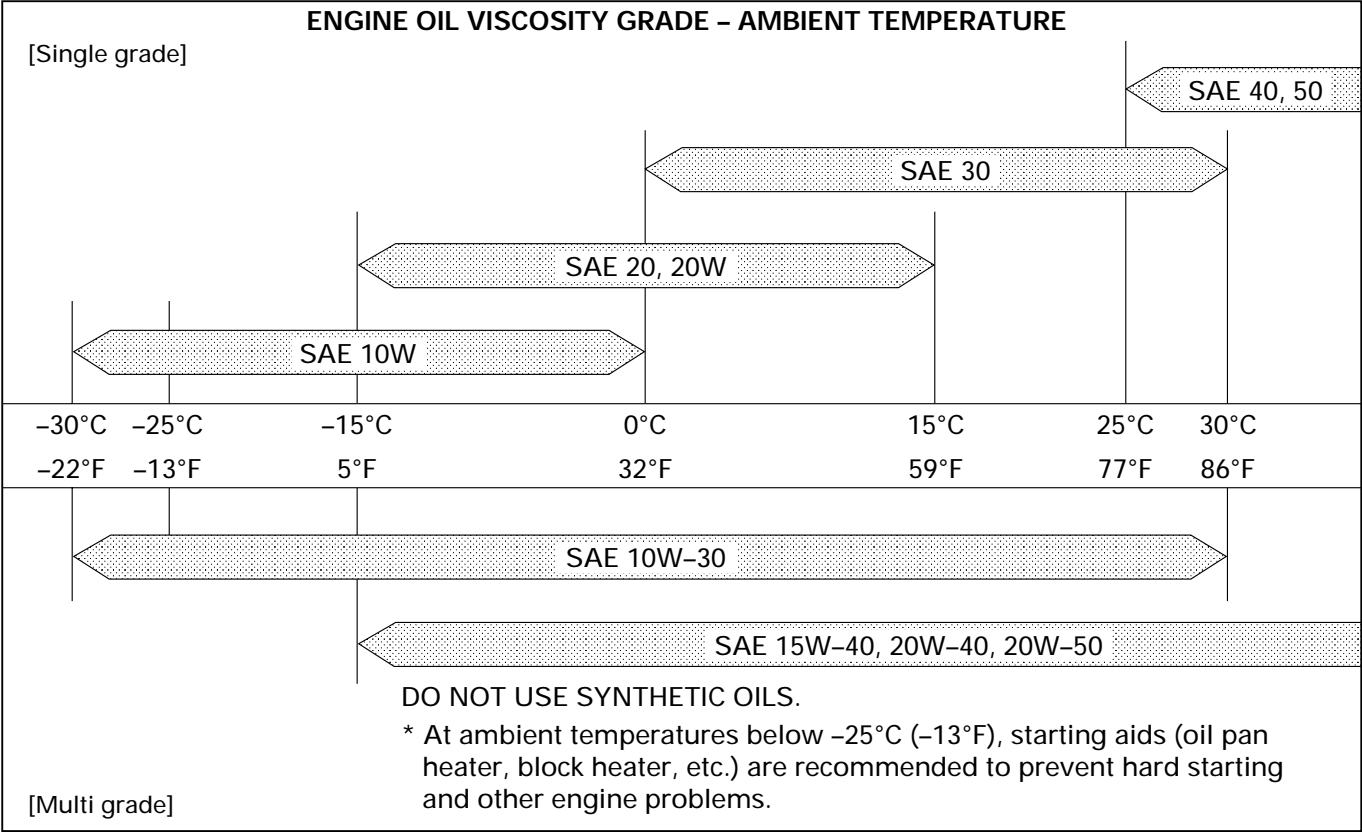
FLUID	TYPE
Clutch and brake fluid reservoir	Besco brake fluid (For light duty) Hydraulic brake fluid SAE J1703 FMVSS 116 DOT.3 grade

NOTE:

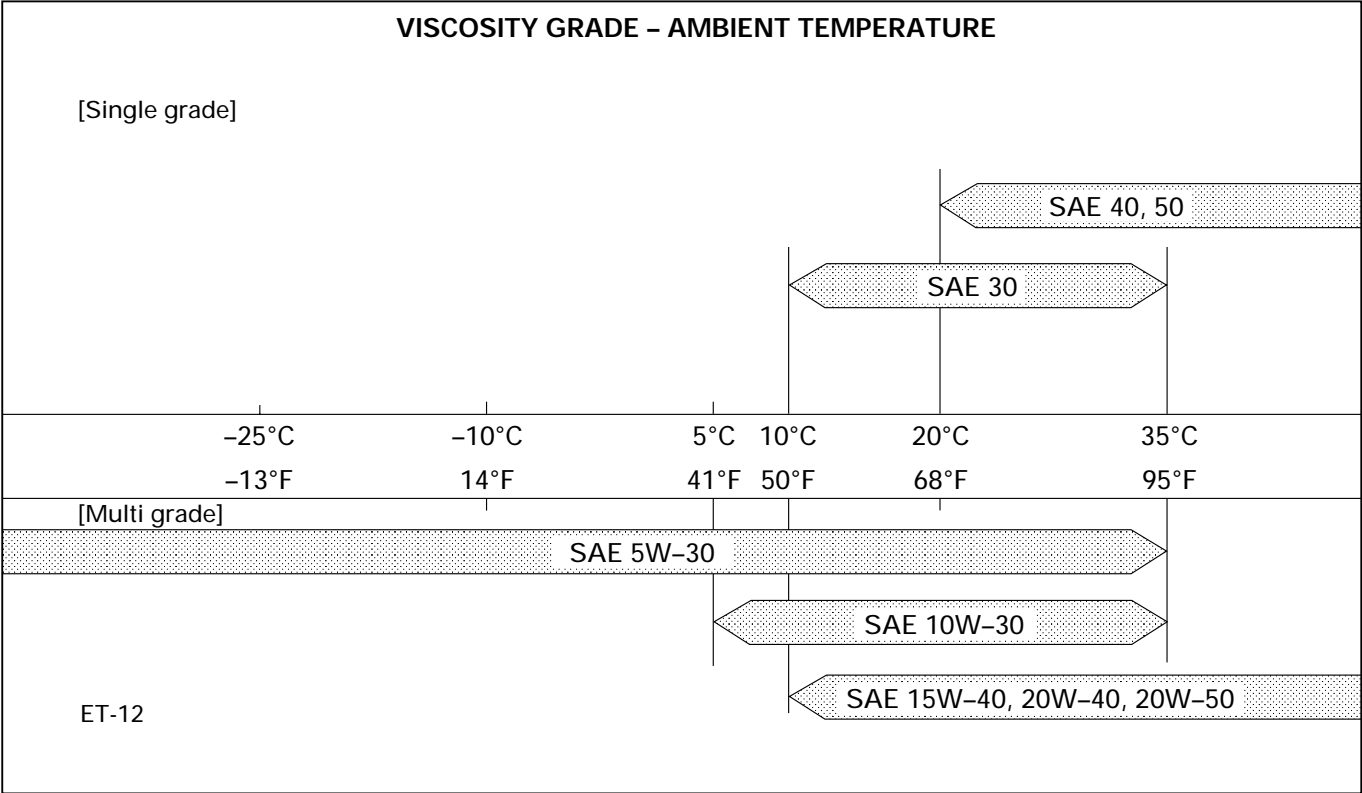
When the recommended lubricants are specified in the workshop manual, follow them.

OIL VISCOSITY CHART

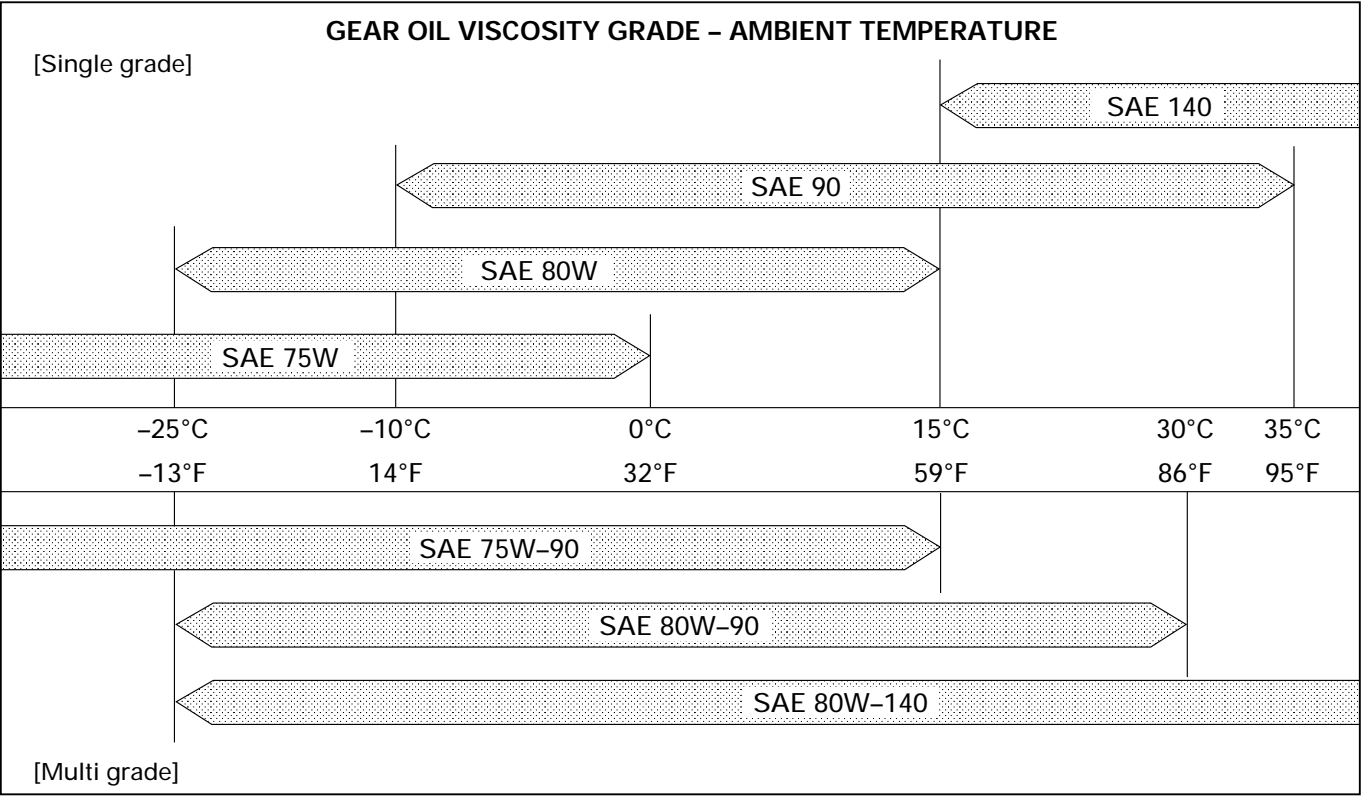
ENGINE OIL



MANUAL TRANSMISSION AND TRANSFER CASE OIL (ENGINE OIL)



FRONT AXLE AND REAR AXLE OIL



LUBRICATION CHART

NHR, NKR (Front Independent Suspension) models

Change

Check and Replenish or Lubricate

E : Engine oil

G : Gear Oil

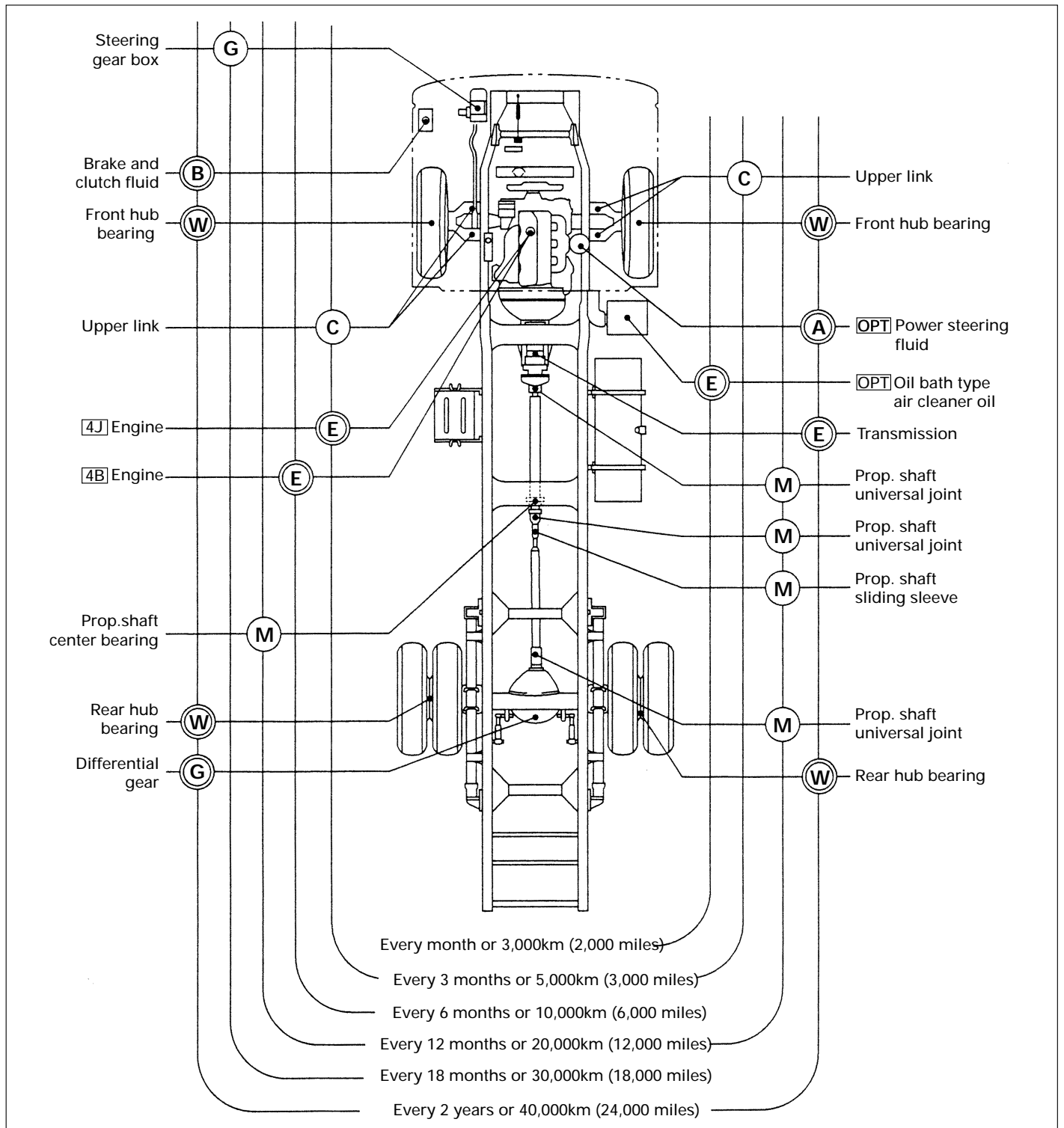
W : Wheel bearing grease

C : Multipurpose type grease

M : MoS2 contained type grease

B : Brake fluid

A : Automatic transmission fluid



NHR, NKR55, NKR69, NPR55 and NPR69 models

Change

Check and Replenish or Lubricate

E : Engine oil

G : Gear Oil

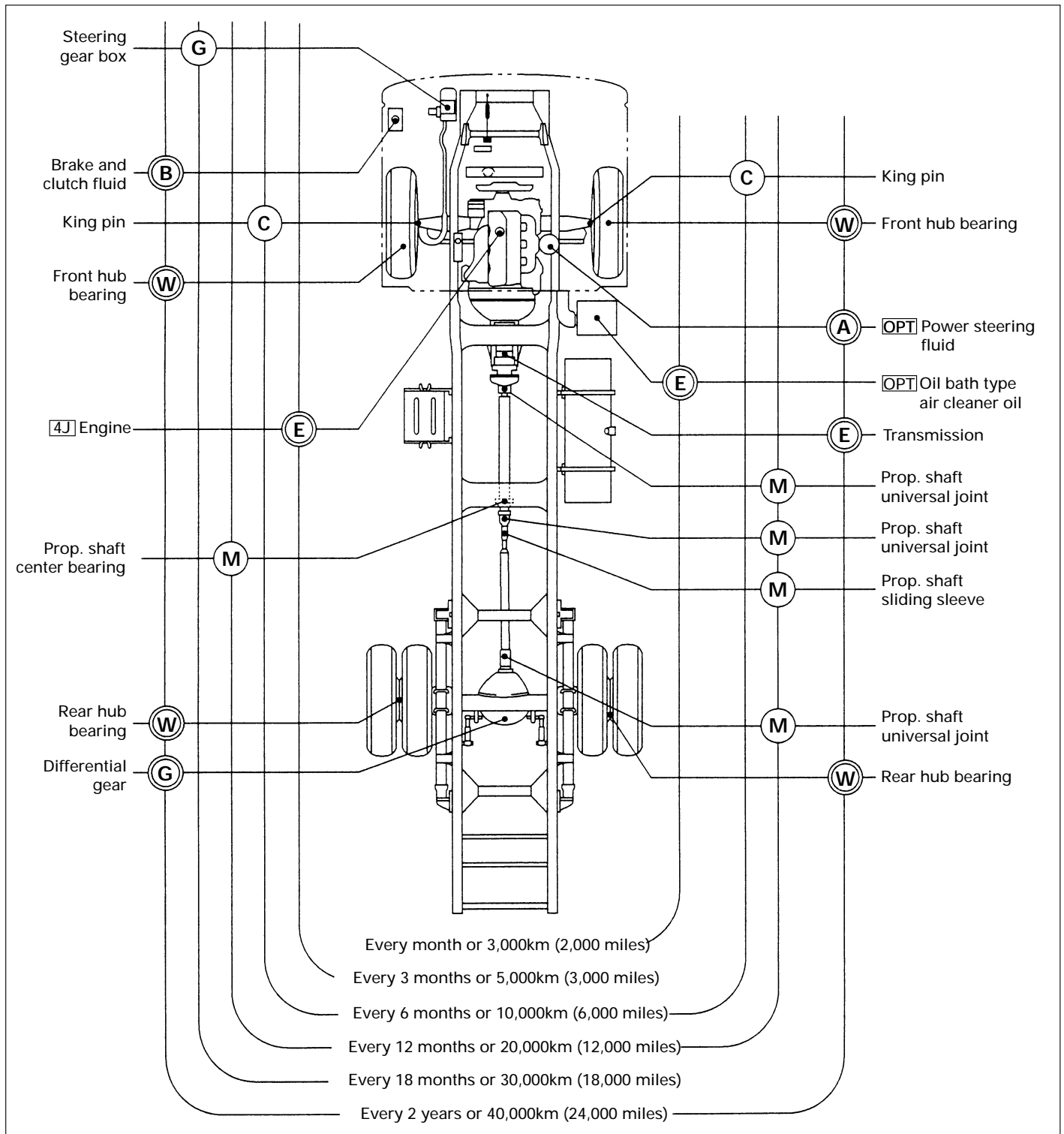
W : Wheel bearing grease

C : Multipurpose type grease

M : MoS2 contained type grease

B : Brake fluid

A : Automatic transmission fluid



NKR66, NPR66, NPR70, NPR71, NQR66, NQR70 and NQR71 models

Change

Check and Replenish or Lubricate

E : Engine oil

G : Gear Oil

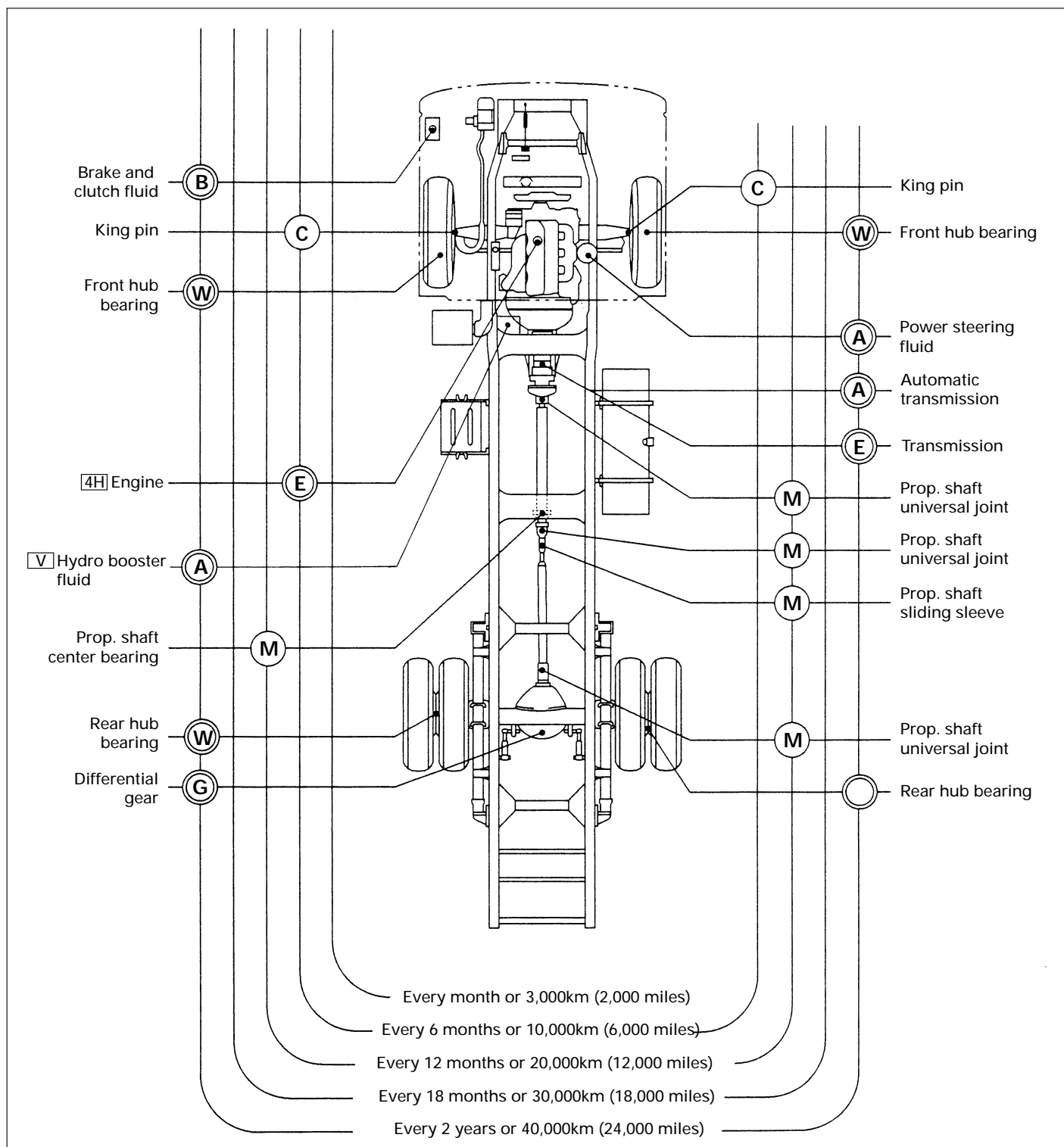
W: Wheel bearing grease

C : Multipurpose type grease

M: MoS2 contained type grease

B : Brake fluid

A : Automatic transmission fluid



NPS66 and NPS71 model

Change

Check and Replenish or Lubricate

E : Engine oil

G : Gear Oil

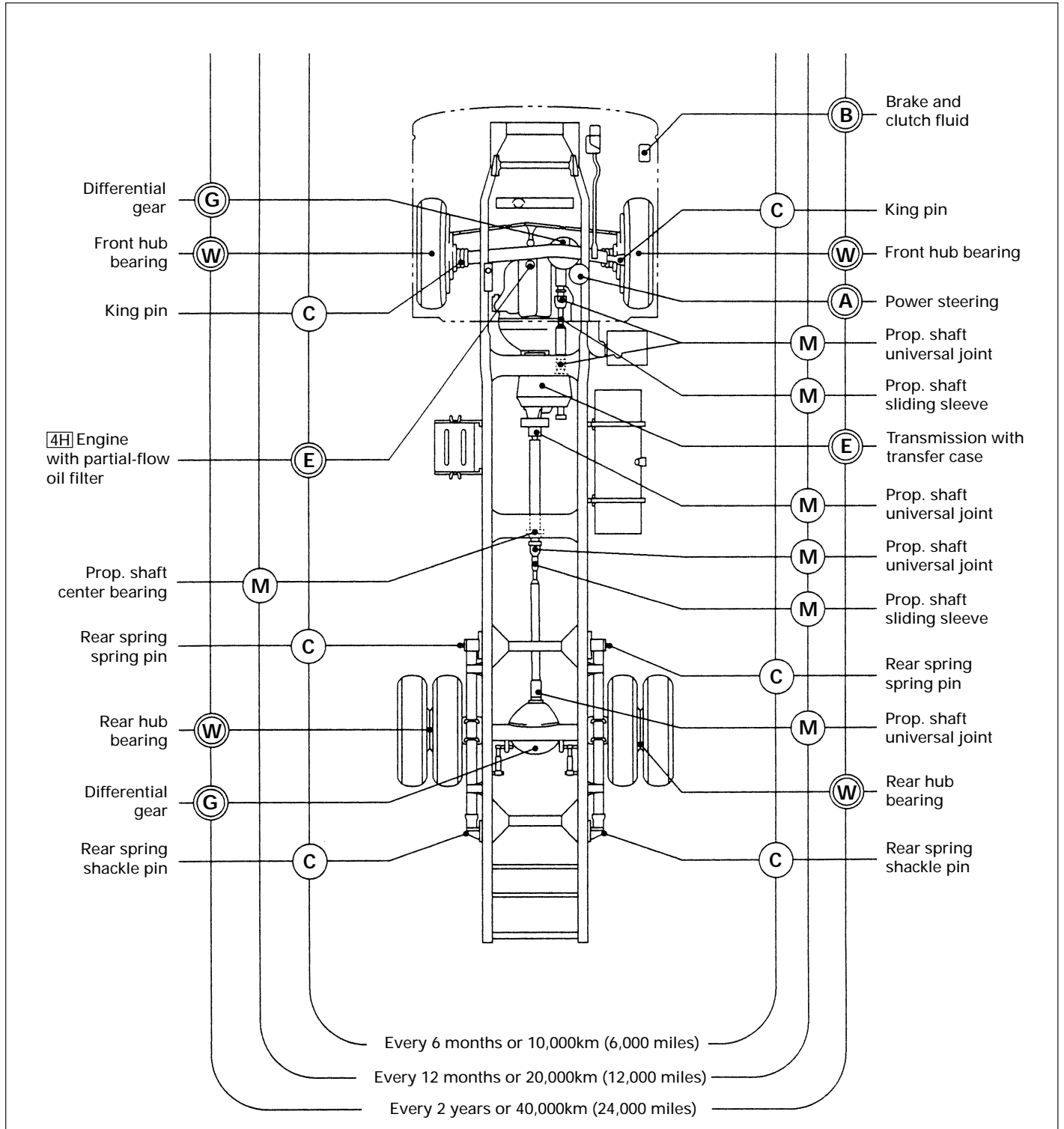
W : Wheel bearing grease

C : Multipurpose type grease

M : MoS2 contained type grease

B : Brake fluid

A : Automatic transmission fluid



MEMO

A series of horizontal dotted lines for writing.

LGGEN-WE-9991

You are requested to order this manual using the manual number that is shown above.

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