

WORKSHOP MANUAL

NKR · NPR · NQR

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.
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Applicable Model

N-Series		
NKR55	NPR55 NPR70	NQR70

This manual is applicable to 2000 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.

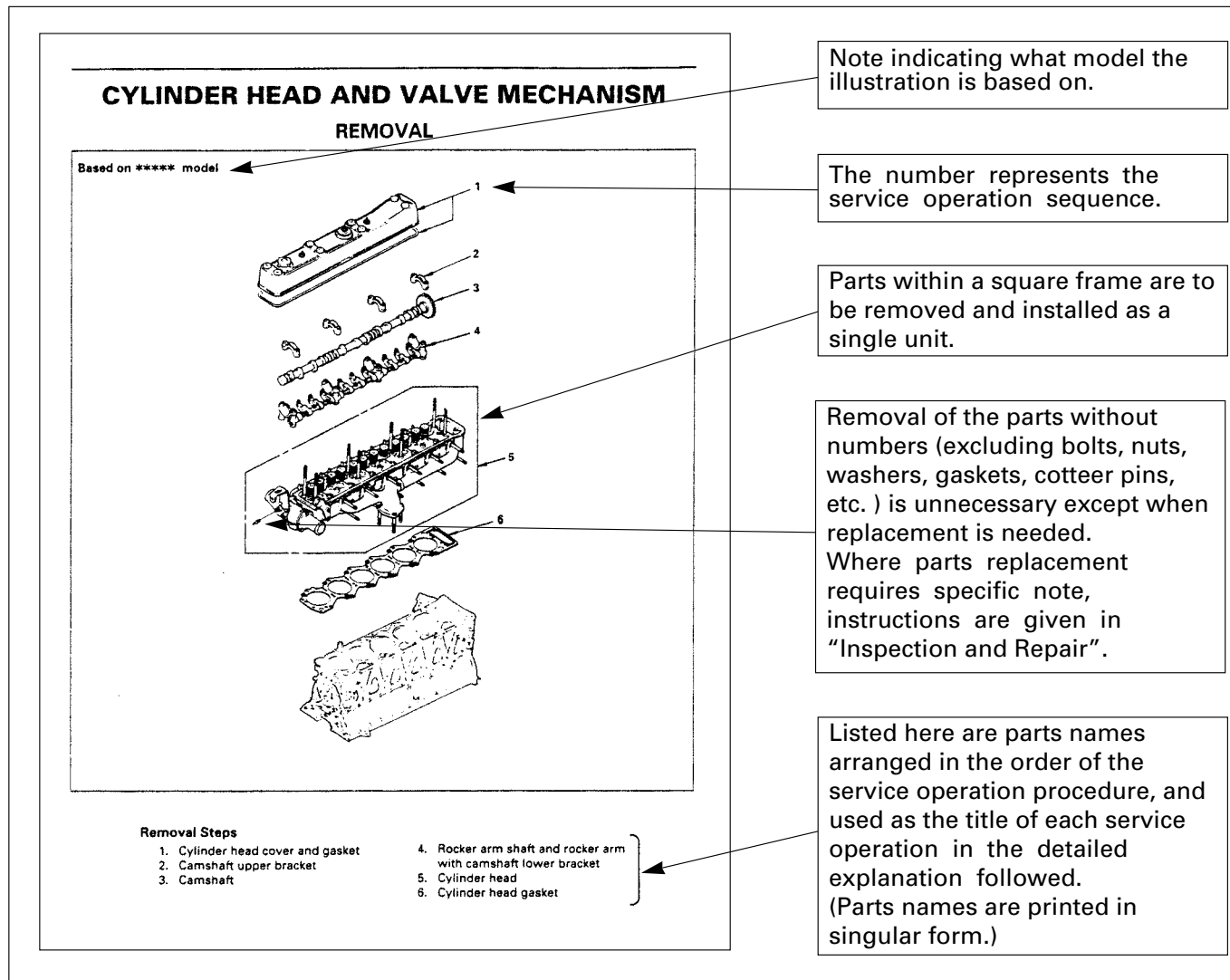
HOW TO USE THIS MANUAL

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.

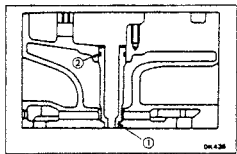
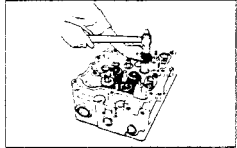
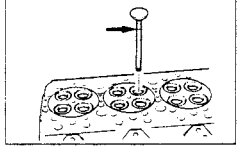
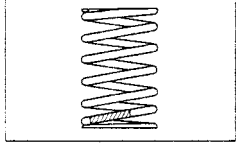
0A-4 GENERAL INFORMATION

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.



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 TL290 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.

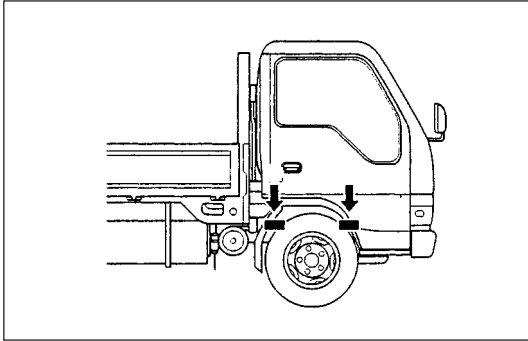
6. In this manual, the following symbols are used to give a full understanding of the service operation to be performed.

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

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).

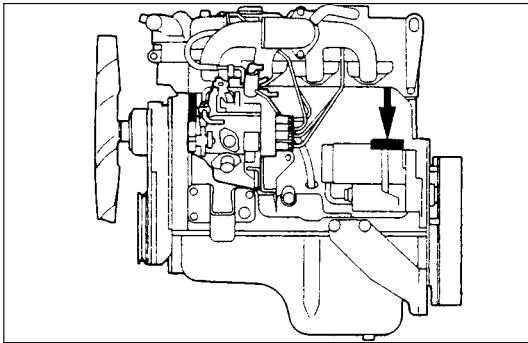
IDENTIFICATION



Chassis Number:

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

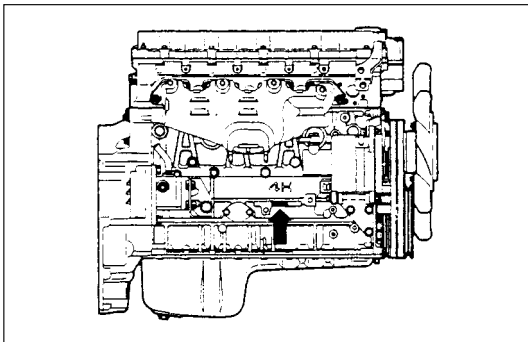
- ①: NKR model with independent front suspension.
- ②: NKR, NPR and NQR models with rigid axle front suspension.



Engine Number:

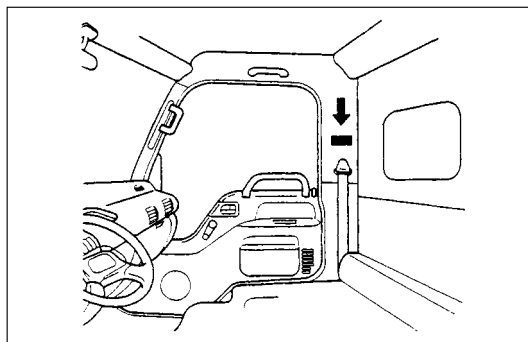
4J Series Engine

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.

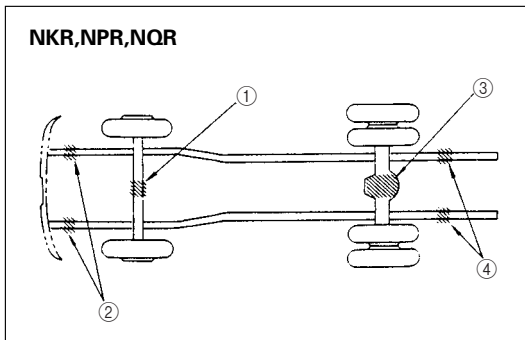


CAUTION:

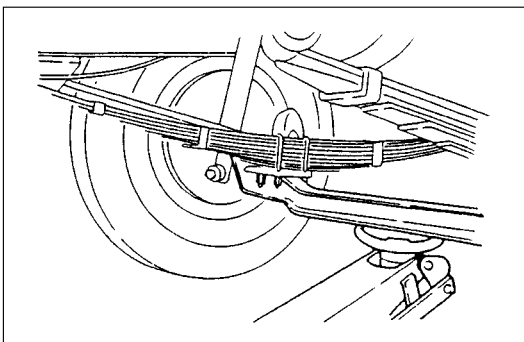
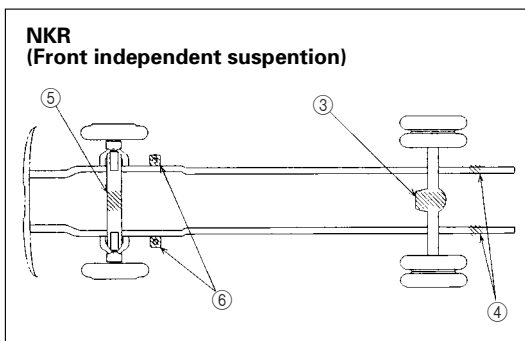
Failure to observe the acceptable lift points may result in unsatisfactory vehicle performance or a durability failure which may result in loss of control of the vehicle.

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



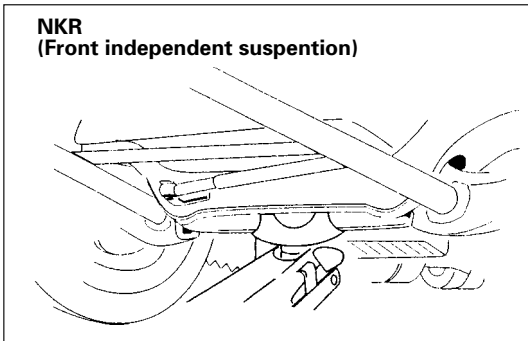
Front Side; Lifting Point

Note:

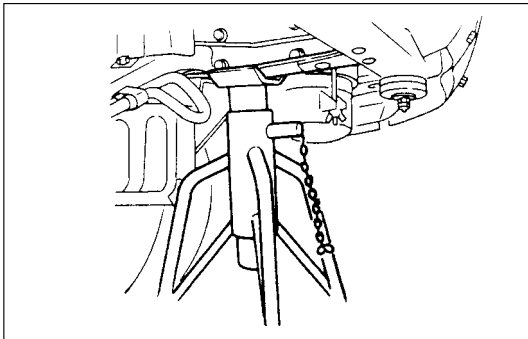
Do not lift or support on engine oil pan.

0A-8 GENERAL INFORMATION

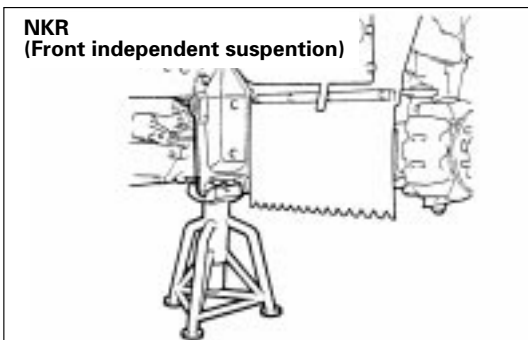
NKR
(Front independent suspension)



Front Side Supportable Point



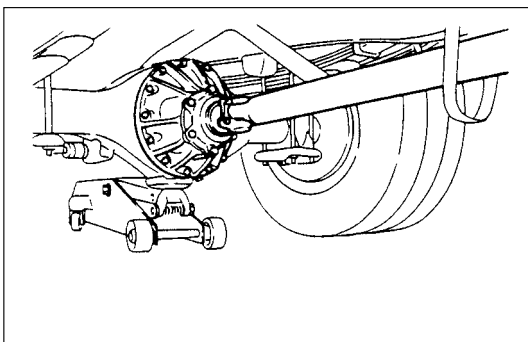
NKR
(Front independent suspension)



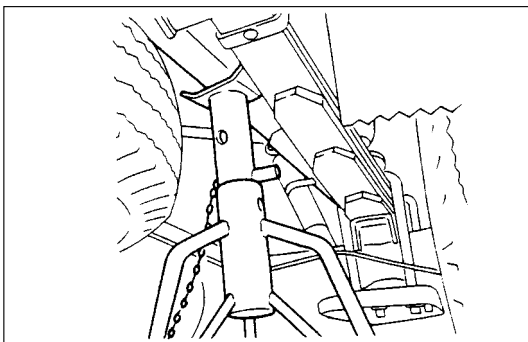
Rear Side Lifting Point

Note:

Do not lift or support on rear axle tube.




Rear Side Supportable Point


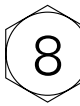


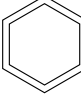
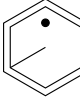

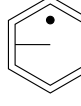

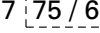
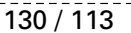
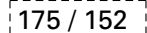
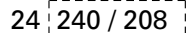


TORQUE SPECIFICATIONS

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 	7 	–	
M 8x1.25	13 	17 	24 	
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 5127	LOCTITE LOCTITE LOCTITE	Engine Oil Seal Retainer Water Pump Transaxle etc.

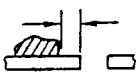

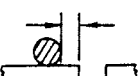



*RTV: Room Temperature Vulcanizer

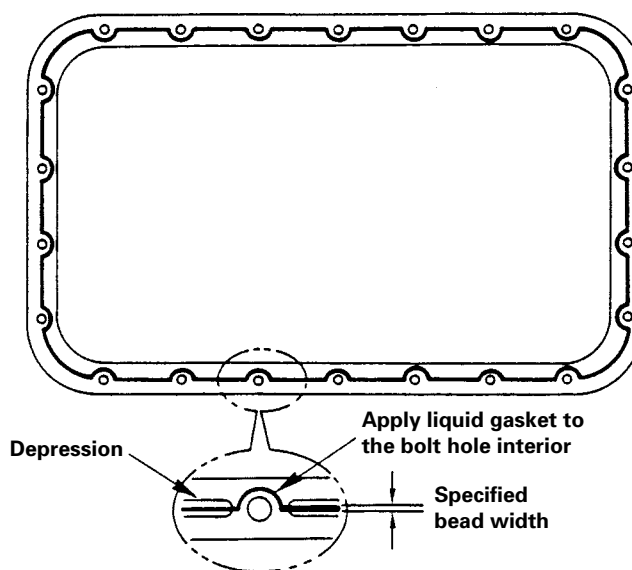
NOTE:

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

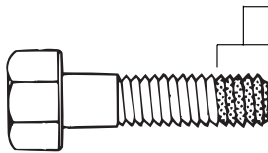


Example
 Anaerobic Type : 2-3mm (0.08-0.12 inch)
 Others : 2-6mm (0.08-0.24 inch)

NOTE:

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

RECOMMENDED THREAD LOCKING AGENT

TYPE	COLOR	APPLICATION STEPS
LOCTITE 242	Blue	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.
LOCTITE 262	Red	2. Apply LOCTITE to the bolts. 
LOCTITE 271	Red	3. Tighten the bolts to the specified torque. NOTE: After tightening, be sure to keep the bolts free from vibration and torque for at least an hour until LOCTITE hardens.

NOTE:

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

SECTION 0B

MAINTENANCE AND LUBRICATION

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MAINTENANCE SCHEDULE

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.

Maintenance schedule: 4JB1-TC engine model (ACEA B2 specification engine oil)

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)		10	20	30	40	50	60	70	80	90	100	
		6	12	18	24	30	36	42	48	54	60	
4J ENGINE												
*	Engine oil	R	R	R	R	R	R	R	R	R	R	or every 6 months
*	Engine oil filter	R	R	R	R	R	R	R	R	R	R	or every 6 months
	Fuel filter	-	R	-	R	-	R	-	R	-	R	or every 12 months
*	Air cleaner element	I	I	I	R	I	I	I	R	I	I	or every 24 months
	Idling speed and acceleration	-	I	-	I	-	I	-	I	-	I	or every 12 months
	Valve clearances	-	-	-	A	-	-	-	A	-	-	or every 24 months
	Fuel tank cap and fuel pipes for loose connections or damage	-	-	-	I	-	-	-	I	-	-	or every 24 months
	Drive belt tension and damage	I	I	I	I	I	I	I	I	I	I	or every 6 months
	Radiator coolant (Ethylene glycol anti-freeze)	-	-	-	R	-	-	-	R	-	-	or every 24 months
*	Exhaust pipes and mountings for looseness or damage	-	I	-	I	-	I	-	I	-	I	or every 12 months
	Cooling system for water leakage	-	I	-	I	-	I	-	I	-	I	or every 12 months
	Engine operation condition	I	I	I	I	I	I	I	I	I	I	or every 6 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4JB1-TC engine model (ACEA B2 specification engine oil)

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)		10	20	30	40	50	60	70	80	90	100	
		6	12	18	24	30	36	42	48	54	60	
CLUTCH												
Clutch fluid		I	I	I	R	I	I	I	R	I	I	or every 24 months
Clutch pedal travel and free play		I	I	I	I	I	I	I	I	I	I	or every 6 months
TRANSMISSION												
* Manual transmission oil		I	I	I	R	I	I	I	R	I	I	or every 24 months
Gear control mechanism for looseness		-	-	-	I	-	-	-	I	-	-	or every 24 months
Gear control cables		-	A	-	A	-	A	-	A	-	A	or every 12 months
PROPELLER SHAFT												
* Universal joints and sliding sleeve grease		-	L	-	L	-	L	-	L	-	L	or every 12 months
Loose connections		I	I	I	I	I	I	I	I	I	I	or every 6 months
Splines for excessive wear		-	-	-	I	-	-	-	I	-	-	or every 24 months
Bearings and related parts for looseness		-	-	-	I	-	-	-	I	-	-	or every 24 months
Center bearing		-	L	-	L	-	L	-	L	-	L	or every 12 months
REAR AXLE												
* Differential gear oil		I	I	I	R	I	I	I	R	I	I	or every 24 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4JB1-TC engine model (ACEA B2 specification engine oil)

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)		10 6	20 12	30 18	40 24	50 30	60 36	70 42	80 48	90 54	100 60	
FRONT AXLE		L	L	L	L	L	L	L	L	L	L	or every 6 months
* Kingpins												
	STEERING											
	Power steering system oil leakage	I	I	I	I	I	I	I	I	I	I	or every 6 months
	* Power steering system for looseness or damage	I	I	I	I	I	I	I	I	I	I	or every 6 months
	Power steering fluid	-	-	-	R	-	-	-	R	-	-	or every 24 months
	Power steering hoses	-	-	-	-	-	-	-	R	-	-	or every 48 months
	Fitting of knuckles and front axle for looseness	I	I	I	I	I	I	I	I	I	I	or every 6 months
	Steering mechanism for looseness or damage	-	-	-	I	-	-	-	I	-	-	or every 24 months
	Ball joints for damage	I	I	I	I	I	I	I	I	I	I	or every 6 months
	(Independent suspension model only)											
* Kingpins	Ball joints for excessive play	I	I	I	I	I	I	I	I	I	I	or every 6 months
	(Independent suspension model only)											
	Relay lever shaft for excessive play	I	I	I	I	I	I	I	I	I	I	or every 6 months
	(Independent suspension model only)											
* Kingpins	Steering wheel play	I	I	I	I	I	I	I	I	I	I	or every 6 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4JB1-TC engine model (ACEA B2 specification engine oil)

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)		10 6	20 12	30 18	40 24	50 30	60 36	70 42	80 48	90 54	100 60	
Steering function		I	I	I	I	I	I	I	I	I	I	or every 6 months
Wheel alignment		-	-	-	I	-	-	-	I	-	-	or every 24 months
SERVICE BRAKES												
Brake fluid		I	I	I	R	I	I	I	R	I	I	or every 24 months
Brake system for fluid leakage		I	I	I	I	I	I	I	I	I	I	or every 6 months
* Brake linings and drums for wear		I	I	I	I	I	I	I	I	I	I	or every 6 months
* Disc brake pads and discs for wear		I	I	I	I	I	I	I	I	I	I	or every 6 months
Brake pedal travel and free play		I	I	I	I	I	I	I	I	I	I	or every 6 months
Pipes and hoses for loose connections or damage		I	I	I	I	I	I	I	I	I	I	or every 6 months
PARKING BRAKE												
Parking brake cables		I	I	I	I	I	I	I	I	I	I	or every 6 months
Parking brake function		I	I	I	I	I	I	I	I	I	I	or every 6 months
Parking brake lever travel		I	I	I	I	I	I	I	I	I	I	or every 6 months
Linings for wear		-	-	-	I	-	-	-	I	-	-	or every 24 months
Drum for wear or damage		-	-	-	I	-	-	-	I	-	-	or every 24 months
Ratchet for wear or damage		-	-	-	I	-	-	-	I	-	-	or every 24 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4JB1-TC engine model (ACEA B2 specification engine oil)

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)		10	20	30	40	50	60	70	80	90	100	
		6	12	18	24	30	36	42	48	54	60	
SUSPENSION												
Spring leaves for damage		I	I	I	I	I	I	I	I	I	I	or every 6 months
Torsion bar spring (Independent suspension model only)		I	I	I	I	I	I	I	I	I	I	or every 6 months
Ball joint boots for damage (Independent suspension model only)		I	I	I	I	I	I	I	I	I	I	or every 6 months
Ball joints for excessive play (Independent suspension model only)		-	-	-	I	-	-	-	I	-	-	or every 24 months
Mounts for looseness or damage		I	I	I	I	I	I	I	I	I	I	or every 6 months
Shock absorbers for oil leakage		I	I	I	I	I	I	I	I	I	I	or every 6 months
Shock absorbers mount for looseness		I	I	I	I	I	I	I	I	I	I	or every 6 months
Upper links (Independent suspension model only)		L	L	L	L	L	L	L	L	L	L	or every 6 months
WHEELS												
Wheel pins and nuts		-	T	-	T	-	T	-	T	-	T	or every 12 months
Wheel discs for damage		-	I	-	I	-	I	-	I	-	I	or every 12 months
Hub bearings grease		-	-	-	R	-	-	-	R	-	-	or every 24 months
Tire pressures and damage		I	I	I	I	I	I	I	I	I	I	or every 6 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4JB1-TC engine model (ACEA B2 specification engine oil)

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)	x 1000 km	10	20	30	40	50	60	70	80	90	100	
	x 1000 mile	6	12	18	24	30	36	42	48	54	60	
ELECTRICAL EQUIPMENT												
Specific gravity of battery electrolyte												or every 6 months
OTHERS												
Lights, horn, windshield, wiper and washers												or every 6 months
Bolts and nuts on chassis and body		-	-	-		-	-	-		-	-	or every 24 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4JB1-TC engine model (Engine oil that meets or exceeds ACEA B3 specification)

SERVICE INTERVAL:		15	30	45	60	75	90	105	120	135	150	
(Use odometer reading or months Whichever comes first)		9	18	27	36	45	54	63	72	81	90	
4J	ENGINE											
*	Engine oil	R	R	R	R	R	R	R	R	R	R	or every 9 months
*	Engine oil filter	R	R	R	R	R	R	R	R	R	R	or every 9 months
	Fuel filter	-	R	-	R	-	R	-	R	-	R	or every 18 months
*	Air cleaner element	I	I	I	R	I	I	I	R	I	I	or every 36 months
	Idling speed and acceleration	-	I	-	I	-	I	-	I	-	I	or every 18 months
	Valve clearances	-	-	-	A	-	-	-	A	-	-	or every 36 months
	Fuel tank cap and fuel pipes for loose connections or damage	-	-	-	I	-	-	-	I	-	-	or every 36 months
	Drive belt tension and damage	I	I	I	I	I	I	I	I	I	I	or every 9 months
	Radiator coolant (Ethylene glycol anti-freeze)	-	-	-	R	-	-	-	R	-	-	or every 36 months
*	Exhaust pipes and mountings for looseness or damage	-	I	-	I	-	I	-	I	-	I	or every 18 months
	Cooling system for water leakage	-	I	-	I	-	I	-	I	-	I	or every 18 months
	Engine operation condition	I	I	I	I	I	I	I	I	I	I	or every 9 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4JB1-TC engine model (Engine oil that meets or exceeds ACEA B3 specification)

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)		15	30	45	60	75	90	105	120	135	150	
		9	18	27	36	45	54	63	72	81	90	
CLUTCH												
Clutch fluid		I	I	I	R	I	I	I	R	I	I	or every 24 months
Clutch pedal travel and free play		I	I	I	I	I	I	I	I	I	I	or every 6 months
TRANSMISSION												
* Manual transmission oil		I	I	I	R	I	I	I	R	I	I	or every 24 months
Gear control mechanism for looseness		-	-	-	I	-	-	-	I	-	-	or every 24 months
Gear control cables		-	A	-	A	-	A	-	A	-	A	or every 12 months
PROPELLER SHAFT												
* Universal joints and sliding sleeve grease		-	L	-	L	-	L	-	L	-	L	or every 12 months
Loose connections		I	I	I	I	I	I	I	I	I	I	or every 6 months
Splines for excessive wear		-	-	-	I	-	-	-	I	-	-	or every 24 months
Bearings and related parts for looseness		-	-	-	I	-	-	-	I	-	-	or every 24 months
Center bearing		-	L	-	L	-	L	-	L	-	L	or every 12 months
REAR AXLE												
* Differential gear oil		I	I	I	R	I	I	I	R	I	I	or every 24 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4JB1-TC engine model (Engine oil that meets or exceeds ACEA B3 specification)

SERVICE INTERVAL:		15	30	45	60	75	90	105	120	135	150	
(Use odometer reading or months Whichever comes first)		9	18	27	36	45	54	63	72	81	90	
FRONT AXLE		L	L	L	L	L	L	L	L	L	L	L
* Kingpins												or every 9 months
	STEERING											
	Power steering system oil leakage	I	I	I	I	I	I	I	I	I	I	or every 9 months
	* Power steering system for looseness or damage	I	I	I	I	I	I	I	I	I	I	or every 9 months
	Power steering fluid	-	-	-	R	-	-	-	R	-	-	or every 36 months
	Power steering hoses	-	-	-	-	-	-	-	R	-	-	or every 72 months
	Fitting of knuckles and front axle for looseness	I	I	I	I	I	I	I	I	I	I	or every 9 months
	Steering mechanism for looseness or damage	-	-	-	I	-	-	-	I	-	-	or every 36 months
	Ball joints for damage	I	I	I	I	I	I	I	I	I	I	or every 9 months
	(Independent suspension model only)											
* Kingpins	Ball joints for excessive play	I	I	I	I	I	I	I	I	I	I	or every 9 months
	(Independent suspension model only)											
	Relay lever shaft for excessive play	I	I	I	I	I	I	I	I	I	I	or every 9 months
	(Independent suspension model only)											
Steering wheel play		I	I	I	I	I	I	I	I	I	I	or every 9 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4JB1-TC engine model (Engine oil that meets or exceeds ACEA B3 specification)

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)		15 9	30 18	45 27	60 36	75 45	90 54	105 63	120 72	135 81	150 90	
Steering function		I	I	I	I	I	I	I	I	I	I	or every 9 months
Wheel alignment		-	-	-	I	-	-	-	I	-	-	or every 36 months
SERVICE BRAKES												
Brake fluid		I	I	I	R	I	I	I	R	I	I	or every 36 months
Brake system for fluid leakage		I	I	I	I	I	I	I	I	I	I	or every 9 months
* Brake linings and drums for wear		I	I	I	I	I	I	I	I	I	I	or every 9 months
* Disc brake pads and discs for wear		I	I	I	I	I	I	I	I	I	I	or every 9 months
Brake pedal travel and free play		I	I	I	I	I	I	I	I	I	I	or every 9 months
Pipes and hoses for loose connections or damage		I	I	I	I	I	I	I	I	I	I	or every 9 months
PARKING BRAKE												
Parking brake cables		I	I	I	I	I	I	I	I	I	I	or every 9 months
Parking brake function		I	I	I	I	I	I	I	I	I	I	or every 9 months
Parking brake lever travel		I	I	I	I	I	I	I	I	I	I	or every 9 months
Linings for wear		-	-	-	I	-	-	-	I	-	-	or every 36 months
Drum for wear or damage		-	-	-	I	-	-	-	I	-	-	or every 36 months
Ratchet for wear or damage		-	-	-	I	-	-	-	I	-	-	or every 36 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4JB1-TC engine model (Engine oil that meets or exceeds ACEA B3 specification)

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)		15 9	30 18	45 27	60 36	75 45	90 54	105 63	120 72	135 81	150 90	
SUSPENSION												
Spring leaves for damage		I	I	I	I	I	I	I	I	I	I	or every 9 months
Torsion bar spring (Independent suspension model only)		I	I	I	I	I	I	I	I	I	I	or every 9 months
Ball joint boots for damage (Independent suspension model only)		I	I	I	I	I	I	I	I	I	I	or every 9 months
Ball joints for excessive play (Independent suspension model only)		-	-	-	I	-	-	-	I	-	-	or every 36 months
Mounts for looseness or damage		I	I	I	I	I	I	I	I	I	I	or every 9 months
Shock absorbers for oil leakage		I	I	I	I	I	I	I	I	I	I	or every 9 months
Shock absorbers mount for looseness		I	I	I	I	I	I	I	I	I	I	or every 9 months
Upper links (Independent suspension model only)		L	L	L	L	L	L	L	L	L	L	or every 9 months
WHEELS												
Wheel pins and nuts		-	T	-	T	-	T	-	T	-	T	or every 18 months
Wheel discs for damage		-	I	-	I	-	I	-	I	-	I	or every 18 months
Hub bearings grease		-	-	-	R	-	-	-	R	-	-	or every 36 months
Tire pressures and damage		I	I	I	I	I	I	I	I	I	I	or every 9 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4JB1-TC engine model (Engine oil that meets or exceeds ACEA B3 specification)														
SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)														
		x 1000 km x 1000 mile		15	30	45	60	75	90	105	120	135	150	
				9	18	27	36	45	54	63	72	81	90	
ELECTRICAL EQUIPMENT														
Specific gravity of battery electrolyte														
OTHERS														
Lights, horn, windshield, wiper and washers														
Bolts and nuts on chassis and body														

Maintenance schedule: 4HE1-TC engine model

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)		km mile	11250 7000	22500 14000	33750 21000	45000 28000	56250 35000	67500 42000	78750 49000	90000 56000	
4H ENGINE											
*	Engine oil		-	R	-	R	-	R	-	R	or every 14 months
*	Engine oil filter		-	R	-	R	-	R	-	R	or every 14 months
	Fuel filter: Main fuel filter		-	R	-	R	-	R	-	R	or every 14 months
	OPT Main fuel filter and Sub fuel filter: with Sub fuel filter		-	-	-	R	-	-	-	R	or every 28 months
*	Air cleaner element		I	I	I	R	I	I	I	R	or every 28 months
	Idling speed and acceleration		-	I	-	I	-	I	-	I	or every 14 months
	Valve clearances		-	-	-	A	-	-	-	A	or every 28 months
	Feed pump strainer		-	I	-	I	-	I	-	I	or every 14 months
	Fuel tank cap and fuel pipes for loose connections or damage		-	-	-	I	-	-	-	I	or every 28 months
	Drive belt tension and damage		I	I	I	I	I	I	I	I	or every 7 months
	Radiator coolant (Ethylene glycol anti-freeze)		-	-	-	R	-	-	-	R	or every 28 months
*	Exhaust pipes and mountings for looseness or damage		-	I	-	I	-	I	-	I	or every 14 months
	Cooling system for water leakage		-	I	-	I	-	I	-	I	or every 14 months
	Engine operation condition		I	I	I	I	I	I	I	I	or every 7 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4HE1-TC engine model

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)		11250 7000	22500 14000	33750 21000	45000 28000	56250 35000	67500 42000	78750 49000	90000 56000	
CLUTCH										
Clutch fluid		I	I	I	R	I	I	I	R	or every 28 months
Clutch pedal travel and free play		I	I	I	I	I	I	I	I	or every 7 months
TRANSMISSION										
* Manual transmission oil		I	I	I	R	I	I	I	R	or every 28 months
Gear control mechanism for looseness		-	-	-	I	-	-	-	I	or every 21 months
Gear control cables		-	A	-	A	-	A	-	A	or every 14 months
PROPELLER SHAFT										
* Universal joints and sliding sleeve grease		-	L	-	L	-	L	-	L	or every 14 months
Loose connections		I	I	I	I	I	I	I	I	or every 7 months
Splines for excessive wear		-	-	-	I	-	-	-	I	or every 28 months
Bearings and related parts for looseness		-	-	-	I	-	-	-	I	or every 28 months
Center bearing		-	L	-	L	-	L	-	L	or every 14 months
REAR AXLE										
* Differential gear oil		I	I	I	R	I	I	I	R	or every 28 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4HE1-TC engine model

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)		11250 7000	22500 14000	33750 21000	45000 28000	56250 35000	67500 42000	78750 49000	90000 56000	
FRONT AXLE										
* Kingpins		L	L	L	L	L	L	L	L	or every 7 months
STEERING										
Power steering system oil leakage		I	I	I	I	I	I	I	I	or every 7 months
* Power steering system for looseness or damage		I	I	I	I	I	I	I	I	or every 7 months
Power steering fluid		-	-	-	R	-	-	-	R	or every 28 months
Power steering hoses		-	-	-	-	-	-	-	R	or every 56 months
Fitting of knuckles and front axle for looseness		I	I	I	I	I	I	I	I	or every 7 months
Steering mechanism for looseness or damage		-	-	-	I	-	-	-	I	or every 28 months
Steering wheel play		I	I	I	I	I	I	I	I	or every 7 months
Steering function		I	I	I	I	I	I	I	I	or every 7 months
Wheel alignment		-	-	-	I	-	-	-	I	or every 28 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4HE1-TC engine model

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)		km	11250	22500	33750	45000	56250	67500	78750	90000	
		mile	7000	14000	21000	28000	35000	42000	49000	56000	
SERVICE BRAKES											
Brake fluid			I	I	I	R	I	I	I	R	or every 28 months
<div> <div>V</div> Hydro booster fluid (ATF) </div>			I	I	I	R	I	I	I	R	or every 28 months
Brake system for fluid leakage			I	I	I	I	I	I	I	I	or every 7 months
* Brake linings and drums for wear			I	I	I	I	I	I	I	I	or every 7 months
* Disc brake pads and discs for wear			I	I	I	I	I	I	I	I	or every 7 months
Brake pedal travel and free play			I	I	I	I	I	I	I	I	or every 7 months
Pipes and hoses for loose connections or damage			I	I	I	I	I	I	I	I	or every 7 months
PARKING BRAKE											
Parking brake cables			I	I	I	I	I	I	I	I	or every 7 months
Parking brake function			I	I	I	I	I	I	I	I	or every 7 months
Parking brake lever travel			I	I	I	I	I	I	I	I	or every 7 months
Linings for wear			-	-	-	I	-	-	-	I	or every 28 months
Drum for wear or damage			-	-	-	I	-	-	-	I	or every 28 months
Ratchet for wear or damage			-	-	-	I	-	-	-	I	or every 28 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

Maintenance schedule: 4HE1-TC engine model

SERVICE INTERVAL: (Use odometer reading or months Whichever comes first)		km mile	11250 7000	22500 14000	33750 21000	45000 28000	56250 35000	67500 42000	78750 49000	90000 56000	
SUSPENSION											
Spring leaves for damage			I	I	I	I	I	I	I	I	or every 7 months
Mounts for looseness or damage			I	I	I	I	I	I	I	I	or every 7 months
Shock absorbers for oil leakage			I	I	I	I	I	I	I	I	or every 7 months
Shock absorbers mount for looseness			I	I	I	I	I	I	I	I	or every 7 months
WHEELS											
Wheel pins and nuts			T	T	T	T	T	T	T	T	or every 7 months
Wheel discs for damage			I	I	I	I	I	I	I	I	or every 7 months
Hub bearings grease			-	-	-	R	-	-	-	R	or every 28 months
Tire pressures and damage			I	I	I	I	I	I	I	I	or every 7 months
ELECTRICAL EQUIPMENT											
Specific gravity of battery electrolyte			I	I	I	I	I	I	I	I	or every 7 months
OTHERS											
Lights, horn, windshield, wiper and washers			I	I	I	I	I	I	I	I	or every 7 months
Bolts and nuts on chassis and body			-	-	-	I	-	-	-	I	or every 28 months

(I): Inspect and correct or replace as necessary (A): Adjust (R): Replace or change (T): Tighten to specified torque (L): Lubricate

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 in extremely cold weather and/or on salted roads

Item	Interval	Condition				
		A	B	C	D	A+B
Engine oil	Change every 5,000 km (3,000 miles)			●		●
Engine oil filter	Replace every 5,000 km (3,000 miles)			●		●
Air cleaner element	Replace every 20,000 km (12,000 miles)			●		
Exhaust pipes and mountings for looseness or damage	Inspect every 10,000 km (6,000 miles)	●	●		●	
Manual transmission oil and differential gear oil	Change every 20,000 km (12,000 miles)		●			
Universal joints and sliding sleeve grease	Lubricate every 10,000 km (6,000 miles)		●			
Kingpins	Lubricate every 5,000 km (3,000 miles)			●	●	
Steering system for looseness or damage	Inspect every 5,000 km (3,000 miles)		●			
Brake linings and drums for wear	Inspect every 5,000 km (3,000 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.

LUBRICATION/FLUID	GRADE		
	ACEA	API	Other
Diesel engine crankcase	B2/B3 E2/E3		
Manual transmission Transfer case	B2/B3 E2/E3		
Differential		GL-5	
Automatic transmission Power steering Hydro brake booster			DEXRON II, III
Clutch and brake fluid reservoir			Hydraulic brake fluid SAE J1703 FMVSS 116 DOT. 3 or 4 grade
Center bearing King pin Upper links			NLGI #2 or #3 multi purpose type grease or wheel bearing grease
Propeller shaft sliding yoke Universal joint (General purpose grease in Molybdenum)			NLGI #2 or #3 multi purpose type grease containing molybdenum disulfide
Engine cooling system			Good quality ethylene glycol antifreeze or GM spec. 6038-M or equivalent

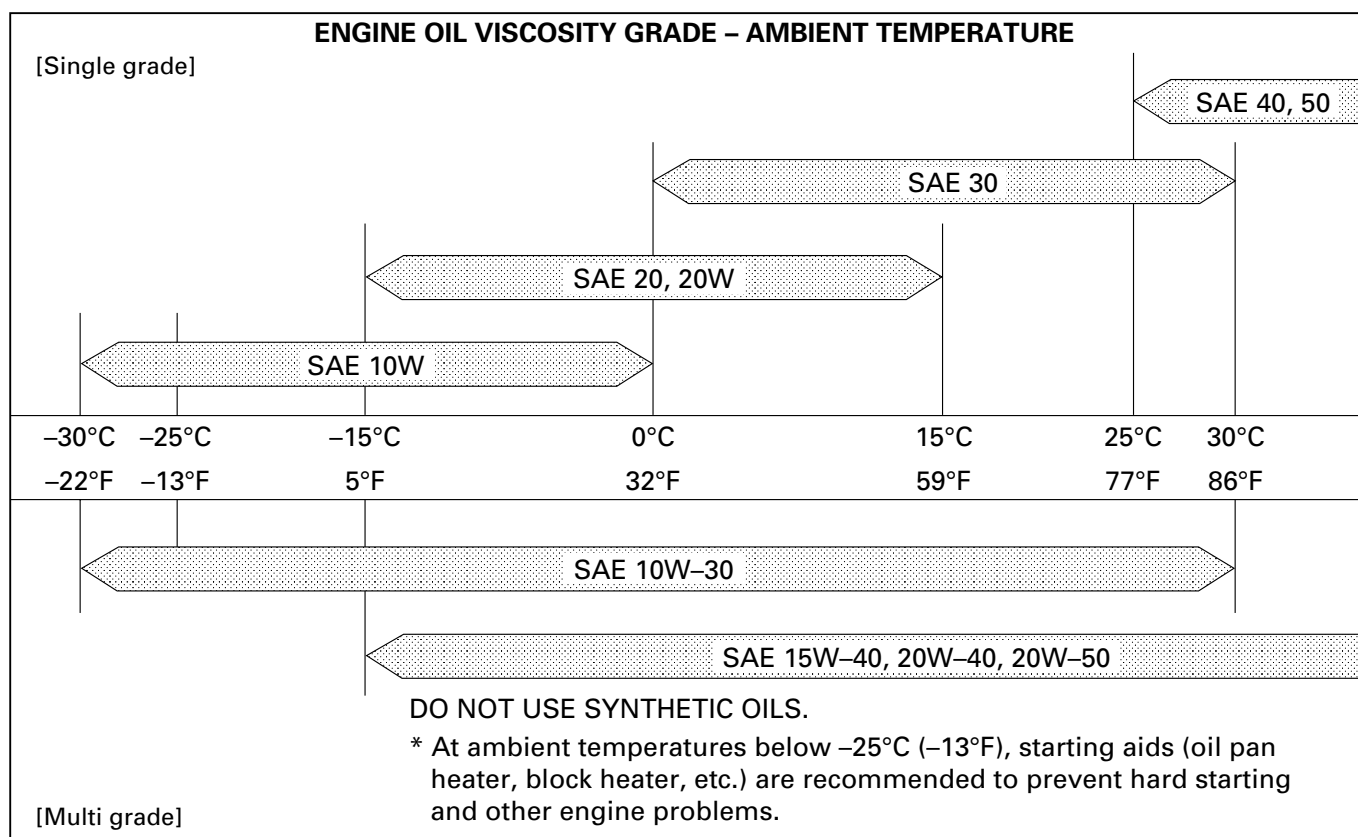
FLUID	TYPE
Clutch and brake fluid reservoir	Besco brake fluid (For light duty) Hydraulic brake fluid SAE J1703 FMVSS 116 DOT.3 grade

NOTE:

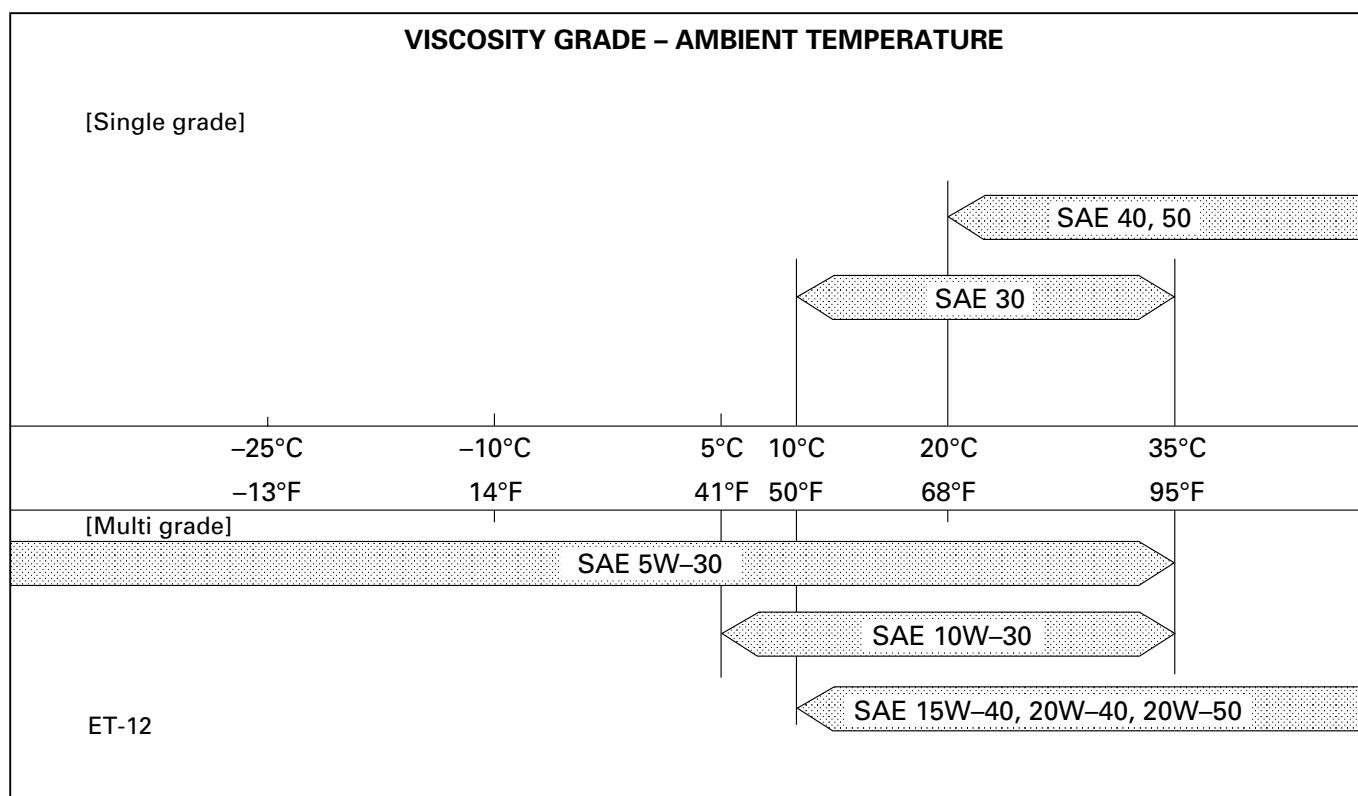
When the recommended lubricants are specified in the workshop manual, follow them.

OIL VISCOSITY CHART

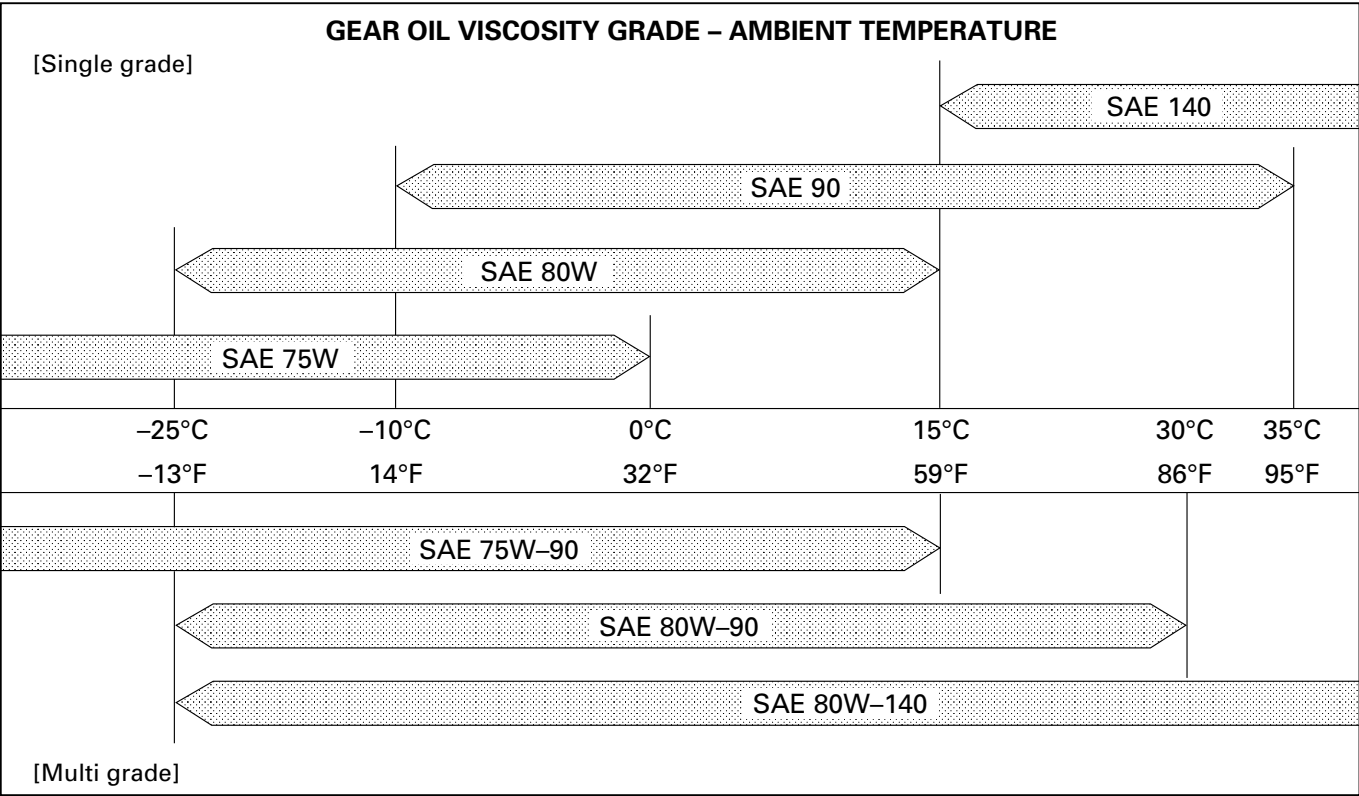
ENGINE OIL



MANUAL TRANSMISSION AND TRANSFER CASE OIL (ENGINE OIL)



FRONT AXLE AND REAR AXLE OIL



LGEN-WE-0001EU

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

This manual is applicable for vehicles in Europe.

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