

# WORKSHOP MANUAL

NKR · NPR · NQR

## GENERAL INFORMATION

### SECTION 0

# ISUZU

**ISUZU**



International Service & Parts  
*Tokyo, Japan*

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**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 |                |       |
|----------|----------------|-------|
| NKR55    | NPR55<br>NPR70 | NQR70 |

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This manual is applicable to 2000 year model.

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**THIS MANUAL INCLUDES THE FOLLOWING SECTIONS:**

| <b>SECTION NO.</b> | <b>CONTENTS</b>                    |
|--------------------|------------------------------------|
| <b>0A</b>          | <b>General Information</b>         |
| <b>0B</b>          | <b>Maintenance and Lubrication</b> |

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 ACR<sup>4</sup> 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.

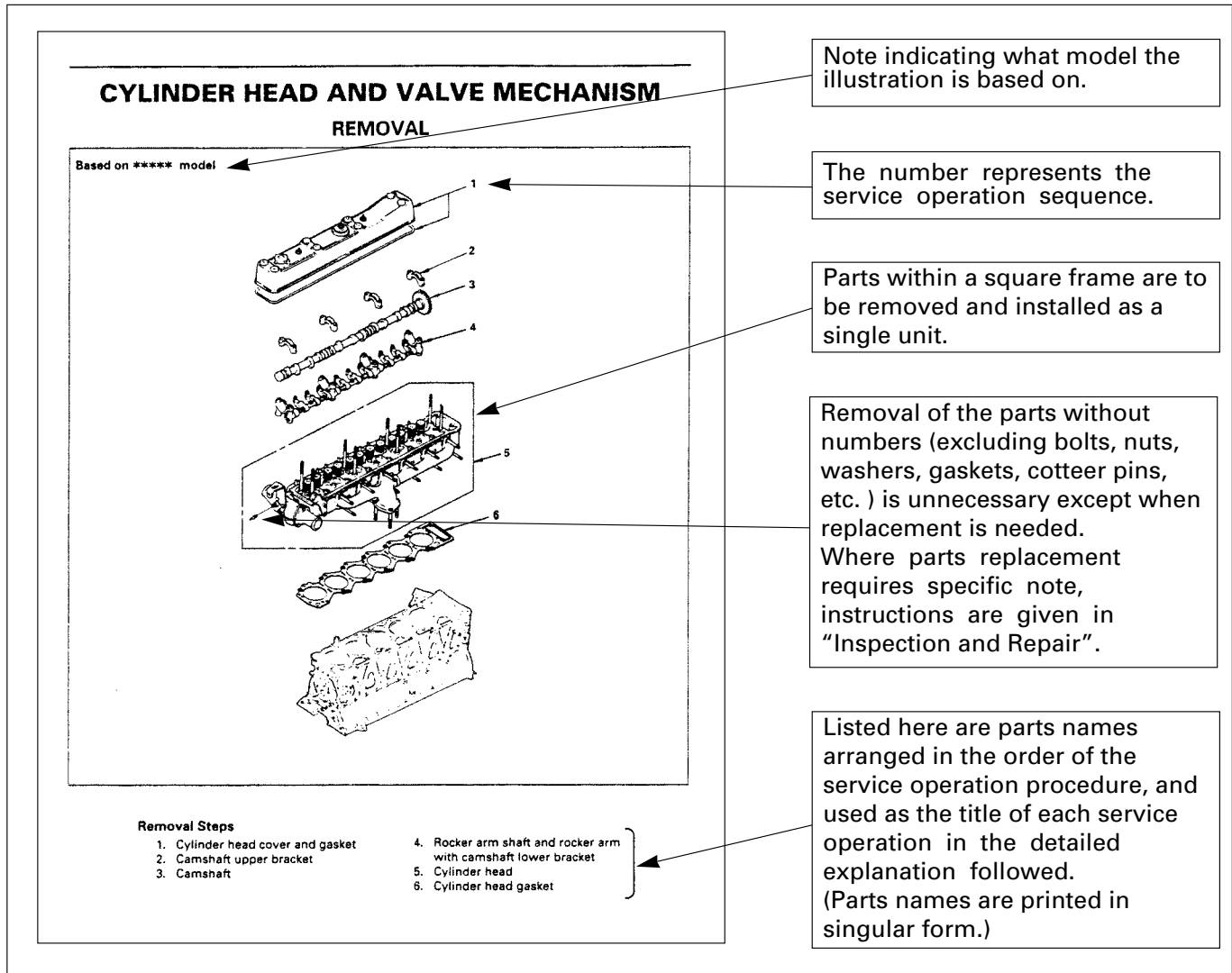
# HOW TO USE THIS MANUAL

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.

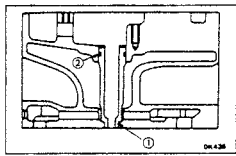
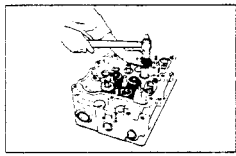
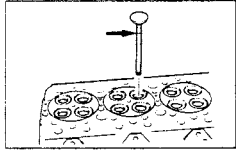
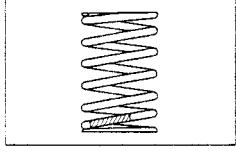
## 0A-4 GENERAL INFORMATION

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. (1)
  - 3) Apply engine oil to the O-ring.
  - 4) Install the O-ring (2) 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.

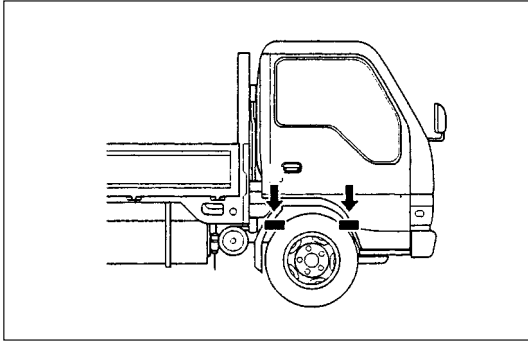
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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <div style="display: flex; justify-content: space-between;"> <div>  ... Remove           </div> <div>  ... Clean           </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>  ... Install           </div> <div>  ... Pay close attention           </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>  ... Disassemble           </div> <div>  ... Tighten to specified torque           </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>  ... Reassemble           </div> <div>  ... Use special tool(s) (Isuzu's tool(s))           </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>  ... Align the marks           </div> <div>  ... Use special tool(s) (parts manufacturer's tool(s))           </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>  ... Correct direction           </div> <div>  ... Lubricate with oil           </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>  ... Inspect           </div> <div>  ... Lubricate with grease           </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>  ... Take measurement           </div> <div>  ... Apply liquid gasket           </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>  ... Adjustment           </div> <div></div> </div> |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

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).



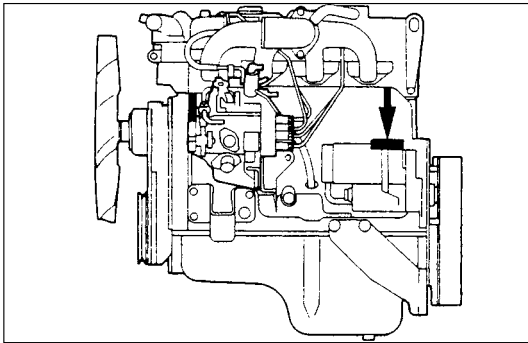
# IDENTIFICATION



## Chassis Number:

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

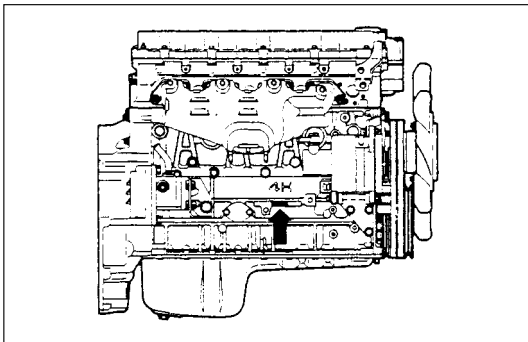
- ①: NKR model with independent front suspension.
- ②: NKR, NPR and NQR models with rigid axle front suspension.



## Engine Number:

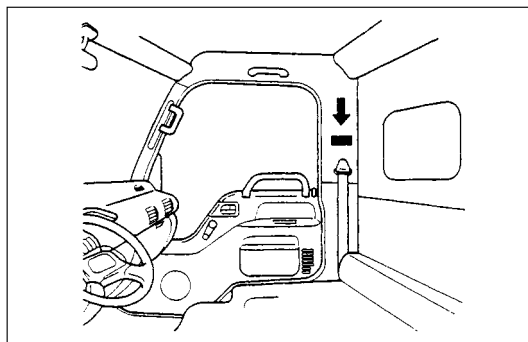
### 4J Series Engine

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.

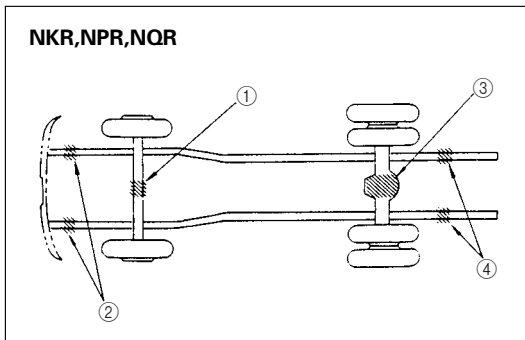


## CAUTION:

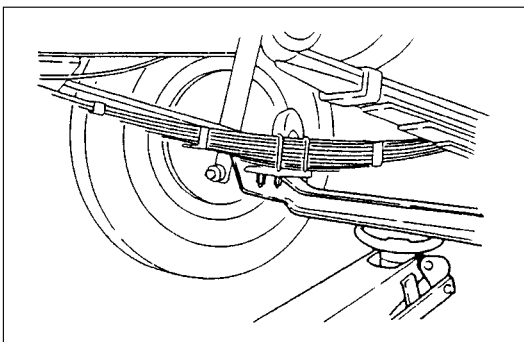
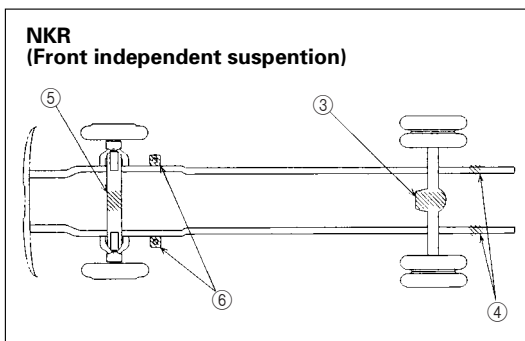
Failure to observe the acceptable lift points may result in unsatisfactory vehicle performance or a durability failure which may result in loss of control of the vehicle.

## 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.