

MITSUBISHI

ENGINE

4D5 SERIES

WORKSHOP MANUAL

FOREWORD

This Workshop Manual contains procedures for removal, disassembly, inspection, adjustment, reassembly and installation, etc. for service mechanics. All information, illustrations and product descriptions contained in this manual are current as at the time of publication. We, however, reserve the right to make changes at any time without prior notice or obligation.

Engine <1991 to 1993> **11A**

Engine
<1994 and subsequent> **11B**

FILING INSTRUCTION

Please keep these manual pages in the binder No. BN940001.

File these pages according to the signs "Added", "Revised" and "Deleted" on the "List of effective pages" which are interpreted below.

Added: File the pages with this label additionally in your manual.

Revised.Deleted: Replace the existing pages with the corresponding pages with this sign.

Missing sheets will be supplied upon request.



~~SUBS~~ ~~MOTORS CORPORATION~~

INTRODUCTION

EXPLANATION OF MANUAL CONTENTS

Maintenance and Servicing Procedures

- (1) A diagram of the component parts is provided near the front of each section in order to give the reader a better understanding of the installed condition of component parts.
- (2) The numbers provided within the diagram indicate the sequence for maintenance and servicing procedures; the symbol **N** indicates a non-reusable part; the tightening torque is provided where applicable.

- Removal steps:
The part designation number corresponds to the number in the illustration to indicate removal steps.
- Disassembly steps:
The part designation number corresponds to the number in the illustration to indicate disassembly steps.
- Installation steps:
Specified in case installation is impossible in reverse order of removal steps. Omitted if installation is possible in reverse order of removal steps.
- Reassembly steps:
Specified in case reassembly is impossible in reverse order of disassembly steps. Omitted if reassembly is possible in reverse order of disassembly steps.

Classification of Major Maintenance/Service Points

When there are major points relative to maintenance and servicing procedures (such as essential maintenance and service points, maintenance and service standard values, information regarding the use of special tools, etc.), these are arranged together as major maintenance and service points and explained in detail.

◀A▶: Indicates that there are essential points for removal or disassembly.

▶A▶: Indicates that there are essential points for installation or reassembly.

Symbols for Lubrication, Sealants and Adhesives

Information concerning the locations for lubrication and for application of sealants and adhesives is provided, by using symbols, in the diagram of component parts, or on the page following the component parts page, and explained.



..... Grease
(multipurpose grease unless there is a brand or type specified)



..... Sealant or adhesive



..... Brake fluid, automatic transmission fluid
or air conditioner compressor oil



..... Engine oil or gear oil

INTRODUCTION

Indicates
the group
title.

Indicates
the section
title.

Indicates
the group
number.

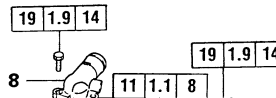
Indicates
the section
number.

Indicates
the page
number.

6A1 ENGINE – Water Pump and Water Pipe

11A-7-1

7. WATER PUMP AND WATER PIPE REMOVAL AND INSTALLATION



Denotes tightening
torque.

Nm Kgm ft.lbs.

Denotes non-
reusable part.

This number
corresponds to the
number appearing in
"Removal steps",
"Disassembly steps",
"Installation steps" or
"Reassembly steps".

Operating proce-
dures, cautions,
etc. on removal,
installation,
disassembly and
reassembly are
described.

Issue date

Publication
number-
Revision code

List of Effective Pages

Page	Revision code	Date	Remarks	Page	Revision code	Date	Remarks
11A-0-1 and 11A-0-2	A	Feb. 1995		11B-4-6	G	May 2001	Revised
11A-0-3 to 11A-0-6		Dec. 1990		11B-4-7	A	Feb. 1995	
11A-1-1 and 11A-1-2	A	Feb. 1995		11B-4-8	A	Feb. 1995	
11A-1-3 and 11A-1-4	B	July 1995		11B-4-9	G	May 2001	Added
11A-1-5 to 11A-1-7	A	Feb. 1995		11B-5-1	F	May 2000	
11A-2-1 to 11A-2-3		Dec. 1990		11B-5-2 to 11B-5-6	A	Feb. 1995	
11A-3-1 to 11A-3-9		Dec. 1990		11B-5-7	G	May 2001	Revised
11A-4-1 to 11A-4-3		Dec. 1990		11B-6-1 and 11B-6-2	A	Feb. 1995	
11A-5-1 to 11A-5-4		Dec. 1990		11B-7-1	G	May 2001	Revised
11A-6-1	A	Feb. 1995		11B-7-1a and 11B-7-1b	G	May 2001	Revised
11A-6-2		Dec. 1990		11B-7-2	G	May 2001	Revised
11A-7-1 and 11A-7-2		Dec. 1990		11B-7-2a	G	May 2001	Revised
11A-7-3 and 11A-7-4	A	Feb. 1995		11B-7-2b	E	Feb. 2000	
11A-8-1	A	Feb. 1995		11B-7-3 to 11B-7-4	A	Feb. 1995	
11A-8-2		Dec. 1990		11B-7-4a and 11B-7-4b	G	May 2001	Revised
11A-8-3 to 11A-8-5	B	July 1995		11B-7-5	A	Feb. 1995	
11A-9-1 and 11A-9-2	A	Feb. 1995		11B-8-1 to 11B-8-3	A	Feb. 1995	
11A-9-3 to 11A-9-8		Dec. 1990		11B-9-1	G	May 2001	Revised
11A-9-9	A	Feb. 1995		11B-9-1a and 11B-9-1b	G	May 2001	Revised
11A-9-10		Dec. 1990		11B-9-2	G	May 2001	Revised
11A-9-11 and 11A-9-12	A	Feb. 1995		11B-9-3	A	Feb. 1995	
11A-10-1		Dec. 1990		11B-10-1 to 11B-10-4	A	Feb. 1995	
11A-10-2	B	July 1995		11B-11-1	G	May 2001	Revised
11A-10-3	A	Feb. 1995		11B-11-2	A	Feb. 1995	
11A-10-4 and 11A-10-5		Dec. 1990		11B-11-3 to 11B-11-5	B	July 1995	
11A-11-1 to 11A-11-4		Dec. 1990		11B-11-6 and 11B-11-7	G	May 2001	Revised
11A-12-1 to 11A-12-4		Dec. 1990		11B-11-8	G	May 2001	Added
11A-12-5	A	Feb. 1995		11B-12-1	G	May 2001	Revised
				11B-12-1a	G	May 2001	Revised
11B-0-1	A	Feb. 1995		11B-12-1b	E	Feb. 2000	
11B-0-3 to 11B-0-5	A	Feb. 1995		11B-12-2 to 11B-12-8	A	Feb. 1995	
11B-1-1 and 11B-1-2	A	Feb. 1995		11B-12-9	E	Feb. 2000	
11B-1-3 and 11B-1-4	B	July 1995		11B-13-1	A	Feb. 1995	
11B-1-5	A	Feb. 1995		11B-13-2	B	July 1995	
11B-1-6 to 11B-1-9	G	May 2001	Revised	11B-13-3	A	Feb. 1995	
11B-2-1 to 11B-2-4	G	May 2001	Revised	11B-13-4	C	Sept. 1996	
11B-3-1	G	May 2001	Revised	11B-13-5	A	Feb. 1995	
11B-3-1a and 11B-3-1b	G	May 2001	Revised	11B-14-1	G	May 2001	Revised
11B-3-2	G	May 2001	Revised	11B-14-1a	G	May 2001	Revised
11B-3-3	A	Feb. 1995		11B-14-1b	E	Feb. 2000	
11B-4-1	G	May 2001	Revised	11B-14-2 to 11B-14-9	A	Feb. 1995	
11B-4-2 to 11B-4-5	A	Feb. 1995					

Missing sheets will be supplied upon request.

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