

MITSUBISHI

ENGINE 6G7 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 <Up to 2001> **11A**

Engine <From 2002> **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 sign additionally in your manual.

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

Missing sheets will be supplied upon request.

HOW TO USE THIS MANUAL

CONTENTS

The preceding page contains GROUP INDEX which lists the group title and group number.

PAGE NUMBERS

All page numbers consist of three sets of digits separated by a dash. The digits preceding the dash identify the number of the group and the second digits identify the section. The digits following the dash represent the consecutive page number within the section. The page numbers can be found on the top left or right of each page.

TEXT

Unless otherwise specified, each service procedure covers all models. Procedures covering specific models and identified by the model codes, destination or similar designation (engine type, transmission type, etc.)

SERVICE PROCEDURES

The service steps are arranged in numerical order and attentions to be paid in performing vehicle service are described in detail in SERVICE POINTS.

Group title

Section title

Group number

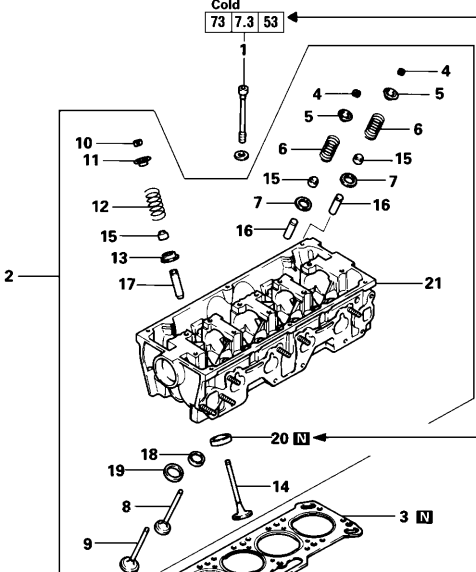
Section number

Page number

ENGINE – Cylinder Head and Valves **11A-8-1**

8. CYLINDER HEAD AND VALVES

REMOVAL AND INSTALLATION <12-VALVE ENGINE>



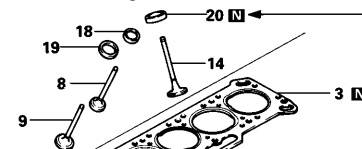
Denotes tightening torque

NOTE:

11A: Torque may also be shown in rectangles in the order of units (Nm, kgm and ft-lbs. from left) as follows.

33 33 23

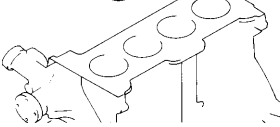
11B: Torque values are given only in SI unit.




Denotes non-reusable parts

Removal steps

- CA ◊ E ◊ 1. Cylinder head bolt
- ◊ D ◊ ◊ 2. Cylinder head, valve assembly
- ◊ B ◊ ◊ C ◊ 3. Cylinder head gasket
- ◊ B ◊ ◊ C ◊ 4. Retainer lock
- ◊ B ◊ 5. Valve spring retainer
- ◊ B ◊ 6. Valve spring
- ◊ B ◊ 7. Valve spring seat



- ◊ B ◊ ◊ C ◊ 10. Retainer lock
- ◊ B ◊ ◊ C ◊ 11. Valve spring retainer
- ◊ B ◊ ◊ C ◊ 12. Valve spring
- ◊ B ◊ ◊ C ◊ 13. Valve spring seat
- ◊ C ◊ ◊ A ◊ 14. Exhaust valve
- ◊ C ◊ ◊ A ◊ 15. Valve stem seal
- ◊ C ◊ ◊ A ◊ 16. Intake valve guide
- ◊ C ◊ ◊ A ◊ 17. Exhaust valve guide
- ◊ C ◊ ◊ A ◊ 18. Intake valve seat (primary)
- ◊ C ◊ ◊ A ◊ 19. Intake valve seat (secondary)
- ◊ C ◊ ◊ A ◊ 20. Exhaust valve seat
- ◊ C ◊ ◊ A ◊ 21. Cylinder head



This number shows the sequence of removal or disassembly. For installation or reassembly, reverse the removal or disassembly steps.

Issue date

Publication number – Revision code

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Operating procedures, cautions, etc. on removal, installation, disassembly and reassembly are described.

Denotes service point for removal or disassembly.

NOTE:

◀A▶ is used in 11A.
▶A◀ is used in 11B.

Denotes service point for installation or disassembly.

NOTE:

▶A◀ is used in 11A.
▶A◀ is used in 11B.

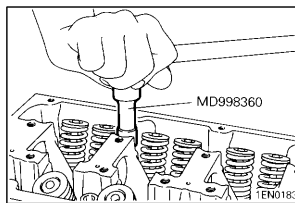
ENGINE

Cylinder Head and Valves

11A-8-3

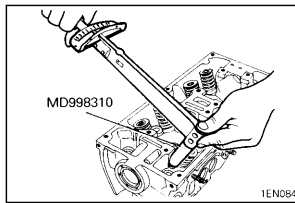
SERVICE POINTS OF REMOVAL

◀A▶ REMOVAL OF CYLINDER HEAD BOLT



◀B▶ REMOVAL OF JET VALVE

- (1) When loosening a jet valve, hold the special tool securely so that it is not tilted with respect to the jet valve center line. Also avoid applying force abruptly.



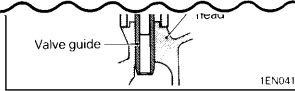
◀C▶ REMOVAL OF RETAINER LOCK

- (1) Store removed valves, springs and other parts, tagged to indicate their cylinder No. and location for reassembly.

NOTE

The valve spring retainers of the 12-valve engine differ in size between the intake and exhaust sides. Therefore, use the following retainer holders.

- (4) After installing valve guides, insert new valves in them to check for sliding condition.
- (5) When valve guides have been replaced, check for valve contact and correct valve seats as necessary.



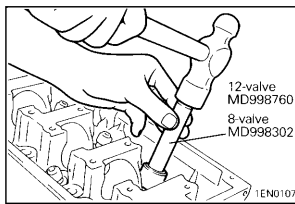
SERVICE POINTS OF REASSEMBLY

▶A◀ INSTALLATION OF VALVE STEM SEAL

- (1) Install the valve spring seat.
- (2) The special tool must be used to install the valve stem seal. Improper installation could result in oil leaking past the valve guide.

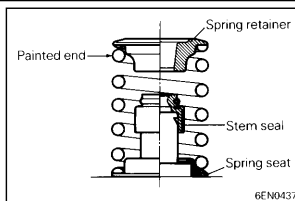
NOTE

The valve stem seal cannot be reused.



▶B◀ INSTALLATION OF VALVE SPRING

- (1) Install the valve spring with the painted end on the rocker arm side.



List of Effective Pages

Page	Revision code	Date	Remarks	Page	Revision code	Date	Remarks
11A-0-1	I	Aug. 2001	Revised	11A-6b-1 and 11A-6b-2	H	Mar. 2000	
11A-0-3	D	Aug. 1994		11A-6c-1 to 11A-6c-4	H	Mar. 2000	
11A-0-4		Oct. 1990		11A-7-1 and 11A-7-2	D	Aug. 1994	
11A-0-5	D	Aug. 1994		11A-7-3 to 11A-7-6	C	Dec. 1993	
11A-0-6		Oct. 1990		11A-7-7	D	Aug. 1994	
11A-0-6a and 11A-0-6b	D	Aug. 1994		11A-7-8	H	Mar. 2000	
11A-0-7 and 11A-0-8	C	Dec. 1993		11A-7-8a and 11A-7-8b	H	Mar. 2000	
11A-0-9 and 11A-0-10	A	Sept. 1992		11A-7-9 and 11A-7-10	D	Aug. 1994	
11A-0-11	C	Dec. 1993		11A-7a-1 and 11A-7a-2	A	Sept. 1992	
11A-0-12	A	Sept. 1992		11A-8-1 and 11A-8-2	D	Aug. 1994	
11A-0-13 to 11A-0-16	C	Dec. 1993		11A-8-3 to 11A-8-5	H	Mar. 2000	
11A-1-1 to 11A-1-4	F	Aug. 1997		11A-8-6 to 11A-8-8	D	Aug. 1994	
11A-1-5	H	Mar. 2000		11A-8-9	E	Nov. 1995	
11A-1-6	E	Nov. 1995		11A-9-1 to 11A-9-4	C	Dec. 1993	
11A-1-7 and 11A-1-8	H	Mar. 2000		11A-9a-1 to 11A-9a-5	H	Mar. 2000	
11A-1-9	E	Nov. 1995		11A-10-1	D	Aug. 1994	
11A-1-10	H	Mar. 2000		11A-10-2	A	Sept. 1992	
11A-1-11	D	Aug. 1994		11A-10-3		Oct. 1990	
11A-1-12	G	May 1999		11A-11-1	A	Sept. 1992	
11A-1-13 to 11A-1-20	H	Mar. 2000		11A-11-2	D	Aug. 1994	
11A-2-1	E	Nov. 1995		11A-11-3 to 11A-11-8	E	Nov. 1995	
11A-2-2 to 11A-2-4	D	Aug. 1994		11A-12-1 to 11A-12-9	H	Mar. 2000	
11A-3-1 to 11A-3-6	D	Aug. 1994		11A-13-1 to 11A-13-3	E	Nov. 1995	
11A-3a-1 to 11A-3a-3	H	Mar. 2000		11A-13-4	D	Aug. 1994	
11A-3b-1	H	Mar. 2000		11A-13-4a and 11A-13-4b	D	Aug. 1994	
11A-3c-1	H	Mar. 2000		11A-13-4c	G	May 1999	
11A-4-1 and 11A-4-2		Oct. 1990		11A-13-4d	H	Mar. 2000	
11A-4-3	D	Aug. 1994		11A-13-5	D	Aug. 1994	
11A-4-4		Oct. 1990		11A-13-6	H	Mar. 2000	
11A-4-5	D	Aug. 1994		11A-13-6a and 11A-13-6b	H	Mar. 2000	
11A-4a-1	D	Aug. 1994		11A-13-7	G	May 1999	
11A-4a-2	G	May 1999		11A-13-8 to 11A-13-12	D	Aug. 1994	
11A-4a-3	H	Mar. 2000		11A-13-13 and 11A-13-14	H	Mar. 2000	
11A-4a-4	F	Aug. 1997		11A-14-1	C	Dec. 1993	
11A-4b-1 and 11A-4b-2	H	Mar. 2000		11A-14-1a	C	Dec. 1993	
11A-5-1 and 11A-5-2	D	Aug. 1994		11A-14-1b	H	Mar. 2000	
11A-5-3 to 11A-5-13	H	Mar. 2000		11A-14-2	A	Sept. 1992	
11A-6-1	H	Mar. 2000		11A-14-3	H	Mar. 2000	
11A-6-2	C	Dec. 1993		11A-14-4	C	Dec. 1993	
11A-6-3 to 11A-6-13	H	Mar. 2000		11A-14-5	B	Dec. 1992	
11A-6a-1 and 11A-6a-2	D	Aug. 1994		11A-14-6 to 11A-14-10	H	Mar. 2000	
11A-6a-3 and 11A-6a-4	H	Mar. 2000		11A-15-1 to 11A-15-9	H	Mar. 2000	
11A-6a-4a and 11A-6a-4b	H	Mar. 2000		11A-16-1	H	Mar. 2000	
11A-6a-5 and 11A-6a-6	D	Aug. 1994		11A-16-2	C	Dec. 1993	

Missing sheets will be supplied upon request.

Page	Revision code	Date	Remarks
11A-16-3	E	Nov. 1995	
11B-0-1 to 11B-0-4	I	Aug. 2001	Added
11B-1-1 to 11B-1-10	I	Aug. 2001	Added
11B-2-1 to 11B-2-3	I	Aug. 2001	Added
11B-3-1 to 11B-3-4	I	Aug. 2001	Added
11B-4-1 to 11B-4-4	I	Aug. 2001	Added
11B-5-1 to 11B-5-5	I	Aug. 2001	Added
11B-6-1 to 11B-6-17	I	Aug. 2001	Added
11B-7-1 to 11B-7-6	I	Aug. 2001	Added
11B-8-1 to 11B-8-6	I	Aug. 2001	Added
11B-9-1 to 11B-9-4	I	Aug. 2001	Added
11B-10-1 to 11B-10-9	I	Aug. 2001	Added
11B-11-1 to 11B-11-5	I	Aug. 2001	Added
11B-12-1 to 11B-12-13	I	Aug. 2001	Added
11B-13-1 to 11B-13-10	I	Aug. 2001	Added
11B-14-1 to 11B-14-14	I	Aug. 2001	Added
11B-15-1 to 11B-15-10	I	Aug. 2001	Added

Page	Revision code	Date	Remarks
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