GROUP 21B

CLUTCH OVERHAUL

CONTENTS

HOW TO USE THIS MANUAL

M1212002400074

HOW TO USE THIS MANUAL

Scope of Service Explanations

This manual describes service procedures performed after removal of the transmission from the vehicle.
For removal of the transmission from the vehicle, installation of the transmission in the vehicle, and on-vehicle inspection and service of the transmission, please use the separate Workshop Manuals prepared for the vehicle.

How to Read Explanations

Service steps

(1) A component part drawing is shown at the beginning of each section to enable the technician to ascertain the installed condition of the component parts.
(2) Service steps are indicated by means of numbers in the component part drawing. Non-reusable parts are indicated as such, and tightening torques are shown.
- Removal steps:
  The numbers of the part names match the numbers in the component part drawing and indicate the removal sequence.
- Installation steps:
  Installation steps are omitted wherever installation can be achieved simply by performing the removal steps in reverse.
- Disassembly steps:
  The numbers of the part names match the numbers in the component part drawing and indicate the disassembly sequence.
- Reassembly steps:
  Reassembly steps are omitted wherever reassembly can be achieved simply by performing the disassembly steps in reverse.

Classification of Service Points

Key service points, service standards, and instructions for using special tools are collated as service points and explained in detail.

<<A>>: Outward-pointing brackets denote removal service points or disassembly service points.
>>A<<: Inward-pointing brackets denote installation service points or reassembly service points.

Lubricant and Sealant Symbols

Every location where a lubricant or sealant must be applied or added is indicated using a relevant symbol in the component part drawing and/or on the page after the component part drawing.

 . . . . . Grease
 . . . . . Sealant or form-in-place gasket (FIPG)
 . . . . . Brake fluid
 . . . . . Gear oil

Inspection

If an inspection reveals a defect or fault, effect a repair and, if necessary, replace relevant parts.

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Section title

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OVERHAUL CONTROL HOUSING

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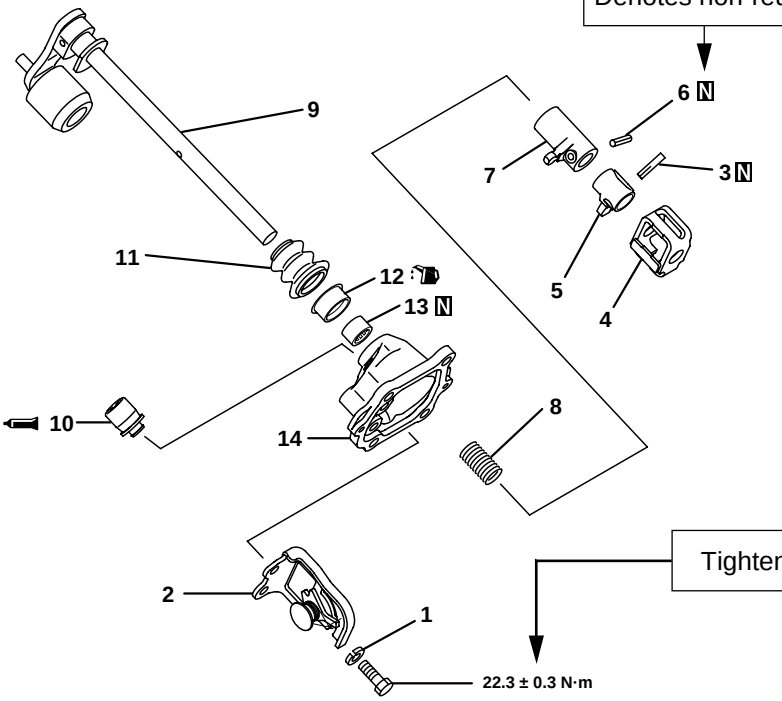
CONTROL HOUSING

DISASSEMBLY AND REASSEMBLY

Denotes non-reusable part.



Tightening torque

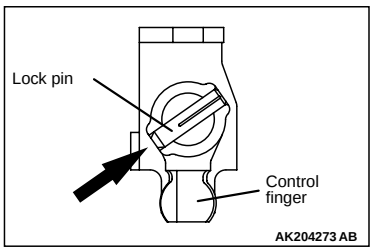
Disassembly steps
1. Spring washer
2. Stopper bracket
<<A>> >>E<< 3. Lock pin
4. Interlock plate
5. Control finger

Disassembly steps
>>D<< 6. Spring pin
7. Stopper body
8. Spring
9. Control shaft

Procedures and cautions for removal, installation, disassembly, and reassembly are explained under this category of heading.

→ DISASSEMBLY SERVICE POINTS

<<A>> LOCK PIN REMOVAL
Drive out the lock pin from the direction shown.



The alphabetical character in this category of heading matches that of the relevant removal steps, installation steps, disassembly steps, or installation steps.

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GENERAL SPECIFICATIONS

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Item	Specification	
Combined engine	**4G63-D4-MPI**	**4G69-S4-MIVEC**
Clutch operating method	Hydraulic type	
Clutch disc type	Single dry disc type	
Clutch disc size OD × ID mm	230 × 155	
Clutch cover type	Diaphragm spring type	
Clutch cover setting load N	4,320	5,200

SERVICE SPECIFICATIONS

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Item	Limit
Diaphragm spring end height difference	0.5 mm
Clutch disc facing rivet sink	Minimum 0.3 mm
Release cylinder I.D. to piston O.D.	0.15 mm

TORQUE SPECIFICATIONS

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Part	N·m
Clutch fluid line bracket bolt	18 ± 3
Clutch tube flare nut	15 ± 1
Clutch orifice mounting bolt <W5M42>	18 ± 3
Union bolt	22 ± 2
Clutch release cylinder mounting bolt	18 ± 3
Clutch cover mounting bolt	18 ± 3
Fulcrum	35 ± 6
Air bleeder	17 ± 1

LUBRICANTS

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Item	Specified lubricant
Release fork and release bearing contact surface	MITSUBISHI genuine grease Part Number 0101011 or equivalent
Release fork and fulcrum contact surface	
Release fork and release cylinder pushrod contact surface	
Clutch disc splines	
Piston and piston cup	Brake fluid DOT3 or DOT4
Release cylinder inner surface	

CLUTCH

DISASSEMBLY AND REASSEMBLY

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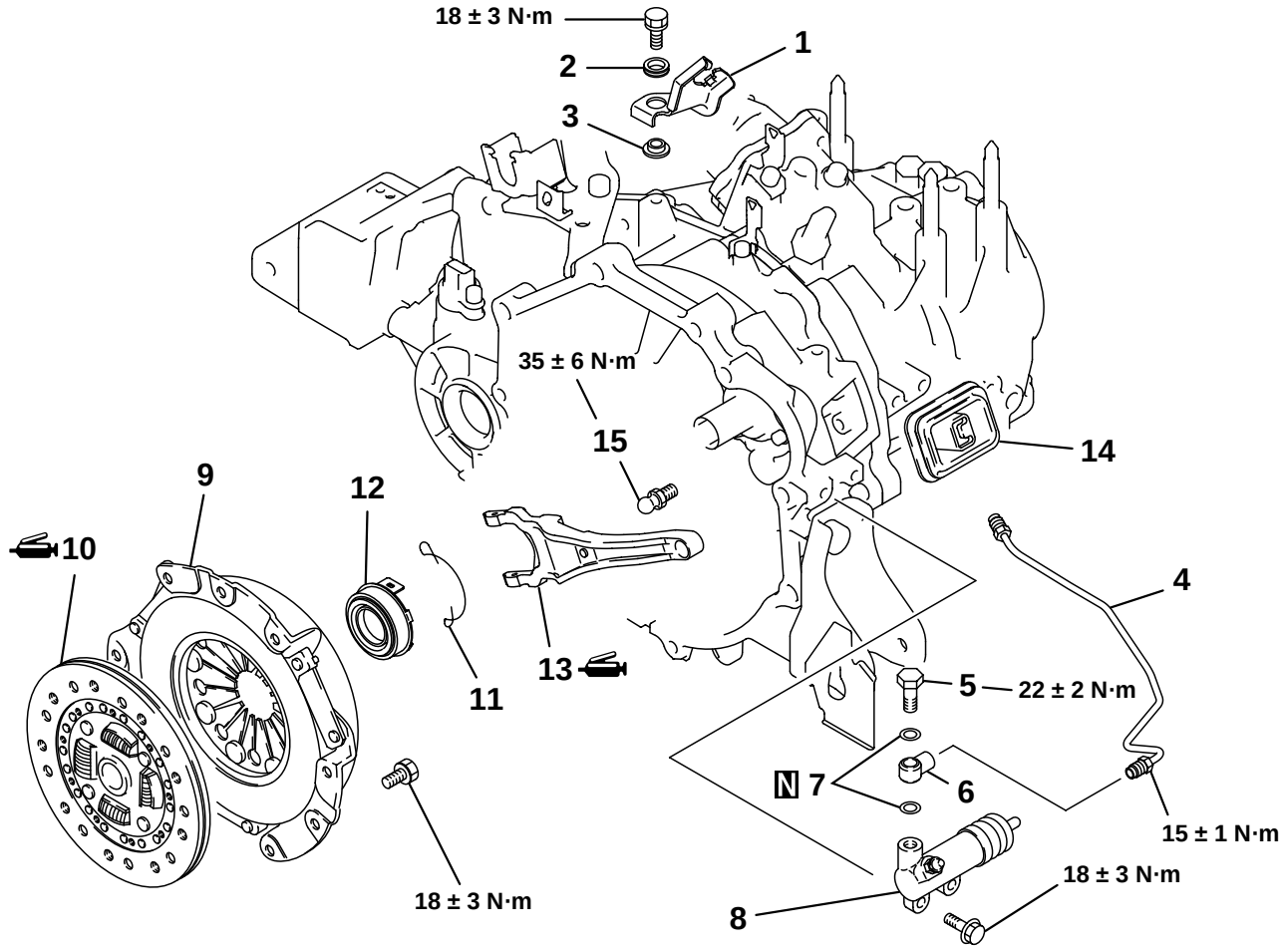

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Removal steps

1. Clutch fluid line bracket
2. Insulator
3. Washer
4. Clutch tube
5. Union bolt
6. Union
7. Gasket
8. Clutch release cylinder

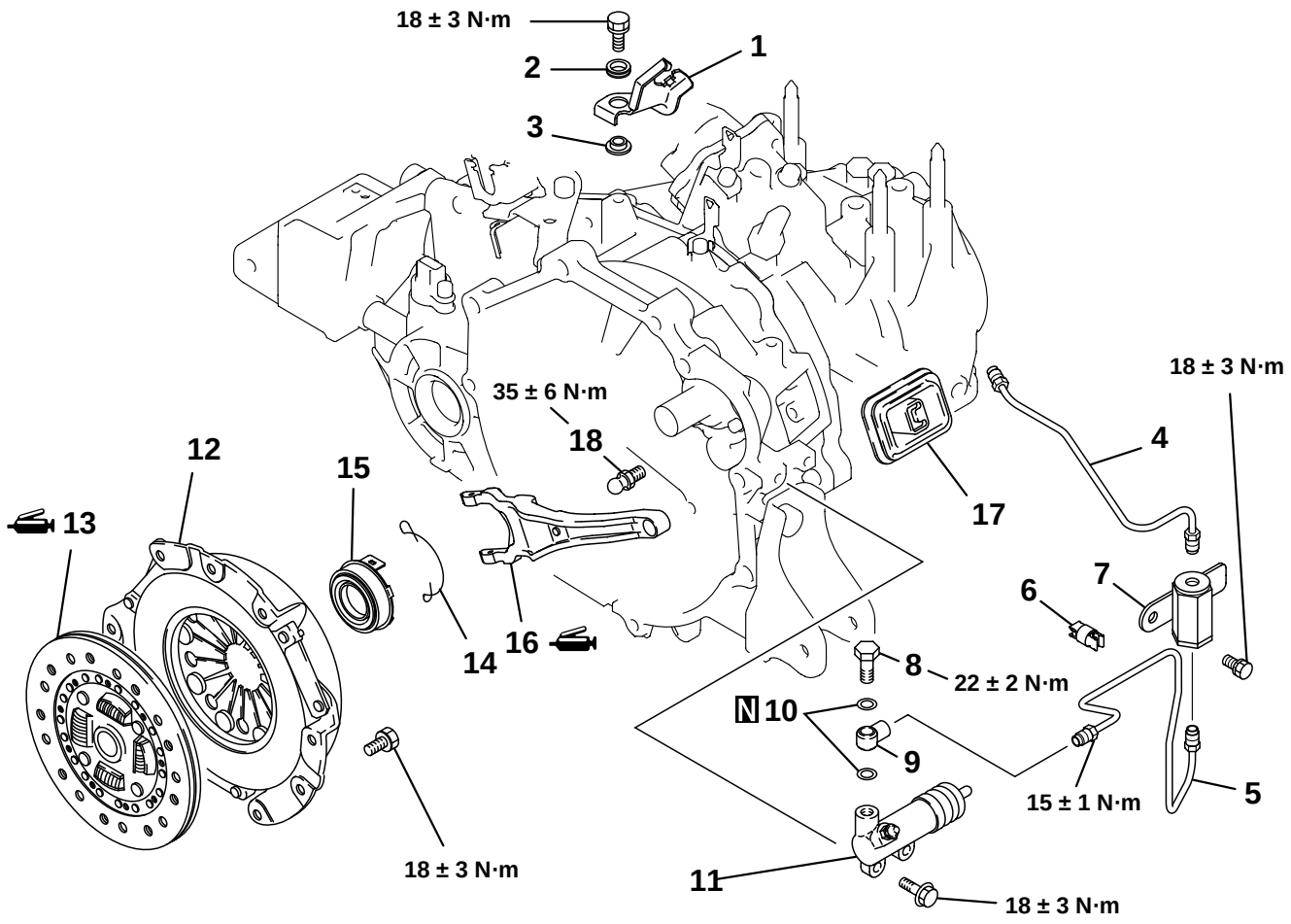
>>B<< 9. Clutch cover

Removal steps (Continued)

>>B<< 10. Clutch disc
11. Return clip
12. Clutch release bearing

<<A>> >>A<< 13. Release fork
14. Release fork boot
15. Fulcrum

<W5M42>



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Removal steps

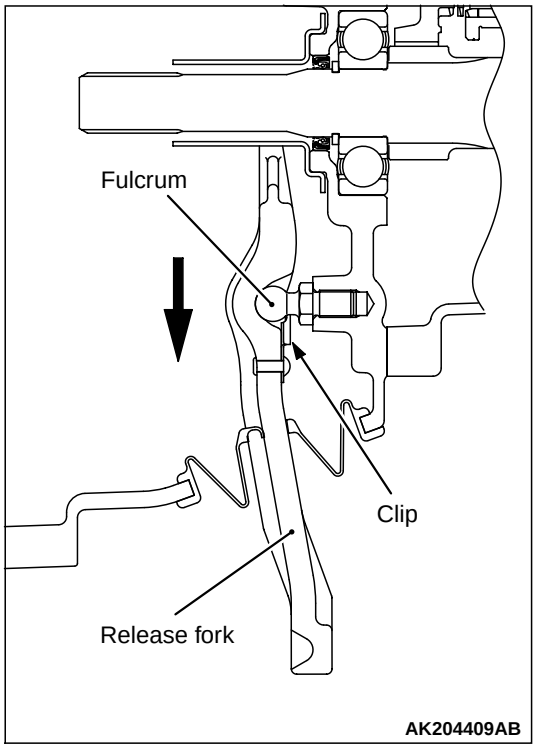
1. Clutch fluid line bracket
2. Insulator
3. Washer
4. Clutch tube
5. Clutch tube
6. Tube clip
7. Clutch orifice
8. Union bolt
9. Union
10. Gasket

Removal steps (Continued)

11. Clutch release cylinder
>>B<< 12. Clutch cover
>>B<< 13. Clutch disc
14. Return clip
15. Clutch release bearing
<<A>> >>A<< 16. Release fork
17. Release fork boot
18. Fulcrum

REMOVAL SERVICE POINT

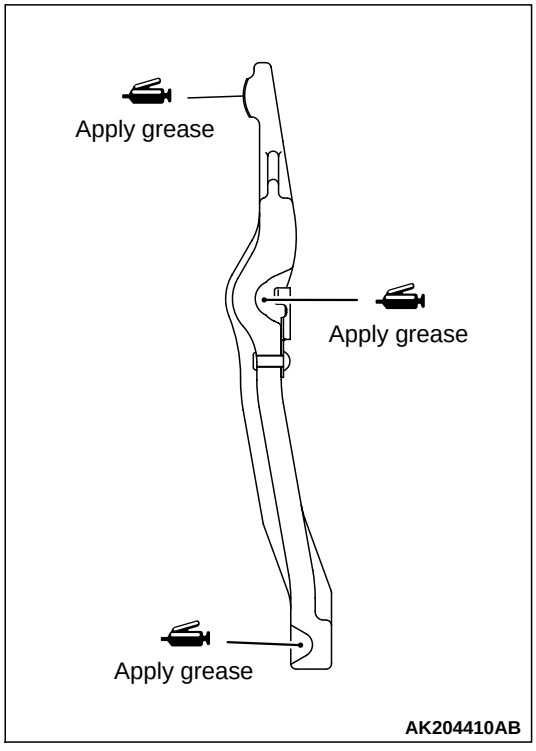
<<A>> RELEASE FORK REMOVAL



Move the release fork in the direction shown to remove the clip from the fulcrum.

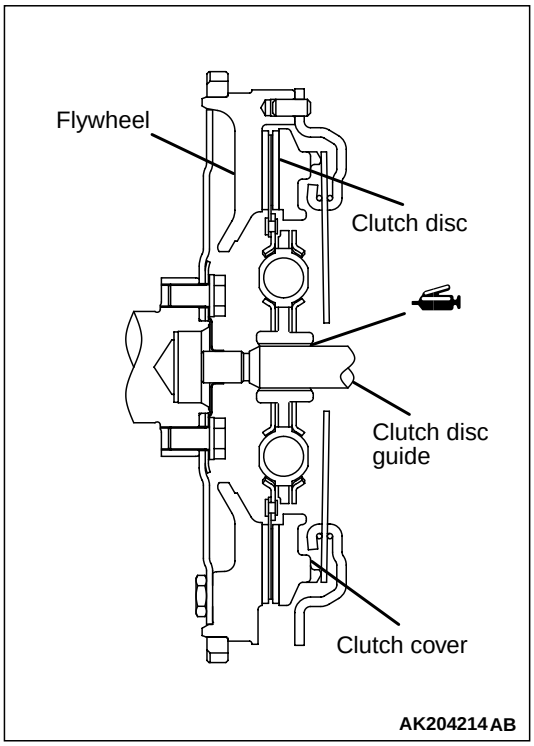
INSTALLATION SERVICE POINTS

>>A<< RELEASE FORK INSTALLATION



1. Apply Mitsubishi genuine grease part number 0101011 or equivalent to the illustrated positions of the release fork.
2. Install the release fork to the fulcrum.

>>B<< CLUTCH DISC AND CLUTCH COVER INSTALLATION



1. Apply Mitsubishi genuine grease part number 0101011 or equivalent to the clutch disc splines and rub it in the splines with a brush.
2. Using the clutch disc guide to position the clutch disc on the flywheel.
3. Install the clutch cover onto the flywheel.

INSPECTION

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CLUTCH COVER

1. Check the diaphragm spring end for wear and uneven height. Replace if wear is evident or height difference exceeds the limit.

   Limit: 0.5 mm
2. Check the pressure plate surface for wear, cracks and discoloration.
3. Check the rivets of the strap plate for looseness. If loose, replace the clutch cover.

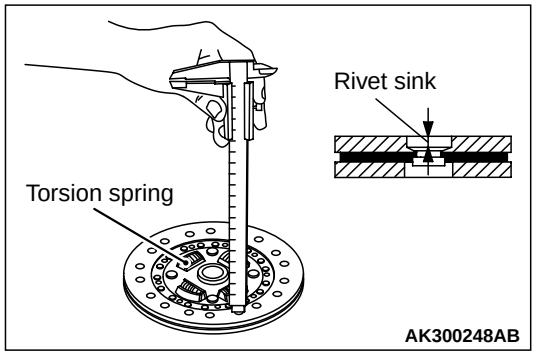
CLUTCH DISC

⚠ CAUTION

Don't clean the clutch disc in a cleaning solvent.

1. Check the facing for loose rivets, uneven contact, evidence of seizure, or deposited oils and greases. If defective, replace the clutch disc.

   NOTE: If contaminated with grease or oil, determine the source of the contaminant and repair it.



2. Measure the rivet sink. Replace the clutch disc if it is below the limit.

   Minimum limit: 0.3 mm

3. Check the torsion spring for play and damage. If defective, replace the clutch disc.
4. Place the clutch disc on the input shaft and check for sliding condition and play in the rotating direction. If poor sliding condition is evident, clean, reassemble, and recheck.

   If excessive play is evident, replace the clutch disc and/or input shaft.

CLUTCH RELEASE BEARING

⚠ CAUTION

Release bearing is packed with grease.
Therefore, do not wash it in a cleaning solvent.

1. Check for seizure, damage, noise or binding/rough rotation.
2. Check for wear on the surface which contacts with the diaphragm spring.
3. Check for wear on the surface which contacts with the release fork. If abnormally worn, replace.

RELEASE FORK

If the surface which contacts with the bearing is abnormally worn, replace.

CLUTCH RELEASE CYLINDER

DISASSEMBLY AND REASSEMBLY

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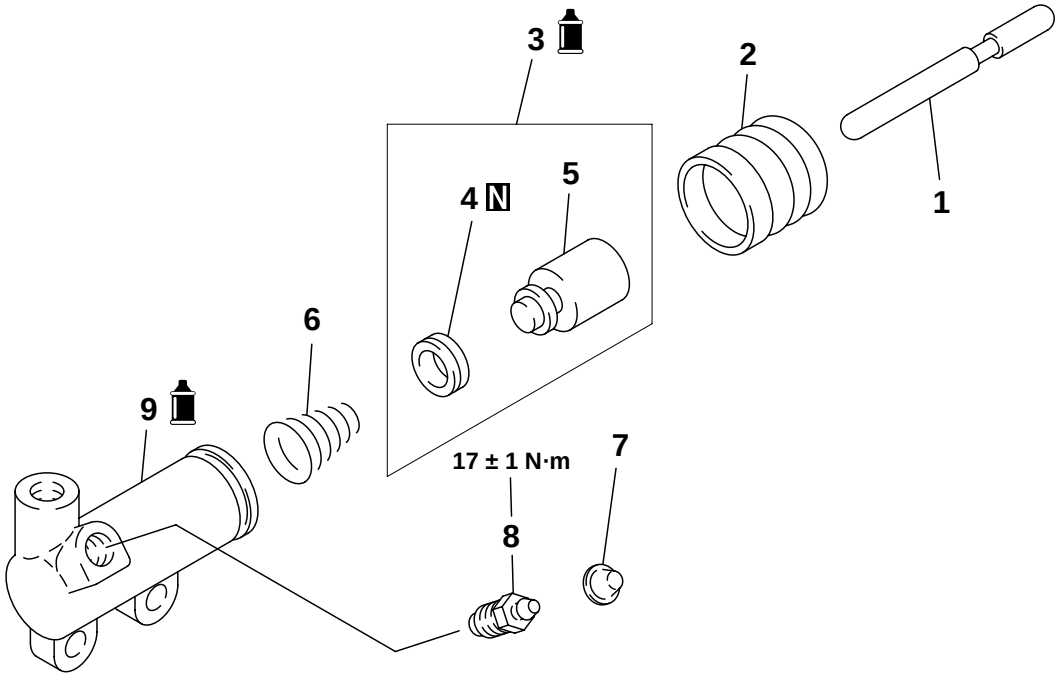

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Disassembly steps

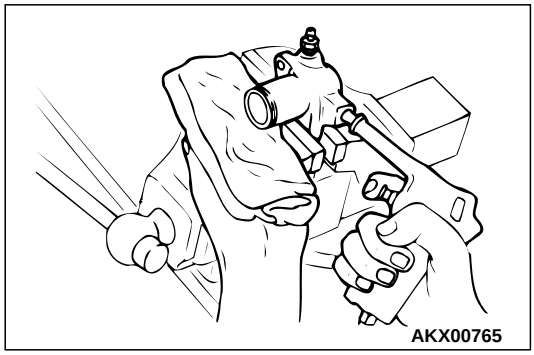
1. Push rod
2. Boot

<<A>> >>A<<

3. Piston assembly
4. Piston cup
5. Piston
6. Conical spring
7. Cap
8. Air bleeder
9. Release cylinder

DISASSEMBLY SERVICE POINT

<<A>> PISTON ASSEMBLY REMOVAL



1. Cover with a shop towel to prevent the piston from popping out.

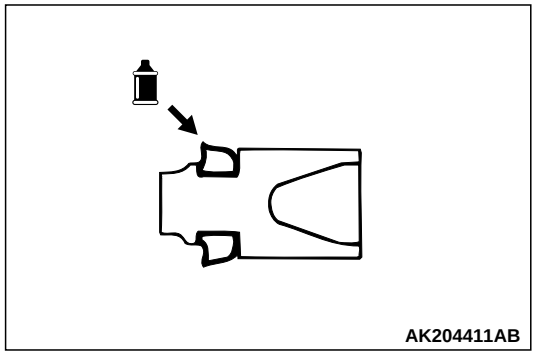
⚠ CAUTION

Apply compressed air slowly to prevent brake fluid from splashing.

2. Apply the compressed air into the tube mounting hole to remove the piston assembly.

REASSEMBLY SERVICE POINT

>>A<< PISTON ASSEMBLY INSTALLATION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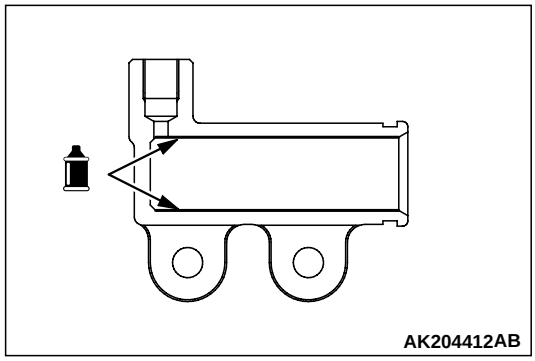
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1. Apply brake fluid DOT3 or DOT4 to the piston cup and inner surface of the release cylinder.
2. Insert the piston assembly into the release cylinder.

INSPECTION

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RELEASE CYLINDER

1. Check the bore of the release cylinder for rust, scratches or damage.
2. Using a cylinder gauge, measure the inside diameter of the release cylinder at about there positions (the deepest, middle and brim positions).

   If the clearance from the outside diameter of the piston exceeds the limit, replace the release cylinder as an assembly.