

SECTION

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CLUTCH

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NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:000000001043505

Use the chart below to help you find the cause of the symptom. The numbers indicate the order of the inspection. If necessary, repair or replace these parts.

Reference																		
SUSPECTED PARTS (Possible cause)																		
Symptom	Clutch grabs/chatters			1			2			2	2	2			2			
	Clutch pedal spongy		1		2													
	Clutch noisy				1													
	Clutch slips	1								2	2			3		4	5	
	Clutch does not disengage	1	2		3	3	3	3	3	3			3	4	4	5		
		CL-5	CL-6	EM-83 (HR16DE), EM-194 (MR20DE), EM-298 (K9K)	CL-15	CL-16												EM-101 (HR16DE), EM-219 (MR20DE), EM-326 (K9K)
		CLUTCH PEDAL (Inspection and adjustment)	CLUTCH LINE (Air in line)	ENGINE MOUNTING (Loose)	CSC (Concentric Slave Cylinder) (Worn, dirty or damaged)	CLUTCH DISC (Out of true)	CLUTCH DISC (Runout is excessive)	CLUTCH DISC (Lining broken)	CLUTCH DISC (Dirty or burned)	CLUTCH DISC (Oily)	CLUTCH DISC (Worn out)	CLUTCH DISC (Hardened)	CLUTCH DISC (Lack of spline grease)	DIAPHRAGM SPRING (Damaged)	DIAPHRAGM SPRING (Out of tip alignment)	PRESSURE PLATE (Distortion)	FLYWHEEL (Distortion)	

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

Service Notice or Precautions for Clutch

INFOID:000000001043506

CAUTION:

- Recommended clutch fluid is brake fluid "DOT 4". Refer to [MA-21, "Fluids and Lubricants"](#).
- Never reuse drained clutch fluid.
- Never splash clutch fluid on painted areas.
- Never use mineral oils such as gasoline or kerosene. It will ruin the rubber parts of the hydraulic system.
- If transaxle assembly is removed from the vehicle, always replace CSC (Concentric Slave Cylinder). Return CSC insert to original position to remove transaxle assembly. Dust on clutch disc sliding parts may damage seal of CSC and may cause clutch fluid leakage.
- Never disassemble master cylinder and CSC.

WARNING:

After cleaning clutch disc, wipe it with a dust collector. Never use compressed air.

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PREPARATION

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PREPARATION

PREPARATION

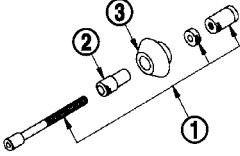
Special Service Tools

INFOID:000000001043507

Tool number Tool name	Description
ST20050240 Diaphragm adjusting wrench	Adjusting unevenness of diaphragm spring of clutch cover
 ZZA0508D	

Commercial Service Tools

INFOID:000000001043508

Tool name	Description
Clutch aligner 1: Center shaft 2: Attachment 3: Guide	Installing clutch disc
 PCIB0017E	

CLUTCH PEDAL

< ON-VEHICLE MAINTENANCE >

ON-VEHICLE MAINTENANCE

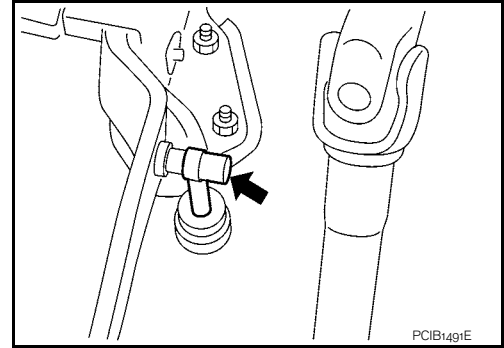
CLUTCH PEDAL

Inspection and Adjustment

INFOID:000000001043509

INSPECTION

1. Check to see if the master cylinder rod end moves freely. It should not be bound by the clutch pedal.
 - If the rod end does not move freely, remove the rod end and check for deformation or damage on the rod end. Leave the rod end removed for step 2.
2. Check the clutch pedal stroke for free range of movement.
 - a. With the master cylinder rod end removed, manually move the clutch pedal up and down to determine if it moves freely.
 - b. If any sticking is noted, replace the clutch pedal assembly. Reverify that the master cylinder rod end moves freely.
3. Inspect the ASCD clutch switch position.
 - a. If the rod end does not move freely, check that the ASCD clutch switch is not applying pressure to the clutch pedal causing the rod end to bind. To adjust, disconnect the ASCD clutch switch electrical connector and turn the ASCD clutch switch.
 - b. Connect the ASCD clutch switch electrical connector.
4. Check the clutch hydraulic system components (master cylinder assembly, CSC) for sticking or binding.
 - a. If any sticking or binding is noted, repair or replace the related parts as necessary.
 - b. If any hydraulic system repair was necessary, bleed the clutch hydraulic system. Refer to [CL-6, "Air Bleeding Procedure"](#).



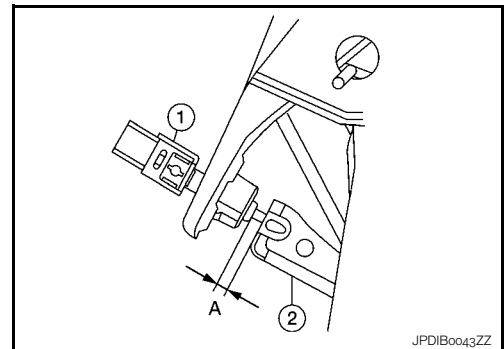
NOTE:

Do not use a vacuum assist or any other type of power bleeder on this system. Use of a vacuum assist or power bleeder will not purge all of the air from the system.

ADJUSTMENT

Adjust ASCD clutch switch (1) position so that clearance between clutch pedal (2) and thread end of ASCD clutch switch, with clutch pedal fully released, is within specification "A".

Clearance "A" : Refer to [CL-20, "Clutch Pedal"](#).



CLUTCH FLUID

< ON-VEHICLE MAINTENANCE >

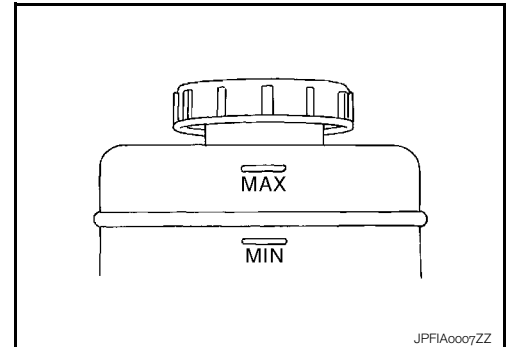
CLUTCH FLUID

Inspection

INFOID:000000001092869

CLUTCH FLUID LEVEL

- Check that the fluid level in the reservoir tank is within the specified range (MAX – MIN lines).
- Visually check for any clutch fluid leakage around the reservoir tank.
- Check the clutch system for any leakage if the fluid level is extremely low (lower than MIN).



Air Bleeding Procedure

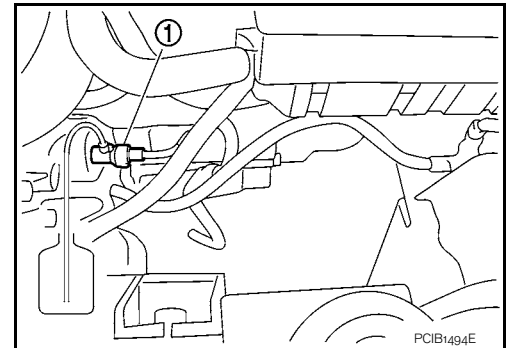
INFOID:000000001043510

NOTE:

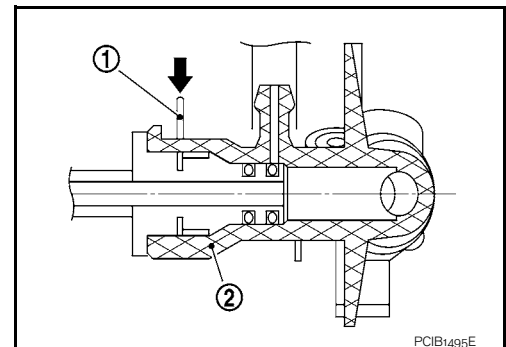
Do not use a vacuum assist or any other type of power bleeder on this system. Use of a vacuum assist or power bleeder will not purge all the air from the system.

CAUTION:

- Monitor clutch fluid level in reservoir tank to make sure it does not empty.
 - Keep painted surface on the body or other parts free of clutch fluid. If it spills, wipe up immediately and wash the affected area with water.
- Bleed the air of bleeding connector (1).
 1. Fill reservoir tank with new clutch fluid.
 2. Connect a transparent vinyl hose to air bleeder of bleeding connector.
 3. "Depress" and "release" the clutch pedal slowly and fully 15 times at an interval of 2 to 3 seconds and release the clutch pedal.



4. Push the lock pin (1) of the bleeding connector (2), and maintain the position.
 - RS5F92R



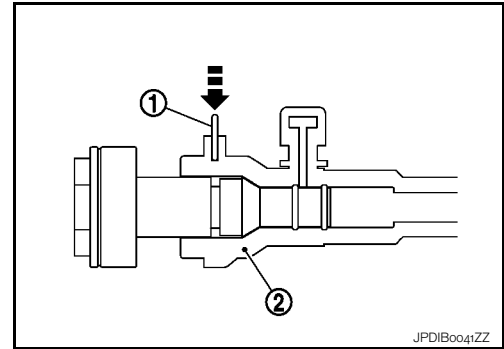
CLUTCH FLUID

< ON-VEHICLE MAINTENANCE >

- RS6F94R and RS6F52A

CAUTION:

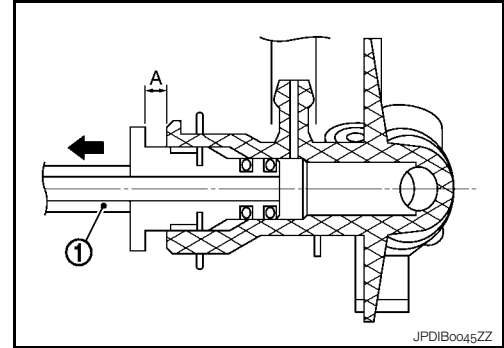
Hold it to prevent releasing clutch tube from bleeding connector when fluid pressure is applied in the tube.



5. Slide clutch tube (1) in the direction of the arrow as shown in the figure.

- RS5F92R

Dimension "A" : 5 mm (0.20 in)



- RS6F94R and RS6F52A

2 : Clutch housing

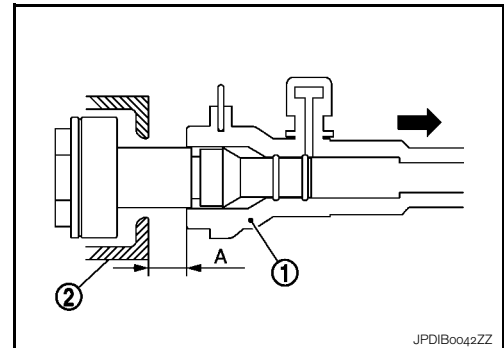
Dimension "A" : 10 mm (0.39 in)

6. Depress the clutch pedal soon and hold it, and then bleed the air from the piping.

CAUTION:

Hold it to prevent releasing clutch tube from bleeding connector when fluid pressure is applied in the tube.

7. Return clutch tube (1) and lock pin to their original positions.
8. Release clutch pedal and wait for 5 seconds.
9. Repeat steps 3 to 8 until no bubbles are observed in the clutch fluid.



CLUTCH PEDAL

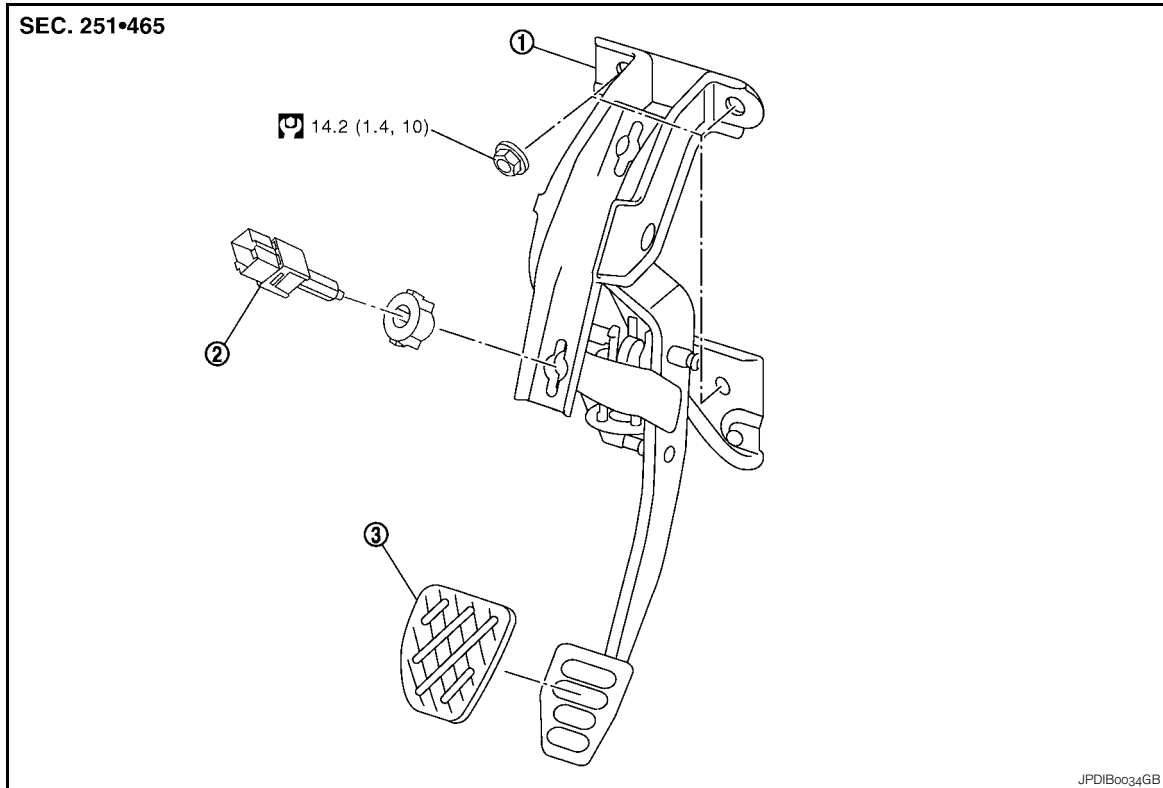
< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

CLUTCH PEDAL

Exploded View

INFOID:000000001043511



1. Clutch pedal assembly

2. ASCD clutch switch

3. Pedal pad

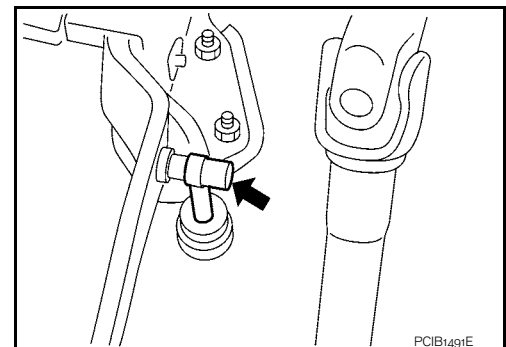
Refer to [GI-4, "Components"](#) for the symbols in the figure.

Removal and Installation

INFOID:000000001043512

REMOVAL

1. Remove front kicking plate inner and dash side finisher. Refer to [INT-14, "Removal and Installation"](#).
2. Remove lower instrument panel, driver side. Refer to [IP-12, "Removal and Installation"](#).
3. Disconnect ASCD clutch switch harness connector and then disconnect clip of harness from clutch pedal assembly.
4. Remove master cylinder rod end from clutch pedal assembly.
5. Remove clutch pedal assembly.



INSTALLATION

Install in the reverse order of removal.

Inspection

INFOID:000000001043513

CLUTCH PEDAL

< ON-VEHICLE REPAIR >

INSPECTION AFTER REMOVAL

Check clutch pedal for bend, damage, or a cracked weld. If bend, damage, or a cracked weld is found, replace clutch pedal assembly.

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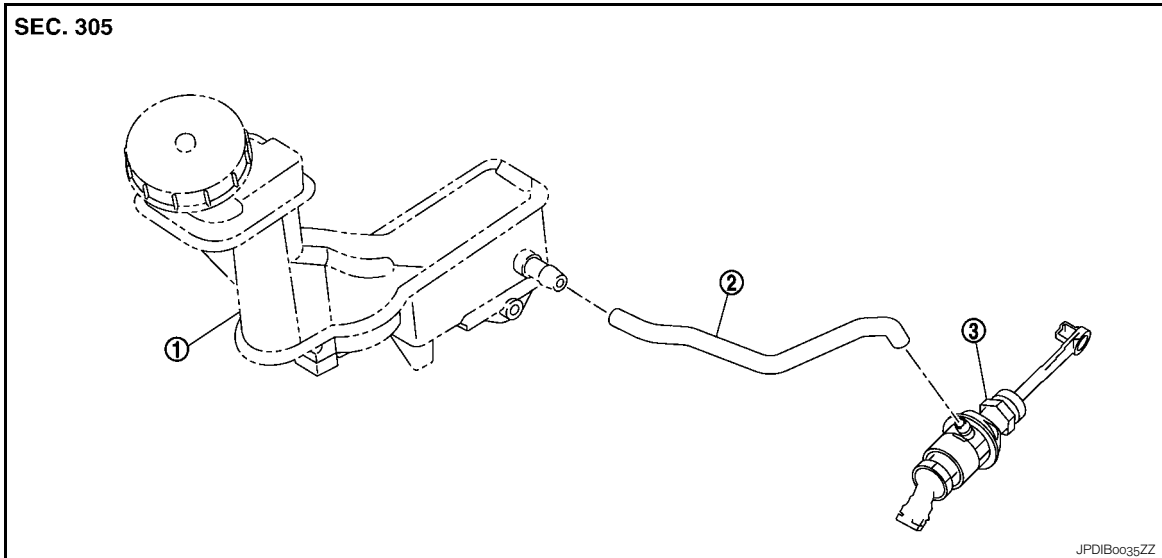
CLUTCH MASTER CYLINDER

< ON-VEHICLE REPAIR >

CLUTCH MASTER CYLINDER

Exploded View

INFOID:000000001043514



1. Reservoir tank assembly

2. Hose

3. Master cylinder assembly

Removal and Installation

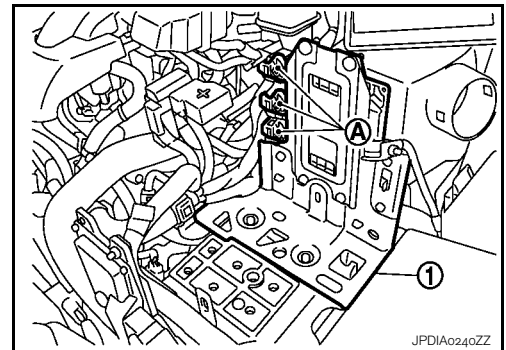
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REMOVAL

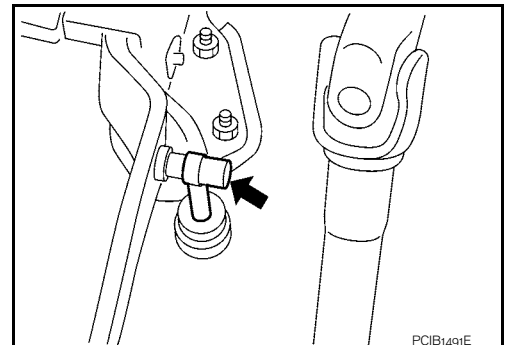
CAUTION:

- Keep painted surface on the body or other parts free of clutch fluid. If it spills, wipe up immediately and wash the affected area with water.
- Never disassemble master cylinder.

1. Remove the air cleaner case and air duct (inlet) or air ducts. Refer to [EM-27, "Removal and Installation"](#) (HR16DE), [EM-144, "Removal and Installation"](#) (MR20DE), or [EM-265, "Removal and Installation"](#) (K9K).
2. Remove the battery. Refer to [PG-118, "Removal and Installation"](#).
3. Disconnect the connectors (A) and then remove the bracket (1).
4. Drain clutch fluid in reservoir tank assembly and then remove hose.



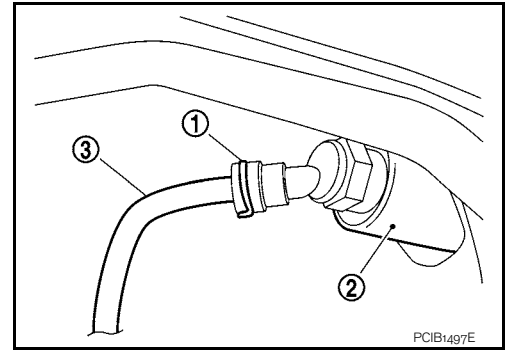
5. Remove master cylinder rod end from clutch pedal assembly.



CLUTCH MASTER CYLINDER

< ON-VEHICLE REPAIR >

6. Remove lock pin (1) from connector of master cylinder (2) and separate clutch tube (3).
7. Rotate master cylinder assembly clockwise by 45° and then remove master cylinder assembly from the vehicle.



INSTALLATION

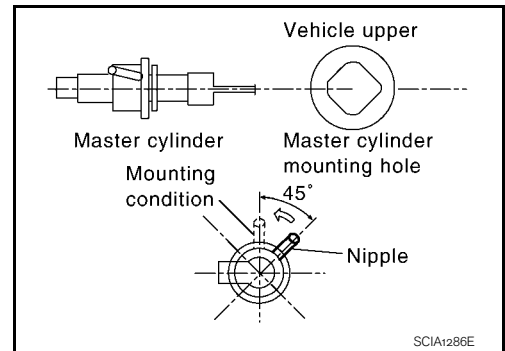
CAUTION:

Keep painted surface on the body or other parts free of clutch fluid. If it spills, wipe up immediately and wash the affected area with water.

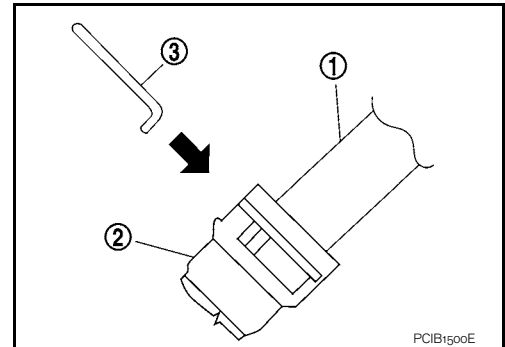
1. Tilt master cylinder assembly clockwise by 45° and insert it to the mounting hole. Rotate counterclockwise and secure it. At this time, nipple is upward of the vehicle.
2. Install master cylinder rod end to clutch pedal assembly.
3. Install hose to reservoir tank assembly and master cylinder assembly.

CAUTION:

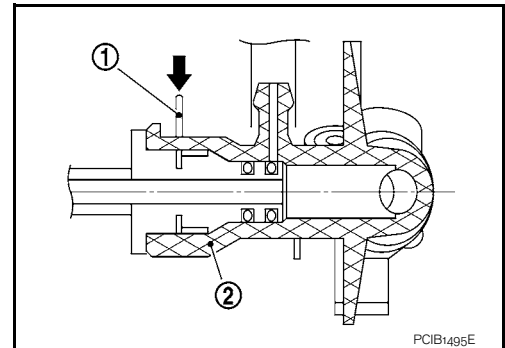
Set hose with painted mark facing upward.



4. Install clutch tube (1) into connector of master cylinder assembly (2) until it stops.
5. Install lock pin (3) into connector of master cylinder assembly until it stops.
6. Fill new clutch fluid according to the following.
 - a. Fill reservoir tank assembly with new clutch fluid.
 - b. Connect a transparent vinyl hose to air bleeder of bleeding connector.



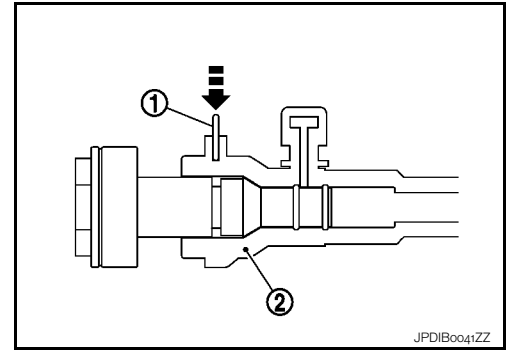
- c. Push the lock pin (1) of the bleeding connector (2).
 - RS5F92R



CLUTCH MASTER CYLINDER

< ON-VEHICLE REPAIR >

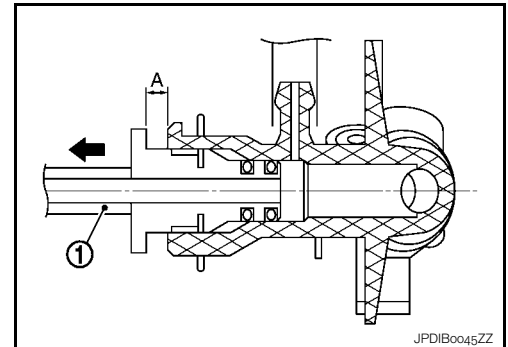
- RS6F94R and RS6F52A



- d. Slide clutch tube (1) in the direction of the arrow as shown in the figure.

- RS5F92R

Dimension "A" : 5 mm (0.20 in)



- RS6F94R and RS6F52A

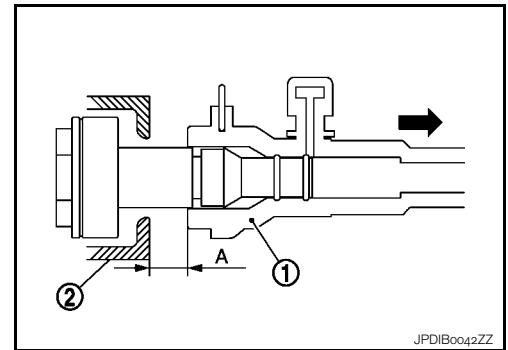
2 : Clutch housing

Dimension "A" : 10 mm (0.39 in)

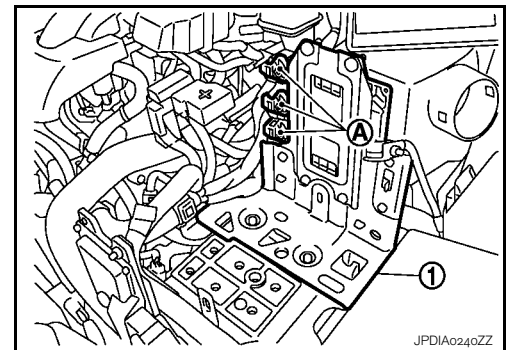
- e. Depress clutch pedal slowly to full stroke and then release it. Repeat this until new clutch fluid comes out.

CAUTION:

- Hold it to prevent releasing clutch tube from bleeding connector when fluid pressure is applied in the tube.
- Monitor clutch fluid level in reservoir tank to make sure it does not empty.



- f. Place clutch tube (1) and lock pin back into position with clutch pedal depressed.
- g. Bleed the air from the clutch hydraulic system. Refer to [CL-6. "Air Bleeding Procedure"](#).
7. After completing this procedure, inspect for clutch pedal. Refer to [CL-5. "Inspection and Adjustment"](#).
8. Install the bracket (1) and then connect the connectors (A).
9. Install the battery. Refer to [PG-118. "Removal and Installation"](#).
10. Install the air cleaner case and air duct (inlet) or air ducts. Refer to [EM-27. "Removal and Installation"](#) (HR16DE), [EM-144. "Removal and Installation"](#) (MR20DE), or [EM-265. "Removal and Installation"](#) (K9K).



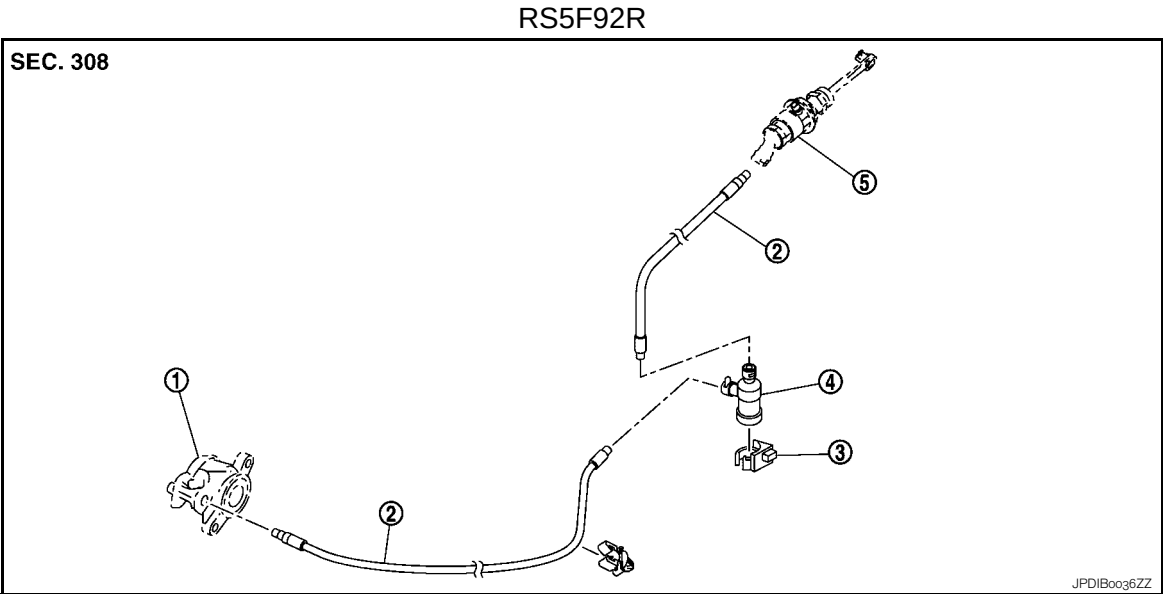
CLUTCH PIPING

< ON-VEHICLE REPAIR >

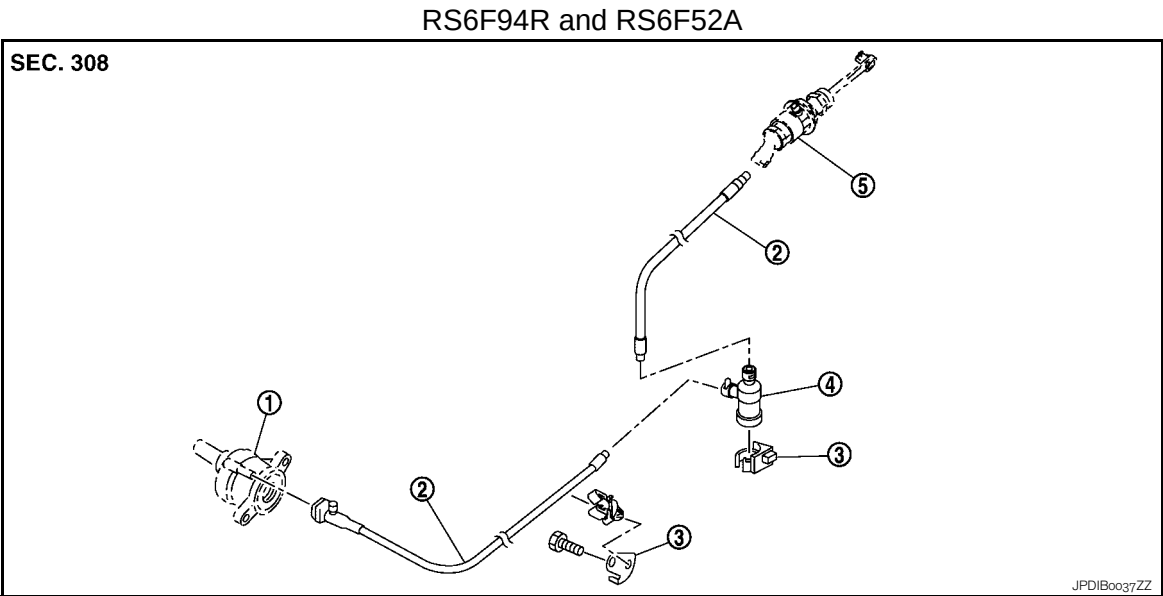
CLUTCH PIPING

Exploded View

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|------------------------------------|-----------------------------|------------|
| 1. CSC (Concentric Slave Cylinder) | 2. Clutch tube | 3. Bracket |
| 4. Clutch damper | 5. Master cylinder assembly | |



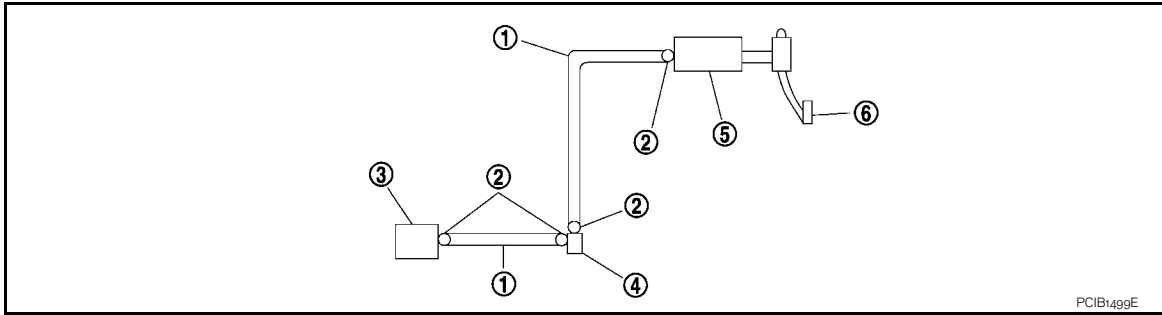
- | | | |
|------------------------------------|-----------------------------|------------|
| 1. CSC (Concentric Slave Cylinder) | 2. Clutch tube | 3. Bracket |
| 4. Clutch damper | 5. Master cylinder assembly | |

Hydraulic Layout

INFOID:0000000001043519

CLUTCH PIPING

< ON-VEHICLE REPAIR >



- | | | |
|------------------|-----------------------------|------------------------------------|
| 1. Clutch tube | 2. Lock pin | 3. CSC (Concentric Slave Cylinder) |
| 4. Clutch damper | 5. Master cylinder assembly | 6. Clutch pedal assembly |

Removal and Installation

INFOID:000000001043520

CAUTION:

Keep painted surface on the body or other parts free of clutch fluid. If it spills, wipe up immediately and wash the affected area with water.

REMOVAL

Refer to the figure for removal procedure.

INSTALLATION

Refer to the figure for installation procedure.

- When installing clutch tube to connector of CSC, connector of clutch damper and connector of master cylinder, push it as far as it goes.
- When installing lock pin to connector of CSC, connector of clutch damper and connector of master cylinder, push it as far as it goes.
- After installation, bleed the air from the clutch hydraulic system. Refer to [CL-6. "Air Bleeding Procedure"](#).

CAUTION:

Never scratch or damage clutch hose.

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CSC (CONCENTRIC SLAVE CYLINDER)

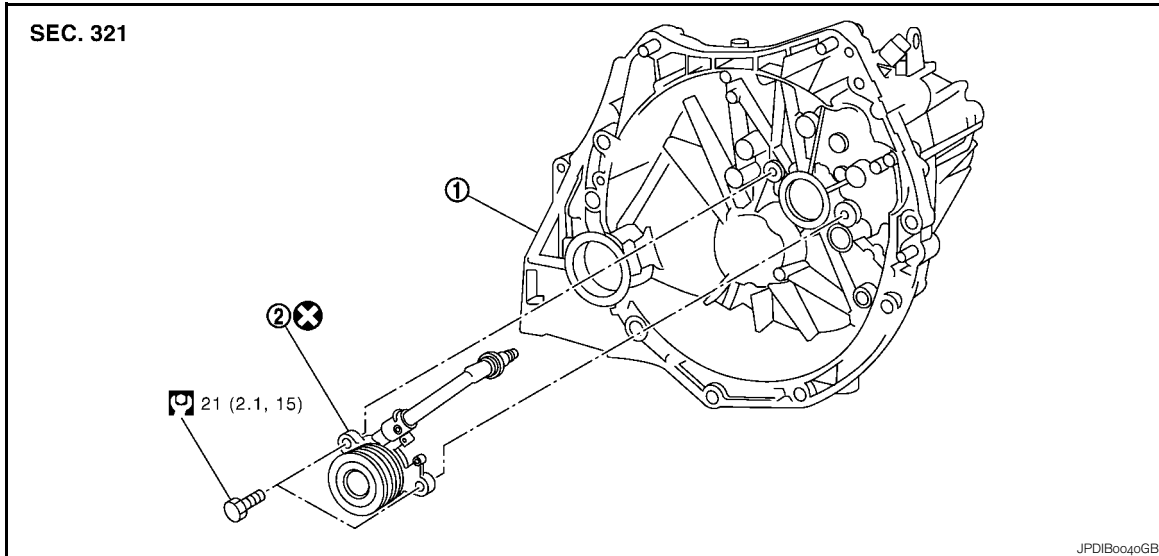
< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

CSC (CONCENTRIC SLAVE CYLINDER)

Exploded View

INFOID:000000001043521



1. Transaxle assembly
2. CSC (Concentric Slave Cylinder)

Refer to [GI-4, "Components"](#) for symbols not described on the above.

Removal and Installation

INFOID:000000001043522

CAUTION:

- If transaxle assembly is removed from the vehicle, always replace CSC (Concentric Slave Cylinder). Return CSC insert to original position to remove transaxle assembly. Dust on clutch disc sliding parts may damage seal of CSC and may cause clutch fluid leakage.
- Never disassemble CSC.
- Keep painted surface on the body or other parts free of clutch fluid. If it spills, wipe up immediately and wash the affected area with water.

REMOVAL

1. Remove transaxle assembly from the vehicle. Refer to [TM-23, "Removal and Installation"](#) (RS5F92R), [TM-69, "Removal and Installation"](#) (RS6F94R), or [TM-123, "Removal and Installation"](#) (RS6F52A).
2. Remove mounting bolts and then remove CSC from clutch housing.

INSTALLATION

1. Install CSC to clutch housing and then tighten bolts to the specified torque.

CAUTION:

- Never reuse CSC.
 - Never insert and operate CSC because piston and stopper of CSC components may fall off.
2. Install transaxle assembly. Refer to [TM-23, "Removal and Installation"](#) (RS5F92R), [TM-69, "Removal and Installation"](#) (RS6F94R), or [TM-123, "Removal and Installation"](#) (RS6F52A).
 3. Bleed the air from the clutch hydraulic system. Refer to [CL-6, "Air Bleeding Procedure"](#).

CLUTCH DISC AND CLUTCH COVER

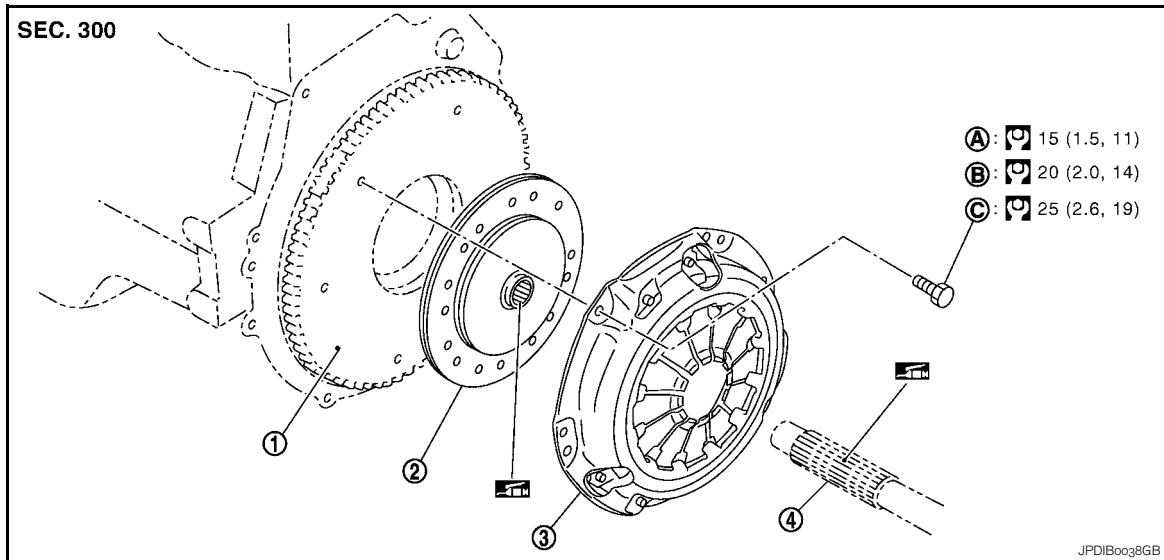
< REMOVAL AND INSTALLATION >

CLUTCH DISC AND CLUTCH COVER

HR16DE, MR20DE

HR16DE, MR20DE : Exploded View

INFOID:000000001043523



- | | | |
|------------------------|------------------------|-----------------|
| 1. Flywheel | 2. Clutch disc | 3. Clutch cover |
| 4. Input shaft | | |
| A. First step (MR20DE) | B. First step (HR16DE) | C. Final step |

 : Apply lithium-based grease including molybdenum disulphide.

Refer to [GI-4, "Components"](#) for symbols not described on the above.

CAUTION:

- If transaxle assembly is removed from the vehicle, always replace CSC (Concentric Slave Cylinder). Return CSC insert to original position to remove transaxle assembly. Dust on clutch disc sliding parts may damage seal of CSC and may cause clutch fluid leakage.
- Never bring any grease to the clutch disc facing, pressure plate surface and flywheel surface.
- When installing, be careful that grease applied to input shaft does not adhere to clutch disc.
- Never clean in solvent on clutch disc.

HR16DE, MR20DE : Removal and Installation

INFOID:000000001043524

CAUTION:

If transaxle assembly is removed from the vehicle, always replace CSC (Concentric Slave Cylinder). Return CSC insert to original position to remove transaxle assembly. Dust on clutch disc sliding parts may damage seal of CSC and may cause clutch fluid leakage.

REMOVAL

1. Remove transaxle assembly from the vehicle. Refer to [TM-23, "Removal and Installation"](#) (RS5F92R), [TM-69, "Removal and Installation"](#) (RS6F94R), or [TM-123, "Removal and Installation"](#) (RS6F52A).
2. Loosen clutch cover mounting bolts.
3. Remove clutch cover and clutch disc.

CAUTION:

Never drop clutch disc.

INSTALLATION

1. Clean clutch disc and input shaft splines to remove grease and powder arisen from abrasion.
2. Apply recommended grease to clutch disc and input shaft splines.

CAUTION:

CLUTCH DISC AND CLUTCH COVER

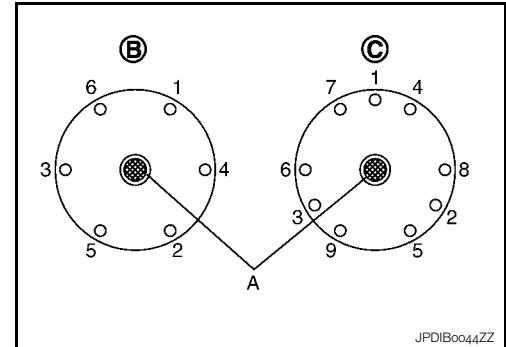
< REMOVAL AND INSTALLATION >

Be sure to apply grease to the points specified. Otherwise, noise, poor disengagement, or damage to the clutch may result. Excessive grease may cause slip or judder. And if it adheres to seal of CSC, it cause clutch fluid leakage. Wipe off excess grease. Wipe off any grease oozing from the parts.

3. Install clutch disc using a suitable clutch aligner (A).

B : HR16DE
C : MR20DE

4. Install clutch cover. Pre-tighten clutch cover mounting bolts.
5. Tighten clutch cover mounting bolts evenly to the specified torque in two steps in the order shown in the figure.
6. Install transaxle assembly to the vehicle. Refer to [TM-23, "Removal and Installation"](#) (RS5F92R), [TM-69, "Removal and Installation"](#) (RS6F94R), or [TM-123, "Removal and Installation"](#) (RS6F52A).



HR16DE, MR20DE : Inspection

INFOID:000000001043525

INSPECTION AFTER REMOVAL

CLUTCH DISC

- Measure circumferential runout relative to clutch disc center spline. If it is outside the specification, replace clutch disc.

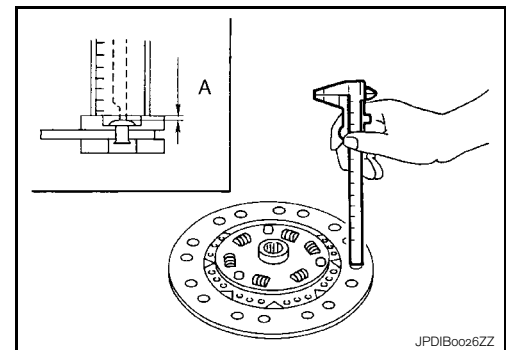
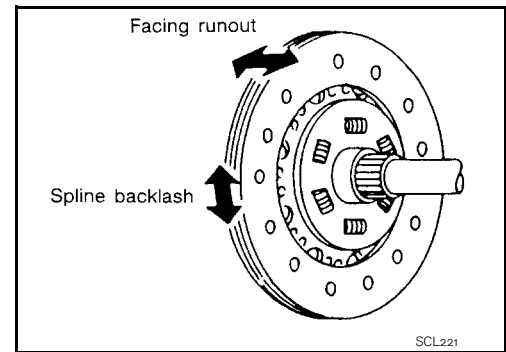
Runout limit/diameter of the area to be measured : Refer to [CL-20, "Clutch Disc"](#).

- Measure backlash to clutch disc spline and main drive gear spline at the circumference of clutch disc. If outside the specification, replace clutch disc.

Maximum allowable spline backlash (at outer edge of disc) : Refer to [CL-20, "Clutch Disc"](#).

- Measure the depth "A" to clutch disc facing rivet heads using calipers. If it exceeds the allowable facing wear limit, replace clutch disc.

Facing wear limit (depth to the rivet head) : Refer to [CL-20, "Clutch Disc"](#).



CLUTCH COVER

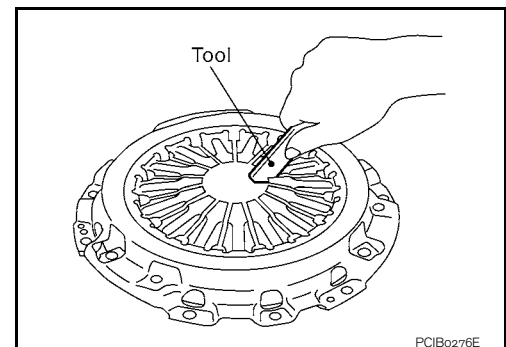
Check diaphragm spring lever claws for unevenness with the lever still on the vehicle. If they exceed the tolerance, adjust lever height using the diaphragm adjusting wrench [SST: ST20050240].

Tolerance for diaphragm spring lever unevenness : Refer to [CL-20, "Clutch Cover"](#).

- Check clutch cover thrust ring for wear or breakage. If wear or breakage is found, replace clutch cover.

NOTE:

- Worn thrust ring will generate a beating noise when tapped at the rivet with a hammer.
- Broken thrust ring will make a clinking sound when cover is shaken up and down.



CLUTCH DISC AND CLUTCH COVER

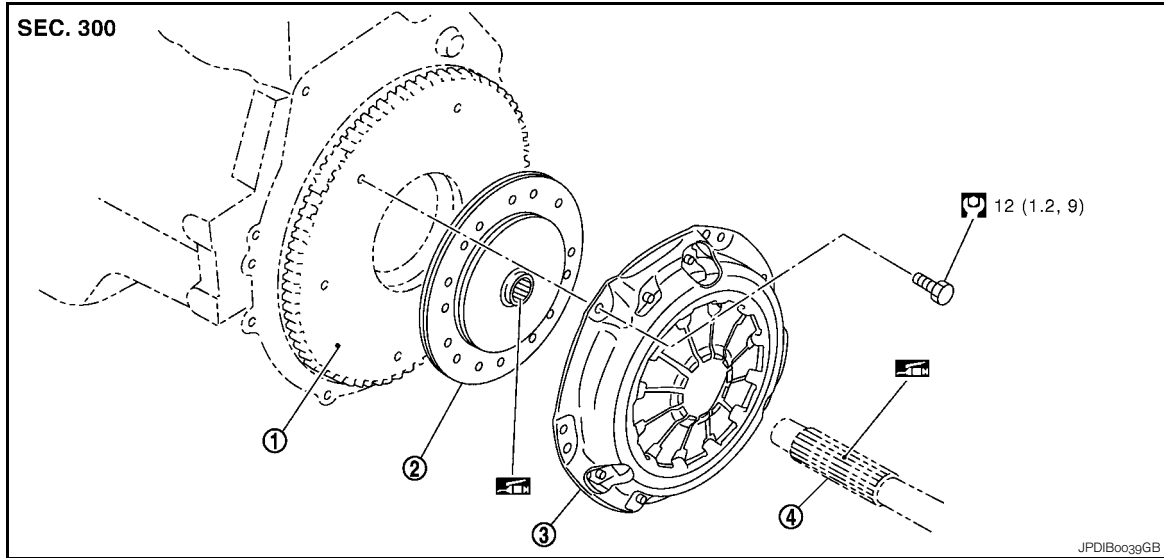
< REMOVAL AND INSTALLATION >

- If a trace of burn or discoloration is found on the clutch cover pressure plate to clutch disc contact surface, repair the surface with sandpaper. If surface is damaged or distorted, replace clutch cover.

K9K

K9K : Exploded View

INFOID:000000001043557



1. Flywheel
2. Clutch disc
3. Clutch cover
4. Input shaft

 : Apply lithium-based grease including molybdenum disulphide.

Refer to [GI-4, "Components"](#) for symbols not described on the above.

CAUTION:

- If transaxle assembly is removed from the vehicle, always replace CSC (Concentric Slave Cylinder). Return CSC insert to original position to remove transaxle assembly. Dust on clutch disc sliding parts may damage seal of CSC and may cause clutch fluid leakage.
- Never bring any grease to the clutch disc facing, pressure plate surface and flywheel surface.
- When installing, be careful that grease applied to input shaft does not adhere to clutch disc.
- Never clean in solvent on clutch disc.

K9K : Removal and Installation

INFOID:000000001043558

CAUTION:

If transaxle assembly is removed from the vehicle, always replace CSC (Concentric Slave Cylinder). Return CSC insert to original position to remove transaxle assembly. Dust on clutch disc sliding parts may damage seal of CSC and may cause clutch fluid leakage.

REMOVAL

1. Remove transaxle assembly from the vehicle. Refer to [TM-69, "Removal and Installation"](#).
2. Loosen clutch cover mounting bolts.
3. Remove clutch cover and clutch disc.

CAUTION:

Never drop clutch disc.

INSTALLATION

1. Clean clutch disc and input shaft splines to remove grease and powder arisen from abrasion.
2. Apply recommended grease to clutch disc and input shaft splines.

CAUTION:

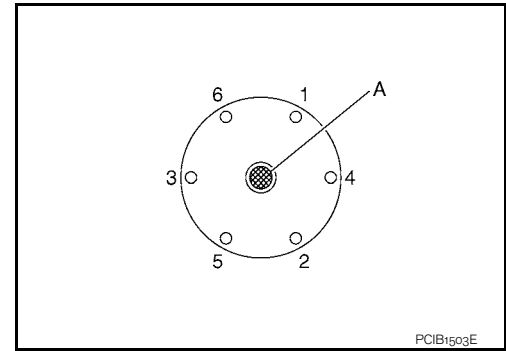
Be sure to apply grease to the points specified. Otherwise, noise, poor disengagement, or damage to the clutch may result. Excessive grease may cause slip or judder. And if it adheres to seal of

CLUTCH DISC AND CLUTCH COVER

< REMOVAL AND INSTALLATION >

CSC, it cause clutch fluid leakage. Wipe off excess grease. Wipe off any grease oozing from the parts.

3. Install clutch disc using a suitable clutch aligner (A).
4. Install clutch cover. Pre-tighten clutch cover mounting bolts.
5. Tighten clutch cover mounting bolts evenly to the specified torque in the order shown in the figure.
6. Install transaxle assembly to the vehicle. Refer to [TM-69, "Removal and Installation"](#).



K9K : Inspection

INFOID:000000001043559

INSPECTION AFTER REMOVAL

CLUTCH DISC

- Measure circumferential runout relative to clutch disc center spline. If it is outside the specification, replace clutch disc.

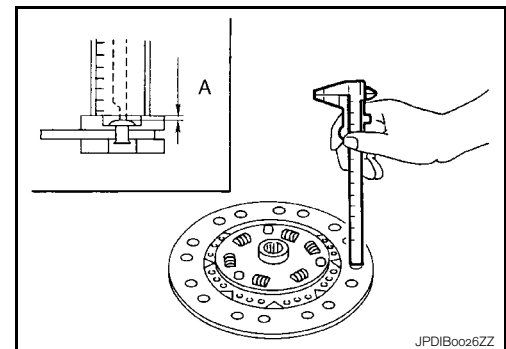
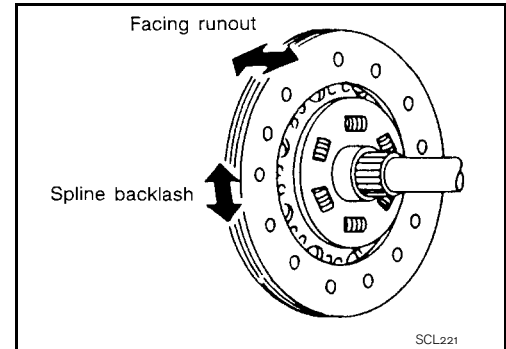
Runout limit/diameter of the area to be measured : Refer to [CL-20, "Clutch Disc"](#).

- Measure backlash to clutch disc spline and main drive gear spline at the circumference of clutch disc. If outside the specification, replace clutch disc.

Maximum allowable spline backlash (at outer edge of disc) : Refer to [CL-20, "Clutch Disc"](#).

- Measure the depth "A" to clutch disc facing rivet heads using calipers. If it exceeds the allowable facing wear limit, replace clutch disc.

Facing wear limit (depth to the rivet head) : Refer to [CL-20, "Clutch Disc"](#).



CLUTCH COVER

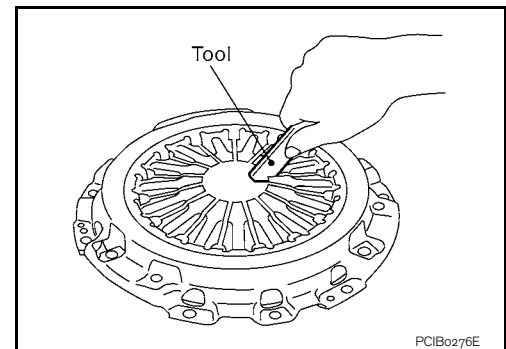
Check diaphragm spring lever claws for unevenness with the lever still on the vehicle. If they exceed the tolerance, adjust lever height using the diaphragm adjusting wrench [SST: ST20050240].

Tolerance for diaphragm spring lever unevenness : Refer to [CL-20, "Clutch Cover"](#).

- Check clutch cover thrust ring for wear or breakage. If wear or breakage is found, replace clutch cover.

NOTE:

- Worn thrust ring will generate a beating noise when tapped at the rivet with a hammer.
- Broken thrust ring will make a clinking sound when cover is shaken up and down.
- If a trace of burn or discoloration is found on the clutch cover pressure plate to clutch disc contact surface, repair the surface with sandpaper. If surface is damaged or distorted, replace clutch cover.



SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Clutch Control System

INFOID:0000000001043459

Type of clutch control	Hydraulic
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Clutch Pedal

INFOID:0000000001043460

Unit: mm (in)

Clearance "A" between clutch pedal and ASCD switch threaded end while clutch pedal is fully released.	0.74 - 1.96 (0.0291 - 0.0772)
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Clutch Disc

INFOID:0000000001043462

Unit: mm (in)

Engine type	HR16DE	MR20DE	K9K
Model	200	225	
Facing size (Outer dia. × Inner dia. × Thickness)	200 × 140 × 3.5 (7.87 × 5.51 × 0.138)	225 × 160 × 3.2 (8.86 × 6.30 × 0.126)	225 × 150 × 3.1 (8.86 × 5.91 × 0.122)
Runout limit/diameter of the area to be measured	1.0 (0.039) /200 (7.87) dia.	1.0 (0.039) /215 (8.46) dia.	
Maximum allowable spline backlash (at outer edge of disc)	0.8 (0.031)	1.0 (0.039)	0.507 (0.0200)
Facing wear limit (depth to the rivet head)	0.3 (0.012)		1.0 (0.039)

Clutch Cover

INFOID:0000000001043463

Engine type	HR16DE	MR20DE		K9K
Transaxle type	RS5F92R	RS6F94R	RS6F52A	RS6F94R
Set-load	4,658 N (475.1 kg, 1,047.1 lb)	5,390 N (549.8 kg, 1,211.7 lb)		6,300 N (642.6 kg, 1416.2 lb)
Tolerance for diaphragm spring lever unevenness	0.7 mm (0.028 in) or less			1.2 mm (0.047 in) or less
Diaphragm spring lever height	29 - 31 mm (1.14 - 1.22 in)	21 - 23 mm (0.83 -0.91 in)	31.8 - 33.8 mm (1.252 - 1.331 in)	—