

Keep this manual

HYPET
Compe-R

Installation manual

Thank you very much for your purchase of EXEDY RACING CLUTCH.
Be sure to read this installation manual prior to use.
Please keep this manual carefully while the product is in use.

EXEDY
EXEDY Corporation

Installation manual introduction

This installation manual includes useful information to prevent problems from occurring during installation.

1. Please read through this manual before installation.
2. Installation work has to be done by a professional installer who will use the product safely.
3. Please do not use the product wrongfully nor modify the parts. In such case, we will not take any responsibility.
4. We will not accept any claim nor return as this product is used predominately for racing and specification may change without prior notice.
5. Please keep this manual following installation.

For safety

Please note the following as these are important warnings and cautions for our customers.







WARNING Ignoring this warning may cause death or extreme injury.








CAUTION Ignoring this caution may cause injury or damage.

Caution during handling

-  CAUTION As this product is heavy, handle carefully when removing it from the box.
-  CAUTION As for the pull type, NEVER hold the inner diameter of the diaphragm. (Otherwise, the collar or C-ring may be deformed, leading to release of the bearing.)
-  CAUTION Do not place the product on the floor directly as this may cause rust to appear on the product.
-  CAUTION Do not throw or drop the product as it is a precision part.

Caution during installation

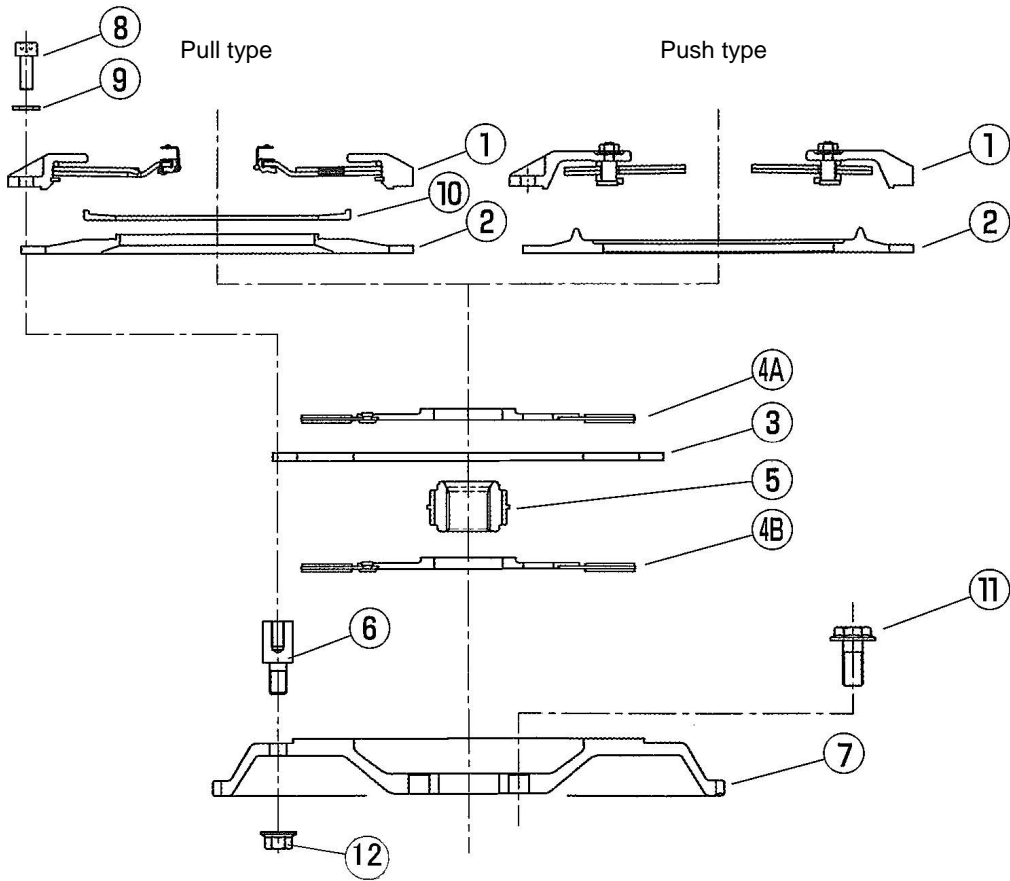
-  WARNING Use a licensed installer as the transmission unit is to be taken out of the vehicle.
-  WARNING Install the product according to the maintenance manual of the vehicle and this installation manual.
-  WARNING Do not apply this product to vehicles other than those specified by EXEDY.
-  WARNING Do not modify this product unless instructed to in this manual.
-  WARNING If a failure such as abnormal noise, vibration, odor or disengagement problem occurs during driving, stop the using immediately and have a licensed garage inspect the vehicle.

Applicable vehicle and model

			Applicable vehicle model	
Manufacturer	Part No.	Clutch size	Vehicle model	Engine model
NISSAN	NM012SBL	φ200	S13/14	SR20DET
	NM022SBL	φ200	S15	
	NM032SBL	φ200	BNR32 BNR32 BCNR33 BNR32 early model and BNR32 later model, BCNR33 conversion model	RB26DETT
	NM042SBL	φ200	BNR32 BCNR33 BNR32 later model, BCNR33	
	NM052SBL	φ200	BNR34	
	NM072SBL	φ200	Z33	VQ35DE
MAZDA	ZM012SBL	φ200	FC3S	13B
	ZM022SBL	φ200	FD3S	13B-REW
MITSUBISHI	MM012SR	φ180	CE9A	4G63
	MM032SR	φ180	CD9A	
	MM022SBL	φ200	CN/CP/CT9A	4B11
	MM062SBL	φ200	CZ4A	
SUBARU	FM012SBL	φ200	GC8	EJ20
	FM022SBL	φ200	GDB	
HONDA	HM022SR	φ180	EG6 EK4/9 DC2	B16A/B B18C
	HM032SBL	φ200	DC5 EP3 CL7	K20A
	HM012SBL	φ200	NA1/2	C30/32B

Components and structural drawing

No.	Description	Number of pieces	
		Pull type	Push type
①	Clutch cover Assy (CCA)	1	
②	Pressure plate (PP)	1	
③	Center plate (IMP)	1	
4A	Clutch disc A (CDA)	1	
4B	Clutch disc B (CDB)	1	
⑤	Center hub (C.HUB)	1	
⑥	Drive boss (D.BOSS)	6	
⑦	Flywheel (F/W)	1	
⑧	Bolt	6	
⑨	Washer	6	
⑩	Pivot ring	1	—
⑪	Crank bolt	See page 7	
⑫	Nut	6	



Parts required additionally

Manufacturer	Vehicle model	Engine model	Parts No.	Parts required to be prepared		
NISSAN	S13/S14	SR20DET	NM012SBL	Release bearing	30502-14601 Nissan genuine parts	
	S15	SR20DET	NM022SBL	Pilot bush	32202-B9500 Nissan genuine parts	
	BNR32	RB26DETT	NM032SBL	Release bearing	30502-14601 Nissan genuine parts	
	BCNR33	RB26DETT	NM042SBL	Release bearing	Genuine parts	
	BNR34	RB26DETT	NM052SBL			
	Z33	VQ35DE	NM072SBL	Flywheel mounting bolt	12315-30P01 Nissan genuine parts	
TOYOTA	JZX90/100/110 JZA70	1JZ-GTE	TM032SBL	Flywheel mounting bolt	90910-02103 TOYOTA genuine parts	
	JZA80	2JZ-GTE	TM042SBL	Release bearing	Genuine parts	
MAZDA	FC3S	13B	ZM012SBL	Mazda genuine counterweight NO.0~200000 N327-11-521A 200001 N351-11-521 Chassis No. from 0 to 200000 N327-11-521A 200001 and later N351-11-521	Release bearing	Genuine parts
	FD3S	13B-REW	ZM022SBL	Counterweight	N351-11-521 MAZDA genuine parts	Release bearing
MITSUBISHI	CD9A	4G63	MM012SR	Flywheel mounting bolt	Genuine parts	
	CE9A		MM032SR	Release bearing	Genuine parts	
	CN/CP/CT9A		MM022SBL	Flywheel mounting bolt	Genuine parts	
	CZ4A	4B11	MM062SBL	Release bearing	Genuine parts	
SUBARU	GC8	EJ20	FM012SBL	Release bearing	Genuine parts	
	GDB	EJ20	FM022SBL			
HONDA	EG6, EK4/9, DC2	B16A/B B18C	HM022SR	Flywheel mounting bolt	90011-PR7-000 HONDA genuine parts	
	DC5,EP3,CL7	K20A	HM032SBL	Release bearing	Genuine parts	
	NA1/2	C30/32B	HM012SBL	Flywheel mounting bolt	Genuine parts	
				Release bearing	Genuine parts	

Parts to be prepared other than the above ones

1. We recommend you replace the release bearing for all vehicle models with a new one.
2. Release bearings shown in page 14 are required for the push type Nissan vehicles.
3. We recommend you replace the flywheel mounting bolts for all vehicle models with new ones. For the vehicle model not shown in the table above, use bolts enclosed with the product.
4. As for the vehicle model that no description is provided for the pilot bearing and a bearing is incorporated into the crank, we recommend you replace the pilot bearing with a new one at the time of replacement of the clutch.

Installation procedure

1. Disassembly of kit

- Loosen the bolt No. 8 and disassemble the kit.



CAUTION

DO NOT loosen the Nut No. 12 that was tightened with the specified torque before delivery.

If it is loosened by mistake, apply a screw lock agent (strong) to it, and tighten it with the specified torque 65 Nm to 75 Nm {6.6 to 7.6 kgm}.

2. Installation of pilot bearing

As for the vehicle model that the pilot bearing is required for the flywheel, prepare the new and genuine parts, and install them.

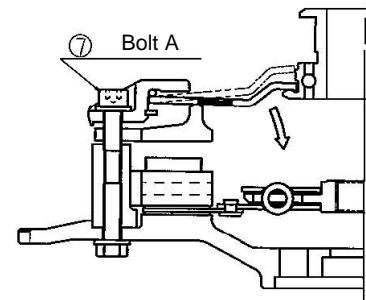
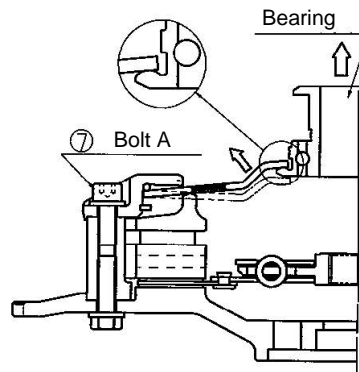
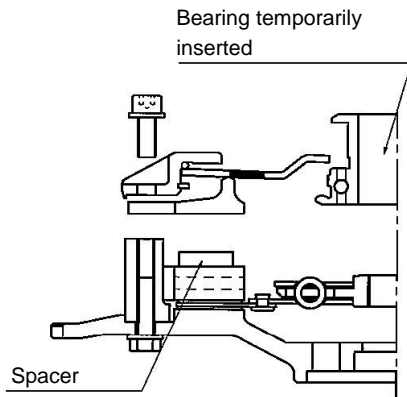
(Refer to the list in page 7.)

3. Installation of release bearing to pull type Honda vehicle

Install the release bearing to the clutch cover Assy No. 1. Be sure to work on a stable bench.

Release bearing installation procedure (To install the bearing easily, follow the instructions below.)

1. Remove the clutch disc [4A], and place the spacers at the three positions on the flywheel equally (positions of the leaf spring on the center plate).
Temporarily insert the release bearing from the inside of the clutch cover
2. Tighten the bolts A [7] in the structural drawing diagonally not at a time, but for several times with equal force, until the flywheel comes in contact with the clutch cover.
As the bolt is tightened up, the lever is raised up. The lever tip should be fit to the proper groove of the bearing.
3. When the bolts A [7] in the structural drawing is loosened while the bearing is supported with your hand, the lever is lowered, and the bearing is fixed.



Use a spacer with a diameter of approximately 20 mm and thickness between 6.5 mm and 7.0 mm. It is acceptable that nuts or washers piled up to fit to the space are used as substitutes.

As the lever is raised, the inner diameter of the lever tip is increased, and the bearing can be easily set to the proper position.

4. Installation of flywheel (F/W)

- 1) Nissan, Toyota, Subaru, Mitsubishi, and Honda vehicles

At the time of installation of the flywheel No. 7, be sure to use the crank bolt (flywheel mounting bolt) specified on the list.

Be sure to apply "Adhesive 1324" to the thread ridges of the crank bolt for the Toyota vehicle before tightening it.

Otherwise, engine oil will ooze from the bolt hole.

Tighten the crank bolt diagonally not at a time, but for several times with equal force. Finally, tighten up it with the specified torque.

Then, install the Flywheel No. 7 to the crank shaft in accordance with the maintenance manual issued by the vehicle manufacturer.

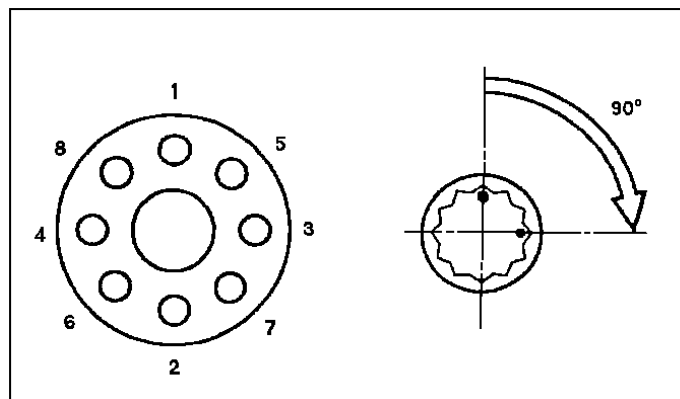
Crank bolt tightening torque list

Manufacturer

	Engine model	Tightening torque
NISSAN	SR20DET	83~93 Nm {8.5~9.5 kgm}
	RB26DETT, RB25DET, RB20DET	142~152 Nm {14.5~15.5 kgm}
	VG30DETT	83~93 Nm {8.5~9.5 kgm}
	VQ35DE	83~93 Nm {8.5~9.5 kgm}
TOYOTA	1JZ-GTE, 2JZ-GTE	49 Nm (5.0 kgm) 注 1 Note 1
SUBARU	EJ20	69~78 Nm {7~8 kgm}
MITSUBISHI	4G63	127~137 Nm {13~14 kgm}
	4B11	130Nm {13.3 kgm}
HONDA	B16A/B, B18C	103 Nm {10.5 kgm}
	K20A	122 Nm {12.5 kgm}
	C30/32B	103 Nm {10.5 kgm}

Note 1. As for the Toyota 1JZ and 2JZ, tightening below must be carried out after the crank bolts are tightened with the tightening torque shown in the table above. (See the drawing in page 10.)

- 1) Paint the bolt-head with a color paint for marking.
- 2) Tighten the crank bolt a further 90 degree relative the paint mark.
- 3) Check the paint mark located on the right side.



2) Mazda vehicle

Fix the Mazda genuine counterweight (see page 7) to the flywheel No. 7 with the supplied special bolts.

☆ Tighten the flywheel mounting bolts diagonally not at a time, but for several times with equal force. Finally, tighten up it with the specified torque.

Specified torque: From 54 to 74 Nm {from 5.5 to 7.5 kgm}

Then, install the flywheel to the eccentric shaft in accordance with the maintenance manual issued by the vehicle manufacturer.

5. Assembly of parts

Disc C →Center plate →Center hub → Disc B →Center plate →Disc A →Pressure plate →Pivot ring
→Clutch cover Assy

At the time of assembly, be sure to match the painted marks on the outer diameter for positioning of the [1], [2], [3] and [7].



CAUTION

Be careful of the direction/location of the disc.

"EXEDY" mark

It should be assembled in such the direction that the identification mark above can be seen from the cover side.



CAUTION

。 Be careful of the direction/location of the center hub.

It should be assembled in such the direction that the angle of approach to input shaft might be narrow above can be seen from the cover side.

Also about DC5 should be assembled in such the direction that the diameter of boss is large can be seen from the cover side.

**CAUTION**

If the marking is not met, it will cause unbalance, noise and vibration problems.

**CAUTION**

Apply grease specified by the vehicle manufacturer to the spline hub then insert the shaft and wipe away any grease which is forced out.

Set up the center bar to the pilot at engine side, and center the center hub No. 5. (For the ϕ 180 Series intended for the Honda vehicles, align the tooth traces on the disc A and the disc B, 4A in the structural drawing.) Tighten the clutch cover Assy No. 1.

The genuine main drive shaft is recommended for this process.

**CAUTION**

Failure in centering of the center hub No. 5 or aligning of the tooth traces of the discs A and B of the ϕ 180 Series will lead to difficulty in the assembly of the transmission and damage to the disc.

Specified torque of bolt No. 8:

Unequal bolt tightening will cause disengagement problems and judder/shudder.

6. Confirm that lever height is equal after tightening. If it is not equal, then restart from item 3.
7. Replace the T/M.
For the pull type, replace the release bearing with the genuine new one, and apply specified genuine grease to the sliding surfaces appropriately.
For the push type, replace the release bearing and the clutch sleeve with the genuine ones specified in the separate sheet.
Follow the maintenance manual issued by the vehicle manufacturer.

**CAUTION**

Do not hit the spline teeth with the edge of the main drive shaft. It will cause disengagement problems or damage to the clutch disc.

8. Stroking adjustment

After installing of this kit, the pedal position (engagement or disengagement point) may change. Adjust the pedal according to the maintenance manual issued by the vehicle manufacturer.

«Advice»

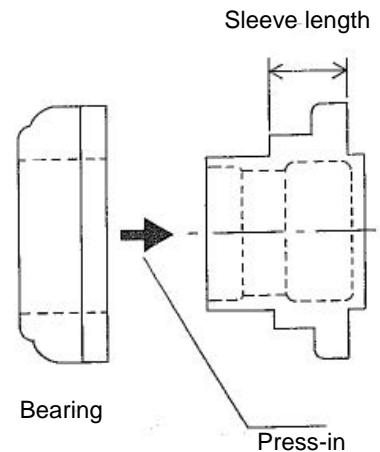
- If the pedal position should be moved towards the floor, adjust the push-rod of the master cylinder in the manner the pedal height is down in free position.
- If the pedal position should be moved away from the floor, adjust the push-rod in the opposite to the above.

• Release bearing and clutch sleeve (for Nissan push type)

- Additionally purchase the release bearing specified by us on page 7.
- Selection of clutch sleeve
Use the clutch sleeve whose sleeve length allows the same inclination of the release fork as that in the case the genuine clutch (new one) is installed, appropriate for each vehicle.

[Nissan vehicle]

Clutch model	Applicable vehicle model	Recommended sleeve length
NM01 NM02	S14 (SR20DET) S15 (SR20DET)	24~26 mm
NM03	R32 (RB26DETT)	14~16 mm
NM06	Z32 (VG30DETT)	22~24 mm






Since all the vehicles are individual, check the clutches and release bearings with installed to them actually.

Nissan genuine parts number (clutch sleeve)

30501-A3800 (12 mm)	30501-S0160 (22 mm)
30501-N1601 (14 mm)	30501-0H600 (24 mm)
30501-U0200 (16 mm)	30501-K0510 (26 mm)
30501-A0200 (18 mm)	30501-N1600 (28 mm)
30501-B6000 (20 mm)	30501-N8400 (30 mm)

For the pull type vehicles, replace the bearing with the genuine new pull type bearing. (No modification is required.)


Caution during operation

-  CAUTION
After installation, drive carefully and gently. (Travel for approximately 500 km in a city area)
If the clutch is used in a condition where the friction surface is not contacting fully with the mating surface, it will cause burning, judder/shudder or short life.
-  CAUTION
It is recommended to re-adjust the stroke after the break in period. Due to the nature of the metal multiple disc clutch, half engaged clutch operation will also be affected after break in period but this is a normal symptom.
3. In the early stage, it is not abnormal if subtle noise or chattering occurs. This is due to the characteristics of metal facings.
4. Due to the clutch design, the multiple disc clutch may cause a rattle noise when disengaged. This is not an abnormal condition.
-  WARNING
Do not change any release control function of the vehicle.
(The clutch is used under normal condition.)
Especially, DO NOT remove the spring in the clutch operator. Otherwise, the preload working on the release bearing will be lost, leading to release of the bearing during usage (for the pull type).

6.  WARNING

This clutch system is specially designed for racing purposes, therefore pedal effort is slightly heavier and start operation is more difficult than standard manual clutch products.

Avoid using if you are not completely confident with your driving technique and physical strength.

7.  CAUTION

The life of a metal multiple disc clutch may be adversely affected by driving technique and driving conditions.

Especially, the friction material is worn prematurely in a racing which necessitates frequent abrupt start operation (for example, drag race). Check it frequently.

«Advice»

Record the new release fork position and confirm its variation. Facing wear amount can then be foreseeable. Preventative maintenance before the discs are worn out is a key factor to maintain steady performance.

Maximum facing wear: Facing thickness


ϕ 200 Series 3.3 mm (At new 4.2 mm)

ϕ 180 Series 3.5 mm (At new 4.0 mm)

8.  WARNING


Due to the nature of the multiple disc clutch, if the clutch is used in the half engaged position for extended periods of time, the clutch set will generate high temperatures. This high heat creates expansion or deformation which causes disengagement problems temporarily or permanently.


Stop driving and allow the clutch to cool down.


9.  **WARNING** Do not over use the clutch beyond the following limits.

«Operation limit list»

Item	Limit	
	φ200series	φ180series
Max. engine rpm	12000 r/mim	
Max. engine torque	745 Nm {76 kgm}	570 Nm {58 kgm}
Max. disc wear	Total 1.8 mm	Total 1.0 mm
Max. friction surface temperature	800°C	
Max. release stroke	9.0 mm	7.0 mm

10.  **WARNING** Do not machine any part of this product, otherwise the strength of each part will be reduced and may fail prematurely.

11.  **WARNING** The bolts have to be tightened at the specified torque. The mating surfaces should be cleaned, wiped with a clean towel to remove any foreign waste. They may affect the performance of the clutch.

12.  **WARNING** The bolts are the very important parts. Use either genuine parts or the bolts included as auxiliary parts in the box. Do not reuse the old bolts after un-tightening.