

Cam Clutch Installation and Maintenance Instruction


PBUS Series

PBUS3, PBUS5, PBUS6, PBUS8, PBUS10, PBUS12, PBUS14

- Thank you for choosing Tsubaki E&M products.
- Before installing or working on the product, check the label for correct model and make sure you have the complete set of parts. Contact your distributor immediately if any parts are missing
- This manual should be considered an essential part of the unit and remain with the unit when redistributed.

SAFETY

- Your Cam Clutch is a high quality, sophisticated unit which should be handled by experienced engineers only.
- For safety purposes, make sure this manual is easily accessible by the user at all times.
- To ensure safety and optimal performance, carefully read this instruction manual in its entirety.

	<p>WARNING</p> <p>Death or serious injury may result from misuse, improper installation and/or improper maintenance of this product. Please refer to the detailed instructions provided in this manual for installation and maintenance specifications.</p>
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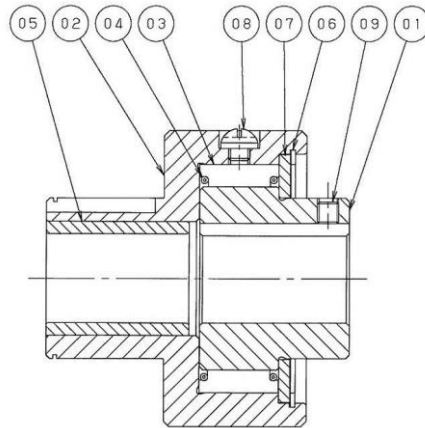
WARNING

USE CARE TO PREVENT INJURY COMPLY WITH THE FOLLOWING TO AVOID SERIOUS PERSONAL INJURY:

1. Guards must be provided on all chain and sprocket installations in accordance with provisions of ANSI/ASME B15.1 - 2000 "Safety Standards for Mechanical Power Transmission Apparatus," and ANSI/ASME B20.1 - 2012 "Safety Standards for Conveyors and Related Equipment," or other applicable safety standards. When revisions of these standards are published, the updated edition shall apply.
2. Always lock out the power switch before installing, removing, lubricating or servicing a system which uses PTUC product.
3. When connecting or disconnecting PTUC products, eye protection is required. Wear safety glasses, protective clothing, gloves and safety shoes.
4. Improper installation or mounting, as well as operating conditions and maintenance, can affect the performance of a cam clutch. The cam clutch should be inspected regularly.

"PTUC is used by U.S. Tsubaki to designate "Power Transmission Unit Components." PTUC products include Cam Clutch DISCO, POWER-LOCK[®], Shock Relay, Gearmotor, HF Drive, Shock Damper, Power cylinder[™], Couplings, SCR variable speed motor and other like products manufactured by/for Tsubaki.

■ **Construction**



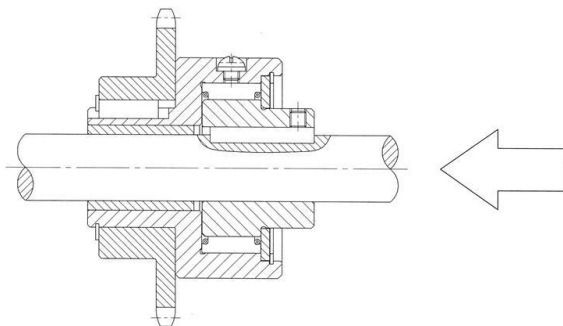
- ① Inner race
- ② Outer race
- ③ Cam
- ④ Spring
- ⑤ Plain bearing
- ⑥ Snap ring
- ⑦ Side plate
- ⑧ Plug
- ⑨ Set screw

■ **Installation**

1. Concentricity of the inner and outer races are maintained by the plain bearing located between the outer race and the shaft. Radial loads which work on the outer race are also supported by this plain bearing. The shaft must therefore be extended through the clutch outer race end.
2. Recommended shaft tolerances are as follows.

Inner race shaft bore diameter	Shaft bore tolerance
PB3, PB5, PB6, PB8	0 to .0005 inches (+0 to -0.013mm)
PB10, PB12, PB14	0 to .0006 inches (+0 to -0.016mm)

3. Do not use the PBUS series Cam Clutch as a coupling. Use with a flexible coupling when connecting two shafts.
4. Specify right (RH) or left hand (LH) inner race drive as viewed from the end marked by the arrow in the illustration below. Check if the rotation of clutch is correct before being run-in.
5. For indexing use, oil lubrication is recommended.
6. Key to be used should be in accordance with ANSI B17, 1-1967(R1998) and must not extend into the sleeve bearing area.
7. Thrust load should not be supported by Cam Clutch.
8. The bore of driven member, such as the sprocket on the clutch outer race, should be within the table below.



Model	Bore Diameter of Driven Member
PBUS 3	0.875/0.876inches (22.225/22.250mm)
PBUS 5	1.250/1.251inches (31.750/31.775mm)
PBUS 6	1.375/1.376inches (34.925/34.950mm)
PBUS 8	1.750/1.751inches (44.450/44.475mm)
PBUS10	2.250/2.251inches (57.150/57.175mm)
PBUS12	2.500/2.501inches (63.500/63.525mm)
PBUS14	2.875/2.876inches (73.025/73.050mm)

9. Attach the snap ring to the groove on the outer race after installing the sprocket or other driven parts. (The snap-ring is not included.)

■ **Lubrication and Maintenance***

1. PBUS series Cam Clutches are pre-lubricated with grease. Change the grease and clean the inside of Cam Clutch every six months.
2. Do not use the grease that contains EP Additives.

*Actual maintenance may vary depending on usage and operating conditions.

Recommended Grease

Brand	200, PBUS Series
Shell	Alvania Grease S1, Sunlight Grease 1, Aeroshell No.7, Aeroshell No.22
Fiske Bros.	Lubriplate Low-Temp, Aero Lubriplate
Kyodo Yushi	Multemp PS No.1
Petro-Canada	PRECISION Synthetic



TSUBAKI E&M CO.

1-1, Kohtari-Kuresumi, Nagaokakyo Kyoto 617-0833, Japan

Phone : +81-75-957-3131

Facsimile: +81-75-957-3122

Internet : <http://tsubakimoto.com/tem/>

Global Associated Partners:

U.S. Tsubaki Power Transmission, LLC

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