

Installation Instructions PN Gold™ Ball Bearings with Bolt on Caps

⚠ WARNING

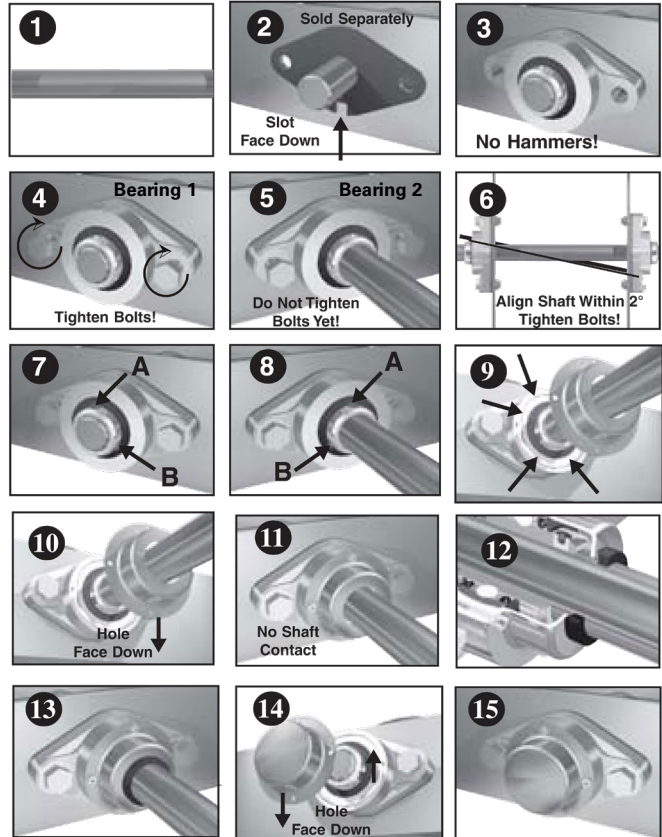
- Read and follow all instructions carefully.
- Disconnect and lock-out power before installation and maintenance. Working on or near energized equipment can result in severe injury or death.
- Do not operate equipment without guards in place. Exposed equipment can result in severe injury or death.

⚠ CAUTION

- Periodic inspections should be performed. Failure to perform proper maintenance can result in premature product failure and personal injury.



- 1 Ensure shafting is clean and within spec. See Table 1. Remove all burrs.
- 2 Place back-side shield on shaft, if used. Drain slot must be face down.
- 3 Place first bearing onto shaft. Do not hammer.
- 4 Install bolts and stainless steel washers (if used). **Tighten down housing mounting bolts.**
- 5 Repeat steps 2-4 for the second bearing but do not tighten down housing mounting bolts yet.
- 6 Align bearings and shaft. Shaft should be within ± 2 degrees. Set screws on both bearings should face the same direction. **Tighten mounting bolts.**
- 7A Bearing one - set screw tightening directions:
Half - Tighten set screw "A" to 1/2 the recommended torque in Table 2 below.
Full - Tighten set screw "B" to the full recommended torque in Table 2 below.
Full - Tighten set screw "A" to the full recommended torque in Table 2.
- 7B Repeat tightening of the set screws in step 7 for the second bearing. Set screws on both bearings should face the same direction.
Half - Tighten set screw "A" to 1/2 the recommended torque in Table 2 below.
Full - Tighten set screw "B" to the full recommended torque in Table 2 below.
Full - Tighten set screw "A" to the full recommended torque in Table 2.
- 8 Skwezloc® Inserts
a) Be sure that the Skwezloc collar is fitted square and snug against the shoulder on the inner ring.
b) Torque the Skwezloc collar cap screw to torque recommended in Table #3.
c) Repeat steps a and b for second bearing.
- 9 Open end cap instructions: apply a silicone sealant evenly onto housing face where the end cap will contact.
- 10 End cap drain hole must be face down.
- 11 Tighten open end cap mounting screws. There must be no shaft contact.
- 12 Place Forsheda seal over shaft. Push seal up against outside of open end cap. Face seal lip toward the outside of the cap. Width of seal should be equal to the height of four US quarters stacked (1/4 inch).
- 13 Open end cap bearing assembly completed.
- 14 Closed end cap instructions: apply a silicone sealant evenly onto face. End cap drain hole must face down.
- 15 Tighten cap screws. There must be no shaft contact. Rotate bearing several times. Look, feel and listen for anything unusual.



End caps and backside shields not available on all units. Sold separately.

TABLE 1

RECOMMENDED SHAFT TOLERANCES	
NOMINAL BORE DIAMETER	TOLERANCE (INCHES)
1/2 - 1 15/16	+0.0000 / -0.0005
2 - 3 3/16	+0.0000 / -0.0010
3 1/4 - 4 15/16	+0.0000 / -0.0015

PN GOLD TABLE 2

SETSCREW TORQUE		
SCREW SIZE	HEX SIZE	INCH-POUNDS PN GOLD
1/4-28	1/8	35 - 45
5/16-24	5/32	75 - 100
3/8-24	3/16	125 - 145
7/16-20	7/32	130 - 160
1/2-20	1/4	N/A
5/8-18	5/16	N/A

TABLE 3

SKWEZLOC CONCENTRIC LOCKING COLLAR CAP SCREW TORQUE		
SCREW SIZE	HEX SIZE	INCH-POUNDS
# 8-32	T-25	70
# 10-24	T-27	100
1/4-20	T-30	240
5/16-18	T-45	495

LUBRICATION:

All Sealmaster® PN Gold™ Ball Bearings are delivered with a high quality food grade grease with an EP additive. The bearing is ready for use with no initial lubrication required. The grease consists of a calcium sulfonate thickener, mineral oil, and NLGI grade 2 consistency.

Compatibility of grease is critical; therefore consult with Application Engineering and your grease supplier to insure greases are compatible. For best performance it is recommended to relubricate with calcium sulfonate thickened grease with a comparable NLGI consistency and base oil properties.

Relubricatable Sealmaster bearings are supplied with grease fittings or zerks for ease of lubrication with hand or automatic grease guns. Always wipe the fitting and grease nozzle clean.

CAUTION! If possible, it is recommended to lubricate the bearing while rotating, until grease purge is seen from the seals. If this is not an option due to safety reasons, follow the alternate lubrication procedure below.

ALTERNATE LUBRICATION PROCEDURE:

Stop rotating equipment. Add one half of the recommended amount shown in Table 4. Start the bearing and run for a few minutes. Stop the bearing and add the second half of the recommended amount. A temperature rise after lubrication, sometimes 30°F (17°C), is normal. Bearing should operate at temperatures less than 200°F (94°C) and should not exceed 250° (121°C) for intermittent operation. For lubrication guidelines, see Tables 4 and 5.

NOTE: Table 5 is a general recommendation. Experience and testing may be required for specific applications.

NOTE: Grease charges in Table 4 are based on the use of calcium sulfonate thickened grease with a NLGI grade 2 consistency.

SPEED LIMITS:

NOTE: The Maximum Operational Speeds listed in Table 6 are based on the use of a single lock setscrew insert with HPS seals for PN Gold.

PN GOLD TABLE 4

GREASE CHARGE FOR RELUBRICATION			
SERIES	BORE SIZE		GREASE CHARGE (MASS - OUNCES)
	STANDARD DUTY	MEDIUM DUTY	
2-012	1/2 - 3/4	---	.03
2-015	13/16 - 1	---	.04
2-13	1 1/16 - 1 1/4R	15/16 - 1	.09
2-17	1 1/4 - 1 7/16	1 3/16	.13
2-19	1 1/2 - 1 9/16	1 7/16	.18
2-111	1 5/8 - 1 3/4	1 1/2	.20
2-115	1 13/16 - 2R	1 11/16 - 1 3/4	.22
2-23	2 - 2 3/16	1 15/16	.30
2-27	2 1/4 - 2 7/16	2 3/16	.38
2-211	2 1/2 - 2 11/16	2 7/16 - 2 1/2	.53
2-215	2 13/16 - 2 15/16	2 11/16	.62
2-33	3 - 3 3/16	2 15/16	.88
2-37	3 1/4 - 3 7/16	3 3/16	1.11
2-38	3 1/2	3 7/16	1.37
2-43	3 15/16 - 4 3/16	3 15/16 - 4	2.50

PN GOLD TABLE 5

RELUBRICATION RECOMMENDATIONS			
ENVIRONMENT	TEMPERATURE (°F)	SPEED (% CATALOG MAX)	FREQUENCY
Dirty	-20 to 220	0 - 100%	Daily to 1 Week
		0 - 25%	4 to 10 Months
Clean	-20 to 125	26 - 50%	1 to 4 Months
		51 - 75%	1 Week to 1 Month
		76 - 100%	Daily to 1 Week
		0 - 25%	2 to 6 Weeks
	125 to 175	26 - 50%	1 Week to 1 Month
		51 - 75%	Daily to 1 Week
		76 - 100%	
	175 to 220	0 - 100%	Daily to 1 Week

PN GOLD TABLE 6

MAXIMUM OPERATIONAL SPEED		
BORE SIZE (INCH)		SPEED (RPM)
STANDARD DUTY	MEDIUM DUTY	PN GOLD
1/2 - 3/4	x	3100
13/16 - 1	x	2700
1 1/16 - 1 1/4R	15/16 - 1	2300
1 1/4 - 1 7/16	1 3/16	2000
1 1/2 - 1 9/16	1 7/16	1750
1 5/8 - 1 3/4	1 1/2	1600
1 13/16 - 2R	1 11/16 - 1 3/4	1500
2 - 2 3/16	1 15/16	1350
2 1/4 - 2 7/16	2 3/16	1250