

# Sure-Grip® Idler Bushing

## Installation & Maintenance Manual

P-5071-TBW  
Form 885D



The Sure-Grip tapered, QD-style interchangeable idler bushing offers flexible and easy installation while providing many hours of reliable service. To ensure that the bushing performs as specified it must be properly installed. Before beginning, make sure the correct size and quantity of parts are available for the installation.

**WARNING:**

**Rotating equipment must be properly guarded.**

**It is the responsibility of the user to properly guard all rotating equipment to comply with OSHA or any applicable regulations. Failure to properly guard may contribute to severe injury should someone come in contact with the rotating parts or should the rotating part fail.**

**WARNING:**

**DO NOT use Wood’s products on any primary aircraft drive or any other drive which could endanger human life should a drive component fail.**

**WARNING:**

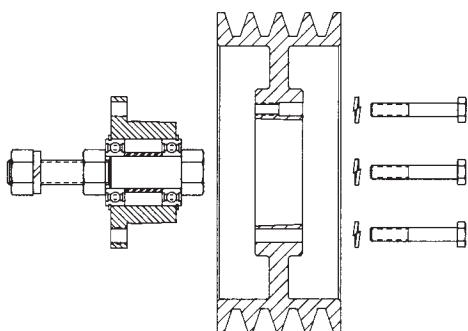
**It is essential that the idler assembly be installed as close to mounting structure as possible to minimize overhung loads.**

**Excessive loads may cause a premature failure of the stud and/or bearings of the idler bushing.**

## INSTALLATION

**IMPORTANT – Do not use lubricants in this installation**

1. Thoroughly inspect the bore of the mating hub and the tapered surface of the idler bushing. Any paint, dirt, grease, oil, etc. **MUST** be removed.
2. Place the idler bushing in the mating hub. Align the drilled holes in the mating hub with the threaded holes in the idler bushing flange. Insert the cap screws, with lock washers, through the drilled holes in the mating hub into the tapped holes in the idler bushing flange and finger-tighten, see Figure 1. Using a torque wrench, tighten all caps screws evenly and progressively in rotation to the torque value listed in Table 1.



**Figure 1**

**Table 1 – Cap Screw Tightening Torque**

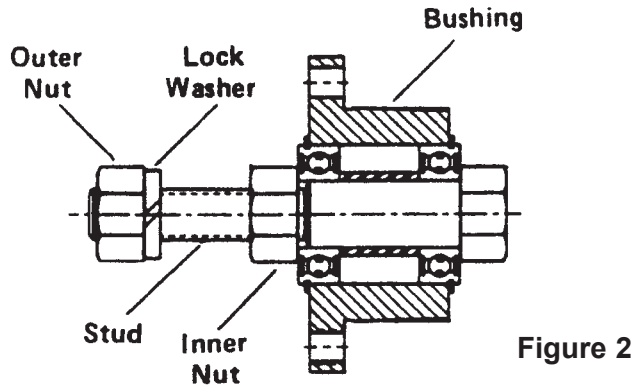
Idler	Cap Screw	Torque
SH-BB	1/4-20NC	5 ft. lb.
SD-BB	1/4-20NC	5 ft. lb.
SK-BB	5/16-18NC	8 ft. lb.
SF-BB	3/8-16NC	15 ft. lb.
E-BB	1/2-13NC	30 ft. lb.

**WARNING:**

**The tightening force on the screws is multiplied many times by the wedging action of the bushing’s tapered surface. If extreme tightening force is applied, or if a lubricant is used, bursting pressures will be created in the hub of the mating part.**

**Do not attempt to over tighten cap screws to a point where the bushing flange touches the face of the mating part. These torque values must be adhered to or idler assembly will fail prematurely.**

3. Mount the assembly to the mounting structure. Place lockwasher and then outer nut on idler bushing stud, Figure 2. Using a torque wrench, tighten the outer nut to the value listed in Table 2.



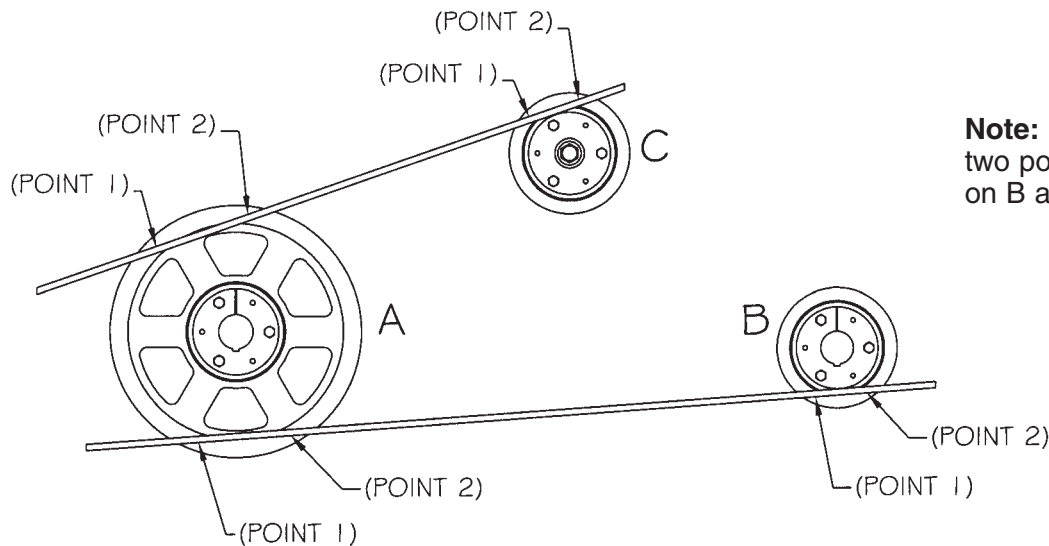
Idler	Cap Screw	Torque
SH-BB	1/2-13NC	60 ft. lb.
SD-BB	1/2-13NC	60 ft. lb.
SD-BB58	5/8-11NC	125 ft. lb.
SK-BB	3/4-10NC	225 ft. lb.
SF-BB	3/4-10NC	225 ft. lb.
SF-BB1	1-8NC	300 ft. lb.
E-BB	1 3/8-8NC	750 ft. lb.

**Note:** If the assembly will be threaded into a tapped hole in the mounting surface, extreme care should be used to prevent the inner nut from turning against the bearings. Additional tightening force on inner nut will cause bearings to fail prematurely.

**WARNING**

**The inner nut has been tightened to 5 ft. lbs. DO NOT tamper with or retighten above this value or the bearings will fail prematurely.**

4. Make sure idler assembly is parallel with both the driveR and driveN shaft. Properly align the driveR, driveN, and idler assembly by the four-point method illustrated in Figure 3, below.



**Note:** Straight edge must touch two points on A and two points on B and C.

**Figure 3**

**To Remove:**

1. Loosen and remove all of the cap screws from the idler assembly.
2. Insert the cap screws into the tapped holes in the mating hub. Evenly and progressively tighten the cap screws until the idler bushing and mating hub separate.
3. Remove idler assembly from the mounting structure.

**Replacement Parts:**

Following is a list of the replacement bearings.

Note: The inner nut torque should not exceed 5 ft. lbs. when reassembling.

Bushing Size	Replacement Bearings (2 per unit)
SH-BB	G275
SD-BB	G275
SK-BB	G276
SF-BB	G276
E-BB	G277

All Customer Service phone numbers shown in bold

Belted Drives and Sheaves	Couplings Cont.	Gearing	Linear Products
<p><b>TB Wood's</b> <i>Belted Drives</i> Chambersburg, PA - USA <b>1-888-829-6637</b> – Press #5 <i>For application assistance:</i> 1-888-829-6637 – Press #7</p>	<p><b>TB Wood's</b> <i>Elastomeric Couplings</i> Chambersburg, PA - USA <b>1-888-829-6637</b> – Press #5 <i>For application assistance:</i> 1-888-829-6637 – Press #7 <i>General Purpose Disc Couplings</i> San Marcos, TX - USA <b>1-888-449-9439</b></p>	<p><b>Bauer Gear Motor</b> <i>Gear Motors</i> Esslingen, Germany <b>+49 (711) 3518-0</b> Middlesex, NJ - USA <b>1-732-469-8770</b></p> <p><b>Boston Gear</b> <i>Enclosed and Open Gearing, Electrical and Mechanical P.T. Components</i> Charlotte, NC - USA <b>1-800-825-6544</b> <i>For application assistance:</i> 1-800-816-5608</p> <p><b>Nuttall Gear and Delroyd Worm Gear</b> <i>Worm Gear and Helical Speed Reducers</i> Niagara Falls, NY - USA <b>1-716-298-4100</b></p>	<p><b>Warner Linear</b> <i>Linear Actuators</i> New Hartford, CT - USA <b>1-800-825-6544</b> <i>For application assistance:</i> 1-800-825-9050 Saint Barthélemy d'Anjou, France <b>+33 (0)2 41 21 24 24</b></p>
<p><b>Couplings</b></p> <p><b>Ameridrives</b> <i>Mill Spindles, Ameriflex, Ameridisc</i> Erie, PA - USA <b>1-814-480-5000</b> <i>Gear Couplings</i> San Marcos, TX - USA <b>1-800-458-0887</b> <i>Universal Joints, Drive Shafts, Mill Gear Couplings</i> Erie, PA - USA <b>1-920-593-2444</b></p> <p><b>Bibby Turboflex</b> <i>Disc, Gear, Grid Couplings, Overload Clutches</i> Dewsbury, England <b>+44 (0) 1924 460801</b> Boksburg, South Africa <b>+27(0) 11 918 4270</b></p> <p><b>Guardian Couplings</b> <i>Engineered Flywheel Couplings, Engine Housings and Pump Mounts, Flexible Shaft Couplings</i> Michigan City, IN - USA <b>1-219-874-5248</b></p> <p><b>Huco</b> <i>Precision Couplings and Air Motors</i> Hertford, England <b>+44 (0) 1992 501900</b> Chambersburg, PA - USA <b>1-888-829-6637</b></p> <p><b>Lamiflex Couplings</b> <i>Flexible Couplings, Bearing Isolators, and Coupling Guards</i> Cotia, SP - Brasil <b>+55 (11) 4615-6300</b></p>	<p><b>Electromagnetic Clutches and Brakes</b></p> <p><b>Inertia Dynamics</b> <i>Spring Set Brakes; Power On and Wrap Spring Clutch/Brakes</i> New Hartford, CT - USA <b>1-800-800-6445</b></p> <p><b>Matrix</b> <i>Electromagnetic Clutches and Brakes, Pressure Operated Clutches and Brakes</i> Brechin, Scotland <b>+44 (0) 1356 602000</b> New Hartford, CT - USA <b>1-800-825-6544</b></p> <p><b>Warner Electric</b> <i>Electromagnetic Clutches and Brakes</i> New Hartford, CT - USA <b>1-800-825-6544</b> <i>For application assistance:</i> 1-800-825-9050 Saint Barthélemy d'Anjou, France <b>+33 (0)2 41 21 24 24</b> <i>Precision Electric Coils and Electromagnetic Clutches and Brakes</i> Columbia City, IN - USA <b>1-260-244-6183</b></p>	<p><b>Heavy Duty Clutches and Brakes</b></p> <p><b>Industrial Clutch</b> <i>Pneumatic and Oil Immersed Clutches and Brakes</i> Waukesha, WI - USA <b>1-262-547-3357</b></p> <p><b>Svendborg Brakes</b> <i>Industrial Brakes and Brake Systems</i> Vejstrup, Denmark <b>+45 63 255 255</b></p> <p><b>Twiflex</b> <i>Caliper Brakes and Thrusters</i> Wichita Falls, TX - USA <b>1-844-723-3483</b> Twickenham, England <b>+44 (0) 20 8894 1161</b></p> <p><b>Wichita Clutch</b> <i>Pneumatic Clutches and Brakes</i> Wichita Falls, TX - USA <b>1-800-964-3262</b> Bedford, England <b>+44 (0) 1234 350311</b></p>	<p><b>Overrunning Clutches</b></p> <p><b>Formsprag Clutch</b> <i>Overrunning Clutches and Holdbacks</i> Warren, MI - USA <b>1-800-348-0881</b> – Press #1 <i>For application assistance:</i> 1-800-348-0881 – Press #2</p> <p><b>Marland Clutch</b> <i>Roller Ramp and Sprag Type Overrunning Clutches and Backstops</i> Warren, MI - USA <b>1-800-216-3515</b></p> <p><b>Stieber Clutch</b> <i>Overrunning Clutches and Holdbacks</i> Heidelberg, Germany <b>+49 (0) 6221-30470</b></p>

For information concerning our sales offices in Asia Pacific check our website [www.altramotion.com.cn](http://www.altramotion.com.cn)



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