

Guardian Super Flex Shaft Coupling

Service & Installation Instructions

P-8610-GC
GUA-MRK-DOC-027



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IMPORTANT READ ALL NOTICES & WARNINGS BEFORE ATTEMPTING ANY INSTALLATION!

NOTICES:

- PLEASE CAREFULLY READ OVER AND UNDERSTAND INSTRUCTIONS BEFORE ATTEMPTING ANY MAINTENANCE. IF ADDITIONAL ASSISTANCE IS NEEDED PLEASE CONTACT GUARDIAN BEFORE SERVICING/INSTALLING THE PRODUCT.
- WHILE GUARDIAN MAKES EVERY EFFORT TO ENSURE THE ACCURACY OF THE INFORMATION PROVIDED, WE MAKE NO WARRANTY AS TO THE ACCURACY OR COMPLETENESS OF SAID INFORMATION. THE INFORMATION PROVIDED CORRESPONDS TO THE INSTALLATION STANDARDS AT THE TIME OF PRINTING.
- THESE INSTALLATION INSTRUCTIONS ACT AS GENERAL GUIDELINES, AND DO NOT COVER EVERY SCENARIO. IF YOUR INSTALLATION DOES NOT APPLY, PLEASE CONTACT GUARDIAN TO FURTHER REVIEW YOUR APPLICATION TO ENSURE PROPER INSTALLATION IS COMPLETED.
- ENSURE PROPER SIZING AND OFFSETS TO AVOID CAUSING DAMAGE TO THE MACHINERY AND/OR COUPLING.
- KEEP COUPLINGS FREE OF DUST AND GRIME TO ENSURE LONG LIFE.
- VERIFY APPLICATION DATA AND REVIEW TORQUE SPECIFICATIONS, MIS-ALIGNMENT, AND APPLICATION SERVICE FACTORS. IF FURTHER ASSISTANCE IS NEEDED PLEASE CONTACT GUARDIAN COUPLINGS.
- CHECK TO MAKE SURE MAXIMUM ALLOWABLE BORE DIAMETERS ON HUBS ARE NOT EXCEEDED. SEE CATALOG SPECIFICATIONS FOR MORE DETAILS.
- HUBS THAT ARE MODIFIED OR MACHINED BY THE CUSTOMER ARE NOT COVERED UNDER THE STANDARD WARRANTY TERMS. IF MODIFICATIONS ARE MADE BY THE CUSTOMER IT IS RECOMMENDED THAT THE CUSTOMER ADHERES TO GUARDIAN MACHINING STANDARDS TO ENSURE PROPER OPERATION.

WARNINGS:

- DISENGAGE ALL POWER TO NECESSARY MACHINERY BEFORE PERFORMING ANY WORK ON THE ASSEMBLY. MAKE SURE NO ACCIDENTAL ENGAGEMENT CAN OCCUR.
- IMPROPER USE OR INSTALLATION MAY RESULT IN SERIOUS INJURY OR DEATH. GUARDIAN COUPLINGS WILL NOT BE LIABLE FOR IMPROPER USE/INSTALLATION OF THE PRODUCTS. THE PURCHASER/INSTALLER IS RESPONSIBLE FOR PROPER INSTALLATION, SAFEGUARDS, MAINTENANCE AND OPERATION OF THE PRODUCT AND EQUIPMENT.
- ANY MODIFICATIONS TO INSTRUCTIONS AND/OR COUPLING CHARACTERISTICS MAY RESULT IN A PREMATURE FAILURE.
- MAKE SURE THAT COUPLINGS ARE NOT IN CONTACT WITH ANY NON-ROTATING SURFACES.
- IF ANY PROBLEMS OCCUR DURING ASSEMBLY, CONTACT GUARDIAN COUPLINGS IMMEDIATELY.
- THIS PRODUCT CONTAINS WEAR ELEMENTS THAT WILL EVENTUALLY FAIL. MAKE SURE THE ASSEMBLY IS ADEQUATELY COVERED/ENCLOSED TO AVOID INJURY IN CASE OF A FAILURE.
- WARNING: THIS PRODUCT MAY CONTAIN CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND/OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

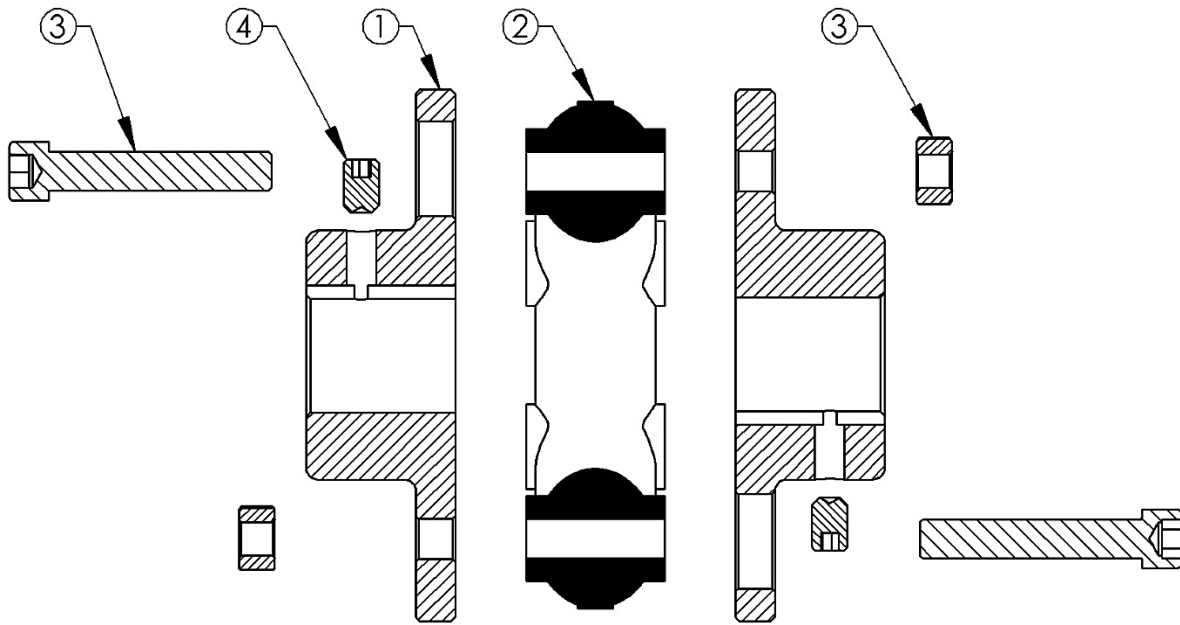


FIGURE 1.1 SUPER FLEX COUPLING (EXPLODED VIEW)

ITEM NUMBER	ITEM DESCRIPTION
1	SUPER FLEX HUB
2	SUPER FLEX RUBBER ELEMENT
3	SUPER FLEX HARDWARE
4	COUPLING SETSCREW

SECTION 1 – COUPLING OVERVIEW

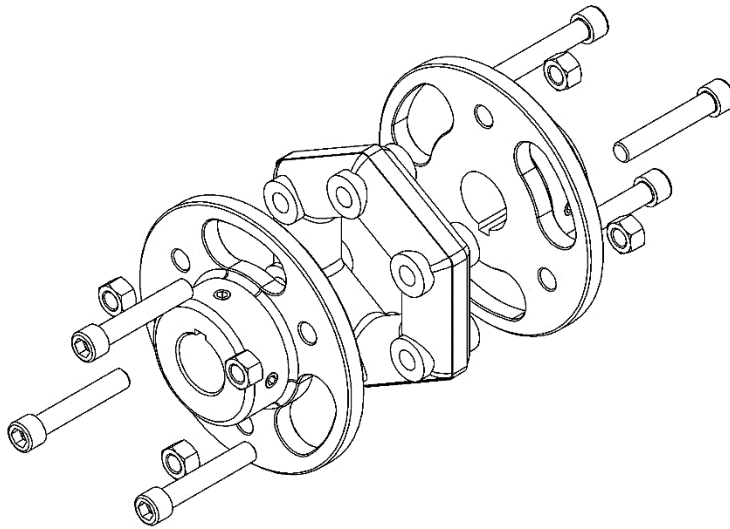


FIGURE 1.2 SUPER FLEX COUPLING (ISO)

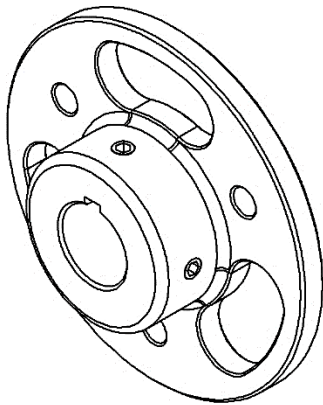


FIGURE 1.3 SUPER FLEX HUB (SETSCREW)

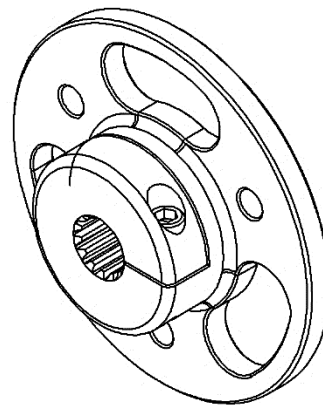


FIGURE 1.4 SUPER FLEX HUB (CROSS CLAMP)

SECTION 2 - TOOLS/MATERIAL REQUIRED

- TORQUE WRENCH
- ALLEN SOCKETS
- MEDIUM STRENGTH REMOVABLE LOCTITE
- CALIPERS / FEELER GAGE(S)
- ALIGNMENT TOOLS (IE: STRAIGHT EDGE, DIAL INDICATOR, SHIMS... ETC.)

SECTION 3 – INSTALLATION INSTRUCTIONS

- 1) **PLEASE READ & FOLLOW ALL NOTICES & WARNINGS PRIOR TO INSTALLATION OF THIS PRODUCT**
DISENGAGE ALL POWER TO NECESSARY MACHINERY BEFORE PERFORMING ANY WORK ON THE ASSEMBLY
MAKE SURE NO ACCIDENTAL ENGAGEMENT CAN OCCUR
DO NOT REMOVE METAL BAND FROM RUBBER ELEMENT UNTIL COUPLING IS COMPLETELY INSTALLED
- 2) INSTALL AND MATE COUPLING HUB BORE WITH DRIVING SHAFT
HUB SHOULD BE INSTALLED WITH THE HUB BODY TOWARD THE DRIVING UNIT
(SEE FIGURE 1.3 THRU 1.4 FOR TYPICAL MOUNTING OPTIONS)
- 3) POSITION HUB ON MATING SHAFT
IDEAL HUB POSITION IS WITH THE FLANGE END OF THE HUB FLUSH WITH THE END OF MATING SHAFT
OVERHUNG HUBS SHOULD HAVE A MINIMUM SHAFT ENGAGEMENT EQUAL TO THE HUB BORE DIAMETER
- 4) WITH HUB PROPERLY POSITIONED, TORQUE CLAMPING FASTENER TO RECOMMENDED SEATING TORQUE
GUARDIAN RECOMMENDS USING MEDIUM STRENGTH REMOVABLE LOCTITE FOR BORE & KEYWAY SETSCREW
(SEE TABLE X.X FOR PROPER BORE & KEYWAY SETSCREW SEATING TORQUES)
(SEE TABLE X.X FOR PROPER CROSS CLAMP BOLT SEATING TORQUES)
- 5) REPEAT STEPS 2 THRU STEPS 4 FOR THE DRIVEN SHAFT HUB
- 6) MOVE DRIVEN AND DRIVING EQUIPMENT TOGETHER UNTIL HUBS ARE PROPERLY SPACED APART
(SEE FIGURE 4.1 AND TABLE 4.3 FOR PROPER ASSEMBLY GAP)
- 7) ENSURE DRIVEN UNIT IS ALIGNED TO DRIVING UNIT, WITHIN COUPLINGS ALLOWABLE MISALIGNMENT
ANGULAR ALIGNMENT
MEASURE THE ASSEMBLY GAP BETWEEN HUB FLANGES IN (4) LOCATIONS 90° APART
THE MEASUREMENT RANGE SHOULD NOT EXCEED THE ANGULAR LIMIT LISTED IN TABLE 4.4
PARALLEL ALIGNMENT
PLACE A STRAIGHT EDGE SQUARE ON THE FLANGE OF BOTH HUBS IN (4) LOCATIONS 90° APART
THE MAXIMUM GAP SHOULD NOT EXCEED THE OFFSET LIMIT LISTED IN TABLE 4.4
- 8) WITH COUPLING HUBS ALIGNED, THE RUBBER ELEMENT CAN BE PLACED BETWEEN THE HUB FLANGES
- 9) ROTATE THE RUBBER ELEMENT UNTIL HOLES ARE ALIGNED WITH THE HUB FLANGE HOLES AND SLOTS
- 10) WITH HOLES ALIGNED, COUPLING HARDWARE CAN BE INSTALLED
FOR EASE OF ASSEMBLY, GUARDIAN RECOMMENDS INSTALLING BOLTS SO HEADS ARE LOCATED IN HUB SLOTS
- 11) TORQUE BOLTS PER VALUES IN TABLE 4.5 TO COMPLETE INSTALLATION
- 12) WITH COUPLING HARDWARE PROPERLY INSTALLED, REMOVE STEEL BAND FROM RUBBER ELEMENT

SECTION 4 - REFERENCE DATA

TABLE 4.1 SUPER FLEX COUPLING SETSCREW SEATING TORQUE

COUPLING SERIES		SF-4	SF-8	SF-16	SF-27	SF-55	SF-80	SF-120	SF-240
IMPERIAL SETSCREW		1/4-20	5/16-18	5/16-18	3/8-16	1/2-13	1/2-13	1/2-13	1/2-13
SEATING TORQUE	FT-LBS	7	14	14	23	50	50	50	50
	Nm	9.5	19	19	31	67.8	67.8	67.8	67.8

TABLE 4.2 SUPER FLEX COUPLING CROSSCLAMP BOLT SEATING TORQUE

COUPLING SERIES		SF-4	SF-8	SF-16	SF-27	SF-55	SF-80	SF-120	SF-240
IMPERIAL CAP SCREW		1/4-20	5/16-18	7/16-14	7/16-14	1/2-13	1/2-13	5/8-11	5/8-11
SEATING TORQUE	FT-LBS	17	35	45	45	85	85	170	170
	Nm	23	47.5	61	61	115.2	115.2	230.5	230.5

TABLE 4.3 SUPER FLEX COUPLING INSTALLATION ASSEMBLY GAP (INCH)

COUPLING SERIES	SF-4	SF-8	SF-16	SF-27	SF-55	SF-80	SF-120	SF-240
ASSEMBLY GAP	1.102	1.260	1.811	1.969	2.441	2.677	3.071	3.937

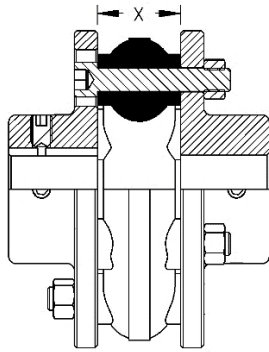


FIGURE 4.1 SUPER FLEX ASSEMBLY GAP

TABLE 4.4 SUPER FLEX COUPLING INSTALLATION ALIGNMENT LIMITS (INCH)

COUPLING SERIES	SF-4	SF-8	SF-16	SF-27	SF-55	SF-80	SF-120	SF-240
OFFSET LIMIT	.08	.08	.08	.08	.08	.12	.12	.12
ANGULAR LIMIT	.42	.42	.28	.68	.86	.92	.80	1.08

TABLE 4.5 SUPER FLEX HARDWARE AND TIGHTENING TORQUES

COUPLING SERIES		SF-4	SF-8	SF-16	SF-27	SF-55	SF-80	SF-120	SF-240
FASTNER SIZE (QTY)		M8 (6)	M10 (6)	M12 (6)	M14 (6)	M20 (6)	M20 (6)	M20 (8)	M27 (8)
TIGHTENING TORQUE	FT-LBS	19	37	59	96	295	295	295	738
	Nm	25.8	50.2	80	130.2	400	400	400	1000.6

SECTION 5 - STORAGE

- COUPLINGS SHOULD BE STORED IN A DRY, WELL MAINTAINED ENVIRONMENT
- HUMID STORAGE ENVIRONMENTS COULD LEAD TO SURFACE RUST METAL COMPONENTS (INSPECT FOR RUST AND BURRS PRIOR TO INSTALLATION)
- COUPLING SHOULD BE STORED WITH RUBBER ELEMENT FREE OF OIL

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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