

Guardian HH Shaft Coupling

Service & Installation Instructions

P-8611-GC
GUA-MRK-DOC-028



TABLE OF CONTENTS

NOTICES AND WARNINGS	PAGE 2
SECTION 1 – COUPLING OVERVIEW	PAGE 3
SECTION 2 – TOOLS/MATERIALS REQUIRED	PAGE 4
SECTION 3 – INSTALLATION INSTRUCTIONS	PAGE 4
SECTION 5 – REFERENCE DATA	PAGE 5
SECTION 5 – STORAGE	PAGE 5
WARRANTY	PAGE 6

IMPORTANT READ ALL NOTICES & WARNINGS BEFORE ATTEMPTING ANY INSTALLATION!

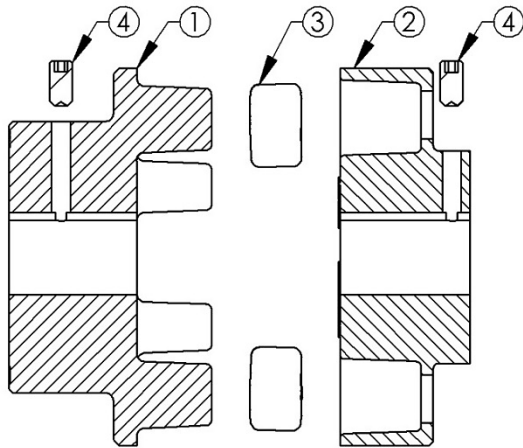
NOTICES:

- 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 HUBS 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.

SECTION 1 – COUPLING OVERVIEW



ITEM NUMBER	ITEM DESCRIPTION
1	HH COUPLING HUB
2	FH COUPLING HUB
3	FH COUPLING RUBBER INSERTS
4	SETSCREW

FIGURE 1.1 HH COUPLING CROSS SECTION

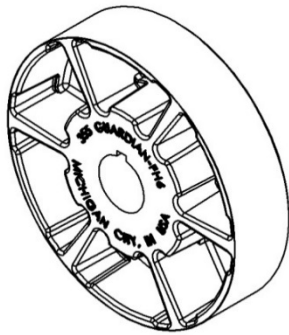


FIGURE 1.2 FH COUPLING HUB (POCKET SIDE)

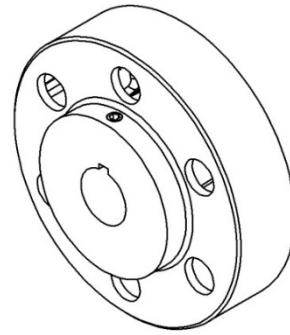


FIGURE 1.3 FH COUPLING HUB (BODY SIDE)

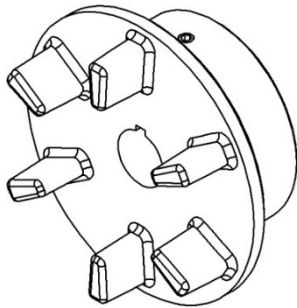


FIGURE 1.4 HH COUPLING HUB (TEETH SIDE)

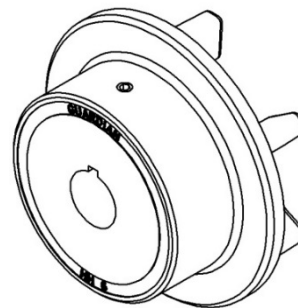


FIGURE 1.5 HH COUPLING HUB (BODY SIDE)

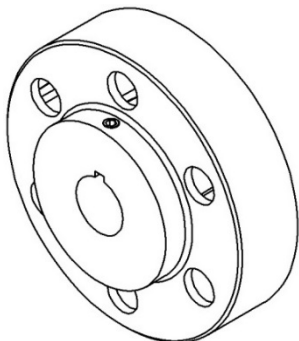


FIGURE 1.6 BORE & KEYWAY

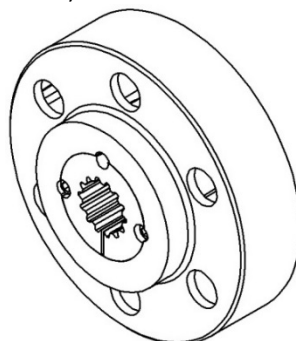


FIGURE 1.7 TAPER-LOCK BUSHING

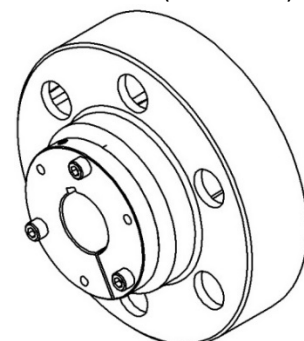


FIGURE 1.8 QD BUSHING

SECTION 2 - TOOLS/MATERIAL REQUIRED

- TORQUE WRENCH
- ALLEN SOCKETS
- MEDIUM STRENGTH REMOVABLE LOCTITE
- CALIPERS
- P-80 RUBBER LUBRICANT (OR ACID FREE GREASE)
- 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**
- 2) INSTALL AND MATE HH COUPLING HUB BORE WITH DRIVING SHAFT
COUPLING SHOULD BE INSTALLED WITH THE HUB TEETH AWAY FROM DRIVING UNIT
(SEE FIGURE 1.4 THRU 1.6 FOR TYPICAL MOUNTING OPTIONS)
- 3) WITH HUB PROPERLY POSITIONED, TORQUE CLAMPING FASTENER TO RECOMMENDED SEATING TORQUE
GUARDIAN RECOMMENDS USING MEDIUM STRENGTH REMOVABLE LOCTITE FOR BORE & KEYWAY SETSCREW
(SEE TABLE 4.2 FOR PROPER BORE & KEYWAY SETSCREW SEATING TORQUES)
FOR TAPER-LOCK AND QD BUSHINGS, REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS
- 4) IF REQUIRED, INSTALL RUBBER INSERTS INTO FH COUPLING HUB POCKETS
GUARDIAN RECOMMENDS APPLYING P-80 LUBRICANT TO RUBBER INSERTS WHEN INSTALLING
(LUBE SUPPLIED WITH COUPLING)
- 5) WITH RUBBER INSERTS INSTALLED IN HUB, INSTALL AND MATE FH COUPLING HUB BORE WITH DRIVEN SHAFT
(SEE FIGURE 1.4 THRU 1.6 FOR TYPICAL MOUNTING OPTIONS)
- 6) POSITION COUPLING HUB ON DRIVEN SHAFT
- 7) WITH HUB PROPERLY POSITIONED, TORQUE CLAMPING FASTENER TO RECOMMENDED SEATING TORQUE
GUARDIAN RECOMMENDS USING MEDIUM STRENGTH REMOVABLE LOCTITE FOR BORE & KEYWAY SETSCREW
(SEE TABLE 4.2 FOR PROPER BORE & KEYWAY SETSCREW SEATING TORQUES)
FOR TAPER-LOCK AND QD BUSHINGS, REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS
- 8) APPLY P-80 LUBRICANT TO RUBBER INSERTS AND FLYWHEEL TEETH
(LUBE SUPPLIED WITH COUPLING)
- 9) MOVE DRIVEN UNIT AND COUPLING HUB TOWARD HH COUPLING HUB.
ENSURE HH HUB TEETH GO BETWEEN RUBBER INSERTS AND INSERTS DO NOT TIP DURING INSTALLATION

SECTION 4 - REFERENCE DATA

TABLE 4.1 HH COUPLING SERIES MOUNTING SETSCREW

HH COUPLING SERIES		HH6	HH12	HH25	HH50	HH100
IMPERIAL SETSCREWS		3/8-16	1/2-13		3/4-10	
SEATING	FT-LBS	23	50		167	
TORQUE	Nm	31	68		226	

TABLE 4.2 HH COUPLING SERIES ASSEMBLY

HH COUPLING SERIES	HH6	HH12	HH25	HH50	HH100
ASSEMBLY GAP	.157"	.157"	.157"	.157"	.157"

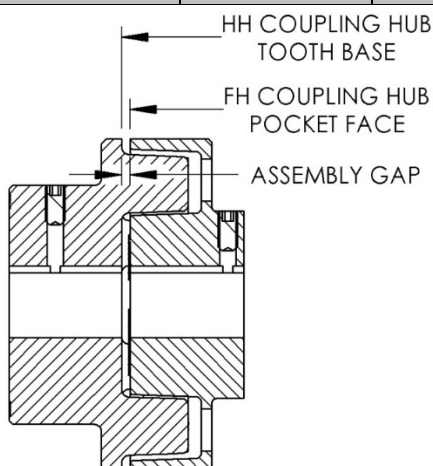
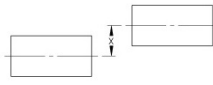
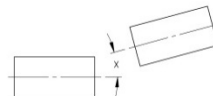
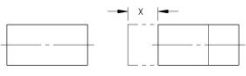
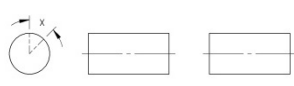


FIGURE 4.1 HH HUB ASSEMBLY GAP

TABLE 4.4 FH COUPLING SERIES MISALIGNMENT CAPABILITIES

FH COUPLING SERIES	FH6	FH12	FH25	FH50	FH100
RADIAL					
	.040"	.040"	.040"	.040"	.040"
ANGULAR					
	1°	1°	1°	1°	1°
AXIAL					
	.118" MAX	.118" MAX	.118" MAX	.118" MAX	.118" MAX
TORSIONAL ANGLE					
	3° - 5°	3° - 5°	3° - 5°	3° - 5°	3° - 5°

SECTION 5 - STORAGE

- COUPLINGS SHOULD BE STORED IN A DRY, WELL MAINTAINED ENVIRONMENT
- HUMID STORAGE ENVIRONMENTS COULD LEAD TO SURFACE RUST ON THE HUB AND BORE (INSPECT BORE FOR RUST AND BURRS PRIOR TO INSTALLATION)
- COUPLINGS SHOULD BE STORED WITH RUBBER INSERTS FREE OF OIL

WARRANTY

Guardian Ind. Inc. warrants that the Goods will be free from defects in material and workmanship for a period of twelve (12) months from delivery, or such other period as shall be agreed upon in writing by the parties. Guardian Ind. Inc.'s limited warranty excludes remedy for damage or defect caused by abuse; failure to resist corrosion or erosion from any corrosive agent or fluid, or due to deposits of foreign material from any fluid; modifications not executed by Guardian Ind. Inc.; improper installation or operation; defects or failures arising out of, in any way related to, or as a result, either direct or indirect, of the Buyer's failure to properly advise Guardian Ind. Inc. of all normal and special operating conditions, known to or suspected by the Buyer, when Guardian Ind. Inc. is manufacturing the Product for a specific operation; or normal wear and tear under normal usage. All weights stated in Guardian Ind. Inc.'s catalog and lists are approximate and are excluded from this warranty. EXCEPT AS EXPRESSLY SET FORTH IN THIS PARAGRAPH, GUARDIAN IND. INC. MAKES NO OTHER WARRANTY WITH RESPECT TO THE GOODS DELIVERED HEREUNDER AND EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, ARISING BY OPERATION OF LAW OR OTHERWISE.

Guardian Ind. Inc. must be notified in writing of any defect in the Goods within a reasonable period of time after discovery (not to exceed thirty (30) days) and the defective Goods must be delivered within the warranty period specified above, prepaid, to Guardian Ind. Inc.'s factory, with evidence that the Goods have been properly installed, maintained and operated in accordance with Guardian Ind. Inc.'s instructions. If Guardian Ind. Inc. determines that any such returned Goods are not in conformity with the warranty set forth herein, then Guardian Ind. Inc. shall, at its sole option and expense, either repair the same or supply replacement Goods.

The remedies of Buyer set forth herein are exclusive, and the total liability of Guardian Ind. Inc. hereunder, whether based on contract, warranty, negligence, indemnity, strict liability or otherwise, and shall not exceed the purchase price of the Goods giving rise to any such claim for liability. IN NO EVENT SHALL GUARDIAN IND. INC. OR ITS SUPPLIERS BE LIABLE TO BUYER, ANY SUCCESSORS IN INTEREST, OR ANY BENEFICIARY OF THIS CONTRACT FOR CONSEQUENTIAL, INDIRECT, INCIDENTAL, OR SPECIAL DAMAGES OR LOSSES, OR FOR ANY SECONDARY CHARGES OR ADMINISTRATIVE OR PUNITIVE DAMAGES, FINES, PENALTIES, FEES, EXPENSES AND OTHER CHARGES, ARISING OUT OF THE CONTRACT OR ANY BREACH THEREOF, WHETHER BASED UPON LOSS OF USE, LOSS OF PRODUCTION, LOST PROFITS OR REVENUE, INTEREST, LOST GOODWILL, WORK STOPPAGE, IMPAIRMENT OF OTHER GOODS, LOSS BY REASON OF SHUTDOWN OR NON-OPERATION, INCREASED EXPENSES OF OPERATION OR CLAIMS OF CUSTOMERS OF BUYER FOR SERVICE INTERRUPTION, OR ANY OTHER TYPE OF ECONOMIC LOSS OR DAMAGE, WHETHER OR NOT SUCH LOSS OR DAMAGE IS BASED ON CONTRACT, WARRANTY, NEGLIGENCE, INDEMNITY, STRICT LIABILITY OR OTHERWISE.

Further details pertaining to TERMS AND CONDITIONS OF SALES can be found at the following link:

http://www.altramotion.com/~media/Files/Corporate/Terms%20and%20Conditions/Sales-Terms/Guardian_Sales_Terms.ashx



www.guardiancouplings.com

300 Indiana Highway 212
Michigan City, IN 46361
219-874-5248
Fax: 219-879-6643