# **Guardian SAE Engine Housing Adaptors & Spacers**

Service & Installation Instructions

**GUA-MRK-DOC-032** 





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#### IMPORTANT READ ALL NOTICES & WARNINGS BEFORE ATTEMPTING ANY INSTALLATION!

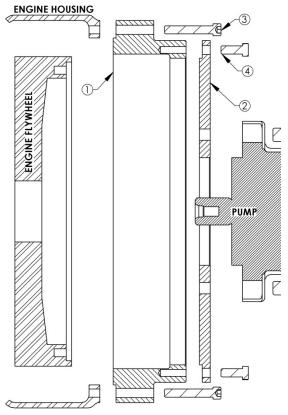
## **NOTICES:**

- 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.
- ADAPTORS/SPACERS 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 MAY RESULT IN A PREMATURE COUPLING FAILURE.
- MAKE SURE THAT ADAPTORS/SPACERS ARE NOT IN CONTACT WITH ANY ROTATING SURFACES.
- IF ANY PROBLEMS OCCUR DURING ASSEMBLY, CONTACT GUARDIAN COUPLINGS IMMEDIATELY.

# SECTION 1 – ADAPTOR/SPACER OVERVIEW



ITEM NUMBER	ITEM DESCRIPTION
1	SAE ENGINE HOUSING ADAPTOR
2	SAE PUMP MOUNTING PLATE
	(OR AUXILIARY EQUIPMENT)
3	ADAPTOR MOUNTING HARDWARE*
5	PLATE MOUNTING HARDWARE*

\*SHOWN FOR REFERENCE ONLY – NOT INCLUDED WITH ADAPTOR

FIGURE 1.1 SAE HOUSING ADAPTOR CROSS SECTION

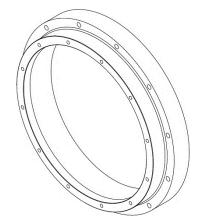


FIGURE 1.2 SAE HOUSING ADAPTOR (EQUIPMENT SIDE)

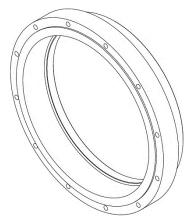
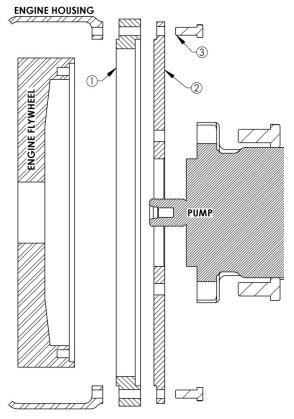


FIGURE 1.3 SAE HOUSING ADAPTOR (ENGINE SIDE)

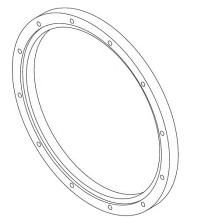
# SECTION 1 - ADAPTOR/SPACER OVERVIEW (continued)



ITEM NUMBER	ITEM DESCRIPTION
1	SAE ENGINE HOUSING SPACER
2	SAE PUMP MOUNTING PLATE
	(OR AUXILIARY EQUIPMENT)
3	SPACER MOUNTING HARDWARE*

<sup>\*</sup>SHOWN FOR REFERENCE ONLY – NOT INCLUDED WITH ADAPTOR

FIGURE 1.5 SAE HOUSING SPACER CROSS SECTION



**FIGURE 1.5** SAE HOUSING SPACER (EQUIPMENT SIDE)



FIGURE 1.6 SAE HOUSING SPACER (ENGINE SIDE)

# **SECTION 2 - TOOLS/MATERIAL REQUIRED**

- **TORQUE WRENCH**
- **ALLEN SOCKETS**
- MEDIUM STRENGTH REMOVABLE LOCTITE

## **SECTION 3A – INSTALLATION INSTRUCTIONS (SAE ADAPTORS)**

- 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 ADAPTOR WITH ENGINE HOUSING PILOT AND MOUNTING HOLES
- 3) WITH ENGINE HOLES ALIGNED, INSTALL PROPER SIZED BOLTS INTO ENGINE HOUSING MOUNTING HOLES GUARDIAN RECOMMENDS USING MEDIUM STRENGTH REMOVABLE LOCTITE (SEE TABLE 5.1 FOR STANDARD SAE ENGINE HOUSING HOLE SIZES)
- 4) ENSURING ADAPTOR IS SEATED FLAT WITH ENGINE HOUSING, TORQUE BOLTS TO RECOMMENDED SEATING TORQUE (SEE TABLE 5.1 FOR ENGINE HOUSING BOLT SEATING TORQUES)
- 5) ADAPTOR IS NOW READY FOR SAE PUMP MOUNTING PLATE OR AUXILIARY EQUIPMENT FOR PUMP PLATES, REFER TO GUARDIAN DOCUMENT GUA-MRK-DOC-031 FOR INSTILLATION INSTRUCTIONS FOR AUXILIARY EQUIPMENT, REFER TO EQUIPMENT MANUFACTURER FOR INSTALLATION INSTRUCTIONS

# SECTION 3B – INSTALLATION INSTRUCTIONS (SAE SPACERS)

- 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 SPACER WITH ENGINE HOUSING PILOT AND MOUNTING HOLES
- 3) SPACER IS NOW READY FOR SAE PUMP MOUNTING PLATE OR AUXILIARY EQUIPMENT FOR PUMP PLATES. REFER TO GUARDIAN DOCUMENT GUA-MRK-DOC-031 FOR INSTILLATION INSTRUCTIONS FOR AUXILIARY EQUIPMENT, REFER TO EQUIPMENT MANUFACTURER FOR INSTALLATION INSTRUCTIONS

# **SECTION 4 - REFERENCE DATA**

TABLE 5.1 SAE – J617c ENGINE HOUSING HOLE SIZES AND SEATING TORQUES									
SAE HOUSING	SIZE	1	2	3	5	5	6		
IMPERIAL BOLTS		1/2-13	3/8-16						
SEATING	FT-LBS	55	35						
TORQUE	Nm	75			56				

# **SECTION 5 - STORAGE**

- ADAPTORS/SPACERS SHOULD BE STORED IN A DRY, WELL MAINTAINED ENVIRONMENT
- HUMID STORAGE ENVIRONMENTS COULD LEAD TO SURFACE RUST ON THE ENGINE MOUNTING SURFACES, WHICH REQUIRES REMOVAL PRIOR TO INSTALLATION
- ADAPTORS/SPACERS SHOULD BE STORED AND HANDLED IN A MANNER TO PREVENT DAMAGE TO THE MACHINED ENGINE AND EQUIPMENT MATING FEATURES

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