

Guardian SAE Pump Mounting Plates

Service & Installation Instructions

P-8612-GC
GUA-MRK-DOC-031



TABLE OF CONTENTS

NOTICES AND WARNINGS	PAGE 2
SECTION 1 – PUMP PLATE OVERVIEW	PAGE 3
SECTION 2 – TOOLS/MATERIALS REQUIRED	PAGE 3
SECTION 3 – INSTALLATION INSTRUCTIONS (OVERVIEW)	PAGE 4
SECTION 3A – INSTALLATION INSTRUCTIONS (1-PIECE COUPLING SETUP)	PAGE 4
SECTION 3B – INSTALLATION INSTRUCTIONS (2-PIECE COUPLING STANDARD SETUP)	PAGE 4
SECTION 3C – INSTALLATION INSTRUCTIONS (2-PIECE COUPLING LARGE HUB SETUP)	PAGE 5
SECTION 4 – 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.
- PLATES 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 PLATES ARE NOT IN CONTACT WITH ANY ROTATING SURFACES.
- IF ANY PROBLEMS OCCUR DURING ASSEMBLY, CONTACT GUARDIAN COUPLINGS IMMEDIATELY.
- 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

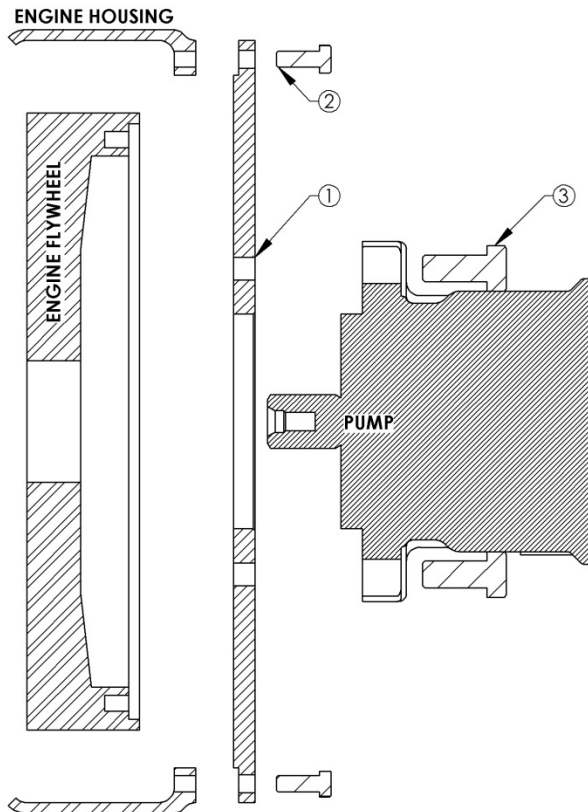


FIGURE 1.1 SAE PUMP PLATE CROSS SECTION

ITEM NUMBER	ITEM DESCRIPTION
1	SAE PUMP MOUNTING PLATE
2	PLATE MOUNTING HARDWARE*
3	PUMP MOUNTING HARDWARE*

*SHOWN FOR REFERENCE ONLY – NOT INCLUDED WITH PLATE

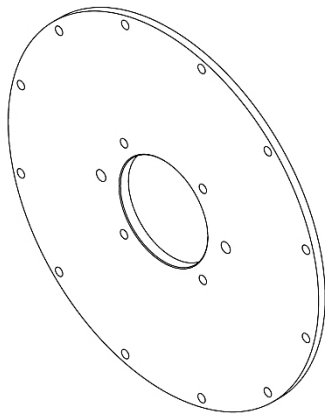


FIGURE 1.2 SAE PUMP PLATE (PUMP SIDE)

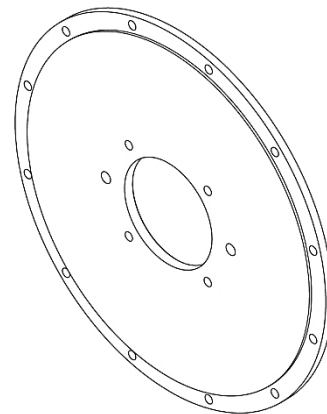


FIGURE 1.3 SAE PUMP PLATE (ENGINE SIDE)

SECTION 2 - TOOLS/MATERIAL REQUIRED

- TORQUE WRENCH
- ALLEN SOCKETS
- MEDIUM STRENGTH REMOVABLE LOCTITE

SECTION 3 – INSTALLATION INSTRUCTIONS

USE CHART TO DETERMINE PROPER ASSEMBLY INSTRUCTIONS

FLYWHEEL COUPLING DESIGN	COUPLING HUB SIZE	INSTRUCTIONS
1-PIECE FLYWHEEL COUPLING	ALL SIZES	SECTION 3A
2-PIECE FLYWHEEL COUPLING	COUPLING HUB SMALLER THAN PUMP PILOT	SECTION 3B
2-PIECE FLYWHEEL COUPLING	COUPLING HUB LARGER THAN PUMP PILOT	SECTION 3C

SECTION 3A – INSTALLATION INSTRUCTIONS (1-PIECE COUPLING SETUP)

- 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) ENSURE 1-PIECE COUPLING IS MOUNTED TO ENGINE FLYWHEEL
(REFER TO RESPECTIVE COUPLING INSTALLATION INSTRUCTIONS FOR ASSISTANCE)
- 3) INSTALL AND MATE PUMP PLATE WITH ENGINE HOUSING PILOT AND MOUNTING HOLES
PUMP PLATE SHOULD BE INSTALLED SO PUMP MOUNTING HOLES ARE PROPERLY ORIENTATED
- 4) WITH ENGINE HOLES ALIGNED, INSTALL PROPERLY SIZED BOLTS INTO ENGINE HOUSING MOUNTING HOLES
GUARDIAN RECOMMENDS USING MEDIUM STRENGTH REMOVABLE LOCTITE
(SEE TABLE 4.1 FOR STANDARD SAE ENGINE HOUSING HOLE SIZES)
- 5) ENSURING PUMP PLATE IS SEATED FLAT WITH ENGINE HOUSING, TORQUE BOLTS TO RECOMMENDED SEATING TORQUE (SEE TABLE 4.1 FOR ENGINE HOUSING BOLT SEATING TORQUES)
- 6) INSTALL AND MATE PUMP WITH PUMP PLATE PILOT AND MOUNTING HOLES
- 7) WITH PUMP HOLES ALIGNED, INSTALL PROPERLY SIZED BOLTS INTO PUMP MOUNTING HOLES
(SEE TABLE 4.2 FOR TYPICAL PUMP MOUNTING BOLT SIZES)
- 8) ENSURING PUMP IS SEATED FLAT WITH PUMP PLATE, TORQUE BOLTS TO RECOMMENDED SEATING TORQUE
(REFER TO PUMP MANUFACTURER FOR PROPER PUMP BOLT SEATING TORQUES)

SECTION 3B – INSTALLATION INSTRUCTIONS (2-PIECE COUPLING STANDARD SETUP)

- 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) ENSURE COUPLING FLYWHEEL IS MOUNTED TO ENGINE FLYWHEEL
(REFER TO RESPECTIVE COUPLING INSTALLATION INSTRUCTIONS FOR ASSISTANCE)
- 3) INSTALL AND MATE PUMP PLATE WITH ENGINE HOUSING PILOT AND MOUNTING HOLES
PUMP PLATE SHOULD BE INSTALLED SO PUMP MOUNTING HOLES ARE PROPERLY ORIENTATED
- 4) WITH ENGINE HOLES ALIGNED, INSTALL PROPERLY SIZED BOLTS INTO ENGINE HOUSING MOUNTING HOLES
GUARDIAN RECOMMENDS USING MEDIUM STRENGTH REMOVABLE LOCTITE
(SEE TABLE 4.1 FOR STANDARD SAE ENGINE HOUSING HOLE SIZES)
- 5) ENSURING PUMP PLATE IS SEATED FLAT WITH ENGINE HOUSING, TORQUE BOLTS TO RECOMMENDED SEATING TORQUE (SEE TABLE 4.1 FOR ENGINE HOUSING BOLT SEATING TORQUES)
- 6) INSTALL COUPLING HUB ON PUMP SHAFT
(REFER TO RESPECTIVE COUPLING INSTALLATION INSTRUCTIONS FOR HUB MOUNTING ASSISTANCE)
- 7) INSTALL AND MATE PUMP WITH PUMP PLATE PILOT AND MOUNTING HOLES
ENSURE COUPLING HUB IS PROPERLY ALIGNED AND MATED WITH COUPLING FLYWHEEL WHEN INSTALLING
- 8) WITH PUMP HOLES ALIGNED, INSTALL PROPERLY SIZED BOLTS INTO PUMP MOUNTING HOLES
(SEE TABLE 4.2 FOR TYPICAL PUMP MOUNTING BOLT SIZES)
- 9) ENSURING PUMP IS SEATED FLAT WITH PUMP PLATE, TORQUE BOLTS TO RECOMMENDED SEATING TORQUE
(REFER TO PUMP MANUFACTURER FOR PROPER PUMP BOLT SEATING TORQUES)

SECTION 3C – INSTALLATION INSTRUCTIONS (2-PIECE COUPLING LARGE HUB SETUP)

- 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) ENSURE COUPLING FLYWHEEL IS MOUNTED TO ENGINE FLYWHEEL
(REFER TO RESPECTIVE COUPLING INSTALLATION INSTRUCTIONS FOR ASSISTANCE)
- 3) INSTALL COUPLING HUB ON PUMP SHAFT
(REFER TO RESPECTIVE COUPLING INSTALLATION INSTRUCTIONS FOR HUB MOUNTING ASSISTANCE)
- 4) INSTALL AND MATE PUMP PILOT WITH PUMP PLATE PILOT AND MOUNTING HOLES
- 5) WITH PUMP HOLES ALIGNED, INSTALL PROPERLY SIZED BOLTS INTO PUMP MOUNTING HOLES
(SEE TABLE 4.2 FOR TYPICAL PUMP MOUNTING BOLT SIZES)
- 6) ENSURING PUMP IS SEATED FLAT WITH PUMP PLATE, TORQUE BOLTS TO RECOMMENDED SEATING TORQUE
(REFER TO PUMP MANUFACTURER FOR PROPER PUMP BOLT SEATING TORQUES)
- 7) INSTALL AND MATE PUMP WITH ENGINE HOUSING PILOT AND MOUNTING HOLES
ENSURE COUPLING HUB IS PROPERLY ALIGNED AND MATED WITH COUPLING FLYWHEEL WHEN INSTALLING
- 8) WITH ENGINE HOLES ALIGNED, INSTALL PROPERLY SIZED BOLTS INTO ENGINE HOUSING MOUNTING HOLES
GUARDIAN RECOMMENDS USING MEDIUM STRENGTH REMOVABLE LOCTITE
(SEE TABLE 4.1 FOR STANDARD SAE ENGINE HOUSING HOLE SIZES)
- 9) ENSURING PUMP PLATE IS SEATED FLAT WITH ENGINE HOUSING, TORQUE BOLTS TO RECOMMENDED SEATING TORQUE (SEE TABLE 4.1 FOR ENGINE HOUSING BOLT SEATING TORQUES)

SECTION 4 - REFERENCE DATA

TABLE 4.1 SAE – J617c ENGINE HOUSING HOLE SIZES AND SEATING TORQUES

SAE HOUSING SIZE		1	2	3	4	5	6
IMPERIAL BOLTS		1/2-13		3/8-16			
SEATING TORQUE	FT-LBS	55		34			
	Nm	75		46			

TABLE 4.2 SAE – J744 PUMP MOUNTING BOLT SIZES AND SEATING TORQUES

SAE 2-BOLT FLANGE	AA	A	B	C	D	E	F
IMPERIAL BOLTS	5/16-18	3/8-16	1/2-13	5/8-11	3/4-10	1-8	
SAE 4-BOLT FLANGE	4F17	A	B	C	D	E	F
IMPERIAL BOLTS	5/16-18	3/8-16	1/2-13		3/4-10		1-8

SECTION 5 - STORAGE

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

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