

## Para-Flex® Spacer Couplings

These instructions must be read thoroughly before installing or operating this product. The instruction manual was correct at the time of printing. Please see [dodgeindustrial.com](http://dodgeindustrial.com) for updated instruction manual.

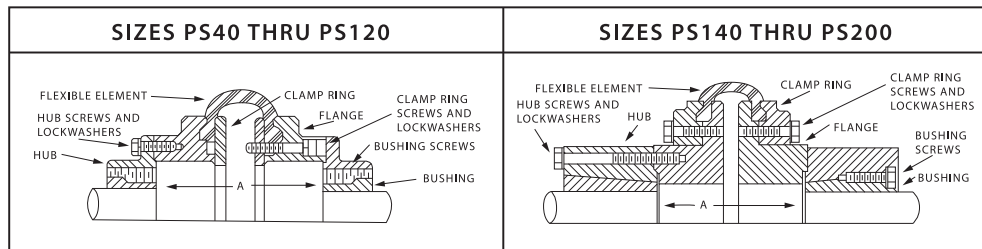


Figure 1

**WARNING:** To ensure that drive is not unexpectedly started, turn off and lock out or tag power source before proceeding. Failure to observe these precautions could result in bodily injury.

**WARNING:** All products over 25 kg (55 lbs) are noted on the shipping package. Proper lifting practices are required for those products.

### INSTALLATION:

1. Install hubs on shaft per instructions packaged with bushings. Shaft ends must not project beyond hub ends. For the Taper-Lock® and QD flanged, install bushing in the flange per instructions included with bushing or find the instruction manuals at [dodgeindustrial.com](http://dodgeindustrial.com).
2. Place shafts into position. If shaft end float is to occur, locate the shafts at the mid-position of the end float.\* Dimension "A", see drawing, should be the same as the figure stamped on the end of the flange after the coupling number.
3. If precision equipment is not available, scales, straight edges, and calipers can be used as less accurate means of alignment. If using a scale or calipers, refer to Figure 2 and check the angular misalignment by measuring dimension "A" at four places 90° apart. Adjust the equipment until the four measurements do not vary more than the value "B" in Table 1. If using a straight edge, check the parallel offset by laying the straight edge across the outside diameter of the flanges in four places 90° apart. The gap between the flange and straight edge should not exceed 1/32" (0.79mm). To achieve maximum coupling performance, align the coupling as accurately as possible during initial installation.
4. Check the torque on the clamp ring screws per the table. Tighten if necessary. Compress the center assembly (using "C" clamps if necessary) and slip between the hubs until the pilots engage. Install hub screws and tighten with a torque

**WARNING:** Because of the possible danger to persons(s) or property from accidents which may result from the improper use of products, it is important that correct procedures be followed. Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance and operation procedures must be observed. The instructions in the instruction manuals must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be desirable or as may be specified in safety codes should be provided, and are neither provided by Dodge nor are the responsibility of Dodge. This unit and its associated equipment must be installed, adjusted and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. When risk to persons or property may be involved, a failsafe device must be an integral part of the driven equipment beyond the speed reducer output shaft.

wrench to the torque specified in Table 1 for hub screws.

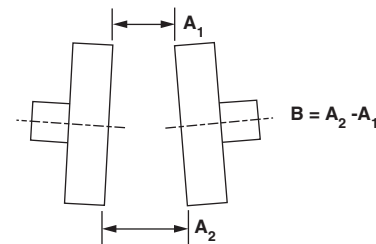


Figure 2

### FLEXIBLE ELEMENT REPLACEMENT:

1. Remove hub screws. Compress the center assembly (using "C" clamps if necessary) and remove from place.
2. Loosen all clamp ring screws. Grasp one end of flexible element at the split and remove from flanges.
3. Ensure 2 to 3 threads of each clamp ring screw are engaged to clamping ring.
4. Clean flange mounting area as well as surface that will come in contact with the element with a solvent, such as Xylene (Xylol), to remove grease, oil, wax, and dirt from surfaces. Do not clean the element with the solvent. A diluted soapy water solution may be applied to aid with element installation.
5. Wrap flexible element around flanges as shown in Figure 5. Make sure beads of element are fully worked down upon the seats. To ensure proper seating, tap around the tire's outside diameter with a small mallet until split is closed. Make sure element is evenly centered on the flanges.
6. Hold split of flexible element closed as shown in Figure 6. Tighten (finger tight) one or two screws 180° from split. Using both hands, knead the tire pulling it toward the split. Hold split closed and tighten (finger tight) the next two screws farthest from the split. Repeat the procedure on all remaining clamp ring screws. Use a torque wrench to tighten each clamp ring screw in succession to the torque specified in Table 1. Using a torque wrench, recheck all clamp ring screw torque values before coupling operation.
7. Optional Procedure: Hold split of flexible element closed as shown in Figure 6. Tighten (finger tight) one or two screws 180° from split. Using both hands, knead the tire pulling it toward the split. Hold split closed and tighten (finger tight) the next two screws in a star or cross pattern as shown in Figure 7. Repeat the procedure on all remaining clamp ring screws. Use a torque wrench to tighten each screw to the torque specified in Table 1. Using a torque wrench, recheck all clamp ring screw torque values before coupling operation.

8. Replace center assembly per Step 4 of Installation.

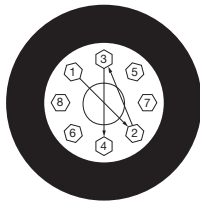


Figure 3

Table 1 - Wrench Torque (Pound-Inches)

Coupling Size	Clamp Ring Screws	Hub Screws	"B"
PS40	130	130	1/64
PS50	130	180	1/64
PS60	240	180	1/64
PS70	290	180	1/64
PS80	290	300	1/64
PS90	480	300	1/32
PS100	480	300	1/32
PS110	480	300	1/32
PS120	1080	720	1/32
PS140	1080	720	1/32
PS160	2160	1296	1/16
PS200	2160	1296	1/16

Notes:

1. If replacing clamp ring screws and washers, use only SAE Grade 8 screws and hardened washers.
2. \*If limited end float is required or sleeve bearings are used, consult Dodge engineering.

**WARNING: The metal components of the coupling that clamp the flexible element will operate properly only if the screws are tightened properly. Tightening one screw to full torque before proceeding to the next screw may cause excessive clamp ring or flange deflection. To prevent clamp ring and flange deflection, the screws must be evenly and gradually tightened to full torque.**

**ATEX CERTIFIED PARA-FLEX COUPLINGS:**

These instructions do not cover all details or variations in equipment nor provide every possible contingency or hazard to be met in connection with installation, operation, and maintenance. Should further information be desired, or should particular problems arise which are not covered in this manual, the matter should be referred to your local Dodge representative.

Dodge Elastomeric couplings are manufactured under the guidelines of the ATEX directive 2014/34/EU. The couplings have been assessed against the applicable sections of the following standards:

- EN ISO 80079-36:2016 Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic method and requirements
- EN ISO 80079-37:2016 Explosive atmospheres - Part 37: Non-electrical type of protection constructional safety 'c', control of ignition sources 'b', liquid immersion 'k'.

Dodge Elastomeric couplings are suitable for ATEX mining and surface locations where the auto ignition temperature of the combustible material exceeds +100°C.

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The couplings are suitable for use in the following ATEX categories:

- I M2
  - II 2 G D
- The following ATEX markings are included on the product:
- Ex h I Mb
  - Ex h IIC T5 Gb
  - Ex h IIIC T100C Db
  - Tamb -30°C +50°C
  - SIRA 04ATEX9358
  - MFG by Dodge Industrial, Inc.
  - 1061 Holland Road, Simpsonville, SC 29681 USA



Products manufactured prior to November 2021 may be marked as ABB Motors and Mechanical, Inc., Baldor, Reliance, etc.

**WARNING: These couplings are designed to operate with surface temperatures below 100°C when properly installed and selected. Excessive temperatures greater than 80°C is a result of an abnormal operating condition caused by:**

1. Improper installation - refer to installation manual for proper procedures
2. Excessive misalignment - re-align coupling / shafts
3. Failure of the coupling element - replace elastomeric
4. Excessive speed - re-evaluate application and selection
5. Excessive vibration - determine source, re-evaluate application

**If applied in a Division 1 or Zone 1 environment, the excessive temperature may cause ignition of hazardous materials.**

In hazardous environments, Dodge elastomeric couplings should not be considered as fail safe or "break-away" power transmission devices. Overloads imposed to these devices could cause irreparable damage, shall be considered an explosive hazard, could create projectiles, and/or could cause torque transmission interruptions. The coupling shall be sized and used to the stated torque capabilities of the unit as published in the Dodge PT Components Engineering Catalog. Any assistance needed in selection shall be referred to a Dodge representative.

**Additional Instruction for Safe Installation and Use**

1. All rotating parts should be guarded to prevent contact with foreign objects which could result in sparks, ignition, or damage to the coupling.
2. Couplings should be periodically inspected for normal wear, dust/dirt buildup or any similar scenario that would impede heat dissipation.
3. Increasing levels of vibration and noise could indicate the need for inspection, repair or replacement of the coupling or element.
4. Electrical sparks are a source of ignition. To reduce the risk, proper electrical bonding and grounding is recommended.
5. Overloading may result in breakage or damage to the coupling or other equipment. As a result the coupling could become an explosion hazard. Damaged coupling components or elements must not be operated in hazardous environment.
6. If thrust loading or axial movement is anticipated, The Para-Flex coupling is the desired unit for use as it has design capability of accepting this movement up to 5/16". Couplings are not intended to be used as thrust bearing members.
7. Coupling guards should have a minimum of 2" clearance over Para-Flex tire style couplings. (3" clearance for Para-Flex style couplings greater than 16" outer diameter.)
8. The date code should be read as:

