

Gear Coupling Instruction Manual

These instructions must be read thoroughly before installation or operation. This instruction manual was accurate at the time of printing. Please see dodgeindustrial.com for updated instruction manuals.

WARNING: To ensure the 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 55 lbs (25 kg) are noted on the shipping package. Proper lifting practices are required for these products.

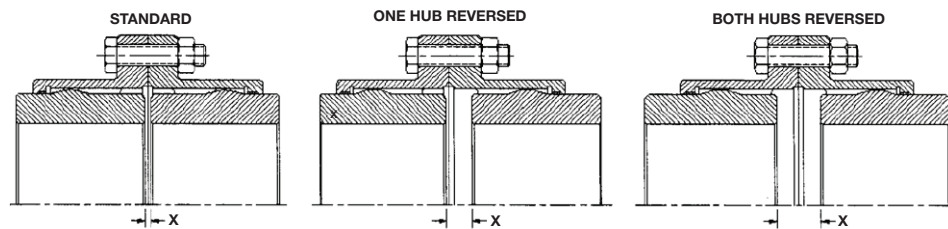


Figure 1 - "X" Dimension Between the Driver and Driven Hub Ends

Table 1—"X" Dimension Between Drive and Driven Hub Ends

Size	Standard		One hub reversed		Two hubs reversed	
	in.	mm	in.	mm	in.	mm
1	0.13	3.30	0.27	6.85	0.41	10.41
1.5	0.13	3.30	0.63	16.00	1.13	28.70
2	0.13	3.30	0.59	14.98	1.05	26.67
2.5	0.19	4.83	0.76	19.30	1.33	33.78
3	0.19	4.83	0.98	24.89	1.77	44.96
3.5	0.25	6.35	1.32	33.53	2.39	60.71
4	0.25	6.35	1.68	42.67	3.11	78.99
4.5	0.31	7.87	1.84	46.74	3.37	85.60
5	0.31	7.87	2.16	54.86	4.01	101.85
5.5	0.31	7.87	2.79	70.87	5.27	133.86
6	0.31	7.87	2.66	67.56	5.01	127.25
7	0.38	9.65	3.15	80.01	5.92	150.37

WARNING: Because of the possible danger to person(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 holding device must be an integral part of the driven equipment beyond the speed reducer output shaft.

INSTALLATION

1. Be sure all components are present and free of burrs or chips.
2. Coat rubber seals with a light film of grease. Be certain the rubber seals are properly seated in the flanges.
3. Place the sleeves over the shaft ends. Care should be taken not to damage the rubber seals.
4. Install the hubs on the respective shafts. Interference fit hubs often require heating the hubs in hot oil or an oven to 320° F (160° C) prior to installation. The hub faces shall be flush with the shaft ends.
5. Locate the driver and driven machinery to maintain the "X" dimension between the driver and driven hub ends, per Table 1, illustrated in Figure 1
6. Using a dial indicator, check the angular and parallel alignment of the hubs.

Angular Method – Attach the dial indicator to the base of one hub and the indicator needle against the face of the other hub. Rotate the hub on which the indicator base is attached, check the dial at 90-degree intervals. All four points should be the same reading on the dial.

Parallel Method – Attach the dial indicator to the base of one hub and the indicator needle against the OD of the other hub. Rotate the hub on which the indicator base is attached, check the dial at 90-degree intervals. All four points should be the same reading on the dial.

Use Figure 2 to determine the maximum TIR for the Face (angular) and the OD (parallel) based on the operating speed of the coupling.

Locate the line representing the RPM at which the coupling will operate. The point at which that line crosses the horizontal axis indicates the maximum TIR on the face, or the maximum allowable angular misalignment. The point at which that line crosses the vertical axis indicates the maximum allowable TIR on the outside diameter, or the maximum allowable parallel misalignment.

*Coupling wear is related to misalignment, therefore, to achieve maximum coupling life, misalignment shall be minimized.

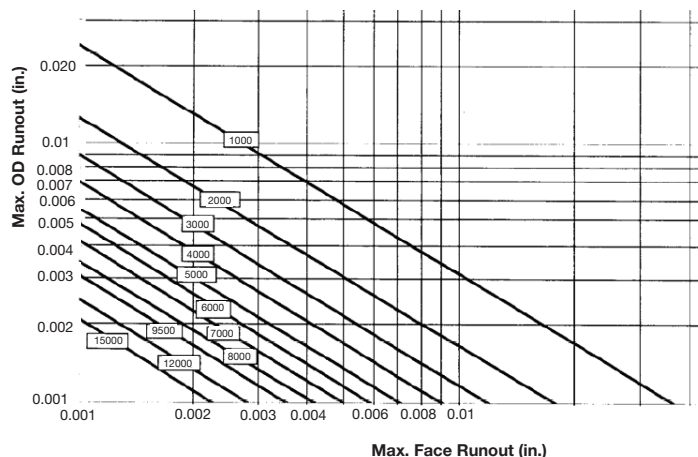


Figure 2 - Face and OD TIR

7. If the coupling is to be grease lubricated, coat all gear tooth areas with grease. Dodge coupling grease is recommended. Refer to Table 3 for part numbers.
8. Slide the sleeves over the hubs and install the gasket between the two sleeves.
9. Install and progressively tighten the bolts with a torque wrench until the proper torque value, per Table 2, is met. Remove lubrication plugs in each sleeve, add grease specified until filled.
NOTE: Consult Dodge Engineering if the coupling operates below the minimum rpm required for grease.
10. Install proper coupling guards per OSHA, or applicable requirements.

Table 2 – Torque values

Size	Bolt torque		Grease capacity		Min RPM (grease)
	in-lbs	Nm	Oz	g	
1	130	15	1	27	529
1.5	425	48	1	36	463
2	940	106	2	63	411
2.5	1800	203	4	113	380
3	1800	203	6	181	348
3.5	3000	339	10	272	321
4	3000	339	16	453	301
4.5	3000	339	18	508	285
5	3650	412	32	907	268
5.5	3650	412	40	1130	257
6	3650	412	56	1590	240
7	4850	548	77	2180	227

Table 3 – Grease

Description	Part number
Dodge Coupling Grease - 14 oz. cartridge	012995
Dodge Coupling Grease - 10-pack of 14 oz. cartridges	012996
Dodge Coupling Grease - Case (Qty. 30 - 14 oz. cartridges)	012997

MAINTENANCE

1. It is recommended that the coupling be completely flushed and relubricated after an initial break-in period of 3 million revolutions. (80 hrs @ 600 RPM).
2. Under normal industrial conditions the coupling should be disassembled, cleaned, and inspected every year. More severe applications may require more frequent inspection and relubrication.
3. During any inspection of the coupling when gear tooth wear is evident or the seal is leaking, it is recommended to replace the worn parts.
4. Upon reassembly after inspection always refer to the installation section for proper installation and bolt torque. Always regrease the coupling after inspection. Grease, which complies with AGMA9001-B97, or any NLGI grade 1 or 0, lithium-based grease with EP additives, is recommended.
5. Successful operation is dependent upon adequate lubrication. Precaution should be taken during handling and recycling grease, oil or water glycol mixtures.

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 impeded heat dissipation.
3. Increasing levels of vibration and noise could indicate the need for inspection, repair or replacement of the coupling.
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.

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