

SFC-825, SFC-1000, SFC-1225, SFC-1525 Heavy Duty Clutch Coupling and SFC-1525 High Torque Heavy Duty Clutch Coupling

P-207
819-0516

Installation Instructions



 **Warner**[®]
Electric

An Altra Industrial Motion Company

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⚠ WARNING Follow the installation instructions in this manual carefully to ensure safe, reliable operation. All stated or implied manufacturer warranties are voided if this product is not installed in accordance with these instructions.

⚠ WARNING Failure to follow these instructions may result in product damage, equipment damage, and serious or fatal injury to personnel.

Clutch-Coupling Spline Drive Armatures SFC-825 SFC-1000 SFC-1225 SFC-1525 SFC-1525 Hi-Torque

The illustration drawings, parts lists, and exploded views for these units can be found beginning on page 8.

A. Aligning the Shafts

In order for the clutch-coupling unit to operate properly, the mounting shafts of the motor and reducer or other hardware must be aligned with respect to each other before the unit is installed. The two shafts should be concentric with each other within .006 T.I.R., and angular alignment should be within 1/2 degree. (See to Figure 1)



SFC-825
 Bearing Mounted



SFC-825
 Flange Mounted

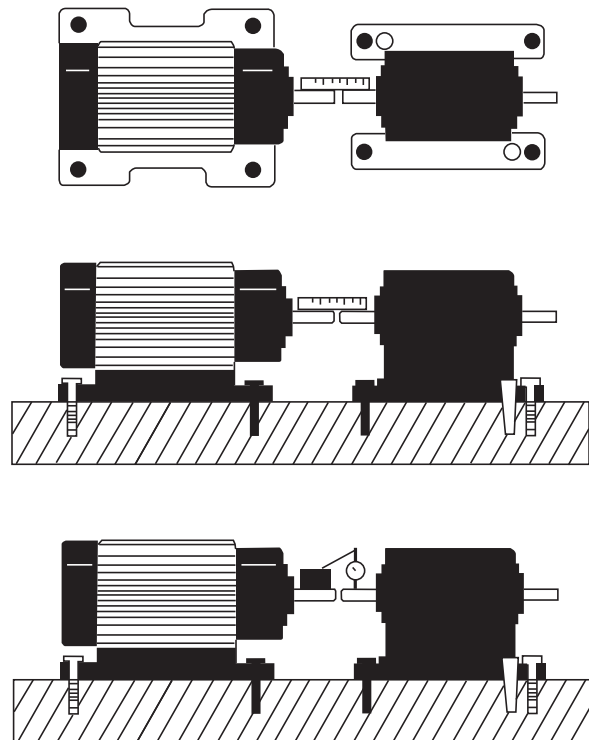


Figure 1

1. Use a straight-edge to check if the shafts are aligned with each other. For a more precise indication of alignment, use a dial indicator.
2. Adjust the position of the motor, reducer, or other hardware as required to achieve the correct alignment.
3. To be sure the shafts stay in alignment, drill holes for tapered dowel pins through the mounting bases of the motor, reducer, or other hardware and into the mounting surfaces. This procedure will ensure that, after the clutch-coupling has been installed, the shafts can easily be placed in proper alignment again by lining up the holes and secured by inserting the dowel pins.

B. Installing the Conduit Box

Install the conduit box on the field. Instructions for this procedure can be found with conduit box. Installation Manual P-1393 • 819-0200.

C. Mounting the Field-and-Rotor Assembly

Flange-Mounted Units

The fields and rotors are shipped separately for flange-mounted units. On some applications it will be necessary to mount the rotor first, and then bring the field into position. In other instances, the field will be mounted first, and then the rotor (mounted on a shaft) will be inserted into place.

1. Mounting the Field

- a. Care must be taken in selecting the location for mounting the field assembly. Pilot diameters are machined on the field mounting flange to aid in holding the field in the proper position.
- b. An appropriate pilot diameter must be provided on the mounting surface as well. (Figure 2)

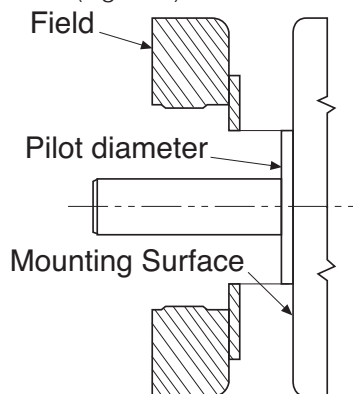


Figure 2

- c. The field assembly is then fastened in place with capscrews and lockwashers. (Figure 3)

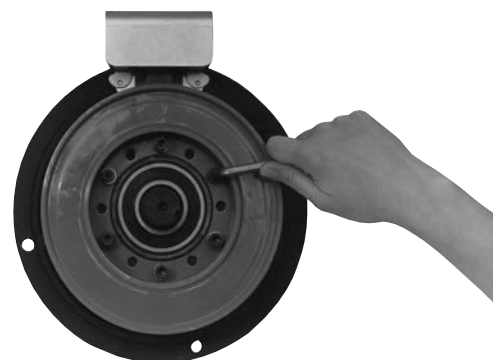


Figure 3

- d. After the unit is in place the mounting face and pilot diameter must be square and concentric with the shaft in accordance with the tolerances listed on the drawings. (Figure 4)



Figure 4

2. Mounting the Rotor

- a. Assemble the rotor to the rotor hub with capscrews and lockwashers. The rotor is reversible depending on the side from which the taperlock bushing must enter. A pilot diameter is machined on the rotor hub to assure a proper fit.
- b. The rotor hub is mounted on the shaft with a taperlock bushing. Be sure all parts are clean and free of dirt, chips, and burrs before assembling.
- c. Insert the bushing into the taper bore.
- d. Loosely assemble the two locking screws between the bushing and rotor.
- e. Insert the key into the shaft keyway. Prick punch the end of the keyway to ensure that the key cannot slide out.

- f. Slide the rotor assembly over the key and onto the shaft.
- g. Place the edge of the rotor 1/16" - 1/8" before the line that is inscribed into the O.D. of the field.
- h. Lock the rotor into place by alternately tightening the two locking screws in the bushing. As the screws are tightened, the rotor normally is pulled 1/16" - 1/8" **further onto the bushing (towards the field). When the rotor is secured tightly on the bushing, the edge of the rotor must be approximately even with the line inscribed in the field.** The overall axial dimension from the face of the rotor to the back of the field flange is shown on the illustration drawings. Squareness and concentricity tolerances must also be held as specified on the drawings to assure that the unit functions correctly.

Bearing Mounted Units

In bearing-mounted units, the field and rotor are shipped as an assembly. Either this assembly or the armature and hub assembly can be mounted on the shaft first, depending on the characteristics of each application.

1. Field and rotor assemblies are mounted on the shaft a taperlock bushing. Insert the bushing into the tapered bore.
2. Loosely assemble the two locking screws between the taperlock bushing and the rotor.
3. Insert the key into the shaft keyway. Prick punch the end of the keyway to ensure that the key cannot slide out.
4. Slide the rotor assembly onto the shaft over the key.
5. If the armature has been secured to the shaft first, adjust the rotor's position to allow a 1/32-inch gap between the two faces. (See Figure 8.)
6. Lock the assembly into place by alternately tightening the two locking screws.
7. A tab or torque arm on the field is used to prevent rotation of the field caused by normal bearing drag. Insert either a pin in the U-slot or a fork around the torque arm to prevent this rotation. Under no circumstances, however, should the field be so tightly restrained as to preload the bearing. (For more information on torque tabs, see page 5.)

D. Assembling the Armature and Hub

These units contain a spline drive armature and hub. The armatures are shipped with a built-in autogap spring accessory. This device automatically maintains a gap of about 1/32" between the armature and rotor faces for the life of the units.

These units are shipped with the armature, splined armature adapter, and autogap already assembled. The splined hub, retainer ring, and bushing are shipped as separate parts.

Follow these instructions to assemble the splined armature assembly and hub:

1. Place the armature assembly on a flat surface with the segmented side up.
2. Push the splined hub, with the retainer ring groove down, through the autogap spring and splined armature adapter (Figure 5). (Considerable force is required to start the hub through the armature.)

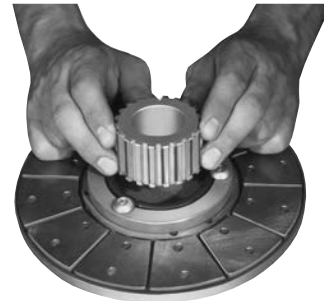


Figure 5

3. Turn the armature assembly over, and insert the



Figure 6

- retainer ring in the groove. (Figure 6)
4. Slide the armature assembly up against the retainer ring.

E. Mounting the Armature-Hub Assembly

1. Insert the bushing into the retainer ring side of the splined hub. The clearance holes in the bushing flange should line up with the tapped holes in the splined hub. (Figure 7)



Figure 7

2. Slide the complete assembly on the shaft and place it in contact with the rotor.
3. Tighten the bushing capscrews, taking a few turns at a time on each capscrew. As the capscrews are tightened, the armature will back away slightly from the rotor. There should be a clearance of 1/16" between the armature and rotor when the capscrews are completely tight.
4. When the assembly has been secured on the shaft, push the armature against the rotor face. When the armature is released, it will spring back about 1/32". (Figure 8)

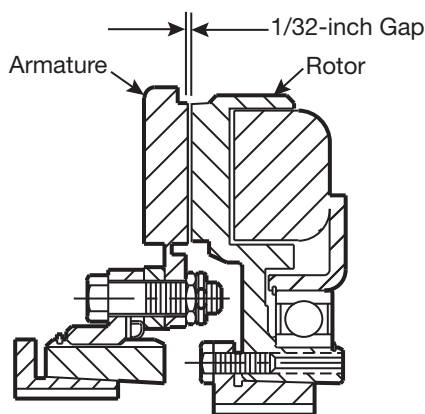


Figure 8

Once this gap is set, it will be automatically maintained for the life of the unit.

Torque Tabs

Clutches

Many Warner Electric clutch assemblies have a bearing mounted stationary field. By design the bearing maintains its proper position between the field and rotor making it easy for the customer to mount the field-rotor assembly. However, the bearing has a slight drag which tends to make the field rotate with the rotor if not restrained. And, since the field has lead wires attached, it must be restrained to prevent rotation and pulling of these wires. To counteract this rotational force, the field has a "torque tab" to which the customer must attach an appropriate anti-rotational restraint.

A few hints regarding proper torque tab restraints are in order. First and foremost, it is important to recognize that the force to be overcome is very small and the tab should not be restrained any manner which will preload the bearing. For example, if the clutch is mounted with the back of the field adjacent to a rigid machine member the customer should not attach a capscrew tightly between the tab and the machine member. This may pull the tab back against the rigid member as shown in Figure 1 and preload the bearing. The recommended methods are illustrated in Illustrations 2, 3, and 4. The method selected is primarily a matter of customer preference or convenience.

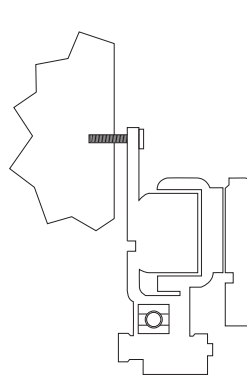


Illustration 1
Rigid Member

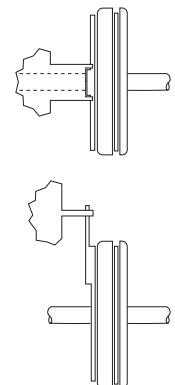


Illustration 2
Rigid Member
Straddling Tab

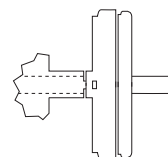


Illustration 3
Pin In Hole Loosely

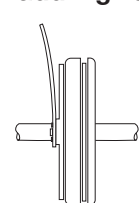


Illustration 4
Flexible Strap

Electrical Coil Data

Unit Size	SF-825			SF-825 Brg.			SF-1000		
Voltage—DC	6	24	90	6	24	90	6	24	90
Resistance @ 20°C—Ohms	1.23	20.9	267.0	1.098	14.6	221	1.07	14.4	214.4
Current—Amperes	4.9	1.15	.34	5.464	1.65	.407	5.61	1.67	.42
Watts	29	28	30	33	40	37	34	40	38
Coil Build-Up—Milliseconds	222	200	245	180	200	225	256	275	283
Coil decay—Milliseconds	105	120	100	115	120	130	123	105	90

Unit Size	SF-1225			SF-1525			SF-1525 HT		
Voltage – DC	6	24	90	6	24	90	6	24	90
Resistance @ 20°C—Ohms	1.21	19.5	268.3	1.11	15.5	239.1	.55	7.63	113.4
Current – Amperes	4.97	1.23	.34	5.41	1.55	.38	10.83	3.14	.794
Watts	30	30	30	32	37	34	65	75	72
Coil Build-Up – Milliseconds	475	440	510	505	535	575	480	535	560
Coil decay—Milliseconds	240	230	220	230	237	215	210	183	160

Notes: Build-up time equals current to approx.* 90% of steady state value and flux to 90%

Decay time equals current to approx.* 10% of steady state value and flux to 10%.

*Approx. because current leads or lags flux by a small amount.

Burnishing and Maintenance

Burnishing

Intimate metal to metal contact is essential between the armature and the metal rings (poles) of the magnet or rotor. Warner Electric clutches and brakes leave the factory with the friction material slightly undercut to assure good initial contact.

Normally, the desired wearing-in process occurs naturally as the surfaces slip upon engagement. The time for wear-in, which is necessary to obtain the ultimate torque of the unit, will vary depending on speed, load, or cycle duty.

If maximum torque is required immediately after installation, the unit should be burnished by slipping the friction surfaces together at reduced voltage. It is recommended that the burnishing be done right on the application, if at all possible.

Burnishing at high speed will result in a smoother wear-in pattern and reduce the time for burnishing. The voltage should be set at approximately 30% or 40% of the rated value.

The unit should be cycled on and off to allow sufficient time between slip cycles to prevent overheating.

When a Warner Electric brake or clutch is properly assembled and installed, no further servicing, lubrication, or maintenance should be required throughout the life of the unit.

Maintenance

Wear Pattern: Wear grooves appear on the armature and rotor surfaces. This is a normal wear condition, and does not impair functioning of the unit. Normally, the rotor and armature, as a mating pair, will wear at the same rate. It is the usual recommendation that both components be replaced at the same time.

Remachining the face of a worn armature is not recommended. If a replacement armature is to be used with a used rotor, it is necessary to remachine the worn rotorface. In refacing a rotor: (1) machine only enough material to clean up the complete face of the magnet; (2) hold the face within .005" of parallel with the mounting plate; and (3) undercut the molded facing material .002"-.004" below the metal poles.

Heat: Excessive heat and high operating temperatures are causes of rapid wear. Units therefore, should be ventilated as efficiently as possible, especially if the application requires fast, repetitive cycle operation.

Foreign Materials: If units are used on machinery where fine, abrasive dust, chips or grit are dispelled into the atmosphere, shielding of the brake or clutch may be necessary if maximum life is to be obtained.

Where units are used near gear boxes or transmissions requiring frequent lubrication, means should be provided to protect the friction surfaces from oil and grease to prevent serious loss of torque.

Oil and grease accidentally reaching the friction surfaces may be removed by wiping with a rag dampened with a suitable cleaner, which leaves no residue. In performing this operation, do not drench the friction material.

If the friction materials have been saturated with oil or grease, no amount of cleaning will be completely effective. Once such a unit has been placed back in service, heat will cause the oil to boil to the surface, resulting in further torque loss.

Torque Loss: If a brake or clutch slips or loses torque completely, the initial check should be the input voltage to the field as follows:

90-Volt Series: Connect a DC voltmeter with a range of 0-100 or more directly across the field terminals. With the power on and the potentiometer turned up, a normal reading is 90 volts, although 85 to 95 is satisfactory. The reading should drop as the potentiometer control is adjusted counterclockwise.

24-Volt Series: Use a DC voltmeter with a range of 0-30 volts or more. A normal reading is approximately 22-26 volts.

Use a DC voltmeter of approximately 0-15 volt range. A normal reading is from 5.5 to 6.5 volts.

The above checks normally are sufficient. Further checks may be made as follows: a low range ammeter, when connected in series with one field lead, will normally indicate approximately .40 amperes for the 90 volt units, 1.0 ampere for the 24 volt, and 3.5 amperes for the 6 volt series. These readings are with the power on and the potentiometer control in the maximum position.

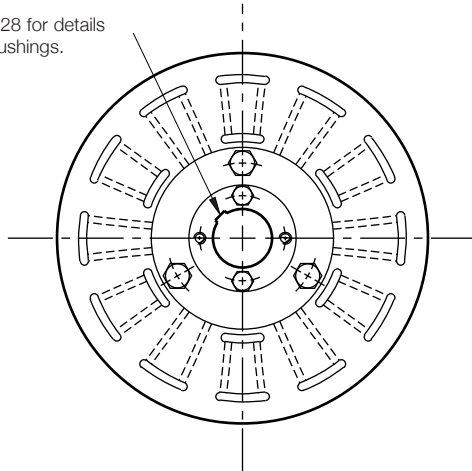
Ohmmeter checks should be made with the power off and the circuit open (to be certain, disconnect one lead to the field). Average resistance for the 90 volt series is 220 ohms; for the 24 volt, 20 ohms; and for the 6 volt series, 1.5 ohms. A very high or infinite resistance reading would indicate an open coil.

If the above checks indicate that the proper voltage and current is being supplied to the magnet, mechanical parts should be checked to assure that they are in good operating condition and properly installed.

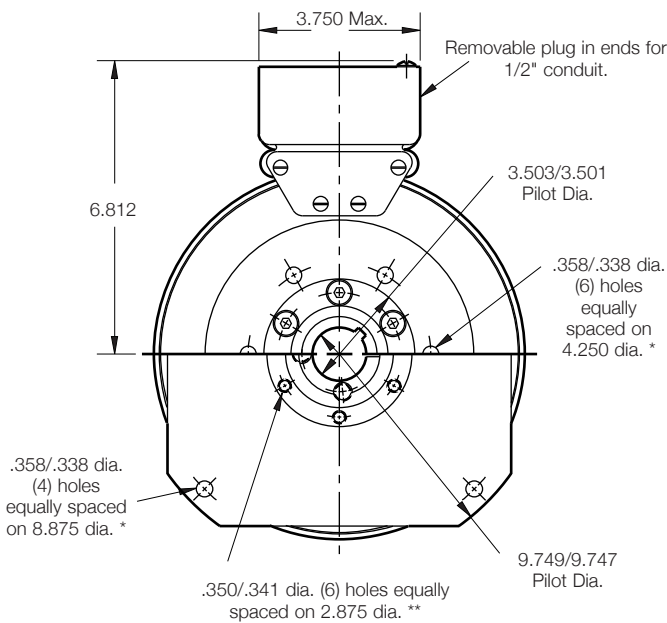
SFC-825 Clutch Coupling Flange Mounted

Drawing I-25564

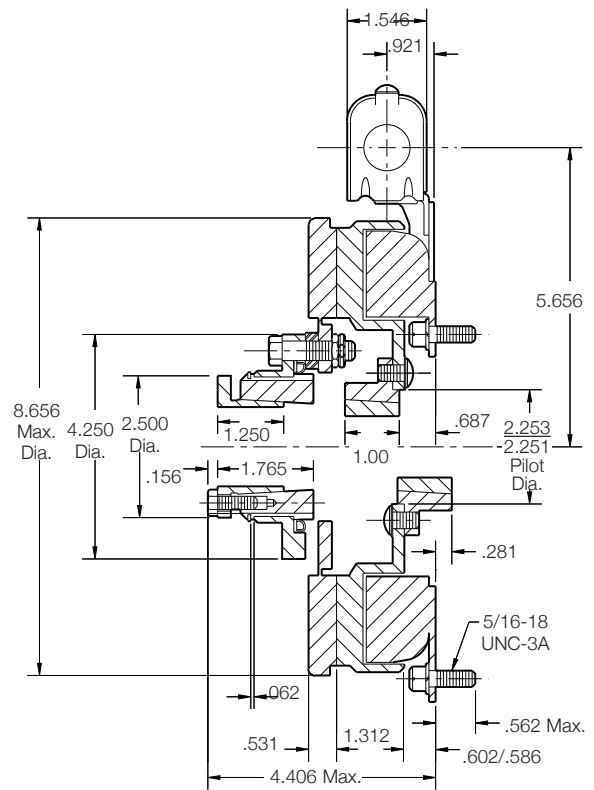
See page 28 for details on Bushings.



Armature View



**Field View
(Inside & Outside Mounted)**



* Mounting holes are within .010 of true position relative to pilot diameter.
 ** Mounting holes are within .008 of true position relative to pilot diameter.

Arm Shaft	.500 – 1.500
Rotor Shaft	.500 – 1.250
Static Torque	125 lb. ft.
Maximum Speed	4,000 rpm
Standard Voltage	D.C. 6, 24, 90

All dimensions are nominal unless otherwise noted.

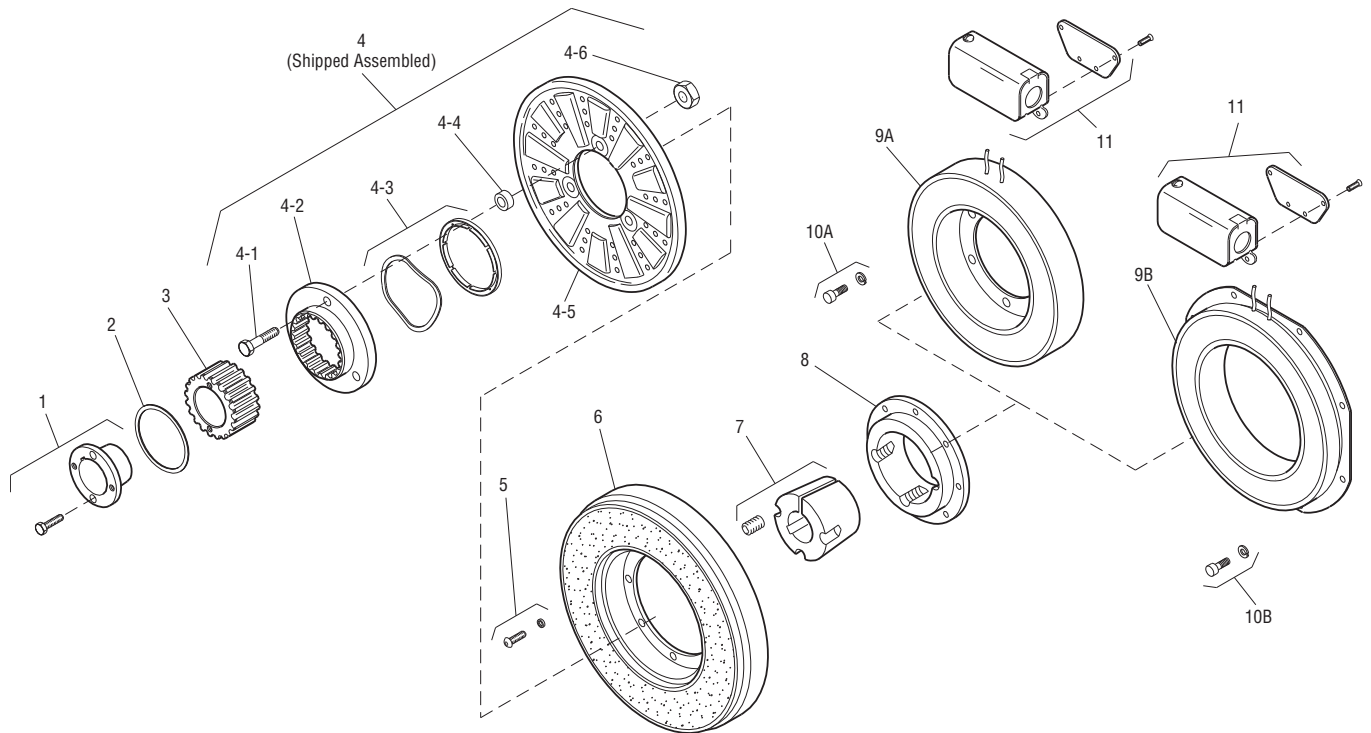
Note: The two mating shafts on which the clutch is mounted must be mounted rigidly to prevent flexing during engagement. Any flexing will cause vibration and rapid clutchwear. The drive motor should not be mounted on the reducer "scoop" mount or other flexible mounts.

Customer Shall Maintain:

1. Concentricity of field mounting pilot diameter with rotor mounting shaft within .006 T.I.R.
2. Squareness of field mounting face with rotor shaft within .006 T.I.R. measured at field mounting bolt circle.
3. Rotor mounting shaft concentric with armature mounting shaft within .006 T.I.R.
4. Angular alignment of shafts within 1/2 degree.



SFC-825 Clutch Coupling Flange Mounted Inside Mtd. Outside Mtd.



Item	Description	SFC-825, F.M. Part Number	Qty.
1	Bushing*		
	1/2" to 1-1/2" Bore	180-0002 to 180-0018	1
2	Retainer Ring	748-0006	1
3	Splined Hub	540-0057	1
4	Armature & Splined Adapter	5201-111-001	1
4-1	Capscrew	797-0341	3
4-2	Splined Adapter	104-0008	1
4-3	Autogap Accessory	5321-101-006	1
4-4	Spacer	748-0333	3
4-5	Armature	5321-111-022	1
4-6	Locknut	661-0004	3
5	Mounting Accessory	5201-101-007	1
6	Rotor		1
	Standard Friction Material	5201-751-003	
	Optional LK Facing	5201-751-007	
7	Bushing*		
	1/2" to 1-1/4" Bore	180-0101 to 180-0013	1
8	Rotor Hub	540-0013	1
9A	Field - Inside Mounted		1
	6 Volt	5201-451-006	
	24 Volt	5201-451-008	
	90 Volt	5201-451-010	
9B	Field - Outside Mounted		1
	6 Volt	5201-451-014	
	24 Volt	5201-451-016	
	90 Volt	5201-451-018	

Item	Description	SFC-825, F.M. Part Number	Qty.
10A	Mounting Accessory - I.M.	5321-101-001	1
10B	Mounting Accessory - O.M.	5321-101-002	1
11	Conduit Box	5200-101-012	1

*See page 28 for specific part numbers.

How to Order:

1. Specify Bore Size for Item 1.
2. Specify Bore Size for Item 7.
3. Specify Voltage for Item 9A or 9B.
4. Specify Inside Mounted for Items 9A and 10A or Outside Mounted for Items 9B and 10B.

Example:

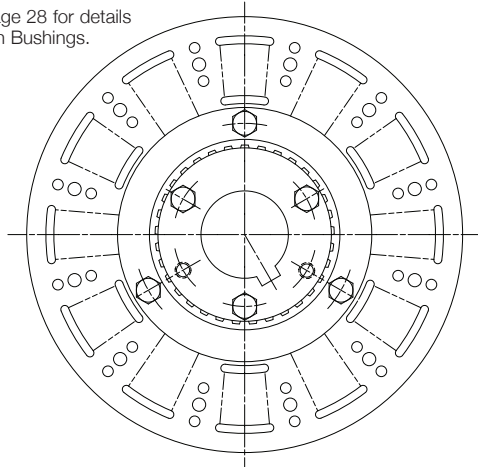
SFC-825 Clutch Coupling per I-25564 - 90 Volt, Inside Mounted, 1" Bore (Item 1), 1" Bore (Item 7)

These units, when used in conjunction with the correct Warner Electric conduit box, meet standards of UL508 and are listed under guide card #NMTR, file #59164.

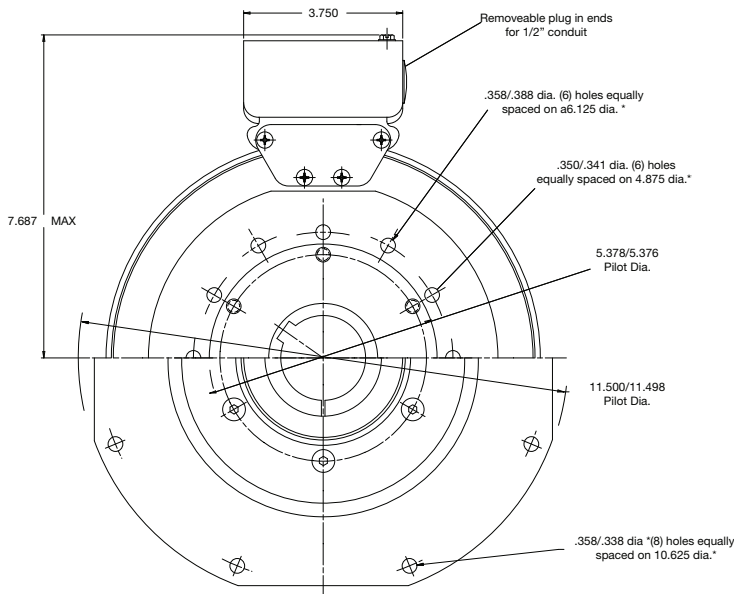
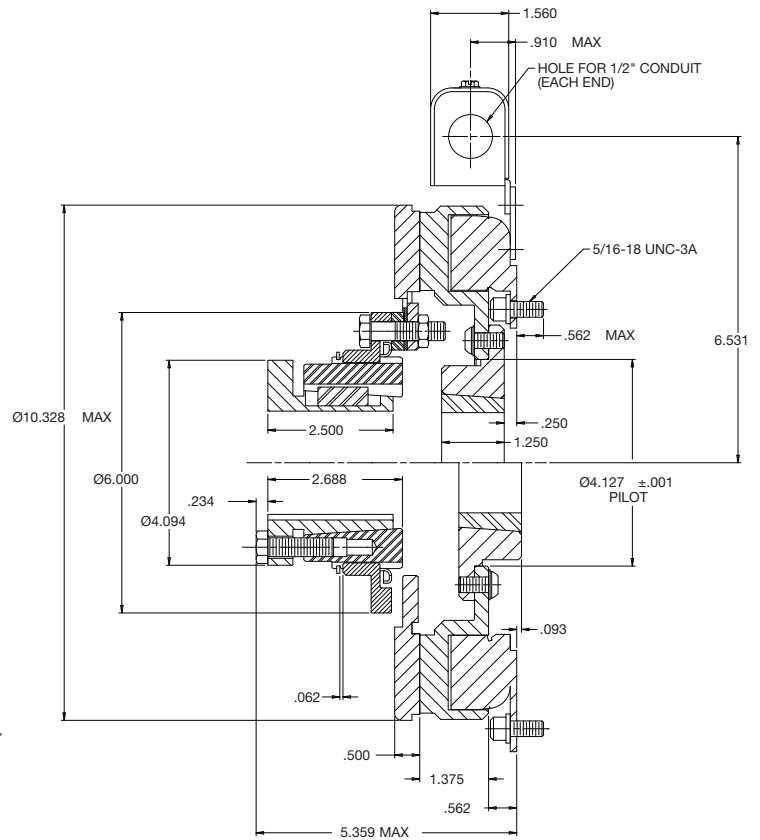
SFC-1000 Clutch Coupling Flange Mounted

Drawing I-25584

See page 28 for details on Bushings.



Armature View



**Field View
(Inside & Outside Mounted)**

* Mounting holes are within .010 of true position relative to pilot diameter.

** Mounting holes are within .008 of true position relative to pilot diameter.

Arm Shaft	.750 – 2.687
Rotor Shaft	.500 – 2.000
Static Torque	240 lb. ft.
Maximum Speed	3,600 rpm
Standard Voltage	D.C. 6, 24, 90

All dimensions are nominal unless otherwise noted.

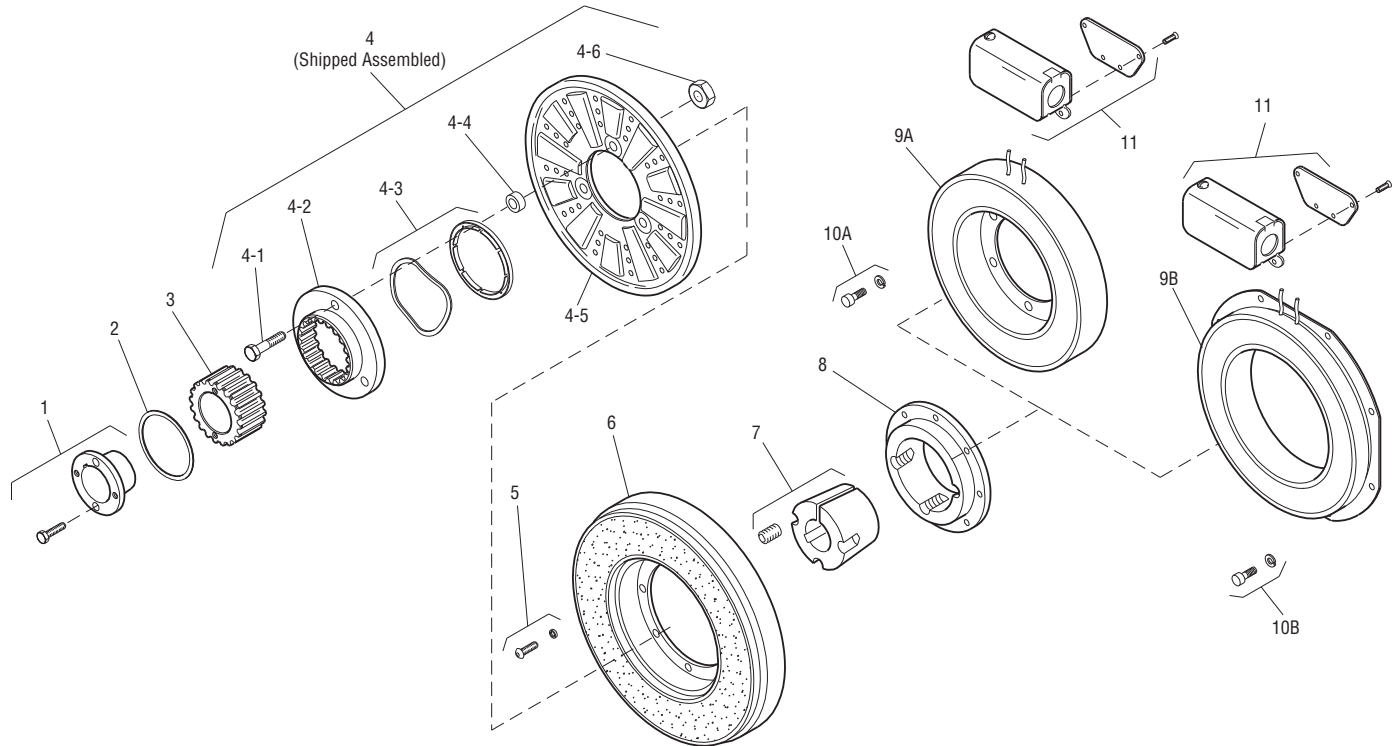
Customer Shall Maintain:

1. Concentricity of field mounting pilot diameter with rotor mounting shaft within .006 T.I.R.
2. Squareness of field mounting face with rotor shaft within .006 T.I.R. measured at field mounting bolt circle.
3. Rotor mounting shaft concentric with armature mounting shaft within .006 T.I.R.
4. Angular alignment of shafts within 1/2 degree.

Note: The two mating shafts on which the clutch is mounted must be mounted rigidly to prevent flexing during engagement. Any flexing will cause vibration and rapid clutchwear. The drive motor should not be mounted on the reducer "scoop" mount or other flexible mounts.



SFC-1000 Clutch Coupling Flange Mounted Inside Mtd. Outside Mtd.



Item	Description	SFC-1000, F.M. Part Number	Qty.
1	Bushing*		
	3/4" to 2-11/16" Bore	180-0026 to 180-0057	1
2	Retainer Ring	748-0007	1
3	Splined Hub	540-0062	1
4	Armature & Splined Adapter	5202-111-001	1
4-1	Capscrew	797-0341	3
4-2	Splined Adapter	104-0009	1
4-3	Autogap Accessory	5322-101-004	1
4-4	Spacer	748-0333	3
4-5	Armature	5322-111-036	1
4-6	Locknut	661-0004	3
5	Mounting Accessory	5201-101-007	1
6	Rotor		1
	Standard Friction Material	5202-751-003	
	Optional LK Facing	5202-751-007	
7	Bushing*		
	1/2" to 2" Bore	180-0155 to 180-0179	1
8	Rotor Hub	540-0315	1
9A	Field - Inside Mounted		1
	6 Volt	5202-451-004	
	24 Volt	5202-451-006	
	90 Volt	5202-451-007	
9B	Field - Outside Mounted		1
	6 Volt	5202-451-011	
	24 Volt	5202-451-013	
	90 Volt	5202-451-014	

Item	Description	SFC-1000, F.M. Part Number	Qty.
10A	Mounting Accessory - I.M.	5321-101-001	1
10B	Mounting Accessory - O.M.	5321-101-002	2
11	Conduit Box	5200-101-012	1

*See page 28 for specific part numbers.

How to Order:

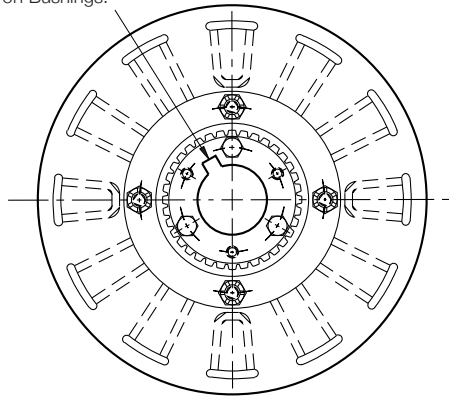
1. Specify Bore Size for Item 1.
2. Specify Bore Size for Item 7.
3. Specify Voltage for Item 9A or 9B.
4. Specify Inside Mounted for Items 9A and 10A or Outside Mounted for Items 9B and 10B.

Example:

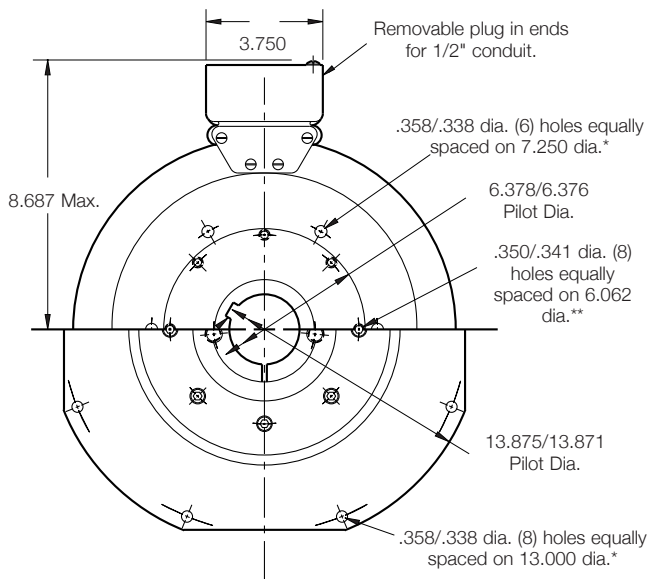
SFC-1000 Clutch Coupling per I-25584 - 90 Volt, Inside Mounted, 1-1/4" Bore (Item 1), 1-1/2" Bore (Item 7)

These units, when used in conjunction with the correct Warner Electric conduit box, meet standards of UL508 and are listed under guide card #NMTR, file #59164.

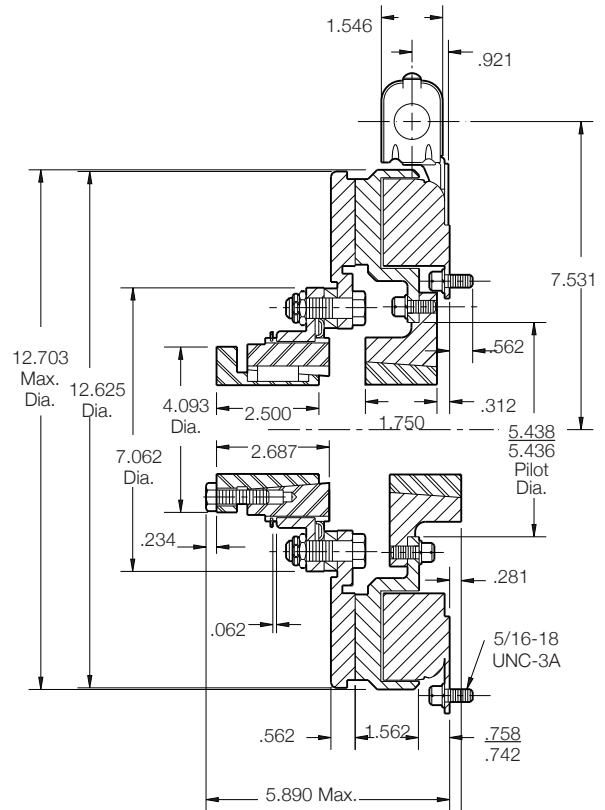
See page 28 for details on Bushings.



Armature View



Field View
(Inside & Outside Mounted)



* Mounting holes are within .010 of true position relative to pilot diameter.

** Mounting holes are within .008 of true position relative to pilot diameter.

Arm Shaft	.750 – 2.687
Rotor Shaft	.500 – 2.500
Static Torque	465 lb. ft.
Maximum Speed	3,000 rpm
Standard Voltage	D.C. 6, 24, 90

All dimensions are nominal unless otherwise noted.

Customer Shall Maintain:

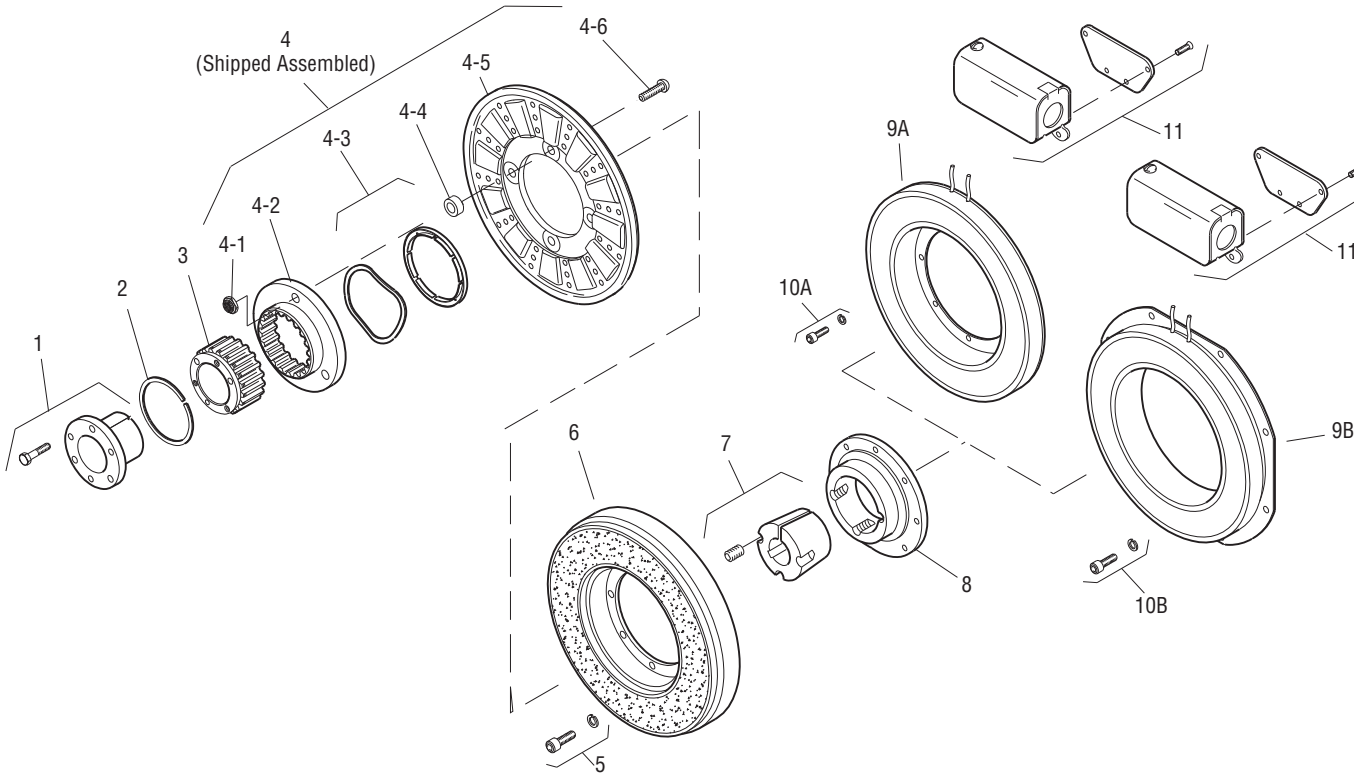
1. Concentricity of field mounting pilot diameter with rotor mounting shaft within .006 T.I.R.
2. Squareness of field mounting face with rotor mounting shaft within .006 T.I.R. measured at field mounting bolt circle.
3. mounting shaft concentric with armature mounting shaft within .006 T.I.R.
4. Angular alignment of shafts within 1/2 degree.

When Hub is Furnished by Customer:

Rotor mounting pilot diameter must be concentric with rotor mounting shaft within .006 T.I.R.



SFC-1225 Clutch Coupling Flange Mounted Inside Mtd. Outside Mtd.



Item	Description	SFC-1225 Part Number	Qty.
1	Bushing*		
	3/4" to 2-11/16" Bore	180-0026 to 180-0057	1
2	Retainer Ring	748-0005	1
3	Splined Hub	540-0064	1
4	Armature & Splined Adapter	5203-111-001	1
4-1	Locknut	661-0005	4
4-2	Splined Adapter	104-0010	1
4-3	Autogap Accessory	5323-101-002	1
4-4	Spacer	266-0004	4
4-5	Armature	5323-111-034	1
4-6	Screw	797-0356	4
5	Mounting Accessory	5321-101-002	2
6	Rotor		1
	Standard Friction Material	5203-751-001	
	Optional LK Facing	5203-751-004	
7	Bushing*		
	1/2" to 2-1/2" Bore	180-0185 to 180-0217	1
8	Rotor Hub	540-0318	1
9A	Field - Inside Mounted		1
	6 Volt	5203-451-002	
	24 Volt	5203-451-006	
	90 Volt	5203-451-005	
9B	Field - Outside Mounted		1
	6 Volt	5203-451-010	
	24 Volt	5203-451-013	
	90 Volt	5203-451-011	

Item	Description	SFC-1225 Part Number	Qty.
10A	Mounting Accessory - I.M.	5321-101-001	1
10B	Mounting Accessory - O.M.	5321-101-002	2
11	Conduit Box	5200-101-012	1

*See page 28 for specific part numbers.

How to Order:

1. Specify Bore Size for Item 1.
2. Specify Bore Size for Item 7.
3. Specify Voltage for Item 9A or 9B.
4. Specify Inside or Outside Mounted for Item 5.
5. Specify Inside Mounted for Items 9A and 10A or Outside Mounted for Items 9B and 10B.

Example:

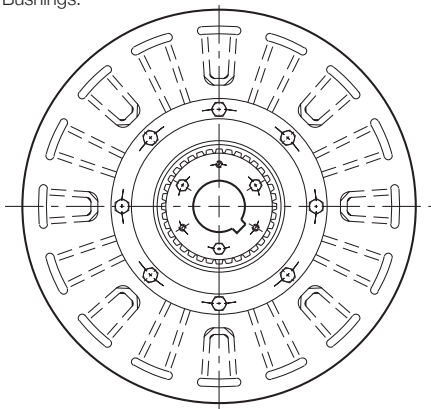
SFC-1225 Clutch Coupling per I-25604 - 90 Volt, Inside Mounted, 1-1/2" Bore (Item 1), 1-3/4" Bore (Item 7).

These units, when used in conjunction with the correct Warner Electric conduit box, meet the standards of UL508 and are listed under guide card #NMTR, file #59164.

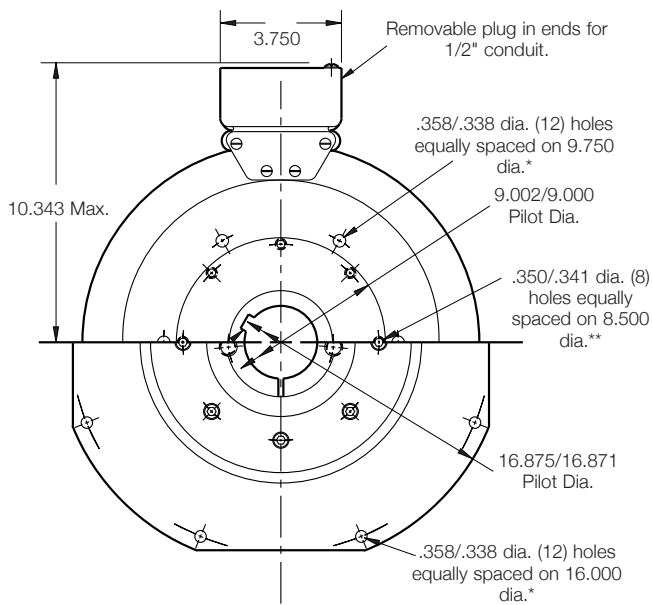
SFC-1525 Clutch Coupling Flange Mounted

Drawing I-25630

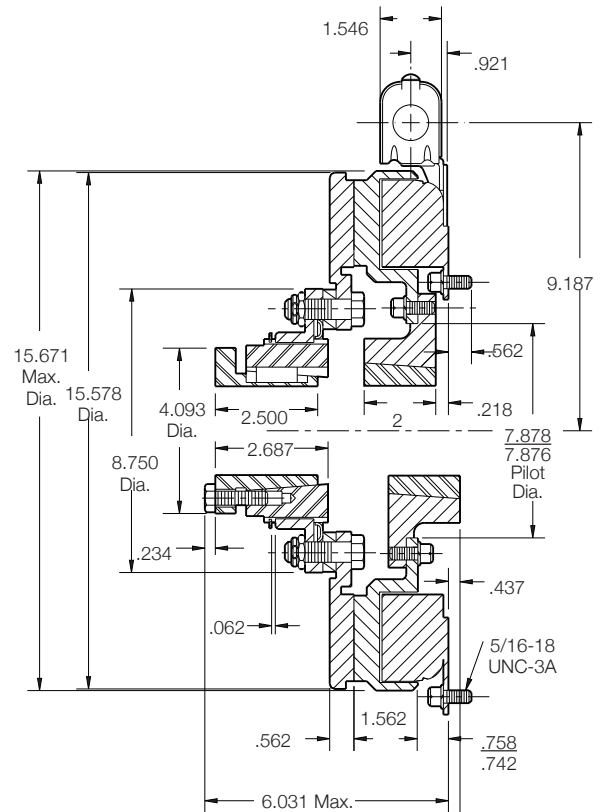
See page 28 for details on Bushings.



Armature View



**Field View
(Inside & Outside Mounted)**



* Mounting holes are within .010 of true position relative to pilot diameter.
 ** Mounting holes are within .008 of true position relative to pilot diameter.

Arm Shaft	.750 – 2.687
Rotor Shaft	.937 – 3.000
Static Torque	700 lb. ft.
Maximum Speed	2,000 rpm
Standard Voltage	D.C. 6, 24, 90

All dimensions are nominal unless otherwise noted.

Customer Shall Maintain:

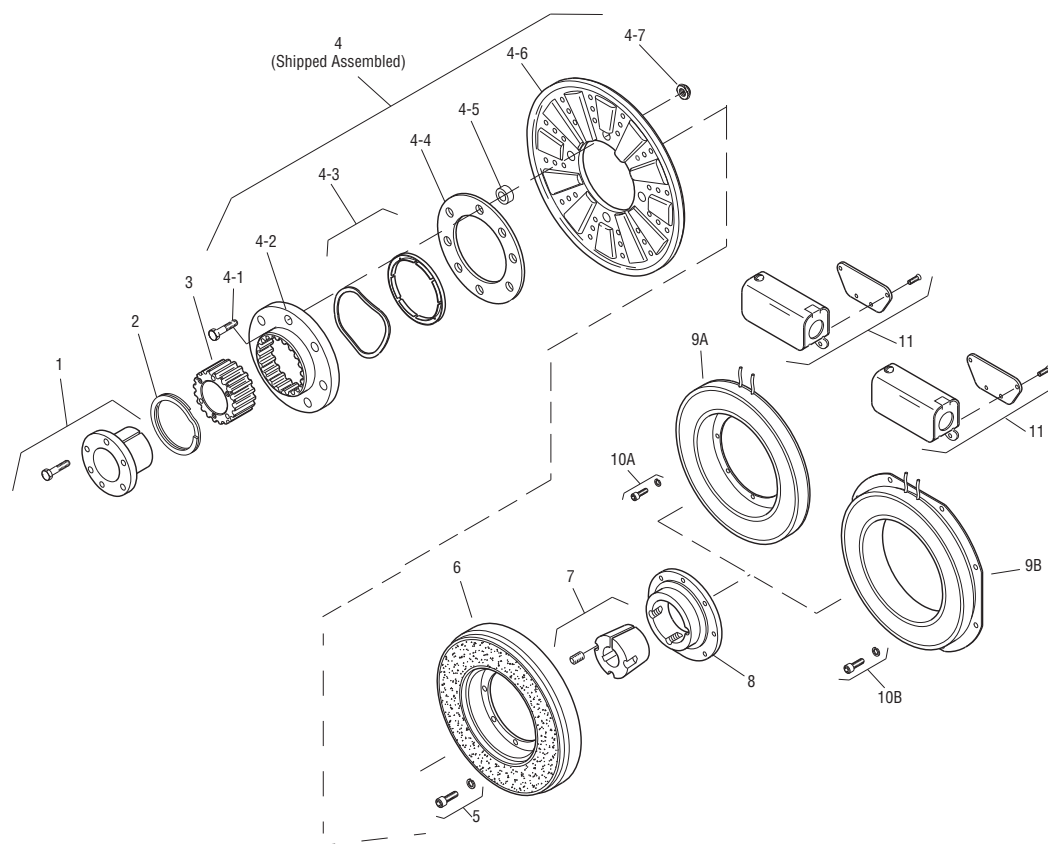
1. Concentricity of field mounting pilot diameter with rotor mounting shaft within .006 T.I.R.
2. Squareness of field mounting face with rotor mounting shaft within .006 T.I.R. measured at field mounting bolt circle.
3. Rotor mounting shaft concentric with armature mounting shaft within .006 T.I.R.
4. Angular alignment of shafts within 1/2 degree.

When Hub is Furnished by Customer:

Rotor mounting pilot diameter must be concentric with rotor mounting shaft within .006 T.I.R.



SFC-1525 Clutch Coupling Flange Mounted Inside Mtd. Outside Mtd.



Item	Description	SFC-1525 Part Number	Qty.
1	Bushing*		
	3/4" to 2-11/16" Bore	180-0026 to 180-0057*	1
2	Retainer Ring	748-0005	1
3	Splined Hub	540-0064	1
4	Armature & Splined Adapter	5204-111-004	1
4-1	Capscrew	797-0342	8
4-2	Splined Adapter	104-0011	1
4-3	Autogap Accessory	5323-101-002	1
4-4	Retainer Plate	686-0003	1
4-5	Spacer	748-0333	8
4-6	Armature	5324-111-034	1
4-7	Locknut	661-0004	8
5	Mounting Accessory	5321-101-002	2
6	Rotor		1
	Standard Friction Material	5204-751-002	
	Optional LK Facing	5204-751-004	
7	Bushing*		
	15/16" to 3" Bore	180-0223 to 180-0256	1
8	Rotor Hub	540-0004	1
9A	Field - Inside Mounted		1
	6 Volt	5204-451-013	
	24 Volt	5204-451-015	
	90 Volt	5204-451-016	
9B	Field - Outside Mounted		1
	6 Volt	5204-451-055	
	24 Volt	5204-451-056	
	90 Volt	5204-451-057	

Item	Description	SFC-1525 Part Number	Qty.
10A	Mounting Accessory - I.M.	5321-101-001	2
10B	Mounting Accessory - O.M.	5321-101-001	2
11	Conduit Box	5200-101-012	1

*See page 28 for specific part numbers.

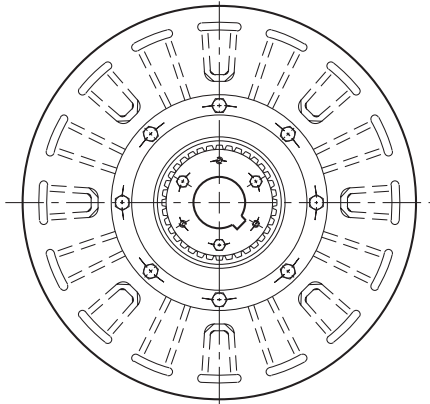
How to Order:

1. Specify Bore Size for Item 1.
2. Specify Bore Size for Item 7.
3. Specify Voltage for Item 9A or 9B.
4. Specify Inside Mounted for Items 9A and 10A or Outside Mounted for Items 9B and 10B.

Example:

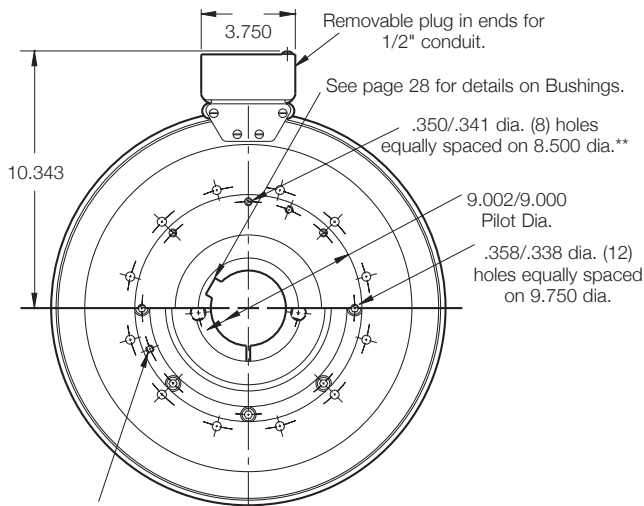
SFC-1525 Clutch Coupling per I-25630 - 90 Volt, Inside Mounted, 1-1/2" Bore (Item 1), 1-3/4" Bore (Item 7).

These units, when used in conjunction with the correct Warner Electric conduit box, meet the standards of UL508 and are listed under guide card #NMTR, file #59164.



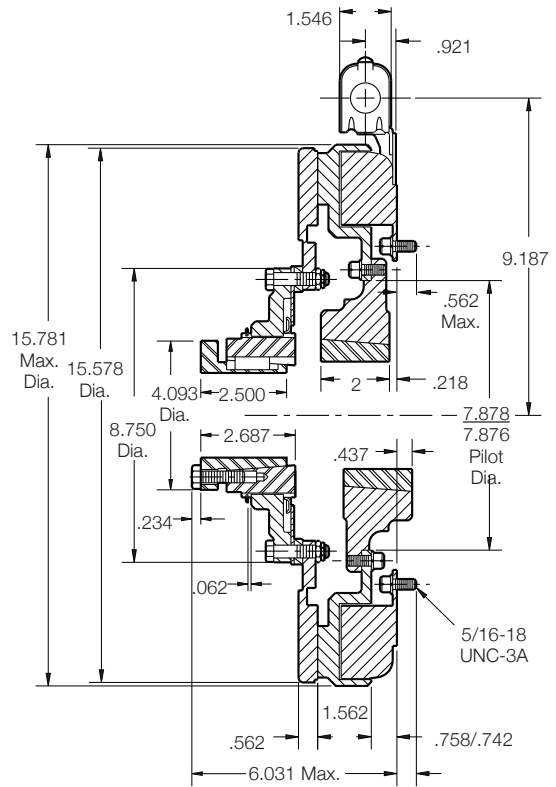
See page 28 for details on Bushing.

Armature View



5/16-18 UNC-2B (2) holes equally spaced for removal of rotor from hub.

Field View



* Mounting holes are within .010 of true position relative to pilot diameter.

** Mounting holes are within .008 of true position relative to pilot diameter.

Arm Shaft	.750 – 2.687
Rotor Shaft	.937 – 3.000
Static Torque	1,350 lb. ft.
Maximum Speed	2,000 rpm
Standard Voltage	D.C. 6, 90

All dimensions are nominal unless otherwise noted.

Customer Shall Maintain:

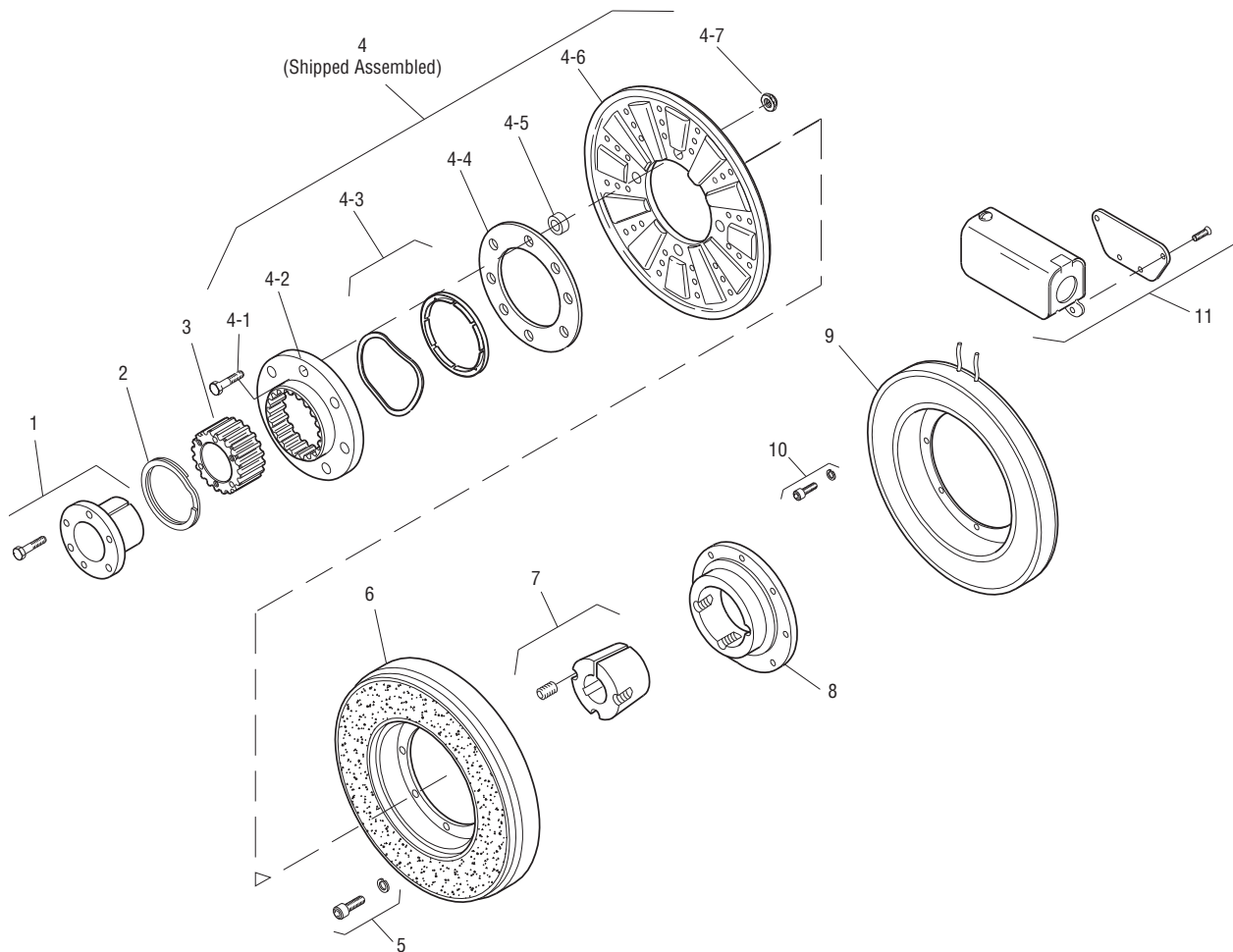
1. Concentricity of field mounting pilot diameter with rotor mounting shaft within .006 T.I.R.
2. Squareness of field mounting face with rotor mounting shaft within .006 T.I.R. measured at field mounting bolt circle.
3. Rotor mounting shaft concentric with armature mounting shaft within .006 T.I.R.
4. Angular alignment of shafts within 1/2 degree.

When Hub is Furnished by Customer:

Rotor mounting pilot diameter must be concentric with rotor mounting shaft within .006 T.I.R.



SFC-1525 H.T. Clutch Coupling, Hi-Torque Flange Mounted Inside Mtd.



SFC-1525, H.T.			
Item	Description	Part Number	Qty.
1	Bushing*		
	3/4" to 2-11/16" Bore	180-0026 to 180-0057	1
2	Retainer Ring	748-0005	1
3	Splined Hub	540-0064	1
4	Armature & Splined Adapter	5204-111-004	1
4-1	Capscrew	797-0342	8
4-2	Splined Adapter	104-0011	1
4-3	Autogap Accessory	5323-101-002	1
4-4	Retainer Plate	686-0003	1
4-5	Spacer	748-0333	8
4-6	Armature	5324-111-034	1
4-7	Locknut	661-0004	8
5	Mounting Accessory	5321-101-002	2
6	Rotor	5204-751-001	1
7	Bushing*		
	15/16" to 3" Bore	180-0223 to 180-0256	1
8	Rotor Hub	540-0004	1
9	Field - Inside Mounted		1
	6 Volt	5204-451-005	
	24 Volt	5204-451-066	
	90 Volt	5204-451-006	
10	Mounting Accessory - I.M.	5321-101-001	2
11	Conduit Box	5200-101-012	1

*See page 28 for specific part numbers.

How to Order:

1. Specify Bore Size for Item 1.
2. Specify Bore Size for Item 7.

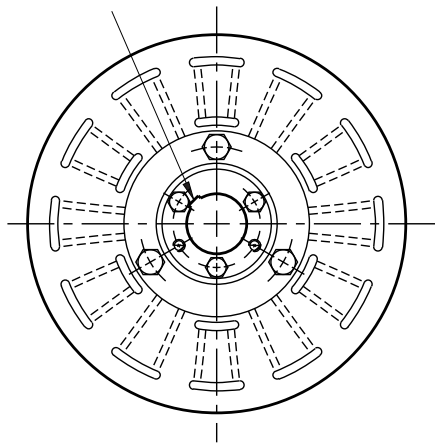
Example:

SFC-1525 Clutch Coupling, Hi-Torque,
per I-25631 - 90 Volt

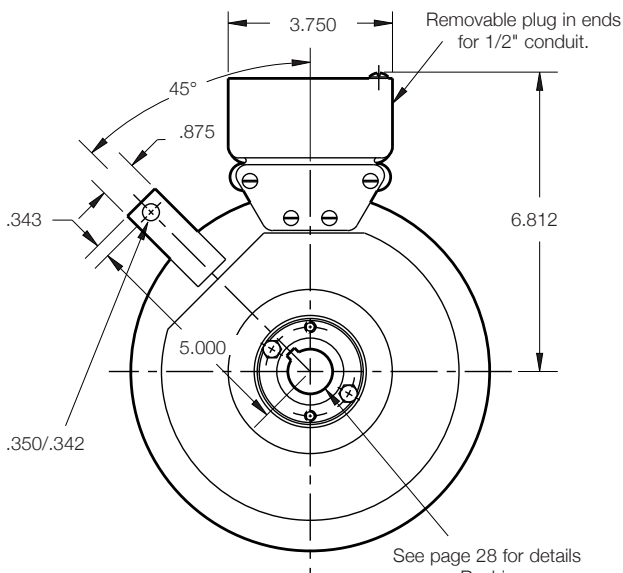
2" Bore (Item 1), 2-1/2" Bore (Item 7)

These units, when used in conjunction with the correct Warner Electric conduit box, meet the standards of UL508 and are listed under guide card #NMTR, file #59164.

See page 28 for details on Bushings.

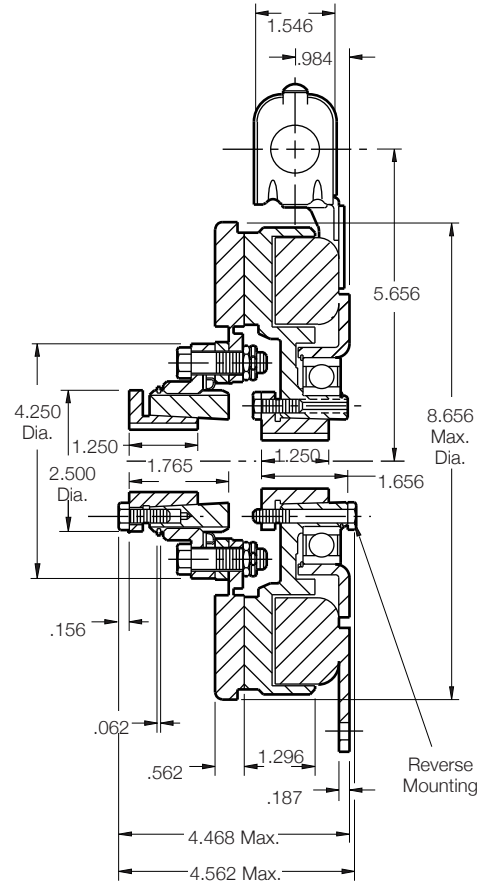


Armature View



Field View

See page 28 for details on Bushings.



Arm Shaft	.500 – 1.500
Rotor Shaft	.500 – 1.500
Static Torque	150 lb. ft.
Maximum Speed	3,600 rpm
Standard Voltage	D.C. 6, 24, 90

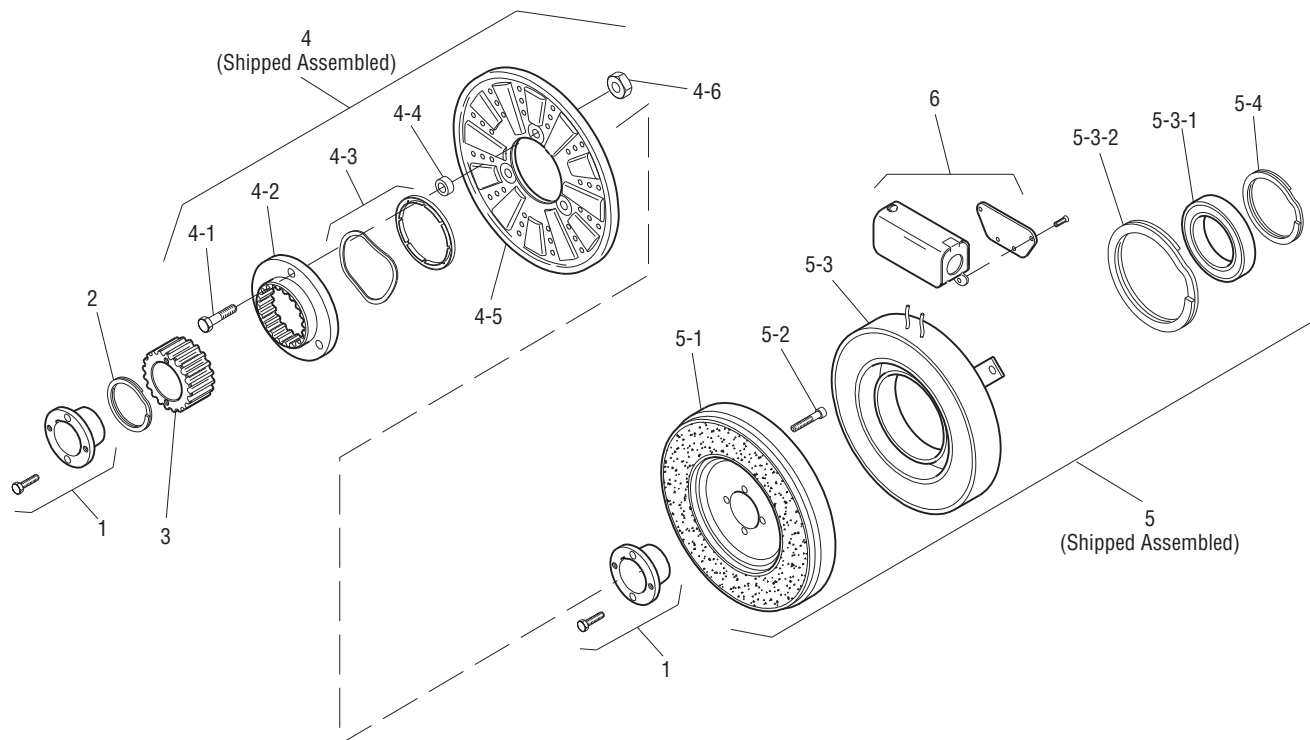
All dimensions are nominal unless otherwise noted.

Customer Shall Maintain:

1. Armature mounting shaft concentric with field and rotor mounting shaft within .006 T.I.R.
2. Angular alignment of shafts within 1/2 degree.



SFC-825 Clutch Coupling Bearing Mounted



Item	Description	SF-825, B.M. Part Number	Qty.
1	Bushing*		2
	1/2" to 1-1/2" Bore	180-0002 to 180-0018	
2	Retainer Ring	748-0006	1
3	Splined Hub	540-0057	1
4	Armature & Splined Adapter	5201-111-001	1
4-1	Capscrew	797-0341	3
4-2	Splined Adapter	104-0008	1
4-3	Autogap Accessory	5321-101-006	1
4-4	Spacer	748-0333	3
4-5	Armature	5321-111-022	1
4-6	Locknut	661-0004	3
5	Field & Rotor Assembly		1
	6 Volt	5201-452-002	
	24 Volt	5201-452-004	
	90 Volt	5201-452-006	
5-1	Rotor		1
	Standard Friction Material	5201-751-008	
	Optional LK Facing	5201-751-014	
5-2	Mounting Accessory	5201-101-005	1
5-3	Field and Bearing Assembly		1
	6 Volt	5201-451-054	
	24 Volt	5201-451-056	
	90 Volt	5201-451-057	
5-3-1	Bearing	166-0412	
5-3-2	Retainer Ring	748-0111	
5-4	Retainer Ring	748-0016	1
6	Conduit Box	5200-101-012	1

*See page 28 for specific part numbers.

How to Order:

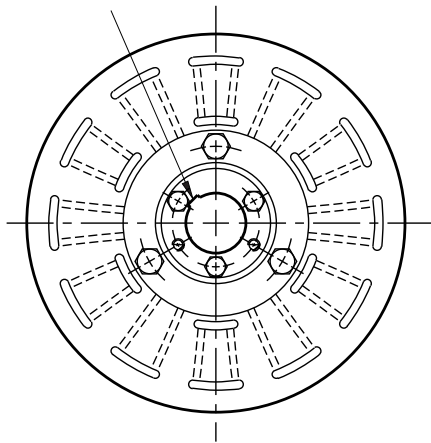
1. Specify Bore Size for Item 1 (both shafts).
2. Specify Voltage for Item 5.

Example:

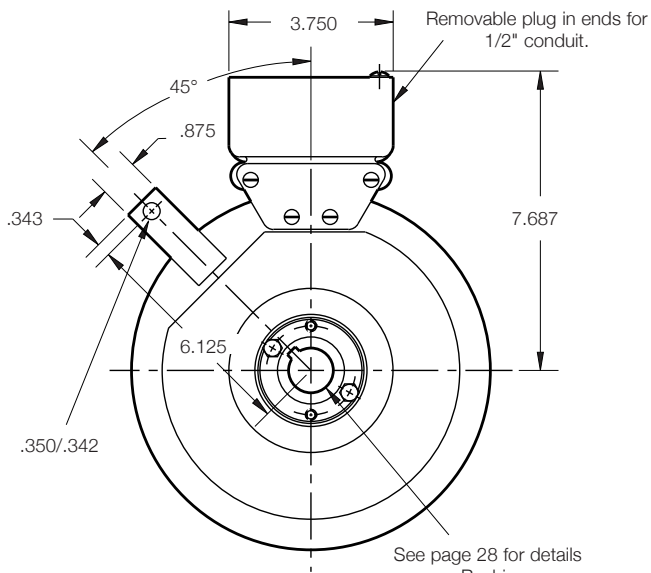
SFC-825 Clutch Coupling per I-25574 - 90 Volt, 1" Bore

These units, when used in conjunction with the correct Warner Electric conduit box, meet the standards of UL508 and are listed under guide card #NMTR, file #59164.

See page 28 for details on Bushings.

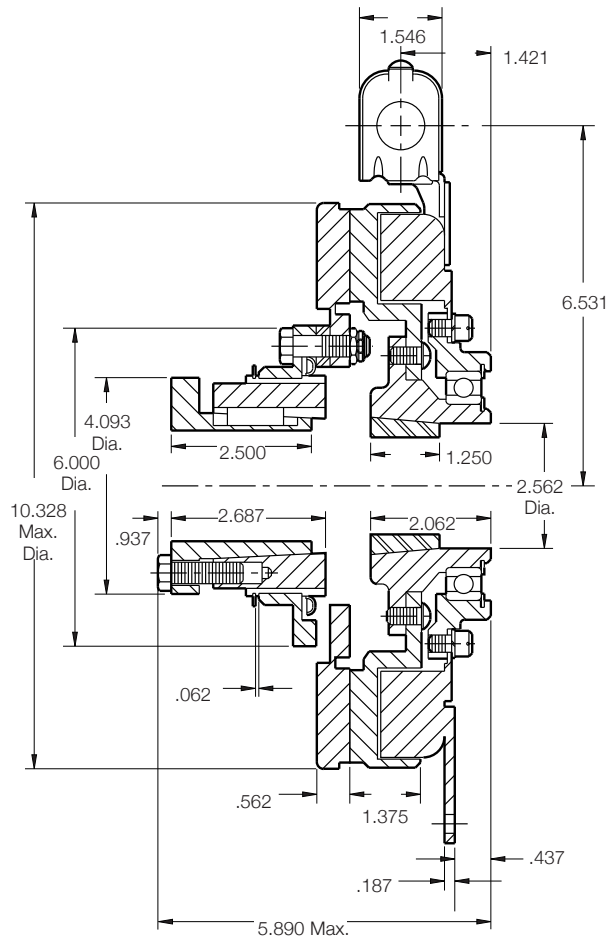


Armature View



Field View

See page 28 for details on Bushings.



Arm Shaft	.750 – 2.687
Rotor Shaft	.500 – 2.000
Static Torque	240 lb. ft.
Maximum Speed	2,500 rpm
Standard Voltage	D.C. 6, 24, 90

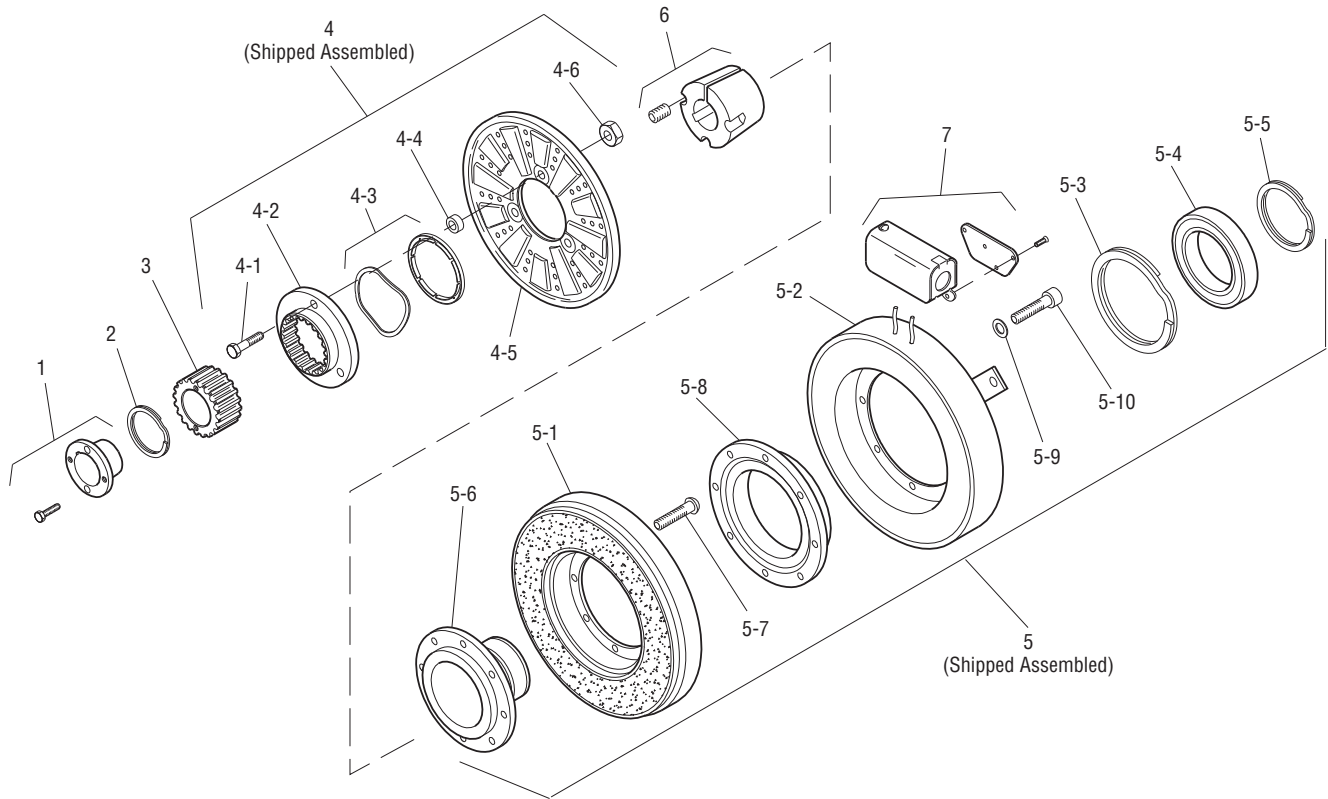
All dimensions are nominal unless otherwise noted.

Customer Shall Maintain:

1. Armature mounting shaft concentric with field and rotor mounting shaft within .006 T.I.R.
2. Angular alignment of shafts within 1/2 degree.



SFC-1000 Clutch Coupling Bearing Mounted



Item	Description	Part Number	Qty.
1	Bushing*		1
	3/4" to 2-11/16" Bore	180-0026 to 180-0057	
2	Retainer Ring	748-0007	1
3	Splined Hub	540-0062	1
4	Armature & Splined Adapter	5202-111-001	1
4-1	Capscrew	797-0341	3
4-2	Splined Adapter	104-0009	1
4-3	Autogap Accessory	5322-101-004	1
4-4	Spacer	748-0333	3
4-5	Armature	5322-111-036	1
4-6	Locknut	661-0004	3
5	Field & Rotor Assembly		1
	6 Volt	5202-452-012	
	24 Volt	5202-452-014	
	90 Volt	5202-452-015	
5-1	Rotor		1
	Standard Friction Material	5202-751-003	
	Optional LK Facing	5202-751-007	
5-2	Field		1
	6 Volt	5202-451-040	
	24 Volt	5202-451-042	
	90 Volt	5202-451-043	
5-3	Retainer Ring	748-0116	1
5-4	Ball Bearing	166-1046	1
5-5	Retainer Ring	748-0582	1
5-6	Rotor Hub	540-1300	1
5-7	Buttonhead Capscrew	797-1261	6

Item	Description	Part Number	Qty.
5-8	Ring Adapter	748-1047	1
5-9	Lockwasher	950-0359	6
5-10	Socket Head Capscrew	797-0422	6
6	Bushing*		1
	1/2" to 2" Bore	180-0155 to 180-0179	
7	Conduit Box	5200-101-012	1

*For specific part numbers see page 28.

How to Order:

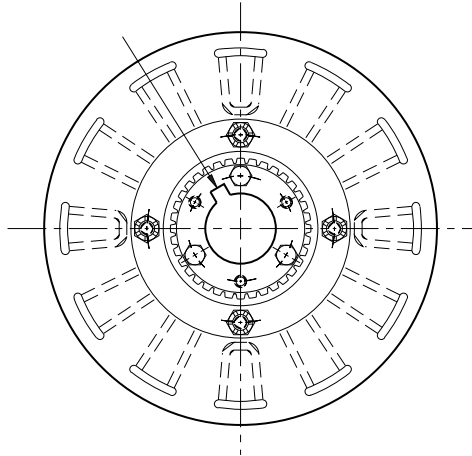
1. Specify Bore Size for Items 1 and 6.
2. Specify Voltage for Item 5.

Example:

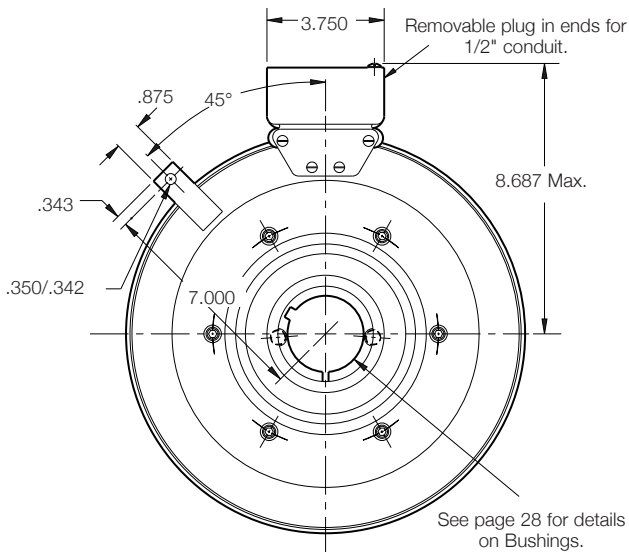
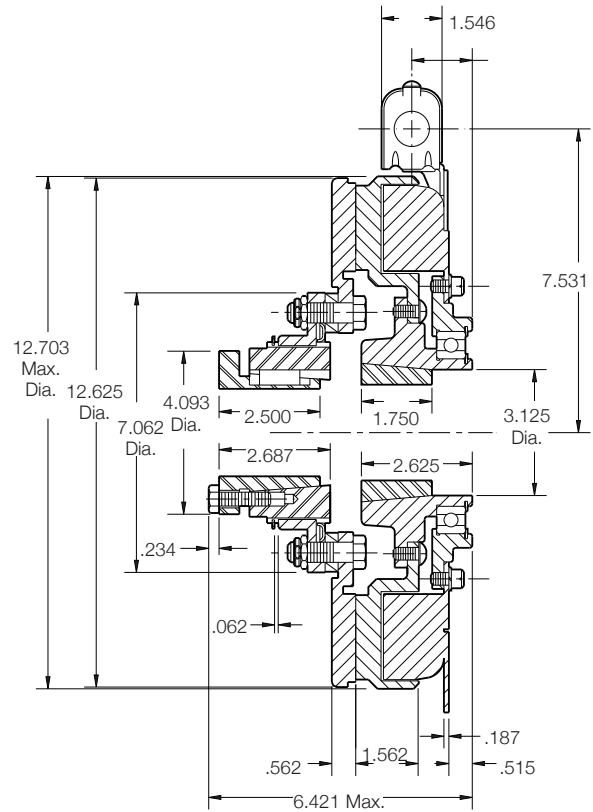
SFC-1000 Clutch Coupling per I-25598 - 90 Volt, 1" Bore

These units, when used in conjunction with the correct Warner Electric conduit box, meet the standards of UL508 and are listed under guide card #NMTR, file #59164.

See page 28 for details on Bore & Keyway.



Armature View



Field View

Arm Shaft	.750 – 2.687
Rotor Shaft	.500 – 2.500
Static Torque	465 lb. ft.
Maximum Speed	2,200 rpm
Standard Voltage	D.C. 6, 24, 90

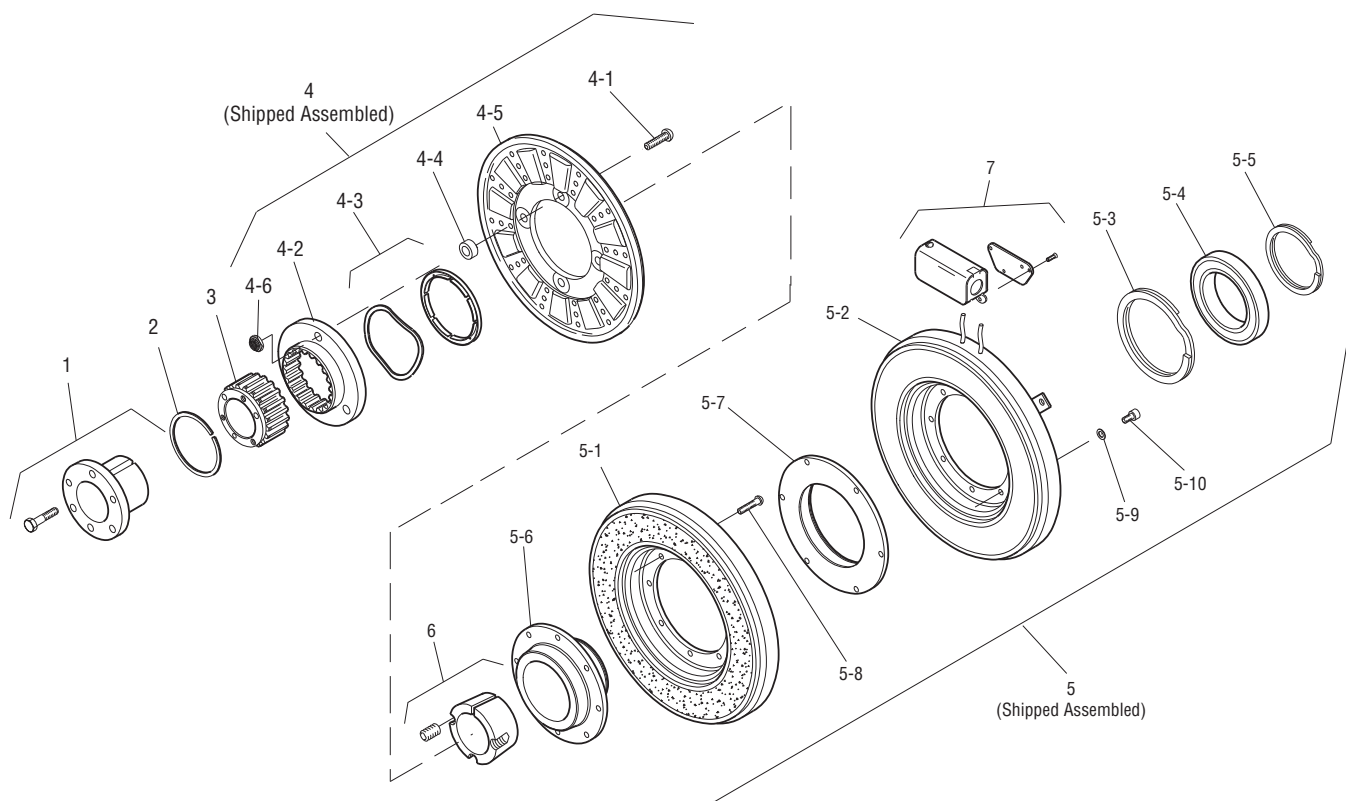
All dimensions are nominal unless otherwise noted.

Customer Shall Maintain:

1. Armature mounting shaft concentric with field and rotor mounting shaft within .006 T.I.R.
2. Angular alignment of shafts within 1/2 degree.



SFC-1225 Clutch Coupling Bearing Mounted



Item	Description	SFC-1225, B.M. Part Number	Qty.
1	Bushing*		
	3/4" to 2-11/16" Bore	180-0026 to 180-0057	1
2	Retainer Ring	748-0005	1
3	Splined Hub	540-0064	1
4	Armature & Splined Adapter	5203-111-001	1
4-1	Capscrow	797-0356	4
4-2	Splined Adapter	104-0010	1
4-3	Autogap Accessory	5323-101-002	1
4-4	Spacer	266-0004	4
4-5	Armature	5323-111-034	1
4-6	Locknut	661-0005	4
5	Field & Rotor Assembly		1
	6 Volt	5203-452-009	
	24 Volt	5203-452-011	
	90 Volt	5203-452-012	
5-1	Rotor		1
	Standard Friction Material	5203-751-001	
	Optional LK Facing	5203-751-004	
5-2	Field		1
	6 Volt	5203-451-034	
	24 Volt	5203-451-036	
	90 Volt	5203-451-037	
5-3	Retainer Ring	748-0019	1
5-4	Ball Bearing	166-1047	1
5-5	Retainer Ring	748-0011	1
5-6	Rotor Hub	540-1304	1
5-7	Ring Adapter	748-0591	1

Item	Description	SFC-1225, B.M. Part Number	Qty.
5-8	Buttonhead Capscrew	797-1261	6
5-9	Lockwasher	950-0359	6
5-10	Sockethead Capscrew	797-0424	6
6	Bushing*		
	1/2" to 2-1/2" Bore	180-0185 to 180-0217*	1
7	Conduit Box	5200-101-012	1

* See page 28 for specific part numbers.

How to Order:

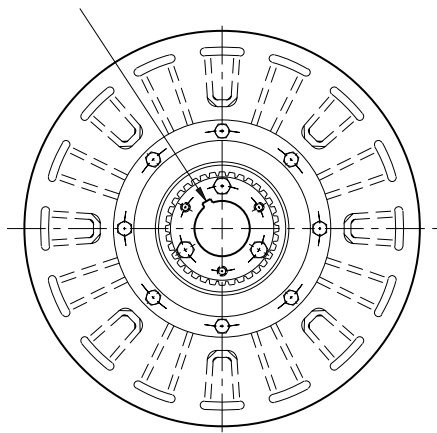
1. Specify Bore Size for Item 1.
2. Specify Bore Size for Item 6.
3. Specify Voltage for Item 5.

Example:

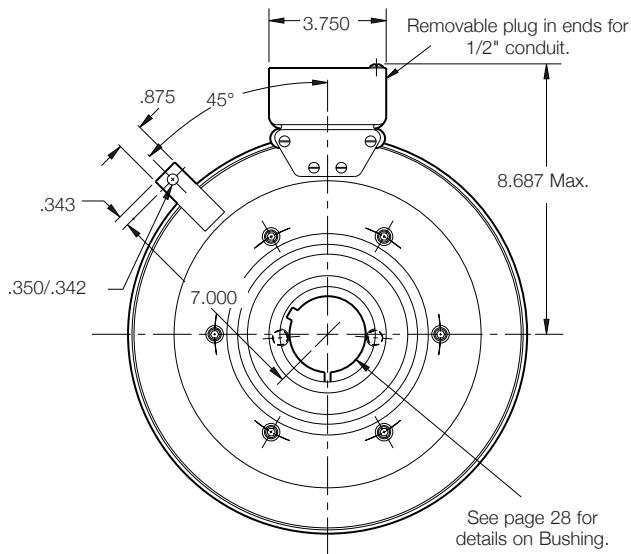
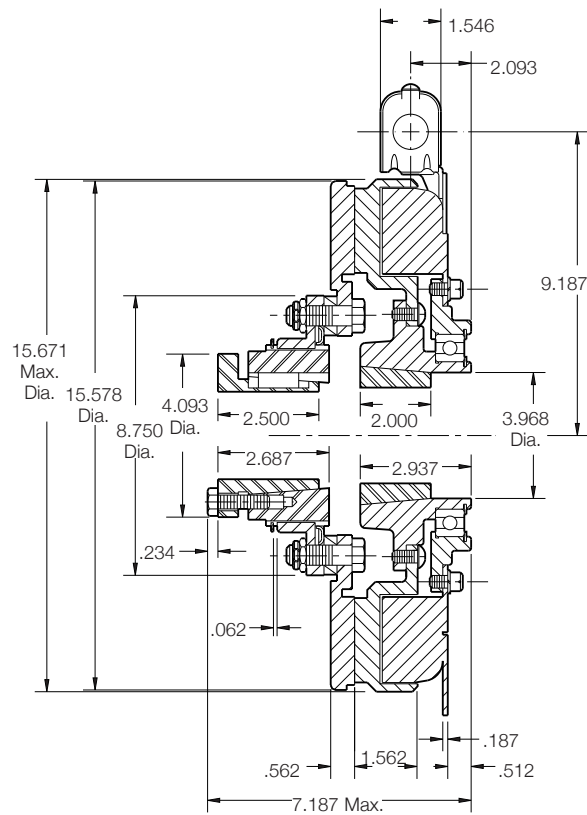
SFC-1225 Clutch Coupling per I-25623 - 90 Volt, 1" Bore

These units, when used in conjunction with the correct Warner Electric conduit box, meet the standards of UL508 and are listed under guide card #NMTR, file #59164.

See page 28 for details on Bore & Keyway.



Armature View



Field View

Arm Shaft	.750 – 2.687
Rotor Shaft	.500 – 3.000
Static Torque	700 lb. ft.
Maximum Speed	1,800 rpm
Standard Voltage	D.C. 6, 24, 90

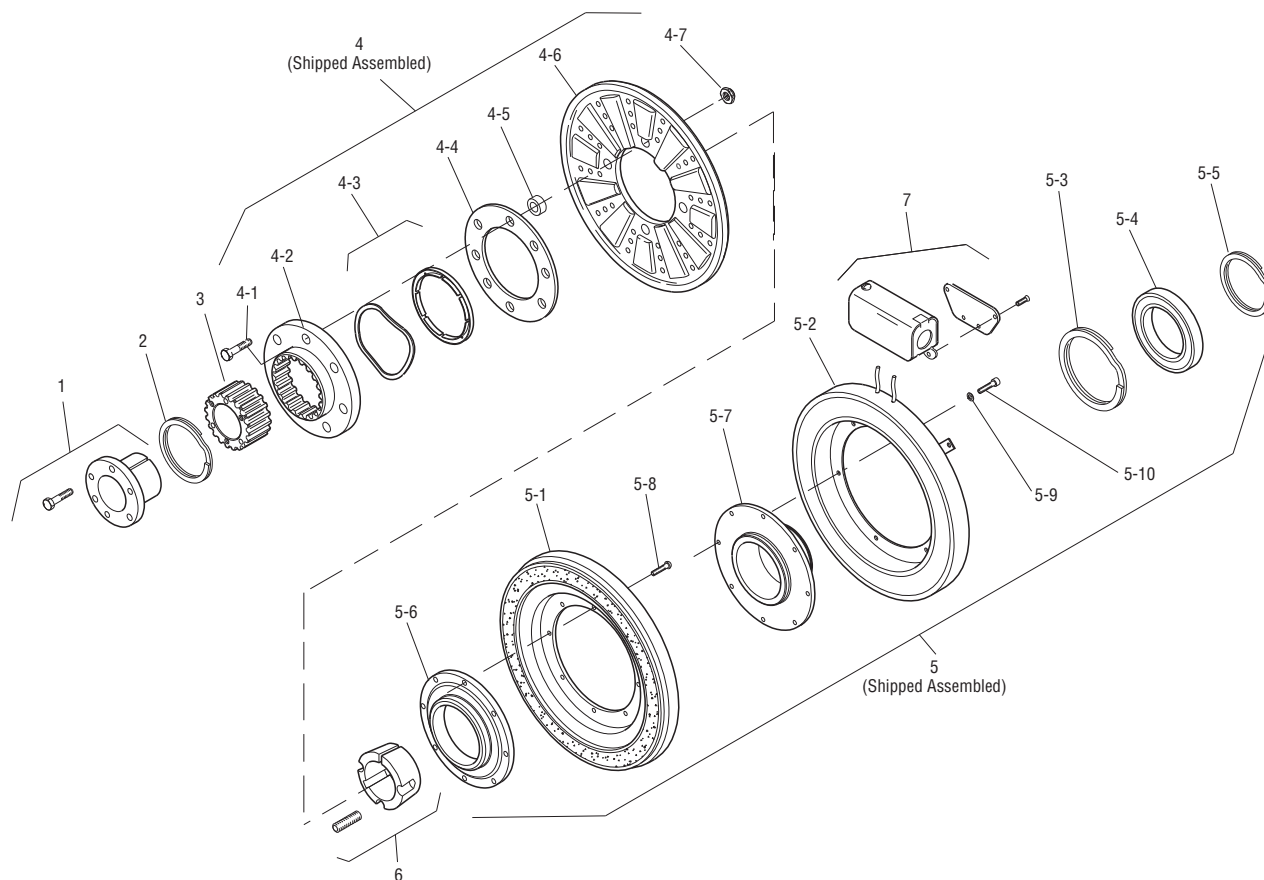
All dimensions are nominal unless otherwise noted.

Customer Shall Maintain:

1. Armature mounting shaft concentric with field and rotor mounting shaft within .006 T.I.R.
2. Angular alignment of shafts within 1/2 degree.



SFC-1525 Clutch Coupling Bearing Mounted



SFC-1525, B.M.			
Item	Description	Part Number	Qty.
1	Bushing*		
	3/4" to 2-11/16" Bore	180-0026 to 180-0057	1
2	Retainer Ring	748-0005	1
3	Splined Hub	540-0064	1
4	Armature & Splined Adapter	5204-111-004	1
4-1	Capscrew	797-0342	8
4-2	Splined Adapter	104-0011	1
4-3	Autogap Accessory	5323-101-002	1
4-4	Retainer Plate	686-0003	1
4-5	Spacer	748-0333	8
4-6	Armature	5324-111-034	1
4-7	Locknut	661-0004	8
5	Field & Rotor Assembly		1
	6 Volt	5204-452-009	
	24 Volt	5204-452-011	
	90 Volt	5204-452-012	
5-1	Rotor		1
	Standard Friction Material	5204-751-002	
	Optional LK Facing	5204-751-004	
5-2	Field		1
	6 Volt	5204-451-084	
	24 Volt	5204-451-086	
	90 Volt	5204-451-087	
5-3	Retainer Ring	748-0014	1
5-4	Ball Bearing	166-0163	1
5-5	Retainer Ring	748-0583	1
5-6	Rotor Hub	540-1306	1
5-7	Ring Adapter	748-1048	1

SFC-1525, B.M.			
Item	Description	Part Number	Qty.
5-8	Buttonhead Capscrew	797-1261	8
5-9	Lockwasher	950-0359	6
5-10	Sockethead Capscrew	797-0424	6
6	Bushing*		
	15/16" to 3" Bore	180-0223 to 180-0256	
7	Conduit Box	5200-101-012	1

* See page 28 for specific part numbers.

How to Order:

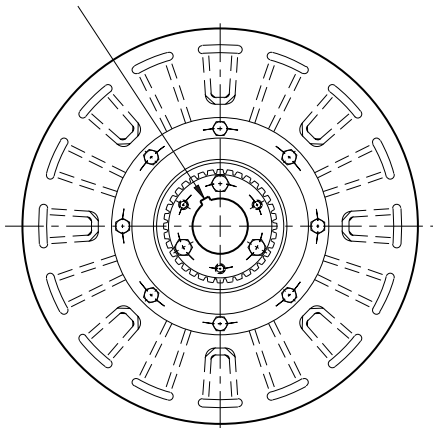
1. Specify Bore Size for Item 1.
2. Specify Bore Size for Item 6.
3. Specify Voltage for Item 5.

Example:

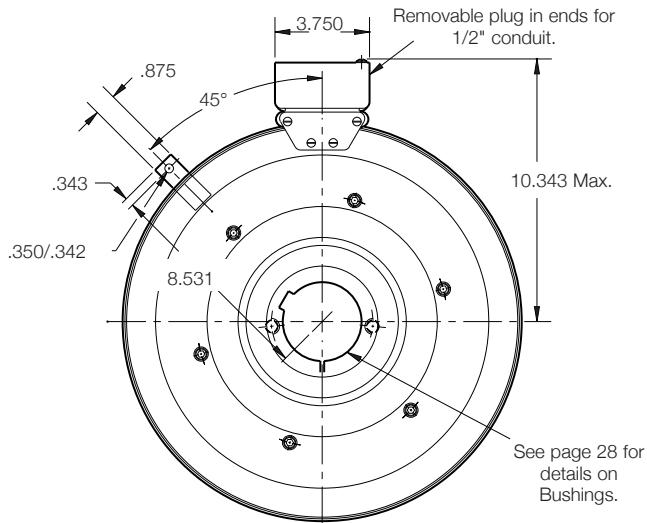
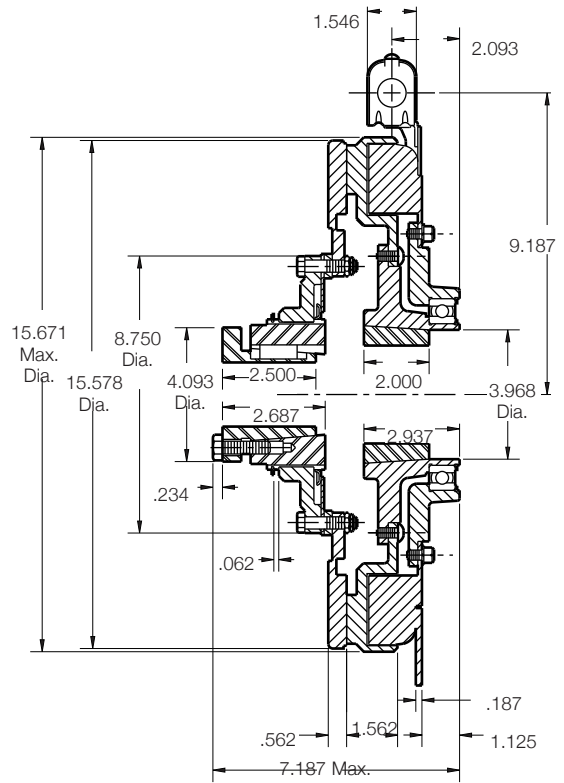
SFC-1525 Clutch Coupling per I-25641 - 90 Volt, 1" Bore

These units, when used in conjunction with the correct Warner Electric conduit box, meet the standards of UL508 and are listed under guide card #NMTR, file #59164.

See page 28 for details on Bushings.



Armature View



Field View

Arm Shaft	.937 – 3.000
Rotor Shaft	.750 – 2.687
Static Torque	1,350 lb. ft.
Maximum Speed	1,800 rpm
Standard Voltage	D.C. 90

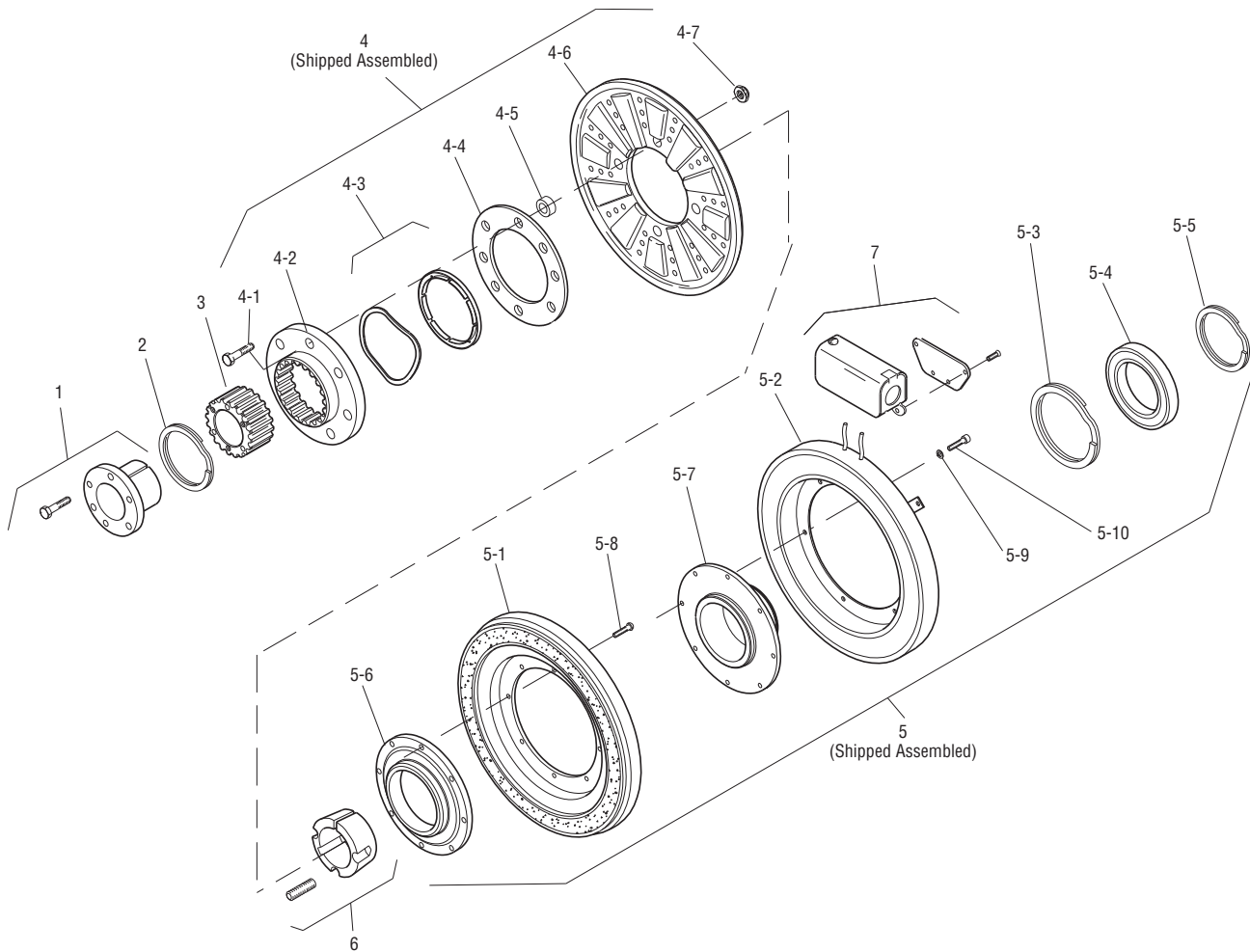
All dimensions are nominal unless otherwise noted.

Customer Shall Maintain:

1. Armature mounting shaft concentric with field and rotor mounting shaft within .006 T.I.R.
2. Angular alignment of shafts within 1/2 degree.



SFC-1525 H.T. Clutch Coupling, Bearing Mounted



Item	Description	SFC-1525 H.T. Part Number	Qty.
1	Bushing*		
	3/4" to 2-11/16" Bore	180-0026 to 180-0057	1
2	Retainer Ring	748-0005	1
3	Splined Hub	540-0064	1
4	Armature & Splined Adapter	5204-111-004	1
4-1	Capscrew	797-0342	8
4-2	Splined Adapter	104-0011	1
4-3	Autogap Accessory	5323-101-002	1
4-4	Spacer	686-0003	1
4-5	Spacer	748-0333	8
4-6	Armature	5324-111-034	1
4-7	Locknut	661-0004	8
5	Field & Rotor Assembly		1
	90 Volt	5204-452-015	
5-1	Rotor	5204-751-001	1
5-2	Field		1
	90 Volt	5204-451-090	
5-3	Retainer Ring	748-0114	1
5-4	Ball Bearing	166-0163	1
5-5	Retainer Ring	748-0583	1
5-6	Rotor Hub	540-1306	1
5-7	Ring Adapter	748-1048	1
5-8	Buttonhead Capscrew	797-1261	8
5-9	Lockwasher	950-0359	6

Item	Description	SFC-1525 H.T. Part Number	Qty.
5-10	Sockethead Capscrew	797-0424	6
6	Bushing*		
	15/16" to 3" Bore	180-0223 to 180-0256	1
7	Conduit Box	5200-101-012	1

*See page 28 for specific part numbers.

How to Order:

1. Specify Bore Size for Item 1.
2. Specify Bore Size for Item 6.
3. Specify Voltage for Item 5.

Example:

SFC-1525 Clutch Coupling Hi-Torque per I-25644 - 90 Volt, 1" Bore

These units, when used in conjunction with the correct Warner Electric conduit box, meet the standards of UL508 and are listed under guide card #NMTR, file #59164.

Bushing Part Numbers

Browning Bushing

Shaft Size	Keyway Size	Bushing Number	
		Warner Electric	Browning
1/2	1/8 x 1/16	180-0002	H-1
9/16	1/8 x 1/16	180-0003	
5/8	3/16 x 3/32	180-0004	
11/16	3/16 x 3/32	180-0005	
3/4	3/16 x 3/32	180-0006	
13/16	3/16 x 3/32	180-0007	
7/8	3/16 x 3/32	180-0008	
15/16	1/4 x 1/8	180-0009	
1	1/4 x 1/8	180-0010	
1-1/6	1/4 x 1/8	180-0011	
1-1/8	1/4 x 1/8	180-0012	
1-3/16	1/4 x 1/8	180-0013	
1-1/4	1/4 x 3/16	180-0014	
1-5/16	5/16 x 7/32	180-0015	
1-3/8	5/16 x 7/32	180-0016	
1-7/16	3/8 x 1/4	180-0017	H-2
1-1/2	3/8 x 7/32	180-0018	
3/4	1/2 x 3/8	180-0026	QI-1
13/16	1/2 x 3/8	180-0027	
7/8	1/2 x 3/8	180-0028	
15/16	1/2 x 3/8	180-0029	
1	1/2 x 3/8	180-0030	
1-1/16	1/2 x 3/8	180-0031	
1-1/8	1/2 x 3/8	180-0032	
1-3/16	1/2 x 3/8	180-0033	
1-1/4	1/2 x 3/8	180-0034	
1-5/16	1/2 x 3/8	180-0035	
1-3/8	1/2 x 3/8	180-0036	
1-7/16	1/2 x 3/8	180-0037	
1-1/2	1/2 x 3/8	180-0038	
1-9/16	1/2 x 3/8	180-0039	
1-5/8	1/2 x 3/8	180-0040	
1-11/16	1/2 x 3/8	180-0041	
1-3/4	1/2 x 3/8	180-0042	
1-13/16	1/2 x 3/8	180-0043	
1-7/8	1/2 x 3/8	180-0044	
1-15/16	1/2 x 3/8	180-0045	
2	1/2 x 3/8	180-0046	QI-2
2-1/16	1/2 x 3/8	180-0047	
2-1/8	1/2 x 3/4	180-0048	
2-3/16	1/2 x 23/32	180-0049	
2-1/4	1/2 x 11/16	180-0050	
2-5/16	5/8 x 5/16	180-0051	
2-3/8	5/8 x 5/16	180-0052	
2-7/16	5/8 x 5/16	180-0053	
2-1/2	5/8 x 5/16	180-0054	
2-9/16	5/8 x 5/16	180-0055	
2-5/8	5/8 x 5/16	180-0056	
2-11/16	5/8 x 5/16	180-0057	

Dodge Bushing

Shaft Size	Keyway Size	Bushing Number		
		Warner Electric	Dodge	
1/2	1/8 x 1/16	180-0101	1210	
9/16	1/8 x 1/16	180-0102		
5/8	3/16 x 3/32	180-0103		
11/16	3/16 x 3/32	180-0104		
3/4	3/16 x 3/32	180-0105		
13/16	3/16 x 3/32	180-0106		
7/8	3/16 x 3/32	180-0107		
5/16	1/4 x 1/8	180-0108		
1	1/4 x 1/8	180-0109		
1-1/16	1/4 x 1/8	180-0110		
1-1/8	1/4 x 1/8	180-0111		
1-3/16	1/4 x 1/8	180-0112		
1-1/4	1/4 x 1/8	180-0113		
1/2	1/8 x 1/16	180-0116		1215
9/16	1/8 x 1/16	180-0117		
5/8	3/16 x 3/32	180-0118		
11/16	3/16 x 3/32	180-0119		
3/4	3/16 x 3/32	180-0120		
13/16	3/16 x 3/32	180-0121		
7/8	3/16 x 3/32	180-0122		
15/16	1/4 x 1/8	180-0123		
1	1/4 x 1/8	180-0124		
1-1/16	1/4 x 1/8	180-0125		
1-1/8	1/4 x 1/8	180-0126		
1-3/16	1/4 x 1/8	180-0127		
1-1/4	1/4 x 1/8	180-0128		
1/2	1/8 x 1/16	180-0131	1615	
9/16	1/8 x 1/16	180-0132		
5/8	3/16 x 3/32	180-0133		
11/16	3/16 x 3/32	180-0134		
3/4	3/16 x 3/32	180-0135		
13/16	3/16 x 3/32	180-0136		
7/8	3/16 x 3/32	180-0137		
15/16	1/4 x 1/8	180-0138		
1	1/4 x 1/8	180-0139		
1-1/16	1/4 x 1/8	180-0140		
1-1/8	1/4 x 1/8	180-0141		
1-3/16	1/4 x 1/8	180-0142		
1-1/4	1/4 x 1/8	180-0143		
1-5/16	5/16 x 5/32	180-0144		
1-3/8	5/16 x 5/32	180-0145		
1-7/16	3/8 x 3/16	180-0146		
1-1/2	3/8 x 3/16	180-0147		
1-9/16	3/8 x 3/16	180-0148		
1-5/8	3/8 x 3/16	180-0149		
1/2	1/8 x 1/16	180-0155	2012	
9/16	1/8 x 1/16	180-0156		
5/8	3/16 x 3/32	180-0157		
11/16	3/16 x 3/32	180-0158		
3/4	3/16 x 3/32	180-0159		
13/16	3/16 x 3/32	180-0160		
7/8	3/16 x 3/32	180-0161		
15/16	1/4 x 1/8	180-0162		
1	1/4 x 1/8	180-0163		
1-1/16	1/4 x 1/8	180-0164		
1-1/8	1/4 x 1/8	180-0165		
1-3/16	1/4 x 1/8	180-0166		
1-1/4	1/4 x 1/8	180-0167		

Bushing Part Numbers

Dodge Bushing

Shaft Size	Keyway Size	Bushing Number		
		Warner Electric	Dodge	
1-5/16	5/16 x 5/32	180-0168	2012	
1-3/8	5/16 x 5/32	180-0169		
1-7/16	3/8 x 3/16	180-0170		
1-1/12	3/8 x 3/16	180-0171		
1-9/16	3/8 x 3/16	180-0172		
1-5/8	3/8 x 3/16	180-0173		
1-11/16	3/8 x 3/16	180-0174		
1-3/4	3/8 x 3/16	180-0175		
1-13/16	1/2 x 1/4	180-0176		
1-7/8	1/2 x 1/4	180-0177		
1-15/16	1/2 x 1/4	180-0178		
2	1/2 x 1/4	180-0179		
1/2	1/8 x 1/16	180-0185		2517
9/16	1/8 x 1/16	180-0186		
5/8	3/16 x 3/32	180--0187		
11/16	3/16 x 3/32	180--0188		
3/4	3/16 x 3/32	180--0189		
13/16	3/16 x 3/32	180--0190		
7/8	3/16 x 3/32	180--0191		
15/16	1/4 x 1/8	180-0192		
1	1/4 x 1/8	180-0193		
1-1/16	1/4 x 1/8	180-0194		
1-1/8	1/4 x 1/8	180-0195		
1-3/16	1/4 x 1/8	180-0196		
1-1/4	1/4 x 1/8	180-0197		
1-5/16	5/16 x 5/32	180-0198		
1-3/8	5/16 x 5/32	180-0199		
1-7/16	3/8 x 3/16	180-0200		
1-1/2	3/8 x 3/16	180-0201		
1-9/16	3/8 x 3/16	180-0202		
1-5/8	3/8 x 3/16	180-0203		
1-11/16	3/8 x 3/16	180-0204		
1-3/4	3/8 x 3/16	180-0205		
1-13/16	1/2 x 1/4	180-0206		
1-7/8	1/2 x 1/4	180-0207		
1-15/16	1/2 x 1/4	180-0208		
2	1/2 x 1/4	180-0209		
2-1/16	1/2 x 1/4	180-0210		
2-1/8	1/2 x 1/4	180-0211		
2-3/16	1/2 x 1/4	180-0212		
2-1/4	1/2 x 1/4	180-0213		
2-5/16	5/8 x 5/16	180-0214		
2-3/8	5/8 x 5/16	180-0215		
2-7/16	5/8 x 5/16	180-0216		
2-1/2	5/8 x 5/16	180-0217		
15/16	1/4 x 1/8	180-0223	3020	
1	1/4 x 1/8	180-0224		
1-1/16	1/4 x 1/8	180-0225		
1-1/8	1/4 x 1/8	180-0226		
1-3/16	1/4 x 1/8	180-0227		
1-1/4	1/4 x 1/8	180-0228		
1-5/16	5/16 x 5/32	180-0229		
1-3/8	5/16 x 5/32	180-0230		
1-7/16	3/8 x 3/16	180-0231		
1-1/2	3/8 x 3/16	180-0232		
1-9/16	3/8 x 3/16	180-0233		
1-5/8	3/8 x 3/16	180-0234		

Shaft Size	Keyway Size	Bushing Number		
		Warner Electric	Dodge	
1-11/16	3/8 x 3/16	180-0235	3020	
1-3/4	3/8 x 3/16	180-0236		
1-13/16	1/2 x 1/4	180-0237		
1-7/8	1/2 x 1/4	180-0238		
1-15/16	1/2 x 1/4	180-0239		
2	1/2 x 1/4	180-0240		
2-1/16	1/2 x 1/4	180-0241		
2-1/8	1/2 x 1/4	180-0242		
2-3/16	1/2 x 1/4	180-0243		
2-1/4	1/2 x 1/4	180-0244		
2-5/16	5/8 x 5/16	180-0245		
2-3/8	5/8 x 5/16	180-0246		
2-7/16	5/8 x 5/16	180-0247		
2-1/2	5/8 x 5/16	180-0248		
2-9/16	5/8 x 5/16	180-0249		
2-5/8	5/8 x 5/16	180-0250		
2-11/16	5/8 x 5/16	180-0251		
2-3/4	5/8 x 5/16	180-0252		
2-13/16	3/4 x 3/8	180-0253		
2-7/8	3/4 x 3/8	180-0254		
2-15/16	3/4 x 3/8	180-0255		
3	3/4 x 3/8	180-0256		
15/16	1/4 x 1/8	180-0262		3030
1	1/4 x 1/8	180-0263		
1-1/16	1/4 x 1/8	180-0264		
1-1/8	1/4 x 1/8	180-0265		
1-3/16	1/4 x 1/8	180-0266		
1-1/4	1/4 x 1/8	180-0267		
1-5/16	5/16 x 5/32	180-0268		
1-3/8	5/16 x 5/32	180-0269		
1-7/16	3/8 x 3/16	180-0270		
1-1/2	3/8 x 3/16	180-0271		
1-9/16	3/8 x 3/16	180-0272		
1-5/8	3/8 x 3/16	180-0273		
1-11/16	3/8 x 3/16	180-0274		
1-3/4	3/8 x 3/16	180-0275		
1-13/16	1/2 x 1/4	180-0276		
1-7/8	1/2 x 1/4	180-0277		
1-15/16	1/2 x 1/4	180-0278		
2	1/2 x 1/4	180-0279		
2-1/16	1/2 x 1/4	180-0280		
2-1/8	1/2 x 1/4	180-0281		
2-3/16	1/2 x 1/4	180-0282		
2-1/4	1/2 x 1/4	180-0283		
2-15/16	5/8 x 5/16	180-0284		
2-3/8	5/8 x 5/16	180-0285		
2-7/16	5/8 x 5/16	180-0286		
2-1/2	5/8 x 5/16	180-0287		
2-9/16	5/8 x 5/16	180-0288		
2-5/8	5/8 x 5/16	180-0289		
2-11/16	5/8 x 5/16	180-0290		
2-3/4	5/8 x 5/16	180-0291		
2-13/16	3/4 x 3/8	180-0292		
2-7/8	3/4 x 3/8	180-0293		
2-15/16	3/4 x 3/8	180-0294		
3	3/4 x 3/8	180-0295		

Bushing Part Numbers

Dodge Bushing

Shaft Size	Keyway Size	Bushing Number	
		Warner Electric	Dodge
1/2	1/8 x 1/16	180-0326	1610
9/16	1/8 x 1/16	180-0327	
5/8	3/16 x 3/32	180-0328	
11/16	3/16 x 3/32	180-0329	
3/4	3/16 x 3/32	180-0330	
13/16	3/16 x 3/32	180-0331	
7/8	3/16 x 3/32	180-0332	
15/16	1/4 x 1/8	180-0333	
1	1/4 x 1/8	180-0334	
1-1/16	1/4 x 1/8	180-0335	
1-1/8	1/4 x 1/8	180-0336	
1-3/16	1/4 x 1/8	180-0337	
1-1/4	1/4 x 1/8	180-0338	
1-5/16	5/16 x 5/32	180-0339	
1-3/8	5/16 x 5/32	180-0340	
1-7/16	3/8 x 3/16	180-0341	
1-1/2	3/8 x 3/16	180-0342	
1-9/16	3/8 x 3/16	180-0343	
1-5/8	3/8 x 3/16	180-0344	
1/2	1/8 x 1/16	180-0410	
9/16	1/18 x 1/16	180-0411	
5/8	3/16 x 3/32	180-0412	
11/16	3/16 x 3/32	180-0413	
3/4	3/16 x 3/32	180-0414	
13/16	3/16 x 3/32	180-0415	
7/8	3/16 x 3/32	180-0416	
15/16	1/4 x 1/16	180-0417	
1	1/4 x 1/16	180-0418	
1/2	1/8 x 1/16	180-0421	1310
9/16	1/8 x 1/16	180-0422	
5/8	3/16 x 3/32	180-0423	
11/16	3/16 x 3/32	180-0424	
3/4	3/16 x 3/32	180-0425	
13/16	3/16 x 3/32	180-0426	
7/8	3/16 x 3/32	180-0427	
15/16	1/4 x 1/16	180-0428	
1	1/4 x 1/16	180-0429	
1-1/16	1/4 x 1/8	180-0430	
1-1/8	1/4 x 1/8	180-0431	
1-3/16	1/4 x 1/8	180-0432	
1-1/4	1/4 x 1/8	180-0433	
1-5/16	15/16 x 5/32	180-0434	
1-3/8	15/16 x 5/32	180-0435	

Warranty

Warner Electric LLC warrants that it will repair or replace (whichever it deems advisable) any product manufactured and sold by it which proves to be defective in material or workmanship within a period of one (1) year from the date of original purchase for consumer, commercial or industrial use.

This warranty extends only to the original purchaser and is not transferable or assignable without Warner Electric LLC's prior consent.

Warranty service can be obtained in the U.S.A. by returning any defective product, transportation charges prepaid, to the appropriate Warner Electric LLC factory. Additional warranty information may be obtained by writing the Customer Satisfaction Department, Warner Electric LLC, 449 Gardner Street, South Beloit, Illinois 61080, or by calling 815-389-3771.

A purchase receipt or other proof of original purchase will be required before warranty service is rendered. If found defective under the terms of this warranty, repair or replacement will be made, without charge, together with a refund for transportation costs. If found not to be defective, you will be notified and, with your consent, the item will be repaired or replaced and returned to you at your expense.

This warranty covers normal use and does not cover damage or defect which results from alteration, accident, neglect, or improper installation, operation, or maintenance.

Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

Warner Electric LLC's obligation under this warranty is limited to the repair or replacement of the defective product and in no event shall Warner Electric LLC be liable for consequential, indirect, or incidental damages of any kind incurred by reason of the manufacture, sale or use of any defective product. Warner Electric LLC neither assumes nor authorizes any other person to give any other warranty or to assume any other obligation or liability on its behalf.

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Changes in Dimensions and Specifications

All dimensions and specifications shown in Warner Electric catalogs are subject to change without notice. Weights do not include weight of boxing for shipment. Certified prints will be furnished without charge on request to Warner Electric.



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