Over-Torque Protection

January 2009

Replaces all previous publications.

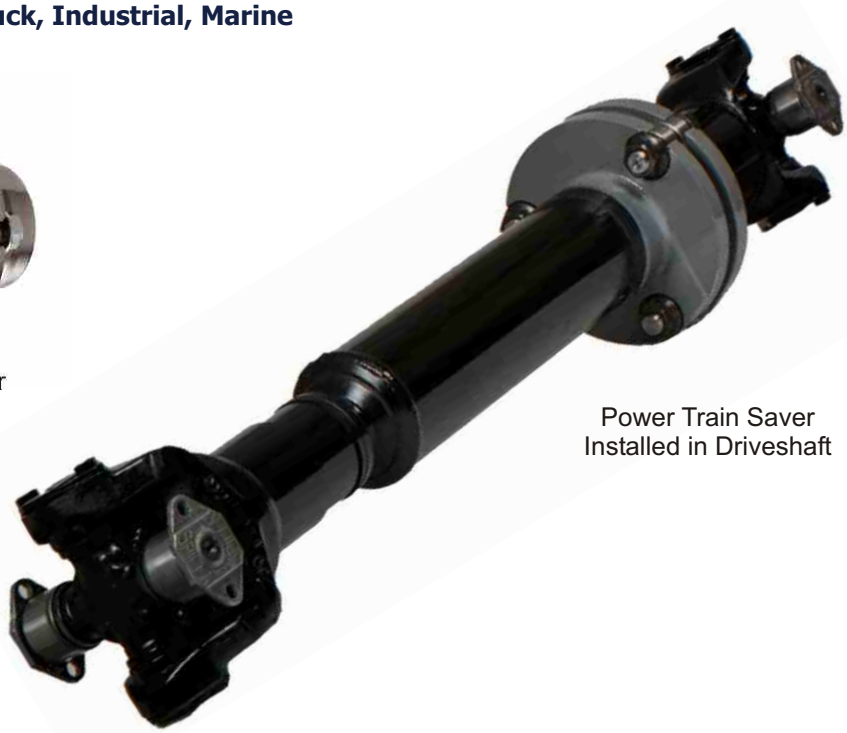
PowerTrainSavers®

Parts Catalogue

Selection, Operation & Procedure

Light / Heavy Truck, Industrial, Marine

Power Train Saver
Drive Shaft Unit

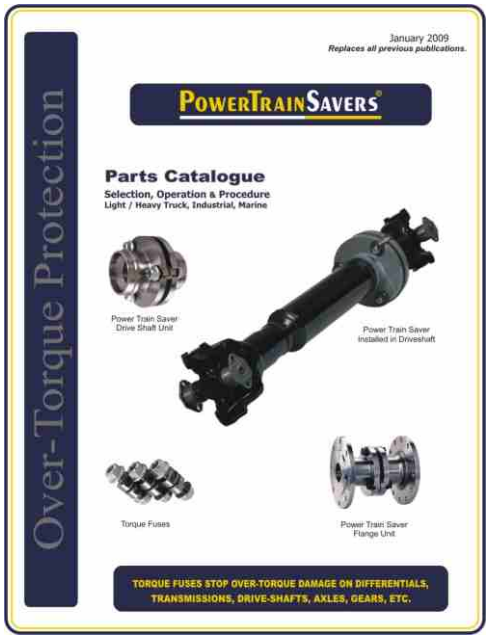


Power Train Saver
Installed in Driveshaft

Torque Fuses

Power Train Saver
Flange Unit

TORQUE FUSES STOP OVER-TORQUE DAMAGE ON DIFFERENTIALS, TRANSMISSIONS, DRIVE-SHAFTS, AXLES, GEARS, ETC.



VISIT OUR WEBSITE:
www.powertrainsavers.com

- **Demonstrational video**
- **Digital catalogues**
- **3-D CAD drawings**
- **Testimonials**

SAFETY PRECAUTIONS

- The Power Train Saver must be installed by a qualified driveline mechanic. (See Page 5 & 15)
- Torque Fuses must be installed with the truck or equipment shut off and brakes locked on. (See Page 7 & 11)
- Torque Fuses must be torqued down to the specifications listed in this catalogue. (See Page 7 & 11)
- Do not preheat the Power Train Saver. (See page 6)

CONTENTS

Power Train Savers® • Box 901, Vauxhall, AB T0K 2K0
Ph: (403) 654-2800 • Fax: (403) 654-2811 • www.powertrainsavers.com

General Information

DESIGN FEATURES

- Power Train Saver Torque Fuses provide torque overload protection for drive train components in light / medium / heavy duty trucks, industrial, forestry, mining and marine applications.
- Fuses are designed to shear under over-torque conditions *just prior* to damage on transmissions, differentials, gears, axles and drive shafts.
- Torque fuses are engineered, tensile tested, durable & accurate.
- Fuses are identified with an engraved letter / number on one end corresponding to their torque rating.
- Weld-in style Power Train Savers are designed with either an internal bushing (Pages 2,3 & 4) or an internal sealed bearing (Page 12, 13 & 14).
- After shearing, the Power Train Saver unit rotates on an internal support system, while continuing to support the drive-shaft.

THE POWER TRAIN SAVER WORKS ON ALL SHAFT DRIVEN EQUIPMENT:

Trucks - Light, Medium & Heavy Duty

Industrial - Oil Field, Mining, Forestry, and Manufacturing

Marine - Tug Boats, Freighters, Trawlers, Barges, Pleasure Craft, etc

Torque Fuse ID	Fuse Ft./Lb Options	Fuse Nut Size	Fuse Nut Torque Specs	PTS Diameter	Fuses per Set
1C - 1S	1,000 - 5,000	3/4”	80 Ft/Lbs	4”	Sets of 3
0 to 13	2,000 - 8,500	15/16”	140 Ft/Lbs	6”	Sets of 3
F to Z	5,500 - 25,500	1 - 1/8”	220 Ft/Lbs	8”	Sets of 3
4F to 4Z	20,000 - 60,000	1 - 1/2”	450 Ft/Lbs	10”	Sets of 3

TORQUE FUSE SIZING

On pages 2,3 & 4, charts are based on drive-shaft tube and u-joint yield limits. For most applications, size Torque Fuses at 95%. This will allow you to operate your equipment day to day without breaking Torque Fuses. When over-torque does occur, the Torque Fuses will shear just prior to component damage. In cases where differential damage is occurring, 90% on charts (Pgs 2, 3 & 4) is generally a good starting place.

INSTALLATION & OPERATION NOTES (Weld-in Units)

- The Power Train Saver (PTS) must be installed by a qualified drive line mechanic.
- Do not pre-heat the PTS unit; pre-heat tube only if needed and weld as directed. (Welding procedure on Page 6)
- The PTS is normally installed on the drive shaft ahead of the front differential however; it can be installed on a different drive shaft. The PTS must be installed on the weld-in yoke end on all shafts. (See installation instructions Page 5, 15)
- Ensure that angles and RPMs on drive shafts do not exceed the manufacturers’ specifications. In cases where angels and RPMs exceed manufacturer specifications, the Power Train Saver must be installed ahead of the steady bearing.
- PTS units with bushings must be shut down promptly after shearing whereas bearing units can be rotated for an extended period of time after shearing. Bearing units see Pages 2, 3, 4 Bushing units see Pages 12, 13, 14

INSTALLATION NOTES (Flange Units)

- The PTS Flange unit bolts up to the companion flange of the drive shaft and the input / output flanges of pumps, transmissions, gear boxes etc.
- PTS Flange units come in 11”, 12” & 14” flange face to flange face.
- PTS Flange units are designed with internal sealed bearings.

TORQUE FUSE TROUBLESHOOTING

See Page 21 for troubleshooting Torque Fuse shear patterns

Torque Fuse Set-Ups & Options

Torque Capacities from 1,000 - 4,000 ft/lbs

4" Diameter

* Standard Capacity is the recommended starting point for applications. Maximum Recommended Capacity uses driveshaft torque capacity as a protection level target. Minimum Recommended Capacity aims at protecting weaker components such as differentials or gear boxes.

Driveline Series	Tube Size OD / Wall Thickness	Part #	Minimum Recommended Capacity	* Standard Capacity	Maximum Recommended Capacity
			Fuse ID Code and Torque Capacity Options		
1310, 7260, 3R	2.0 x .083	20083B	1E 1500 Ft/lbs	1F 1750 Ft/lbs	1G 2000 Ft/lbs
1310, 1330, 1350, 7260, 3R	2.0 x .120	20120B	1H 2250 Ft/lbs	1I 2500 Ft/lbs	1J 2750 Ft/lbs
1310, 1330, 1350, 7260, 7290, 3R	2.5 x .083	25083B	1J 2750 Ft/lbs	1K 3000 Ft/lbs	1L 3250 Ft/lbs
1410	2.5 x .095	25095B	1K 3000 Ft/lbs	1L 3250 Ft/lbs	1M 3500 Ft/lbs
1310	2.5 X .120	25120B	1O 4000 Ft/lbs	1P 4250 Ft/lbs	1Q 4500 Ft/lbs

Torque Fuses Come In Sets Of Three

Torque Fuse Part #	Torque Fuse ID	Torque Fuse Part #	Torque Fuse ID
1000	1C 1000 Ft/lbs	3000	1K 3000 Ft/lbs
1250	1D 1250 Ft/lbs	3250	1L 3250 Ft/lbs
1500	1E 1500 Ft/lbs	3500	1M 3500 Ft/lbs
1750	1F 1750 Ft/lbs	3750	1N 3750 Ft/lbs
2000	1G 2000 Ft/lbs	4000	1O 4000 Ft/lbs
2250	1H 2250 Ft/lbs	4250	1P 4250 Ft/lbs
2500	1I 2500 Ft/lbs	4500	1Q 4500 Ft/lbs
2750	1J 2750 Ft/lbs	4750	1R 4750 Ft/lbs
		5000	1S 5000 Ft/lbs

The Torque Fuses are Engineered, Tensile Tested, Accurate, and Durable.
They are stamped with a number to identify the force in which they shear.

Torque Fuse Set-Ups & Options

Torque Capacities from 2,000 - 8,500 ft/lbs

6" Diameter

* Standard Capacity is the recommended starting point for applications. Maximum Recommended Capacity uses driveshaft torque capacity as a protection level target. Minimum Recommended Capacity aims at protecting weaker components such as differentials or gear boxes.

Driveline Series	Tube Size OD / Wall Thickness	Part #	Minimum Recommended Capacity	* Standard Capacity	Maximum Recommended Capacity
			Fuse ID Code and Torque Capacity Options		
1310	3.0 x .083	30083	3 3500 Ft/lbs	4 4000 Ft/lbs	5 4500 Ft/lbs
1330	3.5 x .083	35083	4 4000 Ft/lbs	5 4500 Ft/lbs	6 5000 Ft/lbs
1330	4.0 x .083	40083	4 4000 Ft/lbs	5 4500 Ft/lbs	6 5000 Ft/lbs
1350	3.0 x .083	30083	3 3500 Ft/lbs	4 4000 Ft/lbs	5 4500 Ft/lbs
1350	3.5 x .083	35083	4 4000 Ft/lbs	5 4500 Ft/lbs	6 5000 Ft/lbs
1350	4.0 x .083	40083	4 4000 Ft/lbs	5 4500 Ft/lbs	6 5000 Ft/lbs
1410	3.0 x .083	30083	3 3500 Ft/lbs	4 4000 Ft/lbs	5 4500 Ft/lbs
1410	3.5 x .083	25083	6 5000 Ft/lbs	7 5500 Ft/lbs	8 6000 Ft/lbs
1410	4.0 x .083	40083	6 5000 Ft/lbs	7 5500 Ft/lbs	8 6000 Ft/lbs
1480	3.5 x .083	35083	7 5500 Ft/lbs	8 6000 Ft/lbs	9 6500 Ft/lbs
1480	4.0 x .083	40083	8 6000 Ft/lbs	9 6500 Ft/lbs	10 7000 Ft/lbs
1550	3.5 x .095	35095	10 7000 Ft/lbs	11 7500 Ft/lbs	12 8000 Ft/lbs
1550	4.0 x .083	40083	10 7000 Ft/lbs	11 7500 Ft/lbs	12 8000 Ft/lbs
1550	4.0 x .095	40095	10 7000 Ft/lbs	11 7500 Ft/lbs	12 8000 Ft/lbs

Torque Fuses Come In Sets Of Three

Torque Fuse Part #	Torque Fuse ID	Torque Fuse Part #	Torque Fuse ID
0020	0 2000 Ft/lbs	0060	8 6000 Ft/lbs
0025	1 2500 Ft/lbs	0065	9 6500 Ft/lbs
0030	2 3000 Ft/lbs	0070	10 7000 Ft/lbs
0035	3 3500 Ft/lbs	0075	11 7500 Ft/lbs
0040	4 4000 Ft/lbs	0080	12 8000 Ft/lbs
0045	5 4500 Ft/lbs	0085	13 8500 Ft/lbs
0050	6 5000 Ft/lbs		
0055	7 5500 Ft/lbs		

The Torque Fuses are Engineered, Tensile Tested, Accurate, and Durable. They are stamped with a number to identify the force in which they shear.

Torque Fuse Set-Ups & Options

Torque Capacities from 5,500 - 25,500 ft/lbs

8” Diameter

* Standard Capacity is the recommended starting point for applications. Maximum Recommended Capacity uses driveshaft torque capacity as a protection level target. Minimum Recommended Capacity aims at protecting weaker components such as differentials or gear boxes.

Driveline Series	Tube Size OD / Wall Thickness	Part #	Minimum Recommended Capacity	* Standard Capacity	Maximum Recommended Capacity
			Fuse ID Code and Torque Capacity Options		
1550	4.0 x .095	15095	F 5500 Ft/lbs	G 6500 Ft/lbs	H 7500 Ft/lbs
1610	3.5 x .134	16134	H 7500 Ft/lbs	I 8500 Ft/lbs	J 9500 Ft/lbs
1610 & 1710	4.0 x .134	17180	K 10500 Ft/lbs	L 11500 Ft/lbs	M 12500 Ft/lbs
1710	4.0 x .180	17180	O 14500 Ft/lbs	P 15500 Ft/lbs	Q 16500 Ft/lbs
1760	4.0 x .180	17180	P 15500 Ft/lbs	Q 16500 Ft/lbs	R 17500 Ft/lbs
1810	4.5 x .134	18134	P 15500 Ft/lbs	Q 16500 Ft/lbs	R 17500 Ft/lbs
1810	4.59 x .180	18134	T 19500 Ft/lbs	U 20500 Ft/lbs	V 21500 Ft/lbs
1810	4.5 x .259	18259	T 19500 Ft/lbs	U 20500 Ft/lbs	V 21500 Ft/lbs
1880	4.5 x .259	18259	X 23500 Ft/lbs	Y 24500 Ft/lbs	Z 25500 Ft/lbs
*SPL 140	4.21 x .138	SP138	M 12500 Ft/lbs	N 13500 Ft/lbs	O 14500 Ft/lbs
*SPL 170	4.96 x .120	SP165	P 15500 Ft/lbs	Q 16500 Ft/lbs	R 17500 Ft/lbs
*SPL 170	4.72 x .197	SP197	R 17500 Ft/lbs	S 18500 Ft/lbs	T 19500 Ft/lbs
*SPL 250	5.06 x .165	SP165	U 20500 Ft/lbs	V 21500 Ft/lbs	W 22500 Ft/lbs

Torque Fuses Come In Sets Of Three

Torque Fuse Part #	Torque Fuse ID	Torque Fuse Part #	Torque Fuse ID
1005	F 5500 Ft/lbs	1016	Q 16500 Ft/lbs
1006	G 6500 Ft/lbs	1017	R 17500 Ft/lbs
1007	H 7500 Ft/lbs	1018	S 18500 Ft/lbs
1008	I 8500 Ft/lbs	1019	T 19500 Ft/lbs
1009	J 9500 Ft/lbs	1020	U 20500 Ft/lbs
1010	K 10500 Ft/lbs	1021	V 21500 Ft/lbs
1011	L 11500 Ft/lbs	1022	W 22500 Ft/lbs
1012	M 12500 Ft/lbs	1023	X 23500 Ft/lbs
1013	N 13500 Ft/lbs	1024	Y 24500 Ft/lbs
1014	O 14500 Ft/lbs	1025	Z 25500 Ft/lbs
1015	P 15500 Ft/lbs		

* SPL is a registered trademark of Dana Corporation

The Torque Fuses are Engineered, Tensile Tested, Accurate, and Durable. They are stamped with a letter to identify the force in which they shear.

Installation Instructions Weld-In Bushing Unit

A Qualified Drive-line Mechanic Must Install The Power Train Saver

The Power Train Saver should normally be installed directly in front of the front differential on the weld in yoke end. See A (drive-shaft), or it can be installed on the B (drive-shaft) ahead of the steady bearing as shown by Fig. 1. In some cases when the drive shaft angles and RPMs exceed manufacturer specifications, the Power Train Saver should be installed ahead of the steady bearing.

The Power Train Saver unit Must Be Installed On The Weld-In Yoke End on all drive shafts.

1. Check Power Train Saver part number. Then make sure Torque Fuses are installed, with timing marks lined up. Torque down fuse nuts to spec. (See Torque fuse installation page 7). Cut and discard the portion of drive shaft pertaining to your particular Power Train Saver as shown in Fig. 1, then machine tube ends square.

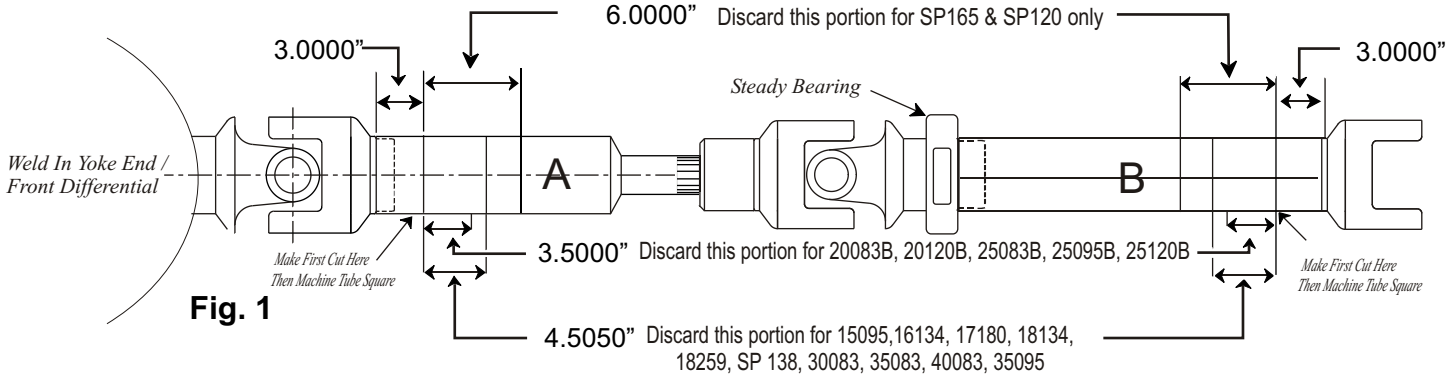


Fig. 1

2. Install the Power Train Saver into the long section of the drive shaft first.
3. Square up the Power Train Saver with the tube. Tack and weld it in place.
4. After welding, check the straightness of the Power Train Saver with the drive shaft. The radial run out of the Power Train Saver, measured at the end, **Must be within .002" of True**, see check straightness as shown in Fig 2.

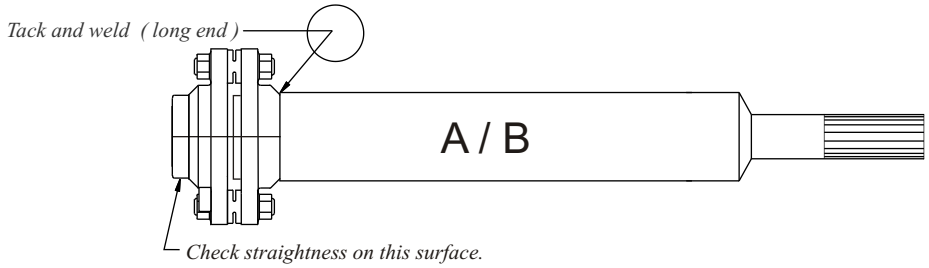


Fig. 2

5. Tack and weld the short end of the drive shaft to the Power Train Saver as shown in Fig. 3.
6. Check the finished assembly for straightness. No part of the assembly should be more than .004" out of straight.

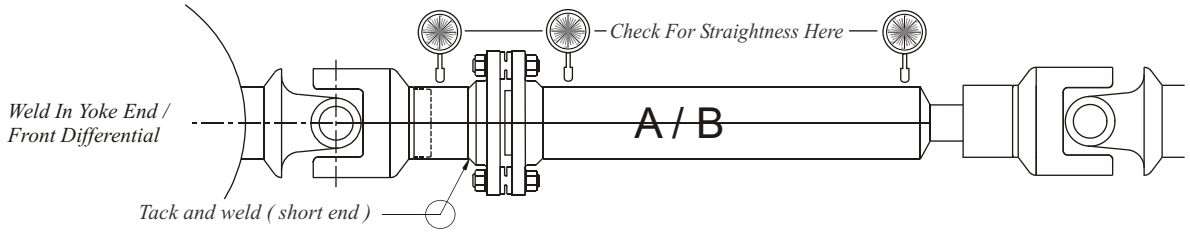


Fig. 3

7. Balance to within .2 oz / in on Both Ends of the assembly.

Welding Procedure for Power Train Saver Installation

Preparation of Base Material

All loose or thick scale, rust, moisture, grease, paint or other foreign material that would prevent proper welding or produce objectionable fumes shall be removed to within 2" of weld location.
The installation area shall be prepared by machining the tube ends square to remove any smeared metal and / or small tears that may be present.

Preheat

Preheating of the Power Train Saver unit is not necessary and should not be done. Weld at room temperature (65°F / 20°C)
The driveline tube can be preheated if needed.

Welder Settings

All welders are different, some may have to be adjusted higher or lower to produce the same amperage. The information below is average settings.
Voltage: 19 - 21
Amperage: 195 - 200

Weld Procedure

The welding process will be flux cored arc welding (FCAW) process, semi-automatic using an E4801 T-9 CH electrode with a 75/25% shielding gas. Use only stringer beads with a radial direction of travel. The driveline should be mounted on rollers and rotated to maintain a flat or horizontal welding position with a controlled rate of weld deposit.

- Slag or flux remaining after a pass, shall be removed before applying the next pass. Similarly cracks or blowholes that appear on the surface of any pass shall be removed before depositing the next pass.
- Care must be used to prevent the containment or trapping of slag, the formation of voids or root porosity.
- Weld geometry must be free from undercut, cold laps, poor transitions and consistent with acceptable weld profiles Figure 5-2 and Clause 5.9.

Cooling of Driveline

The best method is to air cool welds slowly at room temperature (65°F / 20°C). Do not rush the cooling process by quenching welds with coolant or water. This can cause stress cracks not noticeable to the eye.

Torque Fuse® Installation for Drive-Shaft Units

CAUTION!

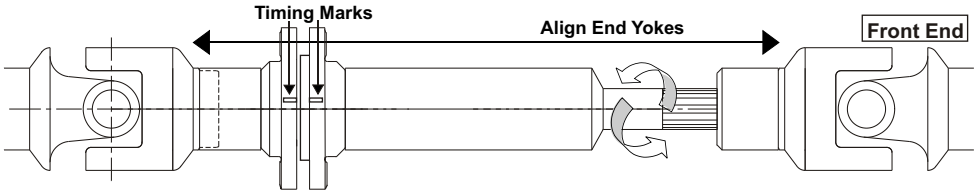
Failure to follow the instructions below could result in premature Torque Fuse breakage and may cause damage to the drive shaft.

Be sure the wheels are blocked, engine is shut off and brakes are locked on before proceeding.
Then with truck / equipment in gear loosen nuts on each of the torque fuses until they clear the recess in which they sit; remove the broken torque fuses from the slots.

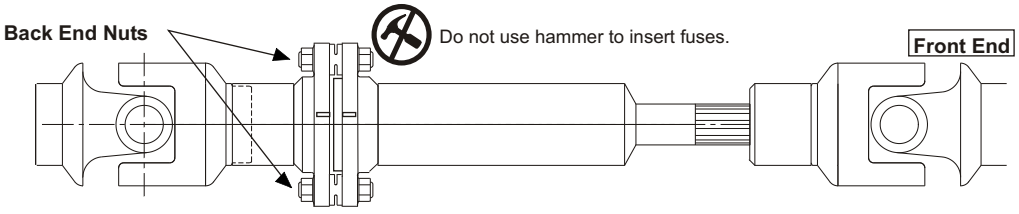
Line up timing marks on the Power Train Saver flanges. Install torque fuses one at a time. Tighten the back end nuts only as you are installing. After all three torque fuses are in place, tighten the front end nuts.
Then all torque fuses must be torqued down to specifications as follows:

4" Weld In Unit: 80 Ft/Lbs
6" Weld In Unit: 140 Ft/Lbs
8" Weld In Unit: 220 Ft/Lbs

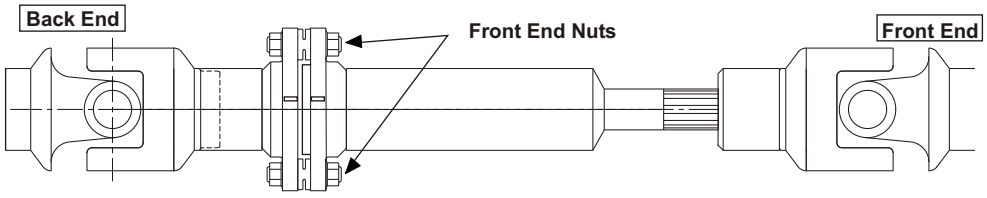
1. Turn the front of the drive shaft to **Line Up The Timing Marks** on the Power Train Saver flanges. **Also, End Yokes Must Be Aligned** as shown below.



2. Install Torque Fuses one at a time. **Tighten The Back End Nuts Only As You Are Installing Them**.



3. **Tighten the front end nuts. Then torque down all fuse nuts to specifications listed above.**



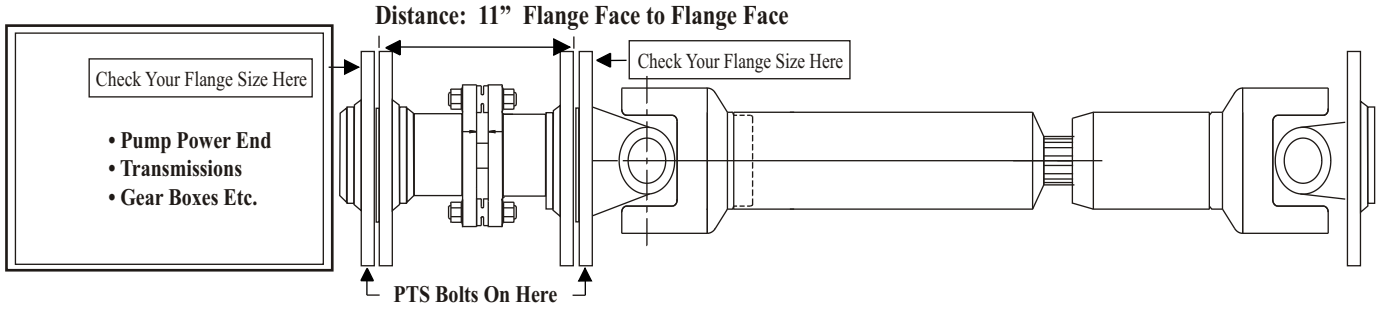
All Torque Fuses are Tensile Tested, Durable & Accurate
They are stamped on one end with a letter or number to identify the force in which they shear.

Part Numbers for 6” Industrial Flange Units

Torque Capacities from 2,000 - 8,500 ft/lbs

Flange locators automatically come male / female unless otherwise indicated.
Power Train Savers will custom build to adapt to any flange configuration.

PTS Part #	*Description*
DIN100LT-11	11” flange face to flange face Power Train Saver assembly with DIN 100 flanges on both ends
DIN120LT-11	11” flange face to flange face Power Train Saver assembly with DIN 120 flanges on both ends
DIN150LT-11	11” flange face to flange face Power Train Saver assembly with DIN 150 flanges on both ends
SP1310LT-11	11” flange face to flange face Power Train Saver assembly with Spicer 1310 flanges on both ends
SP1410LT-11	11” flange face to flange face Power Train Saver assembly with Spicer 1410 flanges on both ends
SP1550LT-11	11” flange face to flange face Power Train Saver assembly with Spicer 1550 flanges on both ends
SP1610LT-11	11” flange face to flange face Power Train Saver assembly with Spicer 1610 flanges on both ends
SP1810LT-11	11” flange face to flange face Power Train Saver assembly with Spicer 1810 flanges on both ends



Torque Fuses come in sets of three.

Torque Fuse Part #	*Torque Fuse ID*	*Torque Fuse Part #*	*Torque Fuse ID*
0020	**0** *2000 Ft/lbs*	**0060**	**8** *6000 Ft/lbs*
0025	**1** *2500 Ft/lbs*	**0065**	**9** *6500 Ft/lbs*
0030	**2** *3000 Ft/lbs*	**0070**	**10** *7000 Ft/lbs*
0035	**3** *3500 Ft/lbs*	**0075**	**11** *7500 Ft/lbs*
0040	**4** *4000 Ft/lbs*	**0080**	**12** *8000 Ft/lbs*
0045	**5** *4500 Ft/lbs*	**0085**	**13** *8500 Ft/lbs*
0050	**6** *5000 Ft/lbs*		
0055	**7** *55000 Ft/lbs*		

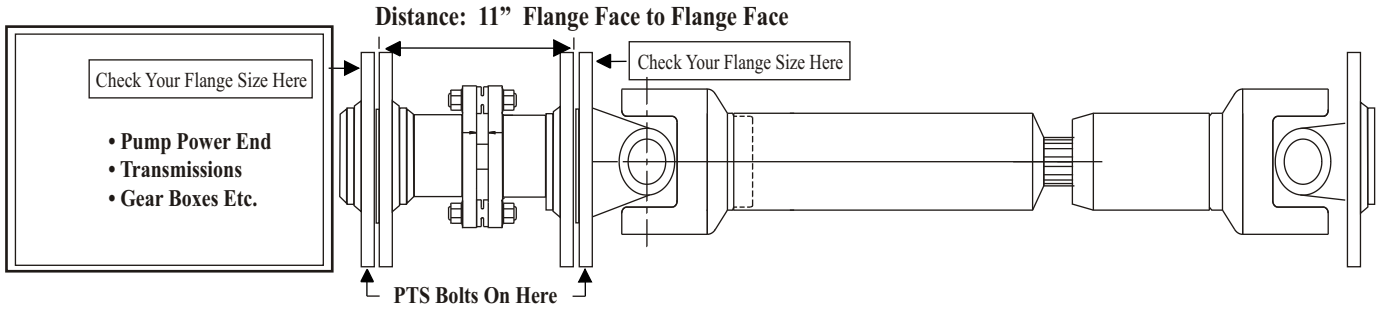
The Torque Fuses are Engineered, Tensile Tested, Accurate, and Durable.
They are stamped with a number to identify the force in which they shear.

Part Numbers for 8” Industrial Flange Units

Torque Capacities from 5,500 - 25,500 ft/lbs

Flange locators automatically come male / female unless otherwise indicated.
Power Train Savers will custom build to adapt to any flange configuration.

PTS Part #	*Description*
DIN150-11	11” flange face to flange face Power Train Saver assembly with DIN 150 flanges on both ends
DIN180-11	11” flange face to flange face Power Train Saver assembly with DIN 180 flanges on both ends
DIN225-11	11” flange face to flange face Power Train Saver assembly with DIN 225 flanges on both ends.
DIN250-11	11” flange face to flange face Power Train Saver assembly with DIN 250 flanges on both ends.
DIN285-11	11” flange face to flange face Power Train Saver assembly with DIN 285 flanges on both ends
28511-1950	11” flange face to flange face PTS assembly with DIN 285 flange on one end & Spicer 1950 flange on the other
SP1610-11	11” flange face to flange face Power Train Saver assembly with Spicer 1610 flanges on both ends
SP1710-11	11” flange face to flange face Power Train Saver assembly with Spicer 1710 flanges on both ends
SP1810-11	11” flange face to flange face Power Train Saver assembly with Spicer 1810 flanges on both ends
SP1880-11	11” flange face to flange face Power Train Saver assembly with Spicer 1880 flanges on both ends
SP1910-11	11” flange face to flange face Power Train Saver assembly with Spicer 1910 flanges on both ends
SP1950-11	11” flange face to flange face Power Train Saver assembly with Spicer 1950 flanges on both ends



Torque Fuses come in sets of three.

Torque Fuse Part #	*Torque Fuse ID*	*Torque Fuse Part #*	*Torque Fuse ID*
1005	**F** *5500 Ft/lbs*	**1016**	**Q** *16500 Ft/lbs*
1006	**G** *6500 Ft/lbs*	**1017**	**R** *17500 Ft/lbs*
1007	**H** *7500 Ft/lbs*	**1018**	**S** *18500 Ft/lbs*
1008	**I** *8500 Ft/lbs*	**1019**	**T** *19500 Ft/lbs*
1009	**J** *9500 Ft/lbs*	**1020**	**U** *20500 Ft/lbs*
1010	**K** *10500 Ft/lbs*	**1021**	**V** *21500 Ft/lbs*
1011	**L** *11500 Ft/lbs*	**1022**	**W** *22500 Ft/lbs*
1012	**M** *12500 Ft/lbs*	**1023**	**X** *23500 Ft/lbs*
1013	**N** *13500 Ft/lbs*	**1024**	**Y** *24500 Ft/lbs*
1014	**O** *14500 Ft/lbs*	**1025**	**Z** *25500 Ft/lbs*
1015	**P** *15500 Ft/lbs*		

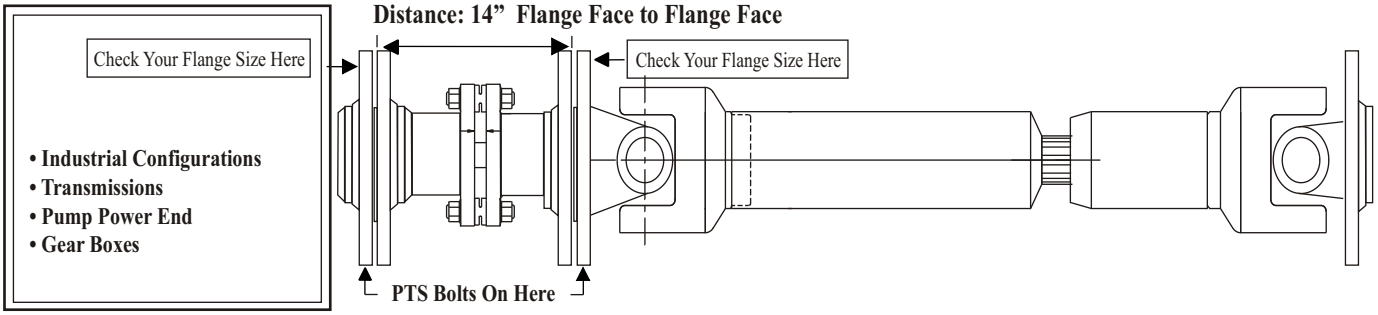
The Torque Fuses are Engineered, Tensile Tested, Accurate, and Durable.
They are stamped with a letter to identify the force in which they shear.

Part Numbers for 10” Industrial Flange Units

Torque Capacities from 20,000 - 60,000 ft/lbs

Flange locators automatically come male / female unless otherwise indicated.
Power Train Savers will custom build to adapt to any flange configuration.

PTS Part #	*Description*
4SP1950-14	14” flange face to flange face Power Train Saver assembly with Spicer 1950 flanges on both ends.
4SP2050-14	14” flange face to flange face Power Train Saver assembly with Spicer 2050 flanges on both ends.
4SP2150-14	14” flange face to flange face Power Train Saver assembly with Spicer 2150 flanges on both ends.
4DIN285-14	14” flange face to flange face Power Train Saver assembly with DIN 285 flanges on both ends.
4DIN315-14	14” flange face to flange face Power Train Saver assembly with DIN 315 flanges on both ends.
4DIN350-14	14” flange face to flange face Power Train Saver assembly with DIN 350 flanges on both ends.



Torque Fuses come in sets of three.

Torque Fuse Part #	*Torque Fuse ID*	*Torque Fuse Part #*	*Torque Fuse ID*
4020	**4F** *20000 Ft/lbs*	**4042**	**4Q** *42000 Ft/lbs*
4022	**4G** *22000 Ft/lbs*	**4044**	**4R** *44000 Ft/lbs*
4024	**4H** *24000 Ft/lbs*	**4046**	**4S** *46000 Ft/lbs*
4026	**4I** *26000 Ft/lbs*	**4048**	**4T** *48000 Ft/lbs*
4028	**4J** *28000 Ft/lbs*	**4050**	**4U** *50000 Ft/lbs*
4030	**4K** *30000 Ft/lbs*	**4052**	**4V** *52000 Ft/lbs*
4032	**4L** *32000 Ft/lbs*	**4054**	**4W** *54000 Ft/lbs*
4034	**4M** *34000 Ft/lbs*	**4056**	**4X** *56000 Ft/lbs*
4036	**4N** *36000 Ft/lbs*	**4058**	**4Y** *58000 Ft/lbs*
4038	**4O** *38000 Ft/lbs*	**4060**	**4Z** *60000 Ft/lbs*
4040	**4P** *40000 Ft/lbs*		

The Torque Fuses are Engineered, Tensile Tested, Accurate, and Durable.
They are stamped with a letter and number to identify the force in which they shear.

Torque Fuse® Installation for Industrial Flange Units

CAUTION!

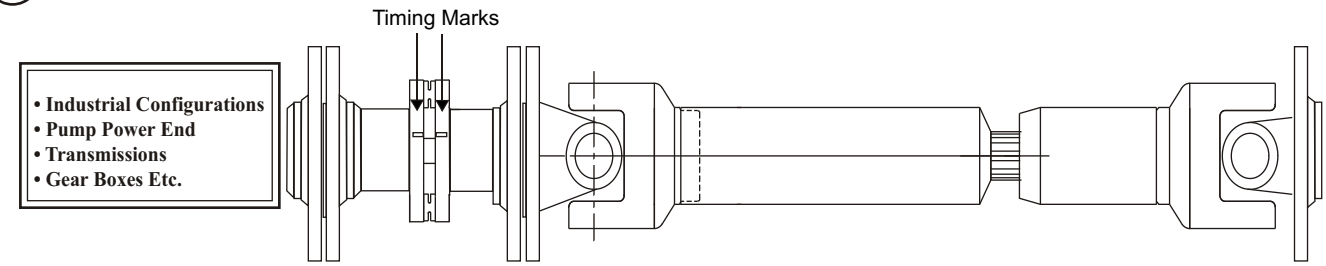
Failure to follow the instructions below could result in premature Torque Fuse breakage and may cause damage to the drive shaft.

Be sure equipment is shut down and not turning before removing or installing Torque Fuses®. Then with equipment in gear loosen nuts on each of the torque fuses until they clear the recess in which they sit; remove the broken torque fuses from the slots.

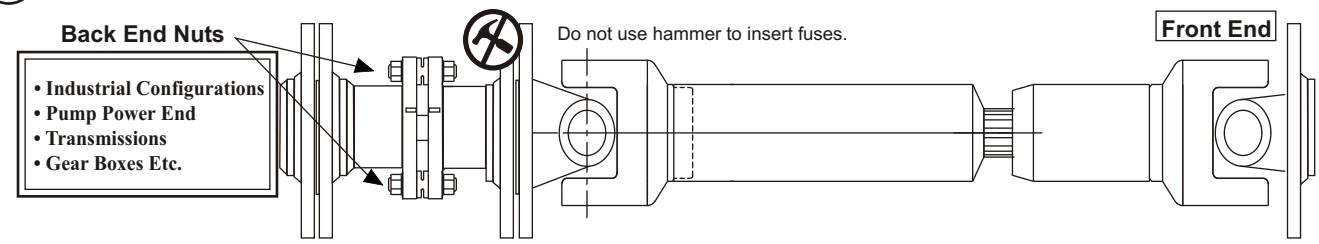
Line up timing marks on the Power Train Saver flanges. Install torque fuses one at a time. Tighten the back end nuts only as you are installing. After all three torque fuses are in place, tighten the front end nuts.
Then all torque fuses must be torqued down to specifications as follows:

6" Industrial Flange Unit: 140 Ft/Lbs
8" Industrial Flange Unit: 220 Ft/Lbs
10" Industrial Flange Unit: 450 Ft/Lbs

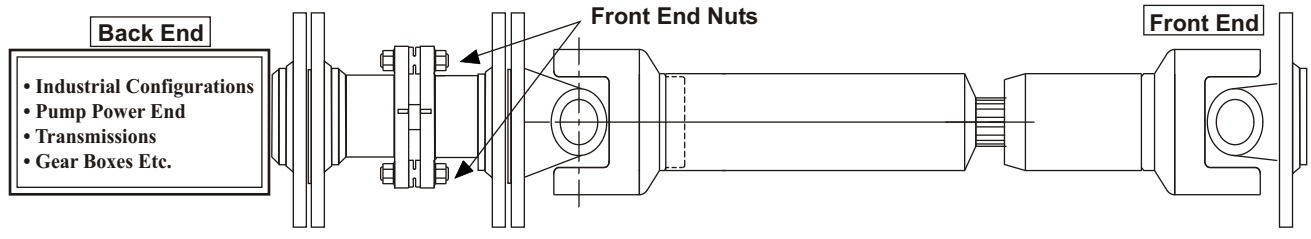
1. **Turn the driveshaft to Line up the timing marks on the Power Train Saver flanges.**



2. **Install torque fuses one at a time. Tighten the back end nuts only as you go.**



3. **Tighten the front end nuts. Then torque down all fuse nuts to specifications listed above.**



All Torque Fuses are Tensile Tested, Durable & Accurate
They are stamped on one end with a letter or number to identify the force in which they shear.

Industrial Weld-In Bearing Units

Torque Fuse Set-Ups & Options

Torque Capacities from 1,000 - 4,000 ft/lbs

4" Diameter

* Standard Capacity is the recommended starting point for applications. Maximum Recommended Capacity uses driveshaft torque capacity as a protection level target. Minimum Recommended Capacity aims at protecting weaker components such as differentials or gear boxes.

Driveline Series	Tube Size OD / Wall Thickness	Part #	Minimum Recommended Capacity	* Standard Capacity	Maximum Recommended Capacity
			Fuse ID Code and Torque Capacity Options		
1310, 7260, 3R	2.0 x .083	20083B	1E 1500 Ft/lbs	1F 1750 Ft/lbs	1G 2000 Ft/lbs
1310, 1331, 1350, 7260, 3R	2.0 x .120	20120B	1H 2250 Ft/lbs	1I 2500 Ft/lbs	1J 2750 Ft/lbs
1310, 1330, 1350, 7260, 7290, 3R	2.5 x .083	25083B	1J 2750 Ft/lbs	1K 3000 Ft/lbs	1L 3250 Ft/lbs
1410	2.5 x .095	25095B	1K 3000 Ft/lbs	1L 3250 Ft/lbs	1M 3500 Ft/lbs
1310	2.5 X .120	25120B	1O 4000 Ft/lbs	1P 4250 Ft/lbs	1Q 4500 Ft/lbs

Torque Fuses Come In Sets Of Three

Torque Fuse Part #	Torque Fuse ID	Torque Fuse Part #	Torque Fuse ID
1000	1C 1000 Ft/lbs	3000	1K 3000 Ft/lbs
1250	1D 1250 Ft/lbs	3250	1L 3250 Ft/lbs
1500	1E 1500 Ft/lbs	3500	1M 3500 Ft/lbs
1750	1F 1750 Ft/lbs	3750	1N 3750 Ft/lbs
2000	1G 2000 Ft/lbs	4000	1O 4000 Ft/lbs
2250	1H 2250 Ft/lbs	4250	1P 4250 Ft/lbs
2500	1I 2500 Ft/lbs	4500	1Q 4500 Ft/lbs
2750	1J 2750 Ft/lbs	4750	1R 4750 Ft/lbs
		5000	1S 5000 Ft/lbs

The Torque Fuses are Engineered, Tensile Tested, Accurate, and Durable.
They are stamped with a number to identify the force in which they shear.

Industrial Weld-In Bearing Units
Torque Fuse Set-Ups & Options

Torque Capacities from 2,000 - 8,500 ft/lbs

6" Diameter

* Standard Capacity is the recommended starting point for applications. Maximum Recommended Capacity uses driveshaft torque capacity as a protection level target. Minimum Recommended Capacity aims at protecting weaker components such as differentials or gear boxes.

Driveline Series	Tube Size OD / Wall Thickness	Part #	Minimum Recommended Capacity	* Standard Capacity	Maximum Recommended Capacity
			Fuse ID Code and Torque Capacity Options		
1310	3.0 x .083	30083B	3 3500 Ft/lbs	4 4000 Ft/lbs	5 4500 Ft/lbs
1330	3.5 x .083	35083B	4 4000 Ft/lbs	5 4500 Ft/lbs	6 5000 Ft/lbs
1330	4.0 x .083	40083B	4 4000 Ft/lbs	5 4500 Ft/lbs	6 5000 Ft/lbs
1350	3.0 x .083	30083B	3 3500 Ft/lbs	4 4000 Ft/lbs	5 4500 Ft/lbs
1350	3.5 x .083	35083B	4 4000 Ft/lbs	5 4500 Ft/lbs	6 5000 Ft/lbs
1350	4.0 x .083	40083B	4 4000 Ft/lbs	5 4500 Ft/lbs	6 5000 Ft/lbs
1410	3.0 x .083	30083B	3 3500 Ft/lbs	4 4000 Ft/lbs	5 4500 Ft/lbs
1410	3.5 x .083	25083B	6 5000 Ft/lbs	7 5500 Ft/lbs	8 6000 Ft/lbs
1410	4.0 x .083	40083B	6 5000 Ft/lbs	7 5500 Ft/lbs	8 6000 Ft/lbs
1480	3.5 x .083	35083B	7 5500 Ft/lbs	8 6000 Ft/lbs	9 6500 Ft/lbs
1480	4.0 x .083	40083B	8 6000 Ft/lbs	9 6500 Ft/lbs	10 7000 Ft/lbs
1550	3.5 x .095	35095B	10 7000 Ft/lbs	11 7500 Ft/lbs	12 8000 Ft/lbs
1550	4.0 x .083	40083B	10 7000 Ft/lbs	11 7500 Ft/lbs	12 8000 Ft/lbs
1550	4.0 x .095	40095B	10 7000 Ft/lbs	11 7500 Ft/lbs	12 8000 Ft/lbs

Torque Fuses Come In Sets Of Three

Torque Fuse Part #	Torque Fuse ID	Torque Fuse Part #	Torque Fuse ID
0020	0 2000 Ft/lbs	0060	8 6000 Ft/lbs
0025	1 2500 Ft/lbs	0065	9 6500 Ft/lbs
0030	2 3000 Ft/lbs	0070	10 7000 Ft/lbs
0035	3 3500 Ft/lbs	0075	11 7500 Ft/lbs
0040	4 4000 Ft/lbs	0080	12 8000 Ft/lbs
0045	5 4500 Ft/lbs	0085	13 8500 Ft/lbs
0050	6 5000 Ft/lbs		
0055	7 5500 Ft/lbs		

The Torque Fuses are Engineered, Tensile Tested, Accurate, and Durable. They are stamped with a number to identify the force in which they shear.

Industrial Weld-In Bearing Units
Torque Fuse Set-Ups & Options

Torque Capacities from 5,500 - 25,500 ft/lbs

8" Diameter

* Standard Capacity is the recommended starting point for applications. Maximum Recommended Capacity uses driveshaft torque capacity as a protection level target. Minimum Recommended Capacity aims at protecting weaker components such as differentials or gear boxes.

Driveline Series	Tube Size OD / Wall Thickness	Part #	Minimum Recommended Capacity	* Standard Capacity	Maximum Recommended Capacity
			Fuse ID Code and Torque Capacity Options		
1550	4.0 x .095	15095B	F 5500 Ft/lbs	G 6500 Ft/lbs	H 7500 Ft/lbs
1610	3.5 x .134	16134B	H 7500 Ft/lbs	I 8500 Ft/lbs	J 9500 Ft/lbs
1610 & 1710	4.0 x .134	17180B	K 10500 Ft/lbs	L 11500 Ft/lbs	M 12500 Ft/lbs
1710	4.0 x .180	17180B	O 14500 Ft/lbs	P 15500 Ft/lbs	Q 16500 Ft/lbs
1760	4.0 x .180	17180B	P 15500 Ft/lbs	Q 16500 Ft/lbs	R 17500 Ft/lbs
1810	4.5 x .134	18134B	P 15500 Ft/lbs	Q 16500 Ft/lbs	R 17500 Ft/lbs
1810	4.59 x .180	18134B	T 19500 Ft/lbs	U 20500 Ft/lbs	V 21500 Ft/lbs
1810	4.5 x .259	18259B	T 19500 Ft/lbs	U 20500 Ft/lbs	V 21500 Ft/lbs
1880	4.5 x .259	18259B	X 23500 Ft/lbs	T 24500 Ft/lbs	Z 25500 Ft/lbs
*SPL 140	4.21 x .138	SP138B	M 12500 Ft/lbs	N 13500 Ft/lbs	O 14500 Ft/lbs
*SPL 170	4.96 x .120	SP165B	P 15500 Ft/lbs	Q 16500 Ft/lbs	R 17500 Ft/lbs
*SPL 170	4.72 x .197	SP197B	R 17500 Ft/lbs	S 18500 Ft/lbs	T 19500 Ft/lbs
*SPL 250	5.06 x .165	SP165B	U 20500 Ft/lbs	V 21500 Ft/lbs	W 22500 Ft/lbs

Torque Fuses Come In Sets Of Three

Torque Fuse Part #	Torque Fuse ID	Torque Fuse Part #	Torque Fuse ID
1005	F 5500 Ft/lbs	1016	Q 16500 Ft/lbs
1006	G 6500 Ft/lbs	1017	R 17500 Ft/lbs
1007	H 7500 Ft/lbs	1018	S 18500 Ft/lbs
1008	I 8500 Ft/lbs	1019	T 19500 Ft/lbs
1009	J 9500 Ft/lbs	1020	U 20500 Ft/lbs
1010	K 10500 Ft/lbs	1021	V 21500 Ft/lbs
1011	L 11500 Ft/lbs	1022	W 22500 Ft/lbs
1012	M 12500 Ft/lbs	1023	X 23500 Ft/lbs
1013	N 13500 Ft/lbs	1024	Y 24500 Ft/lbs
1014	O 14500 Ft/lbs	1025	Z 25500 Ft/lbs
1015	P 15500 Ft/lbs		

* SPL is a registered trademark of Dana Corporation

The Torque Fuses are Engineered, Tensile Tested, Accurate, and Durable.
They are stamped with a letter to identify the force in which they shear.

Installation Instructions For Weld-In Bearing Units

A Qualified Drive-line Mechanic Must Install The Power Train Saver

1. Cut and discard portion of drive-shaft pertaining to your particular Power Train Saver as shown in Figure 1. Then machine tube ends square.

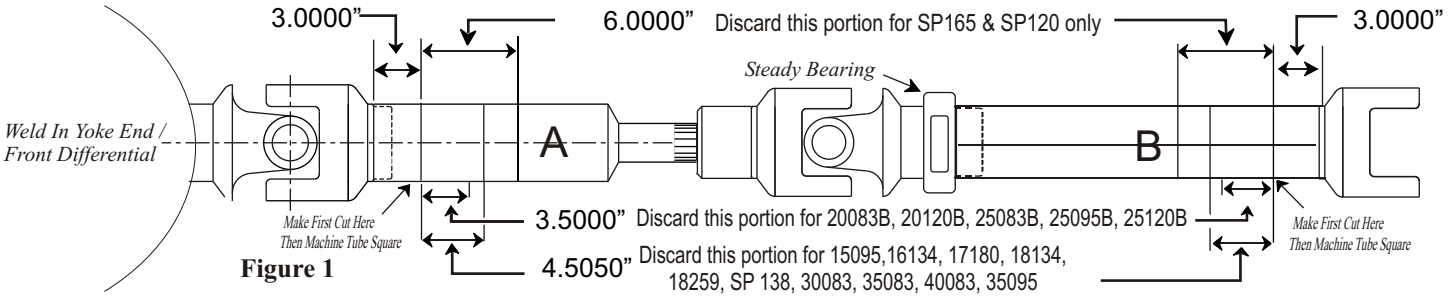


Figure 1

2. Install female half of the Power Train Saver as shown in Fig. 2 and then let cool to 125 degrees before going to No. 3.

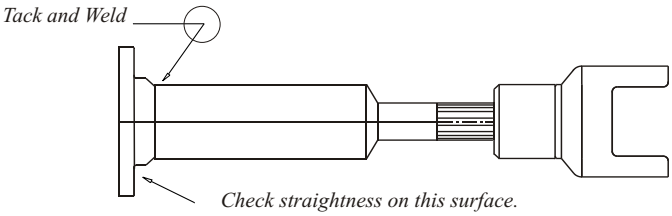


Figure 2

3. After welding, check the straightness of the half Power Train Saver with the drive shaft. The radial run out of the Power Train Saver, measured at the end, **Must be within .002" of True**, see check straightness above.

4. Install male half of PowerTrainSaver into female half and then secure snap ring as shown in Fig.3.

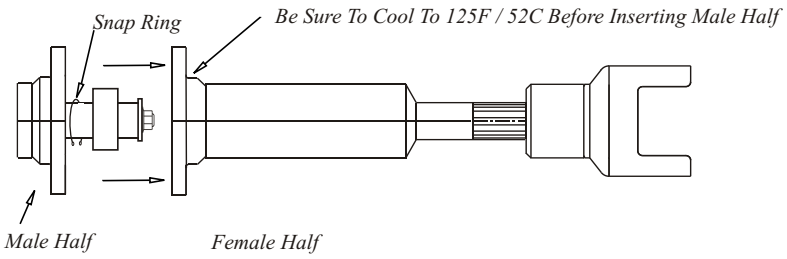


Figure 3

5. Line up timing marks on the PowerTrainSaver flanges.
6. After timing marks are lined up, install torque-fuses and torque down all 6 fuse nuts to 220 ft/lbs. *(See Pg 7)*

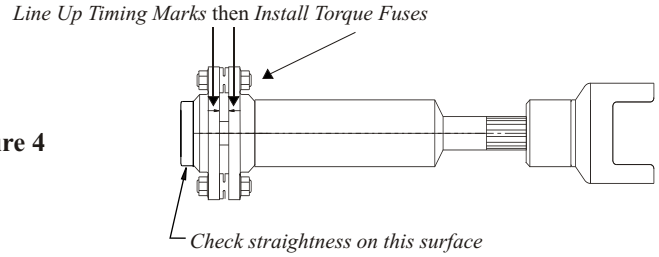


Figure 4

7. Tack and weld the short end of the drive shaft to the Power Train Saver as shown in Fig. 5.
8. Check the finished assembly for straightness. No part of the assembly should be more than .002" off True.

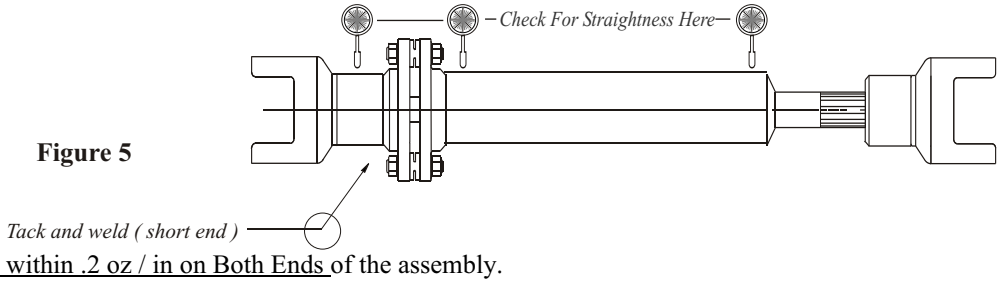


Figure 5

9. Balance to within .2 oz / in on Both Ends of the assembly.

Torque Fuse® Ft/lb Ratings & Part Numbers

From 2,000 - 60,000 Ft/Lbs

Torque Fuses Come In Sets of 3

Torque Fuse Part #	Torque Fuse ID	Torque Fuse Part #	Torque Fuse ID
0020	0 *2000 Ft/lbs*	0060	8 *6000 Ft/lbs*
0025	1 *2500 Ft/lbs*	0065	9 *6500 Ft/lbs*
0030	2 *3000 Ft/lbs*	0070	10 *7000 Ft/lbs*
0035	3 *3500 Ft/lbs*	0075	11 *7500 Ft/lbs*
0040	4 *4000 Ft/lbs*	0080	12 *8000 Ft/lbs*
0045	5 *4500 Ft/lbs*	0085	13 *8500 Ft/lbs*
0050	6 *5000 Ft/lbs*		
0055	7 *55000 Ft/lbs*		

Torque Fuse Part #	Torque Fuse ID	Torque Fuse Part #	Torque Fuse ID
1005	F *5500 Ft/lbs*	1016	Q *16500 Ft/lbs*
1006	G *6500 Ft/lbs*	1017	R *17500 Ft/lbs*
1007	H *7500 Ft/lbs*	1018	S *18500 Ft/lbs*
1008	I *8500 Ft/lbs*	1019	T *19500 Ft/lbs*
1009	J *9500 Ft/lbs*	1020	U *20500 Ft/lbs*
1010	K *10500 Ft/lbs*	1021	V *21500 Ft/lbs*
1011	L *11500 Ft/lbs*	1022	W *22500 Ft/lbs*
1012	M *12500 Ft/lbs*	1023	X *23500 Ft/lbs*
1013	N *13500 Ft/lbs*	1024	Y *24500 Ft/lbs*
1014	O *14500 Ft/lbs*	1025	Z *25500 Ft/lbs*
1015	P *15500 Ft/lbs*		

Torque Fuse Part #	Torque Fuse ID	Torque Fuse Part #	Torque Fuse ID
4020	4F *20000 Ft/lbs*	4042	4Q *42000 Ft/lbs*
4022	4G *22000 Ft/lbs*	4044	4R *44000 Ft/lbs*
4024	4H *24000 Ft/lbs*	4046	4S *46000 Ft/lbs*
4026	4I *26000 Ft/lbs*	4048	4T *48000 Ft/lbs*
4028	4J *28000 Ft/lbs*	4050	4U *50000 Ft/lbs*
4030	4K *30000 Ft/lbs*	4052	4V *52000 Ft/lbs*
4032	4L *32000 Ft/lbs*	4054	4W *54000 Ft/lbs*
4034	4M *34000 Ft/lbs*	4056	4X *56000 Ft/lbs*
4036	4N *36000 Ft/lbs*	4058	4Y *58000 Ft/lbs*
4038	4O *38000 Ft/lbs*	4060	4Z *60000 Ft/lbs*
4040	4P *40000 Ft/lbs*		

Torque Fuse® Installation

CAUTION!

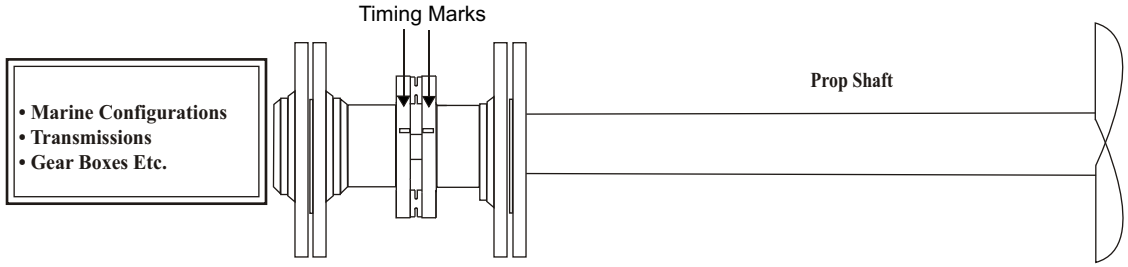
Failure to follow the instructions below could result in premature Torque Fuse breakage.

Be sure the equipment is shut down and not turning before removing or installing Torque Fuses.
Then with equipment shut down, loosen nuts on each of the Torque Fuses until they clear the recess in which they sit; remove the broken torque fuses from the slots.

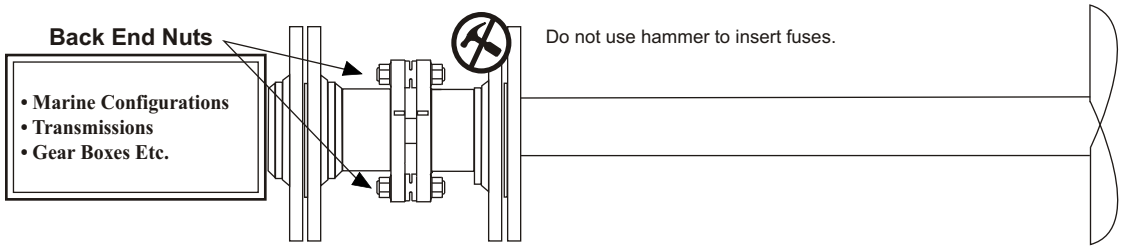
Line up timing marks on the Power Train Saver flanges. Install torque fuses one at a time. Tighten the back end nuts only as you are installing. After all three torque fuses are in place, tighten the front end nuts.
Then all torque fuses must be torqued down to specifications as follows:

6" Marine Flange Unit: 140 Ft/Lbs
8" Marine Flange Unit: 220 Ft/Lbs
10" Marine Flange Unit: 450 Ft/Lbs

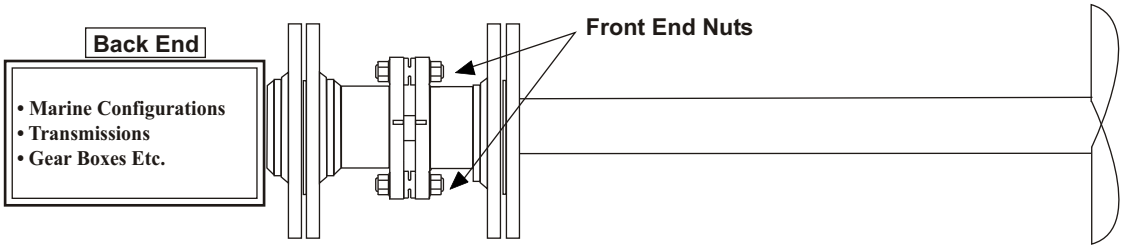
1. **Turn the propshaft to Line up the timing marks on the Power Train Saver flanges.**



2. **Install torque fuses one at a time. Tighten the back end nuts only as you go.**



3. **Tighten the front end nuts. Then torque down all fuse nuts to specifications listed above.**



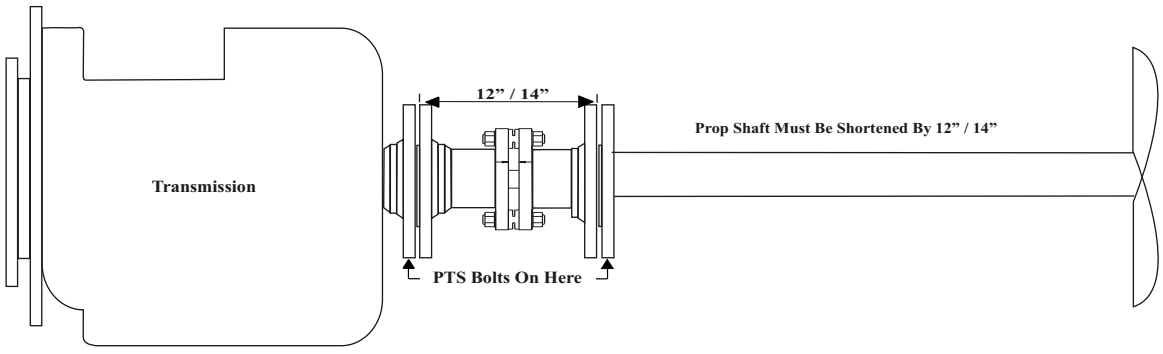
All Torque Fuses are Tensile Tested, Durable & Accurate
They are stamped on one end with a letter or number to identify the force in which they shear.

Twin Disc® Continuous Duty Transmissions

Power Train Savers will custom build to adapt to any flange configuration

Transmission Model#	Output Flange Diameter	Bolt Pattern Diameter	Bolt Hole Diameter	Power Train Savers Part#	Torque Fuse Part#
MG-5065 SC & A	184.15 mm	152.40 mm	19.45 mm - 6	MR184J	0025 "1"
MG-5075 SC & A	184.15 mm	152.40 mm	19.45 mm - 6	MR184J	0025 "1"
MG-5085 SC & A	184.15 mm	152.40 mm	19.45 mm - 6	MR184J	0025 "1"
MG-5082 SC & A	184.15 mm	152.40 mm	19.45 mm - 6	MR184J	0035 "3"
MG-509	184.15 mm	152.40 mm	19.45 mm - 6	MR184J	* 0025 "1" ** 0035 "3"
MG-5091 SC	184.15 mm	152.40 mm	19.45 mm - 6	MR184J	0035 "3"
MG-5091 DC	266.70 mm	222.25 mm	26.19 mm - 8	MR266J	0055 "7"
MG-5090 A	184.15 mm	152.40 mm	19.45 mm - 6	MR184J	0030 "2"
MG-5114 SC	228.60 mm	190.50 mm	22.62 mm - 8	MR228J	0055 "7"
MG-5114 SC-HD	228.60 mm	190.50 mm	22.62 mm - 8	MR228J	0055 "7"
MG-5114 DC	266.70 mm	222.25 mm	26.19 mm - 8	MR266J	0065 "9"
MG-5114 A	228.60 mm	190.50 mm	22.62 mm - 8	MR228J	0055 "7"
MG-514C SC	266.70 mm	222.25 mm	26.19 mm - 8	MR266J	0055 "7"
MG-514C DC	279.40 mm	241.30 mm	26.19 mm - 8	MR279L	1007 "H"
MG-5135 SC	228.60 mm	190.50 mm	22.62 mm - 8	MR228J	0055 "7"
MG-5135 A	228.60 mm	190.50 mm	22.62 mm - 8	MR228J	0055 "7"
MG-516 DC	279.40 mm	228.60 mm	26.19 mm - 8	MR279K	1010 "K"
MG-5170 DC	279.40 mm	228.60 mm	26.19 mm - 8	MR279K	1013 "N"
MG-520-1HP	342.90 mm	292.10 mm	26.19 mm - 12	MR343J	1018 "S"
MG-5202 SC	279.40 mm	228.60 mm	24.50 mm - 8	MR279J	1008 "I"
MG-5222 DC	342.90 mm	292.10 mm	24.50 mm - 12	MR343J	1017 "R"
MG-5203 SC	279.40 mm	228.60 mm	24.50 mm - 8	MR279J	1008 "I"
MG-5204 SC	279.40 mm	228.60 mm	24.50 mm - 8	MR279J	1008 "I"
MG-5301 DC	374.00 mm	325.00 mm	24.50 mm - 14	MR374J	1020 "U"
MG-540	355.60 mm	304.80 mm	26.92 mm - 12	MR355J	*** 1013 "N" **** 1022 "W"
MG-5600	465.00 mm	400.00 mm	30.50 mm - 18	MR465J	4035 "4P"
MG-5600 DR	465.00 mm	400.00 mm	30.50 mm - 18	MR465J	4044 "4Y"
MG-6557 SC	208.00 mm	178.00 mm	18.00 mm - 12	MR208J	1008 "I"
MG-6557 DC	260.00 mm	225.00 mm	20.20 mm - 15	MR260L	1011 "L"
MG-6557 A	208.00 mm	178.00 mm	18.00 mm - 12	MR208J	0085 "13"
MG-6600 DC	320.00 mm	275.00 mm	24.20 mm - 16	MR320J	1013 "N"
MG-6619 SC	247.00 mm	210.00 mm	20.20 mm - 14	MR247J	1009 "J"
MG-6619 A	247.00 mm	210.00 mm	20.20 mm - 14	MR247J	1009 "J"
MG-6848 SC	374.00 mm	325.00 mm	24.50 mm - 12	MR374J	1016 "Q"

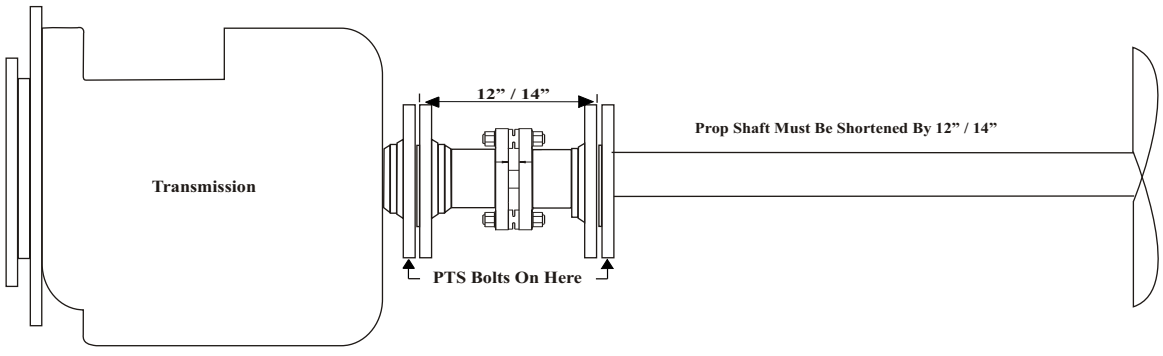
* For gear ratios 1.45 – 3.39
** For gear ratios 3.83 – 4.95
*** For gear ratios 1.71 – 3.91
**** For gear ratios 4.60 – 7.47



Zf Marine® Continuous Duty Transmissions

Power Train Savers will custom build to adapt to any flange configuration

Transmission Model#	Output Flange Diameter	Bolt Pattern Diameter	Bolt Hole Diameter	Power Train Savers Part#	Torque Fuse Part#
ZF 304 A	184 mm	152 mm	16.30 mm - 8	MR184L	0025 “1”
ZF 305	155 mm	125 mm	16.20 mm - 10	MR155J	0025 “1”
ZF 305 A	155 mm	125 mm	16.20 mm - 10	MR155J	0025 “1”
ZF 311	205 mm	170 mm	18.30 mm - 10	MR205J	0030 “2”
ZF 311 A	184 mm	152 mm	16.30 mm - 8	MR184L	0025 “1”
ZF W320	225 mm	196 mm	17.00 mm - 8	MR225J	0050 “6”
ZF 325-1	170 mm	140 mm	16.20 mm - 12	MR170J	0035 “3”
ZF 325-1 A	170 mm	140 mm	16.20 mm - 12	MR170J	0050 “6”
ZF W325	225 mm	196 mm	17.00 mm - 8	MR225J	0050 “6”
ZF 350	205 mm	170 mm	18.30 mm - 10	MR205J	0040 “4”
ZF 350 A & V	205 mm	170 mm	18.30 mm - 10	MR205J	0040 “4”
ZF W350 NR	260 mm	218 mm	20.30 mm - 10	MR260J	0085 ”13”
ZF 500 A	205 mm	170 mm	18.30 mm - 10	MR205J	0045 “5”
ZF 550	205 mm	170 mm	18.30 mm - 10	MR205J	0050 “6”
ZF 550 A & V	205 mm	170 mm	18.30 mm - 10	MR205J	0045 “5”
ZF W650	279 mm	229 mm	24.20 mm - 8	MR279J	1010 “K”
ZF 665	205 mm	170 mm	18.30 mm - 10	MR205J	0055 “7”
ZF 665 A & V	205 mm	170 mm	18.30 mm - 10	MR205J	0055 “7”
ZF 2000	185 mm	156 mm	18.30 mm - 10	MR185J	0065 “9”
ZF 2000 A & V	185 mm	156 mm	18.30 mm - 10	MR185J	0055 “7”
ZF 2050	185 mm	156 mm	18.30 mm - 10	MR185J	0065 “9”
ZF 2050 A & V	185 mm	156 mm	18.30 mm - 10	MR185J	0065 “9”
ZF 2150	185 mm	156 mm	18.30 mm - 10	MR185J	0065 “9”
ZF 2150 A & V	185 mm	156 mm	18.30 mm - 10	MR185J	0065 “9”
ZF 2200	285 mm	245 mm	20.20 mm - 12	MR285J	1007 “H”
ZF 2250	285 mm	245 mm	20.20 mm - 12	MR285J	1008 “I”
ZF 2300	285 mm	245 mm	20.20 mm - 12	MR285J	1009 “J”
ZF 2350	285 mm	245 mm	20.20 mm - 12	MR285J	1010 “K”
ZF 2500	225 mm	190 mm	20.20 mm - 15	MR225L	0075 “11”
ZF W2700	285 mm	245 mm	20.20 mm - 12	MR285J	1012 “M”
ZF W3200	320 mm	270 mm	27.50 mm - 10	MR320L	1015 “P”
ZF W3300	320 mm	270 mm	27.50 mm - 10	MR320L	1013 “N”
ZF W3450	320 mm	270 mm	27.50 mm - 10	MR320L	1015 “P”
ZF W3700	320 mm	270 mm	27.50 mm - 10	MR320L	1016 “Q”
ZF W3900	343 mm	292 mm	24.50 mm - 12	MR343J	1017 “R”
ZF W4400	343 mm	292 mm	24.50 mm - 12	MR343J	1019 “T”
ZF 4540	280 mm	245 mm	22.20 mm - 16	MR280J	1012 “M”
ZF 4600	280 mm	245 mm	22.20 mm - 16	MR280J	1014 “O”
ZF W4610	390 mm	345 mm	24.20 mm - 12	MR390J	4028 “4I”
ZF 4650	280 mm	245 mm	22.20 mm - 16	MR280J	1015 “P”
ZF W5200	390 mm	336 mm	31.00 mm - 10	MR390J	1019 “T”
ZF W5700	350 mm	300 mm	27.50 mm - 8	MR350J	1016 “P”
ZF W6300	390 mm	336 mm	31.00 mm - 10	MR390J	1023 “X”
ZF W7000	390 mm	336 mm	31.00 mm - 10	MR390J	1024 “Y”



Flange Sizes And Specifications

PTS Part #	Flange Dia.	Bolt Circle	Bolt Holes	Locater Dia.	PTS Style
MR155J	155 mm	125 mm	16.20 mm - 10	100.00 mm	6” – 3 fuse
MR170J	170 mm	140 mm	16.20 mm - 12	115.00 mm	6” – 3 fuse
MR184J	184 mm	152 mm	19.45 mm - 6	95.25 mm	6” – 3 fuse
MR184L	184 mm	152 mm	16.30 mm - 8	95.30 mm	6” – 3 fuse
MR185J	185 mm	156 mm	18.30 mm - 10	120.00 mm	6” – 3 fuse
MR205J	205 mm	170 mm	18.30 mm - 10	140.00 mm	6” – 3 fuse
MR208J	208 mm	178 mm	18.00 mm - 12	140.00 mm	6” – 3 fuse
MR225J	225 mm	196 mm	17.00 mm - 8	140.00 mm	6” – 3 fuse
MR225L	225 mm	190 mm	20.20 mm - 15	145.00 mm	6” – 3 fuse
MR228J	228 mm	190 mm	22.62 mm - 6	152.40 mm	6” – 3 fuse
MR247J	247 mm	210 mm	20.20 mm - 14	175.00 mm	8” – 3 fuse
MR260J	260 mm	218 mm	20.30 mm - 10	140.00 mm	6” – 3 fuse
MR260L	260 mm	225 mm	20.20 mm - 15	180.00 mm	8” – 3 fuse
MR266J	266 mm	222 mm	26.19 mm - 8	127.00 mm	6” – 3 fuse
MR279J	279 mm	229 mm	24.20 mm - 8	152.00 mm	8” – 3 fuse
MR279K	279 mm	229 mm	26.19 mm - 8	152.00 mm	8” – 3 fuse
MR279L	279 mm	241 mm	26.19 mm - 8	152.30 mm	8” – 3 fuse
MR280J	280 mm	245 mm	22.20 mm - 16	175.00 mm	8” – 3 fuse
MR285J	285 mm	245 mm	20.20 mm - 12	175.00 mm	8” – 3 fuse
MR320J	320 mm	275 mm	24.20 mm - 16	220.00 mm	8” – 3 fuse
MR320L	320 mm	270 mm	27.50 mm - 10	175.00 mm	8” – 3 fuse
MR343J	343 mm	292 mm	24.50 mm - 12	177.70 mm	8” – 3 fuse
MR350J	350 mm	300 mm	27.50 mm - 8	240.00 mm	8” – 3 fuse
MR355J	355 mm	305 mm	26.92 mm - 12	203.20 mm	8” – 3 fuse
MR374J	374 mm	325 mm	24.50 mm - 12	200.06 mm	8” – 3 fuse
MR390J	390 mm	336 mm	31.00 mm - 10	250.00 mm	10” – 3 fuse
MR465J	465 mm	400 mm	30.50 mm - 18		10” – 3 fuse

Flanges for the 6” – 3 fuse savers range from 155mm to 266mm
Flanges for the 8” – 3 fuse savers range from 228mm to 374mm
Flanges for the 10” – 3 fuse savers range from 390mm to 465mm
6” & 8” Power Train Saver marine units are 12” flange face to flange face
10” Power Train Saver marine units are 14” flange face to flange face

Torque Fuse Troubleshooting

(**A**) Shows a normal shear pattern.

(**B**) Shows what occurs when drive shaft has a vibration caused by:

1. Improper installation of Power Train Saver
   (See Torque Fuse Installation Instructions Page 7 & 11 in Parts Catalogue)
2. Torque Fuses not properly torqued down

(A) Normal Shear Pattern



(B) Vibration Shear Pattern



Warranty

General

Power Train Savers (seller) warrants to the original end user that the Power Train Saver unit is free from defects in materials and workmanship for a period of one year from the date of purchase.

This limited warranty is in lieu of any other warranties, expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose, or otherwise, and of any other obligations or liability on seller's part. This limited warranty does not cover non-defect damage, or damage caused by improper power train saver or torque fuse installation, or on worn or damaged drive trains, operations, or care (including but not limited to) abuse, misuse, or any alterations to this product.

Under no circumstances shall seller be liable for consequential, incidental, or special damages arising in connection with the use, or inability to use this product. Power Train Savers cannot be held responsible if for any reason the drive-train of the vehicle on which the Power Train Saver is installed is damaged. In no event shall seller's liability for breach of warranty, breach of contract, negligence or strict liability exceed the cost of the product covered hereby. No person is authorized to assume for us any other liability in connection with the sale or operation of this product.

The proper operation of this product is dependent on your compliance with the installation instructions provided. We recommend that you have a qualified drive-line shop preform the installation.

Procedure

If, during the limited warranty period, it appears as though this product contains a defect which is covered by this limited warranty, call our main office at *403-654-2800*. Please have the name of the dealer that you purchased the Power Train Saver from as well as proof of purchase containing date of purchase. You will be advised of shipping details, if required. Parts that are confirmed by the seller to be defective and covered by this limited warranty will be repaired or replaced at the seller's sole option and returned at no cost to you.

PowerTrainSavers
BOX 901 VAUXHALL, ALBERTA T0K 2K0
PH: (403) 654-2800 FAX: (403) 654-2811
www.powertrainsavers.com

Printed in Canada