

# sonnax<sup>®</sup>

## POWER TRAIN SAVERS<sup>®</sup>

### PRODUCT CATALOG VOL 3

- Eliminate Damage to Gears & Driveshafts
- Avoid Costly Repairs to Drivetrain Components
- Eliminate Roadside & Repair Shop Downtime



# sonnax<sup>®</sup>

## POWER TRAIN SAVERS<sup>®</sup>

### Stop Axle, Differential & Driveshaft Damage



Power Train Savers are patented drivetrain protection devices which mount into an existing driveshaft. Once installed, these unique devices protect the drivetrain from over-torque damage that can ruin differentials, gears, axles and driveshafts. With a Power Train Saver unit installed, you won't notice a difference in performance until you encounter an over-torque situation. Then, our precisely calibrated Torque Fuses<sup>®</sup> shear before drivetrain damage occurs, while the unit design holds the driveshaft in place.

#### ***Power Train Savers work on all shaft-driven equipment:***

**Trucks** - Light, Medium & Heavy Duty

**Industrial** - Petroleum, Mining, Forestry & Manufacturing

**Marine** - Tug Boats, Ferries & Pleasure Craft

**Recreational Vehicles** - Rock Crawlers, Sand Rails



Torque Fuses<sup>®</sup> range from 2,000 to 35,000 ft-lb of shearing force capacity calibrated to your specific requirements.



Power Train Savers are virtually eliminating over-torque drivetrain repair costs and downtime for individual truck owners, fleets, maintenance managers and their companies.

**A demonstration video and more information  
can be found online at [www.sonnax.com](http://www.sonnax.com)**

Power Train Savers work on a series of Torque Fuses<sup>®</sup> which are engineered to shear at specific torque loads. While the fuses do their work preventing over-torque damage, an internal system within the unit supports the driveshaft, avoiding the consequential damage caused by a broken shaft. When over-torque occurs and the fuses snap, simply replace the three fuse links right on the job site and you are up and running in no time. Units are available to cover a wide variety of driveshaft series, and can easily be matched with Torque Fuses calibrated to your specific requirements.

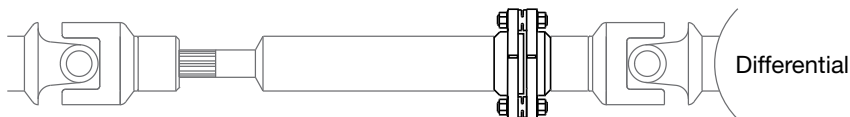
Using a Power Train Saver doesn't just cut down on expensive drivetrain repairs. Consider the collateral damage from a broken driveshaft such as leaking or broken hydraulic lines, damaged fuel tanks, punctured air lines, etc. Then calculate the costly downtime of waiting for a wrecker and making repairs, and the benefits of installing a Power Train Saver quickly add up.

Every Power Train Saver unit requires a Torque Fuse set (consisting of three or more fuse links). Fuse set recommendations are provided for each unit based on the torque capacity of the driveline series and driveshaft tube in which it will be installed. These recommendations allow buyers to choose fuse shear points based on three specific levels of protection. Your Sonnax sales representative can assist you with fuse set recommendations, particularly if differential protection is your primary concern.



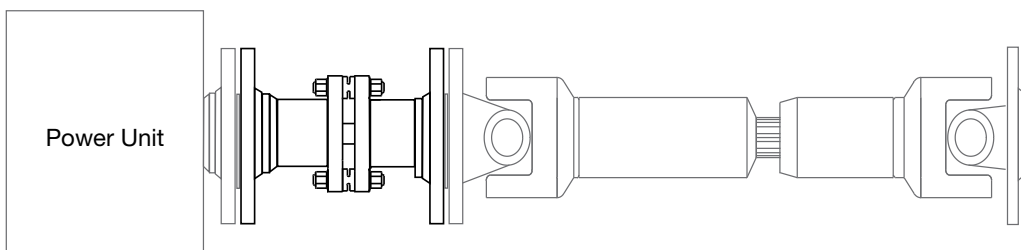
### Heavy Duty Truck Series

The Power Train Saver unit can be installed in any driveline configuration, we recommend ahead of the forward differential.



### Industrial & Marine Flanged Series

Used in industrial driveline applications, utilizing flanged series.





**Fits 2" and 2½" driveshafts.**

Typically used for industrial/agricultural purposes such as pumps or PTO applications, and for enthusiast or recreational vehicle applications (rock crawlers, sand rails, etc.).

**Torque Fuse Recommendations**

Best Protection Level (90%)	Standard Protection Level (95%)	Basic Protection Level (100%)
The recommended starting point and aimed at protecting weaker components such as differentials or gear boxes.	Uses driveshaft torque capacity as a protection-level target.	Closest to the yield point of driveshaft components, while still providing protection.

Driveline Series	Tube Size*	PTS Unit Part No.	Torque Fuse Recommendations									105%+ Caution
			90% Capacity Best Protection Level			95% Capacity Standard Protection Level			100% Capacity Basic Protection Level			
			Capacity†	ID	Part No.	Capacity†	ID	Part No.	Capacity†	ID	Part No.	
1310	2.00 x .083	20083B	1,500	1E	1500	1,750	1F	1750	2,000	1G	2000	<b>D A M A G E  A R E A</b>
1310	2.00 x 1.20	20120B	2,250	1H	2250	2,500	1I	2500	2,750	1J	2750	
1310	2.50 x .083	25083B	2,750	1J	2750	3,000	1K	3000	3,250	1L	3250	
1310	2.50 x .120	25120B	4,000	1O	4000	4,250	1P	4250	4,500	1Q	4500	
1330	2.00 x 1.20	20120B	2,250	1H	2250	2,500	1I	2500	2,750	1J	2750	
1330	2.50 x .083	25083B	2,750	1J	2750	3,000	1K	3000	3,250	1L	3250	
1350	2.00 x 1.20	20120B	2,250	1H	2250	2,500	1I	2500	2,750	1J	2750	
1350	2.50 x .083	25083B	2,750	1J	2750	3,000	1K	3000	3,250	1L	3250	
1410	2.50 x .095	25095B	3,000	1K	3000	3,250	1L	3250	3,500	1M	3500	
7260	2.00 x .083	20083B	1,500	1E	1500	1,750	1F	1750	2,000	1G	2000	
7260	2.00 x 1.20	20120B	2,250	1H	2250	2,500	1I	2500	2,750	1J	2750	
7260	2.50 x .083	25083B	2,750	1J	2750	3,000	1K	3000	3,250	1L	3250	
7290	2.50 x .083	25083B	2,750	1J	2750	3,000	1K	3000	3,250	1L	3250	
3R	2.00 x .083	20083B	1,500	1E	1500	1,750	1F	1750	2,000	1G	2000	
3R	2.00 x 1.20	20120B	2,250	1H	2250	2,500	1I	2500	2,750	1J	2750	
3R	2.50 x .083	25083B	2,750	1J	2750	3,000	1K	3000	3,250	1L	3250	

\*O.D. x Wall Thickness given in inches.

†Torque Capacity given in ft-lb.

**Light Duty Series Torque Fuse Options**

Capacity	ID	Part No.	Capacity	ID	Part No.	Capacity	ID	Part No.	Capacity	ID	Part No.
1,500	1E	1,500	2,500	1I	2500	3,500	1M	3500	4,500	1Q	4500
1,750	1F	1,750	2,750	1J	2750	3,750	1N	3750			
2,000	1G	2,000	3,000	1K	3000	4,000	1O	4000			
2,250	1H	2,250	3,250	1L	3250	4,250	1P	4250			



Torque fuses come in sets of three. Each fuse is stamped with an ID.



# sonnax<sup>®</sup> POWER TRAIN SAVERS Medium Duty Series

Torque Capacity 2,000 – 8,500 ft-lb



**Fits 3", 3 1/2" and 4" driveshafts.**

Typically used on single axle, light- and medium-duty trucks.

## Torque Fuse Recommendations

### Best Protection Level (90%)

The recommended starting point and aimed at protecting weaker components such as differentials or gear boxes.

### Standard Protection Level (95%)

Uses driveshaft torque capacity as a protection-level target.

### Basic Protection Level (100%)

Closest to the yield point of driveshaft components, while still providing protection.

Driveline Series	Tube Size*	PTS Unit Part No.	Torque Fuse Recommendations									105%+ Caution
			90% Capacity Best Protection Level			95% Capacity Standard Protection Level			100% Capacity Basic Protection Level			
			Capacity†	ID	Part No.	Capacity†	ID	Part No.	Capacity†	ID	Part No.	
1310	3.00 x .083	30083	3,500	3	0035	4,000	4	0040	4,500	5	0045	<b>D A M A G E  A R E A</b>
1330	3.50 x .083	35083	4,000	4	0040	4,500	5	0045	5,000	6	0050	
1330	4.00 x .083	40083	4,000	4	0040	4,500	5	0045	5,000	6	0050	
1350	3.00 x .083	30083	3,500	3	0035	4,000	4	0040	4,500	5	0045	
1350	3.50 x .083	35083	4,000	4	0040	4,500	5	0045	5,000	6	0050	
1350	4.00 x .083	40083	4,000	4	0040	4,500	5	0045	5,000	6	0050	
1410	3.00 x .083	30083	3,500	3	0035	4,000	4	0040	4,500	5	0045	
1410	3.50 x .083	35083	5,000	6	0050	5,500	7	0055	6,000	8	0060	
1410	4.00 x .083	40083	5,000	6	0050	5,500	7	0055	6,000	8	0060	
1480	3.50 x .083	35083	5,000	6	0050	5,500	7	0055	6,000	8	0060	
1480	4.00 x .083	40083	6,000	8	0060	6,500	9	0065	7,000	10	0070	
1550	3.50 x .095	35095	5,000	6	0050	5,500	7	0055	6,000	8	0060	
1550	4.00 x .083	40083	5,500	7	0055	6,000	8	0060	6,500	9	0065	
1550	4.00 x .180	40180	Call Sonnax for recommendation.									

\*O.D. x Wall Thickness given in inches.

†Torque Capacity given in ft-lb.

## Medium Duty Series Torque Fuse Options

Capacity	ID	Part No.
2,000	0	0020
2,500	1	0025
3,000	2	0030
3,500	3	0035

Capacity	ID	Part No.
4,000	4	0040
4,500	5	0045
5,000	6	0050
5,500	7	0055

Capacity	ID	Part No.
6,000	8	0060
6,500	9	0065
7,000	10	0070
7,500	11	0075

Capacity	ID	Part No.
8,000	12	0080
8,500	13	0085



Torque fuses come in sets of three. Each fuse is stamped with an ID.



**Fits 3 1/2", 4", 4 1/2" and 5" driveshafts.**

Primarily used on multi-axle, Class 6, 7 and 8 trucks.

## Torque Fuse Recommendations

Best Protection Level (90%)	Standard Protection Level (95%)	Basic Protection Level (100%)
The recommended starting point and aimed at protecting weaker components such as differentials or gear boxes.	Uses driveshaft torque capacity as a protection-level target.	Closest to the yield point of driveshaft components, while still providing protection.

Driveline Series	Tube Size*	PTS Unit Part No.	Torque Fuse Recommendations									105%+ Caution
			90% Capacity Best Protection Level			95% Capacity Standard Protection Level			100% Capacity Basic Protection Level			
			Capacity†	ID	Part No.	Capacity†	ID	Part No.	Capacity†	ID	Part No.	
1550	4.00 x .095	15095	5,500	F	1005	6,500	G	1006	7,500	H	1007	<b>D A M A G E  A R E A</b>
1610	3.50 x .134	16134	7,500	H	1007	8,500	I	1008	9,500	J	1009	
1610	4.00 x .134	17180	10,500	K	1010	11,500	L	1011	12,500	M	1012	
1710	4.00 x .134	17180	10,500	K	1010	11,500	L	1011	12,500	M	1012	
1710	4.00 x .180	17180	14,500	O	1014	15,500	P	1015	16,500	Q	1016	
1760	4.00 x .180	17180	15,500	P	1015	16,500	Q	1016	17,500	R	1017	
1810	4.00 x .134	18134	12,500	M	1012	13,500	N	1013	14,500	O	1014	
1810	4.59 x .180	18134	19,500	T	1019	20,500	U	1020	21,500	V	1021	
1810	4.50 x .259	18259	19,500	T	1019	20,500	U	1020	21,500	V	1021	
1880	4.50 x .259	18259	22,500	W	1022	23,500	X	1023	24,500	Y	1024	
SPL140®	4.21 x .138	SP138	12,500	M	1012	13,500	N	1013	14,500	O	1014	
SPL170®	4.96 x .120	SP165	15,500	P	1015	16,500	Q	1016	17,500	R	1017	
SPL170®	4.72 x .197	SP197	17,500	R	1017	18,500	S	1018	19,500	T	1019	
SPL250®	5.06 x .165	SP165	20,500	U	1020	21,500	V	1021	22,500	W	1022	

SPL is a registered trademark of Dana Corporation.

\*O.D. x Wall Thickness given in inches.

†Torque Capacity given in ft-lb.

## Heavy Duty Series Torque Fuse Options

Capacity	ID	Part No.	Capacity	ID	Part No.	Capacity	ID	Part No.	Capacity	ID	Part No.
5,500	F	1005	11,500	L	1011	17,500	R	1017	23,500	X	1023
6,500	G	1006	12,500	M	1012	18,500	S	1018	24,500	Y	1024
7,500	H	1007	13,500	N	1013	19,500	T	1019	25,500	Z	1025
8,500	I	1008	14,500	O	1014	20,500	U	1020			
9,500	J	1009	15,500	P	1015	21,500	V	1021			
10,500	K	1010	16,500	Q	1016	22,500	W	1022			

Torque fuses come in sets of three. Each fuse is stamped with an ID.





The Power Train Savers towing disconnect unit was developed for demanding applications which require not only over-torque protection, but also long-distance towing options. The innovative design of this dual purpose device offers all the great benefits of a Power Train Saver, plus the ability to tow disabled vehicles without having to pull axles or the driveshaft.

## How does the towing disconnect work?

### As an Over-Torque Protection Device:

Just like all Power Train Savers, when an over-torque situation occurs, the calibrated torque fuses in this unit shear to protect the drivetrain from damage. New fuses can be easily installed on-site to get the vehicle back on the road quickly.

### As a Towing Device:

If a mechanical issue occurs with a truck and towing is required, the torque fuses in this Power Train Saver unit are easily removed, allowing the vehicle to be towed without pulling a driveshaft or axle.

- Eliminates crawling under the truck to remove a heavy driveshaft.
- There is no chance for potential contaminants in the differential if axles are pulled.
- Ends the loss and mess of gear oil or other fluids in the streets.



*Call today to speak with a Sonnax representative about custom-build options designed to fit your application.*

## Going Green with Power Train Savers

The Power Train Savers towing disconnect unit is a part of the movement towards developing more fuel-efficient truck fleets. Sonnax developed the device in conjunction with truck manufacturers, large city municipalities and pioneers in hydraulic hybrids who are working together to build hydraulic hybrid trucks. We are proud to offer a product which supports these initiatives and leads the industry in robust drivetrain protection.



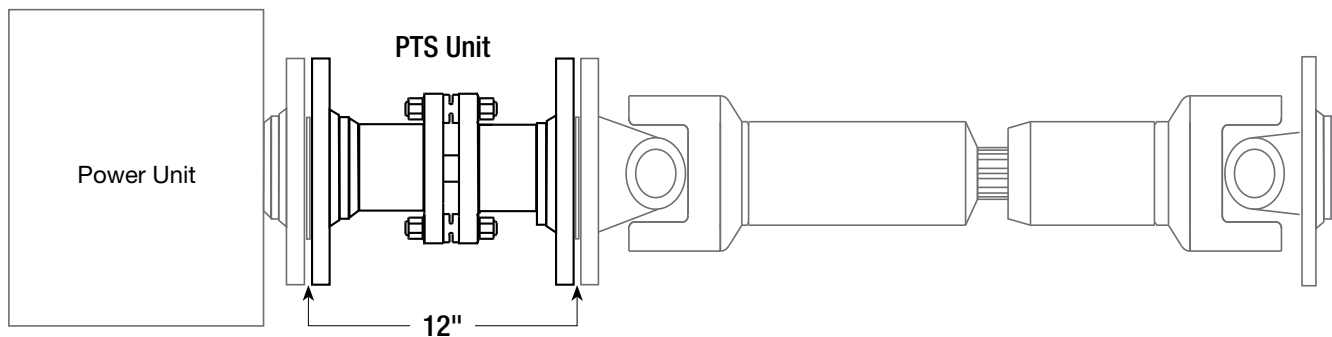
# sonnax<sup>®</sup> POWER TRAIN SAVERS Industrial Series

Torque Capacity 5,500 – 35,000+ ft-lb



The Power Train Savers industrial series is designed to withstand constant use in extreme environments and protect power driven units and operators from the dangers of accidental over-torque. Each self-contained unit is custom built to specific torque and driveline requirements, and the variety of torque fuse options allow for fine-tuning to optimal torque range. If over-torque occurs, the calibrated torque fuses snap safely and cleanly to stop the shaft. Getting equipment back up and working is as simple as replacing the fuses – there are no damaged parts to repair or clean up.

- Completely self-contained unit can be used in any shaft-driven application.
- Bolt-in protection uses standardized DIN and SAE flange configurations.
- Torque capacities range from 5,500 ft-lb to 35,000 ft-lb (higher torque ratings also available).
- Standard flange configurations go from 155mm to 465mm.



Shown above is a Power Train Saver industrial unit installed in the Snow Wolf SB-1050, a high-speed, high-capacity airport snow blower by Airport Technologies in Manitoba, Canada.



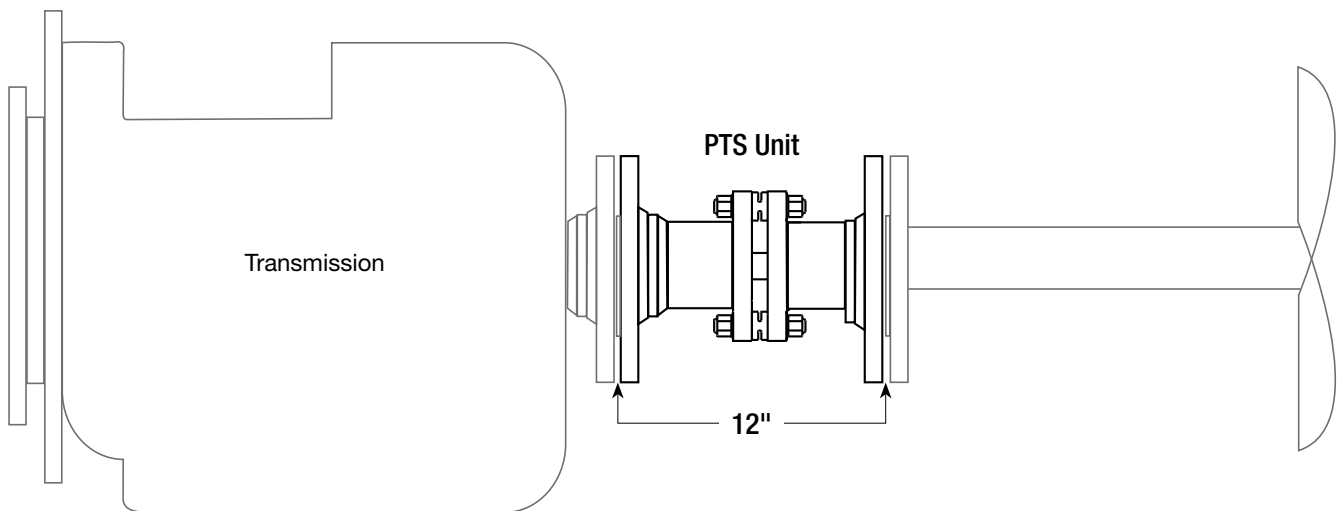
# sonnax<sup>®</sup> Marine Series

Torque Capacity 5,500 – 35,000+ ft-lb



Power Train Saver units for marine applications bolt directly into the output gear flange. In situations of prop bottoming, debris or cable contact, the calibrated torque fuses shear to immediately stop the prop, preventing damage to the prop as well as the transmission, gear and drivelines. These specially designed devices excel at protecting ferries, luxury boats, tug and “push” boats operating in extreme river and ocean environments.

- Installs between the transmission and prop shaft on marine powertrains.
- Torque capacities range from 5,000 ft-lb to 35,000 ft-lb (higher torque ratings also available).
- Standard marine flange configurations go from 155mm to 465mm.



This worksheet aids in both the selection of the Power Train Saver unit in a specific driveshaft, and the torque fuse selection. Critical information is noted with an asterisk.

This form is available for download in the Power Train Saver section of the Sonnax website.

**\*Rear Drive Train:**       Tri Axle                       Tandem                       Single Axle

**\*Driveline Series:**       1610                       1710                       1760  
                                   1810                       SPL250®                       Other \_\_\_\_\_

**\*Tube Wall Thickness:**       .095"                       .134"                       .165"  
                                   .180"                       .259"                       Other \_\_\_\_\_"

**\*Tube Outside Diameter:**  3.50"                       4.00"                       4.50"  
                                   4.21"                       5.06"                       Other \_\_\_\_\_"

**Rear Gear Ratio:**                      \_\_\_\_\_

**Rear Diff. Size:**                       23,000 lb.                       40,000 lb.                       46,000 lb.  
                                   52,000 lb.                       65,000 lb.                       Other \_\_\_\_\_ lb.

**Steering Drive Axle:**                       Yes       No

**Auxiliary Transmission:**                       Yes       No

**Gross Vehicle Weight:**                      \_\_\_\_\_ lb.

**Typical Weight Hauled:**                      \_\_\_\_\_ lb.

**What parts are currently breaking?**                       Axles                       Differentials  
                                   U-Joints                       Tubes                       Other \_\_\_\_\_

**Customer Name:** \_\_\_\_\_

**Customer Phone:** \_\_\_\_\_                      **Customer E-mail:** \_\_\_\_\_

**Notes:** \_\_\_\_\_  
 \_\_\_\_\_

\* Critical information

# sonnax®

## Behind every Power Train Saver is the Sonnax reputation for the highest quality products for the automotive aftermarket.

- Innovative transmission parts for restoring valve bodies to standards meeting or exceeding OE
- Heavy-duty and high performance products for transmissions and torque converters
- Full-line of high-quality torque converter components
- Advanced driveshaft protection devices
- Superior aluminum driveline components

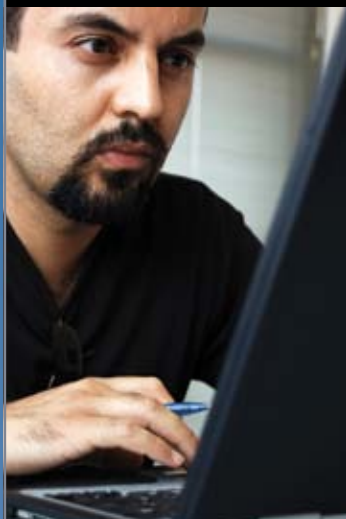
### Driveline

Sonnax designs and manufactures the industry's best aluminum driveline components. We offer OE-quality Alcoa® tubing ordered to our specifications, along with 6061-T6 aluminum yokes and repair bushings which are precision machined by skilled craftsmen at our Vermont manufacturing facility. Call us or visit [www.sonnax.com](http://www.sonnax.com) anytime to request a Driveline catalog.



### Allison®

Sonnax offers a continually expanding line of Allison transmission and converter parts, including governors, ground sleeves, oil pans, converter pistons and enhanced billet covers. Our latest product additions include pump bushings, speed sensors and ground sleeves for PTO and non-PTO units. Browse our extensive selection of Allison parts online at [www.sonnax.com](http://www.sonnax.com) or **contact a Sonnax sales representative today for more information.**



### Sonnax ONLINE

There's no better place to find the information and parts you need from Sonnax than our industry-leading website. [www.sonnax.com](http://www.sonnax.com) is your best resource for all our latest products, installation guides, technical articles, and much more.

- Watch Power Train Savers in ACTION! Visit [www.sonnax.com](http://www.sonnax.com) to watch our demonstration video. You'll see Power Train Savers fuses at work protecting driveshafts, plus how quickly and easily torque fuses install on-site for fast, economical repairs.
- E-mail us anytime using our handy online contact form to get in touch with a sales representative, order catalogs or request tech support.



*Sonnax is an Employee-Owned Company*

Sonnax is a diversified supplier of specialized drivetrain products to the automotive and commercial vehicle industries, and to industrial sectors utilizing drivetrain technology. We design, manufacture, test and distribute a wide variety of components used to remanufacture torque converters, to rebuild automatic transmissions, and to protect driveshafts and associated components from over-torque damage.

### **Warranty Policy**

Sonnax warrants to the purchaser that each part manufactured or supplied by Sonnax will be free from defects in material or in factory workmanship. The warranty period shall extend for six (6) months from the date of sale. Sonnax must receive all warranty claims before the end of the warranty period.

If Sonnax determines that the part is defective in material or in factory workmanship, Sonnax will, at its option, repair or replace the defective part, or issue an account credit for the purchase price. This remedy is Sonnax's sole liability and the sole remedy provided by Sonnax for any breach of warranty.

All warranty returns must be pre-approved. Please contact Sonnax if you have a part to be returned under this warranty.

This Warranty will not cover: Removal and replacement labor costs; Loss of time, inconvenience or other consequential damage; Any Sonnax part that has been:

Subject to misuse, negligence; alteration or improper maintenance; Improperly installed in the judgment of Sonnax, so as to adversely affect its performance and reliability.

This warranty is the only warranty applicable to parts manufactured or supplied by Sonnax, and is expressly in lieu of any other warranties, expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose. Any representations or descriptions in brochures, ads or catalogs are approximate only and will not create any warranty or other obligation by Sonnax. There are no warranties which extend beyond the description on the face hereof.

Sonnax does not authorize any person to create for it any other obligation or liability in connection with these parts. Sonnax shall not be liable for any incidental or consequential damage, lost profits, lost savings or punitive damages resulting from any breach of warranty.

### **Power Train Savers® Catalog Vol. 3**

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