



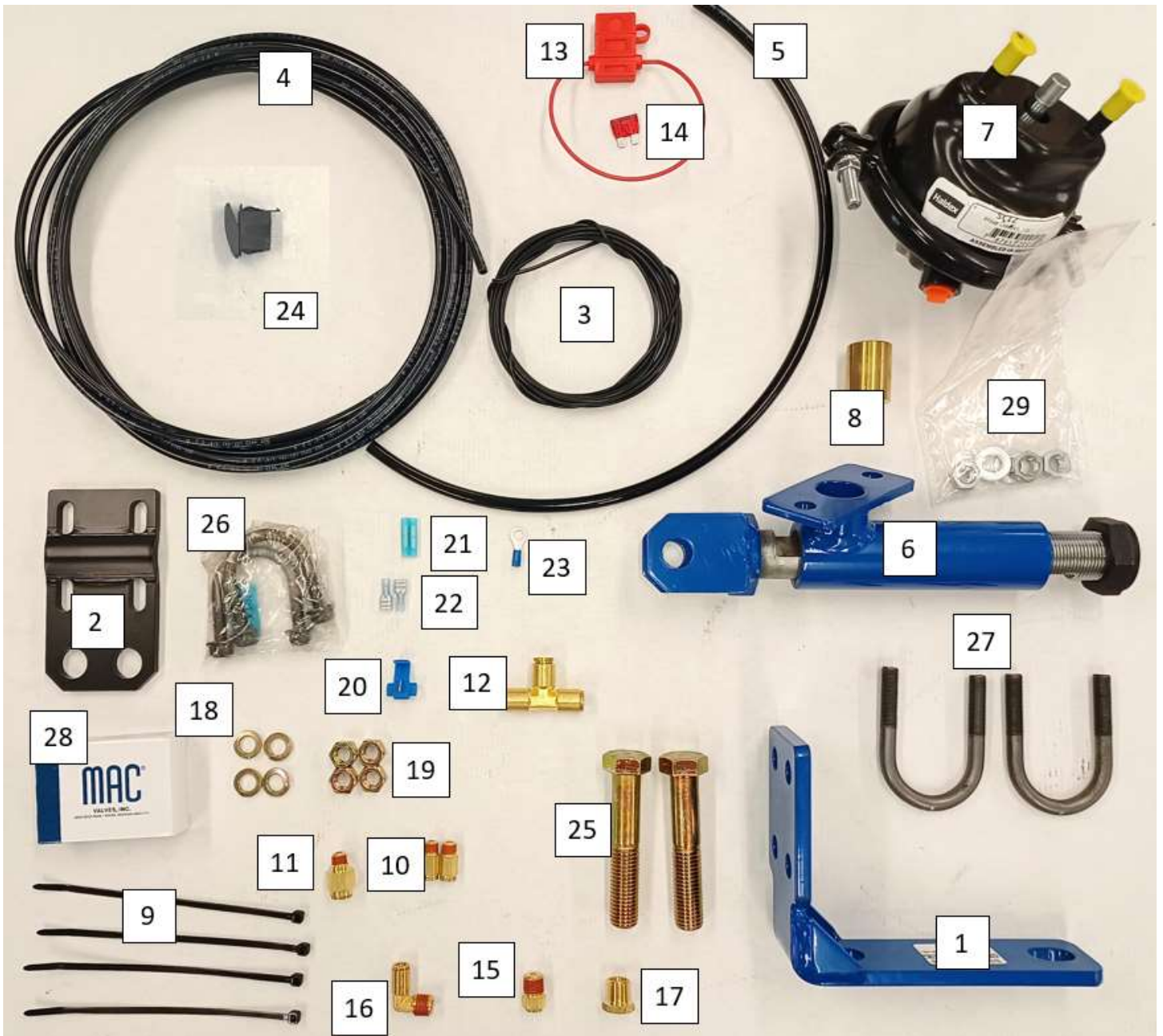
## Installation Instructions for: SS200 F/L Trim Unit

**Note: Must have 6" of clearance between fuel tank and tie rod for this part to fit. Be sure to check at ride height and with air drained**

**Warning: Never service air canister/lines without draining air pressure first.**

This product is intended for **Freightliner XC Chassis with Solid I-Beam Front Suspension & Air Ride** and allows the Safe-T-Plus hydraulic steering control unit to be installed with on-the-fly control of the center point. The Trim Unit bolts to the 41-230 Safe-T-Plus device (**sold separately**) and the motorhome's front axle (taking the place of the F-143K3 Safe-T-Plus mounting kit) allowing the driver to adjust the steering center point at the flip of a switch.

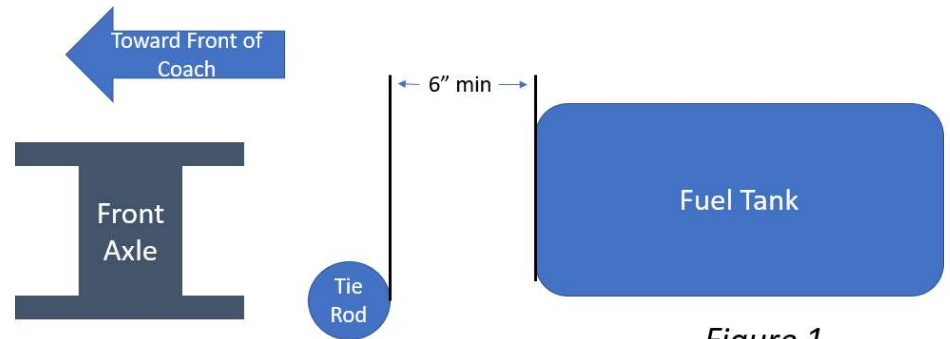
Item Number	Item Description	Quantity
1	SS200-55-143-6 Axle Mount Bracket	1
2	206 Tie Rod Bracket	1
3	14 AWG Black Wire	15 ft.
4	¼" Air Line	20 ft.
5	3/8" Air Line	2 ft.
6	Sleeve/Bolt Assembly	1
7	Air Chamber	1
8	Brass Plunger	1
9	6" Zip Ties	4
10	1/8" NPT x ¼" Tube Straight Fitting	2
11	1/8" NPT x 3/8" Tube Straight Fitting	1
12	Union Tee 3/8"	1
13	Fuse Holder	1
14	10A Fuse	1
15	Adapter ¼" Air Hose to ¼" NPT Straight	1
16	Adapter ¼" Air Hose to ¼" NPT Elbow	1
17	3/8" to ¼" NPT Adapter	1
18	7/16" Lock Washer	4
19	7/16" Fine Thread Nuts	4
20	Blue Scotch Lock Connector – 16-14 AWG	1
21	Blue Nylon Butt Connector – 16-14 AWG	2
22	¼" Spade Connector 16-14 AWG	2
23	¼" Stud Ring Terminal 16-14 AWG	1
24	Rocker Switch	1
25	¾"-10x4" Bolts, Hex Head Grade 8	2
26	3/8"x1-3/4" U-bolts with Flange Nuts	2
27	7/16"x1-3/4" Round Top U-bolts	2
28	Air Solenoid Valve	1
29	7/16" Coarse Lock Nut and Washer	2



### Preparation

Move the coach to a level, flat surface, with the wheels pointed straight ahead. It may be necessary to use a pit or ramps to gain clearance. Be sure to use wheel chocks.

**Important:** Before beginning installation, measure distance from back of tie rod to front of fuel tank, as shown in **Figure 1** below (viewed from drivers' side of coach). Measure at ride height and with air dumped. There must be at least 6" for Trim Unit to fit.



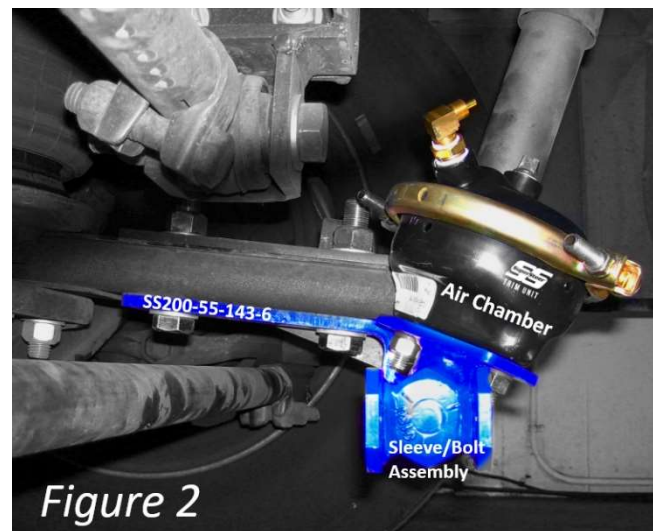
*Figure 1*

### Axle Mount Assembly

#### Installation

On passenger side, remove the two 3/4" bolts that hold the shock mount to the half leaf just above the tie rod tube. Install the **SS200-55-143-6 Axle Mount Bracket (Item 1)** with the two new 3/4" x 4" bolts from the bottom side with flat washers and reuse the factory nuts. Tighten to 120-150 ft. lbs.

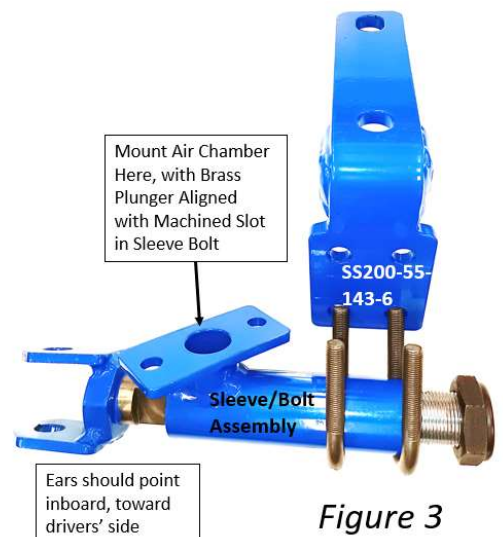
Refer to **Figure 2** for axle mount bracket location but note that **Sleeve/Bolt Assembly** and **Air Chamber** do not get installed yet.



*Figure 2*

Place **Brass Plunger (Item 8)** on push rod of **Air Chamber (Item 7)** and install on **Sleeve/Bolt Assembly (Item 6)** using two **7/16" Coarse Lock Nut and Washer (Item 29)**. Make sure that the brass plunger aligns with machined slot on bolt slide area.

Note: bolt slide can be installed two different directions. End with mounting ears for 41-230 Safe-T-Plus cylinder should point towards drivers' side to mount the Safe-T-Plus cylinder. Tighten 7/16" nuts 35-40 ft. lbs. See **Figure 3** at right.



*Figure 3*

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Install **Sleeve/Bolt Assembly** to **SS200-55-143-6 Axle Mount Bracket** using the two **7/16"x1-3/4" Round Top U-bolts (Item 27)**, **Lockwashers (Item 18)** and **Nuts (Item 19)**. Use the four holes in the Axle Mount Bracket and loosely install so the assembly can be rotated for best clearance (refer to **Figure 2** and **Figure 3** for positioning). Once in position tighten U-bolt nuts 40-45 ft. lbs. Tighten large nut at the end of Sleeve/Bolt Assembly so that at least three threads protrude through the nylock nut.

Be sure that the Bolt slides freely within the Sleeve and there is sufficient clearance around all moving parts with steering turned lock to lock and with suspension both at normal ride height and with air drained.

If necessary, the U-bolts holding the Sleeve/Bolt Assembly to the Axle Bracket can be loosened to allow the Sleeve/Bolt Assembly to rotate and provide better clearance. Be sure to torque bolts again in this case.

### Safe-T-Plus Cylinder Installation

Use one  $\frac{3}{4}$ " bolt, nut and washer (included with 41-230 Safe-T-Plus Cylinder) to mount the Cylinder to the ears on the Sleeve/Bolt Assembly. Leave bolt loose for now.

Install **206 Tie Rod Bracket (Item 2)** on tie rod using **3/8"x1-3/4" U-bolts with Flange Nuts (Item 26)**. Use the other  $\frac{3}{4}$ " bolt, nut and washer included with the 41-230 Cylinder to loosely mount the Cylinder to the Tie Rod Bracket. Refer to **Figure 4** below. Ensure that the cylinder is positioned such that the bolt has approximately equal travel within the sleeve in either direction.

Tighten the  $\frac{3}{4}$ " bolt to 80-90 ft-lb to fasten the Cylinder to the Sleeve/Bolt Assembly. Tighten the U-bolts on the Tie Rod Bracket to 25-35 ft-lb. Finally, tighten the other  $\frac{3}{4}$ " bolt to 80-90 ft-lb to fasten the Cylinder to the Tie Rod Bracket.

Note: if the coach already has a Safe-T-Plus installed, the existing Cylinder and 206 Tie Rod Bracket can be used but the Tie Rod Bracket will need to be relocated in order to provide equal travel of the Bolt in either direction within the Sleeve.

**Important:** With Cylinder installed, again check to confirm there is sufficient clearance around all moving parts with steering turned lock to lock and with suspension both at normal ride height and with air drained. If Cylinder scrapes or binds at any point, review instructions and make necessary corrections by rotating Tie Rod Bracket and/or Sleeve/Bolt Assembly to obtain necessary clearance.



### Switch Mounting Preparation

Locate entry point to feed wires to the drivers' seat area of the coach (i.e., a wire harness hole).

Locate blank switch location in dash or left arm rest to fit **Rocker Switch (Item 24)**, next to existing rocker switches. Check with customer to confirm the desired location. Remove plastic blank cover and confirm fitment of Rocker Switch.

### Plumbing Trim Unit

Locate air supply (typically in left front compartment) for tire inflator/etc. If there is no tire inflator connection, locate main air supply tank. Install one **1/8" NPT x 1/4" Tube Straight Fitting (Item 10)** into Port #2 of the **Air Solenoid Valve (Item 28)**. Run **1/4" Air Line (Item 4)** from Air Chamber location to the air supply location and connect to Port #2 on the Air Solenoid Valve – refer to **Figure 5** at right. Take care to fully seat hose in quick connect.

Secure air line routed to Air Chamber, ensuring that the line does not interfere with any moving parts. Leave sufficient slack in the air line for suspension travel at the Air Chamber. Use protective material (not included) for any possible rub points. Cut air line with air line cutter, taking care that the line is cut straight and clean.

Using **3/8" to 1/4" NPT Adapter (Item 17)** and **Adapter 1/4" Air Hose to 1/4" NPT Elbow (Item 16)** or **Adapter 1/4" Air Hose to 1/4" NPT Straight (Item 15)** attach air line to port on Air Chamber and tighten brass sleeve. Either the elbow or the straight fitting can be used to provide the best routing.

If there is a 3/8" air supply line available, use the **3/8" Air Line (Item 5)** and feed line to Port #3 on Solenoid Valve from air tank supply. Use the **1/8" NPT x 3/8" Tube Straight Fitting (Item 11)** to connect the 3/8" line to port #3. Use **Union Tee 3/8" (Item 12)** to tee into 3/8" supply line from air tank (first cleaning line with solvent, and using air line cutter).

If there is no 3/8" air supply line readily available, either connect to an available air supply port at the tire inflator, or use the **Adapter 1/4" Air Hose to 1/4" NPT Straight (Item 15)** or **Adapter 1/4" Air Hose to 1/4" NPT Elbow (Item 16)** to connect directly to the air tank. In this case, run 1/4" line from

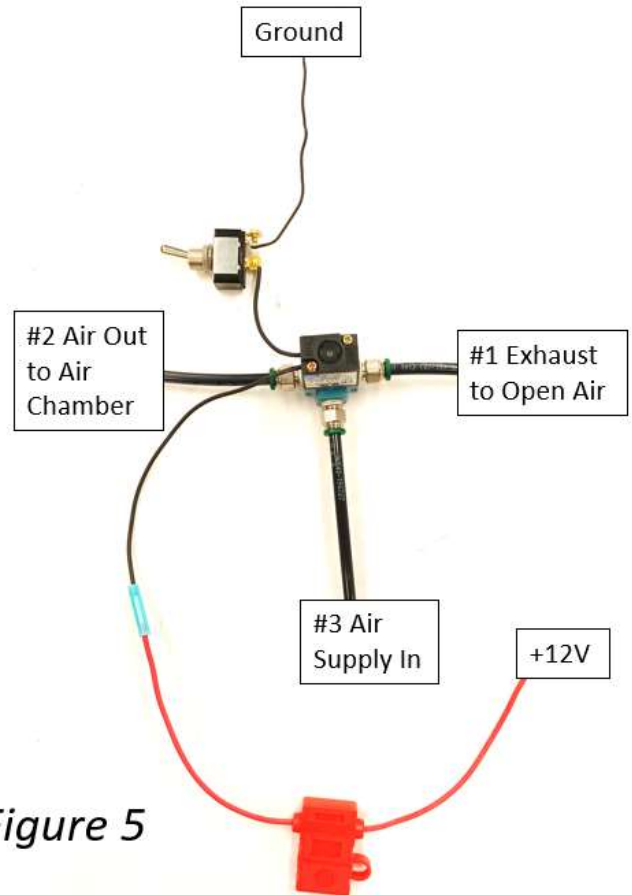


Figure 5

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the tank to Port #3 of the Solenoid Valve, and connect to the Solenoid Valve using the second 1/8" NPT x 1/4" Tube Straight Fitting.

Thread the remaining 1/8" NPT Fitting (either 1/4" Tube or 3/8" Tube, depending on what was used to connect the supply line to the Solenoid Valve) to Port #1 on the Air Solenoid Valve. Run a third length of air line (either 1/4" or 3/8", depending on which fitting was used) from Port #1 of the Solenoid Valve to exhaust under the coach.

Secure the Solenoid Valve within the compartment using the provided **6" Zip Ties (Item 9)**.

### Wiring Trim Unit

Find area to feed **14 AWG Black Wire (Item 3)** from the dash switch location to one wire on the Solenoid Valve. Use one of the two **Blue Nylon Butt Connector – 16-14 AWG (Item 21)** to connect the wire to the solenoid valve. Connect the other end of the wire to one post on the **Rocker Switch (Item 24)** using one of the **1/4" Spade Connectors (Item 22)**.

Locate keyed source of 12V power near Solenoid Valve. Connect power through the **Fuse Holder (Item 13)** with **10A Fuse (Item 14)** to the other wire of the Solenoid Valve using the other Blue Nylon Butt Connector and the **Blue Scotch Lock Connector (Item 20)** – refer to *Figure 5*.

Ground the other post on the Toggle Switch, using **1/4" Stud Ring Terminal (Item 23)**, 14 AWG Wire, and the other Spade Connector.

### Mounting Switch

Install switch in desired location on dash or arm rest. Note that switch is normally in "Off" position, as power to the solenoid ("On") releases the clamp and allows the trim to be adjusted.

### Test Unit

Start coach and build air to normal operating pressure. Shut coach off and check all fittings to ensure no air leaks. Check switch function verifying that the Air Chamber/Plunger assembly applies and releases pressure on the Sleeve Bolt shaft.

### User Instructions

When driving coach on a straight stretch of road, notice if the coach pulls either direction. If it does flip switch to "On" position and turn steering wheel slightly in opposite direction of pull, then release pressure on switch to return to "Off" position to re-lock.

Please make sure to visit **SuperSteerParts.com** and fill out your warranty registration.

**Your comments are greatly appreciated. Please feel free to contact SuperSteer® at 888-898-3281 or e-mail at sales@supersteerparts.com**

## LIMITED LIFETIME SUPERSTEER WARRANTY

### 1. WARRANTY

#### 1a. WARRANTY OF CONFORMITY AT TIME OF SALE

SUPERSTEER warrants that at the time of sale of this product it will be free from defects in material and manufacture and will conform to SUPERSTEER'S specifications for the product.

#### 1b. CONDITIONAL LIMITED LIFETIME WARRANTY

In addition to the preceding time-of-sale warranty, if the product registration is completely and accurately filled out at supersteerparts.com within thirty (30) days of purchase, SUPERSTEER will provide a Limited Lifetime warranty after sale the product will remain in good working order, PROVIDED THAT the product is installed and maintained in accordance with SUPERSTEER'S instructions and is not subjected to: (a) alteration or unauthorized repairs or repairs by anyone other than SUPERSTEER or a SUPERSTEER -authorized service center, (b) misuse, abuse, commercial use, or improper maintenance, (c) Acts of God (including without limitation hurricanes, tornadoes, floods, or other severe weather or natural phenomena), (d) failures due to products not supplied by SUPERSTEER, or (e) other treatments, uses, or installations for which the product was not intended. This warranty extends only to the first retail purchaser-consumer of the product and is not transferable.

### 2. DISCLAIMER OF OTHER WARRANTIES

The preceding warranties are the exclusive and sole express warranties given by SUPERSTEER. They supersede any prior, contrary or additional representations, whether oral or written. No agent, representative, dealer, or employee has the authority to alter or increase the obligations or limitations of this warranty. Any implied warranties, including the WARRANTY OF MERCHANTABILITY and any WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, are limited in duration to thirty days or the term of the applicable express warranty provided above, whichever is longer. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

### 3. EXCLUSIVE REMEDY FOR ANY NONCONFORMITIES

If during the applicable Warranty Period, the product does not conform to the preceding Warranties, notify SUPERSTEER as provided below, and within a reasonable time SUPERSTEER will provide, at its option, one of the following: (1) replacement components for any nonconforming or defective product or components or (2) the percentage of the purchase price for the nonconforming product equal to the percentage of the Warranty Period remaining when SUPERSTEER is notified of the nonconformity. SUPERSTEER will, at its option, (a) use new and/or reconditioned parts in performing warranty repairs and making replacement products, (b) use parts or products of original or improved design in the repair or replacement. If SUPERSTEER repairs or replaces a product, its warranty continues for the remaining portion of the original Warranty Period or 60 days from the date of the return shipment to the customer, whichever is greater. All replaced products and all parts removed from repaired products become the property of SUPERSTEER. SUPERSTEER will not provide, and will not be liable for, labor, costs of removal or reinstallation of components, disposal, shipping, freight, taxes, or other incidental charges.

### 4. DISCLAIMER OF INCIDENTAL AND CONSEQUENTIAL DAMAGES

For any breach of warranty, the Owner must telephone SUPERSTEER at 1-888-898-3281 within thirty (30) days after discovering the nonconformity. Do not return any product without first calling SUPERSTEER and getting a return authorization number. Returned products must include the return authorization number and a copy of the original invoice, bill or other proof of the date of purchase. The date of purchase must coincide with the original warranty registration card on file. SUPERSTEER will authorize (a) shipment of the product to SUPERSTEER or (b) repair or replacement at the nearest warranty service center—in both cases with shipping at your expense. Do not purchase replacement parts or pay for repair labor—you will not be reimbursed. Compliance with the requirements of this paragraph is a condition to coverage under the Warranty: if these requirements are not complied with, SUPERSTEER will have no obligation to provide any remedy for any breach of warranty.

### 4. DISCLAIMER OF INCIDENTAL AND CONSEQUENTIAL DAMAGES

IN NO EVENT SHALL SUPERSTEER BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM NONDELIVERY OR FROM THE USE, MISUSE OR INABILITY TO USE THE PRODUCT OR FROM DEFECTS IN THE PRODUCT.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

### 5. APPLICABLE LAW

This Warranty will be interpreted, construed, and enforced in all respects in accordance with the laws of the State of Washington, without reference to its choice of law rules. The U.N. Convention on Contracts for the International Sale of Goods will not apply to this Warranty.

### 6. SEVERABILITY

If any provision of this warranty is found to be invalid or unenforceable, then the remainder shall have full force and effect, and the invalid provision shall be partially enforced to the maximum extent permitted by law to effectuate the purpose of the agreement.

### 7. ADDRESS FOR NOTICES TO SUPERSTEER

SuperSteer, 458 Redwood Hwy, Grants Pass Oregon 97527

This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.