PSX1™
(POWER STABILIZING SYSTEM)
OEM INSTALLATION MANUAL

LIPPERT COMPONENTS®

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System Description

The PSX1™ is a 12V DC electric motor-driven system. The electric motor drives Acme-threaded screws to extend and retract the stabilizer legs to stabilize the trailer.

The stabilizing system can be installed on travel trailers and 5th Wheels. Travel trailer options include both front and rear stabilizers or a rear stabilizer only, while 5th Wheels typically utilize only a rear stabilizer. The standard duty stabilizer is suitable for all trailers.

There are no serviceable parts within the electric motors. If a motor fails, it must be replaced. Disassembly of the motor voids the warranty. Mechanical portions of the PSX1™ are replaceable. Contact Lippert Components, Inc. to obtain replacement parts.

Safety Information

The PSX1™ is intended for the purpose of stabilizing the trailer after the trailer has been leveled. The use of this system for any reason other than which it is intended is prohibited by Lippert's Limited Warranty and may result in serious personal injury or death. The PSX1™ is designed as a stabilizing component system and should not be used to provide service for any reason under the trailer such as changing tires or repairing or replacing any components beneath the trailer.

⚠WARNING

The "WARNING" symbol above is a sign that an installation procedure has a safety risk involved and may cause death, serious personal injury or severe product or property damage if not performed safely and within the parameters set forth in this manual. Always wear eye protection when performing this installation procedure. Other safety equipment to consider would be hearing protection, gloves and possibly a full face shield, depending on the nature of the installation procedure.

⚠WARNING

Lippert Components Inc. recommends that a trained professional be employed to change the tires on the trailer. Any attempts to change tires or perform other service while trailer is supported by the PSX1™ could result in death, serious personal injury or severe product or property damage.

Installation

⚠WARNING

The PSX1™ is designed as a stabilizing component system. Do NOT use this stabilizing system to attempt to level the trailer. Failure to follow instructions in this manual could result in death, serious personal injury or severe product or property damage.

⚠WARNING

Before working underneath the trailer, make sure it is supported per manufacturer's recommendations. Failure to do so may result in death or serious personal injury or severe product or property damage.

⚠CAUTION

Moving parts can pinch, crush or cut. Keep clear and use caution.

Resources Required

- Cordless or electric drill or screw gun
- Appropriate drive bits
- Appropriate drill bits
- Torque wrench
- ¼" self-drilling screws
- ⅜" flange bolts
- ⅜" flange nuts
- Manual crank handle (PN #119226) - Optional

Determine Stabilizer Locations

1. Determine the locations for the stabilizers. The rear stabilizer can be mounted at any point between the rear axle hanger and the bumper while making sure the system stays within the departure angle. The front stabilizer can be mounted anywhere as long as the system remains within the approach angle.
2. To measure approach and departure angle, run a string line from the meeting point of the tire and ground up at an angle to the lowest point on the front and rear of the trailer. These string lines are shown as dotted lines (Fig. 1).

NOTE: The stabilizing systems are shown for reference only to help mark proper locations. Any location outside these guidelines will need LCI engineering approval.

Fig. 1

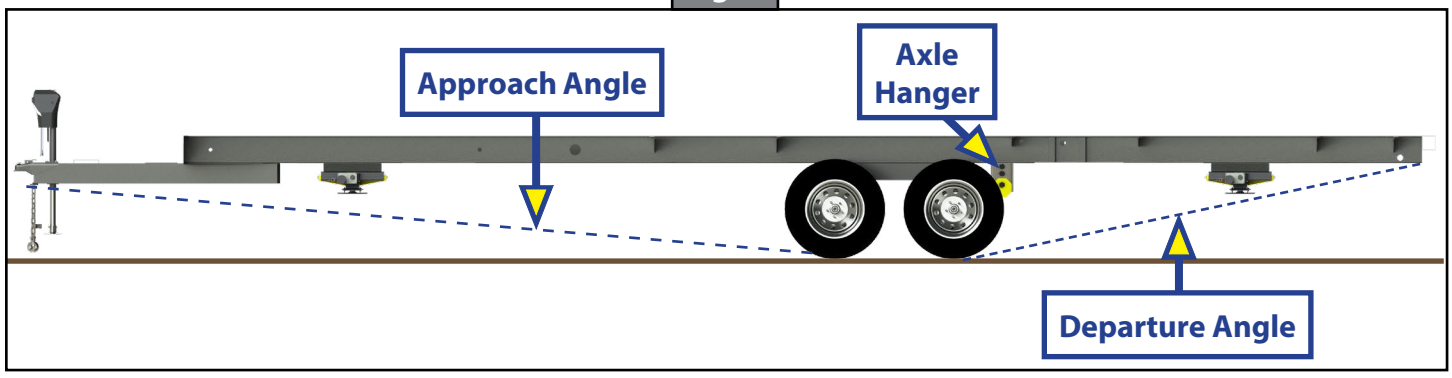
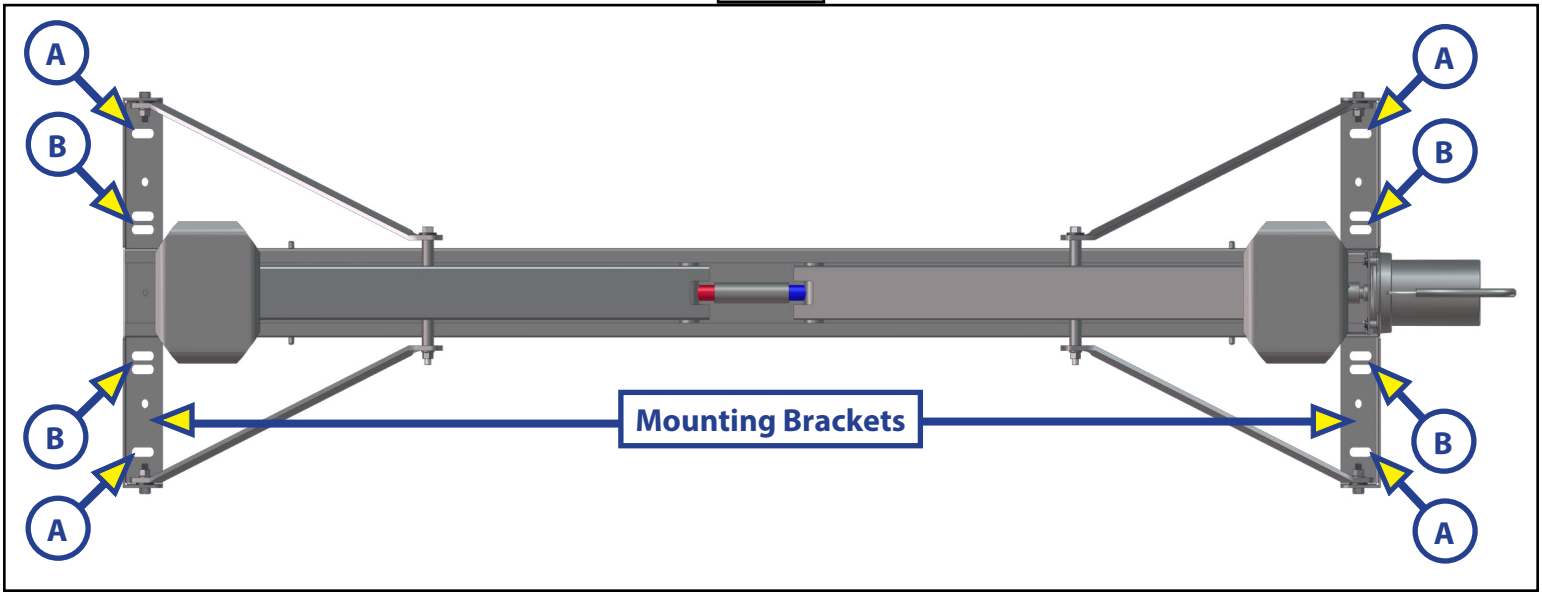


Fig. 2



Attaching Stabilizers

NOTE: Do not weld the PSX1™ system to the trailer. Welding the system to the trailer voids all warranty claims.

NOTE: Support framework in accordance with the manufacturer's recommendations.

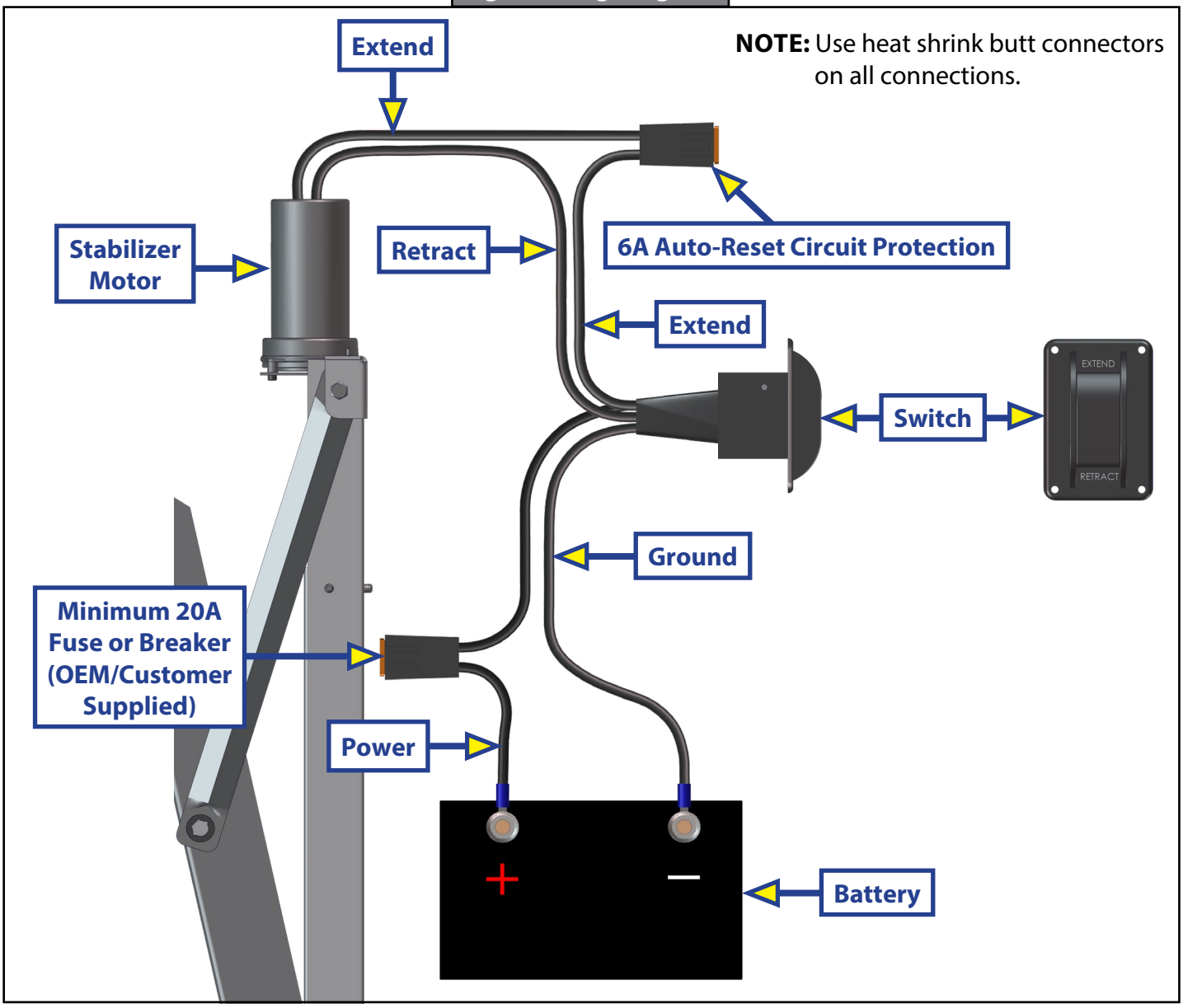
1. Place the stabilizer under the main frame rails.
2. Manually crank the system upward so the mounting brackets match up to the main frame rails. See Manual Override in the Troubleshooting section.
3. Install four ¼" self-drilling screws, two per end, in the Fig. 2B positions.
4. Drill four ⅜" diameter mounting holes in the main frame rails in the Fig. 2A positions.
5. Using four ⅜" flange bolts and flange nuts, securely fasten the stabilizer to the main frame rails with two bolts and nuts per mounting bracket in the Fig. 2A locations. Torque nuts to 23 ft-lbs.
6. Install switch inside a compartment or on the exterior of the trailer within view of the related stabilizer legs.
7. The supplied 6A auto-reset circuit protection must be wired in-line between the switch and the stabilizer motor (Fig. 3).

NOTE: A maximum 6A auto-reset circuit protection is required between the switch and the motor (Fig. 3).

8. Power feed for the stabilizer must be on a minimum 20A circuit. The power feed should not experience more than a 10% voltage drop between the power source and the motor connections while the circuit is under load.
9. Circuit protection of power feed wires must be per RVIA code standards.

NOTE: For electric stabilizer motors and switch wiring variations, click on the link to QR-041 or go to http://www.lci1.com/support-electric-stabilizer and then select the Quick Reference tab. Find and click on the link for *QR - 041: Electric Stabilizer Motor Comparative* from the listing.

Fig. 3 Wiring Diagram



Operation

⚠WARNING

Failure to act in accordance with the following may result in death, serious personal injury or severe product or property damage. Always make sure that the stabilizer area is clear of people, pets and objects before and during operation of the system. Always keep away from the stabilizer legs in operation.

⚠CAUTION

The PSX1™ is to be used for stabilizing the trailer, not leveling the trailer. The stabilizer legs should never be extended longer than two seconds beyond initial contact with the ground.

⚠CAUTION

Moving parts can pinch, crush or cut. Keep clear and use caution.

Preparation

The PSX1™ is intended for the purpose of stabilizing the trailer after the trailer has been leveled.

⚠CAUTION

Never lift the trailer completely off the ground. Lifting the trailer completely off the ground creates an unstable condition that could result in property damage and personal injury.

1. Be sure to park the trailer on solid, level ground.
2. Clear all stabilizer leg landing locations of debris and obstructions. Locations should also be free of depressions.
3. When parking the trailer on extremely soft surfaces, utilize load distribution pads under each stabilizer leg.
4. People and pets should be clear of trailer while operating the stabilizers.

Extending Stabilizers

1. Make sure the trailer is level.
2. Verify the battery is fully charged and hooked up to the electrical system.
3. Press and hold "EXTEND" on the switch (Fig. 4A) for the rear stabilizer until the footpads of the stabilizer legs contact the ground and the rear of the trailer is stabilized. Then release the switch.
4. If a front stabilizer is installed, press and hold "EXTEND" on the switch (Fig. 4A) for the front stabilizer until the footpads of the stabilizer legs contact the ground and the front of the trailer is stabilized. Then release the switch.

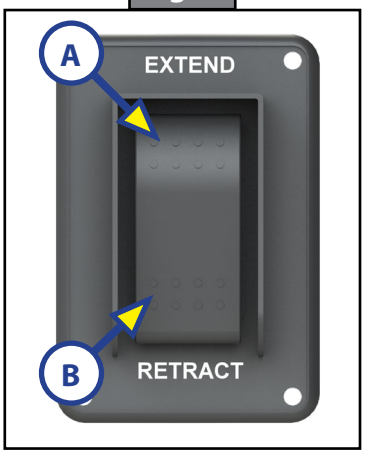
⚠CAUTION

Once the stabilizer legs have been extended, do not use the tongue jack on a travel trailer or the landing gear on a 5th Wheel. Damage to the stabilizer legs can occur when lifting or leveling the trailer after the stabilizer legs have been extended. Doing so will void the warranty of the stabilizers.

Retracting Stabilizers

1. Verify the battery is fully charged and hooked up to the electrical system.
2. If a front stabilizer is installed, press and hold "RETRACT" on the switch (Fig. 4B) for the front stabilizer until the stabilizer legs are fully retracted. Then release the switch.
3. Press and hold "RETRACT" on the switch (Fig. 4B) for the rear stabilizer until the stabilizer legs are fully retracted. Then release the switch.

Fig. 4



Stabilizing System

By keeping the "EXTEND" switch (Fig. 4A) engaged for one to two seconds after the legs' footpads make contact with the ground, the trailer will be stabilized and ready for use.

In the event the system shuts off while trying to stabilize the trailer, the in-line auto-reset circuit protection has tripped and will reset within 10 seconds. This is an indication the PSX1™ is not being used as intended and is trying to lift too much weight.

NOTE: Make sure the stabilizer legs are fully retracted before moving the trailer.

System Maintenance

⚠WARNING

Do not work on the stabilizer unless the battery is disconnected. Failure to act in accordance with the following may result in death, serious personal injury or severe product or property damage.

Mechanical Maintenance

It is recommended that when operating in harsh environments, e.g. road salt or ice buildup, the moving parts be kept clean. They can be washed with mild soap and water. The Acme Screw is precoated with grease. If the screw is cleaned, it may be necessary to add grease to the screw to ensure smooth stabilizer operation.

⚠ CAUTION

Operating the stabilizer without grease on the screw could lead to product failure.

Electrical Maintenance

For optimum performance, the system requires full battery current and voltage. The battery must be maintained at full capacity. Other than good battery maintenance, check the terminals and other connections at the battery, the control switch and the electric motors for corrosion and loose or damaged terminals. Check motor leads under the trailer chassis. Since these connections are subject to damage from road debris, make sure they are in good condition.

Troubleshooting

Manual Override

PSX1™ comes with a manual override system located on the stabilizer end opposite the electric motor (Fig. 5).

To manually operate the stabilizer:

1. Disconnect one of the wire leads from the motor to prevent backfeeding the motor.
2. Insert the ½″ manual crank handle (PN #119226) (Fig. 6) over the coupler and pin at the end of the stabilizer (Fig. 5A). The slot in the end of the crank handle (Fig. 6) accommodates the pin on the coupler (Fig. 5A) to allow the manual extension/retraction of the stabilizer legs.

⚠ CAUTION

The gears can be stripped if the stabilizer legs are manually retracted/extended to the fullest extent and the operator continues to rotate the manual override. Do NOT use a power tool to extend or retract stabilizers.

3. Rotate the crank handle clockwise to extend or counterclockwise to retract the stabilizer legs.

Fig. 5

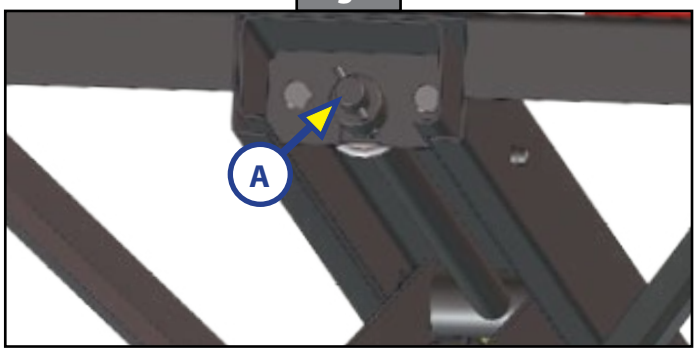
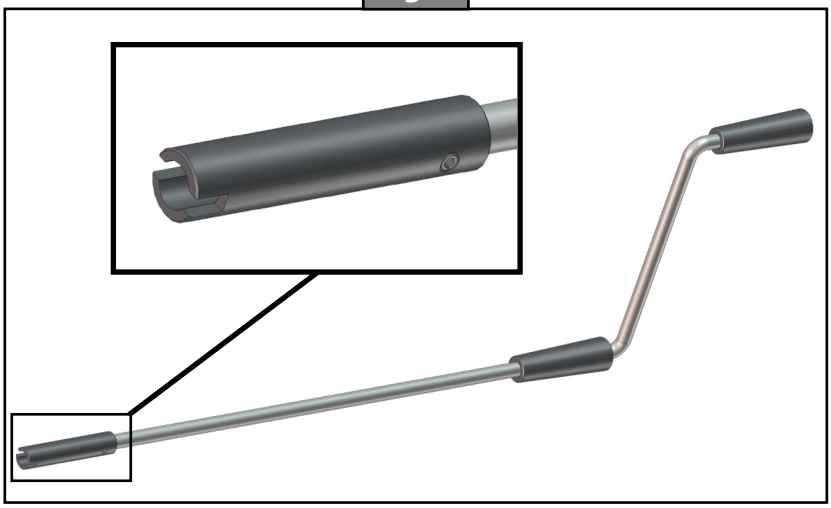


Fig. 6



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