

S4S and ICP/Buckle Assembly Installation Instructions for Pierce/Velocity PS6 Seats

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Important Facts:

S4S is a Suspension Seat Safety System.

In the event of a side roll, the S4S unit is deployed by the master roll sensor, pretensioning the seat belt, and then pulling the seat to its lowest position. The S4S is only effective when the seat belt is used.

Instruct the user of this product to always wear their seat belt.

Important:

Read the entire RollTek Installation Instruction before starting the installation of the RollTek system components, including the S4S.

- The S4S is to be used only in specific vehicle applications and seating positions.
- Always follow the Pierce Manufacturing vehicle installation instructions. Use this guide as an addition to the manufacturer's installation instructions.

ALWAYS DISCONNECT VEHICLE BATTERIES AND TURN OFF VEHICLE SWITCH BEFORE ACCESSING ELECTRICAL CONNECTION.

- Do not puncture, drill or apply heat to the S4S unit.
- Do not mount anything near the S4S unit that could interfere with the travel path of the S4S tethers.
- The S4S is designed to activate only once. If the system is activated or damaged, the S4S unit cannot be serviced and must be replaced by authorized personnel.

Important Note:

⚠ WARNING!

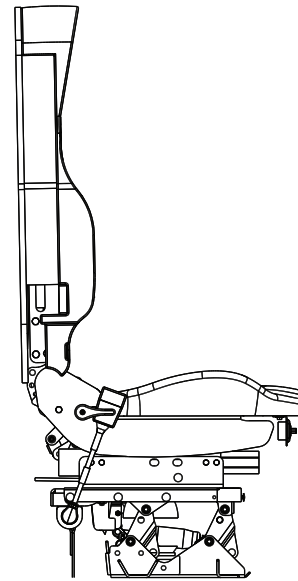
DO NOT APPLY HEAT

Temperatures over 85 C (185 F) Could cause the S4S unit to deploy. The deployed unit could cause serious injury or death.

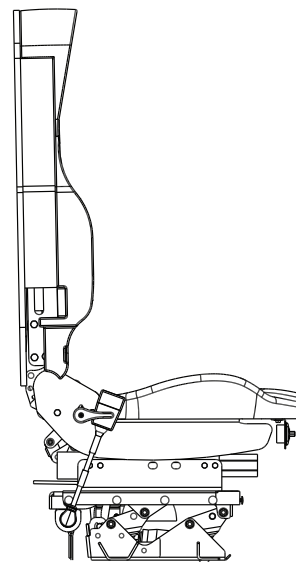
⚠ WARNING!

HAZARDOUS OPERATION

Disconnect and tag out power. Always make connection to roll sensor last. Keep clear of protective device when first applying power. Applying power prematurely could deploy occupant protection device, causing serious injury or death to installer.



Before Deployment



After Deployment



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This information is not all inclusive and will not cover every seat, pedestal and vehicle configuration. Installer shall have sole responsibility for proper selection, application, installation and testing of the seat in accordance with FMVSS 207, 208 and 210 as amended, or any other applicable or additional specification such as for use outside the U.S., and for providing instructions to the ultimate end user concerning use and periodic inspection and maintenance of the S4S unit and seat belt system.

S4S INSTALLATION

1. Remove S4S units from the main carton. There are 2 units per carton. **See Figure 1.**
2. If parts need to be returned, they must be returned in the original packaging, so retain the original carton.

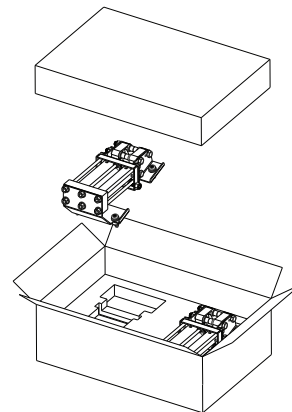


Figure 1

S4S Product Identification

1. Locate product identification label. This is located on the side surface of the unit. **See Figure 2.**
2. Verify your unit is the proper system for your configuration by making sure the part number on the label matches the part number ordered for this installation..

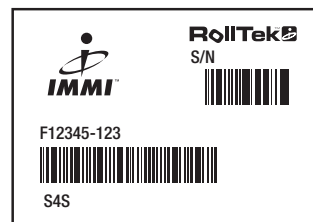


Figure 2

Mounting the S4S Unit to Mounting Plate

ALWAYS DISCONNECT VEHICLE BATTERIES AND TURN OFF VEHICLE SWITCH BEFORE PERFORMING INSTALLATION WORK.

1. Use only pre-drilled mounting holes.
2. Metal to metal contact is mandatory on all mounting points.
3. Remove the rubber band from the tether hook and rear mounting bracket.
4. Position the unit in place. **See Figure 3.**
5. Make sure wiring harness is free and not pinched. **DO NOT MAKE WIRING HARNESS CONNECTION TO UNIT AT THIS TIME.**
6. Position the unit to the mounting plate. Align the mounting holes and install the proper Pierce supplied mounting hardware. (7/16-20 Grade 5 Fasteners)
7. Torque each mounting bolt (4) on S4S to 35-40 ft-lbs.

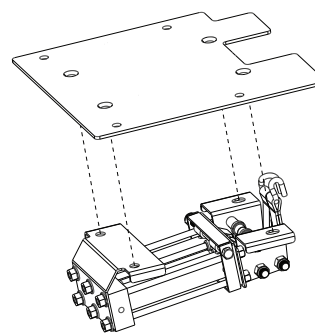


Figure 3

ICP Bar Mounting (Captain Seat)

The S4S ICP bar is designed to be used with IMMI's S4S seat pull down system and the Seats Inc., Ultra low suspension. The bar should only be used with this system. When used with the S4S system, the ICP bar will remove slack from the 3-point belt system similar to a buckle pretensioner, tightening the belt around the occupant.

1. Remove the ICP bar from the carton.

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2. Position the ICP bar to the rear of the seat mounting location. **See Figure 4.**
3. Slide the loose mounting bracket so that both brackets will be located on the inside of the seat mounting flange. **See Figure 5.**
4. Install the mounting bolt to the right hand (or fixed) mounting bracket and tighten. **See Figure 6.**
5. Move the loose mounting bracket to the seat mounting flange and install the mounting bolt and tighten. **See Figure 7.**
6. Torque each ICP Bar mounting bracket bolt (2) to 35 to 40 ft-lbs.

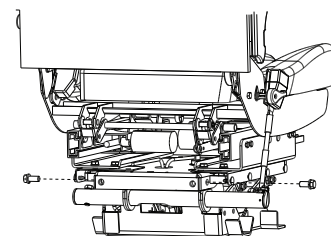


Figure 5

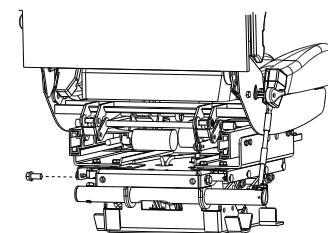


Figure 6

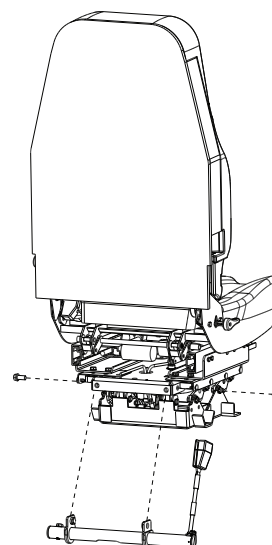


Figure 4

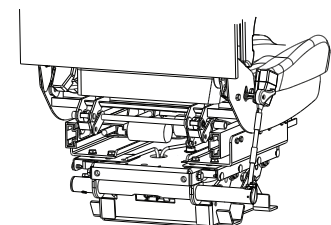


Figure 7

ICP Bar Mounting (First Officer Seat)

The S4S ICP bar is designed to be used with IMMI's S4S seat pull down system and the Seats Inc., Ultra low suspension. The bar should only be used with this system. When used with the S4S system, the ICP bar will remove slack from the 3-point belt system similar to a buckle pretensioner, tightening the belt around the occupant.

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1. Remove the ICP bar from the carton.
2. Position the ICP bar to the rear of the seat mounting location. **See Figure 8.**
3. Install the two mounting bolts and tighten.
4. Torque each ICP bar mounting bracket bolt (2) to 35 to 40 ft-lbs.

Mounting the S4S Unit / Mounting Plate to the Vehicle Structure

ALWAYS DISCONNECT VEHICLE BATTERIES AND TURN OFF VEHICLE SWITCH BEFORE PERFORMING INSTALLATION WORK.

1. Lower the S4S and mounting plate into the vehicle seat riser module.
2. Make sure to pull the tether through the cutout at the rear of the mounting plate when lowering the unit into the seat riser.
3. Align the mounting holes and install the seat. With the mounting holes for the seat and S4S mounting plate aligned, insert the (4) seat mounting bolts to secure the seat and S4S mounting plate to the vehicle seat riser. **See Figure 9.** Torque each mounting bolt (4) to 35 to 40 ft-lbs.

ICP (InterConnect Point Bar)/Tether Connection

Figure 9

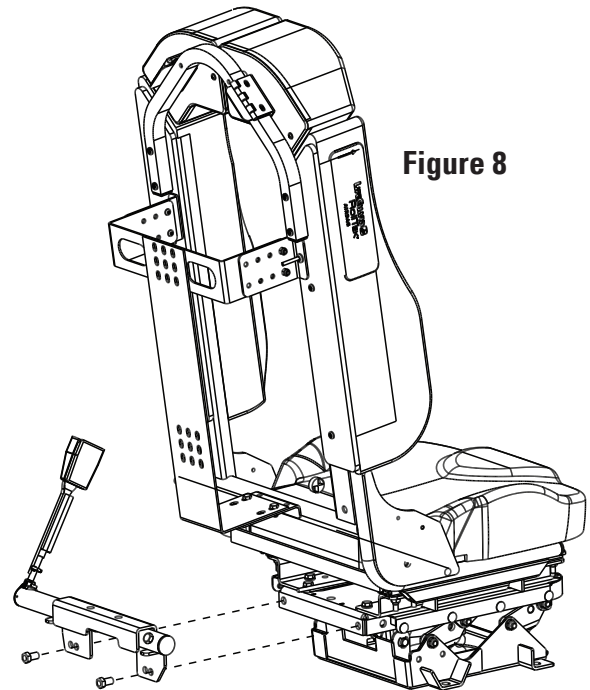
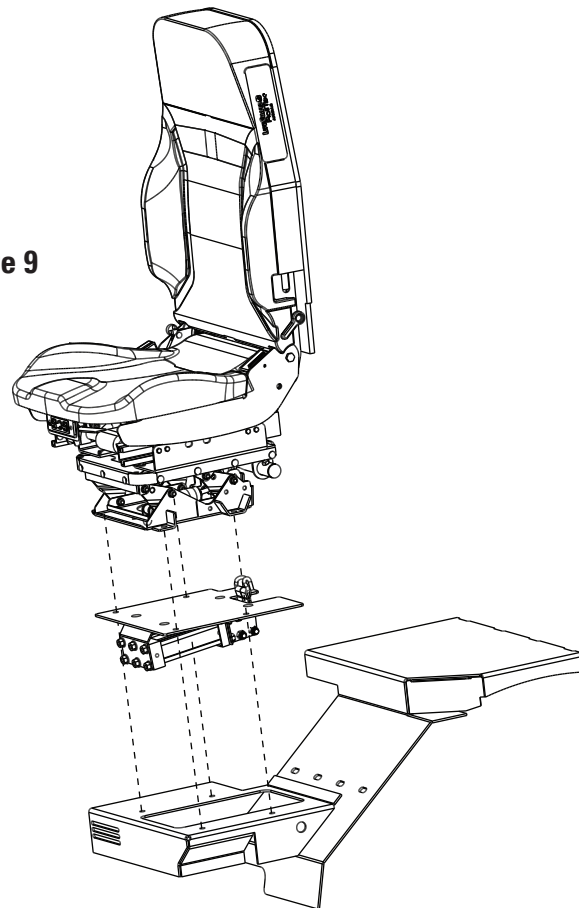


Figure 8

ALWAYS DISCONNECT VEHICLE BATTERIES AND TURN OFF VEHICLE SWITCH BEFORE PERFORMING INSTALLATION WORK.

1. Make sure web tethers are routed per diagram on S4S, and not twisted, pinched or damaged before unit is torqued. **See Figure 10.**
2. Make sure hook is oriented as shown.
3. Make sure seat is fully lowered.
4. Connect hook into ICP cable as shown. **See Figure 11.**
5. Place two tie wraps (supplied) around hook and cable as shown in detail in **Figure 11** and pull tightly. The tie-wraps assure hook remains in engagement with the cable.

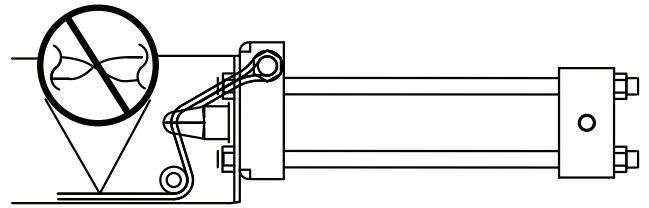


Figure 10

Install seat belt.

Reference the LifeGuard Seat Belt & ADM Installation Instructions.

Electrical Connection and Test

1. **Ensure battery switch is OFF.**
2. Make connection between cab wiring harness and S4S
3. Verify that plug and connector are latched together.
4. Verify no one is inside vehicle and all loose objects are clear of seat and surrounding area.
5. From outside vehicle, connect battery negative cable and turn on battery switch.

Important Final System Inspection

1. Check ICP mounting on both sides of the seat.
2. Check for proper buckle angle. Buckle's cable should not droop or be kinked.
3. Check shoulder loop and/or seat belt height adjuster (optional)
4. Inspect for twisting of seat belt.
5. Check buckle for proper latching
6. Check for interferences. Seat belt must fully retract.

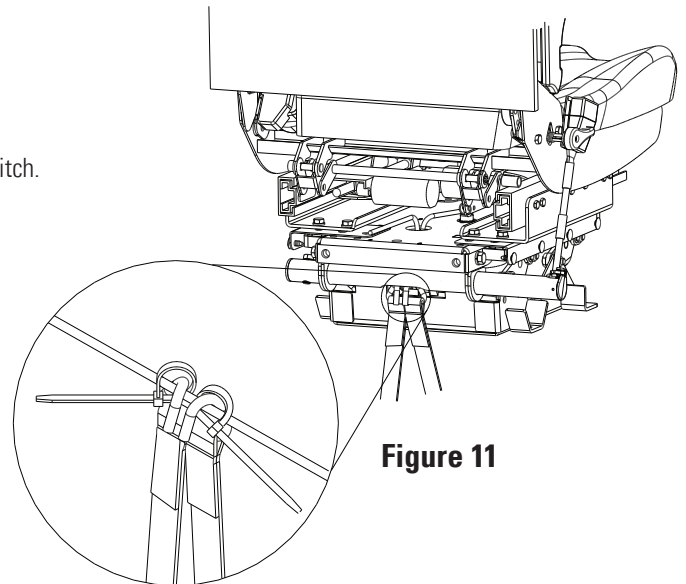


Figure 11

⚠ WARNING!

Failure to follow and perform final inspection steps could cause serious injury or death to personnel in the vehicle.



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