The Turning Point™ Pin Box is designated for 5th wheel application only. The Turning Point Pin Box can be used as a standard pin box for conventional transport or, with the pivot point relocated to the trailer, will provide up to a 90-degree turn and towing capability.

**NOTE:** Please refer to hitch manufacturer’s instructions as to the compatibility with the Lippert Turning Point Pin Box. Not all hitches are designed to accept a wedge that relocates the pivot point.

**WARNING**

The “WARNING” symbol above is a sign that an installation procedure has a safety risk involved and may cause death or serious injury 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**

Failure to follow the instructions provided in this manual may result in death, serious injury, trailer damage or voiding of the component warranty.

**WARNING**

The trailer MUST be supported per manufacturer's specifications before working underneath. Failure to do so may result in death or serious injury.

**CAUTION**

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

**WARNING**

Failure to check and follow tow ratings could result in tow vehicle damage or truck and trailer separation while towing. Trailer and its contents MUST not exceed truck, hitch and/or trailer tow ratings.

**Tow Rating Weights Check For 10,000 lbs Pin Box (Fig. 1)**

1. Do not exceed:
   A. Vehicle tow rating
   B. Turning Point Pin Box rating of 10,000 lbs
   C. Gross trailer weight (trailer + full water tanks + cargo)
   D. Pin weight of 2,000 lbs (20 percent maximum of Step 1.C.)

2. Trailer weight should be lowest of the tow rating weights to ensure safe towing.

**NOTE:** The Turning Point Pin Box's pin weight is designed for a maximum load of 20 percent of the gross trailer weight of 2,000 lbs.

![Fig. 1](image1)

**Tow Rating Weights Check For 16,000 lbs Pin Box (Fig. 2)**

1. Do not exceed:
   A. Vehicle tow rating
   B. Turning Point Pin Box rating of 16,000 lbs
   C. Gross trailer weight (trailer + full water tanks + cargo)
   D. Pin weight of 3,200 lbs (20 percent maximum of Step 1.C.)

2. Trailer weight should be lowest of the tow rating weights to ensure safe towing.

**NOTE:** The Turning Point Pin Box's pin weight is designed for a maximum load of 20 percent of the gross trailer weight of 3,200 lbs.

![Fig. 2](image2)
Operation

Conventional Transport

The Turning Point Pin Box can be used as standard pin box. Two 5/8” - 11 x 2” lockout bolts (Fig. 3A) installed on the back of the unit prevent rotation and permit use of the pin box without the wedge installed.

When using the unit as a standard pin box, the two 5/8” lockout bolts shall be torqued to 200 ft-lbs.

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**Fig. 3**

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Moving Pivot Point

To provide towing with up to a 90-degree turn, the pivot point must be moved. Installation of a wedge will lock the pin box at the tow vehicle’s hitch and move the pivot point from the vehicle's bed to the nose of the 5th wheel (Fig. 4A).

**NOTE:** Not all tow vehicle and trailer combinations will allow a 90-degree turn.

**NOTE:** Please refer to hitch manufacturer’s instructions as to the compatibility with the Lippert Turning Point Pin Box. Not all hitches are designed to accept a wedge that relocates the pivot point.

⚠️WARNING

It is normal for a gap to open up at the rear of the pin box. The gap appears when the pin box is loaded on a hitch and it normally remains after it is unloaded. However, the gap should be no wider than ½” to ensure a safe operation. Utilizing the pin box with a larger gap can result in vehicle instability, vehicle damage, serious injury and death.

⚠️WARNING

Remove rear lockout bolts when hitch wedge is to be installed. When removing hitch wedge, re-install rear lockout bolts to original location. Failure to install bolts correctly according to instructions can result in vehicle instability, vehicle damage, serious injury and death.

1. Remove the two 5/8” - 11 x 2” lockout bolts and mounting hardware from the rear of the pin box (Fig. 3A) and store in the two bolt holes on the underside of the pin box (Fig. 5A).
2. Remove the universal wedge from its storage location (Fig. 5B) by removing two bolts and lock washers.

**NOTE:** The two bolts holding the wedge in place are identical to the 5/8” - 11 x 2” lockout bolts and can be used interchangeably.

**NOTE:** The universal wedge is supplied with the pin box and is compatible with many different 5th wheel hitches.
3. Determine the best orientation for installation of the wedge (Fig. 6 and Fig. 7).
   A. Dry fit the wedge into the hitch funnel (Fig. 8 and Fig. 9) to make sure of the proper orientation.
   B. The wedge should have contact with all parts of the funnel while providing adequate space for the kingpin receiver.
   C. Different hitch configurations may require a different orientation for the wedge.

Wedge orientation for Reese/Draw-Tite/Hidden Hitch Select Series, Pro Series, Husky and similar 5th wheel hitch styles.


4. After best wedge orientation has been determined, place the wedge into position on the pin box (Fig. 10A).
   A. Install previously removed two 5/8" - 11 x 2" bolts and lock washers.
   B. Tighten the bolts until the lock washers begin to engage.
      I. Do not fully tighten the bolts.
      II. The wedge should be allowed to slide by tapping it with a hammer or mallet.

5. Go to the Hitching Procedure section and follow the instructions to connect the trailer's pin box to the tow vehicle's hitch.

NOTE: To assist with hitching, grease may be applied to the wedge, around the kingpin and on the skid plate surface.
Failure to follow these instructions may result in death or serious injury.

1. Place blocks firmly against the front and rear of each trailer wheel to prevent possible movement either forward or backward.
2. If necessary, lower the tow vehicle's tailgate.

**NOTE:** Clearance of the lowered tailgate to the trailer needs to be monitored during hookups, since some combinations of truck and trailer have little or no clearance.

3. Using the trailer landing gear, adjust trailer height per the manufacturer's recommendation so the bottom of the trailer's pin box is ½" to 1" below the hitch skid plate (Fig. 11).

**Hitching Procedure**

**WARNING**

Failure to follow these instructions may result in death or serious injury.

1. Place blocks firmly against the front and rear of each trailer wheel to prevent possible movement either forward or backward.
2. If necessary, lower the tow vehicle's tailgate.

**NOTE:** Clearance of the lowered tailgate to the trailer needs to be monitored during hookups, since some combinations of truck and trailer have little or no clearance.

3. Using the trailer landing gear, adjust trailer height per the manufacturer's recommendation so the bottom of the trailer's pin box is ½" to 1" below the hitch skid plate (Fig. 11).
WARNING

Failure to follow these instructions may result in the kingpin being too high and coming to rest on top of closed jaws or not completely inside the jaw. This could result in the trailer separating from the hitch which may result in death or serious injury.

WARNING

Do not attempt to hitch the trailer by using trailer jacks to lower the trailer and kingpin. This could result in the kingpin coming to rest on top of the skid plate instead of within the hitch opening, which may result in death or serious injury.

NOTE: During the hitching maneuver, the bottom of the trailer's pin box should come into contact with the hitch skid plate ramp.

4. Open the jaw on the 5th wheel head. Refer to the manufacturer's instructions for proper 5th wheel hitch latch operation.

5. Back the truck slowly toward the trailer until the truck's hitch contacts the bottom of the pin box and the kingpin slides into the receiver.

NOTE: The truck and trailer must be straight and in line for the wedge to enter into the 5th wheel funnel.

6. Latch 5th wheel hitch in closed position per the instructions of the 5th wheel hitch manufacturer.

7. With the trailer wheels still blocked, make sure:
   • The landing gear is resting on firm, level ground.
   • The landing gear fully supports the trailer's weight.
   • The truck is stationary and in park with the emergency brake on.
   • The bottom of the pin box is resting on top of the hitch.
   • There is no space between the mating surfaces.

NOTE: If space exists between the pin box and hitch, the trailer has not been properly hitched. Do not tow the trailer. Instead, repeat the hitching steps 1-7 until the trailer is properly hitched.

WARNING

Working between the tow vehicle and trailer can be dangerous. Failure to properly secure the tow vehicle and trailer from movement can result in serious personal injury or death and serious product damage. Make sure tow vehicle and trailer are secured from movement. Make sure all safety precautions are followed to prevent personal injury or product damage.

8. Connect the electrical cable between the truck and trailer.

9. Connect the breakaway switch cable from the pin box to a permanent part of the truck with slack to allow for rotation of pin box.

10. Raise the tailgate of the truck.

11. Do not tow the trailer until a Pull Test has been conducted.
Pull Test

**WARNING**

Failure to perform a pull test may result in severe property damage, serious personal injury or death. Failure to secure tow vehicle and trailer from movement during procedure could result in severe property damage, serious personal injury or death. Make sure tow vehicle and trailer are properly secured against movement during the procedure.

1. Make sure the trailer wheels are blocked, the trailer landing gear is resting on firm ground to support the trailer and the tow vehicle is in park with the emergency brake engaged.
2. Return to the cab of the tow vehicle, release the emergency brake and then apply the trailer brakes.
3. Slowly pull the trailer forward with the tow vehicle.
   - **A.** If the tow vehicle is properly hitched, the wheel blocks and trailer brakes should keep the truck from moving forward.
   - **B.** If the trailer is not properly hitched, the trailer will separate from the hitch and the truck will move forward while leaving the trailer behind. If this happens, repeat the Hitching Procedure.
4. After successfully performing the Pull Test, fully raise the landing gear per manufacturer’s recommendations.
5. Check and inspect all electrical circuits for proper operation, including clearance lights, turn signals and stop lights.
6. Remove and store all trailer wheel blocks.

**Maintenance**

1. Check all fasteners every 500 miles to ensure connections have not loosened.
2. Periodically check the torque values of all bolts, including 200 ft-lbs for wedge/pivot lock and 175 ft-lbs for mounting bolts located between the trailer wings and the pin box.
3. Tighten loose fasteners to previously stated torque requirements.
4. Check bearing and grease once per season. If more grease is needed, add it to the bearing assembly. Use any of the recommended brands below.

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<tbody>
<tr>
<td>Mobile Oil</td>
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<td>Ashland Oil Co.</td>
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**WARNING**

Do not mix lithium, calcium, sodium or barium complex greases. Mixing of these incompatible compounds can create a corrosive and/or toxic chemical with fumes that can result in a serious health risk if exposed to skin or lungs. When converting from one grease to another, make sure all old grease is removed completely prior to applying new grease.

5. If the nut needs to be removed when checking the bearing, leave in the rear locking bolts to maintain engagement.
6. Re-torque the nut to 50 lb-ft when replacing the nut and make sure to install a new cotter pin.
TURNING POINT PIN BOX ASSEMBLY

TOWING

- King Pin
- Wedge
- Wing Plates
- Wing Mounting Bolts
- Lockout Bolts
- Cover Plate (On 16,000 lb Pin Box Only)
### TURNING POINT PIN BOX COMPONENTS

#### TOWING

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### Turning Point Pin Box Components

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