



Lippert® Standard Pin Box

Installation and Owner's Manual

(For Aftermarket Applications)

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Lippert Standard Pin Boxes

Part #	Description
1270271	M19 retracted pin box, 19K rating
1191191	L05 standard pin box, 15.5K rating
1191151	L05 extended pin box, 18K rating
1387883	L05 SHD extended pin box, 21K rating
1324791	L07 retracted pin box, 15.5K rating

Introduction

Lippert pin boxes are the industry standard. Each pin box has a rust-resistant powder-coated surface. Consult the original equipment label before purchasing a new Lippert pin box.

Additional information about this product can be obtained from lci1.com/support or by using the LippertNOW app. Replacement kits can be ordered from <https://store.lci1.com/> or by using the LippertNOW app.

The LippertNOW app is available for free on Apple App Store® for iPhone® and iPad® and also on Google Play™ for Android™ users.

App Store® and iPad® are registered trademarks of Apple Inc.
Google Play™ and Android™ are trademarks of Google Inc.

For additional support on this product, scan this QR code or go to: <https://support.lci1.com/lippert-pin-boxes>



NOTE: Images used in this document are for reference only when assembling, installing and/or operating this product. Actual appearance of provided and/or purchased parts and assemblies may differ.



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Safety

This manual provides general instructions. Many variables can change the circumstances of the instructions, i.e., the degree of difficulty, operation and ability of the individual performing the instructions. This manual cannot begin to plot out instructions for every possibility, but provides the general instructions, as necessary, for effectively interfacing with the device, product or system. Failure to correctly follow the provided instructions may result in death, serious personal injury, severe product and/or property damage, including voiding of the Lippert limited warranty.

⚠ 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 AND/OR PROPERTY DAMAGE IF NOT PERFORMED SAFELY WITHIN THE PARAMETERS SET FORTH IN THIS MANUAL.

⚠ WARNING

THE TRAILER MUST BE SUPPORTED PER MANUFACTURER'S RECOMMENDATIONS BEFORE WORKING UNDERNEATH. FAILURE TO DO SO MAY RESULT IN DEATH OR SERIOUS INJURY.

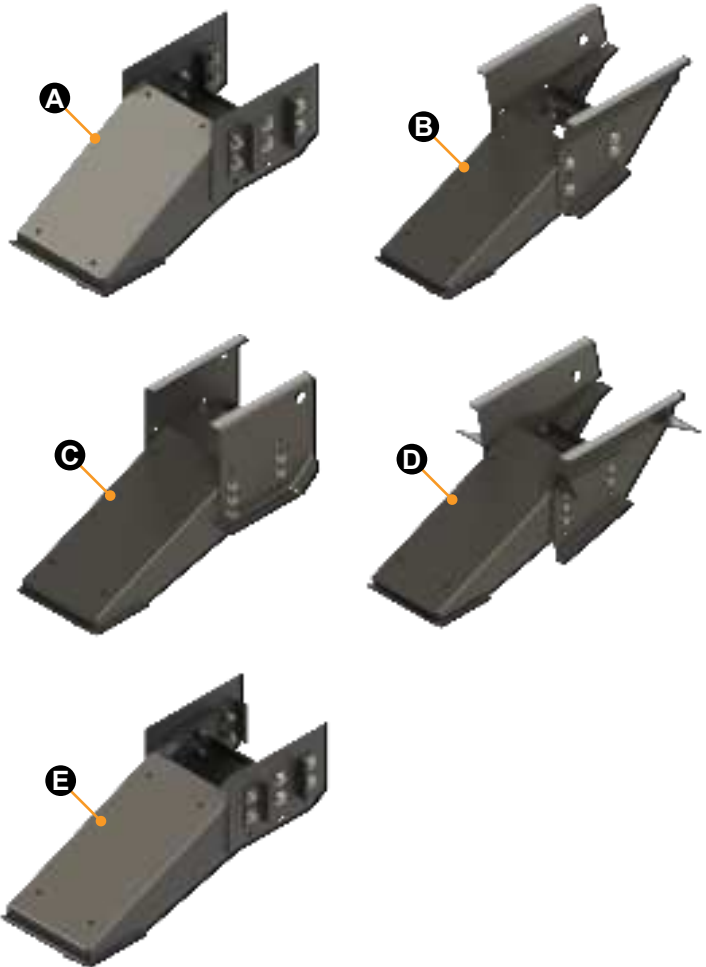
⚠ CAUTION

THE "CAUTION" SYMBOL ABOVE IS A SIGN THAT A PROCEDURE HAS A RISK INVOLVED THAT MAY CAUSE PERSONAL INJURY OR PROPERTY DAMAGE IF NOT PERFORMED SAFELY AND WITHIN THE PARAMETERS SET FORTH WITHIN THIS MANUAL.

⚠ CAUTION

FAILURE TO CHECK AND FOLLOW TOW RATINGS COULD RESULT IN TOW VEHICLE DAMAGE OR TOW VEHICLE AND TRAILER SEPARATION WHILE TOWING. TRAILER AND ITS CONTENTS MUST NOT EXCEED TOW VEHICLE, HITCH AND/OR TRAILER TOW RATINGS.

Parts List



Letter	PN	Description	Weight Rating
A	1270271	M19 retracted pin box	19K
B	1191191	L05 standard pin box	15.5K
C	1191151	L05 extended pin box	18K
D	1387883	L05 SHD extended pin box	21K
E	1324791	L07 retracted pin box	15.5K

NOTE: Part numbers are shown for identification purposes only. Not all parts are available for individual sale. All parts with a link to the Lippert Store can be purchased.

Steps to Verify Purchase of Proper Replacement Model

1. Look for the white sticker with a four-digit number on it, e.g. 1621 or 1716.
2. Determine the gross vehicle weight rating (GVWR) of the trailer.
3. Visually compare illustrations to the mounting wing on the 5th Wheel.
4. Measure length of box: Front row of bolts to center of kingpin (Fig.1 Dimension E).

5. Measure bolt pattern: (Fig.1 All three dimensions of A, B and C if needed).

6. Measure box width: (Fig.1 Dimension G).

NOTE: Write in the measurements of the pin box in the Actual Dimensions area of the chart.

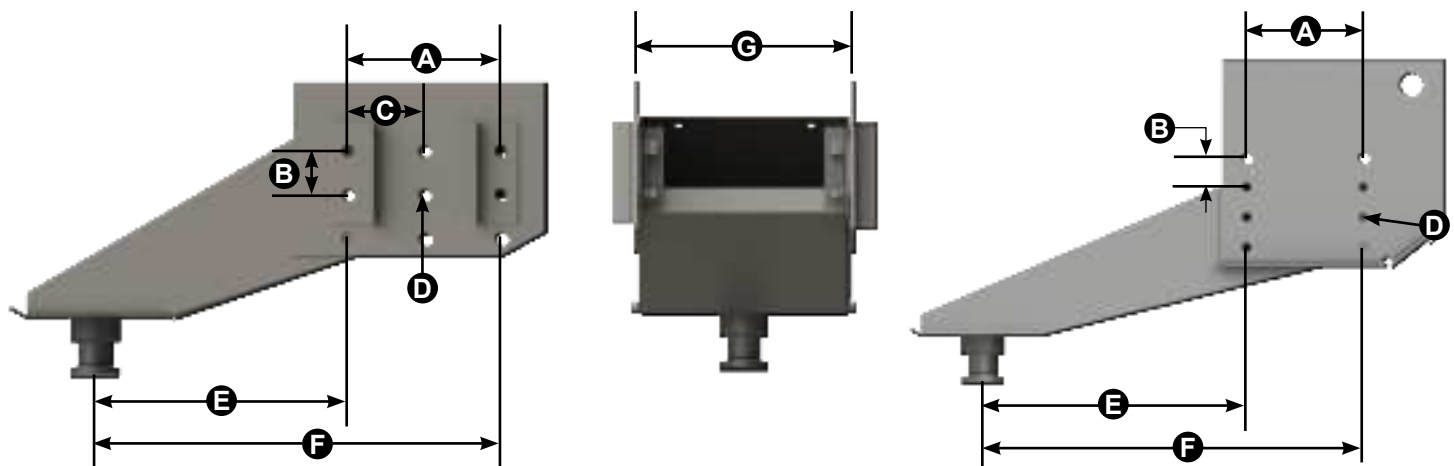


Fig.1 three-row hole pattern

two-row hole pattern

OEM part number	Lippert replacement	bolt pattern	style	horizontal distance between bolt pattern Dim. A	vertical distance between bolt pattern Dim. B	distance between rows Dim. C	bolt size Dim. D	bolt head size	front row bolts to center of kingpin Dim. E	rear row bolts to center of kingpin Dim. F	box width Dim. G
1621	L05	2 row	long	7 7/8"	2"	N/A	5/8"	15/16"	17 3/4"	25 5/8"	12"
0719	M15	2 row	medium	7 7/8"	2"	N/A	5/8"	15/16"	9"	16 7/8"	12"
1716	L07	3 row	long	8 3/4"	2 1/2"	4 3/8"	5/8"	15/16"	20 3/8"	29 1/8"	12 1/2"
1116	M19	3 row	medium	8 3/4"	2 1/2"	4 3/8"	5/8"	15/16"	14 5/8"	23 1/4"	12 1/2"

actual dimensions

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Resources Required

- Two people
- Cordless or electric drill or screw gun
- Appropriate drive bits
- Torque wrench
- Impact wrench or ratchet
- Sockets
- Drift/centering pin
- Second drift/centering pin (optional)
- Hammer (optional)
- Tape measure

Installation

⚠ WARNING

THE TRAILER MUST BE SUPPORTED PER MANUFACTURER'S RECOMMENDATIONS BEFORE WORKING UNDERNEATH. FAILURE TO DO SO MAY RESULT IN DEATH OR SERIOUS INJURY.

⚠ CAUTION

DUE TO THE WEIGHT OF THE PIN BOX, IT IS RECOMMENDED THAT AT LEAST TWO PEOPLE INSTALL THIS SYSTEM.

⚠ CAUTION

MOVING PARTS CAN PINCH, CRUSH OR CUT. KEEP CLEAR AND USE CAUTION.

Removal of Factory Pin Box

1. Level the 5th Wheel front to back.
2. Measure the distance from the bottom of the factory kingpin plate (Fig.2A) to a flat surface directly below (Fig.2B).

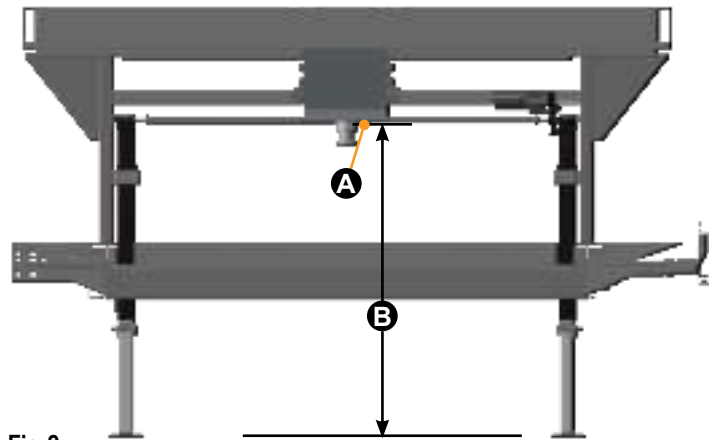


Fig.2

3. Make note of the bolt hole locations of the factory-installed pin box. The new pin box system will be mounted in the same hole settings (Fig.3).

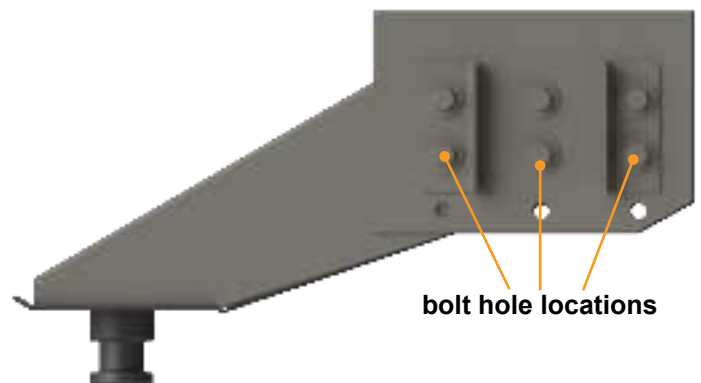


Fig.3



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4. Properly support the pin box assembly.

NOTE: The pin box assembly weighs several hundred pounds and a minimum of two people are required to complete the removal and installation. A forklift may also be used to remove and replace the pin box.

5. Make sure any electrical cables between the tow vehicle and trailer have been disconnected.
6. Remove fasteners that held the original pin box in place.
7. Remove factory pin box from the mounting frame.

Install new pin box

1. Hoist the new pin box into place.
2. Use a second person to line up the pin box to the bolt holes in the mounting plate.
3. Using a drift/centering pin or screwdriver, center the holes and install at least one bolt on the roadside of the trailer at the rear of the mounting plate (Fig.4A).



Fig.4

4. Install one bolt on the curbside of the trailer at the front of the pin box in the same hole the factory pin box bolt was located (Fig.5A).

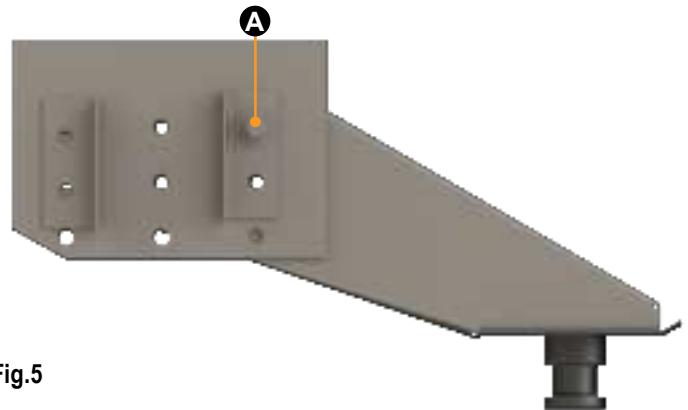


Fig.5

5. Verify distance from the bottom of the kingpin plate to a flat surface is within $\pm 1/2$ " of the factory setting (Fig.2A).
6. Utilizing the hardware in the pin box kit, install the bolts, washers, lock washers and nuts.
7. Torque the bolts to according to required values. Possible torque values may include: 110 ft-lbs minimum for $1/2$ " bolts; 160 ft-lbs minimum for $5/8$ " bolts; and 210 ft-lbs minimum for $3/4$ " bolts.

NOTE: Reference pin box installation manual to confirm specific torque values. Some models require different torque values for the bolts.

8. Reconnect the previously-disconnected electrical cables between the tow vehicle and the trailer.



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Operation

Hitching Procedure

NOTE: To assist with the hitching procedure, grease may be applied around the kingpin and on the skid plate surface. See the Maintenance section for recommended grease specifications.

⚠ WARNING

FAILURE TO FOLLOW THESE INSTRUCTIONS MAY
RESULT IN DEATH OR SERIOUS INJURY.

⚠ 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.

1. Place chocks 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. Some combinations of tow vehicle and trailer have little or no available clearance.

⚠ WARNING

DO NOT ATTEMPT TO HITCH THE TRAILER BY USING TRAILER JACKS TO LOWER THE TRAILER AND KINGPIN ONTO THE HITCH OPENING. 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.

3. Using the trailer landing gear, adjust trailer height per the manufacturer's recommendation so the bottom of the trailer's pin box (**Fig.6A**) is 1/2" to 1" below the top portion hitch skid plate (**Fig.6B**).

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 tow vehicle slowly toward the trailer until the tow vehicle's hitch contacts the bottom of the pin box and the kingpin slides into the receiver.

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:

- A. The landing gear is resting on firm, level ground.
- B. The landing gear fully supports the trailer's weight.
- C. The tow vehicle is stationary and in park with the emergency brake on.
- D. The bottom of the pin box is resting on top of the hitch.
- E. There is no space between the mating surfaces.

8. 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.

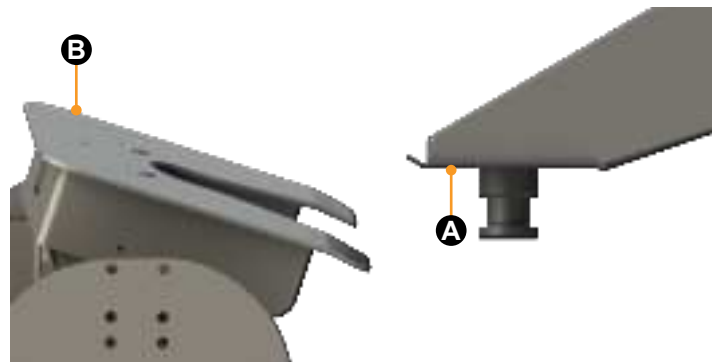


Fig.6



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9. Connect any electrical cables between the tow vehicle and trailer.

10. Raise the tailgate of the truck.

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

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 chocks.

Troubleshooting

What is happening?	Why?	What should be done?
Trailer not level.	Adjustment needed	Adjust pin box or hitch accordingly.
Excessive bottoming of skid pad assembly. Chucking in tow vehicle.	Operational, mechanical issues	Inspect the rubber compression bumpers to make sure they are in place. Check the trailer brakes for proper operation. NOTE: If the above items are satisfactory, it may be necessary to install a shear spring with a different spring rate.
Skid pad assembly does not return to neutral position when disconnected from the tow vehicle.	Spring loose or damaged	Check for loose or torn rubber shear spring.
Excessive noise from pin box area.	Attachment or hitch issues	Verify that the pin box is securely attached to the 5th Wheel. If the kingpin is excessively worn, the skid pad will need to be replaced. Hitch mechanisms can also cause noise. Verify that unwanted noise is not coming from the hitch. The hitch manufacturer can provide guidelines for this check.



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Maintenance

1. Annually inspect kingpin for excessive wear.
2. Inspect the skid pad to ensure a neutral (centered) position. When the trailer is disconnected from the tow vehicle, an equal gap of approximately 1 ¼" should be observed between the lip of the skid pad and the rubber compression bumpers. It is normal to be able to slightly move and twist the skid pad assembly with hand force.
3. Inspect the retainment rods for excessive wear. The retainment rods may show surface scratch marks as an indication of occasional contact, but the scratches, if present, should be minimal.
4. Inspect the plastic glide pads for excessive wear. The glide pad thickness should be no less than ¾".
5. Periodically check the torque values of all bolts.
6. 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.

⚠ 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.

Approved Sources - Bearing Grease

Mobil Oil	Mobilgrease HP
Exxon/Standard	Ronex MP
Kendall Refining Co.	Kendall L-427
Ashland Oil Co.	Valvoline Val-plex EP Grease
Pennzoil Prod. Co.	Premium Wheel Bearing Grease 707L

Notes



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