CURT™ The FIRST Name in Towing Products™

INSTALLATION INSTRUCTIONS

WARNING: NEVER EXCEED YOUR VEHICLE MANUFACTURER'S RECOMMENDED TOWING CAPACITY

Q20 5TH WHEEL HITCH



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DANGER ZONE PRECAUTIONS

Block all trailer tires in front and behind with appropriate wheel chocks. Do not substitute objects such as, but not limited to: stones, wood blocks, etc.

Front trailer lifting jacks must be supporting the trailer and resting on a firm and level surface.

Towing vehicle must be stationary with automatic transmission in park, emergency brake applied and engine off. If equipped with a manual transmission place in neutral, apply emergency brake and shut off the engine.

WARNINGS

Read and understand instructions before using this product. Fully instruct and demonstrate the operation of this 5th wheel hitch to the end user. Include the importance of observing all warnings contained herein, including warning labels on 5th wheel hitch mid section. Provide this manual in its entirety to the end-user. Serious injury or death may result if the warnings above are not observed.

To avoid serious injury, do not expose hands, body parts or clothing between the truck and trailer or the truck's bed sides and trailer. Extreme care should be observed to avoid serious injury to self, property and observers.

Never exceed the rated towing capacity of your vehicle. Trailer and contents combined must not exceed tow vehicle, hitch and/or trailer tow ratings. Exceeding rated capacity may result in separation. Exceeding rated capacity may result in damage to 5th wheel hitch, towing vehicle, trailer and or cause serious injury or death.

Never position yourself or others under the trailer's kingpin area (danger zone) during coupling and uncoupling. If for any reason you must position any part of your body under the trailer, between the truck and the trailer or between the trailer's kingpin and 5th wheel hitch you must follow the steps in the 'Danger Zone Precautions' section to the left. Improperly coupled trailers can separate and drop without notice.

ASSEMBLY & INSTALLATION

UNPACKING THE 5TH WHEEL

Your Q20 5th wheel hitch has been partially assembled, inspected and tested for fit, function and completeness. The Q20 5th wheel hitch is an engineered unit that has been designed and tested at the rating of 20,000 lbs. GTW.

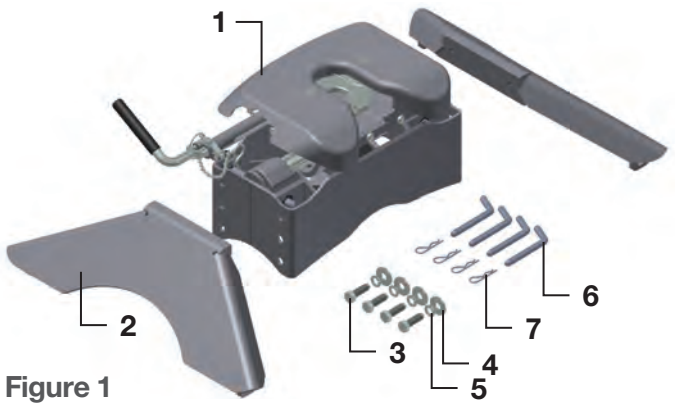


Figure 1

Be sure that the leg with the warning and instruction labels is placed on the side of the unit with the activation bar.

PARTS LIST

Item#	Qty	Description
1	1	Q20 5th wheel head assembled to mid-section
2	2	Legs
3	4	Pilot hex bolts, M14 - 2 x 45mm
4	4	Flat washers, 14mm
5	4	Lock washers, 14mm
6	4	Base rail mounting pins, 1/2" diameter
7	4	Hair pin clips for base rail mounting pins

CALCULATING THE HEIGHT OF THE ASSEMBLY

Assembly includes measuring the height requirement for the Q20 5th wheel head in relation to your trailer ride height at the kingpin box and skid plate. Ideally the trailer should ride as near to level as possible. The Q20 5th wheel is adjustable from 13" to 17", from the pickup bed to the top of its skid plate. Adjustment is attained by adjusting the mid-section up or down, in relation to the legs, in 2" increments (typical clearance between the pickup bed rails and the trailer should be a minimum of 5 1/2").

Step 1
With your trailer on a firm and level surface, set chock blocks in front of and behind the tires. (Do not substitute wood blocks, rocks, etc. for chock blocks.) Extend front trailer lifting jacks, adjust as required to set trailer at or near level.

Step 2
Measure from the ground to under the trailer's kingpin box skid plate (or lube plate if used). This will be the portion in contact with the Q20 5th wheel's skid plate once coupled.

Step 3
Measure from the ground to the surface of the pickup bed.

Step 4
Subtract the measurement from Step 2 from Step 1. This value will be near the height requirement for the Q20 5th wheel.

ASSEMBLY

Once you have determined the height adjustment required for your Q20 5th wheel, assemble the legs to the mid-section using the appropriate holes. Occasionally, the trailer's kingpin 'pin box' will require adjustment to facilitate correct ride height.

IMPORTANT: Torque the four pilot bolts to 100 foot lbs. Re-torque after initial 500 miles and every 1,000 miles thereafter and prior to each individual use.

Step 1
Depending on which holes are selected, attachment of the legs to the mid-section may be easier with the mid-section upside-down sitting on its skid plate.

Step 2
The head assembly can be removed from the mid-section to further aid in the installation of the pilot bolts.

Step 3
If the Q20 5th wheel is being mounted to existing bed mounting rails, and alignment issues arise, it may be necessary to proceed as follows:

Loosely assemble the legs to the Q20 5th wheel mid-section. Place the unit on top of the existing bed mounting rails, aligning the foot tabs with the outermost rectangular slots of the mounting rails. When the 5th wheel foot tabs drop into the four rectangular slots, pin the foot tabs using the four pins & clips provided. Continue assembly by tightening the pilot hex bolts to 100 foot lbs.

If difficulty is still experienced fitting the Q20 5th wheel to the existing bed mounting rails, it may be necessary to loosen the mounting rail bolts and realign the mounting rails as required to facilitate installation. It is recommended to replace old lock washers with new lock washers at this time. Torque mounting rail bolts to 75 foot lbs. Continue with the Q20 installation by tightening the pilot bolts to 100 foot lbs.

If using new bed mounting rails, follow the mounting rail's instructions for proper placement, alignment and spacing.

COUPLING & LOCKING

CAB VIEW

Indicator positions are showing
a coupled and locked 5th wheel

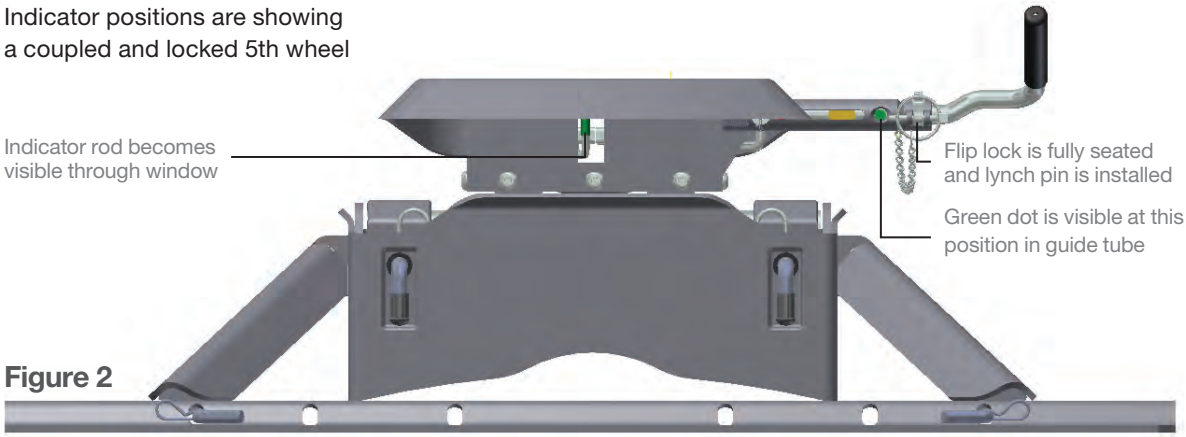


Figure 2

PREPARING THE VEHICLE AND TRAILER TO COUPLE

It is advised to perform trailer connections to the 5th wheel on a firm and level surface.

Multiple wheel chocks should be used in front of and behind trailer tires. Do not substitute objects such as, but not limited to: stones, wood blocks, etc.

Lower or remove truck tailgate as required.

Position the towing vehicle with the 5th wheel centered and in line with trailer or coach kingpin. Do not engage the kingpin into 5th wheel at this time.

Set automatic transmissions to park and activate the emergency brake. Set manual transmissions to neutral and activate the emergency brake.

The rear stabilizer jacks must be retracted. Adjust the front trailer lifting jacks so the trailer's kingpin skid plate is approximately 1/2" below the top surface of 5th wheel skid plate. Hooking up in this manner helps ensure proper engagement of the trailer kingpin to most 5th wheel systems. Never lower the trailer's kingpin into the 5th wheel hitch head.

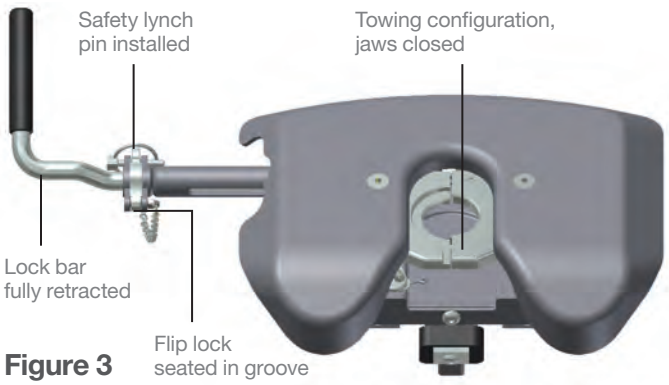


Figure 3

PREPARING THE 5TH WHEEL TO COUPLE

Refer to Figure 2, above and Figure 3, below for this step.

Note that green dot is visible (cab side) through lock bar guide tube and indicator rod is visible through window.

Flip safety lynch pin bail and remove lynch pin.

Lift flip lock, rotate clockwise and let hang.

Pull lock bar to full extension (approximately 3 1/2") until jaws activate and open, then release lock bar.

Visually check that jaws are open and ready to receive trailer kingpin.

Note that green dot and indicator rod have moved. This signifies that 5th wheel jaws are not in their closed and locked position. The yellow dot should now be visible. Yellow signifies the 5th wheel is ready for coupling.

If the 5th wheel is in any configuration other than that described in the first step, follow the preparation troubleshooting guide on the following page.

PREPARATION TROUBLESHOOTING

Red dot - Do not tow

WARNING: Do not tow in this configuration. The jaws will close, but will not lock. Follow the steps below to prepare for coupling. Jaws are open, but the lock bar is at extended position and being held by flip lock. Red dot is visible (cab side) through lock bar guide tube.

The red dot signifies that the jaws are open and the lock bar is in its extended position. The jaws will close, but will not lock, in this configuration.

Lightly pull the lock bar and release the flip lock from its groove.

Release the lock bar. The lock bar will retract partially inward.

Visually check that the jaws are open and ready to receive the trailer's kingpin. The yellow dot should be visible from cab.

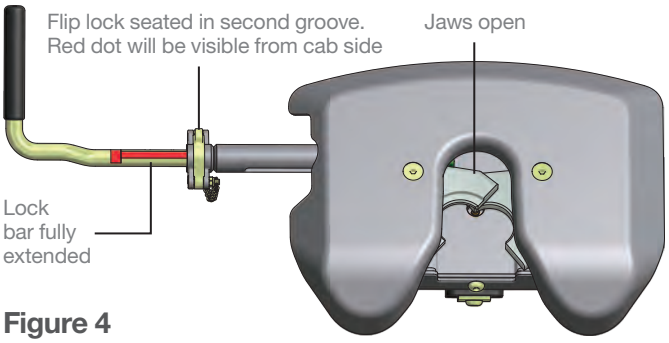


Figure 4

Out of sync jaws - Do not couple

WARNING: Do not couple. The jaws are semi-open and interlocked/interlaced with each other. The lock bar is somewhere in between full, retracted position and full, extended position. This configuration means that the movable jaw has become out of time with the second fixed jaw.

Inspect that the flip lock is hanging free in its clockwise, rotated position.

Pull the lock bar to its full, extended position and release. The jaws will re-time themselves.

Visually check that jaws are open and ready to receive trailer's kingpin (yellow dot).

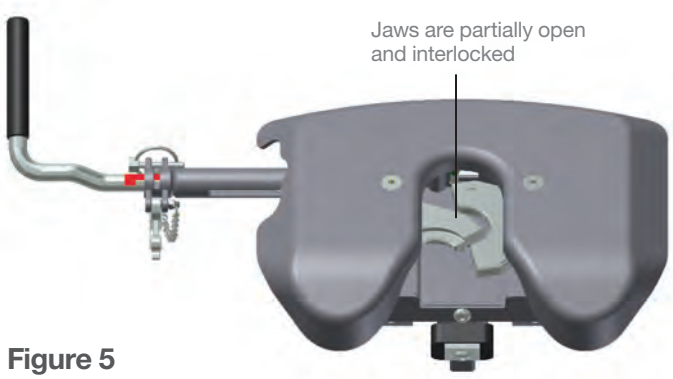


Figure 5

COUPLING

If you are using a lube plate on the trailer's kingpin, you are ready to couple the trailer to the 5th wheel. Up to two 3/16" thickness lube plates may be used. If you are not using a lube plate, apply a high-pressure wheel bearing grease to the 5th wheel skid plate.

Never position yourself or others under the trailer's kingpin area (danger zone) during coupling and uncoupling. If for any reason, you must position any part of your body under the trailer or between the truck and trailer or between the trailer kingpin and 5th wheel hitch you must follow the steps in the 'Danger Zone Precautions' on page 1.

Back-up the towing vehicle while remaining centered and aligned to trailer's kingpin. The trailer's kingpin skid plate will compress the towing vehicle's suspension and ramp up onto the 5th wheel skid plate. Refer to 'Cab View' on page 3 for the indicator's location and to observe the following:

- Lock bar will fully retract into 5th wheel head
- Green dot will become visible (viewing from cab)
- Green indicator rod is visible in window (viewing from cab)

Visually confirm that no space exists between the trailer's kingpin skid plate and the 5th wheel skid plate or between lube plate and 5th wheel skid plate. If a gap is present, then kingpin is not engaged into jaws.

Determine if kingpin is resting on top of jaws and provide corrective action.

Inspect for damage to 5th wheel unit. Under no circumstances should 5th wheel unit be used if damage exists due to improper coupling.

If no damage exists, review coupling instructions and repeat procedure.

PULL TEST

After coupling and prior to removing trailer wheel blocks and or raising front trailer jacks, you must do the following:

Set towing vehicle in a forward gear and lightly tug on the trailer to ensure that a 100% coupling has taken place. If resistance is felt, release forward pressure, set vehicle to park (if equipped with an automatic transmission) and activate the emergency brake. Place in neutral if equipped with a standard transmission and activate emergency brake.

If resistance is not felt, trailer may not be coupled correctly. Do not continue applying forward pressure, immediately stop and back towing vehicle into original position. Do not allow the truck and trailer to separate. Separation can cause damage to the towing vehicle, 5th wheel hitch and/or trailer. Serious injury or death may result if all warnings are not observed.

Review coupling instructions, apply corrective action and repeat coupling steps.

PREPARING TO TOW

Rotate flip lock counter-clockwise and seat in groove.

Insert safety lynch pin and flip bail to secure.

Attach electrical harnesses.

Attach lanyard and insert electric brake break-away plunger. If hydraulic surge brakes are present, attach lanyard from the surge brake assembly as required.

Fully retract front trailer lifting jacks.

Close truck tailgate or reinstall tailgate as required.

Remove tire chock blocks.

Check running lights, directional signals and brake lights for proper operation.

Pull forward a few feet and apply brakes to check that trailer brakes are activating. Adjust the electric brake controller if necessary.

UNCOUPLING & RESETTING

When parking it may be necessary to unload the forces on the kingpin by lightly backing against the kingpin. This maneuver helps put the kingpin and 5th wheel in a neutral position. Once parked on a firm and level surface, set automatic transmission vehicles to park and activate emergency brake, set standard transmission vehicles to neutral and activate emergency brake.

Multiple wheel chocks should be used in front of and behind trailer tires. Do not substitute objects such as, but not limited to: stones, wood blocks, etc.

Disconnect as required all harnesses, lanyards, safety devices, etc.

Do not extend rear trailer stabilizer jacks at this time.

Lower or remove truck tailgate as required.

Begin extending front trailer lifting jacks. Extend lifting jacks just enough to remove the weight of the trailer from the 5th wheel skid plate. Creating a gap between the trailer skid plate and the 5th wheel skid plate is not necessary and is not recommended. If a gap is present, it should be minimal and no more than 1/16". Excessive gap while coupled can damage internal components of the 5th wheel hitch as well as components of your trailer.

Flip safety lynch pin bail and remove lynch pin.

Lift flip lock and pull lock bar outward approximately 1/2". While holding lock bar in this position, drop flip lock back onto the lock bar. Pull lock bar to its full extension. Flip lock will drop and engage second groove. Release lock bar. Lock bar should remain in full extended position. **NOTE:** The red dot is visible (cab side) through lock bar guide tube. This signifies that the jaws are not locked and are prepared to be uncoupled.

Flip lock to secure.

Slowly pull vehicle out from underneath trailer skid plate. Observe that trailer is uncoupling. If resistance is encountered, determine corrective action and repeat uncoupling steps.

Once uncoupled from trailer, you may elect to reset 5th wheel for future coupling at this time. To reset for future coupling, lift the flip lock from its groove. This will allow the lock bar to partially retract into its coupling position.

IMPORTANT: Failure to reset lock bar in this manner prior to next coupling will not allow the jaws to lock around the trailer's kingpin. See Figure 6 below.

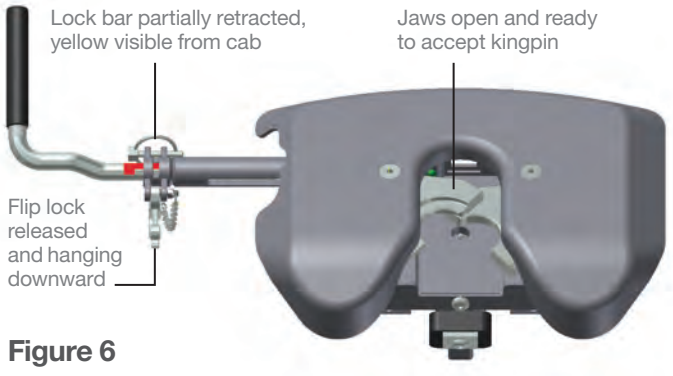


Figure 6

REMOVAL & REINSTALLATION

For your convenience, the Q20 5th wheel hitch may be disassembled to ease removal. This section will discuss the three different ways the Q20 5th wheel can be removed.

REMOVAL - OPTION 1

We do not recommend separating the entire 5th wheel hitch from the base rails. Follow the four steps below and refer to Figure 7 for assistance.

1. Remove the four clips and mounting rail pins.
2. Remove the 5th wheel unit from the mounting rails.

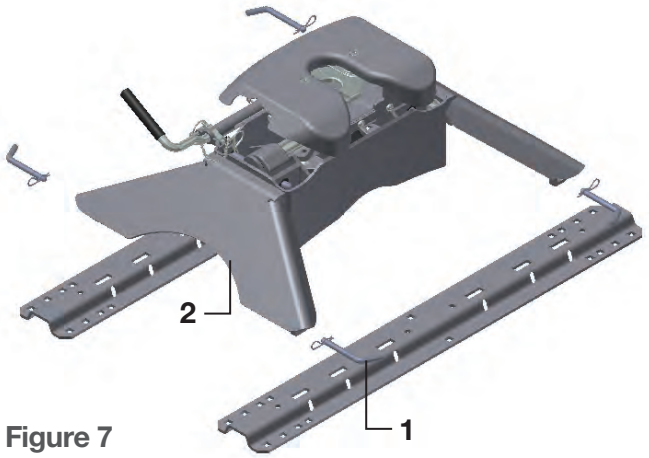


Figure 7

REMOVAL - OPTION 2

We recommended that the head be separated from the mid-section and mid-section and sides be removed as one unit. **NOTE:** It is helpful to reinstall the caps, pins & clips. Follow the four steps below and refer to Figure 8 for assistance.

1. Remove clips, pins and caps.
2. Lift and remove head with bearing shaft.
3. Remove the clips and mounting rail pins.
4. Lift and remove rail pins, mid-section and sides as one unit.

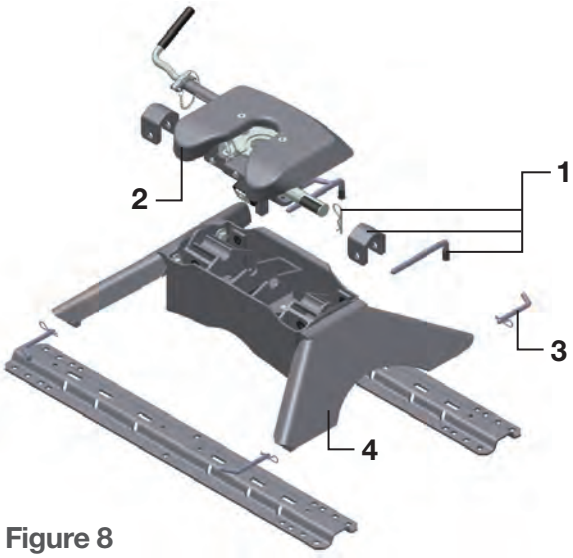


Figure 8

REMOVAL - OPTION 3

Separate the head and legs from the mid-section. Follow the four steps below and refer to Figure 9 for assistance.

1. Remove clips, pins and caps.
2. Lift and remove head with bearing shaft.
3. Remove the four pilot hex bolts, lock washers and flat washers. Separate the sides from mid-section.
4. Remove the four clips and mounting rail pins. Remove the sides from the mounting rails.

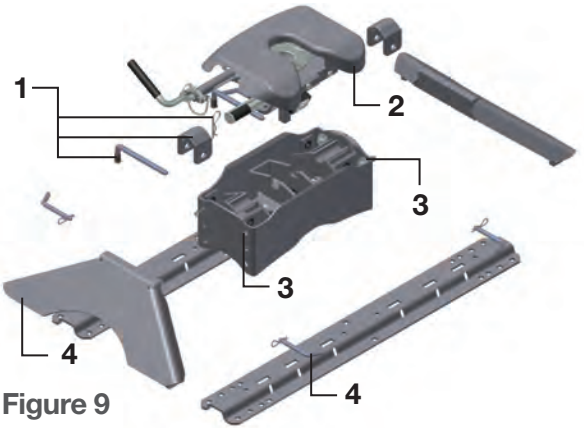


Figure 9

REINSTALLATION

Reinstall the Q20 5th wheel in the reverse order it was removed. If removal method was per Option 2, please follow the steps below:

Place the mid-section, still securely bolted to the legs, into the mounting rails.

Insert the four mounting rail pins & clips.

Re-torque four pilot hex bolts to 100 foot lbs.

IMPORTANT: When installing the 5th wheel head into the mid-section, the long end of the bearing shaft is inserted into the lower bearing assembly. The machined bearing retainer must be against the lower bearing assembly. The removable bearing retainer must be against the other side of the lower bearing assembly. The O-ring retainer stop is placed in its groove lastly.

Apply a light film of lubricant to the lower pilot. Guide lower pilot into mid-section while holding bearing shaft and its retainers against lower bearing assembly. Continue to guide lower pilot through the lower square pad until the bearing shaft is fully seated in its saddles. Place shaft caps over the bearing shaft. Install the two long pins & clips. See Figures 10 through 12 on the following page.

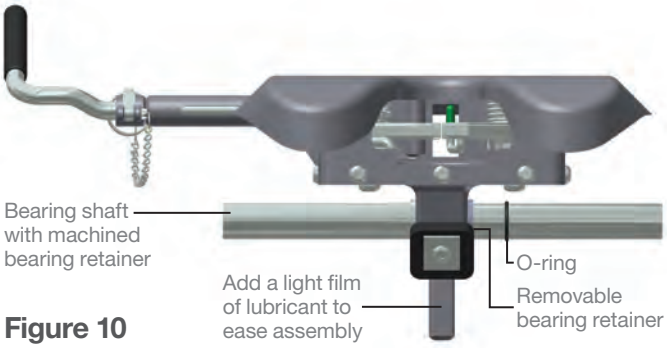


Figure 10

Ensure that the machined bearing retainer and the removable bearing retainer are against lower bearing assembly. Both sit inboard of mid-section bearing shaft cradles during assembly.



Figure 11

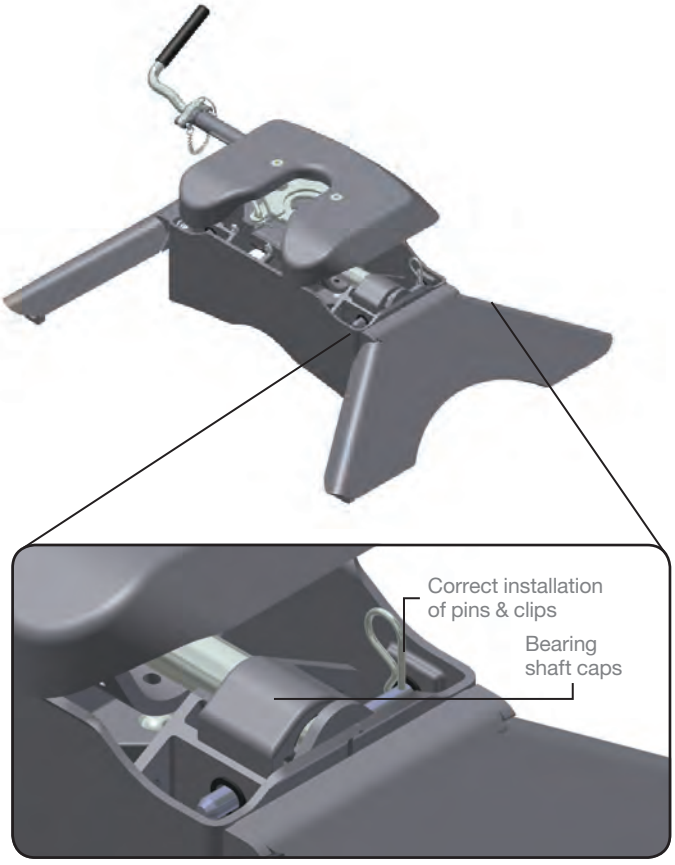


Figure 12

MAINTENANCE REQUIREMENTS

MAINTENANCE SCHEDULE

IMPORTANT: Torque the four pilot bolts to 100 foot lbs. Re-torque after initial 500 miles and every 1,000 miles thereafter and prior to each individual use.

Lubricate before each individual use and every 1,000 miles thereafter. Black graphite grease is recommended for the jaw, pins and the lower bearing assembly jaw. High-pressure wheel bearing grease is preferred for the skid plate. **NOTE:** In severe cold temperatures a lighter grease, such as white lithium, may be substituted for the jaw pins and the lower bearing assembly jaw. This will ensure that all mechanisms work as designed.

JAW PIN GREASE FITTINGS

Each jaw pin is supplied with grease through a grease fitting located in each jaw. These grease fittings are visible from each side of the Q20 5th wheel.

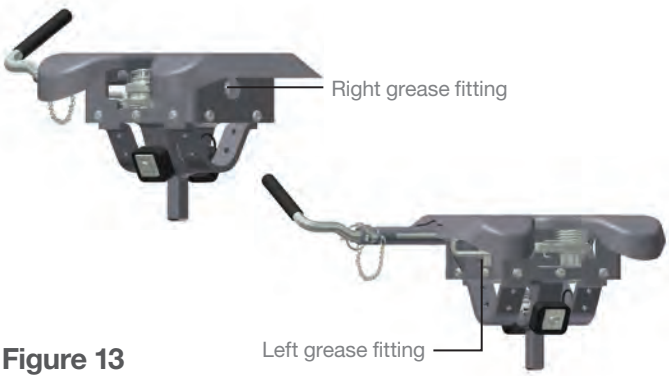


Figure 13

LOWER BEARING GREASE FITTING

The lower bearing assembly is supplied with grease through the grease fitting centered in the cast base plate. This grease fitting is visible while looking down through the jaws in their locked position.

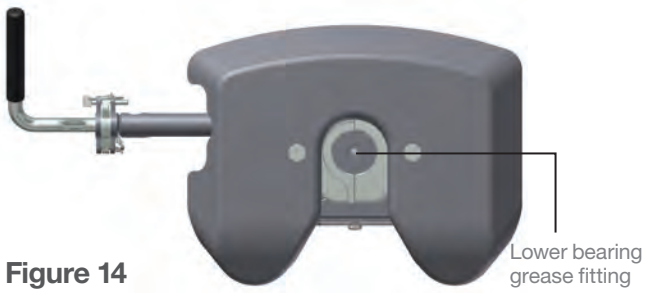


Figure 14

SPIRAL CAM GREASING

The spiral cam seated in the cast base plate requires the application of grease into its pocket. To access, the jaws must be open. Place the lock bar in its fully extended position and retain by seating the flip lock in its uncoupling position. Insert the safety lynch pin. Using a suitable probe, apply grease to the pocket under the spiral cam. When complete, remove the safety lynch pin, rotate the flip lock from its seat and allow the lock bar to retract inward into the coupling position.

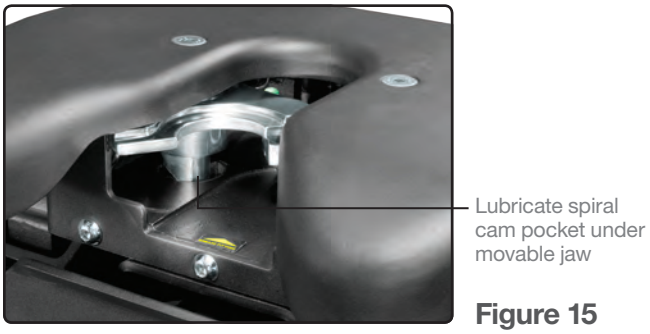


Figure 15

SKID PLATE GREASING

The last lubrication point is the Q20's skid plate. Liberally apply grease to the skid plate's surface if not using a lube plate. A high-pressure wheel bearing grease is preferred. Apply as required between coupling and uncoupling the trailer from the Q20 5th wheel.

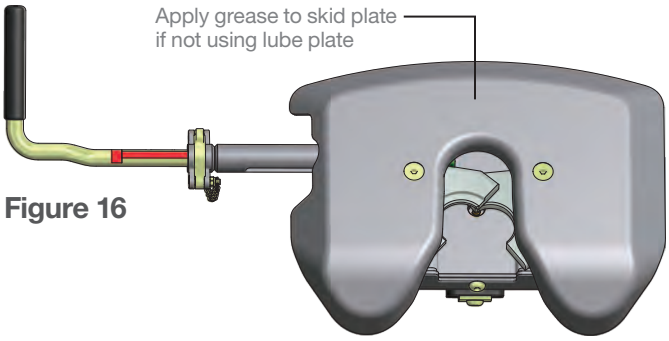


Figure 16

CURT WARRANTY

TEN YEARS LIMITED

CURT Manufacturing, LLC (CURT) warrants to the original purchaser (Purchaser), its products to be free from defect under normal use and service, ordinary wear and tear excepted, for the warranty period stated below, from the date of the original retail purchase, but subject to the limitations as set forth below.

LIMITATION ON WARRANTY

CURT's obligation under the above warranty is limited to repair or replacement of the CURT Product (Product), at its option due to a manufacturing defect of the Product. CURT shall not be liable for the loss of or use of vehicles, loss of or damage to personal property, expenses such as telephone, lodging, gasoline, towing, tire damage or any other incidental or consequential damages incurred by the Purchaser, or any other person or entity.

CURT will examine the returned Product. If CURT, in its exclusive discretion, determines that the defect or damaged Product is covered under this limited warranty, CURT will repair the Product or replace it at that time.

Alterations to or misuse of the Product will void the warranty. For example, overloading or exceeding an automobile or trailer manufacturers' weight ratings, or maneuvering motor vehicles equipped with Products at improper rate of speed, shall void the warranty on any of the Products. Failure to properly maintain and regularly inspect the Product according to the specific instruction sheet accompanying each Product shall also void the warranty.

Some states do not allow the exclusion or limitation of incidental or consequential damages. If such exclusions or limitations are prohibited under the applicable law, the above limitation or exclusion may not apply.

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

The Purchaser, when returning a CURT Product, must observe the following steps:

1. The Purchaser must have proof of purchase of any damaged Product and supply the same to the headquarters of CURT. The Purchaser must obtain from CURT (toll free number is 877-CURTMFG (877.287.8634)) a Returned Goods Authorization (RGA) number in order to return any damaged Product to CURT for inspection and evaluation under this Limited Warranty.

2. The Purchaser must pay all handling charges and shipping costs to deliver Products to CURT and must send the damaged Product along with the RGA number and proof of purchase to CURT at 6208 Industrial Drive, Eau Claire, Wisconsin 54701.

3. Upon receipt of damaged Product, CURT will determine whether the damaged Product is covered under the Limited Warranty. If it is, CURT will repair or replace the Product. If the Product is replaced, the Product that is originally returned by the Purchaser shall become the exclusive property of CURT. If the returned Product is not covered under the Limited Warranty, CURT will notify the Purchaser before taking any further action with regard to repair or replacement, which would be at the Purchaser's cost.