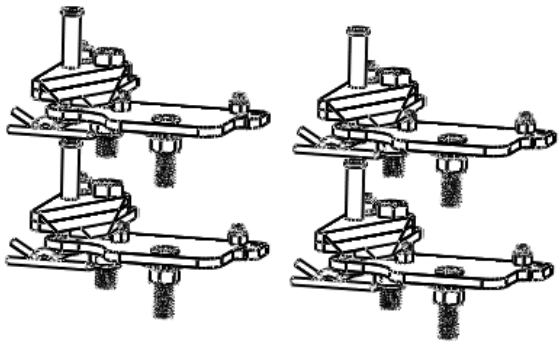
TORKLIFT INTERNATIONAL

OVER 35 YEARS OF INNOVATION, QUALITY, SAFETY.

IMPORTANT OWNER-OPERATOR INSTALLATION INSTRUCTIONS

A7310/A7311
A7310S/A7311S

STABLELOAD
APPLICATION FITS:
ANY TRUCK WITH A BOTTOM
OVERLOAD LEAF SPRING



Member of NATCOA
WWW.NATCOA.COM

REVISED version 3 BY: RAS 1/31/19

TECH SUPPORT (800) 246-8132

AFTER INSTALL, PLEASE GIVE THIS BOOKLET TO YOUR CUSTOMER

Before Beginning

Lower Overload Springs

These Stable Loads are designed to be installed on vehicles with lower overload springs, and work by engaging the lower overload spring sooner, allowing the spring to carry a heavier load.

Lower overload springs can be identified as being on the bottom of the spring pack. The lower overload is generally shorter and thicker than the rest of the leaf springs and in most cases and will be separated by a gap. See figure 0.1

Stable Loads are designed to work on lower overload springs up to 3-3/8” wide. If your overload springs exceed this width, contact our tech support by phone at (800) 246-8132 or Email at support@torklift.com for more information.

Figure 0.1

Tire Chains

Stable Loads **must have adequate clearance** for the tire chains or cables. If installing chains or cables make sure there is enough clearance between your Stable Loads. The lack of clearance may potentially cause unsafe interference issues and/or damage.

A7311/A7311S Leaf Spring Drilling

A7311/A7311S installations require drilling of the leaf springs. Many factory overload springs come predrilled with 1/2" holes; therefore, drilling holes in the overload springs (using part number A7311/A7311S) in the same factory locations found on vehicles with pre-drilled holes will have no effect on your springs integrity or operation. When drilled in accordance with the TorkLift International drilling specifications, the springs will be covered under the Torklift International Legendary Lifetime Warranty.

Most factory leaf springs can be drilled by hand with a cordless drill and the supplied Cobalt Drill Bits, however some of our customers have encountered difficulties with particularly hard springs. We recommend having the leaf springs drilled by a certified Torklift dealer.

If you choose to drill the leaf springs yourself, we highly recommend watching our leaf spring drilling video at
https://www.youtube.com/watch?v=Jt76V8VVqtM

We have also developed a leaf spring drilling tool to greatly reduce the effort required to drill through the spring steel. Free rental (With deposit and shipping) is available through the Torklift International customer service department at (800) 246-8132. To see our drill tool in action, visit
https://www.youtube.com/watch?v=R9NQ5vpv6aE

Nissan Titan

If your Nissan Titan has an axle wrap bracket located at the rear of the lower leaf spring, Stable Loads will only be installed on the front of the driver and passenger leaf springs. See figure 0.2 below.

Figure 0.2

PARTS INVENTORY

Steel Stable Loads A7310/A7311		
DESCRIPTION	QTY.	Item #
Mounting Plate	4	A7310-P4
Right Lower Wedge Plate C	2	A7310-P3-R
Left Lower Wedge Plate C	2	A7310-P3-L
Right Lower Wedge Plate B	2	A7310-P2-R
Left Lower Wedge Plate C	2	A7310-P2-L
Right Lower Wedge Plate A	2	A7310-P1-R
Left Lower Wedge Plate C	2	A7310-P1-L

Stainless Stable Loads A7310S/A7311S		
DESCRIPTION	QTY.	Item #
Mounting Plate	4	A7310S-P4
Right Lower Wedge Plate C	2	A7310S-P3-R
Left Lower Wedge Plate C	2	A7310S-P3-L
Right Lower Wedge Plate B	2	A7310S-P2-R
Left Lower Wedge Plate B	2	A7310S-P2-L
Right Lower Wedge Plate A	2	A7310S-P1-R
Left Lower Wedge Plate A	2	A7310S-P1-L

Shared Parts-A7310, A7311, A7310S, A7311S		
Description	**QTY.**	**Item#**
1/2" x 2 1/2" - Hex Bolt - Grade 8	4	9887
1/2" - SAE - Flat Washer - Grade 8	44	7465
1/2" Nylock Nut	4	10569
7/16" x 1 3/4"- Thin Hex Bolt - Grade 8	4	11583
7/16" - USS - Flat Washer	4	3536
7/16" – Nylock Hex Nut – Grade 8	4	13493
3/8" x 1 1/4" - Hex Bolt – SS	4	10261
3/8" - Nylock Hex Nut - SS	4	10564
1/4" x 3/4" - Hex Bolt - SS	8	11758
1/4"- Nylock Nut - SS	8	12080
1/8" x 2-5/8" - Hitch Pin Clip - Grade 2	4	3703
3/8" x 2-1/4" - Clevis Pin - SS	4	13492
Grommet 3/8" ID	4	11831
7/16" Cobalt Drill Bit For (A7311, A7311S Only)	2	11548

Installation

Step 1.

Park your vehicle on a flat, level surface and chock the front wheels. Use a floor jack to lift the rear of the truck up by its hitch. This will help to open the gap between the lower overload spring and the main spring pack. Place jack stands under both sides of the vehicle as a safety precaution.

Step 2. – A7311/A7311S only. Skip to Step 3 for A7310/A7310S.

For this step, you will need:

- A low speed electric cordless hand drill capable of spinning 200-300 rpm. A 18v or larger drill is recommended.
- Cutting fluid or motor oil.

Begin by marking the hole locations on both ends of each lower overload spring. The hole should be marked 1” in from the end.

Without pre-drilling, use the supplied 7/16” Cobalt drill bits to drill through the leaf springs in the marked locations. If more 7/16” Cobalt Drill Bits are required they can be purchased from most hardware stores. Do not drill all the way through the leaf spring at this time. Once the top of the leaf spring begins to dimple, stop drilling and move to the next hole location. Drilling through the leaf spring at this time may damage the drill bit. See figure 2.1

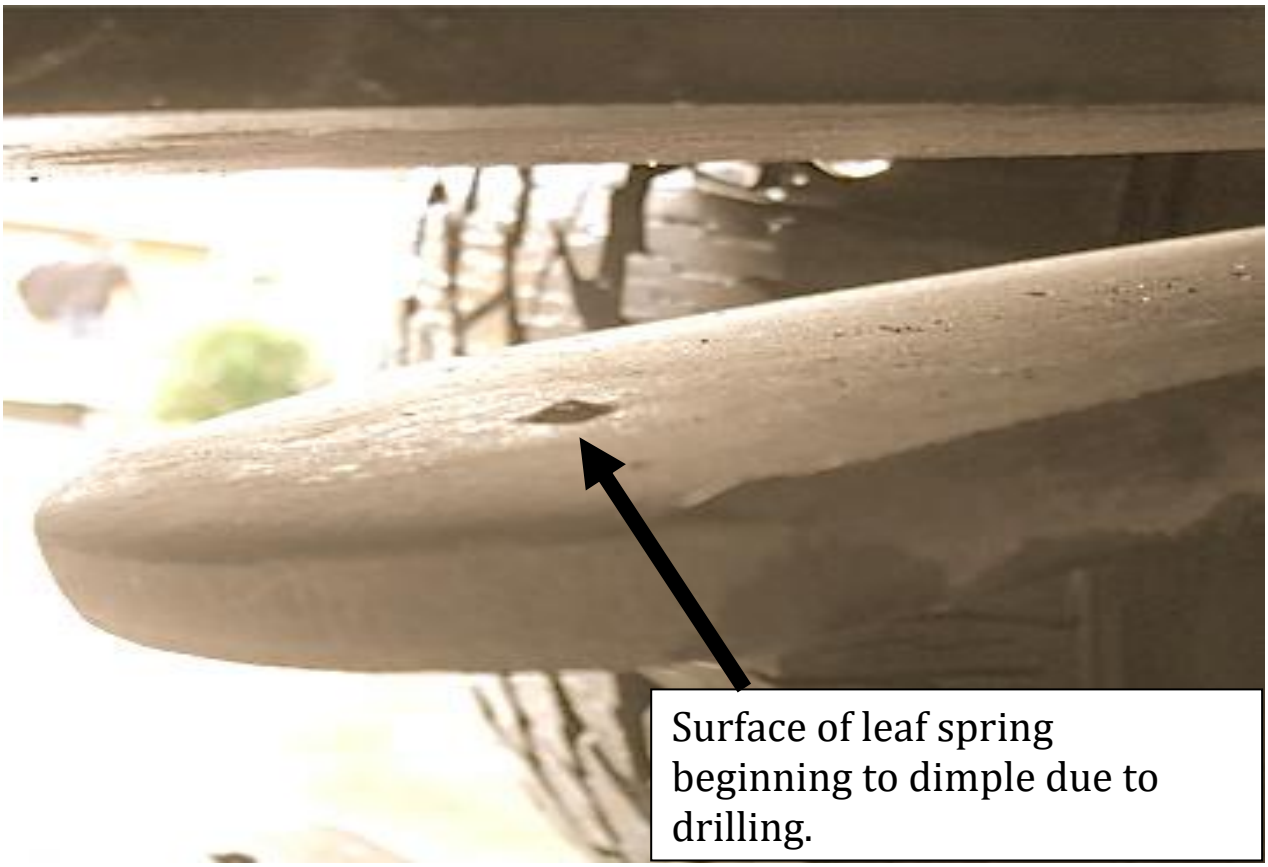


Figure 2.1

When drilling, use a slow rpm, and apply a high amount of force against the spring to keep the bits from dulling. Apply oil to the tip of the drill bit approximately every 5 to 10 seconds.

Once all four holes are mostly drilled, go back and finish drilling the holes. Use a lighter pressure on the drill as the bits will grab as they break through the upper layer of the overload spring.

If drilling the springs by hand is too difficult, Torklift offers a free drill tool rental (Deposit and shipping required). Call customer service at (800) 246-8132 for more information.

Step 3

Measure the thickness of the lower overload spring 3” back from the end of each overload. Write your measurement down here _____. You will also want to measure the gap between the overload spring and the spring pack assembly at this location. Write your measurements down here. Driver (Fr)_____, Driver (Rr)_____,
Pass (Fr)_____, Pass (Rr)_____.

Step 4

Depending on the number of wedges used it may be necessary to lift the rear end of the truck to engage and disengage the Stable Loads. This can be done with either a floor jack or air bags (if applicable).

Determine the number of wedges to assemble in the wedge pack. If the gap between the lower overload and spring pack measured in step 3 is 3/4” or greater, assemble the wedge pack as shown in figure 4.1. If the gap is between 1/2” and 3/4", assemble the wedge pack without the top wedge (Wedge A). If the gap is 1/4"-1/2”, assemble the wedge pack with only the bottom wedge (Wedge C).

If you are using less than three wedges in the wedge pack, wedges can be added to increase the effect of the stable load on the suspension, however this may also increase the difficulty of engaging and disengaging the StableLoad.

To lessen the difficulty of engaging the StableLoads, the top and bottom of the wedge packs can be greased, or a wedge can be removed.

To assemble the wedge pack, place the wedges into three groups. Each wedge is 1/4” thick and assembles from flat spot largest to smallest. The bottom wedge(C) has four round holes and one square hole. The middle wedge(B) will have four round holes and the top wedge(A) is the smallest wedge with three round holes. Be sure that the tapered edges are all facing up as seen in figure 4.1. Torque the nylock nut and bolt to 20 ft-lbs (27nm). Make sure the wedges are aligned evenly.

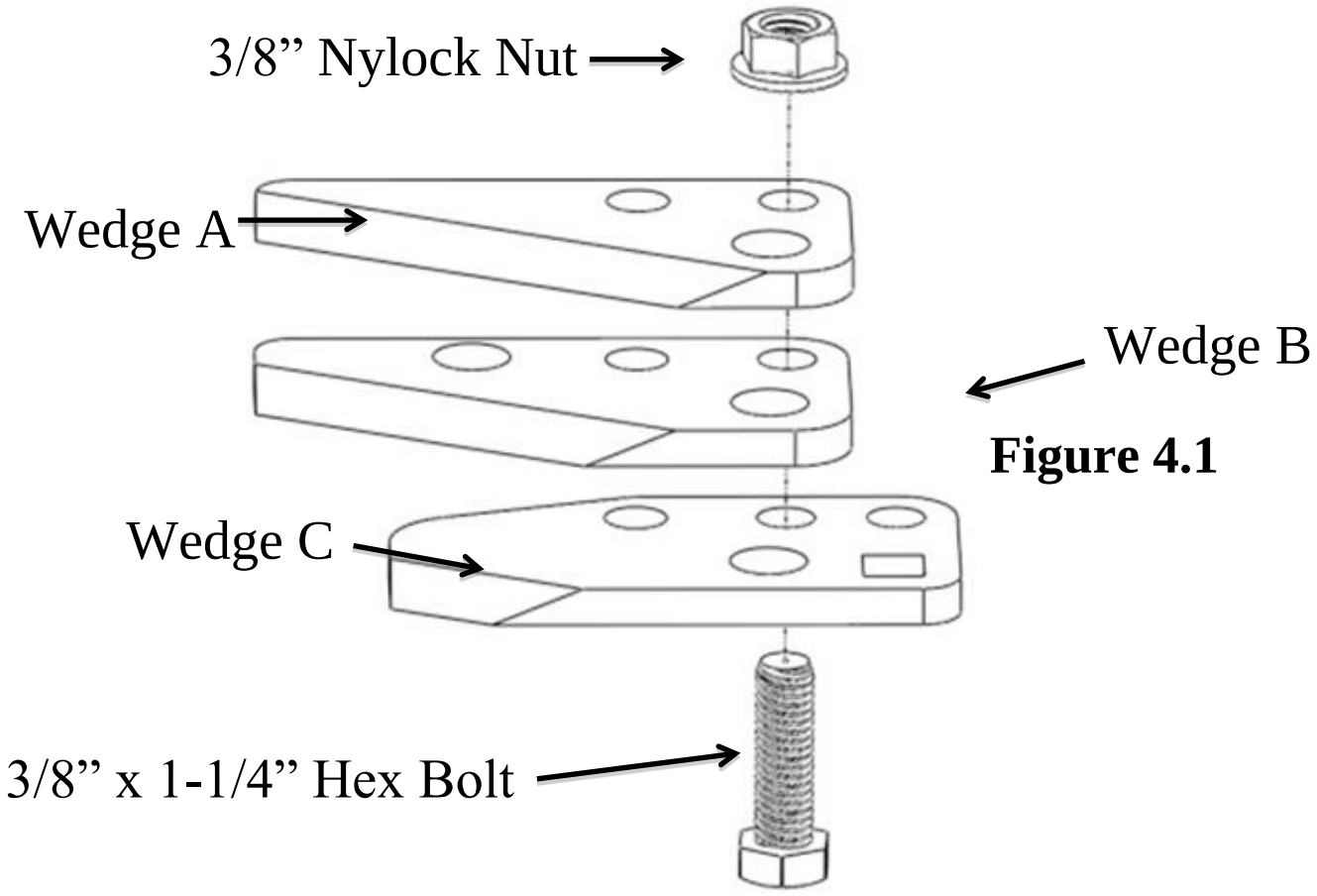


Figure 4.1

Step 5

Assemble a stack of 1/2” SAE Washers to match the thickness of the lower overload spring as measured in Step 3. The washer stack cannot be shorter than the lower overload spring, but needs to be as close as possible. Assemble the wedge pack to the mounting plate as seen in figure 5.1. The Rubber Grommet will need to be pushed into the hole in the Mounting Plate.

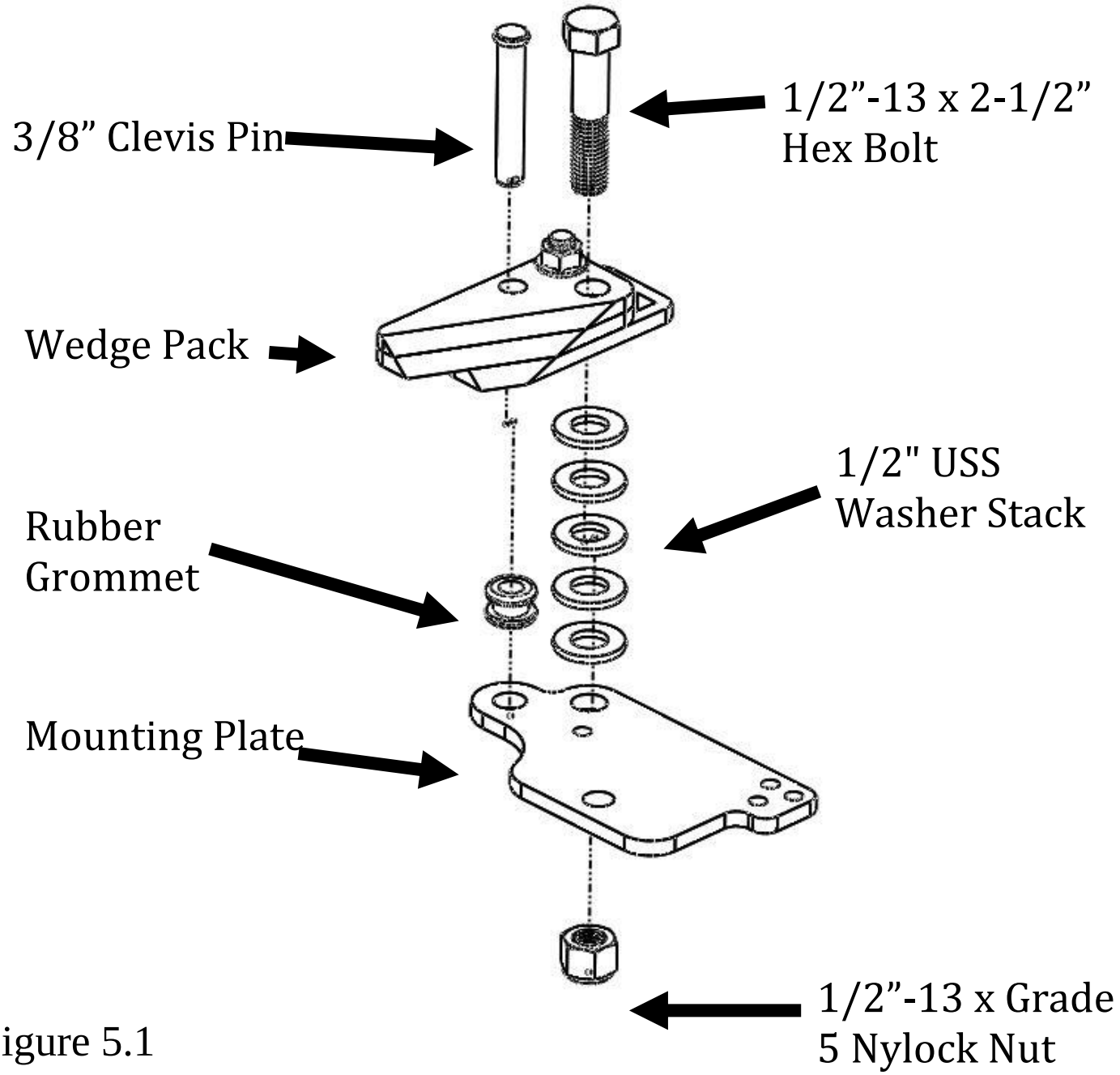


Figure 5.1

Tighten the 1/2"-13 x 2-1/2” Hex Bolt until snug. Keep the bolt loose enough to allow the wedge pack to rotate with slight effort. Repeat step 5 three more times to make two right-hand and two left-hand StableLoads as shown in figure 5.2.

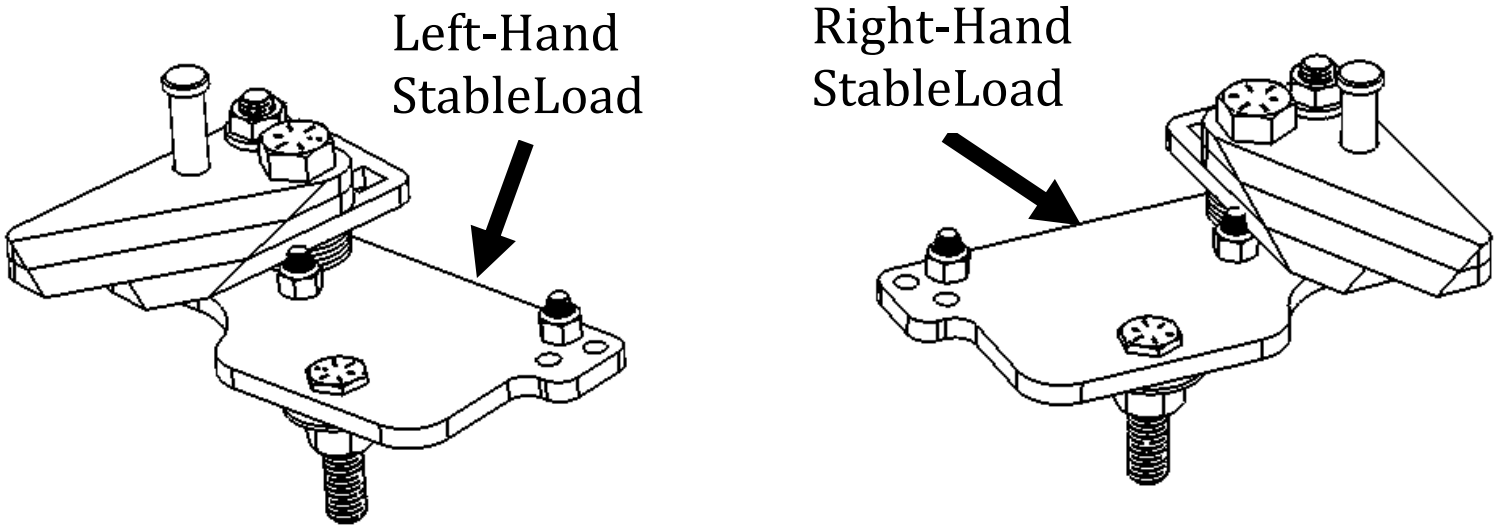


Figure 5.2 (All wedges shown)

Step 6

Determine the mounting orientation. StableLoads can be installed on either the inside (frame side) or outside (tire side) of the spring. Which side is used will depend on the available clearance around the spring on the vehicle. It is important that the StableLoad has at least 1” of clearance around obstacles such as the frame, tire, mud flaps, brake lines, and exhaust when it is both engaged and disengaged. Keep in mind that the suspension is currently uncompressed, and the StableLoads will travel both upwards and downwards from their current positions. Failure to provide enough clearance can result in damage to the StableLoad, Tires, Brake lines, or other parts of the vehicle. See figure 6.1.


PIVOT POINT INSIDE SPRING PACK


PIVOT POINT OUTSIDE OF SPRING PACK

Figure 6.1

Step 7

Next you will need to determine the configuration of your Mounting Plate. If your overload is 2-5/8” wide or less, you will need to use both 1/4” X 3/4” Hex Bolts and both 1/4” Nylock Nuts as seen in **Figure 7.1 and 7.2.**

NOTE: While it is not necessary for the Mounting Plate to be exactly perpendicular to the leaf spring, it is imperative that plate rotation is prevented by using one of the installation options pictured on the following pages.

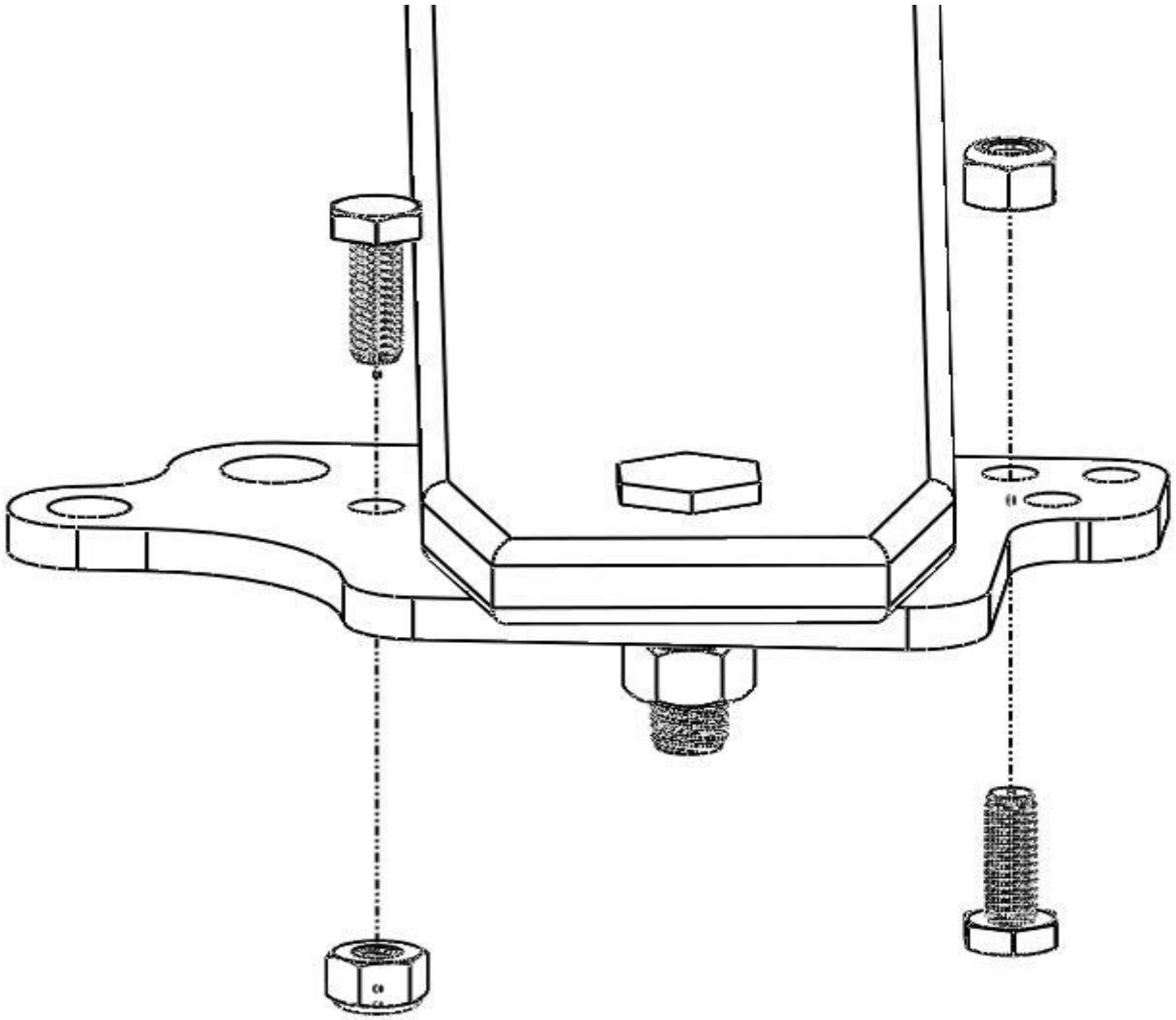


Figure 7.1

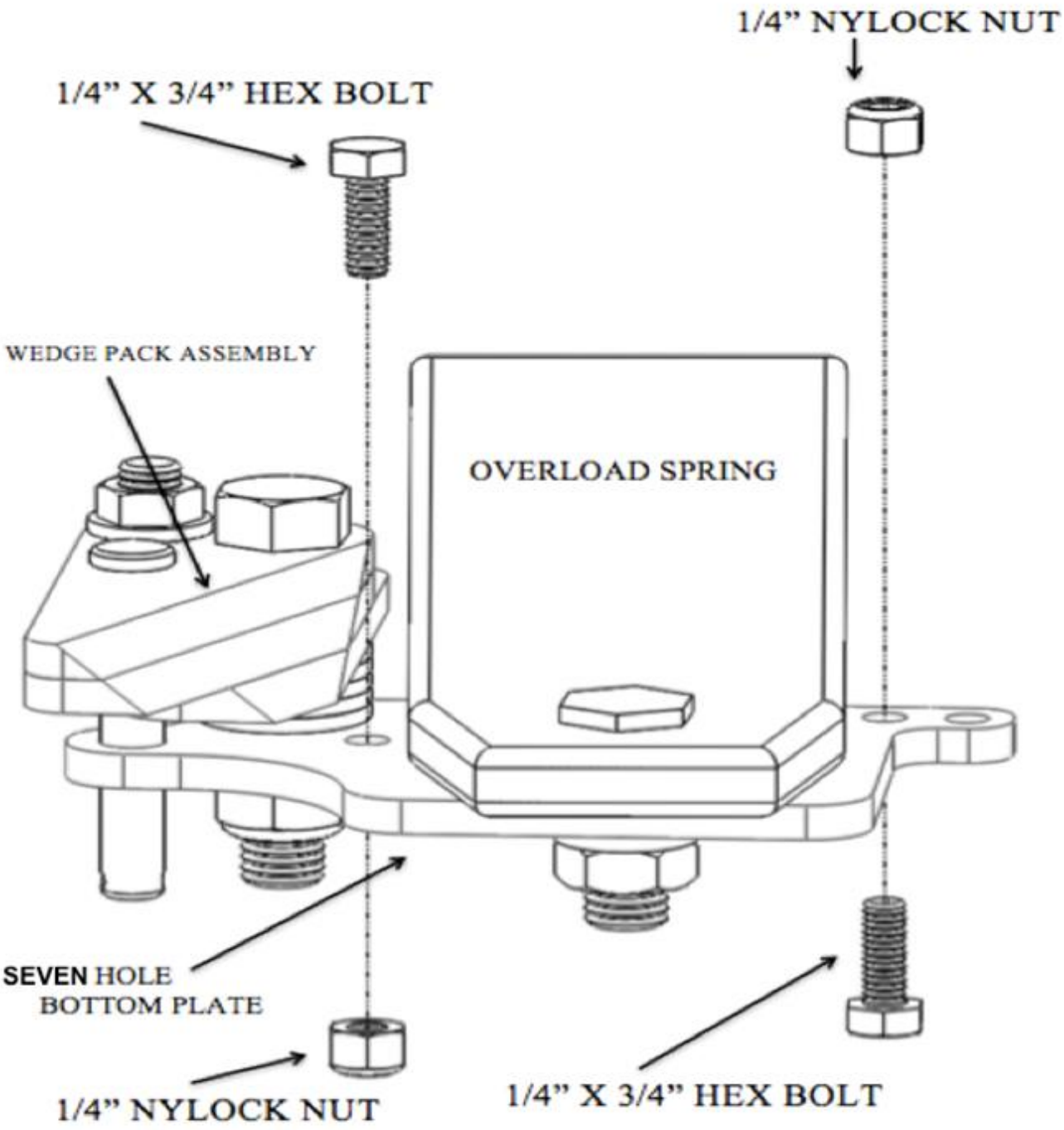


Figure 7.2

If your overload is between 2-5/8" and 3" you will also use both 1/4" X 3/4" Hex Bolts and both 1/4" Nylock Nuts as seen in **Photo 7.3**.

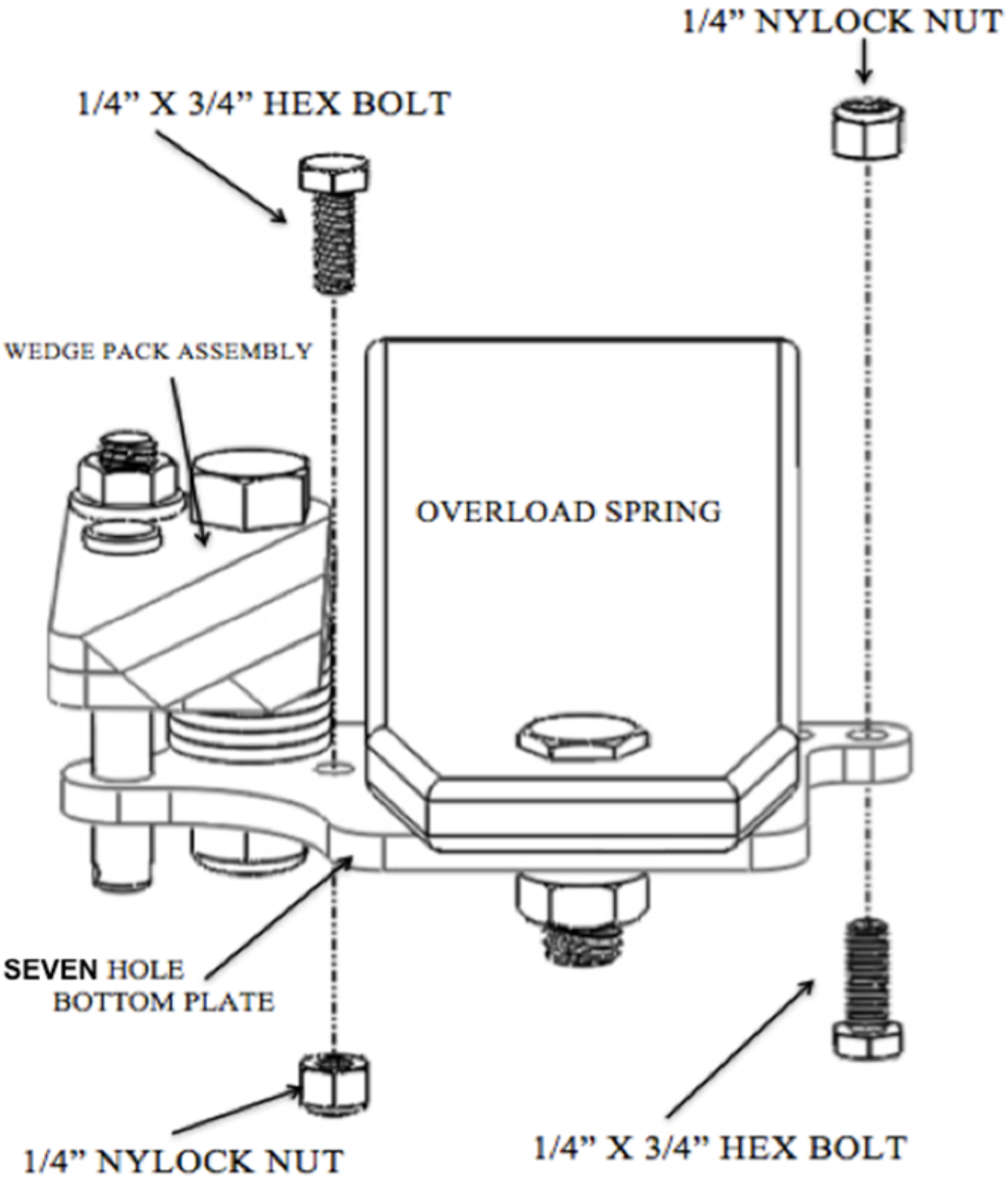

1/4" NYLOCK NUT
1/4" X 3/4" HEX BOLT
WEDGE PACK ASSEMBLY
OVERLOAD SPRING
SEVEN HOLE
BOTTOM PLATE
1/4" NYLOCK NUT
1/4" X 3/4" HEX BOLT

Figure 7.3

If your overload is greater than 3”, you will only use one 1/4” X 3/4” Hex Bolt and one 1/4” Nylock Nut as seen in **Photo 7.4** below.

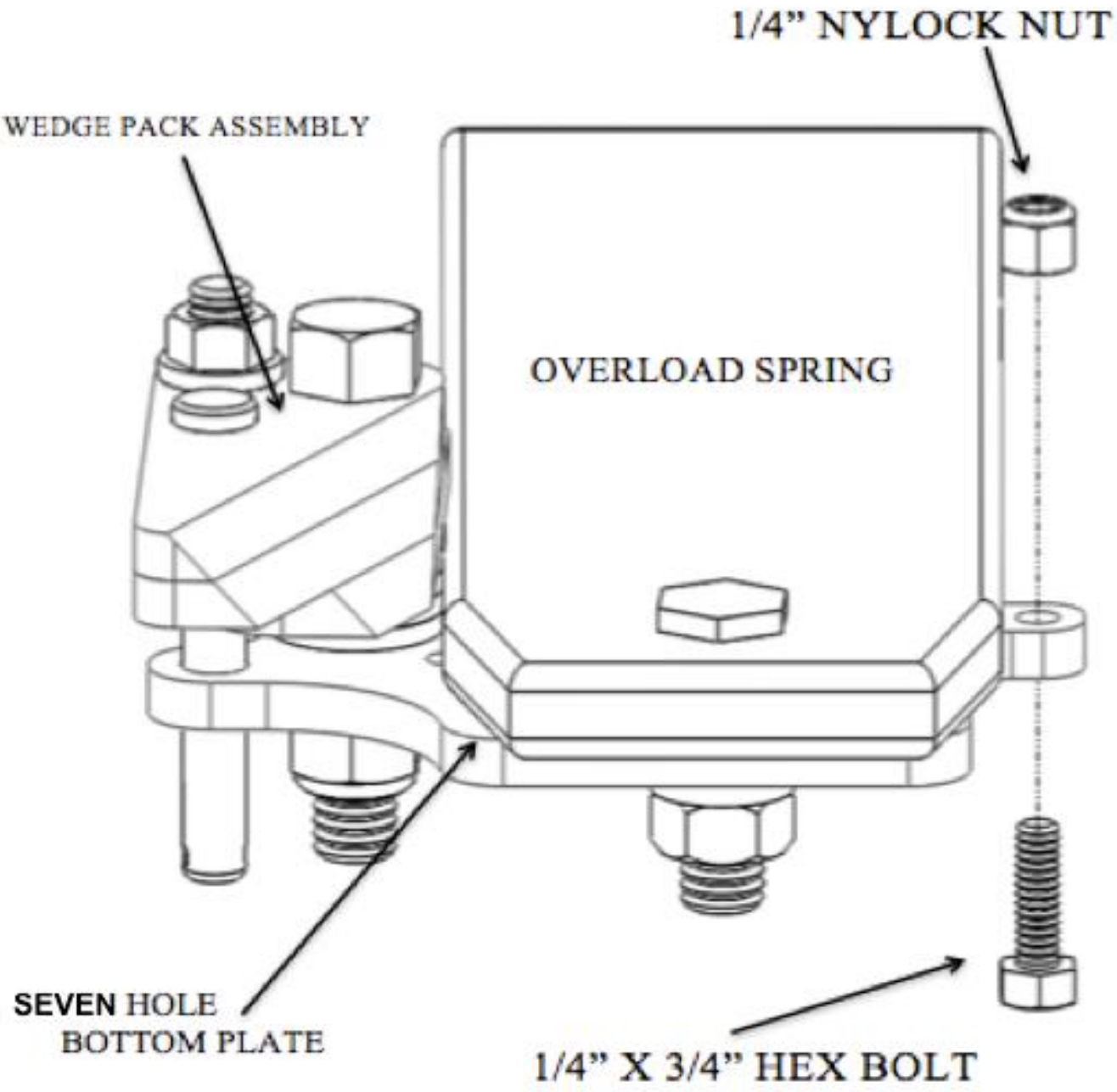


Figure 7.4

Note: In Figure 7.4, the washers under the wedge pack act as the rotation stop. Only one 1/4” hex bolt is required to prevent rotation in the other direction.

Step 8

Insert one 7/16” X 1-3/4” Low Profile Hex Bolt through the hole in the Overload spring from the top. If there is not enough clearance between the overload spring and main spring pack to insert the bolt, a crow bar may be used to carefully spread the springs apart further.

Place one Mounting Plate under the overload leaf spring with the pivot point on the inside or outside, depending on clearance.
Place one 7/16" USS Flat Washer and one 7/16” Nylock Hex Nut onto the 7/16” X 1-3/4” Low Profile Hex Bolt and tighten to 35 FT - LBS (47 Nm). See photo below. *Use a 3/8”drive ratchet and extension to engage or disengage the StableLoads as needed. Place the Pin and Clip through the remaining hole to lock into place.*

Caution! To prevent the clip from backing out of the pin, insert it all the way in as shown in figure 8.1 so that it hangs down. Failure do to so may result in damage to the StableLoad and/or your vehicle.

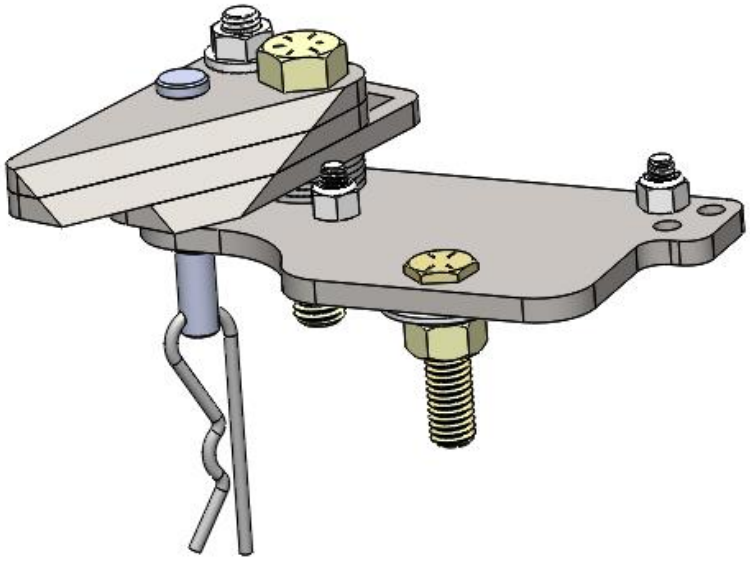
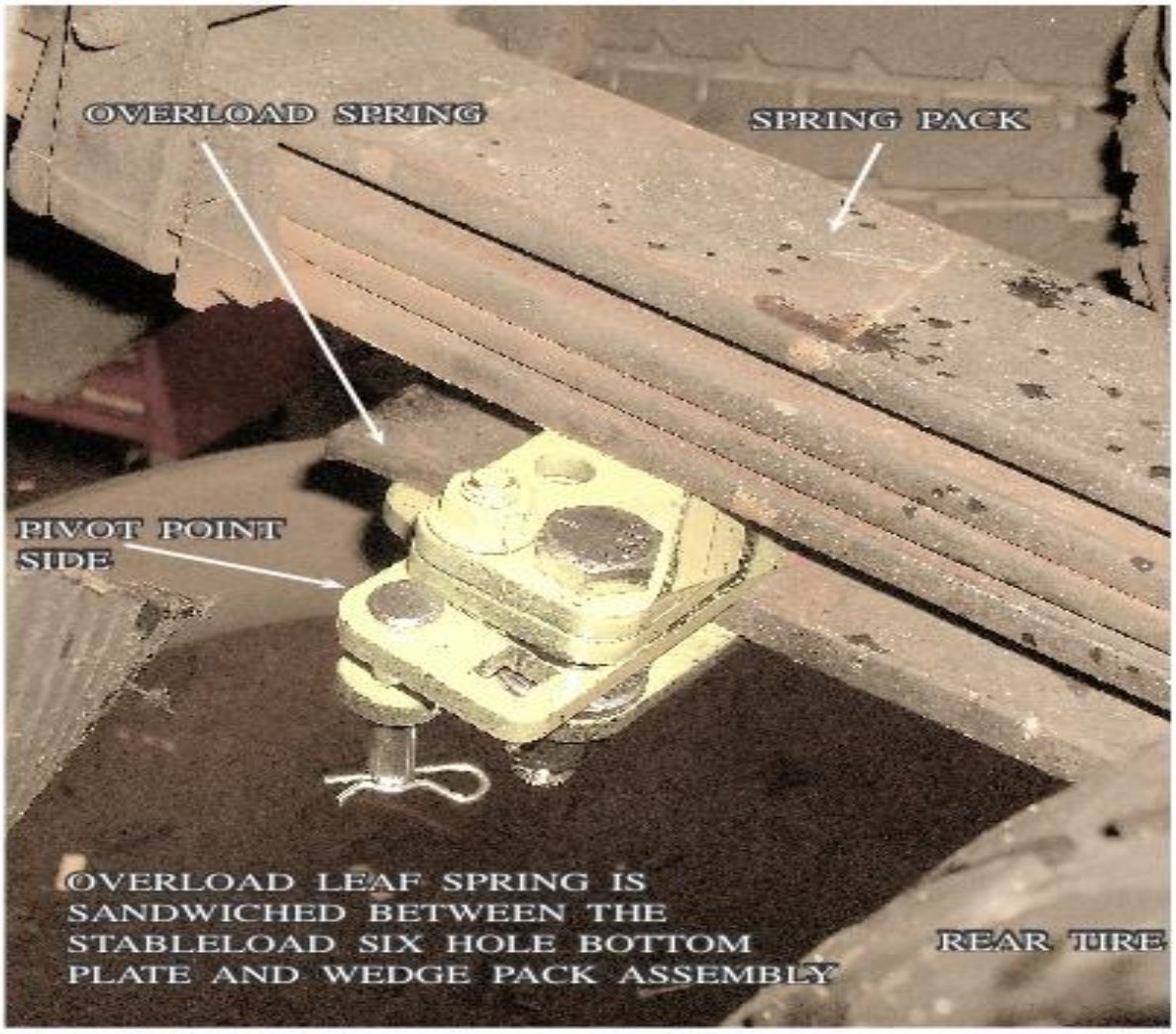


Figure 8.1

PASSENGER SIDE-REAR STABLELOAD ENGAGED



Note: If the installed Stable Loads result in a rough ride, it may be necessary to adjust the pressure in your airbags or adjust the tension on the WD system.

TorkLift International Limited Lifetime Warranty Information

322 N Railroad Ave. Kent, WA 98032

TorkLift will require proof of purchase to register, with pictures of any defective product before issuing a replacement. TorkLift will not register any product without proof of purchase, which can be faxed, scanned, emailed, or mailed to the information provided below. TorkLift warrants it's hitches, custom hitch receivers, frame mounted tie downs, turnbuckles, and accessories (excluding wire harnesses which carry a 90 day warranty) from date of purchase against defects in material and workmanship under normal use and service for the ownership life of the original consumer purchaser. ALL COMMERCIAL APPLICATIONS ARE WARRANTED FOR A PERIOD OF 90 DAYS FROM THE DATE OF INSTALLATION/SERVICE. TorkLift will replace FREE OF CHARGE any part, which proves defective in material or workmanship when presented to TorkLift, TRANSPORTATION CHARGES PREPAID by purchaser, at the address above. THIS WARRANTY IS LIMITED TO DEFECTIVE PARTS REPLACEMENT ONLY. LABOR CHARGES AND/OR DAMAGE INCURRED IN INSTALLATION OR REPLACEMENT, AS WELL AS INCIDENTAL AND CONSEQUENTIAL DAMAGES CONNECTED THEREWITH ARE EXCLUDED. This warranty does not include the finish or paint on our products. Rusting, cracking or peeling of the finish is also excluded. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Any damage to TorkLift products as a result of misuse, abuse, neglect, accident, improper installation or any use violation of instructions furnished by TorkLift or WHEN USED IN ANY COMMERCIAL APPLICATION WILL VOID THE WARRANTY. This warranty gives you specific legal rights, and you may also have rights, which vary from state to state. With warranty service, you may be able to go to a small claims court, a state court or a federal district court.

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322 N Railroad Ave. Kent, WA 98032

Phone (800) 246-8132 Fax (253) 854-8003

or visit our website: www.TorkLift.com

Dear Valued Customer,

Thank you for making TorkLift your choice for truck, camper packages and accessories for your vehicle. By choosing TorkLift products, you have chosen a company that has been serving the RV industry for nearly 40 years and whose name has become synonymous with strength, quality and advanced design and installation.
Please take a few moments of your time to complete the Product Registration Warranty Card on the next page. When registering your newly purchased TorkLift products, you can be assured that your contact information is secure and that you and your product are getting the attention and respect that you deserve.

Thank you again for choosing TorkLift quality products.

Register for your lifetime warranty and receive a free Torklift International gift.

To Fax: Send copies of the questionnaire, warranty card and receipt to 253-854-8003
To E-mail: Send copies of the questionnaire, warranty card and receipt to warranty@torklift.com
To Mail: Send to Torklift International 322 N Railroad Ave. Kent, WA 98032

TORKLIFT INTERNATIONAL

OVER 35 YEARS OF INNOVATION, QUALITY, SAFETY.

OFFICIAL WARRANTY REGISTRATION CARD

PLEASE FILL OUT THIS FORM COMPLETELY AND RETURN TO TORKLIFT WITHIN 30 DAYS OF PURCHASE ACCOMPANIED BY A COPY OF YOUR ORIGINAL RECEIPT

TODAY'S DATE: _____

1. PART(S) PURCHASED

PART#: _____ PART#: _____

PART#: _____ PART#: _____

2. PURCHASER INFORMATION

NAME: _____

ADDRESS: _____

_____

CITY: _____ STATE: _____ ZIP / POSTAL CODE: _____

PHONE: (_____) _____-_____ EMAIL: _____

3. TRUCK INFORMATION

YEAR: _____ MAKE: _____

MODEL:_____ BED LENGTH: _____

4. CAMPER INFORMATION

YEAR: _____ MAKE: _____ MODEL: _____

5. DEALER INFORMATION

PURCHASED FROM: _____

ADDRESS:_____

CITY: _____ STATE: _____ ZIP / POSTAL: _____

INSTALLED BY: ☐ OWNER ☐ ABOVE DEALER ☐ ANOTHER DEALER

IF ANOTHER DEALER, WHO: _____