



Instruction Sheet

US Patent 7140601 B2

JounceShock™ System Front

2005 -2015 Frontier, 2005 - 2015, Navara D40, 2005 - 2012 Pathfinder, 2005 - 2015 Xterra

This part should only be installed by personnel who have the necessary skill, training and tools to do the job correctly and safely. Incorrect installation can result in personal injury, vehicle damage and / or loss of vehicle control.

Read instructions completely before beginning installation.

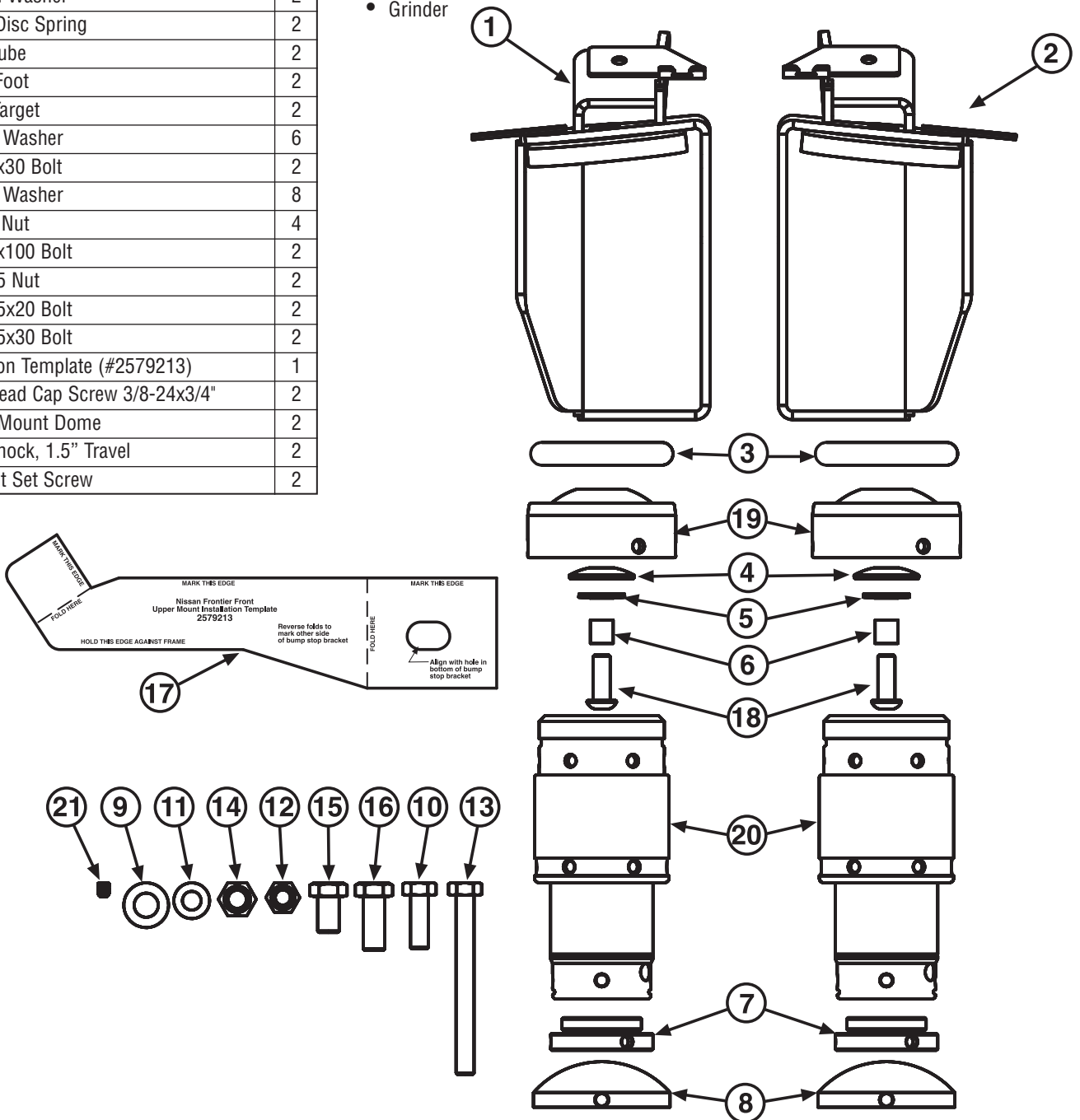
Parts List:

#	Description	Qty.
1	Right Hand JounceShock Mount	1
2	Left Hand JounceShock Mount	1
3	O-Ring	2
4	Spherical Washer	2
5	Bellville Disc Spring	2
6	Spacer Tube	2
7	Cupped Foot	2
8	Domed Target	2
9	M12 Flat Washer	6
10	M10-1.5x30 Bolt	2
11	M10 Flat Washer	8
12	M10-1.5 Nut	4
13	M10-1.5x100 Bolt	2
14	M12-1.75 Nut	2
15	M12-1.75x20 Bolt	2
16	M12-1.75x30 Bolt	2
17	Installation Template (#2579213)	1
18	Button Head Cap Screw 3/8-24x3/4"	2
19	15° Flex Mount Dome	2
20	JounceShock, 1.5" Travel	2
21	Cup Point Set Screw	2

Required Tools:

- Cutting tools (grinder with cut-off wheel, reciprocation saw, or hacksaw).
- Metric sockets and wrenches.
- Drill and Drill Index.
- Grinder

- Floor jack or lift w/ jack stands
- 100 lb-ft torque wrench
- 1/4" pin wrench
- 1/8" hex key
- Medium Hold Thread Locker



Part No. 25792 Instruction Sheet

Front JounceShock System - 2005 -2015 Frontier, 2005 - 2015, Navara D40, 2005 - 2012 Pathfinder, 2005 - 2015 Xterra - Continued

Installation process:

1. Confirm that you have all parts and tools required to complete job
2. Safely raise vehicle per manufacturer's specifications and remove wheels.
3. Remove stabilizer bar at frame mount and at knuckle and move stabilizer bar forward.
4. Using the #8370 tie rod end puller or equivalent, remove both outer tie rod ends from steering arm and allow tie rod to hang out of the way.
5. Install system on one side of the vehicle at a time.
6. Remove the stock shock and spring assembly.
7. Remove brake lines from brackets on the side of the frame rail above the stock bump stop and position out of the way. Take care not to kink or abrade brake lines.
8. Remove the stock bump stop pads from the lower control arms.
9. Fold the cut template 90 degrees at the dotted lines. Position the template so the hole in the template matches up with the hole on the underside of the frame bump stop bracket as shown in **FIGURE 1**. Now mark the cut lines on the frame bracket
10. The lower portion of the frame bracket will be cut off. The same template is used twice on each side, simply fold the template the opposite direction for the front and rear sides of each mount. The supplied templates have notes printed on them which detail their use and where to mark for cutting.
11. Use cutting tools to cut along the lines marked on the stock bump stop bracket. Be careful not to damage any adjacent suspension components. The stock bump stop bracket should look similar to **FIGURE 2** after cutting has been completed. (retain cut off bracket and bumpstop for the ability to return to stock configuration.)
12. Again, using cutting tools cut the brake line tab off of the coil tower. Finished cut should look like **FIGURE 3**.
13. Place the appropriate hand JounceShock bracket over the remaining stock bump stop bracket and check fit. The mount should fit flush with the stock bump stop bracket at all bolt holes.
14. Bolt bottom of JounceShock bracket to the bottom of the bump stop bracket using existing hole one M12 X 30mm bolt, two M12 washers and one M12 nut. (one washer on bolt head and one washer on nut)
15. Loosely thread cylinder end of 1.5" JounceShock into flex mount until it bottoms. Thread plastic cupped foot into shaft end of JounceShock until it bottoms.
16. Apply a small dab of medium strength thread locker to M12 X 20 bolt. Bolt dome to lower control arm through hole for the stock bump stop using M12 X 30 mm bolt and one washer. Torque to 35 lb-ft. Use 1/4" pin style spanner or drift punch to hold Domed Target during tightening. (Follow all thread locker cure time instructions)
17. Using a floor jack, raise suspension until first contact between JounceShock cupped foot and lower dome. Proper alignment between the JounceShock foot and the dome on the lower control arm will dictate placement of the upper bracket bolts. The dome should be as close to centered on the JounceShock foot as possible but can be up to 10mm off center. Use grinder to remove additional material from the stock bump stop bracket if needed. Clamp bracket in best location.
18. Using the JounceShock bracket as a template drill remaining 3 holes. It is recommended that when one hole is drilled a bolt be inserted and tightened before drilling the next hole. This will significantly improve the hole alignment of the finished assembly. The M10 x 100 bolt will go through the bracket and both side holes. The M10 x 30 bolt will be used at the top of the bracket.
19. Remove JounceShock and bracket and paint all exposed frame metal.
20. Reinstall bracket and torque M10 fasteners holding bracket to frame to 30 ft*lbs. Torque M12 fastener to 35 lb-ft.
21. Gently bend brake line to allow stock brake line bracket to align with rear tab on JounceShock bracket. Brake line routing should be as shown in **FIGURE 4**. Install brake line to provided tab using the stock sheet metal clip.
22. Install wheel speed sensor wire into provided tab on the front of the JounceShock mount.
23. Reinstall JounceShock unit into mount and tighten using pin wrench.
24. Apply a small dab of medium hold thread locker to the set screw. Install supplied set screw to lock JounceShock into position. (Follow all thread locker cure time instructions)
25. Repeat installation for opposite side of vehicle.
26. Re-install stock shocks, tie rod ends, sway bar etc. and tighten all bolts to manufacturer's specs.
27. Re-install wheels and torque lug nuts to manufacturer's specs.
28. Check steering clearance.
29. **FIGURE 5** shows the complete system installed correctly.
30. Re-torque all fasteners after 100 miles.

Figure 1

Position the template so the hole in the template matches up with the hole on the underside of the frame bumpstop bracket.

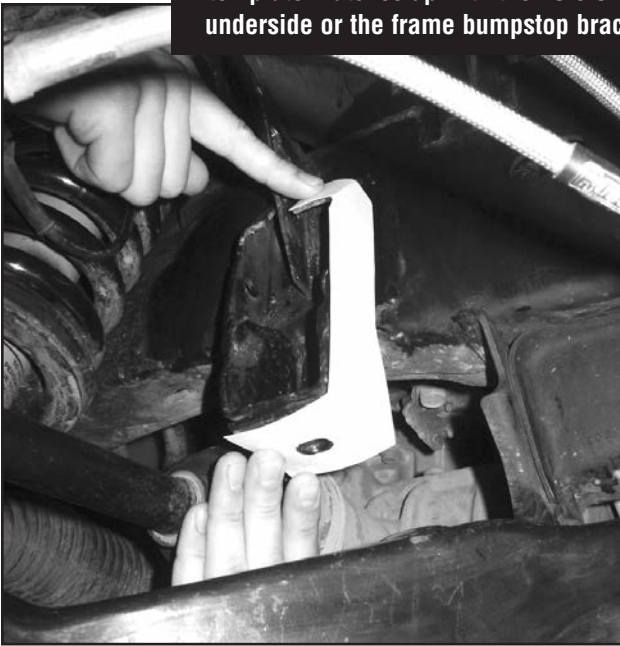


Figure 2

The stock bump stop bracket should look like this after cutting has been completed.



Figure 3

Using cutting tools cut the brake line tab off of the coil tower.

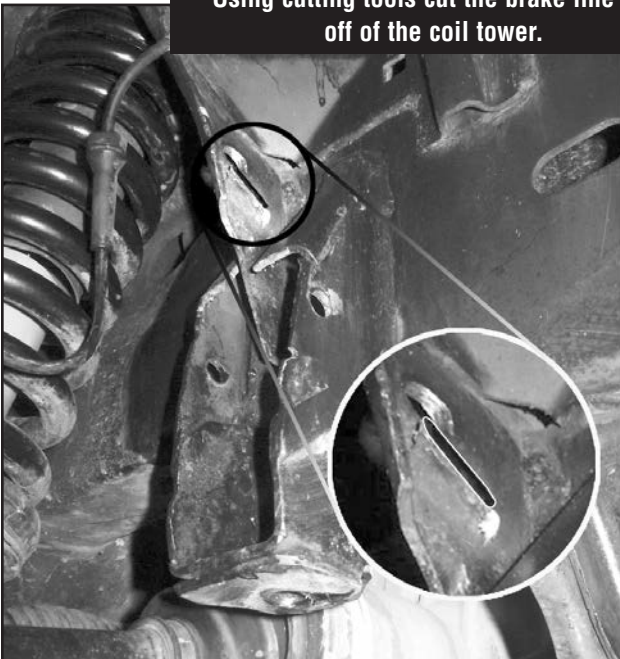


Figure 4

Gently bend brake line to allow stock brake line bracket to align with rear tab on JounceShock bracket.



Figure 5

Complete system install.



Part No. 25792 Instruction Sheet

Front JounceShock System - 2005 -2015 Frontier, 2005 - 2015, Navara D40, 2005 - 2012 Patnfinder,
2005 - 2015 Xterra - Continued

*For information on how to tune the JounceShocks, please refer to the instructions for the individual shocks:
http://www.spcalignment.com/instructions/25710-INS_WEB.pdf*

What to expect from your JounceShock system:

The JounceShock is the core of a secondary suspension system that dramatically increases the capacity of your vehicle's suspension. Most systems are designed such that the JounceShocks do not engage the suspension of your vehicle at ride height. Therefore, the system does not usually alter the ride height or on-road ride quality of your vehicle. When you have a heavy payload or take your vehicle off-road, your suspension will compress more and engage the JounceShocks. When the suspension engages the JounceShocks, you may hear the initial contact. This is normal and is an indication that the JounceShocks are being applied. When the vehicle is driven off-road you will notice a couple of performance gains. First, as you drive the vehicle over rough terrain it never feels as though the vehicle is bottoming. Also, you will realize that the vehicle moves up and down less, this is known as "Gross Vehicle Motion Control". These are changes caused by the characteristic exponential air spring curve and the critical damping of the JounceShock units. These changes significantly enhance the ability and durability of the vehicle, as well as the comfort level of the occupants. This added capacity can be misleading and care should be taken to learn the new limits of your vehicle without damage to the vehicle itself. For more discussion on JounceShock function and performance gains please visit our website at www.specprod.com

There is no warranty stated or implied due to the inability to monitor the part's modification, installation, and use, except that Specialty Products Company warrants its products to be free from defects in material and workmanship for 90 days after purchase under normal use. In that case, parts returned must be determined by Specialty Products to be defective and Specialty Products's obligations under that warranty are solely limited to repairing or replacing, at its option, any part proven defective.

Final determination of the suitability of the parts for use contemplated by the buyer is the sole responsibility of the buyer. Specialty Products Company shall not be liable for any special, direct, indirect, incidental, or consequential damages that might be claimed as a result of the failure of any part, including claims for delay, loss of profits or labor. Specialty Products Company shall not be liable for any damage or injury to persons or property resulting from improper installation or misuse of any part subject to this warranty. There are no other warranties expressed or implied extending beyond those set forth above.



Specialty Products Company®

P.O. Box 923 • Longmont, CO 80502 • (303) 772-2103 • Fax: (303) 772-1918 • www.specprod.com • Email: info@specprod.com

ECN#1866

Toll Free Technical Hot Line: 1-800-525-6505

©2015 Niwot Corp. dba Specialty Products Co. • Printed in U.S.A. • Form No. 987922 • Rev. 5/15