



Join Date: Jun 2009
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So guessing I should try the kit? Idk \$200 seems like alot for a cable and switch.

It is, spend \$25 and make your own. Gimme a few on a how to

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<http://www.s10forum.com/forum/f30/das-baja-451528/>

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10-29-2010, 08:53 PM

#7

renswic
 Registered User



Join Date: Jun 2009
 Posts: 795
 Location:
 User is: OffLine

Re: 4x4 actuator "Cable Froze" 1988 s15 2.8

Converting a vacuum actuator to a locking cable system on a 1995 Chevy S10 Blazer 4x4

Many call this a posi-lock system.

I spent a total of only \$25.50 USD on this project. Other comparable kits run \$150-200.

Special thanks to Hanr3 for this concept.

In this How-to, I will give you a step-by-step list on how I changed out the always-troublesome vacuum actuator that changes the my son's 1995 S10 Blazer 4x4 from 2 wheel drive to 4 wheel drive. I will be converting the system from a vacuum activated system to a locking cable.

I recommend you read these instructions in their entirety before beginning.

How the vacuum actuator works: To begin with, the vacuum actuator is activated when you press either your 4Hi or 4Lo button. The actuator pulls a cable that engages your 4 wheel drive.

But, these vacuum actuators are prone to failure due to the rubber that it uses to maintain a suction. The rubber will inevitably rupture, as mine did, or will cause varying degrees of failure due to hot and cold temperatures.

Tools Needed

Here is a picture of the tools I used. I used only common tools...nothing fancy or expensive.



Tip: I used *split washers* anywhere I could. This will keep things tight even when going down the roughest of trails.

Step 1

Locate your actuator and remove its support bracket from the engine compartment.

On my 95, I had to remove the battery and battery shelf. Here is what mine looks like.

You can see the two bolts sticking through. Remove these bolts. The heads of the bolts are located under the front right wheel well. I sprayed the threads with WD-40 to help loosen them up.

**Step 2**

Remove the actuator from the support bracket.
This is done in three steps listed below.

Step 2a

Release the cable from the hub by lifting the retaining spring out of its notch and laying it to the side of the hub. I took this picture after the actuator was removed so I could get a better picture of the spring and notch area of the hub.



Here is a close-up of the retaining spring.



Step 2b

Remove the three screws that hold the actuator to its support bracket. You will then have to compress the actuator by pressing the hub inward toward the main housing of the actuator.



Step 2c

Remove the vacuum line from the actuator and plug it with a bolt that you can tightly screw into the line opening.



Notice the tear in the rubber on my actuator. This caused total failure resulting in no 4x4.



Step 3

Remove the lower cable from the actuator support bracket.

Here is the support bracket with the actuator removed. Notice the two clips holding the cable in the support bracket. Press these two clips at the same time (see red arrows below) and slide the cable out of the support bracket.

**Step 4**

Re-form the support bracket to look like this.

It was easier than it might look.

Notice I used a hacksaw to make relief cuts at each point where I made a bend to make bending easier.

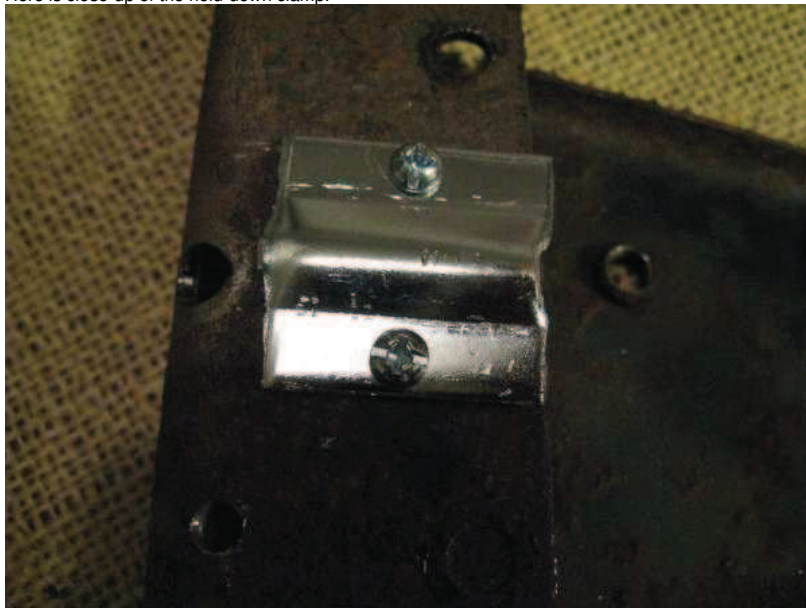
**Step 5**

Make and attach a cable hold-down clamp that will be used to hold the new locking cable in place.

I used a piece of metal that I cut off an old pair of bicycle training wheels. I then drilled holes and attached the clamp to the actuator support bracket using two bolts, two split washers and two nuts. Notice the hold-down clamp has a slight rise to the center. This is so that it will hold my locking cable centered and will not crush the cable housing when tightened.



Here is close-up of the hold-down clamp.



Step 6

Mount the support bracket to your cooling fan shroud.

I found this to be the best location for relocating the support bracket for my 95 Blazer.

I drilled two holes in the shroud that matched the current holes in the support bracket. I then reinserted the lower cable into the support bracket. Then, using the original two mounting bolts from Step 1, I mounted the support bracket to the shroud.



Another view...



Here is the locking cable I found at a NAPA auto parts store. Only \$25.00 USD.
It's a #731-1104 universal locking control. I chose the one with the 9ft cable length.



Here it is out of the packaging.



You pull the handle and then turn it clockwise to lock it in place.

**Step 4**

Attach a mounting bracket wherever you would like your locking cable located.

I recommend making sure it is being secured to something metal for stability as it takes quite a pull to get the 4 wheel drive engaged.

I mounted my bracket to the left of the steering column near the parking break release lever. There was already a nice metal backing behind the decorative molding of the interior for me to run my screws and bolt into..

I had this little bracket that I took off an old water softener part. I bent it a little to get it to work.

To mount the bracket, I used a bolt that I ran into an existing threaded hole used to attach the lower dash. I then used two sheet metal screws for even greater stability and strength.



I routed the cable through an hole in the firewall where a rubber seal was located due to another cable going through the firewall to the engine compartment.

**Step 7**

Shorten the new locking cable to the needed length.

I did this by pulling the pull handle out far enough so that when I cut the outer cable cover, I wouldn't cut the actual cable. I then pushed the cable handle back in to place. Then, I positioned the locking cable into my hold-down clamp seen in Step 5 and cut the cable to the proper length. You will have to determine what length is best for your installation.

I used a cable clamp to attach my new locking cable to the original lower cable.

Here is the clamp I bought at a Lowes hardware store for 50 cents USD.



Here is a picture of the cable clamp holding the new and old cables together.



Cable routing in the engine compartment

Here is a picture of how I routed the new cable through the engine compartment. It entered the engine compartment through the firewall and ran across the top of my radiator just under the plastic housing to my newly mounted support bracket. The red arrows indicate the path the cable took from the firewall to the support bracket.



That's it. You are now ready for a fail-proof off road experience where your 4 wheel drive will remain engaged.

How to use your new posi-lock system:

For 4 wheel drive high, press the 4Hi button, then pull the locking cable handle firmly and twist it to lock it in place. To return to 2 wheel drive high, press the 2Hi button, then twist the locking cable handle and push it in and twist once again to lock it in place.

For 4 wheel drive low, press the 4Lo button, then pull the locking cable handle firmly and twist it to lock it in place. To return to 2 wheel drive high, press the 2Hi button, then twist the locking cable handle and push it in and twist once again to lock it in place.

For 2 wheel drive low (used for moving trailers around at slow speeds when tight cornering is needed), put the transmission in neutral and press the 4Lo button. Do NOT pull the locking cable handle.

Aquired from: <http://www.blazerforum.com/forum/showthread.php?t=24131> And it is the same for the stick 4x4.

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10-30-2010, 07:48 AM

#8

Mesosneaky

I'm learning, slowly...



Age: 21
Join Date: Mar 2010
Posts: 66
Location: Pennsylvania
User is: OffLine

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Re: 4x4 actuator "Cable Froze" 1988 s15 2.8

Thank you very much. That is a nice walk through. It would have been nice to see where the lower cable goes, and to have the entire cable replaced. Still very helpful and nicely put together. Thanks for the post and props to original write up.

11-01-2010, 12:42 AM

#9

renswic
Registered User

Re: 4x4 actuator "Cable Froze" 1988 s15 2.8

Quote: Originally Posted by Mesosneaky

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