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GW-V-REAR-DISC

GoWesty Custom Rear Disc Brake Conversion Kit [Vanagon]

The GoWesty rear disc brake conversion is not simply a re-purposed hashtag of parts from other vehicles that *kinda* works (like all the other kits out there). The GoWesty system is properly engineered and tested and *specifically designed* to be a direct-fit on any Vanagon using all-new parts and with no modifications required. No messing around—this system FITS, and it WORKS.

Caliper assembly: The caliper, bracket, and pad assembly we chose to design the system around are an exact copy of the rear caliper assembly VW used on the 01-03 Eurovan. We chose this caliper because it was designed for a vehicle of similar size and weight, so we knew it was up to the task in all regards, not the least of which is: A parking brake THAT ACTUALLY WORKS!

Rotor: The rotor is a custom GoWesty design specifically to fit a Vanagon without modification to the hub and with a friction surface identical to the 01-03 Eurovan—so it would work with that caliper. This is a key component in many ways, but *especially* because it does not require any modification to the hub—unlike other kits that repurpose a rotor from another vehicle that requires machining to the hub.

Adaptor, hose, parking brake, hardware: These are all custom parts engineered and designed right here at GoWesty. These have all been thoroughly thought-out and tested and make for an easy installation that takes about 4 hours, start to finish.

Note: *This rear disc brake kit requires the use of 15" or larger wheels. The kit will not fit the original 14" steel or alloy wheel. The new rotor reduces your stud length by 4mm. This doesn't pose an issue with any of the 15 or 16" wheels we sell. If you are running a set of wheels that require longer studs, check the fitment on your wheel to verify that your stud length will be adequate. If you need longer studs, they can be found on our website [here](#).*

KIT CONTENTS



- (2) Caliper/Bracket Assemblies
- (2) Rotors
- (2) Stainless Brake Hoses w/ Hardware
- (2) Brake Pads
- (2) Parking Brake Cables
- (2) Caliper Adapters
- (2) Splash Shields

DISCLAIMER: *This brake system should only be installed by a competent mechanic. Failure to install this product correctly could result in serious injury or death.*

KIT HARDWARE



- (2) M8 x 35mm Bolt
- (2) M8 Nuts
- (2) M8 Lock Washers
- (4) M10 x 35mm Bolt
- (4) M10 Wavy Washers
- (4) M14 Custom Flange Bolts
- (2) Axle Nut Cotter Pins
- (2) Countersunk Rotor Retaining Screws
- (1) Parking Brake Return Spring
- (1) Parking Brake Cable Retaining Spring Clip
- (2) M6 Eye Nuts
- (1) M6 Eye Bolt
- (1) M6 Lock Washer
- (1) Set Brake Pad Retaining Clips
- (2) Small Adel Clamps
- (2) Large Adel Clamps

Tips, Hints, and Notes

This product requires the use of a 15" or larger diameter wheel. 14" wheels are too small.

Torque specs:	Caliper Bracket to Adapter = 40 ft-lbs.
Brake line to caliper banjo bolt = 14 ft-lbs.	Caliper Bracket to Caliper Body = 12 ft-lbs.
M8 Caliper Adapter to Bearing Housing = 20 ft-lbs	M10 Caliper Adapter to Bearing Housing = 30ft-lbs

Troubleshooting



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If you experience a sticky caliper (piston not retracting fully upon release), cycle the piston in and out a few times—but be careful not to push the piston out of the caliper completely! Put something in between the pads that is roughly $\frac{1}{2}$ the thickness of the rotor to prevent over-extension of the piston during cycling.

If you experience any clicking noises from the new brake system, do not panic! The ground surface on the rotors can cause some noise initially, but this usually completely disappears (the ground surface and the noise) after a few miles of use. The texture is useful in proper pad bedding, as it tends to eliminate pad glazing when a proper bedding process is NOT used upon installation. Despite this, please do follow the proper bedding-in procedure detailed below to get the best performance and life out of your new brake system.

Pad Bedding

It is VERY IMPORTANT to properly bed or seat-in new pads on their rotors. The rotors won't function at peak efficiency until the pad friction material has transferred to the rotor friction surfaces. The idea is to heat the rotor gradually to the upper operating temperature of the pad compound to evenly transfer material to the rotor.

In a safe location, make a series of gentle stops from low speed. Start around 10 mph to prove that the system is functioning properly. Gradually work up to 20 and 30 mph again with gentle stops. Gradually work up to hard braking at higher speeds. Run vehicle up to moderate speed (50 – 70 mph) and make a series (10 – 12) of medium brake applications (slow down to 20mph, do not come to a complete stop, then speed back up to 50 - 70 quickly) to heat the rotor slowly. This will help reduce the chance of thermal shock caused by uneven heating of the rotor and reduce the possibility of pad/rotor glazing and uneven transfer, which leads to lowered performance, noise, etc. When complete, drive the car without using the brakes, if possible. This may be easily done on a freeway without traffic. Drive a few miles at freeway speeds before parking the car to cool the rotors.

Park the car and allow the brakes to cool completely. While driving the vehicle to where it will be parked, use the brakes as little as possible. When you need to stop the vehicle, get off the brakes just before the car stops and allow it to roll a foot or two before stopping completely.

Do not hold brakes on after performing the bedding-in procedure until cooling is completed. This will avoid "hot spotting" or uneven cooling which can damage the rotor.

If brake fade is experienced at any time, the system should be cooled immediately. Drive at moderate speeds to cool the pads. Do not apply the brakes during this process if possible. After initial cooling in this manner, the vehicle should be parked so that the pads can return to ambient temperature. This completes the heat cycle and will ensure minimal pad wear and maximum pad friction and performance.



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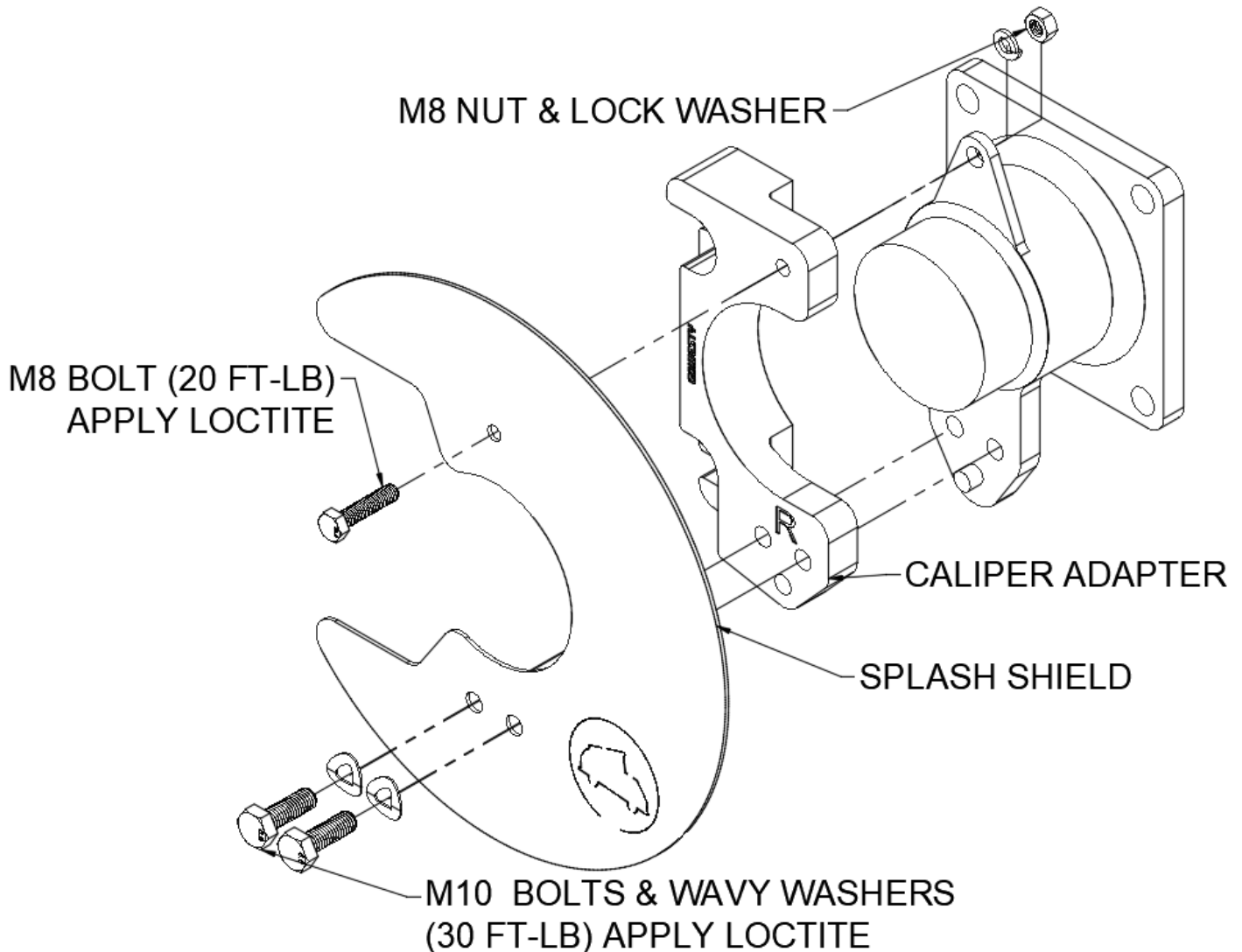
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Installation Instructions



1. Remove the original drum brakes. (See your Bentley: 46.6) This will include hardlines, cables, drum assemblies, and hubs.
2. Install the adapter and dust shield using the M8 bolts with lock washers and M10 bolts with wavy washers. The M10 bolts will thread into the wheel bearing housing, facing the inside of the van. The M8 bolt will be secured with the M8 nut and lock washer from the back of the bearing housing. Once you have secured the adapter hardware, remove the original pivot pin from the drums. This pin is frequently seized and will require a torch, some rust eater, and a hammer and drift punch, or some combination of these tools. Once you have freed the pin, clean it up and apply some anti-seize to the pin before driving it back into the bearing housing from the backside with the adapter installed. It will drive right into the adapter and provide some added strength to this system. This pin does not need to be installed for the complete functionality of this system but is recommended for maximum longevity and strength.





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3. Reinstall the hub, axle nut, and the included fresh cotter pin. Wipe down the braking surface of the rotor to remove the anti-rust coating and secure the rotor to the hub using the 1/4"-28 countersunk locating screw. Make sure to apply anti-seize to the screw. Be careful not to strip this screw. See photo below step four.
4. Start threading the 14mm bolts with anti-seize into the caliper carrier. Slide the caliper bracket onto the rotor by sliding the lower M14 bolt into the lower adapter slot then swinging the bracket up into place. The bolt head will seat into the machined circles on the back of the adapter. With the upper bolt fully seated at the end of the upper slot, and both bolt heads seated in the adapter recesses, tighten down the M14 Bolts to 40 ft-lb.

Note: Make sure to apply antisieze compound to the threads of the M14 bolts that attach the caliper bracket to the adapter.





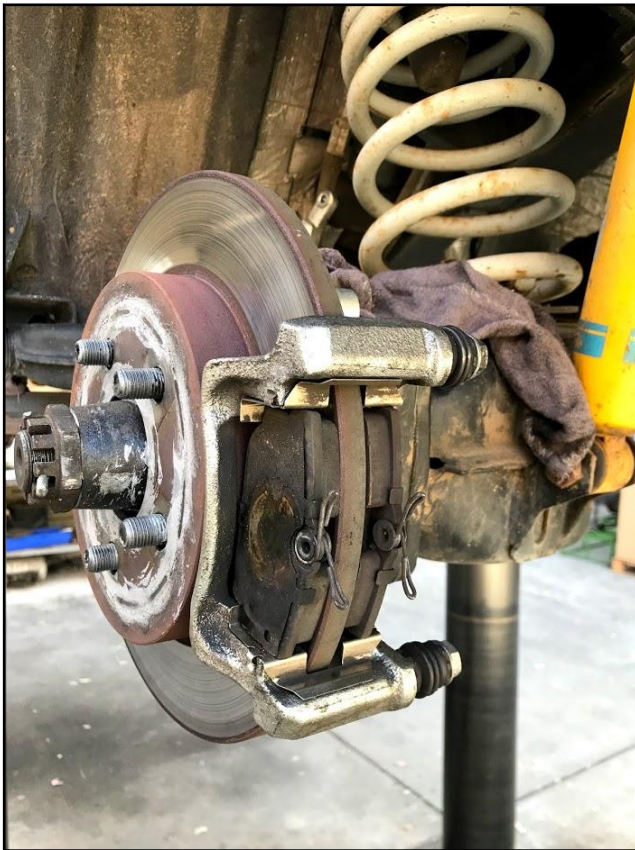
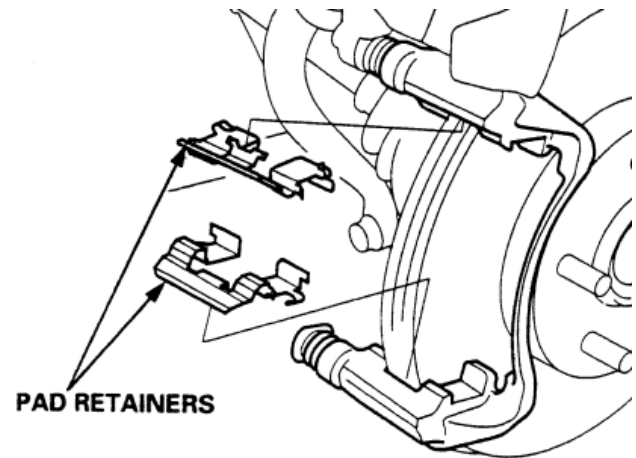
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5. Install the pads and retaining clips into the caliper bracket. Make sure to apply the anti-squeak brake lube to the back of the pads. Install the caliper body. Do not over-torque the caliper bracket to caliper body bolts. 12 ft-lb. max.

Note: Make sure to apply antisieze compound to the threads of the M8 bolts that connect the caliper bracket to caliper body.





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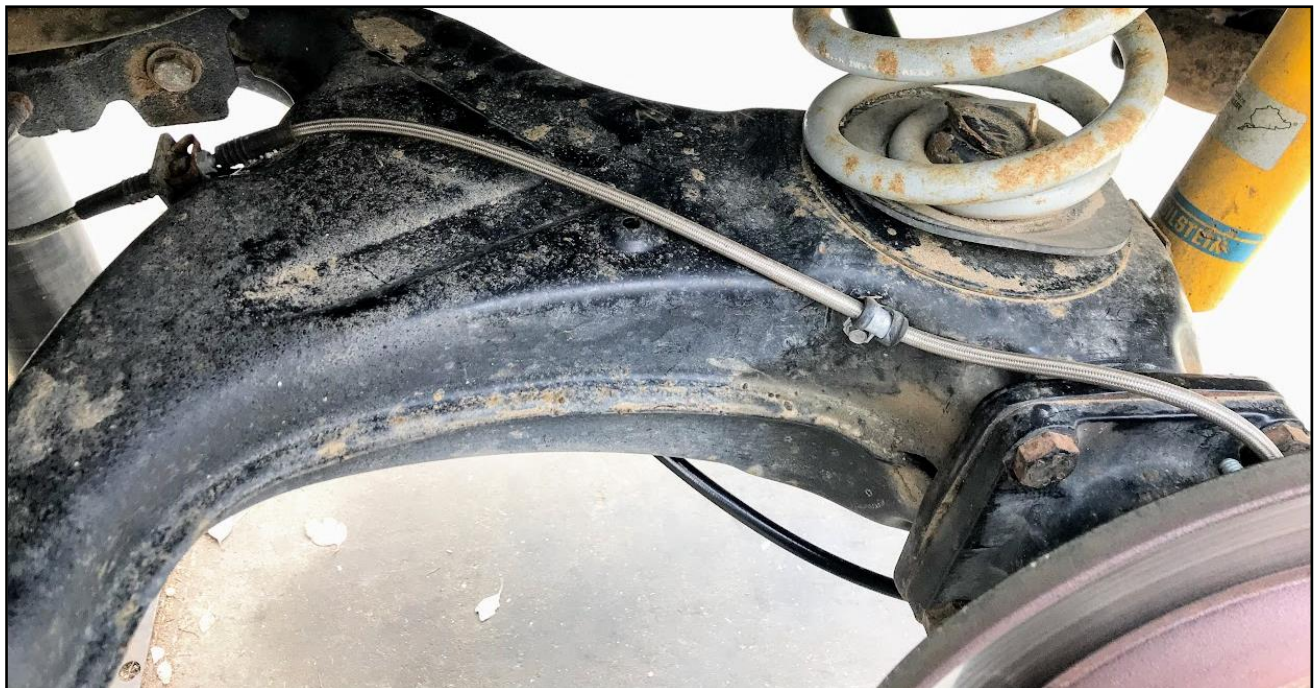
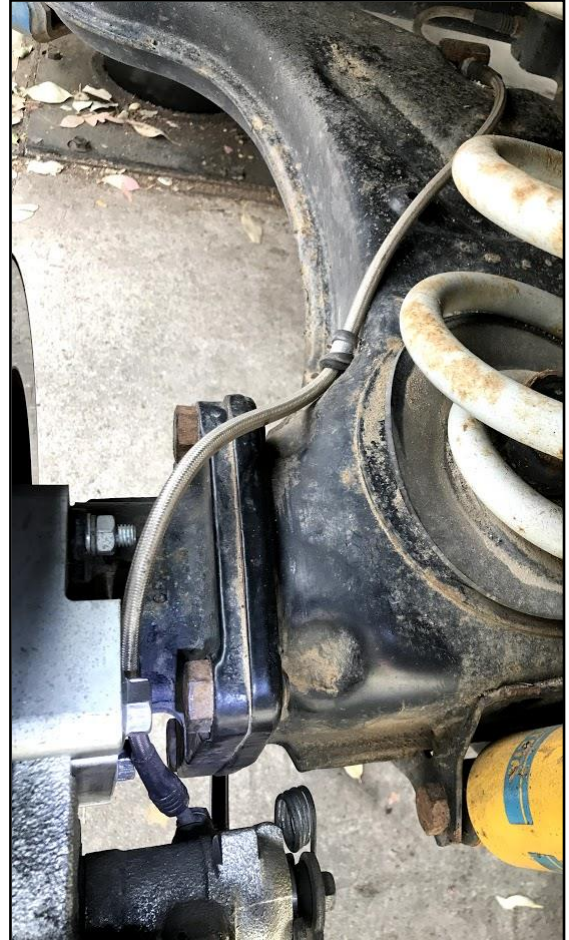
6. Remove the original brake fluid hardline that runs between the drum brake wheel cylinder and the flex-line that runs between the trailing arm and body. Save the spring clip that is present between the hard-line and flex-line, you will need this when you install the new brake line.
7. Thread the banjo bolt through the banjo end fitting including one crush washer on each side of the banjo fitting, push the fitting as far outward as possible, and tighten the banjo bolt.



Caution: As the pads wear, the caliper will necessarily move **INBOARD** the same distance as the thickness of one pad. Route hose such that it is free to move **INBOARD** with caliper as the pads wear. Failure to do this can cause the hose to loosen or fail, with catastrophic consequences!

8. Connect the swivel nut to the original hose that runs between the trailing arm and body, and install the small adel clamp using the included self-drilling screw as shown in the photo. Bleed the brakes!

Note: The threaded part of the swivel nut on the new hose is a little longer than the nut on the original hard line. The legs on the spring clip will need to be straightened a bit for best fit.



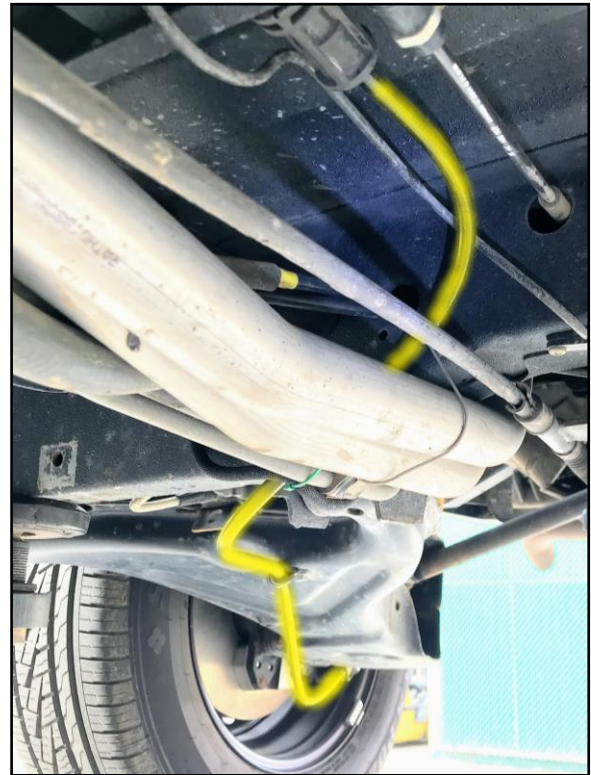
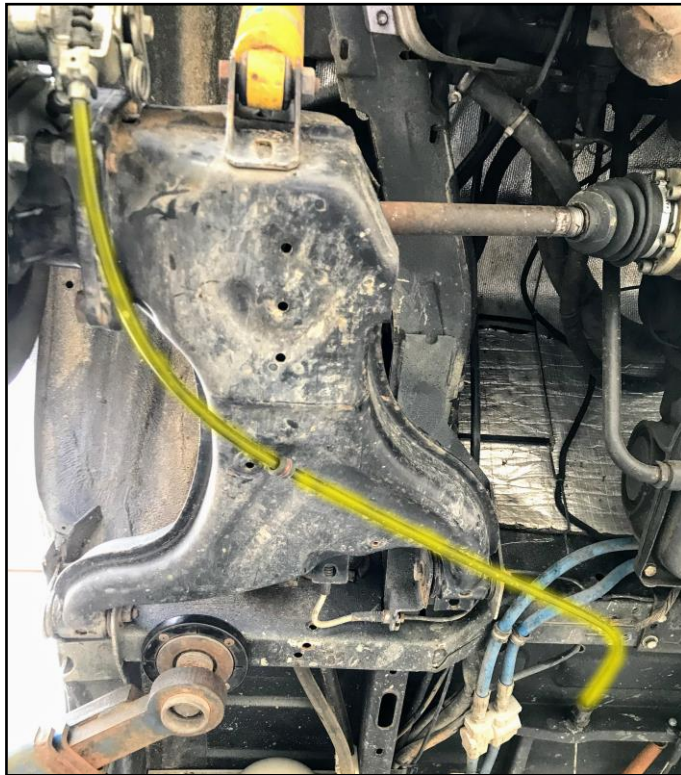
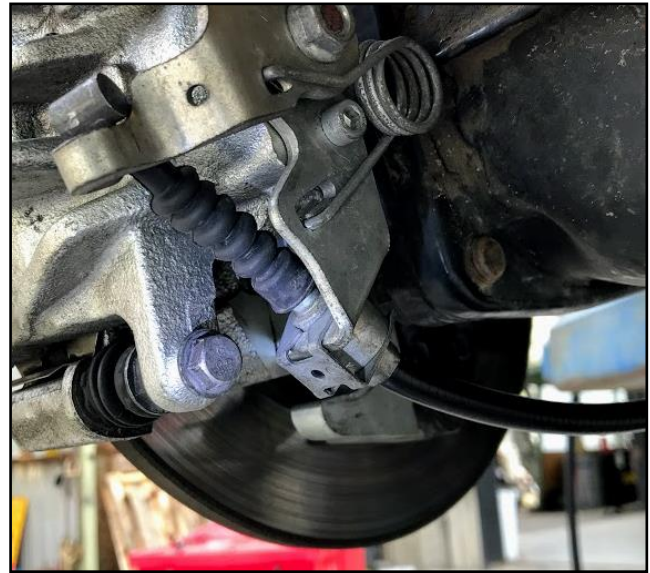


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9. Install the brake cable and retaining clip at the caliper end. Then route the cable up to the balance bar. The passenger side will pass up above the coolant pipes and into the plastic fitting before the balance bar. The driver side will go straight from the adel clamp to the plastic fitting and on to the balance bar. Install the included large adel clamp and sheet screws in the original hole in the control arm shown. Make sure the cable has a bit of slack coming out of the caliper. The cables are highlighted yellow below to make the routes more clear.



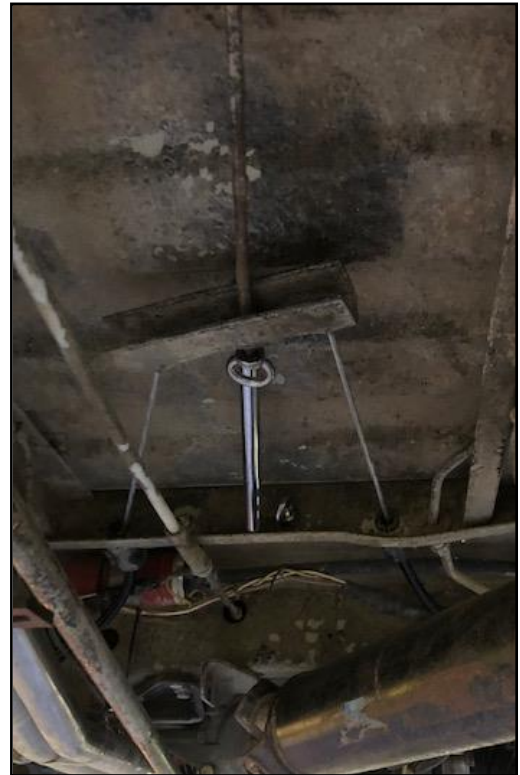


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10. You are now going to install the parking brake cable return spring. You can begin by connecting the M6 eye nut to the threaded parking brake cable rod. You want to connect the rear eye nut in line with the threaded rod. To do this; pull the parking brake, leave it set, and find the spot where the threaded rod would intercept if it went back to the cross member. You can use a long extension or any straight edge to find this spot, as shown in the photo to the right. Drill a 1/4" hole at this location. Install the eye nut with the included M6 bolt and lock washer. With the eye nuts installed, pull the spring into place. Tighten the parking brake cables just enough that the brakes aren't engaged without pulling the parking brake lever. Make sure the brakes return and the rotors spin freely when you release the lever. Pull the lever a few times to make sure there isn't any slack in the system.



That's it!