

TOOLS REQUIRED:

- Hydraulic jack and jack stands
- Wrenches and sockets 10mm, 15mm, 16mm, 18mm 21mm
- 50 Torx Bit Socket
- Sawzall

NOTE: Before proceeding, take note of the following recommendations. Unfortunately, the entire rear Crossmember must be lowered to install this part to access the driver's side rear differential bolt. This install is very involved and not recommended for the novice home mechanic. We recommend that you read the installation procedure before proceeding to make sure it is within your capabilities.

NOTE: We removed the springs before documenting this installation to allow better visibility for illustrating each step of the install.

INSTALLATION:

- 1. Lift the rear of the vehicle and safely support with jack stands under the rear jack points on the rockers. Make sure vehicle is high enough to lower the Crossmember approximately 6 inches. Remove wheel/tires to provide access to the work areas.
- 2. The first thing to remove is the entire exhaust, from the manifolds rearward. With the various exhausts offered from the factory, plus aftermarket options, we will not go into details of the removal process.
- 3. Next, disconnect the rear of the driveshaft from the front of the differential using a 50 Torx bit socket.
- 4. With the exhaust removed and the drive shaft disconnected and set aside, proceed to the driver side rear wheel well. Remove the 7 plastic clips and two 10mm nuts retaining the inner plastic wheel well. Towards the rear there are a few rivets that do not come out. Simply leave these attached and fold the wheel well out of the way to allow access to the gas filler tube.



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- 5. Next disconnect the small fuel tube shown in **IMAGE 1**. Release the 2 clips and unplug the sensor then set the fuel tube/sensor aside.
- 6. Using a 10mm socket, remove the nut holding the fuel fill tube to the inner wheel well. (IMAGE 2 On Page 1)
- 7. Remove the hose clamp on the rear of the tank as shown in **IMAGE 3**. Use a bucket to catch any gas Once the lower hose clamp is removed, the entire fill tube can be removed. Pull the tube out the bottom, through the lower control arm and trailing arm.

(**NOTE:** the tank has a check valve to hold the fuel in the tank but you will still drip whatever fuel is in the hose itself.)

(NOTE: the upper part of the tube is only connected with a rubber grommet and pulls loose easily. IMAGE 4)

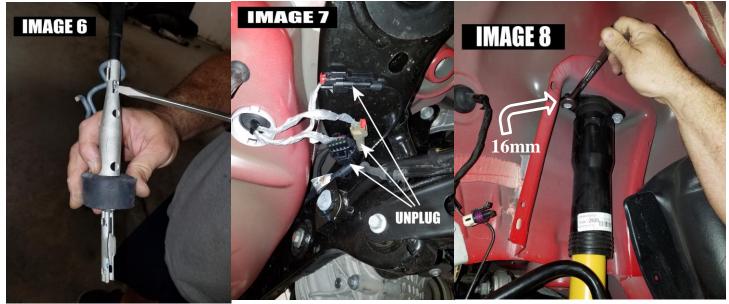
- 8. Next the calipers must be removed in order to lower the Crossmember. To eliminate the need to disconnect a brake hose, remove the outer trailing arm bolt using two 18mm wrenches as shown in **IMAGE 5**. This will allow sufficient room for the caliper to clear as the Crossmember as it is lowered.
- 9. Using an 18mm socket, remove the two caliper bolts then hang the caliper with a piece of wire or a zip tie.
- 10. The next step is to disconnect the emergency brake cables. This is difficult due to its location above the Crossmember. Follow the cable upward to where they connect together above the Crossmember. Using a small screwdriver or pick, release the spring steel retainers (IMAGE 6 shown on page 3) to separate the cables.
- 11. Remove the two small cable clamps using a 10mm wrench.
- 12. Locate the group of wiring harnesses on the passenger side and unplug the three harnesses shown in **IMAGE 7 shown on page 3**.

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- Challenger 2008- Current Solid Differential Busnings
- 13. Using a 16mm socket, remove the upper shock bolts. (IMAGE 8 on page 3)
- **14.** Place a jack under the rear Crossmember then loosen the four main Crossmember bolts using an 18mm socket and carefully lower it to the ground.



15. With the Crossmember on the ground, the easiest way to proceed is to disconnect the Differential, Upper and Lower Control Arms, Tie Rod, Upper and Lower Trailing Arms and also the Wheel Speed Sensors bolts from the Crossmember as shown in **Image 9, 10 & 11 on page 3 and 4**. This will allow the Differential, Axles, Hubs, Control Arms and all of the Linkages to remain on the ground as the Rear Crossmember is lifted away.



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- 16. With the Crossmember lifted away from the Differential, have an assistant help lift and hold the Crossmember on end. Then use a Sawzall to make a vertical cut through the thin web of the Bushing as shown in Image 12 & 13 on page 4. (Note: It is <u>Critical</u> that you only cut through the thin web of the Bushing and relieve pressure on the bushing sleeve. <u>DO NOT</u> cut into the Rear Crossmember.)
- 17. Next use a 3/8" Drill bit to drill through the Bushings attached to the Differential. Gradually increase until you have drilled through the Bushing Sleeve as shown in **Image 14 & 15 on page 4.** You should then be able to use a hammer and remove the old Bushings.
- 18. Using a dead blow or rubber headed hammer, install your new Solid Bushings into the Differential as shown in **Images 16 on page 4.**
- (Note: The differential shown in the images has upgraded Half-Shafts that can be unbolted from the differential)
- 19. Using a dead blow or rubber headed hammer, install your new Solid Bushings into the Rear of the Crossmember as shown in **Image 17 on page 4**.
- 20. Lower the Crossmember back over top of the Differential, Axles and Linkages. Re-connect and **torque** the four Differential bolts to spec as listed at the end of the instructions.
- 21. Reconnect and **only hand tighten** the bolts for all of the Linkages. (Note: If you torque the Linkages without the vehicle's weight on the suspension, you will create binding points for the Suspension geometry.)
- 22. Raise Crossmember and Differential Assembly back into the car and secure with the four main Crossmember bolts. **Torque** to Spec as listed at the end of the instructions.
- 23. Once the Crossmember has been torqued, lower the car and set the suspension. Then proceed to drive your vehicle onto ramps in order to gain enough room to torque all rear linkages to their final specified torque as listed at the end of these instructions.
- 24. Drive the car 10-15 miles in order to settle the springs.

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Rear Suspension • Specifications

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SPECIFICATIONS

DESCRIPTION	N∙m	Ft. Lbs.	In. Lbs.
Brake Caliper Adapter Knuckle Bolts	115	85	_
Camber Link Crossmember Bolt	85	63	_
Camber Link Knuckle Bolt	98	72	_
Compression Link Crossmember Bolt	85	63	_
Compression Link Knuckle Bolt	81	60	_
Crossmember Mounting Bolts	180	133	_
Hub And Bearing Mounting Bolts	68	50	_
Hub Nut	213	157	_
Parking Brake Cable Knuckle Screw	8	_	71
Shock Absorber Mounting Bolts - Upper	52	38	_
Shock Absorber Mounting Bolt Nut - Lower	72	53	_
Spring Link Crossmember Bolt	108	80	_
Spring Link Knuckle Nut	142	105	_
Stabilizer Bar Isolator Retainer Bolts	61	45	_
Stabilizer Link Nuts	61	45	_
Tension Link Crossmember Bolt	85	63	_
Tension Link Knuckle Bolt	98	72	_
Toe Link Crossmember Nut	108	80	_
Toe Link Knuckle Bolt	95	70	_

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