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Part # TBC-9 or TBC-10 --- 1963-82

Corvette Rear swing arm installation
instructions:

Included in kit:

- Assembled Right and left swing arms
- 8 (3/8 bolts x 3.00)
- 8 (5/16 washers)
- 8 (3/8 lock nuts)
- 1 (3 inch long tube for the brake cable)

We recommend using shop that has experience with Corvettes do this service. An alignment will be required after installation. When changing the swing arms out, we also recommend servicing the hub repacking the bearings and seals.



1. Raise the rear of the vehicle up and support it with jack stands.
2. Place the floor jack under the leaf spring close to the swing arm and raise the spring up until the load is removed off the swing arm bolt cushion assembly.



3. Remove the spring bolt and cushions. Note in this particular case the bolt is not factory and the head of the bolt have been machined round. In order to remove the bolt a vise grip is required. Once you have removed the bolt assemble, lower the floor jack and get it out of the way.
Note: Some vehicles have a rear sway bar that has

brackets that bolt directly above the spring bolt. You will have to remove the sway bar bracket before the bolt can be removed.

4. Remove the axle ½ shaft from the hub flange.



5. Remove the strut rod and the shock from the swing arm.

6. Remove the packing brake cable and brake lines going to the swing arm and cap off the brake line at the frame.
7. If you have disc brakes, remove the caliper.
8. You have two options at this point; you can remove the swing arm from the car and finish the swap on the bench or finish removing the rotor or drum assembly off the swing while it is still on the car. The key is to get to the 4 bolts that hold the hub assembly to the swing arm. If you have an original rotor hub assembly, you will have to drill through the head of 5 rivets holding the axle rotor assembly together. Punch the balance of the rivet through the axle and remove the rotor. If you are lucky, some one has already done this and the rotor simply slides off.
9. Remove the cotter pin and axle nut from the hub assembly. This is required in order to allow the hub assembly to pass through the swing arm.
10. Remove the 4 nuts that hold the hub assembly to the swing arm and remove the hub with the backing plates/parking brake all at once. You will probably need to tap the assembly out with a dead blow hammer. Doing it this way is cumbersome because the entire assembly is being handled all at once.



Note: When we change over the swing arms we service the hub bearings at the same time. GM has a special tool for removing the axle from the hub while it is on the car, (this is why a Corvette shop needs to install this kit.)

11. With the hub assembly removed from the swing arm, remove the swing arm from the car and install the new arm.



If you are installing TBC-9 (spherical bearing kit) there are gold steel spacers installed in the bearing already. When installing the arm into the frame, make sure the spacers are there in place. The toe adjustment shims are going to install in the same location. Do not tighten the frame bolt holding the swing arm at this time because an alignment is still required. If you are installing a TBC-10 (polyurethane kit) make sure that one large flat washer is installed on each side of the bushing. The shims then go between the flat washer and the frame.

12. Install the new hardware supplied in your kit through the swing arm.



13. Next install the hub. You will notice the hub is separate from the brake assembly. We always service the bearings when installing a new swing arm. Therefore the assembly is apart as shown.



14. Next install the backing plate (drum brake) or the parking brake/caliper bracket.



Install the 3/8 flat washers and lock nuts supplied in your kit --- Torque to 37 pounds. Note: Notice in the photo above the hub has a new outer seal and the bearing is greased.

15. Install the axle through the hub assembly.



16. Inside the hub assembly on the axle there is a steel spacer approximately 1-1/2-inches long that installs next to the bearing. Then a small steel shim (pictured below) goes next to the spacer. The shim is available in different sizes from GM for setting the hub bearing preload. In this case the bearing preload was correct so we reused the shim.



17. Next install the inner bearing.



18. Install inner hub seal.

19. Install inner dust shield.



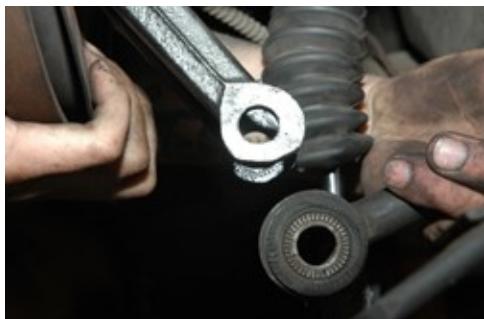
19. Install axle shaft flange.



20. Install the axle shaft steel thrust washer, castle nut and torque to 120 foot-pounds. Install the axle $\frac{1}{2}$ shaft and torque to 65 foot-pounds.



21. Install the strut rod and shock.



22. Install the spring cushion and bolts attaching the swing arm to the leaf.



23. Lift the spring up by using a floor jack and slide the assembly through the hole.



24. The parking brake cable will now be loose (referring to the adjustment) once you have the swing arms installed. In the kit you will find a 3 inch long tube. This is for the brake cable. Remove the adjusting nut for the parking brake cable located where the cable loops at the transmission cross member. Take the tube and slide it on the cable so it pushes up against the cable tensioning guide. Install the nut and re-adjust the tension on the parking brake cable.

Alignment setting for the following applications:

Street	Settings	Driver	Passenger
	Camber	$\frac{3}{4}$ degree negative	$\frac{3}{4}$ degree negative
	Toe	1/16 toe in	1/16 toe in

Auto cross / Road race	Settings	Driver	Passenger
	Camber	1-3/4 to 2 degree negative	1- $\frac{3}{4}$ to 2 degree negative
	Toe	1/2 toe in	1/2 toe in

Note: The setting for auto cross and road racing is just a base. The rear spring rate and type of tire will make a difference on these settings. This is just a start point!