

In the past if you rebuilt the steering box on your tri-five Chevy, you may have found that moisture had gotten in the box and ruined the pitman shaft or the teeth on the ball box. Also if the box has gotten some wear in it, the main shaft that goes to the steering wheel can drag on the mast jacket, and ruin the shaft. With these pieces ruined, you were just out of luck, but now CCI offers a new pitman shaft, **part #53-12**, and the main shaft with the box installed, **part #53-13**. Now if you have a good case, you can install all new internal parts, and have a box as good as new!

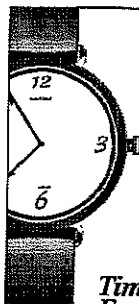
When installing a new main shaft with ball box, you will use **part #53-71**. This kit is the same as our complete steering gear box kit, **part #53-18**, less the balls and guides.

This box is a perfect candidate for at least a new mainshaft. Someone has just cut it off to get it off the frame. This box has been sitting in our junkyard for several years, so I'm sure there is some moisture inside as well (see photo #1).

To disassemble the box, first remove the locknut on the set screw in the center of the cap. Then the (3) $\frac{9}{16}$ " bolts (see photo #2).

The set screw has right hand threads, so by screwing the set screw counter clockwise it will force the cap off (see photo #3). Once the cap has been removed, you can get a view of the upper pitman shaft gear and main shaft ball box, looks bad (see photo #4). With the box centered, the pitman shaft can be slid out (photo #5). The teeth on this shaft are junk. It will need to be replaced (see photo #6).

Now, we are ready to remove the main shaft and ball box. This is removed at the lower end of the gear box. There is a large jam nut on the end cap with right hand threads. Using a chisel, rotate the jam nut counter clockwise (see photo #7). The end cap will



**Time
Frame:**

2 1/2 hours



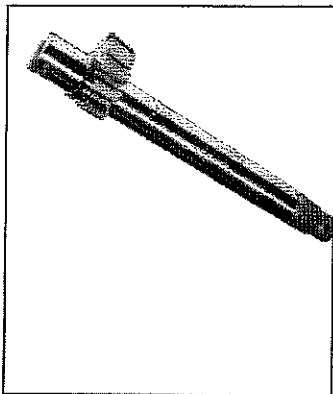
- Hammer
- 1 1/4 Deep Socket
- #1 Screwdriver
- Parts Washer
- Cylinder Hone
- Grease
- Chisel
- Punch

Parts We Talk About:

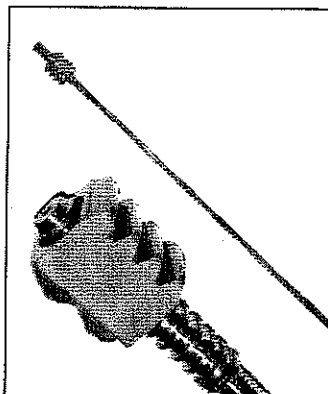
Part # Description

- 53-12** 55-57 Pitman shaft
- 53-13** 55-57 Main sector shaft
- 53-18** 55-57 Gear box rebuild kit w/balls
- 53-71** 55-57 Gear box rebuild kit, less ball §
- 30-64** Cast iron gray paint

§ To be used with any new main shaft with ball box



Part #53-12



Part #53-13

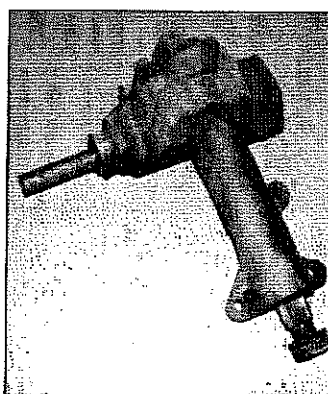


Photo #1

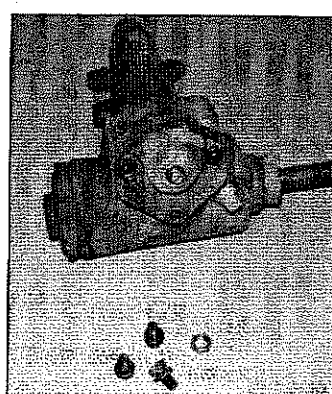
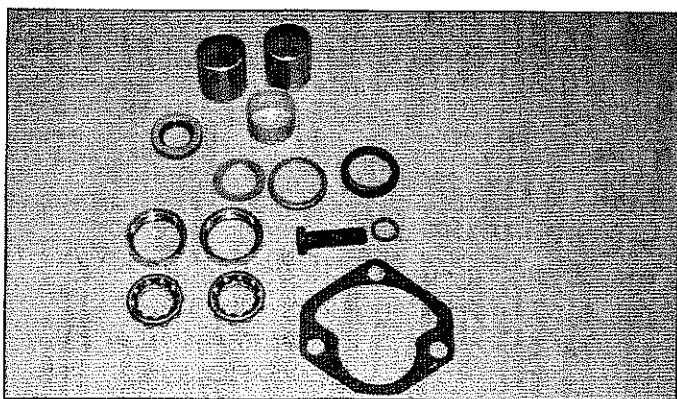


Photo #2



Part #53-71

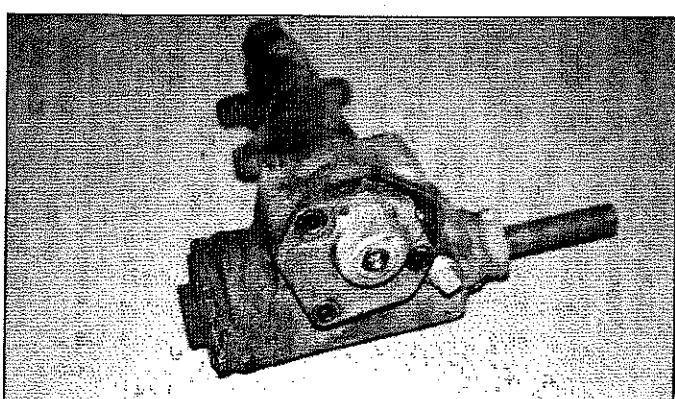


Photo #3

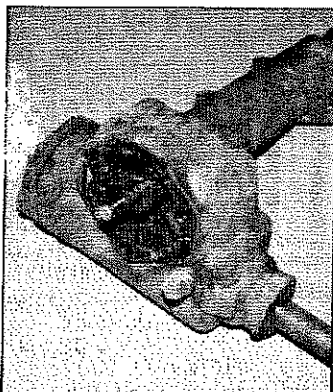


Photo #4

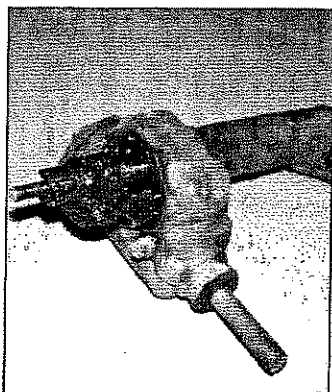


Photo #5

unscrew from the lower end of the box. A large crescent wrench may be necessary. There is a race ball bearing and retainer in the end cap that will be replaced (see photo #8). Now the main shaft and ball box can be removed. It's junk also (photo #9).

There is a felt dust deflector, and seal where the main shaft comes through the top of the box. These can be removed with a #1 screw driver (photo #10). On the inside of the box, where the main shaft comes through, there is a race for the upper bearing on the main shaft. Using a sharp chisel, drive the race out (see photos #11a & 11b). The end cap has a bearing, race, and retainer in it for the main shaft. Using a #1 screwdriver, remove the retainer, then the bearing will lift out (see photo #12a & 12b).

The race for the bearing is pressed into the end cap. We found by using a pilot bushing removing tool, and a vice worked great to remove it (see photo #13). The top cap has a brass bushing in it to support the pitman shaft. To remove this, we used a sharp chisel, and split the bushing (see photo #14). There are (2) long brass bushings in the top and bottom of the main case, and a seal at the bottom. Using a long punch, we drove these bushings out (see photo #15).

Now that the box has been completely disassembled, it is time to clean up the parts, you can't get this stuff too clean (see photo #16). First we ran the parts through a parts washer. Then, glass beaded them, then washed them off in soap and water (see photo #17).

The top cap uses the short brass bushing. Using a bushing driver, or a large socket drive the bushing in flush (see photo #18). The main case uses the (2) long bushings at the top and bottom of the pitman shaft. Drive them in flush with the case as well (see photo

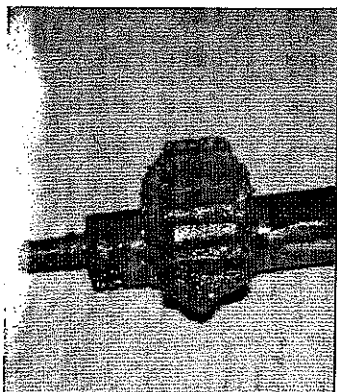


Photo #6



Photo #7



Photo #8



Photo #9



Photo #11b

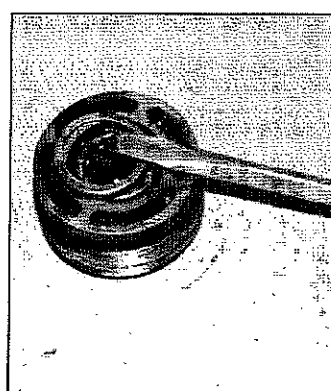


Photo #12a

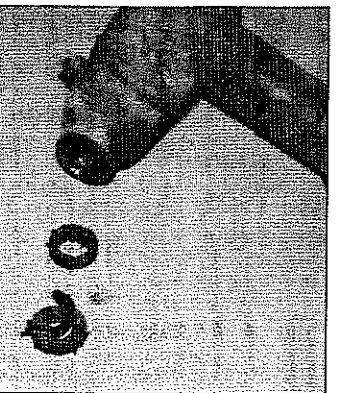


Photo #10

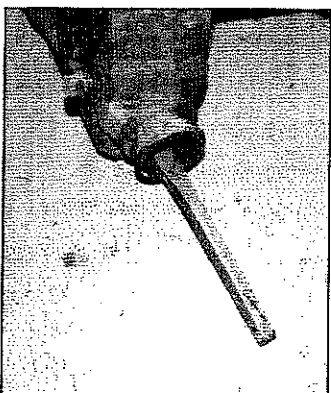


Photo #11a

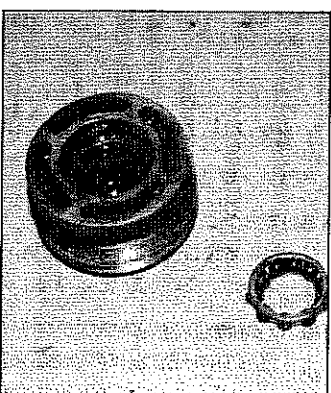


Photo #12b

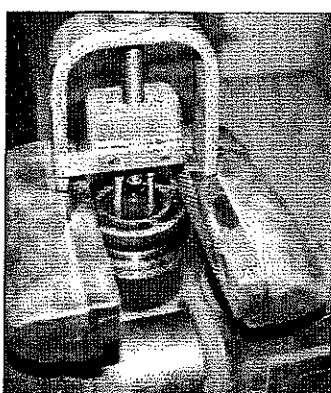


Photo #13



Photo #14

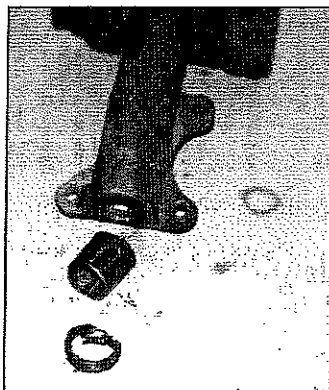


Photo #15

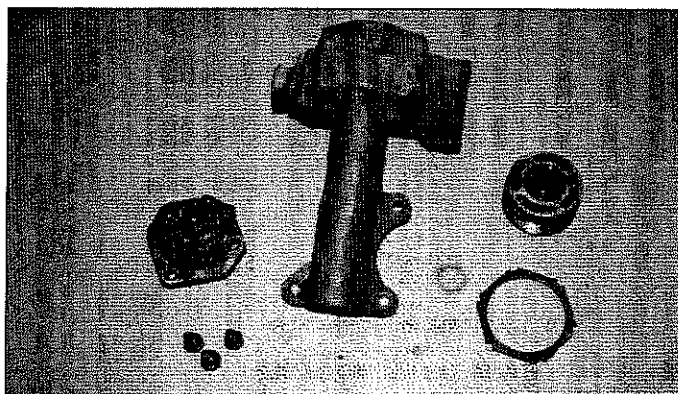


Photo #16

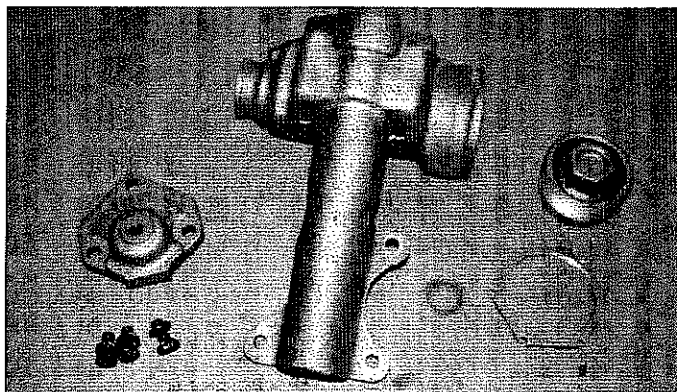


Photo #17

#19). Once the bushings have been driven in, it may be necessary to hone them to allow the shaft to fit. A wheel cylinder hone works great (see photo #20). The end cap has a race, bearing, and a bearing retainer. First drive the race all the way in (see photo #21). There is a race in the upper end of the main case for the main shaft, drive this race in flush (see photo #22). Next, pack the bearing with a good multi-purpose grease, and place it in the race (see photo #23a). Now, install the retainer over the bearing. This needs to be hammered in place. This retainer keeps the bearing in place while assembling the box (see photo #23b).

Install the upper bearing on the new main shaft, part #53-13. Make sure to use grease on the bearing (photo #24). The main shaft installs from the bottom end of the box. Notice the narrower part of the teeth on the ball box is to the top. This is so the pitman shaft can be installed (see photo #25). The end cap can now be screwed in place. Tighten the cap until there is no "in" or "out" movement on the main shaft. Then, install the lock nut, and tighten using a chisel and hammer (see photo #26).

With grease on the bushing surfaces, and on the teeth of the pitman shaft, install the pitman shaft. The lash adjusting stud can also be in place now (see photo #27). The gasket fits in between the main case and cap. Put plenty of grease on the bushing in the cap (see photo #28).

By turning the lash adjuster stud counter clockwise, the top cap will draw down onto the box. Once the cap is pulled all the way down, tighten the (3) bolts that hold the cap in place. Now screw the lash adjuster in, until you feel a slight resistance, then, using the lock nut, lock the the set screw in place. This will set the lash

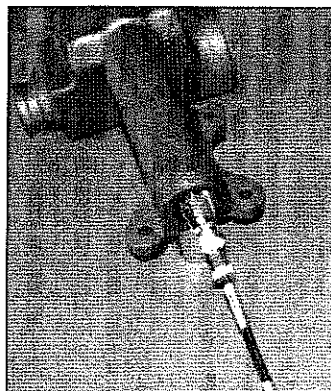


Photo #20

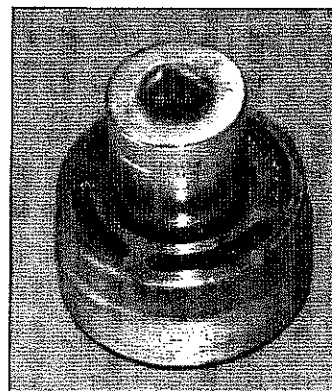


Photo #21

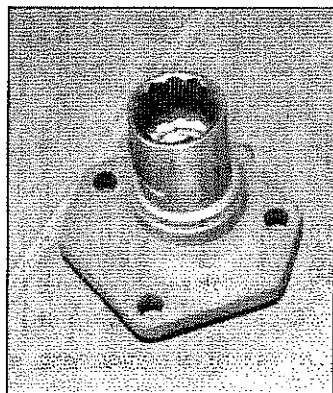


Photo #18

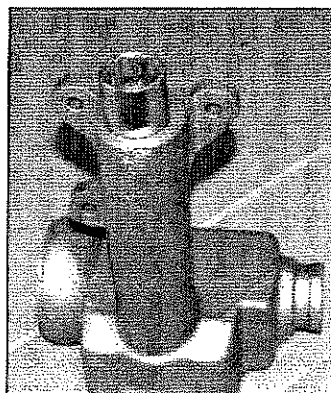


Photo #19

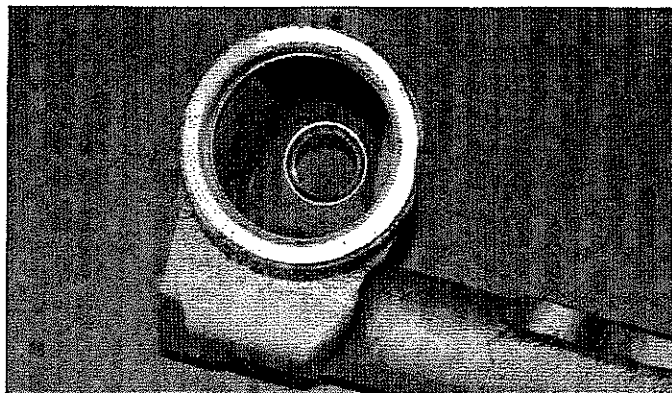


Photo #22

in the box, between the main shaft, and the pitman shaft (see photo #29). The pitman shaft has a seal. This can be driven in place with a deep socket (see photo's #30a & 30b). The main shaft has a seal at the top of the box. Drive the seal in as deep as it will go (see photo #31). The felt seal fits on the top of the main shaft seal (see photo #32).

Lastly, the thin flat wash sits on top of the felt washer. This is where the spring will sit—between the mast jacket and the steering box (see photo #33). The box will need to be filled with a good multi-purpose grease. A grease gun works great through the pipe plug. All the boxes that we do here at CCI get a coat of part #30-64. Cast iron gray paint looks great, and as good as new (see photo #34).

Good luck! ✓

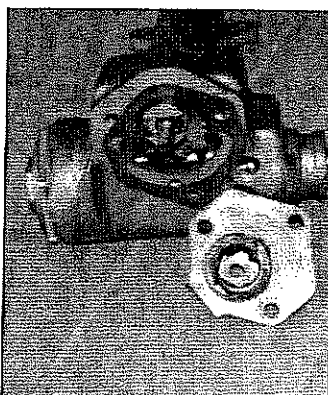


Photo #28

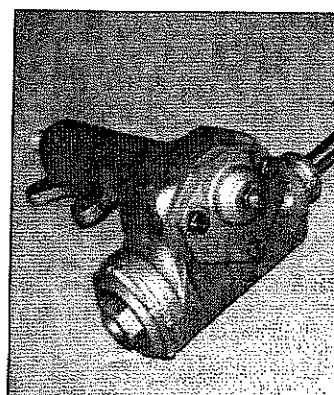


Photo #29

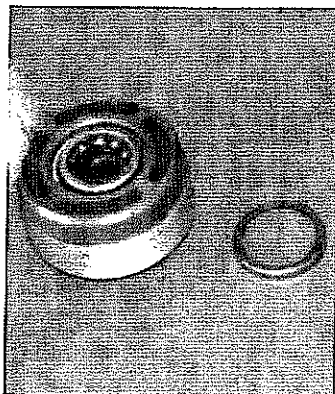


Photo #23a

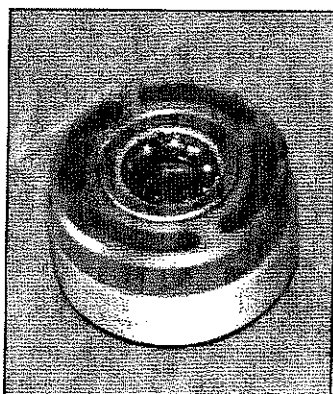


Photo #23b

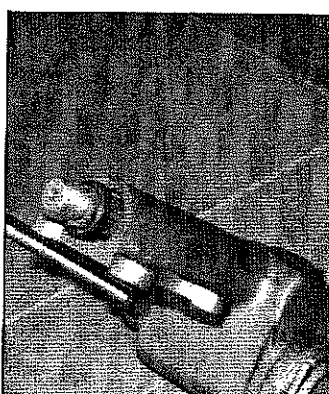


Photo #30a

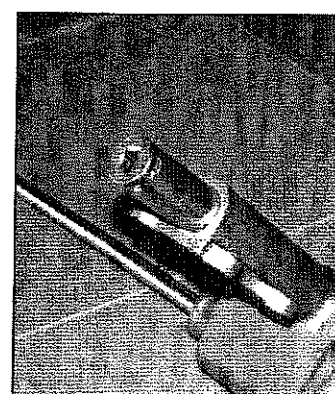


Photo #30b

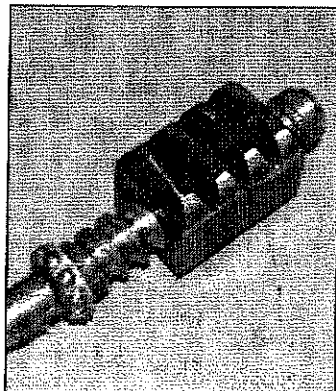


Photo #24

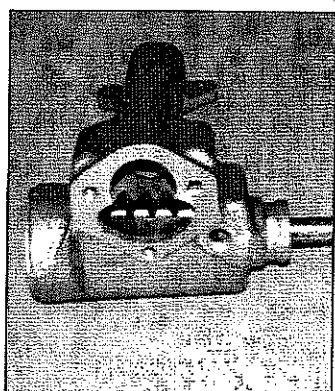


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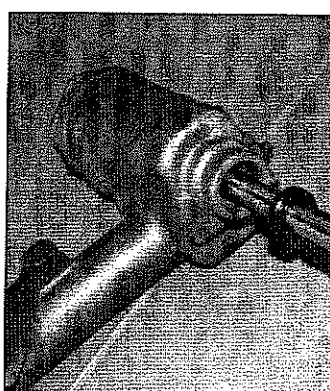


Photo #31

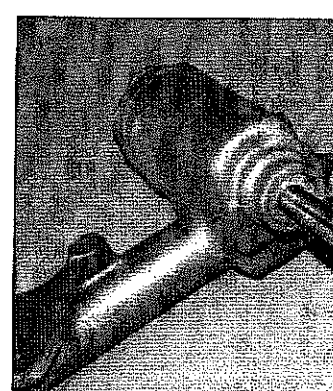


Photo #32

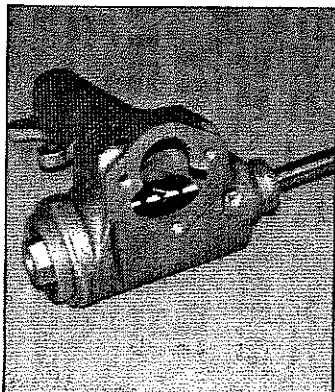


Photo #26

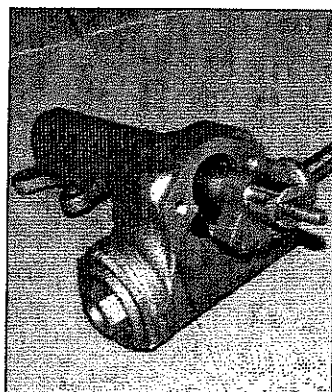


Photo #27

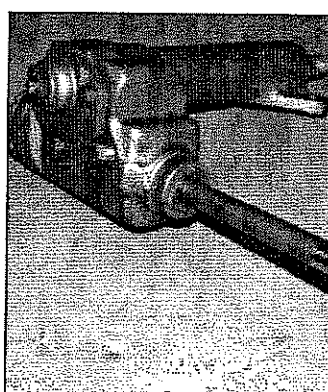


Photo #33

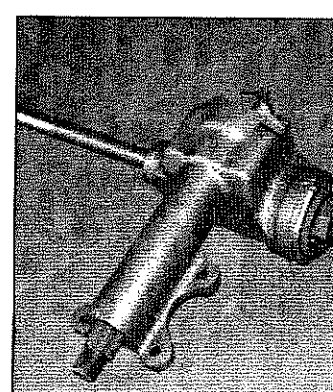


Photo #34