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Quick Ratio Steering System

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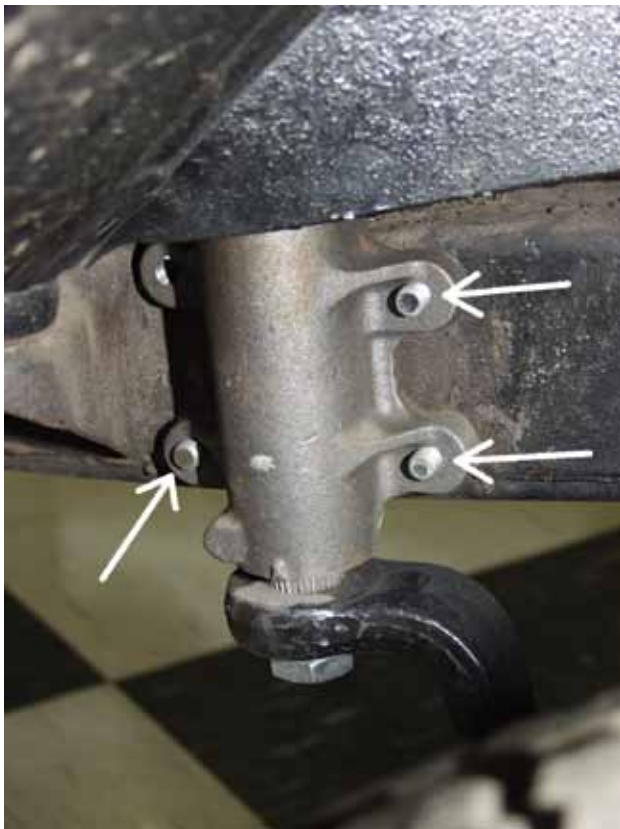
Please note this instruction sheet is written from the perspective of one converting from stock Bronco manual steering. If you are changing from one power steering system to another some of the instructions may not apply and there may be areas that are not specifically covered in this sheet.

1. For safety move Bronco to flat level ground. Block the rear tires. **Disconnect the battery.**
2. Use pickle fork/ball joint disconnecting tool to remove the draglink from the pitman arm.
3. Remove pitman arm from steering box. A pitman arm puller is the best method for removal.
4. Move to the lower end of the steering shaft. There is a spring clip which retains the rubber boot inside the coupler at the stock manual steering box. Remove the clip with pliers.
5. At the bottom of the column, on the steering shaft there is a clamp holding the steering column lower bearing in place. Loosen the clamp.
6. From the inside of the Bronco pull the steering wheel up about 6" so that the shaft comes out of the coupler on the steering box. Put vise grips on the shaft to keep the shaft from falling down towards the steering box.
7. Remove the steering box from the frame. Now is a good time to inspect the condition of the frame. The section of frame where the steering box is bolted to can be a problem area. Make sure there are no cracks or damage. Check the inner section of the frame by the radiator. Repair any damage before bolting on the new box.
8. Bolt the new box to the frame. Use washers under the bolts. Bolts go from the inside of the frame and thread into the box. Be careful not to cross thread the box.
9. Find the center of the box by turning all the way from one direction to the other. Make sure the front tires are straight. Reinstall the pitman arm and draglink.
10. Now hook up the steering shaft. **If you purchased the deluxe version of the system refer to the custom lower shaft instructions. Then proceed to #16 below.** For the single joint version proceed to the next step.
11. Install the new U-joint/yoke on the input shaft of the steering box. Line up the set screw with the place on the input shaft grooved for the set screw (some boxes and yokes also have keyways) do not tighten at this time.
12. Next you need to determine how much of the shaft you need to cut off. Bring the shaft to the yoke so it is touching the end of the yoke. You can not put the shaft into the yoke yet because the yoke is 3/4" DD and the shaft is 3/4" round. At this point it's good to have someone helping. With one person holding the shaft to the end of the yoke go inside the Bronco and measure the distance from the backside of the steering wheel flange to the turn signal switch housing and subtract 1" from the measurement. This measurement is very important. Mark the measured amount from the bottom of the shaft. This will be the cut mark.
13. To remove the column or not to remove the column? That is the question. We find it easier to remove the column but know people who have performed these next steps with the column still in the Bronco. First cut the shaft at the mark. Now you need to grind the 3/4" round shaft into a 3/4" DD. Grind flats on two sides. **Be careful not to grind to much.** It's better to do a little at a time and check the fit with the yoke. Once you have the shaft fitting the yoke thread the set screws in the yoke to mark the shaft. Remove the set screws and yoke from the shaft and grind notches in the shaft for the set screws to bite into.
14. With the column in the Bronco slide the steering shaft into the yoke and retain the shaft with the set screws. Do not use loctite at this time.

15. Now slide the steering shaft clamp on the steering shaft back up to the bearing and tighten it. You should have about 1/8" gap between the turn signal switch housing and the steering wheel hub. This is critical! If you do not leave enough gap you could experience a tightening of the steering under hard acceleration. The early columns are slotted under the dash and you can make small adjustments as needed by loosening the shaft clamp and moving the column up or down. Once you have established the correct gap. Use Loktite on the steering yoke set screws. Recheck and tighten all set screws at this time.
16. Now we will focus on the steering pump. It is easiest to remove the radiator when installing the steering pump and brackets (you will have a lot more room to work) but can usually be done with the radiator in place.
17. **NOTE: WH brackets are specifically designed for use with stock 289 and 302 Bronco water pumps.** Remember if you have a 351W you will need our #8048 adapter bracket to keep all the brackets lined up properly. The stock Bronco water pump will have the water inlet on the passenger side of the motor.
18. Start by bolting the pump to the pump bracket. 4 bolts and two spacers are installed on the pump. Because the pulley is installed on the pump it will take some finesse to start the bolts but we assure you it will work and can be done.
19. Bolt the pump adjusting bracket to the water pump.
20. Determine which end of the double threaded rod fits your head 3/8 or 7/16". Use the rod to bolt the assembled pump and bracket to the pump adjusting bracket and head. Use an appropriate amount of washers for spacing of the pump bracket away from the head. This is to line up the pulleys and belt. We do not include a belt in the kit because of all the different size crank and water pump pulleys. Obtain the correct size v-belt from your local parts store.
21. You have one pressure and one return hose in your system. These are metric and use o-rings. Make sure the o-rings are in place on the ends of the fittings of the hoses. The return and pressure hoses are different sizes. Start with the return hose. It has just one fitting end. Install it in the box and route the other end to the return port on the pump. Use a hose clamp on the pump end. Now install the pressure hose to the box and pump.
22. At this point everything should be double checked and tightened into place.
23. Fill the steering pump with steering fluid. We recommend that you use a regular non synthetic power steering fluid. **Do not use automatic transmission fluid it will void your warranty.** Connect the battery and remove the ignition coil wire. Turn the motor over a few times. This will allow the steering system to move fluid from the pump to the box and hoses. Add fluid once or twice before you reinstall the coil wire and start the Bronco.
24. With the front axle on jack stands start the Bronco and turn the steering wheel lock to lock 5 to 10 times. Check for leaks, and smooth operation with no binding. Double check and make sure power steering fluid is at the correct level.
25. Time for your test drive. Start with a few trips around the block turning right and left on your route. Come back and recheck under the hood just to be safe. If the steering wheel is no longer centered remove the steering wheel and reinstall in the correct position.



This photo shows the gap between the steering wheel hub and turn signal switch housing.



This photo shows the three holes used to mount the box to the frame.



This photo shows a simple frame repair using a steel plate.



This photo shows front view of assembly on a 351W



This photo shows view of the pump from passenger side.



This photo shows the pump adjusting bracket and pump mounted to the water pump and head.

