

400 SERIES POWER STEERING CONVERSION FOR 1948-52 W/ STOCK COLUMN

INST-
94614-4852-WLD

Last Rev:
12/12/2018

PAGE NUMBER:
1 OF 4

!@#\$%!@#\$% INSTRUCTIONS
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NOTES:

DO NOT CUT the column or shaft until you have completed the mock-up/test-fit phase of the installation, which will lead you to decide on the appropriate length for each of those pieces. Use tack-welds only until all measurements are determined by this process.

MAKE SURE to plan for exhaust and engine clearance around this larger than stock steering box. You will also need to plan for steering pump mount and hose routing to the box.

- 1) Use a marker to mark the stock/existing location on the column, on the top where it meets the stock column drop (dash mount bracket). This mark will be useful later. **See Fig. 1.**
- 2) Remove the steering wheel to begin removing the stock steering box and column completely. At the steering box, remove the clamp and slide the clamp and column sleeve up and out of the way. Cut the steering shaft 1" above the steering box casing (send us your core!). Remove all.
- 3) Widen out the frame hole for the pitman shaft slightly to ensure clearance. No need to go overboard, 1/16 inch overall diameter increase is sufficient. Hold the new steering box up there and get a feel for how much is needed.
- 4) Bolt in the new CPP400 steering box and bracket with the 3/4 inch spacers (provided) inside between the bracket and frame rail.
- 5) Use a marker to make a reference line on top frame rail exactly over the pitman shaft **See Fig. 2.**
- 6) Measure exacty 5-1/4 inches from the center of the top frame rail and make another reference mark. **See Fig. 3.**
- 7) Align 4647-T Heim Support Bracket plum/verticle at above reference mark as shown. Note that the top frame rail is narrower than the bottom frame rail. This means you will have approximately 3/8 inch gap at the bottom frame rail edge where you weld the bottom of the bracket. **CHECK FOR CLUTCH ARM CLEARANCE.** With the Heim Bracket (4647-T) in the correct position, the clutch arm will barely clear the Heim Joint when installed. Insert the Heim Joint with one nut on either side of the bracket and test for this clearance. The clutch arm may need to have a small amount of material grinded off of it for good clearance. **DO NOT** bead-weld this bracket in YET. Tack-weld only until mock-up is complete. **See Fig.4.**
- 8) Don't cut steering shaft yet. De-burr and attach U-Joint (J75R-7DD) with 2 small tack-welds only.
- 9) Re-assemble the steering column and wheel. Suggested mock-up configuration shown in **Fig. 6.** We recommend using Mid Fifty part# 4625 at the top of the column under the steering wheel to hold the steering shaft in place during mock-up **See Fig. 5.** Make sure the bottom of the column outer sleeve is extending no further than necessary into the engine compartment to allow maximum space for the double U-joint and DD shaft assembly **See. Fig 6.** This prevents the shaft and U-joint from sliding down during mock-up. Loosen your floor plate clamp for the following steps, allowing you to move the column, shaft and tack-welded U-joint up and out of the way temporarily, allowing room to assemble the other U-joint and DD shaft to the steering box worm shaft.
- 10) The other U-Joint (J736-7DD), the short DD shaft (4641-7DD3) and the Heim Joint (4649) can now be assembled together and the Heim inserted into the tack-welded bracket (4647-T). The steering shaft and U-Joint can now be lowered back down onto the other end of the DD shaft. **IMPORTANT** make sure the U-Joints are properly aligned (in proper phase, **See Fig 7 & 8**). Tighten all joints enough to do a functional test of the assembly by turning the steering wheel from limit to limit. If you did not tack-weld the traingel gusset (4647-G) in place at the beginning, that's ok, you may notice a small amount of flex in the Heim Bracket near the center of travel of the box.

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PAGE NUMBER:
2 OF 4

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- 11) Before disassembling this temporary setup, **MAKE SURE** to do ALL of the following:
- Check again for smooth motion of the clutch arm, as in step 7 above.
 - Find and mark the center of travel of the steering wheel and pitman shaft for reference during final assembly.
 - With the driver's seat installed (or at least mocked up) **PUT THE DRIVER IN THE TRUCK!** This is necessary to determine the final desired position of the steering wheel **before cutting the shaft and column.** If you know you want the stock position, you can make some measurements using that reference mark made on the column in step 1) above and skip driver test, but this is risky.
 - IMPORTANT:** Measure twice cut once! The length of the outer sleeve that you cut out **MAY NOT** be the same as the length of the steering shaft that must be removed. Consider that the outer column shaft sits **UP INTO** the steering wheel when finally installed, approximately 7/16 inch (see Fig. 9). If you mocked it up that way, that's great, no adjustment necessary. If you used Mid Fifty part# 4625 as suggested in step 9), then the column sleeve was prevented from "nesting" up in the steering wheel during mock-up **AND** the additional shaft length taken up by that 4625 piece must also be taken into account before cutting the **BOTTOM** of the steering shaft, that is approximately 5/8 inch.
- 12) **When you are confident that your repeated measurements** have taken all these things into account, remove the tack-welded U-joint at the bottom of the steering shaft and cut out the desired amount of shaft **AT THE BOTTOM**, leaving the splines for the steering wheel in place on the other end.
- 13) **Don't Forget** to complete good bead welds for the Heim Bracket 4647-T, the triangle gusset that goes with it 4647-G **AND** the U-Joint J75R7DD at the bottom of the steering shaft.

FIG. 1



FIG. 2



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PAGE NUMBER:
3 OF 4

FIG. 3



FIG. 4



FIG. 5



**400 SERIES POWER STEERING CONVERSION FOR
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Last Rev:
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PAGE NUMBER:
4 OF 4

!@#\$%!@#\$% INSTRUCTIONS
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FIG. 6



FIG. 7

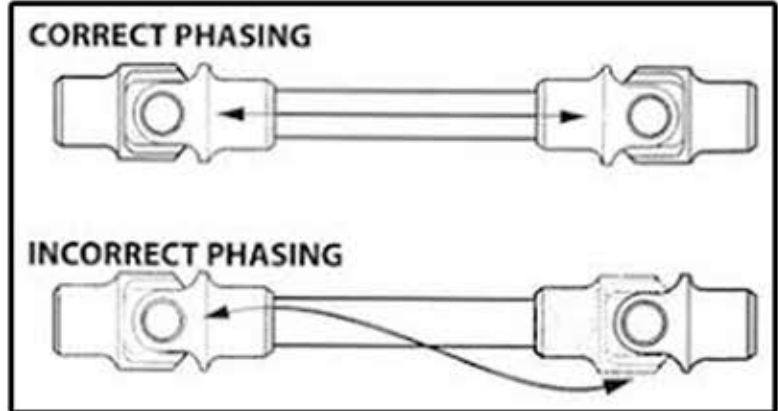


FIG. 8

