# INSTRUCTIONS

**919-2200**



# FLATHEAD FORD UNIVERSAL FIT DRIVESHAFT

This is a driveshaft designed to give the car builder much more versatility with the ability to provide the correct length driveshaft when using early Ford torque tube style rear axles. This design can also be used with any brand V8 style quickchange center section using a 6 spline jack shaft and similar torque tube drive shaft configuration. This product requires welding. Final assembly should be performed by an experienced welder.

**PARTS PROVIDED:** Make driveshaft and tube assembly, 6 spline coupler, roll pin.

**TOOLS REQUIRED:** Tape measure, 220 amp welder, blade cut saw, 1/4" x 2" bolt, small carpenter's square.

## ASSEMBLY INSTRUCTIONS:

1. It is important that the rear axle and the engine transmission be correctly located. This part requires a cut to length distance; an incorrect positioning error may result in the drive shaft being too short or too long. If the product is cut too short it **CANNOT** be repaired.
2. Determine as close as possible the actual ride height of the vehicle. Use blocks between the frame and rear axle for stability.
3. Make sure that the pinion shaft is pointing directly towards the center line of the rear transmission shaft. At this time double check to insure that the rear end is centered to the transmission.
4. Slide the spline coupler on the pinon shaft or, in the case of a quickchange, the jack shaft. Make sure that the stepped edge of the coupler is pointing towards the transmission. Align the splines so that the hole in the coupler matches the hole in the pinion or jack shaft. Insert a 1/4" x 2" bolt thru the coupling holes to eliminate movement.
5. With the u-joint installed and tightened correctly and without the torque tube pivot cap installed, use a tape measure to determine the length of the drive tube distance. This is done by measur-ing from the depth of the drive shaft yoke to the step edge of the coupler. Record this dimension. To double check, insert the driveshaft into the u-joint, making sure that it does not stick thru the yoke but is fully engaged. Swing the tube and the larger edge of the coupler step. This dimension should be within 1/16" or less of the coupler and yoke dimension. Remember, measure twice—cut once! No allowance for mistakes.
6. Now it is time to cut the driveshaft tube. **DO NOT USE A PIPE CUTTER!!** This is quality driveshaft tubing. A pipe cutter will oval the tubing and place the driveshaft out of balance. Take the measurement that you determined from Step #5 and transfer to the driveshaft by measuring from the face of the spline end as far towards the open end of the drive shaft tube as necessary at multiple places around the shaft. It is suggested that you square the edge by wrapping it with tape and checking dimensions. Mark the side that you are to cut off with a felt marker. It is suggested that you cut the tubing using a cutoff abrasive saw but the same results can also be achieved by using a band saw or a hand-held saw. It is of utmost importance that you **DO NOT** squeeze the tubing by tightening in a vise. When using a hand-held saw, use special care to insure you get a straight cut. Check the cut edge and file as necessary to achieve a square cut. Remove burrs from inside the tubing.

7. Now remove the couple from the shaft and install it in the end of the driveshaft tube. This is a tight fit so you may want to place the coupler in the freezer section of your refrigerator. To install the collar in the driveshaft tube, simply center it in the tube and tap in with a hammer. **DO NOT HAMMER DIRECTLY ON THE COUPLE**; use a block of wood as a buffer so as not to damage the splines.
8. Now reinstall the driveshaft to check it before final welding. At this time it will be necessary to unhook some locating brackets as the rear axle assembly will have to moved back slightly to install the driveshaft. After installing driveshaft, rehook the mounts and install a 1/4" bolt to position the driveshaft. The driveshaft should not protrude thru the u-joint yoke.
9. Welding is a very important process. You **CANNOT** get a satisfactory weld by using a 110 volt welder and if you are not a competent welder, this should be taken to a professional to complete fabrication. When finalizing the weldment, it is necessary to prevent distortion from over heating. It is suggested that a tack weld be made first, then another 180° from that and then 2 others at 90° to those welds. Before doing any welding again check to insure that the coupler is square to the driveshaft tube by using a square off the edge of the tubing. The driveshafts are within .008" of true when they have been made. This tacking process and your double checking will insure that they remain that way. Completely weld the circumference of the joint.
10. For those of you who also need to shorten the torque tube, the procedure is similar. Use the inner torque tube pivot collar as the point of measurement at the transmission and the bolt flange of the rear end to determine the length of the torque tube. The position of the cut on the torque tube will be determined by the wheel base of the car and the year torque tube used. After cutting the torque tube, take in place, square, and check the alignment before final welding.
11. You are now ready to install the driveshaft. Remember that if you are using a 1937 or newer torque tube it is necessary to remove the center support bearing. It is not necessary with this design driveshaft. ALso, follow the instruction in the service manuals on removal and replacement of the upper driveshaft seal and correct installation of the speedometer gear. As a safety precaution after installing the roll pin, secure with a loop safety wire.

# IMPORTANT

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