
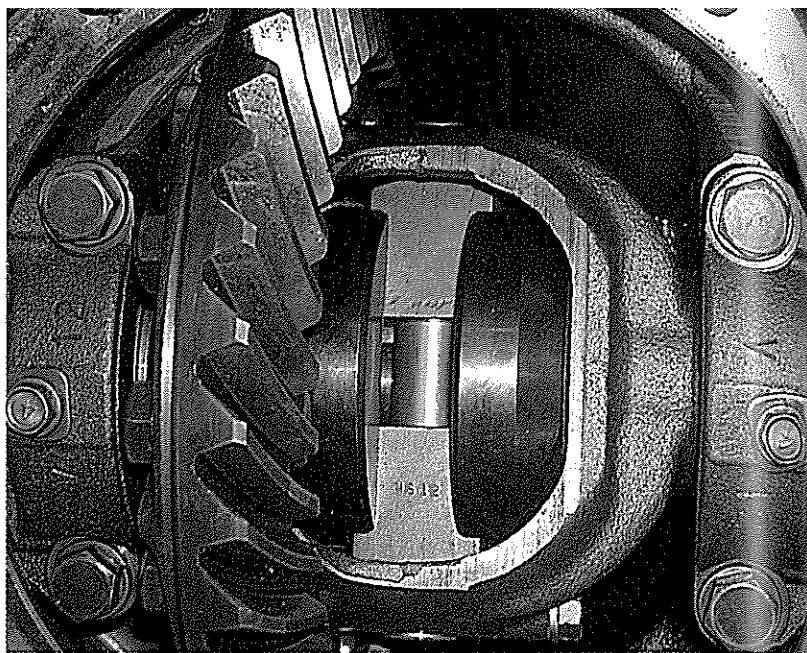


I decided to use the existing cross pin even though it showed signs of abuse from the previous owner. Obviously this truck was stuck with only one wheel spinning for a long time. The spider gears, while designed to spin briefly while going around corners, are not made to withstand long periods of rotation. With the mini spool installed, this shaft will never again see the sort of rotation the old spider gear introduced. The scoring will be inconsequential in this application. With the cross pin back in and the retaining bolt tight, I reinstalled the cover.

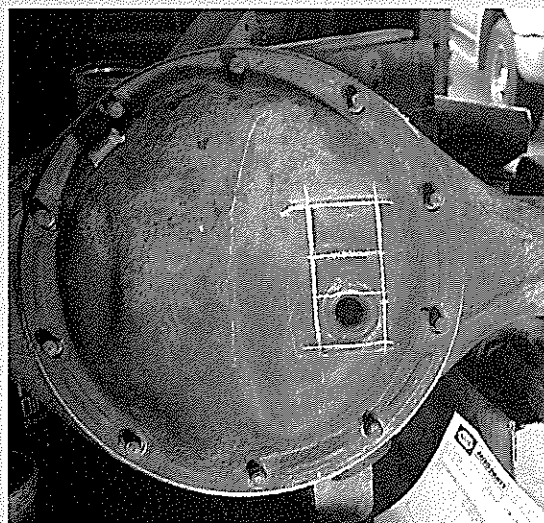
This project fulfilled several needs: effective traction improvement, it was inexpensive, and provided me a chance to relax while working on my hobby. All in all, a good project.

 Photos by Gary Brandt

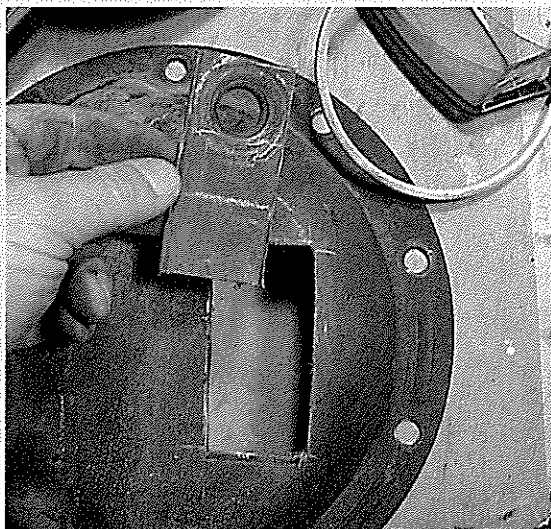


The completed project.

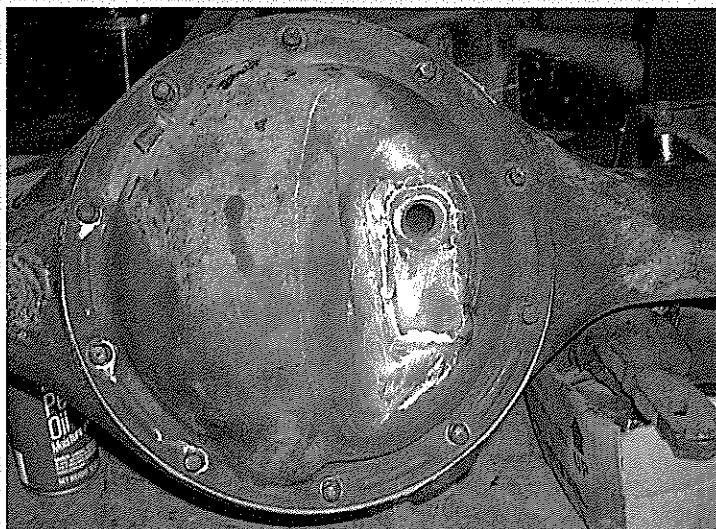
While performing a spring over lift on my FJ40, I needed to point the rear pinion up towards the transfer case. This realignment solved several issues: reduced the u-joint operating angles; kept the pinion out of the rocks; and if performed in conjunction with a constant velocity joint at the transfer case, will reduce vibration. Unfortunately, pointing the pinion up also causes a problem—lack of oil. The low-buck solution to this problem is to overfill the axle to restore the oil to the bottom of the outer pinion bearing. To accomplish this, I marked the location where I wanted the filler hole to be and then made accompanying marks around the existing filler. After cutting out the rectangle formed, it is a simple process to rotate the piece and weld it back into the cover. Before welding, coat the plug threads with a thick coat of grease or a wet rag to keep them free of weld splatter. The new differential cover will allow you to raise the oil level without making a mess by simply trying to force in more oil.



Locating the new filler hole.



The cover cut and ready for welding.



The newly positioned fill plug hole.