

# Tech - Talk

## COLD FORMING PROCESS






### MARKET ISSUE:

There is market concern that the mark seen on the JBJ7026 ball joint housing is a stress crack.

### TRW SOLUTION:

This is folded over metal from a forging process, not a stress crack. Forging produces a stronger and more accurate part. The part becomes stronger as the forging compresses the metal into a tighter structure. Forging is more accurate as it is done in a single process that prevents incorrect stack tolerances which could occur in a two-step machined process environment. This process is performed in the OE plant and approved by the OE nameplate manufacturer as an acceptable practice.



Step	Process	Image
1	This is a cold forged part cut to length from the OE approved grade bar stock.	
2	From the cut in step #1, a slight protruding lip of metal results from the cut.	
3	As part of the pressing operation, that lip of metal is rolled and flattened. It is cosmetic and has no impact on the precisely forged (not machined) housing, inside and out.	
4	From this nugget of metal, it is inverted and under intense, but extremely accurate repeated forging pressure, the inner socket is pounded.	
5	The forging pressure is repeated until proper measurements are achieved for the inner socket to be pounded into place for the bearing.	
6	From there, it is assembled with the bearing, grease stud and rolled into a sealed unit to which a dust boot is applied.	