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CLBCOM 55
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BEN CUNNINGHAM
is back to working on the complete restoration of their Squire after taking some time off to change residence in St. Petersburg. I changed the address before the last roster went out but neglected to change the phone number. Rather than re-issue the latest roster why don't we pencil it in on the current one in your possession. It is Area 813+896-6123. Ben has just sent some photos of work-in-progress and believe me, he's giving it a major overhaul and re-do.

A SHIFTLESS WONDER
is another way to describe a Squire with an automatic transmission. Of the 38 Squires located to date, exactly 19, or 50% of the total are automatics and if you have one, the following will be of little interest to you - and I believe that's a first for all the tech-tips we've published to date. But, for those of you that have a manual transmission, this should shift your attention (Yuk Yuk!).

On all of the linkage between the clutch pedal and the bell housing there are four metal-to-metal contact points and two more that are "supposed" to be supported by nylon bushings. My Squire now has accumulated just under 25,000 miles, most of it in city traffic with constant shifting. I had recently noted that there was a good deal of "slop" or loose travel in the mechanism that could be removed by lengthening the travel on the threaded adjustment rod but I decided to take it apart to see just where all the wear was located and in the process I got a surprise. (Please note attached clutch assembly drawings by Bill Lieske). At the point where the thrust rod from the clutch pedal joined the upper arm of the bearing shaft, and where the threaded adjustment rod joined the lower arm, the metal-to-metal contact had worn the round hole drilled in both arms into a definite egg-shaped contour. In addition, the two factory-installed nylon bushings supporting the bearing shaft between the engine and frame had both worn flat on one side. All of this "slop" can be adjusted out for awhile - but not indefinitely. So, I decided to fix and improve it.

The entire clutch assembly can be removed by pulling three cotter pins (which I replaced with hitch pins at reassembly) and the use of 17 & 19MM open end and socket wrenches. First, loosen the 17MM securing nut on the threaded adjustment rod and remove all tension from the rod, and at the same time remove the transmission end of the pedal return spring. Pull the cotter pin and remove the rod. Next, pull the two cotter pins on the thrust rod between the clutch pedal and the upper arm and remove the rod by twisting and pulling the rod into the cockpit area. Using a 17MM open end and socket wrench, remove the two nuts and bolts securing the bearing shaft to the engine housing and with a little jiggling and cussing, the bearing shaft assembly will drop off (if it's as loose as mine was), leaving the bearing post attached to the frame. (Continued)

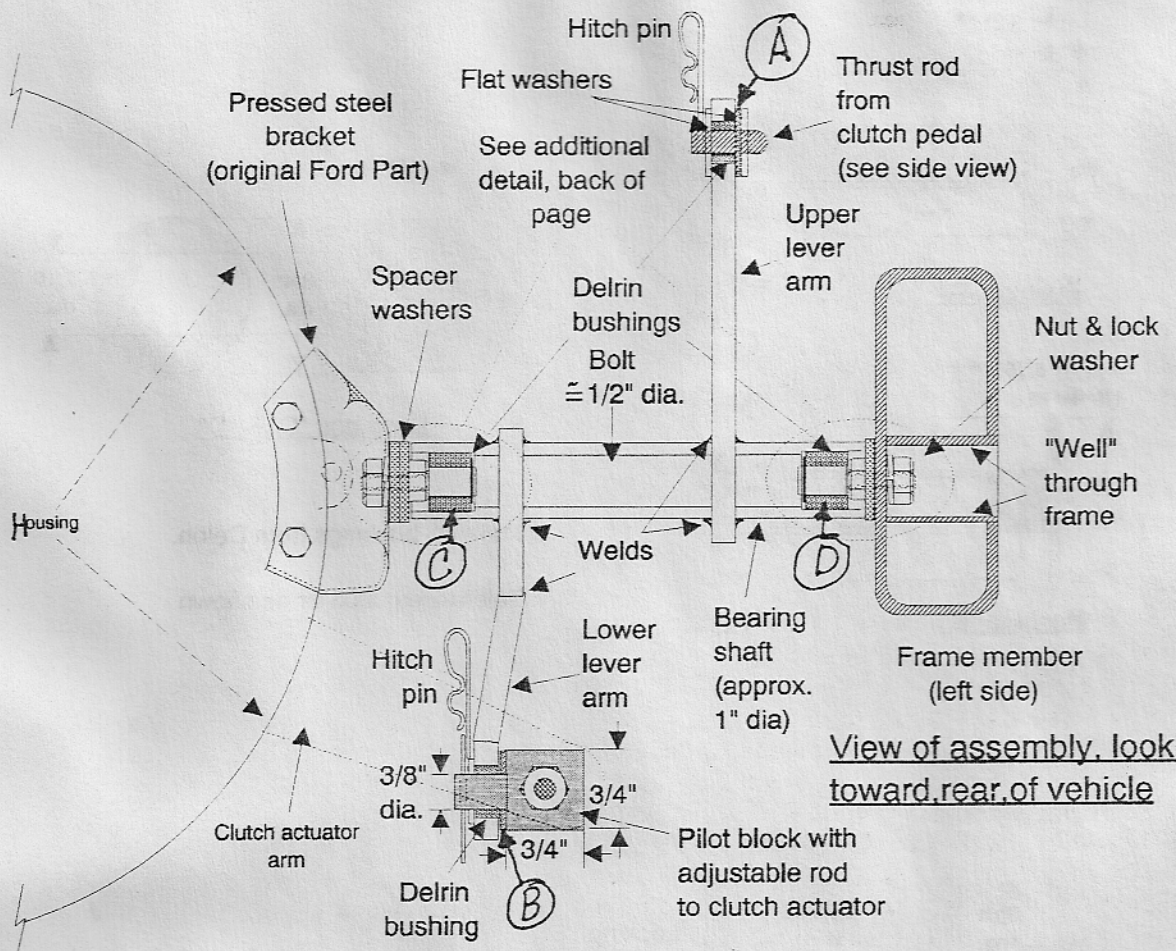
To remove the bearing post, slip a 19MM socket and universal joint (3/8" drive works best) into the aperture on the outside of the frame and remove the nut and lock washer, The post can then be removed from the inside of the frame. I am assuming that on the higher mileage cars your wear will approximate mine. After inspection, if your wear is not excessive, reassemble and count your blessings. However, if the metal-to-metal holes are egg shaped and the two nylon support bushings are worn flat on one side, now is the time to fix it - and here's how I did mine:

The two original support bushings pinned to the two bearing posts and slipped into the bearing shaft are old fashioned nylon and I used a similar but newer material called Delrin which has much better wear characteristics and built in lubricity. (Note: There are small job-shop machinists that specialize in working with plastics. Mine was machined and drilled by a friend using donated Delrin so my total cost was $20.00 - if that's any kind of guide). These bushings are held on both posts with a spring steel split retaining ring. Both of mine flew off on removal and are forever lost in the debris in my garage. If that happens don't worry, you can replace them with the American variety available at any good hardware store. After machining and installing the new bearing shaft bushings we tackled the two metal-to-metal wear points on the upper and lower arms by drilling out the holes on both arms to the best acceptable size and making a slip-in bushing drilled to accept the push rods. While Bill Lieske has shown the dimensions made for my car, your wear may be more or less than mine and this may not apply. That's up to you or the machinist doing the work but I'll extend a warning at this juncture. By the very nature of their training and profession, machinists tend to make things "on size" or very tight but remember, you have to re-install all this stuff in a very limited work area so it's a good idea to build in a little ability to "wiggle" the parts around the new bushings because they go back in place somewhat harder than they fell out. Good luck - and if you get in trouble call me, or, pull the parts and ship them to me UPS or parcel post and we'll do it here and ship them back. It will cost something more than $20,00 however.

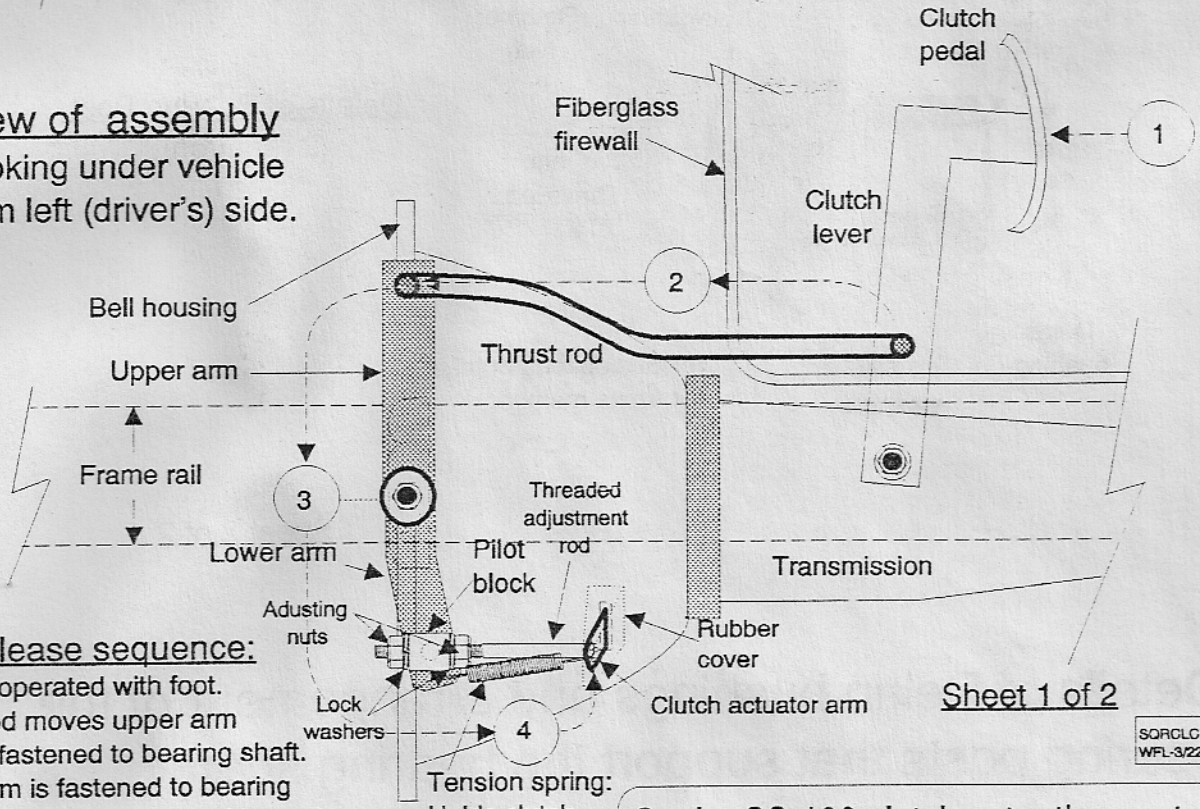
That's about all for this month, Squire fans. While we have devoted almost this entire issue to owners with manual transmissions we may have some good news for owners with automatics. One of the gripes from many of you is the "T" bar shifter that does not represent the period that our cars replicate and further, the foot brake that bangs the left leg on anyone over 5"8" and does not work anyway. I attended a car show recently and spotted a shifter/handbrake kit designed with hot rods in mind but would look great on a Squire. As soon as we get more techdata on this we'll print the results.

For those of you that phone me occasionally, Arizona does not observe Daylight Savings Time and we are now on Pacific Daylight Time insted of Mountain Time. More next month.

Art Stahl



View of assembly, looking toward rear of vehicle



View of assembly

Looking under vehicle from left (driver's) side.

Clutch release sequence:

1. Pedal is operated with foot.
2. Thrust rod moves upper arm which is fastened to bearing shaft.
3. Lower arm is fastened to bearing shaft and forces release rod toward rear of vehicle.
4. Release rod moves clutch actuator arm rearward to dis-engage clutch.

Tension spring: Holds clutch release rod into adjustment rod

Sheet 1 of 2

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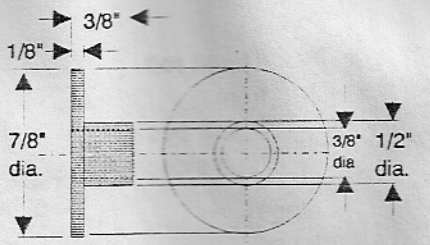
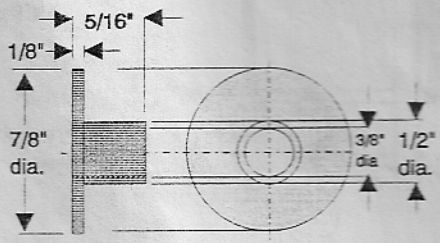
WFL-3/22/95

Squire SS-100 clutch actuating system:

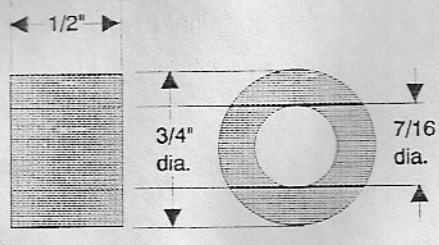
4 speed manual transmission models



Bushing "A"



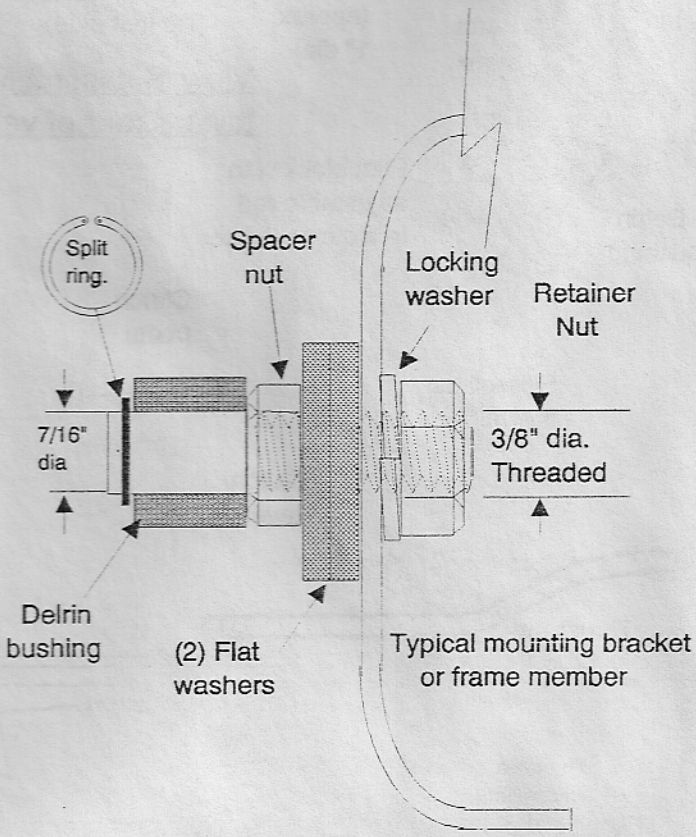
Bushing "B"



Bushings "C" & "D"

Make all bushings from Delrin.

Tolerances: .003"or as shown



Details of Bearing Post.
(2 required)

Sheet 2 of 2

Details of Delrin bushings and arrangement of the bearing posts that support the bearing shaft.

SQCLTCH2
W. LIESKE
3/22/95