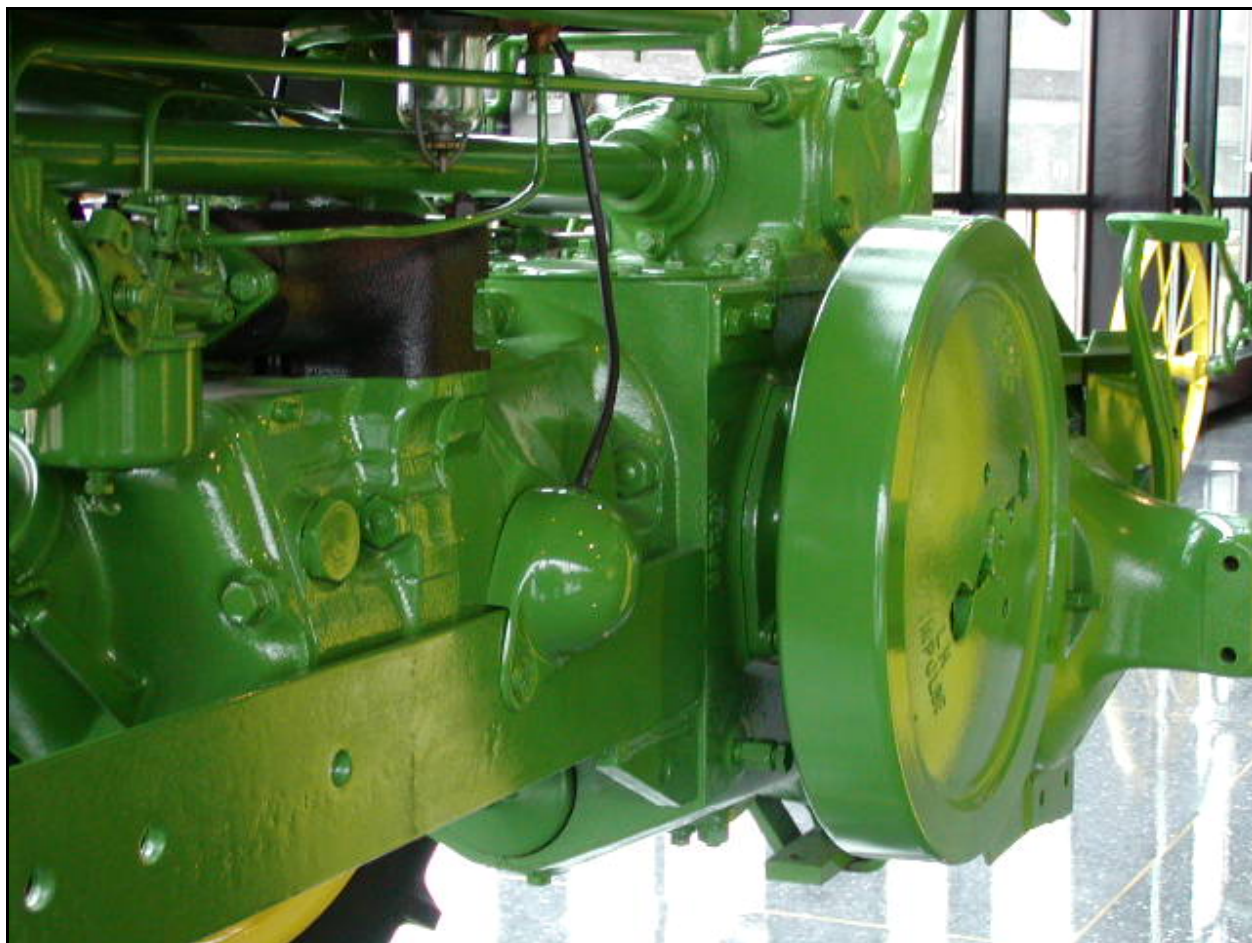


## The 1939 "H" -- A Tractor "Set Apart"

4-10-2010

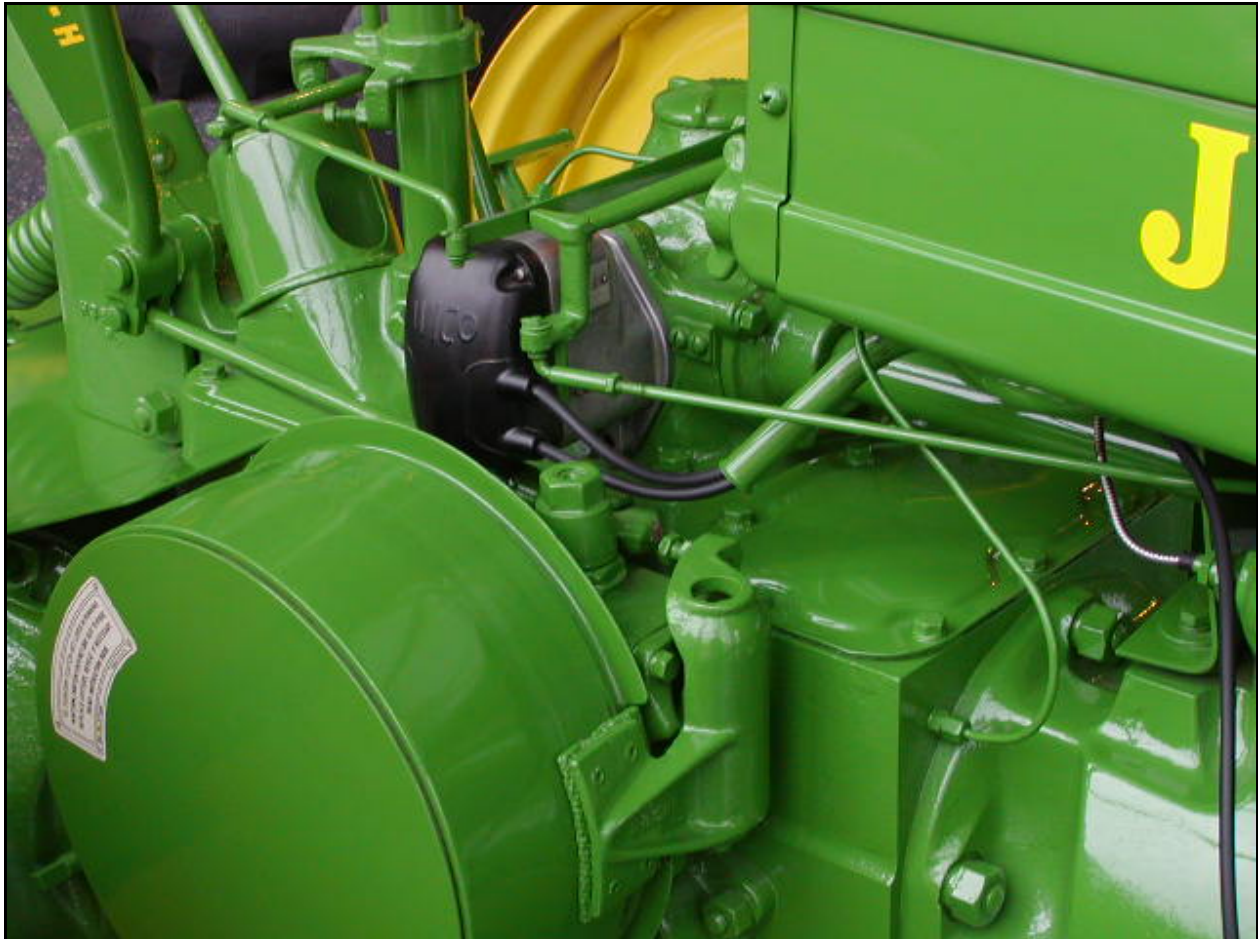
Reference the introduction to the Model "H" John Deere Tractor as relates to serial number assignment. Note that while the Parts Catalog cites part number data beginning with 1000 and up, there is only one "H" tractor below serial number 1104 that is known to have survived, that one being 1013 currently at the John Deere Pavilion. Therefore, in the analysis that follows, I will observe 1104 as the lowest "H" serial number 'out there.' From other data, we see serial numbers 9911 through 9999 were not used! Thus '39 tractors appear to range from 1104 through 9910!



**Wrong flywheel (see threaded puller holes). Wrong carburetor (should be DLTX-26, DLTX-46 shown here). Sparkplug covers were first installed on SN7919. Vent pipe from governor to carburetor inlet elbow is the correct version. Cap screws in main case where serial plate should be.**

NOTE: For those who visit the JD Pavilion to examine H1013, this tractor is said to be an Expo quality restoration, a very fine-looking machine! However, the restoration seems to be lacking any serious attempt to restore its authentic (or original) configuration. Genuine John Deere

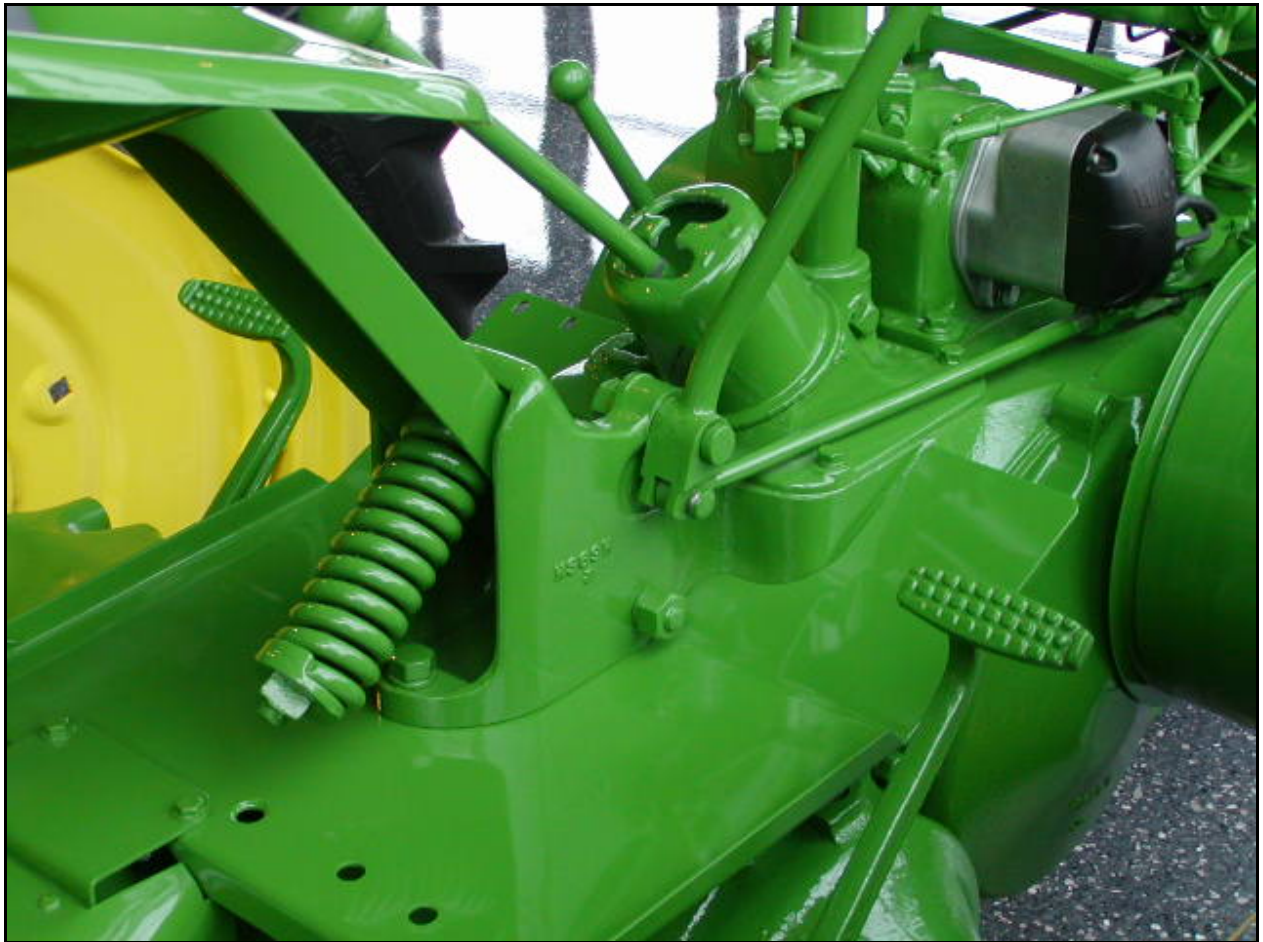
parts were used, by part number, but many parts evolved over time without a number change. Literally dozens of instances can be found by one having the knowledge to examine the tractor closely. Here we see the difference between a show-quality restoration using genuine parts, and an authentic original configuration restoration.



**WICO "X" in place of WICO "C" magneto. Wrong oil gauge line (39's were larger in diameter). Missing H404R accelerator lever and springs H285R & H286R. The "J" in JOHN DEERE hood decal is the correct decal for 1939 – large letters with no border.**



**Wrong drawbar. Wrong drawbar support. Wrong platform – too many drilled holes. This particular drawbar is H675R, appeared on tractors SN 7186 through 47795. Note placement of the rear cover decal – this decal is the right one for 1939 and is correctly placed!**



**See the H372R pivot bolt that forms the hinge between seat support and the seat casting. This appears to be a threaded bolt with a nut! This is not correct for any “H” tractors. This should be a pin with a cotter installed. Pivot pin for the foot throttle (just under the magneto) appears to have been broken off – thus the missing foot throttle as observed earlier.**

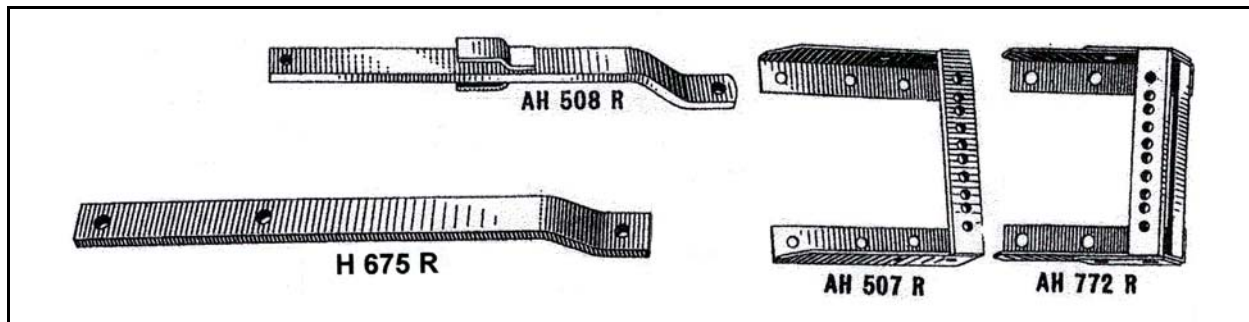
This restoration points out the real challenge for a person restoring any vintage tractor. The keys here are to gather data on your model from as many sources as you can and then cross-check the data with the contributors, and to find parts suppliers who know the tractor, will counsel with you on nuances as outlined below, and be willing to take back a part that isn't right.

For those '39 tractors out there with serial numbers 9999 and below, special care is to be taken when procuring replacement parts in select areas of the tractor. There were three major areas of change at the 9999 - 10000 break. They are the **camshaft** and all components on each end of the shaft, the **shifter section**, and the **slider shaft** and its associated components. Study the enclosed parts listing that exposes the changed parts, most coming at the 9999-10000 break, and some at different places -- all worthy of note. You just know a change is a major when a tractor's main case is changed! Less invasive changes this author knows of are described below.

Some subtle changes you will find, and which should not present great consternation are outlined below:

**Brake Latch (H435R)** -- Some changes were made along the way that only are evident when you compare the Deere & Co. documentation versus the tractor you have in your shed. Brake latches for instance were a bit different on the early '39 tractors; the cam diameter was less. With a smaller cam diameter, the latch fell deeper into position when the brake was set, and was often a challenge to release. The increased diameter cam versions (for H10000 and up) will fit on the '39 tractor, and the '39 version can be installed on later tractors.

**Drawbar** -- Early '39 tractor through 7185 had a couple differences, one in the length of the drawbar stem (it was shorter), and also some peculiarity in the drawbar support (only one crossover piece). These early tractors had the AH 508R swinging drawbar and the AH 507 R drawbar support (below). AH772R Support was made effect with H7186. Other changes continued along the way after the 1939 tractors.



### 1939 Drawbar Configurations

Also with H-7186 came the H675R swinging drawbar. The two holes on the left (under the belly) end of H675R permitted the drawbar to be repositioned forward and aft. This adjustment provides a "long" or "short" drawbar feature to the owner. Both AH508R and H675R can be inverted to offer "high" or "low" drawbar elevations. H675R would later give way to H1030R, easily spotted having two hitch holes.

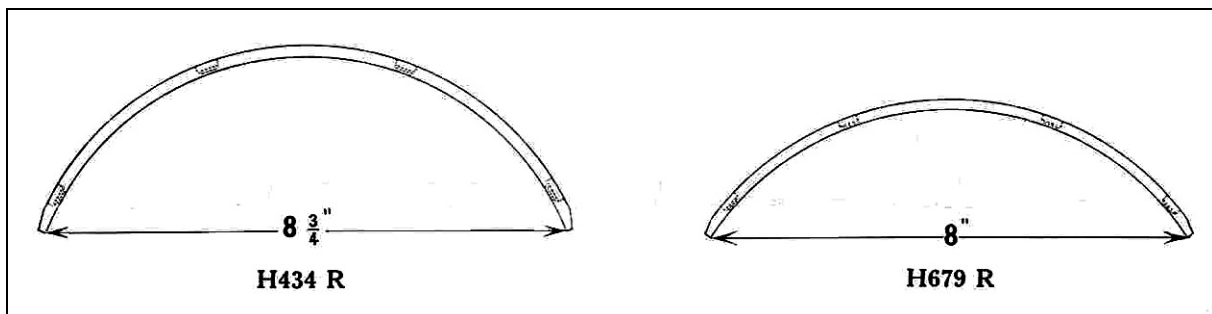
**Cast Front Wheels** -- The early front wheels were much weaker. There was no reinforcing boss around the five oval openings as found in the later versions. There is also some variation in the wheel weight mounting holes and bosses. This change doesn't affect interchangeability.



Two versions of AH570R flywheel in 1939. At left is the early flywheel installed on H-9053, 16-1/4 inches in diameter and 2-1/2 inches wide at the rim. Compare with flywheel at right installed on H-47511, 17-1/4 inches in diameter and 2-3/4 inches rim width. Note the pattern difference of threaded pulling holes in relation to expansion slots, left versus right.

**Flywheels** -- Early flywheels were narrower and smaller in diameter, and the threaded puller holes were close to the expansion slots. When the flywheel changed, the part number did not because the later flywheels are direct replacements for the earlier ones. The threaded puller bolt holes were relocated to be at a right angle to the expansion slots for the new, larger flywheels. Found and believed to have been inserted into FSB 139 (11-15-42), is an undated, typewritten 2-page document over a "DEERE & WEBBER CO" signoff. It deals with angular flywheel position specifications of various timing benchmarks for Models A, B, G and H tractors. This "letter" also established H-9151 as the starting serial number for the bigger AH570R flywheel.

**Brake Shoes** -- We find longer brake shoes and facings up through about 7805. The facings (H434R) for the early tractors had a chord length of 8-3/4 inches, and both shoe and lining have a hole pattern different from the later tractors, and (of course) from available replacement parts. To mount new 8-inch-long facing (H679R), onto the early shoes, you must re-drill the early brake shoe to the new facing hole pattern. The assembly part number changed from AH1154R to AH1155R. (FSB 110-S, 6-15-40).



Early brake facings at left, redesigned facings on the right.

**French and Hecht Steering Wheel** -- For the early '39's, the steering wheel had a larger hub embossed with the manufacturer's name. The overall diameter remained unchanged -- this is just something interesting to look for.

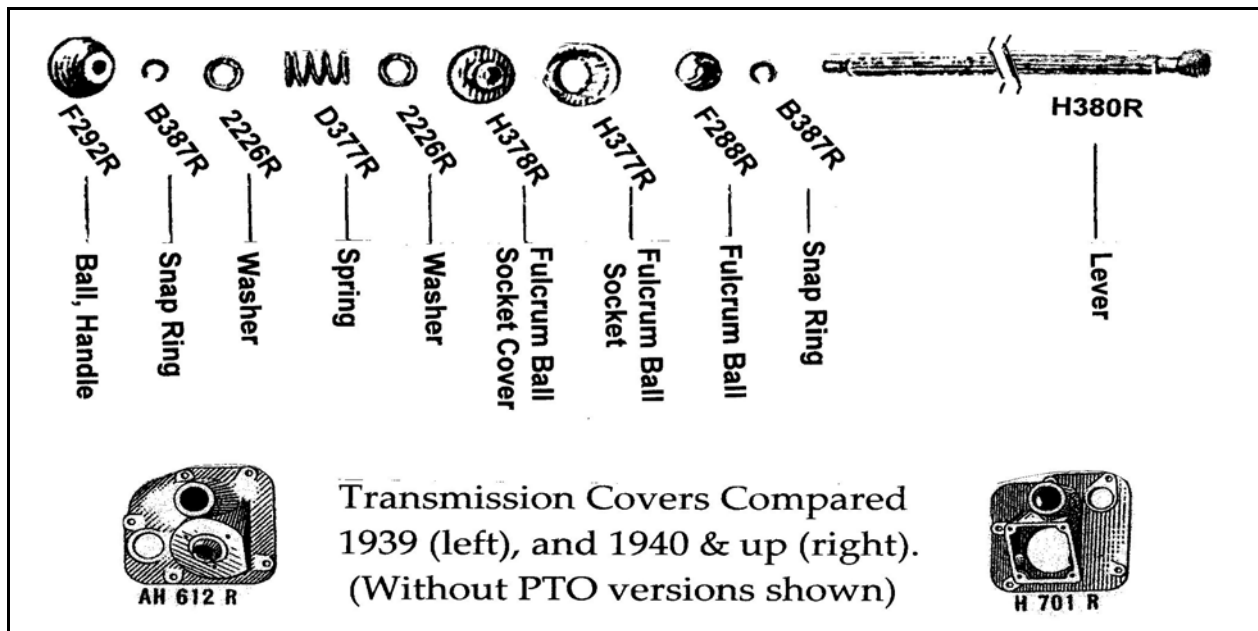
**Woven Mesh** -- Earlier '39's had woven mesh over the air intake in the hood that later changed to a pressed mesh such as you find in most two-cylinder JD grille sections.

**Narrow Rear Wheels** -- The '39's were outfitted with the narrow, 6-inch wide rear rims (took 7-32 tires), and at this writing, it is believed the narrow rear rims were installed on most tractors below 10,000. Rims that were 7 and 8 inches wide were made available soon thereafter. Once the change was made, all of the later tractors have the 8-inch rims to accommodate 9-32 (now 9.5-32) tires. At this writing, there is no known source for new 7-32 or 8-32 tires to go with the 6-inch or 7-inch rims. Installing a 9-32 tire on a 6-inch rim takes only 2 inches from the balloon circumference and thus reduces mounted-inflated tire width by a scant 2/3 of an inch! Thus, there is little need for concern in mounting the current 9.5-32 tire on 6-inch (or 7-inch) rims. Further, if your tractor has narrow rims that are generally beyond economical repair, the logical choice is to opt for 8-inch replacements to go with the now-available 9.5-32 tires. One other subtle but interesting feature is that for the 39's, the wheel lug bolts were dome-shaped, not flat headed as most JD tractors are equipped with.

**Fan and Fan Shaft** -- While not illustrated in PC304, there are a number of differences that will most likely make the 39 versions incompatible with later models. As a "for-instance," the 39's made no provision for a generator pulley. As a point in fact, the generator pulley variations continued beyond the 39 models.

**Main Case Casting** -- The H326R casting was not drilled for a starter mount, nor were later H700R main case castings until H27000. From 27000 and up, all main case castings were so drilled.

**Platform Drilling** -- The platform was not drilled for power shaft master shield, for lighting, nor for the H989R (safety) extension between operator and flywheel. Some were drilled for the master shield and for lighting, but not for the extension!



### The 39-H Gear shift Assembly

Shown in figure 4-1 (at left - above) is the transmission cover with H377R fulcrum ball socket installed. This socket is a near-press-fit into the cover, making removal a bit of a challenge. To remove the gear shift assembly, remove the F292R ball handle (The handle unscrews from the gear shift lever), and remove the three small cap screws securing quadrant. Lift quadrant away. Reinstall the F292R ball handle to assist in removal of the gear shift assembly which is not easy, and is best done by means of penetrating fluids, moderate heat, and gentle tapping and prying around the outside of the fulcrum ball socket. One fellow told me, " The only way I got mine to move was reinstalling the ball handle, pulling with all my might and then taping with hammer on underside of ball handle. Once I got it out and cleaned then it goes in and out much easier."

Trouble with the snap rings? This is not unusual. For the bottom, it is becoming customary to spot-weld a ring in place. The ring can be an old B387R snap ring, or a 5/8" lock washer with the bend taken out of it. For the top snap ring, a few choices exist. If you are real adept with a small Dremel™ type grinding disk, you might try enhancing the groove in the gear shift lever. There is the EC-62 External Clip solution as outlined in the basic text. One enterprising fellow proposed drilling at the groove so as to insert a cotter pin (tricky at best - and may weaken the gear shift lever at a critical point).

Once inspection and repairs are completed, reinstall by reversing disassembly steps above. Ensure the fulcrum ball, its socket and cover are well treated with bearing grease during build-up. Apply a coating of Permatex 2B™ (or equivalent) to the interface of the fulcrum ball socket and transmission cover. You will note that the three holes for mounting the quadrant are not symmetrical. The quadrant piece will fit only one way. In the unlikely event the quadrant base plate breaks away from the "top hat" part, observe the "up" orientation of the base plate BEFORE welding so that its "up" direction is coincident with the "up" direction of the "top hat".



**39-H Gear Shift Assembly (left) and Transmission Cover Port (right)**

**Part Change Without Part Number Change** -- As in the case of H1013 at the Pavilion, you can pretty much depend on your Parts Catalog to identify JD "H" parts that will fit on your 1939 tractor, but you cannot depend on the part number to tell you what the part looked like on the 1939 showroom floor! For more discussion on this issue, see this same heading in Chapter 1.

**Listing of P/N changes versus S/N breaks (See PC304 Parts Catalog for page and key)** -- You will find a part number change when a change is made that changes "form, fit and/or function". And this is where your PC304 Parts Catalog comes in handy during procurement of replacement items. Deere & Co. always stressed model and serial numbers when ordering parts. Actual part number is always preferred.

### **39-H Part Changes, the Biggies!**

#### **Section 1 -- Camshaft Redesign (1000 thru 9999)**

<b><u>Page-Key</u></b>	<b><u>Nomenclature and Part Number</u></b>
2-4	Main Case S/A, AH671R (H326R)
8-16	Camshaft with nut AH559R
5-20 thru 5-26 (9-47 thru 9-51)	LH Camshaft bearing & housing, AH887R + Hardware H247R & JD7696R + Hardware
10-9	Clutch driving disk
10-10 thru 10-12	2 snap rings and bearing, A378R, A1401R and JD7697R
10-16	Pulley w/bushing and pin, AH1103R (H330R)
11-31	Pulley gear w/key AH1180R
11-71	Clutch Operating Sleeve, AH1213R

#### **Section 2 -- Shifter Redesign (1000 thru 9999)**

<b><u>Page-Key</u></b>	<b><u>Nomenclature and Part Number</u></b>
23-8	Shifter quadrant, AH690R
23-10	Plug, NPT 15H281R
23-14	Transmission cover, AH612R (H375R)
23-15 & 28-7	Gasket, H376R
23-19	Shifter ball, F288R
23-21	Shifter lever, H380R
24-1	Set screw, 22H139R
24-10	Shaft, shift fork H382R
24-11	Shifter S/A, 2nd and 3rd gear, AH614R (H381R)
24-12	Yoke, H384R
24-15	Yoke, H383R or H818R
24-16	Oil collector, H385R
24-17	Shifter S/A. low and reverse gear, AH613R or AH907R
28-8	Cover, transmission AH713R (H608R)

### **Section 3 -- Sliding Gear Shaft Redesign (1000 thru 9999)**

<b><u>Page-Key</u></b>	<b><u>Nomenclature and Part Number</u></b>
25-10	Sliding gear shaft, AH723R (1104 thru 3209)
	Sliding gear shaft, AH724R (3210 thru 9999)
28-16	Shifter w/yoke AH715R (H615R)
28-17	Yoke, H616R
28-20	Gear w/bushing, AH 1194R
28-21	Bushing, H594R
28-23	Cone w/rollers, JD7358R
28-26	Bearing cup, JD7250R
28-31	(Same as 25-10 above)