

## Service Bulletin

Location Charles City  
 Subject Transmission –  
 1265-1270 Tractors  
 Number 430 741  
 Date 8-7-75  
 File C Transmission

1 of 3

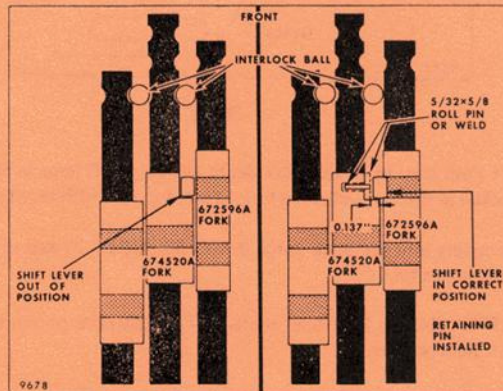


Fig. 1.

This bulletin supersedes and cancels bulletin 430 698 dated 2-18-75 to provide additional information relating to transmission gear disengagement on 1265-1270 tractors.

### PROBLEM

1. Disengagement of 1st and 4th gear on some 1265-1270 tractors while under load.
2. Transmission may jump out of reverse gear.
3. Transmission may jump out of 3rd and 6th gear.

### OBSERVATION

1. Three conditions may contribute to disengagement of 1st and 4th gear.
  - a. 672 416A Interlock Ball for 674 520A Hi-Low Range Shift Fork may have been left out at assembly. Interlock ball locks center rail in position which in turn is used to lock transmission in gear with end of shift lever (Fig. 1).



PARTS REPLACEMENT OR REPAIR AT COMPANY EXPENSE IS NOT AUTHORIZED UNLESS SUCH POLICY IS STATED.

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430 741

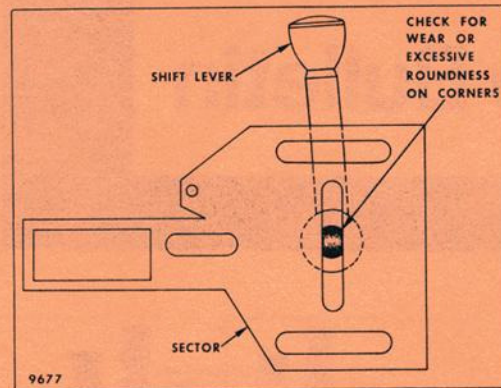


Fig. 2.

- b. Notch in 674 520A Shift Fork may be of excessive depth allowing shift lever to move out of position (Fig. 1). 672 596A Fork will not be locked in position, allowing fork to move to rear with resultant gear disengagement.
- c. End of shift lever not dropping into interlock notch in 674 520A Fork or end of shift lever and/or notch in fork worn so lever does not lock in position.
2. Excessive material on 672 596A Shifting Fork may contact 672 492A Gear preventing complete engagement of 671 123A Gear with 31-290 2114 Reverse Gear.
3. 670 228A Cover may be machined incorrectly. Cover should clamp lower shaft bearing and gasket simultaneously. As gasket is crushed lower shaft is forced to rear until snap ring contacts case preventing lateral movement of shaft. If 670 228A Cover has excessive counterbore, shaft is allowed to move forward with resulting disengagement of 3rd and 6th gear.

## CORRECTION

### FACTORY

Starting at tractor serial number 318 899 000 transmission inspection procedures were introduced to assure correct assembly.

### FIELD

#### I. 672 416A Shift Rail Interlock Ball Missing.

Remove transmission cover and shift transmission into engaged position on high-low range and 1st gear. If interlock ball is in place, high-low range rail will be locked in position when an attempt is made to move it back to neutral.

With transmission shifted as stated above, interlock notch in forward end of 674 520A Shift Fork must be in alignment with shift lever notch in 672 596A 1st and 4th Gear Shift Fork.

Interlock notch in 674 520A Fork must be 0.137 inch (3.5 mm) deep to accept end of shift lever to interlock 1st and 4th gear shift fork. Inspect end of shift fork for possible wear or damage on interlock face.

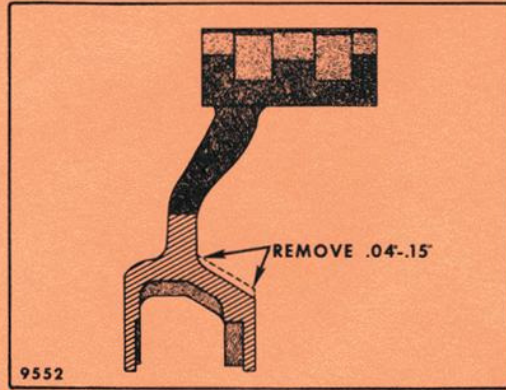


Fig. 3.

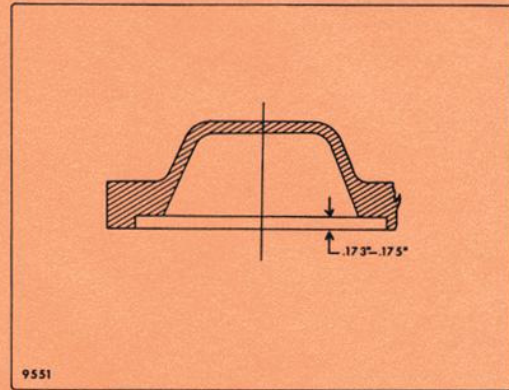


Fig. 4.

If notch in 674 520A Shift Fork is in excess of 0.137-inch (3.5 mm) deep, it may be reworked without removing from transmission. If fork is removed or replaced for any reason, add material using arc welder. Rework fork as follows:

Shift transmission so transmission is in high range (center fork forward) and forward notch in 672 596A Fork is aligned with notched area in 674 520A Fork.

Drill 5/32-inch hole approximately 1/2-inch deep and install 933 165 Roll Pin (5/32 x 5/8-inch) (Fig. 1). Use care to catch all shavings while drilling hole in fork. CAUTION: Pin must leave 0.137-inch (3.5 mm) notch (Fig. 1).

Check that ball on end of shift lever is not worn. Shift ball may be built up to width of slot in 31-290 0214 Sector (Fig. 2).

Realign shift forks and reinstall transmission cover.

### II. Transmission jumps out of reverse.

If interference exists between 672 492A Gear and 672 596A Fork, remove 672 596A Fork and grind as shown (Fig. 3). Upon reassembly determine that fork does not contact inner diameter of 672 492A Gear; when in full detent, reverse gear position.

Units exhibiting problem should also have shaft spline backlash checked between input shaft and 671 123A Gear. Backlash of .0006 to .0037-inch is acceptable. Excessive backlash may allow gears to walk on shaft with resultant gear disengagement.

### III. Transmission jumps out of 3rd and 6th gears.

If problem exists, remove 670 228A Cover and check cover as shown in Fig. 4. If counterbore exceeds .173-.175 inch in depth, purchase and install 670 228A Cover or mill existing cover to specification.

Service Department

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