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MANUAL PREVIEW

# Ford Service Manual

Sherman Transmission  
Over-Under, Reversing  
Live PTO

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Service Manual

FO-S-SHER TRAN

SHERMAN PRODUCTS, INC. - ROYAL OAK, MICHIGAN  
TRANSMISSION PARTS LIST

Step-Up Models 10A100B(formerly A100)    Step-Down Models 10A300B(formerly M100)  
10A230B(formerly B100)    10A400B(formerly MB100)

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| Illus.*<br>Ref. No. | Part No. | Name                                                                                             | No.<br>Required |
|---------------------|----------|--------------------------------------------------------------------------------------------------|-----------------|
| 1                   | 10A129   | Hand Shift Ball .....                                                                            | 1               |
| 2                   | 10A120   | Hand Shift Lever Assembly .....                                                                  | 1               |
| 3                   | 73903-S  | Hand Shift Lever Pin .....                                                                       | 1               |
|                     | 72015-S  | Hand Shift Lever Pin Cotter .....                                                                | 1               |
| 4                   | 10A111   | Dust Seal .....                                                                                  | 1               |
| 5                   | 10A138   | Shift Shaft Bushing (not sold separately) .....                                                  | 2               |
| 6                   | 20390-S  | Support Cap Screw .....                                                                          | 4               |
| 7                   | 10A150   | Support Assembly (Includes bushings and oil seal) .....                                          | 1               |
| 8                   | 72035-S  | Shifter Shaft Cotter Pin .....                                                                   | 1               |
| 9                   | 10A135   | Shift Shaft Assembly .....                                                                       | 1               |
| 10                  | 10A114   | Support Gasket .....                                                                             | 1               |
| 11                  | 10A139   | Main Oil Seal .....                                                                              | 1               |
| 12                  | 10A142   | Ball Bearing Snap Ring .....                                                                     | 1               |
| 13                  | 10A133   | Clutch Shaft Ball Bearing .....                                                                  | 1               |
| 14                  | 10A165   | Clutch Shaft(For Step-Up transmissions. Serviced<br>with roller bearing A-136 Assembled) .....   | 1               |
| 14                  | 10A155   | Clutch Shaft Assembly(For Step-Up transmissions.<br>Includes both bearings) .....                | 1               |
| 14                  | 10A365   | Clutch Shaft(For Step-Down transmissions. Serviced<br>with roller bearing A-136 assembled) ..... | 1               |
| 14                  | 10A155   | Clutch Shaft Assembly(For Step-Down transmissions.<br>Includes both bearings) .....              | 1               |
| 15                  | 10A110   | Shifter Rod Assembly .....                                                                       | 1               |
| 16                  | 10A141   | Shifter Rod Oil Seal (Discontinued) .....                                                        | 1               |
| 17                  | 10A136   | Clutch Shaft Roller Bearing (not sold separately) .....                                          | 1               |
| 18                  | 10A101   | Gear Case (For Step-Up transmissions) .....                                                      | 1               |
| 19                  | 20430-S  | Flange Cap Screw .....                                                                           | 4               |
| 20                  | 34808-S  | Lock Washer .....                                                                                | 4               |
| 21                  | 353075-S | Detent Ball .....                                                                                | 1               |
| 22                  | 10A119   | Detent Spring .....                                                                              | 1               |
| 23                  | 10A131   | Detent Cap .....                                                                                 | 1               |
| 24                  | 10A156   | Magnetic Drain Plug .....                                                                        | 1               |
| 25                  | 10A123   | Flange Gasket .....                                                                              | 1               |
| 26                  | 10A121   | Thrust Washer .....                                                                              | 2               |
| 27                  | 10A127   | Shift Collar .....                                                                               | 1               |
| 28                  | 10A109A  | Shifter Finger .....                                                                             | 1               |
| 29                  | 10A154   | Shifter Rod Nut .....                                                                            | 1               |
| 30                  | 72034-S  | Shifter Rod Cotter Pin .....                                                                     | 1               |
| 31                  | 10A137   | Needle Bearing (Not sold separately) .....                                                       | 2               |
| 32                  | 10A180   | Cluster Gear Assembly(For Step-Up transmissions.<br>Includes bearings) .....                     | 1               |
| 32                  | 10A380   | Cluster Gear Assembly(For Step-Down transmissions.<br>Includes bearings) .....                   | 1               |
| 33                  | 10A108   | Cluster Gear Shaft .....                                                                         | 1               |
| 34                  | 10A146   | Lock Wire .....                                                                                  | 2               |
| 35                  | 22534-S  | Drilled Cap Screw .....                                                                          | 4               |

\* Refer to parts illustration on page 3 Form SP181.

FERGUSON TRACTOR

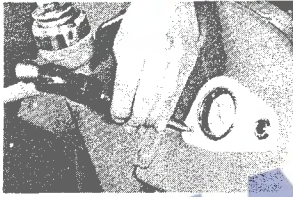


FIG. 6—USE OF INSTRUMENT PANEL TEMPLATE



FIG. 7—USE OF CLUTCH HOUSING TEMPLATE

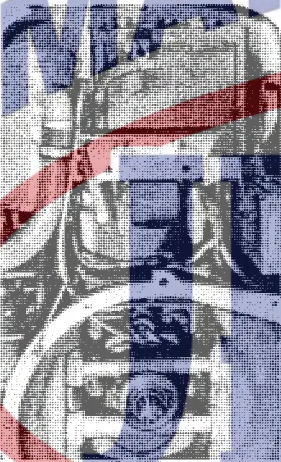


FIG. 8—TRANSMISSION AND PUSH-PULL CABLE INSTALLED

# INSTALLATION—Continued

assemble over step-up gear; do not cut.) Press race to seat in flange with arbor press. Again install flange in tractor and check bearing. Be sure flange is properly seated and bolts are tight before and after checking bearing. Repeat the adjustment and checking procedure until proper adjustment is obtained, then wire cap screws with lock wire (Fig. 3).

7. Using templates (figs. 4 and 5), prick punch instrument panel (fig. 6) and clutch housing (fig. 7); drill  $\frac{1}{2}$ -holes.

8. **IMPORTANT:** Check tractor clutch spline with spline of Step-Up unit before mounting. Make certain shift collar is engaged with shifter finger and that the internal teeth of shift collar are in mesh with small teeth on the end of clutch shaft.

9. Insert cable through drilled hole into clutch housing. Remove the two upper support cap screws. Screw cable securely into shifter rod (fig. 8). Fit bracket 10B196 into groove at cable housing end (fig. 1) with upper end of bracket out. Secure bracket with the two support cap screws. Pull sufficient cable through housing wall to permit movement of the transmission.

10. Inspect clutch pilot bearing in flywheel. Lubricate or replace, as necessary.

11. Fill Step-Up with 1 pint tractor transmission oil, and mount to flange in tractor. Be sure flange gasket is in place and undamaged. **BE SURE HOUSING IS PROPERLY SEATED BEFORE BOLTS ARE TIGHTENED.** After tightening bolts, check operation of Step-Up unit by hand rotation of spline shaft in all shift knob positions.

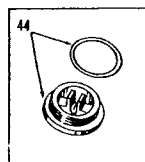
12. Insert cable housing into drill hole in instrument panel and install jam nuts and knob (figs. 1 and 8).

13. Install the tractor clutch and brake shafts, clutch release collar and bearing, and clutch release collar springs. Then, pull cable from clutch housing until red paint mark on cable shows: **INSTALL RUBBER BUSHING AND CLAMP TO COVER RED MARKING** (fig. 1). This is important to ensure cable-clutch clearance.

14. Rejoin the tractor.



FIG. 9—SHERMAN STEP-UP TRANSMISSION—DISASSEMBLED ARRANGEMENT



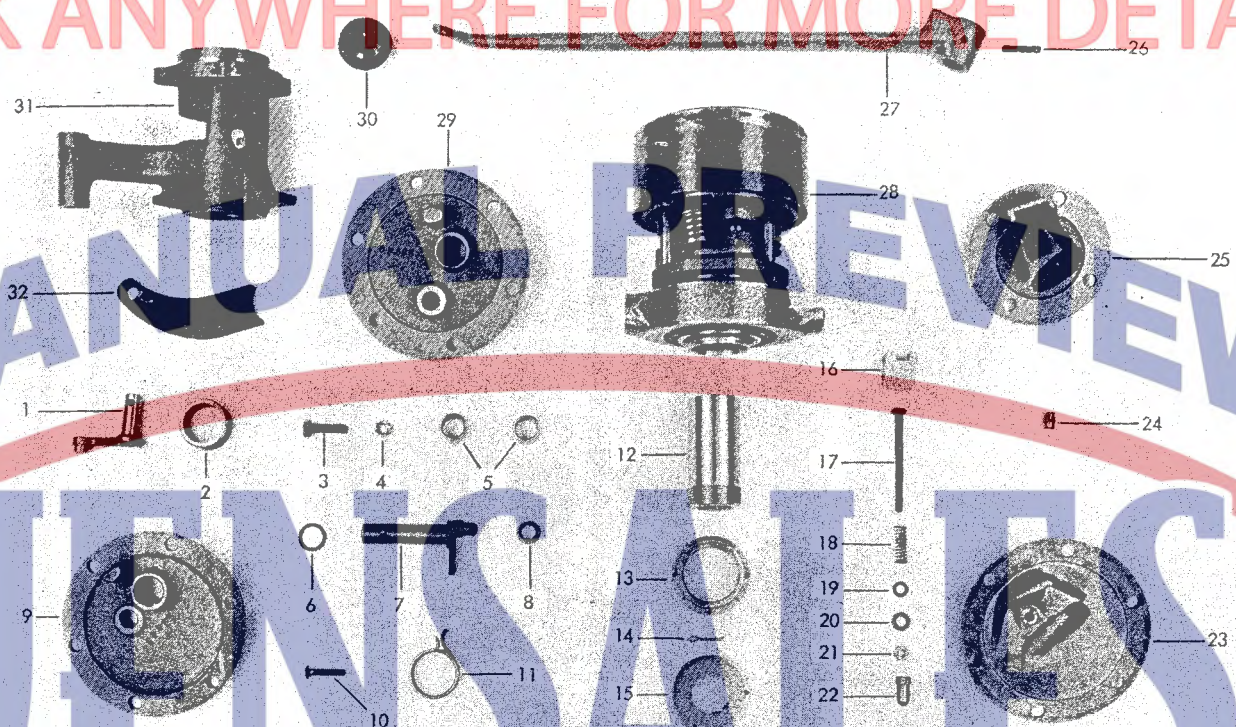
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## TRACTOR LIVE P.T.O. CLUTCH ASSEMBLY PARTS LIST

FARM AND  
INDUSTRIAL

 Sherman  
PRODUCTS, INC.
EQUIPMENT  
MANUFACTURERS

Model 11A100 (NAA) 11A200 (8N)

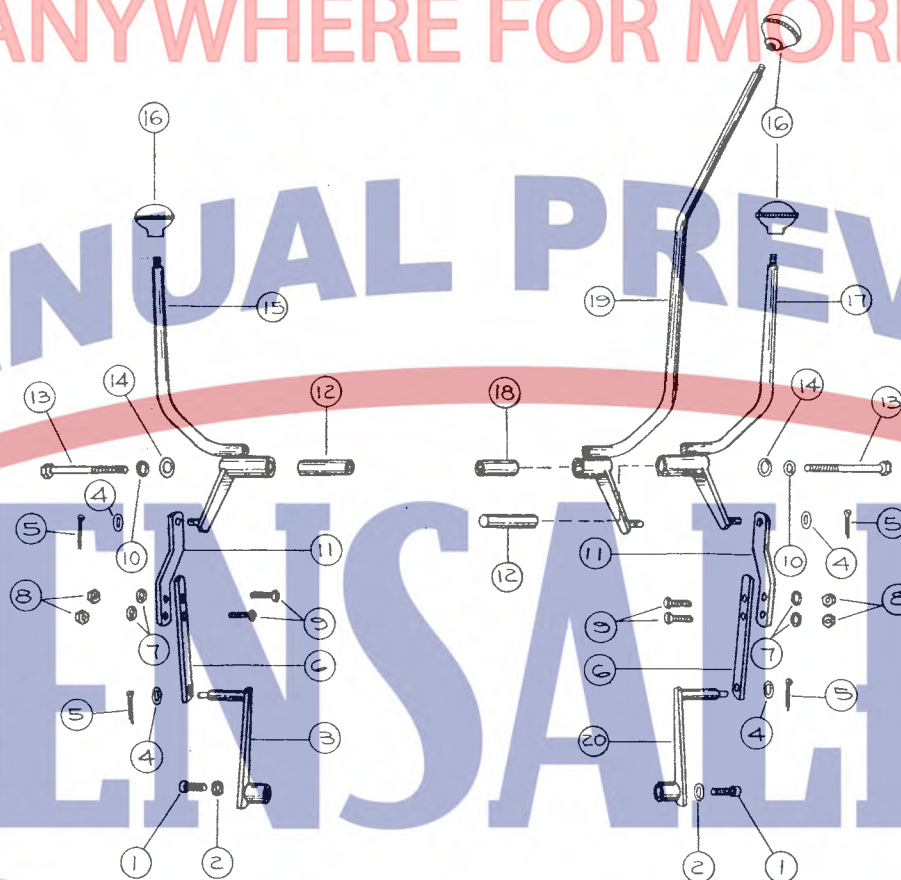


| REF. NO. | PART NO.  | DESCRIPTION                                                                                | UNIT QUANTITY | MODEL    |
|----------|-----------|--------------------------------------------------------------------------------------------|---------------|----------|
| 1        | 11A227    | Shifter Fork - P.T.O.                                                                      | 1             | 8N       |
| 2        | 11A223    | Spacer                                                                                     | 1             | 8N       |
| 3        | 20428 - S | 3/8" - 16 x 1 1/4" Hex Head Bolt                                                           | 1             | NAA - 8N |
| 4        | 33924 - S | 3/8" - 16 NC Hex Jam Nut                                                                   | 1             | NAA - 8N |
| 5        | 11A154    | Needle Bearing                                                                             | 2             | NAA - 8N |
| 6        | 11A111    | "O" Ring - Sealing                                                                         | 1             | NAA - 8N |
| 7        | 11A112    | Shaft - Release Collar                                                                     | 1             | NAA - 8N |
| 8        | 11A153    | Roller - Release Shaft                                                                     | 1             | NAA - 8N |
| 9        | 11A220    | L.H. Cover Assembly<br>(Includes (2) 11A154 Bearings (1) 20428 - S Bolt (1) 33924 - S Nut) | 1             | 8N       |
| 10       | 11A152    | Rivet                                                                                      | 1             | NAA - 8N |
| 11       | 11A129    | Spring - Lever Return                                                                      | 1             | NAA - 8N |
| 12       | 11A108    | Hub - Coupling Adjusting                                                                   | 1             | NAA      |
| 12       | 11A210    | Hub - Sub Assembly                                                                         | 1             | 8N       |
| 13       | 11A107    | Lock Nut - Flanged                                                                         | 1             | NAA - 8N |
| 14       | 72026 - S | Cotter Pin 1/8" x 7/8"                                                                     | 1             | NAA - 8N |
| 15       | 11A109    | Thrust Washer                                                                              | 1             | NAA      |
| 15       | 11A213    | Thrust Washer                                                                              | 1             | 8N       |
| 16       | 11A119    | Adjusting Slide                                                                            | 1             | NAA - 8N |
| 17       | 23097 - S | Square Bolt 5/16" - 18 x 3 1/2"                                                            | 1             | NAA - 8N |
| 18       | 11A123    | Spring                                                                                     | 1             | NAA - 8N |
| 19       | 11A126    | Washer - Sealing                                                                           | 1             | NAA - 8N |
| 20       | 11A122    | Washer - 11/32" Diameter - Plain                                                           | 1             | NAA - 8N |
| 21       | 33922 - S | 5/16" - 18 Hex Jam Nut                                                                     | 1             | NAA - 8N |
| 22       | 11A118    | Crown Nut                                                                                  | 1             | NAA - 8N |
| 23       | 11A115    | R.H. Cover Assembly (Includes (1) 11A116 Tube)                                             | 1             | NAA      |
| 24       | 11A116    | Tube - Dipstick                                                                            | 1             | NAA - 8N |
| 25       | 11A215    | R.H. Cover Assembly (Includes (1) 11A116 Tube)                                             | 1             | 8N       |
| 26       | 11A124    | Pin - Spring                                                                               | 1             | NAA - 8N |
| 27       | 11A128    | Clutch Release Lever                                                                       | 1             | NAA - 8N |
| 28       | 11A150    | Clutch Assembly (Basic)                                                                    | 1             | NAA - 8N |
| 29       | 11A120    | L.H. Cover Plate<br>(Includes (2) 11A154 Bearings (1) 20428 - S Bolt (1) 33924 - S Nut)    | 1             | NAA      |
| 30       | 11A113    | Knob - Release Lever                                                                       | 1             | NAA - 8N |
| 31       | 11A224    | P.T.O. Support                                                                             | 1             | 8N       |
| 32       | 11A222    | Shifter Arm                                                                                | 1             | 8N       |

# FORWARD AND REVERSE TRANSMISSION SHIFTER LEVER PARTS

FARM AND  
INDUSTRIAL
*Sherman*  
PRODUCTS, INC.
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| REF. NO. | PART NO. | DESCRIPTION                             | LEVER MODEL |      |      | USAGE |
|----------|----------|-----------------------------------------|-------------|------|------|-------|
|          |          |                                         | 1207        | 1209 | 1210 |       |
| 1        | A901A3-S | Soc. Hd. Screw, 3/8" - 16 x 7/8" .....  | X           | X    | X    | 1     |
| 2        | 34807-S  | Lockwasher, 3/8" .....                  | X           | X    | X    | 1     |
| 3        | 370262   | Pivot Arm - L.H. ....                   | X           |      |      | 1     |
| 4        | 44726-S7 | Flat Washer, 3/8" .....                 | X           | X    | X    | 2     |
| 5        | 72016-S7 | Cotter Pin, 3/32" x 3/4" .....          | X           | X    | X    | 2     |
| 6        | 370271   | Link .....                              | X           | X    | X    | 1     |
| 7        | 34805-S7 | Lockwasher, 1/4" .....                  | X           | X    | X    | 2     |
| 8        | 33795-S7 | Hex Nut, 1/4" - 20 .....                | X           | X    | X    | 2     |
| 9        | 31128-S7 | Fill. Hd. Screw, 1/4" - 20 x 1" .....   | X           | X    | X    | 2     |
| 10       | 34808-S7 | Lockwasher, 7/16" .....                 | X           | X    | X    | 1     |
| 11       | 370270   | Link Extension .....                    | X           | X    | X    | 1     |
| 12       | 10A1092  | Bushing .....                           | X           | X    |      | 1     |
| 13       | 45550-S7 | Hex Cap Screw, 7/16" - 14 x 3-1/2" .... | X           | X    | X    | 1     |
| 14       | 44730-S7 | Flat Washer, 7/16" .....                | X           | X    | X    | 1     |
| 15       | 370261   | Shift Lever L.H. (Short) .....          | X           |      |      | 1     |
| 16       | M100A1   | Knob .....                              | X           | X    | X    | 1     |
| 17       | 10A1095  | Shift Lever R.H. (Short) .....          |             | X    |      | 1     |
| 18       | 10A1061  | Bushing .....                           |             |      | X    | 1     |
| 19       | 10A1070  | Shift Lever R.H. (Long) .....           |             |      | X    | 1     |
| 20       | 10A1060  | Pivot Arm Assy. R.H. ....               |             | X    | X    | 1     |

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