



OUTDOOR
POWER EQUIPMENT
OPERATION

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SCHENECTADY, NEW YORK 12305 Phone (518) 374-2211

March 31, 1972

TO: HOLDERS OF ELEC-TRAK PRODUCT SERVICE MANUALS

SUBJECT: Peerless Mechanics Handbook

The attached material updates the Peerless Mechanics Handbook section of you ELEC-TRAK Product Service Manual to cover the E12M ELEC-TRAK tractor transaxle. Replace the title page on the Peerless manual with the new title page attached, and add section 4 immediately following section 1.

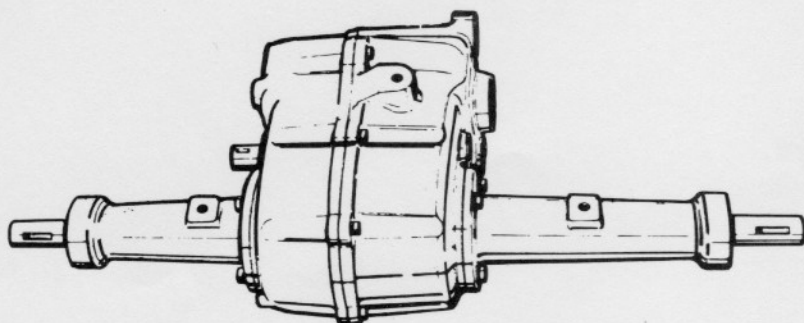
Sincerely yours,

A handwritten signature in cursive script that reads 'A. R. Martinelli'.

A. R. Martinelli, Manager
Product Service



PEERLESS MECHANIC'S HANDBOOK FOR



Electrak

GARDEN TRACTOR



GENERAL  ELECTRIC

Ⓣ TRADEMARK OF GENERAL ELECTRIC COMPANY

Form No. 692911

Printed in U.S.A.

GENERAL
INFORMATION

1

1200, 1400,
1700, 2000
THREE - SPEED
TRANSAXLES

4

FOUR - SPEED
TRANSAXLES

5

DIFFERENTIALS

8

SHIFTING
ASSEMBLY

10

BEARING AND
BUSHING SERVICE

11

SECTION 4 THREE-SPEED TRANSAXLES (1200,1400,1700, AND 2000 SERIES)

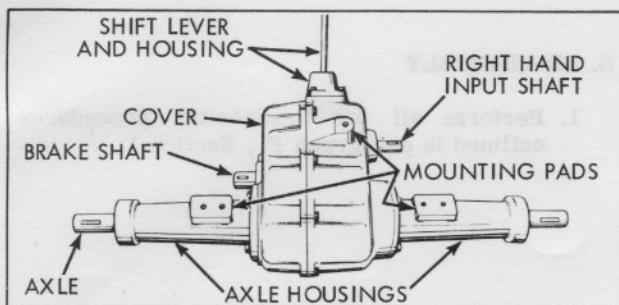


Figure 4-1 2000 Series Transaxle

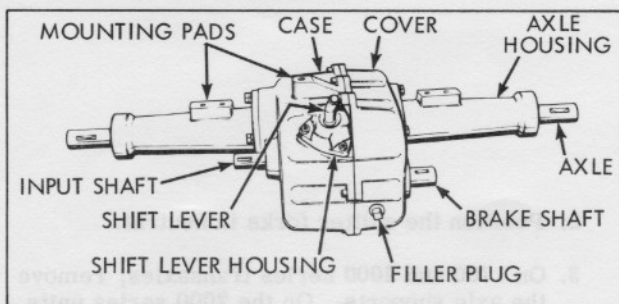


Figure 4-2 2000 Series Transaxle

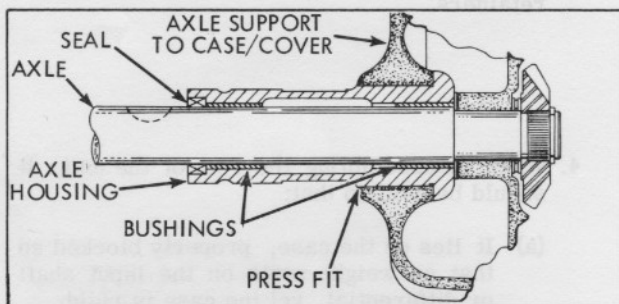


Figure 4-3 1200 and 1400 Series Axle Housing, Bushings and Seal

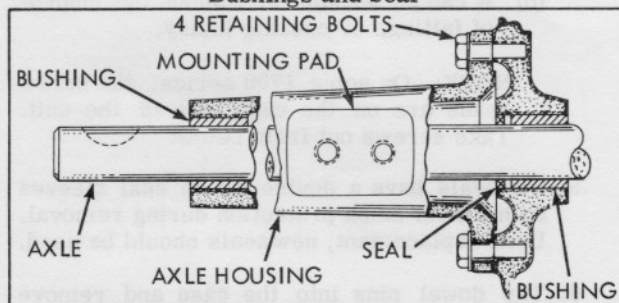


Figure 4-4 Typical 1700 Series Axle Housing, Bushings and Seal

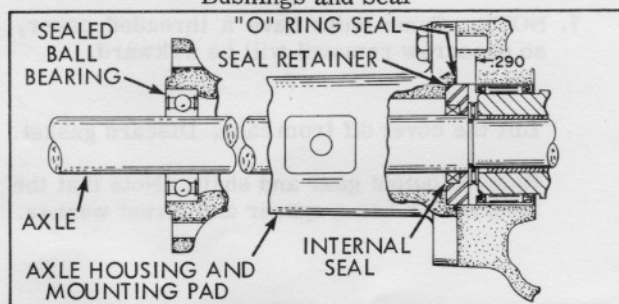


Figure 4-5 Typical 2000 Series Axle Housing, Bushing and Seal Assembly

A. GENERAL

1. The 1200, 1400, 1700, and 2000 series transaxles have three forward speeds and one reverse. All units are similar in construction, assembly, and repair. Differences will be pointed out where it is pertinent. See paragraph F for differences relating to the 1400 series transaxle.

2. To identify each unit, refer to paragraph C of SECTION 1, and to Figures 4-3, 4-4, and 4-5 for differences in axle support appearance.

3. None of the series is intended for use with ground engaging equipment. That is, they should not be used to pull plows or similar equipment which are pulled through the soil to overturn it. Also, judicious use is expected in any situation where a severe strain will be placed on the axles.

4. The three units use the same type shaft housing and are quite similar in appearance, except for axle support housings which are quite distinctive.

5. Note that oil seals are situated in different locations. The serviceman should be aware of this when re-assembling the various series so that he installs the seal at the proper time.

- a. On the 1200 and 1400 series, replace the seals after complete reassembly.
- b. On the 1700 series replace the seals after assembly, but before installing the axle supports.
- c. On the 2000 series, the seals can be installed in the retainers at any time.

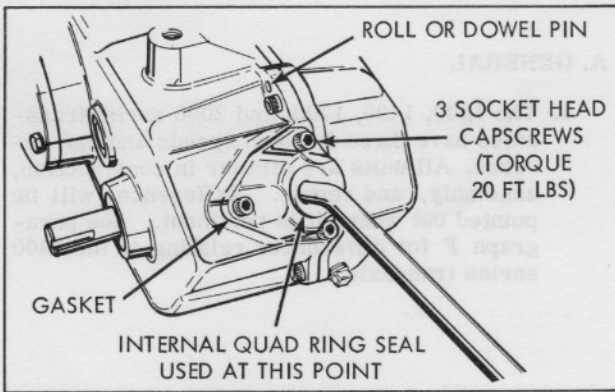


Figure 4-6 Shift Lever Housing

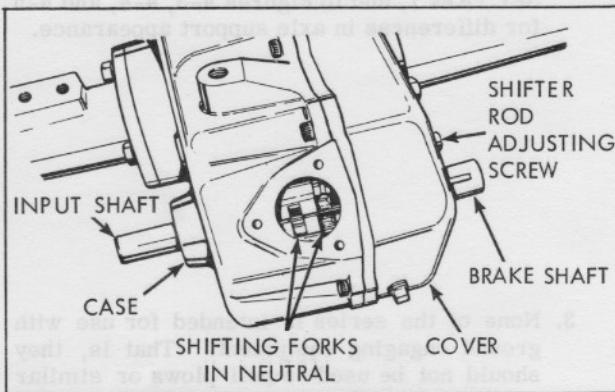


Figure 4-7 Transaxle Case

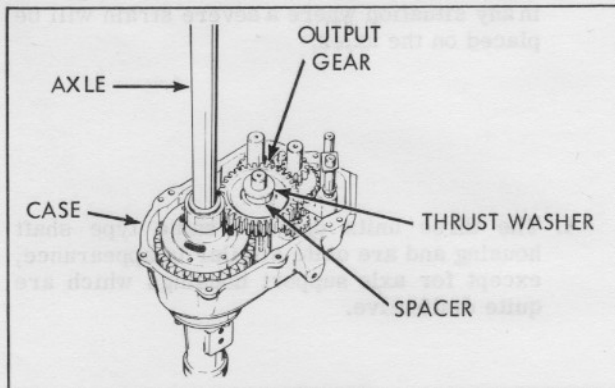


Figure 4-8 Output Gear and Shaft

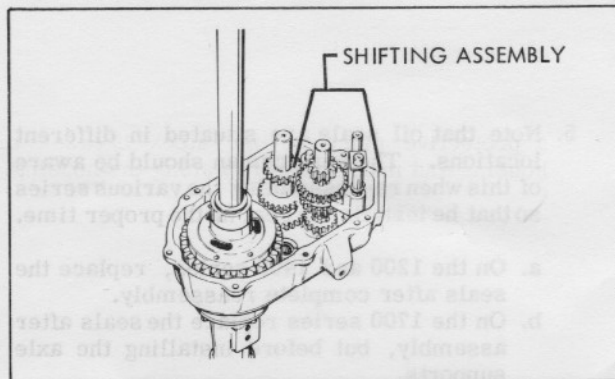


Figure 4-9 Shifter Assembly

B. DISASSEMBLY

1. Perform all pre-disassembly procedures outlined in paragraph F., Section 1.

2. Position the shifter forks in neutral.
3. On 1700 and 2000 series transaxles, remove the axle supports. On the 2000 series units, use the axle as a ram to press out the seal retainers.

4. When disassembling the rest of the unit, it should be held so that:

- (a) It lies on the case, properly blocked so that no weight rests on the input shaft or differential, yet the case is rigid.
- (b) It can be worked on without the chance of falling, or causing injury.

NOTE: On some 1700 series, the screw heads are on the case side of the unit. Take screws out from below.

5. Oil seals have a double lip so seal sleeves do not offer much protection during removal. Upon replacement, new seals should be used.
6. Tap dowel pins into the case and remove socket head capscrews.
7. NOTE: Some units have a threaded cover, so capscrew removal will be awkward.

Lift the cover off from case. Discard gasket.

Remove output gear and shaft. Note that the 2000 series has a spacer and thrust washer.

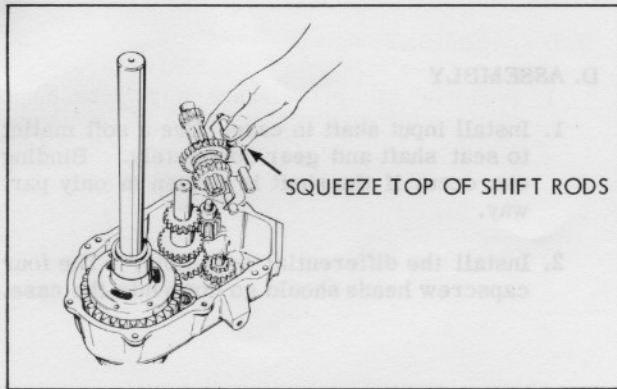


Figure 4-10 Removing Shifting Assembly

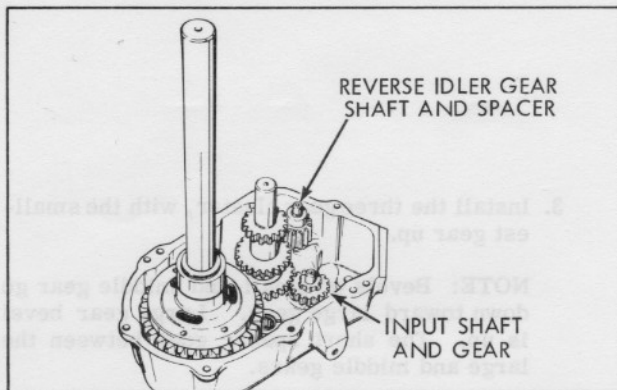


Figure 4-11 Reverse Idler Gear and Shaft

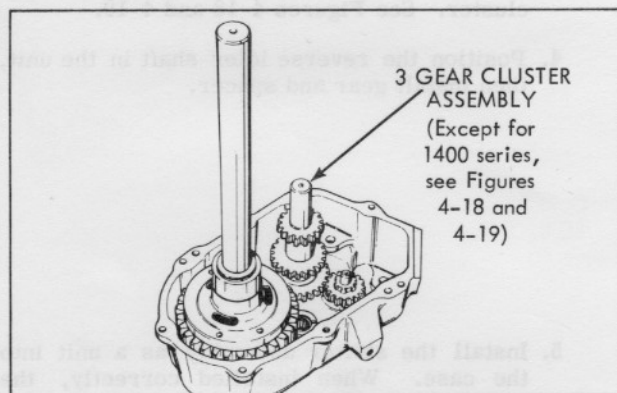


Figure 4-12 Three Gear Cluster

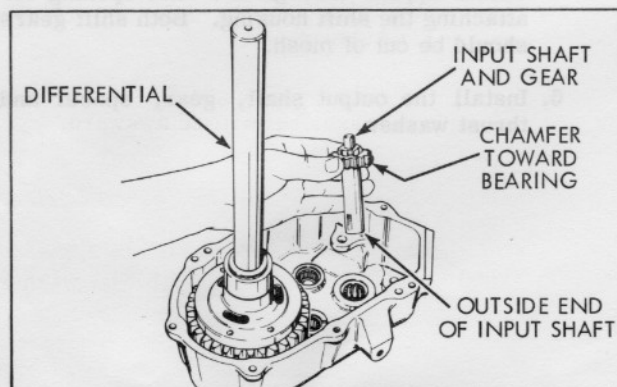


Figure 4-13 Input Shaft and Gear

8. Remove the shifting assembly as one unit.

9. Remove the reverse idler shaft, spacer and gear.

10. Lift out the three gear cluster.

11. Remove the differential.

12. Tap the input shaft out of the case.

C. INSPECTION AND REPAIR

Refer to SECTION 5, Paragraph B for discussion of gears, case, cover, and shafts.

Inspection of the case and cover on the 1200 or 1400 series may indicate the need for replacement of the axle housings.

Use an arbor press to drive out the housing, and a protective piece of bar stock between the housing and press when replacing the housing.

Press the housing in squarely until the flange seats against the case and cover.

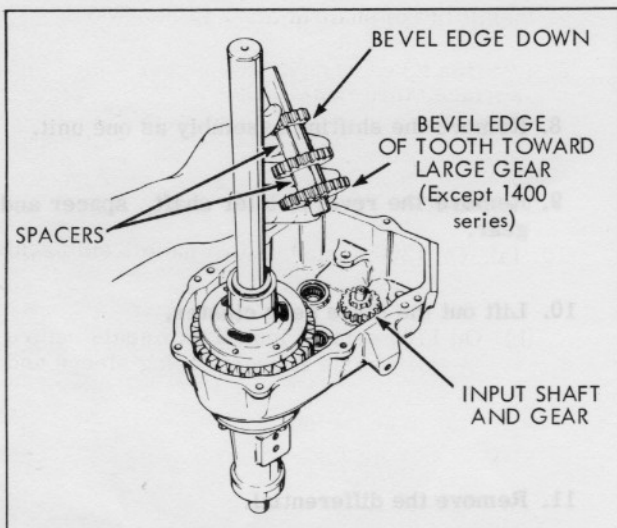


Figure 4-14 Install Three Gear Cluster

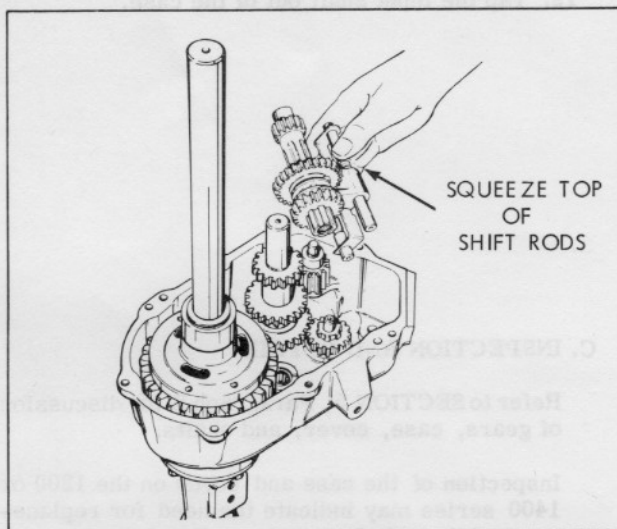


Figure 4-15 Install Shifter Assembly

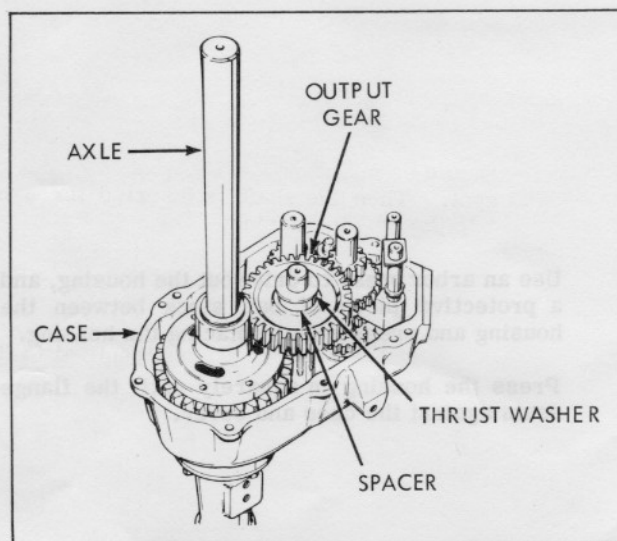


Figure 4-16 Output Gear and Shaft

D. ASSEMBLY

1. Install input shaft in case. Use a soft mallet to seat shaft and gear completely. Binding can occur if the shaft is driven in only part way.
2. Install the differential assembly. The four capscrew heads should go down into the case.

3. Install the three gear cluster, with the smallest gear up.

NOTE: Bevels of small and middle gear go down toward large gear. Large gear bevel is up. The short spacer goes between the large and middle gears.

The 1400 series has a one piece, 3 gear cluster. See Figures 4-18 and 4-19.

4. Position the reverse idler shaft in the unit, then install gear and spacer.

5. Install the shifter assembly as a unit into the case. When installed correctly, the neutral square formed by the shifting forks should appear through the case opening for attaching the shift housing. Both shift gears should be out of mesh.

6. Install the output shaft, gear, spacer and thrust washer.

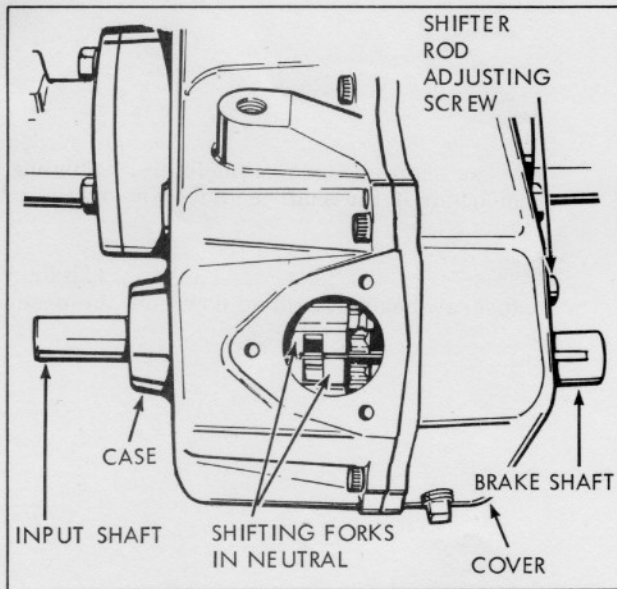


Figure 4-17 Transaxle Case

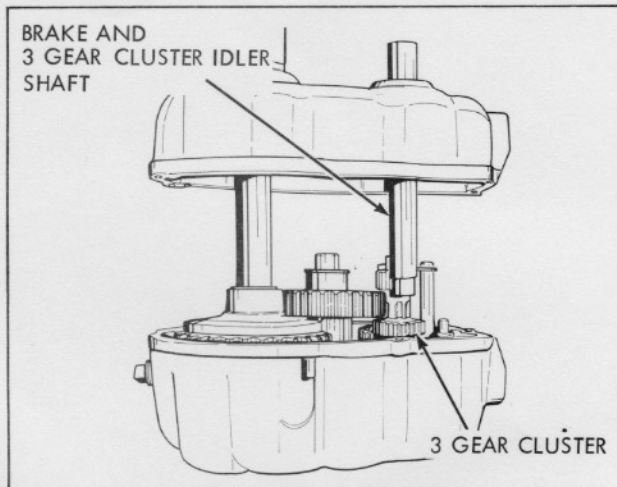


Figure 4-18 Removal 1400 Transmission

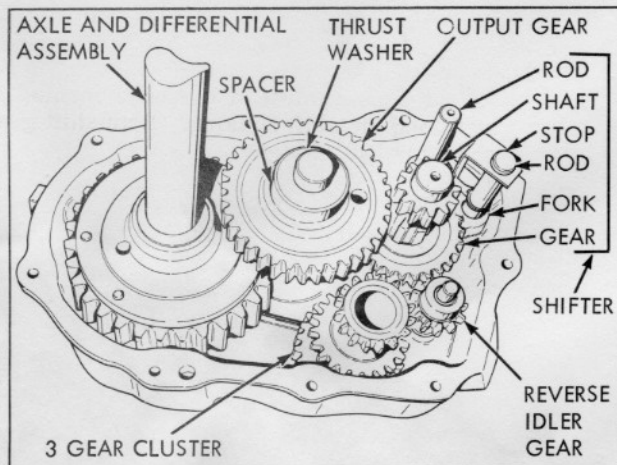


Figure 4-19 1400 3 Gear Cluster

7. Install brake shaft in the unit cover.
8. Position a new gasket on the cover mounting surface, then install cover.
9. Align cover with the dowel pin and secure with the socket head capscrew. Torque to 10 lbs. ft.
10. (a) On 1200 series units, install axle seals using sleeve and driver.
- (b) On 1700 series, install axle seals before installing axle supports using sleeve and driver.
- (c) On 2000 series, press seals into seal retainers, then use sleeve to protect seal when installing into the case and cover. Install "O" ring seal.
11. Install axle supports (1700 and 2000 series). Be sure that the mounting pad position is correct before tightening down capscrews to 13 lbs. ft.
12. Install a new gasket and shift lever housing. Torque screws to 10 lbs. ft. Be sure the shift lever is in the proper position to allow shifting.

E. LUBRICATION

Use S.A.E. 90 E.P. oil in the transaxle.

Fill units 1203, 1204, 1204-A, 1205 thru 1208 with 3 pints oil. All other units, fill with 2 pints oil.

F. 1400 SERIES TRANSAXLE

The following areas of repair and assembly are peculiar to the 1400 series transaxle.

1. The brakeshaft is also an idler shaft for the 3 gear cluster. When the cover is removed or installed with the shaft, the 3 gear cluster should be positioned in the case to its proper spot. Then the shaft is inserted through it into the needle bearing.
2. The one piece gear cluster is identical to that found in the 2300 series. Refer to page 11-2 of SECTION 11 for bushing replacement procedure. Use tool 670183 for the 7/8" I.D. bushing.