

SHOP MANUAL

BINDER

GRADER

GALION MANUFACTURING COMPANY, Galion, Ohio 44833, U.S.A.
a Jeffrey Galion Inc. Company

FILE

F

SECTION

7 R2

1/74

TANDEM CASE DOUBLE REDUCTION TANDEM DRIVE WITH 6 SPLINE AXLES

MODEL

T-500L
T-500A
T-600B

SERIAL NO.

2601-2811
2601-2811
1501-1823 with Cummins
1501 & Up D. D. Only

160L

2101-2601 with Cummins
2101 & Up D. D. Only

Standard torque specifications apply unless otherwise stated.

CAUTION

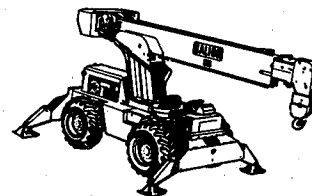
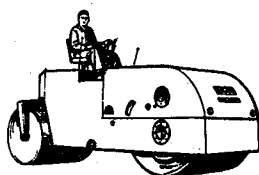
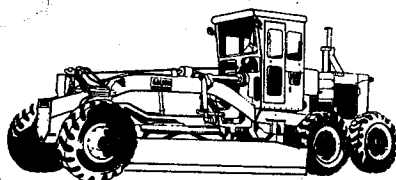
- ALL** COMPONENTS MUST BE PROPERLY SUPPORTED DURING DISASSEMBLY AND ASSEMBLY.
- ALL** JACKING, HOISTING AND GENERAL WORKSHOP EQUIPMENT REQUIRED FOR THIS OPERATION MUST BE IN GOOD WORKING ORDER.
- EXTREME** CAUTION TO BE OBSERVED AT ALL TIMES TO PREVENT INJURY
- SAFE** WORKSHOP PRACTICES ARE A MUST.

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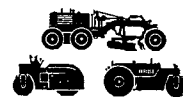


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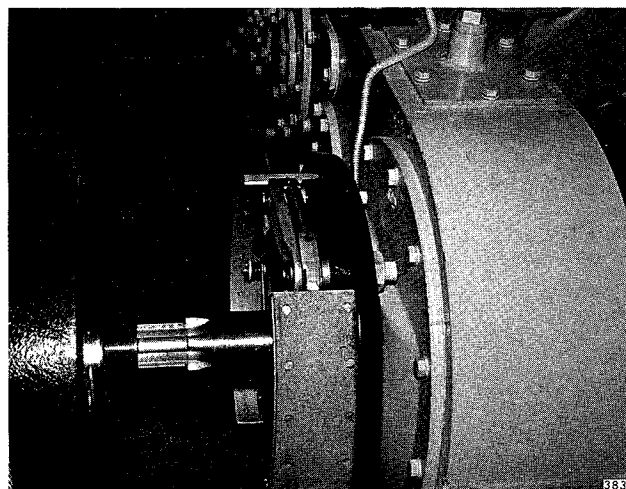


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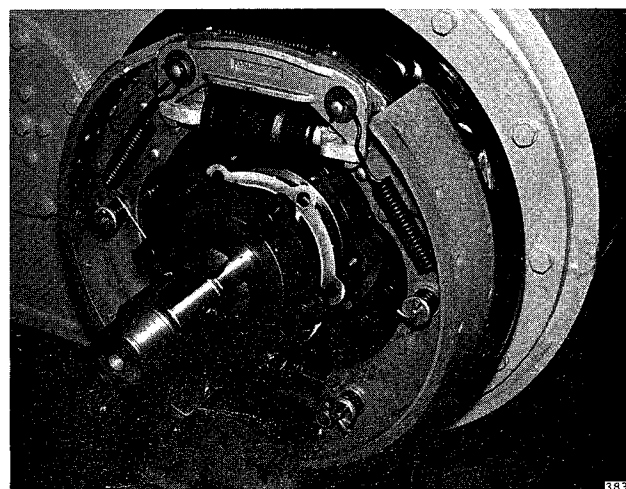
Remove wheel and drum assembly.



2

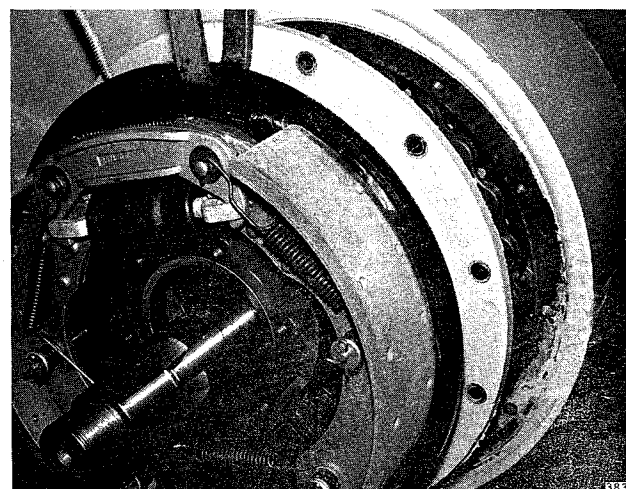
Remove wheel bearing retainer and seal assembly.

Remove shims.



3

Brake assembly and axle bearing housing assembly can be removed together.

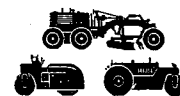


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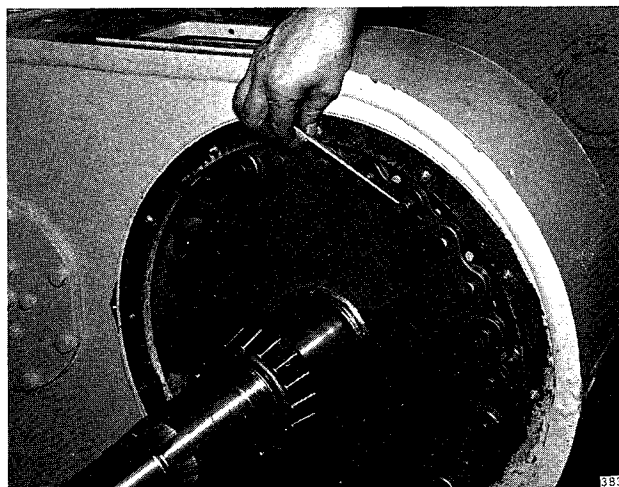


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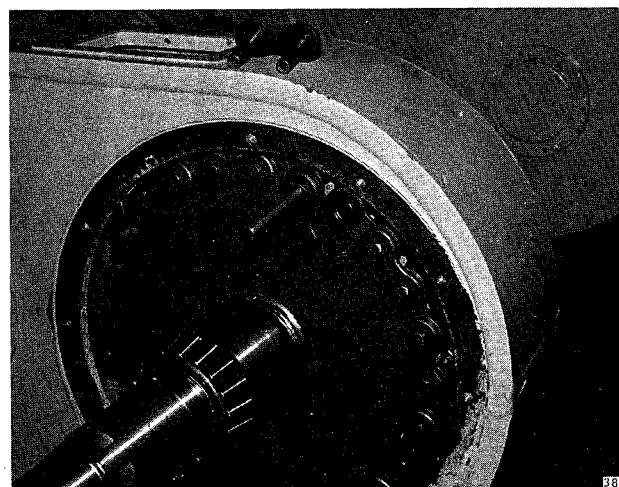
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Remove chain connector link pins.



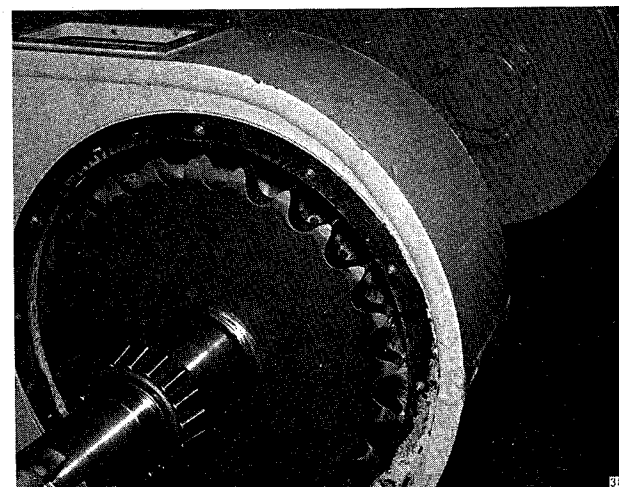
5

Remove chain connector link and side plate.



6

Remove axle and sprocket assembly.

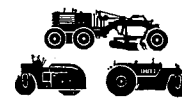


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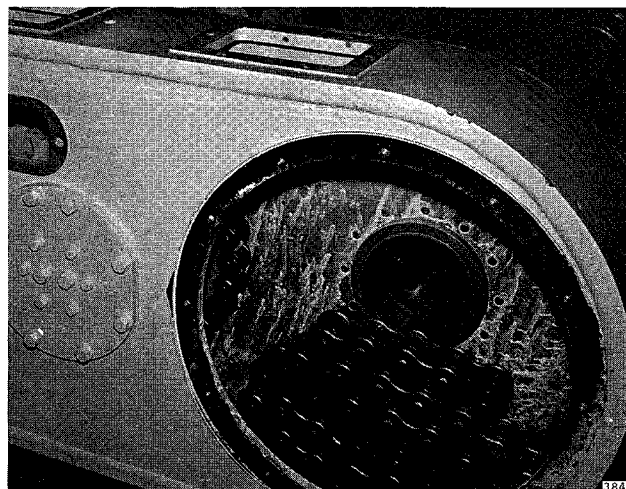
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7

Remove inspection covers.

Remove free chain from case.



8

Turn counter shaft drive chain to connector link.

Remove connector link pins.



9

Remove connector link and side plate.

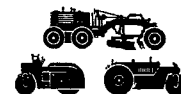


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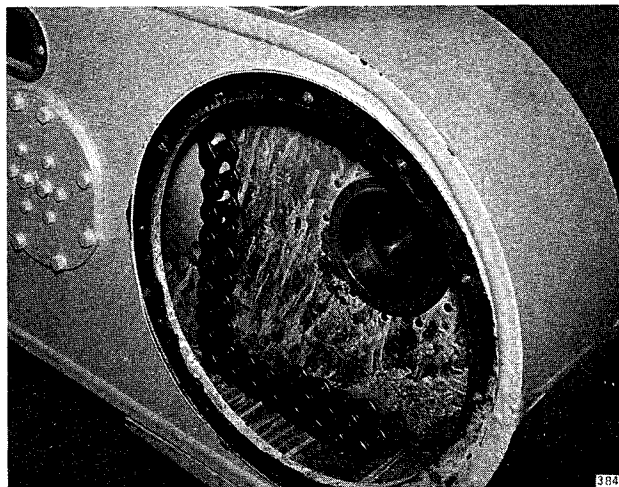


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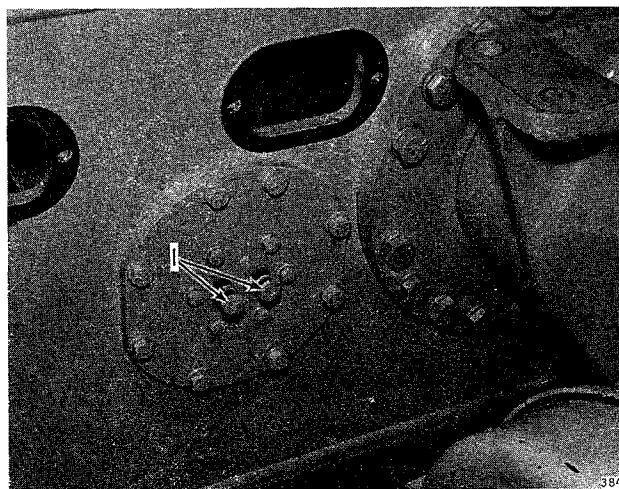
10

Remove counter shaft drive chain.



11

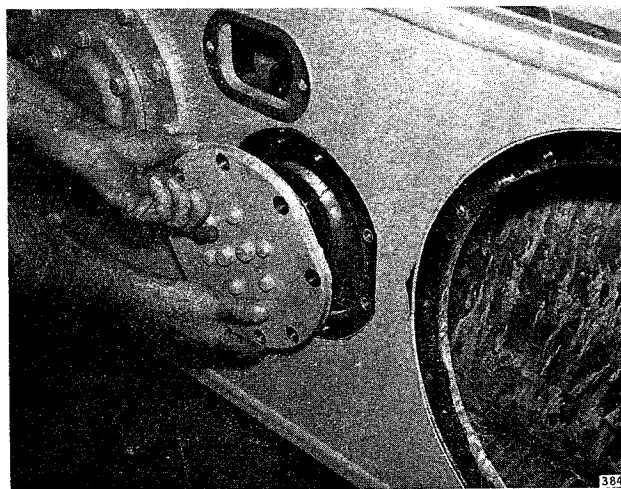
Remove two capscrews from counter shaft and cover (1) on opposite side of case as pictured.



12

Support counter shaft sprocket assembly in case.

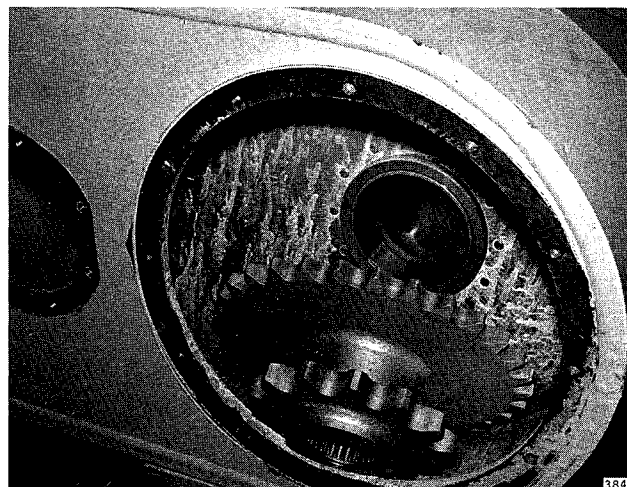
Remove outside counter shaft carrier cover, carrier, gasket and shaft as an assembly.





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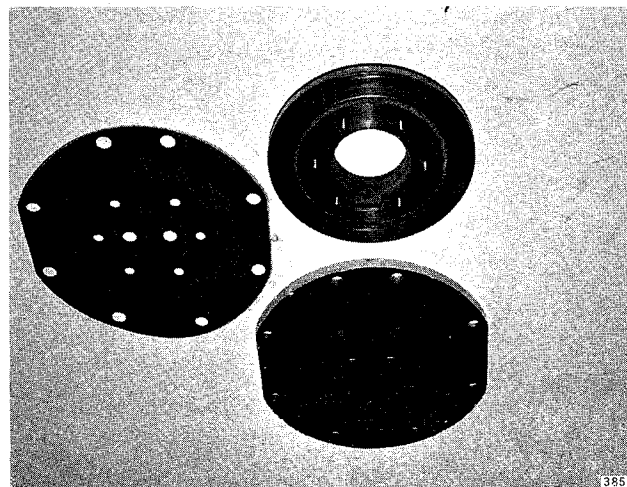
Move counter shaft sprocket assembly to end of case and remove.



14

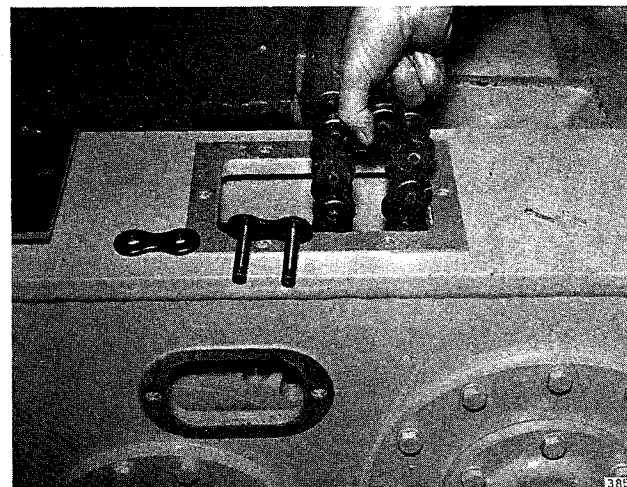
Separate counter shaft carrier, cover and gaskets.

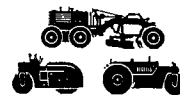
NOTE: Inner and outer carriers are not identical.



15

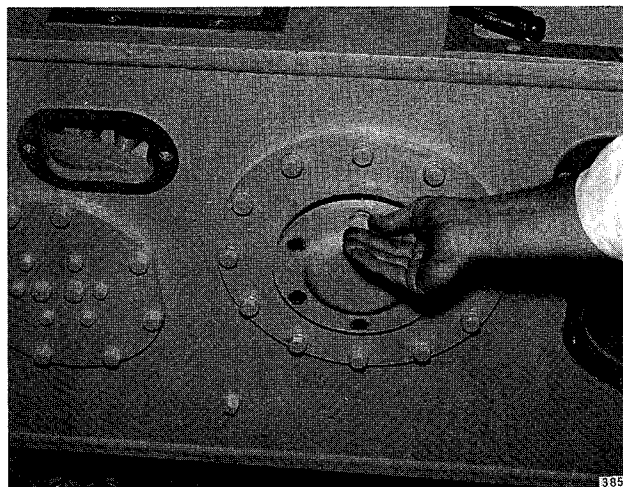
Rotate remaining counter shaft drive chain to reveal and remove connecting link and chain.





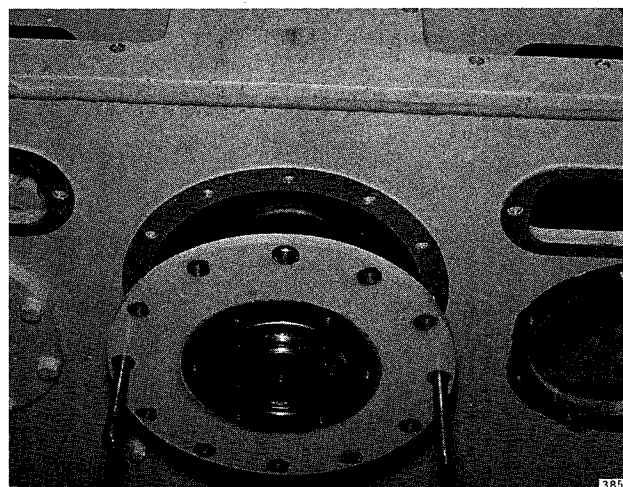
16

Procedure for further disassembly of remaining wheel axle and counter shaft is identical to the above.



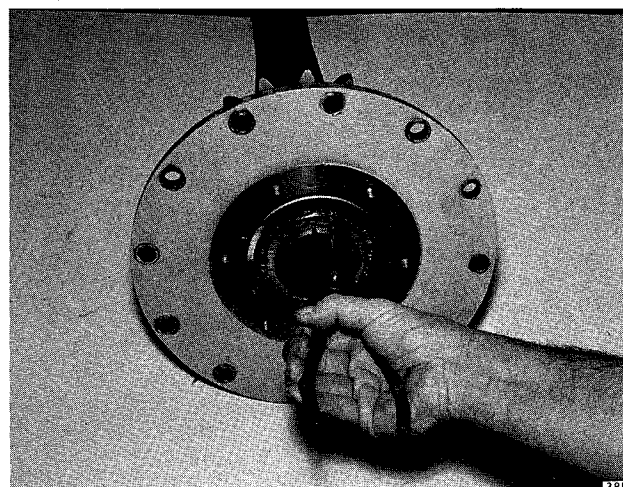
17

Support axle bearing carrier on guide pins during removal to prevent damage to axle oil seal.



18

Remove bearing retaining ring and press axle out of bearing.



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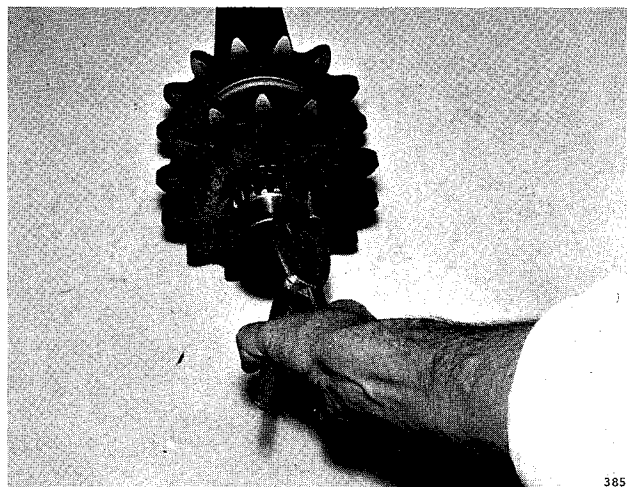


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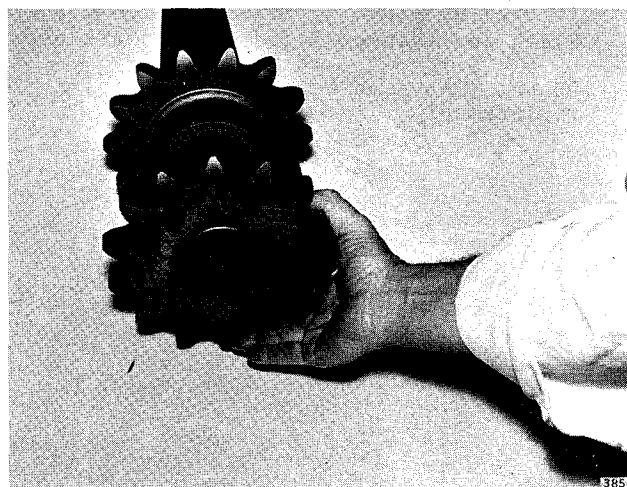
19

Remove sprocket retaining ring.



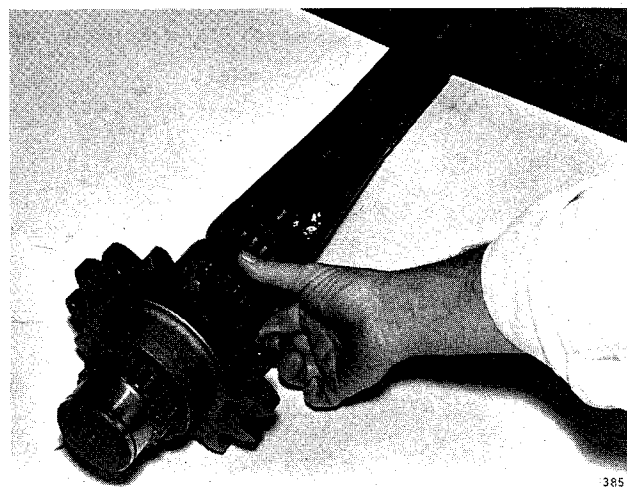
20

Remove outer sprocket.



21

Remove inner sprocket and spacer.



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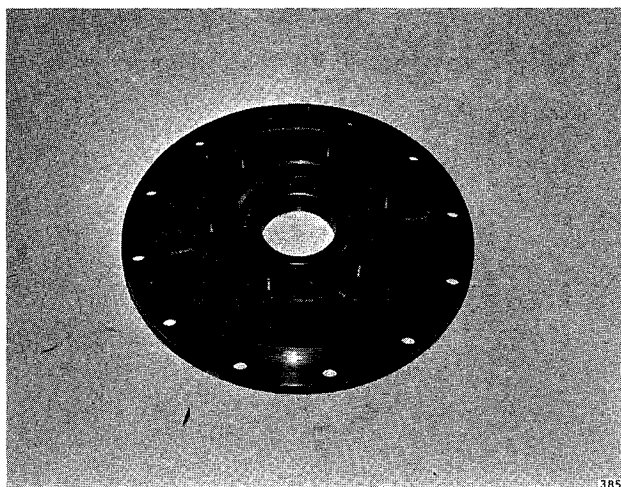


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If outer bearing needs service or replacement remove retaining ring and press bearing out of cover.



23

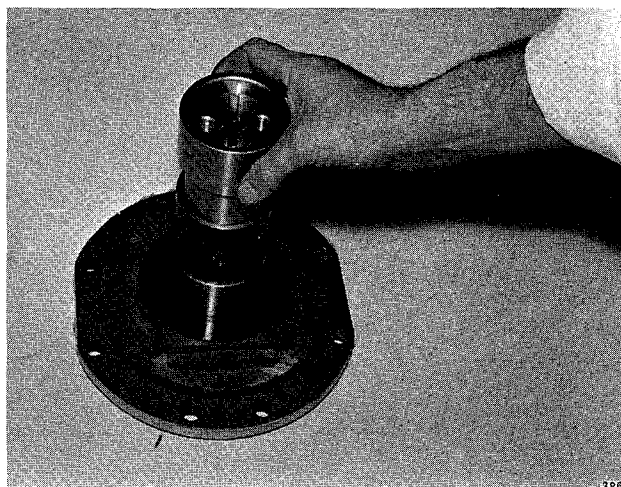
Clean and inspect all counter shaft bearings.
Do not remove unless bearings require replacement.



24

Remove inner race, spacer and second inner race.

Fiber thrust washer can now be removed.





25

Separate shaft and carrier assembly by removing two shaft retaining capscrews.

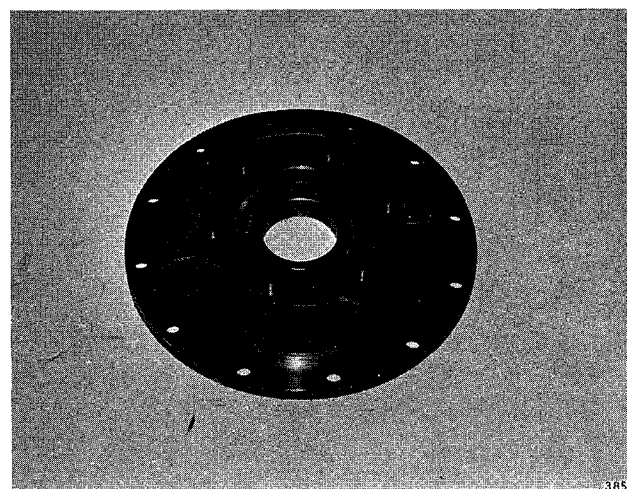
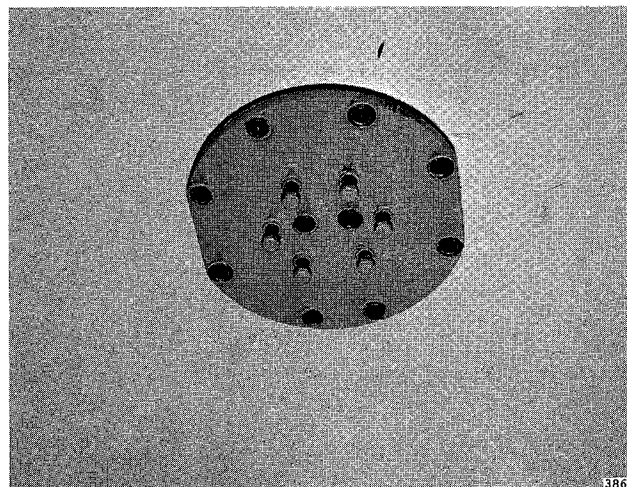
Then separate cover and gasket from carrier by removing six carrier retaining screws.

ASSEMBLY:

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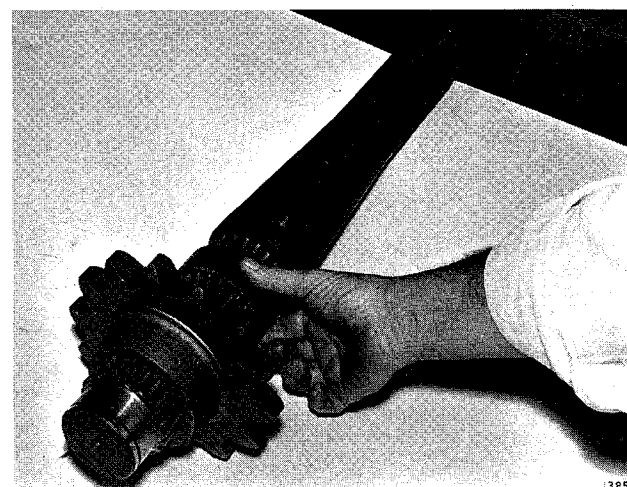
Install bearing and retaining ring in drive axle bearing carrier.

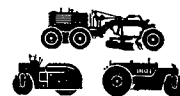
Lubricate bearing.



27

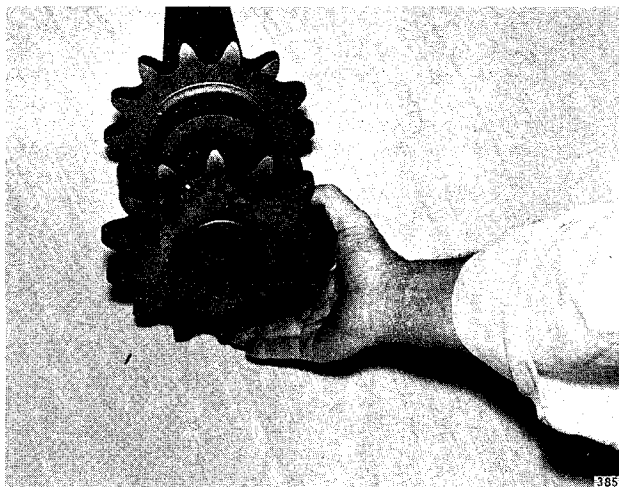
Install spacer and inner sprocket on drive axle.





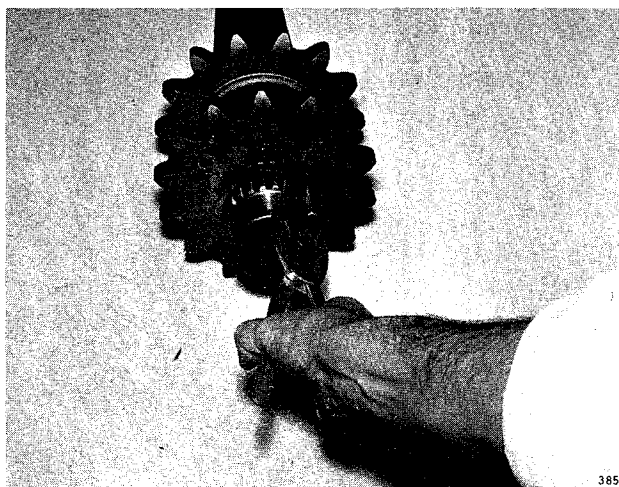
28

Install outer drive sprocket.



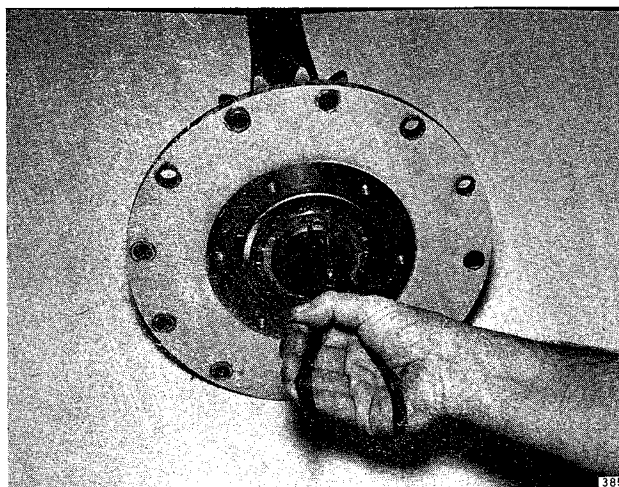
29

Install sprocket retaining ring.



30

Install bearing carrier assembly on axle assembly, then install retaining ring.





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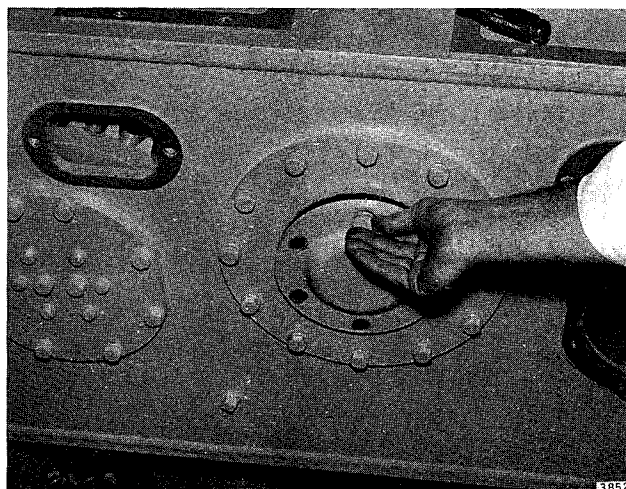
Install guide pins in case.

Place new gasket over pins against case and carefully install drive axle and sprocket assembly.



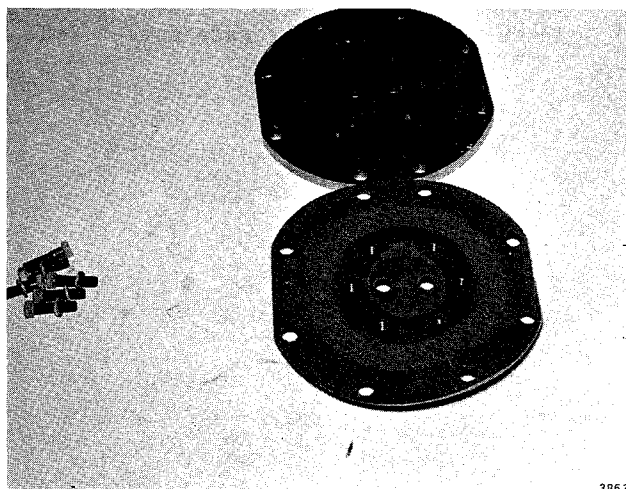
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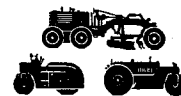
Attach carrier assembly to case and install bearing cap.



33

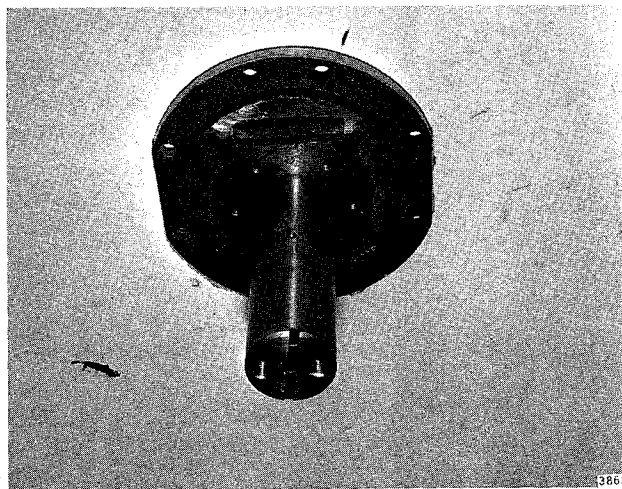
Place new gasket between shaft outer carrier and end cover.





34

Assemble outer carrier to gasket and cover and attach shaft in place with two capscrews.



35

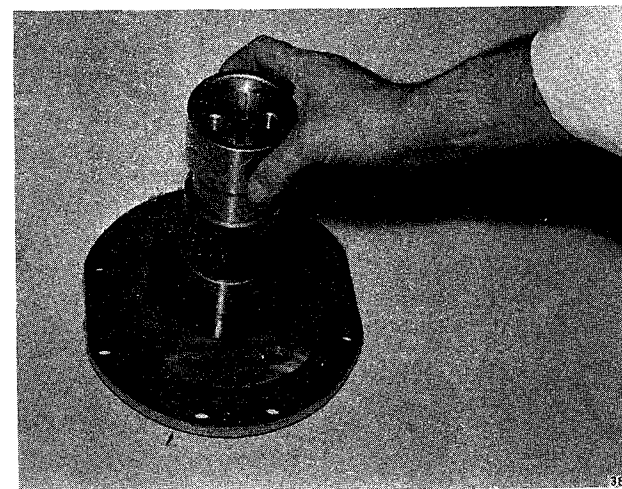
Place thrust washer over shaft and against carrier.

Install one bearing inner race.



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Install bearing inner race spacer and other bearing race.



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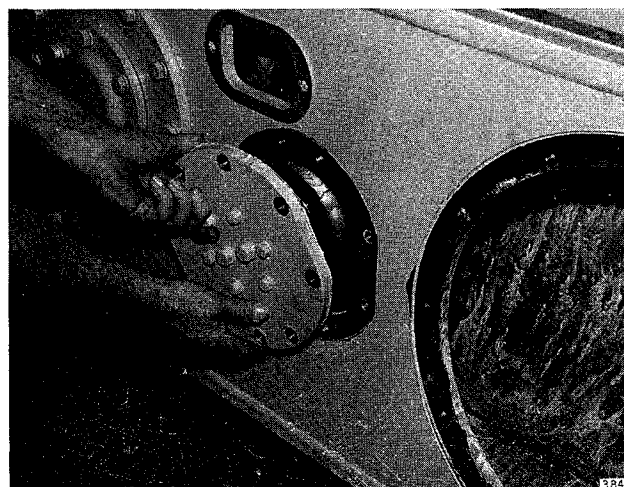
37

Lubricate counter shaft bearings and roll sprocket assembly into position.



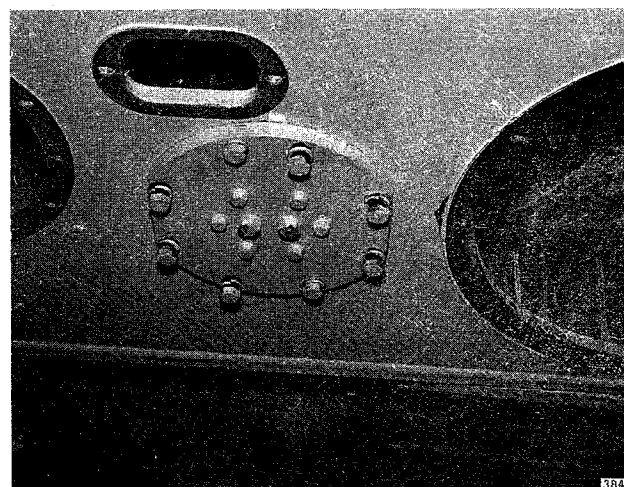
38

Support sprocket assembly and insert shaft and cover assembly.



39

Attach carrier assembly with shaft to outside of case.

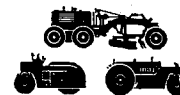


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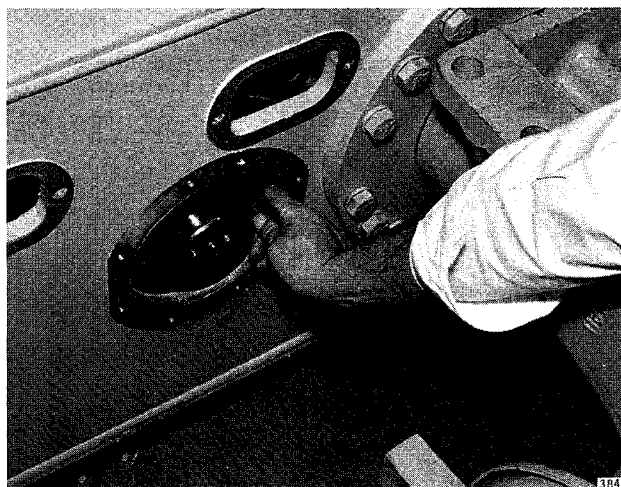


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At inside of case, install inner counter shaft thrust washer.



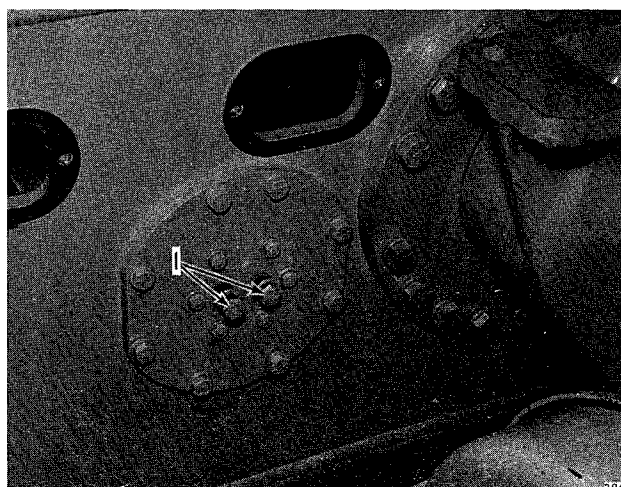
41

Position inner carrier and cover assembly.



42

Attach carrier and cover assembly and install counter shaft retaining screws.

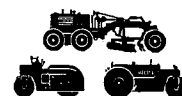


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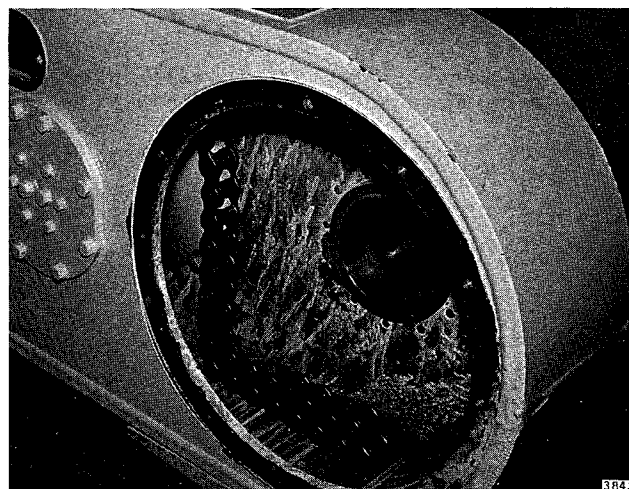


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Install chain on drive sprocket and counter shaft.



44

Install connecting link and lock in place.



45

Place counter shaft to wheel sprocket drive chain in case.

Spread chain along bottom and against end of case.

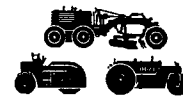


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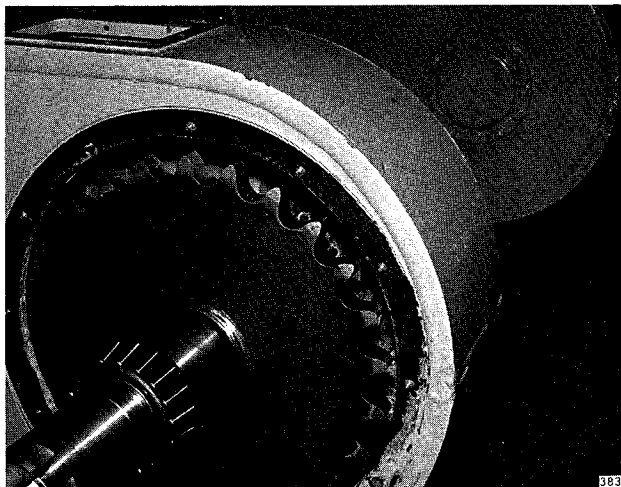
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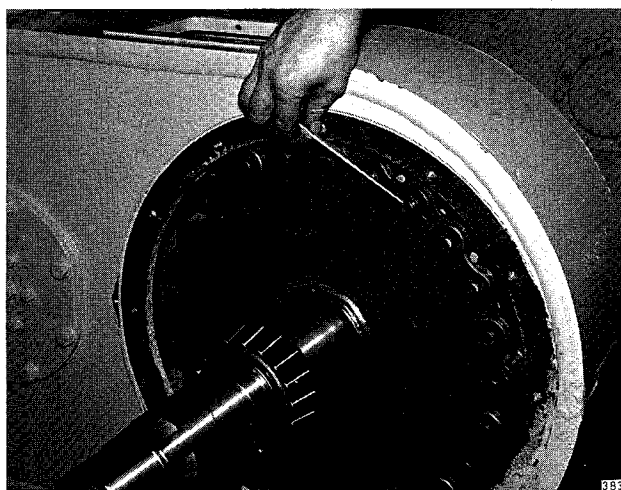
If previously removed, install inner axle bearing retainer and cup assembly.

Place wheel axle and sprocket assembly in case over chain.



47

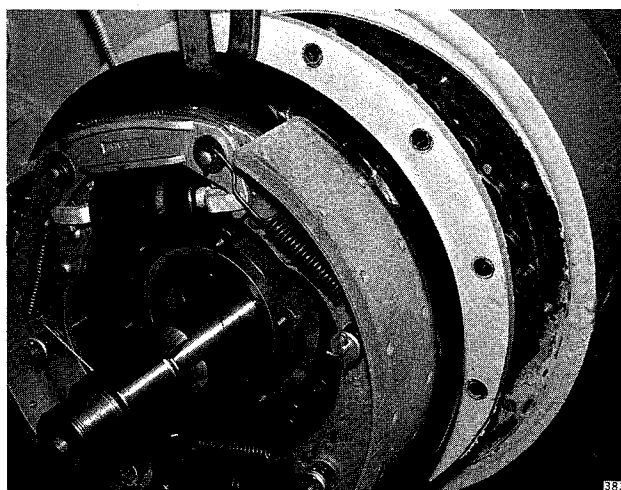
Install chain connecting link and lock in place.

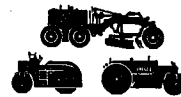


48

Place new gasket on outer housing.

With bearing cup in position--install housing and brake assembly.





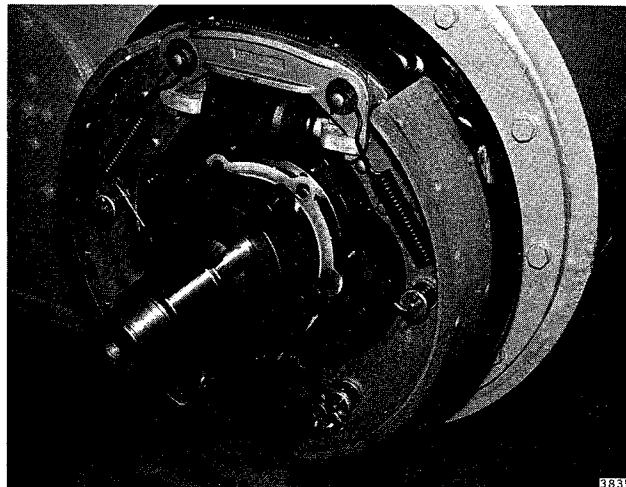
49

Place seal and retainer assembly in position.

Tighten cap screws to point of no shaft end play.

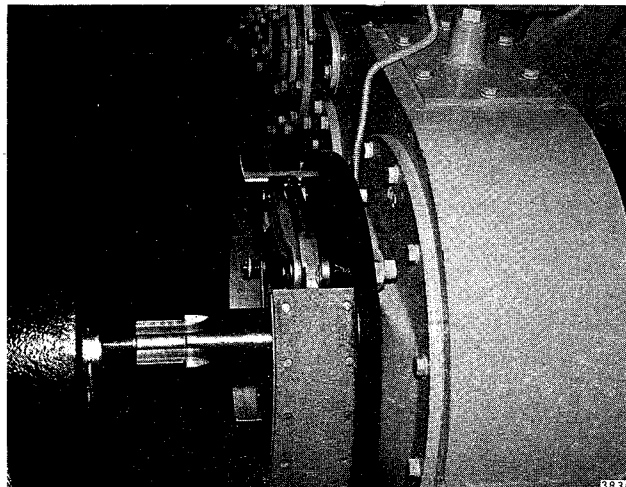
Measure retainer to housing gap for correct shim stack.

Remove retainer, install shims, tighten and check for end play or excessive pre-load.



50

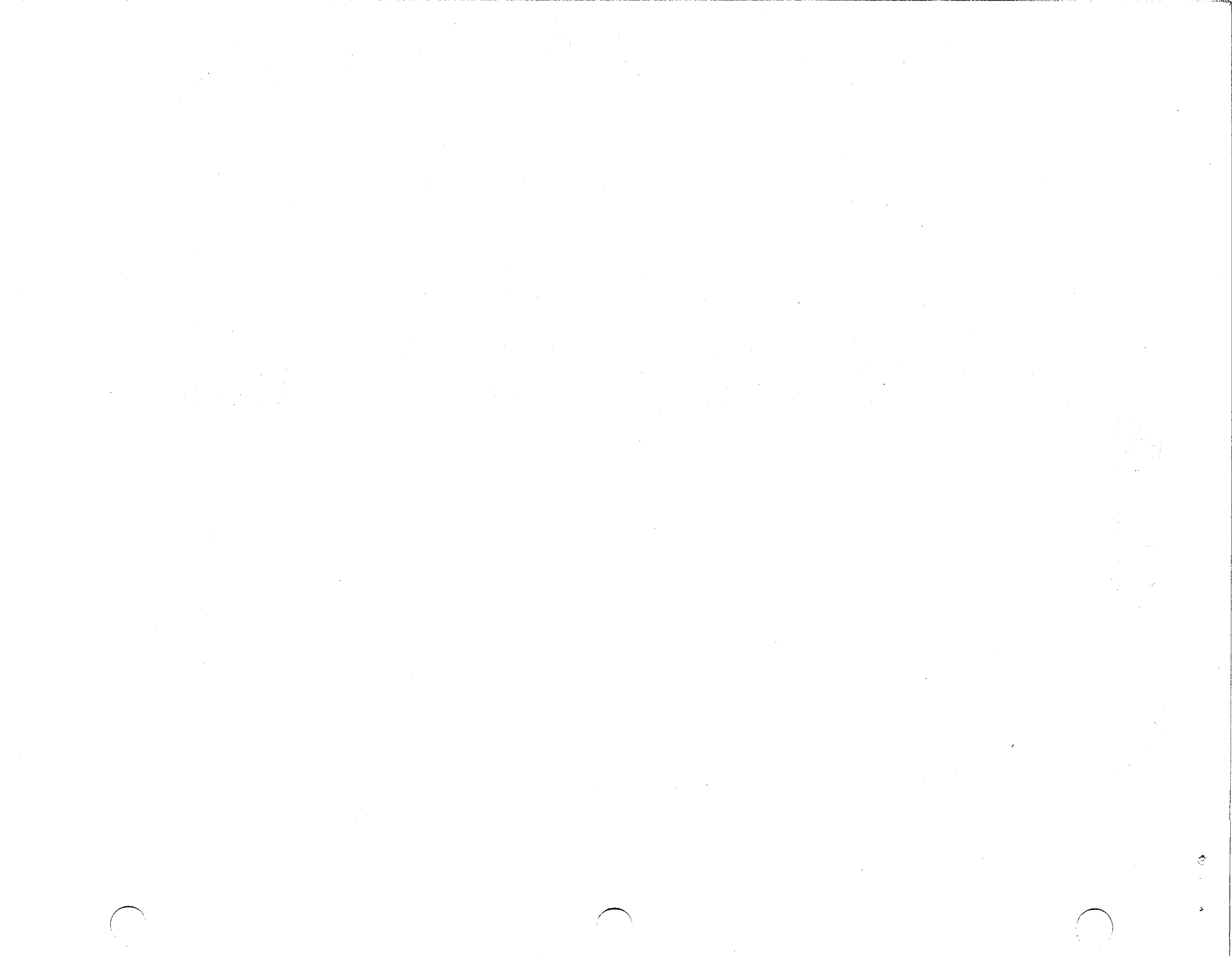
Install wheel and drum assembly.



51

Fill to correct level with proper lubricant and replace all inspection covers.





LUBRICATION FOR TANDEM CASES

Beginning with the following serial numbers the tandem cases were factory filled with Dexron:

118C-----	11721 & Up
T-400A-----	01414 & Up
T-500A-----	05239 & Up
160L-----	02961 & Up
160C-----	02961 & Up
T-600B-----	02043 & Up

The older machines were factory filled with SAE 80 Straight Mineral Gear Oil/SAE 30 H.D. engine oil. **DO NOT** mix or top with Dexron or ATF Type A, Suffix A.

If a change is made from SAE 80/SAE 30 H.D. Oil to Dexron or ATF Type A, Suffix A, the following procedure must be followed:

1. Remove drain plug and drain lubricant completely only after the unit has been operated sufficiently to bring the lubricant to operating temperature.
2. After draining, flushing is desirable. Clean around and replace drain plug and fill both cases to correct level with a light flushing oil. Operate the unit for a short period of time (5-10 minutes) under extremely light or no load condition. Drain all of the flushing oil from the cases while it is warm and replace the drain plugs.
3. To refill, clean the area around the fill plug and fill the tandem cases to the level plug with the Dexron or ATF Type A, Suffix A fluid.

DO NOT OVERFILL AS EXCESS QUANTITY WILL SERVE NO USEFUL PURPOSE.

4. The same suggested level check period (50 hours) and drain interval (1000 hours) will suffice with the new lubricant.

CAPACITY: 8 U.S. GALLONS EACH TANDEM CASE.

See File J - Section 1 for detailed lubrication specifications.

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