

## GROUP G TRANSMISSION

### G 3, Dismantling and assembling transmission

(Transmission is removed)

Fig. 1

Tools: Hammer, chisel, two big screwdrivers, open ended spanner 14 mm, socket spanners 10 and 19 mm, plastic mallet, wooden tool, cotter pin pliers, depth gauge, guiding plate for installation of transmission shafts toolkit illustration No. 30.

Fig. 2

1. Locate transmission on support fixture and drain oil. (socket spanner 19 mm)
2. Withdraw clutch rod from hollow center of drive shaft towards the clutch end.
3. Release tab washer for the coupling flange fixing screw. (hammer, chisel)
4. Unscrew coupling flange fixing screw. (socket spanner 19 mm)
5. Remove coupling flange with the aid of 2 screwdrivers.

Fig. 3

6. Unscrew the nuts securing transmission rear end cover. (socket spanner 10 mm)
7. Remove rear cover by means of a wooden drift.

Caution: Apply wooden tool only on the provided drift lobes right and left, never attempt to remove the cover by inserting a screwdriver blade or similar tool between the castings.

Fig. 4

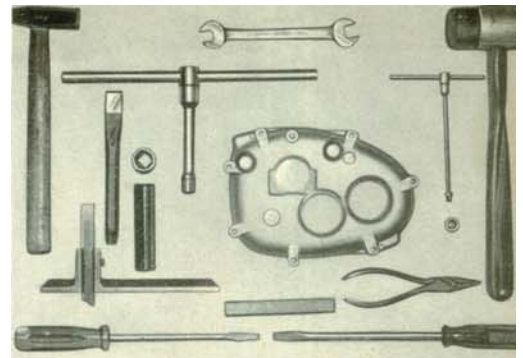
Caution: When refitting the cover make certain that the pin holding reverse idler shaft enters the slot machined in bearing housing. Likewise be sure that the thrust bearing on clutch rod end applies correctly in its seating. Insert clutch rod to centralise the bearing.

Fig. 5

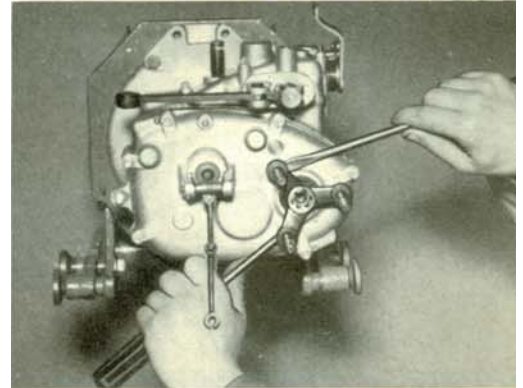
8. Drive ball bearings out of the cover plate by gently heating the plate and dropping it - joint face downwards - on a wooden block.

Caution: Before replacing the cover on reassembly fit heated ball bearings upon the shafts and enter the bearing and shaft assemblies into their bearing housings by means of soft blows with a plastic mallet. (plastic mallet)

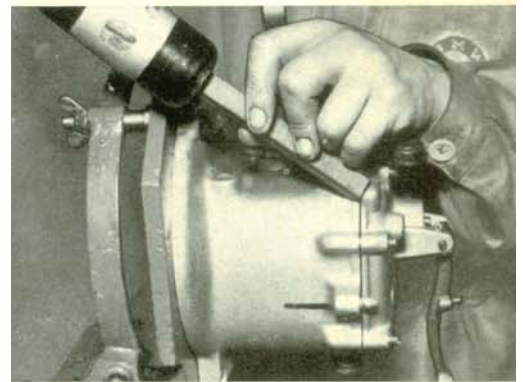
1



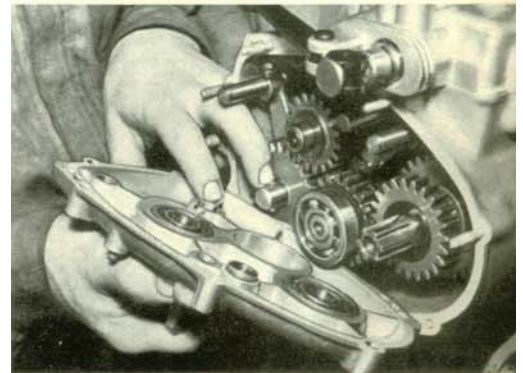
2



3



4



5



9. Measure bearing height with respect to the bearing cover by means of a depth gauge and on assembling compensate the difference by placing spacing shims behind the bearings.

Fig. 6 10. Remove cotter pin from the pivot of the lever that operates the reverse selector shaft.

11. Unscrew nuts of transmission top cover bearing the gearshift selector mechanism. (socket spanner 10 mm)

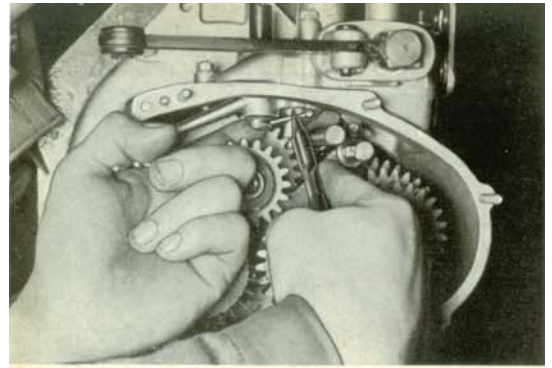
Fig. 7 12. When removing top cover draw reverse fulcrum lever situated at the inner side of top cover downwards.

Caution: When replacing transmission top cover refit the fulcrum lever simultaneously from beneath.

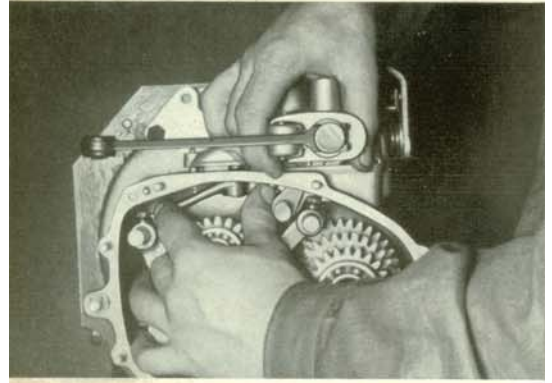
Fig. 8 8 Caution: Before refitting the cover place the selector forks in neutral position and fulcrum lever in central position.

Fig. 9 13. Remove gearshift selector ball springs and the detent balls.

Fig. 10 14. Remove the two lock screws which hold selector forks to selector shafts. (socket spanner 10 mm)



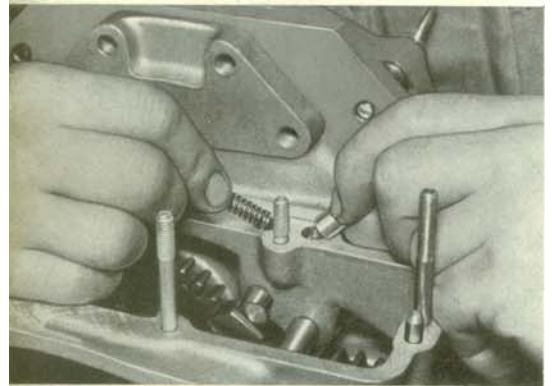
6



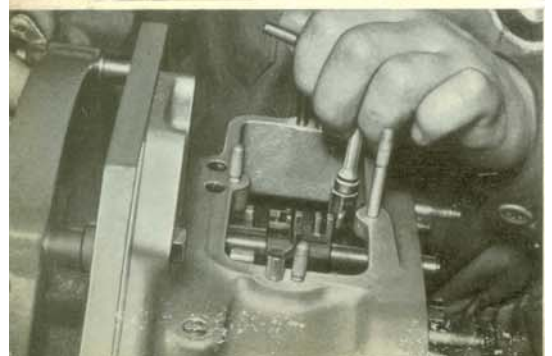
7



8



9



10

Fig. 11 15. Withdraw selector shafts and lift out selector forks.

16. Unscrew slotted plug for spring and detent ball of reverse selector shaft.  
(screwdriver 8 mm)

Fig. 12 12 Caution: When assembling secure slotted plug by means of a center punch blow.

17. Remove spring and detent ball for reverse selector shaft.

18. Slide out reverse idler shaft with idler gear and selector shaft.

Fig. 13 13 19. Remove all other shafts by heating transmission case to about  $60^{\circ}\text{C} = 140^{\circ}\text{F}$  upon a heating plate.

Caution: To replace the shafts on reassembly use template toolkit illustration No. 30 so the shaft and ball bearing assemblies will enter with proper alignment.

20. Remove ball bearings and dismantle the shafts.

Fig. 14 14 21. Dismantle selector (top) cover:

- a) Unscrew slotted plug for detent spring.  
(screwdriver 8 mm)
- b) Remove detent spring and ball.
- c) Remove cotter pin from selector lever.  
(cotter pin pliers)
- d) Remove selector lever.

Fig. 15 15 e) Unscrew slotted head screw serving as pivot for the fulcrum lever of guide shaft sector and withdraw the fulcrum lever.  
f) Remove fulcrum lever holding sector and the selector guide shaft.

Caution: Take care not to lose the two spacing shims at the right and left of the connecting sector on selector guide shaft.

- g) Remove gearchange operating lever by slackening the nut on inner side of housing, remove spring.  
(open ended spanner 14 mm)

The reassembly is carried out in precisely the reverse order.

The two dog clutch units set in neutral position must have a clearance of  $1.5\text{ mm} = .06\text{ inch}$  on either side.

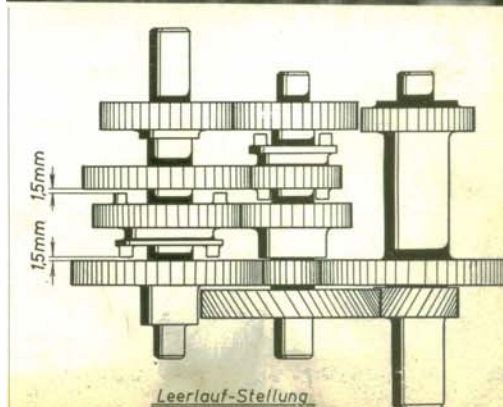
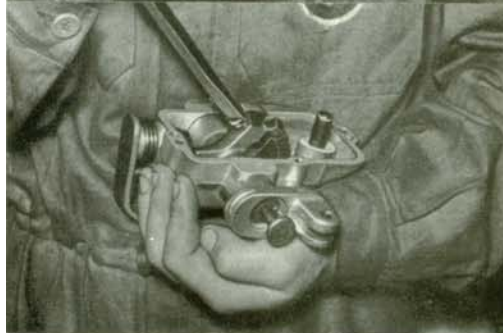
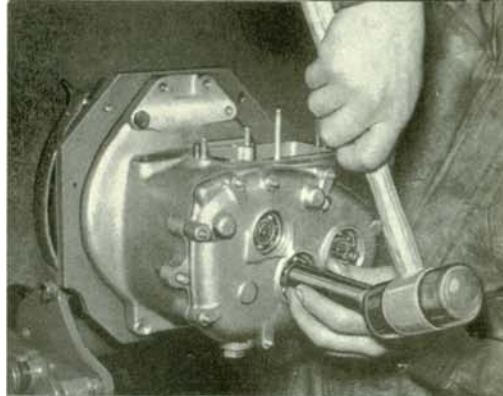
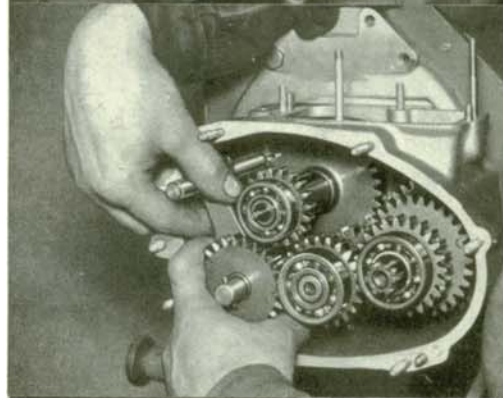
11

12

13

14

15



## G 5 Adjusting gear control linkage

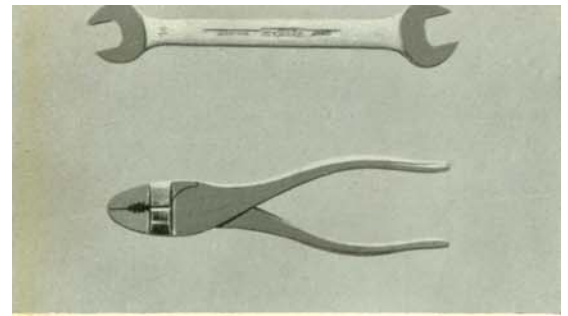
Fig. 16 Tools: Open ended spanner 14 mm, pliers.

Fig. 17 1. Place gear lever at the left of the seat in neutral position, the operating lever on the transmission must be placed against the engine.

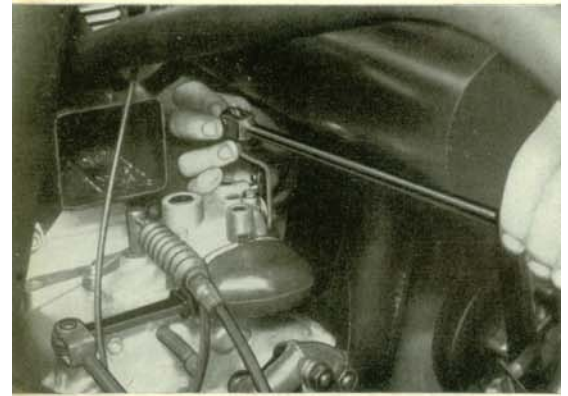
Fig. 18 2. Approach gear lever rod to the connecting lever, so that the toggle pin enters smoothly. If this position is not obtained slacken lock nut and rotate toggle (clevis) until the toggle pin fits correctly.

Fig. 19 and 20 3. Now adjust the two transverse rods in precisely the same manner by slackening the lock nut and turning the toggle (clevis) unit until the desired position is obtained.

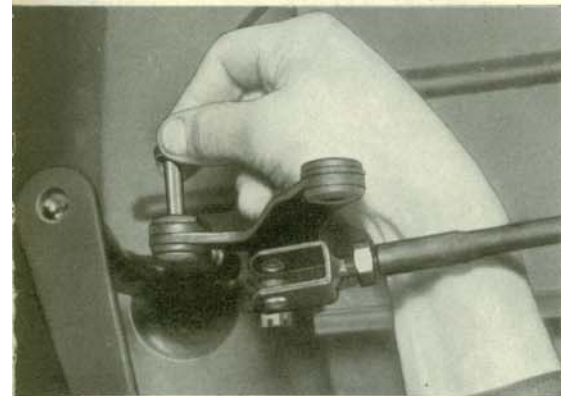
16



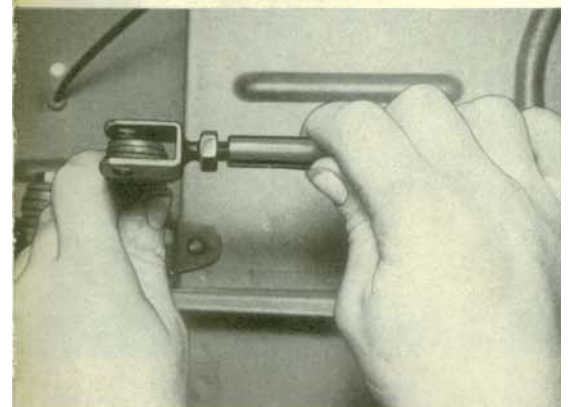
17



18



19



20

