GROUP H REAR AXLE

H 1 Removing and refitting rear axle

Fig. 1 — Tools: Wheel nut spanner, open ended spanners 12/14/17mm, socket spanners 9/14/19/22, ring spanners 12/17mm, screwdriver 6/8 mm, cotter pin pliers, circlip pliers, hammer, chisel, plastic mallet.

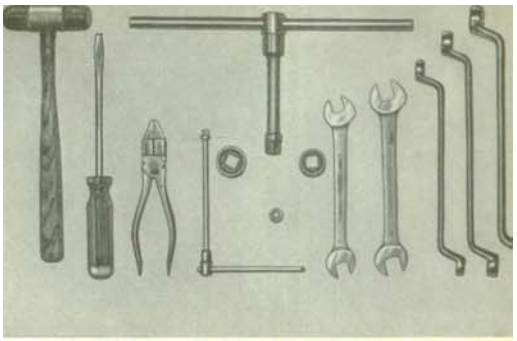

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Fig. 2 — 1. Drain oil from rear axle case. (ring spanner 12 mm)

2. Remove seat and rubber mat.

3. Remove handbrake lever support unit. (four screws, socket spanner 9 mm)

4. Remove cotter pin from handbrake lever pin and withdraw the lever pin. (cotter pin pliers)

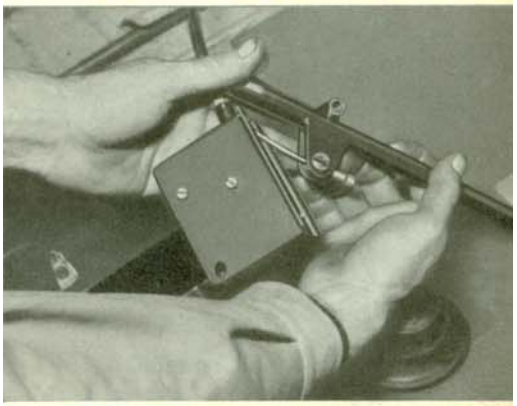

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Fig. 3 — 5. Push handbrake cable back through body panel.

6. Remove cover plates from the rear wheels, slacken wheel nuts. (screwdriver, wheel nut spanner)

7. Support the vhicle at rear by applying the jack under the engine carrying cross member.

8. Unscrew the nuts from three bolts on rubber coupling at transmission end. (ring spanner 17 mm and open ended spanner 14 mm)

Caution: These three bolts must be slackened which connect the rubber ring to the three-legged coupling flange on gearbox shaft.

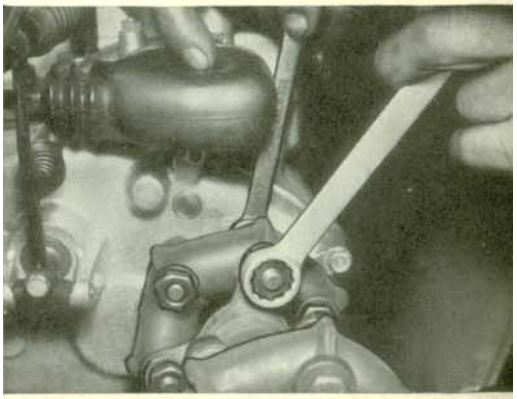

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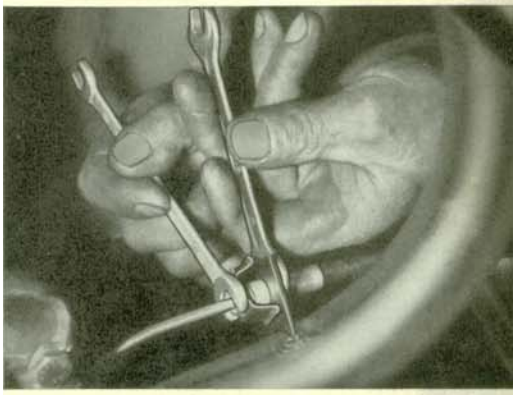
Fig. 4 — 9. Detach brake cable hose from holding braket. (open ended spanner 17 and 12 mm)

Fig. 5 — 10. Remove clip fixing handbrake cable hose on right-hand rear leaf spring. (screwdriver)



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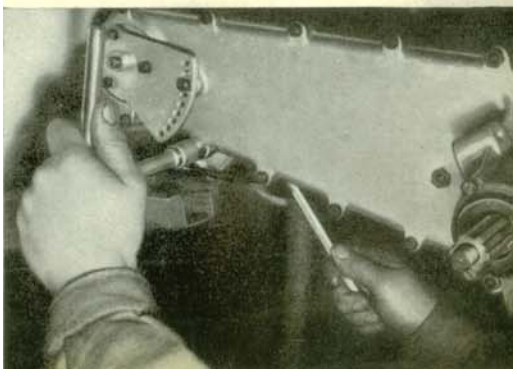
11. Remove cotter pins and unscrew the nuts securing telescopic shock absorbers on rear axle casing, at right and left. (cotter pin pliers, ring spanner 17 mm)

12. Remove cotter pin from thorough bolt crossing chaincase and swing link connecting the assembly to the chassis frame. Unscrew nut of thorough bolt. (cotter pin pliers, ring spanner 14 mm, open ended spanner 14 mm)



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13. Unscrew speedometer drive on front end of chaincase.

14. Unscrew spring-eye bolt of left-hand cantilever spring. (socket spanner 19 mm)

    Caution: When assembling tighten this bolt carefully until it gets stopped as otherwise the thread in the aluminium case would be torn out.

15. Unscrew nut of right-hand spring eye bolt, press the bolt out.

16. Remove rear axle unit rearwards by turning it in a clockwise direction.

The reassembly is carried out in precisely the reverse order.

Caution: After refitting bleed and adjust the hydraulic brake system.

H 2 Dismantling and assembling rear axle assembly

Rear axle assembly removed

Fig. 6 Tools: Open ended spanner 14 mm, socket spanners 9/10/14/22 mm, ring spanners 10/19 mm, screwdriver 8/12 mm, cotter pin pliers, circlip pliers, hammer, chisel, plastic mallet.

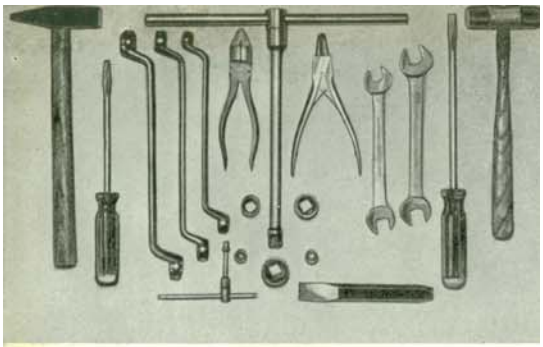

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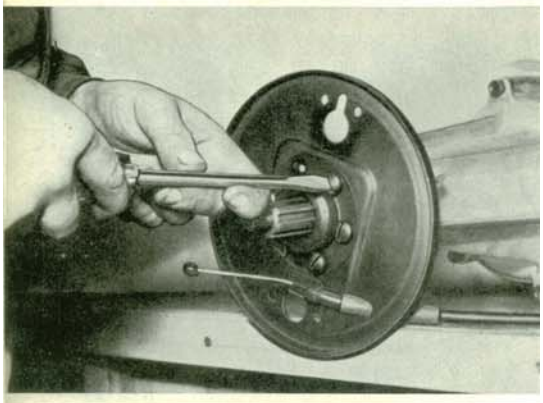
Fig. 7

1. Remove cotter pins from rear axle nuts, right and left. (cotter pin pliers)
2. Unscrew axle nuts, right and left. (socket spanner 22 mm)
3. Remove the two hubs. (screwdriver and plastic mallet)



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4. Remove screw securing wheel cylinder and brake adjuster on brake plate. (ring spanner 10 mm)
5. Remove brake shoe assemblies, unhook handbrake cable.
6. Remove the brake plate from rear axle case. (screwdriver 12 mm)

Fig. 8

7. Remove adjuster plate for chain tensioner. (socket spanner 9/10 mm)
8. Remove chain case bolts, 6 thorough bolts 14 mm with nuts, nine screws 10 mm. (socket spanner and open ended spanner 14 mm, socket spanner 10 mm)

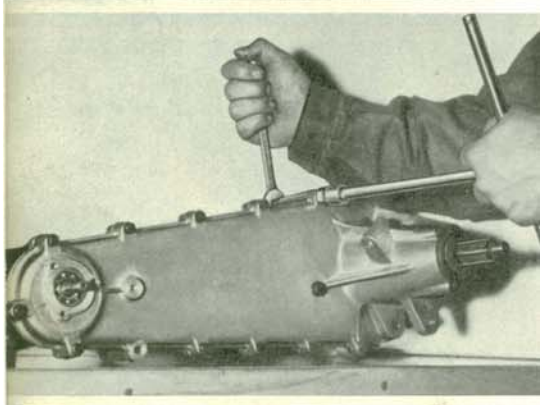

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Fig. 9

9. Loosen case half by gentle blows of a plastic mallet against the joint line and remove the part with the shorter axle housing extension.

Caution: When disassembling and assembling the chain case castings never tap against the housing border, but apply soft blows with a plastic mallet against the shock absorber anchor noses as shown of figure. When assembling pay attention to the fit of eccentric for chain adjustment. Heat chain case gently on the ball bearing seat.

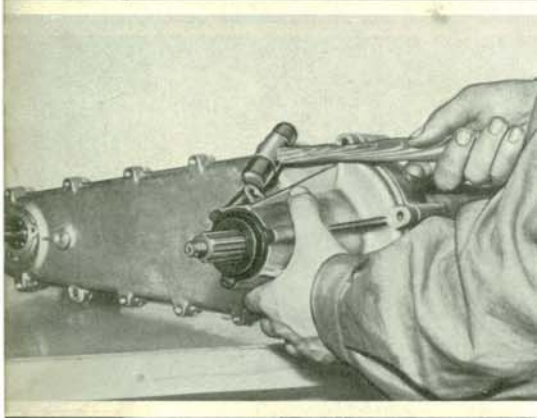

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Fig. 10

10. Remove the two bearing shells from rear axle.

Caution: When assembling make certain that the flange end of split bearing collar regards inwards.

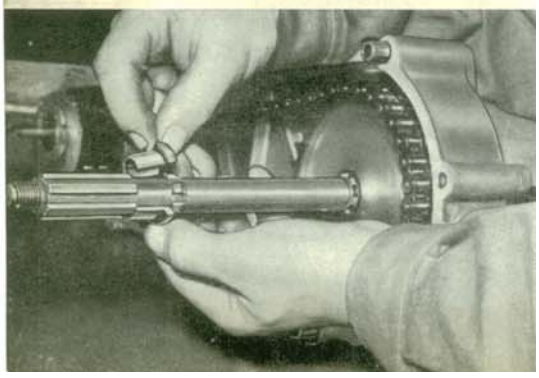

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Fig. 11 — 11. Loosen chain lock and remove chain by turning the shafts.

Caution: When assembling the chain make sure to refit the chain lock in correct position. The hardened (blue) member of the connecting link must be fitted in the middle and the browned one at front. The spring fastener must always be put on with the closed end facing the forward direction of travel of the chain.

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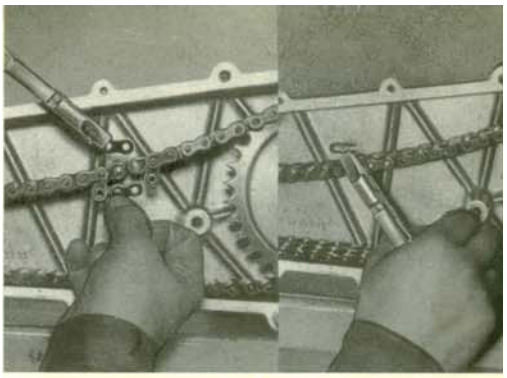

Fig. 12 — 12. Remove long back axle case extension from right-hand chain drive casting by means of a plastic mallet.

Caution: To remove this axle casing tap also against the shock absorber nose, on no account jam a screwdriver blade between the castings as this would damage the joint faces.

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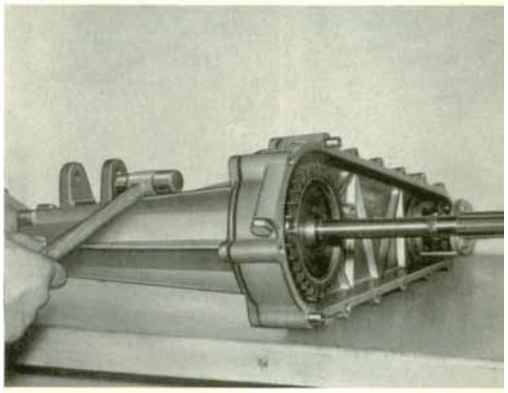

Fig. 13 — 13. Remove circlip securing rear sprocket.
(circlip pliers)

Fig. 14 — 14. Remove rear axle sprocket frontwards by means of screwdrivers and plastic mallet.

15. Remove circlip behind the sprocket.
(circlip pliers)

16. Remove rear axle in contrary direction by tapping it with a plastic mallet.

Caution: When carrying out these jobs the casting must be well supported on the spots where the parts in question are located.

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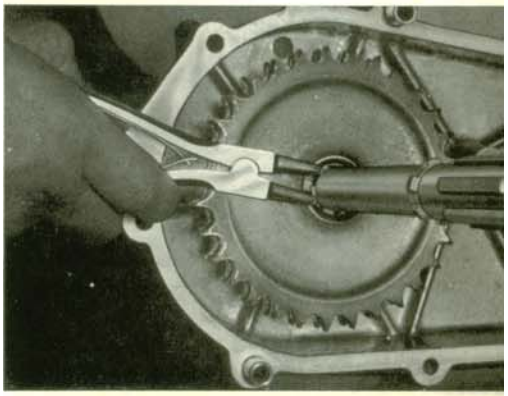

17. Release lock tab of tab washer for screw fixing three-legged coupling flange to front sprocket drive shaft. (hammer and chisel)

18. Remove the above screw at the rubber joint.
(ring spanner 19 mm)

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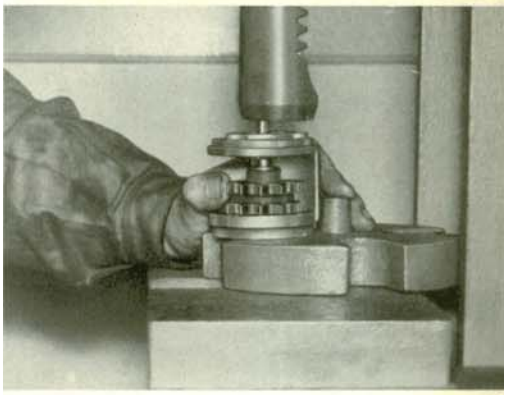

19. Withdraw three-legged coupling flange from front sprocket drive shaft.
(two screwdrivers)

20. Remove chain tensioner.

21. Detach carrier for rubber sealing washer on chain tensioner.
(screwdriver 8 mm)

22. Press out front sprocket shaft.

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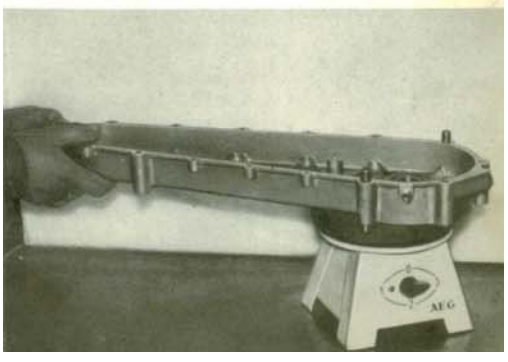

Fig. 15

23. Remove ball bearings from all castings integrating the rear axle assembly.

Caution: Remember that all aluminium castings must be heated before removing and refitting the ball bearings. Use a heating plate to heat them up to about 60 to 70°C = 140 to 160°F. Do not attempt to drive or to press out a ball bearing.

The reassembly is carried out in precisely the reverse order.

H 4 Adjusting chain

Tool: Open ended spanner 10 mm

Fig. 16

Caution: To check the chain for stretch proceed as follows: Place gears in neutral position, grasp the rubber coupling with the hand from beneath and turn it with short movements in clock and anticlockwise directions. If the slack is being increased, one notes this condition by the chain's striking against the chaincase during the alternative movement.

Fig. 17

The readjustment is then carried out in accordance to the instructions below:

1. Remove adjuster plate locating screw.
   (open ended spanner 10 mm)

Fig. 18 and 19

2. Raise the adjuster plate with a screwdriver until the holes register.

Caution: The holes must precisely coincide so the locating screw can be provisorily screwed in with the hand. Never try to force in the locating screw as thus one would risk to smash the thread in the aluminium casing. If the correct coincidence of the holes cannot be obtained, return the adjuster plate to the next suitable hole.

Fig. 20

3. Screw the locating screw in with the hand and tighten it with a spanner
   (open ended spanner 10 mm)
4. Check double-roller chain again for correct tension by moving it as indicated above.

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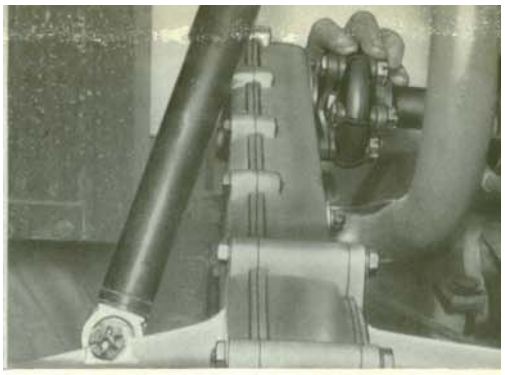

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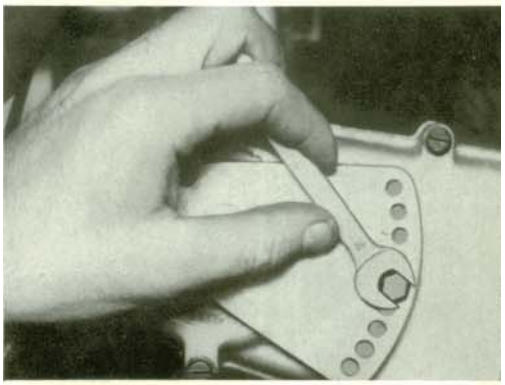

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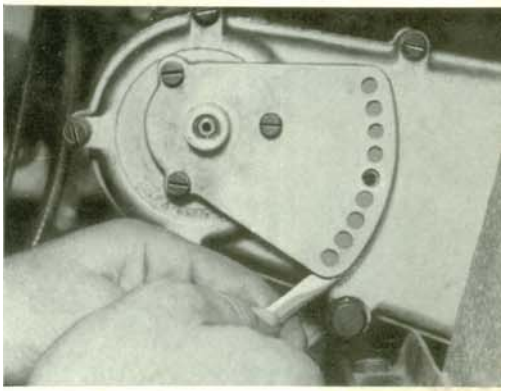

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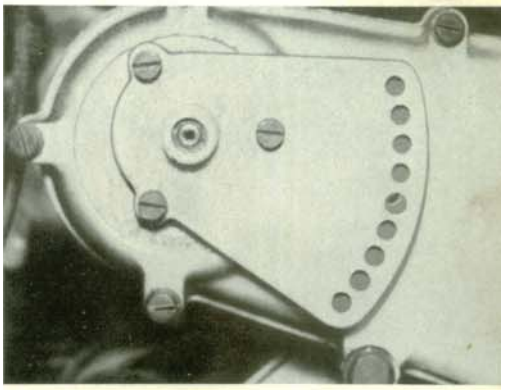

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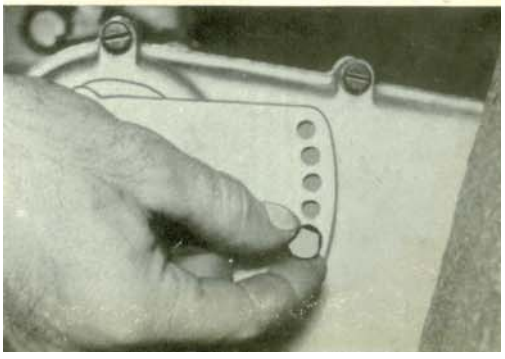

H 6 Replacement of chain

Fig. 21 — Tools: Wheel nut spanner, open ended spanner 10/14 mm, socket spanners 9/10/14/17/19/22 mm, ring spanners 10/12/14/17 mm, screwdriver 6 mm, cotter pin pliers, hammer, chisel and plastic mallet.

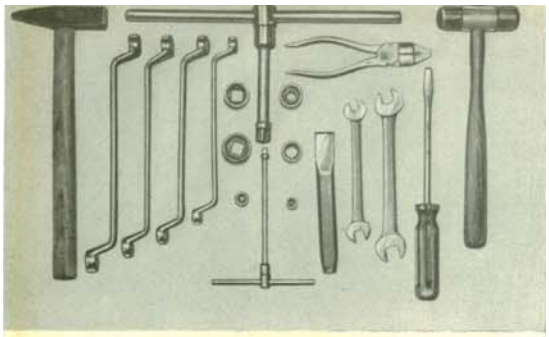

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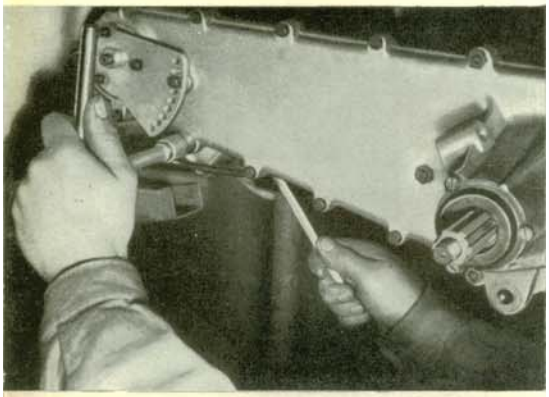
Fig. 22

1. Drain oil from rear axle case. (ring spanner 12 mm)
2. Remove cover plate from left-hand rear wheel, slacken wheel nuts. (screwdriver, wheel nut spanner)
3. Raise the vehicle at rear by placing a suitable support under the frame member beneath the engine.
4. Remove left-hand rear wheel.
5. Detach left-hand mudguard, 2 screws top, 2 screws on bottom. (ring spanner and open ended spanner 10 mm)
6. Remove left-hand rear spring (see F3).
7. Remove left-hand shock absorber (see F 4).
8. Loosen speedometer connection.
9. Remove cotter pin and unscrew the rear axle nut. (cotter pin pliers, socket spanner 22 mm)
10. Press-off the wheel hub and drive it out. (screwdrivers and plastic mallet)
11. Detach chain tensioner adjusting plate. (socket spanner 9 and 10 mm)
12. Support right-hand rear axle casing aditionally by a suitable arrangement.
13. Remove cotter pin and unscrew thorough bolt crossing chain-case and swing link. (ring spanner and open ended spanner 14 mm)



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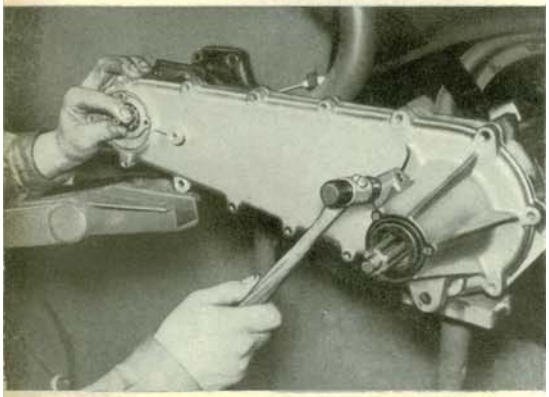

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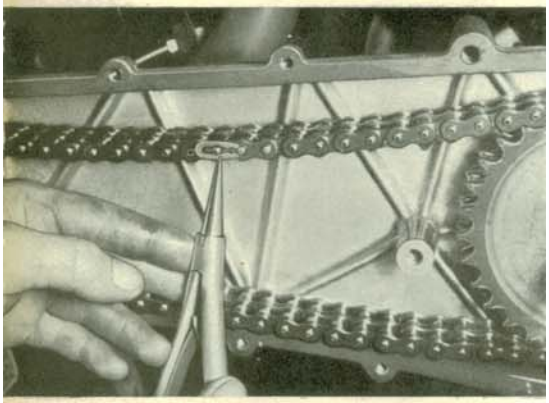

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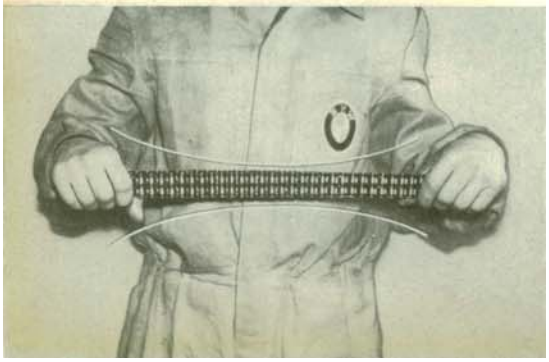
Fig. 23

14. Remove the screws connecting the two chaincase halves. (socket spanners 10 and 14 mm, ring spanner 14 mm)
15. Loosen left-hand casting by gently tapping the joint line with a plastic mallet and drive the casting outwards. (plastic mallet)



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Caution: Do not attempt to remove the casting by inserting a screwdriver blade or a chisel between the castings as such a procedure would damage the joint faces. When removing and replacing the cover do not tap against the border of casting, but only against the noses for spring and shock absorber attachment. On reassembly make certain that the chain tensioner eccentric is fitted in correct position.

Fig. 24 16. Slacken the chain completely.

17. Remove chain lock spring fastener and open the chain lock.

Caution: When assembling the chain make sure to refit the chain lock in correct position. The hardened (blue) member of the connecting link must be fitted in the middle and the browned one at front. The spring fastener must always be put on with the closed end facing the forward direction of travel of the chain.

Fig. 25 18. Remove the chain by rotating the wheel.

Caution: The chain is checked for wear by bending it laterally. If the lateral bending curves are found to be too high as shown on figure 25, the chain must be discarded.

The reassembly is carried out in precisely the reverse order.