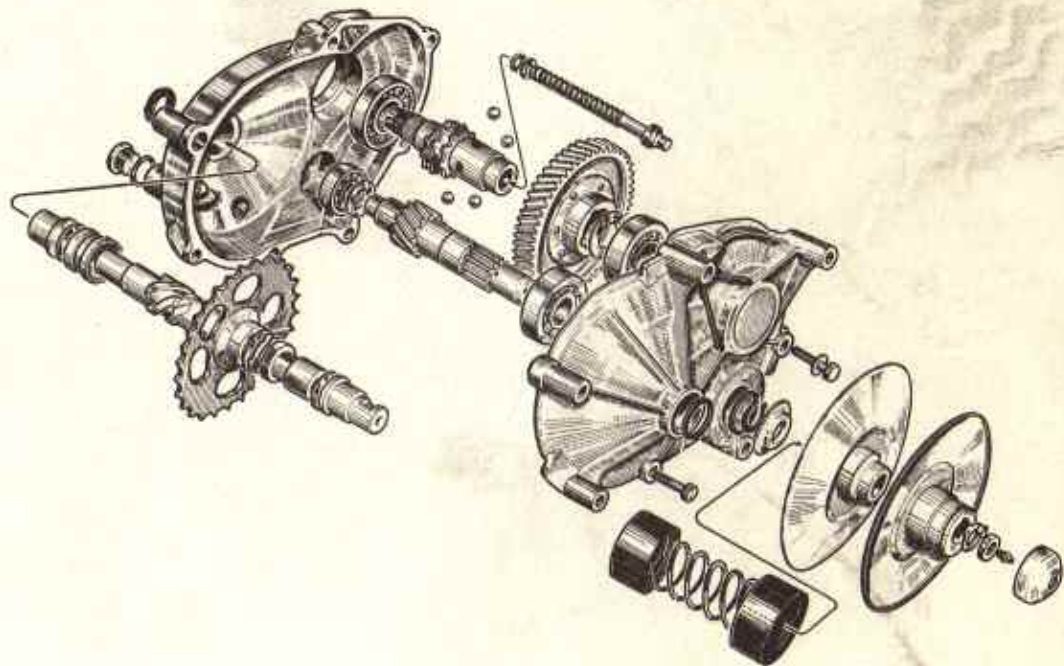


Mobylette

RELAY BOX

SP94TT-SP93-92

*Repair
Manual*



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Mobylette . SP 94 TT - SP 93 - 92

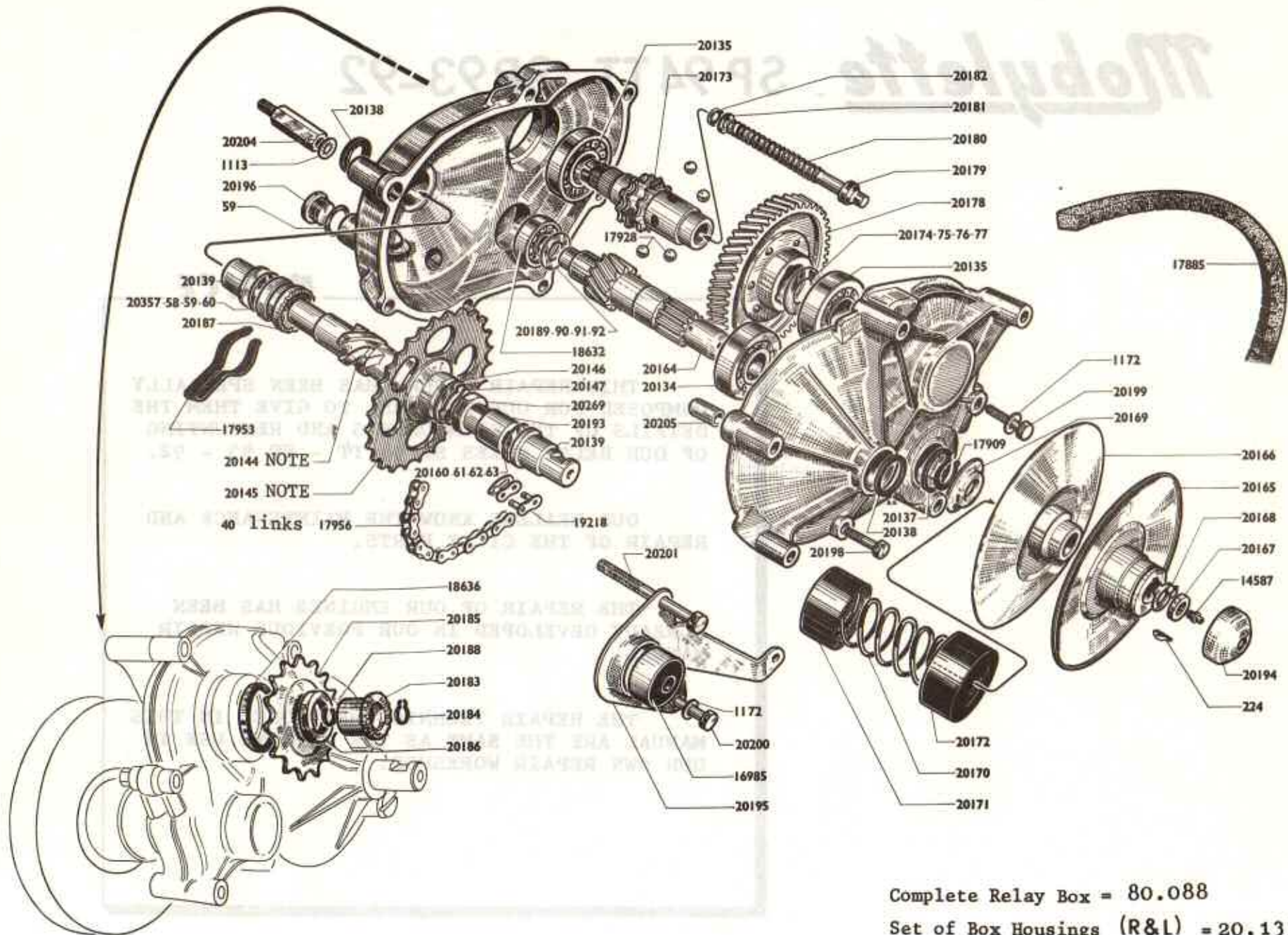
NOTICE

THIS REPAIR MANUAL HAS BEEN SPECIALLY COMPOSED FOR OUR DEALERS, TO GIVE THEM THE DETAILS OF THE DISMOUNTING AND REMOUNTING OF OUR RELAY BOXES SP 94 TT - SP 93 - 92.

OUR DEALERS KNOW THE MAINTENANCE AND REPAIR OF THE CYCLE PARTS.

THE REPAIR OF OUR ENGINES HAS BEEN ALREADY DEVELOPED IN OUR PREVIOUS REPAIR MANUAL.

THE REPAIR TECHNIQS MENTIONED IN THIS MANUAL ARE THE SAME AS THE ONES WE USE IN OUR OWN REPAIR WORKSHOP.



Complete Relay Box = 80.088
 Set of Box Housings (R&L) = 20.133



DISMOUNTING RELAY BOX SP 94TT-SP 93

TOOLS REQUIRED

for dismounting and remounting the relay box

M.B.N°	DESIGNATION and FUNCTION	Supplier	Supplier N°
1495	Tool for securing box to vice	VAR	483
1117	Lubricator spanner	VAR	367
1291	Universal clamp	VAR	340
	Pipe spanner 17 mm dia.		
1496	Mobile jaw compressor (suitable for all types of relay boxes)	VAR	482
1498	Fixed jaw extractor		
	Pipe wrench 11 mm dia.		
	Pipe wrench 10 mm dia.		
1359	Gazecom gas torch	VAR	350
1431	Bearing extractor	VAR	142/42
	Pipe wrench 24 mm dia.		
988	circlip opening pliers	VAR	430

DISMOUNTING RELAY BOX SP 94TT-SP 93

SECURING

- Secure the Relay Box to the vice by means of tool $\frac{MB - 1495}{VAR - 483}$ Fig. 1

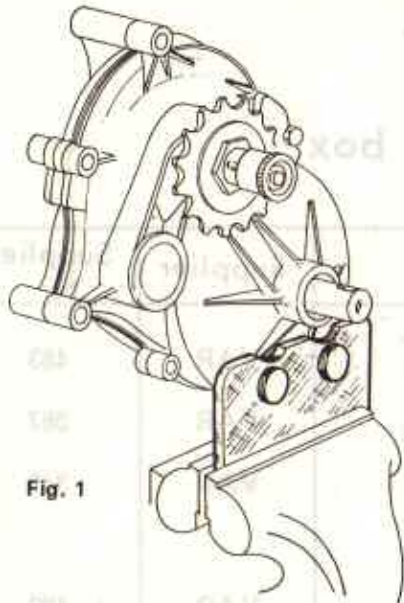


Fig. 1

Tool $\frac{MB - 1495}{VAR - 483}$ secures the Relay Box by means of the oil fill and drain holes

1. - DISMOUNTING THE PULLEY

- Extract plastic plug 20194 with a screwdriver.
- Loosen the 4 x 75 mm lubricator using lubricator spanner $\frac{MB - 1117}{VAR - 367}$ Fig.2
- Loosen nut 20167 (11 x 100 x 17 x 6 mm dia.)
- Secure the pulley jaw 20165 by means of Universal Clamp $\frac{MB - 1291}{VAR - 340}$ Fig. 3
- Loosen nut 20167 using the 17 mm dia. pipe wrench

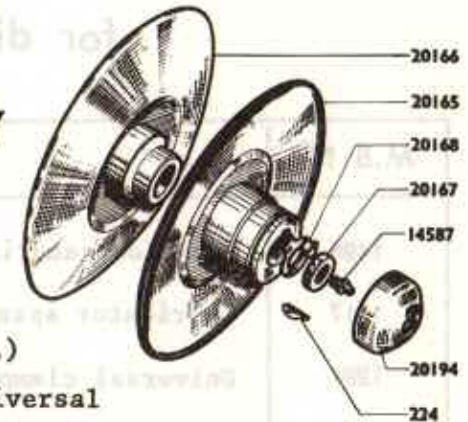


Fig. 4

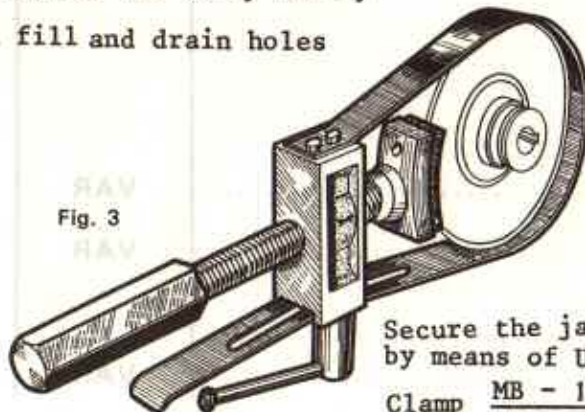
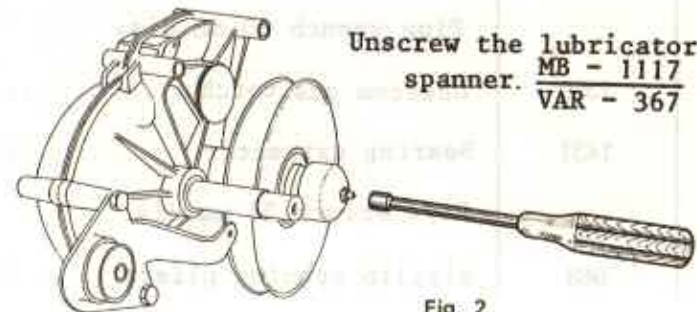


Fig. 3

Secure the jaw 20165 by means of Universal Clamp $\frac{MB - 1291}{VAR - 340}$



Unscrew the lubricator using spanner. $\frac{MB - 1117}{VAR - 367}$

Fig. 2



DISMOUNTING RELAY BOX SP94TT-SP93

1. DISMOUNTING THE PULLEY (CONTINUED)

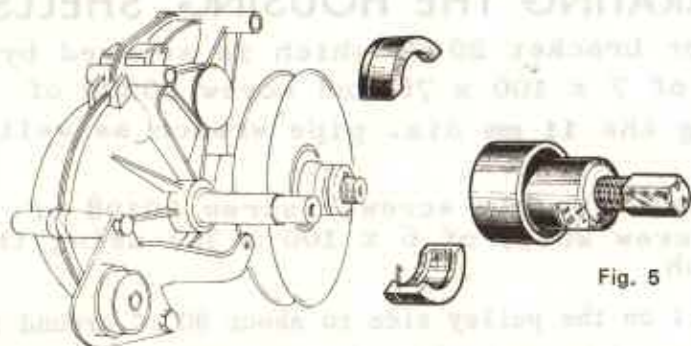


Fig. 5

How to extract the mobile jaw
using tool MB - 1498



Fig. 6

Use spring pliers 988 for extracting
circlip 17909 on the primary shaft

NOTE :

Compressor on Fig. 7 is used to dismount the pulley without dismounting the relay box, on all machines with relay boxes. It is necessary however to dismount the entire exhaust pipe.

- Compress pulley jaw 20166 with compressor tool $\frac{\text{MB} - 1496}{\text{VAR} - 482}$ Fig. 7
- Extract jaw 20165 using 36 mm dia. shell extractor MB 1498
- Remove locking pin 224.
- Compress the movable jaw of the pulley using tool $\frac{\text{MB} - 1496}{\text{VAR} - 482}$
- Remove movable jaw 20166, spring 20170, guards 20171 - 20172 and centering washer 20169.
- Extract circlip 17909 20 mm dia. on the primary shaft using pliers $\frac{\text{MB} - 988}{\text{VAR} - 430}$

Compressing mobile jaw 20166
using tool $\frac{\text{MB} - 1496}{\text{VAR} - 482}$

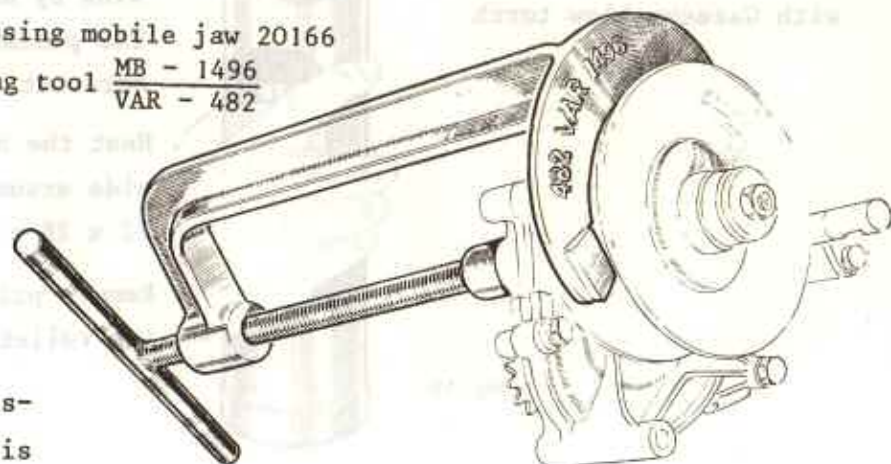


Fig. 7

DISMOUNTING RELAY BOX SP 94TT-SP 93



Fig. 9

Heating the housing shells
with Gazecom blow torch



Fig. 10

2. - SEPARATING THE HOUSING SHELLS

- Dismount the Flexibloc bracket 20195 which is secured by 2 screws (Screw 20201 of 7 x 100 x 76 and screw 20200 of 6 x 100 x 50 mm) using the 11 mm dia. pipe wrench as well as pillar nut 20204
- Unscrew the two housing assembly screws (screw 20198 of 6 x 100 x 21 mm and screw 20199 of 6 x 100 x 36) using the 10 mm dia. pipe wrench.
- Heat the housing half shell on the pulley side to about 80° C around the area of the bearings (20134 of 20 x 42 x 12 mm) on the primary shaft and 20135 of 20 x 42 x 8 mm on the secondary shaft) using blow torch MB 1359
VAR 350
- Remove the housing half shell on the pulley side by small blows with a mallet. The pinion assembly remains in the chain sprocket side of the housing.
- Heat the housing half shell on the chain pinion side around the location of bearing 18632 of 12 x 28 x 8 mm, Fig. 8, to around 80° C.
- Remove primary shaft 20164 together with its two roller bearings 18632 and 20134.



Fig. 8

DISMOUNTING RELAY BOX SP 94TT-SP 93

2. SEPARATING THE HOUSING SHELLS (CONTINUED)

- Extract the two bearings (20134 on primary shaft and 20135 on secondary shaft on the pulley side of the half shell) using the 11 mm shell extractor $\frac{MB - 1431}{VAR - 142/42 L}$ Fig. 11.
- Extract roller bearing 18632 (12x28x8) left on the primary shaft, using shell extractor MB 1498 of 28 mm (Fig. 12).

NOTE: This extractor has already been used for extracting the fixed jaw of the variator but with a 36 mm shell.

Remove the secondary shaft disks 20174, secondary pinion 20178 and the 4 balls 17928.

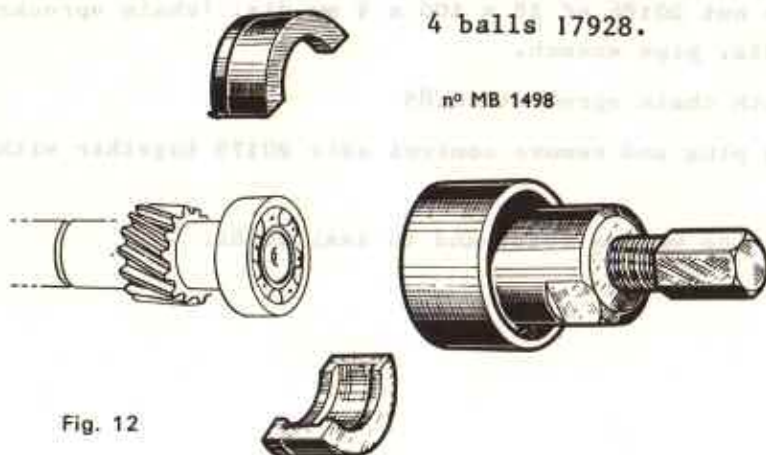


Fig. 12

Extracting bearing 18632 (12 x 28 x 8) on the primary shaft.

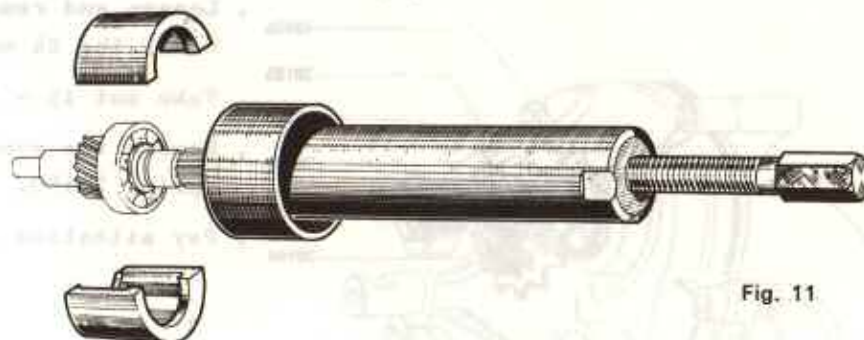


Fig. 11

Extracting bearing 20134 (20 x 42 x 12)

on the primary shaft.



DISMOUNTING RELAY BOX SP 94TT-SP 93

3. DISMOUNTING CONTROL AXLE

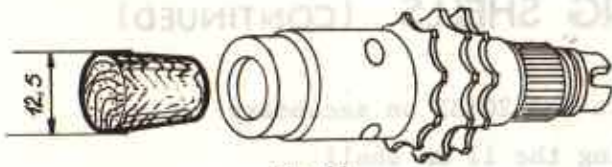
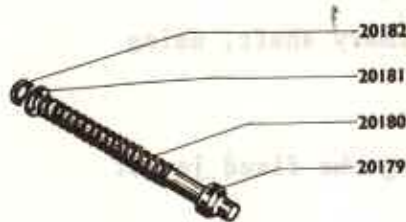


Fig. 13

At this phase of dismounting : There is left on the box housing on the chain sprocket side : secondary shaft, chain pinion control axle and the complete pedal bracket shaft.



- . Hold back control axle 20179 with a wooden plug 12.5 mm dia.. This is easy to do, as per sketch.
- . Remove circlip 20184

- . Remove button 20183 and stop ring 20188.
- . Loosen and remove nut 20186 of 18 x 100 x 4 mm dia. (chain sprocket) using the 24 mm dia. pipe wrench.

- . Take out 15 - tooth chain sprocket 20185
- . Remove the wooden plug and remove control axle 20179 together with its spring 20180.
- . Pay attention to stop washer 20181 and to seal 20182.

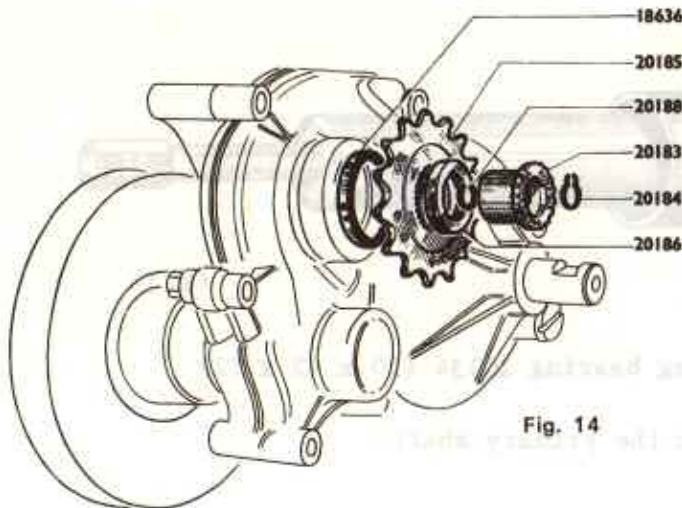


Fig. 14

DISMOUNTING RELAY BOX SP 94TT-SP 93

4. DISMOUNTING THE SECONDARY SHAFT

ASSEMBLY AND THE PEDAL BRACKET SHAFT

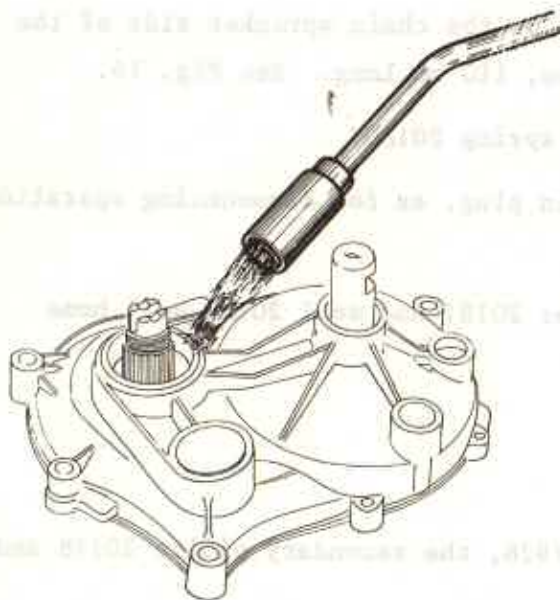


Fig. 15

- Heat the housing half shell on the chain sprocket side to about 80° C at the location of the secondary shaft bearing, using gas blow torch

MB 1359
VAR 350 Fig. 15.

- Chase out the secondary shaft 20173 with its bearing 20135, then the pedal bracket shaft 20144.
- Extract bearing 20135 of 20 x 42 x 8 mm on the secondary shaft, using extractor MB 1431
VAR 142/42 L.
- Remove the gaskets (these will mandatorily have to be replaced when remounting).

REMOUNTING RELAY BOX SP 94TT-SP 93

1. ASSEMBLING THE PINION

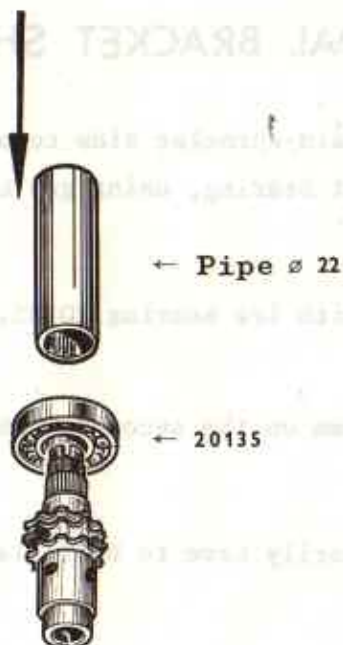


Fig. 16

- . Remount bearing 20135 (20 x 42 x 8) on the chain sprocket side of the secondary shaft using a 22 dia. pipe, 110 mm long. See Fig. 16.
- . Mount engaging stem 20179 with its spring 20180.
- . Hold back stem 20179 with the wooden plug, as for dismounting operation 3, Fig. 13.

ATTENTION : Carefully push stop washer 20181 and seal 20182 well home on the secondary shaft

- . Position stop ring 20188.
- . Remove the wooden plug.
- . Replace the four 7 mm dia. balls 17928, the secondary pinion 20178 and disks 20174 to 20177.
- . Reposition roller bearing 20135 on the pulley side of the secondary shaft using the 22 mm dia. pipe, 110 mm long.

REMOVING RELAY BOX SP 94TT-SP 93

1. - ASSEMBLING THE PINION (CONTINUED)

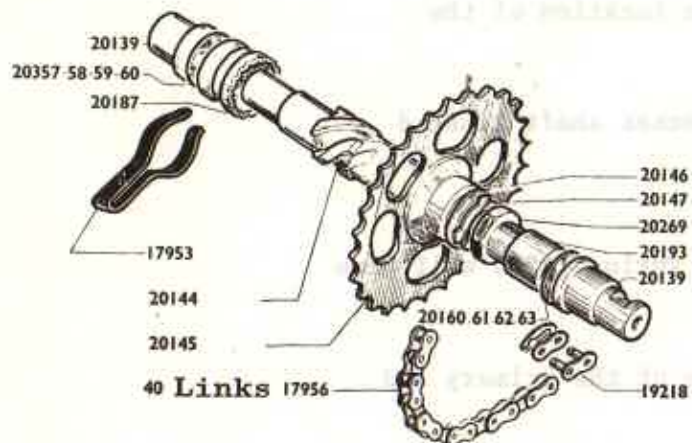


Fig. 17

- Prepare the secondary shaft assembly complete with control axle and ball bearing - with the complete pedal bracket (shaft sliding gear 20187, drive spring 17953, chain sprocket 20145 and disk 20146, brake 20147 and nut 20269).
- The side washers.
- Replace chain 17956 on the secondary shaft and the chain sprocket 20145 IN THE CORRECT DIRECTION, for fixing spring link 19218.
- Remount bearing 20134 using the 22mm dia. pipe, 110 mm long, on the primary shaft, 20164, then bearing 18632 (12 x 28 x 8) on the same shaft.

NOTE : The first relay boxes were equipped with a pedal bracket shaft designed for an 18 mm bore chain sprocket. The wheel nut was welded on and there was no brake 20147. In such a case, consult us.



REMOUNTING RELAY BOX SP 94TT-SP 93

2 ASSEMBLING HOUSINGS R. & L. AND COMPLETING THE REMOUNTING

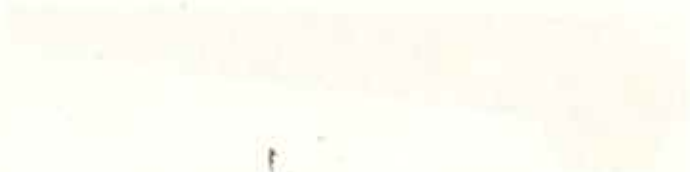
- . Change the seal rings 20138 (17 x 23 x 3 mm) on the pedal shaft.
- . Heat the housing on the chain sprocket side at the location of the secondary shaft bearing 20135.
- . Present the secondary shaft assembly and pedal bracket shaft mounted together, and fit together.

ATTENTION : Carefully engage the sliding gear drive spring 17953 well home in the housing anchor.

- . Heat the housing shells at the location of the primary and secondary bearings.
- . Assemble the housing shells previously coated with a sealing compound such as 3 M Scotch Mastic Seal, on the flat portion of the joints.
- . The remainder of the operations are not difficult. Simply reverse the dismounting sequence.
- . When remounting the fixed jaw of the pulley 20166 it is essential to use compressor MB 1496 Fig. 7.
VAR 482
- . It is important to see that the splines of the pulley correctly engage the splines of the primary shaft.

PHOTOGRAPH

NO. 101

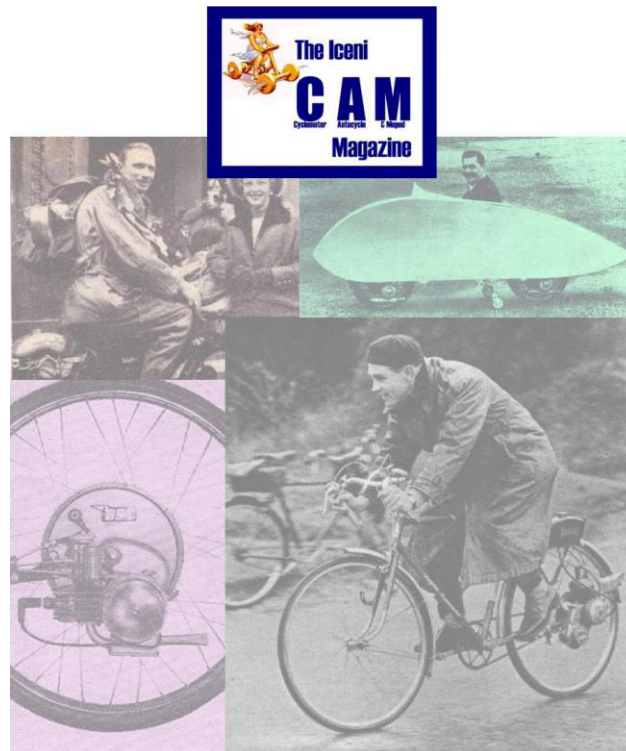


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