

Chapter 24B

AIR-INTAKE, DISMANTLING

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THIS CHAPTER, which is applicable to both the Ghost 48 Mk. 1 and the Ghost 48 Mk. 2, contains instructions for dismantling the air-intake after it has been removed from the engine in accordance with the instructions given in chapter 23. The general information contained in chapter 22 should also be referred to. As the air-intakes fitted to 48 Mk. 1 and 48 Mk. 2 engines are not identical, a separate sequence of dismantling operations is given for each engine.

GHOST 48 Mk. 1 AIR-INTAKE

FRONT BEARING

1. Place the air-intake on a flat surface with the rear end uppermost.
2. Unlock and remove the twelve plain $\frac{1}{4}$ inch B.S.F. nuts and tab washers which secure the front bearing retaining plate.
3. Reverse the air-intake so that the front is uppermost.
4. Position extractor T.72479 over the front bearing housing and press out the front bearing assembly complete, Fig. 1.

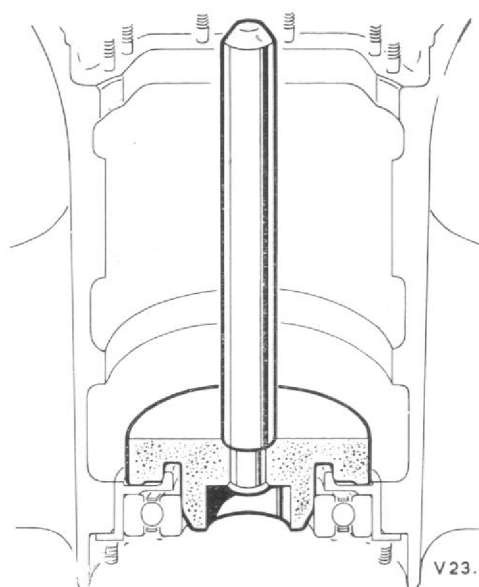


Fig. 1. Extractor T.72479, for pressing front bearing assembly out of air-intake casing.

5. Place the housing, flange downwards, on pot fixture T.79106, and using adapter T.74292,

press out the front bearing, Fig. 2.

6. Wrap the bearing in grease-proof paper and

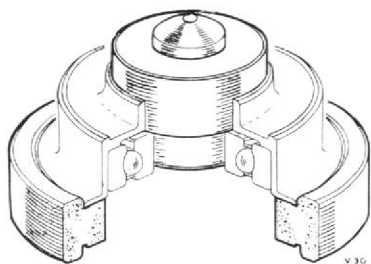


Fig. 2. Pot fixture T.79106 and adapter T.74292 for pressing front bearing out of its housing.

tie together all remaining loose parts.

TRANSFERRING AIR-INTAKE TO ERECTING STAND

1. Using lifting sling T.70454, transfer the air-intake to erecting stand T.72381, Fig. 3, and using $\frac{5}{16}$ in. B.S.F. slave bolts, washers and nuts, secure the air-intake to the erecting stand.

UPPER DRIVING GEAR AND STARTER DOG

1. Unlock and remove the four $\frac{1}{4}$ in. B.S.F. plain nuts and tab washers which secure the upper driving gear assembly to the air-intake; withdraw the assembly.
2. Position the assembly in vice block T.74760;

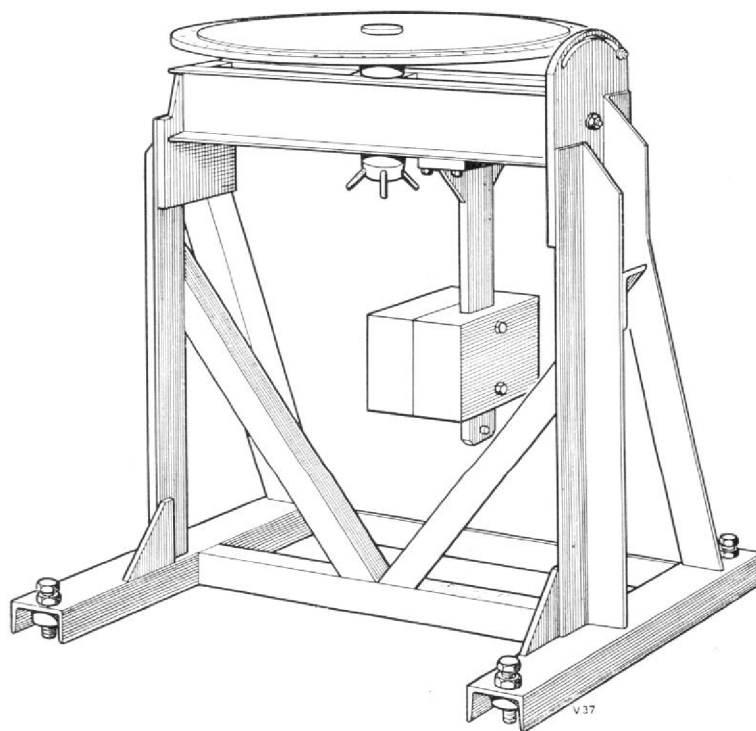
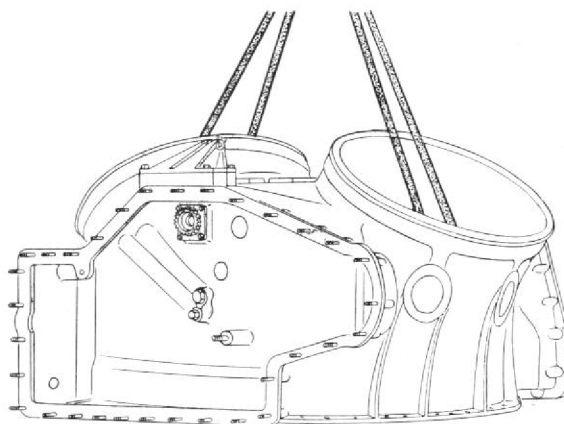


Fig. 3. Lowering air-intake on to erecting stand T.72381, using sling T.70454.

open up the cup locking washer and, using spanner T.74911, remove the ring nut and cup washer, Fig. 4.

3. Remove the bevelled retaining washer, the upper gear bearing, and the plain thrust washer.
4. Remove the assembly from the vice block and tap out the starter dog; tie all loose parts to the housing.

LOWER DRIVING GEAR

1. Unlock and remove the four $\frac{1}{4}$ in. B.S.F. plain nuts and tab washers which secure the lower driving gear assembly to the air-intake; withdraw the assembly.
2. Position the assembly in vice block T.74753, open up the cup locking washer and, using spanner T.74755, remove the ring nut, Fig. 5; remove the cup locking washer and plain washer.
3. Position split bush T.74756 between the teeth of the lower driving gear and the assembly housing. Place the assembly, with the split bush in position, on pot fixture

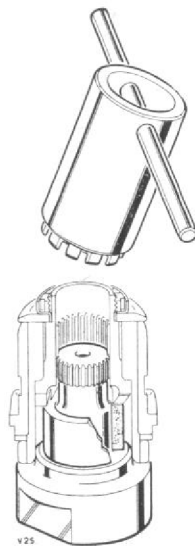


Fig. 4. Vice block T.74760 and spanner T.74911 for removing the ring nut from the upper driving gear assembly.

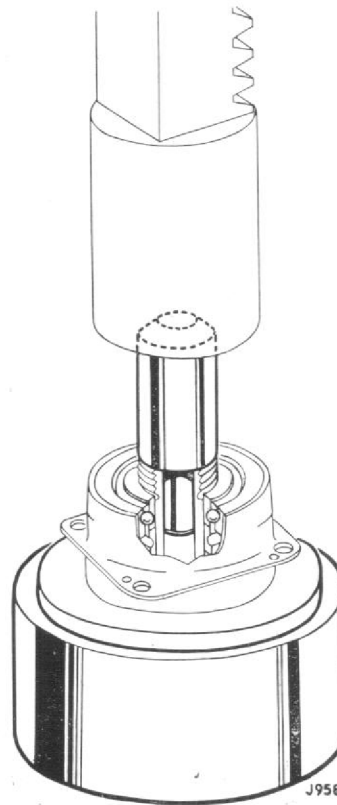


Fig. 6. Split bush T.74756, pot fixture T.74757, and adapter T.74748, for removing bearing from lower driving gear.

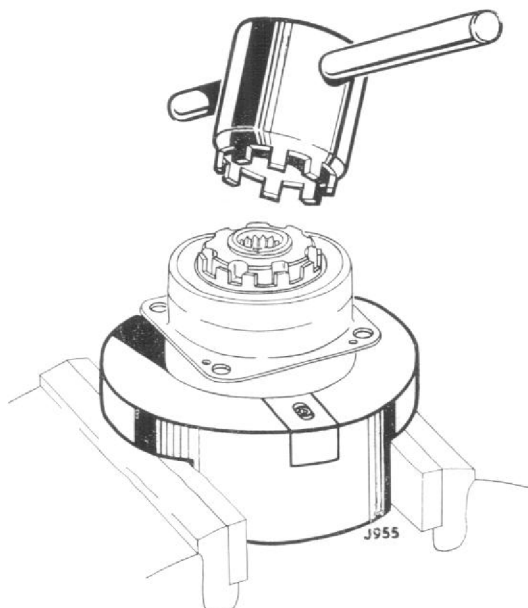


Fig. 5. Vice block T.74753 and spanner T.74755, for removing ring nut from lower driving gear assembly.

T.74757 and using adapter T.74758, press out the lower driving gear, Fig. 6.

4. Remove the internal circlip from the housing and set the housing, short end from flange uppermost, on the reverse end of pot fixture T.74757.
5. Pass the expanding collet end of extractor T.74759 through the bore of the first ball bearing and align it with the spacer, just clear of the lower ball bearing. Tighten the centre nut of the extractor to expand the collet within the bore of the spacer, and press down the extractor by hand to push out the lower ball bearing, Fig. 7.
6. Unscrew the centre nut of the extractor to free the collet from the spacer and remove the extractor; remove the housing from the pot fixture.
7. Remove the spacer and the remaining circlip and replace the assembly on pot fixture T.74757 as before—short end from flange uppermost. Use adapter T.74752 to press out

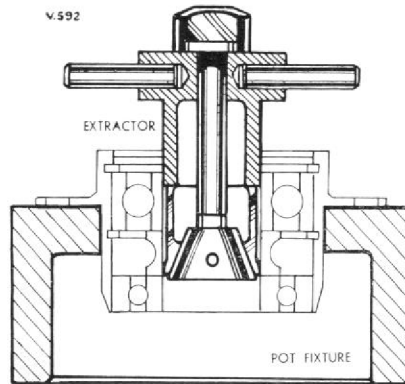


Fig. 7. Pot fixture T.74757 and extractor T.74759 for removing the upper bearing from lower driving gear bearing housing.

the remaining ball bearing, Fig. 8.

BREATHER TUBE

1. Remove the hexagonal plug adjacent to the lower driving gear assembly housing which secures the breather tube plug and spring.
2. Extract the split pin which secures the breather cap to the upper end of the breather tube; unscrew and remove the breather cap together with the spring.
3. Press the breather tube down until the collar at the lower end is showing and withdraw the breather tube from the lower end.

MISCELLANEOUS

1. Unlock and remove the hexagonal plug and tab washer, situated near the breather tube plug, which blanks the end of the front bearing oil duct.

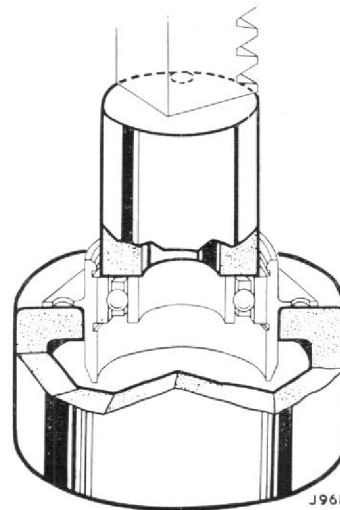


Fig. 8. Pot fixture T.74757 and adapter T.74752, for removing lower bearing from lower driving gear bearing housing.

2. Tie together all loose parts of the dismantled drive assemblies; wrap the ball bearings in grease-proof paper and place all the components in a box marked with the engine number.
3. Unlock and remove the eight $\frac{1}{4}$ in. B.S.F. plain nuts and tab washers which secure the four air bleed aperture protection plates; remove the protection plates.
4. Remove the banjo bolt, banjo, and washers for the front bearing oil feed also the oil drain unions and washers.

GHOST 48 Mk. 2 AIR-INTAKE

FRONT BEARING

1. Remove the front bearing by applying the sequence of operations detailed for the 48 Mk. 1 front bearing, page 1.

TRANSFERRING AIR-INTAKE TO ERECTING STAND

1. Using two lifting slings T.70454 as illustrated in chapter 23, Fig. 24, transfer the air-intake to erecting stand T.72381 and using $\frac{5}{16}$ in. B.S.F. slave bolts, washers and nuts, secure it to the erecting stand.

UPPER DRIVING GEAR AND STARTER DOG

1. Repeat the instructions detailed for the same assembly on the 48 Mk. 1, page 2.
2. Position the housing and gear assembly, gear downwards, in pot fixture T.77740; using adapter T.77741, Fig. 9, press the gear out of the housing complete with the inner roller race.

3. Place the gear and inner roller race, gear uppermost, on pot fixture T.77740 and position the three pins of adapter T.77742 in the holes provided in the gear web; press off the inner roller race for the first $\frac{1}{2}$ in., Fig. 10; remove the adapter.
4. Position the reduced diameter of extractor T.77743 centre pad in the bore of the gear, engage the claws under the inner roller race and draw the inner roller race clear of the gear, Fig. 11.
5. Remove the retaining ring which secures the outer race of the roller bearing in the housing.
6. Position the housing on pot fixture T.77740 and using adapter T.77744, press out the outer roller and spacers.

LOWER DRIVING GEAR

1. Unlock and remove the three $\frac{1}{4}$ in. plain nuts and tab washers which secure the lower driving gear assembly to the air-intake; withdraw

the assembly.

2. Position the assembly in vice block T.77231, open up the cup locking washer and using spanner T.74755, remove the ring nut; remove the cup locking washer and plain washer.
3. Position the housing and gear assembly, gear downwards on pot fixture T.77745 and using adapter T.77746, press out the gear complete with the inner roller race.
4. Use extractor T.77747 to remove the inner roller race.
5. Remove the retaining ring which secures the ball bearing in the housing.
6. Place the housing on pot fixture T.77745 and using adapter T.77748, press out the outer roller race and spacers.

MISCELLANEOUS

1. Remove the screwed plug, situated in the boss adjacent to the lower driving gear housing, which blanks off the front bearing oil feed duct.
2. Tie together all loose parts of the dismantled drive assemblies; wrap all the ball bearings in

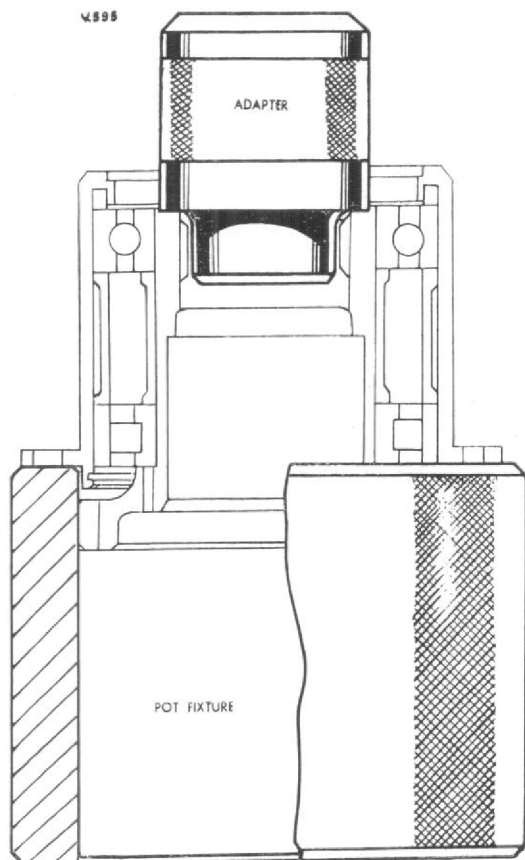


Fig. 9. Pot fixture T.77740 and adapter T.77741 for pressing the upper driving gear and inner roller race out of the housing.

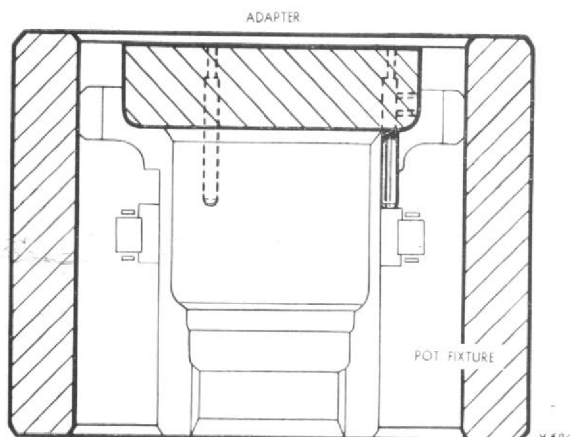


Fig. 10. Pot fixture T.77740 and adapter T.77742 for pressing the inner roller race off the upper driving gear.

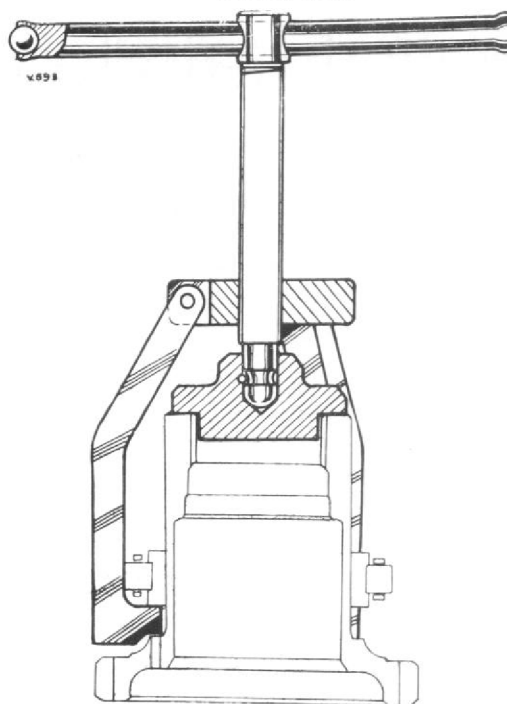


Fig. 11. Extractor T.77743 for drawing the inner roller race clear of the upper driving gear.

grease-proof paper and place all the components in one box marked with the engine number.

3. Remove the retaining rings which secure the four air bleed aperture protection plates and remove the protection plates.
4. Remove the four $\frac{1}{4}$ in. B.S.F. plain nuts, spring and plain washers which secure the cover to the bottom aperture in the front of the air-intake.
5. Remove the front bearing oil feed union and washer from the port side of the air-intake.

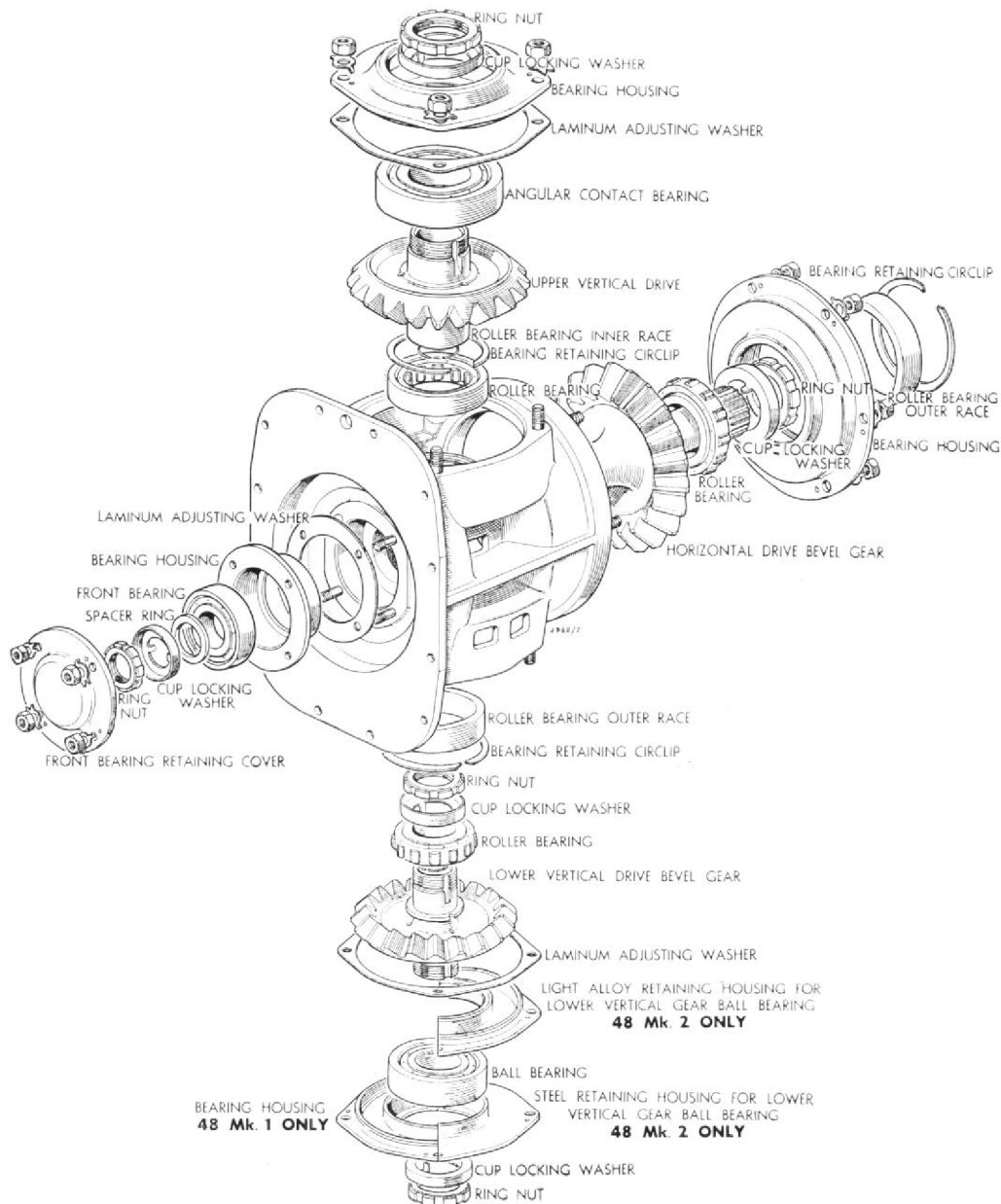


Fig. 1. Exploded view of centre housing assembly. The components which are annotated to show that they are peculiar to the 48 Mk. 1 or 48 Mk. 2, are normally symmetrical in shape, but in order to clarify the difference in these particular components they are shown as half-sections in this illustration.

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