

## DESCRIPTION OF ENGINE TYPES 1600 C (616/15) and 1600 SC (616/16)

### GENERAL

The 1600 C engine (Design No. 616/15) is an improved version of the 1600 S engine (616/12); the 1600 SC engine (616/16) is an improved version of the 1600 S-90 (616/7).

The following outline is for comparison with the 1600 S and 1600 S-90 engines. Minor modifications which are of insignificant nature are not included herein.

### CRANKCASE

The cast light alloy crankcase consists of two halves and a timing gear cover. The three parts are machined to form one complete assembly; as such, they should not be replaced individually although it is possible to replace the timing gear cover alone.

To simplify stocking, identical crankcases are utilized for both engine types, i. e., the 1600 C and 1600 SC. To ensure good seating of the split, steel-reinforced main bearing inserts, grooves have been machined into the crankcase bearing seats.

### CRANKSHAFT AND CONNECTING RODS

The four connecting rods ride on plain-bearing crankshaft journals and are provided with exchangeable, steel-reinforced, tri-metal bearing inserts.

All connecting rods accommodate bronze bushings for the piston pins.

The 1600 C and 1600 SC crankshafts are identical in dimensions, material, and fabrication features; the only difference in the 1600 SC crankshaft is that it has counter weights for better balance.

Both engines employ soft-nitrited crankshafts. The 1600 C and 1600 SC crankshafts ride in 4 main bearings. Bearing 1 and 4 are light-alloy sleeves, bearings 2 and 3 are split, steel-backed lead-bronze inserts. The diameter of main bearing journal is, in both engines, as follows: Bearing 1 = 50 mm diameter (1.969 in.), Bearings 2 and 3 = 55 mm (2.165 in.), and Bearing 4 = 40 mm (1.574 in.).

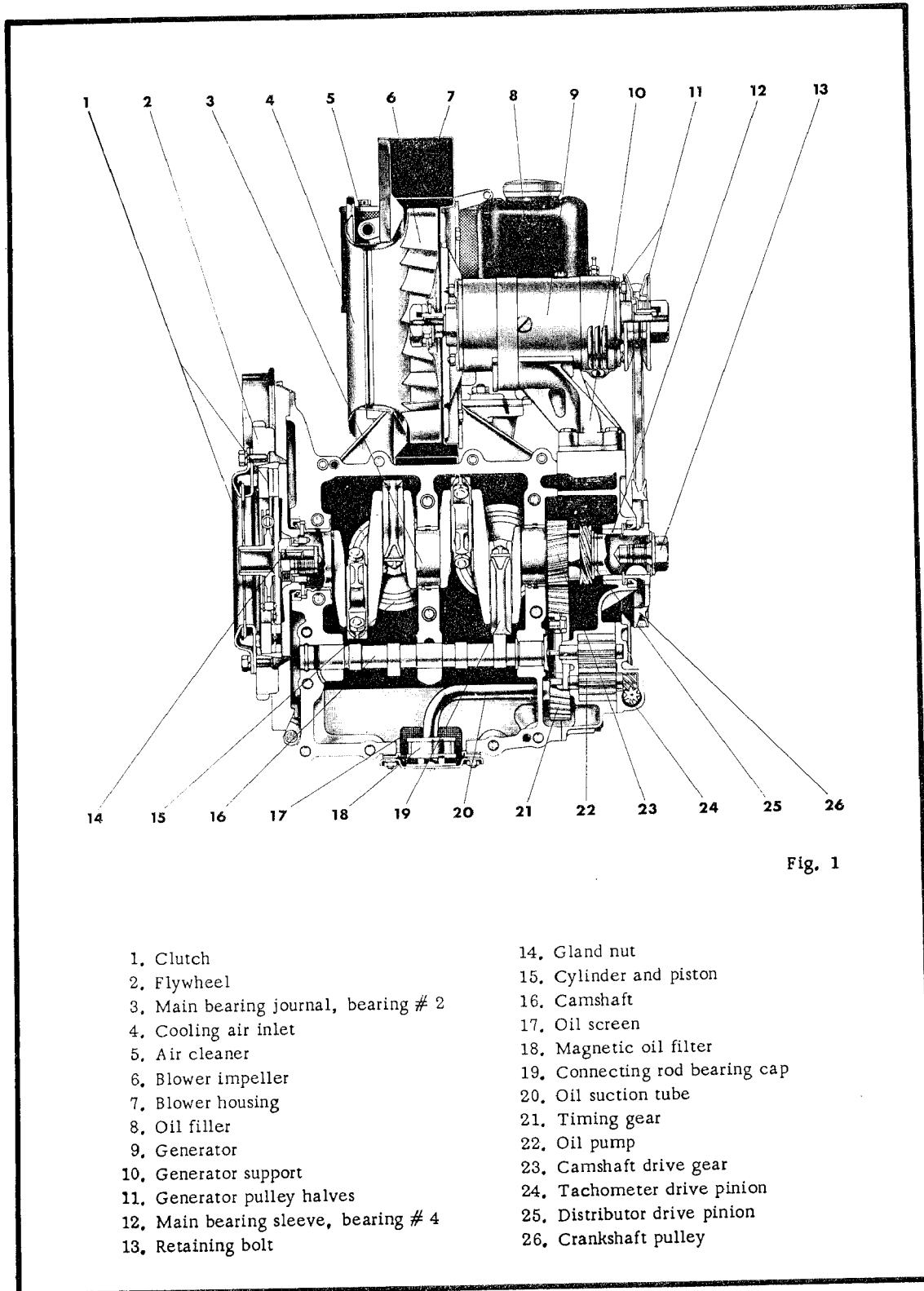


Fig. 1

- |                                      |                                |
|--------------------------------------|--------------------------------|
| 1. Clutch                            | 14. Gland nut                  |
| 2. Flywheel                          | 15. Cylinder and piston        |
| 3. Main bearing journal, bearing # 2 | 16. Camshaft                   |
| 4. Cooling air inlet                 | 17. Oil screen                 |
| 5. Air cleaner                       | 18. Magnetic oil filter        |
| 6. Blower impeller                   | 19. Connecting rod bearing cap |
| 7. Blower housing                    | 20. Oil suction tube           |
| 8. Oil filler                        | 21. Timing gear                |
| 9. Generator                         | 22. Oil pump                   |
| 10. Generator support                | 23. Camshaft drive gear        |
| 11. Generator pulley halves          | 24. Tachometer drive pinion    |
| 12. Main bearing sleeve, bearing # 4 | 25. Distributor drive pinion   |
| 13. Retaining bolt                   | 26. Crankshaft pulley          |