

## SECTION 1

## TOOLS AND EQUIPMENT

1. In this section standard tools which are in general use on all engines are not referred to, although the necessary selection is included in the Flight Servicing Kit.
2. In most instances the method of using the special tools does not require explanation. Where information is considered necessary, it is included in the appropriate chapter.

| Component and application                                                           | Tool                                                          | Part No.                                             | Ref.No.                         |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------|---------------------------------|
| <u>Acceleration control unit</u>                                                    |                                                               |                                                      |                                 |
| Adjusting pressure drop section<br>(Mk.109, pre-Mod.5326)                           | Spanner, adjusting                                            | BA.67127                                             | 64VV/735                        |
| (Mk.115, 121, 122,<br>pre-Mod.5326)                                                 |                                                               | GT.6972                                              | 64VV/2513                       |
| Adjusting pressure drop section<br>(Mod.5326)                                       | Assembly,<br>'Tee' spanner                                    | AK.368                                               | 64VV/1193                       |
| <u>Combined fuel control unit</u>                                                   |                                                               |                                                      |                                 |
| Drain b.p.c. unit                                                                   | Spanner, ring<br>serrated                                     | GT.4868                                              | 64VV/2957                       |
| Adjust ground idling valve                                                          | Spanner, adjusting                                            | GT.6973                                              | 64VV/2514                       |
| Adjust b.p.c. clicker<br>(Mod.5327)                                                 | Spanner, special                                              | GT.10108                                             | 64VV/3053                       |
| <u>Starter fairing</u>                                                              |                                                               |                                                      |                                 |
| Setscrews, adjacent to l.h.<br>hinge bracket, starter<br>fairing retaining (Mk.109) | Spanner, ring<br>extension<br>Extension bar<br>Ratchet handle | AK.195<br>AK.18 or Ak.27<br>AK.5 or AK.194           | 64VV/739<br>-<br>64JJ/127       |
| <u>High-energy igniters</u>                                                         |                                                               |                                                      |                                 |
| H.E. igniter plug                                                                   | Socket                                                        | AK.166 or<br>AK.142                                  | IL/164                          |
| <u>Fuel pumps</u>                                                                   |                                                               |                                                      |                                 |
| Nuts, retaining fuel pump                                                           | Spanner, ring                                                 | AK.628                                               | 64VV/2230                       |
| Setscrews, retaining fuel pumps                                                     | Socket<br>Extension bar<br>Ratchet handle                     | AK.157 or AK.167<br>AK.16 or AK.25<br>AK.5 or AK.194 | 64VV/2546<br>IL/160<br>64VV/127 |

| Component and application                              | Tool                                  | Part No. | Ref.No.      |
|--------------------------------------------------------|---------------------------------------|----------|--------------|
| Bleed air from fuel system                             | Tool,air bleed                        | AK.889   | 64VV/2805    |
|                                                        | Tubing,transparent plastic,90 in.long | UT.121   | 64AE/36      |
| <u>Tachometer generator</u>                            |                                       |          |              |
| Setscrews,securing tachometer generator                | Spanner,ring                          | AK.628   | 64VV/2230    |
| <u>Electrical harness junction box</u>                 |                                       |          |              |
| Adapter,breeze plug,size 'A'                           | Spanner,box                           | GT.9047  | 64VV/2689    |
| Adapter,breeze plug,size 'C' (Mk.109)                  | Spanner,box                           | GT.9048  | 64VV/2691    |
| Adapter,breeze plug,size 'Z'                           | Spanner,box                           | GT.9049  | 64VV/2690    |
| Nuts,breeze plugs (Mk.109)                             | Spanner,jaw,6 B.A. x 7 B.A.           | D.39651  | -            |
| <u>Intake guide vane ram</u>                           |                                       |          |              |
| I.G.V. ram orifice adjustment                          | Spanner,adjusting                     | GT.6969  | 64VV/2510    |
| Setting i.g.v. ram                                     | Pointer,spring clip                   | GT.6975  | 64VV/2272    |
| <u>Starter drive</u>                                   |                                       |          |              |
| Gearwheel,driving epicyclic train, from starter drive  | Tool,dogging                          | HW.18699 | 64VV/919     |
|                                                        | Extractor                             | HW.20720 | 64VV/734     |
| <u>Auxiliary gearbox</u>                               |                                       |          |              |
| Auxiliary gearbox driveshaft coupling (Mk.115,121,122) | Spanner,                              | AK.299   | 64VV/3138    |
|                                                        | Tool,holding                          | AK.300   | 64VV/3139    |
| <u>Turbo-starter (triple-breech)</u>                   |                                       |          |              |
| Starter breeches - testing starting circuit            | Dummy breech caps                     | GT.6652  | 37F/12034    |
| Remove carbon deposit from breech barrel               | Assembly,wire brush                   | AK.403   | 37F/12032    |
| <u>Low pressure turbine wheel</u>                      |                                       |          |              |
| Locking plate                                          | Extractor                             | HW.23275 | 64VV/1121    |
| Retaining nut                                          | Extension socket                      | HW.14078 | 64VV/481     |
|                                                        | Hand wrench                           | HB.47909 | 64VV/6070053 |
|                                                        | 10: 1 reduction unit                  | HC.10    | 64VV/630     |
|                                                        | Torque wrench                         | 1703029  | NIV          |
| L.P. turbine wheel                                     | Dogging fixture                       | HW.14077 | 64VV/480     |
|                                                        | Extractor                             | HW.20729 | 64VV/633     |

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| Component and application                         | Tool                                | Part No.  | Ref.No.      |
|---------------------------------------------------|-------------------------------------|-----------|--------------|
| <u>Starter drive</u>                              |                                     |           |              |
| Housing - remove                                  | Extractor                           | HW.37007  | 64VV/2150    |
| Nut retaining coupling assembly - Remove/fit      | Spanner                             | GT.8685   | 64VV/2806    |
| Cupwasher - Lock                                  | Special punch                       | HW.13656  | 64VV/391     |
| Spring drive assembly from compressor shaft       | Withdrawing tool                    | HW.14692  | 64VV/256     |
| Adjust washer - Remove                            | Withdrawing tool                    | HW.14596  | 64VV/248     |
| Internal nut - Retaining outer spring drive shaft | Spanner                             | HW.14582  | 64VV/247     |
| <u>Front bearing housing</u>                      |                                     |           |              |
| Front bearing housing - Remove/fit                | Dummy front bearing housing Adaptor | HW.30117  | 64VV/1639    |
|                                                   | Protective cover                    | HW.33099  | 64VV/3079    |
| Remove dowels                                     | Extractor                           | HW.29110  | 64VV/1640    |
|                                                   | Spanner - Jaw extension *           | HW.18677  | 64VV/791     |
|                                                   | Spanner - Jaw extension *           | D.33770/1 | 64VV/6070048 |
|                                                   | Torque wrench                       | D.33771/1 | 64VV/6070049 |
|                                                   | Adaptor                             | 1703080   | 64SY/18      |
|                                                   |                                     | AK.137    | 64Q/469      |
| <u>Top-half compressor casing</u>                 |                                     |           |              |
| Top-half compressor casing                        | Nut tightening template - Starboard | HW.16494  | 64VV/922     |
|                                                   | Nut tightening template - Port      | HW.16495  | 64VV/923     |
| Remove dowels                                     | Extractor                           | GT.6285   | 64VV/3062    |
|                                                   | Spanner - Jaw extension             | D.33291/1 | 64VV/6070046 |
|                                                   | Eye slinging                        | BA.895    | 64VV/209     |

\* Also used for top-half compressor casing

