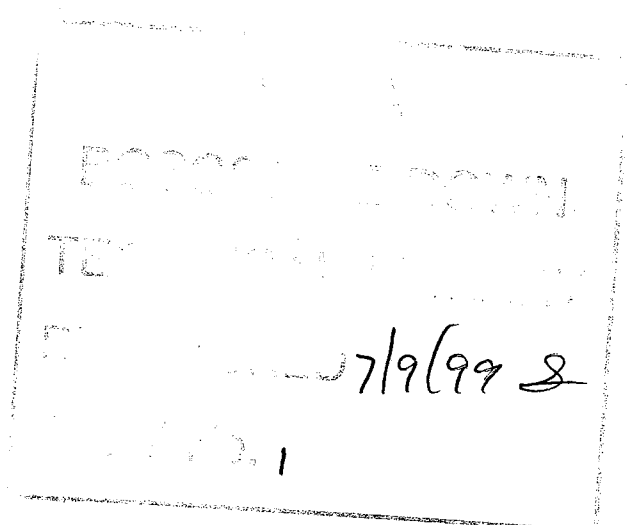


JACK (BAY SERVICE) FAIREY HYD LTD

PART NO. AH 33523



AMENDMENT RECORD CERTIFICATE

1. This certificate is for Ministry of Defence (Air) ALs only.
2. Amendments are to be inserted in numerical sequence except where Non-Availability slips for particular A.L.s are issued.

| A.L.<br>No              | A.L. MONTH AND<br>YEAR OF ISSUE | AMENDMENT INCORPORATED<br>SIGNATURE | DATE OF<br>INCORPORATION |
|-------------------------|---------------------------------|-------------------------------------|--------------------------|
| 1                       |                                 | <i>J. Green</i>                     | 28-2-84                  |
| 2                       |                                 |                                     |                          |
| 3                       |                                 |                                     |                          |
| 4                       |                                 |                                     |                          |
| 5                       |                                 |                                     |                          |
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| 20                      |                                 |                                     |                          |
| E0299 (1) Issued May 74 |                                 |                                     |                          |

| ITEM No                 | ITEM | OPERATION |
|-------------------------|------|-----------|
|                         |      |           |
| EO299 (2) Issued May 74 |      |           |

PF7

| REF NO.   | EQUIPMENT AND TOOLS                     | QTY |
|-----------|---|-----|
|           | Kits Tool Airframe Fitter to Scale A2   |     |
|           | AP830 Vol 3 Pt A                        | 1   |
| 1A/4225   | Balance, Spring, 0-30 lb                | 1   |
| 4G/5902   | Test Rig, Powered Flying Controls, Mk 2 | 1   |
| 27KF/106  | Mandrel, Seal Expansion Pt No. FHQ 793  | 1   |
| 27KF/683  | Tool, Seal Manipulating Pt No. FHQ 100  | 1   |
| 27KF/688  | Tool, Manipulating Pt No. FHQ 164       | 1   |
| 27KF/697  | Block, Connecting Pt No. FHQ 102        | 1   |
| 27KF/1250 | Spanner, Peg Pt No. FHQ 270             | 1   |
| 27KF/1244 | Vice, Blocks Pt No. FHQ 271             | 1   |
| 27KF/3230 | Washer, Reseating Pt No. FHQ 2284       | 1   |
| 27Y/2374  | Spanner, Hook Pt No. RS181/16           | 1   |
| 1C/7150   | Wrench, Torque, 60-360 lbf in.          | 1   |
| 1B/4229   | Iron, Soldering, Electric               | 1   |

SPARES

Refer to AP4515P Vol 3 Pt 1 Sect 2 Chap 1

MATERIALS

NATO CODE NO.

|             |                                     |       |             |
|-------------|-------------------------------------|-------|-------------|
| 30A/3055    | Wire Locking, Nickel Chrome, 22 SWG |       | As required |
| 34B/2241973 | Grease, XG-287                      | G-354 | " "         |
| 34B/9100572 | Oil, OM-15                          | H-515 | " "         |
| 30B/1214    | Solder, Tinmans, Grade C            |       | " "         |
| 33C/525     | Flux, Solder                        |       | " "         |

SERVICING NOTES

1. AP105D-0001-5F is to be complied with throughout the work detailed in this schedule.
2. Clean all components except pre-packed bearings in Oil, OM-15.
3. All components, except bearings, are to be immersed in Oil, OM-15 immediately before assembling.

| ITEM No       | ITEM                               | OPERATION  |
|---------------|------------------------------------|--|
| 1.            | <u>Preparation</u>                 |  |
| 1.1           | Servicing Notes.                   | Read.  |
| 2.            | <u>Dismantling</u>                 |  |
| 2.1           | By-pass valve )                    |  |
|               | attachment bolts. )                | Remove.  |
| 2.2           | By-pass valve. )                   |  |
| 2.3           | By-pass valve.                     |  |
|               | (a) Spring. )                      | Remove.  |
|               | (b) Piston. )                      |  |
|               | (c) Piston seal.                   | Remove and discard.  |
| 2.4           | Special washer. )                  | Remove and discard from jack   |
| 2.5           | Special seal. )                    | counterbore.   |
| 2.6           | Jack body.                         | Support in vice using vice blocks.   |
| 2.7           | Identification plate and dowel.    | Remove.  |
| 2.8           | Locking collar.                    | Slacken, using hook spanner.   |
| 2.9           | Extension end.                     | Remove, using peg spanner.<br>Note: Extension end bearing is not to be disturbed unless defective. |
| 2.10          | Extension end.                     |  |
|               | (a) Locking washer.                | Remove and discard.  |
|               | (b) Locking collar. )              |  |
|               | (c) Ferrules. )                    | Remove.  |
|               | (d) Seals and inserts.             | Remove and discard.  |
| 2.11          | Jack body.                         | Remove ram.  |
| 2.12          | Jack ram piston seals and inserts. | Remove and discard.  |
| 2.13          | Platform protection cover. )       |  |
|               | Protection plugs. )                | Remove.  |
| 2.14          |                                    |  |
| 2.15          | Jack body.                         | Remove from vice and vice blocks.  |
| SM 83/517 (2) |                                    | Continued overleaf   |

| ITEM No | ITEM   | OPERATION  |
|---------|--|--|
| 2.16    | Duct blanking plugs.   | (i) Remove.<br>(ii) Discard bonded seals.  |
| 2.17    | Jack body seals and inserts.   | Remove and discard.  |
| 3.      | <u>Examination</u>   |  |
| NB      | The extension end bearing is pre-packed, do not contaminate with oil while cleaning extension end. |  |
| 3.1     | Extension end bearing.   | (i) Clean. (Servicing Note 2 refers).<br>(ii) Examine.   |
| 3.2     | Locking collar.  | )  |
| 3.3     | Ferrules.  | )  |
| 3.4     | Jack ram.  | )  |
| 3.5     | Jack body.   | )  |
| 3.6     | Connecting pieces.   | )  |
| 3.7     | By-pass valve housing.   | ) (i) Clean.   |
| 3.8     | By-pass valve piston.  | ) (ii) Examine.  |
| 3.9     | By-pass valve spring.  | )  |
| 3.10    | By-pass valve attachment bolts.  | )  |
| 3.11    | Duct blanking plugs.   | )  |
| 3.12    | Identification plate and dowel.  | )  |
| 4.      | <u>Assembling</u>  |  |
| 4.1     | Jack body.   | Support in vice using vice blocks.   |
| 4.2     | Jack ram piston.<br>(a) Backing seals.<br>(b) Sealing rings.                                       | ) Fit to piston head. (Figs 1 and 2 refer).  |
| 4.3     | Jack body seals and inserts.   | ) (i) Fit.   |
| 4.4     | Extension end seals.   | ) Note: Ensure White inserts (Pre Mod FHB 157) or fabric faces (Pre Mod FHB 157) are towards atmosphere (Fig 1 refers).<br>(ii) Expand into grooves using mandrel. |
| 4.5     | Jack ram.  | Fit.   |
| 4.6     | Extension end.<br>(a) Locking collar.<br>(b) Locking washer.<br>(c) External seal.                 | ) Fit.   |
| 4.7     | Extension end.   | (i) Fit.<br>(ii) Ensure locating dowel holes coincide.   |
| 4.8     | Locking collar.  | Tighten.   |

| ITEM No | ITEM  | OPERATION  |
|---------|---|--|
| 4.      | <u>Assembling</u> (Contd)   |  |
| 4.9     | Duct blanking plugs.  | (i) Fit new bonded seals.<br>(ii) Fit.   |
| 4.10    | Jack body.  | Remove from vice and vice blocks.  |
| 4.11    | Special seal.   | ) Fit to jack counterbore.   |
| 4.12    | Special washer.   |  |
| 4.13    | By-pass valve piston seal.  | Fit.   |
| 4.14    | Reseating washer.   | Fit. (AP105D-1301-1).  |
| 4.15    | By-pass valve.  | ) Fit.   |
|         | (a) Piston.   |  |
|         | (b) Spring.   |  |
| 4.16    | Reseating washer.   | Remove.  |
| 4.17    | By-pass valve.  | Refit.   |
| 4.18    | Connecting pieces seals.  | Fit.   |
| 4.19    | Connecting pieces.  | Refit.   |
| 5.      | During this Item reference is to be made to Fig.3 for connexion identification.<br><u>Testing</u> |  |
| 5.1     | Connecting block (Pt No.FHQ 102).   | Fit to jack platform.  |
| 5.2     | Connexion E.  | Connect to hydraulic test rig.   |
| 5.3     | Connexion A and D.  | Fit blanks.  |
| 5.4     | Connexion B and C.  | Connect to hydraulic test rig in order to achieve pressure and return selection. |
| 5.5     | Connexion E.  | Apply pressure of between 2880 and 3120 lbf/in2.                                 |
| 5.6     | Connexion B and C.  | Apply pressure alternately to stroke jack ram until all air is expelled.         |
| 5.7     | Connexion B, C and E.   | Release pressure.  |
| 5.8     | Connexion C.  | (i) Disconnect from test rig supply.<br>(ii) Connect to test rig return.         |



| ITEM No             | ITEM               | OPERATION  |
|---------------------|--------------------|--|
| 5.9                 | Connexion B and E. | (i) Apply pressure of between 3850 and 4150 lbf/in <sup>2</sup> .<br>(ii) Maintain for 3 minutes.<br>(iii) Ensure no external leakage. |
| 5.10                | Connexion B.       | (i) Reduce pressure to between 1 and 10 lbf/in <sup>2</sup> .<br>(ii) Maintain for 3 minutes.<br>(iii) Ensure no external leakage.     |
| 5.11                | Connexion B and E. | Release pressure.  |
| 5.12                | Connexion B.       | (i) Disconnect from test rig supply.<br>(ii) Connect to test rig return.   |
| 5.13                | Connexion C.       | (i) Disconnect from test rig return.<br>(ii) Connect to test rig supply.   |
| 5.14                | Connexion C and E. | (i) Apply pressure of between 3850 and 4150 lbf/in <sup>2</sup> .<br>(ii) Maintain for 3 minutes.<br>(iii) Ensure no external leakage. |
| 5.15                | Connexion C.       | (i) Reduce pressure to between 1 and 10 lbf/in <sup>2</sup> .<br>(ii) Maintain for 3 minutes.<br>(iii) Ensure no external leakage.     |
| 5.16                | Connexion E and C. | Release pressure.  |
| 5.17                | Connexion B.       | (i) Disconnect from test rig return.<br>(ii) Connect to test rig supply.   |
| 5.18                | Connexion C.       | Disconnect from test rig.  |
| 5.19                | Connexion B and E. | (i) Apply pressure of between 2880 and 3120 lbf/in <sup>2</sup> .<br>(ii) Maintain pressure for 3 minutes.                             |
| 5.20                | Connexion C.       | During fourth minute measure seepage. This is not to exceed 65 cc.   |
| 5.21                | Connexion B and E. | Release pressure.  |
| 5.22                | Connexion B.       | Disconnect from test rig.  |
| 5.23                | Connexion C.       | Connect to test rig supply.  |
| 5.24                | Connexion E and C. | (i) Apply pressure of between 2880 and 3120 lbf/in <sup>2</sup> .<br>(ii) Maintain pressure for 3 minutes.                             |
| 5.25                | Connexion B.       | During fourth minute measure seepage. This is not to exceed 65 cc.   |
| 5.26                | Connexion E and C. | Release pressure.  |
| SM 83/517 (3A) CSDE |                    | Continued  |

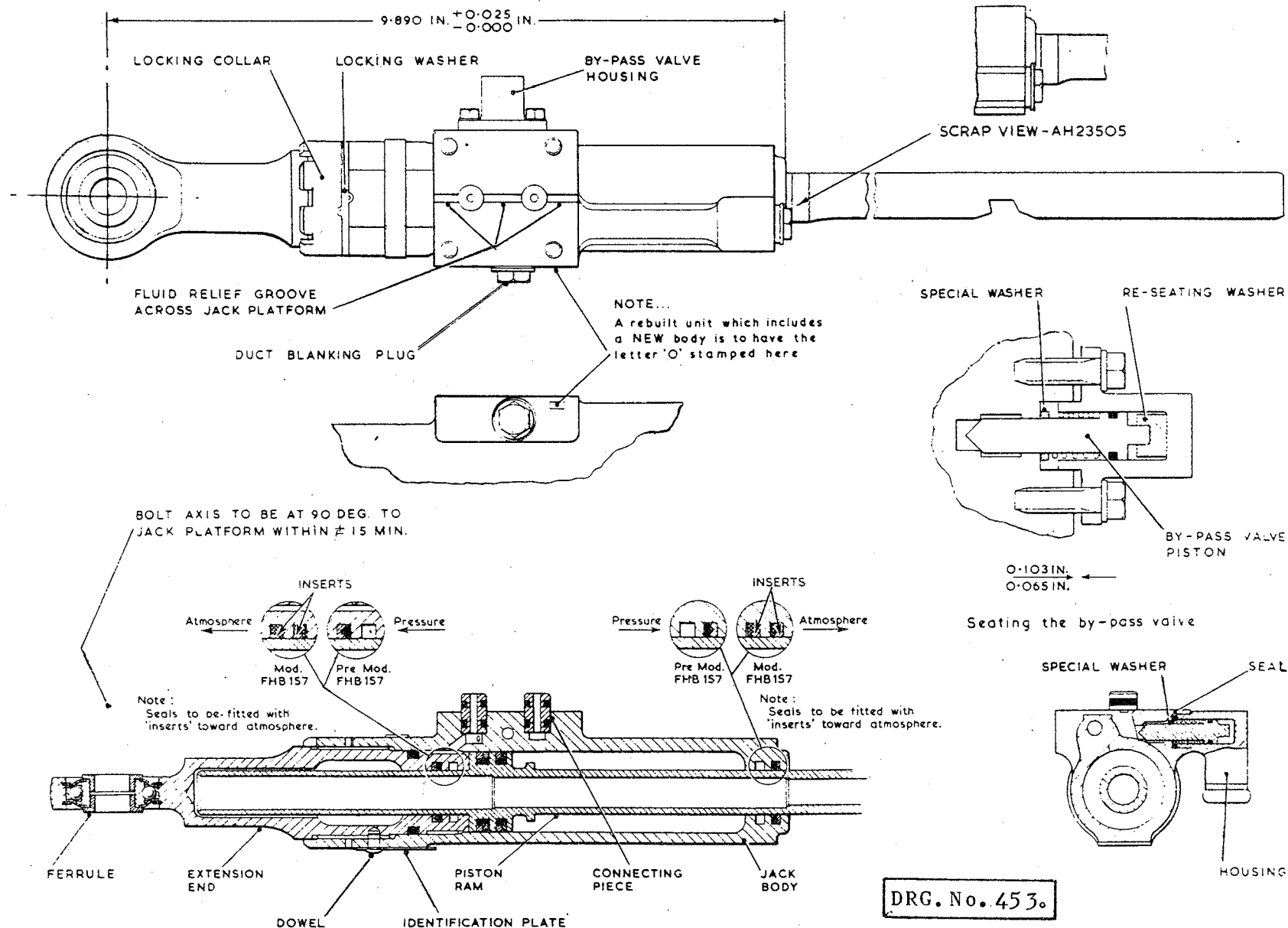
| ITEM No                 | ITEM                      | OPERATION  |
|-------------------------|---------------------------|--|
| 5.                      | <u>Testing</u> (Contd)    |  |
| 5.27                    | Connexion B and C.        | Connect to test rig in order to achieve alternate pressure and return selection.   |
| 5.28                    | Connexion E.              | Apply pressure of between 2880 and 3120 lbf/in <sup>2</sup> .  |
| 5.29                    | Connexion B and C.        | (i) Apply pressure alternately to stroke jack ram.<br>(ii) Check measurement is between 3.090 and 3.155 in.  |
| 5.30                    | Connexion B, C and E.     | Release pressure.  |
| 5.31                    | Connexion B and C.        | Connect to test rig return.  |
| 5.32                    | Connexion E.              | Disconnect.  |
| 5.33                    | Jack ram.                 | (i) Stroke manually to between 20 and 25 times.<br>(ii) Measure resistance in both directions using spring balance. Resistance is not to exceed 27 lb.   |
| 6.                      | <u>By-pass Valve Test</u> |  |
| 6.1                     | Connexion B and C.        | Disconnect from test rig return.   |
| 6.2                     | Connexion E and B.        | (i) Connect to common test rig supply.<br>(ii) Gradually apply pressure and note pressure at which flow from connexion C falls to normal seepage rate. This pressure is not to exceed 500 lbf/in <sup>2</sup> .<br>(iii) Increase pressure to between 2880 and 3120 lbf/in <sup>2</sup> .<br>(iv) Decrease pressure and note pressure when flow recommences at connexion C. This is not to be less than 200 lbf/in <sup>2</sup> .<br>(v) Release pressure. |
| 6.3                     | Connexion B.              | Disconnect.  |
| 6.4                     | Connexion C.              | Connect to common pressure supply with connexion E.  |
| EO299 (7) Issued May 74 |                           | Continued overleaf   |

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| ITEM No    | ITEM                            | OPERATION   |
|------------|---------------------------------|---|
| 6.5        | Jack.                           | Repeat Sub-item 6.2, Operations (ii) to (v) inclusive, but observing flow from connexion B.                   |
| 6.6        | Connexion E and C.              | Disconnect.   |
| 7.         | <u>Completion</u>               |   |
| 7.1        | Jack.                           | Ensure fully retracted.   |
| 7.2        | By-pass valve protection plug.  | (i) Fit seal.<br>(ii) Fit.  |
| 7.3        | Connecting block.               | Remove from jack platform.  |
| 7.4        | Connecting pieces.              | (i) Remove.<br>(ii) Place in polythene bag and attach to jack body.   |
| 7.5        | Protection plugs.               | ) Fit to jack platform.<br>)  |
| 7.6        | Platform protection cover.      |   |
| 7.7        | Locking washer.                 | Lock by peening into collar and jack body.  |
| 7.8        | Duct blanking plugs.            | Lock with wire.   |
| 7.9        | By-pass valve attachment bolts. | Lock together with wire.  |
| 7.10       | Ferrules.                       | (i) Lightly coat mating faces with Yellow chromate.<br>(ii) Fit to extension end.                             |
| 7.11       | Jack ram.                       | Lightly coat exposed portion with grease, XG-287.   |
| 7.12       | Identification plate and dowel. | (i) Lightly coat undersurface with Yellow chromate.<br>(ii) Fit to jack body.<br>(iii) Secure as appropriate. |
| 7.13       | Servicing forms.                | Sign.   |
| EO299 (7A) |                                 | Continued   |

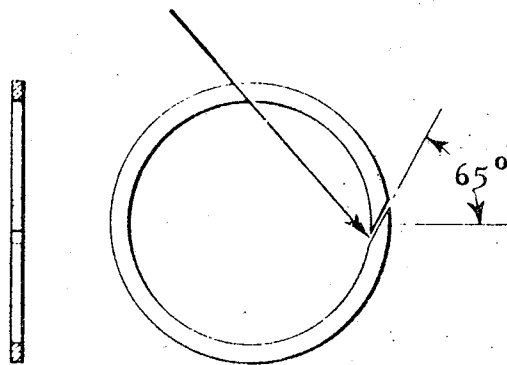
EO299 (8) Issued May 74

FIG 1



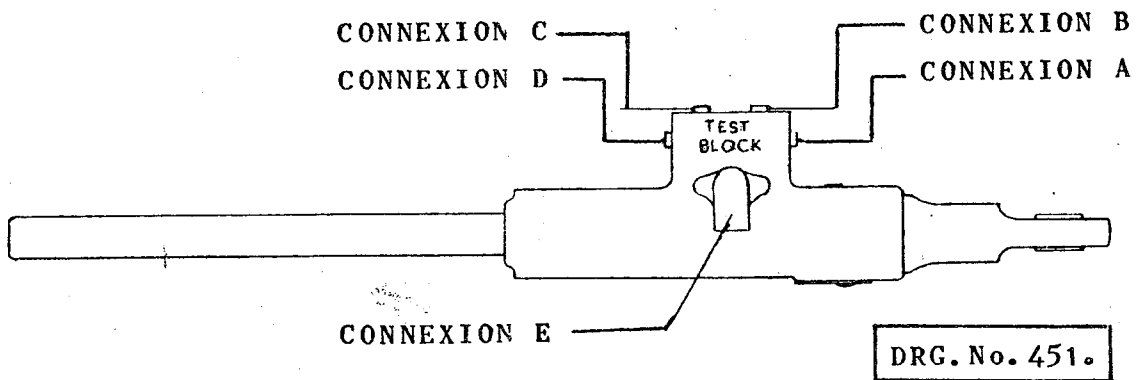
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SLIT WITH RAZOR-EDGED BLADE IMMEDIATELY  
PRIOR TO ASSEMBLY INTO COMPONENT



DRG. No. 450.

FIG 2 - PISTON HEAD SEALING RING



DRG. No. 451.

FIG 3 - TEST CONNEXIONS

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