



# FUEL PUMPS

## SINGLE TYPE

# REPAIR INSTRUCTIONS

### DISMANTLING

Before commencing to dismantle the pump, thoroughly clean the exterior and make a file mark across the two flanges of the pump housing, as a guide when re-assembling.

Remove the six securing screws and separate the two halves of the main casting.

Turn the diaphragm, and pull rod assembly through an angle of 90°, when it may be disconnected from its securing slot in the connecting link and withdrawn. Remove diaphragm spring.

The rocker arm pin, spring and washers, together with the rocker arm and connecting link may now be removed.

Withdraw the valve retainer screws from inside the upper casting and remove the retainer plate, valve assemblies, and valve retainer gasket.

On latest type pumps, valve retaining plates are omitted, the valve assemblies being a light tap fit into the casting.

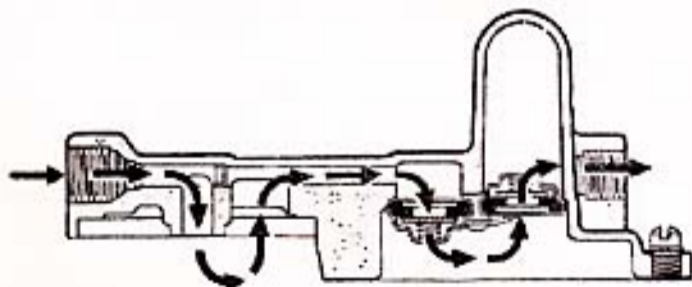
### CLEANING AND INSPECTION OF PARTS

All pump parts must be thoroughly cleaned in order to ascertain their condition. Wash valves, upper castings, filters and other parts which come into contact with the fuel in a clean paraffin bath separate from that used for dirtier components.

Upper and lower pump castings should be examined for cracks or damage and where diaphragm or engine mounting flanges are distorted these should be lightly lished to restore their original flatness. AC Repair Kits contain the items normally needed for fuel pump overhaul and all of these should be used on each job, the corresponding worn parts being discarded.

### RE-ASSEMBLY

Replace valve retainer gasket, valves, valve retainer and secure in position with two retaining screws.



Replace filter gauze and cork seating gasket in position. Refit filter bowl.

Assemble link, packing washers, rocker arm and rocker arm spring in the body.

Insert rocker arm pin through the hole in the body, at the same time engaging the packing washers, link, and the rocker arm, then spring the retaining clips into the grooves on each end of the pin. The rocker arm pin should be a tap fit in the body, and if due to wear it has more play than this, the ends of the holes in the body may be burred over slightly. On pumps fitted with 'drop-in' rocker arm pins secured by flat retainers inserted in grooves, these

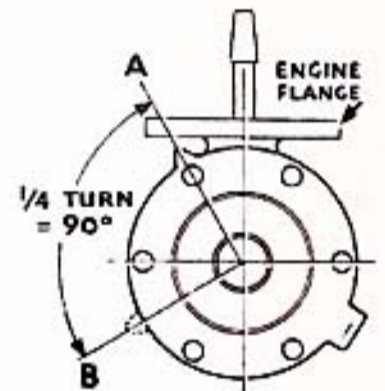
### RE-ASSEMBLY—contd.

assemblies should not be disturbed providing that the pin is tightly held with no excessive play between it and the rocker arm. Where, however, replacement of parts is necessary be sure that rocker arm pin is right home in its slots and while so held, retainers should be tapped in and secured by lightly riveting over the metal of the pump body.

For service replacement purposes always use the copper plated pin retainers as included in parts kits. Examine diaphragm pull rod oil seals, where fitted, and if worn, fit replacements supplied. A few types of fuel pumps are now equipped with the latest type cupped seal, fitting instructions for which are given on page 22.

Place the diaphragm spring in position in the pump body. Place the diaphragm assembly over the spring (the pump rod being downwards) and centre the upper end of the spring in the lower protector washer. When fitting the diaphragm assembly the small locating tabs should be

at position 'A' shown in illustration. The diaphragm assembly should then be pushed down until the flattened end of the pull rod enters the slot in the link and then turned a quarter turn to the left until the diaphragm locating tabs are at position 'B' and then they will be in line with locating mark cast on pump body. The sub-assemblies of the pump are now ready for fitting together, and this is carried out as follows:

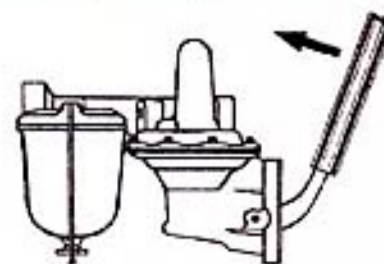


Push the rocker arm towards the pump until the diaphragm is level with the body flanges.

Place the upper half of the pump into the proper position, as shown by the mark made on the flanges before dismantling. Install the cover screws and spring washers and tighten until the heads of the screws just engage the washers.

### IMPORTANT

Before finally tightening the cover screws, the rocker arm must be held at its inward position preferably using a short piece of tube as shown



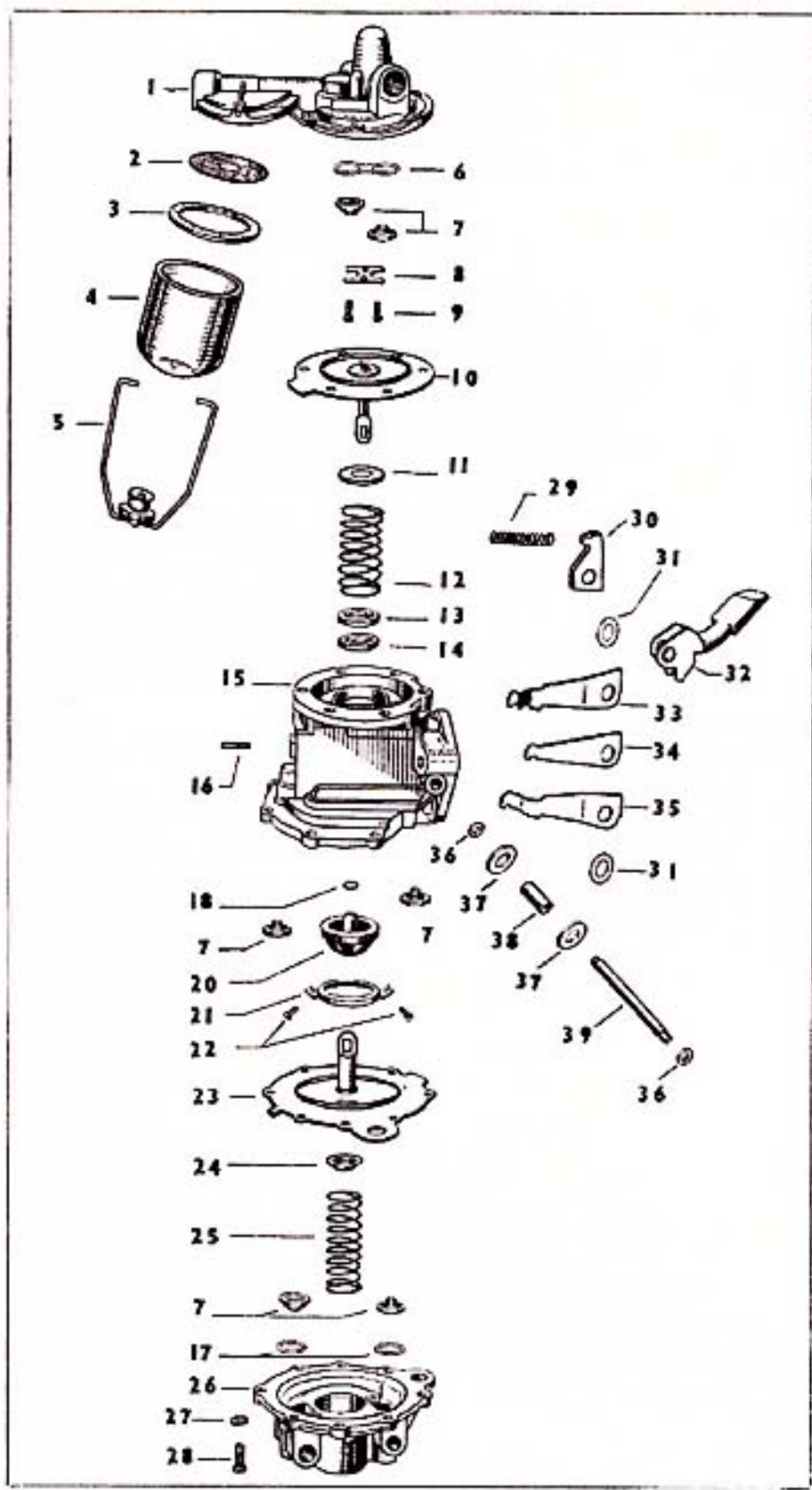
in the illustration. Sufficient pressure must be exerted to draw the diaphragm inwards until its edges no longer protrude beyond the pump flanges.

While the rocker arm is so held, the cover screws should be securely tightened, working from side to side so as to keep the pressure even.





# FUEL/VACUUM PUMPS REPAIR INSTRUCTIONS



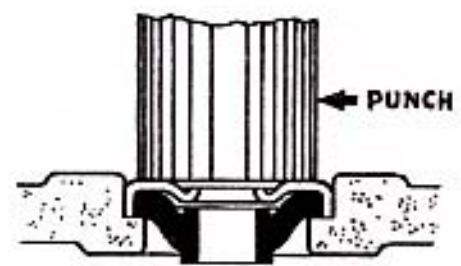
### KEY TO PART NAMES

<table border="0"> <tr><td>Illus. No.</td><td>Description</td></tr> <tr><td>1</td><td>Upper Casting</td></tr> <tr><td>2</td><td>Filter Gauze .. .. fuel</td></tr> <tr><td>3</td><td>Filter Bowl Gasket .. fuel</td></tr> <tr><td>4</td><td>Filter Bowl .. .. fuel</td></tr> <tr><td>5</td><td>Filter Bowl Retainer fuel</td></tr> <tr><td>6</td><td>Valve Gasket .. fuel</td></tr> <tr><td>7</td><td>Valve Assembly fuel and vacuum</td></tr> <tr><td>8</td><td>Valve Retainer .. fuel</td></tr> <tr><td>9</td><td>Valve Retaining Screw fuel</td></tr> <tr><td>10</td><td>Diaphragm Assembly fuel</td></tr> <tr><td>11</td><td>Spring Locator .. fuel</td></tr> <tr><td>12</td><td>Spring-Diaphragm .. fuel</td></tr> <tr><td>13</td><td>Oil Seal Retainer .. fuel</td></tr> <tr><td>14</td><td>Oil Seal .. .. fuel</td></tr> <tr><td>15</td><td>Body</td></tr> <tr><td>16</td><td>Breather Pipe</td></tr> <tr><td>17</td><td>Valve Gasket vacuum</td></tr> <tr><td>18</td><td>Oil Seal Retaining Circlip</td></tr> <tr><td>19</td><td></td></tr> <tr><td>20</td><td>Oil Seal .. vacuum</td></tr> <tr><td>21</td><td>Oil Seal Retainer vacuum</td></tr> </table>	Illus. No.	Description	1	Upper Casting	2	Filter Gauze .. .. fuel	3	Filter Bowl Gasket .. fuel	4	Filter Bowl .. .. fuel	5	Filter Bowl Retainer fuel	6	Valve Gasket .. fuel	7	Valve Assembly fuel and vacuum	8	Valve Retainer .. fuel	9	Valve Retaining Screw fuel	10	Diaphragm Assembly fuel	11	Spring Locator .. fuel	12	Spring-Diaphragm .. fuel	13	Oil Seal Retainer .. fuel	14	Oil Seal .. .. fuel	15	Body	16	Breather Pipe	17	Valve Gasket vacuum	18	Oil Seal Retaining Circlip	19		20	Oil Seal .. vacuum	21	Oil Seal Retainer vacuum	<table border="0"> <tr><td>Illus. No.</td><td>Description</td></tr> <tr><td>22</td><td>Oil Seal Screw vacuum</td></tr> <tr><td>23</td><td>Diaphragm Assembly vacuum</td></tr> <tr><td>24</td><td>Spring Seat .. vacuum</td></tr> <tr><td>25</td><td>Spring Diaphragm vacuum</td></tr> <tr><td>26</td><td>Lower Casting vacuum</td></tr> <tr><td>27</td><td>Lock Washer</td></tr> <tr><td>28</td><td>Screw Diaphragm Clamping</td></tr> <tr><td>29</td><td>Rocker Arm Spring</td></tr> <tr><td>30</td><td>Link Spacer</td></tr> <tr><td>31</td><td>Rocker Pin Shim Washer</td></tr> <tr><td>32</td><td>Rocker Arm</td></tr> <tr><td>33</td><td>Link R/H .. vacuum</td></tr> <tr><td>34</td><td>Link Centre .. .. fuel</td></tr> <tr><td>35</td><td>Link L/H .. vacuum</td></tr> <tr><td>36</td><td>Rocker Pin Retaining Washer</td></tr> <tr><td>37</td><td>Rocker Pin Spacing Washer</td></tr> <tr><td>38</td><td>Rocker Pin Bush</td></tr> <tr><td>39</td><td>Rocker Arm Pin</td></tr> </table>	Illus. No.	Description	22	Oil Seal Screw vacuum	23	Diaphragm Assembly vacuum	24	Spring Seat .. vacuum	25	Spring Diaphragm vacuum	26	Lower Casting vacuum	27	Lock Washer	28	Screw Diaphragm Clamping	29	Rocker Arm Spring	30	Link Spacer	31	Rocker Pin Shim Washer	32	Rocker Arm	33	Link R/H .. vacuum	34	Link Centre .. .. fuel	35	Link L/H .. vacuum	36	Rocker Pin Retaining Washer	37	Rocker Pin Spacing Washer	38	Rocker Pin Bush	39	Rocker Arm Pin
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### REPLACING VACUUM OIL SEALS (A) EARLY TYPE

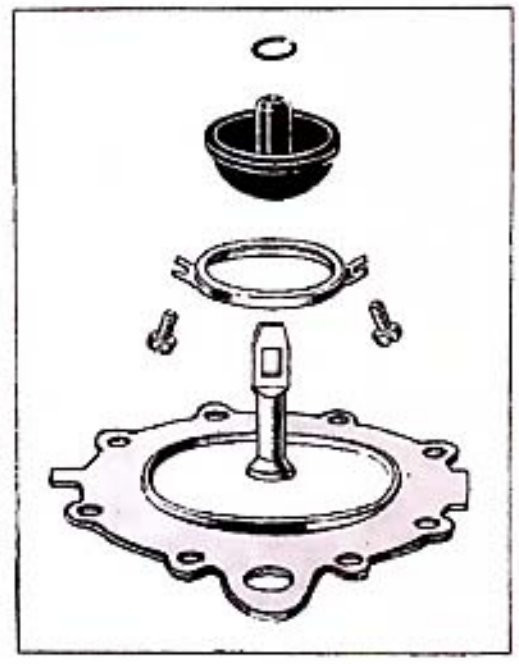
The oil seal on the vacuum side, which is readily accessible, can be prised out of the pump body with any suitable tool, such as a large screwdriver. As the oil seal on the fuel side is deeply recessed, this should be driven out from the other side of the body, after removal of the vacuum oil seal, as already described.

The method for fitting new seals is shown below, and a flat-ended punch,  $\frac{1}{2}$ " diameter, must be used to lightly drive home the steel retainer of the replacement seal. Afterwards the surrounding portion of the pump body should be lightly staked to prevent any possibility of the oil seal working out of position.



### (B) LATEST TYPE (Below)

Before being fitted to the pump, the diaphragm assembly must have fitted to it the three oil seal parts shown in the following illustration. The small end of the oil seal should be located just below the flattened end of the pull rod leaving just sufficient room for the split washer to be fitted.



### IMPORTANT

Vacuum Section Oil Seals should be replaced every time the diaphragm assembly is renewed.

### KEY TO PUMP TYPES

- WE** Combined fuel and vacuum pump. Early type has detachable lower vacuum cover.
- WG** As WE but filter bowl on top.
- WH** As WE but no filter.
- W** Vacuum pump only.