

## HANDRAULIC STARTER FITMENT INSTRUCTIONS

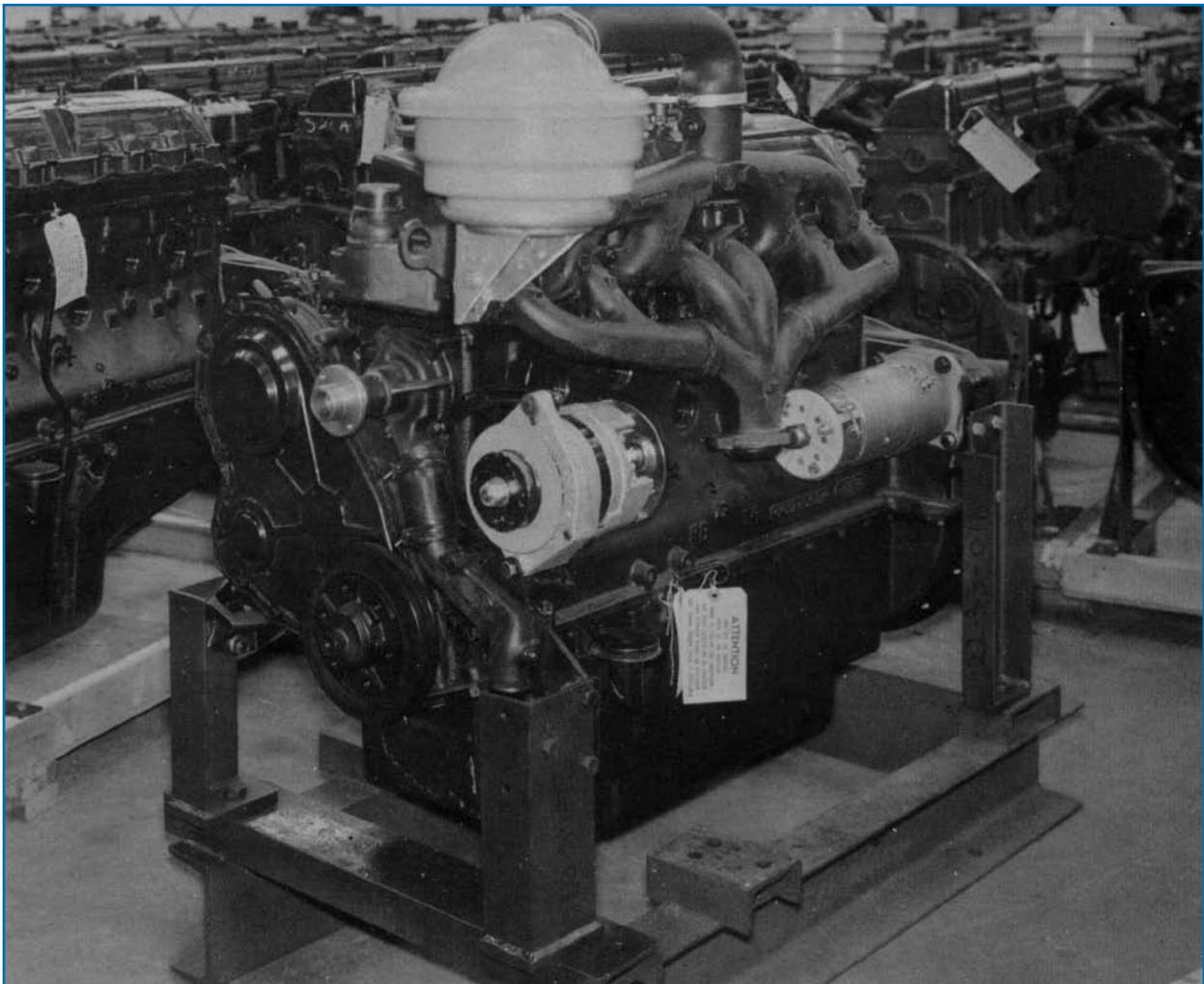
Handraulic004/1\_07/07

This publication contains detailed information on how to fit a Prestolite Handraulic Starter unit to a diesel engine.

The procedure is explained and photographed in a step-by-step sequence.

A typical application, the Ford 2700E engine, has been used in the illustrations.  
Product Data and further details are contained in the back cover of this publication.

If the information you require is not contained in this Publication please contact our Sales Department.

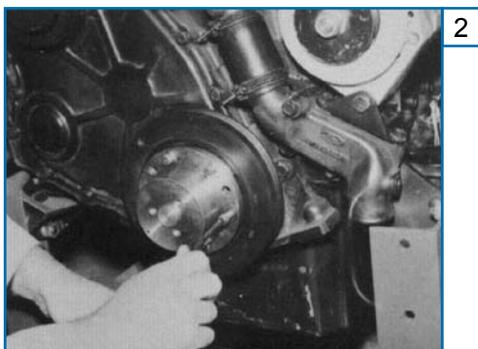


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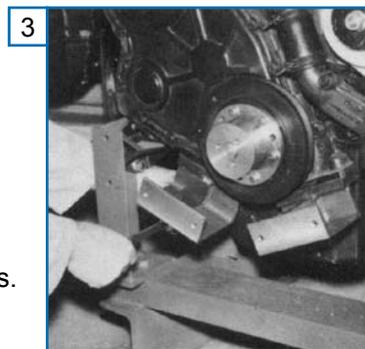
- 1 Diesel engine ready to receive Handraulic Starter.  
NOTE: This engine has a low level fan which has been removed to permit the Handraulic Starter to be fitted.

**FITMENT INSTRUCTIONS CONTINUED**

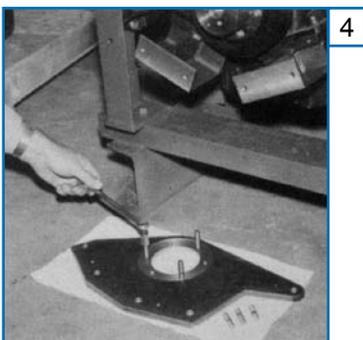
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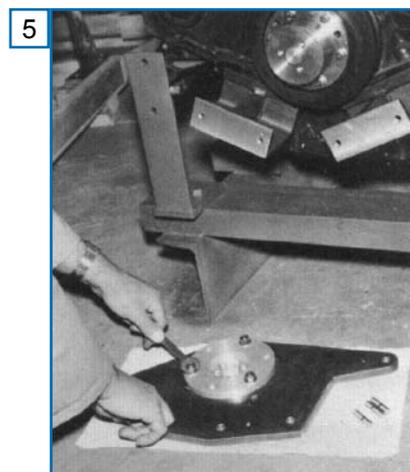
2. Fit engine dog adaptor to crankshaft pulley.



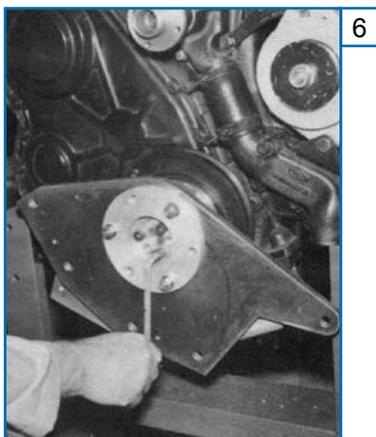
3. Fit two mounting brackets to the engine.  
Do not, at this stage, tighten the bolts to final tightness.



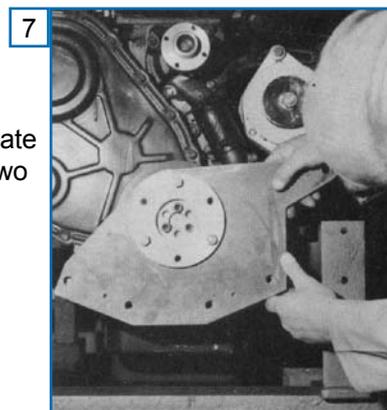
4. Fit three of the six studs to the mounting plate as shown.



5. Fit the alignment tool to the mounting plate.  
This tool will ensure alignment of the Prestolite Handraulic Starter unit and dog to the engine crankshaft centre-line.  
Tool No. 75/684A – B35.  
Tool No. 75/684B = B50.



6. Fit mounting plate with alignment tool to the engine dog adaptor with three cap screws – (do not tighten).



7. Rotate engine to ensure the mounting plate holes to align with the four holes in the two engine brackets previously fitted.

**FITMENT INSTRUCTIONS CONTINUED**

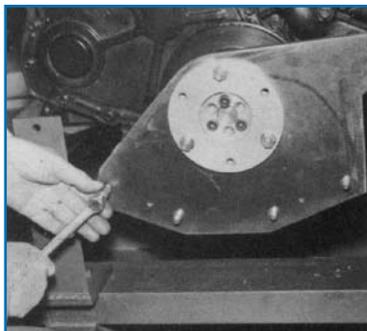
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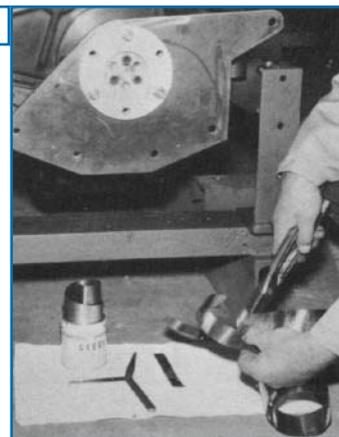
8. Check gap between mounting bracket and plate. Use two 0.049 inch / 1.25 mm thick shims (18SWG) to accommodate extreme tolerances.

9. Cut suitable shims to ensure squareness of the front mounting plate. This may involve fitting shims between engine bracket to lift or lower the front bracket as desired.



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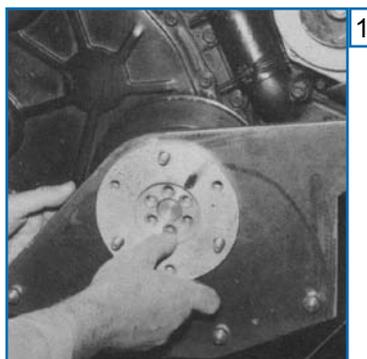
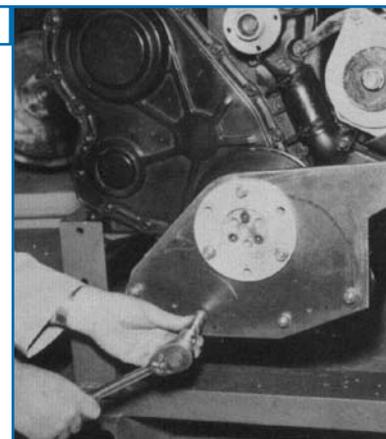
10. Fit four studs through the front mounting plate into the two engine brackets.



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11. Fit nuts and washers to studs and tighten. Also tighten bolts holding engine brackets to engine.

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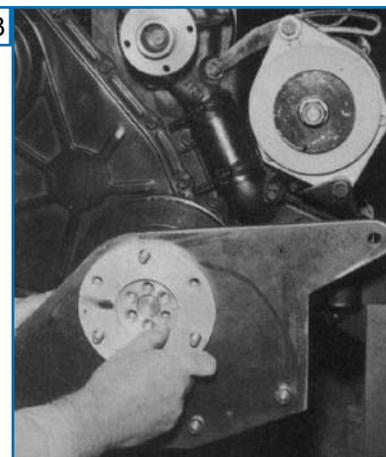


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12. Remove the alignment tool.

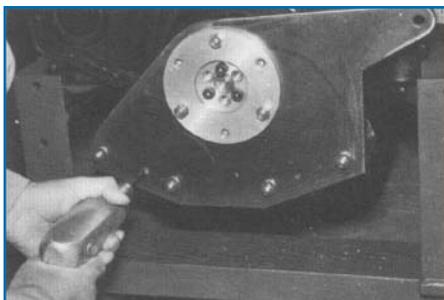
13. Refit alignment tool in a new position to overcheck ease of fitting / squareness / concentricity. If problems arise, re-check earlier shim arrangements and adjust as necessary. When alignment tool fits easy, proceed.

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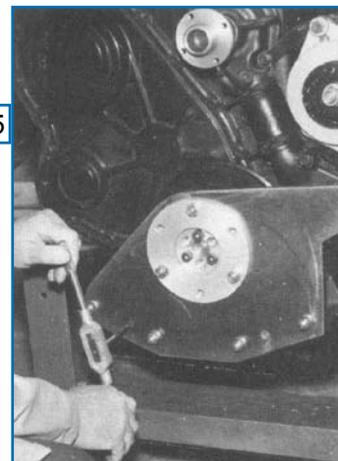
**FITMENT INSTRUCTIONS CONTINUED**

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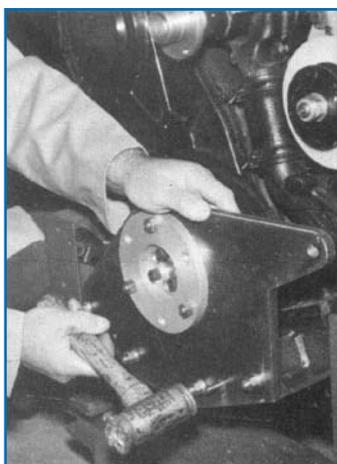
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14. With alignment tool re-assembled, drill two dowel holes.



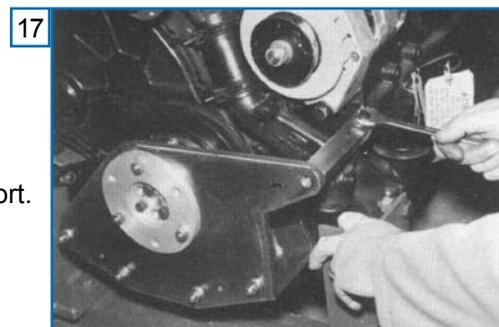
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15. Ream dowel holes.



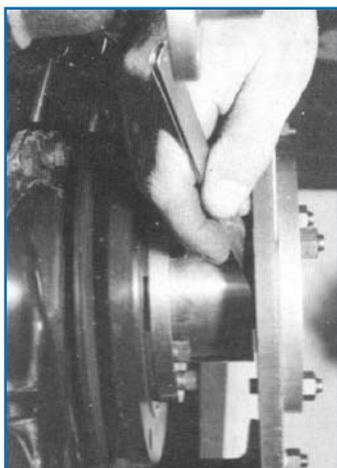
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16. Fit dowels.



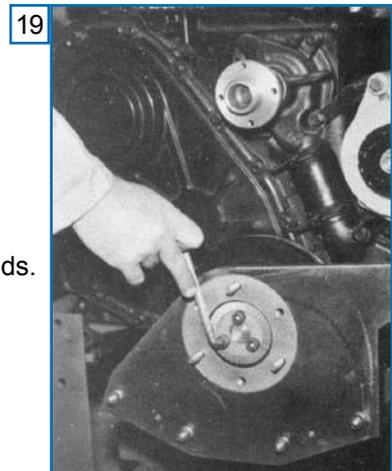
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17. Remove alternator bracket fixing bolt.  
Fit long bolt and plate support.



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18. Remove the three cap screws from the centre of alignment tool. Check clearance between alignment tool and engine adaptor. If gap is 0.010 inch (0.25 mm) or less, then setting is within acceptable limits. If gap is greater than 0.010 inch (0.25 mm), then shims should be removed from between bracket and plate.

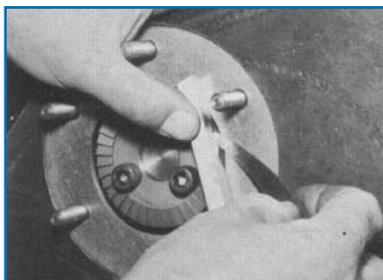


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19. Fit engine dog and remaining starter mounting studs.

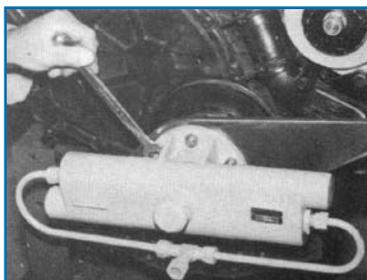
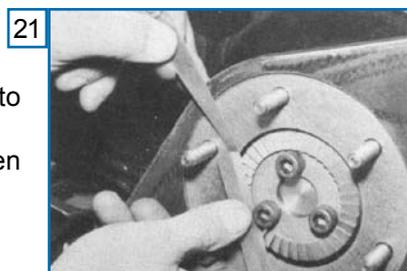
**FITMENT INSTRUCTIONS CONTINUED**

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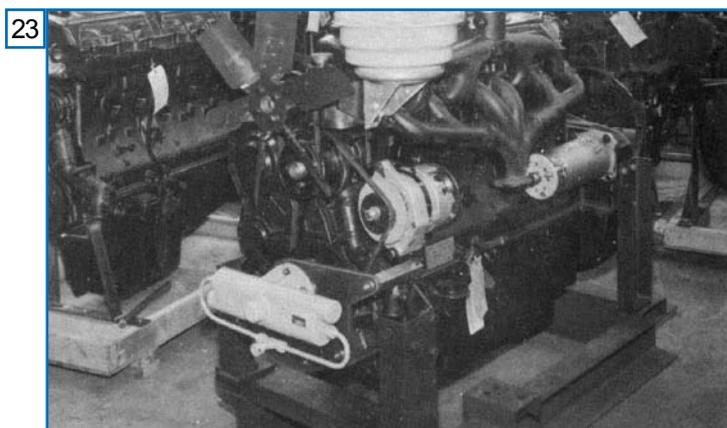
20. It is important to obtain the correct engine dog tooth depth relative to the face of the starter mounting plate. Fit the circular shim provided until the clearance between the top of the teeth and shim face is between  $\pm 0.010$  inches ( $\pm 0.25$  mm). Photograph shows tooth recessed below mounting face.

21. It is important to obtain the correct engine dog tooth depth relative to the face of the starter mounting plate. Fit circular shim until the clearance between the top of the teeth and the shim face is between  $\pm 0.010$  inches ( $\pm 0.25$  mm). Photograph shows tooth projection above shim mounting face.



22. Fit starter unit to the engine.

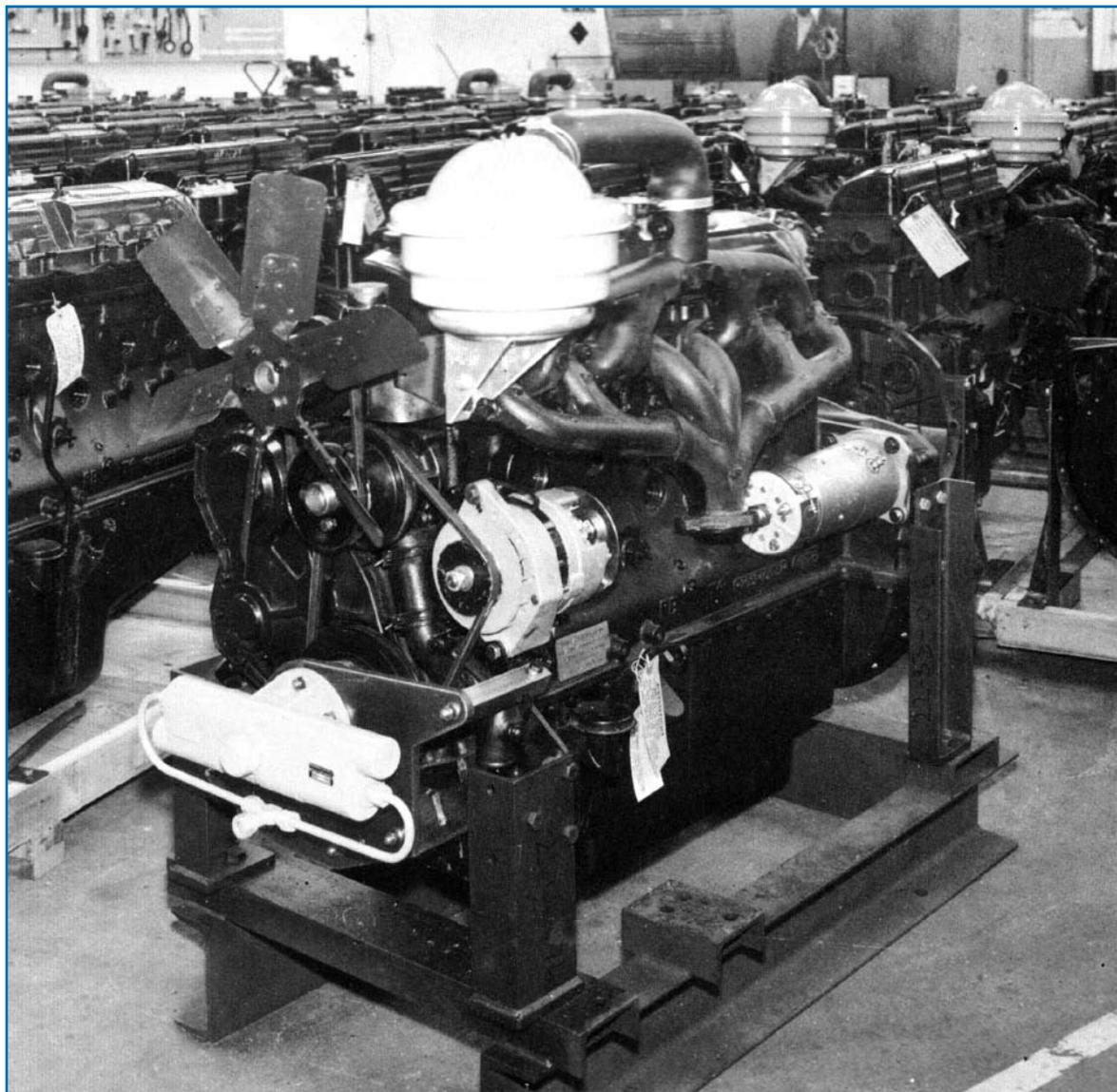
23. Fit high level fan unit and belt drive.



**FITMENT INSTRUCTIONS CONTINUED**

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After the starter unit has been fitted, the panel containing the ancillary equipment can be suitably located. This is normally positioned adjacent to the starter unit. A pipe connecting the starter unit and the ancillary equipment completes the Handraulic Starter installation.



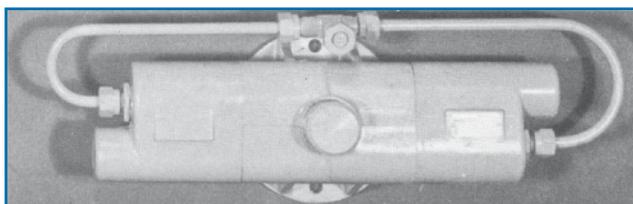
Diesel Engine with Handraulic Starter fitted.

## HANDRAULIC STARTER SET

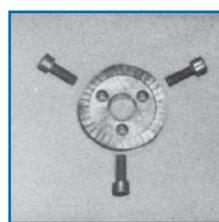
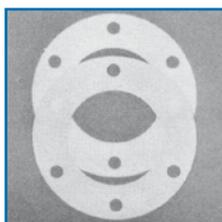
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Ancillary Panel Assembly



Starter Unit



Engine Dog Set

**Also included:**

Operating lever.

1m length of installation pipe.

Hydraulic fluid specification OM15.5 litre can.

Operators handbook and spare parts list.