W4
Loader and Forklift

Service Manual

8-33652

CASE CONSTRUCTION

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INTRODUCTION

The purpose of this Manual is to assist skilled mechanics in the efficient repair and maintenance of the range of engines given on the title-page. The procedures detailed, carried out in the sequence given and using the appropriate service tools, will enable the operations to be completed in the time stated in the Repair Operation Times.

Indexing
The contents pages list the titles and reference numbers of the divisions in alphabetical order.

Operation Numbering
Each operation is followed by the number allocated to it in a master index. The number consists of six digits arranged in three pairs.

The master index of operations has been compiled for universal application to engines manufactured by BL Cars Limited and therefore continuity of the numbering sequence is not maintained throughout this Manual.

Each instruction within an operation has a sequence number, and to complete the operation in the minimum time it is essential that these instructions are performed in the numerical sequence commencing at 1 unless otherwise stated. Where applicable, the sequence numbers identify the components in the appropriate illustration.

Service Tools
Where performance of an operation requires the use of a service tool, the tool number is quoted under the operation heading and is repeated in the instruction involving its use.

An illustrated list of all service tools necessary to complete the operations described in the Manual is also included.

Definitions
Remove and refit – the removing of an existing part, fitting of a new or replacement part.
Overhaul – includes removing a component, fitting new parts, adjusting and its refitting.

References
The water pump end of the engine is referred to as the front.

To reduce repetition, operations covered in this Manual do not include reference to testing the engine after repair. It is essential that work is inspected and tested after completion, particularly where safety-related items are concerned.

Dimensions
The dimensions quoted are to design engineering specification. Alternative unit eq alents have been converted from the original specification.

During the period of running-in from new, certain adjustments may vary from the spe cation figures given in this Manual. These adjustments will be reset by the supplier a After Sales Service, and thereafter should be maintained at the figures specified ir Manual.

REPAIRS AND REPLACEMENTS

When service parts are required it is essential that only genuine **BL** or **Unipart** rep s ments are used.

Attention is particularly drawn to the following points concerning repairs and the fitt of replacements parts and accessories:

The performance and durability of the engine may be impaired if other than genuine pa are fitted. In certain territories, legislation prohibits the fitting of parts not to the engi manufacturer's specification. Torque wrench setting figures given in this Manual must strictly adhered to. Locking devices, where specified, must be fitted. If the efficiency c locking device is impaired during removal, it must be renewed. When purchasing accesso i while travelling abroad ensure that the accessory and its fitted location conform to requirements existing in their country of origin. The engine warranty may be invalidated l the fitting of other than genuine **BL** or **Unipart** parts.

All **BL** and **Unipart** replacements have the full backing of the factory warranty.

SERVICE PARTS

Genuine BL and UNIPART Service parts are designed and tested for your engine and ha the full backing of the BL Factory Warranty. ONLY WHEN GENUINE BL or UNIPAR SERVICE PARTS ARE USED CAN RESPONSIBILITY BE CONSIDERED UNDER TH TERMS OF THE WARRANTY.

Genuine parts are supplied in cartons bearing one or both of these symbols:

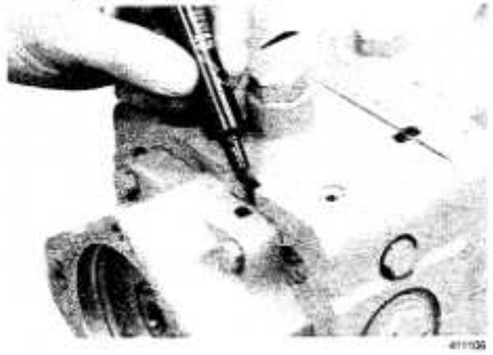
UNIPART

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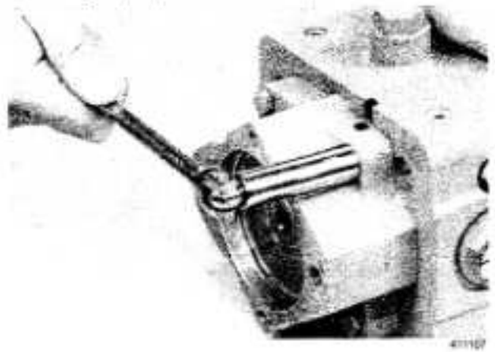
DISASSEMBLY

1. Clean the outside of the hydrostatic pump.

2. Make alignment marks on the charge pump, end cap, and pump housing.



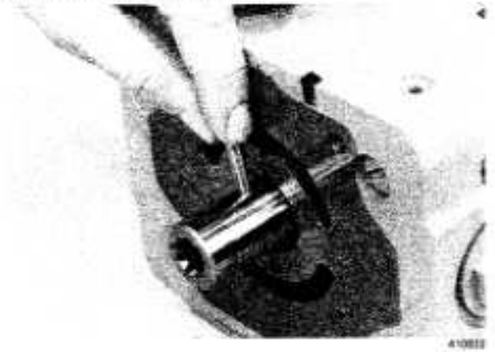
3. Loosen and remove the cap screws that fasten the charge pump to the end cap.



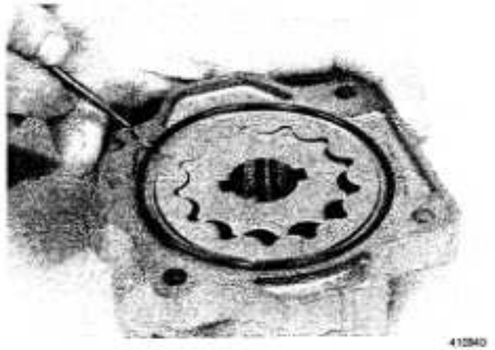
4. Remove the charge pump housing.



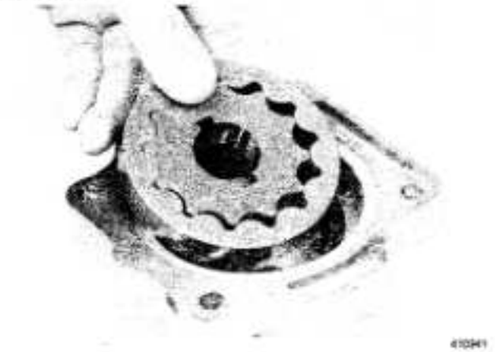
5. Remove the drive pin.



6. Remove the O-ring from the charge pump housing.



7. Remove the gerotor from the charge pump housing.



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