

ENGINE SERVICES

Besides the daily or routine services required on the engine, repair and replacement services have to be carried out at times depending on the internal conditions of the engine. For the latter class of services, the whole engine may have to be dismantled from the tractor or some of its components may have to be dismantled and taken down with the engine remaining in place. In either case, it is essential that the work be performed in a clean place, with a clean floor and a surrounding space large enough to handle the engine or its components freely.

Use of the prescribed tools (special tools) in addition to the common tools is another essential requirement. The standard practices for engine servicing include the following:

- (a) Have a hoisting or lifting means ready for use. Some of engine components are too heavy to handle with bare hands.
- (b) The exterior surfaces of any part or component must be cleaned before its removal.
- (c) Have a full assortment of hand tools (including special tools) ready for use. Make sure they are clean.
- (d) There should be an adequate number of trays and pans for holding disassembled parts in an orderly manner, plus plenty of washing fluid and wiping cloths. A supply of clean compressed air is desirable.

A repair or replacement service is usually occasioned by an operating difficulty or failure of one or more components of the engine. If the service involves removal of one or more of the below-named engine parts, it is not necessary to take down the engine from the tractor; the service can be carried out with the engine in place.

- (1) Cylinder head. (This includes the valve mechanism.)
- (2) Pistons.
- (3) Fuel-injection pump or oil pump.

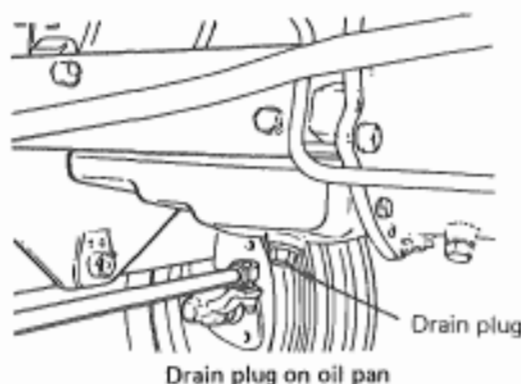
- (4) Water pump.
- (5) Gear case cover, timing gears or related parts.

ENGINE REMOVAL

In the event of the flywheel or clutch needing a repair service, the engine must be taken down, complete with the radiator, front axle and chassis, by detaching it from the clutch housing. The method of separating the engine from the clutch housing is detailed in the section for CLUTCH.

The engine removal procedure for replacing crankshaft or cylinder block is as follows:

- (1) Bring the tractor to the place of work, letting it stand on the level floor, and drain the engine oil pan.



- (2) Drain the engine cooling system by opening the cock cock on the cylinder block.

