

REPAIR MANUAL
for
FORD 8700
& 9700
TRACTORS

40870020



Ford Tractor Operations

Ford Motor Company

Reprinted

Foreword

This manual provides information for the proper servicing of the Ford 8700 and 9700 Tractors. The information is essential for all mechanics and will be especially meaningful to those who have attended the Training Programs for the 8700 and 9700 Tractors. We recommend therefore, that this manual be readily available for reference at all times.

The manual is grouped into parts, each containing chapter divisions. The chapters contain such information as general operating principles, detailed inspection and repair procedures, and full specifics regarding trouble shooting, specifications, and special tools. Whenever possible, the special tools are illustrated performing their specific operations. Any reference made in the manual to right, left, front, rear, top, or bottom, is as viewed facing the direction of forward travel from the driver's seat.

The material contained in this manual was correct at the time the manual was approved for printing. Ford policy is one of continuous improvement and the Ford Motor Company reserves the right to discontinue models at any time or change specifications or design without notice and without incurring obligation.

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Part 1

ENGINE SYSTEM

Chapter 1

ENGINE AND LUBRICATION SYSTEM

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1. DESCRIPTION AND OPERATION

The engine described in this manual is a six cylinder diesel "in-line" type with direct fuel injection and overhead valve design. The displacement amounts to 401 cu. in. (6580 cc), the bore to 4.4 in. (111.76 mm) and the stroke to 4.4 in. (111.76 mm). Because of the bore and stroke dimensions it is also referred to as a square engine.

This part of the manual deals with the disassembly, inspection and repair, and assembly of the engine and lubrication system, plus the cooling system.

CYLINDER HEAD ASSEMBLY – INCLUDING VALVE TRAIN COMPONENTS

The cylinder head assembly incorporates the valves, valve springs, and rotators. The valve rocker arm shaft assembly is bolted to the cylinder block, through the head. The intake and exhaust manifolds are bolted to the head. The intake manifold is on the right side of the engine, and the exhaust manifold is on the left side.

Valve guides are an integral part of the cylinder head, and valves with oversize stems are available for service. Special replaceable cast alloy valve seats are pressed into each valve port of the cylinder head. The alloyed steel exhaust valves are fitted with positive valve rotators. Intake valves use umbrella-type seals while the exhaust valves use a square section O-ring. The push rods are high tensile strength steel with oil-cushioned sockets, and locate inside the tappet. The tappets are cast cylindrical, chill-hardened iron. Valve lash is maintained by self-locking adjusting screws.

The camshaft is supported by five replaceable bearings. The camshaft is driven by the camshaft drive gear which is in mesh with the camshaft gear. Camshaft thrust is controlled by a plate secured to the block and located between the camshaft gear and the front journal of the camshaft.



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