Information and Instructions

This individual shop manual is one unit of a series on wheel type tractors. Contained in it are the necessary specifications and the brief but terse procedural data needed by a mechanic when repairing a tractor on which he has had no previous actual experience.

The material is arranged in a systematic order beginning with an index which is followed immediately by a Table of Condensed Service Specifications. These specifications include dimensions, fits, clearances and timing instructions. Next in order of arrangement is the procedures paragraphs.

In the procedures paragraphs, the order of presentation starts with the front axle system and steering and proceeding toward the rear axle. The last paragraphs are devoted to the power take-off and power lift systems. Interspersed where needed are additional tabular specifications pertaining to wear limits, torquing, etc.

HOW TO USE THE INDEX

Suppose you want to know the procedure for R&R (remove and reinstall) of the engine camshaft. Your first step is to look in the index under the main heading of ENGINE until you find the entry "Camshaft." Now read to the right where under the column covering the tractor you are repairing, you will find a number which indicates the beginning paragraph pertaining to the camshaft. To locate this wanted paragraph in the manual, turn the pages until the running index appearing on the top outside corner of each page contains the number you are seeking. In this paragraph you will find the information concerning the removal of the camshaft.

FORD

MODELS 5640-6640-7740-7840-8240-8340

The tractor identification plate is located on right side under the tractor hood. Serial and model numbers of the tractor, engine, transmission, rear axle, hydraulic pump and the hydraulic lift are recorded on this identification plate. If equipped with front-wheel drive, a similar plate is attached to the rear surface of the front drive axle housing.

INDEX (By Starting Paragraph)

BRAKES	ENGINE AND COMPONENTS
Adjustment	Cam Followers
Brake Discs and Actuating Assembly 230	Camshaft and Bearings 44
Master Cylinder	Connecting Rods and Bearings 52
System Bleeding	Connecting Rod and Piston Units 46
CLUTCH, ENGINE	Crankshaft and Main Bearings 53
Clutch Assembly, R&R	Crankshaft Oil Seals 54
Clutch Linkage	Cylinder Head
Clutch Master Cylinder 129	Engine Balancer (5640, 6640, 7740) 56
Clutch Release Bearing 127	Engine, R&R
Tractor Split	Exhaust Valve Rotators 37
COOLING SYSTEM	Flywheel
Radiator	Oil Pump and Relief Valve 59
Radiator Pressure Cap and Thermostat 86	Oil Sump 58
Water Pump	Pistons and Rings 47
DIESEL FUEL SYSTEM	Pistons and Cylinders 48
Adjustments 83	Piston Pins
Filters and Bleeding 70	Rocker Arms
Fuel Injection Pump 80	Timing Gear Cover
Fuel Injectors	Timing Gears
Fuel Tanks	Turbocharger (7740 and 8340) 61
Injection Pump Drive Gear	Valve Clearance
Troubleshooting 69	Valve Guides and Springs
DIFFERENTIAL, MAIN DRIVE BEVEL	Valves, Stem Seals and Seats 35
GEARS, FINAL DRIVE AND REAR AXLES	FRONT AXLE (Two-Wheel Drive)
Bevel Pinion	Axle Center Member, Pivot Pins and Bushings. 4
Differential and Differential Lock	Front Support 5
Rear Axle and Final Drive	Spindles, Axle Extentions and Bushings 3
Tractor Rear Split	Tie Rod, Toe-Out and Tread Adjustment 2
DUAL POWER (16 x 4 Transmission)	Wheels and Bearings
Control Valve	FRONT-WHEEL DRIVE
Dual Power Unit	Adjustments
Lubrication	Axle Pivot Bearings
Pressure Test	Bevel Pinion Gears
Troubleshooting	Differential
ELECTRICAL SYSTEM	Drive Shaft
Alternator and Regulator 89	Front Drive Axle
Instrumentation	Front Support
Starting Motor	Steering Knuckle Housing
ELECTRICAL WIRING DIAGRAMS 300	Transfer Gearbox

Wheel Hub and Planetary (5640, 6640, 7740). 11	Troubleshooting
Wheel Hub and Planetary (7840, 8240, 8340). 12	REDUCTION GEARBOX 148
HYDRAULIC LIFT (Electronic Draft Control)	REMOTE CONTROL VALVES
Electronic Draft Control Valve 280	Adjustments
Hydraulic Lift Cover	Remote Control Valve
Operation	Remote Valve Couplers 299
Troubleshooting	TRANSMISSION ($\hat{8} \times 2$ Constant Mesh)
HYDRAULIC LIFT (Top Link Sensing)	Lubrication
External Linkage Adjustment 291	Overhaul
Hydraulic Lift Cover and Cylinder 285	Remove and Reinstall
Internal Linkage Adjustment 288	TRANSMISSION (16 \times 16 Powershift Built
Lift Assist Cylinder	Prior To September 1993)
Operation	Clutch Calibration
Priority Valve Pack	Electrical Component Description 177
Troubleshooting	Gearshift Cover
Unloading Valve	Gearshift Linkage
HYDRAULIC SYSTEM	Pressure Testing
Hydraulic Fluid and Filters 240	Transmission Control Valve 190
HYDRAULIC SYSTEM (Closed Center	Transmission Overhaul 194
Load Sensing)	Troubleshooting Electronic Control System 188
Operation	Troubleshooting Transmission System 189
Pressure Testing	TRANSMISSION (16×16 'Quad Mod' Power-
Pump Overhaul	shift Built September 1993 And After)
Troubleshooting	Clutch Fill Time Calibration 206
HYDRAULIC SYSTEM (Open Center)	Clutch Spring Pressure Calibration 204
Engine Mounted Auxiliary Gear Pump 269	Gear Shift Control Cables 216
Operation	Pressure Testing
Pressure Testing	Transmission Control Valve
Transmission Mounted Tandem Gear Pump . 268	Transmision Overhaul
HYDROSTATIC STEERING	Troubleshooting Electronic Control System 212
Fluid and Bleeding	$\textbf{TRANSMISSION} \ (\textbf{12} \times \textbf{12} \ \textbf{Synchro-Shift})$
Power Cylinder 26	Lubrication
Pump	Overhaul
Steering Valve	Remove and Reinstall 152
Tests and Adjustment 24	TRANSMISSION (12 $ imes$ 12 Synchro-Shift With
Troubleshooting	Dual Power)
POWER TAKE-OFF	Clutch Calibration
Operating Principles	Dual Power Unit
Pto Clutch and Control Valve (Mechanically	Electro-Hydraulic System 162
Operated)	Lubrication Control Valve 173
Pto Clutch and Control Valve (Electric	Pressure Testing
Solenoid Operated)	Transmission Control Valve
Pto Output Shafts and Gears 234	Troubleshooting Electronic Control System 167

DUAL DIMENSIONS

This service manual provides specifications in both U.S. Customary and Metric (SI) systems of measurement. The first specification is given in the measuring system perceived by us to be the preferred system when servicing a particular component, while the second specification (given in parenthesis) is the converted measurement. For instance, a specification of 0.011 inch (0.28 mm) would indicate that we feel the preferred measurement in this instance is the U.S. Customary system of measurement and the Metric equivalent of 0.011 inch is 0.28 mm.