

# 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.

# SHOP MANUAL

# FORD

## MODELS

1120—1220—1320—1520—1720—1920—2120

The tractor model number, serial number and engine number are stamped on an identification plate located on left side of transmission housing.

## INDEX (By Starting Paragraph)

	1120, 1220	1320, 1520	1720	1920	2120
<b>BRAKES</b>					
Adjustment .....	142	142	142	142	142
R&R and Overhaul .....	143	144	144	144	144
<b>CLUTCH</b>					
Adjustment .....	86	86	86	86	86
Dual Plate Clutch .....	...	89	89	89	89
Single Plate Clutch .....	88	88	88	...	88
Tractor Split .....	87	87	87	87	87
<b>COOLING SYSTEM</b>					
Radiator .....	70	70	70	70	70
Thermostat .....	71	71	71	71	71
Water Pump .....	72	73	73	73	74
<b>CREEPER GEAR</b>					
Overhaul .....	...	...	...	124	125
<b>DIESEL FUEL SYSTEM</b>					
Engine Speed Adjustment ...	58	58	58	58	58
Fuel Filter and Bleeding ...	53	53	53	53	53
Governor .....	59	59	59	59	60
Injection Pump .....	54	54	54	54	56
Injector Nozzles .....	61	61	61	61	61
<b>DIFFERENTIAL AND BEVEL DRIVE GEARS</b>					
Bevel Gears, R&R and Overhaul .....	130	135	136	136	136
Differential, R&R and Overhaul .....	128	128	128	128	128
Tractor Rear Split .....	126	127	127	127	127
<b>ELECTRICAL SYSTEM</b>					
Alternator and Regulator ...	76	76	76	76	76
Engine Fuel Stop Solenoid ...	84	84	84	84	85
Glow Plugs .....	83	83	83	83	83
Safety Start Switches .....	80	80	80	80	80
Starting Motor and Solenoid .....	81	82	82	82	82

# INDEX (CONT.)

	1120, 1220	1320, 1520	1720	1920	2120
<b>ENGINE</b>					
Assembly, R&R .....	27	27	27	27	27
Camshaft and Cam Followers .....	40	40	40	40	41
Connecting Rods and Bearings .....	46	46	46	46	46
Crankshaft and Bearings .....	47	47	47	47	47
Cylinder Head .....	28	28	28	28	28
Engine Balancer .....	...	...	...	48	48
Flywheel .....	49	49	49	49	49
Oil Pump and Relief Valve .....	50	50	50	50	51
Piston Pin .....	44	44	44	44	44
Pistons, Rings and Cylinders .....	43	43	43	43	43
Rod and Piston Units .....	42	42	42	42	42
Rocker Arms and Push Rods .....	30	30	30	30	30
Timing Gear Case .....	33	33	33	33	34
Timing Gears .....	35	35	35	35	37
Valve Clearance Adjustment .....	29	29	29	29	29
Valves, Guides and Seats ...	32	32	32	32	32
<b>FINAL DRIVE</b>					
R&R and Overhaul .....	140	141	141	141	141
<b>FRONT AXLE (Two Wheel Drive)</b>					
Assembly, R&R .....	1	2	2	2	2
Front Wheel Bearings .....	3	4	4	4	4
Spindles and Bushings .....	5	6	6	6	6
Tie Rods and Toe-in .....	7	7	7	7	7
<b>FRONT WHEEL DRIVE AXLE</b>					
Assembly, R&R .....	9	9	9	9	9
Bevel Drive Gears .....	12	12	12	12	12
Differential .....	11	11	11	11	11
Final Drive and Wheel Hub .....	10	10	10	10	10
Lubrication .....	8	8	8	8	8
Transfer Case .....	15	15	15	15	15
<b>HYDRAULIC LIFT SYSTEM</b>					
Flow Control Valve, Check Valve and Safety Relief Valve .....	167	167	167	167	167
Fluid and Filter .....	152	152	152	152	152
Hitch Adjustments .....	160	160	160	160	160
Hydraulic Lift Housing .....	165	165	165	165	165
Hydraulic Pump .....	156	156	156	156	157
Lift Control Valve .....	168	170	170	170	170

## INDEX (CONT.)

	1120, 1220	1320, 1520	1720	1920	2120
<b>HYDRAULIC LIFT SYSTEM (Cont.)</b>					
Remote Control Valve . . . . .	172	172	172	172	172
System Relief Valve and Diverter Manifold . . . . .	155	155	155	155	155
Testing . . . . .	154	154	154	154	154
Trouble-Shooting . . . . .	153	153	153	153	153
<b>MANUAL STEERING GEAR</b>	16	...	...	...	...
<b>POWER STEERING</b>					
Lubrication and Bleeding . .	19	19	19	19	19
Steering Control Valve . . . .	22	22	22	22	22
Steering Cylinder . . . . .	25	25	25	25	25
Steering Pump . . . . .	24	24	24	24	24
Testing . . . . .	21	21	21	21	21
Trouble-Shooting . . . . .	20	20	20	20	20
<b>POWER TAKE-OFF</b>					
Standard Rear Pto . . . . .	145	147	150	150	151
Mid-Mount Pto . . . . .	146	148	...	...	...
<b>TRANSMISSION (9 x 3 Gear)</b>					
Assembly, R&R . . . . .	91	94	...	...	...
Lubrication . . . . .	90	93	...	...	...
Overhaul . . . . .	92	95	...	...	...
<b>TRANSMISSION (12 x 4 Gear)</b>					
Assembly, R&R . . . . .	...	...	108	108	108
Lubrication . . . . .	...	...	107	107	107
Overhaul . . . . .	...	...	109	109	110
<b>TRANSMISSION (Hydrostatic)</b>					
Assembly, R&R . . . . .	102	103	...	...	...
Lubrication . . . . .	97	97	...	...	...
Overhaul . . . . .	104	104	...	...	...
Range Transmission . . . . .	105	106	...	...	...
Tests and Adjustments . . . .	99	99	...	...	...
Trouble-Shooting . . . . .	98	98	...	...	...
<b>TRANSMISSION (12 x 12 Synchronesh Shuttle)</b>					
Assembly, R&R . . . . .	...	...	113	113	...
Lubrication . . . . .	...	...	112	112	...
Overhaul . . . . .	...	...	114	114	...
<b>TRANSMISSION (12 x 12 Hydraulic Shift Shuttle)</b>					
Assembly, R&R . . . . .	...	...	...	...	121
Hydraulic Pump . . . . .	...	...	...	...	120
Lubrication . . . . .	...	...	...	...	115
Overhaul . . . . .	...	...	...	...	122
Pressure Test . . . . .	...	...	...	...	117
Shuttle Control Valve . . . . .	...	...	...	...	118
Trouble-Shooting . . . . .	...	...	...	...	116