

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. Interpersed 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

CASE/INTERNATIONAL

MODELS 5120, 5130 & 5140

IDENTIFICATION

Tractor model number and identification serial number are located on a plate on lower left side of instrument panel cover on tractors equipped with a cab or lower left front side of operator's platform on tractors equipped with a ROPS frame. Engine serial number is located on a plate on left side of timing gear housing. Transmission serial number is located on a plate on right side of transmission housing. On models equipped with mechanical front-wheel-drive axle, the axle serial number is located on a plate on right rear side of front axle housing.

INDEX (By Starting Paragraph)

	5120	Models 5130	5140
AFTERCOOLER	75
AIR CLEANER	76	76	76
AXLE, FRONT (TWO-WHEEL DRIVE)			
Axle Main Member	4	4	4
Steering Knuckles	2	2	2
Tie Rod & Toe-In	3	3	3
Wheel Bearings	1	1	1
AXLE, FRONT (FOUR-WHEEL DRIVE)			
Axle Assembly, R&R.	5	5	5
Differential & Bevel Gears.	8	8	8
Drive Shaft	9	9	9
Front Drive Clutch.	11	11	11
Pivot Housing & Axle Shaft.	7	7	7
Tie Rods & Toe-In.	10	10	10
Wheel Hub & Planetary.	6	6	6
BRAKE (PARKING)	133	133	133
BRAKES (WHEEL)			
Adjustment.	126	126	126
Bleed Brakes	130	130	130
Brake Assemblies.	131	131	131
Master Cylinders.	132	132	132
CAB AND SEAT	170	170	170
COOLING SYSTEM			
Belt Tensioner	81	81	81

INDEX (CONT.)

	5120	Models 5130	5140
COOLING SYSTEM (Cont.)			
Fan	80	80	80
Radiator	77	77	77
Thermostat.	78	78	78
Water Pump	79	79	79
CREEPER TRANSMISSION			
R&R and Overhaul.	121	121	121
DIESEL FUEL SYSTEM			
Fuel Filters & Lift Pump.	55	55	55
Injection Pump.	59	59	59
Injector Nozzles	65	65	65
DIFFERENTIAL AND MAIN DRIVE			
BEVEL GEARS			
Differential & Bevel Gears	122	122	122
Differential Lock	123	123	123
DRIVE SHAFT (W/O Creeper)	120	120	120
ELECTRICAL SYSTEM			
Alternator.	88	88	88
Batteries.	82	82	82
Charging System Testing.	84	84	84
Instrument Cluster	98	98	98
Lights	97	97	97
Programming Digital Instrument Cluster	102	102	102
Protective Circuits	95	95	95
Starting Motor	91	91	91
Wiring.	94	94	94
ENGINE			
Assembly, R&R.	24	24	24
Balancer	48
Cam Followers	30	30	30
Camshaft & Bearings	36	36	36
Connecting Rods & Bearings	42	42	42
Connecting Rod & Piston Units	38	38	38
Crankshaft & Main Bearings	43	43	43
Crankshaft Seals	45	45	45
Cylinder Block & Sleeves	40	40	40
Cylinder Head	25	25	25
Flywheel.	47	47	47
Oil Cooler	54	54	54
Oil Pan	51	51	51
Oil Pressure Regulator	53	53	53
Oil Pump	52	52	52
Oil Spray Nozzles.	44	44	44
Piston Pins & Bushings.	41	41	41
Pistons & Rings	39	39	39

INDEX (CONT.)

	5120	Models 5130	5140
ENGINE (Cont.)			
Rocker Arms	29	29	29
Timing Gear Cover.	31	31	31
Timing Gears	32	32	32
Valve Guides & Springs.	28	28	28
Valves & Seats	26	26	26
FINAL DRIVES	124	124	124
HYDRAULIC SYSTEM			
Hydraulic Pumps.	135	135	135
Hydraulic Pump Drive Gear	142	142	142
Pto Front Drive Shaft	142	142	142
HYDRAULIC LIFT SYSTEM			
Adjustments	151	151	151
Front Three-Point Hitch.	161	161	161
Position Control Sensing Valve	160	160	160
Rear Hitch Operation	143	143	143
Remote Control Valves	162	162	162
Rockshaft & Lift Cylinder	159	159	159
Troubleshooting.	150	150	150
POWERSHIFT TRANSMISSION			
Control Valve.	106	106	106
Hydraulic Oil Temperature Sensor	107	107	107
Operation.	104	104	104
Powershift Manifold.	106	106	106
Powershift Unit.	108	108	108
Troubleshooting.	105	105	105
POWER STEERING SYSTEM			
Control Unit (Valve)	20	20	20
Fluid, Filter & Bleeding.	13	13	13
Hydraulic Supply Pump.	19	19	19
Operational Tests	16	16	16
Steering Hand Pump	20	20	20
Steering Operating Pressure	15	15	15
Steering Cylinder	22	22	22
Troubleshooting.	14	14	14
POWER TAKE-OFF			
Clutch	168	168	168
Control Valve.	167	167	167
Gears & Shafts	169	169	169
Housing	166	166	166
Linkage	164	164	164
Neutral Start Switch	165	165	165

INDEX (CONT.)

	5120	Models 5130	5140
RANGE TRANSMISSION & FORWARD-REVERSE SHUTTLE TRANSMISSION			
Inching Pedal & Transmission			
Linkage Adjustment	115	115	115
Forward-Reverse Shuttle Valve.	113	113	113
Operation.	111	111	111
R&R and Overhaul.	112	112	112
SYNCHROMESH TRANSMISSION			
Operation.	109	109	109
R&R and Overhaul.	110	110	110
TORQUE LIMITER CLUTCH			
R&R and Overhaul.	103	103	103
TURBOCHARGER	72	72

CONDENSED SERVICE DATA

	5120	Models 5130	5140
GENERAL			
Engine Make	Own _____		
Number of Cylinders	4	6	6
Bore.	102 mm (4.02 in.)	102 mm (4.02 in.)	102 mm (4.02 in.)
Stroke	120 mm (4.72 in.)	120 mm (4.72 in.)	120 mm (4.72 in.)
Displacement	3.92 L (239 cu. in.)	5.88 L (359 cu. in.)	5.88 L (359 cu. in.)
Compression Ratio.	16.5:1	17:1	17.5:1
Electrical System	_____ 12 volts, negative ground _____		
Speed Selection	_____ 16 forward, 12 reverse _____		
TUNE-UP			
Firing Order	1-3-4-2	1-5-3-6-2-4	1-5-3-6-2-4
Rocker Arm-to-Valve Clearance (Cold)—			
Intake.	_____ 0.25 mm _____ (0.010 in.)		
Exhaust	_____ 0.50 mm _____ (0.020 in.)		
Injection Timing.	Paragraph 61	Paragraph 60	Paragraph 61
Injector Opening Pressure.	_____ 24,500-25,305 kPa _____ (3553-3670 psi)		
Engine Low Idle.	_____ 900 rpm _____		
Engine High Idle (No-Load)	_____ 2400 rpm _____		