

# 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

## MAGNUM SERIES

### MODELS

7110-7120-7130-7140

### IDENTIFICATION

Tractor model number and identification serial number are located on a plate on lower left side of instrument panel cover. Engine serial number is located on a plate on left side of timing gear housing. Cab serial number is located on a plate just to the left of inching pedal. Transmission serial number is located on a plate on right front side of speed transmission housing. On models so equipped, front-wheel drive serial number is located on a plate on right rear side of front drive axle housing.

## INDEX (By Starting Paragraph)

	Models			
	7110	7120	7130	7140
<b>AFTER COOLER</b> .....	....	....	....	71
<b>AIR CLEANER SYSTEM</b> ..	72	72	72	72
<b>AXLE, FRONT (TWO WHEEL DRIVE)</b>				
Axle Main Member .....	4	4	4	4
Front Support .....	5	5	5	5
Spindles .....	2	2	2	2
Tie Rod & Toe-In .....	3	3	3	3
Wheel Bearings .....	1	1	1	1
<b>BRAKES</b>				
Adjustment .....	178	178	178	178
Bleed System .....	181	181	181	181
Brake Cylinders .....	179	179	179	179
Control Valve .....	180	180	180	180
<b>CAB</b>				
Remove & Reinstall .....	228	228	228	228
<b>COOLING SYSTEM</b>				
Belt Tensioner .....	75	75	75	75
Fan .....	74	74	74	74
Filter & Conditioner .....	78	78	78	78
Radiator .....	73	73	73	73
Thermostat .....	77	77	77	77
Water Pump .....	76	76	76	76

# INDEX (CONT.)

	<b>Models</b>			
	<b>7110</b>	<b>7120</b>	<b>7130</b>	<b>7140</b>
<b>DIESEL FUEL SYSTEM</b>				
Bleed System .....	55	55	55	55
Ether Starting Aid .....	67	67	67	67
Fuel, Filters & Transfer				
Pump .....	52,53,54	52,53,54	52,53,54	52,53,54
Fuel Solenoid Shut-Off ....	66	66	66	66
Injection Pump .....	56	56	56	56
Injector Nozzle .....	59	59	59	59
Timing .....	57	57	57	57
 <b>DIFFERENTIAL (REAR)</b>				
R&R and Overhaul .....	171	171	171	171
 <b>DIFFERENTIAL LOCK</b>				
Control Valve .....	175	175	175	175
 <b>ELECTRICAL SYSTEM</b>				
Accessory Systems .....	95	95	95	95
Alternator .....	85	85	85	85
Batteries .....	79	79	79	79
Cab Fan .....	130	130	130	130
Charging System .....	81	81	81	81
Digital Instrument Cluster ..	96	96	96	96
Heater & Air Conditioning .	131	131	131	131
Protective Circuits .....	93	93	93	93
Starting Motor .....	88	88	88	88
Windshield Wiper .....	129	129	129	129
 <b>ENGINE</b>				
Cam Followers .....	30	30	30	30
Camshaft .....	37	37	37	37
Connecting Rods &				
Bearings .....	42	42	42	42
Crankshaft & Bearings ....	43	43	43	43
Cylinder Head .....	25	25	25	25
Cylinder Sleeves .....	40	40	40	40
Flywheel .....	47	47	47	47
Main Bearings .....	43	43	43	43
Oil Pan .....	48	48	48	48
Oil Pump .....	49	49	49	49
Piston & Rod Removal ....	39	39	39	39
Piston Pins & Bushings ....	41	41	41	41
Pistons & Rings .....	40	40	40	40
Remove & Reinstall Engine				
Assembly .....	24	24	24	24
Timing Gear Cover .....	31	31	31	31
Timing Gears .....	32	32	32	32
Valve Adjustment .....	27	27	27	27
Valve Guides & Springs ...	28	28	28	28
Valves & Seats .....	26	26	26	26

# INDEX (CONT.)

	<b>Models</b>			
	<b>7110</b>	<b>7120</b>	<b>7130</b>	<b>7140</b>
<b>FINAL DRIVES</b>				
Overhaul . . . . .	177	177	177	177
Remove & Reinstall . . . . .	176	176	176	176
<b>FRONT-WHEEL DRIVE</b>				
Differential . . . . .	11	11	11	11
Front Drive Shaft . . . . .	12	12	12	12
Front Support . . . . .	7	7	7	7
Pivot Housing & Axle shaft . . . . .	10	10	10	10
R&R Drive Axle Assy. . . . .	6	6	6	6
Tie Rod & Toe-In . . . . .	8	8	8	8
Wheel Hub & Planetary . . . . .	9	9	9	9
<b>HYDRAULIC LIFT SYSTEM</b>				
Electronic Diagnostic Codes . . . . .	203	203	203	203
Control Circuit Tests . . . . .	204	204	204	204
Control Valve . . . . .	221	221	221	221
Hitch Adjustments . . . . .	216	216	216	216
Hitch Lift Assist Cylinders . . . . .	223	223	223	223
Lift Housing . . . . .	222	222	222	222
Operation . . . . .	200	200	200	200
<b>HYDRAULIC SYSTEM</b>				
Priority Valve . . . . .	198	198	198	198
Pto Control Valve . . . . .	199	199	199	199
Pump Compensator Valve . . . . .	196	196	196	196
Pump Drive Unit . . . . .	197	197	197	197
Pumps . . . . .	193	193	193	193
Remote Control Valves . . . . .	224	224	224	224
<b>PARK LOCK</b>				
Linkage Adjustment . . . . .	182	182	182	182
Overhaul Park Lock . . . . .	183	183	183	183
<b>POWER SHIFT</b>				
Adjustment . . . . .	134	134	134	134
Control Valve . . . . .	138	138	138	138
Power Shift Operation . . . . .	133	133	133	133
Speed Transmission, Overhaul . . . . .	150	150	150	150
Range Transmission, Overhaul . . . . .	161	161	161	161
<b>POWER STEERING SYSTEM</b>				
Fluid, Filters & Bleeding . . . . .	13	13	13	13
Hand Pump . . . . .	20	20	20	20
Operational Tests . . . . .	16	16	16	16
Steering Cylinder . . . . .	22,23	22,23	22,23	22,23
System Pressure . . . . .	15	15	15	15
Trouble-Shooting . . . . .	14	14	14	14

# INDEX (CONT.)

	Models			
	7110	7120	7130	7140
<b>POWER TAKE-OFF</b>				
Clutch Overhaul . . . . .	188,191	188,191	188,191	188,191
Control Valve . . . . .	186	186	186	186
Linkage Adjustment . . . . .	184	184	184	184
Overhaul Dual Shaft . . . . .	190	190	190	190
Overhaul Single Shaft . . . . .	189	189	189	189
Pressure Adjustment . . . . .	185	185	185	185
Rear Unit, R&R . . . . .	187	187	187	187
Reduction Gears . . . . .	192	192	192	192
<b>TURBOCHARGER</b>				
Operation . . . . .	68	68	68	68
Overhaul . . . . .	70	70	70	70
Remove & Reinstall . . . . .	69	69	69	69

---

## DUAL DIMENSIONS

This service manual provides specifications in both the U.S. Customary and Metric (SI) system of measurements. The first specification is given in the measuring system used during manufacture, while the second specification (given in parenthesis) is the converted measurement. For instance, a specification of "0.011 inch (0.279 mm)" would indicate that the equipment was manufactured using the U.S. system of measurement and the metric equivalent of 0.011 inch is 0.279 mm.

---

## CONDENSED SERVICE DATA

	Models			
	7110	7120	7130	7140
<b>GENERAL</b>				
Engine Make . . . . .	Case-International			
Engine Model . . . . .	6T-830		6TA-830	
Cylinders, No. of . . . . .	6			
Bore . . . . .	4.488 in. (114 mm)			
Stroke . . . . .	5.315 in. (135 mm)			
Displacement . . . . .	505 cu. in. (8.3 L)			
Compression Ratio . . . . .	17.3:1		16.5:1	
Main Bearings, No. of . . . . .	7			
Cylinder Sleeves . . . . .	Wet			
Forward Speeds . . . . .	18 or 24			
<b>TUNE-UP</b>				
Firing Order . . . . .	1-5-3-6-2-4			
Valve Tappet Gap, Cold—				
Intake . . . . .	0.012 in. (0.305 mm)			
Exhaust . . . . .	0.024 in. (0.609 mm)			