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 CASE/INTERNATIONAL

MODELS 385-485-585-685-885

Engine serial number is stamped on right side of engine crankcase on all models. Tractor model and serial number are stamped on a plate attached to right side of front axle support. Transmission serial number is stamped on a plate attached to the right rear side of rear main frame. Model and serial number plate for front drive axle is located on left rear of axle housing.

INDEX (By Starting Paragraph)

	385 Diesel	485 Diesel	585 Diesel	685 Diesel	885 Diesel
BRAKES					
Adjustment	121	121	121	121	121
Bleed	122	122	122	122	122
Master Cylinders	124	124	124	124	124
R&R and Overhaul	123	123	123	123	123
CLUTCH, ENGINE					
Adjustment	97	97	97,98	97,98	97,98
Cylinders			99	99	99
R&R and Overhaul	101	101	101	101	101
CAB					
Remove and Reinstall		* *2*	145	145	145
COOLING SYSTEM					
Fan	69	69	69	69	69
Radiator	68	68	68	68	68
Water Pump	71	71	71	71	71
DIESEL FUEL SYSTEM					
Ether Starting Aid	67	67	67	67	67
Filters and Bleeding	60	60	. 60	60	60
Injection Pump	61	61	61	61	61
Nozzles	64	64	64	64	64

INDEX (CONT.)

	385 Diesel	485 Diesel	585 Diesel	685 Diesel	885 Diesel
DIFFERENTIAL LOCK					210001
R&R and Overhaul	116	116	116	116	116
ELECTRICAL SYSTEM					
Alternator	78	78	78	78	78
Batteries	72	72	72	72	72
Charging System	74	74	74	74	74
Starting Motor	85,91	85,91	85,91	85,91	85,91
ENGINE					
Assembly, R&R	34	34	34	34	34
Balancer			56	56	56
Cam Followers	39	39	39	39	39
Camshaft and Bearings	46	46	46	46	46
Connecting Rods and	10	10	40	40	40
Bearings	51	51	51	51	51
Crankshaft and Main				,02	-
Bearings	52	52	52	52	52
Crankshaft Oil Seals	53,54	53,54	53,54	53,54	53,54
Cylinder Head	35	35	35	35	35
Flywheel	55	55	55	55	55
Injection Timing	61	61	61	61	61
Nozzle Sleeves	36	36	36	36	36
Oil Pan	59	59	59	59	59
Oil Pump	58	58	58	58	58
Piston Pins	50	50			
Piston Removal	48		50	50	50
		48	48	48	48
Pistons, Sleeves and Rings .	49	49	49	49	49
Rocker Arms	40	40	40	40	40
Timing Gear Cover	41	41	41	41	41
Timing Gears	42	42	42	42	42
Valves and Seats	37	37	37	37	37
Valve Guides and Springs	38	38	38	38	38
FENDERS, FUEL TANK AND PLATFORM					
Remove and Reinstall	144	144	144	144	144
FINAL DRIVE					
Assemblies, R&R	118	118	118	118	118
Planetary Carrier	119	119	119	119	119
Rear Axles	120	120	120	120	120
FRONT SYSTEM (Two-Wheel Drive)					
Axle Main Member	4,5	4,5	4,5	4,5	4,5
Front Support	7	7	7	7	7
Spindles	2,3	2,3	2,3	2,3	2,3
Tie Rods and Toe-In	6	6	6	6	6
Wheel Bearings	1	1	1	1	1

INDEX (CONT.)

	385 Diesel	485 Diesel	585 Diesel	685 Diesel	885 Diesel
FRONT-WHEEL DRIVE					
Axle Assembly, R&R Differential and Bevel	8	8	8	8	8
Drive Gears	12	12	12	12	12
Front Drive Shaft	16	16	16	16	16
Front Support	9	9	9	9	9
Swivel Housing and Axle					
Shaft	11	11	11	11	11
Tie Rods and Toe-In	19	19	19	19	19
Transfer Gearbox	17	17	17,18	17,18	17,18
Wheel Hub and Planetary	10	10	10	10	10
HYDRAULIC SYSTEM				777.40	
Auxiliary Control Valves	143	143	143	143	143
Filter, Fluid and Pump	142	142	142	142	142
Lift Cylinder and Valve	139	139	139	139	139
Raise Rate Valve	140	140	140	140	140
Rockshaft	141	141	141	141	141
R&R Lift Unit	137	137	137,138	137,138	137,138
Test and Adjust	129	129	129	129	129
Trouble Shooting	128	128	128	128	128
Unloading and Flow			1990	1222	100
Control Valve	136	136	136	136	136
MAIN DRIVE BEVEL GEARS AND DIFFERENTIAL	3				
R&R and Overhaul	115	115	115	115	115
PARK BRAKE	117	117	117	117	117
POWER STEERING SYSTEM					
Cylinder	30,31,32	30,31,32	30,31,32	30,31,32	30,31,32
Flow Divider	28	28	28	28	28
Flow and Pressure Tests	22	22	22	22	22
Lubrication and Bleeding	21	21	21	21	21
Oil Cooler	33	33	33	33	33
Operation	20	20	20	20	20
Pump	26	26	26	26	26
Steering Hand Pump	29	29	29	29	29
POWER TAKE-OFF		***	107	107	107
Clutch, Shafts and Gears	127	127	127	127	127
Linkage Adjustment	125	125	125	125	125 126
Operating Pressure	126	126	126	126	120
TRANSMISSION, FORWARD REVERSE	-				
Operation	105	105	105	105	
Regulator (Control) Valve	107	107	107	107	
R&R and Overhaul	109	109	109	109	***
Trouble Shooting	106	106	106	106	

INDEX (CONT.)

	385	485	585	685	885
	Diesel	Diesel	Diesel	Diesel	Diesel
TRANSMISSION, TWO SPEI POWERSHIFT	ED				
Operation	102	102	102	102	102
Regulator (Control) Valve	103	103	103	103	103
R&R and Overhaul	104	104	104	104	104
TRANSMISSION, RANGE					
R&R and Overhaul	111,112,113	111,112,113	111,113	111,113	111,113
Transfer Lube Pump	114	114	114	114	114
TRANSMISSION, SYNCHRO MESH (SPEED)	-				
R&R and Overhaul	110	110	110	110	110

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

	385	485	585	685	885		
	Diesel	Diesel	Diesel	Diesel	Diesel		
GENERAL							
Engine Make	Case/International						
Engine Model	D-155	D-179	D-206	D-239	D-268		
Number of Cylinders	3	3	4	4	4		
Bore	3.875 in.	3.875 in.	3.875 in.	3.875 in.	3.937 in.		
	(98.4 mm)	(98.4 mm)	(98.4 mm)	(98.4 mm)	(100.0 mm)		
Stroke	4.37 in.	5.06 in.	4.37 in.	5.06 in.	5.51 in.		
	(111.1 mm)	(128.5 mm)	(111.1 mm)	(128.5 mm)	(140.0 mm)		
Displacement	155 cu. in.	179 cu. in.	206 cu. in.	239 cu. in.	268 cu. in.		
	(2.54 L)	(2.93 L)	(3.38 L)	(3.92 L)	(4.39 L)		
Main Bearings,							
Number of	4	4	5	5	5		
Cylinder Sleeves	Wet	Wet	Wet	Wet	Wet		
Forward Speeds,							
Number of	8 (1)	8 (1)	8 (1)	8 (1)	8 (1)		
Alternator/Starter Make			Lucas and Bosch	ı	G- 200		
Battery Ground			Negative				

⁽¹⁾ Sixteen forward speeds, if equipped with Two-Speed Power Shift.