
TT45A, TT50A REPAIR MANUAL COMPLETE CONTENTS

SECTION 00 - GENERAL	2
SECTION 10 - ENGINE	3
SECTION 18 - CLUTCHES	10
SECTION 21 - TRANSMISSION SYSTEM	11
SECTION 27 - MECHANICAL REAR WHEEL DRIVE	13
SECTION 31 - POWER TAKE-OFF	15
SECTION 33 - BRAKING SYSTEM	16
SECTION 35 - HYDRAULIC SYSTEM	16
SECTION 41 - STEERING SYSTEMS	19
SECTION 44 - FRONT AXLE	20
SECTION 55 - ELECTRICAL SYSTEM	21
SECTION 90 - BODYWORK	27

The following pages are the collation of the contents pages from each section and chapter of the TT45A, TT50A Repair manual. Complete Repair part # 87655297.

The sections used through out all New Holland product Repair manuals may not be used for each product. Each Repair manual will be made up of one or several books. Each book will be labeled as to which sections are in the overall Repair manual and which sections are in each book.

The sections listed above are the sections utilized for the TT45A, TT50A Tractors.

SECTION 00 - GENERAL

BOOK 1 - 87655298

Chapter 1 - General

CONTENTS

Section	Description	Page
	Federal Emissions Warranty	2
	California Emission Control Warranty Statement	3
	General Instructions	5
	Important Notice	5
	Shimming	5
	Rotating Shaft Seals	5
	O-Rings	6
	Sealers	6
	Bearings	6
	Spring Pins	6
	Precautionary Notice	7
	Equipment Notice	7
	Spare Parts Notice	7
	General Notices	7
	Health and Safety Precautions	8
	General Workshop Tools and Equipment	13
	Legal Aspects	13
	Lubricants and Greases	13
	Precautionary Statements	17
	Safety	18
	The Tractor	18
	Driving the Tractor	19
	Operating the Tractor	20
	Operating the PTO	21
	Servicing the Tractor	21
	Diesel Fuel	22
	Universal Symbols	23
	Safety Decals	24
	Instructional Decals	28
	Ecology and the Environment	29
	Minimum Hardware Tightening Torques	30
	General Specifications	32
	Lubricants and Coolants	37

SECTION 10 - ENGINE

BOOK 1 - 87655298

Chapter 1 - Engine

CONTENTS

Section	Description	Page
	Specifications	6
	Metric Bolt Torque Specifications	15
	Special Tools	16
	Compression Test and Tools	17
	Description of Operation	18
	Troubleshooting	19
	Cylinder Head and Valve Train Components	23
	Cylinder Block Assembly	23
	Separating the Tractor at the Clutch Housing/Engine - 8 x 12 Transmission	25
	Disassembly	25
	Separating the Tractor at the Engine/Frame	28
	Removal	28
	Installation	29
	Attaching the Tractor at the Clutch Housing/Engine - 8 x 12 Transmission	30
	Assembly	30
	Overhaul	34
	Engine	34
	Fuel Injector and Glow Plug	34
	Removal	34
	Oil Pressure Switch	34
	Temperature Sending Switch and Alternator	34
	Removal	34
	Fan, Water Pump and External Oil Tube	35
	Removal	35
	Air Inlet Manifold	35
	Removal	35
	Rocker Arm Shaft and Support Bracket	36
	Removal	36
10 101	Cylinder Head	36
	Removal	36
	Valve Tappet	37
	Removal	37
	Fuel Shutoff Solenoid	37
	Removal	37

SECTION 10 - ENGINE

BOOK 1 - 87655298

Chapter 1 - Engine (Continued)

CONTENTS

Section	Description	Page
10 106	Engine Timing Gear Cover, Timing Gears, and Cam Shaft	37
	Timing Gear Cover Removal	37
10 106	Timing Gears and Cam Shaft	40
	Removal	40
10 102	Oil Sump	41
	Removal	41
	Oil Suction Pipe and Strainer	41
	Removal	41
10 110	Balancer Assembly	42
	Removal	42
10 105	Connecting Rods, Bearings, and Pistons, Rings	42
	Removal	42
10 103	Flywheel	43
	Removal	43
10 103	Backplate and Oil Seal	43
	Removal	43
	Crankshaft - Main Bearings	43
	Removal	43
10 101	Cylinder Head	44
	Disassembly	44
	Inspection and Repair	44
	Valve Seats	45
	Valves	46
	Valve Guides	47
	Valve Springs	48
	Rocker Arms	48
	Push Rods	49
	Cylinder Head	49
	Assembly	49
	Cylinder Block	50
	Pistons	50
	Disassembly and Inspection	50

SECTION 10 - ENGINE

BOOK 1 - 87655298

Chapter 1 - Engine (Continued)

CONTENTS

Section	Description	Page
	Piston Rings	53
	Connecting Rods	53
	Connecting Rod Bearing	55
	Clearance Check	55
	Pistons, Rings, and Connecting Rod	56
	Assembly	56
10 103	Crankshaft - Main Bearing and Thrust Washer	57
	Removal and Inspection	57
	Crankshaft	58
	Bearing (Bushing)	59
	Replacement	59
	Main Bearing	60
	Assembly	60
	Port Block	61
	Removal	61
	Installation	61
10 106	Timing Gear	62
	Camshaft	62
	Disassembly	62
	Inspection	62
	Assembly	63
10 103	Flywheel	63
10 102	Timing Gear Housing	64
10 102	Front Oil Seal and Steering Pump Seal	64
	Replacement	64
10 103	Crankshaft and Bearing Holder	65
	Installation	65
	Rear Oil Seal and Backplate	65
	Installation	65
	Flywheel	66
	Installation	66
10 105	Pistons and Connecting Rods	66
	Installation	66

SECTION 10 - ENGINE

BOOK 1 - 87655298

Chapter 1 - Engine (Continued)

CONTENTS

Section	Description	Page
10 110	Balancer Assembly	67
	Installation	67
	Balancer Shims	67
	Oil Suction Pipe and Suction Strainer	68
	Installation	68
	Oil Sump	68
	Installation	68
10 106	Camshaft and Camshaft Gear	68
	Installation	68
10 106	Idle Gear, Oil Pump, and Injection Timing	69
	Installation	69
	Timing Gear Cover	69
	Installation	69
	Crankshaft Pulley	70
	Installation	70
	Fuel Injection Pump	70
	Installation	70
	Hydraulic Oil Pump	71
	Installation	71
	Power Steering Pump	71
	Installation	71
10 101	Head Gasket Selection	72
	Selection Chart	72
	Cylinder Head	72
	Installation	72
10 106	Valve Clearance	73
	Adjustment	73
	Valve Cover	74
	Installation	74
	Water Pump and Cooling Fan	74
	Installation	74
	External Oil Tube	74
	Assembly	74

SECTION 10 - ENGINE

BOOK 1 - 87655298

Chapter 1 - Engine (Continued)

CONTENTS

Section	Description	Page
	Glow Plug and Connector	75
	Installation	75
	Fuel Injector	75
	Installation	75
10 218	Fuel Piping	75
	Installation	75
	Alternator and Temperature Sender Switch	76
	Installation	76
	Exhaust Manifold	76
	Installation	76
10 304	Description of Operation - Engine Lubrication System	77
10 206	Oil Filter	80
	Construction and Function	80
	Maintenance	80
10 304	Oil Pump	80
	Removal	80
	Inspection	80
	Installation and Adjustment	81
	Engine Oil Pressure	82
	Check	82
	Oil Pressure Relief Valve	83
	Removal	83
	Installation	83
	Oil Consumption	83
10 400	Description of Operation - Cooling System	84
	Maintenance	86
	Coolant	86
	Radiator Cap	86
10 402	Thermostat	87
10 402	Water Pump	87
10 414	Cooling Fan	87

SECTION 10 - ENGINE

BOOK 1 - 87655298

Chapter 1 - Engine (Continued)

CONTENTS

Section	Description	Page
	Overhaul - Cooling System	88
10 406	Radiator	88
	Removal	88
	Inspection and Repair	89
	Installation	89
10 402	Water Pump	90
	Removal	90
	Inspection and Repair	92
	Installation	92
10 402	Thermostat	93
	Removal	93
	Inspection and Repair	93
	Installation	94

SECTION 10 - ENGINE

BOOK 1 - 87655298

Chapter 2 - Fuel Systems

CONTENTS

Section	Description	Page
	Specifications	3
	Standards for Adjusting Injection Pump	3
	Torque Specifications	4
	Special Tools	4
	Description of Operation	5
10 242	Injection Pump	5
	Troubleshooting - General	7
	Troubleshooting - Fuel Injectors	10

SECTION 10 - ENGINE

BOOK 1 - 87655298

Chapter 2 - Fuel Systems (Continued)

CONTENTS

Section	Description	Page
	Troubleshooting - Governor	11
10 244	Fuel Variation Mechanism	12
	Delivery Valve Assembly	13
10 244	CTD (Compact Timing Device)	13
10 236	Pumping Elements	15
10 214	Delivery Valves	15
10 242	Injection Pump	17
	Removal	17
	Repair	19
	Installation	19
	Calibration/Adjustments	20
10 230	Fuel Pump	20
	Installation	20
	Spill-Timing Procedure	21
	Fuel Screw/High Idle	25
	Adjustment	25
10 230	Fuel Pump	26
	Auto Bleed	26
	Description of Operation	27
10 230	Governor	27
	Disassembly	29
	Assembly	30
	Adjustments	32
10 218	Injectors	33
	Removal	34
	Disassembly	35
	Assembly/Adjustment	35
	Engine Breather Valve	36
	Removal	37
	Installation	37
	Troubleshooting - Engine Breather Valve	38

SECTION 18 - CLUTCHES

BOOK 1 - 87655298

Chapter 1 - Clutches

CONTENTS

Section	Description	Page
	Specifications	2
	Tightening Torques	3
	Special Tools	4
	Sealants	4
	Sectional Views - Clutch Assembly	5
	Sectional Views - Clutch Plate	6
	Troubleshooting	7
	Description and Operation	8
	Operation	8
	Overhaul	9
	Clutch Pedal	9
	Removal	9
	Inspection	10
	Installation	11
	PTO and Clutch Lever Cross Shaft	12
	Removal	12
	Inspection	14
	Installation	14
	Transmission/PTO Release Bearing Assembly	16
	Disassembly	16
	Assembly	17
	Clutch Pedal Setting	18
	Adjustment	18
	PTO Clutch Lever Adjustment	19
	Clutch Assembly	20
	Removal	20
	Installation	21
	Disassembly	23
	Release Fingers	25
	Disassembly	25
	Assembly	26
	Inspection and Repair	28
	Installation	29
	Release Lever Height Adjustment	32

SECTION 21 - TRANSMISSION SYSTEM

BOOK 1 - 87655298

Chapter 1 - Transmission System

CONTENTS

Section	Description	Page
	Specifications	2
	Tightening Torques	3
	Sealants	6
	Special Tools	7
	Sectional View	7
	Transmission Assembly	7
	Troubleshooting	9
	Description and Operation	10
	8 x 2 Transmission	10
	General Recommendations for Overhauling Operations	13
	Overhaul	14
	Transmission Assembly	14
21 118 10	Removal	14
	Installation	21
	Sealant Locations	28
	Input Shaft	29
21 148 60	Removal	29
	Repair and Inspection	33
	Assembly	34
	Transmission Input Shaft Axial Play Adjustment	40
	Adjustment Procedure	40
	Installing Shims	42
	Reverse Gear	43
21 148 48	Removal	43
	Installation	44
	Pinion Shaft	45
21 118 10	Removal	45
	Repair and Inspection	47
	Pinion Shaft Bearing Replacement	47
	Installation	48
	Adjustments and Settings	51

SECTION 21 - TRANSMISSION SYSTEM

BOOK 1 - 87655298

Chapter 1 - Transmission System (Continued)

CONTENTS

Section	Description	Page
21 130 26	External Components	55
	Gear Shift Lever	55
	Removal	55
	Installation	56

SECTION 21 - TRANSMISSION SYSTEM

BOOK 1 - 87655298

Chapter 2 - Front Reduction Gearbox

CONTENTS

Section	Description	Page
	Description of Operation	2
	Reduction Gearbox Operation	2
	Front Reduction Gearbox	3
	Removal	3
	Disassembly	4
	Assembly	6
	Installation	9

SECTION 27 - MECHANICAL REAR WHEEL DRIVE

BOOK 2 - 87655299

Chapter 1 - Mechanical Rear Wheel Drive

CONTENTS

Section	Description	Page
	Specifications	2
	Pinion to Ring Gear and Differential	2
	Tightening Torques	3
	Sealants	4
	Special Tools	5
	Sectional Views	6
	Ring Gear and Differential Assembly	6
	Troubleshooting	7
	Pinion, Ring Gear and Differential	7
	Description and Operation	7
	Ring Gear and Differential Housing	8
27 100	Removal	8
	Installation	14
	Ring Gear/Pinion Backlash and Total Preload Setting	21
	Procedure	21
	Differential Assembly	24
	Disassembly	24
	Inspection	28
	Assembly	28

SECTION 27 - MECHANICAL REAR WHEEL DRIVE

BOOK 2 - 87655299

Chapter 2 - Rear Axle and Final Drive

CONTENTS

Section	Description	Page
	Specifications	2
	Final Drive	2
	Tightening Torques	2
	Sealants	4
	Special Tools	5
	Sectional View	5
	Final Drive	5
	Troubleshooting	6
	Final Drive	6
	Description and Operation	7
	Rear Axle and Final Drive	7
	Overhaul	8
	Final Drive Housing	8
	Removal	8
	Disassembly	11
	Inspection	15
	Assembly and Adjustments	16

SECTION 31 - POWER TAKE-OFF

BOOK 2 - 87655299

Chapter 1 - Rear Power Take-Off System

CONTENTS

Section	Description	Page
	Specifications	2
	Tightening Torques	3
	Sealants	4
	Sectional View	5
	Description and Operation	6
	Main PTO Levers and Internal Linkages	7
	Removal	7
	Repair and Inspection	9
	Installation	9
	Main PTO Shafts	11
	Removal	11
	Installation	14
	Rear PTO Shaft Assembly	16
	Removal	16
	Disassembly	18
	Inspection	20
	Assembly	20
	Installation	22
	PTO Clutch Adjustment	24
	PTO Brake	25
	PTO Brake Torque Test	25

SECTION 33 - BRAKING SYSTEM

BOOK 2 - 87655299

Chapter 1 - Tractor Brakes

CONTENTS

Section	Description	Page
	Specifications	2
	Tightening Torques	3
	Sealants	4
	Sectional Views - Brake Control Assembly	5
	Troubleshooting	6
	Description and Operation	7
	Brake Pedals and External Linkages	8
	Removal	8
	Installation	9
	Parking Brake Linkage	10
	Removal	10
	Inspection	10
	Installation	10
	Brake Assembly	11
	Disassembly	11
	Inspection	14
	Assembly	15
	Brake Pedal Free Play Adjustment	18

SECTION 35 - HYDRAULIC SYSTEM

BOOK 2 - 87655299

Chapter 1 - Hydraulic System

CONTENTS

Section	Description	Page
35 000	Introduction and Circuit Identification	2
	Open Center Hydraulic Circuit and Mechanical Lift	4
	Schematic View of Hydraulic System	4
	Hydraulic Circuit Diagram	5

SECTION 35 - HYDRAULIC SYSTEM

BOOK 2 - 87655299

Chapter 2 - Hydraulic Pump

CONTENTS

Section	Description	Page
35 000	Specifications	2
	Description of Operation - Hydraulic Pump and Filter	3
	Hydraulic Pump and Filter	3
	Hydraulic Pump	4
	Removal	4
	Disassembly	4
	Inspection and Repair	6
	Assembly	7
	Installation	8

SECTION 35 - HYDRAULIC SYSTEM

BOOK 2 - 87655299

Chapter 3 - Hydraulic Lift Assembly

CONTENTS

Section	Description	Page
35 000	Specifications	3
	Tightening Torque	4
	Sealants	5
	Special Tools	5
	Description and Operation	6
	Hydraulic System	6
	Position Control Operation	6
	Float Operation	7
	Response Control	7
	Hydraulic Control Valve	8
	Control Valve Operation	9
	Neutral Position	9
	Lifting Position	10
	Lowering Position	11
	Control Valve Internal Linkage	12

SECTION 35 - HYDRAULIC SYSTEM

BOOK 2 - 87655299

Chapter 3 - Hydraulic Lift Assembly (Continued)

CONTENTS

Section	Description	Page
	Position Control – Raise Mode	12
	Use of Position Control Lever	13
Overhaul		14
	Mechanical Lift Assembly	14
	Removal	14
	Installation	15
	Rear Lift External Controls	17
	Disassembly	17
	Assembly	18
	Rear Lift Internal Controls	20
	Disassembly	20
	Inspection	23
	Assembly	24
	Lift Arm Shaft	27
	Disassembly – Assembly	27
	Inspection	29
	Installation	29
	Control Valve Assembly	31
	Removal	31
	Disassembly	32
	Control Valve Adjustments	36
	Sensitivity Adjustment	36
	Position Control Lever Adjustment	37
	Internal Push Rod Adjustment	38
	Hydraulic System Pressure Check	40
	Setting Relief Valve	41
	Servicing Faulty Relief Valve	41
	Auxiliary Hydraulic Ports	42
	Rear Remote Valves (Optional)	42
	Hydraulic Pump Testing	43
	Inlet Restriction Test	43
	Flow Meter Installation	43
	Pump Efficiency Test	44
	Troubleshooting	45

SECTION 41 - STEERING SYSTEMS

BOOK 3 - 87655300

Chapter 1 - Hydrostatic Steering Systems

CONTENTS

Section	Description	Page
41 000	Specifications	2
	Tightening Torques	3
	Special Tools	3
	Troubleshooting	4
	System Testing	6
	Steering Pump	6
	Steering Test	6
	Steering Relief Valve Pressure Test	6
	Relief Valve Adjustment	7
	Description and Operation	8
	Operation	11
	Straight-ahead Driving (A, a, d)	11
	RH Steer (B, Sd, b, e, f)	11
	LH Steer (B, Ss)	11
	Emergency Hydraulic Steer (C, Sed, Ses)	11
	Power Cylinder Safety and Make-up Valves	12
	Hydrostatic Steering Reservoir	13
	Inspection and Cleaning	14
	Steering Motor	15
	Removal	15
	Installation	16
	Disassembly	16
	Cleaning	21
	Inspection and Replacement	21
	Lubrication	21
	Assembly	22
	Two Wheel Drive Steering Cylinder	35
Removal	35	
Disassembly	36	
Inspection	37	
Assembly	37	
Inspection	38	

SECTION 44 - FRONT AXLE

BOOK 3 - 87655300

Chapter 1 - Two Wheel Drive Axle

CONTENTS

Section	Description	Page
44 000	Specifications	2
	Track Adjustments	2
	Front Wheel Track Adjustments	2
	Tightening Torques	4
	Sealants	5
	Troubleshooting	5
	Description and Operation	5
	Sectional View - Front Axle Support	6
	Sectional View - Stub Assembly	7
	Front Axle Assembly	8
	Removal	8
	Installation	10
	Front Wheel Hub	12
	Removal	12
	Installation	14
	Spindle Assembly	15
	Removal	15
	Overhaul	17
	Installation	18

**Thanks very much for your reading,
Want to get more information,
Please click here, Then get the complete
manual**

JustClickHere 

NOTE:

**If there is no response to click on the link above,
please download the PDF document first, and then
click on it.**

**Have any questions please write to me:
admin@servicemanualperfect.com**