
T1510-T1520 SERVICE MANUAL COMPLETE CONTENTS

SECTION 00 - GENERAL INFORMATION	2
SECTION 10 - ENGINE	3
SECTION 18 - CLUTCH	11
SECTION 21 - GEAR TRANSMISSION	13
SECTION 25 - FWD FRONT AXLE	15
SECTION 27 - DIFFERENTIAL, REAR AXLE	17
SECTION 29 - HYDROSTATIC TRANSMISSION	18
SECTION 31 - POWER TAKE-OFF SYSTEMS	20
SECTION 33 - BRAKES	22
SECTION 35 - HYDRAULIC SYSTEM	22
SECTION 41 - STEERING	26
SECTION 44 - WHEELS, TIRES AND 2WD AXLE	28
SECTION 55 - ELECTRICAL SYSTEM	29
SECTION 90 - PLATFORM	38

The following pages are the collation of the contents pages from each section and chapter of the T1510-T1520 Service manual. Complete Service part # 84260810.

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

SECTION 00 - GENERAL INFORMATION

BOOK 1 - 84260811

Chapter 1 - General Information

CONTENTS

Section	Description	Page
	Introduction	2
	Precautionary Statements	3
	Personal Safety	3
	Machine Safety and Information	3
	Safety	4
	Precautionary Statements	4
	The Tractor	4
	Servicing the Tractor	4
	Operating the Tractor	5
	Driving the Tractor	5
	Operating the PTO	6
	Diesel Fuel	6
	Safety Frame (ROPS)	6
	International Symbols	8
	Specifications	9
	General Dimensions	15
	Minimum Hardware Tightening Torques	18
	Metric Bolt Torque Specifications	19
	Lubricants	20
	Recommended Lubricants and Coolants	20
	Adjustments	21
	Tire Inflation Pressure	21

SECTION 10 - ENGINE

BOOK 1 - 84260811

Chapter 1 - Engine

CONTENTS

Section	Description	Page
	Specifications	6
	Metric Bolt Torque Specifications	13
	Engine Bolt Torque Specifications	14
	Engine Fuel System Bolt Torque Specifications	14
	Special Tools	15
	Compression Test and Tools	16
	Description of Operation - Engine	17
	Cylinder Head and Valve Train Components	18
	Cylinder Block Assembly	18
	Troubleshooting	20
	Overhaul - Engine	25
	Engine	25
	Preparation	25
	Fuel Injector and Glow Plug	26
	Removal	26
	Oil Pressure Switch	26
	Removal	26
	Temperature Sending Switch and Alternator	27
	Removal	27
	Fan, Water Pump, and External Oil Tube	27
	Removal	27
	Head Cover	27
	Removal	27
	Rocker Arm Shaft and Support Bracket	28
	Removal	28
	Cylinder Head	28
	Removal	28
	Valve Tappet	29
	Removal	29
	Fuel Shutoff Solenoid	29
	Removal	29
	Timing Gear Cover	29
	Removal	29

SECTION 10 - ENGINE

BOOK 1 - 84260811

Chapter 1 - Engine (Continued)

CONTENTS

Section	Description	Page
	Timing Gears and Camshaft	31
	Removal	31
	Oil Sump	31
	Removal	31
	Oil Suction Tube and Strainer	32
	Removal	32
	Connecting Rods, Bearings, Pistons, and Rings	32
	Removal	32
	Flywheel	33
	Removal	33
	Backplate and Oil Seal	33
	Removal	33
	Crankshaft and Main Bearings	33
	Removal	33
	Cylinder Head	34
	Disassembly	34
	Inspection and Repair	34
	Valve Seats	35
	Inspection and Repair	35
	Valves	36
	Inspection and Repair	36
	Valve Guides	37
	Inspection and Repair	37
	Valve Springs	38
	Inspection and Replacement	38
	Rocker Arms	38
	Inspection and Replacement	38
	Push Rods	39
	Inspection and Replacement	39
	Cylinder Head	40
	Assembly	40
	Cylinder Block	40
	Inspection	40

SECTION 10 - ENGINE

BOOK 1 - 84260811

Chapter 1 - Engine (Continued)

CONTENTS

Section	Description	Page
	Pistons	41
	Disassembly and Inspection	41
	Piston Rings	43
	Disassembly and Inspection	43
	Connecting Rods	43
	Disassembly and Inspection	43
	Pin to Bushing Clearance	44
	Connecting Rod Bearing Oil Clearance Check	45
	Pistons, Rings, and Connecting Rod	46
	Assembly	46
	Main Bearing and Thrust Washer	47
	Removal and Inspection	47
	Crankshaft	47
	Inspection	47
	Crankshaft Bearing (Bushing)	48
	Inspection	48
	Replacement	49
	Main Bearing and Thrust Washer	49
	Assembly	49
	Port Block	51
	Removal	51
	Installation	51
	Timing Gear	51
	Inspection	51
	Standard	51
	Allowable Limit	51
	Camshaft	52
	Disassembly	52
	Inspection	52
	Assembly	52
	Flywheel	53
	Inspection and Repair	53

SECTION 10 - ENGINE

BOOK 1 - 84260811

Chapter 1 - Engine (Continued)

CONTENTS

Section	Description	Page
	Timing Gear Housing	53
	Front Oil Seal and Steering Pump Seal	53
	Replacement	53
	Crankshaft and Bearing Holder	54
	Installation	54
	Standard Thrust	54
	Allowable Limit	54
	Rear Oil Seal and Backplate	54
	Installation	54
	Flywheel	55
	Installation	55
	Pistons and Connecting Rods	55
	Installation	55
	Oil Suction Tube and Suction Strainer	56
	Installation	56
	Oil Sump	56
	Installation	56
	Camshaft and Camshaft Gear	56
	Installation	56
	Idle Gear, Oil Pump, and Injection Timing	57
	Installation	57
	Timing Gear Cover	57
	Installation	57
	Crankshaft Pulley	57
	Installation	57
	Fuel Injection Pump	58
	Installation	58
	Power Steering Pump	58
	Installation	58
	Head Gasket Selection	59
	Cylinder Head	59
	Assembly	59

SECTION 10 - ENGINE

BOOK 1 - 84260811

Chapter 1 - Engine (Continued)

CONTENTS

Section	Description	Page
	Valve Clearance Adjustment	60
	Head Cover	60
	Installation	60
	Water Pump and Cooling Fan	61
	Installation	61
	External Oil Tube	61
	Installation	61
	Glow Plug and Connector	61
	Installation	61
	Fuel Injector	62
	Installation	62
	Fuel Tubing	62
	Installation	62
	Alternator and Temperature Sender Switch	62
	Installation	62
	Exhaust Manifold	63
	Installation	63
	Description of Operation - Engine Lubrication System	63
	Oil Filter	66
	Construction and Function	66
	Maintenance	66
	Oil Pump	66
	Removal	66
	Inspection	66
	Installation and Adjustment	67
	Engine Oil Pressure Check	67
	Oil Pressure Relief Valve	69
	Removal	69
	Installation	69
	Oil Consumption	69

SECTION 10 - ENGINE

BOOK 1 - 84260811

Chapter 1 - Engine (Continued)

CONTENTS

Section	Description	Page
	Description of Operation - Cooling System	70
	Maintenance	71
	Coolant	71
	Radiator Cap	71
	Thermostat	72
	Water Pump	72
	Cooling Fan	72
	Overhaul - Cooling System	73
	Radiator	73
	Removal	73
	Inspection and Repair	74
	Installation	74
	Water Pump	76
	Removal	76
	Inspection and Repair	77
	Installation	77
	Thermostat	78
	Removal	78
	Inspection and Repair	79
	Installation	79
	Separating the Tractor at the Clutch Housing/Engine	80
	Preparation	80
	Removal	80
	Attaching the Clutch Housing to the Engine	87
	Installation	87

SECTION 10 - ENGINE

BOOK 1 - 84260811

Chapter 2 - Fuel System

CONTENTS

Section	Description	Page
	Specifications	10-3
	Special Tools	10-5
	Description of Operation - Injection Pump	10-6
	Troubleshooting	10-7
	General	10-7
	Governor System	10-10
	Injectors	10-11
	Breather Valve	10-12
	Fuel Variation Mechanism	10-13
	Delivery Valve Assembly	10-14
	CTD (Compact Timing Device) Mechanism	10-14
	Delivery Valves	10-17
	Fuel Delivery	10-17
	Injection Pump	10-20
	Removal	10-20
	Repair	10-21
	Installation	10-21
	Original Pump and Drive Components	10-22
	Installation	10-22
	New Pump or Drive Component	10-23
	Installation	10-23
	Injection Pump Timing	10-24
	Bleeding the Fuel System	10-24
	Fuel Settings Adjustments	10-26
	Fuel Screw/High Idle	10-26
	Description of Operation - Governor	10-27
	Governor	10-29
	Disassembly	10-29
	Assembly	10-30

SECTION 10 - ENGINE

BOOK 1 - 84260811

Chapter 2 - Fuel System (Continued)

CONTENTS

Section	Description	Page
	Description of Operation - Injectors	10-32
	Injectors	10-34
	Removal	10-34
	Disassembly	10-35
	Assembly and Adjustment	10-35
	Description of Operation - Engine Breather Valve	10-36
	Breather Valve	10-37
	Removal	10-37
	Installation	10-37

SECTION 18 - CLUTCH

BOOK 1 - 84260811

Chapter 1 - Single Clutch

CONTENTS

Section	Description	Page
	Description of Operation - Single Clutch	2
	2WD 9 x 3 Gear Transmission	2
	HST Models	2
	HST Drive Transmission	2
	Clutch Pedal Assembly	3
	Overhaul - Single Clutch	4
	Single Clutch	4
	Removal	4
	Inspection	4
	Installation	5
	Adjustments - Single Clutch	6
	Free-play Adjustment - HST Models Only	6
	Clutch Stop - HST and 9 x 3 Transmission Models	7
	Troubleshooting	8
	Specifications	9
	Bolt Torques	10
	Special Tools	10

SECTION 18 - CLUTCH

BOOK 1 - 84260811

Chapter 2 - Double Clutch

CONTENTS

Section	Description	Page
	Description of Operation - Double Clutch	2
	9 x 3 Gear Transmission Models	2
	Overhaul - Double Clutch	2
	Double Clutch	2
	Disassembly	2
	Inspection	3
	Assembly	4
	Adjustments - Double Clutch	5
	Free-play Adjustment - 9 x 3 Gear Transmission Models with Double Clutch	6
	Clutch Stop - 9 x 3 Transmission Models	7
	Servicing Clutch-related Components	8
	Clutch Pilot Bearing	8
	Removal	8
	Installation	8
	Clutch Release Bearing	9
	Removal	9
	Inspection	9
	Installation	10
	Clutch Linkage Components	10
	Clutch Cross Shaft Bushings	10
	Removal	10
	Installation	10
	Clutch Pedal Bushings	11
	Removal	11
	Installation	11
	Troubleshooting	12
	Specifications	13
	Bolt Torques	14
	Special Tools	14

SECTION 21 - GEAR TRANSMISSION

BOOK 2 - 84260812

Chapter 1 - Gear Transmission 9 x 3

CONTENTS

Section	Description	Page
	Specifications	3
	9 x 3 Gear Transmission	3
	General Bolt Torque Specifications	4
	Special Tools	5
	Description of Operation	6
	9 x 3 Gear Transmission	6
	Transmission Assembly	14
	Removal	14
	Single Clutch Input Shaft	14
	Removal	14
	Double Clutch Input Shaft	14
	Removal	14
	Single and Double Clutch	14
	Main Gear Shifter Rod	14
	Removal	14
	Main Shaft	15
	Removal	15
	Reverse Idler Shaft	15
	Removal	15
	Single Clutch Countershaft	16
	Removal	16
	Double Clutch Countershaft	16
	Removal	16
	Single Clutch PTO Countershaft	17
	Removal	17
	Double Clutch PTO Countershaft	17
	Removal	17
	Double Clutch FWD Drive Shaft	17
	Removal	17
	FWD Shift Rod	18
	Removal	18

SECTION 21 - GEAR TRANSMISSION

BOOK 2 - 84260812

Chapter 1 - Gear Transmission 9 x 3 (Continued)

CONTENTS

Section	Description	Page
	Rear Main Shaft	18
	Removal	18
	Range Gear Shifter Rod	19
	Removal	19
	Drive Pinion	20
	Removal	20
	Inspection	20
	Pre-installation Instructions	20
	Drive Pinion	21
	Installation	21
	Range Gear Shifter Rod	21
	Installation	21
	Rear Main Shaft	21
	Installation	21
	FWD Drive Shaft	22
	Installation	22
	FWD Shift Rod	22
	Installation	22
	Single Clutch PTO Countershaft	23
	Installation	23
	Double Clutch PTO Countershaft	23
	Installation	23
	Single Clutch Countershaft	23
	Installation	23
	Double Clutch Countershaft	24
	Installation	24
	Reverse Idler	24
	Installation	24
	Main Shaft	24
	Installation	24
	Main Gear Shifter Rod	25
	Installation	25

SECTION 21 - GEAR TRANSMISSION

BOOK 2 - 84260812

Chapter 1 - Gear Transmission 9 x 3 (Continued)

CONTENTS

Section	Description	Page
	Main Transmission Shift Lever	25
	Removal and Overhaul	25
	Installation	26
	Single Clutch Input Shaft	26
	Installation	26
	Double Clutch Input Shaft	27
	Installation	27
	Separating the Tractor	28
	9 x 3 Gear Transmission	28
	Removal	28
	Installation	29

SECTION 25 - FWD FRONT AXLE

BOOK 2 - 84260812

Chapter 1 - FWD Front Axle

CONTENTS

Section	Description	Page
	Specifications	3
	Four Wheel Drive	3
	Bolt Torque Specifications	4
	Special Tools	5
	Description of Operation - Front-Wheel Drive Front Axle	6
	Troubleshooting	8
	Overhaul	8
	Front-Wheel Drive Front Axle	8
	Removal	8

SECTION 25 - FWD FRONT AXLE

BOOK 2 - 84260812

Chapter 1 - FWD Front Axle (Continued)

CONTENTS

Section	Description	Page
	Reduction Gear - Drop Box	10
	Disassembly	10
	Front Axle and Differential	11
	Disassembly	11
	Drive Pinion	12
	Disassembly	12
	Front Axle	13
	Inspection and Repair	13
	Bearing Clearance	13
	Differential	13
	Inspection and Repair	13
	Gear Reduction - Drop Box	14
	Inspection and Repair	14
	Drive Pinion	14
	Assembly	14
	Differential Gear	15
	Assembly	15
	Ring Gear-to-Pinion Backlash Check and Adjustment	16
	Axle and Differential	18
	Assembly	18
	Reduction Gear Box	19
	Assembly	19
	Idler Case Vertical Shimming Procedure	22
	Bevel Gear-to-Pinion Backlash Check	23
	Front Axle - 4WD	24
	Removal	24
	Installation	25
	Front Wheel Toe-in	28
	Checking Toe-In	28
	Adjusting Toe-In	28

SECTION 27 - DIFFERENTIAL, REAR AXLE

BOOK 2 - 84260812

Chapter 1 - Differential, Rear Axle

CONTENTS

Section	Description	Page
	Specifications	2
	Ring Gear and Pinion Gear Pattern Specification and Adjustment	2
	Bolt Torque Specifications	3
	Special Tools	3
	Description of Operation	4
	Differential Assembly	5
	Differential Lock	6
	Overhaul	7
	Differential	7
	Removal	7
	Disassembly	9
	Inspection	9
	Drive Pinion	10
	Removal	10
	Disassembly (with HST Transmission)	10
	Disassembly (with 9 x 3 Transmission)	11
	Assembly and Installation	12
	Differential	14
	Assembly and Installation	14
	Rear Axle	17
	Removal	17
	Disassembly	17
	Inspection	17
	Assembly	18
	Axle Seal	19
	Installation	19
	Rear Axle/Center Housing	21
	Removal	21
	Installation	23

SECTION 29 - HYDROSTATIC TRANSMISSION

BOOK 2 - 84260812

Chapter 1 - Hydrostatic Transmission

CONTENTS

Section	Description	Page
	Specifications	3
	Hydrostatic Transmission	3
	Bolt Torques	3
	Description of Operation - Hydrostatic Transmission	4
	Troubleshooting	5
	Variable Displacement Pump	7
	Operation	7
	Fixed Displacement Motor	8
	Operation	8
	Fluid Flow	9
	Neutral Position	9
	Forward Position	10
	Reverse Position	11
	Overhaul	12
	Hydrostatic Unit	12
	Removal	12
	Precautions Before Disassembly	13
	Hydrostatic Pump	16
	Disassembly	16
	Hydrostatic Motor	17
	Disassembly	17
	Hydrostatic Motor Shaft	19
	Removal	19
	Charge Pump	19
	Removal	19
	Swash Plate	20
	Removal	20
	Hydrostatic Transmission	20
	Inspection	20
	Hydrostatic Pump	24
	Assembly	24
	HST Piston Pump Cylinder Block	26
	Assembly	26
	HST Motor Cylinder Block	27
	Assembly	27

SECTION 29 - HYDROSTATIC TRANSMISSION

BOOK 2 - 84260812

Chapter 1 - Hydrostatic Transmission (Continued)

CONTENTS

Section	Description	Page
	Port Block	28
	Disassembly	28
	Inspection	28
	Assembly	29
	Charge Pump Relief Valve	30
	Disassembly	30
	Inspection	30
	Assembly	30
	High Pressure Relief Valve	30
	Removal	30
	Installation	30
	Hydrostatic Pump and Port Block	31
	Assembly	31
	Hydrostatic Motor and Port Block	32
	Assembly	32
	HST Cooler Check Valve	33
	Disassembly	33
	Inspection	33
	Assembly	33
	Pressure Tests	34
	High Pressure Relief Valve	34
	Charge Pump Relief Valve	36

SECTION 31 - POWER TAKE-OFF SYSTEMS

BOOK 3 - 84260813

Chapter 1 - Power Take-off Systems

CONTENTS

Section	Description	Page
	Specifications	3
	Bolt Torque Specifications	4
	Description of Operation	5
	Transmission Drive Power Take-Off	5
	9 x 3 Gear Transmission - Single Clutch (T1510 - 2WD Only)	5
	Transmission Drive Power Take-Off: 4WD (9x3)	7
	Live Power Take-Off	7
	Power Take-Off Drive - Hydrostatic Transmission	8
	Overhaul - Power Take-Off	9
	Power Take-Off	9
	Removal	9
	Output Shaft	9
	Removal	9
	Center Countershaft	10
	Removal	10
	One-Way Clutch	10
	Disassembly	10
	Rear Countershaft	11
	Removal	11
	9x3 Transmission	11
	HST Transmission	11
	Front Countershaft	12
	Removal	12
	Shifter	12
	Removal	12
	Assembly	14
	Front Countershaft	15
	Assembly	15
	Rear Countershaft	15
	Assembly	15
	HST Transmission	15
	9x3 Transmission	16

SECTION 31 - POWER TAKE-OFF SYSTEMS

BOOK 3 - 84260813

Chapter 1 - Power Take-off Systems (Continued)

CONTENTS

Section	Description	Page
	Center Countershaft	17
	One-Way Clutch	17
	Assembly	17
	Installation	18
	Output Shaft	19
	Assembly	19
	Description of Operation - Mid-Mount Power Take-Off	20
	Overhaul - Mid-Mount PTO	21
	Mid-Mount PTO	21
	Countershaft	21
	Removal	21
	Shifter Arm	22
	Removal	22
	Gearbox	23
	Disassembly	23
	Mid-Mount PTO Gear Shifter Removal	23
	Mid-Mount PTO Output Shaft Removal	23
	Inspection	24
	Assembly	24
	Output Shaft Installation	24
	Gear Shifter Installation	24
	Shifter Arm	25
	Assembly	25
	Countershaft	25
	Assembly	25
	Rear PTO Components	25
	Assembly	25

**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**