

FIGURE 1

PREVIEW - YOUFIXTHIS.COM

Blurred on purpose. The manual you buy has this page in full quality.

Download full manual at youfixthis.com

SECTION 1
VICKERS TRANSMISSION REMOVAL

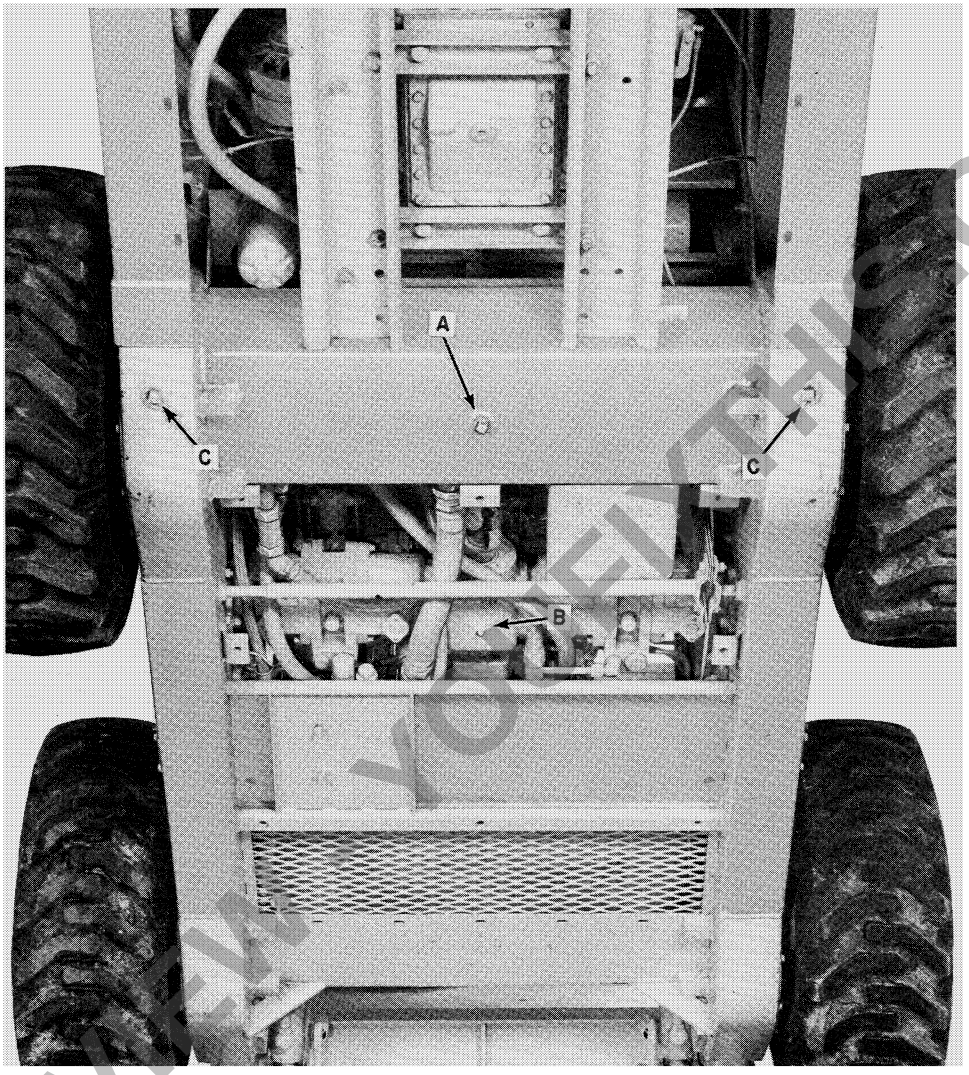


FIGURE 1

Before removing one or both transmissions from the loader, a complete check of the hydraulic system should be made to eliminate all other possible causes. If both transmissions must be removed, the right-hand transmission should be removed first because of easier access to the hardware. If, however, only **one** is to be removed, the same procedure applies to either side. **For easier access to the transmission areas, the boom should be raised and resting on the boom lock pins.**

WARNING: RAISE THE BOOM, EXTEND THE BOOM LOCK PINS AND LOWER THE BOOM DOWN ON THE PINS. STOP THE ENGINE AND WORK THE BOOM AND BUCKET PEDALS TO RELIEVE HYDRAULIC PRESSURE IN THE BOOM AND BUCKET SYSTEM BEFORE DISMOUNTING.

1. Drain the oil from the hydraulic oil reservoir, A, gear box, B, and both final drive chain cases, C, see Figure 1.
2. Remove the seat, safety covers, and the seat plate. Take out the four ¼" cap screws and remove the shield.

PREVIEW OF YOUFIXTHIS.COM

Download full manual at youfixthis.com

SECTION 12
TORQUE CHARTS

MINIMUM HARDWARE TIGHTENING TORQUES

IN FOOT POUNDS (NEWTON-METRES) FOR NORMAL ASSEMBLY APPLICATIONS

Blurred on purpose. The manual you buy has this page in full quality.



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SECTION 11
VICKERS TROUBLE SHOOTING

PROBLEM	PROBABLE CAUSE	WHAT TO LOOK FOR	DIAGNOSIS CORRECTION
1. Loader will not move in either direction.	Low oil level in reservoir.	Check for oil leakage or other possible causes for loss of oil.	Check reservoir for proper oil level and viscosity rating for operating temperature.
	Main system pump failure.	Boom will not respond or is slow to respond. Check main system pressure. Should be 2200-2400 psi (15,169-16,548 kPa)	Inspect the pump for ring, vane and housing wear. If pump housing is not scored, repair by installing cartridge kit. If housing is scored, replace entire pump.
		Pump shaft splines worn off.	If excessive wear is noted between the pump shaft splines and the gear box shaft internal splines both the gear box shaft and pump shaft must be replaced. **Grease liberally.**
		Weld failure at joint in gear box shaft.	Inspect shaft and replace if necessary.
	Transmission — internal linkage.	Check pressure at the plug on the oil cooler. Proper transmission charge pressure is 65 psi. Also see #5.	Remove transmission and inspect all mating surfaces. If scratches large enough to be felt with a fingernail exist on the valve body, rotating blocks, piston shoes, or swash plates, repairs, should be made. If both rotating groups and the valve block must be replaced, it is advisable to install a new transmission.
2. One transmission will not move in one direction.	Defective directional relief valve.	Check to make sure spring and metering pin are properly installed in relationship to relief valve.	Interchange the two directional relief valves. If the loader operates in the opposite direction, replace the defective valve. The forward directional relief valves are on top on both transmissions.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

SECTION 9

Specifications - L-35

ENGINE—VG4D

Manufacturer ..... Wisconsin

PREVIEW - YOUFIXTHIS.COM

Blurred on purpose. The manual you buy has this page in full quality.

Download full manual at youfixthis.com

CONTENTS

FOREWORD 2
SAFETY ..... 3, 5, 6 and 7
INTRODUCTION 8
SERVICING VICKERS-EQUIPPED LOADERS 10
SECTION 1 - VICKERS TRANSMISSION REMOVAL 10
SECTION 2 - HYDROSTATIC TRANSMISSION OPERATION 14
SECTION 3 - VICKERS TRANSMISSION DISASSEMBLY 16
SECTION 4 - VICKERS TRANSMISSION PUMP AND MOTOR SHIMMING 31
SECTION 5 - SHIMMING PROCEDURE FOR VICKERS FOUR-WAY GEAR BOX 34
SECTION 6 - VICKERS STEERING CONTROL ADJUSTMENTS 40
SECTION 7 - VICKERS VANE PUMP REMOVAL, INSPECTION AND INSTALLATION 47
SECTION 8 - PROPORTIONAL FLOW DIVIDER 54
SECTION 9 - STEERING CYLINDER REBUILDING 56
SERVICING CESSNA-EQUIPPED LOADERS 60
GENERAL INFORMATION 60
SECTION 1 - CESSNA TRANSMISSION REMOVAL 62
SECTION 2 - CESSNA TRANSMISSION OVERHAUL 70
SECTION 3 - CESSNA TRANSMISSION OIL LEAKS 90
SECTION 4 - SHIMMING FOUR-WAY GEAR BOX 98
SECTION 5 - SYSTEM CLEANING PROCEDURE AFTER TRANSMISSION OVERHAUL 108
SECTION 6 - HYDRAULIC RESERVOIR AND CHECK VALVE ASSEMBLY 104
SECTION 7 - STEERING NEUTRALIZER REPAIR 111
SECTION 8 - CESSNA STEERING CONTROL ADJUSTMENTS 113
SECTION 9 - CESSNA GEAR PUMP REMOVAL, INSPECTION AND INSTALLATION 115
GENERAL INFORMATION - VICKERS AND CESSNA-EQUIPPED SKID-STEER LOADERS 125
SECTION 1 - START-UP PROCEDURE 125
SECTION 2 - FINAL DRIVE DISASSEMBLY AND ASSEMBLY 128
SECTION 3 - HYDRAULIC SYSTEM PRESSURE CHECKS 144
SECTION 4 - SERVICING THE CONTROL VALVE 150
SECTION 5 - REBUILDING BUCKET AND BOOM CYLINDERS 153
SECTION 6 - ELECTRICAL SYSTEM 164
SECTION 7 - BOOM LOCKOUT 172
SECTION 8 - FUEL TANK REMOVAL 176
SECTION 9 - SPECIFICATIONS - L-35 LOADER, L-775 LOADER L-778 LOADER, L-779 LOADER 183
SECTION 10 - HYDRAULIC CIRCUIT DIAGRAMS 189
SECTION 11 - TROUBLE SHOOTING 194
SECTION 12 - TORQUE CHARTS 205
ADJUSTABLE FITTINGS 208
BITE-TYPE FLARELESS FITTINGS 209
TUBE FITTING TROUBLE SHOOTING 210
INDEX 211

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com



PLEASE READ CAREFULLY!

INCLUDED THROUGHOUT THIS MANUAL AND ON MACHINE DECALS YOU WILL FIND PRECAUTIONARY STATEMENTS SUCH AS "CAUTION", "WARNING" AND "DANGER", FOLLOWED BY SPECIFIC INSTRUCTIONS.

THESE PRECAUTIONS ARE INTENDED FOR THE PERSONAL SAFETY OF YOU AND THOSE WORKING WITH YOU. PLEASE TAKE THE TIME TO READ THEM.

PERSONAL SAFETY!

CAUTION: THE WORD "CAUTION" IS USED WHERE A SAFE BEHAVIORAL PRACTICE ACCORDING TO OPERATING AND MAINTENANCE INSTRUCTIONS AND COMMON SAFETY PRACTICES WILL PROTECT THE OPERATOR AND OTHERS FROM ACCIDENT INVOLVEMENT.

WARNING: THE WORD "WARNING" DENOTES A POTENTIAL OR HIDDEN HAZARD WHICH HAS A POTENTIAL FOR SERIOUS INJURY. IT IS USED TO WARN OPERATORS AND OTHERS TO EXERCISE EVERY APPROPRIATE MEANS TO AVOID A SURPRISE INVOLVEMENT WITH MACHINERY.

DANGER: THE WORD "DANGER" DENOTES A FORBIDDEN PRACTICE IN CONNECTION WITH A SERIOUS HAZARD.

ADDITIONAL PRECAUTIONARY STATEMENTS SUCH AS "ATTENTION" AND "IMPORTANT" ARE FOLLOWED BY SPECIFIC INSTRUCTIONS. THESE STATEMENTS ARE INTENDED FOR MACHINE SAFETY.

MACHINE SAFETY!

ATTENTION: THE WORD "ATTENTION" IS USED TO WARN THE OPERATOR OF POTENTIAL MACHINE DAMAGE IF A CERTAIN PROCEDURE IS NOT FOLLOWED.

IMPORTANT: THE WORD "IMPORTANT" IS USED TO INFORM THE READER OF SOMETHING HE NEEDS TO KNOW TO PREVENT MINOR MACHINE DAMAGE IF A CERTAIN PROCEDURE IS NOT FOLLOWED.

IMPORTANT!

FAILURE TO FOLLOW THE "CAUTION", "WARNING", AND "DANGER" INSTRUCTIONS MAY POSSIBLY RESULT IN SERIOUS BODILY INJURY.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Place a jack under the chain case, as shown in Figure 66, to lift the wheels off the ground. Lift all four wheels off the ground, and securely block the machine.

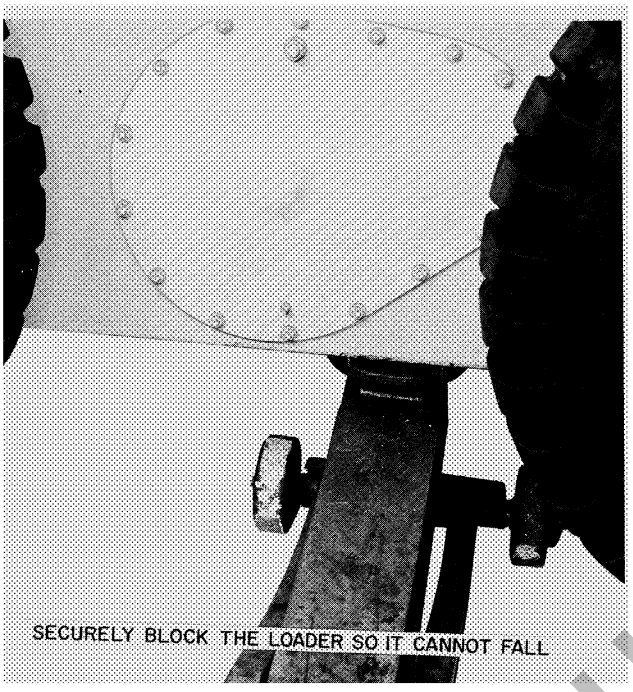


FIGURE 66

CAUTION: SECURELY BLOCK THE MACHINE SO IT CANNOT FALL!

Make sure everyone is clear of the machine. Start the engine. The wheels should remain stationary. If the wheels rotate, adjust the length of the centering spring rod at C, Figure 65, so the wheels remain stationary. Lock the jam nut, C.

RIGHT SIDE DRIVE CONTROL ADJUSTMENT

The right side drive control is adjusted the same as the left side drive control. Follow the left side drive control adjustment procedure to adjust the right side drive control.

CAUTION: DISCONNECT THE BATTERY CABLES BECAUSE YOU ARE WORKING VERY CLOSE TO A BATTERY TERMINAL.

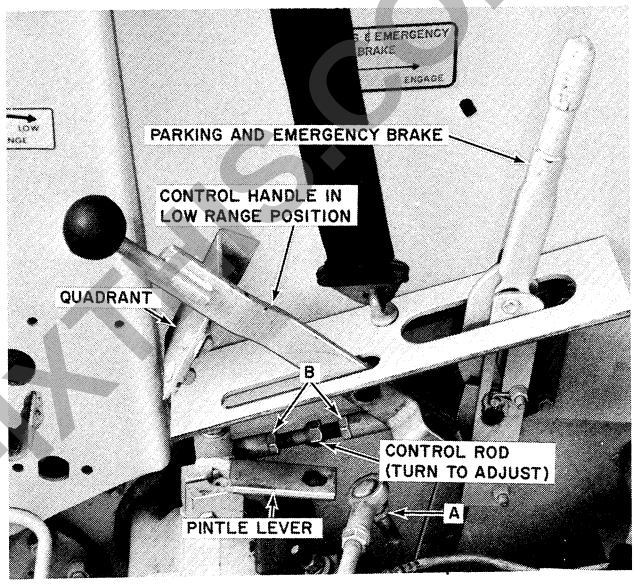


FIGURE 67

SHIELDS SHOWN REMOVED FOR CLARITY.

HIGH AND LOW RANGE CONTROL ADJUSTMENT

Disconnect tie rod from right pintle lever as shown at A, Figure 67.

Position the high-low control handle in the low range (rear) position of the quadrant and adjust control rod at B, Figure 67, so approximately five pounds of force is required to snap the high-low control handle into the low range notch. Lock the jam nuts.

All linkage should work freely so the pintle lever is held against the motor internal stop.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

CAUTION: IF TRANSMISSIONS HAVE BEEN UNDER LOAD OR BYPASSING, THE OIL MAY BE QUITE HOT. USE CAUTION WHEN REMOVING VALVES.

FIGURE 39

A. Valve body

B. O-ring

C. Back-up washer

D. Spring

E. Shim washers (As required. Must use at least one.) Do not add or remove shims.

F. Valve spool. Arrow points to oil port.

G. Snap ring. **NOTE: Later relief valves have a fixed shoulder on the valve spool in place of the snap ring.** See J, Figure 39.

H. Cartridge. Arrow points to small oil port.

I. O-ring

INSPECTION: Replace relief valve and seat if any parts are damaged.

1. Seat and valve assemblies must be kept together as matched sets or pressure settings may change. Mating surfaces of seat and body should not be scratched or burred.
2. Check valve body for damaged O-ring or back-up washer.
3. **Number of shims is factory set. Do not change quantity or try to change pressure setting of valve.**
4. Be sure snap ring is seated in groove in spool. If snap ring is off, do not try to replace it. Replace the valve instead because the snap ring is easily over-expanded. The snap ring is not used in later relief valves. Instead, a shoulder is machined on the valve spool, J, Figure 39.
5. Make sure passage and small port K in valve spools are not plugged.
6. O-rings, I, Figure 39, may be cut when valves are removed from valve plates, but ordinarily they can be reused without leaking.

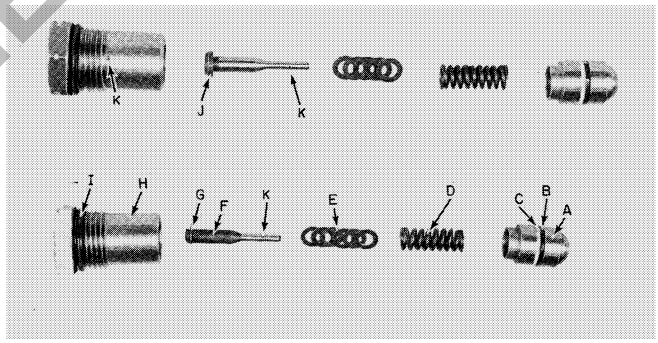


FIGURE 39

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

SECTION 2
FINAL DRIVE DISASSEMBLY AND ASSEMBLY



FIGURE 1

SHIELDS SHOWN REMOVED FOR CLARITY.

The two final drives on the utility loader consist of a motor pinion, gear-sprocket assembly, drive sprockets, one roller chain and tensioning idler. The transmission motor pinion drives the gear-sprocket assembly which in turn drives the front and rear wheels through the roller chain and tensioning idler.

CAUTION

BEFORE SERVICING THE LOADER OR ANY OF ITS ATTACHED EQUIPMENT BE SURE THAT THE ATTACHMENTS ARE LOWERED TO THE GROUND OR THAT THE BOOM ARMS ARE SUPPORTED BY THE BOOM LOCK PINS.

ALWAYS SERVICE LOADER ON LEVEL TERRAIN WITH WHEELS BLOCKED OR ENTIRE LOADER SOLIDLY SUPPORTED WITH WHEELS OFF THE GROUND BEFORE SERVICING ANY COMPONENT OF THE DRIVE TRAIN.

CAUTION

NEVER LOOSEN ANY HYDRAULIC LINE FITTING WITHOUT FIRST HAVING BOOM IN THE COMPLETELY LOWERED POSITION (ON GROUND) OR RESTING SOLIDLY ON THE BOOM LOCK PINS. ANY ATTACHMENT MUST BE IN THE COMPLETELY LOWERED POSITION TO RELIEVE ALL PRESSURE IN THAT CIRCUIT.

OBSERVE DUE CAUTION IN AREAS OF ROTATING COMPONENTS IF ANY OBSERVATIONS OR ADJUSTMENTS MUST BE MADE WHILE THE ENGINE IS RUNNING! (NORMALLY, MOST ADJUSTMENTS CAN BE MADE WITH THE ENGINE STOPPED. IF SO, STOP ENGINE, MAKE ADJUSTMENT, AND RESTART ENGINE TO CHECK ADJUSTMENT).

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Alternator Test for Optional 12-Volt Negative Ground TA Series Motorola Alternator

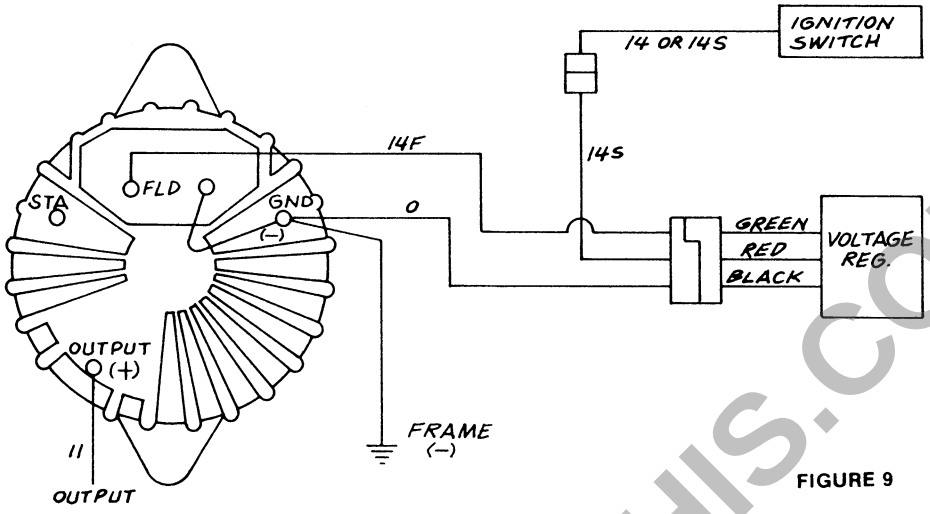


FIGURE 9

A. TYPE I

The Type I TA (totally enclosed) Motorola series alternators use a three-wire regulator but **no** isolation diode. Figure 9 shows the proper wiring of the enclosed alternator when mounted on the Sperry New Holland loader and using a Motorola three-wire regulator. This alternator should be used with an ammeter. It will not activate a charge warning light on later model loaders using the warning light instead of the ammeter.

B. TYPE II

The Type II TA Motorola series alternator use a standard rear mounted regulator with isolation diode, see Figure 10. Wiring connections are the same as the standard RA Series Motorola alternator. The Type II Motorola TA alternator is the latest style available and can be used on those loaders with a warning light as the isolation diode is standard to activate the light.

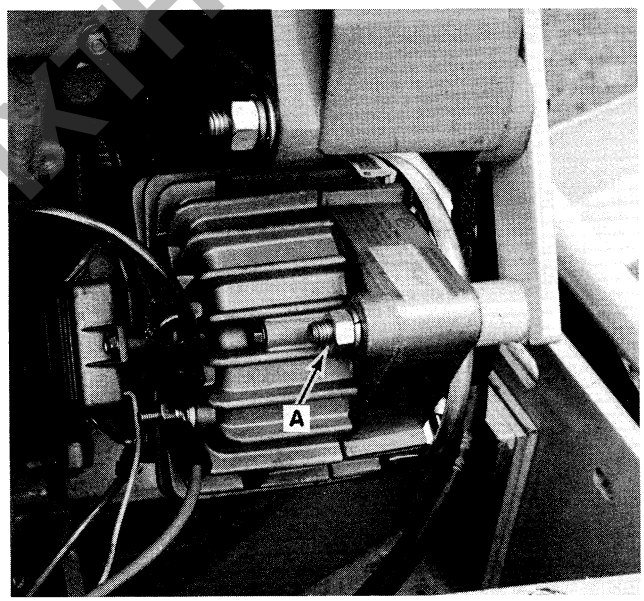


FIGURE 10

SHIELDS SHOWN REMOVED FOR CLARITY.

TEST PROCEDURE FOR TE ALTERNATORS

The test procedures for evaluating charging problems with the TA series alternator are the same as the RA series in the previous section with the exception of tests:

1 and 3—Checking Isolation Diode. Tests 1 and 3 do not apply to the TA series as there is no isolation diode.

Refer to the "Test Precautions" in the RA series alternator section before proceeding to check the TA series alternator.

CAUTION: THIS SYMBOL IS USED THROUGHOUT THIS BOOK WHENEVER YOUR OWN PERSONAL SAFETY IS INVOLVED. TAKE TIME TO BE CAREFUL!

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 11 of 214 pages

The full manual includes:

- All 214 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Sperry New Holland L-35, L-775, L-778, L-779 Service Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual