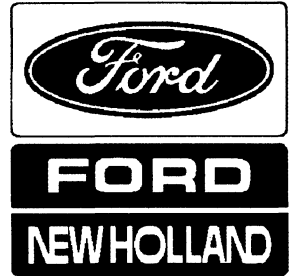


# VERSATILE

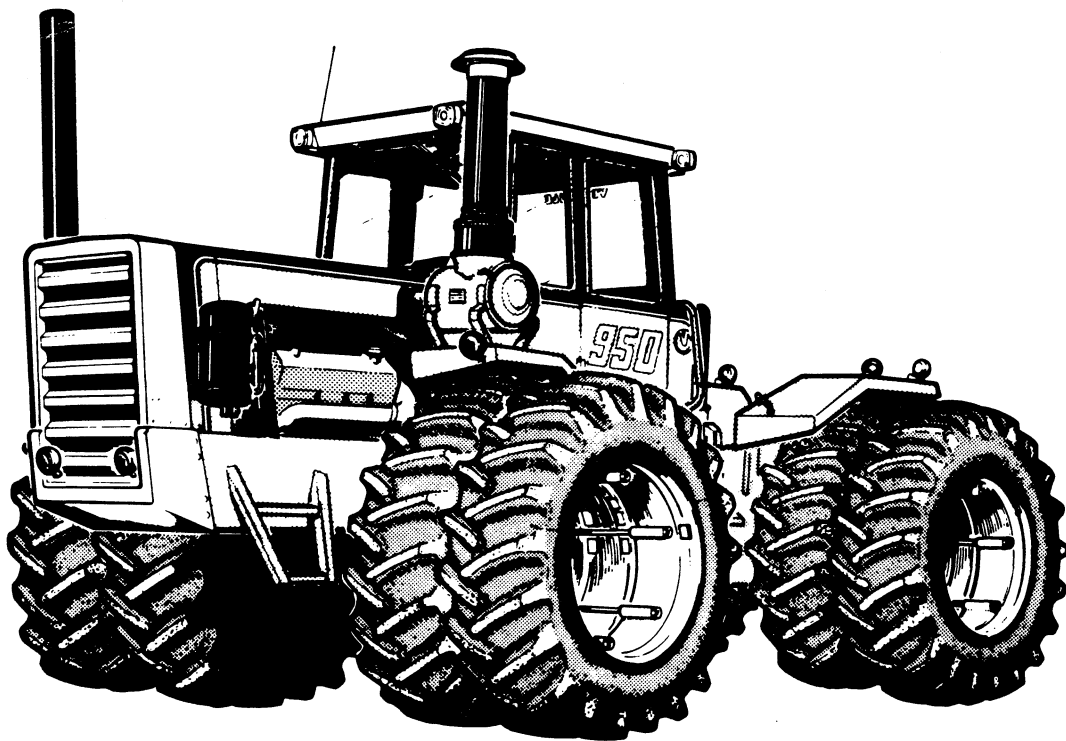
## Operator's Manual

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4WD Tractor  
950

1978



Reprinted

## VERSATILE WARRANTY

VERSATILE MANUFACTURING LTD. (VERSATILE) warrants each item of new Versatile equipment sold by it to be free from defects in material and workmanship under normal use and service. The sole obligation of Versatile to the Dealer under this warranty is limited to repairing or replacing, as Versatile may elect, any part or parts that prove in Versatile's judgment to be defective in material or workmanship within one year after delivery to the original purchaser, under normal farm use. Such a defective part or parts will be replaced or repaired ONLY TO THE ORIGINAL PURCHASER, such repair or replacement will be done at the location of the selling Versatile Dealer. Purchaser must give written notice to the Authorized Dealer from whom equipment was purchased of any claimed defect and the Dealer will have a reasonable time under the circumstances then existing to repair or replace said part or parts found to be defective. It is understood that if there is any delay in giving such written notice wherein it is possible that the alleged defective part may have caused damage or defects to other parts of the equipment, then this warranty shall not cover the repairs necessitated therein.

**NOTE: THE SOLE REMEDY OF THE PURCHASER FOR BREACH OF THIS WARRANTY IS THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS.**

This warranty does not extend to the engine or tires on Versatile tractors which are manufactured by others, and which carry separate warranties from said manufacturers. There are no representations, warranties, or conditions express or implied, statutory or otherwise, except those herein contained and no agreement collateral otherwise, except those herein contained and no agreement collateral hereto shall be binding upon either party unless in writing hereon or attached hereto, signed by purchaser and accepted by Versatile at its head office.

Versatile's liability under this warranty is limited to the repairing or replacing of parts, and Versatile shall in no event be liable to the Purchaser for consequential damages or loss of profits on crops sustained by it as a result of any defect in material or workmanship on any of the equipment covered by this warranty.

Versatile equipment is warranted for agricultural use only. This Warranty does not cover industrial application. ALTERING, MODIFYING OR ADDING ADDITIONAL EQUIPMENT WHICH IS NOT APPROVED FOR INSTALLATION ON VERSATILE EQUIPMENT BY THE COMPANY WILL VOID THE WARRANTY.

All Warranties are subject to the legislation of the state or province in which the machine is sold.

**\*THERE WILL BE NO DEVIATION FROM THE PROCEDURE AS OUTLINED\*.**

**NOTE: THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE BY VERSATILE OR ITS AUTHORIZED DEALER, REGARDING VERSATILE EQUIPMENT EXCEPT THE WARRANTY AGAINST DEFECTS IN MATERIAL OR WORKMANSHIP EXPRESSED HEREIN. NO PERSON IS AUTHORIZED TO BIND VERSATILE FOR ANY OTHER WARRANTY WHATSOEVER.**

## **INTRODUCTION**

We at VERSATILE Manufacturing Ltd. are pleased that you have chosen a VERSATILE Four-Wheel Drive Tractor for your farming operation. The founders of VERSATILE pioneered the development of the four-wheel drive tractor. It has evolved through ideas and suggestions submitted to us by customers such as yourself.

We ask that you study this manual and adopt the preventative maintenance program outlined in it. Good preventative maintenance should provide trouble free service for years. The suggested schedule has been designed to meet most operating conditions. It may be necessary to adjust your maintenance program to suit your specific operating conditions and to perform the maintenance more often than outlined.

As the purchaser of a VERSATILE Four-Wheel Drive Tractor you have also received a Cummins' Operation and Maintenance Manual. We would ask that for maintenance on the engine, which is not covered by our tractor manual, you follow the instructions in the Cummins' manual. Before placing the tractor in service become familiar with all the procedures described in both the engine manual and the tractor manual.

Review with all operators on at least a yearly basis, the proper and safe way to operate and maintain the tractor. All operators should know the tractor completely before operating it.

Your dealer is factory-trained to provide you with genuine parts and professional repair service. Consult him regarding your service needs. He is working for you.

## **IMPORTANT NOTE**

**This manual is applicable to Serial No. 950 78 110630 and subsequent.**

## SERIAL NUMBER LOCATION

### IMPORTANT:

When ordering parts, state the serial number of the tractor and/or engine. The tractor serial number is stamped on the rear of the front frame section and on a metal tag on lower left hand side of the doorpost. The engine (Cummins) serial number is on a metal tag on engine's left cylinder bank.

Write your model and serial number information here:

#### ENGINE

MAKE

CUMMINS

MODEL

VT-903

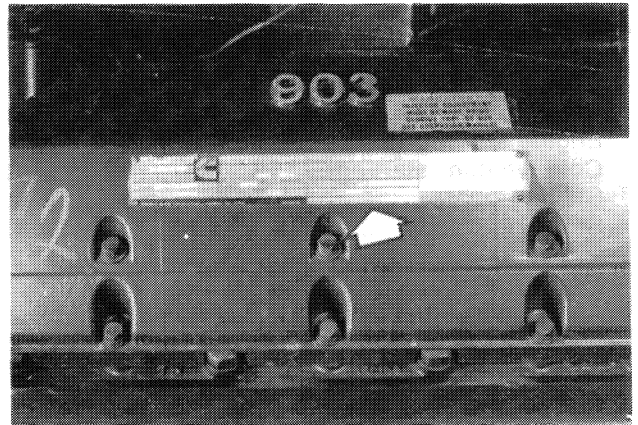
SERIAL \_\_\_\_\_

#### TRACTOR

MODEL

950

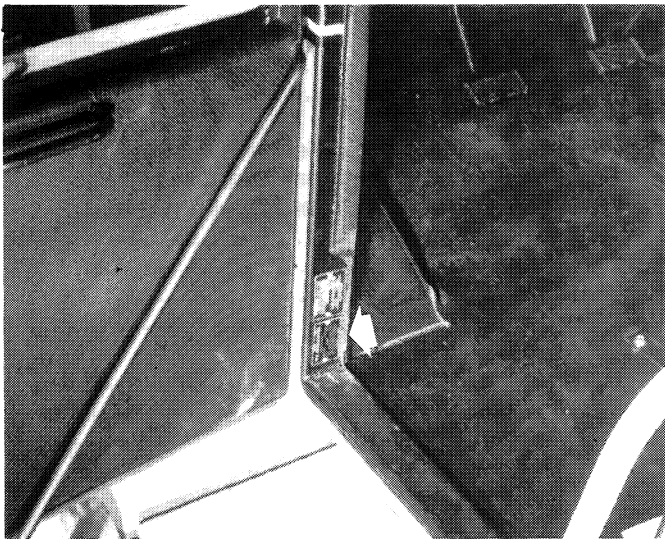
SERIAL \_\_\_\_\_



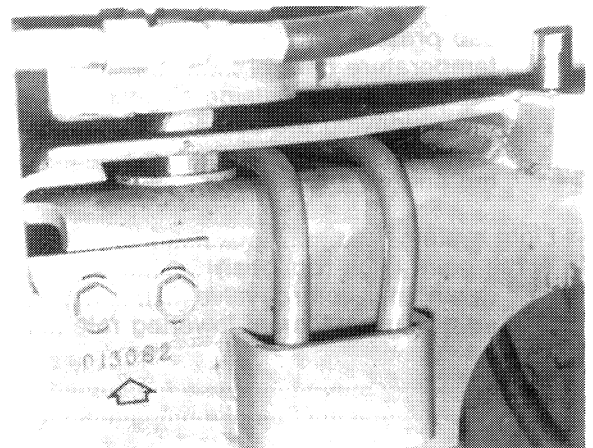
Engine Plate

#### FRAME

SERIAL \_\_\_\_\_



Tractor Plate



Frame Stamp

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## SPECIFICATIONS

### DIMENSIONS:

- Wheel Base - 130 in. (3.3 m)
- Length Overall - 253 in. (6.43 m)
- Height Overall - 141 in. (3.58 m)
- Height to Drawbar - 18 in. (45.7 cm)
- Height of Differential - 23 in. (58.4 cm)
- Width - See Tire Size

### WEIGHT

- Maximum Operating Weight - 32,500 lbs. (14770 kg)
- Approximate weight with various tire sizes: (Weights are measured with 30 gallons fuel and no three-point hitch.)
  - 18.4 x 38 Duals - 19,700 lbs. (8950 kg)
  - 20.8 x 38 Duals - 20,610 lbs. (9370 kg)
  - 24.5 x 32 Duals - 21,770 lbs. (9895 kg)
  - 20.8 x 32 Singles - 18,045 lbs. (8200 kg)
  - 24.5 x 32 Singles - 18,665 lbs. (8485 kg)
  - 30.5 x 32 Singles - 19,185 lbs. (8720 kg)
  - 24.5 x 32 Rice & Cane Singles - 18,860 lbs. (8570 kg)
  - 30.5 x 32 Rice & Cane Singles - 19,830 lbs. (9010 kg)
- Recommended Operating Weight Range (Most Applications) - 29,000 to 30,500 lbs. (13,180 to 13,860 kg).

TURNING RADIUS: Measured to Outside of Outer Tire

- 236 in. (5.99 m) with 18.4 x 38 duals
- 239 in. (6.06 m) with 20.8 x 38 duals
- 216 in. (5.48 m) with 24.5 x 32 singles
- 222 in. (5.64 m) with 30.5 x 32 singles.

### ENGINE: (TURBOCHARGED)

- Cummins VT 903 V8 Diesel
- Engine maximum brake horsepower (per SAE Standard J-816a) 2400 rpm is 348 hp.
- Maximum Torque - 848 ft. lb. at 1800 rpm (1130 N-m).
- Compression ratio: 15.5:1
- Bore - 5.5 in. x Stroke, 4.75 in. (14 x 21.1 cm).
- Displacement - 903 cu. in. (14.8 L)
- Idle Speed - 1000 rpm

- Operating full load governed speed - 2400 rpm. Corresponding full throttle no load speed - 2550 to 2640 rpm.
- Lubrication System - 34 U.S. Qts.; 27.2 Imp. Qts.; (32.2 L). Full-flow oil filter with by-pass oil conditioner and oil to water cooler.
- 30 degrees angularity capability oil pan.
- Mounts - Versatile design, fully rubber mounted.

### TRANSMISSION:

- Completely rubber mounted.
- Tapered roller bearings 12 speed fully constant mesh with sliding collars.
- Four shafts, 3 in. (7.63 cm) diameter. Pressure lubricated 4 to 15 psi (28 to 105 kPa).
- Range and Shift Levers.
- Helical forward gears, spur reverse gear.
- Independent lubrication system with pump, 10 micron filter, cooler steel lines and wire braid hoses, dash mounted warning light.
- Oil capacity - 21 U.S. Qts.; 16.8 Imp. Qts., (20.3 L)

Speeds with 31.5 in. (80 cm) load radius tires:

RANGE	1		2		3			
	MPH	Km/h	MPH	Km/h	MPH	Km/h	MPH	KM/H
at 2400 rpm								
1st gear	2.5	4.0	3.0	4.8	3.3	5.3	4.0	6.4
2nd gear	4.5	7.3	5.4	8.7	6.0	9.7	7.2	11.6
3rd gear	8.8	14.1	10.5	16.9	11.7	18.8	14.1	22.6
Reverse	3.3	5.2	3.9	6.2	4.3	6.9	5.2	8.3

### CLUTCH:

- Dana Spicer 14 in. (35.6 cm), self-adjusting super duty, two plate dry type with ceramic button lining, spring-loaded cushion hub discs. Mechanically actuated by foot pedal.

### BRAKES

- Road Brake - drive line mounted 15 in. (38.1 cm). Self-adjusting disc type. Independent of tractor hydraulic system.
- Park Brake - mechanically actuated caliper.

**AXLES:**

- Spiral bevel single reduction differential with out-board planetary floating ring gear final drives.
- Radios - 27.45 axle, 4.88 differential, 5.625 planetary.
- Differential mounted in Ductile Cast differential housing.
- Oil Capacity - axle 41 U.S. Qts.; 32.8 Imp. Qts.; (38.6 L).

**COOLING SYSTEM:**

- Capacity - 54 U.S. Qts.; 43 Imp. Qts.; (49 L)
- Radiator (5 row core) rubber mounted - 1080 sq. in. (6950 cm<sup>2</sup>).
- Independent surge tank.
- Hinged perforated metal grill screen.
- Fan (6 blade sucker type) 28 in. (71.1 cm) diameter. 1:1 ratio to engine rpm.

**EXHAUST SYSTEM:**

- One 8.5 in. (21 cm) x 11.5 in. (29.1 cm) x 40 in. (101.6 cm) oval muffler.
- Built in vacuum aspirator for air cleaner.
- Muffler is rubber mounted.

**AIR CLEANER:**

- Dual safety element, Strata Tube pre-cleaner, exhaust aspirated, restriction indicator gauge on instrument panel.

**STEERING:**

- Articulated frame, 42° left or right. Fully hydrostatic actuation via two 3 in. (7.6 cm) x 16.5 in. (41.9 cm) stroke cylinders.

**DRAWBAR:**

- Swinging clevis type with wear block. One and one half in (3.81 cm) pin with locking lever. Hardened bushings. Height: 18 in. (45.9 cm) on top of main member.

**FUEL TANK:**

- Capacity, 185 U.S. Gal.; 132 Imp. Gal.; (700 L)
- Two saddle type low mounted tanks.
- Mechanical fuel gauge near filler neck, duplicate electrical gauge in cab.
- Remote breather 24 in. (61 cm) above tank.

**FRAME:**

- Articulated via two ball bushings between front and sub-frame.
- Articulation capability - 42°.
- Oscillation capability - 15°.

**ELECTRICAL:**

- Two, 8D - 900 Amp. Batteries. Negative ground. 12-Volt, 75 Amp. brushless alternator with built-in voltage regulator. Automatic reset circuit breakers and replaceable fuses, 6-60 watt working lamps, two red tail lamps, two head lights and four warning flashers.

**HYDRAULICS:**

- Open center. Nominal at 2400 rpm 26.9 U.S. gpm.; 21.5 Imp. gpm.; (100.8 Lpm) at 2600 rpm 29.1 U.S. gpm.; 23.3 Imp. gpm.; (110 Lpm) for steering Nominal 4.0 to 25 U.S. gpm.; 3.2 to 20.0 Imp. gpm.; (15 to 101.8 Lpm)  $\pm 10\%$  for implement; flow adjustable from inside cab).
- Filters - washable suction filter on suction line, one replaceable filter on return oil line.
- Cooler - mounted in front of radiator. Swings down for cleaning.
- Implement Control Valve - built in flow control. Relief valve (tank mounted) set at  $2300 \pm 50$  psi (15.86 mPa 340 kPa) Four, 4-way spools set at  $2100 \pm 0$  - 100 psi (14.48 mPa  $\pm 0$ , -690 kPa) One spool has float position.
- Couplers - Pioneer 8250 Series push-to-connect-under-pressure type. 8010-4 male tips.
- Capacity - vented reservoir 74.5 U.S. Qts.; 59.6 Imp. Qts.; (70.5 L) dipstick oil level check and low level sight glass.

**CAB:**

- Fully isolated module on rubber mounts. Roll Over Protective Structure (ROPS). Noise isolated. Pressurized and Air Conditioned. Tinted glass. Operator's Seat. Lap type seat belts.
- Self cleaning cab air filter allows for longer periods between servicing. The filter is removable (without tools) from outside the cab.

**INSTRUMENTS AND CONTROLS:**

- Tachometer, hour meter, voltmeter, air restriction, fuel gauge, engine temperature gauge, oil pressure gauge, transmission oil light, key start switch, starter button, manual safety switch, override button, hazard warning flasher with turn signals, light switch, wiper switch, air conditioner warning lights, ether starting aid, heater, air conditioner, and blower.



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