

# OPERATOR'S MANUAL

## Bidirectional™ Tractor 276 II

Issue 1-89

42027610



# VERSATILE



**NEW HOLLAND**

Reprinted

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## TO THE OWNER:

This manual contains information concerning the operation, adjustment, and maintenance of your Model 276 II Bidirectional™ tractor.

You have purchased a dependable product, but only by proper care and operation can you expect to receive the performance and long service built into this tractor. Please have all operators read this manual carefully and keep it available for ready reference.

Your dealer's staff of factory-trained service technicians will be glad to answer any questions that may arise regarding the operation of your tractor.

Your Ford New Holland dealer carries a complete line of genuine Ford New Holland service parts. These parts are manufactured and carefully inspected in the same factories that built the tractor, to insure high quality and accurate fitting of any necessary replacement parts.



**CAUTION: THIS SYMBOL IS USED THROUGHOUT THIS BOOK WHENEVER PERSONAL SAFETY IS INVOLVED. TAKE TIME TO READ AND FOLLOW THE INSTRUCTIONS. BE CAREFUL!**

**CAUTION: PICTURES IN THIS MANUAL MAY SHOW PROTECTIVE SHIELDING OPEN OR REMOVED TO BETTER ILLUSTRATE A PARTICULAR FEATURE OR ADJUSTMENT.**

**BE CERTAIN, HOWEVER, TO CLOSE OR REPLACE ALL SHIELDING BEFORE OPERATING THE MACHINE.**

## IMPROVEMENTS

Ford New Holland, Inc. is continually striving to improve its products. We reserve the right to make improvements or changes when it becomes practical and possible to do so, without incurring any obligation to make changes or additions to the equipment sold previously.

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# WARRANTY

## VERSATILE PRODUCTS

Ford New Holland, Inc. or New Holland of Canada Ltd., hereinafter called the "Company", warrants to each purchaser of farm equipment bearing the Versatile brand name from an authorized dealer that such equipment is free from defects in material and workmanship (except tires, tubes, and Cummins engines which are warranted as defined by the respective manufacturer) in accordance with the following provisions:

All warranty periods begin with the date of first retail sale or first use, whether it be through rental, lease, or special demonstration program, whichever occurs first.

This warranty is for the benefit of the original or subsequent purchaser during the remaining warranty period where the equipment is purchased from an authorized dealer of Versatile products. The warranty only applies if the equipment has been used and serviced in accordance with the recommendations in the Operator's Manual.

The basic farm equipment warranty shall be 12 months. Specific tractor driveline components are extended to 24 months or 2,000 hours, whichever comes first. The obligation of the Company under this warranty is limited to repairing, or at its option replacing any part(s) which, in the Company's judgment is defective.

Except as set forth above, **THE COMPANY SHALL HAVE NO OBLIGATION OR LIABILITY OF ANY KIND ON ACCOUNT OF ANY OF ITS EQUIPMENT AND SHALL NOT BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES. THE COMPANY MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND SPECIFICALLY, THE COMPANY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS. SOME STATES OR PROVINCES DO NOT PERMIT LIMITATIONS OR EXCLUSIONS OF IMPLIED WARRANTIES OR INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE LIMITATIONS OR EXCLUSIONS IN THIS WARRANTY MAY NOT APPLY.**

The specific details of the Owner's Warranty, outlined in more detail in "Warranty Detail" below are expressive of the quality built into your equipment.

When you invested in this equipment, you became eligible for the protection of the Company's Warranty.

## WARRANTY DETAIL

*The following information explains the details of the Company warranty on Versatile products. These details include an explanation of the criteria for determining warranty, those items covered by warranty, those not covered, and information on how to obtain warranty service.*

### Extended/Limited Drivetrain Warranty

In addition to the basic warranty, the following items are covered by an extended warranty to a maximum of 24 months or 2,000 hours, whichever comes first:

- Hydrostatic Drive and Transmission case and all internal parts, transmission mounts, drivelines, and U-joints.
- Axles, Differentials, dropbox housings and all internal parts.
- Main Frame, Front and rear weldments.
- Power Take-Off clutch, dropbox housings and all internal parts, drivelines and U-joints.

### Warranty Determination

Defective parts and the labor to replace same, are covered by this warranty. Any part or parts of a product found to be defective, will, in accordance with the provisions of this warranty, be repaired or replaced by an authorized dealer of Versatile products.

### Items Covered by Warranty

This warranty includes the replacement or repair of any part or parts of machines or attachments on Versatile products purchased from an authorized dealer (except tires, and tubes, and Cummins engines) which are defective in material, workmanship, or both. Tires, tubes, and Cummins engines will be warranted as defined by their manufacturer.

When premature part(s) failure can be attributed to normal use, and defective material or workmanship cannot be accurately defined, the allowance may be prorated according to the amount of use and known operating conditions.

Genuine Versatile brand name replacement parts will be warranted for 90 days from date of purchase, or the remainder of the original equipment warranty period, whichever is longer.

### Obtaining Warranty Service

To obtain warranty service, contact the authorized dealer from whom the machine was purchased. If this is not practical, any dealer authorized to sell Versatile products may perform warranty work.

Engine warranty service shall be handled by the local Cummins dealer.

### Items Not Covered

1. Dealer Travel Time - The customer shall be responsible for payment of dealer travel time to the machine or to deliver the machine to the dealer's service shop for repair. This warranty does not cover travel time.
2. Used Equipment - This warranty shall apply only to equipment sold by an authorized dealer. With the exception of special Extended Service Plans or other Owner Protection Programs, the Company shall have no liability for used equipment sold beyond the specified coverage period. All other used equipment is sold "AS IS".
3. Tires, Tubes - Tires and tubes shall be warranted by the respective manufacturers selling dealer or by local representatives of the manufacturer.
4. Modified or Altered Equipment - No warranty shall apply on any equipment or parts that have been modified, or altered in any way without prior approval and knowledge of the Company. Nor is there warranty if service, other than normal replacement of service items, is performed by someone other than an authorized dealer.
5. Normal Wear or Maintenance Parts - The Company shall not be responsible for normal replacement parts such as cutting knives, chains, belts, clutches, filters, oil, or other parts which are worn out, unless they are determined to be defective in material or workmanship.
6. Miscellaneous - No warranty shall apply to damage resulting from accident, misapplication, abuse, or damage caused by environment (such as exposure to corrosive material). The Company shall not be responsible for rental equipment used to replace the equipment being repaired, loss of time, or loss of use of product, or damage caused by improper servicing.

### Leased, Rented, or Special Purchase Plan

When a unit is leased, rented or used by a customer on a Special Purchase Plan, the warranty period starts on the date the unit is first leased, rented, or otherwise put to use. If the unit is sold prior to the expiration of the warranty, the warranty will continue in effect for the remainder of the warranty period.

### About Improvements

The Company is continually striving to improve its products, and therefore reserves the right to make improvements or changes when it becomes practical and possible to do so, without incurring any obligations to make changes or additions to the equipment sold previously.

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# OWNER ASSISTANCE

We at Ford New Holland and your Ford New Holland dealer want you to be completely satisfied with your investment. Normally any problems with your equipment will be handled by your dealer's Service Department. Sometimes, however, misunderstanding can occur. If your problem has not been handled to your satisfaction, we suggest the following.

1. Contact the owner or General Manager of the dealership, explain the problem, and request assistance. When additional assistance is needed, your dealer has direct access to our branch office.
2. If you cannot obtain satisfaction by doing this, contact the Ford New Holland branch office in your area and provide them with:
  - Your name, address, and telephone number
  - Machine model and serial number
  - Dealership name and address
  - Machine purchase date and amount of use
  - Nature of problem

## **Atlanta**

2000 Mountain Ind. Blvd.  
Tucker, GA 30084  
Telephone: (404) 491-3449

## **New Holland**

500 Diller Avenue  
New Holland, PA 17557  
Telephone: (717) 355-3951

## **Calgary**

Box 1616, Main P.O.  
Calgary, AB  
CANADA T2P 2M7  
Telephone: (403) 273-6771

## **Dallas**

P.O. Box 10227  
Dallas, TX 75207  
Telephone: (214) 939-4919

## **San Francisco**

P.O. Box 6100  
Fairfield, CA 94533  
Telephone: (707) 423-9200

## **Toronto**

P.O. Box 7000  
Brampton, ON  
CANADA L6V 2M9  
Telephone: (416) 452-6524

## **Kansas City**

P.O. Box 14550  
Lenexa, KS 66219  
Telephone: (913) 894-3387

## **Troy**

1315 Coolidge Avenue  
Troy, MI 48084  
Telephone: (313) 637-9382

## **Minneapolis**

P.O. Box 1342  
Minneapolis, MN 55440  
Telephone: (612) 887-4232

3. If you need further assistance contact:

*Consumer Services Department  
Mail Station 500  
Ford New Holland, Inc.  
New Holland, PA 17557  
Telephone: (717) 355-1545*

When contacting Ford New Holland's branch office or Consumer Services Department, be aware that your problem will likely be resolved in the dealership using the dealer's facilities, equipment, and personnel. So it is important that your initial contact be with the dealer.

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# PRECAUTIONARY STATEMENTS

## PERSONAL SAFETY

Throughout this manual and on machine decals, you will find precautionary statements ("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.



**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.**

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

## MACHINE SAFETY

Additional precautionary statements ("ATTENTION" and "IMPORTANT") are followed by specific instructions. These statements are intended for 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.*

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# SAFETY

National Safety Council statistics indicate many people die or suffer serious injury each year as a result of farm accidents.

Do not become a statistic or victim.

Carefully review the procedures given in this manual with all operators **ANNUALLY**. It is important that all operators be familiar with, **AND FOLLOW**, safety precautions.

Operating instructions must be given to everyone using the tractor before operation and at least once yearly thereafter in compliance with OSHA Regulation 1928.57 (United States).

## GENERAL SAFETY

1. Never let an unqualified or untrained driver operate the tractor.
2. Keep a fire extinguisher with ABC rating in the cab. Maintain it and be familiar with its use.
3. Never carry passengers.
4. Never operate the tractor in a closed building. Provide adequate ventilation. Engine exhaust fumes are poisonous and can kill.
5. Always keep sleeves, jackets or other clothing relatively tight and belted. Loose clothing may catch in moving parts and result in personal injury or death.
6. Provide a first-aid kit in the cab for use in case of an accident.
7. Never jump from the tractor. There is a danger of catching clothing on protruding parts.
8. Use steps and handholds when mounting and dismounting tractor or for servicing components too high to reach from the ground.
9. Fasten the seat belt before starting engine.
10. Safety devices are intended to protect operators from injury or death. Under no circumstances should they be disabled or removed.
11. To provide a better view, certain photos and illustrations show a safety shield removed. It is important that a machine never be operated in this way. Keep all shields in place.

## OPERATING SAFETY

1. Always operate tractor controls sitting in the operator's seat.
2. Lock the seat and instrument console in position and buckle the seat belt before operating the tractor.
3. Always start the tractor with the FNR (Propulsion) lever in neutral, transmission in neutral, PTO clutch lever(s) disengaged and other operating controls either in the OFF or neutral position.
4. Always wait until all of the warning lights go out before putting the tractor in gear.
5. Always stop the engine before leaving the operator's seat. Never oil, grease or adjust the tractor while it is running. Do not leave the engine running while the tractor or drawn equipment is being adjusted, repaired or cleaned.
6. Be sure the parkbrake is set when the tractor is stopped. The tractor can freewheel even when in gear.
7. Avoid abrupt turns, starts or stops, especially at high speeds.
8. Keep all safety shields in place when operating the tractor.
9. Do not operate the tractor when you are tired, sick or impaired.
10. Never operate the tractor in confined areas. Visibility next to tractor is reduced. Injury to bystanders or damage to the tractor or equipment may result.
11. Do not start the engine by shorting across the starter terminals. The engine can start and the machine can move when the starting safety switch is bypassed.
12. Never attach any PTO, 3-point hitch or drawbar equipment to the cab end when the loader is attached on the tractor.

## SAFE OPERATION IN ROUGH TERRAIN

1. Drive the tractor slowly on hillsides and curves to eliminate the danger of tipping. Avoid slopes which are too steep for safe operation. Avoid sharp uphill turns.
2. Always drive slowly over rough ground. Drive at speeds slow enough to be safe.

3. When driving out of a ditch, gully or up a steep hillside, engage the transmission drive slowly. Avoid sharp uphill turns.
4. When descending steep grades, select a sufficiently slow speed to maintain control with minimum braking.
5. Use caution when driving near the edge of a ditch or gully. It may cave in, causing the tractor to roll over.
6. Be especially alert when operating at row ends, road slopes and around obstructions.
7. Slow down when turning corners, because the danger of tipping increases. Do not travel at high speeds.

### **MAINTENANCE SAFETY**

1. Escaping hydraulic oil under pressure can penetrate the skin causing personal injury. Wear gloves and goggles and use a piece of cardboard or wood as a backstop for spurting fluid when searching for hydraulic leaks.
2. Be sure all connections are tight and lines and hoses are undamaged. Before disconnecting hydraulic lines, relieve all pressure. Do not overfill tank.
3. Add coolant to the cooling system only when the engine is stopped and cool. Turn the radiator cap slightly to its first stop to relieve pressure before removing.
4. Never refuel the tractor when the engine is hot or running. Do not smoke while filling the fuel tank or servicing the fuel system. Use precautions in handling any type of tractor fuel. Vaporized diesel fuel is highly flammable. Do not overfill.
5. Ground the fuel storage tanks to prevent static buildup.
6. Do not smoke and avoid open flames servicing any batteries.
7. Starting fluid is highly flammable. Do not use near fire, sparks, open flames or when the engine is running.
8. Remove mud, crop residue, chains and tools from steps and operator's platform. They may interfere with pedal operation or entry/exit from tractor.
9. Engage the safety locks or block implements when servicing.
10. Be sure turbocharger is cool before servicing and keep flammable material away from the turbocharger.
11. Never operate with a damaged tire. The tire may explode.

### **IMPLEMENT SAFETY**

1. Always hitch loads to the drawbar or hitch points.
2. When hitching drawn equipment to the drawbar, only allow the assistant between the tractor and implement if the tractor is in neutral and the brakes are engaged.
3. When the implement is not in use or being disconnected from the tractor, always relieve pressure from the hydraulic circuits. Install the safety locks or pins to prevent implement movement.
4. Do not leave implements with hydraulic cylinders fully extended or retracted where the heat from the sun can cause the hydraulic fluid to expand. Hydraulic pressure can rupture hoses, releasing high pressure oil causing personal injury.
5. Be careful when turning with an implement. Lift it from the ground if possible during turns. Side thrust caused by implement could damage tire and implement.
6. Use transport locks, lower the implement to the ground and securely block the frame before servicing the implement. Relieve pressure from the hydraulic system and shut off the tractor.

### **POWER TAKE-OFF (PTO) SAFETY**

1. Never start the tractor with the PTO engaged.
2. Be sure the articulation lock is engaged, the parkbrake is set and the gearshift lever is in neutral when using the PTO in stationary applications. Do not leave the tractor unattended. If you must leave the area for any reason, stop the tractor and remove the key.
3. Take special care in the hook-up of implements to the PTO.
4. Be sure all guards are in place while operating the PTO.
5. Stop the tractor before disconnecting or servicing the PTO drivelines.



## SAFE HIGHWAY OPERATION

1. Before transporting the tractor and/or implements on public roadways, check with authorities for local regulations.
2. Drive the tractor in the engine forward configuration only when driving on roads or transporting implements.
3. Equip the tractor and towed implements with "slow-moving vehicle" (SMV) signs when travelling on public roads.
4. Install additional lights on implement rear to safeguard against rear-end collisions. Daybreak and dusk are particularly dangerous. Model 276 II tractors have seven-pin trailer connectors to facilitate installation of extra lighting.
5. Be aware of transport width of towed implements. Install additional lights to left side of wide implements to alert passing traffic. Keep clear of the approaching lane.
6. Use hazard warning flashers as required by law when transporting or driving the tractor on public roads.
7. Keep to the right and yield right-of-way especially when pulling implements. Pull off the road and stop to allow motorists to pass. Drive on the road shoulder, if permitted by law.
8. Use extreme caution when pulling heavy loads at road speeds. Avoid hard application of tractor brakes at high speed. Equip implement trailers with brakes as required by law.
9. Be sure headlights are aligned so they will not blind the operators of oncoming vehicles.
10. Hydrostatic transmission provides dynamic braking. Use caution when moving the FNR lever toward neutral.

## CHEMICAL SAFETY

1. The cab air filters are not designed to filter harmful chemicals. When using agricultural chemicals, follow the manufacturer's instructions carefully.

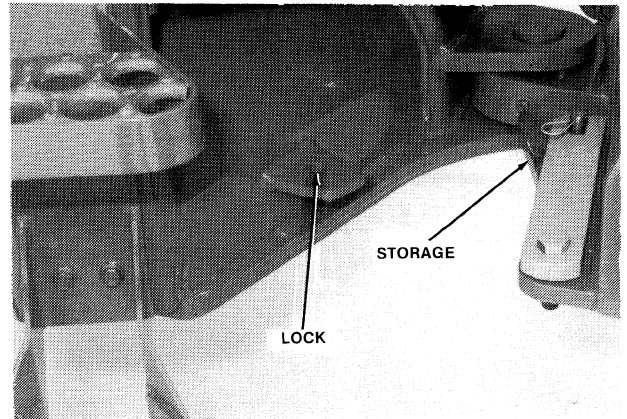


FIGURE 0-1

2. Do not carry harmful chemicals in the cab. Chemicals may rupture the container and the fumes may poison the operator.
3. Wear approved respiratory protection when working near toxic chemicals. Maintain the equipment regularly.

## ARTICULATION LOCK

### Figure 0-1

1. Use the articulation lock during stationary applications, servicing, jacking or overhaul operations. Do not use when the tractor is operating.
2. Before engaging the lock, drive the tractor to a level surface, put the steering straight, engage the parkbrake, put the FNR lever in neutral and stop the engine.
3. Remove the arm from the storage position on the front frame and put it through the hole on the rear frame. It may be necessary to start the engine and articulate the frame slightly to be sure the arm is engaged. Secure with the klik pin.
4. Do not allow personnel to enter the articulation area with the engine running, unless the articulation lock and parkbrake are engaged.

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