

555 TRACTOR SERVICE MANUAL

40055520



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FOREWORD

This service manual provides instructions for troubleshooting, removal, inspection, replacement and overhaul of 1980 model 555 VERSATILE® tractor components.

The service manual should be used in conjunction with the parts manual for the specific model year.

A table of contents precedes each section providing detailed coverage of the information contained within that section. The index at the end of the book should ease location of specific information, and an up-to-date list of Cummins Distributors is provided following the index.

REVISIONS AND ADDITIONS

The purpose of a loose-leaf service manual is to enable us to keep the book updated.

When changes are made, pages will be forwarded to you marked either as replacement or additional pages.

Replacement pages will carry the same page number as the original. Discard the original page and insert the replacement page in its place. Added pages will carry the original page number plus an alphabetical suffix. Insert these pages after the existing page.

Please fill in the feedback page at the back of the book and return it to Versatile Manufacturing Company. Such information you can supply will help us improve our service manuals in the future.

SAFETY

This section contains general safety precautions which should be thoroughly studied, and practiced, by all service personnel.

GENERAL SAFETY

1. Mount a fire extinguisher near the service area. Maintain it as recommended by the manufacturer and be familiar with its use.
2. Never operate the tractor in a closed building. If it is absolutely necessary to do so, be sure the building is well ventilated.
3. Always keep sleeves, jackets or other clothing relatively tight and belted, since loose clothing might catch in moving tractor parts.
4. Do not jump from the tractor cab. There is a danger of catching clothing on protruding parts. Use steps and handholds when mounting and dismounting tractor.
5. Before beginning any maintenance procedure, park the tractor on a level, clear area. Shut down the engine and remove the ignition key; set the parkbrake and chock the front and back of at least two wheels. Ensure that all operating controls are in the neutral position. Always disengage the PTO clutch and three-point hitch.
6. Never leave an implement in the raised position; always **lower it to the ground**.
7. Never attempt to start or operate tractor controls except from the operator's seat.

TOWING AND TRANSPORT SAFETY

1. Use a strong chain, cable or towbar and attach securely to the front frame plate or drawbar of tractor. Do not tow tractor faster than 15 mph (25 km).

2. Use a trailer having a carrying capacity of at least 30,000 lb (13 600 kg) to haul tractors.
3. Securely chain the tractor to the trailer, block the wheels and engage the parkbrake and articulation lock to prevent tractor movement.

JACKING SAFETY

1. Select a jack strong enough to carry the load. The minimum jack required is five ton capacity (4.5 t).
2. Stabilize the tractor by engaging the parkbrake and articulation lock, and chocking or blocking the wheels securely.
3. Brace the center pivot frame by applying a strong wedge on the frame pivot and engaging the articulation lock to prevent jackknifing.
4. Place the jack securely under the axle tube, frame, or drawbar where it is strong enough to support the lifted weight.
5. Use a heavy block as a base for the jack if working on the ground. It should be long enough to keep the jack from tipping, sinking or shifting. Any additional blocking should be under the jack.
6. Jack up the front and/or rear frame just enough to install steel safety stands under the axle tubes or frame.
7. Check the jack position after it has started to lift. Lower the jack immediately if it starts to lean. Reset the jack; block the tractor more securely and lift again.
8. Keep the tractor stable by not raising it so high that it will slide off the jack saddle.
9. Place support stands under the tractor. Lower the jack and let the tractor rest on the stands. This provides solid support for the tractor when the jack is removed.

HOIST SAFETY

1. Use a chain hoist and frame to lift the tractor properly. The minimum capacity required for the hoist is 10 tons (9 t); for the A-frame or overhead support, 7-1/2 tons (6.8 t); and for the support stands, three tons (2.7 t).
2. Protect yourself from injury as the tractor is being raised by doing the following:
 - a) Do not stand on the tractor as you are lifting.
 - b) Keep hands away from pinch points where the chain links tighten or the chain is against the tractor frame.
 - c) Do not let the tractor swing and strike personnel or the frame as it leaves the ground.
 - d) Keep support stands nearby and place under the tractor when proper height is reached.
 - e) Do not go under a tractor supported by a chain hoist. Place support stands under the tractor before working under tractor.
3. The transmission alone weighs approximately 1 200 lb (550 kg). Extreme care must be exercised when hoisting, lowering or moving the transmission.

MAINTENANCE SAFETY

1. Shut down the engine before performing any maintenance procedure.
2. Be alert when approaching the tractor while it is running, especially the PTO, articulation joint and three-point hitch.
3. Use the articulation lock on the tractor during overhaul operations.
4. Do not oil, grease or adjust the tractor while it is in motion. Do not leave the engine running while the tractor is being adjusted, cleaned or repaired.
5. Before beginning work on any hydraulic system component, move all implement con-

trol levers to the full forward position several times to dissipate all pressure. If a three-point hitch is fitted, select the DOWN position. Disconnect any component that may be connected to the hoses.

6. Wear a face shield or goggles to protect your eyes, and heavy gloves to protect your hands, when searching for hydraulic leaks or charging the air conditioning system.
7. Escaping hydraulic oil under pressure can penetrate the skin, causing severe personal injury. Use a piece of cardboard or wood when searching for leaks. If injured, get immediate medical attention.
8. Do not smoke and avoid open flames when filling the batteries.
9. Shut down the engine and remove the ignition key before disconnecting or servicing PTO drivelines.
10. Do not remove the cooling system pressure cap while the engine is hot. Allow it to cool to less than 165°F (74°C).
11. Stop the engine before making any linkage adjustments.
12. Welding fuel tanks is dangerous and is not recommended.
13. Repair adhesive is a petroleum distillate and easily flammable. Keep the adhesive and its vapours from heat, sparks and flame. During application, and until the vapour is gone, avoid using spark-producing electrical equipment. Keep the container tightly closed when not in use.

FUEL AND FLUID SAFETY

1. Do not smoke and avoid open flame when:
 - a) filling the fuel tanks
 - b) filling the batteries
 - c) working near a disassembled air conditioning system. Refrigerant vapour and flame combined produce lethal phosgene gas.

2. Add coolant to the radiator only when the engine is stopped. Turn the radiator cap slightly to relieve pressure before removing the cap.
3. Do not use an open pail or can for transporting fuel. Use only an approved container manufactured for that purpose.
4. If clothes should become splashed with fuel, change immediately. Fuel-soiled clothes are an extreme fire hazard.
5. Dispose of all fuel-soaked rags. Do not leave them lying around a work area where they may be exposed to flame, spark or cigarette smoking.

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