

NEW HOLLAND

Boomer

8N

SERVICE

MANUAL



SERVICE

SECTION 00 - GENERAL INFORMATION

Chapter 1 - General Information

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INTRODUCTION

This service manual provides the technical information needed to properly service the New Holland Boomer 8N CVT transmission. Use this manual in conjunction with the operator's manual for complete operation, adjustment, and maintenance information.

On New Holland equipment, left and right are determined by standing behind the unit, looking in the direction of travel.

PRECAUTIONARY STATEMENTS

PERSONAL SAFETY



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

Throughout this manual and on machine decals, you will find signal words **DANGER**, **WARNING**, and **CAUTION** 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.



DANGER



DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury. The color associated with Danger is RED.

M1169A



WARNING



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury. The color associated with Warning is ORANGE.

M1170A



CAUTION



CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. The color associated with Caution is YELLOW.

M1171A

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION INSTRUCTIONS COULD RESULT IN DEATH OR SERIOUS INJURY.

MACHINE SAFETY AND INFORMATION

NOTICE is used to address practices not related to personal injury.

NOTICE: The signal word **NOTICE** is used throughout this manual followed by specific instructions. These messages are intended for machine safety, or to identify and present supplementary information.

TECHNICAL INFORMATION

HARDWARE

GENERAL

The Boomer 8N tractor has been built using metric hardware.

NOTICE: *Be sure to use the hardware specified when using tapped holes, as trying to install a metric bolt in an inch thread, or an inch bolt in a metric thread, will damage the thread.*

Certain hardware must be tightened to specific torque specifications. If specific torque specifications are not noted, tighten the hardware to the standard torque chart specification listed in this manual.

PLATING

Hardware used on New Holland tractors is plated with zinc chromate (gold color). Gold colored hardware has different torquing requirements from unplated or zinc plated (silver color) hardware because of the difference in the coefficient of friction of the plating material. The torque charts in this manual list the correct specifications for gold, silver, and unplated bolts.

NUT TIGHTENING

Whenever possible, the nut should be tightened, not the head of the bolt. When tightening using the bolt head, the clamp load can be lost because some of the torque applied twists the bolt instead of tensioning (stretching) it. The tension on the bolt is what holds the joint together.

Approximately 90% of the torque applied during assembly goes to overcoming friction between the parts. The other 10% is used to tension (stretch) the bolt. After assembly, the frictional forces disappear, which is the basis for the saying "If it does not fail during assembly, it will not fail in service." The bolt may later fail due to other factors, but not from being over tightened.

LOCKNUTS

Most locknuts are coated with a special lubricant that is dry to the touch. Anytime a locknut is used, a lower than normal torque is required. Refer to the torque charts in this manual for specific values.

JAM NUTS

When using a jam nut to lock a regular nut, the jam nut should be installed first and tightened to one half the recommended torque, then held in place while installing a regular nut to the recommended torque.

THREAD LUBRICATION

The addition of anti-seize compound, Molykote, oil, graphite, or any other lubricant to a bolt decreases the friction between it and a nut. This makes it necessary to reduce the recommended torque to prevent over tensioning of the bolt. When using the torque charts in this manual, decrease the value by 20% whenever a lubricant is used.

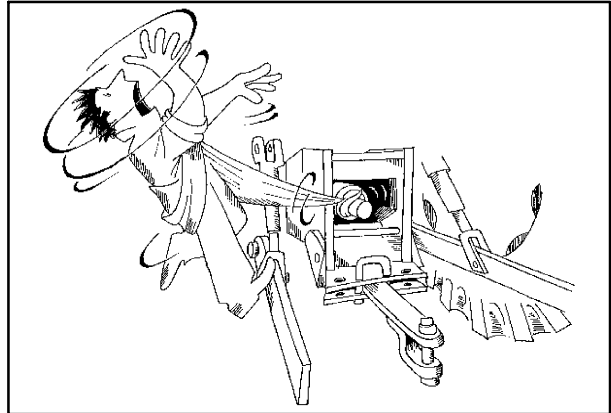
WORKING SAFELY

1. During the manufacturing of this tractor, every step has been taken to ensure safe operation. However, the best way to avoid accidents is to exercise caution at all times. Once the accident has already happened it is too late to remember what steps should have been taken.
2. Read this manual carefully before starting, using, carrying out maintenance, refueling or performing any other type of operation on the tractor.
3. The time spent reading this manual will allow you to get to know your tractor, thereby saving time and effort. This will also help prevent accidents from taking place.
4. Read all the safety decals on the machine and follow the instructions thereon before starting, operating, refueling or carrying out maintenance on the machine. Promptly replace any decals that are damaged, lost or illegible.

Clean the decals if they are covered by mud or debris.

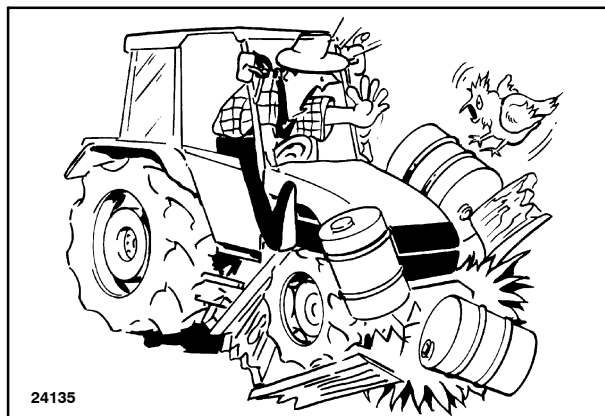
5. Remember that the tractor is exclusively designed for agricultural use. Any other use will require prior authorization from CNH America LLC.
6. It is advisable to keep a first aid kit on hand.
7. The tractor must only be used by responsible personnel, trained in tractor use and authorized to operate the machine.
8. Do not alter the injection system calibration in an attempt to increase maximum engine speed.
9. Do not wear loose clothing that may be trapped in moving parts.

Check that all rotating parts connected to the power take-off are correctly protected.



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10. Do not alter the calibration of the pressure relief valves in the various hydraulic circuits (steering, hydraulic lift, auxiliary distributors, etc.).
11. Avoid using the tractor in unsuitable physical conditions, stop work instead.
12. Enter and leave the tractor using the steps and handles provided. Keep these fittings free of mud and debris.



2

STARTING THE TRACTOR

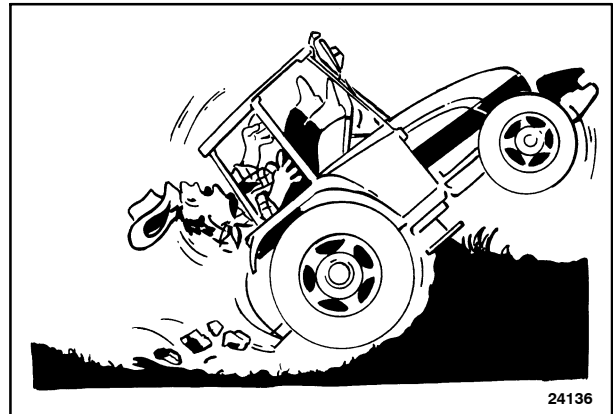
1. Before starting the engine, check that the hand brake is on and that the transmission shuttle shift lever and power take-off are disengaged, even if the tractor is fitted with a start-up safety device. Never disconnect the start-up safety switch. If the switch does not work correctly, contact your local dealer for eventual repair operations.
2. Before starting the engine, make sure that all attached implements are lowered to the ground.
3. Before starting the engine, check that all covers and guards are correctly in position (hood side panels, power take-off guard, front axle transmission shaft cover, etc.).
4. Never start or maneuver the tractor unless seated in the driving position.
5. Before moving the tractor, always check that the area is free of persons or obstacles.
6. Never run the engine in a closed space without ensuring adequate ventilation. Exhaust fumes are damaging to the health and can be lethal.



3

USING THE TRACTOR

1. Select the most suitable wheel setting for the work in hand, i.e.: the setting that provides the best stability.

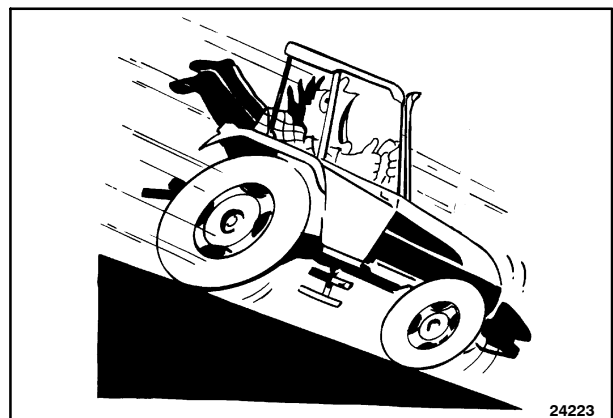


4

2. Depress the speed control pedal slowly: if engaged too quickly, especially when the tractor is getting out of a hole, ditch or operating on muddy ground or steep slopes, the tractor may overturn.

Release the speed control pedal immediately if front wheels begin to lift.

3. When traveling downhill, keep the tractor in gear. Never place shuttle shift lever in the neutral position.
4. When the tractor is moving, the operator must remain correctly seated in the driving position.
5. Never get on or off the tractor while in movement.
6. When using the brakes, press the pedal down slowly.
7. Avoid taking turns at high speeds.
8. Always use the tractor at a speed that will guarantee safe operation on the type of land being worked. When working on uneven ground, use maximum care to ensure proper stability.
9. If you have to work with the tractor on a gradient, for example on hillsides, drive at moderate speed especially when taking turns.



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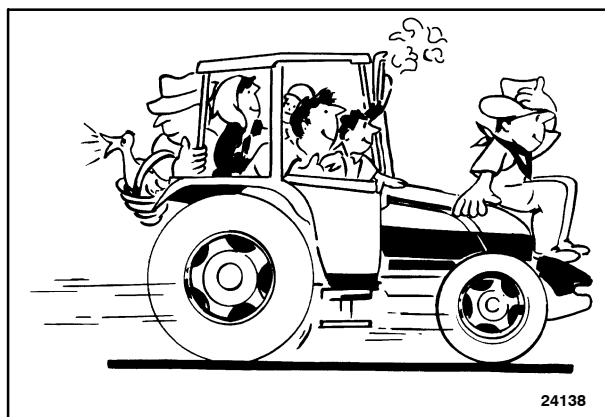
10. Proceed with maximum caution when working with the wheels near the edge of ditches or slopes.
11. When driving on public highways, observe the Highway Code.



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12. When driving, do not rest your feet on the brake pedals.
13. Never haul passengers on tractor.

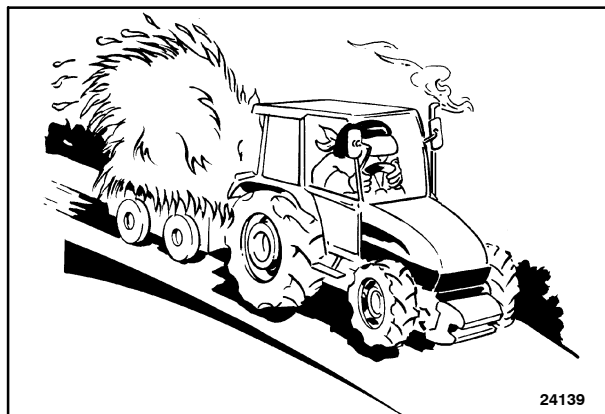
When driving on roads, connect the brake pedals using the plate provided. Braking when the pedals are not connected could cause the tractor to skid. Avoid excessive wear on the brakes by using engine braking.



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TOWING AND TRANSPORT

1. To guarantee tractor stability when moving, adjust the hitching device according to the trailer or implement to be used.
2. Drive slowly when towing extremely heavy loads.
3. For your own safety, do not tow trailers that are not fitted with an independent braking system.
4. If the tractor is used to tow heavy loads, always use the hitching device and never hitch loads onto the lower arms or the top link of the three-point linkage. This may result in tipping or overturning.
5. When towing, do not negotiate turns with the differential lock engaged as this may prevent you from steering the tractor.



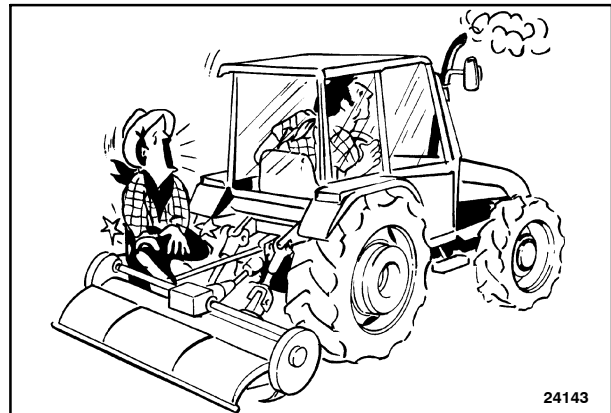
8

USING IMPLEMENTS AND AGRICULTURAL MACHINERY

1. Do not connect implements or machinery that require more power than can be generated by your tractor model.
2. Never negotiate sharp turns with the power take-off under a heavy load; this may damage the universal joints on the transmission shaft connected to the power take-off.
3. Never stand between the reversing tractor and the implement when hitching.
4. When using implements that require the tractor to be stationary with the engine running, keep the shuttle lever in the neutral position, apply the hand brake and use suitable wheel chocks.
5. Do not operate machines connected to the power take-off without first ensuring that the operating range of the machine is free of bystanders.

Also check that all rotating parts connected to the power take-off shaft are correctly protected.

6. Add some type of rear ballast when using lifting equipment fitted to the front of the tractor. Rear ballast, such as, rear wheel weights, fluid in rear tires or 3pt weight box.



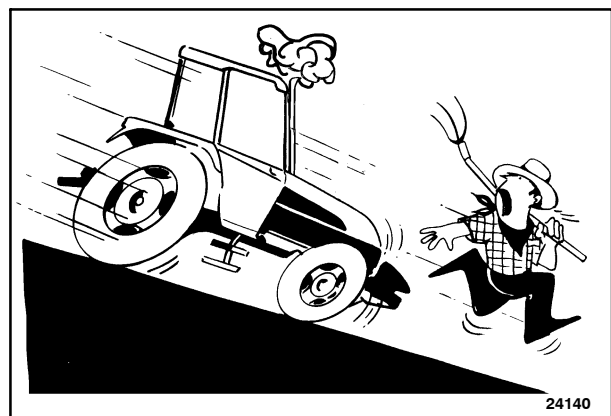
9

STOPPING THE TRACTOR

1. When the tractor is stationary, never leave connected implements in the raised position. All implements must be lowered before stopping the engine.
2. Before leaving the driving position, move the transmission shuttle shift lever to the neutral position, disengage the power take-off, apply the hand brake and stop the engine.

Always remove the ignition key from the dashboard when leaving the tractor unattended.

3. Park on flat surfaces, where possible, put the tractor into gear and apply the hand brake. As an additional safety measure, use wheel chocks (available as an optional); this procedure is compulsory when parking with a trailer hitched.



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SERVICING THE TRACTOR

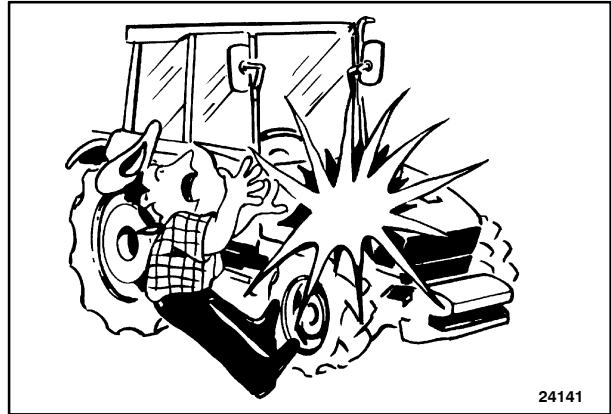


Some photographs in this manual may show shields or cover panels removed for purposes of clarity.

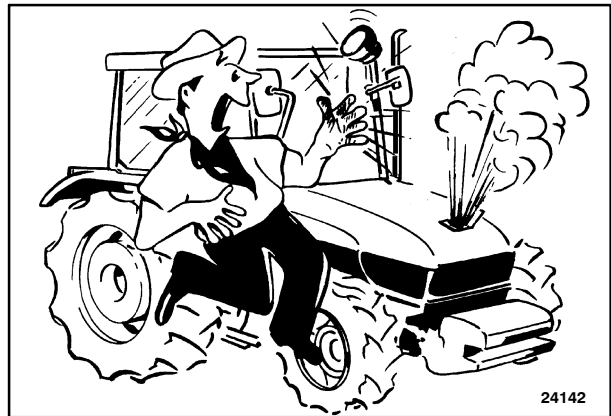
NEVER OPERATE unit without all shields and cover panels in place.

M202B

1. Do not work on the tires with unsuitable equipment or without the necessary experience. Incorrect tire fitting may put safety at risk. If in doubt, contact skilled personnel.
2. When changing or storing tires, make sure they are stacked correctly and cannot roll or topple over causing personal injury.
3. Before removing any hydraulic tubing, check that the system is not pressurized.
4. Leaks of pressurized oil can cause serious injuries. When looking for leaks use the appropriate safety equipment: screens, safety glasses and gloves.
5. Before touching any electrical components, disconnect the ground lead from the battery.
6. Only remove the radiator cap after the engine has been allowed to cool. With the engine switched off, use a cloth to slowly unscrew the cap and release the pressure before completely removing the cap.

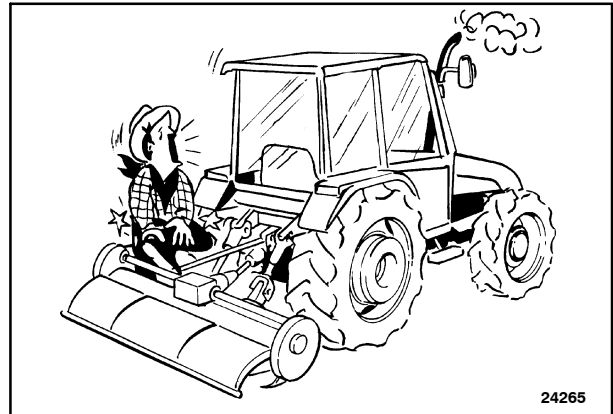


11



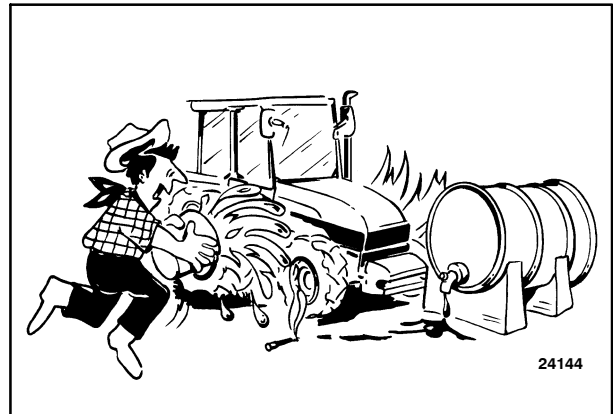
12

7. Before inspecting, cleaning or carrying out maintenance on the tractor (or any implement connected to the tractor), always ensure that the engine is switched off, the transmission shuttle shift lever in neutral, the brakes are on, the power take-off is disengaged and that all moving parts are stationary.



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8. Always keep a fire extinguisher at hand.



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DIESEL FUEL

1. UNDER NO CIRCUMSTANCES should gasoline, alcohol, or blended fuels be added to diesel fuel. These combinations can create an increased fire or explosive hazard. Such blends are more explosive than pure gasoline in a closed container such as a fuel tank. DO NOT USE THESE BLENDS.
2. Never remove the fuel cap or refuel with the engine running or hot.
3. Do not smoke while refueling or when standing near fuel.
4. Maintain control of the fuel filler pipe nozzle when filling the tank.
5. Do not fill the fuel tank to capacity. Allow room for expansion.
6. Low sulfur diesel fuel required.



WHEN YOU SEE THIS SYMBOL

IT MEANS:

ATTENTION!

BECOME ALERT!

YOUR SAFETY IS INVOLVED!

SAFETY DECALS

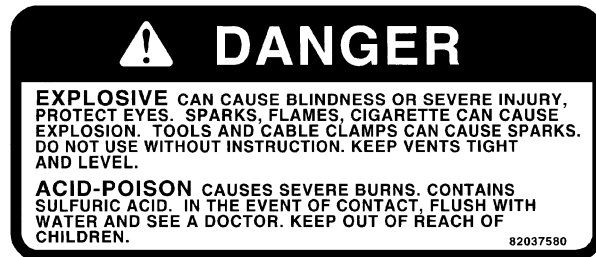
The following safety decals have been placed on your machine in the areas indicated. They are intended for your personal safety and for those working with you. Please take this manual and walk around your machine to note the content and location of these warning signs. Review these warning signs

and the operating instructions detailed in this manual with your machine operators.

Keep the decals legible. If they are not, obtain replacements from your authorized dealer. The decal replacement part numbers are listed with each decal.



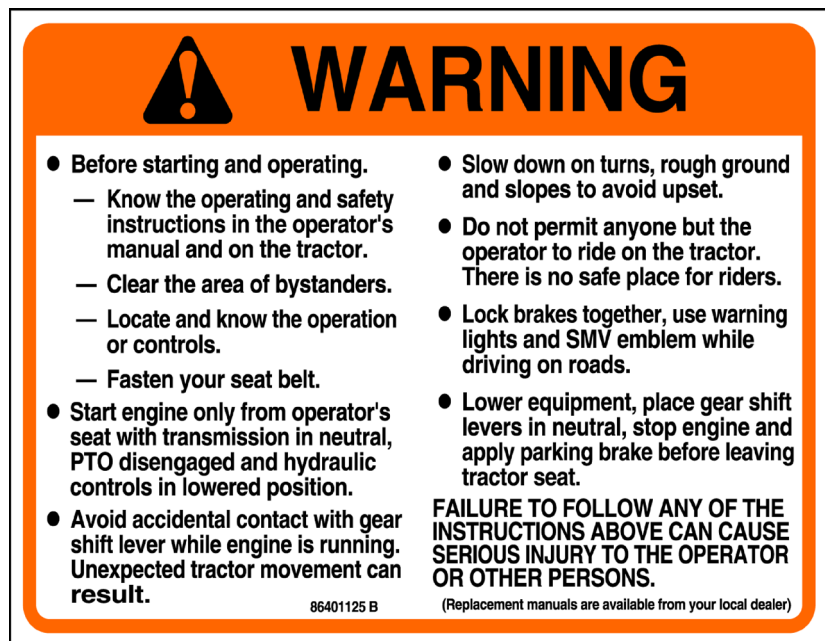
WARNING: Pull Only From Drawbar
PART NO: 86532904
LOCATION: PTO Shield



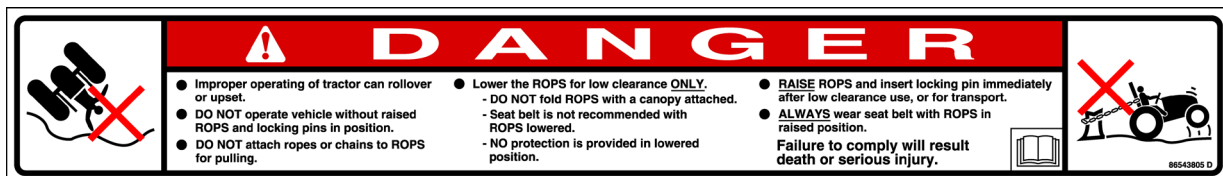
DANGER: Battery Safety
PART NO: 82037580
LOCATION: In Front of Battery



WARNING: Rotating Fan and Belts
PART NO: 86532907
LOCATION: Both sides of Radiator Shroud



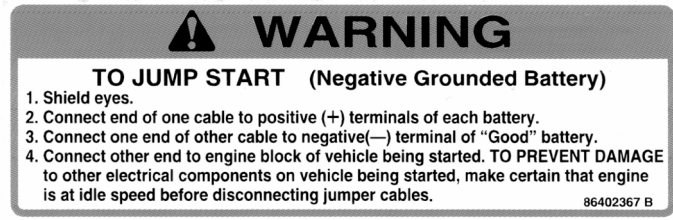
WARNING: Before Starting and Operating
PART NO: 86401125 B
LOCATION: Left Side Pod



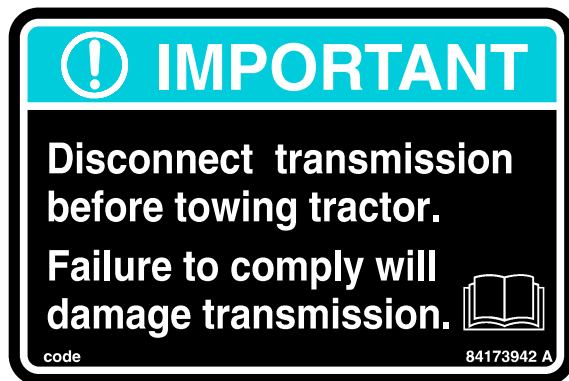
DANGER: ROPS
PART NO: 86543805_D
LOCATION: Top Under Side of ROPS



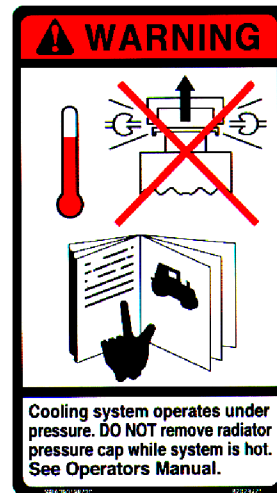
WARNING: Tractor Dismounting
 PART NO: 84222486
 LOCATION: Top Left Dash



WARNING: To Jump Start
 PART NO: 86402367
 LOCATION: In front of battery



IMPORTANT: Disconnect Transmission
 PART NO: 84173942
 LOCATION: Top Left Dash



WARNING: Cooling System Under Pressure
 PART NO: 82029421
 LOCATION: Air Filter Intake Tube



DANGER: Start Engine Only From Operator's Seat
 PART NO: 82985062
 LOCATION: On Top of Starter



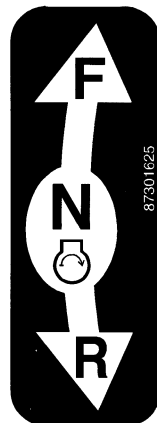
WARNING: Operate Controls only from Tractor seat
 PART NO: 87300025
 LOCATION: PTO Shield

INSTRUCTION DECALS

PTO Engagement
PART NO: 84143212
LOCATION: Left-Hand
POD near Floor
(With Mid PTO Only)



Position Control
Lever
PART NO: 86567896
LOCATION:
Right-Hand POD Top



Forward-Reverse Shuttle
PART NO: 87301625
LOCATION: Top Left of Dash



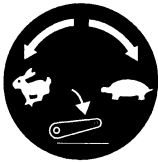
Operating Remote
Control
Valve-Single
Spool (Optional)
PART NO: 86567895
LOCATION:
Right-Hand POD Top



Differential Lock
PART NO: 86532901
LOCATION: Above
Pedal Left Side of
Operator's Platform



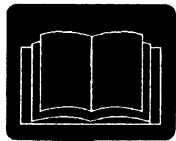
Starter Switch
PART NO: 87656846
LOCATION: Starter
Switch, Right Side of
Instrument Panel



Flow Control Valve
PART NO: 86400295
LOCATION: Top of Flow
Control Knob



Engine Oil
PART NO: 86532916
LOCATION: Engine Oil
Filler Cap



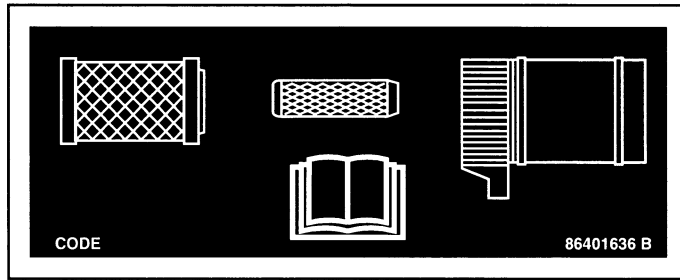
Hyd. Manifold Operation
(See Operator's Manual)
PART NO: 86532914
LOCATION: Right Side
Frame Rail Underneath
Operator's Platform

Lubrication and
Maintenance Intervals
PART NO: 84181050
LOCATION: Inside of Hood

WATCH YOUR PROOF METER HOURS Lubrication and maintenance service intervals					
LUBRICATION AND MAINTENANCE ITEM	CHECK	CLEAN	LUBE	CHANGE	ADJUST SERVICE INTERVAL
Radiator Coolant	•	•			Every 10 Hours or Daily
Engine Oil Level	•				
Air Cleaner	•				
Transmission Oil Level	•				
Front Diff Oil Level	•				
Front Axle Oil Level	•				
Tires	•				
Clutch Pedal	•		•	•	
Battery	•				
Lubrication Fittings					Every 50 Hours
Steering Linkage			•		
2-Wheel Drive King Pins			•		
3-point Linkage			•		
Pivot Shaft			•		
Brake Pedal			•		
Drive Shaft Cover			•		
H.S.T. Foot Pedal Shaft			•		
Power Steering			•		
Super Steer Gearbox	•				
Fuel Filter	•	•			Every 100 Hours
Air Cleaner	•				
Engine Oil				•	Every 200 Hours
Engine Oil Filter	•			•	
Fan Belt				•	
Brakes				•	
Fuel Filter				•	Every 300 Hours
Front Axle Oil				•	
Front Diff Oil				•	
Hydraulic Filters				•	
Transmission Oil				•	
Fuel Injectors	•			•	Every 600 Hours
Valve Clearance	•			•	
Front Wheel Bearings			•		
G-Rotor Inner Filter			•		
Super Steer Gearbox			•		
Radiator Coolant				•	Seasonal
Air Cleaner Element				•	

Refer to your Operator's Manual
for additional information.

Code 84181050 A



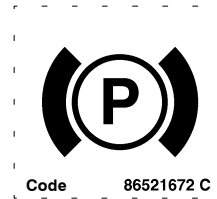
Air Cleaner Maintenance
PART NO: 86401636
LOCATION: Air Cleaner Canister



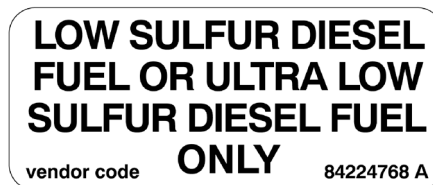
Red Reflective Tape
PART NO: 86547781
LOCATION: Back Rear Fender
(Both Sides)



Throttle
PART NO: 81863547
LOCATION: Top Right Dash



Parking Brake
PART NO: 86521672
LOCATION: Right side of operator's
platform



Low Sulfur Fuel
PART NO: 84224768
LOCATION: Left Rear Post of ROPS, near fuel tank

**Thanks very much for your reading,
Want to get more information,
Please click here, Then get the complete
manual**

JustClickHere 

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click on it.**

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