



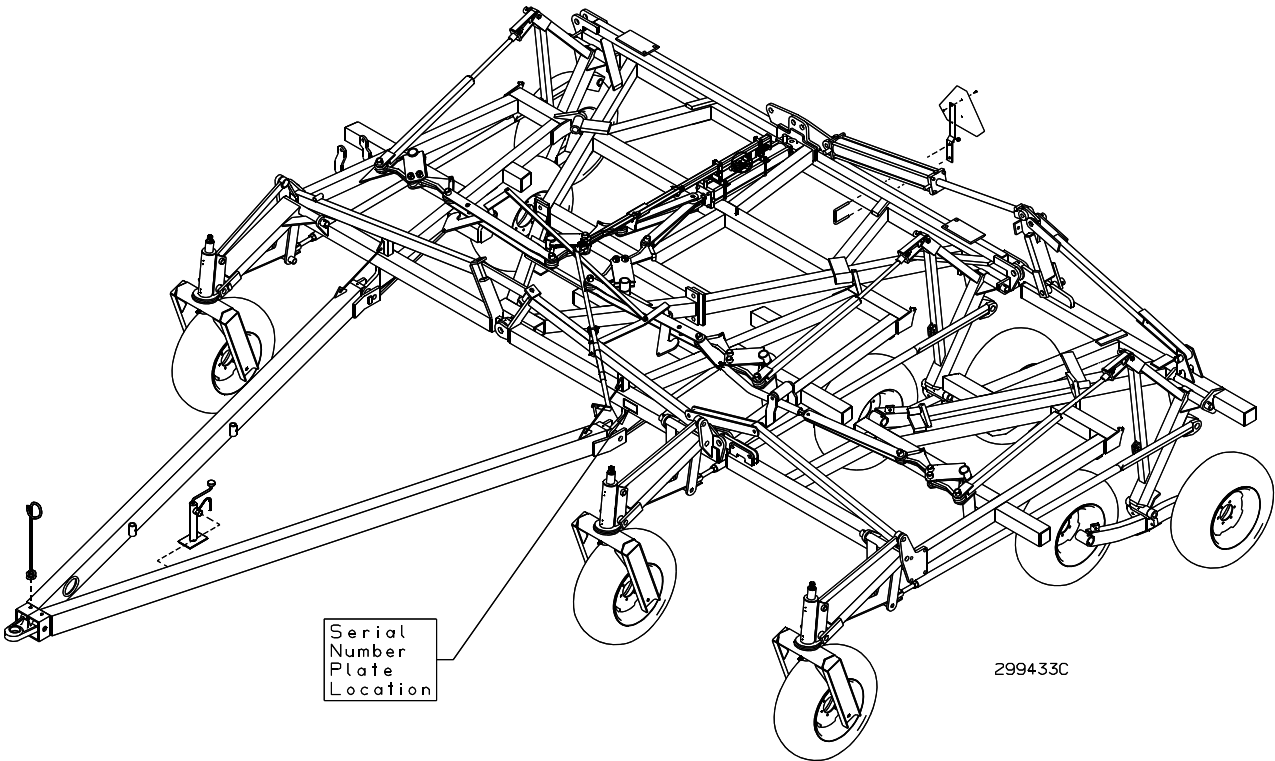
# **ST820 Precision Tillage**

## **Service Manual**

REPAIR PARTS IDENTIFICATION

This implement has a Serial Number plate attached to identify the components installed on this machine. The plate looks like the sample with a number stamped on.

For easy reference, locate the plate at the location shown on the figure. Record the number on this sheet. When requiring repair parts, take this number into your dealer. This Serial Plate was used on machines manufactured to June 2004.

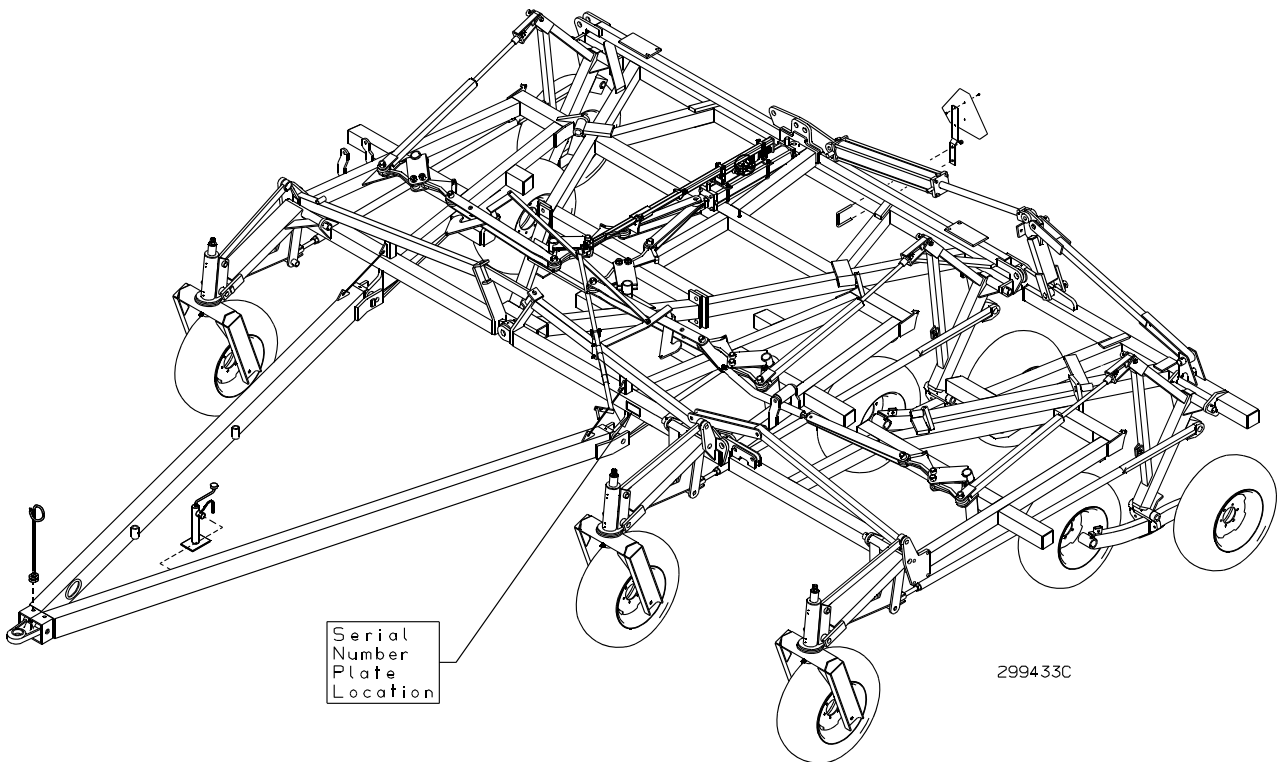


## REPAIR PARTS

This implement has a Product Identification Number (PIN) plate. The plate looks like the sample at right. For easy reference, locate the PIN plate at the location shown on the figure below. Record the number on this sheet. When requiring repair parts, take this number into your dealer.

**NOTE:** This PIN plate replaces the Serial Number plate found on machines manufactured prior to June 2004.

<b>CNH Canada, Ltd.</b> Toronto, ON M5X 1B8 Canada		
<b>flexicoil</b>		
Made In Canada		
○	Model Number	○
	Product Identification Number	



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# SECTION 1

## GENERAL INFORMATION

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**SECTION 1 - GENERAL INFORMATION**

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GENERAL SERVICE INFORMATION

**DANGER!**



Be alert for overhead electrical wires. Failure to stay clear of electrical wires will result in electrocution. Electrocution can occur without direct contact with overhead electrical wires.

**CAUTION!**



To prevent personal injury when assembling the implement, always block up the raised section. Be sure the section is stable before assembly and never rely on a jack or hydraulic device to support the raised implement.

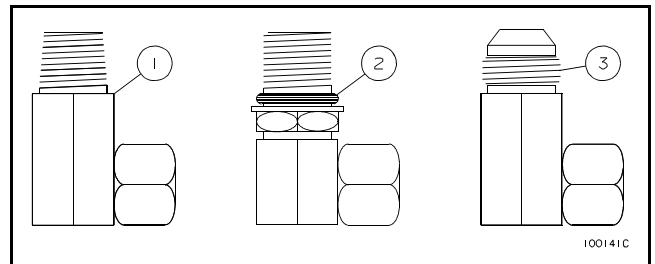
Always make sure that pressure is relieved from hydraulic circuits before servicing or disconnecting from the tractor. Failure to do so may result in hydraulic fluid being injected into the skin; this may result in gangrene.

**READ ASSEMBLY INSTRUCTIONS CAREFULLY BEFORE YOU BEGIN.**

1. Be sure to read and follow all instructions to ensure proper assembly and operation of the implement.
2. Assembly may require the use of a forklift or other suitable lifting device.
3. Implement must be serviced on a flat surface.
4. Left and right directions are determined from the rear of the implement facing the direction of forward travel.
5. Use a suitable sealant on hydraulic connections. Be careful to prevent sealant from entering the hydraulic system.
6. Apply a thread sealant to all female-to-male pipe thread connections.
7. Do not allow tape to enter the hydraulic system.
8. Do not use a thread sealant on ORB or swivel fitting connections.

**NOTE:** If you are assembling or servicing the implement inside of a building, ensure the door opening is large enough to allow the implement to be removed after assembly. Check the Specifications Tables in this section for the overall height and width in transport position.

**NOTE:** Additional bolt torque information can be found later in this section.



Hydraulic Fitting Identification

**NOTE:** Pipe thread (1) fittings, o-ring boss fittings (2) and JIC fittings (3) may be the types of hydraulic fittings used.



## SECTION 1 - GENERAL INFORMATION

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### IMPORTANT INFORMATION

All repair and maintenance work listed in this manual must be carried out only by qualified dealership personnel, strictly complying with the instructions given and using, whenever required, the special tools.

Anyone who carries out the above operations without complying with the procedures shall be responsible for the subsequent damages.

The manufacturer and all the organizations of its distribution chain, including - without limitation - national, regional or local dealers, reject any responsibility for damages due to the anomalous behavior of parts and/or components not approved by the manufacturer himself, including those used for the servicing or repair of the product manufactured or marketed by the manufacturer.

In any case, no warranty is given or attributed on the product manufactured or marketed by the manufacturer in case of damages due to an anomalous behavior of parts and/or components not approved by the manufacturer.

The information in this manual is updated at the date of the publication. It is the policy of the manufacturer to aim for continuous improvement. Some information could not be updated due to modifications of technical or commercial type, as well as for suiting the laws and regulations of different countries.

In case of disagreement, refer to your Sales and Service Networks.

### SERVICE TOOLS

There are several service tools/update kits available through the parts department, for ease of diagnosis and servicing the ST820.

ND-035K	Trip shim kit.
ND-897K	Trip shim kit.
TC-352K	Trip shim kit (for 650 lb trips).
NW-487K	Tube aligning kit.
NW-738K	Ball drive update kit (1.5" ball).
NW-105K	Transport lockout kit (for locking front casters for transport).

**SAFETY**

**SAFETY-ALERT SYMBOL**



This symbol is used to denote possible danger and care should be taken to prevent bodily injury. This symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**

**THIS SYMBOL APPEARS WITH TEXT READING “DANGER!”, “CAUTION!”, OR “WARNING!” THESE WORDS INDICATE THREE LEVELS OF POSSIBLE HAZARDS, THAT ARE DESCRIBED BELOW.**

**DANGER!**



Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. The color associated with Danger is RED.

**WARNING!**



Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. The color associated with Warning is ORANGE.

**CAUTION!**



Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. The color associated with Caution is YELLOW.

## SECTION 1 - GENERAL INFORMATION

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### GENERAL SAFETY PRACTICES

REVIEW this manual and operator's manual before servicing equipment.

NEVER allow anyone unfamiliar, untrained, or complacent to operate the cultivator.

ALWAYS USE the jack supplied when unhooking the cultivator.

NEVER transport the cultivator at speeds higher than 30 km/hr (18 mph).

MAINTAIN YOUR CULTIVATOR in proper working condition. Unauthorized modifications to the machine may impair function and/or safety and affect machine life.

BE SURE the cultivator is securely fastened to a large farm tractor or an air cart that is attached to a large farm tractor before operating hydraulics.

USE EXTREME CARE when making adjustments.

KEEP CHILDREN AWAY from all farm equipment.

### SERVICING SAFETY PRECAUTIONS

BLOCK the wheels to prevent movement when servicing.

BE SURE the press wheels are blocked and wing lock pins are in place before servicing or adjusting opener assemblies or working on the cultivator.

#### **CAUTION!**



The tractor engine should be stopped and the wheels blocked to prevent any movement during servicing.

Always be sure that the depth control safety lock is in place when servicing the cultivator.

Always be sure the wings are in field position before servicing the cultivator.

Escaping hydraulic fluid is a serious hazard. Escaping hydraulic fluid that is under pressure can penetrate the skin, causing serious injury. Relieve pressure before disconnecting the hydraulic lines.

Check/tighten all connections before applying pressure.

Never use your hand to search for leaks. Use a piece of cardboard or paper. If any fluid is injected into the skin, seek immediate medical attention. Gangrene may result if the wound is not treated within a few hours. Check your hydraulic fluid containers for warnings concerning the hydraulic fluids you use.

DO NOT walk within the radius of raised cultivator wings.

## SECTION 1 - GENERAL INFORMATION

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### SAFETY DURING OPERATION

DO NOT ALLOW ANYONE ON THE CULTIVATOR while operating the cultivator hydraulics.

NEVER disconnect the tractor from the cultivator while the cultivator wings are raised.

KEEP CHILDREN AWAY from the cultivator during operation.

NEVER STAND within the radius of the raised wings. Hydraulic or mechanical failure may result in rapid or uncontrolled falling of the wings.

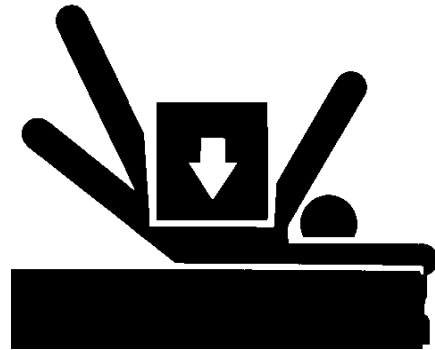
OPERATE the wings only on level ground with the depth control fully raised.



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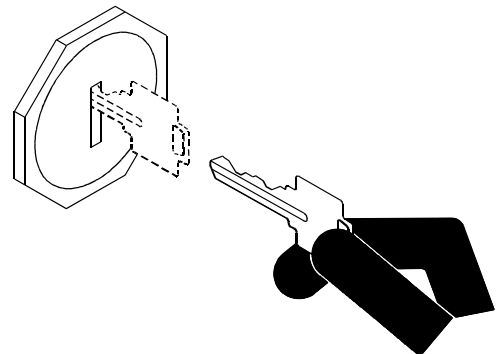
PARK ON LEVEL GROUND and block adequately.

AVOID moving machines.



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DISENGAGE POWER AND SHUT DOWN the tractor engine (remove the key from the tractor ignition), be certain that all moving parts have stopped, and all pressure in the system is relieved BEFORE cleaning, adjusting or lubricating the cultivator.



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**SECTION 1 - GENERAL INFORMATION**

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READ the operators manual thoroughly.

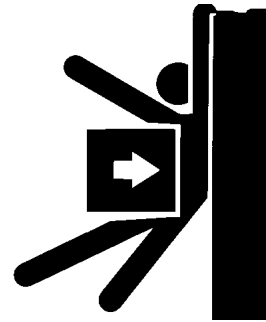
KEEP service area clean.



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DO NOT enter tight areas.

BE CERTAIN machine is tagged 'out of order' or work area is supervised.



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BE CERTAIN all moving parts have stopped before servicing.

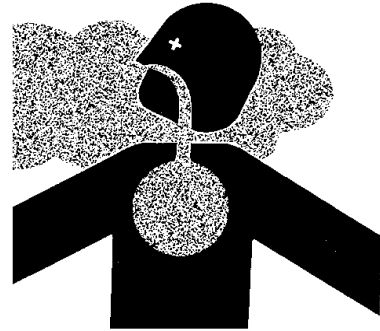


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**SECTION 1 - GENERAL INFORMATION**

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AVOID toxic vapors. Breath clean air.



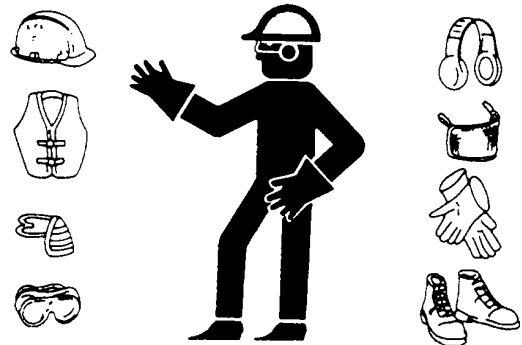
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DO NOT permit smoking.



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WEAR protective clothing.



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## SECTION 1 - GENERAL INFORMATION

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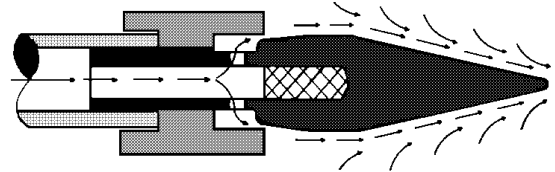
### AIR AND AIR HOSES

COMPRESSOR HOSES may move unexpectedly when suddenly disconnected.



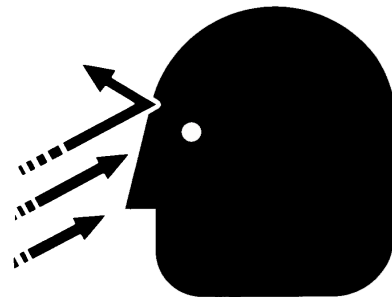
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USE PROPER air nozzles. Do not use compressed air to clean clothes or direct it toward any part of yourself.



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AVOID getting chemicals into eyes. Use eye protection.



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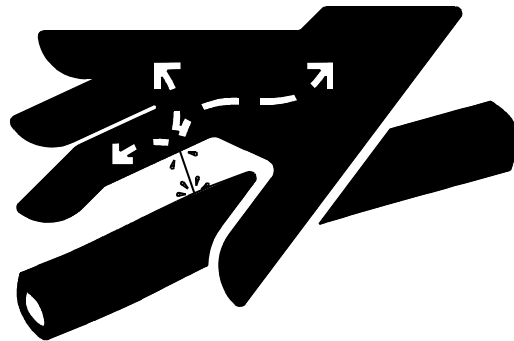
### HYDRAULICS AND HYDRAULIC LEAKS

AVOID high-pressure fluids.

ESCAPING HYDRAULIC FLUID IS A SERIOUS HAZARD. Escaping hydraulic fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting the hydraulic lines. Check/tighten all connections **BEFORE** applying pressure.

BEWARE excessive hydraulic pressure. Explosive structural failure can result.

BEWARE air locks in cylinders. Large cylinder displacements can occur without hydraulic oil flow.



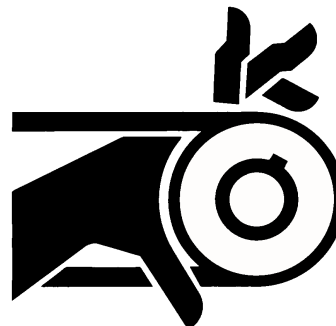
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## SHIELDS

REPAIR damaged shields.

KEEP all shields in place.

BE EXTRA CAUTIOUS when repairing or servicing without protective shields.

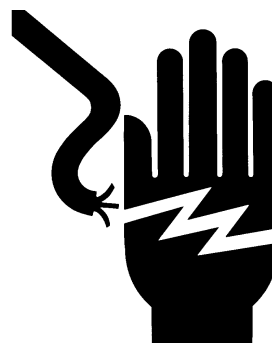


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## ELECTRICAL

REMOVE the ground wire to avoid arcing contacts.

REMOVE GROUND WIRE when welding.



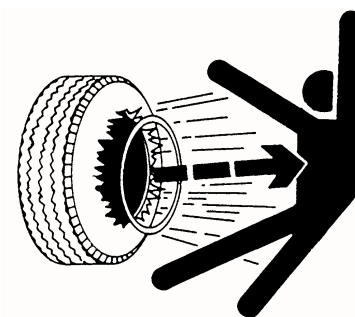
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## TIRES

USE A CAGE IF POSSIBLE when setting tires on rims.

AVOID excessive air pressure.

DO NOT OVER-INFLATE tires. NEVER lean over a tire while inflating it.



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