

1 - INTRODUCTION

A Word From Hagie Manufacturing Company	1-1
About This Manual	
Safety Messages Used In This Manual	
Service and Assistance	
Specifications	
2014 Product Warranty	

2 - SAFETY AND PRECAUTIONS

Safety Precautions2-	-1
Safety Decals2-	-3

3 - OPERATING YOUR NTB

Machine Display Warning Messages - 60' NTB	
Unfold/Fold Procedure - 30'/40' NTB	
Unfold/Fold Procedure - 60' NTB	
Float Operation - 30'/40' NTB	
Float Operation - 60' NTB	
Application	
r ppiloution	

4 – MAINTENANCE AND STORAGE

Service - Lubrication	4-	-1
Storage	4-	.5

5 - MISCELLANEOUS

Transporting	5-1
Quick-Tach System	5-1
Cradle Installation - 60' NTB	5-8



The following patent decal is located on the front of the attachment and provides current patents issued on your Nitrogen Tool Bar.

NOTE: Hagie Manufacturing Company reserves the right to make changes to any current patents or patents pending at any time, without notice.



Hagie Manufacturing Patent Decal (Located on the front of attachment)

A WORD FROM HAGIE MANUFACTURING COMPANY

Congratulations on the purchase of your STS Nitrogen Toolbar (NTB)! We recommend that you review this operator's manual and become familiar with operating procedures and safety precautions before attempting to operate your NTB.

As with any piece of equipment, certain operating procedures, service, and maintenance are required to keep your NTB in top running condition. We have attempted herein to cover all of the adjustments required to fit varying conditions. However, there may be times when special care must be considered.

NOTE: The user is responsible for inspecting the NTB and having parts repaired or replaced when continued use of the product causes damage or excessive wear to other parts. Hagie Manufacturing Company reserves the right to make changes in the design and material of any subsequent NTB without obligation to existing units.

Thank you for choosing a Hagie NTB and we ensure you of our continued interest in its satisfactory operation for you. We are proud to have you as a customer!

ABOUT THIS MANUAL

A CAUTION

READ OPERATOR'S MANUAL BE ALERT LEARN TO OPERATE THIS MACHINE SAFELY OBSERVE ALL SAFETY PRACTICES, MACHINES GAN RE HAZAROOUS IN THE HANDS OF AN UNFAMILIAR, UNTRAINED, OR COMPLACENT OPERATOR, SHUT OFF ENGINE SEFORE SERVICING, WHEN MACHANISM BECOMES CLODGED, SHUT OFF ENGINE SEFORE CLEANING, ON'T RISK MUSIC DEATH.

NOTICE

The purpose of this manual is to guide you in operating the Nitrogen Toolbar (NTB). Read this manual in addition to the sprayer operator's manual, and all other literature that is included with the machine.

This manual is only intended to cover the NTB attachment and any differences in the operation of the sprayer controls. Refer to your sprayer operator's manual for complete instructions on machine operation.

NOTICE

Any pictures contained within this operator's manual that depict situations with shields, guards, rails, or lids removed are for demonstration only. Hagie Manufacturing Company strongly urges the operator to keep all shields and safety devices in place at all times.



NOTICE

Reference to right and left-hand used throughout this manual refers to the position when seated in the operator's seat facing forward.

This manual will aid you in the proper operation and service of your Nitrogen Toolbar (NTB). It is the responsibility of the user to read the operator's manual and comply with the correct and safe operating procedures, as well as maintain the product according to the service information provided in the *Maintenance and Storage* section elsewhere in this manual.

Photographs and illustrations used in this manual are of general nature only. Some of the equipment described and/or shown may or may not be available on your NTB.

Information described in this manual was correct at the time of printing. Because of Hagie Manufacturing Company's continuous product improvement, certain information may not be included in this manual. To obtain the most current operator's manual for your attachment, please visit *www.hagiehelp.com*.

Keep this manual in a convenient place for easy reference, should problems arise. This manual is considered a permanent fixture of the product. In the event of resale, this manual should accompany the NTB.

If you do not understand any part of this manual or require additional information or service, contact Hagie Customer Support for assistance.

SAFETY MESSAGES USED IN THIS MANUAL

The following safety messages found throughout this manual alert you of situations that could be potentially dangerous to the operator, service personnel, or equipment.

🛦 DANGER

This symbol indicates a hazardous situation which, if not avoided, will result in serious injury or death.

WARNING

This symbol indicates a potentially hazardous situation, which if not avoided, could result in serious injury or death.

ACAUTION

This symbol indicates a potentially hazardous situation, which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

This symbol indicates operator awareness, which if not avoided, may result in personal or property damage.

NOTE: A "Note" is intended to make special mention of, or remark on.

SERVICE AND ASSISTANCE

For service and assistance, please contact:

Hagie Manufacturing Company 721 Central Avenue West P.O. Box 273 Clarion, IA 50525-0273 (515) 532-2861 OR (800) 247-4885 www.hagiehelp.com



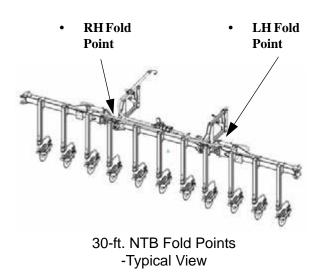
SPECIFICATIONS

Hagie Manufacturing Company offers it's Nitrogen Toolbar (NTB) in 12-row, 16-row, 18-skip row, 24-skip row, and 36-skip row configurations, depending on model. The 6-ft. (182 cm) clearance allows growers to side-dress nitrogen later in the growing season, in some situations, after tassels have topped.

NTB units are set for 30" (76 cm) rows, but some can accommodate 20, 22, or 36-inch (50, 55, or 91 cm) rows. They are capable of applying 80 to 100 lbs. (36 to 45 kg) of nitrogen at 14 to 16 mph (22 to 25 km/h), which is approximately twice the speed of tractor-pulled units.

Specification	12-Row NTB	16-Row NTB	18-Row NTB	24-Row NTB	36-Row NTB (60-ft. only)
Skip Row	N/A	N/A	Х	Х	Х
Standard Coulter Row Units	11	15	9	12	N/A
Electro-Hydraulic Fold/Lift/ Level	Х	Х	Х	Х	Х
100 PSI (6.9 bar) Glycerin- Filled Pressure Gauge	Х	Х	Х	Х	Х
Solution Control Valves	3	3	3	 3 (40' NTB) 5 (60' NTB) 	5

Fold Points (30-ft. NTB)

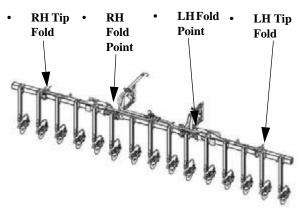




30-ft. NTB Fold Points (Folded position shown) -Typical View



Fold Points (40-ft. NTB)

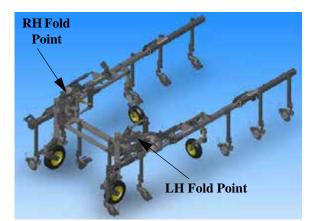


40-ft. NTB Fold Points -Typical View



40-ft. NTB Fold Points (Folded position shown) -Typical View

Fold Points (60-ft. NTB)



60-ft. NTB Fold Points (Folded position shown) -Typical View



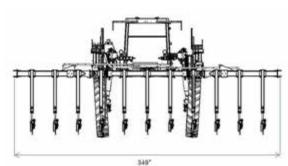
60-ft. NTB Folding Mechanism (Complete fold position) * Right-hand side shown



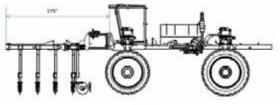
NTB Transport Dimensions

40-ft. NTB Dimensions

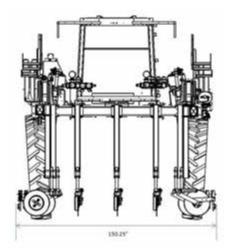
30-ft. NTB Dimensions



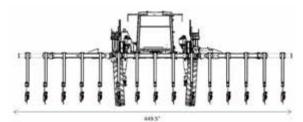
30' NTB (Complete unfolded width) * 349" (886.5 cm)



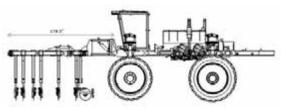
30'NTB (Length - front of machine to front of folded NTB) * 175" (444.5 cm)



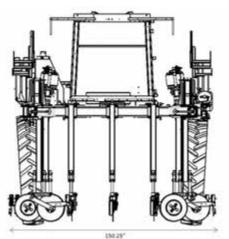
30' NTB (Complete folded width) * 150.25" (381.6 cm)



40' NTB (Complete unfolded width) * 449.5" (11.4 m)



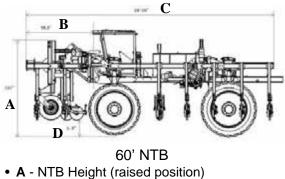
40'NTB (Length - front of machine to front of folded NTB) * 178.3" (452.9 cm)



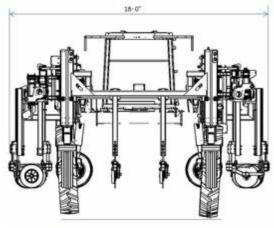
40' NTB (Complete folded width) * 150.25" (381.6 cm)



60-ft. NTB Dimensions

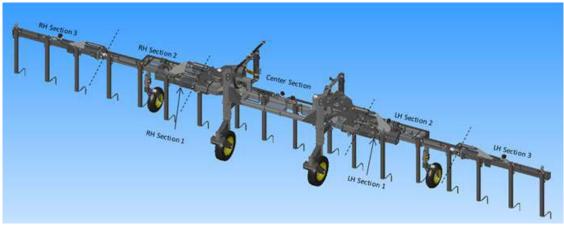


- = 137" (348 cm)
- **B** Length (front of cab to front of folded NTB) = 98.3" (249.7 cm)
- **C** Length (overall NTB) = 29'-10" (909.3 cm)
- **D** Height (bottom of raised coulter to ground) = 1', 9" (53.3 cm)



60' NTB (Complete folded width) * 18' (216"/548.6 cm)

The following illustration defines the 60-ft. NTB design and will help in identifying terminology used throughout this manual.



60' NTB Layout



2014 PRODUCT WARRANTY

Hagie Manufacturing Company Product Warranty

Hagie Manufacturing Company warrants each new Hagie product to be free under normal use and service from defects in workmanship and materials for a period of lesser of: two (2) years or 1000 hours from the date of delivery on all Agricultural Products. Hagie Manufacturing Company makes this warranty from the original delivery date and is transferable to a purchaser from the original purchaser of this equipment, given there is remaining time left under the year and hour warranty standard stated above. This warranty shall be fulfilled by repairing or replacing free of charge any part that shows evidence of defect or improper workmanship, provided the part is returned to Hagie Manufacturing Company within thirty (30) days of the date that such defect or improper workmanship is discovered, or should have been discovered. Labor to repair said items will be covered by standard labor time rates. Freight charges of defective parts are not covered by this warranty and are the responsibility of the purchaser. No other express warranty is given and no affirmation of Hagie Manufacturing Company, by words or action, shall constitute a warranty.

Hagie Manufacturing Company limits its warranty to only those products manufactured by Hagie Manufacturing Company and does not warrant any part or component not manufactured by Hagie Manufacturing Company, such as parts or components being subject to their manufacturer's warranties, if any. Excluded from this warranty are parts subjected to accident, alteration, or negligent use or repair. This warranty does not cover normal maintenance such as engine tune ups, adjustments, inspections, nor any consumables such as tires, rubber products, solution system valves, wear parts, wiper blades, etc.

Hagie Manufacturing Company shall not be responsible for repairs or replacements which are necessitated, in whole or in part; by the use of parts not manufactured by or obtainable from Hagie Manufacturing Company nor for service performed by someone other than Hagie authorized personnel, unless authorized by Hagie Manufacturing Company. Customer acknowledges that it is not relying on Hagie Manufacturing Company's skill or judgment to select finish goods for any purpose and that there are no warranties which are not contained in this agreement.

In no event shall Hagie Manufacturing Company's tort, contract, or warranty liability exceed the purchase price of the product. The foregoing limitation will not apply to claims for personal injury caused solely by Hagie Manufacturing Company's negligence.

Hagie Manufacturing Company shall not be liable for damages, including special, incidental or consequential damages or injuries (damage and repairs of equipment itself, loss of profits, rental or substitute equipment, loss of good will, etc.) arising out of or in connection with performance of the equipment or its use by customer, and Hagie Manufacturing Company shall not be liable for any special, incidental or consequential damages arising out of or in connection with Hagie Manufacturing Company's failure to perform its obligation hereunder. HAGIE MANUFACTURING COMPANY'S ENTIRE LIABILITY AND THE CUSTOMER'S EXCLUSIVE REMEDY SHALL BE REPAIR OR REPLACEMENT OF PARTS COVERED UNDER THIS WARRANTY. THIS WARRANTY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE IMPIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

SECTION 2 - SAFETY AND PRECAUTIONS

Most accidents occur as the result of failure to follow basic and fundamental safety rules and precautions. Recognizing potential safety hazards, following correct and safe operating procedures described in this manual, and complying with safety warnings located throughout the machine and attachment may reduce the risk of accidents.

There is no way to completely eliminate the potential for danger when operating agricultural equipment. Therefore, you must study this operator's manual and understand how to operate the attachment controls for safe operation before using the attachment. Likewise, never let anyone operate the attachment without proper instruction.

Do not operate the attachment for anything other than its intended use. Hagie Manufacturing Company shall not be liable for any damage, injury, or death associated with improper use of the attachment.

Do not make any modifications such as weldments, add-ons, adaptations, or changes from the original design of the attachment. Such modifications may become safety hazards to you and others and **will void all warranties**.

Replace missing, faded, or damaged safety signs. Refer to "Safety Decals" elsewhere in this section for correct sign and placement.

SAFETY PRECAUTIONS

General Safety

- The hydraulic and electrical control systems are optimized for use with this attachment. Any modification to these systems may lead to unintended or uncontrolled motion. Do NOT install add-on control systems that are not approved by Hagie Manufacturing Company.
- Some conditions cannot be completely safeguarded against without interfering with efficient operation of the machine and/or

reasonable accessibility. In these cases, decals have been installed to provide the operator with hazard information. Do NOT remove decals for any reason. If a decal is damaged or missing, contact the Hagie Customer Support Department for replacement.



Wear Protective Clothing

• Do not wear loose fitting clothing that could get caught in moving parts. Wear safety equipment that is appropriate for the job.



• Do not store chemical-soaked clothes in the cab. Clean off as much mud and dirt from your shoes as you can before entering the cab.

Be Prepared

- Be prepared for an emergency. Keep a fire extinguisher handy. Keep a first aid kit and clean water in the cab.
- Make sure to service the fire extinguisher regularly. Keep an accurate inventory of supplies in the first aid kit and dispose of anything that has expired.

SECTION 2 -SAFETY AND PRECAUTIONS



General Repair/Maintenance Safety

- Turn off sprayer engine before checking, adjusting, repairing, lubricating, or cleaning any part of the attachment.
- Disconnect the battery ground cable and turn the Battery Disconnect Switch OFF before servicing the electrical system or welding on an attachment.



Safe Hydraulic Maintenance

• Always practice personal safety when performing service or maintenance on the hydraulic system.



- Use caution when working around hydraulic fluid under pressure. Escaping fluid can have sufficient force to penetrate your skin, causing serious injury. This fluid may also be hot enough to burn.
- Always lower the load or relieve pressure before repairing a hydraulic leak.
- Avoid torching, welding, and soldering near pressurized hydraulic lines. Pressurized lines may accidentally burst when

heat goes beyond the immediate flame area.



Oil-Over-Air Scenarios

• Upon initial startup of the NTB, be ready for possible rapid movement, should some air become trapped in the cylinders.

DO NOT ALLOW PEOPLE TO STAND IN LOCATIONS WHERE THE NTB COULD STRIKE THEM!



- Open and close right and left toolbars two (2) times, simultaneously to force out any air in the system.
- Operate all attachment functions (i.e. main lift, main fold, up/down movement of outer sections, outer folds, and left and right-hand wings) two (2) times simultaneously to force out any air in the system.

Handle Agricultural Chemicals Safely

Agricultural chemicals used in applications can be harmful to your health and the environment if not used carefully.

- Always follow the manufacturer's label for directions of use.
- Never allow chemicals to come in contact with your skin or eyes. Always use the proper Personal Protective Equipment (PPE).





- Never pour chemicals into an empty tank. Always fill tank half full of water first.
- Dispose of empty chemical containers properly.



- Wash spilled chemicals or residue away to prevent corrosion and deterioration.
- Select safe areas to fill, flush, calibrate, and clean sprayer where chemicals will not run off to contaminate people, animals, vegetation, or water supply.
- Never place a spray nozzle to your lips in an attempt to unclog it.
- Do not spray when wind is in excess of chemical manufacturer's recommendation.
- Store chemicals in their original containers with the label intact.
- Store chemicals in a separate, locked building.
- Wear protective equipment as recommended by the chemical manufacturer.

SAFETY DECALS

Decals warning you of avoidable danger are located on various parts of the attachment. They are there for your personal safety and protection. DO NOT remove them. They will fracture upon attempted removal and therefore, must be replaced.

Following are locations of important safety decals. Replace them if they are damaged or missing. All safety decals, instructional decals, or machine striping may be purchased through the Hagie Customer Support Department.

To replace safety decals, ensure the installation area is clean and dry and decide on exact position before you remove the backing paper.

Safety Decal Locations

30' NTB

650137

(Located to the right of the electrical box cover)



650219

(Located on each lower lift arm weld)



650201 (Located on each outrigger)



650204

(Located between center tool bar and articulator)



SECTION 2 -SAFETY AND PRECAUTIONS



650339

(Located on left and right front crossmember near hydraulic manifolds)



40' NTB

650137

(Located to the right of the electrical box cover)



650219 (Located on each lower lift arm weld)



650201

(Located on each outer arm)



650204

(Located between center tool bar and articulator; Located between outrigger and outer arm)



650339

(Located on left and right front crossmember near hydraulic manifolds)

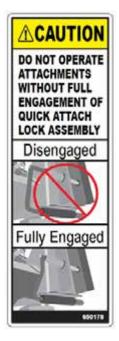






60' NTB

650178 (Located near Quick-Attach system)



650201

(Located on Sections 1, 2, and 3; Located on Section 1 articulator)



650204

Section 1

• Located on Section 1 tubes, locks, and fold joint

Section 2

- Located between Section 2 articulator and center section.
- Located between Section 2 rear tube.
- Section 2 fold joint.



650208 (Located on Section 3)



650339

(Located on left and right front crossmember near hydraulic manifolds)





650447

(Located to the right of the electrical box cover)





MACHINE DISPLAY WARNING MESSAGES - 60' NTB

When operating machine functions, such as Tread Adjustment, All-Wheel Steer (AWS), and Float operation, various warning and confirmation messages will appear on your Machine Display to avoid property damage.

NOTE: These warning and confirmation messages will reset and the operator must acknowledge these messages again any time the NTB is installed and the Left or Right Boom Switches (located on the Hydrostatic Drive Control Handle) are pressed in the "Fold-In" position, the machine's drive state is changed from Road to Field Mode, the AWS or Float Buttons (located on the Machine Display) are pressed, or each time the ignition key is cycled.

Tread Width Adjustment

-If Equipped

When any of the Tread Width Adjustment Buttons (located on the Machine Display Auxiliary Controls Page) are pressed, a warning message will appear stating that before Tread Width Adjustment will be enabled, ensure the NTB is in the UNFOLDED position.

• Press ACKNOWLEDGE to accept.



Tread Width Adjustment Warning Message

After the first warning message has been acknowledged, a second confirmation message will appear, which is an assurance confirming that the NTB is unfolded and you want to proceed.

- Press ACKNOWLEDGE to accept.
- *NOTE: If you run the wheels into the bar after you have pressed "Acknowledge" on the confirmation message, the warranty will be voided.*



Tread Width Adjustment Confirmation Message

Refer to your machine operator's manual for further information on Tread Width Adjustment.

All-Wheel Steer (AWS)

-If Equipped

When the AWS Button (located on the Machine Display Home Page - Field Mode) is pressed, a warning message will appear stating that before AWS will be enabled, ensure the NTB is in the UNFOLDED position.

• Press ACKNOWLEDGE to accept.





AWS Warning Message

After the first warning message has been acknowledged, a second confirmation message will appear, which is an assurance confirming that the NTB is unfolded and you want to proceed.

• Press ACKNOWLEDGE to accept.

NOTE: If you run the wheels into the bar after you have pressed "Acknowledge" on the confirmation message, the warranty will be voided.



AWS Confirmation Message

Refer to your machine operator's manual for further information on AWS.

Float Operation

When the Float Button (located on the Machine Display Auxiliary Controls Page) is pressed, a warning message (cradle hazard) will appear stating that before Float will be enabled, ensure the NTB is in the UNFOLDED position. • Press ACKNOWLEDGE to accept.



Float Warning Message

Refer to "Float Operation - 60' NTB" elsewhere in this manual for further information.

UNFOLD/FOLD PROCEDURE - 30'/40' NTB

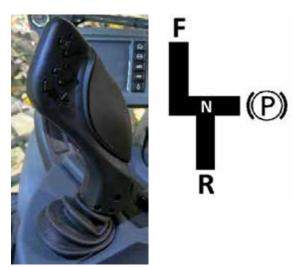
🛦 WARNING

Before proceeding, check the area around the machine for bystanders, overhead objects, and power lines. Failure to comply may result in serious injury or death.

Unfold Nitrogen Toolbar (from storage position)

1. Ensure the Hydrostatic Drive Control Handle is in the NEUTRAL position.





Hydrostatic Drive Control Handle -Typical View

- 2. Press the Field/Road Button (located on the Machine Display - Home Page) and change the machine's drive state to FIELD mode.
- *NOTE: The selected drive state will illuminate.*



Field/Road Button (Located on the Machine Display - Home Page)

- NOTE: The machine's drive state cannot be changed unless the Hydrostatic Drive Control Handle is in the NEUTRAL position.
- 3. Raise NTB up off ground.
- Press and hold the Transom Switch (located on the Hydrostatic Drive Control Handle) in the UP position to raise the entire lift.



Transom Switch - UP (Located on the Hydrostatic Drive Control Handle) -Typical View

NOTE: Ensure coulters clear the ground.

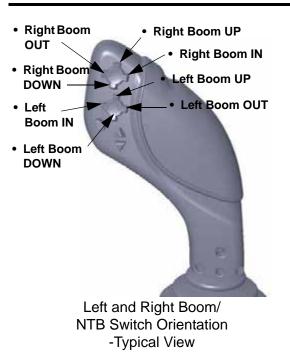
 Unfold the NTB by pressing and holding the corresponding Left and Right Boom/ NTB Switches (located on the Hydrostatic Drive Control Handle) in the OUT position.



Left and Right Boom/NTB Switches (Located on the Hydrostatic Drive Control Handle) -Typical View

SECTION 3 – OPERATING YOUR NTB





NTB Extension - Section 2 (40-ft. NTB only)

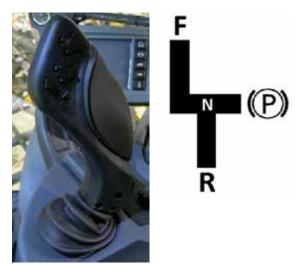
- 5. Unfold each Section 2 extension by pressing and holding the Boom/NTB Extension Switch (located on the side console) in the UP (Out) position.
- NOTE: Both left and right extensions will unfold when this switch is pressed.



Boom/NTB Extension Switch (Located on the side console) -Typical View

Fold Nitrogen Toolbar (to storage position)

1. Ensure the Hydrostatic Drive Control Handle is in the NEUTRAL position.



Hydrostatic Drive Control Handle -Typical View

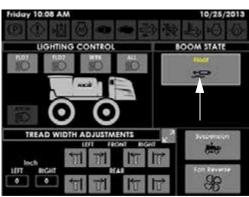
- 2. Ensure the machine's drive state is in FIELD mode on the Machine Display Home Page.
- NOTE: The selected drive state will illuminate.



Machine Display - Home Page (Field Mode)

- NOTE: The machine's drive state cannot be changed unless the Hydrostatic Drive Control Handle is in the NEUTRAL position.
- 3. Press the Float Button (located on the Machine Display Auxiliary Controls Page) and turn Float operation OFF.





Float Button (Located on the Machine Display -Auxiliary Controls Page)

- 4. Raise NTB up off ground.
- Press and hold the Transom Switch (located on the Hydrostatic Drive Control Handle) in the UP position to raise the entire lift.



Transom Switch - UP (Located on the Hydrostatic Drive Control Handle) -Typical View

NOTE: Ensure coulters clear the ground.

NTB Extension - Section 2 (40-ft. NTB only)

NOTICE

Fold each Section 2 extension IN before folding the tool bar arms in. Failure to comply will result in damage to the NTB during fold procedure.

- 5. Fold in each Section 2 extension by pressing and holding the Boom/NTB Extension Switch (located on the side console) in the DOWN (In) position.
- *NOTE:* Both left and right extensions will fold in when this switch is pressed.



Boom/NTB Extension Switch (Located on the side console) -Typical View

 Fold in the NTB by pressing and holding the corresponding Left and Right Boom/ NTB Switches (located on the Hydrostatic Drive Control Handle) in the IN position.





Left and Right Boom/NTB Switches (Located on the Hydrostatic Drive Control Handle) -Typical View

Right Boom UP
Right Boom UP
Right Boom IN
Right Boom UP
Left Boom UP
Left Boom IN
Left Boom DOWN
Left Boom DOWN
Left and Right Boom/

NTB Switch Orientation -Typical View

UNFOLD/FOLD PROCEDURE - 60' NTB

A WARNING

Before proceeding, check the area around the machine for bystanders, overhead objects, and power lines. Failure to comply may result in serious injury or death.

NOTE: Refer to the "60' NTB Layout" illustration provided in Section 1 -Introduction elsewhere in this manual to aid in identifying the various sections of the NTB.

Unfold Nitrogen Toolbar (from storage position)

1. Ensure the Hydrostatic Drive Control Handle is in the NEUTRAL position.





Hydrostatic Drive Control Handle -Typical View

- 2. Press the Field/Road Button (located on the Machine Display - Home Page) and change the machine's drive state to ROAD mode.
- NOTE: The selected drive state will illuminate.





Field/Road Button (Located on the Machine Display - Home Page)

- NOTE: The machine's drive state cannot be changed unless the Hydrostatic Drive Control Handle is in the NEUTRAL position.
- Press and hold the Gauge Wheel Switch (located on the side console) in the DOWN position to lower the gauge wheels.
- NOTE: The Gauge Wheel Switch operates two separate functions. In Road Mode, the switch activates the gauge wheels. In Field Mode, the switch activates the lock assembly.



Gauge Wheel Switch (Located on the side console) -Typical View



Gauge Wheel (One located on each side of NTB) -Typical View

- 4. Press the Field/Road Button (located on the Machine Display - Home Page) and change the machine's drive state to FIELD mode.
- *NOTE: The selected drive state will illuminate.*



Field/Road Button (Located on the Machine Display - Home Page)

- NOTE: The machine's drive state cannot be changed unless the Hydrostatic Drive Control Handle is in the NEUTRAL position.
- 5. Raise the NTB out of cradles by pressing and holding the corresponding Left and Right Boom/NTB Switches (located on

SECTION 3 -OPERATING YOUR NTB

the Hydrostatic Drive Control Handle) in the UP position.



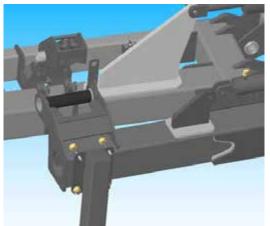
Left and Right Boom/NTB Switches (Located on the Hydrostatic Drive Control Handle) -Typical View

- Right Boom OUT
 Right Boom DOWN
 Left Boom IN
 Left Boom IN
 Left Boom OUT
 Left Boom DOWN
 Left and Right Boom/ NTB Switch Orientation -Typical View
- 6. Unfold the NTB by pressing and holding the corresponding Left and Right Boom/ NTB Switches in the OUT position.

- NOTE: When each outer Section 3 attachment is nearing the fully unfolded position, ensure that Section 1 does not interfere with the lock assembly (located on Section 2).
- 7. Lower each Section 1 attachment into the Lock Assembly Receptacle by pressing and holding the corresponding Left or Right Section 1 Raise/Lower Switch (located on the side console) in the DOWN position.



Section 1 Raise/Lower Switches (Located on the side console) -Typical View



Lower each Section 1 attachment into Lock Assembly Receptacle

8. Engage the Lock Assembly by pressing the Lock Assembly Switch (located on the side console) in the DOWN (Lock) position.

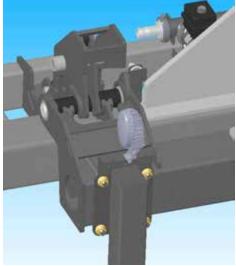


SECTION 3 -OPERATING YOUR NTB

NOTE: The Lock Assembly Switch operates two separate functions. In Road Mode, the switch activates the gauge wheels. In Field Mode, the switch activates the lock assembly.



Lock Assembly Switch (Located on the side console) -Typical View



Lock Assembly Engagement

Fold Nitrogen Toolbar (to storage position)

1. Ensure the Hydrostatic Drive Control Handle is in the NEUTRAL position.





Hydrostatic Drive Control Handle -Typical View

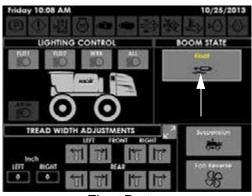
- 2. Press the Field/Road Button (located on the Machine Display - Home Page) and change the machine's drive state to FIELD mode.
- *NOTE: The selected drive state will illuminate.*



Field/Road Button (Located on the Machine Display - Home Page)

- NOTE: The machine's drive state cannot be changed unless the Hydrostatic Drive Control Handle is in the NEUTRAL position.
- 3. Press the Float Button (located on the Machine Display Auxiliary Controls Page) and turn Float operation OFF.





Float Button (Located on the Machine Display -Auxiliary Controls Page)

- 4. Raise the NTB up off ground.
- Press and hold the Transom Switch (located on the Hydrostatic Drive Control Handle) in the UP position to raise the entire lift.
- *NOTE: Continue to raise lift until it comes to a complete stop.*



Transom Switch - UP (Located on the Hydrostatic Drive Control Handle) -Typical View

5. Press and hold the corresponding Left or Right Section 3 Raise/Lower Switch (located on the side console) UP or DOWN to ensure each Section 3 attachment is level with the rest of the bar (as shown in the following illustration).



Section 3 Raise/Lower Switches (Located on the side console) -Typical View



 Disengage the Lock Assembly by pressing and holding the Lock Assembly Switch (located on the side console) in the UP (Unlock) position.



Lock Assembly Switch (Located on the side console) -Typical View





Lock Assembly "Engaged/Locked" Position Shown

Lock Assembly "Disengaged/Unlocked" Position Shown

- 7. Press and hold the corresponding Left and Right Section 1 Raise/Lower Switch to raise each Section 1 attachment out of the Lock Assembly Receptacle.
- NOTE: Take caution when raising each Section 1 out of the Lock Assembly Receptacle. Raising the section too high may interfere or catch with the Lock Assembly.



Section 1 Raise/Lower Switches (Located on the side console) -Typical View

NOTE: Before proceeding to fold the NTB, ensure each Section 2 attachment is level with each Section 1 attachment. Refer to the following illustration.



-Typical View

 Fold in the NTB by pressing and holding the corresponding Left and Right Boom/ NTB Switches (located on the Hydrostatic Drive Control Handle) in the IN position.



Left and Right Boom/NTB Switches (Located on the Hydrostatic Drive Control Handle) -Typical View

- Right Boom
 Right Boom UP
 Right Boom IN
 Right Boom
 Left Boom UP
- Left Boom OUT
 Boom IN
- Left Boom
 DOWN

Left and Right Boom/ NTB Switch Orientation -Typical View

9. Guide the NTB into cradles using the corresponding Left and Right Boom/ NTB Switches.

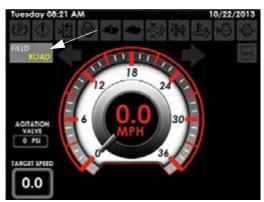
SECTION 3 -OPERATING YOUR NTB

- NOTE: While viewing cradle in mirror, ease attachment into cradle by "tapping" the Left or Right Boom/NTB Switch one side at a time.
- Once NTB makes contact with each cradle backstop, lower into position by pressing the corresponding Left and Right Boom/NTB Switches in the DOWN position.



NTB Seated in Cradle -Typical View

- 11. Press the Field/Road Button (located on the Machine Display - Home Page) and change the machine's drive state to ROAD mode.
- NOTE: The selected drive state will illuminate.



Field/Road Button (Located on the Machine Display - Home Page)

NOTE: The machine's drive state cannot be changed unless the Hydrostatic Drive Control Handle is in the NEUTRAL position.

- 12. Press and hold the Gauge Wheel Switch (located on the side console) in the UP position to raise the gauge wheels.
- NOTE: The Gauge Wheel Switch operates two separate functions. In Road Mode, the switch activates the gauge wheels. In Field Mode, the switch activates the lock assembly.



Gauge Wheel Switch (Located on the side console) -Typical View



Gauge Wheel (One located on each side of NTB) -Typical View

NOTE: Ensure the gauge wheels are straight and do not come in contact with the coulters.





FLOAT OPERATION - 30'/40' NTB

NOTICE

Ensure Float operation is enabled when operating the NTB. Failure to comply may result in property damage.

Float operation allows the NTB to raise up and down while riding through the field to avoid machine damage due to uneven ground.

Float operation may be activated using various methods. In all options, Float must be enabled through the Machine Display and the machine must be in Field Mode.

Master Spray Switch

(Default Setting)

The Master Spray Switch (located on the back side of the Hydrostatic Drive Control Handle) controls both the solution pump and the Float "Down" functions when Float is enabled.

- 1. Press the Field/Road Button (located on the Machine Display - Home Page) and change the machine's drive state to FIELD mode.
- NOTE: The selected drive state will illuminate.



Field/Road Button (Located on the Machine Display - Home Page)

- NOTE: The machine's drive state cannot be changed unless the Hydrostatic Drive Control Handle is in the NEUTRAL position.
- 2. Press the Float Button (located on the Machine Display Auxiliary Controls Page) to enable Float operation.



Float Button (Located on the Machine Display -Auxiliary Controls Page)

3. Float will now be activated when the Master Spray Switch is pressed.

SECTION 3 -OPERATING YOUR NTB





Master Spray Switch (Located on the back side of the Hydrostatic Drive Control Handle) -Typical View

Set Float to Transom Switch

The Set Float to Transom Switch feature allows the operator to activate Float with the Transom "Down" Switch (located on the Hydrostatic Drive Control Handle).

1. Press and hold the Transom Switch (located on the Hydrostatic Drive Control Handle) in the UP position to raise the mid and outer NTB sections to desired height.



Transom Switch - UP (Located on the Hydrostatic Drive Control Handle) -Typical View

2. Press the NTB Setup Button (located on the Machine Display - Settings Page).



NTB Setup Button (Located on the Machine Display -Settings Page)

3. On the "NTB Adjustments" screen, press EDIT (next to Float With Transom Down).





NT8 Adjus	ومحمد ومحمد ومرافع فيتحدث والمتح	and the local data
NIB Ovenide Timer	3500 ms	Edil
Float With Transom Down	Tes	Edit
One Top Transom Up	Yes	Edit
One Top Transom Up	Tes	Eal

NTB Adjustments Screen

- 4. Press YES to operate Float with the Transom Down Switch, then press OK.
- NOTE: Press NO to set Float back to operating with the Master Spray Switch.
- 5. Press OK.
- 6. Float will now be activated when the Transom "Down" Switch is pressed.

Transom Switch (Up/Down)

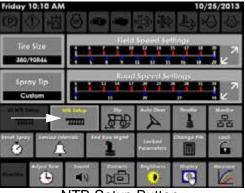
(Default Setting)

To raise or lower the entire lift, the Transom Switch (located on the Hydrostatic Drive Control Handle) must be held in the UP or DOWN positions until desired height is reached.

One Tap Transom

The One Tap Transom feature allows the operator to fully raise the transom by pressing the Transom Switch (located on the Hydrostatic Drive Control Handle) UP once, to raise the entire lift.

1. Press the NTB Setup Button (located on the Machine Display - Settings Page).



NTB Setup Button (Located on the Machine Display -Settings Page)

2. On the "NTB Adjustments" screen, press EDIT (next to One Tap Transom Up).



NTB Adjustments Screen

- 3. Press YES to raise entire lift with one tap of the Transom Up Switch, then press OK.
- NOTE: Press NO to require the Transom Up Switch to be held the entire time that the cylinders are raising the transom.
- 4. Press OK.

NTB Override Timer

The override timer controls how long the outer sections raise with the transom during Float operation.

1. Press the NTB Setup Button (located on the Machine Display - Settings Page).





NTB Setup Button (Located on the Machine Display -Settings Page)

2. On the "NTB Adjustments" screen, press EDIT (next to NTB Override Timer).



NTB Adjustments Screen

- 3. Enter desired value (ranging from 100 to 10,000 milliseconds), then press OK.
- 4. Press OK.

FLOAT OPERATION - 60'

NOTICE

Ensure Float operation is enabled when operating the NTB. Failure to comply may result in property damage. Float operation allows the NTB to raise up and down while riding through the field to avoid machine damage due to uneven ground.

Float operation may be activated using various methods. In all options, Float must be enabled through the Machine Display and the machine must be in Field Mode.

Master Spray Switch

The Master Spray Switch (located on the back side of the Hydrostatic Drive Control Handle) controls both the solution pump and the Float "Down" functions when Float is activated.

- 1. Press the Field/Road Button (located on the Machine Display - Home Page) and change the machine's drive state to FIELD mode.
- NOTE: The selected drive state will illuminate.



Field/Road Button (Located on the Machine Display - Home Page)

- NOTE: The machine's drive state cannot be changed unless the Hydrostatic Drive Control Handle is in the NEUTRAL position.
- 2. Press the Float Button (located on the Machine Display Auxiliary Controls Page) to enable Float operation.





Float Button (Located on the Machine Display -Auxiliary Controls Page)

When Float operation is enabled, a warning message (cradle hazard) will appear stating that before Float will be activated, ensure the NTB is in the UNFOLDED position.

• Press ACKNOWLEDGE to accept.

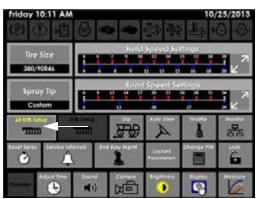


Float Warning Message

Float Adjust

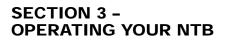
In an effort to help make your 60-ft. NTB ride through the field and apply as desired, Hagie Manufacturing Company has designed each up and down function on the tool bar adjustable, due to varying ground conditions and personal preference from one operator to the next. The operator may choose the desired maximum value (through the Machine Display) for the Main Lift, Left/Right Section 2, and Left/Right Section 3 to obtain desired field depth. These adjustments will allow each bar to run slightly different and allow the operator to choose the depth in which the NTB will ride in Float mode. An example of when this may be desired is if the bar is not engaging the ground at the desired depth, but only occurring on the outer sections. The operator can then choose to add down pressure via the hydraulic cylinders that control those sections by changing parameters through the Machine Display.

1. Press the 60' NTB Setup Button (located on the Machine Display - Settings Page).



60' NTB Setup Button (Located on the Machine Display -Settings Page)

- 2. On the "60' NTB Adjustments" screen, press EDIT (next to desired setting):
- Main Lift Maximum
- Left Section 3 Maximum
- Left Section 2 Maximum
- Right Section 3 Maximum
- Right Section 2 Maximum





60' NTB Adjustments Screen

- NOTE: Refer to the "60' NTB Layout" illustration provided in Section 1 -Introduction elsewhere in this manual to aid in identifying the various sections of the NTB.
- 3. Enter desired value (ranging from -1200 to 1200 milli-amps), then press OK.
- NOTE: The lower the value, the further the NTB section will push into the ground. The higher the value, the higher the NTB section will raise out of the ground.
- 4. Press OK.

Forced Float Operation

If the NTB will not enter a Float state, there may be a sensor malfunction. Therefore, Float operation may be forced for field operation.

1. Press the 60' NTB Setup Button (located on the Machine Display - Settings Page).



60' NTB Setup Button (Located on the Machine Display -Settings Page)

2. On the "60' NTB Adjustments" screen, press EDIT (next to Section 1 Force Float).

60 NTB Adj	ustments	
Main Lift Maximum	1200 mA	Edil
Left Section 3 Maximum	500 mA	Edil
Left Section 2 Maximum	500 mA	Edit
Right Section 3 Maximum	500 mA	Edil
Right Section 2 Maximum	500 mA	Edil
Section 1 Force Float	No	Edil

60' NTB Adjustments Screen

- 3. Press YES to enable Section 1 Force Float, then press OK.
- 4. Press OK.
- NOTE: Change Section 1 Force Float to NO for road transportation and to avoid unwanted tool bar movement.

AT 3

APPLICATION

NOTICE

Never attempt to operate the spray system without solution in the tank. Failure to comply will cause severe equipment damage and will void the warranty.

The solution system is a constantly monitored, continuously adjusted computercontrolled system. The cab-mounted digital spray system console receives information from various inputs to help determine gallons per minute (GPM)/liters per minute (l/min) and gallons per acre (GPA)/liters per hectare (l/ha).

NOTE: The spray system console must be programmed for NTB use before operating.

The following information refers to components of the solution system and is not intended to replace the manufacturer's operating instructions. Please read and understand the information provided in this manual, as well as your machine operator's manual and spray system console manufacturer's operation manual before operating.

Refer to the operator's manual of the machine being used to operate the NTB for information on the following:

- Solution System
- Rinse System
- Foam Marker System

NTB Application

- 1. Calibrate the Spray System Console (refer to the manufacturer's operation manual for calibration instructions).
- 2. Ensure there is adequate amount of solution in the tank.
- 3. Engage the parking brake.

- 4. Start the engine.
- 5. Press the Field/Road Button (located on the Machine Display - Home Page) and change the machine's drive state to FIELD.
- NOTE: The drive state of the machine cannot be changed unless the Hydrostatic Drive Control Handle is in the NEUTRAL position.



Field/Road Button (Located on the Machine Display -Home Page)

NOTE: The selected drive state will illuminate.

6. Press the Solution Pump Switch (located on the side console) in the UP (On) position.

NOTICE

Do not allow the Solution Pump to run continuously while the Boom Solution Valve Switches are off. Failure to comply will generate overheating, causing severe pump damage and will void the warranty.

SECTION 3 -OPERATING YOUR NTB





Solution Pump Switch (Located on the side console) -Typical View

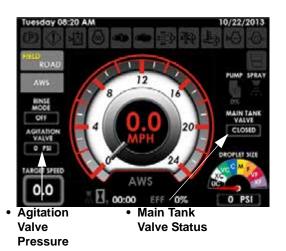
7. Press the Main Tank Valve Switch (located on the side console) in the UP (Open) position.

If desired, activate the Agitation Valve Switch (located on the side console). Press and hold switch UP to increase flow, or DOWN to decrease flow.



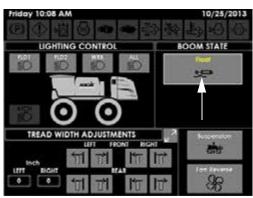
Main Tank and Agitation Valve Switches (Located on the side console) -Typical View

NOTE: Main Tank Valve status (OPEN or CLOSED) and Agitation Valve pressure are displayed on the Machine Display - Home Page (Field Mode). Agitation Valve pressure is also displayed when in Rode Mode.



Main Tank Valve Status and Agitation Valve Pressure Indicators (Located on the Machine Display Home Page - Field Mode)

8. Press the Float Button (located on the Machine Display - Auxiliary Controls Page) to enable Float operation.



Float Button (Located on the Machine Display -Auxiliary Controls Page)

9. Press the Master Spray Switch (located on the back side of the Hydrostatic Drive Control Handle) to the ON position.





Master Spray Switch (Located on the back side of the Hydrostatic Drive Control Handle)

NOTE: When the Master Spray Switch is ON, a Master Spray Indicator (located on the Machine Display Home Page - Field Mode) will illuminate.



Master Spray Indicator (Located on the Machine Display Home Page - Field Mode)

- 10. Press the individual Boom Solution Valve Switches (located on the side console) to the ON position.
- NOTE: Each Boom Solution Valve Switch is equipped with an indicator light and will illuminate when the corresponding Boom Solution Valve is OFF.



Boom Solution Valve Switches (Located on the side console) -Typical View

- NOTE: Number of sections available will depend on the number of section valves equipped on your NTB.
- 11. Slowly move the Hydrostatic Drive Control Handle forward to obtain desired ground speed.
- 12. Frequently observe the pressure gauge. If the pressure drops to zero or the spray pattern deteriorates, turn OFF the Master Spray, Solution Pump, Main Tank Valve, and Agitation Valve Switches until solution is refilled.



SECTION 4 – MAINTENANCE AND STORAGE

SERVICE - LUBRICATION

Perform grease point inspection/application as recommended in the following information. Apply grease (such as Mobilgrease XHP[™] 220-Series) as required.

NOTICE

Failure to properly lubricate pivot and friction points may result in unnecessary wear and damage.

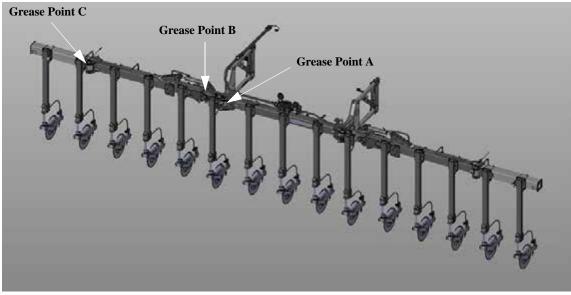
Grease Points (Zerks) - 30/40' NTB

Lubricate the following Grease Points weekly, or as needed.

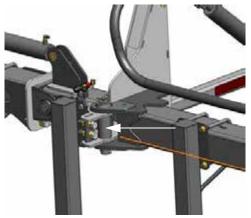


- **30' NTB**: Four (4) Grease Points (A and B) two (2) per side.
- 40' NTB: Six (6) Grease Points (A, B, and C) three (3) per side.





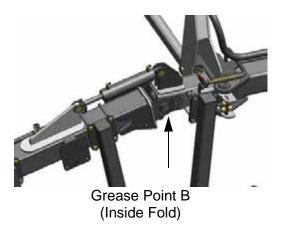
Grease Points (40-ft. NTB shown) -Typical View



Grease Point A (Main Toolbar Fold)



Grease Point C (Outer Fold) * 40-ft. NTB only



SECTION 4 – MAINTENANCE AND STORAGE



Grease Points (Zerks) - 60' NTB

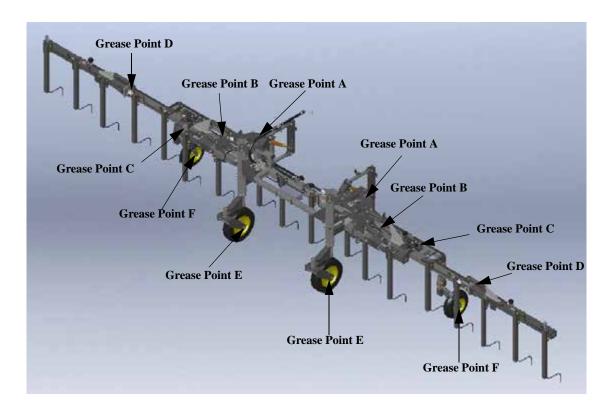
Lubricate the following Grease Points daily/weekly (as required), or as needed.



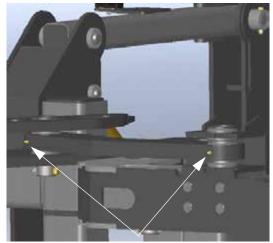


• 60' NTB: Twelve (12) Grease Points (A, B, C, D, E, and F) - six (6) per side.

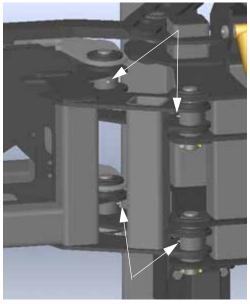
NOTE: Lubricate Grease Points A, B, C, and D weekly. Lubricate Grease Points E and F daily.



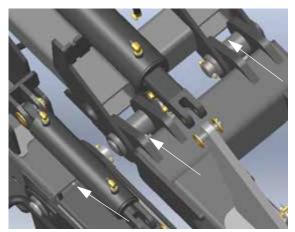




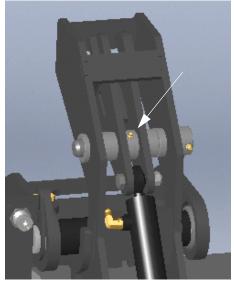
Grease Point A - View 1 (Left-hand side shown)



Grease Point A - View 2 (Left-hand side shown)

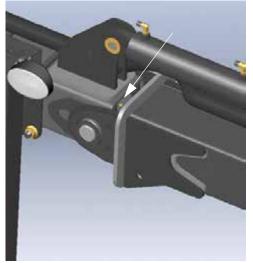


Grease Point B (Left-hand side shown)



Grease Point C (Left-hand side shown)

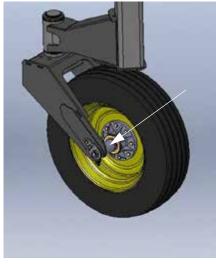
SECTION 4 – MAINTENANCE AND STORAGE



Grease Point D (Left-hand side shown)



Grease Point F (Left-hand side shown)



Grease Point E (Left-hand side shown)

STORAGE

Preparing For Storage

- 1. Perform daily and weekly lubrication and maintenance inspections, as required.
- 2. With the engine at normal operating temperature, cycle all the hydraulic functions.
- 3. Thoroughly rinse the spray system.

NOTE: Refer to your machine operator's manual for further information.

- 4. Thoroughly wash the attachment and touch up any chipped or damaged paint.
- 5. Replace any damaged or missing decals.

NOTE: Contact Hagie Customer Support for paint touch-up recommendations and decal replacement.

- 6. Apply multi-purpose grease to hydraulic cylinder rods.
- 7. Refer to the spray system console manufacturer's operation manual for detailed information on monitor and flow meter storage procedures.
- 8. If the Nitrogen Toolbar (NTB) attachment will be stored separately, ensure that all open ends (e.g. hydraulic, electri-





cal, solution, and foam marker, if equipped) are capped or covered with a suitable covering.

Winterization Procedure

To winterize the NTB, it is recommended that you use an environmentally safe type of antifreeze and water mixture that will give you adequate protection to -30° .

Drain any remaining solution in the system and rinse thoroughly. Run antifreeze mixture through the system until it comes out all attachment openings.

Removal From Storage

- 1. Remove any dried grease from the cylinder rods and re-apply, if necessary.
- 2. Thoroughly clean the NTB attachment.
- 3. Carefully unseal any openings that were sealed for storage.
- 4. Attach NTB to the sprayer and manually cycle the hydraulics two or three times to adequately lubricate components.

SECTION 5 - MISCELLANEOUS

TRANSPORTING

Driving Your Machine with an Attachment

When driving on a roadway or elsewhere, be aware of any situation where the machine will be traveling near an object with a clearance less than the transporting height and width of the overall machine and attachment.

Refer to "Specifications" provided in the *Introduction Section* elsewhere in this manual for dimensions on your model.

- Never operate the sprayer on a public roadway with solution in the tank.
- Never load or unload the sprayer with solution in the tank.
- Stopping the sprayer on trailer ramps may result in the sprayer to tip over.

ACAUTION

Ensure there is adequate clearance when transporting the sprayer near an object with clearance less than the transporting height and width of the overall machine and NTB attachment.

ACAUTION

Do not transport the machine without the 60-ft. NTB folded and in cradle. Failure to comply may result in injury or equipment damage.

ACAUTION

Hagie Manufacturing Company does not recommend any form of transportation other than driving the sprayer. Loading the sprayer onto a trailer may result in sprayer rollover.

ACAUTION

DO NOT operate the machine at speeds exceeding 20 mph (32 km/h) with solution in the tank. Operating speeds exceeding 20 mph (32 km/h) with a fully loaded tank may result in tire blow-out or wheel hub damage and will void the warranty.

QUICK-TACH SYSTEM

Connecting the NTB

When connecting or disconnecting the attachment, observe the following safety precautions:

- Monitor both sides of the attachment during fold procedure.
- Select a safe area before unfolding/folding the attachment.
- Clear area of personnel.
- Check for overhead obstructions.
- Do not unfold or fold attachment near power lines. Contact with power lines can result in serious injury or death.



WARNING

Turn the engine OFF before connecting/ disconnecting any hoses or electrical lines. Failure to comply may result in serious injury or death.

- 1. Square up to the NTB attachment.
- 2. Disengage the Quick-Tach Lock Assemblies by pulling the Lock Pin (located on the front left and right-hand side of machine) OUT as far as it will go until it is in the "lock-out" position.
- *NOTE: "Lock-out" position prevents relocking while attaching or detaching the NTB.*



Lock Pin (Located on the front left and right-hand side of machine) -Typical View * *Disengaged position shown*

- Lower the machine by pressing the Suspension Button (located on the Machine Display Auxiliary Controls Page) to the ON (Deflate) position.
- NOTE: Ensure the Air Suspension Pilot Valve (located near the air tank beneath machine) is ENABLED.

Refer to "Air Suspension Exhaust" provided in your machine operator's manual for further information.



Suspension Button (Located on the Machine Display -Auxiliary Controls Page)

NOTE: When the Suspension Button is pressed, a warning message will appear, alerting you that activating the Air Bags will change suspension height. Press OK to acknowledge. After you have acknowledged the suspension height warning, the Air Bags will deflate and the Suspension Button will illuminate.



Suspension Warning

- 4. Slowly pull machine into NTB attachment.
- 5. Ensure the Attachment Hooks are high enough to clear the Mounting Pins.

SECTION 5 -MISCELLANEOUS





Attachment Clearing Mounting Pin -Typical View

- 6. Raise the machine by pressing the Suspension Button to the OFF (Inflate) position.
- 7. Engage the parking brake.
- 8. Turn the engine OFF before connecting any hoses or electrical lines.
- 9. Connect all Solution, Foam Marker (if equipped), Hydraulic and Electrical lines.

Solution Connection



Solution Connection (Located on front right-hand side of machine) -Typical View

Foam Marker Connection -If Equipped

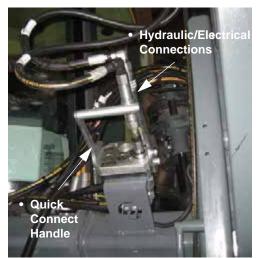


Foam Marker Connection (Located on front right-hand side of machine) -Typical View

Hydraulic and Electrical Connections (Quick Connect Multi-Coupler)

- Install the Hydraulic/Electrical Connections (located on the left-hand side of attachment) into the Multi-Coupler Receptacle (located on front left-hand side of machine), ensuring full engagement.
- Push the Quick Connect Handle (located on the Hydraulic/Electric Multi-Coupler Assembly) UP to engage hydraulic/electrical connections.





Hydraulic/Electric Multi-Coupler Assembly (Located on front left-hand side of machine) -Typical View

- 10. Start the engine.
- 11. Raise the NTB attachment until the Attachment Hooks fully engage.
- NOTE: Raising the attachment will allow the weight of the NTB to pull the Attachment Hooks over the Mounting Pins. You will notice a change of weight as the machine begins to support the attachment.



-Typical View

12. Engage the Quick-Tach Lock Assemblies by pushing the Lock Pins IN, ensuring full engagement.





Lock Pin -Typical View * *Engaged position shown*

Disconnecting the NTB

Turn the engine OFF before connecting/ disconnecting any hoses or electrical lines. Failure to comply may result in serious injury or death.



A WARNING

Ensure NTB attachment is in the fully FOLDED position before detaching from machine. Failure to comply may result in serious injury or death and will result in property damage.

Before disconnecting the NTB, determine a proper storage location. When choosing a place to store the attachment, there are three important things to keep in mind:

Is the ground level?

The ground must be level to help prevent the attachment from falling over. Level ground will also minimize stress on the frame of the attachment while in storage and ease of attachment hook-up.

Is there enough space?

The NTB must be folded for it to stand properly. Be aware of the room that is needed for the attachment and adequate space to travel around it safely.

Is it accessible?

The NTB must to be positioned so you can connect the attachment easily. If temporarily storing the attachment on a soft surface (such as grass), it is recommended to put blocks or wood beneath the coulters to prevent the attachment from sinking into the ground.

- NOTE: It is NOT recommended to store the NTB attachment on a soft surface for an extended period of time, due to the risk of settling soil, even when blocks or wood are used.
- 1. Lower the NTB attachment down to level storage location.

NOTICE

Lower NTB to the ground before disengaging the Quick-Tach Lock Assemblies.

- 2. Disengage the Quick-Tach Lock Assemblies by pulling the Lock Pin (located on the front left and right-hand side of machine) OUT as far as it will go until it is in the "lock-out" position.
- NOTE: "Lock-out" position prevents relocking while attaching or detaching the NTB.



Lock Pin (Located on the front left and right-hand side of machine) -Typical View

 Lower front of machine by pressing the Suspension Button (located on the Machine Display - Auxiliary Controls Page) in the ON (Deflate) position until the Attachment Hooks clear the Mounting Pins.





Suspension Button (Located on the Machine Display -Auxiliary Controls Page)

NOTE: When the Suspension Button is pressed, a warning message will appear, alerting you that activating the Air Bags will change suspension height. Press OK to acknowledge. After you have acknowledged the suspension height warning, the Air Bags will deflate and the Suspension Button will illuminate.



Suspension Warning



Attachment Clearing Mounting Pins -Typical View

4. Ensure the Boom Solution Valve Switches (located on the side console) are in the OFF position.



Boom Solution Valve Switches (Located on the side console) -Typical View

- 5. Engage the parking brake.
- 6. Turn the engine OFF before disconnecting any hoses or electrical lines.
- 7. Disconnect all Solution, Foam Marker (if equipped), Hydraulic, and Electrical lines, ensuring not to leave the ends in a place where they may become damaged or contaminated.

SECTION 5 -MISCELLANEOUS



Solution Connection



Solution Connection (Located on front right-hand side of machine) -Typical View

Foam Marker Connection

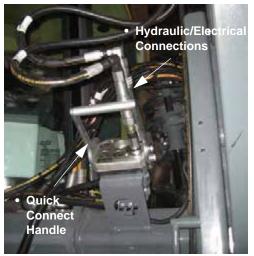


Foam Marker Connection (Located on front right-hand side of machine) -Typical View

Hydraulic and Electrical Connections (Quick Connect Multi-Coupler)

- Pull the Quick Connect Handle (located on the Hydraulic/Electric Multi-Coupler Assembly) DOWN to disengage hydraulic/electrical connections.
- Remove the Hydraulic/Electrical Connections from the Multi-Coupler Recep-

tacle (located on front left-hand side of machine).



Hydraulic/Electric Multi-Coupler Assembly (Located on front left-hand side of machine) -Typical View

- 8. If no other attachment is going to be installed, re-lock the Quick-Tach Lock Assemblies by pushing the Lock Pins IN.
- NOTE: Install provided covers/caps on disconnection points to avoid damage and contamination. If necessary, cover the opening with a plastic bag (secured with tape). Contact Hagie Customer Support for replacement covers.



Lock Pin -Typical View * *Engaged position shown*

SECTION 5 -MISCELLANEOUS



- 9. Start the engine.
- 10. Disengage the parking brake and slowly back away from the attachment.



-Typical View

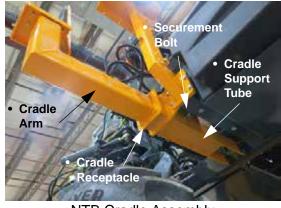
11. Raise the machine by pressing the Suspension Button to the OFF (Inflate) position.

CRADLE INSTALLATION - 60' NTB

NOTICE

Install cradles before operating the 60' NTB.

The 60-ft. NTB is equipped with separate cradles. These cradles are shipped loose and require installation before use of the NTB.



NTB Cradle Assembly -Typical View

To Install Cradle

NOTICE

Ensure securement bolt is properly installed before operating the NTB. Failure to comply may result in property damage.

1. Insert Cradle Arm into the Cradle Receptacle (located near the boom cradle on side of machine), as shown.



Cradle Receptacle (Located near boom cradle on side of machine) -Typical View

- 2. Align Cradle Support Tube hole opening with the Cradle Arm hole opening.
- NOTE: The Cradle Arm is equipped with two hole positions to allow you to install the cradle as desired.
- 3. Insert Securement Bolt through the aligned Cradle Support Tube and Cradle Arm hole openings.





Securement Bolt -Typical View

- 4. Insert Lock Pin into hole opening located on the opposite end of Securement Bolt.
- NOTE: Ensure the cable is attached to the Lock Pin before installing.



-Typical View

- 5. Perform Steps 1 through 4 on opposite side of machine to install second NTB Cradle.
- 6. Reverse steps to remove NTB Cradle from machine.



2014 Product Warranty	. 1-7
A Word From Hagie Manufacturing	
Company	. 1-1
About This Manual	.1-1
Application	3-19
Cradle Installation - 60' NTB	. 5-8
Float Operation - 30'/40' NTB	3-13
Float Operation - 60' NTB	3-16
Machine Display Warning Messages -	
60' NTB	. 3-1
Quick-Tach System	. 5-1
Safety Decals	
Safety Messages Used In This Manual	. 1-2
Safety Precautions	. 2-1
Service - Lubrication	.4-1
Service and Assistance	.1-2
Specifications	.1-3
Storage	
Transporting	
Unfold/Fold Procedure - 30'/40' NTB	
Unfold/Fold Procedure - 60' NTB	