204

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Covers Machine Serial Numbers: SNU1011331001-100 **Part No.** 493565

Rev. 1304130711

8 – MAINTENANCE AND STORAGE

9 – MISCELLANEOUS

SECTION 1 – INTRODUCTION

The following patent decal is located on the rear left-hand frame and provides current patents issued on your machine.

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 rear left-hand frame)

A WORD FROM HAGIE MANUFACTURING COMPANY

Congratulations on the purchase of your 204 Detasseler! We recommend that you review this operator's manual and become familiar with operating procedures and safety precautions before attempting to operate your detasseler.

As with any piece of equipment, certain operating procedures, service, and maintenance are required to keep your machine 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 detasseler 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 machine without obligation to existing units.

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

ABOUT THIS MANUAL

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.

This manual will aid you in the proper operation and service of your machine. 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 and features described and/or shown may or may not be available on your machine.

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 machine, 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 machine.

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 to 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.

CAUTION

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

IDENTIFICATION

NOTICE

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

Each machine is identified by means of a frame serial number. This serial number denotes the model, year in which it was built, and the number of the detasseler.

For further identification, the engine and hydrostatic pumps each have serial numbers, the wheel motors have identification tags, and the planetary wheel hubs have identification plates that describe the type of mount and gear ratio.

To ensure prompt, efficient service when ordering parts or requesting service repairs, record the serial numbers and identification numbers in the following spaces provided.

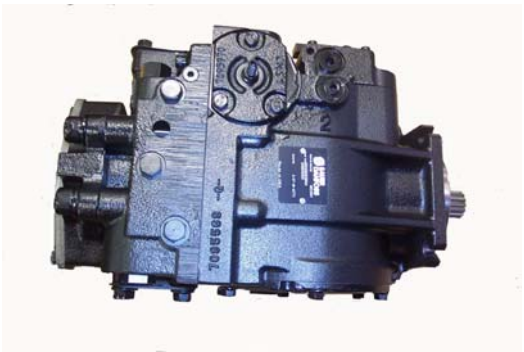
Detasseler

- The Detasseler serial number is stamped on the right rear corner of the frame

Engine

- The diesel engine serial number is located on the side of the front left gear housing

Hydrostatic Pump



- Left: _____
- Right: _____

Wheel Motors

Front and Left Rear Wheel Motors

- Front Left: _____
- Front Right: _____
- Rear Left: _____

Right Rear Wheel Motor (w/Sensor)

- Right: _____
  (Refer to Parts Manual)

Wheel Hubs

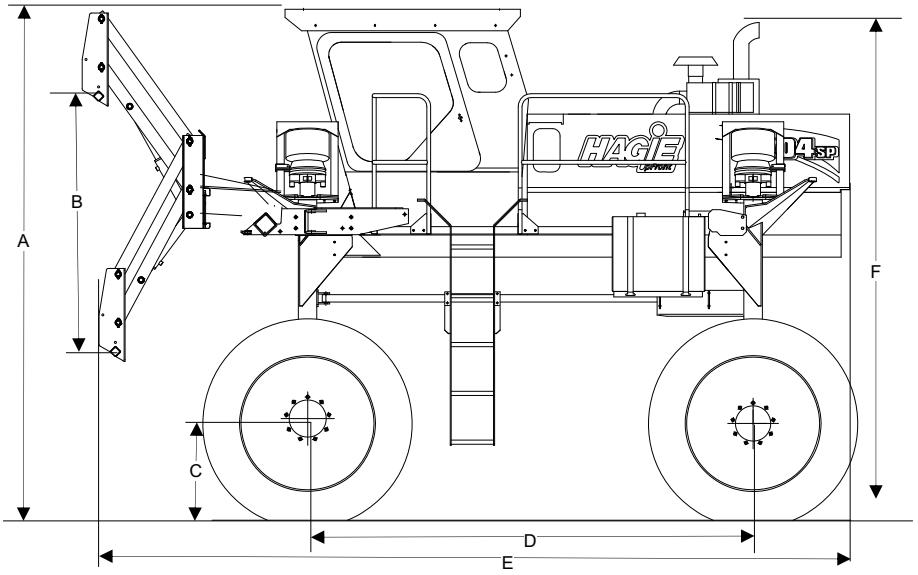
Planetary Wheel Hubs (w/Brakes)

- Left: _____
- Right: _____

SPECIFICATIONS

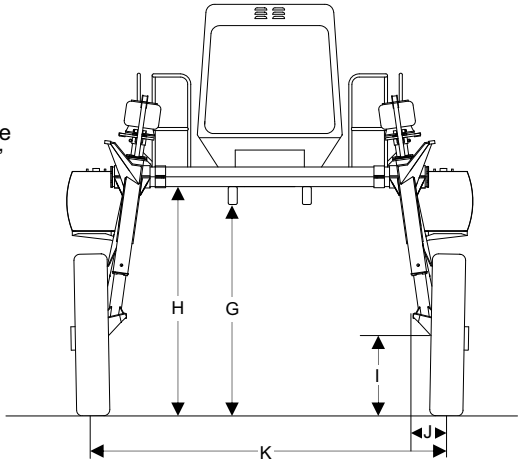
DETASSELER DIMENSIONS

A. Overall tractor height (w/cab or canopy) ..... 144”
B. Lift arm range ..... 66”
C. Axle height ..... 26.2”
D. Wheel base ..... 120”
E. Detasseler length (w/o attachments) ..... 206”
F. Diesel exhaust height ..... 140”
- Beacon
  -Fully extended ..... 152”
  -Folded down ..... 144”



G. Center clearance ..... 78”
H. Frame clearance ..... 83”
I. Lower leg clearance (front) ..... 24”
J. Tire center to inside of lower leg (front) ..... 12.5”
K. Tread width* ..... Adjustable 78” - 120”

*NOTE: Measure tread width at ½ tire height.



GENERAL DETASSELER INFORMATION

- Frame type ..... Rigid with 4-wheel, independent, air-suspension
- Approximate shipping weight ..... 10,200 lbs. depending on options
- Shipping width ..... 143”

NOTICE

Because Hagie Manufacturing Company offers a variety of options, the illustrations in this manual may show a machine equipped other than standard.
Weight and height do not consider options. Values may vary, depending on options.

ENGINE	
Manufacturer	Cummins
Model	QSB4.5 Turbo-Charged
Type	In-line, Liquid Cooled
Number of Cylinders	4
Displacement	4.5 Liter
Horsepower	160
Type of Fuel	No. 1 or No. 2 Diesel
Fuel System	Filtered, Direct-Injected
Air Cleaner	Dry-Type, Single Element
Slow Idle	800 RPM
Fast Idle	2500 RPM
POWER TRAIN	
DRIVE	
Hydrostatic Pump	Sauer/Danfoss 90-Series
Range	100cc Variable Displacement
Drive Train	All Time 4-Wheel Drive
2-Speed	Low (0-12 mph), High (0-15 mph)
Hydrostatic Wheel Motor	Sauer-Danfoss KC-38 (front and left rear)
	Sauer-Danfoss KC-38 w/sensor (right rear)
Final Drives:	
Type	Planetary Gear Reduction Hubs
• Front (11.2 - 38 tire)	Torque Hub 7HPA w/Brake, Drive Ratio = 24:1
• Rear	Torque Hub 7HPA w/Brake, Drive Ratio = 19:1

Lubrication	Oil Bath
BRAKES	
Type	• Multiple Disc • Spring Applied • Hydraulically Released
STEERING SYSTEM	
Type	Hydraulic, Priority on Demand
Control	Full-Time Power
Steering Cylinders	Double Action
Turning Radius	18’ with 120” Tread
AUXILIARY HYDRAULIC SYSTEM	
Type	Open
Pump Type	Tandem Gear
Pressure Setting	2000 PSI
ELECTRICAL SYSTEM	
GENERAL ELECTRICAL SYSTEM	
Battery	Single 12V, Negative Ground
Alternator	130 AMP, Voltage Regulated
Starter	12V w/Solenoid
CIRCUIT BREAKERS/FUSES	
A/C Relay (cab only)	30 AMP
A/C Breaker (cab only)	30 AMP
Main Breaker	100 AMP
Motor Control Block	20 AMP
Tasseltrol® Control Box, Seat Motor (cab only)	20 AMP
Outrigger Hydraulic Fold (optional)	20 AMP
Depth Command Switch Panel	10 AMP
Aux	20 AMP
ACC	10 AMP
Display Panel	5 AMP
Engine Diagnostic Plug	10 AMP
Beacon	10 AMP
Horn	10 AMP
Headlight	15 AMP

Ignition	5 AMP
Autosteer	20 AMP
LIGHTS (CAB OR CANOPY)	
Front of Cab	(4) Halogen Field Lights
Rear of Cab	(2) Halogen Work Lights
OPERATOR'S STATION	
CANOPY (STANDARD)	
General Operator Station	• Tilt Steering • Flashing/Hazard Warning Lights • Turn Signals • Side Mirrors
Seat	Adjustment For: • Fore-aft • Height • Ride Firmness
CAB (OPTIONAL)	
General Cab	Same as Operator Station, including: • Windshield Wiper • Side Mirrors • Dome Light • Tinted Glass
Temperature Control	Full Range
A/C Charge Type	R-134a
Fresh Air Filtration	Paper and Charcoal Filter
Seat	Air Ride with adjustment for: • Fore-aft • Backrest • Height • Ride Firmness • Armrest Tilt
Stereo	AM/FM/Weather Band w/Dual Speakers
INSTRUMENTS	
Dial Gauges	Fuel
Digital Gauge	• Speedometer (MPH-Km/H) • Tachometer (RPM) • Oil Pressure • Coolant Temperature • Engine Hours • Fuel Rate • Systems Voltage
Engine Air Filter Monitor	Filter Minder®

TIRES/RIMS	
RIMS (FRONT AND REAR)	
Standard	38” x 10”
TIRES (FRONT AND REAR)	
Standard	11.2 - 38 (Bias TU)
Air Pressure	26 PSI
Tire Width	11.3”
Load Capacity (at 25 mph)	2540 lbs.
Overall Diameter	57.4”
Static Load Radius (suggested, may vary by load)	27.3”
Rolling Circumference	170.8”
CAPACITIES	
Fuel Tanks (2)	40 Gallons (each)
Cooling System (w/o Cab Heater)	5.1 Gallon
Hydraulic Reservoir	20 Gallons
Engine Oil Capacity (Total System)	15.9 Quarts
- Pan Only	13.7 Quarts
Torque Hub	16 oz. (approx.)
DETASSELING SYSTEM (Front-mounted, with or without LS System)	
QUAD PULLER	
Number of Rows Available	4, 6, 8, 10, 12, or 18
Drive	Hydraulic
Tire Size	4.10/3.50 2-ply
Operating Speed	Up to 400 RPM
Pulling Height	• Minimum Range (32” to 97”) • Maximum Range (40” to 105”)

Weight (per Head Assembly)	86 lbs.
CUTTER	
Number of Rows Available	4, 6, 8, 10, 12, or 18
Drive	Hydraulic
Blade Size	18”
Operating Speed	Up to 3100 RPM
Cutting Height	• Minimum Range (29” to 94”) • Maximum Range (13” to 102”)
Weight (per Head Assembly)	62 lbs.

2013 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.

Most accidents occur as the result of failure to follow simple and fundamental safety rules. For this reason, most accidents can be prevented by recognizing the real cause and doing something about it before the accident occurs.

Many conditions cannot be completely safeguarded against without interfering with efficient operation and/or reasonable accessibility. Therefore, you must study this operator's manual and learn how to operate the machine safely. Likewise, never let anyone operate the machine without proper instruction.

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

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

SAFETY PRECAUTIONS

Driving

- Before moving the detasseler, ensure no persons or obstructions are in the path of travel.
- Do not drive under trees, bridges, wires, or other obstructions unless there is adequate clearance.
- Do not permit passengers to ride on machine while it is moving. Failure to comply may result in passenger falling off of machine and/or obstructing the operator's view.

- Never drive near ditches, embankments, holes, mounds, or other obstacles.
- Never drive on hills too steep for safe operation.
- Know and obey all state laws for driving farm equipment on a public roadway.
- Take caution when entering or exiting a public roadway.

- Always drive at a reasonable field speed and to suit the conditions.
- Reduce the detasseler speed and use turn signals before turning.
- Come to a complete stop before reversing direction.
- Pull over to the side of the road before stopping.
- Use the flashing/hazard warning lights when traveling on public roads, day or night, unless prohibited by law.
- Ensure Slow Moving Vehicle (SMV) emblem is in place and visible from the rear when traveling on public roadways.

Operating

Tread Width

- Select the widest tread setting to fit between crop rows.
- Never manually adjust the tread width on the detasseler until the wheels have been properly blocked. Loosen the leg clamp bolts only enough for the leg to slide on the frame.

Outriggers

- Ensure the outriggers are in the LOCKED position when folded IN or OUT.

- Ensure the outrigger is in the FOLDED and LOCKED position when driving or transporting.

General Operation Safety

- Do not adjust the factory engine RPM settings.
- Start the engine from the operator's seat only. Do not bypass the Safety Start Switch.

- Handle starting fluid with care. Keep it away from open flames. Store with the cap on and in a cool place.
- Never run the machine engine in an enclosed building. Proper exhaust ventilation is required.
- If equipped with light sensing depth units, do not look directly into the light beam, as it emits a very low intensity microwave signal, which may cause possible eye damage.
- Keep all shields in place.
- Keep clear of all moving parts and keep others away when operating.
- Do not wear loose fitting clothing that may be blown or drawn into moving parts.
- Never allow walking personnel in the same field as the machine.
- Keep a fire extinguisher nearby at all times.

Repair/Maintenance

Hydraulics

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

Fueling

- Always turn the engine off and allow it to cool before refueling.
- NEVER smoke while refueling.

- Do not fill fuel tank completely. Fuel may expand and run over.

General Repair/Maintenance

- Turn off the engine before checking, adjusting, repairing, lubricating, or cleaning any part of the machine.
- When servicing the radiator, let the engine cool down before removing the pressurized cap.
- Disconnect the battery ground cable before servicing the electrical system or welding on a machine.
- When charging the battery, connect the positive cable to the positive terminal and the negative cable to the negative terminal. Failure to comply may result in an explosion and cause injury. Likewise, avoid battery acid contact and incurring injuries.
- Never pressurize suspension air bags over 100 psi.

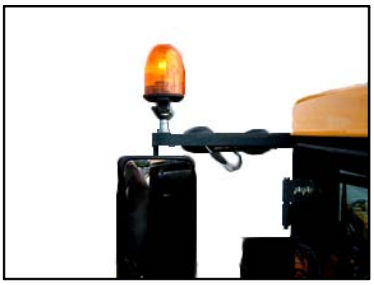
Towing

Refer to "Transportation" in the *Miscellaneous Section* of this manual for further information.

ROTATING BEACON

The Rotating Beacon (located on the left-hand side of the operator's station) is used for increased visibility to others. The beacon will illuminate when the Flashing Hazard Switch is activated.

NOTE: Hazard Lights are inactive in "Field" mode.



Rotating Beacon
-Typical View

E-Stop Switch
(Located near the side console)
-Typical View

EMERGENCY STOP (E-STOP)

DO NOT use the E-Stop for non-emergency stopping or as a parking brake.

The E-Stop Switch (located near the operator's side console) provides a quick and positive method for stopping the engine in an emergency situation.

When the E-Stop Switch is depressed, it locks in position and removes the ignition signal to shut down the engine. To reset the E-Stop Switch, turn the switch in the direction of the arrows (located on the face of the button).

OPERATOR PRESENCE SWITCH

The Operator Presence Switch (located inside the operator's seat) protects the operator from exposure to moving parts or hazards in regards to the detasseler cutting blades and quad pullers by introducing an electrical interlock that ensures that when the operator is out of the seat for three seconds or more, the operation of these functions have stopped.

To re-engage the cutting blades or quad pullers, the operator must be seated. Turn the Master Control Switch to the OFF position, then to the ON position for all functions to resume.

Operator Presence Switch
(Located inside the operator's seat)
-Typical View

Res-Q-Me Tool
(Located on left-hand side of cab)
-Typical installation shown

EMERGENCY EXIT

In the event of an emergency, use the cab door to exit the machine.

Should the cab door become inoperable, a Res-Q-Me Tool (located on the left-hand side of cab) is provided and is used in the rare event to shatter the glass of the cab.

The Res-Q-Me Tool, when pressed firmly against the glass, will automatically trigger and shatter the glass.

NOTE: Do not look directly at the glass when using the tool.

SAFETY DECALS

Decals warning you of avoidable danger are located on various parts of the machine. 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
-Typical View

650303
(Located near operator's station)

650175
(Located near front of cab)

650388
(Located near operator's station)

650847
(Located near operator's station or outside of cab beneath rear window)

650378
(Located on front console)

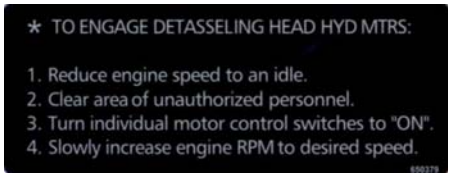
650849 and 650954
(Located on top of each fuel tank)

650851
(Located on right and left rear frame)

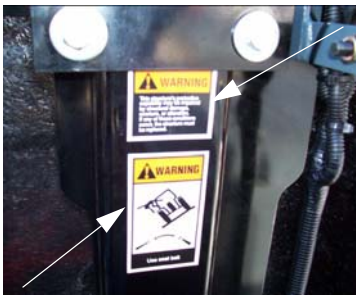
650852
(Located near operator's station)

650982
(Located on the hydraulic reservoir)

650379
(Located on top of side console panel, and inside console panel)



CE Supplement



- Warns the operator to use seat belts.
- Warns of impairment to the structure's protective capabilities due to rollover, structural damage, or alteration. If any of these conditions should occur, the structure must be replaced.

(Located on the Rollover Protection Post)
-Typical installation shown

- (A) - Wear hearing protection while operating this machine.
- (B) - Wear eye protection while operating this machine.
- (C) - Read the Operator's Manual.
- (D) - Refer to the service and maintenance instructions.

(A) - 650251

(B) - 650250

(C) - 650249

(D) - 650248

650252
(Located on center rear of machine, near the Battery Disconnect Switch)

Identifies the electrical circuit can be broken, preventing the machine from starting when the ignition key is in the OFF position.

NOTE: Do not use this device as a safety when working on the electrical system. Disconnect the negative battery cable before servicing.

650253
(Located on back side of the wheel motor mount)

Identifies the only place that is designated as a safe place to attach a towing device to tow the machine. Refer to operator's manual.

650255
(Located on top of the engine compartment near the exhaust tube)

Warns the operator that the exhaust tube may be hot enough to burn. Avoid touching the exhaust tube while the machine is running. Allow the engine plenty of time to cool down before performing any service or maintenance procedures.

650257
(Located in the engine compartment on the left-hand side of fan guard)

Warns the operator that putting their hand beyond the protective guard may result in serious injury from a moving fan blade.

650260
(Located on the top right-hand side of the ladders)

Indicates that there is a trip hazard at the top of the ladder. Use caution when entering the operator's station.

650254
(Located on both sides of the canopy)

Warns the operator of the risk of bumping their head while entering the operator's station.

650256
(Located on the engine compartment shield near the radiator cap)

Warns the operator of the risk of expulsion of material while servicing. Do not stand in the path of material to avoid injury.

650259
(Located on the mounting tube of each puller head)

Warns the operator that there is risk of injury from the rotating tires. Never attempt to perform any service or maintenance on the pullers while they are rotating. Never attempt to dislodge a wedged object from the pullers with your hand.

650258
(Located on both sides of the cutter head assemblies)

Warns the operator that putting your hand past the protective guard may result in serious injury by the rotating blade. Never attempt to perform any maintenance on a moving cutting blade or try to stop the blade.

650277
(Located on both sides of the frame at each bend of the belly shield)

Specifies the four lifting points to lift the machine safely

SEAT - OPERATOR

Fore-Aft Adjustment (1)

- Pull the Fore-Aft Lock Lever to the LEFT to unlock and adjust seat forward or rearward.
- Release the Fore-Aft Lock Lever to lock in position.

Ride Height (2)

- To adjust seat height, place all your body weight on the seat and locate the Height Adjustment Dial. Rotate dial “clockwise” to lower seat height and “counter-clockwise” to raise seat height.

Ride Firmness (3)

- To adjust ride firmness, rotate the Ride Firmness Dial “clockwise” to “soften” ride, and “counter-clockwise” to “stiffen” ride.

Operator Presence Switch (OPS)

- The OPS Switch (located inside the seat) protects the operator from exposure to moving parts or hazards in regards to the detasseler cutting blades or quad pullers by introducing an electrical interlock, ensuring that when the operator is not seated inside the cab (for three seconds), the operation of these functions stop.

Seat Belt

For your safety, it is recommended that you wear your seat belt at all times when operating the machine.

- Grasp the Seat Belt Buckle and extend all the way across your hips and below your stomach.
- Insert the buckle tongue into the receptacle (located on the opposite side of seat) and engage.

SEAT - OPERATOR (AIR SUSPENDED)

-If Equipped

Your detasseler may be equipped with an Air Suspended Operator’s Seat that is featured with the following for your driving and comfort needs.

Ride Firmness (1)

- Pull the Ride Firmness Knob OUT to release air and “soften” ride.
- Push the Ride Firmness Knob IN to increase air and “stiffen” ride.

NOTE: Ignition key must be in the ON position to activate the seat pump.

Fore-Aft Adjustment (2)

- Release Fore-Aft Lock Lever by pulling lever OUT.
- Slide forward or backward to desired position.
- Release lever to lock in position.

Height Adjustment (3)

- Release Height Lock Lever by pulling lever UP.
- Apply body weight slowly to lower seat position.
- Remove body weight slowly to raise seat position.
- When desired height is reached, release lever to lock in position.

Backrest Adjustment (4)

- Rotate the Backrest Knob “counter-clockwise” to tilt backrest forward or “clockwise” to tilt backrest backward.

Armrest Adjustment (5/6)

- Unzip either armrest to expose the armrest adjustment bolt.
- Turn bolt IN to raise armrest tilt or OUT to lower armrest tilt.

Operator Presence Switch (OPS)

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Seat Belt

For your safety, it is recommended that you wear your seat belt at all times when operating the machine.

- Grasp the Seat Belt Buckle and extend all the way across your hips and below your stomach.
- Insert the buckle tongue into the receptacle (located on the opposite side of seat) and engage.

OPERATOR’S STATION

Steering Column

The Steering Column in your machine may be adjusted for your driving comfort and ease of cab exit/entry.

⚠ WARNING

Ensure the steering wheel and steering column are locked into place before operating the machine. Failure to comply may make it difficult to maintain control of the machine.

To Adjust Steering Column

1. Push DOWN on the Steering Column Tilt Lock Lever to release.

Steering Column Tilt Lock Lever
(Located in center of steering column)
-Typical View

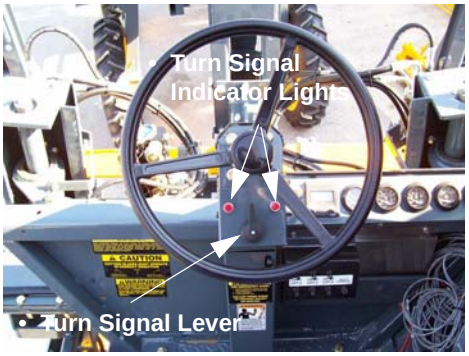
2. While maintaining the lock lever in the down position, PULL or PUSH the steering column to desired position.
3. Release the Steering Column Tilt Lock Lever to re-lock the steering column in position.

Turn Signals

To activate the front and rear Turn Signals, move the Turn Signal Lever (located on steering column) to the RIGHT for a right-hand turn; and to the LEFT for a left-hand turn.

Steering column-mounted indicator lights will flash correspondingly when either turn signal is activated.

NOTE: The Turn Signal Lever is not self-centering and must be manually returned to the OFF position after completing your turn.



Turn Signal Lever and Indicator Lights
(Located on steering column)
-Typical View

Hazard/Warning Lights

The Hazard/Warning Lights are to be used at any time, day or night, that you are traveling on a public roadway, unless prohibited by law.

To activate the Hazard/Warning Lights, press the Hazard Flasher Switch (located on the side console) to the ON position.

Hazard Flasher Switch
(Located on side console)
-Typical View

Running Lights

The Running Lights are used when traveling on a public roadway at night and are turned on by activating the Work Lights.

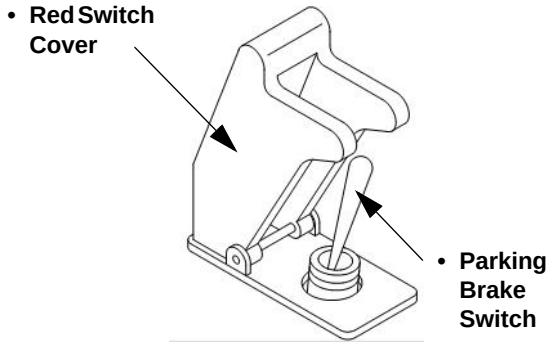
NOTE: The ignition does NOT have to be on to operate the Running Lights. However, prolonged use of these lights without the engine running is not recommended.

Parking Brake

> **CAUTION**
>
> Do not engage the Parking Brake while operating the machine. Failure to comply may result in personal injury and machine damage.

To engage the Parking Brake

- Lift the red switch cover (located on the side console).



- Press the Parking Brake Switch UP to engage brake.

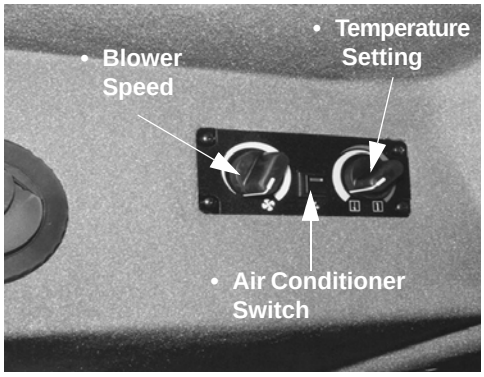
To disengage the Parking Brake

- Close the red switch cover, which will flip the Parking Brake Switch to the DOWN/ OFF position.

NOTE: Always ensure the Parking Brake is OFF before operating the machine.

Climate Controls

The Climate Controls are located on the cab headliner.



Climate Controls
(Located on cab headliner)
-Typical View

Fan Blower Speed

- Rotate the Fan Blower Speed Dial “clockwise” to increase fan speed.
- Rotate the Fan Blower Speed Dial “counter-clockwise” to decrease fan speed.
- To shut the fan off, rotate the Fan Blower Speed Dial fully “counter-clockwise”.

Temperature Setting

- Rotate the Temperature Setting Dial “clockwise” to increase temperature.
- Rotate the Temperature Setting Dial “counter-clockwise” to decrease temperature.

Air Conditioner Switch

- To activate the air conditioner, press the Air Conditioner Switch ON (Up).
  Adjust the fan speed and temperature accordingly.

Air Vents

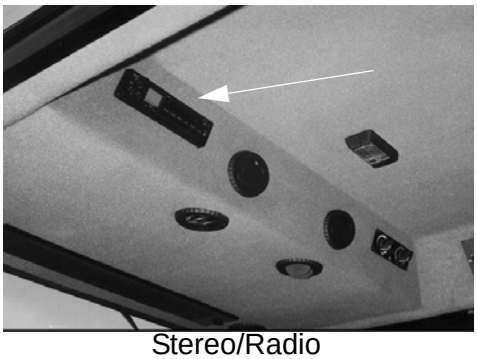
Rotate air vents to desired position, or individually turn on or off with the directional fins.

Air Vents
-Typical View

Refer to the *Maintenance and Storage* section of this manual for information on servicing the Air Conditioning System.

Stereo/Radio

The cab is featured with an AM/FM/Tuner with a CD Player and Weatherband Broadcasting. Refer to the stereo manufacturer's user guide for complete operating instructions and programming information.



Stereo/Radio
(Located on cab headliner)
-Typical View

Windshield Wiper

-If Equipped

- **To turn the wiper on**, press the Windshield Wiper Switch (located on the side console) in the ON (Up) position.
- **To turn the wiper off**, press the Windshield Wiper Switch in the OFF (Down) position.

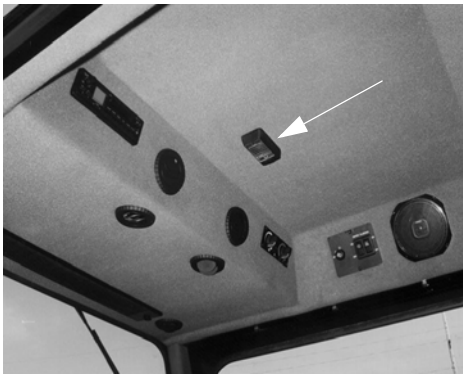
NOTE: The wiper will continue to operate until the switch is turned to the OFF position.

Windshield Wiper Switch
(Located on side console)
-Typical View

Interior Work Light (Cab)

The Interior Work Light is turned on manually by pressing the right or left edges of the lens.

NOTE: The ignition key must be in the ON position for the light to operate.



Interior Work Light
(Located on cab headliner)
-Typical View

Work Lights

Work Lights are installed on the front and rear of the detasseler canopy or cab for use when operating in the field after dark.

NOTE: Turn Work Lights OFF before entering a public roadway.

Work Lights
(Located on the front and
rear of the canopy or cab)
-Typical View

- Pull the Work Light Switch (located on the side console) OUT to the first position to activate the Work Lights.
- Pull the Work Light Switch OUT to the second position to deactivate the two outer front and the two rear Work Lights.

Work Lights Switch
(Located on side console)
-Typical View

NOTE: The ignition does NOT have to be on to operate the Work Lights. However, prolonged use of these lights without the engine running is not recommended.

FUEL TANK SELECTOR

- To draw engine fuel from the right-hand fuel tank, press the Fuel Tank Switch (located on the side console) in the UP (“Right”) position.
- To draw engine fuel from the left-hand fuel tank, press the Fuel Tank Switch in the DOWN (“Left”) position.

Fuel Tank Selector Switch
(Located on side console)
-Typical View

NOTE: You may operate from either fuel tank until the yellow “Low Level” indicator light illuminates. When the indicator light is on, you must either switch to the opposite tank, or refuel.

⚠ WARNING

CALIFORNIA PROPOSITION 65 WARNING

WARNING: Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer and birth defects or other reproductive harm.

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, and chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

ENGINE - PRE-OPERATIONAL INSPECTION

Pre-Operational Inspection Check-list

1. Check the engine oil level.

NOTE: Do not operate the engine when oil level is below the low mark on the dipstick.

2. Check the coolant level in the radiator and coolant overflow reservoir.
3. Check hydraulic oil reservoir level.
4. Check cooling air intake screens.
5. Check engine drive belt.
6. Drain fuel/water separator.
7. Check Filter Minder®.
8. Check for any oil or fuel leaks and correct, if needed.

ENGINE - STARTING

Starting the Engine

⚠ CAUTION

Start engine from the operator's seat only. When running engine inside a building, ensure there is proper ventilation.

NOTICE

Do not use starting fluid when starting an engine. Use of too much starting fluid will cause engine damage.

⚠ CAUTION

The electrical system is 12-volt negative ground. When using booster with jumper cables, precautions must be taken to prevent personal injury or damage to electrical parts.

- Attach one end of jumper cable to positive terminal of booster battery and other end to positive terminal of vehicle battery connected to the starter motor.
- Attach one end of second cable to negative terminal of booster battery and other end to the vehicle frame away from battery. DO NOT attach to cab or cab support.
- To remove cables, reverse above sequence exactly to avoid sparks. See operator's manual for additional information.

1. Place Hydrostatic Controller in NEUTRAL position.
2. Apply Parking Brake.

NOTE: When starting procedure is complete, release Parking Brake before operating.

3. Start the engine with the throttle at one-half speed.
4. Turn the ignition key to the ON position.
5. Turn the ignition key to engage starter.

NOTE: If the engine fails to start after 15 seconds, turn the key OFF, wait one minute, and repeat the procedure. If the engine fails to start after three attempts, check the fuel supply system. Absence of blue or white exhaust smoke while cranking indicates no fuel is being delivered.

6. When the engine starts, immediately reduce the throttle setting to 1/3.
7. Inspect indicator lights and gauges for correct operation. If any are inoperable, shut off the engine and determine the cause.
8. Always allow at least a five minute warm-up period before operating the engine at a high RPM.

NOTE:The engine must reach operating temperature and oil pressure must stabilize in the normal operating range before it is run faster than an idle speed (1000 RPM or less). Cold oil may not flow in quantities to adequately prevent pump seizure. A longer warm-up period may be required in cold weather.

ENGINE MONITOR - CANTRAK 2600

NOTICE

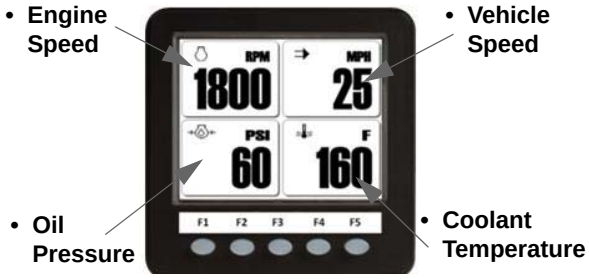
Immediately reduce engine speed and shut off ignition if any red indicator lights illuminate. Determine cause and correct before continuing operation.

Your detasseler is featured with a CANtrak 2600 System, which monitors engine parameters. Refer to the manufacturer's user guide for complete operating and programming instructions.

CANtrak Engine Monitor
(Located near the operator's station)
-Typical View

NOTE: The CANtrak Engine Monitor is factory pre-set. No adjustments are required.

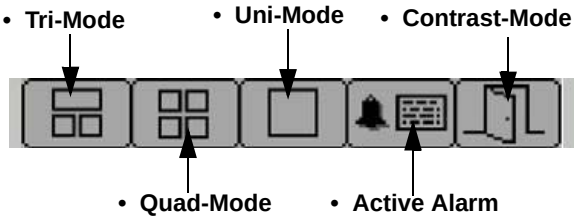
After the initial start-up screen is displayed, the Quad-Mode display will appear.



At any time, press the F1 or F2 Buttons to display the context-dependent "Button Bar".

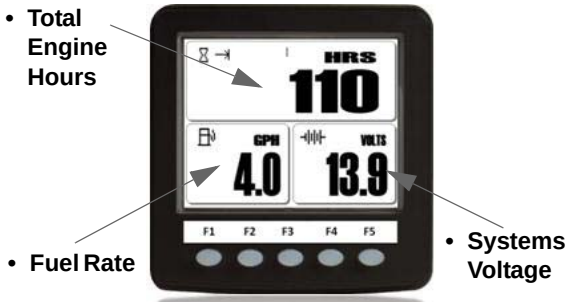
The top level Button Bar shows the basic structure of the monitor and disappears after five seconds of inactivity.

- (F1) - Tri-Mode
- (F2) - Quad-Mode
- (F3) - Uni-Mode
- (F4) - Active Alarm
- (F5) - Contrast Mode (or hold for three seconds to view the Configuration Menu)



Button Bar
-Typical View

Tri-Mode



Tri-Mode
-Typical View

NOTE: Press F2 to go back to the Quad-Mode display, or F3 to view the Uni-Mode display.

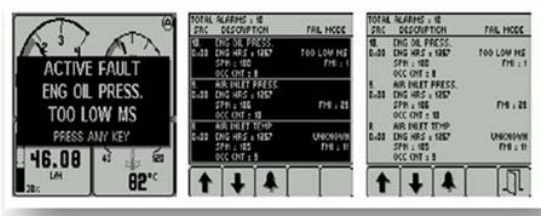
Uni-Display

Uni-Mode display mode plots data history in an X-Y graph format.

Uni-Mode
-Typical View

Active Alarm

The Active Alarm display mode lists all active/current alarms received by the unit.



Active Alarm
-Typical View

Configuration Menu

Configuration Menu
-Typical View

Fuel Gauge

The Fuel Gauge measures the amount of fuel in either fuel tank, depending on the tank selected.

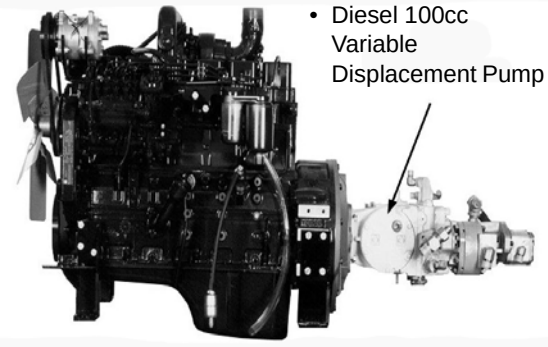
Fuel Gauge
-Typical View

NOTE: A yellow indicator light (located near the fuel gauge) alerts the operator of low level operation.

HYDROSTATIC DRIVE

The Hydrostatic Drive system on your machine uses pressurized hydraulic fluid to drive the machine.

The Hydrostatic Drive system is derived from a Cummins® diesel engine. The hydrostatic power system consists of a Sauer-Danfoss heavy duty variable displacement pump and variable displacement wheel motors. A manual control lever (connected to the pump swashplate) controls the amount of and direction of oil flow to the motors, determining the speed and direction of the machine.



NOTICE

Never operate the detasseler at anything less than full recommended throttle.

⚠ CAUTION

Start the engine from the operator's seat only. When running the engine in a building, ensure there is adequate ventilation.

⚠ WARNING

DO NOT USE ETHER!

The engine is equipped with an electronic starting aid. Use of ether may cause an explosion and severe injury.

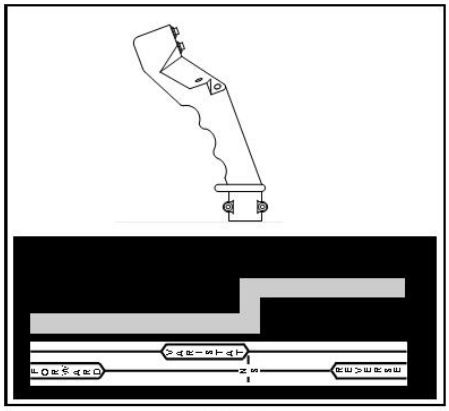
NOTICE

Cold oil may not flow in quantities adequate to prevent pump cavitation.

Operation

1. Slowly open the throttle to the maximum recommended engine speed setting.
2. To move machine forward, slowly push the Hydrostatic Controller forward.

NOTE: The farther the Hydrostatic Controller is moved, the faster the machine will travel. To stop machine, slowly place the controller in the NEUTRAL position.

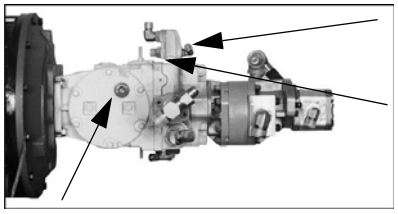


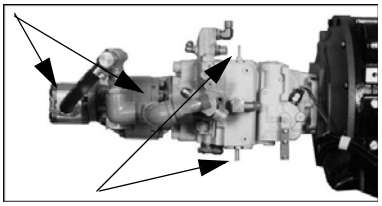
3. To move the machine in reverse, slowly pull the Hydrostatic Controller backward.

NOTE: To stop machine, slowly place the controller in the NEUTRAL position.

4. Before turning off the engine, reduce engine speed and allow the engine to idle at least three minutes.

Hydrostatic System





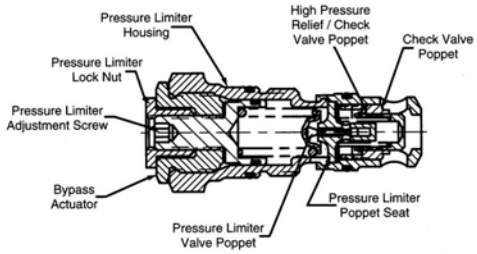
Displacement Limiter

The Sauer-Danfoss 90-Series Variable Pump is equipped with a mechanical displacement (stroke) limiter.

NOTICE
The Displacement Limiter is factory set and requires no further adjustment. If adjustments are made without contacting the Hagie Customer Support department, system damage may result and will void the warranty.

Multi-Function Valves

Each Variable Pump is equipped with two Multi-Function Valves. These valves incorporate the System Check Valve, Pressure Limiter Valve, High Pressure Relief Valve, and Bypass Valve.



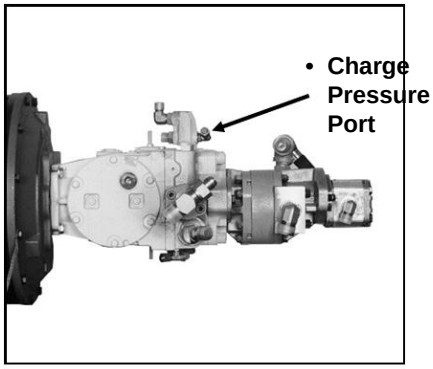
Cross Section of Multi-Function Valve

When the pre-set pressure is reached, the Pressure Limiter System acts to rapidly de-stroke the pump in order to limit the system pressure.

Charge Pressure

To monitor the closed loop system (Hydrostatic Pump):

- Install a 500 psi pressure gauge at the Charge Pressure Port.
- Start the engine and open the throttle to full RPM.

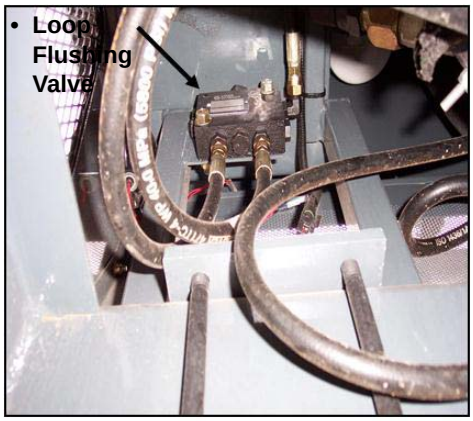


NOTE: Charge pressure should be between 348 and 365 psi. If it is below required pressure, contact Hagie Customer Support for assistance.

Loop Flushing Valve

NOTICE
The Loop Flushing Valve has been factory set. DO NOT adjust. Damage to the system may result if adjustment is made without contacting the Hagie Customer Support department.

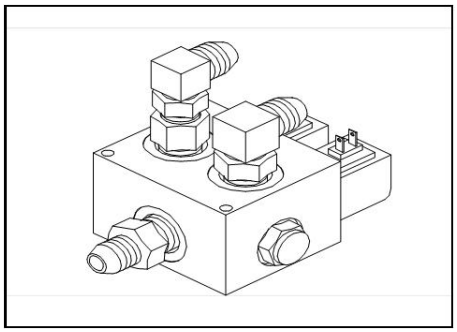
The Hydrostatic Pump is equipped with a Loop Flushing Valve, which is used to remove fluid from the Hydrostatic System for cooling and contamination removal.

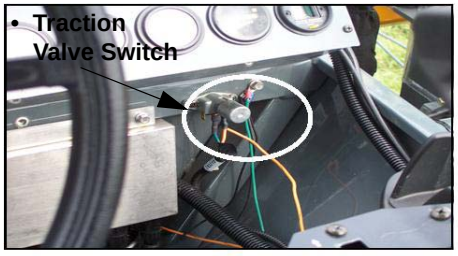


Traction Valve

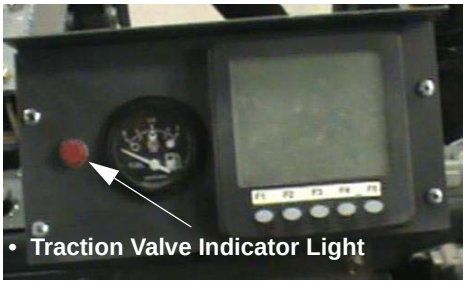
Your machine is equipped with hydraulic valves for increased traction (one located in the front hydraulic loop, and one in the rear hydraulic loop).

These valves greatly reduce spin-out if muddy conditions prevail, or if wheels lose traction for any reason. The valve in the rear loop is active at all times. The valve in the front loop is activated by the Traction Valve Switch (located in the operator's station).





When the Traction Valve is activated, an indicator on the instrument panel will light up.



NOTICE

To prevent hydraulic loop damage, do not operate the front Traction Valve continuously, or while traveling over 4 mph. Activate the front Traction Valve only when needed. Shut the Traction Valve Switch OFF when clear of the problem area.

Wheel Motors

The Sauer-Danfoss Variable Speed Wheel Motors on your machine are controlled by a Shift Switch (located on the side console).

-Typical installation shown

When the Shift Switch is in the ON position, you are in high gear, which gives you a higher speed for better road performance.

When the Shift Switch is in the OFF position, you are in low gear, which gives you lower speed for better field performance.

Parking Brake

CAUTION

Do not engage the Parking Brake while operating the machine. Failure to comply may result in personal injury and machine damage.

CAUTION

FOR EMERGENCY STOP

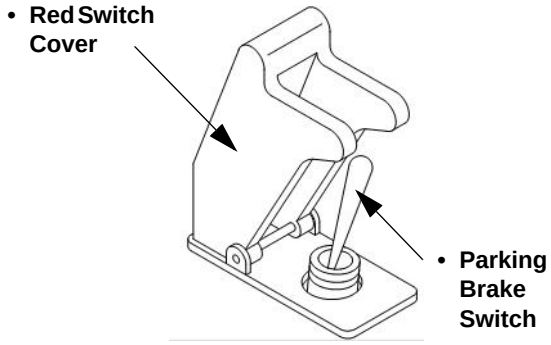
1. Move Hydrostatic Controller to the NEUTRAL position.
2. Activate the E-Stop.

Follow these steps to prevent injury or machine damage.

The brakes are controlled by charge pressure. When the engine is shut off, or if the charge pressure is below 150 psi, the brakes will activate.

To engage the Parking Brake

- Lift the red switch cover (located on the side console).



- Press the Parking Brake Switch UP to engage brake.

To disengage the Parking Brake

- Close the red switch cover, which will flip the Parking Brake Switch to the DOWN/ OFF position.

NOTE: Always ensure the Parking Brake is OFF before operating the machine.

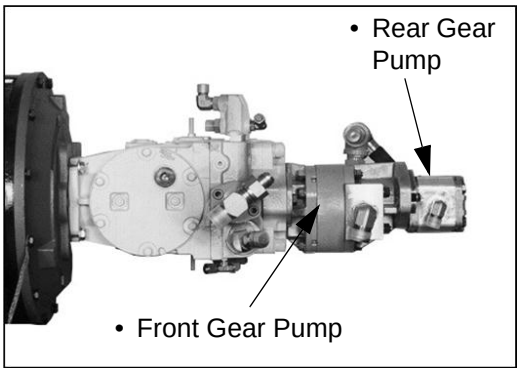
HYDRAULIC SYSTEM

The auxiliary Hydraulic System is an open-type and is mounted behind the heavy-duty Variable Displacement Pump. This system consists of dual Gear Pumps (that supply required hydraulics to operate the full-time Power Steering Unit, Lift Cylinders, Cutters, and Pullers).

After supplying each of these systems, the hydraulic oil is sent to the oil cooler (located in front of the engine coolant radiator), where it is cooled and then sent back to the hydraulic oil reservoir.

Gear Pump

The front, larger Gear Pump supplies hydraulic power to the Cutters and Pullers. The rear, smaller Gear Pump supplies hydraulic power to the Power Steering and Lift Cylinders.



NOTE: Immediately shut down the engine if the Low Hydraulic Oil Level Indicator (located on the side console) comes on.

Low Hydraulic Oil Level Indicator
(Located on the side console)
-Typical View

Power Steering

The full-time Power Steering system consists of a Hydraulic Steering Motor (mounted on the end of the steering wheel shaft), which is connected to a pair of double-action Steering Cylinders (mounted on both of the front steering arms and outer leg weldments).

Steering Cylinders
(Mounted to both of the front steering arms and outer leg weldments)
-Typical View

This system is powered by one of the hydraulic dual Gear Pumps (driven by the engine). Since these Gear Pumps are sensitive to

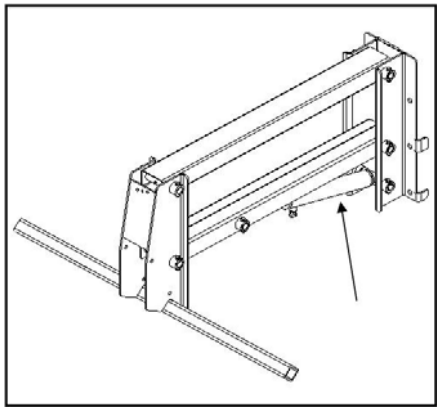
engine RPM, it is best to operate the detasseler at full recommended RPM to ensure maximum steering responsiveness.

NOTE: The higher the RPM, the higher the oil flow.

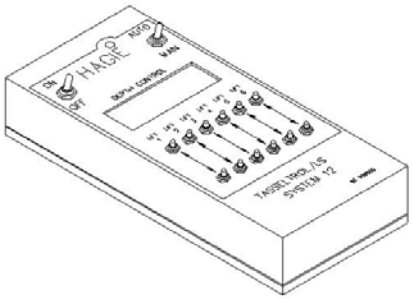
Lift Cylinders

The Lift Cylinders (mounted on each lift unit) adjust the height of the detasseling head assemblies, which are controlled by the Tasseltrol®/LS Control Panel (located in the operator's station).

Refer to the "Tasseltrol" information provided in the *Detasseling Systems* section for information on operating and adjusting parameters.



Lift Cylinders
(Mounted on each lift unit)

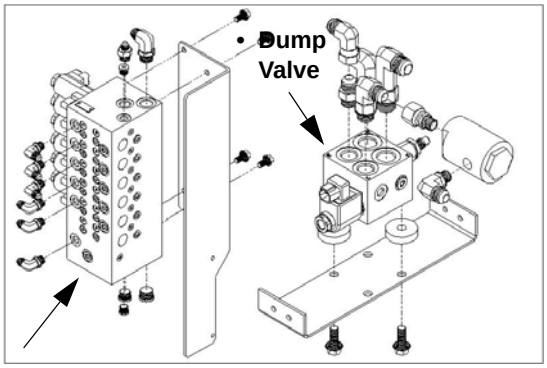


Tasseltrol Control Panel
(Located in operator's station)

Electro-Hydraulic Valves

The Electro-Hydraulic Valves (located on the front of the toolbar) control the Lift Cylinders in their upward and downward movement.

The Dump Valve (located directly beneath the operator's seat) is the main valve, which controls the amount of pressure going to the Lift Valve. The Dump Valve is factory pre-set to 2200 psi.

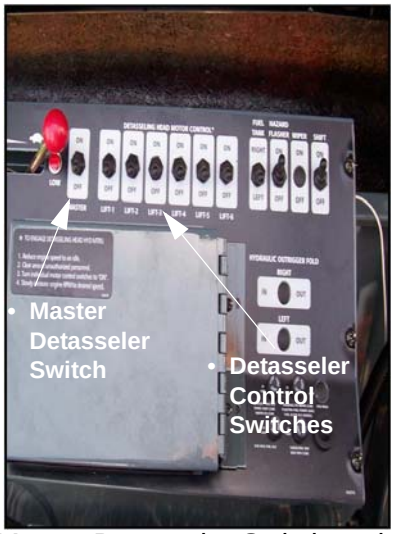


• **Electro-Hydraulic Valves**

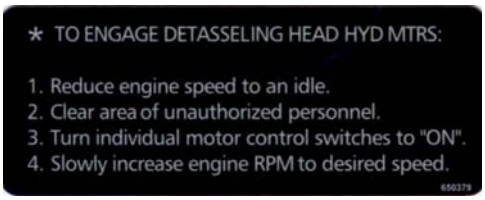
NOTE: To check psi, install a 3000 psi pressure gauge to the Dump Valve Inlet (1). If additional adjustment is required, contact Hagie Customer Support for assistance.

Detasseling Heads

The hydraulic motors on the Detasseling Heads are controlled by the Master Detasseler Switch and are individually turned on and off using the Detasseler Control Switches (located on the side console).



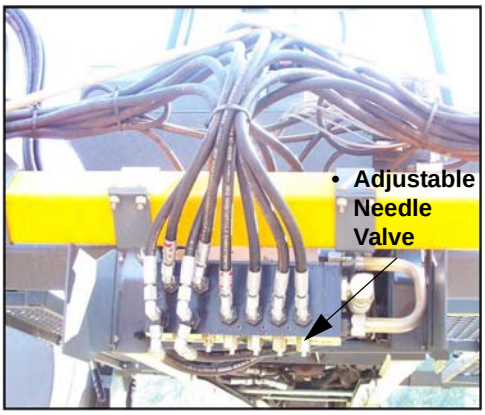
Master Detasseler Switch and Detasseler Control Switches (Located on the side console) -Typical View



Motor Control Valves

- To open the solenoid on the Motor Control Valves (which activate the motors), flip the corresponding switch(es) away from the operator.
- To shut any or all of the motors off, flip the corresponding switch(es) toward the operator.

Each set of motors is controlled with an Adjustable Needle Valve that restricts hydraulic flow to the hydraulic motors, ensuring they do not over-speed and become damaged.



Motor Control Valves -Typical View

NOTE: The Adjustable Needle Valve is factory pre-set and requires no adjustment.

Activate hydraulic motors while engine speed is at idle, then increase engine RPM to operating speed.

NOTE: If the operator is out of the operator's seat for three (3) seconds while the detasseling heads are running, these functions will stop. The detasseling heads will remain off until the operator is seated and turns the Master Detasseler Switch OFF, and then ON again. Refer to the "Operator Presence Switch (OPS)" information provided in the Operating your Detasseler section in this manual for further information on this safety feature.

⚠ WARNING

CALIFORNIA PROPOSITION 65 WARNING

WARNING: Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer and birth defects or other reproductive harm.

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, and chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

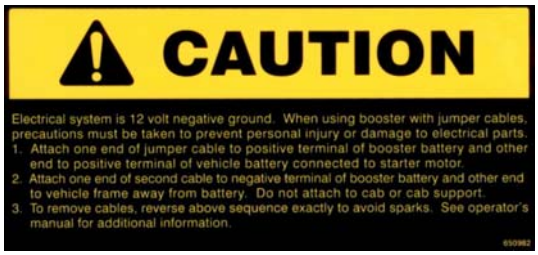
BATTERIES

⚠ CAUTION

Batteries contain sulfuric acid. Avoid contact with skin, eyes, or clothing. Do not inhale fumes or ingest liquid. Batteries contain gases which can explode. Avoid sparks and flames while servicing.

NOTICE

To ensure sufficient electrical contact, battery terminal connections should be as clean and tight as possible.



Access

The battery is located on the rear right-hand side of machine. Open side panel to access.

Battery Access
(Located behind rear right-hand side panel)
-Typical installation shown

NOTE: When servicing the electrical system, always remove the batteries (removing the ground cable first). When reinstalling the batteries, connect the ground cable last.

Cleaning

- Disconnect the battery cables from the batteries.
- Remove any corrosion with a wire brush or battery post brush.
- Wash the battery cable connections and posts with a mild baking soda and ammonia solution.
- Apply grease (or dielectric grease) to prevent corrosion.
- Reconnect the batteries, ensuring connections are tight.
- Clean every 100 hours of operation.

Replacement

Install replacement batteries with ratings equivalent to the following specifications:

- **Voltage** - 12V only.
- **CCA** - 30 seconds at 0 degrees F. (950).
- **Reserve Capacity** - 185 minutes at 25 amps.

BATTERY DISCONNECT SWITCH

WARNING

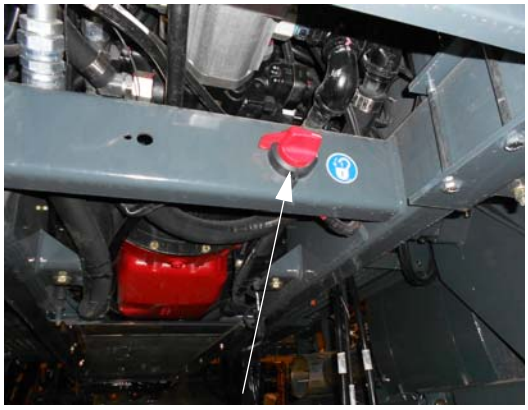
Do not bypass disconnect. Do not terminate electrical devices to battery terminals. Turn Battery Disconnect Switch OFF before servicing electrical equipment. Completely isolate electronics before welding by disconnecting negative battery terminal. Failure to comply may result in serious injury or equipment damage.

Your detasseler is equipped with a Battery Disconnect Switch (located on the rear frame).

The Battery Disconnect Switch disengages the battery, therefore, cutting all electrical power to the engine. Ensure the switch is in the ENGAGED position before starting the engine.

- Rotate the Battery Disconnect Switch to the ON or OFF positions to operate.

NOTE: DO NOT use the Battery Disconnect Switch as a safety device when performing work to the electrical system. Disconnect the negative battery cable before servicing.



Battery Disconnect Switch
(Located on the rear frame)
-Typical View

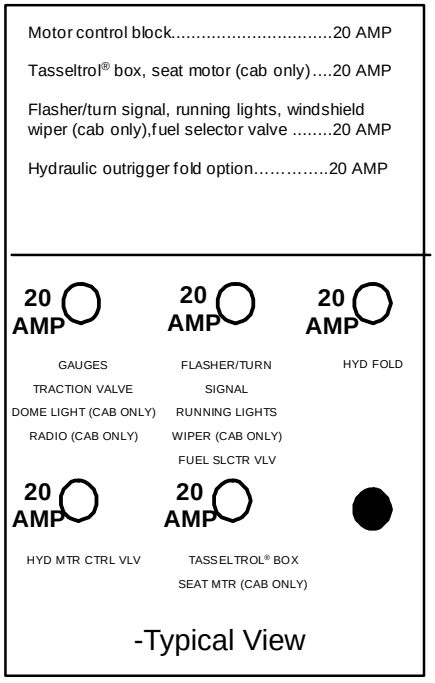
FUSES

Fuses protect individual “lighter duty” electrical circuits on your machine and are located on the side console.

Fuses
(Located on the side console)
-Typical View

If a fuse blows, remove it by rotating the fuse cap “counter-clockwise”, while pushing IN and pull fuse out.

Replace with fuse of equal size and amperage.



-Typical View

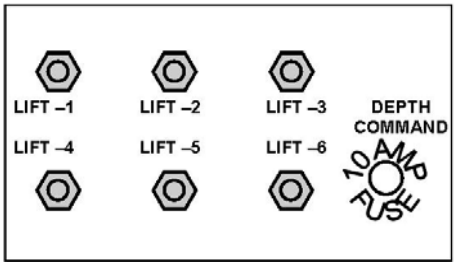
Depth Command Fuse

The Depth Command Fuse is located on the Lift Switch Panel near the operator's station.


Depth Command Fuse
(Located on Lift Switch Panel)
-Typical View

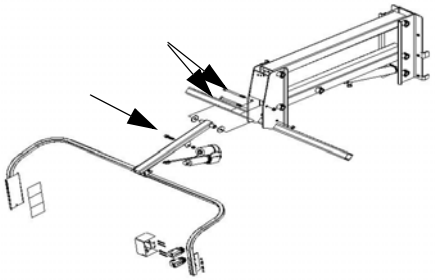
If the Depth Command Fuse blows, remove it by rotating the fuse cap "counter-clockwise" while pushing IN and pull fuse out.

Replace with fuse of equal size and amperage.



-Typical View

NOTE: Operating more than two actuators at one time may cause the fuse to blow. A blown fuse may indicate that the LS/ Depth Command Pivot Bolts (as shown in the following illustration) are too tight. If the fuse continues to blow, determine the cause and correct.


LS/Depth Command Pivot Bolts
-Typical View

CIRCUIT BREAKERS

Circuit Breakers handle the functions of the "heavier duty" electrical circuits on the machine. The breakers will trip when overloaded and automatically reset themselves after they cool down. They will continue to trip and reset as long as the overload or short exists.

If the Circuit Breaker does not reset, replace with a breaker of equal amperage and size.

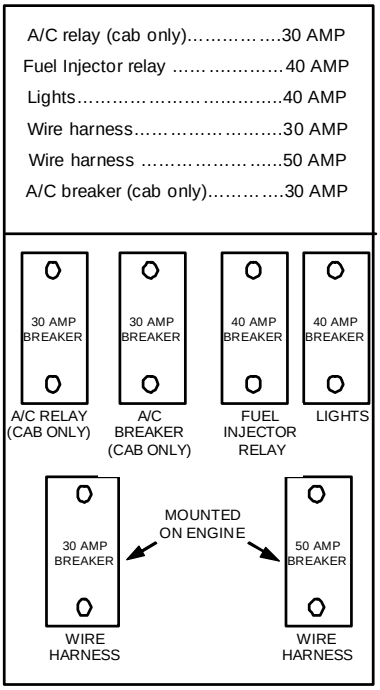
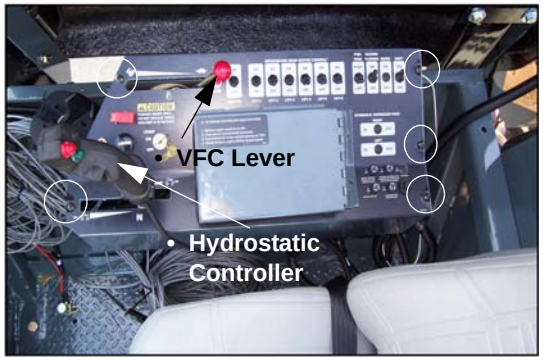


FIG 7.42

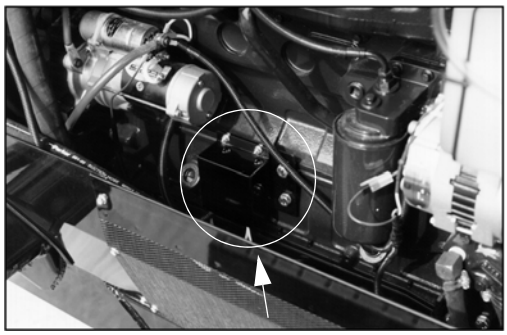
The Circuit Breakers are located toward the rear of the side console. To access:

- Remove the Hydrostatic Controller, VFC Lever, and Panel Screws (circled).



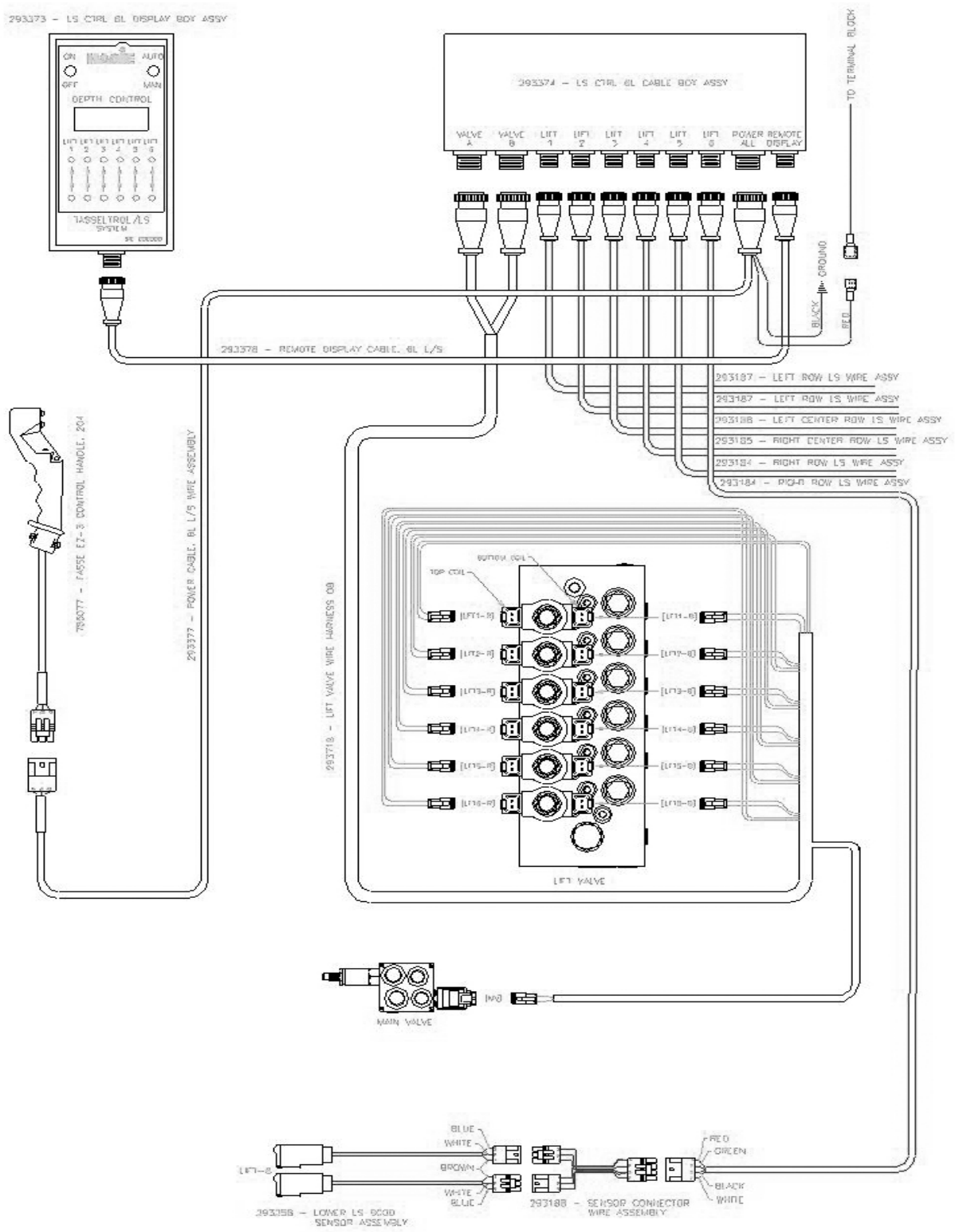
Circuit Breakers
(Located on side console)
-Typical View

The wire harness on the engine is also protected by Circuit Breakers (mounted on the engine itself). Remove cover to access.



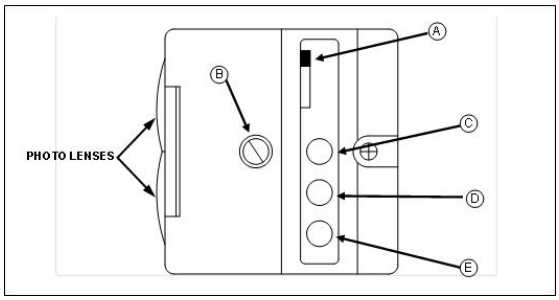
Circuit Breakers (Wire Harness)
(Located on the engine)
-Typical View

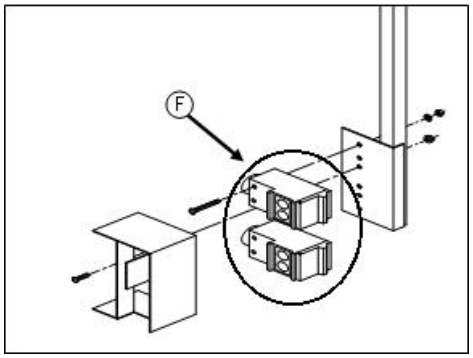
TASSELTROL WIRING DIAGRAM



LS PHOTO LIGHT INDICATORS

LS Photo Light Indicator
-Typical View





- The upper and lower LS Photo Lights (F) are equipped with LED lights (A, C, D, E) that indicate operation status.
- The LT/DK (Light/Dark) Switch (A) located on the photo light sensor changes the activated condition of the green LED from ON (LT) to OFF (DK).

NOTE: The LT/DK Switch does not affect the functional operation of the light, only how it is displayed. This switch should be set to "LT".

- The Sensitivity Adjustment Screw (B) should always be set to MAXIMUM.
- The Yellow LED Light (C) indicates that the power is ON.
- The Green LED Light (D) indicates output energized (sending a signal to the Tasseltrol Box and opening the raise or lower stack valve).
- The Red LED Light (E) indicates that the photo light is receiving reflected signal.

DEPTH COMMAND

-If Equipped

Your detasseler may be equipped with an adjustable Depth Command feature, which allows the operator to adjust the depth of the LS System from the operator's seat.

The Depth Command Switches are located near the operator's station.

Depth Command Switches
(Located near the operator's station)
-Typical View

- **To lower the cutting or pulling height**, select desired Depth Command Switch and press DOWN.
  This will extend the Actuator, raising the LS System, which in turn lowers the cutting or pulling height.

Actuator
-Typical View

- **To raise the cutting height**, lower the Actuator by pressing the corresponding Depth Command Switch UP.

NOTICE
DO NOT operate more than two (2) Actuators at one single time. Failure to comply may result in blowing a fuse on the switch panel.

Further Information

Refer to the *Maintenance and Storage* section of this manual for additional information on the Depth Command System.

TASSELTROL®/LS SYSTEM 12™

Tasseltrol Control Panel
(Located near the side console)

Setting Up

Enter Parameter Mode

- Select AUTO by pressing the AUTO/MAN Switch (A) (located on the Tasseltrol Control Panel).
- Press the ON/OFF Switch (B) in the ON position to activate the Depth Control.

- On the LCD display will be four lines. The top line displays the program level. The second line will flash SELECT MANUAL (as a warning that you are about to enter the parameter adjusting mode).
  Current parameter settings are displayed on the bottom line (the values for B, R, T, L, and D are typically set.) The machine type will vary from o, p, or c, depending on the valve system.

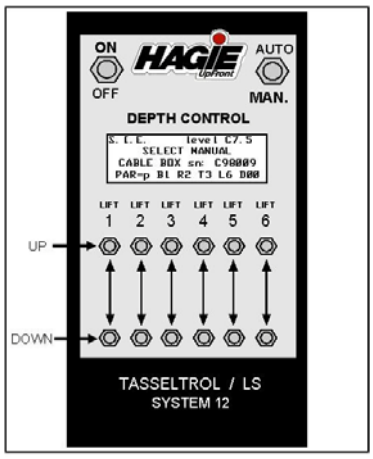
NOTE: The L may vary, depending on the number of lifts on the machine.

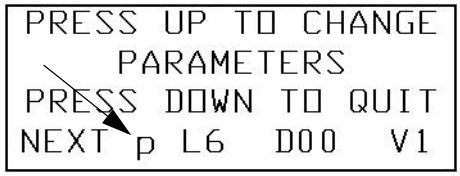
NOTICE

Machines with Tasseltrol software version 8.7 and greater have an enhancement that allows the operator to set the lift speeds for auto mode functions.

Match the Machine Valve Type

- Press the LIFT 1 UP Switch (under "PAR" on the LCD display) **two times** to display the machine type selected.





- The o, p, or c to the right of "NEXT" (on the bottom line of the LCD display) indicates the type of machine. Press the LIFT 2 UP Switch that is located under this item. The display will now change to the "Select Machine Type" screen.

- Select the type of machine that the unit is installed on.

NOTE: For machines built prior to 2007 with the original valve system, press the LIFT 4 Switch under the "o". If the machine is equipped with proportional valves, press the LIFT 5 under the "p".

For machines built 2007 or newer with proportional valves, press the LIFT 6 Switch under the "c".

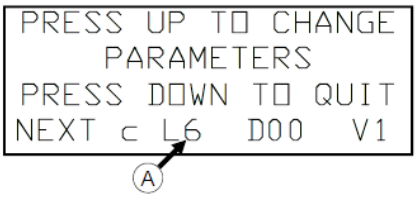
- The screen will now revert back to the SELECT MANUAL page with the machine type that you have just selected displayed on the bottom line.

Match How Many Lifts Are On The Machine

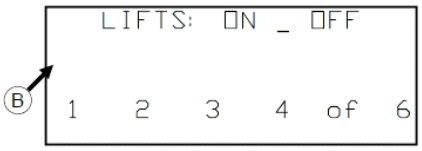
(System must be in parameter mode before proceeding)

- Press the LIFT 1 UP Switch (under "PAR" on the LCD display) **two times** to display how many lifts are on.

NOTE: The L6 (A) on the display indicates that all six lifts are ON.



- To change the number of lifts to match your machine, press the LIFT 3 UP Switch under the "L". This will display the LIFTS: ON-OFF screen (B).

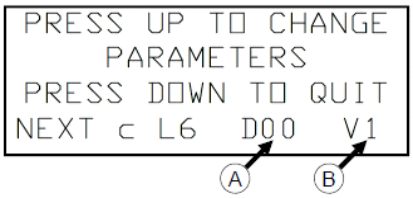


- Press the UP Switch under the lift that you want to turn on/off.
- After selecting which lifts are to be on/off, press the LIFT 1 DOWN Switch **two times** to exit the screen and save the new parameter setting.

Establish "D" and "V"

(System must be in parameter mode before proceeding)

- Press the LIFT 1 UP Switch (under "PAR" on the LCD display) **two times** and the display will show the current setting of the *Dwell* (A) for "all up" and the *Valve Compensation* (B) as either 1=ON, or 0=OFF.



- The "D" value indicates how many seconds that the lifts will travel up after the ALL-UP Switch (located on the Hydrostatic Controller) is pressed momentarily. This time can be changed by pressing the LIFT 4 UP Switch.

NOTE: The time is factory preset to 0, but can be set to a value of 20 while adjusting the machine valves.

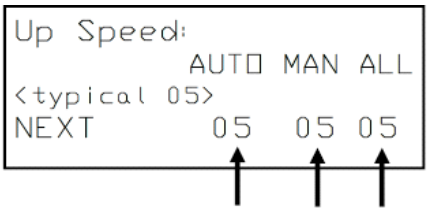
- Pressing the LIFT 4 UP Switch will add five seconds to the value each time until "D25", then will return to "D00".
  When the value is set to D00, the up motion stops as soon as the Hydrostatic Controller ALL-UP Switch is released.
  If the value is set to anything greater than D00, the ALL-UP Switch will only need to be pressed momentarily and the lifts will continue the up move until the parameter has been reached.
- The "V" value indicates whether or not the valve automatic compensation is performed. Press the LIFT 6 UP Switch to change this value.

NOTE: This value is typically left at "V1".

Set The Lift Up Speeds

(System must be in parameter mode before proceeding)

- Press the LIFT 1 UP Switch (under "PAR" on the LCD display) **three times** and the display will show the current setting of the up speed for an auto, manual, and all-up move with a value from 01 to 10.
- With the value set to 01 in "MAN" or to 03 in "AUTO" and "ALL", the lifts will move slow enough to see if any are moving slower than the rest. These settings are useful for adjusting the offset of the values to get all the lifts to move at the same speed. Typically, these values are set to 05 for a fairly fast speed. The values can be changed by pressing the Up/Down Switches under AUTO, MAN, or ALL.



NOTE: These values can be saved by pressing the LIFT 1 DOWN Switch to exit screen and save the new parameter setting.

Set The Lift Up Offset

(System must be in parameter mode before proceeding)

- Press the LIFT 1 UP Switch (under "PAR" on the LCD display) **four times** and the display will show the current setting of the UP OFFSET for the first three lifts. Pressing NEXT again will show the offset setting for the last three lifts.
  The UP OFFSET for each valve can be set from -19 to +20, as needed to get the lift speed to match the speed of the other lifts.

NOTE: The more positive the number, the faster the lift will move. Typically, the offset is initially adjusted at a very slow speed by setting the LIFT UP SPEED to either 01 or 02.

NOTICE

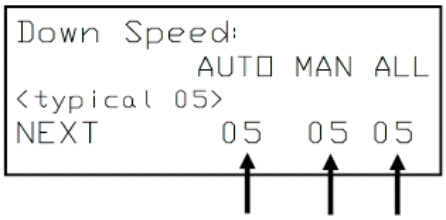
To get all the lift speeds even, you may need to lower the speed below 05. This will ensure that the flow is being controlled by the value rather than restricted by the .042" orifice. After adjusting the offset parameters for even up speeds, the up speed value can be increased back to 05.

- Exit the parameter mode and check the speed of each lift by moving it manually with the Up/Down Switches.
- Correct the fastest and slowest lifts to match the average speed by changing the offset value with the Up/Down Switches for that lift while in the LIFT UP OFFSET parameter.
- When finished setting the offset values, return the speed setting back to approximately 05.
- With all the lifts at their lowest points, select AUTO.
- Press the ALL-UP Switch (located on the Hydrostatic Controller) so the lifts all move up at the same time. Correct the values for any lifts that are not close to the speed of the others.
- The values can be saved by pressing the LIFT 1 DOWN Switch to exit the screen and save the new parameter setting.

Set The Lift Down Speeds

(System must be in parameter mode before proceeding)

- Press the LIFT 1 UP Switch (under "PAR" on the LCD display) **six times** and the display will show the current setting of the down speed for an auto, manual, and all-resume move with a value of 01 to 10.
- With the value set to 03, the lifts will move a little slower. This setting of 03 is useful for adjusting the offset of the values for getting all the lifts the same speed.
  Typically, these values are set to 05 for a fairly fast speed. The values can be changed by pressing the Up/Down Switches under the AUTO, MAN, or ALL.
- The values can be saved by pressing the LIFT 1 DOWN Switch to exit the screen and save the new parameter setting.



Set The Lift Down Offset

(System must be in parameter mode before proceeding)

- Press the LIFT 1 UP Switch (under "PAR" on the LCD display) **seven times** to display the current setting of the down offset for the first three lifts.
- The down offset can be adjusted for a value from -19 to +20.

NOTE: The more positive the number, the faster the lift will move. Typically, the offset is initially adjusted at a slower speed by setting the LIFT DOWN SPEED to 03.

NOTICE

Once parameters have been set, very little adjustment will be required.

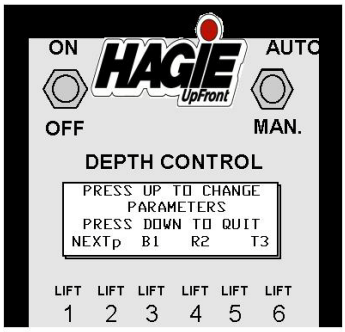
- Exit parameter mode and check the speed of each lift by moving it manually with the Up/Down Switches.
- Correct the fastest and slowest lifts to match the average speed by changing the offset value with the Up/Down Switches for that lift while in the DOWN OFFSET parameter.
- When finished setting the offset values, return the speed setting back to approximately 05.
- With all lifts at their highest points, select AUTO so all lifts move down together. Correct the values for any lifts that are not close to the speed of the others.
- The values can be saved by pressing the LIFT 1 DOWN Switch to exit the screen and save the parameter setting.

Once you have set the operating parameters, you can adjust the Response Parameters. These parameters are used to adjust the response of the controller and seldom need changing. The parameter values are stored in flash memory and will be retained even when no battery power is present.

Your programmable control panel is factory preset with the following parameter defaults:

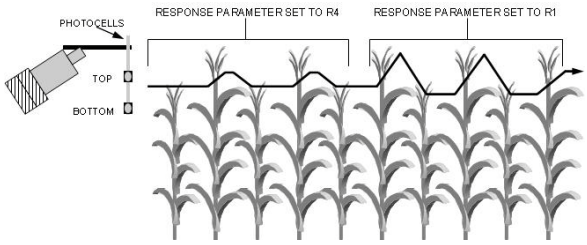
- **Bottom Parameter (B1)**
- **Response Parameter (R2)**
- **Top Parameter (T3)**

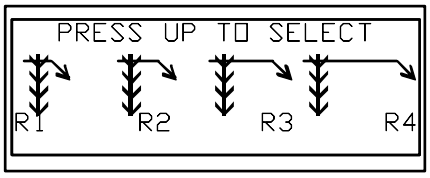
These parameters will always be displayed until the control panel is reprogrammed. Once reprogrammed, the new values for the parameters will be displayed on the control panel.



To program the unit, first select the Response Parameter. If further adjustment is required for top and/or bottom parameters, continue with their adjustments.

Tasseltrol Response Parameter





The Response Parameter is used to adjust the response time of both photocells.

How quickly the down motion starts when no corn is detected by either top or bottom cells, and how quickly the up motion is stopped when corn is no longer detected by the top cell. This can be changed by selecting R1, R2, R3, or R4.

NOTE: More corrections will occur with R1 selected and fewer with R4 selected. The normal or default value for this parameter is R2, but can be set to any desired value.

Use the Response Parameter to adjust overall correction activity and to compensate for ground speed. If the pullers are moving too quickly and frequently, the Response Parameter can be increased toward R4. If the pullers are too slow to

respond to changes in the corn depth, decrease the parameters toward R1. Generally, this parameter can be left at R2.

To display the Response Parameter:

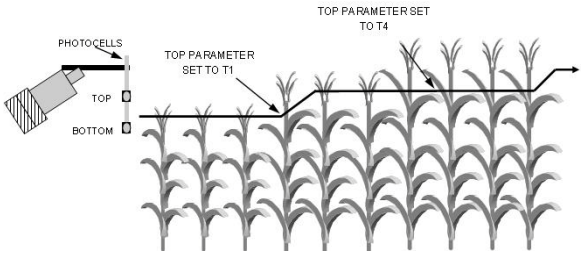
- Select AUTO and turn the control panel ON. Wait three seconds for the SELECT MANUAL message to appear.
- Press the UP Switch under “PAR”.
- Press the UP Switch under the “R” value.

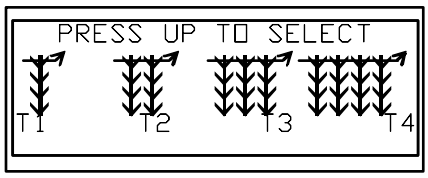
The active value of the parameter is indicated by it blinking on and off while the other three options are displayed continuously.

To select a new value for the parameter:

- Press the UP Switch under the desired selection.
- After selecting one of the four options, press the LIFT 1 DOWN Switch to escape this parameter.
- To save new values and escape the parameter mode, press the LIFT 1 DOWN Switch a second time.

Tasseltrol Top Parameter





The Top Parameter is used to adjust the sensitivity time of the top photocell. The top photocell starts the up motion when it’s light path is blocked by corn. How much corn it has to see before starting the up move can be changed by selecting one of the four values: T1, T2, T3, or T4.

NOTE: With T1 selected, less corn is required to start an up move. The normal or default value for this parameter is T3, but can be set to any desired value.

If the pullers move up too easily when a taller stalk of corn passes, increase the parameter toward T4. If the pullers stay deep too long when taller corn passes, decrease the parameter toward T1. Generally, this parameter can be left at T3.

To display the Top Parameter:

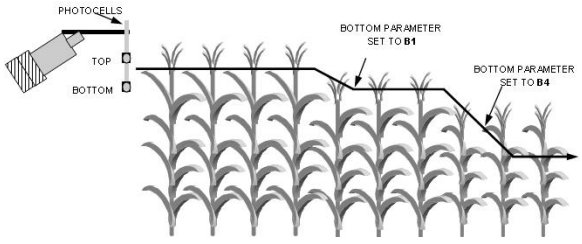
- Select AUTO and turn the control panel ON. Wait three seconds for the SELECT MANUAL message to appear.
- Press the UP Switch under “PAR”.
- Press the UP Switch under the “T” value.

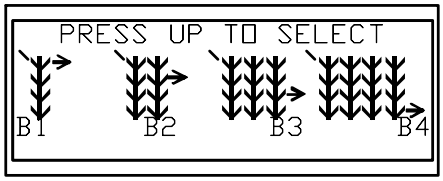
The active value of the parameter is indicated by it blinking on and off while the other three options are displayed continuously.

To select a new value for the parameter:

- Press the UP Switch under the desired selection.
- After selecting one of the four options, press the LIFT 1 DOWN Switch to escape this parameter.
- To save new values and escape the parameter mode, press the LIFT 1 DOWN Switch a second time.

Tasseltrol Bottom Parameter





The Bottom Parameter is used to adjust the sensitivity time of the bottom photocell. The bottom photocell stops the down motion when it’s light path is blocked by corn. Selecting one of

the four values (B1, B2, B3, or B4) will set how much corn the photocell has to see before it stops moving down.

NOTE: With B1 selected, the down move will stop as soon as corn is detected. The normal or default value for this parameter is B1, but can be set to any desired value.

If the pullers run too shallow after moving down into shorter corn, increase the parameter toward B4. If the pullers move too deep when going into shorter corn or oscillates between the top and bottom photocells, decrease the parameter toward B1. Generally, this parameter can be left at B1.

To display the Bottom Parameter:

- Select AUTO and turn the control panel ON. Wait three seconds for the SELECT MANUAL message to appear.
- Press the UP Switch under "PAR".
- Press the UP Switch under the "B" value.

The active value of the parameter is indicated by it blinking on and off while the other three options are displayed continuously.

To select a new value for the parameter:

- Press the UP Switch under the desired selection.
- After selecting one of the four options, press the LIFT 1 DOWN Switch to escape this parameter.
- To save new values and escape the parameter mode, press the LIFT 1 DOWN Switch a second time.

To use the control panel with it's normal parameter setting:

1. Turn the ignition to the ON position.
2. Turn the Tasseltrol Control Panel ON.
3. Press the Auto/Manual Switch to MANUAL.

NOTE: At this time, the display will read "MANUAL" in addition to other information identifying the control panel.

4. Press the individual row switches for up and down movement. An arrow is the display will indicate direction of each lift assembly.

NOTE: "P" indicates pressure, UP is only available on "o-type" machines, and UP/DOWN are available on "p and c-type" machines.

5. If the Auto/Manual Switch is left in the AUTO position when the unit is first started, the display will tell you to "SELECT MANUAL".
   After you have selected MANUAL, switch back to the AUTO position.
6. To override the system, press the desired UP Switch to raise the attachment. When the switch is released, the system will go back into AUTO mode.
7. If the ignition is left on and the Auto/Manual Switch is left in AUTO position, the down coils on the electro-hydraulic valve will lose power after 45 seconds.
   To reactivate, switch the Auto/Manual Switch from AUTO to MANUAL, then back to AUTO.
8. The control panel is set up with a feature that if a unit loses contact during operation in AUTO mode, the unit will automatically rise.
   If this should occur, switch to MANUAL mode and determine the cause for the malfunction.

Short Corn Operation

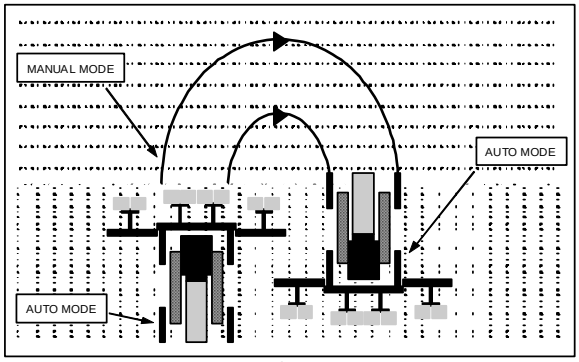


FIG 5.51

When operating the LS System, always select MANUAL when first entering the field. Once you have maintained your operating speed and

the cutting and/or pulling depth, select AUTO. When you come to an area where the corn is very short, such as a low spot in the field, you may want to switch to the MANUAL position until you reach taller corn.

Always switch to the MANUAL position before you reach the end rows (see previous figure). This will allow the cutter or puller heads to maintain their cutting or pulling height when re-entering the field. Then you may switch back to AUTO.

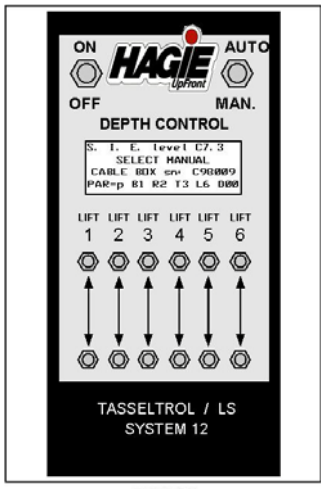
NOTE: You may choose to use the ALL-UP/ HOLD function instead of switching to manual. This function will raise all the detasseling heads in one motion.

All-Up/All-Hold Function

The All-Up/All-Hold Function can be used to raise or lower all row units at the same time. The switches to control this option are located on the Hydrostatic Controller (1).

All row units will move up when the red switch is activated, and will lower when the green switch (2) is activated.

-Typical View



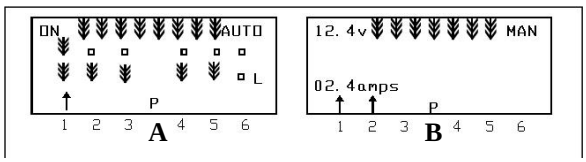
The parameters for Dwell on the up move can be set to 0, 5, 10, 15, 20, or 25 seconds. The heads will move up this amount of time without having to hold the red switch in (only in values greater then 0.) All heads will hold this position when the parameter is reached. To resume automatic depth control, activate the green switch.

Additional Features

To temporarily lock a lift up, hold the UP Switch for that particular lift while switching from MANUAL to AUTO mode. The display will show “L” for that lift to indicate that it is locked and will not move down automatically.

NOTE: The lift will return back to normal operation when MANUAL mode is again selected (A).

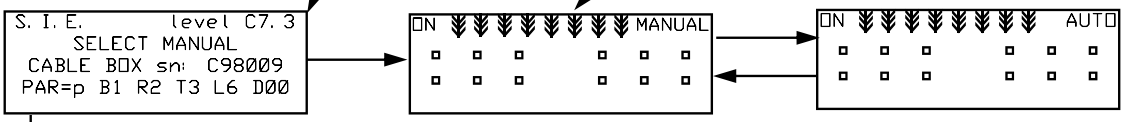
To display the supply voltage and current for the controller, press the ALL-UP Switch while in MANUAL mode (B).



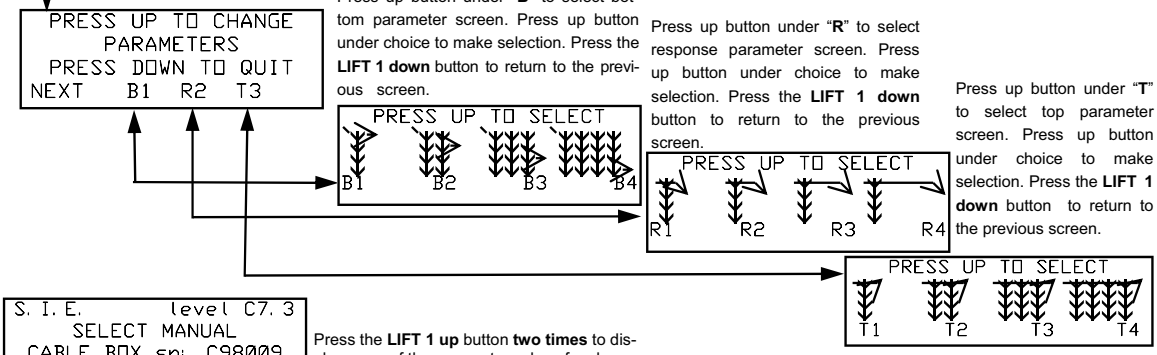
TASSELTROL FLOWCHART

Turn on the TASSELTROL® power switch with the "AUTO/ MANUAL" switch in "AUTO" position. This is how to enter the adjusting mode. Select MANUAL to save parameters and return to AUTO for automatic head adjustments.

Turn on the TASSELTROL® power switch with the "AUTO/ MANUAL" switch in "MAN" position.



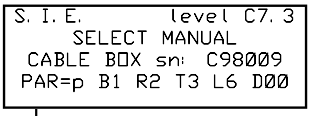
Press up button under "**PAR**" **one time** to enter adjusting mode. Press the **LIFT 1 down** button **one time** to return to the **SELECT MANUAL** screen.



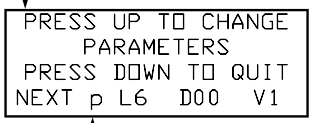
Press up button under "**B**" to select bottom parameter screen. Press up button under choice to make selection. Press the **LIFT 1 down** button to return to the previous screen.

Press up button under "**R**" to select response parameter screen. Press up button under choice to make selection. Press the **LIFT 1 down** button to return to the previous screen.

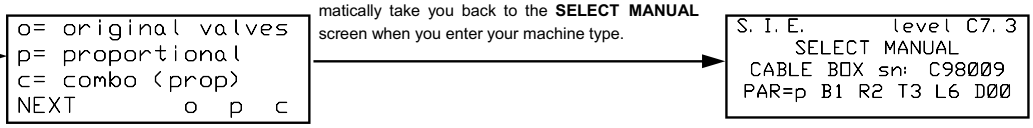
Press up button under "**T**" to select top parameter screen. Press up button under choice to make selection. Press the **LIFT 1 down** button to return to the previous screen.

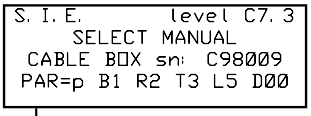


Press the **LIFT 1 up** button **two times** to display more of the parameter values for change.

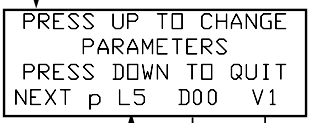


This parameter will be either "**o**" for all machines produced with the original valve system prior to 2007 and including the 2007 model year of the 204 and the 204SP; "**p**" for 2008+ model year machines with proportionate valve system; or "**c**" for the 2007+ STS combination sprayer/ detasseler machines with the proportionate valve system. This screen will automatically take you back to the **SELECT MANUAL** screen when you enter your machine type.



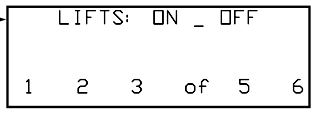


Press the **LIFT 1 up** button **two times** to display more of the parameter values for change. Press the **LIFT 1 down** button to return to the **SELECT MANUAL** screen.

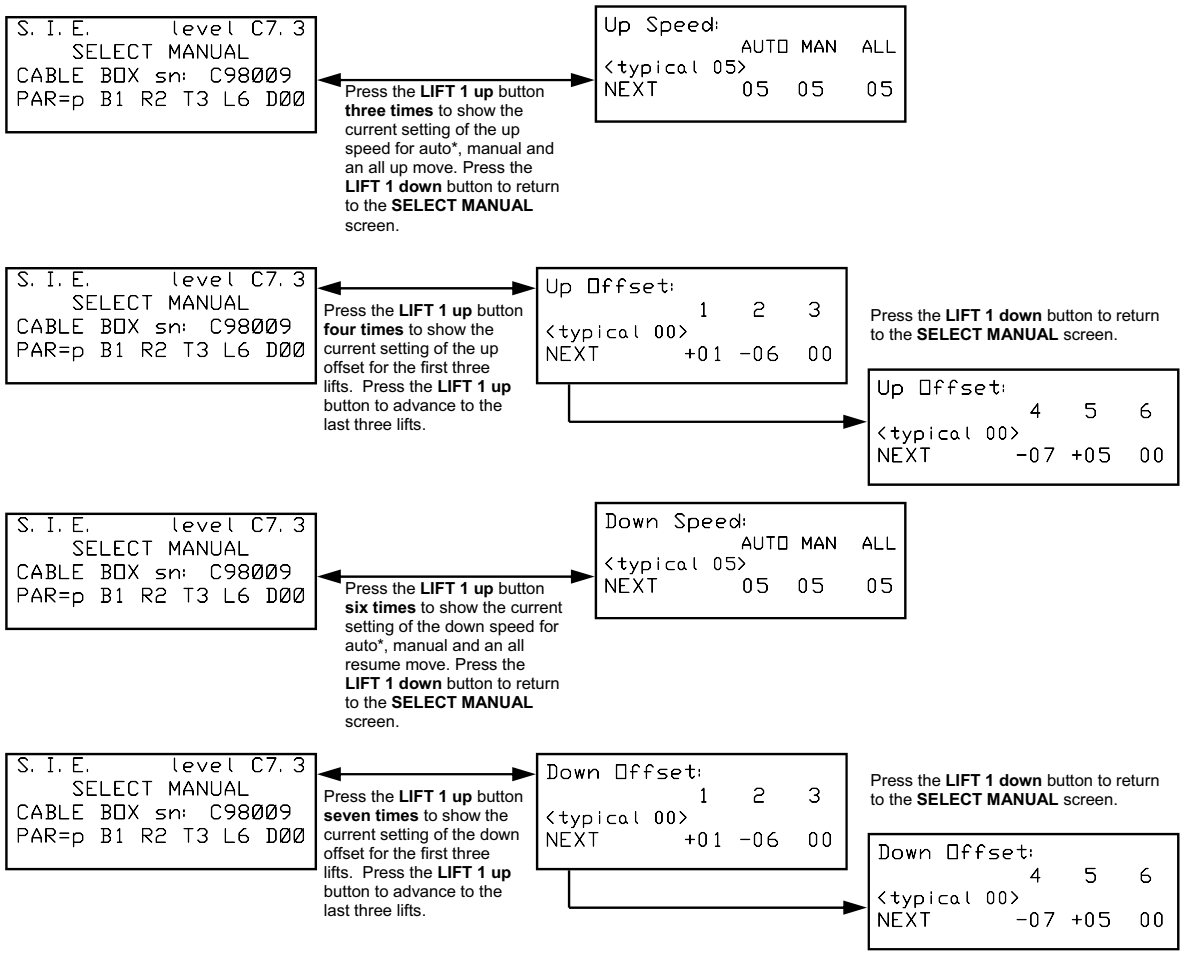


"**V**" parameter is for valve compensation. **V1** = yes for compensation and **V0** = no for do not compensate the valve output for system variables. Press the **LIFT 1 down** button to return to the previous screen. **This is normally left at V1.**

Press up button under "**D**" to select **ALL UP** dwell time. Choose in 5 second increments between 0 and 25. Press the **LIFT 1 down** button to return to the previous screen.



Press up button under "**L**" to select screen to turn lifts on or off. Press the appropriate "up" button to turn that lift on or off. (example: Lift 4 is off) Press that switch again to turn it back on. Press the **LIFT 1 down** button to return to the previous screen.



NOTE: With the exception of the machine valve type screen, which automatically reverts upon changing, you may advance through all the parameter settings while making changes without returning to the **SELECT MANUAL** screen each time by pressing the **LIFT 1 up** button instead of the down button. **LIFT 1 down** saves the changes upon exiting the parameter screen.

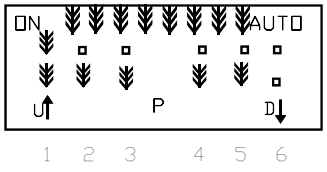
KEY

▫ **=** reflector with no corn present

⩔ = the photo cell is blocked by corn

↓ = the down valve is on

↑ = the up valve is on



P = the pressure valve is on. Displayed in the lower middle part of the screen.
LV = the source of voltage fell below 10.8 vdc for a low voltage condition. Displayed in the upper left corner of the screen in place of "ON" when situation occurs.
SHORT = current exceeded 18 amps and outputs are turned off for a short time. Displayed in place of "ON" when situation occurs.
t = task not completed in the 30 seconds allowed, will resume on next task. Displayed in place of "ON" when situation occurs.
of = a lift is turned off by the parameter settings
L = the operator locked that lift up until manual is selected again. Displayed next to bottom photo cell icon for the valve that is locked.
ALL HOLD = the operator pressed the ALL-UP button on the hydrostatic handle. Displayed in the middle of the screen.
U,D, or B = either the up, down, or both manual buttons are pressed for that lift. Displayed next to the arrow for the lift being used.

SERVICE - FLUIDS

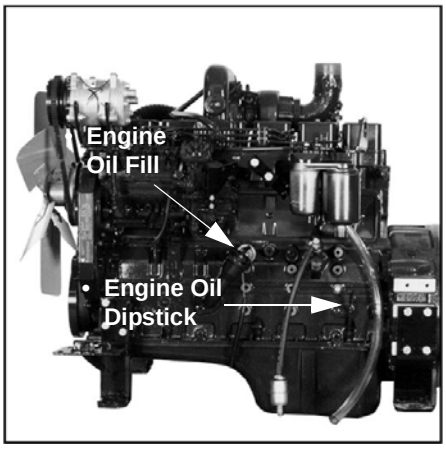
Engine Oil

The engine oil level dipstick is located on the left-hand side of the engine. Never operate the engine with the oil level below the "L" (low) mark or above the "H" (high) mark. Wait at least five (5) minutes after shutting the engine off before checking the oil level.

NOTE: Check the engine oil level daily.

NOTICE

The engine must be level when checking the oil level to ensure accuracy.



Engine Oil Fill and Dipstick
(Located on the left-hand side of engine)
-Typical View

Capacity

- Low to high mark capacity = 2 quarts
- Engine oil pan capacity = 17 quarts

NOTE: Change the engine oil every 250 hours or yearly, whichever occurs first. Replace with 15W40 diesel engine oil.

Hydraulic Oil

Check the hydraulic oil reservoir/dipstick daily. Add just enough fluid so the oil level reaches the bottom tip of the dipstick.

Hydraulic oil will expand when heated. Always check the hydraulic oil level when it is cool.

NOTE: Ensure the Lift Cylinders are in the lowered position before checking the hydraulic oil level.

Hydraulic Oil Dipstick
(Located on top of
Hydraulic Oil Reservoir)
-Typical View

Premium hydraulic fluids containing high quality rust, oxidation, and foam inhibitors are required. Hydraulic oil must conform to one of the following types:

- Anti-Wear Hydraulic Oil
- Type-F Automatic Transmission Fluid
- Agricultural Hydraulic Transmission Fluid

NOTE: Replace the hydraulic oil after 500 hours of operation, or at the beginning of each detasseling season, whichever occurs first.

NOTICE

Ensure area is clean before changing hydraulic oil and filter to avoid contamination, such as dirt and debris.

Torque Hub® Oil

Oil Level

Each Torque Hub should maintain an oil level of half-full at all times. Less than that would limit lubrication and overfilling would cause overheating and machine damage.

To check the oil level:

NOTE: Check the Torque Hub oil level daily.

1. Position the Torque Hub so one of the drain plugs is positioned at 12 o'clock. The other plug will be positioned at either 9 o'clock or 3 o'clock.

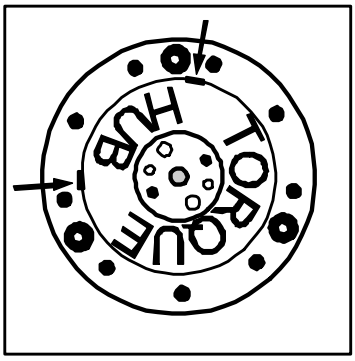


FIG 7.3

2. Remove the bottom plug.
   If no oil comes out, the oil level is too low.
3. If oil is needed, remove the top plug and fill with EP-90 oil, just until oil begins to come out of the lower hole.

4. Reinstall plugs when oil level is satisfactory.

To change the oil:

1. Position one of the Torque Hub plugs at 6 o'clock and the other at 3 o'clock or 9 o'clock.
2. Remove the bottom plug to drain oil.
3. Once all of the oil is drained, reinstall the bottom plug and remove the top plug.
4. Refill Torque Hub with EP-90 or 85-140 oil.

NOTE: Torque Hub oil should be changed after the first 50 hours of operation. Subsequently, it should be changed every 100 hours of operation or yearly, whichever occurs first.

General Maintenance

If your detasseler is going to sit unused for an extended period of time, occasionally rotate the Torque Hubs by driving the machine forward and backward - at least half of a tire rotation to adequately coat all internal hub parts. This will prevent rusting if moisture inadvertently entered the hub during an oil change.

NOTICE

Failure to rotate the Torque Hub and disperse oil may cause rusting and internal hub damage.

Cooling System

Your cooling system should always be sufficiently charged with an adequate mixture of antifreeze and water, regardless of climate, to maintain broad operating temperature range.

NOTE: Your cooling system has been factory-charged with an ethylene glycol-based antifreeze.

NOTICE
Ethylene Glycol-based antifreeze and Propylene Glycol-based antifreeze should never be mixed.

Checking Concentration

The radiator cap is located behind the rear of the operator's station.

Radiator Cap
(Located behind the rear of the operator's station)
-Typical View

NOTE: Never remove the radiator cap from a hot engine. Always allow the engine to cool before servicing the cooling system. Check coolant level daily.

A 50/50 antifreeze and water mixture is a conservative mixture, which allows protection against both overheating and freezing. If a stronger antifreeze mixture is required, ensure not to exceed the engine manufacturer's guidelines for antifreeze-water mixing.

The following Ethylene Glycol Table gives a few examples of ethylene glycol antifreeze/water mixture protection values.

Ethylene Glycol		
40%	-23° C	-10° F
50%	-37° C	-34° F
60%	-54° C	-65° F

Concentration should be checked every 500 hours of operation or at the beginning of each winter season, whichever occurs first. A refract meter should be used to check concentration.

NOTE: "Floating Ball" type density testers are not accurate for use with a heavy duty diesel cooling system.

Checking Coolant Level

The coolant level should be checked daily when the engine is cold. Maintain coolant level within the normal "cold range" marks.

NOTE: Ensure that if you are adding antifreeze, that it is ethylene glycol-based. DO NOT mix with propylene glycol-based antifreeze.

Changing Coolant

Coolant should be changed periodically to eliminate the buildup of harmful chemicals. Drain and replace the coolant every other detasseling season or every 1,000 hours of operation, whichever occurs first.

Ethylene glycol-based antifreeze should be mixed with soft water only, as hard water contains minerals, which break down the anti-corrosion properties of the antifreeze.

Fuel

⚠ CAUTION

ENGINE FUEL CAN BE DANGEROUS

- Turn off engine before refueling.
- Do not smoke while refueling.
- Clear off any spilled fuel after refueling.

CARELESSNESS WITH FUEL CAN KILL

Type

No. 2 diesel fuel is recommended for the best performance and fuel economy under most operating conditions. In operating conditions less than 32-degrees F., use a blend of No. 1 and No. 2 diesel fuel.

NOTE: The addition of No. 1 diesel fuel may cause loss of power and/or fuel economy.

Refueling

- Always turn OFF the engine and allow it to cool before refueling.
- Do not smoke while refueling.
- Keep a fire extinguisher nearby when refueling.
- DO NOT fill fuel tank completely. Fuel can expand and run over. Wipe up all spilled fuel and clean with detergent and water before starting the engine.

Priming

If the fuel system should happen to run dry and lose it's prime, a Priming Bulb (located on the left-hand side of the engine) is provided for use in filling the engine fuel filters.

Priming Bulb
(Located on the left-hand side of the engine)
-Typical View

Windshield Washer Fluid

The windshield washer reservoir is located on the rear of the cab. Check fluid level occasionally and refill with non-freezing automotive windshield washer fluid, as required.

Air Conditioning

The cab is equipped with an R-134A Air Conditioning System.

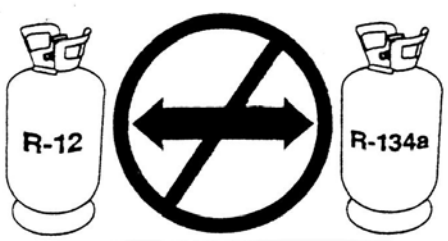
NOTICE

- Recharge with R-134A only.
- Charge to 2 lbs., 12 oz.

Recharging

Recharge the Air Conditioning System with R-134A refrigerant only.

NOTE: Confirm refrigerant before recharging the system. If your system is mistakenly recharged with R-12 refrigerant, machine damage (such as compressor seizure) may result.
If you do not have the proper equipment, it is recommended that you allow an independent service technician service your Air Conditioning System.



DO NOT MIX REFRIGERANTS

Fluid Capacities and Types	
Engine Oil Pan (including filter)	15.9 quarts (SAE 15W-40)
Engine Oil Dipstick (L-H mark)	2 quarts
Hydraulic Oil Reservoir	25 gallons (anti-wear hydraulic oil)
Torque Hub® Oil Level	Approx. 16 oz. (EP-90)
Engine Cooling System	5.1 gallons (ethylene glycol)
Fuel Tanks (2)	40 gallons/ea. (No. 1 or 2 diesel)

SERVICE - FILTERS

Engine Air Intake

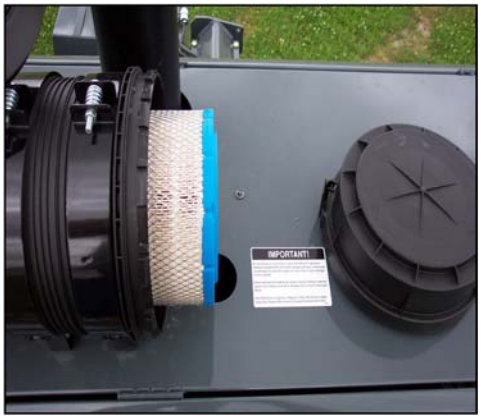

Engine Air Intake Filter
(Remove air cleaner end cap to access)
-Typical View

Removal

The Engine Air Intake Filter should only be removed if replacement is required.

- Loosen the air cleaner and remove end cap.
- Remove the filter.

NOTE: Use care when removing the filter to ensure dust from the filter does not enter the air intake passage.


-Typical View

Replacement

Your detasseler is equipped with a Filter Minder® to notify you of filter element efficiency. Refer to the following Filter Minder service guidelines.

Cleaning

It is not recommended to clean the air intake filter element. However, a clean damp cloth should be used to wipe away dust and debris from the air cleaner housing.

NOTICE

Do not tap filter to remove dust. A crushed filter caused by tapping may result in engine damage. Remove and replace filter as recommended.

Filter Minder

The Filter Minder (located near the operator's station) is an air restriction monitoring system that progressively and constantly indicates how much air filter capacity remains.

NOTE: Check Filter Minder reading daily.

Filter Minder
(Located near the operator's station)
-Typical View

Service

Service the air cleaner when the Filter Minder reads 20" (80% of dirt holding capacity) and before the yellow indicator reaches the red line on the Filter Minder.

NOTE: Be sure to reset the system after servicing.

Fuel Filters

Primary (Water Separator)

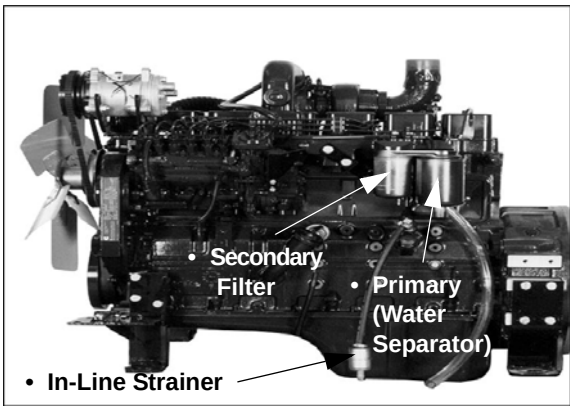
- Drain water and sediment from the Water Separator daily.
- Replace every 500 hours of operation or yearly, whichever occurs first.

Secondary

- Replace every 500 hours of operation or yearly, whichever occurs first.

In-Line Strainer

- Note direction of fuel flow arrow when replacing.



Grille Screens

To maintain maximum airflow through the engine cooling system's radiator, oil cooler, and air conditioning condenser, the cooling air intake grille screens must be inspected often and cleaned periodically.

NOTICE

Failure to keep cooling systems clean can cause overheating and damage to the engine and hydrostatic systems.

Removal

- **Side Grille Screen** - Slide out of housing (located on side of radiator) to remove.

Side Grille Screen
(Slide out of radiator housing to remove)
-Typical View

- **Top Grille Screen** - Remove two bolts (located on top radiator panel) and set aside. Remove panel to access screen.

Top Grille Screen
(Remove two radiator panel bolts/panel to access)
-Typical View

Cleaning

NOTE: When cleaning the cooling fins of the radiator, oil cleaner, or A/C condenser with compressed air or water, be careful not to damage the cooling fins, which may impair cooling capabilities.

- Use compressed air to dislodge most large debris or loose dirt from the grille screens. Water from a pressurized hose may also be used. If necessary, screens may be soaked in warm, soapy water and scrubbed gently with a brush.

-Typical View

Suction, Charge Pressure, and Return Filters

NOTE: Replace these filters after the first 50 hours of operation. Subsequently, replace every 250 hours of operation or yearly, whichever occurs first.

Suction Filter

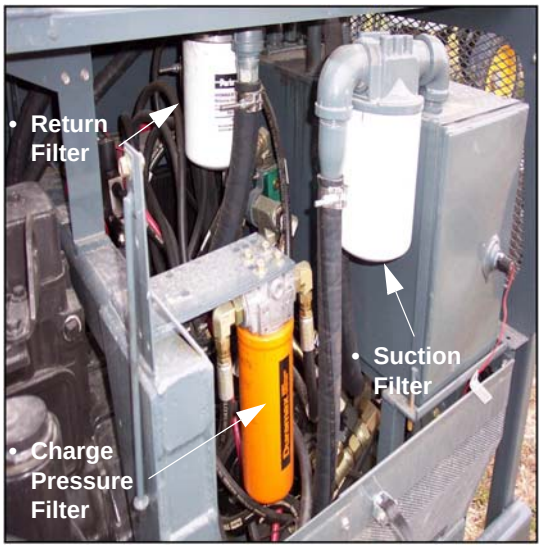
- Remove Suction Filter and replace with a new 10 Micron-rated Suction Filter.

Charge Pressure Filter

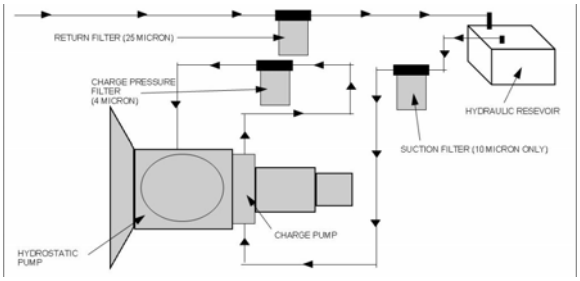
- Remove Charge Pressure Filter and replace with a new 4 Micro-rated Charge Pressure Filter.

Return Filter

- Remove Return Filter and replace with a new 25 Micron-rated Return Filter.



Suction, Charge Pressure,
and Return Filters
(Located on rear left-hand side of machine)
-Typical installation shown



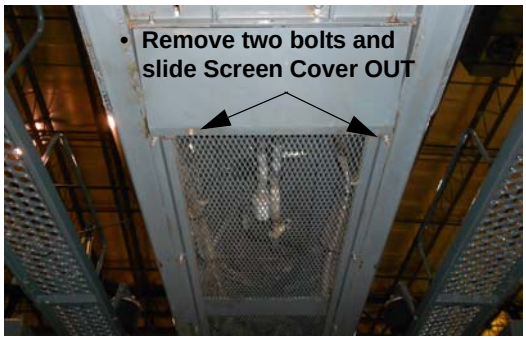
High Pressure In-Line Filters

Lift/Dump Valves

Lift Control System Valves are protected by a 90 Micron In-Line Sintered Bronze Filter (located beneath the operator's station on underside of machine - slide screen cover out to access).

Filter Access

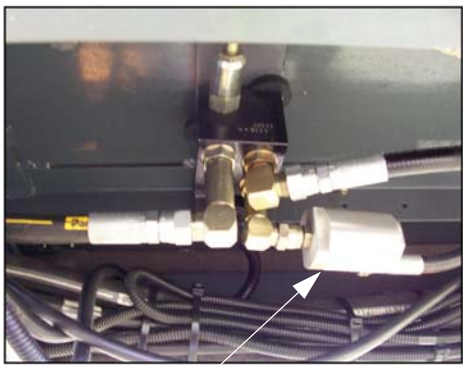
1. Remove two bolts (located on panel ahead of Screen Cover) and set aside.



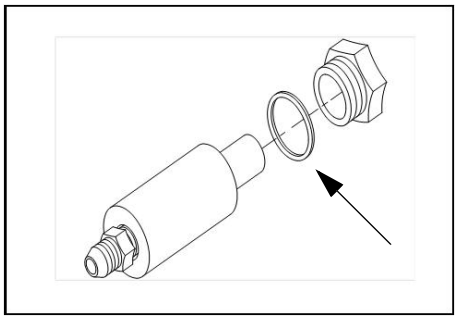
Screen Cover
(Located on underside of machine)
-View looking toward rear of machine

2. Slide Screen Cover OUT to access filter.

NOTE: When the filter element is removed for cleaning, caution should be taken to ensure the gasket is properly placed when reinstalling. Also, pay special attention to the direction of flow, ensuring the end marked "OUT" is oriented correctly.



90 Micron In-Line Filter
(Shown with Screen Cover removed)
-Typical View

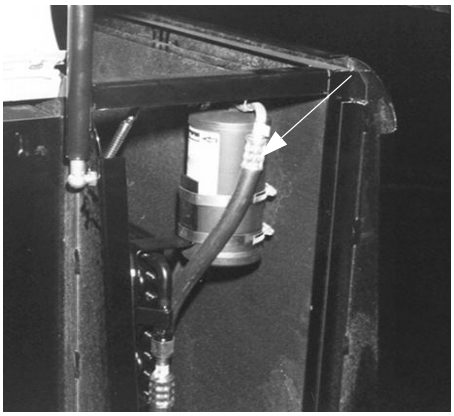


90 Micron In-Line Filter Gasket
-Typical View

A/C System Receiver/Dryer

-If Equipped

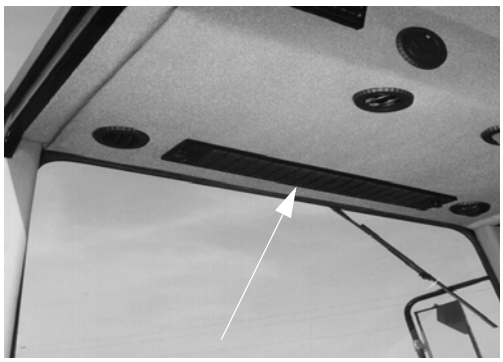
- The A/C System Receiver/Dryer (located on the right-hand side of radiator screen) should be replaced if the A/C loop is ever open (e.g. when replacing a compressor or condenser line, etc.)



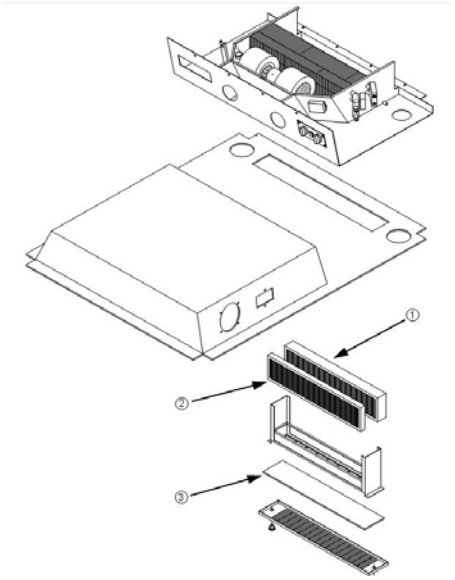
A/C System Receiver/Dryer
(Located on right-hand side of radiator screen)
-Typical View

Fresh Air Cab Filters

(Refer to the Parts Manual for specific location and replacement part numbers on your model)



Fresh Air Cab Filters
(Located on cab headliner)
-Typical View



Paper Filter (1)

- Remove the paper filter and gently tap it against a flat surface.
- Direct low-pressure compressed air through the filter to remove large particles.
- Replace the paper filter, if necessary.

NOTE: The paper filter should be cleaned every 50 hours of operation, or more often, if necessary.

Charcoal Filter (2)

- Remove and replace Charcoal Filter at the first sign of chemical odor entering the cab.

Recirculating Filter (3)

The Recirculating Filter may be cleaned with soap and water. Replace if filter becomes worn.

SERVICE - LUBRICATION

NOTICE

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

Leg Bearings

The leg assemblies on your machine are constructed with upper and lower nylon bearings for suspension telescoping between the inner and outer leg weldments. These bearings must be lubricated to avoid bearing failure and ensure optimal ride quality.

Grease Points (zerks) are located on the sides of the leg assemblies - one on the upper bearing, and two on the lower bearing. Refer to following illustration.

NOTE: Grease bearings on front and rear legs daily.

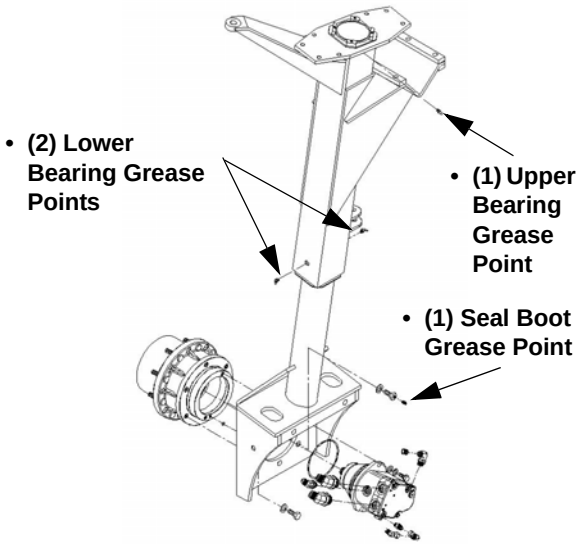
During operation of the detasseler, the grease may possibly be wiped away due to the passing of crop leaves. Therefore, bearings should be greased at least two times per day (e.g. morning and noon).

NOTE: If the crop is mature enough or plant population is high enough, more frequent leg bearing grease application may be required to ensure proper lubrication and optimal performance.

Torque Hub® Seal Boot

Each leg assembly has a Torque Hub Seal Boot (located between the wheel motor and Torque Hub). Grease Seal Boot every 50 hours of operation, or as needed.

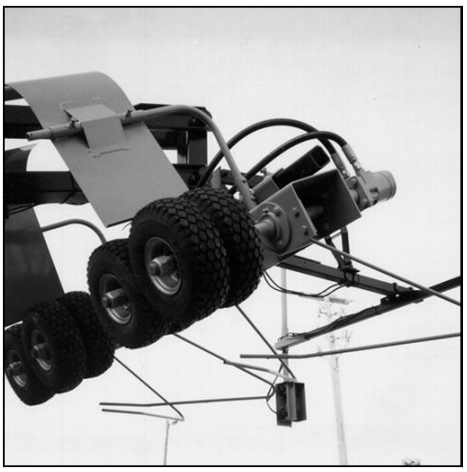
NOTE: An over-greased Seal Boot will leak grease out around the seal, and when heated, may cause the appearance of a failed wheel motor leaking hydraulic fluid. Wipe away any excess grease after servicing.



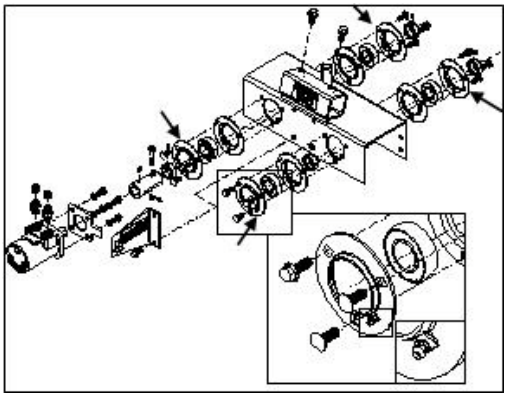
Leg Bearing and Torque Hub Seal Boot Grease Points
-Typical View

Quad Puller Heads

Each Quad Puller Head is featured with four bearings, which are equipped with Grease Points (zerks). Grease each bearing two times per day (e.g. morning and noon).



Quad Puller Head
-Typical View



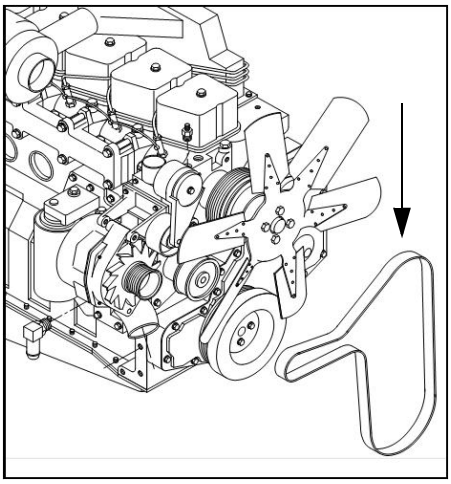
-Typical View

SERVICE - BELTS

Engine Drive Belt

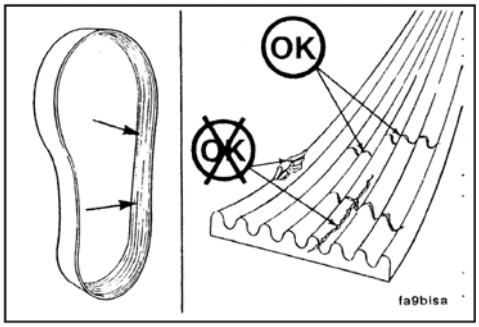
Removal

- Insert a 3/8” square ratchet drive into the belt tensioner.
- Lift UP and remove the Engine Drive Belt.



Inspection

- Visually inspect the Engine Drive Belt daily.
- Check the belt for intersecting cracks.



NOTE: Transverse cracks (across the belt width) are acceptable. Longitudinal cracks (direction of the belt length) that intersect with transverse cracks are not acceptable.

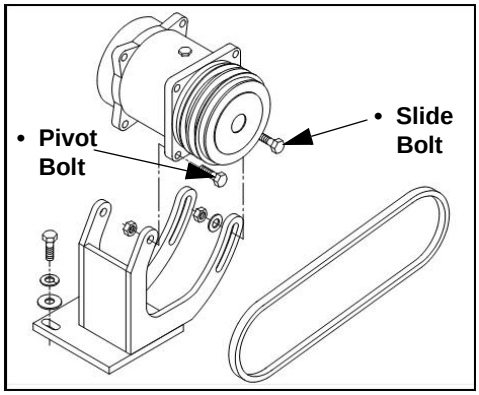
- Replace the Engine Drive Belt if it is frayed or has material missing.

A/C Compressor Belt

-If Equipped

Visually inspect the A/C Compressor Belt daily. Replace the belt if it is frayed or has missing material.

- To tighten the A/C Compressor Belt, loosen the two Pivot Bolts and the two Slide Bolts.



- Using a pry tool, adjust the tension of the A/C Compressor Belt to desired tautness.
- While maintaining tension, re-tighten all four bolts.

NOTE: Inspect A/C Compressor Belt every 250 hours of operation.

SERVICE - BOLT TORQUE

NOTICE

Check lug nut torque immediately after receiving the machine and every 50 hours of operation thereafter.

Wheel Bolts

NOTE: If you do not have the proper equipment to mount a tire, contact a local qualified tire service center.

NOTICE

To achieve even torque consistency, the tire should be completely off the ground.

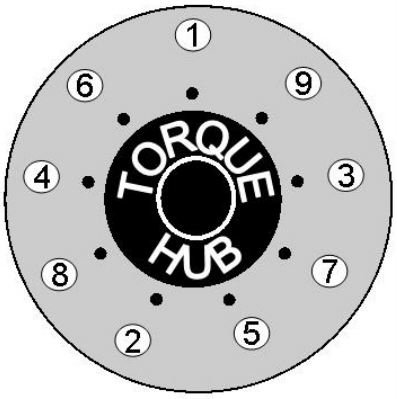
To install wheel/tire assembly on the Torque Hub®:

1. Ensure threads are thoroughly cleaned of rust and dirt.

NOTE: Threads should be dry (no lubricant).

2. Align the wheel bolt holes with the Torque Hub studs.
3. Mount wheel on the hub.
4. Start all of the lug nuts and tighten until snug.
5. Following the torque sequence (as shown in the following illustration), turn each lug nut to a torque value of 120 dry ft.-lbs.

NOTE: Use slow, even pressure on the torque wrench. Quick or jerky movements can cause inaccurate values.



6. Repeat the same sequence to 150 dry ft.-lbs., and again to 180 dry ft.-lbs.

NOTE: If the wheel turns during lug nut torquing, lower machine to the ground - just enough for the tire to touch and prevent rotation. Or, more preferably, place a suitable wedge between the tire and the ground. Lower the machine and resume operation. Recheck torque after 30 minutes of operation.

7. When torquing is complete, lubricate exposed threads with anti-seize grease.

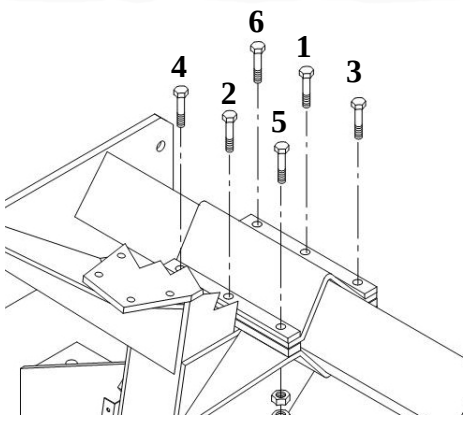
Leg Mounting Bolts

CAUTION

Never remove more than three leg mounting bolts from any single leg mount.

To torque leg mounting bolts:

1. Start lug nuts on the mounting bolts and tighten until snug.
2. Following the torque sequence (as shown in the following illustration), turn each lug nut to a value of 100 dry ft.-lbs.



NOTE: Use slow, even pressure on the torque wrench. Quick or jerky movements can cause inaccurate values.

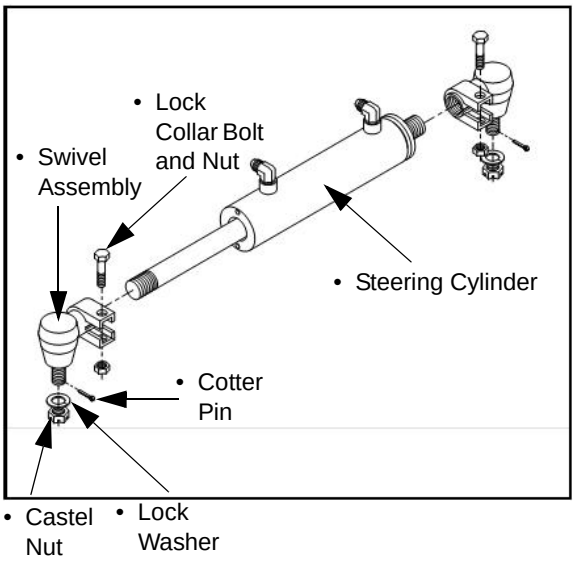
3. Lower machine to the ground and repeat same sequence to 130 dry ft.-lbs., and again to 160 dry ft.-lbs.
4. Resume operation and recheck torque values after 30 minutes.

SERVICE - TOE-IN

Toe-In Adjustment

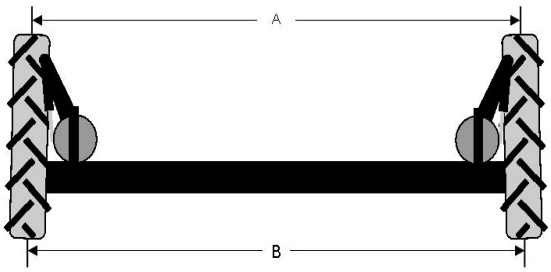
To adjust Toe-In of the front tires, perform the following for both front steering cylinders:

1. Remove Cotter Pin, Castel Nut, and Lock Washer.



2. Loosen Lock Collar Bolt and Nut.
3. Lightly tap Swivel Assembly out of steering arm.
4. Move left and right tires evenly until the difference in Dimension A and B are within specified range.

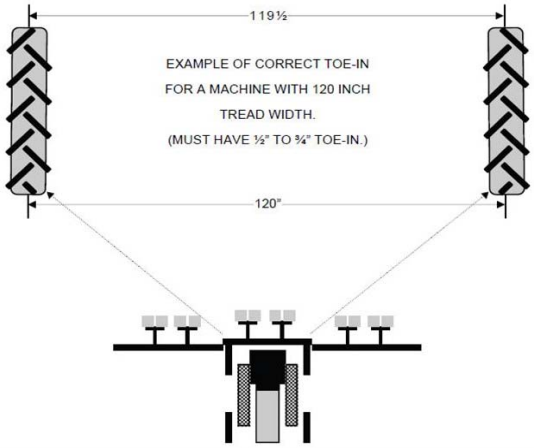
NOTE: Dimension A should be 1/2” to 3/4” less than Dimension B.



5. Screw Swivel Assembly IN or OUT on the Steering Cylinder until the tread part lines up with the steering arm.
6. Insert Swivel Assembly into steering arm.
7. Install Lock Washer and Castel Nut, then tighten.
8. Install Cotter Pin.
9. Tighten Lock Collar Bolt.

To Gauge Toe-In

- Use a tape measure placed at one-half tire height on the front center seam of the front tire, compared to the same measurement of the rear of the front tire.
- Subtract the front measurement from the rear measurement (which must be a positive number).
- Correct Toe-In should range between 1/2” and 3/4”.



NOTE: Toe-in is factory preset and should not require adjustment unless the steering cylinders are removed or if you experience difficulty steering one way versus the other.

Contact Hagie Customer Support for additional assistance regarding Toe-In measurement and adjustment.

SERVICE - AIR SPRINGS

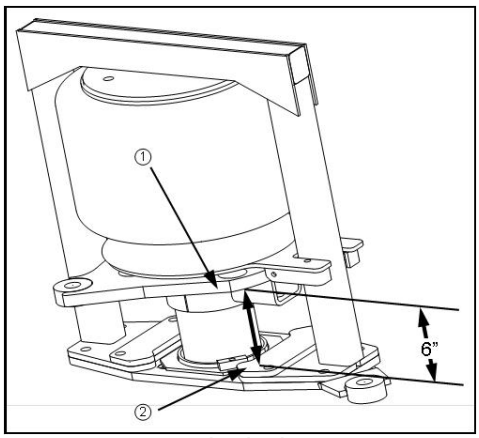
Air Ride Adjustment

WARNING

Air Springs can explode resulting in serious injury or death to your or others. DO NOT exceed 100 PSI. Keep hands and body parts away from suspension travel.

- Park the machine on level ground with outriggers in the completely UNFOLDED and field operating position.
- Adjust the air pressure in each Air Bag until the distance between the bottom of the Steer-

ing Plate (1) and the top of the Bumper Pad Strike Plate (2) is six (6) inches.



-Typical View

- With a clear path on level ground, drive the machine forward 100 yards, cycling the steering back and forth, and shifting machine weight from side to side.
- Stop on level ground and remeasure. Adjust as necessary.
- Repeat procedure until desired measurement is achieved.
- Inspect each Air Bag height (with a tape measure) daily. Adjust as necessary.

The amount of pressure in the Air Bags will depend on the options available on the machine. Typically, the pressure should be approximately 42 PSI (front) and 24 PSI (rear).

The pressure should be enough that the tie rods and steering cylinders are LEVEL, as shown in the following photo.


-Typical View

NOTE: Over-inflated or under-inflated Air Bags will cause stress to the machine, resulting in damage.

SERVICE - DRIVE TRAIN

Hydrostatic Pump

When the Hydrostatic Controller is in the NEUTRAL position, the machine should not move in either direction. If it does, the Neutral setting (of the controller) on the Hydrostatic Pump requires adjustment.

Repair/Replacement

Contact Hagie Customer Support for assistance.

Auxiliary Gear Pumps

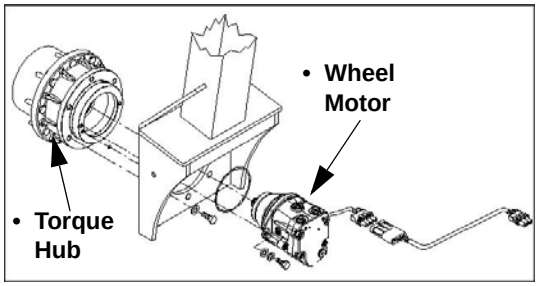
Repair/Replacement

Contact Hagie Customer Support for assistance.

Wheel Motors

Repair/Replacement

Contact Hagie Customer Support for assistance.



Torque Hubs®

Refer to “Service: Torque Hubs” elsewhere in this section for maintenance and service information.

Repair/Replacement

Contact Hagie Customer Support for assistance.

SERVICE - TIRES

> **⚠ CAUTION**
>
> When inflating a tire, use an extension hose with an in-line air gauge and "clip-on" air chuck. This will allow the operator to stand clear of a possible tire side explosion trajectory.

Air Pressure

Check tire pressure once per week, or every 50 hours of operation. Never inflate a tire more than the recommended maximum air pressure.

NOTE: Tire pressure will depend on load quantity due to various options installed.

When inflating a tire, use an extension hose with an in-line air gauge and "clip-on" air chuck. This will allow the operator to stand clear of a possible tire side explosion trajectory.

Wheel Bolts

Refer to "Service: Bolt Torque" elsewhere in this section for torque specifications and torquing pattern.

Mounting

NOTE: If you do not have the proper equipment to mount a tire, contact a local qualified tire service center.

Tire should be mounted on rim according to the following illustration for optimal traction and tread cleaning action.

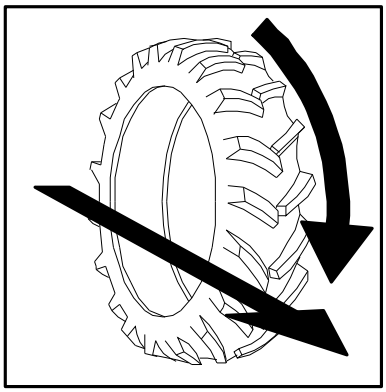


FIG 7.55

Toe-In

Refer to "Service: Toe-In" elsewhere in this section for information on measurement and adjustment.

DAILY INSPECTION

INSPECTION POINT	ACTION *(if necessary)*
CHECK	
Engine Oil Level	Add Oil
Radiator Coolant Level	Add Antifreeze Solution
Coolant Overflow Reservoir Level	Add Antifreeze Solution
Engine Drive Belt	Replace Belt
Filter Minder®	Replace Air Filter Element
Hydraulic Reservoir Level	Add Hydraulic Oil
Neutral Setting (Hydrostatic Pump)	Adjust Setting
Visual Inspection of Leg Mounting Bolts	Tighten
Visual Inspection of Air Bag Height	Adjust Height
Battery	Clean or Tighten
Radiator Grille Screens	Remove and Clean
Check for Loose or Missing Parts (e.g. Shields)	Tighten or Replace
Check for Fluid Leaks	Determine Cause and Correct
Quad Puller Tire Pressure (four on each row)	Add Air
Cutter Blade Retaining Bolt	Tighten
GREASE	
Upper/Lower Leg Bearings	See “Service: Lubrication” elsewhere in this section
Quad Puller Bearings (four on each row)	See “Service: Lubrication” elsewhere in this section
DRAIN	
Fuel/Water Separator	See “Service: Filters” elsewhere in this section

SERVICE INTERVALS

Service Point	Clean	Change	Check	Grease	Drain
Engine Oil		**I**	**Daily**		
Radiator Coolant Level			**Daily**		
Coolant Overflow Reservoir Level			**Daily**		**A**
Coolant Concentration		**As Req.**	**500 Hrs.***		
Radiator Grille Screens	**As Req.**				
Engine Drive Belt		**As Req.**	**Daily**		
A/C Compressor Belt (cab only)		**As Req.**	**250 Hrs.**		
A/C Compressor (cab only)		**B**			
A/C Dryer (cab only)		**As Req.**			
Primary Fuel Filter (Water Separator)		**500 Hrs.***			**Daily**
Secondary Fuel Filter		**500 Hrs.***			
In-Line Fuel Filters		**As Req.**			
Air Intake Filter	**	**C**			
Filter Minder®		**D**	**Daily**		
Hydraulic Reservoir Oil Level		**500 Hrs.***	**Daily**		
Hydraulic Suction Filter		**E***			
Hydrostatic Charge Pressure Filter		**E***			
Hydraulic Return Filter		**E***			
High Pressure In-Line Filter (Lift Valve/Dump Valve)	**As Req.**				
Torque Hub® Oil Level		**F**	**Daily**		
Torque Hub Zerk (1 on each leg/seal boot)				**H**	
Quad Puller PSI (4 locations - each row)			**Daily**		
Quad Puller Bearings (4 locations - each row)				**2x Daily**	
Cutter Blade Retaining Bolt (Tighten)			**Daily**		
Leg Bearing Zerks (3 on each leg)				**2x Daily**	
Leg Mount Bolt Torque			**Daily**		
Battery	**100 Hrs.**	**As Req.**	**Daily**		

Lug Nut Torque			**G**		
Tire Pressure			**50 Hrs.**		
Fresh Air Filter (cab only)	**As Req.**	**500 Hrs.***			
Charcoal Filter (cab only)		**As Req.**			
Recirculation Filter (cab only)	**As Req.**	**As Req.**			
Fuses/Circuit Breakers		**As Req.**			
Air Ride Suspension (visual)			**Daily**		
Air Ride Suspension (tape measure)			**Daily**		

As Req. = As Required

(*) - Or at the beginning of each season (yearly), whichever occurs first, or as required.
(**) - Not recommended.
(A) - Coolant system should be drained every other season, or every 1000 hours of operation.
(B) - Charge as required, use proper equipment.
(C) - Follow Filter Minder manufacturer's recommendations.
(D) - Reset each time you service air filter.
(E) - First 50 hours of operation, then every 250 hours thereafter.
(F) - First 50 hours of operation, then every 100 hours thereafter.
(G) - Immediately, then every 50 hours thereafter.
(H) - Grease every 50 hours of operation, or as needed. Wipe away excess grease after servicing.
(I) - Refer to engine manufacturer's operation manual.

Initial Inspection Points After Receiving Machine

Immediately

(then every 50 hours of operation thereafter)

- Check Lug Nut Torque.

First 50 Hours of Operation

(then every 100 or 250 hours of operation - refer to Service Intervals chart)

- Change Torque Hub Oil.
- Change Hydrostatic Charge Pressure Filter.
- Change Hydraulic Suction Filter.
- Change Hydraulic Return Filter.

Daily

- Check Engine Oil.
- Drain Primary Fuel Filter (Water Separator).
- Check Radiator Coolant Level.
- Check Radiator Coolant Overflow Reservoir Level.
- Check Engine Drive Belt.
- Check Filter Minder.
- Check Hydraulic Oil Reservoir Level.
- Grease Leg Bearings.
- Check Leg Mount Bolts.
- Check Battery.
- Check Quad Puller PSI.
- Grease Quad Puller Bearings (2 times).
- Check/Tighten Cutter Blade Retaining Bolt.
- Visually Check Air Bag Suspension Height.

As Required

- Change Coolant Concentration.
- Clean Radiator Grille Screens.
- Change Engine Drive Belt.
- Change A/C Compressor Belt.
- Change A/C Dryer.
- Charge A/C Compressor.

- Change Primary Fuel Filter (Water Separator).
- Change Secondary Fuel Filter.
- Change In-Line Fuel Pre-Filter.
- Change Hydraulic Reservoir Oil.
- Clean High-Pressure In-line Filter (Lift Assembly Dump Valve).
- Change Battery.
- Clean Fresh Air Intake Cab Filter.
- Change Fresh Air Intake Cab Filter.
- Change Charcoal Cab Filter.
- Clean Recirculation Cab Filter.
- Replace Fuses and Circuit Breakers.
- Grease Torque Hub Seal Boot.
- Adjust Air Ride Suspension Height.
- Change Engine Air Filter Element (per manufacturer's recommendations).

Every 50 Hours

- Check Tire Pressure.
- Check Lug Nut Torque.
- Measure Air Bag Suspension Height (w/tape measure).
- Grease Torque Hub Seal Boot.

Every 100 Hours

- Check Torque Hub Oil Level.
- Clean Battery.

Every 250 Hours

- Check A/C Compressor Belt.
- Change Hydrostatic Charge Pressure Filter.
- Change Hydraulic Suction Filter.
- Change Hydraulic Return Filter.

Every 500 Hours

(or yearly, whichever occurs first)

- Check Coolant Concentration.
- Change Primary Fuel Filter (Water Separator).
- Change Secondary Fuel Filter.
- Change Hydraulic Reservoir Oil.
- Change Torque Hub Oil.
- Pack Bearing on Non-Drive Tire Hub (Quad Puller Assembly).
- Change Engine Oil.

1000 Hours

(or every two years, whichever occurs first)

- Drain Coolant System.

STORAGE

Preparing For Storage

1. Perform daily level checks, lubrication, and bolt/linkage inspections, as required in this manual.
2. Every other season, drain the coolant from the engine and radiator. Probe the drain holes during drainage to ensure they are not clogged by sludge, scale, or other deposits. Fill the cooling system to the top with a 50/50 water/antifreeze mixture. Run the engine to operating temperature and recheck level.

NOTE: If antifreeze is added, run the engine to operating temperature to ensure proper mixing of solution.

3. Add a fuel stabilizer to the fuel and fill the tank.
4. Run the engine until it reaches operating temperature, then drain the engine oil. Refill with fresh oil of recommended weight and install a new lubricating oil filter element.
5. With the engine at normal operating temperature, cycle all hydraulic functions, including the steering.
6. Release tension on all belts.
7. Use plastic bags and water-resistant adhesive tape to seal the air intake opening, all exhaust manifold openings, engine oil filter cap, hydraulic oil tank breather cap, and fuel tank caps.
8. Disconnect and remove batteries. Completely clean and charge the batteries. Coat the terminals with dielectric grease and store the batteries in a cool place (above freezing).
9. Thoroughly clean the detasseler. Touch up any painted surfaces that are scratched or chipped.

NOTE: For paint touch-up recommendations, contact the Hagie Customer Support department.

10. Replace worn or missing decals. Refer to "Safety Decals" in the *Safety and Precautions Section* for proper location of warning decals and corresponding part number.

NOTE: For decal replacement, contact the Hagie Customer Support department.

11. Apply multi-purpose grease to coat exposed hydraulic cylinder rods to prevent rusting, which could result in cylinder damage.
12. If the detasseler must be stored outside, cover with a waterproof cover.

Removing From Storage

1. Inspect the condition of and test the air pressure of all tires.
2. Carefully unseal all openings that were previously sealed in the "Preparing for Storage" process.
3. Clean and reinstall the batteries. Be sure to attach the battery cables to the proper terminals.
4. Tighten all belts. Inspect and replace any worn belts.
5. Check the engine oil, hydraulic oil, and engine coolant levels, and add if necessary.

NOTE: A mixture of 50/50 water/antifreeze will cool adequately in the summer, as well as protect in winter.

6. Thoroughly clean the detasseler.
7. Perform all recommended services as instructed elsewhere in this section.
8. For starting instructions, refer to the "Engine - Starting" information provided in the *Engine and Drive Systems* section.

NOTICE
Protective compounds such as grease can harden under exposure to weather conditions. Be sure to remove any dried grease and reapply new, if necessary.

TRANSPORTING

When traveling on a public roadway or elsewhere, be aware of any situation where the machine will be passing under an object with a clearance lower than the transporting height of the machine.

⚠ CAUTION

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

⚠ WARNING

When transporting the detasseler, observe the following to avoid serious injury or death:

- Check for adequate clearance before driving under any overhead obstructions.
- Contact with power lines may result in serious injury or death.

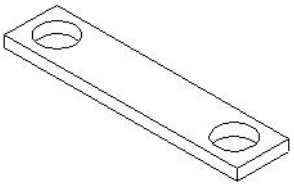
Folding the Outriggers

Manual Fold (Standard)

Manual Fold consists of a ratchet system connected to the outrigger and center toolbar. See following photo.

-Typical View

NOTE: The ratchet should not be used in place of the Lock Bar during transportation.

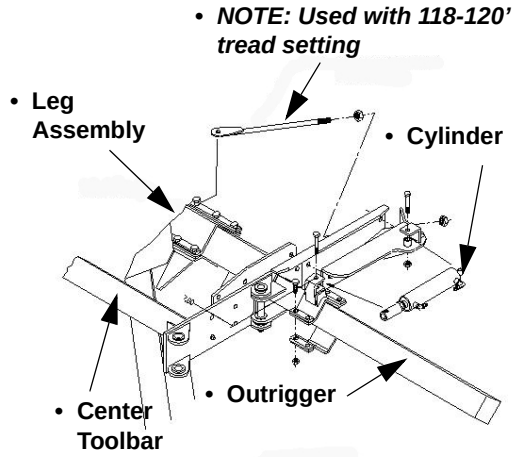


Lock Bar

Hydraulic Fold (Optional)

Hydraulic Fold is controlled by a fold valve mounted on the center toolbar and a cylinder attached to the outrigger and center toolbar.

Hydraulic Fold Valve
(Located on center toolbar)
-Typical View



Hydraulic Cylinder
(Attached to cylinder and center toolbar)
-Typical View
** Left side shown*

Activate the fold valve by pressing the corresponding right or left Hydraulic Outrigger Fold Valve Switch (located on the side console).

Right/Left Hydraulic Outrigger
Fold Valve Switches
(Located on side console)
-Typical View

Driving the Detasseler on a Public Roadway

When driving the detasseler on a public roadway, use caution while following these recommendations:

1. Always have the outrigger in the FOLDED and LOCKED position when driving or transporting the machine.
2. Use the flashing hazard/warning lights to warn other drivers, day or night, unless prohibited by law.
3. Know and obey all state laws for driving agricultural equipment on a public roadway.
4. Adjust the detasseler's speed to suit the conditions.
5. Slow down and use turn signals before turning.
6. Pull over to the side of the road before stopping.
7. Keep a proper lookout and maintain control of the detasseler.
8. Do not drive under trees, bridges, wires, or other obstructions unless there is adequate clearance.
9. Use extra care when entering or exiting a public roadway.
10. Ensure the SMV (Slow Moving Vehicle) emblem is properly displayed to warn other drivers, unless prohibited by law.

Loading

WARNING

Stopping detasseler on the trailer loading ramps may result in machine rollover.

NOTICE

The loaded height and width of the trailer must conform to state law in which it is being used. Do not exceed the trailer manufacturer's recommendations on loaded weight.

NOTICE

Read and understand the trailer manufacturer's operation manual. Hitch the trailer to the pulling vehicle according to their recommendations.

NOTICE

Extra care should be taken when loading the detasseler onto a trailer. Consider whether it is best to back the machine on, or drive the machine on forward.

When loading the detasseler onto a trailer, follow these steps:

1. Pull the trailer to flat ground.
2. Engage the pulling vehicle's Parking Brake and turn the engine OFF.
3. Use tire chocks to keep the trailer from moving.
4. Fold the detasseler's outriggers and LOCK them in place.
5. Lower the trailer ramps and set the ramp spacing for the tread width setting.
6. Have an attendant help guide you onto the trailer.

NOTE: Keep all person(s) away from the trailer when loading the detasseler.

7. Allow enough room between the detasseler and the pulling vehicle for turning.
8. Secure the detasseler onto the trailer using the recommended securement restraints (see trailer manufacturer's operation manual).
9. Cover or remove the SMV (Slow Moving Vehicle) emblem when traveling over 25 mph.

Unloading

When unloading the detasseler from the trailer, follow these steps:

1. Pull the trailer to flat ground.
2. Engage the pulling vehicle's Parking Brake and turn the engine OFF.
3. Use tire chocks to keep the trailer from moving.
4. Lower the trailer ramps and set the ramp spacing for the tread width setting.
5. Carefully release the securement restraints.
6. Have an attendant help guide you off of the trailer.

NOTE: Keep all person(s) away from the trailer when unloading the detasseler.

7. Uncover or replace the SMV (Slow Moving Vehicle) emblem.

Towing

Hagie Manufacturing Company does not recommend towing of the detasseler. Should a situation arise where towing is unavoidable, use extreme caution and perform the following steps carefully.

1. Ensure the outriggers are in the FOLDED and LOCKED position.
2. Disengage the Torque Hubs® by removing the two outer cap bolts, reversing the cap, and replacing the bolts.

NOTE: This process pushes on a spring-loaded splined shaft, disengaging the Torque Hub. Failure to comply may result in damage to the wheel motors, hubs, or brakes.

⚠ CAUTION

Once the Torque Hubs have been disengaged, the detasseler's braking power is disabled. Use extreme caution.

> **⚠ CAUTION**
>
> When re-engaging the Torque Hubs, make sure the spring-loaded splined shaft has returned to it's expended position.

NOTE: The machine must be running in order for the power steering system to function.

3. Turn the Hazard/Warning Lights ON.
4. When towing, it is necessary that two vehicles of sufficient size and weight are used for adequate pulling and braking. One of the vehicles is used for pulling the detasseler, and the second vehicle is used for braking, should the detasseler overtake the towing vehicle (such as going downhill). **Once the Torque Hubs have been disengaged, the detasseler's braking power is disabled. Use extreme caution.**

> **⚠ WARNING**
>
> Secure items (e.g. tow straps, chains, etc.) between the towing vehicle, braking vehicle, and detasseler to avoid possible dislodgement.

5. Place SMV emblem so it is visible from the rear.
6. Reduce towing speed well in advance of any anticipated turns.
7. Know and obey all state laws for towing agricultural equipment on public roadways.

> **NOTICE**
>
> Excessive speed may result in damage to the Torque Hubs as well as the Hydrostatic System. Do not exceed 25 mph when towing the detasseler.

Tow Point

- Attach (4) 10-ft. long (3.048m) chains (one located on each of the legs at the specified Tow Point.) Make sure to attach them in such a way that they will not slip off.

Tow Point
-Typical View

- Attach the other end of the two chains to the towing vehicle and the loose end of the rear two chains to the braking vehicle.

NOTE: Refer to the towing vehicle operator's manual to determine the safest attachment point for the vehicle.

Do not tow the machine long distances. Do not use towing as a way of transporting the machine between fields. Towing should only be used as a last resort in any situation, as damage can occur to the machine.

Contact Hagie Customer Support for additional towing assistance.

ATTACHMENTS

> **NOTICE**
>
> Read and comply with the following attachment instructions. Ensure you have the proper equipment and assistance when installing the attachment.

⚠ CAUTION

Engage the parking brake and turn the engine OFF before attaching components.

In shipment, some machine components may have been sent loose and require installation before operating.

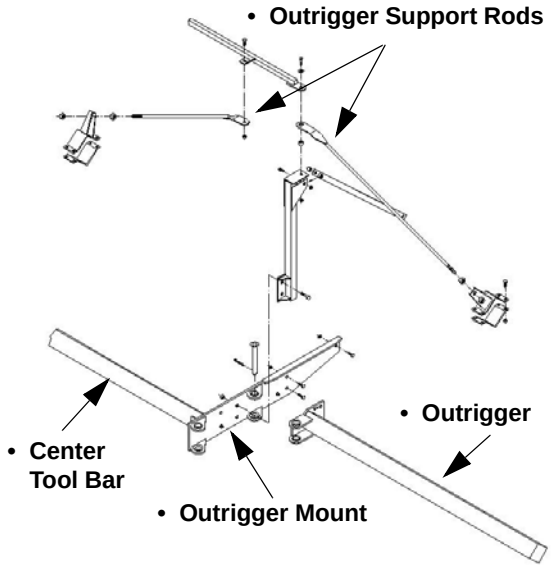
To ensure proper component installation, refer to your Parts Manual for outlining the installation, hydraulic schematic, and wiring diagram.

NOTE: Refer to your Parts Manual for correct hardware when performing the following attachment procedures.

Outrigger Assembly

1. Attach the center tool bar to the front frame cross-member (with supplied hardware).

NOTE: The guide pin (that is welded to the Outrigger mount) is located toward the bottom of the assembly.

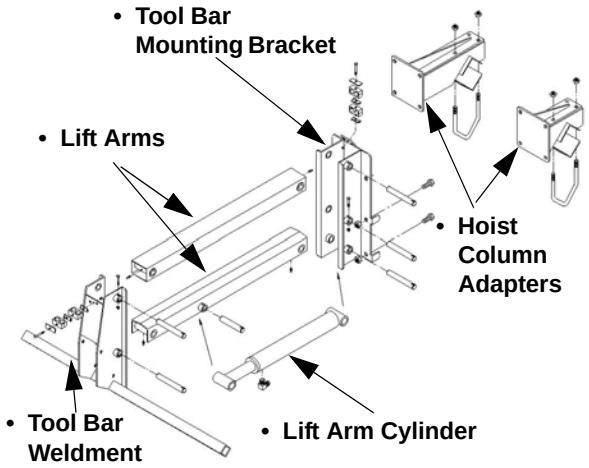


2. Attach left and right Outrigger (with supplied hardware).
3. Attach Outrigger support rods, if required.

Lift Assemblies

1. Attach the hoist column adapters to the tool bar and the outriggers at the appropriate spacing.

NOTE: Refer to your Parts Manual for spacing recommendations.



2. Attach tool bar mounting bracket to the hoist column adapters.
3. Attach the lift arms to the tool bar mounting bracket.
4. Attach lift arm cylinders to the lift arms.
5. Attach tool bar weldment to the lift arms.
6. Connect hydraulic hoses to the lift cylinders.

NOTE: Refer to your Parts Manual for correct hydraulic schematics.

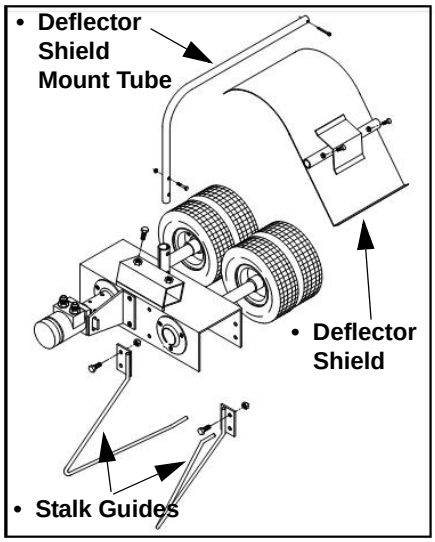
Quad Pullers

NOTICE

Some Quad Pullers may come pre-assembled to the tool bar. In this case, you would attach them to the lift assembly.

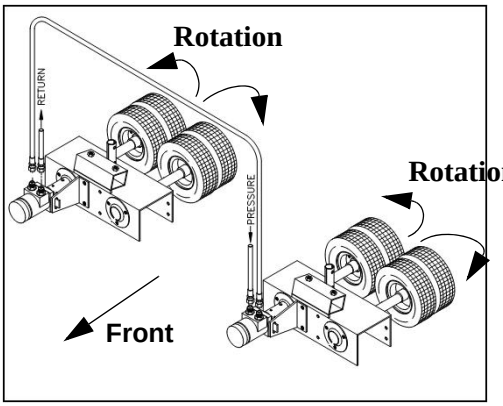
1. Attach the Quad Pullers to each lift arm tool bar.

2. Install the stalk guides to the Quad Puller head assembly.

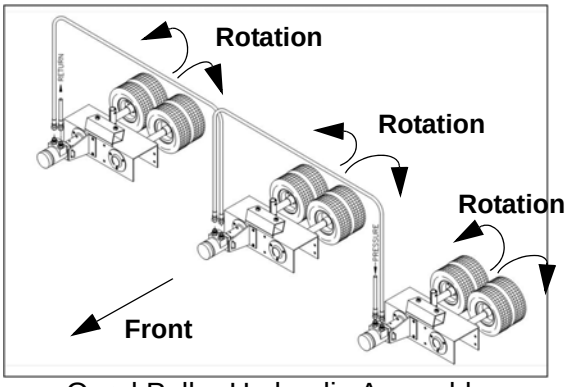


3. Attach the deflector shield mount tube and the deflector shields for right or left-hand deflection.
4. Install hydraulic hoses.

NOTE: Hydraulic hoses on Quad Puller heads should be connected so tires rotate according to the following illustrations. Refer to your Parts Manual for correct hardware, hose lengths, and hydraulic schematics.



Quad Puller Hydraulic Assembly
(Two-Head Series)
-Typical View



Quad Puller Hydraulic Assembly
(Three-Head Series)
-Typical View

5. Adjust tire pressure to approximately 10 lbs.

NOTICE
Ensure all four tires have equal pressure. Check tire pressure daily.

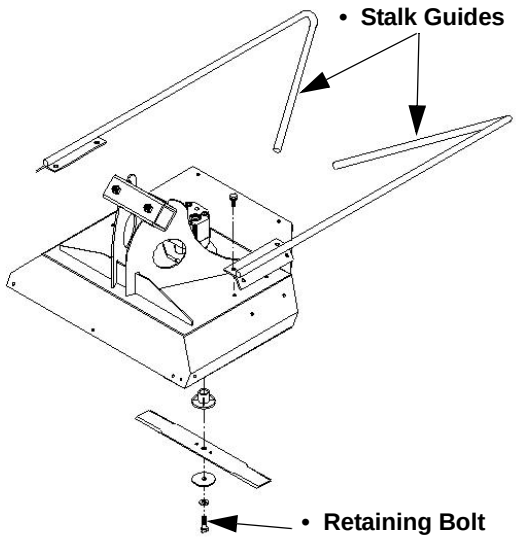
Cutter Heads

NOTICE

Some Cutter Heads may come pre-assembled to the tool bar. In this case, you would attach them to the lift assembly.

1. Attach Cutter Head assembly to the tool bar.

2. Install the stalk guides to the Cutter Head assembly.



3. Check and tighten the retaining bolt, if necessary.
4. Install hydraulic hoses.

Blade Rotation (Left of Operator)

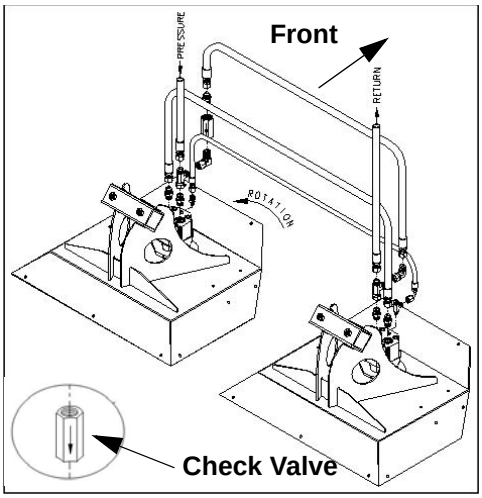
NOTE: Hydraulic hoses on Cutter Heads should be connected so the blades on the heads (mounted left of the operator) rotate "counter-clockwise" from above, according to the following illustrations. Refer to your Parts Manual for correct hardware, hose lengths, and hydraulic schematics.

NOTICE

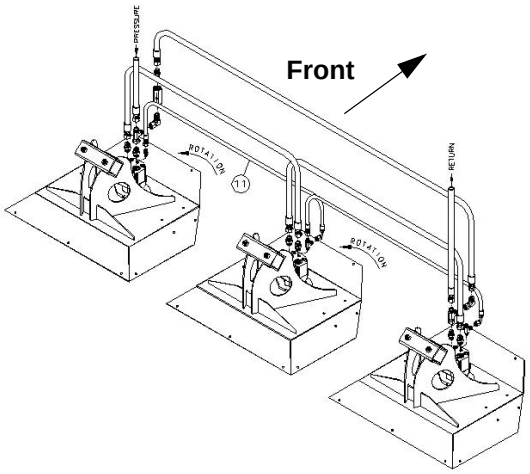
Care should be taken when installing check valve on the cutter motor to ensure the flow arrow is oriented correctly.

NOTICE

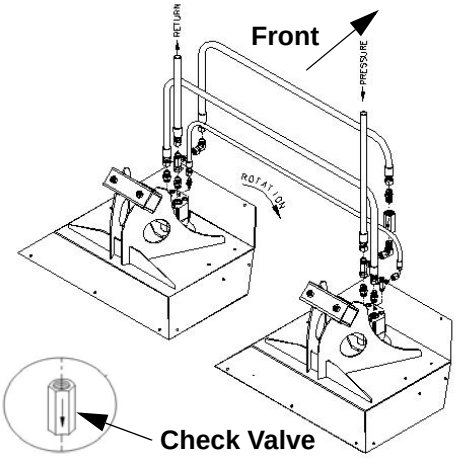
Case drain hoses must be installed correctly on cutter motors to prevent motor damage. Refer to Parts Manual.



Blade Rotation - Left of Operator
(Two-Head Series)
-Typical View



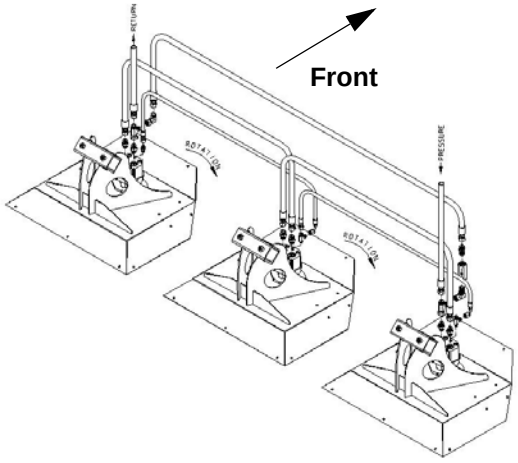
Blade Rotation - Left of Operator
(Three-Head Series)
-Typical View



Blade Rotation - Right of Operator
(Two-Head Series)
-Typical View

Blade Rotation (Right of Operator)

NOTE: Hydraulic hoses on Cutter Heads should be connected so the blades on the heads (mounted right of the operator) rotate "clockwise" from above, according to the following illustrations.
Refer to your Parts Manual for correct hardware, hose lengths, and hydraulic schematics.



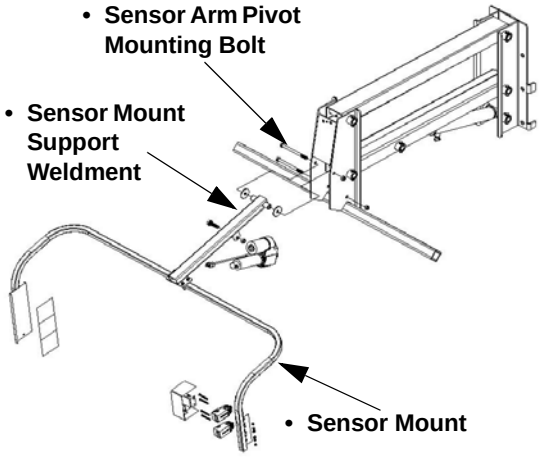
Blade Rotation - Right of Operator
(Three-Head Series)
-Typical View

NOTICE
Care should be taken when installing check valve on the cutter motor to ensure the flow arrow is oriented correctly.

NOTICE
Case drain hoses must be installed correctly on cutter motors to prevent motor damage. Refer to Parts Manual.

LS System/Depth Command

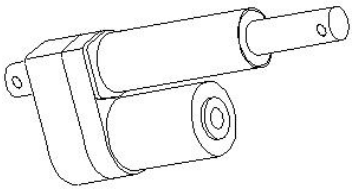
1. Install the Tasseltrol®/LS sensor mount support weldment with the two nylon washers (located in the forward-most hole of the tool bar).



2. Install the Tasseltrol/LS sensor mount to the sensor mount support weldment.
3. Install cable assembly (according to the wiring diagram provided in your Parts Manual).
4. Turn the ignition key in the ON position to check sensor installation.

NOTE: DO NOT start the engine.

5. Attach the Depth Command Actuator to the light sensor mount and the tool bar.



Depth Command Actuator
-Typical View

NOTICE

Over-tightening of the sensor arm pivot mounting bolt may cause the Depth Command Actuator to stall.

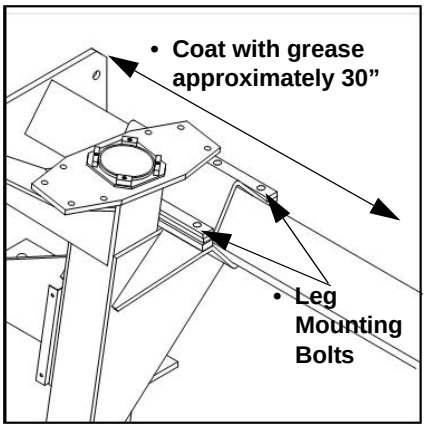
WHEEL TREAD AND ROW SPACING

Knowing the row spacing of the field that is to be detasseled, refer to the following steps to obtain proper tread.

- **To adjust Tread Width in or out**, park machine on level ground.
- Shut engine OFF.
- Loosen leg mounting bolts on both the front and rear legs (on one side of the detasseler only).

⚠ CAUTION

Loosen leg mounting bolts only enough to allow for free movement of leg on mainframe. DO NOT remove bolts under any circumstances.

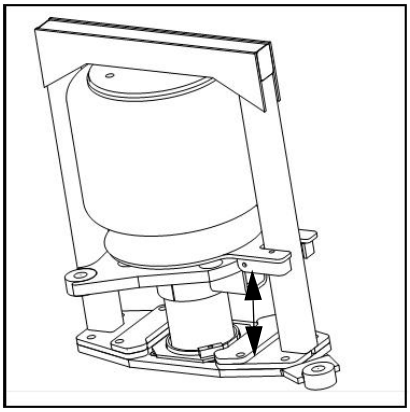


Leg Mounting Bolts
(Six on each leg)
-Typical View

- Loosen rear lock nut (located on the leg brace) to allow one leg to move further than the other without binding while adjusting the tread setting.

Rear Lock Nut
(Located on leg brace)
-Typical View

- Lubricate the slide path the leg mount will travel along mainframe (approximately 30 inches).
- Place a suitable block beneath the air bag mounting plate (before raising the machine) to prevent the suspension from telescoping.



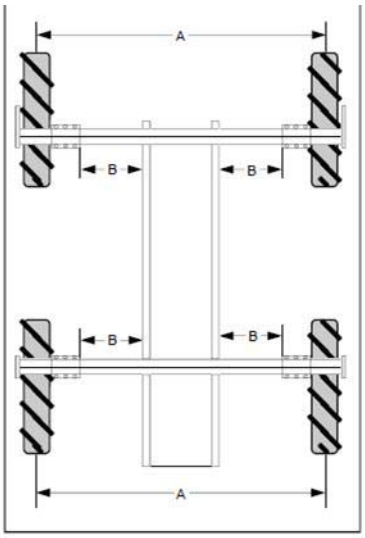
- Raise the machine until the tires (on the side being adjusted) are just touching the ground.
- **To adjust Tread Width out**, place a suitable prying tool beneath the center of the tire and pry out at the same time, while simultaneously pushing out at the top of the leg.

- Carefully lower the machine to the ground, which in turn, will allow the leg to slide outward.
- Repeat procedure until desired Tread Width is obtained.
- **To adjust Tread Width in**, raise the machine until the tires (on the side being adjusted) are just off the ground.
- Carefully lower the machine to the ground, which in turn, will allow the top of the leg to slide in on the mainframe.
- Re-tighten leg mounting bolts.
- Re-tighten the leg brace lock nut.
- Repeat previous procedures to adjust and set the opposite side.

NOTE: When finished, all four legs should be the same distance from the mainframe.

Tread Width (Standard)		
DIM A		**DIM B**
120”	=	25.5”
114”	=	22.5”
108”	=	19.5”

Tread Width (Narrow Tread Option)		
DIM A		DIM B
90”	=	10.5”
84”	=	7.5”
78”	=	4.5”



Removable Handrail Extension
-Typical View

HANDRAIL EXTENSION - REMOVABLE

The Handrail Extension may be removed to gain access to the engine hoods (located on both sides of machine).

1. Remove handrail.
2. Open hood(s).
3. Close hood(s) and reinstall Handrail Extension when finished.

TROUBLESHOOTING

WARNING

CHEMICALS ARE DANGEROUS
Read the chemical manufacturer's labels to avoid injury or damage.

CAUTION

Start engine from operator's seat only. When running engine in a building, ensure there is adequate ventilation.

NOTICE

Disconnect the battery when servicing any part of the electrical system to prevent damage.

NOTICE

Ensure the machine valve type is correctly selected to match the machine in which the Tasseltrol® control box is installed on.

Problem	Possible Cause	Suggested Remedy
Engine will not crank	• Dead battery • Poor battery connections • Neutral Safety Switch • Starter or starter relay • Lock-out Switch in LOCKED position	• Charge or replace battery • Clean and tighten • Adjust and/or replace, if needed • Test, rebuild or replace • Inspect switch
Engine will not start	• Out of fuel • Clogged fuel filter • Cold weather • Low starter speed	• Fill fuel tank • Replace fuel filters • Refer to the engine manufacturer's user guide for cold weather starting • Check starter and battery
Engine overheats	• Engine overload • Dirty radiator core/grille screen • Faulty radiator cap • Loose or faulty fan belt • Faulty thermostat • Low coolant level	• Reduce load • Remove all foreign material and clean all items • Replace cap • Tighten or replace fan belt • Replace thermostat • Refill to proper level with recommended coolant
Engine misfires: runs uneven/low power	• Water in fuel • Dirty air cleaner element • Poor grade of fuel • Fuel tank vent clogged • Clogged fuel filter	• Drain, flush, replace filter, fill system • Replace element • Drain system, change to a better grade fuel • Open fuel tank vent (in cap) • Replace fuel filter
Engine knocks	• Low oil level in crankcase • Cold engine	• Add oil to full mark • Allow proper warm-up period, refer to engine manufacturer's user guide
Machine will not move in either direction	• Engine speed too low • Oil level in reservoir low • Control linkage • Clogged filter • Hydrostatic pump not turning • Faulty hydrostatic pump • Air leak in suction line • Low charge pressure	• Set engine at operating RPM before moving the machine • Fill reservoir to proper level with approved oil • Repair or replace • Replace filter • Check drive coupling • Replace pump • Inspect and tighten all fittings on suction line • Refer to "Charge Pressure" elsewhere in this manual
Machine will move in only one direction	• Faulty Flow Divider Valve	• Replace faulty valve

Hydrostatic System responding slowly	• Engine speed too low • Oil in reservoir low • Cold oil • Plugged filter • Partially restricted suction line • Internal damage	• Set engine at operating RPM before trying to move the machine • Fill reservoir to proper level with approved oil (see Service: Fluids elsewhere in this section) • Allow adequate warm-up period • Check and replace filter • Inspect for collapsed suction hose • Replace hydrostatic pump or motor
Noisy Hydrostatic System	• Cold oil • Low engine speed • Oil level in reservoir low • Air in system • Internal damage to pump	• Allow adequate warm-up period • Increase engine speed • Fill reservoir to proper level with approved oil (see Service: Fluids elsewhere in this section) • Inspect and tighten all fittings on suction line • Replace pump
External oil leaks	• Loose or faulty fittings • Damaged o-ring • Faulty hose	• Tighten or replace • Inspect, if damaged - replace • Replace hose
Entire hydraulic system fails to function	• Oil level in reservoir low • Oil not reaching pump • Faulty hydraulic pump	• Fill reservoir to proper level with approved oil (see Service: Fluids elsewhere in this section) • Prime the pump by removing suction hose from reservoir. Hold removed end higher than the pump. Hand-feed two quarts of approved oil through the suction hose by bumping engine with starter (ensuring NOT to start the engine). Reinstall hose. Tighten all fittings. • Replace hydraulic pump
Noisy hydraulic pump	• Collapsed suction hose (caused by cold oil) • Oil level in reservoir low • Air leak in suction line	• Allow for adequate warm-up period • Fill reservoir to proper level with approved oil (see Service: Fluids elsewhere in this section) • Inspect and tighten all fittings on the suction hose

Lifting mechanism will not lift	• Bad cylinder • Blown relief valve • Relief valve set too low • Lift arms seized • Faulty electro-hydraulic valve	• Check cylinder - remove, rebuild, or replace • Remove, inspect, replace with new • Reset to 2000 PSI • Loosen mounting bolts, lubricate grease fittings (if equipped) • Refer to the Tasseltrol user guide
Cutter head blades, quad pullers, rollers, or ties will not turn	• Oil level in reservoir too low • Oil not reaching pump • Faulty hydraulic pump • Faulty hydraulic motor(s)	• Fill reservoir to proper level with approved oil • Remove suction hose from pump and check for proper flow, reinstall hose and all suction fittings • Replace hydraulic pump • Replace motor(s)
Hydraulic motor leaking	• Seal failure • Restricted case drain hose	• Replace seal, turn heads on with low engine RPM • Inspect or replace hose
No units will lift	• Oil in reservoir low • Faulty valve • Relief valve in electro-hydraulic valve set too low	• Fill tank to proper level • Repair or replace valve • Contact Hagie Customer Support for assistance
No units will lower	• All lift arm pivots too tight	• Lubricate and loosen pivot points
Only one unit will not lower	• Faulty valve • Lift arm pivot too tight	• Replace valve • Lubricate and loosen pivot point
All units lift slowly	• Hydraulic oil not at operating temperature • Faulty valve • Lift arm pivots too tight • Plugged high pressure filter • Relief valve in electro-hydraulic valve system set too low	• Allow time for oil to warm up • Replace valve • Lubricate and loosen pivot points • Remove, clean, or replace • Contact Hagie Customer Support for assistance
Only one unit lifts slowly	• Faulty valve • Lift arm pivot points too tight	• Replace valve • Lubricate/loosen pivot point
Only one unit will not hold position	• Oil leak between valve and cylinder • Faulty valve • Faulty lower poppet on lift valve	• Repair leak or replace hose • Replace valve • Remove, clean, or replace
No units will hold position	• Problem is not hydraulic	• Refer to the “Tasseltrol” information elsewhere in this manual

Only one unit lowers slowly	• Faulty valve • Faulty lower poppet on lift valve	• Replace valve • Remove, clean, or replace
All units lower slowly	• Hydraulic oil not at operating temperature	• Allow time for oil to warm up
In MANUAL mode, more than one unit lifts or lowers from one up/ down switch	• Faulty valve	• Replace valve
In AUTO mode, more than one unit raises from photo sensor	• Faulty valve	• Replace valve
In AUTO mode, wrong unit raises from photo sensor	• Cylinder hoses are connected to the wrong cylinder	• Attach correct hoses to proper cylinder
No units will lift	• Faulty Auto/Manual Switch • Blown Fuse • Faulty #1 valve, coil, or loose coil mounting nut • Loose wire connections • Faulty wire connections • Faulty main wire assembly	• Replace control box • Find short in wire, repair, and replace fuse • Tighten nut or replace coil • Find loose connection, tighten • Replace or repair • Replace or repair
Only one unit will not lift	• In MANUAL mode, faulty Up/ Down Switch • Light photo sensor assembly • Faulty valve, coil, or loose coil mounting nut • Loose wire connections • Lights of photo sensor not lined up with reflector • Faulty row wire assembly • Faulty sensor connector wire assembly	• Replace control box • Replace photo sensor • Tighten nut or replace coil • Find loose connections, tighten • Line up sensor with reflector • Replace or repair • Replace or repair
No units will lower	• Faulty Auto/Manual Switch • Blown fuse • Loose wire connections • In AUTO mode, LS valve assembly unplugged	• Replace switch • Find short in wire, repair, and replace fuse • Find loose connection, tighten • Plug in wire assembly

Only one unit will not lower	• Faulty Up/Down Switch • In AUTO mode, faulty light sensor assembly • Loose wire connections • Faulty valve coil or loose coil mounting unit • Faulty sensor connector wire assembly • In AUTO mode, light sensor not lined up with reflector • Faulty row LS wire assembly	• Replace control box • Replace sensor • Find loose connections, tighten • Tighten nut or replace coil • Replace or repair • Line up sensor with reflector • Replace or repair
No units will hold position	• In AUTO mode, no crop moving under assemblies	• Drive forward or select MANUAL mode
In AUTO mode, wrong unit raises from sensor assembly	• Row LS wire assembly plugged into wrong sensor connector	• Plug correct wire assembly into proper row sensor connector assembly
Entire electrical system is dead	• Dead battery • Poor battery connection • Low charging rate • No charging rate • Lockout Switch in LOCKED position	• Charge or replace battery • Clean and tighten battery connections • Tighten alternator belt • Replace alternator • Inspect switch
All gauges on instrument panel not working	• Blown fuse • Poor ground	• Replace fuse • Clean and tighten ground
Tachometer/MPH indicator not working	• Blown fuse • Loose connections at sensor/ alternator • Faulty sensor	• Replace fuse • Tighten or replace connectors • Replace sensor
Light system does not function	• Blown fuse • Burned out bulb • Separation or short in wire • Blown fuse • Faulty switch • Ignition switch is OFF	• Clean and tighten ground • Replace bulb • Check continuity and replace wire • Replace fuse • Replace switch • Turn ignition switch to the ON position

Machine Valve Type

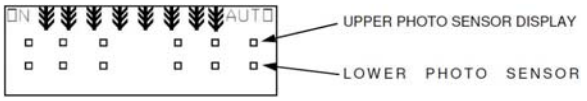
- **o** = Any machine with original valve (Model Year 2007 or prior).
- **p** = 204/204SP machines with proportionate valve (Model Year 2008 and later).
- **c** = STS Combination Sprayer/Detasseler with proportionate valve (Model Year 2007 or later).
- **x** = 204XP and DTS 8C (Combination Sprayer/Detasseler) with 12 valves (Model Year 2010).

To obtain further information on the status of the Tasseltrol/LS System before operation:

- Turn the ignition key to the ON position (do not start the engine).
- Turn the Tasseltrol box to the ON position.
- Turn the Auto/Manual Switch to MANUAL.
- Ensure there is nothing physically blocking any upper or lower sensor's path to its reflector.

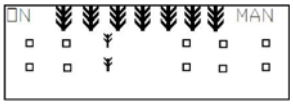
The display will show the status of the upper and lower photo sensor on each lift assembly. If the display shows a box (" □ ") in all upper and lower areas, the unit is ready for operation. If the display shows a corn stalk (" ¥ ") in one or more areas, refer to the following information for troubleshooting.

NOTE: Left-center sensors used as examples.

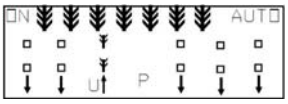


Tasseltrol Display

Manual Mode



Auto Mode

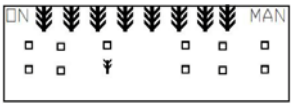


Unit rises automatically

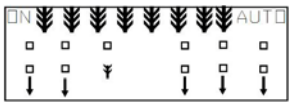
Photo Sensor Light Status	Possible Cause
Lights at both photo sensors	• Photo sensors not in line with reflector. Contact Hagie Customer Support for assistance.
No lights at either photo sensor	• Faulty connector cable (refer to your Parts Manual) • Faulty wire in connector cable (refer to your Parts Manual)

Tasseltrol Display

Manual Mode



Auto Mode

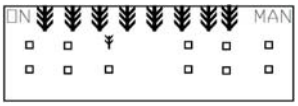


Unit does NOT rise automatically

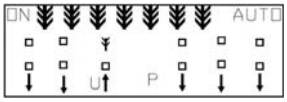
Photo Sensor Light Status	Possible Cause
Lights at lower photo sensor	• Faulty wire in connector cable (refer to your Parts Manual) • Photo sensor not in line with reflector. Contact Hagie Customer Support for assistance. • Faulty wire in sensor assembly (refer to your Parts Manual)
No lights at lower photo sensor	• Faulty wire in connector cable (refer to your Parts Manual)

Tasseltrol Display

Manual Mode



Auto Mode



Unit rises automatically

Photo Sensor Light Status	Possible Cause
Lights at upper photo sensor	• Faulty wire in sensor assembly (refer to your Parts Manual)
No lights at upper photo sensor	• Faulty wire in connector cable (refer to your Parts Manual)

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