MacDon™

# M150, M200 Self-Propelled Windrower

# UNLOADING & ASSEMBLY INSTRUCTIONS for NORTH AMERICAN SHIPMENTS

Form # 169018

Model Year - 2009


**MACDON SELF PROPELLED WINDROWER TRACTOR**

# INTRODUCTION

This instruction describes the unloading, set-up and pre-delivery requirements for the MacDon M Series Self-Propelled M150 and M200 Windrower Tractors. Use the table of contents to guide you to specific areas. Retain this instruction for future reference.

CAREFULLY READ ALL THE MATERIAL PROVIDED BEFORE ATTEMPTING TO UNLOAD, ASSEMBLE, OR USE THE MACHINE.

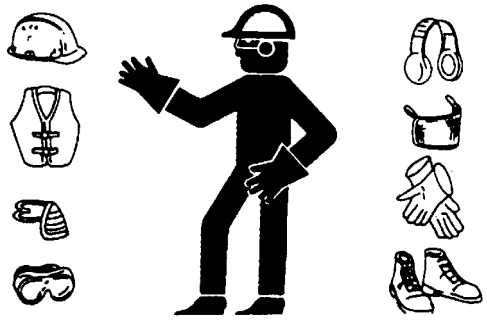
**TABLE OF CONTENTS**

# GENERAL SAFETY

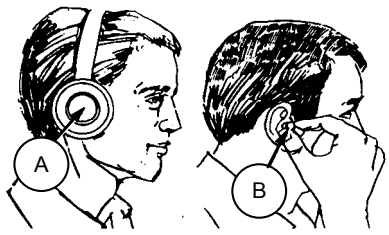
## CAUTION

**The following are general farm safety precautions that should be part of your operating procedure for all types of machinery.**

- **Protect yourself.**
- **When assembling, operating and servicing machinery, wear all the protective clothing and personal safety devices that COULD be necessary for the job at hand. Don't take chances.**



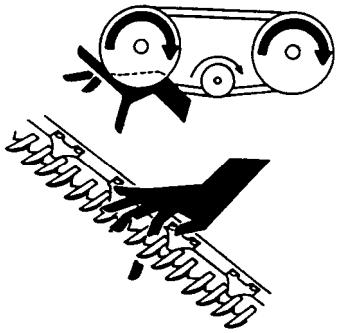
- **You may need:**
  - **a hard hat.**
  - **protective shoes with slip resistant soles.**
  - **protective glasses or goggles.**
  - **heavy gloves.**
  - **wet weather gear.**
  - **respirator or filter mask.**
  - **hearing protection. Be aware that prolonged exposure to loud noise can cause impairment or loss of hearing. Wearing a suitable hearing protective device such as ear muffs (A) or ear plugs (B) protects against objectionable or loud noises.**





- **Provide a first-aid kit for use in case of emergencies.**
- **Keep a fire extinguisher on the machine. Be sure the extinguisher is properly maintained and be familiar with its proper use.**
- **Keep young children away from machinery at all times.**
- **Be aware that accidents often happen when the operator is tired or in a hurry to get finished. Take the time to consider the safest way. Never ignore warning signs of fatigue.**
- **Wear close-fitting clothing and cover long hair. Never wear dangling items such as scarves or bracelets.**

- **Keep hands, feet, clothing and hair away from moving parts. Never attempt to clear obstructions or objects from a machine while the engine is running.**



- **Keep all shields in place. Never alter or remove safety equipment. Make sure driveline guards can rotate independently of the shaft and can telescope freely.**
- **Use only service and repair parts made or approved by the equipment manufacturer. Substituted parts may not meet strength, design, or safety requirements.**
- **Do not modify the machine. Unauthorized modifications may impair the function and/or safety and affect machine life.**

- **Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.**

- **Keep the area used for servicing machinery clean and dry. Wet or oily floors are slippery. Wet spots can be dangerous when working with electrical equipment. Be sure all electrical outlets and tools are properly grounded.**
- **Use adequate light for the job at hand.**
- **Keep machinery clean. Do not allow oil or grease to accumulate on service platforms, ladders or controls. Clean machines before storage.**
- **Never use gasoline, naphtha or any volatile material for cleaning purposes. These materials may be toxic and/or flammable.**
- **When storing machinery, cover sharp or extending components to prevent injury from accidental contact.**

# RECOMMENDED TORQUES

## A. GENERAL

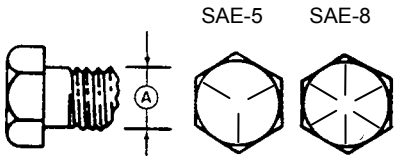
The tables shown below give correct torque values for various bolts and capscrews.

- Tighten all bolts to the torques specified in chart unless otherwise noted throughout this manual.
- Check tightness of bolts periodically, using bolt torque chart as a guide.
- Replace hardware with the same strength bolt.
- Torque figures are valid for non-greased or non-oiled threads and heads unless otherwise specified. Do not grease or oil bolts or capscrews unless specified in this manual. When using locking elements, increase torque values by 5%.

## B. SAE BOLTS

| BOLT DIA. "A" in. | NC BOLT TORQUE* | | | |
|---|---|---|---|---|
| | SAE 5 | | SAE 8 | |
| | ft·lbf | N·m | ft·lbf | N·m |
| 1/4 | 9 | 12 | 11 | 15 |
| 5/16 | 18 | 24 | 25 | 34 |
| 3/8 | 32 | 43 | 41 | 56 |
| 7/16 | 50 | 68 | 70 | 95 |
| 1/2 | 75 | 102 | 105 | 142 |
| 9/16 | 110 | 149 | 149 | 202 |
| 5/8 | 150 | 203 | 200 | 271 |
| 3/4 | 265 | 359 | 365 | 495 |
| 7/8 | 420 | 569 | 600 | 813 |
| 1 | 640 | 867 | 890 | 1205 |

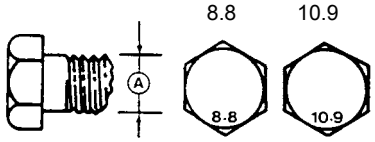
* Torque categories for bolts and capscrews are identified by their head markings.




## C. METRIC BOLTS

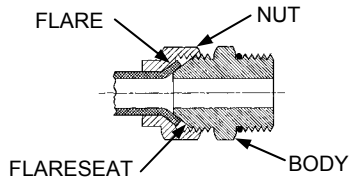
| BOLT DIA. "A" | NC BOLT TORQUE* | | | |
|---|---|---|---|---|
| | 8.8 | | 10.9 | |
| | ft·lbf | N·m | ft·lbf | N·m |
| M3 | 0.4 | 0.5 | 1.3 | 1.8 |
| M4 | 2.2 | 3 | 3.3 | 4.5 |
| M5 | 4 | 6 | 7 | 9 |
| M6 | 7 | 10 | 11 | 15 |
| M8 | 18 | 25 | 26 | 35 |
| M10 | 37 | 50 | 52 | 70 |
| M12 | 66 | 90 | 92 | 125 |
| M14 | 103 | 140 | 148 | 200 |
| M16 | 166 | 225 | 229 | 310 |
| M20 | 321 | 435 | 450 | 610 |
| M24 | 553 | 750 | 774 | 1050 |
| M30 | 1103 | 1495 | 1550 | 2100 |
| M36 | 1917 | 2600 | 2710 | 3675 |

* Torque categories for bolts and capscrews are identified by their head markings.



## *D. HYDRAULIC FITTINGS*

### FLARE TYPE




a. Check flare and flare seat for defects that might cause leakage.

b. Align tube with fitting before tightening.

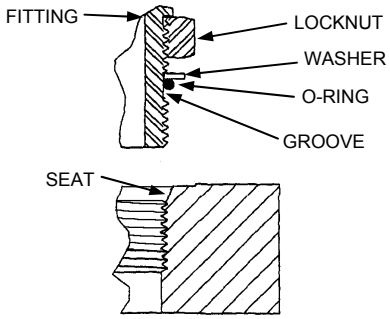
c. Lubricate connection and hand tighten swivel nut until snug.

d. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and with the second tighten the swivel nut to the torque shown.

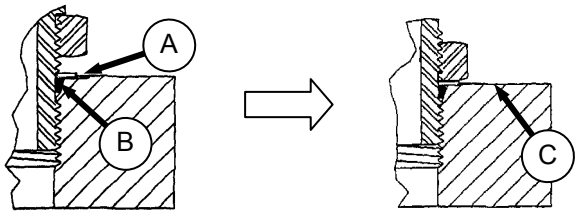
| TUBE SIZE O.D. (in.) | NUT SIZE ACROSS FLATS (in.) | TORQUE VALUE* | | RECOMMENDED TURNS TO TIGHTEN (AFTER FINGER TIGHTENING) | |
|---|---|---|---|---|---|
| | | lbf·ft | N·m | Flats | Turns |
| 3/16 | 7/16 | 6 | 8 | 1 | 1/6 |
| 1/4 | 9/16 | 9 | 12 | 1 | 1/6 |
| 5/16 | 5/8 | 12 | 16 | 1 | 1/6 |
| 3/8 | 11/16 | 18 | 24 | 1 | 1/6 |
| 1/2 | 7/8 | 34 | 46 | 1 | 1/6 |
| 5/8 | 1 | 46 | 62 | 1 | 1/6 |
| 3/4 | 1-1/4 | 75 | 102 | 3/4 | 1/8 |
| 7/8 | 1-3/8 | 90 | 122 | 3/4 | 1/8 |

* The torque values shown are based on lubricated connections as in reassembly.

### O-RING TYPE




a. Inspect O-ring and seat for dirt or obvious defects.




b. On angle fittings, back off the lock nut until washer (A) bottoms out at top of groove (B) in fitting.

c. Hand tighten fitting until back up washer (A) or washer face (if straight fitting) bottoms on part face (C) and O-ring is seated.

d. Position angle fittings by unscrewing no more than one turn.

e. Tighten straight fittings to torque shown.

f. Tighten angle fittings to torque shown in the following table while holding body of fitting with a wrench.

| THD SIZE (in.) | NUT SIZE ACROSS FLATS (in.) | TORQUE VALUE* | | RECOMMENDED TURNS TO TIGHTEN (AFTER FINGER TIGHTENING) | |
|---|---|---|---|---|---|
| | | lbf·ft | N·m | Flats | Turns |
| 3/8 | 1/2 | 6 | 8 | 2 | 1/3 |
| 7/16 | 9/16 | 9 | 12 | 2 | 1/3 |
| 1/2 | 5/8 | 12 | 16 | 2 | 1/3 |
| 9/16 | 11/16 | 18 | 24 | 2 | 1/3 |
| 3/4 | 7/8 | 34 | 46 | 2 | 1/3 |
| 7/8 | 1 | 46 | 62 | 1-1/2 | 1/4 |
| 1-1/16 | 1-1/4 | 75 | 102 | 1 | 1/6 |
| 1-3/16 | 1-3/8 | 90 | 122 | 1 | 1/6 |
| 1-5/16 | 1-1/2 | 105 | 142 | 3/4 | 1/8 |
| 1-5/8 | 1-7/8 | 140 | 190 | 3/4 | 1/8 |
| 1-7/8 | 2-1/8 | 160 | 217 | 1/2 | 1/12 |

* The torque values shown are based on lubricated connections as in reassembly.

# ACCRONYMS AND ABBREVIATIONS

## ENGLISH/METRIC EQUIVALENTS

| ENGLISH | FACTOR | SI UNITS (METRIC) |
|---|---|---|
| acres | x 0.4047 | = hectares (ha) |
| ft/min | x 0.3048 | = meters/min (m/min) |
| ft/s | x 0.3048 | = meters/sec (m/s) |
| US gal | x 3.7854 | = liters (L) |
| US gal/min (gpm) | x 3.7854 | = liters/min (L/min) |
| hp | x 0.7457 | = kilowatts (kW) |
| $in.^3$ | x 16.3871 | = cubic centimeters ($cm^3$ or cc) |
| lbf | x 4.4482 | = newtons (N) |
| lbf·ft or ft·lbf | x 1.3558 | = newton meters (N·m) |
| lbf·in. or in·lbf | x 0.1129 | = newton meters (N·m) |
| mph | x 1.6063 | = kilometers/hour (km/h) |
| oz. | x 29.5735 | = milliliters (ml) |
| psi | x 6.8948 | = kilopascals (kPa) |
| psi | x .00689 | = megapascals (MPa). |

## DEFINITIONS

| TERM | DEFINITION |
|---|---|
| API | American Petroleum Institute |
| ASTM | American Society Of Testing And Materials |
| C | Celsius |
| Cab Forward | Windrower operation with the operator and cab facing in the direction of travel. |
| CDM | Cab Display Module |
| DWA | Double Windrow Attachment |
| Engine Forward | Windrower operation with the operator and engine facing in the direction of travel. |
| F | Fahrenheit |
| ft/min | feet per minute |
| ft/s | feet per second |
| gpm | U.S. gallons per minute |
| GSL | Ground Speed Lever |
| hp | horsepower |
| $in.^3$ | cubic inches |
| lbf | pounds force |
| lbf·ft or ft·lbf | pound feet or foot pounds |
| lbf·in. or in·lbf | pound inches or inch pounds |
| ISC | Integrated Speed Control |
| mph | miles per hour |
| N-DETENT | The slot opposite the neutral position on operator's console. |
| oz. | ounces |
| psi | pounds per square inch |
| rpm | revolutions rer minute |
| SAE | Society Of Automotive Engineers |
| WCM | Windrower Control Module |
| Windrower | Windrower Tractor with header attached. |
| Windrower Tractor | Power unit only. (Windrower without the header attached). |

## STEP 1. UNLOAD TRACTOR

**CAUTION**

**To avoid injury to bystanders from being struck by machinery, do not allow persons to stand in unloading area.**

### *A. TWO FORKLIFT METHOD*

**CAUTION**

**Equipment used for unloading must meet or exceed the requirements specified below. Using inadequate equipment may result in chain breakage, vehicle tipping or machine damage.**

| *LIFTING VEHICLE* | |
|---|---|
| Min. Lifting Capacity * | 5500 lb (2500 kg) |
| Min. Fork Length | 78 in. (1981 mm) |

* At 48 inches (1220 mm) from back end of forks.

**IMPORTANT**

Forklifts are normally rated for a load located 24 inches (610 mm) ahead of back end of the forks. To obtain the forklift capacity at 48 inches (1220 mm), check with your forklift distributor.

a. Move trailer into position and block trailer wheels.

b. Set forklift tines to the widest possible setting.

c. Position one forklift on either side of trailer and position forks under windrower tractor frame.

**NOTE**

*Windrower center of gravity is approximately 55 inches (1397 mm) rearward of drive wheel center.*

d. Lift with both forklifts simultaneously until windrower is clear of trailer bed.

**WARNING**

**Be sure forks are secure before moving trailer away from load. Stand clear when lifting.**

e. Drive the truck slowly forward until trailer bed is clear of windrower tractor.

f. Lower unit slowly and simultaneously with both forklifts to the ground. Place wooden blocks under front shipping stands if ground is soft.

g. Back off forklifts.

h. Check windrower tractor for shipping damage and check shipment for missing parts.

## *B. SINGLE FORKLIFT METHOD*

### *METHOD 1*

**CAUTION**

**Equipment used for unloading must meet or exceed the requirements specified below. Using inadequate equipment may result in chain breakage, vehicle tipping or machine damage.**

| *LIFTING VEHICLE* | |
|---|---|
| Min. Lifting Capacity * | 5500 lb (2500 kg) |

* At 48 inches (1220 mm) from back end of forks.

**IMPORTANT**

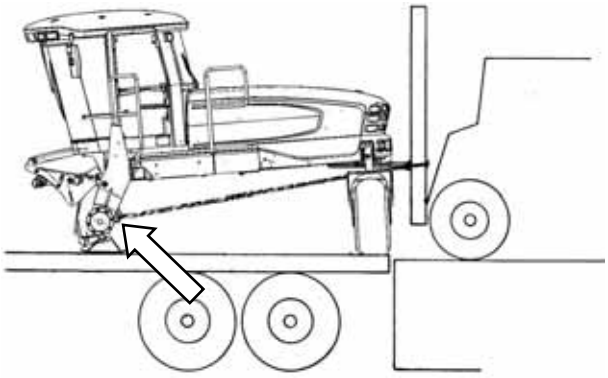
Forklifts are normally rated for a load located 24 inches (610 mm) ahead of back end of the forks. To obtain the forklift capacity at 48 inches (1220 mm), check with your forklift distributor.

| *CHAIN* | |
|---|---|
| Type | Overhead Lifting Quality (1/2 inch) |
| Min. Working Load | 5000 lb (2270 kg) |

a. Position rear of trailer against unloading dock that is the same height or slightly lower than the trailer bed.

b. Remove shipped parts from under windrower tractor frame.

c. Set forklift tines to widest possible setting.



d. Position forklift up to rear of windrower tractor and place forks under the rear frame cross member.

e. Install chains from forklift mast to jacking brackets on both front legs of windrower tractor.

f. Chains must be the same length.

**CAUTION**

**The front legs rest on the trailer bed on skid shoes. Ensure there are no obstructions to prevent rearward sliding of the skid shoes and watch carefully that as unit is dragged, the skid shoes are not sliding sideways towards the edge of the trailer bed.**

g. Drag windrower rearward off of carrier.

h. Remove chains and back off the forklift.

i. Check windrower tractor for shipping damage and check shipment for missing parts.

### *METHOD 2*

**CAUTION**

**Equipment used for unloading must meet or exceed the requirements specified below. Using inadequate equipment may result in chain breakage, vehicle tipping or machine damage.**

| *LIFTING VEHICLE* | |
|---|---|
| Min. Lifting Capacity * | 11000 lb (4994 kg) |
| Min. Fork Length | 78 in. (1981 mm) |

* At 48 in. (1220 mm) from back end of forks.

**IMPORTANT**

Forklifts are normally rated for a load located 24 inches (610 mm) ahead of back end of the forks. To obtain the forklift capacity at 48 inches (1220 mm), check with your forklift distributor.

**WARNING**

**Be sure forks are secure before moving away from load. Stand clear when lifting.**

a. Move trailer into position and block trailer wheels.

b. Set forklift tines to the widest possible setting.

*(continued next page)*

c. Position forklift on left or right side of trailer and position forks under windrower tractor frame.

**NOTE**

*Windrower center of gravity is approximately 55 inches (1397 mm) rearward of drive wheel center.*

**WARNING**

**Ensure forks project beyond far side of frame.**

d. Lift until windrower is clear of trailer bed.

e. Slowly back forklift away from trailer until windrower tractor is clear of trailer.

f. Lower unit slowly to the ground. Place wooden blocks under front shipping stands if ground is soft.

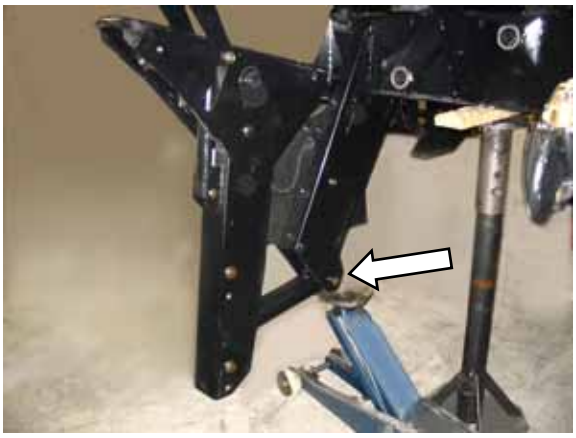
g. Back off forklift.

h. Check windrower tractor for shipping damage and check shipment for missing parts.

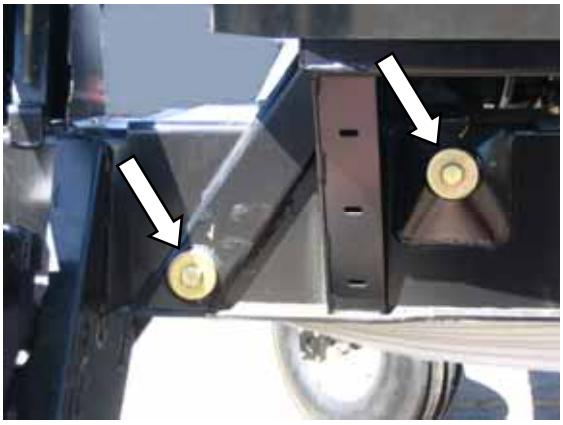
## STEP 2. REPOSITION RH LEG

Only the right cab-forward leg requires repositioning from shipping to field configuration.

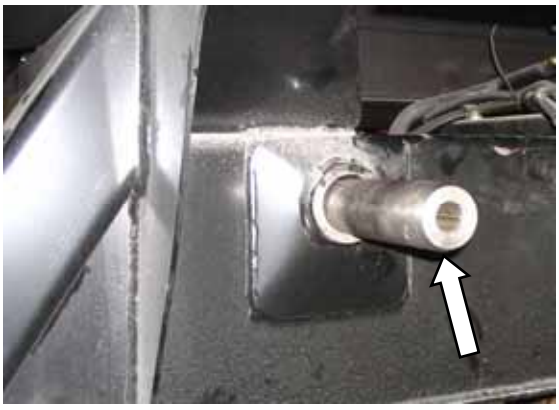
a. Support the front of the tractor leg off the ground with stand (or equivalent).



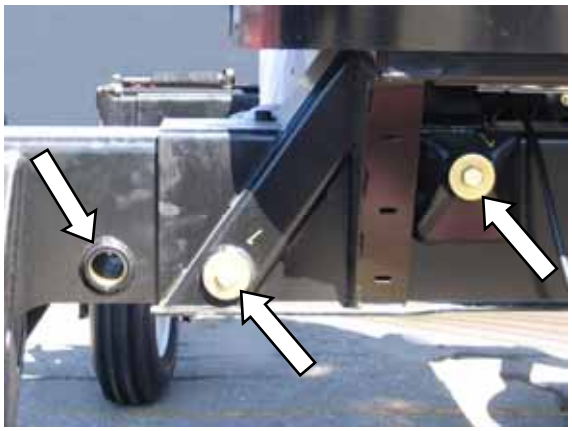
b. Position jack under RH leg and raise jack slightly to take some weight off leg.



c. Remove two bolts, washers, and nuts from frame.

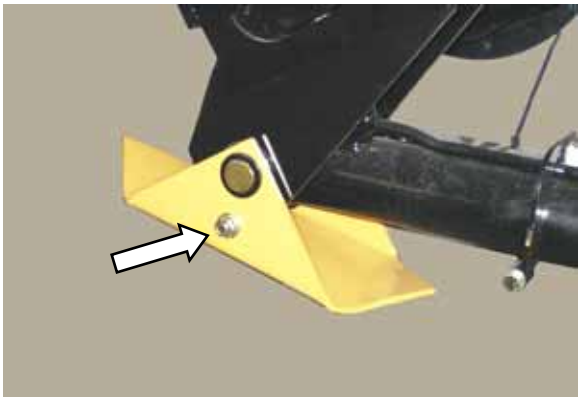


d. Tap out the two pins with a hammer.



e. Move leg out to expose one hole.

f. Re-install pins and secure with bolts, washers, and nuts (not shown). Torque nuts to 100 ft·lbf (136 N·m).



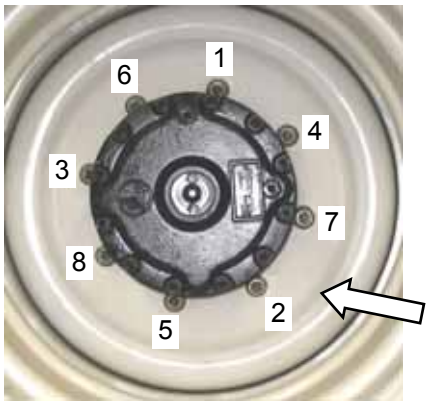
g. Remove bolt and shipping skids from legs.

## STEP 3. INSTALL FRONT WHEELS

a. Position wheel against hub so that that air valves are on outside and tire tread point forward. For "Turf" tires (diamond tread), be sure arrow on sidewall points in forward rotation.

b. Lift wheel on hub with a forklift or equivalent. Lower forklift.

c. Rotate wheel to align holes with studs and push wheel onto studs.




d. Install wheel nuts and tighten to 175-200 ft·lbf (237-271 N·m) using the tightening sequence as shown.

**NOTE**

*To avoid damage to wheel disks, do not over-tighten wheel nuts.*

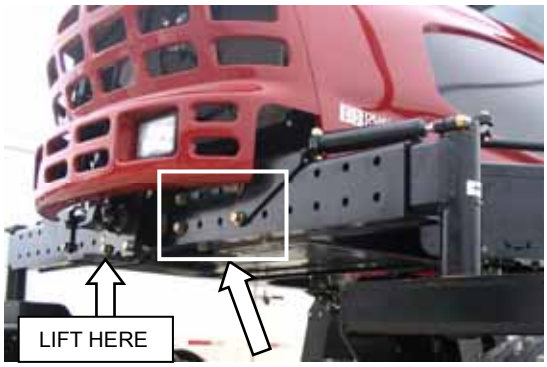
e. Repeat sequence three times.

## STEP 4. REPOSITION CASTER WHEELS

a. Raise rear of tractor slightly so that most of the weight is off the casters, using a jack or other lifting device under the frame where shown.

**NOTE**

*Lifting device should have a lifting capacity of at least 5000 lb (2270 kg).*

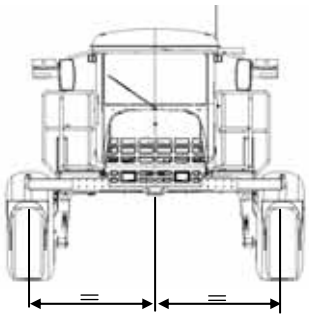



b. Remove six bolts (four on backside, two on underside) and washers from left and right side of walking beam.

c. Slide extensions outboard equal amounts and align holes at desired location.

**NOTE**

*Illustration shows widest tread width.*



**IMPORTANT**

Caster wheels must be equidistant from center of tractor.

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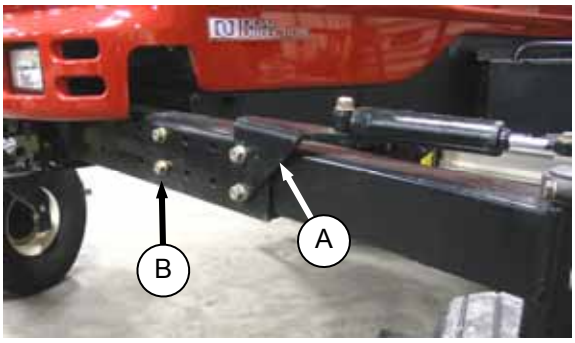


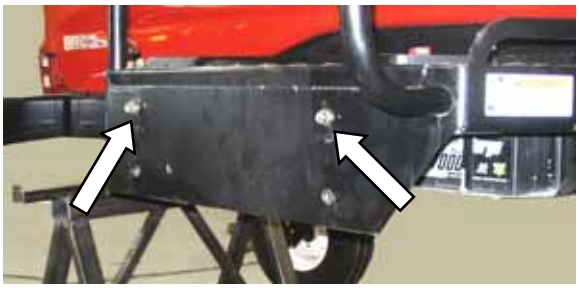

d. Position bracket (A) and install bolts. The two shorter bolts (B) are installed at the back inboard locations. Torque as follows:
   1. Snug bottom bolts.
   2. Tighten and torque back bolts to 330 ft·lbf (447 Nm).
   3. Tighten and torque bottom bolts to 330 ft·lbf (447 Nm).

e. Lower tractor to ground.

**IMPORTANT**

f. Retorque bolts after first 5 and 10 hours of operation.

## STEP 5. INSTALL STEPS



a. Install two ½ in.x1.0 hex bolts in upper holes in platform. Do not thread in fully.

b. Hang step assembly (both step assemblies are the same) on bolts.

c. Install two ½ in.x1.0 lg. hex bolts in lower holes in step and tighten.

d. Tighten upper bolts installed in step a.

e. Repeat for other step assembly.

## STEP 6. INSTALL CENTER LINK

**MECHANICAL LINK – M150 ONLY**

a. Remove clevis pin from center link.

b. Position link between mounting brackets on front frame and attach at lower hole location.

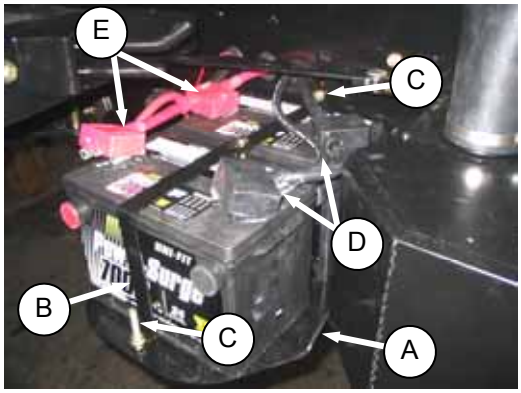
c. Install clevis pin and secure with hair pin.

**HYDRAULIC LINK – M200 STD, M150 OPTION**

The hydraulic center link is supplied in a separate kit that is included with the shipment. Refer to installation instructions in the kit.

## STEP 7. INSTALL BATTERIES (2)

a. Open right hand (cab forward) maintenance platform.




b. Remove cable ties securing battery clamps and cables to frame.

| RATING | GROUP | CCA | VOLT | MAX. DIMENSION |
|---|---|---|---|---|
| Heavy Duty, Off-Road, Vibration Resistant | BCI 29H or 31A | 750 | 12 | 13.25x7.37x9.44 in. (337x188x240 mm) |

c. Position new batteries on holder (A).

d. Install clamp (B) with bolts (C) provided and tighten securely.

**IMPORTANT**

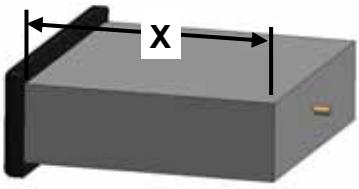
BATTERY IS NEGATIVE GROUNDED. Always connect starter cable to the positive (+) terminal of battery and battery ground cable to negative (-) terminal of battery. Reversed polarity in battery or alternator may result in permanent damage to electrical system.

e. Attach negative (black) cable clamps (D) to negative post on batteries and tighten clamps.

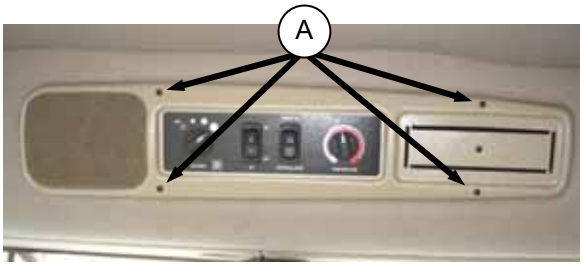
f. Attach positive (red) cable clamps (E) to positive post on batteries and tighten. Reposition plastic covers onto clamps.

g. Move platform back to closed position.

## STEP 8. INSTALL AM/FM RADIO

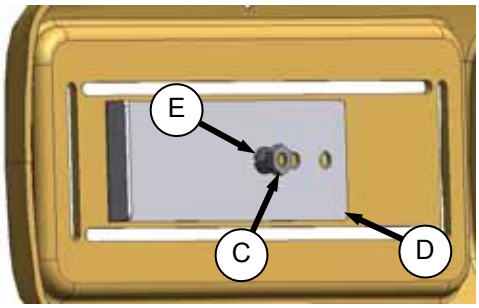



Provision has been made for installation of AM/FM radio. The mounting is designed to fit a DIN E style radio with a depth X=161 mm and having a 5 mm threaded stud centered on the rear for support. Provision has been made for adjustments should the radio fall outside these parameters.

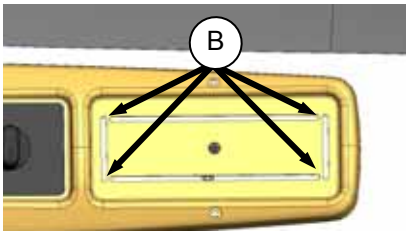



a. Ensure the ignition is turned to the OFF position.

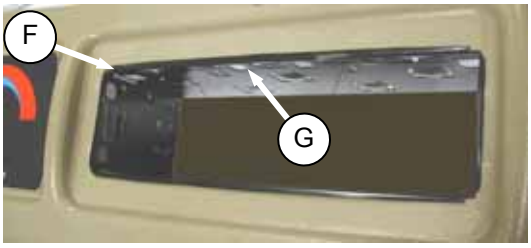
b. Remove radio panel by removing four screws (A).




c. Remove screw and nut (C) to remove support (D) from panel. Retain metric nut (E) and lockwasher.



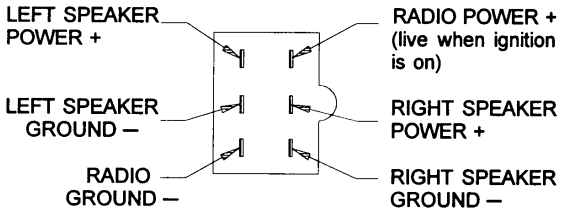

d. Remove the cut-out by cutting the tabs (B) in the panel. Remove sharp edges on panel.




e. Locate receptacle (F) (supplied with radio) in opening and secure by bending tabs (G) on receptacle against panel.


f. Insert radio into receptacle and attach radio bezel. Ensure radio locks into position and faceplate (H) is against the panel.

g. A six-pin connector for the radio is included in the wiring harness. In order to mate properly with this connector, the radio must have a six-pin connector (Packard #2977042) and have a terminal arrangement as follows:




h. Attach two additional wires in the wiring harness to the radio:

1. Circuit 503, Red with 1/4 in. female blade terminal. This is a live wire provided for powering a radio clock/memory, if these exist on your radio.
2. Circuit 315, Black ground wire attaches to radio body.

i. Plug cable from antenna into radio.

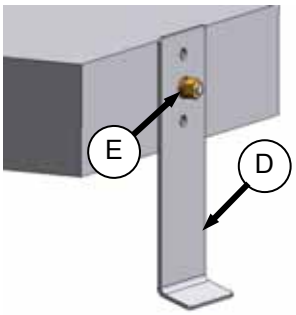
**NOTE**

*An approved radio package is available from Radio Engineering Industries (REI) of Omaha, Nebraska.*

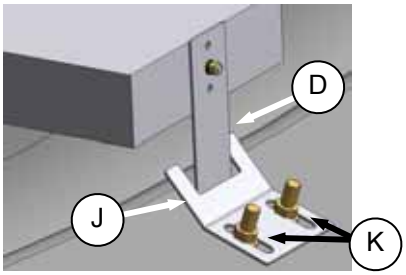
*(continued next page)*

j. Attach stud (supplied with radio) to center rear of radio.

k. Attach support (D) to stud on back of radio chassis with lock washer and metric nut (E) that was supplied with the support. Support can be attached to chassis in multiple locations to allow for proper mounting of radio.




l. Reinstall radio panel with original screws.




m. Adjust bracket (J) if necessary by loosening nuts (K) to allow radio to slide into opening, and securely capture support (D).

n. Turn ignition key to ACC, switch on the radio and check operation in accordance with instructions supplied with the radio.

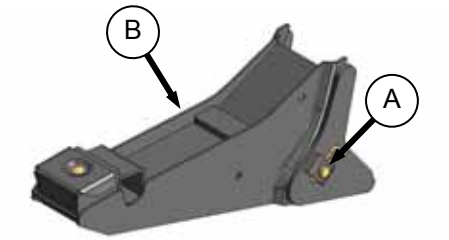
# STEP 9. ATTACH HEADER

## I. HEADER ATTACHMENT - D SERIES

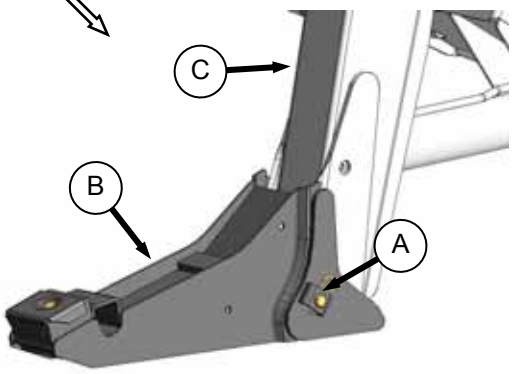
a. If not installed, attach draper header boots (supplied with header) to tractor lift linkage as follows:

**DANGER**

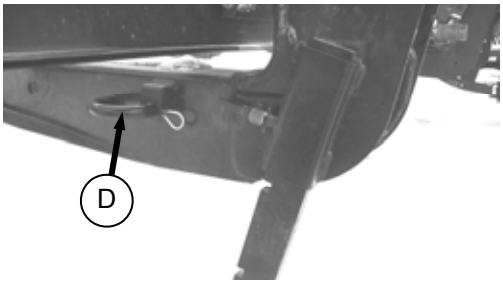
**Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.**




1. Remove pin (A) from boot (B).



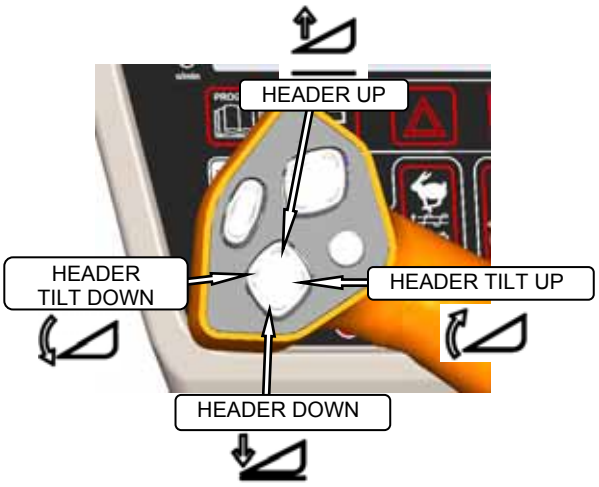

2. Locate boot (B) on lift linkage (C) and reinstall pin (A). Pin may be installed from either side of boot.
3. Secure pin (A) with hairpin.
4. Repeat for opposite side.



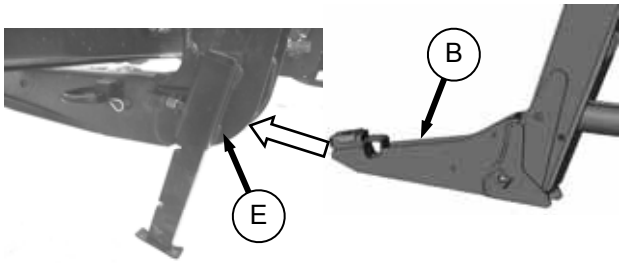

b. Remove hairpin on pins (D) and remove pins from header legs.

**CAUTION**

**Check to be sure all bystanders have cleared the area.**




c. Start the engine and activate header down button on the GSL to fully retract header lift cylinders.




d. Slowly drive tractor forward so that boots (B) enter header legs (E). Continue to drive slowly forward until linkages contact support plates in the lower header legs, and header nudges forward.

e. Check that linkages are properly engaged in header legs, contacting support plates.

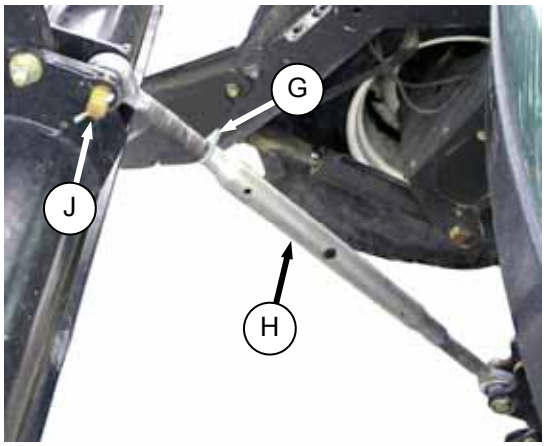
*(continued next page)*

f. Connect center link as follows:

MECHANICAL LINK – M150

## DANGER

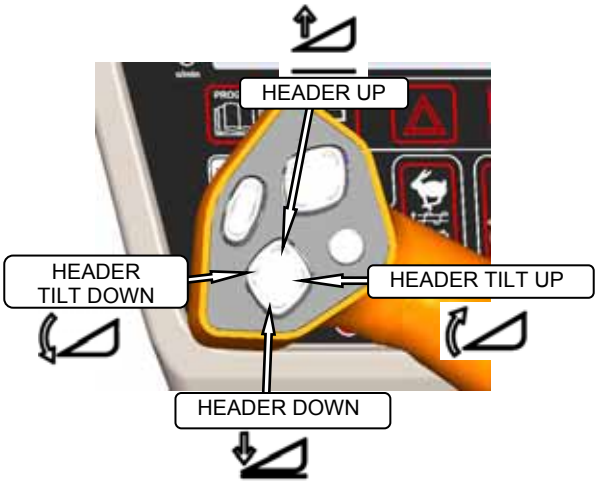
**Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.**



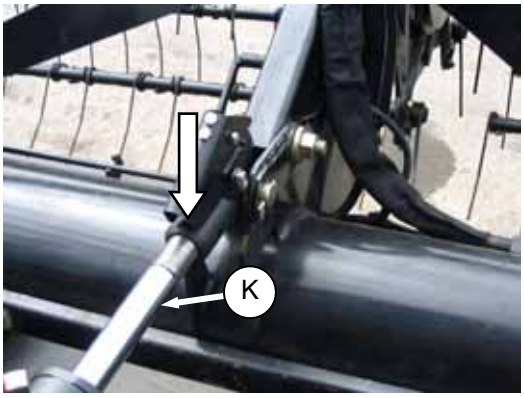

1. Loosen nut (G) and rotate barrel (H) to adjust length so that link lines up with header bracket.
2. Install pin (J) and secure with cotter pin.
3. Adjust link to required length for proper header angle by rotating barrel (H). Tighten nut (G) against barrel. A slight tap with a hammer is sufficient.
4. Proceed to step g.

HYDRAULIC LINK WITHOUT SELF-ALIGNMENT KIT – M200 STD, M150 OPTION

1. Re-locate the pin at the frame linkage as required to position the hook over the header pin.



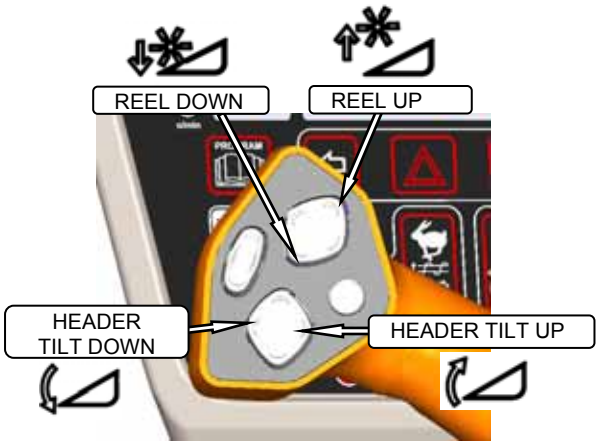

2. Activate header tilt cylinder switches on GSL to extend or retract center link cylinder so that the hook lines up with the header attachment pin.




3. Push down on rod end of link cylinder (K) until hook engages pin on header and is locked.
4. Check that center link is locked onto header by pulling upward on rod end of cylinder.
5. Proceed to step g.

*(continued next page)*

HYDRAULIC LINK WITH OPTIONAL SELF-ALIGNMENT KIT




1. Adjust the position of the center link cylinder with the REEL UP and REEL DOWN switches, and HEADER TILT switches on the GSL to position the hook above the header attachment pin.

2. Lower the center link onto the header with REEL DOWN switch until it locks into position (handle is down).

## CAUTION

**Check to be sure all bystanders have cleared the area.**

g. Start engine.

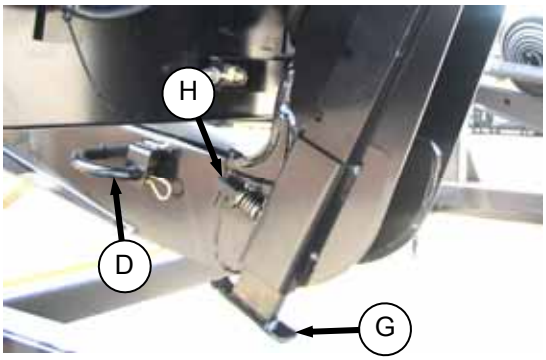
h. Raise the header fully with the header up switch on the GSL. Stop engine and remove key.

## DANGER

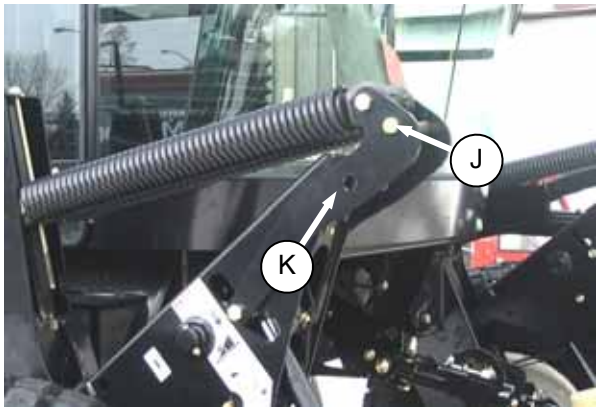
**To avoid bodily injury from fall of raised header, always engage header lift cylinder stops when working on or around raised header.**

i. Engage lift cylinder stops on both lift cylinders.

j. Install pin (D) through header leg, (engaging U-bracket in header leg) on both sides.




k. Raise header stand (G) to storage position by pulling pin (H) and lifting stand into uppermost position. Release pin (H).




l. Remove pin (J) from storage position in linkages on both sides and insert in hole (K) to engage float springs. Secure with hairpin.

m. Disengage lift cylinder stops.

## CAUTION

**Check to be sure all bystanders have cleared the area.**

n. Start engine and activate header lift cylinders (switch on GSL) to lower header fully.

## DANGER

**Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.**

o. Stop engine and remove key.

*(continued next page)*

HEADER DRIVE HOSES

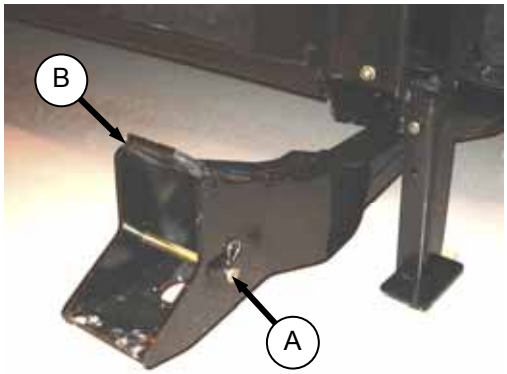
REEL HYDRAULICS

p. Connect header drive and reel hydraulics, and electrical harness to header.

**NOTE**

*Refer to the Draper Header Operator's Manual for instructions on attaching the hydraulics and electrical to the header.*

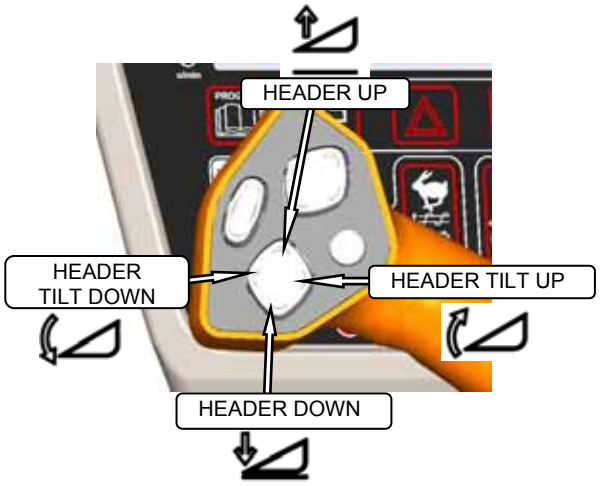
## II. HEADER ATTACHMENT – A SERIES



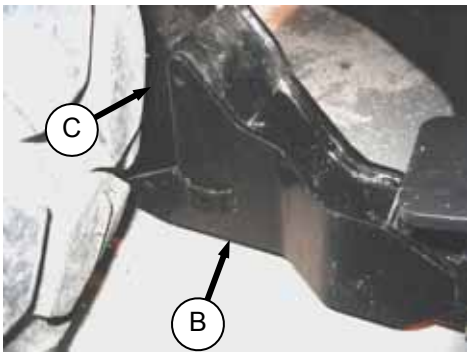

a. Remove hairpin from pin (A), and remove pin from on left and right header boots (B) on header.

**CAUTION**

**Check to be sure all bystanders have cleared the area.**




b. Start the engine and activate header down button on the GSL to fully retract header lift cylinders.




c. Slowly drive tractor forward so that feet (C) on tractor enter boots (B) on the header. Continue to drive slowly forward until feet engage the boots, and header nudges forward.

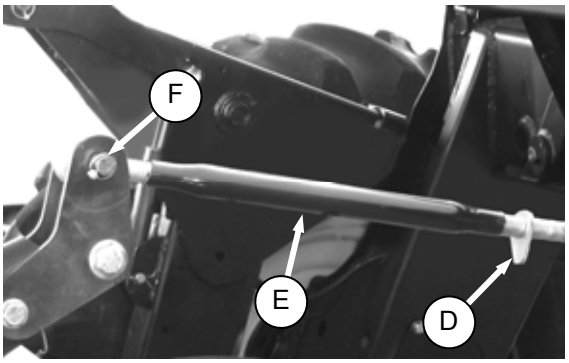
d. Connect center link as follows:

MECHANICAL LINK – M150

**DANGER**

**Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.**

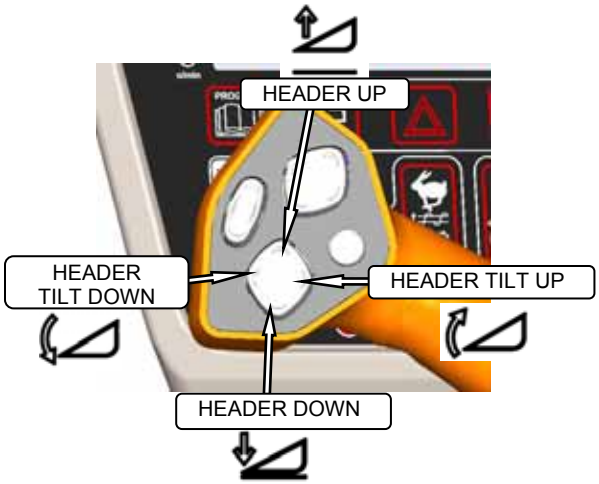
1. Stop engine and remove key.



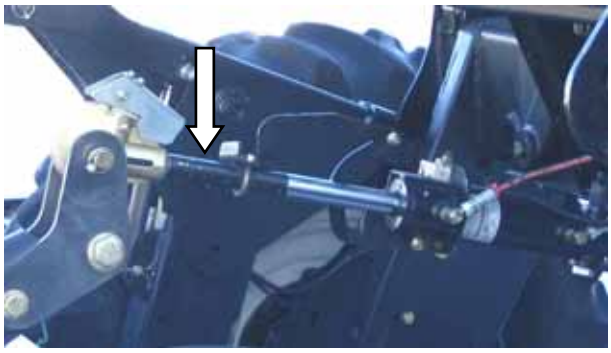

2. Loosen nut (D) and rotate barrel (E) to adjust length so that other end lines up with header bracket.
3. Install pin (F) and secure with cotter pins.
4. Adjust link to required length for proper header angle by rotating barrel (E). Tighten nut (D) against barrel. A slight tap with a hammer is sufficient.
5. Proceed to step e.

HYDRAULIC LINK WITHOUT SELF-ALIGNMENT KIT – M200 STD, M150 OPTION

1. Re-locate the pin at the frame linkage as required to position the hook over the header pin.

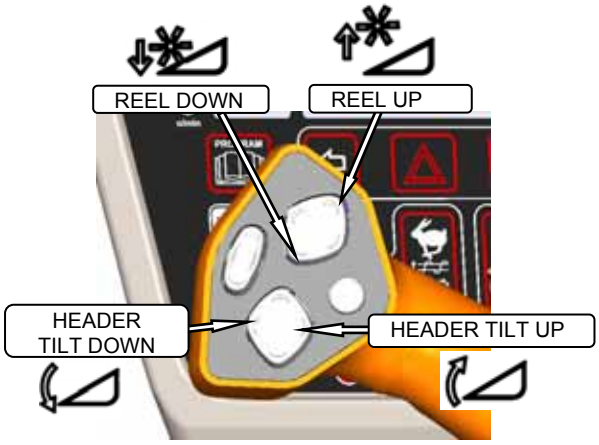



2. Activate HEADER TILT cylinder switches on GSL to extend or retract center link cylinder so that the hook lines up with the header attachment pin.



3. Push down on rod end of link cylinder until hook engages pin on header and is locked.
4. Check that center link is locked onto header by pulling upward on rod end of cylinder.
5. Proceed to step e.

HYDRAULIC LINK WITH OPTIONAL SELF-ALIGNMENT KIT




1. Adjust the position of the center link cylinder with the REEL UP and REEL DOWN switches, and HEADER TILT switches on the GSL to position the hook above the header attachment pin.
2. Lower the center link onto the header with REEL DOWN switch, until it locks into position (handle is down).

**CAUTION**

**Check to be sure all bystanders have cleared the area.**

e. Start engine.

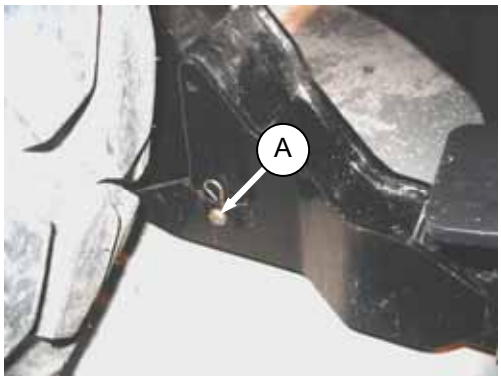
*(continued next page)*

f. Raise the header fully with the header up switch on the GSL. Stop engine and remove key.

## DANGER

**To avoid bodily injury from fall of raised header, always engage header lift cylinder stops when working on or around raised header.**

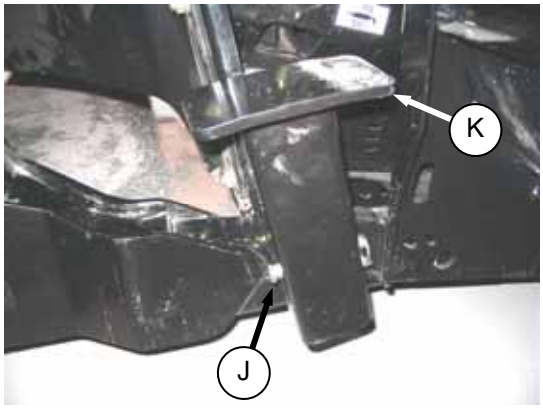
g. Engage lift cylinder stops on both lift cylinders.




h. Install pin (A) through each boot and foot and secure with hairpin.

**IMPORTANT**

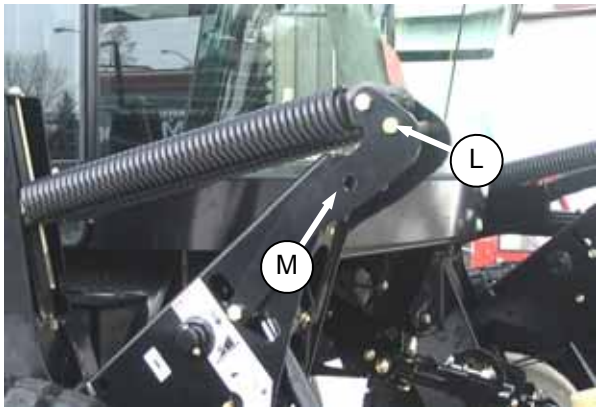
Ensure pin (A) is fully inserted and hairpin is installed behind bracket on boot.




i. Remove lynch pin from pin (J) in stand (K).

j. Hold stand and remove pin (J).

k. Reposition stand to storage position by inverting stand and re-locating on bracket as shown. Reinsert pin (J) and secure with lynch pin.




l. Remove pin (L) from storage position in linkages on both sides and insert in hole (M) to engage float springs. Secure with lynch pin.

m. Disengage lift cylinder stops.

## CAUTION

**Check to be sure all bystanders have cleared the area.**

n. Start engine, and activate header lift cylinder switch on GSL to lower header fully. Stop engine and remove key.

## DANGER

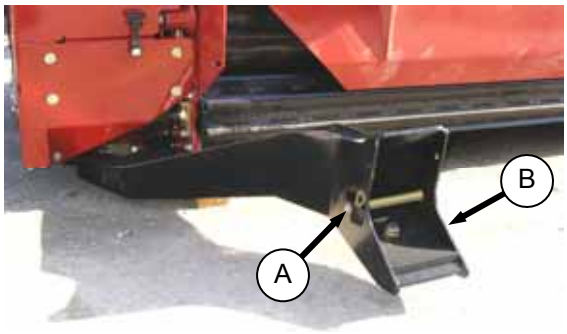
**Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.**

o. Connect header drive hydraulics and electrical harness to header.

**NOTE**

*Refer to the Auger Header Operator's Manual for instructions on attaching the hydraulics and electrical to the auger header.*

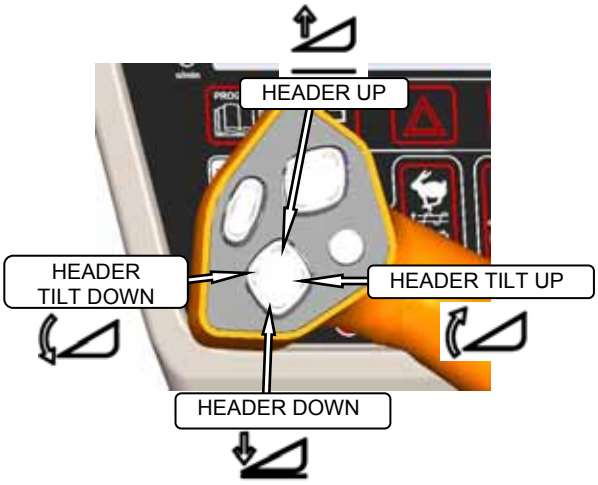
## III. HEADER ATTACHMENT – R SERIES



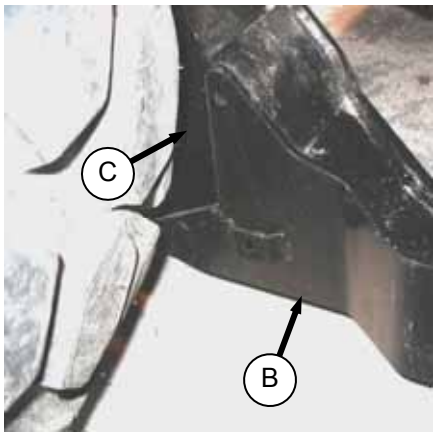

a. Remove hairpin from pin (A), and remove pin from on left and right header boots (B) on header.

**CAUTION**

**Check to be sure all bystanders have cleared the area.**




b. Start the engine and activate header down button on the GSL to fully retract header lift cylinders.




c. Slowly drive tractor forward so that feet (C) on tractor enter boots (B) on the header. Continue to drive slowly forward until feet engage the boots, and header nudges forward.

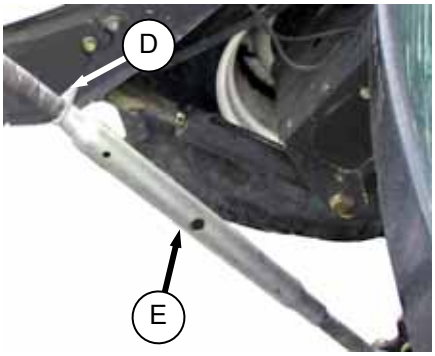
d. Connect center link as follows:

MECHANICAL LINK – M150

**DANGER**

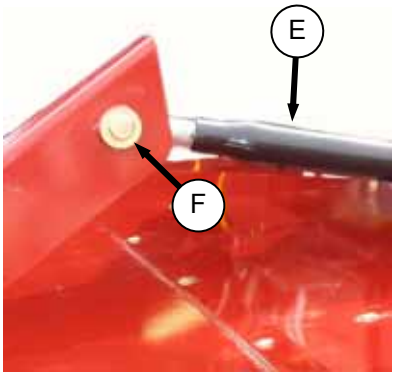
**Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.**

1. Stop engine and remove key.




2. Loosen nut (D) and rotate barrel (E) to adjust length so that other end lines up with header bracket.

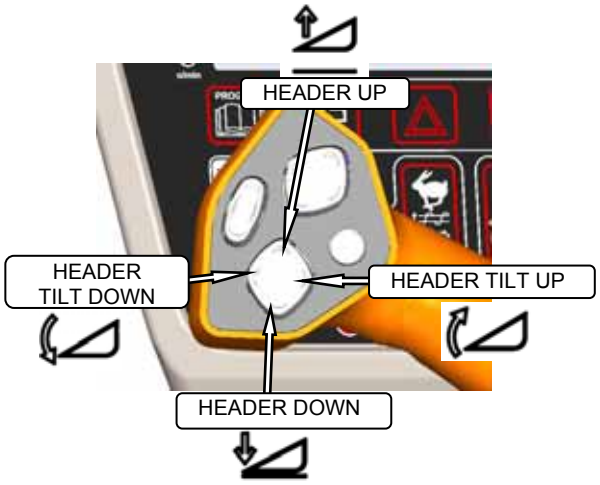
*(continued next page)*



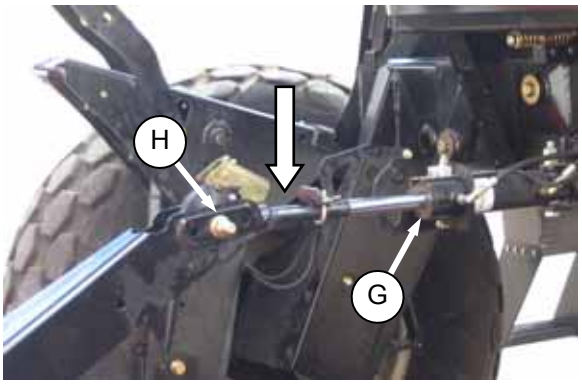

3. Install clevis pin (F) and secure with cotter pin.
4. Adjust link to required length for proper header angle by rotating barrel (E). Tighten nut (D) against barrel. A slight tap with a hammer is sufficient.
5. Proceed to step e.

HYDRAULIC LINK WITHOUT SELF-ALIGNMENT KIT – M200 STD, M150 OPTION

1. Re-locate the pin at the frame linkage as required to position the hook over the header pin.



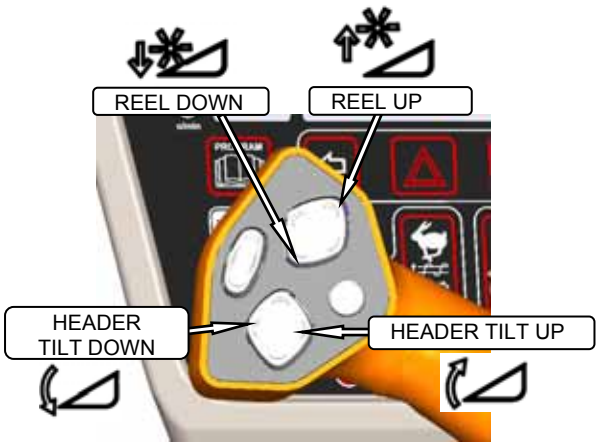

2. Activate header tilt cylinder switches on GSL to extend or retract center link cylinder so that the hook lines up with the header attachment pin.



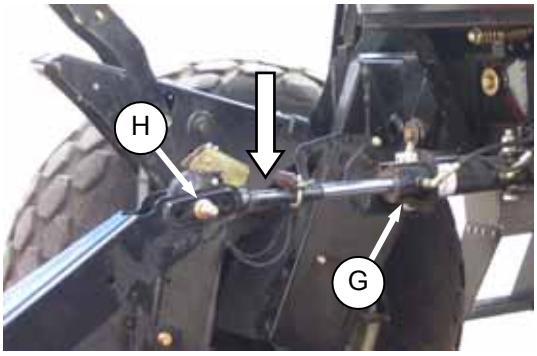

3. Push down on rod end of link cylinder (G) until hook engages pin (H) on header and is locked.
4. Check that center link is locked onto header by pulling upward on rod end of cylinder.
5. Proceed to step e.

*(continued next page)*

HYDRAULIC LINK WITH OPTIONAL SELF-ALIGNMENT KIT




1. Adjust the position of the center link cylinder with the REEL UP and REEL DOWN switches, and HEADER TILT switches on the GSL to position the hook above the header attachment pin.




2. Lower the center link (G) with the REEL DOWN switch onto the header pin (H) until it locks into position (handle is down).

**CAUTION**

**Check to be sure all bystanders have cleared the area.**

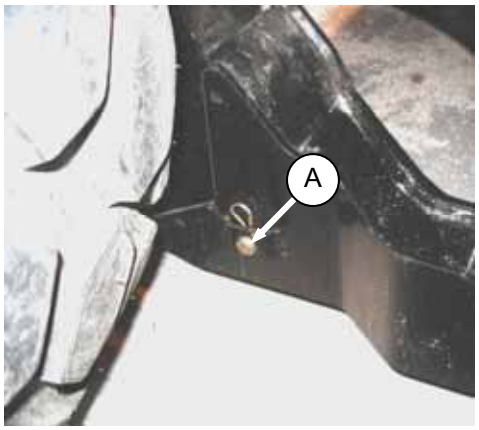
e. Start engine.

f. Raise the header fully with the header up switch on the GSL. Stop engine and remove key.

**DANGER**

**To avoid bodily injury from fall of raised header, always engage header lift cylinder stops when working on or around raised header.**

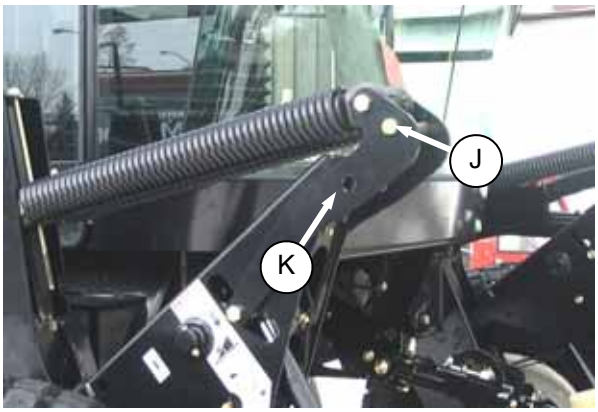
g. Engage lift cylinder stops on both lift cylinders.




h. Install pin (A) through each boot and foot and secure with hairpin.

**IMPORTANT**

Ensure pin (A) is fully inserted and hairpin is installed behind bracket on boot.




i. Remove pin (J) from storage position in linkages on both sides and insert in hole (K) to engage float springs. Secure with hairpin.

j. Disengage lift cylinder stops.

**CAUTION**

**Check to be sure all bystanders have cleared the area.**

k. Start engine, and activate header lift cylinder switch on GSL to lower header fully. Stop engine and remove key.

**DANGER**

**Stop engine and remove key from ignition before leaving operator's seat for any reason. A child or even a pet could engage an idling machine.**

*(continued next page)*

l. Connect header drive hydraulics and electrical harness to header.

**NOTE**

*Refer to the Rotary Header Operator's Manual for instructions on attaching the hydraulics and electrical to the rotary header.*

# STEP 10. LUBRICATE MACHINE

**Recommended Lubricant**

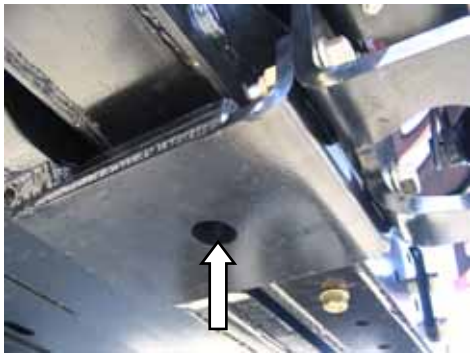
| SPEC | DESCRIPTION | USE |
|---|---|---|
| SAE Multi-Purpose. | High Temp. Extreme Pressure (EP2) Performance With 1% Max Molybdenum Disulphide (NLGI Grade 2).Lithium Base | As Required Unless Otherwise Specified. |

a. Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.
b. Inject grease through fitting with grease gun until grease overflows fitting, except where noted.
c. Leave excess grease on fitting to keep out dirt.
d. Replace any loose or broken fittings immediately.
e. If fitting will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.
f. Refer to the following illustrations for identifying the various locations that require lubrication.

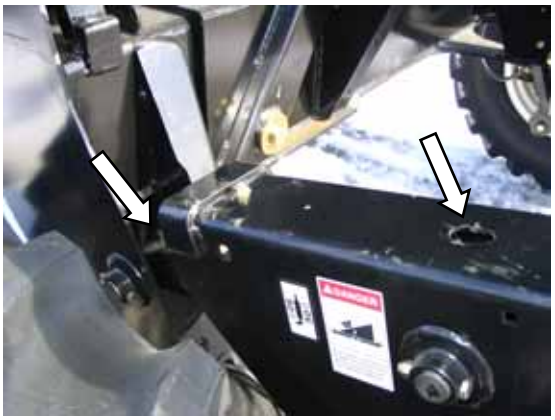
*(continued next page)*

**Lubrication Points** (continued)

High Temp. Extreme Pressure (EP2) Performance With 1% Max Molybdenum Disulphide (NLGI Grade 2).Lithium Base

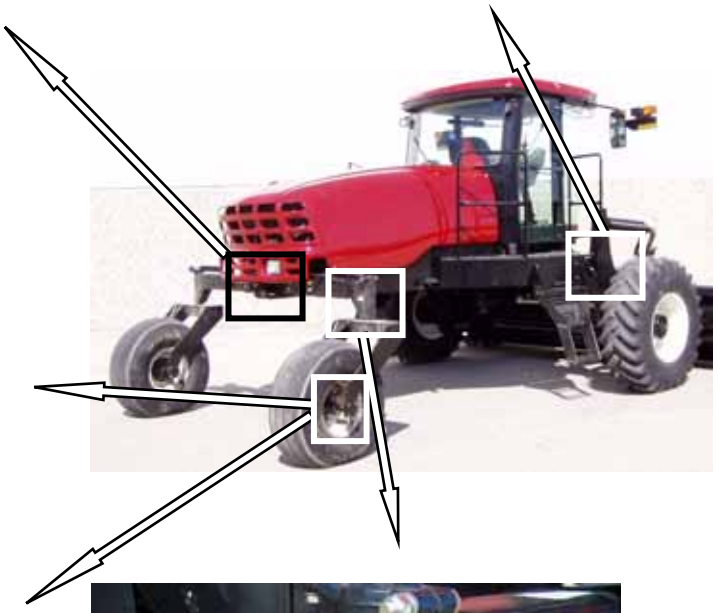


WALKING BEAM PIVOT)



TOP LINK – TWO FITTINGS
(BOTH SIDES)

FORMED CASTER WHEEL BEARING
1 PLACE (BOTH WHEELS)



FORKED CASTER SPINDLE BEARINGS
TWO PLACES (BOTH WHEELS)

CASTER PIVOT
(BOTH SIDES)

## STEP 11. PROGRAM CDM

The monitoring system requires programming for each header and the **header must be attached to the tractor**. Programming the system may be accomplished with or without the engine running. If the engine is running, the transmission must be in neutral. If the engine is not running, the ignition must be on. Exit programming mode at any time by pressing the PROGRAM switch or by turning off the ignition.

The system only needs to be programmed once for each header. The operator may make changes later on to a particular setting to suit windrowing conditions or modifications to the machine. Most functions have been pre-programmed at the factory but can be changed by the operator if required.

The following functions can be programmed by the dealer provided he has the applicable information from the operator and the header is installed:

- **DWA INSTALLED**
- **HDR CUT WIDTH**
- **HAY CONDITIONER INSTALLED**
- **CALIBRATE SENSORS**

Proceed as follows to program the CDM:

**IMPORTANT**

Header must be attached to the tractor. See STEP 9.

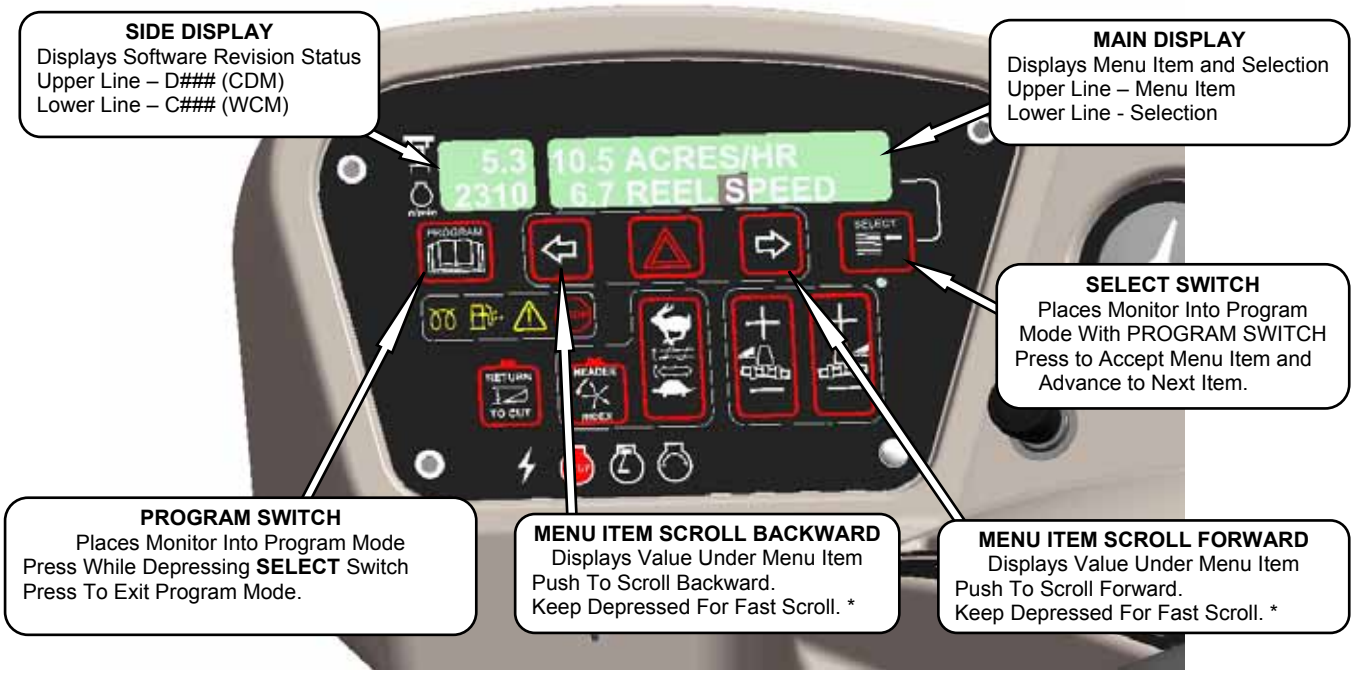
a. Turn ignition key to RUN, or start the engine. Refer to STEP 12.J. II START ENGINE.
b. Press PROGRAM and SELECT on CDM to enter programming mode. Header ID code is displayed.
c. Press SELECT. TRACTOR SETUP? is displayed.
d. Press ⇨. SET KNIFE SPEED? is displayed
e. Press SELECT until DWA INSTALLED? is displayed.
f. Press ⇦ or ⇨.
g. Press SELECT to advance to the next L1 item.
h. Press PROGRAM to exit programming mode.
i. Refer to Detailed Programming Instructions on following pages.

**NOTE**

*The functions requiring programming are hi-lited.*

**NOTE**

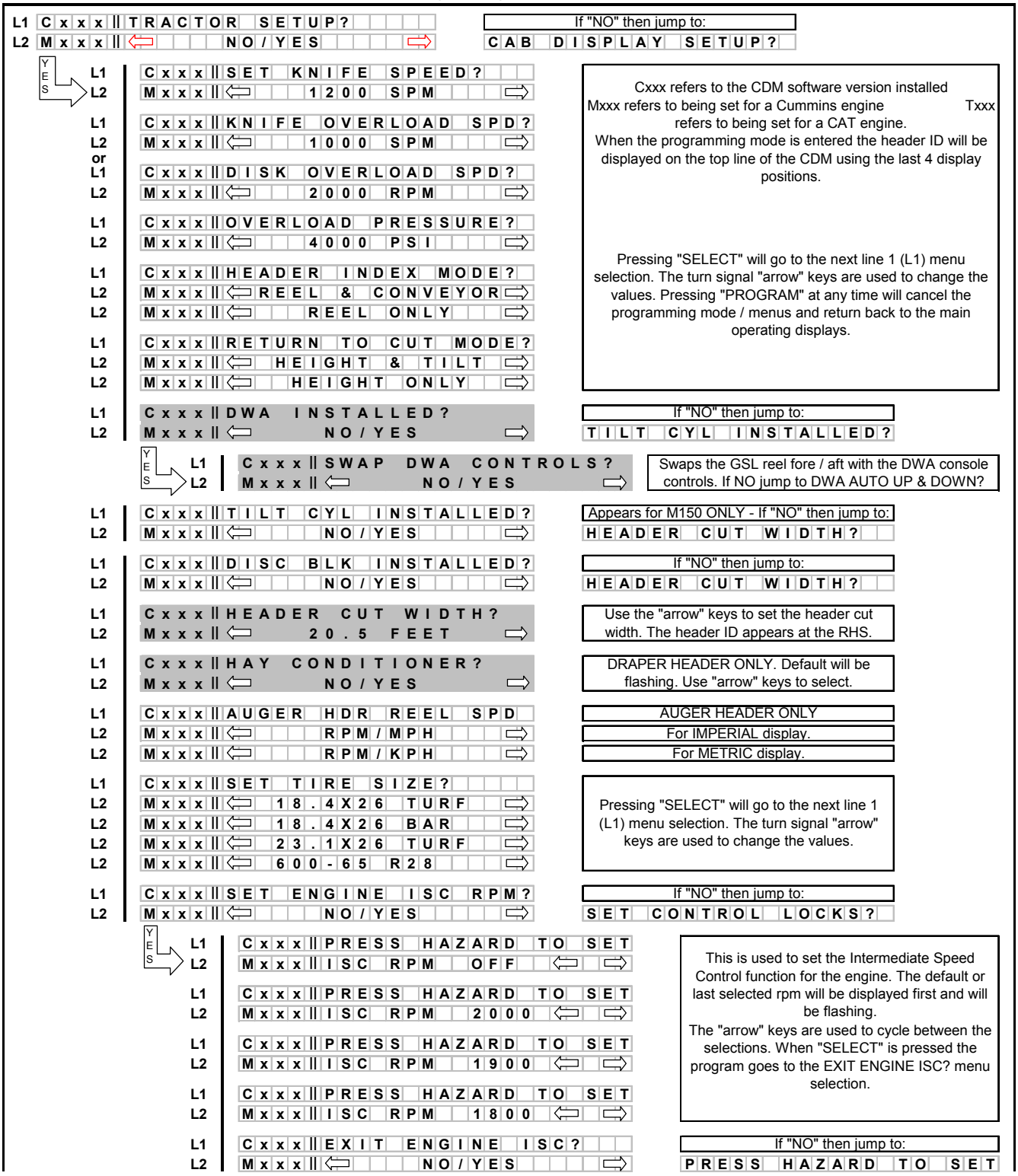
*If necessary, refer to the M150, M200 Windrower Operator's Manual for programming CDM to specific crop types and conditions.*



# DETAILED PROGRAMMING INSTRUCTIONS

(Key On / Engine Running or Not / Header Disengaged).
(Press **PROGRAM** and **SELECT** on CDM to enter programming mode).

**Programming Menu Flow Chart**

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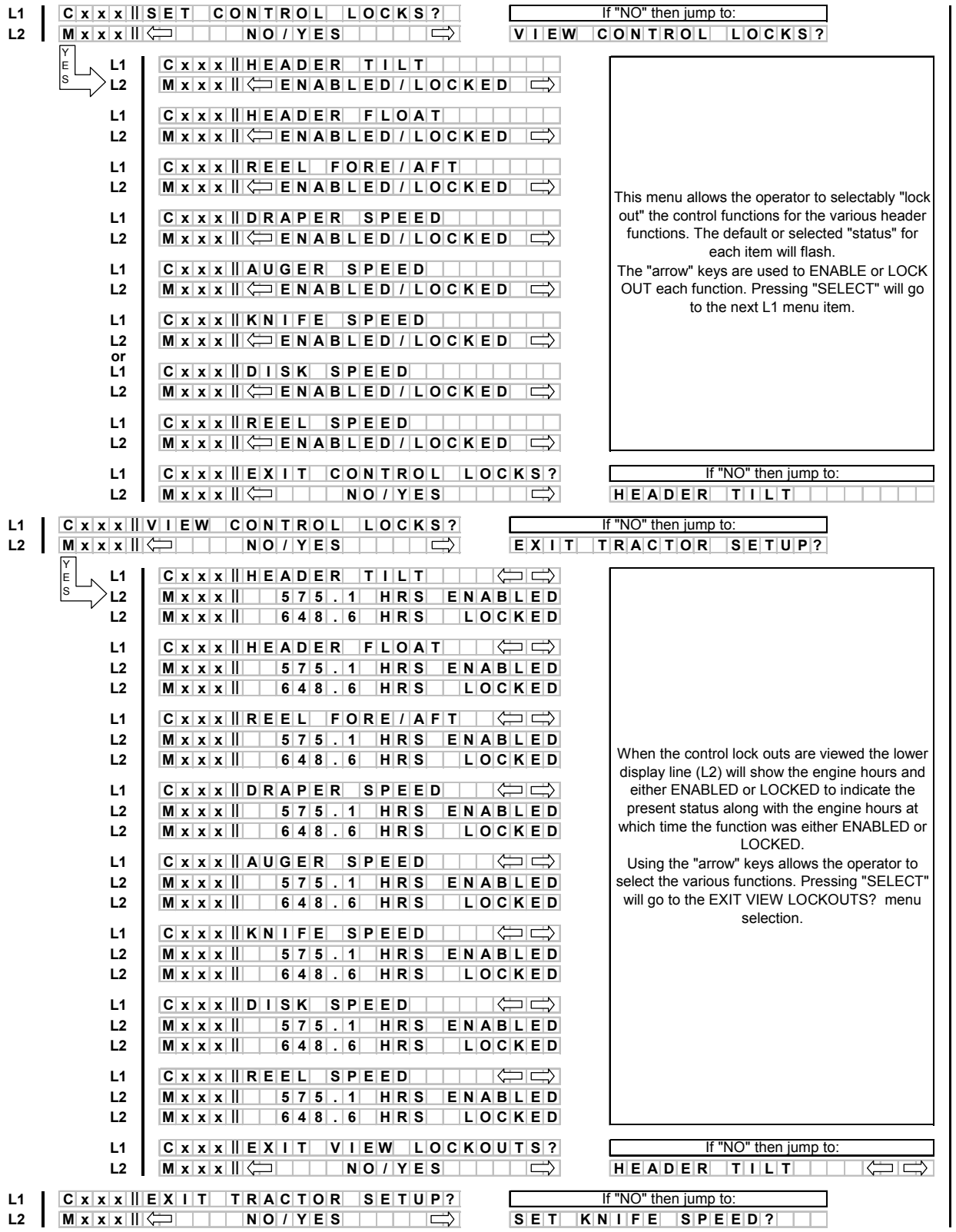


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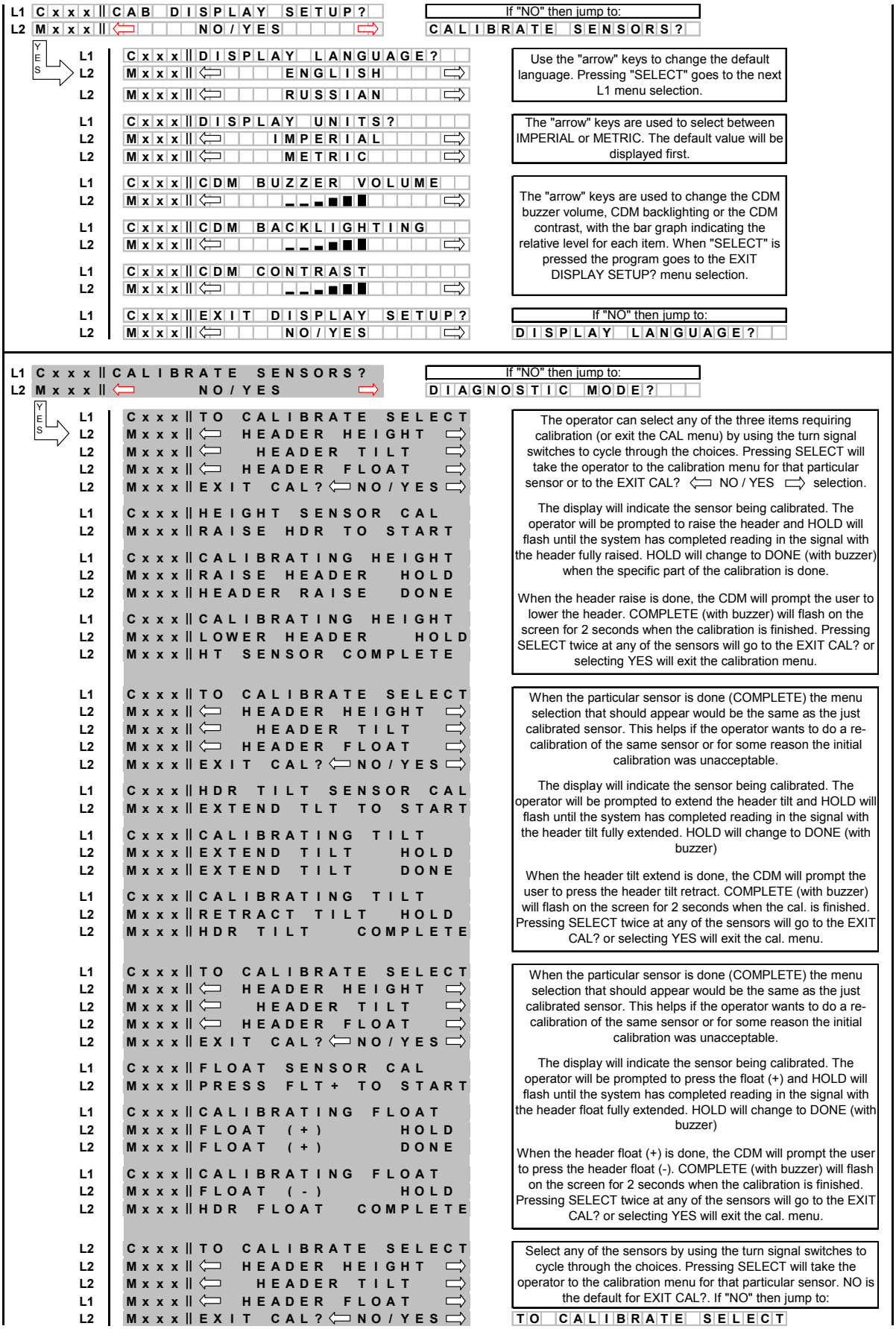


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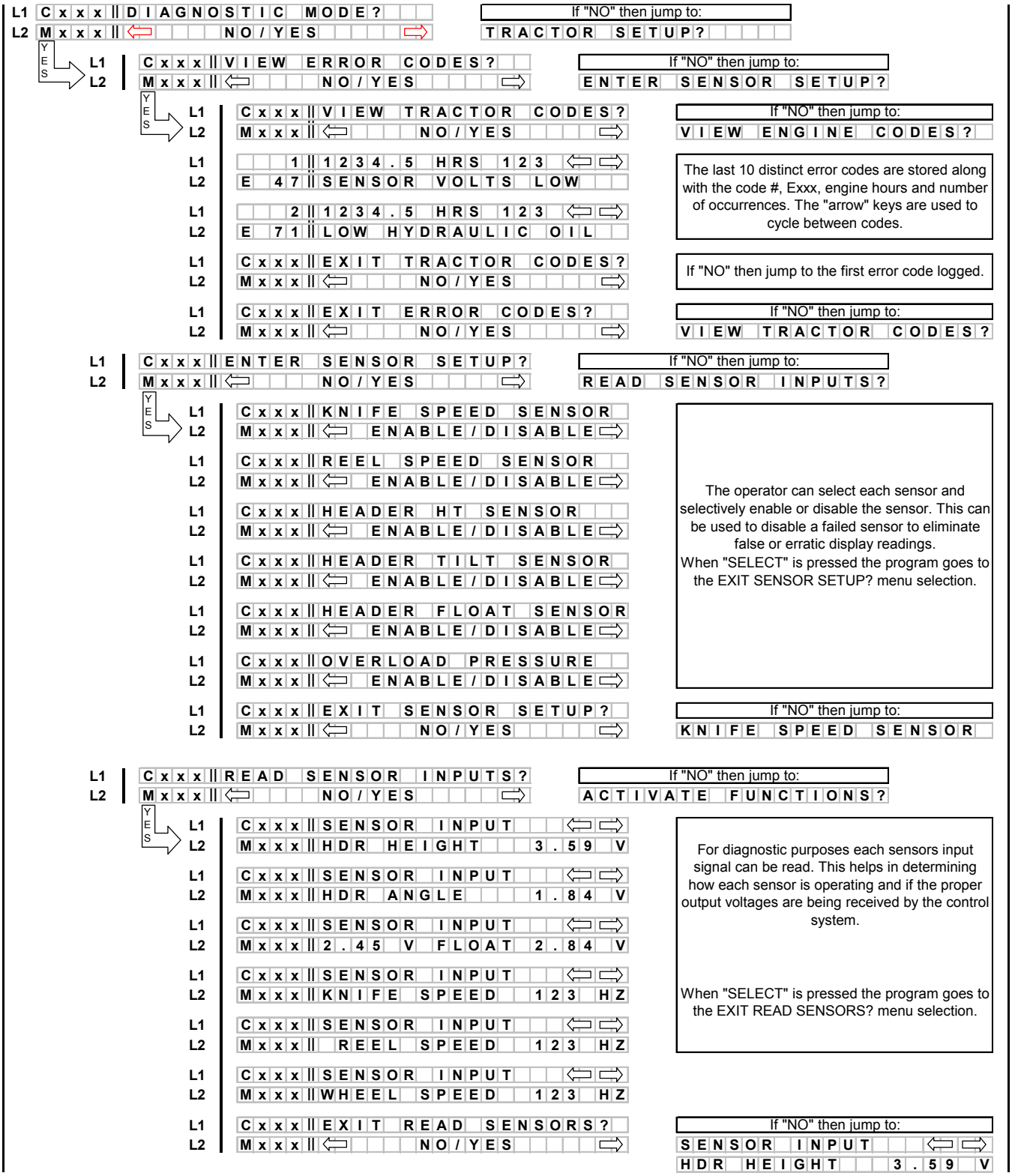


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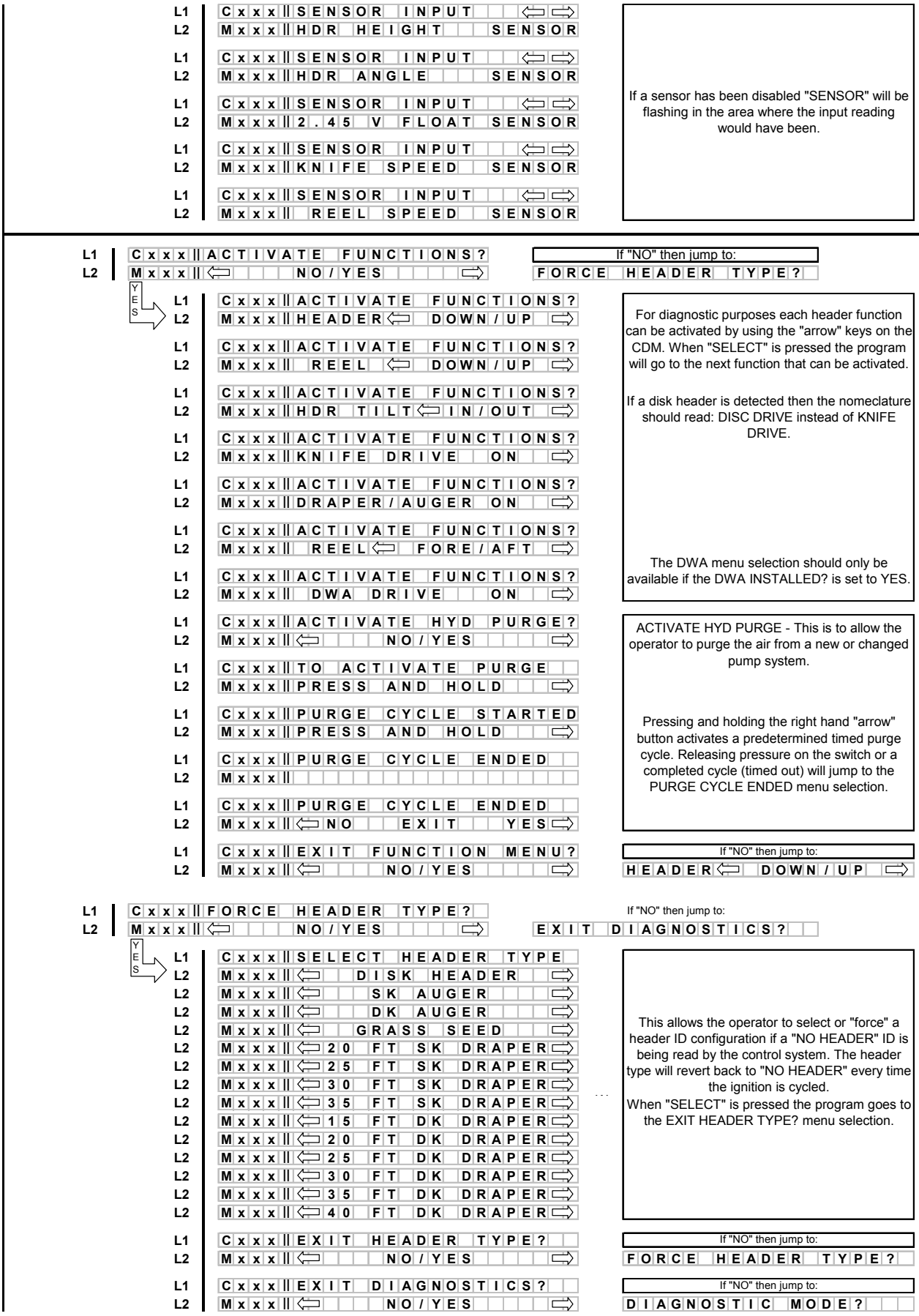

L1 Cxxx SENSOR INPUT
L2 Mxxx HDR HEIGHT SENSOR
L1 Cxxx SENSOR INPUT
L2 Mxxx HDR ANGLE SENSOR
L1 Cxxx SENSOR INPUT
L2 Mxxx 2.45 V FLOAT SENSOR
L1 Cxxx SENSOR INPUT
L2 Mxxx KNIFE SPEED SENSOR
L1 Cxxx SENSOR INPUT
L2 Mxxx REEL SPEED SENSOR
If a sensor has been disabled "SENSOR" will be flashing in the area where the input reading would have been.
L1 Cxxx ACTIVATE FUNCTIONS?
L2 Mxxx NO/YES
If "NO" then jump to:
FORCE HEADER TYPE?
YES
L1 Cxxx ACTIVATE FUNCTIONS?
L2 Mxxx HEADER DOWN/UP
L1 Cxxx ACTIVATE FUNCTIONS?
L2 Mxxx REEL DOWN/UP
L1 Cxxx ACTIVATE FUNCTIONS?
L2 Mxxx HDR TILT IN/OUT
L1 Cxxx ACTIVATE FUNCTIONS?
L2 Mxxx KNIFE DRIVE ON
L1 Cxxx ACTIVATE FUNCTIONS?
L2 Mxxx DRAPER/AUGER ON
L1 Cxxx ACTIVATE FUNCTIONS?
L2 Mxxx REEL FORE/AFT
L1 Cxxx ACTIVATE FUNCTIONS?
L2 Mxxx DWA DRIVE ON
For diagnostic purposes each header function can be activated by using the "arrow" keys on the CDM. When "SELECT" is pressed the program will go to the next function that can be activated.
If a disk header is detected then the nomeclature should read: DISC DRIVE instead of KNIFE DRIVE.
The DWA menu selection should only be available if the DWA INSTALLED? is set to YES.
L1 Cxxx ACTIVATE HYD PURGE?
L2 Mxxx NO/YES
L1 Cxxx TO ACTIVATE PURGE
L2 Mxxx PRESS AND HOLD
L1 Cxxx PURGE CYCLE STARTED
L2 Mxxx PRESS AND HOLD
L1 Cxxx PURGE CYCLE ENDED
L2 Mxxx
L1 Cxxx PURGE CYCLE ENDED
L2 Mxxx NO EXIT YES
ACTIVATE HYD PURGE - This is to allow the operator to purge the air from a new or changed pump system.
Pressing and holding the right hand "arrow" button activates a predetermined timed purge cycle. Releasing pressure on the switch or a completed cycle (timed out) will jump to the PURGE CYCLE ENDED menu selection.
L1 Cxxx EXIT FUNCTION MENU?
L2 Mxxx NO/YES
If "NO" then jump to:
HEADER DOWN/UP
L1 Cxxx FORCE HEADER TYPE?
L2 Mxxx NO/YES
If "NO" then jump to:
EXIT DIAGNOSTICS?
YES
L1 Cxxx SELECT HEADER TYPE
L2 Mxxx DISK HEADER
L2 Mxxx SK AUGER
L2 Mxxx DK AUGER
L2 Mxxx GRASS SEED
L2 Mxxx 20 FT SK DRAPER
L2 Mxxx 25 FT SK DRAPER
L2 Mxxx 30 FT SK DRAPER
L2 Mxxx 35 FT SK DRAPER
L2 Mxxx 15 FT DK DRAPER
L2 Mxxx 20 FT DK DRAPER
L2 Mxxx 25 FT DK DRAPER
L2 Mxxx 30 FT DK DRAPER
L2 Mxxx 35 FT DK DRAPER
L2 Mxxx 40 FT DK DRAPER
This allows the operator to select or "force" a header ID configuration if a "NO HEADER" ID is being read by the control system. The header type will revert back to "NO HEADER" every time the ignition is cycled.
When "SELECT" is pressed the program goes to the EXIT HEADER TYPE? menu selection.
L1 Cxxx EXIT HEADER TYPE?
L2 Mxxx NO/YES
If "NO" then jump to:
FORCE HEADER TYPE?
L1 Cxxx EXIT DIAGNOSTICS?
L2 Mxxx NO/YES
If "NO" then jump to:
DIAGNOSTIC MODE?

## STEP 12. PERFORM PRE-DELIVERY CHECKS

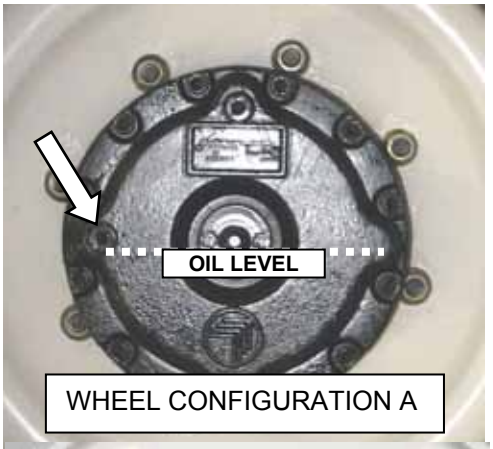
**WARNING**

**Stop windrower tractor engine and remove key before making adjustments to machine. A child or even a pet could engage the drive.**

a. Perform the final checks and adjustments as listed on the "Pre-Delivery Checklist" (yellow sheet) to ensure the machine is field-ready. Refer to the following pages for detailed instructions as indicated on the checklist.

b. The completed checklist should be retained either by the operator or the dealer.

### *A. FINAL DRIVE LUBRICANT LEVEL*




WHEEL CONFIGURATION A


WHEEL CONFIGURATION B

c. Rotate wheel so that one of the plugs is horizontally aligned with the center of the hub.

d. Remove the plug. The oil should be visible through the hole or slightly running out.

### *B. TIRE PRESSURES*

Measure tire pressure with a gauge.

Bar – 32 psi (221 kPa)
Turf – 20 psi (138 kPa)
Caster - 10 psi (69 kPa)

### *C. ENGINE COOLANT*

a. Check daily the coolant level in the coolant recovery tank. Tank should be at least half full.

b. Check coolant concentration in the radiator. Coolant shall be good for temperatures of -30°F (-34°C).

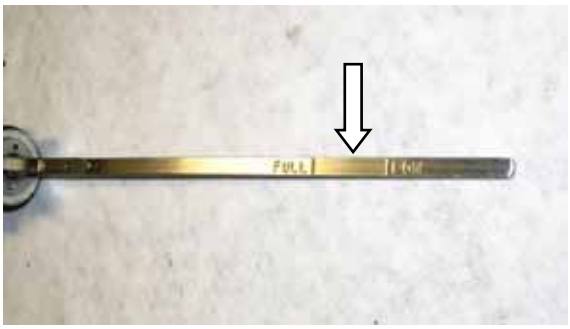
### *D. AIR CLEANER*

a. Check that air cleaner cap is firmly attached and that all clamps are secure.


b. Check spring clamp at back of air cleaner.

## E. HYDRAULIC OIL LEVEL

a. Turn filler cap counterclockwise to loosen bung, and remove dipstick.




b. Check that level is between LOW and FULL marks.

c. Reinstall filler cap and turn clockwise to tighten bung.

## F. FUEL SEPARATOR

M150

M200

a. Turn drain valve by hand 1½ to 2 turns counterclockwise until draining occurs.

b. Drain the filter sump of water and sediment until clear fuel is visible. Clean as necessary.

c. Turn the valve clockwise to close the drain.

## G. GEAR BOX LUBRICANT LEVEL

a. Remove plug. The lubricant should be visible through the hole or slightly running out.

b. Replace plug and tighten.

## H. A/C COMPRESSOR BELT

a. Tension on A/C compressor belt should be such that a force of 8 to 12 lbf (35-55 N) deflects the belt 3/16 inch (5 mm) at mid-span.

## I. PERFORM SAFETY SYSTEM CHECKS

**CAUTION**

**Check to be sure all bystanders have cleared the area.**

A properly functioning system should operate as follows:

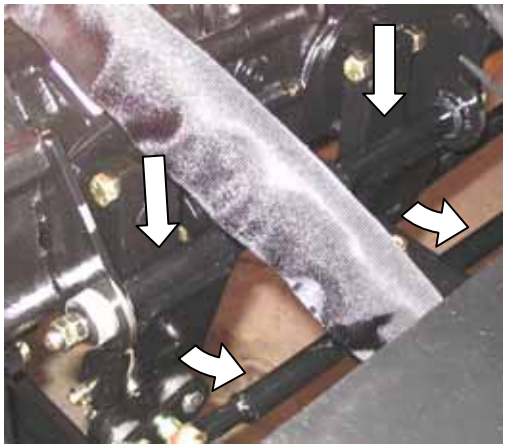
- The starter should engage ONLY when the GSL is in N-DETENT, steering wheel locked in the CENTER position, and the header drive switch is in the OFF position.
- Under the above conditions, the brake should engage and the machine should not move after engine start-up.
- The steering wheel should not lock with the engine running and the GSL is out of the N-DETENT.
- The machine should not move with the engine running and with the steering wheel still centered, when the GSL is pulled straight out of N-DETENT (not in forward or reverse).

If the system does not function as described above, see your windrower dealer.

a. With the engine shut down and the header drive switch engaged, try to start the engine. The CDM will display “HEADER ENGAGED” on the upper line, and “DISENGAGE HEADER’ on the lower line. If the engine turns over, the system requires adjustment. See your dealer.

b. With the engine shut down, do the following:

1. Open engine compartment hood.



2. Pry the steering interlock away from pintle arms by inserting a wedge or pry bar between one of the interlock channels and pintle arm.

*(continued next page)*

3. Insert a wood block approximately ¾ inch (19 mm) thick between the other channel and pintle arm so that the interlock channel is clear of the pintle arm.
4. Turn the steering wheel off center, and move the GSL in N-DETENT.
5. Try to start the engine. The CDM will flash "CENTER STEERING", accompanied by a short beep with each flash, and the engine should not turn over. If the engine turns over, the system requires adjustment. See your dealer.
6. Remove key.
7. Remove wood block inserted at step 3 above and close hood.

## CAUTION

**Check to be sure all bystanders have cleared the area.**

c. With the engine shut down, steering wheel centered, and the GSL in Neutral but not in N-DETENT;

1. Try to start the engine. The CDM will flash "CENTER STEERING" on the upper line, and "PLACE GSL INTO N" on the lower line accompanied by a short beep with each flash, and the engine should not turn over. If the engine turns over, the system requires adjustment. See your dealer.

## J. OPERATIONAL CHECKS

### I. ENGINE WARNING LIGHTS

a. Turn ignition key to RUN position.

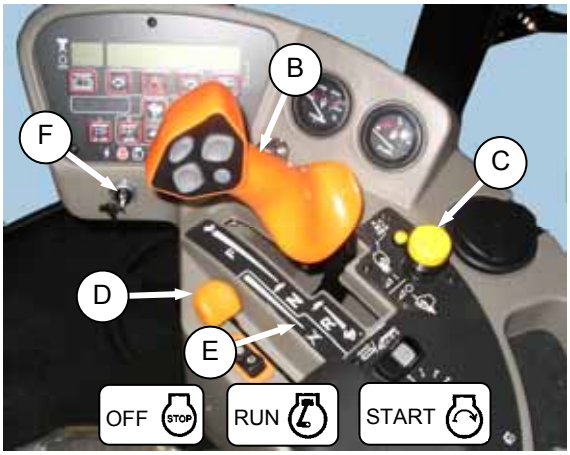
b. Single loud tone sounds, and engine warning lights illuminate.

### II. START ENGINE

a. Check fuel level and if required add sufficient fuel for a 15 minute run.


b. Operator's station lock (A) must be engaged at cab forward or engine forward position.

c. Move GSL (B) into N-DETENT.




d. Turn steering wheel until it locks.

e. Push header drive switch (C) to off.

f. Normal Start - engine temperature above 60°F (16°C):

1. Set throttle (D) to start position (E) – fully back.
2. Turn ignition key (F) to RUN position.
3. Single loud tone sounds, engine warning lights illuminate and CDM displays HEADER DISENGAGED or DISENGAGE HEADER and IN PARK.

**CAUTION**

**Check to be sure all bystanders have cleared the area.**

4. Turn ignition key to START position until engine starts and then release key. Tone ceases and warning lights go out. CDM displays programmed header data for 5 seconds if attached and then returns to previous display.

**IMPORTANT**

Do not operate starter for longer than 15 seconds at a time. If engine does not start, wait at least two minutes before trying again. After the third 15 second crank attempt, allow starter to cool for 10 minutes before further cranking attempts. If engine still does not start, refer to the following table:

| PROBLEM | SOLUTION |
|---|---|
| Controls not in neutral. | Move GSL to neutral.<br>Move steering wheel to locked position.<br>Disengage header clutch. |
| Neutral interlock misadjusted. | Contact MacDon dealer. |
| No fuel to engine. | Fill empty fuel tank, replace clogged filter. |
| Old fuel in tank. | Drain tank, refill with fresh fuel. |
| Water, dirt or air in fuel system. | Drain, flush, fill and prime system. |
| Improper type of fuel. | Use proper fuel for operating conditions. |
| Crankcase oil too heavy. | Use recommended oil. |
| Low battery output. | Have battery tested. Check battery electrolyte level. |
| Poor battery connection. | Clean and tighten loose connections. |
| Faulty starter. | Contact MacDon dealer. |
| Wiring shorted, circuit breaker open. | Check continuity of wiring and breaker (manual reset). |
| Faulty injectors. | Contact MacDon dealer. |

g. Cold Start - engine temperature below 40°F (5°C).

M200 – CAT ENGINE

1. Set throttle (D) to start position (E) – fully back (low idle).
2. Turn key to RUN.
3. Single loud tone sounds, engine warning lights illuminate and CDM displays HEADER DISENGAGED or DISENGAGE HEADER and IN PARK.

*(continued next page)*

4. Glow plug light on CDM will cycle on/off/on after 2 seconds for a pre-set length of time. The operating period for the glow plug light will change depending engine temperature.

## CAUTION

**Check to be sure all bystanders have cleared the area.**

5. When glow plug light goes out, turn key to START and crank engine until it starts. Leave throttle at IDLE.

**IMPORTANT**

If engine fails to start within 30 seconds, cease cranking and wait two minutes to allow the starting motor to cool before attempting to re-start the engine.

6. If engine fails to start, repeat steps 1 to 4.
7. Engine will cycle through a period where it appears to labour.

M150 – CUMMINS ENGINE

1. Follow procedure for Normal Start.
2. Engine will cycle through a period where it appears to labour until engine warms up.

**NOTE**

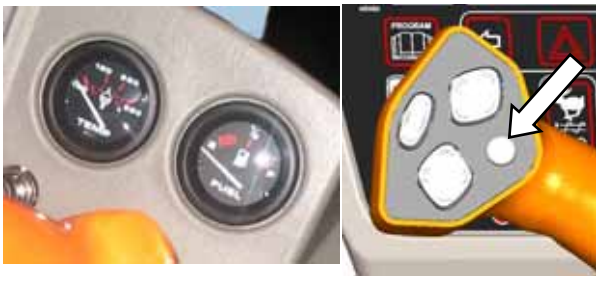
Throttle is non-responsive during this time as engine is in "WARM UP" mode. This mode will last from 30 seconds to 3 minutes depending on temperature. After engine has stabilized and idling normally, throttle becomes active.

**IMPORTANT**

Do not operate engine above 1500 rpm until engine temperature gauge is above 100°F.

## III. GAUGES AND CDM DISPLAY

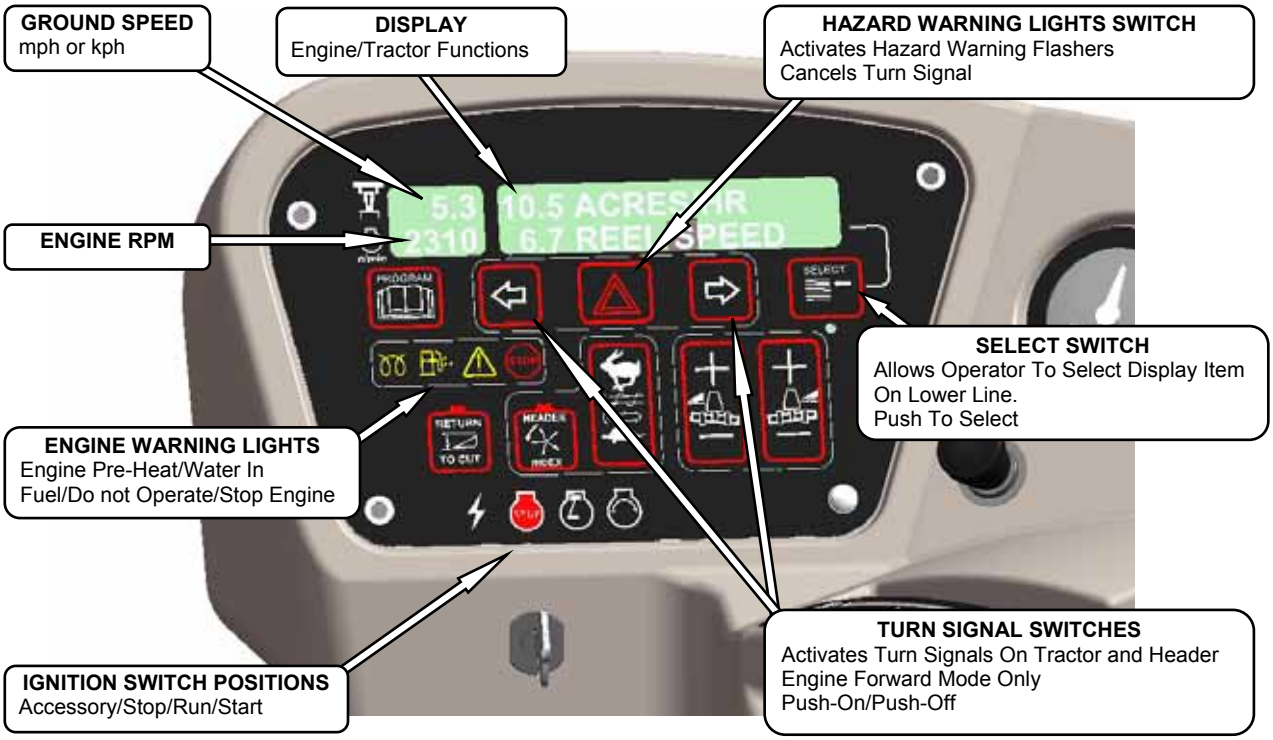
a. Check engine temperature gauge and fuel gauge are working.
b. Check CDM display is working by pushing SELECT on CDM or SELECT button on GSL.



## IV. ENGINE SPEED

a. Check engine rpm on CDM.

| | IDLE | MAX RPM (No Load) |
|---|---|---|
| M150 | 1100 | 2270-2330 |
| M200 | 1100 | 2250-2300 |



## V. OPERATOR'S PRESENCE SYSTEM CHECKS

a. With the windrower engine running, place the GSL in Neutral and turn the steering wheel until it locks.

**CAUTION**

**Check to be sure all bystanders have cleared the area.**

b. With everyone clear of the machine, engage header drive switch.

1. After header drives are running, stand up out of the seat. In approximately 5 seconds the header should shut off. If not, the operator presence system requires adjustment. Refer to Technical Service Manual.

**NOTE**

*To restart the header, move the header engage switch to "OFF" position and back to the "ON" position again.*

c. With the engine running, position the GSL in Neutral and in N-DETENT;

1. Swivel the operator's station but do not lock into position.
2. Move GSL out of N-DETENT. The engine should shut down and the lower display will flash "LOCK SEAT BASE ---> CENTER STEERING WHEEL ---> NOT IN NEUTRAL".
3. Swivel and lock the operator's station and the display should return to normal.
4. If the engine does not shut down, the seat position switches require adjustment. Refer to Technical Service Manual.

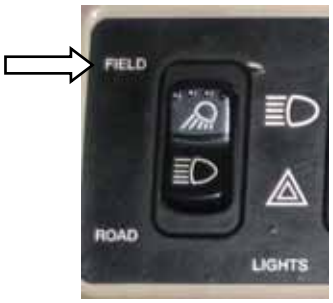
d. With the windrower moving at less than 3 mph;

1. Stand up out of the seat.
2. The CDM will flash "NO OPERATOR" on the upper line, and "ENGINE SHUTDOWN 5…4…3…2…1…0" on the lower line accompanied by a steady tone. At "0", the engine shuts down.
3. If the engine does not shut down, the operator presence system requires adjustment. Refer to Technical Service Manual.

e. With the windrower moving at more than 3 mph;

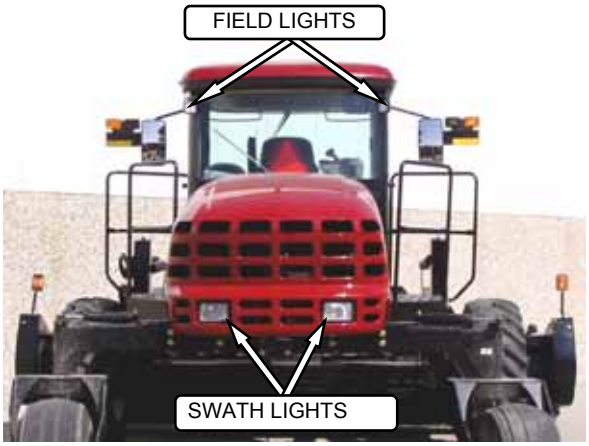
1. Stand up out of the seat.
2. The CDM beeps once and displays "NO OPERATOR" on the lower line.
3. If not, the operator presence system requires adjustment. Refer to Technical Service Manual.

## VI. EXTERIOR LIGHTS





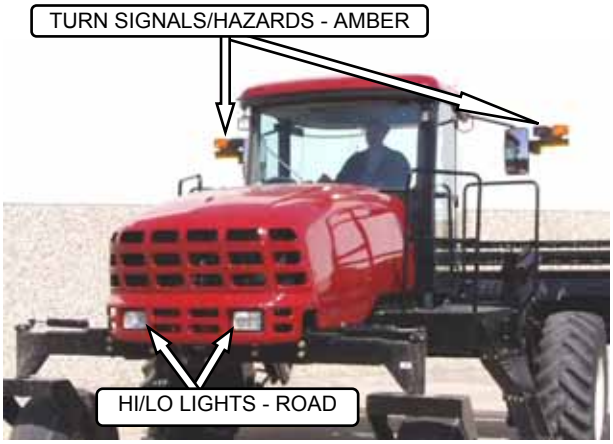
FRONT – CAB FWD



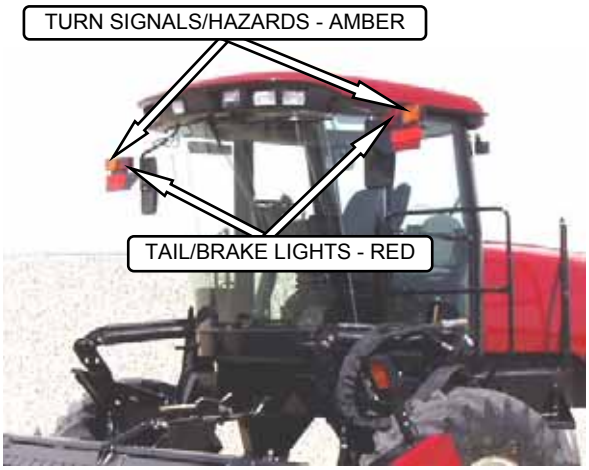

REAR – CAB FWD

a. Ensure operator's seat is in cab forward mode.
b. Switch on field lights and check that all lights as shown are functioning.
c. Turn off lights.

d. Rotate operator's seat to engine forward mode.


FRONT – ENG FWD




REAR – ENG FWD

e. Switch on road lights and check that all lights shown are functioning.
f. Activate hi/lo switch.
g. Activate turn signals and hazard warning lights with switches on CDM.

## VII. INTERIOR LIGHTS

a. Switch lights on and off with switches on each light. Interior lights only work with road or field light switch on.

## VIII.A/C AND HEATER

**IMPORTANT**

*To distribute the oil throughout the system, perform the following steps whenever the machine is first started after storage for more than one week.*


a. With the engine running, turn blower switch to the first position, turn temperature control switch to maximum heating, and A/C control to “OFF”.

b. Click A/C switch from "OFF" to "ON" for one second, then back to "OFF" for 5 to 10 seconds. Repeat this step ten times.

## *K. MANUALS*

a. The following manuals should be stored in the manual storage case behind the operator’s seat:

- M Series Self-Propelled Windrower PARTS CATALOG. Form #169016.
- M Series Self-Propelled Windrower OPERATOR’S MANUAL. See below:

| WINDROWER TRACTOR | FORM NUMBER |
|---|---|
| MacDon | 169017 |
| Premier | 169095 |
| Westward | 169087 |

- Engine Manual

## *L. CAB INTERIOR*

a. Remove plastic coverings from Cab Display Module and seats after pre-delivery check is complete.

## NOTES

# NOTES

**MacDon Industries Ltd.**
680 Moray Street
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# M150/M200 Self-Propelled Windrower Pre-Delivery Checklist

Perform these checks and adjustments prior to delivery to your customer. The completed checklist should be retained either by the operator or the dealer.

**CAUTION: Carefully follow the instructions given. Be alert for safety related messages which bring your attention to hazards and unsafe practices.**

**Windrower Serial Number: _____ Engine Serial Number: _____**

| ✓ | ITEM | PAGE |
|---|---|---|
| | Check for shipping damage or missing parts. Be sure all shipping dunnage is removed. | - |
| | Check for loose hardware. Tighten to required torque. | 4 |
| | Check tire air pressures and adjust as required. | 35 |
| | Check final drive hub lubricant level. | 35 |
| | Check engine coolant level and strength at reserve tank. | 35 |
| | Check air cleaner and clamps. | 35 |
| | Check hydraulic oil level and check for leaks along lines. | 36 |
| | Check fuel separator for water & foreign material. Drain and clean as necessary. Add fuel. | 36 |
| | Check gear box lubricant level. | 37 |
| | Check tension of A/C compressor belt. | 37 |
| | Check machine completely lubricated. | 27 |
| | Check neutral interlock system. | 37 |
| | Check engine oil pressure indicator light at Cab Display Module. | 40 |
| **START ENGINE AND RUN TO OPERATING TEMPERATURE** | | |
| | Check Cab Display Module for operation. | 40 |
| | Check operator's presence system. | 41 |
| | Check alternator charge rate at instrument console. | 40 |
| | Check fuel gauge for operation. | 40 |
| | Check air conditioning functioning properly. | 43 |
| | Check heater functioning properly. | 43 |
| | Check instrument console gauge lights and interior lights for operation. | 43 |
| | Check maximum (no load) engine speed at Cab Display Module (M150 – 2270-2330 rpm) (M200 – 2250-2300 rpm). | 40 |
| | Check exterior lights for operation. | 42 |
| | Complete the Header Pre-Delivery Checklist. | - |
| | Check that manuals are with the tractor. | 43 |
| | Check plastic coverings from cab interior removed. | 43 |

Date Checked: _____ Checked by: _____