

Recommended Fluids and Lubricants			
Fluids and Lubricants	Specification	Use	Capacities
Air conditioning refrigerant oil	SP-15 PAG	Cab A/C compressor	240 cc (8.1 fl. oz)
Engine coolant	ASTM D-6210 and CES-14603, Fleetguard ES Compleat® OAT, or Peak Final Charge Global®	Engine cooling system	27.5 liters (7.3 US gal)
Engine oil	SAE 15W-40 for API class SJ and CH-4	Engine lubrication	11 liters (11.6 US qt.)
Fuel: diesel no. 1 and no. 2 mix	Sulphur (by weight) 0.5%, preferably 1%; maximum water and sediment (by weight) 0.1%; maximum lubricity 460 microns	Fuel tank	367 liters (97 US gal)
Fuel: diesel no. 2	ASTM D-975 Grade S15 Sulphur (by weight) 0.5%; maximum water and sediment (by volume) 0.05%; maximum lubricity 520 microns		
Grease	SAE multi-purpose high temperature extreme pressure EP2 max 1% molybdenum disulphide, lithium base. Use this grease unless directed otherwise in the operator's or technical manual.	As required unless otherwise specified	As required
Hydraulic oil	SAE 15W-40 for API Class SJ and CH-4	Windrower drive and header drive	65 liters (17.2 US gal)
Gear lubricant	SAE 75W-90 API Service Class GL-5 fully synthetic gear lubricant (SAE J2360 preferred)	Wheel drive	1.4 liters (1.5 US qt.)
	SAE 80W-140 API Service Class GL-5 fully synthetic gear lubricant (SAE J2360 preferred)	Gearbox	2.1 liters (2.2 US qt.)
Refrigerant	R134A	Cab A/C system	2.27 kg (5 lb.)

Break-In Inspections
To help prevent major component failure, perform break-in inspections on your machine during the first 50 hours of operation. Refer to your operator's manual for the complete break-in inspection and adjustment procedures.

Operating Hours	Maintenance Task
1 hour	Check drive wheel nuts. Torque wheel nuts to 510 Nm (375 lbf-ft) dry.
5 hours	Tension A/C compressor belt.
	Torque caster wheels nuts to 163 Nm (120 lbf-ft).
	Torque caster wheel anti-shimmy dampener bolts: inboard bolt 135 Nm (100 lbf-ft) and outboard bolt 115 Nm (85 lbf-ft).
	Torque walking beam width adjustment bolts to 448 Nm (330 lbf-ft)
10 hours	Torque walking beam width adjustment bolts to 448 Nm (330 lbf-ft)
	The Dealer will adjust the neutral.
50 hours	Hand tighten the following hose clamps: air intake, radiator, heater, and hydraulic.
	Torque the walking beam width adjustment bolts to 448 Nm (330 lbf-ft)
	Torque the caster wheel anti-shimmy dampener bolts: inboard bolt 135 Nm (100 lbf-ft) and outboard bolt 115 Nm (85 lbf-ft).
	Change the following: main gearbox oil, drive wheel oil lubricant, charge system oil filter, and return oil filter.

Tire Pressures		
Drive tires	18.4 - 26 bar 317 kPa (46 psi)	600 - 65 R28 bar 241 kPa (35 psi)
	18.4 - 26 turf 317 kPa (46 psi)	23.1 - 26 turf 234 kPa (34 psi)
Rear tires	69 kPa (10 psi)	

Ongoing Maintenance Intervals
Refer to the operator's manual for a comprehensive maintenance schedule and record. Log the machine's hours of operation, use the maintenance record, and keep copies of your maintenance records.
Following the maintenance schedule will increase your windrower's service life.

Subject to change without notice

Operator's Station Features

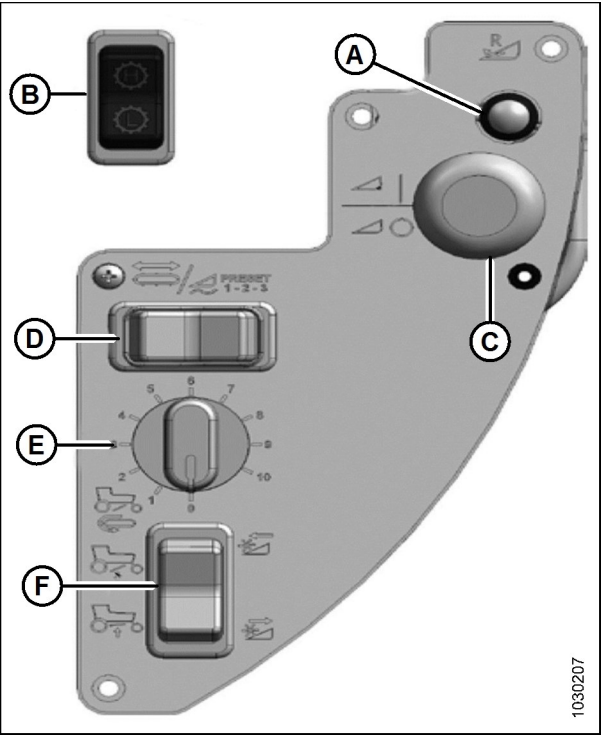


Figure 1: In-Cab Controls

- A. REVERSER - To activate, hold down and engage the header (requires optional hydraulics)
- B. GROUND SPEED RANGE
- C. HEADER ENGAGE
- D. DECK SHIFT / FLOAT PRESET
- E. DWA DRAPER SPEED (optional)
- F. DWA / SWATH COMPRESSOR - RAISE / LOWER (optional)

Float Presets
A Series, R/R1 Series, and D/D1 Series without Hydraulic Deck Shift The FLOAT PRESET / DECK SHIFT allows for the retention and recall of three different float cylinder positions. For example: #1 - Border width LH 5.0, RH 6.5 #2 - Normal width LH 5.0, RH 5.0 #3 - Rocky width LH 6.5, RH 6.5 D/D1 Series Headers with Hydraulic Deck Shift The DECK SHIFT switch activates hydraulic deck shifting when the header is engaged. The switch allows for the retention and recall of float cylinder adjustments in each delivery opening position. Doing so ensures that the header adjusts to changes in weight distribution.

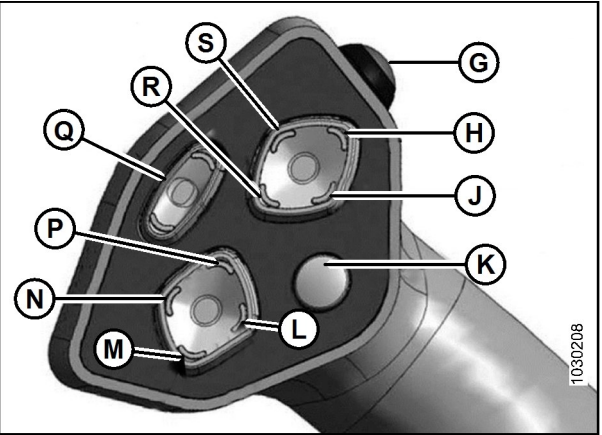


Figure 2: Ground Speed Lever (GSL)

- G. ENGAGE AUTOSTEER
- H. REEL UP
- J. REEL AFT
- K. DISPLAY SELECTOR SWITCH
- L. HEADER TILT UP (retracts center-link)
- M. HEADER DOWN
- N. HEADER TILT DOWN (extends center-link)
- P. HEADER UP
- Q. REEL / DISC SPEEDS
- R. REEL DOWN
- S. REEL FORE

Normal Start – Ambient Temperature above 16°C (60°F)
<ol style="list-style-type: none">1. Main battery disconnect switch – power ON.2. GSL in N-DETENT. Header Drive switch OFF.3. Seat belt ON. Set the throttle to the low idle position (fully back).4. Sound the horn three times.5. Turn the ignition key to the RUN position. A single loud tone will sound, the engine warning lights will flash (self-test mode), and the cab display module (CDM) will display the message HEADER DISENGAGED and IN PARK.6. Turn the ignition key to the START position until the engine starts, then release the key.7. Run engine at idle until temperature reaches 40°C (100°F). <p>NOTE: CDM displays programmed header data for 5 seconds, then returns to previous display.</p>

Cab Display Module (CDM) Interface

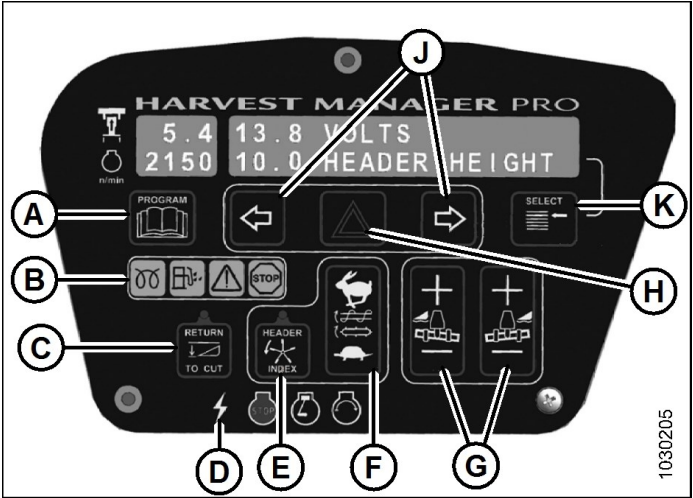


Figure 3: Cab Display Module (CDM)

- A. **PROGRAM** - Press to enter/exit set-up modes and for key shortcuts.
- B. **ENGINE WARNING** - Includes the Engine Preheat, Water in Fuel, Engine Malfunction, and Stop Engine warning lights.

- C. **RETURN TO CUT** - When the green light is ON, the RETURN TO CUT function is active.
- D. **IGNITION** - Includes the Accessory, Stop, Run, and Start lights.
- E. **HEADER INDEX** - When the green light is ON, the reel/conveyor speed features are active.
- F. **AUGER / DRAPER SPEED** - Allows the Operator to adjust the draper or auger speed (depending on the type of header).
- G. **FLOAT** - Allows for in-cab adjustments of the independent left and right header float settings.
- H. **HAZARD WARNING LIGHT** - Activates the hazard warning lights; cancels turn signals.
- J. **TURN SIGNAL** - Activates the turn indicators, and allows the Operator to scroll through the CDM set-up screens.
- K. **SELECT** - Allows the Operator to select a display item on the lower line.

Header Index Mode

Header index mode allows the reel and conveyor to be driven by reference to the windrower’s ground speed.

Operation of Header Index for REEL SPEED: A Series and D/D1 Series

1. Clear all bystanders, start the windrower, and engage the header.
2. While the GSL is in PARK, use the REEL SPEED control switch to set a minimum reel speed.

When the windrower is traveling at a ground speed greaer than the sum of the minimum reel speed and the header index value, the REEL SPEED message will change to REEL INDEX.
3. Adjust the header index value using the GSL REEL SPEED switch.

The reel speed will be equal to the sum of the ground speed and the index value, or the minimum reel speed (whichever is greater).

Operation of Header Index for DRAPER SPEED: D/D1 Series Only

Follow the instructions above, but use the CDM AUGER/DRAPER speed control, instead of the GSL REEL SPEED switch.

Header Hydraulic Pressures			
Header Model	Application/System	Suggested Overload Warning Setting kPa (psi)	Windrower Pressure Relief Setting kPa (psi)
R/R1 Series	Disc pressure	27,579 (4000)	28,958 (4200)
A Series D/D1 Series	Reel / draper pressure	20,684 (3000)	22,063 (3200)
	Knife / conditioner pressure	27,579 (4000)	28,958 (4200)

CDM Programming Mode: Windrower Setup	
SET KNIFE SPEED—SPM	Allows adjustment of the knife speed on draper and auger headers
KNIFE / DISC OVERLOAD SPD—SPM/RPM	KNIFE OVERLOAD SPEED (auger/draper headers): should be set at 75% of desired knife speed DISC OVERLOAD SPEED (rotary disc headers): should be set to 1300 rpm
OVERLOAD PRESSURE—PSI/BAR	Allows adjustment of the pressure overload sensor’s warning threshold. Refer to the Header Hydraulic Pressures table on this card for more information
HEADER INDEX MODE—Reel and drapers OR reel only	Enabling index mode links the speed of the reel and conveyor to the windrower’s ground speed. This setting is used on draper and auger headers only
RETURN TO CUT MODE—Height and tilt OR height only	Allows configuration of the windrower’s return to cut settings
AUTO RAISE	Allows configuration of the header’s height when RETURN TO CUT mode is enabled. Ranges from 4.0 (minimum) to 10.0 (maximum)
DWA INSTALLED—NO/YES?	Enables the controls for the Double Windrow Attachment (DWA), if it is installed on the windrower
SWAP DWA CONTROLS—NO/YES?	If YES is selected, the REEL FORE-AFT buttons on the GSL and the DWA RAISE/LOWER switches on the console will swap functions
DWA AUTO UP/DOWN—NO/YES?	Enables the express UP and DOWN features when RETURN TO CUT mode is enabled

Tips and Shortcuts	
Entering Programming Mode	Ignition ON. Press and hold PROGRAM and SELECT at the same time, until the CDM display enters programming mode.
Exiting Programming Mode	Press PROGRAM.
Changing Language to English	Ignition OFF. Press and hold HEADER INDEX and PROGRAM and SELECT.
Clearing Sub-Acres	Windrower in cab-forward position. Ignition ON. Press SELECT until SUB-ACRES appears on the bottom line of the display. Press and hold PROGRAM until SUB-ACRES changes to 0.0.
Disconnecting Batteries	The battery disconnect switch is located just behind the batteries and can be accessed by opening the maintenance platform. Ensure that the switch is in the OFF position when servicing electrical components, or when the windrower will not be used for periods longer than one week.
NOTE: Refer to the M155 Self-Propelled Windrower Operator’s Manual for complete operating instructions.	