

## ONGOING MAINTENANCE INTERVALS

TIME	SERVICE
10 Hours or Daily	<ol style="list-style-type: none"> <li>1. Check Tire Inflation.</li> <li>2. Check Engine Oil Level.</li> <li>3. Check Engine Coolant Level at Recovery Tank.</li> <li>4. Clean Radiator, Hydraulic Oil Cooler, A/C Condenser, and Charge Air Cooler.</li> <li>5. Check Hydraulic Oil Level.</li> <li>6. Drain Fuel Filter Water Trap.</li> <li>7. Fill Fuel Tank.</li> <li>8. Check Hydraulic Hoses and Lines for Leaks.</li> </ol>
50 Hours	<ol style="list-style-type: none"> <li>1. Grease Caster Pivots and Top Lift Link Pivots.</li> <li>2. Grease Walking Beam Center Pivot.</li> <li>3. Grease Forked Caster Spindle Bearings.</li> <li>4. Clean Cab Fresh Air Intake Filter.</li> <li>5. Check Engine Gearbox Oil Level.</li> </ol>
100 Hours or Annually	<ol style="list-style-type: none"> <li>1. Clean Cab Air Return Filter.</li> </ol>

**NOTE:** Refer to M105 Operator's Manual for 250, 500, 1000, 1500, 2000, 5000 hour, Annual & Bi-Annual Maintenance.

## BREAK-IN INSPECTIONS

HRS	ITEM	CHECK
Every 15 mins Road or 1 Hour Field	Drive Wheel Nuts	Torque: 220 ft-lbf (300 N·m). Repeat checks until torque stabilizes.
At 5 Hours	A/C Belt	Tension.
	Caster Wheel Nuts	Torque: 120 ft-lbf (163 N·m).
	Caster Wheel Anti-Shimmy Dampener Bolts	Torque Inboard: 100 ft-lbf (135 N·m). Torque Outboard: 85 ft-lbf (115 N·m).
	Walking Beam Bolts	Torque: 330 ft-lbf (448 N·m).
At 10 Hours	Walking Beam Bolts	Torque: 330 ft-lbf (448 N·m).
	Drive Wheel Nuts	Torque: 220 ft-lbf (300 N·m). Repeat checks until torque stabilizes, and at 20 hours, and at 30 hours.
	Neutral	Dealer Adjusted.
At 50 Hours	Hose Clamps: Air Intake, Radiator, Heater, Hydraulic	Hand-tighten unless otherwise noted.
	Walking Beam Bolts	Torque: 330 ft-lbf (448 N·m).
	Caster Wheel Anti-Shimmy Dampener Bolts	Torque Inboard: 100 ft-lbf (135 N·m). Torque Outboard: 85 ft-lbf (115 N·m).
	Drive Wheel Nuts	Torque: 220 ft-lbf (300 N·m). Repeat check until torque stabilizes.
	Engine Gearbox Oil	Change.
	Drive Wheel Oil	
Hydraulic Oil Filters		

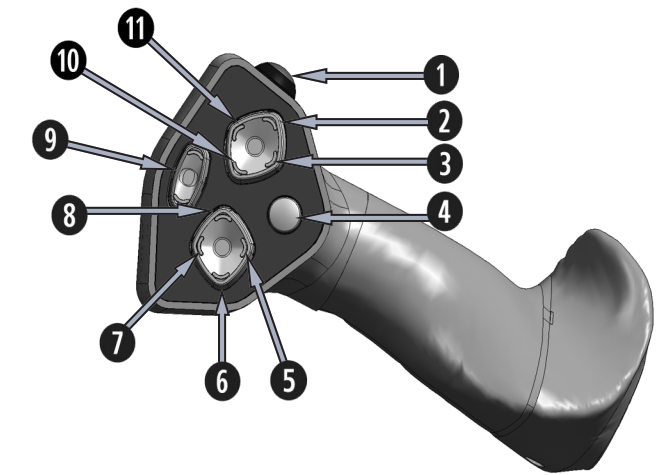
## FLUIDS AND LUBRICANTS

FLUID	VOL	SPEC	DESCRIPTION / INFORMATION
Fuel: Diesel No.2	97 US Gallons (367 L)	ASTM D-975 Grade S15	Sulphur (by weight) 0.5% maximum. Water and Sediment (by volume) 0.05% maximum. Lubricity 520 HFRR
Fuel: Diesel No.1 and No. 2 Mix	97 US Gallons (367 L)	n/a	Sulphur (by weight) 0.5% preferred 1% maximum. Water and Sediment (by weight) 0.1% maximum. Lubricity 460 HFRR
Coolant Anti-Freeze	6.6 US Gallons (25 L)	ASTM D-4985	Ethylene Glycol with SCA, mixed equally with high quality de-ionized, distilled, de-mineralized water Rated to -30°F (-34°C)
Grease	N/A	SAE Multi-Purpose	High Temperature Extreme Pressure EP2. Maximum 1% molybdenum disulphide. Lithium base. Use as required unless otherwise noted.
Engine Oil (including filter)	12.6 US Quarts (11.9 L)	SAE 15W40 for API Class SJ and CH-4	Engine Crankcase
Hydraulic Oil	11.5 US Gallons (44 L)	SAE 15W40 for API Class SJ and CH-4	Windrower and Header Drive
Gear Box Lubricant	2.2 US Gallons (2.1L)	SAE 75W-90 API Service Class GL-5.	Engine Gear Box <u>after</u> initial change.
Drive Wheel Gear Lubricant	1.5 US Quarts (1.4 L)	Fully Synthetic Gear Lube (SAE J2360)	Drive Wheel Gears <u>after</u> initial change.
Air Conditioner Refrigerant	3.6 lb (1.63 kg)	R134A	Cab A/C System
Air Conditioner Compressor Oil	8.1 fl. oz (240 cc)	SP-15 PAG	Cab A/C Compressor Lubricant

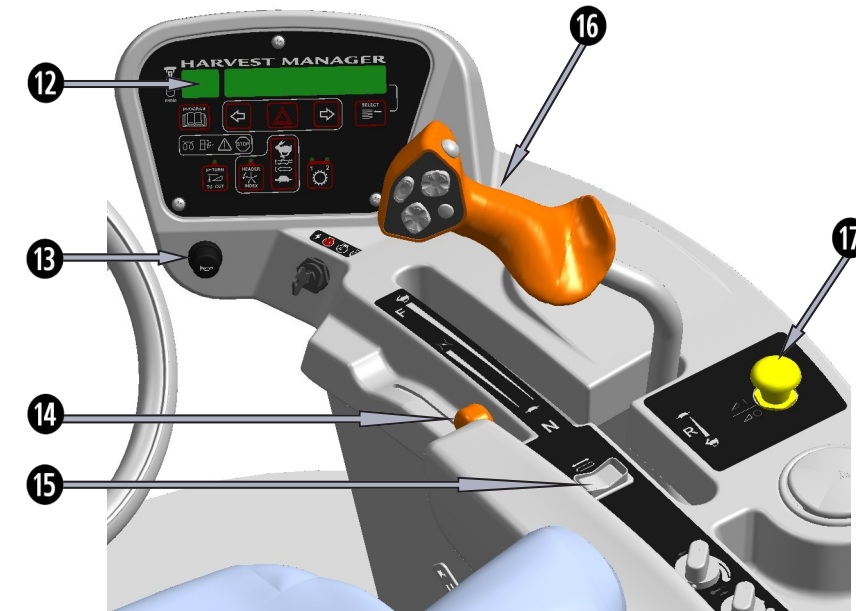
## TIRE PRESSURES

Drive Tires	18.4 - 26 BAR 32 psi (221 kPa)	600 - 65 R28 BAR 26 psi (179 kPa)	580 / 70 R26 TURF 24 psi (165 kPa)
	18.4 - 26 TURF 35 psi (241 kPa)	23.1 - 26 TURF 20 psi (138 kPa)	
Rear Tires	All Rear Tire Pressures are 10 psi (69 kPa).		

- 1 ENGAGE GPS
- 2 REEL UP
- 3 REEL AFT
- 4 SCROLLS THE TOP LINE OF DISPLAY
- 5 HEADER TILT UP (Retracts center-link)
- 6 HEADER DOWN
- 7 HEADER TILT DOWN (Extends center-link)
- 8 HEADER UP
- 9 REEL SPEED
- 10 REEL DOWN
- 11 REEL FORWARD

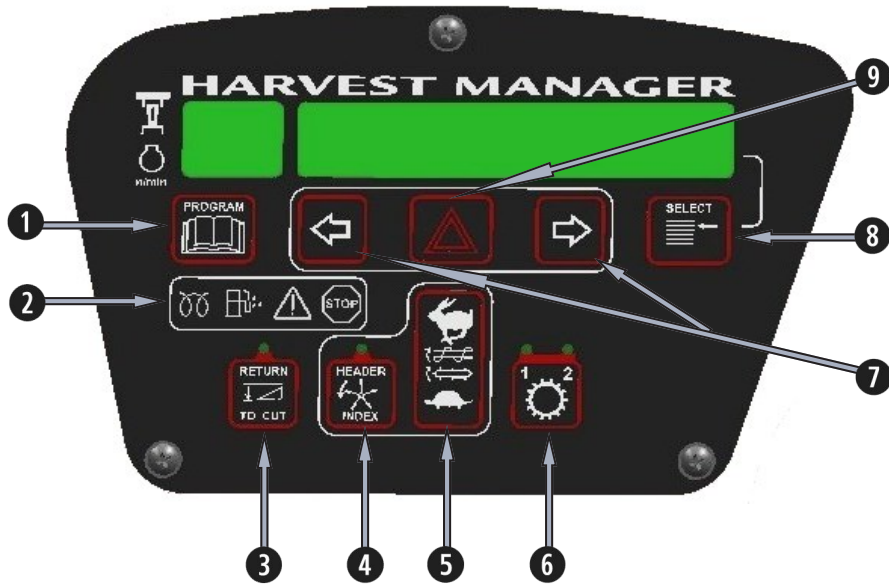


- 12 CDM DISPLAY
- 13 HORN
- 14 THROTTLE
- 15 DECK SHIFT (Optional)
- 16 GROUND SPEED LEVER (GSL)
- 17 HEADER DRIVE ENGAGE



## NORMAL START- Engine Temperature Above 60°F (16°C)

1. GSL in **N-DETENT**.
  2. Turn steering wheel until it locks. Fasten seat belt.
  3. Push **HEADER DRIVE** switch to **OFF**.
  4. Set throttle to **START** position - fully back.
  5. Sound horn three times.
  6. Turn ignition key to **RUN** position.
- Single loud tone sounds. Engine warning lights illuminate in self-test mode. CDM displays "HEADER DISENGAGED" and "IN PARK".
5. Turn ignition key to **START** position until engine starts. Release key.
  6. Allow engine to run at **IDLE** until temperature reaches 100°F (38°C).



- 1 **PROGRAM** - Press to enter and exit set-up modes, and for key shortcuts.
- 2 **ENGINE WARNING LIGHTS** - Engine Pre-Heat, Water in Fuel, CAUTION, and Stop.
- 3 **RETURN TO CUT** - When the green light is ON, RETURN TO CUT (RTC) programmable function is activated.
- 4 **HEADER INDEX** - When the green light is ON, auto Reel/Draper Conveyor Speed features are activated.
- 5 **AUGER OR DRAPER SPEED** - Adjusts the draper or auger speed, depending on header that is attached.
- 6 **GROUND SPEED RANGE SELECTOR** - 1 is Field Speed; 2 is Road Speed.
- 7 **TURN SIGNALS** - Activates the turn indicators, and scrolls through CDM set-up screens.
- 8 **SELECT** - Changes the bottom line of the display, and works as the ENTER button in Program Mode.
- 9 **HAZARD WARNING LIGHTS** - Activates flashing amber lights.

**HEADER INDEX MODE**

Enhanced reel/conveyor speed controls may be desirable in variable crop and terrain conditions.

Allows the reel and conveyor to be driven by reference to ground speed, so that header systems will speed up and slow down as ground speed changes.

**Operation of Header Index for REEL SPEED: (A and D Series) (with Reel Sensor installed)**

1. With all bystanders clear, start windrower, and engage the header.
2. While stationary, with the GSL in PARK, use the REEL SPEED control switch to set a 'Minimum Reel Speed'.
3. When operating at ground speeds faster than the "Minimum Reel Speed + Header Index" value, REEL SPEED display will change to REEL INDEX. Using the GSL REEL SPEED switch, Header Index can be adjusted.
4. Reel speed will be equal to the **greater** of: 'Ground Speed + Index Value' OR 'Minimum Reel Speed'.

**Operation of Header Index for DRAPER SPEED: (D Series Only)**

Follow instructions above, using the CDM AUGER/DRAPER speed control, rather than the GSL REEL SPEED switch.

**TIPS AND SHORTCUTS**

<b>Enter Programming Mode</b>	Ignition ON. Press and hold <b>PROGRAM</b> and <b>SELECT</b> at the same time, until CDM display enters Programming Mode.
<b>Exit Programming Mode</b>	Press <b>PROGRAM</b> .
<b>Change Language to English</b>	Ignition OFF. Press and hold <b>HEADER INDEX, PROGRAM</b> and <b>SELECT</b> .
<b>Clear Sub-Acres</b>	Ignition ON. Press <b>SELECT</b> until SUB-ACRES is on bottom line of the display. Press and hold <b>PROGRAM</b> until SUB-ACRES changes to "0.0"

**CDM PROGRAMMING MODE: TRACTOR SETUP**  
(See M105 Operator's Manual for complete instructions and detailed information)

<b>SELECT HEADER TYPE?</b> → DRAPER or A30 AUGER or A40 AUGER	Allows Operator to select Header application (selected header will be flashing). Allows for software to control appropriate values for the specific header drive.
<b>TILT CYLINDER INSTALLED?</b> → NO / YES?	Activates an installed Hydraulic Center-Link Cylinder kit. Must be set to YES if installed, regardless of whether expansion module monitor is installed.
<b>REEL FORE / AFT?</b> → NO / YES?	Activates an installed Reel Fore-Aft kit for D50/D60 headers.
<b>KNIFE OVERLOAD SPD?</b> → SPM	Expansion module must be installed for reel/knife speed sensing. Overload speed should be set @ 75% of operating knife speed (spm).
<b>HEADER INDEX MODE?</b> → REEL AND CONVEYOR, OR REEL ONLY	Will only appear if Draper Header installed. See Operator Station Features.
<b>RETURN TO CUT MODE?</b> → HEIGHT AND TILT, OR HEIGHT ONLY	Sets functions to be controlled by RETURN TO CUT. Will default to HEIGHT ONLY if Hydraulic Tilt Cylinder and Sensor are not installed on machine. HEIGHT AND TILT in RTC will <u>only</u> function with an optional module.
<b>HEADER CUT WIDTH?</b> → FEET OR METERS	Set cut width according to operating width for calibration of ACRE counter.
<b>HAY CONDITIONER</b> → NO / YES?	Draper Header only. Activates hydraulics for conditioner and feed deck drive systems.
<b>AUGER HDR REEL SPD</b> → RPM or MPH or KPH	Selection will appear only with an Auger Header attached. Allows REEL SPEED to display in RPM or MPH or KPH.
<b>SET TIRE SIZE</b> →	Select installed tire size, for ground speed and acre counter calibration.
<b>SET ENGINE ISC RPM</b> → OFF / ON?	ENGINE INTERMEDIATE SPEED CONTROL reduces engine rpm when header is engaged. ON - 2200 rpm. OFF - normal operating speed.
<b>SET CONTROL LOCKS</b> → NO / YES?	Allows header functions to be locked from Operator control. (for example: Locking reel speed and/or reel fore-aft controls from Operator.)
<b>VIEW CONTROL LOCKS</b> → NO / YES?	Allows Operator to view control lock status, and engine hours when status was established. (for example: REEL FORE-AFT - 224.5 HRS LOCKED).

**RETURN TO CUT (OPTIONAL)**

1. Engine running. HEADER DRIVE engaged.
2. Use GSL controls to move header to cutting position.
3. Press RETURN TO CUT (green light illuminates).
4. Until RTC is turned OFF, this header position will remain in memory as the cutting height/tilt or height only (depending on programming).
5. Single touch of HEADER DOWN returns to pre-set RTC height.
6. Double-tap of either HEADER TILT button returns to pre-set RTC header tilt (if programmed).