

CORN

INSTALLATION MANUAL



CNH, PRE-2012

09020201g



HEADSIGHT.COM|574.546.5022

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About this Manual

How to use this manual

The instructions in this manual are in the order that they should be completed for new installations. Complete all applicable instructions in each section before proceeding. Note that some sections are labeled to indicate they only apply to certain machines or applications. An index is available in the front of the manual to help find technical information for previously installed systems.



This icon designates information of which you should take note.



This icon indicates a special tool needed for a given task.



This icon designates an important instruction.

Suggestions

If you have any suggestions to improve this manual please call 574-546-5022 or email info@headsight.com.

Disclaimers

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Protected by one or more of the following patents and published applications:
US6883299; US7310931; US7647753; US9609806; US9609806; US10222410;
US10244680; EP2955993(DE,ES,FR,IT,UK); EP2956851 AU2004203614;
BR112015019262; BR112015019286; CA2900987; CA2900994; WO20180152266

Table of Contents

Installation	01
Mounting Sensors	02
Poly Snouts - CIH 2000+ Series & All NH Poly: All Rows	02
Aftermarket GVL Poly: All Rows	03
CIH 8/9/10 Series & All NH Steel	04
Routing Sensor Wiring	06
Harness Length Table	06
Removing Connectors for Tight Access	06
Wiring Instructions	07
Lights Wiring	09
Mounting Controller (if equipped)	09
Sensor Adjustment	10
Changing Swing	10
Increasing or Decreasing Voltage	10
Sensor Extensions	11
Parts	12
Mounting Brackets and Harness	12
Statement of Limited Warranty	15

Installation



Before working on combine or under header always:

1. Perform all combine and header manufacturer safety precautions for servicing header.
2. Insert stop to prevent movement of header.
3. Turn off combine and remove key from ignition.
4. Set combine parking brake.
5. Disconnect all drive shafts from the header.



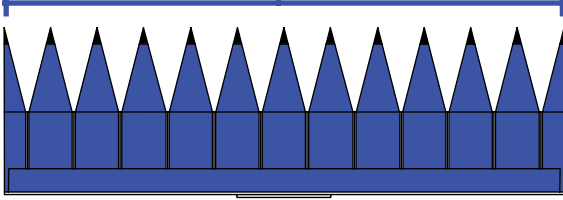
Complete the header installation in this manual before proceeding to the installation in the Combine or Horizon Manuals.



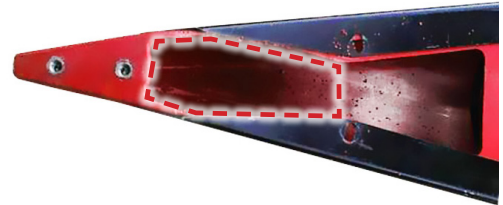
JD combines and heads 2016→ have the check valve for the deck plate circuit moved to the head. Older heads may need to have this block added to prevent deck plate drift on newer combines. Older combines may need the check valve removed to prevent jerky motion with newer heads. See your JD dealer.

Mounting Sensors

Poly Snouts - CIH 2000+ Series & All NH Poly: All Rows



1. Choose the rows to which you will mount the sensors.
 - Mount the two outer sensors to the outermost rows for all row widths 30" or more
 - Mount the outermost sensors one row in from the outside for row widths less than 30"
2. Remove cast iron snout tip from each row which will receive a sensor.
3. Cut out poly as shown to allow bracket into snout tip.
 - Use drill to make rounded corners to avoid weakening snout



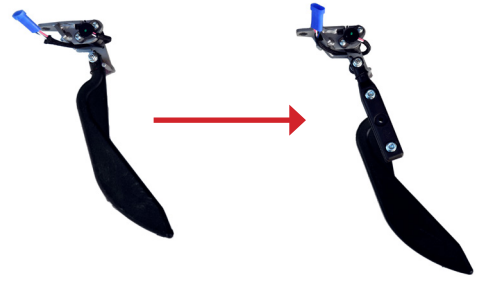
4. Cut out poly behind steel support tube to allow the tail of sensing arm to swing up into snout.
 - Do not remove the steel support tube



5. Assemble the sensor to the HT2244 bracket.
 - Use short flange bolt in rear threaded hole
 - Use carriage bolt and flange nut in front hole
 - Make sure sensor is aligned with bracket.



6. Install extensions on each sensor.
 - See “Sensor Extensions” in “Sensor Adjustments” section for instructions
 - Use the “shortest” extension position

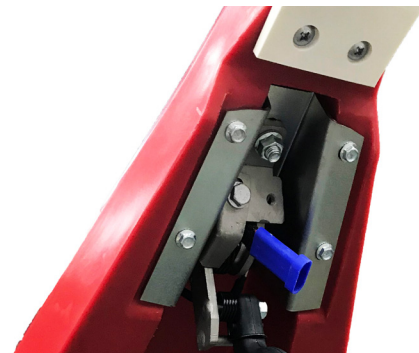


7. Install sensor with bracket as shown using B2244 hardware provided.



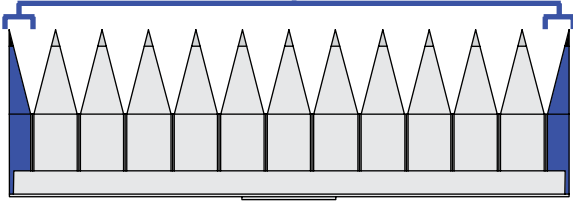
Aftermarket GVL Poly: All Rows

1. Choose the rows to which you will mount the sensors.
 - Mount the two outer sensors to the outermost snouts
 - Evenly space the inner sensors across the head
 - If the number of rows between each sensor does work out evenly, leave the larger gaps toward the center of the head
2. Bolt the sensor to the pocket bracket.
3. Mount the pocket bracket to the snout using the 4 threaded inserts.



CIH 8/9/10 Series & All NH Steel

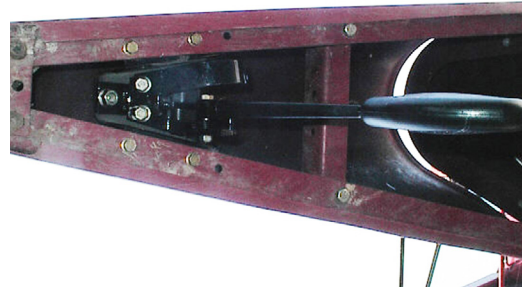
Outer Rows



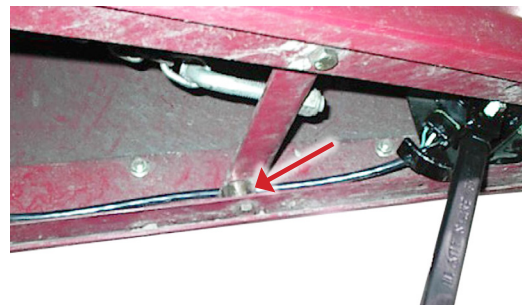
1. Choose rows to which you will mount the sensors.
 - Mount the two outer sensors to the outermost rows for all row widths 30' or more
 - Mount the outermost sensors one row in from the outside for row widths less than 30' unless all fields are planted using high-accuracy autosteer
2. Locate pocket-shaped brackets and hardware labeled "B2240".
3. Hold bracket as far forward as possible on the snout.
 - Remove skid plate if necessary
 - Mark the position of the 4 holes
4. Remove bracket and drill locations marked in step #2 with 3/8" drill bit.
5. Mount the sensor into the bracket using the included hardware B2240.



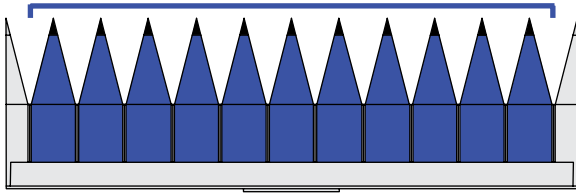
6. Mount bracket into snout using 4 self-tapping screws.
 - Mount bracket over bottom lip of snout



Some outer rows will require raising the snout's cross-brace to allow the sensing arm to swing through its full range of motion. Use the included spacer nuts to raise the brace, then readjust the support chain.

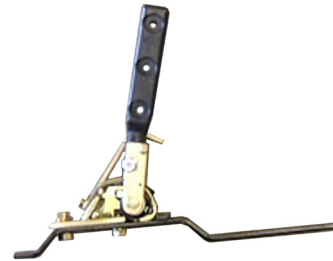


Inner Rows (Steel)



1. Mount sensor onto bracket using hardware labeled “B2241”.

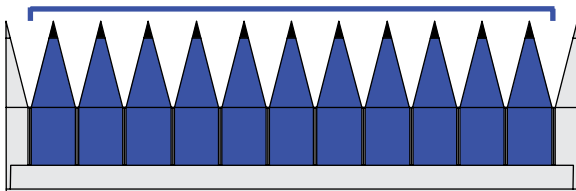
- Front hole: Long M10 bolt, nut, and washer
- Rear hole: Short M10 bolt (into tapped hole)



2. Use existing bolts along top seam of snout to secure bracket to snout.



Inner Rows (Poly)



1. Use the HT2243 pocket bracket and mount to the metal flange at the bottom edge of the poly snouts following the instructions for outer row steel snouts.



Routing Sensor Wiring



Properly routing the wiring is the most critical part of the installation process. Please take time to ensure that you have allowed sufficient slack for motion as well as sufficient clearance from moving header parts or crop flow.

Harness Length Table

1. Select appropriate wiring from chart below and mark blue connector with sensor position.

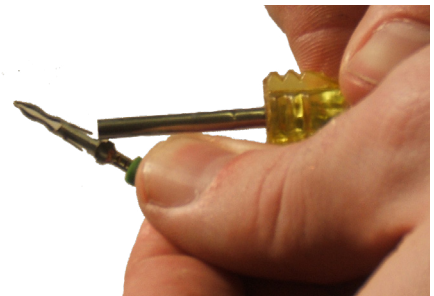
	Standard Sensor Routing				
Header Width	Left	Left Center	Center	Right Center	Right
Up to 20'	17'		17'		33'
21-30'	23'	17'	17'	23'	38'
31-40'	33'	17'	17'	33'	33' and 10'
41'-45'	33'	23'	17'	38'	38' and 10'
46'-Up	38'	23'	17'	38'	38' and 17'

Removing Connectors for Tight Access



When routing the wiring, there may be times when you would like to route the wiring through a small hole. You may remove the Weatherpack connector by using the following procedure. This step is NOT always required; it is shown to aid installation as needed.

1. Release wire retaining clip on each connector. Insert removal tool and pull each wire out of connector.
2. Route wiring as needed.
3. Flare connector terminal tabs using removal tool.
4. Reinstall wires in connector body:
 - Black or Blue into A
 - White into B
 - Green or Pink into C
5. Latch wire retaining clip.
6. Connect wiring harness to sensor.



Wiring Instructions

1. Lay out wiring to appropriate snout.
 - Wiring will run from the sensor to the rear of the header near the combine's feederhouse connection
2. Connect the wiring to the sensor.
 - Ensure connection is properly aligned and seated
 - Push gently but firmly until you hear or feel a slight click
 - Run ziptie lengthwise around both plugs to secure them together
3. Fasten wiring with cable clamps on both sides of the connection (if possible).
 - Allow slight (1/2") slack near sensor
4. Use zipties & clamps to route wiring along tubes securely.



5. Fasten with cable clamps near snout hinge points.
 - Lift snout to see full range of motion
 - Leave enough slack to prevent tension on the wiring when snout is raised OR lowered

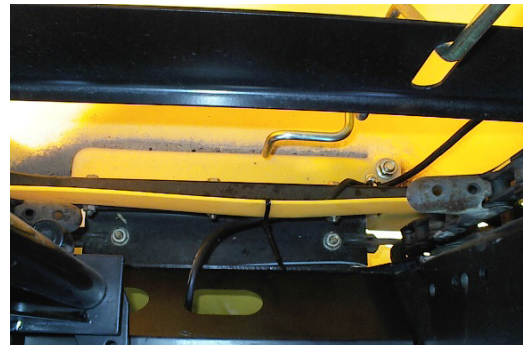


- Route near outer edge of snout, as near pivot point as reasonable



6. Route wiring to rear of header.

- Route to rear of head near the combine feederhouse electrical connectors
 - Avoid moving parts
- Secure wiring with cable clamps and zip ties approximately every 12-24" as needed
- Follow existing wiring where possible



- For narrow row headers bolt the wire guard at back of the gathering chains using front 2 OEM bolts
 - Remove connector to route harness through wire guard

7. Repeat steps above for each sensor.

8. Wrap and fasten excess wiring in secure location.



Lights Wiring

1. Connect Headsight black wire (Ground) to ground of light wiring.
2. Connect Headsight Yellow (Left Hazard) to left warning lamp wire.
3. Connect Headsight Green (Right Hazard) to right warning lamp wire.
4. Connect Headsight Brown (Stubble) to stubble light lamp wire (if equipped).



Mounting Controller (if equipped)

1. Mount controller to the backsheet of the header, near the combine connection point. See Combine or Horizon manual for further instructions.



See the Headsight combine manual for more details about how to install the remaining wiring harness or control box and then connect each individual sensor.

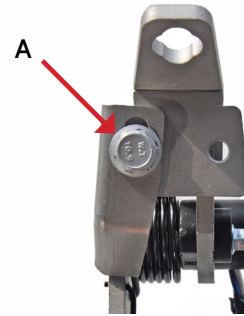
Sensor Adjustment



Insert header stop to prevent movement.

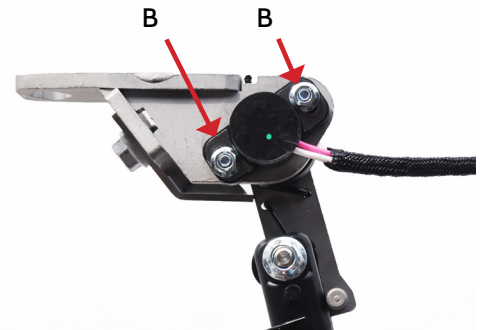
Changing Swing

1. Loosen the bolt A holding downstop.
2. Slide the downstop to new position in slotted hole.
 - Raising downstop will increase voltage swing and allow higher maximum cutting height
 - Lowering the downstop will decrease total voltage swing and help prevent arm from stabbing the ground when the headers is lowered



Increasing or Decreasing Voltage

1. Loosen sensor mounting nuts B.
2. Twist the sensor to new position using the slotted mounting holes.
 - Twisting sensor clockwise will lower voltage
 - Twisting sensor counterclockwise will increase voltage
3. Re-tighten the nuts B.



Sensor Extensions



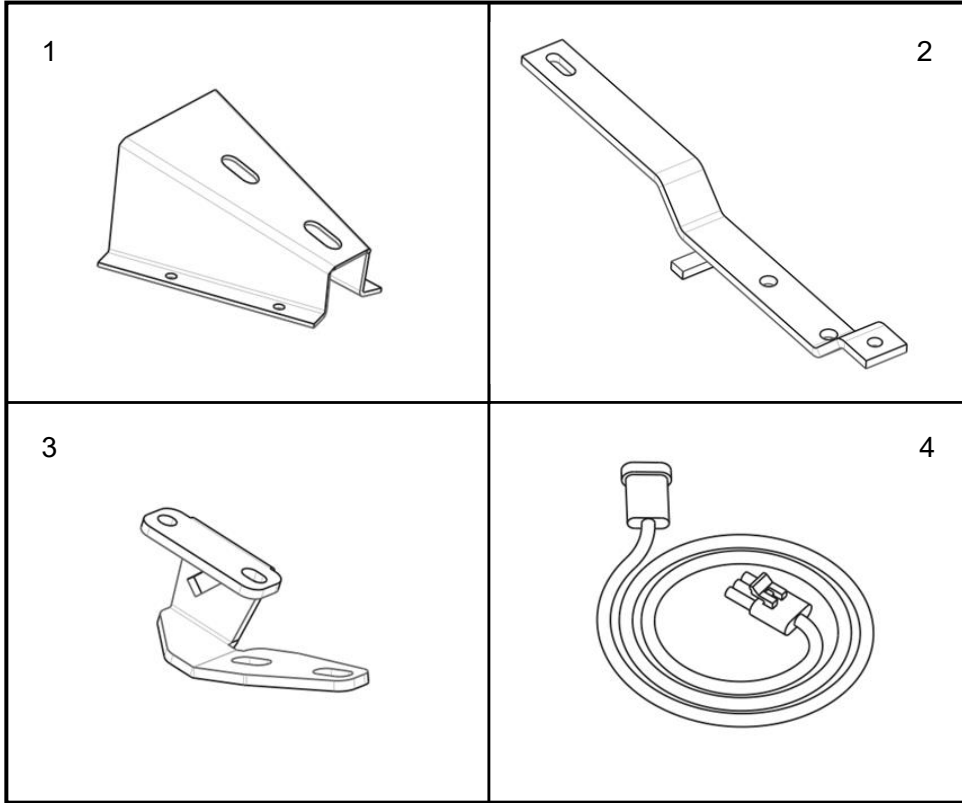
Headsight recommends using the lowest setting that allows you to run as high as you desire. Increasing the length of the extension will reduce header control sensitivity.

1. Remove flange lock nut then remove arm and spring.
2. Install extension to sensor assembly with previously removed spring and flange locknut.
3. Install arm in extension with two bolts and nuts as pictured at desired length.
 - Headsight **does not** recommend outer 2 extension positions unless you need to run higher
 - If you desire to operate header higher then sensors will allow, you may add extensions

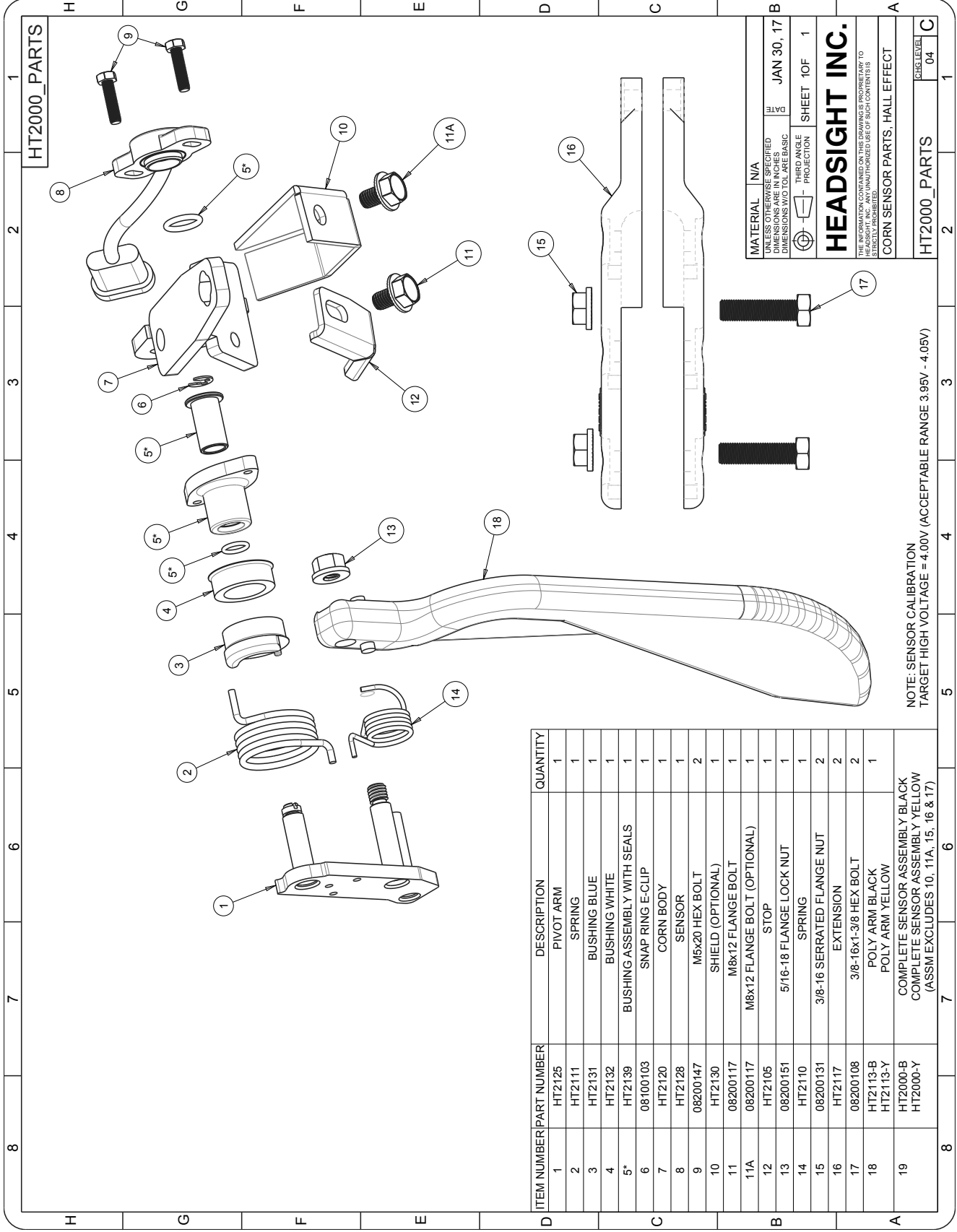


Parts

Mounting Brackets and Harness



<u>ITEM</u>	<u>QTY.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
1	AR	HT2240	Mounting Bracket
2	AR	HT2241	Mounting Bracket
3	AR	HT2244	Mounting Bracket
4	AR	PFBxx (xx=length) (10,17,23,33,38)	Extension Harness



HT2000_PARTS

MATERIAL	N/A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DIMENSIONS W/TOL ARE BASIC	DATE JAN 30, 17
THIRD ANGLE PROJECTION	SHEET 10F 1

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THE INFORMATION CONTAINED ON THIS DRAWING IS PROPRIETARY TO HEADSIGHT, INC. ANY UNAUTHORIZED USE OF SUCH CONTENTS IS STRICTLY PROHIBITED.

CORN SENSOR PARTS; HALL EFFECT	
HT2000_PARTS	REVISION 04

ITEM NUMBER	PART NUMBER	DESCRIPTION	QUANTITY
1	HT2125	PIVOT ARM	1
2	HT2111	SPRING	1
3	HT2131	BUSHING BLUE	1
4	HT2132	BUSHING WHITE	1
5*	HT2139	BUSHING ASSEMBLY WITH SEALS	1
6	08100103	SNAP RING E-CLIP	1
7	HT2120	CORN BODY	1
8	HT2128	SENSOR	1
9	08200147	M5x20 HEX BOLT	2
10	HT2130	SHIELD (OPTIONAL)	1
11	08200117	M8x12 FLANGE BOLT	1
11A	08200117	M8x12 FLANGE BOLT (OPTIONAL)	1
12	HT2105	STOP	1
13	08200151	5/16-18 FLANGE LOCK NUT	1
14	HT2110	SPRING	1
15	08200131	3/8-16 SERRATED FLANGE NUT	2
16	HT2117	EXTENSION	2
17	08200108	3/8-16x1-3/8 HEX BOLT	2
18	HT2113-B HT2113-Y	POLY ARM BLACK POLY ARM YELLOW	1
19	HT2000-B HT2000-Y	COMPLETE SENSOR ASSEMBLY BLACK COMPLETE SENSOR ASSEMBLY YELLOW (ASSM EXCLUDES 10, 11A, 15, 16 & 17)	1

NOTE: SENSOR CALIBRATION
 TARGET HIGH VOLTAGE = 4.00V (ACCEPTABLE RANGE 3.95V - 4.05V)

Statement of Limited Warranty

For Headsight® Products

Precision Planting DBA Headsight Harvesting Solutions (Headsight) warrants its new products to be free from defects in material and workmanship for a period of twelve (12) consecutive months following the date of purchase by the retail purchaser.

Headsight warrants its new corn sensors assemblies for a period of thirty-six (36) months.

Headsight warrants genuine Headsight replacement parts and components to be free from defects in material and workmanship for a period of six (6) consecutive months following the date of purchase or the remainder of the original equipment warranty period, whichever is longer.

Headsight's obligation under these warranties shall be limited to repairing or replacing, free of charge to the original purchaser, any part that, in Headsight's judgment, shows evidence of such defect.

Limitations to Warranty

This warranty does not cover:

- Warranty claims directly resulting from improper installation of the product.
- Any product damaged by accident, abuse, misuse, or negligence after shipment from Headsight.
- Any unauthorized product alteration or modification.
- Any unauthorized repairs made with parts other than genuine Headsight parts.
- Any repairs performed by anyone other than Headsight or an authorized Headsight dealer unless specifically authorized by Headsight.

Warranty Procedure

- Troubleshooting should be done between farmer/dealer and Headsight through our technical assistance @ **574.220.5511**.
- Labor reimbursement will occur only pre-arranged through Headsight technical assistance and be scheduled to a flat rate basis or reasonable time allowance in Headsight's judgment.
- There is no mileage reimbursement.
- Diagnostic time will not be reimbursed except in pre-arranged circumstances.
- Warranty claims should be on typical dealer service work order with a number and name to be attached for any future correspondence.
- All warranty work must be performed, and claims submitted, within thirty (30) days of the occurrence of the claim and within the warranty period.
- All parts removed during warranty repair must be returned to Headsight with Headsight's Return Form within thirty (30) days of the occurrence of the claim and within the warranty period.
- Headsight reserves the right to either inspect the product at the original retail purchaser's location or require it to be returned to Headsight for inspection.

Limitation of Liability

Headsight makes no express warranties other than those, which are specifically described herein. Any description of the goods sold hereunder, including any reference to buyer's specifications and any descriptions in circulars and other written material published by Headsight is for the sole purpose of identifying such goods and shall not create an express warranty that the goods shall conform to such description.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. There are no implied warranties of merchantability or fitness of a particular purpose. This warranty states Headsight's entire and exclusive liability and buyer's exclusive remedy or any claim for damages in connection with the sale of furnishing of Headsight products, their design, suitability for use, installation or operation, or for any claimed defects herein. **HEADSIGHT WILL IN NO EVENT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER, NOR FOR ANY SUM IN EXCESS OF THE PRICE RECEIVED FOR THE GOODS FOR WHICH LIABILITY IS CLAIMED.**

No representative of Headsight nor any dealer associated with Headsight has the authority to change the items of this warranty in any manner whatsoever, and no assistance to purchaser by Headsight in the repair or operation of any Headsight product shall constitute a waiver of the conditions of this warranty, nor shall such assistance extend or revive it.

Headsight reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligation to owners of units previously sold. Warranty: **1/2022**



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