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3016
Pick-up Header

SERVICE MANUAL

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CASE IH AGRICULTURE

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Safety rules

Personal safety



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

⚠ DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury.

⚠ WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.

⚠ CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.

Machine safety

NOTICE: *Notice indicates a situation that, if not avoided, could result in machine or property damage.*

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine or property damage. The word Notice is used to address practices not related to personal safety.

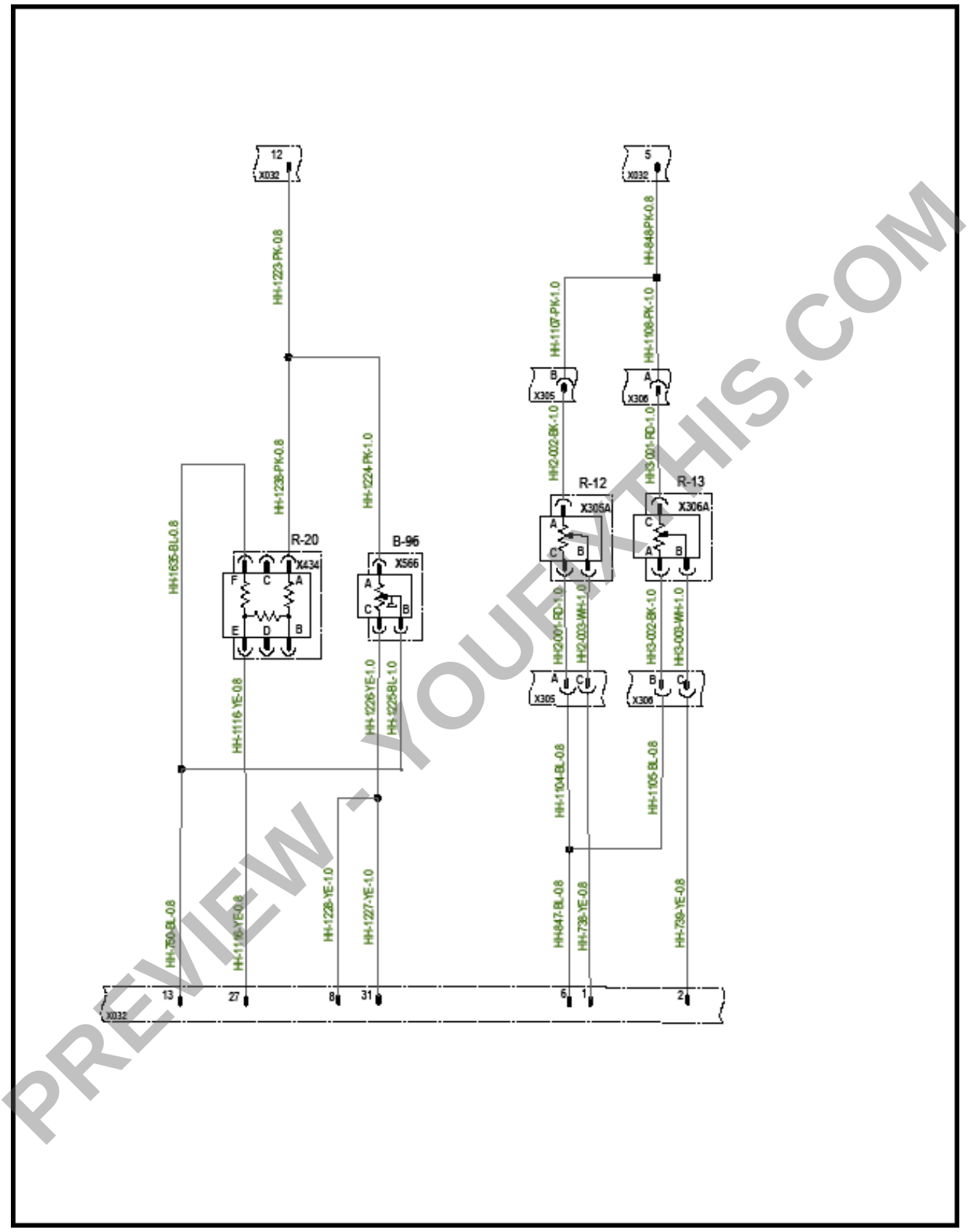
Information

NOTE: *Note indicates additional information that clarifies steps, procedures, or other information in this manual.*

Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

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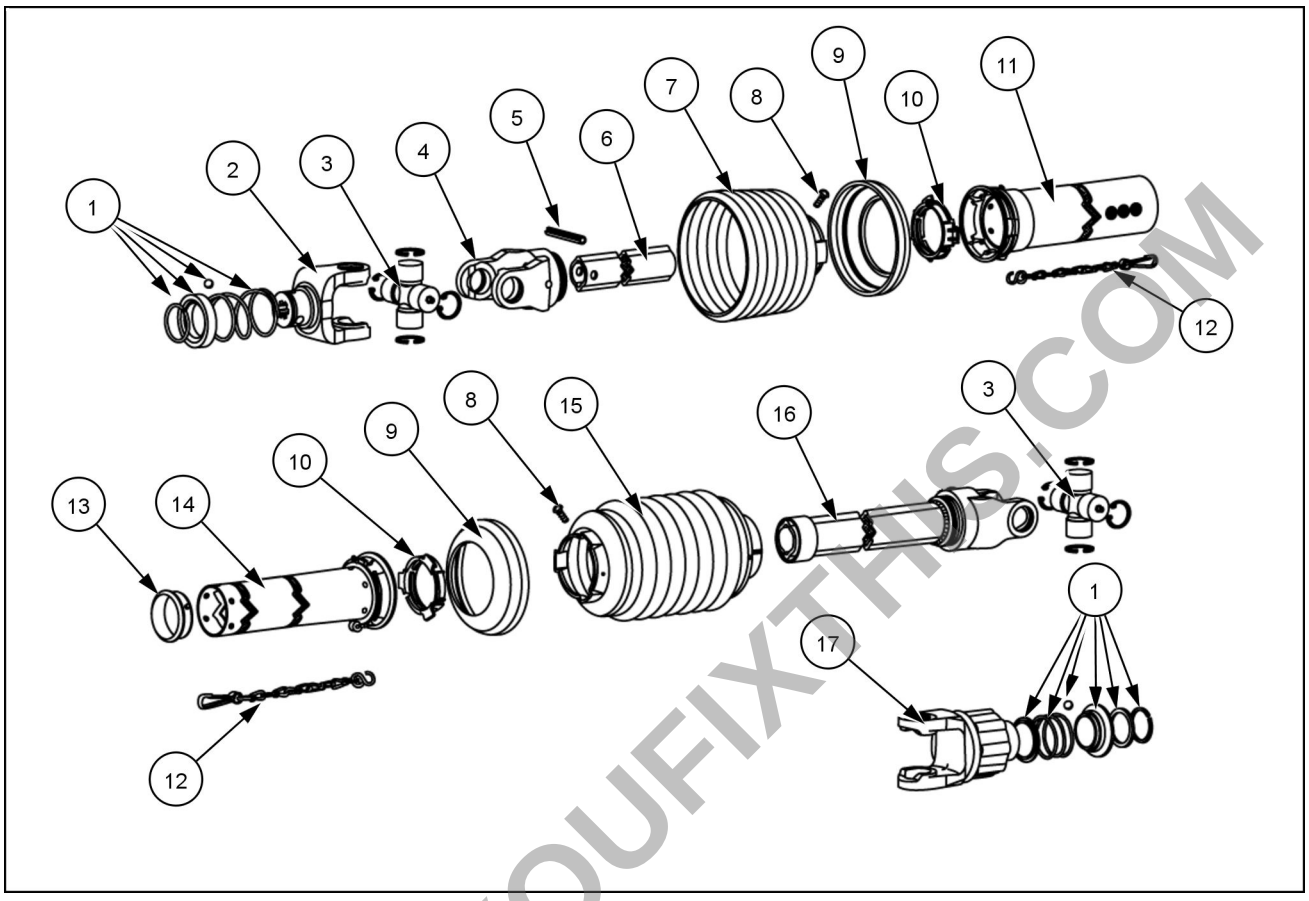


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Power Take-Off (PTO) shaft - Exploded view



93111740 1

Reference	Description	Quantity
(1)	Locking collar	1
(2)	Yoke	1
(3)	Spider	2
(4)	Yoke	1
(5)	Slotted pin	1
(6)	Inner PTO shaft	1
(7)	Outer shield cone, seven rib	1
(8)	Screw	2
(9)	Collar	2
(10)	Ring	2
(11)	Inner shield	1
(12)	Restraint chain	2
(13)	Bearing	1
(14)	Inner shield	1
(15)	Shield cone, ten rib	1
(16)	Outer PTO shaft	1
(17)	PTO radial pin clutch	1

NOTE: *12–foot and 15–foot Power Take-Off (PTO) shafts have the same components. The 15–foot PTO shafts are longer than the 12–foot PTO.*

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Torque - Minimum tightening torques for normal assembly

METRIC NON-FLANGED HARDWARE

NOM. SIZE	CLASS 8.8 BOLT and CLASS 8 NUT		CLASS 10.9 BOLT and CLASS 10 NUT		LOCKNUT CL.8 W/CL8.8 BOLT	LOCKNUT CL.10 W/CL10.9 BOLT
	UNPLATED	PLATED W/ZnCr	UNPLATED	PLATED W/ZnCr		
M4	2.2 N·m (19 lb in)	2.9 N·m (26 lb in)	3.2 N·m (28 lb in)	4.2 N·m (37 lb in)	2 N·m (18 lb in)	2.9 N·m (26 lb in)
M5	4.5 N·m (40 lb in)	5.9 N·m (52 lb in)	6.4 N·m (57 lb in)	8.5 N·m (75 lb in)	4 N·m (36 lb in)	5.8 N·m (51 lb in)
M6	7.5 N·m (66 lb in)	10 N·m (89 lb in)	11 N·m (96 lb in)	15 N·m (128 lb in)	6.8 N·m (60 lb in)	10 N·m (89 lb in)
M8	18 N·m (163 lb in)	25 N·m (217 lb in)	26 N·m (234 lb in)	35 N·m (311 lb in)	17 N·m (151 lb in)	24 N·m (212 lb in)
M10	37 N·m (27 lb ft)	49 N·m (36 lb ft)	52 N·m (38 lb ft)	70 N·m (51 lb ft)	33 N·m (25 lb ft)	48 N·m (35 lb ft)
M12	64 N·m (47 lb ft)	85 N·m (63 lb ft)	91 N·m (67 lb ft)	121 N·m (90 lb ft)	58 N·m (43 lb ft)	83 N·m (61 lb ft)
M16	158 N·m (116 lb ft)	210 N·m (155 lb ft)	225 N·m (166 lb ft)	301 N·m (222 lb ft)	143 N·m (106 lb ft)	205 N·m (151 lb ft)
M20	319 N·m (235 lb ft)	425 N·m (313 lb ft)	440 N·m (325 lb ft)	587 N·m (433 lb ft)	290 N·m (214 lb ft)	400 N·m (295 lb ft)
M24	551 N·m (410 lb ft)	735 N·m (500 lb ft)	762 N·m (560 lb ft)	1016 N·m (750 lb ft)	501 N·m (370 lb ft)	693 N·m (510 lb ft)

NOTE: *M4 through M8 hardware torque specifications are shown in pound-inches. M10 through M24 hardware torque specifications are shown in pound-feet.*

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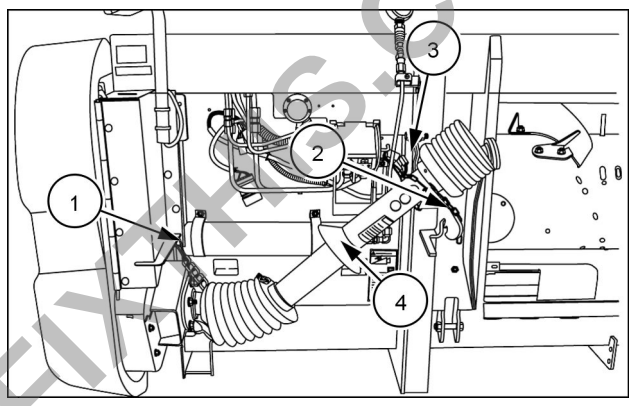
Power Take-Off (PTO) shaft - Remove

⚠ WARNING

Avoid injury! Always do the following before lubricating, maintaining, or servicing the machine.
1. Disengage all drives.
2. Engage parking brake.
3. Lower all attachments to the ground, or raise and engage all safety locks.
4. Shut off engine.
5. Remove key from key switch.
6. Switch off battery key, if installed.
7. Wait for all machine movement to stop.
Failure to comply could result in death or serious injury.

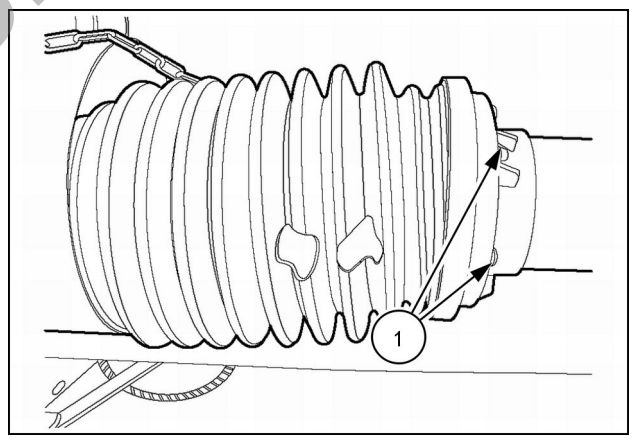
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1. Remove the chain **(1)** from the header.
2. Remove the chain **(2)** from the PTO shaft holder **(3)**.
3. Remove the PTO shaft **(4)** from the holder.



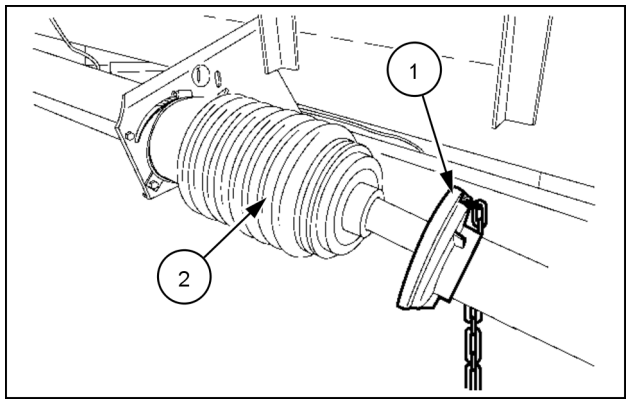
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4. Remove the three screws **(1)**.



83085324 2

5. Slide the collar **(1)** and dust boot **(2)** toward the center of the PTO shaft.



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Wire connectors - Component diagram 01 - Connectors X032 - X436

Connector X032 - Header harness to feeder harness (on combine)

CONNECTOR X032 - FEEDER HARNESS			
PIN NUMBER	WIRE NUMBER	CIRCUIT REFERENCE	ELECTRICAL SCHEMATICS FRAME
1	738 (YE)	Sense — Left-hand stubble height sensor	**Wiring harnesses - Electrical schematic sheet 01 (55.100)**
2	739 (YE)	Sense — Right-hand stubble height sensor	
3	-		
4	-		
5	848 (PK)	+5V supply — Height sensors	**Wiring harnesses - Electrical schematic sheet 01 (55.100)**
6	847 (BL)	Reference ground — Height sensors	
7	-		
8	1228 (YE)	Reference ground — Belt Pick Up (BPU) pressure sensor	**Wiring harnesses - Electrical schematic sheet 01 (55.100)**
9	-		
10	-		
11	-		
12	1223 (BL)	+5V supply — Header type module and BPU pressure sensor	**Wiring harnesses - Electrical schematic sheet 01 (55.100)**
13	750 (BL)	Reference ground — Header type module and BPU pressure sensor	
14	-		
15	-		
16	-		
17	-		
18	-		
19	-		
20	-		
21	-		
22	613 (VT)	+12V supply — Left-hand flashing light	**Wiring harnesses - Electrical schematic sheet 02 (55.100)**
23	-		
24	-		
25	-		
26	713 (OR)	+12V supply — BPU solenoids	**Wiring harnesses - Electrical schematic sheet 02 (55.100)**
27	1116 (YE)	Sense — Header type module	**Wiring harnesses - Electrical schematic sheet 01 (55.100)**
28	618 (VT)	+12V supply — Right-hand flashing light	**Wiring harnesses - Electrical schematic sheet 02 (55.100)**
29	-		
30	775 (BK)	Reference ground — BPU solenoids and flashing lights	**Wiring harnesses - Electrical schematic sheet 02 (55.100)**
31	1227 (YE)	Reference ground — BPU pressure sensor	**Wiring harnesses - Electrical schematic sheet 01 (55.100)**

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Hydraulic systems - Testing Belt pick up solenoid 1

NOTE: *See* ***Electrical system - Overview Solenoids (55.000)*** *for general solenoid information.*

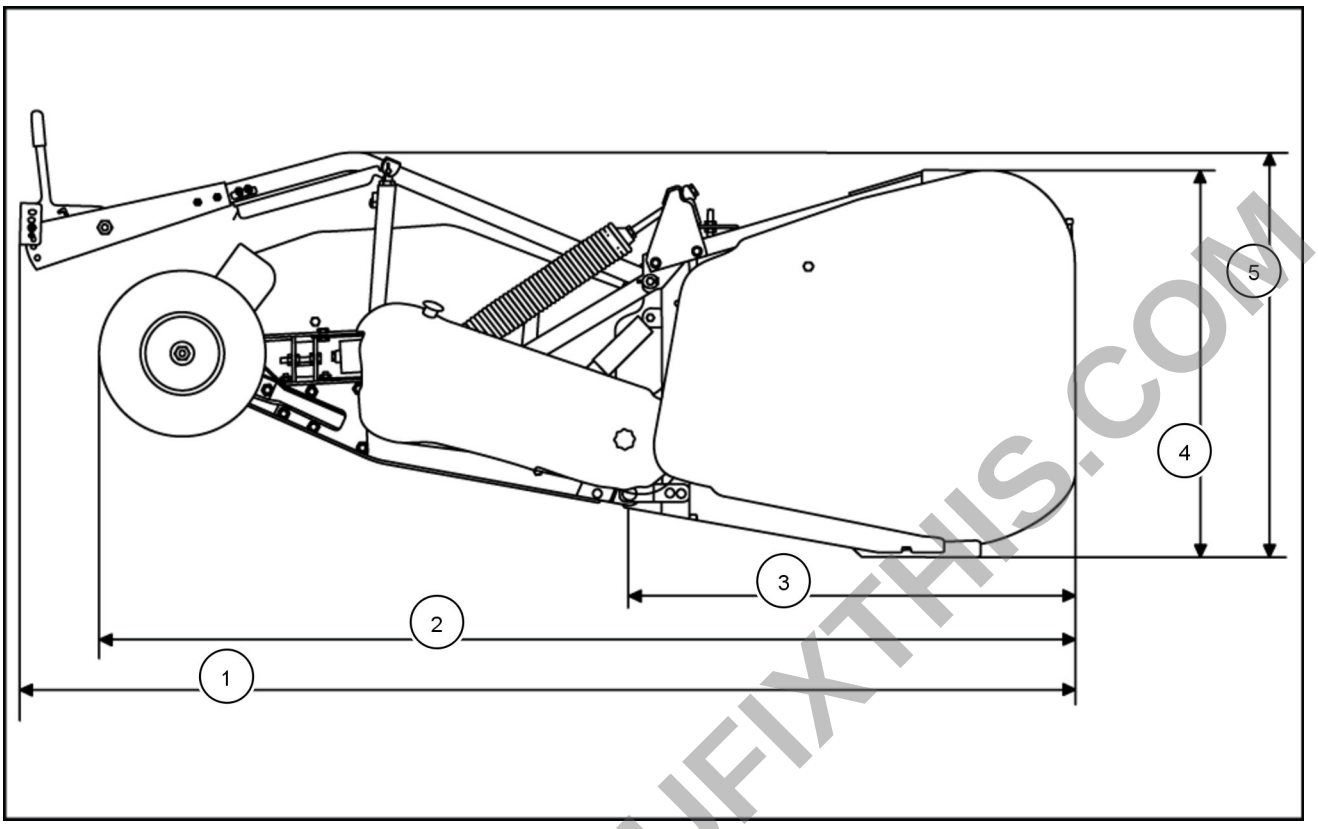
NOTE: *Use schematics*
Wiring harnesses - Electrical schematic sheet 02 (55.100)

N°	Test Point	Expected Result	Other Result (Possible Cause)
1	**Condition** Inspect Belt pick up solenoid 1 **L-79** and harness for damage. **Check** Visually check sensor for loose electrical connections, damaged mounting holes, missing hardware etc.	**Result** No visible damage. **Action** Go to test **2**	**Result** Solenoid or harness is damaged. **Action** Replace solenoid or repair harness.
2	**Condition** Disconnect connector **X032** from the combine. **Check** Use a multi-meter to check for voltage from the Feeder Harness side of connector **X032** pin 26 and ground.	**Result** **12 V** **Action** Go to test **3**	**Result** **0 V** **Action** There is a problem in the wiring of the combine. See combine service manual for more information.
3	**Condition** Disconnect connector **X522** from the Belt pick up solenoid 1 **L-79**. **Check** Use a multi-meter to check for resistance between Belt pick up solenoid 1 pins 1 and 2.	**Result** **8 Ω** **Action** Go to test **4**	**Result** **0 Ω**, or infinite. **Action** Belt pick up solenoid 1, **L-79** has failed. Replace the solenoid.
4	**Condition** Use **Electrical system - Testing General Wire Testing (55.000)** as a guide to check wire(s). **Check** Check wire condition between **X032** pin 26 and connector **X522** pin 1.	**Result** No wire problems. **Action** Go to test **5**	**Result** Wire problems are found. **Action** Locate and repair or replace broken wire 711 (Grey) / 713 (Orange) or adjacent wiring.
5	**Condition** Use **Electrical system - Testing General Wire Testing (55.000)** as a guide to check wire(s). **Check** Check wire condition between **X522** pin 2 and connector **X032** pin 30.	**Result** No wire problems. **Action** The fault may be intermittent. Visually inspect the relevant harnesses and connectors for damage, bent or dislocated pins, corroded terminals or broken wires. Verify that the connectors are fully installed. Flex the harnesses involved to reveal intermittent breaks or shorts in the wiring concerned. If no damage is found, continue operation.	**Result** Wire problems are found. **Action** Locate and repair or replace broken wire 1110/775 (Black) or adjacent wiring.

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Frame - Dimension



93108175 1

(1)	**2853.7 mm** (**112.4 in**)
(2)	**2633.6 mm** (**103.7 in**)
(3)	**1202.6 mm** (**47.3 in**)
(4)	**1044.1 mm** (**41.1 in**)
(5)	**1092.4 mm** (**43.0 in**)

Configuration	Header width	Picking width	Tire to tire width	
			With gage wheels	With castor wheels.
Grass seed	**12 ft**	**11 ft 11 in**	**4.45 m** (**14.6 ft**)	**4.8 m** (**15.7 ft**)
Small grain	**15 ft**	**14 ft 11 1/2 in**	**5.36 m** (**17.6 ft**)	**5.72 m** (**18.8 ft**)

Approximate weight

12 ft	15 ft
1401.6 kg (**3090 lb**)	**1451.5 kg** (**3200 lb**)

NOTE: *Due to different options the weight of your header may vary.*

	12 ft	15 ft
PTO drive	Free motion PTO	Free motion PTO
Picking belts	One **12 ft**	Three **5 ft**
Belt drive	Hydraulic	Hydraulic
Speed adjustment	Electrically controlled from combine cab	Electrically controlled from combine cab
Speed range for belts	Variable from **0 - 550 RPM**	Variable from **0 - 550 RPM**
Header recognition sensor	Standard	Standard
Hold down height adjustment adjusted from inside the cab	**400 mm** (**15.7 in**) cylinder stroke	**400 mm** (**15.7 in**) cylinder stroke
Auger		
Tube diameter	**406 mm** (**16 in**)	**406 mm** (**16 in**)
Flighting height	**127 mm** (**5 in**)	**127 mm** (**5 in**)

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INTRODUCTION

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Wiring harnesses - Electrical schematic sheet 01

Component	Description	Component	Description
B-96	Belt pick up pressure sensor	R-13	Right hand stubble height sensor
R-12	Left hand stubble height sensor	R-20	Header type module

Wire Color Codes

Abbreviation	Color	Abbreviation	Color	Abbreviation	Color
RD	Red	TN	Tan	WH	White
YE	Yellow	BK	Black	GN	Green
GY	Grey	OR	Orange	PK	Pink
VT	Violet	BL	Blue	LB	Light Blue
BK/WH	Black/White	LG	Light Green		

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