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HDX122
HDX142
HDX162
HDX182
Sickle 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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General specification

Sickle headers - models HDX122, HDX142, HDX162, and HDX182	
Header drive	Hydraulic **110 l/min** (**29 US gpm**) at **24132 kPa** (**3500 psi**)
Conditioner gearbox capacity	**0.59 l** (**0.62 US qt**)
Cutterbar	
Type	Counterstroking dual sickles
Drive	Dual, open wobble
Knives	Overserrated, fully bolted
Guards	Two tine, double-hardened; or stub guards, double-hardened, optional
Cutting angle	Adjustable from **0 - 6 °** or **6 - 12 °** hydraulic tilt
Cutting height	**30 - 157 mm** (**1.2 - 6.2 in**)
Knife stroke	**76 mm** (**3 in**)
Sickle speed	1810 strokes per minute (no load)
Sickle thickness	**3 mm** (**0.120 in**)
Skid shoe positions	Five
Knife bolt seating tool	RS711426DS
Reel	
Type	Five-bat, steel
Reel speed	**52 - 83 RPM**
Reel diameter	**1066 mm** (**42 in**)
Drive	Belt and chain; or chain only with variable hydraulic drive kit installed
Auger	
Type	Full floating
Auger diameter	**508 mm** (**20 in**)
Floating range	**51 mm** (**2 in**)
Auger flighting	**127 mm** (**5 in**)
Auger speed	**287 RPM**
Roll conditioner	
Roll type	Chevron design, intermeshing (rubber or steel); non-intermeshing high contact
Roll length	**2590 mm** (**102 in**)
Roll diameter	**263 mm** (**10.35 in**)
Roll speed	**717 RPM**
Roll pressure	Torsion bar, dual crank adjustment
Roll drive	Spur drive gearbox and PTO shafts
Cutting width	
HDX122	**3.73 m** (**12.24 ft**)
HDX142	**4.34 m** (**14.24 ft**)
HDX162	**4.95 m** (**16.24 ft**)
HDX182	**5.56 m** (**18.24 ft**)
Header width	
HDX122	**4.34 m** (**14.24 ft**)
HDX142	**4.95 m** (**16.24 ft**)
HDX162	**5.56 m** (**18.24 ft**)
HDX182	**6.17 m** (**20.24 ft**)
Header weights (shipping)	
HDX122 , rubber rolls	**1647 kg** (**3631 lb**)
HDX142 , rubber rolls	**1770 kg** (**3902 lb**)
HDX162 , rubber rolls	**1869 kg** (**4120 lb**)
HDX182 , rubber rolls	**1983 kg** (**4372 lb**)

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Torque – Minimum tightening torques for normal assembly

NOTE: *In the metric tables, nominal sizes M4 through M8 hardware torque specifications are shown as a Newton meters (pound-inches) numerical value.*
Nominal sizes M10 through M24 hardware torque specifications are shown as a Newton meters (pound-feet) numerical value.

Metric non-flanged hardware

Plain (PLN) an unplated hardware finish with residual manufacturing oils
Zinc-dichromate (ZND) – a yellow colored chemical plating formula yellow applied to the hardware

Nominal size	Class (CL) 8.8 bolt and Class (CL) 8 nut	Class (CL) 10.9 bolt and Class (CL) 10 nut	Locknut CL 8 w/CL 8.8 bolt	Locknut CL 10 w/CL 10.9 bolt
	PLN and ZND	PLN and ZND	ZND	ZND
	N·m (lb in)	N·m (lb in)	N·m (lb in)	N·m (lb in)
M4	2.9 (26)	4.2 (37)	2 (18)	2.9 (26)
M5	5.9 (52)	8.5 (75)	4 (36)	5.8 (51)
M6	10.1 (89)	14.5 (128)	6.8 (60)	10 (89)
M8	24.5 (217)	35.1 (311)	17 (151)	24 (212)
	N·m (lb ft)	N·m (lb ft)	N·m (lb ft)	N·m (lb ft)
M10	48.7 (36)	69.5 (90)	33 (25)	48 (35)
M12	85 (63)	121 (67)	58 (43)	83 (61)
M14	135 (100)	193 (142)	92 (68)	132 (97)
M16	210 (155)	301 (222)	143 (106)	205 (151)
M18	299 (221)	414 (305)	203 (150)	281 (207)
M20	425 (313)	587 (433)	290 (214)	400 (295)
M24	735 (542)	1016 (749)	501 (370)	693 (510)

Metric flanged hardware

Plain (PLN) – an unplated hardware finish with residual manufacturing oils
Zinc-dichromate (ZND) – a yellow colored chemical plating formula yellow applied to the hardware

Nominal size	Class (CL) 8.8 bolt and Class (CL) 8 nut	Class (CL) 10.9 bolt and Class (CL) 10 nut	Locknut CL 8 w/CL 8.8 bolt	Locknut CL 10 w/CL 10.9 bolt
	PLN and ZND	PLN and ZND	ZND	ZND
	N·m (lb ft)	N·m (lb ft)	N·m (lb ft)	N·m (lb ft)
M4	3.2 (28)	4.6 (41)	2.2 (19)	3.1 (27)
M5	6.5 (58)	9.4 (83)	4.4 (39)	6.4 (57)
M6	11.1 (98)	15.9 (141)	7.5 (66)	11 (96)
M8	27 (239)	39 (345)	18 (163)	27 (240)
	N·m (lb ft)	N·m (lb ft)	N·m (lb ft)	N·m (lb ft)
M10	53.6 (40)	76.5 (56)	37 (27)	53 (39)
M12	93 (69)	134 (98)	63 (47)	91 (67)
M14	148 (109)	213 (157)	101 (75)	145 (107)
M16	231 (171)	331 (244)	158 116)	226 (167)
M18	329 (243)	455 (336)	223 (165)	309 (228)
M20	467 (345)	645 (476)	318 (235)	440 (325)
M24	809 (597)	1118 (824)	552 (407)	

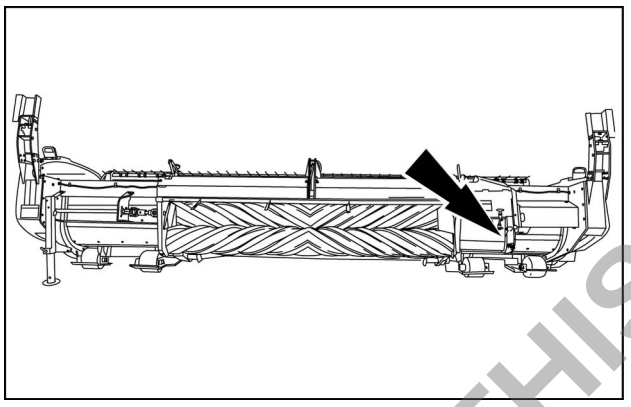
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Wire connectors - Component diagram 01 – Connectors X-010 to X-019

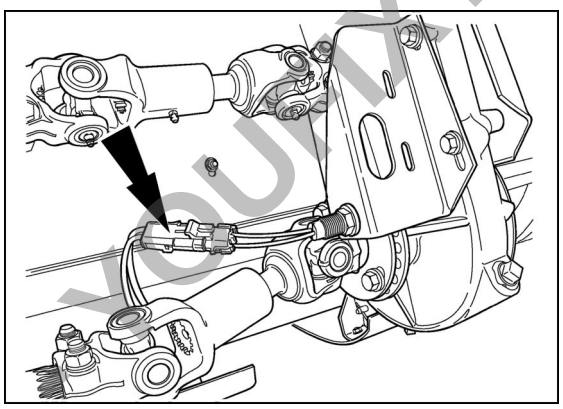
X-010 - Header knife speed sensor (87692855)

NOTE: *This connector is present only when sickle header adaptor kit is on header for use in self-propelled windrower applications.*



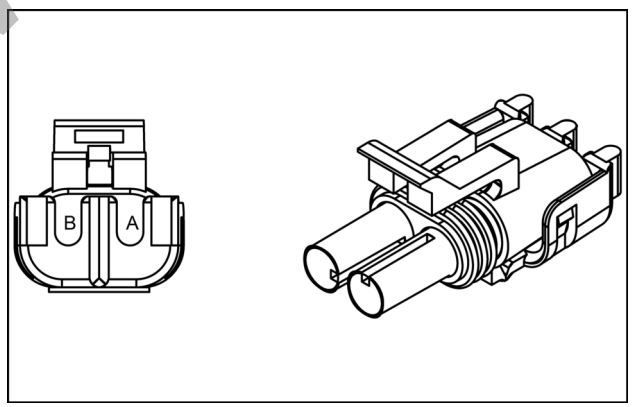
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Connector X-010 is on the rear of the header.



50044894 2

Connector X-010 is inboard of the right-hand end support.



87692855 3

87692855

Pin	From	Wire	Description	Color-Size	Frame
A	**X-336 (Female) pin B**	HS-42	Header knife speed sensor frequency output signal	PK - 1.0	**SHEET 01**
B	**X-336 (Female) pin C**	HS-164	Header speed sensor reference ground	BK -1.0	

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Turn signal and/or hazard lights - Testing – Left-hand header flashing light circuit continuity check with sickle header adaptor kit installed

NOTE: *The diagnostics listed below is for windrower applications where the sickle header adaptor is on the header.*

Test N°1	
Test Point	**Check** Remove the bulb from the left-hand header flashing light. Use a multi-meter to check continuity between the contacts on the bulb.
Expected Result	**Result** There should be continuity present. Leave the bulb removed from the connector (**X-367**). **Action** Go to test **2**
Other Result (Possible Cause)	**Result** If there is no continuity present, the bulb has failed. **Action** Replace the bulb.

Test N°2	
Test Point	**Check** Disconnect connector **X-192 (Male)** , if connected to a windrower. Use a multi-meter to check for continuity between pins **X-192 (Male) pin C** and **X-367 pin 1**.
Expected Result	**Result** There should be continuity present. Leave the connectors disconnected. **Action** Go to test **3**
Other Result (Possible Cause)	**Result** If there is no continuity present, there is an open wire between pins **X-192 (Male) pin C** and **X-367 pin 1**. **Action** Locate and repair open circuit.

Test N°3	
Test Point	**Check** Use a multi-meter to check for continuity between pins **X-192 (Male) pin A** and **X-367 pin 2**.
Expected Result	**Result** There should be continuity present. **Action** If there is continuity present, verify wiring on the windrower. Use the appropriate product service manual schematics and diagnose wiring from connector **X-192 (Male) pin A**.
Other Result (Possible Cause)	**Result** If there is no continuity present, there is an open wire between **X-192 (Male) pin A** and **X-367 pin 2**. **Action** Locate and repair open circuit.

Turn signal and/or hazard lights - Testing – Right-hand header flashing light circuit continuity check with sickle header adaptor kit installed

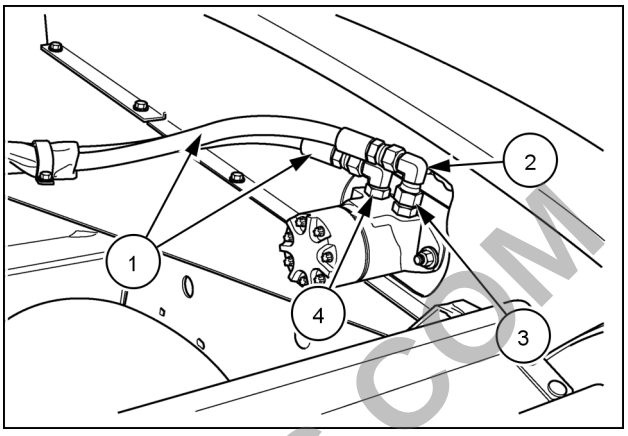
NOTE: *The diagnostics listed below is for windrower applications where the sickle header adaptor is on the header.*

Test N°1	
Test Point	**Check** Remove the bulb from the right-hand header flashing light. Use a multi-meter to check continuity between the contacts on the bulb.

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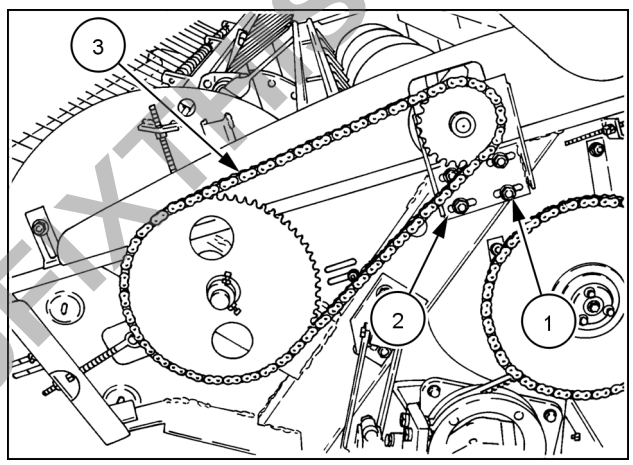
Reel drive system - Remove - Variable hydraulic reel drive motor

1. Remove the quick-disconnect coupler hoses **(1)** from the motor fittings.
2. Remove the **90 °** swivel elbow **(2)** from the straight connector **(3)** on the motor.
3. Remove the straight connector **(3)** from the front port of the motor.
4. Remove the **90 °** O-ring elbow **(4)** from the rear port of the motor.



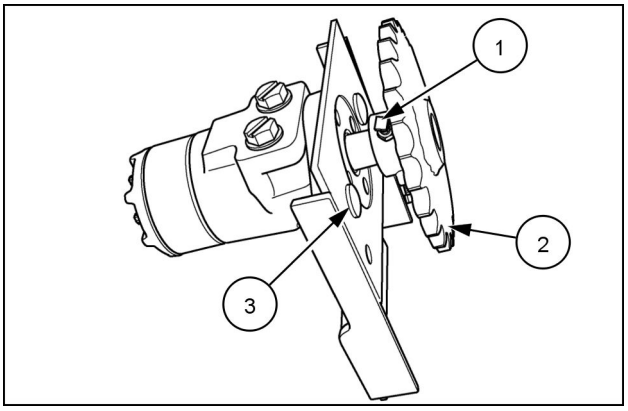
10024004 1

5. Loosen the carriage bolt nuts **(1)** on the motor support and move the support **(2)** forward to remove the chain **(3)**.
6. Remove the carriage bolts and remove the pump and mount assembly from the machine.



20022846 2

7. Loosen the jam nuts on the setscrews **(1)** and loosen the setscrews. Remove the sprocket **(2)** and shaft key.
8. Remove the motor from the mounting bracket **(3)** by removing the 7/16 in x 1-1/2 in carriage bolts **(4)**.



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Next operation:
Reel drive system - Disassemble (58.105)

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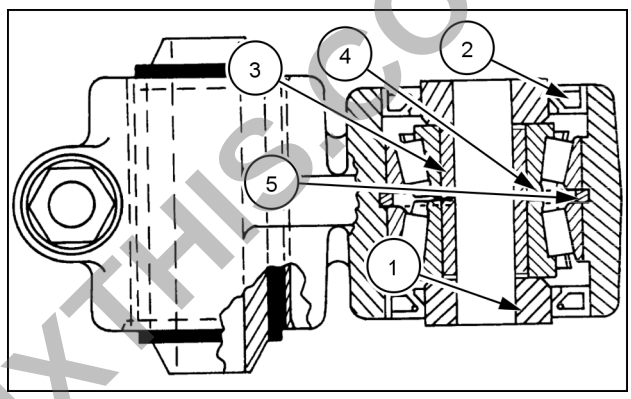
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Attachment/Header cutting mechanism - Disassemble - Connector Link

NOTICE: *Replace the entire connector assembly bearings and seals if any part of the bearing fails.*

The bearings are a matched set of two cups, two cones, one cone spacer, and one cup spacer. The gap in the cup spacer must line up with the hole for the grease fitting.

1. Remove oil seal spacers, **(1)**, and oil seals, **(2)**.
2. Drive out the center spacer, **(3)**, until one cone is free.
3. Remove the center spacer and cone spacer, **(4)**, along with the second cone.
4. Remove one cup, then the other. Remove the grease fitting.
5. Rotate the cup spacer, **(5)**, in the grease channel until the end of the spacer can be seen through the grease fitting hole.
6. Using care not to damage the threads, use a small punch to collapse the cup spacer until it can be removed.



19987266N 1

Next operation:
Attachment/Header cutting mechanism - Service instruction - Connector link reassembly (58.110)

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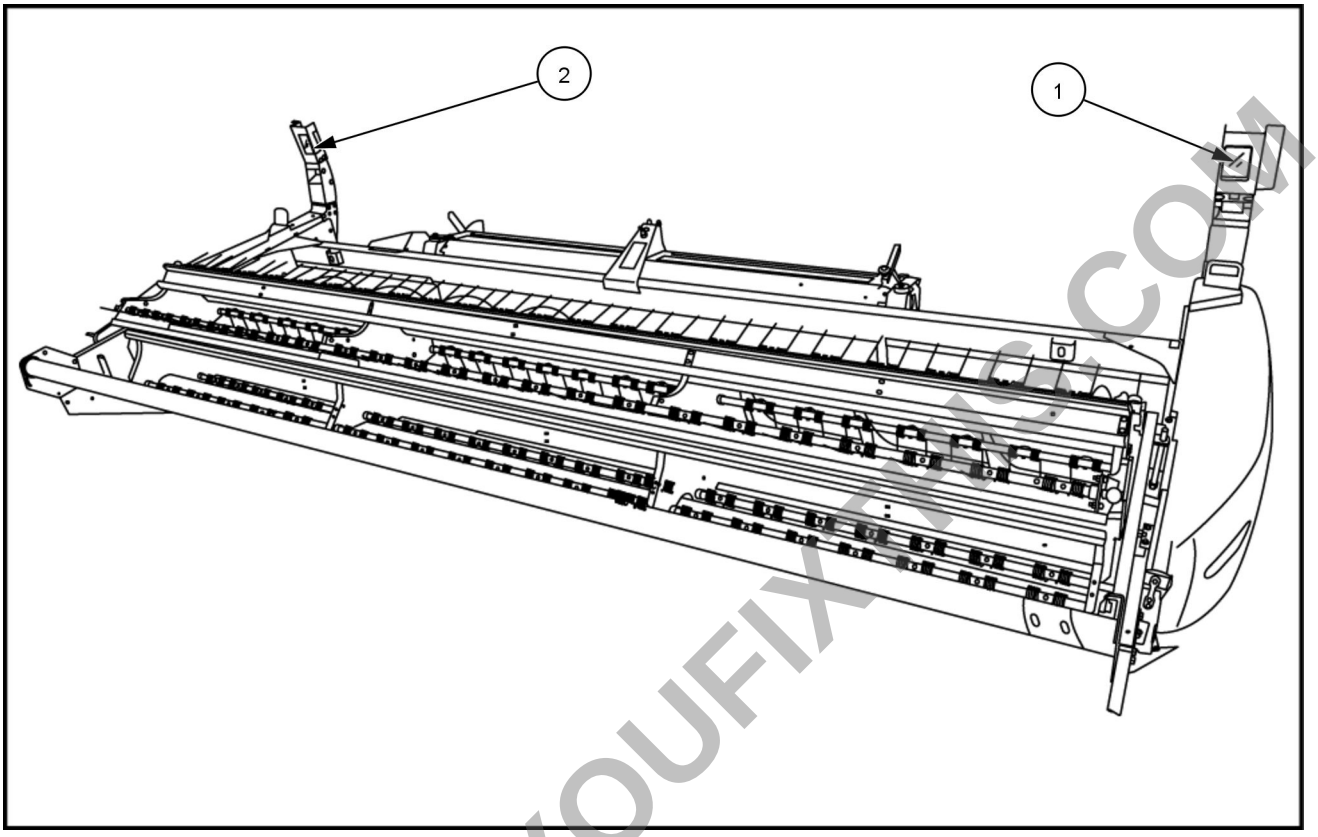
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Turn signal and/or hazard lights - Dynamic description

The header lighting system consists of a left-hand amber flashing light **(1)** and a right-hand amber flashing light **(2)** that, when activated from the windrower or tractor cab, can indicate left-hand turns, right-hand turns, or flashing hazards.



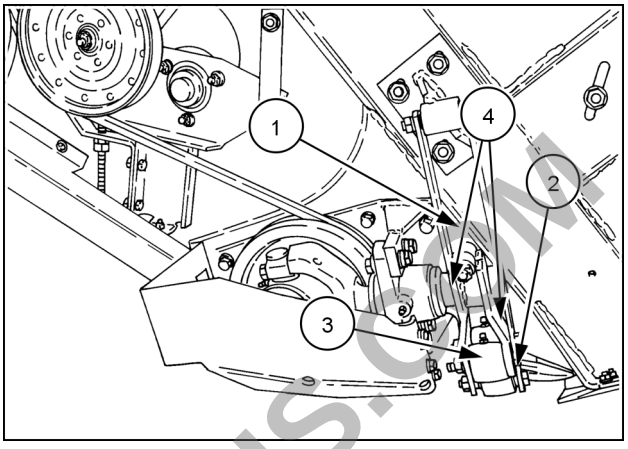
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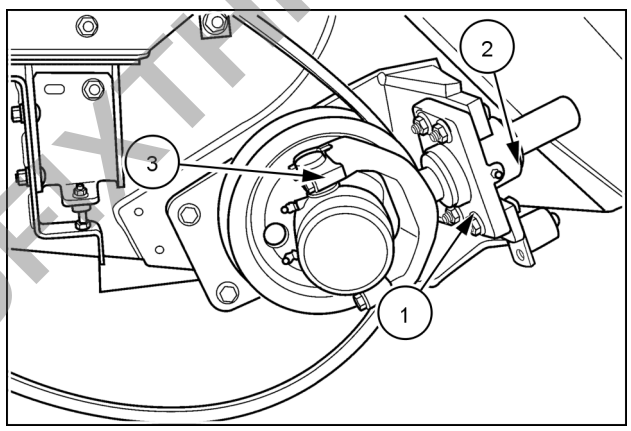
Attachment/Header cutting mechanism - Remove Steady rest bearing and yoke shaft

1. Loosen the drop link clamp bolt, **(1)**.
2. Remove the bolt, **(2)**, that attaches the connector assembly to the drop link.
3. Swing the connector assembly, **(3)**, down out of the way. Do not lose the oil seal spacers on the front and rear of the connector assembly. Do not let any dirt into the bearings.
4. Remove the drop link, **(4)**, from the shaft and remove any paint from the end of the shaft.



20022844 1

5. Remove the four steady rest housing bolts, **(1)**. Swing the yoke shaft and steady rest housing, **(2)**, away from the header. Pull the steady rest housing off the shaft.
6. Remove the trunnion bearing bolts, **(3)**. Remove the yoke shaft from the wobble hub. Remove the trunnions bearings to prevent damage from falling off.



10024156 2

Next operation:
Attachment/Header cutting mechanism - Disassemble Steady rest bearing (58.110)

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