Foreword - Important notice regarding equipment servicing

All repair and maintenance work listed in this manual must be carried out only by qualified dealership personnel, strictly complying with the instructions given, and using, whenever possible, the special tools.

Anyone who performs repair and maintenance operations without complying with the procedures provided herein shall be responsible for any subsequent damages.

The manufacturer and all the organizations of its distribution chain, including - without limitation - national, regional, or local dealers, reject any responsibility for damages caused by parts and/or components not approved by the manufacturer, including those used for the servicing or repair of the product manufactured or marketed by the manufacturer. In any case, no warranty is given or attributed on the product manufactured or marketed by the manufacturer in case of damages caused by parts and/or components not approved by the manufacturer.

The manufacturer reserves the right to make improvements in design and changes in specifications at any time without notice and without incurring any obligation to install them on units previously sold. Specifications, descriptions, and illustrative material herein are as accurate as known at time of publication but are subject to change without notice.

In case of questions, refer to your NEW HOLLAND Sales and Service Networks.

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Non-powered rear axle - 550

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Roll-Belt™ 550
Roll-Belt™ 560

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Power Take-Off (PTO) - 31

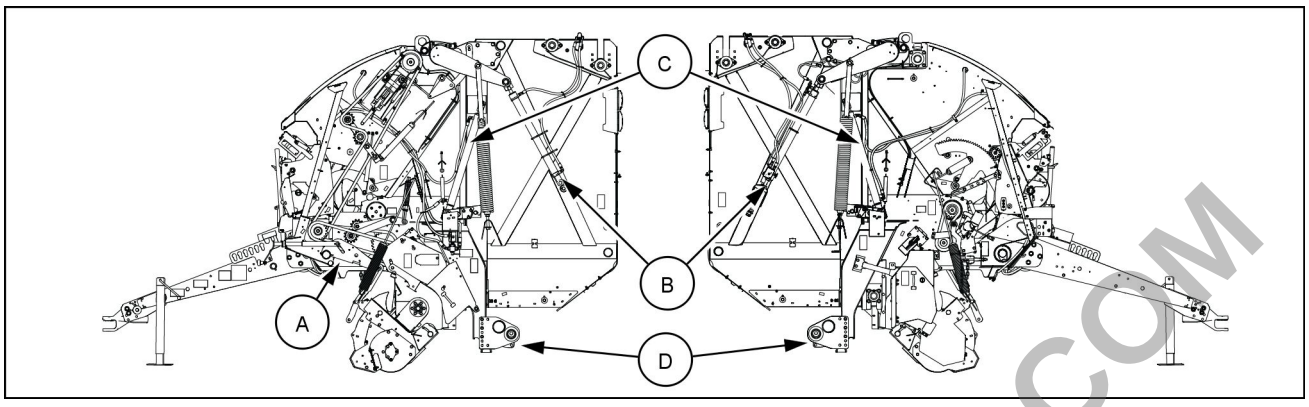
Power Take-Off (PTO) drive shaft - 201

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Hydraulic systems - Overview of the components



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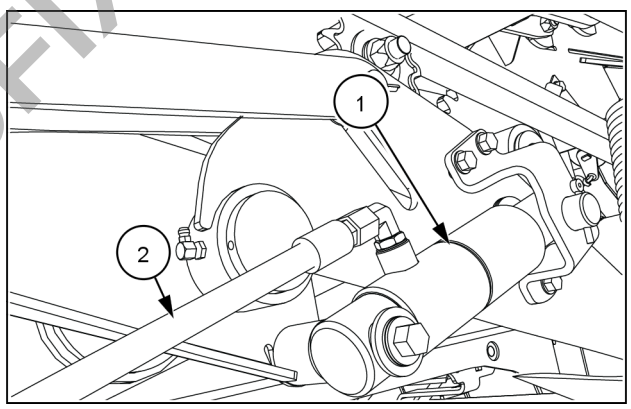
Hydraulic circuit identification

Item	Hydraulic circuit
(A)	Pickup lift
(B)	Bale density
(C)	Tailgate
(D)	Bale eject
(E)	Cutter control (Not shown, available on **1.2 m** (**4 ft**) wide balers only)

(A) Pickup lift circuit

(1) – Hydraulic cylinder

(2) – Hydraulic hose



NHIL13RB00924AA 2

Information type	Location
Technical data	**Pickup lift circuit - General specification (35.560)**
Functional data	**Pickup lift circuit - Overview (35.560)**

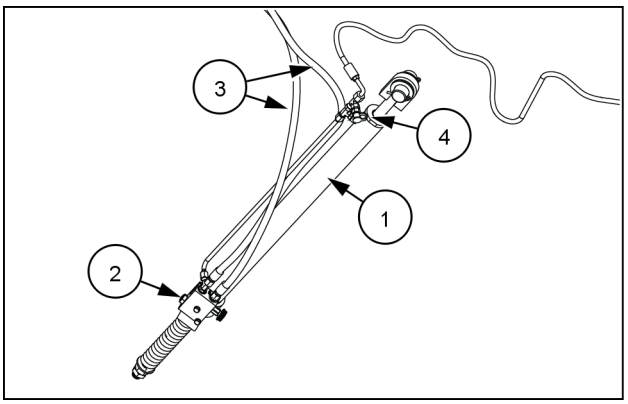
(B) Bale density circuit

(1) – Hydraulic cylinder (right-hand side shown)

(2) – Density relief valve

(3) – Hydraulic hoses

(4) – Density charge port



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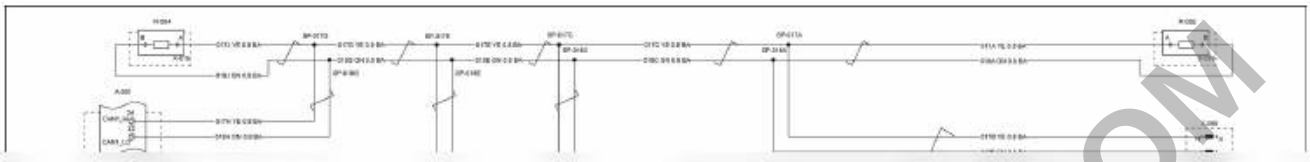
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Electrical system - Dynamic description – Controller Area Network (CAN) – ISOBUS

Roll-Belt™ 450	Wrap control system - ISOBUS
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Roll-Belt™ 550	Wrap control system - ISOBUS
Roll-Belt™ 560	Wrap control system - ISOBUS



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Bale formation - 140

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Machine shields and guards - 105

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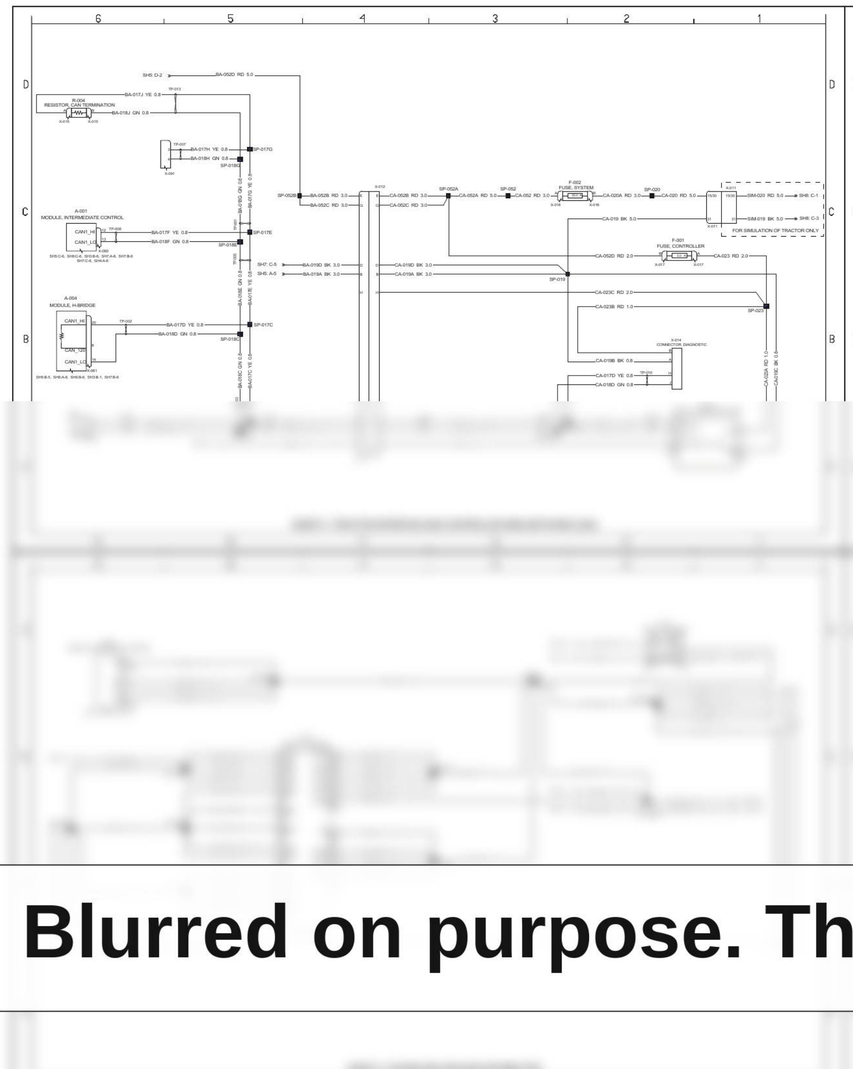
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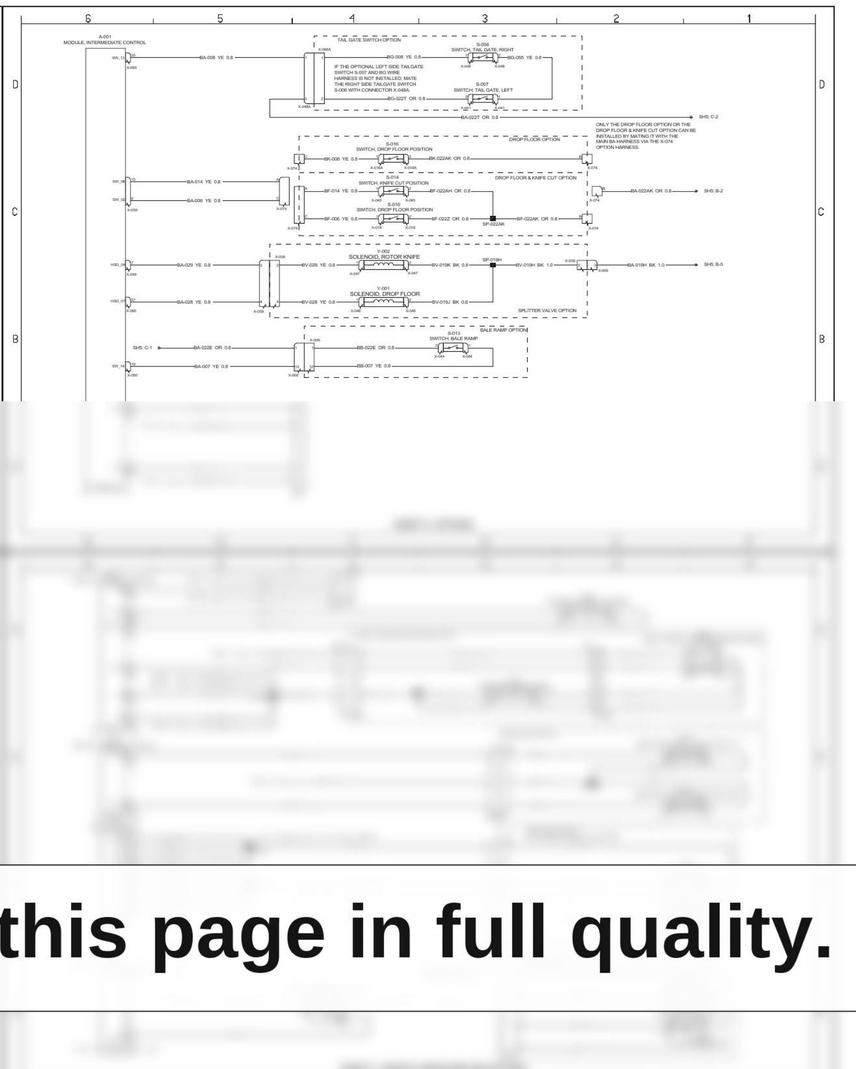
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Gearbox type model applicability

- Rotor cutter

Gearbox type model applicability

- **Bale-Slice™ – 1000 RPM**
- Specialty crop – **1000 RPM**

Gearbox oil level capacity – 2.0 l (2.1 US qt)

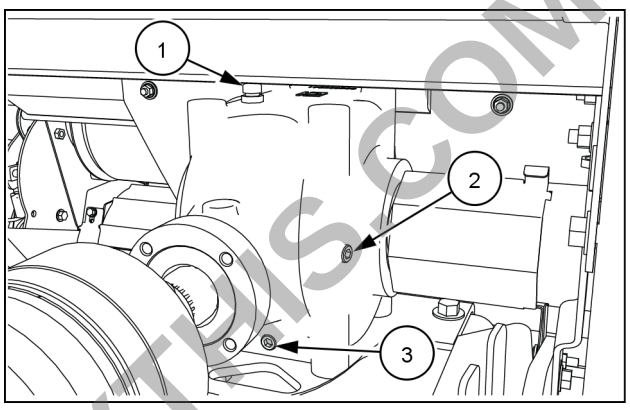
1. To prevent gearbox contamination, clean the followings areas of the gearbox:
   - Clean the gearbox breather/fill plug **(1)** on top of the gearbox.
   - Clean the oil level inspection plug **(2)** located on the left-hand side of the gearbox.
   - Clean the gearbox drain plug **(3)** located on the front of the gearbox.
2. Position a suitable container as a drain pan under the gearbox drain plug **(2)** capture the draining gearbox oil.
3. Remove the drain plug and allow the factory gearbox oil to completely drain.

NOTE: *A small amount of clean oil can be used to flush out any remaining contaminated oil remaining around the drain plug.*

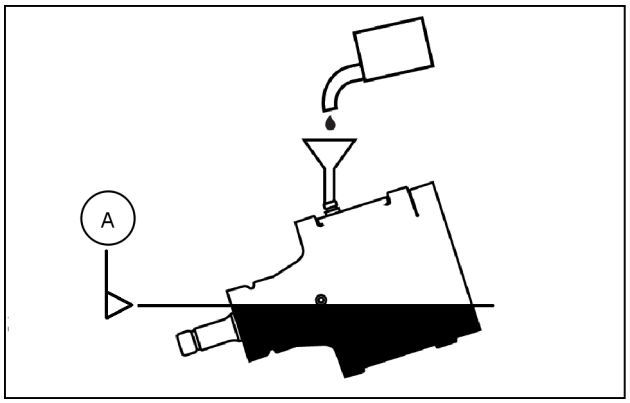
4. Install and tighten the drain plug.
5. Remove the hex screw inspection plug with the correct size hex key/wrench to prevent damage to the plug.
6. Add approximately **2.0 l** (**2.1 US qt**) of **NEW HOLLAND AMBRA HYPOIDE 90** gear oil until the oil level is flush with the bottom of the plug opening **(A)**

NOTE: *The oil level must be flush with the bottom of the plug opening.*

7. Install and tighten the oil level inspection plug.
8. Inspect the gearbox breather. If it is clogged, clean or replace it with a new part.
9. Install and tighten the gearbox breather/fill plug.
10. Clean any oil residue from around the breather/fill plug, inspection plug, and drain plug.
11. Dispose of the captured gearbox oil in accordance with shop practice and/or local laws.
12. Check the oil level weekly, every 50 hours, or 1000 bales.



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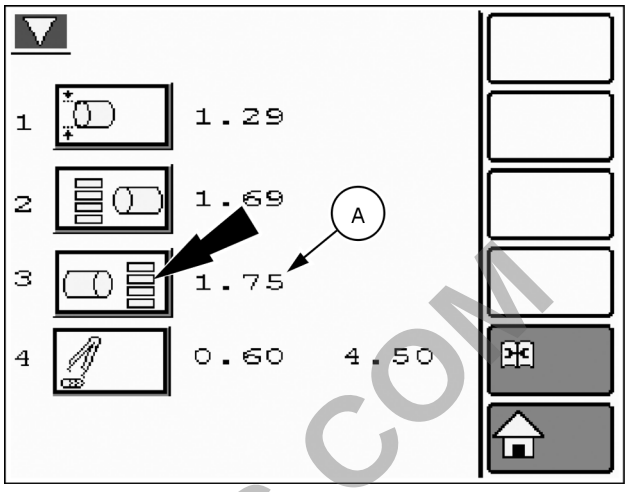
Bale eject circuit - 570

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Roll-Belt™ 550
Roll-Belt™ 560

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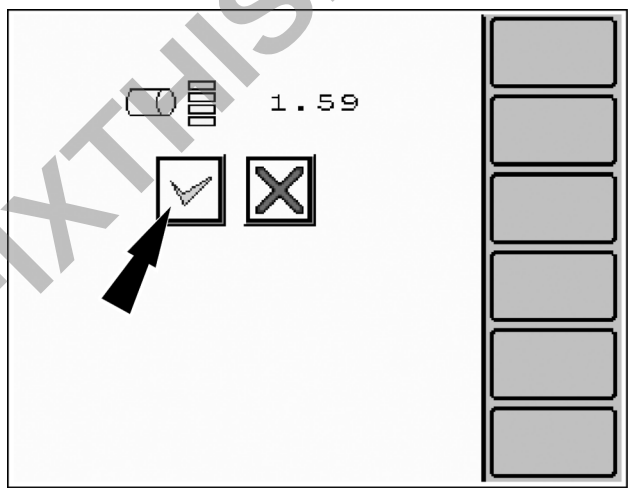
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4. Press the right-hand bale shape sensor button. The displayed voltage across the right-hand bale shape potentiometer is shown at **(A)**.



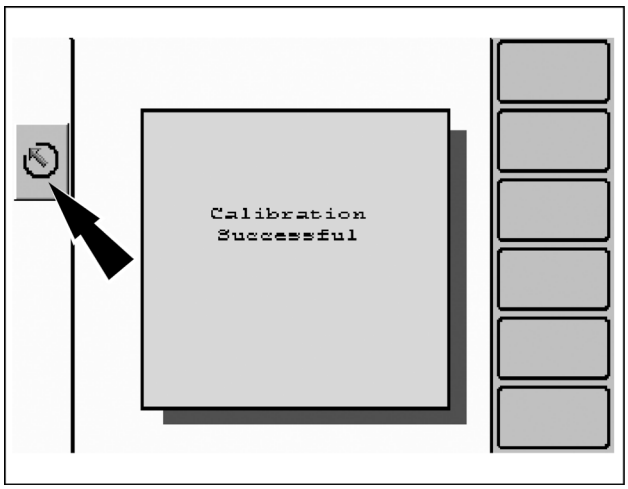
NHIL15RB00126AA 3

5. The actual voltage is shown is at **(B)**. Confirm the calibration selection by pressing the “Accept” button.



NHIL15RB00129AA 4

6. A message reading “Calibration Successful” will display if the Universal Control Module (UCM) and bale shape sensor were calibrated properly. Press the back softkey to return to the calibration menu.

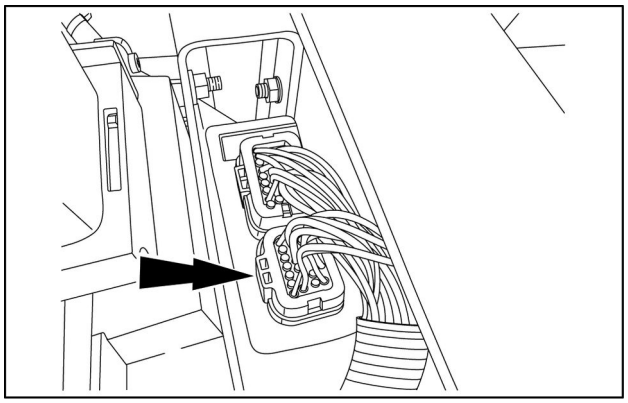


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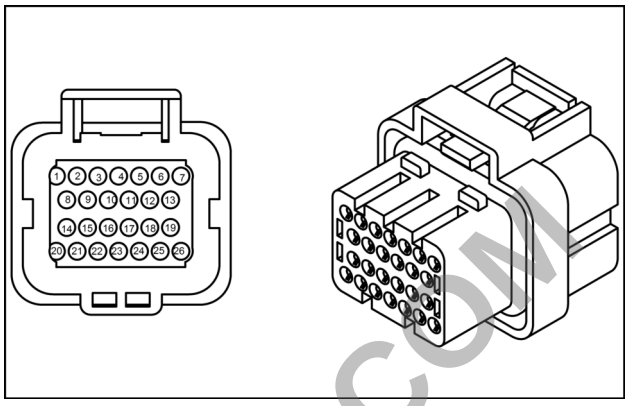
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CONNECTOR X-059 - A-001 INTERMEDIATE CONTROL MODULE



NHIL14RB00005AA 7

Connector X-059 is located on the Intermediate Control Module (ICM) on the forward face of the front channel on the right-hand side of the baler.



82028493 8

CONNECTOR X-059

CONNECTOR X-059 - A-001 INTERMEDIATE CONTROL MODULE			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	029 (YE)	High side driver rotor knife solenoid	**SHEET 04**
8	-	-	-
9	006 (YE)	Drop floor position switch signal	**SHEET 06**
10	005 (YE)	Duckbill home position switch signal	
11	004 (YE)	Knife home position switch signal	
12	-	-	-
13	-	-	-
14	-	-	-
15	014 (YE)	Knife cut position switch signal	**SHEET 04**
16	027 (YE)	-	**SHEET 07**
17	-	-	-
18	-	-	-
19	024 (YE)	Right twine motion sensor	**SHEET 07**
20	022V (OR)	12VF source	**SHEET 05**
21	-	-	-
22	-	-	-
23	-	-	-
24	-	-	-
25	-	-	-
26	019AY (BK)	Ground source	**SHEET 07**

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(*) See content for specific models

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A. If there is continuity, continue to Step **4**.

B. If there is no continuity, the switch has failed. Replace the switch.

Duckbill home switch wiring – Check

4. Check the wiring harness to the switch.

   Verify **12.0 V** is supplied to the switch at connector **X-043** pin 2.

   Check the signal line for any short or open circuits.

   A. If the wiring harness test fails, locate and repair faulty wiring.

   B. If the wiring harness test passes, the fault may be internal to the UCM. Use the operator's panel to verify the control module information. Use the Electronic Service Tool (EST) to flash the UCM.

Net knife motor wiring – Check

5. Check the wiring harness for an open circuit.

   Place the key switch OFF.

   Disconnect the wiring harness from the H-Bridge module at connector **X-062**.

   Use a multimeter to check for continuity.

From	To	Result
Harness connector **X-033** pin 1	Harness connector **X-062** pin A2	There should be continuity.
	Harness connector **X-062** pin A3	
	Harness connector **X-062** pin A4	
	Harness connector **X-062** pin B2	
	Harness connector **X-062** pin B3	
	Harness connector **X-062** pin B4	
Harness connector **X-033** pin 12	Harness connector **X-062** pin A5	There should be continuity.
	Harness connector **X-062** pin A6	
	Harness connector **X-062** pin A7	
	Harness connector **X-062** pin B5	
	Harness connector **X-062** pin B6	
	Harness connector **X-062** pin B7	

   A. If the wiring harness test fails, locate and repair faulty wiring.

   B. If the wiring harness test passes, there may be an internal fault with the H-Bridge module.

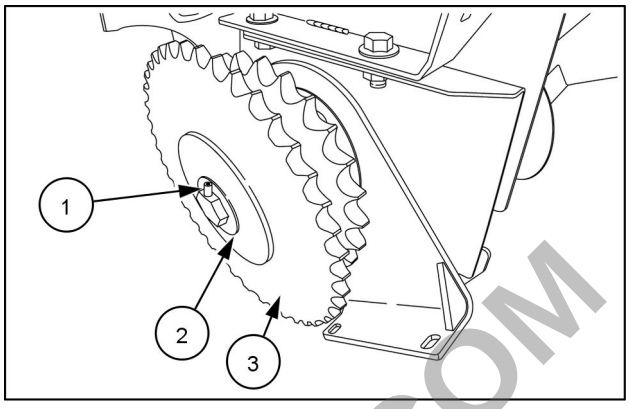
Wiring harnesses - Electrical schematic sheet 06 (55.100)

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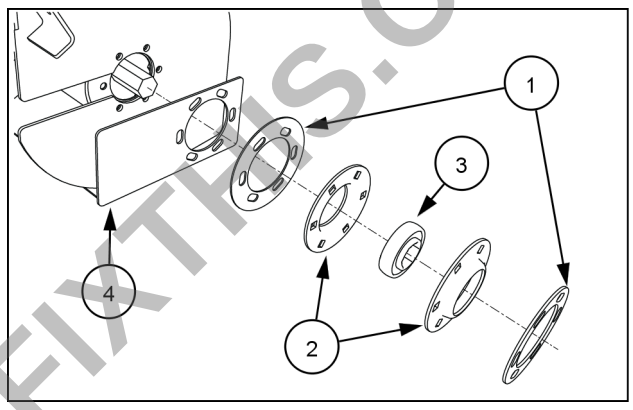
23. Install the over shot feeder drive sprocket assembly **(3)** and the previously removed shims **(2)**, and then install the roll pin **(1)** to the right-hand side of the over shot feeder shaft.

NOTE: *The sprockets must align with each other to within* ***1.5 mm*** *(****0.059 in****). It may be necessary to adjust the shims after installation to achieve this alignment.*



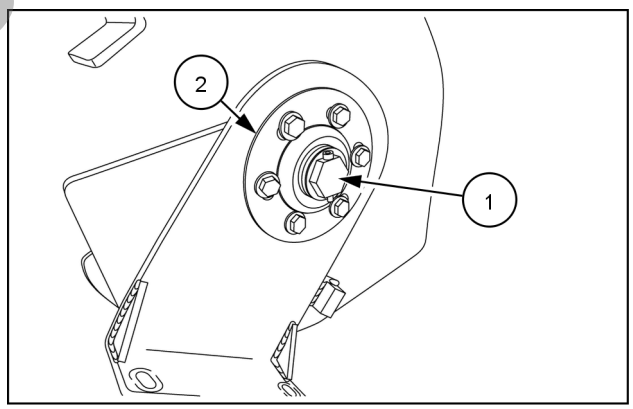
NHIL13RB01948AA 20

24. Install retaining plate **(4)** onto the over shot feeder shaft.
25. Install the bearing flangettes **(2)**, bearing **(3)**, and shaft spacers **(1)**.



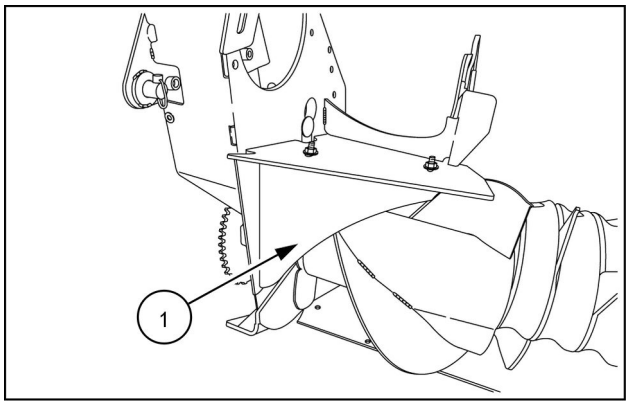
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26. Install the bearing plate **(2)**, and then secure it with the six bolts.
27. Install the previously removed shims, and then secure the over shot feeder shaft **(1)** with the roll pin. See **Pickup assembly - End play (60.222)**.



NHIL13RB01950AA 22

28. Install the right-hand auger shield **(1)**.

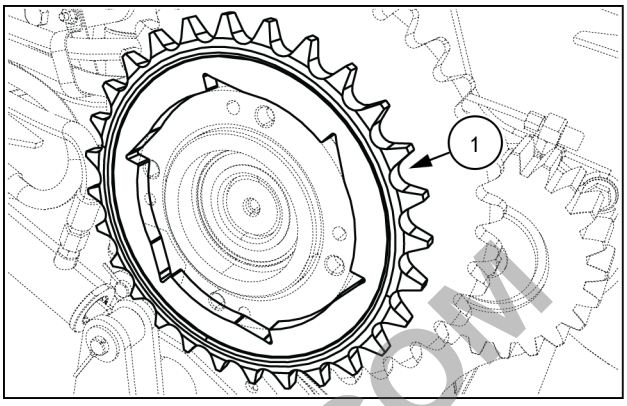


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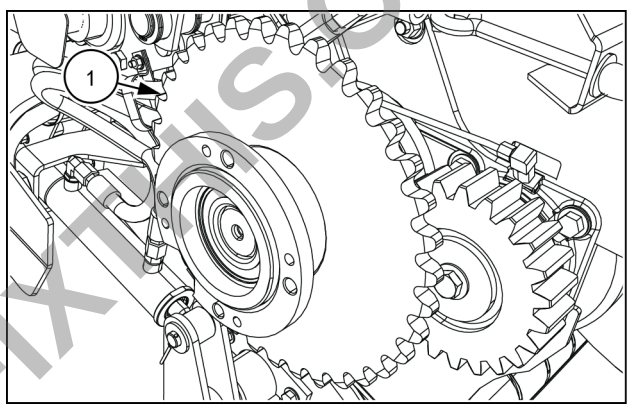
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7. Remove the outer rotor reverser sprocket **(1)**.



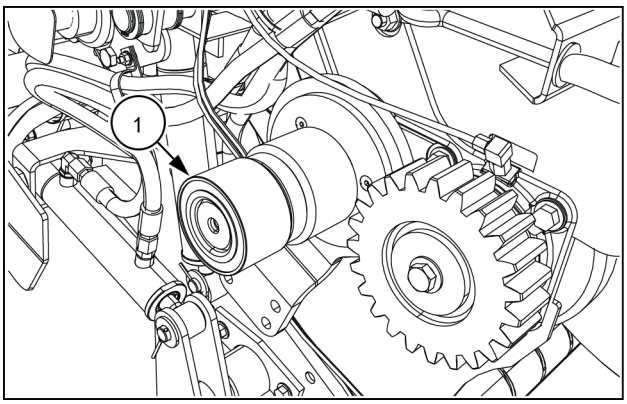
NHIL13RB02349AA 7

8. Remove the inner rotor reverser sprocket **(1)**.



NHIL13RB02352AA 8

9. Remove the angular contact bearing **(1)** if it was not removed with the inner rotor reverser sprocket.



NHIL13RB02353AA 9

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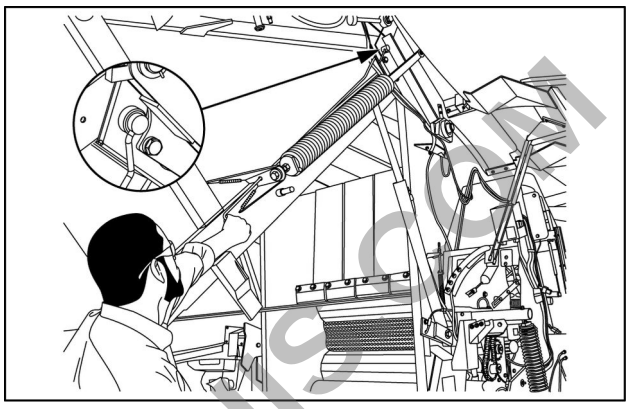
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Bale forming rolls Top rear tailgate idler roll - Remove

1. Relieve pressure from the density system.

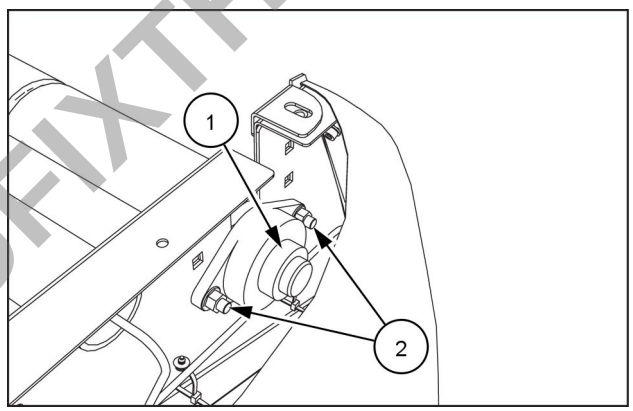
NOTE: *For in-cab density systems, make sure that the density valve solenoid is de-energized.*

2. Open the tailgate high enough to engage the serpentine arm lockout pin.
3. Engage the serpentine arm lockout pin to remove the bale forming belt tension.
4. Close the tailgate.



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5. Loosen and remove the lubrication lines from each bearing housing.
6. Loosen the set screw, insert a punch into the blind hole, and strike it sharply with a hammer in the opposite direction of shaft rotation to remove the locking collar **(1)** from each end of the shaft of the rear tailgate idler roll.
7. Loosen and remove two M12 x 40 carriage bolts and flange nuts **(2)**.
8. Remove the flange bearing from the end of the shaft.
9. Use a hoist to lift the top rear tailgate idler roll up to remove the bale forming belts.
10. Use a hoist to remove the top tear tailgate idler roll from the baler.



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Net wrapper - General information – Intermittent failure to complete an automatic net wrap cycle

The intermittent failure of the automatic net wrap cycle occurs from the following situations:

- The duckbill binds from a mechanical restraint in the course of the automatic net wrap cycle.
- The net knife binds from a mechanical restraint in the course of the automatic net wrap cycle.
- The baler does not have a sufficient power source.

NOTE: *If there is a bind from a mechanical restraint, the power draw may be enough to pull the voltage low enough to trigger the 500.04 fault code even though the supply voltage is sufficient.*

When there is a intermittent failure of the automatic net wrap cycle, you will see one or more of the following stored fault codes in the control module:

- 300.05 = Net duckbill is not moving; no electric load, or open circuit
- 301.07 = Net duckbill is stalled without returning to the home position
- 302.05 = Net knife is not moving; no electric load, or open circuit
- 303.07 = Net knife is stalled without returning to the home position
- 304.03 = Net duckbill home switch
- 305.03 = Net knife home switch
- 500.04 = H-Bridge supply voltage is too low or is shorted to a low source
- 100.03 = Battery supply voltage too low

In addition to the stored fault codes above, you may also see one or more of the following non-stored fault codes in the control module at the time of an intermittent failure of the automatic net wrap cycle:

- 600.04 = Alarm - The AUTO mode was interrupted
- 600.05 = Alarm - Faulty wrap
- 600.06 = Alarm - (WARNING) The duckbill is not home
- 600.07 = Alarm - (STOP) The duckbill is not home
- 600.08 = Alarm - (WARNING) The net knife is not home
- 600.09 = Alarm - The net wrap did not start
- 600.10 = Alarm - (STOP) The net knife is not home
- 600.11 = Alarm - The net did not cut at the end of the wrap cycle

NOTE: *Remember to ask the operator if he has seen any of the 600 level fault codes above on the control module at the time of an intermittent failure of the automatic net wrap cycle.*

⚠ WARNING

Avoid injury!
Before you start any work on the unit:
• Park the unit on a hard, level surface.
• If applicable, apply the parking brake.
• Secure the unit with wheel chocks.
• Relieve all the hydraulic system pressure.
• Disconnect the Power Take-Off (PTO) shaft from the tractor.
• Disconnect the electrical supplies from the tractor.
Failure to comply could result in death or serious injury.

W1372A

Correct a duckbill bind from a mechanical restraint in the course of the automatic net wrap cycle

The following stored fault codes are common from this scenario:

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