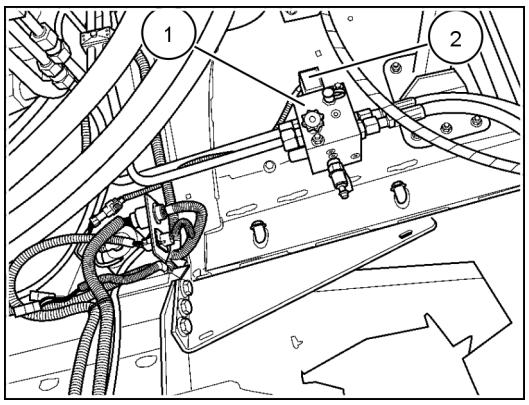
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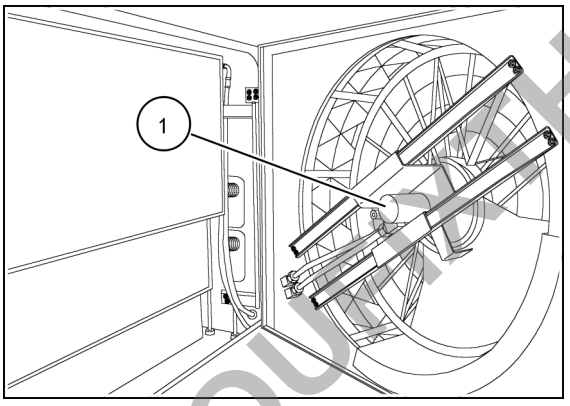
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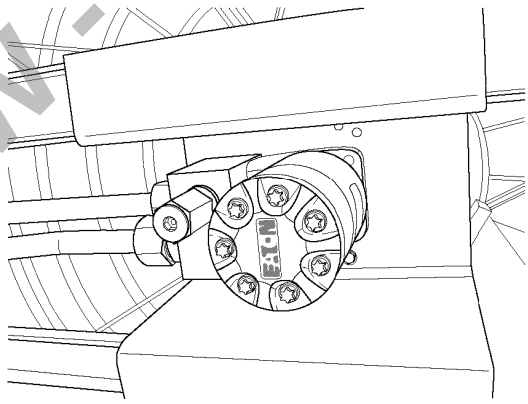
13033639 3

Oil from the center section of the triple pump flows first to the spreader valve **(1)**, mounted on the left rear of the combine. If the threshing mechanism is engaged, then the solenoid **(2)**, will be energized and oil will flow to the two spreader motors in series before returning to the spreader valve and on to the rotary screen drive.



40034893 4

If the threshing mechanism is not engaged, then the solenoid will not be energized, and oil will flow out of the spreader valve directly to the rotary screen motor **(1)**. The rotary screen spins at a constant speed relative to engine speed, and rotates any time the engine is running.



83061452 5

If the rotary screen becomes blocked or damaged so that it cannot rotate, a relief valve **(1)**, mounted at the rotary screen will open when the pressure at the motor reaches **34.5 bar** (**500 psi**).

The oil leaving the rotary screen motor flows thorough the hydraulic cooler, and then returns through the hydraulic return filter to the suction manifold on the PFC pump. If the combine is operated in cold operating conditions, the cooler relief valve may allow oil to bypass the cooler to prevent excessive pressures that could result in cooler failure. The cooler relief valve will open when the differential pressure across the cooler exceeds **7.6 bar** (**110 psi**).

NOTICE: *The spreader / rotary screen pump is a positive displacement pump for use in an open center system. This circuit oil flow must never be deadheaded, or pump failure will occur.*

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Transmission - 21

Mechanical transmission external controls - 130

CR6090 [YBG115106 -]
CR7090 [YBG115106 -]
CR8080 [YBG115106 -]
CR8090 [YBG115106 -]
CR9090 [YBG115106 -]

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Pump - Component identification

CR6090 NA, CR8080 NA

Each pump has a name plate attached to the housing. The name plate will include the model number, model code and serial number.

Model Code A

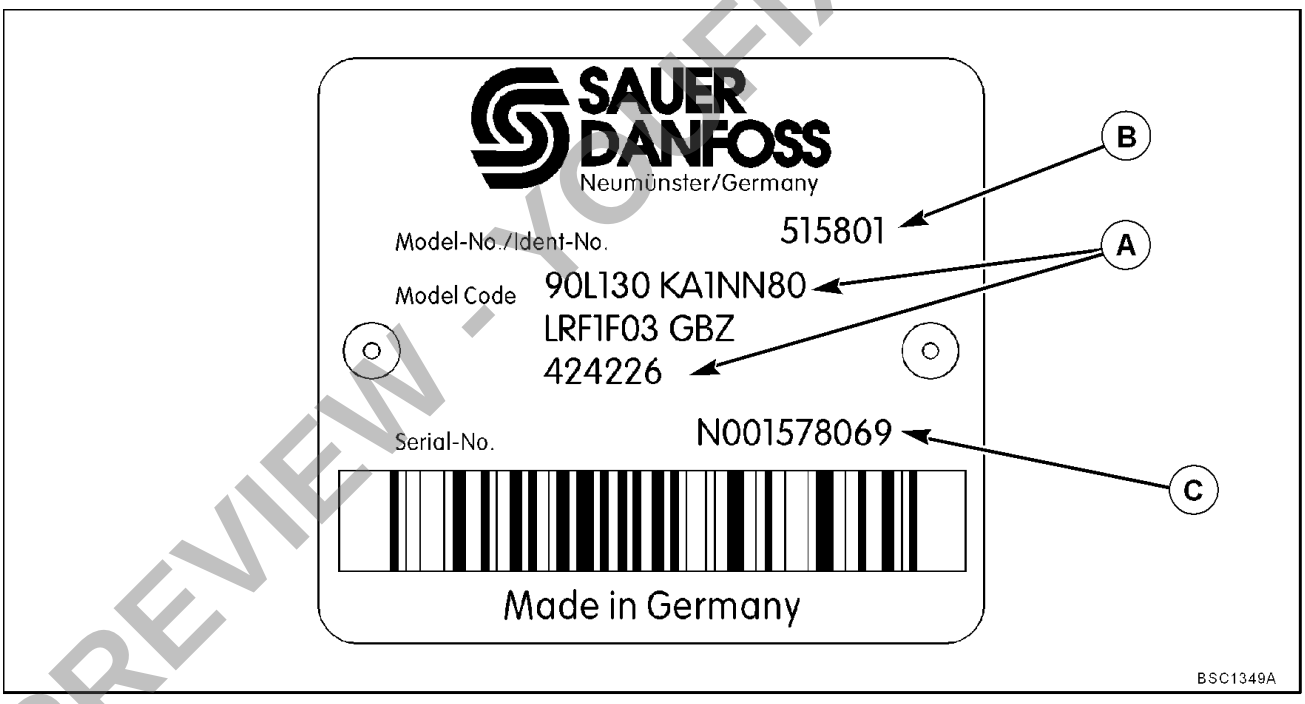
The Sauer Danfoss model code defines the specific build configuration of each unit and must be used when ordering spare parts or a new pump.

Model Number B

The Sauer Danfoss model number is used by the factory in manufacturing. A new unit can be ordered by the model number.

Serial Number C

The Sauer Danfoss serial number identifies the location and date of manufacture and the unit sequence in the build.The letter coding indicates the location of original assembly “A" indicates assembly in Ames, Iowa, USA “N" indicates assembly in Neumunster, Germany.
The first number (two digits) indicates the year of manufacture. For example, a unit built in 2001 would have the number "01" in this space.
The second number (two digits) indicates the calendar week of manufacture, from week 1 to week 52.
The third number (five digits) is the sequential build number identifying the specific unit.



BSC1349A 1

Pump Identification Name Plate

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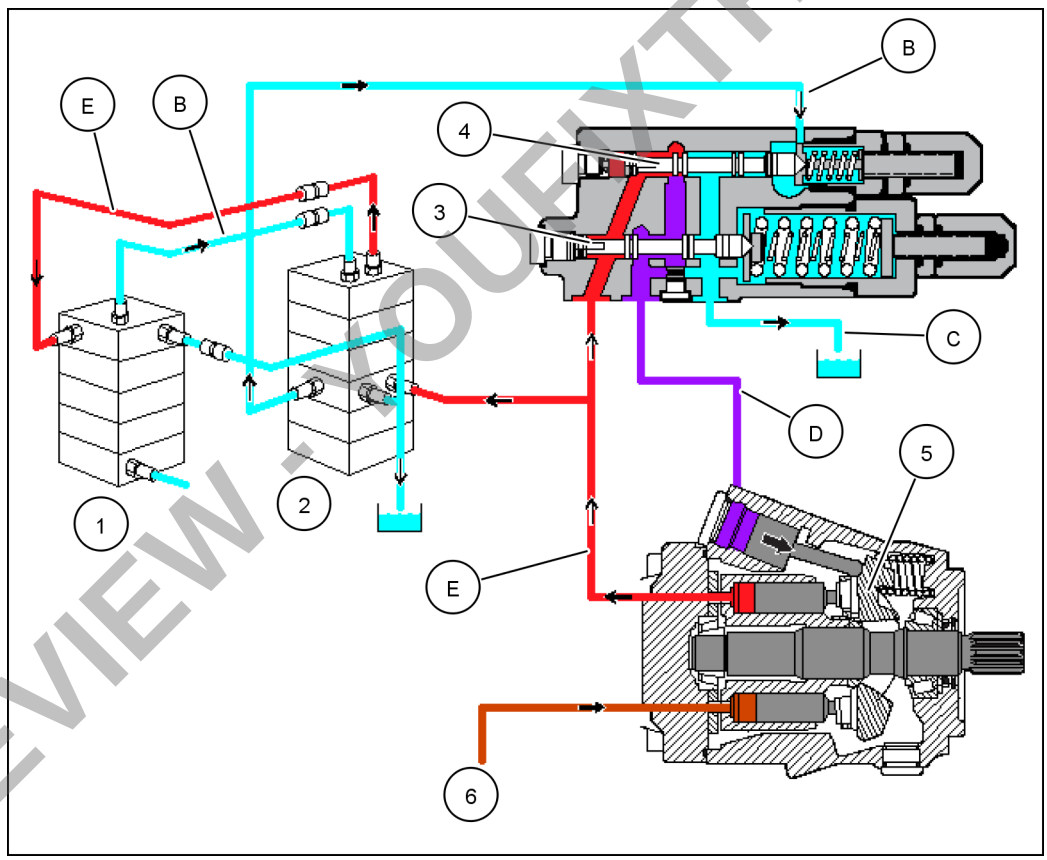
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Low Pressure Standby

Low pressure standby is the system pressure - **21 - 24 bar** (**305 - 348 psi**) - maintained by the hydraulic pump when high pressure hydraulic circuits are not being operated. During engine startup, standby pressure has not been generated and both the pressure and flow compensating valves **(3) (4)** are held to the left by spring pressure. While the spools are held to the left, oil pressure generated by the pump in gallery **(E)** cannot be applied to the swash plate servo piston via gallery **(D)**. The swash plate **(5)** consequently remains in the maximum flow position until the pump has developed sufficient flow to produce pressure at low pressure standby.

As pump output pressure increases to **21 - 24 bar** (**305 - 348 psi**), this pressure is sensed in gallery **(E)** and applied to the flow compensating spool **(4)**. The spool gradually moves against the spring, allowing oil flow from gallery **(E)** to gallery **(D)**. The controlled pressure rise in gallery **(D)** operates the swash plate servo piston, changing the angle of the swash plate in relation to the pumping head. The change in angle reduces the operating stroke of the pistons and output of the pump.

As pump output decreases and the pressure in gallery **(D)** decreases to less than **24 bar** (**348 psi**), the flow compensating valve gradually moves under spring pressure to the left, bleeding gallery **(D)** to sump through gallery **(C)**. This reduces the control pressure applied to the servo piston, allowing the servo piston to retract at a controlled rate under pressure from the swash plate return spring and re-adjust the angle of the swash plate to increase pump output. This control process continues, maintaining pump output pressure at **21 - 24 bar** (**305 - 348 psi**) (low pressure standby) until a high pressure circuit is operated and pump system pressure needs to be increased to operate the service.



56070853A 2

Standby Pressure @ **21 - 24 bar** (**305 - 348 psi**)

Return to Reservoir

Control Pressure

Charge Pressure

1. Feeder stack valve (in neutral)
2. Main frame stack valve (in neutral)
3. Pressure Compensating Valve
4. Flow Compensating Valve
5. Swash Plate
6. Return from Hydrostatic Motors

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Stone trapping system - 992

SERVICE

Stone trap door unlatching cylinder
Remove 3
Install 5

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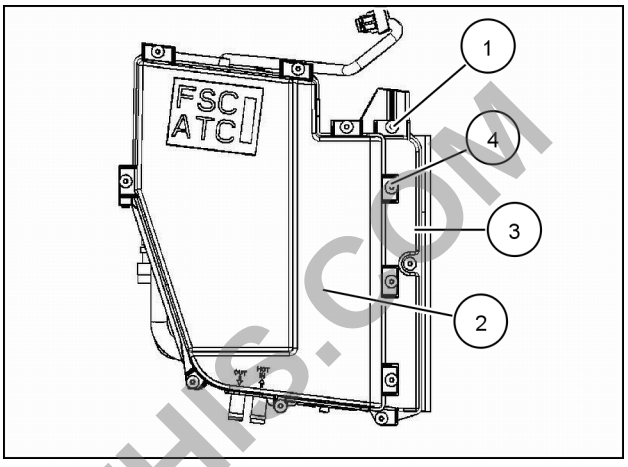
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Expansion valve - Remove

CR6090 [YBG115106 -], CR6090 NA, CR8080 NA, CR9090 [YBG115106 -] NA, CR7090 [YBG115106 -] NA, CR8090 [YBG115106 -] NA

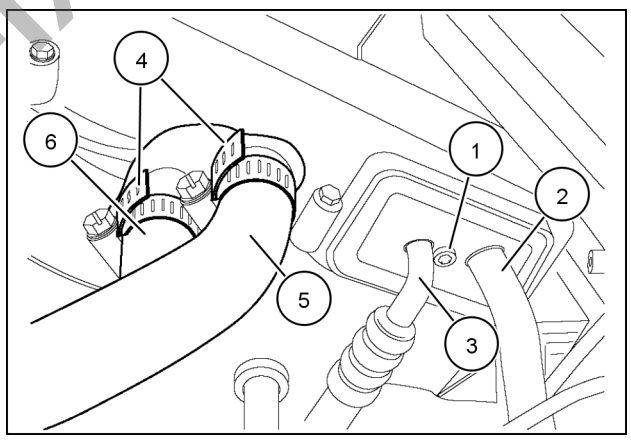
T30 Torx® driver required.

1. Using a T30 Torx® tool, remove nine truss head screws **(1)** around outside of covers **(2)** and **(3)** and remove cover assembly as a unit. It is not necessary to remove three screws **(4)**.



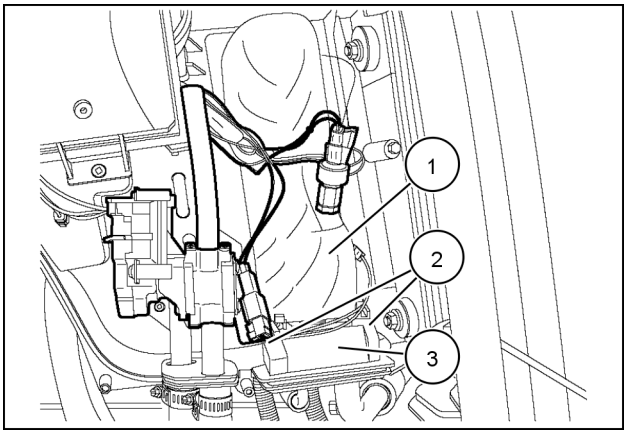
20082321 1

2. Recover refrigerant in accordance with local regulations and special tool instructions Refer to **Air conditioning - Service instruction (50.200)**.
3. Remove hex socket head screw **(1)**, lock washer and plate to disconnect the refrigerant lines **(2)** and **(3)** from the evaporator assembly. Cap the hose ends to prevent foreign material and moisture from entering the system.



83082323 2

4. Remove insulation **(1)** from the lower part of evaporator tubing.
Cut and remove cable ties **(2)** securing rubber cover **(3)** over the expansion valve.



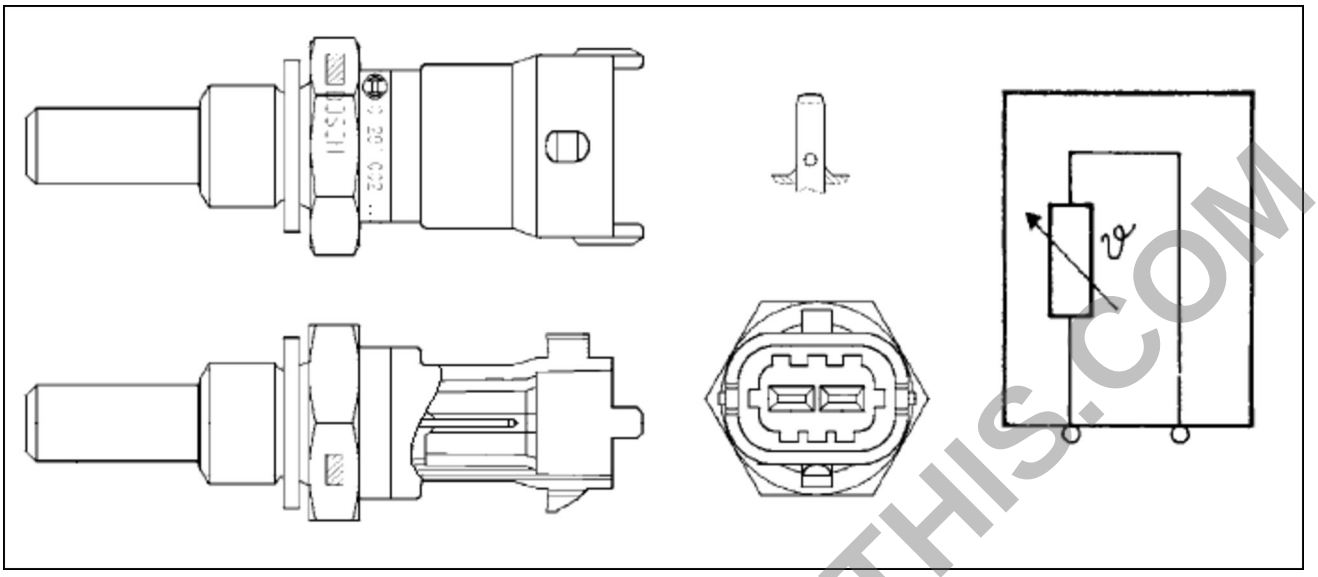
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Engine coolant temperature sensor - Overview

CR9090 [YBG115106 -], CR8090 [YBG115106 -]



TEMPSENSOR 1

This N.T.C. type sensor located on the water outlet sump on the left of the cylinder head measures coolant temperature for the various operating logics. Depending on wether the engine is hot or cold, it identifies the injection enrichment requirements for a cold engine or fuel reduction requirements for a hot engine.

Temperature to kOhm comparison

- **-10 °C** (**14 °F**) = 8.10 - 10.77 kOhms
- **20 °C** (**68 °F**) = 2.28 - 2.72 kOhms
- **80 °C** (**176 °F**) = 0.29 - 0364 kOhms

60 - 90 °C (**140 - 194 °F**), the voltage ranges from **0.6 - 2.4 V**.

Pin	Description	Wire color
15	Sensor Connector C	Pink
26	Sensor Connector C	Yellow

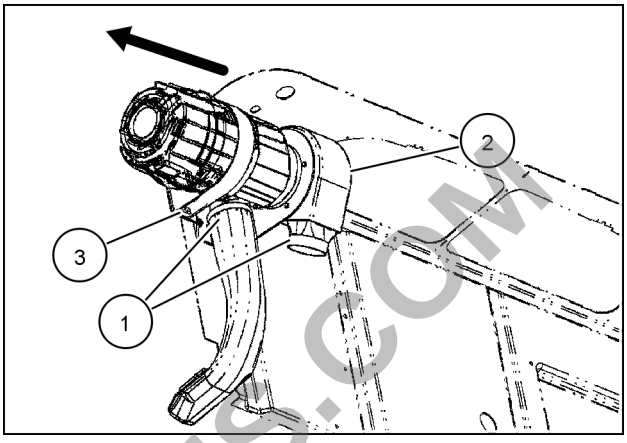
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Blower Separator fan - Remove

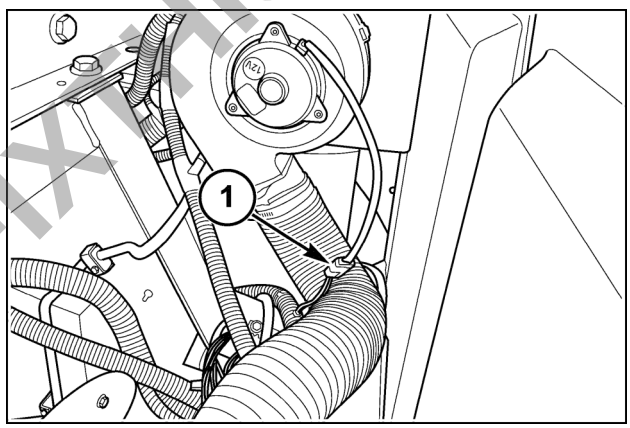
CR6090 [YBG115106 -], CR6090 NA, CR8080 NA, CR9090 [YBG115106 -] NA, CR7090 [YBG115106 -] NA, CR8090 [YBG115106 -] NA

1. Disconnect large hoses from air cleaner and from fan **(2)** at **(1)**.
2. Remove two cap screws, washers, lock washers and nuts **(3)** and remove air cleaner assembly from the fan housing by pulling to the left.



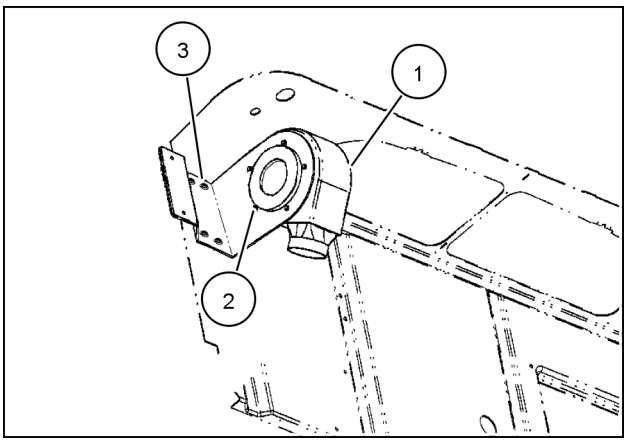
20082264 1

3. Disconnect power wires from the motor at right hand end of fan housing **(1)**.



10036374A5 2

4. Remove separator fan **(1)** from mounting bracket by turning out five cap screws and washers **(2)**. Alternatively, the bracket can also be removed with the fan still mounted to it, and then taken apart on the bench. To remove bracket from cab frame, remove four nuts and lock washers **(3)**.



20082265 3

Next operation:
Blower Separator fan - Install (55.050).

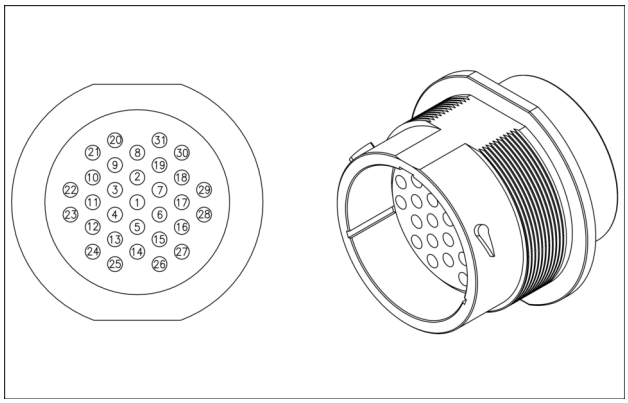
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CONNECTOR X-036 - CAB ROOF			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
18	CR-931 (OR) OR-931 (OR)	Switched power from mirror heat switch **S-19** to LH/RH mirror **A-31**/ **A-32**, and german mirror **A-33**	**Wire harnesses - Electrical schematic frame 56 — Mirrors (55.100)**
19	CR-955 (WH) OR-955 (WH)	Switched power from mirror select switch **S-57** or switch bypass fuses **F-64** to RH mirror **A-32**	
20	CR-963 (WH) OR-963 (WH)	Switched power from mirror select switch **S-57** or switch bypass fuses **F-64** to german mirror **A-33**	
21	CR-962 (WH) OR-962 (WH)	Switched power from mirror select switch **S-57** or switch bypass fuses **F-64** to RH mirror **A-32**	
22	CR-958 (WH) OR-958 (WH)	Switched power from mirror adjust switch **S-27** to LH mirror **A-31**	
23	CR-959 (WH) OR-959 (WH)		
24	CR-964 (WH) OR-964 (WH)	Switched power from mirror select switch **S-57** or switch bypass fuses **F-64** to german mirror **A-33**	
25	CR-961 (GY) OR-961 (GY)	Switched power from mirror adjust switch **S-27** to LH mirror **A-31**	
26	CR-954 (GY) OR-954 (GY)	Switched power from mirror adjust switch **S-27** to RH mirror **A-32** and german mirror **A-33**	
27	CR-978 (VT)	Switched power from road lights relay **K-27**	
28	CR-981 (VT) OR-981 (VT)	Switched power from road lights relay **K-27** to LH/RH cab inner work lights **E-17**/ **E-18** and HID distance light **E-62**	
29	CR-210 (VT) OR-210 (VT)	Switched power from header work lights relay **K-22** to center work light **E-38**	**Wire harnesses - Electrical schematic frame 49 — Lighting (Header, Center Work) (55.100)**
30	-	-	
31	-	-	



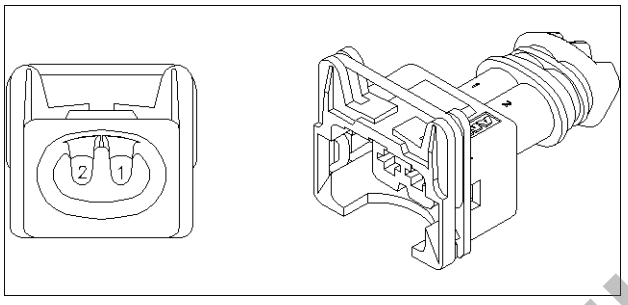
NHPE11CR00069AA 13

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CONNECTOR X-272 - REEL FORE

CONNECTOR X-272 - REEL FORE			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
1	FV-560 (WH)	Control signal from **CCM-2**	**Wire harnesses - Electrical schematic frame 11 — Header (55.100)**
2	FV-589 (BK)	Front ground	



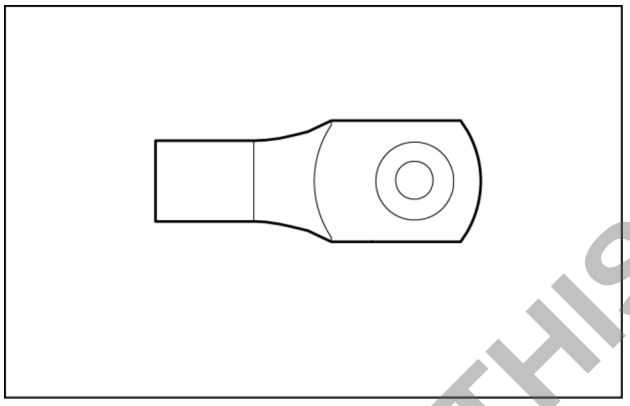
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CONNECTOR X-671A - JUMP START STUD +12V

CONNECTOR X-671A - JUMP START STUD +12V			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
1	BT-802 (RD)	Battery power from engine power tap **J-02**	**Wire harnesses - Electrical schematic frame 01 — Starting (55.100)**

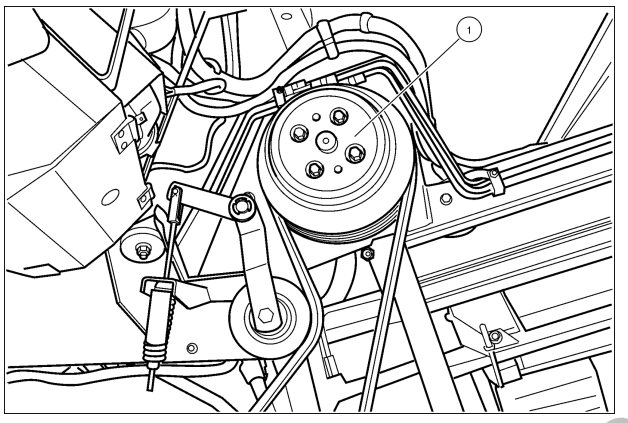


RING TERMINAL 3

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The feeder clutch **(1)** is located on the left-hand side of the combine, toward the front, just rearward of the cab. When engaged, it transmits rotary motion to the feeder drive mechanism.



10021019 4

Feeder Engage Alarms

Error	Description
A0014	Feeder reverser engaged
A0015	Seat switch open

Feeder Engage - Error Codes

E0000-03 - Stone trap closed sensor , Shorted to high source The troubleshooting procedure for this fault code is located at **Stone trapping sensors Door position sensor - Short circuit to B+ (55.628)**.

E0000-04 - Stone trap closed sensor , Shorted to low source The troubleshooting procedure for this fault code is located at **Stone trapping sensors Door position sensor - Short circuit to ground (55.628)**.

E0000-05 - Stone trap closed sensor , Line disconnected The troubleshooting procedure for this fault code is located at **Stone trapping sensors Door position sensor - Open circuit (55.628)**.

E0004-03 - Fdr Reverser Disengaged Shorted To High Source The troubleshooting procedure for this fault code is located at **Reverse solenoid - Short circuit to B+ (55.618)**.

E0004-04 - Fdr Reverser Disengaged Shorted To Low Source The troubleshooting procedure for this fault code is located at **Reverse solenoid - Short circuit to ground (55.618)**.

E0004-05 - Fdr Reverser Disengaged Line Disconnected The troubleshooting procedure for this fault code is located at **Reverse solenoid - Open circuit (55.618)**.

E0047-03 - V Supply Feeder Clutch Shorted To High Source The troubleshooting procedure for this fault code is located at **Main engagement control switches - Short circuit to B+ (55.520)**.

E0646-04 - CSW Feeder Reverse Shorted to Low Source The troubleshooting procedure for this fault code is located at **Main engagement control switches - Short circuit to ground (55.520)**.

E0140-04 - Operator Seat Switch Shorted To Low Source The troubleshooting procedure for this fault code is located at **Operator presence switch Seat switch - Short circuit to ground (55.408)**.

E0175-03 - V Supply Thresher Clutch Shorted to High Source The troubleshooting procedure for this fault code is located at **Threshing electrical control - Short circuit to B+ (55.628)**.

E0654-04 - CSW Road Mode Shorted to Low Source The troubleshooting procedure for this fault code is located at **Road/Field mode switch - Short circuit to ground (55.512)**.

E0654-07 - CSW Road Mode Mechanical Out of Range The troubleshooting procedure for this fault code is located at **Road/Field mode switch - Out of range (55.512)**.

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B. If no damage or other than normal display readings are indicated, erase the fault code and continue operation.

Wire harnesses - Electrical schematic frame 08 (55.100.DP-C.20.E.08)
Wire harnesses - Electrical schematic frame 26 (55.100.DP-C.20.E.26)

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E0143-04-Chopper RPM sensor Shorted To Low Source

CR6090 [YBG115106 -] NA, CR8080 [YBG115106 -] NA, CR9090 [YBG115106 -] NA, CR7090 [YBG115106 -] NA, CR8090 [YBG115106 -] NA

Control Module : CM2

Context:

Cause:
CM2 is sensing a signal less than **0.5 V** from the Chopper RPM **B-10** sensor .

Possible failure modes:

1. Sensor or supply wiring shorted to ground.
2. Controller internal failure.

Solution:

1. Use the Display Monitor diagnostic capability to view Parameter status, reference **Instrument cluster - Detailed view (55.408)** if needed, to check the voltage range.
   The normal operating range for the sensor when blocked by ferrous metal is **5.6 - 7.3 V**, typically **6.6 V**.
   The normal operating range for the sensor when not blocked by ferrous metal is **0.5 - 5.6 V**, typically **4.6 V**.
   When any part of the circuit is disconnected, **7.3 - 9.0 V**, typically **7.5 V**, is displayed.
   A. If the voltage reading is low, less than **0.5 V**, continue with step **2**.
   B. If the voltage reading is within the normal operating range, the fault may be intermittent and not currently active. Continue with step **6**.
2. Disconnect the straw hood rear (SH) harness from the Chopper RPM **B-10** sensor at connector **X253**.
   A. If the voltage increases to **7.3 - 9.0 V**, the short to ground is in the sensor, or sensor wiring. Replace the Chopper RPM **B-10** sensor.
   B. If the voltage remains low, continue with step **3**.
3. Disconnect the straw hood rear (SH) harness from the straw hood front (SW) harness at connector **X071**.
   A. If the voltage increases to **7.3 - 9.0 V**, the short to ground is in the straw hood rear (SH) harness between connector **X071** pin 4 and connector **X253** pin 2, wire 413 yellow. Locate and repair the shorted conductor.
   B. If the voltage remains low, continue with step **4**.
4. Disconnect the straw hood front (SW) harness from the main frame (MF) harness at connector **X024**.
   A. If the voltage increases to **7.3 - 9.0 V**, the short to ground is in the straw hood front (SW) harness between connector **X024** pin 4 and connector **X071** pin 4, wire 413 yellow. Locate and repair the shorted conductor.
   B. If the voltage remains low, continue with step **5**.
5. Carefully disconnect the main frame (MF) harness from **CM2** at connector **X016**. Use a multi-meter to check the voltage, on the controller, from pin J2-38 to chassis ground. There should be **7.0 - 8.0 V**, typically **7.5 V**.
   A. If there is **7.0 - 8.0 V**, the short to ground is in the main frame (MF) harness between connector **X024** pin 4 and connector **X016** pin J2-38, wire 413 yellow. Locate and repair the shorted conductor.
   B. If there is less than **7.0 V**, the sensor reference voltage may be faulted or the controller has failed internally. Use the Display Monitor to check for error **E0166-04 - CM2 8V Ref Voltage Shorted to Low Source** replace **CM2**.
6. 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. Operate the machine while monitoring the Display.

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13. Determine if a short to ground condition exists in the source power circuit. Use a multi-meter to check for continuity from the terminal B side of the CCM-3 fuse **F-47** fuse panel socket to chassis ground. There should be no continuity.

    A. If there is continuity, there is a short to ground condition in the source power circuit, continue with step **14**.

    B. If there is no continuity, the blown fuse may be the result of a defect in the Sample motor **M-28** power circuitry. Check the mechanical and electrical condition of the Sample motor **M-28** and the in-line fuse.

14. Determine the location of the short to ground condition. Disconnect the cab main (CM) harness from the main frame (MF) harness at connector **X004**. Use a multi-meter to check for continuity, on the cab main (CM) harness side of connector **X004**, from pin 5 to chassis ground. There should be no continuity.

    A. If there is continuity, there is a short to ground condition in the cab main (CM) harness either between connector **X004** pin 5 and the terminal B side of the CCM-3 fuse **F-47** fuse panel socket or the terminal B side of the CCM-3 fuse **F-47** fuse panel socket and connector **X004** pin 4, wire 036 or 035 orange. Locate and repair the grounded conductor.

    B. If there is no continuity, reconnect connector **X004** and continue with step **15**.

15. Determine the location of the short to ground condition. Disconnect the main frame (MF) harness from the expansion (EX) harness at connector **X034**. Use a multi-meter to check for continuity, on the main frame (MF) harness side of connector **X034**, from pin 4 to chassis ground. There should be no continuity.

    A. If there is continuity, there is a short to ground condition in the main frame (MF) harness either between connector **X034** pin 4 and connector **X004** pin 5 or connector **X004** pin 4 and connector **X034** pin 3, wire 036 or 035 orange. Locate and repair the grounded conductor.

    B. If there is no continuity, reconnect connector **X034** and continue with step **16**.

16. Determine the location of the short to ground condition. Carefully disconnect the expansion (EX) harness from **CCM-3** at connector **X013**. Use a multi-meter to check for continuity, on the expansion (EX) harness side of connector **X013**, from pin J2-2 to chassis ground. There should be no continuity.

    A. If there is no continuity, **CCM-3** has failed internally, replace the module.

    B. If there is continuity, leave connector **X013** disconnected and continue with step **17**.

17. Determine the location of the short to ground condition. Disconnect the Rear axle angle **B-70** jumper harness from the expansion (EX) harness at connector **X462**. Use a multi-meter to check for continuity, on the expansion (EX) harness side of connector **X462**, from pin A to chassis ground. There should be no continuity.

    A. If there is no continuity, the short to ground condition is in the Rear axle angle **B-70** sensor circuit, continue with step **24**.

    B. If there is continuity, leave connector **X462** disconnected and continue with step **18**.

18. Determine the location of the short to ground condition. Carefully disconnect the expansion (EX) harness from **CCM-3** at connector **X014**. Use a multi-meter to check for continuity, on the expansion (EX) harness side of connector **X014**, from pin J3-11 to chassis ground. There should be no continuity.

    A. If there is no continuity, **CCM-3** has failed internally, replace the module.

    B. If there is continuity, leave connector **X014** disconnected and continue with step **19**.

19. Determine the location of the short to ground condition. Disconnect the harness from the Sample motor **M-28** at connector **X222**. Use a multi-meter to check for continuity from the harness side of connector **X222** pin 1 and chassis ground. There should be no continuity.

    A. If there is no continuity, the Sample motor **M-28** or bypass unit power circuitry has failed, locate and repair the grounded conductor or device or replace the unit.

    B. If there is continuity, leave connector **X222** disconnected and continue with step **20**.

20. Determine the location of the short to ground condition. Disconnect the harness from the at connector **X223**. Use a multi-meter to check for continuity, on the harness side of connector **X223**, from pin to chassis ground. There should be no continuity.

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E1564-04- Engine oil pressure sensor - Shorted to low source

CR6090 [YBG115106 -] NA, CR8080 [YBG115106 -] NA, CR9090 [YBG115106 -] NA, CR7090 [YBG115106 -] NA, CR8090 [YBG115106 -] NA

Control Module : ECU

Context:
The Engine Control Unit (ECU) generated a fault associated with the Oil temp / press sensor. The Oil temp / press sensor is an integrated sensing device used to sense both temperature and pressure. This fault is related to the pressure sensing function of the device. This error could result from a signal out of range or a plausibility check (oil pressure too high). The plausibility check is only started if there are no sensor power supply (**5 volts** dc) or Analog to Digital Converter (ADC) signal errors detected.

Cause:
The Oil temp / press sensor signal to the ECU is out of range of the lower threshold limit.

Possible failure modes:

1. Faulty wiring
2. Faulty sensor
3. Faulty ECU

Solution:

1. Check the electrical circuit. Remove Oil temp / press sensor connector **X-517** and inspect housing body/latch, pins and wiring harness for damage or corrosion. Also, inspect connector portion of the Oil temp / press sensor.

   A. If damage is determined after careful inspection, repair wiring and/or replace connector parts to ensure a good and sound electrical connection. Replace OPS sensor if damaged.

   B. If no damage is determined, proceed to step **2**.

2. Check for circuit voltages for oil temp / press sensor. Remove connector **X-517** from the Oil temp / press sensor Use a multi-meter to check for voltages (DC) between connector pins outlined in the table below. Place the ignition switch ON. Use spade style leads from the Harness Diagnostic Repair Kit **380040185** to access the pins from the engine harness side of connector **X-517**.

Test Type	From	To	Expected Results
1. Voltage	**X-517** (Pin 3)	**X-517** (Pin 1)	Approx. **5 volts**
2. Voltage	**X-517** (Pin 2)	**X-517** (Pin 1)	Approx. **5 volts**
3. Voltage	**X-517** (Pin 4)	**X-517** (Pin 1)	Approx. **5.4 volts**

   A. If the voltage test sequence is successful, replace the sensor.

   B. If the voltage test sequence is not successful, proceed to step **3**.

3. Check for faulty wiring. Place the ignition switch OFF. Remove and perform continuity tests between connectors **X-517** and **X-516** on engine wiring harness. Flex harness during test to check for any intermittent operation. Use the test lead labeled "Air Press/Temp Sensor" from the Tier II (NEF) Diagnostic Repair Kit **380040185** to be able to access the pins on the sensor connector **X-517**. Also, use the **0.4 mm** (**0.017 in**) diameter test probes from the repair kit when connecting the digital multi-meter (DMM) to connector **X-516**. Make sure the DMM's test lead resistance is taken into account when taking continuity measurements. See test table below.

   Important Note: Check and verify that the Vehicle Status is correct. Potential ECU damage could result when removing main ECU connectors if this is not followed.

Test Type	From	To	Expected Results
1. Continuity	**X-517** (Pin: 1)	**X-516** (Pin: 24)	Approx. **0 - 0.10 ohms**
2. Continuity	**X-517** (Pin: 2)	**X-516** (Pin: 28)	Approx. **0 - 0.10 ohms**

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E1604-12- Injector bank 2 high side driver - Bad intelligent device

CR6090 [YBG115106 -], CR8080 [YBG115106 -] NA, CR9090 [YBG115106 -] NA, CR7090 [YBG115106 -] NA, CR8090 [YBG115106 -] NA

Control Module : ECU

Context:
The engine control unit (ECU) has determined that an unclassified error exists in an injector cable in Bank 2 (Group B, Cylinders 4, 5, & 6). A power stage component energizes the unit injection system transistors and simultaneously observes the current flow in the high-side and low-side switching branch by sensing resistors. If there is a deviation from the expected current flow the component detects specific errors and reports them to the ECU. This error message is then rearranged so it holds information on performed injections, errors of cylinders on the same bank, bank specific errors and cylinder specific errors. The rearranged error message is then compared to applicable error patterns and if there is a match the failure corresponding to the matched pattern is output. If an error message doesn't match any pattern the defect is treated as an unclassifiable error. Monitoring is performed once per camshaft revolution. This error is the result of an unclassified error being present over 9 camshaft revolutions. As a result of this error an individual cylinder or bank is shut off, based on parameters established in the ECU. Certain parameters, as currently applied, are permanent (without a healing possibility, once tested by switching on the component to see if the defect is still present). and others evoke an irreversible or reversible shut off of the engine to be executed.

Cause:
The Engine Control Unit (ECU) has determined that there is a fault associated with the injector output power driver stage.

Possible failure modes:

1. Faulty electrical wiring (damaged connector or conductor).
2. Faulty ECU, hardware or software.

Solution:

1. Because this error is unclassifiable (not directly attributable to typical circuit failures), use the Display Monitor diagnostics capability, reference **Instrument cluster - Detailed view (55.408)**, if needed, to check for other ECU errors.

   A. If other errors do exist, follow the troubleshooting procedures established for those errors.

   B. If other errors do not exist, continue with step **2**
2. Visually check the electrical integrity of the injector circuits in Bank 2 (Inspect connector housing body/latch, pins and wiring harness for damage or corrosion).

   A. If damage is determined after careful inspection, repair wiring and/or replace connector parts to ensure a good and sound electrical connection.

   B. If no damage is determined, the ECU may have failed. Try reloading the ECU software and if the fault reoccurs, replace the ECU.

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CONSUMABLES INDEX

Consumable	Reference	PAGE
NEW HOLLAND Ambra Hypoide 90	Product feed chain - Install	60.150 / 21
Loctite® Anti-Seize	Clutch - Install	60.150 / 34
Loctite® 567 PST Pipe Sealant	Clutch - Install	60.150 / 35
NEW HOLLAND Ambra Hi-Temp EP Grease	Slip clutch - Install	60.150 / 76
NEW HOLLAND Ambra Hi-Temp EP Grease	Slip clutch - Install	60.150 / 76
NEW HOLLAND Ambra Hi-Temp EP Grease	Slip clutch - Install	60.150 / 76
NEW HOLLAND Ambra Hi-Temp EP Grease	Slip clutch - Install	60.150 / 76

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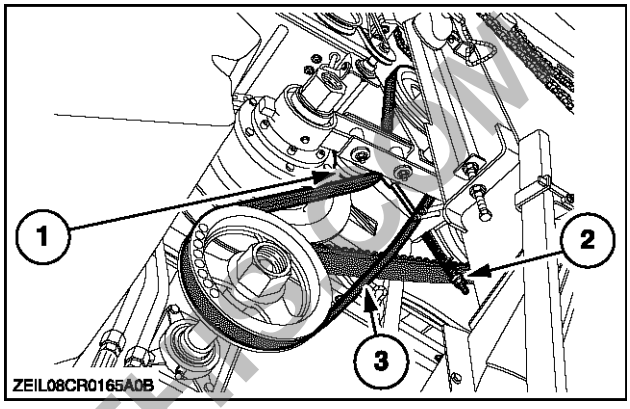
Bridge - Disassemble

CR6090 [YBG115106 -] NA, CR8080 [YBG115106 -] NA, CR9090 [YBG115106 -] NA, CR7090 [YBG115106 -] NA, CR8090 [YBG115106 -] NA

1. Suitably position the combine in a workshop or on a level hard surface.

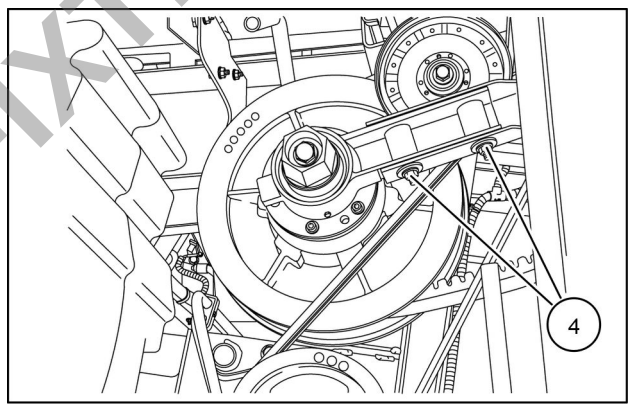
ATTENTION: *Use an adequate ladder or platform to safely reach the components.*

2. Loosen the tensioner **(2)** and remove the belt **(3)** from the pulley to create clearance.
3. Pull the tensioner pulley **(1)** upwards with an adequate rope to move the tensioner **(1)** out of the way for further disassembly.



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4. Remove the two bolts, the washers and the nuts **(4)** on the driven side of the bridge.

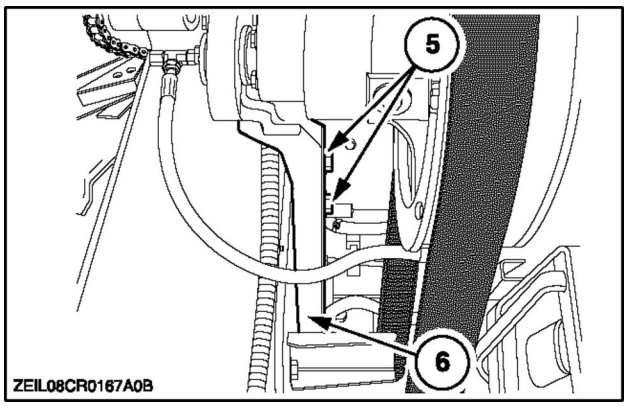


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5.

ATTENTION: *The bearing housings will turn freely on their shaft. Take care to their movement to avoid any injury or any damage to other parts of the machine.*

6. Secure the bridge adjusting plate **(6)** with a rope to avoid it from falling when all the bolts will be removed, or have an assistant to help with the removal of the bridge adjusting plate.
7. Remove the two bolts, and the washers **(5)** on the drive side of the bridge.
8. Remove the bridge adjusting plate **(6)**.



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5. Insert four M10 x 25 mm carriage bolts **(1)**, for attaching top plate **(2)** to hub **(3)** through top plate and hub. Secure top plate to hub bolts with Belleville lock washers and M10 nuts.

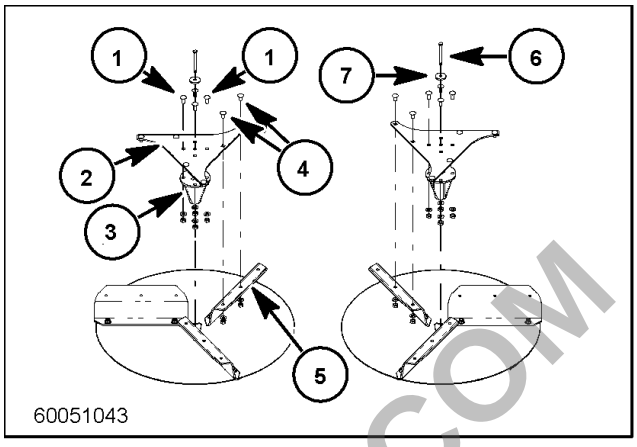
6. Install the assembled hub and top plate on motor shaft. Ensure the 8 x7 x 32 shaft key is installed.

7. Rotate the assembled hub and top plate so that the arms of top plate align with blades on disc and the hub engages notched center hole of disc.

NOTE: *If the arms do not align with the blades, the top-plate is upside down and must be reversed.*

8. Fasten the assembled top plate and hub to the blades by inserting two M10 x 20 mm carriage bolts **(4)** for each blade through top-plate **(2)** and blade **(5)**. Secure each bolt with a Belleville lock washer and M10 nut.

9. Secure each top-plate, hub, and disc/blade assembly to the motor shaft with an M8 x 90 mm locking bolt **(6)** and large OD flat washer **(7)**. Tighten the bolt.



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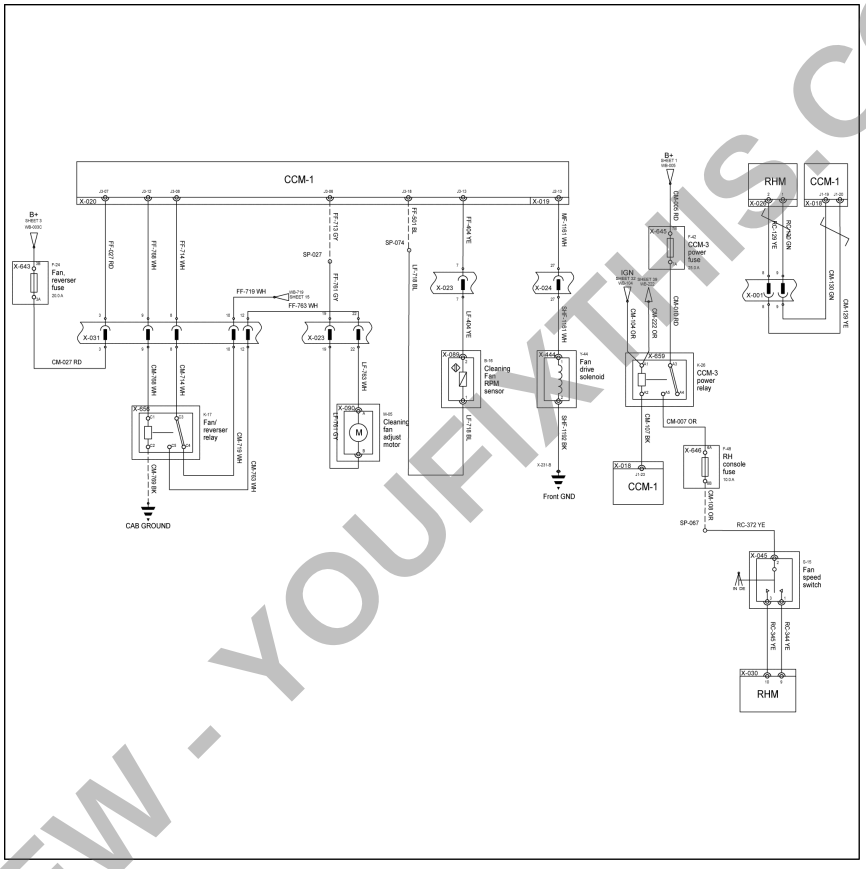
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Fan Motor - Dynamic description – Electrical

CR6090 [YBG115106 -] NA, CR8080 [YBG115106 -] NA, CR9090 [YBG115106 -] NA, CR7090 [YBG115106 -] NA, CR8090 [YBG115106 -] NA

The Cleaning Fan Adjust Motor **M-05** and the Fan Drive Solenoid **Y-44** are some of the output devices associated with the cleaning system. The motor provides air flow to clean MOG from the cleaning system, by receiving a control signal from the Combine Control Module1 **CCM-1**. The motor speed can be adjusted by the operator by actuating the Fan Speed Switch **S-15**, located on right hand console. For additional information concerning the system, see **Fan drive system - Static description (74.136)**

Simplified Circuit Diagram



NHPE11CR00103AA 1

Figure 1

NOTE: *Figure 1 is a simplified functional diagram of the Wiper/washer circuit.*

Battery voltage flows through the fan, reverser fuse F-24 to **CCM-1** and **CCM-1** will energize the Fan/reverser Relay **K-17**, which will close its normally open contact. The closed contact will deliver power to the **M-05**.

Once the cutting process has started, the cleaning process will start and **CCM-1** will energize **K-17** and designate **M-05** connections as ground or power, this action determines the direction of **M-04**. The operator can adjust the motor's speed by actuating the **S-15**. The Right Hand Module **RHM** receives the adjustment signal and then sends the adjustment signal to **CCM-1**, using the shared CAN signal lines. In addition to **S-15**, the **CCM-1** using the Cleaning Fan Sensor **B-16** and Fan Drive Solenoid **Y-44** during the cleaning fan process. The **B-16** monitors the cleaning fan speed and reports it finding to **CCM-1**. The **Y-44** engages the cleaning fan and helps maintain a constant fan speed.

Module Control Power Source

Combine Control Module1 **CCM-1**

Battery power from **F-24**	Connector **X-020** pin J3-07
Cab ground	Connector **X-018** pin J1-08

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Grain discharge horizontal tube - Install (After PIN Y8G112000)

CR6090 [YBG115106 -], CR6090 NA, CR8080 NA, CR9090 [YBG115106 -] NA, CR7090 [YBG115106 -] NA, CR8090 [YBG115106 -] NA

Prior operation:
Grain discharge horizontal tube - Assemble (80.180)

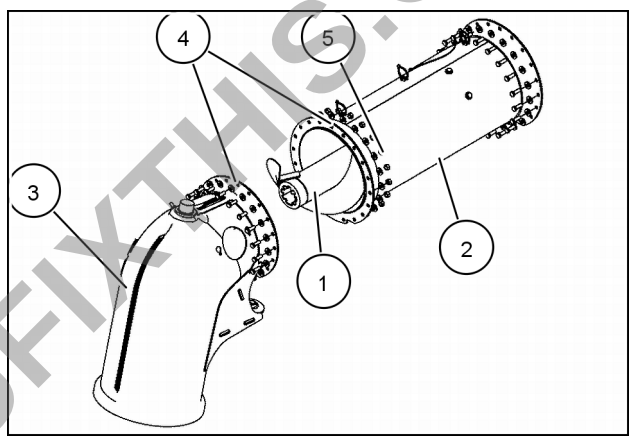
⚠ WARNING ⚠

Lift and handle all heavy components using lifting equipment of appropriate lifting capacity. Make sure that units or parts are supported by suitable slings or hooks. Make sure that no-one is in the vicinity of the load to be lifted. Failure to comply could result in serious injury or death.

B012

Installing extension

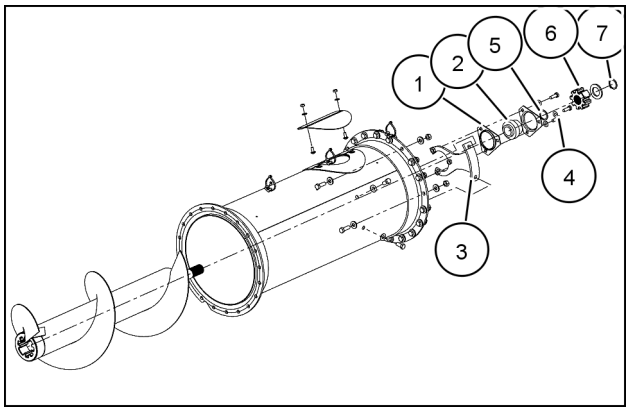
1. Install extension auger **(1)** and tube **(2)** to tube elbow **(3)** and gearbox, aligning the square holes in flanges **(4)**. Fasten with nineteen M12 x 40 cap screws, hard washers and nuts **(5)**.
2. Engage toothed sleeve on auger shaft with toothed hub on elbow gearbox and push the auger tight to the gearbox.



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3. Apply **NEW HOLLAND AMBRA GR-9 MULTI-PURPOSE GREASE** to inside diameter and to locking collar of bearing.
   If bearing has been removed or loosened, install two bearing flanges **(1)** with bearing **(2)** onto bearing support **(3)** using three M10 x 30 cap screws and lock washers **(4)**.
   Install bearing lock collar loosely.
4. Push the auger tight to the gearbox and tighten locking collar in counter clockwise direction.
5. Install first retaining ring **(5)**, drive hub **(6)**, washer and retaining ring **(7)**.

NOTICE: *Wide tooth on drive hub **(6)** must be oriented **180 °**from the wide tooth on the gearbox drive hub.*



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