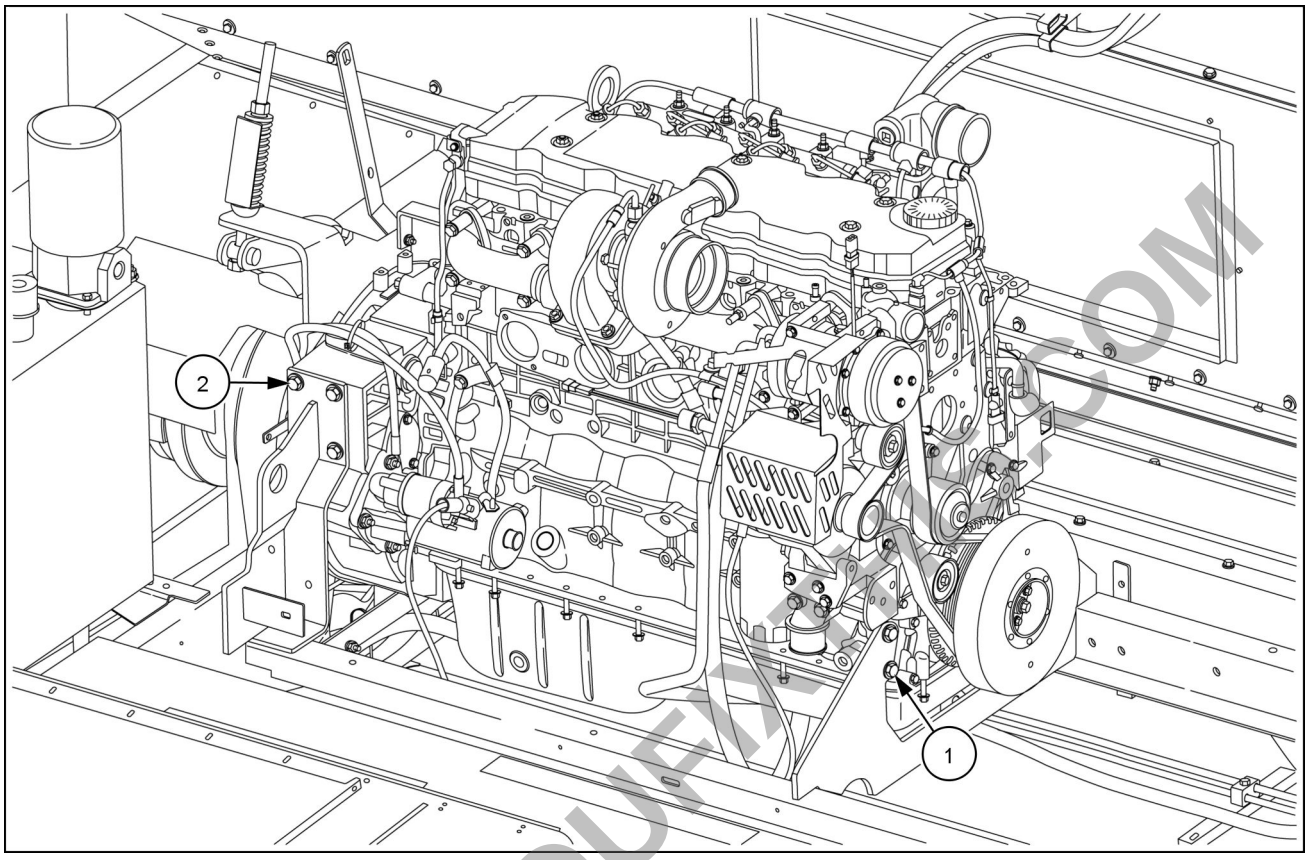
Link Product / Engine

Product	Market Product	Engine
TC5090 Máquina hidrostática Tier III com alimentador curto e sapata fixa [HCCY3595HGCG04491 -]	Latin America	F4HE9687G*J105
TC5090 Máquina hidrostática Tier III com alimentador curto e autonivelamento [HCCY3595HGCG04491 -]	Latin America	F4HE9687G*J105
TC5090 Máquina hidrostática para arroz Tier III com alimentador longo e sapata fixa [HCCY3595HGCG04491 -]	Latin America	F4HE9687G*J105
TC5090 Máquina hidrostática para arroz Tier III com alimentador curto [HCCY3595HGCG04491 -]	Latin America	F4HE9687G*J105
TC5090 Máquina hidrostática Tier III com alimentador longo e sapata fixa e sem saca-palha [HCCY3595HGCG04491 -]	Latin America	F4HE9687G*J105
TC5090 Máquina hidrostática Tier III com alimentador curto e sem saca-palha [HCCY3595HGCG04491 -]	Latin America	F4HE9687G*J105

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Engine - Torque



CUIL16TC00340FA 1

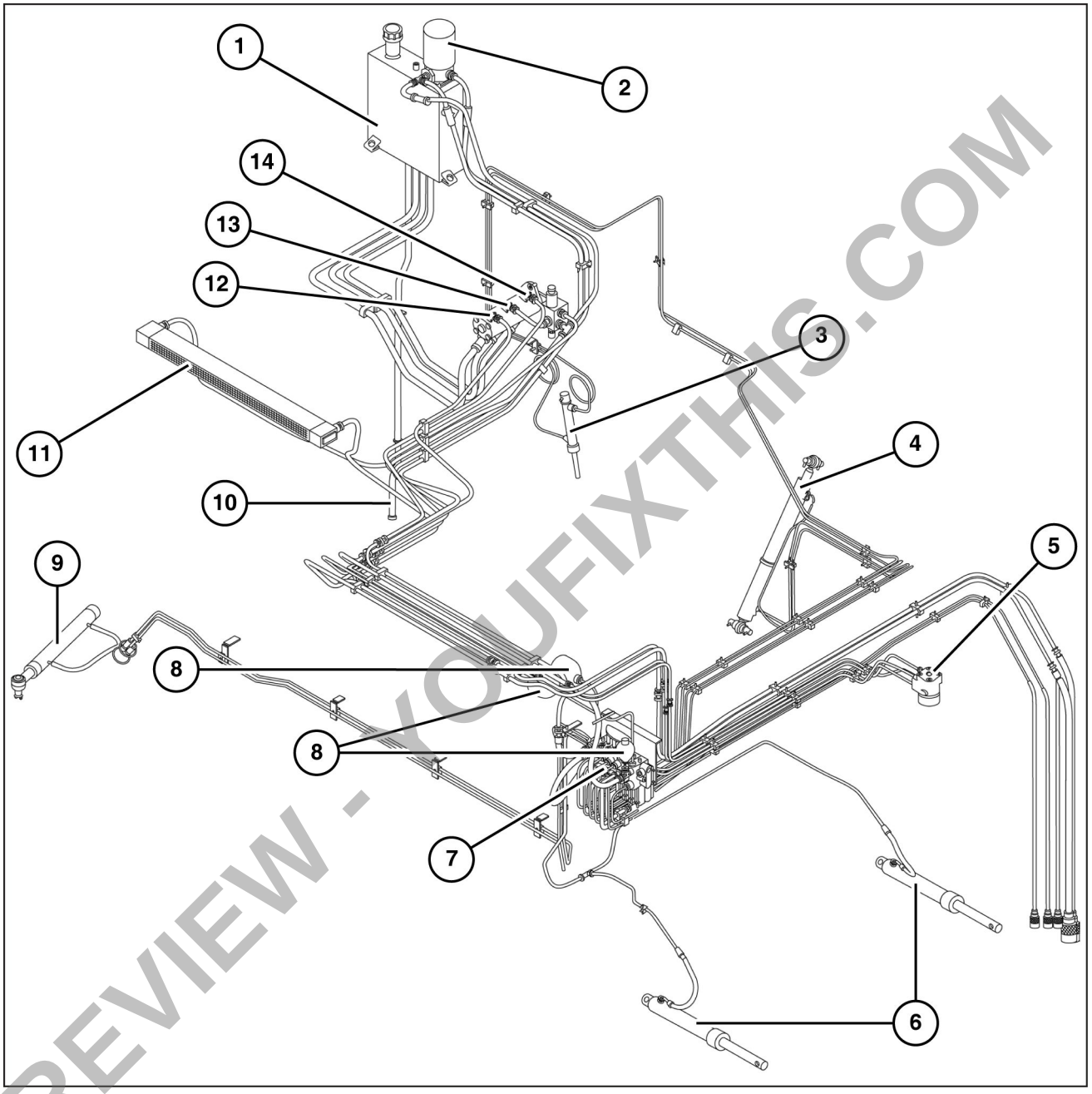
Reference	Torque	Reference	Torque
(1)		(2)	

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Mechanical transmission - Overview

TC5070 Combine [mechanical transmission]



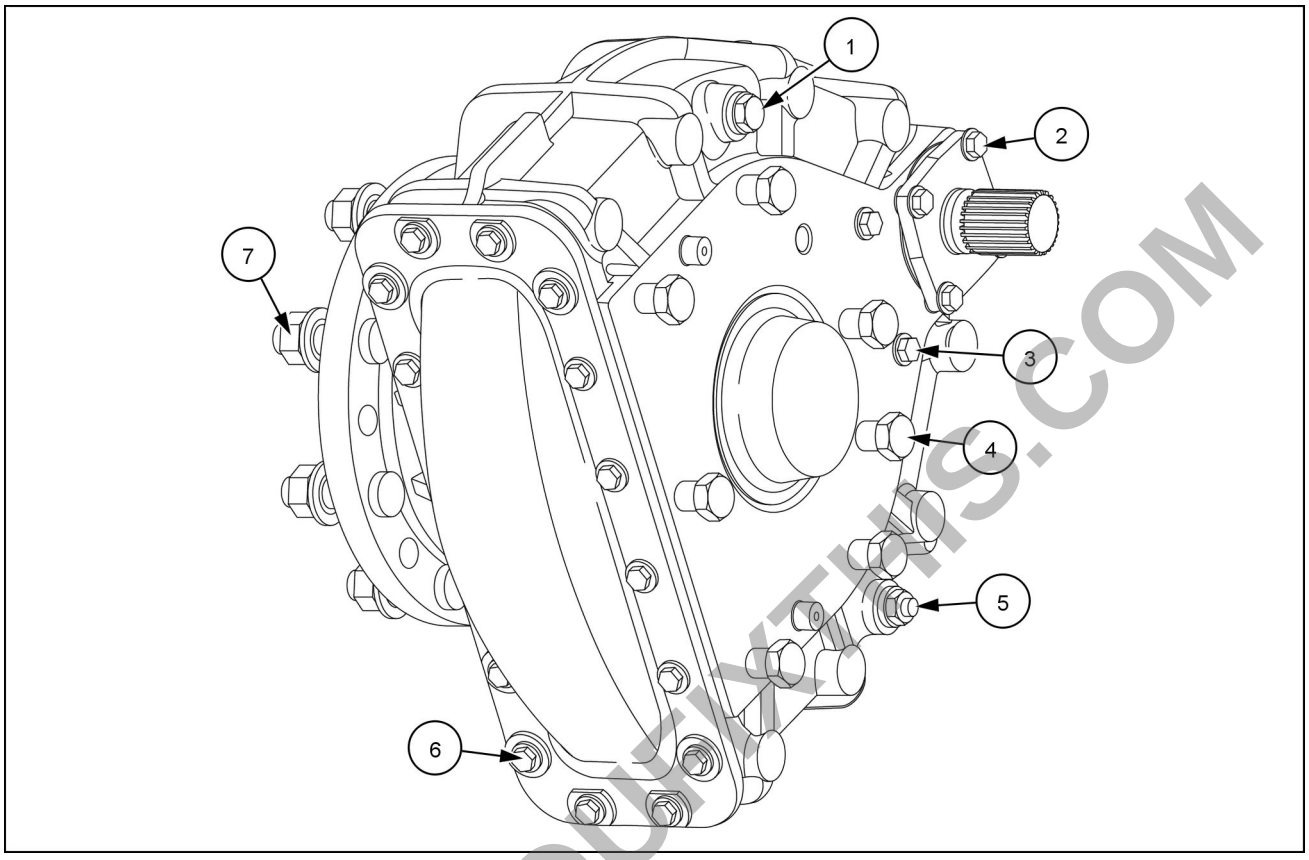
LAIL11TC0618G0A 1

1. Hydraulic oil reservoir
2. Hydraulic oil filter
3. Drive variator cylinder
4. Unloading tube cylinder
5. Steering servostat
6. Header cylinders
7. Hydraulic control
8. Hydraulic accumulators
9. Steering Cylinder
10. Hydraulic oil drain hose
11. Hydraulic oil radiator
12. Steering hydraulic pump
13. Reel rotation hydraulic pump
14. Controls hydraulic pump

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Final drives - Torque



CUIL17TC00060FA 1

Reference	Torque	Reference	Torque
(1)	**90.0 – 110.0 N·m** (**66.4 – 81.1 lb ft**)	(5)	**90.0 – 110.0 N·m** (**66.4 – 81.1 lb ft**)
(2)	**34.0 N·m** (**25.1 lb ft**)	(6)	**28.0 – 45.0 N·m** (**20.7 – 33.2 lb ft**)
(3)	**70.0 – 90.0 N·m** (**51.6 – 66.4 lb ft**)	(7)	**710.0 – 790.0 N·m** (**523.7 – 582.7 lb ft**)
(4)	**645.0 – 695.0 N·m** (**475.7 – 512.6 lb ft**)	-	-

Final drives - General specification

Gear Ratio	xx
Maximum input rpm **25 km/h** (**15.5 mph**)	**xx RPM**
Nominal input torque	**xx – xx N·m** (**xx – xx lb ft**)
Nominal output torque	**xx – xx N·m** (**xx – xx lb ft**)
Input shaft axial end play	**xx – xx mm** (**xx – xx in**)
Approximate total weight	**342.0 kg** (**754.0 lb**)
Oil Capacity	**xx l** (**xx US gal**)

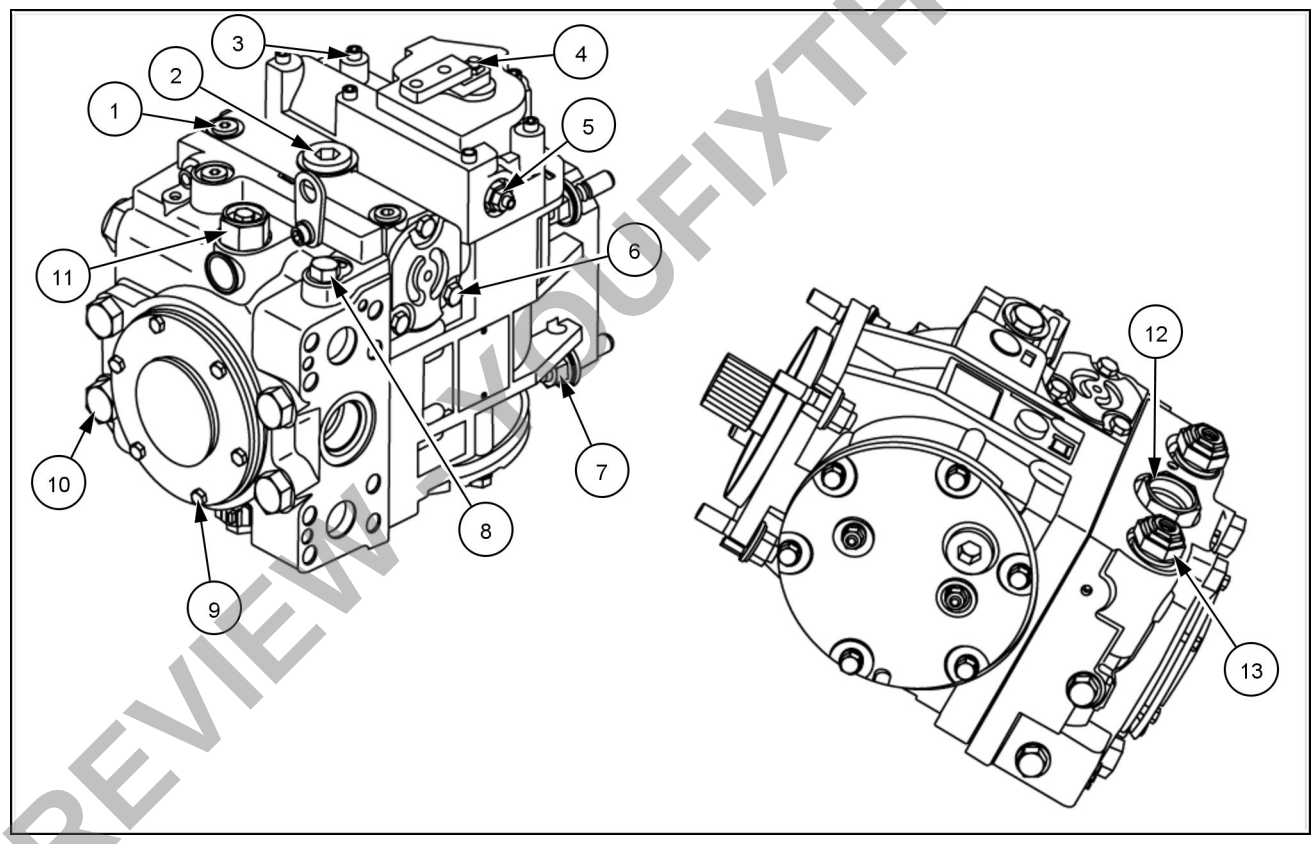
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Pump - General specification

Type of pump	Axial pistons with variable displacement
Flow rate at nominal speed, theoretical	**270.0 L/min** (**71.3 US gpm**)
Maximum volumetric displacement	**75.0 cm³/rev** (**4.6 in³/rev**)
Charge pump volumetric displacement	**17.0 cm³/rev** (**1.0 in³/rev**)
Charge pressure adjustment	**24.0 bar** (**348.0 psi**)to **1500 RPM**
High pressure setting on port A	**420.0 bar** (**6090.0 psi**)
High pressure setting on port B	**420.0 bar** (**6090.0 psi**)
Displacement control	Manual by cable
Direction of rotation	Clockwise and counter-clockwise
Minimum rotation	**500 RPM**
Nominal rotation	**3600 RPM**
Maximum rotation	**3950 RPM**
Axle configuration	Splined shaft, 23 teeth, pitch 16/32

Pump - Torque



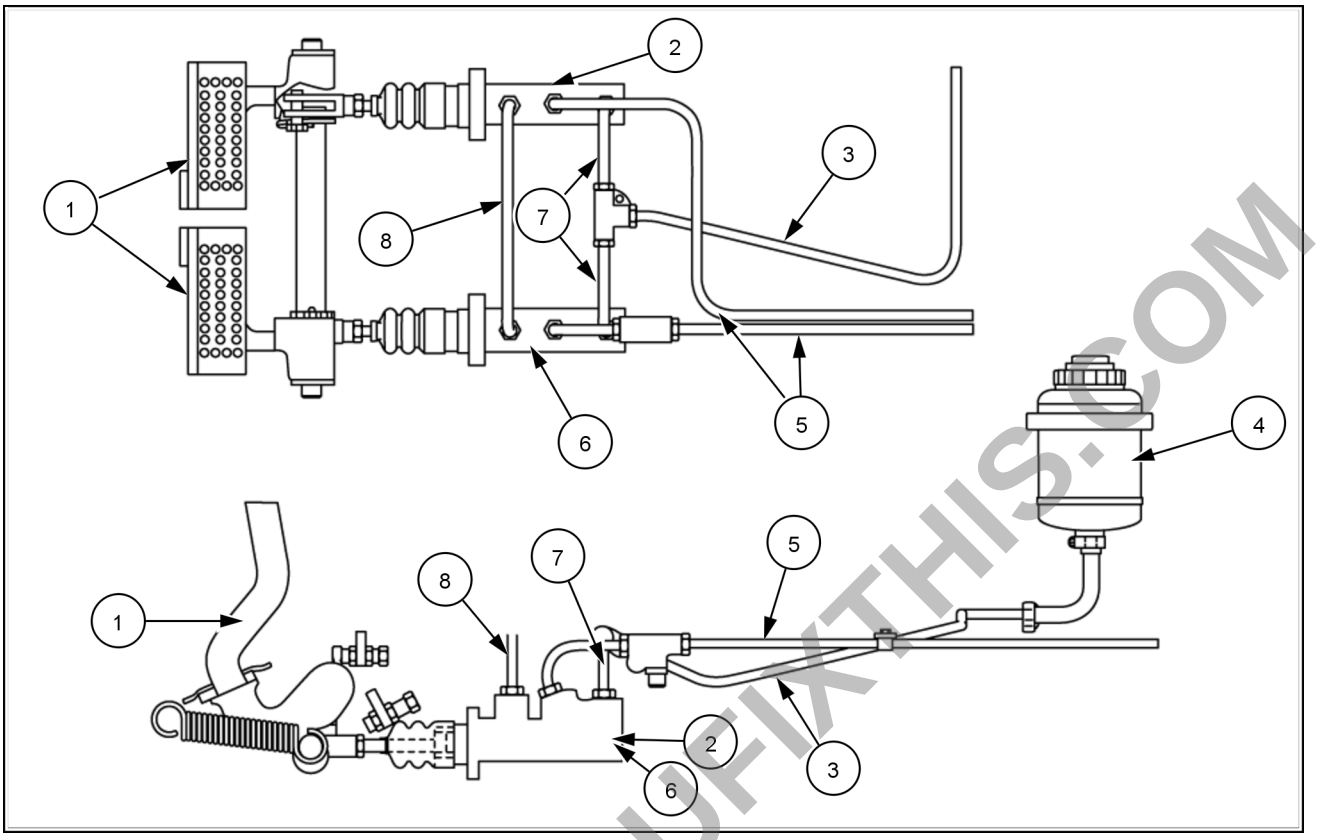
CUIL17TC00114AA 1

Reference	Torque	Reference	Torque
(1)	**12.0 N·m** (**8.9 lb ft**)	(8)	**23.0 N·m** (**17.0 lb ft**)
(2)	**115.0 N·m** (**84.8 lb ft**)	(9)	**16.0 N·m** (**11.8 lb ft**)
(3)	**16.0 N·m** (**11.8 lb ft**)	(10)	**298.0 N·m** (**219.8 lb ft**)
(4)	**13.5 N·m** (**10.0 lb ft**)	(11)	**52.0 N·m** (**38.4 lb ft**)
(5)	**13.0 N·m** (**9.6 lb ft**)	(12)	**52.0 N·m** (**38.4 lb ft**)
(6)	**32.5 N·m** (**24.0 lb ft**)	(13)	**89.0 N·m** (**65.6 lb ft**)
(7)	**131.0 – 139.0 N·m** (**96.6 – 102.5 lb ft**)	-	-

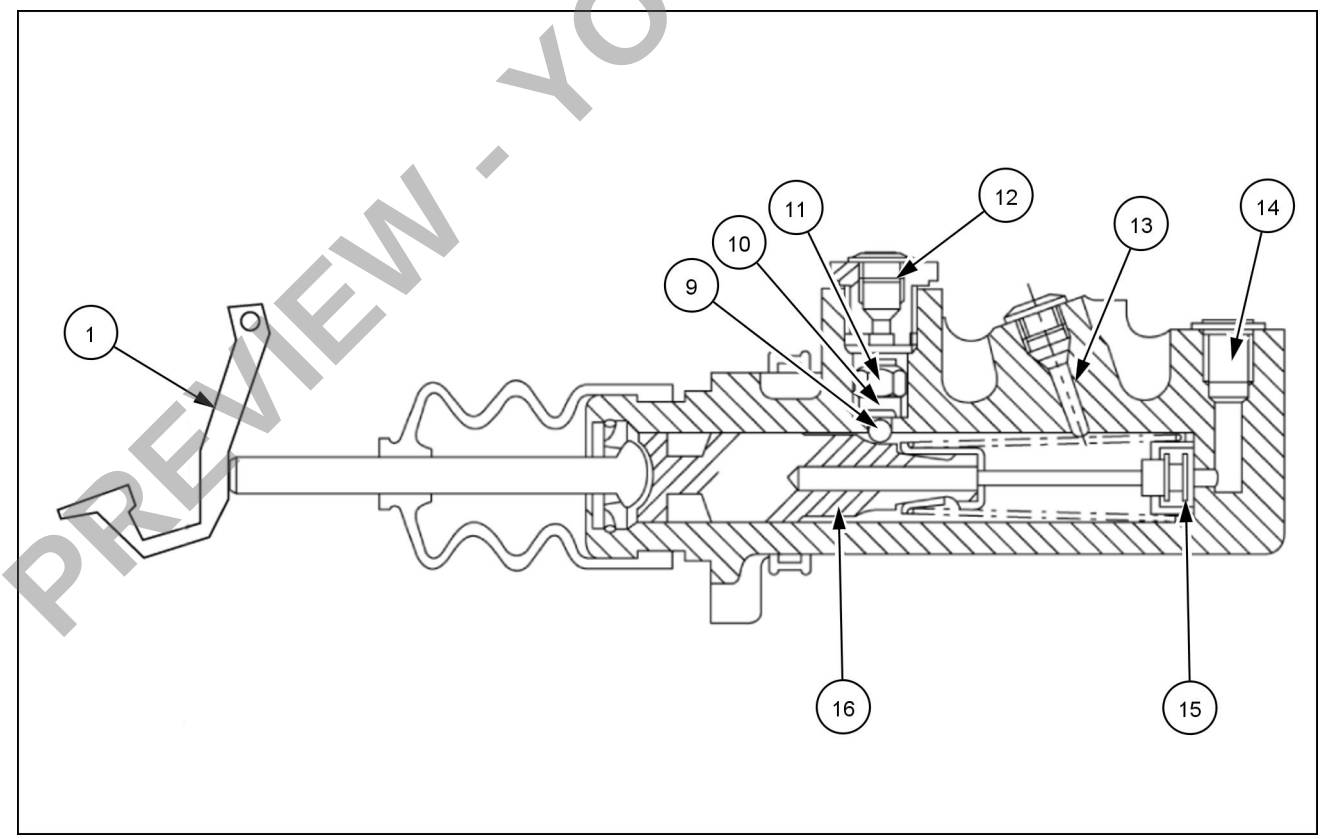
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Hydraulic service brakes - Dynamic description



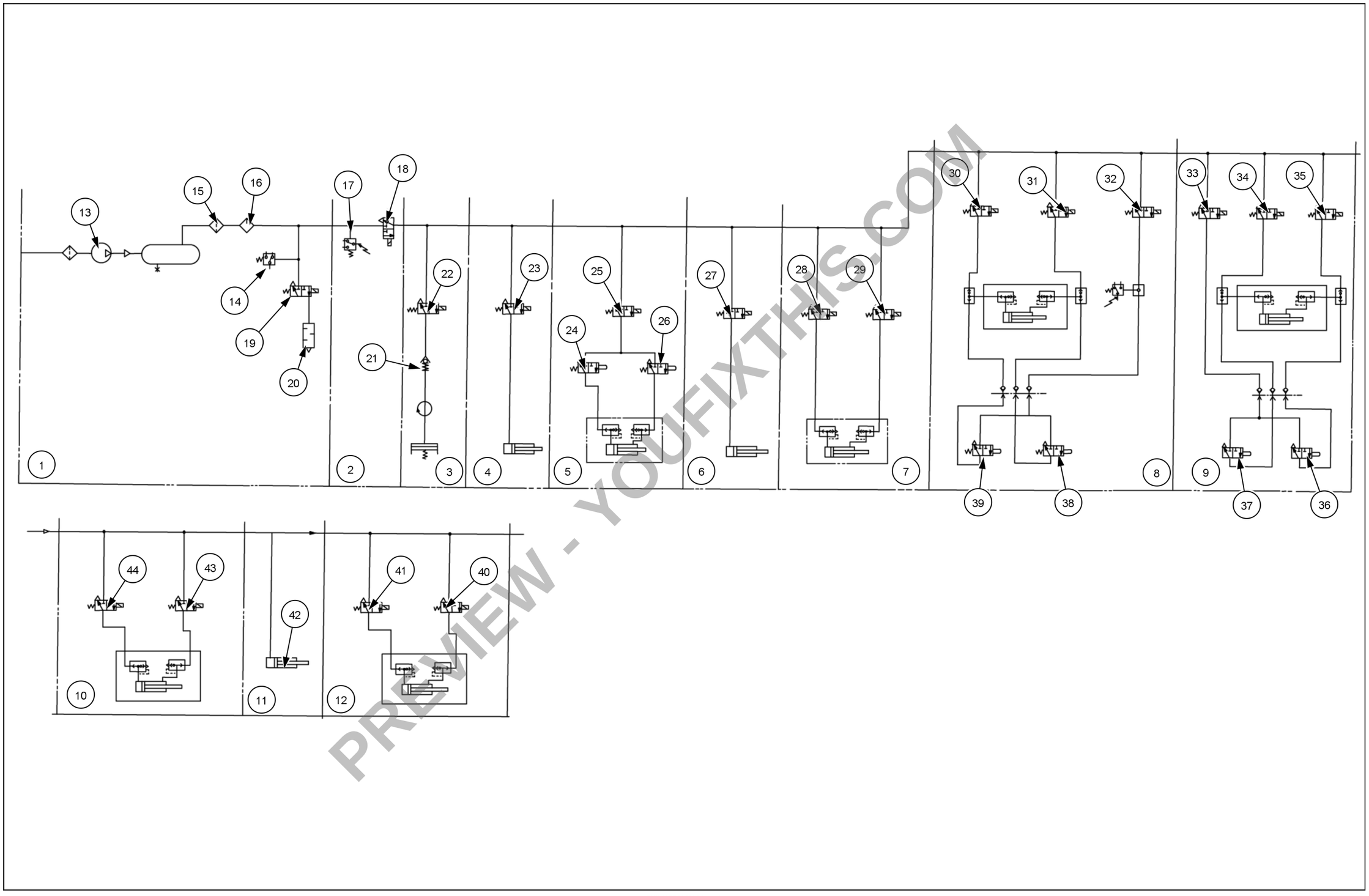
CUIL14TC00427AA 1



CUIL14TC00428AA 2

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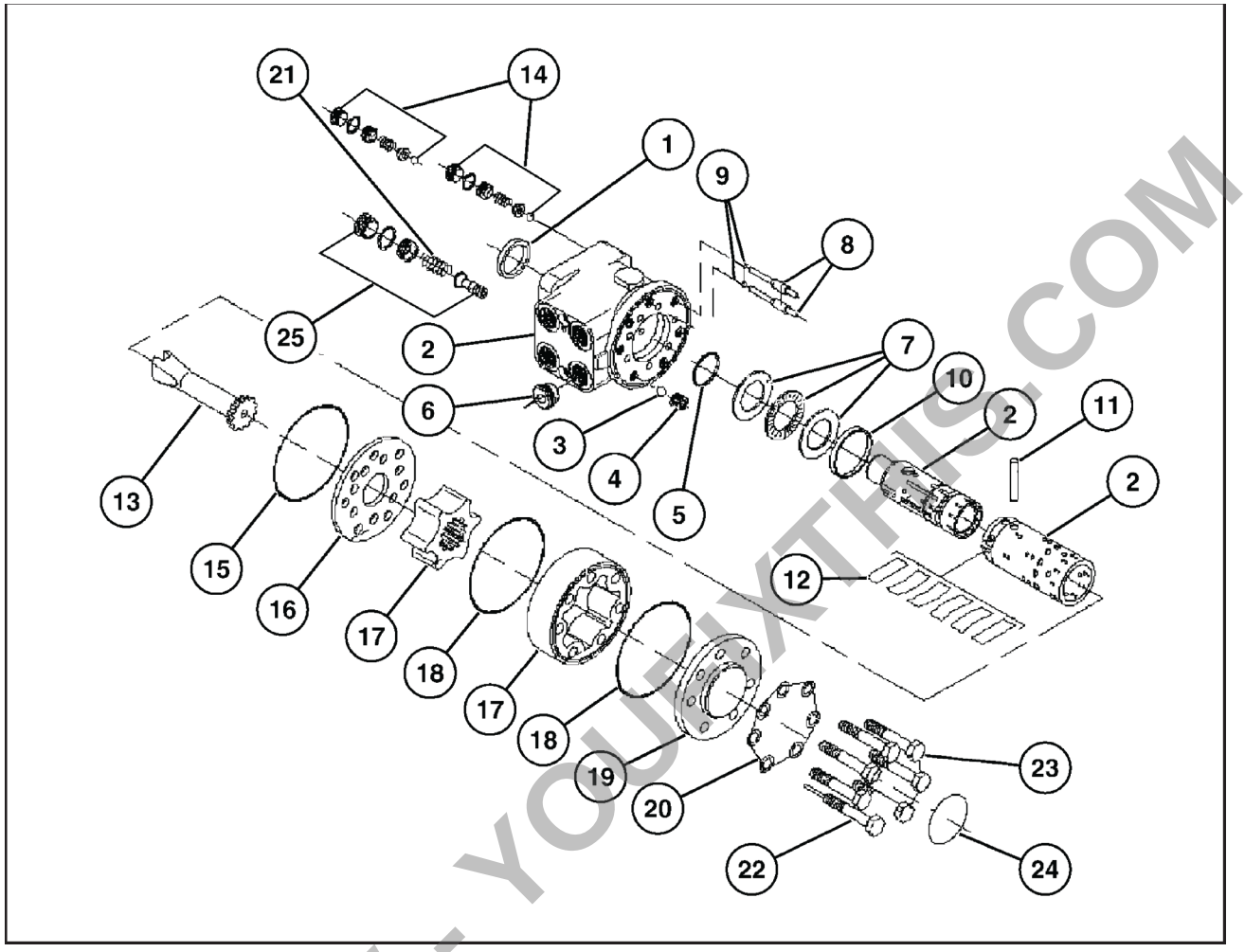
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CUIL16TR00250GA 1

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Power steering control valve - Exploded view

TC5090	LA



LAIL11TC0789F0A 1

1. Dust seal ring
2. Housing spool/sleeve
3. Ball
4. Thread bushing
5. O–ring
6. Non return valve
7. Bearing set
8. Bushing with pin
9. Ball
10. Collet
11. Cross pin
12. Spring set
13. Axle
14. Complete shock valve
15. O–ring
16. Spreader plate
17. Gear wheel set
18. O–ring
19. End cover
20. Washer
21. Spring for relief valve
22. Screw with pin
23. Bolt
24. Identification plate
25. Pressure release valve

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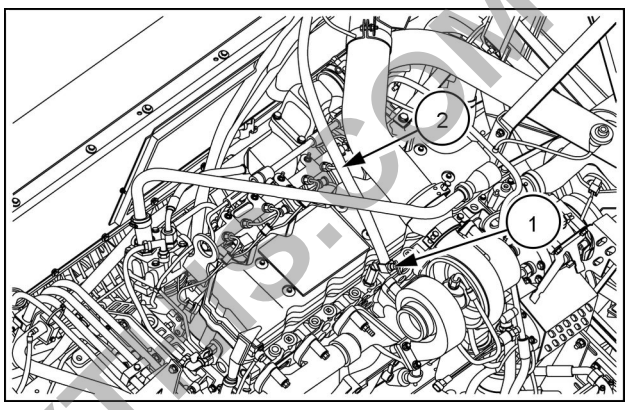
Heating - Remove

⚠ WARNING

Fall hazard!
Take correct measures to make sure steps, ladders, and platforms remain clean and clear of debris or foreign substances.
Failure to comply could result in death or serious injury.

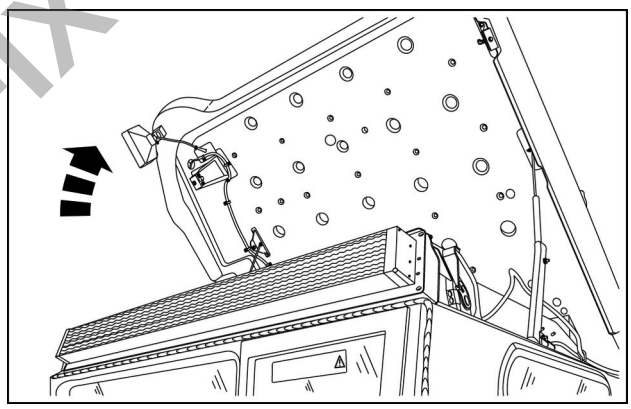
W1183A

1. In the motor, close the valve **(1)** of the warm fluid supply hose **(2)**.



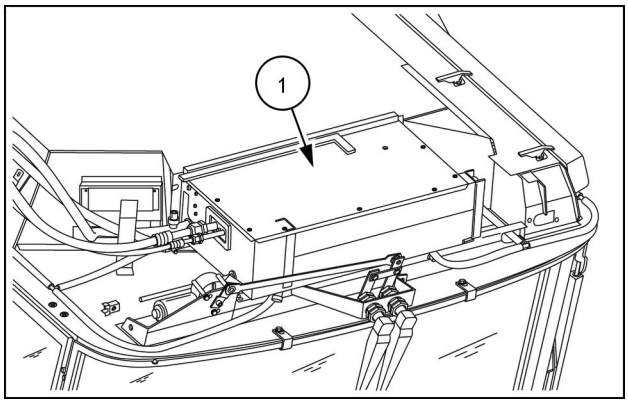
CUIL16TC00307AA 1

2. Tilt the cab roof.



CUIL17TC00025AA 2

3. Remove the cover **(1)**, secured with bolts.



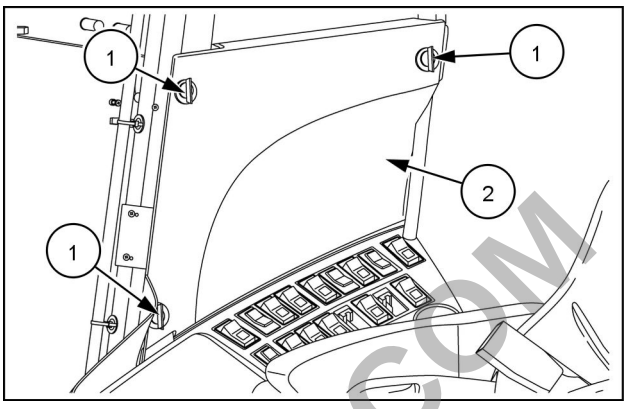
CUIL17TC00026AA 3

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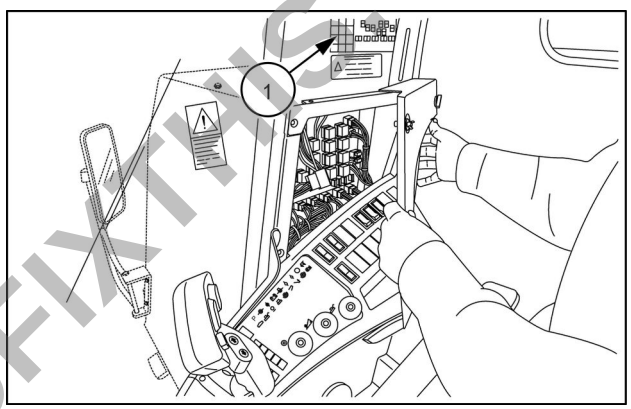
Fuse and relay box - Component identification

1. The fuse and relay compartment is located on the right-hand side of the cab, behind the control panel.
2. To reach the fuse and relay compartment, turn the latches **(1)** and remove the guard **(3)**.



CUIL16TC00144AA 1

3. A decal **(1)** is installed above the fuse and relay compartment.
4. The list of fuses and relays installed in the machine is found below.

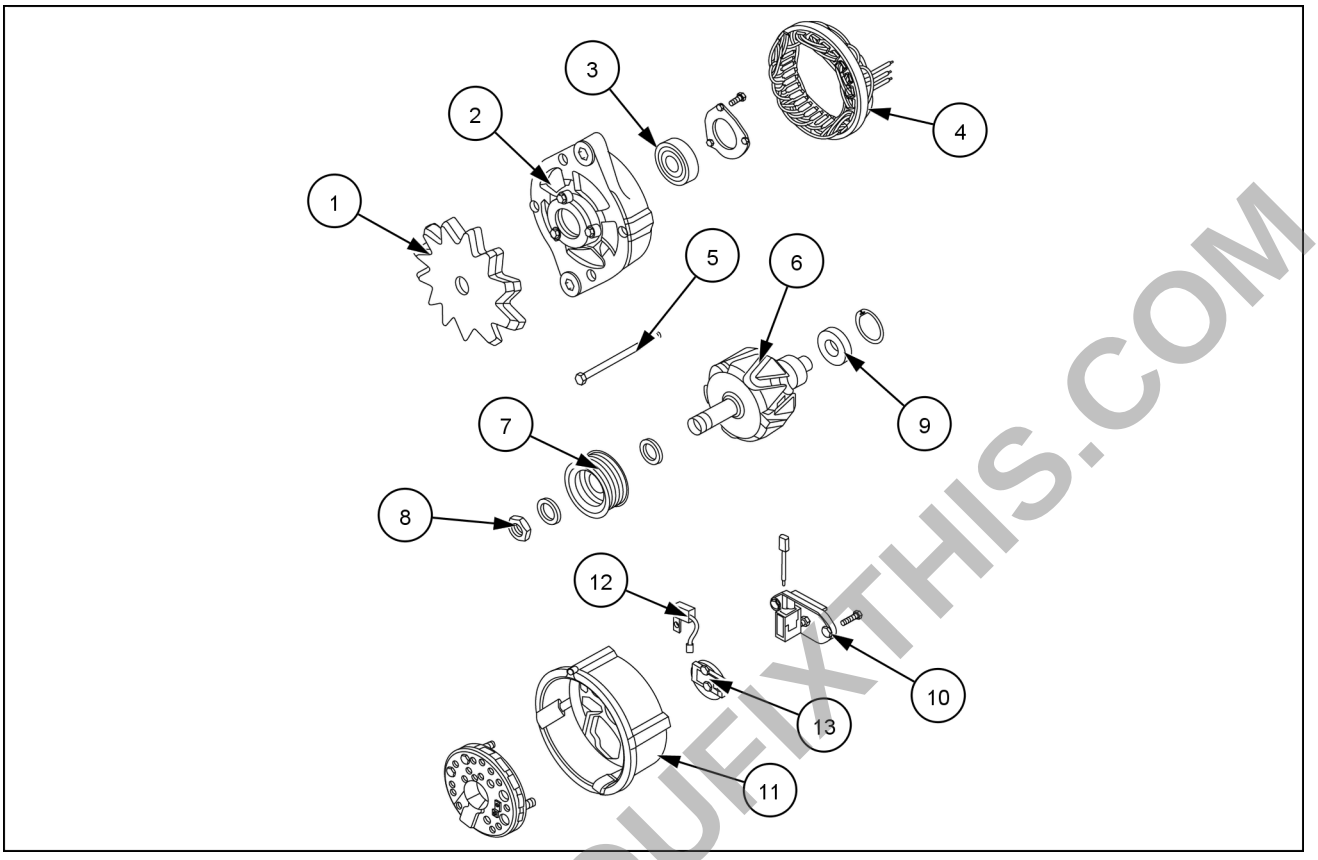


CUIL16TC00126AA 2

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Alternator - Exploded view



CUIL16TR00242GA 1

Reference	Component	Reference	Component
(1)	Fan	**(8)**	Nut and washer
(2)	Front support	**(9)**	Bearing
(3)	Bearing	**(10)**	Rectifier
(4)	Stator	**(11)**	Rear bracket
(5)	Screw	**(12)**	Capacitor
(6)	Rotor	**(13)**	Regulator
(7)	Pulley		

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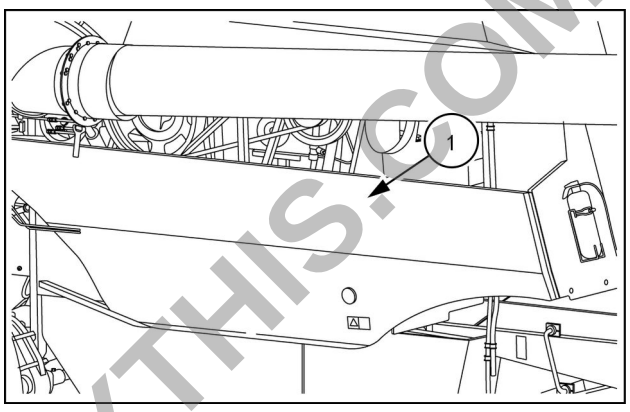
Battery - Remove

⚠ CAUTION

Avoid injury!
Handle all parts carefully. Do not place your hands or fingers between parts. Use Personal Protective Equipment (PPE) as indicated in this manual, including protective goggles, gloves, and safety footwear.
Failure to comply could result in minor or moderate injury.

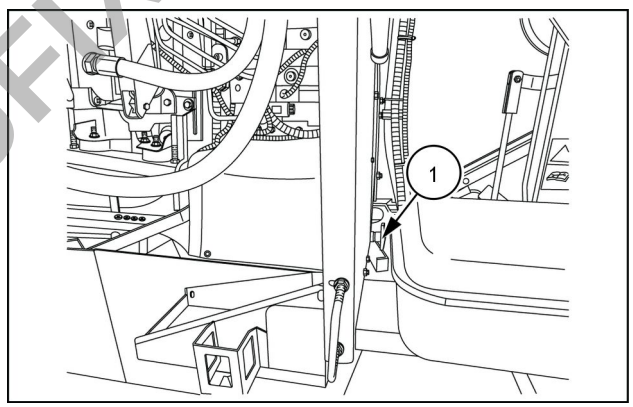
C0145A

1. Both batteries are located at the rear of the machine, on the left-hand side.
2. To access the batteries, tilt the side shield **(1)**.



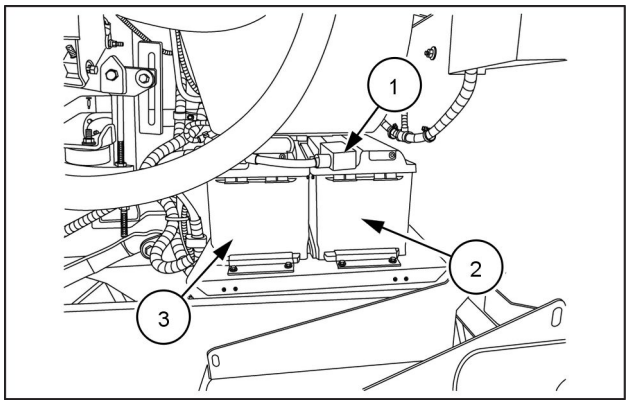
CUIL16TC00140AA 1

3. Turn off the general switch **(1)**.



CUIL16TC00141AA 2

4. The negative cable is located on the internal side. Disconnect the negative cable for both batteries.
5. Disconnect the positive cable **(1)** for both batteries.
6. Remove the batteries **(2)** and **(3)** from their housing.



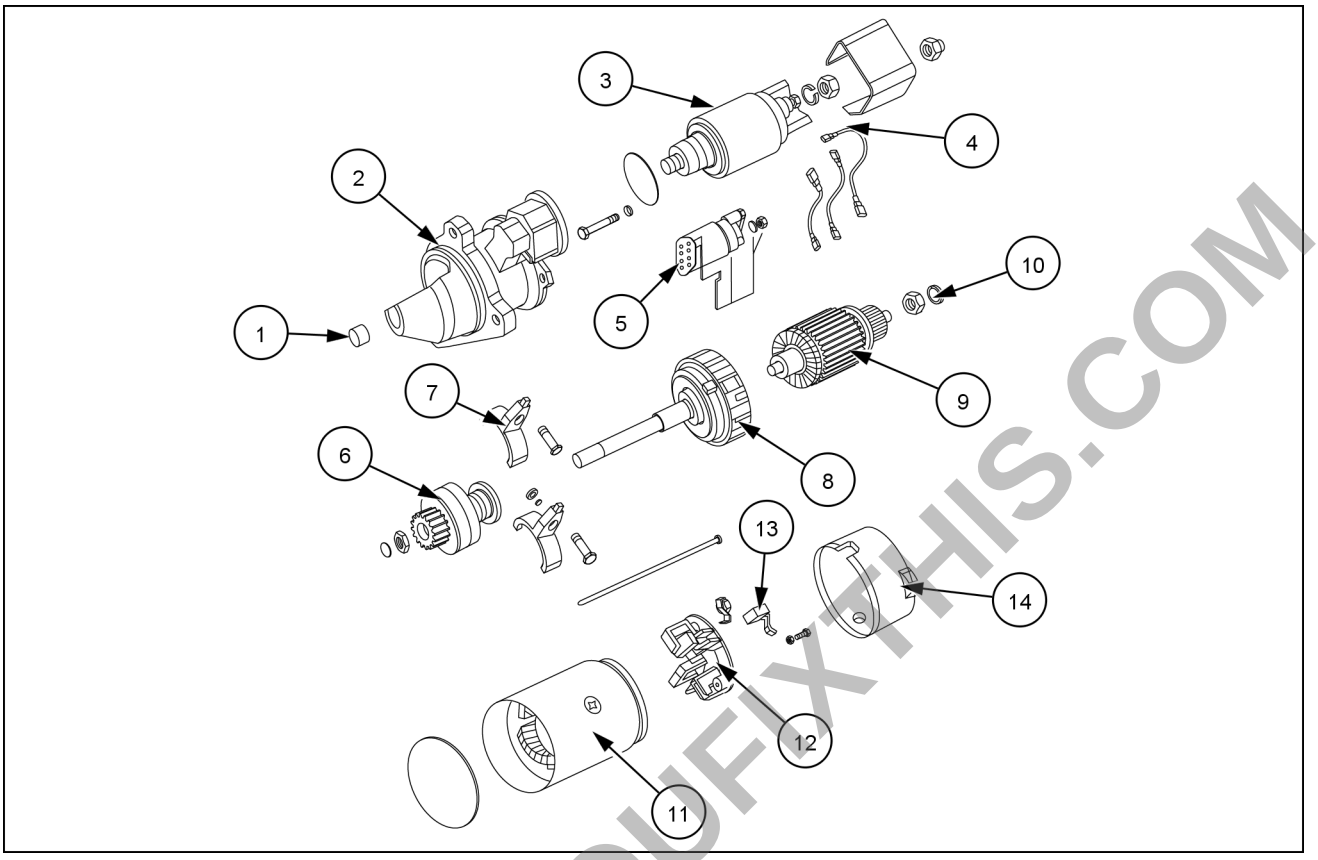
CUIL16TC00142AA 3

Next operation:
Battery - Install (55.302)..

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Engine starter - Exploded view



CUIL16TR00243GA 1

Reference	Component	Reference	Component
(1)	Bushing	**(8)**	Reduction gear
(2)	Rear bracket	**(9)**	Armature
(3)	Solenoid	**(10)**	Armature ring and nut
(4)	Solenoid assembly	**(11)**	Stator
(5)	Rectifier bridge	**(12)**	Brush cradle
(6)	Drive line	**(13)**	Brush assembly
(7)	Drive lever	**(14)**	Front support

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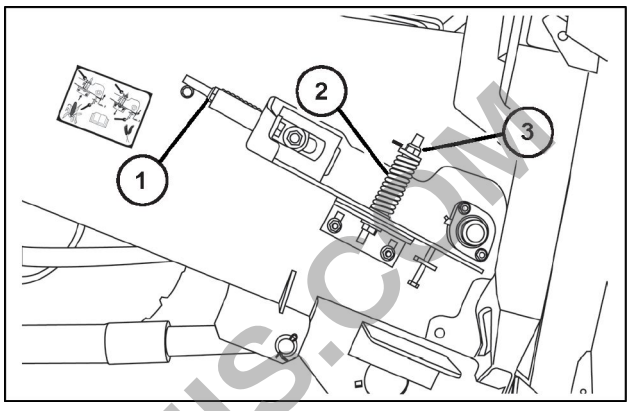
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Chain tensioner - Tension adjust

TC5090	LA

Straw elevator chain tension

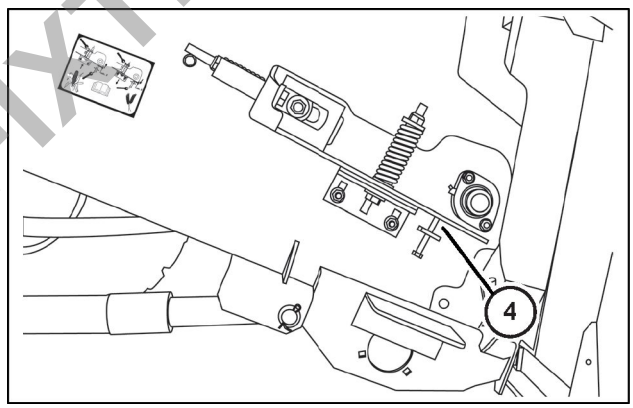
To adjust the tension of the straw elevator chain, tighten the spring using the nut **(1)**. Then release them until the length of the reference plate is obtained, leaving a clearance of **1 mm** between the washer and the guide face (both sides of the elevator).
When this adjustment is carried out and the supports move to the end of the grooves, remove a chain link and repeat the above process.



LAIL11TC0342A0A 1

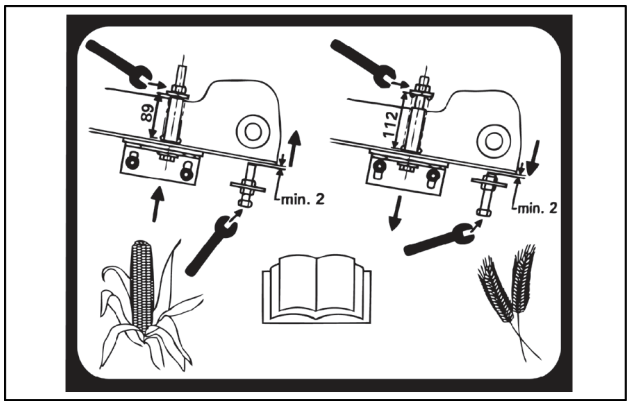
Adjustment of the front axle suspension spring.

For corn harvesting, it is necessary to adjust the front axle suspension spring which must operate at a length of **89 mm** between the washer and the retaining plate **(2)**. The correct adjustment is obtained using the nut **(3)**.
Adjust the front axle suspension limiter with **2 mm** of clearance **(4)**.



LAIL11TC0343A0A 2

The adjustment of the bar fixed to the conveyor chain in relation to the bottom plate of the straw elevator must be **27 mm** for corn crops.



LAIL11TC0344A0A 3

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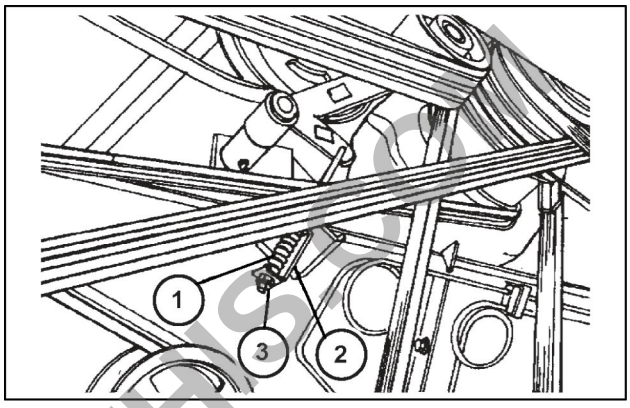
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Threshing mechanism drive system - Tension adjust

TC5090	LA

Industrial system coupling belt

Tensioned by spring and tensioner pulley when coupled .Correct belt tension.
Spring length **(1)** equal to indicator plate length **(2)**.
Adjust with the nut **(3)**.



LAIL11TC0004A0A 1

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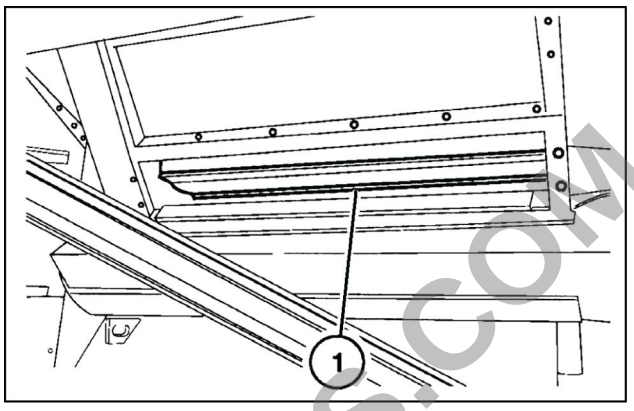
Beater - Dynamic description

Cylinder type

Assembled with four adjustable blades **(2)**, located above the intermediate grate of the concave. Turning in the same direction as the cylinder, it throws the plants to the Rotary Separator.

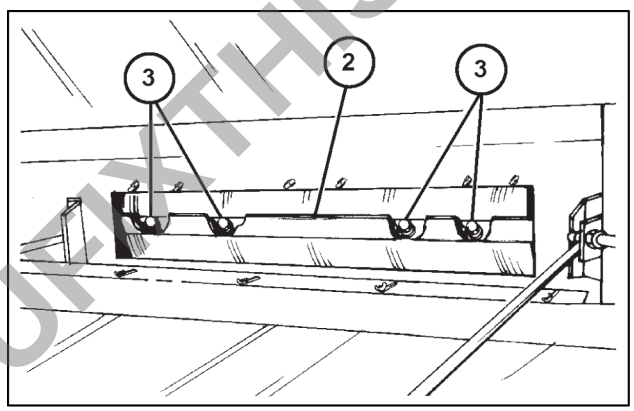
Access to the beater, through an inspection window in the grain tank **(1)**.

To adjust the blades **(2)**, loosen the bolts **(3)** and bring the blades as close together as possible (recommended distance of **2 – 4 mm**).



LAIL11TC0282A0A 1

NOTE: *When adjusting the beater blades, turn the entire system manually, checking there is no interference with the cylinder bars.*

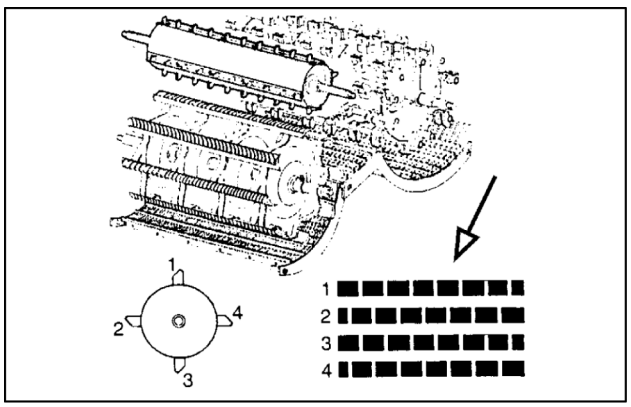


LAIL11TC0283A0A 2

NOTE: *For corn harvesting, use toothed bars which can also be used for soybeans.*

NOTICE: *The toothed bars must be placed in the sequence shown in the figure.*

NOTE: *When changing blades with pinned bars (toothed), the blades must be identified in order to be mounted in the original position, preventing possible balancing problems.*



LAIL11TC0289A0A 3

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Straw chopper drive system - Tension adjust

TC5090	LA

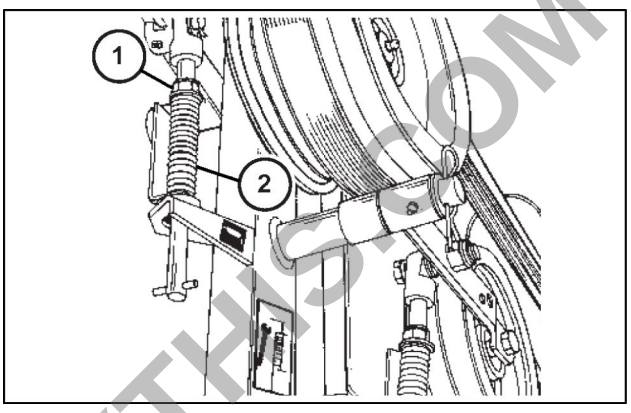
Belt Tension Adjustment

Front belt

- Tensioned by spring and tensioner pulley.

Correct belt tension

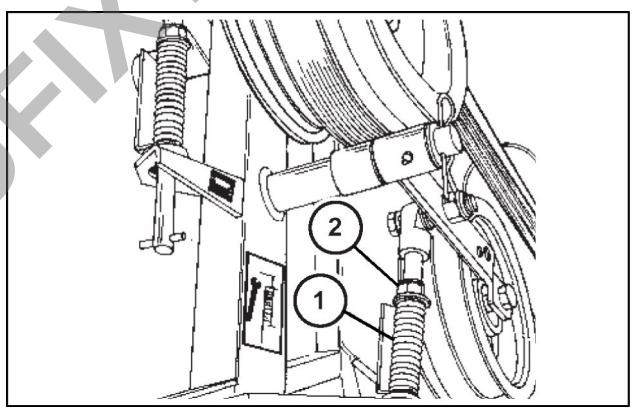
- Spring **(1)** length equal to indicator plate length.
- Length of the indicator plate **110 mm**.
- Adjust through nut **(2)**.



LAIL11TC0336A0A 1

Rear belt

- Spring **(1)** length equal to indicator plate length.
- Length of the indicator plate **110 mm**.
- Adjust through nut **(2)**.

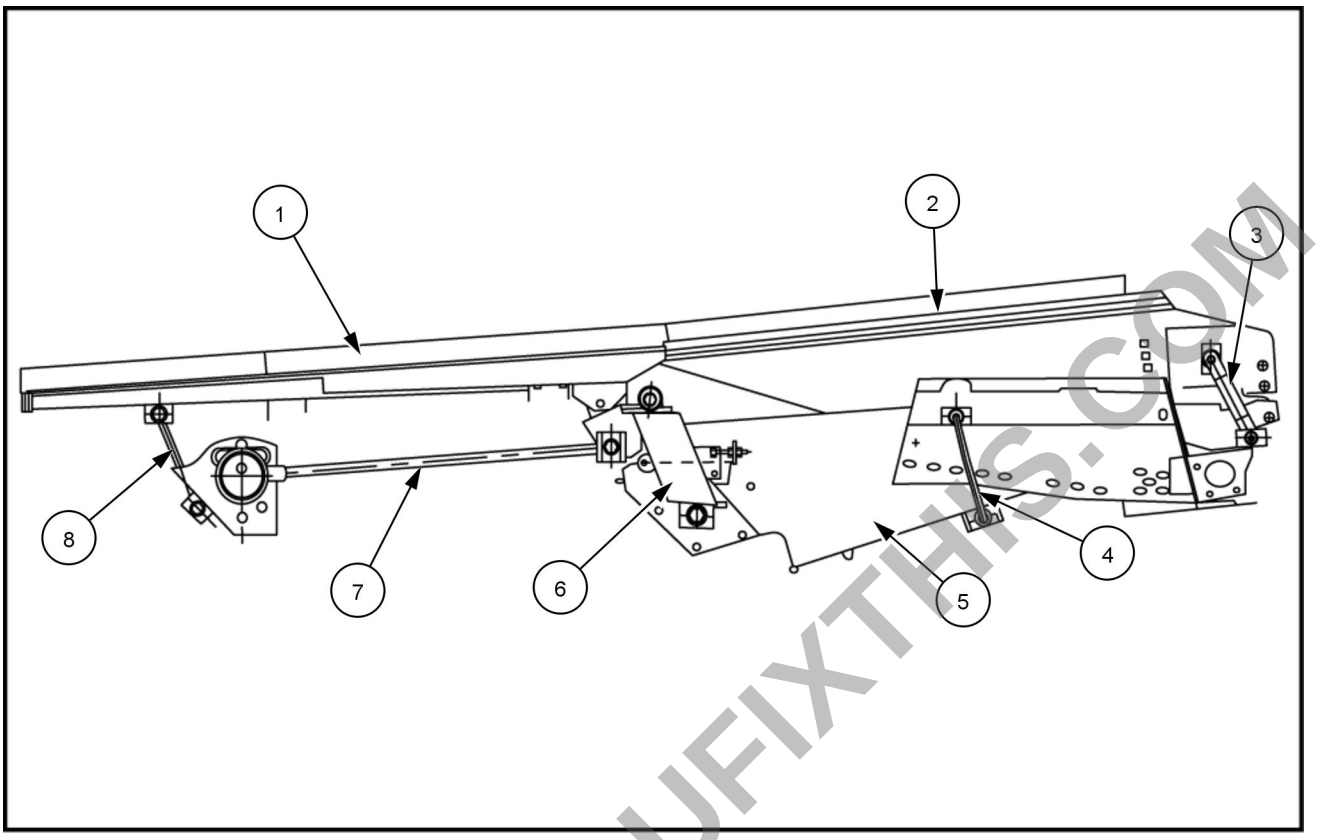


LAIL11TC0337A0A 2

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Shaker shoe frame - Functional diagram of the sieves and shakers



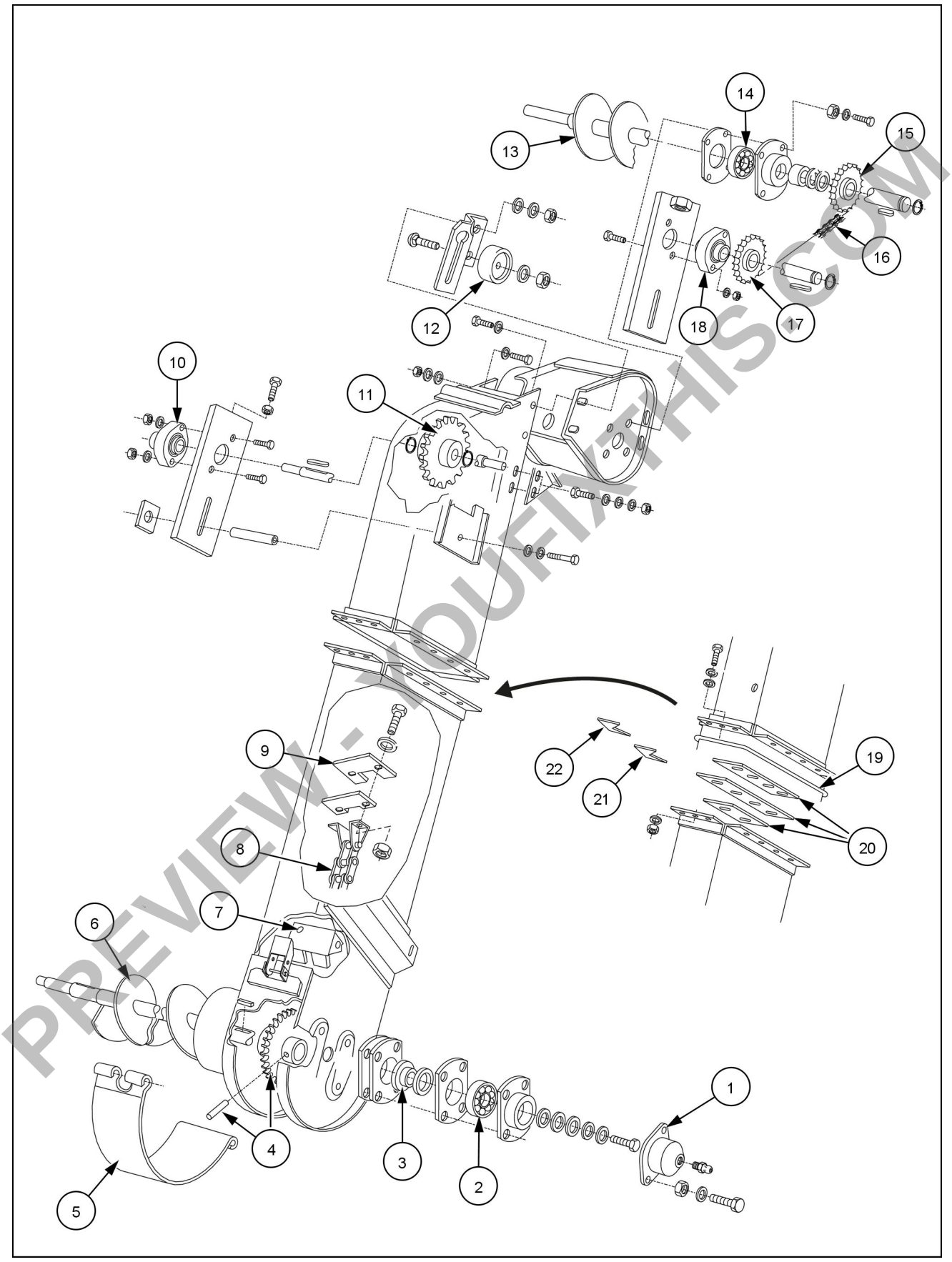
CUIL14TC00250AA 1

Reference	Component	Reference	Component
(1)	Grain Pan	**(5)**	Lower shaker
(2)	Upper shaker	**(6)**	Pivot arm
(3)	Rear suspension arm of the upper shaker	**(7)**	Cam rod (connecting rod)
(4)	Rear suspension arm of the lower shaker	**(8)**	Lower shaker

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Clean grain elevator - Exploded view



CUIL14TC00075HA 1

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SPECIAL TOOL INDEX

Genuine	Reference	PAGE
380001074 [Ground Drive Transmission Nut Spanner Wrench (45mm)]	Mechanical transmission - Special tools	21.1 / 4
380001074 [Ground Drive Transmission Nut Spanner Wrench (45mm)]	Drive shaft Intermediate shaft - Assemble	21.4 / 52
380000305 [Power Steering KIN_RING Seal Installer]	Power steering control valve - Disassemble	41.1 / 12
OEM	**Reference**	**PAGE**
380200165 [Guide Pivot]	Gearbox housing cover - Assemble - shift cover, rods and forks	21.3 / 26
380200159 [Mandrel]	Drive shaft - Assemble	21.4 / 61
380200164 [Mandrel]	Drive shaft - Install first axle	21.4 / 66
380200161 [Bearing Support]	Drive shaft - Install first axle	21.4 / 68
380200164 [Mandrel]	Drive shaft - Install first axle	21.4 / 68
380200153 [Guide Bushing]	Drive shaft Intermediate shaft - Install	21.4 / 73
380200161 [Bearing Support]	Drive shaft Intermediate shaft - Install	21.4 / 73
380200153 [Guide Bushing]	Drive shaft Intermediate shaft - Install	21.4 / 73
380200161 [Bearing Support]	Drive shaft Intermediate shaft - Install	21.4 / 74
380200153 [Guide Bushing]	Drive shaft Intermediate shaft - Install	21.4 / 75
380200164 [Mandrel]	Drive shaft Intermediate shaft - Install	21.4 / 75

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Contents

INTRODUCTION

Engine 10

[10.001] Engine and crankcase 10.1

[10.202] Air cleaners and lines 10.2

[10.206] Fuel filters 10.3

[10.216] Fuel tanks 10.4

[10.254] Intake and exhaust manifolds and muffler 10.5

[10.304] Engine lubrication system 10.6

[10.310] Aftercooler 10.7

[10.400] Engine cooling system 10.8

[10.408] Oil cooler and lines 10.9

[10.418] Rotary screen 10.10

Clutch 18

[18.104] Clutch hydraulic release control 18.1

Transmission 21

[21.114] Mechanical transmission 21.1

[21.130] Mechanical transmission external controls 21.2

[21.120] Gearbox 21.3

[21.145] Gearbox internal components 21.4

[21.182] Differential 21.5

[21.126] Gearbox external controls 21.6

[21.600] Traction variator 21.7

Front axle system 25

[25.310] Final drives 25.1

Rear axle system 27

[27.550] Non-powered rear axle 27.1

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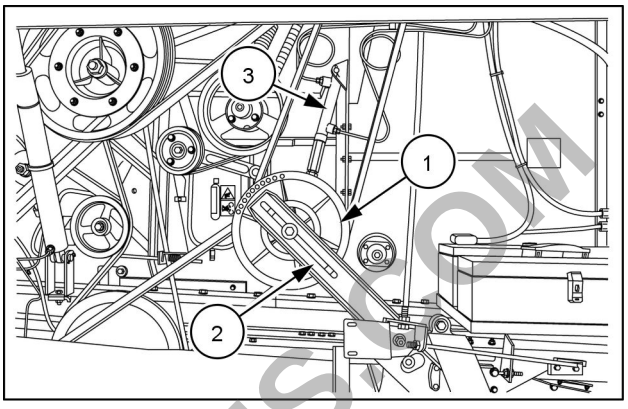
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Traction variator - Dynamic description

The purpose of the variator pulley is to provide a range of continuous variation of travel speed, for each of the 3 selected gears in the gear shift.

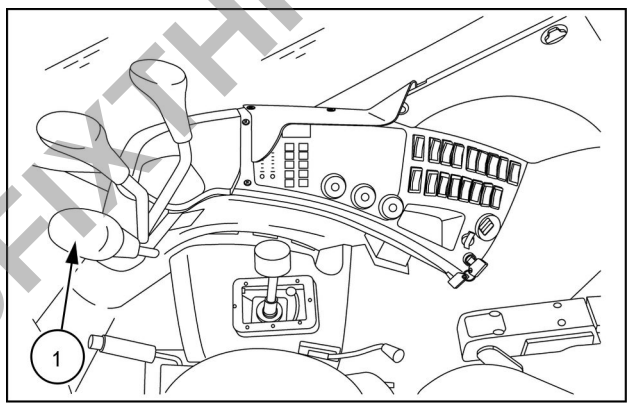
The variator pulley **(1)** is support by the swing arm **(2)**, moved by the hydraulic cylinder **(3)** to promote the opening and closing of the pulley, or variation in drive rotation of the gear shift.

- When the pulley **(1)** moves upwards, the speed is reduced.
- When the pulley **(1)** moves downward, the speed is increased.



CUIL14TC00604AA 1

You use the lever **(1)** in the cab to control the variator, through the arm and pulley movement hydraulic cylinder.



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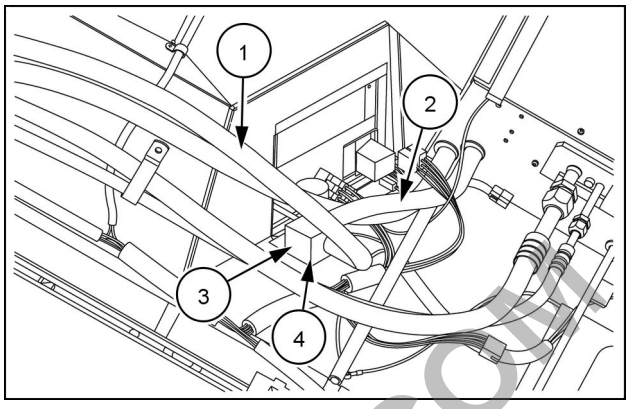
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4. Disconnect the fluid inlet hose **(1)** and the fluid outlet hose **(2)** from the control valve **(3)**.

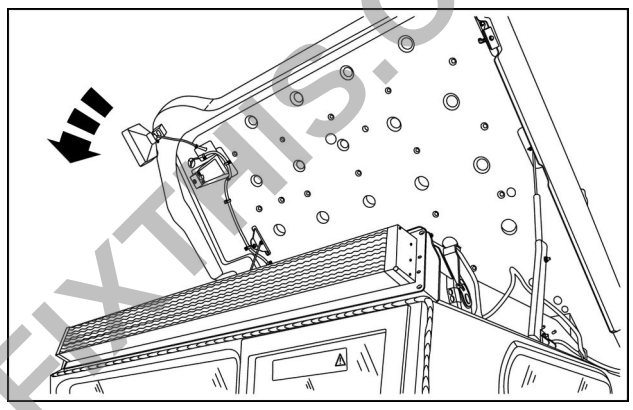
NOTE: *Cover the end of the hoses with plugs.*

5. Remove the nuts **(4)**. Remove the valve **(3)**.
6. Install a new control valve.
7. Connect the fluid inlet hose **(1)** and the fluid outlet hose **(2)**.



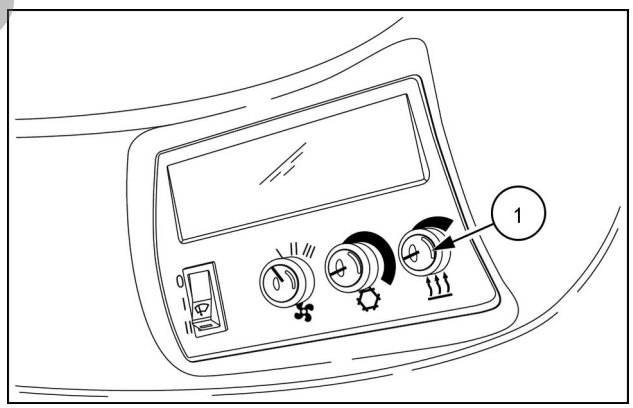
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8. Lower and latch the cab roof.



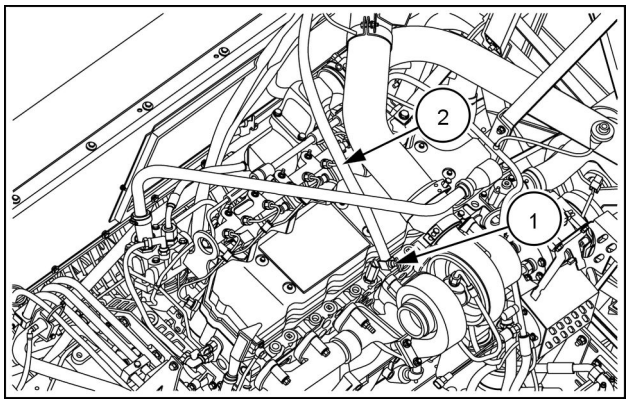
CUIL17TC00025AA 5

9. Install the heating selector **(1)** on the rod of the control valve.



CUIL17TC00028AA 6

10. Open the valve **(1)** of the warm fluid supply hose **(2)**.



CUIL16TC00307AA 7

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E112 - Engine Coolant Temperature – defective sensor

Control Module: ECU

NOTE: *When the cause of the error code has been rectified, clear the error code and test the system for normal operation.*

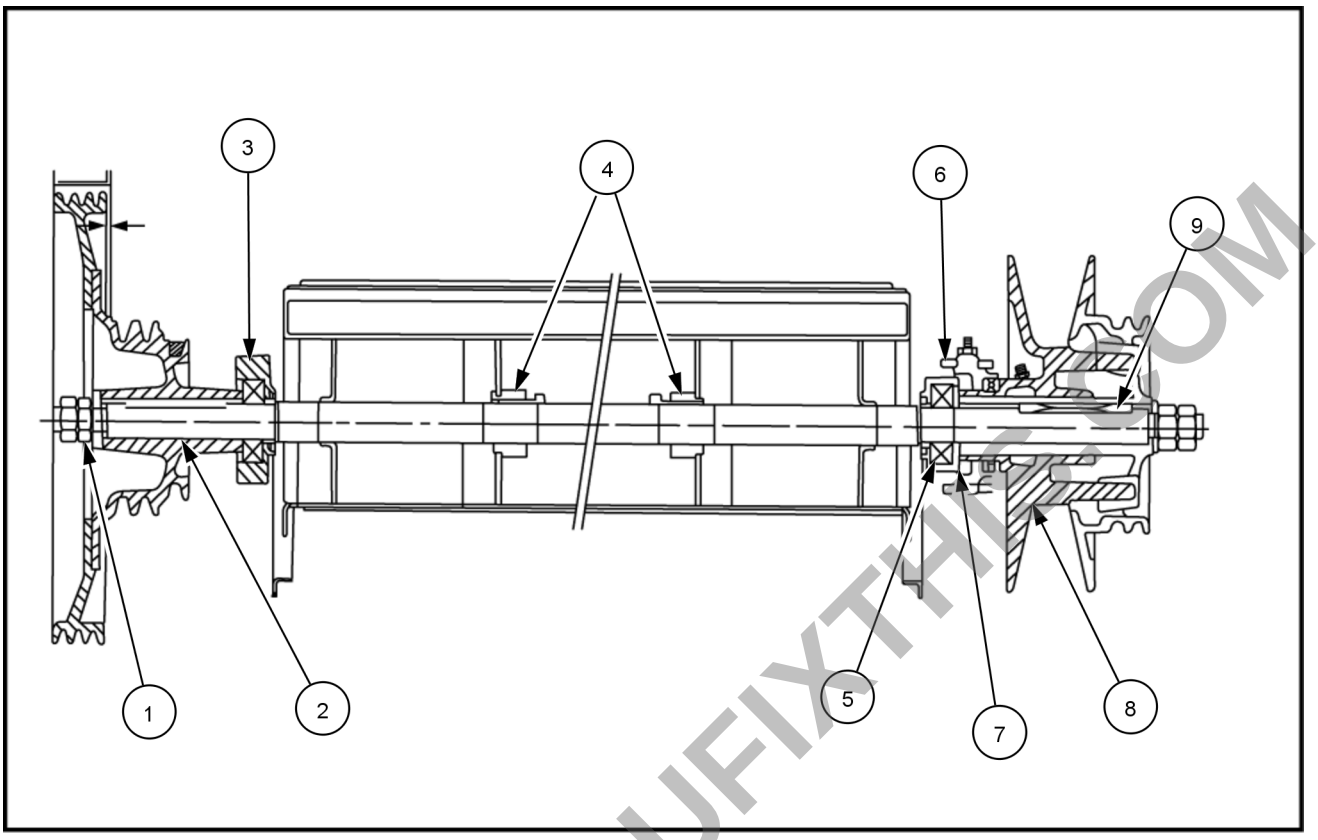
Possible failure modes:

1. Faulty connector
2. Faulty harness
3. Faulty control module - ECU

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Beater - Sectional view of the rear cylinder



CUIL14TC00173AA 1

Reference	Component	Reference	Component
(1)	Left-hand pulley fastening nuts	**(6)**	Threshing variator mechanism (Varitorq)
(2)	Drive pulleys (left-hand side)	**(7)**	Special washer
(3)	Left-hand journal with ball bearing	**(8)**	Varitorq drive pulleys
(4)	Keys	**(9)**	Key
(5)	Right-hand journal with self-compensating roller bearing	-	-

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