SERVICE MANUAL

B80B

Backhoe Loader

PREVIEW - YOUFIXTHIS.COM

Part number 48143704
1st edition English
April 2017

NEW HOLLAND CONSTRUCTION

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Engine - Remove

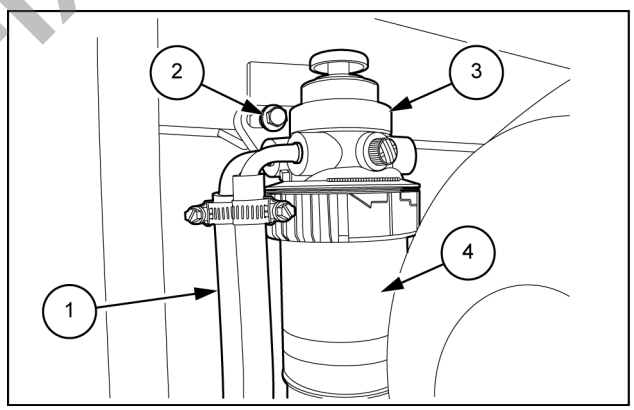
Prior operation:
Refer to **Basic instructions**
Prior operation:
Refer to **Hood - Remove (90.100)**
Prior operation:
Refer to **Radiator - Remove (10.400)**
Prior operation:
Refer to **Exhaust manifold - Remove (10.254)**

NOTE: *Put identification tags on all disconnected hoses and wires. Close all disconnected hoses and fittings with caps and plugs immediately.*

NOTE: *The images in this procedure may be different from your machine and are for reference only.*

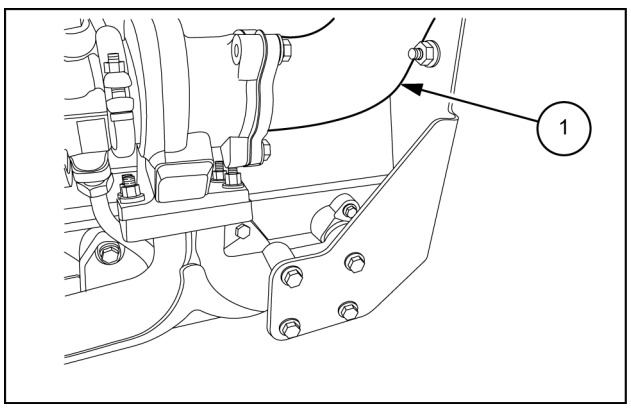
ATTENTION: *Allow the engine to reach normal temperature before performing any service or maintenance procedure. Wear safety gloves and goggles for protection from hot components and fluids or severe burns could result.*

1. Drain engine oil by loosening the drain nut. Collect the oil in a clean container, cap it and keep it aside in a clean place.
2. Disconnect the fuel return and inlet lines **(1)** from the mud filter **(4)** and cap them immediately.
   Loosen the mounting bolts **(2)** and remove the assembly **(3)** from the machine.



PTIL13TLB0953AB 1

3. Remove the exhaust pipe **(1)** of the turbocharger and cap it.



PTIL13TLB0956AB 2

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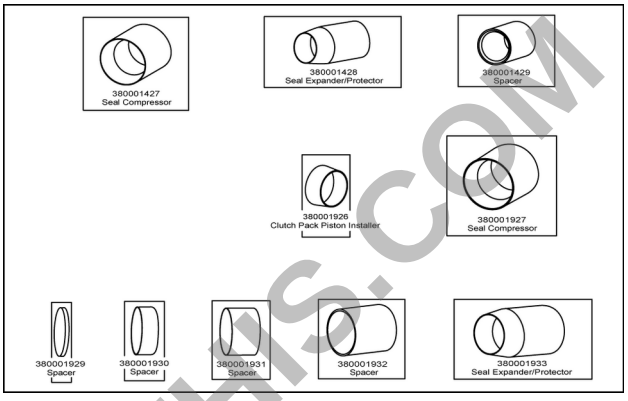
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Power shuttle transmission - General specification

Power shuttle transmission - Special tools

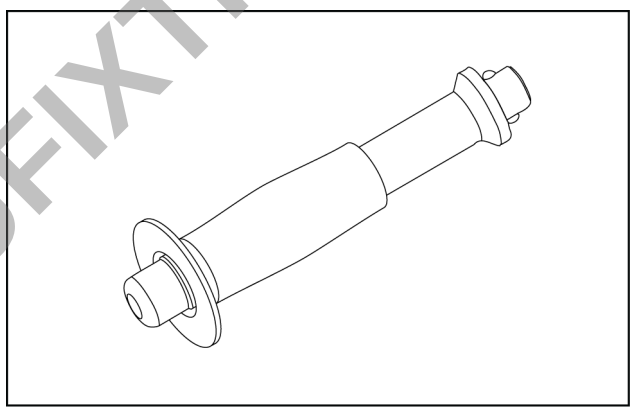
ATTENTION: *Operations described in this section of the manual must be performed using the following tools to work safely and achieve the best technical results.*

380040161 Teflon seal installation



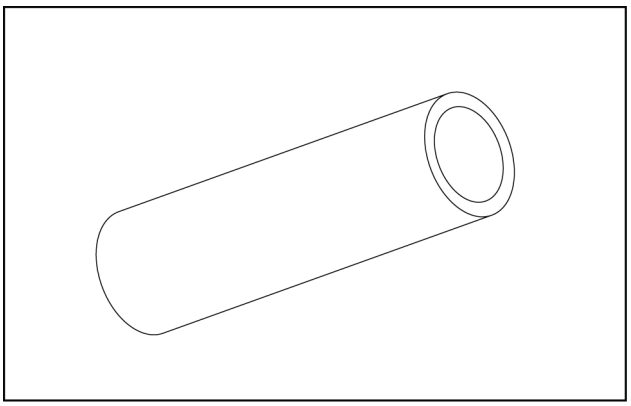
RCPH10TLB828AAL 1

380002211 Handle



PTIL13TLB0431AA 2

380200403 Driver



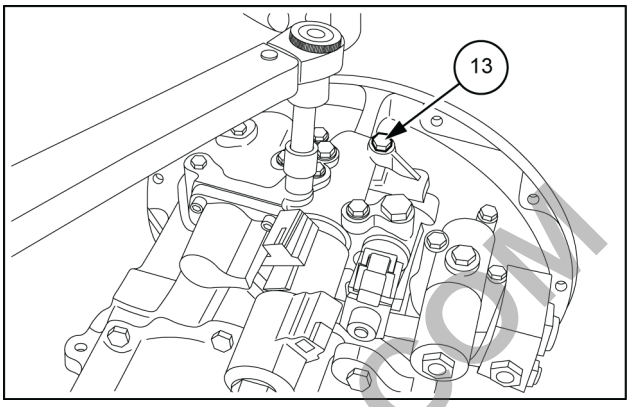
PTIL13TLB0432AA 3

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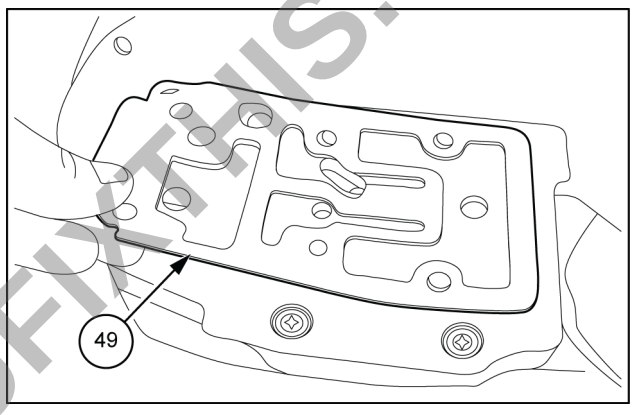
Transmission control valve - Disassemble

1. Before removing hydraulic control valve disconnect all electrical wires and drain the hydraulic oil from the transmission.
   Remove the screws **(13)** and remove the control valve **(53)**.



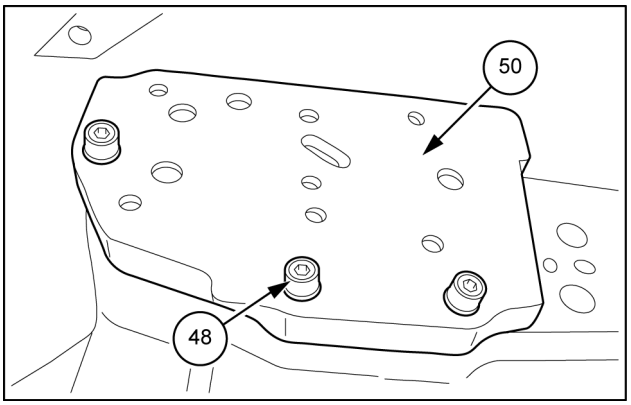
PTIL13TLB0226AB 1

2. Remove the gasket **(49)**.



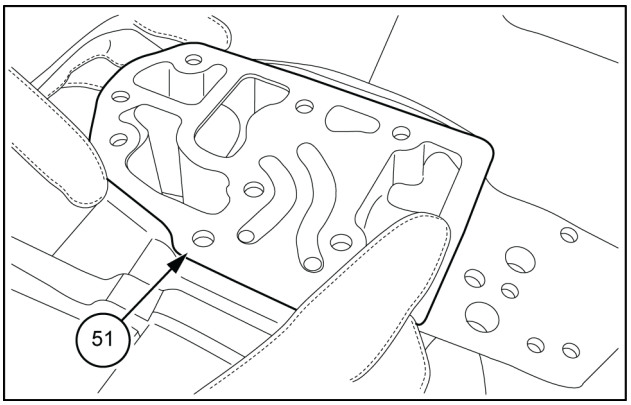
PTIL13TLB1535AB 2

3. Remove the screws **(48)** and the plate **(50)**.



PTIL13TLB0228AB 3

4. Remove the gasket **(51)**.



PTIL13TLB1536AB 4

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Transmission - 21

Power shuttle transmission internal components - 154

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Transmission - 21

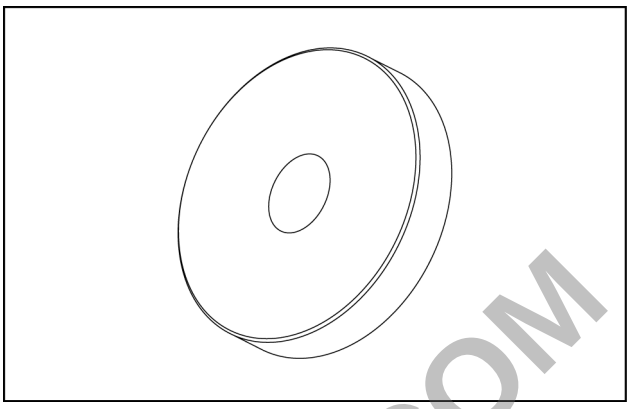
Torque converter - 700

B80B

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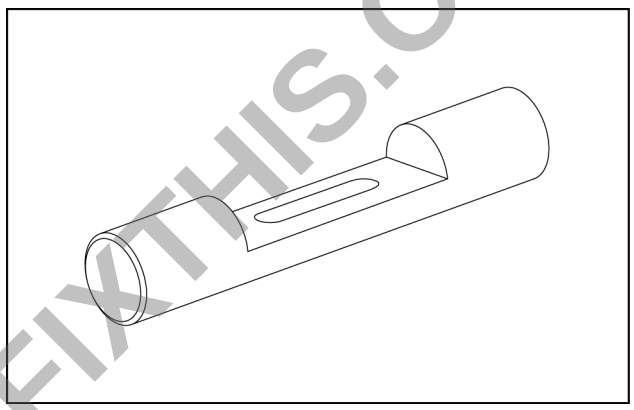
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380200455 False differential box disc



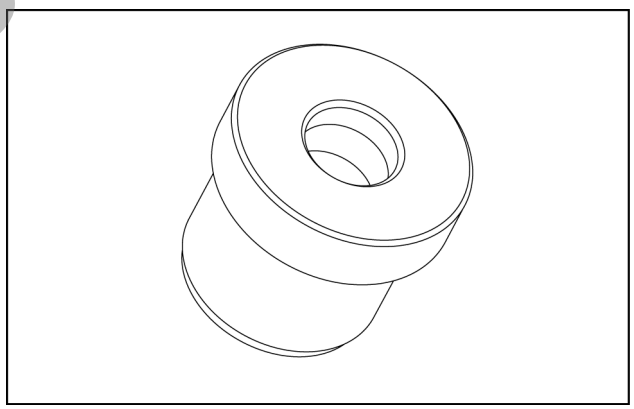
PTIL13TLB0675AA 3

380002214 False differential box pin



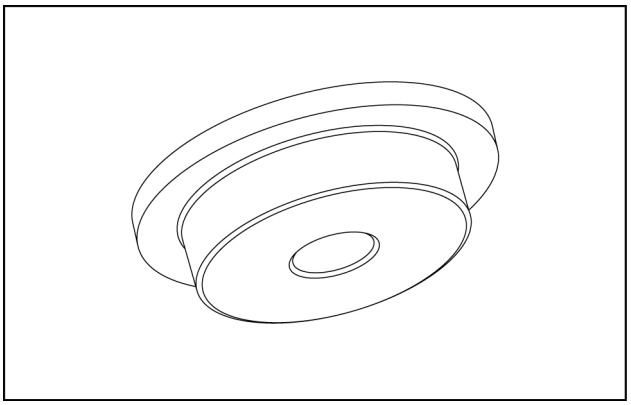
PTIL13TLB0679AA 4

380200456 Driver



PTIL13TLB0672AA 5

380002215 Driver



PTIL13TLB0676AA 6

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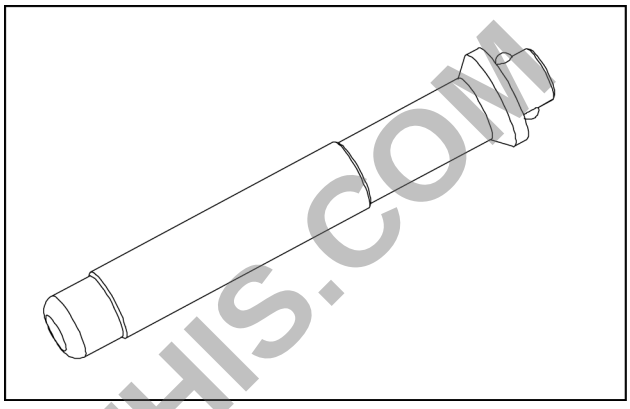
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Rear axle - Special tools

ATTENTION: *Operations described in this section of the manual must be performed using the following tools to work safely and achieve the best technical results.*

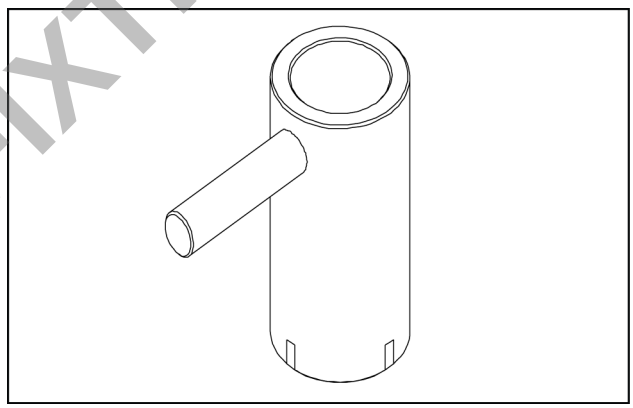
The special drifts/pad used to assembly the seals, bearings and bushes should always be used with the interchangeable handle, its use is recommended together with a suitable safety handle in order to protect the hands.

380000221 Handle



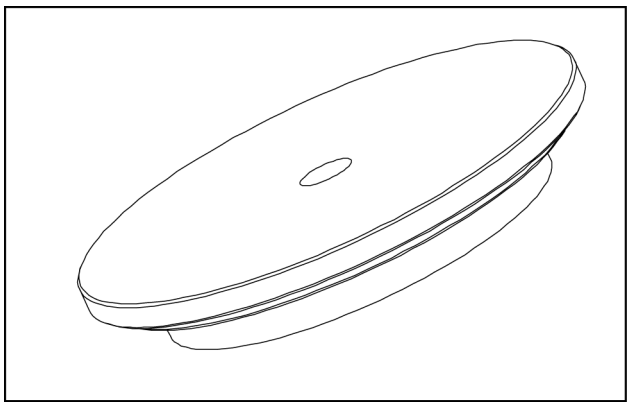
PTIL13TLB0137AA 1

380000021 Wrench



PTIL13TLB0141AA 2

380002213 Driver



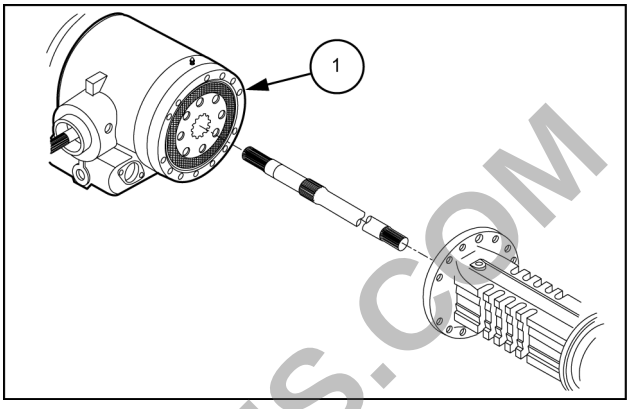
PTIL13TLB0145AA 3

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Brakes - Disassemble

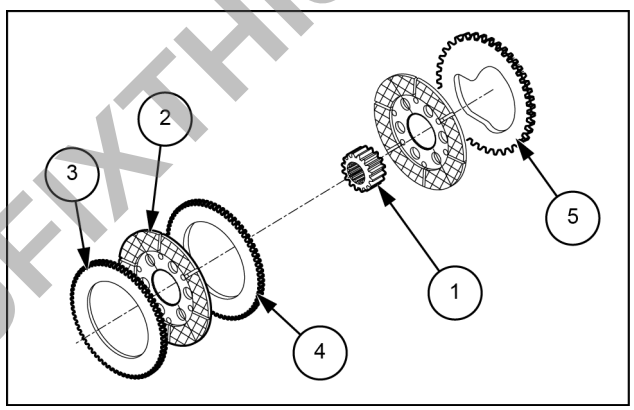
1. Remove rear axle. Refer to **Rear axle - Remove (27.100)**.
2. Remove the beam trumpet and half-shaft from the brake flange **(1)**.



PTIL13TLB0057AB 1

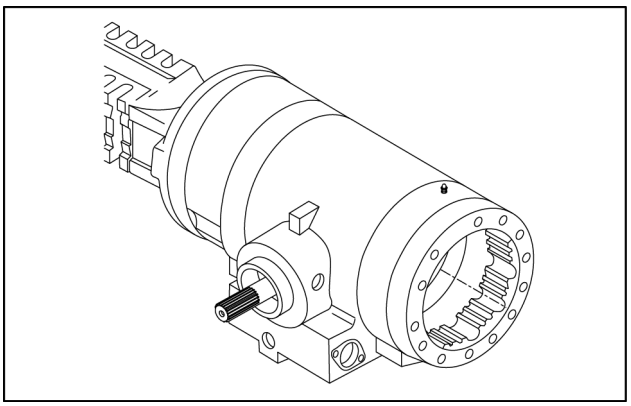
3. Remove the components from the brake flange. Brake drive plate **(5)**, hub **(1)**, brake plate **(4)** and **(2)**, brake drive plate **(3)**.

NOTE: *Remember the position of the brake disk carrier, it must be reassembled in the same position.*



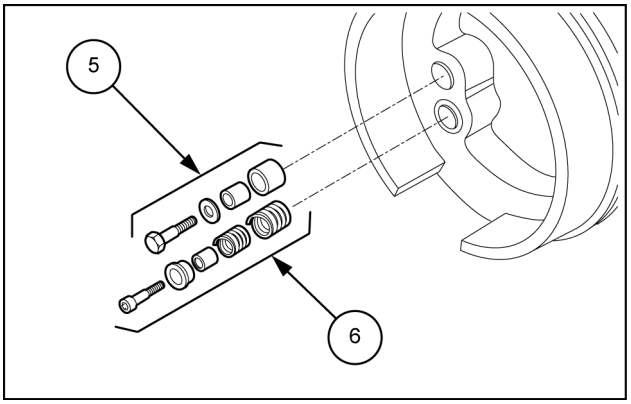
PTIL13TLB1757AB 2

4. Remove the brake control group.



PTIL13TLB0059AA 3

5. Unscrew the fastening screws and remove all the parts of the self-adjust kit **(5)** and brake mechanism return kit **(6)**.

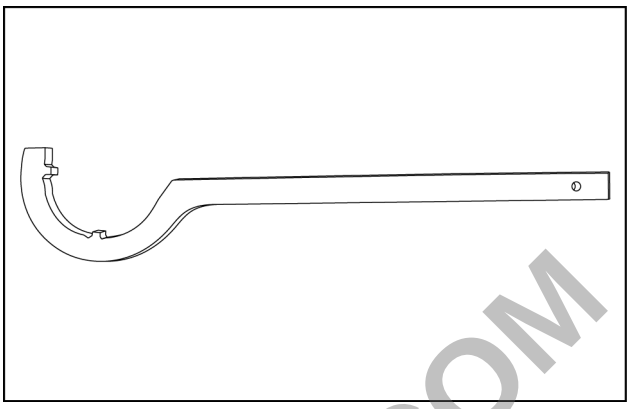


PTIL13TLB0060AB 4

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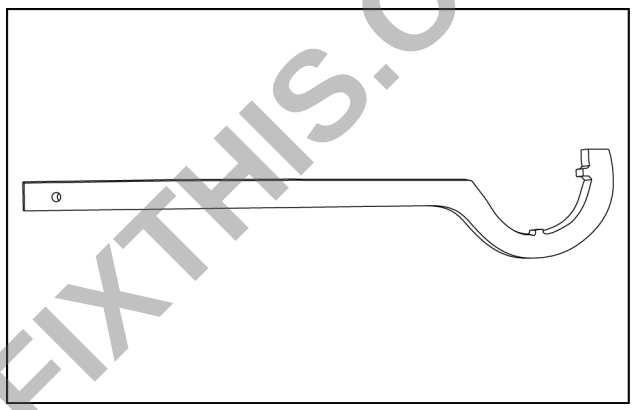
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380200474 Swing cylinder (Wipro)



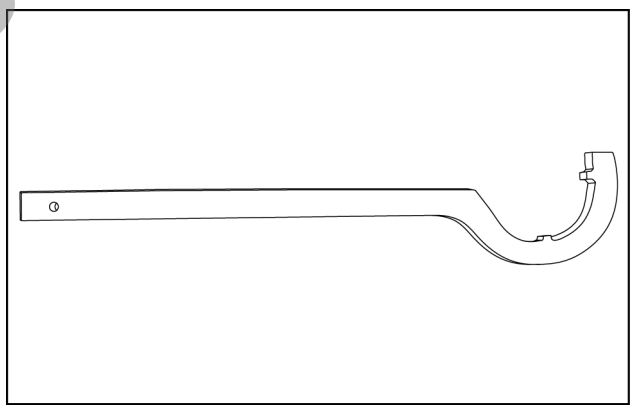
PTIL13TLB1776AA 2

380200472 Lift cylinder (Wipro & Dantal)



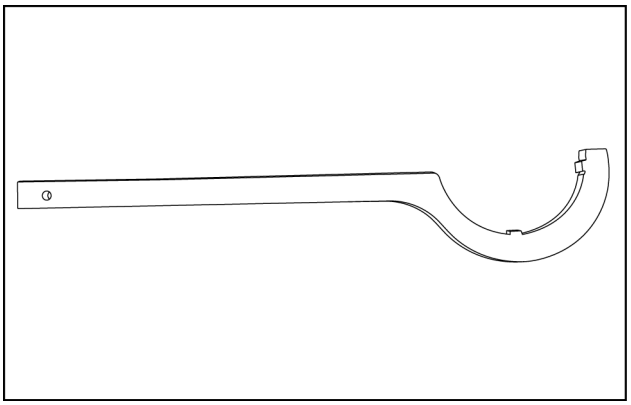
PTIL13TLB1777AA 3

380200476 Boom cylinder (Dantal)



PTIL13TLB1778AA 4

380200477 Boom cylinder (Wipro)

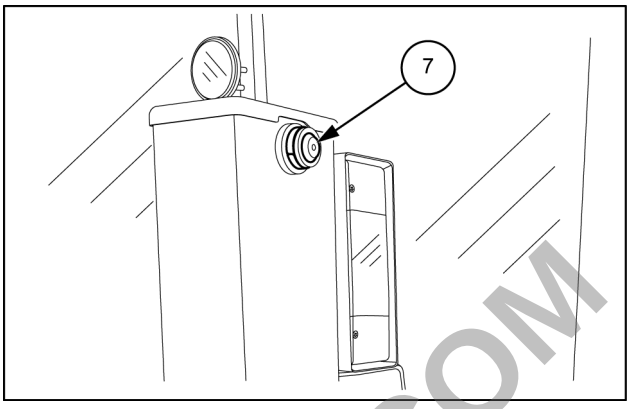


PTIL13TLB1779AA 5

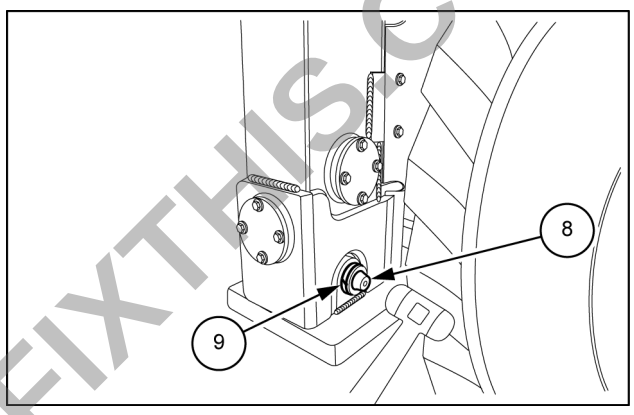
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10. After removing the snap ring **(9)** and spacer **(10)** from both ends remove the head end pin **(7)** and eye end pin **(8)** to free the stabilizer cylinder by tapping with a wooden hammer.



PTIL13TLB1549AB 2

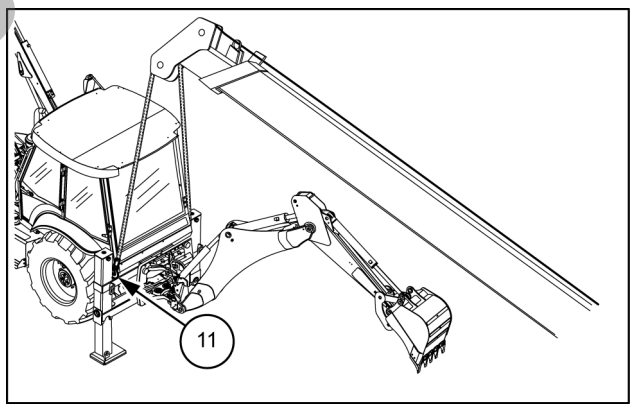


PTIL13TLB1549AB 3

11. Lift the cylinder using a suitable lifting device and place it safely aside.

ATTENTION: *Before lifting the machine, ensure to check overhead objects if any and handle the components carefully to avoid serious injury. Connect lifting device only at the lifting eyes* ***(11)*** *provided on the frame.*

12. Raise the machine using a suitable lifting device to slide the sleeve **(12)** and foot pad **(13)** out of the stabilizer frame **(14)**.



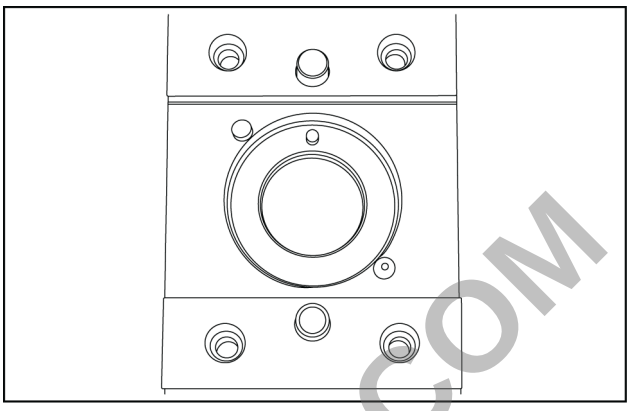
PTIL13TLB1550AB 4

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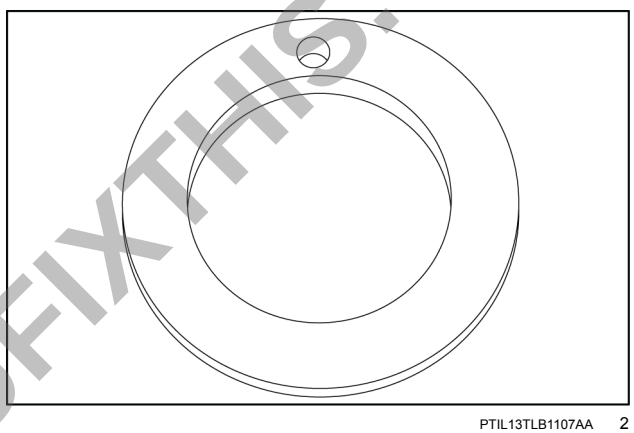
Hydraulic steering system - Special tools

Holding tool



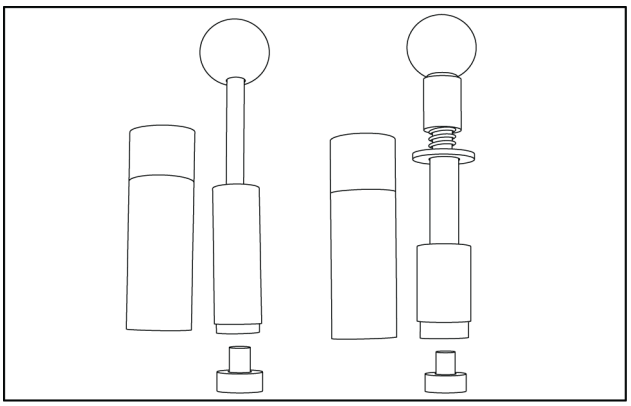
PTIL13TLB1106AA 1

Guide ring



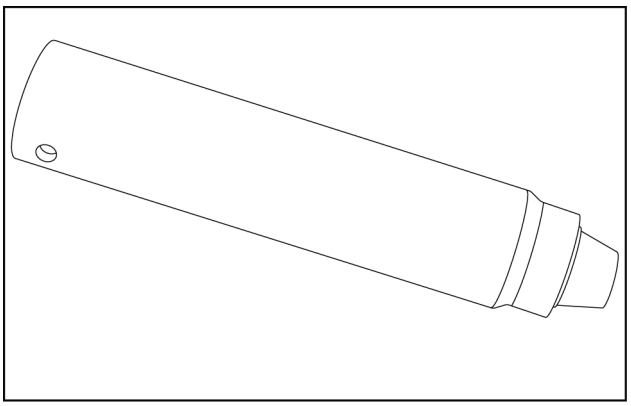
PTIL13TLB1107AA 2

Assembly tool for O-ring and kin-ring/roto glyd



PTIL13TLB1108AA 3

Assembly tool for lip seal



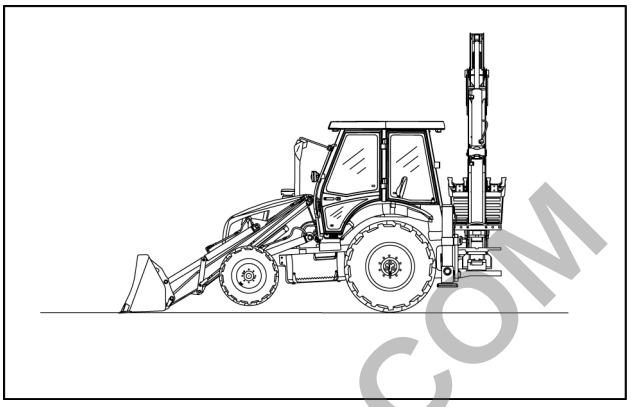
PTIL13TLB1109AA 4

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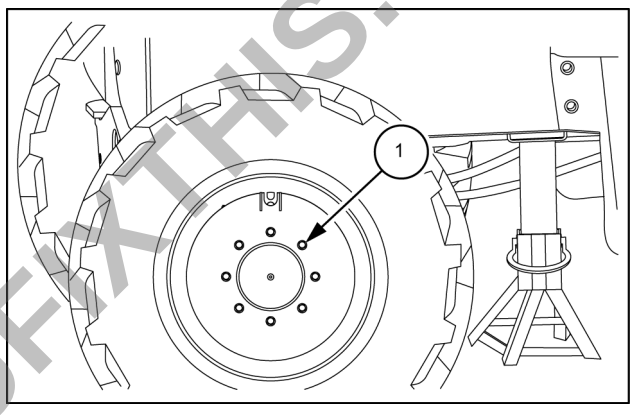
Front wheels - Remove

1. Support the machine on the loader and lift the front of the vehicle till the front wheels are off the ground.



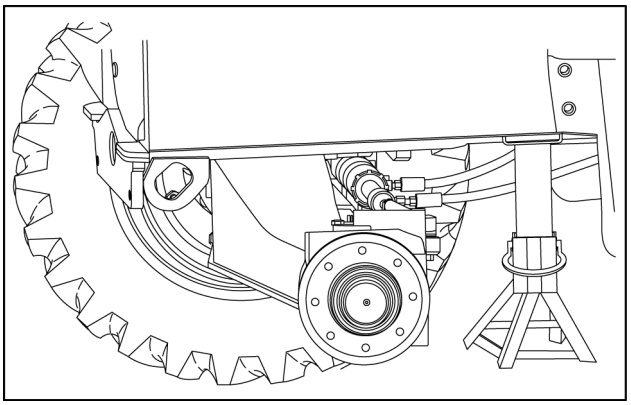
PTIL13TLB1455AA 1

2. Provide support and remove the nuts **(1)**.



PTIL13TLB1473AB 2

3. Remove the front wheel.



PTIL13TLB0732AA 3

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Cab air filter

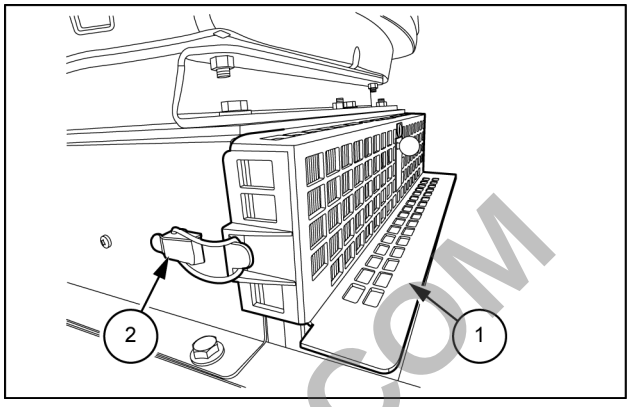
Before servicing the air filter situated under the drivers seat, switch off the blower and close all windows and one door. Forcibly close the other door. The resulting back pressure will dislodge loose dirt from the underside of the filters.

To remove the grille **(1)** release the retaining straps **(2)** and remove the filter element **(3)**. Ensure the element, and sealing faces are not damaged on removal.

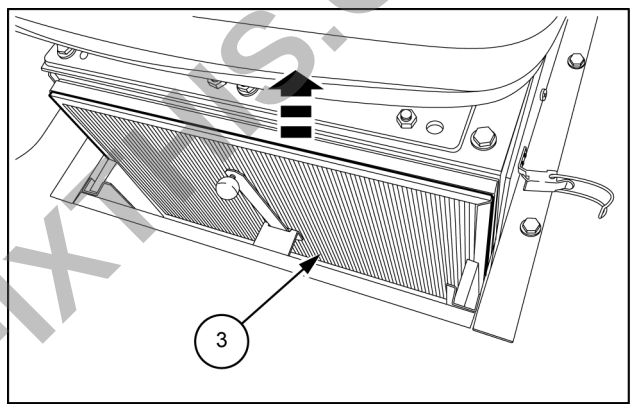
NOTICE: *In humid conditions, such as occur on most early mornings, do not switch on the blower prior to servicing the filters. Damp particles drawn into the filter may solidify and prove difficult to remove without washing.*

The filter elements are made of specially treated paper with a sealing strip bonded to the outer face.

Clean all of the elements by blowing with compressed air from the clean side through to the dirty side. The compressed air should not exceed **2 bar** (**29 psi**) and the air line nozzle should be at least **300 mm** (**12 in**) from the element.



PTIL14TLB0063AB 2

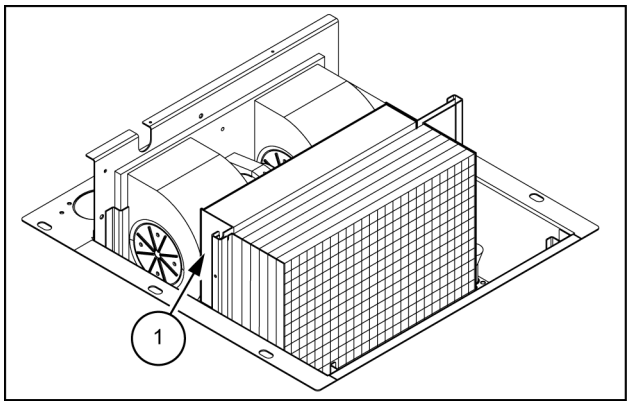


PTIL14TLB0064AB 3

Heater radiator

The heater radiator **(1)** is fitted in a housing under the cab seat for central displacement of warm or cold air flow.

NOTICE: *Too ensure a good flow of air through the heater radiator the filter should be cleaned more frequently when operating in extremely dusty conditions.*

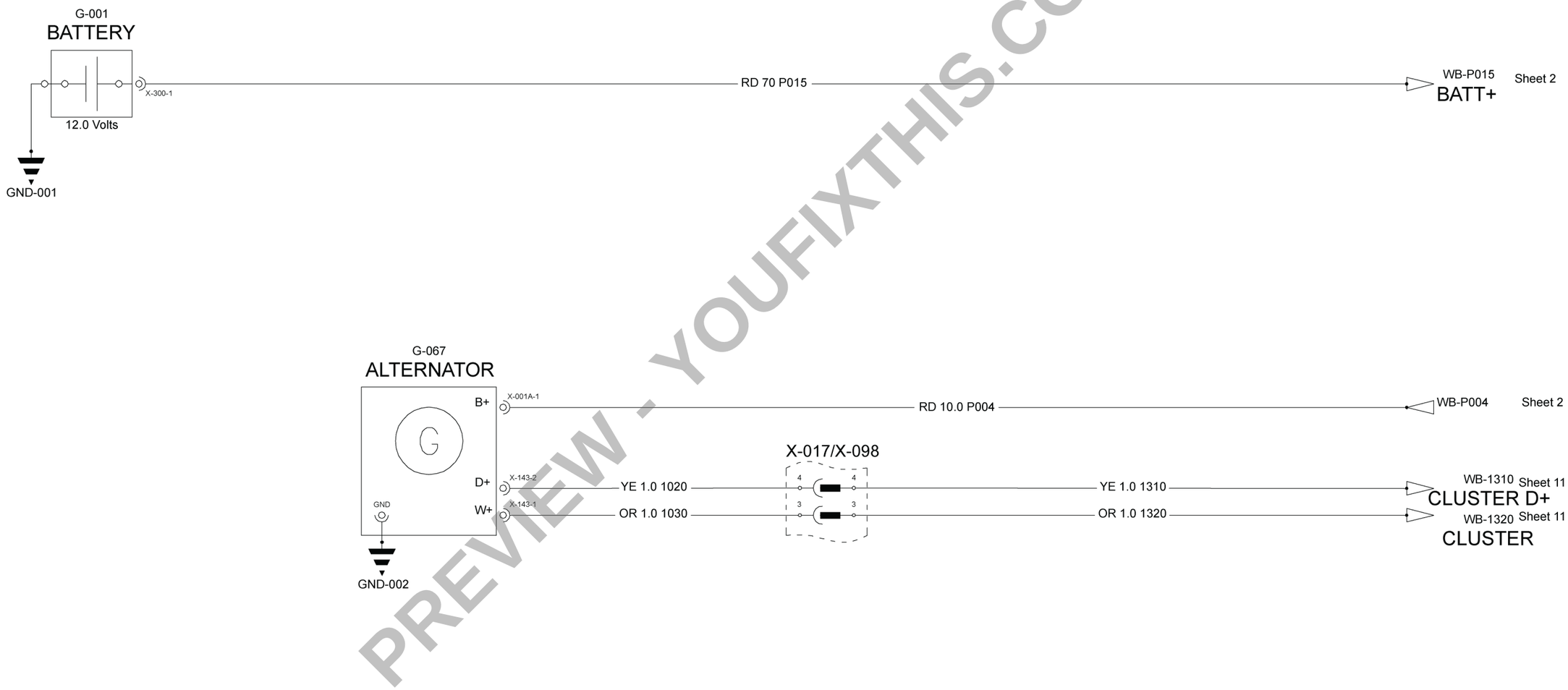


PTIL14TLB0151AB 4

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POWER DISTRIBUTION / CHARGING SYSTEM



SHEET 1

PTIL13TLB0158JB 1

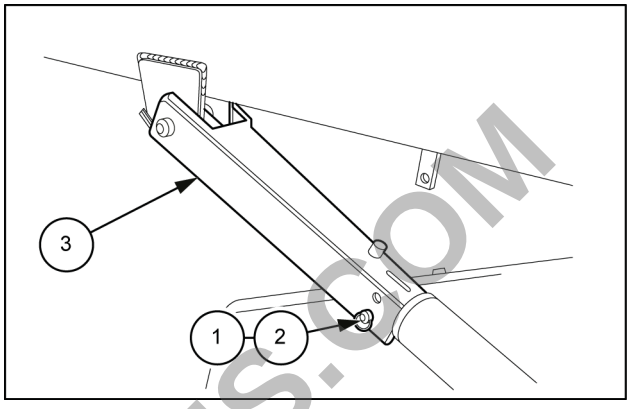
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Engine starter - Remove

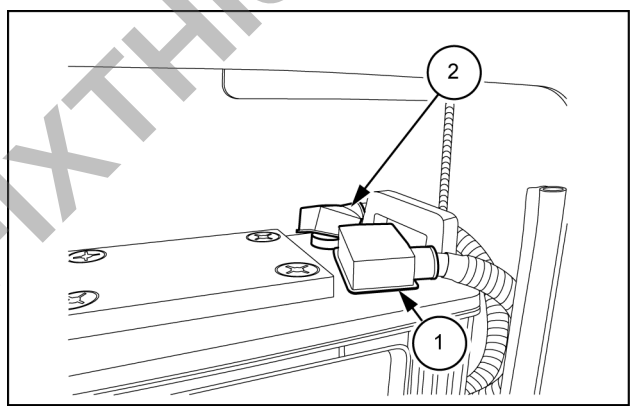
NOTE: *The starter is located on the engine flywheel housing.*

1. Park the machine on a level surface. Raise the loader and lock the support strut to hold the loader. Stop the engine and apply the parking brake.



PTIL13TLB1190AB 1

2. Remove the battery cover on the right hand step of the machine.
3. Remove the negative battery cable **(1)** from the battery. Move the cable away from the battery terminals.
4. Remove the positive battery cable **(2)** from the battery. Move the cable away from the battery terminals.

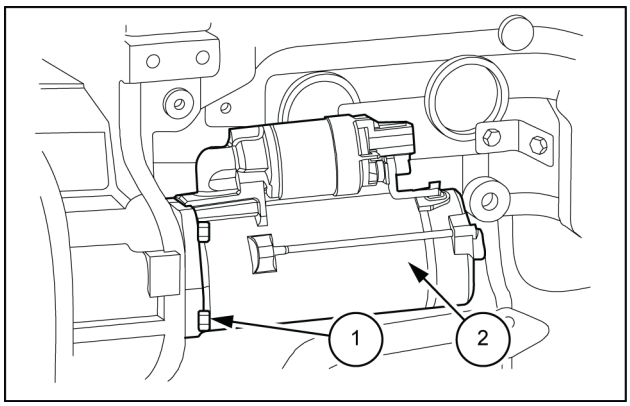


PTIL13TLB1199AB 2

5. Open the hood.
6. Tag and disconnect the wires and cables from the terminals on the starter.

NOTE: *Starter wire is coated with RTV silicone sealant.*

7. Remove the bolts **(1)** that fasten the starter **(2)** to the flywheel housing.
8. Remove the starter.



PTIL13TLB1193AB 3

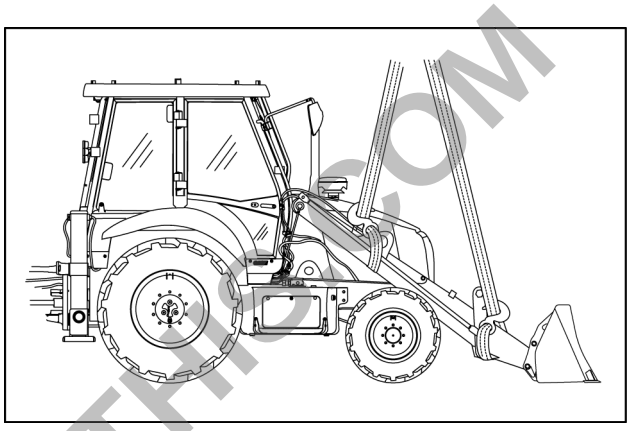
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Front loader arm - Remove

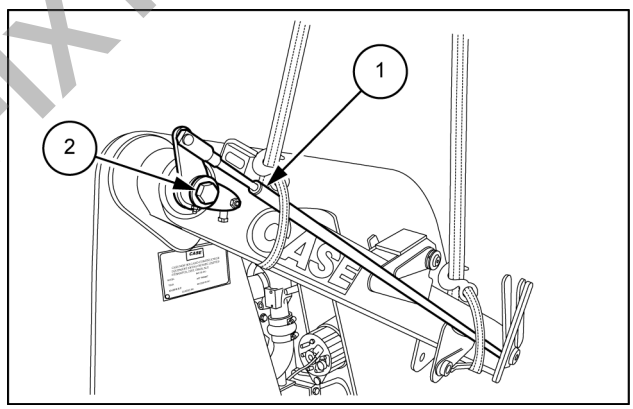
Remove loader bucket. Refer to **Bucket - Remove (82.300)**.
Remove loader cylinder. Refer to **Loader bucket control cylinder - Remove (35.723)**.
Remove loader lift cylinder. Refer to **Lift arm cylinder - Remove (35.701)**.

1. Lower the loader assembly to the ground and attach a suitable lifting device.



PTIL13TLB0469AA 1

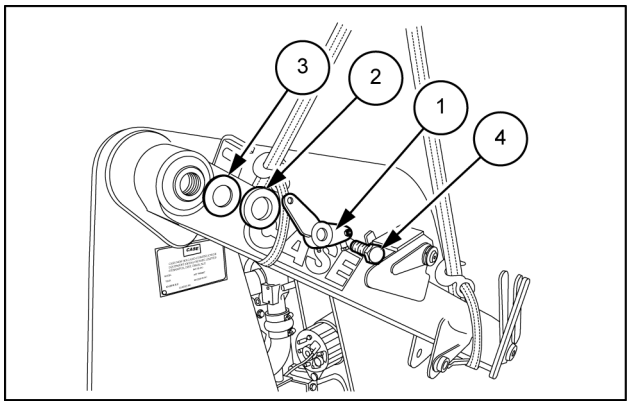
2. Disconnect the linkages **(1)** by removing the retainer bracket bolts **(2)** and washers from the right hand side of the loader frame.



PTIL13TLB0470AB 2

3. Remove the retainer bracket **(1)**, shims **(2)**, washers **(3)** and bolt **(4)**.

NOTE: *Ensure to collect all the shims for easy retainment during installation.*



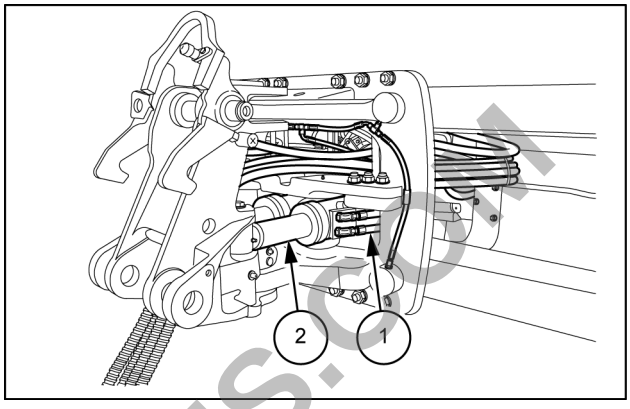
PTIL13TLB0471AB 3

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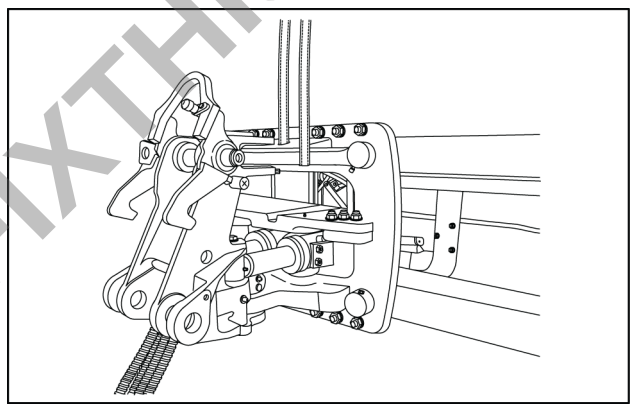
Sliding support - Remove

1. Remove the boom from the swing tower.
   Refer **Boom - Remove (84.910)**.
2. Disconnect all the hydraulic lines **(1)** from the backhoe control valve to the swing cylinders **(2)**.
3. Cap the oil ports and the control valve hydraulic lines immediately.
4. Disconnect the hydraulic lines to the locking pistons.



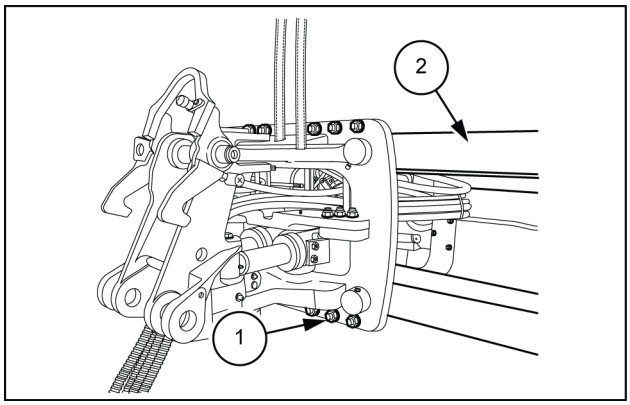
PTIL13TLB0466AB 1

5. Attach a suitable lifting device to the slide frame before proceeding.



PTIL13TLB0467AA 2

6. Remove the slide frame mounting bolts (**1)** from the retainer plate **(2)**.
   Lift the slide frame along with the swing cylinders from the machine and place it aside securely.



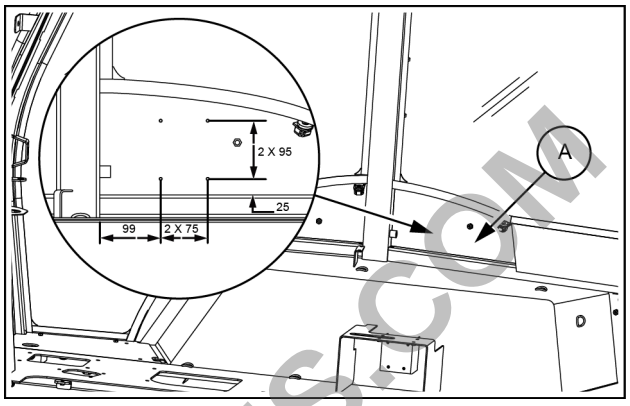
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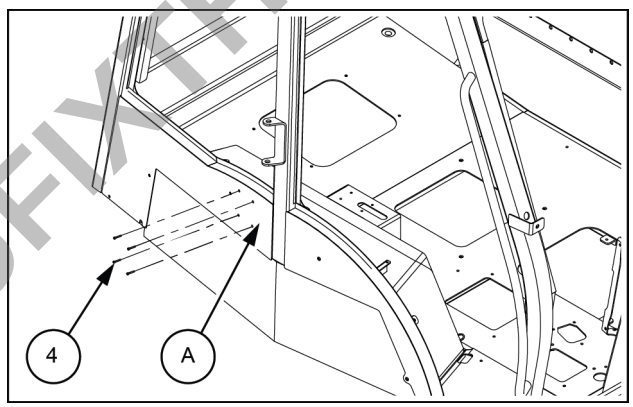
Accessories - Install Telematics - Install

1. Locate the 4 mounting hole by marking as shown below (Right-hand side of cabin fender mounting plate).
2. Carry out the drilling of Ø **5 mm** 4 numbers and qualify the M4 screw on the cabin shield **(A)**.



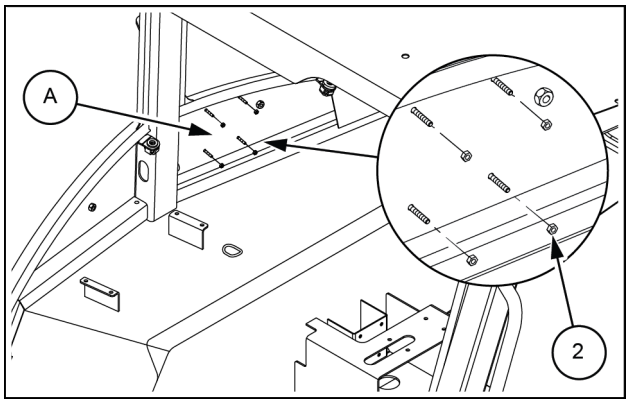
PTIL16TLB0011AB 1

3. Make sure they pass freely in the drilled holes.
4. Install the four screws (item 4) on the cabin shield **(A)**.



PTIL16TLB0009AB 2

5. Tighten the four nuts (item 2) on the cabin shield **(A)**.



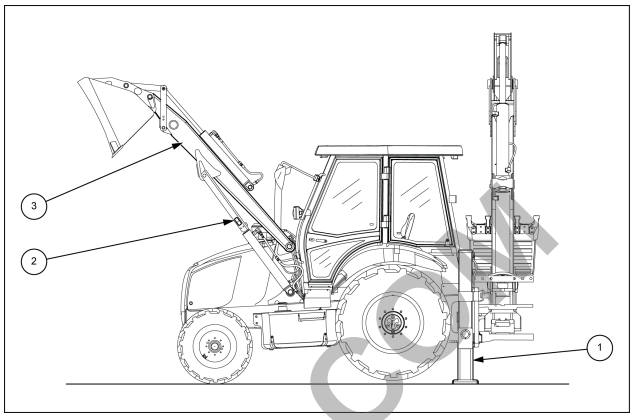
PTIL16TLB0010AB 3

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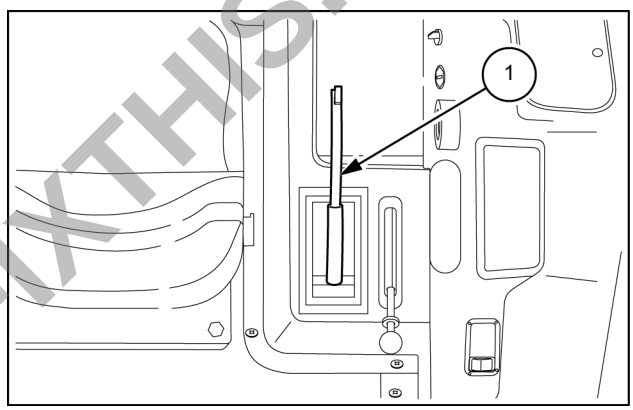
Cab - Remove

1. Disconnect the battery. Refer to **Basic instructions**.
2. Lower the stabilizers **(1)** to the ground. Keep the back-hoe in travel position.
3. Lift the loader **(3)** in the full vertical position and engage the lock **(2)**.



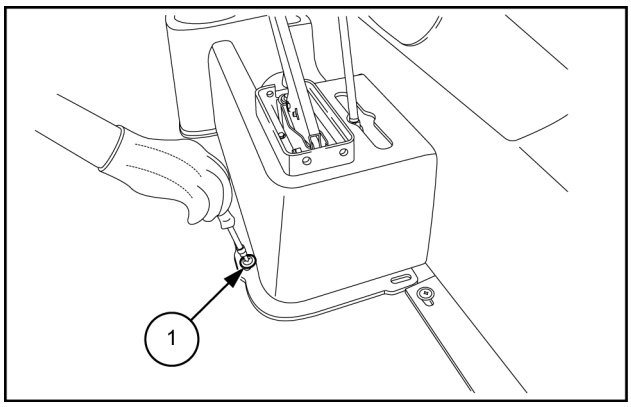
PTIL13TLB1480AB 1

4. Apply the parking brake **(1)** and switch Off the engine.



PTIL12TLB0560AB 2

5. Remove the front floor mats.
6. Remove the screws **(1)** and remove loader lever control console.



PTIL13TLB1482AB 3

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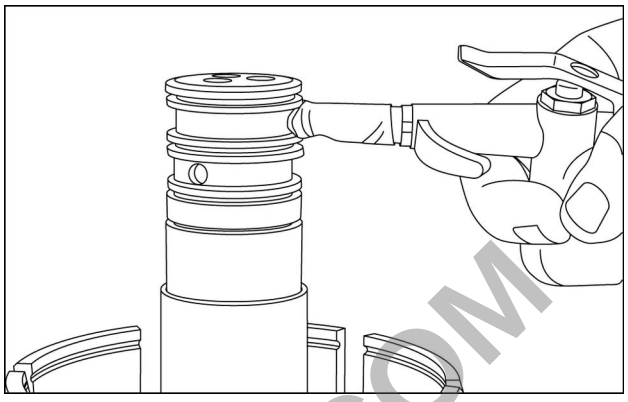
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[35.104] Fixed displacement pump 35.3
[35.359] Main control valve 35.4
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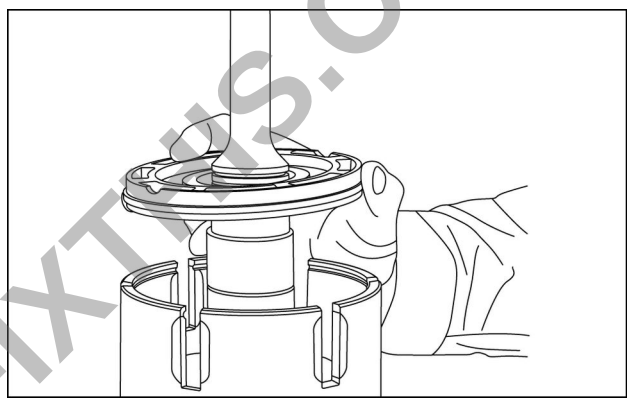
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50. Use compressed air in the port shown to remove the piston.



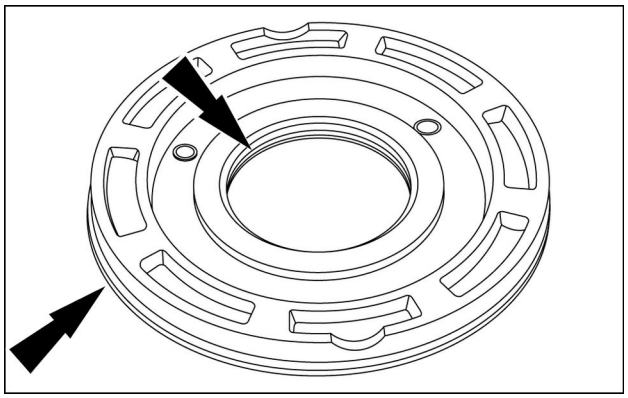
RCPH10TLB803AAL 47

51. Remove the piston.



RCPH10TLB802AAL 48

52. Remove the sealing ring from the OD and the ID of each piston.



RCPH10TLB805AAL 49

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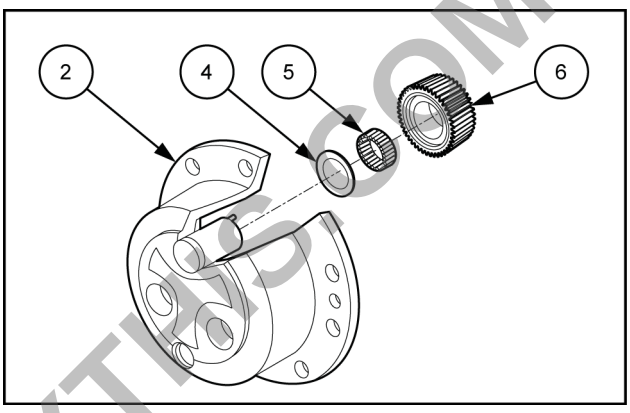
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Final drive hub, steering knuckles, and shafts - Assemble - Epicyclic reduction gear group

Refer **Final drive hub, steering knuckles, and shafts - Component identification (27.124)**

Refer **Final drive hub, steering knuckles, and shafts - Assemble - Wheel hub group (27.124)** before assemble the epicyclic reduction gear group.

1. Position the planetary carrier **(2)** on a workbench.
2. Insert the thrust washer **(4)** on every pin.

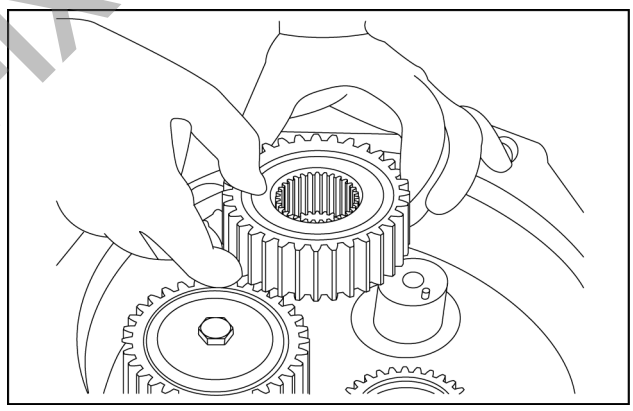


PTIL13TLB0023AB 1

3. Insert the needles **(5)** into the planetary gears **(6)**.

NOTE: *Grease well the needle bearings **(5)**.*

4. Insert the gears **(6)** with assembled needles into the planetary carrier pins.

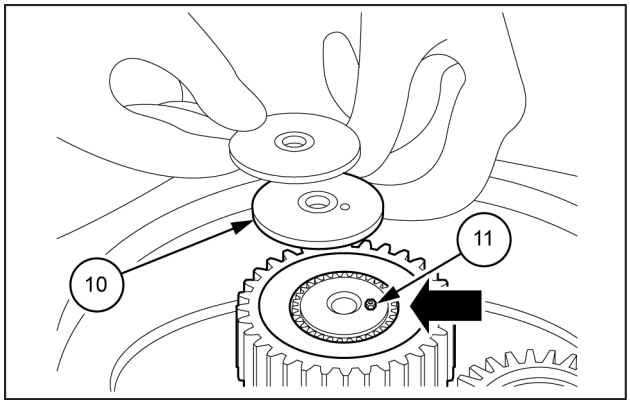


PTIL13TLB0024AA 2

5. Fit the thrust washers **(7)** and **(9)** to the planetary carrier **(2)** pins.

NOTE: *The intermediate thrust washers **(7)** has a hole for centering with the dowel pin **(8)** fitted on the planetary carrier **(2)** pins.*

6. Assemble the fastening bolts **(10)** and then tighten them to the requested torque.



PTIL13TLB0025AB 3

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Hydraulic systems generic sub-group - Troubleshooting

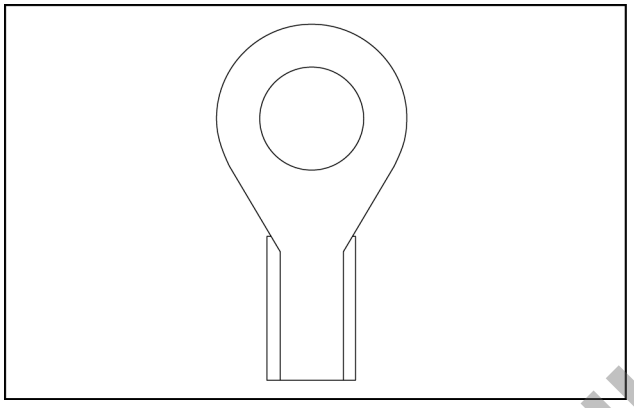
Problem	Possible Cause	Correction
Rod seal leakage	Excessive Seal wear	Check oil contamination and change, if required
	Piston rod scored	Apply emery, if scoring is mild. Replace the piston rod, if the scoring is deep
	Weld arcing	Replace the piston rod*
	Seal assembled wrongly	Replace the seal kit and assemble the seal in right direction*
	Piston rod bend	Reset the system pressure, if it is malfunctioning and replace the piston rod*
	Oil temperature high	Air bleed the system properly and change the oil if contaminated*
Internal leakage	Scoring in tube ID	Check for side loads on cylinder (Wear on rod eye/CEC face) and adjust alignment suitably. Change tube s/a if badly scored*
	Tube ID rusting	Remove the rust with emery, change tube s/a, if rust is more
	External damage	Replace the outer tub
	Air in hydraulic circuit	Air bleed the hydraulic system
	Piston seal damaged	Replace the complete seal kit*
Tube ID scored	External damage on tube	Replace the tube s/a and other damaged components
	Piston rod bend	Check the system pressure and replace the PR s/a*
	Foreign particles in the system	Check the filter and oil, replace if required
	Filter ineffective/clogged	Replace the filter
	Excessive clearance at mountings	Add shims and align the axis suitably
External leakage (Other than Rod seal)	Seal wrongly assembled	Change the seal kit*
	Weld leakage	Rework or replace the component, if it is not re-workable*
	Leakage through casting	Change the defective component*
	Ineffective sealing due to rust in the cylinder ID	Rework by emery or replace the failure component
Piston rod bend / Break	Excessive system pressure	Check and reset the system pressure, if required*
	More than recommended load applied	Use the system with in recommended load. Educate the operator
	Excessive side loads	Check the condition of bushes, pins, shims and replace if required
	External damage	Change the piston rod assembly*
Plating defects	Rust on rod due to accumulation of mud on piston rod	Clean the mud periodically from the piston rod
	Peel off due to piston rod exposure to chemical environment	Protect the piston rods from chemical attach. Apply petroleum jelly when the machine is not in use for more period
	Weld Arcing	Apply grease on piston rod when carry out welding near rod

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CONNECTOR X - 001A - Alternator B+

CONNECTOR X - 001A - Alternator B+		
CAV ID	**WIRE ID**	**COLOR**
1	P004	RD



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