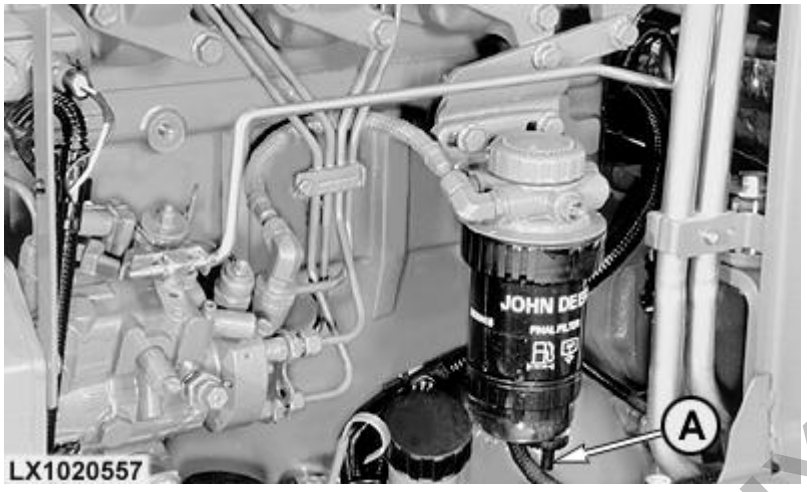
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Bleeding the Fuel System

The fuel system must be bled whenever the fuel tank has been run dry.

Turn key in main switch one position to the right so that the fuel transfer pump is operating. Keep the pump running for approx. 20 seconds.



LEGEND:

A	Drain plug

Clean the water trap

→NOTE:

The fuel filter is located on the left-hand side.



Run the engine until it is warm, and check engine speeds

Slow idle:

- With mechanical actuation 850±50 rpm
- With electronic actuation 850 rpm

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Disconnect cable. Put identifying marks on the fuel lines before disconnecting them too.

Use special wrench (A) to remove the screw connection (see Section 99 for tools manufactured by the dealer).

Carefully pull the sending unit upwards and tilt it to avoid damaging the float system linkage.

Install the fuel transfer pump on the new sending unit. See Replacing the Fuel Transfer Pump .

Put on the O-ring before installation. Insert the sending unit and fuel transfer pump so that the pump fits into the recess in the base of the tank, and the connections face in the direction of forward travel.

Connect the cables and install the fuel lines.

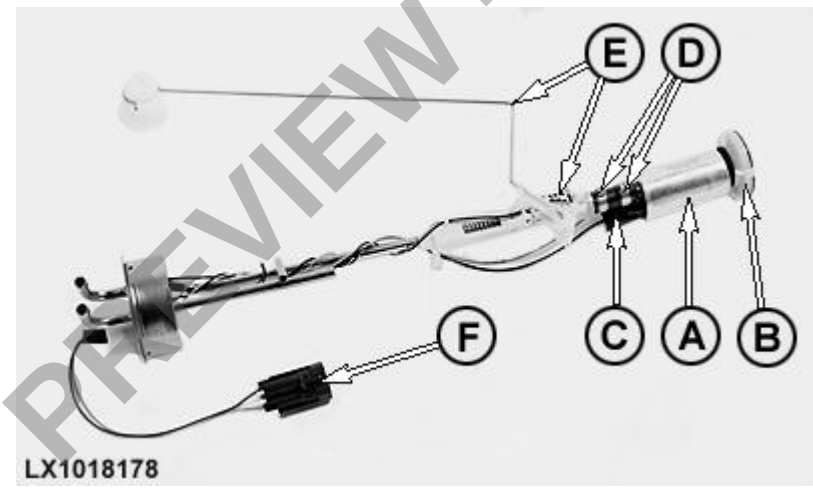
IMPORTANT:

Do not mix up connections.

Install the screw connection.

Bleed the fuel system.

Changing the Fuel Transfer Pump

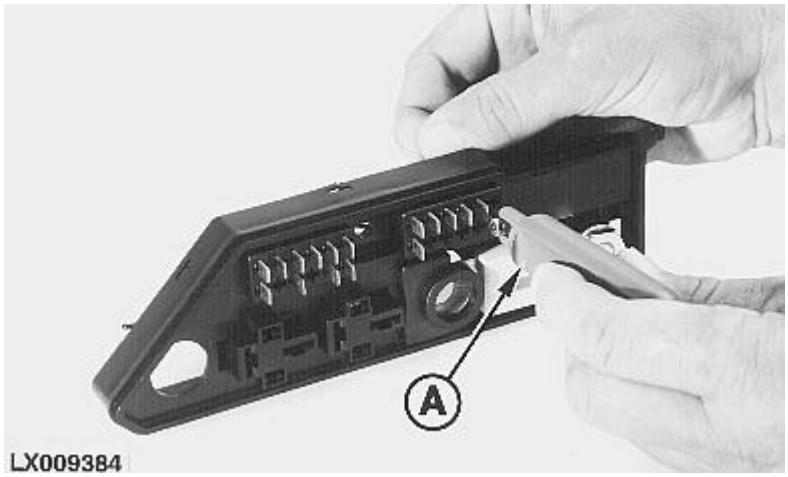


LEGEND:

A	Fuel transfer pump
B	Screen
C	Connecting hose
D	Hose clamp
E	Fuel gauge sending unit and float system linkage
F	Plug

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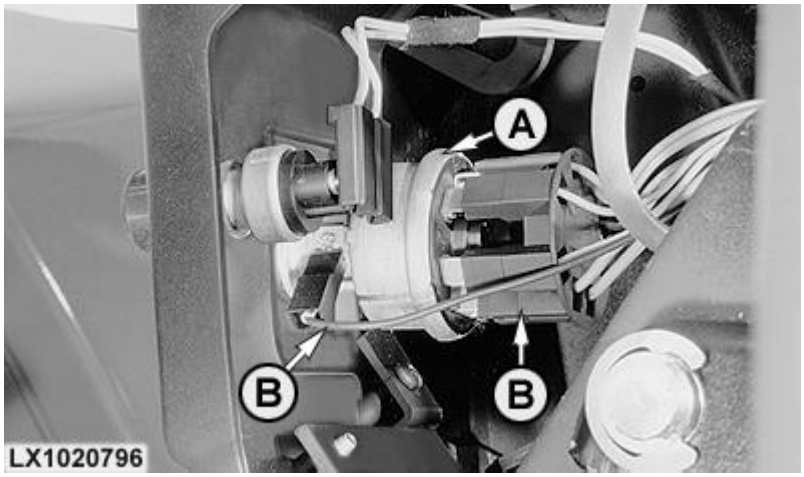


LEGEND:

A	Extraction tool JDG948

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LEGEND:

A	Main switch
B	Plug

CAUTION:

Disconnect the battery ground cable (-).

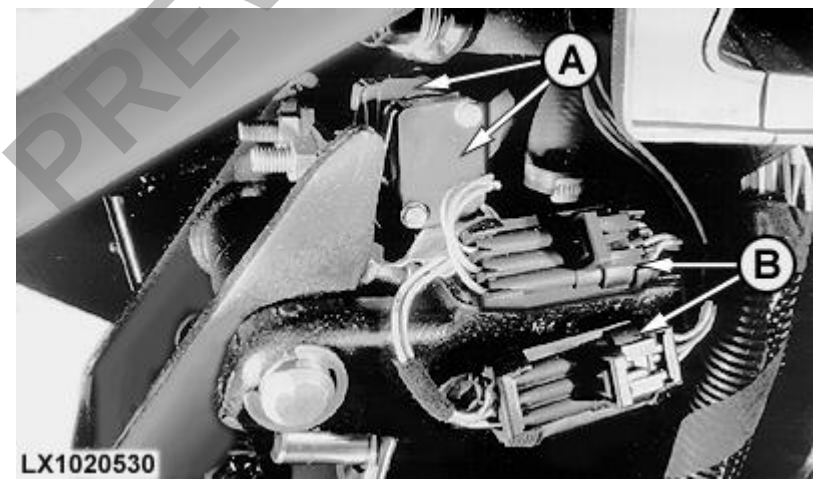
Remove the instrument panel trim. Open the cover at the side.

Pull out the plugs (B).

Take off the special nut on the outside.

Pull out main switch (A) and install new one.

Replacing Brake Switches



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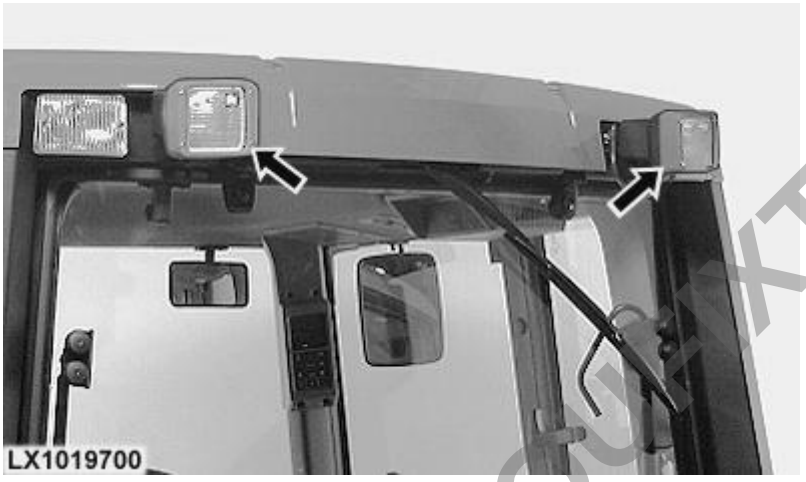
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IMPORTANT:

Old xenon bulbs that have been replaced must be disposed of properly (i.e. as hazardous waste).

Bulb Replacement, Xenon Worklights

CAUTION:



Comply with safety instructions!

→NOTE:

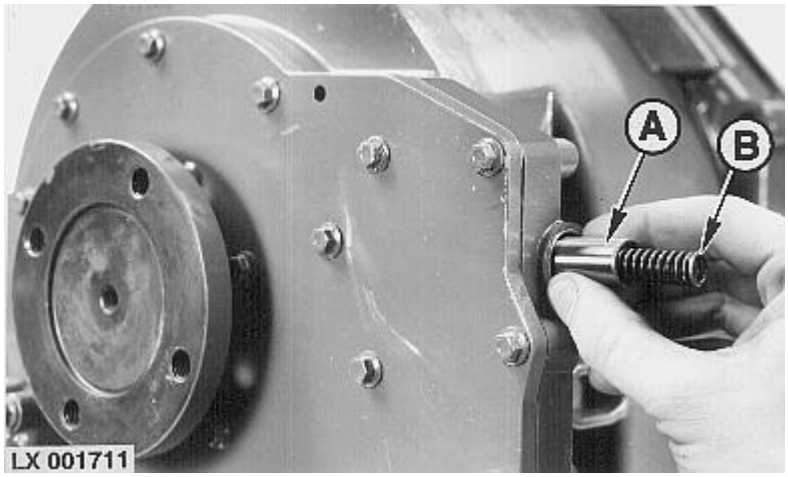
Unlike the bulbs on H3 worklights, which fail suddenly when the filament burns through or breaks, xenon bulbs show that they are approaching the end of their useful life by slowly losing their brightness. The end comes when the ballast unit ceases to ignite the xenon bulb.

The tractor may be equipped with high-performance xenon worklights. This is indicated by the word "XENON" written on the lens of the worklight.

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Lube Relief Valve

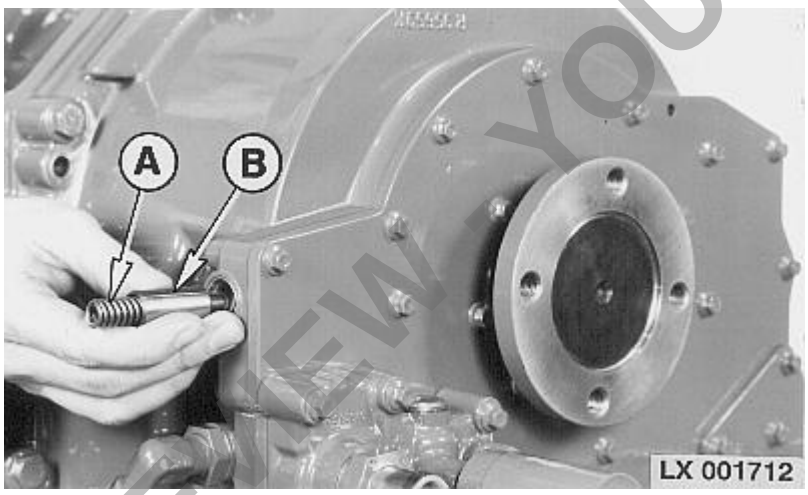


LEGEND:

A	Valve spool
B	Spring

Check spring and examine valve spool for signs of wear.

Cooler Relief Valve



LEGEND:

A	Spring
B	Valve spool

Check spring and examine valve spool for signs of wear.

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CAUTION:

Do not perform any adjustments with the engine running because the tractor could move unexpectedly. Switch off the ignition and remove the key.

→NOTE:

The length of the reverser control linkage (B) can also be determined and adjusted when removed.

Measure the length (a) of the reverser control linkage.

Adjust the linkage to the specified length using the end yokes as required.

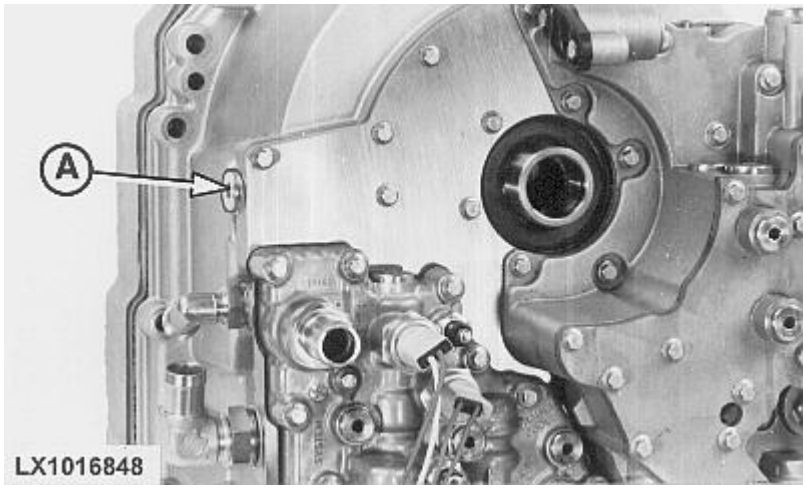
Item	Measurement	Specification
Linkage	Specified Length (a)	529.5 mm ± 1 mm (20.85 in. ± 0.04 in.)

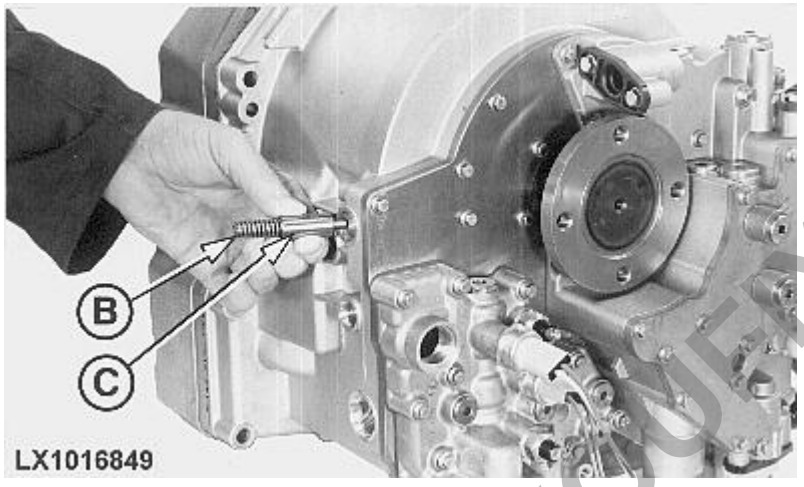
When installed the reverser control linkage should be in the lower hole on lever (A) in the right hole of lever (C).

Check shifting and parking lock action.

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LEGEND:

A	Plug
B	Spring
C	Valve spool

Remove plug (A).

Check valve spool (C) for signs of wear.

Check spring (B).

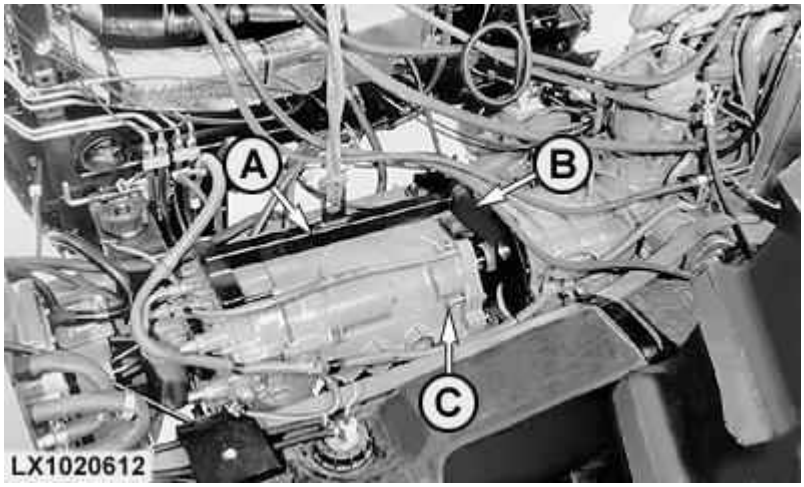
Item	Measurement	Specification
New Spring	Free Length	50 mm (1.97 in.)
	Test Length	40 mm at 170 to 210 N (1.57 in. at 38 to 47 lb)

Repairing the Lube Relief Valve

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Installing the PowrQuad ™ Module



Transmission shown without creeper

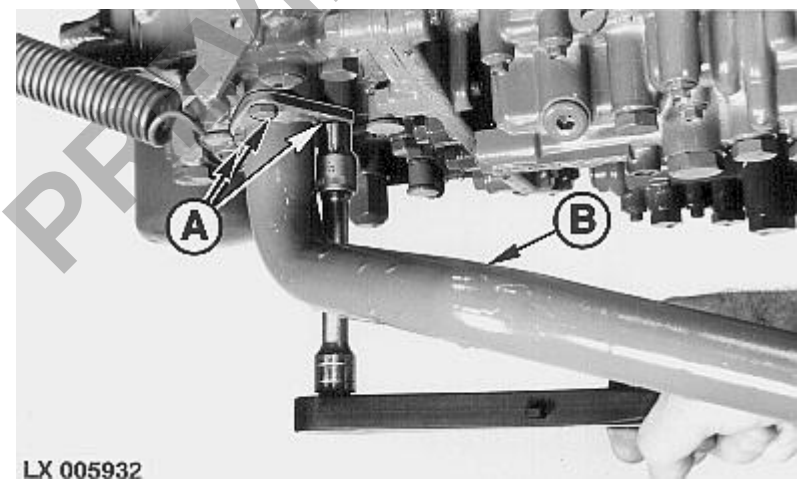
Install dealer-fabricated device (A) on the PowrQuad ™ module, and attach lifting tackle.

Install gasket (B) on the flange, fixing it in place with a little grease if necessary.

Locate the PowrQuad ™ module against the range transmission or creeper, and tighten the screws (C) in the flange to 70 N·m (50 lb-ft).

IMPORTANT:

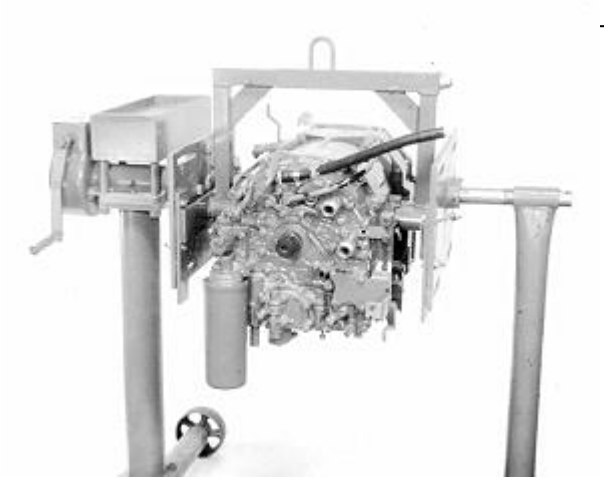
Tighten screws in flange in cross-wise fashion (alternately by small amounts).



Install suction line (A) and tighten screws (B) to 18 N·m (13 lb-ft).

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Remove PowrQuad ™ Module, see Group 00.

Install the transmission mounting fixture into the D01003AA Repair Stand.

Remove transmission output shaft and auxiliary drive shaft, from the rear of the transmission assembly.

Remove Transmission Front Cover/Front Valve Housing



Remove front cover-to-planetary housing cap screws (A) and remove front cover/valve housing assembly.

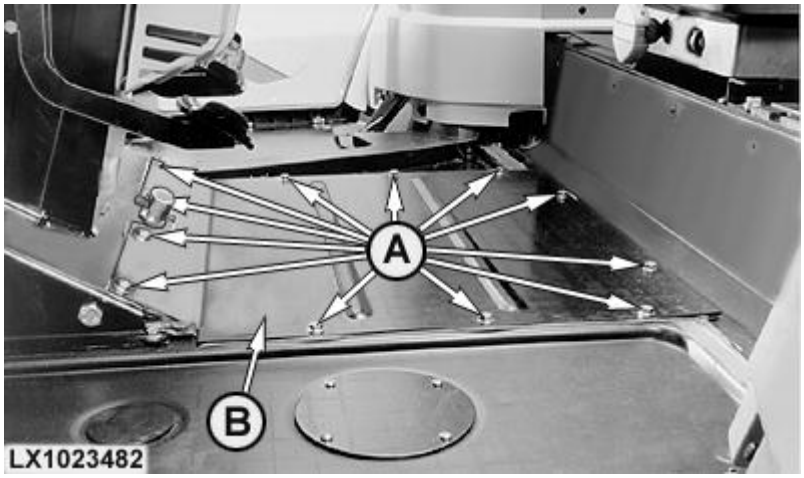
→NOTE:

Cover-to-housing cap screws are a special wax-coated, colored cap screw. DO NOT use a substitute cap screw. When reusing the old cap screws, completely coat with oil. Remove gasket and clean both gasket surfaces.

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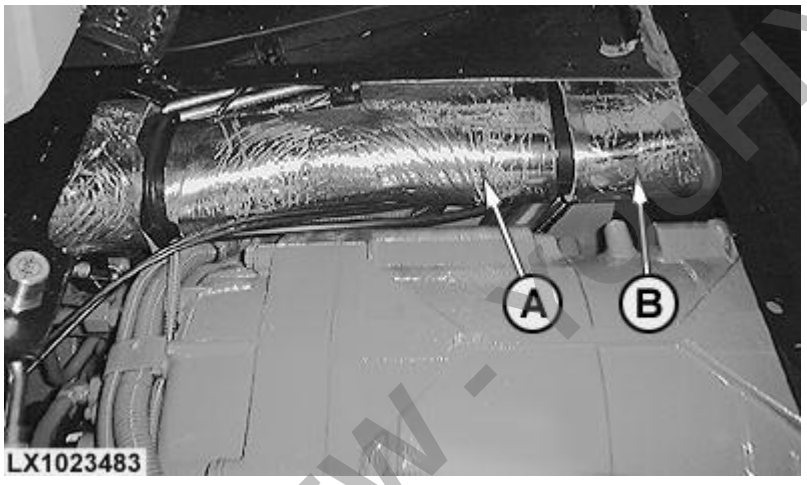
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Removing the Stepper Motor

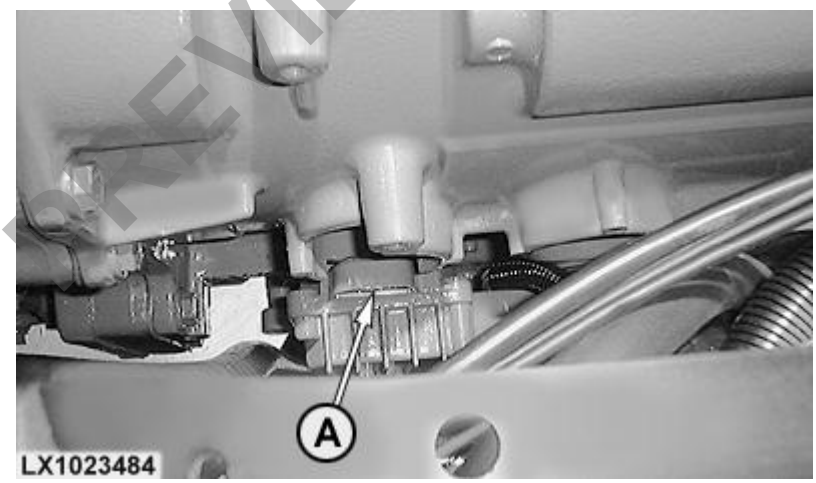


Remove the floor mat from operator′s cab.

Remove screws (A) and lift off floor plate (B).



Remove parts (A) and (B) of the air duct.

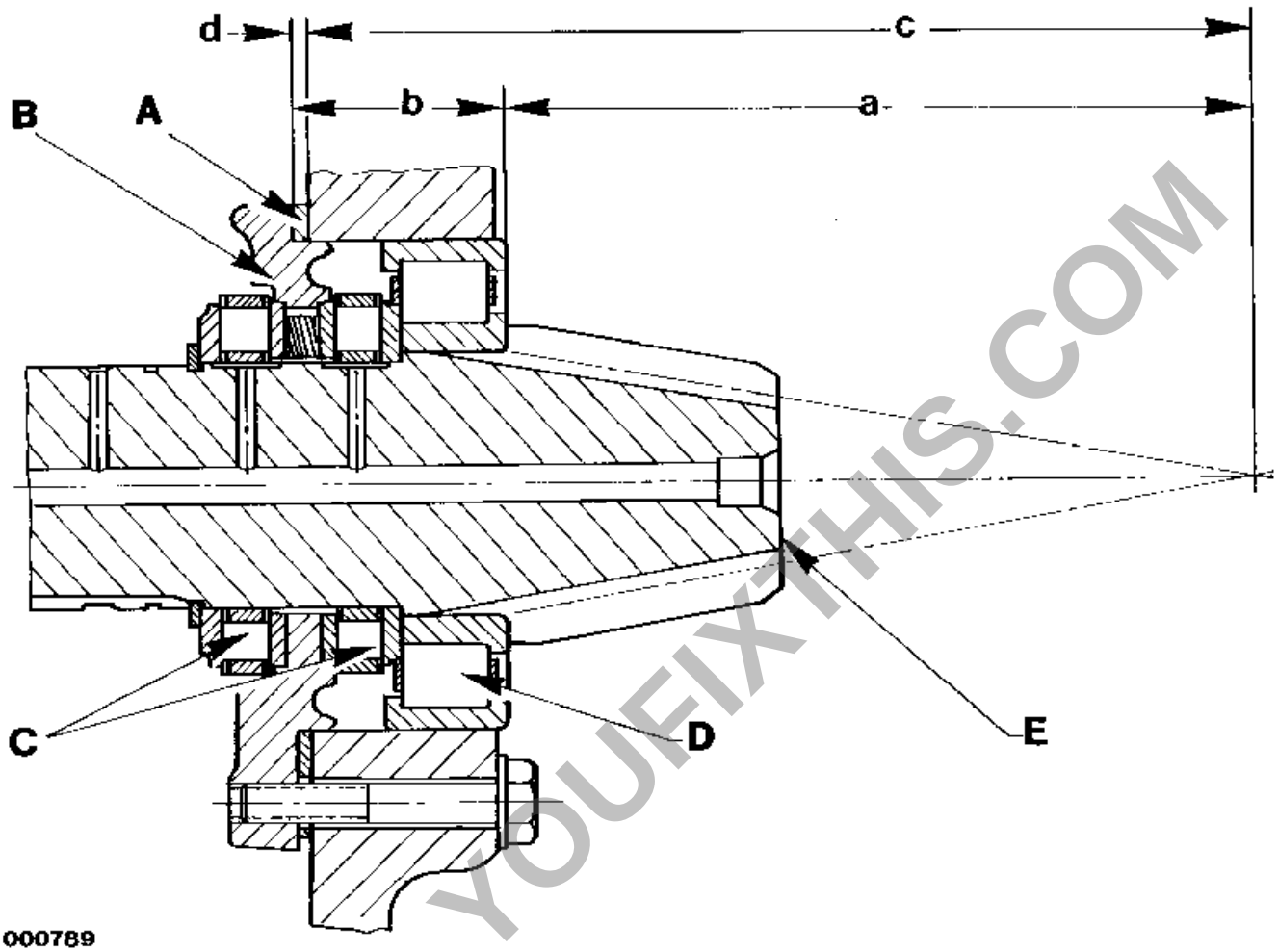


Remove stepper motor screw (A).

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Cone Point Adjustment



LX000789

LEGEND:

A	Spacer washer (use as required)
B	Bearing quill
C	Axial bearing
D	Needle bearing
E	Differential drive shaft face

[1] - Record dimension (a) stamped into bevel gear face. In most cases this dimension is exactly 172,0 mm (6.772 in.).

[2] - Measure dimension (b) from needle bearing to bearing quill.

[3] - Cone point dimension (c) of differential housing is always 219,5 mm (8.642 in.).

[4] - Calculate spacer washer thickness (d).

d = a + b - c

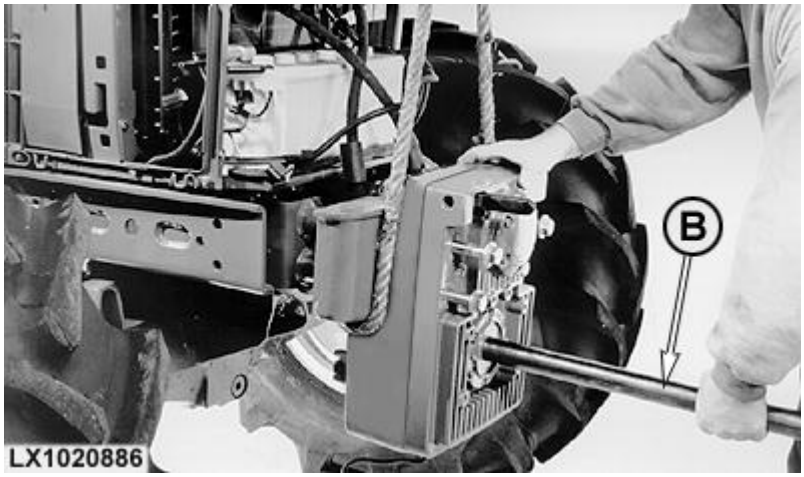
Thickness of Spacer Washers Available

0,2 mm (0.008 in.)	0,5 mm (0.020 in.)
0,3 mm (0.012 in.)	

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→NOTE:

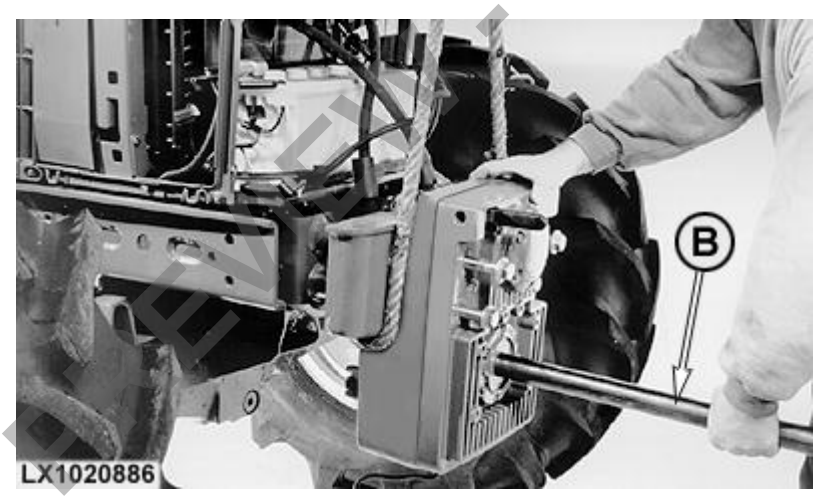


Using a tube (B) pushed onto PTO shaft, align housing.

CAUTION:

Once the front PTO has been removed, it is essential to seal all the lines and remove the drive shaft BEFORE starting the tractor.

Installing Front PTO



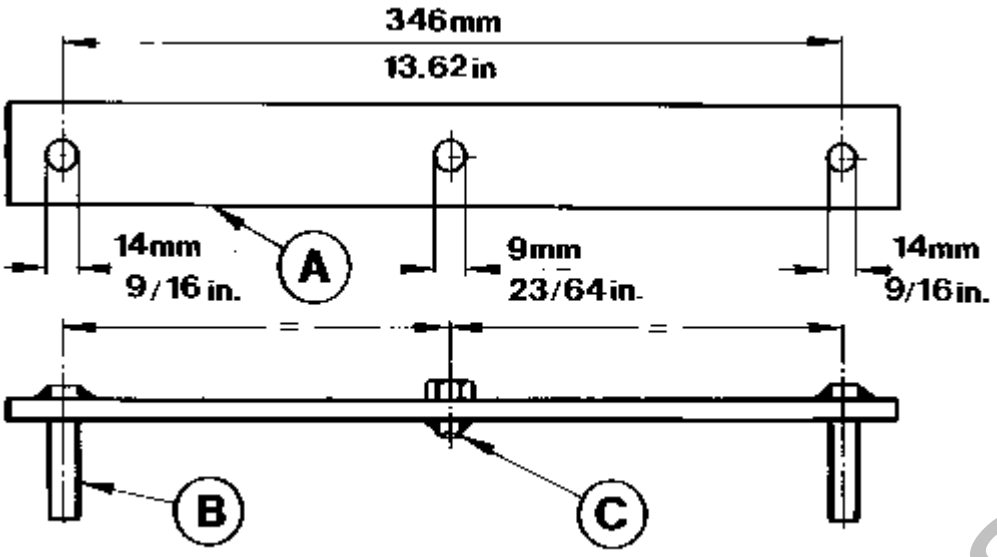
Attach front PTO to suitable hoist and move in position.

→NOTE:

Using a tube (B) pushed onto PTO shaft, align housing.

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LX000191

LEGEND:

A Flat steel 40 x 10 x 400 mm (1.5 x 0.4 x 15.7 in.)
B Round steel 14 x 50 mm (0.55 x 2 in.)
C Cap screw M8 x 15 mm (0.6 in.)

Rear axle rolling drag torque adjustment

Specifications

Item	Measurement	Specification
Taper roller bearing cup	Force at insertion	min. 45 kN (10000 lb)
Taper roller bearing cone	Force at insertion	min. 50 kN (11000 lb)
Planet gear to carrier	Force at insertion	min. 15 kN (3400 lb)
Final Drive Housing, Adjusting Rolling Drag Torque		
6110 to 6210L tractors with flanged axle	Value to be added to measured rolling drag torque (before tightening special 12-point screw)	8 to 11.5 N·m (6 to 8.5 lb-ft)
6310 to 6510S tractors with flanged axle, plus all tractors with rack-and-pinion axle	Value to be added to measured rolling drag torque (before tightening special 12-point screw)	10 to 13.5 N·m (7.5 to 10 lb-ft)
Final drive housing to differential housing	Torque	260 N·m (190 lb-ft)

Preliminary Work

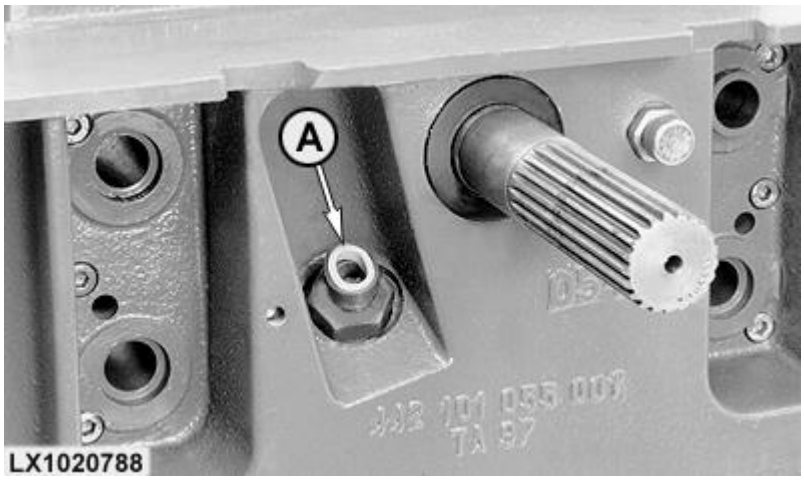
Remove final drives , see Group 00.

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Check the modulating valve . Refer to the “Operation and Tests” manual.

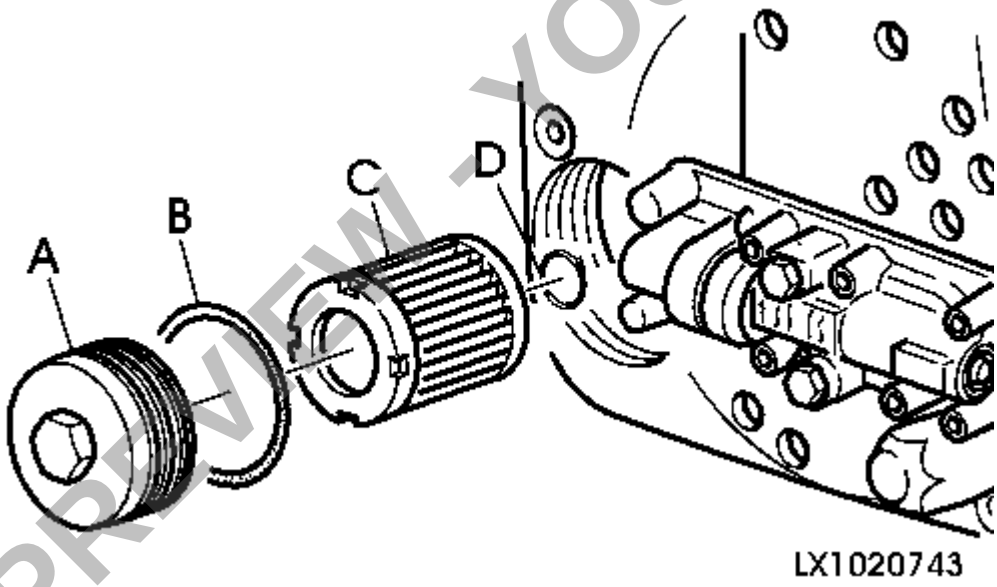
Replacing PTO Speed Sending Unit



Replace O-ring and tighten sending unit (A) to 15 N·m (10 lb-ft).

Connect the cable.

Changing/Washing the Filter



LEGEND:

A	Cover
B	O-ring
C	Filter
D	O-ring

Wash the filter in fuel.

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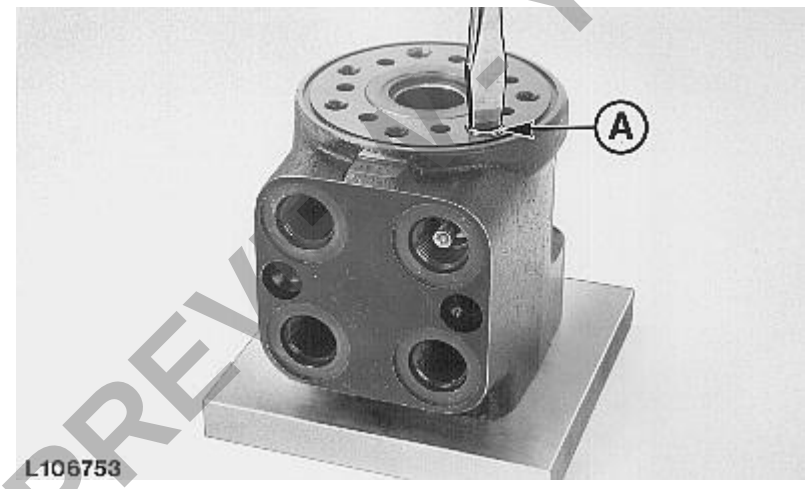
Coat valve assembly with oil, and then install.

IMPORTANT:

Make sure that cross pin of valve spool and sleeve is horizontal.

→NOTE:

Insert valve spool and sleeve into housing bore, applying slight turning movements.



Installing check valve:

[1] - Place ball of check valve into the bore provided.

[2] - Screw in threaded bushing (A) until it is just below the surface of the housing.

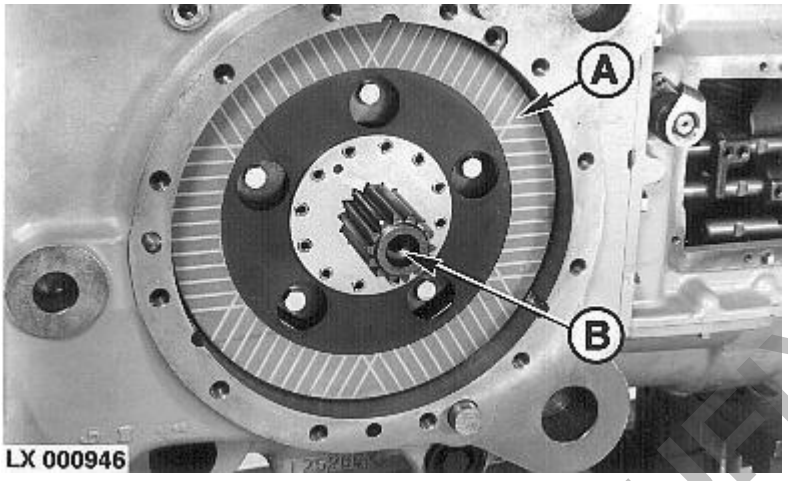
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[5] - When relieving pressure, measure the return movement at three points (approx. 120° apart).

→NOTE:

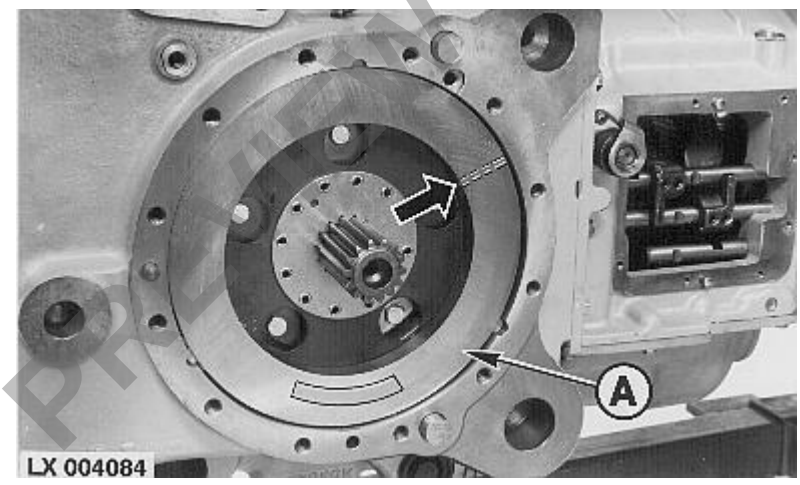
Of three measurements of return movement, the average must be at least 0.40 mm (0.016 in.) and not more than 0.57 mm (0.022 in.). A return movement of at least 0.40 mm (0.016 in.) must be achieved within 15 seconds. Every individual reading should lie within the range 0.35 to 0.60 mm (0.014 to 0.024 in.).



Install brake disk (A) and drive shaft (B).

→NOTE:

The longer final drive shaft has to be installed on the right hand side of the tractor.



Install brake plate (A).

IMPORTANT:

The bore (see arrow) must be above the final drive shaft.

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→NOTE:

The stepper motor and pressure/discharge valves can be repaired without removing the rockshaft valve.

Remove 3rd or 4th SCV unit (if equipped). See Group 30.

Remove protective cap and break plug connection (A) to stepper motor.

Disconnect hydraulic lines (C), take off the three hex. nuts (B) and remove endplate (D).

Remove the studs.

→NOTE:

The valve plates between the rockshaft valve and inlet priority valve, or between the rockshaft valve and SCV unit may drop out.

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LEGEND:

A	Control valve assembly
B	Gasket
C	Spool cap
D	Notches

Install control valve assembly (A) through spool cap (C).

Install knob assembly making sure notches (D) align correctly.

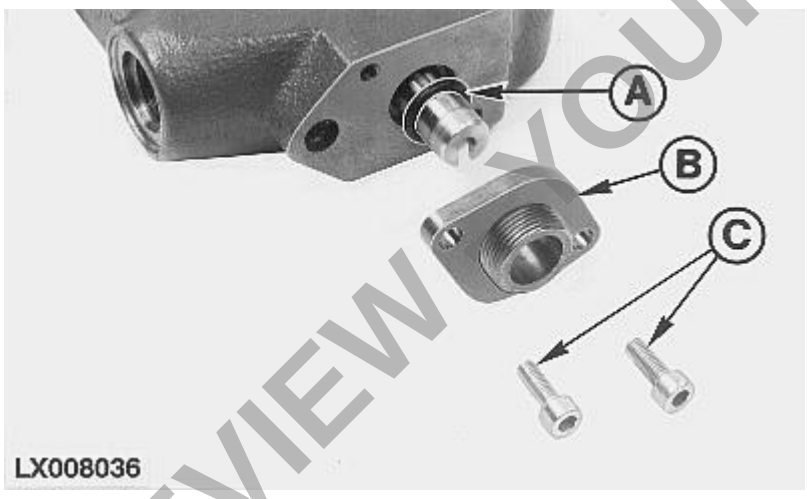
→NOTE:

For designs using lock washers, install washers with bowed ID toward screw heads.

Install and hand-tighten the end cap screws (remember to include lock washers

[Not used in all designs]

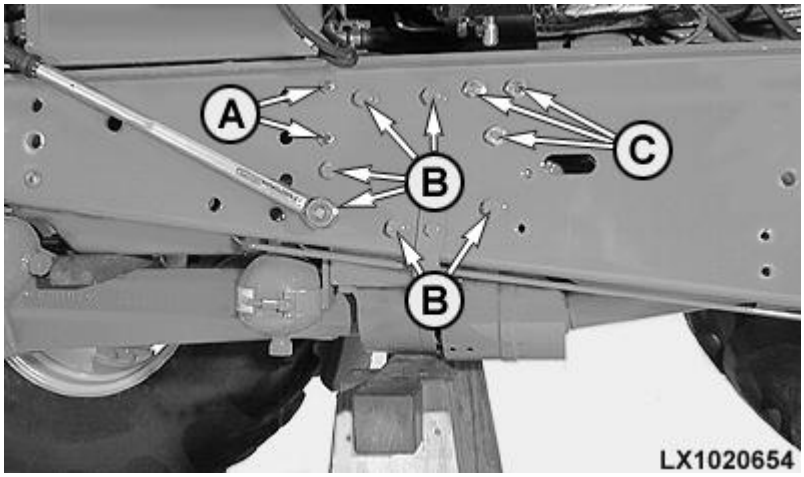
) and then tighten to 11 N·m (8 lb-ft). Knob should turn without binding.



Using hex. socket screws (C), install O-ring (A) and flange (B).

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Tighten cap screws (A) to 95 N·m (70 lb-ft). Tighten cap screws (B) to 350 N·m (255 lb-ft). Tighten cap screws (C) to 240 N·m (177 lb-ft).

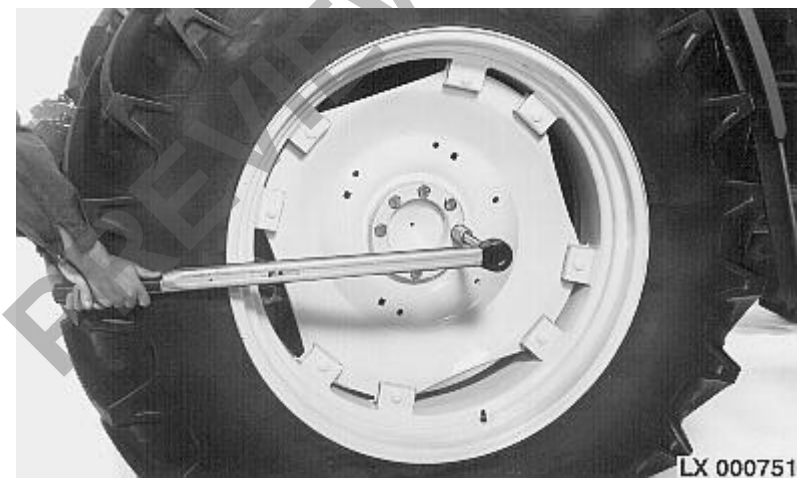
For further assembly, reverse disassembly procedure.

IMPORTANT:

Close front axle control valves.

IMPORTANT:

After installing right-hand main frame, bleed the brakes. See Section 60, Bleed brake system

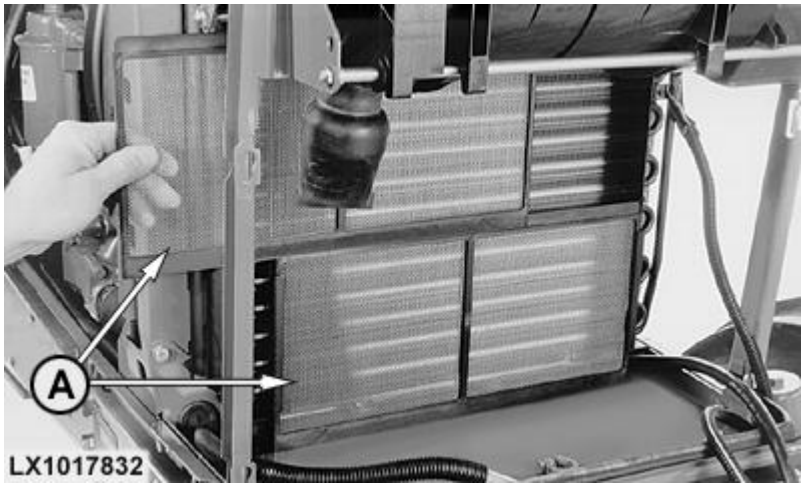


Install rear wheel.

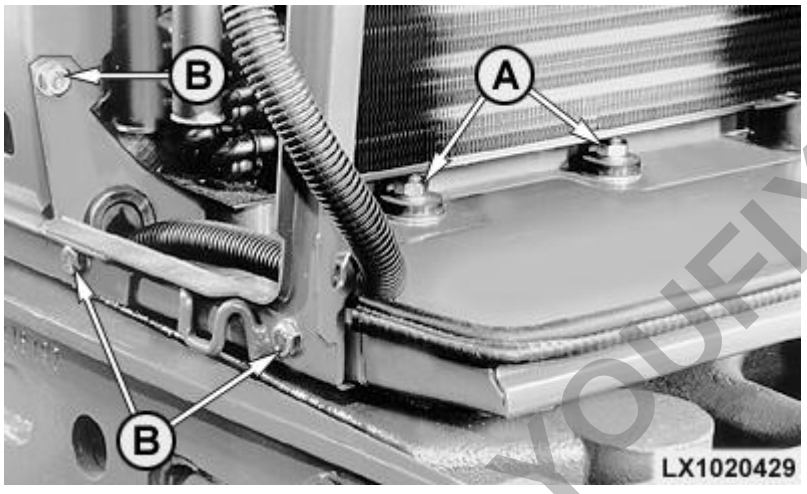
Tighten cap screws to 500 N·m (370 lb-ft).

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Remove screens (A; if equipped).



Remove nuts (A).

At both sides of the battery platform, take out screws (B).

Raise the front frame slightly and remove the battery platform.

IMPORTANT:

Do not raise the front frame much. Make sure no components (e.g. fan shroud) are damaged.

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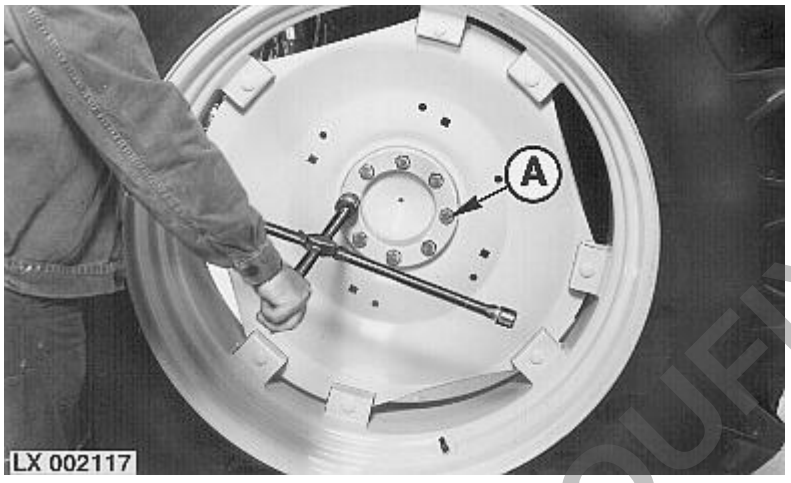
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turning adjusting pin (D).

→NOTE:

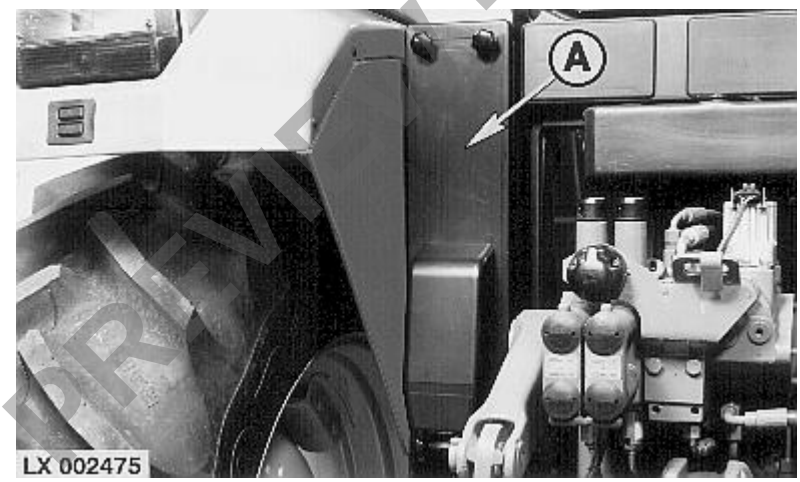
Before taking the wheel off, remove the adjusting pin to prevent the pinion from breaking.

Tractors With Flanged Rear Axle



Remove the rear wheel on the r,h, side.

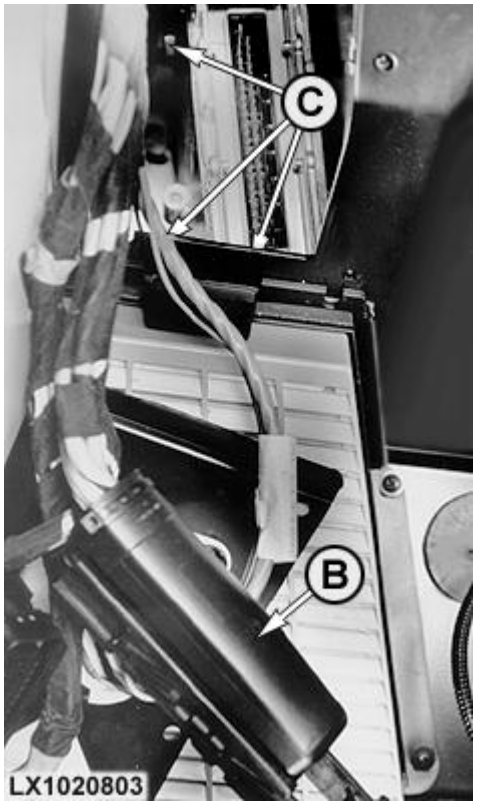
Take out cap screws (A) and remove the rear wheel.



Remove the left-hand cab air filter (A).

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Pull out rail and remove plug (B).

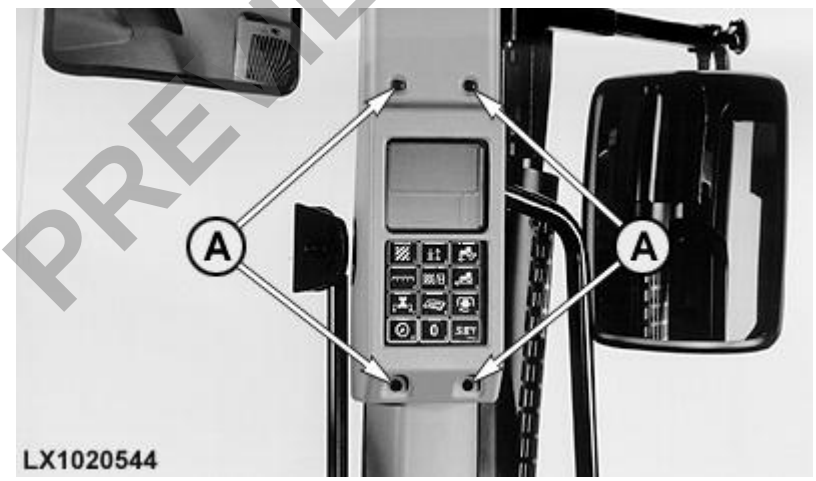
Remove retaining sleeves (C).

For installation, reverse removal procedure.

A new electronic control unit has to be calibrated (see Technical Manual, Section 255, Group 10B or Section 270, Group 15).

Replacing Performance Monitor (PRF)

[if equipped]



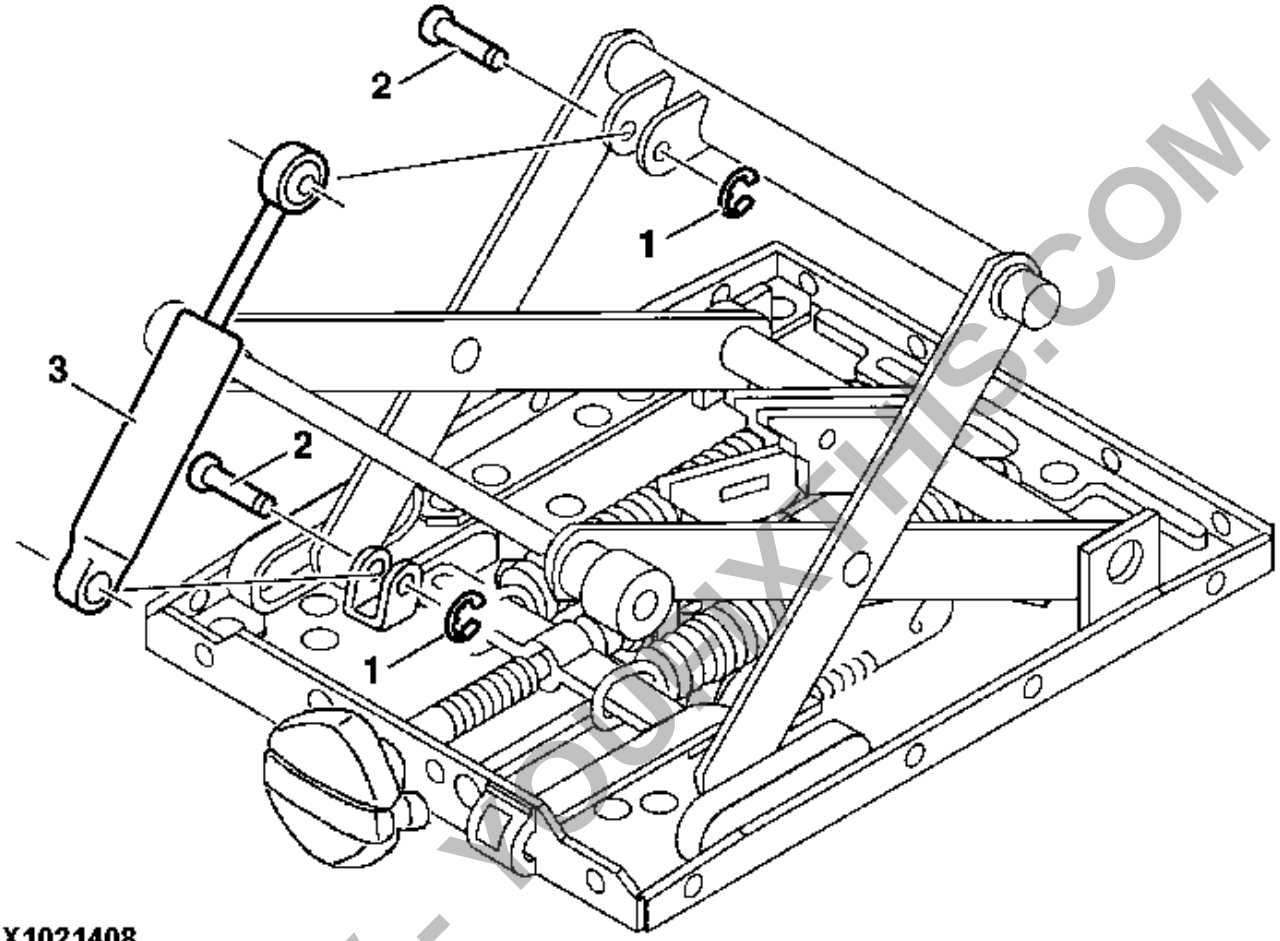
The performance monitor is located at the right-hand front cab post (seen in direction of forward travel.

Remove cap screws (A).

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Removing and Installing the Vertical Shock Absorber



LX1021408

Remove upper part of seat.

Remove the boot.

Remove upper section of spring assembly.

Take off snap rings (1) and pull out pins (2).

Remove the vertical shock absorber (3).

→NOTE:

The decal on the vertical shock absorber must face upward.

Install in reverse order.

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