



Service Manual

Chassis, Mast & Options

EP10KRT	ETB10-00011-up
EP12KRT	ETB10-20001-up
EP15KRT	ETB10-50001-up

Basic Check

Always following basic troubleshooting steps.

- Talk to the operator.
- Confirm his description of the problem with an operational check.
- Visually inspect cables, connectors, contactor tips, etc.
- Perform basic battery cables to frame resistance test. (at least 20 k ohm)
- Check battery condition.

Always check each option and write down the reading.

Testing Tools

- (a) Circuit tester
- (b) Clamp meter
- (c) IC tip
- (d) Digital console (Refer to Page 3-25.)

NOTE

The illustrations show digital circuit testers. In these testers, the positive (+) terminal is applied with positive charge, and the negative (-) terminal with negative charge. It should be noted that the terminals must be connected inversely when using an tester.

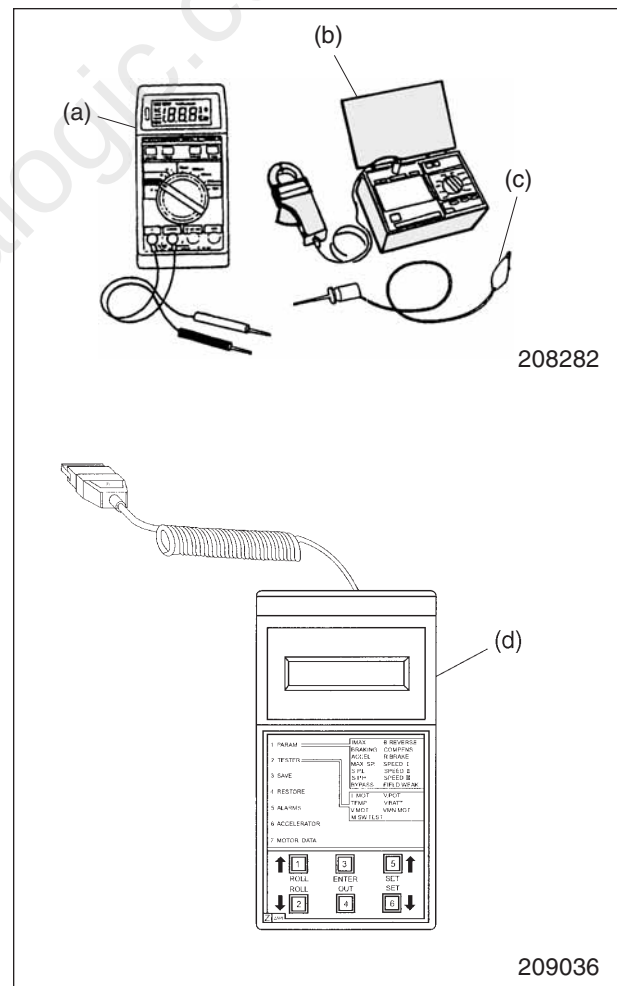
! WARNING

Disconnect the battery plug before inspecting or adjusting the controller.

Measurement of Logic Card Voltage

! WARNING

To prevent accidental movement of the vehicle, place wood blocks under the vehicle to lift the rear wheel off the ground. Do not stand close to the rear wheel.



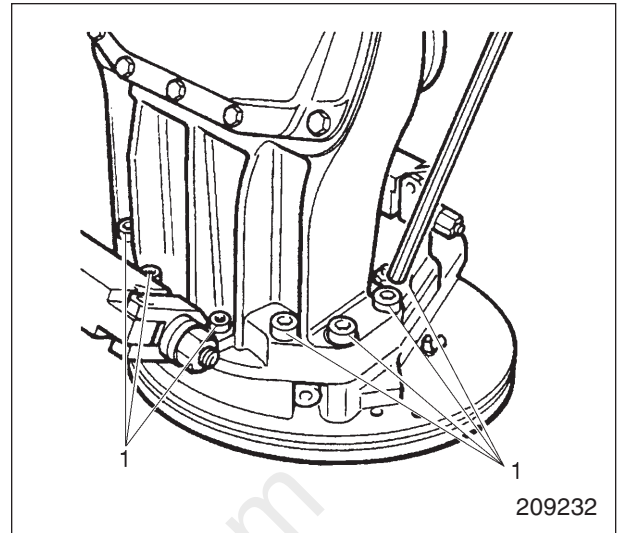
2. Remove housing top section

Loosen and remove the socket head bolts 1 on the bottom side of the rear axle housing as well as inside the housing top section.

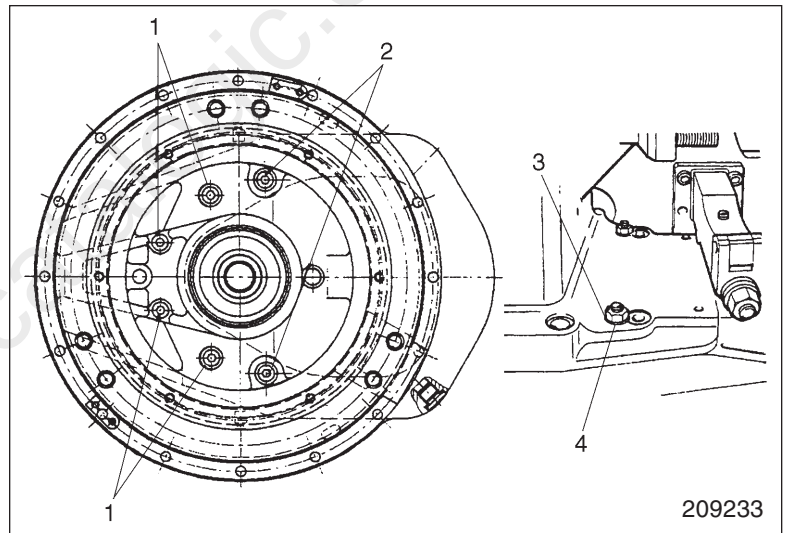
5xM8x35

2xM8x50

8xM10x45



This rear axle version has the housing top section additionally fastened to the axle housing by means of two socket head bolts 2, hexagon nuts 3 and washers 4.

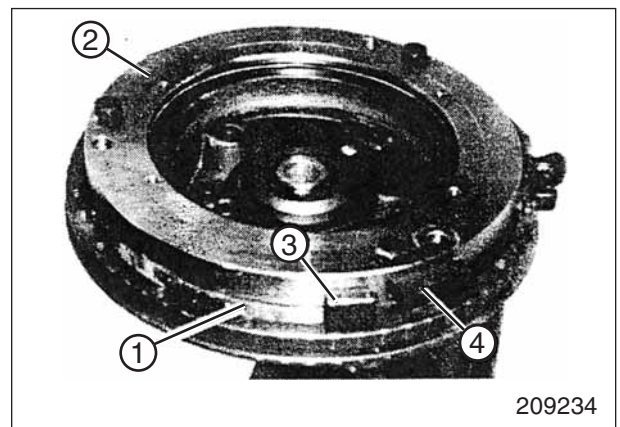


For motor fixing the centering ring 2 is bolted onto the pivoting bearing 1.

Two final stops 3 on the chain tread and the lock plate 4 connected with the centering ring are required for the steering lock.

NOTE

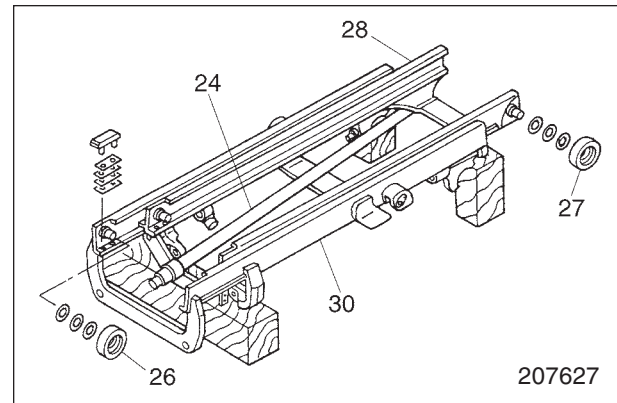
Only in case of damage, does the lock plate and the two final stops have to be removed and replaced.



MAST AND FORK

4. Removing main rollers 26, 27 from middle mast 28 and outer mast 30

Remove the bolts that are holding second lift cylinders 24. Place the cylinder rod ends on the outer mast. Lower middle mast 28 until main rollers 26, 27 can be removed. Then, remove the main rollers.



Removal and Installation

Drive Motor

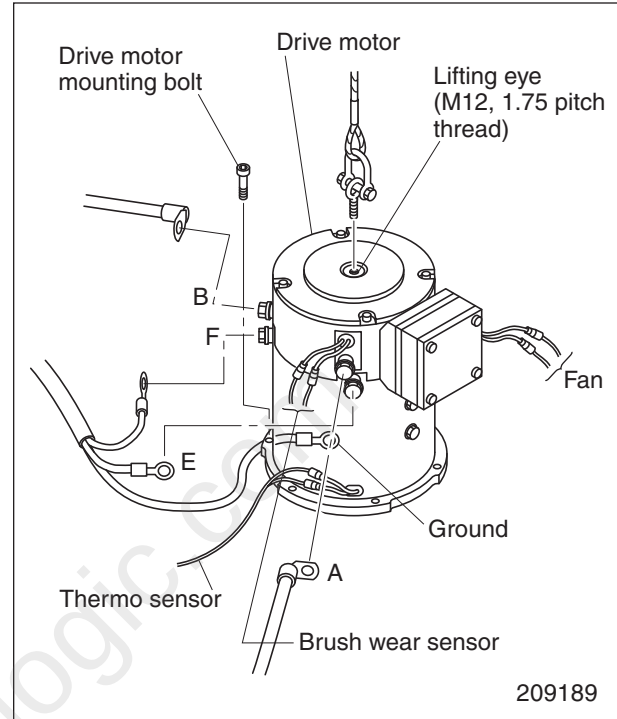
Removal

- (1) Park the truck on a flat surface in the service area.
- (2) Turn off (press) the battery switch, then disconnect the battery cable by detaching the plug from the jack on the side of the battery box.
- (3) Remove the battery cover.
- (4) Remove the rear cover.
- (5) Disconnect all the cables and harnesses that are connected to the motor terminals and sensors. Put marks as necessary to facilitate reconnection.
- (6) Screw an eyebolt (M12, 1.75 pitch) into the motor shaft and attach it to a hoist using a sling.
- (7) Remove the six motor mounting bolts (hex socket bolts), then hoist away the motor from the truck.

Installation

Follow the removal sequence in reverse while respecting the following instructions.

- (1) Apply molybdenum grease to the splines on the shaft.
- (2) When installing the motor on the truck, use guide bolts while making sure each section of the motor faces in the correct direction.
- (3) Tighten the motor mounting bolts to a torque equivalent to that specified for 7T bolts.
- (4) Install the terminal of each cable such that it does not interfere with another.
- (5) Each cable terminal should be properly covered with a boot.



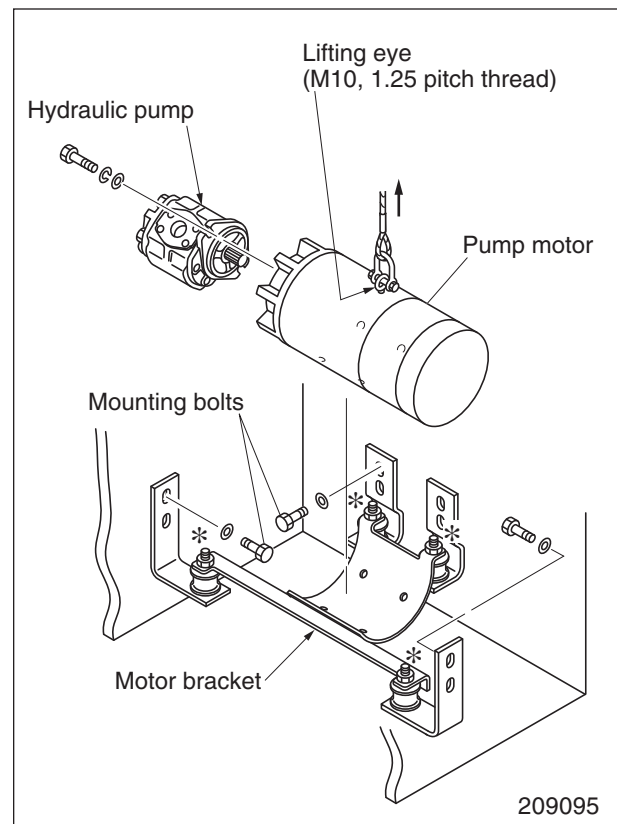
Pump Motor

Removal

- (1) Remove the hydraulic pump complete with the bracket from the truck following the instructions on page 10-14.
- (2) Separate the hydraulic pump from the pump motor.
NOTE: Remove the nuts marked * if the bracket is to be hoisted up.

Installation

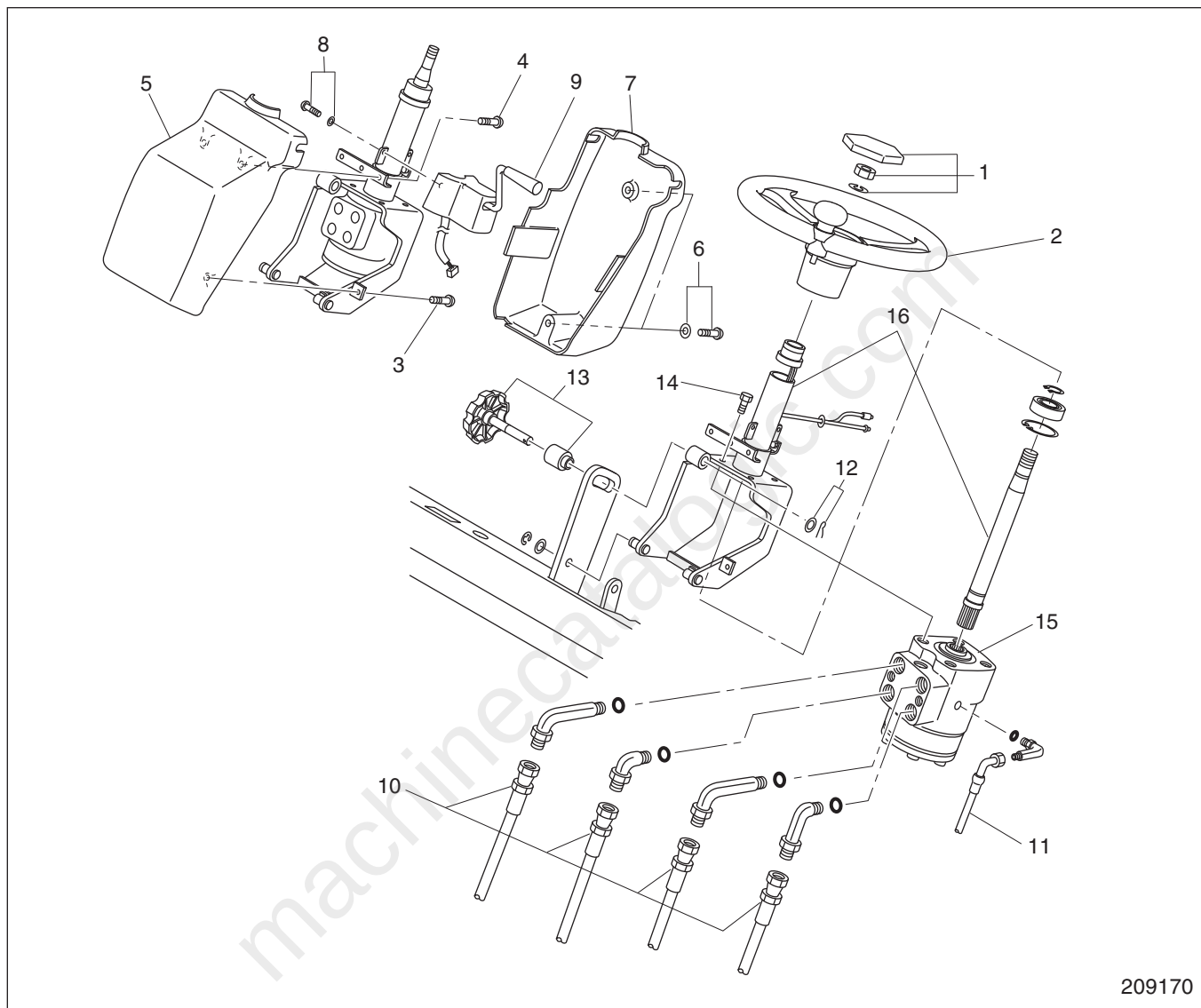
- (1) Apply molybdenum grease to the internal splines in the shaft before assembling the hydraulic pump.
- (2) Respect the same instructions about installation of cables and harnesses described in the "Drive Motor" section above.



Removal and Installation

Steering Column Assembly

Removal

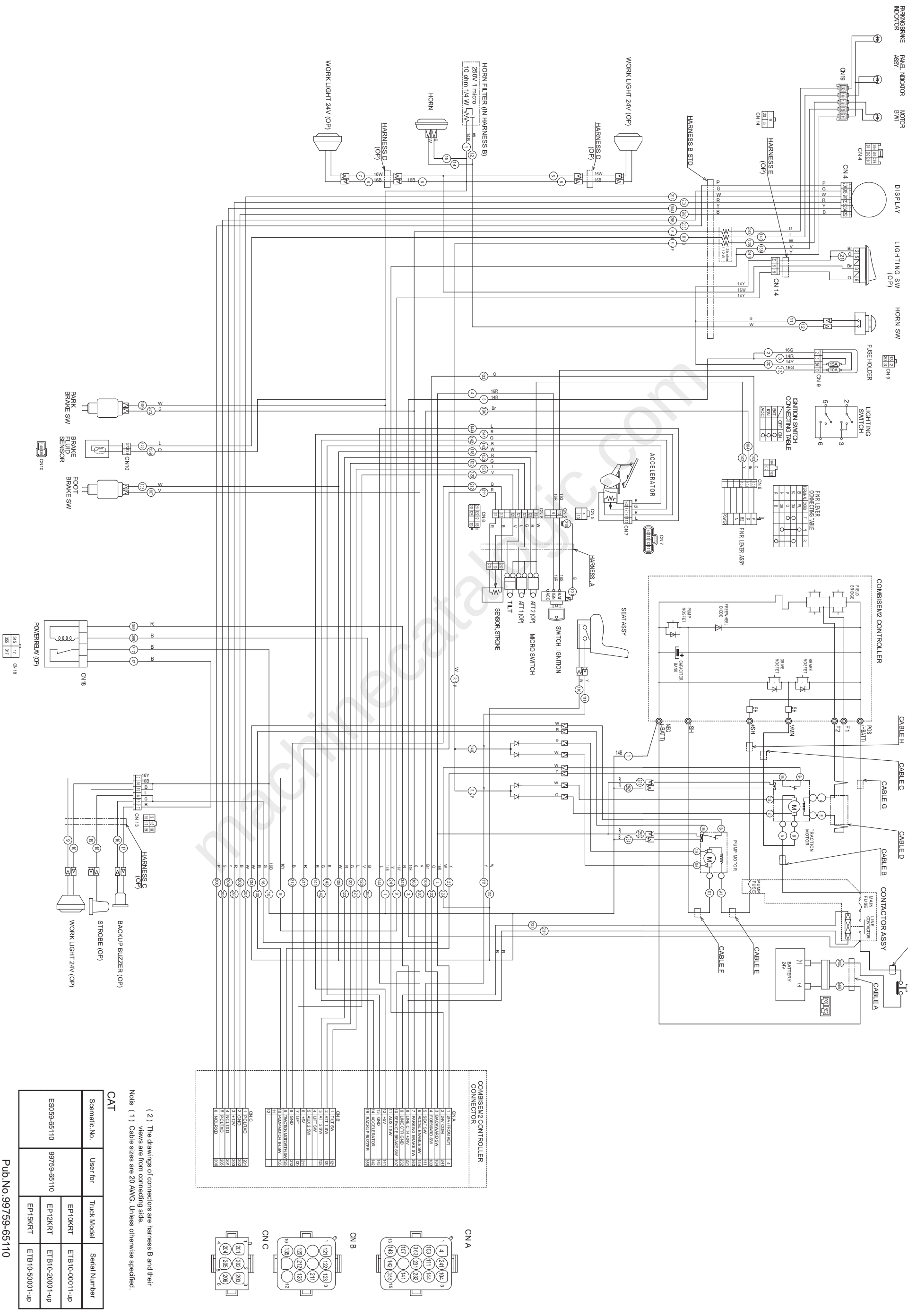


209170

Sequence

- | | | | |
|---|---------------------------------|----|--------------------------|
| 1 | Horn button, Nut, Spring washer | 9 | F·N·R lever assembly |
| 2 | Steering wheel | 10 | Steering hydraulic lines |
| 3 | Tapping screw | 11 | LS pressure line |
| 4 | Tapping screw | 12 | Split pin, Plain washer |
| 5 | Front cover | 13 | Knob bolt, Spacer |
| 6 | Machine screw | 14 | Bolt |
| 7 | Rear cover | 15 | Steering valve assembly |
| 8 | Machine screw, Washer | 16 | Column assembly |

Electrical Schematic (Type : Chopper)



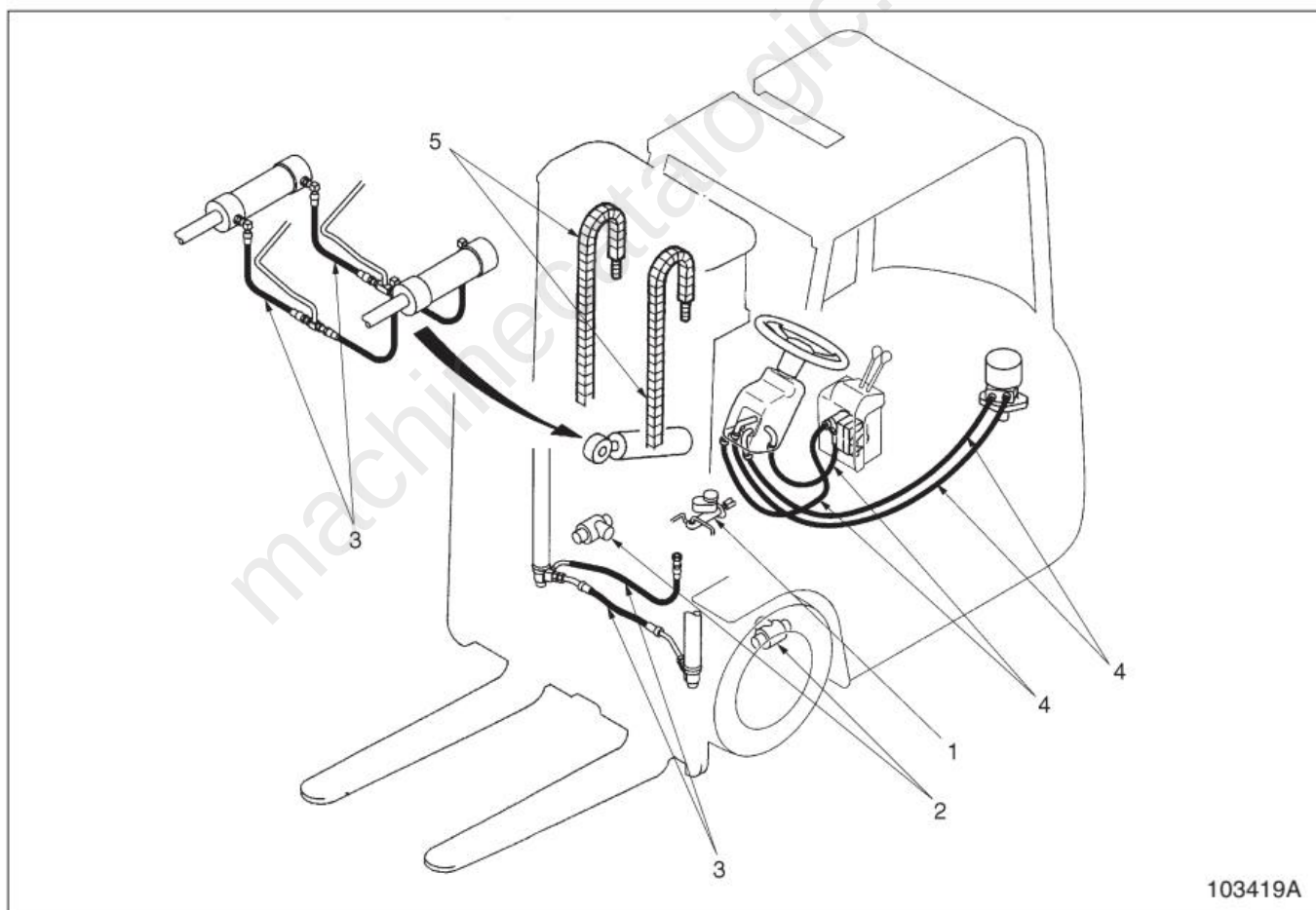
Planned Replacement of Parts

The following parts should be periodically changed as noted below.

These parts are made of materials which will deteriorate with time. Further, it is difficult to determine visually whether or not they are still in good condition. Changing at proper intervals will reduce the chance of injury to the operator and damage to the truck.

NOTICE: Periodic change of these parts is not covered by *Warranty*.

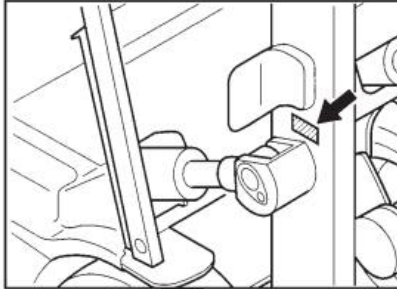
Ref. No.	Parts to be changed	Interval
1	Rubber parts of brake master cylinder	2400 service hours or 2 years, whichever comes first
2	Rubber parts of wheel cylinders	2400 service hours or 2 years, whichever comes first
3	High-pressure hoses of hydraulic system	2400 to 4800 service hours or 2 to 4 years, whichever comes first
4	Power steering hoses	4800 service hours or 4 years, whichever comes first
5	Lift chains	4800 service hours or 4 years, whichever comes first



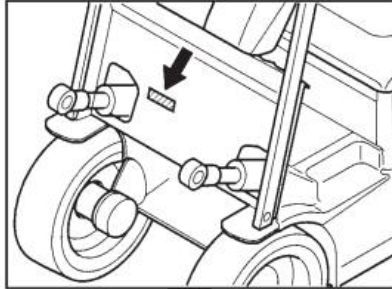
103419A

Serial Number Locations

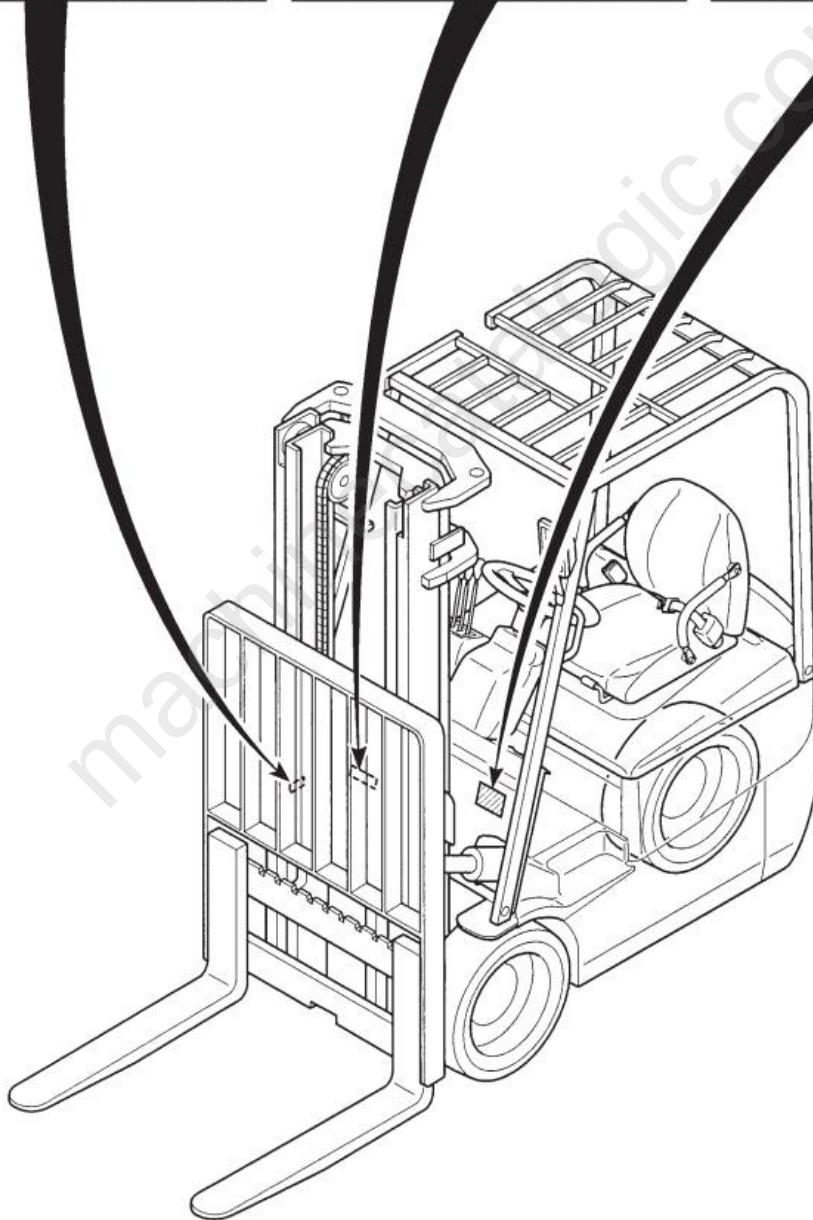
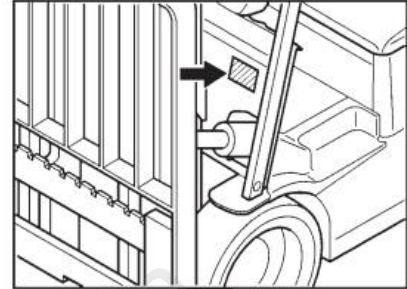
Mast number



Chassis number



Nameplate



209010

Full Version Available

Caterpillar EP15KRT Forklift Service Manual (99759-65110)

Caterpillar EP15KRT Forklift service manual, covers electric drive, hydraulics, mast, brakes, and wiring. Searchable PDF download.

[VIEW THE FULL MANUAL](https://machinecatalogic.com/caterpillar-ep15krt-forklift-service-manual-99759-65110/)

<https://machinecatalogic.com/caterpillar-ep15krt-forklift-service-manual-99759-65110/>