

Document Title: <b>Introduction</b>	Function Group: <b>500</b>	Information Type: <b>Service Information</b>	Date: <b>2014/6/26</b>
Profile:			

## Introduction

A30C has an air-hydraulic service brake system, which acts on all wheels.

The parking brake is of the air-mechanical type acting on the propeller shaft. It is applied by spring force and released by compressed air. Service and parking brakes are disc brakes with one or more brake calipers per disc.

The engine is provided with a direct-drive, single-cylinder, water-cooled compressor and separate unloading – pressure regulator for the compressed-air supply. The machine has two reservoirs on the tractor unit and one on the trailer unit for storing compressed air.

The service brakes are operated through a foot brake valve which has two circuits. The brake valve regulates the brake pressure to the air-hydraulic units the tractor unit directly and on the trailer unit via a relay valve. The air-hydraulic units have a diaphragm which is actuated by the compressed air. The diaphragm is attached to a piston rod. This transfers force to a piston which in turn acts on the brake fluid. The area difference between the diaphragm and the piston is large and this boosts the pressure on the brake fluid. The brake fluid actuates the pistons in the brake calipers. The four air-hydraulic units, two for the front axle and two for the trailer unit, have reservoirs for brake fluid. These are positioned directly on the brake units on the trailer unit and separately with connecting hoses on the tractor unit.

When the parking brake is applied, also the longitudinal differential lock will be engaged, this in order to make the parking brake act on more wheels.

### **Load and dump brake (serial No. 2901–, US 60001–)**

The load and dump brake is a function which causes the trailer unit service brakes to be applied when the parking brake is applied. This takes place provided that the air system is pressurised and that the ignition switch is in the running position.

The purpose of the load and dump brake is to improve the braking capacity of the parking brake when the machine is being loaded or is dumping a load.

### **Engagement of load and dump brake, overview**

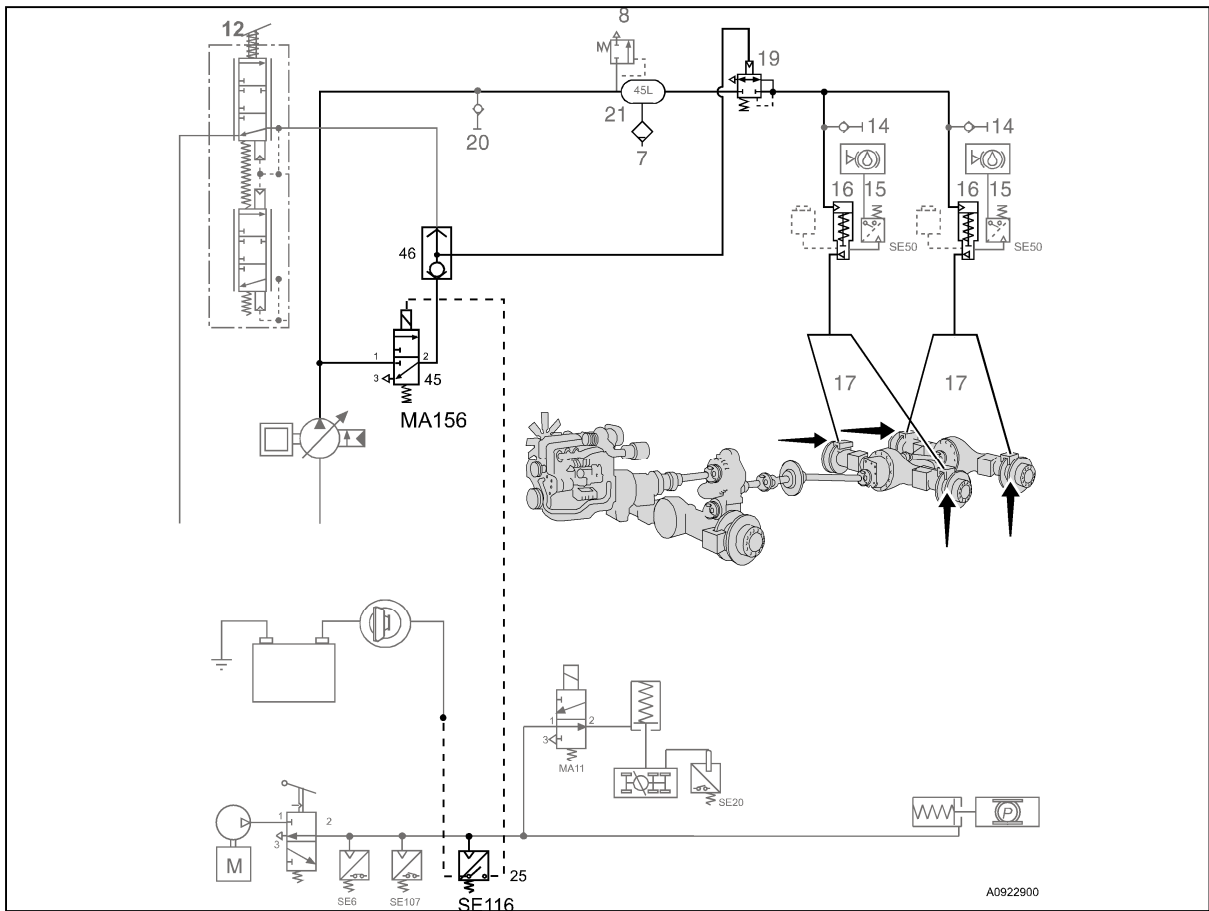
Engagement, position and component parts, see [Invalid linktarget] .

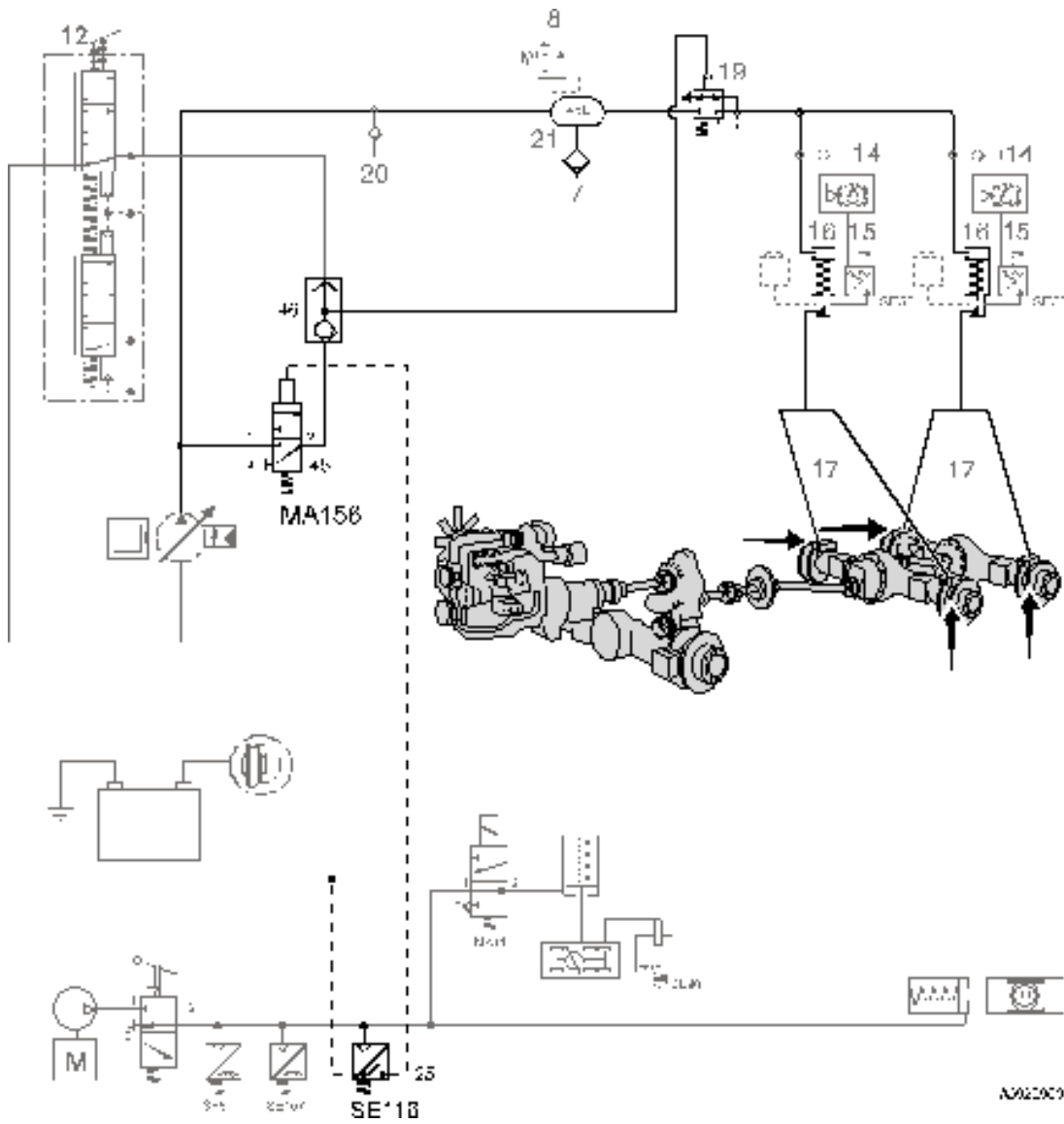
## **WARNING**

**The parking brake is not dimensioned to take up the forces from a moving machine. Therefore, do not use the parking brake as service brakes, even if the machine is equipped with a load and dump brake.**

## **CAUTION**

However, the parking brake may be used as an emergency brake, but only if the ordinary brake system has ceased to function.





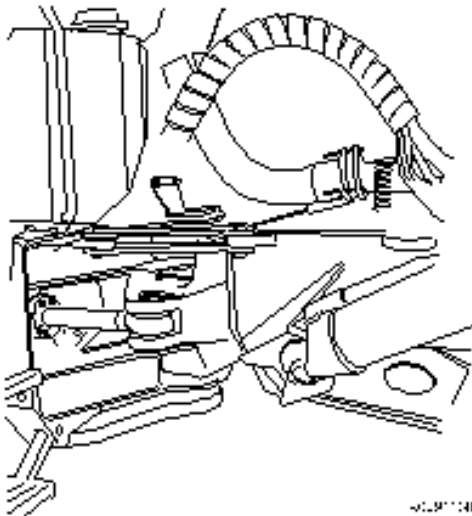
**Figure 1**  
**Load and dump brake. Engagement, position and component parts. (The item numbers refer to the item list on page 58.)**

Document Title: <b>Brake disc for service brakes, checking</b>	Function Group: <b>510</b>	Information Type: <b>Service Information</b>	Date: <b>2014/6/26</b>
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## Brake disc for service brakes, checking

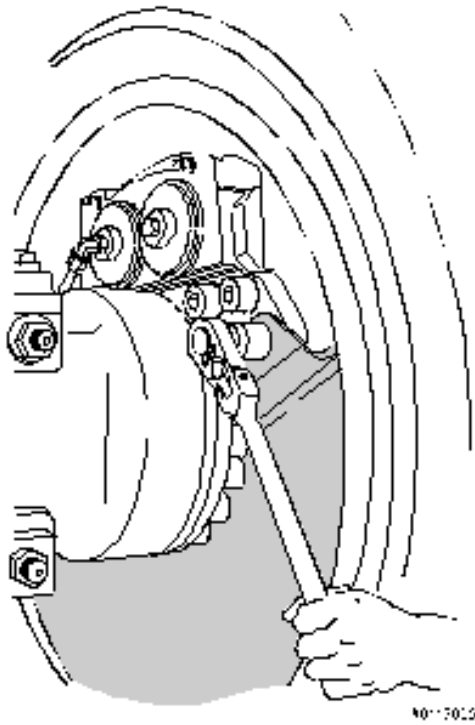
### Op nbr 51002

Torque wrench 0–200 N m (148 lbf ft)



**Figure 1**

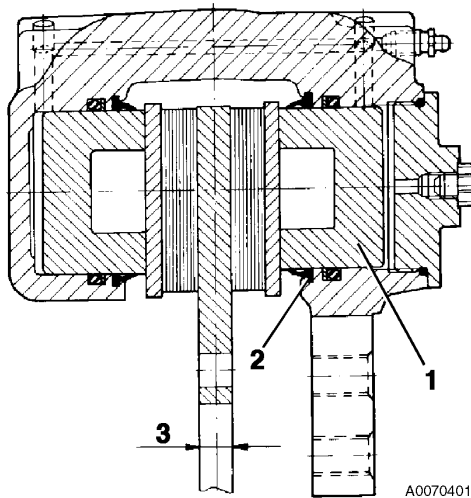
1. Place the machine in service position, i.e. the machine should stand on level and hard ground. The steering joint lock should be connected and at least one wheel blocked.
2. Remove the brake guard which is attached with two bolts. See [Invalid linktarget] .



**Figure 2**  
**Removing brake guard**

3. Check the brake disc wear. See [Invalid linktarget] .

**Min. thickness of service brake discs is 13 mm (0.51 in).**



**Figure 3**  
**Brake caliper, complete**

1. Brake piston
  2. Scraper seal
  3. Min. thickness (13 mm) (0.51 in)
4. Bolt on the brake guard with the two bolts.  
Tightening torque: **91 N m** (9.1 kgf m) (67 lbf ft).

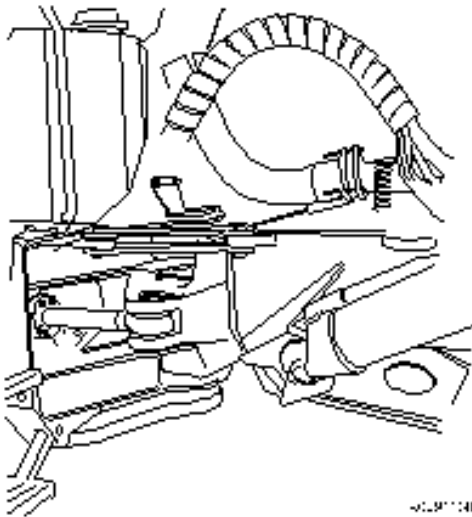
Document Title: <b>Brake pads for service brakes</b>	Function Group: <b>510</b>	Information Type: <b>Service Information</b>	Date: <b>2014/6/26</b>
Profile:			

## Brake pads for service brakes

### Op nbr

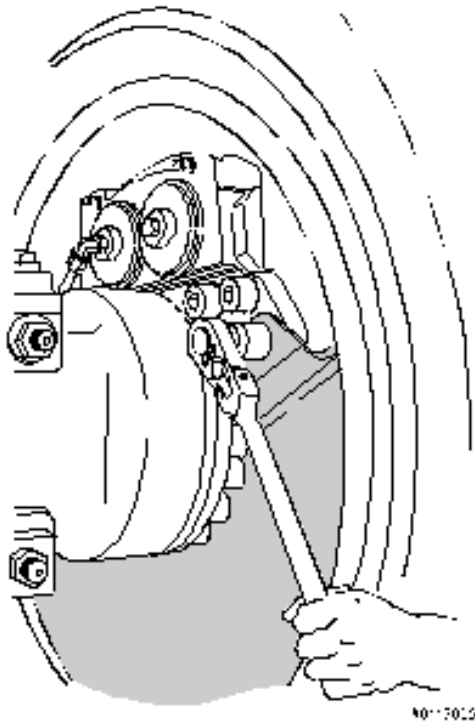
Torque wrench 0–200 N m (148 lbf ft)

Op. number	51001 (checking wear, all axles)
Op. number	51101 (checking front axle)
Op. number	51201 (checking wear, rear axle)



**Figure 1**

1. Place the machine in service position, i.e. the machine should stand on level and hard ground. The steering joint lock should be connected and at least one wheel blocked.
2. Remove the brake guard which is attached with two bolts. See [Invalid linktarget] .

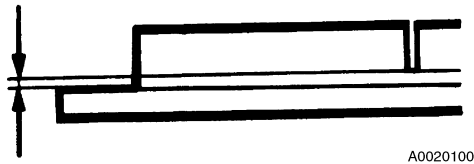


**Figure 2**  
**Removing brake guard**

3. Check the wear of the brake pads. See [Invalid linktarget] .  
**The minimum thickness of the service and parking brake pads (linings) is 3 mm (0.12 in).**

**⚠ CAUTION**

The pads must not be worn down below a lining thickness of 3 mm (0.12 in), as the pistons in the brake calipers and the brake discs may be damaged.



**Figure 3**  
**Minimum thickness of brake pads (linings) is 3 mm (0.12 in)**

4. Bolt on the brake guard with the two bolts.  
Tightening torque: **91 N m** (9.1 kgf m) (67 lbf ft).

Document Title: <b>Brake caliper, replacing</b>	Function Group: <b>511</b>	Information Type: <b>Service Information</b>	Date: <b>2014/6/26</b>
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## Brake caliper, replacing

### Op nbr

11 668 007 Stand jack (or similar equipment)

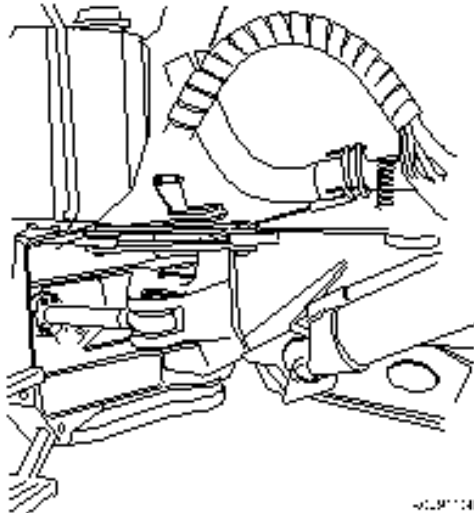
Wheel handling trolley (or similar equipment)

Op. number                                    51145 (Front axle)

Op. number                                    51245 (Rear axle)

### Removing

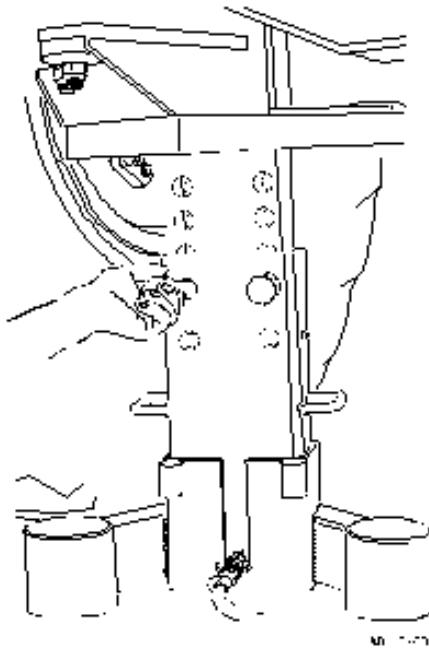
1. Place the machine in service position, i.e. the machine should stand on level and hard ground. The steering joint lock should be connected and at least one wheel blocked.



**Figure 1**

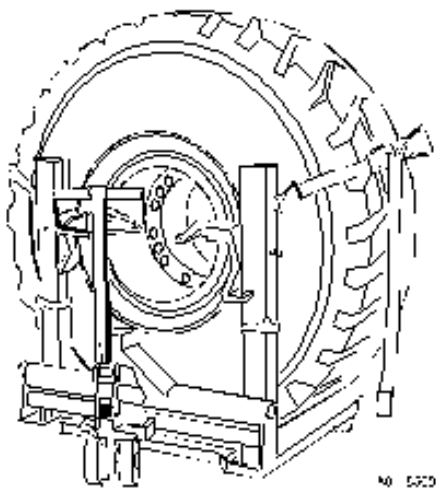
2. Lift the axle with a stand jack (or alternatively with a jack and axle stand), see [Invalid linktarget] .



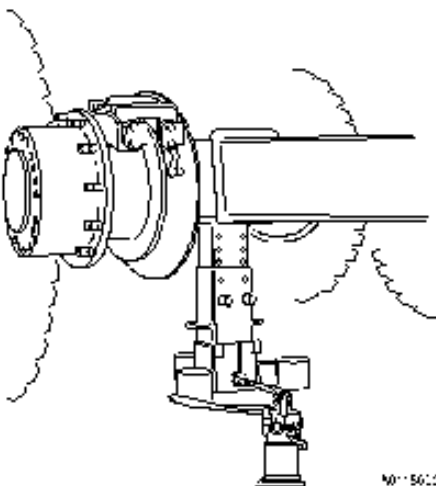


**Figure 2**

3. Remove the wheel with a wheel handling trolley or equivalent equipment, see [Invalid linktarget] and [Invalid linktarget] .



**Figure 3**

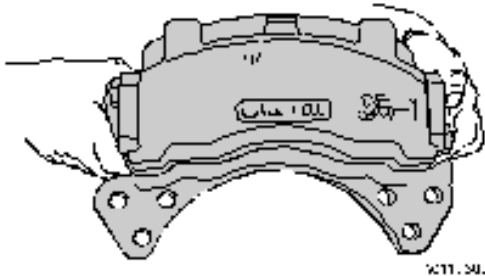


**Figure 4**

4. Remove the brake guard.
5. Disconnect the brake pipe and remove the brake caliper. See [Invalid linktarget] .

**CAUTION**

Plug the connections.

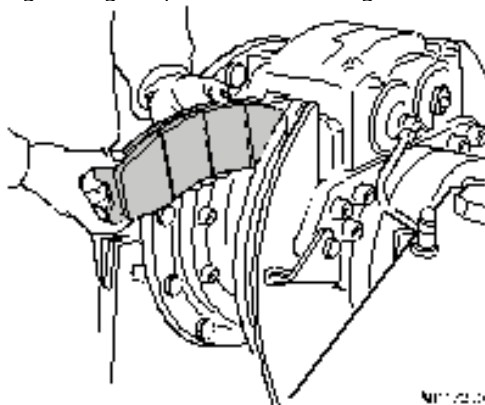


**Figure 5**  
**Removing brake caliper**

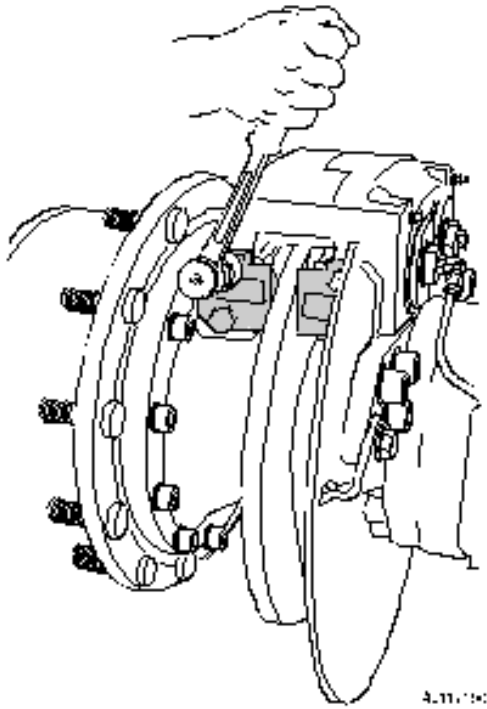
6. Check the brake disc as regards wear and damage.

### Installing

7. Install the brake caliper.  
Tightening torque: **550 N m** (55.0 kgf m) (406 lbf ft).  
Install the brake pipe.
8. Install the brake pads in the caliper. See [Invalid linktarget] . Apply locking fluid (medium locking) to the bolts and install the stop. See [Invalid linktarget] .  
Tightening torque: **240 N m** (24 kgf m) (177 lbf ft).



**Figure 6**  
**Installing brake pad**



**Figure 7**  
**Installing stops**

9. Bleed the brake caliper according to [Invalid linktarget] .

**NOTE!**

Only the system on the axle on which work has been carried out needs to be bled.

10. Install the wheel and tighten the nuts to **800 N m** (80 kgf m) (590 lbf ft). Remove the stand jack.
11. Fit the brake guard.  
Tightening torque for the bolts: **90 N m** (9 kgf m) (66 lbf ft).
12. Test the function.  
Apply the brakes 4–5 times to check the function. If necessary increase the pressure.

**Thank you very much for reading.**

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