

Document Title: Description	Function Group: 500	Information Type: Service Information	Date: 2014/7/7 0
Profile:			

Description

Articulated hauler A30C is equipped with a compressed air-hydraulic brake system affecting the service brake on all wheels. The parking brake acts by compressed air on the propeller shaft. It is applied by spring force and is released with compressed air. The service brake and parking brake are disc type brakes with one or more brake calipers per disc.

The engine is equipped with a direct drive one-cylinder water-cooled compressor and separate unloading-pressure regulator for supply of compressed air. A30C has two accumulators on the tractor unit and one accumulator on the load unit for storing compressed air.

Operation of the service brake is achieved through a dual-circuit service brake (foot brake) valve. The valve regulates the brake pressure directly on the tractor unit and on the load unit by way of a relay valve to the compressed air-hydraulic brake units. The brake units have a diaphragm affected by the compressed air. The diaphragm is attached to a piston rod. The piston rod transfers the force to a piston pressing on the brake fluid. The area differential between the diaphragm and the piston is large, resulting in a pressure increase on the brake fluid. The brake fluid acts on the pistons in the brake calipers. The four compressed air-hydraulic units, two for the front axle and two for the load unit, have reservoirs for brake fluid. The load unit reservoir tank is located on the brake unit and separate with a hose connection to the tractor unit.

The longitudinal differential is engaged when the parking brake is applied in order to allow the parking brake to act on several wheels simultaneously.

Document Title: Brake discs, changing	Function Group: 510	Information Type: Service Information	Date: 2014/7/7 0
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Brake discs, changing

Op nbr 51102

[E 1666 Hub lifting device](#)

[E 1667 Lifting device](#)

Wheel forklift or equivalent equipment

11668004 Sleeve (hub nut)

Garage jack 10 ton (22 050 lbs.)

Torque wrench 0–1000 Nm (0 - 738 ft.lbs)

Removing

1. Park the machine on a firm and level surface (service position) and block at least one of the wheels.
2. Remove the wheel using a wheel forklift or equivalent equipment, see fig.

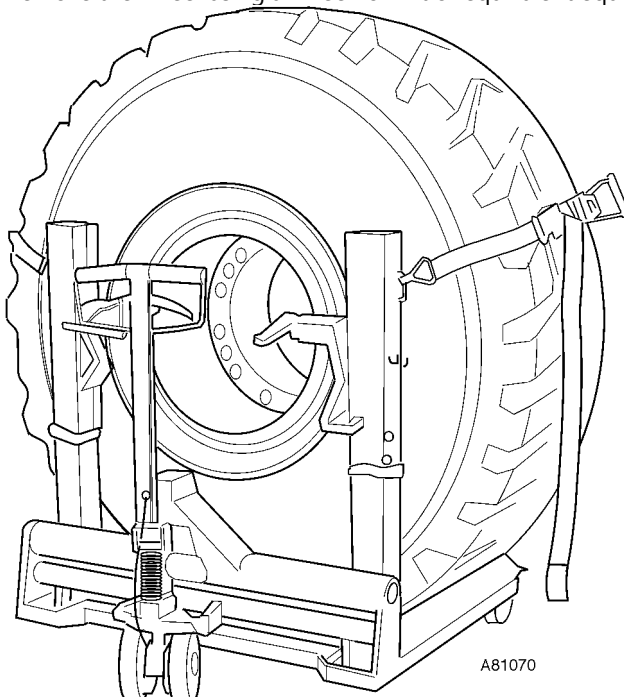


Figure 1
Wheel forklift

3. Secure with a support stand. Position the axle so that the oil does not drain from the axle housing . Drain the oil out of the hub and axle center through the plug in the hub.

4. Remove brake shields, brake pads, brake lines and brake caliper. Plug brake pipes and hoses.
5. Remove the bolts for the planetary retainer.

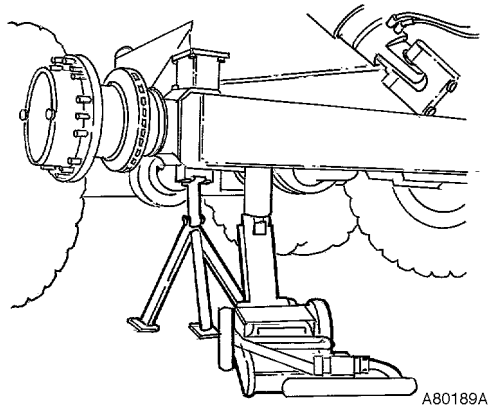


Figure 2
Lifting of axle, bogie

6. Set up E 1666, Hub lifting device.
7. Use thread protectors 10x 35 mm to make sure that the threads in the hub are not damaged by the puller bolts.
8. Fit guide pins M12xM120 in two holes. Use puller bolts M16x60. Pull out the planetary retainer on the guide pins and lower.

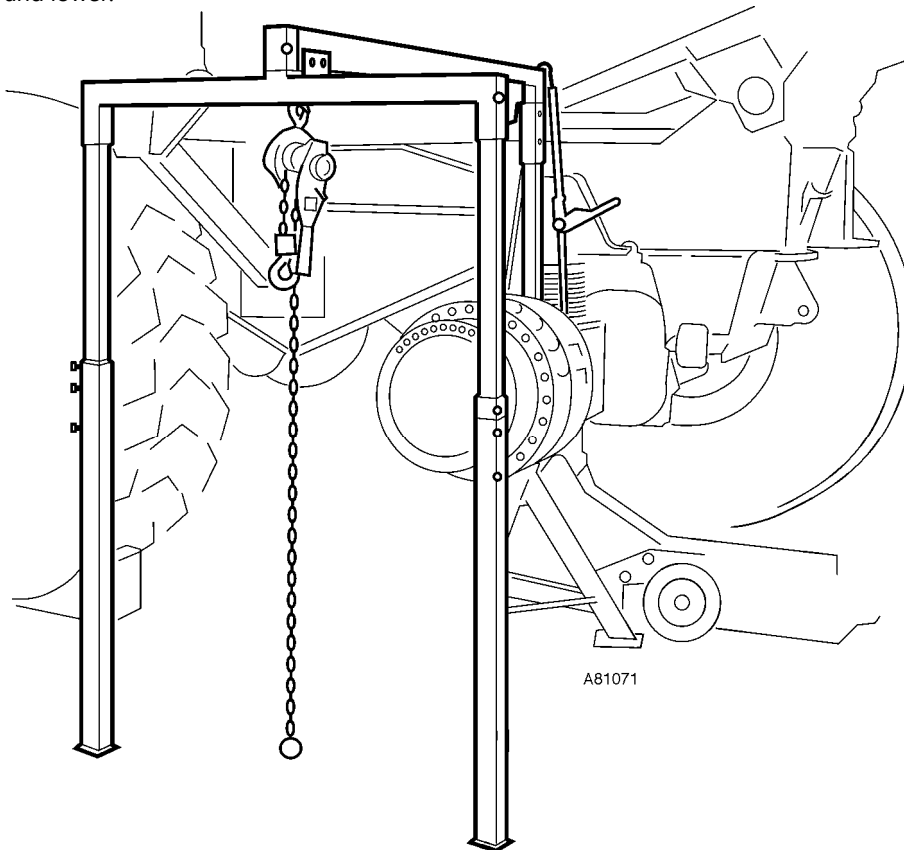


Figure 3

9. Remove the retaining ring and the sun gear on the drive axle. Leave the axle in place.
10. Remove the locking ring and the lock washer on the axle.

11. Loosen and remove hub nut with sleeve 11668004.

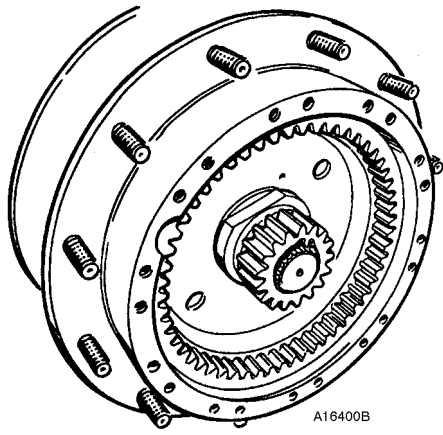


Figure 4

12. Secure the ring gear with two bolts and two large washers so that it does not fall out of the hub.

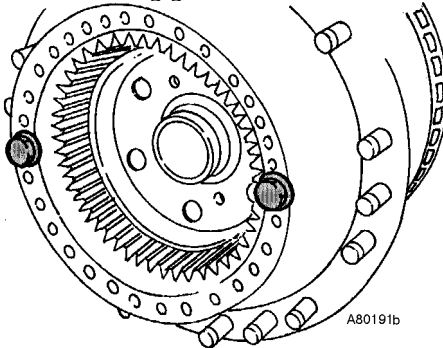


Figure 5

13. Hook up the hub with E 1667 Hub lifting device and lift away hub complete with ring gear, see fig.

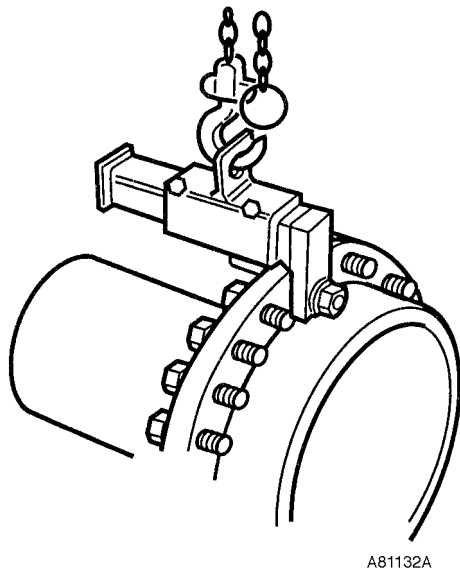


Figure 6

14. Place the hub on the floor with the brake disc up.
15. Remove the old brake disc and replace with a new disc. Fit new spring washers.

16. Change seal. Also replace the wear ring if there is noticeable wear.

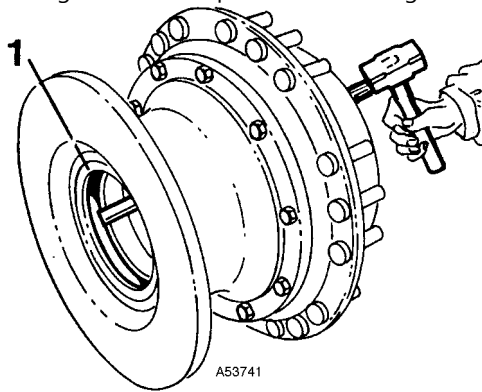


Figure 7

17. Lift up the hub complete with ring gear.
18. Torque the hub with **600–800 Nm (442.6 - 590 ft.lbs)** using sleeve 11668004.
19. Turn the hub 4–5 turns and loosen hub nut 1/2 turn.
20. Torque the hub nut to **300 Nm (221.3 ft.lbs)**.

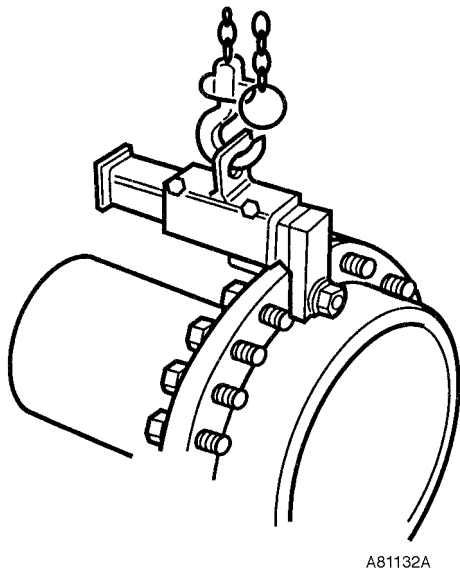


Figure 8

21. Adjust the indicator pin on sleeve 11668004 so that it corresponds to one of the bolt holes in the hub.
22. Tighten hub nut until the indicator pin reaches the next hole (12°) in the hub.
23. Mount the lock washer and retaining ring.

CAUTION

Never loosen the hub nut to fit the lock washer. The lock washer is available in two different types.

24. Fit sun gear with retaining ring.
25. Clean the planetary carrier and hub. Apply new sealant.
26. Mount the planetary carrier with a few bolts. Fit and tap in the guide pins. Torque to **110 Nm (81.1 ft.lbs)**.

27. Torque brake disc to **310 Nm (228.7 ft.lbs)**.

28. Mount brake caliper and torque to **550 Nm (405.7 ft.lbs)**. Connect brake lines and hoses.

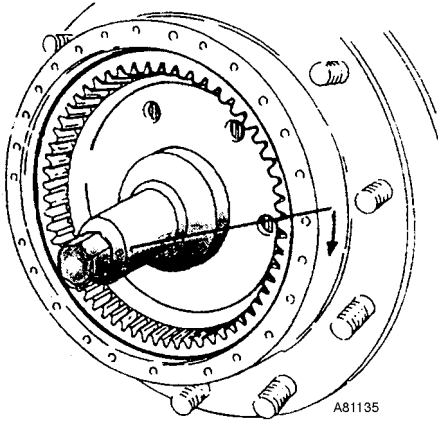


Figure 9

29. Mount the brake shoe. Lock the bolts using medium type locking fluid. Torque to **240 Nm (177.0 ft.lbs)**. Bleed brake system.

30. Mount the brake shields and wheel. Torque wheel nuts to **800 Nm (590 ft.lbs)**.

31. Check oil level in axle. Fill if needed. Remove wheel blocks.

32. Check functions.

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