

Boom, Dipper and Bucket Rams

Removal

- 1 With the engine idling, set the machine with the bucket on the ground.
- 2 Support the excavator under the angle between the dipper and boom to ensure it will not move when the ram is removed.
- 3 On boom and bucket rams, remove the protection plate. Support the ram under the gland bearing and remove locknut **A** and bolt **B** from the pivot at the eye end of the ram. Drive out the pivot pin **C**.

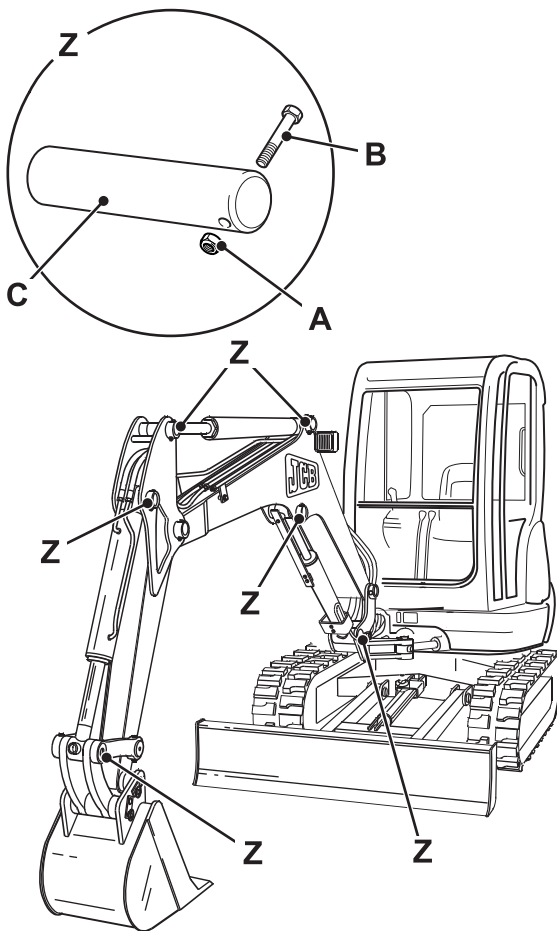


Fig 1.

- 4 With the engine idling, gently retract the ram rod into the cylinder by operating the relevant service.

- 5 Run the engine at idle and with the servo isolator lock in the operate position, move the control lever rapidly in both directions to vent any trapped pressure. Stop the engine.

⚠ WARNING

It is not possible to vent all residual pressure. Loosen the connection one full turn and allow the pressure to dissipate. Keep face and hands well clear of pressurised hydraulic oil and wear protective glasses.

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- 6 Support the ram and remove the locknut **A** and the bolt **B** from the pivot at the base of the piston. Drive out the pivot pin **C**. Disconnect the hoses. Remove the ram from the machine.

Replacement

- 1 Locate the pivot point on the ram into the location on the machine structure. Fit the pivot pin **C** and secure using the bolt **B** and new locknut **A**.
- 2 Support the ram under the gland end of the cylinder, reconnect the hoses. With the engine idling, slowly extend the ram until the eye end locates correctly in the machine structure. Fit pin **C**. Secure using the bolt **B** and new locknut **A**.
- 3 Apply grease to the pivot points through the grease nipples. For grease specification refer to Section 3, Fluids, Lubricants and Capacities.
- 4 Connect the hoses to the cylinder, torque tighten.
- 5 On the bucket and boom rams, fit the protection plate and secure using the bolts.

Dozer Ram

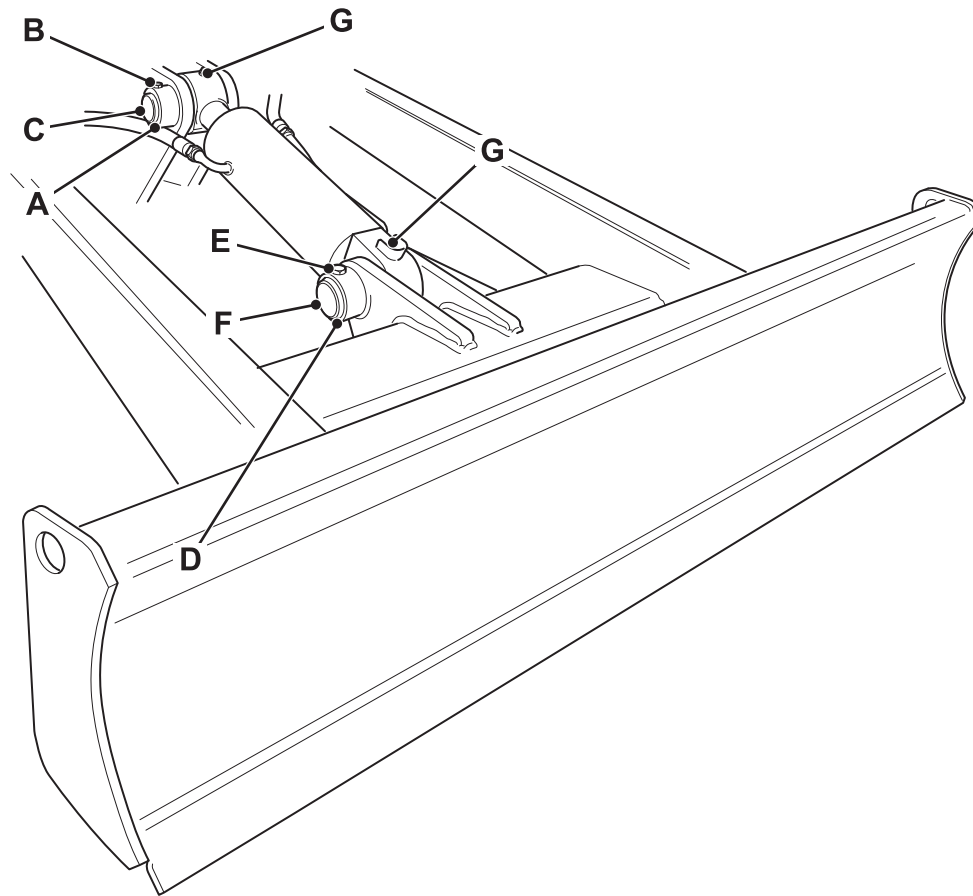


Fig 2.

Removal

- 1 Set the machine in the posture shown with the dozer grounded onto suitable supports.
- 2 With the starter switch turned OFF, relieve residual hydraulic pressure by operating the hydraulic controls.
- 3 Disconnect the hydraulic hoses. Blank off the hoses and the open ports of the ram.
- 4 Remove locknut **A** and the bolt **B** from the pivot at the rod end of the ram. Support the ram and drive out the pin **C**. Lower the ram end onto a suitable support.
- 5 Remove locknut **D** and bolt **E**. Support the ram and drive out pin **F**. Carefully remove the ram from the machine.

Replacement

- 1 Locate the pivot point on the cylinder end of the ram into the dozer frame.
- 2 Fit pivot pin **F** and secure with bolt **E** and new locknut **D**.
- 3 Fit the pivot point at the rod end of the ram to the machine.
- 4 Fit the pivot pin **C** and secure using the bolt **B** and new locknut **A**.
- 5 Apply grease to the pivot points through the grease nipples **G**.
- 6 Connect the hoses to the cylinder.

Note: For torque tightening and sealant information, refer to Section 1, Standard Torque Settings then Sealing and Retaining Compounds.