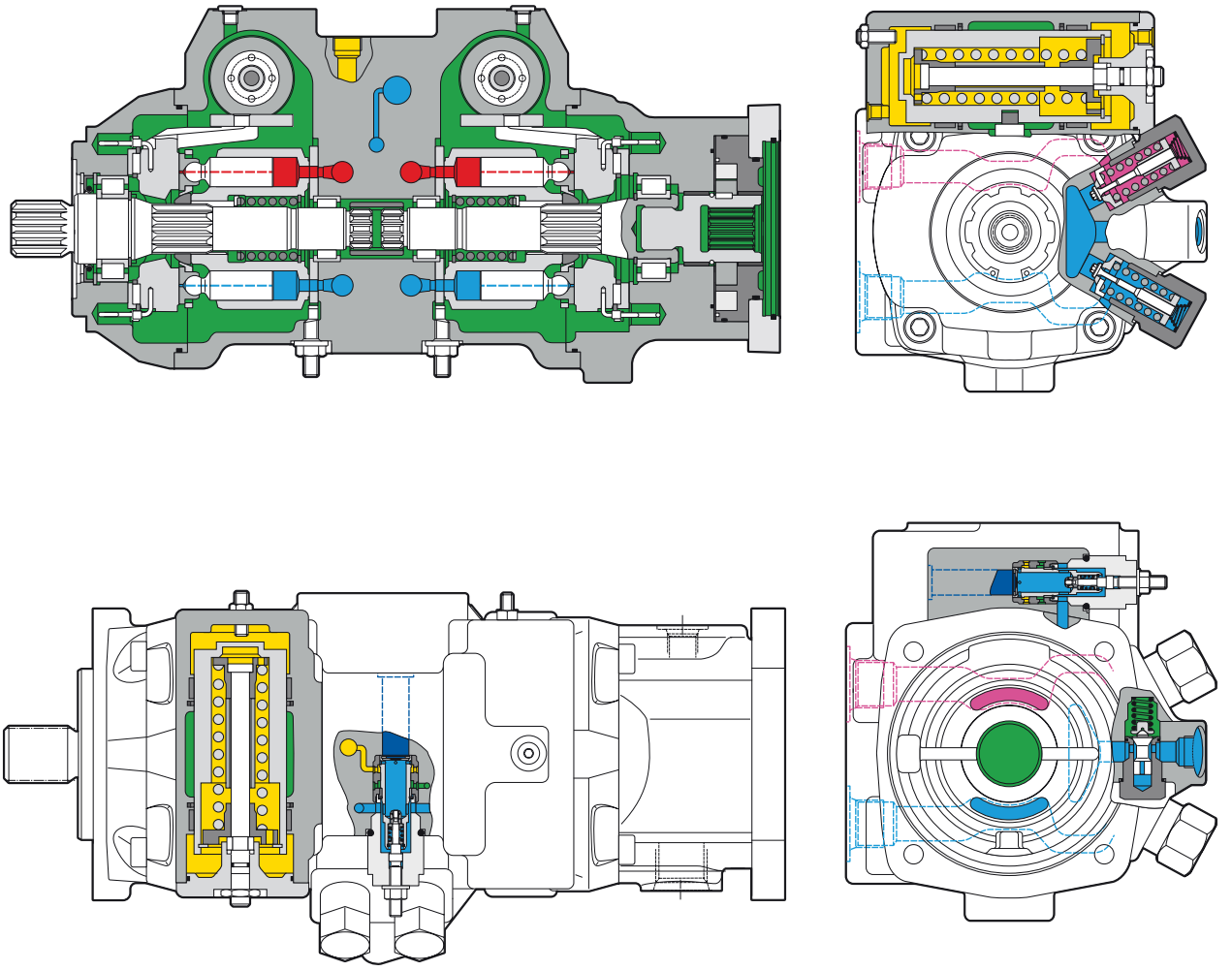

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Fig 10. Sectional View

DA Control Valve

Speed Related Pilot Pressure Supply

The DA closed loop control is an engine speed-dependent system for travel drives. The built-in DA control valve **2** generates a pilot pressure that is proportional to pump (engine) drive speed. ⇒ *Fig 9. (F-18)*. This pilot pressure is directed to the stroke cylinder of the pump by operation of the drive joysticks. The pump displacement can be steplessly varied in each flow direction and is influenced by both the speed of the pump drive and the system pressure. The flow direction (i. e. machine moving forwards or backwards) is determined by either joystick being activated.

Increasing the drive speed of the pump generates a higher pilot pressure from the DA control valve resulting in increased flow and/or delivery pressure from the pump.

Increasing the system pressure (i. e. machine load) will have the effect of swivelling the pump back to a smaller displacement. An overload protection circuit for the engine (against stalling) is achieved by combining this pressure dependent reduction in pump stroke with a reduction in pilot pressure as the engine speed drops.

Any additional power requirement, e. g. hydraulic functions from the loader or attachments, could cause the speed of the engine to drop further. This will cause a further reduction in pilot pressure and thus of the pump displacement. Automatic power distribution and full exploitation of the available power are achieved in this way, both for the travel drive and for the loader hydraulics, with priority given to the loader hydraulics.

Pump/Engine Coupling

This is a gear type coupling comprising a drive plate **A** bolted to the engine flywheel and a coupling **B** clamped to the input shaft of the pump unit. Both are contained within the engine bell housing and rear support frame to which the pump unit is bolted.

Drive plate **A** is secured to the flywheel with eight bolts **C**. Coupling **B** is clamped onto the pump shaft spline with cap screw **D** (not visible in illustration).

Ensure the drive plate is fitted with the flat face against the flywheel and boss **E** facing outwards.

Before fitting coupling **B** to the pump input shaft ensure that circlip **F** is fitted to the groove in the bore.

Coat threads of bolts **C** with JCB Threadlocker and Sealer and torque tighten to 23 Nm (17 lbf ft, 2.3 kgf m).

Coat threads of cap screw **D** with JCB Retainer (High Strength) and torque tighten to 49 Nm (36 lbf ft, 5 kgf m).

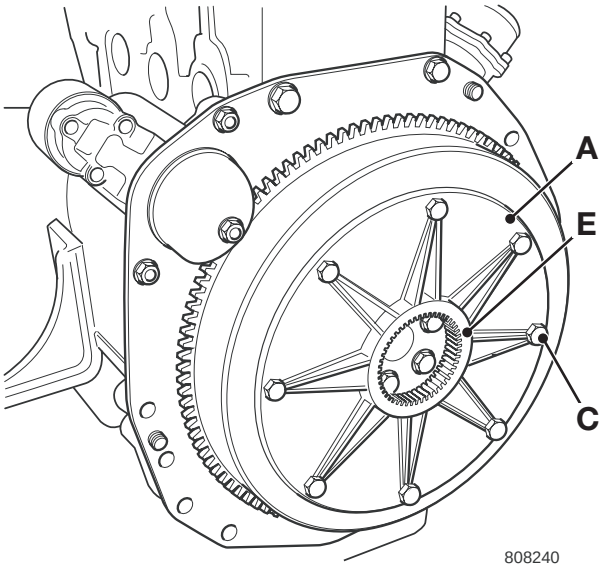

Fig 11.

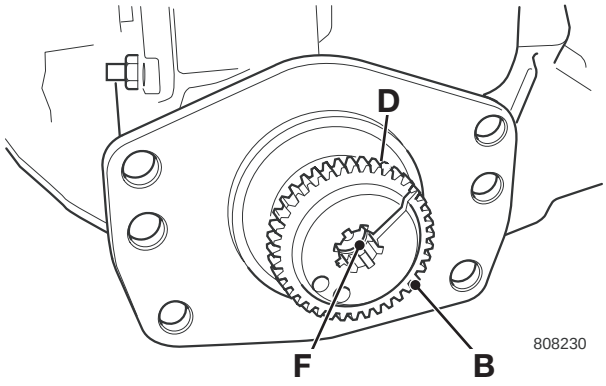

Fig 12.

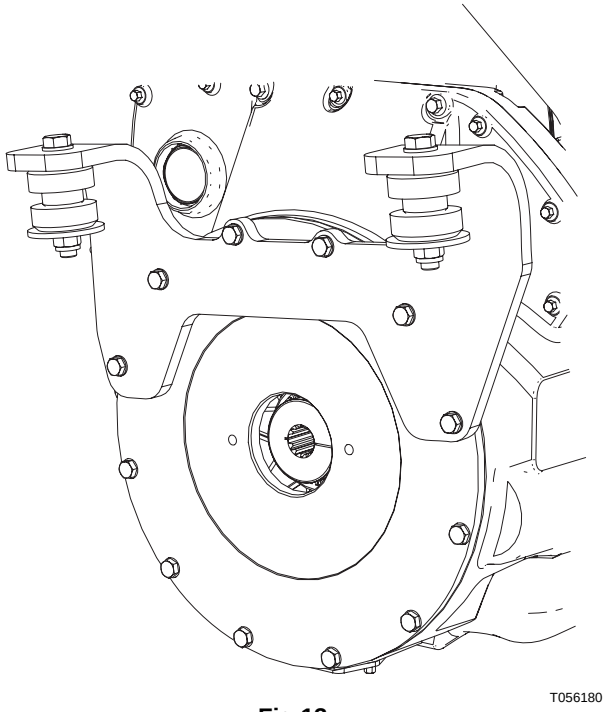

Fig 13.

Removal and Replacement

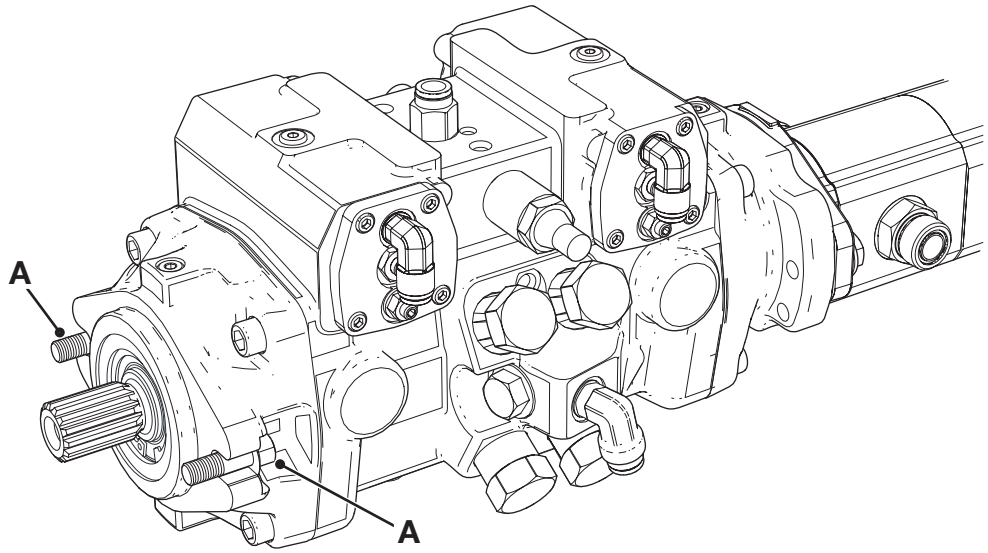

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Fig 14.

Removal

1 Make the machine safe with the loader and cab lifted. Refer to ***Maintenance, Prepare the Machine for Maintence***.

2 Drain the hydraulic tank.

3 Label all hose connections to enable correct refitting. Disconnect the hoses and plug exposed connections.

4 Sling the complete pump unit using suitable lifting tackle.

5 Remove bolts **A** and ease the unit away from the engine. Once the pump coupling has separated from the engine, the unit can be lifted clear.

6 The loader pump may now be separated from the transmission pump.

Replacement

1 Using suitable lifting tackle, ease the pump unit into position, making sure that the pump/engine coupling engages smoothly and completely ⇨ ***Pump/Engine Coupling (F-21)***.

2 Coat threads of flange bolts **A** with JCB Threadlocker and Sealer, fit and tighten to correct torque.

3 Refit and torque tighten the hydraulic connections.

Note: *Refill the pumps with filtered, clean oil via the pump outlets before finally tightening the outlet connections.*

4 Refill the hydraulic tank.

5 Prime the system. ⇨ ***Start-Up Procedure (F-31)***.