

Service Bulletin

General

161 Issue 1

Delphi type DPG fuel injection pump - introduction

December 2001

This service bulletin applies to the Delphi type DPG fuel pump fitted to engines on generator sets from January 2002 onwards, in place of the Stanadyne pump.

To fit the type DPG pump

All pumps have a taper shaft to accept the drive gear which has a woodruff key to ensure alignment and a single retainer nut. For details, please refer to the workshop manual.

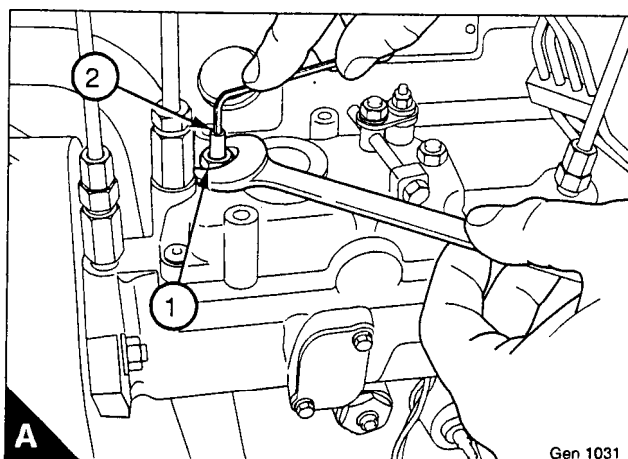
To set the frequency droop

When fitted, the type DPG pump may require adjustment to the engine speed setting and the governor droop. The two adjustments are made at the same time with the engine being run and with the generator set coupled, and the overshoot protection disabled.

1 To disable the overshoot protection, check that the overshoot screw (A2) protrudes 18 mm (0.708 in) above the top of the locknut (A1). If adjustment is necessary, release the locknut and hold in position, then turn the overshoot screw until the correct protrusion is obtained. Hold the overshoot screw in position and tighten the locknut to 4,5 Nm (40 lbf in).

Caution: The overshoot protection must be set before the engine is stopped and started again, see step 9.

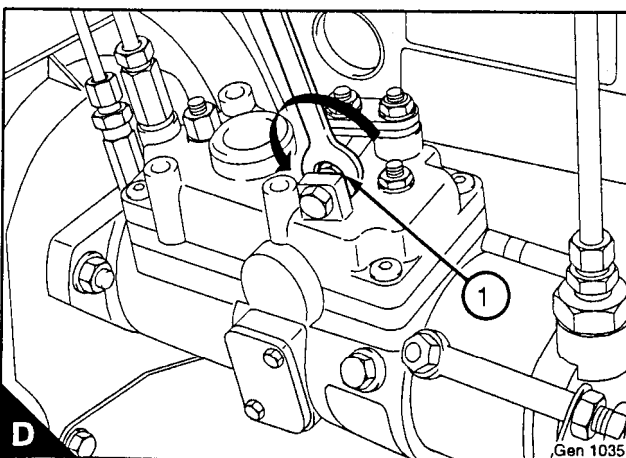
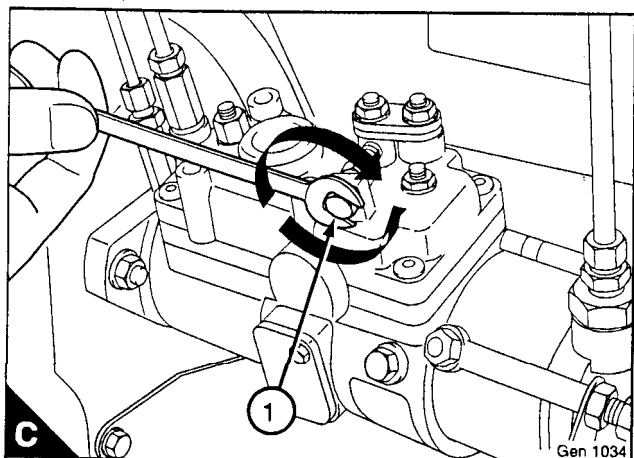
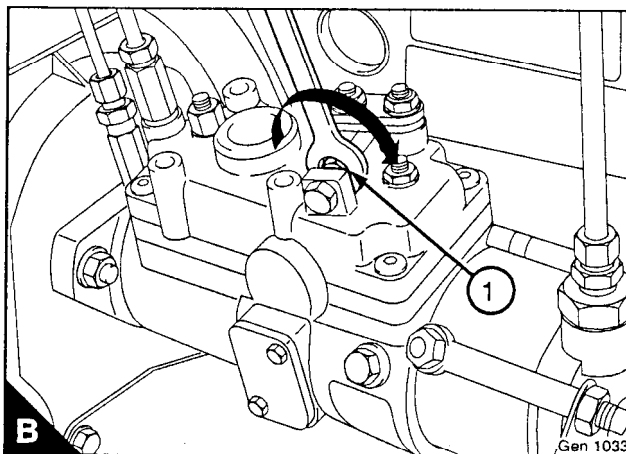
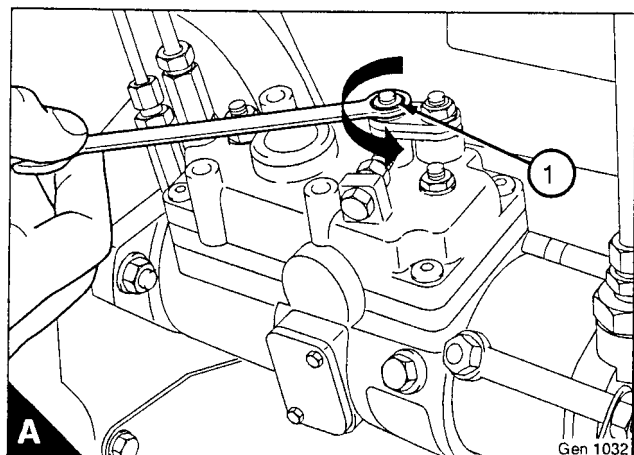
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To set the no-load frequency / engine speed - engine off load.

- 2 Release the pivot-locknut (A1).
- 3 Release the throttle lever adjustment locknut (B1).
- 4 Adjust the throttle lever adjustment screw (C1) until the required no-load frequency / engine speed is reached. Usually generator set manufacturers set no-load speed to 51,5 - 52,5 Hz for 50 Hz sets, and 62 - 63 Hz for 60 Hz sets.
- 5 Tighten the locknut (D1) to 5,7 Nm (50 lbf in) for the throttle lever adjustment screw.

Continued



- 6 Then tighten the pivot locknut (A1) to 5,7 Nm (50 lbf in).

To set the full-load frequency / engine speed to give rated frequency droop - engine on full load.

- 7 Full-load frequency / engine speed is adjusted to give the required frequency droop. Release the droop screw locknut (B1), and use an allen key to adjust the droop screw (B2) until the required droop is reached. Hold the droop screw in position and tighten the locknut to 4,5 Nm (40 lbf in).

- 8 Repeat steps 2 to 7 to obtain the required frequency droop.

To set the overshoot protection screw

The overshoot protection screw can be used to reduce speed overshoot on engine start up. If this feature is required, or it has been disabled to set the frequency droop, the overshoot protection screw should be adjusted as follows:

Ensure the engine is on full load.

- 9 To set the overshoot protection, release the overshoot screw locknut (C1) and use an allen key to adjust the overshoot screw (C2) until the engine speed begins to reduce. Then rotate the overshoot screw approximately one sixth of a turn counter clockwise. Hold the overshoot screw in position and tighten the locknut to 4,5 Nm (40 lbf in).

Note: The label attached to the Delphi DPG fuel injection pump does not contain bare engine speed information, so it is included here for clarification: 50 Hz sets (1500 rev/min rated speed), high idle target speed is 1570 rev/min; for 60 Hz sets (1800 rev/min rated speed), high idle target speed is 1890 rev/min.

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