

GC/GLC080VX & 080VX-BCS, GC/GLC100VX & 100VX-BCS, GC/GLC120VX & SVX & PRS (F818) SERVICE MANUAL CONTENTS

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Service information for Cummins diesel engines can be ordered through the Hyster Literature Distribution Center.

9000 YRM 1112 ON CD

PART NO. 550064306 (12/14)

General

This section includes a description and the repair procedures for the hydraulic gear pump assembly and for the variable displacement pump (VDP) assembly.

Hydraulic Gear Pump Assembly

Lift truck models listed below can be equipped with one of three different gear pumps: 24 cc/rev, 25.7 cc/rev, or 29.4 cc/rev

- GC/GLC030VX, GC/GLC035VX, GC/GLC040SVX) (C809)
- GLP/GDP16VX, GLP/GDP18VX, GLP/GDP20SVX, (GP/GLP/GDP030VX, GP/GLP/GDP035VX, GP/GLP/GDP040SVX) (C810)
- GLC20-35VX (GC/GLC040-070VX, GC/GLC055SVX) (A910)
- GLP/GDP20-35VX (GP/GLP/GDP040-070VX) (B875)

Lift truck models listed below can be equipped with the 24 cc/rev gear pump

- GLC050LX (A967)
- GLP20-25LX (GLP050LX) (A974)

Lift truck models listed below can be equipped with the 25.7 cc/rev gear pump

- GDP20-25LX (GDP050LX) (A974)

Lift truck models listed below can be equipped with a 32.5 cc/rev gear pump

- GLP/GDP40VX5/VX6; GLP/GDP45SVX5, GLP/GDP45VX6; GLP/GDP50-55VX (GP/GLP/GDP080, 090, 100, 110, 120VX) (H813, J813)
- GLC40, 45, 55VX; GLC55SVX; (GC/GLC080, 100, 120VX; GC/GLC080, 100VXBCS; GC/GLC120SVX; GC/GLC120VXPRS) (E818, F818)

Lift truck models listed below can be equipped with one of two different gear pumps: 41.3 cc/rev, or 51.6 cc/rev

- GLC40, 45, 55VX; GLC55SVX; (GC/GLC080, 100, 120VX; GC/GLC080, 100VXBCS; GC/GLC120SVX; GC/GLC120VXPRS) (E818, F818)
- GLP/GDP40VX5/VX6; GLP/GDP45SVX5, GLP/GDP45VX6; GLP/GDP50-55VX (GP/GLP/GDP080, 090, 100, 110, 120VX) (F813, G813, H813, J813)

Lift truck model listed below can also be equipped with a 46.5 cc/rev gear pump

- GLP/GDP40VX5/VX6; GLP/GDP45SVX5, GLP/GDP45VX6; GLP/GDP50-55VX (GP/GLP/GDP080, 090, 100, 110, 120VX) (F813, G813, H813, J813)

Lift truck models listed below can be equipped with one of two different tandem gear pumps: 63.3 cc/rev or 68.5 cc/rev

- GLC/GDC60VX, GLC/GDC70VX, (GC/GLC/GDC135VX, GC/GLC/GDC155VX) (C879, D879, E879, F879)
- GLP/GDP60VX, GLP/GDP70VX (GP/GLP/GDP135VX, GP/GLP/GDP155VX) (C878, D878, E878)

Lift truck model listed below is equipped with a tandem gear pump: 63.3 cc/rev

- GLP/GDP80VX, GLP/GDP80VX9, GLP/GDP90VX (GLP/GDP170VX, GLP/GDP175VX36, GLP/GDP190VX) (A909, B909).

The repair procedures are similar for each type of gear pump. When the repair has been completed, see the Gear Pump Specifications section in this manual.

Variable Displacement Pump Assembly

Lift truck models listed below can be equipped with one of three different variable displacement pumps: 24 cc/rev, 26 cc/rev, or 28 cc/rev

- GLP/GDP20-35VX (B875)

Lift truck models listed below can be equipped with one of two different variable displacement pumps: 42 cc/rev or 45 cc/rev

- GLP/GDP40VX5/VX6; GLP/GDP45SVX5, GLP/GDP45VX6; GLP/GDP50-55VX (G813, H813)

The repair procedures are similar for each size of VDP. When the repair has been completed, see the section Variable Displacement Pump Specifications.

Repair information for other components of the hydraulic system, equipped with either a hydraulic gear pump or variable displacement pump, are found in the following manuals

See **Steering Axle** 1600YRM1133 for lift truck models

- GC/GLC030VX, GC/GLC035VX, GC/GLC040SVX (C809)
- GLP/GDP16VX, GLP/GDP18VX, GLP/GDP20SVX, (GP/GLP/GDP030VX, GP/GLP/GDP035VX, GP/GLP/GDP040SVX) (C810)
- GLC20-35VX (GC/GLC040-070VX, GC/GLC055SVX) (A910)
- GLP/GDP20-35VX (GP/GLP/GDP040-070VX) (B875)
- GLC40, 45, 55VX; GLC55SVX; (GC/GLC080, 100, 120VX; GC/GLC080, 100VXBCS; GC/GLC120SVX; GC/GLC120VXPRS) (E818, F818)

- GLP/GDP40VX5/VX6; GLP/GDP45SVX5, GLP/GDP45VX6; GLP/GDP50-55VX (GP/GLP/GDP080, 090, 100, 110, 120VX) (F813, G813, H813, J813)
- GLC/GDC60VX, GLC/GDC70VX, (GC/GLC/GDC135VX, GC/GLC/GDC155VX) (C879, D879, E879, F879)
- GLP/GDP60VX, GLP/GDP70VX (GP/GLP/GDP135VX, GP/GLP/GDP155VX) (C878, D878, E878)
- GLP/GDP80VX, GLP/GDP80VX9, GLP/GDP90VX (GLP/GDP170VX, GLP/GDP175VX36, GLP/GDP190VX) (A909, B909).

See **Steering Axle** 1600YRM1425 for lift truck models

- GLC050LX (A967)
- GLP/GDP20-25LX (GLP/GDP050LX) (A974)

See **Main Control Valve** 2000YRM1137 for lift truck models

- GC/GLC030VX, GC/GLC035VX, GC/GLC040SVX (C809)
- GLP/GDP16VX, GLP/GDP18VX, GLP/GDP20SVX, (GP/GLP/GDP030VX, GP/GLP/GDP035VX, GP/GLP/GDP040SVX) (C810)
- GLC20-35VX (GC/GLC040-070VX, GC/GLC055SVX) (A910)
- GLP/GDP20-35VX (GP/GLP/GDP040-070VX) (B875)
- GLC050LX (A967)
- GLP/GDP20-25LX (GLP/GDP050LX) (A974)
- GLC40, 45, 55VX; GLC55SVX; (GC/GLC080, 100, 120VX; GC/GLC080, 100VXBCS; GC/GLC120SVX; GC/GLC120VXPRS) (E818, F818)

- GLP/GDP40VX5/VX6; GLP/GDP45SVX5, GLP/GDP45VX6; GLP/GDP50-55VX (GP/GLP/GDP080, 090, 100, 110, 120VX) (F813, G813, H813, J813)
- GLC/GDC60VX, GLC/GDC70VX, (GC/GLC/GDC135VX, GC/GLC/GDC155VX) (C879, D879, E879, F879)
- GLP/GDP60VX, GLP/GDP70VX (GP/GLP/GDP135VX, GP/GLP/GDP155VX) (C878, D878, E878)
- GLP/GDP80VX, GLP/GDP80VX9, GLP/GDP90VX (GLP/GDP170VX, GLP/GDP175VX36, GLP/GDP190VX) (A909, B909).

See **Main Control Valve** 2000YRM1457 for lift truck models

- GLP/GDP20-35VX (B875)
- GLP/GDP40VX5/VX6; GLP/GDP45SVX5, GLP/GDP45VX6; GLP/GDP50-55VX (G813, H813)

See **Mast Repairs (S/N A551, A555, A559, A661, A662, A663, A664, B507, B508, B509, B551, B555, B559, B562, B563, B564, B661, B662, B663, C515, C551, C555, C559, D507, D508, D509, D515, D562, D563, D564, E509, and E564)** 4000YRM1148 for lift truck models

- GC/GLC030VX, GC/GLC035VX, GC/GLC040SVX (C809)
- GLP/GDP16VX, GLP/GDP18VX, GLP/GDP20SVX, (GP/GLP/GDP030VX, GP/GLP/GDP035VX, GP/GLP/GDP040SVX) (C810)
- GLC20-35VX (GC/GLC040-070VX, GC/GLC055SVX) (A910)

- GLP/GDP20-35VX (GP/GLP/GDP040-070VX) (B875)

See **Mast Repairs (S/N A513, A514, A613, A614, A702, A703, A704, A705, A706, A707, A751, A752, B513, B514, B586, B587, B588, B589, B590, B591, B749, B750, B751, B752, B753, B754)**

4000YRM1250 for lift truck models

- GLC40, 45, 55VX; GLC55SVX; (GC/GLC080, 100, 120VX; GC/GLC080, 100VXBCS; GC/GLC120SVX; GC/GLC120VXPRS) (E818, F818)
- GLP/GDP40VX5/VX6; GLP/GDP45SVX5, GLP/GDP45VX6; GLP/GDP50-55VX (GP/GLP/GDP080, 090, 100, 110, 120VX) (F813, G813, H813, J813)
- GLC/GDC60VX, GLC/GDC70VX, (GC/GLC/GDC135VX, GC/GLC/GDC155VX) (C879, D879, E879, F879)
- GLP/GDP60VX, GLP/GDP70VX (GP/GLP/GDP135VX, GP/GLP/GDP155VX) (C878, D878, E878)

See **Mast Repair (S/N A513, A514, A613, A614, A643, A644, A683, A684)** 4000YRM1406 for lift truck models

- GLP/GDP80VX, GLP/GDP80VX9, GLP/GDP90VX (GLP/GDP170VX, GLP/GDP175VX36, GLP/GDP190VX) (A909, B909)

See **Mast Repair (S/N A698, A699, B551)**

4000YRM1431 for lift truck models

- GLC050LX (A967)
- GLP/GDP20-25LX (GLP/GDP050LX) (A974)

Single Gear Pump Assembly Repair

REMOVE



WARNING

PUTTING THE LIFT TRUCK ON BLOCKS

The lift truck must be put on blocks for some types of maintenance and repair. The removal of the following assemblies will cause large changes in the center of gravity: mast, drive axle, engine, transmission, and counterweight. When the lift truck is put on blocks, put additional blocks in the following positions to maintain stability:

- Before removing the mast and drive axle, put blocks under the counterweight so the lift truck cannot fall backward.
- Before removing the counterweight, put blocks under the mast assembly so the lift truck cannot fall forward.

The surface must be solid, even, and level when the lift truck is put on blocks. Make sure any blocks used to support the lift truck are solid, one-piece units.

NOTE: Worn or damaged seals are the most common cause of pump damage. The pump bushings, gears, and shafts also wear. They must be checked during disassembly. DO NOT make any repairs to the parts. To prevent more failures, always replace parts that are worn or damaged. If several main parts need replacing, replace the complete group.

1. Put the lift truck on blocks. See the **Operating Manual** or the **Periodic Maintenance Manual** for your lift truck for the procedures to put the lift truck on blocks.
2. Place a drain pan under the hydraulic tank, remove drain plug at the bottom of hydraulic oil tank, and drain oil from tank.
 - a. Drain pan capacity approximately 30 liter (8 gal) for lift truck models
 - GC/GLC030VX, GC/GLC035VX, GC/GLC040SVX (C809)
 - GLP/GDP16VX, GLP/GDP18VX, GLP/GDP20SVX, (GP/GLP/GDP030VX, GP/GLP/GDP035VX, GP/GLP/GDP040SVX) (C810)
 - GLC20-35VX (GC/GLC040-070VX, GC/GLC055SVX) (A910)
 - GLC050LX (A967)
 - GLP/GDP20-35VX (GP/GLP/GDP040-070VX) (B875)
 - GLP/GDP20-25LX (GLP/GDP050LX) (A974)

NOTE: For lift trucks equipped with dual hydraulic tanks, place a second drain pan with same capacity under opposite hydraulic tank.

- b. Drain pan capacity approximately 40 liter (11 gal) for lift truck model
- GLC40, 45, 55VX; GLC55SVX; (GC/GLC080, 100, 120VX; GC/GLC080, 100VXBCS; GC/GLC120SVX; GC/GLC120VXPRS) (E818, F818)
- c. Drain pan capacity approximately 51 liter (13.5 gal) for lift truck model
- GLP/GDP40VX5/VX6; GLP/GDP45SVX5, GLP/GDP45VX6; GLP/GDP50-55VX (GP/GLP/GDP080, 090, 100, 110, 120VX) (F813, G813, H813, J813)

NOTE: Perform Step 3 and Step 4 for lift trucks equipped with an iron transmission housing.

3. Put a drain pan under the pump assembly. Disconnect all hydraulic lines connected to the pump assembly. Remove the pump outlet fitting and suction adapter. Put caps on all the hose fittings and hydraulic pump ports.

See Figure 1 for lift truck models

- GC/GLC030VX, GC/GLC035VX, GC/GLC040SVX (C809)

- GLP/GDP16VX, GLP/GDP18VX, (GLP/GDP20SVX, (GP/GLP/GDP030VX, GP/GLP/GDP035VX, GP/GLP/GDP040SVX) (C810)
- GLC20-35VX (GC/GLC040-070VX, GC/GLC055SVX) (A910)
- GLP/GDP20-35VX (GP/GLP/GDP040-070VX) (B875)

See Figure 2 for lift truck models

- GLC40, 45, 55VX; GLC55SVX; (GC/GLC080, 100, 120VX; GC/GLC080, 100VXBCS; GC/GLC120SVX; GC/GLC120VXPRS) (E818, F818)
- GLP/GDP40VX5/VX6; GLP/GDP45SVX5, GLP/GDP45VX6; GLP/GDP50-55VX (GP/GLP/GDP080, 090, 100, 110, 120VX) (F813, G813, H813, J813)

See Figure 3 for lift truck model

- GLC40, 45, 55VX; GLC55SVX; (GC/GLC080, 100, 120VX; GC/GLC080, 100VXBCS; GC/GLC120SVX; GC/GLC120VXPRS) (F818) equipped with dual hydraulic tanks.

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