

Checking and Partial Repairing of Fuel Feed Pump

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Job No.

07-14

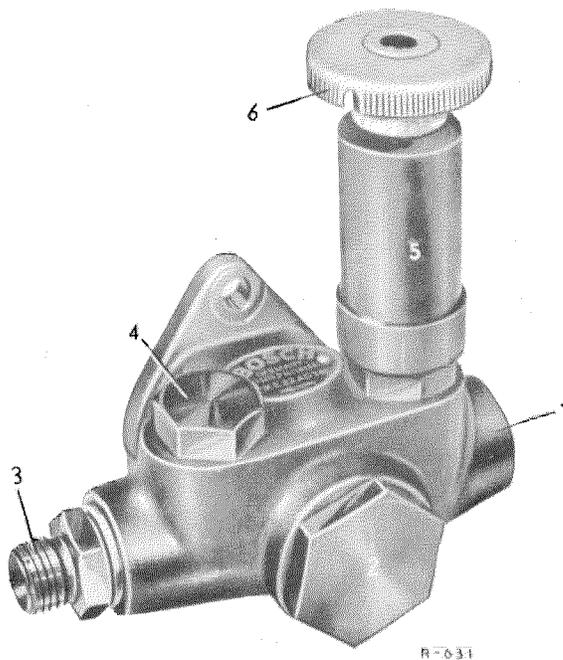


Fig. 07-14/1

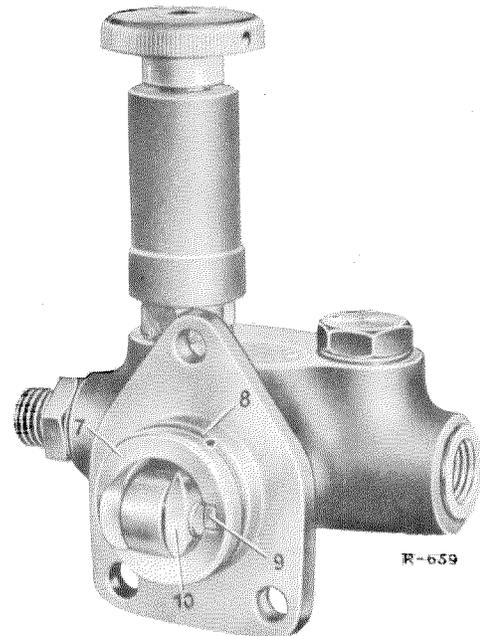


Fig. 07-14/2

1 Connector at suction end
2 Screw plug to plunger
3 Connector at discharge end

4 Screw plug to pressure valve
5 Hand pump and cap lug to suction valve

6 Handle of hand feed pump
7 Roller tappet guide
8 Guard ring

9 Guide pin and/or guide plate on roller tappet
10 Roller tappet

In general, repairing of the feed pump is not necessary before the engine and the injection pump are overhauled. If the discharge rate is insufficient, changing of the valves will usually help or if no spare valve is available, reconditioning of the valve seat. Worn parts such as tappet, plunger and housing must be replaced.

General overhauls of feed pumps must always be done by the firm Bosch. When replacing parts observe always the correct pump designation. The main changes and/or characteristic features of the different pump types are listed in the following table.

When exchanging a complete feed pump make sure of the type of drive mechanism. The feed pumps with the designation EP/K 16 A 47 with long roller tappet guide are driven by one of the 4 cams of the camshaft and **must only be mounted on the injection pumps with the designations S 17, S 17 z, RS 17 and RS 60**. The feed pumps with the designation FP/K 22 A . . may only be installed on injection pumps which have eccentric to drive the feed pump. The feed pumps with the designation FP/KE 22 AD have a short roller tappet guide and a roller tappet dia. of 17.5 mm; they can be used with all injection pumps. Feed pumps carrying the designation FP/KE 22 AC and having a roller tappet dia. of 19.0 mm may only be used with injection pumps already fitted with an "AC" feed pump at the factory.

The injection pumps with the designations RS 50, RS 50 z, RS 68, RS 68 z, RS 144, RS 144 z, RS 204, RS 204 z, RS 1010, RS 1010 y, RS 1010 z, RS 1025 and RS 1026 are equipped with camshafts which have eccentric to drive the feed pump. Through an opening in the mounting flange it can be determined from outside whether the camshaft is equipped with a cam or with a driving eccentric.

Fuel Feed Pumps and their Characteristic Features

Model	Bosch Designation DB Part No.	Dia. of Plunger in mm	With or without guide pin and/or guide plate on roller tappet	With or without fuel prefilter	Housing of	Pump drive by	Connector	
							at inlet suction end	at outlet discharge end
OM 636	FP/K 16 A 47 000 091 26 01	16	without	without	light metal	cam	adapter	adapter
	FP/K 22 A 47 000 091 49 01	22	without	without	light metal	eccenter	adapter	adapter
	FP/KE 22 AC 47/3 or x FP/KE 22 AD 47/3 000 091 41 01	22	with	without	cast iron	eccenter or cam	adapter with strainer	adapter
	FP/KE 22 AC 48/2 or x FP/KE 22 AD 48/2 000 091 48/01	22	with	with	cast iron	eccenter or cam	without connector	without connector
	FP/KE 22 AC 48/3 or x FP/KE 22 AD 48/3 000 091 48 01	22	with	with	cast iron	eccenter or cam	adapter	adapter
	FP/KE 22 AD 112/2 001 091 11 01	22	with	with	cast iron	eccenter	adapter M 14×1.5	adapter M 14×1.5 ^x
	FP/K 22 A 143 000 091 39 01	22	without	without	light metal	eccenter	adapter	adapter
	FP/KE 22 A 143 000 091 41 01	22	with	without	light metal	eccenter or cam	adapter	adapter
	FP/KE 22 AC 143 or FP/KE 22 AD 143 000 091 41 01	22	with	without	cast iron	eccenter or cam	adapter	adapter
	FP/K 22 A 148 000 091 39 01	22	without	without	light metal	eccenter	screw connector	adapter
	FP/KE 22 A 148 000 091 41 01	22	with	without	light metal	eccenter or cam	screw connector	adapter
	FP/KE 22 AC 148 or FP/KE 22 AD 148 000 091 41 01	22	with	without	cast iron	eccenter or cam	screw connector	adapter
	FP/KE 22 AC 208 ¹⁾ or FP/KE 22 AD 208 ¹⁾ 000 091 64 01	22	with	without	cast iron	eccenter or cam	screw connector	adapter
	x FP/KE 22 AD 223/2 001 091 10 01	22	with	without	cast iron	eccenter	adapter M 14×1.5	adapter M 14×1.5
OM 621	FP/K 22 M 2/8 or x FP/K 22 M 6 000 091 73 01	22	without	without	cast iron	eccenter	adapter	adapter
	x FP/K 22 M 3/8 001 091 02 01	22	without	without	cast iron	eccenter	adapter	adapter
	x FP/K 22 M 7 001 091 00 01	22	without	without	cast iron	eccenter	screw connector	adapter

¹⁾ Hand pump horizontally installed for right-hand drive on Model L and O 319 type 636.319 R and 636.934 R

Feed pumps with a light metal housing can be exchanged for pumps with a housing of cast iron.

A satisfactory performance of the injection pump and/or the engine can only be achieved if the fuel is delivered free of bubbles and at a gauge pressure of 1 to 1.5 atm. to the suction end of the injection pump. If the feed pump does not meet these requirements, the feed pump must be repaired or exchanged.

Testing the suction and discharge effect of the installed feed pump see Job No. 00-9.

Different characteristic features of the feed pump of the OM 636 with respect to the feed pump of the OM 621

Model	OM 636	OM 621
Connection flange	3 hole	2 hole
Fuel feed and return	lateral	from top
Tappet guide	with slide piece	lock pin featuring guide
Valves	Valve and spring exchangeable, valve seats can be remachined	suction and pressure valve featuring valve body with valve seat, spring and plate valve. The pressure valve is provided with an additional spacer ring.

Disassembly and Partial Repairing of Fuel Feed Pump

Unscrew the hand pump (5) and remove the suction valve. Unscrew the screw plug (4) to the pressure valve and remove the pressure valve. Level worn valve seats on a touching plate or better still, replace (see Figure 07-14/1).

Unscrew the large screw plug (2) to the plunger, remove spring and plunger (see Figure 07-14/1).

If the plunger is worn or if the cylinder is scored, the pump must be replaced. Restore the operating ease of jamming plunger or roller tappet by removing points of sticking. The guard ring (8) must be removed from the groove before the disassembly of the roller tappet (see Figure 07-14/2).

Screw the cylinder of the hand pump out of the connector. Check plunger and cylinder for scores. Scored plungers and cylinders must be replaced.

The rubber ring to seal the hand pump must be replaced during assembly of the fuel feed pump.

Note: In the vehicle the fuel feed pump causes in many cases a tapping or ticking noise in the fuel lines from and to the tank. Remedies see Page 09-3/3.