

Issue Date: August 19, 2003

NEWS NUMBER: **FN03026**

To : All Komatsu Distributors

Component Group **Engine**

SUBJECT: **New Fuel Shutoff Valve Solenoid**

PURPOSE: To introduce the new 2 inch Fuel Shutoff Valve Solenoid

APPLICATION: Komatsu 4D102 and 6D102 engines

DESCRIPTION:

This Flash News introduces the new part numbers and installation procedure for the new 2-inch shutoff solenoid on the Komatsu 4D102 and 6D102 series engines using the Bosch® In-line A pump with the (RSV) governor. The new solenoid replaces the 1-3/4-inch fuel pump mounted solenoid and bracket.

The 1-3/4-inch solenoid part numbers are being obsolete and replaced by the new 2 inch solenoid.

Two new solenoid mounting capscrews, Part Number 3991132, **must** be used when replacing a 1-3/4-inch solenoid with a 2-inch solenoid.

Note: A large percentage of fuel shutoff solenoid failures are attributed to overheating of the pull-in coil. This occurs during extended cranking periods. Always observe correct starting and fuel system priming procedures in order to prevent fuel shutoff solenoid failures.

Note. Bosch® A Pump With RSV Governor: This repair can be performed without removing fuel pump. Removal of shutoff lever, filter, and supply line is required to access solenoid from the bottom of fuel pump. The new solenoid is installed from the back side bottom of pump and lifted into position.

Parts Matrix

New Solenoid Part No. (2 inch solenoid kit)	New Solenoid Part No. (2 inch solenoid kit)	New solenoid mounting capscrews (2 required)	Minimum Pull-in Voltage	Minimum Hold-in Voltage	Energized Rod Length (in)	Rod Length Fig. No.
1296700H2	1296700H2	6732-71-3140	16.6	11.6	4.61	1
1310425H1	6731-81-9210	6732-71-3140	17.1	11.9	6.33	4
NA	6731-81-9120	6732-71-3140	8.3	4.7	9.86	1
NA	6731-81-9310	6732-71-3140	17.1	11.9	5.15	4
6733-81-9110	6733-81-9130	6732-71-3140	19.1	9.4	6.33	4
6742-01-2310	1296700H2	6732-71-3140	16.6	11.6	4.61	1
NA	6731-81-9160	6732-71-3140	17.1	11.9	6.33	4
NA	6733-81-9130	6732-71-3140	19.1	9.4	6.33	4
NA	6735-81-9150	6732-71-3140	9.7	4.7	6.33	4
NA	6742-01-5583	6732-71-3140	16.6	8.8	2.93	1
NA	6742-01-5584	6732-71-3140	16.6	8.8	8.81	1

Install

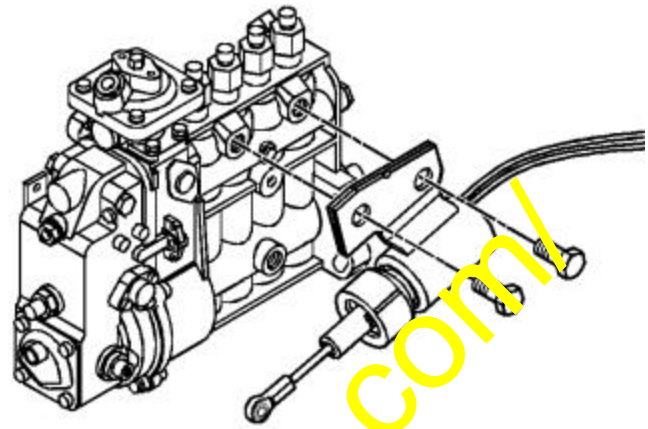
Bosch® A Pump with PSV Governor

NOTE: New solenoid mounting capscrews have thread locker pre-applied. Loctite application is not necessary when new capscrews are installed.

Install the shutoff solenoid on the fuel pump using two new M16 x 1.5-16 capscrews. Apply Loctite to the capscrew threads. Tighten the capscrews just enough to hold the solenoid in place.

⚠ CAUTION ⚠

Failure to observe proper cranking and fuel system priming procedures can cause solenoid failures.



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CAUTION

New solenoid mounting capscrews **must** be used if replacing an old 1-3/4-inch solenoid with a 2-inch solenoid. Insufficient thread engagement can cause damage to the pump and the solenoid.

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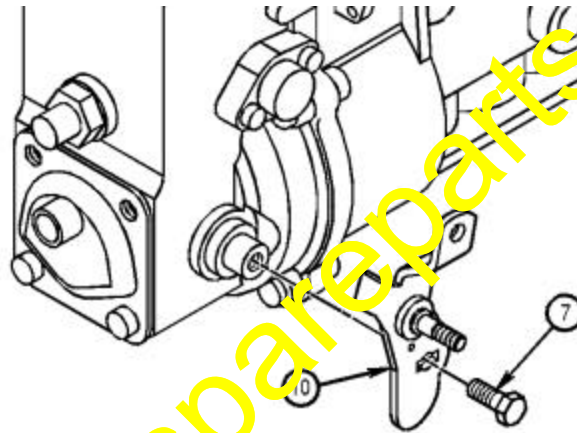
Install the shutoff lever (10) over the shutoff shaft on the fuel pump.

Use the capscrew (7) previously removed to hold the shutoff lever in place.

Torque Value:

9 n.m

[84 in-lb]



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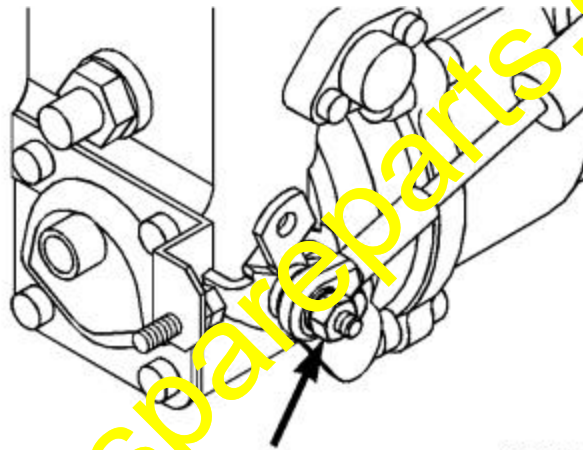
Connect the rod end of the solenoid to the shutoff lever.

Tighten the shutoff lever nut.

Torque Value:

9 n.m

[84 in-lb]



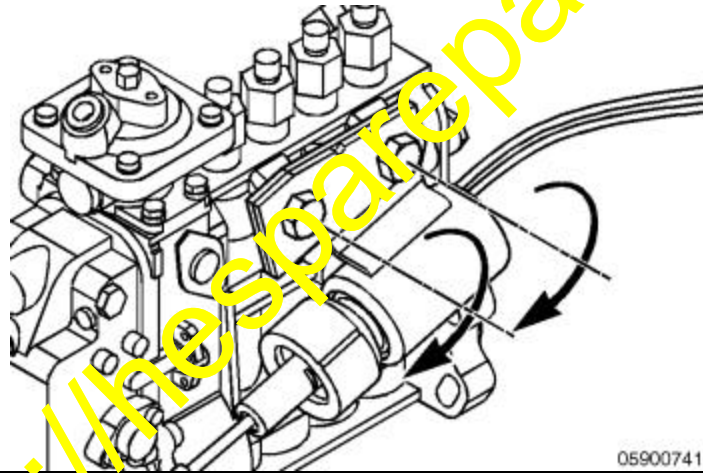
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△CAUTION△

The solenoid mounting capscrews **must not** be overtightened. Distortion to the fuel pump body can result causing the rack to stick in the fuel pump.

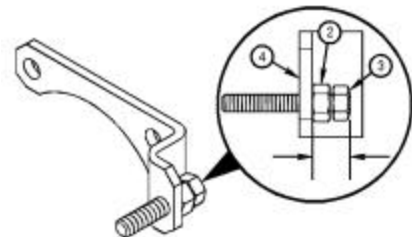
Tighten the solenoid mounting capscrews.

Torque Value:
24 n.m
[212 in-lb]



If equipped with stop screw.

Assemble the stop screw to the stop screw bracket. Adjust the stop screw (3) so the contact surface of the screw protrudes 10 mm beyond the surface of the stop bracket (4).

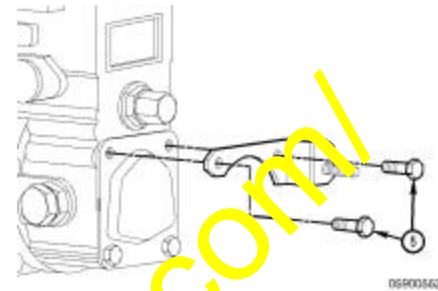


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Install the stop bracket assembly using two M6 x 1-16 capscrews (5).

Tighten the capscrews.

Torque Value: 7 n.m [60 in-lb]

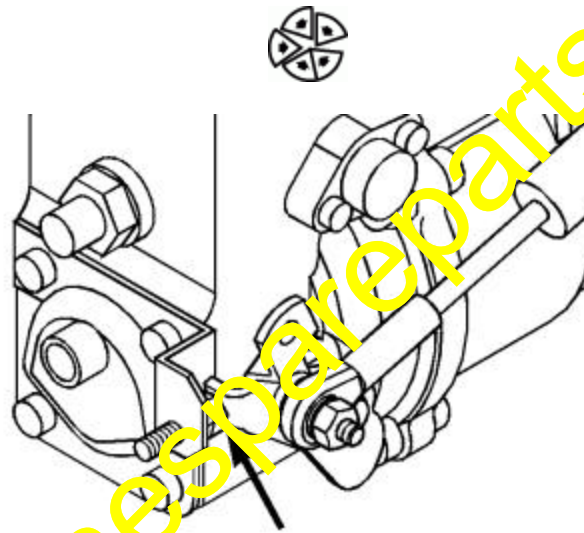


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⚠ CAUTION ⚠

The solenoid rod length is pre-set. Adjustment of the solenoid rod can cause damage to the solenoid or lead to a low power complaint.

Verify the shutoff lever is contacting the stop screw and is in the full stop position. If the shutoff lever does **not** contact the stop screw, verify the shutoff solenoid and stop screw bracket are assembled correctly. Loosen the solenoid mounting capscrews and readjust the solenoid, if necessary.



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Finishing Steps

Install all components removed, including the fuel filter and fuel supply line.

Connect the wire harness to the fuel shutoff solenoid.



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