



# VMC - Gearbox - Oil Pump - January 1989 to June 1995 - Replacement

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## VMC - Gearbox - Oil Pump - Replacement - Introduction

This procedure tells you how to remove a magnet-drive oil pump for the gearbox and install an electric-drive oil pump.



**Caution:** When you do maintenance or repair on CNC machines and their components, you must always follow basic safety precautions. This decreases the risk of injury and mechanical damage.

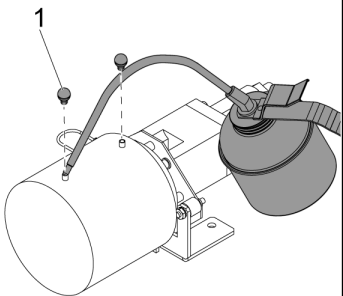
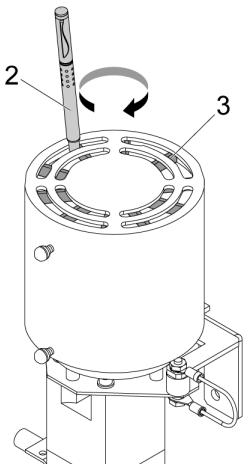
Do these steps before you do work in the machine or in the control cabinet:

- Set the main circuit breaker to the **[OFF]** position.
- Use an approved lock with an approved safety tag. Always follow lock-out procedures in accordance to local government rules.
- After turning off the machine, wait at least 5 minutes before working in the control cabinet, to allow power to dissipate. Wait for the voltage indicator LED on the vector drive to go off completely.
- Always turn off the main air supply when you work on any part of the pneumatic system.
- Make sure to rest the spindle head on a block of wood when work is done on a vertical axis. This will prevent any unintended movement that could result in the axis falling.
- Never alter any safety circuits on the machine.

You should not do machine repair or service procedures unless you are qualified and knowledgeable about the processes. Serious damage to the machine components can result in costly repairs. The service technicians at your Haas Factory Outlet (HFO) have the training and experience, and are certified to do these tasks safely and correctly. The repair and service work performed by your HFO is protected with a limited warranty.

**Danger:** Some service procedures can be dangerous or life-threatening. DO NOT attempt a procedure that you do not fully understand. If you have any doubts about doing a procedure contact your Haas Factory Outlet (HFO) and schedule a service visit.

### Prerequisites

		<p>Remove the two oil port covers [1]. Use an oiler to add (2) drops of oil to each of the ports.</p> <p>Put the oil port covers [1] back on the oil pump.</p> <p>Use a pen or thin rod [2] to turn the fan [3] 2 full revolutions.</p>
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### Machine Compatibility

Do this procedure for a VF series mill that has a gearbox, and the gearbox oil-pump has a magnetic drive.

## Parts Included

KIT PN: 93-1938, OIL PUMP ASSY, RETROFIT KIT EARLY VF. QTY: 1



**[A]** 33-5961 QTY: 1  
CABLE, 950 LOW OIL ADAPTER QD-2X2MF



**[B]** 58-0282 QTY: 1  
FITTING, STRAIGHT-3/8 X STRAIGHT-3/8 PUSH TO CONNECT UNION



**[C]** 58-0231 QTY: 1  
FITTING, PC1/2F NPT1/4M STR STL



**[D]** 58-2020 QTY: 1  
HOSE, 3/8 OD POLYETHYLENE



**[E]** 58-2022 QTY: 1  
HOSE, 1/2 OD POLYETHYLENE



**[F]** 61-7330 QTY: 1  
BREAKER, 5A 2-POLE



**[G]** 66-1205 QTY: 1  
HTSNK T0-220 TOPCLIP BOARD MOUNT, T



**[H]** 93-1939 QTY: 1  
OIL PUMP ASSY

## VMC - Gearbox - Oil Pump - Replacement

### STEP 1



Push **[POWER OFF]**.

Set the main circuit breaker to the **OFF** position.

Lock the main circuit breaker. Use an approved lock with an approved safety tag.

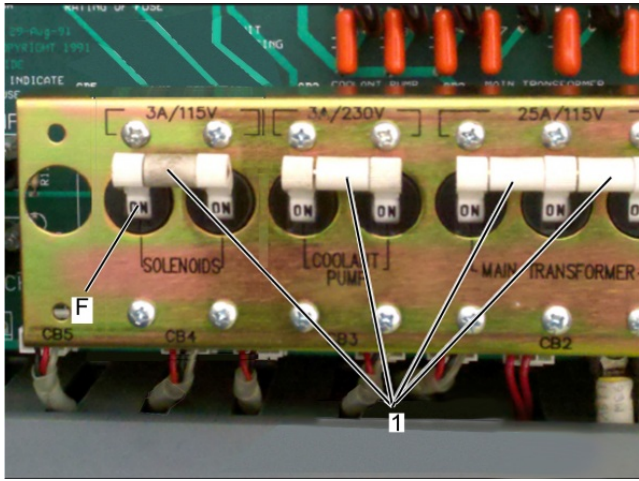


**Danger:** After turning off the machine, wait at least 5 minutes before working in the control cabinet, to allow power to dissipate. Wait for the voltage indicator LED on the vector drive to go off completely.



**Caution:** When you handle a PCB, you must wear an Electrostatic Discharge (ESD) strap.

## STEP 2

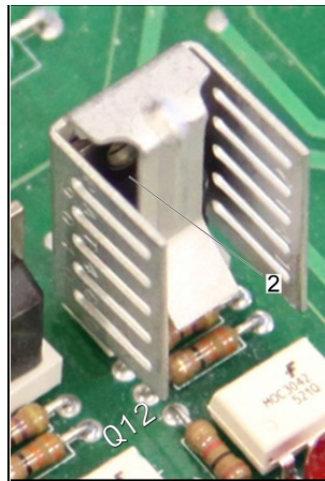
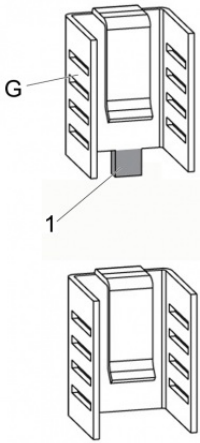


Remove the connecting pins [1] between the circuit breakers on the PSUP PCB.

Remove the circuit breaker from the location that has the label "CB4."

Install the BREAKER, 5A 2PL MED DLY [F] at CB4.

## STEP 3

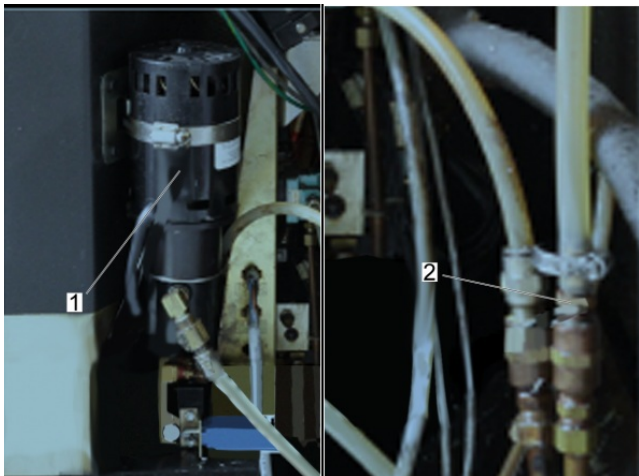


Do this step to add a heatsink to the Triac at Q12 on the I/O PCB. If the Triac already has a heat sink, do not do this step.

Cut the tab [1] off of the HTSNK T0-220 TOPCLIP BOARD MOUNT [G]. Make sure you fully remove the tab.

Push the heat sink over the Triac [2] at Q12 on the I/O PCB.

## STEP 4

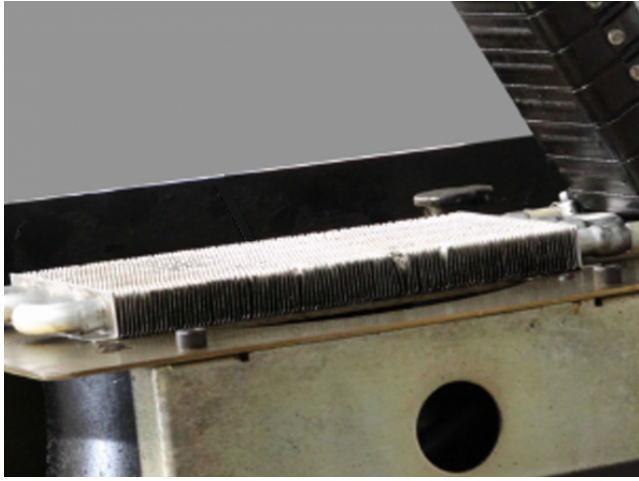


Remove the spindle head covers.

Remove the used oil pump [1] and the pump mount bracket.

Remove the 1/2" oil return hose. Remove the fitting [2] at the end of the return oil hose.

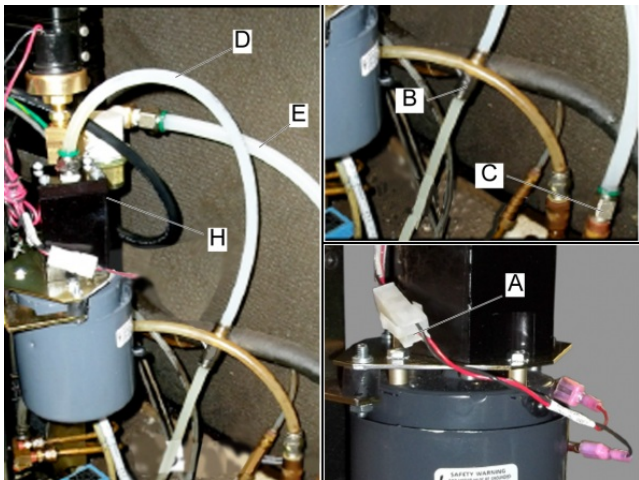
## STEP 5



Do these steps if the machine has a heat exchanger at the top of the motor shroud:

- Follow the (2) oil hoses from the exchanger to the nearest connectors. Disconnect the hoses.
- Remove the heat exchanger.

## STEP 6



Install the OIL PUMP ASSY **[H]**. Connect the pump power cable.

Connect the HOSE 3/8 OD PE CLEAR **[D]** to the top of the pump.

Put the FITTING, STRAIGHT-3/8 X STRAIGHT-3/8 PUSH TO CONNECT UNION **[B]** on the end of the 3/8" hose. Connect the fitting to the installed oil supply hose.

Connect the HOSE 1/2 OD PE CLEAR **[E]** to the right-angle fitting at the top of the pump.

Put the FITG PC1/2F NPT1/4M STR STL **[C]** on the end of the 1/2" hose. Connect the fitting to the installed oil return hose.

Connect the CBL950 OIL ADPTR QD-2X2MF **[A]** to the installed spade connectors on the mill.