



Enclosure Exhaust - How it Works and Troubleshooting Guide

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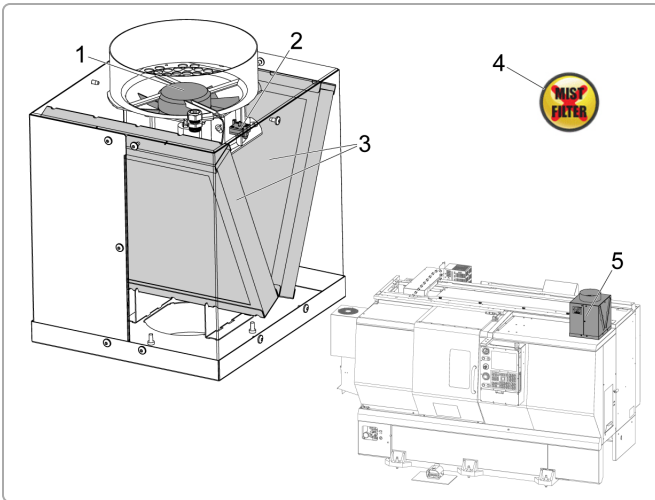


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How It Works

The Haas Enclosure Exhaust system is a filtered vent system that interfaces with the Haas control. It removes coolant mist and smoke generated by the cutting process from the machine enclosure and away from the operator.

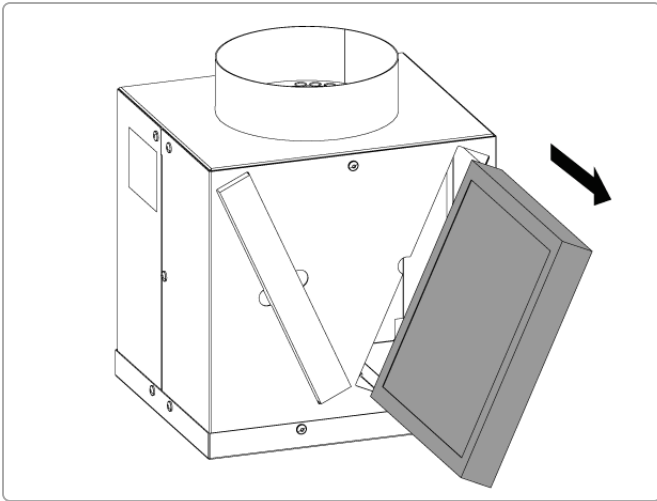
The Enclosure Exhaust uses a powerful, low-vibration, 600 CFM fan enclosed and mounted on the top of the machine enclosure. The fan creates a vacuum that removes the unwanted coolant mist and smoke from the inside of the machine enclosure. The coolant mist passes through two reusable woven-metal filter panels. The panels remove the coolant from the air. The removed coolant returns to the machine. The clean exhaust air and smoke is expelled out of the top of the unit. The system automatically turns on when the spindle starts, and turns off after the spindle stops. On machines made after June 2015 an on-screen icon alerts the operator when the filters need cleaning.



1. Low-vibration fan
2. Vacuum switch
3. Reusable woven-metal filter panels
4. Dirty filter icon
5. Enclosure assembly

Symptom	Possible Cause	Corrective Action	Section
The dirty filter icon appears.	The filter boxes are dirty and clogged.	Clean the filter boxes.	1
	The vacuum switch is defective.	Test the vacuum switch.	2
The Enclosure Exhaust does not remove coolant mist and smoke.	There is a problem with the fan, or with the power to the fan.	Inspect the fan for damage and check the power to the fan.	3
	The vacuum switch is defective.	Test the vacuum switch.	2

Section 1



Symptom: The dirty filter icon is shown.

Possible Cause: The filter boxes are dirty and clogged.

Corrective Action:

Slide the filters out of the Enclosure Exhaust. Clean the filters with soap and water. Put them back in the enclosure exhaust assembly.

Section 2

INPUTS 2	OUTPUTS 2				
Spare Input 46	ITC Mark	M21	0	Spare Output 48	0
Spare Input 48	ITC Home	M22	0	Spare Output 49	0
Spare Input 50	XFormer OverHeat	M23	0	Spare Output 50	0
Exhaust Clogged	X/Y FAULT STATUS	M24	0	Spare Output 51	0
BP SAFETY COVER	DC MOTOR CURRENT	M25	0	Ax Lube Pump	52 0
BP Out of Pos 11	UNUSED	M26	0	Spare Output 53	0
Spare Input 76	UNUSED	M27	0	Spare Output 54	0
Spare Input 78	UNUSED	M28	0	Spare Output 55	0
Spare Input 80	UNUSED	Spare Output 40	0		
Spare Input 82	UNUSED	Spare Output 41	0		
Spare Input 84	UNUSED	Spare Output 42	0		
Spare Input 86	UNUSED	Spare Output 43	0		
Spare Input 88	UNUSED	Spare Output 44	0		
Spare Input 90	UNUSED	Spare Output 45	0		
Spare Input 92	UNUSED	Spare Output 46	0		
Spare Input 94	UNUSED	Spare Output 47	0		
Spare Input 96	UNUSED				
Spare Input 98	UNUSED				
Spare Input 100	UNUSED				
Spare Input 102	UNUSED				
Spare Input 104	UNUSED				
Spare Input 106	UNUSED				
Spare Input 108	UNUSED				
Spare Input 110	UNUSED				
Spare Input 112	UNUSED				

Symptom: The Enclosure Exhaust does not remove coolant mist and smoke. The dirty filter icon is shown.

Possible Cause: The vacuum switch is defective.

A faulty vacuum switch may fail to notify you of a dirty filter, or may falsely indicate that the filters are dirty.

Corrective Action:

Disconnect the vacuum switch from the I/O PCB. Put a jumper on the vacuum switch connector pins on the I/O PCB. The connector is at P23 for CHC [1] and P34 for NGC [2].

Go to **Enclosure Exhaust Clogged** on the I/O tab of the Diagnostics screen. Verify the value changes state when you put the jumper on the pins. If the value changes state, replace the vacuum switch.

If the value does not change, check the cable for damage. If the cable is not damaged, go to [I/O PCB - How it Works and Troubleshooting Guide \(Classic Haas Control\)](#).

Input	Value	Filter
INPUT 95	HYDRAULIC PRESSURE SW	0
INPUT 97	WORK_HOLD_CCDSP	0
INPUT 98	TRK_REDUNDANT_STOP	1
INPUT 99	CELL_SAFE	0
INPUT 100	USER_INPUTS_0	0
INPUT 101	USER_INPUTS_1	0
INPUT 102	WORK_HOLD_UNCLAMP	0
INPUT 103	SPARE_USER_INPUT	0
INPUT 104	INPUT_104	0
INPUT 105	ENCLOSURE_EXHAUST_CLOGGED	0
INPUT 106	INPUT_106	0
INPUT 107	MAIN_TRANSFORMER_TEMPERATURE	0
INPUT 108	INPUT_108	0
INPUT 109	INPUT_109	0
INPUT 110	INPUT_110	0
INPUT 111	INPUT_111	0

Section 3

Symptom: The Enclosure Exhaust does not remove coolant mist and smoke.

Possible Cause: There is a problem with the fan, or with the power to the fan.

Corrective Action:

Clean the fan. Inspect the fan blades for damage. Make sure the fan turns by hand. If there is damage to the fan blades, or the fan does not turn by hand, replace the fan.

If the fan turns:

1. Measure the spindle fan connector on the I/O PCB. The correct voltage is 120 VAC.

Measure the voltage at P41 for machines with the Classic Haas Control (CHC) and at P32 on machines with the Next Generation Control (NGC).

If there is no voltage at the spindle fan connector, go to [I/O PCB - How it Works and Troubleshooting Guide \(Classic Haas Control\)](#).

2. If there is 120 VAC at the spindle fan connection, measure the voltage at the end of the spindle fan cable 300A.

If there is no voltage at the end of the cable, replace cable 300A. If voltage is present, the fan is faulty.