



OVC OIL VISCOSITY CONTROL



WARNING

These instructions are intended for use only by experienced, qualified combustion start-up personnel. Adjustment of this equipment and its components by unqualified personnel can result in fire, explosion, severe personal injury, or even death.

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Attachments: Appropriate Drawings and Schematics

These instructions are intended to serve as guidelines covering the installation, operation, and maintenance of Hauck equipment. While every attempt has been made to ensure completeness, unforeseen or unspecified applications, details, and variations may preclude covering every possible contingency. **WARNING: TO PREVENT THE POSSIBILITY OF SERIOUS BODILY INJURY, DO NOT USE OR OPERATE ANY EQUIPMENT OR COMPONENT WITH ANY PARTS REMOVED OR ANY PARTS NOT APPROVED BY THE MANUFACTURER.** Should further information be required or desired or should particular problems arise which are not covered sufficiently for the purchaser's purpose, contact Hauck Mfg. Co.



WARNING

This equipment is potentially dangerous with the possibility of serious personal injury and property damage. Hauck Manufacturing Company recommends the use of flame supervisory equipment and fuel safety shutoff valves. Furthermore, Hauck urges rigid adherence to National Fire Protection Association (NFPA) standards and insurance underwriter's requirements. Operation and regular preventative maintenance of this equipment should be performed only by properly trained and qualified personnel. Annual review and upgrading of safety equipment is recommended.

A. GENERAL INFORMATION

The Hauck OVC Oil Viscosity Control takes the inconvenience and guess work out of burning waste, recycle and heavy oils. To properly burn waste and recycled oils, they must be heated to the optimum viscosity to burn cleanly and efficiently. The new Hauck Oil Viscosity Controller automatically monitors the viscosity and adjusts the temperature of the fuel oil for optimal combustion, removing the requirement for manual testing. Set the unit set point to the desired viscosity in SSU and let the controller do the rest.

The unit ships with a NEMA 4 control panel, temperature probe, transfer oil volume control valve, and viscosity transmitter. The unit is easily installed within the existing fuel oil piping system.

B. RECEIVING AND INSPECTION

Upon receipt, check each item on the bill of lading and/or invoice to determine that all equipment has been received. A careful examination of all parts should be made to ascertain if there has been any damage in shipment.

IMPORTANT

If the installation is delayed and the equipment is stored outside, provide adequate protection as dictated by climate and period of exposure. Special care should be given to all motors and bearings, if applicable, to protect them from rain or excessive moisture.

C. DRAWINGS AND SUPPLEMENTAL LITERATURE

Panel Assembly	Y8341
System Schematic	Y8342

D. INSTRUMENT CONFIGURATION

Two instruments are provided for viscosity control and over temperature protection. The viscosity controller instrument receives a 4-20mA oil viscosity input from the viscometer and provides two contact closure outputs to the control actuator. Actual viscosity is also provided as a 4-20mA output signal for customer use.

The high temperature limit instrument receives a 4-20mA oil temperature input from the viscometer and provides a contact output to enable the control actuator. If oil temperature exceeds the preset limit the control actuator will be forced closed. Oil temperature is also provided as a 4-20mA output signal for customer use.



Front Face of Viscosity Controller

Upper Display: Normally displays process temperature. Also displays parameter values or selections when in the set up mode.

Lower Display: Shows value of set point. Also displays function groups and parameters when in the set up mode.

Error / Fault Indications

Parameter	Upper Display	Lower Display	Description
Over Range	[<HH>]	Normal	Input > 5% over-range
Under Range	OPEN	Normal	Input > 5% under-range
Sensor Break	OPEN	Normal	Break in input sensor or wiring
Option 1 Error	ERR	OPn1	Option 1 module fault
Option 2 Error	ERR	OPn2	Option 2 module fault
Option 3 Error	ERR	OPn3	Option 3 module fault
Option A Error	ERR	OPnA	Auxiliary Option module fault

▼: Used to decrease the setpoint or configuration values.

▲: Used to increase the setpoint or configuration values.

⏏: Used in conjunction with the ▲ key to enter the set up and configuration modes. Also used to advance through the parameters.

E. CONFIGURATION RECORD

Use the following procedure to change parameters if required. Detailed information is given in the vendor literature supplied with the control panel.

Simultaneously press and hold the ▲ arrow and ⤴ Keys. **OPtr** will appear in the Upper Display. Press the ▲ arrow key until the Upper Display reads **ConF**, then press ⤴.

ULoc will appear in the Lower Display. Press the ▲ arrow until Upper Display reads **20** then press the ⤴ key to enter the configuration mode.

Press the ⤴ key to advance through configuration parameters. Use the ▼/▲ keys to change parameters if required. Press **AUTO/MAN** or **RESET** after changes are made to accept the new values.

Viscosity Controller: Configuration

LOWER DISPLAY (FUNCTION)	FACTORY CONFIGURATION	USER SETTINGS
InPt	4_20	
ruL	385.0	
rLL	55.0	
dPoS	1	
Ctrl	Rev	
Tr	0.07	
SPuL	302.0	
SPLL	-4.0	
ALA1	nonE	
ALA2	nonE	
LAEn	EnAb	
Inhi	nonE	
USE1	OPn	
USE2	CLS	
USE3	rEtP	
tyP3	4_20	
ro3H	385.0	
ro3L	55.0	
diSP	1	
CLoc	20	

High Temp Limit: Configuration

<u>LOWER DISPLAY (FUNCTION)</u>	<u>FACTORY CONFIGURATION</u>	<u>USER SETTINGS</u>
InPt	4_20	
ruL	302.0	
rLL	-4.0	
dPoS	1	
OFFS	0.0	
Ctrl	Hi	
SPuL	302.0	
SPLL	-4.0	
ALA1	nonE	
ALA2	nonE	
USE2	A1_d	
USE3	rEtP	
tyP3	4_20	
ro3H	302.0	
ro3L	-4.0	
diSP	EnAb	
CLoc	20	

Simultaneously press and hold the ▲ arrow and ⤵ Keys. **ConF** will appear in the Upper Display. Press the ▲ arrow key until the Upper Display reads, **OPtr** then press ⤵ to return to the operating display.

F. SETUP MODE

The setup menu must be accessed to tune the viscosity controller or to change the setpoint of the high temperature limit. Simultaneously press the ▲ and ↻ keys. **OPtr** will appear in the Upper Display. Press the ▲ arrow key until the Upper Display reads **SEtP** then press the ↻ key.

ULoc will appear in the Lower Display. Press the ▲ arrow until Upper display reads **10** then press the ↻ key to enter the setup mode.

Set the parameters as shown in the following table.

Viscosity Controller: Setup

LOWER DISPLAY (FUNCTION)	FACTORY CONFIGURATION	USER SETTINGS
FiLt	1.0	
OFFS	0.0	
Pb_P	10.0	
ArSt	5.00	
rAtE	0.00	
Ton	0.5	
SPul	385.0	
SPLL	55.0	
Apt	diSA	
PoEn	EnAb	
SPr	diSA	
rP		
SP	90.0	
SLoc	10	

For the viscosity controller, simply press the ↻ key to display **SP** in the lower display and use the ▼/▲ keys to change the setpoint.

High Temperature Limit: Setup

LOWER DISPLAY (FUNCTION)	FACTORY CONFIGURATION	USER SETTINGS
SP	275.0	
HYS	0.1	
FiLt	2.0	
SLoc	10	