

## Quarterly Inspections: Clean Air Separator Only

Inspect Clean Air Separator for proper operating configuration. See EO VR-203-H, Exhibit 2, Figure 2B-7 or 2B-7H for guidance. Figure 2B-7 applies to vertical CAS installations. Figure 2B-7H applies to horizontal CAS installations.

## Annual Inspections

Annual VST ECS Membrane <i>Processor</i> Inspections and Replacements					
Component	Procedure	Fail Criteria	Corrective Action	Reference Manuals	Authorized Personnel
Blower	Replace the blower every ten years or 15,000 hrs. (whichever comes first).			IOM - 11	VST ASC Level C
Vacuum pump	Replace pump every ten years or 15,000 hrs. (whichever comes first).				
Vacuum pump drive coupling - rubber insert	Visually inspect the drive coupling between the vacuum pump and the motor for wear	Rubber debris is found on or around the vacuum-pump base.	Replace the drive coupling rubber insert	IOM - 11	
Heat Trace Cable	Check the continuity of the heat trace cable.	If the heat trace cable circuit is open, the cable has failed.	Replace the heat-trace cable	IOM - 11	
HC Sensor	Test the HC sensor	The difference shall be within $\pm 1.0\%$ HC concentration from the calibration gas concentration for zero and mid-range gas and $\pm 2.0\%$ for the high-range gas.	Replace the HC Sensor	IOM - 11 and Exhibit 8	

## Preventative Maintenance Checklist Form

Component	Frequency	Date Inspected	Completed	Required Action Items
<b>VST ECS PROCESSOR</b>				
	Yearly			
<ul style="list-style-type: none"> <li>Inspect drive coupling on the vacuum pump.</li> </ul>			[ ]	
<ul style="list-style-type: none"> <li>Check the continuity of the heat trace cable.</li> </ul>			[ ]	
<b>RECIRCULATION BLOWER</b>				
Replace every 10 years or 15,000 hours, whichever comes first.			[ ]	
<b>VACUUM PUMP</b>				
Replace every 10 years or 15,000 hours, whichever comes first.			[ ]	

## Hirt VCS 100 Processor Annual Inspection Checklist

**DATE OF TEST:**

SERVICE COMPANY NAME	SERVICE COMPANY'S TELEPHONE
SERVICE TECHNICIAN	HIRT TECHNICIAN CERTIFICATION # (as applicable) ICC or DISTRICT TRAINING CERTIFICATION (as applicable)
STATION NAME	DISTRICT PERMIT #
STATION ADDRESS	CITY STATE ZIP
Instructions: Perform each step and check each box after step is completed. File completed checklist with station's Maintenance Records.	
<b>1.</b>	Turn OFF electrical power to processor.  <b>CAUTION:</b> The processor can be hot from operation. Use caution when removing Weather Cover, Shell, and raising Inner Stack; they are HOT! <div style="float: right; text-align: right;"><input type="checkbox"/></div>
<b>2.</b>	Remove Weather Cover. Look inside stack and burner chamber to check for debris. Remove any debris. <div style="float: right; text-align: right;"><input type="checkbox"/></div>
<b>3.</b>	Remove padlocks, if any, and remove Shell from processor. <div style="float: right; text-align: right;"><input type="checkbox"/></div>
<b>4.</b>	Loosen stack bolt and raise Inner Stack. The pilot and igniter/sensor are now exposed. The internals should be checked for foreign material. Remove any foreign material. <div style="float: right; text-align: right;"><input type="checkbox"/></div>
<b>5.</b>	Check igniter/sensor for carbon buildup. Replace Pilot Tip assembly if Excessive buildup. See instructions that come with replacement Pilot Tip for Installation details. <div style="float: right; text-align: right;"><input type="checkbox"/></div>
<b>6.</b>	Visually check all processor piping and tubing for leaks (this is checked when conducting TP-201.3 and Exhibit 4 of Executive Order VR-203). Check metal tubing and piping for kinks, worn areas, and cracks, or deterioration. Check piping and metal tubing fittings to insure that they are strong and tight sealing. Replace any questionable components. <div style="float: right; text-align: right;"><input type="checkbox"/></div>

7.	Conduct Exhibit 13 of Executive Order VR-203 "Hirt VCS 100 Processor With Indicator Panel Operability Test Procedure"	<input type="checkbox"/>
8.	Check setting of Pilot Needle Valve adjustmet (section 8.8 of Hirt VCS 100 IOM).	<input type="checkbox"/>
9.	Lower Inner Stack and Tighten bolt. Replace Shell, Weather Cover, and padlocks removed for visual inspection.	<input type="checkbox"/>
10.	Verify handle on 3-way valve is in down position – Processor to UST Ullage.	<input type="checkbox"/>
11.	Turn ON electrical power to processor.	<input type="checkbox"/>