

April 12, 2005

**PROBE CONDITIONING
SYSTEM- P/N 13036
FOR GENERATOR SAMPLING SYSTEMS
ACTUATED BY AC20
INSTRUCTION MANUAL M4515**



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Table Of Contents

◆Introduction	p. 1
◆Specifications	p. 1
◆Description	p. 1
◆Installation	p. 2
◆Operation	p. 2
◆Wiring Diagram.....	p. 3
◆Revision History	p. 4

INTRODUCTION

Thank you for selecting **SSI P/N 13036** for your generator probe maintenance application.

You lubricate critical machine parts on a regular basis if you want them to last. Your zirconia carbon sensor also requires regular maintenance. Buildup of carbon in the space between the zirconia sensing element and the sheath, as well as at the sensing point, will eventually adversely affect the proper operation of the probe. If carbon (soot) is allowed to accumulate to the extent that the atmosphere cannot penetrate to the sensing surface, control is impossible. The 13036 is designed to prevent that from happening. By periodically initiating a procedure from the SSI SlikGen or AC20 controls to remove the accumulated carbon, the carbon sensor is maintained in a clean operating condition. The 13036 is intended for use with generator-dew point sampling (reheat) systems only. This system can perform very well with low burnoff flow rates since the sample flow is stopped and displaced by burnoff air.

SPECIFICATIONS

- | | |
|--------------------------------|---|
| ◆Reference air flow- 2scfh max | ◆Dimensions- 10" x 10" x 6" |
| ◆Burnoff air flow- 10scfh max. | ◆Weight- 17.8 lbs |
| ◆Burnoff time- 1 to 10 minutes | ◆Actuation- Cycle times- 5 to 50 hours. |

DESCRIPTION

The 13036 Generator Probe Conditioning Box is designed for use with generator sampling or reheat systems. While the SSI 13003 system is equipped with internal timers to conduct the burnoff routine, the 13036 is actuated by SSI AC20 or other controls. Existing burnoff systems that were designed to work with a programmable controller cannot provide adequate air for burnoff because they simply switch the output of small reference air pumps to the burnoff fitting without regard to adequate flow. Fig. 1 shows the piping and wiring diagram of the SSI B.O. Box.

INSTALLATION

Location

The compact JIC box is provided with flanges, each having two 1/4" mounting holes. Locate the box within about 6 feet of the sensor, if possible. Avoid locations close to a source of combustibles such as a natural gas fitting that could develop a leak. Wire and pipe the system as shown in Fig. 1. The controller will hold the additive gas flow constant during burnoff and purge/delay periods.

Commissioning

Locate the reheat well and probe in the generator wall so that the indicated probe temperature is stable between 1450 and 1650°F.

With the power switch on, set the reference airflow rate close to full scale (2cfh).

Initiate a burnoff routine in the control instrument with a nominal burnoff time of 3 minutes. Adjust the burnoff airflow rate to 3cfh and observe the probe millivolt reading. If it doesn't drop well below 200mv (preferably to zero) before the burnoff is complete, increase the flow rate or the time until it does. Your system is now operational.

Values of 24 hours cycle time, 3 minutes burnoff time and 3cfh burnoff flow are typical for this application. When operating at dew points lower than 35°F, it may be desirable to reduce the cycle time to 12 hours or less. If you encounter difficulties, contact SSI for advice and assistance.

OPERATION

See Fig. 1 for a brief explanation of the routine and refer to the **GOLD PROBE™** instruction manual for a more complete discussion of probe conditioning.

THANK YOU

We think you will be delighted with the performance of your probes once you have installed this engineered conditioning system. If you have any questions, suggestions or problems, your **GOLD PROBE™** team is only as far as your phone. Call us at 1-800-666-4330. We listen. And we respond.

Revision History

Rev.	Description	Date
A	Initial Release	04-24-2001
B	Added Revision History	07-11-2001
C	Revised Drawings on Page 3	11-06-2002
D	SSi Address Update, General Update	04-12-2005

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Page 4

PROBE CONDITIONING SYSTEM MANUAL