

API Standard 622 Test Report

“Type Testing of Process Valve
Packing for Fugitive Emissions”
Second Edition, 2011

Performed for

PBM, Inc.

<http://www.pbmvalve.com>



1/2" Valve Stem Assembly
Product Code: SK-P001

Project Number: 213034
Test Start Date: January 25, 2013



Performed by

YARMOUTH RESEARCH AND TECHNOLOGY, LLC

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Yarmouth Research and Technology, LLC

API 622 PROJECT SUMMARY

Customer: PBM, Inc.

Start Date: 25-Jan-13

Project #: 213034

Fixture Information

Test Fixture: 1/2" valve stem assembly

Product Code: SK-P001

Source of Sample: Customer

Packing Description: Garlock Style 1303 FEP; SK-001 - (2) pieces

Test Conditions

Specification: API 622, 2nd Edition, 2011

Test Media: 99% Methane

Test Pressure: 600 psig at ambient temperature

Test Pressure: 600 psig at 500 deg F.

Cycling Rate: 15 seconds per cycle

Cycle Stroke: 1/4 turn

Recommended Packing Nut Torque: 84-96 in-lbs

Maximum Allowable Leakage: 100 PPM_v

Results

Number of Mechanical Cycles Completed: 1510

Number of Thermal Cycles Completed: 5

Number of Packing Adjustments Required: 0

Cycle Number(s) of Packing Adjustments:

Average Leakage Throughout Test: 6 PPM_v

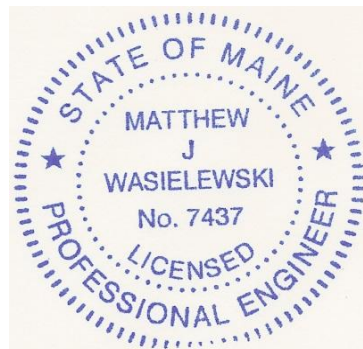
Maximum Leakage Throughout Test: 31 PPM_v

Witness



Matthew J Wasielewski, PE

President, Yarmouth Research



Yarmouth Research and Technology, LLC

Customer: PBM, Inc.

Start Date: 25-Jan-13

Project #: 213034

Test Fixture: 1/2" valve stem assembly

Product Code: SK-P001

Cycle Number	Inside Temp (F)	Bonnet Temp - (F)	Pressure (psig)	Stem Seal Leakage		Packing
				(PPMv)		Retorque
				Avg.	Max.	See Note
0	65	65	600	0	0	
50	67	68	600	1	1	
100	69	69	600	1	1	
150	69	69	600	1	1	
150	493	500	600	2	3	
200	493	500	600	1	2	
250	493	500	600	1	1	
300	493	500	600	1	1	
300	64	64	600	4	5	
350	65	65	600	6	7	
400	65	65	600	6	6	
450	65	65	600	5	5	
450	493	500	600	5	5	
500	493	500	600	5	5	
550	493	500	600	4	4	
600	493	499	600	3	3	
600	66	66	600	9	9	
650	66	67	600	7	8	
700	67	67	600	8	9	
750	68	68	600	8	8	
750	495	500	600	5	6	
800	494	500	600	5	5	
850	494	501	600	5	5	
900	494	501	600	4	4	
900	62	63	600	7	8	
950	64	64	600	7	7	
1000	64	64	600	7	8	
1050	65	65	600	7	8	
1050	494	501	600	5	5	
1100	494	500	600	4	4	
1150	493	500	600	4	4	
1200	493	500	600	4	4	
1200	63	64	600	10	10	
1250	65	65	600	9	9	
1300	66	66	600	7	8	

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1350	67	67	600	7	7
1350	494	501	600	3	4
1400	493	500	600	3	3
1450	494	501	600	3	3
1500	494	501	600	3	3
1500	66	66	600	28	31
1510	66	66	600	25	28
Averages ->			600	6	6
Maximums ->			600	28	31

Packing Retorque Notes:

	<i>Cycle Number</i>	<i>Nut Torque ft-lb</i>
1		
2		
3		
4		

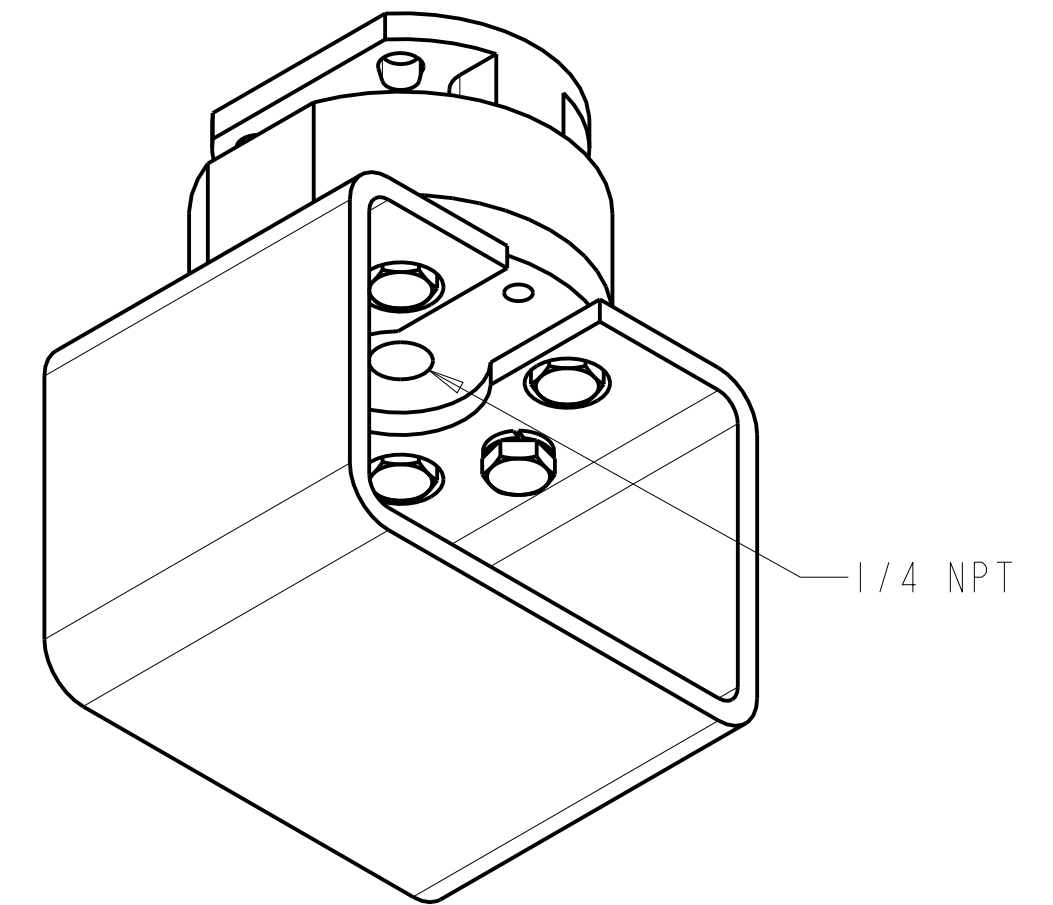
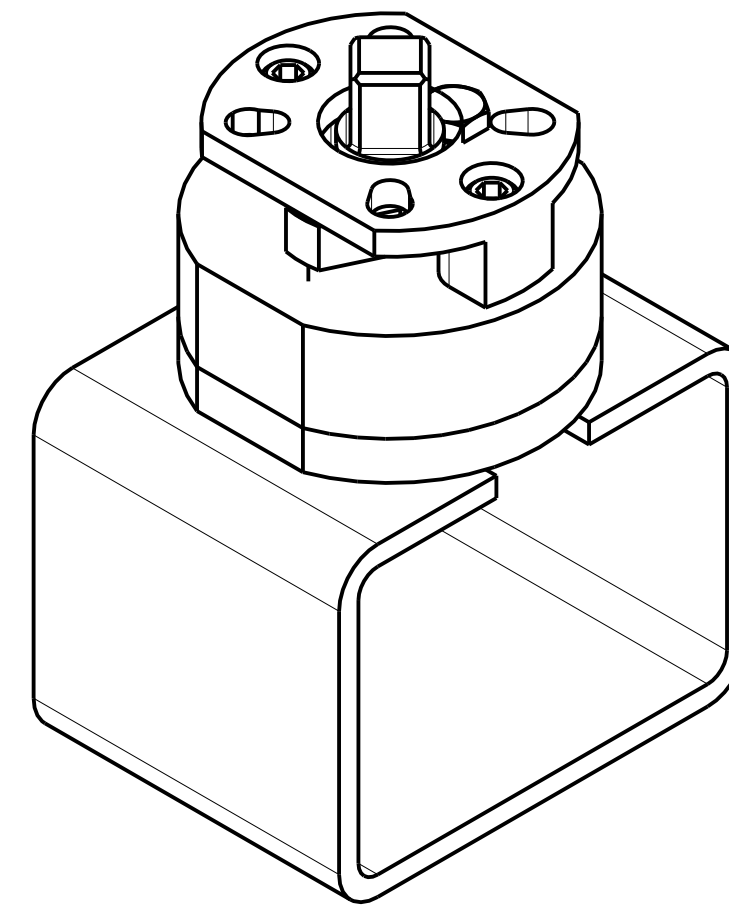
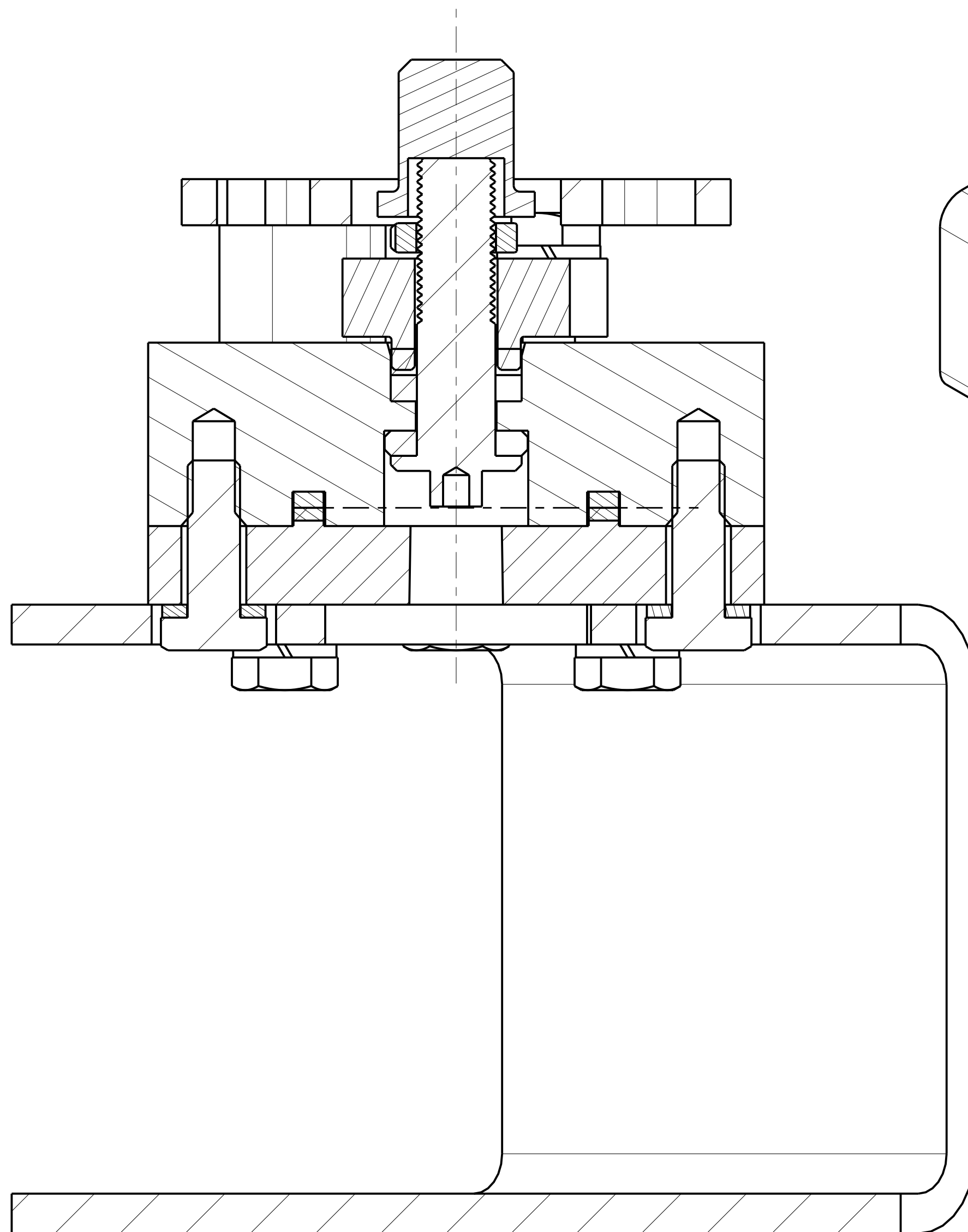
Nut Torque at End of Test: (in-lb)	35
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Test Notes:

Test Results: The average and maximum leakage results shown below were calculated from 60 readings measured during a minute duration.
See data sheets for more detailed information.

GENERIC NO.
SK-N041

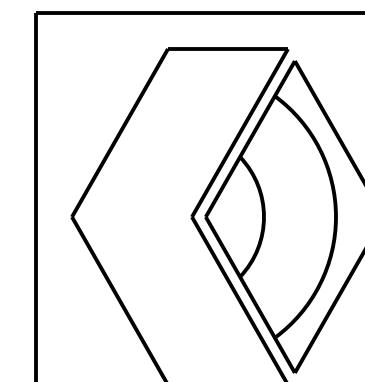
REV. No.	REV. DATE	CHK BY	APP BY	REMARKS



PARTS LIST - SK-N041

ITEM	PART NO.	DESCRIPTION	QTY.	MATERIAL
1	SPK-D519	THIN HEX NUT (3/8"-24)	1	18-8 SST
2	SPCGD535B-	STEM BEARING	1	METCAR M-1515
3	SK-P002-6	GLAND PLATE	1	A479-S31603
4	SK-P001-9	STEM PACKING	2	WIRE-BRAIDED GRAPHITE
5	SK-P001-3	COVER, TEST ASSEMBLY	1	SST
6	SK-P001-1	FUGITIVE EMISSIONS TEST BODY	1	SST
7	SK-N041-22	BRACKET	1	300 SER SST
8	1VHLD605	STEM	1	A479, S31603
9	HWBKXEXL	HI COLLAR LOCKWASHER (1/4")	2	18-8 SST
10	HWBKCE07	SOC HD CAPSCREW (1/4"-20 x 7/8" LG)	2	18-8 SST
11	HWAKXEXL	LOCKWASHER (1/4")	9	18-8 SST
12	HWAKCE06	HEX CAPSCREW (1/4"-20 X 3/4" LG.)	6	18-8 SST
13	HWAKCE04	HEX CAPSCREW (1/4"-20 X 1/2" LG.)	3	18-8 SST
14	CNGRH513B	2" GRAPHITE BONNET GASKET	1	GRAPHITE
15	BSK-D560VB	INSERT	1	300 SER SST
16	BSK-D522---1	BRACKET	1	300 SER SST

SECTION Z-Z



PBM, Inc.
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FUGITIVE EMISSIONS TEST FIXTURE
FOR: STEM PACKING DESIGN EVALUATION

DR	INIT	DATE	SIZE	FSCM NUMBER	DWG. NO.	REV.
	LJA	1/3/13	C	92021	SK-P001	0
CHK						
APP						

SCALE: 1.0 WEIGHT: N/A SHEET 1 of 1

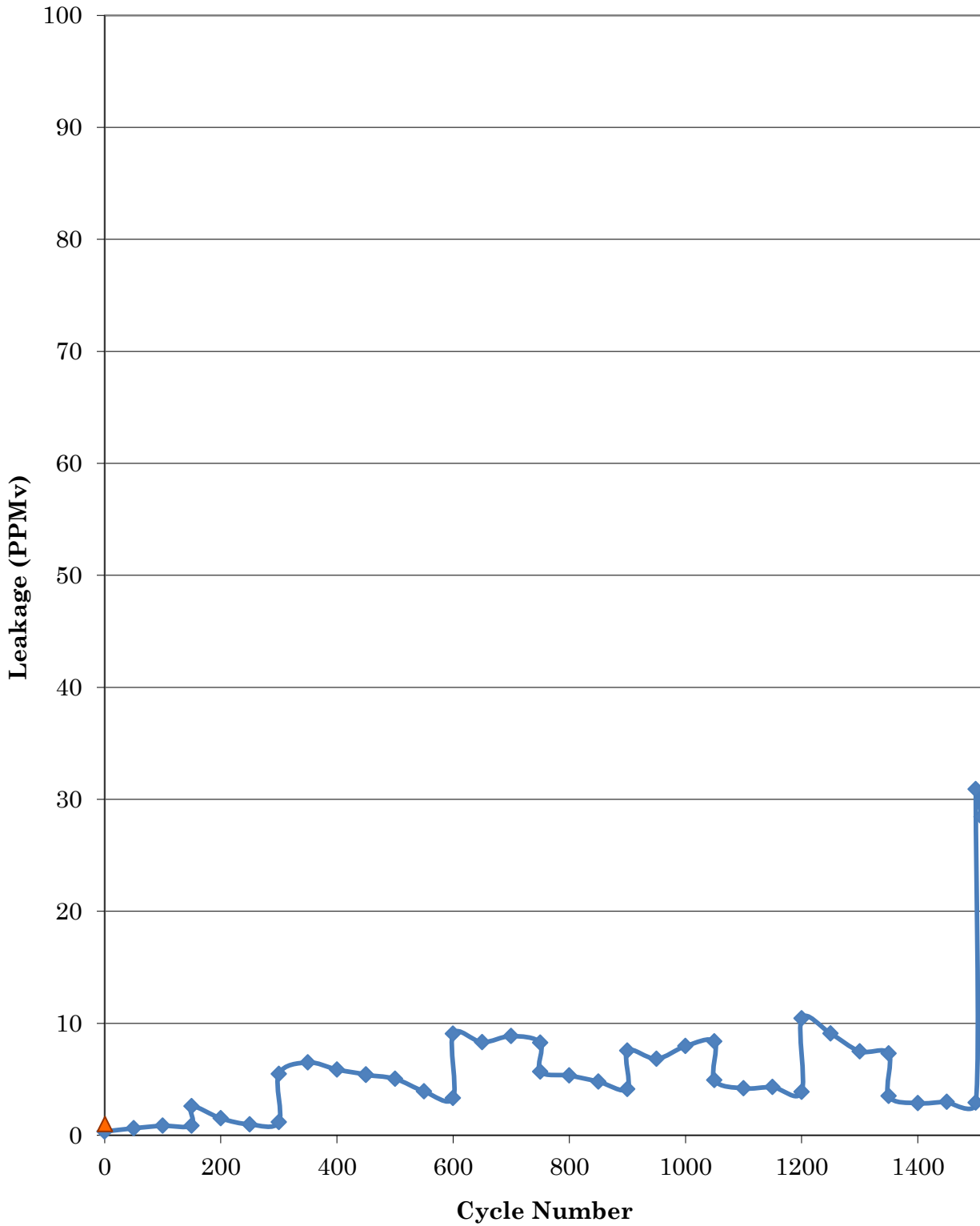
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Test Valve Setup

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Static Leakage Chart
Maximum Reading



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Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 0 **Date** 1/25/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
10:46:16 AM	600	65	66	0.3
10:46:17 AM	600	65	65	0.3
10:46:18 AM	600	66	66	0.3
10:46:19 AM	600	65	66	0.3
10:46:20 AM	600	66	65	0.3
10:46:21 AM	600	66	65	0.3
10:46:22 AM	600	65	65	0.3
10:46:23 AM	600	66	65	0.3
10:46:24 AM	600	65	65	0.3
10:46:25 AM	600	65	65	0.3
10:46:26 AM	600	65	65	0.3
10:46:27 AM	600	66	66	0.3
10:46:28 AM	600	66	65	0.3
10:46:29 AM	600	66	65	0.3
10:46:30 AM	600	65	65	0.3
10:46:31 AM	600	65	65	0.3
10:46:32 AM	600	66	65	0.3
10:46:33 AM	600	65	65	0.3
10:46:34 AM	600	65	65	0.3
10:46:35 AM	600	65	65	0.3
10:46:36 AM	600	65	65	0.3
10:46:37 AM	600	65	65	0.3
10:46:38 AM	600	65	65	0.3
10:46:39 AM	600	65	65	0.3
10:46:39 AM	600	66	65	0.3
10:46:40 AM	600	66	65	0.3
10:46:41 AM	600	66	65	0.3
10:46:42 AM	600	66	65	0.3
10:46:43 AM	600	66	66	0.3
10:46:44 AM	600	66	66	0.3
10:46:45 AM	600	65	66	0.3
10:46:46 AM	600	66	65	0.3
10:46:47 AM	600	66	66	0.3
10:46:48 AM	600	66	66	0.3
10:46:49 AM	600	65	65	0.3
10:46:50 AM	600	66	65	0.3
10:46:51 AM	600	66	66	0.3
10:46:52 AM	600	66	65	0.3
10:46:53 AM	600	65	65	0.3
10:46:54 AM	600	66	65	0.3
10:46:55 AM	600	66	66	0.3
10:46:56 AM	600	66	65	0.3
10:46:57 AM	600	65	66	0.3
10:46:58 AM	600	65	66	0.3
10:46:59 AM	600	66	65	0.3
10:47:00 AM	600	66	65	0.3
10:47:01 AM	600	65	65	0.3
10:47:02 AM	600	66	65	0.3
10:47:03 AM	600	66	65	0.3
10:47:04 AM	600	66	65	0.3
10:47:05 AM	600	65	65	0.3
10:47:06 AM	600	65	65	0.3
10:47:07 AM	600	65	65	0.3
10:47:08 AM	600	66	65	0.3
10:47:09 AM	600	66	65	0.2
10:47:10 AM	600	65	65	0.3
10:47:11 AM	600	65	65	0.3
10:47:12 AM	600	65	66	0.3
10:47:13 AM	600	65	66	0.3
10:47:14 AM	600	65	65	0.3
Averages ->	600	65	65	0.3
			Maximum ->	0.3

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Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 50 **Date** 1/25/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
11:01:37 AM	600	68	68	0.4
11:01:38 AM	600	68	68	0.4
11:01:39 AM	600	68	68	0.4
11:01:40 AM	600	68	68	0.4
11:01:41 AM	600	68	68	0.4
11:01:42 AM	600	68	68	0.4
11:01:43 AM	600	68	68	0.5
11:01:44 AM	600	68	68	0.5
11:01:45 AM	600	68	68	0.5
11:01:46 AM	600	68	68	0.5
11:01:47 AM	600	68	68	0.5
11:01:48 AM	600	68	68	0.5
11:01:49 AM	600	68	68	0.5
11:01:50 AM	600	68	68	0.5
11:01:51 AM	600	68	68	0.5
11:01:52 AM	600	68	68	0.5
11:01:53 AM	600	68	68	0.5
11:01:54 AM	600	68	68	0.5
11:01:55 AM	600	68	68	0.5
11:01:56 AM	600	68	68	0.5
11:01:57 AM	600	68	68	0.5
11:01:58 AM	600	68	68	0.5
11:01:59 AM	600	68	68	0.5
11:02:00 AM	600	68	68	0.5
11:02:01 AM	600	68	68	0.6
11:02:02 AM	600	68	68	0.5
11:02:03 AM	600	68	68	0.5
11:02:04 AM	600	68	68	0.5
11:02:05 AM	600	68	68	0.6
11:02:06 AM	600	68	68	0.5
11:02:07 AM	600	68	68	0.6
11:02:08 AM	600	68	68	0.6
11:02:09 AM	600	68	30	0.5
11:02:10 AM	600	68	68	0.5
11:02:11 AM	600	68	68	0.5
11:02:12 AM	600	68	68	0.5
11:02:13 AM	600	68	68	0.6
11:02:14 AM	600	68	68	0.6
11:02:14 AM	600	68	68	0.6
11:02:15 AM	600	68	68	0.6
11:02:16 AM	600	68	68	0.6
11:02:17 AM	600	68	68	0.5
11:02:18 AM	600	68	68	0.5
11:02:19 AM	600	68	68	0.5
11:02:20 AM	600	68	68	0.6
11:02:21 AM	600	68	68	0.5
11:02:22 AM	600	68	68	0.5
11:02:23 AM	600	68	68	0.5
11:02:24 AM	600	68	68	0.5
11:02:25 AM	600	68	68	0.5
11:02:26 AM	600	68	68	0.5
11:02:27 AM	600	68	68	0.5
11:02:28 AM	600	68	68	0.5
11:02:29 AM	600	68	68	0.6
11:02:30 AM	600	68	68	0.5
11:02:31 AM	600	68	68	0.6
11:02:32 AM	600	68	68	0.6
11:02:33 AM	600	68	68	0.6
11:02:34 AM	600	68	68	0.6
11:02:35 AM	600	68	68	0.6
Averages ->	600	68	67	0.5
			Maximum ->	0.6

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Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 100

Date 1/25/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
11:16:59 AM	600	69	69	0.8
11:17:00 AM	600	69	69	0.8
11:17:01 AM	600	69	69	0.8
11:17:02 AM	600	69	69	0.8
11:17:03 AM	600	69	69	0.8
11:17:04 AM	600	69	69	0.8
11:17:05 AM	600	69	69	0.8
11:17:06 AM	600	69	69	0.9
11:17:07 AM	600	69	69	0.8
11:17:08 AM	600	69	69	0.8
11:17:09 AM	600	69	69	0.8
11:17:10 AM	600	69	69	0.8
11:17:11 AM	600	69	69	0.8
11:17:12 AM	600	69	69	0.8
11:17:13 AM	600	69	69	0.8
11:17:14 AM	600	69	69	0.8
11:17:15 AM	600	69	69	0.8
11:17:16 AM	600	69	69	0.8
11:17:17 AM	600	69	69	0.8
11:17:18 AM	600	69	69	0.7
11:17:19 AM	600	69	69	0.7
11:17:20 AM	600	69	69	0.7
11:17:21 AM	600	69	69	0.8
11:17:22 AM	600	69	69	0.8
11:17:23 AM	600	69	69	0.8
11:17:24 AM	600	69	69	0.8
11:17:25 AM	600	69	69	0.8
11:17:26 AM	600	69	69	0.8
11:17:27 AM	600	69	69	0.8
11:17:27 AM	600	69	69	0.8
11:17:28 AM	600	69	69	0.8
11:17:29 AM	600	69	69	0.8
11:17:30 AM	600	69	69	0.8
11:17:31 AM	600	69	69	0.8
11:17:32 AM	600	69	69	0.8
11:17:33 AM	600	69	69	0.8
11:17:34 AM	600	69	69	0.8
11:17:35 AM	600	69	69	0.8
11:17:36 AM	600	69	69	0.8
11:17:37 AM	600	69	69	0.8
11:17:38 AM	600	69	69	0.8
11:17:39 AM	600	69	69	0.8
11:17:40 AM	600	69	69	0.8
11:17:41 AM	600	69	69	0.8
11:17:42 AM	600	69	69	0.8
11:17:43 AM	600	69	69	0.8
11:17:44 AM	600	69	69	0.8
11:17:45 AM	600	69	69	0.8
11:17:46 AM	600	69	69	0.8
11:17:47 AM	600	69	69	0.8
11:17:48 AM	600	69	69	0.8
11:17:49 AM	600	69	69	0.8
11:17:50 AM	600	69	69	0.8
11:17:51 AM	600	69	69	0.8
11:17:52 AM	600	69	69	0.8
11:17:53 AM	600	69	69	0.8
11:17:54 AM	600	69	69	0.8
11:17:55 AM	600	69	69	0.8
11:17:56 AM	600	69	69	0.8
11:17:57 AM	600	69	69	0.8
Averages ->	600	69	69	0.8
			Maximum ->	0.9

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Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 150

Date 1/25/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
11:31:36 AM	600	69	69	0.6
11:31:37 AM	600	69	69	0.6
11:31:38 AM	600	69	70	0.6
11:31:39 AM	600	69	69	0.6
11:31:40 AM	600	70	69	0.6
11:31:41 AM	600	69	69	0.7
11:31:42 AM	600	69	69	0.7
11:31:43 AM	600	70	69	0.7
11:31:44 AM	600	69	69	0.7
11:31:45 AM	600	70	70	0.7
11:31:46 AM	600	69	69	0.7
11:31:47 AM	600	70	70	0.7
11:31:48 AM	600	69	69	0.7
11:31:49 AM	600	69	69	0.7
11:31:50 AM	600	69	69	0.7
11:31:51 AM	600	69	69	0.8
11:31:52 AM	600	69	69	0.8
11:31:53 AM	600	69	69	0.8
11:31:54 AM	600	69	69	0.8
11:31:55 AM	600	70	69	0.8
11:31:56 AM	600	70	69	0.8
11:31:57 AM	600	69	69	0.8
11:31:58 AM	600	69	69	0.8
11:31:59 AM	600	69	69	0.8
11:32:00 AM	600	69	69	0.8
11:32:01 AM	600	70	69	0.8
11:32:02 AM	600	70	69	0.8
11:32:03 AM	600	69	69	0.8
11:32:04 AM	600	70	69	0.8
11:32:05 AM	600	69	69	0.8
11:32:06 AM	600	69	69	0.8
11:32:07 AM	600	69	69	0.8
11:32:08 AM	600	69	69	0.8
11:32:09 AM	600	69	69	0.8
11:32:10 AM	600	69	69	0.8
11:32:11 AM	600	69	69	0.8
11:32:12 AM	600	69	69	0.8
11:32:13 AM	600	69	69	0.8
11:32:14 AM	600	69	69	0.8
11:32:15 AM	600	69	69	0.8
11:32:16 AM	600	69	69	0.8
11:32:17 AM	600	69	69	0.8
11:32:18 AM	600	69	69	0.8
11:32:19 AM	600	69	69	0.8
11:32:20 AM	600	69	69	0.8
11:32:21 AM	600	69	69	0.8
11:32:21 AM	600	69	69	0.8
11:32:22 AM	600	69	69	0.8
11:32:23 AM	600	69	69	0.8
11:32:24 AM	600	69	69	0.8
11:32:25 AM	600	69	69	0.9
11:32:26 AM	600	69	69	0.9
11:32:27 AM	600	69	69	0.9
11:32:28 AM	600	69	69	0.8
11:32:29 AM	600	69	69	0.8
11:32:30 AM	600	70	69	0.8
11:32:31 AM	600	70	69	0.8
11:32:32 AM	600	70	69	0.8
11:32:33 AM	600	70	69	0.8
11:32:34 AM	600	69	69	0.8
Averages ->	600	69	69	0.8
			Maximum ->	0.9

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 150

Date 1/25/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
12:38:04 PM	600	500	493	2
12:38:05 PM	600	500	493	2
12:38:06 PM	600	500	494	2
12:38:07 PM	600	500	494	2
12:38:08 PM	600	499	493	2
12:38:09 PM	600	501	494	2
12:38:10 PM	600	501	494	2
12:38:11 PM	600	500	493	2
12:38:12 PM	600	500	494	2
12:38:13 PM	600	500	494	2
12:38:14 PM	600	499	493	2
12:38:15 PM	600	500	493	2
12:38:16 PM	600	500	494	2
12:38:17 PM	600	499	493	2
12:38:18 PM	600	500	493	2
12:38:19 PM	600	501	493	2
12:38:20 PM	600	499	493	2
12:38:21 PM	600	499	493	2
12:38:22 PM	600	500	493	2
12:38:23 PM	600	498	492	2
12:38:24 PM	600	499	493	2
12:38:25 PM	600	500	494	2
12:38:26 PM	600	500	492	2
12:38:27 PM	600	499	493	2
12:38:28 PM	600	500	493	2
12:38:29 PM	600	499	493	2
12:38:30 PM	600	498	492	2
12:38:31 PM	600	500	494	2
12:38:32 PM	600	499	493	2
12:38:33 PM	600	499	492	2
12:38:34 PM	600	501	494	2
12:38:35 PM	600	500	493	2
12:38:36 PM	600	498	492	2
12:38:37 PM	600	500	493	2
12:38:38 PM	600	499	494	2
12:38:39 PM	600	499	492	2
12:38:40 PM	600	499	494	2
12:38:41 PM	600	500	493	2
12:38:42 PM	600	499	493	2
12:38:43 PM	600	500	493	2
12:38:44 PM	600	500	494	2
12:38:45 PM	600	499	492	2
12:38:46 PM	600	500	493	2
12:38:47 PM	600	500	494	2
12:38:48 PM	600	499	493	2
12:38:49 PM	600	500	493	2
12:38:50 PM	600	501	494	2
12:38:51 PM	600	500	493	3
12:38:52 PM	600	500	493	3
12:38:53 PM	600	501	494	3
12:38:54 PM	600	499	493	3
12:38:55 PM	600	500	494	2
12:38:56 PM	600	500	494	2
12:38:57 PM	600	500	493	3
12:38:58 PM	600	500	493	3
12:38:59 PM	600	500	493	3
12:38:59 PM	600	501	494	3
12:39:00 PM	600	499	492	3
12:39:01 PM	600	500	493	3
12:39:02 PM	600	501	494	3
Averages ->	600	500	493	2
			Maximum ->	3

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 200

Date 1/25/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
1:35:46 PM	600	500	492	1.3
1:35:47 PM	600	501	494	1.3
1:35:48 PM	600	500	490	1.4
1:35:49 PM	600	501	494	1.5
1:35:50 PM	600	499	492	1.5
1:35:51 PM	600	501	493	1.4
1:35:52 PM	600	501	493	1.4
1:35:53 PM	600	501	494	1.4
1:35:54 PM	600	499	492	1.4
1:35:55 PM	600	501	494	1.4
1:35:56 PM	600	499	492	1.4
1:35:57 PM	600	500	494	1.5
1:35:58 PM	600	499	492	1.4
1:35:58 PM	600	499	492	1.4
1:35:59 PM	600	501	493	1.3
1:36:00 PM	600	499	490	1.3
1:36:01 PM	600	501	494	1.3
1:36:02 PM	600	499	491	1.3
1:36:03 PM	600	500	493	1.3
1:36:04 PM	600	501	493	1.2
1:36:05 PM	600	498	492	1.2
1:36:06 PM	600	500	493	1.2
1:36:07 PM	600	498	491	1.2
1:36:08 PM	600	500	493	1.2
1:36:09 PM	600	499	492	1.3
1:36:10 PM	600	498	491	1.3
1:36:11 PM	600	500	494	1.3
1:36:12 PM	600	499	492	1.3
1:36:13 PM	600	500	494	1.3
1:36:14 PM	600	498	492	1.2
1:36:15 PM	600	499	493	1.2
1:36:16 PM	600	500	493	1.2
1:36:17 PM	600	499	491	1.2
1:36:18 PM	600	499	493	1.2
1:36:19 PM	600	499	492	1.2
1:36:20 PM	600	501	493	1.2
1:36:21 PM	600	499	493	1.2
1:36:22 PM	600	499	492	1.2
1:36:23 PM	600	501	493	1.2
1:36:24 PM	600	499	491	1.2
1:36:25 PM	600	501	494	1.2
1:36:26 PM	600	498	492	1.3
1:36:27 PM	600	500	492	1.3
1:36:28 PM	600	500	493	1.4
1:36:29 PM	600	499	492	1.4
1:36:30 PM	600	501	494	1.4
1:36:31 PM	600	497	493	1.4
1:36:32 PM	600	501	493	1.4
1:36:33 PM	600	499	492	1.4
1:36:34 PM	600	500	493	1.4
1:36:35 PM	600	501	493	1.4
1:36:36 PM	600	499	492	1.4
1:36:37 PM	600	501	493	1.4
1:36:38 PM	600	499	491	1.4
1:36:39 PM	600	500	492	1.5
1:36:40 PM	600	500	494	1.5
1:36:41 PM	600	499	492	1.5
1:36:42 PM	600	501	494	1.5
1:36:43 PM	600	499	491	1.5
1:36:44 PM	600	500	494	1.5
Averages ->	600	500	493	1.3
			Maximum ->	1.5

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 250 **Date** 1/25/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
1:56:37 PM	600	500	493	1.0
1:56:38 PM	600	501	493	1.0
1:56:39 PM	600	500	493	1.0
1:56:40 PM	600	500	493	1.0
1:56:41 PM	600	500	493	1.0
1:56:42 PM	600	501	494	1.0
1:56:43 PM	600	501	493	1.0
1:56:44 PM	600	501	493	1.0
1:56:45 PM	600	500	492	1.0
1:56:46 PM	600	501	493	1.0
1:56:47 PM	600	500	492	1.0
1:56:48 PM	600	500	493	0.9
1:56:49 PM	600	499	492	0.9
1:56:50 PM	600	501	492	0.9
1:56:51 PM	600	499	491	1.0
1:56:52 PM	600	500	492	1.0
1:56:53 PM	600	497	491	0.9
1:56:54 PM	600	500	493	0.9
1:56:55 PM	600	498	490	0.9
1:56:56 PM	600	499	493	0.9
1:56:57 PM	600	497	491	0.9
1:56:58 PM	600	500	492	0.9
1:56:59 PM	600	497	492	0.9
1:57:00 PM	600	498	493	0.9
1:57:01 PM	600	498	493	0.9
1:57:02 PM	600	499	493	0.9
1:57:03 PM	600	498	491	0.9
1:57:04 PM	600	500	492	0.9
1:57:05 PM	600	497	491	0.9
1:57:06 PM	600	500	492	0.9
1:57:07 PM	600	498	491	0.9
1:57:08 PM	600	501	493	0.9
1:57:09 PM	600	499	492	0.9
1:57:10 PM	600	499	493	0.9
1:57:11 PM	600	499	493	0.9
1:57:12 PM	600	500	493	0.9
1:57:13 PM	600	500	493	0.9
1:57:14 PM	600	501	493	0.9
1:57:15 PM	600	499	493	0.9
1:57:16 PM	600	500	492	0.9
1:57:17 PM	600	500	492	0.9
1:57:18 PM	600	500	494	0.9
1:57:19 PM	600	500	492	0.9
1:57:20 PM	600	500	492	0.9
1:57:21 PM	600	501	493	0.9
1:57:22 PM	600	501	493	0.9
1:57:23 PM	600	500	492	0.9
1:57:24 PM	600	501	493	0.9
1:57:25 PM	600	500	493	0.9
1:57:26 PM	600	501	493	0.9
1:57:27 PM	600	500	493	0.9
1:57:27 PM	600	501	493	0.9
1:57:28 PM	600	501	492	0.9
1:57:29 PM	600	501	493	0.9
1:57:30 PM	600	500	493	0.9
1:57:31 PM	600	501	493	0.9
1:57:32 PM	600	500	492	0.9
1:57:33 PM	600	500	494	0.9
1:57:34 PM	600	500	493	0.9
1:57:35 PM	600	500	493	0.9
Averages ->	600	500	493	0.9
			Maximum ->	1.0

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 300 **Date** 1/25/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
2:11:11 PM	600	500	491	0.8
2:11:12 PM	600	501	494	0.9
2:11:13 PM	600	499	492	0.8
2:11:14 PM	600	501	494	0.8
2:11:15 PM	600	500	492	0.8
2:11:16 PM	600	502	495	0.8
2:11:17 PM	600	499	492	1.0
2:11:18 PM	600	502	494	0.8
2:11:19 PM	600	499	493	0.8
2:11:20 PM	600	502	494	0.9
2:11:21 PM	600	499	491	0.8
2:11:22 PM	600	502	494	1.0
2:11:23 PM	600	499	492	0.9
2:11:24 PM	600	501	494	0.9
2:11:25 PM	600	499	492	0.9
2:11:26 PM	600	502	494	0.8
2:11:27 PM	600	498	491	1.0
2:11:28 PM	600	501	493	0.9
2:11:29 PM	600	499	492	1.0
2:11:30 PM	600	501	493	1.0
2:11:31 PM	600	499	493	0.9
2:11:32 PM	600	501	493	0.9
2:11:33 PM	600	499	492	0.9
2:11:34 PM	600	500	493	0.9
2:11:35 PM	600	500	492	0.8
2:11:36 PM	600	500	494	0.9
2:11:37 PM	600	499	493	0.8
2:11:38 PM	600	501	493	0.9
2:11:39 PM	600	499	492	0.8
2:11:40 PM	600	501	494	1.0
2:11:41 PM	600	499	492	0.8
2:11:42 PM	600	501	493	0.9
2:11:43 PM	600	500	492	0.9
2:11:44 PM	600	500	493	0.9
2:11:45 PM	600	499	492	0.9
2:11:46 PM	600	500	493	0.9
2:11:47 PM	600	500	492	0.9
2:11:48 PM	600	501	494	0.9
2:11:49 PM	600	499	492	1.0
2:11:50 PM	600	501	493	1.0
2:11:51 PM	600	499	492	1.0
2:11:52 PM	600	500	493	1.0
2:11:53 PM	600	499	492	1.0
2:11:54 PM	600	500	493	1.1
2:11:55 PM	600	500	493	1.1
2:11:56 PM	600	501	493	1.2
2:11:57 PM	600	499	493	1.0
2:11:58 PM	600	501	493	1.2
2:11:59 PM	600	499	492	1.0
2:12:00 PM	600	501	493	0.8
2:12:01 PM	600	501	493	0.8
2:12:02 PM	600	500	492	0.8
2:12:03 PM	600	500	493	0.9
2:12:04 PM	600	498	492	0.9
2:12:05 PM	600	500	493	0.9
2:12:06 PM	600	500	492	0.8
2:12:07 PM	600	500	493	0.9
2:12:08 PM	600	498	493	0.9
2:12:09 PM	600	500	493	0.8
2:12:10 PM	600	499	492	0.8
Averages ->	600	500	493	0.9
			Maximum ->	1.2

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 300

Date 1/28/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
9:35:15 AM	600	65	64	5.5
9:35:16 AM	600	64	64	5.4
9:35:17 AM	600	65	65	5.2
9:35:18 AM	600	65	65	5.0
9:35:19 AM	600	65	64	4.9
9:35:20 AM	600	64	65	4.8
9:35:21 AM	600	64	64	4.7
9:35:22 AM	600	65	65	4.5
9:35:23 AM	600	64	64	4.4
9:35:24 AM	600	64	64	4.3
9:35:25 AM	600	64	64	4.2
9:35:26 AM	600	63	63	4.1
9:35:27 AM	600	64	64	4.0
9:35:28 AM	600	65	64	3.9
9:35:29 AM	600	64	64	3.8
9:35:30 AM	600	63	64	3.7
9:35:31 AM	600	64	64	3.7
9:35:32 AM	600	64	64	3.8
9:35:33 AM	600	64	65	3.8
9:35:34 AM	600	65	65	3.9
9:35:35 AM	600	64	64	3.9
9:35:36 AM	600	65	64	3.9
9:35:37 AM	600	65	65	3.9
9:35:38 AM	600	65	64	4.0
9:35:39 AM	600	65	64	4.1
9:35:40 AM	600	64	64	4.2
9:35:41 AM	600	64	64	4.4
9:35:42 AM	600	64	63	4.5
9:35:43 AM	600	65	65	4.7
9:35:44 AM	600	64	65	4.8
9:35:45 AM	600	64	64	4.9
9:35:46 AM	600	64	64	5.0
9:35:47 AM	600	64	65	5.0
9:35:48 AM	600	64	65	5.0
9:35:49 AM	600	65	65	5.0
9:35:50 AM	600	65	65	5.1
9:35:51 AM	600	64	64	5.2
9:35:52 AM	600	64	64	5.2
9:35:53 AM	600	65	65	5.1
9:35:54 AM	600	66	65	5.0
9:35:55 AM	600	64	64	4.9
9:35:56 AM	600	65	64	4.8
9:35:57 AM	600	64	64	4.8
9:35:58 AM	600	64	64	4.8
9:35:59 AM	600	65	65	4.7
9:36:00 AM	600	64	65	4.6
9:36:01 AM	600	64	64	4.4
9:36:02 AM	600	64	65	4.3
9:36:03 AM	600	64	64	4.1
9:36:04 AM	600	65	65	3.9
9:36:05 AM	600	65	66	3.9
9:36:06 AM	600	65	64	3.8
9:36:07 AM	600	64	64	3.7
9:36:08 AM	600	64	64	3.7
9:36:09 AM	600	64	65	3.6
9:36:09 AM	600	64	64	3.4
9:36:10 AM	600	64	64	3.3
9:36:11 AM	600	65	64	3.3
9:36:12 AM	600	64	65	3.3
9:36:13 AM	600	65	65	3.3
Averages ->	600	64	64	4.3
			Maximum ->	5.5

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 350

Date 1/28/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
10:00:12 AM	600	65	65	6.5
10:00:13 AM	600	65	65	6.5
10:00:14 AM	600	65	65	6.4
10:00:15 AM	600	65	65	6.5
10:00:16 AM	600	65	65	6.4
10:00:17 AM	600	65	65	6.4
10:00:18 AM	600	65	65	6.5
10:00:19 AM	600	65	65	6.4
10:00:20 AM	600	65	65	6.3
10:00:21 AM	600	65	65	6.0
10:00:22 AM	600	65	65	6.0
10:00:23 AM	600	65	65	6.0
10:00:24 AM	600	65	65	5.9
10:00:25 AM	600	65	65	5.7
10:00:26 AM	600	65	65	5.7
10:00:27 AM	600	65	65	5.5
10:00:28 AM	600	65	65	5.4
10:00:29 AM	600	65	65	5.4
10:00:30 AM	600	65	65	5.3
10:00:31 AM	600	64	65	5.2
10:00:31 AM	600	65	65	5.2
10:00:32 AM	600	64	65	5.2
10:00:33 AM	600	65	65	5.1
10:00:34 AM	600	65	65	5.0
10:00:35 AM	600	65	65	5.0
10:00:36 AM	600	65	65	4.9
10:00:37 AM	600	65	65	4.8
10:00:38 AM	600	64	65	4.7
10:00:39 AM	600	65	65	4.7
10:00:40 AM	600	64	65	4.6
10:00:41 AM	600	65	65	4.6
10:00:42 AM	600	65	65	4.7
10:00:43 AM	600	65	65	5.0
10:00:44 AM	600	65	65	5.2
10:00:45 AM	600	65	65	5.2
10:00:46 AM	600	65	65	5.2
10:00:47 AM	600	65	65	5.2
10:00:48 AM	600	65	65	5.3
10:00:49 AM	600	65	65	5.3
10:00:50 AM	600	65	65	5.4
10:00:51 AM	600	65	65	5.5
10:00:52 AM	600	65	65	5.7
10:00:53 AM	600	65	65	5.7
10:00:54 AM	600	65	65	5.7
10:00:55 AM	600	65	65	5.9
10:00:56 AM	600	65	65	5.9
10:00:57 AM	600	65	65	6.0
10:00:58 AM	600	65	65	6.0
10:00:59 AM	600	64	65	6.0
10:01:00 AM	600	65	64	6.1
10:01:01 AM	600	65	65	6.3
10:01:02 AM	600	65	65	6.3
10:01:03 AM	600	65	65	6.4
10:01:04 AM	600	65	65	6.3
10:01:05 AM	600	65	65	6.2
10:01:06 AM	600	65	65	6.3
10:01:07 AM	600	65	65	6.2
10:01:08 AM	600	65	65	6.4
10:01:09 AM	600	64	65	6.4
10:01:10 AM	600	65	64	6.4
Averages ->	600	65	65	5.7
			Maximum ->	6.5

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 400

Date 1/28/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
10:19:25 AM	600	65	65	5.2
10:19:26 AM	600	65	65	5.3
10:19:27 AM	600	65	65	5.2
10:19:28 AM	600	65	65	5.3
10:19:29 AM	600	65	65	5.2
10:19:30 AM	600	65	65	5.3
10:19:31 AM	600	65	65	5.2
10:19:32 AM	600	65	65	5.3
10:19:33 AM	600	65	65	5.2
10:19:34 AM	600	65	65	5.4
10:19:35 AM	600	65	65	5.6
10:19:36 AM	600	65	65	5.5
10:19:37 AM	600	65	65	5.6
10:19:38 AM	600	65	65	5.6
10:19:39 AM	600	65	65	5.7
10:19:40 AM	600	65	65	5.6
10:19:41 AM	600	65	65	5.6
10:19:42 AM	600	65	65	5.8
10:19:43 AM	600	65	65	5.8
10:19:44 AM	600	65	65	5.8
10:19:45 AM	600	65	65	5.8
10:19:46 AM	600	65	65	5.7
10:19:47 AM	600	65	65	5.8
10:19:48 AM	600	65	65	5.8
10:19:49 AM	600	65	65	5.8
10:19:50 AM	600	65	65	5.8
10:19:51 AM	600	65	65	5.7
10:19:52 AM	600	65	65	5.7
10:19:53 AM	600	65	65	5.6
10:19:54 AM	600	65	65	5.5
10:19:55 AM	600	65	65	5.5
10:19:56 AM	600	65	65	5.5
10:19:57 AM	600	65	65	5.5
10:19:58 AM	600	65	65	5.5
10:19:59 AM	600	65	65	5.5
10:20:00 AM	600	65	65	5.7
10:20:01 AM	600	65	65	5.8
10:20:02 AM	600	65	65	5.9
10:20:03 AM	600	65	65	5.7
10:20:04 AM	600	65	65	5.8
10:20:05 AM	600	65	65	5.9
10:20:06 AM	600	65	65	5.8
10:20:07 AM	600	65	65	5.7
10:20:08 AM	600	65	65	5.7
10:20:09 AM	600	65	65	5.8
10:20:10 AM	600	65	65	5.7
10:20:11 AM	600	65	65	5.7
10:20:12 AM	600	65	65	5.6
10:20:13 AM	600	65	65	5.6
10:20:14 AM	600	65	65	5.6
10:20:14 AM	600	65	65	5.5
10:20:15 AM	600	65	65	5.3
10:20:16 AM	600	65	65	5.2
10:20:17 AM	600	65	65	5.0
10:20:18 AM	600	65	65	5.2
10:20:19 AM	600	65	65	5.2
10:20:20 AM	600	65	65	5.4
10:20:21 AM	600	65	65	5.3
10:20:22 AM	600	65	65	5.4
10:20:23 AM	600	65	65	5.4
Averages ->	600	65	65	5.5
			Maximum ->	5.9

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 450

Date 1/28/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
10:39:52 AM	600	65	65	4.4
10:39:53 AM	600	65	65	4.5
10:39:54 AM	600	65	65	4.5
10:39:55 AM	600	65	65	4.5
10:39:56 AM	600	65	65	4.5
10:39:57 AM	600	65	65	4.5
10:39:58 AM	600	65	65	4.4
10:39:59 AM	600	65	65	4.3
10:40:00 AM	600	65	65	4.1
10:40:01 AM	600	65	65	4.0
10:40:02 AM	600	65	65	3.9
10:40:03 AM	600	65	65	3.9
10:40:04 AM	600	65	65	3.9
10:40:05 AM	600	65	65	4.0
10:40:06 AM	600	65	65	4.1
10:40:07 AM	600	65	65	4.0
10:40:08 AM	600	65	65	4.1
10:40:09 AM	600	65	65	4.0
10:40:10 AM	600	65	65	4.1
10:40:11 AM	600	65	65	4.1
10:40:12 AM	600	65	65	4.1
10:40:13 AM	600	65	65	4.2
10:40:14 AM	600	65	65	4.2
10:40:15 AM	600	65	65	4.3
10:40:16 AM	600	65	65	4.3
10:40:17 AM	600	65	65	4.4
10:40:18 AM	600	65	65	4.5
10:40:19 AM	600	65	65	4.6
10:40:20 AM	600	65	65	4.7
10:40:21 AM	600	65	65	4.7
10:40:21 AM	600	65	65	4.8
10:40:22 AM	600	65	65	4.9
10:40:23 AM	600	65	65	5.0
10:40:24 AM	600	65	65	5.0
10:40:25 AM	600	65	65	5.1
10:40:26 AM	600	65	65	5.2
10:40:27 AM	600	65	65	5.4
10:40:28 AM	600	65	65	5.3
10:40:29 AM	600	65	65	5.2
10:40:30 AM	600	65	65	5.2
10:40:31 AM	600	65	65	5.3
10:40:32 AM	600	65	65	5.3
10:40:33 AM	600	65	65	5.2
10:40:34 AM	600	65	65	5.1
10:40:35 AM	600	65	65	5.1
10:40:36 AM	600	65	65	5.2
10:40:37 AM	600	65	65	5.3
10:40:38 AM	600	65	65	5.4
10:40:39 AM	600	65	65	5.3
10:40:40 AM	600	65	65	5.1
10:40:41 AM	600	65	65	5.1
10:40:42 AM	600	65	65	5.1
10:40:43 AM	600	65	65	5.1
10:40:44 AM	600	65	65	5.0
10:40:45 AM	600	65	65	5.0
10:40:46 AM	600	65	65	5.0
10:40:47 AM	600	65	65	5.0
10:40:48 AM	600	65	65	5.0
10:40:49 AM	600	65	65	5.0
10:40:50 AM	600	65	65	5.0
Averages ->	600	65	65	4.7
			Maximum ->	5.4

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 450

Date 1/28/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
12:16:15 PM	600	500	493	4.8
12:16:16 PM	600	500	493	4.9
12:16:17 PM	600	500	493	4.9
12:16:18 PM	600	501	493	4.9
12:16:19 PM	600	500	494	4.8
12:16:20 PM	600	500	493	4.7
12:16:21 PM	600	501	493	4.9
12:16:22 PM	600	501	493	4.9
12:16:23 PM	600	501	493	5.0
12:16:24 PM	600	501	494	5.1
12:16:25 PM	600	501	493	5.1
12:16:26 PM	600	501	494	5.1
12:16:27 PM	600	501	494	5.2
12:16:28 PM	600	501	493	5.2
12:16:29 PM	600	501	493	5.2
12:16:30 PM	600	500	492	5.0
12:16:31 PM	600	500	492	5.0
12:16:32 PM	600	500	493	5.0
12:16:33 PM	600	500	493	5.0
12:16:34 PM	600	500	493	5.0
12:16:35 PM	600	500	492	4.9
12:16:36 PM	600	500	492	4.9
12:16:37 PM	600	499	493	4.9
12:16:38 PM	600	499	492	4.9
12:16:39 PM	600	498	493	5.0
12:16:40 PM	600	499	492	5.0
12:16:41 PM	600	498	492	5.0
12:16:41 PM	600	499	492	5.1
12:16:42 PM	600	499	492	5.1
12:16:43 PM	600	498	492	5.1
12:16:44 PM	600	499	492	5.0
12:16:45 PM	600	499	492	5.0
12:16:46 PM	600	498	492	5.0
12:16:47 PM	600	499	492	5.0
12:16:48 PM	600	498	492	4.9
12:16:49 PM	600	499	492	4.9
12:16:50 PM	600	499	492	4.9
12:16:51 PM	600	499	492	5.0
12:16:52 PM	600	499	492	5.0
12:16:53 PM	600	500	492	5.0
12:16:54 PM	600	500	493	5.0
12:16:55 PM	600	500	493	5.0
12:16:56 PM	600	500	492	5.0
12:16:57 PM	600	499	493	5.0
12:16:58 PM	600	500	492	5.0
12:16:59 PM	600	500	492	4.9
12:17:00 PM	600	500	492	4.9
12:17:01 PM	600	500	493	4.9
12:17:02 PM	600	500	493	4.9
12:17:03 PM	600	501	493	4.9
12:17:04 PM	600	501	493	4.9
12:17:05 PM	600	501	493	5.0
12:17:06 PM	600	501	493	5.0
12:17:07 PM	600	501	493	5.1
12:17:08 PM	600	501	493	5.3
12:17:09 PM	600	501	494	5.3
12:17:10 PM	600	500	494	5.2
12:17:11 PM	600	501	494	5.4
12:17:12 PM	600	501	494	5.3
12:17:13 PM	600	501	494	5.4
Averages ->	600	500	493	5.0
			Maximum ->	5.4

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 500 **Date** 1/28/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
12:39:36 PM	600	501	494	4.8
12:39:37 PM	600	501	493	4.9
12:39:38 PM	600	500	494	4.9
12:39:39 PM	600	500	493	5.0
12:39:40 PM	600	501	493	4.8
12:39:41 PM	600	501	493	4.8
12:39:42 PM	600	500	493	4.7
12:39:43 PM	600	500	492	4.7
12:39:44 PM	600	500	493	4.6
12:39:45 PM	600	501	493	4.7
12:39:46 PM	600	500	493	4.8
12:39:47 PM	600	500	491	4.8
12:39:48 PM	600	500	493	4.7
12:39:49 PM	600	499	493	4.6
12:39:50 PM	600	500	493	4.6
12:39:51 PM	600	499	493	4.7
12:39:52 PM	600	499	493	4.7
12:39:53 PM	600	499	492	4.8
12:39:54 PM	600	499	493	4.8
12:39:55 PM	600	499	492	4.8
12:39:56 PM	600	498	492	4.7
12:39:57 PM	600	498	492	4.7
12:39:58 PM	600	499	492	4.7
12:39:59 PM	600	499	492	4.6
12:40:00 PM	600	500	493	4.7
12:40:01 PM	600	498	492	4.7
12:40:02 PM	600	499	492	4.7
12:40:03 PM	600	498	492	4.6
12:40:04 PM	600	498	492	4.6
12:40:05 PM	600	499	492	4.7
12:40:06 PM	600	500	493	4.8
12:40:07 PM	600	500	493	4.8
12:40:08 PM	600	499	492	4.9
12:40:09 PM	600	499	492	4.9
12:40:10 PM	600	499	493	4.9
12:40:11 PM	600	499	493	4.9
12:40:12 PM	600	500	493	4.9
12:40:13 PM	600	499	494	4.9
12:40:14 PM	600	500	493	4.9
12:40:15 PM	600	500	493	4.8
12:40:16 PM	600	500	492	4.8
12:40:17 PM	600	499	492	4.8
12:40:18 PM	600	499	493	4.8
12:40:19 PM	600	500	493	4.8
12:40:20 PM	600	502	493	4.9
12:40:21 PM	600	501	493	4.9
12:40:22 PM	600	501	494	5.0
12:40:23 PM	600	501	493	4.9
12:40:24 PM	600	500	493	4.8
12:40:25 PM	600	501	492	4.8
12:40:26 PM	600	501	493	4.9
12:40:26 PM	600	501	493	4.9
12:40:27 PM	600	502	493	5.1
12:40:28 PM	600	502	493	5.0
12:40:29 PM	600	501	494	5.0
12:40:30 PM	600	501	493	4.9
12:40:31 PM	600	501	493	4.8
12:40:32 PM	600	501	493	4.8
12:40:33 PM	600	500	494	4.8
12:40:34 PM	600	501	493	4.9
Averages ->	600	500	493	4.8
			Maximum ->	5.1

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 550 **Date** 1/28/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
12:52:57 PM	600	499	492	3.3
12:52:58 PM	600	499	493	3.4
12:52:59 PM	600	499	492	3.4
12:53:00 PM	600	499	492	3.4
12:53:01 PM	600	499	493	3.4
12:53:02 PM	600	499	493	3.4
12:53:03 PM	600	499	493	3.5
12:53:04 PM	600	500	494	3.4
12:53:05 PM	600	500	494	3.4
12:53:06 PM	600	500	492	3.4
12:53:07 PM	600	500	493	3.4
12:53:08 PM	600	500	493	3.5
12:53:09 PM	600	500	493	3.5
12:53:10 PM	600	501	494	3.5
12:53:11 PM	600	501	494	3.5
12:53:12 PM	600	501	493	3.5
12:53:13 PM	600	501	494	3.6
12:53:14 PM	600	501	493	3.6
12:53:15 PM	600	500	492	3.7
12:53:16 PM	600	500	493	3.7
12:53:17 PM	600	501	492	3.7
12:53:18 PM	600	501	493	3.7
12:53:19 PM	600	501	492	3.7
12:53:20 PM	600	501	493	3.6
12:53:21 PM	600	501	492	3.6
12:53:22 PM	600	500	492	3.7
12:53:23 PM	600	500	492	3.6
12:53:24 PM	600	500	493	3.6
12:53:25 PM	600	500	493	3.6
12:53:26 PM	600	499	493	3.6
12:53:27 PM	600	499	493	3.6
12:53:28 PM	600	499	493	3.6
12:53:29 PM	600	499	493	3.6
12:53:30 PM	600	499	491	3.6
12:53:31 PM	600	499	492	3.7
12:53:32 PM	600	498	493	3.7
12:53:33 PM	600	498	493	3.7
12:53:34 PM	600	499	493	3.7
12:53:35 PM	600	499	492	3.7
12:53:35 PM	600	498	492	3.7
12:53:36 PM	600	499	492	3.7
12:53:37 PM	600	498	491	3.7
12:53:38 PM	600	499	492	3.6
12:53:39 PM	600	499	492	3.7
12:53:40 PM	600	500	493	3.7
12:53:41 PM	600	500	492	3.7
12:53:42 PM	600	500	493	3.8
12:53:43 PM	600	499	493	3.8
12:53:44 PM	600	499	493	3.8
12:53:45 PM	600	500	493	3.9
12:53:46 PM	600	499	493	3.8
12:53:47 PM	600	499	493	3.8
12:53:48 PM	600	500	493	3.8
12:53:49 PM	600	500	493	3.8
12:53:50 PM	600	500	492	3.8
12:53:51 PM	600	500	493	3.8
12:53:52 PM	600	501	494	3.8
12:53:53 PM	600	501	493	3.9
12:53:54 PM	600	501	493	3.9
12:53:55 PM	600	501	493	3.9
Averages ->	600	500	493	3.6
			Maximum ->	3.9

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 600 **Date** 1/28/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
1:06:15 PM	600	498	492	2.8
1:06:16 PM	600	498	492	2.8
1:06:17 PM	600	498	492	2.8
1:06:18 PM	600	498	492	2.9
1:06:19 PM	600	498	492	2.8
1:06:20 PM	600	499	492	2.9
1:06:21 PM	600	499	492	2.9
1:06:22 PM	600	498	492	2.9
1:06:23 PM	600	499	492	2.9
1:06:24 PM	600	498	492	2.9
1:06:25 PM	600	499	492	3.0
1:06:26 PM	600	498	492	3.0
1:06:27 PM	600	499	493	3.0
1:06:28 PM	600	501	492	3.0
1:06:29 PM	600	499	493	3.1
1:06:30 PM	600	499	493	3.1
1:06:30 PM	600	499	493	3.1
1:06:31 PM	600	500	492	3.1
1:06:32 PM	600	500	493	3.1
1:06:33 PM	600	500	494	3.1
1:06:34 PM	600	500	493	3.2
1:06:35 PM	600	501	493	3.2
1:06:36 PM	600	501	494	3.2
1:06:37 PM	600	500	493	3.2
1:06:38 PM	600	501	493	3.2
1:06:39 PM	600	500	493	3.2
1:06:40 PM	600	501	493	3.3
1:06:41 PM	600	501	493	3.3
1:06:42 PM	600	501	494	3.3
1:06:43 PM	600	501	494	3.3
1:06:44 PM	600	501	493	3.3
1:06:45 PM	600	500	493	3.3
1:06:46 PM	600	499	492	3.2
1:06:47 PM	600	500	493	3.1
1:06:48 PM	600	501	494	3.1
1:06:49 PM	600	500	494	3.0
1:06:50 PM	600	501	493	3.0
1:06:51 PM	600	501	493	3.0
1:06:52 PM	600	500	492	3.0
1:06:53 PM	600	499	493	3.0
1:06:54 PM	600	500	493	3.0
1:06:55 PM	600	500	492	3.0
1:06:56 PM	600	499	493	2.9
1:06:57 PM	600	499	492	3.0
1:06:58 PM	600	499	492	2.9
1:06:59 PM	600	499	492	2.9
1:07:00 PM	600	499	492	2.9
1:07:01 PM	600	499	492	2.9
1:07:02 PM	600	499	492	2.9
1:07:03 PM	600	499	492	2.9
1:07:04 PM	600	499	492	2.9
1:07:05 PM	600	499	492	3.0
1:07:06 PM	600	499	492	3.0
1:07:07 PM	600	498	492	3.0
1:07:08 PM	600	498	492	3.0
1:07:09 PM	600	499	492	3.0
1:07:10 PM	600	499	492	3.0
1:07:11 PM	600	499	492	3.0
1:07:12 PM	600	499	491	3.0
1:07:13 PM	600	498	492	2.9
Averages ->	600	499	493	3.0
			Maximum ->	3.3

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 600 **Date** 1/29/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
1:42:47 PM	600	66	66	8.3
1:42:48 PM	600	66	66	8.2
1:42:49 PM	600	66	66	8.3
1:42:50 PM	600	66	66	8.3
1:42:51 PM	600	66	66	8.3
1:42:52 PM	600	66	66	8.2
1:42:53 PM	600	66	66	8.3
1:42:54 PM	600	66	66	8.3
1:42:55 PM	600	66	66	8.5
1:42:56 PM	600	66	66	8.7
1:42:57 PM	600	66	66	8.8
1:42:58 PM	600	66	66	8.8
1:42:59 PM	600	66	66	8.7
1:43:00 PM	600	66	66	8.7
1:43:01 PM	600	66	66	8.7
1:43:02 PM	600	66	66	8.8
1:43:03 PM	600	66	66	8.8
1:43:04 PM	600	66	66	9.0
1:43:05 PM	600	66	66	8.9
1:43:06 PM	600	66	66	8.9
1:43:07 PM	600	66	66	8.9
1:43:08 PM	600	66	65	8.8
1:43:09 PM	600	66	65	8.7
1:43:10 PM	600	66	66	8.7
1:43:11 PM	600	66	66	8.6
1:43:12 PM	600	66	66	8.7
1:43:13 PM	600	66	66	8.9
1:43:14 PM	600	66	66	8.8
1:43:15 PM	600	66	66	8.9
1:43:16 PM	600	66	66	8.9
1:43:17 PM	600	66	65	8.8
1:43:18 PM	600	66	66	8.5
1:43:19 PM	600	66	66	8.5
1:43:20 PM	600	66	66	8.5
1:43:21 PM	600	66	66	8.3
1:43:22 PM	600	66	66	8.3
1:43:23 PM	600	65	65	8.4
1:43:23 PM	600	66	66	8.5
1:43:24 PM	600	66	66	8.5
1:43:25 PM	600	65	66	8.7
1:43:26 PM	600	66	65	8.8
1:43:27 PM	600	66	66	8.7
1:43:28 PM	600	66	66	8.9
1:43:29 PM	600	66	66	8.8
1:43:30 PM	600	66	66	8.9
1:43:31 PM	600	66	65	9.1
1:43:32 PM	600	66	65	9.0
1:43:33 PM	600	66	66	9.0
1:43:34 PM	600	66	66	9.1
1:43:35 PM	600	66	66	8.9
1:43:36 PM	600	66	66	9.0
1:43:37 PM	600	66	66	9.0
1:43:38 PM	600	66	66	9.0
1:43:39 PM	600	66	66	9.0
1:43:40 PM	600	66	66	8.9
1:43:41 PM	600	66	65	8.8
1:43:42 PM	600	66	66	8.8
1:43:43 PM	600	66	66	8.7
1:43:44 PM	600	66	66	8.7
1:43:45 PM	600	66	65	8.6
Averages ->	600	66	66	8.7
			Maximum ->	9.1

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 650 **Date** 1/29/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
2:05:33 PM	600	67	67	7.7
2:05:34 PM	600	67	66	7.7
2:05:35 PM	600	67	66	7.7
2:05:36 PM	600	67	66	7.7
2:05:37 PM	600	67	67	7.9
2:05:38 PM	600	67	66	7.9
2:05:39 PM	600	66	66	8.0
2:05:40 PM	600	66	66	8.2
2:05:41 PM	600	67	66	8.2
2:05:42 PM	600	66	66	8.3
2:05:43 PM	600	67	66	8.2
2:05:44 PM	600	66	67	8.1
2:05:44 PM	600	67	67	7.9
2:05:45 PM	600	66	66	7.8
2:05:46 PM	600	66	66	7.7
2:05:47 PM	600	67	66	7.6
2:05:48 PM	600	67	66	7.5
2:05:49 PM	600	67	67	7.5
2:05:50 PM	600	67	66	7.5
2:05:51 PM	600	67	67	7.7
2:05:52 PM	600	67	67	7.6
2:05:53 PM	600	67	66	7.6
2:05:54 PM	600	67	67	7.4
2:05:55 PM	600	67	66	7.4
2:05:56 PM	600	67	66	7.4
2:05:57 PM	600	67	66	7.2
2:05:58 PM	600	67	67	7.1
2:05:59 PM	600	67	66	7.0
2:06:00 PM	600	67	67	7.1
2:06:01 PM	600	67	66	7.3
2:06:02 PM	600	67	66	7.3
2:06:03 PM	600	67	67	7.5
2:06:04 PM	600	67	66	7.6
2:06:05 PM	600	67	67	7.6
2:06:06 PM	600	67	67	7.5
2:06:07 PM	600	67	67	7.4
2:06:08 PM	600	67	67	7.3
2:06:09 PM	600	67	66	7.1
2:06:10 PM	600	67	66	7.0
2:06:11 PM	600	67	67	6.9
2:06:12 PM	600	67	67	6.8
2:06:13 PM	600	66	67	6.8
2:06:14 PM	600	67	66	6.7
2:06:15 PM	600	67	67	6.7
2:06:16 PM	600	67	67	6.7
2:06:17 PM	600	67	67	6.8
2:06:18 PM	600	67	66	6.8
2:06:19 PM	600	67	66	6.8
2:06:20 PM	600	67	66	6.9
2:06:21 PM	600	67	67	7.0
2:06:22 PM	600	67	66	6.9
2:06:23 PM	600	67	67	6.8
2:06:24 PM	600	67	66	7.0
2:06:25 PM	600	67	67	7.1
2:06:26 PM	600	67	67	7.2
2:06:27 PM	600	67	66	7.2
2:06:28 PM	600	67	67	7.3
2:06:29 PM	600	67	66	7.2
2:06:30 PM	600	67	66	7.2
2:06:31 PM	600	66	66	7.0
Averages ->	600	67	66	7.4
			Maximum ->	8.3

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 700 **Date** 1/29/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
2:24:36 PM	600	67	67	7.0
2:24:37 PM	600	67	67	7.0
2:24:38 PM	600	67	67	7.0
2:24:39 PM	600	67	67	7.0
2:24:40 PM	600	67	67	7.1
2:24:41 PM	600	67	67	7.0
2:24:42 PM	600	67	67	7.1
2:24:43 PM	600	67	67	7.2
2:24:44 PM	600	67	67	7.2
2:24:45 PM	600	67	67	7.2
2:24:46 PM	600	67	67	7.1
2:24:47 PM	600	68	67	7.2
2:24:48 PM	600	67	67	7.2
2:24:49 PM	600	67	67	7.3
2:24:50 PM	600	67	67	7.3
2:24:51 PM	600	67	67	7.2
2:24:52 PM	600	67	67	7.3
2:24:53 PM	600	67	67	7.4
2:24:54 PM	600	67	67	7.5
2:24:55 PM	600	67	67	7.4
2:24:56 PM	600	67	67	7.5
2:24:57 PM	600	67	67	7.5
2:24:58 PM	600	67	67	7.5
2:24:59 PM	600	67	67	7.4
2:25:00 PM	600	67	67	7.6
2:25:01 PM	600	67	67	7.6
2:25:02 PM	600	67	67	7.6
2:25:03 PM	600	67	67	7.9
2:25:04 PM	600	67	67	7.9
2:25:05 PM	600	67	67	8.1
2:25:06 PM	600	67	67	8.3
2:25:07 PM	600	67	67	8.4
2:25:08 PM	600	67	67	8.6
2:25:09 PM	600	67	67	8.6
2:25:10 PM	600	67	67	8.9
2:25:11 PM	600	67	67	8.8
2:25:12 PM	600	67	67	8.7
2:25:13 PM	600	68	67	8.7
2:25:14 PM	600	67	67	8.6
2:25:15 PM	600	67	67	8.6
2:25:16 PM	600	68	67	8.4
2:25:17 PM	600	67	67	8.4
2:25:18 PM	600	67	67	8.2
2:25:19 PM	600	67	67	8.2
2:25:20 PM	600	68	67	8.3
2:25:21 PM	600	68	67	8.3
2:25:22 PM	600	67	67	8.2
2:25:23 PM	600	67	67	8.1
2:25:24 PM	600	67	67	8.2
2:25:25 PM	600	67	67	8.0
2:25:26 PM	600	68	67	8.1
2:25:27 PM	600	67	67	7.9
2:25:28 PM	600	67	67	7.9
2:25:29 PM	600	67	67	7.8
2:25:30 PM	600	67	67	7.7
2:25:31 PM	600	67	67	7.8
2:25:32 PM	600	67	67	7.8
2:25:32 PM	600	68	67	7.8
2:25:33 PM	600	68	67	7.7
2:25:34 PM	600	68	67	7.6
Averages ->	600	67	67	7.8
			Maximum ->	8.9

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 750 **Date** 1/29/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
2:44:20 PM	600	68	68	7.6
2:44:21 PM	600	68	68	7.6
2:44:22 PM	600	68	68	7.6
2:44:23 PM	600	68	68	7.8
2:44:24 PM	600	68	68	7.9
2:44:25 PM	600	68	68	7.9
2:44:26 PM	600	68	68	8.0
2:44:27 PM	600	68	68	8.1
2:44:28 PM	600	68	68	8.3
2:44:29 PM	600	68	68	8.1
2:44:30 PM	600	68	68	8.1
2:44:31 PM	600	68	68	8.2
2:44:32 PM	600	68	68	8.1
2:44:33 PM	600	68	68	7.8
2:44:34 PM	600	68	68	7.7
2:44:35 PM	600	68	68	7.6
2:44:36 PM	600	68	68	7.5
2:44:37 PM	600	68	68	7.3
2:44:38 PM	600	68	68	7.4
2:44:39 PM	600	68	68	7.2
2:44:40 PM	600	68	68	7.1
2:44:41 PM	600	68	68	7.1
2:44:42 PM	600	68	68	7.1
2:44:43 PM	600	68	68	7.2
2:44:44 PM	600	68	68	7.2
2:44:45 PM	600	68	68	7.1
2:44:46 PM	600	68	68	7.2
2:44:47 PM	600	68	68	7.2
2:44:48 PM	600	68	68	7.3
2:44:49 PM	600	68	68	7.5
2:44:50 PM	600	68	68	7.3
2:44:51 PM	600	68	68	7.3
2:44:52 PM	600	68	68	7.3
2:44:53 PM	600	68	68	7.5
2:44:54 PM	600	68	68	7.8
2:44:55 PM	600	68	68	8.0
2:44:56 PM	600	68	68	8.1
2:44:57 PM	600	68	68	8.1
2:44:58 PM	600	68	68	8.1
2:44:59 PM	600	68	68	8.1
2:45:00 PM	600	68	68	7.9
2:45:01 PM	600	68	68	7.8
2:45:02 PM	600	68	68	7.7
2:45:03 PM	600	68	68	7.7
2:45:04 PM	600	68	68	7.6
2:45:04 PM	600	68	68	7.7
2:45:05 PM	600	68	68	7.8
2:45:06 PM	600	68	68	7.6
2:45:07 PM	600	68	68	7.6
2:45:08 PM	600	68	68	7.7
2:45:09 PM	600	68	68	7.8
2:45:10 PM	600	68	68	7.8
2:45:11 PM	600	68	68	7.7
2:45:12 PM	600	68	68	7.7
2:45:13 PM	600	68	68	7.8
2:45:14 PM	600	68	68	7.7
2:45:15 PM	600	68	68	7.8
2:45:16 PM	600	68	68	7.9
2:45:17 PM	600	68	68	7.9
2:45:18 PM	600	68	68	7.8
Averages ->	600	68	68	7.7
			Maximum ->	8.3

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 750 **Date** 1/29/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
3:38:22 PM	600	500	495	5.5
3:38:23 PM	600	500	495	5.5
3:38:24 PM	600	500	495	5.5
3:38:25 PM	600	500	495	5.5
3:38:26 PM	600	500	495	5.5
3:38:27 PM	600	499	494	5.4
3:38:28 PM	600	499	494	5.4
3:38:29 PM	600	499	494	5.3
3:38:30 PM	600	499	494	5.3
3:38:31 PM	600	499	494	5.3
3:38:32 PM	600	499	494	5.3
3:38:33 PM	600	499	494	5.3
3:38:34 PM	600	499	494	5.3
3:38:35 PM	600	499	494	5.3
3:38:36 PM	600	499	494	5.3
3:38:37 PM	600	499	494	5.3
3:38:38 PM	600	499	494	5.4
3:38:39 PM	600	499	494	5.3
3:38:40 PM	600	499	494	5.3
3:38:41 PM	600	499	494	5.3
3:38:42 PM	600	499	494	5.3
3:38:43 PM	600	499	494	5.3
3:38:44 PM	600	499	494	5.3
3:38:45 PM	600	499	494	5.3
3:38:46 PM	600	499	494	5.3
3:38:47 PM	600	499	494	5.3
3:38:48 PM	600	499	494	5.3
3:38:49 PM	600	499	494	5.3
3:38:50 PM	600	499	495	5.3
3:38:50 PM	600	500	495	5.3
3:38:51 PM	600	500	495	5.3
3:38:52 PM	600	500	495	5.4
3:38:53 PM	600	500	495	5.4
3:38:54 PM	600	500	495	5.3
3:38:55 PM	600	500	495	5.4
3:38:56 PM	600	501	495	5.4
3:38:57 PM	600	500	495	5.4
3:38:58 PM	600	501	495	5.4
3:38:59 PM	600	501	495	5.4
3:39:00 PM	600	501	495	5.4
3:39:01 PM	600	501	495	5.4
3:39:02 PM	600	501	495	5.4
3:39:03 PM	600	501	496	5.5
3:39:04 PM	600	501	495	5.5
3:39:05 PM	600	501	495	5.5
3:39:06 PM	600	502	495	5.5
3:39:07 PM	600	502	495	5.6
3:39:08 PM	600	502	495	5.6
3:39:09 PM	600	501	495	5.7
3:39:10 PM	600	501	495	5.7
3:39:11 PM	600	502	496	5.7
3:39:12 PM	600	501	495	5.6
3:39:13 PM	600	502	495	5.6
3:39:14 PM	600	501	495	5.6
3:39:15 PM	600	501	495	5.6
3:39:16 PM	600	501	495	5.6
3:39:17 PM	600	501	495	5.5
3:39:18 PM	600	501	495	5.5
3:39:19 PM	600	500	495	5.5
3:39:20 PM	600	500	495	5.5
Averages ->	600	500	495	5.4
			Maximum ->	5.7

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 800 **Date** 1/29/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
3:52:11 PM	600	501	495	5.1
3:52:12 PM	600	502	495	5.3
3:52:13 PM	600	502	495	5.2
3:52:14 PM	600	502	495	5.3
3:52:15 PM	600	502	495	5.2
3:52:16 PM	600	502	495	5.3
3:52:17 PM	600	502	495	5.3
3:52:18 PM	600	502	495	5.3
3:52:19 PM	600	502	495	5.3
3:52:20 PM	600	501	495	5.2
3:52:21 PM	600	501	494	5.3
3:52:22 PM	600	501	494	5.1
3:52:23 PM	600	501	494	5.2
3:52:24 PM	600	501	494	5.1
3:52:25 PM	600	501	494	5.1
3:52:26 PM	600	501	494	5.2
3:52:27 PM	600	500	494	5.1
3:52:28 PM	600	500	494	5.2
3:52:29 PM	600	500	494	5.2
3:52:29 PM	600	500	494	5.1
3:52:30 PM	600	499	494	5.2
3:52:31 PM	600	499	493	5.1
3:52:32 PM	600	499	493	5.0
3:52:33 PM	600	499	493	5.0
3:52:34 PM	600	499	493	5.0
3:52:35 PM	600	499	493	5.1
3:52:36 PM	600	499	493	5.0
3:52:37 PM	600	499	493	5.0
3:52:38 PM	600	499	493	5.0
3:52:39 PM	600	499	493	4.9
3:52:40 PM	600	499	493	4.9
3:52:41 PM	600	499	493	4.9
3:52:42 PM	600	499	493	5.0
3:52:43 PM	600	499	493	5.1
3:52:44 PM	600	499	493	5.1
3:52:45 PM	600	499	493	5.1
3:52:46 PM	600	500	494	4.9
3:52:47 PM	600	500	494	5.0
3:52:48 PM	600	500	494	5.1
3:52:49 PM	600	500	494	5.1
3:52:50 PM	600	500	494	5.0
3:52:51 PM	600	500	494	5.1
3:52:52 PM	600	500	494	5.2
3:52:53 PM	600	500	494	5.1
3:52:54 PM	600	500	494	5.1
3:52:55 PM	600	500	494	5.3
3:52:56 PM	600	501	495	5.1
3:52:57 PM	600	501	495	5.2
3:52:58 PM	600	501	495	5.2
3:52:59 PM	600	501	494	5.1
3:53:00 PM	600	501	495	5.3
3:53:01 PM	600	501	494	5.2
3:53:02 PM	600	502	495	5.3
3:53:03 PM	600	502	495	5.2
3:53:04 PM	600	501	495	5.3
3:53:05 PM	600	502	495	5.2
3:53:06 PM	600	502	495	5.3
3:53:07 PM	600	502	494	5.2
3:53:08 PM	600	502	495	5.3
3:53:09 PM	600	502	495	5.2
Averages ->	600	500	494	5.1
			Maximum ->	5.3

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 850 **Date** 1/29/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
4:07:04 PM	600	501	494	4.5
4:07:05 PM	600	501	494	4.6
4:07:06 PM	600	501	494	4.6
4:07:07 PM	600	501	495	4.5
4:07:08 PM	600	501	495	4.5
4:07:09 PM	600	502	495	4.5
4:07:10 PM	600	501	494	4.5
4:07:11 PM	600	502	495	4.5
4:07:12 PM	600	502	495	4.5
4:07:13 PM	600	502	494	4.5
4:07:14 PM	600	501	494	4.5
4:07:15 PM	600	501	494	4.5
4:07:16 PM	600	501	494	4.5
4:07:17 PM	600	501	494	4.6
4:07:18 PM	600	501	494	4.6
4:07:19 PM	600	501	494	4.6
4:07:20 PM	600	501	494	4.6
4:07:21 PM	600	501	494	4.6
4:07:22 PM	600	501	494	4.6
4:07:23 PM	600	501	494	4.6
4:07:24 PM	600	500	494	4.5
4:07:25 PM	600	500	493	4.4
4:07:26 PM	600	500	494	4.4
4:07:27 PM	600	500	493	4.5
4:07:28 PM	600	500	493	4.6
4:07:29 PM	600	499	493	4.5
4:07:30 PM	600	499	493	4.5
4:07:31 PM	600	499	493	4.5
4:07:32 PM	600	499	493	4.4
4:07:33 PM	600	499	493	4.5
4:07:34 PM	600	499	493	4.6
4:07:35 PM	600	499	493	4.6
4:07:36 PM	600	499	493	4.4
4:07:37 PM	600	499	493	4.4
4:07:38 PM	600	499	493	4.5
4:07:39 PM	600	500	493	4.5
4:07:39 PM	600	500	494	4.4
4:07:40 PM	600	500	493	4.3
4:07:41 PM	600	500	493	4.4
4:07:42 PM	600	500	494	4.5
4:07:43 PM	600	500	493	4.4
4:07:44 PM	600	500	493	4.4
4:07:45 PM	600	500	494	4.5
4:07:46 PM	600	500	494	4.5
4:07:47 PM	600	501	494	4.6
4:07:48 PM	600	501	494	4.5
4:07:49 PM	600	501	494	4.4
4:07:50 PM	600	501	494	4.4
4:07:51 PM	600	501	494	4.5
4:07:52 PM	600	501	494	4.6
4:07:53 PM	600	501	494	4.5
4:07:54 PM	600	502	494	4.5
4:07:55 PM	600	501	494	4.5
4:07:56 PM	600	502	495	4.5
4:07:57 PM	600	502	494	4.5
4:07:58 PM	600	502	495	4.6
4:07:59 PM	600	502	495	4.6
4:08:00 PM	600	502	495	4.6
4:08:01 PM	600	502	495	4.7
4:08:02 PM	600	502	495	4.8
Averages ->	600	501	494	4.5
			Maximum ->	4.8

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 900 **Date** 1/29/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
4:25:49 PM	600	501	494	3.8
4:25:50 PM	600	501	494	3.8
4:25:51 PM	600	501	494	3.8
4:25:52 PM	600	501	494	3.8
4:25:53 PM	600	501	494	3.8
4:25:54 PM	600	501	494	3.8
4:25:55 PM	600	500	494	3.8
4:25:56 PM	600	500	493	3.8
4:25:57 PM	600	500	493	3.8
4:25:58 PM	600	500	493	3.8
4:25:59 PM	600	499	493	3.8
4:26:00 PM	600	499	493	3.8
4:26:01 PM	600	499	493	3.8
4:26:02 PM	600	499	493	3.8
4:26:03 PM	600	499	493	3.8
4:26:04 PM	600	499	493	3.8
4:26:05 PM	600	499	493	3.8
4:26:06 PM	600	499	493	3.8
4:26:07 PM	600	499	493	3.9
4:26:08 PM	600	499	493	3.8
4:26:09 PM	600	499	493	3.8
4:26:10 PM	600	499	493	3.9
4:26:11 PM	600	500	493	3.8
4:26:12 PM	600	499	493	3.9
4:26:13 PM	600	500	493	3.8
4:26:14 PM	600	500	494	3.9
4:26:15 PM	600	500	493	3.9
4:26:16 PM	600	500	494	3.8
4:26:17 PM	600	500	494	3.9
4:26:18 PM	600	500	494	3.8
4:26:19 PM	600	500	494	3.9
4:26:20 PM	600	501	494	3.9
4:26:21 PM	600	501	494	4.0
4:26:22 PM	600	501	494	3.9
4:26:23 PM	600	501	494	4.1
4:26:24 PM	600	501	494	3.9
4:26:25 PM	600	501	494	4.0
4:26:26 PM	600	501	494	4.0
4:26:27 PM	600	502	494	4.1
4:26:28 PM	600	502	494	4.0
4:26:29 PM	600	502	495	4.0
4:26:30 PM	600	502	494	4.1
4:26:31 PM	600	502	495	3.9
4:26:32 PM	600	502	494	4.0
4:26:33 PM	600	502	495	4.0
4:26:34 PM	600	502	495	3.9
4:26:35 PM	600	502	495	4.0
4:26:36 PM	600	502	495	3.9
4:26:37 PM	600	502	495	4.0
4:26:38 PM	600	502	495	4.1
4:26:39 PM	600	502	495	4.0
4:26:40 PM	600	501	494	4.0
4:26:41 PM	600	501	495	4.1
4:26:42 PM	600	501	494	4.1
4:26:43 PM	600	501	494	3.9
4:26:44 PM	600	501	494	3.8
4:26:45 PM	600	501	494	3.8
4:26:46 PM	600	501	494	3.7
4:26:47 PM	600	500	494	3.8
4:26:48 PM	600	500	493	3.8
Averages ->	600	501	494	3.9
			Maximum ->	4.1

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 900 **Date** 1/30/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
11:54:07 AM	600	62	62	6.6
11:54:08 AM	600	62	62	6.5
11:54:09 AM	600	63	62	6.4
11:54:10 AM	600	63	62	6.4
11:54:11 AM	600	62	62	6.5
11:54:12 AM	600	62	62	6.7
11:54:13 AM	600	63	62	6.7
11:54:14 AM	600	62	62	6.9
11:54:15 AM	600	63	62	7.1
11:54:16 AM	600	63	62	7.2
11:54:17 AM	600	63	62	7.4
11:54:18 AM	600	62	62	7.4
11:54:19 AM	600	63	62	7.4
11:54:20 AM	600	62	62	7.2
11:54:21 AM	600	62	62	7.3
11:54:22 AM	600	62	62	7.2
11:54:23 AM	600	63	62	7.1
11:54:24 AM	600	62	62	7.0
11:54:25 AM	600	62	62	7.1
11:54:26 AM	600	62	62	6.9
11:54:27 AM	600	63	62	6.8
11:54:28 AM	600	63	63	6.7
11:54:29 AM	600	62	62	6.6
11:54:30 AM	600	62	62	6.5
11:54:31 AM	600	63	62	6.6
11:54:32 AM	600	63	62	6.5
11:54:33 AM	600	62	63	6.5
11:54:34 AM	600	63	63	6.4
11:54:35 AM	600	63	63	6.5
11:54:36 AM	600	62	62	6.6
11:54:37 AM	600	63	62	6.5
11:54:38 AM	600	63	62	6.7
11:54:39 AM	600	63	62	6.8
11:54:40 AM	600	63	62	6.7
11:54:41 AM	600	63	62	6.7
11:54:42 AM	600	63	62	6.8
11:54:43 AM	600	63	63	6.6
11:54:44 AM	600	62	62	6.6
11:54:45 AM	600	63	62	6.5
11:54:46 AM	600	63	63	6.4
11:54:46 AM	600	63	62	6.3
11:54:47 AM	600	63	62	6.3
11:54:48 AM	600	63	62	6.2
11:54:49 AM	600	63	63	6.2
11:54:50 AM	600	63	62	6.0
11:54:51 AM	600	63	63	6.1
11:54:52 AM	600	62	62	6.3
11:54:53 AM	600	62	63	6.3
11:54:54 AM	600	63	62	6.4
11:54:55 AM	600	62	62	6.3
11:54:56 AM	600	62	63	6.4
11:54:57 AM	600	63	63	6.6
11:54:58 AM	600	63	62	6.7
11:54:59 AM	600	63	63	6.8
11:55:00 AM	600	63	62	6.9
11:55:01 AM	600	62	62	6.9
11:55:02 AM	600	62	62	7.0
11:55:03 AM	600	63	62	7.3
11:55:04 AM	600	63	62	7.6
11:55:05 AM	600	63	62	7.6
Averages ->	600	63	62	6.7
			Maximum ->	7.6

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 950 **Date** 1/30/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
12:11:54 PM	600	64	64	6.6
12:11:55 PM	600	64	64	6.7
12:11:56 PM	600	64	64	6.8
12:11:57 PM	600	64	64	6.8
12:11:58 PM	600	64	64	6.8
12:11:59 PM	600	64	64	6.8
12:12:00 PM	600	64	64	6.7
12:12:01 PM	600	64	64	6.7
12:12:02 PM	600	64	64	6.7
12:12:03 PM	600	64	64	6.7
12:12:04 PM	600	64	64	6.6
12:12:05 PM	600	64	64	6.6
12:12:06 PM	600	64	64	6.6
12:12:07 PM	600	64	64	6.5
12:12:08 PM	600	64	64	6.5
12:12:09 PM	600	64	64	6.5
12:12:10 PM	600	63	64	6.4
12:12:11 PM	600	63	64	6.5
12:12:12 PM	600	64	64	6.5
12:12:13 PM	600	64	64	6.6
12:12:14 PM	600	64	64	6.5
12:12:15 PM	600	64	64	6.5
12:12:16 PM	600	64	64	6.6
12:12:17 PM	600	64	64	6.7
12:12:18 PM	600	64	64	6.6
12:12:19 PM	600	64	64	6.6
12:12:20 PM	600	64	64	6.7
12:12:21 PM	600	64	64	6.6
12:12:22 PM	600	64	64	6.6
12:12:22 PM	600	64	64	6.6
12:12:23 PM	600	64	64	6.7
12:12:24 PM	600	64	64	6.7
12:12:25 PM	600	64	64	6.7
12:12:26 PM	600	64	64	6.7
12:12:27 PM	600	64	64	6.6
12:12:28 PM	600	64	64	6.5
12:12:29 PM	600	64	64	6.6
12:12:30 PM	600	64	64	6.6
12:12:31 PM	600	64	64	6.5
12:12:32 PM	600	64	64	6.6
12:12:33 PM	600	64	64	6.7
12:12:34 PM	600	64	63	6.6
12:12:35 PM	600	63	63	6.5
12:12:36 PM	600	64	64	6.6
12:12:37 PM	600	64	63	6.4
12:12:38 PM	600	63	64	6.3
12:12:39 PM	600	63	64	6.3
12:12:40 PM	600	63	64	6.4
12:12:41 PM	600	64	64	6.2
12:12:42 PM	600	63	64	6.3
12:12:43 PM	600	64	64	6.4
12:12:44 PM	600	64	64	6.5
12:12:45 PM	600	64	64	6.4
12:12:46 PM	600	64	64	6.5
12:12:47 PM	600	64	63	6.5
12:12:48 PM	600	64	64	6.4
12:12:49 PM	600	64	64	6.5
12:12:50 PM	600	64	64	6.5
12:12:51 PM	600	64	63	6.4
12:12:52 PM	600	64	64	6.5
Averages ->	600	64	64	6.6
			Maximum ->	6.8

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1000

Date 1/30/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
12:57:47 PM	600	64	64	7.9
12:57:48 PM	600	64	64	7.9
12:57:49 PM	600	64	64	7.9
12:57:50 PM	600	64	64	7.7
12:57:51 PM	600	64	64	7.2
12:57:52 PM	600	64	64	7.0
12:57:53 PM	600	64	64	7.0
12:57:54 PM	600	64	64	7.0
12:57:55 PM	600	64	64	7.3
12:57:56 PM	600	64	64	7.4
12:57:57 PM	600	64	64	7.5
12:57:58 PM	600	64	64	7.6
12:57:58 PM	600	64	64	7.8
12:57:59 PM	600	64	64	7.9
12:58:00 PM	600	64	64	8.0
12:58:01 PM	600	64	64	7.8
12:58:02 PM	600	64	64	7.8
12:58:03 PM	600	64	64	7.6
12:58:04 PM	600	64	64	7.6
12:58:05 PM	600	64	64	7.4
12:58:06 PM	600	64	64	7.3
12:58:07 PM	600	64	64	7.4
12:58:08 PM	600	64	64	7.3
12:58:09 PM	600	64	64	7.3
12:58:10 PM	600	64	64	7.4
12:58:11 PM	600	64	64	7.5
12:58:12 PM	600	64	64	7.6
12:58:13 PM	600	64	64	7.5
12:58:14 PM	600	64	64	7.6
12:58:15 PM	600	64	64	7.6
12:58:16 PM	600	64	64	7.7
12:58:17 PM	600	64	64	7.6
12:58:18 PM	600	64	64	7.6
12:58:19 PM	600	64	64	7.7
12:58:20 PM	600	64	64	7.7
12:58:21 PM	600	64	64	7.6
12:58:22 PM	600	64	64	7.6
12:58:23 PM	600	64	64	7.6
12:58:24 PM	600	64	64	7.7
12:58:25 PM	600	64	64	7.7
12:58:26 PM	600	64	64	7.7
12:58:27 PM	600	64	64	7.7
12:58:28 PM	600	64	64	7.7
12:58:29 PM	600	64	64	7.8
12:58:30 PM	600	64	64	7.8
12:58:31 PM	600	64	64	7.7
12:58:32 PM	600	64	64	7.8
12:58:33 PM	600	64	64	7.7
12:58:34 PM	600	64	64	7.7
12:58:35 PM	600	64	64	7.5
12:58:36 PM	600	64	64	7.4
12:58:37 PM	600	64	64	7.4
12:58:38 PM	600	64	64	7.3
12:58:39 PM	600	64	64	7.0
12:58:40 PM	600	64	64	6.8
12:58:41 PM	600	64	64	6.7
12:58:42 PM	600	64	64	6.3
12:58:43 PM	600	64	64	6.1
12:58:44 PM	600	64	64	5.9
12:58:45 PM	600	64	64	5.7
Averages ->	600	64	64	7.4
			Maximum ->	8.0

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1050

Date 1/30/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
1:13:38 PM	600	65	65	7.7
1:13:39 PM	600	65	65	7.7
1:13:40 PM	600	65	65	7.5
1:13:41 PM	600	65	65	7.5
1:13:42 PM	600	65	65	7.5
1:13:43 PM	600	65	65	7.6
1:13:44 PM	600	65	65	7.6
1:13:45 PM	600	65	65	7.5
1:13:46 PM	600	65	65	7.5
1:13:47 PM	600	65	65	7.6
1:13:48 PM	600	65	65	7.5
1:13:49 PM	600	65	65	7.6
1:13:50 PM	600	65	65	7.6
1:13:51 PM	600	65	65	7.5
1:13:52 PM	600	65	65	7.5
1:13:53 PM	600	65	65	7.5
1:13:54 PM	600	65	65	7.6
1:13:55 PM	600	65	65	7.7
1:13:56 PM	600	65	65	7.9
1:13:57 PM	600	65	65	8.1
1:13:58 PM	600	65	65	8.2
1:13:59 PM	600	65	65	8.2
1:14:00 PM	600	65	65	8.2
1:14:01 PM	600	65	65	8.3
1:14:02 PM	600	65	65	8.4
1:14:03 PM	600	65	65	8.1
1:14:04 PM	600	65	65	8.1
1:14:05 PM	600	65	65	8.1
1:14:06 PM	600	65	65	8.1
1:14:07 PM	600	65	65	7.8
1:14:08 PM	600	65	65	7.6
1:14:09 PM	600	65	65	7.5
1:14:10 PM	600	65	65	7.4
1:14:11 PM	600	65	65	7.3
1:14:12 PM	600	65	65	7.2
1:14:12 PM	600	65	65	7.1
1:14:13 PM	600	65	65	7.1
1:14:14 PM	600	65	65	7.0
1:14:15 PM	600	65	65	7.1
1:14:16 PM	600	65	65	7.2
1:14:17 PM	600	65	65	7.3
1:14:18 PM	600	65	65	7.4
1:14:19 PM	600	65	65	7.4
1:14:20 PM	600	65	65	7.4
1:14:21 PM	600	65	65	7.2
1:14:22 PM	600	65	65	7.1
1:14:23 PM	600	65	65	6.9
1:14:24 PM	600	65	65	6.8
1:14:25 PM	600	65	65	6.7
1:14:26 PM	600	65	65	6.6
1:14:27 PM	600	65	65	6.6
1:14:28 PM	600	65	65	6.6
1:14:29 PM	600	65	65	6.5
1:14:30 PM	600	65	65	6.4
1:14:31 PM	600	65	65	6.3
1:14:32 PM	600	65	65	6.3
1:14:33 PM	600	65	65	6.3
1:14:34 PM	600	65	65	6.2
1:14:35 PM	600	65	65	6.2
1:14:36 PM	600	65	65	6.4
Averages ->	600	65	65	7.3
			Maximum ->	8.4

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1050

Date 1/30/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
2:22:08 PM	600	502	494	4.8
2:22:09 PM	600	502	495	4.8
2:22:10 PM	600	502	495	4.8
2:22:11 PM	600	502	494	4.8
2:22:12 PM	600	502	495	4.9
2:22:13 PM	600	502	494	4.9
2:22:14 PM	600	502	494	4.9
2:22:15 PM	600	502	494	4.9
2:22:16 PM	600	502	494	4.9
2:22:17 PM	600	501	494	4.9
2:22:18 PM	600	501	494	4.9
2:22:19 PM	600	501	494	4.9
2:22:20 PM	600	501	494	4.9
2:22:21 PM	600	501	494	4.8
2:22:22 PM	600	500	494	4.8
2:22:23 PM	600	500	494	4.8
2:22:24 PM	600	500	493	4.8
2:22:25 PM	600	500	493	4.8
2:22:26 PM	600	500	493	4.8
2:22:27 PM	600	500	493	4.8
2:22:28 PM	600	499	493	4.8
2:22:29 PM	600	499	493	4.8
2:22:30 PM	600	499	493	4.8
2:22:31 PM	600	499	493	4.8
2:22:32 PM	600	499	493	4.8
2:22:33 PM	600	499	493	4.8
2:22:34 PM	600	499	493	4.8
2:22:35 PM	600	499	493	4.8
2:22:36 PM	600	499	493	4.8
2:22:37 PM	600	499	493	4.8
2:22:38 PM	600	499	493	4.8
2:22:39 PM	600	500	493	4.8
2:22:40 PM	600	500	494	4.8
2:22:41 PM	600	500	494	4.8
2:22:42 PM	600	500	493	4.8
2:22:43 PM	600	500	494	4.8
2:22:44 PM	600	500	494	4.8
2:22:45 PM	600	500	494	4.8
2:22:46 PM	600	500	494	4.8
2:22:47 PM	600	500	494	4.9
2:22:48 PM	600	501	494	4.8
2:22:48 PM	600	501	494	4.8
2:22:49 PM	600	501	494	4.8
2:22:50 PM	600	501	494	4.8
2:22:51 PM	600	501	494	4.9
2:22:52 PM	600	501	494	4.8
2:22:53 PM	600	501	494	4.9
2:22:54 PM	600	501	494	4.8
2:22:55 PM	600	501	494	4.9
2:22:56 PM	600	502	494	4.8
2:22:57 PM	600	502	494	4.9
2:22:58 PM	600	502	495	4.9
2:22:59 PM	600	502	495	4.9
2:23:00 PM	600	502	494	4.9
2:23:01 PM	600	502	494	4.9
2:23:02 PM	600	502	494	4.9
2:23:03 PM	600	502	494	4.9
2:23:04 PM	600	502	494	4.9
2:23:05 PM	600	502	494	4.9
2:23:06 PM	600	501	494	4.9
Averages ->	600	501	494	4.8
			Maximum ->	4.9

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1100

Date 1/30/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
2:37:23 PM	600	501	494	4.0
2:37:24 PM	600	501	494	4.0
2:37:25 PM	600	501	494	4.0
2:37:26 PM	600	501	494	4.0
2:37:27 PM	600	501	494	4.0
2:37:28 PM	600	501	494	4.0
2:37:29 PM	600	500	493	4.0
2:37:30 PM	600	500	493	4.0
2:37:31 PM	600	500	493	4.0
2:37:32 PM	600	500	493	4.0
2:37:33 PM	600	500	493	4.0
2:37:34 PM	600	499	493	3.9
2:37:35 PM	600	499	493	3.9
2:37:36 PM	600	499	493	3.9
2:37:37 PM	600	499	493	3.9
2:37:38 PM	600	499	493	3.9
2:37:39 PM	600	499	493	3.9
2:37:40 PM	600	499	493	3.9
2:37:41 PM	600	499	493	4.0
2:37:42 PM	600	499	493	4.0
2:37:43 PM	600	499	493	4.0
2:37:44 PM	600	499	493	3.9
2:37:45 PM	600	500	493	4.0
2:37:46 PM	600	500	493	4.0
2:37:47 PM	600	500	493	4.0
2:37:48 PM	600	499	493	3.9
2:37:49 PM	600	500	493	3.9
2:37:50 PM	600	500	493	3.9
2:37:51 PM	600	500	493	3.9
2:37:52 PM	600	500	494	4.0
2:37:53 PM	600	500	494	4.0
2:37:54 PM	600	501	494	4.0
2:37:55 PM	600	501	493	4.0
2:37:56 PM	600	501	494	4.0
2:37:57 PM	600	501	494	4.0
2:37:58 PM	600	501	494	4.0
2:37:59 PM	600	501	494	4.0
2:38:00 PM	600	501	494	4.0
2:38:01 PM	600	502	494	4.1
2:38:02 PM	600	502	494	4.1
2:38:03 PM	600	502	494	4.1
2:38:04 PM	600	502	494	4.2
2:38:05 PM	600	502	494	4.2
2:38:06 PM	600	502	494	4.2
2:38:07 PM	600	502	494	4.2
2:38:08 PM	600	502	494	4.2
2:38:09 PM	600	502	494	4.1
2:38:10 PM	600	502	494	4.2
2:38:11 PM	600	502	494	4.2
2:38:12 PM	600	502	494	4.1
2:38:13 PM	600	501	494	4.2
2:38:14 PM	600	501	494	4.2
2:38:15 PM	600	501	494	4.1
2:38:16 PM	600	501	494	4.2
2:38:17 PM	600	501	494	4.2
2:38:18 PM	600	500	493	4.1
2:38:19 PM	600	501	494	4.1
2:38:20 PM	600	500	493	4.1
2:38:21 PM	600	500	493	4.1
2:38:22 PM	600	500	493	4.1
Averages ->	600	500	494	4.0
			Maximum ->	4.2

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1150

Date 1/30/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
2:54:02 PM	600	499	493	4.1
2:54:03 PM	600	499	493	4.0
2:54:03 PM	600	499	493	4.0
2:54:04 PM	600	499	493	4.0
2:54:05 PM	600	499	493	4.0
2:54:06 PM	600	499	493	4.0
2:54:07 PM	600	499	493	4.0
2:54:08 PM	600	499	493	4.0
2:54:09 PM	600	499	493	4.0
2:54:10 PM	600	499	493	4.0
2:54:11 PM	600	500	493	4.0
2:54:12 PM	600	500	493	4.0
2:54:13 PM	600	500	493	4.0
2:54:14 PM	600	500	493	4.0
2:54:15 PM	600	500	493	4.0
2:54:16 PM	600	500	494	4.0
2:54:17 PM	600	500	494	4.0
2:54:18 PM	600	501	494	4.0
2:54:19 PM	600	501	494	4.1
2:54:20 PM	600	501	494	4.1
2:54:21 PM	600	501	494	4.1
2:54:22 PM	600	501	494	4.1
2:54:23 PM	600	501	494	4.1
2:54:24 PM	600	501	494	4.1
2:54:25 PM	600	501	494	4.1
2:54:26 PM	600	502	494	4.2
2:54:27 PM	600	502	494	4.2
2:54:28 PM	600	502	494	4.2
2:54:29 PM	600	502	494	4.2
2:54:30 PM	600	502	494	4.2
2:54:31 PM	600	502	494	4.2
2:54:32 PM	600	502	494	4.2
2:54:33 PM	600	502	494	4.2
2:54:34 PM	600	502	494	4.2
2:54:35 PM	600	502	494	4.3
2:54:36 PM	600	501	494	4.3
2:54:37 PM	600	501	494	4.3
2:54:38 PM	600	501	494	4.3
2:54:39 PM	600	501	494	4.3
2:54:40 PM	600	501	493	4.3
2:54:41 PM	600	501	493	4.3
2:54:42 PM	600	501	494	4.2
2:54:43 PM	600	500	493	4.2
2:54:44 PM	600	500	493	4.2
2:54:45 PM	600	500	493	4.2
2:54:46 PM	600	500	493	4.2
2:54:47 PM	600	500	493	4.1
2:54:48 PM	600	500	493	4.1
2:54:49 PM	600	500	493	4.1
2:54:50 PM	600	500	493	4.1
2:54:51 PM	600	499	493	4.1
2:54:52 PM	600	499	493	4.0
2:54:53 PM	600	499	493	4.1
2:54:54 PM	600	499	493	4.1
2:54:55 PM	600	499	493	4.1
2:54:56 PM	600	500	493	4.1
2:54:57 PM	600	499	493	4.1
2:54:58 PM	600	500	493	4.1
2:54:59 PM	600	500	493	4.1
2:55:00 PM	600	500	493	4.1
Averages ->	600	500	493	4.1
			Maximum ->	4.3

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1200

Date 1/30/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
3:13:56 PM	600	499	493	3.7
3:13:57 PM	600	500	493	3.7
3:13:58 PM	600	500	493	3.7
3:13:59 PM	600	500	493	3.7
3:14:00 PM	600	500	494	3.8
3:14:01 PM	600	500	493	3.8
3:14:02 PM	600	500	493	3.8
3:14:03 PM	600	500	493	3.8
3:14:04 PM	600	501	493	3.8
3:14:05 PM	600	501	493	3.8
3:14:06 PM	600	501	494	3.8
3:14:07 PM	600	501	494	3.8
3:14:08 PM	600	501	494	3.8
3:14:09 PM	600	501	494	3.8
3:14:10 PM	600	501	494	3.8
3:14:11 PM	600	502	494	3.8
3:14:12 PM	600	502	494	3.8
3:14:13 PM	600	502	494	3.8
3:14:14 PM	600	502	494	3.8
3:14:15 PM	600	502	494	3.9
3:14:16 PM	600	502	494	3.9
3:14:17 PM	600	502	494	3.8
3:14:18 PM	600	502	494	3.9
3:14:19 PM	600	502	494	3.8
3:14:20 PM	600	502	494	3.8
3:14:21 PM	600	502	494	3.8
3:14:22 PM	600	502	494	3.8
3:14:23 PM	600	502	494	3.8
3:14:24 PM	600	501	494	3.8
3:14:25 PM	600	501	494	3.8
3:14:26 PM	600	501	494	3.8
3:14:27 PM	600	501	494	3.8
3:14:28 PM	600	501	494	3.8
3:14:29 PM	600	501	493	3.8
3:14:30 PM	600	500	493	3.8
3:14:31 PM	600	500	493	3.8
3:14:32 PM	600	500	493	3.8
3:14:33 PM	600	500	493	3.8
3:14:34 PM	600	499	493	3.8
3:14:35 PM	600	499	493	3.8
3:14:36 PM	600	499	493	3.8
3:14:37 PM	600	499	493	3.7
3:14:38 PM	600	499	493	3.7
3:14:39 PM	600	499	493	3.8
3:14:40 PM	600	500	493	3.8
3:14:41 PM	600	499	493	3.8
3:14:42 PM	600	499	493	3.8
3:14:43 PM	600	499	493	3.8
3:14:44 PM	600	500	493	3.8
3:14:45 PM	600	500	493	3.8
3:14:46 PM	600	499	493	3.8
3:14:47 PM	600	500	493	3.8
3:14:48 PM	600	500	493	3.8
3:14:48 PM	600	500	493	3.8
3:14:49 PM	600	500	493	3.7
3:14:50 PM	600	500	493	3.7
3:14:51 PM	600	500	493	3.8
3:14:52 PM	600	500	493	3.8
3:14:53 PM	600	501	493	3.8
3:14:54 PM	600	501	494	3.7
Averages ->	600	500	493	3.8
			Maximum ->	3.9

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1200

Date 1/31/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
11:27:14 AM	600	64	64	9.3
11:27:15 AM	600	64	63	9.3
11:27:16 AM	600	64	63	9.2
11:27:17 AM	600	64	63	9.5
11:27:18 AM	600	64	63	9.3
11:27:19 AM	600	64	63	9.2
11:27:20 AM	600	64	63	9.1
11:27:21 AM	600	64	64	9.1
11:27:22 AM	600	64	63	9.2
11:27:23 AM	600	64	63	9.2
11:27:24 AM	600	64	63	9.1
11:27:25 AM	600	64	63	9.1
11:27:26 AM	600	64	64	9.1
11:27:27 AM	600	64	63	9.1
11:27:28 AM	600	64	63	9.1
11:27:28 AM	600	64	63	9.3
11:27:29 AM	600	64	64	9.8
11:27:30 AM	600	64	63	9.8
11:27:31 AM	600	64	63	10.2
11:27:32 AM	600	64	64	10.2
11:27:33 AM	600	64	63	10.0
11:27:34 AM	600	64	64	10.2
11:27:35 AM	600	64	64	10.0
11:27:36 AM	600	64	63	10.0
11:27:37 AM	600	64	63	10.2
11:27:38 AM	600	64	64	10.4
11:27:39 AM	600	64	63	10.4
11:27:40 AM	600	64	63	10.3
11:27:41 AM	600	64	63	10.4
11:27:42 AM	600	64	63	10.2
11:27:43 AM	600	64	64	10.3
11:27:44 AM	600	64	63	10.2
11:27:45 AM	600	64	64	10.4
11:27:46 AM	600	64	63	10.4
11:27:47 AM	600	64	63	10.1
11:27:48 AM	600	64	63	10.4
11:27:49 AM	600	64	64	10.2
11:27:50 AM	600	64	63	10.3
11:27:51 AM	600	64	63	10.1
11:27:52 AM	600	64	63	10.3
11:27:53 AM	600	64	63	10.4
11:27:54 AM	600	64	63	10.2
11:27:55 AM	600	64	63	10.2
11:27:56 AM	600	64	63	10.4
11:27:57 AM	600	64	64	10.4
11:27:58 AM	600	64	64	10.0
11:27:59 AM	600	64	64	10.2
11:28:00 AM	600	64	63	10.1
11:28:01 AM	600	64	63	10.2
11:28:02 AM	600	64	63	10.1
11:28:03 AM	600	64	64	9.9
11:28:04 AM	600	64	63	10.1
11:28:05 AM	600	64	64	10.0
11:28:06 AM	600	63	63	9.9
11:28:07 AM	600	64	63	10.0
11:28:08 AM	600	64	63	10.0
11:28:09 AM	600	64	63	10.1
11:28:10 AM	600	64	63	10.0
11:28:11 AM	600	64	63	10.2
11:28:12 AM	600	64	64	10.2
Averages ->	600	64	63	9.9
			Maximum ->	10.4

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1250

Date 1/31/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
11:44:48 AM	600	65	65	8.6
11:44:49 AM	600	65	65	8.7
11:44:50 AM	600	65	65	8.7
11:44:50 AM	600	65	65	8.9
11:44:51 AM	600	65	65	8.9
11:44:52 AM	600	65	65	9.0
11:44:53 AM	600	65	65	8.8
11:44:54 AM	600	65	65	8.9
11:44:55 AM	600	65	65	8.9
11:44:56 AM	600	65	65	9.0
11:44:57 AM	600	65	65	9.0
11:44:58 AM	600	65	65	9.1
11:44:59 AM	600	65	65	9.1
11:45:00 AM	600	65	65	9.0
11:45:01 AM	600	65	65	8.9
11:45:02 AM	600	65	65	9.1
11:45:03 AM	600	65	65	8.8
11:45:04 AM	600	65	65	9.0
11:45:05 AM	600	65	65	9.0
11:45:06 AM	600	65	65	8.9
11:45:07 AM	600	65	65	9.0
11:45:08 AM	600	65	65	8.8
11:45:09 AM	600	65	65	8.7
11:45:10 AM	600	65	65	8.8
11:45:11 AM	600	65	65	8.9
11:45:12 AM	600	65	65	8.8
11:45:13 AM	600	65	65	8.7
11:45:14 AM	600	65	65	8.6
11:45:15 AM	600	65	65	8.6
11:45:16 AM	600	65	65	8.6
11:45:17 AM	600	65	65	8.7
11:45:18 AM	600	65	65	8.5
11:45:19 AM	600	65	65	8.6
11:45:20 AM	600	65	65	8.5
11:45:21 AM	600	65	65	8.5
11:45:22 AM	600	65	65	8.6
11:45:23 AM	600	65	65	8.5
11:45:24 AM	600	65	65	8.4
11:45:25 AM	600	65	65	8.5
11:45:26 AM	600	65	65	8.5
11:45:27 AM	600	65	65	8.7
11:45:28 AM	600	65	65	8.6
11:45:29 AM	600	65	65	8.6
11:45:30 AM	600	65	65	8.4
11:45:31 AM	600	65	65	8.3
11:45:32 AM	600	65	65	8.4
11:45:33 AM	600	65	65	8.3
11:45:34 AM	600	65	65	8.2
11:45:35 AM	600	65	65	8.3
11:45:36 AM	600	65	65	8.2
11:45:37 AM	600	65	65	8.2
11:45:38 AM	600	65	65	8.2
11:45:39 AM	600	65	65	8.1
11:45:40 AM	600	65	65	8.2
11:45:41 AM	600	65	65	8.3
11:45:42 AM	600	65	65	8.2
11:45:43 AM	600	65	65	8.2
11:45:44 AM	600	65	65	8.0
11:45:45 AM	600	65	65	8.1
11:45:46 AM	600	65	65	8.1
Averages ->	600	65	65	8.6
			Maximum ->	9.1

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1300

Date 1/31/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
11:59:52 AM	600	66	66	7.5
11:59:53 AM	600	66	66	7.5
11:59:54 AM	600	66	66	7.5
11:59:55 AM	600	66	66	7.5
11:59:56 AM	600	66	66	7.5
11:59:57 AM	600	66	66	7.4
11:59:58 AM	600	66	66	7.4
11:59:59 AM	600	66	66	7.2
12:00:00 PM	600	66	66	7.2
12:00:01 PM	600	66	66	6.9
12:00:02 PM	600	66	66	6.7
12:00:03 PM	600	66	66	6.8
12:00:04 PM	600	66	66	6.7
12:00:05 PM	600	66	66	6.8
12:00:06 PM	600	66	66	6.7
12:00:07 PM	600	66	66	6.9
12:00:08 PM	600	66	66	7.0
12:00:09 PM	600	66	66	7.2
12:00:10 PM	600	66	66	7.0
12:00:11 PM	600	66	66	7.0
12:00:12 PM	600	66	66	6.9
12:00:13 PM	600	66	66	7.0
12:00:14 PM	600	66	66	6.9
12:00:15 PM	600	66	66	6.8
12:00:16 PM	600	66	66	6.8
12:00:17 PM	600	66	66	7.1
12:00:18 PM	600	66	66	6.9
12:00:19 PM	600	66	66	6.9
12:00:20 PM	600	66	66	7.1
12:00:21 PM	600	66	66	7.1
12:00:22 PM	600	66	66	7.2
12:00:23 PM	600	66	66	7.2
12:00:24 PM	600	66	66	7.3
12:00:25 PM	600	66	66	7.4
12:00:26 PM	600	66	66	7.4
12:00:27 PM	600	66	66	7.4
12:00:28 PM	600	66	66	7.4
12:00:29 PM	600	66	66	7.5
12:00:30 PM	600	66	66	7.3
12:00:31 PM	600	66	66	7.5
12:00:31 PM	600	66	66	7.5
12:00:32 PM	600	66	66	7.5
12:00:33 PM	600	66	66	7.4
12:00:34 PM	600	66	66	7.4
12:00:35 PM	600	66	66	7.4
12:00:36 PM	600	66	66	7.3
12:00:37 PM	600	66	66	7.3
12:00:38 PM	600	66	66	7.1
12:00:39 PM	600	66	66	7.1
12:00:40 PM	600	66	66	7.1
12:00:41 PM	600	66	66	7.1
12:00:42 PM	600	66	66	7.0
12:00:43 PM	600	66	66	7.0
12:00:44 PM	600	66	66	7.1
12:00:45 PM	600	66	66	7.0
12:00:46 PM	600	66	66	7.1
12:00:47 PM	600	66	66	7.1
12:00:48 PM	600	66	66	7.1
12:00:49 PM	600	66	66	7.0
12:00:50 PM	600	66	66	7.2
Averages ->	600	66	66	7.2
			Maximum ->	7.5

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1350

Date 1/31/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
12:22:18 PM	600	67	67	7.3
12:22:19 PM	600	67	67	7.3
12:22:20 PM	600	67	67	7.2
12:22:21 PM	600	67	67	7.2
12:22:22 PM	600	67	67	7.1
12:22:23 PM	600	67	67	7.1
12:22:24 PM	600	67	67	7.1
12:22:25 PM	600	68	67	7.0
12:22:26 PM	600	67	67	7.1
12:22:27 PM	600	67	67	7.0
12:22:28 PM	600	67	67	7.0
12:22:29 PM	600	67	67	7.0
12:22:30 PM	600	67	67	6.9
12:22:31 PM	600	67	67	6.9
12:22:32 PM	600	67	67	7.0
12:22:33 PM	600	67	67	7.0
12:22:34 PM	600	67	67	7.0
12:22:35 PM	600	67	67	6.9
12:22:36 PM	600	67	67	6.8
12:22:37 PM	600	67	67	6.6
12:22:38 PM	600	67	67	6.7
12:22:39 PM	600	67	67	6.7
12:22:40 PM	600	67	67	6.7
12:22:41 PM	600	67	67	6.5
12:22:42 PM	600	67	67	6.3
12:22:43 PM	600	67	67	6.4
12:22:44 PM	600	67	67	6.6
12:22:45 PM	600	67	67	6.6
12:22:46 PM	600	67	67	6.7
12:22:47 PM	600	67	67	6.8
12:22:48 PM	600	67	67	6.8
12:22:49 PM	600	67	67	6.9
12:22:50 PM	600	67	67	6.9
12:22:51 PM	600	67	67	7.0
12:22:52 PM	600	67	67	7.0
12:22:53 PM	600	67	67	7.1
12:22:54 PM	600	67	67	7.1
12:22:55 PM	600	67	67	7.0
12:22:56 PM	600	67	67	7.1
12:22:57 PM	600	67	67	7.1
12:22:58 PM	600	67	67	7.1
12:22:59 PM	600	67	67	7.1
12:23:00 PM	600	67	67	7.1
12:23:01 PM	600	67	67	7.2
12:23:02 PM	600	67	67	7.2
12:23:03 PM	600	67	67	7.2
12:23:04 PM	600	67	67	7.2
12:23:05 PM	600	67	67	7.2
12:23:05 PM	600	67	67	7.2
12:23:06 PM	600	67	67	7.2
12:23:07 PM	600	67	67	7.1
12:23:08 PM	600	67	67	7.2
12:23:09 PM	600	67	67	7.2
12:23:10 PM	600	67	67	7.3
12:23:11 PM	600	67	67	7.3
12:23:12 PM	600	67	67	7.3
12:23:13 PM	600	67	67	7.3
12:23:14 PM	600	67	67	7.2
12:23:15 PM	600	67	67	7.2
12:23:16 PM	600	67	67	7.2
Averages ->	600	67	67	7.0
			Maximum ->	7.3

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1350

Date 1/31/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
1:33:38 PM	600	501	494	3.5
1:33:39 PM	600	501	494	3.5
1:33:40 PM	600	501	494	3.5
1:33:41 PM	600	501	494	3.4
1:33:42 PM	600	501	494	3.4
1:33:43 PM	600	501	493	3.3
1:33:44 PM	600	501	494	3.3
1:33:45 PM	600	500	493	3.3
1:33:46 PM	600	500	493	3.2
1:33:47 PM	600	500	493	3.2
1:33:48 PM	600	500	493	3.2
1:33:49 PM	600	500	493	3.2
1:33:50 PM	600	500	493	3.1
1:33:51 PM	600	500	493	3.1
1:33:52 PM	600	499	493	3.1
1:33:53 PM	600	500	493	3.2
1:33:54 PM	600	499	493	3.2
1:33:55 PM	600	499	493	3.2
1:33:56 PM	600	499	493	3.2
1:33:57 PM	600	499	493	3.2
1:33:58 PM	600	500	493	3.2
1:33:59 PM	600	500	493	3.2
1:34:00 PM	600	500	494	3.2
1:34:00 PM	600	500	493	3.1
1:34:01 PM	600	500	494	3.1
1:34:02 PM	600	500	493	3.1
1:34:03 PM	600	500	494	3.2
1:34:04 PM	600	500	494	3.1
1:34:05 PM	600	500	494	3.1
1:34:06 PM	600	500	494	3.1
1:34:07 PM	600	500	494	3.2
1:34:08 PM	600	501	494	3.2
1:34:09 PM	600	501	494	3.2
1:34:10 PM	600	501	494	3.2
1:34:11 PM	600	501	494	3.2
1:34:12 PM	600	501	494	3.2
1:34:13 PM	600	501	494	3.2
1:34:14 PM	600	501	494	3.2
1:34:15 PM	600	502	494	3.2
1:34:16 PM	600	502	494	3.2
1:34:17 PM	600	502	494	3.3
1:34:18 PM	600	502	494	3.3
1:34:19 PM	600	502	494	3.4
1:34:20 PM	600	502	494	3.4
1:34:21 PM	600	502	494	3.4
1:34:22 PM	600	502	494	3.5
1:34:23 PM	600	501	494	3.5
1:34:24 PM	600	501	494	3.5
1:34:25 PM	600	501	494	3.5
1:34:26 PM	600	502	494	3.5
1:34:27 PM	600	501	494	3.5
1:34:28 PM	600	501	494	3.5
1:34:29 PM	600	501	494	3.5
1:34:30 PM	600	500	494	3.4
1:34:31 PM	600	500	494	3.4
1:34:32 PM	600	500	493	3.4
1:34:33 PM	600	500	493	3.4
1:34:34 PM	600	499	493	3.4
1:34:35 PM	600	499	493	3.4
1:34:36 PM	600	500	493	3.4
Averages ->	600	501	494	3.3
			Maximum ->	3.5

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1400

Date 1/31/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
2:10:03 PM	600	499	493	2.7
2:10:04 PM	600	499	493	2.7
2:10:05 PM	600	499	493	2.7
2:10:06 PM	600	499	493	2.7
2:10:07 PM	600	499	493	2.7
2:10:08 PM	600	499	493	2.7
2:10:09 PM	600	499	493	2.7
2:10:10 PM	600	499	493	2.7
2:10:11 PM	600	499	493	2.6
2:10:12 PM	600	499	493	2.6
2:10:13 PM	600	499	493	2.6
2:10:14 PM	600	500	493	2.6
2:10:15 PM	600	500	493	2.6
2:10:16 PM	600	500	493	2.6
2:10:17 PM	600	500	493	2.6
2:10:18 PM	600	500	493	2.6
2:10:19 PM	600	500	493	2.6
2:10:20 PM	600	500	493	2.6
2:10:21 PM	600	500	493	2.6
2:10:22 PM	600	500	494	2.6
2:10:23 PM	600	501	494	2.6
2:10:24 PM	600	501	494	2.6
2:10:25 PM	600	501	494	2.6
2:10:26 PM	600	501	494	2.6
2:10:27 PM	600	501	494	2.6
2:10:28 PM	600	501	494	2.7
2:10:29 PM	600	501	494	2.7
2:10:30 PM	600	502	494	2.7
2:10:31 PM	600	502	494	2.7
2:10:32 PM	600	502	494	2.8
2:10:33 PM	600	502	494	2.8
2:10:34 PM	600	502	494	2.8
2:10:35 PM	600	502	494	2.8
2:10:36 PM	600	502	494	2.8
2:10:37 PM	600	502	494	2.8
2:10:38 PM	600	502	494	2.8
2:10:39 PM	600	502	494	2.8
2:10:40 PM	600	502	494	2.8
2:10:41 PM	600	502	494	2.8
2:10:42 PM	600	502	494	2.8
2:10:43 PM	600	502	494	2.8
2:10:44 PM	600	501	494	2.8
2:10:45 PM	600	501	494	2.8
2:10:46 PM	600	501	494	2.9
2:10:47 PM	600	501	493	2.9
2:10:48 PM	600	501	493	2.8
2:10:49 PM	600	500	493	2.9
2:10:50 PM	600	500	493	2.9
2:10:51 PM	600	500	493	2.9
2:10:52 PM	600	500	493	2.9
2:10:53 PM	600	500	493	2.9
2:10:54 PM	600	499	493	2.8
2:10:54 PM	600	499	493	2.8
2:10:55 PM	600	499	493	2.8
2:10:56 PM	600	499	493	2.7
2:10:57 PM	600	499	493	2.8
2:10:58 PM	600	499	493	2.8
2:10:59 PM	600	499	493	2.7
2:11:00 PM	600	499	493	2.7
2:11:01 PM	600	499	493	2.7
Averages ->	600	500	493	2.7
			Maximum ->	2.9

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1450

Date 1/31/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
2:28:13 PM	600	501	494	2.8
2:28:14 PM	600	502	494	2.8
2:28:15 PM	600	502	494	2.8
2:28:16 PM	600	502	494	2.8
2:28:17 PM	600	502	494	2.9
2:28:18 PM	600	502	494	2.9
2:28:19 PM	600	502	494	2.8
2:28:20 PM	600	502	494	2.9
2:28:21 PM	600	502	494	2.9
2:28:22 PM	600	502	494	2.8
2:28:23 PM	600	502	494	2.8
2:28:24 PM	600	502	494	2.8
2:28:25 PM	600	502	494	2.8
2:28:26 PM	600	501	494	2.8
2:28:27 PM	600	501	494	2.8
2:28:28 PM	600	501	494	2.8
2:28:29 PM	600	501	494	2.8
2:28:30 PM	600	501	494	2.8
2:28:31 PM	600	500	493	2.8
2:28:32 PM	600	500	493	2.8
2:28:33 PM	600	500	493	2.8
2:28:34 PM	600	500	493	2.8
2:28:35 PM	600	500	493	2.8
2:28:36 PM	600	500	493	2.8
2:28:37 PM	600	500	493	2.8
2:28:38 PM	600	500	493	2.8
2:28:39 PM	600	500	493	2.8
2:28:40 PM	600	500	493	2.8
2:28:41 PM	600	500	493	2.8
2:28:42 PM	600	500	493	2.8
2:28:43 PM	600	500	493	2.8
2:28:44 PM	600	500	493	2.8
2:28:45 PM	600	500	493	2.8
2:28:46 PM	600	500	493	2.9
2:28:47 PM	600	500	493	2.9
2:28:48 PM	600	500	493	2.9
2:28:49 PM	600	500	493	3.0
2:28:50 PM	600	500	493	2.9
2:28:51 PM	600	500	493	2.9
2:28:52 PM	600	500	494	3.0
2:28:53 PM	600	501	494	3.0
2:28:54 PM	600	501	494	3.0
2:28:55 PM	600	501	494	3.0
2:28:56 PM	600	501	494	3.0
2:28:57 PM	600	501	494	3.0
2:28:58 PM	600	501	494	3.0
2:28:59 PM	600	502	494	2.9
2:29:00 PM	600	502	494	3.0
2:29:01 PM	600	502	494	2.9
2:29:02 PM	600	502	494	2.9
2:29:03 PM	600	502	494	2.9
2:29:04 PM	600	502	494	2.9
2:29:04 PM	600	502	494	2.9
2:29:05 PM	600	502	495	2.9
2:29:06 PM	600	502	494	2.9
2:29:07 PM	600	502	494	2.9
2:29:08 PM	600	502	494	2.9
2:29:09 PM	600	502	494	2.9
2:29:10 PM	600	502	494	2.9
2:29:11 PM	600	502	494	2.9
Averages ->	600	501	494	2.9
			Maximum ->	3.0

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1500

Date 1/31/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
2:44:13 PM	600	501	494	2.7
2:44:14 PM	600	502	494	2.8
2:44:15 PM	600	502	494	2.8
2:44:16 PM	600	502	494	2.7
2:44:17 PM	600	502	494	2.8
2:44:18 PM	600	502	494	2.8
2:44:19 PM	600	502	494	2.7
2:44:20 PM	600	502	494	2.7
2:44:21 PM	600	502	494	2.7
2:44:22 PM	600	502	494	2.7
2:44:23 PM	600	502	494	2.7
2:44:24 PM	600	501	494	2.7
2:44:25 PM	600	501	494	2.7
2:44:26 PM	600	501	494	2.7
2:44:27 PM	600	501	494	2.7
2:44:28 PM	600	501	494	2.7
2:44:29 PM	600	501	494	2.7
2:44:30 PM	600	500	494	2.7
2:44:31 PM	600	500	494	2.7
2:44:32 PM	600	500	493	2.7
2:44:32 PM	600	500	493	2.7
2:44:33 PM	600	500	493	2.7
2:44:34 PM	600	500	493	2.7
2:44:35 PM	600	499	493	2.7
2:44:36 PM	600	500	493	2.7
2:44:37 PM	600	499	493	2.7
2:44:38 PM	600	499	493	2.7
2:44:39 PM	600	500	493	2.7
2:44:40 PM	600	499	493	2.7
2:44:41 PM	600	499	493	2.7
2:44:42 PM	600	500	493	2.7
2:44:43 PM	600	500	493	2.7
2:44:44 PM	600	500	493	2.6
2:44:45 PM	600	500	493	2.7
2:44:46 PM	600	500	493	2.7
2:44:47 PM	600	500	493	2.7
2:44:48 PM	600	500	493	2.7
2:44:49 PM	600	500	494	2.7
2:44:50 PM	600	500	493	2.7
2:44:51 PM	600	501	494	2.7
2:44:52 PM	600	501	494	2.8
2:44:53 PM	600	501	494	2.8
2:44:54 PM	600	501	494	2.7
2:44:55 PM	600	501	494	2.8
2:44:56 PM	600	501	494	2.8
2:44:57 PM	600	501	494	2.8
2:44:58 PM	600	501	494	2.8
2:44:59 PM	600	501	494	2.8
2:45:00 PM	600	502	494	2.8
2:45:01 PM	600	502	494	2.8
2:45:02 PM	600	502	494	2.8
2:45:03 PM	600	502	494	2.9
2:45:04 PM	600	502	494	2.8
2:45:05 PM	600	502	494	2.9
2:45:06 PM	600	502	494	2.8
2:45:07 PM	600	502	494	2.9
2:45:08 PM	600	502	494	2.9
2:45:09 PM	600	501	494	2.9
2:45:10 PM	600	501	494	2.9
2:45:11 PM	600	501	494	2.9
Averages ->	600	501	494	2.7
			Maximum ->	2.9

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1500

Date 2/1/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
1:29:12 PM	600	66	66	25.7
1:29:13 PM	600	66	66	25.4
1:29:14 PM	600	66	66	25.0
1:29:15 PM	600	66	66	25.0
1:29:16 PM	600	66	66	25.2
1:29:17 PM	600	66	66	25.5
1:29:18 PM	600	66	66	26.4
1:29:19 PM	600	66	66	27.3
1:29:20 PM	600	66	66	28.0
1:29:21 PM	600	66	66	28.1
1:29:22 PM	600	66	66	27.8
1:29:23 PM	600	66	66	27.2
1:29:24 PM	600	66	66	26.5
1:29:25 PM	600	66	66	26.8
1:29:26 PM	600	66	66	26.5
1:29:27 PM	600	66	66	26.4
1:29:28 PM	600	66	66	25.9
1:29:29 PM	600	66	66	26.2
1:29:30 PM	600	66	66	26.6
1:29:31 PM	600	66	66	26.8
1:29:32 PM	600	66	66	27.2
1:29:32 PM	600	66	66	28.3
1:29:33 PM	600	66	66	29.2
1:29:34 PM	600	66	66	29.7
1:29:35 PM	600	66	66	29.0
1:29:36 PM	600	66	66	28.2
1:29:37 PM	600	66	66	28.3
1:29:38 PM	600	66	66	28.2
1:29:39 PM	600	66	66	27.5
1:29:40 PM	600	66	66	27.2
1:29:41 PM	600	66	66	26.5
1:29:42 PM	600	66	66	26.5
1:29:43 PM	600	66	66	26.5
1:29:44 PM	600	66	66	26.5
1:29:45 PM	600	66	66	26.3
1:29:46 PM	600	66	66	26.6
1:29:47 PM	600	66	66	26.9
1:29:48 PM	600	66	66	27.2
1:29:49 PM	600	66	66	27.4
1:29:50 PM	600	66	66	27.2
1:29:51 PM	600	66	66	27.4
1:29:52 PM	600	66	66	27.8
1:29:53 PM	600	66	66	28.5
1:29:54 PM	600	66	66	28.9
1:29:55 PM	600	66	66	29.2
1:29:56 PM	600	66	66	29.2
1:29:57 PM	600	66	66	29.9
1:29:58 PM	600	66	66	30.3
1:29:59 PM	600	66	66	30.5
1:30:00 PM	600	66	66	30.8
1:30:01 PM	600	66	66	30.9
1:30:02 PM	600	66	66	30.5
1:30:03 PM	600	66	66	29.8
1:30:04 PM	600	66	66	29.4
1:30:05 PM	600	66	66	29.4
1:30:06 PM	600	66	66	29.3
1:30:07 PM	600	66	66	29.3
1:30:08 PM	600	66	66	29.3
1:30:09 PM	600	66	66	29.1
1:30:10 PM	600	66	66	29.0
Averages ->	600	66	66	27.8
			Maximum ->	30.9

Yarmouth Research and Technology, LLC

Valve Description: PBM 1/2 Inch Valve Stem Assembly SK-P001

Cycle Number: 1510

Date 2/1/2013

Time (EST)	Pressure (psig)	Bonnet Temp. (deg. F)	Body Temp. (deg. F)	Leakage (PPMv)
1:38:55 PM	600	66	66	21.9
1:38:56 PM	600	66	66	22.9
1:38:57 PM	600	66	66	23.7
1:38:58 PM	600	66	66	24.2
1:38:59 PM	600	66	66	24.3
1:39:00 PM	600	66	66	24.0
1:39:01 PM	600	66	66	23.8
1:39:02 PM	600	66	66	23.6
1:39:03 PM	600	66	66	23.4
1:39:04 PM	600	66	66	22.9
1:39:04 PM	600	66	66	22.8
1:39:05 PM	600	66	66	22.9
1:39:06 PM	600	66	66	22.9
1:39:07 PM	600	66	66	23.3
1:39:08 PM	600	66	66	23.1
1:39:09 PM	600	66	66	23.4
1:39:10 PM	600	66	66	23.9
1:39:11 PM	600	66	66	24.6
1:39:12 PM	600	66	66	25.4
1:39:13 PM	600	66	66	25.8
1:39:14 PM	600	66	66	25.5
1:39:15 PM	600	66	66	25.0
1:39:16 PM	600	66	66	24.4
1:39:17 PM	600	66	66	24.0
1:39:18 PM	600	66	66	24.3
1:39:19 PM	600	66	66	24.7
1:39:20 PM	600	66	66	25.1
1:39:21 PM	600	66	66	25.4
1:39:22 PM	600	66	66	25.3
1:39:23 PM	600	66	66	25.6
1:39:24 PM	600	66	66	25.1
1:39:25 PM	600	66	66	25.5
1:39:26 PM	600	66	66	25.8
1:39:27 PM	600	66	66	25.8
1:39:28 PM	600	66	66	26.4
1:39:29 PM	600	66	66	26.6
1:39:30 PM	600	66	66	26.6
1:39:31 PM	600	66	66	27.2
1:39:32 PM	600	66	66	27.8
1:39:33 PM	600	66	66	28.1
1:39:34 PM	600	66	66	28.0
1:39:35 PM	600	66	66	28.0
1:39:36 PM	600	66	66	28.4
1:39:37 PM	600	66	66	28.2
1:39:38 PM	600	66	66	28.1
1:39:39 PM	600	66	66	28.4
1:39:40 PM	600	66	66	28.4
1:39:41 PM	600	66	66	28.4
1:39:42 PM	600	66	66	28.3
1:39:43 PM	600	66	66	27.8
1:39:44 PM	600	66	66	27.3
1:39:45 PM	600	66	66	26.8
1:39:46 PM	600	66	66	26.0
1:39:47 PM	600	66	67	24.6
1:39:48 PM	600	66	67	22.9
1:39:49 PM	600	66	66	21.2
1:39:50 PM	600	66	66	20.3
1:39:51 PM	600	66	66	19.5
1:39:52 PM	600	66	66	17.9
1:39:53 PM	600	66	66	16.6
Averages ->	600	66	66	24.9
			Maximum ->	28.4