

1 **Re: Page B-125, Replace Switchgear, \$383,300 (2008), \$168,000 (2009)**

2 Q. Please provide a summary of the maintenance information for each year
3 from 2002 to 2007F for the current switchgear control panels.

4

5

6 A. Maintenance information for 2002 to 2007 involving Cartwright Switchgear is
7 summarized in the table on page 2 of 2.

8

9 Please note that the primary cause of majority of the switchgear equipment
10 failures is heat degradation caused by the close proximity of the switchgear
11 to Unit No. 2036 exhaust manifolds.

Date	Maintenance W.O.	Switchgear Equipment Problems	Repair Cost (\$)
2002-04-14	272868	2045 Voltage Adjust Potentiometer Failure	480
2002-07-02	286484	Unit 2045 Synchronizing Malfunction	1793
2002-08-14	293881	Defective PLC Analogue Card	2745
2002-08-19	294489	Plant Main Breaker Failure	1123
2002-08-26	295511	Unit G2 Digital Meter Failure	4096
2002-09-11	298607	Unit G2 Watt Transducer Failure	68
2002-09-11	298608	Switchgear 3600 Display Failure	170
2003-02-16	325184	Unit G2 PSI Transducer Failure	1069
2003-06-04	342937	Unit Digital Meter Failure	4693
2003-06-26	347122	Unit 2052 Voltage Malfunction	1700
2003-08-13	354773	Unit Voltage Problem (Caused Power Outage)	198
2003-08-15	355553	Switchgear Control DC Failure	302
2003-08-18	355706	Unit Voltage Control Problem	1243
2003-08-18	355710	Switchgear Control DC Malfunction	870
2003-09-24	362341	Unit 2045 Voltage Malfunction	272
2003-10-09	365516	Unit 2052 Voltage Malfunction	699
2003-12-11	376292	Unit Speed Control Malfunction	265
2003-09-26	363116	Plant Voltage Control Problem	444
2004-01-05	378905	Unit 2036 Reverse Power Problem	3341
2004-04-23	399317	Switchgear DC Failure (Power Outage)	944
2004-05-26	405098	Unit Start Malfunction	803
2004-05-28	405371	Unit 567 Speed Switch Malfunction	263
2004-09-20	423922	Plant Undervoltage Causing Outage	157
2005-04-11	459294	Unit Start Malfunction	280
2005-08-22	482607	Replace Unit Voltage Regulator	3418
2005-08-02	479672	Unit 2052 Breaker Malfunction	696
2005-09-22	487804	Unit 2052 Synchronizing Malfunction	1348
2005-11-14	496471	Unit 2045 Breaker Malfunction	304
2005-11-23	498007	Unit Speed Control and DC Malfunction	608
2005-11-24	498125	PLC DC Power Supply Replaced	1200
2005-12-06	499846	Unit 2045 loss of voltage	288
2006-03-14	518084	PLC DC Power Supply Replaced	1200
2006-04-17	522540	Switchgear Voltage Problem	1026
2006-04-18	522853	Unit 567 Isoch/Droop Switch Failure	468
2006-06-10	531505	Unit 2045 Voltage Malfunction	1572
2006-06-13	532116	Switchgear DC Failure	864
2006-07-07	536759	Unit Breaker Failure	8060
2006-11-22	559321	Unit 2045 Breaker Not Closing	506
2006-11-30	560601	Sync Scope Malfunction	1285
2006-12-04	560740	Diesel Unit 3710 Malfunction	5225
2007-02-07	571800	Unit 2045 Failed to Sync.	748
2007-02-18	574222	Unit 2045 Breaker Malfunction (Caused Power Outage)	312
2007-04-09	583581	Unit 2045 Breaker Malfunction (Caused Power Outage)	1843
2007-08-30	605007	Unit 2036 Start Malfunction	225
2007-09-04	605354	Unit 2045 Alarm Malfunction (Caused Power Outage)	150
Total Cost of Corrective Maintenance Work Orders for Cartwright Switchgear (2002-2007)			\$59,364