

Input Voltage (Line-Ground)

RMS Measurements In Volts AC:

L1-G:

L2-G:

L3-G:

Inputs To Negative DC Bus

RMS AC Measurements:

VL1-BUS:

IL1:

VL2-BUS:

IL2:

L3-BUS:

IL3:

DC BUS VOLTAGE AND AC RIPPLE

DC BUS VOLTAGE (in volts):

DC BUS AC RIPPLE (in volts):

Output To Load

RMS Measurements In Volts AC:

T1-T2:

T1-T3:

T2-T1:

T2-T3:

T3-T1:

T3-T2:

Output To Load (Voltage And Current)

RMS Measurements In Volts AC:

T1V-L:

T1I:

T2VL:

T2I:

T3V-L:

T3I:

CONTROL BOARD DC VOLTAGE

CONTROL BOARD DC VOLTAGE (in volts):



VARIABLE FREQUENCY DRIVE



COMMENTS:
DEFICIENCIES:



MEDIUM VOLTAGE VACUUM MOTOR STARTER TEST



OWNER Example Owner PAGE 5
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION MOTOR CONTROL HUMIDITY _____ % JOB # MOTOR CONTROL
 POSITION GENERAL ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 CATALOG NO. _____ STARTER SIZE _____ FORM _____
 SERIES _____ MAXIMUM VOLTAGE _____ INT. RATING _____ kA @ _____ kV
 OPERATING VOLTAGE _____ CONTROL VOLTAGE _____ OTHER _____
 MOTOR CONTROL CENTER SYSTEM VOLTAGE _____ STARTER IDENTIFICATION _____

OVERCURRENT PROTECTION DEVICES

CONTROL POWER FUSE: MFR. _____ TYPE _____ SIZE _____
 MAIN POWER FUSE: MFR. _____ TYPE _____ SIZE _____
 OVERLOAD PROTECTION: MFR. _____ TYPE _____ TESTED YES NO

INSTRUMENT TRANSFORMER DATA

CONTROL POWER TRANSFORMER: MFR. _____ VA RATING _____ TYPE _____ VOLTAGE _____
 CURRENT TRANSFORMER: MFR. _____ RATIO _____ :5 TYPE _____ CAT. NO. _____

DESCRIPTION	INSPECTED	CONDITION	CLEAN/LUBE	DESCRIPTION	INSPECTED	CONDITION	CLEAN/LUBE
OVERALL CLEANLINESS				OPERATING MECHANISM			
INSULATING MEMBERS				CONTACT FINGERS			
MECHANICAL CONNECTIONS				VACUUM INTERRUPTER			
STRUCTURAL MEMBERS				CONTACT EROSION INDICATOR			
CUBICLE				CONTACT SEQUENCE			
RACKING DEVICES				GROUND CONNECTIONS			
SHUTTER				AUXILIARY DEVICES			

INSULATION TEST VOLTAGE _____ kVDC EQUIPMENT TEMPERATURE _____ °C TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____
 MILLIWATT LOSS TEST VOLTAGE _____ kVDC HIGH POTENTIAL TEST VOLTAGE _____ kVDC _____ kVAC

INSULATION TESTS	POLE 1 MEGOHMS (P1 - P2)		POLE 2 MEGOHMS (P2 - P3)		POLE 3 MEGOHMS (P1 - P3)	
	READING	20°C	READING	20°C	READING	20°C
POLE TO POLE						
POLE TO FRAME						
LINE TO FRAME						
LOAD TO FRAME						
LINE TO LOAD						

CONTACT MEASUREMENTS		POLE 1	POLE 2	POLE 3
CONTACT TRAVEL - INCHES				
POLE RESISTANCE	RDG.			
MICRO - OHMS	20°C			
INTERRUPTER RESISTANCE	RDG.			
MICRO - OHMS	20°C			

CONTROL WIRING - MEGOHMS			
READING		20°C	

	POLE 1	POLE 2	POLE 3
HIGH POTENTIAL TEST DC			
MILLIWATT LOSS TEST DC			

COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



MOTOR STARTER TEST



OWNER Example Owner PAGE 7
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION MOTOR CONTROL HUMIDITY _____ % JOB # MOTOR CONTROL
 POSITION GENERAL ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 CATALOG NO. _____ STARTER SIZE _____ FORM _____
 SERIES _____ MAXIMUM VOLTAGE _____ INT. RATING _____ kA @ _____ kV
 OPERATING VOLTAGE _____ CONTROL VOLTAGE _____ OTHER _____
 MOTOR CONTROL CENTER SYSTEM VOLTAGE _____ STARTER IDENTIFICATION _____

OVERCURRENT PROTECTION DEVICES

CONTROL POWER FUSE: MFR. _____ TYPE _____ SIZE _____
 MAIN POWER FUSE: MFR. _____ TYPE _____ SIZE _____
 OVERLOAD PROTECTION: MFR. _____ TYPE _____ TESTED YES NO

INSTRUMENT TRANSFORMER DATA

CONTROL POWER TRANSFORMER: MFR. _____ KVA _____ TYPE _____ VOLTAGE _____
 CURRENT TRANSFORMER: MFR. _____ RATIO _____:5 TYPE _____ CAT. NO. _____

DESCRIPTION	INSPECTED	CONDITION	CLEAN/LUBE
OVERALL CLEANLINESS			
INSULATING MEMBERS			
MECHANICAL CONNECTIONS			
STRUCTURAL MEMBERS			
CUBICLE			
RACKING DEVICES			
SHUTTER			
CONTACT FINGERS			

DESCRIPTION	INSPECTED	CONDITION	CLEAN/LUBE
MAIN CONTACTS			
ARCING CONTACTS			
ARC CHUTES			
OPERATING MECHANISM			
CONTACT SEQUENCE			
GROUND CONNECTIONS			
AUXILIARY DEVICES			

INSULATION TEST VOLTAGE _____ kVDC TEST VOLTAGE MULTIPLIER, K1 = _____ K2 = (K1) (TCF)
 EQUIPMENT TEMPERATURE _____ °C TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____

	RANGE MULTIPLIER	K2	INSULATION RESISTANCE TEST RESULTS - MEGOHMS						
			POLE 1 (P1-P2)		POLE 2 (P2-P3)		POLE 3 (P1-P3)		
			READING	20°C	READING	20°C	READING	20°C	
POLE TO POLE									
POLE TO FRAME									
LINE TO FRAME									
LOAD TO FRAME									
LINE TO LOAD									

CONTACT RESISTANCE MICRO-OHMS	POLE 1	POLE 2	POLE 3

CONTROL WIRING - MEGOHMS			
READING		20°C	

COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



MOTOR CONTROL CENTER INSPECTION



OWNER Example Owner
 PLANT Example Plant
 SUBSTATION MOTOR CONTROL
 POSITION GENERAL

PAGE 8
 AMBIENT TEMP. _____ °F
 DATE 10/13/2014
 HUMIDITY _____ %
 JOB # MOTOR CONTROL
 ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 CATALOG NO. _____ DRAWING NO. _____ VOLTAGE CLASS _____
 MAIN BUS RATING _____ A MAIN BUS NEUTRAL RATING _____ A CONDUCTOR CU AL
 CURRENT WITHSTAND RATING _____ NUMBER OF SECTIONS _____ LISTING UL CSA OTHER

INSTALLED DEVICES

MAIN BREAKER _____ TYPE _____ AMPACITY _____ MAIN DISCONNECT _____ FUSE TYPE _____ SIZE _____ MLO _____
 TOTAL POSITIONS EQUIPPED _____ NO. OF SPARE SPACES _____ TOTAL POSITIONS USED _____

DESCRIPTION	INSPECTED	CONDITION	CLEANED/LUBED
OVERALL CLEANLINESS	<input type="checkbox"/>		
INSULATING MEMBERS	<input type="checkbox"/>		
CUBICLES	<input type="checkbox"/>		
GROUND CONNECTIONS	<input type="checkbox"/>		
AUXILIARY DEVICES	<input type="checkbox"/>		

POSITION	LOAD	LOAD COND. SIZE	NO. COND./ PHASE	M. S. DISC. TYPE	OVER-CURRENT TYPE	OVER-CURRENT SIZE	OVER-LOAD SIZE	STARTER NEMA SIZE	COMMENTS

COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



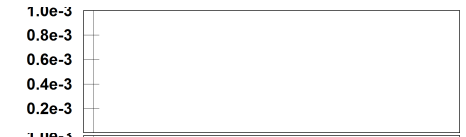
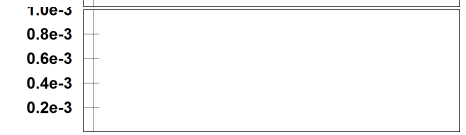
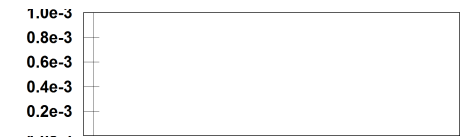
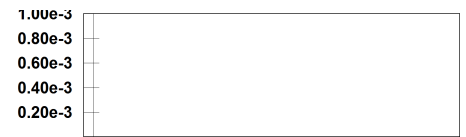
480 VOLT MOTOR CONTROL CENTER PREVENTATIVE MAINTENANCE



OWNER Example Owner
 PLANT Example Plant
 SUBSTATION MOTOR CONTROL
 POSITION GENERAL

PAGE 9
 AMBIENT TEMP. _____ °F
 DATE 10/13/2014
 HUMIDITY _____ %
 JOB # MOTOR CONTROL
 ASSET ID _____

		TEST HISTORY					
TEST DATE		10/13/2014					
TESTED BY		Default Administrator					
OVERLOAD RELAY / HEATERS DELAY @ 300% MFLA	AMPS:						
	@ 3 X AMPS						
	A (seconds)						
	B (seconds)						
	C (seconds)						
STARTER CONTACT CONDITION							
STARTER IR @ 1000 VDC (w/starter open)	AA (megohms)						
	BB (megohms)						
	CC (megohms)						
PHASE-TO-PHASE OHMS	AB (ohms)						
	BC (ohms)						
	CA (ohms)						
FEEDER & MOTOR IR @ 1000VDC							
VOLTAGE DROP	BREAKER	A (volts)					
		B (volts)					
		C (volts)					
	TEST SET	A (volts)					
		B (volts)					
		C (volts)					
INSTANTANEOUS PICKUP	A (amps)						
	B (amps)						
	C (amps)						
MCP IR @ 1000VDC (w/open breaker)	AA (megohms)						
	BB (megohms)						
	CC (megohms)						



COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



MEDIUM VOLTAGE VACUUM MOTOR STARTER TEST



OWNER Example Owner PAGE 10
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION MOTOR CONTROL HUMIDITY _____ % JOB # MOTOR CONTROL
 POSITION GENERAL ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 CATALOG NO. _____ STARTER SIZE _____ FORM _____
 SERIES _____ MAXIMUM VOLTAGE _____ INT. RATING _____ kA @ _____ kV
 OPERATING VOLTAGE _____ CONTROL VOLTAGE _____ OTHER _____
 MOTOR CONTROL CENTER SYSTEM VOLTAGE _____ STARTER IDENTIFICATION _____

OVERCURRENT PROTECTION DEVICES

CONTROL POWER FUSE: MFR. _____ TYPE _____ SIZE _____
 MAIN POWER FUSE: MFR. _____ TYPE _____ SIZE _____
 OVERLOAD PROTECTION: MFR. _____ TYPE _____ TESTED YES NO

INSTRUMENT TRANSFORMER DATA

CONTROL POWER TRANSFORMER: MFR. _____ VA RATING _____ TYPE _____ VOLTAGE _____
 CURRENT TRANSFORMER: MFR. _____ RATIO _____ :5 TYPE _____ CAT. NO. _____

DESCRIPTION	INSPECTED	CONDITION	CLEAN/LUBE
OVERALL CLEANLINESS			
INSULATING MEMBERS			
MECHANICAL CONNECTIONS			
STRUCTURAL MEMBERS			
CUBICLE			
RACKING DEVICES			
SHUTTER			

DESCRIPTION	INSPECTED	CONDITION	CLEAN/LUBE
OPERATING MECHANISM			
CONTACT FINGERS			
VACUUM INTERRUPTER			
CONTACT EROSION INDICATOR			
CONTACT SEQUENCE			
GROUND CONNECTIONS			
AUXILIARY DEVICES			

INSULATION TEST VOLTAGE _____ KVDC TEST VOLTAGE MULTIPLIER, K1 = _____ K2 = (K1) (TCF)
 EQUIPMENT TEMPERATURE _____ °C TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____
 MILLIWATT LOSS TEST VOLTAGE _____ KVDC HIGH POTENTIAL TEST VOLTAGE _____ KVDC _____ kVAC

INSULATION TESTS	RANGE MULTIPLIER	K2	POLE 1 MEGOHMS (P1 - P2)		POLE 2 MEGOHMS (P2 - P3)		POLE 3 MEGOHMS (P1 - P3)	
			READING	20°C	READING	20°C	READING	20°C
POLE TO POLE								
POLE TO FRAME								
LINE TO FRAME								
LOAD TO FRAME								
LINE TO LOAD								

CONTACT MEASUREMENTS		POLE 1	POLE 2	POLE 3
CONTACT TRAVEL - INCHES				
POLE RESISTANCE	RDG.			
MICRO - OHMS	20°C			
INTERRUPTER RESISTANCE	RDG.			
MICRO - OHMS	20°C			

CONTROL WIRING - MEGOHMS			
READING		20°C	

	POLE 1	POLE 2	POLE 3
HIGH POTENTIAL TEST DC			
MILLIWATT LOSS TEST DC			

COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



MOTOR STARTER TEST



OWNER Example Owner PAGE 11
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION MOTOR CONTROL HUMIDITY _____ % JOB # MOTOR CONTROL
 POSITION GENERAL ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 CATALOG NO. _____ STARTER SIZE _____ FORM _____
 SERIES _____ MAXIMUM VOLTAGE _____ INT. RATING _____ kA @ _____ kV
 OPERATING VOLTAGE _____ CONTROL VOLTAGE _____ OTHER _____
 MOTOR CONTROL CENTER SYSTEM VOLTAGE _____ STARTER IDENTIFICATION _____

OVERCURRENT PROTECTION DEVICES

CONTROL POWER FUSE: MFR. _____ TYPE _____ SIZE _____
 MAIN POWER FUSE: MFR. _____ TYPE _____ SIZE _____
 OVERLOAD PROTECTION: MFR. _____ TYPE _____ TESTED YES NO

INSTRUMENT TRANSFORMER DATA

CONTROL POWER TRANSFORMER: MFR. _____ KVA _____ TYPE _____ VOLTAGE _____
 CURRENT TRANSFORMER: MFR. _____ RATIO _____ :5 TYPE _____ CAT. NO. _____

DESCRIPTION	INSPECTED	CONDITION	CLEAN/LUBE
OVERALL CLEANLINESS			
INSULATING MEMBERS			
MECHANICAL CONNECTIONS			
STRUCTURAL MEMBERS			
CUBICLE			
RACKING DEVICES			
SHUTTER			
CONTACT FINGERS			

DESCRIPTION	INSPECTED	CONDITION	CLEAN/LUBE
MAIN CONTACTS			
ARCING CONTACTS			
ARC CHUTES			
OPERATING MECHANISM			
CONTACT SEQUENCE			
GROUND CONNECTIONS			
AUXILIARY DEVICES			

INSULATION TEST VOLTAGE _____ kVDC EQUIPMENT TEMPERATURE _____ °C TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____

	INSULATION RESISTANCE TEST RESULTS - MEGOHMS					
	POLE 1 (P1-P2)		POLE 2 (P2-P3)		POLE 3 (P1-P3)	
	READING	20°C	READING	20°C	READING	20°C
POLE TO POLE						
POLE TO FRAME						
LINE TO FRAME						
LOAD TO FRAME						
LINE TO LOAD						

CONTACT RESISTANCE MICRO-OHMS	POLE 1	POLE 2	POLE 3

CONTROL WIRING - MEGOHMS			
READING		20°C	

COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



MOTOR CONTROL CENTER INSULATION TEST



OWNER Example Owner PAGE 12
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION MOTOR CONTROL HUMIDITY _____ % JOB # MOTOR CONTROL
 POSITION GENERAL ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 CATALOG NO. _____ DRAWING NO. _____ VOLTAGE CLASS _____
 MAIN BUS RATING _____ A MAIN BUS NEUTRAL RATING _____ A CONDUCTOR CU AL
 CURRENT WITHSTAND RATING _____ NUMBER OF SECTIONS _____ LISTING UL CSA OTHER

INSTALLED DEVICES

MAIN BREAKER _____ MLO _____ TYPE _____ AMPACITY _____ MAIN DISCONNECT _____ FUSE TYPE _____ SIZE _____
 TOTAL POSITIONS EQUIPPED _____ NO. OF SPARE SPACES _____ TOTAL POSITIONS USED _____

DESCRIPTION	INSPECTED	CONDITION	CLEANED/LUBED
OVERALL CLEANLINESS	<input type="checkbox"/>		
INSULATING MEMBERS	<input type="checkbox"/>		
CUBICLES	<input type="checkbox"/>		
GROUND CONNECTIONS	<input type="checkbox"/>		
AUXILIARY DEVICES	<input type="checkbox"/>		

TEST VOLTAGE _____ KVDC EQUIPMENT TEMPERATURE _____ °C TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____

BUS SECTION TESTED		INSULATION RESISTANCE TEST RESULTS - MEGOHMS									
		PHASE									
		A-GND	B-GND	C-GND	N-GND	A - B	A - C	B - C	A - N	B - N	
	RDG.										
	20°C										
	RDG.										
	20°C										
	RDG.										
	20°C										
	RDG.										
	20°C										
	RDG.										
	20°C										

COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator