

TRANSFORMER TESTING & REPAIRS, INC. ®

LABORATORY SERVICES ☆ FIELD REPAIRS & MAINTENANCE ☆ PCB SERVICES ☆ HOT OIL RECONDITIONING
PO BOX 2219, SUISUN CITY, CA 94585-5219 | PHONE: (707) 421-9398 | FAX: (707) 421-9662

COMPANY: VA PALO ALTO HEALTHCARE CITY, STATE: LIVERMORE, CA	DIVISION: LIVERMORE REGION:	ID# 0110795 TAG# 7
SUBSTATION: BLDG 90 OTHER:	LOCATION: OUTDOORS/GROUND	UNIT: T-10

EQUIPMENT NAMEPLATE DATA

MFG: COOPER SERIAL #: 9937000963 KVA: 500 PHASE/CYCLE: 3/60 EQUIP. TYPE: PADMOUNT TRANSFORMER	PRIMARY: 12000 SECONDARY: 480Y/277 CLASS / IMPED.: OA 4.4 RATED TEMP: 65°C DATE OF MFG: 01/1999	GALLONS: 224 FLUID TYPE: OIL COOLING: AIR HV BUSHINGS: SIDE IN-CABINET LV BUSHINGS: SIDE IN-CABINET
---	---	---

ANNUAL INSPECTION & GAUGE SETTINGS AS OF: 12/23/14

HV BUSHINGS: CLEAN LEAKS RESIDUE @ H2A PAINT COND: GOOD OTHER:	LV BUSHINGS: SLIGHTLY DUSTY	FLUID-LEVEL: Good FLUID-TEMP/PEAK: 38°C/65°C WINDING TEMP: N/A PRES/VAC: +0.5 TAP-SETTING: C
SERVICE NOTES: Installed Pressure gauge & N2 valve: 5/20/10.		

LIQUID SCREEN TEST

DATE	ACID (N/N)	IFT	DIELECTRIC	COLOR	Spec-Gravity	VISUAL / SEDIMENT
01/05/15	0.03	34.1	58	0.75	0.882	CLEAR / ND
05/31/13	0.03	31.3	42	0.5	0.880	CLEAR / ND
12/29/11	0.03	31.7	46	1.0	0.882	CLEAR / ND
05/25/10	0.02	30.9	54	0.75	0.880	CLEAR / ND

COMMENTS: Acceptable: All screen test categories are Acceptable at this time. Retest One Year.

INHIBITOR CONTENT

DATE	RESULTS (% BY WEIGHT)
01/05/15	0.21
05/31/13	0.21
12/29/11	0.19
05/25/10	0.21

COMMENTS: Acceptable.

DISSOLVED GAS-IN-OIL / GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST	TOTAL-GAS
01/05/15	60	2497	46126	35	665	4285	3	2	2	766	53674
05/31/13	93	4518	82171	10	733	4038	0	0	0	836	91563
12/20/11	79	2012	72542	35	733	4484	9	5	0	863	79901
05/24/10	115	2102	56003	24	685	3320	3	0	0	826	62251

COMMENTS: The presence of Acetylene indicates a possible Arcing condition. Analyzed on two DGA instruments to confirm the gases. Recommended retest time: 1 MONTH

MOISTURE CONTENT /PPM

DATE	PPM	COMMENTS:
01/05/15	7	Acceptable.
05/31/13	6	
12/29/11	3	
05/25/10	6	

PCB IN PARTS / MILLION

TEST DATE	CONTENT	CLASS
12/23/11	0	NON-PCB

*California Depart. Of Toxic Substances Control regulates PCB > 5 ppm. CCR defines PCB's as hazardous waste: Title 22, Division 4.5, Chapter 11, Article 3, §66261.24.

LIQUID POWER FACTOR %

DATE	25° C	100° C	COMMENTS:
01/05/15	0.005	0.388	Acceptable.
05/31/13	0.010		
12/29/11	0.007		
05/25/10	0.009		

NOTES:

Missing: PCB-Label/HV-Sign.



FURAN ANALYSIS—PARTS / BILLION

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL
05/31/13	0	0	0	0	0	0
12/29/11	0	0	0	9	0	9

COMMENTS: Retest One Year. Estimated DP: >1000, Life: 100%. No Significant amounts of Furans detected, Levels indicate minimal signs of aging paper insulation.

TRANSFORMER TESTING & REPAIRS, INC. ®

LABORATORY SERVICES ☆ FIELD REPAIRS & MAINTENANCE ☆ PCB SERVICES ☆ HOT OIL RECONDITIONING
PO BOX 2219, SUISUN CITY, CA 94585-5219 | PHONE: (707) 421-9398 | FAX: (707) 421-9662

COMPANY: VA PALO ALTO HEALTHCARE CITY, STATE: LIVERMORE, CA	DIVISION: LIVERMORE REGION:	ID# 0110795 TAG# 9
SUBSTATION: BEHIND T16 OTHER: SPARE	LOCATION: OUTDOORS	UNIT:

EQUIPMENT NAMEPLATE DATA

MFG: COOPER SERIAL #: 0850007822 KVA: 1000 PHASE/CYCLE: 3/60 EQUIP. TYPE: PADMOUNT TRANSFORMER	PRIMARY: 12000 SECONDARY: 480Y/277 CLASS / IMPED.: ONAN 5.5 RATED TEMP: 65°C DATE OF MFG: 05/2008	GALLONS: 501 FLUID TYPE: OIL COOLING: AIR HV BUSHINGS: IN-CABINET LV BUSHINGS: IN-CABINET
--	---	---

ANNUAL INSPECTION & GAUGE SETTINGS AS OF: 12/23/14

HV BUSHINGS: SLIGHTLY DUSTY LEAKS: NONE PAINT COND: GOOD OTHER:	LV BUSHINGS: CLEAN FLUID-LEVEL: Good FLUID-TEMP/PEAK: 20°C/45°C WINDING TEMP: N/A PRES/VAC: N/A TAP-SETTING: C	SERVICE NOTES:
--	---	----------------

LIQUID SCREEN TEST

DATE	ACID (N/N)	IFT	DIELECTRIC	COLOR	Spec-Gravity	VISUAL / SEDIMENT
01/05/15	0.02	44.8	57	0.5	0.876	CLEAR / ND
10/23/12	0.01	40.9	51	0.5	0.876	CLEAR / ND

COMMENTS: Acceptable: All screen test categories are Acceptable at this time. Retest One Year.

INHIBITOR CONTENT

DATE	RESULTS (% BY WEIGHT)
01/05/15	0.30
10/23/12	0.28

COMMENTS: Acceptable.

DISSOLVED GAS-IN-OIL / GAS CHROMATOGRAPHY EXPRESSED IN PPM

DATE	HYDROGEN	OXYGEN	NITROGEN	METHANE	CARBON MONOXIDE	CARBON DIOXIDE	ETHANE	ETHYLENE	ACETYLENE	TOTAL COMBUST	TOTAL-GAS
01/05/15	0	5492	42112	11	89	483	0	0	0	99	48187
10/25/12	45	17596	91287	20	79	779	8	0	0	152	109814

COMMENTS: All gases are within normal limits. Recommended retest time: ONE YEAR

MOISTURE CONTENT /PPM

DATE	PPM	COMMENTS:
01/05/15	9	Acceptable.
10/23/12	13	

PCB IN PARTS / MILLION

TEST DATE	CONTENT	CLASS
	Not Tested.	

*California Depart. Of Toxic Substances Control regulates PCB > 5 ppm. CCR defines PCB's as hazardous waste: Title 22, Division 4.5, Chapter 11, Article 3, §66261.24.

LIQUID POWER FACTOR %

DATE	25° C	100° C	COMMENTS:
01/05/15	0.012	0.428	Acceptable.
10/23/12	0.018		

NOTES:

Missing pressure gauge & N2 valve.
Missing: PCB-Label/HV-Sign.



FURAN ANALYSIS—PARTS / BILLION

DATE	5H2F	2FOL	2FAL	2ACF	5M2F	TOTAL

COMMENTS: Not Tested.