

**SERIAL # / UNIT ID** 0204160207  
**SECOND ID**  
**UNIT TYPE** ROTARY SCREW COMPRESSOR  
**MFR** INGERSOLL RAND  
**MODEL** UP6-25-125  
**COOLANT MFR** INGERSOLL RAND  
**COOLANT TYPE** ULTRA PLUS COOLANT  
**ACCT NO** TTC AB10690082  
**CUSTOMER**  
**CUST CENTER/DIST** PROCESS AND POWER MEMPHIS  
**LOC-LAB #-DA** I-017567-JUK

**CONDITION**



**SEVERITY: 4**

#	COMMENTS
1	ABNORMAL WEAR EVIDENT; Aluminum content EVIDENT; Check for source of CONTAMINATION; Resample at next recommended interval to monitor and establish wear trend; N/A
2	Oxidation content HIGH; ACTION SHOULD BE TAKEN TO CORRECT; Check for source of CONTAMINATION; Improve operating conditions; USE AIR ANALYSIS KIT; CHECK INLET CONDITION; CHANGE COOLANT; B.SWINDLE
3	Data indicates no abnormal findings. Resample at normal interval; B SWINDELL
4	Oxidation content HIGH; ACTION SHOULD BE TAKEN TO CORRECT; Check for source of CONTAMINATION; Improve operating conditions; USE AIR ANALYSIS KIT; CHECK INLET CONDITION; CHANGE COOLANT; S GORDON

**CUSTOMER SERVICE - 866-341-4367**

#	WEAR METALS									CONTAMINANT METALS				MULTI-SRC METALS				ADDITIVE METALS				
	Fe	Cr	Ni	Al	Cu	Pb	Sn	Ag	V	Si	Na	K	Ti	Mo	Mn	B	Mg	Ca	Ba	P	Zn	
1	0	0	0	4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	11	297	9	
2	0	0	0	1	11	0	0	0	0	0	3	0	0	0	0	0	0	0	0	276	19	
3	1	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	277	13	
4	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	1	0	4	331	18	
NEW LUBE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	

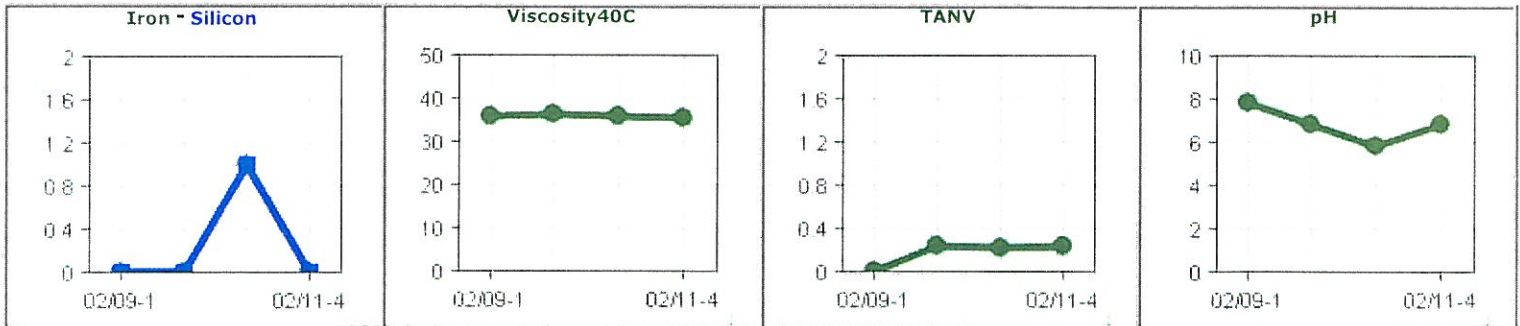
\*\*\* NEW LUBE \*\*\*

\*\*\* NEW LUBE \*\*\*

\*\*\* NEW LUBE \*\*\*

SAMPLE DATE	RECEIVE DATE	COMPLETE DATE	COOLANT_HOURS UNIT_HOURS	OIL/ FILTER CHGD	H2O PPM	VIS 40C	TAN	OXI	NIT	ISO CODE	p H
02/18/09	02/20/09	02/23/09	6667 21776	N	1102	36.00	0.01	119	12	16/15/13	7.9
02/10/10	02/17/10	02/19/10	4454 24339	N	237	36.40	0.24	172	11	22/21/18	6.9
06/16/10	06/23/10	06/24/10	5379 25264	N	1691	36.20	0.23	114	13	17/16/14	5.9
02/16/11	02/23/11	02/24/11	1149 27230	N	2758	35.80	0.24	156	12	16/16/13	6.9
N/A	09/26/06	09/28/06	NEW LUBE	U	380	35.4	0.28	107	14	18/14/10	8.0

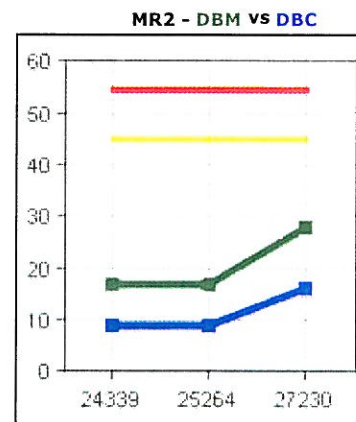
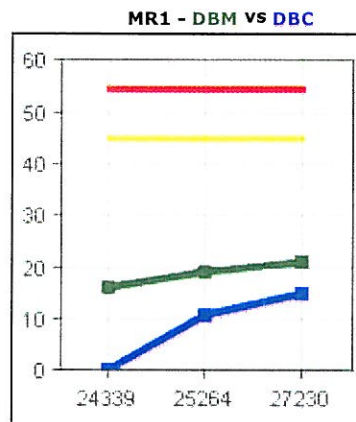
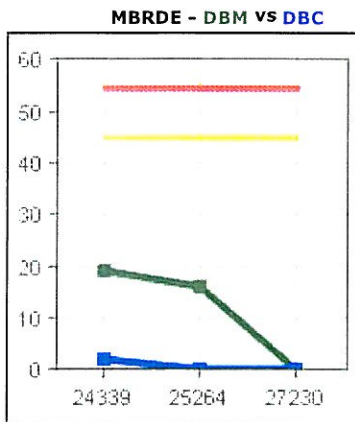
\*\*\* NEW LUBE \*\*\*



### SPM REPORT

**SERIAL # / UNIT ID** 0204160207  
**SECOND ID**  
**ACCT NO** ITSLAB10690082  
**CUSTOMER** TMG  
**CUST CENTER/DIST** PROCESS AND POWER MEMPHIS  
**AIR END CHANGE?**  
**REASON FOR SAMPLE** DIAGNOSTIC  
**WARRANTY**

HOURS	MBRDE			MR1			MR2		
	D	D	D	D	D	D	D	D	
	B	B	B	B	B	B	B	B	
	I	M	C	I	M	C	I	M	C
27230	0	0	0	25	21	15	25	28	16
25264	25	16	0	25	19	11	25	17	9
24339	25	19	2	25	16	0	25	17	9



**Evaluating SPM results:**

**dBm/dBc values are indicators of bearing condition and lubrication deterioration. Please use the following guidelines and Ingersoll Rand limits tables to evaluate Shock Pulse data.**

- |   |   |
|---|---|
| 1) dBm values, on new flooded/oil free compressors, will run in the 20 to 40 range. dBc is about half the dBm.  | 5) dBm values which rise in the 45 range and above, particularly when unit is loaded, are to be noted. dBc will also rise, coming close to dBm.   |
| 2) Two consecutive dBm readings at or above 55 in 700 hours, signal a need to consider bearing overhaul.  | 6) Sudden changes are to be especially noted and monitoring frequency "doubled up". A cracked or loosened inner race will result in such drastic changes, and must receive immediate attention.   |
| 3) Oil Free Compressors will display consistent dBm of 10, 15 points higher than dBc in normal running condition, loaded or unloaded.   | 7) Flooded (Contact Cooled) single stage units seem to display closer dBm/dBc points than oil free, and when running unloaded dBm/dBc will be equal to or higher than loaded. When gas load is relieved, rotors seem to become more unstable and "rattle around" in the bearing clearances.         |
| 4) Flooded two stage units display dBm/dBc loaded points consistent with single stage and oil free machines. However, unloaded dBm/dBc seem to run at, or considerably higher than, loaded figures. Therefore, on flooded units, loaded dBm/dBc figures are to be considered dominant decision points. Drive motor bearings behave in a similar manner. | 8) Two stage units have four bearing points per casing. The shock pulse emission from the four points radiates and overlaps as it is read from the casing flanges. However, trending, and observing loaded dBm/dBc using these guidelines should yield accurate indications of repair requirements. |

Comments are advisory only and are based on the assumption that the sample and data submitted are valid. Missing lube or unit time limits the evaluation. No warranty is expressed or implied.