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May 23, 2025

Steve Benesch Valero West Memphis Terminal West Memphis, AR

Steve,

The following is a summary of findings from the May 2025 (2<sup>nd</sup> quarter) quarterly vibration survey at your facility.

QualiTest® uses a four-step rating system for defects.

<u>Class I:</u> Defect is present, but effect on reliability is not clear; no immediate action is required. Continue to normally monitor.

**<u>Class II</u>**: Defect (s) present that may cause problem in long term (2-6 months). Repair during normal maintenance scheduling. Continue to monitor.

<u>Class III</u>: Defect (s) present that may cause failure in short term (less than 2 months). This should be addressed as soon as practical, with a high maintenance priority. Increase monitoring frequency.

**Class IV**; Defect (s) present that makes continued reliability unpredictable, and possibility of secondary damage is high. Repairs should be made ASAP. An unscheduled shutdown should be considered for repairs

*Hi-Speed* Industrial Service tests and inspects industrial machinery and equipment and makes recommendations concerning maintenance and repairs based on its experience in the field of industrial repair and maintenance. The information contained herein is provided as an opinion only, not as a guaranty or warranty of the matters discussed herein.

# **Defect Summary**

# 31-15-042 Short Horn Lateral Pump

Motor/Pump was not in service during this survey.

## #1 Barge Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

## #2 Barge Loading Pump

Motor data is starting to show elevated noise floor in spectral data. This is likely a combination of bearing wear and lubrication issue. We will continue to monitor this issue closely. Rated as a **CLASS I** defect for now.

#### #3 Barge Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#### #4 Barge Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#### #8 LX Truck Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#### #12 LX Truck Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

# #13 XX Truck Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

# #14 XX Truck Loading Pump

Motor/Pump was not in service during this survey.

# #17 LS Truck Loading Pump

Motor/Pump was not in service during this survey.

#### #15NL Truck Loading Pump

Pump data is still showing some signs of low level bearing defects/wear in the pump. We will monitor this issue closely. Rated as a **CLASS I** defect.

# #18 NL Truck Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

# #6 Transfer Pump

Motor/Pump was not in service during this survey.

#### #5 Truck Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

# #7 Truck Loading Pump

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#### #43 Bio-Diesel Pump North

Motor/Pump appeared to be operating at acceptable vibration levels during this survey.

#### #44 Bio-Diesel Pump Middle

Motor data indicates defects in the motor bearings. Motor also has some 1 x rpm vibration. Ensure couplings and alignment are good. Rated as a **CLASS III** defect.

#### #45 Bio-Diesel Pump South

Motor data shows defects are present in motor bearings. Pump also has some high overall vibration amplitude. Data shows a 3 x rpm vertical vibration. This may be a coupling issue but could be base related or an issue with the pump shaft such as bent shaft, excessive clearances. Rated as a **CLASS II** defect.

# We recommend changing the coupling type of the Bio-Diesel Pumps. The type of coupling that we recommend is the Rexnord Omega Coupling. TB Woods couplings tend to cause high vibration in high speed pumps when couplings begin to wear.

See link below for coupling information.

Omega Elastomeric Couplings Elastomeric Couplings - Couplings | Rexnord

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ME	ASUREMEN	r poii	1T 	c -	OVERALI	L LEVEL	HFD /	VHFD
#1	BARGE	- #1	BARGE	LOADING	PUMP		(23-May-25)	
					OVERA	LL LEVEL	1 - 20	KHz
	MOH				.100	In/Sec	. 496	G-s
	MOV				.113	In/Sec	.106	G-s
	MIH				.058	In/Sec	. 494	G-s
	MIV				.053	In/Sec	.071	G-s
	MIA				.035	In/Sec	.099	G-s
#2	BARGE	- #2	BARGE	LOADING	PUMP		(23-May-25)	
					OVERA	LL LEVEL	1 - 20	KHz
	MOH				.080	In/Sec	. 492	G-s
	MOV				.076	In/Sec	.119	G-s
	MIH				.050	In/Sec	. 539	G-s
	MIV				.053	In/Sec	.078	G-s
	MIA				.043	In/Sec	.129	G-s
#3	BARGE	- #3	BARGE	LOADING	PUMP		(23-May-25)	
					OVERA	LL LEVEL	1 <sup>-</sup> 20	KHz
	MOH				.061	In/Sec	.308	G-s
	MOV				.138	In/Sec	.243	G-s
	MIH				.076	In/Sec	.261	G-s
	MIV				.138	In/Sec	.117	G-s
	MIA				.046	In/Sec	.092	G-s

Abbreviated Last Measurement Summary

#4 BARGE	- ‡	<b>#4 BARGE</b>	LOADING	PUMP		(23-May-25)
				OVERA	LL LEVEL	1 - 20 KHz
MOH				.211	In/Sec	.316 G-s
MOV				.340	In/Sec	.063 G-s
MIH				.105	In/Sec	.562 G-s
MIV				.211	In/Sec	.081 G-s
MIA				.078	In/Sec	.026 G-s
#8LX PUMP	- ‡	#8 LX TR	UCK LOAD	ING PUI	MP	(23-May-25)
				OVERA	LL LEVEL	1 - 20 KHz
MOH				.046	In/Sec	.578 G-s
MOV				.049	In/Sec	.113 G-s
MIH				.030	In/Sec	.513 G-s
MIV				.050	In/Sec	.144 G-s
MIA				.041	In/Sec	.075 G-s
#101W DIM/D		#10 TH m				(02
#IZLX POMP	- 7	#12 LX T	RUCK LOAI	OVERAL	JMP	(23-May-25)
MOH				OVERA	цг гелет Тр/бос	I = 20  KHz
MOH				.203	In/Sec	.090 G-S
MUV				148	In/Sec	.020 G-s
MTV				090	In/Sec	.219 G S
MTA				055	In/Sec	.025 G S
					111, 000	.035 6 5
#13XX PUMP	- ‡	#13 XX T	RUCK LOAI	DING P	JMP	(23-May-25)
				OVERA	LL LEVEL	1 - 20 KHz
MOH				.076	In/Sec	.491 G-S
MOV				.007	In/Sec	.092 G-S
MIH				.054	In/Sec	.510 G-S
МІУ				.057	In/Sec	.128 G-S
MIA				.054	III/ Sec	.097 G-S
#15NL PUMP	- ‡	#15 NL T	RUCK LOAI	DING P	JMP	(23-May-25)
				OVERA	LL LEVEL	1 - 20 KHz
MOH				.053	In/Sec	.346 G-s
MOV				.050	In/Sec	.137 G-s
MIH				.048	In/Sec	.379 G-s
MIV				.047	In/Sec	.055 G-s
MIA				.044	In/Sec	.074 G-s
EIN				.103	In/Sec	2.047 G-S
ETA				140	In/Sec	.520 G-S
EIA				132	In/Sec	.952 G-S
EOV				150	In/Sec	300 G-s
EOA				.177	In/Sec	.249 G-s
#18NL PUMP	- ‡	#18 NL T	RUCK LOAI	DING P	JMP	(23-May-25)
мон				0151	Tn/Sec	193 C-s
MON				100	In/Sec	.193 G-s
мтн				053	In/Sec	227 G-s
MIV				.184	In/Sec	.045 G-s
MIA				.049	In/Sec	.051 G-s
EIH				.217	In/Sec	.437 G-s
EIV				.325	In/Sec	.201 G-s
EIA				.160	In/Sec	.233 G-s
EOH				.076	In/Sec	.589 G-s
EOV				.185	In/Sec	.200 G-s
EOA				.161	In/Sec	.320 G-s
#5TRCKLOAD	- 4	#5 TRUCK	LOADING	PUMP		(23-Mav-25)
	'			OVERA	LL LEVEL	1 - 20 KHz
MOH				.138	In/Sec	.295 G-s
MOV				.188	In/Sec	.079 G-s
MIH				.129	In/Sec	.392 G-s
MIV				.202	In/Sec	.081 G-s
MIA				.189	In/Sec	.099 G-s
EIH				.167	In/Sec	.052 G-s
EIV				.189	In/Sec	.159 G-s

EIA	.140	In/Sec	.055	G-s
EOH	.159	In/Sec	.336	G-s
EOV	.219	In/Sec	.186	G-s
EOA	.201	In/Sec	.263	G-s

#7TRCKLOAD - #7 TRUCK LOAD	ING PUMP (23	3-May-25)
	OVERALL LEVEL	1 - 20 KHz
MOH	.103 In/Sec	.313 G-s
MOV	.096 In/Sec	.069 G-s
MIH	.076 In/Sec	.214 G-s
MIV	.200 In/Sec	.040 G-s
MIA	.097 In/Sec	.066 G-s
EIH	.080 In/Sec	.552 G-s
EIV	.199 In/Sec	.155 G-s
EIA	.132 In/Sec	.284 G-s
EOH	.109 In/Sec	.414 G-s
EOV	.155 In/Sec	.286 G-s
EOA	.155 In/Sec	.243 G-s
#43BOIDSLP - #43 BIO-DIESE	L PUMP NORTH (23	3-May-25)
	OVERALL LEVEL	1 - 20 KHz
MOH	.094 In/Sec	.464 G-s
MOV	.113 In/Sec	.166 G-s
MIH	.065 In/Sec	.335 G-s
MTV	.088 In/Sec	.102 G-s
MTA	045 In/Sec	097 G-s
ETH	105 Tn/Sec	305 G-s
FTV	214 In/Sec	138 C-s
ETA	073 In/Sec	298 G-s
EIR	.075 IN/Sec	.290 G-S
LOH	.097 IN/Sec	.0// G-S
EOV	.326 In/Sec	.1/2 G-s
EOA	.143 In/Sec	.201 G-S
#44BOIDSLP - #44 BIO-DIESE	L PUMP MIDDLE (2)	3-Mav-25)
#44BOIDSLP - #44 BIO-DIESE	L PUMP MIDDLE (23 OVERALL LEVEL	3-May-25) 1 - 20 KHz
#44BOIDSLP - #44 BIO-DIESE:	L PUMP MIDDLE (2) OVERALL LEVEL .260 In/Sec	8-May-25) 1 - 20 KHz 2.131 G-s
#44BOIDSLP - #44 BIO-DIESE MOH MOV	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec	3-May-25) 1 - 20 KHz 2.131 G-s .658 G-s
#44BOIDSLP - #44 BIO-DIESE: MOH MOV MTH	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec 402 In/Sec	3-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3 639 G-s
#44BOIDSLP - #44 BIO-DIESE: MOH MOV MIH MIV	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec 267 In/Sec	3-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s 462 G-s
#44BOIDSLP - #44 BIO-DIESE: MOH MOV MIH MIV MIA	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .72 In/Sec	3-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s .462 G-s 940 G-s
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA FIH	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .772 In/Sec .203 In/Sec	B-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s .462 G-s .940 G-s 483 C-s
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIU	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .402 In/Sec .267 In/Sec .772 In/Sec .303 In/Sec 427 In/Sec	B-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s .462 G-s .940 G-s .483 G-s 181 C-s
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .402 In/Sec .267 In/Sec .772 In/Sec .303 In/Sec .437 In/Sec	B-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s .462 G-s .940 G-s .483 G-s .181 G-s
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA BOY	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec	B-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s .462 G-s .940 G-s .483 G-s .181 G-s .200 G-s
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .097 In/Sec	B-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s .462 G-s .940 G-s .483 G-s .181 G-s .200 G-s .737 G-s
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .254 In/Sec	B-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s .462 G-s .940 G-s .483 G-s .181 G-s .200 G-s .737 G-s .216 G-s
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV EOA	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .097 In/Sec .254 In/Sec .143 In/Sec	B-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s .462 G-s .940 G-s .483 G-s .181 G-s .200 G-s .737 G-s .216 G-s .198 G-s
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV EOA	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .254 In/Sec .143 In/Sec	B-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s .462 G-s .940 G-s .483 G-s .181 G-s .200 G-s .737 G-s .216 G-s .198 G-s
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV EOA #45BOIDSLP - #45 BIO-DIESE	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .254 In/Sec .143 In/Sec L PUMP SOUTH (2:	B-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s .462 G-s .940 G-s .483 G-s .181 G-s .200 G-s .737 G-s .216 G-s .198 G-s B-May-25) 1 - 20 KHz
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV EOA #45BOIDSLP - #45 BIO-DIESE	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .097 In/Sec .254 In/Sec .143 In/Sec L PUMP SOUTH (2: OVERALL LEVEL .181 In/Sec	B-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s .462 G-s .940 G-s .483 G-s .181 G-s .200 G-s .737 G-s .216 G-s .198 G-s B-May-25) 1 - 20 KHz 1 263 C-2
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV EOA #45BOIDSLP - #45 BIO-DIESE	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .254 In/Sec .143 In/Sec L PUMP SOUTH (2: OVERALL LEVEL .181 In/Sec	B-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s .462 G-s .940 G-s .483 G-s .181 G-s .200 G-s .737 G-s .216 G-s .198 G-s B-May-25) 1 - 20 KHz 1.263 G-s
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV EOA #45BOIDSLP - #45 BIO-DIESE MOH MOV	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .127 In/Sec .143 In/Sec .143 In/Sec .144 In/Sec .144 In/Sec	<pre>3-May-25) 1 - 20 KHz 2.131 G-s .658 G-s 3.639 G-s .462 G-s .940 G-s .483 G-s .181 G-s .200 G-s .737 G-s .216 G-s .198 G-s 3-May-25) 1 - 20 KHz 1.263 G-s .491 G-s .491 G-s</pre>
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV EOA #45BOIDSLP - #45 BIO-DIESE MOH MOV MIH	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .127 In/Sec .254 In/Sec .143 In/Sec .141 In/Sec .144 In/Sec .219 In/Sec	<ul> <li>B-May-25)</li> <li>1 - 20 KHz</li> <li>2.131 G-s</li> <li>.658 G-s</li> <li>3.639 G-s</li> <li>.462 G-s</li> <li>.940 G-s</li> <li>.483 G-s</li> <li>.181 G-s</li> <li>.200 G-s</li> <li>.737 G-s</li> <li>.216 G-s</li> <li>.198 G-s</li> </ul> B-May-25) <ul> <li>1 - 20 KHz</li> <li>1.263 G-s</li> <li>.491 G-s</li> <li>3.965 G-s</li> </ul>
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV EOA #45BOIDSLP - #45 BIO-DIESE MOH MOV MIH MIV	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .127 In/Sec .143 In/Sec .143 In/Sec .144 In/Sec .219 In/Sec .433 In/Sec	<ul> <li>B-May-25)</li> <li>1 - 20 KHz</li> <li>2.131 G-s</li> <li>.658 G-s</li> <li>3.639 G-s</li> <li>.462 G-s</li> <li>.940 G-s</li> <li>.483 G-s</li> <li>.181 G-s</li> <li>.200 G-s</li> <li>.737 G-s</li> <li>.216 G-s</li> <li>.198 G-s</li> </ul> B-May-25) <ul> <li>1 - 20 KHz</li> <li>1.263 G-s</li> <li>.491 G-s</li> <li>3.965 G-s</li> <li>.770 G-s</li> <li>.770 G-s</li> </ul>
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV EOA #45BOIDSLP - #45 BIO-DIESE MOH MOV MIH MIV MIA	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .127 In/Sec .254 In/Sec .143 In/Sec .144 In/Sec .219 In/Sec .224 In/Sec .224 In/Sec	<ul> <li>B-May-25)</li> <li>1 - 20 KHz</li> <li>2.131 G-s</li> <li>.658 G-s</li> <li>3.639 G-s</li> <li>.462 G-s</li> <li>.940 G-s</li> <li>.483 G-s</li> <li>.181 G-s</li> <li>.200 G-s</li> <li>.737 G-s</li> <li>.216 G-s</li> <li>.198 G-s</li> </ul> B-May-25) <ul> <li>1 - 20 KHz</li> <li>1.263 G-s</li> <li>.491 G-s</li> <li>3.965 G-s</li> <li>.770 G-s</li> <li>1.459 G-s</li> </ul>
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIX EIH EIV EIA EOH EOV EOA #45BOIDSLP - #45 BIO-DIESE MOH MOV MIH MIV MIA EIH	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .772 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .127 In/Sec .127 In/Sec .143 In/Sec .143 In/Sec .144 In/Sec .219 In/Sec .433 In/Sec .224 In/Sec .331 In/Sec	<ul> <li>B-May-25)</li> <li>1 - 20 KHz</li> <li>2.131 G-s</li> <li>.658 G-s</li> <li>3.639 G-s</li> <li>.462 G-s</li> <li>.940 G-s</li> <li>.483 G-s</li> <li>.181 G-s</li> <li>.200 G-s</li> <li>.737 G-s</li> <li>.216 G-s</li> <li>.198 G-s</li> </ul> B-May-25) <ul> <li>1 - 20 KHz</li> <li>1.263 G-s</li> <li>.491 G-s</li> <li>3.965 G-s</li> <li>.770 G-s</li> <li>1.459 G-s</li> <li>.726 G-s</li> </ul>
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIX EIH EIV EIA EOH EOV EOA #45BOIDSLP - #45 BIO-DIESE MOH MIH MIV MIA EIH EIV	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .772 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .127 In/Sec .127 In/Sec .143 In/Sec .143 In/Sec .144 In/Sec .219 In/Sec .433 In/Sec .224 In/Sec .331 In/Sec .300 In/Sec	<ul> <li>B-May-25)</li> <li>1 - 20 KHz</li> <li>2.131 G-s</li> <li>.658 G-s</li> <li>3.639 G-s</li> <li>.462 G-s</li> <li>.940 G-s</li> <li>.483 G-s</li> <li>.181 G-s</li> <li>.200 G-s</li> <li>.737 G-s</li> <li>.216 G-s</li> <li>.198 G-s</li> </ul> B-May-25) <ul> <li>1 - 20 KHz</li> <li>1.263 G-s</li> <li>.491 G-s</li> <li>3.965 G-s</li> <li>.770 G-s</li> <li>1.459 G-s</li> <li>.726 G-s</li> <li>.314 G-s</li> </ul>
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV EOA #45BOIDSLP - #45 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .772 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .127 In/Sec .127 In/Sec .254 In/Sec .143 In/Sec .143 In/Sec .144 In/Sec .219 In/Sec .219 In/Sec .224 In/Sec .331 In/Sec .300 In/Sec .296 In/Sec	<ul> <li>B-May-25)</li> <li>1 - 20 KHz</li> <li>2.131 G-s</li> <li>.658 G-s</li> <li>3.639 G-s</li> <li>.462 G-s</li> <li>.940 G-s</li> <li>.483 G-s</li> <li>.181 G-s</li> <li>.200 G-s</li> <li>.737 G-s</li> <li>.216 G-s</li> <li>.198 G-s</li> </ul> B-May-25) <ul> <li>1 - 20 KHz</li> <li>1.263 G-s</li> <li>.491 G-s</li> <li>3.965 G-s</li> <li>.770 G-s</li> <li>1.459 G-s</li> <li>.314 G-s</li> <li>.396 G-s</li> </ul>
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV EOA #45BOIDSLP - #45 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EIA EOH	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .127 In/Sec .127 In/Sec .254 In/Sec .143 In/Sec .143 In/Sec .144 In/Sec .219 In/Sec .219 In/Sec .224 In/Sec .331 In/Sec .300 In/Sec .300 In/Sec .296 In/Sec .361 In/Sec	<ul> <li>B-May-25)</li> <li>1 - 20 KHz</li> <li>2.131 G-s</li> <li>.658 G-s</li> <li>3.639 G-s</li> <li>.462 G-s</li> <li>.940 G-s</li> <li>.483 G-s</li> <li>.181 G-s</li> <li>.200 G-s</li> <li>.737 G-s</li> <li>.216 G-s</li> <li>.198 G-s</li> <li>B-May-25)</li> <li>1 - 20 KHz</li> <li>1.263 G-s</li> <li>.491 G-s</li> <li>3.965 G-s</li> <li>.770 G-s</li> <li>1.459 G-s</li> <li>.314 G-s</li> <li>.396 G-s</li> <li>1.060 G-s</li> </ul>
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV EOA #45BOIDSLP - #45 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .127 In/Sec .127 In/Sec .127 In/Sec .143 In/Sec .143 In/Sec .144 In/Sec .219 In/Sec .219 In/Sec .224 In/Sec .331 In/Sec .300 In/Sec .300 In/Sec .361 In/Sec .494 In/Sec	<ul> <li>B-May-25)</li> <li>1 - 20 KHz</li> <li>2.131 G-s</li> <li>.658 G-s</li> <li>3.639 G-s</li> <li>.462 G-s</li> <li>.940 G-s</li> <li>.483 G-s</li> <li>.181 G-s</li> <li>.200 G-s</li> <li>.737 G-s</li> <li>.216 G-s</li> <li>.198 G-s</li> <li>B-May-25)</li> <li>1 - 20 KHz</li> <li>1.263 G-s</li> <li>.491 G-s</li> <li>3.965 G-s</li> <li>.770 G-s</li> <li>1.459 G-s</li> <li>.396 G-s</li> <li>.396 G-s</li> <li>1.060 G-s</li> <li>.598 G-s</li> </ul>
#44BOIDSLP - #44 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EOH EOV EOA #45BOIDSLP - #45 BIO-DIESE MOH MOV MIH MIV MIA EIH EIV EIA EIH EIV EIA EOH EOV EOA	L PUMP MIDDLE (2: OVERALL LEVEL .260 In/Sec .805 In/Sec .402 In/Sec .267 In/Sec .303 In/Sec .437 In/Sec .127 In/Sec .127 In/Sec .127 In/Sec .127 In/Sec .143 In/Sec .143 In/Sec .144 In/Sec .219 In/Sec .219 In/Sec .224 In/Sec .331 In/Sec .300 In/Sec .300 In/Sec .361 In/Sec .377 In/Sec	<ul> <li>B-May-25)</li> <li>1 - 20 KHz</li> <li>2.131 G-s</li> <li>.658 G-s</li> <li>3.639 G-s</li> <li>.462 G-s</li> <li>.940 G-s</li> <li>.483 G-s</li> <li>.181 G-s</li> <li>.200 G-s</li> <li>.737 G-s</li> <li>.216 G-s</li> <li>.198 G-s</li> <li>B-May-25)</li> <li>1 - 20 KHz</li> <li>1.263 G-s</li> <li>.491 G-s</li> <li>3.965 G-s</li> <li>.770 G-s</li> <li>1.459 G-s</li> <li>.396 G-s</li> <li>.396 G-s</li> <li>.598 G-s</li> <li>.517 G-s</li> </ul>

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Clarification Of Vibration Units:

Acc --> G-s RMS

As always, it has been a pleasure to serve the Valero West Memphis Truck Terminal. If there are any comments or questions, do not hesitate to contact us.

Sincerely,

Kevin W. Marcuell

ISO Certified Vibration Analyst, Category III



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