



SPS Final Test Report Vibration and Alignment

Point	1x(in/s)	2x(in/s)	Overall(in/s)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
M1			
M2			
M3			
M4			
M5			
M6			

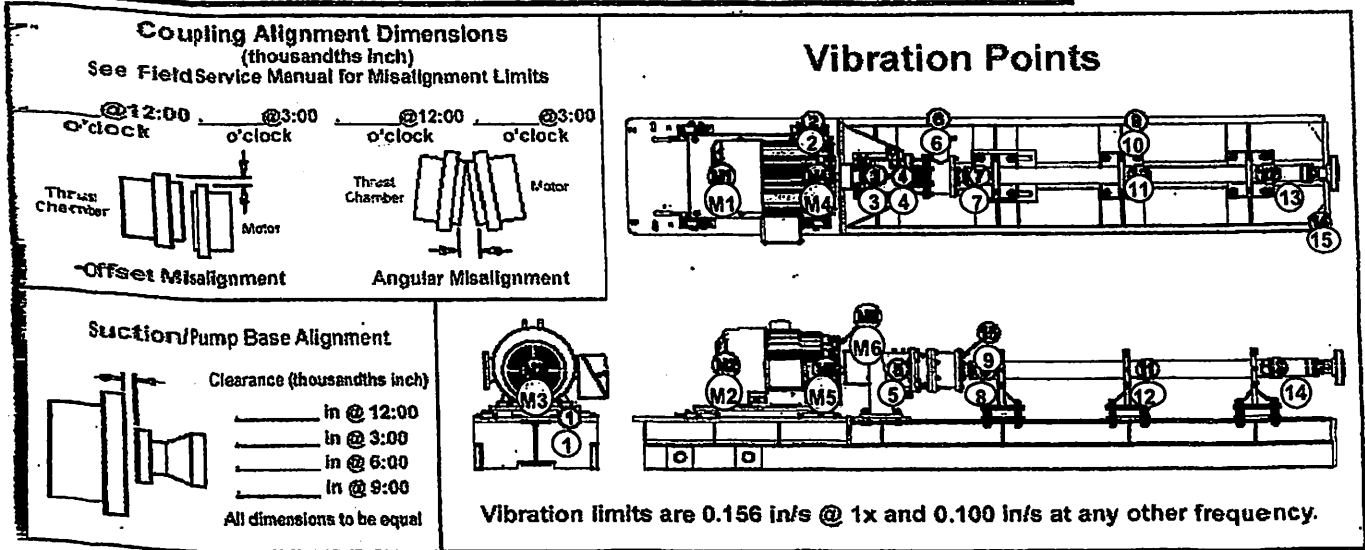
Work Order Number: 107179631		Date: 1-7-20
Customer: XTO Longhorn 2 of 2		
Project: 500002070H		
SPS Skid Type: Fm 1000	S/N: 15083422	
Motor HP: 200 Mfg: GE	S/N: LNFT 333U032	
Pump Type: 8SE 5500	S/N:	
Number Stages: 100	S/N:	
500002069H	S/N:	
500002069H	S/N: 15075445	
Thrust Chamber: AL 185108	S/N: 15124703	
Motor Coupling Type: Dodge		
Pressure & Flow @ Q Min		Motor Amps
Suction: 66 (psi)	Phase 1: 133	
Discharge: 1229 (psi)	Phase 2: 125	
Flowrate: 71 (bpd/gpm)	Phase 3: 132	
Pressure & Flow @ BEP		Motor Amps
Suction: 65 (psi)	Phase 1: 157	
Discharge: 1114 (psi)	Phase 2: 143	
Flowrate: 109 (bpd/gpm)	Phase 3: 162	
Pressure & Flow @ Q Max		Motor Amps
Suction: 65 (psi)	Phase 1: 157	
Discharge: 787 (psi)	Phase 2: 147	
Flowrate: 146 (bpd/gpm)	Phase 3: 153	
Specific Gravity	Max Amps	212
Motor temp 70	Motor volts 460	Motor RPM/Hz 3580/60
Motor eff rating	Pwr factor rating	
Length of Test: 30 (min.)		
Ambient Temp: 67 deg F		
TC Operating Temp: 78 deg F		

Certification of test within acceptable limits

X MR
 Pass Fail

Notes

NTC Only - Record total indicator runout on coupling. Max tolerance is .0035



Rev A HZP-TST-8404



Baker Hughes, Incorporated

844 W Lowry Rd
Claremore, OK, USA
Tested to API RP11S2 1997

Tested to BHI Engineering Specification ES 517

Stage Type: TE-5500:COMP Stages: 100
Serial Number: 15083422 NEW Pump
Well Name: none Well ID: none
Customer: XTO LONG 2
Remarks: none

Date Tested: 01/07/2020
Tested By: rittmikl

RAW DATA	Test Point	Speed (rpm)	Temp (degF)	Flow (GPM)	Pin (psi)	Pout (psi)	Torque (Ft-lbs)
	1	2465	75	0	65	1511	1
	2	2461	75	36.1	66	1404	1
	MIN	2462	75	70.7	66	1229	1
	BEP	2458	75	109	65	1114	1
	MAX	2459	75	146	65	787	1
	6	2403	75	174	64	385	1
	7	2400	75	189	65	211	1

BPD and HEAD are corrected to density=1.0
Rate, Head and BHP are corrected to 3500 rpm

TEST DATA	Test Point	Flow (BPD)	Head (ft)	Power (HP)	Eff (%)
	1	0	67.2	-0.04	100
	2	1763	62.4	-0.04	100
	MIN	3445	54.2	-0.04	100
	BEP	5321	49.1	-0.04	100
	MAX	7125	33.8	-0.04	100
	6	8689	15.7	-0.03	100
	7	9450	7.18	-0.03	100

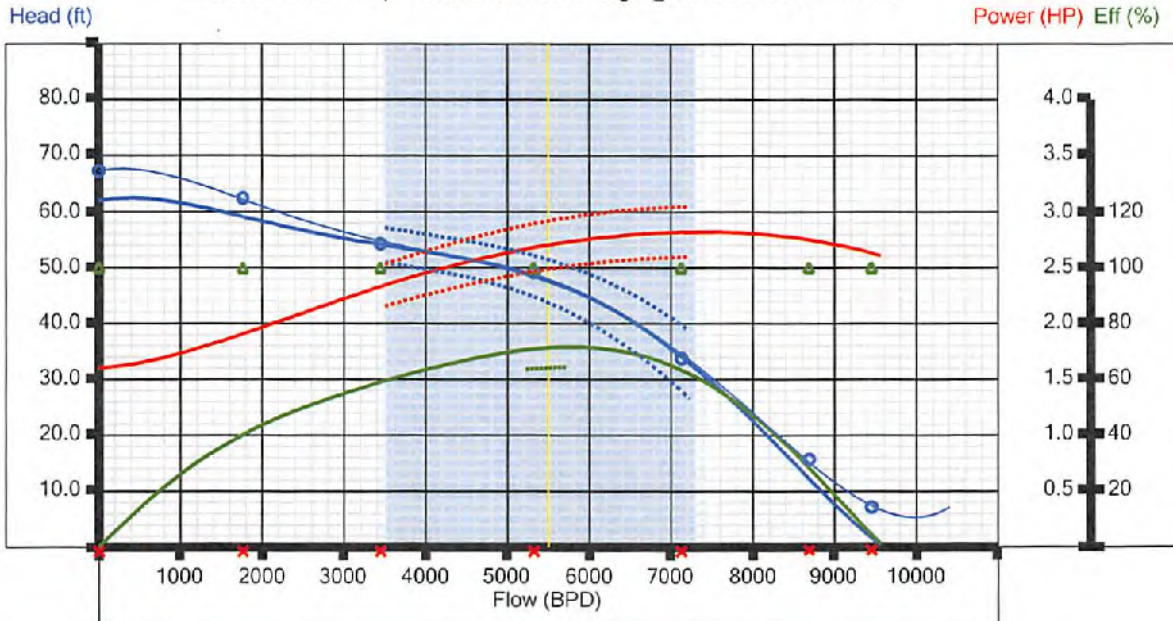
PERCENT DEVIATION/LIMITS

Deviation (%) / API Limit (%)

MIN	3500	.1 / ±5.0%	* -101.2 / ±8.0%	
BEP	5500	.7 / ±5.0%	* -100.6 / ±8.0%	40.1 / -10.0%
MAX	7300	-.3 / ±5.0%	* -101.3 / ±8.0%	

*Indicates Failed Limit

TE-5500:COMP Pump Performance- ONE stage @ 3500 RPM and SG=1.0





Elapsed Time (hh:mm:ss)

00:31:31

File Name

15083422-20200107_0840

Serial Number

15083422

Part Number

500002070H

Work Order

107179631

EXIT

STOP

Location	1	2	M3	M1	M2	M5	M4	M6	3	4	5	6	7	8	9	10	11	12	13	14	15
Overall Vibration (in/s)	0.039	0.078	0.024	0.059	0.089	0.056	0.045	0.034	0.046	0.034	0.087	0.055	0.037	0.070	0.031	0.036	0.028	0.076	0.078	0.059	0.088
1X Vibration (in/s)	0.019	0.018	0.008	0.020	0.015	0.008	0.024	0.006	0.026	0.018	0.063	0.033	0.004	0.028	0.008	0.010	0.005	0.049	0.066	0.038	0.068
2X Vibration (in/s)	0.003	0.020	0.005	0.017	0.002	0.007	0.020	0.018	0.010	0.010	0.010	0.002	0.014	0.004	0.008	0.016	0.008	0.014	0.002	0.004	0.023

Speed (RPM) **2468**

1X Max Vibration 0.0678

1X Vibration <= 0.1560 in/s ●

non-1X Max Vibration 0.023

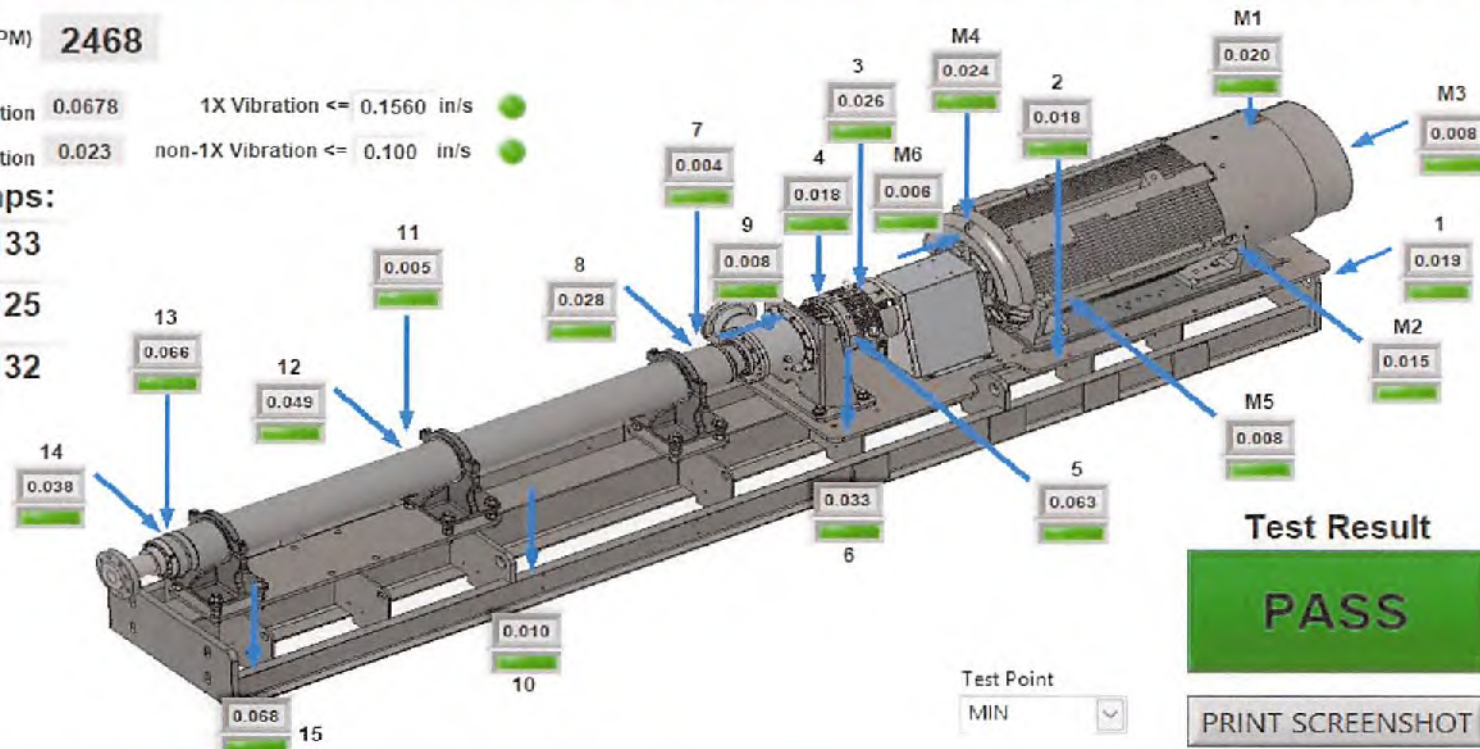
non-1X Vibration <= 0.100 in/s ●

Motor Amps:

Phase 1 133

Phase 2 125

Phase 3 132



Test Result

PASS

PRINT SCREENSHOT

Test Point

MIN



Elapsed Time (hh:mm:ss)

00:29:54

File Name
15083422-20200107_0840

Serial Number
15083422

Part Number
500002070H

Work Order
107179631

EXIT

STOP

Location	1	2	M3	M1	M2	M5	M4	M6	3	4	5	6	7	8	9	10	11	12	13	14	15
Overall Vibration (in/s)	0.043	0.077	0.027	0.060	0.103	0.059	0.040	0.029	0.055	0.035	0.106	0.062	0.037	0.082	0.032	0.032	0.028	0.101	0.080	0.066	0.108
1X Vibration (in/s)	0.020	0.019	0.009	0.017	0.021	0.008	0.026	0.007	0.029	0.020	0.076	0.040	0.003	0.026	0.008	0.006	0.002	0.067	0.068	0.044	0.092
2X Vibration (in/s)	0.007	0.003	0.000	0.011	0.004	0.004	0.016	0.011	0.003	0.001	0.004	0.008	0.019	0.008	0.005	0.003	0.011	0.014	0.001	0.005	0.022

Speed (RPM) **2464**

1X Max Vibration 0.0921 1X Vibration <= 0.1560 in/s ●

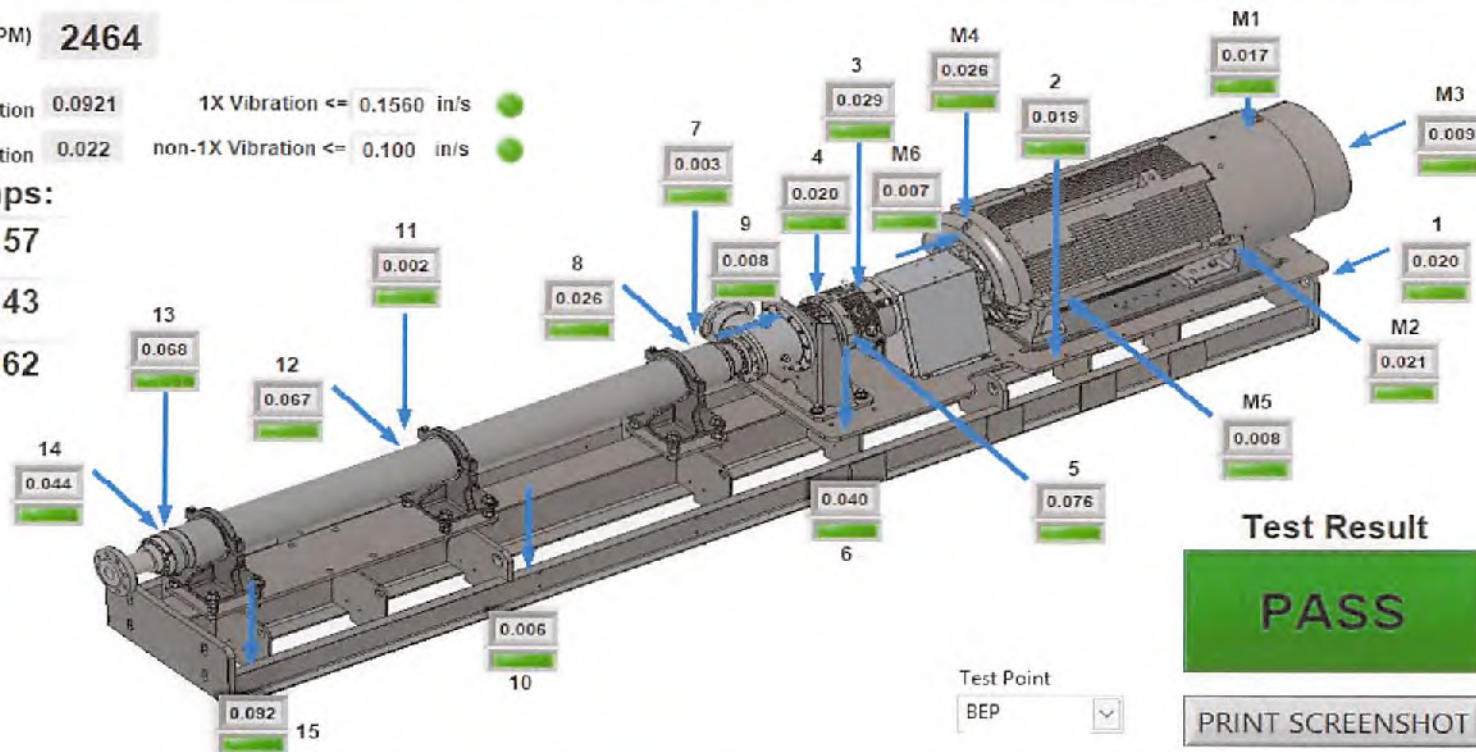
non-1X Max Vibration 0.022 non-1X Vibration <= 0.100 in/s ●

Motor Amps:

Phase 1 **157**

Phase 2 **143**

Phase 3 **162**



Test Result

PASS

PRINT SCREENSHOT

Test Point
BEP



Elapsed Time (hh:mm:ss)

00:28:20

File Name

15083422-20200107_0840

Serial Number

15083422

Part Number

500002070H

Work Order

107179631

EXIT

STOP

Location	1	2	M3	M1	M2	M5	M4	M6	3	4	5	6	7	8	9	10	11	12	13	14	15
Overall Vibration (in/s)	0.042	0.071	0.024	0.055	0.095	0.057	0.041	0.029	0.052	0.028	0.105	0.057	0.042	0.068	0.027	0.031	0.032	0.107	0.057	0.076	0.127
1X Vibration (in/s)	0.025	0.021	0.011	0.019	0.020	0.009	0.023	0.005	0.034	0.017	0.085	0.036	0.001	0.022	0.007	0.006	0.002	0.084	0.045	0.058	0.116
2X Vibration (in/s)	0.004	0.010	0.004	0.013	0.002	0.004	0.023	0.018	0.005	0.007	0.005	0.007	0.023	0.002	0.000	0.007	0.015	0.007	0.001	0.004	0.024

Speed (RPM) **2464**

1X Max Vibration 0.1159

1X Vibration <= 0.1560 in/s ●

non-1X Max Vibration 0.024

non-1X Vibration <= 0.100 in/s ●

Motor Amps:

Phase 1 157

Phase 2 147

Phase 3 153

