

Puite, Tammie (EGLE)

From: Dickman, Rob (EGLE)
Sent: Monday, December 21, 2020 7:48 AM
To: Nixon, Shane (EGLE); Puite, Tammie (EGLE)
Subject: FW: AirUsePermits
Attachments: EGLE_AQD_617-96_PermitRecords092019-082020.zip; EGLE_AQD_619-96_PermitRecords092019082020.zip; EGLE_AQD_620-96_PermitRecords092019-082020.zip; EGLE_AQD_622-96_PermitRecords092019-082020.zip; EGLE_AQD_AirPermitChecklist.pdf; Maintenance Log 092019-082020.xlsx; Permit Maintenance Field Support Logs.pdf

The facility sent me the attached records in response to the VN.

From: Dennis Marelich <dennis.denergyervices@gmail.com>
Sent: Tuesday, December 15, 2020 3:35 PM
To: Dickman, Rob (EGLE) <DICKMANR@michigan.gov>
Cc: Chris Kokenis <c_kokenis@deltaoperations.com>
Subject: AirUsePermits

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Rob,

Attached is the information you requested for permits 617-96, 619-96, 620-96, and 622-96. I hope this is what you are looking for and if any other information is needed please let me know. I also hope this brings Delta Oil Co back into compliance.

Thanks for you patience,

--
Dennis Marelich
Owner
Denergy Services Co LLC
Mobile: 989-370-3194



Rob Dickman

EGLE-Air Quality Division

Cadillac District Office

Rob,

Regarding the inspections and subsequent records requested for the air use permits 617-96, 619-96, 620-96, and 622-96:

The rolling emissions calculations for CO, VOC, and NOx have been completed.

There are no HAP's to report.

Monthly fuel consumption spreadsheets have been completed individually for all compressors relative to permits requested.

None of our facilities produce, collect, process, or truck crude oil or condensates.

Only one of the facilities permitted has a dehy to log glycol circulation, that being the Avery24/31 PN 622-96. The others are satellite screw compressor units that move produced gas to a CPF for processing before sales.

Records of produced gas have been completed for each permit.

A maintenance and repair log has been completed for each permit.

There were no catalysts bypassed for the requested period.

All fuel used for all compressors is sweet natural gas derived from the produced Antrim gas of each respective field.

Appendix A
 Force Energy Company
 Permit No. 620-96

09/2019-08/2020

Equipment	Usage		Factor				Emissions			
	This month	12-month rolling period	CO	NOx	VOC ¹	HAP	CO	NOx	TOTAL VOC ²	HAP
U1319-S G3406 TA Naturally Aspirated Compressor Facility Fuel Gas MMcf	1.76	21.69	0.215	1.7	0.041	—	4.66	36.87	0.89	—
N/A Low Emission Compressor Facility Fuel Gas MMcf			0.043	0.17	0.0205	—				—
N/A Tank Thruput bbl			—	—	0.000052	—	—	—		—
N/A Tank Capacity bbl	—		—	—	0.000037	—	—	—		—
N/A Crude Oil Trucked bbl			—	—	0.0014	—	—	—		—
N/A Niagaran Dehy ³ gpm	—		—	—	25.5	20.7	—	—		—
N/A Prairie Duchein Dehy ³ gpm	—		—	—	8.6	1.1	—	—		—
N/A Antrim Dehy ³ gpm	—		—	—	0.046	—	—	—		—
TOTAL Tons per 12-month rolling period							0.0	0.0	0.0	0.0

Notes-

- 1 - VOC factors in this column are non-HAP VOCs; but all HAPs are VOCs
- 2 - This column must be the TOTAL of the non-hap VOCs column and the HAPs columns
- 3 - Only ONE of the dehydrator types will be applicable for a particular facility

Example -

Fuel Gas MMcf	2.2	23.5	0.215	1.7	0.041	—	5.1	40.0	1.0	—
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BRILEY 19/VIENNA 13 MONTHLY GAS PRODUCTION 09/2019-08/2020 PN 620-96

	BRILEY 19		VIENNA 13	
	TOTAL	AVG	TOTAL	AVG
SEPTEMBER 2019	15,913	530	3,318	111
OCTOBER 2019	16,669	538	3,231	104
NOVEMBER 2019	15,538	518	2,733	91
DECEMBER 2019	14,832	478	2,374	77
JANUARY 2020	15,413	497	2,428	78
FEBRUARY 2020	13,927	480	1,881	65
MARCH 2020	15,124	488	2,326	75
APRIL 2020	14,822	494	2,259	75
MAY 2020	15,441	498	2,386	77
JUNE 2020	15,270	509	2,386	80
JULY 2020	16,385	529	2,640	85
AUGUST 2020	16,308	526	2,797	90

TOTALS	185,642	507	30,759	84
TOTAL COMBINED	216,401			

Single Well Report For: Briley_19 - Briley19/Vienna13_1319S Fuel - From: 2019-09-02 - To: 2019-10-01

Date	Gas	Diff	Line
2019-09-02 12:00:00	65.40	2.10	334.90
2019-09-03 12:00:00	65.10	2.10	334.60
2019-09-04 12:00:00	65.80	2.20	333.90
2019-09-05 12:00:00	66.10	2.10	348.40
2019-09-06 12:00:00	66.00	2.00	353.20
2019-09-07 12:00:00	65.70	2.00	354.40
2019-09-08 12:00:00	65.70	2.00	356.40
2019-09-09 12:00:00	65.80	2.00	356.30
2019-09-10 12:00:00	60.60	1.70	358.50
2019-09-11 12:00:00	65.10	2.00	355.60
2019-09-12 12:00:00	65.80	2.00	358.10
2019-09-13 12:00:00	65.90	2.00	356.30
2019-09-14 12:00:00	65.60	2.00	357.40
2019-09-15 12:00:00	65.30	2.00	356.10
2019-09-16 12:00:00	65.70	2.00	357.00
2019-09-17 12:00:00	65.90	2.00	356.30
2019-09-18 12:00:00	66.10	2.00	356.80
2019-09-19 12:00:00	66.30	2.00	356.20
2019-09-20 12:00:00	60.80	1.90	355.90
2019-09-21 12:00:00	67.00	2.10	355.80
2019-09-22 12:00:00	67.00	2.10	355.30
2019-09-23 12:00:00	67.50	2.10	357.40
2019-09-24 12:00:00	67.60	2.10	356.30
2019-09-25 12:00:00	67.20	2.10	356.40
2019-09-26 12:00:00	67.10	2.10	356.30
2019-09-27 12:00:00	68.10	2.20	355.90
2019-09-28 12:00:00	68.00	2.20	356.00
2019-09-29 12:00:00	68.10	2.20	356.70
2019-09-30 12:00:00	56.50	1.50	357.70
2019-10-01 12:00:00	68.10	2.20	354.90
Sums	1,970.90		
Averages	65.70	2.03	353.83

Single Well Report For: Briley_19 - Briley19/Vienna13_1319S Fuel - From: 2019-10-02 - To: 2019-11-01

Date	Gas	Diff	Line
2019-10-02 12:00:00	67.80	2.10	356.70
2019-10-03 12:00:00	77.40	3.10	345.20
2019-10-04 12:00:00	82.20	3.30	341.30
2019-10-05 12:00:00	81.10	3.00	358.60
2019-10-06 12:00:00	80.10	3.00	355.70
2019-10-07 12:00:00	79.40	3.00	355.40
2019-10-08 12:00:00	79.70	3.00	355.10
2019-10-09 12:00:00	80.10	3.00	358.10
2019-10-10 12:00:00	80.10	3.00	357.40
2019-10-11 12:00:00	79.50	3.00	356.10
2019-10-12 12:00:00	79.60	3.00	355.70
2019-10-13 12:00:00	78.60	2.90	354.90
2019-10-14 12:00:00	79.70	2.90	357.40
2019-10-15 12:00:00	79.60	3.00	355.20
2019-10-16 12:00:00	79.30	2.90	356.90
2019-10-17 12:00:00	79.30	2.90	357.40
2019-10-18 12:00:00	81.10	3.10	357.80
2019-10-19 12:00:00	82.20	3.20	356.30
2019-10-20 12:00:00	82.70	3.20	354.40
2019-10-21 12:00:00	82.80	3.20	354.50
2019-10-22 12:00:00	82.50	3.20	355.40
2019-10-23 12:00:00	82.30	3.20	356.30
2019-10-24 12:00:00	83.10	3.30	355.60
2019-10-25 12:00:00	82.90	3.20	355.70
2019-10-26 12:00:00	83.50	3.30	356.50
2019-10-27 12:00:00	83.20	3.30	356.60
2019-10-28 12:00:00	83.00	3.20	356.50
2019-10-29 12:00:00	76.40	2.90	351.50
2019-10-30 12:00:00	48.50	1.50	337.60
2019-10-31 12:00:00	59.10	1.60	357.70
2019-11-01 12:00:00	59.50	1.60	356.60
Sums	2,416.30		
Averages	77.95	2.91	354.71

Single Well Report For: Briley_19 - Briley19/Vienna13_1319S Fuel - From: 2019-11-02 - To: 2019-12-01

Date	Gas	Diff	Line
2019-11-02 12:00:00	58.10	1.50	356.50
2019-11-03 12:00:00	58.90	1.60	358.20
2019-11-04 12:00:00	59.40	1.60	357.90
2019-11-05 12:00:00	58.80	1.60	356.50
2019-11-06 12:00:00	58.90	1.60	355.70
2019-11-07 12:00:00	60.10	1.70	349.50
2019-11-08 12:00:00	20.90	0.80	346.50
2019-11-09 12:00:00	39.40	1.20	352.00
2019-11-10 12:00:00	57.40	1.50	351.10
2019-11-11 12:00:00	58.50	1.60	349.90
2019-11-12 12:00:00	58.50	1.60	354.70
2019-11-13 12:00:00	58.70	1.60	355.50
2019-11-14 12:00:00	58.40	1.50	353.20
2019-11-15 12:00:00	58.60	1.60	355.80
2019-11-16 12:00:00	58.20	1.50	356.40
2019-11-17 12:00:00	58.50	1.50	356.30
2019-11-18 12:00:00	57.80	1.50	355.50
2019-11-19 12:00:00	58.00	1.50	355.30
2019-11-20 12:00:00	58.10	1.50	356.90
2019-11-21 12:00:00	58.40	1.50	357.40
2019-11-22 12:00:00	58.50	1.50	357.50
2019-11-23 12:00:00	58.60	1.50	357.00
2019-11-24 12:00:00	58.20	1.50	355.50
2019-11-25 12:00:00	58.20	1.50	355.80
2019-11-26 12:00:00	58.40	1.50	356.40
2019-11-27 12:00:00	54.90	1.70	329.60
2019-11-28 12:00:00	56.90	1.40	357.60
2019-11-29 12:00:00	57.80	1.50	358.70
2019-11-30 12:00:00	58.70	1.50	357.60
2019-12-01 12:00:00	58.30	1.50	356.70
Sums	1,692.10		
Averages	56.40	1.50	354.44

Single Well Report For: Briley_19 - Briley19/Vienna13_1319S Fuel - From: 2019-12-02 - To: 2020-01-01

Date	Gas	Diff	Line
2019-12-02 12:00:00	56.00	1.40	357.50
2019-12-03 12:00:00	43.70	0.90	358.30
2019-12-04 12:00:00	44.70	1.00	357.30
2019-12-05 12:00:00	52.20	1.30	354.30
2019-12-06 12:00:00	57.90	1.50	356.10
2019-12-07 12:00:00	59.60	1.70	346.50
2019-12-08 12:00:00	48.60	1.30	353.10
2019-12-09 12:00:00	51.50	1.40	351.10
2019-12-10 12:00:00	53.60	1.40	352.40
2019-12-11 12:00:00	57.00	1.50	356.00
2019-12-12 12:00:00	59.50	1.70	339.20
2019-12-13 12:00:00	57.30	1.50	348.10
2019-12-14 12:00:00	57.70	1.50	357.30
2019-12-15 12:00:00	58.30	1.50	358.20
2019-12-16 12:00:00	58.50	1.50	357.30
2019-12-17 12:00:00	51.70	1.40	355.60
2019-12-18 12:00:00	55.70	1.50	356.30
2019-12-19 12:00:00	50.00	1.30	351.80
2019-12-20 12:00:00	56.70	1.50	355.50
2019-12-21 12:00:00	48.80	1.40	347.80
2019-12-22 12:00:00	57.50	1.50	358.20
2019-12-23 12:00:00	58.20	1.50	358.50
2019-12-24 12:00:00	58.80	1.60	357.20
2019-12-25 12:00:00	38.50	2.10	272.20
2019-12-26 12:00:00	42.80	1.40	286.50
2019-12-27 12:00:00	48.30	1.50	336.60
2019-12-28 12:00:00	57.20	1.50	356.10
2019-12-29 12:00:00	56.90	1.50	357.70
2019-12-30 12:00:00	56.80	1.50	359.70
2019-12-31 12:00:00	56.30	1.40	360.80
2020-01-01 12:00:00	56.30	1.50	358.50
Sums	1,666.60		
Averages	53.76	1.46	349.41

Single Well Report For: Briley_19 - Briley19/Vienna13_1319S Fuel - From: 2020-01-02 - To: 2020-02-01

Date	Gas	Diff	Line
2020-01-02 12:00:00	56.30	1.40	359.60
2020-01-03 12:00:00	56.90	1.50	358.80
2020-01-04 12:00:00	56.60	1.50	357.90
2020-01-05 12:00:00	56.70	1.50	360.60
2020-01-06 12:00:00	56.60	1.50	359.60
2020-01-07 12:00:00	56.30	1.40	360.50
2020-01-08 12:00:00	56.20	1.40	359.60
2020-01-09 12:00:00	55.80	1.40	360.70
2020-01-10 12:00:00	49.50	1.40	337.00
2020-01-11 12:00:00	35.50	0.90	360.10
2020-01-12 12:00:00	34.60	1.00	352.00
2020-01-13 12:00:00	46.20	1.20	360.10
2020-01-14 12:00:00	57.00	1.40	361.50
2020-01-15 12:00:00	56.10	1.40	359.80
2020-01-16 12:00:00	56.20	1.40	360.10
2020-01-17 12:00:00	54.90	1.30	364.10
2020-01-18 12:00:00	55.00	1.30	360.70
2020-01-19 12:00:00	55.60	1.40	360.90
2020-01-20 12:00:00	55.30	1.30	360.90
2020-01-21 12:00:00	55.70	1.40	360.80
2020-01-22 12:00:00	55.80	1.40	358.60
2020-01-23 12:00:00	55.60	1.40	357.60
2020-01-24 12:00:00	56.80	1.40	357.90
2020-01-25 12:00:00	56.50	1.40	357.80
2020-01-26 12:00:00	56.40	1.40	358.20
2020-01-27 12:00:00	56.40	1.40	359.70
2020-01-28 12:00:00	56.70	1.40	358.60
2020-01-29 12:00:00	56.80	1.40	357.70
2020-01-30 12:00:00	56.60	1.40	356.90
2020-01-31 12:00:00	56.90	1.40	356.90
2020-02-01 12:00:00	56.60	1.40	356.80
Sums	1,684.10		
Averages	54.33	1.37	358.45

Single Well Report For: Briley_19 - Briley19/Vienna13_1319S Fuel - From: 2020-02-02 - To: 2020-03-01

Date	Gas	Diff	Line
2020-02-02 12:00:00	56.10	1.40	358.50
2020-02-03 12:00:00	56.40	1.40	359.90
2020-02-04 12:00:00	56.60	1.40	357.10
2020-02-05 12:00:00	56.70	1.40	355.70
2020-02-06 12:00:00	56.40	1.40	357.30
2020-02-07 12:00:00	55.90	1.40	356.50
2020-02-08 12:00:00	55.50	1.40	356.00
2020-02-09 12:00:00	55.90	1.40	355.50
2020-02-10 12:00:00	56.00	1.40	357.00
2020-02-11 12:00:00	56.10	1.40	355.90
2020-02-12 12:00:00	55.90	1.40	354.70
2020-02-13 12:00:00	56.00	1.40	355.40
2020-02-14 12:00:00	56.00	1.40	358.00
2020-02-15 12:00:00	55.30	1.40	354.50
2020-02-16 12:00:00	54.80	1.30	355.30
2020-02-17 12:00:00	54.80	1.30	356.10
2020-02-18 12:00:00	54.60	1.30	356.90
2020-02-19 12:00:00	55.00	1.30	356.40
2020-02-20 12:00:00	55.90	1.40	356.50
2020-02-21 12:00:00	56.20	1.40	356.60
2020-02-22 12:00:00	57.50	1.50	345.20
2020-02-23 12:00:00	56.70	1.40	358.10
2020-02-24 12:00:00	55.80	1.40	358.10
2020-02-25 12:00:00	55.80	1.40	358.10
2020-02-26 12:00:00	55.60	1.40	358.50
2020-02-27 12:00:00	55.60	1.40	360.30
2020-02-28 12:00:00	55.50	1.40	360.20
2020-02-29 12:00:00	55.40	1.30	359.80
2020-03-01 12:00:00	56.20	1.40	359.00
Sums	1,620.20		
Averages	55.87	1.39	356.80

Single Well Report For: Briley_19 - Briley19/Vienna13_1319S Fuel - From: 2020-03-02 - To: 2020-04-01

Date	Gas	Diff	Line
2020-03-02 12:00:00	55.80	1.40	356.50
2020-03-03 12:00:00	55.50	1.40	354.80
2020-03-04 12:00:00	54.30	1.30	355.70
2020-03-05 12:00:00	54.80	1.30	358.30
2020-03-06 12:00:00	55.40	1.40	357.90
2020-03-07 12:00:00	55.50	1.40	357.10
2020-03-08 12:00:00	55.30	1.40	356.60
2020-03-09 12:00:00	55.60	1.40	358.70
2020-03-10 12:00:00	56.50	1.40	359.10
2020-03-11 12:00:00	55.90	1.40	358.50
2020-03-12 12:00:00	55.70	1.40	356.50
2020-03-13 12:00:00	56.40	1.40	355.90
2020-03-14 12:00:00	57.20	1.50	351.60
2020-03-15 12:00:00	58.00	1.50	350.10
2020-03-16 12:00:00	56.60	1.40	357.00
2020-03-17 12:00:00	56.00	1.40	355.20
2020-03-18 12:00:00	55.90	1.40	356.20
2020-03-19 12:00:00	55.70	1.40	353.20
2020-03-20 12:00:00	56.30	1.40	354.70
2020-03-21 12:00:00	56.20	1.40	355.60
2020-03-22 12:00:00	56.40	1.40	354.90
2020-03-23 12:00:00	56.20	1.40	353.60
2020-03-24 12:00:00	56.20	1.40	354.10
2020-03-25 12:00:00	56.20	1.40	354.50
2020-03-26 12:00:00	56.00	1.40	353.80
2020-03-27 12:00:00	56.20	1.40	355.20
2020-03-28 12:00:00	56.20	1.40	355.50
2020-03-29 12:00:00	56.20	1.40	356.10
2020-03-30 12:00:00	56.20	1.40	356.20
2020-03-31 12:00:00	56.30	1.40	353.90
2020-04-01 12:00:00	56.40	1.40	353.00
Sums	1,737.10		
Averages	56.04	1.40	355.48

Single Well Report For: Briley_19 - Briley19/Vienna13_1319S Fuel - From: 2020-04-02 - To: 2020-05-01

Date	Gas	Diff	Line
2020-04-02 12:00:00	56.50	1.40	354.30
2020-04-03 12:00:00	56.30	1.40	356.30
2020-04-04 12:00:00	56.30	1.40	355.90
2020-04-05 12:00:00	56.30	1.40	355.90
2020-04-06 12:00:00	56.20	1.40	355.00
2020-04-07 12:00:00	56.40	1.40	354.50
2020-04-08 12:00:00	56.30	1.40	355.30
2020-04-09 12:00:00	56.40	1.40	354.70
2020-04-10 12:00:00	52.80	1.80	348.20
2020-04-11 12:00:00	40.20	1.20	356.40
2020-04-12 12:00:00	54.40	1.30	355.50
2020-04-13 12:00:00	55.10	1.40	354.20
2020-04-14 12:00:00	54.70	1.30	354.70
2020-04-15 12:00:00	54.80	1.30	355.60
2020-04-16 12:00:00	54.80	1.30	354.00
2020-04-17 12:00:00	54.60	1.30	355.70
2020-04-18 12:00:00	55.00	1.40	354.80
2020-04-19 12:00:00	54.90	1.30	355.10
2020-04-20 12:00:00	54.90	1.30	355.80
2020-04-21 12:00:00	54.60	1.30	354.10
2020-04-22 12:00:00	54.80	1.30	355.60
2020-04-23 12:00:00	54.70	1.30	354.60
2020-04-24 12:00:00	54.60	1.30	354.80
2020-04-25 12:00:00	54.70	1.30	354.00
2020-04-26 12:00:00	54.90	1.40	353.10
2020-04-27 12:00:00	54.90	1.30	354.30
2020-04-28 12:00:00	54.90	1.30	354.40
2020-04-29 12:00:00	55.40	1.40	354.40
2020-04-30 12:00:00	54.90	1.30	356.20
2020-05-01 12:00:00	54.90	1.30	355.80
Sums	1,640.20		
Averages	54.67	1.35	354.77

Single Well Report For: Briley_19 - Briley19/Vienna13_1319S Fuel - From: 2020-05-02 - To: 2020-06-01

Date	Gas	Diff	Line
2020-05-02 12:00:00	54.70	1.30	355.60
2020-05-03 12:00:00	55.30	1.40	355.40
2020-05-04 12:00:00	55.20	1.30	357.10
2020-05-05 12:00:00	55.10	1.30	356.80
2020-05-06 12:00:00	55.00	1.30	355.20
2020-05-07 12:00:00	54.10	1.30	354.00
2020-05-08 12:00:00	54.70	1.30	355.20
2020-05-09 12:00:00	54.80	1.30	354.90
2020-05-10 12:00:00	54.80	1.30	352.30
2020-05-11 12:00:00	54.90	1.40	351.00
2020-05-12 12:00:00	55.00	1.40	353.80
2020-05-13 12:00:00	54.70	1.30	353.30
2020-05-14 12:00:00	53.30	1.30	350.80
2020-05-15 12:00:00	55.00	1.30	356.80
2020-05-16 12:00:00	55.80	1.40	356.40
2020-05-17 12:00:00	55.50	1.40	356.80
2020-05-18 12:00:00	55.70	1.40	356.30
2020-05-19 12:00:00	55.30	1.40	356.60
2020-05-20 12:00:00	55.70	1.40	356.10
2020-05-21 12:00:00	55.70	1.40	356.30
2020-05-22 12:00:00	55.70	1.40	355.20
2020-05-23 12:00:00	55.70	1.40	353.70
2020-05-24 12:00:00	56.00	1.40	354.80
2020-05-25 12:00:00	55.90	1.40	355.40
2020-05-26 12:00:00	56.10	1.40	354.30
2020-05-27 12:00:00	56.40	1.40	354.30
2020-05-28 12:00:00	56.30	1.40	354.00
2020-05-29 12:00:00	56.10	1.40	355.40
2020-05-30 12:00:00	55.30	1.40	350.40
2020-05-31 12:00:00	55.40	1.40	357.60
2020-06-01 12:00:00	55.50	1.40	357.20
Sums	1,714.70		
Averages	55.31	1.36	354.94

Single Well Report For: Briley_19 - Briley19/Vienna13_1319S Fuel - From: 2020-06-02 - To: 2020-07-01

Date	Gas	Diff	Line
2020-06-02 12:00:00	55.70	1.40	356.10
2020-06-03 12:00:00	56.10	1.40	356.50
2020-06-04 12:00:00	56.10	1.40	355.50
2020-06-05 12:00:00	56.00	1.40	357.30
2020-06-06 12:00:00	56.10	1.40	358.50
2020-06-07 12:00:00	56.00	1.40	357.40
2020-06-08 12:00:00	56.00	1.40	355.00
2020-06-09 12:00:00	56.10	1.40	355.60
2020-06-10 12:00:00	42.90	1.50	354.80
2020-06-11 12:00:00	65.30	1.90	355.00
2020-06-12 12:00:00	64.60	1.90	354.00
2020-06-13 12:00:00	38.50	2.70	306.50
2020-06-14 12:00:00	52.20	2.00	359.30
2020-06-15 12:00:00	62.00	1.70	356.70
2020-06-16 12:00:00	62.40	1.70	356.60
2020-06-17 12:00:00	62.20	1.70	355.30
2020-06-18 12:00:00	60.70	1.70	353.30
2020-06-19 12:00:00	61.90	1.70	354.80
2020-06-20 12:00:00	62.10	1.70	354.30
2020-06-21 12:00:00	62.40	1.80	351.40
2020-06-22 12:00:00	62.80	1.80	353.10
2020-06-23 12:00:00	62.30	1.70	354.30
2020-06-24 12:00:00	62.30	1.70	355.00
2020-06-25 12:00:00	53.70	1.60	356.10
2020-06-26 12:00:00	61.10	1.70	354.60
2020-06-27 12:00:00	61.40	1.70	355.20
2020-06-28 12:00:00	61.70	1.70	353.90
2020-06-29 12:00:00	61.30	1.70	355.00
2020-06-30 12:00:00	61.50	1.70	355.10
2020-07-01 12:00:00	61.50	1.70	355.40
Sums	1,754.90		
Averages	58.50	1.67	353.72

Single Well Report For: Briley_19 - Briley19/Vienna13_1319S Fuel - From: 2020-07-02 - To: 2020-08-01

Date	Gas	Diff	Line
2020-07-02 12:00:00	61.10	1.70	356.80
2020-07-03 12:00:00	61.30	1.70	354.70
2020-07-04 12:00:00	61.50	1.70	356.20
2020-07-05 12:00:00	60.90	1.70	356.70
2020-07-06 12:00:00	61.10	1.70	356.20
2020-07-07 12:00:00	61.40	1.60	363.00
2020-07-08 12:00:00	61.50	1.70	362.70
2020-07-09 12:00:00	61.40	1.60	363.60
2020-07-10 12:00:00	61.60	1.70	362.10
2020-07-11 12:00:00	61.90	1.70	361.00
2020-07-12 12:00:00	61.20	1.60	360.90
2020-07-13 12:00:00	60.90	1.60	359.30
2020-07-14 12:00:00	60.40	1.60	358.00
2020-07-15 12:00:00	61.30	1.70	361.50
2020-07-16 12:00:00	61.70	1.70	359.20
2020-07-17 12:00:00	61.30	1.70	355.10
2020-07-18 12:00:00	57.80	1.60	354.50
2020-07-19 12:00:00	61.40	1.70	357.60
2020-07-20 12:00:00	61.30	1.70	354.80
2020-07-21 12:00:00	61.00	1.70	352.70
2020-07-22 12:00:00	61.00	1.70	354.90
2020-07-23 12:00:00	61.30	1.70	357.50
2020-07-24 12:00:00	61.30	1.70	356.80
2020-07-25 12:00:00	61.20	1.70	356.10
2020-07-26 12:00:00	61.50	1.70	356.90
2020-07-27 12:00:00	62.10	1.70	357.60
2020-07-28 12:00:00	61.50	1.70	357.20
2020-07-29 12:00:00	61.00	1.70	356.30
2020-07-30 12:00:00	61.30	1.70	355.10
2020-07-31 12:00:00	61.00	1.70	355.10
2020-08-01 12:00:00	60.90	1.70	354.30
Sums	1,896.10		
Averages	61.16	1.68	357.56

Single Well Report For: Briley_19 - Briley19/Vienna13_1319S Fuel - From: 2020-07-02 - To: 2020-08-01

Date	Gas	Diff	Line
2020-07-02 12:00:00	61.10	1.70	356.80
2020-07-03 12:00:00	61.30	1.70	354.70
2020-07-04 12:00:00	61.50	1.70	356.20
2020-07-05 12:00:00	60.90	1.70	356.70
2020-07-06 12:00:00	61.10	1.70	356.20
2020-07-07 12:00:00	61.40	1.60	363.00
2020-07-08 12:00:00	61.50	1.70	362.70
2020-07-09 12:00:00	61.40	1.60	363.60
2020-07-10 12:00:00	61.60	1.70	362.10
2020-07-11 12:00:00	61.90	1.70	361.00
2020-07-12 12:00:00	61.20	1.60	360.90
2020-07-13 12:00:00	60.90	1.60	359.30
2020-07-14 12:00:00	60.40	1.60	358.00
2020-07-15 12:00:00	61.30	1.70	361.50
2020-07-16 12:00:00	61.70	1.70	359.20
2020-07-17 12:00:00	61.30	1.70	355.10
2020-07-18 12:00:00	57.80	1.60	354.50
2020-07-19 12:00:00	61.40	1.70	357.60
2020-07-20 12:00:00	61.30	1.70	354.80
2020-07-21 12:00:00	61.00	1.70	352.70
2020-07-22 12:00:00	61.00	1.70	354.90
2020-07-23 12:00:00	61.30	1.70	357.50
2020-07-24 12:00:00	61.30	1.70	356.80
2020-07-25 12:00:00	61.20	1.70	356.10
2020-07-26 12:00:00	61.50	1.70	356.90
2020-07-27 12:00:00	62.10	1.70	357.60
2020-07-28 12:00:00	61.50	1.70	357.20
2020-07-29 12:00:00	61.00	1.70	356.30
2020-07-30 12:00:00	61.30	1.70	355.10
2020-07-31 12:00:00	61.00	1.70	355.10
2020-08-01 12:00:00	60.90	1.70	354.30
Sums	1,896.10		
Averages	61.16	1.68	357.56

Air Use Permit Maintenance Log 09/2019-08/2020

Scheduled Services (Lube, Oil, Filters)

617-96 Service		619-96 Service		620-96 Service		622-96 Service	
Unit #	Date	Unit #	Date	Unit #	Date	Unit #	Date
978-S	11/12/2019	674-S	9/4/2019	1319-S	9/9/2019	1307 & 841-S	11/7/2019
978-S	2/11/2020	674-S	12/3/2019	1319-S	12/19/2019	1308 & 841-S	2/9/2020
978-S	5/13/2020	674-S	3/10/2020	1319-S	3/26/2020	1309 & 841-S	5/5/2020
978-S	8/19/2020	674-S	6/8/2020	1319-S	6/24/2020	1310 & 841-S	8/7/2020

Engine Repairs

Unit #	Date	Explanation of Repairs
978-S	9/30/2019	Replace engine oil cooler
978-S	10/2/2019	Flush coolant system
978-S	10/15/2019	Replace piston, liner, and #8 cylinder head
841-S	10/21/2019	Replace engine water pump
841-S	11/8/2019	Replace engine fuel regulator
978-S	11/14/2019	Replace engine water pump, repair throttle linkage, replace plugs
978-S	11/20/2019	Replace left side exhaust manifold
1319-S	12/20/2019	Replace engine oil pan gasket
1319-S	4/10/2020	Changed head, oil cooler, coolant, and engine oil
841-S	5/5/2020	Changed front and rear main engine bearing seals
841-S	5/12/2020	Changed head and cleaned turbo nozzles
841-S	5/18/2020	Changed out governor
1319-S	6/9/2020	Replace engine block freeze plug and check oil cooler-OK
1307	8/7/2020	Change our rear main engine bearing seal

NATURAL GAS COMPRESSION SYSTEMS FIELD MAINTENANCE REPORT

Maintenance Performed REPLACED ENG. OIL COOLER		WO 46808
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Customer DELTA	Unit # U 978-S	Location BRILEY 31	Date 9/30/2019
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Equipment	Eng. Hours 36875	Day Of Week MONDAY	Time In 10:00	Time Out 19:30	Total Billable Reg 10.5	Total Billable OT	NonBillable
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Eng. Model & Serial # CAT 379 TA 72B01257	Compressor Model & serial # LEROI SCREW-LGL30270VFEP G3 S#5610X49	Cylinder Sizes
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Water Temp In	Water Temp Out	RPM		Oil Temp	Fuel Press	Aux Water In	Aux Water Out	Vac. Left	Vac. Right
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Valve Adjust	In./Exh.	Avg. Clear. Before Set		Type Of Oil		Timing		Amb. Temp	Sep. Press	Pre Cat	Post Cat
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Compression	LB	1	2	3	4	5	6	7	8	Suc Press	1st Int Press	2nd Int Press	3rd Int Press	Disc Press
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Readings	RB	1	2	3	4	5	6	7	8	1st temp	2nd Temp	3rd Temp	4th Temp	Oil Press	Oil Temp
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HRS.		SERVICE CHECKLIST																																	
9.5	PK ✓	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">Service Unit</td> <td style="width:30%;">Check Cooler</td> <td style="width:40%;">Check Lube/Cycle time.</td> </tr> <tr> <td>Oil Sample Eng./Frame</td> <td>Test shutdowns</td> <td>X Oil & A/F Levels -25</td> </tr> <tr> <td>Change Oil & Filters</td> <td>Regap/Replace Spark plugs</td> <td>Grease Bearings</td> </tr> <tr> <td>Adjust Valves/Bridges</td> <td>Air Filter</td> <td>Check packing</td> </tr> <tr> <td>Check Compression</td> <td>Carb Linkage</td> <td>Check Salt Filter Diff</td> </tr> <tr> <td>Check Hold Downs</td> <td>Compressor Valves</td> <td>Check Battery Level</td> </tr> <tr> <td>Check Fuel Press</td> <td>Check O2 %</td> <td>Check UNDER VOLTAGE</td> </tr> <tr> <td>Check Belts/Bearings</td> <td>Check CO</td> <td>Converter Maintenance</td> </tr> <tr> <td>Check Panel Wiring</td> <td>Check NOX</td> <td>Coalescer Differential</td> </tr> <tr> <td>Replace Pro Flo Batt</td> <td></td> <td>Alignment</td> </tr> <tr> <td>DUMPS</td> <td></td> <td></td> </tr> </table>	Service Unit	Check Cooler	Check Lube/Cycle time.	Oil Sample Eng./Frame	Test shutdowns	X Oil & A/F Levels -25	Change Oil & Filters	Regap/Replace Spark plugs	Grease Bearings	Adjust Valves/Bridges	Air Filter	Check packing	Check Compression	Carb Linkage	Check Salt Filter Diff	Check Hold Downs	Compressor Valves	Check Battery Level	Check Fuel Press	Check O2 %	Check UNDER VOLTAGE	Check Belts/Bearings	Check CO	Converter Maintenance	Check Panel Wiring	Check NOX	Coalescer Differential	Replace Pro Flo Batt		Alignment	DUMPS		
Service Unit	Check Cooler	Check Lube/Cycle time.																																	
Oil Sample Eng./Frame	Test shutdowns	X Oil & A/F Levels -25																																	
Change Oil & Filters	Regap/Replace Spark plugs	Grease Bearings																																	
Adjust Valves/Bridges	Air Filter	Check packing																																	
Check Compression	Carb Linkage	Check Salt Filter Diff																																	
Check Hold Downs	Compressor Valves	Check Battery Level																																	
Check Fuel Press	Check O2 %	Check UNDER VOLTAGE																																	
Check Belts/Bearings	Check CO	Converter Maintenance																																	
Check Panel Wiring	Check NOX	Coalescer Differential																																	
Replace Pro Flo Batt		Alignment																																	
DUMPS																																			
1	Eric ✓																																		

MAINTENANCE PERFORMED

CALLED TO LOCATION BY PETE L. THAT PUMPER WAS SHUTTING DOWN UNIT. OIL OVERFLOWING OUT OF COOLANT DAY TANK. PETE CALLED ARCHROCK FOR PART. MEET ERIC W. FOR PART. AT LOCATION CHECKED OVER UNIT AND LAID DOWN OIL SOAKS ON SKID AND WIPE PIPES WERE I WAS GOING TO WORK. FOUND 2 EMPTY BARRELS. DRAINED COOLANT SYSTEM INTO BARRELS. DRAINED OIL COOLER. PULLED OFF OIL COOLER AND CLEANED UP EVERYTHING. INSTALLED NEW OIL COOLER AND GASKET AND ORINGS. FINISHED UP. CLEANED UP WHILE WAITING FOR STEAMER. HAD STEAMER CLEAN UP COOLER/FAN/BELT GUARD. HAD STEAMER FILL ENGINE WITH WATER. START UP AND LOAD UNIT. HOOKED UP HOSE OFF TOP OF DAY TANK. HAD STEAMER CLEAN UP REST OF UNIT. ADD WATER EVERY 15 MINUTES. SHUTDOWN AND DRAINED SYSTEM. REFILL SYSTEM AND PURGED SYSTEM. START UP AND LOAD UNIT. ADDED WATER A FEW TIMES TO PUMP OFF OIL OUT THE TOP OF TANK. HAD STEAMER FILL BARREL WITH WATER. LEFT WATER IN SYSTEM.

PARTS LIST					
QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
1	OR 5540 OIL COOLER	CUST.			
1	109 2332 ORING	PK			
1	6L 1650 ORING	PK			
1	3P 0650 ORING	PK			
2	4F 7387 ORING	PK			
1	4L 8120 GASKET	PL			
1	10# RAGS	NS			
20	WHITE OIL SOAKS	NS			
3	ROLOC DISCS	NS			

Customer Signature _____ Mechanic PHILLIP KORFF



JS



pij

NATURAL GAS COMPRESSION SYSTEMS FIELD MAINTENANCE REPORT

Maintenance Performed REPLACED ENG. OIL COOLER		WO					46808							
Customer DELTA			Unit # U 978-S		Location BRILEY 31			Date 9/30/2019						
Equipment	Eng. Hours 36875	Day Of Week MONDAY	Time In 10:00	Time Out 19:30	Total Billable Reg 10.5	Total Billable OT	NonBillable							
Eng. Model & Serial # CAT 379 TA 72B01257			Compressor Model & serial # LEROI SCREW-LGL30270VFEP G3 S#5610X49			Cylinder Sizes								
Water Temp In	Water Temp Out	RPM	Oil Temp	Fuel Press	Aux Water In	Aux Water Out	Vac. Left / Vac. Right							
Valve Adjust In./Exh.	Avg. Clear. Before Set	Type Of Oil			Timing	Amb. Temp	Sep. Press / Pre Cat / Post Cat							
Compression	LB	1	2	3	4	5	6	7	8	Suc Press	1st Int Press	2nd Int Press	3rd Int Press	Disc Press
Readings	RB	1	2	3	4	5	6	7	8	1st temp	2nd Temp	3rd Temp	4th Temp	Oil Press / Oil Temp

HRS.		SERVICE CHECKLIST													
9.5	PK	Service Unit		Check Cooler				Check Lube/Cycle time							
1	Eric	Oil Sample Eng./Frame		Test shutdowns				X Oil & A/F Levels -25							
		Change Oil & Filters		Regap/Replace Spark plugs				Grease Bearings							
		Adjust Valves/Bridges		Air Filter				Check packing							
		Check Compression		Carb Linkage				Check Salt Filter Diff							
		Check Hold Downs		Compressor Valves				Check Battery Level							
		Check Fuel Press		Check O2 %				Check UNDER VOLTAGE							
		Check Belts/Bearings		Check CO				Converter Maintenance							
		Check Panel Wiring		Check NOX				Coalescer Differential							
		Replace Pro Flo Batt						Alignment							
		DUMPS													

MAINTENANCE PERFORMED

CALLED TO LOCATION BY PETE L. THAT PUMPER WAS SHUTTING DOWN UNIT. OIL OVERFLOWING OUT OF COOLANT DAY TANK. PETE CALLED ARCHROCK FOR PART. MEET ERIC W. FOR PART. AT LOCATION CHECKED OVER UNIT AND LAID DOWN OIL SOAKS ON SKID AND WIPE PIPES WERE I WAS GOING TO WORK. FOUND 2 EMPTY BARRELS. DRAINED COOLANT SYSTEM INTO BARRELS. DRAINED OIL COOLER. PULLED OFF OIL COOLER AND CLEANED UP EVERYTHING. INSTALLED NEW OIL COOLER AND GASKET AND ORINGS. FINISHED UP. CLEANED UP WHILE WAITING FOR STEAMER. HAD STEAMER CLEAN UP COOLER/FAN/BELT GUARD. HAD STEAMER FILL ENGINE WITH WATER. START UP AND LOAD UNIT. HOOKED UP HOSE OFF TOP OF DAY TANK. HAD STEAMER CLEAN UP REST OF UNIT. ADD WATER EVERY 15 MINUTES. SHUTDOWN AND DRAINED SYSTEM. REFILL SYSTEM AND PURGED SYSTEM. START UP AND LOAD UNIT. ADDED WATER A FEW TIMES TO PUMP OFF OIL OUT THE TOP OF TANK. HAD STEAMER FILL BARREL WITH WATER. LEFT WATER IN SYSTEM.

PARTS LIST					
QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
1	OR 5540 OIL COOLER	CUST.			
1	109 2332 ORING	PK			
1	6L 1650 ORING	PK			
1	3P 0650 ORING	PK			
2	4F 7387 ORING	PK			
1	4L 8120 GASKET	PL			
1	10# RAGS	NS			
20	WHITE OIL SOAKS	NS			
3	ROLOC DISCS	NS			

Customer Signature _____

Mechanic PHILLIP KORFF

ENTERED

NATURAL GAS COMPRESSION SYSTEMS FIELD MAINTENANCE REPORT

Maintenance Performed FINISH COOLANT FLUSH					WO										46827								
Customer DELTA					Unit # U 978-S					Location BRILEY 31					Date 10/2/2019								
Equipment		Eng. Hours 52364		Day Of Week WEDNESDAY			Time In 7:30		Time Out 10:30		Total Billable Reg 3		Total Billable OT		NonBillable								
Eng. Model & Serial # CAT 379 TA 72B01257					Compressor Model & serial # LEROI SCREW-LGL30270VFEP G3 S#5610X49					Cylinder Sizes													
Water Temp In 111		Water Temp Out 179		RPM 1108		Oil Temp 63		Fuel Press 184		Aux Water In		Aux Water Out		Vac. Left		Vac. Right							
Valve Adjust In./Exh.		Avg. Clear. Before Set		Type Of Oil					Timing		Amb. Temp		Sep. Press		Pre Cat		Post Cat						
Compression		LB		1	2	3	4	5	6	7	8	Suc Press -17.5		1st Int Press		2nd Int Press		3rd Int Press		Disc Press 37			
Readings		RB		1	2	3	4	5	6	7	8	1st temp 69 208		2nd Temp		3rd Temp		4th Temp		Oil Press 13		Oil Temp 188	

HRS.		SERVICE CHECKLIST											
3 PK		Service Unit				Check Cooler				Check Lube/Cycle time			
		Oil Sample Eng./Frame				Test shutdowns				X Oil & A/F Levels -25			
		Change Oil & Filters				Regap/Replace Spark plugs				Grease Bearings			
		Adjust Valves/Bridges				Air Filter				Check packing			
		Check Compression				Carb Linkage				Check Salt Filter Diff			
		Check Hold Downs				Compressor Valves				Check Battery Level			
		Check Fuel Press				Check O2 %				Check UNDER VOLTAGE			
		Check Belts/Bearings				Check CO				Converter Maintenance			
		Check Panel Wiring				Check NOX				Coalescer Differential			
		Replace Pro Flo Batt								Alignment			
		DUMPS											

MAINTENANCE PERFORMED

AT LOCATION CHECKED OVER UNIT AND HOOKED UP PUMP AND ADDED WATER AND PUMPED WATER OUT TOP OF DAY TANK INTO BUCKETS. ONCE SYSTEM WAS CLEAN. THEN SHUTDOWN AND DRAINED SYSTEM DOWN DUMP LINE. PUMPED NEW COOLANT INTO SYSTEM. PURGED SYSTEM, START UP AND LOAD UNIT. CLEANED UP AND DISCONNECTED HOSE AND HOOKED UP CAP AND DRAIN LINE. CHECKED OVER UNIT BEFORE LEAVING.

PARTS LIST

QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
110	Gallons coolant	CUST			

Customer Signature _____

Mechanic **PHILLIP KORFF**

ENTERED

NATURAL GAS COMPRESSION SYSTEMS FIELD MAINTENANCE REPORT

Maintenance Performed Cyl. Head Piston and Liner		NATURAL GAS COMPRESSION SYSTEMS FIELD MAINTENANCE REPORT						WO 50 46843							
Customer Delta			Unit # U978-s			Location Briley 31			Date 10/15/2019						
Equipment		Eng. Hours		Day Of Week Tuesday		Time In 10:00		Time Out 22:30		Total Billable Reg 13.5	Total Billable OT 13	NonBillable			
Eng. Model & Serial # Cat 379 72B314				Compressor Model & serial # Leroy LGL3027ovfep 561ox49				Cylinder Sizes							
Water Temp In 79	Water Temp Out 150	RPM 1109	Oil Press. 68	Oil Temp 135	Fuel Press	Aux Water In 74	Aux Water Out 74	Vac. Left 0	Vac. Right						
Valve Adjust In./Exh.		Avg. Clear. Before Set		Type Of Oil				Timing		Amb. Temp	Sep. Press	Pre Cat	Post Cat		
Compression	LB	1	2	3	4	5	6	7	8	Suc Press -17	1st Int Press	2nd Int Press	3rd Int Press	Disc Press 38	
Readings	RB	1	2	3	4	5	6	7	8	1st temp 83	2nd Temp 211	3rd Temp	4th Temp	Oil Press 13	Oil Temp 145

HRS.	SERVICE CHECKLIST									
12.5	Chad Wright	10:00 - 22:30	5.5	SERVICE		Check Cooler		Check Lube/Cycle time		
11.5	Jeff Butler	10:30 - 22:00	5	Oil Sample Eng./Frame		Test shutdowns		Oil & A/F Levels -25		
2.5	Peter Latuszek	18:00 - 20:30	2.5	Change Oil & Filters		Regap/Replace Spark plugs		Grease Bearings		
				Adjust Valves/Bridges		Air Filter		Check packing		
				Check Compression		Carb Linkage		Check Salt Filter Diff		
				Check Hold Downs		Compressor Valves		Check Battery Level		
				Check Fuel Press		Check O2 %		Check UNDER VOLTAGE		
				Check Belts/Bearings		Check CO		Converter Maintenance		
				Check Panel Wiring		Check NOX		Coalescer Differential		
				Replace Pro Flo Batt				Alignment		
				DUMPS						

MAINTENANCE PERFORMED

Called to unit for suspected coolant getting into a cylinder I drove to location we shut unit down and pulled the spark plugs to find out what cylinder was filling up with coolant after letting it sit for a half hour we found that the coolant was leaking into the number 8 cylinder. We Drained the coolant part way down below the heads we then removed number 8 head. Upon inspection we could not find anything wrong with the head we then turned our attention to the liner where we then found pitting in the cylinder and coolant leaking from one of the spots. We then drained the rest of the coolant I drove to the shop for parts and liner tool drove back to location replaced the piston and liner and cylinder head filled engine up with coolant changed engine oil cleaned oil pan out installed new spark plugs started unit up checked for leaks everything looked good cleaned up skid and left location.

PARTS LIST

QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
1	OR3286 Piston and liner pack	CW			
1	OR2670-R Cyl.Head	CW			
1	399054CP Gasket Kit	CW			
8	RL85G Spark Plugs	CW			
10	07480 roloc disc	non stk.			
6	Brake clean	non stk.			
1	10# Rags	non stk.			
1	Aero-Kroil penetrating	non stk.			

Customer Signature Chad Wright Compression Unit # Briley 31 / Raymer Mechanic Operations Project _____

AFE # _____ Acct # _____

Explanation: repair cylinder on

01-2785

Rob

ENTERED

57

NATURAL GAS COMPRESSION SYSTEMS
FIELD MAINTENANCE REPORT

Maintenance Performed: r & r water pump

Customer: DELTA Unit #: U841-S Location: AVERY 31 Date: 10/21/2019

Equipment: Eng. Hours: n/a Day Of Week: Monday Time In: 12:00 Time Out: 17:30 Total Billable Reg: 9.5 Total Billable OT: NonBillable

Eng. Model & Serial #: CAT379 72B237 Compressor Model & serial #: LGL30270V/FEP:5610X51 Cylinder Sizes: 16 3/4 11R 7R 4 1/4

Water Temp In: 140 Water Temp Out: 172 RPM: 1134 Oil Press: 47 Oil Temp: 175 Fuel Press: Aux Water In: Aux Water Out: Vac. Left: Vac. Right:

Valve Adjust In./Exh.: Avg. Clear: Before Set: Type Of Oil: CHEVRON SAE 40 Timing: Amb. Temp: 53 Sep. Press: Pre-Cat: Post-Cat:

Compression: LB 1 2 3 4 5 6 7 8 Suc. Press: -10 1st Int. Press: 2nd Int. Press: 3rd Int. Press: Disc Press: 15

Readings: RB 1 2 3 4 5 6 7 8 1st temp: 62 2nd Temp: 3rd Temp: 4th Temp: 154 Oil Press: 32 Oil Temp: 150

HRS.		SERVICE CHECKLIST																
5.5	jab	Service Unit	Check Cooler	Check Lube/Cycle time														
4	pjl	Oil Sample Eng./Frame	Test shutdowns	X Oil & A/F Levels -25														
		Change Oil & Filters	Regap/Replace Spark plugs	Grease Bearings														
		Adjust Valves/Bridges	Air Filter	Check packing														
		Check Compression	Carb Linkage	Check Salt Filter Diff														
		Check Hold Downs	Compressor Valves	Check Battery Level														
		Check Fuel Press	Check O2 %	Check UNDER VOLTAGE														
		Check Belts/Bearings	Check CO	Converter Maintenance														
		Check Panel Wiring	Check NOX	Coalescer Differential														
		Replace Pro Flo Batt		Alignment														

MAINTENANCE PERFORMED

call out by Bill for water pump leaking. Arrived at unit and water pump was leaking coolant out of a hole in the top of the water pump. Shut unit down and drained coolant. Removed and replaced water pump. Replaced all gaskets and orings on coolant bypass tube. Filled unit with coolant. started unit. checked for leaks. all pressure and temps normal.

PARTS LIST					
QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
1	OR-0803 water pump	jab	6	Roloc disc	n/s
1	5L-2660 bearing	jab	1	Black adhesive	n/s
1	8L-5197 gasket	jab	6	cans of break clean	n/s
1	4L-7885 gasket	jab	1	Black silicone	n/s
1	4L-7885 gasket	jab			
1	4L-8121 gasket	jab			
1	4L-5832 gasket	jab			
1	4L-3437 gasket	jab			
1	4L-8606 gasket	jab			
1	5H-6012 seal	jab			
2	6L-1650 oring	jab			

Customer Signature _____ Mechanic Jeff Butler



37



**NATURAL GAS COMPRESSION SYSTEMS
FIELD MAINTENANCE REPORT**

Maintenance Performed Fuel regulator		NATURAL GAS COMPRESSION SYSTEMS FIELD MAINTENANCE REPORT						WO 46940										
Customer DELTA			Unit # U841-S			Location AVERY 31			Date 11/8/2019									
Equipment		Eng. Hours n/a		Day Of Week Friday		Time In 10:00		Time Out 12:30		Total Billable Reg 2.5	Total Billable OT	NonBillable						
Eng. Model & Serial # CAT379 72B237				Compressor Model & serial # Lerio LGL30270VFEP 5610X51				Cylinder Sizes										
Water Temp In 129	Water Temp Out 175	RPM 1170		Oil Press. 52	Oil Temp 180	Fuel Press 14	Aux Water In 71	Aux Water Out 76	Vac. Left		Vac. Right							
Valve Adjust In./Exh.		Avg. Clear. Before Set			Type Of Oil CHEVRON SAE 40				Timing 26		Amb. Temp. 13	Sep. Press	Pre Cat	Post Cat				
Compression	LB	1	2	3	4	5	6	7	8	Suc Press -8		1st Int Press		2nd Int Press		3rd Int Press		Disc Press 12
Readings	RB	1	2	3	4	5	6	7	8	1st temp 51 175		2nd Temp	3rd Temp	4th Temp	Oil Press 51		Oil Temp 175	

HRS.	SERVICE CHECKLIST												
2.5	Peter	Service Unit				Check Cooler				Check Lube/Cycle time			
		Oil Sample Eng./Frame				Test shutdowns				Oil & A/F Levels -25			
		Change Oil & Filters				Regap/Replace Spark plugs				Grease Bearings			
		Adjust Valves/Bridges				Air Filter				Check packing			
		Check Compression				Carb Linkage				Check Salt Filter Diff			
		Check Hold Downs				Compressor Valves				Check Battery Level			
		Check Fuel Press				Check O2 %				Check UNDER VOLTAGE			
		Check Belts/Bearings				Check CO				Converter Maintenance			
		Check Panel Wiring				Check NOX				Coalescer Differential			
		Replace Pro Flo Batt								Alignment			

MAINTENANCE PERFORMED

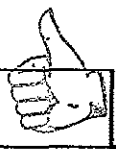
Callout by Kent, stated engine wouldn't start after the service and wanted the right fuel regulator replaced. At location, installed a new regulator. Started unit and checked the timing while warming up b/c Kent had replaced the magneto. Timing was too high. Shutdown and index the magneto. Restart unit and set timing to 26 BTDC. Engine was low on coolant fill engine with coolant.

PARTS LIST					
QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
15	Gallons coolant	customer			
1	S201 regulator	PL			

Customer Signature _____ Mechanic Peter Latuszek

ENTERED

Maintenance Performed
r & r water pump



NATURAL GAS COMPRESSION SYSTEMS FIELD MAINTENANCE REPORT

WO
46967

Customer **DELTA** Unit # **U978-S** Location **BRILEY 31** Date **11/14/2019**

Equipment Eng. Hours **53354** Day Of Week **Thursday** Time In **6:30** Time Out **15:00** Total Billable Reg **8.5** Total Billable OT NonBillable

Eng. Model & Serial # **CAT379 72B00314** Compressor Model & serial # **LEROI LGL30270VFEP/ 5610X49** Cylinder Sizes

Water Temp In **126** Water Temp Out **175** RPM **1131** Oil Press. **65** Oil Temp **175** Fuel Press Aux Water In Aux Water Out Vac. Left Vac. Right

Valve Adjust In./Exh. Avg. Clear. Before Set Type Of Oil **CHEVRON SAE 40** Timing Amb. Temp. **37** Sep. Press Pre Cat **954** Post Cat **1033**

Compression LB 1 2 3 4 5 6 7 8 Suc Press **-15** 1st Int Press 2nd Int Press 3rd Int Press Disc Press **46**

Readings RB 1 2 3 4 5 6 7 8 1st temp 2nd Temp 3rd Temp 4th Temp **155** Oil Press **14** Oil Temp **200**

HRS.	Job	Service Unit	Check Cooler	Check Lube/Cycle time
8.5	jab	Oil Sample Eng./Frame	Test shutdowns	X Oil & A/F Levels -25
		Change Oil & Filters	Regap/Replace Spark plugs	Grease Bearings
		Adjust Valves/Bridges	Air Filter	Check packing
		Check Compression	Carb Linkage	Check Salt Filter Diff
		Check Hold Downs	Compressor Valves	Check Battery Level
		Check Fuel Press	Check O2 %	Check UNDER VOLTAGE
		Check Belts/Bearings	Check CO	Converter Maintenance
		Check Panel Wiring	Check NOX	Coalescer Differential
		Replace Pro Flo Batt		Alignment

MAINTENANCE PERFORMED

call out by Pat for water pump leaking. Arrived at unit and unit was down. drained coolant. Removed and replaced water pump. Filled unit with new coolant. found throttle linkage bolt missing. Found bolt and nut and put back on. started unit and unit would barely run. checked fuel. checked timing. checked spark on all spark plugs and left bank plugs weren't firing. shut unit down and replaced left bank spark plugs. started unit. checked for leaks. let unit warm up and loaded. all pressure and temps normal.

PARTS LIST

QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
1	OR-0803 water pump	jab			
1	5L-2660 bearing	jab	3	6L-9284 oring	ATL -jab-
1	8L-5197 gasket	jab	3	6L-1651 oring	ATL -jab-
2	4L-7885 gasket	jab	2	barrels coolant	customer
2	9M-4218 o-ring	ATL jab	4	RL85G spark plug (customer supplied)	customer
1	4L-8121 gasket	jab	1	box of rags	n/s
1	4L-5832 gasket	jab	1	bag of gray soaks	n/s
1	4L-3437 gasket	jab	6	cans of break clean	n/s
1	4L-8606 gasket	jab	4	roloc disc	n/s
2	5H-6012 seal	jab			
2	6L-1650 oring	jab			

Customer Signature _____

Mechanic Jeff Butler

ENTERED

37

**NATURAL GAS COMPRESSION SYSTEMS
FIELD MAINTENANCE REPORT**

Maintenance Performed: left exhaust manifold
 Customer: Delta
 Unit #: U978-S
 Location: Briley 31
 WO: 46986
 Date: 11/20/2019

Equipment: eng hours
 Day Of Week: Wednesday
 Time In: 7:00
 Time Out: 13:30
 Total Billable Reg: 19.5
 Total Billable OT: NonBillable

Eng. Model & Serial #: 379TA 72B00314
 Compressor Model & serial #: LGL 30270VFEP 5610X49
 Cylinder Sizes:

Water Temp In: 114
 Water Temp Out: 188
 RPM: 1130
 Oil Press.: 62
 Oil Temp: 190
 Fuel Press:
 Aux Water In: 53
 Aux Water Out: 58
 Manifold psi left: 2.5#
 Manifold psi right: 2.5#

Valve Adjust In./Exh.:
 Avg. Clear. Before Set:
 Type Of Oil: chevron
 Timing: 27 ACT
 DES.
 Amb. Temp: 35
 Sep. Press:
 Pre Cat: 1030
 Post Cat: 949

Compression: LB 1 2 3 4 5 6 7 8
 Suc Press: -18
 1st Int Press: 2nd Int Press: 3rd Int Press: Disc Press: 35
 Readings: RB 1 2 3 4 5 6 7 8
 1st temp: 58 205
 2nd Temp: 3rd Temp: 4th Temp:
 Oil Press: 12
 Oil Temp: 200

HRS.	HOURS DETAIL	TECHNICIAN	SERVICE CHECKLIST		
6.5	/	Peter	Service Unit	Check Cooler	Check Lube/Cycle time
7	/	Kyle	Oil Sample Eng./Frame	Test shutdowns	Oil & A/F Levels -25
6	/	Phil	Change Oil & Filters	Regap/Replace Spark plugs	Grease Bearings
			Adjust Valves/Bridges	Air Filter	Check packing
			Check Compression	Carb Linkage	Check Salt Filter Diff
			Check Hold Downs	Compressor Valves	Check Battery Level
			Check Fuel Press	Check O2 %	Check Dumps
			Check Belts/Bearings	Check CO	Converter Maintenance
			Check Panel Wiring	Check NOX	Coalescer Differential
			Replace Pro Flo Batt		

MAINTENANCE PERFORMED

At location to replace the left exhaust manifold. Manifold has internal crack.
 Shutdown and drain the coolant. Remove left exhaust manifold. Clean all mating surfaces and install new manifold. Replace all related gaskets and o-rings.
 Refill engine with coolant and restart unit. Put unit back online.

PARTS LIST

QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
1	4L-9151 Exhaust manifold- Marine exhaust	po#47246			
2	5L-8817 gasket	PL			
4	4H-5952 gasket (4 FDSOI)	PL			
1	4L-7907 gasket PK	+PL			
1	7M-7273 gasket	PK			
4	2N-3238 gasket	n/s			
1	4L-8128 gasket	PL			
1	9M-4217 o-ring	KP			
1	10# Rags	n/s			
6	Brake clean	n/s			
1	Bolts (Atlanta Hardware)	N/S			

Mechanic: Peter J Latuszek

ENTERED

Maintenance Performed
FIX ENGINE OIL PAN LEAK

NATURAL GAS COMPRESSION SYSTEMS
FIELD MAINTENANCE REPORT

WO
47132

Customer DELTA **Unit #** U 1319-S **Location** BRILEY 19 **Date** 12/20/2019

Equipment **Eng. Hours** 31282 **Day Of Week** FRIDAY **Time In** 6:00 **Time Out** 12:00 **Total Billable Reg** 10 **Total Billable OT** **NonBillable**

Eng. Model & Serial # CAT 3406 TA 4FD01614 **Compressor Model & serial #** LEROI A219-232-6 G3 S#5265X231 **Cylinder Sizes** SCREW

Water Temp In 122 **Water Temp Out** 180 **RPM** 1664 **Oil Press.** 78 **Oil Temp** 172 **Fuel Press** **Aux Water In** **Aux Water Out** **Vac. Left** 5 **Vac. Right**

Valve Adjust In./Exh. **Avg. Clear. Before Set** **Type Of Oil** **Timing** **Amb. Temp** 20 **Sep. Press** **Pre Cat** **Post Cat**

Compression **LB** 1 2 3 4 5 6 7 8 **Suc Press** -10 **1st Int Press** **2nd Int Press** **3rd Int Press** **Disc Press** 74

Readings **RB** 1 2 3 4 5 6 7 8 **1st temp** 48 **193** **2nd Temp** **3rd Temp** **4th Temp** **Oil Press** 50 **Oil Temp** 184

HRS.	SERVICE CHECKLIST							
6 PK						Service Unit	Check Cooler	Check Lube/Cycle time
4 PL						Oil Sample Eng./Frame	Test shutdowns	Oil & A/F Levels -25
						Change Oil & Filters	Regap/Replace Spark plugs	Grease Bearings
						Adjust Valves/Bridges	Air Filter	Check packing
						Check Compression	Carb Linkage	Check Salt Filter Diff
						Check Hold Downs	Compressor Valves	Check Battery Level
						Check Fuel Press	Check O2 %	Check UNDER VOLTAGE
						Check Belts/Bearings	Check CO	Converter Maintenance
						Check Panel Wiring	Check NOX	Coalescer Differential
						Replace Pro Flo Batt		Alignment
						DUMP		

MAINTENANCE PERFORMED

WENT TO SHOP FOR PARTS. AT LOCATION CHECKED OVER UNIT BEFORE SHUTTING DOWN. DRAINED OIL FROM ENGINE AND PULLED CAT WALK AND PIPES OUT OF THE WAY. PULLED OFF ENGINE OIL PAN. CLEANED UP EVERYTHING AND INSTALL NEW GASKET. INSTALL OIL PAN BACK ONTO ENGINE. PUT PIPING BACK TOGETHER AND CAT WALK BACK IN PLACE. FINISHED UP AND START UP AND LOAD UNIT. CLEANED UP AND CHECKED OVER UNIT BEFORE LEAVING.

PARTS LIST

QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
1	4N 1151 GASKET KIT	PK			
6	CANS BRAKE CLEANER	NS			
1	BLACK SILICONE GASKET MAKER	NS			
20	WHITE OIL SOAKS	NS			
1	10# RAGS	NS			
4	ROLOC DISC	NS			

Customer Signature _____

Mechanic PHILLIP KORFF

POSTED

NATURAL GAS COMPRESSION SYSTEMS FIELD MAINTENANCE REPORT

Maintenance Performed head change		NATURAL GAS COMPRESSION SYSTEMS FIELD MAINTENANCE REPORT					WO 47517								
Customer DELTA			Unit # U1319-S		Location BRILEY 19		Date 4/10/2020								
Equipment	Eng. Hours 33928	Day Of Week Friday	Time In 6:30	Time Out 16:00	Total Billable Reg 19	Total Billable OT	NonBillable								
Eng. Model & Serial # 3406 4FD01614			Compressor Model & serial # LEROI 5265X231			Cylinder Sizes									
Water Temp In 127	Water Temp Out 188	RPM 1691	Oil Press. 78	Oil Temp 203	Fuel Press	Aux Water In 75	Aux Water Out 79	Vac. Left Vac. Right							
Valve Adjust In./Exh.	Avg. Clear. Before Set	Type Of Oil chevron			Timing	Amb. Temp. 34	Sep. Press	Pre Cat Post Cat							
Compression	LB	1	2	3	4	5	6	7	8	Suc Press -17	1st Int Press	2nd Int Press	3rd Int Press	Disc Press 29	
Readings	RB	1	2	3	4	5	6	7	8	1st temp 58	2nd Temp	3rd Temp	4th Temp 210	Oil Press 50	Oil Temp 175

HRS.		SERVICE CHECKLIST													
9.5	jab	Service Unit				Check Cooler				Check Lube/Cycle time					
9.5	PK	Oil Sample Eng./Frame				Test shutdowns				Oil & A/F Levels -25					
		Change Oil & Filters				Regap/Replace Spark plugs				Grease Bearings					
		Adjust Valves/Bridges				Air Filter				Check packing					
		Check Compression				Carb Linkage				Check Salt Filter Diff					
		Check Hold Downs				Compressor Valves				Check Battery Level					
		Check Fuel Press				Check O2 %				Check UNDER VOLTAGE					
		Check Belts/Bearings				Check CO				Converter Maintenance					
		Check Panel Wiring				Check NOX				Coalescer Differential					
		Replace Pro Flo Batt								Alignment					

MAINTENANCE PERFORMED

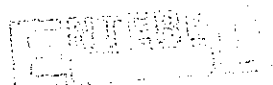
unit is scheduled for a head change. Arrived at unit. Drained coolant and engine oil. coolant was black. told Kent and he said he would get new coolant. Removed engine head. Cleaned engine deck. Installed new head. adjusted valves/bridges. removed and replaced oil filter, installed new spark plugs. removed oil cooler and inspected. oil cooler was clogged. drove to shop and picked up a new one. installed new oil cooler. removed sight glass and petcock and tube on coolant tank and cleaned. reinstalled sight glass and petcock. refilled unit with new coolant and oil. started unit. let unit warm up and loaded. all pressure and temps normal.

PARTS LIST

QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
1	20R-0827 head	jab			
1	7X-7657 gasket kit	jab			
1	OR5511 oil cooler	jab			
1	6V-1185 gasket kit (459978)	jab			
6	RN79G spark plug	customer			
6	7E-0079 seal	customer			
1	1R-0716 oil filter	customer			
1	box of rags	n/s			
1	bag gray oil soaks	n/s			
12	break clean	n/s			
12	roloc disc's	n/s			

Customer Signature _____

Mechanic Jeff Butler



Maintenance Performed front/rear seal		NATURAL GAS COMPRESSION SYSTEMS FIELD MAINTENANCE REPORT						WO 47577							
Customer Delta		Unit # U841-S		Location Avery 31 booster			Date 5/5/2020								
Equipment screw		Eng. Hours 50093		Day Of Week Tuesday		Time In 7:00	Time Out 15:00	Total Billable Reg 23.5	Total Billable OT	NonBillable					
Eng. Model & Serial # CAT 379TA 72B0237				Compressor Model & serial # Lerio LGL30270YFEP 5610X51				Cylinder Sizes							
Water Temp In 137	Water Temp Out 170	RPM 1183	Oil Press. 47	Oil Temp 182	Fuel Press 26	Aux Water In	Aux Water Out	Vac. Left	Vac. Right						
Valve Adjust In./Exh.		Avg. Clear. Before Set		Type Of Oil Chevron Hdax Low Ash				Timing	Amb. Temp. 51	Sep. Press	Pre Cat	Post Cat			
Compression	LB	1	2	3	4	5	6	7	8	Suc Press -15	1st Int Press	2nd Int Press	3rd Int Press	Disc Press 10	
Readings	RB	1	2	3	4	5	6	7	8	1st temp 60	2nd Temp 201	3rd Temp	4th Temp	Oil Press 30	Oil Temp 176

HRS.		SERVICE CHECKLIST											
8	KP	Service Unit				Check Cooler				Check Lube/Cycle time			
9	PJL	Oil Sample Eng./Frame				Test shutdowns				Oil & A/F Levels -25			
6.5	CW	Change Oil & Filters				Regap/Replace Spark plugs				Grease Bearings			
		Adjust Valves/Bridges				Air Filter				Check packing			
		Check Compression				Carb Linkage				Check Salt Filter Diff			
		Check Hold Downs				Compressor Valves				Check Battery Level			
		Check Fuel Press				Check O2 %				Check UNDER VOLTAGE			
		Check Belts/Bearings				Check CO				Converter Maintenance			
		Check Panel Wiring				Check NOX				Coalescer Differential			
		Replace Pro Flo Batt								Alignment			

MAINTENANCE PERFORMED

Checked unit over good. Shut unit down. Blew unit down. Was there to change front and rear seal. Drain compressor oil down, shut oil valve off for compressor. Removed inlet and outlet pipe to compressor. Unhook all lines connecting to compressor. Unbolt compressor from engine and skid stand. Pull compressor out using boom truck. Changed coupling on compressor. Removed flywheel. Removed adapter and old seal. Cleaned up and installed new adapter and seal. Reinstalled flywheel and torque flywheel bolts. Reinstalled compressor and shimed mounts. Changed gasket on main inlet pipes. Also change seals on compressor oil pipes. Hooked up all piping and lines. Refilled with compressor oil. Removed fan guard. Removed belts and pulleys. Removed damper. Removed adapter and old seal. Installed new front seal. Reinstalled damper. Reinstalled pulley and belts. Reinstalled fan guard. Installed 4 new compressor filters. Fired unit back up. Checked unit over good. Everything looked good. Unit was than put back on line.

PARTS LIST

QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
1	4W-2606 front seal	KP	1	8T coupling	customer
1	4W-2607 rear seal	KP	2	.020 B-Type shims	n/s
1	2445-0490 garlock gasket	KP			
4	008-8000 2in dresser sleeves	KP			
4	B99 filters	KP			
12	cans of brake clean	N/S			
10	roltec disc	N/S			
2	scotch brit pads	N/S			
1	4W-2566 adapter	PJL			
1	4W-2567 adapter	PJL			
2	5L-2093 gaskets	PJL			

Customer Signature _____

Mechanic Kyle Purvis

MAY 27 ENT'D

**NATURAL GAS COMPRESSION SYSTEMS
FIELD MAINTENANCE REPORT**

Maintenance Performed Changed #1 #3 Cylinder Head		Unit # U841-s					Location Avery 31 Booster			WO 47594	
Customer Delta		Date 5/12/2020		Eng. Hours 50261		Day Of Week Tuesday		Time In 9:00		Time Out 18:30	
Equipment		Total Billable Reg 15.5		Total Billable OT		NonBillable		Compressor Model & serial # Leroi Igl30270vfep63 5610x51		Cylinder Sizes	
Eng. Model & Serial # Cat 379 72B237		Oil Press. 60		Oil Temp 180		Fuel Press		Aux Water In		Aux Water Out	
Water Temp In 142		Water Temp Out 190		RPM 1170		Vac. Left 0		Vac. Right			
Valve Adjust In./Exh.		Avg. Clear. Before Set		Type Of Oil		Timing		Amb. Temp		Sep. Press Pre Cat Post Cat	
Compression		LB		1 2 3 4		5 6 7 8		Suc Press -14		1st Int Press 2nd Int Press 3rd Int Press Disc Press 10	
Readings		RB		1 2 3 4		5 6 7 8		1st temp 58		2nd Temp 3rd Temp 4th Temp 195	

SERVICE CHECKLIST												
HRS.												
9.5	Chad Wright ✓			SERVICE				Check Cooler			Check Lube/Cycle time	
6	Kyle Purvis ✓			Oil Sample Eng./Frame				Test shutdowns			Oil & A/F Levels -25	
				Change Oil & Filters				Regap/Replace Spark plugs			Grease Bearings	
				Adjust Valves/Bridges				Air Filter			Check packing	
				Check Compression				Carb Linkage			Check Salt Filter Diff	
				Check Hold Downs				Compressor Valves			Check Battery Level	
				Check Fuel Press				Check O2 %			Check UNDER VOLTAGE	
				Check Belts/Bearings				Check CO			Converter Maintenance	
				Check Panel Wiring				Check NOX			Coalescer Differential	
				Replace Pro Flo Batt							Alignment	
				DUMPS								

MAINTENANCE PERFORMED

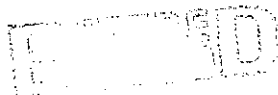
Called to unit for coolant leak. Drove to location and found the coolant was leaking from under number 1 Cylinder head. Drained coolant from engine and drove to the shop to get parts to change head. Drove back to location and started removing head, after removing head we discovered that the head burnt a exhaust valve cleaned up and installed new head. Filled back up with coolant and started unit up. When we tried loading unit the engine started detonating we shut unit back down, removed turbo nozzles and cleaned them reassembled. Started unit back up and loaded and was running good cleaned up skid and left location.

PARTS LIST

QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
1	OR-2670 Cylinder Head (NG657)	CW	6	Brake clean	n/s
1	399054cp Gasket Kit	CW	8	Roloc disc	n/s
2	NK1000063C400 Seals	CW	4	07447 scotch pads	n/s
1	9M-4217 O-ring	CW			
2	6L-1650 O-ring	CW			
1	9M-4849 O-ring	KP			
1	1S-6595 Gasket	KP			
1	1S-4810 Gasket	KP			
5	RL85G Spark plug	KP			
1	1S-6595 Gasket	N/S			
1	1S-4810 Gasket	N/S			

Customer Signature _____

Mechanic Chad Wright



Maintenance Performed CHANGED ENGINE GOVERNOR					NATURAL GAS COMPRESSION SYSTEMS FIELD MAINTENANCE REPORT					WO 47620												
Customer DELTA				Unit # U841-S				Location AVERY 24				Date 5/18/2020										
Equipment		Eng. Hours 50392		Day Of Week MONDAY		Time In 10:30		Time Out 14:00		Total Billable Reg 3.5		Total Billable OT		NonBillable								
Eng. Model & Serial # CAT 379 TA 72B237				Compressor Model & serial # LEROI LGL30270VFEP G3 S# 5610X51				Cylinder Sizes SCREW														
Water Temp In 139		Water Temp Out 160		RPM 1015		Oil Press. 32		Oil Temp 183		Fuel Press 30		Aux Water In		Aux Water Out		Vac. Left		Vac. Right				
Valve Adjust In./Exh.		Avg. Clear. Before Set		Type Of Oil				Timing				Amb. Temp		Sep. Press		Pre Cat		Post Cat				
Compression		LB	1	2	3	4	5	6	7	8	Suc Press -13		1st Int Press		2nd Int Press		3rd Int Press		Disc Press 9			
Readings		RB	1	2	3	4	5	6	7	8	1st temp 64 171		2nd Temp		3rd Temp		4th Temp		Oil Press 31		Oil Temp 180	

HRS.		SERVICE CHECKLIST													
3.5	PK	Service Unit				Check Cooler				Check Lube/Cycle time					
		Oil Sample Eng./Frame				Test shutdowns				X Oil & A/F Levels -25					
		Change Oil & Filters				Regap/Replace Spark plugs				Grease Bearings					
		Adjust Valves/Bridges				Air Filter				Check packing					
		Check Compression				Carb Linkage				Check Salt Filter Diff					
		Check Hold Downs				Compressor Valves				Check Battery Level					
		Check Fuel Press				Check O2 %				Check UNDER VOLTAGE					
		Check Belts/Bearings				Check CO				Converter Maintenance					
		Check Panel Wiring				Check NOX				Coalescer Differential					
		Replace Pro Flo Batt								Alignment					
		DUMPS													

MAINTENANCE PERFORMED

CALLED TO LOCATION BY OPERATOR THAT ENGINE SURGING. WENT TO SHOP FOR PARTS. AT LOCATION CHECKED OVER UNIT. ENGINE SPEED WAS 1015. COULD NOT SPEED UP OR SLOW DOWN. EVERYTHING WAS BOUND. DISCONNECT LINKAGE AND PROBLEM WAS IN THE GOVERNOR. SLOW DOWN OTHER UNIT. SHUTDOWN UNIT AND PULL OFF GOVERNOR. INSTALL NEW GOVERNOR. START UP UNIT AND COULD NOT SPEED UP. CHECKED LINKAGES AND PULLED OFF TOP ON GOVERNOR. ADJUSTED OVERSPEED. SPEED UP AND LOAD UNIT. SET OVERSPEED AND SET RPMS AT 1180. CHECKED OVER UNIT BEFORE LEAVING. CALLED BACK THAT ENGINE WAS SURGING. AT LOCATION CHECKED OVER ENGINE. SHUTDOWN AND SHIM RELIEF. START UP AND LOAD UNIT. ADJUSTED FUEL. CHECKED OVER UNIT BEFORE LEAVING.

PARTS LIST					
QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
1	3N 4077 GOVERNOR	GAY			
1	7L 8682 GASKET	PK			

Customer Signature _____ Mechanic PHILLIP KORFF

ENTERED

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pjl

Maintenance Performed Coolant Leak repair	NATURAL GAS COMPRESSION SYSTEMS FIELD MAINTENANCE REPORT	WO 47691
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Customer Delta	Unit # U-1319-S	Location Briley 19	Date 6/9/2020
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Equipment	Eng. Hours 35355	Day Of Week Tuesday	Time In 13:30	Time Out 19:00	Total Billable Reg 6.5	Total Billable OT 3	NonBillable
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Eng. Model & Serial # Cat 3406 4FD01514	Compressor Model & serial # Leroi A219-232-6 5265x231	Cylinder Sizes
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Water Temp In 146	Water Temp Out 190	RPM 1583	Oil Press. 75	Oil Temp 173	Fuel Press	Aux Water In	Aux Water Out 102	Vac. Left 7	Vac. Right
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Valve Adjust In./Exh.	Avg. Clear. Before Set	Type Of Oil	Timing	Amb. Temp	Sep. Press	Pre Cat	Post Cat
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Compression	LB	1	2	3	4	5	6	7	8	Suc Press 0	1st Int Press	2nd Int Press	3rd Int Press	Disc Press 54
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Readings	RB	1	2	3	4	5	6	7	8	1st temp 88	2nd Temp	3rd Temp	4th Temp 195	Oil Press	Oil Temp
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HRS.	SERVICE CHECKLIST		
5.5	Chad Wright	13:30 - 19:00	SERVICE
4	Pete Latuszek	14:00 - 18:00	Oil Sample Eng./Frame
			Change Oil & Filters
			Adjust Valves/Bridges
			Check Compression
			Check Hold Downs
			Check Fuel Press
			Check Belts/Bearings
			Check Panel Wiring
			Replace Pro Flo Batt
			DUMPS
			Check Cooler
			Test shutdowns
			Regap/Replace Spark plugs
			Air Filter
			Carb Linkage
			Compressor Valves
			Check O2 %
			Check CO
			Check NOX
			Check Lube/Cycle time
			Oil & A/F Levels -25
			Grease Bearings
			Check packing
			Check Salt Filter Diff
			Check Battery Level
			Checl UNDER VOLTAGE
			Converter Maintenance
			Coalescer Differential
			Alignment

MAINTENANCE PERFORMED

Called to unit for coolant leak one of the freeze plugs in the hot housing popped out. Drove to shop and picked up parts, drove to location made sure all the coolant was out then started removing the hot housing we were going to replace with a new hot housing but we did not have the old style housing so we installed a new freeze plug in the old hot housing and reassembled Also checked the oil cooler to make sure it was not plugged causing the freeze plug to pop out but oil cooler was not plugged reassembled that. Filled engine back up with coolant and started up checked for leaks cleaned up and left location.

PARTS LIST

QTY	PART#/DESCRIPTION	INV. LOC.	QTY	PART#/DESCRIPTION	INV. LOC.
1	4N0932 Freeze plug	PL			

Customer Signature _____

Mechanic Chad Wright

ENTERED