



Ariel Performance



Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 1: Ps-low, Pd-design

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

7.7.7.0

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4273	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

1 (SG)

Target Flow, MMSCFD	25.000
Flow Calc, MMSCFD	18.151
BHP per Stage	1123.4
Specific Gravity	0.7500
Ratio of Sp Ht (N)	1.2340
Comp Suct (Zs)	0.9903
Comp Disch (Zd)	0.9857
Pres Suct Line, psig	20.00
Pres Suct Flg, psig	19.67
Pres Disch Flg, psig	75.70
Pres Disch Line, psig	N/A
Pres Ratio F/F	2.722
Temp Suct, F	50.00
Temp Clr Disch, F	130.00

Cylinder Data:

Throw 3

Throw 5

Throw 4

Throw 6

Throw 1

Throw 2

Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.98	15.98	68.41	68.41	229.52	554.49
Temp Suct Intl, F	60	60	139	139	136	135
Pres Disch Intl, psig	84.03	84.03	263.82	263.82	610.04	1357.57
Temp Disch Intl, F	194	194	285	285	252	249
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	77.8/78.2	77.8/78.2	65.9/65.6	65.9/65.6	70.5/69.5	66.8/63.0
Disch Event HE/CE, ms	11.2/12.8	11.2/12.8	9.5/11.2	9.5/11.2	11.5/13.0	11.2/12.3
Suct Pseudo-Q HE/CE	7.9/7.7	7.9/7.7	5.4/5.1	5.4/5.1	4.0/3.7	2.6/2.1
Gas Rod Ld Comp, %	39.0 C	39.0 C	58.5 C	58.5 C	71.3 C	72.1 C
Gas Rod Ld Tens, %	40.7 T	40.7 T	59.4 T	59.4 T	68.6 T	60.1 T
Gas Rod Ld Total, %	41.2	41.2	60.9	60.9	72.3	68.5
Xhd Pin Deg/%RvrsI lbf	170/84.1	170/84.1	180/97.7	180/98.1	146/72.6	180/62.6
Flow Calc, MMSCFD	9.076	9.076	9.076	9.076	18.151	18.131
Cyl BHP	561.7	561.7	648.6	648.6	946.6	836.8



Ariel Performance


7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 2: Ps design-Pd design

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4955	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:
1 (SG)

Target Flow, MMSCFD	25.000	---	25.000	---	25.000	25.000
Flow Calc, MMSCFD	23.090	---	23.090	---	23.090	23.090
BHP per Stage	1230.8	---	1625.8	---	1129.1	900.0
Specific Gravity	0.7500	---	0.7503	---	0.7503	0.7503
Ratio of Sp Ht (N)	1.2499	---	1.2322	---	1.2481	1.2634
Comp Suct (Zs)	0.9878	---	0.9830	---	0.9516	0.9026
Comp Disch (Zd)	0.9838	---	0.9778	---	0.9462	0.9091
Pres Suct Line, psig	35.00	---	N/A	---	N/A	N/A
Pres Suct Flg, psig	34.52	---	94.05	---	299.02	651.52
Pres Disch Flg, psig	97.31	---	306.50	---	668.69	1326.26
Pres Disch Line, psig	N/A	---	N/A	---	N/A	1300.00
Pres Ratio F/F	2.325	---	2.987	---	2.185	2.016
Temp Suct, F	50.00	---	130.00	---	130.00	130.00
Temp Clr Disch, F	130.00	---	130.00	---	130.00	120.00

Cylinder Data:
Throw 3
Throw 5
Throw 4
Throw 6
Throw 1
Throw 2

Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	29.12	29.12	88.05	88.05	281.47	637.37
Temp Suct Intl, F	59	59	139	139	136	134
Pres Disch Intl, psig	107.91	107.91	322.96	322.96	700.14	1357.83
Temp Disch Intl, F	181	181	291	291	250	234
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	66.86 (V) %	66.86 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	43.89	43.89	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	53.3/82.8	53.3/82.8	67.4/67.1	67.4/67.1	73.7/72.8	74.1/71.2
Disch Event HE/CE, ms	9.7/14.3	9.7/14.3	9.8/11.3	9.8/11.3	12.2/13.7	12.7/14.2
Suct Pseudo-Q HE/CE	8.0/7.7	8.0/7.7	5.4/5.1	5.4/5.1	4.0/3.7	2.6/2.1
Gas Rod Ld Comp, %	45.3 C	45.3 C	70.4 C	70.4 C	78.7 C	65.8 C
Gas Rod Ld Tens, %	47.0 T	47.0 T	71.4 T	71.4 T	75.2 T	52.7 T
Gas Rod Ld Total, %	47.7	47.7	73.2	73.2	79.6	61.5
Xhd Pin Deg/%RvrsI lbf	172/94.7	172/94.6	157/89.8	153/89.4	145/74.2	168/69.8
Flow Calc, MMSCFD	11.545	11.545	11.545	11.545	23.090	23.090
Cyl BHP	615.4	615.4	812.9	812.9	1129.1	900.0



Ariel Performance



Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 3: Ps-high, Pd-design

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

7.7.7.0

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4896	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

1 (SG)

Target Flow, MMSCFD	25.000
Flow Calc, MMSCFD	26.182
BHP per Stage	1468.4
Specific Gravity	0.7500
Ratio of Sp Ht (N)	1.2469
Comp Suct (Zs)	0.9800
Comp Disch (Zd)	0.9729
Pres Suct Line, psig	60.00
Pres Suct Flg, psig	59.27
Pres Disch Flg, psig	161.13
Pres Disch Line, psig	N/A
Pres Ratio F/F	2.412
Temp Suct, F	50.00
Temp Clr Disch, F	130.00

Cylinder Data:

Throw 3

Throw 5

Throw 4

Throw 6

Throw 1

Throw 2

Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.98	51.17	147.00	147.00	373.68	765.14
Temp Suct Intl, F	59	64	137	137	135	133
Pres Disch Intl, psig	177.94	177.58	429.24	429.24	840.85	1360.09
Temp Disch Intl, F	185	190	264	264	237	208
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	87.71 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	53.25	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	40.4/81.7	N/A/81.7	21.2/74.6	21.2/74.6	47.6/76.8	55.2/79.6
Disch Event HE/CE, ms	8.2/14.0	N/A/14.0	5.7/13.2	5.7/13.2	9.8/14.8	11.7/16.3
Suct Pseudo-Q HE/CE	7.7/7.8	N/A/7.7	4.2/5.2	4.2/5.2	4.1/3.8	2.7/2.2
Gas Rod Ld Comp, %	73.0 C	5.8 C	84.9 C	84.9 C	88.3 C	56.3 C
Gas Rod Ld Tens, %	75.8 T	71.1 T	85.4 T	85.4 T	83.4 T	41.4 T
Gas Rod Ld Total, %	76.8	38.7	88.0	88.0	88.8	50.8
Xhd Pin Deg/%RvrsI lbf	168/82.2	130/57.9	142/84.7	143/85.4	151/93.6	159/61.8
Flow Calc, MMSCFD	15.882	10.300	13.091	13.091	26.182	26.182
Cyl BHP	871.4	597.0	754.7	754.7	1110.6	738.2



Ariel Performance



Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 4: Ps-low, Pd-low

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

7.7.7.0

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4022	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

1 (SG)

Target Flow, MMSCFD	25.000
Flow Calc, MMSCFD	18.243
BHP per Stage	1115.7
Specific Gravity	0.7500
Ratio of Sp Ht (N)	1.2342
Comp Suct (Zs)	0.9903
Comp Disch (Zd)	0.9857
Pres Suct Line, psig	20.00
Pres Suct Flg, psig	19.67
Pres Disch Flg, psig	74.54
Pres Disch Line, psig	N/A
Pres Ratio F/F	2.687
Temp Suct, F	50.00
Temp Clr Disch, F	130.00

Cylinder Data:

Throw 3

Throw 5

Throw 4

Throw 6

Throw 1

Throw 2

Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.98	15.98	67.46	67.46	221.24	501.43
Temp Suct Intl, F	60	60	138	138	135	134
Pres Disch Intl, psig	82.78	82.78	253.83	253.83	550.58	1045.14
Temp Disch Intl, F	192	192	282	282	243	226
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	78.2/78.6	78.2/78.6	67.0/66.7	67.0/66.7	73.5/72.5	74.2/71.3
Disch Event HE/CE, ms	11.3/13.0	11.3/13.0	9.8/11.3	9.8/11.3	12.2/13.7	12.8/14.3
Suct Pseudo-Q HE/CE	7.9/7.7	7.9/7.7	5.4/5.1	5.4/5.1	4.0/3.7	2.6/2.1
Gas Rod Ld Comp, %	38.3 C	38.3 C	55.9 C	55.9 C	61.9 C	49.9 C
Gas Rod Ld Tens, %	40.0 T	40.0 T	56.7 T	56.7 T	59.2 T	39.6 T
Gas Rod Ld Total, %	40.4	40.4	58.1	58.1	62.6	46.4
Xhd Pin Deg/%RvrsI lbf	169/83.9	169/83.9	178/96.1	177/96.4	179/79.0	161/78.4
Flow Calc, MMSCFD	9.122	9.122	9.122	9.122	18.243	18.230
Cyl BHP	557.9	557.9	637.3	637.3	881.3	681.1



Ariel Performance


7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 5: Ps-design, Pd-low

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4946	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:
1 (SG)

Target Flow, MMSCFD	25.000	---	25.000	---	25.000	25.000
Flow Calc, MMSCFD	24.867	---	24.867	---	24.867	24.867
BHP per Stage	1396.8	---	1704.5	---	1103.9	671.4
Specific Gravity	0.7500	---	0.7503	---	0.7503	0.7503
Ratio of Sp Ht (N)	1.2493	---	1.2329	---	1.2494	1.2656
Comp Suct (Zs)	0.9878	---	0.9820	---	0.9502	0.9061
Comp Disch (Zd)	0.9835	---	0.9768	---	0.9449	0.9066
Pres Suct Line, psig	35.00	---	N/A	---	N/A	N/A
Pres Suct Flg, psig	34.52	---	100.13	---	308.70	624.74
Pres Disch Flg, psig	103.19	---	315.27	---	638.87	1020.26
Pres Disch Line, psig	N/A	---	N/A	---	N/A	1000.00
Pres Ratio F/F	2.449	---	2.904	---	2.027	1.620
Temp Suct, F	50.00	---	130.00	---	130.00	130.00
Temp Clr Disch, F	130.00	---	130.00	---	130.00	120.00

Cylinder Data:
Throw 3
Throw 5
Throw 4
Throw 6
Throw 1
Throw 2

Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	29.12	29.12	93.78	93.78	290.56	611.18
Temp Suct Intl, F	59	59	139	139	135	133
Pres Disch Intl, psig	114.23	114.23	332.28	332.28	669.44	1045.85
Temp Disch Intl, F	188	188	287	287	240	202
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	33.85 (V) %	33.85 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	29.06	29.06	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	65.1/81.4	65.1/81.4	68.7/68.4	68.7/68.4	76.8/76.0	82.8/80.9
Disch Event HE/CE, ms	10.7/13.8	10.7/13.8	10.2/11.7	10.2/11.7	13.0/14.5	15.3/16.8
Suct Pseudo-Q HE/CE	7.9/7.7	7.9/7.7	5.4/5.1	5.4/5.1	4.1/3.7	2.6/2.1
Gas Rod Ld Comp, %	48.9 C	48.9 C	71.5 C	71.5 C	71.5 C	41.6 C
Gas Rod Ld Tens, %	50.8 T	50.8 T	72.4 T	72.4 T	67.8 T	29.8 T
Gas Rod Ld Total, %	51.5	51.5	74.4	74.4	72.0	37.1
Xhd Pin Deg/%RvrsI lbf	173/91.7	173/91.6	147/87.7	145/87.3	162/73.4	157/85.5
Flow Calc, MMSCFD	12.433	12.433	12.433	12.433	24.867	24.867
Cyl BHP	698.4	698.4	852.2	852.2	1103.9	671.4



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 6: Ps-high, Pd-low

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4892	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

1 (SG)

Target Flow, MMSCFD	25.000
Flow Calc, MMSCFD	28.371
BHP per Stage	1629.8
Specific Gravity	0.7500
Ratio of Sp Ht (N)	1.2466
Comp Suct (Zs)	0.9800
Comp Disch (Zd)	0.9727
Pres Suct Line, psig	60.00
Pres Suct Flg, psig	59.27
Pres Disch Flg, psig	165.70
Pres Disch Line, psig	N/A
Pres Ratio F/F	2.476
Temp Suct, F	50.00
Temp Clr Disch, F	130.00

Cylinder Data:

Throw 3

Throw 5

Throw 4

Throw 6

Throw 1

Throw 2

Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.99	51.18	151.57	151.57	373.37	707.78
Temp Suct Intl, F	59	64	137	137	135	132
Pres Disch Intl, psig	182.87	182.50	427.89	427.89	776.30	1047.34
Temp Disch Intl, F	188	193	259	259	226	182
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	45.55 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	34.32	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	58.5/81.0	N/A/81.0	25.0/75.7	25.0/75.7	54.9/79.9	71.7/86.7
Disch Event HE/CE, ms	10.0/13.8	N/A/13.8	6.3/13.5	6.3/13.5	11.0/15.7	15.0/19.0
Suct Pseudo-Q HE/CE	8.0/7.8	N/A/7.7	4.5/5.2	4.5/5.2	4.1/3.8	2.7/2.2
Gas Rod Ld Comp, %	75.8 C	5.8 C	83.2 C	83.2 C	76.6 C	34.4 C
Gas Rod Ld Tens, %	78.7 T	74.1 T	83.5 T	83.5 T	71.5 T	21.3 T
Gas Rod Ld Total, %	79.8	40.2	86.2	86.2	76.6	29.0
Xhd Pin Deg/%RvrsI lbf	161/94.0	120/57.0	143/84.2	142/84.9	152/99.3	154/82.5
Flow Calc, MMSCFD	18.167	10.204	14.185	14.185	28.371	28.371
Cyl BHP	1023.0	606.9	789.9	789.9	1076.8	536.3



Ariel Performance


7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 7: Ps-low Pd-high

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4344	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:
1 (SG)

Target Flow, MMSCFD	25.000	---	25.000	---	25.000	25.000
Flow Calc, MMSCFD	18.122	---	18.122	---	18.122	18.100
BHP per Stage	1125.8	---	1304.1	---	965.8	879.1
Specific Gravity	0.7500	---	0.7501	---	0.7501	0.7502
Ratio of Sp Ht (N)	1.2340	---	1.2183	---	1.2334	1.2497
Comp Suct (Zs)	0.9903	---	0.9838	---	0.9520	0.8940
Comp Disch (Zd)	0.9856	---	0.9766	---	0.9415	0.8965
Pres Suct Line, psig	20.00	---	N/A	---	N/A	N/A
Pres Suct Flg, psig	19.67	---	73.56	---	246.78	584.45
Pres Disch Flg, psig	76.07	---	253.21	---	600.96	1428.26
Pres Disch Line, psig	N/A	---	N/A	---	N/A	1400.00
Pres Ratio F/F	2.734	---	3.079	---	2.364	2.413
Temp Suct, F	50.00	---	130.00	---	130.00	130.00
Temp Clr Disch, F	130.00	---	130.00	---	130.00	120.00

Cylinder Data:
Throw 3
Throw 5
Throw 4
Throw 6
Throw 1
Throw 2

Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.98	15.98	68.71	68.71	232.18	571.62
Temp Suct Intl, F	60	60	139	139	136	135
Pres Disch Intl, psig	84.42	84.42	267.02	267.02	629.23	1461.66
Temp Disch Intl, F	195	195	286	286	255	256
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	77.7/78.0	77.7/78.0	65.6/65.2	65.6/65.2	69.6/68.5	64.7/60.7
Disch Event HE/CE, ms	11.2/12.8	11.2/12.8	9.5/11.0	9.5/11.0	11.2/12.8	10.7/11.8
Suct Pseudo-Q HE/CE	7.9/7.7	7.9/7.7	5.4/5.1	5.4/5.1	4.0/3.7	2.6/2.1
Gas Rod Ld Comp, %	39.3 C	39.3 C	59.4 C	59.4 C	74.4 C	79.6 C
Gas Rod Ld Tens, %	40.9 T	40.9 T	60.3 T	60.3 T	71.6 T	66.9 T
Gas Rod Ld Total, %	41.4	41.4	61.8	61.8	75.5	75.9
Xhd Pin Deg/%RvrsI lbf	170/84.2	170/84.2	180/98.3	180/98.6	144/73.7	152/56.1
Flow Calc, MMSCFD	9.061	9.061	9.061	9.061	18.122	18.100
Cyl BHP	562.9	562.9	652.1	652.1	965.8	879.1



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 8: Ps-design Pd-high

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4957	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

1 (SG)

Target Flow, MMSCFD	25.000	---	25.000	---	25.000	25.000
Flow Calc, MMSCFD	22.618	---	22.618	---	22.618	22.618
BHP per Stage	1188.8	---	1605.9	---	1137.2	956.0
Specific Gravity	0.7500	---	0.7503	---	0.7503	0.7503
Ratio of Sp Ht (N)	1.2500	---	1.2320	---	1.2478	1.2629
Comp Suct (Zs)	0.9878	---	0.9832	---	0.9519	0.9013
Comp Disch (Zd)	0.9839	---	0.9781	---	0.9465	0.9104
Pres Suct Line, psig	35.00	---	N/A	---	N/A	N/A
Pres Suct Flg, psig	34.52	---	92.50	---	296.95	661.73
Pres Disch Flg, psig	95.83	---	304.72	---	679.87	1428.26
Pres Disch Line, psig	N/A	---	N/A	---	N/A	1400.00
Pres Ratio F/F	2.294	---	3.014	---	2.236	2.136
Temp Suct, F	50.00	---	130.00	---	130.00	130.00
Temp Clr Disch, F	130.00	---	130.00	---	130.00	120.00

Cylinder Data:

Throw 3

Throw 5

Throw 4

Throw 6

Throw 1

Throw 2

Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	29.11	29.11	86.59	86.59	279.53	647.35
Temp Suct Intl, F	59	59	139	139	136	134
Pres Disch Intl, psig	106.31	106.31	321.05	321.05	711.68	1461.77
Temp Disch Intl, F	179	179	292	292	253	243
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	76.47 (V) %	76.47 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	48.20	48.20	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	50.2/83.1	50.2/83.1	67.1/66.7	67.1/66.7	72.8/71.8	71.6/68.4
Disch Event HE/CE, ms	9.5/14.5	9.5/14.5	9.8/11.3	9.8/11.3	11.8/13.5	12.2/13.5
Suct Pseudo-Q HE/CE	7.9/7.7	7.9/7.7	5.4/5.1	5.4/5.1	4.0/3.7	2.6/2.1
Gas Rod Ld Comp, %	44.4 C	44.4 C	70.3 C	70.3 C	81.2 C	73.8 C
Gas Rod Ld Tens, %	46.1 T	46.1 T	71.3 T	71.3 T	77.7 T	60.2 T
Gas Rod Ld Total, %	46.7	46.7	73.1	73.1	82.2	69.5
Xhd Pin Deg/%RvrsI lbf	174/96.1	174/96.1	158/90.3	154/89.9	145/74.8	178/63.2
Flow Calc, MMSCFD	11.309	11.309	11.309	11.309	22.618	22.618
Cyl BHP	594.4	594.4	803.0	803.0	1137.2	956.0



Ariel Performance



Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 9: Ps-high, Pd-design

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

7.7.7.0

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4923	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

1 (SG)

Target Flow, MMSCFD
Flow Calc, MMSCFD
BHP per Stage
Specific Gravity
Ratio of Sp Ht (N)
Comp Suct (Zs)
Comp Disch (Zd)
Pres Suct Line, psig
Pres Suct Flg, psig
Pres Disch Flg, psig
Pres Disch Line, psig
Pres Ratio F/F
Temp Suct, F
Temp Clr Disch, F

25.000
25.613
1454.4
0.7500
1.2470
0.9804
0.9735
58.75
58.03
160.21
N/A
2.441
50.00
130.00

2

25.000
25.613
1492.8
0.7499
1.2334
0.9712
0.9639
N/A
155.72
408.32
N/A
2.498
130.00
130.00

3

25.000
25.613
1120.7
0.7499
1.2498
0.9318
0.9261
N/A
398.82
823.78
N/A
2.032
130.00
130.00

4

25.000
25.613
785.8
0.7499
1.2654
0.8734
0.8821
N/A
803.72
1428.26
1400.00
1.765
130.00
120.00

Cylinder Data:

Throw 3

Throw 5

Throw 4

Throw 6

Throw 1

Throw 2

Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	49.90	50.08	146.12	146.12	375.16	785.72
Temp Suct Intl, F	59	64	137	137	135	133
Pres Disch Intl, psig	176.88	176.52	431.09	431.09	863.75	1464.24
Temp Disch Intl, F	186	191	265	265	240	215
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	85.85 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	52.42	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	40.2/81.4	N/A/81.4	20.1/74.2	20.1/74.2	45.4/75.9	50.7/77.7
Disch Event HE/CE, ms	8.2/13.8	N/A/13.8	5.5/13.0	5.5/13.0	9.5/14.5	10.8/15.8
Suct Pseudo-Q HE/CE	7.7/7.8	N/A/7.7	4.1/5.2	4.1/5.2	4.1/3.8	2.7/2.2
Gas Rod Ld Comp, %	73.0 C	5.7 C	85.8 C	85.8 C	92.2 C	63.5 C
Gas Rod Ld Tens, %	75.8 T	71.3 T	86.3 T	86.3 T	87.4 T	48.0 T
Gas Rod Ld Total, %	76.8	38.7	88.9	88.9	92.9	57.9
Xhd Pin Deg/%RvrsI lbf	168/82.6	130/57.3	142/84.8	142/85.5	165/92.1	163/63.5
Flow Calc, MMSCFD	15.537	10.076	12.806	12.806	25.613	25.613
Cyl BHP	863.0	591.4	746.4	746.4	1120.7	785.8



Ariel Performance



Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 10: Ps-low, Pd-design-Avalon-Winter

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

7.7.7.0

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4332	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	18.206	18.206	18.206	18.187
BHP per Stage	1152.2	1318.1	960.2	833.0
Specific Gravity	0.8285	0.8285	0.8285	0.8287
Ratio of Sp Ht (N)	1.2429	1.2259	1.2389	1.2517
Comp Suct (Zs)	0.9900	0.9831	0.9500	0.8902
Comp Disch (Zd)	0.9851	0.9745	0.9362	0.8810
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	73.19	244.15	567.94
Pres Disch Flg, psig	75.65	250.35	583.57	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.721	3.059	2.321	2.306
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.59	15.59	67.85	67.85	228.16	554.10
Temp Suct Intl, F	60	60	139	139	136	135
Pres Disch Intl, psig	84.74	84.74	265.35	265.35	614.01	1361.40
Temp Disch Intl, F	202	202	292	292	257	251
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	78.1/78.4	78.1/78.4	66.1/65.8	66.1/65.8	70.5/69.4	66.4/62.6
Disch Event HE/CE, ms	11.3/13.0	11.3/13.0	9.7/11.2	9.7/11.2	11.5/13.0	11.2/12.3
Suct Pseudo-Q HE/CE	8.7/8.5	8.7/8.5	6.0/5.7	6.0/5.7	4.5/4.1	2.9/2.4
Gas Rod Ld Comp, %	39.7 C	39.7 C	59.2 C	59.2 C	72.3 C	72.5 C
Gas Rod Ld Tens, %	41.4 T	41.4 T	60.1 T	60.1 T	69.6 T	60.4 T
Gas Rod Ld Total, %	41.8	41.8	61.6	61.6	73.3	68.9
Xhd Pin Deg/%RvrsI lbf	169/84.2	170/84.2	180/97.9	180/98.3	146/73.5	180/61.7
Flow Calc, MMSCFD	9.103	9.103	9.103	9.103	18.206	18.187
Cyl BHP	576.1	576.1	659.0	659.0	960.2	833.0



Ariel Performance



Company:	Exterran Energy	Customer:	XTO ENERGY
Order #:	86326 (AP034266) Rev:13	Inquiry:	US-123192 thru 203
7.7.7.0 Case 11:	Ps design-Pd design-Avalon-Winter	Project:	XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4878	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	22.707	22.707	22.707	22.707
BHP per Stage	1214.0	1600.4	1110.2	884.1
Specific Gravity	0.8288	0.8288	0.8288	0.8288
Ratio of Sp Ht (N)	1.2463	1.2273	1.2419	1.2552
Comp Suct (Zs)	0.9855	0.9793	0.9407	0.8777
Comp Disch (Zd)	0.9799	0.9695	0.9269	0.8707
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	92.26	292.90	639.23
Pres Disch Flg, psig	95.52	300.39	656.40	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.287	2.980	2.189	2.054
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	28.54	28.54	85.71	85.71	273.68	623.45
Temp Suct Intl, F	59	59	139	139	136	134
Pres Disch Intl, psig	107.09	107.09	318.41	318.41	691.25	1362.62
Temp Disch Intl, F	180	180	289	289	250	235
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	75.75 (V) %	75.75 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	47.88	47.88	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	50.5/83.1	50.5/83.1	67.2/66.9	67.2/66.9	73.1/72.2	72.3/69.2
Disch Event HE/CE, ms	9.5/14.5	9.5/14.5	9.8/11.3	9.8/11.3	12.0/13.7	12.3/13.8
Suct Pseudo-Q HE/CE	8.8/8.6	8.8/8.6	6.0/5.7	6.0/5.7	4.5/4.1	2.9/2.4
Gas Rod Ld Comp, %	45.2 C	45.2 C	69.8 C	69.8 C	78.5 C	67.3 C
Gas Rod Ld Tens, %	46.9 T	46.9 T	70.7 T	70.7 T	75.1 T	54.3 T
Gas Rod Ld Total, %	47.5	47.5	72.6	72.6	79.4	63.1
Xhd Pin Deg/%RvrsI lbf	174/96.5	174/96.4	164/91.0	163/90.7	146/74.3	170/67.7
Flow Calc, MMSCFD	11.354	11.354	11.353	11.353	22.707	22.707
Cyl BHP	607.0	607.0	800.2	800.2	1110.2	884.1



Ariel Performance



7.7.7.0	Company: Exterran Energy	Customer: XTO ENERGY
	Order #: 86326 (AP034266) Rev:13	Inquiry: US-123192 thru 203
	Case 12: Ps-high, Pd-design-Avalon-Winter	Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4848	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	25.732	25.732	25.731	25.732
BHP per Stage	1456.4	1494.8	1098.5	729.0
Specific Gravity	0.8265	0.8265	0.8265	0.8265
Ratio of Sp Ht (N)	1.2490	1.2336	1.2480	1.2613
Comp Suct (Zs)	0.9780	0.9675	0.9228	0.8560
Comp Disch (Zd)	0.9694	0.9561	0.9098	0.8530
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	154.36	391.69	773.57
Pres Disch Flg, psig	158.83	400.93	792.64	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.380	2.475	1.991	1.703
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.12	50.34	143.82	143.82	365.81	754.08
Temp Suct Intl, F	59	64	137	137	135	133
Pres Disch Intl, psig	177.11	176.70	425.77	425.77	835.93	1364.67
Temp Disch Intl, F	187	192	266	266	238	209
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	100.00 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	58.77	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	36.0/82.1	N/A/82.1	20.7/74.5	20.7/74.5	46.4/76.3	52.6/78.6
Disch Event HE/CE, ms	7.7/14.2	N/A/14.2	5.7/13.2	5.7/13.2	9.7/14.7	11.2/16.2
Suct Pseudo-Q HE/CE	8.2/8.6	N/A/8.5	4.6/5.8	4.6/5.8	4.5/4.2	3.0/2.5
Gas Rod Ld Comp, %	73.0 C	6.4 C	84.8 C	84.8 C	88.8 C	57.6 C
Gas Rod Ld Tens, %	75.8 T	70.7 T	85.3 T	85.3 T	84.0 T	42.8 T
Gas Rod Ld Total, %	76.8	38.7	87.9	87.9	89.4	52.1
Xhd Pin Deg/%RvrsI lbf	171/79.3	134/58.6	143/84.1	142/84.7	150/95.2	160/59.9
Flow Calc, MMSCFD	15.378	10.354	12.866	12.866	25.731	25.732
Cyl BHP	849.7	606.7	747.4	747.4	1098.5	729.0



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 13: Ps-low, Pd-low-Avalon-Winter

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4085	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	18.299	18.299	18.299	18.286
BHP per Stage	1144.3	1294.8	894.1	682.3
Specific Gravity	0.8285	0.8285	0.8285	0.8286
Ratio of Sp Ht (N)	1.2430	1.2261	1.2392	1.2525
Comp Suct (Zs)	0.9900	0.9833	0.9517	0.9001
Comp Disch (Zd)	0.9852	0.9750	0.9391	0.8886
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	72.17	235.16	512.59
Pres Disch Flg, psig	74.47	240.60	525.45	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.684	2.981	2.170	1.966
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.59	15.59	66.89	66.89	219.75	500.18
Temp Suct Intl, F	60	60	139	139	136	134
Pres Disch Intl, psig	83.46	83.46	255.11	255.11	553.21	1048.04
Temp Disch Intl, F	200	200	289	289	247	227
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	78.5/78.8	78.5/78.8	67.2/66.9	67.2/66.9	73.5/72.5	74.0/71.1
Disch Event HE/CE, ms	11.3/13.0	11.3/13.0	9.8/11.3	9.8/11.3	12.2/13.7	12.8/14.2
Suct Pseudo-Q HE/CE	8.7/8.5	8.7/8.5	6.0/5.7	6.0/5.7	4.5/4.1	2.9/2.3
Gas Rod Ld Comp, %	38.9 C	38.9 C	56.4 C	56.4 C	62.7 C	50.2 C
Gas Rod Ld Tens, %	40.6 T	40.6 T	57.2 T	57.2 T	59.9 T	39.9 T
Gas Rod Ld Total, %	41.1	41.1	58.7	58.7	63.4	46.7
Xhd Pin Deg/%RvrsI lbf	170/84.0	170/84.0	177/96.3	178/96.6	179/78.6	162/78.0
Flow Calc, MMSCFD	9.149	9.149	9.149	9.149	18.299	18.286
Cyl BHP	572.2	572.2	647.4	647.4	894.1	682.3



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 14: Ps-design, Pd-low-Avalon-Winter

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4881	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	24.448	24.448	24.448	24.448
BHP per Stage	1374.5	1675.0	1084.0	678.7
Specific Gravity	0.8288	0.8288	0.8288	0.8288
Ratio of Sp Ht (N)	1.2457	1.2280	1.2432	1.2579
Comp Suct (Zs)	0.9855	0.9782	0.9391	0.8829
Comp Disch (Zd)	0.9795	0.9682	0.9263	0.8745
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	98.06	301.36	609.42
Pres Disch Flg, psig	101.11	307.94	623.56	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.405	2.892	2.025	1.660
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	28.54	28.54	91.14	91.14	281.55	594.42
Temp Suct Intl, F	59	59	139	139	135	133
Pres Disch Intl, psig	113.16	113.16	326.51	326.51	657.22	1049.45
Temp Disch Intl, F	187	187	285	285	239	205
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	42.26 (V) %	42.26 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	32.84	32.84	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	61.9/81.8	61.9/81.8	68.5/68.2	68.5/68.2	76.4/75.6	81.4/79.3
Disch Event HE/CE, ms	10.5/14.0	10.5/14.0	10.0/11.7	10.0/11.7	12.8/14.5	15.0/16.5
Suct Pseudo-Q HE/CE	8.8/8.6	8.8/8.6	6.0/5.7	6.0/5.7	4.5/4.1	2.9/2.4
Gas Rod Ld Comp, %	48.6 C	48.6 C	70.6 C	70.6 C	70.9 C	43.2 C
Gas Rod Ld Tens, %	50.5 T	50.5 T	71.5 T	71.5 T	67.2 T	31.6 T
Gas Rod Ld Total, %	51.2	51.2	73.4	73.4	71.4	38.8
Xhd Pin Deg/%RvrsI lbf	173/91.9	173/91.8	162/89.1	160/88.7	169/73.1	158/83.4
Flow Calc, MMSCFD	12.224	12.224	12.224	12.224	24.448	24.448
Cyl BHP	687.3	687.3	837.5	837.5	1084.0	678.7



Ariel Performance



Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 15: Ps-high, Pd-low-Avalon-Winter

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4855	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	27.787	27.786	27.787	27.787
BHP per Stage	1522.9	1651.7	1064.3	547.1
Specific Gravity	0.8265	0.8265	0.8265	0.8265
Ratio of Sp Ht (N)	1.2494	1.2331	1.2488	1.2632
Comp Suct (Zs)	0.9780	0.9685	0.9233	0.8665
Comp Disch (Zd)	0.9698	0.9571	0.9114	0.8611
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	149.35	388.83	710.58
Pres Disch Flg, psig	153.54	396.94	726.27	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.307	2.526	1.840	1.428
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.12	50.33	139.15	139.15	363.12	692.83
Temp Suct Intl, F	59	64	138	138	135	132
Pres Disch Intl, psig	171.37	170.97	421.43	421.43	766.56	1050.74
Temp Disch Intl, F	183	188	269	269	227	185
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	75.00 (V) %	N/A %	75.00 (V) %	75.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	47.54	N/A	55.31	55.31	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	50.0/82.9	N/A/82.9	32.1/73.7	32.1/73.7	53.9/79.5	69.4/85.7
Disch Event HE/CE, ms	9.5/14.5	N/A/14.5	7.0/12.8	7.0/12.8	11.0/15.7	14.5/18.7
Suct Pseudo-Q HE/CE	8.8/8.6	N/A/8.5	5.4/5.7	5.4/5.7	4.6/4.2	3.0/2.4
Gas Rod Ld Comp, %	69.8 C	6.4 C	84.9 C	84.9 C	76.6 C	35.8 C
Gas Rod Ld Tens, %	72.3 T	67.2 T	85.5 T	85.5 T	71.7 T	22.9 T
Gas Rod Ld Total, %	73.4	37.0	88.0	88.0	76.7	30.5
Xhd Pin Deg/%RvrsI lbf	174/84.5	141/59.7	142/91.6	142/92.3	155/99.0	155/81.4
Flow Calc, MMSCFD	17.325	10.462	13.893	13.893	27.787	27.787
Cyl BHP	928.5	594.3	825.9	825.9	1064.3	547.1



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 16: Ps-low, Pd-high-Avalon-Winter

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	3899	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	16.210	16.210	16.210	16.194
BHP per Stage	1264.8	979.4	753.0	833.2
Specific Gravity	0.8285	0.8285	0.8285	0.8287
Ratio of Sp Ht (N)	1.2399	1.2295	1.2412	1.2498
Comp Suct (Zs)	0.9900	0.9780	0.9459	0.8927
Comp Disch (Zd)	0.9836	0.9692	0.9331	0.8839
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	99.05	265.76	554.27
Pres Disch Flg, psig	101.55	272.19	570.78	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	3.517	2.547	2.095	2.541
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.61	15.61	92.06	92.06	248.33	540.80
Temp Suct Intl, F	63	63	138	138	135	135
Pres Disch Intl, psig	112.74	112.74	289.08	289.08	601.25	1465.24
Temp Disch Intl, F	236	236	268	268	243	264
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	67.49	67.49	65.46	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	69.4/69.9	69.4/69.9	17.2/73.4	17.2/73.4	41.1/74.1	61.2/56.7
Disch Event HE/CE, ms	9.3/10.8	9.3/10.8	5.0/12.8	5.0/12.8	8.8/14.2	10.2/11.2
Suct Pseudo-Q HE/CE	8.7/8.5	8.7/8.5	4.2/5.7	4.2/5.7	4.3/4.1	2.9/2.4
Gas Rod Ld Comp, %	55.7 C	55.7 C	59.2 C	59.2 C	66.4 C	82.3 C
Gas Rod Ld Tens, %	58.2 T	58.2 T	59.7 T	59.7 T	63.3 T	70.0 T
Gas Rod Ld Total, %	58.8	58.8	61.4	61.4	67.1	78.9
Xhd Pin Deg/%RvrsI lbf	179/89.3	179/89.3	166/75.7	167/75.0	175/75.3	152/56.5
Flow Calc, MMSCFD	8.105	8.105	8.105	8.105	16.210	16.194
Cyl BHP	632.4	632.4	489.7	489.7	753.0	833.2



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 17: Ps-design Pd-high-Avalon-Winter

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4876	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	22.243	22.243	22.244	22.243
BHP per Stage	1173.3	1581.7	1118.6	933.4
Specific Gravity	0.8288	0.8288	0.8288	0.8288
Ratio of Sp Ht (N)	1.2465	1.2271	1.2416	1.2544
Comp Suct (Zs)	0.9855	0.9796	0.9411	0.8758
Comp Disch (Zd)	0.9800	0.9698	0.9269	0.8702
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	90.79	291.19	650.40
Pres Disch Flg, psig	94.11	298.95	668.53	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	2.258	3.008	2.241	2.173
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	28.53	28.53	84.34	84.34	272.08	634.32
Temp Suct Intl, F	59	59	139	139	136	134
Pres Disch Intl, psig	105.56	105.56	316.86	316.86	703.86	1466.97
Temp Disch Intl, F	178	178	291	291	253	243
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	85.48 (V) %	85.48 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	52.25	52.25	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	47.4/83.5	47.4/83.5	66.8/66.5	66.8/66.5	72.1/71.1	69.7/66.3
Disch Event HE/CE, ms	9.2/14.7	9.2/14.7	9.8/11.3	9.8/11.3	11.8/13.3	11.8/13.2
Suct Pseudo-Q HE/CE	8.7/8.6	8.7/8.6	6.0/5.7	6.0/5.7	4.5/4.1	3.0/2.4
Gas Rod Ld Comp, %	44.3 C	44.3 C	69.7 C	69.7 C	81.0 C	75.3 C
Gas Rod Ld Tens, %	46.0 T	46.0 T	70.7 T	70.7 T	77.7 T	61.7 T
Gas Rod Ld Total, %	46.6	46.6	72.5	72.5	82.1	71.0
Xhd Pin Deg/%RvrsI lbf	176/97.8	176/97.8	163/91.5	163/91.1	145/75.7	179/61.3
Flow Calc, MMSCFD	11.122	11.122	11.122	11.122	22.244	22.243
Cyl BHP	586.7	586.7	790.8	790.8	1118.6	933.4



Ariel Performance



Company:	Exterran Energy	Customer:	XTO ENERGY
Order #:	86326 (AP034266) Rev:13	Inquiry:	US-123192 thru 203
7.7.7.0 Case 18:	Ps-design Pd-high-Avalon-Winter	Project:	XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4917	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	25.573	25.573	25.573	25.573
BHP per Stage	1458.6	1497.7	1118.3	773.8
Specific Gravity	0.8265	0.8265	0.8265	0.8265
Ratio of Sp Ht (N)	1.2490	1.2336	1.2480	1.2608
Comp Suct (Zs)	0.9780	0.9672	0.9216	0.8517
Comp Disch (Zd)	0.9693	0.9557	0.9085	0.8505
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	155.61	397.82	800.52
Pres Disch Flg, psig	160.16	407.39	820.67	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	2.399	2.494	2.030	1.772
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.12	50.34	145.00	145.00	371.51	780.27
Temp Suct Intl, F	59	64	137	137	135	133
Pres Disch Intl, psig	178.56	178.15	432.60	432.60	865.35	1469.37
Temp Disch Intl, F	188	194	267	267	241	215
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	100.00 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	58.77	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	35.2/81.9	N/A/81.9	19.7/74.1	19.7/74.1	44.5/75.6	48.7/76.9
Disch Event HE/CE, ms	7.7/14.0	N/A/14.0	5.5/13.0	5.5/13.0	9.3/14.5	10.5/15.7
Suct Pseudo-Q HE/CE	8.2/8.6	N/A/8.5	4.5/5.8	4.5/5.8	4.5/4.2	3.0/2.5
Gas Rod Ld Comp, %	73.9 C	6.4 C	86.5 C	86.5 C	93.2 C	64.4 C
Gas Rod Ld Tens, %	76.7 T	71.5 T	87.1 T	87.1 T	88.4 T	48.9 T
Gas Rod Ld Total, %	77.7	39.2	89.7	89.7	93.9	58.8
Xhd Pin Deg/%RvrsI lbf	170/80.6	132/58.3	142/86.1	143/86.8	160/92.8	163/62.3
Flow Calc, MMSCFD	15.248	10.326	12.787	12.787	25.573	25.573
Cyl BHP	848.9	609.7	748.9	748.9	1118.3	773.8



Ariel Performance



7.7.7.0 Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 19: Ps-low, Pd-design-3BS-Winter

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4250	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	18.126	18.126	18.126	18.072
BHP per Stage	1130.0	1287.9	937.4	825.5
Specific Gravity	0.8012	0.8012	0.8012	0.7984
Ratio of Sp Ht (N)	1.2232	1.2079	1.2243	1.2433
Comp Suct (Zs)	0.9886	0.9808	0.9436	0.8774
Comp Disch (Zd)	0.9825	0.9708	0.9283	0.8716
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	73.20	242.51	561.71
Pres Disch Flg, psig	75.66	248.71	577.34	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.721	3.039	2.311	2.331
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.72	15.72	68.02	68.02	227.03	548.32
Temp Suct Intl, F	60	60	138	138	136	135
Pres Disch Intl, psig	84.64	84.64	263.44	263.44	607.04	1360.58
Temp Disch Intl, F	190	190	279	279	249	248
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	77.6/77.9	77.6/77.9	65.6/65.3	65.6/65.3	70.2/69.1	65.8/61.9
Disch Event HE/CE, ms	11.2/12.8	11.2/12.8	9.5/11.0	9.5/11.0	11.3/13.0	11.0/12.2
Suct Pseudo-Q HE/CE	8.5/8.2	8.5/8.2	5.8/5.5	5.8/5.5	4.4/4.0	2.8/2.3
Gas Rod Ld Comp, %	39.5 C	39.5 C	58.5 C	58.5 C	71.2 C	72.9 C
Gas Rod Ld Tens, %	41.2 T	41.2 T	59.4 T	59.4 T	68.5 T	60.8 T
Gas Rod Ld Total, %	41.7	41.7	60.9	60.9	72.2	69.3
Xhd Pin Deg/%RvrsI lbf	169/83.9	169/83.9	180/97.2	180/97.6	148/72.8	179/61.3
Flow Calc, MMSCFD	9.063	9.063	9.063	9.063	18.126	18.072
Cyl BHP	565.0	565.0	643.9	643.9	937.4	825.5



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 20: Ps design-Pd design-3BS-Winter

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4909	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	23.243	23.243	23.243	23.243
BHP per Stage	1250.6	1601.0	1103.6	885.3
Specific Gravity	0.7969	0.7969	0.7969	0.7969
Ratio of Sp Ht (N)	1.2277	1.2110	1.2296	1.2482
Comp Suct (Zs)	0.9835	0.9763	0.9326	0.8622
Comp Disch (Zd)	0.9765	0.9650	0.9178	0.8593
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	94.73	297.01	640.98
Pres Disch Flg, psig	97.99	304.49	658.15	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.339	2.950	2.165	2.048
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	28.75	28.75	88.26	88.26	278.10	625.49
Temp Suct Intl, F	58	58	138	138	135	134
Pres Disch Intl, psig	109.54	109.54	322.43	322.43	692.44	1361.85
Temp Disch Intl, F	173	173	277	277	242	232
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	61.05 (V) %	61.05 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	41.28	41.28	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	54.2/82.2	54.2/82.2	67.0/66.7	67.0/66.7	73.2/72.3	72.5/69.4
Disch Event HE/CE, ms	9.7/14.2	9.7/14.2	9.8/11.3	9.8/11.3	12.0/13.7	12.3/13.8
Suct Pseudo-Q HE/CE	8.5/8.3	8.5/8.3	5.8/5.5	5.8/5.5	4.4/4.0	2.9/2.4
Gas Rod Ld Comp, %	46.4 C	46.4 C	70.2 C	70.2 C	77.9 C	67.1 C
Gas Rod Ld Tens, %	48.2 T	48.2 T	71.1 T	71.1 T	74.4 T	54.0 T
Gas Rod Ld Total, %	48.9	48.9	73.0	73.0	78.8	62.8
Xhd Pin Deg/%RvrsI lbf	173/94.8	173/94.8	162/90.4	160/90.0	145/73.9	169/68.0
Flow Calc, MMSCFD	11.621	11.621	11.621	11.621	23.243	23.243
Cyl BHP	625.3	625.3	800.5	800.5	1103.6	885.3



Ariel Performance



7.7.7.0 Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 21: Ps-high, Pd-design-3BS-Winter

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4891	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	26.441	26.441	26.441	26.441
BHP per Stage	1499.7	1495.5	1094.4	732.4
Specific Gravity	0.7902	0.7902	0.7902	0.7902
Ratio of Sp Ht (N)	1.2321	1.2194	1.2381	1.2558
Comp Suct (Zs)	0.9753	0.9631	0.9132	0.8398
Comp Disch (Zd)	0.9648	0.9505	0.9004	0.8412
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	158.21	396.39	774.88
Pres Disch Flg, psig	162.68	405.62	793.95	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.434	2.446	1.971	1.700
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.49	50.69	147.85	147.85	371.07	755.85
Temp Suct Intl, F	59	63	137	137	135	133
Pres Disch Intl, psig	180.82	180.43	430.11	430.11	836.18	1363.61
Temp Disch Intl, F	180	185	256	256	233	208
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	79.00 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	49.34	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	42.5/81.1	N/A/81.1	20.7/74.5	20.7/74.5	46.9/76.5	53.2/78.8
Disch Event HE/CE, ms	8.3/13.8	N/A/13.8	5.7/13.2	5.7/13.2	9.7/14.8	11.3/16.2
Suct Pseudo-Q HE/CE	8.3/8.2	N/A/8.2	4.4/5.5	4.4/5.5	4.4/4.1	2.9/2.4
Gas Rod Ld Comp, %	75.0 C	6.1 C	85.0 C	85.0 C	87.9 C	57.4 C
Gas Rod Ld Tens, %	77.8 T	72.9 T	85.4 T	85.4 T	83.1 T	42.5 T
Gas Rod Ld Total, %	78.9	39.7	88.0	88.0	88.4	51.8
Xhd Pin Deg/%RvrsI lbf	166/86.1	127/57.2	142/83.9	142/84.6	149/95.4	160/60.0
Flow Calc, MMSCFD	16.160	10.280	13.220	13.220	26.441	26.441
Cyl BHP	896.5	603.2	747.8	747.8	1094.4	732.4



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 22: Ps-low, Pd-low-3BS-Winter

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4008	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	18.222	18.222	18.222	18.187
BHP per Stage	1122.4	1265.7	873.9	677.0
Specific Gravity	0.8012	0.8012	0.8012	0.7993
Ratio of Sp Ht (N)	1.2233	1.2080	1.2242	1.2427
Comp Suct (Zs)	0.9886	0.9810	0.9455	0.8880
Comp Disch (Zd)	0.9826	0.9714	0.9314	0.8773
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	72.17	233.63	507.55
Pres Disch Flg, psig	74.48	239.07	520.41	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.685	2.963	2.163	1.985
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.72	15.72	67.06	67.06	218.71	495.53
Temp Suct Intl, F	59	59	138	138	135	134
Pres Disch Intl, psig	83.36	83.36	253.32	253.32	547.51	1047.48
Temp Disch Intl, F	188	188	276	276	240	225
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	78.0/78.3	78.0/78.3	66.8/66.5	66.8/66.5	73.2/72.2	73.4/70.4
Disch Event HE/CE, ms	11.3/13.0	11.3/13.0	9.7/11.3	9.7/11.3	12.0/13.7	12.7/14.0
Suct Pseudo-Q HE/CE	8.5/8.2	8.5/8.2	5.8/5.5	5.8/5.5	4.3/4.0	2.8/2.3
Gas Rod Ld Comp, %	38.8 C	38.8 C	55.8 C	55.8 C	61.8 C	50.5 C
Gas Rod Ld Tens, %	40.5 T	40.5 T	56.6 T	56.6 T	59.1 T	40.3 T
Gas Rod Ld Total, %	40.9	40.9	58.1	58.1	62.5	47.1
Xhd Pin Deg/%RvrsI lbf	170/83.7	170/83.7	178/95.6	177/95.9	180/78.8	162/77.9
Flow Calc, MMSCFD	9.111	9.111	9.111	9.111	18.222	18.187
Cyl BHP	561.2	561.2	632.8	632.8	873.9	677.0



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 23: Ps-design, Pd-low-3BS-Winter

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4906	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	24.984	24.984	24.984	24.984
BHP per Stage	1410.3	1673.7	1077.0	675.6
Specific Gravity	0.7969	0.7969	0.7969	0.7969
Ratio of Sp Ht (N)	1.2272	1.2117	1.2307	1.2499
Comp Suct (Zs)	0.9835	0.9750	0.9308	0.8679
Comp Disch (Zd)	0.9760	0.9636	0.9170	0.8610
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	100.47	305.26	611.63
Pres Disch Flg, psig	103.53	311.83	625.76	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.456	2.865	2.007	1.654
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	28.75	28.75	93.65	93.65	285.79	596.90
Temp Suct Intl, F	59	59	138	138	135	133
Pres Disch Intl, psig	115.55	115.55	330.30	330.30	658.88	1048.88
Temp Disch Intl, F	179	179	273	273	232	202
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	30.41 (V) %	30.41 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	27.52	27.52	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	65.6/80.9	65.6/80.9	68.3/68.0	68.3/68.0	76.4/75.6	81.5/79.4
Disch Event HE/CE, ms	10.7/13.7	10.7/13.7	10.0/11.7	10.0/11.7	12.8/14.5	15.0/16.5
Suct Pseudo-Q HE/CE	8.5/8.2	8.5/8.2	5.8/5.5	5.8/5.5	4.4/4.0	2.9/2.3
Gas Rod Ld Comp, %	49.9 C	49.9 C	71.0 C	71.0 C	70.4 C	42.9 C
Gas Rod Ld Tens, %	51.8 T	51.8 T	71.9 T	71.9 T	66.7 T	31.3 T
Gas Rod Ld Total, %	52.5	52.5	73.8	73.8	70.9	38.6
Xhd Pin Deg/%RvrsI lbf	175/92.7	175/92.6	160/88.5	158/88.1	170/73.8	158/83.4
Flow Calc, MMSCFD	12.492	12.492	12.492	12.492	24.984	24.984
Cyl BHP	705.1	705.1	836.8	836.8	1077.0	675.6



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 24: Ps-high, Pd-low-3BS-Winter

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4886	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1		2		3		4
Target Flow, MMSCFD	25.000	---	25.000	---	25.000	---	25.000
Flow Calc, MMSCFD	28.567	---	28.567	---	28.567	---	28.567
BHP per Stage	1652.1	---	1560.8	---	1060.6	---	543.7
Specific Gravity	0.7902	---	0.7902	---	0.7902	---	0.7902
Ratio of Sp Ht (N)	1.2319	---	1.2200	---	1.2386	---	1.2569
Comp Suct (Zs)	0.9753	---	0.9622	---	0.9136	---	0.8509
Comp Disch (Zd)	0.9645	---	0.9498	---	0.9017	---	0.8473
Pres Suct Line, psig	60.00	---	N/A	---	N/A	---	N/A
Pres Suct Flg, psig	59.27	---	162.36	---	394.34	---	714.19
Pres Disch Flg, psig	166.55	---	402.45	---	729.89	---	1020.26
Pres Disch Line, psig	N/A	---	N/A	---	N/A	---	1000.00
Pres Ratio F/F	2.487	---	2.370	---	1.824	---	1.421
Temp Suct, F	50.00	---	130.00	---	130.00	---	130.00
Temp Clr Disch, F	130.00	---	130.00	---	130.00	---	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.50	50.70	151.74	151.74	369.14	696.83
Temp Suct Intl, F	59	64	137	137	134	132
Pres Disch Intl, psig	185.02	184.62	426.91	426.91	769.32	1049.97
Temp Disch Intl, F	183	188	252	252	222	183
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	40.57 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	32.08	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	59.9/80.5	N/A/80.5	24.5/75.7	24.5/75.7	54.2/79.7	69.9/85.9
Disch Event HE/CE, ms	10.0/13.7	N/A/13.7	6.3/13.5	6.3/13.5	11.0/15.7	14.7/18.7
Suct Pseudo-Q HE/CE	8.5/8.2	N/A/8.2	4.7/5.5	4.7/5.5	4.4/4.1	2.9/2.4
Gas Rod Ld Comp, %	77.4 C	6.1 C	82.9 C	82.9 C	76.0 C	35.4 C
Gas Rod Ld Tens, %	80.3 T	75.4 T	83.2 T	83.2 T	71.0 T	22.5 T
Gas Rod Ld Total, %	81.4	41.0	85.8	85.8	76.1	30.1
Xhd Pin Deg/%RvrsI lbf	160/95.0	117/56.4	142/84.0	143/84.7	162/99.1	155/81.7
Flow Calc, MMSCFD	18.368	10.199	14.283	14.283	28.567	28.567
Cyl BHP	1041.0	611.1	780.4	780.4	1060.6	543.7



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 25: Ps-low, Pd-high-3BS-Winter

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	3808	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	16.069	16.069	16.069	16.024
BHP per Stage	1234.4	950.4	731.7	823.0
Specific Gravity	0.8012	0.8012	0.8012	0.7986
Ratio of Sp Ht (N)	1.2206	1.2118	1.2267	1.2415
Comp Suct (Zs)	0.9886	0.9751	0.9390	0.8802
Comp Disch (Zd)	0.9806	0.9649	0.9248	0.8759
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	99.09	263.60	547.51
Pres Disch Flg, psig	101.60	270.03	564.02	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	3.518	2.527	2.087	2.572
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.73	15.73	92.30	92.30	246.75	534.50
Temp Suct Intl, F	62	62	137	137	135	135
Pres Disch Intl, psig	112.69	112.69	286.56	286.56	593.70	1464.34
Temp Disch Intl, F	222	222	256	256	236	262
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	67.49	67.49	65.46	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	68.7/69.2	68.7/69.2	16.4/73.2	16.4/73.2	40.4/73.8	60.5/56.0
Disch Event HE/CE, ms	9.2/10.7	9.2/10.7	5.0/12.8	5.0/12.8	8.7/14.0	10.0/11.0
Suct Pseudo-Q HE/CE	8.4/8.2	8.4/8.2	4.0/5.5	4.0/5.5	4.2/4.0	2.8/2.3
Gas Rod Ld Comp, %	55.6 C	55.6 C	58.4 C	58.4 C	65.3 C	82.6 C
Gas Rod Ld Tens, %	58.1 T	58.1 T	58.9 T	58.9 T	62.2 T	70.5 T
Gas Rod Ld Total, %	58.7	58.7	60.6	60.6	66.0	79.3
Xhd Pin Deg/%RvrsI lbf	179/89.0	179/89.0	167/77.6	167/76.9	177/72.5	152/57.0
Flow Calc, MMSCFD	8.034	8.034	8.034	8.034	16.069	16.024
Cyl BHP	617.2	617.2	475.2	475.2	731.7	823.0



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 26: Ps-design Pd-high-3BS-Winter

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4910	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	22.780	22.780	22.780	22.781
BHP per Stage	1210.2	1582.7	1112.0	936.4
Specific Gravity	0.7969	0.7969	0.7969	0.7969
Ratio of Sp Ht (N)	1.2278	1.2108	1.2293	1.2476
Comp Suct (Zs)	0.9835	0.9766	0.9329	0.8601
Comp Disch (Zd)	0.9766	0.9653	0.9178	0.8597
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	93.27	295.33	651.84
Pres Disch Flg, psig	96.60	303.09	669.98	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	2.310	2.977	2.216	2.168
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	28.75	28.75	86.90	86.90	276.54	636.06
Temp Suct Intl, F	58	58	138	138	135	134
Pres Disch Intl, psig	108.02	108.02	320.92	320.92	704.72	1466.10
Temp Disch Intl, F	172	172	278	278	245	240
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	69.89 (V) %	69.89 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	45.25	45.25	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	51.2/82.6	51.2/82.6	66.6/66.3	66.6/66.3	72.2/71.2	70.0/66.5
Disch Event HE/CE, ms	9.5/14.3	9.5/14.3	9.7/11.2	9.7/11.2	11.8/13.5	11.8/13.2
Suct Pseudo-Q HE/CE	8.5/8.3	8.5/8.3	5.8/5.5	5.8/5.5	4.4/4.0	2.9/2.4
Gas Rod Ld Comp, %	45.6 C	45.6 C	70.2 C	70.2 C	80.4 C	75.1 C
Gas Rod Ld Tens, %	47.3 T	47.3 T	71.1 T	71.1 T	77.0 T	61.5 T
Gas Rod Ld Total, %	48.0	48.0	73.0	73.0	81.4	70.8
Xhd Pin Deg/%RvrsI lbf	173/96.2	173/96.1	162/90.8	160/90.4	145/74.9	180/61.7
Flow Calc, MMSCFD	11.390	11.390	11.390	11.390	22.780	22.781
Cyl BHP	605.1	605.1	791.4	791.4	1112.0	936.4



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 27: Ps-high Pd-high-3BS-Winter

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4892	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	25.888	25.888	25.888	25.888
BHP per Stage	1463.7	1479.3	1103.4	776.5
Specific Gravity	0.7902	0.7902	0.7902	0.7902
Ratio of Sp Ht (N)	1.2322	1.2192	1.2380	1.2554
Comp Suct (Zs)	0.9753	0.9632	0.9128	0.8360
Comp Disch (Zd)	0.9648	0.9506	0.8999	0.8403
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	157.49	398.29	795.95
Pres Disch Flg, psig	162.04	407.87	816.10	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	2.425	2.470	2.016	1.782
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.49	50.69	147.18	147.18	372.86	776.33
Temp Suct Intl, F	59	63	137	137	135	133
Pres Disch Intl, psig	180.13	179.74	432.45	432.45	859.32	1468.10
Temp Disch Intl, F	180	185	257	257	236	214
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	88.80 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	53.74	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	38.1/81.2	N/A/81.2	19.5/74.1	19.5/74.1	44.6/75.6	48.6/76.9
Disch Event HE/CE, ms	7.8/13.8	N/A/13.8	5.5/13.0	5.5/13.0	9.3/14.5	10.5/15.7
Suct Pseudo-Q HE/CE	8.0/8.2	N/A/8.2	4.3/5.5	4.3/5.5	4.4/4.1	2.9/2.4
Gas Rod Ld Comp, %	74.6 C	6.1 C	85.9 C	85.9 C	91.8 C	64.6 C
Gas Rod Ld Tens, %	77.4 T	72.5 T	86.3 T	86.3 T	87.0 T	49.1 T
Gas Rod Ld Total, %	78.5	39.5	89.0	89.0	92.5	59.0
Xhd Pin Deg/%RvrsI lbf	167/82.6	128/57.3	143/84.8	142/85.5	154/93.5	163/62.5
Flow Calc, MMSCFD	15.593	10.296	12.944	12.944	25.888	25.888
Cyl BHP	861.8	601.9	739.6	739.6	1103.4	776.5



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 28: Ps-low, Pd-design-WC XY-Winter

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4271	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	18.195	18.195	18.195	18.175
BHP per Stage	1114.4	1299.6	946.9	841.0
Specific Gravity	0.6971	0.6971	0.6971	0.6972
Ratio of Sp Ht (N)	1.2442	1.2277	1.2428	1.2589
Comp Suct (Zs)	0.9908	0.9847	0.9549	0.9019
Comp Disch (Zd)	0.9867	0.9786	0.9462	0.9032
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	73.16	244.16	567.78
Pres Disch Flg, psig	75.62	250.36	583.41	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.720	3.060	2.320	2.306
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	16.24	16.24	68.68	68.68	230.78	556.29
Temp Suct Intl, F	60	60	139	139	136	135
Pres Disch Intl, psig	83.31	83.31	262.96	262.96	608.78	1355.03
Temp Disch Intl, F	197	197	291	291	256	252
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	78.1/78.4	78.1/78.4	66.2/65.9	66.2/65.9	70.8/69.8	67.2/63.5
Disch Event HE/CE, ms	11.3/13.0	11.3/13.0	9.7/11.2	9.7/11.2	11.5/13.0	11.2/12.5
Suct Pseudo-Q HE/CE	7.4/7.1	7.4/7.1	5.0/4.8	5.0/4.8	3.7/3.4	2.4/2.0
Gas Rod Ld Comp, %	38.5 C	38.5 C	58.2 C	58.2 C	70.9 C	71.8 C
Gas Rod Ld Tens, %	40.1 T	40.1 T	59.1 T	59.1 T	68.1 T	59.7 T
Gas Rod Ld Total, %	40.6	40.6	60.6	60.6	71.9	68.1
Xhd Pin Deg/%RvrsI lbf	169/84.2	169/84.2	179/98.0	180/98.3	146/72.9	180/62.9
Flow Calc, MMSCFD	9.098	9.098	9.097	9.097	18.195	18.175
Cyl BHP	557.2	557.2	649.8	649.8	946.9	841.0



Ariel Performance



7.7.7.0	Company: Exterran Energy	Customer: XTO ENERGY
	Order #: 86326 (AP034266) Rev:13	Inquiry: US-123192 thru 203
	Case 29: Ps design-Pd design-WC XY-Winter	Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4921	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	23.301	23.301	23.301	23.300
BHP per Stage	1229.2	1616.5	1114.9	891.9
Specific Gravity	0.6972	0.6972	0.6972	0.6972
Ratio of Sp Ht (N)	1.2476	1.2296	1.2467	1.2634
Comp Suct (Zs)	0.9865	0.9808	0.9454	0.8892
Comp Disch (Zd)	0.9817	0.9738	0.9370	0.8920
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	94.83	299.95	650.61
Pres Disch Flg, psig	98.09	307.43	667.77	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.342	2.974	2.176	2.018
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	29.49	29.49	89.19	89.19	283.48	637.27
Temp Suct Intl, F	59	59	139	139	136	134
Pres Disch Intl, psig	108.06	108.06	322.90	322.90	697.34	1356.17
Temp Disch Intl, F	179	179	288	288	248	234
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	62.28 (V) %	62.28 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	41.83	41.83	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	54.7/82.5	54.7/82.5	67.4/67.1	67.4/67.1	73.7/72.8	73.8/70.8
Disch Event HE/CE, ms	9.8/14.3	9.8/14.3	9.8/11.3	9.8/11.3	12.2/13.8	12.7/14.0
Suct Pseudo-Q HE/CE	7.4/7.2	7.4/7.2	5.1/4.8	5.1/4.8	3.8/3.5	2.4/2.0
Gas Rod Ld Comp, %	45.2 C	45.2 C	70.1 C	70.1 C	77.8 C	65.7 C
Gas Rod Ld Tens, %	46.9 T	46.9 T	71.0 T	71.0 T	74.3 T	52.6 T
Gas Rod Ld Total, %	47.5	47.5	72.9	72.9	78.7	61.3
Xhd Pin Deg/%RvrsI lbf	172/94.1	172/94.0	157/89.6	152/89.2	145/74.4	168/69.7
Flow Calc, MMSCFD	11.650	11.650	11.650	11.650	23.301	23.300
Cyl BHP	614.6	614.6	808.3	808.3	1114.9	891.9



Ariel Performance



7.7.7.0	Company: Exterran Energy Order #: 86326 (AP034266) Rev:13 Case 30: Ps-high, Pd-design-WC XY-Winter	Customer: XTO ENERGY Inquiry: US-123192 thru 203 Project: XTO ENERGY
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Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4904	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	26.552	26.552	26.552	26.552
BHP per Stage	1477.9	1514.9	1107.6	734.6
Specific Gravity	0.6966	0.6966	0.6966	0.6966
Ratio of Sp Ht (N)	1.2501	1.2363	1.2533	1.2699
Comp Suct (Zs)	0.9795	0.9698	0.9288	0.8697
Comp Disch (Zd)	0.9722	0.9618	0.9220	0.8744
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	158.12	400.22	785.80
Pres Disch Flg, psig	162.59	409.45	804.87	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.432	2.470	1.980	1.677
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	51.57	51.74	149.06	149.06	378.09	769.38
Temp Suct Intl, F	59	63	137	137	135	133
Pres Disch Intl, psig	178.33	177.99	430.75	430.75	841.51	1357.91
Temp Disch Intl, F	185	190	264	264	237	208
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	79.86 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	49.72	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	43.5/81.5	N/A/81.5	21.6/74.7	21.6/74.7	47.9/76.9	55.5/79.8
Disch Event HE/CE, ms	8.5/14.0	N/A/14.0	5.8/13.2	5.8/13.2	9.8/14.8	11.7/16.5
Suct Pseudo-Q HE/CE	7.3/7.2	N/A/7.2	3.9/4.8	3.9/4.8	3.8/3.5	2.5/2.0
Gas Rod Ld Comp, %	72.9 C	5.4 C	84.8 C	84.8 C	87.7 C	55.8 C
Gas Rod Ld Tens, %	75.6 T	71.3 T	85.2 T	85.2 T	82.7 T	40.9 T
Gas Rod Ld Total, %	76.7	38.6	87.8	87.8	88.1	50.2
Xhd Pin Deg/%RvrsI lbf	166/85.3	127/57.6	142/84.4	142/85.1	151/94.0	159/61.6
Flow Calc, MMSCFD	16.270	10.282	13.276	13.276	26.552	26.552
Cyl BHP	886.9	591.0	757.5	757.5	1107.6	734.6



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 31: Ps-low, Pd-low-WC XY-Winter

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4015	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	18.284	18.284	18.284	18.271
BHP per Stage	1106.6	1276.8	880.8	682.1
Specific Gravity	0.6971	0.6971	0.6971	0.6972
Ratio of Sp Ht (N)	1.2444	1.2279	1.2428	1.2590
Comp Suct (Zs)	0.9908	0.9848	0.9564	0.9104
Comp Disch (Zd)	0.9868	0.9789	0.9481	0.9064
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	72.18	235.50	513.75
Pres Disch Flg, psig	74.49	240.94	526.61	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.685	2.984	2.172	1.962
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	16.24	16.24	67.75	67.75	222.57	503.41
Temp Suct Intl, F	60	60	139	139	135	134
Pres Disch Intl, psig	82.09	82.09	253.14	253.14	549.84	1043.16
Temp Disch Intl, F	196	196	287	287	246	228
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	78.5/78.8	78.5/78.8	67.3/67.0	67.3/67.0	73.7/72.7	74.6/71.7
Disch Event HE/CE, ms	11.3/13.2	11.3/13.2	9.8/11.3	9.8/11.3	12.2/13.8	13.0/14.3
Suct Pseudo-Q HE/CE	7.4/7.1	7.4/7.1	5.0/4.8	5.0/4.8	3.7/3.4	2.4/2.0
Gas Rod Ld Comp, %	37.8 C	37.8 C	55.6 C	55.6 C	61.5 C	49.5 C
Gas Rod Ld Tens, %	39.4 T	39.4 T	56.4 T	56.4 T	58.8 T	39.2 T
Gas Rod Ld Total, %	39.8	39.8	57.8	57.8	62.2	46.0
Xhd Pin Deg/%RvrsI lbf	169/84.0	169/84.0	177/96.4	178/96.7	179/79.6	162/78.4
Flow Calc, MMSCFD	9.142	9.142	9.142	9.142	18.284	18.271
Cyl BHP	553.3	553.3	638.4	638.4	880.8	682.1



Ariel Performance



7.7.7.0	Company: Exterran Energy Order #: 86326 (AP034266) Rev:13 Case 32: Ps-design, Pd-low-WC XY-Winter	Customer: XTO ENERGY Inquiry: US-123192 thru 203 Project: XTO ENERGY
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Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4918	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	25.122	25.122	25.122	25.122
BHP per Stage	1398.0	1695.6	1089.4	666.3
Specific Gravity	0.6972	0.6972	0.6972	0.6972
Ratio of Sp Ht (N)	1.2470	1.2304	1.2481	1.2656
Comp Suct (Zs)	0.9865	0.9797	0.9437	0.8933
Comp Disch (Zd)	0.9814	0.9726	0.9358	0.8912
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	101.03	309.79	623.88
Pres Disch Flg, psig	104.09	316.36	638.01	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.468	2.891	2.017	1.623
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	29.50	29.50	95.07	95.07	292.76	611.11
Temp Suct Intl, F	59	59	138	138	135	133
Pres Disch Intl, psig	114.49	114.49	332.36	332.36	666.74	1044.46
Temp Disch Intl, F	186	186	284	284	237	202
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	29.39 (V) %	29.39 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	27.06	27.06	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	66.7/81.1	66.7/81.1	68.7/68.4	68.7/68.4	76.8/76.0	82.6/80.7
Disch Event HE/CE, ms	10.8/13.8	10.8/13.8	10.2/11.7	10.2/11.7	13.0/14.7	15.3/16.8
Suct Pseudo-Q HE/CE	7.4/7.2	7.4/7.2	5.1/4.8	5.1/4.8	3.8/3.5	2.4/2.0
Gas Rod Ld Comp, %	48.8 C	48.8 C	71.2 C	71.2 C	70.6 C	41.5 C
Gas Rod Ld Tens, %	50.8 T	50.8 T	72.1 T	72.1 T	66.8 T	29.7 T
Gas Rod Ld Total, %	51.4	51.4	74.0	74.0	71.1	37.0
Xhd Pin Deg/%RvrsI lbf	174/92.2	174/92.2	146/87.4	145/87.1	165/73.8	157/85.2
Flow Calc, MMSCFD	12.561	12.561	12.561	12.561	25.122	25.122
Cyl BHP	699.0	699.0	847.8	847.8	1089.4	666.3



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 33: Ps-high, Pd-low-WC XY-Winter

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4900	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	28.787	28.787	28.788	28.787
BHP per Stage	1643.1	1586.0	1072.8	529.3
Specific Gravity	0.6966	0.6966	0.6966	0.6966
Ratio of Sp Ht (N)	1.2499	1.2369	1.2542	1.2712
Comp Suct (Zs)	0.9795	0.9689	0.9288	0.8781
Comp Disch (Zd)	0.9720	0.9610	0.9221	0.8775
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	163.19	400.36	727.62
Pres Disch Flg, psig	167.37	408.47	743.31	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.499	2.393	1.830	1.395
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	51.58	51.75	153.85	153.85	378.20	712.51
Temp Suct Intl, F	59	64	137	137	135	132
Pres Disch Intl, psig	183.46	183.12	429.86	429.86	777.74	1045.59
Temp Disch Intl, F	189	194	260	260	226	182
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	37.49 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	30.70	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	62.0/80.8	N/A/80.8	25.3/75.8	25.3/75.8	55.2/80.0	72.2/86.9
Disch Event HE/CE, ms	10.3/13.7	N/A/13.7	6.3/13.5	6.3/13.5	11.2/15.8	15.2/19.0
Suct Pseudo-Q HE/CE	7.4/7.2	N/A/7.2	4.2/4.8	4.2/4.8	3.9/3.5	2.5/2.0
Gas Rod Ld Comp, %	75.8 C	5.4 C	83.2 C	83.2 C	76.0 C	33.9 C
Gas Rod Ld Tens, %	78.7 T	74.4 T	83.4 T	83.4 T	70.9 T	20.7 T
Gas Rod Ld Total, %	79.8	40.1	86.1	86.1	76.0	28.4
Xhd Pin Deg/%RvrsI lbf	154/93.2	110/56.6	142/85.3	142/86.0	151/98.7	154/82.8
Flow Calc, MMSCFD	18.604	10.184	14.394	14.394	28.788	28.787
Cyl BHP	1042.0	601.2	793.0	793.0	1072.8	529.3



Ariel Performance



7.7.7.0	Company: Exterran Energy Order #: 86326 (AP034266) Rev:13 Case 34: Ps-low, Pd-high-WC XY-Winter	Customer: XTO ENERGY Inquiry: US-123192 thru 203 Project: XTO ENERGY
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Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	3853	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	16.225	16.224	16.224	16.208
BHP per Stage	1230.6	965.1	742.6	845.4
Specific Gravity	0.6971	0.6971	0.6971	0.6972
Ratio of Sp Ht (N)	1.2413	1.2316	1.2451	1.2571
Comp Suct (Zs)	0.9908	0.9801	0.9513	0.9042
Comp Disch (Zd)	0.9855	0.9739	0.9431	0.9073
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	98.77	265.22	553.23
Pres Disch Flg, psig	101.28	271.65	569.74	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	3.509	2.549	2.095	2.546
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	16.26	16.26	92.92	92.92	250.67	542.06
Temp Suct Intl, F	62	62	137	137	135	135
Pres Disch Intl, psig	110.71	110.71	285.80	285.80	595.10	1458.47
Temp Disch Intl, F	232	232	266	266	242	267
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	67.49	67.49	65.46	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	69.5/70.0	69.5/70.0	17.6/73.4	17.6/73.4	41.8/74.4	62.1/57.7
Disch Event HE/CE, ms	9.3/11.0	9.3/11.0	5.2/12.8	5.2/12.8	8.8/14.2	10.2/11.3
Suct Pseudo-Q HE/CE	7.3/7.1	7.3/7.1	3.5/4.8	3.5/4.8	3.6/3.4	2.4/2.0
Gas Rod Ld Comp, %	54.1 C	54.1 C	58.0 C	58.0 C	64.9 C	81.5 C
Gas Rod Ld Tens, %	56.6 T	56.6 T	58.4 T	58.4 T	61.7 T	69.3 T
Gas Rod Ld Total, %	57.2	57.2	60.1	60.1	65.5	78.2
Xhd Pin Deg/%RvrsI lbf	178/89.3	178/89.3	168/75.8	167/75.1	175/74.6	152/56.6
Flow Calc, MMSCFD	8.112	8.112	8.112	8.112	16.224	16.208
Cyl BHP	615.3	615.3	482.5	482.5	742.6	845.4



Ariel Performance



Company:	Exterran Energy	Customer:	XTO ENERGY
Order #:	86326 (AP034266) Rev:13	Inquiry:	US-123192 thru 203
7.7.7.0 Case 35:	Ps-design Pd-high-WC XY-Winter	Project:	XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4922	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	22.817	22.817	22.817	22.817
BHP per Stage	1186.5	1596.6	1123.1	946.9
Specific Gravity	0.6972	0.6972	0.6972	0.6972
Ratio of Sp Ht (N)	1.2477	1.2294	1.2464	1.2629
Comp Suct (Zs)	0.9865	0.9811	0.9457	0.8877
Comp Disch (Zd)	0.9818	0.9741	0.9373	0.8929
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	93.25	297.85	660.80
Pres Disch Flg, psig	96.57	305.61	678.94	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	2.310	3.001	2.227	2.139
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	29.49	29.49	87.70	87.70	281.50	647.25
Temp Suct Intl, F	59	59	139	139	136	134
Pres Disch Intl, psig	106.43	106.43	320.96	320.96	708.85	1460.02
Temp Disch Intl, F	177	177	289	289	251	242
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	71.87 (V) %	71.87 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	46.13	46.13	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	51.5/82.9	51.5/82.9	67.0/66.7	67.0/66.7	72.7/71.7	71.2/68.0
Disch Event HE/CE, ms	9.5/14.5	9.5/14.5	9.8/11.3	9.8/11.3	11.8/13.5	12.0/13.3
Suct Pseudo-Q HE/CE	7.4/7.2	7.4/7.2	5.0/4.8	5.0/4.8	3.8/3.5	2.4/2.0
Gas Rod Ld Comp, %	44.2 C	44.2 C	69.9 C	69.9 C	80.3 C	73.7 C
Gas Rod Ld Tens, %	45.9 T	45.9 T	70.9 T	70.9 T	76.8 T	60.1 T
Gas Rod Ld Total, %	46.6	46.6	72.7	72.7	81.2	69.3
Xhd Pin Deg/%RvrsI lbf	171/95.5	171/95.5	157/90.1	153/89.7	144/74.7	178/63.1
Flow Calc, MMSCFD	11.409	11.409	11.409	11.409	22.817	22.817
Cyl BHP	593.3	593.3	798.3	798.3	1123.1	946.9



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 36: Ps-high Pd-high-WC XY-Winter

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4005	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	20.729	20.729	20.729	20.729
BHP per Stage	1164.0	1076.3	965.0	731.0
Specific Gravity	0.6966	0.6966	0.6966	0.6966
Ratio of Sp Ht (N)	1.2504	1.2371	1.2496	1.2664
Comp Suct (Zs)	0.9795	0.9705	0.9378	0.8769
Comp Disch (Zd)	0.9724	0.9634	0.9299	0.8833
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	154.05	345.95	735.39
Pres Disch Flg, psig	158.60	355.53	755.53	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	2.377	2.207	2.141	1.926
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	<u>CE(HEVR)</u>	<u>CE(HEVR)</u>	<u>CE(HEVR)</u>	<u>CE(HEVR)</u>	DBL	DBL
Cyl Disp, CFM	1760.2	1760.2	900.8	900.8	1113.7	499.6
Pres Suct Intl, psig	51.74	51.74	145.48	145.48	326.93	720.15
Temp Suct Intl, F	63	63	139	139	136	134
Pres Disch Intl, psig	173.73	173.73	373.91	373.91	789.18	1461.01
Temp Disch Intl, F	187	187	250	250	247	228
HE Suct Gas Vel, FPM	3325	3325	2517	2517	7481	4594
HE Disch Gas Vel, FPM	N/A	N/A	N/A	N/A	6147	4370
HE Spcrs Used/Max	N/A	N/A	N/A	N/A	0/4	0/4
HE Vol Pkt Avail	N/A	N/A	N/A	N/A	0.71+40.40	0.36+53.03
Vol Pkt Used	N/A %	N/A %	N/A %	N/A %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	N/A	N/A	N/A	N/A	24.35	29.34
HE Total Clr, %	N/A	N/A	N/A	N/A	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	N/A/82.1	N/A/82.1	N/A/78.6	N/A/78.6	39.9/73.5	40.8/73.5
Disch Event HE/CE, ms	N/A/14.2	N/A/14.2	N/A/14.2	N/A/14.2	8.7/14.0	9.2/14.7
Suct Pseudo-Q HE/CE	N/A/7.2	N/A/7.2	N/A/4.8	N/A/4.8	3.6/3.5	2.4/2.0
Gas Rod Ld Comp, %	5.4 C	5.4 C	4.2 C	4.2 C	87.0 C	68.2 C
Gas Rod Ld Tens, %	68.8 T	68.8 T	66.6 T	66.6 T	82.9 T	53.6 T
Gas Rod Ld Total, %	37.3	37.3	35.5	35.5	87.9	63.2
Xhd Pin Deg/%RvrsI lbf	134/58.4	134/58.4	131/54.5	130/54.6	149/99.6	168/59.2
Flow Calc, MMSCFD	10.365	10.365	10.365	10.365	20.729	20.729
Cyl BHP	582.0	582.0	538.2	538.2	965.0	731.0



Ariel Performance



7.7.7.0	Company: Exterran Energy	Customer: XTO ENERGY
	Order #: 86326 (AP034266) Rev:13	Inquiry: US-123192 thru 203
	Case 37: Ps-low, Pd-design-Avalon-Summer	Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4237	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	17.661	17.661	17.630	17.545
BHP per Stage	1123.4	1282.8	939.3	822.7
Specific Gravity	0.8273	0.8273	0.8277	0.8287
Ratio of Sp Ht (N)	1.2385	1.2262	1.2390	1.2512
Comp Suct (Zs)	0.9911	0.9835	0.9512	0.8921
Comp Disch (Zd)	0.9869	0.9752	0.9376	0.8825
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	70.80	237.66	557.62
Pres Disch Flg, psig	73.26	243.86	573.25	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.647	3.068	2.340	2.347
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.75	15.75	65.63	65.63	222.11	544.05
Temp Suct Intl, F	80	80	139	139	136	135
Pres Disch Intl, psig	81.84	81.84	258.45	258.45	603.04	1361.22
Temp Disch Intl, F	220	220	293	293	258	253
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	78.8/79.1	78.8/79.1	66.0/65.7	66.0/65.7	70.2/69.1	65.5/61.5
Disch Event HE/CE, ms	11.5/13.2	11.5/13.2	9.7/11.2	9.7/11.2	11.3/12.8	11.0/12.2
Suct Pseudo-Q HE/CE	8.4/8.2	8.4/8.2	6.0/5.7	6.0/5.7	4.5/4.1	2.9/2.4
Gas Rod Ld Comp, %	37.9 C	37.9 C	57.8 C	57.8 C	71.3 C	73.2 C
Gas Rod Ld Tens, %	39.5 T	39.5 T	58.6 T	58.6 T	68.7 T	61.3 T
Gas Rod Ld Total, %	40.0	40.0	60.1	60.1	72.4	69.7
Xhd Pin Deg/%RvrsI lbf	169/83.7	169/83.7	179/96.5	179/96.8	147/73.0	177/60.8
Flow Calc, MMSCFD	8.830	8.830	8.830	8.830	17.630	17.545
Cyl BHP	561.7	561.7	641.4	641.4	939.3	822.7



Ariel Performance



Company:	Exterran Energy	Customer:	XTO ENERGY
Order #:	86326 (AP034266) Rev:13	Inquiry:	US-123192 thru 203
7.7.7.0 Case 38:	Ps design-Pd design-Avalon-Summer	Project:	XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4880	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	22.556	22.556	22.556	22.474
BHP per Stage	1233.7	1590.8	1104.1	882.4
Specific Gravity	0.8280	0.8280	0.8280	0.8288
Ratio of Sp Ht (N)	1.2414	1.2276	1.2423	1.2551
Comp Suct (Zs)	0.9870	0.9795	0.9411	0.8784
Comp Disch (Zd)	0.9821	0.9697	0.9273	0.8712
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	91.59	291.05	635.61
Pres Disch Flg, psig	94.85	298.54	652.78	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.273	2.981	2.190	2.065
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	28.77	28.77	85.09	85.09	271.97	619.93
Temp Suct Intl, F	79	79	139	139	136	134
Pres Disch Intl, psig	105.96	105.96	316.42	316.42	687.38	1362.56
Temp Disch Intl, F	201	201	290	290	250	236
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	66.09 (V) %	66.09 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	43.54	43.54	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	54.9/83.2	54.9/83.2	67.2/66.9	67.2/66.9	73.1/72.1	72.1/68.9
Disch Event HE/CE, ms	10.0/14.5	10.0/14.5	9.8/11.3	9.8/11.3	12.0/13.7	12.3/13.7
Suct Pseudo-Q HE/CE	8.5/8.2	8.5/8.2	6.0/5.7	6.0/5.7	4.5/4.1	2.9/2.4
Gas Rod Ld Comp, %	44.4 C	44.4 C	69.3 C	69.3 C	78.0 C	67.6 C
Gas Rod Ld Tens, %	46.1 T	46.1 T	70.3 T	70.3 T	74.7 T	54.6 T
Gas Rod Ld Total, %	46.7	46.7	72.1	72.1	79.0	63.3
Xhd Pin Deg/%RvrsI lbf	172/96.7	172/96.7	165/91.4	164/91.0	145/74.3	169/67.6
Flow Calc, MMSCFD	11.278	11.278	11.278	11.278	22.556	22.474
Cyl BHP	616.9	616.9	795.4	795.4	1104.1	882.4



Ariel Performance



7.7.7.0	Company: Exterran Energy Order #: 86326 (AP034266) Rev:13 Case 39: Ps-high, Pd-design-Avalon-Summer	Customer: XTO ENERGY Inquiry: US-123192 thru 203 Project: XTO ENERGY
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Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4849	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	25.515	25.515	25.515	25.473
BHP per Stage	1477.2	1483.3	1091.7	727.5
Specific Gravity	0.8285	0.8285	0.8285	0.8289
Ratio of Sp Ht (N)	1.2430	1.2331	1.2476	1.2608
Comp Suct (Zs)	0.9803	0.9675	0.9227	0.8556
Comp Disch (Zd)	0.9726	0.9560	0.9096	0.8524
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	153.25	389.20	769.92
Pres Disch Flg, psig	157.72	398.43	788.99	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.365	2.476	1.994	1.711
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.46	50.66	142.76	142.76	363.41	750.46
Temp Suct Intl, F	79	84	137	137	135	133
Pres Disch Intl, psig	175.32	174.93	423.20	423.20	832.19	1364.78
Temp Disch Intl, F	207	213	266	266	239	210
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	87.23 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	53.03	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	42.2/82.2	N/A/82.2	20.6/74.4	20.6/74.4	46.2/76.3	52.1/78.4
Disch Event HE/CE, ms	8.5/14.2	N/A/14.2	5.7/13.2	5.7/13.2	9.7/14.7	11.2/16.2
Suct Pseudo-Q HE/CE	8.3/8.3	N/A/8.2	4.6/5.8	4.6/5.8	4.5/4.2	3.0/2.5
Gas Rod Ld Comp, %	71.8 C	6.2 C	84.4 C	84.4 C	88.5 C	57.9 C
Gas Rod Ld Tens, %	74.5 T	69.6 T	84.9 T	84.9 T	83.8 T	43.1 T
Gas Rod Ld Total, %	75.6	38.1	87.4	87.4	89.1	52.4
Xhd Pin Deg/%RvrsI lbf	172/82.0	135/58.6	142/83.4	143/84.1	150/95.7	160/59.1
Flow Calc, MMSCFD	15.554	9.962	12.758	12.758	25.515	25.473
Cyl BHP	880.4	596.8	741.7	741.7	1091.7	727.5



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 40: Ps-low, Pd-low-Avalon-Summer

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	3997	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	17.751	17.751	17.726	17.642
BHP per Stage	1114.9	1259.6	874.3	678.8
Specific Gravity	0.8273	0.8273	0.8276	0.8286
Ratio of Sp Ht (N)	1.2387	1.2264	1.2392	1.2519
Comp Suct (Zs)	0.9911	0.9837	0.9530	0.9020
Comp Disch (Zd)	0.9870	0.9757	0.9405	0.8902
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	69.78	228.68	502.19
Pres Disch Flg, psig	72.08	234.13	515.05	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.611	2.989	2.186	2.006
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.75	15.75	64.66	64.66	213.71	490.06
Temp Suct Intl, F	80	80	139	139	136	134
Pres Disch Intl, psig	80.56	80.56	248.23	248.23	542.17	1047.88
Temp Disch Intl, F	218	218	289	289	248	230
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	79.2/79.5	79.2/79.5	67.1/66.8	67.1/66.8	73.2/72.2	73.1/70.0
Disch Event HE/CE, ms	11.5/13.3	11.5/13.3	9.8/11.3	9.8/11.3	12.0/13.7	12.7/14.0
Suct Pseudo-Q HE/CE	8.4/8.2	8.4/8.2	6.0/5.7	6.0/5.7	4.5/4.1	2.9/2.3
Gas Rod Ld Comp, %	37.2 C	37.2 C	55.0 C	55.0 C	61.7 C	51.0 C
Gas Rod Ld Tens, %	38.8 T	38.8 T	55.8 T	55.8 T	59.1 T	40.8 T
Gas Rod Ld Total, %	39.2	39.2	57.2	57.2	62.4	47.6
Xhd Pin Deg/%RvrsI lbf	169/83.5	169/83.5	176/94.9	177/95.2	180/79.1	162/77.7
Flow Calc, MMSCFD	8.875	8.875	8.875	8.875	17.726	17.642
Cyl BHP	557.4	557.4	629.8	629.8	874.3	678.8



Ariel Performance



7.7.7.0	Company: Exterran Energy	Customer: XTO ENERGY
	Order #: 86326 (AP034266) Rev:13	Inquiry: US-123192 thru 203
	Case 41: Ps-design, Pd-low-Avalon-Summer	Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4883	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	24.257	24.257	24.257	24.174
BHP per Stage	1394.5	1663.0	1076.8	680.1
Specific Gravity	0.8280	0.8280	0.8280	0.8287
Ratio of Sp Ht (N)	1.2409	1.2282	1.2435	1.2577
Comp Suct (Zs)	0.9870	0.9784	0.9396	0.8837
Comp Disch (Zd)	0.9818	0.9685	0.9268	0.8751
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	97.22	299.11	605.21
Pres Disch Flg, psig	100.28	305.68	619.34	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.388	2.894	2.026	1.672
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	28.78	28.78	90.37	90.37	279.47	590.32
Temp Suct Intl, F	79	79	139	139	135	133
Pres Disch Intl, psig	111.84	111.84	324.10	324.10	652.72	1049.39
Temp Disch Intl, F	207	207	286	286	239	206
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	33.00 (V) %	33.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	28.68	28.68	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	66.4/81.9	66.4/81.9	68.5/68.2	68.5/68.2	76.4/75.6	81.1/79.0
Disch Event HE/CE, ms	10.8/14.0	10.8/14.0	10.0/11.7	10.0/11.7	12.8/14.5	14.8/16.3
Suct Pseudo-Q HE/CE	8.5/8.2	8.5/8.2	6.0/5.7	6.0/5.7	4.5/4.1	2.9/2.4
Gas Rod Ld Comp, %	47.7 C	47.7 C	70.1 C	70.1 C	70.4 C	43.5 C
Gas Rod Ld Tens, %	49.6 T	49.6 T	71.0 T	71.0 T	66.8 T	31.9 T
Gas Rod Ld Total, %	50.3	50.3	72.9	72.9	71.0	39.2
Xhd Pin Deg/%RvrsI lbf	173/93.6	173/93.6	164/89.5	162/89.2	169/73.4	158/83.0
Flow Calc, MMSCFD	12.129	12.129	12.129	12.129	24.257	24.174
Cyl BHP	697.3	697.3	831.5	831.5	1076.8	680.1



Ariel Performance



Company:	Exterran Energy	Customer:	XTO ENERGY
Order #:	86326 (AP034266) Rev:13	Inquiry:	US-123192 thru 203
7.7.7.0 Case 42:	Ps-high, Pd-low-Avalon-Summer	Project:	XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4856	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	27.607	27.607	27.607	27.568
BHP per Stage	1630.5	1549.0	1059.1	548.7
Specific Gravity	0.8285	0.8285	0.8285	0.8288
Ratio of Sp Ht (N)	1.2428	1.2337	1.2485	1.2628
Comp Suct (Zs)	0.9803	0.9667	0.9232	0.8660
Comp Disch (Zd)	0.9724	0.9555	0.9112	0.8605
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	157.29	386.71	707.43
Pres Disch Flg, psig	161.47	394.82	723.12	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.417	2.396	1.842	1.434
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.46	50.67	146.53	146.53	361.07	689.70
Temp Suct Intl, F	80	84	137	137	135	132
Pres Disch Intl, psig	179.39	178.99	419.53	419.53	763.35	1050.82
Temp Disch Intl, F	210	216	261	261	227	185
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	45.36 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	34.23	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	59.9/81.6	N/A/81.6	24.5/75.6	24.5/75.6	53.8/79.5	69.0/85.6
Disch Event HE/CE, ms	10.2/14.0	N/A/14.0	6.3/13.3	6.3/13.3	10.8/15.7	14.5/18.5
Suct Pseudo-Q HE/CE	8.5/8.3	N/A/8.2	4.9/5.8	4.9/5.8	4.6/4.2	3.0/2.4
Gas Rod Ld Comp, %	74.1 C	6.2 C	82.2 C	82.2 C	76.4 C	36.1 C
Gas Rod Ld Tens, %	77.0 T	72.0 T	82.6 T	82.6 T	71.5 T	23.2 T
Gas Rod Ld Total, %	78.0	39.3	85.1	85.1	76.5	30.8
Xhd Pin Deg/%RvrsI lbf	168/93.5	129/57.8	143/82.8	143/83.4	159/98.7	155/81.1
Flow Calc, MMSCFD	17.720	9.887	13.804	13.804	27.607	27.568
Cyl BHP	1025.4	605.2	774.5	774.5	1059.1	548.7



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 43: Ps-low, Pd-high-Avalon-Summer

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	3825	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	15.748	15.748	15.709	15.645
BHP per Stage	1244.4	954.5	736.4	820.4
Specific Gravity	0.8273	0.8273	0.8278	0.8287
Ratio of Sp Ht (N)	1.2355	1.2299	1.2412	1.2494
Comp Suct (Zs)	0.9911	0.9785	0.9470	0.8943
Comp Disch (Zd)	0.9855	0.9699	0.9343	0.8852
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	96.37	259.71	545.32
Pres Disch Flg, psig	98.88	266.14	561.83	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	3.435	2.554	2.108	2.582
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.77	15.77	89.56	89.56	242.69	532.09
Temp Suct Intl, F	83	83	138	138	135	135
Pres Disch Intl, psig	109.47	109.47	282.61	282.61	591.73	1465.07
Temp Disch Intl, F	256	256	268	268	244	266
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	67.49	67.49	65.46	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	70.2/70.6	70.2/70.6	16.9/73.3	16.9/73.3	40.5/73.8	60.3/55.7
Disch Event HE/CE, ms	9.5/11.0	9.5/11.0	5.0/12.8	5.0/12.8	8.7/14.0	10.0/11.0
Suct Pseudo-Q HE/CE	8.4/8.1	8.4/8.1	4.1/5.7	4.1/5.7	4.3/4.1	2.9/2.4
Gas Rod Ld Comp, %	53.7 C	53.7 C	58.0 C	58.0 C	65.7 C	82.9 C
Gas Rod Ld Tens, %	56.1 T	56.1 T	58.5 T	58.5 T	62.6 T	70.7 T
Gas Rod Ld Total, %	56.7	56.7	60.2	60.2	66.4	79.6
Xhd Pin Deg/%RvrsI lbf	177/88.7	177/88.7	168/78.3	168/77.6	176/73.3	151/57.0
Flow Calc, MMSCFD	7.874	7.874	7.874	7.874	15.709	15.645
Cyl BHP	622.2	622.2	477.3	477.3	736.4	820.4



Ariel Performance



Company:	Exterran Energy	Customer:	XTO ENERGY
Order #:	86326 (AP034266) Rev:13	Inquiry:	US-123192 thru 203
7.7.7.0 Case 44:	Ps-design Pd-high-Avalon-Summer	Project:	XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4878	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	22.103	22.103	22.103	22.021
BHP per Stage	1192.9	1572.6	1112.7	930.9
Specific Gravity	0.8280	0.8280	0.8280	0.8288
Ratio of Sp Ht (N)	1.2416	1.2274	1.2419	1.2543
Comp Suct (Zs)	0.9870	0.9798	0.9414	0.8764
Comp Disch (Zd)	0.9822	0.9700	0.9273	0.8707
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	90.16	289.44	646.94
Pres Disch Flg, psig	93.48	297.20	665.07	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	2.244	3.010	2.243	2.184
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	28.77	28.77	83.75	83.75	270.47	630.95
Temp Suct Intl, F	79	79	139	139	136	134
Pres Disch Intl, psig	104.47	104.47	314.98	314.98	700.16	1466.91
Temp Disch Intl, F	199	199	291	291	253	244
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	75.71 (V) %	75.71 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	47.86	47.86	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	51.8/83.5	51.8/83.5	66.8/66.5	66.8/66.5	72.1/71.1	69.5/66.0
Disch Event HE/CE, ms	9.7/14.7	9.7/14.7	9.8/11.3	9.8/11.3	11.8/13.3	11.7/13.0
Suct Pseudo-Q HE/CE	8.5/8.2	8.5/8.2	6.0/5.7	6.0/5.7	4.5/4.1	2.9/2.4
Gas Rod Ld Comp, %	43.5 C	43.5 C	69.3 C	69.3 C	80.6 C	75.5 C
Gas Rod Ld Tens, %	45.2 T	45.2 T	70.3 T	70.3 T	77.3 T	62.0 T
Gas Rod Ld Total, %	45.8	45.8	72.1	72.1	81.7	71.3
Xhd Pin Deg/%RvrsI lbf	173/98.1	173/98.0	165/91.8	163/91.5	145/75.6	178/60.6
Flow Calc, MMSCFD	11.051	11.051	11.051	11.051	22.103	22.021
Cyl BHP	596.5	596.5	786.3	786.3	1112.7	930.9



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 45: Ps-design Pd-high-Avalon-Summer

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4845	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	24.966	24.966	24.966	24.923
BHP per Stage	1440.9	1466.8	1100.3	768.1
Specific Gravity	0.8285	0.8285	0.8285	0.8289
Ratio of Sp Ht (N)	1.2431	1.2330	1.2474	1.2601
Comp Suct (Zs)	0.9803	0.9676	0.9223	0.8520
Comp Disch (Zd)	0.9726	0.9561	0.9089	0.8506
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	152.55	391.28	791.80
Pres Disch Flg, psig	157.11	400.86	811.95	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	2.356	2.501	2.041	1.791
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.46	50.66	142.11	142.11	365.35	771.72
Temp Suct Intl, F	79	84	137	137	135	133
Pres Disch Intl, psig	174.66	174.27	425.72	425.72	856.21	1469.41
Temp Disch Intl, F	207	212	267	267	242	216
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	97.97 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	57.86	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	37.6/82.3	N/A/82.3	19.3/74.0	19.3/74.0	43.9/75.3	47.4/76.4
Disch Event HE/CE, ms	8.0/14.2	N/A/14.2	5.5/13.0	5.5/13.0	9.3/14.5	10.3/15.5
Suct Pseudo-Q HE/CE	8.0/8.3	N/A/8.2	4.4/5.8	4.4/5.8	4.5/4.2	3.0/2.5
Gas Rod Ld Comp, %	71.4 C	6.2 C	85.3 C	85.3 C	92.6 C	65.1 C
Gas Rod Ld Tens, %	74.1 T	69.2 T	85.9 T	85.9 T	87.9 T	49.6 T
Gas Rod Ld Total, %	75.2	37.9	88.4	88.4	93.3	59.5
Xhd Pin Deg/%RvrsI lbf	172/79.1	136/58.7	142/83.8	143/84.5	155/93.3	164/61.6
Flow Calc, MMSCFD	14.992	9.974	12.483	12.483	24.966	24.923
Cyl BHP	845.5	595.4	733.4	733.4	1100.3	768.1



Ariel Performance


7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 46: Ps-low, Pd-design-3BS-Summer

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4157	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	17.584	17.584	17.553	17.423
BHP per Stage	1102.6	1253.6	917.1	814.7
Specific Gravity	0.8010	0.8010	0.8013	0.7981
Ratio of Sp Ht (N)	1.2186	1.2080	1.2240	1.2428
Comp Suct (Zs)	0.9898	0.9813	0.9450	0.8795
Comp Disch (Zd)	0.9846	0.9715	0.9297	0.8735
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	70.84	236.13	551.56
Pres Disch Flg, psig	73.30	242.33	567.19	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.648	3.049	2.330	2.373
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.87	15.87	65.80	65.80	221.06	538.45
Temp Suct Intl, F	79	79	138	138	136	135
Pres Disch Intl, psig	81.78	81.78	256.68	256.68	596.31	1360.39
Temp Disch Intl, F	208	208	279	279	250	251
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	78.3/78.7	78.3/78.7	65.5/65.2	65.5/65.2	69.8/68.7	64.9/60.8
Disch Event HE/CE, ms	11.3/13.0	11.3/13.0	9.5/11.0	9.5/11.0	11.3/12.8	10.8/12.0
Suct Pseudo-Q HE/CE	8.2/7.9	8.2/7.9	5.8/5.5	5.8/5.5	4.3/4.0	2.8/2.3
Gas Rod Ld Comp, %	37.8 C	37.8 C	57.2 C	57.2 C	70.3 C	73.6 C
Gas Rod Ld Tens, %	39.4 T	39.4 T	58.0 T	58.0 T	67.7 T	61.7 T
Gas Rod Ld Total, %	39.9	39.9	59.5	59.5	71.3	70.1
Xhd Pin Deg/%RvrsI lbf	168/83.4	168/83.4	179/95.8	179/96.1	150/72.9	175/60.4
Flow Calc, MMSCFD	8.792	8.792	8.792	8.792	17.553	17.423
Cyl BHP	551.3	551.3	626.8	626.8	917.1	814.7



Ariel Performance



Company:	Exterran Energy	Customer:	XTO ENERGY
Order #:	86326 (AP034266) Rev:13	Inquiry:	US-123192 thru 203
7.7.7.0 Case 47:	Ps design-Pd design-3BS-Summer	Project:	XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4910	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	23.084	23.084	23.084	22.917
BHP per Stage	1272.7	1589.8	1095.7	882.8
Specific Gravity	0.8016	0.8016	0.8016	0.7969
Ratio of Sp Ht (N)	1.2215	1.2101	1.2288	1.2479
Comp Suct (Zs)	0.9852	0.9762	0.9322	0.8632
Comp Disch (Zd)	0.9789	0.9646	0.9170	0.8602
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	94.02	294.85	636.09
Pres Disch Flg, psig	97.28	302.34	653.26	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.325	2.949	2.165	2.064
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	28.94	28.94	87.56	87.56	275.96	620.73
Temp Suct Intl, F	78	78	138	138	135	134
Pres Disch Intl, psig	108.45	108.45	320.27	320.27	687.53	1361.76
Temp Disch Intl, F	193	193	276	276	242	233
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	51.60 (V) %	51.60 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	37.03	37.03	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	58.7/82.3	58.7/82.3	67.0/66.7	67.0/66.7	73.2/72.2	72.2/69.0
Disch Event HE/CE, ms	10.2/14.2	10.2/14.2	9.8/11.3	9.8/11.3	12.0/13.7	12.3/13.7
Suct Pseudo-Q HE/CE	8.2/8.0	8.2/8.0	5.8/5.5	5.8/5.5	4.4/4.0	2.9/2.4
Gas Rod Ld Comp, %	45.7 C	45.7 C	69.8 C	69.8 C	77.4 C	67.5 C
Gas Rod Ld Tens, %	47.5 T	47.5 T	70.7 T	70.7 T	73.9 T	54.5 T
Gas Rod Ld Total, %	48.1	48.1	72.6	72.6	78.2	63.2
Xhd Pin Deg/%RvrsI lbf	172/95.2	172/95.1	164/90.8	163/90.4	146/73.7	169/67.9
Flow Calc, MMSCFD	11.542	11.542	11.542	11.542	23.084	22.917
Cyl BHP	636.3	636.3	794.9	794.9	1095.7	882.8



Ariel Performance



Company:	Exterran Energy	Customer:	XTO ENERGY
Order #:	86326 (AP034266) Rev:13	Inquiry:	US-123192 thru 203
7.7.7.0 Case 48:	Ps-high, Pd-design-3BS-Summer	Project:	XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4892	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	26.216	26.216	26.216	26.125
BHP per Stage	1524.3	1482.3	1086.0	730.3
Specific Gravity	0.7995	0.7995	0.7995	0.7975
Ratio of Sp Ht (N)	1.2245	1.2174	1.2364	1.2545
Comp Suct (Zs)	0.9775	0.9624	0.9116	0.8375
Comp Disch (Zd)	0.9679	0.9493	0.8981	0.8385
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	157.10	393.52	769.98
Pres Disch Flg, psig	161.57	402.75	789.04	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.418	2.445	1.973	1.711
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.74	50.93	146.68	146.68	368.05	750.84
Temp Suct Intl, F	79	83	137	137	135	133
Pres Disch Intl, psig	179.22	178.84	427.42	427.42	831.64	1364.04
Temp Disch Intl, F	200	205	255	255	232	208
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	66.30 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	43.63	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	48.9/81.2	N/A/81.2	20.5/74.4	20.5/74.4	46.6/76.4	52.4/78.5
Disch Event HE/CE, ms	9.0/13.8	N/A/13.8	5.7/13.2	5.7/13.2	9.7/14.8	11.2/16.2
Suct Pseudo-Q HE/CE	8.2/8.0	N/A/8.0	4.4/5.6	4.4/5.6	4.5/4.1	3.0/2.4
Gas Rod Ld Comp, %	73.9 C	6.0 C	84.5 C	84.5 C	87.6 C	57.8 C
Gas Rod Ld Tens, %	76.7 T	71.9 T	84.9 T	84.9 T	82.8 T	43.0 T
Gas Rod Ld Total, %	77.8	39.1	87.5	87.5	88.1	52.3
Xhd Pin Deg/%RvrsI lbf	168/88.3	129/57.2	143/83.2	142/83.9	150/95.9	160/59.5
Flow Calc, MMSCFD	16.324	9.891	13.108	13.108	26.216	26.125
Cyl BHP	929.7	594.7	741.2	741.2	1086.0	730.3



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 49: Ps-low, Pd-low-3BS-Summer

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	3922	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	17.677	17.677	17.652	17.536
BHP per Stage	1094.5	1231.5	854.6	672.9
Specific Gravity	0.8010	0.8010	0.8012	0.7991
Ratio of Sp Ht (N)	1.2187	1.2081	1.2239	1.2420
Comp Suct (Zs)	0.9898	0.9816	0.9469	0.8902
Comp Disch (Zd)	0.9847	0.9721	0.9328	0.8792
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	69.80	227.26	497.32
Pres Disch Flg, psig	72.11	232.70	510.19	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.612	2.971	2.178	2.025
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.87	15.87	64.83	64.83	212.74	485.58
Temp Suct Intl, F	79	79	138	138	135	134
Pres Disch Intl, psig	80.49	80.49	246.57	246.57	536.69	1047.32
Temp Disch Intl, F	206	206	276	276	240	228
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	78.8/79.1	78.8/79.1	66.7/66.4	66.7/66.4	72.9/71.9	72.4/69.3
Disch Event HE/CE, ms	11.5/13.2	11.5/13.2	9.7/11.3	9.7/11.3	12.0/13.5	12.5/13.8
Suct Pseudo-Q HE/CE	8.2/7.9	8.2/7.9	5.8/5.5	5.8/5.5	4.3/4.0	2.8/2.3
Gas Rod Ld Comp, %	37.1 C	37.1 C	54.5 C	54.5 C	60.9 C	51.3 C
Gas Rod Ld Tens, %	38.7 T	38.7 T	55.2 T	55.2 T	58.2 T	41.2 T
Gas Rod Ld Total, %	39.1	39.1	56.7	56.7	61.6	47.9
Xhd Pin Deg/%RvrsI lbf	169/83.2	169/83.2	176/94.2	176/94.5	180/79.2	162/77.7
Flow Calc, MMSCFD	8.839	8.839	8.839	8.839	17.652	17.536
Cyl BHP	547.3	547.3	615.7	615.7	854.6	672.9



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 50: Ps-design, Pd-low-3BS-Summer

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4906	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	24.781	24.781	24.777	24.614
BHP per Stage	1432.1	1659.8	1067.8	677.6
Specific Gravity	0.8016	0.8016	0.8016	0.7973
Ratio of Sp Ht (N)	1.2210	1.2108	1.2299	1.2496
Comp Suct (Zs)	0.9852	0.9749	0.9305	0.8689
Comp Disch (Zd)	0.9785	0.9633	0.9164	0.8618
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	99.58	302.59	606.06
Pres Disch Flg, psig	102.63	309.16	620.19	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.437	2.864	2.007	1.669
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	28.94	28.94	92.76	92.76	283.17	591.47
Temp Suct Intl, F	79	79	138	138	135	133
Pres Disch Intl, psig	114.24	114.24	327.60	327.60	653.25	1048.82
Temp Disch Intl, F	199	199	273	273	232	203
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	21.44 (V) %	21.44 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	23.49	23.49	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	70.3/81.0	70.3/81.0	68.3/68.0	68.3/68.0	76.4/75.6	81.1/79.0
Disch Event HE/CE, ms	11.0/13.8	11.0/13.8	10.0/11.7	10.0/11.7	12.8/14.5	14.8/16.3
Suct Pseudo-Q HE/CE	8.2/8.0	8.2/8.0	5.8/5.5	5.8/5.5	4.4/4.0	2.9/2.3
Gas Rod Ld Comp, %	49.0 C	49.0 C	70.4 C	70.4 C	69.9 C	43.3 C
Gas Rod Ld Tens, %	50.9 T	50.9 T	71.3 T	71.3 T	66.2 T	31.8 T
Gas Rod Ld Total, %	51.6	51.6	73.2	73.2	70.4	39.0
Xhd Pin Deg/%RvrsI lbf	174/95.7	174/95.6	163/89.0	161/88.6	171/74.1	158/83.1
Flow Calc, MMSCFD	12.391	12.391	12.391	12.391	24.777	24.614
Cyl BHP	716.1	716.1	829.9	829.9	1067.8	677.6



Ariel Performance



7.7.7.0 Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 51: Ps-high, Pd-low-3BS-Summer

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4887	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	---	2	---	3	4
Target Flow, MMSCFD	25.000	---	25.000	---	25.000	25.000
Flow Calc, MMSCFD	28.283	---	28.283	---	28.283	28.199
BHP per Stage	1674.7	---	1545.0	---	1051.9	546.8
Specific Gravity	0.7995	---	0.7995	---	0.7995	0.7977
Ratio of Sp Ht (N)	1.2243	---	1.2180	---	1.2369	1.2555
Comp Suct (Zs)	0.9775	---	0.9616	---	0.9122	0.8489
Comp Disch (Zd)	0.9677	---	0.9487	---	0.8996	0.8448
Pres Suct Line, psig	60.00	---	N/A	---	N/A	N/A
Pres Suct Flg, psig	59.27	---	160.93	---	390.79	708.53
Pres Disch Flg, psig	165.12	---	398.90	---	724.23	1020.26
Pres Disch Line, psig	N/A	---	N/A	---	N/A	1000.00
Pres Ratio F/F	2.467	---	2.369	---	1.826	1.432
Temp Suct, F	70.00	---	130.00	---	130.00	130.00
Temp Clr Disch, F	130.00	---	130.00	---	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.74	50.93	150.26	150.26	365.48	691.10
Temp Suct Intl, F	79	83	137	137	134	132
Pres Disch Intl, psig	183.06	182.68	423.49	423.49	763.92	1050.29
Temp Disch Intl, F	202	207	251	251	222	184
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	28.10 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	26.48	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	66.3/80.6	N/A/80.6	24.3/75.6	24.3/75.6	54.0/79.5	69.1/85.6
Disch Event HE/CE, ms	10.7/13.7	N/A/13.7	6.2/13.3	6.2/13.3	11.0/15.7	14.5/18.5
Suct Pseudo-Q HE/CE	8.2/8.0	N/A/7.9	4.8/5.6	4.8/5.6	4.5/4.1	2.9/2.4
Gas Rod Ld Comp, %	76.1 C	6.0 C	82.3 C	82.3 C	75.7 C	35.9 C
Gas Rod Ld Tens, %	79.0 T	74.2 T	82.6 T	82.6 T	70.7 T	23.0 T
Gas Rod Ld Total, %	80.1	40.3	85.2	85.2	75.7	30.6
Xhd Pin Deg/%RvrsI lbf	163/91.7	122/56.4	143/82.5	143/83.2	165/97.8	155/81.3
Flow Calc, MMSCFD	18.465	9.818	14.142	14.142	28.283	28.199
Cyl BHP	1072.8	601.9	772.5	772.5	1051.9	546.8



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 52: Ps-low, Pd-high-3BS-Summer

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	3736	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	15.611	15.611	15.573	15.471
BHP per Stage	1215.6	926.4	715.5	809.8
Specific Gravity	0.8010	0.8010	0.8014	0.7983
Ratio of Sp Ht (N)	1.2160	1.2119	1.2264	1.2410
Comp Suct (Zs)	0.9898	0.9756	0.9403	0.8820
Comp Disch (Zd)	0.9829	0.9656	0.9260	0.8774
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	96.46	257.69	538.74
Pres Disch Flg, psig	98.96	264.12	555.25	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	3.437	2.534	2.100	2.613
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	15.88	15.88	89.84	89.84	241.21	525.97
Temp Suct Intl, F	82	82	137	137	135	135
Pres Disch Intl, psig	109.48	109.48	280.27	280.27	584.42	1464.16
Temp Disch Intl, F	240	240	257	257	237	264
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	67.49	67.49	65.46	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	69.5/69.9	69.5/69.9	16.1/73.1	16.1/73.1	39.8/73.6	59.6/54.9
Disch Event HE/CE, ms	9.3/10.8	9.3/10.8	4.8/12.7	4.8/12.7	8.7/14.0	9.8/10.8
Suct Pseudo-Q HE/CE	8.1/7.9	8.1/7.9	3.9/5.5	3.9/5.5	4.2/4.0	2.8/2.3
Gas Rod Ld Comp, %	53.7 C	53.7 C	57.2 C	57.2 C	64.6 C	83.3 C
Gas Rod Ld Tens, %	56.0 T	56.0 T	57.7 T	57.7 T	61.6 T	71.2 T
Gas Rod Ld Total, %	56.6	56.6	59.4	59.4	65.2	80.0
Xhd Pin Deg/%RvrsI lbf	177/88.4	177/88.4	170/80.1	169/79.4	177/71.5	153/57.3
Flow Calc, MMSCFD	7.806	7.806	7.806	7.806	15.573	15.471
Cyl BHP	607.8	607.8	463.2	463.2	715.5	809.8



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 53: Ps-design Pd-high-3BS-Summer

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4911	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	22.633	22.633	22.633	22.464
BHP per Stage	1232.2	1572.2	1104.3	932.9
Specific Gravity	0.8016	0.8016	0.8016	0.7968
Ratio of Sp Ht (N)	1.2216	1.2099	1.2285	1.2474
Comp Suct (Zs)	0.9852	0.9765	0.9325	0.8611
Comp Disch (Zd)	0.9790	0.9650	0.9171	0.8606
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	92.62	293.30	647.09
Pres Disch Flg, psig	95.94	301.06	665.23	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	2.296	2.976	2.215	2.184
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	28.94	28.94	86.24	86.24	274.50	631.44
Temp Suct Intl, F	78	78	138	138	135	134
Pres Disch Intl, psig	106.99	106.99	318.89	318.89	699.97	1466.01
Temp Disch Intl, F	191	191	277	277	245	241
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	60.31 (V) %	60.31 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	40.94	40.94	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	55.6/82.6	55.6/82.6	66.6/66.3	66.6/66.3	72.2/71.2	69.6/66.1
Disch Event HE/CE, ms	10.0/14.3	10.0/14.3	9.7/11.2	9.7/11.2	11.8/13.3	11.7/13.0
Suct Pseudo-Q HE/CE	8.2/8.0	8.2/8.0	5.8/5.5	5.8/5.5	4.4/4.0	2.9/2.4
Gas Rod Ld Comp, %	44.9 C	44.9 C	69.7 C	69.7 C	79.9 C	75.4 C
Gas Rod Ld Tens, %	46.6 T	46.6 T	70.7 T	70.7 T	76.5 T	61.9 T
Gas Rod Ld Total, %	47.2	47.2	72.5	72.5	80.9	71.2
Xhd Pin Deg/%RvrsI lbf	172/96.5	172/96.4	164/91.2	162/90.8	145/75.0	178/61.0
Flow Calc, MMSCFD	11.316	11.316	11.316	11.316	22.633	22.464
Cyl BHP	616.1	616.1	786.1	786.1	1104.3	932.9



Ariel Performance



7.7.7.0 Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 54: Ps-high Pd-high-3BS-Summer

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4893	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	25.677	25.677	25.677	25.586
BHP per Stage	1488.9	1466.7	1095.1	773.2
Specific Gravity	0.7995	0.7995	0.7995	0.7975
Ratio of Sp Ht (N)	1.2245	1.2173	1.2363	1.2540
Comp Suct (Zs)	0.9775	0.9626	0.9112	0.8336
Comp Disch (Zd)	0.9680	0.9494	0.8975	0.8375
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	156.46	395.59	791.22
Pres Disch Flg, psig	161.01	405.17	811.36	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	2.410	2.469	2.018	1.792
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.74	50.93	146.08	146.08	369.98	771.48
Temp Suct Intl, F	79	83	137	137	135	133
Pres Disch Intl, psig	178.61	178.24	429.94	429.94	854.98	1468.57
Temp Disch Intl, F	199	204	256	256	236	215
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	76.04 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	48.01	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	44.4/81.3	N/A/81.3	19.3/74.1	19.3/74.1	44.4/75.5	47.9/76.6
Disch Event HE/CE, ms	8.5/13.8	N/A/13.8	5.5/13.0	5.5/13.0	9.3/14.5	10.3/15.5
Suct Pseudo-Q HE/CE	8.1/8.0	N/A/8.0	4.3/5.6	4.3/5.6	4.4/4.1	3.0/2.4
Gas Rod Ld Comp, %	73.5 C	6.0 C	85.4 C	85.4 C	91.5 C	65.0 C
Gas Rod Ld Tens, %	76.3 T	71.6 T	85.9 T	85.9 T	86.7 T	49.6 T
Gas Rod Ld Total, %	77.4	39.0	88.5	88.5	92.2	59.5
Xhd Pin Deg/%RvrsI lbf	169/84.7	130/57.3	142/83.7	143/84.3	153/94.4	164/61.9
Flow Calc, MMSCFD	15.775	9.902	12.838	12.838	25.677	25.586
Cyl BHP	895.4	593.5	733.3	733.3	1095.1	773.2



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 55: Ps-low, Pd-design-WC XY-Summer

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4178	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	17.651	17.651	17.619	17.534
BHP per Stage	1086.9	1264.7	926.3	831.0
Specific Gravity	0.6967	0.6967	0.6968	0.6972
Ratio of Sp Ht (N)	1.2398	1.2279	1.2427	1.2583
Comp Suct (Zs)	0.9918	0.9851	0.9560	0.9035
Comp Disch (Zd)	0.9884	0.9792	0.9473	0.9047
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	70.77	237.61	557.22
Pres Disch Flg, psig	73.23	243.81	572.85	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.646	3.069	2.338	2.349
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	16.37	16.37	66.42	66.42	224.59	545.96
Temp Suct Intl, F	80	80	139	139	136	135
Pres Disch Intl, psig	80.49	80.49	256.07	256.07	597.69	1354.88
Temp Disch Intl, F	216	216	291	291	257	255
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	78.8/79.1	78.8/79.1	66.1/65.7	66.1/65.7	70.5/69.4	66.3/62.4
Disch Event HE/CE, ms	11.5/13.2	11.5/13.2	9.7/11.2	9.7/11.2	11.3/13.0	11.0/12.3
Suct Pseudo-Q HE/CE	7.1/6.9	7.1/6.9	5.0/4.8	5.0/4.8	3.7/3.4	2.4/2.0
Gas Rod Ld Comp, %	36.8 C	36.8 C	56.8 C	56.8 C	69.9 C	72.5 C
Gas Rod Ld Tens, %	38.3 T	38.3 T	57.7 T	57.7 T	67.3 T	60.6 T
Gas Rod Ld Total, %	38.8	38.8	59.1	59.1	70.9	69.0
Xhd Pin Deg/%RvrsI lbf	169/83.7	169/83.7	178/96.5	179/96.8	146/73.7	178/62.0
Flow Calc, MMSCFD	8.825	8.825	8.825	8.825	17.619	17.534
Cyl BHP	543.5	543.5	632.3	632.3	926.3	831.0



Ariel Performance

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Ps design-Pd design-WC XY-Summer

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY



7.7.7.0

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4923	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	23.131	23.131	23.131	23.046
BHP per Stage	1249.3	1605.8	1108.1	890.4
Specific Gravity	0.6969	0.6969	0.6969	0.6972
Ratio of Sp Ht (N)	1.2427	1.2298	1.2470	1.2633
Comp Suct (Zs)	0.9880	0.9810	0.9458	0.8898
Comp Disch (Zd)	0.9839	0.9740	0.9374	0.8925
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	94.08	297.88	646.56
Pres Disch Flg, psig	97.34	305.36	663.72	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.326	2.976	2.177	2.031
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	29.69	29.69	88.48	88.48	281.53	633.31
Temp Suct Intl, F	79	79	139	139	136	134
Pres Disch Intl, psig	106.90	106.90	320.71	320.71	693.08	1356.11
Temp Disch Intl, F	199	199	288	288	248	235
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	52.94 (V) %	52.94 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	37.64	37.64	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	59.1/82.6	59.1/82.6	67.4/67.1	67.4/67.1	73.7/72.7	73.5/70.5
Disch Event HE/CE, ms	10.3/14.3	10.3/14.3	9.8/11.3	9.8/11.3	12.2/13.8	12.7/14.0
Suct Pseudo-Q HE/CE	7.1/6.9	7.1/6.9	5.0/4.8	5.0/4.8	3.8/3.5	2.4/2.0
Gas Rod Ld Comp, %	44.4 C	44.4 C	69.6 C	69.6 C	77.4 C	66.0 C
Gas Rod Ld Tens, %	46.1 T	46.1 T	70.6 T	70.6 T	73.9 T	52.9 T
Gas Rod Ld Total, %	46.7	46.7	72.4	72.4	78.2	61.7
Xhd Pin Deg/%RvrsI lbf	171/94.4	171/94.3	159/90.0	157/89.6	145/74.3	168/69.4
Flow Calc, MMSCFD	11.566	11.566	11.566	11.566	23.131	23.046
Cyl BHP	624.7	624.7	802.9	802.9	1108.1	890.4



Ariel Performance



7.7.7.0	Company: Exterran Energy Order #: 86326 (AP034266) Rev:13 Case 57: Ps-high, Pd-design-WC XY-Summer	Customer: XTO ENERGY Inquiry: US-123192 thru 203 Project: XTO ENERGY
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Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4906	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	26.316	26.316	26.316	26.270
BHP per Stage	1499.1	1503.2	1100.8	733.7
Specific Gravity	0.6971	0.6971	0.6971	0.6973
Ratio of Sp Ht (N)	1.2447	1.2362	1.2533	1.2697
Comp Suct (Zs)	0.9818	0.9699	0.9291	0.8700
Comp Disch (Zd)	0.9754	0.9620	0.9222	0.8746
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	156.88	397.54	781.94
Pres Disch Flg, psig	161.35	406.77	801.01	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.415	2.472	1.983	1.685
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	51.87	52.03	147.88	147.88	375.54	765.59
Temp Suct Intl, F	79	83	137	137	135	133
Pres Disch Intl, psig	176.46	176.14	427.94	427.94	837.48	1357.90
Temp Disch Intl, F	206	210	264	264	237	209
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	67.37 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	44.12	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	49.8/81.6	N/A/81.6	21.5/74.6	21.5/74.6	47.8/76.8	55.0/79.5
Disch Event HE/CE, ms	9.2/14.0	N/A/14.0	5.8/13.2	5.8/13.2	9.8/14.8	11.5/16.3
Suct Pseudo-Q HE/CE	7.1/7.0	N/A/6.9	3.9/4.8	3.9/4.8	3.8/3.5	2.5/2.0
Gas Rod Ld Comp, %	71.7 C	5.3 C	84.3 C	84.3 C	87.4 C	56.1 C
Gas Rod Ld Tens, %	74.3 T	70.2 T	84.7 T	84.7 T	82.4 T	41.2 T
Gas Rod Ld Total, %	75.4	37.9	87.3	87.3	87.8	50.5
Xhd Pin Deg/%RvrsI lbf	169/87.7	130/57.6	142/83.8	142/84.4	150/94.3	159/61.7
Flow Calc, MMSCFD	16.420	9.896	13.158	13.158	26.316	26.270
Cyl BHP	917.3	581.8	751.6	751.6	1100.8	733.7



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 58: Ps-low, Pd-low-WC XY-Summer

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	3930	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	17.737	17.737	17.711	17.627
BHP per Stage	1078.6	1242.0	861.2	679.2
Specific Gravity	0.6967	0.6967	0.6968	0.6972
Ratio of Sp Ht (N)	1.2400	1.2281	1.2428	1.2583
Comp Suct (Zs)	0.9918	0.9853	0.9575	0.9121
Comp Disch (Zd)	0.9884	0.9795	0.9493	0.9079
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	69.79	228.96	503.14
Pres Disch Flg, psig	72.09	234.41	516.00	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.611	2.992	2.187	2.002
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	16.37	16.37	65.49	65.49	216.40	493.03
Temp Suct Intl, F	80	80	139	139	136	134
Pres Disch Intl, psig	79.27	79.27	246.27	246.27	538.70	1043.03
Temp Disch Intl, F	214	214	287	287	247	231
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	79.2/79.5	79.2/79.5	67.2/66.9	67.2/66.9	73.4/72.4	73.6/70.7
Disch Event HE/CE, ms	11.5/13.3	11.5/13.3	9.8/11.3	9.8/11.3	12.0/13.7	12.7/14.2
Suct Pseudo-Q HE/CE	7.1/6.9	7.1/6.9	5.0/4.8	5.0/4.8	3.7/3.4	2.4/1.9
Gas Rod Ld Comp, %	36.1 C	36.1 C	54.2 C	54.2 C	60.6 C	50.3 C
Gas Rod Ld Tens, %	37.6 T	37.6 T	55.0 T	55.0 T	57.9 T	40.2 T
Gas Rod Ld Total, %	38.1	38.1	56.4	56.4	61.3	46.9
Xhd Pin Deg/%RvrsI lbf	168/83.5	168/83.5	176/94.9	177/95.2	180/79.9	162/78.1
Flow Calc, MMSCFD	8.869	8.869	8.869	8.869	17.711	17.627
Cyl BHP	539.3	539.3	621.0	621.0	861.2	679.2



Ariel Performance



Company:	Exterran Energy	Customer:	XTO ENERGY
Order #:	86326 (AP034266) Rev:13	Inquiry:	US-123192 thru 203
7.7.7.0 Case 59:	Ps-design, Pd-low-WC XY-Summer	Project:	XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4919	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	24.910	24.910	24.903	24.820
BHP per Stage	1418.4	1682.3	1081.3	668.6
Specific Gravity	0.6969	0.6969	0.6970	0.6972
Ratio of Sp Ht (N)	1.2421	1.2306	1.2483	1.2654
Comp Suct (Zs)	0.9880	0.9799	0.9442	0.8940
Comp Disch (Zd)	0.9836	0.9729	0.9363	0.8919
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	100.10	307.21	619.12
Pres Disch Flg, psig	103.16	313.79	633.25	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.449	2.892	2.019	1.635
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	29.69	29.69	94.19	94.19	290.33	606.46
Temp Suct Intl, F	79	79	138	138	135	133
Pres Disch Intl, psig	113.13	113.13	329.65	329.65	661.74	1044.40
Temp Disch Intl, F	206	206	284	284	238	203
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	20.42 (V) %	20.42 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	23.03	23.03	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	71.2/81.3	71.2/81.3	68.6/68.3	68.6/68.3	76.8/76.0	82.3/80.4
Disch Event HE/CE, ms	11.2/13.8	11.2/13.8	10.2/11.7	10.2/11.7	13.0/14.7	15.2/16.7
Suct Pseudo-Q HE/CE	7.1/6.9	7.1/6.9	5.1/4.8	5.1/4.8	3.8/3.5	2.4/2.0
Gas Rod Ld Comp, %	48.0 C	48.0 C	70.6 C	70.6 C	70.1 C	41.8 C
Gas Rod Ld Tens, %	49.8 T	49.8 T	71.5 T	71.5 T	66.4 T	30.1 T
Gas Rod Ld Total, %	50.5	50.5	73.4	73.4	70.6	37.4
Xhd Pin Deg/%RvrsI lbf	173/95.4	173/95.3	154/87.9	146/87.6	166/74.2	157/84.9
Flow Calc, MMSCFD	12.455	12.455	12.455	12.455	24.903	24.820
Cyl BHP	709.2	709.2	841.1	841.1	1081.3	668.6



Ariel Performance



7.7.7.0

Company: Exterran Energy
Order #: 86326 (AP034266) Rev:13
Case 60: Ps-high, Pd-low-WC XY-Summer

Customer: XTO ENERGY
Inquiry: US-123192 thru 203
Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4902	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	28.499	28.499	28.499	28.455
BHP per Stage	1663.4	1571.9	1065.4	532.2
Specific Gravity	0.6971	0.6971	0.6971	0.6972
Ratio of Sp Ht (N)	1.2444	1.2369	1.2541	1.2710
Comp Suct (Zs)	0.9818	0.9691	0.9292	0.8785
Comp Disch (Zd)	0.9753	0.9613	0.9225	0.8778
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	161.69	397.14	723.11
Pres Disch Flg, psig	165.88	405.25	738.81	1020.26
Pres Disch Line, psig	N/A	N/A	N/A	1000.00
Pres Ratio F/F	2.478	2.395	1.833	1.404
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	51.87	52.03	152.43	152.43	375.14	708.09
Temp Suct Intl, F	80	84	137	137	135	132
Pres Disch Intl, psig	181.31	180.98	426.48	426.48	773.03	1045.58
Temp Disch Intl, F	209	214	260	260	226	182
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Sprcs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	24.92 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	25.05	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Sprcs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	68.5/80.9	N/A/80.9	25.2/75.8	25.2/75.8	55.0/79.9	71.6/86.6
Disch Event HE/CE, ms	10.8/13.8	N/A/13.8	6.3/13.5	6.3/13.5	11.2/15.7	15.0/19.0
Suct Pseudo-Q HE/CE	7.2/7.0	N/A/6.9	4.2/4.8	4.2/4.8	3.9/3.5	2.5/2.0
Gas Rod Ld Comp, %	74.4 C	5.3 C	82.6 C	82.6 C	75.7 C	34.2 C
Gas Rod Ld Tens, %	77.3 T	73.1 T	82.9 T	82.9 T	70.6 T	21.1 T
Gas Rod Ld Total, %	78.3	39.4	85.5	85.5	75.6	28.8
Xhd Pin Deg/%RvrsI lbf	160/90.3	119/56.7	143/84.4	142/85.0	152/99.1	155/82.5
Flow Calc, MMSCFD	18.692	9.806	14.249	14.249	28.499	28.455
Cyl BHP	1071.8	591.6	786.0	786.0	1065.4	532.2



Ariel Performance



7.7.7.0	Company: Exterran Energy Order #: 86326 (AP034266) Rev:13 Case 61: Ps-low, Pd-high-WC XY-Summer	Customer: XTO ENERGY Inquiry: US-123192 thru 203 Project: XTO ENERGY
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Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	3780	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	15.762	15.762	15.723	15.659
BHP per Stage	1211.4	940.6	726.1	832.8
Specific Gravity	0.6967	0.6967	0.6969	0.6972
Ratio of Sp Ht (N)	1.2368	1.2319	1.2450	1.2565
Comp Suct (Zs)	0.9918	0.9806	0.9523	0.9056
Comp Disch (Zd)	0.9874	0.9745	0.9442	0.9086
Pres Suct Line, psig	20.00	N/A	N/A	N/A
Pres Suct Flg, psig	19.67	96.09	259.10	544.06
Pres Disch Flg, psig	98.59	265.53	560.57	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	3.426	2.555	2.108	2.588
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	16.39	16.39	90.38	90.38	244.89	533.09
Temp Suct Intl, F	82	82	137	137	135	135
Pres Disch Intl, psig	107.53	107.53	279.34	279.34	585.46	1458.33
Temp Disch Intl, F	251	251	266	266	242	269
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	0.00 (V) %	0.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	13.87	13.87	67.49	67.49	65.46	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	70.3/70.7	70.3/70.7	17.4/73.4	17.4/73.4	41.2/74.1	61.1/56.7
Disch Event HE/CE, ms	9.5/11.0	9.5/11.0	5.2/12.8	5.2/12.8	8.8/14.2	10.0/11.2
Suct Pseudo-Q HE/CE	7.0/6.8	7.0/6.8	3.5/4.8	3.5/4.8	3.6/3.4	2.4/2.0
Gas Rod Ld Comp, %	52.3 C	52.3 C	56.8 C	56.8 C	64.1 C	82.2 C
Gas Rod Ld Tens, %	54.6 T	54.6 T	57.3 T	57.3 T	61.1 T	70.1 T
Gas Rod Ld Total, %	55.2	55.2	58.9	58.9	64.7	78.9
Xhd Pin Deg/%RvrsI lbf	176/88.6	176/88.7	169/78.4	168/77.7	177/72.4	151/56.8
Flow Calc, MMSCFD	7.881	7.881	7.881	7.881	15.723	15.659
Cyl BHP	605.7	605.7	470.3	470.3	726.1	832.8



Ariel Performance


7.7.7.0

Company: Exterran Energy
 Order #: 86326 (AP034266) Rev:13
 Case 62: Ps-design Pd-high-WC XY-Summer

Customer: XTO ENERGY
 Inquiry: US-123192 thru 203
 Project: XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4923	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	22.659	22.659	22.659	22.574
BHP per Stage	1206.6	1586.6	1116.7	944.6
Specific Gravity	0.6969	0.6969	0.6969	0.6972
Ratio of Sp Ht (N)	1.2428	1.2296	1.2467	1.2627
Comp Suct (Zs)	0.9880	0.9812	0.9461	0.8883
Comp Disch (Zd)	0.9839	0.9743	0.9377	0.8934
Pres Suct Line, psig	35.00	N/A	N/A	N/A
Pres Suct Flg, psig	34.52	92.54	295.89	656.93
Pres Disch Flg, psig	95.86	303.65	675.07	1428.26
Pres Disch Line, psig	N/A	N/A	N/A	1400.00
Pres Ratio F/F	2.295	3.003	2.228	2.152
Temp Suct, F	70.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	DBL	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	3545.8	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	29.69	29.69	87.03	87.03	279.66	643.46
Temp Suct Intl, F	79	79	139	139	136	134
Pres Disch Intl, psig	105.33	105.33	318.89	318.89	704.77	1459.96
Temp Disch Intl, F	198	198	289	289	251	243
HE Suct Gas Vel, FPM	9976	9976	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	8467	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	0.66+44.90	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	62.42 (V) %	62.42 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %	0.00 (V) %
HE Min Clr, %	13.20	13.20	18.03	18.03	24.35	29.34
HE Total Clr, %	41.89	41.89	18.79	18.79	25.06	29.70
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	55.9/83.0	55.9/83.0	67.0/66.7	67.0/66.7	72.7/71.7	71.0/67.7
Disch Event HE/CE, ms	10.0/14.5	10.0/14.5	9.8/11.3	9.8/11.3	11.8/13.5	12.0/13.3
Suct Pseudo-Q HE/CE	7.1/6.9	7.1/6.9	5.0/4.8	5.0/4.8	3.8/3.4	2.4/2.0
Gas Rod Ld Comp, %	43.5 C	43.5 C	69.5 C	69.5 C	79.9 C	74.0 C
Gas Rod Ld Tens, %	45.2 T	45.2 T	70.5 T	70.5 T	76.4 T	60.4 T
Gas Rod Ld Total, %	45.8	45.8	72.3	72.3	80.8	69.6
Xhd Pin Deg/%RvrsI lbf	171/95.9	171/95.8	159/90.5	157/90.1	145/74.6	180/63.1
Flow Calc, MMSCFD	11.329	11.329	11.329	11.329	22.659	22.574
Cyl BHP	603.3	603.3	793.3	793.3	1116.7	944.6



Ariel Performance



Company:	Exterran Energy	Customer:	XTO ENERGY
Order #:	86326 (AP034266) Rev:13	Inquiry:	US-123192 thru 203
7.7.7.0 Case 63:	Ps-high, Pd-design-Avalon-Winter	Project:	XTO ENERGY

Compressor Data:

Elevation,ft:	3600.00	Barmtr,psia:	12.861	Ambient,F:	110.00
Frame:	KBZ/6	Stroke, in:	6.75	Rod Dia, in:	2.875
Max RL Tot, lbf:	150000	Max RL Tens, lbf:	75000	Max RL Comp, lbf:	80000
Rated RPM:	1000	Rated BHP:	7800.0	Rated PS FPM:	1125.0
Calc RPM:	1000.0	BHP:	4848	Calc PS FPM:	1125.0

Driver Data:

Type:	Nat. Gas
Mfg:	Caterpillar
Model:	G3616 A4
BHP:	5000
Avail:	5000

Services

Gas Model

Service 1

VMG-APRNL2

Stage Data:

	1	2	3	4
Target Flow, MMSCFD	25.000	25.000	25.000	25.000
Flow Calc, MMSCFD	25.732	25.732	25.731	25.732
BHP per Stage	1456.4	1494.8	1098.5	729.0
Specific Gravity	0.8265	0.8265	0.8265	0.8265
Ratio of Sp Ht (N)	1.2490	1.2336	1.2480	1.2613
Comp Suct (Zs)	0.9780	0.9675	0.9228	0.8560
Comp Disch (Zd)	0.9694	0.9561	0.9098	0.8530
Pres Suct Line, psig	60.00	N/A	N/A	N/A
Pres Suct Flg, psig	59.27	154.36	391.69	773.57
Pres Disch Flg, psig	158.83	400.93	792.64	1326.26
Pres Disch Line, psig	N/A	N/A	N/A	1300.00
Pres Ratio F/F	2.380	2.475	1.991	1.703
Temp Suct, F	50.00	130.00	130.00	130.00
Temp Clr Disch, F	130.00	130.00	130.00	120.00

Cylinder Data:

	Throw 3	Throw 5	Throw 4	Throw 6	Throw 1	Throw 2
Cyl Model	24-1/8Z:10	24-1/8Z:10	17-7/8Z:10	17-7/8Z:10	14-1/8Z:10	9-1/4ZK
Cyl Bore, in	24.125	24.125	17.375	17.375	13.625	9.250
Cyl RDP (API), psig	250.0	250.0	577.3	577.3	1154.5	2181.8
Cyl MAWP, psig	275.0	275.0	635.0	635.0	1270.0	2400.0
Cyl Action	DBL	<u>CE(HEVR)</u>	DBL	DBL	DBL	DBL
Cyl Disp, CFM	3545.8	1760.2	1827.0	1827.0	1113.7	499.6
Pres Suct Intl, psig	50.12	50.34	143.82	143.82	365.81	754.08
Temp Suct Intl, F	59	64	137	137	135	133
Pres Disch Intl, psig	177.11	176.70	425.77	425.77	835.93	1364.67
Temp Disch Intl, F	187	192	266	266	238	209
HE Suct Gas Vel, FPM	9976	3325	7550	7550	7481	4594
HE Disch Gas Vel, FPM	8467	N/A	6733	6733	6147	4370
HE Spcrs Used/Max	0/0	N/A	0/6	0/6	0/4	0/4
HE Vol Pkt Avail	0.66+44.90	N/A	0.76+48.69	0.76+48.69	0.71+40.40	0.36+53.03
Vol Pkt Used	100.00 (V) %	N/A %	100.00 (V) %	100.00 (V) %	100.00 (V) %	100.00 (V) %
HE Min Clr, %	13.20	N/A	18.03	18.03	24.35	29.34
HE Total Clr, %	58.77	N/A	67.49	67.49	65.46	82.73
CE Suct Gas Vel, FPM	9834	9834	7343	7343	7148	4150
CE Disch Gas Vel, FPM	8347	8347	6548	6548	5874	3947
CE Spcrs Used/Max	0/0	0/0	0/6	0/6	0/4	0/4
CE Min Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
CE Total Clr, %	13.59	13.59	18.99	18.99	26.09	33.52
Suct Vol Eff HE/CE, %	36.0/82.1	N/A/82.1	20.7/74.5	20.7/74.5	46.4/76.3	52.6/78.6
Disch Event HE/CE, ms	7.7/14.2	N/A/14.2	5.7/13.2	5.7/13.2	9.7/14.7	11.2/16.2
Suct Pseudo-Q HE/CE	8.2/8.6	N/A/8.5	4.6/5.8	4.6/5.8	4.5/4.2	3.0/2.5
Gas Rod Ld Comp, %	73.0 C	6.4 C	84.8 C	84.8 C	88.8 C	57.6 C
Gas Rod Ld Tens, %	75.8 T	70.7 T	85.3 T	85.3 T	84.0 T	42.8 T
Gas Rod Ld Total, %	76.8	38.7	87.9	87.9	89.4	52.1
Xhd Pin Deg/%RvrsI lbf	171/79.3	134/58.6	143/84.1	142/84.7	150/95.2	160/59.9
Flow Calc, MMSCFD	15.378	10.354	12.866	12.866	25.731	25.732
Cyl BHP	849.7	606.7	747.4	747.4	1098.5	729.0