



Unit 200420 Specs:

-Packager: POI

-Year Built: 2000

-Engine: Caterpillar G3306NA, 1800 RPM- 145 HP

-Frame: Ariel JGP-2/3 Stage

-Cylinder Configuration: 8" M (175 psi), 5.75" P (575 psi), 3.25" P (1,125 psi)

-Cooler: R&R U-154.8L3

- MAWP- IC1: 300 psi
- MAWP- IC2: 655 psi
- MAWP- AC: 1,315 psi

-Current Condition:

Field-run (running) condition. (Video evidence provided.)

-Price: \$60,000

(Inspections welcome at our shop in Longview, TX.)



## Ariel Performance

Company: Synergy Field Services, LLC

Customer:

Quote:

Inquiry:

7.7.6.0

Case 1:

Project:



### Compressor Data:

|                  |        |                   |        |                   |        |
|------------------|--------|-------------------|--------|-------------------|--------|
| Elevation, ft:   | 600.00 | Barmtr, psia:     | 14.376 | Ambient, F:       | 100.00 |
| Frame:           | JGQ/2  | Stroke, in:       | 3.00   | Rod Dia, in:      | 1.125  |
| Max RL Tot, lbf: | 20000  | Max RL Tens, lbf: | 10000  | Max RL Comp, lbf: | 11000  |
| Rated RPM:       | 1800   | Rated BHP:        | 280.0  | Rated PS FPM:     | 900.0  |
| Calc RPM:        | 1800.0 | BHP:              | 136    | Calc PS FPM:      | 900.0  |

### Driver Data:

|        |             |
|--------|-------------|
| Type:  | Nat. Gas    |
| Mfg:   | Caterpillar |
| Model: | G3306B NA   |
| BHP:   | 138 (5.00%) |
| Avail: | 138         |

### Services

Gas Model

### Service 1

VMG-APRNL2

### Stage Data:

|                       | 1 (SG) | 2      | 3      |
|-----------------------|--------|--------|--------|
| Target Flow, MMSCFD   | 0.500  | 0.500  | 0.500  |
| Flow Calc, MMSCFD     | 0.705  | 0.705  | 0.695  |
| BHP per Stage         | 57.0   | 49.7   | 23.3   |
| Specific Gravity      | 0.6500 | 0.6500 | 0.6358 |
| Ratio of Sp Ht (N)    | 1.2475 | 1.2474 | 1.2719 |
| Comp Suct (Zs)        | 0.9924 | 0.9794 | 0.9460 |
| Comp Disch (Zd)       | 0.9892 | 0.9748 | 0.9433 |
| Pres Suct Line, psig  | 25.00  | N/A    | N/A    |
| Pres Suct Flg, psig   | 24.61  | 120.13 | 368.82 |
| Pres Disch Flg, psig  | 123.06 | 373.82 | 610.00 |
| Pres Disch Line, psig | N/A    | N/A    | 600.00 |
| Pres Ratio F/F        | 3.526  | 2.886  | 1.629  |
| Temp Suct, F          | 80.00  | 120.00 | 120.00 |
| Temp Clr Disch, F     | 120.00 | 120.00 | 120.00 |

### Cylinder Data:

|                        | Throw 1    | Throw 2   | Throw 2   |
|------------------------|------------|-----------|-----------|
| Cyl Model              | 8M         | 5-3/4P-HE | 3-1/4P-CE |
| Cyl Bore, in           | 8.000      | 5.750     | 3.250     |
| Cyl RDP (API), psig    | 150.0      | 522.7     | 1022.7    |
| Cyl MAWP, psig         | 175.0      | 575.0     | 1125.0    |
| Cyl Action             | DBL        | HE        | CE        |
| Cyl Disp, CFM          | 311.1      | 81.1      | 22.8      |
| Pres Suct Intl, psig   | 20.72      | 108.97    | 338.92    |
| Temp Suct Intl, F      | 87         | 125       | 122       |
| Pres Disch Intl, psig  | 134.81     | 403.19    | 651.41    |
| Temp Disch Intl, F     | 269        | 285       | 207       |
| HE Suct Gas Vel, FPM   | 10331      | 9596      | 0         |
| HE Disch Gas Vel, FPM  | 9196       | 8599      | N/A       |
| HE Spcrs Used/Max      | 0/2        | 0/2       | N/A       |
| HE Vol Pkt Avail       | 1.31+59.76 | No Pkt    | N/A       |
| Vol Pkt Used           | 0.00 (V) % | No Pkt    | N/A %     |
| HE Min Clr, %          | 16.87      | 16.19     | N/A       |
| HE Total Clr, %        | 18.18      | 16.19     | N/A       |
| CE Suct Gas Vel, FPM   | 10127      | 0         | 9226      |
| CE Disch Gas Vel, FPM  | 9014       | N/A       | 7574      |
| CE Spcrs Used/Max      | 0/2        | N/A       | 0/2       |
| CE Min Clr, %          | 17.72      | N/A       | 22.62     |
| CE Total Clr, %        | 17.72      | N/A       | 22.62     |
| Suct Vol Eff HE/CE, %  | 60.8/61.5  | 72.0/N/A  | N/A/85.6  |
| Disch Event HE/CE, ms  | 4.8/5.6    | 5.8/N/A   | N/A/9.7   |
| Suct Pseudo-Q HE/CE    | 9.1/8.7    | 7.7/N/A   | N/A/3.7   |
| Gas Rod Ld Comp, %     | 52.4 C     | 53.4 C    | 53.4 C    |
| Gas Rod Ld Tens, %     | 55.9 T     | 40.5 T    | 40.5 T    |
| Gas Rod Ld Total, %    | 56.8       | 49.6      | 49.6      |
| Xhd Pin Deg/%RvrsI lbf | 143/94.2   | 165/82.0  | 165/82.0  |
| Flow Calc, MMSCFD      | 0.705      | 0.705     | 0.695     |
| Cyl BHP                | 57.0       | 49.7      | 23.3      |



## Ariel Performance

Company: Synergy Field Services, LLC

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7.7.6.0

Case 1:

Project:



### Compressor Data:

|                  |        |                   |        |                   |        |
|------------------|--------|-------------------|--------|-------------------|--------|
| Elevation, ft:   | 600.00 | Barmtr, psia:     | 14.376 | Ambient, F:       | 100.00 |
| Frame:           | JGQ/2  | Stroke, in:       | 3.00   | Rod Dia, in:      | 1.125  |
| Max RL Tot, lbf: | 20000  | Max RL Tens, lbf: | 10000  | Max RL Comp, lbf: | 11000  |
| Rated RPM:       | 1800   | Rated BHP:        | 280.0  | Rated PS FPM:     | 900.0  |
| Calc RPM:        | 1800.0 | BHP:              | 137    | Calc PS FPM:      | 900.0  |

### Driver Data:

|        |             |
|--------|-------------|
| Type:  | Nat. Gas    |
| Mfg:   | Caterpillar |
| Model: | G3306B NA   |
| BHP:   | 138 (5.00%) |
| Avail: | 138         |

### Services

Gas Model

### Service 1

VMG-APRNL2

### Stage Data:

|                       | 1 (SG) | 2      | 3      |
|-----------------------|--------|--------|--------|
| Target Flow, MMSCFD   | 0.500  | 0.500  | 0.500  |
| Flow Calc, MMSCFD     | 0.639  | 0.639  | 0.631  |
| BHP per Stage         | 52.5   | 48.0   | 30.8   |
| Specific Gravity      | 0.6500 | 0.6499 | 0.6418 |
| Ratio of Sp Ht (N)    | 1.2461 | 1.2453 | 1.2663 |
| Comp Suct (Zs)        | 0.9929 | 0.9804 | 0.9438 |
| Comp Disch (Zd)       | 0.9898 | 0.9755 | 0.9411 |
| Pres Suct Line, psig  | 22.00  | N/A    | N/A    |
| Pres Suct Flg, psig   | 21.64  | 112.42 | 372.77 |
| Pres Disch Flg, psig  | 115.47 | 378.53 | 810.00 |
| Pres Disch Line, psig | N/A    | N/A    | 800.00 |
| Pres Ratio F/F        | 3.606  | 3.099  | 2.129  |
| Temp Suct, F          | 80.00  | 120.00 | 120.00 |
| Temp Clr Disch, F     | 120.00 | 120.00 | 120.00 |

### Cylinder Data:

|                        | Throw 1    | Throw 2   | Throw 2   |
|------------------------|------------|-----------|-----------|
| Cyl Model              | 8M         | 5-3/4P-HE | 3-1/4P-CE |
| Cyl Bore, in           | 8.000      | 5.750     | 3.250     |
| Cyl RDP (API), psig    | 150.0      | 522.7     | 1022.7    |
| Cyl MAWP, psig         | 175.0      | 575.0     | 1125.0    |
| Cyl Action             | DBL        | HE        | CE        |
| Cyl Disp, CFM          | 311.1      | 81.1      | 22.8      |
| Pres Suct Intl, psig   | 18.05      | 101.92    | 342.25    |
| Temp Suct Intl, F      | 87         | 126       | 123       |
| Pres Disch Intl, psig  | 126.53     | 407.85    | 862.33    |
| Temp Disch Intl, F     | 271        | 295       | 245       |
| HE Suct Gas Vel, FPM   | 10331      | 9596      | 0         |
| HE Disch Gas Vel, FPM  | 9196       | 8599      | N/A       |
| HE Spcrs Used/Max      | 0/2        | 0/2       | N/A       |
| HE Vol Pkt Avail       | 1.31+59.76 | No Pkt    | N/A       |
| Vol Pkt Used           | 0.00 (V) % | No Pkt    | N/A %     |
| HE Min Clr, %          | 16.87      | 16.19     | N/A       |
| HE Total Clr, %        | 18.18      | 16.19     | N/A       |
| CE Suct Gas Vel, FPM   | 10127      | 0         | 9226      |
| CE Disch Gas Vel, FPM  | 9014       | N/A       | 7574      |
| CE Spcrs Used/Max      | 0/2        | N/A       | 0/2       |
| CE Min Clr, %          | 17.72      | N/A       | 22.62     |
| CE Total Clr, %        | 17.72      | N/A       | 22.62     |
| Suct Vol Eff HE/CE, %  | 59.6/60.5  | 69.3/N/A  | N/A/76.8  |
| Disch Event HE/CE, ms  | 4.7/5.6    | 5.5/N/A   | N/A/8.0   |
| Suct Pseudo-Q HE/CE    | 9.1/8.7    | 7.7/N/A   | N/A/3.7   |
| Gas Rod Ld Comp, %     | 49.8 C     | 55.5 C    | 55.5 C    |
| Gas Rod Ld Tens, %     | 53.2 T     | 56.4 T    | 56.4 T    |
| Gas Rod Ld Total, %    | 54.0       | 58.7      | 58.7      |
| Xhd Pin Deg/%RvrsI lbf | 152/98.1   | 138/79.7  | 138/79.7  |
| Flow Calc, MMSCFD      | 0.639      | 0.639     | 0.631     |
| Cyl BHP                | 52.5       | 48.0      | 30.8      |



## Ariel Performance

Company: Synergy Field Services, LLC  
 Quote:  
 Case 1:

Customer:  
 Inquiry:  
 Project:



7.7.6.0

### Compressor Data:

|                  |        |                   |        |                   |        |
|------------------|--------|-------------------|--------|-------------------|--------|
| Elevation, ft:   | 600.00 | Barmtr, psia:     | 14.376 | Ambient, F:       | 100.00 |
| Frame:           | JGQ/2  | Stroke, in:       | 3.00   | Rod Dia, in:      | 1.125  |
| Max RL Tot, lbf: | 20000  | Max RL Tens, lbf: | 10000  | Max RL Comp, lbf: | 11000  |
| Rated RPM:       | 1800   | Rated BHP:        | 280.0  | Rated PS FPM:     | 900.0  |
| Calc RPM:        | 1800.0 | BHP:              | 129    | Calc PS FPM:      | 900.0  |

### Driver Data:

|        |             |
|--------|-------------|
| Type:  | Nat. Gas    |
| Mfg:   | Caterpillar |
| Model: | G3306B NA   |
| BHP:   | 138 (5.00%) |
| Avail: | 138         |

### Services

Gas Model  
**Stage Data:**  
 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

### Service 1

VMG-APRNL2

#### 1 (SG)

0.500  
**0.537**  
 45.2  
 0.6500  
 1.2454  
 0.9938  
 0.9911  
**17.00**  
 16.69  
 101.10  
 N/A  
 3.717  
 80.00  
 120.00

#### 2

0.500  
**0.536**  
 43.4  
 0.6501  
 1.2434  
 0.9826  
 0.9779  
 N/A  
 98.12  
 366.11  
 N/A  
 3.382  
 120.00  
 120.00

#### 3

0.500  
**0.528**  
 33.9  
 0.6352  
 1.2649  
 0.9468  
 0.9469  
 N/A  
 359.76  
 1010.14  
**1000.00**  
 2.738  
 120.00  
 120.00

### Cylinder Data:

|                        |              |                  |                  |
|------------------------|--------------|------------------|------------------|
| <b>Cyl Model</b>       | <b>8M</b>    | <b>5-3/4P-HE</b> | <b>3-1/4P-CE</b> |
| <b>Cyl Bore, in</b>    | <b>8.000</b> | <b>5.750</b>     | <b>3.250</b>     |
| Cyl RDP (API), psig    | 150.0        | 522.7            | 1022.7           |
| Cyl MAWP, psig         | 175.0        | 575.0            | 1125.0           |
| Cyl Action             | DBL          | HE               | CE               |
| Cyl Disp, CFM          | 311.1        | 81.1             | 22.8             |
| Pres Suct Intl, psig   | 13.60        | 88.83            | 330.71           |
| Temp Suct Intl, F      | 87           | 126              | 124              |
| Pres Disch Intl, psig  | 110.87       | 394.00           | 1070.85          |
| Temp Disch Intl, F     | 275          | 307              | 283              |
| HE Suct Gas Vel, FPM   | 10331        | 9596             | 0                |
| HE Disch Gas Vel, FPM  | 9196         | 8599             | N/A              |
| HE Spcrs Used/Max      | 0/2          | 0/2              | N/A              |
| HE Vol Pkt Avail       | 1.31+59.76   | No Pkt           | N/A              |
| Vol Pkt Used           | 0.00 (V) %   | No Pkt           | N/A %            |
| HE Min Clr, %          | 16.87        | 16.19            | N/A              |
| HE Total Clr, %        | 18.18        | 16.19            | N/A              |
| CE Suct Gas Vel, FPM   | 10127        | 0                | 9226             |
| CE Disch Gas Vel, FPM  | 9014         | N/A              | 7574             |
| CE Spcrs Used/Max      | 0/2          | N/A              | 0/2              |
| CE Min Clr, %          | 17.72        | N/A              | 22.62            |
| CE Total Clr, %        | 17.72        | N/A              | 22.62            |
| Suct Vol Eff HE/CE, %  | 58.1/59.0    | 65.7/N/A         | N/A/66.7         |
| Disch Event HE/CE, ms  | 4.6/5.5      | 5.1/N/A          | N/A/6.7          |
| Suct Pseudo-Q HE/CE    | 9.1/8.7      | 7.7/N/A          | N/A/3.6          |
| Gas Rod Ld Comp, %     | 44.6 C       | 55.3 C           | 55.3 C           |
| Gas Rod Ld Tens, %     | 47.7 T       | 72.5 T           | 72.5 T           |
| Gas Rod Ld Total, %    | 48.4         | 66.6             | 66.6             |
| Xhd Pin Deg/%RvrsI lbf | 173/94.4     | 118/69.9         | 118/69.9         |
| Flow Calc, MMSCFD      | 0.537        | 0.536            | 0.528            |
| Cyl BHP                | 45.2         | 43.4             | 33.9             |





## Ariel Performance

Company: Synergy Field Services, LLC

Customer:

Quote:

Inquiry:

7.7.6.0

Case 1:

Project:



### Compressor Data:

|                  |        |                   |        |                   |        |
|------------------|--------|-------------------|--------|-------------------|--------|
| Elevation, ft:   | 600.00 | Barmtr, psia:     | 14.376 | Ambient, F:       | 100.00 |
| Frame:           | JGQ/2  | Stroke, in:       | 3.00   | Rod Dia, in:      | 1.125  |
| Max RL Tot, lbf: | 20000  | Max RL Tens, lbf: | 10000  | Max RL Comp, lbf: | 11000  |
| Rated RPM:       | 1800   | Rated BHP:        | 280.0  | Rated PS FPM:     | 900.0  |
| Calc RPM:        | 1800.0 | BHP:              | 138    | Calc PS FPM:      | 900.0  |

### Driver Data:

|        |             |
|--------|-------------|
| Type:  | Nat. Gas    |
| Mfg:   | Caterpillar |
| Model: | G3306B NA   |
| BHP:   | 138 (5.00%) |
| Avail: | 138         |

### Services

Gas Model

### Service 1

VMG-APRNL2

### Stage Data:

|                       | 1 (SG) | 2      | 3       |
|-----------------------|--------|--------|---------|
| Target Flow, MMSCFD   | 0.500  | 0.500  | 0.500   |
| Flow Calc, MMSCFD     | 0.593  | 0.593  | 0.584   |
| BHP per Stage         | 49.6   | 47.0   | 35.3    |
| Specific Gravity      | 0.6500 | 0.6504 | 0.6367  |
| Ratio of Sp Ht (N)    | 1.2459 | 1.2445 | 1.2664  |
| Comp Suct (Zs)        | 0.9933 | 0.9811 | 0.9434  |
| Comp Disch (Zd)       | 0.9903 | 0.9762 | 0.9435  |
| Pres Suct Line, psig  | 20.00  | N/A    | N/A     |
| Pres Suct Flg, psig   | 19.66  | 107.83 | 382.47  |
| Pres Disch Flg, psig  | 110.99 | 389.01 | 1010.14 |
| Pres Disch Line, psig | N/A    | N/A    | 1000.00 |
| Pres Ratio F/F        | 3.684  | 3.301  | 2.582   |
| Temp Suct, F          | 80.00  | 120.00 | 120.00  |
| Temp Clr Disch, F     | 120.00 | 120.00 | 120.00  |

### Cylinder Data:

|                        | Throw 1    | Throw 2   | Throw 2   |
|------------------------|------------|-----------|-----------|
| Cyl Model              | 8M         | 5-3/4P-HE | 3-1/4P-CE |
| Cyl Bore, in           | 8.000      | 5.750     | 3.250     |
| Cyl RDP (API), psig    | 150.0      | 522.7     | 1022.7    |
| Cyl MAWP, psig         | 175.0      | 575.0     | 1125.0    |
| Cyl Action             | DBL        | HE        | CE        |
| Cyl Disp, CFM          | 311.1      | 81.1      | 22.8      |
| Pres Suct Intl, psig   | 16.27      | 97.71     | 351.46    |
| Temp Suct Intl, F      | 87         | 126       | 124       |
| Pres Disch Intl, psig  | 121.63     | 418.76    | 1071.91   |
| Temp Disch Intl, F     | 274        | 304       | 274       |
| HE Suct Gas Vel, FPM   | 10331      | 9596      | 0         |
| HE Disch Gas Vel, FPM  | 9196       | 8599      | N/A       |
| HE Spcrs Used/Max      | 0/2        | 0/2       | N/A       |
| HE Vol Pkt Avail       | 1.31+59.76 | No Pkt    | N/A       |
| Vol Pkt Used           | 0.00 (V) % | No Pkt    | N/A %     |
| HE Min Clr, %          | 16.87      | 16.19     | N/A       |
| HE Total Clr, %        | 18.18      | 16.19     | N/A       |
| CE Suct Gas Vel, FPM   | 10127      | 0         | 9226      |
| CE Disch Gas Vel, FPM  | 9014       | N/A       | 7574      |
| CE Spcrs Used/Max      | 0/2        | N/A       | 0/2       |
| CE Min Clr, %          | 17.72      | N/A       | 22.62     |
| CE Total Clr, %        | 17.72      | N/A       | 22.62     |
| Suct Vol Eff HE/CE, %  | 58.6/59.4  | 66.8/N/A  | N/A/69.3  |
| Disch Event HE/CE, ms  | 4.6/5.5    | 5.2/N/A   | N/A/6.9   |
| Suct Pseudo-Q HE/CE    | 9.1/8.7    | 7.7/N/A   | N/A/3.7   |
| Gas Rod Ld Comp, %     | 48.4 C     | 58.2 C    | 58.2 C    |
| Gas Rod Ld Tens, %     | 51.7 T     | 71.9 T    | 71.9 T    |
| Gas Rod Ld Total, %    | 52.4       | 68.0      | 68.0      |
| Xhd Pin Deg/%RvrsI lbf | 163/99.3   | 122/76.6  | 122/76.6  |
| Flow Calc, MMSCFD      | 0.593      | 0.593     | 0.584     |
| Cyl BHP                | 49.6       | 47.0      | 35.3      |













