



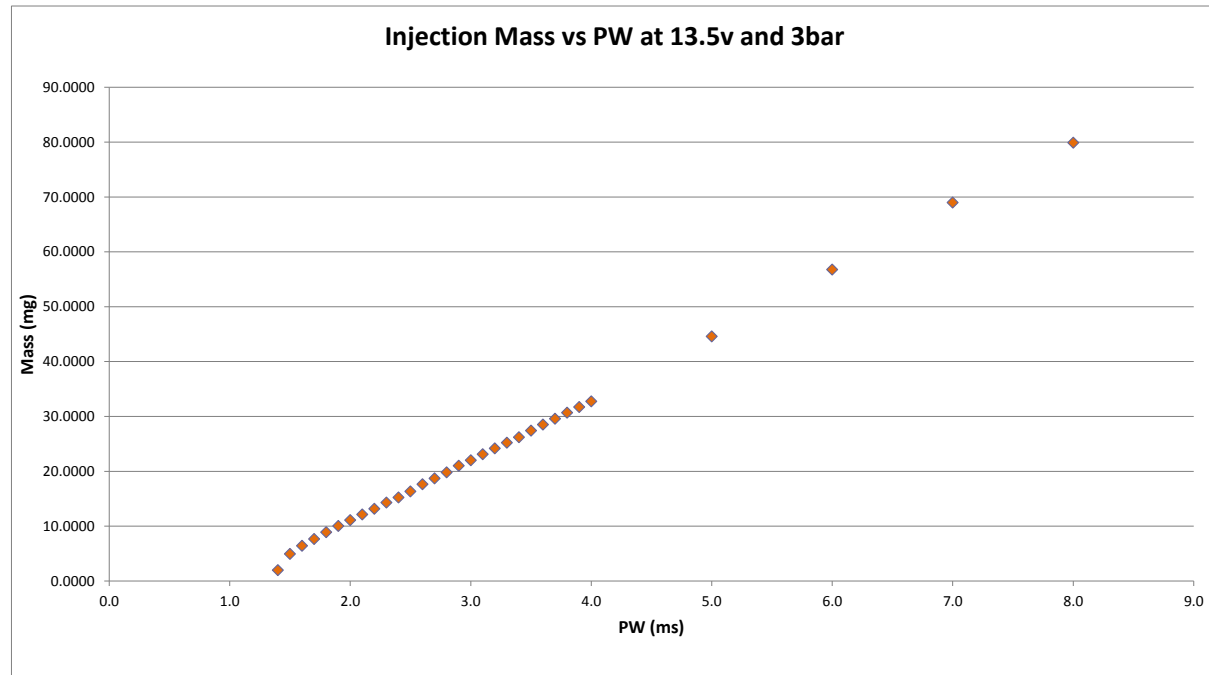
Fuel Injector Characterization Summary

DW PN: 18U-XX-0088-X, 18U-XX-0900-X, 18U-XX-1000-X

| Pulsed Flow Data (3bar, 13.5v) | | | | Linearity |
|--------------------------------|---------------------------|-----------------------|------------------|------------------|
| Pulse Width (ms) | Volumetric (cc/shot) | Gravimetric (mg/shot) | % Mass Deviation | |
| 1.0 | Below limits of detection | | | NON LINEAR RANGE |
| 1.1 | | | | |
| 1.2 | | | | |
| 1.3 | | | | |
| 1.4 | 0.0027 | 1.997 | -29.70% | |
| 1.5 | 0.0066 | 4.930 | 22.92% | |
| 1.6 | 0.0086 | 6.428 | 24.07% | |
| 1.7 | 0.0103 | 7.676 | 20.86% | |
| 1.8 | 0.0119 | 8.893 | 18.24% | |
| 1.9 | 0.0134 | 10.048 | 15.60% | |
| 2.0 | 0.0148 | 11.109 | 12.64% | |
| 2.1 | 0.0162 | 12.138 | 10.03% | |
| 2.2 | 0.0176 | 13.168 | 7.92% | |
| 2.3 | 0.0191 | 14.292 | 6.87% | |
| 2.4 | 0.0203 | 15.228 | 4.71% | |
| 2.5 | 0.0218 | 16.351 | 4.06% | LINEAR RANGE |
| 2.6 | 0.0235 | 17.630 | 4.43% | |
| 2.7 | 0.0250 | 18.723 | 3.71% | |
| 2.8 | 0.0265 | 19.815 | 3.08% | |
| 2.9 | 0.0281 | 21.032 | 3.13% | |
| 3.0 | 0.0294 | 21.999 | 2.02% | |
| 3.1 | 0.0309 | 23.122 | 1.71% | |
| 3.2 | 0.0323 | 24.183 | 1.17% | |
| 3.3 | 0.0337 | 25.213 | 0.56% | |
| 3.4 | 0.0350 | 26.212 | -0.12% | |
| 3.5 | 0.0366 | 27.428 | 0.05% | |
| 3.6 | 0.0381 | 28.521 | -0.22% | |
| 3.7 | 0.0395 | 29.582 | -0.58% | |
| 3.8 | 0.0410 | 30.674 | -0.81% | |
| 3.9 | 0.0423 | 31.703 | -1.22% | |
| 4.0 | 0.0438 | 32.764 | -1.50% | |
| 5.0 | 0.0595 | 44.591 | -0.83% | |
| 6.0 | 0.0758 | 56.760 | 0.16% | |
| 7.0 | 0.0921 | 68.992 | 0.91% | |
| 8.0 | 0.1067 | 79.883 | -0.23% | |
| SLOPE (cc/min) | | 951 | | |

| Static Flow Data | | | | | |
|-----------------------|-----|------|--------|-------|-------|
| Differential Pressure | | | Flow | | |
| Bar | kPa | PSI | cc/min | lb/hr | g/s |
| 2 | 200 | 29.0 | 755 | 71.9 | 9.43 |
| 3 | 300 | 43.5 | 927 | 88.3 | 11.57 |
| 4 | 400 | 58.0 | 1105 | 105.2 | 13.79 |
| 5 | 500 | 72.5 | 1261 | 120.1 | 15.74 |

| Battery Offset | | | | | |
|----------------|---------|----------|----------|----------|----------|
| | 8 volts | 10 volts | 12 volts | 14 volts | 16 volts |
| 2bar | 2.299 | 1.698 | 1.217 | 0.856 | 0.617 |
| 3bar | 2.695 | 1.990 | 1.435 | 1.029 | 0.773 |
| 4bar | 2.837 | 2.154 | 1.598 | 1.168 | 0.864 |
| 5bar | 3.226 | 2.379 | 1.728 | 1.273 | 1.014 |



NOTES

All mass values (gravimetric) are calculated for pump gas using SG of 0.749

Application specific calibration summaries are also available

Data on calibration summaries may vary slightly from data on this sheet due to in-car optimization rev