

FLUID PERFORMANCE TEST

Fluid Test Report No.: FT-0050

Lubricant Name: AMLUBE 925

Manufacturer: AML Industries, Inc.

Customer: Meadville Forge

Application: Forging Press Die Lube

Contact Name: Mike Stelbotsky (Airline)

Contact Phone: (814) 825-2716

Date: 6/7/2004

Test Date: 5-28-04/6-7-04

Nozzle used: TFN-IL-NC-120-3 / SFN-IL-NC-120-3

Item #: 570-85991-0003 / 570-85965-0003

Injector size: 1/2 Drop
 1 Drop
 2 Drops

Injector configuration:
Cycle Time: .6 Sec.
Dwell Time: 0.3
Delay Time: 0.3

Tubing Length (Ft.): 3 ft. Nylon

Regulator Pressure (PSI): 5-20 Psig.

Test Temperature
Ambient
Heated

Temperature (deg. F): _____

Test Objective: To determine spray pattern, coverage & feasibility with the ORSCO spray system.

Nozzle Gap Size (In.): 0.008

Nozzle Orifice Size (In.): NA

Spray Distance (In.): 2 inch

Spray Width Achieved: 2 & 3

Spray Quality

	<u>None</u>	<u>Low</u>	<u>Medium</u>	<u>High</u>
Pulse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Spits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Splatters	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Atomizes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overspray	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TEST NOTES

Two (2) types of nozzle assemblies were used to perform this fluid test: (1) TFN style, and (2) SFN swivel fan style. Results of each separate nozzle assemblies are as follows: (1) TFN: this nozzle performed best at 15 Psi nozzle air pressure. As to the width of the spray pattern, 3 inches wide was seen at 2 inches away from the spray surface.

The injector frequency could not be removed from the spray pattern. The overall optimal cycle time was .6 seconds (considered quite fast for our system, which may reduce the over-all life of injector). (2) SFN: optimal performance was at 20 Psi nozzle air pressure. A 2-inch wide spray pattern was seen at 2 inches away from the spray surface. The best overall cycle time with this nozzle was also .6 seconds.

The results of this test show that an INCH OF WIDTH IS LOST with the TFN vs. the SFN. Air pressure is increased with the use of the SFN, however, a more consistent and increased flow of productivity is accomplished with the use of the SFN nozzle. An additional area of concern relates to the retention fluid properties of this customer's graphite/water mixture, which does not exhibit the characteristics of OIL, which is typically used in our nozzle models -- this will result in the faster recycling of the injector. One final concern is the decrease in "holding pressure:", which is normally 10 lbs during a typical 8-hour shift. Given the parameters of this particular test, this customer would lose as much as 20 lbs -- this may result in a "purge-cycle" prior to initial run.

****NOTE: THIS TEST WAS PERFORMED DURING 8 HOUR SHIFTS, EACH DAY, FOR ONE CONSECUTIVE (1) WEEK.**

Tested By: _____

Sales: _____

Engineering: Steven E. Gorski