

FLUID PERFORMANCE TEST

Fluid Test Report No.: FT-0043-2

Lubricant Name: Endraw HDC-94WS

Manufacturer: Engineered Lubricants

Customer: JH Robotics

Application: Part O.D.

Contact Name: Ken Walker-Hydrotech

Contact Phone: 513-881-7000

Date: 4/27/2004

Test Date: 5/11/2004

Nozzle used: TFN-IL-NY-120-3

Item #: _____

Injector size: 1/2 Drop
 1 Drop
 2 Drops

Injector configuration:
Cycle Time: 1 seconds
Dwell Time: 0.5 seconds
Delay Time: 0.5 seconds

Tubing Length (Ft.): 2-FT NYLON

Regulator Pressure (PSI): Varied from 12-17 psig.

Test Temperature
Ambient
Heated

Temperature (deg. F): _____

Test Objective: To determine proper spray gap to provide best spray pattern.
Proper coverage and number of nozzles required for O.D. of 0.35" and 0.5"

Nozzle Gap Size (In.): 0.010"

Nozzle Orifice Size (In.): NA

Spray Distance (In.): 1.0"

Spray Width Achieved: 1.5"

Spray Quality

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

TEST NOTES

Reference FT-0043-1 for test results with pinpoint spray. Application requires a short lube cycle (2 sec.) . Used the TFN so the fan spray would come out parallel to the part. Coverage was 1.5" high with the tip placed approximately 1" away. Coverage was approximately 100-120 degrees around the perimeter of the 0.35 diameter part. Would advise using three nozzles placed 120 degrees apart to supply sufficient coverage. Setting cycle 2 seconds should be sufficient using the three nozzles for coverage. Nozzle air pressure provided best coverage around 15psig.

Note: Due to the spitting nature of this lubricant, overspray will present a problem over time. Moving the nozzle tips in closer to the part will reduce this, however, linear motion would then be required to move either the part or the nozzles vertically.

Tested By: Steve Clancy

Sales: _____

Engineering: Steve Clancy