STATUS UPDATE

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Testing

Low Pressure Water Injector Test
Injector Redesign

- Manufacturing Difficulty
  - Drilling holes at angles
  - Manually set part position

- Redesign Goals
  - Minimize human error
  - Decrease manufacturing time
  - Guarantee self impinging
Injector

● Problems
  ○ Leaks
  ○ Piping Alignment
  ○ Injector Plate Compression

● Next Steps
  ○ Full Size Injector
  ○ More Bolts
  ○ Better Sealing
What we Learned

- The current system leaks
- Need support for test system
- Flow Impinging
- New parts to order
Bill of Materials: Newly Ordered Parts

- Type 304 Smooth-Bore Seamless SS Tubing 1/4"OD, .21"ID, .02"Wall
- Flaring Tool for Soft Metal 37 Degree, for 3/16"- 5/8" OD Tubing
- Fittings for Flared 37 Degree 1/4” SS Tubing
  - Fitting T’s
  - Nuts
  - Sleeves
- Type 316 Stainless Steel Ball Valve with Yor-Lok Fittings 1/4" OD
Bill of Materials: Newly Ordered Parts

Gravity

Injector
Safety Procedures

For High Pressure Water

● Paintball tank filling
● Paintball tank transportation
● Test system arming
● Testing
● Disarming
● Burst disk failure

Still need approval to start testing
Main Safety Issues

Addressed in high pressure water testing safety procedures

- “events”
- water jet injury
- hearing protection
- location
Revised Schedule

- Low Pressure Water
- High Pressure Water
- Fuel GOX
- Water LN2
- Preparation =
Current Status

- Preliminary Injector Design Test at Low Pressure (~100 PSI)
  - Done
- High Pressure Water Test Safety Procedure
  - Done
- High Pressure Water Test
  - This weekend
- Ethanol/Gox Safety and Testing Procedures
  - In Progress
Thank You!