

# STATUS UPDATE



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# Testing

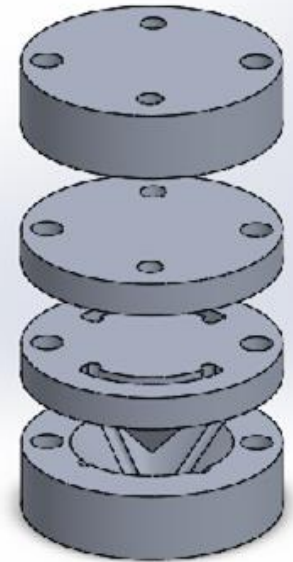


Low Pressure Water Injector Test

# 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

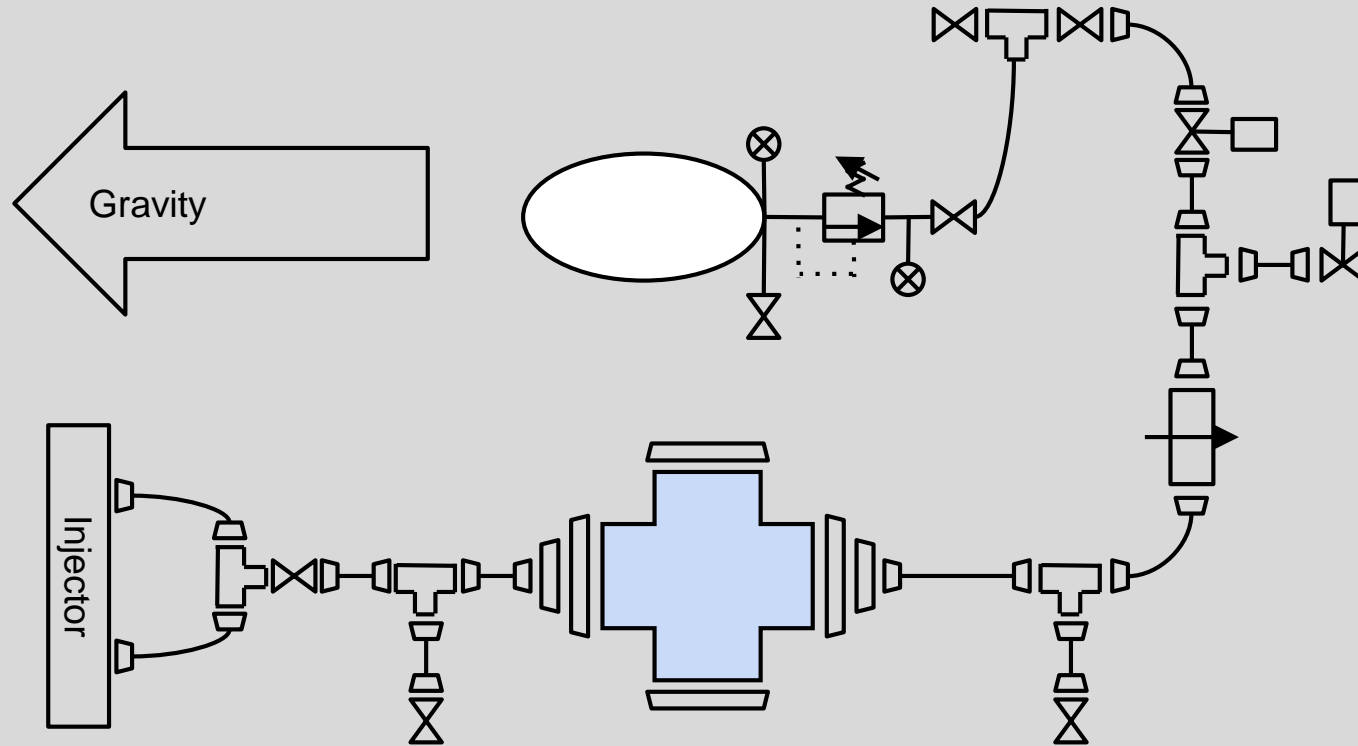


# Bill of Materials: Newly Ordered Parts



- 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



# 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 and Injector
- High Pressure Water
- Fuel GOX
- Water LN2
- Preparation = 

3/29	3/30	3/31	4/1	4/2	4/3	4/4
						
4/5	4/6	4/7	4/8	4/9	4/10	4/11
		PO				
4/12	4/13	4/14	4/15	4/16	4/17	4/18
						
4/19	4/20	4/21	4/22	4/23	4/24	4/25
						

# 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!

