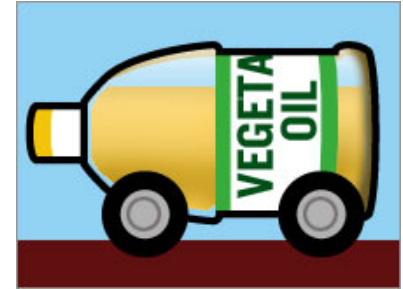




Green-Grease Pump

Team Orange B
Mockup Review

Introduction



**Green-Grease Pump: Waste veggie oil
pumping + filtration**

Key Questions

Will it work?

**Can we address customer needs better
than existing products?**

Customer Needs

No.		Need
1	The system	is portable
		requires only 1 person to operate
2	The filters	are found in most auto parts stores
3	The system	minimizes oil spillage/splash

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- 1. Compact**
 - 2. Usable Filtration System**
 - 3. Clean**



Industry Standards

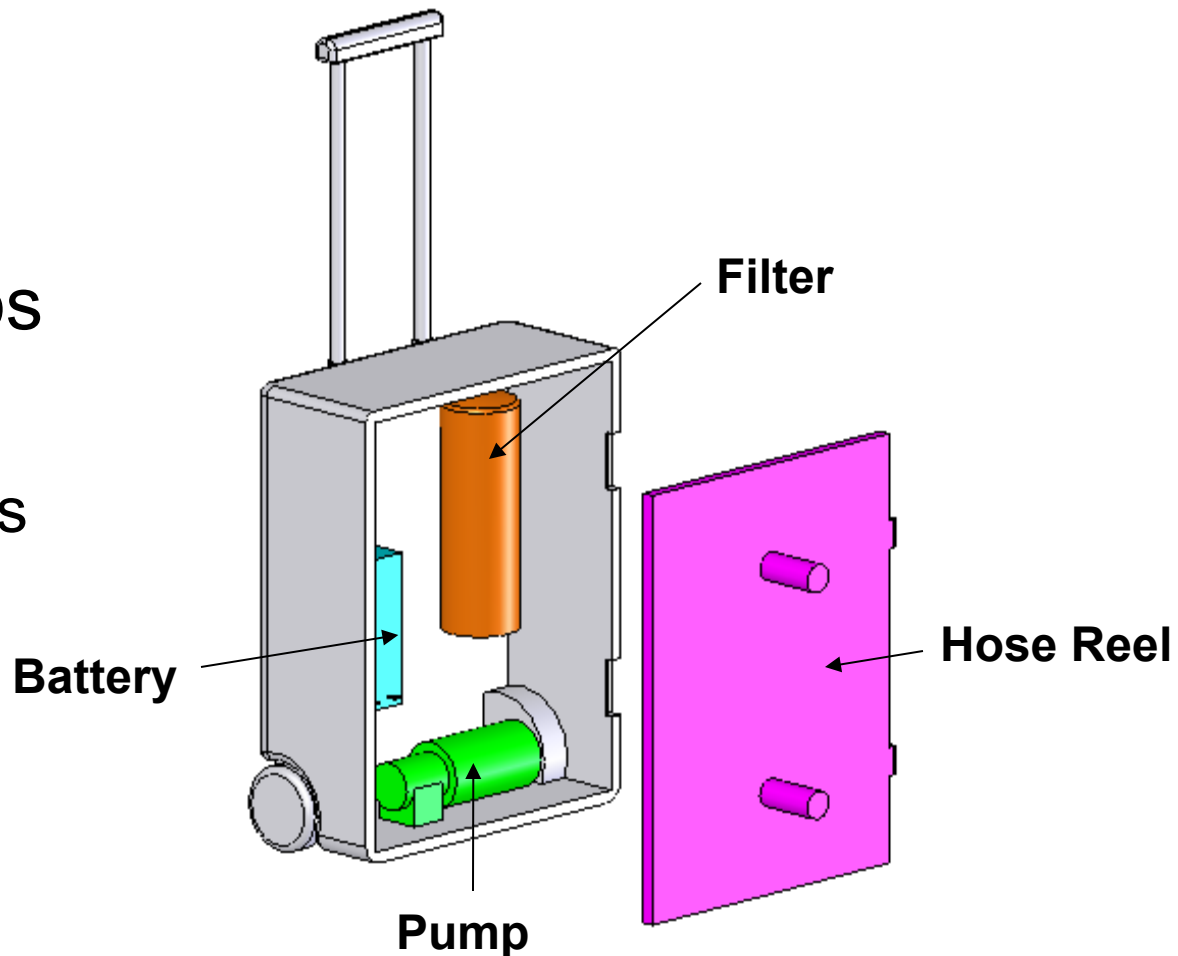
- Filter level at least 10 microns
 - Goal: Less than 5
- Flow rate at least 1.5 gal/min

Issue 1: Compact

Need	Metric	Comp.	Target
Portable	Total weight	45 lbs	35 lbs
	Total size	5.7 ft ³	< 5.7 ft ³
Requires 1 person to operate	Setup time	?	< 3 min
	Pump time	?	< 12 min

Issue 1: Compact

- Tested with model mockup
- Total weight: 30 lbs
- Total size: 1.5 ft³
 - Nearly four times smaller than competition

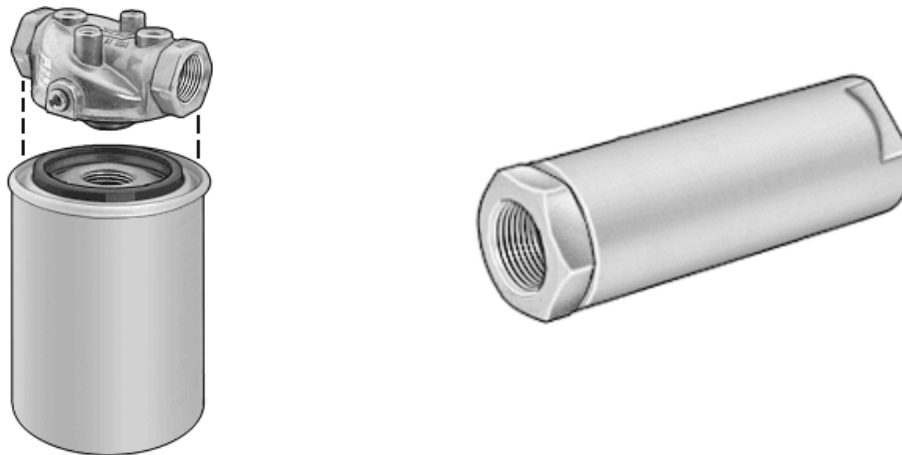


Issue 2: Filtration

Need	Metric	Comp.	Target
Usable Filtration System	Filter available in most auto parts stores	No	Yes

Issue 2: Filtration

- Four different filters at different levels
 - 3 microns, 10 microns
- Technical challenges:
 - Keep at competitive flow rate of 1.5 gal/min

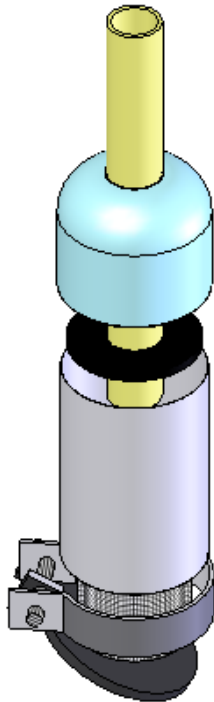




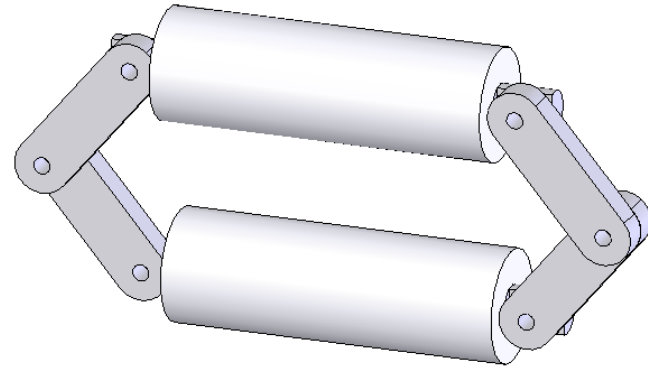
Issue 3: Clean

- Goal: minimize oil spilled/splashed
 - Competing product: messy

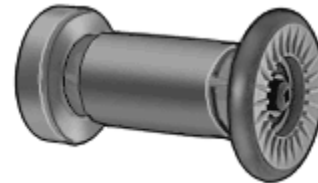
Issue 3: Clean



Squeegee



Rollers



Shut-off valve

Cost Analysis

- **Total cost to manufacture: \$252**

Item	Cost
Pump	\$110
Filters	\$30
Tubing	\$15
Case	\$27
Battery	\$20
Misc	\$50