

<b>Team #:</b>	P17027	<b>Team Name:</b>	Starfish Gripper
<b>Date:</b>	4/12/2017 17:42	<b>Document Owner:</b>	Jon Greeley
<b>Revision #:</b>	2		

<b>Subsystem/ Function/ Feature Name:</b>	Waterproofing - Deployable Depth Test	<b>ER7 Test Plan</b>
<b>Date of Test:</b>	4/20/2017	
<b>Performed By:</b>	Jon Greeley, Matthew Landolfa	
<b>Tested By:</b>	Jon Greeley, Matthew Landolfa	

Concluded Condition of meeting Engineering Specification

**I. TESTING SPECIFICATION**

Specification Number	Importance	Source	Function	Specification (Metric)	Unit of Measure	Marginal Value	Ideal Value	Comments/Status
ER7	1	Engineering Req	Underwater Use	Depth	m	1 m	5 m	

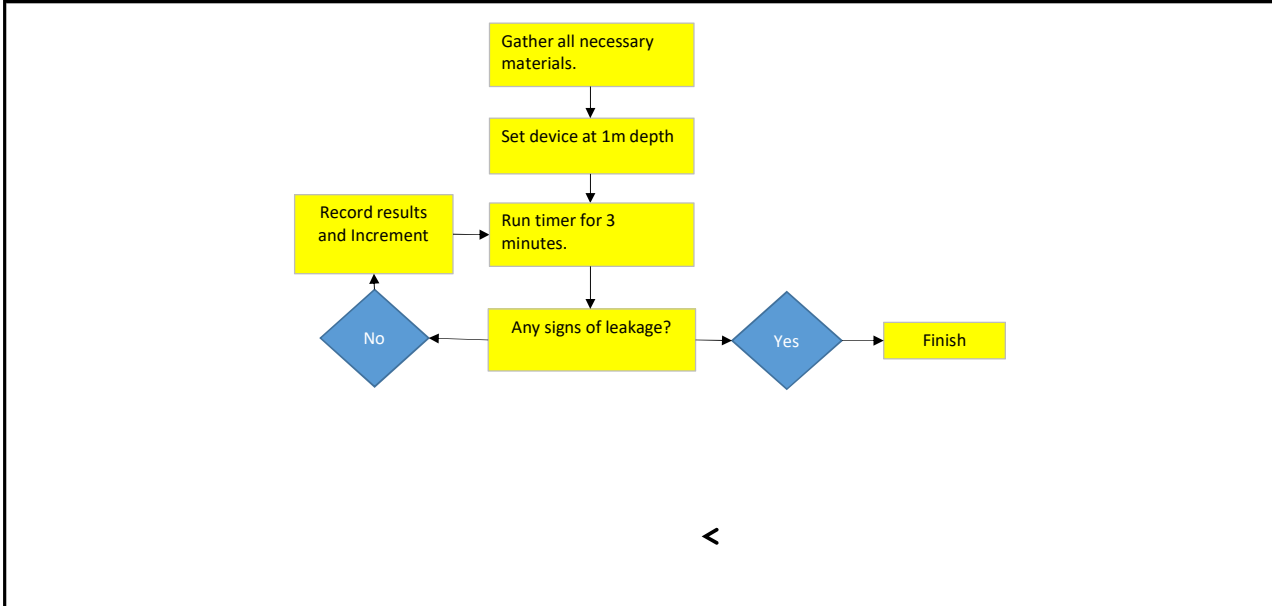
**II. EQUIPMENT REQUIRED**

Specification Number	Equipment or Instrumentation required
ER7	Pool or water tank, meter stick, completed robot, stopwatch

**III. DATA COLLECTION STRATEGY**

Specification Number	Data acquisition strategy
ER7	The goal of this test is to determine the waterproof capabilities of the underwater gripper device. A timer will be used to measure a set length of time while the device is underwater at a set depth. The depth will be measured from the lowest point on the robot. Then the device will be checked for water that has leaked inside or any sign of breaching the seals. This is a pass/fail test.

**III. TESTING FLOWCHART**



**IV. RAW DATA ACQUISITION**

Deployable Depth Testing	Depth (m)	Any sign of leakage?	Comments
	1	No	
	2	No	
	2.4	No	Depth limited by tether to control panel

**V. RESULTS**

Robot was waterproof at all tested depths, and was opened between trials to inspect for water leakage. Due to the tether to the control panel being 2.4 m long, the team was unable to test any further depth.

**VI. CONCLUSION**

Robot is waterproof to at least 2.4 m. With a longer tether, it is expected to be waterproof to further depths.