



**Company Logo**



**Renegator Remote Operated Vehicle**

### **Company Specifications for Nimitz Sr. High School**

#### **Renegators Underwater Robotics**

**2005 W.W. Thorne Road, Houston, Texas, 77073, United States of America**

**(281) 233-8920**

**Alcmene Gonzalez (12th) (R) – CEO (Pilot)**

**Gregory Montelongo (10th) (N) – COO (Team leader)**

**Nicholas Fogarty (12th) (N) – Research and Development**

**Theophilus Mallet (12th) (N) – Operations Engineer**

**Christian Castro (11th) (N) - Fabrication (Tether/Launcher)**

**Emanuel Sanchez (11th) (R) - Project Manager (Pilot)**

**Rafael Soto (10th) (N) – Computer Aided Drafting (Recorder)**

**Ruben Valdillez (10th) (N) - Computer Aided Drafting (Tether)**

**Derrick Tchety (12th) (R) - Logistics Coordinator**

**Victor Rivas (12<sup>th</sup>) (R) – Manufacturing**

**David Ericson – Mentor**

In parentheses  
Numbers indicate grade level  
(R) Refers to returning members  
(N) Refers to new members

The Renegators is a Ranger Class Remote Operated Vehicle (ROV) company located in Houston, Texas, United States of America. The company is based out of Nimitz Sr. High School in Houston, Texas. We are located 3,371 miles away from the 2015 MATE International Competition. This is our second year of M.A.T.E. competition under our mentor David Ericson.



Left to Right : Christian Castro, Gregory Montelongo, Derrick Tchety, Ruben Valdillez, Emanuel Sanchez, Alcmene Gonzalez, Theophilus Mallet, Nicholas Fogarty, Rafael Soto

**ROV and Team Name:** Renegators

**Total Cost:** \$1,538.50

**Safety Features:** Wire loom wrapping on motor wires for wire management. All wiring is soldered; heat shrunk with hot glue inside shrink wrap to water proof, wire mesh and PVC shrouds covering motor propellers, Power In is fused to ON/OFF power switch with Light Emitting Diode power indicator light, and low voltage (12 volts direct current).

**Special Features:** “Modular Design” we designed the Renegator to be able to add and remove the specialized tools for each task we perform. This has allowed us to focus on making tooling without worry of interference from other tooling. We use clevis hitch pins to secure the ROV’s specialized tools in place and they are easily changed by just pulling the pin out. We have an integrated valve turning feature for opening and closing valves which serves also as a “booster motor” for forward or reverse direction to aid in keeping the ROV in position in stronger currents. Our algae collection attachment also incorporates this modular design strategy. The JAW of Renegator is air actuated and can be manually rotated allowing for more grabbing and manipulation of objects. We also own and operate our own 51.8 meter ROV Mothership.