**Task Description**

Selection of appropriate brake rotor, caliper, master cylinder, and lines insure that the driver will be able to reliably control the deceleration of the vehicle. The Brake Selection Team will choose the ideal brake configuration of our vehicle based on expected driving conditions presented in FH, FE, and FN competitions, BR16 architecture, and BR16 predicted top speed. The brake system for BR16 should also improve upon BR13 (pressure and leakage issues). The total cost of the project should be low – the majority of the components should be donated.

**Responsible Parties**

Holden will do the primary research and assembly for this project. He will receive input on expected braking loads from Phil Piper and Dante Archangeli.

**Deliverables**

The deliverables for this project include submitting the work package, creating a list of the final choices of brake components, ordering brake components, an assembly plan, and a finished product. The time frame for these deliverables can be seen below.

**Budget**

See detailed [budget](https://docs.google.com/a/yale.edu/spreadsheets/d/1ix77Urj3FsnzFcDlAE1jaVrpef3JjmVY7YJSjP-_eD4/edit?usp=sharing).

**Resources (human and machine)**

See detailed resources [sheet](https://docs.google.com/a/yale.edu/spreadsheets/d/1ix77Urj3FsnzFcDlAE1jaVrpef3JjmVY7YJSjP-_eD4/edit?usp=sharing).

**Time to complete**

The timeline for this project is linked to that of the pedal box because the two systems are closely related.

* 10/12/2015 - Submit work package.
* 10/15/2015 - Finish calculations on brake system and finalize component choices. Order components.
* 10/26/2015 - Create plan for all aspects of assembly and fabrication (in conjunction with plan for pedal box).
* 11/12/2015 - Finish installation with pedal box.

**Measures of Success**

* The brakes can lock all four wheels during a brake test.
* The brakes have a stiffer pedal than BR13.
* Pedal box is in compliance with all rules in Formula Hybrid 2016 section T7.

**Required Inputs**

The space constraints from the pedal box and chassis dimensions will inform the master cylinder rod length and mounting position.

The caliper, rotor, and brake pad choices require information about expected braking loads from Dante Archangeli and Phil Piper.