Wish List

2011-2012 Season

As an organization given limits by the competition’s regulating body, we fully understand that it isn’t always possible to help through direct monetary means. As a result, we have created a convenient wish list of valuable parts that the team needs to maintain and even exceed its outstanding level of performance this year. Any one of these parts will be a significant contribution to the team and will be vastly appreciated.

Engine Dynamometer

Tuning an engine "by feel," as we have done in the past, is both suboptimal and time-consuming. A dynamometer would give the team a precisely controlled engine tuning environment. Tuning would be more consistent, more meaningful, and closer to optimum performance. It is an essential process of designing the car, and a dynamometer would help to ensure that all the resources put into the car are used as efficiently as possible.

Estimate: $7,500

Flowbench

A flowbench would allow the team to validate steady state computational fluid dynamic results. This would help the team quickly determine exactly how much combustion air will pass through components at a given pressure. With flowbench capabilities, the team could analyze each airflow component individually, significantly reducing design and tuning time.

Estimate: $2,695 plus shipping (SF-60 Flowbench, SuperFlow Technologies Group)

4-Way Adjustable Dampers

Suspension adjustability allows for more control of vehicle performance, handling, and balance. The ability to tune the suspension gives better control over ride and handling, and it allows us to tune the car for specific track and racing conditions.

Estimate: $2,400

Honda f4i Engines

In previous years, engines were modified to fit the chassis. From now on, our policy is to use new, unmodified engines. A spare is also critical, so that an engine failure won't throw us out of competition.

Estimate: $1,200-1,500 each

Torsen Differential + Custom Drive shafts

Penn’s car currently utilizes a lightweight Honda ATV differential. However, our suspension designers have to make multiple compromises to achieve suitable performance with the differential. A new limited slip differential would ensure nearly compromise free performance, resulting in a faster overall car that is also easier to drive. Upgrading the differential would also require an upgrade to the car's driveshafts, which could be made stronger, as well as lighter in the process.

Estimate: $415 (Torsen University Special) + $850 (RCV Formula SAE Tripod Axle Kit)

Vacuum Brake Bleeding Kit

As with all cars, we must bleed our brakes to remove any air in the lines that could cause less than optimal brake performance. The operation is traditionally done manually using the brake pedal to force the air out of the lines. A vacuum bleed kit would allow for fast bleeding of the system, while removing more air from the lines than capable through the traditional method.

Estimate: $138.32 (MV6835)

More information can be provided upon request by contacting:

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