

Progress Report #1



University of Tennessee

Courtney Lindwurm & Shaun Hinds
clindwur@utk.edu & shinds1@utk.edu



Teams *completed* major milestones this year (include dates)

The following was completed by October 27th 2006:

- Noise and Vibration baseline testing for various locations inside and outside the vehicle is complete
- Research on how to improve motor setup is complete
- Urea SCR was donated from XTengine
- New exhaust layout design that does not hinder ground clearance complete
- Research designs of automatically shifted transmission completed



Teams *remaining* milestones this year (include dates)

- New exhaust configuration installed –Nov. 17th
- Urea installed in exhaust- Nov. 21st
- Research for automatic-manual transmission completed- Dec. 1st
- Install noise dampening material- Jan 15th
- Relocation of brake pedal and clutch pedal- Jan. 15th
- New High voltage cooling system installed-Jan 15th
- New motor mounting system complete- Feb. 1st
- New fuel tank installed- Feb. 7th
- New controls system and wiring redone- Feb. 15th
- Implement an automatically shifted transmission with driver control buttons –Feb. 15th



VTS for Year Three (highlight Y2 differences)

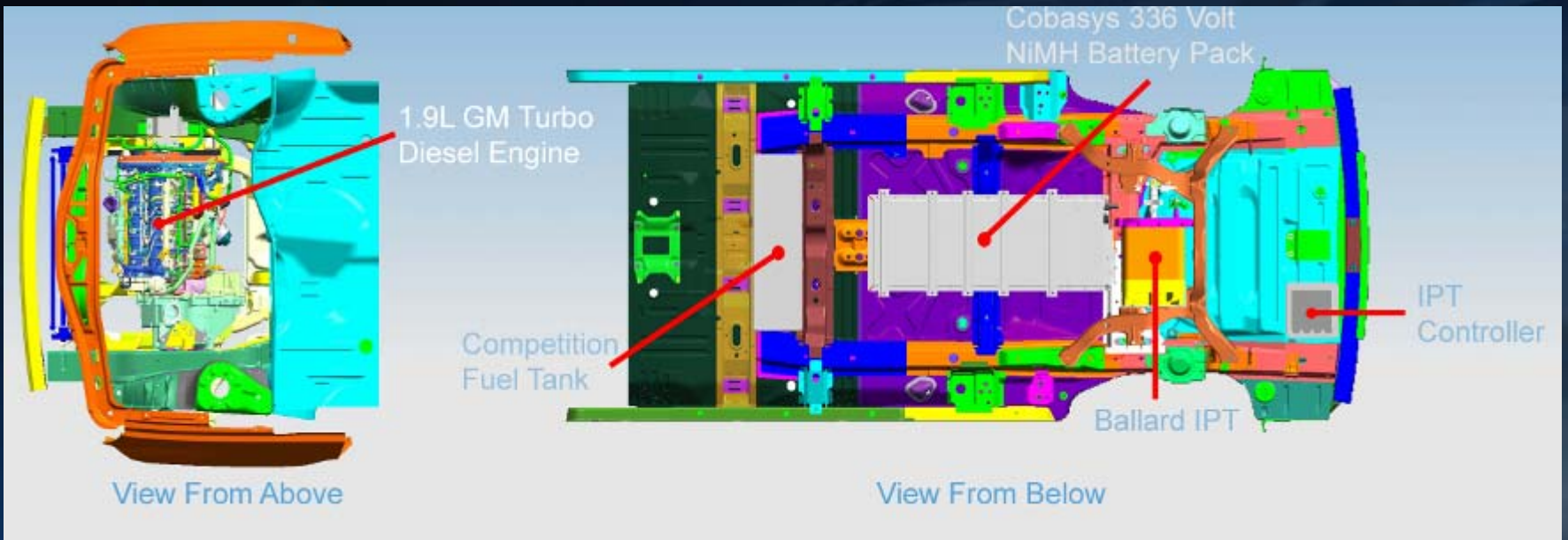
VTS Motivation

- Increase fuel economy
- Maintain performance and utility
- Reduce emissions
- Noise considerations
- Competition goals and requirements

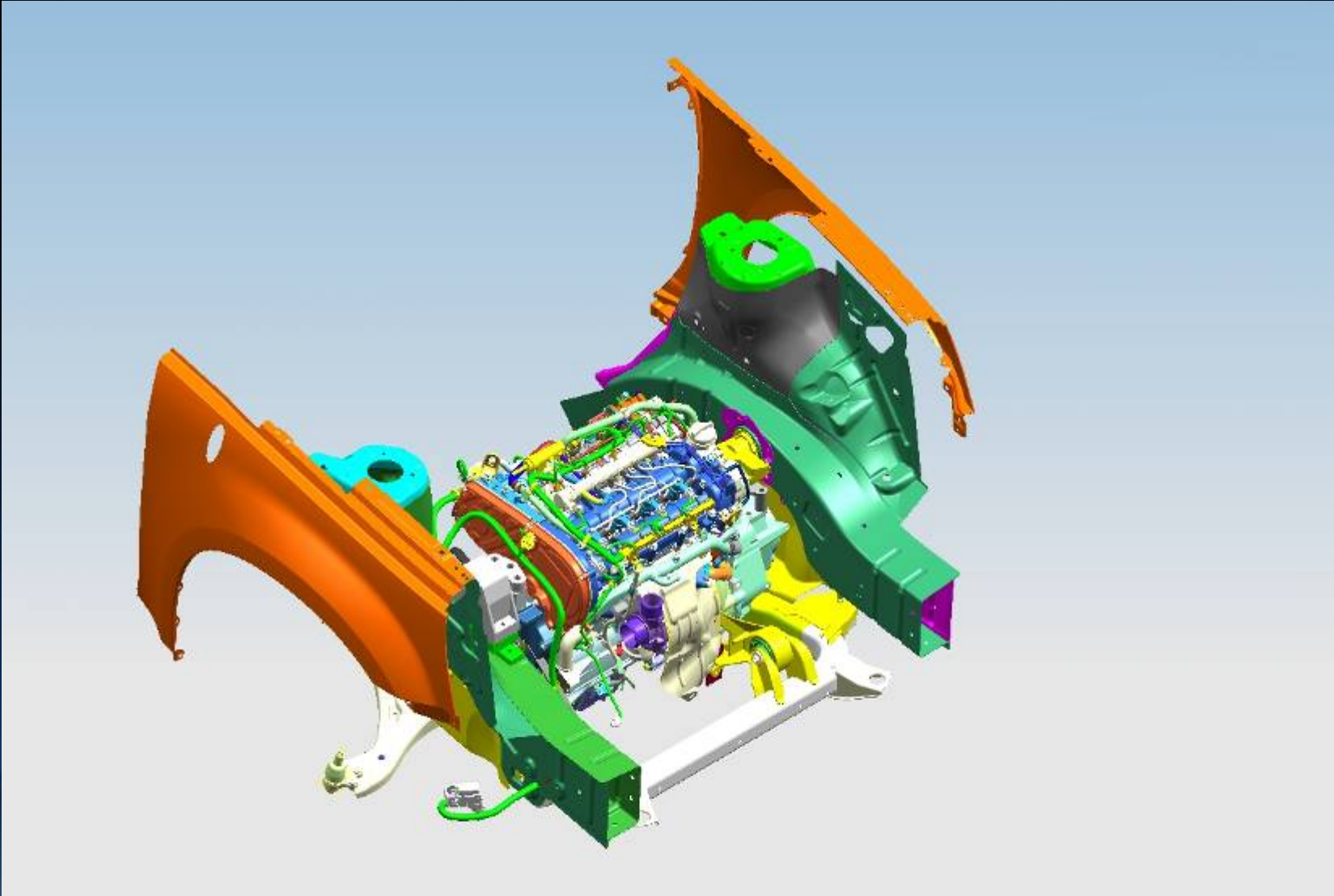
Description	Test Year	Modeling/Inspection/Testing	VTS (Team Selected)
IVM-60 MPH	1,2,3	M,T	≤9.5 sec
50-70 MPH	1,2,3	M,T	≤7.3 sec
Vehicle Mass	1,2,3	M,T	≤4200 lbs
MPG Combined EPA	1,2,3	M,T	≥32.0 mpg
Highway Range	1,2,3	M,T	≥200 mi
Passenger Capacity	1,2,3	M,T	5 passengers
Emissions Cert Level	2,3	T	Tier 2, Bin 5
Trailing Capacity	2,3	M,T	2500 lbs
Cargo Capacity	2,3	I	60 Cu. Ft. behind front seat
Starting Time	1,2,3	T	<5.0 sec
Noise Emission	1,2,3	T	<75 dbA



Current vehicle packaging diagram – include Y3 changes



Additional current vehicle packaging diagram



Facility pictures



Vehicle work area



Fabrication area



Shop safety equipment 1

Goggle Drawer

Glove Drawer



Scott with all our safety equipment on

Shop safety equipment 2





Vehicle Exterior – Facing Driver Side



Vehicle exterior – Facing Passenger Side



Vehicle exterior –
Front of Vehicle



Vehicle exterior – Rear of Vehicle



Vehicle underneath/underhood pictures



Underhood



Underneath Vehicle Front



Underneath Vehicle - Center



Underneath Vehicle Rear





Vehicle Interior - Dashboard



Vehicle Interior – Front Seats



Vehicle Interior –
Rear Seats



Vehicle Interior – Truck / Cargo Area



