

Hybrid Vehicle PowerPoint Outline

Slide 2 – Definition of a Hybrid

- Hybrid vehicles could be any that use two forms of power.
- This presentation is strictly for Electric/gas hybrids

Slide 3 – Types of HEV's Available

- Honda Insight and Toyota Prius are the two popular ones.
- Future HEV's:
 - Ford Escape and Prodigy in 2004 and 2005
 - Saturn VUE in 2005
 - Chevy Equinox and Malibu in 2006
 - Chevy and GMC trucks and SUV's in 2005-2007
 - Dodge Durango and Ram in 2005
 - Lexus SUV's in 2005
- Number of HEV's sold:
 - 38,000 in 2002
 - 54,000 in 2003
 - over 100,000 in 2004
 - over 210,000 in 2005
- Growth due to the number of models coming out.

Slide 4 – High Voltage Battery Packs (Honda Insight)

- batteries range in voltage from 135 to 300 volts. The inverter can jump this to 500 volts.
- Power is carried through 3 orange cables from the battery pack through the floor under the drivers seat to the electric motor under the hood.

Slide 5 – High Voltage Battery Packs (Toyota Prius)

- 3 orange cables run through the floor to the engine compartment.

Slide 6 – Identification

- Rear trunklid
 - Much like normal cars
- Vented C-pillar
 - Toyota Prius
- Sticker in Window
 - Rear window stating that it is a hybrid efficient car
- Orange cables
 - Anything orange under hood or in trunk means high voltage
- Instrument cluster
 - In the middle of the dash

Slide 7 – Extrication Considerations

- Place vehicle in neutral
- Turn off ignition
 - Turns off the engine and the motor, which prevents electric current from flowing into the cables from the motor or high-voltage battery (activation of airbags should trigger a relay to open and do this)
 - Place key on the dash so all can see it.
 - Key may not need to be in the forward position for ignition to be on
- Disconnect the 12 volt battery
 - Prius battery is in the drivers wheel well in the trunk
 - Disables the high voltage battery controller
- Never touch or cut near anything orange
 - All high voltage parts are orange

Slide 8-Extrication Considerations

- Be cautious around fluids
 - Leaking fluids may be the highly alkaline electrolyte
- A,B,and C pillars may be filled with foam or rubber
 - This is to reduce the load on the air conditioner and should not hinder extrication

Slide 9-Fire Considerations

- Battery pack fires
 - Defensive attack
- Fires can be extinguished using normal firefighting procedures.
 - Conventional attack
 - Disable vehicle during overhaul

Slide 10-Summary

QUESTIONS???