

Electric Motors Discussion Summary

- ▶ Focus on materials: non heavy rare earth, copper, steel
 - ▶ Potential game changer due to multiplying effect
 - ▶ Potential over engineering – could materials be removed (need in field warranty data)
- ▶ No N.A. supplier can compete with Asian companies on performance and price of magnets and steels
 - ▶ Suppliers are competing and OEMs only need to provide specifications
- ▶ Moving to WBG devices will necessitate closer placement of power electronics (PE) but not necessarily full integration with the motors
 - ▶ Determine impact for moving PE closer to electric motors - opportunity to reduce cable/connectors cost
 - ▶ Electric motors (EM) will remain to be oil cooled (most effective way)
- ▶ Most of steels used for EM are pretty mature; breakthrough in technology is difficult.
 - ▶ Most domestic enhancements are focused on lowering manufacturing cost
- ▶ Motor performance (torque and power) is key for specific applications
- ▶ Need to define requirements for EM steel and copper