Experience Operating Hybrid Vehicles

LEB Workshop

30/3/17

Tom Large – Head of Engineering – Arriva Yorkshire



Vehicles

Volvo B5LH

Wrightbus Eclipse Gemini body
13 plate
Parallel hybrid transmission
Volvo I-Sam motor
Volvo I-Shift transmission

ADL Enviro 350H

 12 plate
 Series hybrid transmission

 BAE Hybrid-Drive system







Operation

- No major operational issues. Expectation in terms of reliability is in line with that of a standard diesel
- Personal experience shows better reliability is achieved on lower speed, urban routes. Particularly true for series hybrid vehicles
- No personal experience operating hybrid vehicles older than 5 years old



MPG

- Volvo B5LH 8.75 MPG
 20% better than equivalent standard diesel
- E350H 8.75 MPG
 2/3% better than equivalent standard diesel
- Very route dependent



Maintenance Costs

- B5LH on an all inclusive maintenance contract with Volvo. Very good service, fixes costs but is expensive
- E350H under extended driveline warranty
- Need to consider whole life cost of vehicle.
 Particularly with regards to battery packs

