

***ELECTRIC VEHICLE  
PRESENTATION***

**Curriculum Planning for Electric  
Vehicles of the Future**

**Durham College**

# Planning of the Presentation

- ❑ A series of unanswered questions kept come up.
- ❑ Curriculum and training standards are shared across Canada.
- ❑ Examinations are shared across Canada.
- ❑ Customer safety.
- ❑ Repair tech. safety.
- ❑ Costs of training.
- ❑ Practical approach to new systems.

# Current Curriculum Standards

- ❑ 240 hours in three levels of in-school training.
- ❑ The in-school portion is divided into five areas of study.
- ❑ The areas of study are Applied Work Practices, Engine Systems, Drive Line Systems, Electrical/Fuel Systems and Directional Control Systems.
- ❑ The areas of study are divided into theory and practical studies.

# Current Curriculum Standards

- ❑ The areas of study stay the same through in-school training but theory and practical times may change per area through out the three levels.
- ❑ The apprenticeship programs are not based on the 9000 hours but based on competencies.
- ❑ All apprentices must complete three levels of school (level 1, 2 and 3).
- ❑ An apprentice can challenge the C.F.Q. license after passing all three levels of school and their competency book has been completed.

# Government Involvement in Curriculum

- ❑ In order to create apprenticeship curriculum the government creates an advisory committee.
- ❑ The advisory committee is made of a cross section of industry, dealerships and independent service stations.
- ❑ H.A.T. (Heads of Apprenticeship Training) also plays a role in curriculum develop.
- ❑ C.A.C. (Curriculum Advisory Committee) formed from training colleges takes the advisory committee and H.A.T. input and creates new curriculum.

# **Government Involvement in Curriculum**

- ❑ After the new curriculum has been created it is reviewed by the C.A.C. and then goes to H.A.T. and the government advisory committee for approval .**
- ❑ Implementation of the new curriculum can take three years.**
- ❑ Shortly after the curriculum adjustments are made; these changes on reflected in the C.F.Q. examination questions.**

# Curriculum Life Expediency

- ❑ The average time of curriculum is 5 to 10 years. This is controlled by H.A.T., the advisory committee and the C.A.C.
- ❑ Either H.A.T. , the advisory committee or the C.A.C. can ask for a rewrite or minor adjustment to current curriculum.
- ❑ Rewrites are expensive (approx. 50,000.)
- ❑ If anything new is added something has to come out of the old curriculum.

# Problem Questions

- ❑ Currently there is so many new fuel delivery or drive systems; bio-diesel, bio-gasoline, high pressure diesel, hybrids and electric.
- ❑ What elements from the curriculum are to be added and what elements are to be removed.
- ❑ Currently , there is three levels of training at 240 hours per level. There is no plans to change or extend the periods; so where does high tech. vehicles fit into the standards.

# Research Study

- ▣ The results were:
- ▣ 1. Safety (times 10).
- ▣ 2. Increased electric skills and knowledge.
- ▣ 3. Access to service information to prevent service personal, customer and repair person injuries.
- ▣ 4. Training service tools and equipment.
- ▣ 5. How will this new information affect their license.

# What is the end results

- ❑ Given the apprenticeship training standards where is the electric vehicle training going to fit into the current curriculum standards.
- ❑ What electric car restricted skill sets fit into the current standards.
- ❑ The cost of creating new curriculum.
- ❑ Is the electric vehicle training going to be an enhancement to current license mechanics.
- ❑ How can the new C.F.Q. tests be past across Canada.

# Sum Up Presentation

- ▣ Ontario Colleges are very interested in planning, creating and implementing new training standards.
- ▣ The success of the electric vehicle can be greatly enhanced when service personal are trained to fix any high tech. problems.
- ▣ Our curriculum can set high standards for the world to model.
- ▣ The safety of our repair industry and the electric vehicle could be reflected in strong training standards.

# Closing

- ▣ Thank you for allowing me this time.

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