

Backgrounder

Winter 2007

NEW LIFE FOR VIA'S F-40 FLEET

The locomotive rebuild program

VIA Rail Canada's total fleet includes 54 F-40 locomotives, which are more than twenty years old, and are nearing the end of their normal life cycle. These locomotives are used in all parts of Canada – on VIA's western and eastern transcontinental services, in the Quebec City – Windsor Corridor, and for remote services.

VIA has recently announced that CAD Railway Industries Ltd. (CAD) has won the contract for rebuilding these locomotives from the ground up. This work will improve reliability and performance adding another 15-20 years to the locomotives' service life.



The program involves stripping locomotives down to their shells and rebuilding them using the latest technology. Beginning in this month, car bodies will be repaired, given an anti-corrosion treatment and repainted with a new colour scheme. The components of each system will be thoroughly inspected, and new systems will be installed to meet or exceed today's standards. The goal of this program is increased reliability, decreased maintenance costs, modernization, standard configuration, safety and compliance with environmental and other regulations. In fact, VIA expects to see a reduction of greenhouse gas emissions of up to 12% once the work has been completed.

The rebuild programs will allow VIA to re-deploy locomotives that are as good as or better than new, designed to meet VIA's operational requirements exactly, and will extend the life of the equipment for another generation. The work on the locomotives will be completed by December 2012.

Benefits

- Incorporates new technology to meet current operational requirements.
- Extends service life by 15-20 years, a lower cost than buying new equipment.
- Will allow VIA to deliver a more reliable, consistent service to travelers.
- Includes many environmental enhancements, such as doubling the unit's life span and reusing the 120 tonnes of steel from the fundamental structure.

- Re-uses locomotive elements such as trucks, main structure, traction motors and major cores such as engine, main generator and compressor.
- Maintains the continuity in documentation, spare parts, operator familiarization and maintenance practices.

Improvements

Description	Benefit
<ul style="list-style-type: none"> • Cleaner burning engine • Engine stop/start system • Fuel heating • HEP diesel generator (not in prototype) • Layover heating 	Fuel saving
<ul style="list-style-type: none"> • Cruise control • De-misting air to windshield • Electronic fuel monitoring • Low speed system 	Improved operation
<ul style="list-style-type: none"> • All new copper air piping • All new receptacles and switches • All new relays (70% less due to microprocessor) • All new wiring 	Improved reliability
<ul style="list-style-type: none"> • Electronic parking brake • Emergency horn • Provision for higher intensity headlight • Improved event recorder with crash hardened memory 	Improved safety and security
<ul style="list-style-type: none"> • Removal of corrosion and anti corrosion 	Locomotive life protection applied
<ul style="list-style-type: none"> • Cooling fan sequencing • Independent dynamic braking • Microprocessor controls • LED indicator lights 	Lower maintenance
<ul style="list-style-type: none"> • Electronic engine governor 	Operation efficiency
<ul style="list-style-type: none"> • Automatic horn sequencing • Cab air-conditioning • Ergonomic improvements in cab • Improved cab heating and ventilation • Improved third (jump) seat added • Microwave oven added • Sun screens added 	Operator comfort and convenience
<ul style="list-style-type: none"> • New paint scheme 	VIA image