

CFOA NEWS

Canadian Ferry Operators Association

Association Canadienne des Opérateurs de Traversiers

Issue 4-11

November 25, 2011

In the last issue, a short description of the 2011 Conference in Owen Sound was provided, there is now a very interesting article in the [Canadian Sailings](#) magazine at the following link <http://canadiansailings.ca/?p=3171> for your enjoyment.

[The Canadian Marine Advisory Council](#) (CMAC) Held the Fall session November 7 to 10th. The Transport Canada website [Marine Services On-Line](#) offers a link for the November 2011 documents. If you did not attend and want to read the material dealt with, the above link will help.

New Members

I am very pleased to advise that [The Institute maritime du Québec](#) has joined the [CFOA](#) since our last issue.


2012 Conference and AGM Update

[The 2012 Conference](#) Committee is now hard at work organizing a stellar event in Victoria. The dates are September 17 and 18, 2012.

The theme is:

“Critical Ferry Infrastructure in Canada –
Critical investments in safety, people and assets”

The conference hotel will be announced soon and you will also be receiving information on Sponsorship and Speaking Opportunities.

Best wishes for the Christmas Season and 2012 to all of you and your families. 

Executive Director

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Calendar:

**Board of Directors Meeting,
Ottawa, ON
February 2012**

[CFOA 2012 AGM and Conference](#)
Victoria BC
Sept. 17 & 18 2012

New Members:

[Institute maritime du Québec](#)

TECHNICAL PAPER

Inside the box – not so subtle benefits of charge air cooler maintenance.

By Ken Westcar, Manager, Marine Market, [Toromont Cat](#).

November 2011

Today's emphasis on fuel economy and exhaust emissions places a great deal of responsibility on regulators, engine builders and owners. Regulators dictate the emission limits to engine manufacturers who then build compliant products for the market place. However, the legal responsibility for continued emissions compliance lies with the engine owner and maintenance of the Technical File and proof of adherence to recommended maintenance schedules should ensure that any emissions audit goes smoothly.

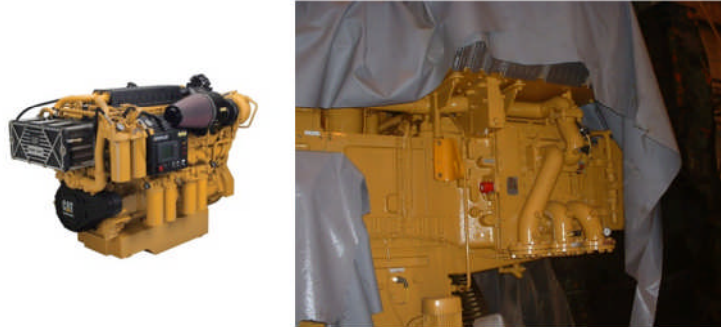
Often neglected during maintenance is the engine's charge air cooler (often called an after-cooler or inter-cooler). It permits a significant amount of heat to be removed from the combustion air after it leaves the turbocharger and before it enters the engine combustion chambers. This cooled air reduces combustion temperature so that the production of NOx is lowered. It also increases the combustion air density (more oxygen) so that more fuel can be burned efficiently in the finite space of the combustion chamber therefore allowing increased power density and higher engine efficiency.



Charge air cooler cores are similar to vehicle radiators and can be tube and fin or bar and plate design. They are densely constructed to resist high thermal and mechanical loads while having the ability to remove large amounts of heat from the combustion air after it passes through the very hot turbocharger. For example, a modern 4500bKW rated medium-

speed engine requires a charge air cooler capable of removing approximately 2000kw of heat from the combustion air at full load.

Because it's encased in a cast or fabricated housing, the condition of the cooler core might be ignored until the engine exhibits a related performance problem such as elevated exhaust temperature, decreased performance, exhaust smoke and/or turbocharger surge.



A charge air cooler passes an enormous mass of air on its way to the engine combustion chambers. In our 4500 bKW rated engine example it can be in the region of 27,000 cubic meters/hr. Any fouling of the air and water sides of the cooler core can reduce its efficiency to the point where the engine is incapable of meeting its legal emissions limits, delivers less than rated power and incurs short or longer term damage. Keeping the charge air cooler clean is therefore mandatory and not optional. Engine manufacturers publish specific data for acceptable pressure and temperature differential limits across the charge air cooler core and should be consulted for appropriate information on limits and measurement methods.

Contaminated charge air cooler cores should be thoroughly inspected for obvious signs of mechanical damage or leakage before the cleaning process commences. Photographic records and a written report on superficial observations are recommended. For shipping they need to be secured to a pallet or other carriage device to avoid damage in transit. If heavily oil-fouled the core should be wrapped in heavy plastic or placed in a containment tray to prevent oil escape to the environment

MEMBER NEWS

[Lengkeek Vessel Engineering](#) (LVE) of Dartmouth, NS has been awarded the contract to design a new harbour ferry for Halifax Regional Municipality. The new domestic transit ferry will replace the existing Woodside ferry which has been in service for 30 years. For this project LVE teamed up with catamaran and ferry specialist [Incat Crowther](#) from Australia. The new [Metro Transit ferry](#) will be a 28 meter aluminum catamaran with diesel electric propulsion, with a maximum speed of 20 knots, and with a maximum capacity of 150 passengers. The catamaran will have two passenger decks with the upper deck giving passengers the option to sit outside. The new vessel will integrate with Metro Transit's existing dock infrastructure. The vessel is scheduled to start operating between Halifax and Woodside in 2014.

FLEET NEWS

Second new ferry “William Frankland” arrives in New Brunswick.

New Brunswick’s newest ferry the “**William Frankland**” has been delivered. The new ferry will replace the aging Lady Whitehead and will increase the capacity to 12 cars and extend the capability for larger trucks to travel to Whitehead Island from Grand Manan. The Ferry is 31.5Metres Length on Deck with a Beam of 10.50metres. The overhead bridge is accessed from the crews accommodations deck which is over the passenger space. The vessel is powered by 2 [Voith Schneider](#) cycloidal propellers direct driven by [Caterpillar](#) Diesels. She easily attained 10 knots on sea trials which will allow the vessel to maintain schedule in the rough conditions of the Bay of Fundy. The ferry is currently undergoing extensive crew training and final outfit prior to going into operation during the fall of 2011. The vessel will also be managed by CFOA member [Coastal Transport Ltd.](#) of Saint John.


The **William Frankland** I was designed by CFOA Associate Member [E.Y.E. Marine Consultants](#) of Dartmouth NS. The builder was [Chantier Naval Forillon Inc.](#) of Gaspé QC.



PRODUCT UPDATES

This equipment brochure was submitted by [DSS Marine Ltd.](#) the Delta "T" Systems Agents in Canada

The New **HEAD VENT SYSTEM**

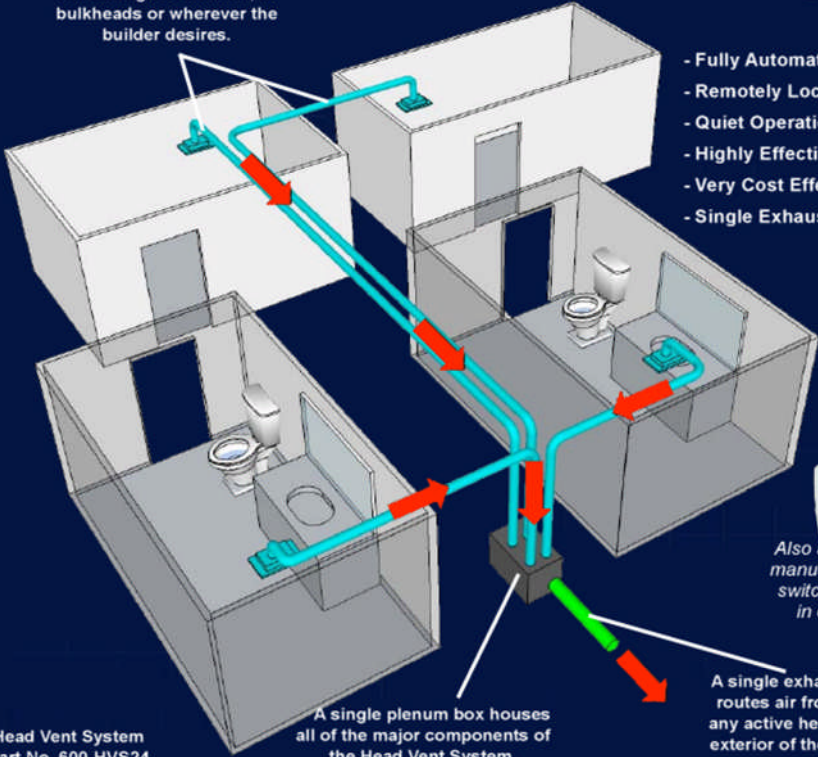


DELTA "T" SYSTEMS

Marine Head Ventilation System

When a person enters the head, an occupancy detector initiates the Head Vent System and starts the flow of air. The system then remains active while the head is occupied, and continues to run until several minutes after the head has been vacated.

Dedicated 3" ducts can be run through overheads, in bulkheads or wherever the builder desires.



Head Vent System
Part No. 600-HVS24

Occupancy Detector

- Fully Automatic Operation
- Remotely Located
- Quiet Operation
- Highly Effective Extraction
- Very Cost Effective
- Single Exhaust Port

Also available as a manual system with switches mounted in each head.

A single exhaust port routes air from from any active head to the exterior of the vessel.

Delta "T" Systems, Inc. 858 West 13th Court, Riviera Beach, Florida 33404 561-204-1500 www.deltatsystems.com
inquire@deltatsystems.com

ENSOLVE BIOSYSTEMS

[Ensolve Biosystems](#) manufactures the only "green" oil water separator (OWS) in the world called the PetroLimiter OWS system. It is Transport Canada approved as well as MEPC 107(49) and USCG certified. Some of our other customers include BC Ferries, Maersk, Carnival Cruise Line, Royal Caribbean, Aker Biomarine, Color Line Marine, Interlake Steamship, and many others. These ship owners have purchased the PetroLimiter OWS system because it provides the best effluent quality and lowest cost of ownership in the business. As an example, BC Ferries purchased their first PetroLimiter OWS system in 2003. They were so satisfied with the performance of their unit that they purchased 4 more PetroLimiter OWS systems in the following years.

Dr. Jason Caplan, CEO of Ensolve Biosystemes Inc. is presenting a Technical Paper on this equipment at the April 2012 [Vancouver Island C.I.Mar. E. meeting](#).



PetroLimiter® OWS

OIL WATER SEPARATOR

Cutting Edge Bilgewater Treatment System

- ◆ MEPC 107(49) Type Approval
- ◆ Destroys emulsified oils
- ◆ Guaranteed lowest operating cost
- ◆ Green technology - little or no waste
- ◆ Compact, modular design
- ◆ Unsurpassed customer service
- ◆ No cascade system required
- ◆ Industry proven since 2000
- ◆ Patented Technology - Only biomechanical IMO Certified OWS in the world



PL 200M OWS shown







MEPC 107(49) Approved by Major Classification Societies



US COAST GUARD



PetroLinator Description

The PetroLinator bilgewater treatment system easily handles phase-separated and emulsified oil in bilgewater. The system consistently achieves effluent concentrations of < 5 ppm oil.

This automated biomechanical bilgewater treatment system is safe, reliable, and simple to use. Unlike conventional oil water separators, the PetroLinator actually destroys oil and grease emulsions using naturally occurring microbes. The system can even remove detergents, solvents, glycol, and other organic shipboard chemicals found in bilgewater.

PetroLimators are in operation on cruise ships, tankers, ferries, container ships, offshore platforms, factory fishing vessels, barges, Ro-Ro's, supply vessels and at shore/ dock-based facilities. This versatile OWS can be installed in numerous applications and ships' platforms.



PL 630M OWS shown



Technical Specifications

Specifications	PL 630M OWS	PL 400M OWS	PL 200M OWS
Length	2,21 m (87")	1,35 m (54")	1,21 m (48")
Width	1,55 m (61")	1,22 m (48")	0,92 m (36")
Height	1,84 m (73")	1,72 m (68")	1,72 m (68")
Daily Flow Rate (Max)	21 m ³ (5,500 gal)	16 m ³ (4,300 gal)	11 m ³ (2,800 gal)

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COASTAL LUBRICANTS Ltd. MATERIAL

The **CLEANEST**
Biodegradable fluid
you can buy.

It's Invisible
in Water.



**Don't settle for a biodegradable fluid that requires costly cleanup.
Choose UCON™ TRIDENT™ AW fluids.**

Just because your hydraulic fluid is biodegradable doesn't mean it's the best fluid for use on or near water. You need a fluid that also won't form a visible sheen, creating messy spills that are costly to clean up.

UCON™ TRIDENT™ AW hydraulic fluids are denser than water and readily disperse so they leave no surface sheen. With good aqueous solubility, they dissolve and readily biodegrade with normal turbulence in water. Other biodegradable fluids – including vegetable and mineral oils – won't mix with water. They create a surface sheen that can foul aquatic wildlife, plants and shorelines and must be cleaned up.

UCON™ TRIDENT™ AW fluids are available in ISO 32, 46 and 68 grades and offer excellent anti-wear and non-varnish forming performance as well as an attractive environmental profile. They are readily biodegradable and practically non toxic to fish and aquatic invertebrates by U.S. Fish & Wildlife criteria. And they are not "hazardous chemicals" by OSHA's hazard communication standard and contain no materials reportable under CERCLA/SARA "RQ" requirements.



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