

Inside...

False maydays waste precious resources

3

Doing what's best for whales—avoid them if you can

5

MCTS officer recalls a loong shift!

6

Tsunami research leads to response strategy

8



Shorelines

A Publication of Canadian Coast Guard Pacific Region Volume 6 Issue 2 Summer 2002

Coast Guard celebrates 40 years of marine safety and service

BY MICHELINE BRODEUR

Forty years ago the captain of a fishing trawler in an Atlantic storm sent out distress signals. A red and white Coast Guard ship answered his call for help. That response to a mariner in distress was one of the first of hundreds of thousands made by the Canadian Coast Guard since its establishment in 1962.

"The red and white vessels have come to stand for safety, security and sovereignty," said Robert Thibault, Minister of Fisheries and Oceans. "I commend the Coast Guard for its commitment to marine safety and service over the past 40 years."

It was January 26, 1962, when Leon Balcer, then Minister of Transport, rose in the House of Commons to announce the formation of the Canadian Coast Guard. The new Coast Guard was to be made up of a fleet of Department of

Transport icebreakers, northern supply craft, and vessels providing navigation aids. Coast Guard vessels were painted the now familiar

LIBRARY

JUN 27 2002

PACIFIC BIOLOGICAL STATION
NANAIMO, B.C.

red and white with a prominent maple leaf on the funnel.

The formation of the Coast Guard came in response to demands for a national civilian marine service. Canadians wanted a service to support

national objectives and to provide search and rescue services to coastal communities and fishing and shipping vessels.

"Coast Guard has become a vital national institution," said John Adams, Commissioner of the Coast Guard. "We've served Canadians with pride and professionalism along our coastlines and on our waterways. Our motto of *Safety First, Service Always* has been the driving force behind our success. I am very proud to be a member of this organization."

Continued on page 11

"Our motto of
Safety First,
Service Always
has been the
driving force
behind our
success."



Fisheries and Oceans
Canada

Coast Guard

Pêches et Océans
Canada

Garde côtière

Canada

Just another day at the office



Coast Guard performs mountaintop refuelling of the repeater stations yearly in May. This year was extra fun for the lucky crew, as you can see by the load of snow that had to be shovelled. The flat shape to the left of the mast is the generator building, buried to the eaves in snow!

Shorelines

Shorelines is published by Coast Guard Pacific Region, and is designed to promote the exchange of information and ideas between Coast Guard and the communities it serves.

You are encouraged to copy or reprint in part or in whole the material presented in *Shorelines*, but we request that you acknowledge the source.

We appreciate feedback from our readers. If you have any comments or suggestions, or if you'd like to be added to our mailing list, please contact the editor:

Micheline Brodeur
350 - 555 West Hastings Street
Vancouver, BC V6B 5G3
Phone 604-775-8809 Fax 604-775-8825
e-mail brodeurm@pac.dfo-mpo.gc.ca

ISSN 1206-5676

Printed on recycled paper.

Visit us on line at
www.pacific.ccg-gcc.gc.ca

A Reminder

The Office of Boating Safety would like to remind boaters that on September 15, 2002, mandatory certification requirements come into effect for operators of pleasure craft less than four meters in length. For information and a list of accredited course providers call 1-800-267-6687 or go to www.pacific.ccg-gcc.gc.ca/obs.

New on the Web

Our webmaster continues to update the French versions of the site to match the English site. View new photos in our photo gallery at www.pacific.ccg-gcc.gc.ca/photogallery/index.htm.

Contributors this issue

Dan Bate, Paul Blunt, Gaetan Boudrealt, Dave Mallory, Michelle McCombs, Stephen Mundschtz, Andy Nelson, Allen Nolan, Terry Wedmedyk.



False mayday involves police and many resources

BY GAETAN BOUDREAU, WATCH SUPERVISOR
VICTORIA MCTS

On Thursday, April 25th, Victoria Marine Communications and Traffic Services (MCTS) received a mayday call from a boater reporting that he was sinking and requesting immediate assistance.

Canadian Coast Guard Auxiliary and US Coast Guard vessels searched for an hour and 15 minutes until it was determined that this particular boater was sitting in his boat, not sinking, but safe and sound in his driveway!

Hoaxes, while not frequent, seem to happen regularly at the start of the busy navigation season. Incidents like this could have grave implications.

Every time a mayday is received, the whole search and rescue team responds, and many resources are committed to saving the lives of those in danger. Auxiliary crews go out in fast response boats in good and bad weather. Helicopters are put on standby and proceed when requested, and all mariners in the area are asked to help if possible. One false mayday call ties up resources and prevents responding to real incidents as the search and rescue teams answer the false report.

The costs of a response to a hoax and the hours spent in the search also impact the funds available for all search and rescue responses.

Esquimalt police took the boater involved in this particular incident into custody and an investigation is underway.

With the weather improving, Victoria MCTS anticipates another very busy season on the water. All boaters should be familiar with VHF radio regulations and report abuse to the nearest Coast Guard Radio Station.

It's a good time to verify your communication equipment is in working order before proceeding on the water. VHF radio is your direct line to help if needed.

Channel 16 We're listening 24/7

The five MCTS stations in BC maintain continuous watch on VHF channel 16. Here are their areas of responsibility:

Victoria: Strait of Georgia, Haro Strait, Fraser River

Vancouver: Vancouver Harbour and Howe Sound

Comox: East of Vancouver Island, North of Parksville

Tofino: West Coast of Vancouver Island

Prince Rupert: Dixon Entrance to Prince Rupert and Hecate Strait to Cape Caution

CALL IF YOU NEED HELP

Hypothermia—resistant personal flotation devices provide added protection

BY PAUL BLUNT, BOATING SAFETY OFFICER



Immersion suit

The most common cause of hypothermia among recreational boaters is exposure to cold water. Hypothermia is also one of the major causes of death in boating incidents. Even in summer the average temperature of BC's coastal waters is between 10-15° C (48-56° F), which can result in a person becoming hypothermic very quickly.

There are many specialized personal flotation devices (PFDs) that can increase your survival time in the water considerably. Depending on the conditions and activities that you engage in while boating, consider wearing these protective suits on your boat. Anti-exposure and immersion suits or thermal system coats with a beaver tail are great at keeping you afloat while keeping hypothermia at bay. These flotation devices are designed to retain your body's heat by protecting the areas of high heat loss (head, neck, armpits, sides of chest and groin).

The coastal waters of BC are unforgiving because of the water temperature and adverse and unpredictable weather conditions. Hypothermia played a role in seven fatalities involving youth, which all occurred within one year on the North Coast. Wearing thermal protective flotation devices may have prevented these tragedies.

Before going out in a boat, check weather conditions, take along appropriate safety equipment and **always wear your PFD**. Remember, **alcohol and boating don't mix**.



Thermal system coat with beavertail



Anti-exposure coverall and work suit

View marine mammals with care

BY MICHELLE MCCOMBS

In late January, a young female killer whale was spotted in Puget Sound off a Seattle suburb—a rare occurrence which highlights the need to behave responsibly around marine mammals, especially whales.

“It’s a fascinating situation and one that’s really quite unusual. It’s virtually unheard of for a killer whale from a resident pod to be on its own,” said scientist Dr. John Ford, Head of Marine Mammal Science at Fisheries and Oceans Canada.

Normally, resident killer whales travel in cohesive family groups called pods.

Scientists such as John Ford, who has tracked and studied killer whale families for 30 years, are able to identify a number of whales and tie them to their pods through body markings and their unique dialect, a series of underwater calls particular to each pod.

The Puget Sound whale has been identified as A73, a 2-year old killer (orca) whale born to one of the resident pods found off northern Vancouver Island. Its mother, A45,



is presumed to have died in early 2001 and A73 became separated from its pod at that time.

This young whale is in a busy area for marine traffic and its vulnerability serves as a reminder that all boaters should be conscious of

the effect of their actions on whales. Closely interacting with wild marine mammals can affect their ability to cope and live in their natural environment.

In Canada, under the *Fisheries Act*, Fisheries and Oceans Canada, there are Marine Mammals Regulations that specifically prohibit disturbance of marine mammals. The department has developed guidelines for marine mammals viewing in all areas along the coast of BC. It is strongly recommended that vessel operators follow these guidelines for all whale species.

MARINE MAMMAL VIEWING GUIDELINES

These are some of the marine mammal viewing guidelines developed by Fisheries and Oceans Canada. You can get a full set of guidelines from Fisheries and Oceans Canada.

- 1 Be cautious when approaching areas where marine mammals are present.
- 2 Reduce speed to less than 5 knots when within 500m of the nearest marine mammal.
- 3 Avoid making any abrupt changes in speed or course.
- 4 Stay at least 100 m away from the nearest animal.
- 5 Always approach and depart animals from the side.
- 6 Limit your time engaged in viewing to a maximum of 30 minutes.
- 7 Do not position your vessel in the path of the animals.
- 8 Back away at the first sign of disturbance or agitation.
- 9 Be cautious and quiet.
- 10 Do not feed marine mammals.

The Longest Day

BY DAVE MALLORY, MCTS OFFICER,
VICTORIA MCTS

These events occurred in the Victoria MCTS area on December 14, 2001. The wind was blowing from the northwest, reaching 65 knots at Entrance Island during the early morning hours.

Well, what started out to be a fairly dull and relatively quiet shift turned into one of the busiest I have ever experienced. I remember staring at the radar in my sector, watching one of the few vessels I had participating with us that night, *Seaspan Challenger*, approach Entrance Island on his way to the Fraser River.

It was after 1:00 a.m. and the traffic was very

that the situation would probably get worse before it got better. I was right.

A few minutes later, up at Entrance Island, *Seaspan Challenger* checked in with me enroute to the Fraser River. I had no traffic for her and she began her turn to the south east. (*Seaspan Challenger* is a purpose-built pusher-style tug. She has her own rail-car barge that gives the two units a combined length of 530 feet.) A few moments after her turn she called again, stating her barge had come disengaged due to the high winds. It was drifting south toward Carlos Island, just over four and a half miles away! She was now desperately trying to recover her barge, which was loaded with tractor-trailers, some of which were carrying dangerous cargo.

“Traffic, are there any large tugs in the area?” asked an anxious voice on the tug. The closest tug was an hour away; obviously that wasn’t going to help the *Challenger*. The barge was moving at about five knots, she had less than an hour before she ran aground. The quick thinking master quickly asked for tugs from the Nanaimo area.

Three *Seaspan* tugs responded: *Hawk*, *Valiant* and

Navigator. The closest one was just under an hour away. The race was on.

Talk about dramatic! I tracked the barge while the *Seaspan Challenger* tried in vain to slow it down. Meanwhile, the tugs bore down on the crisis. I realized that unless the wind relented, the tugs would arrive too late.

The wind kept up its assault on the barge, and she went aground on Carlos Island about one hour after initially reporting the problem. The tugs and the barge merged into one contact on the radar minutes later.

Seaspan Challenger reported that the barge disengaging from the tug loosened a hydraulic



light, with good conditions that had been forecast by Pacific Weather Centre.

But within a very short time all that changed as the wind picked up. Within one hour I had two vessels reporting difficulties. *M/V Modern Peak*, a 538-foot bulk carrier was dragging her anchor at Constance Bank. Ten minutes later another deep-sea vessel, *M/V Modern Express*, had her mooring lines severed by the high winds and was forced off her berth at Annacis Auto Terminal in the Fraser River. She needed tug boats immediately. Luckily, the tug *Westminster Pride* was close by and her crew coaxed *Modern Express* back to the berth. I remember thinking



pin and now the tug was taking on water. Fortunately, onboard pumps were keeping up with the ingress.

By now, all appropriate agencies were in the loop, including Rescue Coordination Centre Victoria and Transport Canada Marine Safety. The phones rang constantly as people called in for updates. During an incident such as the *Seaspan Challenger's*, time passes incredibly fast. Before I knew it, it was 4:00 a.m. And the storm wasn't finished wreaking havoc!

Just before 5:00 a.m. another call for help, this time in the Fraser River from the deep-sea vessel *M/V Braunschweig*. High winds parted her mooring lines and she was adrift. There was no pilot onboard and the master, whose English wasn't very good, was calling desperately for tugs.

But she was drifting fast and tugs did not reach her in time. She went aground for a short while on Tilbury Island. Luckily the river bottom in that area is sandy and there was no real damage. The tugs arrived and took the vessel to deeper water to anchor.

In the next hour and a half, three more deep-sea vessels—two at Delta Port and one at Roberts Bank—reported that they had either parted mooring lines or were in danger of doing so. Everyone wanted tugs!

Victoria MCTS issued urgent broadcasts on behalf of the vessels and tried to contact the authorities at Delta Port. The situation was becoming hazardous, as one of the vessels at Delta Port lost her aft mooring lines and was in danger of colliding with another berthed container vessel. The distress and traffic

channels were seldom quiet for even a moment at this point.

We were then called by Delta Port and told that a single tug, *Seaspan Discovery* was shuttling a lone pilot to assist the vessels back to their respective berths, one by one. A major catastrophe had been averted.

Problems began coming fast and furious. The tug *Billie H* lost one of her barges off Point Roberts and the barge was making way faster than the tug could. The tug *Lindsey Foss* was dispatched from Bellingham to head off the barge. *Billie H* got the barge back only to have it break free again!

Another barge came loose from its moorings in Gabriola Pass and it took six vessels, including



four tugs, to corral the runaway barge.

The rail ferry *Carrier Princess* had a loaded propane tanker trailer overturn on her deck. Luckily the trailer did not leak any of its lethal cargo and the ferry returned to her berth to fix the problem.

Another barge broke loose in the Shelter Island marina.

Dozens of pleasure craft were reported adrift in most of the marinas in the area, and several other less serious incidents were also reported.

When my shift ended at 7:30 a.m. I was thoroughly exhausted. Even though there was a lot of property damage, there were no injuries reported and most importantly, no loss of life. As I reflected on that morning's events on my drive home, the one thing that stuck out was the extreme professionalism of the mariners and response agencies involved.

It Starts with Science: Tsunami Predictions Will Save Lives

BY MICHELLE McCOMBS

A group of Fisheries and Oceans Canada researchers at the Institute of Ocean Sciences in Sidney is predicting the unpredictable, and turning tsunami simulation into a fine science.

The team, championed by Bill Crawford with Josef Cherniawsky and Fred Stephenson, is researching tsunamis to help develop an emergency response strategy for Coast Guard in case a tsunami hits the Pacific Coast.

"We hope to learn how to survive a tsunami and to determine the best way to reach people in need after a tsunami occurs," said Bill, a Fisheries and Oceans Canada researcher. "Through this research, we're working towards creating guidelines for search and rescue personnel and volunteers."

The Tsunami Project is trying to predict the impact tsunamis will have on various coastal communities following a massive earthquake. Fisheries and Oceans Canada will use this data along with other information to improve existing tsunami policies and procedures. For Bill, understanding tsunamis is key to forming a policy on tsunamis that will be important to the safety of Coast Guard's search and rescue teams.

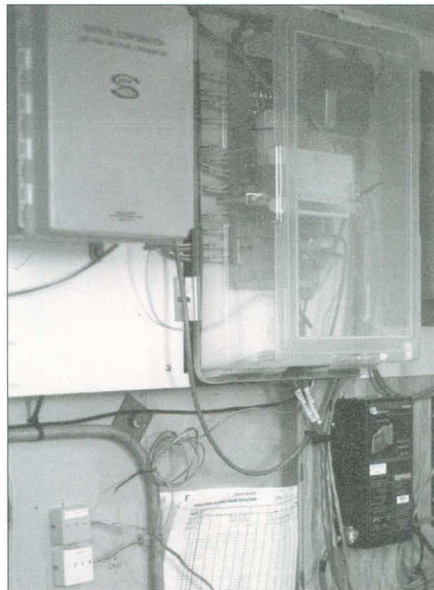
"Generally, 20-30 minutes is enough

time to wait after a tsunami before venturing back into the water to ensure no destructive waves follow the initial impact," Bill said. "However, each geographic area is different and a safe response depends on understanding these differences."

Using computer generated models, researchers simulate potentially destructive waves and their effect on tsunami-prone harbours on the Pacific Coast.

"Our models show what waves will look like as they travel towards coastal communities," explained Fred Stephenson of the Canadian Hydrographic Service. "Each harbour is unique so we consider the tide height, currents, shape and size of each harbour and, of course, the magnitude of the earthquake. All of this is key to determining the height and force of the waves as they hit the coast."

Tsunami modelling on the West Coast is not a new concept. In the 1980s, several American universities began to develop tsunami models to examine potential impacts on US cities. However, more recent discovery of tsunami from earthquakes in the Cascadia subduction zone, located deep beneath the sea about 100 km west of Vancouver Island,



These instruments measure water levels and immediately alert DFO scientists in Sidney when a tsunami has happened.

meant Canadian researchers also started to do tsunami modelling in Canada. The zone is compressing and it will eventually release, resulting in an earthquake that could cause a tsunami, inflicting substantial damage from Alaska to California, as happened in 1700.

While tsunami modelling may not be new, Fisheries and Oceans Canada scientists are advancing the precision of this technique. "The simulations we're producing are much more accurate. Previous modelling studies used 1 km by 1 km resolution grids, which meant that details of harbours were lost. Now we have the ability to use 10 m by 10 m resolution in our modelling," explained Fred.

Determining when a tsunami has occurred is an important part of Fisheries and Oceans Canada's commitment to public safety. As part of an early warning system for tsunamis, the Canadian Hydrographic Service operates warning stations at Langara Island, Winter Harbour and Tofino. These stations are continuously monitoring water levels of the Pacific Coast to help verify when a tsunami has occurred.

The technology used at these monitoring stations, designed by Canadian Hydrographic Service electronics technologist Larry Dorosh, looks for a significant rise or drop in sea level. When an earthquake occurs, shifting tectonic



The tide station in Tofino measures water levels as part of the tsunami warning systems.

plates can affect water levels, which signify a tsunami. Tsunami warning stations sense this change and alert Institute of Ocean Sciences in Sidney by phone, or by satellite up-link if the phone system is knocked out due to an earthquake. IOS staff can receive this information on a 24-hour basis. If a tsunami has hit, they alert the Provincial Emergency Program, which is responsible for broadcasting the information to emergency responders, such as the Coast Guard and RCMP, and to the public.

By providing warnings that a tsunami has happened, Fisheries and Oceans Canada is helping to minimize the damage and death that may follow a major tsunami. Tsunamis cannot, of course, be prevented, but as Fisheries and Oceans Canada scientists learn more about them, we can reduce the impact they pose to people on the Pacific Coast.

Our apologies...

We made an error in our Spring 2002 issue that we want to correct. Our lead story about the *Kella-Lee* rescue should give credit to MCTS officer John Boellaard of Tofino MCTS, who responded to the original call and relayed the distress call to other ships. Our apologies to John for attributing his decisive actions to others.

About the Coast Guard Crest ...

The Coast Guard crest has become a beacon of hope for those in danger since being approved by the Queen in 1962.

The oval crest is divided vertically into a blue section symbolizing water, and a white section symbolizing ice. On the white half is a red maple leaf, the emblem of Canada.

Two golden dolphins, one facing inward, and the other outward, are on the blue half. They symbolize the Coast Guard ships that operate on all three coasts of Canada. The dolphin, long known as a friend to mariners, is considered to be an appropriate symbol for the Coast Guard whose primary concern is ensuring the

The Coast Guard jack has its origins in naval history. When warships went into action under sail, the national flag (flown aft) was obscured ahead by the sails. To avoid confusion between friend and foe it became the custom to use a small flag

forward, not necessarily a replica of the national flag but a smaller variation. This smaller flag, universally known as the "jack," derives its name from "Jacques"

which, in the slang of French mariners of the middle ages, described anything diminutive.



safety of shipping in Canadian waters.

Because ropes are an important part of life at sea,

the crest is enclosed within a rope frame tied at the base. To indicate that Coast Guard ships are in the service of the Queen in right of Canada, the crest is surmounted by the Royal Crown.

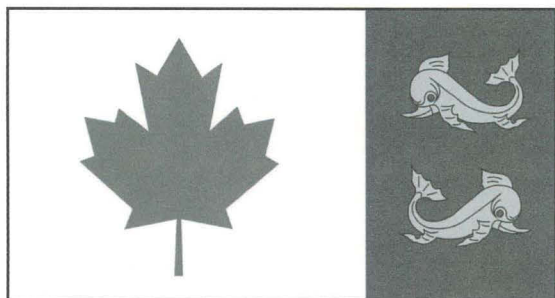
The crest is displayed on the exterior of all Coast Guard ships, at the forward end of the superstructure, at the centre line below the bridge.

... and the Jack

The jack is always flown with the national flag, a combination known as "the colours." At sea, the jack is only flown when the ship is dressed with masthead flags or when the ship is escorting royalty or heads of state, including the governor general or lieutenant governor within provincial waters.

Traditionally, the jack was not flown at sea outside of these special occasions because bunting was expensive and soon wore out. However, it is flown in harbour, following the harbour routine of hoisting each morning and lowering together at sunset.

All flags in current use within the Coast Guard are modifications of the crest. The jack displays the dolphins on a blue background and a large red maple leaf on a white background.



Coast Guard and local mariners plan services for the future

BY STEPHEN MUNDSCHUTZ

During the last several months Coast Guard Pacific Region, with help from representatives of the marine community, has been rethinking the way services are delivered on the West Coast through a project called the Change Initiative.

"We're working with mariners to close the gap that exists between what people have come to expect in terms of service from Coast Guard, and what we can afford to deliver," said Mike Henderson, Regional Director, Pacific. "We're rewriting the way Coast Guard services will be delivered during the next five years."

Coast Guard has had difficulty maintaining all of its programs and services because of funding cuts in recent years. As a result, Coast Guard must work to restore financial stability and program integrity to ensure the future of the Coast Guard.

The gap exists because of a lack of money, aging equipment and changing skill requirements for staff.

The Coast Guard fleet is in need of modernization or replacement, as is the communications system. Coast Guard also needs to look at improving employee recruitment, retention and training, because the knowledge and skills that staff require to do their jobs is changing.

Coast Guard's work won't change much in the next five years but this process will help determine how to best deliver our services in the future.

Similar processes are underway across the country to look at the same questions in different areas. They are being conducted in parallel and all regions will keep in close contact.

What will be reviewed?

Teams of Coast Guard and marine community experts, will meet to review these services:

- Marine Communications & Traffic Services
- Marine Aids to Navigation
- Search and Rescue
- Office of Boating Safety
- Environmental Response
- Navigable Waters Protection
- Waterways
- Fleet
- Aircraft
- Technical Services
- Co-location and Base Management
- Regional Training
- Organizational Alignment (CCG-P)

The Change Initiative is working to develop plans by Fall 2002. For more information, contact Bob Ferguson, at 250-480-2640 or David Heap at 250-413-2854.

40 years of service

Continued from page 1

Coast Guard became part of Fisheries and Oceans Canada in 1995. We have over 4,400 employees and we are assisted by 5,100 dedicated volunteers in the Coast Guard Auxiliary. Our duties include search and rescue, environmental protection and response, icebreaking, aids to navigation, marine communications and traffic services and boating safety.

We'll be celebrating our 40th anniversary with special events across the country in 2002. Details on these events and a comprehensive history of the Coast Guard are available on the Internet at www.ccg-gcc.gc.ca.

CCGS Gordon Reid

Intermediate Multi Task (Patrol) Vessel

Home Port	Victoria BC
Call sign	CGBR
Patrol Area	Pacific Region
Port of Registry	Ottawa
Official Number	813735
Built	1990 - Versatile Pacific, Victoria BC
Description	Intermediate SAR vessel with a notched stern ramp for the launch and recovery of the fast rescue craft. CCGS Gordon Reid is a medium endurance vessel, capable of offshore patrols and operations.
Duties	Search and rescue, pollution response and other tasks as required by Fisheries & Oceans and Canadian Coast Guard programs.
Crew	14 on the lay day system. Crew change every 28 days.
Registered Tonnage	Gross 879.61 Net 257.31
Displacement	1,175 tons
Draft	5.35 m
Length	49.95 m
Breadth	11 m
Accommodations	8 berths in double cabins
Propulsion	4 x 6-cylinder Deutz diesel engines plus bow thruster
Horsepower	4,800 hp
Max. Speed	16.5 knots
Cruising Speed	12 knots
Fuel Capacity	148,200 litres
Water Capacity	18,200 litres
Water-making Capacity	8,000 litres per day
Electrical	3 x 250 kW Mitsubishi generators
Cleared Deck Space	Limited
Towing Capability	275 m of 4.5 cm diameter nylon braid on power reel
Lifting/Cargo Gear	2 x Hiab Sea-Crane 200 (port and starboard, aft) rated at 1825 kg safe working load
Auxiliary Vessels	1 x Zodiac Hurricane 733 RHI with twin 150 hp outboard engines 1 x Dunlop 4.35 m RHI Marshalling boat with a 20 hp outboard 1 x Zodiac Mk III inflatable with 20 hp outboard engine

