



# CUSTOMS 'HAWK' GUARDING OUR COAST

BY KEITH INGRAM

Commissioned on International Customs Day 2018, *Hawk V* is the fifth patrol vessel in the history of New Zealand Customs Service to bear the name 'Hawk'.

**T**o be based primarily in Auckland, *Hawk V* has been purpose-built to boost New Zealand Customs' ability to identify risk, detect non-compliance in the marine environment, and carry out enforcement activities.

New Zealand Customs was first established in Kororareka, Bay of Islands on January 5, 1840, when the first Head of Customs was appointed. The role of Customs, its responsibilities and activity have all changed over the years: from combating opium smuggling, bootleggers, importers of risqué books and objectionable material, importer scams, transistor radio smugglers, to counter-terrorism, fraud and money laundering.

Lately, the illegal importation of methamphetamine and recreational drugs, the current scourge on our society, remains a large part of the work Customs have to deal with.

The primary function when Customs were established was to gather revenue for the government. By the 1980s, however, trade's importance to the economy saw a shift in focus. Helping facilitate New Zealand's expanding international trade relationships became a priority.

Alcohol and tobacco remain some of the department's oldest areas of responsibility, and it is the Customs' job to regulate

some aspects of their production and distribution. Customs also collects the excise tax levied on these products.

## LAUNCH

At the launch of *Hawk V*, Deputy Comptroller Operations, Bill Perry said Customs is determined to protect the maritime border from risks or threats. This new vessel, he said, will enhance the department's capabilities, now and in future.

Locally designed and built by Whanganui boat-builders Q-West, the *Hawk V* is larger and faster than the previous Customs patrol vessel, *Hawk IV*. She is designed to accommodate a seagoing crew for extended covert and overt patrols – protecting our territorial waters and waters out to 24 nautical miles.

Customs has always had a strong connection with the sea. During the colonial years, tobacco smuggling was a serious concern. Enforcement activity involved keeping watch along the long, rugged coastline – and chasing smugglers on the high seas.

NZ Customs' maritime role evolved during World War II, expanding to monitoring and building intelligence for wartime national security.

A War Book was issued to Customs collectors which detailed procedures and instructions for suspicious vessels: "with a view to preventing any hostile act by prospective enemy merchant ships in the harbour."

Also, Customs reports to naval intelligence staff were required if anything worthy of suspicion was found when examining cargo.

Perhaps the most renowned of Customs' maritime experts was



Minister of Customs Meka Whaitiri does the honours, officially christening *Hawk V*



A clear foc's'l with secure anchor locker

Captain Henry Parker, whose career surged in 1868 after seizing a schooner for tobacco smuggling, and persuading officials to pursue other smugglers.

By that stage, Customs had needed a special craft for many years and the specially commissioned Hawk reported for duty in Auckland in January 1881.

At £3,000, she was quite a splurge. She was a leading-edge design, custom-built cutter made of puriri and kauri by famed Aratapu boat builder James Barbour – built specifically for chasing smugglers.

By the end of the 19th century, NZ Customs was on top of the tobacco smuggling. The 'rummaging' of ships in search of revenue-evading contraband continued at the waterfront over the many decades to follow.

Then in the later part of the 20th century, with the increase in drug smuggling, the second *Hawk*, a 24 foot Mason Clipper, served from December 1978 until 1986.

The third *Hawk* was a 36-foot Salthouse Corsair which, during its 12 years of service from 1986 to 1998, covered a total distance of nearly 80,000 nautical miles.

*Hawk IV* was a 16.5m Salthouse Patrol. She was in service from 1998 until 2018.

Each *Hawk* continued the tradition of the original *Hawk* from a century earlier – high-tech pursuit of drug and contraband smugglers.

From the 1980s, a key part of Customs' maritime role was maintaining surveillance and collecting intelligence. A well-known example is the 1989 joint (Customs, Police and Navy) 'Operation Anaconda' that involved *Hawk III* looking out ►

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The main saloon and galley forward



Looking aft



The skipper's cabin



Below are two berth cabins



Port heads and shower



Starboard vanity and shower

for, hailing and then shadowing the banana ship *Rio Amazonas*, which had previously been caught (overseas) with 50kg cocaine on board. Customs had also seized 20kg cocaine off its sister ship in Auckland earlier in the year.

In 2017, a joint (Customs and Police) 'Operation Heracles' resulted in New Zealand's largest cocaine seizure to date. Much like the 20kg of cocaine found on the *Rio Amazonas* in 1989, a whopping 46kg of cocaine was smuggled in a sea chest attached to the exterior of a container ship which arrived in the port of Tauranga from South America.

A range of Customs' operational expertise, including the dive team, formed part of the task force.

#### IN WITH THE NEW

In seeking a new suitable vessel, the Customs maritime team had a lot of options to look at. The Police *Deodar III* approaching

10 years of solid service (coming up for a half-life repower), and Wellington's *Lady Elizabeth* now settled into hardy service in the Cook Strait region, there was some logic in maintaining inter-agency compatibility.

The Customs team looked at Auckland's Coastguard impressive *Lion Rescue*, and a more recent arrival, the survey craft *Ten Seventy*. From these evaluations, they made the decision to go with a foil assisted catamaran – a step that was something completely new for the Customs team.

In talking with the operators of the other vessels, Senior Customs Officer and the new vessel's skipper Scott James said, "One of the key questions we asked is, 'What would you change?'" These results had a huge impact on the decision-making process going forward – to the point where the Customs team believes they have a vessel that makes the best of most worlds.

During construction Customs conducted an age-old ceremony

which involves attaching a coin to the vessel. It's a tradition believed to bring good luck during the build and to the captain and crew during the vessel's working life.

In this case, in keeping with tradition, Customs chose to use one of their own 'Customs Challenge' coins.

Nowadays such ceremonies are normally the preserve of sailing ships where a gold coin is placed under the main mast when stepped. Old steel ships had a 'golden rivet' as the last rivet hammered home, normally down near the lower plate in the engine room. Similarly, the coin in *Hawk V* is positioned well down in the starboard engine room – the irony of its position made us smile when one still has to bend over awkwardly to actually see it.

#### CONSTRUCTION

*Hawk V* is an 18.85m Teknicraft designed, foil-assisted high-

speed catamaran. She was constructed at the Whanganui-based boat builder Q-West using 5383 H116 marine grade alloy plate ranging in thickness from 6mm, 8mm and 10mm in the hulls and wingdecks, with the cabin in 4mm. All of it is Sealium® marine grade aluminium – a product specially developed for the marine and aerospace industries. The main property of Sealium® is that it is significantly stronger than other alloys commonly used in shipbuilding (a minimum of 15 percent stronger).

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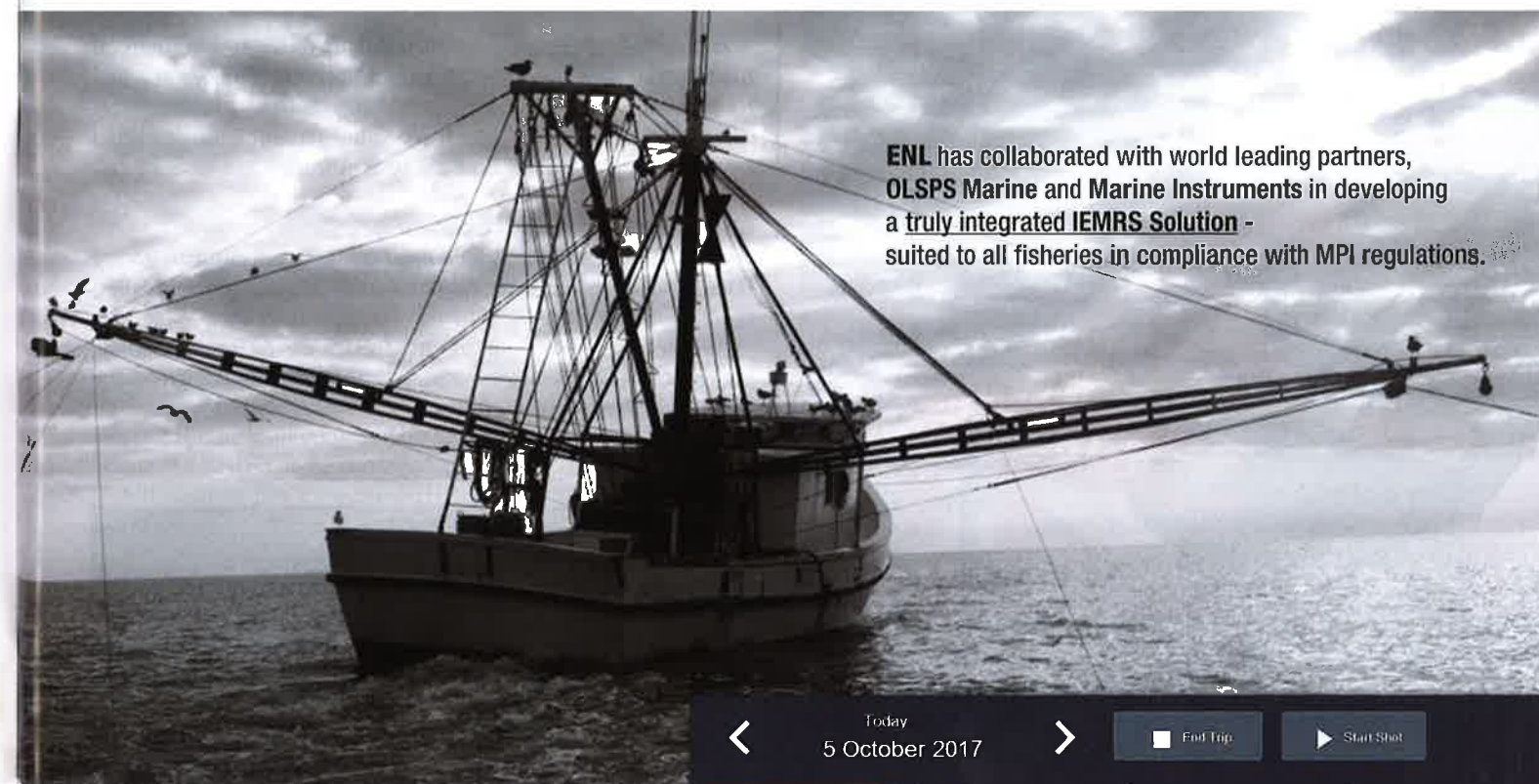
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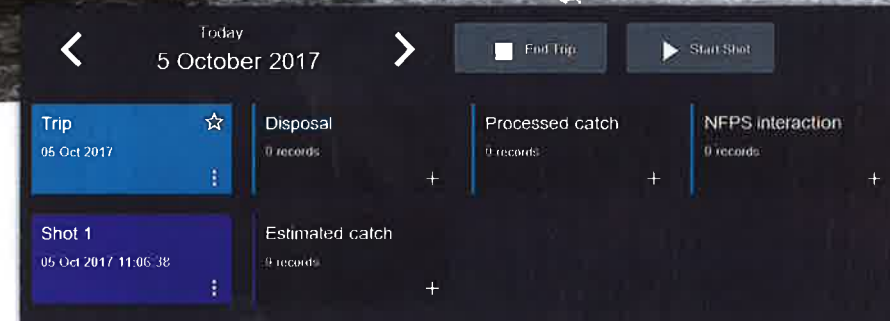
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Crossing the bar during sea trials

Above water, the aluminium is left bare to gain its natural oxide patina – which gives it its cold grey 'You can't see me' look at sea.

Below water, *Hawk V*'s high speed hulls and foil are protected by the 'Pettit® Vivid' antifouling system from Altex Coatings.

### DESIGN DIFFERENCES

*Hawk V* is every bit the specialized customs vessel, with a very business-like appearance and large array of electronics bristling the treetops.

As she was eased out of the shed we saw an immediate difference from the more traditional Teknicraft design – the addition of wave piercing bows. These first appeared on a similar Teknicraft-designed vessel, the *Ten Seventy* built in 2015. They



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not only add to the waterline *length*, but give improved sea-keeping abilities and speed performance in what can be our typical snotty weather.

The all-important adjustable foil amidships between the hulls has also undergone some refinements to improve sea-keeping efficiencies.

On stepping aboard, we note the split transom platforms on each quarter with a few steps up to the main deck. These platforms are positioned over (and protect) the Hamilton water jets. They carry twin dive or swimmer ladders as well as a rescue buoy aside.

The main quick response ship's boat is positioned in the centre, so that the launching cradle 'rockers' out and down to the launch position between the hulls. This is similar to the police vessels where the RHIB can be deployed and recovered while underway.

Although in this case the RHIB is a 4.8m Naiad (equipped with 60hp outboard) is slightly larger than the police boats because of the need to be deployed in more open water. The operating system remains the same.

Immediately ahead of the support boat is a solid towing post and a substantial towing warp, neatly stowed on its own drum against the forward screen. While towing and rescue is *not* one of Customs' core functions, we are advised that sometimes vessels of interest have to be taken in tow as part of enforcement duties.

Central is the external access to the fly-bridge and upper conning positions. The two doors to starboard give access to the external heads and shower and the starboard engine room. Out on deck are two large soft-patch hatches that give full access to the water jet propulsion space and engine room for servicing.

We note the cooling water and main strum boxes are external above the water jet landing platforms. Also, we are advised ►

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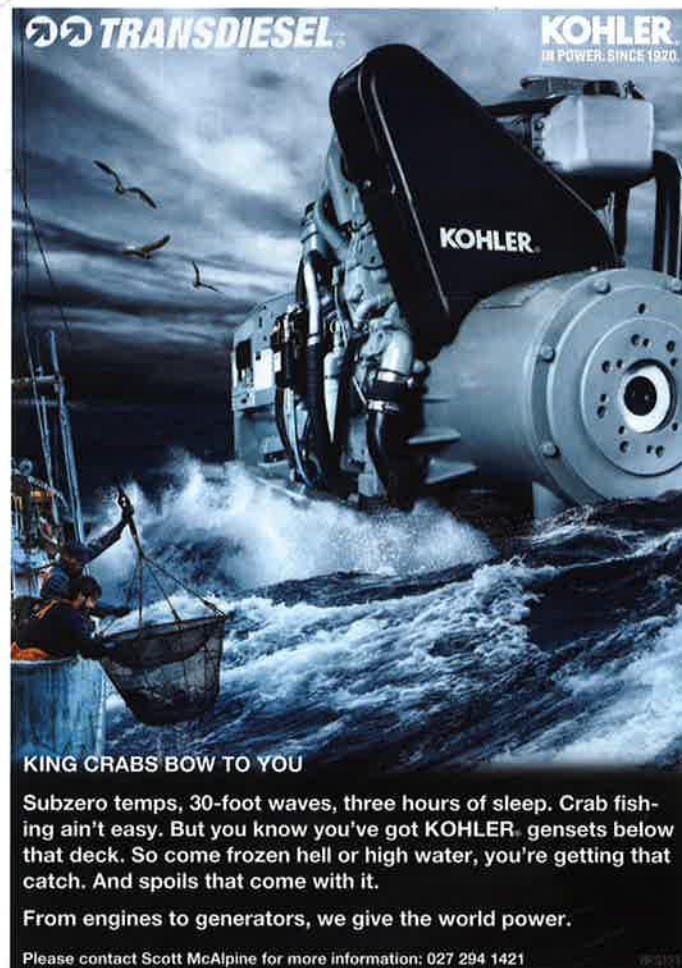
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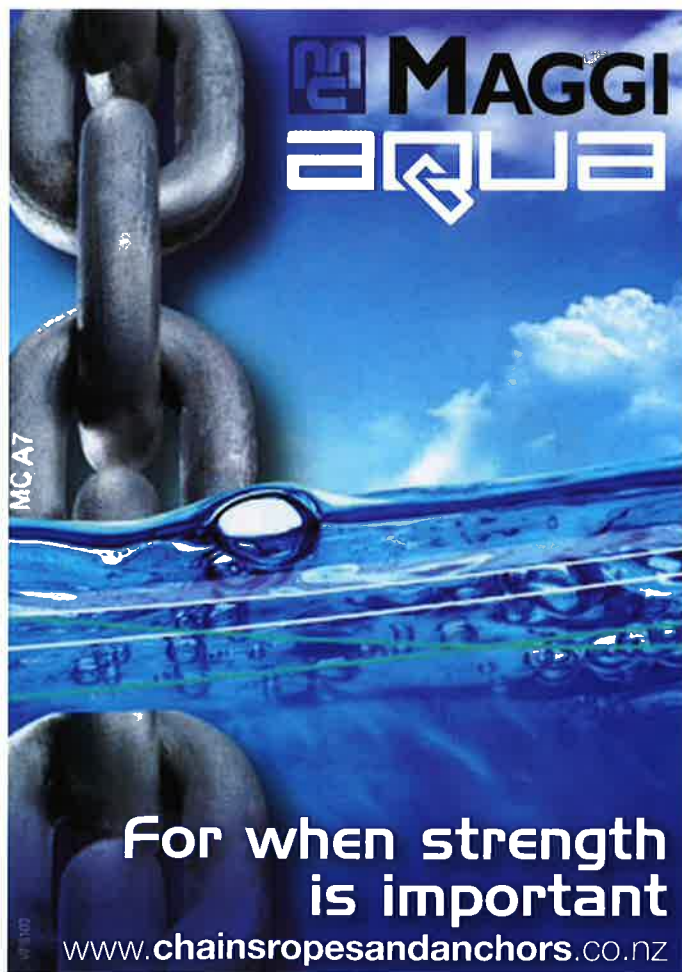
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Large towing post and tow rope

that the fire hose system runs off the starboard motor and propulsion system.

There is a small independent general purpose lifting davit to starboard, stowed flat. This davit is designed for the lifting or transfer of goods from other boats – or for lifting cray pots when they have fisheries officers on board as part of the inter-agency operations.

Moving forward, we note the waists seem to be wider with clear access forward. Correct, we are advised.

The deck house is a little slimmer. This was one of the Police's 'would change' suggestions. By shortening in the deckhouse sides, eliminating the wide shoulders, the skipper may operate the vessel for most events from his main command station and, using the Hamilton Jet blueARROW lever he has fingertip control – with good vision and no need to revert to the fly-bridge.

Up forward the foc's'l area is primarily clear with the only trip hazard being the anchor chain disappearing into the secure chain and which drum locker. Once again we find 'Chains Ropes & Anchors' have supplied the required ground tackle for the vessel. Moving aft, the port rear door is the main internal access to the vessel.

#### INTERIOR

On stepping inside there is no 'jail', so to speak – although the rest of the interior layout follows on from much of Wellington's Police boat *Lady Elizabeth*.

A door to port gives at-sea access to the port engine room below. There is a small settee and a berth opposite. This area has been claimed by the 'mate' when at sea and comes complete with ample stowage.

The main saloon provides for an excellent crew mess and rest area. There is a fully equipped galley with large fridges and freezers to cater for extended voyages. The twin bunk spaces and ablutions below in each hull are both functional and comfortable.

Looking aft the 'skippers' cabin is to starboard, with a pipe cot above which may extend the accommodation out to seven if required.

In moving up into the bridge, we immediately notice the lower-in-height main console, allowing for even the shortest in the crew to see over the top. With no centre console the main dash layout is well thought-out and functional. Much of this seems to have been copied from *Lion Rescue*.

#### ELECTRONICS

There is an extensive electronics package consisting of both



Skipper Scott James at the helm

civilian and military style equipment to meet the Customs' needs. ATL was approached as a company to put together a large 'Networked' system of electronics that will suit a wide range of crew's talents and requirements – not a dissimilar situation to when dealing with Coastguard Units, but this was on a far greater scale.

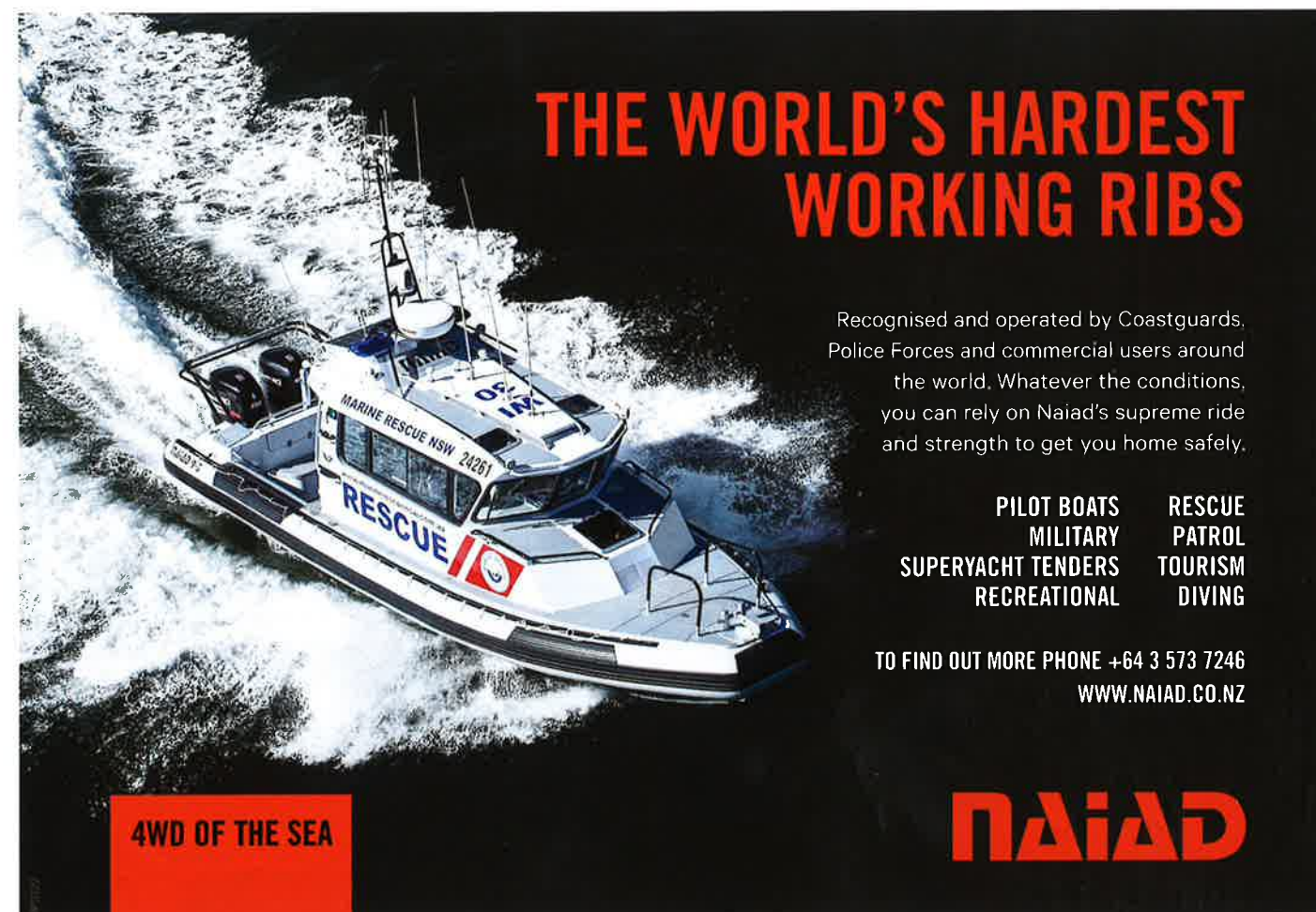
The Customs team had their own firm ideas about what was required at the three main stations, and after some discussion and input, ATL was able to come up with a system that is extremely thorough and complex, but also very user-friendly, utilising the latest EVO3 Multifunction Displays from Simrad.



Chart table

The electronics system was installed by Q-West with complete CAD Drawings supplied by ATL Service Manager Scott Bailey and then commissioned by ATL Technicians.

In general, it's a very thorough, yet practical electronics system for use by a number of crew. Feedback from the crew was positive, with comments on how intuitive the system is to use; the brightness and clarity of displays; a dead straight autopilot; excellent radar performance; and the connectivity and networking of the whole system which means different operators can be looking at differing radar or plots without upsetting the skipper's screens.



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- FLIR MX Hi Resolution Day / Night Camera
- Intellian Satellite TV Antenna
- Navionics Platinum Charting
- 6 x Panasonic CCTV Cameras.
- Web Boat Internet Antenna
- Auto Anchor – Chain Counter
- Fusion Surround Sound, and Fly-bridge Remote

#### Navigation Work Station

- 2 x Simrad NSS12, EVO3 12" Displays
- Simrad HS90 VHF Radio

#### Saloon Station

- Simrad NSS9, EVO 3 Multifunction

#### Ancillary

- ATL Scan Antennas, For VHF, AIS, HF

## CREW SEATS

There are three model KAB 514c helm seats across the main command position, with a further seat at the logistical command and communications station. (We are advised that this is Customs speak for a polite space to park the boss or any boffins out of the way, when carried on board.)

Opposite is a small bench seat for passengers who can get a bird's eye view of the activity in hand.

These seats, supplied by TRT, feature a heavy duty mechanical suspension designed to mitigate the impacts and vibrations created in the marine environments over sustained periods.

Customs chose a high back option without headrests (an optional feature) with fully adjustable armrests. The KAB 514c seat is fully adjustable to accommodate any operator size, while ensuring maximum comfort at all times. TRT advise the harness on this model is designed to ensure optimum operator safety and reflects the quality craftsmanship and reliability that owners have come to demand.

There is a small door to access to the outside fly-bridge.

*Hawk V* has three conning positions: the main below to starboard, and two (both port and starboard) on the fly-bridge. This was another recommendation gleaned from others' experience.

## GRUNT

*Hawk V*'s water jets are powered by twin Scania DI16 076M 809kW@2300RPM marine diesels from South Pacific Diesel Systems Limited. This firm has had a long association with Customs with Scania engines in the previous vessel *Hawk IV*. These engines are coupled to twin HJ403 Hamilton water jets with blueARROW, an innovated new generation electronic control system unique to Hamilton Jet. With this power and propulsion combination, the *Hawk V* will certainly be no slow coach. Fresh air intake and hot air outlets to the machinery spaces are protected by the Camfil Clean Air Solutions water separators to eliminate the ingress of moisture.

Along with its excellent surveillance electronics and cold grey colours, Customs will be able to maintain covert surveillance at a distance and, when required, pop over the horizon at 40-plus knots and it's 'action stations'. Her most effective service speed is still being evaluated, but an economical transit speed of 30 knots is comfortable, while being a cat, anything under 20 knots the fuel burn increases markedly.

Ship's power is provided by 'TransDiesel' using a Kohler 20.5EFKOZD 20kVA to supply all the domestic power, air conditioning and water maker. Yes, a water maker.

While the main fuel tanks hold 6,000 litres, freshwater capacity is only 600 litres. The Spectra Farallon 1800 water



Lazarette with Hamilton Jet



Ease of access for servicing



Scania power below

maker is capable of making 284 litres of fresh water per hour – and as such will only need to be run two hours a day. The crew advises that they will be making all their own potable water because the waterfront water can be so bad you wouldn't want to wash your dog in it, never mind the boat.

In closing, we believe this new vessel will be a huge asset to the NZ Customs maritime unit, with the capability to patrol all of our near-shore 25 nm coastal waters – the very area at risk of illegal imports or activity.

*Hawk V* is certainly equipped to do the job that will be demanded of her by the men and women who will serve on her.

One public spin off of such a distinctive vessel is that she will be recognisable close up by the public and will be supporting our public 'Coast Watch' an outreach programme coordinated by Customs.

As Customs says: "Border security is everyone's business." If

you notice vessels meeting at sea, or landing in an unusual area, or transferring objects from one vessel to another, you may have witnessed something illegal.

If you see any unusual activity, contact Coastwatch 0800 4 Customs, for you are our New Zealand Customs' "eyes and ears".

## SPECIFICATIONS

LOA	18.6m
Beam	6.9m
Draft	0.750m
Power	Twin Scania DI16 076M 809kW@2300RPM
Propulsion	Twin HJ403 Hamilton water jets
Service speed	30 knots
Designer	Teknicraft
Builders	Q-West Boat builders.



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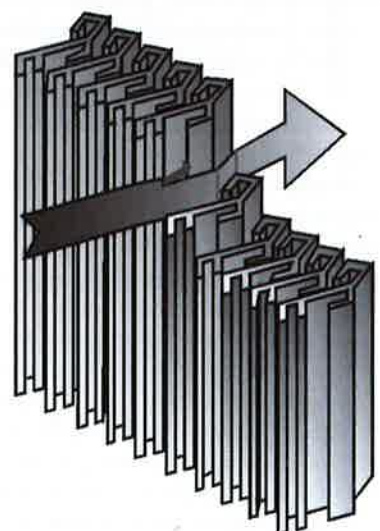




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