



TOMAX
NEWS

Issue 58
26th November 2021



PLUS:

MARKET SUMMARY

• EMPTY CONTAINER PARK CONGESTION SURCHARGES

- Please note that there are currently significant issues in Melbourne with returning containers to empty parks. Still rebounding from COVID-19 shutdowns and a heavy peak season, the parks have not been able to handle the large amount of containers flooding in. Where containers are required to be returned to the terminals directly there are also large issues where not enough export/empty time slots are available to return the containers. Containers are having to be staged at transport company yards causing further upstream problems. Carriers are often waiting in very long queues to de-hire containers despite having slots booked for the return, and these waits will likely result in some detention charges being applicable.

• Sea freight pricing from China is expected to increase again in the lead up to Chinese New Year as lines have begun announcing increases due to expected demand increases. Despite pressure from

various international government bodies and regulatory agencies, shipping lines seem intent on gouging the market as much as possible whilst the demand is high.

• China state-owned shipping company COSCO reported a staggering USD 10.45 billion operating profit in the 9 months through to September. COSCO is the world's 4th largest shipping line, having purchased both China Shipping and OOCL in recent years.

• Domestic small parcel service providers have released further statements regarding the surplus of packages to be delivered in the lead-up to Christmas, advising customers that lengthy delays should be expected. A recent notice from Toll Group advised that an additional 2 days would need to be added to the already lengthy lead times as a result of increased demand.

GAZETTE TARIFF CONCESSIONS (TC)

Tariff Concession Orders (TCOs) are an Australian Government revenue concession that exists where there are no known Australian manufacturers of goods that are substitutable for imported goods.

Objectors to the making of a TCO are not identified unless the objection is successful. At least 50 new TCOs are made each month. When a new TCO is made, it is published in the Gazette by the Australian Border Force.

You can stay up to date with the weekly gazette via the Tomax Newsletter.

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THE MOST POWERFUL ENGINE IN THE WORLD

By Rob Margeit

If you think 80,080kW is huge, wait until you see the torque figure. Meet the Wärtsilä RT-flex96C, the most powerful internal combustion engine ever made.

There's no replacement for displacement, or so goes the mantra indelibly imprinted into the hearts and minds of petrolheads everywhere. Whether it's the blunt force of Dodge's 8.4-litre V10 as found in the monster that is the Viper, the unusual W16 layout of the Bugatti Chiron, or a succession of big block V8s that proliferated in the US in the era of cheap fuel and 'bigger is better' philosophy, displacement has been a measure of power and brute force.

But, none of those engines – whether its GM's 8.4-litre V8 making 272kW in the 1971 Cadillac Eldorado or the 440ci (7.2-litre) Hemi making its home in the Dodge Charger – can hold an oily rag to the world's most powerful internal combustion engine, currently in production in Finland.

There aren't enough adjectives to adequately describe the Wärtsilä RT-flex96C (catchy name). But, let's start with the obvious. It's big, very big, its 13.5-metre height roughly the same as an average three- or four-storey building. It measures 26.59 metres long, or about four times the length of an average-sized suburban garage. Its cylinders alone (and there are 14 of them) measure one metre in diameter with a stroke of 2.5 metres.



What makes the Wärtsilä RT-flex96C noteworthy is its claim on the title of the most powerful internal combustion engine in the world. And its technology – if not its sheer size and power – is not that far removed from what you find in your average diesel-powered car. Let's talk numbers because they are impressive. As you would expect from a 25,500-litre inline 14-cylinder common-rail, turbocharged, two-stroke diesel, the Wärtsilä pumps out some huge numbers. And it needs to, its primary task to propel huge cargo ships across the world's oceans.

When all 14 cylinders are working away at ferrying your consumables held in 11,000 containers on a ship weighing 171,000 tons, the Wärtsilä makes an astonishing 80,080kW and a somewhat mind-boggling 7,603,850Nm (no, that's not a typo, that's seven-million-six hundred-and three-thousand-eight-hundred-fifty Newton meters) of torque. And it makes that maximum torque at a lazy 102rpm. Rev it out beyond that and you'll hit redline at 120rpm.

Fuel consumption is, as you'd expect, pretty hefty, the Wärtsilä lapping up 6283 litres of heavy oil diesel per hour. But, while the pure consumption number seems large, it is in the world of marine engines at least, super-efficient. Thermal efficiency is a measure of how much fuel is used to propel an object and how much is essentially wasted as pure heat energy. Most modern cars have a thermal efficiency of around 25 to 30 per cent. The Wärtsilä achieves a thermal efficiency rating in excess of 50 per cent, meaning that over half of the energy generated by its huge pistons is used to move the ship forward. Nice.

The Wärtsilä is currently in service inside the



Danish container ship, Emma Maersk, which when launched was the largest container ship in the world. Its gross tonnage is in excess of 170,000 tons, and

it measures almost 400 metres (397m) in length. When under full throttle and those 14 pistons are cranking away at their peak 102rpm, the Emma Maersk can hit top speed of around 47km/h (25.5 knots). If the 14-cylinder version seems a bit too big for you, Wärtsilä helpfully makes smaller versions of the RT-flex96C, starting with a humble inline six. Still probably too big to shoehorn into your VN Commodore project car, though.



140KG DRUG BUST!

The Victorian Joint Organised Crime Taskforce (JOCTF) seized 140kg of methamphetamine which was concealed in catering equipment, which saw three men charged for attempting to import the illicit drugs. The investigation commenced after the Canada Border Services Agency (CBSA) identified a suspicious air-cargo shipment in Toronto, destined for Melbourne. Upon closer examination, the industrial dough mixer machine was found to conceal 140 kg of methamphetamine. If sold as individual street deals, the drugs have an estimated value exceeding \$88 million, authorities believe.

The investigation into the drug trafficking plot was greatly aided by intelligence provided to the AFP by the Royal Malaysian Customs Department. The JOCTF began an investigation into the suspected syndicate responsible for the attempted import for Melbourne. The Royal Canadian Mounted Police (RCMP) and CBSA obtained approval for an international controlled operation to allow the consignment to be delivered to the intended recipients in Australia, facilitated through the AFP's International Network.

The consignment arrived in Melbourne on 5 October, was cleared for release and moved to a storage location in Tullamarine and moved to multiple locations in Melbourne, where it was closely monitored by Police. The police arrested the three men – aged 29, 33 and 37 years, on 17th November. The men who were charged faced Melbourne Magistrates Court on Wednesday (17 November 2021) and were remanded in custody, accused of facilitating the importation of the drugs from Canada into Melbourne. Additionally, officers seized an estimated \$1.5 million worth of cash, various quantities of drugs, a handgun, two long arm firearms, ammunition, a motorbike and a used clandestine laboratory at a rural address containing drug manufacturing equipment. All of the items will be subject to further forensic analysis.

South James Watson, ABF Commander Enforcement Operations, stated this operation is another example of how the ABF and its law enforcement partners work in conjunction to keep dangerous drugs off Australian streets.

“Methamphetamine has a devastating effect on the community, which is why the ABF and our partner agencies are constantly on alert for illicit drugs at our borders,” Commander Watson said, “no matter how criminals attempt to conceal their packages, the ABF has the skills, technology and the resources to detect these harmful substances and bring the criminals to justice.”

Krissy Barrett, AFP Assistant Commissioner Southern Command, said the strong local and international partnerships led to the outstanding result of preventing 140 kilograms of ice from reaching Australian shores. She said, “the success of this operation is due to the strong relationships we have with offshore law enforcement counterparts including the Royal Canadian Mounted Police and our local colleagues. Together we share intelligence and help investigate the activities of transnational and serious organised crime syndicates, with the assistance of the AFP International Network and its Liaison Officers based in posts around the world.”

AFP Detective Superintendent Andrew Bailey said this outstanding operational outcome was achieved through close investigative collaboration and a broad, long-standing relationship with the RCMP, including within the transnational serious organised crime environment.

Mick Frewen, Victoria Police Crime Command Acting Assistant Commissioner, said the result highlights how the work of law enforcement agencies across the world protects the Victorian community. Mick said “as this investigation shows, we are often dealing with organised crime syndicates that have significant reach both nationally and internationally. We want to make it as difficult as possible for these syndicates to bring harm to Victoria and create an environment where they should expect to be targeted and held to account. To be able to make these arrests and seizures at this time also highlights the continued local demand there is for a range of drugs even during the pandemic.”



CONTAINER LOGISTICS COMPANY HIT BY CYBER ATTACK

After ACFS Port Logistics was hit by a cyber-attack yesterday, which affected their operations and empty container park service, the container logistics company is now recovering its IT systems. Arthur Tzaneros, C.E.O. of ACFS said, “our systems are coming on line server by server” and the company has swiftly gained its feet again after the attack with warehousing operations and empty container parks set to return to normal. Tzaneros commended the team, saying, “it’s been an amazing effort by the team...we caught the cyber incident very early and shut all our systems down very quickly so information wasn’t compromised...It was all managed very, very promptly, due to the security systems we had in place.”

The systems are managed by eSecure, a Melbourne-headquartered information security and risk management service with offices located in large eastern capitals and London, purchased by Orro, an Australian digital services and cybersecurity firm in September.

Tsaneros noted that there would still be work to do to rectify the disruption saying, “we are hoping to be fully operational this evening”, he continued, “to the outside world and to our customers, we should be in a fairly strong position by close of play today.”

He was not drawn on the detail of the attack, beyond saying that it was a typical cyber incident and stating, “I can’t say too much more than that but I want to make it very clear, ACFS does not pay ransoms.”

Once the threat had been established, the company powered to minimise disruption as best as possible during a time of peak demand. Empty container depots were accepting de-hired containers, while manual processes were undertaken for driver and container details. However, services for export containers were affected. The incident heeds a further warning, that transport and logistics is as exposed as any other industry to cyber-criminal activity.

Earlier in February 20202, Toll Group was just the largest and most high-profile victim of such an attack, affecting the firm for at least four months amid a time when it was already under financial pressure. Closer to ports, Container logistics platform Containerchain took two days to rectify its systems following a ransomware attack in October 2020, as was global containership operator CMA CGM.

McKay, R. (2021). ACFS PORT LOGISTICS WARDS OFF CYBER ATTACK. Retrieved from <https://www.fullyloaded.com.au/industry-news/2111/acfs-port-logistics-wards-off-cyber-attack> on 25th November, 2021.



THE WORLD'S FIRST EMISSION-FREE CONTAINER SHIP IN OPERATION

Yara Birkeland, the world's first electric and self-propelled container ship has made its voyage in the Oslo fjord in Norway. C.E.O. of Yara, Svein Tore Holsether said, "we are proud to be able to showcase the world's first fully electric and self-propelled container ship. It will cut 1000 tonnes of CO2 and replace 40,000 trips by diesel-powered trucks a year".

The ship, which has already received wide coverage in Norwegian and international media was developed in collaboration with the Kongsberg Group, built by VARD with financial support from Enova and will be in commercial operation from 2022.

Work on the 262-feet (80 m) long, fully electric container ship began as early as 2017. Designed to carry 103 containers on a single trip, Birkeland is powered by a 7MWh battery and can travel with a top speed of 15 knots. Technological inputs such as sensors that can detect objects like kayaks in the water and integrations for autonomous operations were provided by Kongsberg. In the future, the ship will be able to load and offload its cargo, charge its battery and navigate without any human involvement, Reuters reported. Starting next year, the container will carry out two trips a week with a manual crew. The self-navigating technology will be tested over a two-year period, after which the ship will be certified autonomous and the bridge will be removed from the ship. "We have been looking forward to this day for a long time. Yara Birkeland will transport mineral

fertiliser between Porsgrunn and Brevik and will contribute to significant emission cuts during transport," Mr Holsether said, "this is an excellent example of green transition in practice, and we hope this ship will be the start of a new type of emission-free container ships. There are a lot of places in the world with congested roads that will benefit from a high-tech solution like this."

C.E.O. of Kongsberg Group, Geir Håøy believes, "the project demonstrates how we have developed a world-leading innovation that contributes to the green transition and provides great export opportunities for Norwegian technology and industry."

Alongside the construction of Yara Birkeland, Yara also began to develop green ammonia as an emission-free fuel for shipping, through the newly started Yara Clean Ammonia. Being the world's largest producer of fertilisers, Yara is reliant on ammonia to make fertiliser and help feed an ever-growing population.

C.E.O. of Yara Clean Ammonia, Magnus Krogh Ankarstrand, said, "as the world's largest producer of ammonia, Yara has launched an offensive plan of international scale, both to remove current emissions and to establish the production of new, clean ammonia".

Wallace, P. (2021). Yara to operate world's first emission-free container ship. Retrieved from <https://www.thedcn.com.au/news/law-regulation-trade/yara-to-operate-worlds-first-emission-free-container-ship/> on 24th November 2021.

STAFF SPOTLIGHT

MEET TITO MALO

INTERSTATE TRANSPORT COORDINATOR
TOMAX LOGISTICS AUSTRALIA



1. What is your role at Tomax?
I'm an Interstate Transport Coordinator.

2. How do you spend your weekends?
Taking my 3 girls to their netball games and my son to rugby.

3. What instantly makes you feel happy and why?
Spending time with my kids because they always surprise me every day with what they say to each other.

4. Do you play or follow any sports? If so which sport/team?
I have played rugby all my life. My favourite team are the All Blacks (NZ rugby team).

5. Best place to travel to?
Samoa!

6. Your biggest pet peeve?
Laziness. Life is about getting things done, and individuals who suffer from laziness will likely be a drag to the people around them.

7. If you could have any super-power what would it be and why?
Being able to fly because in case anything happens to any of my kids I can get there quicker.



FRIDAY FUNNIES

We hope these jokes brighten your day as we approach the weekend!

The pessimist sees a dark tunnel. The optimist sees a light at the end of the tunnel. The realist sees a freight train. **The train driver sees three idiots standing on the tracks.**

Before the invention of the wheel... **everything was a drag!**

Do you remember that joke I told you about my spine? **It was about a weak back!**

Have you heard of the band 923 Megabytes? **Probably not, they haven't had a gig yet.**

Why don't ants get sick? **They have anty-bodies.**

A truck carrying blackberries spilled on the highway. It was quite a traffic jam. A truck transporting ice cream spilled on the highway. **There was some rocky road.**

What do bees do if they need a ride? **Wait at the buzz stop!**

What do a dog and a cellphone have in common? **Both have a collar I.D.**

I tried to organise a professional Hide-and-Seek tournament, but it was a complete failure. **Good players are hard to find.**

I have an addiction to cheddar cheese. **But it's only mild.**

