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The Flying Wire

Chapter 124
Experimental Aircraft Association

Volume 62 Number 1 January 4, 2023

Board Meeting - 5:30 pm

Dinner - 6:30 pm \$7

General Meeting - 7:00 pm

www.EAA124.org

www.CafeFoundation.org

www.EAA.org

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January 4, 2023 Program

Rich Beach: Cirrus owner Rich Beach will share his experiences owning and enjoying the unique attributes of the plane, and talk about the factory sponsored safety training program that integrates with the groundbreaking safety features engineered into the design.

Dinner Menu: Hot Dogs and Hamburgers with all the fixings, and baked beans with coleslaw. \$7.00

Dangerous Drones

Reprint from The <u>Drive.com</u> Forwarded by Andy Werback

Same Type Of Rotax Engines Used In Iranian Drones Targeted In Bizarre Theft

Wave (Updated)

After Ukraine displayed an Iranian drone with a Rotax 912 motor, the global targeting of those engines by criminals is even more intriguing.

BYHOWARD ALTMAN|PUBLISHED OCT 25, 2022 6:21 PM

THE WAR ZONE



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The Austrian-made Rotax light aircraft engine recently found in a Russian-operated, Iranian-made Mohajar-6 drone recovered by Ukrainian forces is a model that has been at the center of a puzzling and prolonged theft campaign around the globe, but especially in Europe. Sophisticated criminals who know how to circumvent airport security measures and find engines that often have low operating hours and

surgically remove them have been the hallmark of the widespread thefts.

So many have been stolen just in the U.K. alone that Operation Opal - a national intelligence team focused on organized crime - was called in to investigate the matter, according to the British Microlight Aircraft Association (BMAA), which along with the Light Aircraft Association (LAA) is collating information about the thefts in the U.K. These facts certainly point to the possibility that Tehran has been getting at least some of its drone engines by having operatives systemically literally rip them out of aircraft in foreign countries.



The Rotax 912 aircraft engine. Credit: Rotax

Investigators in Norway are also looking into what is being considered sophisticated thefts of Rotax 912 engines.

Ukrainian authorities recently discovered a Rotax 912 fourstroke piston engine in an Iranian Mohajer-6 medium-altitude, long-endurance (MALE) unmanned aerial vehicle downed over the Black Sea earlier this month. You can read much more about that here.

The aircraft-specific engines made by Rotax, a subsidiary owned by Canadian company Bombardier Recreational Products (BRP), are usually found in light and ultralight aircraft. Their delivery to Iran, however, violates <u>European Union sanctions</u> banning the export of items with both civilian and military purposes, such as vehicle parts. <u>Identical sanctions</u> are imposed by the European Union against Russia, as well.

The discovery of the Rotax engine in the Mohajer-6 brought down over the Black Sea was initially made after Ukrainian intelligence specialists displayed the partially disassembled drone during a *CNN* network broadcast aired last Tuesday. In it, the outlet's chief international correspondent Clarissa Ward was given exclusive access to view the recovered and now somewhat dissected drone.

After the discovery of the Rotax engine in the Mohajer-6 drone, Rotax and BRP issued a media release denying any wrongdoing.

"We have been made aware of the alleged use of Rotax engines, or counterfeit engines, in certain specific situations involving Iranian Mohajer-6 drones in the conflict areas," read the <u>press release</u>. "We are taking this situation very seriously. BRP has not authorized and has not given any authorization to its distributors to supply military UAV manufacturers in Iran or Russia."



A view of the Rotax 912iS engine found in the Iranian drone. Credit: CNN Screencap

In years past, other Russian drones <u>have featured Rotax</u> <u>engine</u>s, which have been used to power General Atomics' <u>MQ-1 Predator</u> and Israel's Heron drones as well.

Reports of Rotax engines powering Iranian UAVs have existed for some time, specifically the Rotax 912 and 914 light aircraft engine variants. For example, the Iranian-made Shahed-129 is widely reported to use a Rotax 914 four-cylinder engine and first entered serial production in 2013.

We reached out to Rotax Monday and Tuesday and will update this story should it provide a response.

According to the company website, more than 130 Rotax 912 engines and six Rotax 914 engines have been stolen worldwide between 2000 and 2021. The first was stolen in Germany and the most recent in Florida.

ROTAX 912 ULS	5645618	Aeri Club Alt Camp of Vallmoll	Spain
ROTAX 912 ULS	5645743	Airfield Pegaso, Venice	Italy
ROTAX 912 ULS	5645830	Aeri Club Alt Camp of Vallmoll	Spain
ROTAX 912 ULS	5645911	Horseley Brook Farm	United Kingdom
ROTAX 912 ULS	5645925	Airfield Muenster	Germany
ROTAX 912 ULS	5645995	Stravhaven, Scotland	United Kingdom
ROTAX 912 ULS	5645997	Les Noyers, Paris	France
ROTAX 912 ULS	5646116	Trosa flygklubb	Sweden
ROTAX 912 ULS	5646352	Florida	United States
ROTAX 912 ULS	5646471	Riby, NE Lincolnshire	United Kingdom
ROTAX 912 ULS	5646506	Air field "Mikhailivsk	Russian Federation
ROTAX 912 ULS	5646508	Airfield "Mikhailovsk"	Russian Federation
ROTAX 912 ULS	5646868	Halwell	United Kingdom
ROTAX 912 ULS	5647175	Audley End Airfield	United Kingdom
ROTAX 912 ULS	5647355	Otherton, Staffs	United Kingdom
ROTAX 912 ULS	5647537	Airfield San Possidonio, Modena	Italy
ROTAX 912 ULS	5647746	Aguscello Ferrara	Italy
ROTAX 912 ULS	5647929	Flugplatz Finow	Germany
ROTAX 912 ULS	5648085	Aeroclub Mantova	Italy
ROTAX 912 ULS	5648945	Airfield Santa Maria di Sala	Italy

Rotax <u>has a list</u> of more than 130 912 and 914 engines that were stolen between 2000 and 2021, here is just a snippet from it. (Rotax screen cap)

The U.K., which had 36 such thefts, topped the list, followed by Germany with 31. There were seven stolen from the U.S. and four from Russia.

The thefts peaked in 2016, with 18, and by 2021, tailed off, with only five reported on the Rotax website.

"The theft of Rotax engines from aircraft and airfields around the UK shows no sign of abating," *Flyer*, an aviation enthusiast publication, reported in October 2016 in an article pointing to the sophistication of the thefts. "The thieves clearly targeted the aircraft and avoided CCTV cameras at the airfield by breaking into the rear of the hangar."

The thefts "follow a similar scenario to those reported in Northamptonshire and Cambridgeshire earlier this year, LAA reported on its Facebook page in August 2016. "In this case, three aircraft were targeted, two gyroplanes and a Skyranger."

Each of those aircraft "had relatively low-hours Rotax 912 engines, which were removed, but the pusher propellers from the gyros were left behind. It is noteworthy too, that two similar aircraft on the strip with high hours 912 engines were left untouched. As with the previous thefts, it was clearly a planned raid, with the thieves accessing the airfield across country and removing the engines with care."



An aircraft that had its Rotax 912 engine stolen. (Twitter photo)

LAA urged its members to "be on the lookout for 'too good to be true' bargain offerings, and please also exercise due vigilance if you fly from a private strip, perhaps reinforcing any security," according to the Facebook post. "We're liaising with the local Police to share our knowledge of the earlier incidents. If you have any information which might help apprehend these villains, please contact LAA HQ."

World microlight champion David Broom, who runs Airplay Aviation, became a Rotax engine theft victim in 2017 and suspected "a fairly professional operation" was behind it, according to Flyer.

"They obviously knew exactly what they wanted, where to cut and what bits were important, so it was a fairly professional operation," Broom told *Flyer*. "The office cabin, workshop and two hangars were all broken into and damaged."

We contacted local police in the U.K. as well as Operation Opal and will update this story with any information they provide.

U.K. authorities aren't the only ones looking into sophisticated Rotax 912 engine thefts.

Norwegian authorities are also looking into thefts there by

criminals who apparently knew exactly what they were doing and were organized enough to be able to carry away an engine weighing more than 220 pounds undetected.

"Nothing was damaged and the aircraft engine was picked neatly from the aircraft," according to an Oct. 31, 2021 story by Norway's TV2 news. "A blanket had been laid over it and a bucket of oil and screws lay underneath."

"There are obviously professional thieves who have been here," Pål Vindfallet, deputy head of the Innlandet flight club and flight school, told the station. "They have taken the trouble to disassemble every little part and have not used offcuts for anything."

Several other aircraft engines were stolen in Norway, according to *TV2* and officials are investigating to see if there is a connection.

Thomas Hauklien, the only Rotax supplier in Norway, told *TV2* he is "certain that there is a connection between the thefts."

Considering how professionally the thefts were carried out, Hauklien told *TV2* he suspects that the thefts were "made to order."

And given the reports in Norway, the thefts listed in the Rotax database are likely only a fraction of the real number.

That database, for instance, only lists two thefts from Norway, both in 2018 and neither from the clubs cited by *TV2* that took place in 2021.

Rotax engine thefts have raised such a concern in the aviation community that one pilot said he installed a tracking device in the engine on his aircraft, something you can watch him talk about in this video below.

Overall, Rotax engines are quite common, especially in light and experimental general aviation aircraft, and they clearly end up on the secondary market and there is potentially a black market for even newer examples. Iran is also well known to have entire networks dedicated to circumventing sanctions and acquiring various military and dual-use tech, as does Russia and especially North Korea. Everything from fake cutout companies to just straight-up theft could account for some engines, and that is on top of the secondary marketplace.

While there are likely many vectors for Iran to get its hands on Rotax engines, executives from a U.S. drone company that does business with the government told *The War Zone* on Tuesday that it would not be surprising to hear Iran obtained drones from a criminal enterprise.

There is precedence for criminal activity being tied to Iranian drone engine acquisition.

In 2014, for example, two Iranian men were charged with smuggling dozens of German-made engines capable of powering drones into Iran. They went on trial in Frankfort, according to Reuters.

One was accused of obtaining 61 engines between 2008 and 2009 and delivering them to Iran through his own import-export company. To get through customs, he allegedly declared them as jet ski engines.

And last year, the U.S. Treasury Department sanctioned a number of Iranian companies associated with drone production.

"Iran's proliferation of UAVs across the region threatens international peace and stability. Iran and its proxy militants have used UAVs to attack U.S. forces, our partners, and international shipping," said Deputy Secretary of the Treasury Wally Adeyemo in a media release at the time. "Treasury will continue to hold Iran accountable for its irresponsible and violent acts."

Questions about Iranian drones are not the first that Rotax has faced about its products.

In 2020, Rotax-BRP came under fire after it was learned that their engines were powering the Turkish Bayraktar TB2 drones used to target Armenians during the Nagorno-Karabakh conflict. As a response to the situation, BRP announced it would be temporarily suspending the export of Rotax 912 engines to "countries with unclear usage."

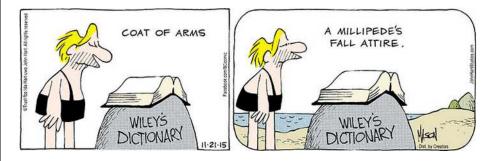
And earlier this month, a Rotax 912 was found to be powering another Mohajer-6 drone that had been shot down by KDPI Peshmerga forces in Iraq.

As <u>noted in our previous report</u>, there are likely a variety of ways Iran gets its hands on Rotax and other export-controlled engines for its unmanned aircraft, including possibly using front companies, smuggling, the second-hand market, and

theft. The fact that there has been a sustained wave of bizarre and well-orchestrated thefts of the exact type of engines that power their key unmanned aircraft systems certainly points to at least a thriving black market for these engines if not a straight-up Iranian operation to obtain them via outright theft. It also isn't clear how far Iranian's own industry has come with being able to clone the engines and to what degree of quality, but clearly, that would be a top priority.

At the moment, it is unknown how the Rotax engine in question wound up in the Iranian Mohajer-6 drone that Kyiv is displaying. But we will keep an eye on this situation and report any additional information we uncover.

Contact the author: howard@thewarzone.com



(Reprinted with permission of John L Hart FLP)

News / Notes From the Editor:Not a competition

As the summer fruits disappear from the grocery stores and cooler days come our way. There still is time to have an adventure and write an article about it. If you get the faces in the picture and

feel like talking about it, I would be glad to put it on these pages.

Interesting Aviation Links

(Thanks Larry Rengstorf)

Youth Electrified <u>Click Here</u> Flying Dog <u>Click Here</u>

EAA Chapter 124 Board Meeting Minutes December 7, 2022

EAA Chapter 124 Dec. 7, 2022 Board Meeting Minutes

Meeting Convened 5:30
Board Members In Attendance- Dan Steinhoff (President)
Ben Barker (Vice President)
John Whitehouse (Treasurer)
David Franco (Secretary)
Larry Rengstorf (Facilities)
Tim Petersen, John Fritsch, Kevin Quirk

Old Business- Motorhome removal letter is on hold pending a CAFE board meeting.

Sam Werback Recognition- A special award has been selected, and will be awarded to her soon.

Bump System- A clarification is pending until January.

Treasurer's Report- Chapter coffers has remained largely unchanged and are

healthy.

Meeting Adjourned 6:00 pm

EAA Chapter 124 General Meeting Minutes December 7, 2022

Meeting Convened 6:30

Meeting Convened 7:15 pm President Dan Steinhoff called the meeting to order and welcomed new members and visitors. He thanked the holiday food prep crew for their efforts. His request that any new visitors introduce themselves elicited an interesting response. A visitor named Harley Milne, happens to be a paramotor enthusiast of some renown. He presently holds the Guiness Book world record for flying across the country in a paramotor.

We're look forward to a thorough presentation of his exploits at a future meeting. He is also interested in being connected to property owners who would allow him to launch and land as part of giving paramotor pilot instruction. Forward any leads to harley@dronepanora.com

Builder's Report- Mike Tovani reported on his progress towards completing his RANS aircraft.

Robert Leach reported that he finished the second wing on his RV12.

Marlon Young, brought everyone up to date on the RV4 project that had languished for many years in the garage of a one-time active member. He believes his recently completed plane has had more EAA Chapter 124 members involved in building it than any other plane. He had spent time and effort discarding the vacuum pump system and recommends that upgrading to a Garmin G5. It is his recommendation that this conversion is a worth while addition. idea. He detailed how much sacrifice it took to finish the plane before his self-imposed November 18th deadline. The plane was then weighed and has been successfully test flown. He shared a

video and the maiden flight! He has logged 10 hours thus far and looks forward to many years of flying ahead.

Treasurer's Report- Coffers remain very stable thanks to rents being mostly current. Dana Hunt Vice President of Pacific Coast Air Museum made an announcement that EAA chapter 124 is invited to display and take part an upcoming Hot Dog Thursday event.

Presentation Topic- The Immortal Beaver Alyssa Abbey delivered an in-depth presentation on the history and development of the DeHaviland Beaver. Her love and appreciation is rooted in having owned and enjoyed a Beaver. She relayed how the original design parameters were derived by consulting working bush pilots about what features they would like to see in a versatile sea plane. Some of her adventures included flying her Beaver to Long Beach and overfying LAX at low altitude on her return flight.

Meeting Adjourned- 8:45 pm

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Chapter meetings are held on the first Wednesday of each month at 7:00 pm. FOOD (\$7 sometimes \$10) AND SOCIALIZING (free) from 6:15 to 7:00 pm. EVERYONE IS WELCOME!

Directions: The site is located on the west side of Sonoma County Airport. Take the Shiloh Road exit from Highway 101 in northern Santa Rosa. Turn left at the stop light (west) and continue to a "T" intersection. Turn left again and follow the road to the EAA sign on the left.

Members are invited to submit articles of interest. You will be notified whether or not an article will appear in the current issue.

Please email articles to: eaa124newsletter@sonic.net

or mail to: Stuart Deal

430 Secretariat Ct Santa Rosa, CA 95401

Deadline for newsletter submissions is the 20th of each month. Articles submitted after that date will be included in the newsletter at the discretion of the editor. All articles are copyrighted. To reproduce any article, please contact the editor.

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