GPS Spoofing: Final Report published by WorkGroup

OPSGROUP Team
6 September, 2024

Key Points

- **Final Report of the GPS Spoofing Workgroup published today**
- **950 participants across full spectrum of aviation industry**
- **Significant concern regarding safety impact of GPS Spoofing**
- **Report download below**

Final Report Published

The Final Report of the GPS Spoofing WorkGroup has been published today, September 6th, 2024.

Over a six-week period between July 17-August 31, the WorkGroup tackled the complex issue of GPS Spoofing affecting civil aviation.

950 people participated in the project, representing the full spectrum of the aviation industry. Led by OPSGROUP, the WorkGroup comprised hundreds of commercial pilots, safety managers, and representatives from airlines, aircraft operators, and air traffic control. Additionally, a diverse group of aviation authorities, avionics manufacturers, aircraft manufacturers, and experts in GPS and GNSS systems participated. Industry organizations including EBAA, IFATSEA, IBAC, ALPA, IFALPA, the Dutch VNV, and BALPA contributed significantly. Support and expertise were also provided by various organizations and agencies, including the Royal Institute of Navigation, Eurocontrol, the Israel National Cyber Directorate, the UK Ministry of Defence, the UK Royal Air Force (RAF), NASA (Langley), U.S. Space Command, the German Aerospace Center (DLR), Zurich University of Applied Sciences, and the University of Texas.

The result is a comprehensive study of the GPS Spoofing problem, including detailed analysis of the technical background, impacts to aircraft handling and operation, best practices for flight crew, and a series of safety concerns and recommendations for industry attention.

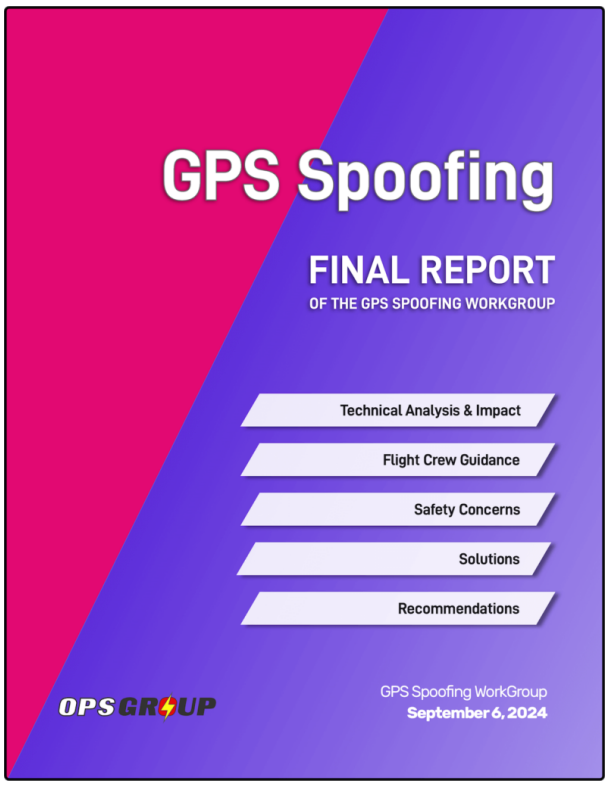
Overall, the Workgroup assessed that the impact of GPS Spoofing on flight safety, aircraft operation and handling, and ATC operations, is extremely significant. **The WorkGroup is very concerned about the overall impact of GPS Spoofing on flight safety**. A total of 8 overall safety concerns, and a further 33 specific concerns were raised.

This year, a 500% increase in spoofing has been observed. On average 1500 flights per day are now spoofed, versus 300 in Q1/Q2 of 2024. This is coincident with the summer months in spoofing affected areas. **With winter approaching**, the operating environment changes from predominantly good weather and VMC conditions, to poor weather, icing, and IMC conditions. **This change will increase the risk factors significantly.**

A survey of flight crew was carried out as part of the Workgroup. The response was excellent – almost 2,000 completed surveys were returned to the Workgroup. The results show that a full 1,400 crew members (~70%) rated their concern relating to GPS Spoofing impact on flight safety as very high or extreme. 91% of all crew members rated their concern as moderate or higher.

The future of GPS use in aviation is unclear. The Workgroup assessed that the vulnerabilities in public-use GPS that are now becoming evident (although known to experts for a decade or more), mean that the high involvement of GPS in aircraft systems is a major issue. Further, the over-reliance on GPS for primary navigation places great importance on preserving a sufficient network of conventional ground-based navaids. This aspect of the issue requires deeper study and conversation.

Download Final Report



Download the Final Report of the GPS Spoofing WorkGroup
PDF, 10 Mb, 128 pages.

Thank you!

Everything you see in this report is the result of community effort. If you know OPSGROUP, you know that this is our approach to solving problems in international flight operations. We have a strong, safety-focused industry, but sometimes things come up that affect us all, yet can't be solved by an individual aviation authority or group. GPS Spoofing is one such "thing".

This WorkGroup was truly something special. The participation of 950 individual people, across the entire industry – pilots, ATC, authorities, manufacturers, GPS experts, industry groups – is a marker of how much concern there is about the GPS Spoofing problem. But participation is just the first step. What stands out in this WorkGroup is the above-and-beyond efforts from so many participants.

Seemingly confounding technical questions were answered quickly, data was offered, contacts were sourced, ideas and solutions were hammered out into the small hours. For six weeks, we worked weekends and late nights, and no stone remained unturned. The energy, drive, and commitment of so many to solve this many-headed Hydra never faded.

There is so much knowledge, experience, and expertise in the international ops community, along with the key ingredient: a desire to share our skills, to tell each other what may harm us, to lead groups and to push for change. It's amazing to see.

Thank you to everyone who took part. From here, we hope that our efforts lead to better-informed flight crews, attention on the safety risks we have listed, and consideration of the recommendations presented at the end of this report.

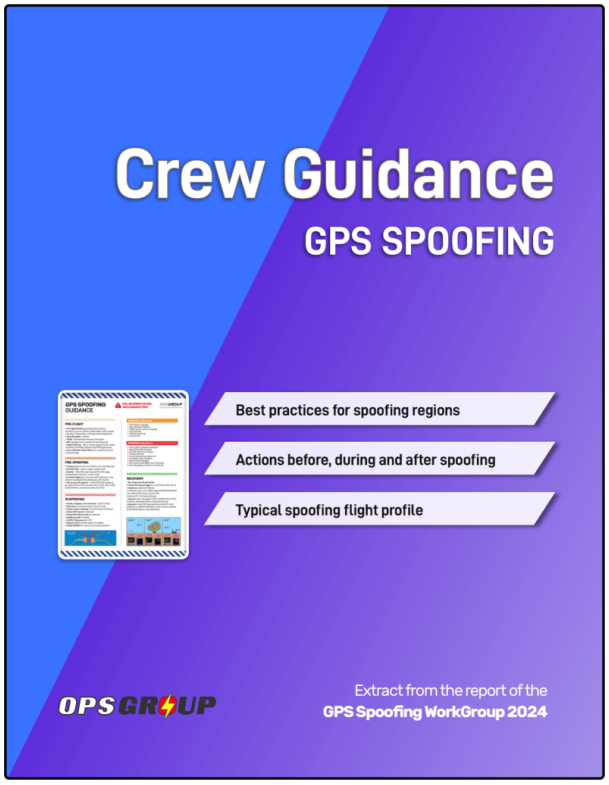
GPS Spoofing Guides

Some sections of the report were made available as reference guides, prior to the full release. These are available below.

Crew Guidance: GPS Spoofing

If you are operating a flight into a spoofing area tomorrow, this guidance will help to mitigate the impact of GPS Spoofing. This is based on best practices collected from the flight crew participating in the GPS Spoofing Workgroup, as well as OEM and other expert input.

- Best practices for spoofing regions
- Actions before, during and after spoofing
- Typical spoofing flight profile
- One-page Checklist style summary
- Diagrams: GPS Spoofing Flight Profile, GPS Reception during Jamming & Spoofing

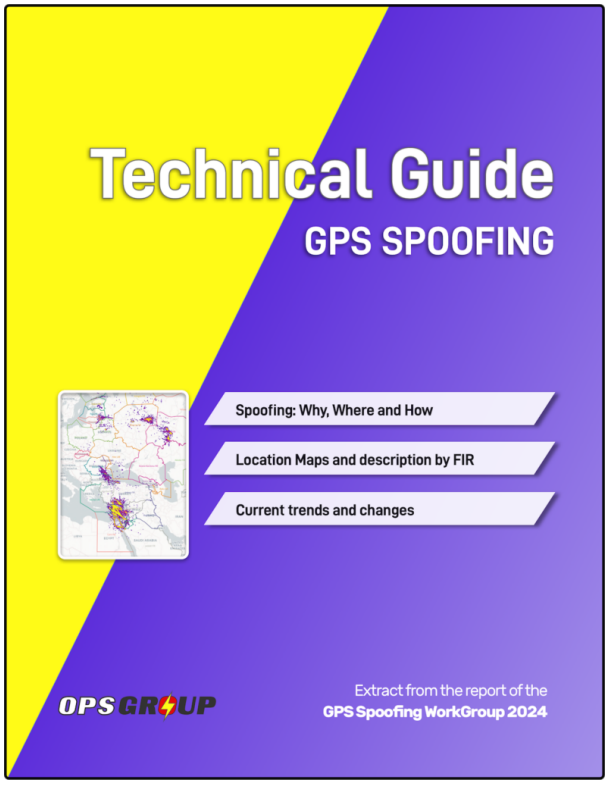


Download the Crew Guidance for GPS Spoofing, PDF, 2.7MB, 17 pages.

Technical Guide: the Where, Why and How of GPS Spoofing

This extract from the report of the GPS Spoofing Workgroup 2024 covers the technical details of GPS Spoofing:

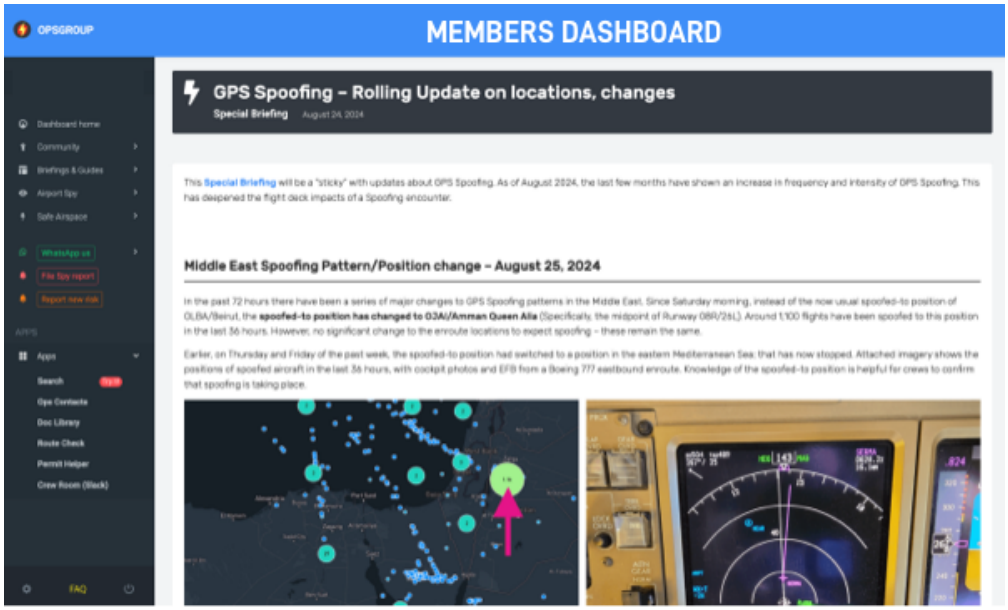
- Why, Where and How GPS Spoofing is happening – full technical details
- Location Maps: Worldwide, Mediterranean, Black Sea, Russia & Baltics, India/Pakistan
- Spoofing statistics and details by FIR
- Aircraft types affected
- Spoofing Patterns
- Changes and current trends



Download the Technical Guide to GPS Spoofing, PDF, 5.3MB, 29 pages.
[This links to the Guide, available in your Members Dashboard]

Ongoing GPS Spoofing Guidance

You can find a “rolling” **Special Briefing** in the Members Dashboard. This Special Briefing will be a “sticky” with updates about GPS Spoofing. As of August 2024, the last few months have shown an increase in frequency and intensity of GPS Spoofing. This has deepened the flight deck impacts of a Spoofing encounter.

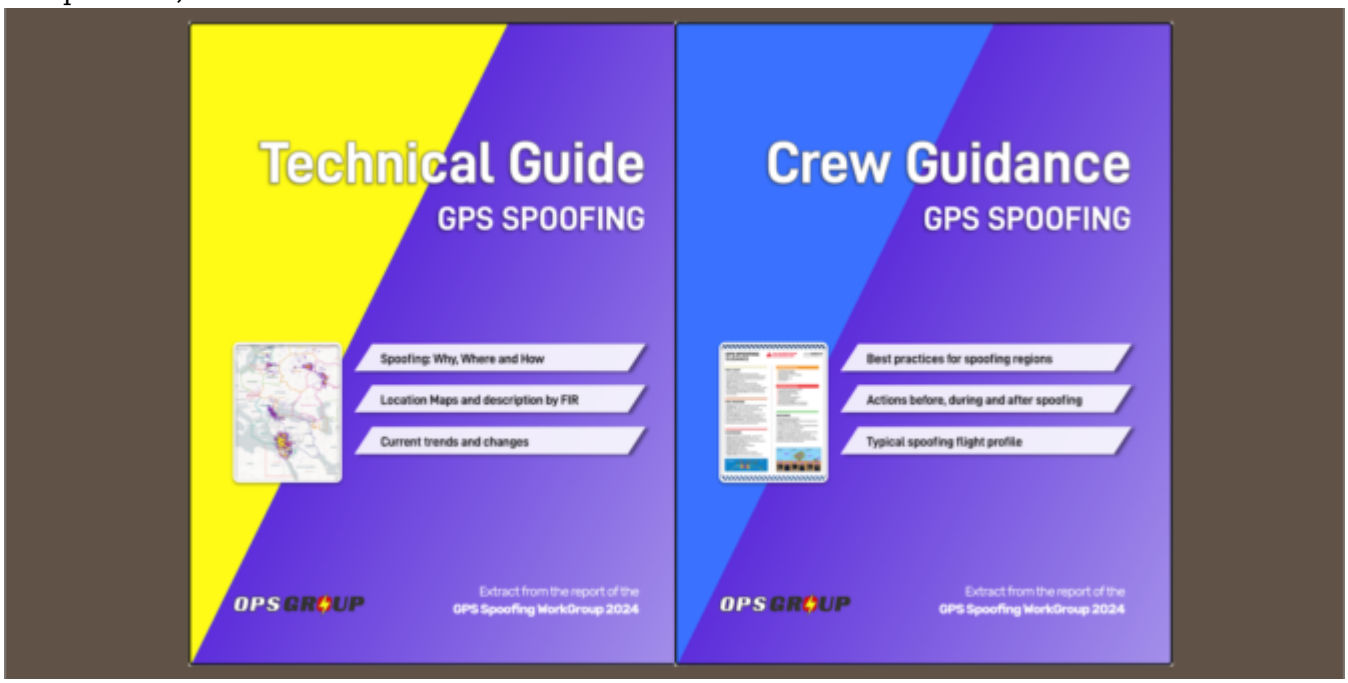


Special Briefing: GPS Spoofing – Recent updates:

- Middle East Spoofing Pattern/Position change – August 25, 2024
- Black Sea – Spoofing platform destroyed by Ukraine – August 15, 2024
- New Location: Western Ukraine – August 14, 2024
- New location: India/Pakistan border – July 2024
- 400% increase in GPS Spoofing – July 2024

Crew Guidance published by GPS Spoofing Workgroup

OPSGROUP Team
6 September, 2024



In August 2024, OPSGROUP co-ordinated a GPS Spoofing WorkGroup, to investigate **the GPS Spoofing problem**. The aim of the WorkGroup was to assess the impact, analyze safety risks, gather best practices and guidance for Flight Crew, and provide recommendations to industry. 950 people took part, from airlines and aircraft operators, ATC, aviation authorities, OEM's, GPS experts, and a variety of aviation organizations and other industry bodies.

Thank you to all who took part □□□. The Workgroup is now complete, and was a great success!

The complete report is available on this page. (after September 6th, 2024)

Report section extracts specifically for flight crew are below:

- **Crew Guidance**
- **Technical Guide: the Where, Why and How of GPS Spoofing**

Crew Guidance: GPS Spoofing

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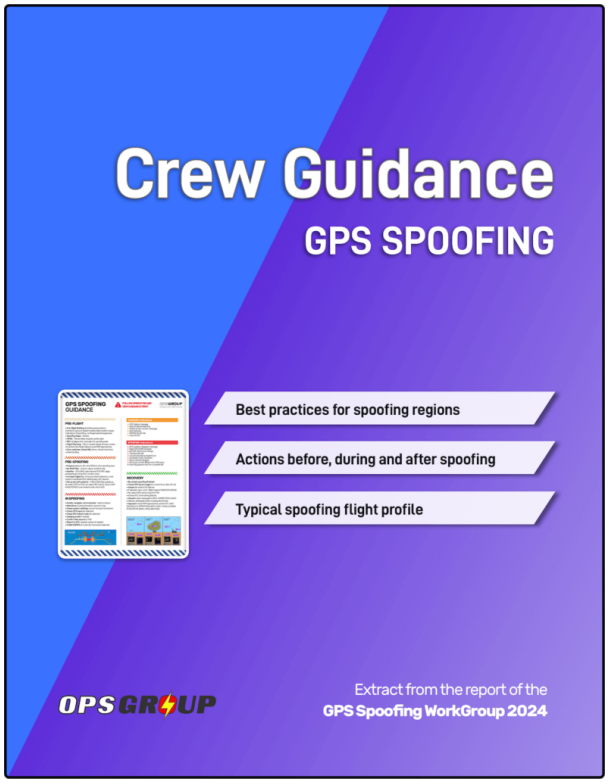

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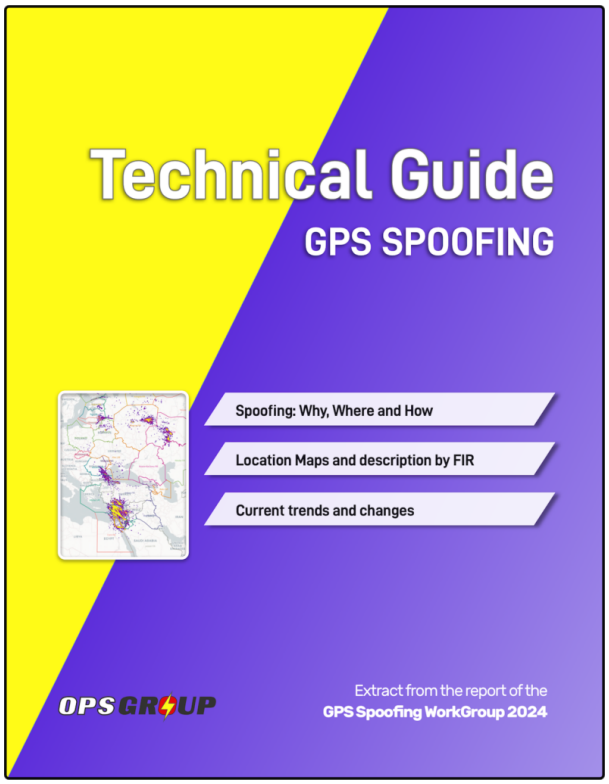

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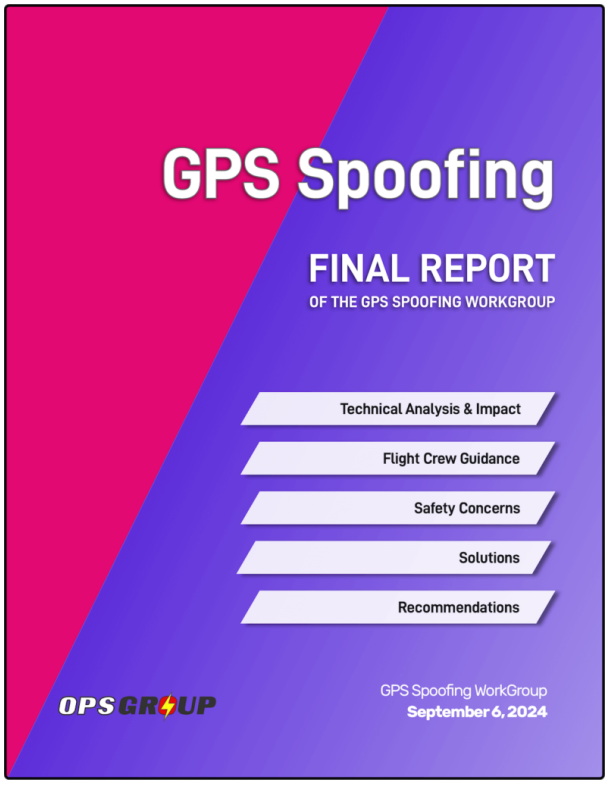
Final Report



Link to the Final Report of the GPS Spoofing WorkGroup.
PDF, 10 Mb, 128 pages.

Mpox: What We Know Right Now

Chris Shieff
6 September, 2024

Key Points

- **There is an active outbreak of the Mpox virus in the Democratic Republic of the Congo.**
- **Sporadic cases are reported elsewhere.**
- **It does not spread easily between people.**
- **ICAO has released limited guidance to operators.**
- **Screening, vaccination requirements and travel restrictions are not recommended.**

What's going on?

Earlier this month, the World Health Organisation (WHO) declared the current outbreak of the Mpox virus a **'public health emergency of international concern.'**

A **more virulent version** of the virus emerged in the Democratic Republic of the Congo and has since

been detected in several other African countries.

ICAO has now published limited guidance to airports and operators which effectively repeats what is publicly available advice from the WHO.

While the information is not alarming, we are of course monitoring things closely.

Here is a **brief and no-nonsense** rundown of what we know about Mpox and how it is affecting our industry right now.

A little context

It was previously called Monkeypox. Mpox is an infectious virus. Its symptoms have been well publicized. If you'd like to know more about those, click here.

The Mpox outbreak is **not new.** It has been spreading between people in a sustained outbreak since 2022. What's changed recently is that a new strain (or 'clade') has emerged in Africa which is linked to more severe symptoms. Cases have sporadically appeared elsewhere.

But what does 'Public Health Emergency of International Concern' *actually* mean? That comes directly from the WHO's own regs:

An *'event which is determined to constitute a public health risk to other states through the international spread of disease, and potentially require a coordinated international response…'*

It sounds alarming, but really suggests methods may need to be introduced to prevent another upswing in cases with perhaps more severe consequences than 2022. In their own words, WHO doesn't want history to repeat itself.

These methods may be as simple as **better health screening** of passengers to prevent them from travelling while contagious.

Give it to me straight – how bad is this going to be?

According to WHO, Mpox is spread between humans primarily through extended direct skin-to-skin contact. **It is not a respiratory virus.**

Contaminated bedding, clothes, utensils and surfaces have also proved contagious.

Inevitably, aviation will have some part to play. But what's important to note is that despite being a public health emergency, *Mpox is not the new Covid.*

When Covid emerged in 2019, it was novel – i.e. it hadn't been seen before. There were no vaccines or natural immunity.

Mpox is not new (it was first identified in the 1950s). It is also far **less efficient** at spreading between humans. WHO themselves have said they know how to control it (through public health measures) and a pre-existing vaccine that is already available. They key is getting that vaccine to those who need it.

The risk of it spreading widely remains low.

Aviation Guidance

Thus far, it's limited.

ICAO are saying this about international travel:

- Travellers should be given **relevant information** to protect themselves where Mpox may be a higher risk.
- Advise anyone who may have Mpox, or has been close to someone else with it, not to travel.

Notably they are **not advising** states to implement any entry/exit screening, travel restrictions or requirements for testing or vaccination.

Despite this, we have seen reports of temperature screening at airports in South Africa, Bangladesh and Pakistan – this isn't cause for alarm.

Pilots and crew may need to travel to countries experiencing active outbreaks. In that case it is important you are familiar with **signs and symptoms**, along with ways to protect yourselves.

Keep in mind when you return, symptoms usually take up to three weeks to appear. You can chose to get vaccinated but it would be worth seeking medical advice from your aviation doctor prior to receiving it. We haven't seen any guidance to suggest more an impact on fitness to fly than any other pre-existing vaccine.

We're watching it closely

Keep an eye on our ops alerts and briefings.

We will report any **significant operational changes** from Mpox as we see them, but for now impact appears to be minimal. You won't hear from us on any health or non-aviation related impacts, so we suggest the WHO's website if you're looking for that.

Of course, you can always contact us via team@ops.group with any updates.

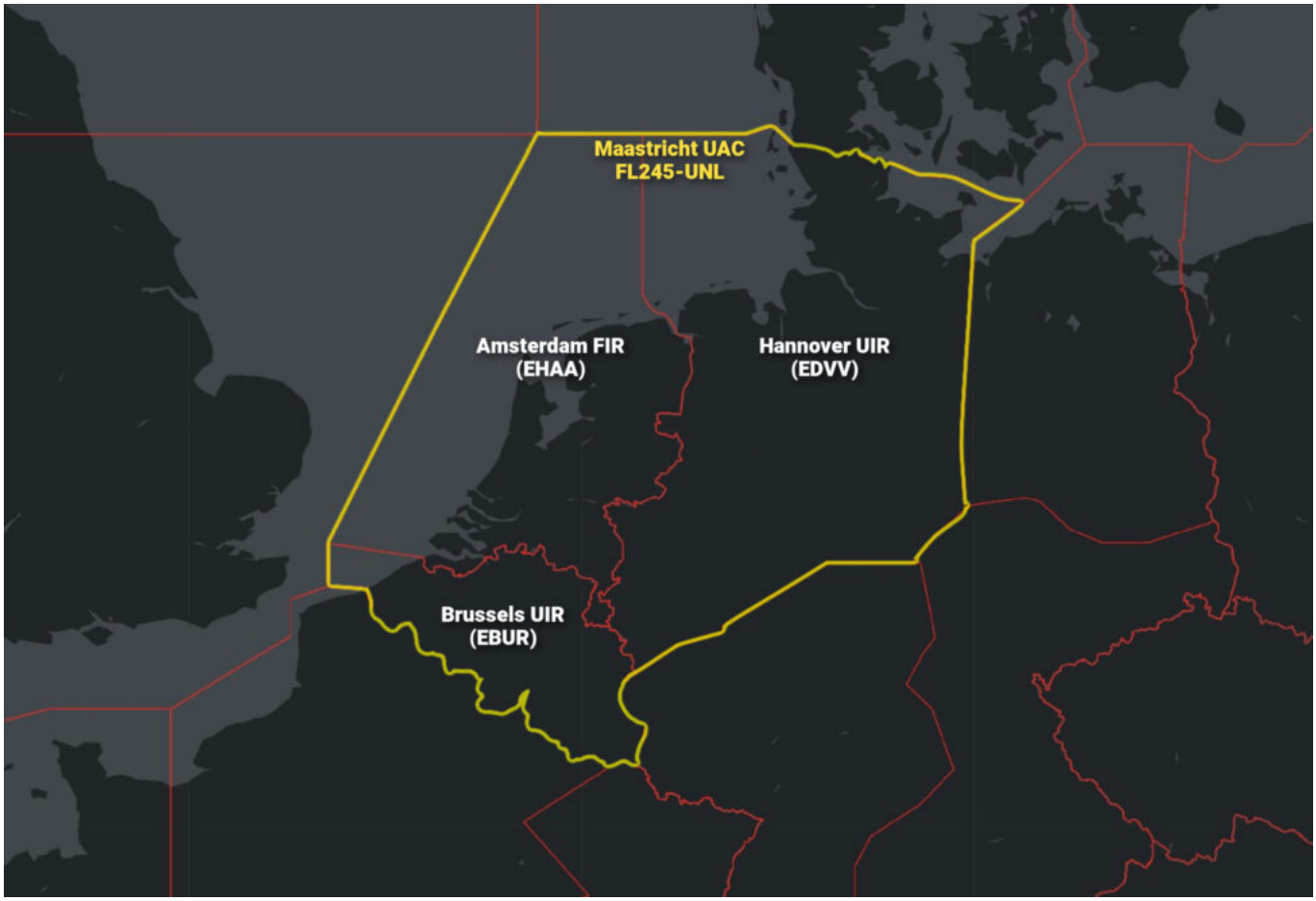
Climb for Contrail Prevention – What's Happening in the Maastricht UAC?

Chris Shieff
6 September, 2024

A few weeks back, the following Notam was issued for the **Maastricht UAC** (i.e. the busy airspace above FL 245 over Belgium, the Netherlands and Luxembourg):

A1832/24 NOTAMN
Q) EHAA/QSUXX/I /NBO/W /245/660/5255N00454E140
A) EHAA B) 2408010000 C) 2409192359
E) IN AN EFFORT TO MINIMISE THE IMPACT OF AVIATION ON THE ENVIRONMENT, MAASTRICHT UAC WILL BE RUNNING A CONTRAIL PREVENTION TRIAL. FLIGHTS MAY BE TACTICALLY REQUESTED TO DEVIATE FROM THE PLANNED/REQUESTED FL BY THE SECTOR CONTROLLER USING PHRASEOLOGY: FOR CONTRAIL PREVENTION CLIMB/DESCEND. ANY FLIGHT FLYING VIA MAASTRICHT UAC MAY BE CHOSEN. THE TRIAL WILL GO AHEAD DEPENDENT ON WEATHER CONDITIONS. FOR TACTICAL ENQUIRIES CTC MAASTRICHT UAC 0031 43 366 1428

Essentially if you are flying through that airspace between now and September 19 you may be instructed to climb or descend using the phrase *'for contrail prevention.'*



Maastricht have teamed up with DLR (the German Aerospace Center) in a bid to lower aviation's **'non-CO2' climate impact.** In other words, the effect aviation is having on the environment *beyond* fossil fuel emissions.

In that sense, this trial is one-of-a-kind and has been running on-and-off since 2021.

If you're wondering why you're being asked to deviate from your desired level, and what that has to do with contrails, read on.

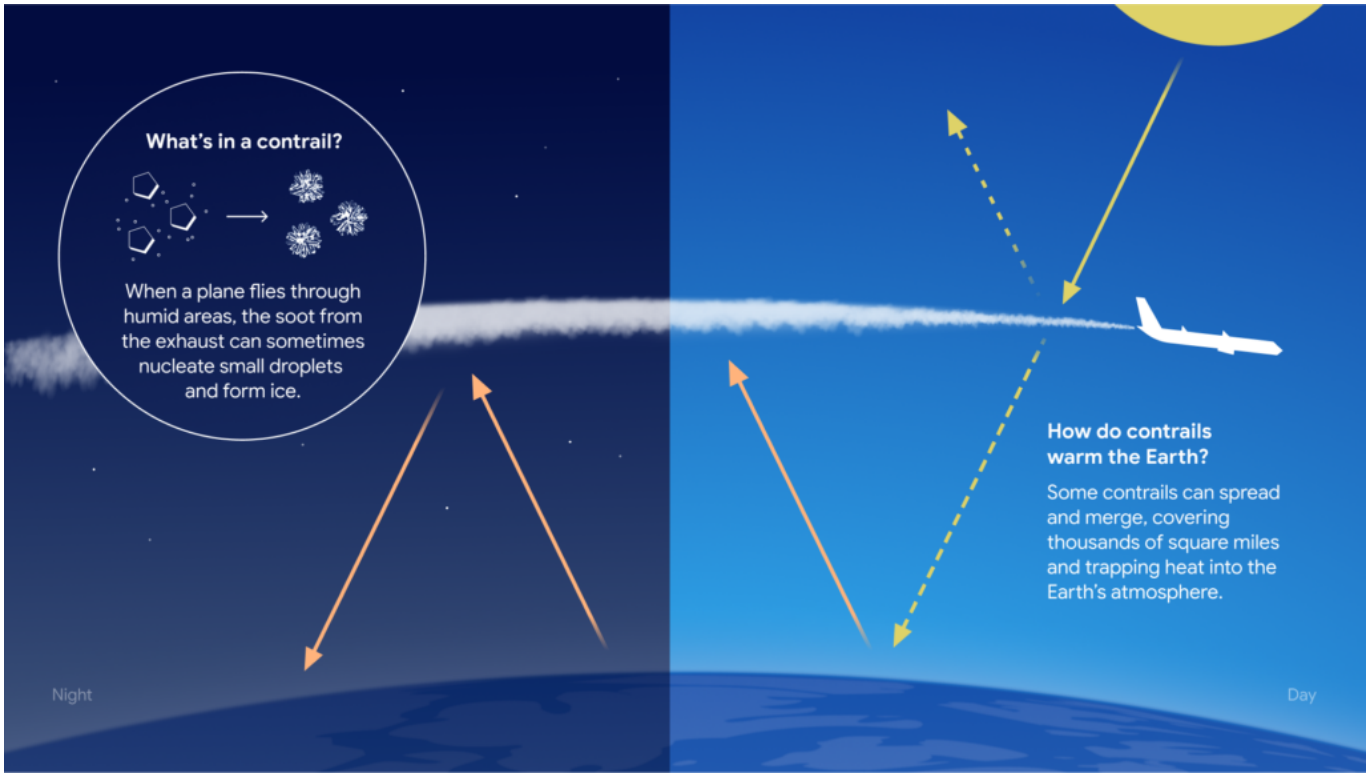
What does any of this have to do with contrails?

The concept of **non-CO2 impacts** may be less familiar to operators. Non-CO2 effects have to do with complex interactions between aircraft emissions and their effect on the surrounding atmosphere.

This includes **soot particles** – a byproduct of combustion. It may come as a surprise that contrails are not (as is often misrepresented) *just* water vapor. When water vapor exits the exhaust nozzle of a jet engine, it condenses and freezes to these soot particles creating tiny ice crystals.

These crystals form **contrails**. They are in fact a type of cirrus cloud with a fancy name that sounds like a bad cold – homogenitus. And if conditions are right, they can persist for hours – long after the aircraft that created them has disappeared over the horizon.

At night in busy airspace (such as the Maastricht UAC) these contrails can have a warming effect by trapping heat in the atmosphere, just like naturally occurring clouds.



This process occurs across quite a shallow band – around FL300 in Winter and FL360 in Summer.

So, contrails are important. Why do I need to change levels?

The strength and persistence of contrails has a lot to do with the state of the atmosphere around them. Part of the industry's approach is **predicting when the atmosphere is favourable to form contrails** and making **small flight path adjustments** to avoid the worst of those conditions.

Enter the Maastricht UAC Contrail Prevention Project.

Covering your tracks

The airspace of Maastricht often experiences conditions favorable for the formation of contrails. Therefore, it is the **ideal testbed for the trial.**

The project focuses on identifying those conditions and preventing prolonged level flight through them. In a nutshell, the German Aerospace Center identify when conditions in the Maastricht UAC are favorable for the formation of contrails by looking at satellite data.

Taking predicted traffic levels into account, the duty supervisor then gives the thumbs up for controllers to conduct **'contrail prevention activity.'**

If it goes ahead, it will begin **after 4pm local and run through the night until 6am local.**

Affected aircraft will be **directed by air traffic control to change flight level** using the phrase *'for contrail prevention.'*

What about fuel burn?

EUROCONTROL advise that **ATC will only request the minimum level change required** – i.e. will keep you as close as possible to you chosen level as conditions permit.

Anyone operating in Maastricht airspace may be selected to participate in this trial. It is important to

inform the controller if the level change will affect flight safety for which all levels will remain available.

US Rule Change for Carrying Dogs

Chris Shieff
6 September, 2024

Key Points

- **New rules apply to carrying a dog into the US, effective August 1.**
- **These rules depend on where the dog has been in the past six months.**
- **If the dog has not been a high-risk country, there is only one form to fill out.**
- **If the dog has been in a high-risk country, it will only be allowed to enter if vaccinated.**
- **Dogs vaccinated outside of the US will also need a rabies test beforehand.**

How do the new rules work?

On August 1 the **rules for bringing a dog into the US** from overseas changed.

Essentially the new requirements depend on where the dog has been in the preceding six months, and whether it has been **vaccinated** against nasties like rabies.

These may now come as a surprise to some owners who have been travelling with their pets regularly.

As the **penalty** for not doing having the right paperwork is as high as $250,000 USD and a year in prison per dog, it’s important operators check everything is in place before wheels up – and not on arrival.

Introducing Peggy – OPSGROUP's unofficial mascot for this article. Peggy was recently in a major Hollywood motion picture. Here's what her owners would face if they wanted her to re-enter the country by air.

Scenario #1 – Peggy has only been in a rabies-free, or low-risk country:

Check this list. If the dog hasn't been in one of these countries in the past six months, the owner only needs to fill out a CDC Dog Import Form.

This can be completed **as late as the day of travel**, but CDC recommends doing it at least a few days in advance.

Once you receive a receipt, it will be valid for **six months** and can be used as many times as you like provided that the dog hasn't been to a high-risk country since it was issued.

It's free, but one must be completed per pooch. No group concessions here! The owner must then show the receipt on paper or via their phone to US customs and air carrier.

A few other things the dog will need:

- It must be healthy on arrival.
- At least six months old (no puppers).
- **It must be microchipped.**

Scenario #2 – Peggy has been in in a high-risk country but is vaccinated:

Note that the list includes several countries from the Middle East, South America, Asia and Africa.

In addition to the Dog Import Form and microchip above, the owner will also need something called A Certification of US-issued Rabies Vaccination form. These need to be filled out by a veterinarian accredited by the US Dept. Of Agriculture and endorsed by the USDA.

If Peggy was vaccinated **outside of the US**, things start to get more complicated. In addition to the Dog Import Form, it will also need:

- A *Certification of Foreign Rabies Vaccination and Microchip.* This must be filled out by the owner's vet and endorsed by an official government veterinarian.
- A valid rabies test from a CDC-approved lab.
- A reservation for Peggy at a CDC-registered kennel for up to 28 days.

Scenario 3 – Peggy has been in a high-risk country and isn't vaccinated:

Peggy will not be allowed to enter the US! Nor will any other dog that falls under this category.

Rules for Air Operators

In addition to the above requirements, there are new procedures for air operators too.

From August 1, operators need to create something called an air waybill (AWB) for each dog they transport to the US. This is a document that accompanies goods shipped internationally by air. It is essentially a receipt of goods for the operator, and a contract of carriage between you and the dog's owner.

The good news is that you can request a waiver to this requirement by emailing cdcanimalimports@cdc.gov and asking for one.

They'll get back to you within one working day with a waiver **valid for 90 days.** You can only do this once though, and beyond that you will need a full AWB to carry the animal on future flights.

Beware the saga of Pistol and Boo

Whether it be in the US or abroad, customs officials take non-declarations of animals extremely seriously and the penalties can extend to the air operators carrying them.

While our clientele may like to take their family pet with them on business or vacation aboard private aircraft, they need to be aware of their obligations and meet them – as is often the case for pets carried between Europe and the US.

In other words, **don't be like Johnny.**

Back in 2015 a high-profile celebrity, Johnny, carried his Yorkshire terriers, Pistol and Boo, illegally into Australia on his private jet. He did so knowingly but (in his words) under the belief that his staff had completed the necessary paperwork – they hadn't.

He and his partner potentially faced several charges including perjury. Pistol and Boo also faced being put down. The case became went infamously public, and even involved the Australian Prime Minister before most charges were dropped.

The moral of the story is what may seem like an oversight to some, are **taken extremely** seriously by authorities – the US included. The passengers we carry may not always realize that to the extent that they perhaps should.

More Questions?

Check the new requirements on the CDC website here, and if you have any really specific questions your best bet is to get in touch with the CDC directly on (800) 232-4636.

Hab Dich! German Ops Gotchas

David Mumford
6 September, 2024

OPSGROUP members have reported several strange things happening at airports in Germany recently. We asked the German Aviation Authority and a few local handling agents and FBOs, who confirmed these were not isolated incidents. So here's the lowdown on these latest German Ops Gotchas…

#1: The Baggage Hold Gotcha

After a few back-and-forth emails with the German Aviation Authority *(LBA – Luftfahrt-Bundesamt, website here)*, the following is what applies.

If you are operating a **commercial flight** (i.e. Part 135) out of a German airport, and your aircraft has an inflight-accessible baggage hold, then **ALL baggage will be required to be screened and deemed cabin baggage**. Size isn't considered, so it could be a Citation or an Airbus 330.

This means that passengers won't be able to take any security-restricted items in their luggage. If they want to carry something sharp, or perhaps some hunting gear, then this would need to have some big lockable box.

You can apply for **approval to carry prohibited items** from the Ministry of the Interior BMI. The list of goods is here. However, LBA have said that it is not an exhaustive list, and the screener shall have the final judgement.

Bottom line, if you are flying most bizav aircraft out of a German airport and you have something that could be "dangerous", you are likely to have the item confiscated if screened correctly.

Possible solution: one member has reported that authorities accepted in their AOC to **install a wire-lock to the "impact-curtain"**, so it is not easy to access the compartment during flight.

#2: Sneaky Security Checks

Jan 2025 update: We're now hearing that the LBA have started charging operators for these checks! One member reported receiving a 330 Euro invoice for a check that took place at EDDM/Munich. It seems that opting-out of these checks is not possible!

These are not ramp checks, they are "security checks" performed by LBA staff to see whether crew follow the right security procedures.

They basically try to enter the aircraft, and your job is to make sure you stop them. So man the doors! **Check their identity**, make sure they're wearing **the right ID cards**, and you will have passed the test. Another common thing is that they **leave a note behind the GPU hatch door** to check if you do the security check properly.

EDDS/Stuttgart is one of the top spots for this, but we've had reports of this happening at **EDDV/Hannover** and other airports in Germany too.

We asked LBA about this one too. They reference EU Implementing Regulation 2015/1998 which is all about *basic standards on aviation security*. We read it, and couldn't find anything in it warning flight crew to watch out for people in yellow jackets trying to trick them by switching their ID cards around and leaving weird notes on their aircraft.

So we don't like this one very much. Security is a team effort, and flight crew are a big part of this. Tricking them into compliance like schoolchildren isn't the way to go.

#3 Fuel Payments

The simple rule we're all used to: **if you're a commercial flight, you don't pay tax on fuel.** So you fuel up, pay the bill, then if you're a commercial flight you get Customs to issue you a refund of the fuel tax.

Problem is, what's been happening more often recently is that **Customs have not been showing up to aircraft** – presumably due to lack of staff.

We also heard one recent case where Customs **refused to accept an AOC** of a commercial flight, and the operators had to pay the associated taxes with a private operation.

Possible solution: one of the local handlers recommends that operators make sure they **always carry the charter contract** for the flight on board, along with the AOC. And if Customs don't show up for the refund, you can **fill in a form** and apply after the flight. Here's a copy. Email it to: poststelle.hza-

potsdam@zoll.bund.de

Been to Germany recently and know any more Ops Gotchas to watch out for? Let us know.

Lebanon Risk Update

Chris Shieff
6 September, 2024

- **Overflights risks of the OLBB/Beirut FIR are increasing. The outbreak of a larger scale conflict between Israel and Hezbollah is increasingly likely.**
- **Several airlines (Air France, Eurowings, Lufthansa, Swiss, Transavia and Middle East Airlines – the Lebanese flag carrier) have temporarily suspended flights to OLBA/Beirut airport.**
- **Canada has issued a new Notam (July 30) advising operators to avoid Lebanese airspace at all levels.**
- **Surface-to-air weaponry may be present capable of reaching aircraft at all altitudes.**

Risk to aircraft operating over Lebanon is increasing

There was a **significant escalation** in hostilities between Israel and Hezbollah in Lebanon over the weekend.

On July 27 a suspected Hezbollah rocket attack caused Israeli casualties in the Golan Heights region – although Hezbollah has been uncharacteristically quick to deny their involvement.

This was quickly followed by Israeli airstrikes well inside Lebanese territory.

The US Embassy has since issued an alert to citizens that scheduled flights to/from Beirut may change or be cancelled at short notice. They're also recommending anyone there develop a **'crisis plan'** to leave if the current situation escalates.

There is widespread concern that the two sides could imminently be drawn into a **full-scale conflict.** In which case the risk picture for aircraft in both the LLLL/Tel Aviv and OLBB/Beirut FIR could change dramatically.

Here is a brief summary of the situation.

Why are Israel and Hezbollah fighting?

The two have fought in several wars – the latest was in 2006. The background to these hostilities is beyond the scope and intent of this article – but you can read more about that here.

The most recent cross-border fighting began almost immediately after the Hamas assault in Southern

Israel which sparked the current war in Gaza.

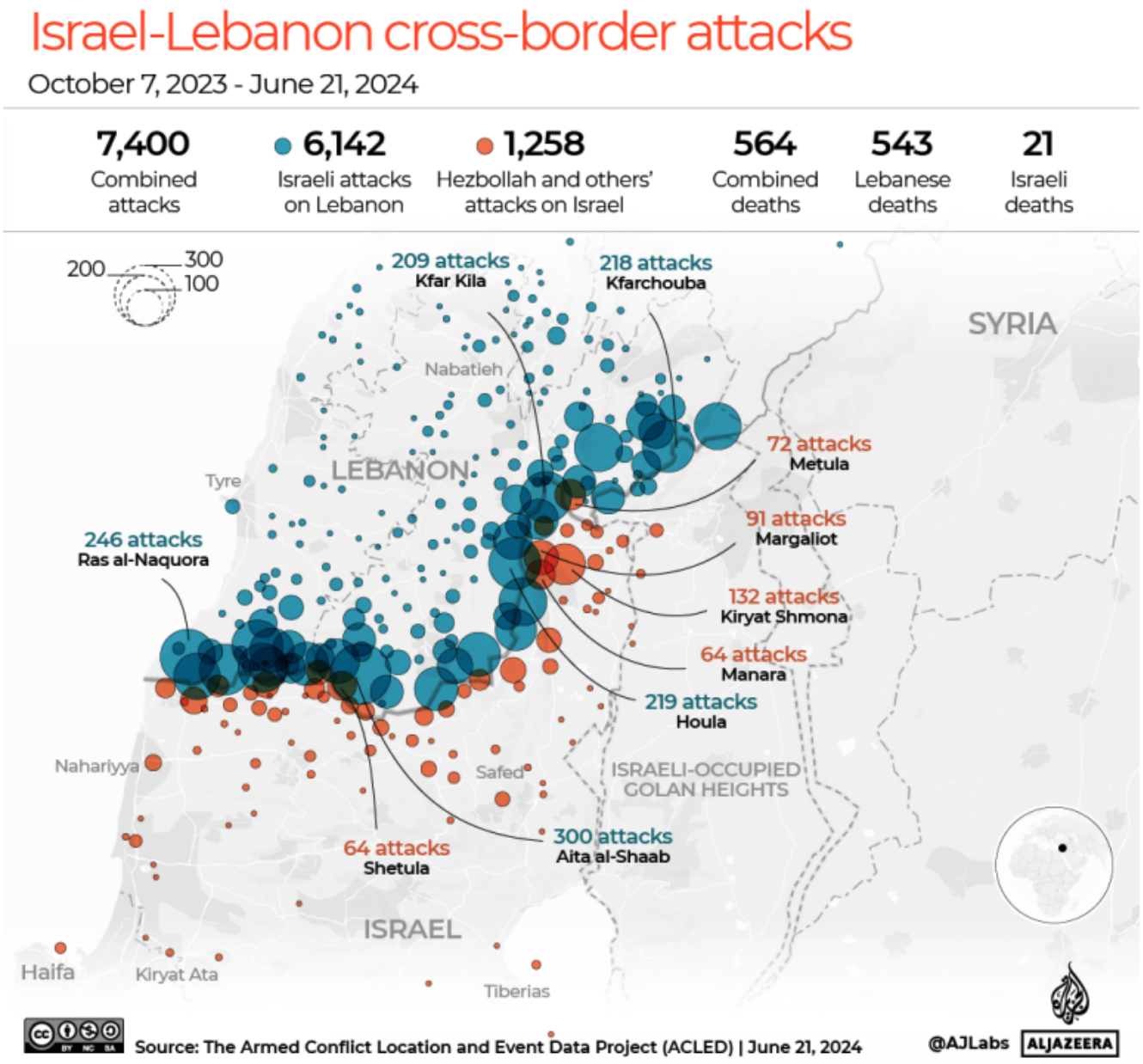
The situation in Gaza has mobilised Iranian-backed militants across the region to act, and Hezbollah is widely considered one of the **most powerfully equipped.**

Hezbollah has said they will not stop hostilities against Israel until there is a cease-fire in Gaza.

So Far…

Since the start of the war in Gaza, sporadic fighting across the Israeli/Lebanese border has been almost a daily occurrence. It is not immediately obvious in existing airspace warnings just how **frequent** these skirmishes have become.

Here is a statistic that may cause alarm to traffic regularly overflying – as of the end of June, the media reported 7,400 cross-border attacks between Israel and Hezbollah in the preceding nine months.



This has included artillery firing, rocket attacks, missiles, drones, and of most concern – air defense activations on both sides. Various instances of false identification have been reported.

This fighting has mostly been constrained. If a full-scale conflict develops as feared, things may get a lot

worse.

In the skies

Just last month, Hezbollah reported targeting Israeli fighter jets using **surface-to-air missiles** for the first time. Existing airspace warnings for the OLBB/Beirut FIR **do not any mention level restrictions.**

There has been some credible concern recently that Hezbollah might possess more sophisticated surface-to-air weaponry. One report speculates this includes mobile Iranian made radar-guided SAMs which are capable of targeting aircraft as high as **90,000 feet** with range of up to 100kms (depending on the variant).

The Wall Street Journal have also suggested another system may be present with similar capabilities supplied by Wagner Group mercenaries.

It is possible we have just not seen these types of weapons used by Hezbollah in this conflict to date.

While the LLLL/Tel Aviv FIR has arguably been a masterclass in how to maintain safe and informed overflights near a conflict zone in recent month, should a larger conflict arise it is **unlikely the safety of civil aircraft in the OLBB/Beirut FIR will be protected to the same extent.**

Existing Airspace Warnings

We maintain a Safe Airspace Risk Level of Two (Danger Exists) for the OLBB/Beirut FIR.

Here is a summary of existing state-issued airspace warnings for Lebanon:

- **Canada** Operators should not enter the OLBB Beirut FIR at all levels due to risk of military activity. CZQX Notam H3476/24. **New, July 29.**
- **US FAA** Exercise caution within 200nm of the Damascus FIR due to military activity. Possibility of GPS interference, communication jamming, and long-range surface to air missiles in the area. KICZ Notam A0009/18.
- **United Kingdom** Caution to UK operators in the OLBB/Beirut FIR due to potential risk from military activity. EGTT Notam V0025/24.

Why have these warnings not been upgraded?

History has taught us that we need to be more responsive to airspace threats – a danger may exist or develop before states publish official airspace warnings or restrictions. And all of that **takes time.**

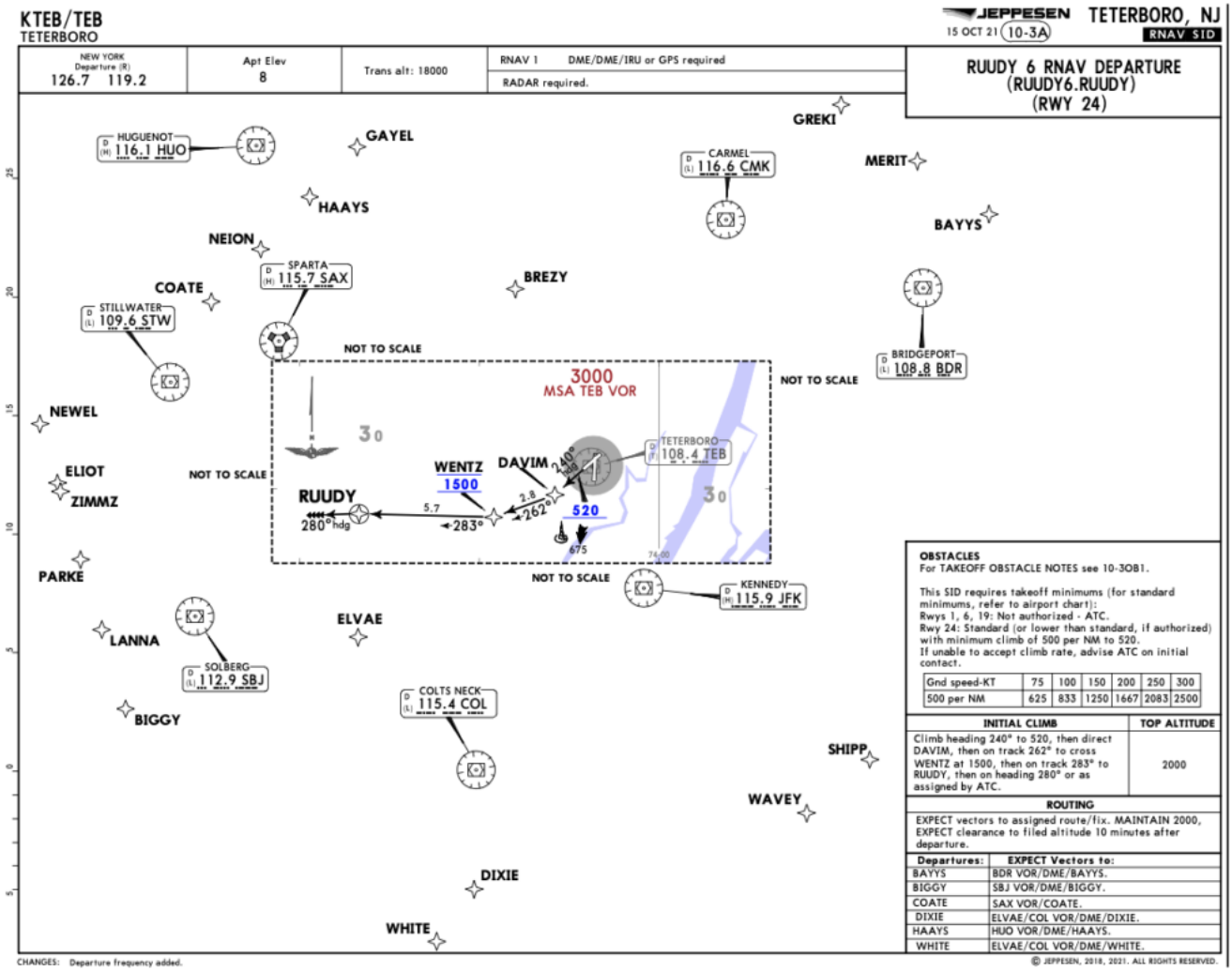
The events of the past days have happened quickly, and extensive diplomatic efforts are now underway to prevent a larger-scale conflict in the Middle East, but it remains to be seen if one can be avoided. **We're monitoring the situation closely** – keep an eye on safeairspace.net for updates.

Teterboro: RIP the RUUDY SIX

Chris Shieff
6 September, 2024

For some time now, the problematic **RUUDY 6 SID** out of KTEB has been causing trouble. In fact, just prior to the pandemic the FAA reported it had resulted in nearly two hundred **pilot violations** in just six years.

If you're not familiar with it, it is a departure from Runway 24. Here's the chart:



The reason for the high number of deviations is cause for debate with **both lateral and vertical excursions** reported. In the case of the latter, one suggestion is that the procedure itself isn't that clear. For instance, a typical IFR clearance out of TEB includes the phrase "*climb via the SID*."

Take another look at the chart – it requires a level off at 1500' and an instruction to maintain 2000'.

This can be interpreted in two different ways – either to maintain 1500' until cleared to 2000', OR to continue climb to 2000' passing the waypoint WENTZ.

The Teterboro Users Group (TUG) since clarified the latter is correct, given there are actually three things going on at once:

- **A turn to WENTZ to separate aircraft on Newark's 22L ILS above.**
- **A level restriction at WENTZ to keep aircraft away from aircraft descending to 2500' above.**
- **Achieving the minimum vectoring altitude for the area – hence the subsequent climb to 2000.'**

And all of this while managing the energy of high-performance business jets shortly after take-off into some of the busiest airspace in the world. There is little room to get things wrong.

But people were, and quite consistently. And so, work began to develop a **clearer SID** to replace the

troublesome RUUDY.

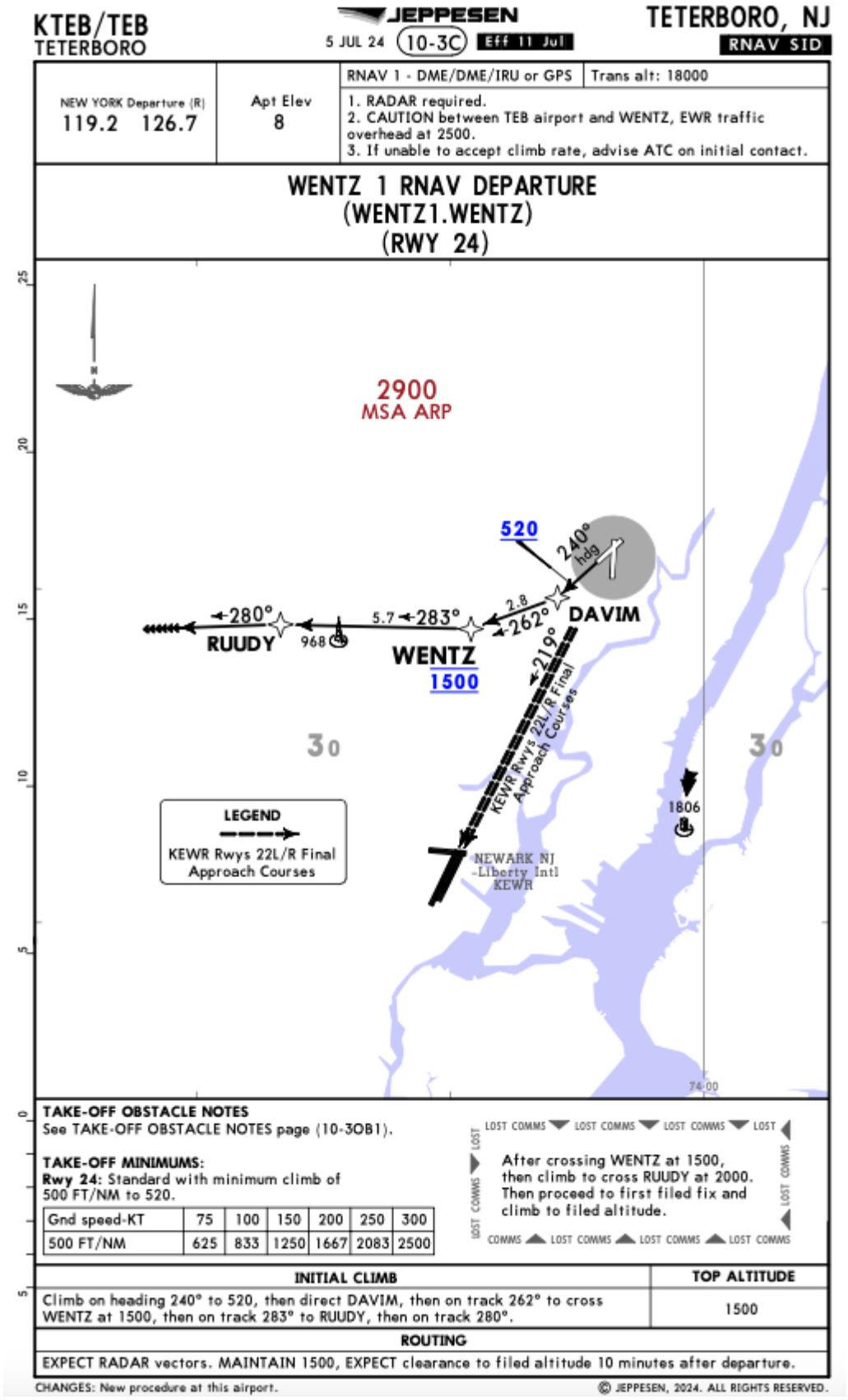
Welcome Wentz.

On July 11 that finally happened with the publication of the new **WENTZ ONE SID** – almost.

The WENTZ ONE is effectively an improvement to remove the ambiguity. It does away with the step climb to 2000', instead requiring aircraft using it to maintain the one level – 1500'.

ATC will issue any subsequent climb instruction.

Here's what the new procedure looks like:



Here's the kicker though, while the charts have been published, **no one is flying it just yet**. Why?

TUG explains that this is due to FAA controller training requirements, which are essential. Given the pending relocation of Newark's airspace from NY TRACON to Philadelphia TRACON it is difficult to predict exactly when this process will be finished.

So, while the plate will appear in your EFB, expect the RUUDY SIX for a short while yet.

What about an instrument approach to Runway 01?

While we have you here – there is another problem pilots need to contend with at TEB.

An instrument approach to Runway 01, or lack thereof.

Right now, the common procedure is the ILS 06, **circle-to-land** 01 to keep you clear of Newark.

This approach is **challenging** for a number of reasons. If you're not familiar with those, check out Code 7700's full briefing here.

For some time now TUG has been advocating tirelessly for a **proper RNAV approach** which is long since overdue. There has been some progress for some Honeywell users. Since last year there has been a **coded FMS visual approach** that replicates the visual to Runway 01, but with lateral guidance and vertical guidance using familiar waypoints DANDY and TORBY. It does this with moderate angles of bank and a gentle 3.5 degree slope alleviating some of the existing threats of the procedure.

You can watch that approach below:

With regards to a publicly available instrument approach to KTEB's 01, TUG advises we will need to wait a while longer yet. They will have a formal update for us later this year.

400% increase in GPS Spoofing; Workgroup established

OPSGROUP Team
6 September, 2024

GPS Spoofing Risk changes, grows

- **900 flights a day on average are now encountering GPS Spoofing**
- **Safety risks changing and growing: EGPWS primary concern**
- **GPS Workgroup established to address issue**

Troubling data shows a significant spike in GPS Spoofing over the last few months, with an increasing impact on flight safety.

The number of flights affected has risen from an average of 200 daily in the period January-March, to around 900 daily for the second quarter of 2024. On some days, as many as 1350 flights have encountered spoofing. Flight crews also report that the intensity of the spoofing is increasing.

At the same time, the number of locations where spoofing is highly active has increased from three to more than ten. At the outbreak of the new spoofing phenomenon in September 2023, spoofing was encountered in northern Iraq (near Baghdad), Egypt (near Cairo), and Israel. Since then, the Black Sea, Cyprus, the Korean border, and Russia have become spoofing hotspots.

Safety risk changing and growing

For flight crews, the workload and knock-on safety risk resulting from spoofing encounters is both changing and growing. Initially, the primary risk from a GPS spoof was navigational: autopilots began turning aircraft unexpectedly, aircraft position became uncertain, IRS was sometimes lost. With ATC help, often through radar vectors, the situation could be resolved.

With both the increase in intensity and frequency of spoofing this year, a second, more concerning set of risks is emerging.

The list is long. GPS is interwoven into many, if not most, aircraft systems these days. The EGPWS – our trusted friend to keep us away from terrain – is suffering heavily, and is becoming unreliable. False alerts – sometimes hours after the spoofing event – are now routine, and as a result, many are inhibiting the system. Crews are losing trust in what was until now an exceptionally reliable and critical device to eliminate CFIT accidents.

Go-arounds directly caused by GPS spoofing effects are also being seen more regularly. False EGPWS alerts are the primary culprit, but in some cases, the indicated wind on the Navigation Display is false and leads to confusion. In others, autopilot behaviour and unusual glideslope/localizer indications are causing missed approaches. Any go-around immediately increases crew workload and reduces the safety margin.

Safety layer of "Swiss Cheese" removed

Other aircraft systems directly affected include TCAS, ADS-B, HUD guidance, and transponders. The aircraft clock, which crews are getting used to seeing "run backwards", is often one of the first victims of a spoofing encounter, and has knock-on effects which include making CPDLC unusable. Eurocontrol report now seeing this on a daily basis.

For Air Traffic Control, especially in Oceanic and remote regions requiring on-board responsibility for navigation accuracy, life has thus become more challenging. Shanwick and Gander OACC's now deal daily with aircraft unable to meet the RNP4 requirement for oceanic crossings as a result of spoofing. Controllers have to work harder to separate aircraft, and this has caused occasional diversions to Iceland.

The trouble is that these shifts in safety risk are happening without much attention to them. They are largely unaddressed, latent pitfalls, that will become painfully clear when the first accident attributable to spoofing occurs. A single, full layer of the "Swiss Cheese" has quietly been pulled out of our safety system this year.

GPS Spoofing Workgroup established

A GPS Spoofing Workgroup has been hastily established to bring the international civil aviation community together and address the problem. The Workgroup is **now running,** and will tackle the issue by collecting data and information, surveying flight crew, discussing the distinct elements of the problem, and producing a community report. With the 14th ICAO Air Navigation Conference taking place at the end of August, the timing of the final report will aim to support discussions there.

450 participants have registered to take part in the Workgroup, which includes representatives of industry organizations IFALPA, IFATCA, OPSGROUP, IBAC, EBAA, ECA, and BALPA. Airlines and Operators represented include Aer Lingus, Air Atlanta, Alaska Airlines, Cathay, Cargolux, Singapore Airlines, Turkish Airlines, United Airlines, Netjets, El Al, Royal Jordanian, Italian Air Force, USAF, American Airlines, LOT Polish Airlines, and Fedex.

An encouraging element of the Workgroup is the involvement of PNT and GPS experts from NASA, Boeing, Collins Aerospace, FlightSafety International, Honeywell International, Safran Electronics & Defense, Satcom Direct, Aircraft Performance Group, Fokker Services, Honda Aircraft Company, Zurich University of Applied Sciences, and SkAI Data Services. Aviation Authorities participating include the Swedish CAA, Transport Canada Civil Aviation, Civil Aviation Authority of Singapore, Civil Aviation Authority of Thailand, CAA Isle of Man, Eurocontrol, FAA, and NATS UK.

To date, the industry has largely focused on ad-hoc mitigation efforts to deal with the GPS Spoofing problem. The focus of the Workgroup will be to shift to discussing quickly available solutions, and broaden industry awareness of the growing safety risks. It will also seek to provide Flight Crews with better guidance, actions and GPS systems information.

The Workgroup is now complete. A final report will be published on September 6, 2024.

GPS Spoofing WorkGroup 2024

OPSGROUP Team
6 September, 2024

GPS Spoofing WorkGroup 2024

- A GPS Spoofing WorkGroup is now up and running.
- We will collaborate and discuss all issues, and produce a report for the community
- **The Workgroup is now complete. A final report will be published on September 6, 2024.**

GPS Spoofing is starting to get out of hand. At first, very few aircraft were being affected – now, it's hundreds every day. Today we learned of a second fake location over the Black Sea. We are starting to get used to ignoring EGPWS warnings, that we once ALWAYS followed. Navigation is degraded, EICAS messages are confusing, clarity on GPS systems and how they actually work is missing. A single, full slice of the Swiss Cheese has been removed. It's likely we are heading for an accident directly caused by this issue.

This is why we are organizing a **GPS Spoofing WorkGroup**, starting this week. Our aim is to collaborate with as many experts, OEM's, operators, flight crew, ATC, agencies, and industry organizations as possible to discuss all aspects of this issue, and find solutions.

We will present a community report on impact, safety, security, and our recommendations together with crew guidance.

To contact the organzing team, send a note to **gps.workgroup@ops.group**.

The Workgroup is now complete. A final report will be published on September 6, 2024.

Participation – how much of my time do you require?

Participate as much or as little as your schedule allows. We'll have several calls and discussions, but if you

can’t make them, no worries. The WorkGroup will be kept updated by regular email summaries and updates. There will be a Slack channel to collaborate, and some shared Google Docs.

WorkGroup Calendar

Volunteers

We’re looking for a couple of volunteers to help with organizing things during the WorkGroup. This is turning into quite a big workgroup already (200+ registrations already), and there will be lots of admin tasks to keep the ball rolling. If you’re good with Google Sheets, organizing info, writing short summaries, organizing people, and that kind of thing .. we would love your help! This would just be “now and then”, when your time allows, during the workgroup which will run for the next few weeks.

New GAR Procedure for UK Flights

David Mumford
6 September, 2024

Effective April 2024, there are some big changes to the UK's General Aviation Report (GAR) submission for international flights. The main changes:

- **The GAR form is now required for departures (not just arrivals).**
- **You have to submit it via an online portal, or through a third-party app (no longer directly to UK Border Force via email).**
- **If you get it wrong, you can now get fined up to £10,000 (there were no fines before). These apply to both the operator AND the captain.**
- **NEW: July 2024: Check below for the common gotchas on GAR submissions, and what to do if you have any last-minute changes.**

These new rules apply to all international flights arriving/departing the UK (including within the Common Travel Area: Ireland, the Isle of Man and the Channel Islands).

You can read the rules in full on the UK Government website, but here's a summary of the main points:

How to submit the GAR

You need to submit info online about the flight and crew/pax, no earlier than 48 hours and no later than 2 hours prior to the expected time of departure. There are 3 ways to do this:

1. The government's free-to-use online portal.
Alternatively, you can download this GAR template (Excel doc), complete it electronically and upload it to the portal.

2. Approved third-party applications
– Rocket Route
– OnlineGAR

3. Direct connections
– FB01
– Streamlane
– Mobile-Edge

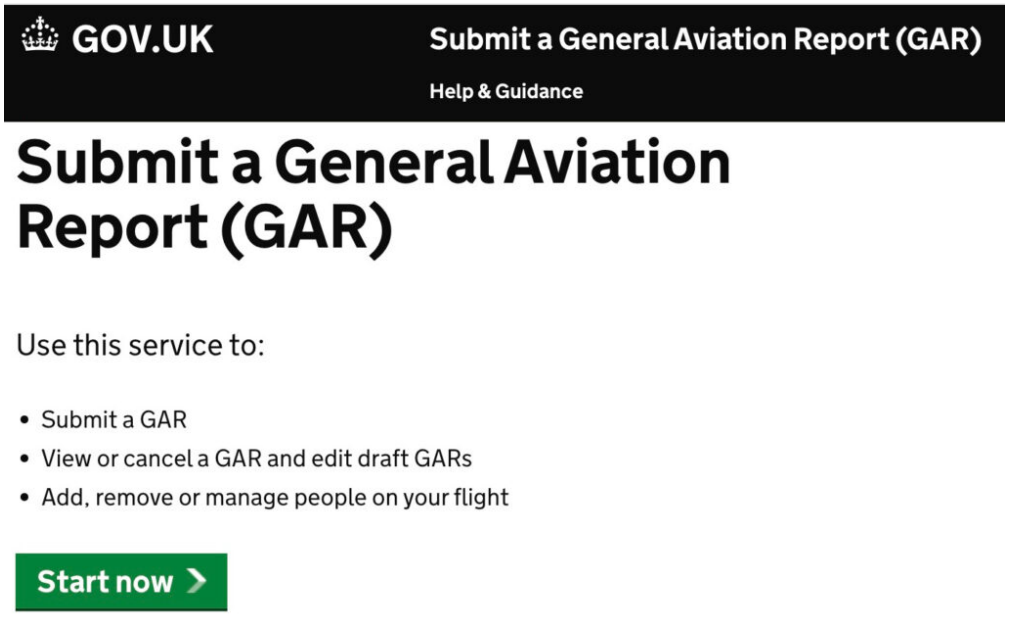
More info on the UK government site here.

After you submit the GAR, **you should get a response telling you whether that crew/pax is allowed to travel.** It will be one of the following (thanks to our friends at FlyingInIreland for this table):

Response Message	Action
Valid permission to travel	The Home Office can find a valid permission to travel for the person. Pilots, operators and agents are not required to check visas, but Passport or Travel Document checks still apply. They must check that the passport or travel document presented is genuine and valid, and that the person is the rightful holder. For more information on checking passports and travel documents click here Guidance on examining identity documents (publishing.service.gov.uk)
Authority to carry granted	Pilots, operators and agents are required to check visas for Visa Nationals. Passport or Travel Document checks apply for all passengers. They must check that the passport or travel document presented is genuine and valid and that the person is the rightful holder. For more information on checking passports and travel documents click here Guidance on examining identity documents (publishing.service.gov.uk) Follow this link to check visa requirements Check if you need a UK visa – GOV.UK (www.gov.uk)
Authority to carry refused. DO NOT BOARD.	This response message will not be displayed on the screen. Pilots, operators and agents will be instructed not to board an individual (NO BOARD) via a call and email when Authority to Carry (ATC) has been refused.

Given the new fines now in place for getting it wrong, you may find that **your local handling agent is no longer able/willing to submit the GAR for you.**

So if you're not already using a third-party application to submit the GAR for you, it looks like the best option is to sign up for an online account and file it yourself direct!



Getting it wrong

Again, check the official guidance on this, but here's what "getting it wrong" basically means:

- Failing to provide correct info about the flight and people on board.
- Not submitting it within the required timeframe (no earlier than 48 hours and no later than 2 hours prior to the expected time of departure).
- Not doing it in the fight format (i.e. through the web portal or via an approved third party).

The big things to know / watch out for:

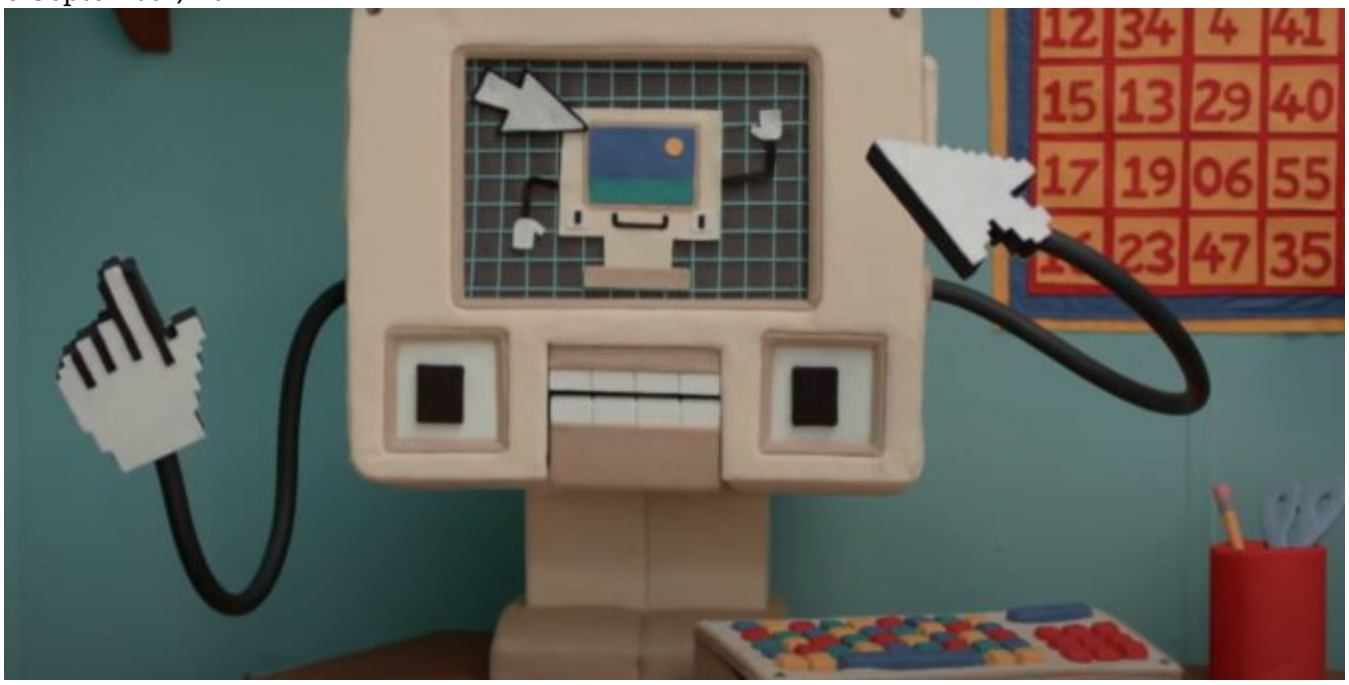
- **Fines:** Getting it wrong could mean a fine for the *"owner or agent and captain"*. So that means the operator AND captain are subject to enforcement action and fines. These start at £5,000 for first-time offenders (ouch!), subsequent breaches start at £7500, followed by the maximum of £10,000.
- **Errors on the GAR submission:** Watch out for incorrect spelling of names, not using the full names as shown on passports, and incorrect crew assignment (which pilot is the PIC). Anything like this is likely to get you a "warning" from UK Customs on arrival, and potentially a fine if it happens again.
- **Last minute changes:** Bad news. If you get an extra passenger last minute, or someone shows up with a different passport than the one you sent on the GAR submission, you have to file a new GAR and then wait 2 hours until you depart. Same applies if you change your arrival airport in the UK. One exception here: if a passenger was provided on the GAR and they do not travel, a new GAR is not required to be submitted.
- **Diverts:** If you have to divert due to weather, that's fine. If this happens, UK Border Force want you to call them if you can, on +44 300 123 2012. Make sure you're diverting to the alternate listed on your flight plan (should also be an international airport with Customs). If you're diverting somewhere other than what's listed on your flight plan (i.e. it's an emergency), call UK Border Force after you land to explain.
- **Late departures:** If the flight will operate on the same day, albeit later, no new GAR submission is required. If a flight is delayed to the next calendar day, a new GAR must be submitted.
- **Early departures:** If you depart early headed to the UK, don't update the GAR! ***Opsgroup member report:*** *We had a flight to UK that departed 45 mins early, so we thought it wise to update the GAR to correct ETA. This resulted in a UK Customs warning for 'submitting' a GAR once flight airborne (8hr leg). We've been told that we should not have updated the ETA and it is UK Customs' responsibility to keep up to date with the ETA.*

More info

Check out this page from PNR-Go. It has a bunch more info for pilots and operators, including a recent webinar recording plus an extensive Q&A on this topic.

New APIS system coming to Hong Kong

David Mumford
6 September, 2024



- Hong Kong will implement a **new APIS system from 1 Sep 2024.**
- The Immigration Department have told us this will be rolled-out to airlines and operators in phases over a 12-month transitional period, and although "non-compliance will not be enforced" during this time, **GA/BA flights will have to start doing it from April 2025.**
- There's no official guidance yet on any of this, but we've seen an advance letter from the authorities saying that APIS info will be **required for all crew and pax (including transit) for all flights** – both private and commercial.
- It sounds like it will work in a fairly straightforward way – operators will submit the API data and aircraft info to the system, and then they will receive a **yes/no response telling them whether each traveler can board the aircraft.**

Ops to Hong Kong

This has long been a tricky old game for GA/BA flights – even before this latest thing with the new APIS requirements.

To operate to VHHH/Hong Kong, you need all of the following to be confirmed in advance (and we recommend applying in this order): **landing permit, parking, ground handling, slots… and soon APIS too.**

All of these need to be applied for individually. Here's how to do it…

Landing Permit

This can be done whenever, but should probably be done first.

Apply here: www.cad.gov.hk/english/efiling_home.html

Contact: Civil Aviation Department (CAD)
Email: asd@cad.gov.hk, gcmtse@cad.gov.hk
Phone: +852 2910-6648, -6629

Parking

Parking is confirmed on a first-come-first-served basis, and can be applied for up to 30 days in advance. Ultimately, the earlier you apply the better. However, parking requests for 5 days or more can sometimes be rejected, and overnight parking is often denied during busy periods. If this happens, unfortunately the best strategy is still to just keep making new applications until you get accepted! Once your parking is approved, you'll receive a confirmation, and this must be given to your ground handler.

Apply here: https://extranet.hongkongairport.com/baps/

Contact: Hong Kong Airport Authority (HKAA)
Email: bjetslot@hkairport.com

Ground Handling

There are plenty of agents and handlers at VHHH, but only one dedicated FBO for BA/GA flights – HKBAC. Send them an email to confirm your ground handling in advance.

Contact: Hong Kong Business Aviation Centre (HKBAC) https://www.hkbac.com
Email: hkbac@hkbac.com
Phone: +852 2949 9000

Slots

Applications will only be considered 14 days prior to flight (unless you're applying for a last-minute cancelled or unused slot). Authorities monitor the slot system for intentional misuse – which could lead to operators being banned from using the system altogether. Other violations include any cancellations of outbound flights less than 72 hours before departure, and delays on the day by more than 2 hours – although any off-slot operations outside a tolerance of +/-20 minutes can still flag up for potential slot misuse.

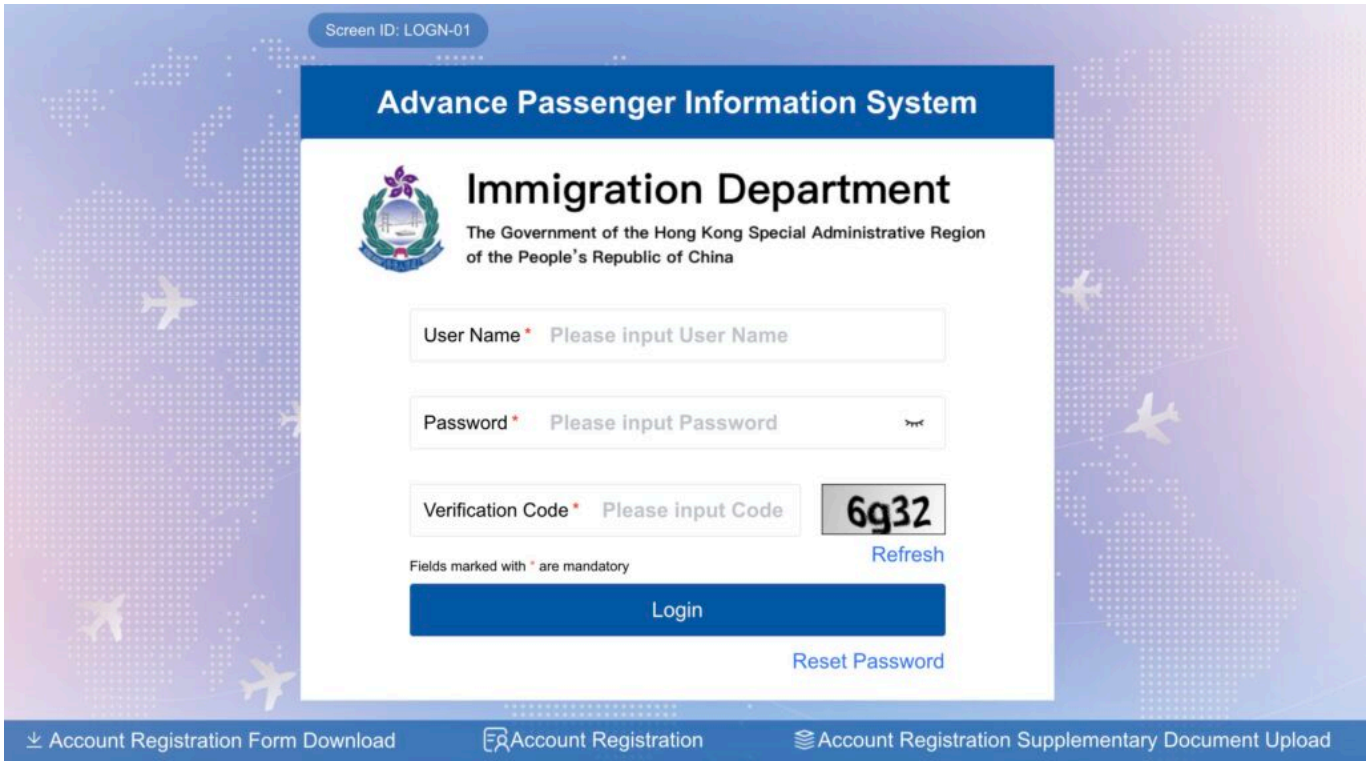
Apply here: http://www.hkgslot.gov.hk/Online_Coordination.html

Contact: Hong Kong Schedule Coordination Office (HKSCO)
Email: hkgslot@cad.gov.hk
Phone: +852 2910 6898

From Sep 2024: APIS

To recap: This is new, no one has any real guidance yet on how it's going to work or what the rules are, but the local FBO says GA/BA will need to do it from April 2025 onwards.

They do now have a website up and running where you can register an account to file APIS online:



We will add more info to this section as and when it becomes available! But if you know more, let us know: team@ops.group

Our Pilot Report – here's what we did...

If you're headed to VHHH/Hong Kong for the first time (or the *first time in a long time)* and want to know what to expect, here's an **OPSGROUP Team report from a recent flight:**

Hong Kong is a busy commercial hub in Asia. However, they manage BizAv aircraft there. There are a few gotchas to keep an eye out for when arriving and departing.

Handling:

- *All your operations will centre around the HKBAC (Business Aviation Centre). They are helpful, and I'd suggest you contact them for help arranging your parking and slots.*
- *It can get busy, so the earlier you contact them, the better your chances will be.*
- *It is an expensive place to fly into. However, Hong Kong is expensive in general.*

Arrival:

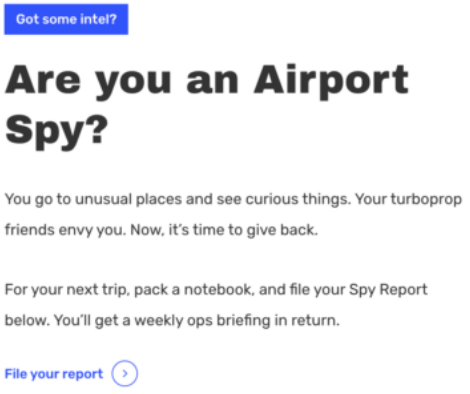
- *If you are coming to Hong Kong, note that the airport is beside a large mountain, so you get significant mechanical turbulence and wind shear.*
- *All arrivals are RNAV; vectors are not expected for many shortcuts beyond TD for Runway 25R. There is a lot of terrain.*
- *I suggest you take the RNAV 25R over the ILS. The ILS is very complicated as it is a two-part RNAV transition. It is also very high-load, and you must NOT select approach mode (i.e., switch to LOC/GS) before you hit TOPAN. Honestly, stick to the RNAV Z unless the cloud base is really an issue (which it rarely is).*

- *Even with calm winds on the ground, expect the approach to be quite bumpy.*
- *Generally, ATC won't assign you the close runway for landing, so expect a long taxi. You can expect to cross 07R/25L at K6 before making a right turn onto K and then into the BAC.*
- *Once you open the door, they will offload the pax and cargo (customs screens everything, so take note), and they will often reposition you quite quickly to a staging bay while you clean up.*
- *If you have a short lay over the Sheraton at Tung Chung is nice, otherwise it is a good 45-minute uber ride into Town.*

Departure:

- *The ramp is small, so expect to be at a remote staging area while you get the aircraft prepped. You can run the APU, etc., without issue, and then somewhere ETD-30, you can expect them to tug the plane into your departure position. These guys know what they are doing, but give them a heads-up if you wish your passengers would be late.*
- *PDC is available, as is Digital ATIS. Don't forget you need a start clearance (this isn't the USA).*
- *You can expect to depart from the closeby runway (07R/25L) unless it is closed for some reason (there is a nightly alternating closure for maintenance). So there is a short taxi; just be mindful that if you are slow with cabin prep, etc., you will be blocking the cargo aircraft that also taxi from the same side of the airport. ATC is friendly and competent but expects us to be efficient also.*
- *Departure clearance will be on your SID to 5000. Be mindful of flying noise abatement procedures; they expect you to accelerate to SID speed restrictions knots as soon as practicable. It is all on the charts; remember, we operate amongst a sea of heavies.*
- *One thing to note is that HK Departures only wants you to make the first call reporting your altitude passing and non-climb. There is no need to report your SID.*
- *Expect to level off at 9000′ until you are about 20-30nm from the airport; this is due to the arrival traffic above.*

If you have been to VHHH/Hong Kong (or anywhere else) and have a story to share – please do! Reports like these are super useful for everyone in the group. **File an Airport Spy report anonymously here.**



July 2024: Afghanistan Overflight Update

Chris Shieff
6 September, 2024

Key Points

- **Read to the end for an OPSGROUP Team report from a recent flight over Afghanistan.**
- **Afghanistan's procedural Notams for overflights have been re-issued: the entire airspace remains uncontrolled.**
- **The US FAA has amended its airspace warning for the OAKX/Kabul FIR: US operators are still permitted to overfly at FL320 or above but they can now use airways P500/G500 in the far east of the airspace as low as FL300.**
- **For the large volume of traffic now using Afghanistan as an air corridor connecting Europe, the Middle East and Asia, we figured it was time for an update on what to expect, and the risks aircraft are taking to use it.**

A Little Background

For all intents and purposes, the security situation and the safety of the airspace above has not changed since the Taliban re-assumed control of the country in late September 2021.

What *has* changed is the **normalisation of risk** – as more traffic (including major carriers) has been using the airspace without incident, it is important to remember these two facts when considering an overflight (along with your own appetite for risk):

- **The entire FIR is uncontrolled.**
- **There is no guarantee of crew or passenger safety if you have to land.**

With these factors in mind, here is a brief refresher on what you need to know if you do choose to go ahead and overfly.

Before You Go

Essentially you need to check three things:

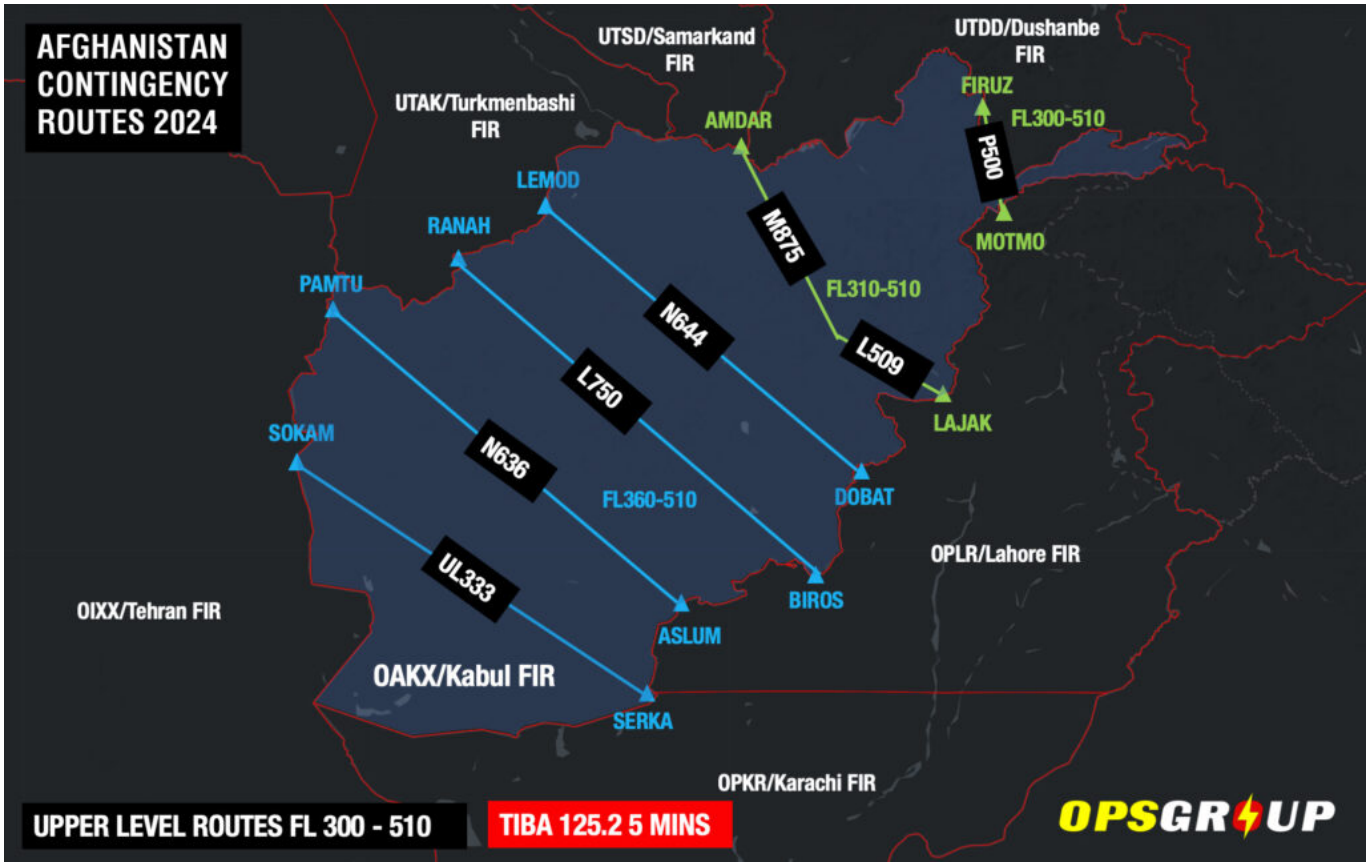
1. **PPR.** All operators need prior approval to enter the Kabul FIR with at least 72 hours' notice. To get that, you need to email flightpermissions.acaa@gmail.com.
2. **Compliance with state-issued rules.** Several states have long-term airspace warnings in place for Afghan airspace. US operators need to check the current SFAR (more on that below) and any applicable KICZ Notams.
3. **Insurance.** Some providers will not cover extended flight through uncontrolled airspace with the risks that apply both in the air and on the ground in Afghanistan.

Overflight

The procedures to overfly the Kabul FIR have not changed – they're found in a series of Notams recently republished and extended. We previously took a detailed look at those here.

For the purposes of this article, this is the highlight reel:

- Adjacent FIRs manage the flow in and out of the Kabul FIR and apply 15 minute spacing.
- Only some routes and levels are available.
- **The entire Kabul FIR is uncontrolled**, with TIBA procedures in effect.
- You can't change speed or level once inside the Class G (except to avoid traffic or you have an emergency).
- **ICAO contingency procedures** apply if you need to descend in a hurry.



Unplanned Landings

For traffic deciding to overfly the Kabul FIR, it is critical to have contingency plans in place for a diversion.

For most operators, this would be to consider a landing at an Afghan airport a last resort **(akin to a ditching in oceanic airspace).**

Enroute planning should include ETP considerations for the most **fuel critical scenario** so that aircraft have enough on board to remain airborne and clear Afghan airspace before landing.

As such, be aware of westward diversions into Iran (the **OIIX/Tehran FIR**). US operators are currently banned from entering at any level due to high risk of misidentification, anti-aircraft fire and unannounced military activity. France, Germany, Canada and the UK also hold similar warnings.

On the Ground

If you do need to land in Afghanistan, **welcome to the wild west.**

OAKB/Kabul airport is your most likely target and there is no approach control, or tower service in use. As such, weather forecasting and Notams should be considered unreliable at best.

They do provide a phone number you can try and contact for the Kabul Notam Office, +93730006669. Failing that, try +93705769453.

As for crew/pax security, there is none. No country officially recognizes the Taliban as a legitimate government yet.

The Latest US Department of State Travel Advisory is stark – **do not go there**. If you do, you are at risk of wrongful detention, kidnapping and crime. There is no consular assistance available.

Updated FAA Airspace Warning

Another change to report.

On July 5, the US FAA (slightly) amended its airspace warning for Afghanistan.

US operators are still permitted to overfly the OAKX/Kabul FIR at FL320 or above but they can now use airways **P500/G500 in the far east of the airspace as low as FL300.**

The FAA's reason for the change: *some operators were struggling to use these airways at higher levels. There have been no incidents here so far, and you don't spend much time in Afghan airspace while transiting them.*

You can view the updated SFAR here.

Our Pilot Report – here's what we did …

There is a hefty dose of 'at your own risk' about all of this. The choice to overfly is not an easy one. To give you a much better idea of what to expect, here's an **OPSGROUP Team report from a recent flight over Afghanistan:**

We operated through OAKX FIR on a EHAM/Amsterdam-WMSA/Kuala Lumpur flight

Overflight Permit: *Getting the permit was relatively easy. We emailed flightpermissions.acaa@gmail.com (cc to flightpermission.atm@mota.gov.af) and received a response within 24 hours. They replied to us saying that to cross the airspace is charged a flat fee of $700 USD. You will need to fill out the form provided (this Excel document) and then forward that, plus copies of your Insurance, Airworthiness Certificate, and Aircraft Reg. If you are operating commercially, they also want your AOC. They ask for a minimum of 48 hours' notice, although we put our application in a week in advance.*

Insurance: *Our insurance (like most) doesn't allow operations within certain countries; however, they permit overflights on ATC-approved airways, and if you end up diverting due to an emergency, you are covered. We checked, and L750 was considered OK. Several air routes are "open."*

Routing: *We had planned on L750, which runs from UTAV (Turkmenabat) to OPLR (Lahore). They also sent us the Kabul FIR Contingency Procedure document. The most important thing to read is the broadcast procedures since there is NO ATC service. The flight was very straightforward, and this route saved us a fair chunk of time and fuel.*

ATC Comms: *About 5 minutes before Kabul's boundary, the UTAV controller asked us to "report ATC established with Kabul." We tried calling Kabul on 125.2, knowing full well there was no ATC service. We told UTAV that we were going to continue TIBA procedures in Kabul FIR, and they told us, "Radar services terminated, frequency change approved. Good night." All our external lights were switched on. We used Comm 2 as our TIBA box (125.2), Comm 1 stayed with the UTAV frequency, and Comm 3 (our data link was set to SAT) to monitor 121.5. Revise your TIBA calls; they suggest you broadcast them every 5 minutes. We used each fix, and it worked at about the right time.*

Over Afghanistan: *There was one aircraft departing OAKB/Kabul airport, a commercial jet on its way to Dubai, and aside from that, there was no one else. Up at FL450, we had a great view of the terrain – the word is "inhospitable."*

We could continue to hear UTAV on Comm 1 until about 15 minutes into Kabul when we switched to 124.1, the OPLR (Lahore) FIR frequency; about 15 minutes before we got to the boundary, we could hear calls from other aircraft. We had about 10 minutes of "dead" time on Comm 1.

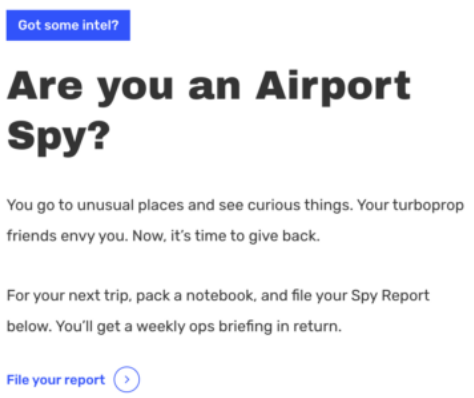
I had an ETP using UTAV/Turkmenabat and OPIS/Islamabad and did not consider using any of the airports within Kabul FIR as available airports. This was treated just like a NOPAC or NAT crossing. There is nowhere to go, so if something eventful happens, you can keep going or turn back based on your ETP.

We checked in with Lahore about 10 minutes before reaching BIROS, and they told us to call overhead BIROS.

***Key Points:** It is relatively straightforward; brush up on the TIBA calls. There is more traffic nowadays as several airlines are using the routes for daytime flights, so it was a bit busier the last time I used it. However, at best, you will have a couple of airliners in the mid to high FL300s. There was no GPS Spoofing / Jamming or bad ATC, so I would use this route again, considering the other options in that region.*

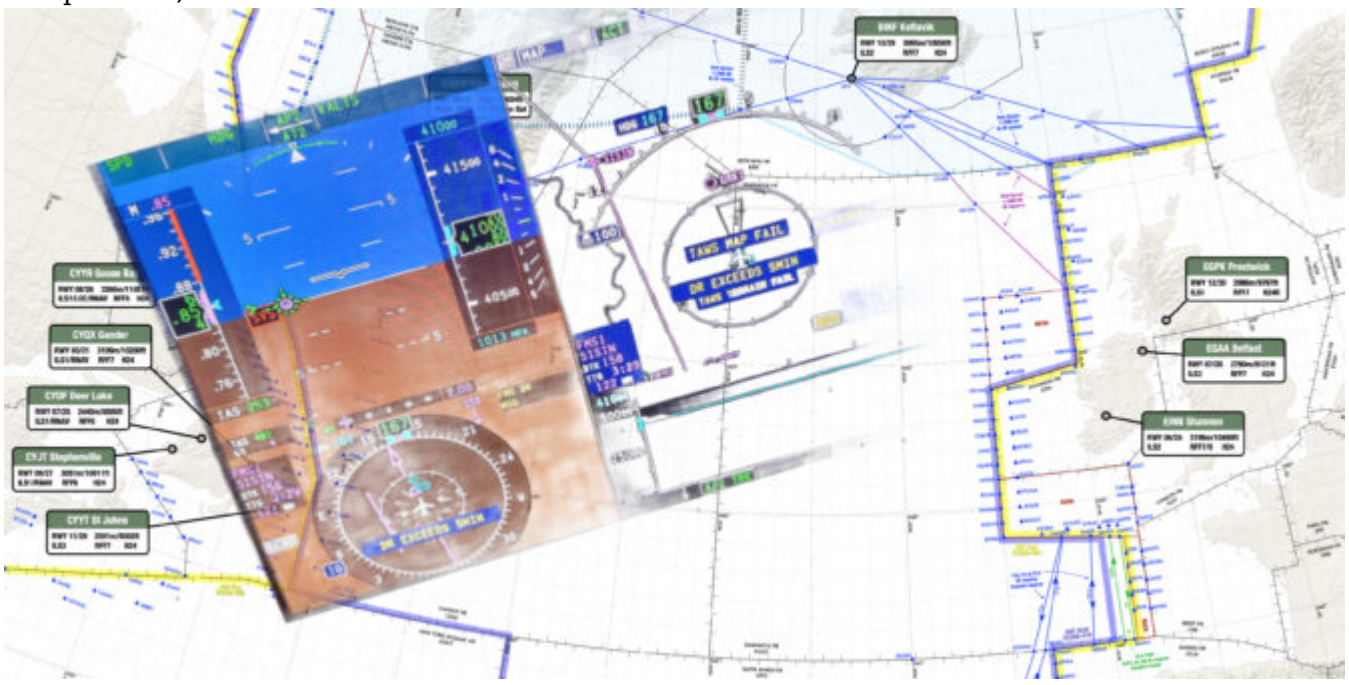
Let's help crew make a **more informed decision** with more reports from other pilots.

You experience is invaluable – if you are overflying Afghanistan and have some operational advice, please share it with the group. You can reach us on team@ops.group, or **file an Airport Spy report anonymously** here.



NAT Crossing after GPS spoofing: a guide

Mark Zee
6 September, 2024



An increasing issue for the NAT Oceanic FIR's is how to handle aircraft with an in-flight degradation of GPS. This normally follows a **GPS Spoofing encounter** somewhere prior to Oceanic Entry, leading to a degraded RNP capability.

If you run into GPS issues before entering the Ocean, you will likely end up with RNP10 as the best you can manage for navigational accuracy. This presents some issues for the Oceanic controllers, as RNP4 is commonly used to ensure separation. We'll take a look at some scenarios and how to best handle these.

Normal RNP requirements on the NAT

NAT Doc 007 specificies two RNP options for entry into the NAT HLA.

The first is **RNP10** (accuracy of 10 nm, 95% of the time). An important consideration here is that **RNP10 is really RNAV10**, but they call it RNP10 to keep things simple [See NAT Doc 007, 1.3.4]. The critical difference is that for RNAV10, on-board monitoring is not required. Since this can only be done by GPS, that's an important relief when it comes to spoofed flights.

The other is **RNP4** (accuracy of 4nm, 95% of the time). RNP4 is only an absolute requirement for PBCS Tracks ("Half-Tracks"). In practice, ATC commonly uses RNP4 for separation purposes on the NAT (Since the introduction of ASEPS). GPS is required for the monitoring part of RNP4; without GPS, RNP4 is not possible.

Loss of GPS Prior to the NAT

Since GPS Spoofing became prevalent in September of 2023, increasing numbers of aircraft are arriving at the Oceanic Boundary with one or both GPS sensors inoperative. A textbook GPS Spoofing encounter will initially see the GPS sensors rapidly change from the real coordinates to fake coordinates. If all GPS sensors agree on the fake coordinates, the FMS becomes confused. IRU values will increase, and in some cases, the IRS may also become “infected”.

The primary spoofing locations have not changed much since the onset of the issue: you will encounter spoofing at the Iraq/Iran border, the Sinai peninsula area (showing Tel Aviv as the spoofed location), Israel and Cyprus (showing Beirut as the spoofed location), and the Black Sea (showing Sevastopol as the spoofed location).

We have no reports in OPSGROUP that the other type of GPS interference – GPS Jamming – leads to lasting effects. Once the jamming has stopped, aircraft systems are normal.

However, we do have reports that if GPS inputs are turned off before departure, and later turned back on in flight, that issues may occur. This is mostly reported for departures from Tel Aviv (LLBG).

GPS failure, Ocean approaching

Since RNP4 requires a functioning GPS, if you encounter spoofing and lose your GPS, you can’t fly RNP4. Assuming that you have an RNP10 approval (one of the only two options for the NAT HLA), you will become **RNP10**.

The problem occurs when Shanwick, or the OACC at the entry point, get late notice of this fact, and you are close to other aircraft. That leaves the Planning Controller with little time to figure out how to separate you (an RNP10 aircraft) from the others (RNP4 aircraft).

In some cases, “spoofed” aircraft have had to descend to FL280 to exit the NAT HLA, and this has caused diversions.

How to best handle a NAT crossing with a failed GPS

The key is to advise Shanwick, or the first OACC, **early**. Shanwick’s preference is that you use the RCL request to do this, and add a note to the end of the RCL along the lines of ATC REMARK/GPS DEGRADED RNP10 ONLY. If using voice to get your clearance, that’s what to say as well. Shanwick NOTAM EGGX G0106/24, and a note on the OTS Track message, has this information.

The RCL for Shanwick should ideally be sent **90 minutes** before the Oceanic Entry in this case. Normal RCL timeframes are -30 to -90. An RCL sent any earlier will be rejected, but if you have something more unusual to discuss, you could use SATCOM to contact the supervisor and ensure a smooth crossing.

RNP10 time limit

With the change to RNP10 for your crossing, double check the **time limit** for RNP10. ICAO Doc 9613 (Volume II, Part B, Chapter 1) specifies that RNP is limited to 6.2 hours of flying. The timing starts from when “the systems are placed in navigation mode” or at the last point at which the “systems are updated”. The logic here is that the IRS will drift without updates enroute, and after 6.2 hours of flying, will

no longer be capable of maintaining the RNP10 accuracy.

For an aircraft spoofed in the Mediterranean, or Black Sea area, it will take 4 hours before Oceanic entry, so this time limit becomes relevant. If the impact of the spoofing is severe enough, there is potential for inputs – including DME/DME or VOR/DME – to the IRS to stop working. This is one of the potential unknowns at present.

Shanwick comments

Shanwick are encountering several GPS jammed aircraft per day, and it is sometimes difficult (or impossible) to find optimum profiles for aircraft without moving several other aircraft to accommodate. The only instance where they have to insist on FL280 and below, is when an aircraft does not meet the requirements for MNPS (such as single LRNS), and needs to be cleared outside HLA.

If a pilot advises that they have lost RNP4, but are still capable of RNP10, Shanwick controllers will look to find a solution where the aircraft can be cleared with at least 10 minutes longitudinal and 60nm lateral separation. These aircraft also need coordinating with the next Oceanic Center before clearance, and sometimes there are limited options available.

In general, the earlier they informed about the degradation, the easier it is for the Shanwick controllers to find satisfactory solutions.

Member input

This is a developing issue and we gratefully welcome any input from members on this. Email us at **team@ops.group**.

NAT Doc 007 – New Edition

Mark Zee
6 September, 2024

A new version of NAT Doc 007 has been published today (July 4th, 2024).

NAT Doc 007 is the main go-to guidance doc for ops over the North Atlantic. All the specifics about how to operate your aircraft safely through the complex airspace of the region are here. **As of this morning, the latest version is NAT Doc 007 2024 Amendment 4**. Download a copy.

What's changed?

For this particular update, **not a lot**. The changes relate to the language around the new RCL process, and what to expect back from ATC once you send your RCL. This is part of the Oceanic Clearance Removal project.

Earlier in the year, the new RCL response included the language "**RCL RECEIVED BY [ANSP]. FLY CURRENT FLIGHT PLAN OR AS AMENDED BY ATC**"

That turns out to have been creating confusion, so the RCL response will now just say:
"**RCL RECEIVED BY [ANSP]**"

These changes are in section 6.2.26 onwards.

What's the latest with the RCL/OCR project?

Santa Maria and Iceland have made the change, so entering that portion of the NAT HLA does not require an Oceanic Clearance. You do still have to send an RCL in the same way as if you were requesting an Oceanic Clearance, but once sent, and you get an ACK – that's it. For more on the new process, read about Oceanic Clearance Removal.

Gander, Shanwick, and Bodø have postponed their change to **December 4th, 2024**. This means that for now, nothing has changed – you get an old-school Oceanic Clearance in the same way you always did – with an RCL, or via voice.

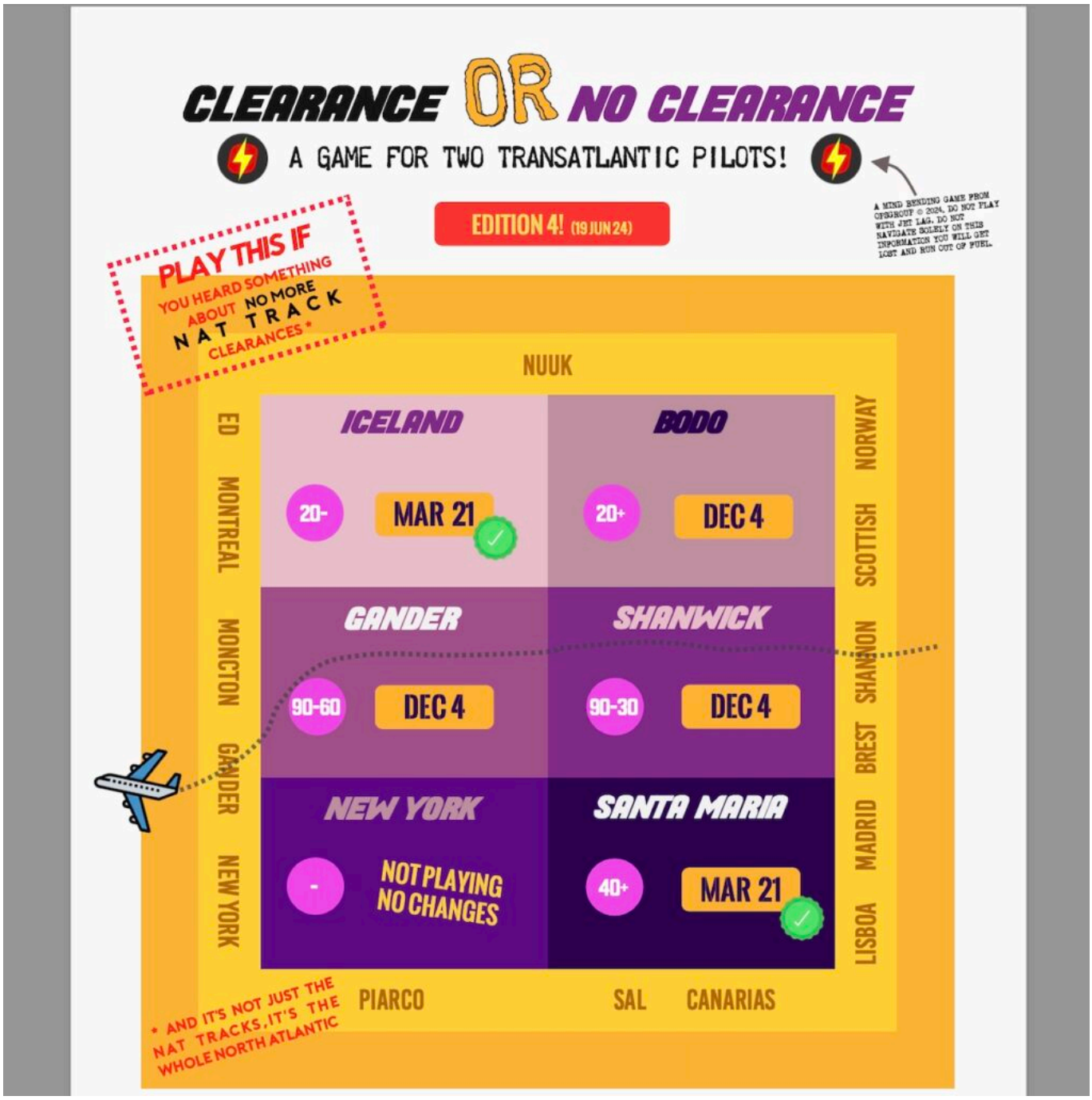
So there are two kinds of RCL then?

Yep. For Gander, Shanwick, and Bodø, **RCL** means **Request Clearance**. You send this message, then wait

to get your Oceanic Clearance back, usually via an OCL message on datalink.

For Iceland and Santa Maria, **RCL** means **RCL Message**. This is a “Check-In” of sorts, but the format is the same as the old meaning of RCL.

Confused? You’re not alone. But by Christmas, all will be easier – once everyone is on the same page. Play “Clearance or No Clearance” to help get things straight.



The hole in NAT Doc 007

There’s one problem with NAT Doc 007 – we’re in limbo land until Christmas. All of the guidance relates to how to send an RCL in a post-Clearance world. But for the next 5 months, most of us still need an Oceanic Clearance, and there’s no information on how to actually get one.

In the previous version of NAT Doc 007, Chapters 5 and 7 related to the Oceanic Clearance process, but

those **have been deleted**. So, here's a copy of the old NAT Doc 007 from 2023, which details that process.

Can we help?

If you have a question about this or need some help, just write us a note and we'll do our best: **team@ops.group**.

Hurricane Beryl

Mark Zee
6 September, 2024

The OPSGROUP Hurricane tracker is now active for **Hurricane Beryl**, which is on track to hit **Jamaica** on Wednesday, with sustained winds of 110 kts. A hurricane warning has been issued for the entire country, along with the **Cayman Islands.**

Click here for the interactive map.

MKJP/Kingston and **MKJS/Montego Bay** are **already closed.**

Further west, **MWCB/Cayman Brac** and **MWCR/Grand Cayman** will **close on Wednesday** at 1500 and 1800 local.

MKJP	Kingston	● Closed	Notam	**Wed** 0600 ET	Closed until 0500LT Thurs. No ATC avail.
MKJS	Montego Bay	● Closed	Notam	**Wed** 0600 ET	Closed until 1200LT Thurs. No ATC avail.
MKBS	Ocho Rios	● Closed	Notam	**Wed** 0600 ET	Closed until 0700LT Thurs.
MWCR	Georgetown	● Restricted	Notam	**Wed** 0600 ET	Will close 1800LT Weds.
MWCB	Cayman Barac	● Restricted	Notam	**Wed** 0600 ET	Will close 1500LT Weds.

The Hurricane Beryl Situation Report is being updated as airports close, and will have information on reopening.

There has been significant damage to airports in **St. Vincent & the Grenadines** post-Beryl, and all are now focused on relief operations. TVSA/Argyle is open and operating for relief flights, the smaller ones (TVSB/Bequia, TVSC/Canouan, TVSU/Union & TVSM/Mustique) have different degrees of infrastructure damage and are closed other than for specific relief operations.

If you have an **update** to share regarding **Airport Status** for any affected airports, please use the link below or email news@ops.group.

Member Meetup: July 3rd – Agenda

OPSGROUP Team
6 September, 2024

Member Meetup – July 3rd

- **OPSGROUP Meetup** starts at **1900 UTC today**
- New member intros, Ops Topics, Workshop, OPSGROUP Updates
- **Final Agenda** below: highlights are GPS Spoofing, NAT Chat, Euro Summer Ops

Hi all, here is the final agenda for today's **Member Meetup** at 1900 UTC (Wednesday 3rd July)

Abbreviated Agenda

- **Welcome!**
- What's all this about then? Quick intro to Member Meetup
- **New members** – 968 new people so far this year, a round of hello's, intro's, where you are and what you fly or operate
- **OPS Topics** – group discussion and action items
    - **GPS Spoofing** – discussion, locations, OEM updates, IRS/Hybrid infection, plan for Workshop on the issue.
    - **NAT Chat** – discussion of changes in 2024, RCL/OCR, Don't Climb problem, NAT jamming.
    - **Euro Summer** – discussion of major pain points in Europe this summer: parking issues, ATC Strikes, CPDLC logon lists, EU LISA.
- **Workshop Projects** – EVS vs LED lights, Stand Guidance, GPS Spoofing, Euro First time ops, and suggestions for new projects
- **OPSGROUP Update** – Report-A-Thing, Daily Brief changes, Below The Line Workshop, GoCrow/Route Check
- **Danger Club** – conversations about cockpit happenings we normally don't talk about. New series, suggestions for incidents.
- **Meetup Notepad**: shared **Google Doc**

How do I take part?

- Meetup starts at **1900 UTC, Wednesday 3rd July** – that's 1500 New York, 2000 London, 2100 Amsterdam, 2300 Dubai.
- **Register** for the call **here**.
- For full Meetup info, visit the **Meetup page** in your Dashboard.
- If you have any issues registering or accessing the link, just email team @ops.group.

MEMBER MEAT-UP
NEW INTRO'S
WORKSHOP
REPORT-A-THING
BURGERS
INTERNATIONAL OPS
ASK-OPSGROUP-ANYTHING
EURO-SUMMER OPS
JUST STOP VANDALS
NAT CHANGES
BIG IDEAS
DANGER CLUB
CONTRAIL COCKTAILS
GROUP WORK

Ops to Paris for the Olympics

David Mumford
6 September, 2024

Key Points

- **Paris will be busy from July 22 to Aug 11 (Olympics) and Aug 26 to Sep 8 (Paralympics).**
- **LFPB/Paris Le Bourget will likely be the airport you want to go to, but expect quick turns only with reposition elsewhere for parking (options below).**
- **There's a procedure to know about (slots, PPR, no late changes).**
- **Paris will be a no-fly zone on July 26 for the opening ceremony.**

France has published new AIC 13/24 (effective 27 June 2024) with procedures for operators to follow if they want to fly to a Paris airport during the Olympics. *It's essentially a corrected AIC, because the previous one had confusing advice for business aviation!*

Here's what bizav flights have to do

- You must **file a "flight intention" for each flight** (send this to your handler/FBO no later than 2 hours before take-off for flights to LFPB/Paris Le Bourget, or 4 hours for other airports).
- There's **no accreditation** for pilots or operators during the Olympics, and everything will proceed pretty much as normal. The AIC only applies to VFR flights.
- The airport authorities will implement **slots/PPR** from July 12 to Sep 16 (these are obtained by the handler and sent to the operator), so you just need to fill out the FPL with the airport slot

ID in Field 18.

- LFPB/Le Bourget airport authorities will **not allow any updates with two hours prior arrival or departure** – no change of timing, no change of crew or pax. The handler will send this info to the authorities prior to the flight, and if they don't reply then the flight is approved. If there is any issue with the pax or crew, the handler will be notified, and the flight will be refused.
- It's going to be busy, so LFPB/Le Bourget will **only be accepting quick turns** with parking elsewhere.
- **If you get a slot, you best keep it** – if you cancel it there's no guarantee you're going to get another one.
- Check with your handler of choice about their fees cancellation policy, as some of these will be **non-refundable.**

At LFPB/Le Bourget you have a few options for handling:

Astonsky – website
lfpb@astonsky.com

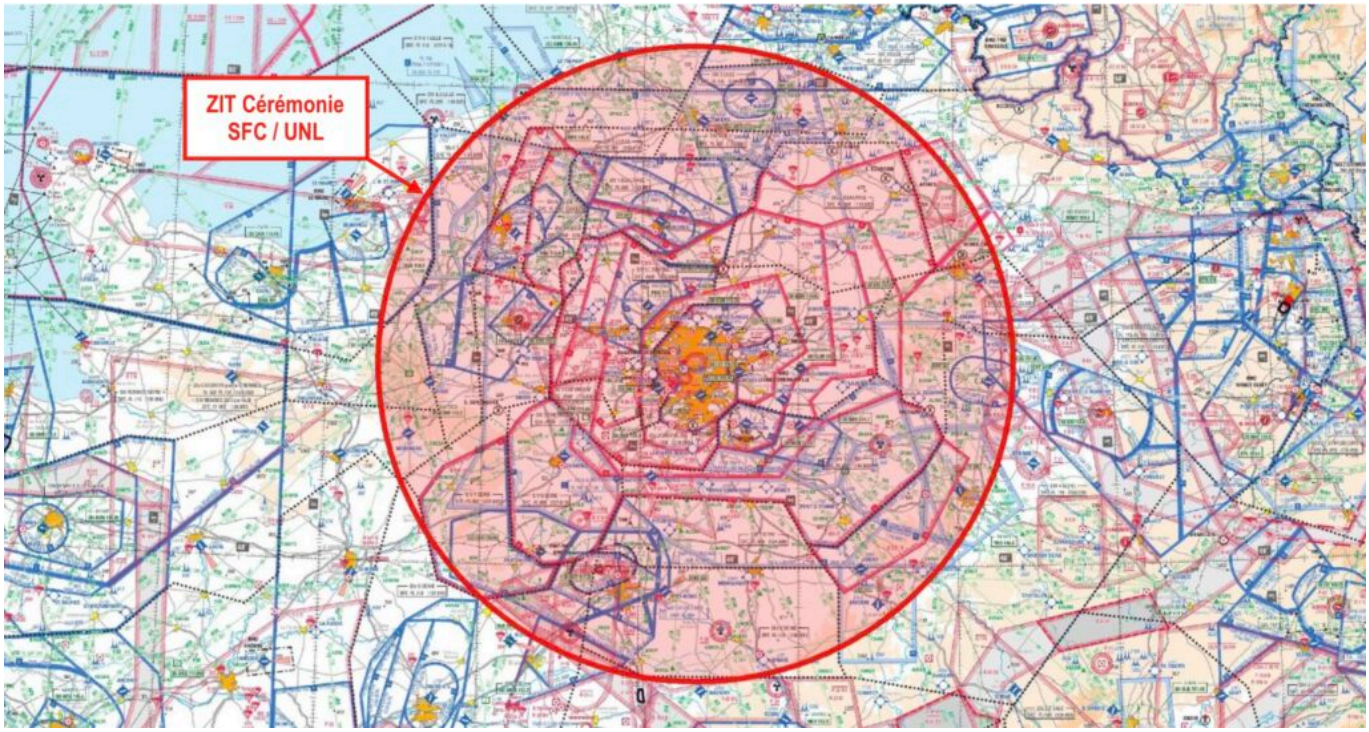
Dassault Falcon Service – website
handling@dassault-falcon.com

Jetex – website
fbo-lbg@jetex.com

Signature – website
lbgt1@signatureflight.fr

The Opening Ceremony

France has published a SUP showing the **closed airspace for the opening ceremony** of the Olympics in Paris on **July 26.**



On that day, between 1630-2200z, **Paris will basically become a no-fly zone** – no flights will be able to enter the airspace or go to/from the airports. Watch out for overflights too – these won't be allowed either!

Flight plans to Paris airports will be rejected starting 1530z. Departures from LFPG/Charles De Gaulle might be allowed starting 2130z with special approval.

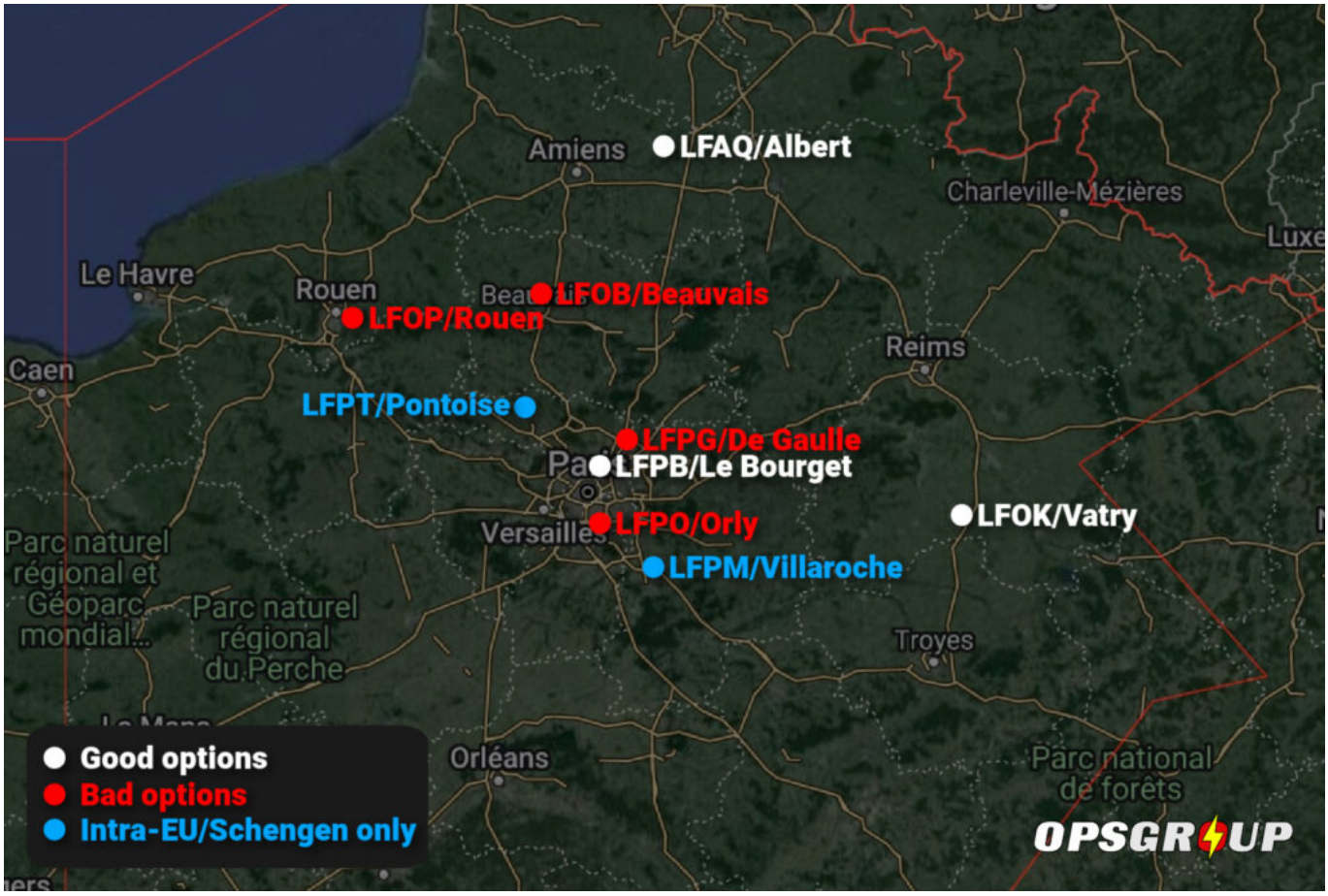
Where to go?

LFPB/Paris Le Bourget, LFAQ/Albert, and LFOK/Vatry seem like the best bets.

LFPT/Pontoise and LFPM/Villaroche might be options too, but there's no customs available here, so these airports are only available for flights between EU/Schengen airports only (i.e. not direct from the likes of the US).

Ones to cross off your list

- **LFPO/Orly and LFPG/Charles De Gaulle** as they are dedicated to airline flights
- **LFOB/Beauvais and LFOP/Rouen** as they have no support for bizav flights.



Most operators are doing one of the following

1. **Drop and go:** Get a slot into LFPB/Le Bourget, fly in, drop off pax and then reposition elsewhere for parking. LFPM/Villaroche and LFPT/Pontoise are good options for this.
2. **Clear customs elsewhere:** Clear customs at some intermediate EU airport (somewhere like LFAT/Le Touquet or LFOP/Rouen), do fast turns for just customs, and then fly to either LFPT/Pontoise or LFPM/Villaroche for parking and pax can access Paris directly. This avoids

the slot situation at LFPB/Le Bourget.

3. **Do everything elsewhere:** Use LFOK/Vatry (2:30 drive into Paris) or LFAQ/Albert (2:10 drive into Paris) directly, where there is customs, and avoid a positioning, but have a very long car journey into Paris.
4. **Avoid!** Just avoid the Olympics altogether. Go somewhere else for your holiday instead.

Tell me more about LFPM/Villaroche

Here's a report from local handler Elyxan Aviation: ops@elyxan-aviation.fr

LFPT/Pontoise does not have a customs facility and neither do we. This is frustrating as we are the two main Paris airports within a reasonable driving distance of the city centre.

LFPM/Villaroche is actually a good option as we have lots of parking and a modern FBO/with VIP lounge. We can offer 24/7 operations, which even LFPB/Le Bourget cannot. That the French authorities don't allow LFPT/Pontoise or LFPM/Villaroche customs and immigration is extremely unfortunate, especially as LFPB/Le Bourget is overloaded even normally in the summer.

LFPM/Villaroche is marginally closer to Paris than LFPT/Pontoise in real world times as we have better and closer motorway connections. We're 45-50 mins from the center and LFPT/Pontoise is 50-55 mins. In reality we are the best for South Paris, and LFPT/Pontoise and LFPB/Le Bourget are better for North. LFPM/Villaroche and LFPT/Pontoise are about equidistant for the Versailles region in real driving times. As the heliport is on the south side of Paris, we at LFPM/Villaroche are better situated for heli transfer into the city (10-15 mins from LFPM/Villaroche and 20-25 from LFPT/Pontoise).

LFPM/Villaroche is less well known, but a substantial airfield and a longer runway than LFPT/Pontoise. Sadly, the airport is managed by the French State and not the private company ADP that manages LFPB/Le Bourget and LFPT/Pontoise. Hence, the lamentable marketing of our airports capability and absolutely superb position.

You can download the brochure for the Elyxan Aviation FBO at LFPM/Villaroche here.

Don't Climb! A Big NAT No-No

Chris Shieff
6 September, 2024

Last week, **Gander Oceanic** asked us to get the word out on this growing problem. More and more crews are getting this wrong, especially since OCR/RCL is starting to happen elsewhere on the ocean. The same issue is common on the other side of the pond, most frequently in the **Shannon FIR**.

What's the problem?

Pilots climbing without a clearance.

Why would we do that?

Because we think we have a clearance.

OK, tell me more

When you get your **Oceanic Clearance – or send your RCL**, it contains an Oceanic Entry Point, Flight Level, and Speed. From that point, that's what you should fly. But if you are currently at a different level to the Oceanic Cleared Flight Level, you have to **ASK** for the level change. That's really all there is to it.

Oceanic Clearance is not a Domestic Clearance

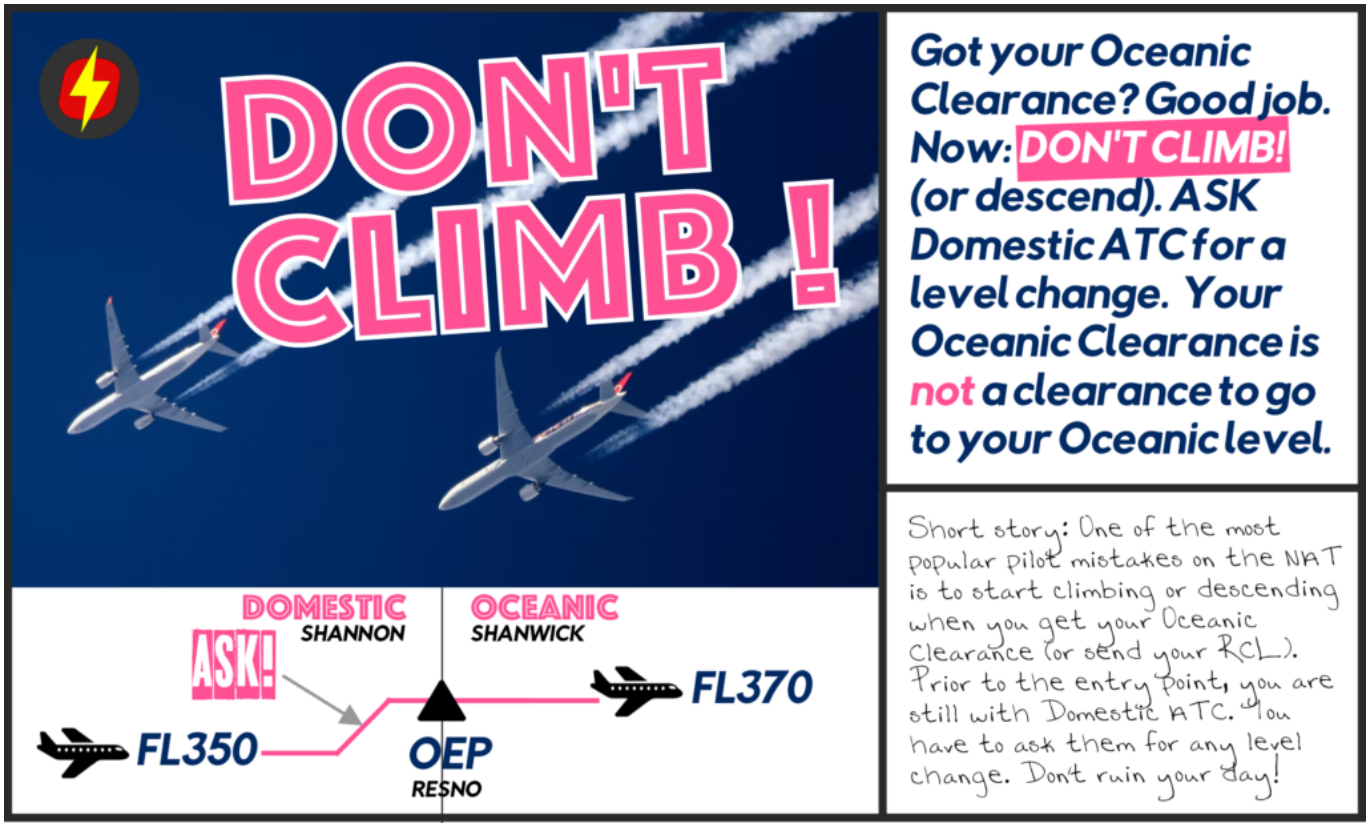
Your Oceanic Clearance is valid **only** from the Oceanic Entry Point (OEP). Take this example.

ACA123 CLRD TO LFPG VIA **NEEKO** 54NO50W 56N040W 57N030W 57N020W PIKIL SOVED
FM NEEKO/1348 MNTN F330 M082

Your Oceanic Clearance commences at NEEKO. You must be at FL330 by the time you reach NEEKO, and then track to 54N50W.

But, if you're still somewhere over Newfoundland at say FL320, you have to request higher from Gander Domestic ATC, before you climb to your Oceanic Level.

If you just decide to climb without asking, that's where your day will start to go wrong.



Recent procedural changes to the NAT may also be compounding the problem, so let's take a closer look.

Wait, I thought Oceanic Clearances on the NAT were a thing of the past?

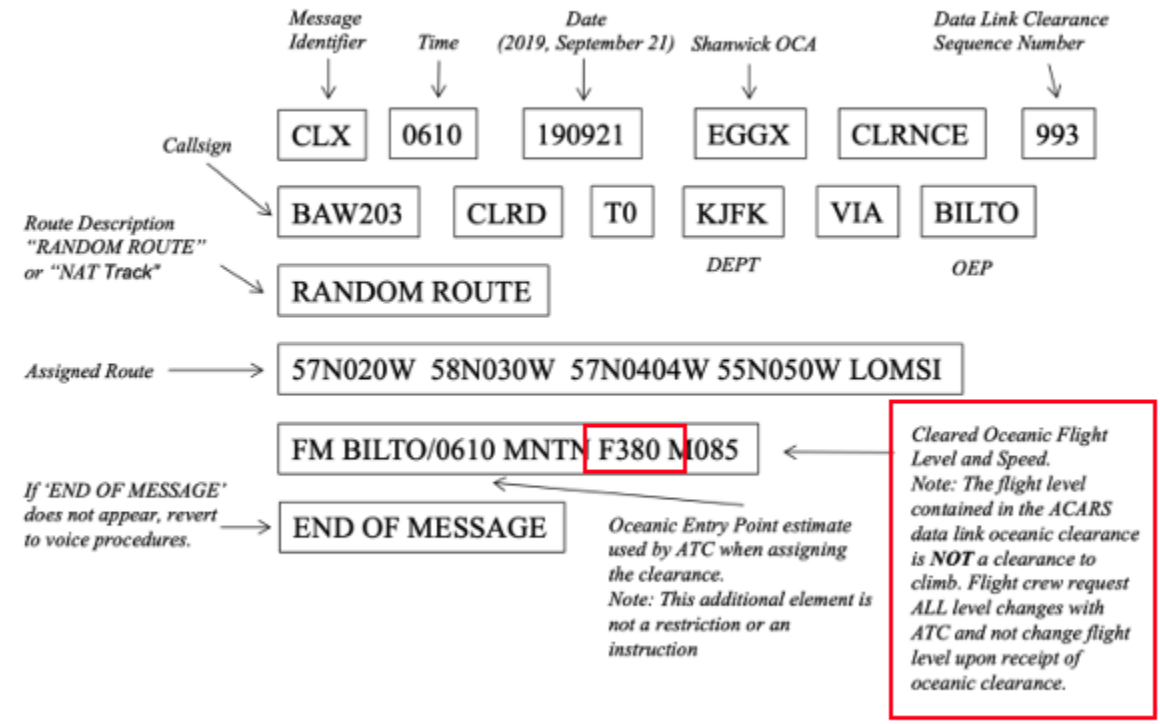
Soon soon, but not yet. While Reykjavik and Santa Maria have removed oceanic clearances, Bodø, Gander and Shanwick are still targeting December 4 for the big switch. Until then, expect to receive a conventional oceanic clearance when approaching their airspace.

Oceanic Clearances

You can read all about them in NAT OPS Bulletin 2020_001 Rev 1, but the crux of the issue is found in Section 5.3 (Clearance Delivery):

… The flight level contained in the ACARS data link oceanic clearance is the "cleared oceanic flight level" for the purposes of complying with the lost communication procedures detailed in State AIPs, ICAO Doc 7030 (North Atlantic Regional Supplementary Procedures) and NAT Doc 007. ATC is responsible for providing a clearance to enable the flight to reach this flight level before reaching the OEP. If there is a concern, flight crews should contact ATC…

They made this handy picture too:



In other words, the flight level contained in the ACARS datalink oceanic clearance is NOT a clearance to climb (or descend). You need to request this with your active ATC.

Why is this becoming a problem again?

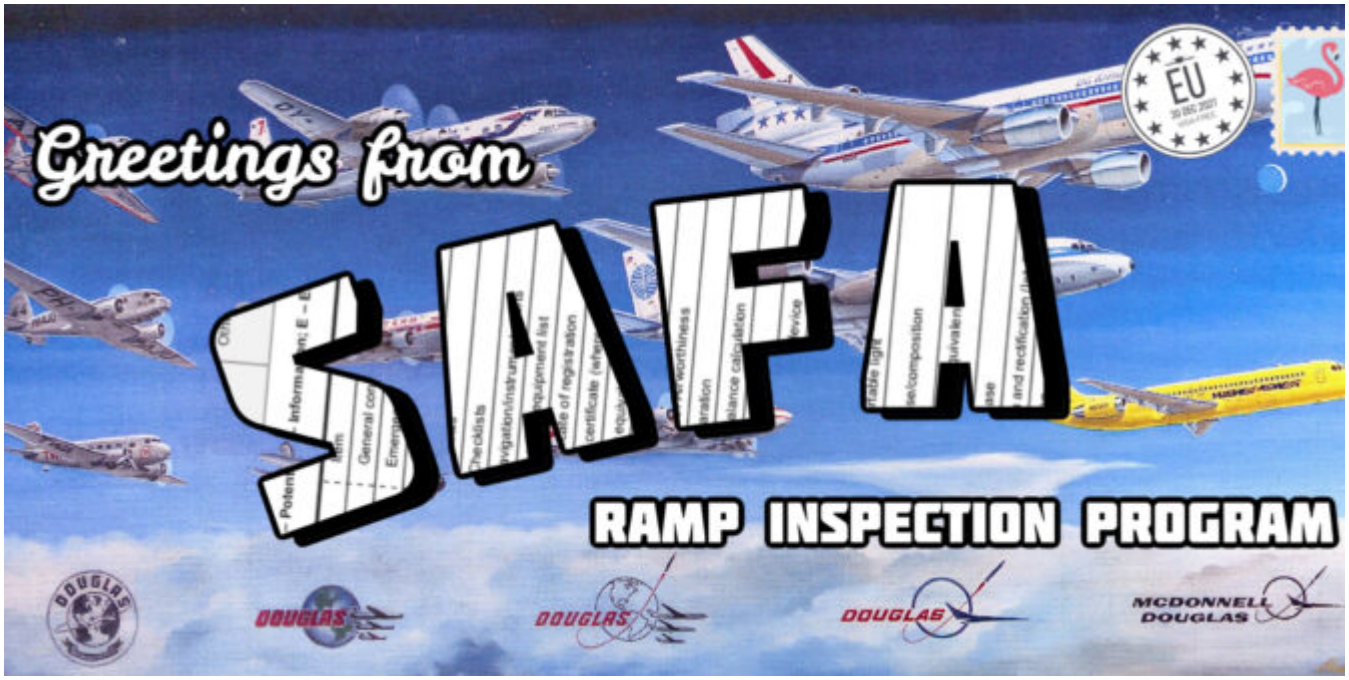
We can only speculate – Gander aren't sure either. But we suspect the use of datalink, in addition to recent RCL changes may be the culprit. For instance, back in May, the automated response to an RCL message was changed (ironically to reduce any ambiguity). It now only reads *"RCL Received by (ANSP)."* In other words, the *"fly current flight plan or as amended by ATC"* bit was removed. A full oceanic clearance therefore contains more information, and the use of ambiguous phrasing such as 'cleared level' may be creating more confusion on the NAT than ever before.

Questions?

Comment below, or email the OPSGROUP Team for help!

SAFA Ramp Checks: The Top 5 Offenders (+Alcohol test)

David Mumford
6 September, 2024



Highlights (updated 2024)

- **The Top 5 SAFA Ramp Check Findings are Flight Planning, Aircraft Documents, Defects, Charts, and Cabin Safety**
- **It's not a knowledge test, so feel free to say "I don't know"**
- **Alcohol testing is now common, see below for a guide**

Ramp check! Not our favourite couple of words in the aviation vernacular, but when your number's up, wouldn't it be good to know **what things most of us are getting wrong**?

Well, here they all are, in a handy little guide. Download, print, attach to wall-of-your-choice, and enjoy.

What do we base this on? Well, something pretty special happened recently. The French DSAC partnered up with IS-BAO to take a look at **hundreds of de-identified ramp check findings** in order to analyse **the most frequent CAT 2 and CAT 3 findings in business aviation.**

This is "special" for three reasons

1. It's great that an aviation regulator has actually shared this info because **now we can see the top things we're getting wrong.**
2. If we can see the top things we're getting wrong, we can stop getting them wrong, and then **ramp checks become faster and more efficient for everyone.**
3. It's great that this specific aviation regulator happens to be the one from **France – because that's where a lot of ramp checks seem to occur!**

So, all good. IS-BAO published the results here, and it's worth giving that a read first before we press on…

The Top 5 Offenders

As the good folks from IS-BAO point out – EASA Ramp checks cover **52 inspection items** spread over 5 areas: **flight deck, cabin, aircraft condition, cargo, and general/other.**

But some of those 52 items generate more findings than others. The DSAC/IS-BAO study found that the **top inspection items by number of CAT2 and CAT3 findings for business aviation** were these ones:

1. Flight preparation (RI checklist item A13)
2. Mass and balance calculations (A14)
3. Manuals (A04)
4. MEL (A07)
5. Checklists (A05)
6. Defect notification and rectification (A23)
7. Navigation/instrument charts (A06)

So essentially, these findings all relate to five key areas: **Flight Planning, Documents, Defects, Charts, Cabin Safety.** Get these right, and your "sweatin over a ramp checkin" days are over, partner!

Have you been ramp checked recently?

Let us know! **Where did it happen? How did it go? What things surprised you?**

As always, we will de-identify anything you share with us before we tell anyone else about it. But we'd love to hear your stories, and other people will too! Our idea is to gather together as many of these stories as possible, and put them into a little book to **help give other pilots and operators an idea of what to expect.** So if you've got a story to share, send us an email at news@ops.group

In related news: the EASA RIM has been updated.

What's the EASA RIM? Europe's version of the Pacific Rim movie only with **ramp inspectors saving the aviation industry from danger?** Or just an updated version of a rather boring manual?

Sadly, just an updated manual.

EASA have made some amendments, corrections and added some other details to their **Ramp Inspection Manual**, so here is **our guide to their 131 pages of guidance** (and an Appendix).

What's up?

The Changes to the RIM are contained in a 131 page document here. So this is the doc that **crew** might want to read. (The massive doc that ramp inspectors use is called the Appendix – we'll get to that later).

The big stuff to look out for (that we could see) is stuff on **Alcohol testing** and they've changed the name of the **"Standard Report" to "Safety Report".**

Page 76.

Let's start with something small.

This isn't actually a change, but just something we think might be of particular use. It is the Checklist for on-the-job training for ramp inspectors. Basically, it is a long list of all the stuff they need to check. Which means it's **a long list you might want to check so you know what you are going to get checked on.**

Alcohol Testing.

Scroll to page 98 (section 10.3) and it lays out all the info on alcohol testing and how it should be carried out. There is a lot of info here (most of it for the inspecting agents rather than you) but still not

uninteresting to read.

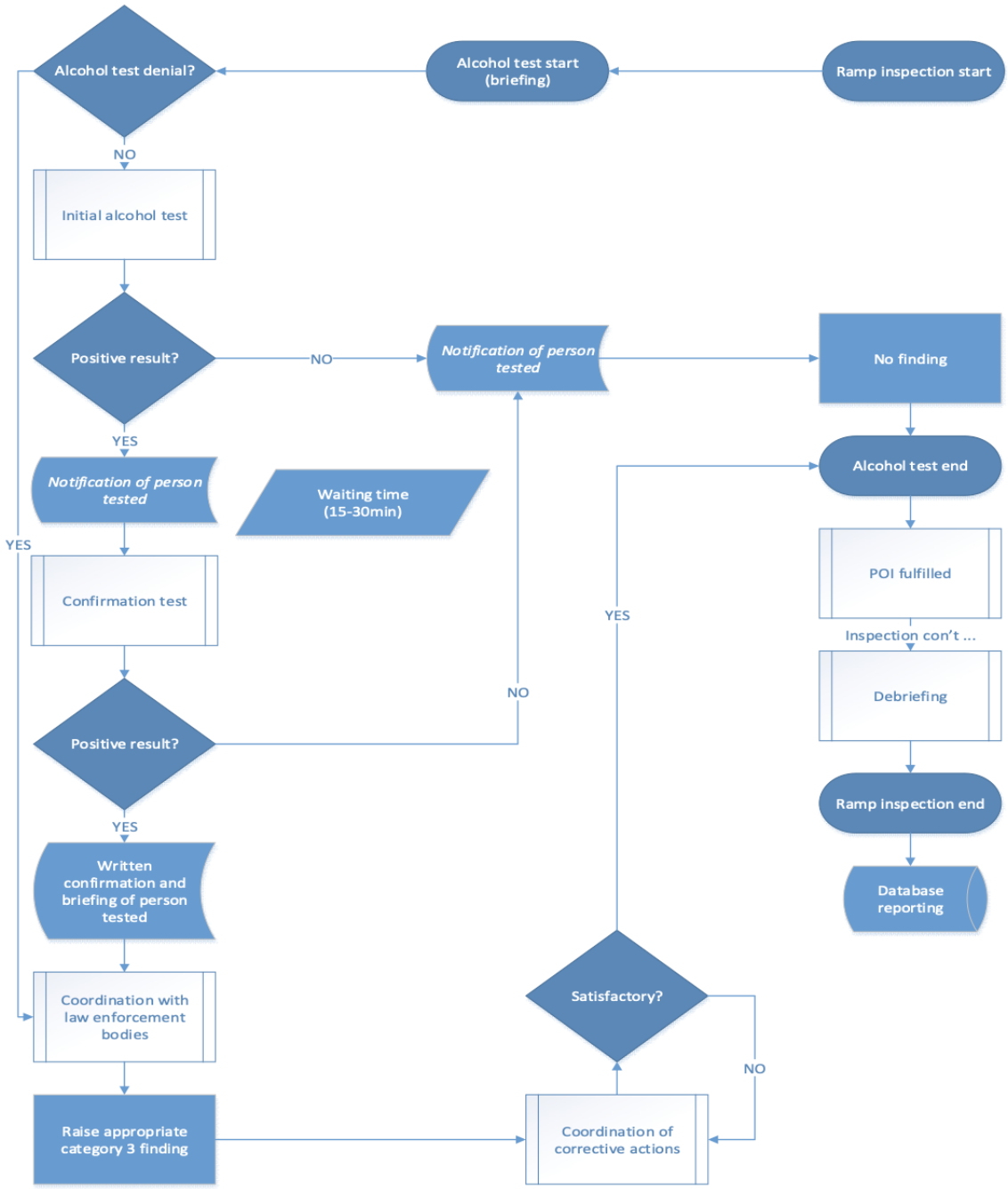
The general principles are that **it should be done somewhere private**, out of sight of anyone else, and if you aren't happy with the spot they pick then chose another.

They're testing to see if you blow **more than 0.2 grams of blood alcohol concentration**. If you blow below that then you pass. If you test above then don't panic straight out, **they must do a follow up confirmation test** which mustn't happen before 15 minutes, or outside of 30.

Certain drinks can mess up the results:

- "Aromatic beverages" like fruit juice *(never heard them called that)*
- Mouth sprays with alcohol content
- Medical juices (*I don't even want to know what that might be*)
- Burping on the test can create false positives.

Here is a particularly hideous flow chart of the entire process.



We think it's easier to sum up stuff like this:

1. **Don't ever go to work drunk.** Most operators/states specify a minimum time between drinking and working but if you aren't sure 12 hours is a generally decent one to work off.
2. Of course even **12 hours won't get you sober in time** if you've been on a mega bender the night before. So don't do that.
3. If you wake up before you're report time and realise you're drunk/potentially drunk then **CALL SICK!**
4. If you think a colleague is drunk, **stop them from going to the airport!** Report them if you need to.
5. If you are at work, and get picked for a random test, **make sure they do it correctly**, in a

private space following the right procedures.

6. **If you blow positive then don't panic** (unless you are drunk in which case do panic, you've messed up bad, partner). Have a think if you've maybe ingested something that could cause a false positive. Tell the inspector and wait for the confirmation test. They leave it at least 15 minutes, but don't push for more than 30.

Moving onto The Appendix.

The Appendix to the RIM is a whole 304 pages filed with **information on ramp check instructions and pre-described findings.**

Many of which have just been updated.

Now, you might be thinking *"why do I care how they're instructing their inspectors on stuff?".* But you should care because if you know how they're inspecting stuff, then it makes it a whole lot easier to not mess up on ramp checks and getting told off.

If you just want to scroll through **the list of changes**, then take a look here at the first 7 or so pages.

If you want a **full description** in standard EASA English, then read the whole 304.

If you want a **summary of the changes** then check this out.

Other useful stuff.

We wrote a whole post on ramp checks a while back and the stuff we wrote in that hasn't really changed that much.

While ensuring you are complaint is important, remember is works both ways. **Ramp Inspectors need to follow the rules and procedures as well.** Particularly when it comes to not delaying you or disrupting your duties too much.

The manual only recommends they must give you **8-10 minutes of quality quiet time** to set up for a flight. If you need more for safety reasons then tell them the time you need them to complete their checks by.

Final note.

Ramp checks can be frustrating. The best way to reduce that is make sure everything is in order and be prepared for them.

There are some airports we've heard are particularly *vigorous* with them:

- Anywhere in France
- Florence, Italy
- Edinburgh, Scotland
- London Heathrow
- Copenhagen, Denmark *(keen on the breath tests)*
- Amsterdam, Netherlands *(also keen on the breath tests)*

Let us know where you've experienced them so we can update the list!

Making a Ramp Check painless (with checklist)

Declan Selleck
6 September, 2024

The **EU Ramp Inspection Program (RIP)** is still alive and kicking – or the **EU SAFA Programme**, as it used to be called.

The RIP is not exclusive to Europe. Your aircraft can be inspected under the program in 49 different countries around the world, including Canada, Morocco, Singapore, and the United Arab Emirates.

Here are the key points:

- Even though it's now called the EU Ramp Inspection Program, ramp inspections for third country operators are still referred to as "SAFA ramp checks". Yeah, it's confusing.
- Ramp checks are possible in every country in the world – but follow a more regulated and common structure in SAFA countries – totalling 49 – see the map and list below.
- There is a **standard checklist** that is used by Inspectors in all SAFA countries, which you should be familiar with – see further down.
- Three categories of findings have been defined. A "**Category 1**" finding is called a minor finding; "**Category 2**" is a significant finding and "**Category 3**" a major finding. The terms "minor", "significant" and "major" relate to the level of influence on safety.
- If there is a "**corrective actions before flight authorised**" finding – then the inspector is concerned and a repair must be made before the aircraft is released to fly.

Unless your aircraft looks like this, you have little to worry about.

Here's how a ramp check normally goes down:

- The flight selected will either be your last of 6 legs for the day, or after a gruelling 12 hour jetlag-inducer, or at 3am when you were thinking about a quick nap during the turnaround. This much is guaranteed.
- As you pull on to the stand, **you will notice more yellow vests than normal hanging around**.
- Two of these will be your friendly ramp inspection team (to be fair, they almost always are)
- A short time later, those yellow vests will be in the cockpit, and the first request will be for a look at your license, medical, aircraft documents (like Insurance, Airworthiness), and flight paperwork. Make sure you've done your fuel checks and there are a few marks on the flight plan.
- If you get a good cop, bad cop scenario, one will disappear down the back (this will be the nice guy) and check the cabin, while the first will stay and ask you tough questions about the TCAS system.
- Some time later, you'll get a list of findings. The average check is probably about 30 minutes.
- You can be guaranteed they will always have at least one finding – which will probably be obscure.
- Sign off the checklist, and you're on your way.

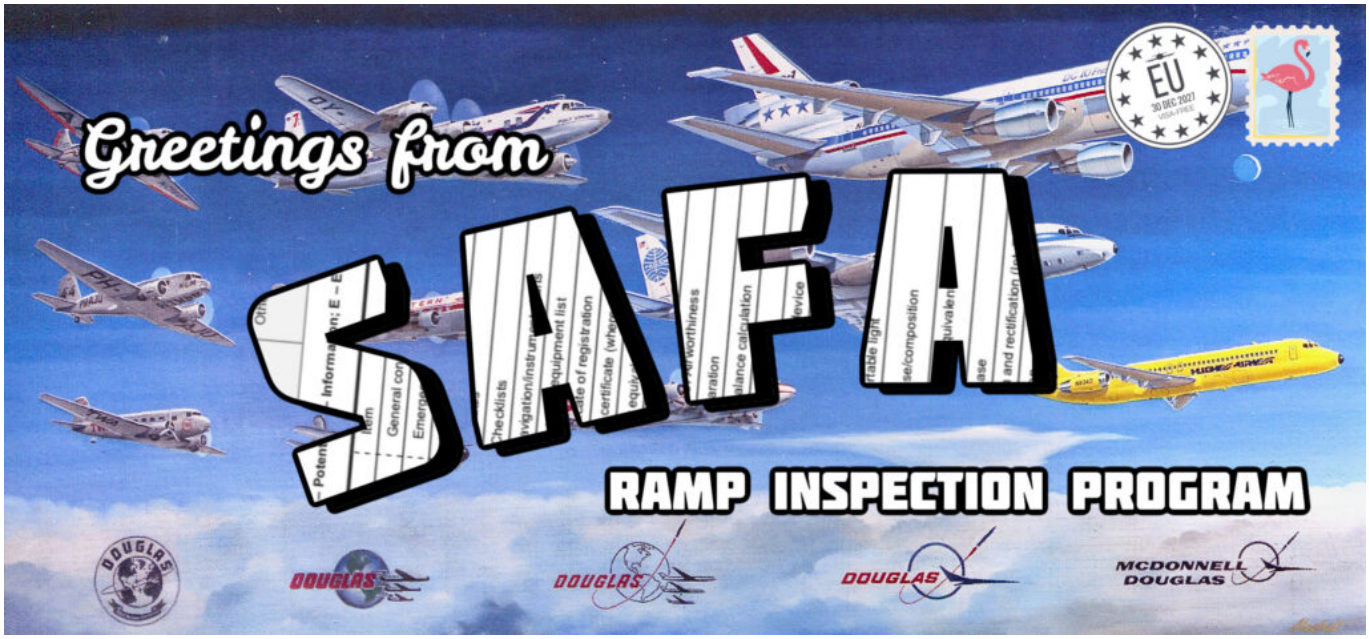
Some interesting points:

- The Inspectors can ask you for manuals, documents, or guidance – but they are not supposed to test your knowledge of procedures, regulations, or technical matters. **This doesn't always happen in practice** – so if you get a tough question – just say "I don't know" – and let them note it if they want to. This isn't a classroom test.
- This guidance is given to Inspectors: Delaying an operator for a non-safety related issue is not only frustrating to the operator, it also could result in unwanted human factor issues with possible negative effects on the flight preparation. **They can (should) only delay your flight**

for a safety related issue.

- Remember, it's not you that's being inspected. It's your aircraft. If you're uncomfortable with the questions, get them noted and allow your operator to discuss later.
- **Every inspector is a little different**. Work with them and you'll find that 90% of your ramp checks will be over in 20 minutes with little issue.
- Private Operators – especially in GA (even more so under the 5700kg mark) – are **far less likely to get ramp checked**. EASA guidelines do apply to General Aviation, but they are far more interested in Commercial Operators.
- The items checked during ramp checks are based on a risk based approach and can differ from operator to operator (for example depending on findings raised during previous inspections). Meaning that operators who get ramp checked with findings will most likely **get ramp checked again**, to see if they've sorted out the problems!
- EASA regulations requiring **alcohol testing** during ramp checks will take effect across all SAFA countries in **Aug 2020**. But some countries have already started doing this: Austria, Belgium, Czech Republic, France, Germany, Greece, Iceland, Ireland, Italy, Netherlands, Portugal, Spain, Switzerland, UK, and Singapore. More info

Common Findings:



See article: **SAFA Ramp Checks: The Top 5 Offenders**

Ramp checks cover **52 inspection items** spread over 5 areas: **flight deck, cabin, aircraft condition, cargo, and general/other.**

But some of those 52 items generate more findings than others. A DSAC/IS-BAO study found that the **top inspection items by number of CAT2 and CAT3 findings for business aviation** were these ones:

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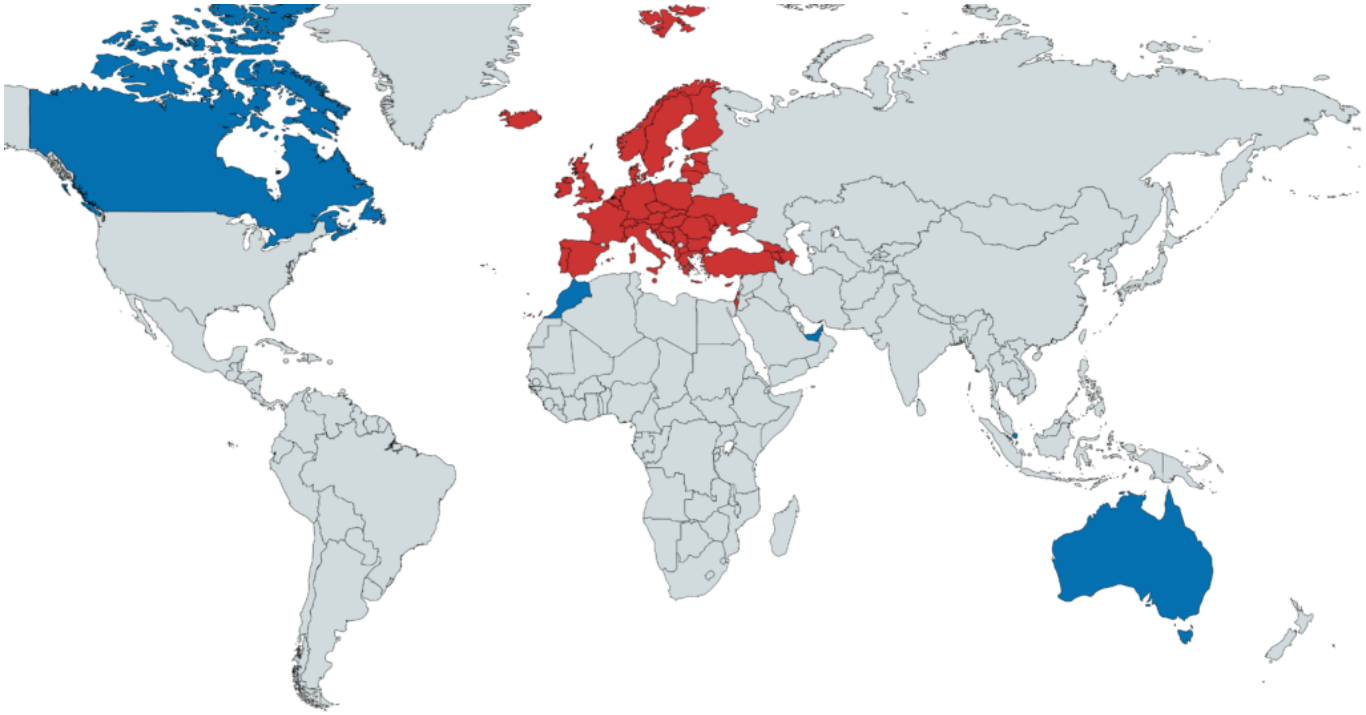
So essentially, these findings all relate to five key areas: **Flight Planning, Documents, Defects, Charts, Cabin Safety.** Get these right, and your “sweatin over a ramp checkin” days are over, partner!

The Countries:

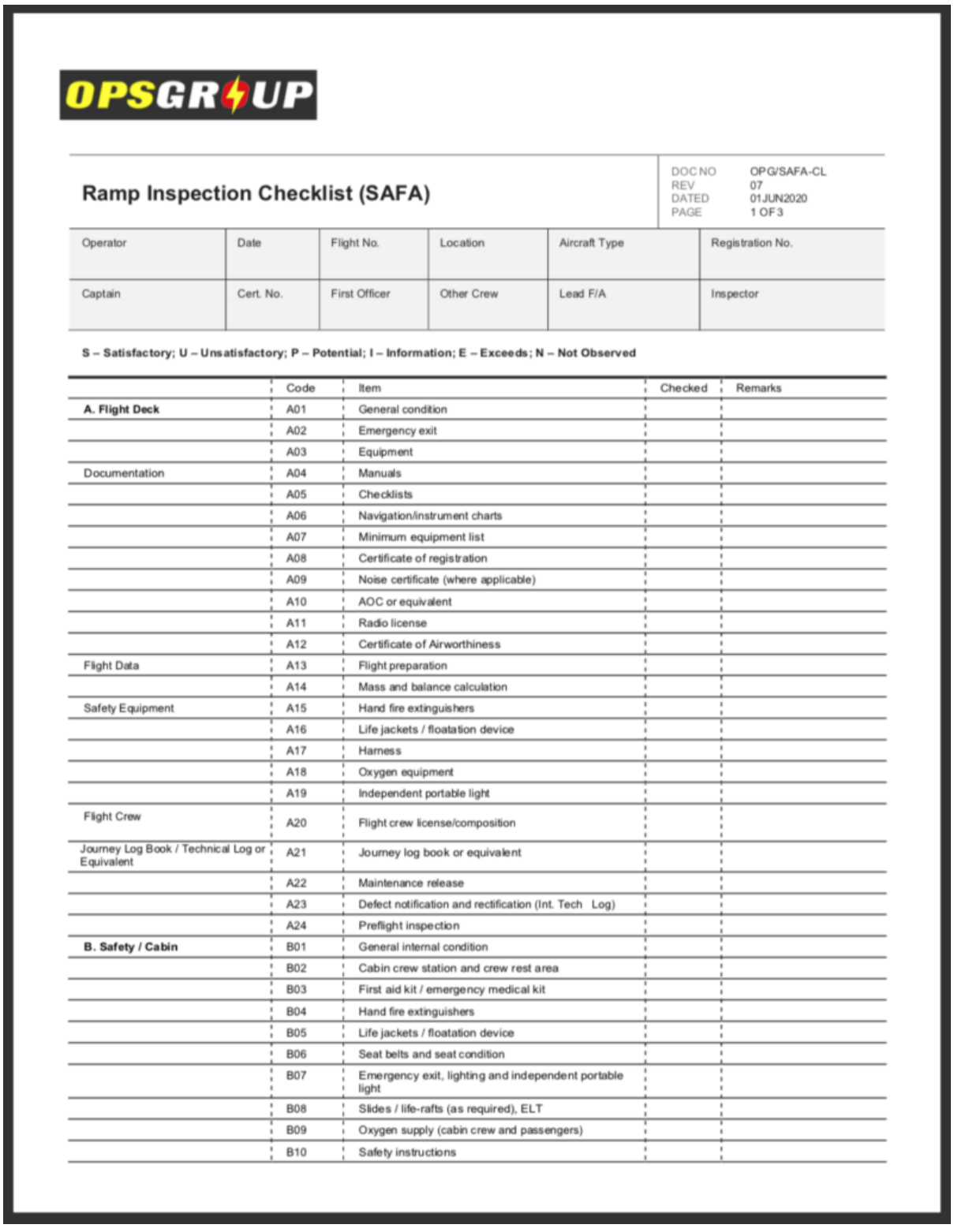


The 49 Participating States engaged in the EU Ramp Inspections Programme are:

Europe: Albania, Armenia, Australia, Austria, Azerbaijan, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Malta, Republic of Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, The Republic of North Macedonia, Turkey, Ukraine, and United Kingdom.

Rest of world: Canada, Morocco, Singapore, United Arab Emirates.

The Checklist:



OPSGROUP

Ramp Inspection Checklist (SAFA)

DOC NO OPG/SAFA-CL
REV 07
DATED 01JUN2020
PAGE 1 OF 3

Operator	Date	Flight No.	Location	Aircraft Type	Registration No.
Captain	Cert. No.	First Officer	Other Crew	Lead F/A	Inspector

S – Satisfactory; U – Unsatisfactory; P – Potential; I – Information; E – Exceeds; N – Not Observed

	Code	Item	Checked	Remarks
A. Flight Deck	A01	General condition		
	A02	Emergency exit		
	A03	Equipment		
Documentation	A04	Manuals		
	A05	Checklists		
	A06	Navigation/instrument charts		
	A07	Minimum equipment list		
	A08	Certificate of registration		
	A09	Noise certificate (where applicable)		
	A10	AOC or equivalent		
	A11	Radio license		
	A12	Certificate of Airworthiness		
Flight Data	A13	Flight preparation		
	A14	Mass and balance calculation		
Safety Equipment	A15	Hand fire extinguishers		
	A16	Life jackets / floatation device		
	A17	Harness		
	A18	Oxygen equipment		
	A19	Independent portable light		
Flight Crew	A20	Flight crew license/composition		
Journey Log Book / Technical Log or Equivalent	A21	Journey log book or equivalent		
	A22	Maintenance release		
	A23	Defect notification and rectification (Int. Tech Log)		
	A24	Preflight inspection		
B. Safety / Cabin	B01	General internal condition		
	B02	Cabin crew station and crew rest area		
	B03	First aid kit / emergency medical kit		
	B04	Hand fire extinguishers		
	B05	Life jackets / floatation device		
	B06	Seat belts and seat condition		
	B07	Emergency exit, lighting and independent portable light		
	B08	Slides / life-rafts (as required), ELT		
	B09	Oxygen supply (cabin crew and passengers)		
	B10	Safety instructions		

Download by clicking above, or here: Opsgroup Ramp Checklist

If you want to delve deep into each item on this checklist to find out exactly what inspectors should be looking for, check out this document published by EASA in Sept 2019, which has the inspection instructions in full. For all things Ramp Inspection Program related, check EASA's dedicated webpage here.

Oceanic Clearance Removal mess – Version 4!

OPSGROUP Team
6 September, 2024

Update: 19th June 2024

Our excitement at seeing another OACC cross the "Oceanic Clearance Removal" finish line has been short lived. Bodø implemented the change on June 17, but it **did not go well**. As a result, they've rolled back the software, and have now decided to try again on **December 4**, when Shanwick and Gander are doing theirs. So, as things stand – **Iceland and Santa Maria have removed the clearance requirement**, and **Bodø, Shanwick, and Gander** will now all transition on the same day in December.

Original Story

Last August, the headlines pointed to a promising development for all of us: **No More Oceanic Clearances Required** on the North Atlantic. The reason? Rapid improvements in comms and surveillance coverage (through satellite-based CPDLC and ADS-C) have created an environment far more like a regular radar sector. The idea of getting a separate Oceanic Clearance was becoming dated.

The reality from the pointy end is – you guessed it – **not quite as exciting**. After the Oceanic Centre changes to OCR (Oceanic Clearance Removal), you don't have to request an Oceanic Clearance. This is true. But you **do** have to send a new-style "RCL message", which is precisely the same message as if you **were** getting an Oceanic Clearance. In fact, that Oceanic Clearance does still exist, behind the scenes. You just don't get a copy of it any more. More on that below.

The bigger issue for operators and pilots is trying to align cockpit procedures and crew expectations with the ever-shifting dates of **when this is happening**. Originally, all 5 Oceanic Centres (Shanwick, Gander, Iceland, Bodø, Santa Maria) were going to do this in March of this year. The current dates are now:

- **Shanwick**: ~~April 9~~ ~~May~~ ~~Q4 2024~~ **December 4**

- **Gander**: ~~March~~ ~~May 3~~ **December 4**
- **Bodø**: ~~March~~ ~~May 6~~ ~~June 17~~ **December 4**
- **Santa Maria**: completed March 21
- **Iceland**: completed March 21

Shanwick, Gander and Bodø have now delayed OCR implementation until December 4. This creates a 2024 year-long limbo for NAT crews, and raises some questions about the way in which changes to this complex airspace are made.

OCR Delayed – So, what now?

- If you are crossing the NAT solely via **Shanwick** and **Gander**'s airspace, don't worry about OCR/RCL changes until **December 4**. Do everything as you normally do. You will request, and get, a clearance as normal. **But** keep in mind that a lot of confusing documentation will now be out there with incorrect dates and procedures that are not yet in place.
- If you are entering via **Iceland** or **Santa Maria**, the Oceanic Clearance Removal has been completed. You don't need a clearance, but you **do need** to send an **RCL message**. The same will apply in **Bodø** from December 4. If you are transiting into Shanwick or Gander, **you don't need** a separate clearance. Iceland/Santa Maria will take care of that for you.
- If you are entering via **New York**, nothing has changed, and won't. New York already operate without Oceanic Clearances, and your flight is coordinated tactically with the next Oceanic Unit.
- ICAO NAT Bulletin 001/23 (Rev 4) was issued on June 20, and all the dates are now finally correct!

Gotcha's to watch out for

- **NAT Doc 007 is unreliable**. The Chapter on Oceanic Clearances (Chapter 5) was removed for the current edition, and crossings now refer to an RCL process that the majority of traffic will not use.
- **Your EFB/Ops manuals** are likely to have incorrect dates and procedures regarding Oceanic Clearances.
- AIP, AIP SUP, and AIRAC updates relating to Oceanic Clearances are likely to be confusing, as a lot of AIP changes have already been made for the planned March/May dates – which are now not happening.

Complexities and Confusion

The North Atlantic is probably the most complex piece of airspace in the world for crews to get to grips with. NAT Doc 007, the bible for NAT Ops, runs to about 170 pages. This complexity is the primary reason for the NAT "HLA" airspace itself, and needing specific approval to be able to operate within it. Crews need to know **a lot**.

Every **change** on the North Atlantic imputes responsibility on the flight crew to understand and execute it. Being able to do that requires clear and simple wording, and above all, for the information to align

between the various centre's and domestic units involved. Potential confusion for flight crew should be minimised, and not underestimate just how hard it is for pilots to keep up with the litany of changes around the world every month.

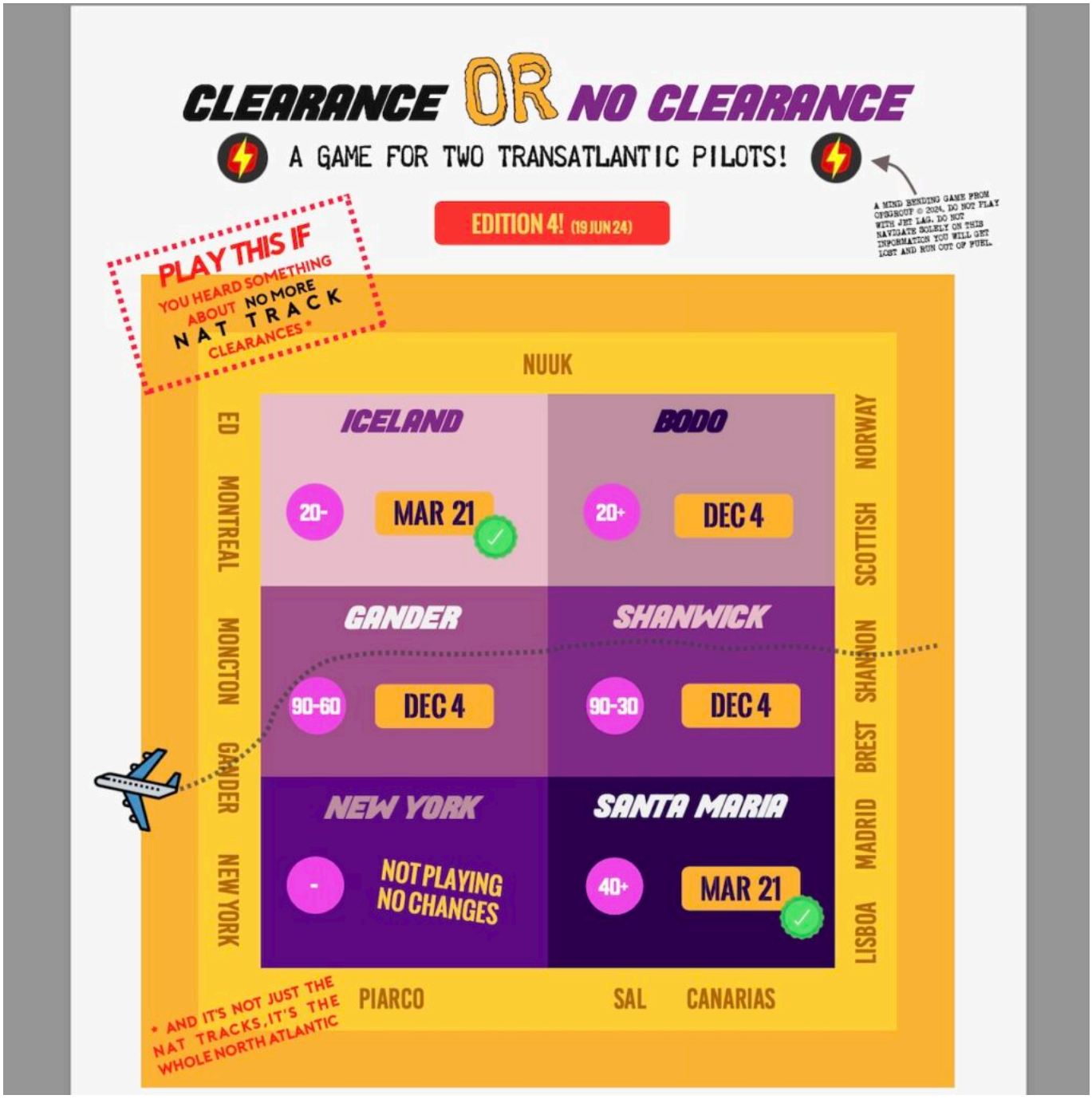
The Oceanic Clearance Removal change has now created quite significant doubt in the minds of crews as to what is happening, and when. In the first place, the headline story "No More Clearances" is misleading. There is still an Oceanic Clearance, we're just not getting a copy of it (An Oceanic Clearance Message (OCM), is still sent to domestic ATC units, so they can see your clearance!). This mismatch between what the pilot *thinks* is happening (no Oceanic Clearance), and what is actually happening (there is still an Oceanic Clearance) gives rise to understandable confusion, and potential for errors. This explains why an RCL is still required … and also explains why trying to think of the RCL as something other than "Request for Clearance" is difficult.

The **continual shuffling of dates** further creates a big workload for operators and pilots, and points to the need for a more integrated approach to making changes on the North Atlantic. **One single date** for a change of this magnitude would have been ideal, but as mentioned, it's complex airspace. Nonetheless, the way this has played out has been frustrating for everyone involved.

Clearance game update

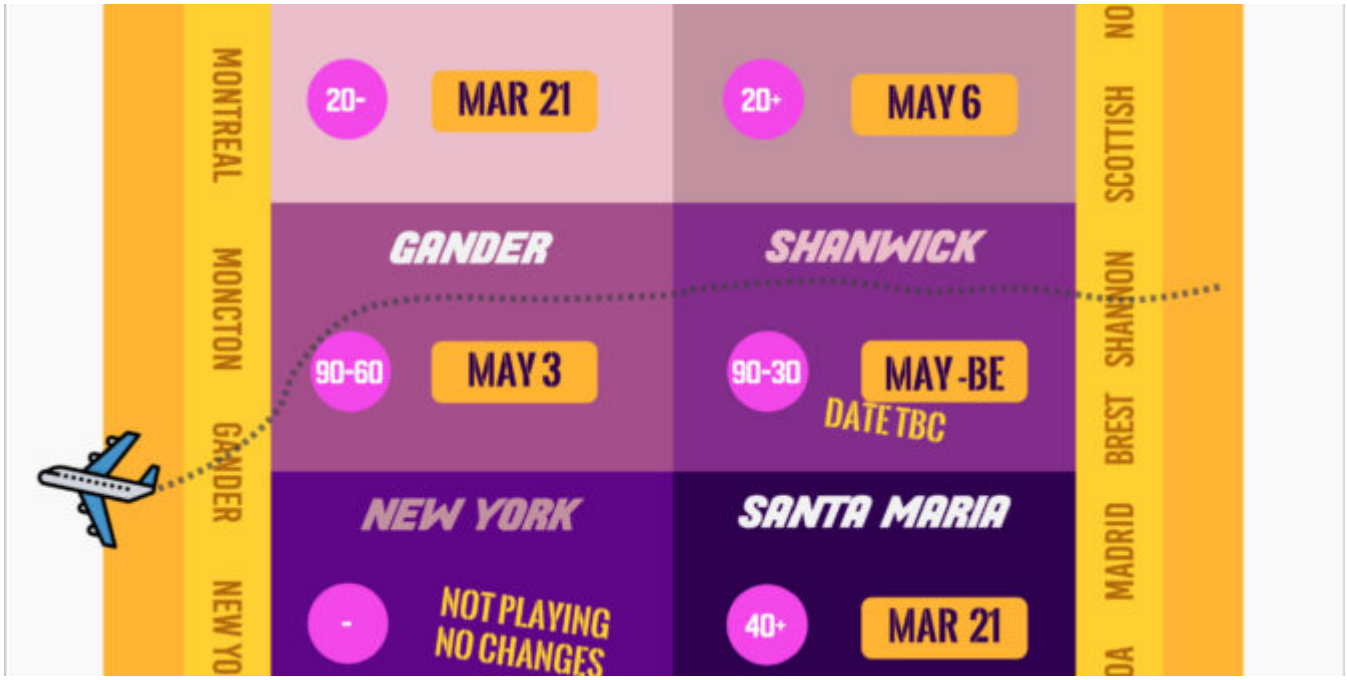
We've updated the "Clearance or No Clearance" game with the **new dates**, and some FAQ.

Download the current version (PDF, 0.5 Mb).



NAT Clearance changes – a game! (V4)

David Mumford
6 September, 2024



- **We've made a little game to help with Oceanic Clearances changes on the NAT.**
- **You can download it here.**
- **Updated June 19, 2024 – Edition 4!**

Why the game?

By **Christmas** of 2024, all OACC's on the NAT will stop transmitting an Oceanic Clearance to you. They still want you to send an "RCL" message, which used to mean "Request Clearance", but now it just means "Tell us your latest preferences". Think of it as Checking In.

There are different dates when Oceanic Clearances will cease to be issued in the following FIRs:

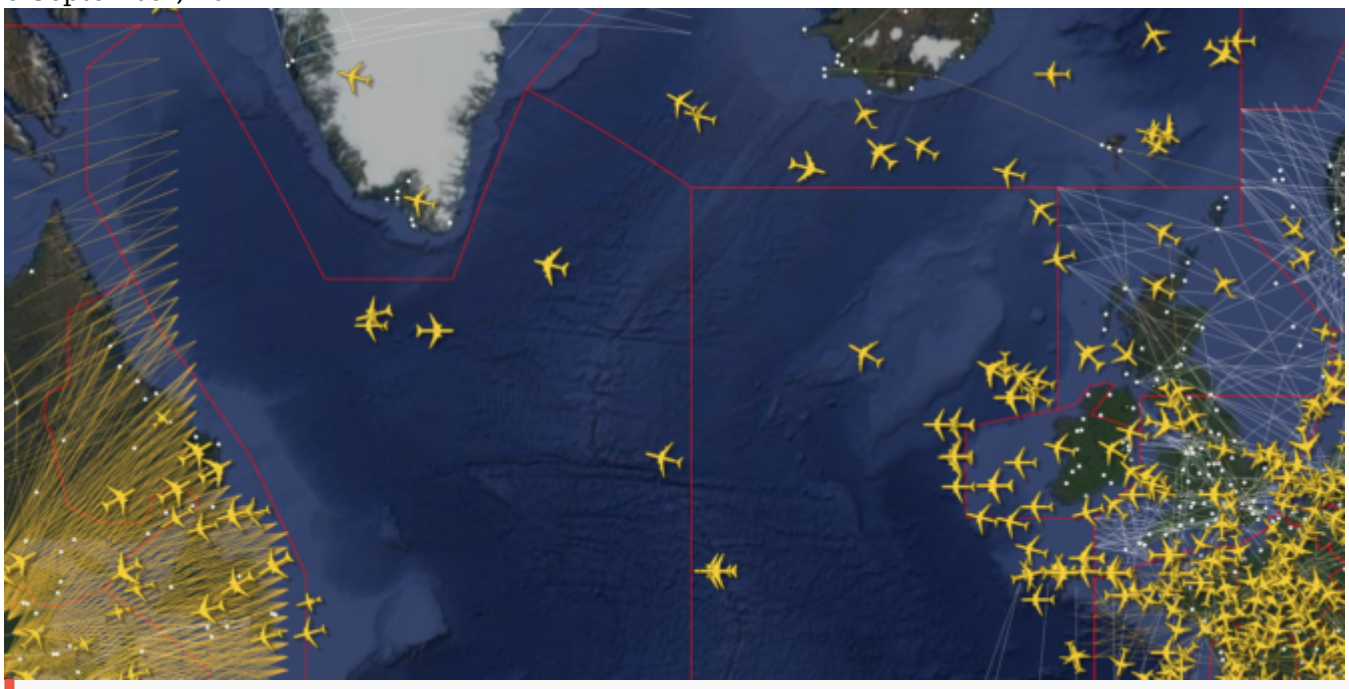
- **Shanwick**: ~~April 9~~ ~~May~~ ~~Q4 2024~~ **December 4**
- **Gander**: ~~March~~ ~~May 3~~ **December 4**
- **Bodø**: ~~March~~ ~~May 6~~ ~~June 17~~ **December 4**
- **Santa Maria**: completed March 21
- **Iceland**: completed March 21

But let there be no further blather about it here! We've done enough of that already – check here for our full post on the topic. **Just play the game – it's fun, and will tell you everything you need to know in 3 pages!** Print it out, share it, pin it on a wall somewhere if you so desire. We *do* so desire.

And if you have a question not covered in the game, send it to us at team@ops.group, and we'll help you out – and add it into the next version.

Timeline of North Atlantic Changes

Mark Zee
6 September, 2024



This page has a timeline of big NAT changes, for the six Oceanic Area Control Centres (OACC's): EGGX/Shanwick, CZQX/Gander, BIRD/Iceland, ENOB/Bodø, LPPO/Santa Maria, and KZWY/New York Oceanic.

2024

- **March 2024**: Beginning of the process of **Oceanic Clearance Removal (OCR)** for all NAT FIR's. More info.
- **March 2024**: **Comms Failure** Procedures simplified. More info.
- **March 2024**: **Squawk 2000** 10 minutes after OEP is now standard in all NAT FIR's, **except** Reykjavik. More info.

2023

- **In Sep 2023, the US FAA officially renamed WATRS airspace in the West Atlantic, to simply WAT.** This small but important change is part of an effort to align control areas with ICAO regions. Existing B050 authorizations will be re-issued within 24 months.
- **In Jan 2023, there were some changes to the boundaries of the datalink exempt airspace in the northern bit of the North Atlantic.** This used to extend down south to SAVRY, but now only goes as far as EMBOK. So now you need datalink in the NAT oceanic airspace over Greenland controlled by Gander. More info

2022

- **From June 14, 2022, HF data link (ACARS) does not meet the satcom part of the NAT DLM requirement – you need Inmarsat or Iridium for that.** So if you want to fly in NAT DLM airspace (FL290-410 in the NAT region) "J2" in field 10a of your FPL won't work anymore – you need "J5" for Inmarsat or "J7" for Iridium. More info.
- **From March 1, 2022, all North Atlantic tracks at FL330 and below will be abolished.** It means operators will have the flexibility to file random routes at FL330 and below when flying between Europe and North America. Particularly for operators unable to file routes across OTS tracks with active flight levels, this means much greater flexibility in choosing their own trajectory. More info

2021

- **The "MAX UPLINK DELAY VALUE TO 300 SECONDS" message will now be sent to all aircraft – and each time you logon to a new OACC.** This change came in July 2021 with the new NAT Doc 007.
- **No NAT Tracks** experiment. Starting February 2021, Shanwick and Gander will experiment with not issuing any NAT Tracks on quiet days. See article. **Update: The No NAT Tracks experiment ended in June 2021** – it's over. There won't be any further NAT OTS NIL days.

2020

- **Datalink Mandate**. Effective Jan 20, 2020, datalink (CPDLC and ADS-C) is now required between FL290-410 in the NAT region. There are exempted areas: North of 80N, Surveillance airspace over a section of Greenland and Iceland (where ATC can see you on radar or ADS-B), and New York Oceanic East. Aircraft without datalink can request to climb/descend through datalink mandated airspace, but will only be considered on a tactical basis – most likely you'll get stuck under FL290. More info

2019

- **Micro-SLOP** ATC don't seem to like the term, but that's basically what it is. Before, you could only SLOP centreline, 1NM or 2NM to the right. But from Aug 2019, Gander, Shanwick, Santa Maria and Bodo started allowing offsets right of centreline in tenths of a nautical mile up to a maximum of 2NM. From 12th Sep 2019, Iceland and New York Oceanic will allow this too. Check out our article for more info.
- **ASEPS.** Reduced longitudinal separation (down to as close as 14NM) has been happening since April 2019 in Gander, Shanwick, and Santa Maria. But from Oct 2019, lateral separation will be reduced to 19NM from the previous PBCS limit of 25NM for compliant aircraft. To be able to get this reduced separation, you'll need ADS-B and to be fully PBCS compliant (i.e. meet the specs of RNP4, RCP240 and RSP180). Read the ICAO Bulletin for more info.
- **OWAFS** Operations Without a Fixed Speed. In other words, you get to decide how fast you fly. It's been happening in the Shanwick, Santa Maria, and New York Oceanic FIRs since Apr 2019. Iceland say they will start doing this some time around Oct-Nov 2019. You get a normal oceanic clearance, with a fixed Mach Number, like you always did. But then somewhere after

the Oceanic Entry Point, you may get a CPDLC message saying RESUME NORMAL SPEED. You should reply with WILCO. What that means is: Fly ECON, or a Cost Index with Variable Mach. You can fly within 0.01 up or down of your cleared Mach, but if it varies by 0.02 or more you must advise ATC. Read the ICAO Bulletin and check out our article for more info.

- **PBCS** From March 29th 2019, there may be more than just three daily PBCS tracks. They will continue to be only FL350 to FL390 inclusive and only on the designated tracks during the period the tracks are in effect. There may be days where there are no PBCS tracks, 3 PBCS tracks, 5 PBCS tracks, potentially even all the tracks.
- **Contingency Procedures** From March 29th 2019, new contingency and weather deviation procedures were introduced. For contingencies, you now turn at least 30 degrees and offset by 5 NM. For weather deviations, you now do your 300ft up/down offset when 5 NM away from track. More info here.

2018

- **PBCS** From March 29th 2018, PBCS is a requirement for the daily mandated PBCS NAT Tracks (right now, that the 3 core tracks each day) between FL350-390. PBCS for the NAT means having both RCP240 (4 minute comms loop) and RSP180 (3 minute position reporting). If you're missing approval for either, then you can fly anywhere other than along the core NAT tracks FL350-390. Read more about PBCS in our article, and check out the NAT Circle of Change for an easier graphical representation.
- **RLAT** From January 4th 2018, Shanwick and Gander increase the number of RLAT tracks – most tracks between FL350-390 will now be RLAT – 25nm separation between them. *RLAT replaced by the term PBCS.*

2017

- **SLOP** – Offsetting is now mandatory. Choose 0, 1, or 2nm right of track. We think 1 or 2 is best. Consider the recent A380 story.
- **TCAS 7.1**: From January 1st, 2017, TCAS 7.1 is required throughout the entire NAT region.
- **Cruising Level**: Effective 2017, you no longer need to file an ICAO standard cruising level in NAT airspace.
- **Gross Nav Error**: This is now defined as greater than 10nm. Everywhere else in the world, it's 25nm.
- **Datalink Mandate**: Since Dec 2017, datalink now required throughout the NAT Region from FL350-390. Exempt areas: Tango Routes, airspace north of 80N, Surveillance airspace, Blue Spruce routes, and New York OCA.

2016

- **Confirm Assigned Route** Introduced August 2016, you will see this message when you enter NAT airspace with datalink, and you should reply with the planned route in NAT airspace. Designed to catch errors.
- **NAT HLA** The airspace formerly known as MNPS. Changed February 2016. NAT HLA = NAT High Level Airspace. Now includes Bodo Oceanic, and aircraft must be RNP 4 or RNP10.

Previous MNPS approvals good through 2020.

2015

- **RLAT** Started December 2015, spacing on the NAT Tracks reduced to “Half Track” (30nm) for 3 core tracks. RLAT=Reduced Lateral Separation Minima. *Next phase of this (ie. all NAT Tracks 350-390) was introduced in Dec 2017.*
- **SLOP** Offsetting right of track by 1nm or 2nm became Mandatory.

Edinburgh security rules create painful delays

David Mumford
6 September, 2024

Key Points

- **EGPH/Edinburgh airport has a rule that means all aircraft have to go through outbound security screening, regardless of weight or type of flight.**
- **Airport Spy reports suggest this can easily take an extra hour to complete, so plan for departure delays.**
- **If planning a trip to the region, consider EGPF/Glasgow instead!**

There’s a rule in the UK that means outbound security screening is required for commercial flights over 10 tonnes MTOW, and all flights over 45.5 tonnes whether commercial or private.

But at **EGPH/Edinburgh**, outbound screening is required for all flights, regardless of weight or type of flight.

This means all crew and pax must pass through security, and abide by the 100ml liquid rule for carry-on luggage.

A recent Airport Spy report says that this **whole process took around an hour**, and they were the only crew there at the time!

Another Airport Spy report says to consider using **EGPF/Glasgow** instead, where they just have the standard UK rules for screening, and also don't have arrival or departure slots.

The reason that EGPH/Edinburgh has this strange rule is something to do with it being a **"Critical Part" airport.**

What is a "Critical Part" airport?

Some folks we spoke to called this term *"Critical Park"*, others *"Critical Path",* but we think it's *"Critical Part"*.

Either way, there's nothing about it in the UK AIP or seemingly anywhere else online.

It's apparently something to do with how the *specific layout of the airport affects zoning for security purposes*.

And that's all we know.

Are there any other UK airports that do this?

Yes. **EGLL/Heathrow** and **EGKK/Gatwick** are both "Critical Part" airports, so both have the same rule: all outbound flights must have security screening here.

EGWU/Northolt is the only other airport in the UK that we know of which has mandatory outbound security screening for all outbound flights, but that's due to some kind of requirement in place from the military there, as the airport is a joint civil/military field.

We contacted a whole bunch of other airports (EGSS/Stansted, EGGW/Luton, EGMC/Southend, EGLC/London City, EGTK/Oxford, EGLF/Farnborough, EGKB/Biggin Hill), and they all said the same thing: no weird "Critical Part" stuff here – the normal UK rules apply.

So tell me the rules again?

EGPH/EGLL/EGKK/EGWU: Outbound screening is required for all flights, regardless of weight or type of flight.

All other UK airports: Outbound screening only required for commercial flights over 10 tonnes MTOW, and all flights over 45.5 tonnes whether commercial or private. You can read more about this here.