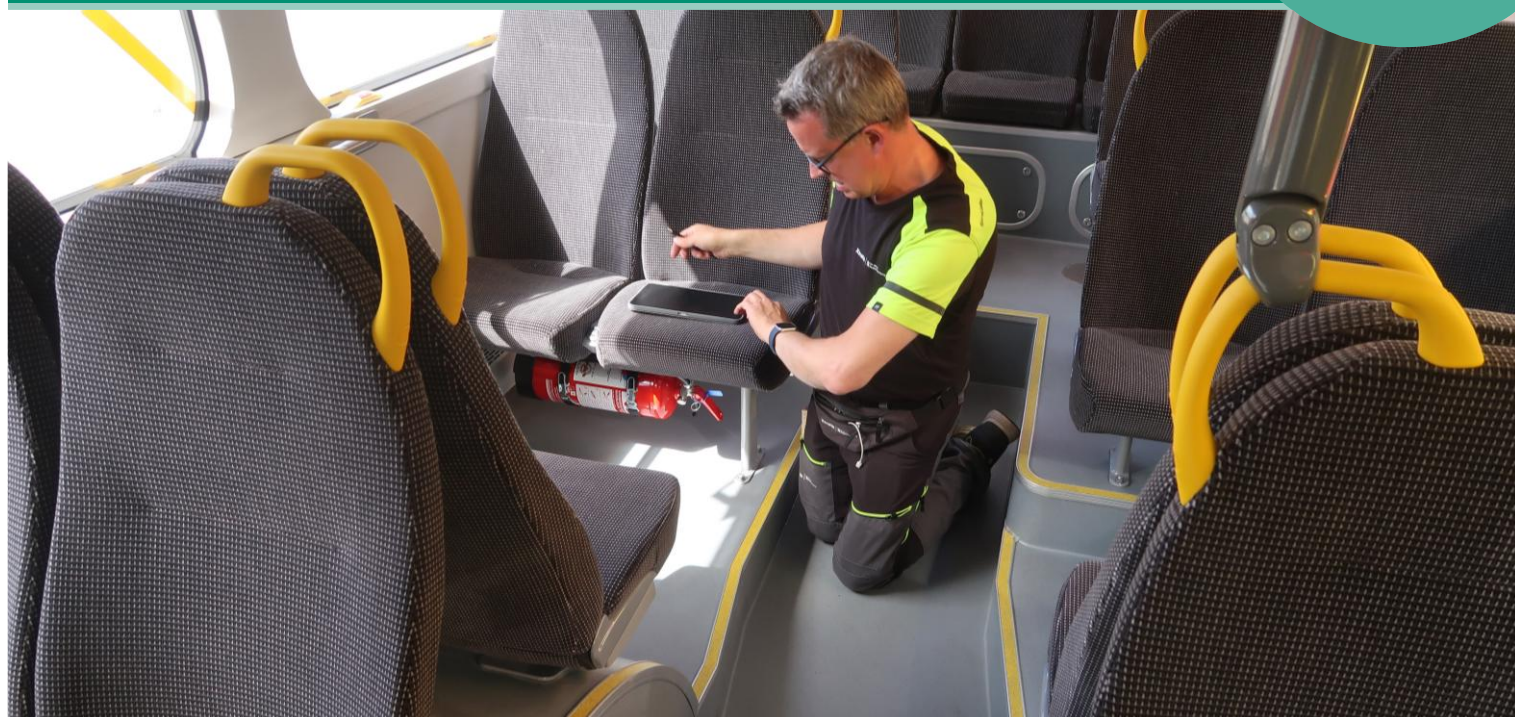


Efficient delivery inspection with FRIDA

Customer stories



A delivery inspection is a vehicle check that must be carried out before a vehicle is put into service under a new service contract. The delivery inspection is designed to verify that the vehicle meets every requirement set out by the service contract. Nordic Port's FRIDA system offers a digital inspection protocol that makes the process efficient and smooth for whoever carries out the vehicle check.

We followed a delivery inspection of two new buses supported by FRIDA, carried out in Sandviken, a few miles west of Gävle. They are checked by X-trafik, which is responsible for public transport in Region Gävleborg. This time it involves two new fully electric two-axle buses made by BYD, set to run in local traffic in Sandviken under a contract held by Transdev. The buses bought by Transdev are brand new from BYD's factory, and now everything inside and outside the buses must be checked against what the contract requires.

John Wendler, vehicle specialist at X-trafik for contract and vehicle checks, carries out the inspection of the two new buses using FRIDA's Vehicle Check tool. He sees himself as something of a caretaker for the taxpayers in his role. – I'm not a vehicle mechanic myself, though, so for those kinds of questions I have Peter Kandén and his colleagues to help if needed, says John as he starts inspecting the first BYD bus from the outside, tablet in hand with FRIDA open.

Besides his tablet, he carries a belt bag with a few other tools: a tape measure, some USB cables and a few square-drive keys he might need. Sometimes he also brings stickers that the client, in this case X-trafik, wants in the bus, such as fare information or stickers showing that the bus has wi-fi.

How long does a delivery inspection like this take?

– It varies a lot, says John. But I usually want to allow an hour per bus for a delivery inspection.

John has prepared for the delivery inspection: he has created his own inspection forms tailored to the specific requirements of the current service contract, and entered all the checks to be carried out into the FRIDA system so that everything is on the tablet he brings with him.

When John connects the tablet he has with him, everything is ready: one of the buses is called 7781, and now all the vehicle's details appear on the tablet screen. Everything is there, from vehicle data to the service contract.

The only thing John adds now is the location where the bus's delivery inspection is carried out, in this case at Transdev's depot in Sandviken. The time is entered automatically when he starts the delivery inspection, so everyone can see where and when it was carried out.



In this case, the delivery inspection in FRIDA has been set up by John so that it matches roughly the flow he wants during the delivery inspection of these particular buses, meaning that all the check points come in the order he himself finds appropriate. Otherwise it would be necessary to run back and forth several times to get through everything that needs to be checked.

– We work with divided inspection questions here, we have a section called exterior, says John. That's how we do it, but this can be built in many different ways, it's up to whoever uses FRIDA how they want to do it.



The first point in this case is something called "X-trafik design". John then walks a round outside and around the bus, making sure the stickers are in place the way the contract says they should look. He continues on the outside and checks for any dents that can actually occur during transport and handling, even on brand new buses that have never been in service. The vehicle's design, tyres, flag holders and various other details are checked. Next, whatever is behind the hatches on the bus, at the back and on the sides, is checked. That's where the fire safety systems are, which must work. Finally, the overall exterior impression is reviewed and approved in FRIDA's delivery inspection protocol on the tablet. If whoever is carrying out a delivery inspection of a vehicle is ever unsure how a detail should look, they can simply open FRIDA's design manual on the tablet, where everything is documented showing exactly how the bus should look according to the current contract. At X-trafik, FRIDA proposes that every point is approved. Only when John finds a deviation does he click "failed" on that point, which he finds easier since most things are usually as they should be. In this case, all the exterior points remained approved in FRIDA.

After the exterior inspection, where everything is entered into FRIDA's tool, it is time to step inside the bus. The first thing checked is the front fire extinguisher located next to the driver's seat. The cylinder should be full, which it is in this case, and its gauge must be clearly visible. There is also a fire extinguisher at the back of the bus, checked in the same way.

It turns out there is a minor problem with the stickers meant to go inside the bus; the ticket prices end up in a slightly different spot than on earlier models, due to a small change in the design around the driver's seat.

From the driver's seat, John checks the real-time camera and other safety systems. For example, the camera must always switch on when the rear door opens, so the driver can see that passengers get off the bus safely, perhaps with a pram or a walker. Various warning lights must also work and be in the right places. The alcolock fitted in all X-trafik buses is found to be functioning as required by the contract in this particular bus.

– It's more practical to have the alcolock in every bus than a central alcolock at the depot that everyone has to blow into, says Patrik Partin, vehicle systems specialist from Transdev's head office in Bromma, Stockholm.

Then it's the ticketing system's turn, which isn't always entirely right, according to John. There is both a card payment terminal and a ticket machine here, since it's still possible to buy a ticket on board the bus within X-trafik.



He also brings a tape measure to check that the seats have the correct height and spacing. This is so the bus complies with the Bus Nordic standard (the recommended standard for buses in the Nordics), and in this bus it held up well; it's about legroom, the correct backrest angle and a few other things.

The digital signs showing the bus's destination and route number are also checked. The speakers must work, used both for automatic announcements and when the driver addresses passengers. There are speakers inside and outside the bus, and both worked when John tested the system.

There is also an infotainment system inside the bus that shows stop names and other information on screens almost all passengers can see. There is also a panic alarm the driver can use if needed. The passengers' red stop buttons are checked and are where they should be in the bus. There are also blue buttons that indicate a passenger needs a little more time.



There is also a point John has added himself in FRIDA called "Other". There, if needed, he can write free text and fail something he has found that isn't included in the pre-set delivery inspection protocol. Something he uses very rarely, only if something is completely wrong.

All X-trafik buses have charging sockets at every window seat for both USB-A and USB-C – John doesn't check that every socket works, to save time. Since the sockets run on a couple of different circuits in the bus, he tests one per circuit. That's usually quite enough.

A good number of further details are checked before John ticks off the last point on his tablet. A few deviations were found, even though most things were exactly as the contract required.

Now you've entered everything into FRIDA using the tablet – what happens next?

– I've noted the deviations I found and entered them into the tablet. That registers in the system as a failed check, which was expected, nothing unusual about that.

In this case it concerns the stickers meant to be fixed to the outside of the bus showing that there is wi-fi on board; the sticker supplier hasn't managed to make them stick properly, which the supplier has promised to fix right away. In addition, a sticker by the driver's seat wasn't working as it should under the contract.

An email is then sent through FRIDA's system to whoever is responsible for the vehicles at Transdev. Whoever receives the email gets a message saying the vehicle hasn't been approved, and the email also includes a PDF file where everything is documented. The file can then be printed or forwarded to those concerned.

– Then a follow-up inspection is created in FRIDA, sitting in the system waiting for my next visit, says John. That inspection only covers what failed, just like a re-test at a vehicle inspection station. Normally I come back to check those points, which is usually quick. In some cases, not even a return visit is needed. In Sandviken it was a sticker meant to be on the buses that wasn't in place.

Transdev in Sandviken can fix that themselves at the depot, followed by a phone call to confirm everything is done.

– Because if we don't have an approved delivery inspection, the vehicle can't be put into service, that's the basic rule. Every vehicle running under our contract must be registered in FRIDA, where all information about them is kept. You're not allowed to run a vehicle without an approved delivery inspection.

There are of course exceptions. According to John, one occurred when all buses of a certain make had faulty USB sockets. The buses were then allowed to run anyway under an exemption, since a fault like that doesn't affect safety.

– So we can grant an exemption for isolated faults, but if half my protocol here is just deviations, that's a different matter. It's very rare, though, for things to be that bad.

Do you check the buses again later too, once they've already been running for a while?

– Yes, twice a year every vehicle is checked by Transdev themselves or by one of the other operators, Vy buss and Mohlins Bussar, who run services for X-trafik in other parts of the county. They do it exactly the same way in FRIDA, guided by me, since I'm responsible for this. On top of that, I do some spot checks myself, going out to inspect buses. That has given good results.

Can the companies running the traffic really check their own vehicles?

– Critics tend to ask that, and I say yes, they're given a responsibility to do it. We've told them how to do it and to dare show shortcomings – because we understand things happen. So I'd say they get a better handle on their own vehicles by doing this and reporting to us, seeing for themselves what needs to be done.

When an operator finds deviations in one of its vehicles, it has seven days to fix the fault. According to John, this has made operators sharpen their preventive work, to avoid the penalty that starts ticking if it takes longer than seven days to fix what needs fixing.

About Nordic Port

Nordic Port is a Swedish SaaS company founded in Gothenburg in 1995. The company develops digital solutions for contracted public transport and is a pioneer in **Public Transport Supplier Management (PTSM)**. Nordic Port supports Public Transport Authorities in structuring and monitoring traffic agreements, operators, and related data within complex transport environments.

The **FRIDA** platform is used by all Public Transport Authorities in Sweden and by several regional authorities in Norway. Today, it manages more than **1,000 traffic agreements and 200 operators**. FRIDA supports contract monitoring, fleet and environmental compliance, service production follow-up, and quality control, with integrations to external and real-time data sources.

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