



Operacija letala na električni pogon – Pipistrel Virus SW 128 (Velis Electro)

Operation of electric propulsion aeroplane – Pipistrel Virus SW 128 (Velis Electro)

SPLOŠNE INFORMACIJE

Medtem ko se Uredba (EU) 2018/1139 uporablja za zrakoplove ne glede na njihovo vrsto pogona, se zahteve iz Priloge I (del FCL) k Uredbi Komisije (EU) št. 1178/2011 in Priloge VII (del NCO) k Uredbi Komisije (EU) št. 965/2012, uporabljajo samo za zrakoplove z „batnim“ in „turbinskim“ motorjem in trenutno ne vključujejo "električnega" pogona.

Trenutne zahteve tako niso primerne za pilote, ki nameravajo pridobiti privilegije za novo letalo Pipistrel Virus Electro SW 128 z električnim motorjem, čeprav to letalo spada na področje uporabe Uredbe (EU) 2018/1139 in je bilo certificirano s strani EASA (EASA TC NO. EASA.A.573) dne 10.06.2020.

Uporabiti je bilo torej treba določbe o prožnosti (izjemo) za ustrezno obravnavo nujnih potreb pilotov, organizacij za usposabljanje ter inštruktorjev in izpraševalcev, ki nameravajo upravljati letala Pipistrel Virus Electro SW 128.

V skladu s to izjemo lahko piloti, organizacije za usposabljanje ter inštruktorji in izpraševalci z odstopanjem od dela FCL in dela NCO uporabljajo ta zrakoplov v VFR v okviru obstoječih privilegijev ratinga za razred enomotornih batnih letal (SEP).

Za zagotovitev varnosti in skladnosti z bistvenimi zahtevami za letalsko posadko se ta izjema uporabi pod določenimi pogoji, kot je opisano spodaj.

Veljavnost izjeme

Ta izjema velja in je odobrena za obdobje od **05.08.2020** do **04.08.2021** oziroma do sprejema ustreznih predpisov, kar je prej.

GENERAL INFORMATION

While Regulation (EU) 2018/1139 applies to aircraft irrespective of its kind of propulsion, the requirements of Annex I (Part-FCL) to Commission Regulation (EU) No 1178/2011 and Annex VII to Commission Regulation (EU) No. 965/2012 apply only to aircraft with 'piston' and 'turbine' propulsion, and at the moment do not include 'electric' propulsion or 'energy' as type of fuel.

The current requirements are thus not fit for the pilots intending to obtain privileges for the new Pipistrel Virus Electro SW 128 aeroplane with an electric engine, although this aeroplane falls under the scope of Regulation (EU) 2018/1139 and was certified by EASA (EASA TC NO. EASA.A.573) on 10.06.2020.

An exemption is therefore necessary in order to adequately address the urgent needs of pilots, training organisations and instructors and examiners intending to operate Pipistrel Virus Electro SW 128 aircraft.

Under this exemption those pilots, training organisations and instructors and examiners are permitted, by derogation from Part-FCL, to operate that aircraft in VFR under the existing single-engine piston (SEP) aeroplane class ratings.

In order to ensure safety and compliance with the essential requirements for aircrew this exemption is granted under certain conditions as described below.

Exemption validity

Validity of this exemption is **05.08.2020** until **04.08.2021** or until applicable rules are published.



LICENCIRANJE OSEBJA

PERSONNEL LICENCING

FCL.710 - Ratingi za razred in tip – različice

Pipistrel Virus SW 128 se obravnava kot različica v okviru razreda enomotornih batnih letal (SEP).

Usposabljanje, kot je določeno v Pipistrelovem dokumentu „DOT-128-00-11-401 - Virus SW 128 Difference Training Program“, mora biti vključeno v:

- (1) usposabljanje za LAPL(A) (po določbi FCL.115) ali PPL(A) (po točki FCL.210), ki se izvaja na letalu SW 128.
- (2) izobraževanje o razlikah (po določbi FCL.135.A(b) in FCL.710) za razširitev privilegijev ratinga za razred SEP na različico SW 128.

Za razširitev privilegijev razreda SEP z različic SW 128 na druge različice ratinga za razred SEP je izobraževanje o razlikah (v skladu s točkama FCL.135.A(b) in FCL.710) sestavljeno iz elementov usposabljanja, ki so zahtevani za pridobitev ustreznih privilegijev v okviru ratinga za razred SEP, z namenom usvojitve ustreznih znanj za varno upravljanje druge različice letala SEP z batnim motorjem.

FCL.140.A - LAPL(A) – Zahteve za najnovejše izkušnje

Izpolnjevanje zahtev glede nedavnih izkušenj iz točke FCL.140.A bo vključevalo privilegije za obe različici SEP (različica z batnimi motorji in različica z električnim motorjem, tj. SW 128) samo, če imetnik LAPL izpolni:

- (1) v primeru točke FCL.140.A(a) in, kot je primerno, točke FCL.140.A(b)(2) skupno 12 ur letenja na različicah SEP z batnimi motorji ali SW 128 ali v kombinaciji obeh, vključno z vsemi naslednjimi zahtevami:
 - (i) najmanj 3 ure letenja na različicah SEP z batnimi motorji;
 - (ii) najmanj 3 ure letenja na SW 128;
 - (iii) pri različicah SEP z batnim motorjem, let za usposabljanje z inštruktorjem letenja, kot je določeno v točki FCL.140.A(a)(2);
 - (iv) na letalu SW 128 najmanj 40-minutni let za usposabljanje z inštruktorjem letenja (FI) ali inštruktorjem za rating za razred (CRI);
- ali
- (2) v primeru točke FCL.140.A(b)(1) preverjanje strokovnosti na ustrezni različici SEP z batnim motorjem in SW 128 z električnim motorjem.

FCL.710 Class and type ratings – variants

The Pipistrel Virus SW 128 shall be treated as a variant within the single-engine piston class (SEP).

The training as set out in the Pipistrel document 'DOT-128-00-11-401 - Virus SW 128 Difference Training Programme' shall be included in:

- (1) flight training for an LAPL(A) (as per point FCL.115) or PPL(A) (as per point FCL.210) that is conducted in the SW 128.
- (2) the differences training (as per points FCL.135.A(b) and FCL.710) for extending SEP class privileges to the SW 128.

For extending SEP class privileges from the SW 128 to SEP variants with a piston engine, differences training (as per points FCL.135.A(b) and FCL.710) shall consist of elements from the SEP class privileges/rating training, as necessary for the candidate to acquire the competence to safely operate SEP variants with a piston engine.

FCL.140.A LAPL(A) – Recency requirements

Compliance with the recency requirements specified in point FCL.140.A will include privileges for both SEP variants with piston engines and the SW 128 only if the LAPL holder completes:

- (1) in the case of point FCL.140.A(a) and, as applicable, point FCL.140.A(b)(2), 12 hours of flight time on SEP variants with piston engines or the SW 128 or a combination of both, including all of the following:
 - (i) at least 3 hours on SEP variants with piston engines;
 - (ii) at least 3 hours on the SW 128;
 - (iii) on SEP variants with a piston engine, a training flight as specified in point FCL.140.A(a)(2);
 - (iv) on the SW 128, a training flight of a least 40 minutes with a flight instructor (FI) or a class rating instructor (CRI);
- or
- (2) in the case of point FCL.140.A(b)(1), a proficiency check on each SEP variants with a piston engine and the SW 128.

FCL.740.A - Podaljšanje veljavnosti ratingov za razred in tip – letala

Skladnost z zahtevami za podaljšanje veljavnosti iz točke FCL.740.A(b) bo vključevala privilegije za obe različici ratinga za razred SEP z batnimi motorji in električnim motorjem - SW 128 samo, če imetnik razreda SEP izpolni:

(1) v 12 urah leta, kot zahteva točka FCL.740.A(b)(1)(ii):

(i) najmanj 3 ure na različicah SEP z batnimi motorji;

(ii) najmanj 3 ure na SW 128;

(iii) pri različicah SEP z batnim motorjem let za usposabljanje z inštruktorjem letenja, kot je določeno v točki FCL.740.A(b)(1)(ii);

(iv) na letalu SW 128 najmanj 40-minutni vadbeni let z inštruktorjem letenja (FI) ali inštruktorjem za rating za razred (CRI); ali

(2) v primeru točke FCL.740.A(b)(1)(i) preverjanje strokovnosti za različico letala SEP z batnim motorjem in SW 128.

(f) Če želi imetnik razreda SEP v skladu s točko FCL.740.A(b)(1)(ii) podaljšati veljavnost privilegijev samo za SW 128, let za usposabljanje z inštruktorjem traja najmanj 40 ur minut.

(g) Vsebina leta za usposabljanje, kot je določeno v točkah (d)(1)(iv), (e)(1)(iv) in (f) te izjeme, vključuje vse naslednje:

(1) postopek v sili - pregrevanje baterij(e) pogonskega sklopa;

(2) okvare baterij(e) pogonskega sklopa:

(i) SOC; prikaz energijskega stanja baterij(e) pogonskega sklopa

(ii) postopki pri izklopu ene baterije pogonskega sklopa

(iii) Pregrevanje in požar baterij(e) pogonskega sklopa.

(3) Simulacija zmanjšane vlečne sile, kot posledica avtomatskega zmanjšanje moči pogonskega sklopa

(h) Skladnost z zahtevo za obnovo ratinga iz točke FCL.740 (b)(1) bo vključevala privilegije le za različice SEP z batnim motorjem ali SW 128, odvisno od zrakoplova, uporabljenega za preverjanje strokovnosti.

FCL.020 - Pilot pripravnik

Pilot pripravnik, ki se usposablja za LAPL(A) ali PPL(A) v SW 128, je pooblaščen v skladu s točko FCL.020 (a), da opravi potrebne samostojne navigacijske lete na različici SEP z batnim motorjem šele po pridobitvi usposobljenosti za varno uporabo takšnih različic SEP.

FCL.740.A Revalidation of class and type ratings – aeroplanes

Compliance with the revalidation requirements in point FCL.740.A(b) will include privileges for both SEP variants with piston engines and the SW 128 only if the SEP class rating holder completes:

(1) within the 12 hours of flight time, as required by point FCL.740.A(b)(1)(ii):

(i) at least 3 hours on SEP variants with piston engines;

(ii) at least 3 hours on the SW 128;

(iii) on SEP variants with a piston engine, a training flight as specified in point FCL.740.A(b)(1)(ii);

(iv) on the SW 128, a training flight of at least 40 minutes with a flight instructor (FI) or a class rating instructor (CRI); or

(2) in the case of point FCL.740.A(b)(1)(i), a proficiency check on each SEP variants with a piston engine and the SW 128.

(f) If the SEP class rating holder, in accordance with point FCL.740.A(b)(1)(ii), wishes to revalidate privileges for the SW 128 only, the required training flight shall have a minimum duration of 40 minutes.

(g) The content of the training flight, as specified in points (d)(1)(iv), (e)(1)(iv) and (f) of this exemption, shall include all of the following:

(1) battery overheating emergency procedure;

(2) battery malfunctions:

(i) SOC;

(ii) reduced battery endurance management (loss of battery);

(iii) battery overheating and battery fire (emergency drills and procedures);

(3) power (thrust) reduction after derating system activation, simulated by reduced power.

(h) Compliance with the renewal requirement in point FCL.740(b)(1) will only include privileges either for SEP variants with a piston engine or the SW 128, depending on the aircraft used for the proficiency check.

FCL.020 Student pilot

A student pilot who is undergoing LAPL(A) or PPL(A) training in an SW 128 shall be authorised in accordance with point FCL.020(a) to undertake the necessary solo cross-country flights on an SEP variant with a piston engine only after he or she has acquired the competence to safely operate such SEP variants.

Uporaba izjeme s strani inštruktorjev, izpraševalcev in organizacij za usposabljanje

Inštruktor, izpraševalec ali organizacija za usposabljanje, kot je primerno, v vsej naslednji dokumentaciji navede, da je bilo usposabljanje ali preverjanje, kot je primerno, izvedeno na podlagi te izjeme, in sicer:

(1) v primeru točke (b)(1) teh omilitvenih ukrepov:

(i) evidence o usposabljanju v skladu s točko ORA.ATO.120 Priloge VII (del ORA) in točko DTO.GEN.220 Priloge VIII (Del DTO) k Uredbi (EU) št. 1178/2011;

(ii) priporočilo za preizkus praktične usposobljenosti (v skladu s točko FCL.030(b));

(2) v primeru točk (b)(2), (c), (d)(1), (e)(1) ali (f) teh olajševalnih ukrepov vpis inštruktorja v pilotski dnevnik pilota;

(3) v primeru točk (d)(2), (e)(2) ali (h) teh omilitvenih ukrepov ali v primeru preizkusa usposobljenosti za izdajo LAPL(A) ali PPL(A) v SW 128 poročilo izpraševalca o preizkusu praktične usposobljenosti ali preverjanju strokovnosti (v skladu s točko FCL.1030(b)(3)).

Usage of exemption by instructor, examiners and training organisations

The instructor, the examiner or the training organisation, as applicable, shall specify in all of the following documentation that training, testing or checking, as applicable, was carried out on the basis of this Exemption:

(1) in the case of point (b)(1) of these mitigating measures:

(i) the training records as per point ORA.ATO.120 of Annex VII (Part-ORA) and point DTO.GEN.220 of Annex VIII (Part-DTO) to Regulation (EU) No 1178/2011;

(ii) the recommendation for skill test (as per point FCL.030(b));

(2) in the case of points (b)(2), (c), (d)(1), (e)(1) or (f) of these mitigating measures, the instructor's entry into the logbook of the pilot;

(3) in the case of points (d)(2), (e)(2) or (h) of these mitigating measures, or in the case of a skill test for the issuance of an LAPL(A) or a PPL(A) in an SW 128, the examiner's report of the skill test or proficiency check (as per point FCL.1030(b)(3)).



LETALSKE OPERACIJE – SW 128

AIR OPERATIONS – SW 128

NCO.OP.125 Zaloga goriva in olja – letala

(a) Vodja zrakoplova začne let samo, če je na letalu dovolj električne energije za lete po vizualnih pravilih letenja (VFR):

(1) podnevi: vzlet in pristank na istem letališču in vedno v vidnem dosegu navedenega letališča, za letenje po predvideni zračni poti in nato najmanj še za deset minut letenja na običajni potovalni višini;

(2) podnevi: za let do letališča predvidenega pristanka in nato najmanj še za 30 minut letenja na običajni potovalni višini ali

(3) ponoči: za let do letališča predvidenega pristanka in nato najmanj še za 45 minut letenja na običajni potovalni višini.

(b) Pri izračunu potrebne električne energije za pogon, vključno za izredne razmere, se upoštevajo:

(1) napovedane meteorološke razmere;

(2) predvidene zračne poti KZP in zamude v prometu;

(3) vse druge okoliščine, ki lahko odložijo pristank letala ali zvečajo porabo električne energije za pogon.

(c) Nič ne preprečuje spremembe načrta leta med letom za preusmeritev leta v drug namembni kraj, če se lahko izpolnjujejo vse zahteve od točke ponovnega načrtovanja leta.

NCO.OP.145 Polnjenje rezervoarjev za gorivo, medtem ko so potniki na zrakoplovu, med njihovim vkrcavanjem ali izkrcavanjem

(a) Potniki ne smejo biti na zrakoplovu, se vkrcavati ali izkrcavati, ko se baterije, ki se uporabljajo za pogon, ponovno polnijo ali menjajo.

NCO.OP.155 Kajenje na krovu – letala in helikopteri

Vodja zrakoplova ne dovoli kajenja na krovu:

(a) če meni, da je to potrebno zaradi varnosti; ter

(b) kadar se baterije, ki se uporabljajo za pogon, ponovno polnijo ali menjajo.

NCO.OP.125 Fuel and oil supply – aeroplanes

(a) The pilot-in-command shall only commence a visual flight rules (VFR) flight if the aeroplane carries sufficient electrical energy used for propulsion for the following:

(1) by day, taking-off and landing at the same aerodrome and always remaining in sight of that aerodrome, to fly the intended route and thereafter for at least 10 minutes at normal cruising altitude;

(2) by day, to fly to the aerodrome of intended landing and thereafter to fly for at least 30 minutes at normal cruising altitude; or

(3) by night, to fly to the aerodrome of intended landing and thereafter to fly for at least 45 minutes at normal cruising altitude.

(b) In computing the required electrical energy used for propulsion including to provide for contingency, the following shall be taken into consideration:

(1) forecast meteorological conditions;

(2) anticipated ATC routings and traffic delays; and

(3) any other condition that may delay the landing of the aeroplane or increase electrical energy consumption used for propulsion.

(c) Nothing shall preclude amendment of a flight plan in-flight, in order to re-plan the flight to another destination, provided that all requirements can be complied with from the point where the flight is re-planned.

NCO.OP.145 Requirement for refuelling with passengers embarking, on board or disembarking

(a) Passengers shall not embark, remain on board or disembark, when the batteries used for propulsion are being recharged or replaced.

NCO.OP.155 Smoking on board – aeroplanes and helicopters

The pilot-in-command shall not allow smoking on board:

(a) whenever considered necessary in the interest of safety; and

(b) when the batteries used for propulsion are being recharged or being replaced.



NCO.OP.185 Upravljanje goriva med letom

(a) Vodja zrakoplova redno preverja, ali količina preostale električne energije, ki se uporablja za pogon, ni manjša od električne energije, ki se zahteva za nadaljevanje leta do vremensko sprejemljivega letališča ali območja delovanja, pri čemer mora ostati načrtovana rezerva električne energije v skladu z NCO.OP.125.

(b) Točnost instrumenta za merjenje količine električne energije, uporabljene za pogon, in stanja baterije je v skladu z veljavnimi zahtevami za certificiranje plovnosti.

NCO.OP.185 In-flight fuel management

(a) The pilot-in-command shall check at regular intervals that the amount of electrical energy used for propulsion remaining is not less than the electrical energy required to proceed to a weather-permissible aerodrome or operating site and the planned reserve electrical energy as required by point NCO.OP.125.

(b) The accuracy of the instrument for measuring the amount of electrical energy used for propulsion and the state of health of the battery shall be in accordance with the applicable airworthiness certification requirements.