AIRWORTHINESS APPROVAL NOTE NO: 29446

| | | |
|---|---|---|
| APPLICANT: | Yak 55 2014 Ltd. | |
| AIRCRAFT TYPE: | Yak 55 | |
| REGISTRATION NO: | G-CIIK | CONSTRUCTOR'S NO: 900909 |
| OPERATOR: | Mr David Kaberry | |
| INSTALLER: | N/A | |
| DESIGN ORGANISATION: | N/A | |
| CERTIFICATE CATEGORY: | National Permit to Fly | |
| MODIFICATION NO: | N/A | |
| MODIFICATION TITLE: | **To Approve Yak 55 Aircraft G-CIIK for the Issue of a National Permit to Fly** | |

## 1. Introduction

This AAN covers the approval of Yak-55 aircraft serial number 900909, G-CIIK.

The Yak-55 has not been type certificated and there is no TCDS, however, the Yak-55 aircraft has been previously approved by the CAA. AAN 28437, dated July 2003 refers.

Yak 55 aircraft registered in EASA member states at the time of transition to EASA regulations in September 2003 were deemed suitable for an EASA Permit to Fly. Subsequently, Yak 55 aircraft newly introduced on to the registers of EASA member states have been subject to National Airworthiness Authority regulations, i.e. approved under a National Permit to Fly

The introduction of G-CIIK to the UK represents the first Yak-55 meeting this criteria.

## 2. Aircraft Build Standard/Modification Definition

The Yak-55 is a single engine, single seat, mid wing, aerobatic aircraft of nominally all-metal construction with full aerobatic capability. It has a single Vedeneyev M14P 360 hp radial engine driving a V530-TA-D-35 constant speed wooden propeller.

The fuselage is of a conventional light alloy semi-monocoque construction with a cantilever light alloy tail structure. The wings are of a single spar all-metal stressed skin construction without flaps. The control surfaces are fabric covered.

## 3. Approval Procedures

Although this aircraft is a foreign product, which would normally require reference to BCAR Section B, the CAA has primary responsibility for any aircraft issued with a UK Permit to Fly. Consequently, this aircraft approval has been carried out in accordance with BCAR Section A Chapter A3-7.

## 4. Basis Of Certification/Validation/Approval

### 4.1 CAA Approval Basis For the Aircraft

The basis of approval for this aircraft is the same as that stated in AAN 28437, i.e. the operating experience of the type as an aerobatic aircraft for the Russian military, operation on the Lithuanian and Russian civilian registers, together with an investigation of the design standard and operational aspects of the aircraft.

### 4.2 CAA Design Requirements For The Issue Of A Permit To Fly

The aircraft must comply with the CAP 747 Generic Requirements where applicable and must be equipped in accordance with Schedule 5 of the Air Navigation Order.

Any installed equipment for which the Air Navigation Order requires approval must be approved by the CAA.

### 4.3 Environmental Requirements

A noise Certificate is not currently required for an ex-military aircraft operating on a Permit to Fly.

### 4.4 Design Requirements Associated With Operational Approvals.

Not applicable.

## 5. Compliance With The Basis Of Approval

### 5.1 Compliance With The Certification/Validation Basis For The Aircraft/Modification

The aircraft was imported into Poland in 2014, registered as UYR-SKY and a National Certificate of Airworthiness was issued. It has been maintained in accordance with an approved maintenance programme by personnel and organizations accepted by the NAA for this type of aircraft. The aircraft has no damage history.

#### 5.1.1 Manufacturer's Modifications

Nil

#### 5.1.2 Applicant's Modifications

A Trig TT 21 Transponder has been installed to meet European airspace requirements. This equipment holds an EASA ETSO approval and is acceptable to CAA.

A Trig TY91 and TC90 VHF Transceiver is installed. This equipment holds an EASA ETSO approval and is acceptable to CAA. A local modification complying with CS-STAN installs this equipment.

### 5.2 Compliance With Design Requirements For The Issue Of A Permit To Fly

Compliance with the Generic Requirements of CAP747 has been shown where applicable.

The aircraft is equipped in accordance with the UK Air Navigation Order.

5.3 Compliance With Environmental Requirements

Not applicable.

5.4 Compliance With Design Requirements Associated With Operational Approvals

Not applicable

5.5 Required Manuals And Other Documents Including Mandatory Placards

a) Flight Manual: The Aircraft is operated in accordance with a Yak UK-supplied English translation of the original Yak-55 Flight Manual for the aircraft.

b) Placards: In accordance with Article 23 of the UK Air Navigation Order, a placard is installed in the cockpit stating that the aircraft has not been certificated to an International Requirement. Other required placards or instrument markings are provided for the limits denoted by an asterix (*) in sections 5.6 to 5.11 below.

c) Maintenance Manual: A Yak UK-supplied English translation of the original Yak-55 Maintenance Manual will be used

d) Maintenance Schedule: A Yak UK-supplied Maintenance Programme will be used. This must include all life-limited parts and equipment.

e) MMEL – not applicable

f) Weight and Balance Schedule: A weighing report for the aircraft meeting BCAR A5-4 report format is required.

5.6 Maximum Number of Occupants

Maximum number of occupants (inc. crew): 1 occupant

Minimum flight crew: 1 pilot

5.7 Aerobatic Limitations

Aerobatic manoeuvres and spinning: Permitted unless fuel load is 20 litres or less

*G Limits (aerobatic): +9g to -6g
*G Limits (ferry): +5g to -3g

5.8 Engine Limitations

| Rating | Duration | Engine RPM | % |
|---|---|---|---|
| *Take off and operational necessity | I minute | 2950 | 101 |
| *Maximum climb | 5 minutes | 2900 | 99 |
| Maximum continuous | - | 2100 | 70 |
| Aerobatic | - | 2400 | 82 |

5.9 Air speed Limitations

| | |
|---|---|
| *Never Exceed Speed $V_{NE}$: | 450 km/h |
| *Maximum Manoeuvring Speed $V_A$: | 360 km/h |

5.10 Loading Limitations

| | |
|---|---|
| Maximum total weight authorised (aerobatic): | 865 Kg |
| Maximum total weight authorised (ferry): | 965 Kg |
| Maximum landing weight authorised (aerobatic): | 834 Kg |
| Maximum landing weight authorised (ferry): | 839 Kg |
| CG range (aerobatic): | 26.0 – 31.5% AMC |
| CG range (ferry): | 24.5 – 31.5% AMC |

5.11 Other Limitations

Maximum Altitude: 10,000 feet
Smoking in the aircraft is prohibited.
The aircraft shall be flown by day in visual meteorological conditions only
Flight into expected or actual icing conditions is prohibited

## 6. Continued Airworthiness

All relevant Service Bulletins and MPDs shall be complied with.

Life limitations on structure and parts shall be complied with.

## 7. Survey

This aircraft G-CIIK has been surveyed by the CAA

Arising from the survey the following changes are required to the aircraft and documentation:

1. Altimeter calibrated in feet to be installed in place of the metric altimeter.
2. Pressure hoses were replaced in 2010. The maintenance schedule life limitations are to be reviewed and appropriate life limits determined.
3. Modification meeting CS-STAN to be certified in respect of the VHF COMM installation.
4. The Yak UK programme and AAN 28437 places life limits on various indication equipment which is not considered viable in today's regulatory environment. Life limits are to be applied to aircraft hoses only.

The documentation referenced by this AAN has been amended to take account of these changes.

## 8. Issue of Permit to Fly

The following actions must be completed prior to initial issue of the Permit to Fly:

a) All actions and ground test procedures specified by the maintenance schedule must be completed satisfactorily.

b) It must be verified that the documents or amendments to documents, and the placards defined under Section 5.5 above are as specified, including any changes specified under Section 7 above.

c) For G-CIIK, a check flight must be carried out by a qualified person in accordance with CAA Check Flight Schedule CFS 2 Issue 2

## 9. Approval

Subject to the conditions of Section 5 above, this aircraft is approved for the issue of a Permit to Fly, provided that it is operated in accordance with the limitations specified/referenced, that it conforms with the contents of this AAN and that it is maintained in accordance with the Maintenance as specified in Section 5 of this AAN.

N J Davis
For the Civil Aviation Authority

Date: 27th July 2016