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# **Type Acceptance Report**

**TAR 13/21B/25**

**Eurocopter AS332/EC225 Series**



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## Executive Summary

New Zealand Type Acceptance has been granted to the Eurocopter AS332/EC225 Series based on validation of EASA Type Certificate number R.002. There are no special requirements for import.

Applicability is currently limited to the Models and/or serial numbers detailed in Appendix 1, which are now eligible for the issue of an Airworthiness Certificate in the Standard Category in accordance with NZCAR §21.177, subject to any outstanding New Zealand operational requirements being met. (See Section 5 of this report for a review of compliance of the basic type design with the operating Rules.) Additional variants or serial numbers approved under the foreign type certificate can become type accepted after supply of the applicable documentation, in accordance with the provisions of NZCAR §21.43(b).

## 1. Introduction

This report details the basis on which Type Acceptance Certificate No.13/21B/25 was granted in the Standard Category in accordance with NZCAR Part 21 Subpart B.

Specifically the report aims to:

- (a) Specify the foreign type certificate and associated airworthiness design standard used for type acceptance of the model(s) in New Zealand; and
- (b) Identify any special conditions for import applicable to any model(s) covered by the Type Acceptance Certificate; and
- (c) Identify any additional requirements which must be complied with prior to the issue of a NZ Airworthiness Certificate or for any subsequent operations.

## 2. ICAO Type Certificate Details

TC Holder:	Eurocopter
Type Certificate:	Number R.002
Issued by:	European Aviation Safety Agency
Models:	AS 332 C, C1, L, L1, L1e*
MCTOW	8,350 kgs [18,410 lbs] - AS332C, L 8,600 kgs [18,960 lbs] - AS332C1, L1 (C, L after SB 01.03)
Max. No. of pax Seats:	19 – AS 332 C, C1 24 – AS 332 L, L1
Noise Standard:	N/A

\* L1e is the commercial designation for the L1 equipped with the AHCAS system.

**Engine:** Turbomeca Makila 1A – AS 332 C, L  
Turbomeca Makila 1A1 – AS 332 C1, L1  
Type Certificate: Number E.072  
Issued by: European Aviation Safety Agency

Model: AS 332 L2

MCTOW 9,300 kgs [20,502 lbs]

Max. No. of pax Seats: 25

Noise Standard: ICAO Annex 16, Volume 1, Part II, Chapter 8 and Appendix 4

**Engine:** Turbomeca Makila 1A2  
Type Certificate: Number E.072  
Issued by: European Aviation Safety Agency

Models: EC 225 LP

MCTOW 11,000 kgs [24,251 lbs]

Max. No. of pax Seats: 25

Noise Standard: ICAO Annex 16, Volume 1, Part II, Chapter 8 and Appendix 4

**Engine:** Turbomeca Makila 2A/2A1  
Type Certificate: Number E.006  
Issued by: European Aviation Safety Agency

### 3. Type Acceptance Certificate

The application for New Zealand type acceptance of the AS 332/EC 225 series was from Heli-Harvest Ltd dated 22 March 2013. The AS 332/EC 225 series (known as the “Super Puma”) is a twin-turbine multi-purpose helicopter in the 5/6 tonne class which uses a conventional four or five-blade single main-rotor system and a conventional tail rotor.

Type Acceptance Certificate Number 13/21B/25 was granted on 2 October 2013 to the Eurocopter AS 332/EC 225 series based on validation of EASA Type Certificate R.002. Specific applicability is limited to the coverage provided by the operating documentation supplied. There are no special requirements for import into New Zealand. As part of the type acceptance process engineers from the CAANZ Aircraft Certification Unit carried out a validation visit to Eurocopter at Marignane.

The Turbomeca Makila 1A engine series approved under EASA Type Certificate number E.072 has been type accepted separately under CAA reference 14/21B/2. The Turbomeca Makila 2A series approved under EASA Type Certificate number E.006 has been type accepted separately under CAA reference 14/21B/3.

The Super Puma was developed from the original SA 330 Puma, which first flew in 1965 and was extensively developed for both civil and military applications. Modifications for the AS 332 Super Puma included new more powerful engines, improved structure and undercarriage, and improved drivetrain and rotor systems. It was always intended to produce the fuselage in two lengths, the standard length and a lengthened version allowing more passengers to be carried where weight is not so critical. The first Super Puma first flew in 1978 and type certification was issued in 1981.

The AS 332 C/C1 and L/L1 models are classed as the Mark I Super Puma, the “L” designation denoting the long fuselage version, and the “1” suffix indicating an uprated engine and increased weight. (C and L models can be converted to C1 and L1 models in accordance with SB 01.00.26). The AS 332 L2 is the only civilian model classed as the Mark II Super Puma, developed in the 1980s. It features more powerful engines, increased weight and an EFIS cockpit.

The EC 225 is developed from the AS 332 L2 and features more powerful Makila 2A engines, increased weight, new five bladed main rotor system, and an all-new glass cockpit. The EC 225 LP first flew in 1980 and was type certificated in 2004.

The C1 and L1 are still in production as a low cost alternative to the EC 225 and are commercially suffixed by an ‘e’ letter to indicate an avionics upgrade to the EC 225 level.

#### 4. NZCAR §21.43 Data Requirements

The type data requirements of NZCAR Part 21B Para §21.43 have been satisfied by supply of the following documents, or were already held by the CAA:

(1) ICAO Type certificate:

EASA Type Certificate Number R.002 (Replaces French DGAC TC No 56)

EASA Type Certificate Data Sheet no. R.002 at Issue 11, dated 10 July 2013

- Model AS 332 C approved (by DGAC) 24 April 1981
- Model AS 332 L approved (by DGAC) 2 December 1980
- Model AS 332 C1 approved (by DGAC) 14 March 1985
- Model AS 332 L1 approved (by DGAC) 14 March 1985
- Model AS 332 L2 approved (by DGAC) 12 June 1991
- Model EC 225 LP approved 27 July 2004

(2) Airworthiness design requirements:

(i) *Airworthiness Design Standards:*

The certification basis for the AS 332C, L, C1, and L1 was FAR 29 effective February 1, 1965, including Amendments 29-1 through 29-16. Three Special Conditions were imposed, there were no Exemptions, Deviations or Equivalent Safety Findings. These have been reviewed and accepted by the CAA. (Note: For aircraft equipped with the AHCAS system, commercial reference AS332L1(e), the certification basis was updated in affected areas, three additional Special Conditions were imposed and four Equivalent Safety Findings were made. See Note 8 on the TCDS for full details.)

The certification basis for the AS 332 L2 was FAR 29 effective February 1, 1965, including Amendments 29-1 through 29-24. Five Special Conditions were imposed, there were four Deviations but no Exemptions or Equivalent Safety Findings. These have been reviewed and accepted by the CAA.

The certification basis for the EC 225 LP is JAR 29 at Change 1 effective December 1, 1999. There were six Special Conditions, three Exemptions and one Partial Exemption, one reversion and two partial reversions to FAR 29 Amendment 24, and ten Equivalent Safety Findings. These have been reviewed and accepted by the CAA.

These are acceptable certification bases in accordance with NZCAR Part 21B Para §21.41 and Advisory Circular 21-1A, as FAR 29 is the basic standard for Transport Category Rotorcraft called up under Part 21 Appendix C, and JAR 29 is an acceptable alternative in accordance with the Advisory Circular. There are no non-compliances and no additional special conditions have been prescribed by the Director under §21.23.

(ii) *Special Conditions:*

AS 332 C, C1, L, L1:

DGAC Condition Spéciale n°1 – Icing – Pilot view for safe operation, FAR §29.773(b)(1)(ii) is modified to read “in the icing conditions specified in FAR 25,



Appendix C”. Ice protection, FAR §29.877 method of substantiation is detailed. Induction system, FAR §29.1093(b) is amended. Static Air Vent, FAR §29.1325(b) is amended.

DGAC Condition Spéciale n°2 – Lightning, as applicable to previous SA 330 J model and notified in the appendix to the letter 02827 SFACT/TC dated March 30, 1978, for the flight in icing conditions – “The rotorcraft must be protected in such a manner as to minimize lightning risks”.

DGAC Condition Spéciale 20.2 dated May 11, 1982 - Category II, IFR flight – Definition of the method of certification, minimum equipment and conditions for category II radio precision approaches for an IFR approved rotorcraft.

AS 332 L2:

DGAC Letter 53445/SFACT/TC dated 27 April 1989 listed the following special conditions:

C.S.A1 – Condition to specify additional flight test time for showing reliability and evaluating crew workload.

C.S.D1 – Condition to design for bird and foreign object strikes.

C.S.E1 – Condition to demonstrate protection against external electro-magnetic disturbances.

C.S. E2 – Condition to show the new Maintenance assistance system (optional system) is at least as safe as normally used methods and a program for collection of in-service data.

DGAC Letter 53610/SFACT/N.HE dated 11 July 1991 listed the following super emergency special condition:

30 seconds and 2 minutes contingency ratings were applied to FAR 29.67 Climb: one engine inoperative, FAR 29.361 Engine Torque, FAR 29.549(e) Fuselage and rotor pylon structures, FAR 29.923 Rotor drive system and control mechanism tests, FAR 29.1143 Cooling tests, FAR 29.1305 Powerplant instruments, FAR 29.1549 Instructions for Continued Airworthiness.

Also, the following were modified:

- FAR 29.1045 Climb cooling test procedures at amendment 26 is applicable (includes OEI requirement).
- FAR 29.1047 Takeoff cooling test procedures at amendment 26 is applicable (includes OEI requirement).
- FAR 29.1521 Powerplant limitations at amendment 26 is applicable (includes OEI requirement) with further OEI requirements added.

EC 225 LP (\* = also applicable to AS 332 L1e):

Minimum In-Flight Experience – CRI B-01 – Conditions and definition of required minimum number of flight hours, takes into account AS 332 L2 experience. \*

SAR (Search and Rescue) System – CRI B-02 – Conditions applicable to the SAR operation and use of a dedicated SAR mode of the Automatic Flight Control System (AFCS), including use in IFR. \*

Water Bombing System – CRI B-05 – Conditions for the novel water bombing system, and it's operation, which installs a collapsible water tank inside the cabin..

External Loads, JAR 29.865 amendment 2 – CRI D-06 – Eurocopter accepted to comply with JAR 29.865 Amendment 2 dated March 1, 2001 for each new hoist installation intended to be used for human external cargo applications..

Protection from the effects of High Intensity radiated Fields (HIRF) – CRI F-02 – Because the EC 225 LP has digital electronic systems (including the engine) the SC was as per the interim policy INT/POL/27,29/1 Issue 2 dated 1/06/97. \*

Helicopter Limited Icing Approval as prescribed by EASA – CRI O-01 – Conditions which allow flight into limited icing conditions without full icing equipment installed.

(iii) *Deviations:*

AS 332 L2:

Reversion to FAR 29 original requirement:

FAR §29.1, §29.605, §29.671, §29.1323

Reversion to FAR 29 at amendment 12:

FAR §29.603

Reversion to FAR 29 at amendment 14:

FAR §29.1303

FAR §29.1309 regarding equipment used on previous AS 332 versions.

EC 225 LP:

Reversion to FAR 29 at amendment 24:

FAR §29.561(b)(3) – Emergency Landing Conditions - General – CRI C-01 – Eurocopter were granted a reversion to the original AS 332 L2 certification basis providing no significant changed parts (including seats, seat locations, items of mass) inside the cabin.

Partial reversion to FAR 29 at amendment 24:

FAR §29.571 – Fatigue Evaluation of Structure – CRI C-03 – Partial reversion only for existing metallic parts fitted unchanged from previous AS 332 models so that tolerance to flaw substantiation of JAR 29 is not carried out based on JAR 21.101 (b)(1) Not Significant Changes. Re-evaluation of safe life will be carried out based on new loads.

FAR §29.785 – Seat, Berth, Safety Belts and Harnesses – CRI D-01 – Reversion required due to cross-references to the JAR 29.562 and to the JAR 29.561(b) for which EC requested respectively an exemption and a reversion.

(iv) *Equivalent Level of Safety Findings:*

EC 225 LP (\* = also applicable to AS 332 L1e):

JAR §29.173, 175 – Static Longitudinal Stability – CRI B-03 – JAA NPA 29-26 was used to show an equivalent level of safety to the requirement for positive static longitudinal stability.

JAR 29 App B §IV – Static Longitudinal Stability – Airspeed Stability– CRI B-04 – The behaviour of the EC 225 LP was deemed to be safely equivalent to the requirements of JAR 29 Appendix B §IV. \*

JAR §29.571 – Fatigue Evaluation of Structure for changed metallic PSE – CRI C-04 – Rule requirement was superseded by NPRM §29.571.

JAR §29.807(c)(1) – Passenger Emergency Exits other than side-of-fuselage – CRI D-02 – The main cabin door offers an equivalent level of safety to Type II exit and emergency exit layout is derived from AS 332L2.

JAR §29.813(a) and 29.815 – Emergency Exit access – Main Aisle Width – CRI D-03 – The EC 225 LP is derived from the AS 332 L2 model and comparative evacuation flow demonstrations showed that the evacuation flow was not affected.

JAR §29.807(d)(2) – Ditching Emergency Exits for passengers – CRI D-07 – The EC 225 LP is derived from the AS 332 L2 model and ditching provisions are retained from this original model. The greater weight of the EC 225 LP was shown to not jeopardise safe evacuation.

JAR §29.923(a)(2) – Rotor Drive System and Control Mechanism Tests – CRI E-03 – Tests were performed on a representative iron bird instead of an aircraft.

JAR §29.1303(j) –  $V_{NE}$  Aural Warning – CRI F-01 – No aural warning fitted but additional red strip on  $V_{NE}$  indicator provides an equivalent level of safety. \*

JAR §29.1545(b)(4) – Airspeed Indicators Markings – CRI G-01 – No green arc for safe operating range but marking of abnormal limits and display design provide an equivalent level of safety. \*

JAR §29.1549(b) – Powerplant Instruments Markings – CRI G-02 – No green arc for normal operating range but marking of abnormal limits and display design provide an equivalent level of safety. \*

(v) *Exemptions:*

EC 225 LP

JAR §29.562 – CRI No. C-02 – Emergency Landing Dynamic Landing Conditions – Exemption based on similarity to AS 332 LP and reversion covered by CRI No. C-01.

FAR §29.952(a)(c)(d)(e)(f)(g) – CRI No. E-01 – Fuel System Crash resistance– An exemption to all sections except (b) was requested based on no significant change in the fuel system compared to the AS 332 L2 system.

FAR §29.555(b) – CRI No. E-05 – Fuel Transfer – The right and left fuel tanks have significantly different capacities, the fuel system design is such that the transfer between the two groups of fuel tanks is not essential for the safety of flight and does not impose an excessive workload on the flight crew, and is considered to be unchanged from that used on the AS 332 L2 model.

FAR §29.963(b) – CRI No. E-02 (Partial Exemption) – Fuel Tanks: General; Puncture resistance – A partial exemption was requested to keep the original AS 332 L2 requirement of FAR29.963 amendment 24, without the addition of ‘puncture resistance’. Note that puncture resistant bladder tanks that meet TSO-C80 are available as an option.

(vi) *Airworthiness Limitations:*

AS 332 C, L, C1, L1: See the Airworthiness Limitations Chapter 05.99 of the Maintenance Servicing Recommendations

AS 332 L2: See the Airworthiness Limitations Chapter 05.99 of the Maintenance Servicing Recommendations

EC 225 LP: See the Airworthiness Limitations Chapter 05.99 of the Maintenance Servicing Recommendations

(3) Aircraft Noise and Engine Emission Standards:

(i) *Environmental Standard:*

The AS 332 L2 and EC 225 LP have been certificated for noise against ICAO Annex 16 Volume 1

(ii) *Compliance Listing:*

EASA Type Certificate Data Sheet for Noise Number R.002:

AS 332 L2: Noise Level Results - MTOW 9,300kg:

Takeoff: 94.3 EPNL Overflight: 93.5 EPNL Approach: 96.1 EPNL

AS 332 L2: Noise Level Results - MTOW 9,300kg (installation of large sponsons):

Takeoff: 94.6 EPNL Overflight: 93.4 EPNL Approach: 96.1 EPNL

EC 225 LP: Noise Level Results - MTOW 11,000kg (Makila 2A):

Takeoff: 95.6 EPNL Overflight: 93.5 EPNL Approach: 98.9 EPNL

EC 225 LP: Noise Level Results - MTOW 11,000kg (Makila 2A1):

Takeoff: 95.6 EPNL Overflight: 93.5 EPNL Approach: 98.9 EPNL

(4) Certification Compliance Listing:

AS 332 C (weight 7800kg): 332A05.0008, 1<sup>st</sup> issue dated 24 April 1981, Certification Documents for the AS 332 C based on FAR Part 29 amendment 16

AS 332 C (weight 8350kg): 332A-055-0027, dated 7.12.81, AS 332 C weight increase to 8.35T, maximum take-off power increase to 2235KW, compliance with FAR 29 amendment 16,

AS 332 L (weight 8350kg): 332A.05.0028, dated 7.12.81, AS 332 L compliance with FAR 29 amendment 16

AS 332 C/L (weight 8600kg): 332ABN.0001, dated 16/04/84, AS 332 C/L increasing the gross weight to 8.6 Tons compliance with FAR 29 amendment 16,

AS 332 C1/L1: 332ABN.0004, dated 22.08.85, 332 C1/L1 Compliance with FAR 29 including amendment 16

AS 332 L2 (weight 9150kg): 332ABN-0057, dated 5/5/92, AS 332 L2 DGAC certification compliance check list

AS 332 L2 (weight 9300kg): 332ABN-0093, dated 15/06/94, AS 332 L2 – 9300kg certification DGAC conformité FAR 29 amendement 24

EC 225 LP: 332ABN-0187, dated 19.07.04, EC 225 LP Compliance Record Document

- (5) Flight Manual: DGAC-Approved Rotorcraft Flight Manual AS332C  
CAA Accepted as AIR 3261  
DGAC-Approved Rotorcraft Flight Manual AS332L  
CAA Accepted as AIR 3262  
DGAC-Approved Rotorcraft Flight Manual AS332C1  
CAA Accepted as AIR 3256  
DGAC-Approved Rotorcraft Flight Manual AS332L1  
CAA Accepted as AIR 3254  
EASA-Approved Rotorcraft Flight Manual AS332L1(e)  
CAA Accepted as AIR 3255  
EASA-Approved Rotorcraft Flight Manual AS332L2  
CAA Accepted as AIR 3260  
EASA-Approved Rotorcraft Flight Manual EC225LP  
CAA Accepted as AIR 3257  
EASA-Approved Rotorcraft Flight Manual EC225LP (MPAI)  
CAA Accepted as AIR 3258

(6) Operating Data for Aircraft and Engine:

(i) *Maintenance Manual:*

AS 332 B,B1,C,C1,F1,L,L1,M,M1	Maintenance Manual
Super Puma Version L2	Aircraft Maintenance Manual
EC 225 LP	Aircraft Maintenance Manual
AS 332 B,B1,C,C1,F1,L,L1,M,M1	Wiring Diagram Manual (Typ I)
AS 332 B,B1,C,C1,F1,L,L1,M,M1	Wiring Diagram Manual (Typ II)
AS 332 B,B1,C,C1,F1,L,L1,M,M1	Fault Isolation Manual
AS 332 B,B1,C,C1,F1,L,L1,M,M1	Repair manual
AS 332 Mk2 Version L2	Structural Repair Manual
EC 225 LP	Structural Repair Manual

(ii) *Current service Information:*

AS 332 Mk 1 (C,C1,L,L1)	SIM: Index of Modifications
AS 332 Mk 2 (L2)	SIM: Index of Modifications
EC 225 LP	SIM: Index of Modifications

Service Information and Service Bulletins

(iii) *Illustrated Parts Catalogue:*

AS 332 Mk 1 (C,C1,L,L1)	Illustrated Parts Catalog
AS 332 Mk 2 (L2)	Illustrated Parts Catalog
EC 225 LP	Illustrated Parts Catalog

(7) Agreement from manufacturer to supply updates of data in (5), and (6):

Access is provided through the Eurocopter website <http://keycopter.eurocopter.com>

(8) Other information:

AS 332 / 532 Mk 1	Illustrated Tools Catalog
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AS 332 / 532 Mk 2	Illustrated Tools Catalog
EC 225 LP	Illustrated Tools Catalog
AS 332 B,B1,C,C1,F1,L,L1,M,M1	Description and Operation Manual

## 5. Additional New Zealand Requirements

Compliance with the retrospective airworthiness requirements of NZCAR Part 26 is a prerequisite for the grant of a type acceptance certificate.

### Civil Aviation Rules Part 26

#### Subpart B - Additional Airworthiness Requirements

Appendix B - All Aircraft

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
B.1	Marking of Doors and Emergency Exits	<i>To be determined on an individual aircraft basis</i>
B.2	Crew Protection Requirements – CAM 8 Appdx. B # .35	Not Applicable – Agricultural Aircraft only

Appendix E - Helicopters

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
E.1	Doors and Exits	FAR §29.783(c) and (e)
E.2.1	Emergency Exit Marking	FAR §29.811(b) and (f)

Compliance with the following additional NZ operating requirements has been reviewed and were found to be covered by either the original certification requirements or the basic build standard of the aircraft, except as noted:

### Civil Aviation Rules Part 91

#### Subpart F - Instrument and Equipment Requirements

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
91.505	Seating and Restraints – Safety belt/Shoulder Harness	FAR §29.785(c)
91.507	Pax Information Signs - Smoking, safety belts fastened	FAR §29.1413
91.509 Min. VFR	(1) ASI (2) Machmeter (3) Altimeter (4) Magnetic Compass (5) Fuel Contents (6) Engine RPM (7) Oil Pressure	FAR §29.1303(a) N/A FAR §29.1303(b) FAR §29.1303(c) FAR §29.1305(a)(3) FAR §29.1305(a)(13) FAR §29.1305(a)(6)
	Flight and navigation equipment - <i>Operational Requirement – Compliance as applicable</i>	
91.511 Night	(1) Turn and Slip (2) Position Lights	Artificial Horizon fitted as Std – See FM Fitted as Std – See FM
91.517	IFR Instruments and Equipment	<i>Operational Requirement – Compliance as applicable</i>
91.519	IFR Communication and Navigation Equipment	<i>Operational Requirement – Compliance as applicable</i>
91.523	Emergency Equipment (a) More Than 9 pax - First Aid Kits per Table 7 - Fire Extinguishers per Table 8 (b) More than 20 pax - Axe readily accessible to crew (c) More than 61 pax - Portable Megaphones per Table 9	<i>Operational Requirement – Compliance as applicable</i> <i>Operational Requirement – Compliance as applicable</i> <i>Operational Requirement – Compliance as applicable</i> Not Applicable – Less than 61 passenger seats
91.529	ELT - TSO C91a or C126 after 1/4/97 (or replacement)	<i>Operational Requirement – Compliance as applicable</i>
91.531	Oxygen Indicators - Volume/Pressure/Delivery	<i>Operational Requirement – Compliance as applicable</i>
91.533	Oxygen for Non-Pressurised Aircraft >30 min above FL100 - Supplemental for crew, 10% Pax - Therapeutic for 3% of Pax Above FL100 - Supplemental for all Crew, Pax - Therapeutic for 1% Pax, - 120l PBE each crew member	<i>Operational Requirement – Compliance as applicable</i> <i>(Certificated for operations between 20,000 – 25,000 depending on model).</i>
91.541	SSR Transponder and Altitude Reporting Equipment	<i>Operational Requirement – Compliance as applicable</i>
91.543	Altitude Alerting Device - Turbojet or Turbofan	Not Applicable – Not turbo jet or turbofan powered
91.545	Assigned Altitude Indicator	<i>Operational Requirement – Compliance as applicable</i>
A.15	ELT Installation Requirements	<i>To be determined on an individual aircraft basis</i>

**Civil Aviation Rules Part 135****Subpart F - Instrument and Equipment Requirements**

PARA:	REQUIREMENT:	MEANS OF COMPLIANCE:
135.355	Seating and Restraints – Shoulder harness flight-crew seats	Crew seats are equipped with a 4-point seat-belt system with inertial-reel locking for the shoulder belts – See FM
135.357	Additional Instruments (Powerplant and Propeller)	FAR §29.1305
135.359	Night Flight	Landing light, Pax compartment
135.361	IFR Operations	Speed, Alt, spare bulbs/fuses
135.363	Emergency Equipment (Part 91.523 (a) and (b))	<i>Operational Requirement – Compliance as applicable</i>
135.367	Cockpit Voice Recorder	<i>Operational Requirement – Compliance would be required</i>
135.369	Flight Data Recorder	<i>Operational Requirement – Compliance would be required</i>
135.371	Additional Attitude Indicator	Not Applicable – Not turbo jet or turbofan powered

**Attachments**

The following documents form attachments to this report:

- Three-view drawing Eurocopter Model AS 332 L1
- Copy of EASA Type Certificate Data Sheet Number R.002

**Sign off**

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 Peter Gill  
 Airworthiness Engineer

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 Checked – Greg Baum  
 Airworthiness Engineer

**Appendix 1****List of Type Accepted Variants:**

<i>Model:</i>	<i>Applicant:</i>	<i>CAA Work Request:</i>	<i>Date Granted:</i>
AS 332 C	Heli-Harvest Ltd	13/21B/25	2 October 2013
AS 332 L	Heli-Harvest Ltd	13/21B/25	2 October 2013
AS 332 C1	Heli-Harvest Ltd	13/21B/25	2 October 2013
AS 332 L1*	Heli-Harvest Ltd	13/21B/25	2 October 2013
AS 332 L2	Heli-Harvest Ltd	13/21B/25	2 October 2013
EC 225 LP	Heli-Harvest Ltd	13/21B/25	2 October 2013

\*Including AS332L1e