




CARGO POD

STC 11/21E/31

OCEANIA AVIATION STC
OAL313-STC

EUROCOPTER AS350B, BA, B1, B2, B3 & D

CAA APPROVED FLIGHT MANUAL SUPPLEMENT
(FMS)

<i>STC 11/21E/31</i>	
SIGN:	
DATE:	31 MAR 2016

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RECORD OF REVISIONS

<i>REVISION</i>	<i>DATE</i>	<i>DESCRIPTION</i>	<i>PARAGRAPH</i>	<i>PAGES AFFECTED</i>
0	29-SEP-2011	INITIAL RELEASE	ALL	ALL
1	26-Sep-2012	Amended reference to rubber.	5.1 (b)	8
1	26-Sep-2012	Weight & Balance.	7	11
1	26-Sep-2012	Added daily check of bonding strap	5.1 (a)	8
2	29-Mar-2016	Incompatibility with DART Flight Step Removed	1.0, 2.0	3, 4
2	29-Mar-2016	Updated Placard	3.4.2	6
2	29-Mar-2016	Updated Weight and balance information	7	13, 14

*Changes are side barred

1.0 GENERAL

This modification installs a removable composite carbon fibre cargo pod and fixed provisions to the left hand side of the rotorcraft landing gear to provide additional cargo capacity.

Information contained in this document supplements or supersedes information in the basic rotorcraft flight manual. For Limitations, Procedures and Performance Data not contained in this supplement refer to the basic rotorcraft flight manual.

Issue 2 provides a pair of alternate brackets in order to accommodate the installation of an extended skid step. It also removes the restriction for carrying flammable materials.

2.0 EFFECTIVITY

Eurocopter AS350 B, BA, B1, B2, B3 & D rotorcraft* equipped with high skid gear (Eurocopter P/N 350A82-4010-03).

| <Deleted>

3.0 LIMITATIONS

3.1 KINDS OF OPERATIONS

3.1.1 Configurations

The following configurations are approved for flight. A tick (✓) indicates that the referenced item is installed.

Configuration	Fixed Provisions	Cargo Pod
1	✓	
2	✓	✓

In all configurations, the helicopter remains in the STANDARD airworthiness category.

3.1.2 Rotorcraft Configuration Requirements

Prior to installation of Oceania Aviation Modification OAL 313, the rotorcraft requires high skid gear (Eurocopter P/N 350A82-4010-03)

3.2 FLIGHT PERFORMANCE LIMITATIONS

3.2.1 Airspeed Limitations

- a. V_{NE} for configuration 1, with only fixed provisions installed is as per the basic rotorcraft flight manual.
- b. V_{NE} configuration 2, with the cargo pod installed is 130kts.

3.3 WEIGHT LIMITATIONS

3.3.1 Maximum Cargo Pod Contents

120 kg (265 lb)

3.3.2 Centre of Gravity Limitations

The lateral and longitudinal centre of gravity limitations, as per the basic rotorcraft flight manual, remain unchanged.

3.3.3 Passenger Loading Limitation

When the pod is installed and loaded, passengers shall be seated as far to the right as possible to minimise lateral out-of-balance.

3.4 PLACARDS

3.4.1 V_{NE} Placard

The V_{NE} placard is attached to the cockpit instrument panel in full view of pilot:

$V_{NE} = 130$ KIAS WITH CARGO POD INSTALLED

3.4.2 Maximum Cargo Pod Loading Placard

The following placard is located in two places, one on the interior of the loading door and one on the exterior of the cargo pod loading door:

**MAXIMUM CARGO POD LOADING
120 kg (265 lb)
SECURE LOADS TO PREVENT MOVEMENT IN FLIGHT**

3.4.3 Locking Pins Placard

The following placard is located in two places on the top face of the cargo pod, above the cargo pod mounting brackets:

**CAUTION
ENSURE BOTH LOCKING PINS
ARE CORRECTLY INSTALLED
PRIOR TO FLIGHT**

4.0 EMERGENCY PROCEDURES

No change. As per the Rotorcraft Flight Manual.

5.0 NORMAL PROCEDURES

5.1 DAILY / PRE-FLIGHT CHECKS

The following checks should be carried out each time the cargo pod is installed, at the start of each day of operation, and before every flight with the cargo pod installed.

- a. Check the landing gear mounting clamps, bonding strap and hardware for security and condition.
- b. Check clamps and rubber inserts (if installed, early models only) for signs of slippage of the clamps on the landing gear tubes.
- c. Check that the cargo pod is securely attached to the landing gear mounts.
- d. Check that the quick release pins are securely installed in the forward and upper rear mounts.
- e. Check the cargo pod structure for evidence of cracking, delamination, loose hardware, or other damage.

5.2 CARGO POD INSTALLATION AND REMOVAL

The cargo pod is pilot removable equipment. Only appropriately trained and qualified persons should perform installation or removal of the cargo pod.

5.2.1 Installation

1. Position the cargo pod next to the left hand landing gear skid.
2. Lift the cargo pod and align the lower rear mounting pin on the rear landing gear crosstube with the lower hole in the rear cargo pod mounting bracket and gently slide the pod aft.
3. Align the forward mounting pin followed by the upper aft mounting pin with the holes in the forward and rear cargo pod mounting brackets respectively, while sliding the cargo pod aft along the mounting pins.

4. Slide the cargo pod aft until the cargo pod mounts rest against the base of the mounting pins and can slide no further.
5. Install two (2) double acting quick release pins, one through the forward mounting pin, and one through the upper aft mounting pin.

5.2.2 Removal

The removal procedure for the cargo pod is the reverse of the installation procedure provided in Section 5.2.1.

5.3 CARGO POD USAGE

1. Position large, low density items such that their weight is evenly distributed.
2. Restrain items whose movement could create a hazard using the tie down points inside the pod.
3. Close the door ensuring that all latches are engaged fully.

6.0 PERFORMANCE

Reduce the calculated basic rate of climb performance of the rotorcraft as indicated in the rotorcraft flight manual by 150 feet per minute with the cargo pod installed.

7.0 WEIGHT & BALANCE

Metric Units	Weight (kg)	Longitudinal Arm (m)	Longitudinal Moment (kg.m)	Lateral Arm (m)	Lateral Moment (kg.m)
Cargo Pod (Empty)	30	3.63	108.90	-1.30	-39
Cargo Pod Load	120	3.63	435.6	-1.30	-156.0
Fixed Provisions	5	3.71	18.55	-0.98	-4.9
Total	155	3.632	563.05	-1.289	-199.9.5

Imperial Units	Weight (lb)	Longitudinal Arm (in)	Longitudinal Moment (in.lb)	Lateral Arm (in)	Lateral Moment (in.lb)
Cargo Pod (Empty)	66.1	142.99	9494.5	-51.18	-3382.9
Cargo Pod Load	264.5	142.99	37818.6	-51.18	-13536.4
Fixed Provisions	11.02	145.94	1608.25	-38.39	-423.05
Total	341.6	143.2	48921.35	-50.77	-17342.35

Cargo Pod extended mounting bracket installation

Metric Units	Weight (kg)	Longitudinal Arm (m)	Longitudinal Moment (kg.m)	Lateral Arm (m)	Lateral Moment (kg.m)
Cargo Pod (Empty)	30	3.63	108.90	-1.385	-41.55
Cargo Pod Load	120	3.63	435.6	-1.385	-166.5
Fixed Provisions	5	3.71	18.55	-0.98	-5.145
Total	155	3.632	563.05	-1.37	-213.195

Imperial Units	Weight (lb)	Longitudinal Arm (in)	Longitudinal Moment (in.lb)	Lateral Arm (in)	Lateral Moment (in.lb)
Cargo Pod (Empty)	66.1	142.99	9454.6	-54.53	-3570.45
Cargo Pod Load	264.5	142.99	37818.6	-54.53	-14423.185
Fixed Provisions	11.02	145.94	1688.7	-38.39	-453.003
Total	341.6	143.09	48921.35	-53.99	-18446.2