



AERONAUTICAL ACCESSORIES, INC.

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INSTALLATION INSTRUCTIONS
LONGRANGE EXTENDER™

P/N 206-284-110

for

BELL 206L and 206L-1

Report AA-88065

Revision E

August 27, 1997

ECCN 9E991

These instructions contain the information required to install the Aeronautical Accessories, Inc., **LONGRANGE EXTENDER™**, Kit P/N 206-284-110 for the Bell 206L and 206L-1 Model Helicopters.

1. Remove the retainer ring (BHT P/N 206-062-648-001), the cap and adapter assembly (BHT P/N 206-062-652-001) and the O-ring (MS29513-243).

NOTE

The fuel cell may move slightly away from the side of the fuselage if the tank is full, due to the weight of the fuel. If this should occur defueling the tank will simplify the installation.

2. Install the **LONGRANGE EXTENDER™** Assembly (206-287-110) using bolts (AN4-10A), provided, at the 1, 4, 8, and 10 O'clock position. Torque bolts to 30 inch pounds. Pull outboard on the **LONGRANGE EXTENDER™** and measure the gap between the **LONGRANGE EXTENDER™** and the skin (see Figure 1A).

NOTE

Since this area of the skin is handlaid fiberglass, there will be a variance in skin thickness around the opening causing a variable gap between the **LONGRANGE EXTENDER™** and the skin. Once the maximum gap has been measured, see Table 1 to determine the proper size compressible shim to use between the **LONGRANGE EXTENDER™** and the aircraft skin.

3. Remove the **LONGRANGE EXTENDER™** and place the appropriate shim in place on the **LONGRANGE EXTENDER™** (See Figure 1B).
4. Install the O-ring (MS29513-243), provided.
5. Install the **LONGRANGE EXTENDER™** using the four bolts (AN4-10A), provided, and washers (AN960PD416L), provided, from the 11 O'clock position through the 2 O'clock position. The remaining eight screws (MS27039-4-16) and washers (AN960JD416L) are located from the 3 O'clock position through the 10 O'clock position. Torque fasteners to 50-70 inch pounds.

NOTE

Use decal colors for best visibility on the aircraft.

6. Remove the Fuel Specification Decal located above the fuel filler opening. Install the new Fuel Specification Decal (206-289-002), provided.
7. Install the No Step/No Handle Decals (206-289-003), provided, on or near the Range Extender.

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8. Use the appropriate color paint and touch up the edge of the shim.
9. Revise aircraft equipment list.
10. Weight and Balance:

Net Weight Change: +2.25

Station: 148.00

Lateral Arm: 28.0

11. Installation complete.

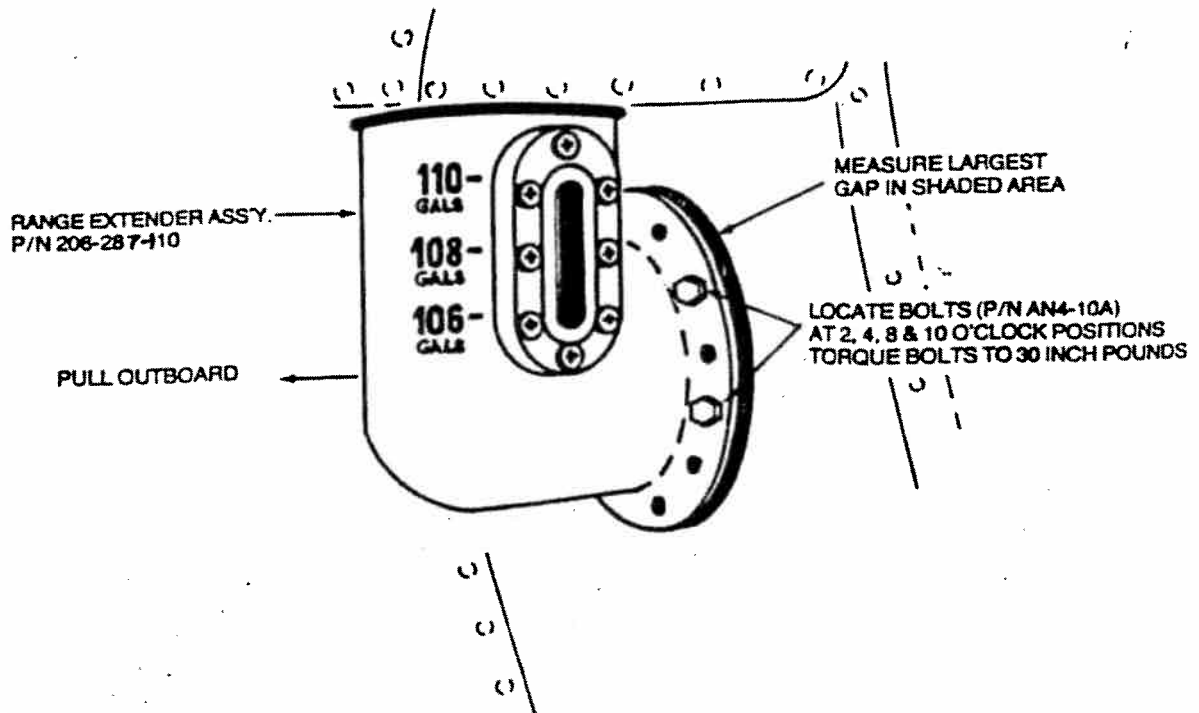
TABLE 1
Compressible Shim Sizing

<u>LARGEST GAP</u>	<u>USE PART NUMBER</u>	<u>THICKNESS</u>
.030 - .050	206-287-003	0.060 in.
.051 - .080	206-287-005	0.090 in.
.081 - .120	206-287-007	0.120 in.

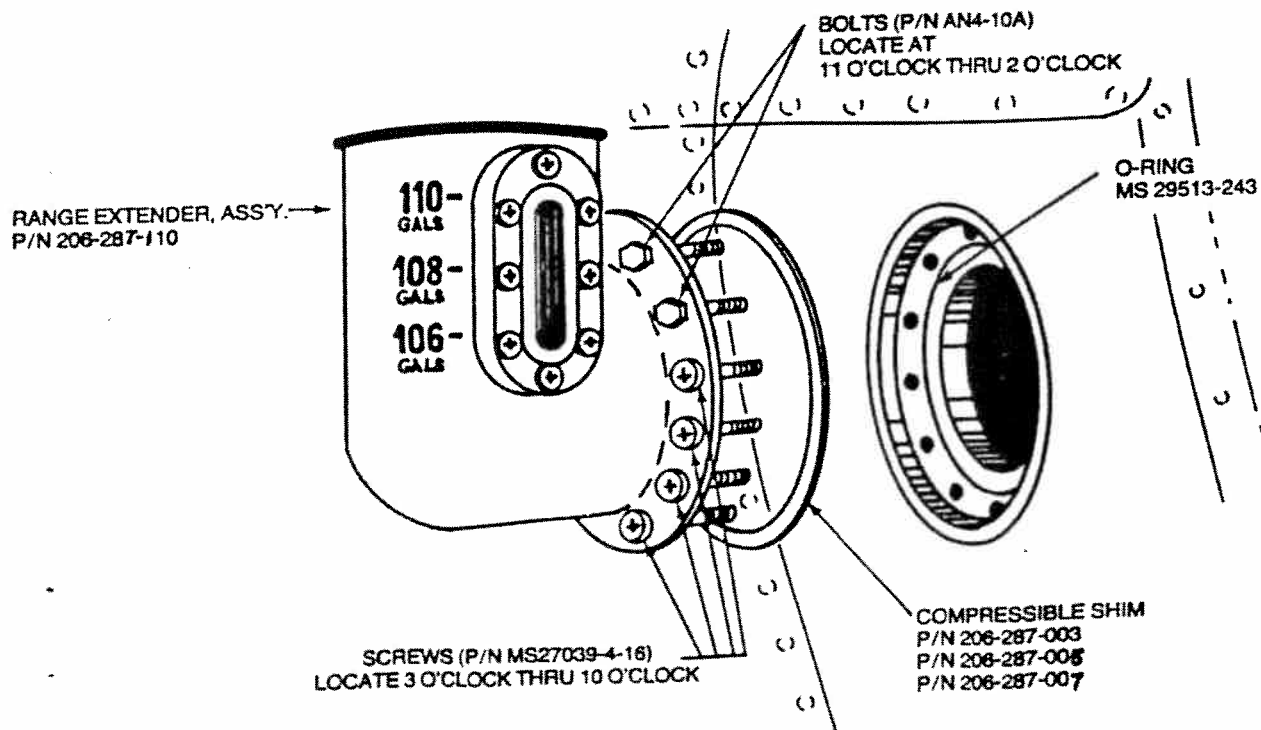
LONGRANGE EXTENDER™

ILLUSTRATED PARTS BREAKDOWN

Figure and Index Number	Part Number	Description	Quantity
2-1	206-287-110	LONGRANGE EXTENDER Assembly	1
-2	206-287-003	Compressible Shim (.060)	1
	206-287-005	Compressible Shim (.090)	1
	206-287-007	Compressible Shim (.120)	1
-3	MS27039-4-16	Screw	8
-4	AN4-10A	Bolt	4
-5	AN960PD416L	Washer	12
-6	MS29513-243	O-Ring	1
-7	206-280-001	Cap Assembly	1
-8	MS29513-232	O-Ring	1
-9	206-288-006	Lanyard Assembly	1
-10	MS29513-031	O-Ring	1
-11	206-288-017	Sight Gauge Cover	1
-12	AN526-C832-R7	Screw	8
N/S	206-289-002	Fuel Specification Decal	1
N/S	206-289-003	NO STEP/NO HANDLE Decal	2
N/S	206-289-005	Fuel Quantity Decal	1



Measure gap to determine thickness
Figure 1A



Exploded View of
Installation
Figure 1B

RANGE EXTENDER
P/N 206-287-110

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LONGRANGE EXTENDER

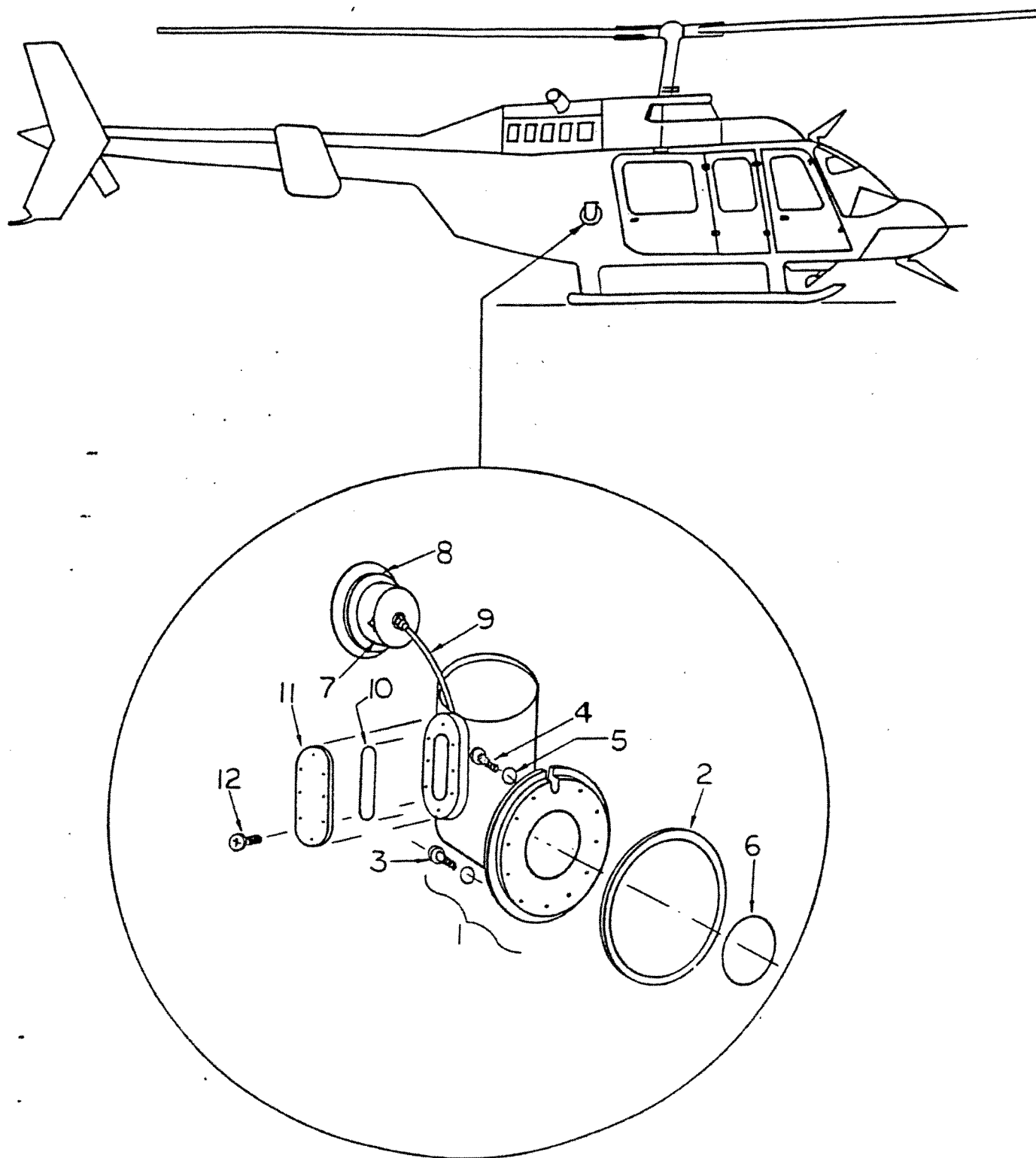


FIGURE 2.

AERONAUTICAL ACCESSORIES, INC.

PARTS LIST

LONGRANGE EXTENDER™

P/N 206-284-110

Items included in this kit:

	<u>QUANTITY</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>
_____	1	LONGRANGE EXTENDER™ Assy	206-287-110
_____	1	Fuel Specification Decal	206-289-002
_____	2	NO STEP/NO HANDLE Decal	206-289-003
_____	1	Compressible Shim (.060)	206-287-003
_____	1	Compressible Shim (.090)	206-287-005
_____	1	Compressible Shim (.120)	206-287-007
_____	1	O'Ring	MS29513-243
_____	8	Screw	MS27039-4-16
_____	4	Bolt	AN4-10A
_____	12	Washer	AN960JD416L
_____	1	Fuel Specification Decal	206-289-009
_____	2	NO STEP/NO HANDLE Decal	206-289-010
_____	1	Flight Manual Supplement	

CONFIRM INVENTORY PRIOR TO INSTALLATION.

Packed by: _____

Date: _____

United States of America
Department of Transportation — Federal Aviation Administration
Supplemental Type Certificate

Number SH1522SO

This certificate, issued to Aeronautical Accessories, Inc.
P.O. Box 3689
Bristol, Tennessee 37625

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 6 of the Civil Air Regulations.

Original Product — Type Certificate Number: H2SW
Make: Bell
Model: 206L, 206L-1

Description of Type Design Change: Manufacture of Range Extender in accordance with Aeronautical Accessories, Inc. Drawing List Report No. AA-89006, Revision "A", dated June 22, 1989, or Report KR-285, no revision, dated September 30, 1983, or later FAA approved revisions, and installation per Installation Instructions listed therein.

Limitations and Conditions: FAA approved Helicopter Flight Manual Supplement, dated December 2, 1983, or later FAA approved revision, is a required part of this approval. Compatibility of this design change with previously approved modifications must be determined by the installer. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: May 10, 1983
Date of issuance: December 2, 1983

Date received:
Date amended: October 2, 1998



By direction of the Administrator
Paul C. Sconyers
Paul C. Sconyers (Signature)
Associate Manager, ACE-117A
Atlanta Aircraft Certification Office
(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

INSTRUCTIONS SPÉCIALES/SPECIAL INSTRUCTIONS:

Mr. Dearing,

In accordance with Transport Canada Airworthiness Policy Letter No. 38, Issue No. 1 dated August 21, 1989 on the subject of familiarization of FAA STC's incorporated on Bell 206 helicopters that was previously sent to you, it has been determined that the following FAA STC's issued to Aeronautical Accessories, Inc. may be accepted on the basis of their FAA certification and therefore would not normally require a Canadian familiarization:

<u>FAA STC No.</u>	<u>Applicability</u>	<u>Description</u>
SH227WE	Bell 206A, 206B, 206L, 206L-1 & 206L-3 (Normal Category only)	Installation of baggage compartment extension.
SH244WE	Bell 206A, 206B, 206L, 206L-1 & 206L-3	Installation and fabrication of cyclic support safety cover.
SH1312SO	Bell 206A, 206B, 206L, 206L-1 & 206L-3	Installation of the Nightscanner belly mounted searchlight.
SH1322SO	Bell 206A, 206B, 206L, 206L-1 & 206L-3	Installation of an aluminum entrance step on helicopter equipped with high skid gear.
SH1385SO	Bell 206A, 206B, 206L, 206L-1 & 206L-3	Installation of a cargo viewing mirror on Bell helicopters.
SH1392SO	Bell 206A & 206B	Installation of High Skid Type Landing Gear.
SH1522SO	Bell 206L & 206L-1	Installation of Range Extender (EA 891-40).
SH1609SO	Bell 206A & 206B	Installation of a spacer block assembly on helicopters equipped with high skid gear.
SH1813SO	Bell 206A, 206B, 206L, 206L-1 & 206L-3	Installation of passenger bubble window assemblies.
SH1814SO	Bell 206A, 206B, 206L, 206L-1 & 206L-3	Installation of crew bubble window assemblies.

AIRWORTHINESS APPROVAL NOTE NO: 23814 Issue 12

APPLICANT: CAA Internal Purposes

AIRCRAFT TYPE: Bell 206 Series

REGISTRATION NO: Not Applicable

CONSTRUCTOR'S NO: Not Applicable



Validation of Aeronautical Accessories FAA Bell 206 Series STC Approvals

In accordance with BCAR B2-2 para 7.2.3 procedures, the following Aeronautical Accessories, Inc modifications are approved for use in the Transport Category (Passengers) when installed in accordance with the FAA STC on UK registered Bell/Agusta Bell 206 Series aircraft, as appropriate:

<u>Description</u>	<u>STC</u>	<u>Model</u>
Range Extender	SH2889SW	Bell 206A,B
Longranger Extender	SH1522SO	Bell 206L,L-1
Raingutter	SH1148SO	Bell 206A,B,L,L-1,L-3
Spacemaker	SH227WE	Bell 206A,B,L,L-1,L-3,L-4,407
Maintenance Step	SH1281SO	Bell 206A,B
Folding Maintenance Step	SH2243SO	Bell 206A,B,L,L-1,L-3,L-4,407
Step/Handle	SH1282SO	Bell 206A,B
Step/Handle	SH1366SO	Bell 206L,L-1,L-3,L-4,407
High Skid Gear	SH1392SO	Bell 206A,B
High Skid Gear	SH2804SO	Bell 206L,L-1,L-3,L-4
Low Skid Gear	SH2764SO	Bell 206A,B
Low Skid Gear	SH2941SO	Bell 206L,L-1,L-3,L-4
Flitestep	SH1322SO	Bell 206A,B,L,L-1,L-3,L-4
Baggage Floor Protector	SH1147SO	Bell 206A,B,L,L-1,L-3,L-4,407
Cyclic Cover	SH244WE	Bell 206A,B,L,L-1,L-3,L-4
Collective Safety Cover	SH2373SO	Bell 206A,B,L,L-1,L-3,L-4
Crew Wedge Window	SH1815SO	Bell 206A,B,L,L-1,L-3,L-4
Replacement Windows	SH1664SO	Bell 206A,B,L,L-1,L-3,L-4
Crew Shoulder Harness	SH2073SO	Bell 206A,B,L,L-1,L-3,L-4
Door Openers	SH1990SO	Bell 206A,B,L,L-1,L-3,L-4,407
VRS	SH7882SW	Bell 206A,B
Cabin Floor Protector	SH2289SO	Bell 206A,B,L,L-1,L-3,L-4,407
Crew Vertical Slide Windows	SH2139SO	Bell 206A,B,L,L-1,L-3,L-4,L-4 (Modified)
Replacement Drive Train Seals	SR00539AT	Bell 206A,B,L,L-1,L-3,L-4
Tail Rotor Pedal Lockout	SR00513AT	Bell 206A,B,L,L-1,L-3,L-4
Replacement Interior Trim	SID298SO	Bell 206A,B,L,L-1,L-3
Replacement Door Locks and Latching	SR00095AT	Bell 206A,B,L,L-1,L-3,L-4
Fuel Cap		

APPLICANT
AIRCRAFT PROJECTS DEPARTMENT
FLIGHT MANUALS SECTION
POWERPLANT DEPARTMENT
REGIONAL MANAGER:-

<u>Description</u>	<u>STC</u>	<u>Model (Cont'd)</u>
Lightweight Replacement Nitrogen Reservoir Assembly	SR00175AT	Bell 206A, B, L, L-1, L-3, L-4
Electrical Inflation Valve Retrofit Kit	SR00822AT	Bell 206A, B, L, L-1, L-3
Air Deflector	SR01556AT	Bell 407
Air Deflector	SR01582AT	Bell 206A, B, L, L-1, L-3, L-4
Dual Video Camera System and Monitor	SH2292SO	Bell 206A, B, L, L-1, L-3
Hinged Circuit Breaker Panel	SR00347AT	Bell 206A, B, L, L-1, L-3, L-4

Issue 2 has been raised to correct minor editorial errors.

Issue 3 has been raised to include the Bell 206L4, where applicable.

Issue 4 has been raised to include the Crew Vertical Slide Windows.

Issue 5 has been raised to include the Replacement Drive Train Seals.

Issue 6 has been raised to include the Tail Rotor Pedal Lockout and Bell 206 L-4 applicability to High and Low Skid Gear.

Issue 7 has been raised to include the Replacement Interior Trim

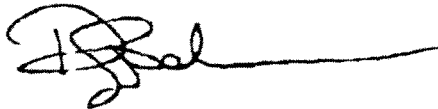
Issue 8 has been raised to include Replacement Door Locks and Locking Fuel Cap

Issue 9 has been raised to include replacement Nitrogen Reservoir and Electrical Inflation Valves for the Bell Emergency Flotation Equipment.

Issue 10 has been raised to include installation of Air Deflection on crew and passenger door windows.

Issue 11 has been raised to include STCs SR01582AT, SH2292SO and SR00347AT.

Issue 12 has been raised to include the Bell 407, where applicable.



P Sparkes

For the Civil Aviation Authority

Date 8 October 1999