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INSTALLATION INSTRUCTIONS

CARGO MIRROR KIT

206-175-303

FOR

BELL HELICOPTER TEXTRON MODEL 206A, B, L, L-1, L-3, L-4 HELICOPTERS

Report Number AA-86032

Revision Q

March 23, 2009

ECCN 9E991

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LOG OF REVISIONS

Revision	Date	Description	Pages
-/A	-/-/86	Original Release Various Technical Updates.	All
B	6/29/93	Revised Model Effectivity	All
C	3/10/94	Added FAA Approval Statement.	All
		Revised Step 7.	2,3
		Revised Step 10.	3
		Revised Parts List.	5
D	7/13/95	Revised P/N Callouts.	All
		Revised Step 7a.	2
		Revised Step 7b	3
		Revised Step 10a,b	3
		Revised Parts List.	5
E	7/24/96	Revised Step 3.	2
		Revised Parts List.	5
F	8/28/97	Revised Step 10a,b	3
		Revised Parts List.	5
G	4/15/98	Added Log of Revisions.	All
		Revised Step 4.	3
		Revised Step 7b.	4
		Revised Step 10a, b.	4
		Revised Parts List	6
H	5/21/98	Revised Part Number Step 11	4
		Revised Part Number.	6
I	8/4/98	Revised Mirror Assembly P/Ns.	4,6
J	6/30/99	Revised steps 2, 5, 6 & 10.	3,4
		Revised rigging procedures.	4,5
		Deleted step 14.	5
K	8/29/00	Revised part number in steps 7.a, 7.b, 10.a & 10.b.	4
		Revised step 11.a.	4
		Deleted & revised part numbers in Parts List.	6
L	10/2/00	Revised step 9 and added step 10 and resequenced.	4
		Deleted & added part numbers in Parts List.	6
M	3/26/01	Deleted step 12 (a) and resequenced.	4
		Added 206-170-323/-324 Spacers.	4,6
		Deleted part numbers AN970-3 & AN525-10R11 from Parts List.	6
		Added part numbers 206-170-303/-304 Clip Assemblies L/H & R/H.	4,6
N	7/2/01	Added part number 206-170-421 Shim.	5,7
		Added MS20426AD4-6 Rivet	7
		Revised Steps 9 & 10.	5
O	7/5/05	Replaced part number 206-170-546 with part Number 206-170-548.	5,7
P	6/14/07	Replaced P/N's 206-170-303/-304 with P/N's 206-170-403/-404	5,7
		Deleted Alternate Washers.	7

**INSTALLATION INSTRUCTIONS
CARGO MIRROR KIT**

LOG OF REVISIONS

Revision	Date	Description	Pages
Q	3/23/09	Revised Disclosure Statement	2
		Replaced P/N 206-170-548 with 206-170-550	6,8
		Replace kit P/N 206-175-203 with 206-175-303	1,5,8
		Add metric value to Lateral Arm	7

1.0 INTRODUCTION

These instructions provide the information necessary to install the **AERONAUTICAL ACCESSORIES, INC. CARGO MIRROR KIT** P/N 206-175-303 on Bell Helicopter Textron model 206A, B, L, L-1, L-3, L-4 helicopters. All Engineering aspects of these instructions are FAA approved under STC No. SH1385SO.

NOTE

Refer to Bell Helicopter Model 206 Maintenance Manuals and all applicable maintenance manuals and/or ICA's for disassembly/reassembly instructions not specifically addressed in this document. Read ALL instructions thoroughly and have a clear understanding BEFORE beginning.

2.0 CARGO MIRROR, INSTALLATION OF:

- 2.1 Remove bracket (206-073-114-1).
- 2.2 Remove fresh air vent control cable from bracket without the removing the cable from fresh air plenum.

NOTE

Push-pull knob and cable retainer are threaded onto cable assembly.

- 2.3 Lay up the replacement Cable Support Bracket Assembly (206-170-281) and mark the position of the lower bracket hole on the instrument panel support. Remove the side panel to gain access to the backside of the support. Drill panel support as required and install the Nut Plate (MS21069L3), using the Rivets (CCR264SS3-2) provided.
- 2.4 Install replacement Cable Support Bracket Assembly, using existing upper nut plate and hardware that held the bracket (206-073-114-1). The console access panel stud (50-013-5), requires removal where it lays under the replacement bracket. Use the Screw (MS27039-1-08) and Washer (NAS1149D0332J) to secure the lower part of the replacement bracket assembly.
- 2.5 Reinstall fresh air control cable previously removed.
- 2.6 Drill hole in chin bubble retainer adjacent to the instrument console side panel just aft of the channel at Station 15. Use an 11/32" drill bit. This hole will accommodate the mirror Control Cable.

NOTE

Use of a unibit is helpful for above operation.

- 2.7 (a) Bell 206A, B, L, L-1, L-3, L-4 Model Helicopters: Install Control Cable (206-189-006) in bracket and through hole drilled in Step 2.6. Attach cable assembly to existing left panel screws with the two (2) Clamps (MS21919WDG5) provided
- (b) Bell 206L, L-1, L-3, L-4 Model Helicopters with STC No. SR00036SE incorporated: Install Control Cable (206-189-006) in bracket and through hole drilled in Step 2.6. Two (2) Clamps (MS21919WDG5) are used to secure the cable assembly in both an upper and lower position. For the upper clamp position locate a suitable existing left panel screw to attach the cable assembly with a Clamp (MS21919WDG5). For the lower clamp position drill out the fourth rivet from the bottom at F.S. 18.0. Drill hole to .202"-.208" diameter and attach Clamp (MS21919WDG5) using one (1) each Screw (MS27039-1-09), Nut (MS21042L3) and two (2) Washers (NAS1149D0332J). Secure cable assembly.

3.0 TRIM LOOKING CONTROL AS FOLLOWS:

- (a) Pull T-handle back until 2 – 3 inches of the inner wire protrudes from outer sheath.
- (b) Cut off cable sheath assembly ¼ inch below chin bubble retainer.
- (c) Push T-handle in and rotate clockwise to lock.
- 3.1 This step should leave ¼ inch of the outer cable sheath protruding from the lower surface of the chin bubble and at least 4 inches of the cable inner wire protruding from the outer sheath.
- 3.2 Remove the landing light cover and the panel just aft of the landing light cover. Retain hardware for reinstallation.
- 3.3 Install Shims (206-170-421) 2 required per Dwg. 206-175 sheet 5. Install Clip Assembly L/H (206-170-403) and Clip Assembly R/H (206-170-404) per Dwg. 206-175 sheets 2,3,4 and 5.

4.0 REINSTALL PREVIOUSLY REMOVED PANEL USING RETAINED HAREWARE:

- 4.1 (a) Bell 206L, L-1, L-3, L-4 Model Helicopters install Support Assembly W/Mirror (206-170-550) on forward outermost edge of panel using two (2) Screws (AN525-10R12), two (2) Washers (NAS1149F0332P), one Spacer (206-170-323 on L/H side) and one Spacer (206-170-324 on R/H side) (under the Support Assembly W/Mirror).
- (b) On forward outermost edge replace center screw with Screw (MS27039-1-11).

5.0 RIG MIRROR CONTROLS AS FOLLOWS:

- 5.1 Rotate the mirror to a neutral position in reference to the Ball Stud in mirror.
- 5.2 Push T-handle forward and rotate clockwise to lock.
- 5.3 Install control cable inner wire in connector assembly as shown on Drawing 206-175, Sheet 3 and adjust the position of the mirror to be at least 1/8" away from the chin bubble. Temporarily tighten the Connector Assembly Nut.
- 5.4 Rotate T-Handle counter-clockwise to unlock and pull aft to deploy/extend mirror. Check and adjust mirror on Ball Stud for desired rear/lower view.
- 5.5 Push T-Handle in to retract mirror and rotate T-Handle clockwise to lock.
- 5.6 Recheck mirror to chin bubble clearance and if necessary readjust the Control Cable inner wire connection. Torque the Control Cable Connector Assembly Nut to 15 in-lb plus nut drag.

CAUTION

Ensure there is no contact between the chin bubble and mirror.

NOTE

If slight mirror vibration occurs in flight in the stowed position, re-adjust the mirror away from the chin bubble to increase protrusion into airflow.

- 5.7 Loosen friction of T-handle and pull handle aft to deploy mirror. Check and adjust mirror for desired rear/lower view.
- 5.8 When desired rigging position is obtained, cut off excess control wire length and curl down and aft to prevent personnel injury. Be sure to leave sufficient wire length to allow future removal and re-rigging.
- 5.9 Revised aircraft equipment list.
- 5.10 Installation Complete.

6.0 WEIGHT AND BALANCE:

WEIGHT:	2.0 lbs (.9 kg)
STATION:	16.0 (406.4 mm)
LATERAL ARM:	7.5 (190.5 mm)

**INSTALLATION INSTRUCTIONS
CARGO MIRROR KIT**

PARTS LIST

CARGO MIRROR 206-175-303

<u>Qty</u> <u>-303</u>	<u>Part Number</u>	<u>Description</u>
1	206-170-281	Cable Support Bracket Assembly
1	206-170-403	Clip Assembly L/H
1	206-170-404	Clip Assembly R/H
1	206-170-323	Spacer
1	206-170-324	Spacer
2	206-170-421	Shim
1	206-170-550	Mirror Support Assembly
1	206-189-006	Control Cable
	Alt: 206-189-004	
2	AN525-10R12	Screw
3	CCR264SS3-2	Rivet
4	MS20426AD3-4	Rivet
4	MS20426AD3-5	Rivet
2	MS20426AD4-6	Rivet
4	MS20470AD3-3	Rivet
1	MS21042L3	Nut
1	MS21069L3	Nut Plate
2	MS21919WDG5	Clamp
1	MS27039-1-08	Screw
1	MS27039-1-09	Screw
1	MS27039-1-11	Screw
3	NAS1149D0332J	Washer
2	NAS1149F0332P	Washer
4	NAS1149F0463P	Washer
1	Dwg. 206-175	Installation Drawing

Confirm inventory prior to installation.

Packed by: _____ / _____

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

Number SH1385SO

This certificate issued to

Bell Helicopter Textron, Inc.
441 Industrial Park Road
Piney Flats, TN 37686

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 Helicopter Textron Canada

Model : 206A, 206B, 206L, 206L-1, 206L-3, 206L-4

Description of Type Design Change:

Installation of a cargo viewing mirror on Bell helicopters in accordance with Aeronautical Accessories, Inc. Report KR-198, Revision "A", dated July 6, 1982, or later FAA approved revisions.

Limitations and Conditions:

The approval of this change applies basically to Bell Models 206A, 206B, 206L, 206L-1, 206L-3, and 206L-4. The installer must determine whether this design change is compatible with previously approved modifications. If the holder agrees to permit another person to use this certificate to alter a product, the holder must 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 : July 06, 1981

Date reissued : April 15, 2011

Date of issuance : November 09, 1982

Date amended : October 05, 1992



By direction of the Administrator

Martin K. Coan
(Signature)

for James A. Richmond, Acting Manager
Rotorcraft Certification Office,
Southwest Region

(Title)

INSTRUCTIONS: The transfer endorsement below may be used to notify the appropriate FAA Regional Office of the transfer of the Supplemental Type Certificate.

The FAA will reissue the certificate in the name of the transferee and forward it to him.

TRANSFER ENDORSEMENT

Transfer the ownership of Supplemental Type Certificate Number _____

to (Name of transferee) _____

(Address of transferee) _____

(Number and street)

(City, State, and ZIP code)

from (Name of grantor) (Print or type) _____

(Address of grantor) _____

(Number & street)

(City, State, and ZIP code)

Extent of Authority (if licensing agreement): _____

Date of Transfer: _____

Signature of grantor (In ink): _____



REPÚBLICA FEDERATIVA DO BRASIL
Ministério da Aeronáutica
CENTRO TÉCNICO AEROESPACIAL

CERTIFICADO DE HOMOLOGAÇÃO SUPLEMENTAR DE TIPO

NÚMERO 9306-06

CATEGORIA NORMAL

Este documento, emitido com base na Portaria nº 453/GM5, de 02 de Agosto de 1991, em nome de: AERONAUTICAL ACCESSORIES, INC.

P.O. BOX 3689

Bristol, TENNESSEE 37625

U.S.A.

atesta que a modificação ao projeto de tipo do produto citado abaixo, observadas as limitações e condições especificadas no Adendo a este Certificado, satisfaz os requisitos de aeronavegabilidade aplicáveis ao produto original.

PRODUTO ORIGINAL

Marcas de nacionalidade e de matrícula: -X-X-

Fabricante: BELL HELICOPTER TEXTRON, INC.

Modelo(s): 206A, B, L, L-1, L-3 e L-4

Nº de série: -X-X-

Nº do Certificado de Tipo: H2SW (FAA)

DESCRIÇÃO DA MODIFICAÇÃO

Instalação do CARGO VIEWING MIRROR, de acordo com o Aeronautical Accessories Report Nº KR-198, REV. E, de 24 JUN 89, ou em revisões posteriores aprovadas pelo CTA.

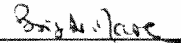
DATAS

Do requerimento: 01 ABR 93 Da emissão: 17 JUN 93

Da reemissão:

APROVAÇÃO


Chefe da Divisão de Homologação Aeronáutica
CLODOALDO MATIAS DE OLIVEIRA - Maj Av


Diretor do CTA
Brig do Ar - NELSON DE SOUZA TAVEIRA

NOTAS

- a) Este Certificado e os dados técnicos com base nos quais ele foi emitido são válidos até que sejam cancelados, suspensos, revogados ou um prazo limite seja estabelecido pelo **Centro Técnico Aeroespacial**.
- b) O proprietário deste Certificado deve:
- mantê-lo integrado ao dossiê do respectivo processo de homologação;
 - manter cópia do Certificado a bordo da aeronave junto dos documentos da mesma.

ENDOSSO DE TRANSFERÊNCIA***NÃO APLICAVEL**

Transfiro a propriedade deste Certificado de Homologação Suplementar de Tipo para:

ADQUIRENTE	Nome:
	Logradouro:
	CEP: Cidade: Estado:
TRANSFERENTE	Nome:
	Logradouro:
	CEP: Cidade: Estado:

Data de Transferência:**Assinatura do Transferente:**

* - No caso de transferência de propriedade deste Certificado, o transferente deve preencher o quadro "**Endosso de Transferência**", e o adquirente deve enviar este Certificado à Divisão de Homologação Aeronáutica para que seja reemitido em nome do adquirente.

OBSERVAÇÕES

Este CHST representa a validação brasileira para o STC SH1385SO emitido pela FAA.

Aug 18 05 01:57p

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P.5

中国民用航空总局

GENERAL ADMINISTRATION OF CIVIL AVIATION OF CHINA

补充型号合格证

VALIDATION OF SUPPLEMENTAL TYPE CERTIFICATE

编号/NO. VSTC144

本证颁发给/This Certificate is issued to Aeronautical Accessories, Inc.

适用机型/Applicable Aircraft Model: Bell 206A, 206B, 206L, 206L-1, 208L-3, 206L-4

级数/Description: Installation of a cargo viewing mirror on Bell helicopters in accordance with Aeronautical Accessories, Inc. Report KR-192, Revision "A", dated July 6, 1982, or later FAA approved revisions.

使用限制/Limitation: See the "Limitation and Conditions" of SH1385SO (Issued on October 5, 1992)

经中国民用航空总局审查确认, 上述民用航空产品的设计更改符合中国民用航空规章的有关规定。中国民用航空总局对由 FAA 颁发的第 SH1385SO 号补充型号合格证给予认可。

This is to certify that design changes of above civil aeronautical product meets applicable China Civil Aviation Regulations. General Administration of Civil Aviation of China validates the Supplemental Type Certificate No. SH1385SO issued by FAA.

局长授权:

For the Minister of CAAC:

签字/Signature Zhou Kaixuan

职务/Title Deputy Director General

部门/Department CAAC-AAD

日期/Date 8/11/2005

AAIC-156(01/2000)

RECEIVED TIME 18.AUG. 14:29

PRINT TIME 18.AUG. 14:36

**AUTORITATEA AERONAUTICĂ
CIVILĂ ROMÂNĂ**
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**ROMANIAN CIVIL
AERONAUTICAL AUTHORITY**
JAA Member
AFTN: LRBBYA
SITE: BUHFOY
www.caa.ro
e-mail: dir.gen@caa.ro

No. 7265 / 13.05.2004

Aeronautical Accessories, Inc.

Mr. Steve Joseph
Director of Engineering

RECEIVED
JUN 02 2004
BY:

Subject: Romanian validation of FAA STC No. SH1385SO.

Dear Mr. Joseph,

Following completion of the documentation review process, we hereby
the FAA STC No. SH1385SO, regarding the installation of the Aero
Accesories, Inc. „Cargo Mirror” on the Bell 206L-1 helicopter.

Best regards,


Director General
Aurelian BOTEZATU