



U.S. Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0025
For FAA Use Only
Office Identification

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in civil penalty not to exceed \$1,000 for each such violation (Section 501 Federal Aviation Act of 1958).

1. Aircraft	Make BELL HELICOPTER CORP.	Model 47D-1
	Serial No. 480	Nationality and Registration Mark N78900
2. Owner	Name (As shown on registration certificate) BRAD STAHL	Address (As shown on registration certificate) [REDACTED] ARROYO GRANDE, CA. 93420

3. For FAA Use Only

4. Unit Identification				5. Type	
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	(As described in Item 1 above)				XX
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address STEPHEN LONG [REDACTED] ARROYO GRANDE, CA. 93420	B. Kind of Agency ☒ U.S. Certificated Mechanic ☐ Foreign Certificated Mechanic ☐ Certificated Repair Station ☐ Manufacturer	C. Certificate No. A&P [REDACTED]
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I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date FEB. 25, 2010	Signature of Authorized Individual [REDACTED]
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7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY	FAA Ftl. Standards Inspector	Manufacturer	☒ Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection FEB. 25, 2010		Certificate or Designation No. [REDACTED]	Signature of Authorized Individual [REDACTED]	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

N78900

S/N 480

TACH: 0.0

A/C T/T: 7640.2 HRS.

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS.

- 1) INTRODUCTION: INSTALLED FLIGHT GRIP MODEL 135 CYCLIC CONTROL GRIP PER STC SH1152NW REPLACING BELL HELICOPTER P/N 47-721-036-1.
- 2) DESCRIPTION: INSTALLED CYCLIC GRIP, NO SERIAL NO.
- 3) OPERATION INFORMATION: FLIGHT GRIP INSTALLATION INSTRUCTIONS.
- 4) SERVICING INFORMATION: NOT APPLICABLE.
- 5) MAINTENANCE INSTRUCTIONS: INSPECT SECURITY AT 100 HR. INSPECTIONS.
- 6) TROUBLESHOOTING: REFERENCE FLIGHT GRIP INSTALLATION INSTRUCTIONS.
- 7) REMOVAL AND REPLACEMENT: REFERENCE FLIGHT GRIP INSTALLATION INSTRUCTIONS.
- 8) DIAGRAMS: REFERENCE FLIGHT GRIP INSTALLATION INSTRUCTIONS.
- 9) SPECIAL INSTRUCTIONS: NOT APPLICABLE
- 10) APPLICATION OF PROTECTIVE TREATMENTS: NOT APPLICABLE.
- 11) DATA: REFERENCE STC SH1152NW.
- 12) SPECIAL TOOLS: NOT APPLICABLE.
- 13) COMMUTER CATEGORY: NOT APPLICABLE.
- 14) RECOMMENDED OVERHAUL PERIODS: ON CONDITION.
- 15) AIRWORTHINESS LIMITATIONS: NOT APPLICABLE.
- 16) REVISION: THIS DOCUMENT MAY BE REVISED BY SUBMITTING A LETTER TO THE LOCAL FSDO ALONG WITH A COPY OF THE REVISED 337.

NOTHING FOLLOWS

☐ Additional Sheets Are Attached

DATE 8-28-91

RECEIVED MAY 13 1997

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				Form Approved Budget Bureau No. 04-2190-1	
MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				FOR FAA USE ONLY	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.				OFFICE IDENTIFICATION (U-1-A-M-O-T)	
1. AIRCRAFT	NAME Bell Helicopter	MODEL 47 D-1	NATIONALITY AND REGISTRATION MARK N 78900		
2. OWNER	NAME (As shown on registration certificate) HIGH COUNTRY HELICOPTERS, INC.	ADDRESS (As shown on registration certificate) Montrose, Co. 81401			
3. FOR FAA USE ONLY					
4. UNIT IDENTIFICATION					
UNIT	NAME	MODEL	SERIAL NO.	REPAIR	ALTERATION
AIRFRAME	***** (As described in item 1 above) *****				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				
5. CONFORMITY STATEMENT					
A. AGENCY'S NAME AND ADDRESS		B. KIND OF AGENCY		C. CERTIFICATE NO.	
Richard A. Dick		X U.S. CERTIFICATED MECHANIC		ASP	
Montrose, Co. 81401		FOREIGN CERTIFICATED MECHANIC			
		CERTIFICATED REPAIR STATION			
		MANUFACTURER			
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with FAR 43.9 and 43.11 and that the information furnished herein is true and correct.					
DATE 5-9-91					
7. APPROVAL FOR RETURN TO SERVICE					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is: ☒ APPROVED ☐ REJECTED					
BY	FAA RTI STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION	OTHER (Specify)	
	FAA DESIGNEE	REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT		
DATE OF APPROVAL OR REJECTION 5-7-91		CERTIFICATE OR DESIGNATION NO. 270		SIGNATURE OF AUTHORIZED INDIVIDUAL	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Bell 47 D-1 N78900 S/N 480 5-9-91

Installed Improved Tail Rotor Kit per BHT Service Instruction 438, installed saddle type fuel system per BHT Instructions in Bell M & O and IPB as Revised in August '74. Installed WHF Radio 1/A/W Manufactures Instructions and A/C 43.13-2A Revised 1977 Para 23,36, and Fig 2.10 for Antenna Installation, Existing A/C Wiring used to connect to two Headset Positions, Radio Mounted in Manufacture furnished try. A/C weight and Balance Record and Equipment List Revised by actual A/C weighing. A/C Records Revised to show the same. Work completed 5-9-91 on N78900. New empty weight 1607.5 at CG 5.8.

THE END

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				Form Approved Budget No. 16-2500-1	
MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				FOR FAA USE ONLY	
				OFFICE IDENTIFICATION AAA 558007	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.					
1. AIRCRAFT	MAKE Bell 47	SERIAL NO. 480	MODEL D1	NATIONALITY AND REGISTRATION MARK N78900	
2. OWNER	NAME (As shown on registration certificate) Richard A. Dick		ADDRESS (As shown on registration certificate) [REDACTED]		
3. FOR FAA USE ONLY					
4. UNIT IDENTIFICATION					
UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE	
AIRFRAME	***** (As described in item 1 above) *****			REPAIR	ALTERATION
POWERPLANT					X
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				
6. CONFORMITY STATEMENT					
A. AGENCY'S NAME AND ADDRESS		B. KIND OF AGENCY		C. CERTIFICATE NO.	
Richard A. Dick [REDACTED] Montrose, Co. 81401		X U.S. CERTIFICATED MECHANIC FOREIGN CERTIFICATED MECHANIC CERTIFICATED REPAIR STATION MANUFACTURER		A/P [REDACTED]	
D. I certify that the repair and/or alteration made in accordance with the information furnished herein is true and correct.				REVERSE OF REGULATION	
DATE 8 March 1989		[REDACTED]			
7. APPROVAL FOR RETURN TO SERVICE					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED					
BY	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION	OTHER (Specify)	
	FAA DESIGNER	REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT		
DATE OF APPROVAL OR REJECTION 3/8/89		CERTIFICATE OR DESIGNATION NO. A/1 [REDACTED]		[REDACTED]	

NOTICE

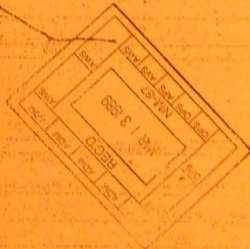
Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Bell 47/D1 S/N#480 N78900 3/8/89

1. Installed Bell Helicopter Textron Improved tail system-- Kit #47-704-010-103. Part I in accordance with service instruction Number 438. Dated 15 August 1980. Revised 9 January 1984.
2. Installed radio, Genave Alpha 100 and 2 position intercom system. VHF antenna installed on tail boom at Sta. +58. All work in accordance with A/C 43.13 1A and 2A, Chapter 15.
3. Aircraft weighed. Weight and Balance information entered into the aircraft flight manual. Aircraft equipment list revised.

END



☐ ADDITIONAL SHEETS ARE ATTACHED

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				Form Approved Budget Bureau No. 04-R060.1	
MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)					
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.					
1. AIRCRAFT		MAKE Bell	MODEL 47D-1	NATIONALITY AND REGISTRATION MARK N78900	
2. OWNER		NAME (As shown on registration certificate) Richard A. Dick		ADDRESS (As shown on registration certificate) Montrose, Colorado 81401	
3. FOR FAA USE ONLY					
4. UNIT IDENTIFICATION					
UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE REPAIR ALTERATION	
AIRFRAME	***** (As described in item 1 above) *****			XX	
POWERPLANT					
PROPELLER					
APPLIANCE					
6. CONFORMITY STATEMENT					
A. AGENCY'S NAME AND ADDRESS		B. KIND OF AGENCY		C. CERTIFICATE NO.	
Richard A. Dick Montrose, Colorado 81401		☒ U.S. CERTIFICATED MECHANIC ☐ FOREIGN CERTIFICATED MECHANIC ☐ CERTIFICATED REPAIR STATION ☐ MANUFACTURER		A&P [REDACTED]	
D. I certify that the repair and/or alteration made in the unit(s) identified in item 4 was inspected in the manner prescribed in the attachments hereto have been made in accordance and that the information furnished herein is true					
DATE 5-28-88		[REDACTED]			
7. APPROVAL					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed in the attachments hereto have been made in accordance and that the information furnished herein is true					
BY	FAA RVT STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION	OTHER (Specify)	
	FAA DESIGNEE	REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT		
DATE OF APPROVAL OR REJECTION 5-28-88		CERTIFICATE OR DESIGNATION NO. [REDACTED]		SIGNATURE OF INSPECTOR [REDACTED]	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

4. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Installed Lycoming VO-435 engine S/N L-2436-52 and centerframe Modification in Accordance with STC SH7528W. Battery installation in Accordance with STC SH2835W. Flight Manual Supplement entered into Aircraft Flight Manual. Weight and Balance information entered into the Aircraft Flight Manual.

End

ADA	ADM	ADM	ADM
USV	REC'D		
JUN 11			

☐ ADDITIONAL SHEETS ARE ATTACHED

From: Texas Helicopters
Phone: [REDACTED]



Texas helicopter corp.

2-15-86

REF: STC 7525W & 5H2855W

GENTLEMEN:

THIS WILL SERVE AS AUTHORIZATION FOR YOU TO USE
STC 7525W & 5H2855W

MODEL 47-D1

S/N 480

SINCERELY,

TEXAS HELICOPTER CORPORATION

[REDACTED]
GIFTON MCCREARY
PRESIDENT

GM/DT

- 
- FAA Repair Station #207-13
 - Approved Bell Service Station
 - Manufacturer of WASP Utility Helicopters

10-11-5

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320 07 007 801 101111111111 11 111111 111111

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86-21586

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

Number SH752SW

This certificate issued to Gifton McCreary

[REDACTED]
Roanoke, Texas 76262

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

Original Product—Type Certificate Number: H-1

Make: Bell,

Model: 47D-1, 47G

Description of Type Design Change: Centerframe modification or replacement and installation of Lycoming VO-435 engine in lieu of Franklin installation and optional lateral control system for Bell Model 47D-1 or 47G according to UTL Aeronautics, Inc. Instruction Sheet for the modification of a 47D-1 or 47G to use a Lycoming Engine, Rev. A, dated 1/16/76.

Battery installation per STC SH283SW for Model 47D-1 only.

Limitations and Conditions:

FAA Approved Rotorcraft Flight Manual Supplement dated January 31, 1967, is required for Model 47D-1.

FAA Approved Rotorcraft Flight Manual Supplement dated January 16, 1974, is required for Model 47G.

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: November 30, 1966

Date issued: 1/16/74; 11/22/74
Revision 2

Date of issuance: January 31, 1967

Date amended:



Don P. Watson

Acting Chief, Engineering and Manufacturing Branch

(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 21.67.



1. The first of the two main parts of the document is a list of names and addresses of persons who have been convicted of tax offenses. The list is organized in two columns. The first column contains the names of the persons, and the second column contains their addresses. The names are listed in alphabetical order. The addresses are listed in the order in which they appear in the list. The list is organized in two columns. The first column contains the names of the persons, and the second column contains their addresses. The names are listed in alphabetical order. The addresses are listed in the order in which they appear in the list.

U. S. DEPARTMENT OF COMMERCE CIVIL AERONAUTICS ADMINISTRATION OFFICE OF AIRCRAFT REGISTRATION		Form Approved Budget Item No. 41-0001-2	
APPLICATION FOR AIRWORTHINESS CERTIFICATE AND/OR ANNUAL INSPECTION OF AN AIRCRAFT		INSTRUCTIONS Please print or type. Submit this form to the Civil Aeronautics Administration Aviation Safety Field Representative.	
1. TYPE OF APPLICATION (Check one) ☒ ORIGINAL ISSUANCE OF CERTIFICATE ☐ ANNUAL INSPECTION FOR RENEWAL OF CERTIFICATE ☐ ASSIGNMENT OR MODIFICATION OF CURRENT CERTIFICATE			
2. AIRCRAFT DESIGN CLASSIFICATION (Check appropriate item(s)) It is requested that the Certificate of Airworthiness be issued for operation of the aircraft in the following airworthiness classification(s): ☒ STANDARD (NORMAL, UTILITY, ACROBATIC, TRANSPORT CATEGORY) ☐ LIMITED USE CATEGORY ☒ EXCEPTED (Check the intended special purpose operation(s) to be authorized: ☒ AERIAL TOWAL AND PEST CONTROL ☐ AERIAL ADVERTISING ☐ AERIAL SURVEYING ☐ GUNNER TOWING ☐ PATROL/LOGGING ☐ FOREST AND WILDLIFE CONSERVATION ☐ WEATHER CONTROL ☐ OTHER EXPERIMENTAL (Check the type of experimental operation(s) to be authorized): ☐ RESEARCH AND DEVELOPMENT ☐ AMATEUR/BUILD ☐ DEMONSTRATION ☐ RACING ☐ EXHIBITION ☐ OTHER			
3. AIRCRAFT IDENTIFICATION (Complete all items)			
a. AIRCRAFT NAME Bell Helicopter		b. AIRCRAFT MODEL 47D1	
		c. AIRCRAFT SERIAL NO. 460	
d. ENGINE MAKE Franklin		e. ENGINE MODEL 6V4-200-032	
4. AIRCRAFT REGISTRATION INFORMATION (Complete all items)			
a. REGISTERED OWNER'S FIRM NAME West Side Helicopter Co., Inc.		b. PERMANENT MAILING ADDRESS [REDACTED] Newman, Calif.	
		c. AIRCRAFT NATIONALITY AND REGISTRATION MARK N- 78900	
5. AIRCRAFT OWNER'S CERTIFICATION (Check appropriate operation item) I hereby certify that I am the registered owner (or his agent) of the aircraft identified in Item 3 above which is registered with the Civil Aeronautics Administration as required by the Regulations of the Administrator, Part 21 of the FAR and when operated in accordance with the following certificate of registration:			
a. CERTIFICATE OF REGISTRATION, FORM ACA-100 (PART 2), DATE OF ISSUE [REDACTED]			
b. APPLICATION FOR REGISTRATION, FORM ACA-100 (PART 2), FORM ACA-100, PART 4, FORWARDED TO CAA AIRCRAFT RECORDS BRANCH, [REDACTED]			
c. OWNER'S REGISTRATION CERTIFICATE, FORM ACA-100 (PART 2), DATE OF ISSUE [REDACTED]			
ATTACHMENTS (Check one) ☒ WEIGHT AND BALANCE REPORT ☒ DATA, DRAWINGS, ETC. ☐ RACIAL ☐ UNAPPROVED REGISTRATION DATA			

A. C.

FLB 23

M. V.

AIRCRAFT AND ENGINE RECORDS NOT OF COMMERCE
RECORDS BRANCH
FAA
AIRCRAFT INSPECTION REPORT

12-01-61
This report is completed by a CAA representative or approved repair station

The aircraft described in Item 3 on the reverse of this form has been inspected and found to conform to the following:

- (Check and complete appropriate items)
1. ☒ AIRCRAFT SPECIFICATION CERTIFICATION BASIS
a. ☒ AIRCRAFT SPECIFICATION, Category, 511 THROUGH SHEET REVISION NO. 23
b. ☐ AIRCRAFT LISTING PAGE NO. 1960 THROUGH CARD NO. 61-18
c. ☒ AIRCRAFT SPECIFICATION SUMMARY 1960
4. ☒ CIVIL AIR REGULATION PART 9 (MODIFIED TYPE CERTIFICATE)

2. AIRCRAFT AND ENGINE OPERATING RECORDS

- a. ☐ AIRCRAFT NEW—NO PREVIOUS OPERATION OR MAINTENANCE HISTORY
b. ☒ COMPLIANCE WITH APPLICABLE AIRWORTHINESS DIRECTIVES RECORDED
c. ☒ AIRCRAFT RECORDS INDICATE THE AIRFRAME HAS BEEN OPERATED A TOTAL OF 4453:00 HOURS
d. ☒ ENGINE RECORDS INDICATE THE FOLLOWING OPERATION:
SERIAL NO. 26360 TOTAL HOURS 2838:40
SERIAL NO. TOTAL HOURS
SERIAL NO. TOTAL HOURS
SERIAL NO. TOTAL HOURS

3. PREVIOUS INSPECTION RECORD (INSPECTION RECORDED ON FORM ACA-318)

- a. LAST AIRWORTHINESS INSPECTION CONDUCTED 10-4-60 (DATE)
b. ☐ BY AIRCRAFT MANUFACTURER
c. ☐ BY APPROVED REPAIR STATION, CERTIFICATE NO. MIA
d. ☒ BY MECHANIC, CERTIFICATE NO. MIA
e. ☐ PERIODIC AIRCRAFT INSPECTION REPORT, FORM ACA-316, WAS RETURNED TO OWNER

4. AIRWORTHINESS DOCUMENTS (ISSUED OR REVIEWED)

- a. ☒ OPERATION LIMITATIONS, ~~ACA-308~~ WAS ISSUED (COPY ATTACHED)
b. ☐ CURRENT OPERATION LIMITATIONS, FORM ACA-308, IS AVAILABLE IN AIRCRAFT
c. ☒ CURRENTLY APPROVED AIRPLANE FLIGHT MANUAL IS AVAILABLE IN AIRCRAFT
d. ☒ CURRENT WEIGHT AND BALANCE INFORMATION IS AVAILABLE IN AIRCRAFT
e. ☒ THIS INSPECTION HAS BEEN RECORDED IN THE AIRCRAFT RECORDS
f. ☒ CERTIFICATE OF AIRWORTHINESS, FORM ACA-304, ISSUED 10-7-61 (DATE)
g. ☒ APPROVED FORM ACA-105 WAS ISSUED 10-7-61 (DATE)
BY B. T. Nault (NAME OF ISSUING REPRESENTATIVE) 4-13 (DESIGNATION NO.)

5. CAA APPROVED REPAIR STATION CERTIFICATION

- The person described on the reverse has been inspected under the authority accorded certificated engine-mechanic
No. 10-7-61 and was for 10-7-61 (DATE)
☒ AIRWORTHY
☐ UNAIRWORTHY

6. CAA REPRESENTATIVE CERTIFICATION

- I HAVE INSPECTED THE AIRCRAFT DESCRIBED ON THE REVERSE AND FOUND IT ☒ AIRWORTHY ☐ UNAIRWORTHY
(Check appropriate box)
DESIGNER'S SIGNATURE [Signature] DESIGNATION NO. 1-10-61 DATE 10-7-61
CAA DESIGNATION NO. [Signature] DATE 10-7-61
☐ ACCEPTED
☐ REINSPECTED
☐ SPOT CHECKED

☒ ATTACHMENT Limitations

FAA Form 337 (7-67)

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

B. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Installed Isaco Alternator 61t P/N 7585-1 in accordance with STC SH19196. See installation instructions attached.

This installation not previously approved on Bell Helicopter Model 47-D1. Engine & Transmission are the same as a Bell Helicopter Model 47-G. The only difference between a 47-G and a 47-D1 is the fuel system.

The difference being saddle type fuel tanks and other minor items if the engine has a Franklin 674-200-032 installed, as this aircraft has.

STC SH19196 is approved for use on the Bell 47 G2.

☐ ADDITIONAL SHEETS ARE ATTACHED

General Aviation District Office
Van Nuys Airport
Van Nuys, California

October 7, 1961

BKLL

N78900

Ser. No. 1480

OPERATION LIMITATIONS

- ✓ The aircraft identified above has been certified in a dual purpose category under the provisions of Part 8 of Civil Air Regulations for the purpose of agricultural and pest control.
- ✓ (a) This aircraft shall not be operated in any manner which will endanger public life and property. The operator shall adjust the takeoff weight to provide a safe margin of performance for the existing operating conditions, considering the takeoff area, altitude, temperature and terrain.
- ✓ (b) Maneuvers shall be limited to those normally performed in agricultural and pest control.
- ✓ (c) Agricultural and pest control operations shall not be conducted over densely populated areas, in congested air lanes, or in the vicinity of busy airports where passenger transport operations are being conducted, unless the Administrator finds it in the public interest to authorize such operations and has issued a Certificate of Waiver or Authorization, Form FAA-663, permitting such operations.
- ✓ (d) Persons other than the minimum crew necessary for agricultural and pest control operations shall not be carried during these operations.
- ✓ (e) Persons and cargo shall not be carried for compensation or hire.
- ✓ (f) No person shall be carried in the aircraft unless a seat and safety belt, installed in accordance with good aeronautical practice, is provided for his use.

[REDACTED]
D. A. Nickerson
Maintenance Inspector
WE-GADO-13

CONFIDENTIAL

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FEDERAL AVIATION AGENCY

Form approved
Federal Register No. 41, 30, 60, 61

MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)

1. AIRCRAFT	NAME Bell	MODEL 47 D1	SERIAL NO. 480	NATIONALITY AND REGISTRATION MARK N 78900
2. OWNER	West Side Helicopter Co., Inc. [REDACTED], Newman, Cal.			
3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 19.				
UNIT	NAME	MODEL	SERIAL NO.	NATURE OF WORK (Check)
a. AIRFRAME	[REDACTED] (As described in Item 1 above) [REDACTED]			XX
b. POWERPLANT	The alteration identified herein complies with [REDACTED] requirements and is approved only for the above described aircraft, subject to the following conditions: [REDACTED]			
c. PROPELLER	[REDACTED]			
d. APPLIANCE	[REDACTED]			
4. AIRFRAME WEIGHT AND BALANCE DATA "AFTER the repairs and/or alterations described below were made." This item must be completed by repair or alteration agency. However, in the case of a repair component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.				
CATEGORY	EMPTY WEIGHT (Pounds)	EMPTY CENTER OF GRAVITY (Inches from datum)*	USEFUL LOAD (Pounds)	
Standard Restricted	XI388IX 1597.5	4.22 XI3E (do not exceed 2350 Gross Weight)	XXXXXX 952.5	
5. CONFORMITY STATEMENT (Complete and check)				
a. AGENCY'S NAME AND ADDRESS		b. KIND OF AGENCY		c. CERTIFICATE NO.
Tom Palmer World Wide Helicopters Inc. [REDACTED] Van Nuys, Cal.		☒ U. S. Certified Mechanic. ☐ Foreign Certified Mechanic. ☐ Certified Repair Station. ☐ Manufacturer. ☐ (Check if repair or alteration was made under delegation option procedures.)		AAP [REDACTED]
6. I certify that the repair and/or alteration made to the aircraft described herein conforms to the information furnished herein is true and correct.				
October 7, 1961 (Date repair and/or alteration completed)		[REDACTED] (Signature of authorized representative)		
7. APPROVAL FOR RETURN TO SERVICE (Check and complete appropriate items) Pursuant to the authority specified below the unit identified in Item 3 was inspected in the manner provided by the Administrator of the Federal Aviation Agency and is:				
☒ APPROVED BY ☐ FAA Designee ☐ Manufacturer ☐ Canadian Department of Transport ☐ REJECTED BY ☐ FAA Flight Standards Inspector ☐ Repair Station ☒ Other (Specify) [REDACTED]				
October 7, 1961 (Date of approval or rejection)		[REDACTED] (Signature of authorized individual title or identification number)		
7. TO BE COMPLETED ONLY BY FAA PERSONNEL				
☐ Forwarded for engineering comment ☐ See attached memorandum ☐ Accepted ☐ Reinspected ☐ [REDACTED]				
WESTERN REGION - LA WE-GADO-13 (FAA Organization Number)		[REDACTED] (Signature of authorized individual title or identification number)		

FEB 23 1962

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, powerplant, propeller or appliance. After the repair and/or alteration has been inspected and item 6 completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the FAA for administrative purposes.

See CAM 18 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

2. DESCRIPTION OF WORK ACCOMPLISHED:

Installed: Electrical system and brackets necessary for conversion from standard to dual purpose category in accordance with conversion instruction **DUAL PURPOSE CONVERSION INSTRUCTIONS.**

To RESTRICTED:

1. Install L.H. and R.H. Hopper Tanks by:
 - a. AN 4 bolts at Bell equipment attachment points
 - b. Insert pin on bottom in bracket attached to center frame
 - c. Install diagonal rearbrace tube from hopper to center frame with AN 3 bolts at either end.
2. Install engine driven spray pump:
 - a. Remove accessory drive plate (Generator)
 - b. Insert pump drive in pad and install 4 AN 365-424 nut and 1/4" washers.
 - c. Be sure it is clear of tail rotor control cable.
 - d. Connect electrical clutch A leads.
3. Install 36 feet boom, shut off valve and filter:
 - a. Attach top brace to AN 5 top tail boom attach point
 - b. Attach boom to aft side of rear cross tube with two AN 4 bolts on each side at the skid tube upright.
 - c. Attach fwd. brace cable with AN 3 bolts to clip on front cross tube attachments at each side.
 - d. Connect rear brace cable to bracket at station 120 lower longeron with AN 3 bolt on each side.
 - e. Connect the shut off valve electrical lead cannon plug.
4. Install hoses.
 - a. connect 1 1/4" hose from pump to gate valve and clamp with AN clamps.
 - b. Connect 2 1/2 " cross feed hoses to manifold with AN clamps.
 - c. Connect two one inch hoses from manifold to pump inlet with clamps.
5. Remove five pounds ballast at station 200

RESTRICTED TO STANDARD

1. Remove all of the above equipment in reverse order and install the five pounds of ballast at station 200.
2. Tape and stow clutch electrical lead.
3. A log book entry of this conversion will be made by an A&P mechanic prior to carriage of passengers for compensation or hire.

IN RESTRICTED CATEGORY:

empty weight
***** 1517.5

29. HJEE 1 11/87
C.G.

MOMENT

***** 6346.15

*If additional space is needed attach additional sheets bearing aircraft nationality and registration mark and this work completed.
Check block if additional sheets are attached. ☐

Modified aircraft flight checked on 10/1/1961

by *Bill Goring* [REDACTED]
in accordance with CAN S.10-3(e) and found to be
safely controllable and to operate satisfactorily with the following
special purpose limit: 200 pounds. (200 pounds maximum)



FEDERAL AVIATION AGENCY				Form Approved Flight Inspection No. 81-8064	
MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)					
1. AIRCRAFT	NAME	MODEL	SERIAL NO.	NATURALITY AND REGISTRATION MARK	
	Bell	47 D1	480	H 78900	
2. OWNER	NAME (Firm, family, last) West Side Helicopter Co., Inc. [Redacted], Nowman, Cal.				
3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 18.					
UNIT	NAME	MODEL	SERIAL NO.	NATURE OF WORK (Check)	
				MAJOR REPAIR	MAJOR ALTERATION
a. AIRFRAME	***** (As described in Item 3 above) *****				XX
b. POWERPLANT	The alteration identified herein complies with airworthiness requirements and is approved only for the above described aircraft subject to conformity inspection by a [Redacted] authorized [Redacted]				
c. PROPELLER	TYPE AND MANUFACTURER				
d. APPLIANCE	WE-ADO-13 Data 70 1-87				
4. AIRCRAFT WEIGHT AND BALANCE DATA "After the repair or alteration alterations described below were made." This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.					
CATEGORY	EMPTY WEIGHT (Pounds)	EMPTY CENTER OF GRAVITY (Inches from datum)		USEFUL LOAD (Pounds)	
Standard	1397.5 XXXXXX	4.22 XXXXX		952.5 XXXXXX	
5. CONFORMITY STATEMENT (Complete and check)					
a. AGENCY NAME AND ADDRESS		b. KIND OF AGENCY		c. CERTIFICATE NO.	
Tom Palmer World Wide Helicopters Inc. [Redacted] Ven Nuys, Cal.		☒ U.S. Certified Mechanic. ☐ Foreign Certified Mechanic. ☐ Certified Repair Station. ☐ Manufacturer. ☐ (Check if repair or alteration was made under delegation option procedures.)		A&P [Redacted]	
6. I certify that the repair and/or alteration made to the unit(s) identified under Item 3 above and described on the reverse or attachments hereto have been made in accordance with the information furnished herein is true and correct [Redacted] (Signature of authorized individual)					
October 7 1961 (Date repair and/or alteration completed)					
7. APPROVAL FOR RETURN TO SERVICE (Check and complete appropriate items) Pursuant to the authority specified below the unit identified in item 3 was inspected in the manner prescribed by the Administrator of the Federal Aviation Agency and is:					
☒ APPROVED BY: ☐ FAA Designee ☐ Manufacturer ☐ Canadian Department of Transport Inspector of Aircraft ☐ REJECTED ☐ FAA Flight Standards Inspector ☐ Repair Station ☒ Other (Specify) Inspection Authorization					
October 7, 1961 (Date of approval or rejection) A&P [Redacted] (Signature of authorized individual, title or representative)					
7. TO BE COMPLETED ONLY BY FAA PERSONNEL					
☐ Forwarded for engineering comment ☐ See attached memorandum ☐ Accepted ☐ Reinspected ☒ Spot Checked (Date)					
WESTERN REGION-LA WE-CADO-13 (FAA Designation Number)					
[Redacted] (Signature Flight Standards Inspector)					

APPLICATION FOR AIRWORTHINESS CERTIFICATE AND/OR ANNUAL INSPECTION OF AN AIRCRAFT		INSTRUCTIONS Fill out in pencil or type. Submit this form to the Civil Aviation Administration Aviation Safety Field Representative.	
1. TYPE OF APPLICATION (Check which)			
☐ ORIGINAL ISSUANCE OF CERTIFICATE ☒ ANNUAL INSPECTION FOR RENEWAL OF CERTIFICATE ☐ AMENDMENT OR MODIFICATION OF CURRENT CERTIFICATE		☐ RECOGNITION UNDER THE PROVISIONS OF CAR 8 ☐ MULTIPLE CERTIFICATE UNDER THE PROVISIONS OF CAR 8	
2. AIRWORTHINESS CLASSIFICATION (Check appropriate item(s)) It is requested that the Certificate of Airworthiness be issued to permit operation of the aircraft in the following airworthiness classification(s):			
☒ STANDARD (NORMAL, UTILITY, ACROBATIC, TRANSPORT CATEGORIES) ☐ LIMITED (SEE CAR 8) ☐ RESTRICTED (SEE CAR 8) (Check the restricted special purpose operation(s) to be conducted)		☐ PATROLLING ☐ FOREST AND WILDLIFE CONSERVATION ☐ WEATHER CONTROL ☐ OTHER	
☐ ENVIRONMENTAL (Check the type of experimental operation(s) to be conducted)		☐ RACING ☐ EXHIBITION ☐ OTHER	
3. AIRCRAFT IDENTIFICATION (Complete all items)			
a. AIRCRAFT MAKE	b. AIRCRAFT MODEL	c. AIRCRAFT SERIAL NO.	
Bell Helicopter	47 D-1	480	
d. ENGINE MAKE	e. ENGINE MODEL		
Franklin	6V4-200-G32		
4. AIRCRAFT REGISTRATION INFORMATION (Complete all items)			
a. REGISTERED OWNER'S FULL NAME	b. PERMANENT MAILING ADDRESS	c. AIRCRAFT NATIONALITY AND REGISTRATION MARK	
World Wide Helicopters Inc.	San Fernando, Cal.	N- 78900	
AIRCRAFT OWNER'S CERTIFICATION (Check and complete appropriate items) I hereby certify that I am the registered owner (or his agent) of the aircraft identified in Item 3 above which is registered* with the Civil Aviation Administration as required by the Regulations of the Administrator, Part 501 or 502 and when operated displays the following evidence of registration:			
☒ CERTIFICATE OF REGISTRATION, FORM ACA-300 (PART A), DATE OF ISSUE Oct. 15, 1953 ☐ APPLICATION FOR REGISTRATION, FORM ACA-300 (PART B), FORM ACA-300, PART A, FORWARDED TO CAA AIRCRAFT RECORDS BRANCH, [redacted] ☐ DEALER'S REGISTRATION CERTIFICATE, FORM ACA-750, DATED [redacted]			
*In order to be eligible for registration an aircraft must be owned by a citizen of the United States, as defined by Section 1 (1) of the Civil Aeronautics Act of 1930, as amended.			
ATTACHMENTS (Check which)			
☐ ACA-319 ☐ WEIGHT AND BALANCE REPORT ☐ ACA-327 ☐ DATA, DRAWINGS, ETC. ☐ ACA-307 ☐ UNAPPROVED DEVIATION DATA			
(Signature of Registered Owner or Authorized Agent) March 15, 1956 Agent		(Date) (Title)	

FAA AIRCRAFT INSPECTION REPORT (To be completed by a FAA approved repair station)

The aircraft described in Item 1 on the reverse of this form has been inspected and found to conform to the following:

(Check and complete applicable items)

1. AIRCRAFT AND ENGINE CERTIFICATION BASIS

- a. ☒ AIRCRAFT SPECIFICATION NO. H-1 THROUGH SERIAL REVISION NO. 15
 b. ☒ AIRCRAFT LISTING PAGE NO. H-1
 c. ☒ AIRWORTHINESS DIRECTIVE SUMMARY 1954 THROUGH CARD NO. 56-2
 d. ☒ CIVIL AIR REGULATION PART 2 (MODIFIED TYPE CERTIFICATE)

2. AIRCRAFT AND ENGINE OPERATING RECORDS

- a. ☒ AIRCRAFT NEW—NO PREVIOUS OPERATION OR MAINTENANCE HISTORY
 b. ☒ COMPLIANCE WITH APPLICABLE AIRWORTHINESS DIRECTIVES RECORDED
 c. ☒ AIRCRAFT RECORDS INDICATE THE AIRFRAME HAS BEEN OPERATED A TOTAL OF 2542.30 HOURS
 d. ☒ ENGINE RECORDS INDICATE THE FOLLOWING OPERATION:
 SERIAL NO. 26712 TOTAL HOURS 958.40
 SERIAL NO. 57 TOTAL HOURS
 SERIAL NO. TOTAL HOURS
 SERIAL NO. TOTAL HOURS

3. PREVIOUS INSPECTION RECORD (INSPECTION RECORDED ON FORM ACA-318)

- a. LAST AIRWORTHINESS INSPECTION CONDUCTED Mar. 15, 1956
☐ BY AIRCRAFT MANUFACTURER
☐ BY APPROVED REPAIR STATION, CERTIFICATE NO.
☒ BY MECHANIC, CERTIFICATE NO. ARE [REDACTED]
 b. ☒ PERIODIC AIRCRAFT INSPECTION REPORT, FORM ACA-318, WAS RETURNED TO OWNER

4. AIRWORTHINESS DOCUMENTS ISSUED OR REVIEWED

- a. ☒ OPERATION LIMITATIONS, FORM ACA-38, WAS ISSUED (COPY ATTACHED)
 b. ☒ CURRENT OPERATION LIMITATIONS, FORM ACA-38, IS AVAILABLE IN AIRCRAFT
 c. ☒ CURRENT APPROVED AIRPLANE FLIGHT MANUAL IS AVAILABLE IN AIRCRAFT
 d. ☒ CURRENT WEIGHT AND BALANCE INFORMATION IS AVAILABLE IN AIRCRAFT
 e. ☒ THIS INSPECTION HAS BEEN RECORDED IN THE AIRCRAFT RECORDS
 f. ☒ CERTIFICATE OF AIRWORTHINESS, FORM ACA-102, ISSUED TO EXPIRE Mar. 15, 1957
 g. ☒ PREVIOUS FORM ACA-102 WAS ISSUED TO EXPIRE Mar. 18, 1956
 BY Harold E. Sighma (NAME OF SPECIAL REPRESENTATIVE) TR [REDACTED]

5. CAA APPROVED REPAIR STATION CERTIFICATION

The aircraft described on the reverse has been inspected under the authority accorded certificated repair station No. by CAR 82 and was found to be:
☐ AIRWORTHY
☐ UNAIRWORTHY

(REPAIR STATION AIRWORTHINESS SIGNATURE) (DATE)

6. CAA REPRESENTATIVE CERTIFICATION

I, [REDACTED] HAVE AND FOUND IT ☒ AIRWORTHY ☐ UNAIRWORTHY
 (Check appropriate box)

NAME OF SPECIAL REPRESENTATIVE NO. [REDACTED] DATE March 15, 1956
 CAA INSPECTION NO. 56180 DATE 4/22/56
☐ ACCEPTED
☐ REINSPECTED
☐ SPOT CHECKED

RECEIVED
 MAR 33 10 30 AM '56
 ADMIN. AREA - 200 Bldg.

U. S. DEPARTMENT OF COMMERCE CIVIL AERONAUTICS ADMINISTRATION				Form Approved Budget Project No. 41-2004-4	
MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)					
1. AIRCRAFT	NAME BEIL	MODEL 47D-1	SERIAL NO. 480	NATURALITY AND REGISTRATION MARKS N78900	
2. OWNER	NAME (Firm, trade, etc.) WORLD WIDE HELICOPTERS INC.		ADDRESS (Street and number, city, state and zip) SAN FERNANDO, California, USA		
3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 18.					
UNIT	NAME	MODEL	SERIAL NO.	NATURE OF WORK (Check)	
4. AIRFRAME	***** (As described in Item 1 above) *****			MAJOR REPAIR ☒ MAJOR ALTERATION ☐	
5. POWERPLANT					
6. PROPELLER					
7. APPLIANCE	TYPE AND MANUFACTURER				
4. AIRCRAFT WEIGHT AND BALANCE DATA *AFTER the repair and/or alteration described below were made. This data must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.					
CATEGORY	EMPTY WEIGHT (Pounds)*	EMPTY CENTER OF GRAVITY (Inches from datum)*		USEFUL LOAD (Pounds)*	
STANDARD	1499.0	+4.11		851.0	
5. CONFORMITY STATEMENT (Completes and checks)					
a. PERSON'S NAME AND ADDRESS Frank TARR [Redacted] PORD, AUSTRALIA, Papua		b. KIND OF AGENCY ☒ U. S. Certificated Mechanic. ☐ Foreign Certificated Mechanic. ☐ Certificated Repair station. ☐ Manufacturer. ☐ (Check if repair or alteration was made under delegation option procedures.)		c. CERTIFICATE NO. A. & F. [Redacted]	
* I certify that the repair and/or alteration made to the unit(s) identified under Item 3 above and described on the reverse or attachments hereto have been made in accordance with the requirements of the Federal Air Regulations and that the information furnished herein is true and correct to the best of my knowledge. July 3, 1960 (Date repair and/or alteration completed) [Redacted] (Signature of authorized individual)					
6. APPROVAL FOR RETURN TO SERVICE (Check and complete appropriately items) Present to the authority specified below the unit identified in Item 3 was inspected in the manner prescribed by the Administrator and is: ☒ APPROVED ☐ REJECTED BY ☐ CAA Designee ☐ Manufacturer ☐ Canadian Department of Transport Inspector of Aircraft ☐ CAA Aviation Safety Agent ☐ Repair [Redacted] I.A. October 4th, 1960 (Date of approval or rejection) Harold E. Riggins [Redacted] (Signature of authorized individual)					
7. TO BE COMPLETED ONLY BY CAA PERSONNEL * ☐ Forwarded for engineering comment ☐ See attached memorandum * ☒ Accepted 11/2/60 (Date) ☐ Reinspected ☐ Spot Checked 11/2/60 SE JDO (CAA Certificate Number)					

INSTRUCTIONS

This form must be completed to duplicate each item a single copy and/or alteration is made to an original, alternate, powerplant, duplicate or blueprint. After the copy and/or alteration has been prepared and item is completed, the original copy of this form will be made available to the aircraft owner, or retention, as per 4. the aircraft records. The duplicate copy is retained by the FAA for administrative purposes.

See 1.1.4.1.1.1 for detailed instructions regarding the information to be provided with the form, with instructions concerning its preparation.

3 2022 SUPPLEMENT TO WOMEN AND MEN'S HEALTH

1. 自願性：由本人自願提供，非受脅或受誘。
 2. 知情性：本人對其行為之法律效果有充分之認識。
 3. 行為時之意思自由：本人於行為時，其意思自由，未受他力之干涉。

Harriet Tracy	Part No.	47-255-117-15
Will Tracy	Part No.	47-255-117-16
Willie	Part No.	47-255-117-17
Ernest Hunt	Part No.	47-255-117-18
Paul Hunt	Part No.	47-255-117-19
Will Hladon	Part No.	47-255-117-20
Will Hladon	Part No.	47-255-117-21

All names are printed in full.

*If additional space is needed, attach additional sheets. Indicate where to insert them with checkmarks. Do not use staples.

These three (sub)divisions are affected

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APPLICATION FOR AIRWORTHINESS CERTIFICATE AND/OR ANNUAL INSPECTION OF AN AIRCRAFT

INSTRUCTIONS
Please print or type. Submit this form to the
Civil Aeronautics Administration Aviation Safety
Field Representative.

1. TYPE OF APPLICATION (Check one)

- ☐ ORIGINAL ISSUANCE OF CERTIFICATE
☒ ANNUAL INSPECTION FOR RENEWAL OF CERTIFICATE
☐ AMENDMENT OR MODIFICATION OF CURRENT CERTIFICATE
☐ REEVALUATION UNDER THE PROVISIONS OF CAR 4
☐ MULTIPLE CERTIFICATE UNDER THE PROVISIONS OF CAR 4

2. AIRCRAFT FUNCTION CLASSIFICATION (Check appropriate function)

It is requested that the Certificate of Airworthiness be issued in permit operation of the aircraft in the following airworthiness classification(s):

☒ STANDARD (NORMAL UTILITY, AEROBATIC, TRANSPORT CATEGORY)

☐ LIMITED (SEE CAR 4)

☐ RESTRICTED (SEE CAR 4)

(Check the restricted special purpose operation(s) to be conducted)

☐ AGRICULTURAL AND PEST CONTROL

☐ AERIAL ADVERTISING

☐ AERIAL SURVEYING

☐ GLOIDER TOWING

☐ EXPERIMENTAL

(Check the type of experimental operation(s) to be conducted)

☐ RESEARCH AND DEVELOPMENT

☐ AMATEUR-BUILT

☐ DEMONSTRATION

☐ PATROLLING

☐ FOREST AND WILDLIFE CONSERVATION

☐ WEATHER CONTROL

☐ OTHER

☐ RACING

☐ EXHIBITION

☐ OTHER

3. AIRCRAFT IDENTIFICATION (Complete all items)

a. AIRCRAFT MAKE

Bell Helicopter

b. AIRCRAFT MODEL

47 D-1

c. AIRCRAFT SERIAL NO.

480

d. ENGINE MAKE

Franklin

e. ENGINE MODEL

6V4-200-C32

4. AIRCRAFT REGISTRATION INFORMATION (Complete all items)

a. REGISTERED OWNER'S FULL NAME

World Wide Helicopters Inc.

b. PERMANENT MAILING ADDRESS

San Fernando, Cal.

c. AIRCRAFT NATIONALITY AND REGISTRATION MARK

N-78900

5. AIRCRAFT OWNER'S CERTIFICATION (Check and complete appropriate item)

I hereby certify that I am the registered owner (or his agent) of the aircraft identified in Item 3 above which is registered with the Civil Aeronautics Administration as required by the Regulations of the Administrator, Part 231 of 202 and when operated displays the following evidence of registration:

☒ CERTIFICATE OF REGISTRATION, FORM ACA-308 (PART A), DATE OF ISSUE July 11, 1952

☐ APPLICATION FOR REGISTRATION, FORM ACA-308 (PART B), FORM ACA-308, PART A, FORWARDED TO CAA AIRCRAFT RECORDS BRANCH.

☐ W-300 ON

☐ DEALER'S REGISTRATION CERTIFICATE, FORM ACA-100, DATED

If unable to be eligible for registration of aircraft must be owned by a citizen of the United States, as defined by statute (101) of the Civil Aeronautics Act of 1930, as amended.

ATTACHMENTS (Check which)

☒ ACA-101 ☐ WEIGHT AND BALANCE REPORT

☐ ACA-102 ☐ DATA, DRAWINGS, ETC.

☐ ACA-103 ☐ UNAPPROVED DEVIATION DATA

(Signature of Registered Owner or Authorized Agent)

Mar. 18, 1955

Agent

(Date)

(Title)

1. AIRCRAFT IDENTIFICATION

The aircraft described in Item 1 has the following data and was inspected and found to conform to the following:
 (Check appropriate certificate type)

2. AIRCRAFT AND ENGINE IDENTIFICATION RECORD

(X) TYPE OF AIRCRAFT NO. 1-1 ENGINE SERIAL NUMBER NO. 55
 (X) AIRCRAFT LANDING PAGE NO. 1-1
 (X) AIRCRAFT REGISTRATION NUMBER 6553 ENGINE CASE NO. 55-5
 (X) ONE AIR REGISTRATION NO. (CHECK TYPE, CATEGORY)

3. AIRCRAFT AND ENGINE OPERATIONS RECORD

(X) AIRCRAFT NEW AND PREVIOUS OPERATOR OR MAINTENANCE HISTORY
 (X) COMPLIES WITH APPLICABLE AIRCRAFT/ENGINE OPERATIONS RECORDS
 (X) AIRCRAFT/ENGINE INSPECTED: THE AIRCRAFT HAS BEEN OPERATED A TOTAL OF 1667155 HOURS
 (X) ENGINE RECORDS INDICATE THE FOLLOWING OPERATION:
 SERIAL NO. 26387 TOTAL HOURS 1125150
 SERIAL NO. _____ TOTAL HOURS _____
 SERIAL NO. _____ TOTAL HOURS _____
 SERIAL NO. _____ TOTAL HOURS _____

4. PREVIOUS INSPECTION RECORD (INSPECTION RECORDED ON FORM AC-119)

(X) LAST APPROVED INSPECTION CONDUCTED April 21, 1954
 (X) BY AIRCRAFT MANUFACTURER
 (X) BY APPROVED REPAIR STATION, CERTIFICATE NO. 148
 (X) BY INSPECTOR, CERTIFICATE NO. 148
 (X) INSPECTOR'S SIGNATURE: [Signature] DATE: April 21, 1954

5. AIRCRAFT/ENGINE DOCUMENTS ISSUED OR REVIEWED

(X) OPERATION LIMITATIONS FORM AC-119 WAS GRANTED COPY ATTACHED
 (X) CURRENT OPERATION LIMITATIONS FORM AC-119 IS AVAILABLE IN AIRCRAFT
 (X) CURRENT APPROVED AIRCRAFT/ENGINE NO. IS AVAILABLE IN AIRCRAFT
 (X) CURRENT WEIGHT AND BALANCE INSPECTION IS AVAILABLE IN AIRCRAFT
 (X) THIS INSPECTION HAS BEEN RECORDED IN THE AIRCRAFT RECORD
 (X) CERTIFICATE OF AIRCRAFT/ENGINE FORM AC-119 ISSUED TO OWNER March 16, 1955
 (X) PREVIOUS FORM AC-119 WAS ISSUED TO OWNER April 21, 1954
 BY Barold Sigmund DATE April 21, 1954
 (NAME OF INSPECTOR)

6. FAA APPROVED REPAIR STATION CERTIFICATION

The aircraft described on the reverse has been inspected under the authority recorded certificate repair station:
 No. _____ by CAR 21 and was found to be:
 (X) AIRCRAFT
 (X) ENGINE/PROP

7. FAA INSPECTION/REPAIR CERTIFICATION

NAME AND FOUND IT: (X) AIRCRAFT (X) ENGINE/PROP
 (Check appropriate type)

REGISTRATION NO.	DATE
<u>18 6504</u>	<u>18 6555</u>
FAA INSPECTION NO.	DATE
<u>92120</u>	<u>3/20/55</u>

8. SIGNATURE

9. AIRCRAFT/ENGINE IDENTIFICATION

APPLICATION FOR AIRWORTHINESS CERTIFICATE
 AND/OR ANNUAL INSPECTION OF AN AIRCRAFT

INSTRUCTIONS

Please print or type. Submit this form to the
 Civil Aeronautics Administration Aviation Safety
 Field Representative.

1. TYPE OF APPLICATION (Check one)

- ☐ ORIGINAL SUBMITTAL OF CERTIFICATE
☐ ANNUAL INSPECTION OR RENEWAL OF CERTIFICATE
☐ AMENDMENT OR MODIFICATION OF EXISTING CERTIFICATE

- ☐ RECERTIFICATION UNDER THE PROVISIONS OF CAR 1
☐ MULTIPLE CERTIFICATE UNDER THE PROVISIONS OF CAR 1
☐ "

2. AIRWORTHINESS CLASSIFICATION (Check appropriate item(s))

It is requested that the Certificate of Airworthiness be issued to permit operation of the aircraft in the following airworthiness classification(s):

- ☒ STANDARD (NORMAL UTILITY, ACROBATIC, TRANSPORT CATEGORIES)

- ☐ LIMITED USE CAR 1

- ☐ RESTRICTED USE CAR 1

(Check for restricted special purpose operation(s) to be conducted)

- ☐ AGRICULTURAL AND PEST CONTROL

- ☐ AERIAL ADVERTISING

- ☐ AERIAL SURVEYING

- ☐ GLIDER TOWING

- ☐ EXPERIMENTAL

(Check for type of experimental operation(s) to be conducted)

- ☐ RESEARCH AND DEVELOPMENT

- ☐ AMATEUR-BUILT

- ☐ DEMONSTRATION

- ☐ PATROLLING

- ☐ FOREST AND WILDLIFE CONSERVATION

- ☐ WEATHER CONTROL

- ☐ OTHER

- ☐ RACING

- ☐ EXHIBITION

- ☐ OTHER

3. AIRCRAFT IDENTIFICATION (Complete all items)

- a. AIRCRAFT MAKE

Bell

- b. AIRCRAFT MODEL

47 D-1

- c. AIRCRAFT SERIAL NO.

480

- d. ENGINE MAKE

Franklin

- e. ENGINE MODEL

6V4-200-632

4. AIRCRAFT REGISTRATION INFORMATION (Complete all items)

- a. REGISTERED OWNER'S FULL NAME

World Wide Helicopters Inc.

- b. PERMANENT MAILING ADDRESS

San Fernando, Calif.
 USA

- c. AIRCRAFT NATIONALITY
 AND REGISTRATION MARK

N78900

5. AIRCRAFT OWNER'S CERTIFICATION (Check and complete appropriate item)

I hereby certify that I am the registered owner (or his agent) of the aircraft identified in Item 3 above which is registered with the Civil Aeronautics Administration as required by the Regulations of the Administrator, Part 91 of 14 CFR, and when operated displays the following evidence of registration:

- ☒ CERTIFICATE OF REGISTRATION, FORM ACA-900 (PART A), DATE OF ISSUE - Oct. 15, 1953

- ☐ APPLICATION FOR REGISTRATION, FORM ACA-900 (PART B), FORM ACA-900, PART A, FORWARDED TO CAA AIRCRAFT RECORDS BRANCH

- ☐ "AS-ON"

- ☐ OWNER'S REGISTRATION CERTIFICATE, FORM ACA-1707, DATED

"In order to be eligible for registration an aircraft must be owned by a citizen of the United States, as defined by Section 1101 of the Civil Aeronautics Act of 1938, as amended."

ATTACHMENTS (Check one)

- ☐ ACA-939
☐ ACA-937
☐ ACA-937
☐ UNAPPROVED DEVIATION DATA

14-58907-5

Harold E. Rignme

Apr. 21, 1954

Agent

(TITLE)

Form ACA-900 (11-53)

AIRCRAFT INSPECTION REPORT

(To be completed by a C.A.B. representative inspecting foreign aircraft)

The aircraft described in Item 2 on the reverse of this form has been inspected and found to conform to the following (Check one machine operation item):

1. AIRCRAFT AND EXISTING IDENTIFICATION RECORDS
a. ☒ AIRCRAFT IDENTIFICATION NO. 11-1 (ORIGINAL COPY PROVIDED) NO. 11
b. ☒ AIRCRAFT LANDING PAGE NO. 11-1
c. ☒ AIRCRAFT INSPECTION SUMMARY 1955 (ORIGINAL COPY NO. 54-6)
d. ☐ CIVIL AIR REGULATION PART 1 (ORIGINAL TYPE CERTIFICATE)

2. AIRCRAFT AND ENGINE OPERATION RECORDS

- a. ☐ AIRCRAFT NEW-NO PREVIOUS OPERATION OR MAINTENANCE HISTORY
b. ☒ COMPLIANCE WITH APPLICABLE AIRCRAFT/ENGINE IDENTIFICATION RECORDS
c. ☒ AIRCRAFT RECORDS INDICATE THE AIRCRAFT HAS BEEN OPERATED A TOTAL OF 860+30 HOURS
d. ☒ ENGINE RECORDS INDICATE THE FOLLOWING OPERATION:
SERIAL NO. 26290 TOTAL HOURS 574+30
SERIAL NO. TOTAL HOURS
SERIAL NO. TOTAL HOURS
SERIAL NO. TOTAL HOURS

3. PREVIOUS INSPECTION RECORD (INSPECTION RECORDED ON FORM ACA-310)

- a. LAST AIRWORTHINESS INSPECTION CONDUCTED March 3, 1955
b. ☒ BY AIRCRAFT MANUFACTURER
c. ☐ BY APPROVED REPAIR STATION CERTIFICATE NO.
d. ☐ BY MECHANIC CERTIFICATE NO.
e. ☒ PREVIOUS AIRCRAFT INSPECTION REPORT FORM ACA-310 WAS RETURNED TO OWNER

4. AIRWORTHINESS DOCUMENTS ISSUED OR REVIEWED

- a. ☐ OPERATION LIMITATIONS FORM ACA-86 WAS ISSUED (COPY ATTACHED)
b. ☒ CURRENT OPERATION LIMITATIONS FORM ACA-86 IS AVAILABLE IN AIRCRAFT
c. ☒ CURRENT APPROVED AIRPLANE PLATE NUMBER IS AVAILABLE IN AIRCRAFT
d. ☒ CURRENT WEIGHT AND BALANCE INFORMATION IS AVAILABLE IN AIRCRAFT
e. ☒ THIS INSPECTION HAS BEEN RECORDED IN THE AIRCRAFT RECORDS
f. ☒ CERTIFICATE OF AIRWORTHINESS FORM ACA-100 ISSUED TO EXPIRE April 21, 1955
g. ☒ PREVIOUS FORM ACA-100 WAS ISSUED TO EXPIRE March 2, 1955
BY Milton B. Deal (Signature)

5. CAA APPROVED REPAIR STATION CERTIFICATION

The aircraft described on the reverse has been inspected under the authority of the authorized certificated repair station
No. _____ by C.A.B. 52 and was found to be:

☐ AIRWORTHY

☐ UNWORTHY

(CHECK STATION AIRCRAFT IDENTIFICATION)

DATE

6. CAA REPRESENTATIVE CERTIFICATION

(Check one certification category and sign on the reverse and forward to: ☒ AIRWORTHY ☐ UNWORTHY (Check appropriate item))

DESIGNATION NO. [REDACTED]	DATE: April 21, 1955
TO: [REDACTED]	DATE: 5-6-55
FROM: [REDACTED]	DATE: [REDACTED]
NO ACCEPTED ☐ REJECTED ☐ NOT CHECKED ☐	

REMARKS (SEE REVERSE)

U. S. DEPARTMENT OF COMMERCE CIVIL AERONAUTICS ADMINISTRATION				Form Approved Revised March 1964	
MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)					
1. AIRCRAFT	NAME Bell	MODEL 47 D-1	SERIAL 480	REGISTRATION MARK N-78960	
2. OWNER	NAME (Firm, name, Inc.) World Wide Helicopters Inc.		ADDRESS (Street and number, city, state and zip) [REDACTED] San Fernando, Cal. USA		
3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 18.					
UNIT	NAME	MODEL	SERIAL NO.	NATURE OF WORK (Check)	
4. AIRFRAME	[REDACTED] (As described in Item 1 above) [REDACTED]			XXX	
5. POWERPLANT	[REDACTED]			[REDACTED]	
6. PROPELLER	[REDACTED]			[REDACTED]	
7. APPLIANCE	TYPE AND MANUFACTURER			[REDACTED]	
4. AIRCRAFT WEIGHT AND BALANCE DATA. This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such time as it is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.					
CATEGORY	EMPTY WEIGHT (Pounds)	EMPTY CENTER OF GRAVITY (Inches from nose)		EMPTY GROSS WEIGHT	
Standard	1499.0	4.11		851.0	
5. CONFORMITY STATEMENT (Complete and check)					
a. AGENCY'S NAME AND ADDRESS Harold E. Sighme [REDACTED] Port Moresby, Papua New Guinea		b. KIND OF AGENCY ☒ U. S. Certified Mechanic ☐ Foreign Certified Mechanic ☐ Certified Repair Station ☐ Manufacturer ☐ (Check if repair or alteration was made under delegation (p-tion procedures))		c. CERTIFICATE NO. ASE [REDACTED]	
6. I certify that the repair and/or alteration made to the aircraft identified under Item 3 above and described on the reverse of this form have been made in accordance with the information furnished herein is true and correct to the best of my knowledge and belief. April 21, 1954 [REDACTED] Harold E. Sighme [REDACTED]					
7. APPROVAL FOR RETURN TO SERVICE (Check and complete appropriate items) Pursuant to the authority specified below the unit identified in Item 3 was inspected in the manner prescribed by the Administrator and is: ☒ APPROVED BY ☒ CAA Designee ☐ Manufacturer ☐ Canadian Department of Transport Inspector of Aircraft ☐ REJECTED BY ☐ CAA Aviation Safety Agent ☐ Repair Station ☐ Other (Specify) [REDACTED] April 21, 1954 [REDACTED] [REDACTED] [REDACTED]					
8. TO BE COMPLETED ONLY BY CAA PERSONNEL. ☐ Forwarded for engineering comment ☐ Be attached memorandum ☒ Accepted ☐ Rejected ☐ Spot Checked [REDACTED] [REDACTED] [REDACTED]					

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, power-plant, propeller or appliance. After the repair and/or alteration has been inspected and Item 8 completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the FAA for administrative purposes.

Use CAM 18 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

8. DESCRIPTION OF WORK ACCOMPLISHED:

Repair accident damage to tubing structure as follows:

Replaced 21 inch section of tail boom lower longeron between Sta. 90.50 and Sta. 115.50, as per CAM 18 fig. 19C.

Replaced tail rotor drive shaft bearing hangers at Sta. 159.50 and Sta. 163.50.

Replaced 6 inch section tubing at left attachment front sprag safety cable, as per CAM 18 fig. 19C.

Replaced 18 inch section of main frame horizontal diagonal brace, repair originating at right engine mount cluster and going aft. Repaired as per CAM 18 fig. 19C.

All materials used are equal in size and quality to the original.

RECEIVED

MAR 25 12 35 PM '87

AIRMAIL RECORDS DIVISION
H-300

*If additional space is needed attach additional sheets bearing aircraft serial number and registration mark and date work completed.

Check here if additional sheets are attached. ☐

U.S. GOVERNMENT PRINTING OFFICE 16-70820-2

Form ACA-305 (11-45)		DEPARTMENT OF COMMERCE U.S. AIRCRAFT ADMINISTRATION		Form Approved Budget Bureau No. 43-2081-4	
APPLICATION FOR AIRWORTHINESS CERTIFICATE AND/OR ANNUAL INSPECTION OF AN AIRCRAFT				INSTRUCTIONS Please submit this form to the Civil Aeronautics Administration, Aviation Safety Field Representative	
1. APPLICATION (CHECK WHETHER) ☒ ORIGINAL AIRWORTHINESS CERTIFICATE ☐ ANNUAL INSPECTION		2. AIRWORTHINESS CLASSIFICATION ☒ STANDARD ☐ RESTRICTED ☐ EXPERIMENTAL ☐ LIMITED ☐ OTHER			
3. MAKE Bell Helicopter		4. MODEL 470D		5. NATIONALITY AND REGISTRATION MARK U.S. N 78900	
6. MAKE Franklin (Aircraft Motors)		7. MODEL 6V1-200-032		8. MANUFACTURER'S SERIAL NO. 489	
9. OWNER'S NAME Bell Aircraft Corporation		10. (GIVE ADDRESS ONLY IF IT HAS BEEN CHANGED FROM THAT GIVEN ON YOUR CERTIFICATE OF REGISTRATION. FORM ACA-306) Fort Worth 1, TEXAS			
11. ATTACHMENTS (CHECK WHICH) ☐ ACA-319 ☒ WEIGHT AND BALANCE REPORT ☐ ACA-327 ☐ DATA, DRAWINGS, ETC. ☒ ACA-337 ☐ UNAPPROVED DEVIATION DATA		12. I CERTIFY that the above information is true and correct. W. J. Humphrey Chief Inspector (DATE) Feb. 27, 1952 (TITLE)			
Form ACA-306a (11-45)					
AIRCRAFT INSPECTION REPORT (To be completed by CAA representatives)					
13. I have determined that the aircraft described in 305 above is in conformity with the following: (CHECK AND COMPLETE APPLICABLE ITEMS)					
a. ☐ AIRCRAFT SPECIFICATION NO. 44-1 THROUGH SHEET REVISION NO. 11					
b. ☐ AIRCRAFT LISTING PAGE NO. 1					
c. ☐ AIRWORTHINESS DIRECTIVE SUMMARY 1952 THROUGH CARD NO. 1					
d. ☐ OPERATIONS LIMITATIONS FORM ACA-308 ISSUED.					
e. ☐ OPERATIONS LIMITATIONS FORM ACA-308 IS AVAILABLE IN AIRCRAFT.					
f. ☒ CURRENT, APPROVED, AIRPLANE FLIGHT MANUAL IS AVAILABLE IN AIRCRAFT.					
g. ☒ ALL APPLICABLE NOTES, INSTRUMENT MARKINGS, AND PLACARDS HAVE BEEN COMPLIED WITH.					
h. ☒ CERTIFICATE OF AIRWORTHINESS FORM ACA-132 WAS ISSUED.					
FINDINGS					
14. ☒ AIRWORTHY ☐ UNAIRWORTHY	15. DESIGNER'S SIGNATURE [Redacted]	16. DESIGNATION NO. [Redacted]	17. DATE 29/1/52	18. ☐ ACCEPTED ☐ REINSPECTED YES ☒ NO	
21. REASON FOR DISAPPROVAL (IF YOU HAVE USED THE REVERSE TO CONTINUE)					

FAA AIRCRAFT REGISTRY
CAMERA NO. 5 DATE:

U. S. DEPARTMENT OF COMMERCE CIVIL AERONAUTICS ADMINISTRATION				Form Approved Budget Bureau No. 41-3008-1	
MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)					
1. AIRCRAFT	NAME Bell Helicopter	MODEL 47M	SERIAL NO. 480	REG. NO. AND REGISTRATION MARK N-78900	
2. OWNER	NAME (Firm, person, etc.) Bell Aircraft Corporation Fort Worth, Texas				
3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN AC-CORDANCE WITH CIVIL AERONAUTICS MANUAL 18.					
UNIT	NAME	MODEL	SERIAL NO.	NATURE OF WORK (Damage)	
4. AIRFRAME	***** (As described in item 1 above) *****				I
5. POWERPLANT					
6. PROPELLER					
7. APPLIANCE	TYPE AND MANUFACTURER				
4. AIRCRAFT WEIGHT AND BALANCE DATA. This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.					
CATEGORY	EMPTY WEIGHT (Pounds)	EMPTY CENTER OF GRAVITY (Inches from datum)		EMPTY LIFT (Pounds)	
Standard	1508.1	4.11		811.9	
5. CONFORMITY STATEMENT (Original and check)					
a. AGENCY'S NAME AND ADDRESS Bell Aircraft Corporation Fort Worth, Texas			b. KIND OF AGENCY ☐ U. S. Certificated Mechanic. ☐ Foreign Certificated Mechanic. ☐ Certificated Repair Station. ☒ Manufacturer. ☐ (Check if repair or alteration was made under delegation option procedure.)		c. CERTIFICATE NO. P.C. 100
4. I certify that the repair and/or alteration made to the unit(s) identified under item 3 above and described on the reverse or attachments herein have been made in accordance with the requirements of Part 18 of the U. S. Civil Air Regulations and that the information furnished herein is true and correct to the best of my knowledge.					
February 21, 1953 (Date repair and/or alteration completed)					
W. L. Humphrey (Signature of authorized individual) Chief Inspector					
6. APPROVAL FOR RETURN TO SERVICE (Check and complete appropriate items)					
Pursuant to the authority specified below the unit identified in item 3 was inspected in the manner prescribed by the Administrator and is:					
☒ APPROVED BY ☒ CAA Designee ☐ Manufacturer ☐ Canadian Department of Transport Inspector of Aircraft ☐ REJECTED ☐ CAA Aviation Safety Agent ☐ Repair Station ☐ Other (Specify)					
2-21-53 (Date of approval or rejection)					
TO BE COMPLETED ONLY BY CAA PERSONNEL.					
☐ Forwarded for engineering comment ☐ See attached memorandum ☒ Accepted ☐ Reinspected ☐ Spot Checked					
(Signature of authorized individual) [Redacted Signature] (Signature of authorized individual) [Redacted Signature]					

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, powerplant, propeller or appliance. After the repair and/or alteration has been inspected and item 6 completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the FAA for administrative purposes.

See CAM 18 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

E. DESCRIPTION OF WORK ACCOMPLISHED:

Installed 47-706-070 spray equipment kit in accordance with Bell Service Instruction 144 Revised 5-20-49. Actual weight and balance shown in item 4. Also see latest revised attached weight sheet, dated 2-20-53.

RECEIVED
MAR 9 4 11 PM '87
Aircraft Registration Section

*If additional space is needed attach additional sheets bearing aircraft nationality and registration mark and date work completed.

Check block if additional sheets are attached. ☐

MODEL 4701 - #450, N78900

Weighed: 2-20-53

Weighed 2-20-53 as a standard Model 4701, battery forward, skid landing gear, handling wheels removed, dual controls installed, center seat cushion removed. Bendix radio is stalled, spray kit installed, trapped fuel and oil plus 29 gallons fuel and 2 gallons oil, 28 tail ballast.

	Scale Reading	Tare	Net
Forward Left	697.5	165.5	532.0
Forward Right	745.5	185.0	560.5
Forward Total			1092.5
Aft	794.5	176.5	618.0
As Weighed			1710.5

Distance from Forward Jack Point to Sta. 0 = 27.70

$$C.G. = 96 - 27.70 - \frac{96(1092.5)}{1710.5} = 6.98$$

	Weight	Arm	Moment
As Weighed	1710.5	6.98	11939
Less: 29 Gallons Fuel	174.0		= 4176
Trapped Fuel	174.8		= 8
2 Gallon Oil	15.0		= 75
Trapped Oil	5.6		= 11
Ballast	2.0		= 1890
	1506.1	3.84	5779
	Weight	Arm	Moment
As Weighed	1506.1	+ 3.84	5779
Ballast	2.0	+210.00	420
Corrected Weight Empty	1508.1	4.11	6199

$$C.G. = \frac{6199}{1508.1} = + 4.11"$$

MOST AFT CONDITION

	Weight	Arm	Moment
Corrected Weight Empty	1508.1	+ 4.11	+ 6199
Oil (2 Gallons)	15.0	+ 2.00	+ 75
Oil (Trapped)	5.6	+ 2.00	+ 11
Fuel (29 Gallons)	174.0	+ 24.00	+ 4176
Fuel (Trapped)	.8	+ 10.00	+ 8
Pilot	170.0	= 30.00	= 5100
	1877.5		5369

$$C.G. = \frac{5369}{1873.5} = + 2.86"$$

MOST FORWARD CONDITION

	Weight	Arm	Moment
Corrected Weight Empty	1508.1	+ 4.11	6199
(Move Battery Aft)			+ 6600
Oil (2 Gallons)	15.0	+ 5.00	+ 75
Oil (Trapped)	5.6	+ 2.00	+ 11
Fuel (Trapped)	.8	+ 10.00	+ 8
Crew (3)	300.0	= 30.00	= 16200
	2069.5		= 3307

$$C.G. = \frac{3307}{2069.5} = + 1.60"$$

FAX AIRCRAFT REGISTRY

CAMERA NO.

DATE

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Jun 9 4 11 PM '93

ADMIN & REGISTRATION

607-555-1234

U. S. DEPARTMENT OF COMMERCE Civil Aeronautics Administration					Form Approved FAA Form No. 41-84-10A	
MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)						
1. AIRCRAFT	NAME Bell Helicopter	MODEL 470R	SERIAL NO. h50	NATIONALITY AND REGISTRATION MARK N-78900		
2. OWNER	NAME (Firm, Individual, Etc.) Bell Aircraft Corporation		ADDRESS (Street and number, city, state and zip) Fort Worth, Texas			
3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 19.						
UNIT	NAME	MODEL	SERIAL NO.	NATURE OF WORK (Check)		
a. AIRFRAME				MAJOR REPAIR	MAJOR ALTERATION	
b. POWERPLANT					I	
c. PROPELLER						
d. APPLIANCE						
4. AIRCRAFT WEIGHT AND BALANCE DATA. This data must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.						
CATEGORY	EMPTY WEIGHT (Pounds)		EMPTY CENTER OF GRAVITY (Inches from datum)		USEFUL LOAD (Pounds)	
Standard	1199.0		4.11		851.0	
5. CONFORMITY STATEMENT (Complete and check)						
a. REPAIR'S NAME AND ADDRESS Bell Aircraft Corporation Fort Worth, Texas			b. KIND OF AGENCY ☐ U. S. Certified Mechanic. ☐ Foreign Certified Mechanic. ☐ Certified Repair Station. ☒ Manufacturer. ☐ (Check if repair or alteration was made under delegation option procedures.)		c. CERTIFICATE NO. P.C. 100	
6. I certify that the repair and/or alteration made to the unit(s) identified under item 3 above and described on the reverse or Attachment hereto have been made in accordance with the requirements of Part 19 of the U. S. Civil Air Regulations and that the information furnished herein is true and correct to the best of my knowledge.						
December 31, 1952 (Date repair and/or alteration completed) W. L. Humphrey Chief Inspector						
7. APPROVAL FOR RETURN TO SERVICE. (Check and complete appropriate box.)						
Permitted to the authority specified below the unit identified in item 3 was inspected in the manner prescribed by the Administrator and is: ☒ APPROVED BY ☒ CAA Designee ☐ Manufacturer ☐ Canadian Department of Transport Inspector of Aircraft ☐ REJECTED ☐ CAA Aviation Safety Agent ☐ Repair Station ☐ Other (Specify) 12-31-52 (Date of approval or rejection)						
8. TO BE COMPLETED ONLY BY CAA PERSONNEL						
☐ Forwarded for engineering comment ☐ See attached memorandum ☒ Accepted 1-2-53 ☐ Reinspected (Date) 4-573-18 (CAA Registration number)						

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, powerplant, propeller or appliance. After the repair and/or alteration has been inspected and item is completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the FAA for administrative purposes.

See CAM 15 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

2. DESCRIPTION OF WORK ACCOMPLISHED:

Installed 47-350-009-13 float kit in accordance with Bell Service Instruction 145.
 Actual weight and balance shown in item 4.

Jul 5 1 26 PM '87
 ATTENDED
 CERTIFICATE SECTION

*If additional space is needed attach additional sheet bearing aircraft serial number and subsection no. 1 and date work completed.
 Check block if additional sheets are attached. ☐

DEPARTMENT OF COMMERCE CIVIL AERONAUTICS ADMINISTRATION				Form Approved Design Structure No. 6-5854-2	
REPAIR AND ALTERATION FORM (AIRCRAFT, PROPELLERS, ENGINES, INSTRUMENTS)					
(SEE REVERSE SIDE OF THIS FORM FOR INSTRUCTIONS)					
1. AIRCRAFT	MAKE Bell Helicopter	MODEL 47D1	SERIAL NO. 480	IDENTICALITY AND REGISTRATION MARK N78900 std	
2. OWNER	NAME (Firm, address, town, and State) Bell Aircraft Corp. [REDACTED] Fort Worth, Texas				
3. FILL IN INFORMATION IN THIS ITEM ONLY FOR THE UNIT REPAIRED AND/OR ALTERED					
UNIT	MAKE	MODEL	SERIAL NO.	NATURE OF WORK (Check)	
4. AIRCRAFT	[REDACTED] (As described in Item 2 above)				MAJOR REPAIR ☐ MAJOR ALTERATION ☒
5. PROPELLER BLADE OR PUL	[REDACTED]				
6. ENGINE	[REDACTED]				
7. INSTRUMENT	[REDACTED]				
8. AIRCRAFT	[REDACTED]				
WEIGHT AND BALANCE DATA					
AFTER the repair and alteration described below were made.		EMPTY WEIGHT (Pounds) 1563	EMPTY CENTER OF GRAVITY (Inches from datum)* 43.43	USEFUL LOAD (Pounds)* 787	
5. KIND OF AGENCY WHICH MADE REPAIRS AND/OR ALTERATIONS (Check)					
☐ MANUFACTURER ☐ APPROVED REPAIR STATION NO. [REDACTED] (See reverse) ☒ CERTIFIED MECHANIC					
6. AGENCY	NAME O.L. Tysdal	ADDRESS (Street and number, city, state, and State) [REDACTED] Lafayette, La.		DATE WORK ACCOMPLISHED 8-10-52	
7. DESCRIPTION OF WORK (ALL WORK MUST BE ACCOMPLISHED IN ACCORDANCE WITH PART 18 OF THE CIVIL AIR REGULATIONS AND ITS ASSOCIATED CIVIL AERONAUTICS MANUAL 18)					
To provide a movable ballast to overcome the necessity of changing the batteries to the aft position when carrying two passengers on short hauls. Alteration identical to those on N131B and in accordance with ACA 337 on N131B dated 12-20-50 Above Helicopter has 200 hp engine installation.					
If more space is needed, continue on reverse, or attach separate sheets bearing aircraft registration mark.					
I CERTIFY that [REDACTED] correct to the best of my knowledge.					
C. L. Tysdal [REDACTED] 8-10-52 (Signature of Supervising Mechanic) (Signature of Owner or Pilot) (Date)					
TO BE COMPLETED BY CAA REPRESENTATIVES					
☒ APPROVED ☐ REJECTED		SIGNATURE C. L. Tysdal		NO. [REDACTED] DATE 8-10-52 ☒ ACCEPTED ☐ REINSPECTED 21-1952	

INSTRUCTIONS

1. This form must be filled out & duplicate each time a major repair and/or alteration is made of an aircraft, propeller, engine, or instrument.
2. When repairs and/or alterations are made which affect the operation limitations set forth in the Airplane Flight Manual or Form ACA-309, the aircraft shall not be returned to service until the operation limitations have been corrected by an authorized representative of the CAA.
3. Certificated mechanics must, in all cases, obtain approval of the repair and/or alteration from the CAA representative prior to returning the article to service.
4. The manufacturer of an aircraft, engine, propeller, or instrument, and a certificated repair station holding the appropriate rating may return the article to service without prior approval of an authorized CAA representative, provided the alteration and/or repair does not change any of the operation limitations.
5. Repair agencies will be guided as follows when completing this form.
 - a. For an Aircraft Repair and/or Alteration—Complete Items 1, 2, 3a, 4, 5, 6, and 7.

Mechanic—Submit to CAA representative for inspection and approval prior to returning the article to service. Upon approval, the CAA representative will return the original copy to the mechanic who should submit it to the aircraft owner.

Manufacturer or Approved Repair Station—Submit original to aircraft owner, forward copy to CAA district office or CAA agent prior to returning article to service.
 - b. For a Component Installed in an Aircraft—Complete Items 1, 2, 3 (b, c, or d, whichever is applicable), 4, 5, 6, and 7. Distribute copies as in a above.
 - c. For a Spare Component—Complete Items 3 (b, c, or d, whichever is applicable), 5, 6, and 7.

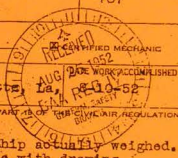
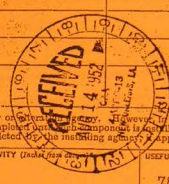
Mechanic—Submit to CAA representative for inspection and approval. When approved, retain both copies of the form with the component until installation on an aircraft. At this time Items 1, 2, and 4 must be completed by the installing agency who will distribute the forms as follows: (No further approval of CAA is required, only a log-book entry by the installing agency is necessary.) After installation, original form should be submitted to aircraft owner, and copy forwarded to the nearest CAA district office or CAA agent.

Manufacturer or Approved Repair Station—Handle same as for mechanics except that it is not necessary to submit to CAA representative for inspection or approval.

10-84210-2 U. S. GOVERNMENT PRINTING OFFICE

RECEIVED
GENERAL INVESTIGATION
SECTION
JUN 27 1972
FBI

Form ACA-407 (1-6)		DEPARTMENT OF COMMERCE CIVIL AERONAUTICS ADMINISTRATION		Form Approved Budget Bureau No. 41-10833	
REPAIR AND ALTERATION FORM (AIRCRAFT, PROPELLERS, ENGINES, INSTRUMENTS)					
(SEE REVERSE SIDE OF THIS FORM FOR INSTRUCTIONS)					
1. AIRCRAFT	MAKE Bell Helicopter	MODEL 47D1	SERIAL NO. 480	NATIONALITY AND REGISTRATION MARK N78900 atd	
2. OWNER	NAME (Firm, individual, both) Bell Aircraft Corp		ADDRESS (Street and number, city, state, and Zip) [Redacted] Port Worth, Texas		
3. FILL IN INFORMATION IN THIS ITEM ONLY FOR THE UNIT REPAIRED AND/OR ALTERED					
UNIT	MAKE	MODEL	SERIAL NO.	NATURE OF WORK (Check)	
1. AIRCRAFT	[Redacted] (As described in Item 1 above)			MAJOR REPAIR	MAJOR ALTERATION
2. PROPELLER BLADE OR HUB					XX
3. ENGINE					
INSTRUMENT	TYPE AND MANUFACTURER				
4. AIRCRAFT	This item must be completed by repair organization. However, in the case of a spare component, it will not be completed by the repairing agency. If applicable, at this time, it will be completed by the marketing agency.				
WEIGHT AND BALANCE DATA					
EMPTY WEIGHT (Pounds)*		EMPTY CENTER OF GRAVITY (Inches from datum)		USEFUL LOAD (Pounds)*	
1563		43.43		787	
5. KIND OF AGENCY WHICH MADE REPAIRS AND/OR ALTERATIONS (Check)					
☐ MANUFACTURER ☐ APPROVED REPAIR STATION NO. [Redacted]					
6. AGENCY	NAME C.L. Tysdal	ADDRESS (Street and number, city, state, and Zip) [Redacted] Lafayette, La.			
7. DESCRIPTION OF WORK (All work must be accomplished in accordance with Part 43 of the Federal Aviation Regulations and its associated Civil Aeronautics Manual (8.)					
Ship converted to sea configuration this date. Ship actually weighed. Sismic installation made this date in accordance with drawing numbers 3754, 3755, 3757, 3758, 3758 A&B, 3759, and 3760 dated 2-20-49. Sismic installation identical with N212B, ACA dated 11-15-49. Above work accomplished in accordance with manufacturer specifications and existing bulletins. Above helicopter has 200 hp installation If more space is needed, continue on reverse, or attach separate sheets bearing aircraft registration mark. ☐ FORWARDED FOR ENGINEERING APPROVAL I CERTIFY [Redacted] and correct to the best of my knowledge. TO [Redacted] (Name) [Redacted] (Signature) [Redacted] (Title) 8-19-52 (Date) ☒ APPROVED ☐ REJECTED ENGINEER'S SIGNATURE C.L. Tysdal DATE 8-19-52 INSPECTED [Redacted] (Signature) [Redacted] (Title) DATE 21-19-52					



INSTRUCTIONS

1. This form must be filled out in duplicate each time a major repair and/or alteration is made of an aircraft, propeller, engine, or instrument.
2. When repairs and/or alterations are made which affect the operation limitations set forth in the Airplane Flight Manual or Form ACA-308, the aircraft shall not be returned to service until the operation limitations have been corrected by an authorized representative of the CAA.
3. Certificated mechanics must, in all cases, obtain approval of the repair and/or alteration from the CAA representative prior to returning the article to service.
4. The manufacturer of an aircraft, engine, propeller, or instrument, and a certificated repair station holding the appropriate rating may return the article to service without prior approval of an authorized CAA representative, provided the alteration and/or repair does not change any of the operation limitations.
5. Repair agencies will be guided as follows when completing this form.
 - a. For an Aircraft Repair and/or Alteration—Complete Items 1, 2, 3a, 4, 5, 6, and 7.
 - For an Aircraft Repair and/or Alteration—Submit original to aircraft owner, forward copy to CAA district office or CAA agent prior to returning article to service.
 - For a Component Installed in an Aircraft—Complete Items 1, 2, 3 (b, c, or d, whichever is applicable), 4, 5, 6, and 7. Distribute copies as in a above.
 - For a Spare Component—Complete Items 3 (b, c, or d, whichever is applicable), 5, 6, and 7.
 - b. Mechanic—Submit to CAA representative for inspection and approval. When approved, retain both copies of the form with the component until installation on an aircraft. At this time Items 1, 2, and 4 must be completed by the installing agency who will distribute the forms as follows: (No further approval of CAA is required, only a log-book entry by the installing agency is necessary.) After installation, original form should be submitted to aircraft owner, and copy forwarded to the nearest CAA district office or CAA agent.
 - c. Manufacturer or Approved Repair Station—Handle same as for mechanics except that it is not necessary to submit to CAA representative for inspection or approval.

16-44120-2 U. S. GOVERNMENT PRINTING OFFICE

RECEIVED
 12 27 11 32
 REPAIRS SECTION

PETERSEN HELL-HELICOPTER SERVICES, INC.
Weight & Balance for Bell Helicopter
Model 470D Serial No. 4802 B 20000 B

Pilot Seat -- Battery Forward

	WEIGHT	ARM	MOMENT
Empty Weight	1563	+343	5323
Pilot	170	-30	-5100
Fuel (29 gals)	174	+24	4176
Oil (2 gals)	15	+5	75
TOTAL	1922	+236	4224
Useful Load	359	C. G. +2.36	
Approved Gross Weight	2350		

Extreme Forward C. G.

Less: Fuel (29 gals)	-174	24	-4176
TOTAL	1748	+19	+348

C. G. Range from Station 0 = 2.0" to 2.88"

DATE 8-10-52

PETROLEUM TELL-HELICOPTER SERVICES, INC.
Weight & Balance for Bell Helicopter
Model 206 Serial No. 450 87582 B

SEISMIC INSTALLATION
Package No. 1, Drilling
(PILOT SOLO WITH ALL PACKAGES)

	<u>WEIGHT</u>	<u>ARM</u>	<u>MOMENT</u>
Empty Weight	<u>1563</u>	<u>+343</u>	<u>5373</u>
Pilot	170.	-30	-5100
Fuel (29 gals)	174.	24.	4176
Oil (29 gals)	15.	+5.	+75
Package No. 1 Drilling	190.	0	
TOTAL	<u>2012</u>	<u>+224</u>	<u>+4524</u>
Useful Load	549		
Approved Maximum Gross Weight	<u>2350</u>		
Extreme Forward C. G.			
Less: Fuel (29 gals)	-174	24.	-4176
TOTAL	<u>1838</u>	<u>+18</u>	<u>+348</u>

C. G. Range from Station 0 = -2.0" to +2.88"

DATE 8-10-52



FRA AIRCRAFT REGISTRY

CANADA NO. 3

DATE: 3

5-87

11 12 13
14 15 16
17 18 19
20 21 22
23 24 25
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29 30 31
32 33 34
35 36 37
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41 42 43
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47 48 49
50 51 52
53 54 55
56 57 58
59 60 61
62 63 64
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74 75 76
77 78 79
80 81 82
83 84 85
86 87 88
89 90 91
92 93 94
95 96 97
98 99 100

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CERTIFICATE 1-17-88

FRYPOLEUM HELL-HELICOPTER SERVICES, INC.
Weight & Balance for Bell Helicopter
Model 470L Serial No. 482 ~~482008~~

SEISMIC INSTALLATION
Package No. 2, Drilling
(Pilot Solo With all Packages)

	<u>WEIGHT</u>	<u>ARM</u>	<u>MOMENT</u>
Empty Weight	<u>1563</u>	<u>+3.43</u>	<u>5323</u>
Pilot	170	-30	-5100
Fuel (29 gals)	174	124	4176
Oil (2 gals)	15	15	15
Package No. 2, Drilling	278	0	
TOTAL	<u>2200</u>	<u>2.06</u>	<u>+4524</u>
Useful Load	697	C. G. =	
Approved Maximum Gross Weight	<u>2350</u>		
Extreme Forward C. G.			
Less: Fuel (29 gals)	-174	21.	-4176
TOTAL	<u>2026</u>	<u>1.17</u>	<u>+348</u>

C. G. Range from Station 0 = -2.0" to +2.88"

DATE 9-10-52

1-27-78 12-27-78
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CERTIFICATE SECTION

PETROLEUM HELICOPTER SERVICE, INC.
Weight & Balance for Bell Helicopter
Model 4701 Serial No. 420 87882BSEISMIC INSTALLATION
Package No. 3, Drilling
(Pilot Solo With All Packages)

	WEIGHT	ARM	MOMENT
Empty Weight	1563	+3.43	5323
Pilot	170	-30	-5100
Fuel (20 gals)	175	24	4200
Oil (2 gals)	15	25	375
Package No. 3, Drilling	910	0	0
TOTAL	2232	2.03	+4524

Useful Load 669 G. G. =
Approved Maximum Gross Weight 2350

Extreme Forward G. G.			
Less: Fuel (20 gals)	-174	24	-4200
TOTAL	2058	+17	+348

C. G. Range from Station 0 = -2.0" to +2.83"

DATE 8-10-52

FAA AIRCRAFT REGISTRY
CAMERA NO. 2

DATE: 3 5 - 87

AUG 29 12 27 PM '82
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CERTIFICATE SEC 704

PERFORMANCE DATA - HELICOPTER SERVICES, INC.

Weight & Balance For Bell 430-1A (1987)

Model 430-1A Serial No. 430-1A-1000

SEMI-INSTALLATION

Package No. 1 Recording

(PILOT SOLD WITH ALL PACKAGES)

	WEIGHT	ARM	MOMENT
Empty Weight	1563	+3.43	5373
Pilot	170.	-30.	-5100
Fuel (29 gals)	174.	44.	4176
Oil (2 Gals)	15.	43.	475
Package No. 1, Recording	198.	0	—
TOTAL	2120	+2.13	4524

Useful Load 557 G. G. = +2.13
Approved Maximum Gross Weight 2380

Extreme Forward C. G.

Less: Fuel (29 gals.) -174 44. -4176

TOTAL 1446 +1.7 14348

C. G. Range from Station 0 = -2.07 to 4.88

DATE 8-10-52



FAA AIRCRAFT REGISTRY

CAMERA NO. 5 DATE 5 5 87

Aug 29 12 22 PM '82
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CERTIFICATE SECTION

PETROLEUM HELL-HELICOPTER SERVICES, INC.
Weight & Balance for Bell Helicopter
Model 470 Serial No. 450 B 28020 B

SEISMIC INSTALLATION
Package No. 2, Recording
(PILOT SOLO WITH ALL PACKAGES)

	WEIGHT	ARM	MOMENT
Empty Weight	<u>1543</u>	<u>+3.43</u>	<u>-5373</u>
Pilot	170.	-30	-5100
Fuel (29 gals)	174.	+24	+4176
Oil (2 gals)	15.	+	+ 75
Package No. 2, Recording	205.	0	
TOTAL	<u>2127</u>	<u>+2.12</u>	<u>+4524</u>

Net Weight 564 C. G. = +2.12
Approved Maximum Gross Weight 2356

Extreme Forward C. G.			
Less: Fuel (29 gals)	-174	24	-4176
TOTAL	<u>1953</u>	<u>+1.17</u>	<u>+348</u>

C. G. Range from Station 0 = -2.00 to +2.88

DATE 8-10-52

FAA AIRCRAFT REGISTRY
CAMERA NO. 5 DATE: 5 - 5 - 87

12875 12 27 152
RECEIVED
CERTIFICATE SECTION

FAA AIRCRAFT REGISTRY (1-8)		DEPARTMENT OF COMMERCE CIVIL AERONAUTICS ADMINISTRATION		Form Approved Budget Bureau No. 42-1092-2	
REPAIR AND ALTERATION FORM (AIRCRAFT, PROPELLERS, ENGINES, INSTRUMENTS)					
(SEE REVERSE SIDE OF THIS FORM FOR INSTRUCTIONS)					
1. AIRCRAFT	MAKE BELL	MODEL 4774	SERIAL NO. 400	NATIONALITY AND REGISTRATION MARK N78200	
2. OWNER	NAME (Firm, name, last) BELL AIRCRAFT CORP.		ADDRESS (Street and number, city, state, and State) [REDACTED] Ft. Worth 1, Texas		
3. FILL IN INFORMATION IN THIS ITEM ONLY FOR THE UNIT REPAIRED AND/OR ALTERED					
UNIT	MAKE	MODEL	SERIAL NO.	NATURE OF WORK (Check) MAJOR REPAIR MAJOR ALTERATION	
a. AIRCRAFT	***** (As described in Item 1 above) *****			X	
b. PROPELLER BLADE OR HUB					
c. ENGINE	TYPE AND MANUFACTURER				
d. INSTRUMENT					
4. AIRCRAFT	This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.				
WEIGHT AND BALANCE DATA					
*AFTER all repairs unless otherwise described below were made.		EMPTY WEIGHT (Pounds) 1539	EMPTY CENTER OF GRAVITY (Inches from datum) + 4.05	USEFUL LOAD (Pounds) 811 lbs.	
5. KIND OF AGENCY WHICH MADE REPAIRS AND/OR ALTERATIONS (Check)					
☒ MANUFACTURER ☐ APPROVED REPAIR STATION NO. _____ (Signatures) ☒ CERTIFIED MECHANIC					
6. AGENCY	NAME BELL AIRCRAFT CORP.		ADDRESS (Street and number, city, state, and State) [REDACTED] Ft. Worth 1, Texas		DATE WORK ACCOMPLISHED 3/28/62
7. DESCRIPTION OF WORK (ALL WORK MUST BE ACCOMPLISHED IN ACCORDANCE WITH PART II OF THE CIVIL AIR REGULATIONS AND ITS ASSOCIATED CIVIL AERONAUTICS MANUAL 16.)					
1. Installed Bell dusting kit for A10 S.I. 2. Weight and Balance conducted. See attached sheet.					
If more space is needed, continue on reverse, or attach separate sheets bearing aircraft registration mark.					
☐ FORWARDED FOR ENGINEERING SPECIAL					
I certify that the above statements are true and correct to the best of my knowledge.					
[REDACTED] A-65 [REDACTED] 3/28/62 (Signature) (Date)					
TO BE COMPLETED BY CAA REPRESENTATIVES					
☒ APPROVED	DESIGNED BY [REDACTED]	NO. [REDACTED]	DATE 3-29-52		
☐ REJECTED	CAA AGENT [REDACTED]	☒ ACCEPTED	DATE 4-2-52		
☐ REINSPECTED					

INSTRUCTIONS

4-5-2

1. This form must be filled out in duplicate when a major repair and/or alteration is made of an aircraft, propeller, engine, or instrument.
2. When repairs and/or alterations are made which affect the operation limitations set forth in the Airplane Flight Manual or Parts ACA-309, the aircraft shall not be returned to service until the operation limitations have been corrected by an authorized representative of the CAA.
3. Certificated mechanics must, in all cases, obtain approval of the repair and/or alteration from the CAA representative prior to returning the article to service.
4. The manufacturer of an aircraft, engine, propeller, or instrument, and a certificated repair station holding the appropriate rating may return the article to service without prior approval of an authorized CAA representative, provided the alteration and/or repair does not change any of the operation limitations.
5. Repair agencies will be guided as follows when completing this form.

- a. For an Aircraft Repair and/or Alteration—Complete Items 1, 2, 3a, 4, 5, 6, and 7.

Mechanic—Submit to CAA representative for inspection and approval prior to returning the article to service. Upon approval, the CAA representative will return the original copy to the mechanic who should submit it to the aircraft owner.

Manufacturer or Approved Repair Station—Submit original to aircraft owner, forward copy to CAA district office or CAA agent prior to returning article to service.

- b. For a Component Installed in an Aircraft—Complete Items 1, 2, 3 (b, c, or d, whichever is applicable), 4, 5, 6, and 7. Distribute copies as in a above.

- c. For a Spare Component—Complete Items 3 (b, c, or d, whichever is applicable), 5, 6, and 7.

Mechanic—Submit to CAA representative for inspection and approval. When approved, retain both copies of the form with the component until installation on an aircraft. At this time Items 1, 2, and 4 must be completed by the installing agency who will distribute the forms as follows: (No further approval of CAA is required, only a log-book entry by the installing agency is necessary.) After installation, original form should be submitted to aircraft owner, and copy forwarded to the nearest CAA district office or CAA agent.

Manufacturer or Approved Repair Station—Handle same as for mechanics except that it is not necessary to submit to CAA representative for inspection or approval.

18-86100-2 U. S. AIRCRAFT REGISTRY

3/28/52

MODEL: 1711-6150, 178900

This report supplements report dated 3/7/52. A dust kit was installed 3/28/52 making necessary the following revisions.

Helicopter Re-weighed 3/28/52		Weight	G. O.
		25.3	14.05
BEST APT CONDITION (3-28-52)			
Weight Empty	Weight	APM	Moment
	15.3	14.05	8233
Oil (2 gallons)	25	5.0	75
Fuel (25 gallons)	174	214.0	1176
Pilot	170	~30.0	~2100
	1298		5384

$$C.O. = \frac{5384}{1298} = + 2.84$$

BEST APT CONDITION (3-28-52)

		Weight	APM	Moment
		25.3	14.05	8233
Weight Empty				
(New Battery A/C)				6630
Oil (2 gallons)	25	5.0	75	
Crew	170	~30.0	~2100	
	2091			~2862

$$C.O. = \frac{2862}{2091} = + 1.36$$

$$\text{MAXIMUM USEFUL LOAD} = 2350 - 1530 = 820$$

FAA AIRCRAFT REGISTRY

CAMERA NO.

DATE

3 - 5 - 87

RECEIVED
11 12 25 PM '87

2/25/52

Model: 47D1-4480, N78900

weighed 2/19/52 as a standard model 47D-1, battery forward, skid landing gear handling wheels removed, dual controls installed, and center seat cushion removed.

	<u>Scale Reading</u>	<u>Tare</u>	<u>Net</u>
Forward Left	635.0	165.0	470.0
Forward Right	682.0	186.0	496.0
Forward Total			966.0
Aft	635.0	177.0	458.0
Weight Empty			1424.0

Distance from forward jack point to Sta. 0 = 27.70

$$C.G. = (96-27.70) = \frac{(96)(966.0)}{(1424.0)} = +3.18"$$

	<u>Weight</u>	<u>Arm</u>	<u>Moment</u>
As weighed	1424.0	3.18	4528
Ballast	6.5	210.00	1365
Corrected Weight Empty	1430.5		5893

$$C.G. = \frac{5893.0}{1430.5} = +4.12"$$

MOST AFT CONDITION

	<u>Weight</u>	<u>Arm</u>	<u>Moment</u>
Corrected Weight Empty	1430.5	+4.12	+5894
Oil (2 Gallons)	15.0	+5.00	+ 75
Fuel (29 Gallons)	174.0	+24.00	+4176
Pilot	170.0	-30.00	-5100
	1789.5		+5045

$$C.G. = \frac{5045.0}{1789.5} = +2.82"$$

MOST FORWARD CONDITION

	<u>Weight</u>	<u>Arm</u>	<u>Moment</u>
Corrected Weight Empty	1430.5	+4.12	5894
(Move Battery Aft)			+6630
Oil (2 Gallons)	15.0	+5.00	+ 75
Crew	540.0	-30.00	-16200
	1785.5		-3601

$$C.G. = \frac{3601.0}{1785.5} = -1.81"$$

FAA AIRCRAFT REGISTRY

CAMERA NO. 5 DATE: 5 - 5 - 97

RECEIVED
AIRCRAFT SECTION
MAY 7 10 13 AM '97