NATIONAL AERONAUTIC ASSOCIATION

APPLICATION FOR SANCTION OF RECORD ATTEMPT

The information requested below must be completed in full and be signed by an authorized representative of the Sponsor of the Record Attempt:

APPLICANT -- Sponsor: HQ, III CORPS FT. HOOD

Contact: CWO YOHA Phone: 817-532-3600/3303/3848

Address: FT. HOOD, TEXAS

RECORD ----- Category: ( )WORLD (X)World "Class" ( )National

Type: AIRPLANE

Class: C-I-E ( )Feminine

Proposed Date of Attempt: WEEK OF 7 JUNE 1971

Location of Attempt, or Course: ROBERT GRAY ARMY AIRFIELD, WEST FT. HOOD, TEXAS

AIRCRAFT --- Manufacturer: GRUMMAN AEROSPACE CORP

Type & Designation: (TURBO PROP) OV-1C

Gross Weight (incl. fuel & crew): 11,900 LB

ENGINES ---- Manufacturer: AVCO LYCOMING

Quantity & Designation: (2) T-53-L15

Horsepower, or Thrust: 1160 SHP

PILOT ------ Name: CWO THOMAS G. YOHA

Nationality: U. S. FAI License No: 378/71

I/We understand that the Sponsor listed above is responsible for all NAA expenses and fees connected with this record attempt, per the schedule attached, and hereby certify that this record attempt will be conducted in accordance with the regulations of the Federation Aeronautique Internationale and the National Aeronautic Association.

This space for NAA use only
SANCTION PERIOD OF 90 DAYS
STARTS: ----------
ENDS: ----------
SANCTION FEE: $----------

Approved By & Date

Signed: William E. Emery

WILLIAM E. EMERY

Title: MAJOR, AGC
Asst AG

Date: 20 MAY 1971

JUNE 4, 1971
Desired starting date of Sanction

TO: NATIONAL AERONAUTIC ASSOCIATION
806 Fifteenth Street, N.W.
Washington, D.C. 20005

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MAY 24 1971
FIELD ENGINEERING

AVCO PRIVATE

C.C.
M. Kleener
G. Hughes
G. Money

RETIED

Issued 19 May

REC'D 1040
139 01 31 May
COMM CENTER
FORT HOOD, TEXAS

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TO RUEOPOA/CGUSCONARC

INFO RUWTNFA/CGUSAFOUR FT SAM HOUSTON TX

RUWTMKA/CG III CORPS AND FT HOOD, FT HOOD TX

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AVCO PRIVATE

ACSFOR AV

CONARC FOR ATOPS-AVN; USAFOUR FOR AKADC-AA; FT HOOD FOR AKCHO-G3-AV.

SUBJ: REQUEST FOR AUTHORITY TO ESTABLISH RECORDS

A. DOD DIRECTIVE 5410.19; B. AR 95-28; C. LTR 55-AVN-293, 4 FEB 71, SUBJECT AS ABOVE.

1. DOD APPROVES REQ BY 293D AVN CO TO ATTEMPT TO ESTABLISH ACFT PERFORMANCE RECORDS AS OUTLINED IN REF C PROVIDED THERE IS NO INTERFERENCE WITH OPERATIONAL RQR.

2. DIRECT COORDINATION WITH NATIONAL AERONAUTIC ASSOCIATION IS AUTH. CONTACT IS MR. RANDLEMAN, TELEPHONE (202) 347-2808. ASSOCIATION ADDRESS: SUITE 610, SHOREHAM BUILDING, 806 15TH STREET, N.W., WASHINGTON, D.C. 20005. FUNDS, NOT EXPECTED TO EXCEED $2,000, ARE NOT AVAL THIS HQ TO SPT PARTICIPATION OF THE NATIONAL AERONAUTIC

PAGE 2 RUEADWD5795 UNCLAS

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MAY 24 1971
FIELD ENGINEERING

C.C M. KLEINER
A. Hagler
R. MOREY
R. UNTIED

SSOCIATION. CONDUCT OF FLIGHT(S) IS AUTH PROVIDED FUNDS FOR REIMBURSING NAA PARTICIPATION ARE AVAL WITHIN YOUR COMMAND.

3. PROVIDE THIS HQ, ATTN; ACSFOR AV AND CINFO, PLANNED DATE OF FLIGHT, RESULTS OF FLIGHT, AND COPIES OF ALL NEWS RELEASES.

4. FOL IS SUGGESTED (NOT MANDATORY) APPROPRIATE PUBLIC INFO RELEASE PRIOR TO FLIGHT:

'FORT HOOD, TEXAS -- ARMY PILOTS FROM FORT HOOD'S 293RD AVN CO, 55TH COMBAT AVN BN, WILL ATTEMPT TO ESTABLISH WORLD ALTITUDE AND TIME-TO-CLIMB PERFORMANCE RECORDS FOR AIRCRAFT IN THE OV-1C CLASS. TESTS WILL BE PERFORMED IN MOHAWK OV-1C AIRCRAFT AND IT IS EXPECTED THE AIRCRAFT WILL REACH AN ALTITUDE OF 9,762 FEET IN APPROXIMATELY THREE MINUTES. IT IS ALSO PLANNED THAT THE AIRCRAFT WILL EVENTUALLY REACH AN ALTITUDE OF 40,000 FEET. EACH FEAT WILL ESTABLISH A WORLD RECORD FOR THIS TYPE AIRCRAFT.

CAPTAIN RICHARD STEINBOCH OF KLAMATH FALLS, OREGON AND CHIEF WARRANT OFFICER THOMAS G. YOHA OF MANSFIELD, OHIO WILL PILOT THE MOHAWK DURING THE ATTEMPT. BOTH HAVE MORE THAN 700 HOURS FLIGHT TIME IN MOHAWK'S.

AVCO PRIVATE

THE MOHAWK OV-1C IS THE STANDARD AIRCRAFT OF THE TESTING UNIT AND IS POWERED BY TWO LYCOMING T53-L-15 ENGINES, EACH ENGINE

PRODUCES 1160 SHAFT HORSE POWER AND HAS A GROSS TAKEOFF WEIGHT BELOW 13,227 POUNDS TO COMPLY WITH CLASS REQUIREMENTS.

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THE 293RD'S RECORD ATTEMPT WILL BE MADE AT FORT HOOD'S ROBERT GRAY ARMY AIRFIELD AND WILL IN NO WAY INTERFERE WITH THE UNIT'S MISSION NOR WILL IT COST ANYTHING ABOVE NORMAL FLYING EXPENSES. IT WILL, HOWEVER, MARK THE FIRST TIME ANY ARMY TACTICAL UNIT HAS TRIED TO SET AN AIRCRAFT RECORD. PREVIOUS RECORDS HAVE BEEN SET ONLY BY MANUFACTURERS OR AS A JOINT MILITARY AND MANUFACTURER EFFORT.

TECHNICAL REPRESENTATIVES FROM THE GRUMMAN AEROSPACE CORPORATION AND AVCO LYCOMING WILL BE PRESENT DURING THE RECORD ATTEMPT. THE FLIGHT WILL ALSO BE MONITORED BY AN OFFICIAL OF THE NATIONAL AERONAUTIC ASSOCIATION (NAA), THE U.S. REPRESENTATIVE OF THE FEDERATION AERONAUTIQUE INTERNATIONALE (FAI), WORLD AUTHORITY FOR THE CERTIFICATION OF INTERNATIONAL RECORDS.

AVCO PRIVATE

THE MOHAWK WAS FIRST OFF THE PRODUCTION LINE IN 1960. IT IS USED TODAY IN VIETNAM FOR SURVEILLANCE AND RECONNAISSANCE, AND AT FORT HOOD IN CONJUNCTION WITH PROJECT MASSTER TESTING.

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Records Are Becoming 'Old Stuff' for Moriarty

Five world records were set by an Army OV-1C aircraft propelled by two T53-L-15 Turbo-prop engines. These records were witnessed by an official representative of the National Aeronautic Association who has transmitted the records to the parent organization, the "Federation Aeronautique Internationale," headquartered in Paris, France. These new Turbo-prop records are in addition to another five world records established in 1966, four of which remain unbeaten. The recent event occurred at Fort Hood, Texas on 8 and 9 June, utilizing an OV-1C "Mohawk" aircraft of the 293rd Aviation Company.

In a dazzling exhibition of engine power and endurance, the Lycoming powerplants performed flawlessly to establish the following new records: time to climb from field elevation to 3,000 meters, to 6,000 meters, and to 9,000 meters. On the second day, the same powerplants propelled the aircraft to a record peak altitude and also to a maximum sustained level flight altitude.

Mr. James Moriarty of 4 Windsor Lane, Supervisor, Field Engineering, Service Department, was initially contacted by Army personnel at Fort Hood, in the second quarter of this year to provide assistance and direction in their record attempts. Upon concurrence by the Assistant Director of the Lycoming Service Department, communication ensued between the 293rd Aviation Company at Fort Hood and Mr. Moriarty.

Once the U.S. Army had finalized an advanced attempt date, a Lycoming Service Representative, Mr. Carl Harrington, was dispatched to Fort Hood with a list of engine condition checks furnished by Mr. Moriarty. Upon his own arrival at Fort Hood, Mr. Moriarty reviewed the results of the engine condition checks. He then performed a power rating check so as to compare engine performance when the engines were shipped new from to their current condition. These engines had accumulated 45 and 200 hours respectively, since delivered from Lycoming. Satisfied that the engines were performing in accordance with the Engine Model Specification, a briefing was then held with the record attempt flight crew, at which time he provided them with cockpit procedures and powerplant management, verbally and in writing. These instructions were for the ascent and descent of the aircraft and any other contingencies that could possibly have occurred.

This is not a "first" for Mr. Moriarty regarding the acquisition of world records. He managed and coordinated the Avco-Lycoming effort in 1966 when five world records were established, then using an earlier model T53 Turbo-prop engine.

Mr. Moriarty has been associated with Avco Lycoming since 1958. He has resided in Monroe for the past seven years, with his wife, Mary Louise, and their five children.

ON THE JOB -- Monroe's James Moriarty is shown on the job as five world records were set by aircraft using Lycoming turbo-prop engines.

4-PLY NYLON CORD TIRES

Five World Flight Records Involve Lycoming Engines

Three world time-to-climb speed records and two world altitude marks have unofficially been established by a twin engine Army OV-1C "Mohawk" surveillance aircraft piloted by two Army officers from the 55th Combat Aviation Battalion, Fort Hood, Texas. Their craft was powered by two T53-L-15 turboprop engines produced at the Avco Lycoming Division in Stratford.

The record-setting flight, first ever attempted by an Army tactical unit, has established official claims to the new world marks for: absolute altitude (39,500 feet); sustained altitude (36,504 feet), and the three time-to-climb records of two minutes, 10 seconds—to 3,000 meters; five minutes, 35 seconds—to 6,000 meters, and 10 minutes, 50 seconds—to 9,000 meters (all from field elevation).

Now awaiting approval from the Federation Aeronautique Internationale (FAI), world authority for the certification of international flight records, all five newly claimed aircraft performance marks fall in the C-1.e, Group II category for light airplanes (turboprop) weighing between 6,614 and 13,227 lbs. No official records had been set in this class previously.

Powered by two Avco Lycoming turboprop engines which are each rated at 1,160 shaft horsepower, and weigh 605 pounds (dry), the OV-1C "Mohawk" aircraft had a gross takeoff weight of 11,875 lbs.

Piloting the "Mohawk" in this June 8-9 effort from Fort Hood's Robert Gray Army Air Field was Chief Warrant Officer Thomas G. Yoha of Mansfield, Ohio, assisted by Captain Richard Steinbach, of Klamath Falls, Ore. as co-pilot.

The coordinator of Avco Lycoming's powerplant effort for the flight was James D. Moriarty who is supervisor, Turboprop Field Engineering, in the Lycoming Service department. Carl Harrington, a senior Lycoming Service Representative, also provided assistance at Fort Hood.

Mr. Moriarty resides on Windsor Road, in Monroe, and Mr. Harrington is a resident of Columbus, Ga.

The record flight was officially monitored by A. Earl Hansen of the National Aeronautic Association (NAA), U.S. Representative of the Federation Aeronautique Internationale (FAI). Accuracy Calibration of the instrumentation used for recording this flight was conducted at Edwards Air Force Base, in California, prior to being sent to the FAI in Paris, France, to be recorded as official.

In charge of preparing the OV-1C "Mohawk" for the records attempt was a selected aircraft maintenance crew from the Army's 55th Combat Aviation Battalion. Prior to this, aircraft performance records had never been attempted by an Army tactical unit, but only by the aircraft manufacturer, or as a joint military-manufacturers effort. In preparing for the flight, the OV-1 Army warrant officer pilot and his co-pilot both had to undergo pressure breathing exercises in pressure chambers simulating high alititudes flight. They also underwent exhaustive physical examinations, in being selected for the effort.

The Grumman OV-1 "Mohawk" aircraft first came off the production line in 1960. Various models of this airplane are being used today in Vietnam for surveillance and tactical reconnaissance in support of U.S.-allied military operation.

An earlier model of this same aircraft, with a less powerful T53-L-7 engine but in a larger weight category (13,227 to 17,636 pounds) still holds four out of five other world records which were established in June 1966. The four records still officially listed are as follows: 293.41 mph speed over a 5,000 feet closed circuit course; 32,000 feet maximum alitiude in horizontal flight, and the time-to-climb marks of three minutes, 45.6 seconds—to 3,000 meters, and nine minutes, 9.4 seconds—6,000 meters (both from sea level).

Broken since then, but only recently, was the 1966 distance record of 2,539.78 miles of flight in a straight line, with normal fueling, which carried that earlier model Mohawk practically across the entire North American continent (from Fort Lewis, Washington, to Cherbrooke, Quebec).

That overall 1966 effort established records in the C-1 f. Group II category for light airplanes (turboprop) and Lycoming's part in that project also was managed by Mr. Moriarty, who has been employed by Lycoming since 1958.

'Ask t

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QUESTION — I have had this problem for years and have not been able to solve it. I would like to know how I, as a mother, can help my boys improve their studying habits.

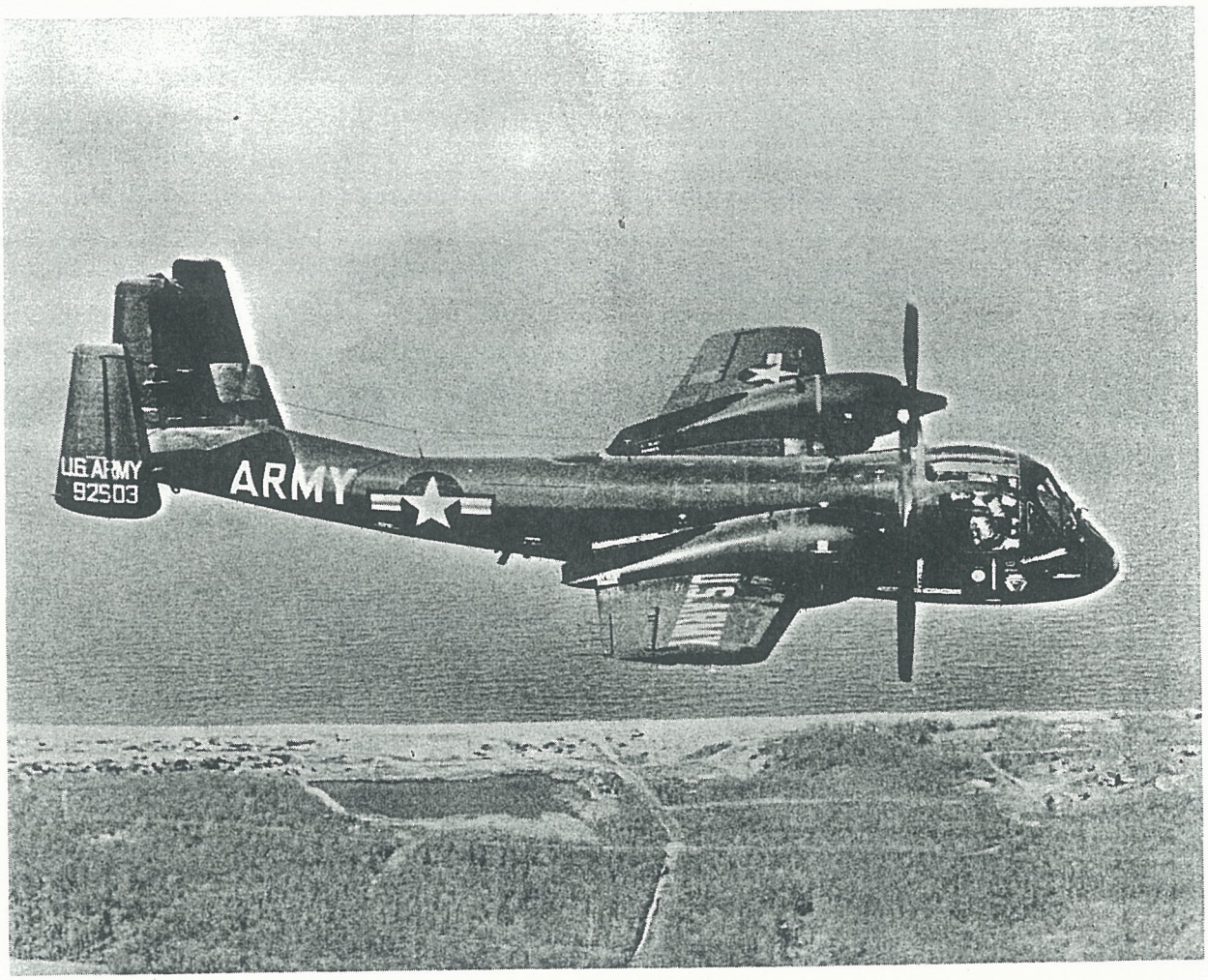
They will listen to baseball games, read newspapers, play with their small sisters—anything, except settle down and do their homework properly and at decent hours. They are average students, but with proper work habits, I am sure they could be above average. They are now 11 and 12 and there is much more studying expected of

AVCO LYCOMING DIVISION

SERVICE DEPARTMENT *Newsletter*

JANUARY 1972

LYCOMING-POWERED GRUMMAN MOHAWK FLIGHT RECORDS



GRUMMAN OV-1C MOHAWK

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LYCOMING-POWERED GRUMMAN MOHAWK FLIGHT RECORDS

E. G. Bull - Service Department

The breaking of established world flight records and the setting of new ones is not accomplished by the mere coincidence of fairly good equipment and a flyer's just feeling exceptionally exuberant some fine morning. To understate the matter, it can be said that, "it takes a bit of doing."

A year ago the Army's 293rd Aviation Company at Fort Hood, Texas requested the advice and assistance of Lycoming Field Engineering and of Grumman Aircraft in attaining world records in CLASS C-1E, Group 2. With the OV-1C airframe and the T53-L-15 power plants, the odds were good that new records for the record CLASS in which the OV-1C Mohawk falls, could be achieved. These classifications for record purposes are:

C-1F group 2 - 13,027 to 17,636 lb. gross take-off weight
C-1E group 2 - 6,614 to 13,027 lb. gross take-off weight

The 293rd Aviation Company had obtained verbal approval for such an attempt from the Third Army Corps at Fort Hood and from a Colonel Gallagher of the Department of the Army. This later was officially confirmed by General Maddox of the D A in Washington. They also had requested the attendance of representatives of Federation Aeronautique Internationale, the organization which officially verifies and maintains all aviation world's records. There was sound basis for anticipating the final official authorization for such an attempt.

The Lycoming Service Department undertook the necessary coordination covering the engines, and late in January John McDaniel, one of our representatives assigned to Bell Helicopter at Dallas, spent a few days at Fort Hood with the Commanding Officer and key personnel of the 293rd and with Chief Warrant 2 Thomas Yoha, the 293rd's coordinator who finally flew the record breaking flights with a Captain Richard Steinbock.

John ascertained that the projected attempt would be to establish both time-to-climb, maximum altitude and maximum sustained altitude records in the aircraft's classification, and 41,000 feet was the hoped-for objective.

The essential effort was to select the best qualified pair of engines available, and then to assure that they would be in the best possible condition for the try. This included the necessity of also providing an equivalent back-up engine so that no last minute difficulty with either of the two selected engines could cause any significant delay in the program.

Jim Moriarty, T53 Turbo-prop Supervisor of Field Engineering Subsection, handled the Lycoming in-house coordination and then went ot Fort Hood to assist in preparing for the flight. He obtained from the Lycoming data bank the available data on the T53-L-15 engines in country, which was sent to CW2 Yoha.

Based on this data Jim furnished Chief Yoha with detailed recommendations for engine selection, including a list by serial numbers of the 8 most promising ones in order of preferability, in the possibility that the best could be obtained. However, this was not possible and the unit had to use the best they had on site and without any back-up engine. He also made recommendations for needed maintenance and test facilities, spare parts and tools and specific suggestions for the care of the engines prior to the test. These went to the maintenance officer, Captain D. O'Hara who, with his maintenance crew, earned a large share of the credit for the later successful flights.

Simultaneously, in-house engineering specialty groups: C. Lynch of Lubrication Engineering, A. Meyers of Engineering Performance, A. Meyer of Gear Engineering, and Al. Wilcox of Test Engineering were contacted and provided their separate inputs. These inputs were collected and engine parameter profiles within the T53-L-15 engine model specification were developed by Field Engineering. A formal presentation of these profiles was set forth collectively to these contributing engineering sections which was also attended by Project Engineering. Constraints were set forth by Project Engineering and the resultant profiles were then finalized.

In late March Carl A. Harrington was dispatched to Fort Hood to supervise and assist the engine(s) preparation. Coordinated with Carl's arrival at Fort Hood, the Service Representative, Hope Freeman, was contacted to transship the portable flight line Multiple Turbine Test Set, LTCT 6689, for the duration of the effort.

Submitted to key personnel of the 293rd and Carl Harrington, before his arrival at Fort Hood, was a comprehensive 13 point engine operational preparation check list which had to be satisfactorily completed prior to any future calibration by Field Engineering. These checks were just started when administrative difficulties at the Department of Army relative to the attempt target date were encountered. Therefore, Carl ceased his activity and departed Fort Hood until a firm attempt date was established by D. A. On 24 May, Jim Moriarty, Supervisor, Turbo-props of Field Engineering, was officially notified that D. A. and DOD had set the attempt for the 2nd week of June. Again, Carl was dispatched to Fort Hood on 25 May, where the engine(s) preparation checks which had to be completed before field engineering arrival, were started in earnest.

During the engine preparation checks, the flight crew, CWO 2 Yoha and Captain Steinbock were undergoing altitude chamber pressure cycles at a nearby Air Force base under the supervision of the Fort Hood flight surgeon. Jim Moriarty, T53 Turbo Prop Supervisor, arrived at Fort Hood on 1 June to assist Carl Harrington in the completion of the engine operation preparation check list. Satisfactory completion of this check list led to the last phase which was the calibration and performance check of both engines. Each engine parameter (N-1, N-2, Torque, EGT) calibration factors were worked out and thereafter a full engine(s) calibration was made. These final engine calibrations were then compared to the original calibration

Chief Warrant Officer Thomas Yoha, immediately after one of his two record breaking flights, seems to be saying with his fingers that, "It was a snap."

data compiled when the engines were delivered new from Lycoming. Al. Wilcox of Test Engineering, back at the plant, was kept current on the calibration data as it evolved.

Satisfied with the calibration data, Field Engineering then notified the 293rd to proceed with the official aircraft gross weight check of the OV-1C aircraft. With the flight crew on board and 1, 040 lbs. of fuel, the official record weight was 11, 785 lbs.

The final Lycoming requirement, before the attempt, was the briefing of the flight crew and maintenance officer by Field Engineering at which time Jim Moriarty provided them with prepared cockpit procedures and power plant management, verbally and in writing. These instructions were for the ascent and descent of the aircraft and for any possible contingencies that could be foreseen. Duplicates of the instructions, clipboard size, were furnished to the flight crew.

By June 8, 1971 the engines were all set for the try. They had been carefully selected, inspected and operationally checked for optimum performance. The pay-off came on June 8 and 9 when CWO Thomas Yoha and Captain Steinbock took off at 6:00 A.M. on the 8th in aircraft Serial Number 67-18923 powered by the two Lycoming T53-L-15 gas turbine engines, Serial Numbers LE-01470 and LE-01466 and set new records for the class in time-to-climb to 3, 000, 6, 000 and 9, 000 meters.

In the evening of June 9 they took off again and established new records for maximum altitude of 39,880 feet and maximum sustained altitude of 36,352 feet.

The official observer was Mr. E. Hansen of the National Aeronautic Association, and the records were forwarded with the recording cameras, barographs and time-pieces for review by the NAA at Edwards Air Force Base.

Although a pilot might not require exceptional exuberance to make a record breaking flight, CWO Tom Yoha's picture indicates that one can feel that way upon successful completion of a job well done.

THE RECORDS

Time to Climb

Date:	June 8, 1971
Take-off time:	6:00 A. M.
Ambient temperature at field:	70° F
To 3,000 meters	2 minutes 46.4 seconds
To 6,000 meters	5 minutes 45.9 seconds
To 9,000 meters	11 minutes 14.4 seconds

Maximum Altitude

Date:	June 9, 1971
Take-off time:	6:00 P.M.
Ambient temperature at field:	94°F
Altitudes achieved:	39,880 feet
Engine Parameters (Maximum Noted)	

Maximum Sustained Altitude

Date:	June 9, 1971
Take-off time:	6:00 P.M.
Altitude achieved:	36,352 feet
Ambient temperature at field:	94°F
Engine Parameters (Maximum Noted)	

The record of the record attempt would not be complete without naming several of the 293rd's men whose diligent effort on the engines was measured by the success of the two record flights.

Flight Line Maintenance Crew		Aviation Company Engine Maintenance Crew	
Okerson, Raymond	- SSG(E-6)	Murphy, Gerald	- SP/5
Rumsey, Ronald	-SP/5	Langford, Mike	-SSG(E-6)
Neal, Raymond	-SP/5	Coursey, George	-SP/5
Betts, Neal	-SP/5	Spear, Paul	-SP/4

COCKPIT PROCEDURES AND POWER MANAGEMENT

1. Perform regular cockpit checks, called out in TM-10, prior to engine start.

2. Start engine(s) and after engine(s) has stabilized at Ground Idle, immediately advance power levers to attain a minimum of 75% NI with the propeller(s) in pitch.

3. Perform all other cockpit checks called out in -10 handbook before taxiing the aircraft.

4. Taxi the aircraft at a minimum NI speed of 75% NI with the propeller(s) in pitch to the end of the active runway starting point.

5. Place both System Supply switches (L and R) on left eyebrow to CLOSED (down) position. Place switch Heat, FWD camera to ON (up) position.

CAUTION

Do NOT reposition System Supply switches during ascending portion of flight.

6. Place Engine De-Icing Switch on left eyebrow panel to OFF (down) position.

7. Perform any remaining cockpit checks prior to start of aircraft ground roll.

8. Advance both power lever and both condition levers to their maximum pedestal throws (firewall). Do not exceed the following values:

NI	101.5%
NII	1720 RPM
Torque	103 PSI
EGT	625° C.

congrats Thomas Hayden RA RUN CWO 4 June 1971 1650 hrs.

NOTE

You should observe a minimum of 1720 RPM and 103 PSI Torque.

9. After the aircraft has rotated from the runway, maintain maximum pedestal throws (firewall) continuously on all four levers until maximum sustained altitude is attained. However, any time during the ascending flight when any value noted in Item 8 is being exceeded, then reduce that respective lever until that parameter is reduced to the maximum permissible level.

NOTE

Do NOT reposition Engine De-Ice switch unless engine icing at altitude is observed. If wing icing is observed at altitude, place Right (R) system supply switch to OPEN (up) position. Limit time in OPEN position and monitor EGT.

10. The elapsed time limit for each parameter is as follows:

PARAMETER		TIME LIMIT
TORQUE----------	103 PSI Maximum	0 to 10 minutes, one cycle
NI----------	101.5% Maximum	0 to 30 minutes
NII----------	1720 PRPM Maximum	0 to 30 minutes
EGT----------	625° C. Maximum	0 to 30 minutes

11. After maximum sustained altitude is attained and the aircraft is descending, reduce NI speed to no less than 98.0% down to 25,000 feet. At 25,000 feet place System Supply Switches to OPEN position and then reduce NI speed to 93.0%.

12. If an engine in-flight start is required, refer to special instruction furnished by J. Moriarty.

J. D. M. - 3/22/71

ALTITUDE ENGINE STARTS

Preconditions: Propeller feathered and no combustion.

1. Place System Supply Switch for that respective engine to the CLOSED (down) position.
2. Place power lever in pedestal Ground Idle detent.
3. Place condition lever two (2) inches aft of its maximum throw.
4. Descend to the altitude choices listed below and its respective airspeed.
5. SIMULTANEOUSLY engage the following switches. Place CRANK switch in CRANK (up) and immediately depress IGNITION BUTTON. Hold in Ignition Button until 40% NI speed.

NOTE

If engine does not sustain itself at 40% and accelerate to 48% NI, then repeat Step #5 after one (1) minute delay.

6. Unfeather the propeller and monitor propeller RPM after Ground Idle speed has stabilized.
7. Advance power lever to match the other engine NI speed.

AIRSPEED	ALTITUDE (FEET)
125 Knots	22,000 down to 2,000
150 Knots	20,000 down to 2,000
175 Knots	18,000 down to 2,000
200 Knots	17,000 down to 2,000
225 Knots	15,000 down to 2,000
250 Knots	13,000 down to 2,000
275 Knots	12,000 down to 2,000
300 Knots	12,000 down to 2,000

concur
4 June 1971

J.D.M.
2/23/71


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