

FAA APPROVED
PILOT'S OPERATING HANDBOOK AND
FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

FOR

HAWKER BEECHCRAFT MODEL 35-33, 35-A33, 35-B33, 35-C33, E33, F33
(s/n CD-1 through CD-1254)

NORMAL CATEGORY

Model(s)	Operation in excess of:	Or with Fuel in Tip Tanks
35-33 35-A33, 35-B33 35-C33, E33, F33	2900 lb. Max Gross Weight 3000 lb. Max Gross Weight 3050 lb. Max Gross Weight	

UTILITY CATEGORY

Model(s)	Operation at or less than:	And with Tip Tanks Empty
35-33 35-A33, 35-B33 35-C33, E33, F33	2900 lb. Max Gross Weight 3000 lb. Max Gross Weight 3050 lb. Max Gross Weight	

REG. NO. _____

SER. NO. _____

This supplement must be attached to the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual when two 20 gallon auxiliary wing tip fuel tanks are installed in accordance with STC(s) SA153EA or SA02722CH. The information contained herein supplements or supersedes the basic handbook only in those areas listed herein. For limitations, procedures, and performance information not contained in this supplement, consult the basic Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.

FAA APPROVED:

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Revision A

LOG OF REVISIONS

Revision	Description	FAA Approved
IR	Original Issue	Mark Anderson May 26, 2009
A	Add STC SA153EA as an applicable STC Add Utility Category eligibility	

SAMPLE

Date: _____

SECTION I GENERAL

This supplement contains revised information for the basic airplane when modified by the addition of two auxiliary wing tip fuel tanks and is to be operated in accordance with STC(S) SA153EA or SA02722CH. The information contained herein supplements or supersedes the basic handbook only in those areas listed herein. Consult the Pilot's Operating Handbook and FAA Approved Flight Manual for limitations, procedures, and performance information not contained herein.

Added tip tank fuel capacity

Total capacity..... 40 gal.

Total usable 40 gal.

MAXIMUM CERTIFIED WEIGHT

Maximum Ramp Weight..... 3212 lb.

Maximum Take-off Weight 3202 lb.

Maximum Landing Weight 3202 lb.

Maximum Zero Fuel Weight..... No Structural Limitation

SECTION II LIMITATIONS

GENERAL

The Airplane Flight Manual for this airplane lists information for operation in the UTILITY category. Since the tip tank installation is approved contingent on operation of the airplane in the NORMAL category when operated in excess of 2900 lb. (Model 35-33) 3000 lb. (Model 33-A33, 35-B33) 3050 lb. (Model 35-C33, E33, F33) or with fuel in Tip Tanks, the following Limitations supersede those of the basic Airplane Flight Manual.

This airplane is eligible for operation in accordance with STC(S) SA153EA or SA02722CH and this airplane flight manual supplement only when equipped with the following modifications:

- a) Wing Tip Fuel Tanks (STC(S) SA153EA or SA02722CH)

AIRSPEED LIMITATIONS

Maneuvering Speed (VA) CAS 122 KCAS

IAS 122 KIAS

CAS 140 MCAS

IAS 140 MIAS

WEIGHT LIMITS

Maximum Ramp Weight..... 3212 lb.

Maximum Take-off Weight 3202 lb.

Maximum Landing Weight 3202 lb.

Maximum Zero Fuel Weight..... No Structural Limitation

Date: _____

CENTER OF GRAVITY LIMITS (Landing Gear Extended)

FORWARD LIMITS

77.0 inches aft of datum to 2600 lbs. with straight line variation to 81.5 inches at 3050 lbs. with straight line variation to 81.5 at 3202 pounds.

AFT LIMITS

86.7 inches aft of datum at all weights.

MANEUVER LIMITS

This is a NORMAL CATEGORY airplane when operated in excess of 2900 lb. (Model 35-33) 3000 lb. (Model 33-A33, 35-B33) 3050 lb. (Model 35-C33, E33, F33) or with fuel in Tip Tanks. Spins and acrobatic maneuvers are prohibited. Normal category airplanes are limited to Non-acrobatic operation.

Non-acrobatic operation includes:

1. Any maneuver incident to normal flying.
2. Stalls (except whip stalls)
3. Lazy eights, chandelles, and steep turns, in which the angle of bank is not more than 60°.

Spins are prohibited.

No inverted maneuvers are approved.

FLIGHT LOAD FACTORS

Positive Maneuvering Load Factors

Flaps Up.....3.8G
Flaps Down.....2.0G

FUEL

In addition to the basic airplane fuel system, two auxiliary wing tip fuel transfer tanks are installed with a capacity of 20 gallons each, all of which is usable.

Take-offs are prohibited with more than 1/4 difference in tip tank fuel quantity. During flight if tip tank fuel quantity gauges indicate more than 1/2 tank difference the landing should be made with flaps up.

Date: _____

PLACARDS

In Full View of Pilot:

FUEL CONSUMPTION MAY EXCEED TIP TANK TRANSFER RATE. INITIATE TRANSFER WITH BOTH MAINS AT LEAST ½ FULL. MONITOR MAIN TANK GAUGES TO PREVENT OVERFLOW.

On Left Side Panel (Airspeed values are CAS)

NORMAL CATEGORY AIRPLANE
(WHEN OPERATED IN EXCESS OF 2900* LB. MAX. GROSS WEIGHT,
OR WITH FUEL IN TIP TANKS)

AIRSPPEED LIMITATION (NORMAL CAT. OPERATIONS)

MAXIMUM DESIGN MANEUVERING SPEED 140 MPH (122 KNOTS)

OPERATE IN ACCORDANCE WITH FAA APPROVED
FLIGHT MANUAL / PILOT'S OPERATING HANDBOOK. INTENTIONAL
SPINS ARE PROHIBITED. NO ACROBATIC MANEUVERS APPROVED.

*Placard is marked 2900 for Model 35-33
Placard is marked 3000 for Model 35-A33, 35-B33
Placard is marked 3050 for Model 35-C33, E33, F33

SECTION III EMERGENCY PROCEDURES

If for any reason it is necessary to land with more than 1/2 tank difference in tip tank quantities, the landing should be made with wing flaps in the "up" position.

Date: _____

SECTION IV NORMAL PROCEDURES

AIRSPEEDS FOR SAFE OPERATION

Maximum Turbulent Air Penetration CAS 122 KCAS
IAS 122 KIAS
CAS 140 MCAS
IAS 140 MIAS

PREFLIGHT INSPECTION

Fuel drains are located on the lower surface of each tip tank. Drain these points daily before the first flight to purge any water from the system.

Check security of flush mounted tip tank filler caps during preflight inspection.

Before flight, check the tip tanks for unsymmetrical fuel loading. If fuel tank capacities differ more than 1/4 tank, relocate fuel prior to take off.

See Section 7, Systems for additional information.

SECTION V PERFORMANCE

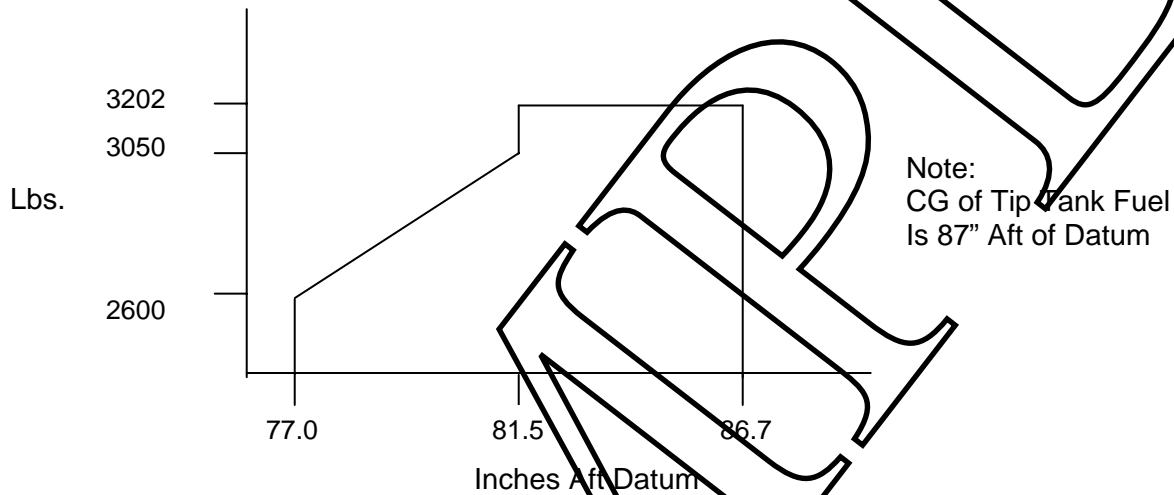
The performance of this airplane operated according to STC(S) SA153EA or SA02722CH is equal to or better than the performance listed in the original Airplane Flight Manual (AFM) except that take-off and landing distance, and rate-of-climb charts originally presented for this model do not apply to this STC modification. Increase AFM/POH take-off and landing chart values by 25% (35-33), 15.5% (35-A33, 35-B33) or 11.5% (35-C33, E33, F33), and decrease rate-of-climb chart values by 9.5% (35-33), 6.5% (35-A33, 35-B33) or 5% (35-C33, E33, F33) when operating at the new maximum gross weight.

In addition, range and endurance information in the original Airplane Flight Manual (AFM) does not apply to this STC modification. When operating at maximum gross weight with no tip tank fuel, decrease AFM/POH range data by 10.5% (35-33), 7% (35-A33, 35-B33) or 5% (35-C33, E33, F33), and endurance information by 16% (35-33), 10.5% (35-A33, 35-B33) or 8% (35-C33, E33, F33)%. These percentages **do not** account for additional range and endurance allowed by tip tank fuel.

SECTION VI WEIGHT AND BALANCE

Weight Condition	Forward CG Limit	Aft CG Limit
3202 lb. (Max. take-off)	81.5	86.7
3050 lb.	81.5	86.7
2600 lb. or less	77.0	86.7

CG Limitations (wheels down)



Following is a table of moment limits versus weight for gross weights between 3050 and 3200 lb.

Weight (lb.)	Minimum Moment/100	Maximum Moment/100
3050	2485	2644
3075	2506	2666
3100	2526	2687
3125	2546	2709
3150	2567	2731
3175	2587	2752
3200	2608	2774

Date: _____

Weight and Balance Loading Form

Model _____ Date: _____

Serial No: CD- _____ Reg. No.: _____

Item	Weight	Mom./100
1. Basic Empty Weight		
2. Front Seat Occupants		
3. 3 rd and 4 th Seat Occupants		
4. 5 th and 6 th Seat Occupants		
5. Baggage		
6. Cargo		
7. Sub Total Zero Fuel Condition		
8. Basic Fuel Loading		
9. Tip Tank Fuel Loading		
10. Sub Total Ramp Condition		
11. Less Fuel for Start, Taxi, and Take-off		
12. Sub Total Take-off Condition		
13. Less Fuel to Destination		
14. Landing Condition		

* Fuel for start, taxi, and take-off is normally 10 lb. at an average Mom. /100 of 9.

Usable tip tank fuel is located at an average arm of 87 inches aft datum.

Date: _____

SECTION VII SYSTEMS DESCRIPTION

FUEL

In addition to the basic airplane fuel system, two auxiliary wing tip fuel transfer tanks are installed with a capacity of 20 gallons each, all of which is usable. Take-offs are prohibited with more than 1/4 difference in tip tank fuel quantity. During flight if tip tank fuel quantity gauges indicate more than 1/2 tank difference the landing should be made with flaps up.

Tip tank fuel is transferred into its respective main tank by an electric pump at a rate of approximately 15 gallons per hour. The transfer pump and a solenoid valve are mounted inside the wheel well of each wing on the rib at wing station 66. At higher power settings, fuel consumption may exceed the fuel transfer rate to the main tank selected.

Tip tank transfer pump switches are located either on the face of the instrument panel or between the front seats on the partition assembly forward of the main spar truss. The pump and solenoid valve circuit breaker is installed adjacent to the pump switches.

A fuel drain is provided on the lower surface of each tip tank.

Fuel quantity is measured by observing the fuel level on a sight gauge located on the inboard side of each tip tank.

Normal tip tank fuel transfer should be accomplished simultaneously to maintain symmetrical wing tip tank fuel loading. Initiate transfer with the left main at 1/2 full and feeding the engine. During the transfer, monitor fuel gauges for both main tanks and stop transfer if gauge indicates full to prevent overflow of fuel through the main tank vent tubes.

SECTION VIII HANDLING, SERVICING AND MAINTENANCE

No Change.

SECTION IX SUPPLEMENTS

No Change.

SECTION X SAFETY INFORMATION

No Change.