

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A1CE	
Revision 31	
BEECH	
19A	B23
B19	C23
M19A	A24
23	A24R
A23	B24R
A23A	C24R
A23-19	
A23-24	
February 15, 1983	

TYPE CERTIFICATE DATA SHEET A1CE

This data sheet which is a part of Type Certificate No. A1CE prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder Beech Aircraft Corporation
Wichita, Kansas 67201

I - Model 23, Musketeer, 4 PCLM (Normal Category), 2 PCLM (Utility Category), Approved February 20, 1962

Engine	Lycoming O-320-D2B	
Fuel	91/96 minimum grade aviation gasoline	
*Engine limits	For all operations, 2700 r.p.m. (160 hp.)	
Propeller and propeller limits	Sensenich M74DM-0-60	
	Static r.p.m. at maximum throttle setting: Not over 2400, not under 2300	
	Diameter: 74 in., no cutoff permitted	
	or	Flottorp F1C-7660-2
	Static r.p.m. at maximum throttle setting: Not over 2400, not under 2300	
	Diameter: 74 in., no cutoff permitted	
	or	Sensenich M74DM-0-56
	Static r.p.m. at maximum throttle setting: Not over 2400, not under 2300	
	Diameter: 74 in., no cutoff permitted	
	or	Sensenich 74DM6-0-60
Static r.p.m. at maximum permissible throttle setting: Not over 2400, not under 2300		
Diameter: 74 in., no cutoff permitted		
or	Sensenich 74DM6-0-56	
Static r.p.m. at maximum permissible throttle setting: Not over 2400, not under 2300		
Diameter: 74 in., no cutoff permitted		
* Airspeed limits (CAS)	Never exceed	171 m.p.h. (148 knots)
	Maximum structural cruising	151 m.p.h. (131 knots)
	Maneuvering	132 m.p.h. (115 knots)
	Flaps extended	110 m.p.h. (95 knots)

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C.G. range

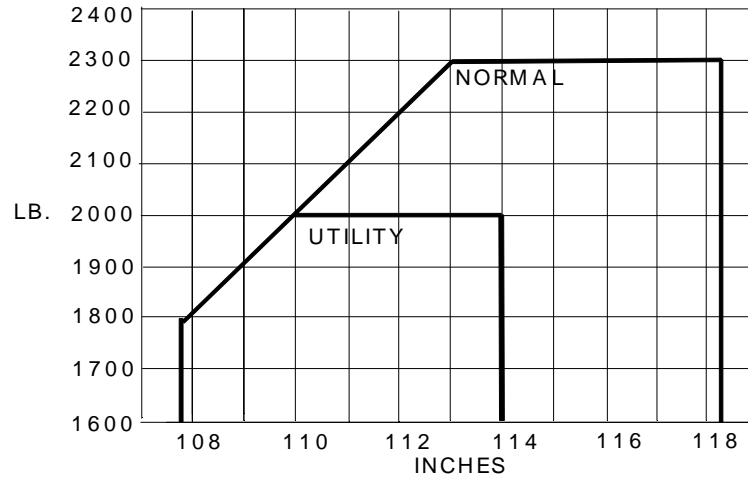
Normal category:

(+113.0) to (+118.3) at 2300 lb.
(+107.8) to (+118.3) at 1800 lb. or less

Utility category:

(+109.9) to (+114.0) at 2000 lb.
(+107.8) to (+114.0) at 1800 lb. or less

Straight line variation between points given



Empty weight C.G. range
Leveling means
Maximum weights

None
Baggage compartment floor
2300 Lb. (Normal Category)
2000 lb. (Utility Category)

No. of seats

4 (2 at +110, 2 at +142)

Maximum baggage

140 lb. (+167)

Fuel capacity

<u>Tank</u>	<u>Capacity Gal.</u>	<u>Usable Gal.</u>	<u>Arm</u>
L&R main	29.9 ea.	29.4 ea.	+117.0

See NOTE 1 for data on unusable fuel

or

L&R main	29.9 ea.	26.1 ea.	+117.0
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See NOTE 1(d) for data on unusable fuel when S.I. No. 0624-281 has been complied with.

Oil Capacity

8 qt. (+50)
See NOTE 1 for unusable oil

Control surface movements

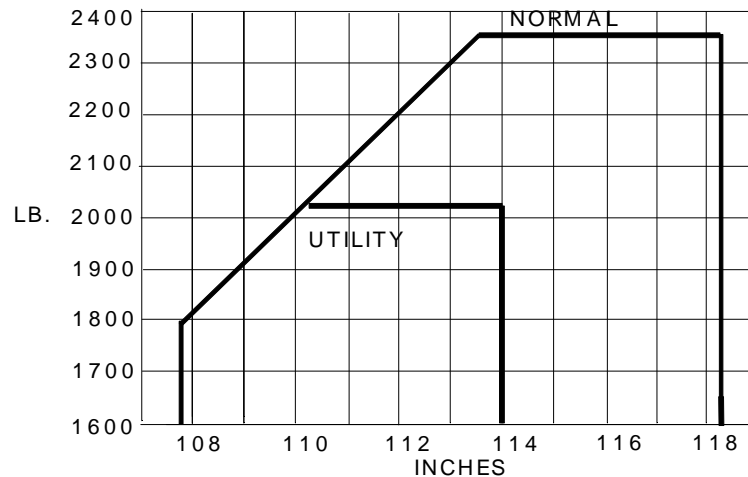
Wing flaps	Down	30° ±1°	
Aileron	Down	10° ±2°	Up 20° ±2°
Rudder	Right	25° ±2°	Left 25° ±2°
Stabilizer	Down	2° ±2°	Up 15° ±2°

Serial Nos. eligible

M-2 through M-554, except M-3

II - Model A23, Musketeer II, 4 PCLM (Normal Category), 2 PCLM (Utility Category), Approved
June 7, 1963

Engine	Continental IO-346-A	
Fuel	91/96 minimum grade aviation gasoline	
Engine limits	For all operations, 2700 r.p.m. (165 hp.)	
Propeller and propeller limits	Flottorp FIA-7660-2 Static r.p.m. at maximum permissible throttle setting: Not over 2400, not under 2300	
	or	Sensenich M74DC-0-60 Maximum and minimum diameter limit 74 in., no cutoff permitted.
	or	Sensenich M74DC-0-56 Maximum and minimum diameter limit 74 in., no cutoff permitted.
	or	Sensenich 74DC-0-60 Maximum and minimum diameter limit 74 in., no cutoff permitted.
	or	Sensenich 74DC-0-56 Maximum and minimum diameter limit 74 in., no cutoff permitted.
* Airspeed limits (CAS)	Never exceed	175 m.p.h. (152 knots)
	Maximum structural cruising	153 m.p.h. (132 knots)
	Maneuvering	133 m.p.h. (115 knots)
	Flaps extended	110 m.p.h. (95 knots)
C.G. range	<u>Normal category:</u> (+113.5) to (+118.3) at 2300 lb. (+107.8) to (+118.3) at 1800 lb. or less <u>Utility category:</u> (+110.2) to (+114.0) at 2030 lb. (+107.8) to (+114.0) at 1800 lb. or less Straight line variation between points given	



Empty weight C.G. range	None
Leveling means	Baggage compartment floor
Maximum weights	2350 Lb. (Normal Category) 2030 lb. (Utility Category)

No. of seats	4 (2 at +110, 2 at +142)			
Maximum baggage	140 lb. (+167)			
Fuel capacity	<u>Tank</u>	<u>Capacity Gal.</u>	<u>Usable Gal.</u>	<u>Arm</u>
	L&R main	29.9 ea.	29.4 ea.	+117.0
	See NOTE 1 for data on unusable fuel			
	or L&R main	29.9 ea.	26.1 ea.	+117.0
	See NOTE 1(d) for data on unusable fuel when S.I. No. 0624-281 has been complied with			
Oil Capacity	8 qt. at +48. See NOTE 1 for unusable oil			
Control surface movements	Wing flaps	Down	35° ±1°	
	Aileron	Down	10° ±2°	Up 20° ±2°
	Rudder	Right	25° ±2°	Left 25° ±2°
	Stabilizer	Down	2° ±2°	Up 15° ±2°
Serial Nos. eligible	M-3, M-555 through M-900			

III - Model A23A, 4 PCLM (Normal Category), 2 PCLM (Utility Category), Approved NOVEMBER 5, 1965

Engine	Continental IO-346-A		
Fuel	91/96 minimum grade aviation gasoline		
Engine limits	For all operations, 2700 r.p.m. (165 hp.)		
Propeller and propeller limits	Flottorp FIA-7660-2 Static r.p.m. at maximum permissible throttle setting: Not over 2400, not under 2300		
	or	Sensenich M74DC-0-60 Maximum and minimum diameter limit 74 in., no cutoff permitted.	
	or	Sensenich M74DC-0-56 Maximum and minimum diameter limit 74 in., no cutoff permitted.	
	or	Sensenich 74DC-0-60 Maximum and minimum diameter limit 74 in., no cutoff permitted.	
	or	Sensenich 74DC-0-56 Maximum and minimum diameter limit 74 in., no cutoff permitted.	
* Airspeed limits (CAS)	Never exceed	175 m.p.h. (152 knots)	
	Maximum structural cruising	155 m.p.h. (132 knots)	
	Maneuvering	135 m.p.h. (115 knots)	
	Flaps extended	110 m.p.h. (95 knots)	

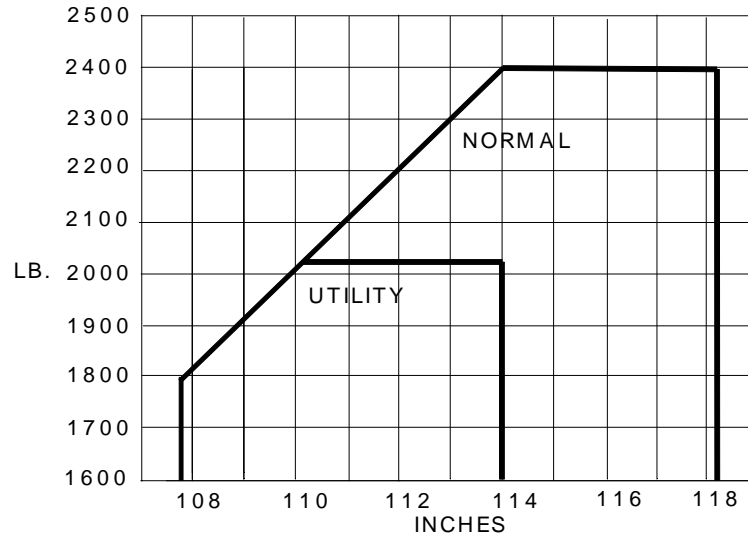
C.G. range

Normal category:

(+114.0) to (+118.3) at 2400 lb.
(+107.8) to (+118.3) at 1800 lb. or less

Utility category:

(+110.2) to (+114.0) at 2030 lb.
(+107.8) to (+114.0) at 1800 lb. or less
Straight line variation between points given



Empty weight C.G. range

None

Leveling means

Baggage compartment floor

Maximum weights

2400 Lb. (Normal Category)
2030 lb. (Utility Category)

No. of seats

4 (2 at +110, 2 at +142)

Maximum baggage

270 lb. (+167)

Fuel capacity

<u>Tank</u>	<u>Capacity Gal.</u>	<u>Usable Gal.</u>	<u>Arm</u>
L&R main	29.9 ea.	29.4 ea.	+117.0
See NOTE 1 for data on unusable fuel			
L&R main	29.9 ea.	26.1 ea.	+117.0
See NOTE 1(d) for data on unusable fuel when S.I. No. 0624-281 has been complied with			

Oil Capacity

8 qt. at +48.
See NOTE 1 for unusable oil

Control surface movements

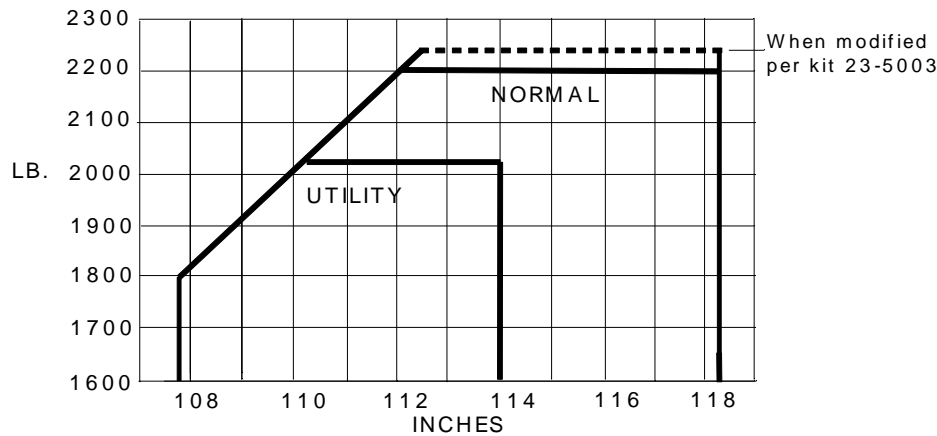
Wing flaps	Down	35°	±1°	
Aileron	Down	10°	±2°	Up 20° ±2°
Rudder	Right	25°	±2°	Left 25° ±2°
Stabilizer	Down	2°	+2°, -1°	Up 15° ±2°

Serial Nos. eligible

M-901 through M-1094

IV - Model A23-19, 2 or 4 PCLM (Normal Category), 2 PCLM (Utility Category), Approved
December 9, 1965

Engine	Lycoming O-320-E2B, E2C or E3D	
Fuel	80/87 minimum grade aviation gasoline	
Engine limits	For all operations, 2700 r.p.m. (150 hp.)	
Propeller and propeller limits	Sensenich M74DM-0-58 Static r.p.m. at maximum permissible throttle setting: Not over 2400, not under 2300 or Sensenich 74DC-0-58 Static rpm at maximum throttle setting: Not over 2400, not under 2300	
* Airspeed limits (CAS)	Never exceed	175 m.p.h. (152 knots)
	Maximum structural cruising	154 m.p.h. (134 knots)
	Maneuvering	133 m.p.h. (115 knots)
	Flaps extended	110 m.p.h. (95 knots)
C.G. range	<u>Normal category:</u> (+112.0) to (+118.3) at 2200 lb. or (+112.5) to (+118.3) at 2250 lb. when modified per Kit 23-5003. (+107.8) to (+118.3) at 1800 lb. or less <u>Utility category:</u> (+110.2) to (+114.0) at 2030 lb. (+107.8) to (+114.0) at 1800 lb. or less Straight line variation between points given	



Empty Weight C.G. range	None
Leveling means	Cabin floor aft of front seats
Maximum weights	2200 Lb. (Normal Category) 2030 lb. (Utility Category)
No. of seats	4 maximum (2 at +110, 2 at +143)
Maximum baggage	340 lb. (+142)

Fuel capacity	<u>Tank</u>	<u>Capacity Gal.</u>	<u>Usable Gal.</u>	<u>Arm</u>
	L&R main	29.9 ea.	29.4 ea.	+117.0
	See NOTE 1 for data on unusable fuel			
or	L&R main	29.9 ea.	26.1 ea.	+117.0
	See NOTE 1(d) for data on unusable fuel when S.I. No. 0624-281 has been complied with			

Oil Capacity 8 qt. at +48.
See NOTE 1 for unusable oil

Control surface movements	Wing flaps	Down	35°	±1°	
	Aileron	Down	10°	±2°	Up 20° ±2°
	Rudder	Right	25°	±2°	Left 25° ±2°
	Stabilizer	Down	2°	+2°, -1°	Up 15° ±2°

Serial Nos. eligible MB-1 through MB-288

V - Model A23-24, 4 or 6 PCLM (Normal Category), 2 PCLM (Utility Category), Approved March 7, 1966
Model A24, 4 or 6 PCLM (Normal Category), 2 PCLM (Utility Category), Approved February 5, 1970

Engine Lycoming IO-360-A2B or A2D
or Lycoming IO-360-A1B or A1D (Constant speed propeller only)

Fuel 100/130 minimum grade aviation gasoline

*Engine limits For all operations, 2700 r.p.m. (200 hp.)

- Propeller and propeller limits
- (1) McCauley 1B235/BFA 7862 (with 4 in. spacer, P/N B3637)
Diameter: not over 78 in., not under 76.5 in.
Static rpm at maximum throttle setting:
Not over 2350, not under 2250
 - or (2) McCauley constant speed propeller (Model A23-24 only)
 - (a) 2D34C8/78FB-1.5, 2 blades aluminum alloy
Diameter: not over 76.5 in., not under 76.5 in.
No cutoff permitted
Pitch settings at 30 in. sta.:
low 13.2°, high 27.5°
Caution: Avoid continuous operation between 2000 and 2150 rpm. above 20 in. manifold pressure
 - (b) McCauley hydraulic governor C290D2B/T3, C290D2C/T3 or C290D2D/T3
 - (c) McCauley spinner assembly D-3683
 - or (3) McCauley 1B235/BFA 7762 (with 4 in. spacer P/N B3637)
Diameter: not over 77 in., not under 76.5 in.
Static rpm at maximum throttle setting:
not over 2350, not under 2250
 - or (4) McCauley constant speed propeller (Models A23-24 and A24)
 - (a) 2D34C9/78FBM-1.5, 2 blades, aluminum alloy
Diameter: not over 76.5 in. not under 76.5 in.
No cutoff permitted
Pitch settings at 30 in. station:
low 14.2°, high 27.5°
Caution: Avoid continuous operation between 2000 and 2150 rpm above 20 in. manifold pressure

* Airspeed limits (CAS)	Never exceed	175 m.p.h. (152 knots)
	Maximum structural cruising	155 m.p.h. (135 knots)
	Maneuvering	140 m.p.h. (122 knots)
	Flaps extended	110 m.p.h. (95 knots)

C.G. range

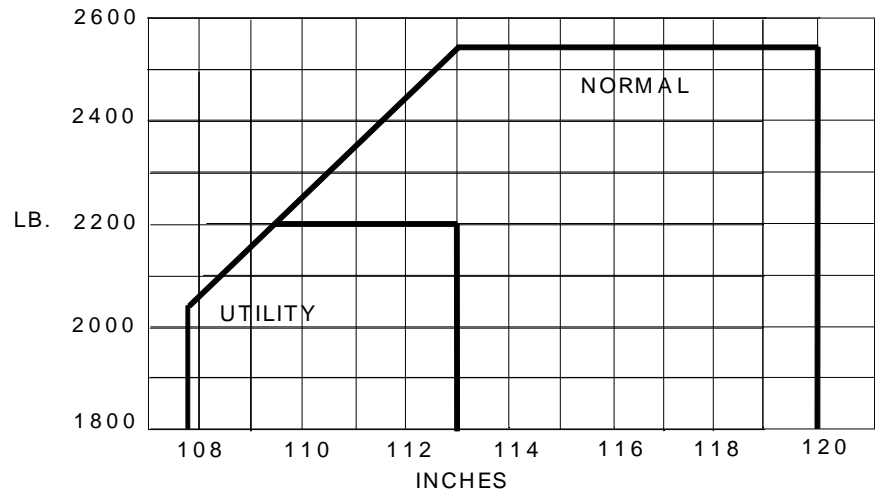
Normal category:

(+113.0) to (+120.0) at 2550 lb.
(+107.8) to (+120.0) at 2050 lb. or less.

Utility category:

(+109.5) to (+113.0) at 2200 lb.
(+107.8) to (+113.0) at 2050 lb. or less

Straight line variation between points given



Empty weight C.G. range

None

Leveling means

Baggage compartment floor

Maximum weights

2550 Lb. (Normal Category)
2200 lb. (Utility Category)

No. of seats

6 maximum (2 at +110, 2 at +147, 2 at +175))

Maximum baggage

270 lb. (+167)

Fuel capacity

<u>Tank</u>	<u>Capacity Gal.</u>	<u>Usable Gal.</u>	<u>Arm</u>
L&R main	29.9 ea.	29.4 ea.	+117.0
See NOTE 1 for data on unusable fuel			
L&R main	29.9 ea.	26.1 ea.	+117.0
or See NOTE 1(d) for data on unusable fuel when S.I. No. 0624-281 has been complied with			

Oil Capacity

8 qt. (+50.0)
See NOTE 1 for unusable oil

Control surface movements

Wing flaps	Down	35°	±1°	
Aileron	Down	10°	±2°	Up 20° ±2°
Rudder	Right	25°	±2°	Left 25° ±2°
Stabilizer	Down	2°	+2°, -1°	Up 15° ±2°

Serial Nos. eligible

MA-1 through MA-363 (Model A23-24)
MA-364 through MA-368 (Model A24)

VI - Model 19A, 2 or 4 PCLM (Normal Category), 2 PCLM (Utility Category), Approved August 31, 1967
2 PCLM (Acrobatic Category), Approved March 12, 1968
Model M19A, 2 PCLM (Normal, Utility and Acrobatic Category), Approved December 9, 1969
Model B19, 2 or 4 PCLM Normal Category), 2 PCLM (Utility and Acrobatic Category),
Approved February 13, 1970

Engine	Lycoming O-320-E2B, E2C or E3D
Fuel	80/87 minimum grade aviation gasoline
*Engine limits	For all operations, 2700 r.p.m. (150 hp.)
Propeller and propeller limits	Sensenich M74DM-0-58 (19A, M19A) Diameter: 74 in. No cutoff permitted Static rpm at maximum throttle setting: Not over 2400, not under 2300 or Sensenich 74DM6-0-58 (19A, M19A) Diameter: 74 in. No cutoff permitted Static rpm at maximum throttle setting: Not over 2400, not under 2300 or Sensenich 74DM6S5-0-58 (Model B19 only, Serial Nos. MB-481 through MB-616 at 2000 lb. wt. limit). Diameter: 74 in. No cutoff permitted Static rpm at maximum throttle setting: Not over 2400, not under 2300 or Sensenich 74DM6S5-0-54 (Model B19 at 2150 lb. wt. limit) Diameter: 74 in. No cutoff permitted Static rpm at maximum throttle setting: Not over 2550, not under 2400
* Airspeed limits (CAS)	Never exceed 175 m.p.h. (152 knots) Maximum structural cruising 154 m.p.h. (134 knots) Maneuvering 133 m.p.h. (115 knots) Flaps extended 110 m.p.h. (95 knots)
C.G. range	<u>Normal category:</u> (+112.5) to (+118.3) at 2250 lb. (Model 19A and M19A only) (+111.4) to (+118.3) at 2150 lb. (Model B19 only, S/N MB-617 and after S/N MB-481 through MB-616 when modified per Beech Kit 23-9014) (+109.9) to (+118.3) at 2000 lb. (Model B19 only, S/N MB-481 through MB-616) (+107.8) to (+118.3) at 1800 lb. or less

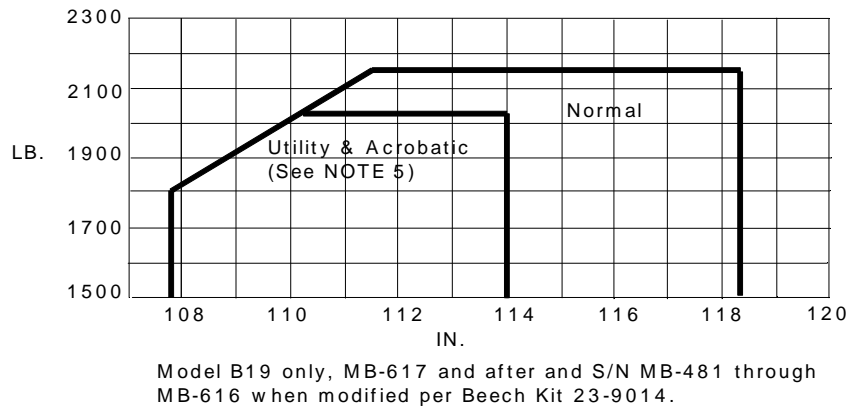
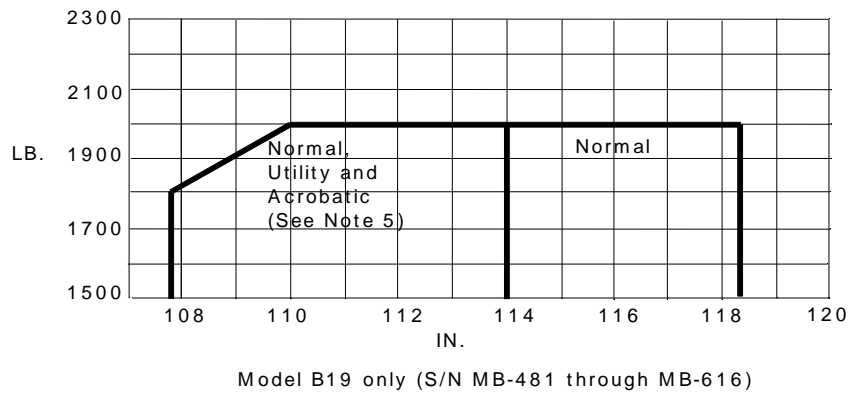
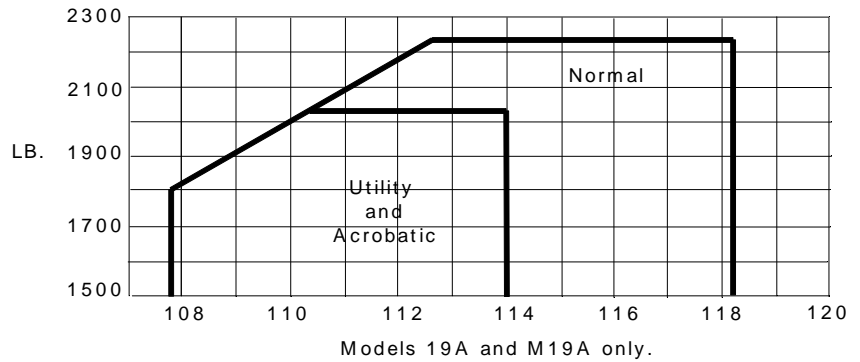
Utility and Acrobatic category: (See Note 5)

(+110.2) to (+114.0) at 2030 lb.

(+109.9) to (+114.0) at 2000 lb. (Model B19 only, S/N MB-481 through MB-616)

(+107.8) to (+114.0) at 1800 lb. or less

Straight line variation between points given



Empty weight C.G. range	None			
Leveling means	Cabin floor aft of front seats			
Maximum weights	2250 Lb. (Normal Category) Models 19A and M19A only. 2150 lb. (Normal Category) (Model B19 only, S/N MB-617 and after and S/N MB-481 through MB-616 when modified per Beech Kit 23-9014) 2030 lb. (Utility and Acrobatic Category) (See NOTE 5) 2000 lb. (Normal, Utility and Acrobatic Category) (Model B19 only, S/N MB-481 through MB-616) (See NOTE 5).			
No. of seats	4 maximum (2 at +110, 2 at +143) 2 maximum (2 at +110, M19A only)			
Maximum baggage	340 lb. (+142)			
Fuel capacity	<u>Tank</u>	<u>Capacity Gal.</u>	<u>Usable Gal.</u>	<u>Arm</u>
	L&R main	29.9 ea.	29.4 ea.	+117.0
	See NOTE 1 for data on unusable fuel			
or	L&R main	29.9 ea.	26.1 ea.	+117.0
	See NOTE 1(d) for data on unusable fuel when S.I. No. 0624-281 has been complied with			
or	L&R main	29.9 ea.	28.6 ea.	+117.0
	(MB-814, MB-817 and up) See NOTE 1(e) for data on unusable fuel			
Oil Capacity	8 qt. (+48) See NOTE 1 for unusable oil			
Control surface movements	Wing flaps	Down	35° ±1°	
	Aileron	Down	10° ±2°	Up 20° ±2°
	Rudder	Right	25° ±2°	Left 25° ±2°
	Stabilizer	Down	2° +2°, -1°	Up 15° ±2°
Serial Nos. eligible	MB-289 through MB-460 (Normal and Utility) (Model 19A) MB-289 through MB-460 (Acrobatic Category) when modified by Beech Drawing COC46786 (Model 19A) MB-461 through MB-480 (Normal, Utility and Acrobatic Category)(Model M19A) when modified by Beech Kit 23-9021-1S are not eligible for U.S. Registration (See NOTE 9) MB-481 and up (Normal and Utility Category) (Model B19) MB-481 and up (Acrobatic Category) (Model B19) (See NOTE 5) MB-635 through MB-654, except MB-649, are modified by Beech Kit 23-9016-1-S (Reference Section VII for operational limitations).			

VII - Model B23, 4 PCLM (Normal Category), 2 PCLM (Utility Category), Approved December 13, 1967.

2 PCLM (Acrobatic Category), Approved November 22, 1968

Model C23, 4 PCLM (Normal Category), 2 PCLM (Utility and Acrobatic Category), Approved February 13, 1970

Engine	Lycoming O-360-A2G Lycoming O-360-A4G, A2G, A4J or A4K (Model C23)
Fuel	91/96 minimum grade aviation gasoline
* Engine limits	For all operations, 2700 r.p.m. (180 hp.)

Propeller and
propeller limits

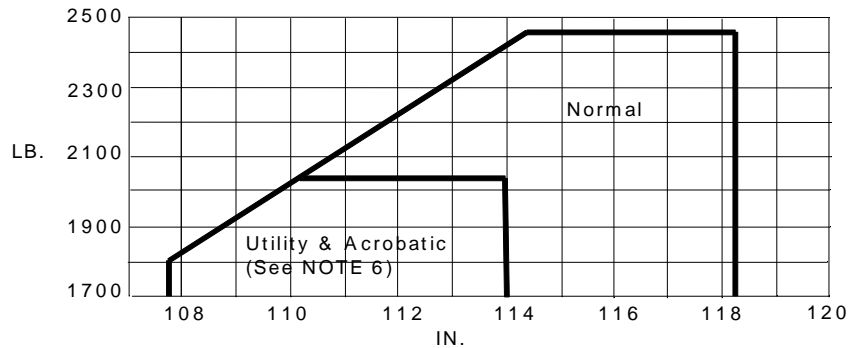
Sensenich M76EMMS-0-60
Static r.p.m. at maximum permissible throttle setting:
Not over 2350, not under 2250
or Sensenich 76EM8S5-0-60
Static r.p.m. at maximum throttle setting:
Not over 2350, not under 2250
Caution: Avoid continuous operation between 2150 to 2350 r.p.m. for
aircraft equipped with O-360-A2G engine

* Airspeed limits
(CAS)

Never exceed 175 m.p.h. (152 knots)
Maximum structural cruising 156 m.p.h. (135.5 knots)
Maneuvering 136 m.p.h. (118 knots)
Flaps extended 110 m.p.h. (95 knots)

C.G. range

Normal category:
(+114.5) to (+118.3) at 2450 lb.
(+107.8) to (+118.3) at 1800 lb. or less
Utility and Acrobatic category: (See Note 6)
(+110.2) to (+114.0) at 2030 lb.
(+107.8) to (+114.0) at 1800 lb. or less
Straight line variation between points given



Empty weight C.G. range

None

Leveling means

Baggage compartment floor

Maximum weights

2450 Lb. (Normal Category)
2030 lb. (Utility and Acrobatic Category) (See NOTE 6)

No. of seats

4 maximum (2 at +110, 2 at +142)

Maximum baggage

270 lb. (+167)

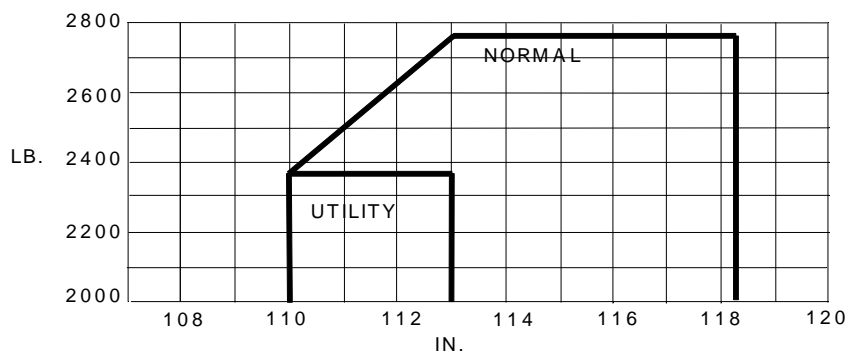
Fuel capacity

Tank	Capacity Gal.	Usable Gal.	Arm
L&R main	29.9 ea.	29.4 ea.	+117.0
See NOTE 1 for data on unusable fuel			
or L&R main	29.9 ea.	26.1 ea.	+117.0
See NOTE 1(d) for data on unusable fuel when S.I. No. 0624-281 has been complied with			
or L&R main	29.9 ea.	28.6 ea.	+117.0
(MB-814, MB-817 an up)			
See NOTE 1(e) for data on unusable fuel (M-1875, M-1880 and Up)			

Oil Capacity	8 qt. at+48 See NOTE 1 for unusable oil			
Control surface movements	Wing flaps	Down	35° ±1°	
	Aileron	Down	10° ±2°	Up 20° ±2°
	Rudder	Right	25° ±2°	Left 25° ±2°
	Stabilizer	Down	2° +2°, -1°	Up 15° ±2°
Serial Nos. eligible	M-1095 through M-1135 (Normal and Utility Category) (B23) M-1136 through M-1284 (eligible in Acrobatic Category) (Model B23) (See NOTE 4) M-1285 and up (Normal and Utility Category) (Model C23) M-1285 and up (Acrobatic Category) (Model C23) (See NOTE 6)			

VIII - Model A24R, Sierra 200, 4 or 6 PCLM (Normal Category), 2 PCLM (Utility Category), Approved
December 23, 1969

Engine	Lycoming IO-360-A1B or A1D	
Fuel	100/130 minimum grade aviation gasoline	
* Engine limits	For all operations, 2700 r.p.m. (200 hp.)	
Propeller and	(a)	McCauley constant speed propeller 2D34C9/78FBM-1.5, 2 blades aluminum alloy Diameter: not over 76.5 in., not under 76.5 in. No cutoff permitted Pitch settings at 30 in. sta.: low 14.2°, high 27.5° Caution: Avoid continuous operation between 2000 and 2150 rpm. above 20 in. manifold pressure
	(b)	McCauley hydraulic governor C290D2B/T3, or C290D2C/T3 or C290D2D/T3
	(c)	McCauley spinner assembly D-3683
* Airspeed limits (CAS)	Never exceed	193 m.p.h. (168 knots)
	Maximum structural cruising	165 m.p.h. (144 knots)
	Maneuvering	144 m.p.h. (125 knots)
	Flaps extended	110 m.p.h. (95 knots)
C.G. range	<u>Normal category:</u> (+113.0) to (+118.3) at 2750 lb. (+110.0) to (+118.3) at 2375 lb. or less	
	<u>Utility category:</u> (+110.0) to (+113.0) at 2375 lb. or less	
	Straight line variation between points given	



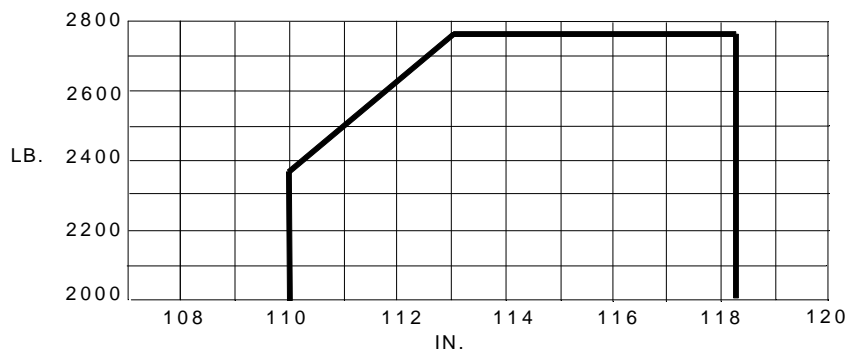
Empty weight C.G. range	None			
Leveling means	Baggage compartment floor			
Maximum weights	2750 Lb. (Normal Category) 2375 lb. (Utility Category)			
No. of seats	6 maximum (2 at +110, 2 at +147, 2 at +175))			
Maximum baggage	270 lb. (+167.0)			
Fuel capacity	<u>Tank</u>	<u>Capacity Gal.</u>	<u>Usable Gal.</u>	<u>Arm</u>
	L&R main	29.9 ea.	29.4 ea.	+117.0
	See NOTE 1 for data on unusable fuel			
	or	L&R main	29.9 ea.	26.1 ea. +117.0
		See NOTE 1(d) for data on unusable fuel when S.I. No. 0624-281 has been complied with.		
Oil Capacity	8 qt. (+50.0) See NOTE 1 for unusable oil			
Control surface movements	Wing flaps	Down	35° ±1°	
	Aileron	Down	10° ±2°	Up 20° ±2°
	Rudder	Right	25° ±2°	Left 25° ±2°
	Stabilizer	Down	2° +2°, -1	Up 15° ±2°
Serial Nos. eligible	MC-2 through MC-150			

IX - Model B24R, Sierra 200, 4 or 6 PCLM (Normal Category), Approved June 18, 1973
Model C24R, Sierra 200, 4 or 6 PCLM (Normal Category), Approved October 1, 1976

Engine	Lycoming IO-360-A1B6
Fuel	100/130 minimum grade aviation fuel
* Engine limits	For all operations, 2700 r.p.m. (200 hp.)
Propeller and propeller limits	(a) Hartzell constant speed propeller HC-M2YR-1BF/F7666A-2R 2 blades aluminum alloy Diameter: not over 74 in., not under 74 in. No cutoff permitted Pitch setting at 30 in. station: low 14.4° ±0.2°, high 29.0° ±2.0° (Model B24R only, MC-152 through MC-448, MC-450 and MC-451)
	(b) Woodward hydraulic governor A210490
	(c) Hartzell spinner assembly A2298-2P
	(d) Hartzell constant speed propeller HC-M2YR-1BF/F7666A 2 blades aluminum alloy Diameter: not over 76 in., not under 76 in. No cutoff permitted Pitch setting at 30 in. station: low 13.0° ±0.1°, high 27.0° to 31.0° (Model C24R only, MC-449, MC-452 and up) Caution: Avoid continuous operation between 2100 to 2350 r.p.m. (Model C24R only)

* Airspeed limits	Never exceed	193 m.p.h. (168 knots)
	Maximum structural cruising	165 m.p.h. (144 knots)
	Maneuvering	144 m.p.h. (125 knots)
	Flaps extended	110 m.p.h. (95 knots)

C.G. range
Normal category:
 (+113.0) to (+118.3) at 2750 lb.
 (+110.0) to (+118.3) at 2375 lb. or less
 Straight line variation between points given



Empty weight C.G. range	None
Leveling means	Baggage compartment floor
Maximum weights	2750 Lb. (Normal Category)
No. of seats	6 maximum (2 at +110, 2 at +147, 2 at +175))
Maximum baggage	270 lb. (+167.0)

Fuel capacity	<u>Tank</u>	<u>Capacity Gal.</u>	<u>Usable Gal.</u>	<u>Arm</u>	
	L&R main	29.9 ea.	29.4 ea.	+117.0	
	See NOTE 1 for data on unusable fuel				
	or	L&R main	29.9 ea.	26.1 ea.	+117.0
		See NOTE 1(d) for data on unusable fuel when S.I. No. 0624-281 has been complied with.			
	or	L&R main	29.9 ea.	28.6 ea.	+117.0
		See NOTE 1(e) for data on unusable fuel (Model C24R)			
Oil Capacity	8 qt. (+50) See NOTE 1 for unusable oil				

Control surface movements	Wing flaps	Down	35° ±1°	
	Aileron	Down	10° ±2°	Up 20° ±2°
	Rudder	Right	25° ±2°	Left 25° ±2°
	Stabilizer	Down	2° +2°, -1°	Up 15° ±2°

Serial Nos. eligible
 MC-152 through MC-448, MC-450, MC-451 - Model B24R
 MC-449, MC-452 and up - Model C24R

Data Pertinent to all Models

Datum
 103 inches forward of wing leading edge

Certification basis
 Part 3 of the Civil Air Regulations effective May 15, 1956, as amended by 3-1 through 3-5 and 3.705 of amendment 3-7, amendment 3-8, and 23.959 amendment 23-7.

NOTE 2. The following placard must be displayed in full view of the pilot:

- (a) "This airplane must be operated in compliance with the operating limitations stated in the form of placards, markings and manuals."

"Normal Category maximum design weight	2300 lb. (Model 23) 2350 lb. (Model A23) 2400 lb. (Model A23A) 2200 lb. (Model A23-19)"
"Normal Category maximum design weight	2550 lb. (Model A23-24, A24) 2250 lb. (Model 19A, M19A) 2150 lb. (Model B19, S/N MB-617 and after and MB-481 through MB-616 when modified per Beech kit 23-9014) 2000 lb. (Model B19, S/N MB-481 through MB-616) 2450 lb. (Model B23, C23) 2750 lb. (Model A24R, B24R, C24R)

Refer to weight and balance data for loading instructions.

Flight maneuver load factor	Flap up +3.8, -1.9 Flap down +1.9
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Maximum maneuver speed 132 mph.	(Model 23) 133 mph. (Models A23, A23-19, 19A, M19A, B19) 135 mph. (Models A23A, B23, C23) 140 mph. (Models A23-24, A24) 144 mph. (Models A24R, B24R, C24R)
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No acrobatic maneuvers including spins approved."

"Utility Category (Model 23)** Maximum weight	1960 lb.
Flight maneuver load factor	Flap up +4.4, -2.2 Flap down +2.2

No acrobatic maneuvers approved except those listed below:

<u>Maneuver</u>	<u>Maximum entry speed</u>
Chandelles	132 mph.
Lazy eights	132 mph.
Steep turns	132 mph.
Stalls (except whip stalls)	Slow deceleration

Note: Maximum altitude loss during stalls	300 ft."
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"Utility Category (Model 23 only)** Maximum weight	2000 lb.
Flight maneuver load factor	Flap up +4.4, -2.2 Flap down +2.2

No acrobatic maneuvers approved except those listed below:

<u>Maneuver</u>	<u>Maximum entry speed</u>
Chandelles	132 mph.
Lazy eights	132 mph.
Steep turns	132 mph.
Stalls (except whip stalls)	Slow deceleration

Note: Maximum altitude loss during stalls	300 ft."
Spins - See Operational Limitations (Note 3)." (See Note 7)	

**Note: Either placard listed for Model 23 eligible on all Model 23 aircraft at option of owner.

or "Utility Category (Model A23, A23A, A23-19, 19A, B23, B19, C23)
Maximum weight 2030 lb. (2000 lb. Model B19 only;
S/N MB-481 through MB-616 unless modified
per kit 23-9014-1S)
Refer to weight and balance data for loading instructions.
Flight maneuver load factor Flap up +4.4, -2.2
Flap down +2.2

No acrobatic maneuvers approved except those listed below:

<u>Maneuver</u>	<u>Maximum entry speed</u>
Chandelles	133 mph.
Lazy eights	133 mph.
Steep turns	133 mph.
Stalls (except whip stalls)	Slow deceleration

Note: Maximum altitude loss during stalls 300 ft."
Spins (Models A23-19, 19A, B23, B19 S/N MB-481 through MB-654, C23 S/N M-1285 through
M-1493). For operational limitations see Note 3." (See Note 7)

or "Utility Category (Model A23-24, A24)
Maximum weight 2200 lb.
Refer to weight and balance data for loading instructions
Flight maneuver load factor Flap up +4.4, -2.2
Flap down +2.2

No acrobatic maneuvers approved except those listed below:

<u>Maneuver</u>	<u>Maximum entry speed</u>
Chandelles	140 mph.
Lazy eights	140 mph.
Steep turns	140 mph.
Stalls (except whip stalls)	Slow deceleration

Note: Maximum altitude loss during stalls 300 ft."

or "Utility and Acrobatic category (Models 19A, M19A, B19)
Maximum weight 2030 lb.
(2000 lb. Model B19 only; S/N MB-481
through MB-616 unless modified per kit
23-9014-1S)
Refer to weight and balance data for loading instructions
Flight maneuver load factor Flap up +6.0, -3.0
Flap down +2.0

No acrobatic maneuvers approved except those listed below:

<u>Maneuver</u>	<u>Maximum entry speed</u>
Chandelles	133 mph.
Lazy eights	133 mph.
Steep turns	133 mph.
Stalls (except whip stalls)	Slow deceleration

Note: Maximum altitude loss during stalls 300 ft."

Spins (for operational limitations see Note 3) (See Note 5) (See Note 8)

	<u>Recommended entry speed</u>
Barrel roll	130 mph
Aileron roll	130 mph.
Snap roll	100 mph.
Split S	90 mph.
Immelmann	150 mph.
Loop	140 mph."

or	"Utility and Acrobatic category (Models B23 and C23)	
	Maximum weight	2030 lb.
	Refer to weight and balance data for loading instructions	
	Flight maneuver load factor	Flap up +6.0, -3.0 Flap down +2.0
	Stalls (except whip stalls)	Slow deceleration
	Note: Maximum alt. loss during stalls	300 ft.

No acrobatic maneuvers approved except those listed below:

<u>Maneuver</u>	<u>Recommended entry speed</u>
Chandelles	133 mph.
Lazy eights	133 mph.
Steep turns	133 mph.
Stalls (except whip stalls)	Slow deceleration
Spins (for operational limitations see Note 3) (See Note 6)	

Barrel roll	130 mph
Aileron roll	130 mph.
Snap roll	100 mph.
Split S	90 mph.
Immelmann	150 mph.
Loop	140 mph."
Stalls (Except whip stalls)	Slow deceleration"

or	"Utility Category (Model A24R)	
	Maximum weight	2375 lb.
	Refer to weight and balance data for loading instructions	
	Flight maneuver load factor	Flap up +4.4, -2.2 Flap down +2.2

No acrobatic maneuvers approved except those listed below:

<u>Maneuver</u>	<u>Maximum entry speed</u>
Chandelles	144 mph.
Lazy eights	144 mph.
Steep turns	144 mph.
Stalls (except whip stalls)	Slow deceleration
Note: Maximum altitude loss during stalls	300 ft."

Landing gear

Maximum gear extended speed	155 m.p.h.
Maximum gear operating speed, Extension	155 m.p.h.
Retraction	130 m.p.h.

(B24R, C24R) No acrobatic maneuver approved except those listed below:

Maneuver, bank angle no more than 60 Deg. (Model B24R, C24R)

<u>Maneuver</u>	<u>Maximum entry speed</u>
Chandelles	144 mph.
Lazy eights	144 mph.
Steep turns	144 mph.
Stalls (except whip stalls)	Slow deceleration

Note: Maximum altitude loss during stalls 300 ft."

Landing gear:

Maximum gear extended speed		155 m.p.h.
Maximum gear operating speed,	Extension	155 m.p.h.
	Retraction	130 m.p.h.

(b) On flap handle:

"Pull to extend - maximum speed 110 m.p.h.

Model 23 - Retracted 0 Deg.
1st notch 15 Deg.
2nd notch 30 Deg.

Model A23, A23A, A23-19, A23-24, 19A, B23, M19A, A24, A24R, B19, C23, B24R, C24R

Retracted 0 Deg.
1st notch 15 Deg.
2nd notch 25 Deg.
3rd notch 30 Deg."

or Adjacent to electric flap switch: "110 m.p.h. - maximum extension speed."

and Below electric flap switch: (B24R, C24R): "Use 15 Deg. flaps for takeoff."

(c) On fuel selector:

Models 23, A23-19, a23-24, 19A, B23, M19A, A24, A24R, B19, C23

"L. Tank - 29 gallons. R. Tank - 29 gallons. OFF."

Models A23, A23A

"Use 15 gallons from left tank first."

"L. Tank - 29 gallons. R. Tank - 29 gallons. OFF."

Model B24R

"L. Tank - 26 gallons. R. Tank - 26 gallons. OFF."

Model B24R, 23, A23, A23A, A23-19, 19A, B19, M19A, A23-24, B23, C23, A24, A24R,
if S.I. 0624-281 is complied with and C23 S/N M-1517 through M-1879 except M-1875;
B19 S/N MB-655 through MB-816 except MB-814.

"L. Tank - 26 gallons, R. Tank - 26 gallons. OFF."

Model C24R

"L. Tank - 28.6 gallons, R. Tank - 28.6 gallons. OFF."

Model C23

"L. Tank - 28.6 gallons, R. Tank - 28.6 gallons. OFF."

(S/N M-1875, M-1880 and up)

Model B19

"L. Tank - 28.6 gallons, R. Tank - 28.6 gallons. OFF."

(S/N MB-814, MB-817 and up)

(d) In baggage compartment:

(Maximum baggage - 140 lb." (23, A23)

(Maximum baggage - 340 lb." (A23-19, 19A, M19A, B19)

(Maximum baggage - 270 lb." (A23-24, A23A, B23, A24R, A24, C23, B24R)

"Baggage Compartment 270 Pounds Maximum Capacity." (C24R)

(e) Adjacent to fuel filler cap:

"CAUTION: Use 91/96 octane fuel or higher only. (23, A23, A23A, B23, C23).

Maximum capacity - 29 U.S. gallons. Usable fuel 26 U.S. gallons." (If S.I. 0624-281 is complied with, and S/N M-1517 through M-1879, except M-1875.)

"CAUTION: Use 80/87 octane fuel or higher only. (A23-19, 19A, M19A, B19)

Maximum capacity - 29 U.S. gallons. Usable fuel 26 U.S. gallons." (If S.I. 0624-281 is complied with, and S/N MB-655 through MB-816, except MB-814.)

"CAUTION: Use 100/130 octane fuel or higher only. (A23-24, A24R, A24)
Maximum capacity - 29 U.S. gallons. Usable fuel 26 U.S. gallons." (If S.I. 0624-281 is complied with.)

"CAUTION: Use 100/130 octane fuel or higher only. (B24R)
Maximum capacity - 29 U.S. gallons. Usable fuel 26 U.S. gallons."

"CAUTION: Use 80/87 octane fuel or higher only. (B19)
Maximum capacity - 29 U.S. gallons. Usable fuel 28.6 U.S. gallons."
(S/N MB-814, MB-817 and up)

"CAUTION: Use 91/96 octane fuel or higher only. (C23)
Maximum capacity - 29 U.S. gallons. Usable fuel 28.6 U.S. gallons."
(S/N M-1875, M-1880 and up)

"CAUTION: Use 100/130 octane fuel or higher only. (C24R)
Maximum capacity - 29 U.S. gallons. Usable fuel 28.6 U.S. gallons."
(S/N MC-449, MC-452 and up)

- (f) On baggage door (Model A23-24, A24R and A24)
"Maximum fifth and sixth seat structural capacity 250 lb. Refer to weight and balance for loading instructions."

On R.H. sidewall below third side window: (Model B24R, C24R)
"Maximum fifth and sixth seat structural capacity 250 lb. Refer to weight and balance for loading instructions."

No smoking in fifth and sixth seats."

On baggage door, adjacent to latch on the interior: OPEN (B24R, MC-151 through MC-180)

OPEN



On baggage door, adjacent to latch on the interior: OPEN (B24R, MC-181 through MC-426)

Pull pin. Rotate handle to Open (B24R, C24R: MC-427 and after)



Emergency Exit

- (1) Normal operation - handle up or down to open.
- (2) In the event of door jamming, it may be opened by means of a hard kick to the center section of the door."

On seat back (fifth and sixth seats):
"Maximum occupant weight 250 lb."

- (g) On right hand cabin door:
Models 19A, M19A, B23, C23, B19 (Acrobatic Category)
"Emergency exit."
"Turn handle counterclockwise and kick out to jettison door."

- (h) On the instrument panel:
Model 19A, M19A, B23, C23, B19 (Acrobatic Category)
"CAUTION: Continuous inverted flight will cause loss of oil and oil pressure.
Rear C.G. limited. Carrying of baggage or rear seat passengers and use of flaps prohibited during acrobatic maneuvers."

Model M19A: "No Smoking."

Model B24R, C23, B19:
"Raise flaps to increase brake effectiveness."
"In case of fire in engine compartment close defrost and cabin air valve."
"Do not take off when fuel quantity gauges indicate in yellow band or with less than 11 gallons in each main tank. Maximum slip duration is 30 seconds." (Model C23, S/N M-1517 through M-1879 except M-1875; Model B19, S/N MB-655 through MB-816 except MB-814.)

Model C24R, C23, B19:
"Raise flaps to increase brake effectiveness."
"In case of fire in engine compartment close defrost and cabin air valve."
"Do not take off when fuel quantity gauges indicate in yellow on either gauge. Maximum slip duration is 30 seconds." (Model MC-449, MC-452 and after, M-1875, M-1880 and after; MB-814, MB-817 and after.)

Models 23, A23, A23A, A23-19, 19A, B19, M19A, A23-24, B23, C23, A24, A24R
IF S.I. 0624-281 is complied with:

"Do not take off when fuel quantity gauges indicate in yellow band or with less than 11 gallons in each main tank. Maximum slip duration is 30 seconds."

(i) On floor under pilot's feet:
Models A24R/B24R/C24R
"Emergency gear extension access door."

(j) On the floor adjacent to landing gear emergency extension valve:
Models A24R (S/N MC-2 through MC-95) and B24R (S/N MC-151 and up)
"EMERGENCY LANDING GEAR EXTENSION"
"1. Landing gear motor circuit breaker - OFF (PULL)
2. Gear position switch - down
3. Throttle - closed
4. Indicated air speed - 100 mph.
5. Emergency extension valve - open
(Use handle - turn counter-clockwise)
6. Wait at least 10 seconds before advancing throttle."

Model A24R (S/N MC-96 and up, including aircraft MC-2 through MC-95, which incorporate Beech Aircraft Kit 23-8005 "Kit Information Cylinder Installation, Nose Gear"), B24R (S/N MC-151 through MC-448, MC-450 and MC-451) and C24R (S/N MC-449, MC-452 and up):
"EMERGENCY LANDING GEAR EXTENSION"
"1. Landing gear motor circuit breaker - OFF (PULL)
2. Gear position switch - down
3. Throttle - maximum 12 inches of mercury (Manifold pressure)
4. Indicated air speed - 100 mph.
5. Emergency extension valve - open
(Use handle - turn counter-clockwise)

(k) On the left hand side panel adjacent to the emergency extension handle (A24R/B24R/C24R)
"Emergency gear extension handle."

- (l) On the right hand side just aft of the top corner of the cabin door:
Model A24R, A24, B19, C23
1. On the interior: "Open"
2. On the exterior: "Open"
→
- (m) On right and left hand cabin door Model A24R, C23, B19, B24R (those aircraft fitted with bandoleer type shoulder harness);
"1. Occupants shorter than 4 ft. 7 in. do not use shoulder strap.
2. Never use shoulder strap without lap belts."
- (n) On right hand cabin door Model C23, B19 (Acrobatic Category)
(For those aircraft fitted with remote control latches):
"Emergency exit. Turn handle counter-clockwise and pull latch above arm rest, then kick out to jettison door."
- (o) On left hand cabin door Model C23, B19 (Acrobatic Category)
(For those aircraft fitted with remote control latches):
"Emergency exit. Turn handle clockwise and pull latch above arm rest, then kick out to jettison door."
- (p) On right hand side wall below second side window (Model B19, C23)
"Baggage, cargo or family seats.
Load in accordance with weight and balance data.
Maximum seat capacity _____ pounds."
- (q) On right hand side wall below third side window (Model B24R, C24R)
"Baggage, cargo or family seats.
Load in accordance with weight and balance data.
Maximum seat capacity _____ pounds."
- Note: Placards defined in Note 2, (p) and (q) will be installed as necessary to show compliance with CAR 3.74.
- (r) On the right and left upper window frames above the first and second side windows (Models B19, C23, B24R, C24R). (For those aircraft equipped with single point shoulder harness and lap belt)

"Instruction - Shoulder strap
1. Occupant shorter than 4 ft. 7 in. do not use shoulder strap."
2. Place seat back in the upright position during takeoff and landing."
- (s) On the right and left upper window frames above the third side window (Model B24R, C24R).
(For those aircraft equipped with sixth seat installation and with single point shoulder harness and lap belt)

"Instruction - Shoulder strap
1. Occupant shorter than 4 ft. 7 in. do not use shoulder strap."

NOTE 3. Operational Limitations

"Spins: The airplane will not spin if orthodox entry is used, but will enter a spiral dive. Speed builds up rapidly in a spiral dive, requiring high pullout loads; therefore, if a spiral is inadvertently entered recovery from the spiral is to be initiated within two turns.

Entry: Stall the airplane with the control column hard back, power off, flaps up, carburetor heat as required and with the nose about 15° above the horizon. At the stall, apply full rudder in the direction required to spin. A slight rudder application immediately before the stall will assure the direction of spin. The airplane nose will drop and rotate towards the applied rudder. When the wings are 90° to the horizon, apply full aileron against (i.e. against the intended direction of spin). The airplane will go slightly inverted and enter a normal spin.

If aileron against is not applied or applied too late, the airplane will enter a rapid spiral dive, and recovery must be initiated by the second turn. If the full back stick is not applied and held, the airplane may spiral. Again recovery must be initiated not later than the second turn.

If aileron is applied too early, the airplane will not rotate and merely remain in a straight stalled condition.

Recovery: THE AIRPLANE WILL RECOVER FROM ANY SPIN WHEN POSITIVE CORRECTIVE ACTION IS TAKEN; SIMULTANEOUSLY REVERSE RUDDER AND ELEVATOR WITH AILERON NEUTRAL. ALL CONTROLS SHOULD BE NEUTRALIZED AS ROTATION STOPS."

Operational Limitations (Model C23, M-1629 - - Model B19, MB-747 and up)

"Spins: The airplane will not spin if orthodox entry is used, but will enter a spiral dive. Speed builds up rapidly in a spiral dive, requiring high pullout loads; therefore, if a spiral is inadvertently entered, recovery from the spiral is to be initiated within two turns.

"Entry: Stall the airplane with the control column hard back, throttle in idle position, flaps up, carburetor heat as required and with the nose about 15° above the horizon. At the stall, apply full rudder in the direction required to spin. A slight rudder application immediately before the stall will assure the direction of spin. The airplane nose will drop and rotate towards the applied rudder. When the wings are 90° to the horizon, apply full aileron against (i.e. against the intended direction of spin). The airplane will go slightly inverted and enter a normal spin.

If aileron against is not applied or applied too late, the airplane will enter a rapid spiral dive, and recovery must be initiated by the second turn.

If the full back stick is not applied and held, the airplane may spiral. Again, recovery must be initiated not later than the second turn.

If aileron is applied too early, the airplane will not rotate and merely remain in a straight stalled condition.

Recovery: IMMEDIATELY MOVE THE CONTROL COLUMN FULL FORWARD AND SIMULTANEOUSLY APPLY FULL RUDDER OPPOSITE TO THE DIRECTION OF THE SPIN: CONTINUE TO HOLD THIS CONTROL POSITION UNTIL ROTATION STOPS AND THEN NEUTRALIZE ALL CONTROLS AND EXECUTE A SMOOTH PULLOUT. AILERONS SHOULD BE NEUTRAL AND THROTTLE IN IDLE POSITION AT ALL TIMES DURING RECOVERY."

- NOTE 4. Model B23 aircraft may be operated as a 2 PCLM in the Acrobatic Category for those maneuvers listed in NOTE 2(a) when the equipment required by NOTE 1 is installed per Beech Modification Contact Order C55218. In addition for Serial Numbers M-1136 through M-1284 install Beech Kit 23-4007-1S per AD 74-23-09.
- NOTE 5. Model B19 aircraft may be operated as a 2 PCLM in the Acrobatic Category for those maneuvers listed in NOTE 2(a) when the equipment required by NOTE 1 is installed per Beech Dwg. 169-002000. In addition for S/N MB-481 through MB-634 and MB-649 install Beech Kit 23-4007-1S per AD 73-14-8.
- NOTE 6. Model C23 aircraft may be operated as a 2 PCLM in the Acrobatic Category for those maneuvers listed in NOTE 2(a) when the equipment required by NOTE 1 is installed per Beech DWG. 169-002001. In addition for Serial Numbers M-1285 through M-1493, except M-1437 AND M-1491, install Beech Kit 23-4007-1S per AD 73-14-08.

NOTE 7. Models 23, A23-19 and B23 aircraft may be operated as a 2 PCLM in the Utility Category for those maneuvers listed in NOTE 2(a) when the equipment required by Beech Kit 23-4007-5S or 23-4007-1S is installed per AD 74-23-09.

NOTE 8. Models 19A, M19A, S/N MB-289 through MB-480, may be operated as a 2 PCLM in the Acrobatic Category for those maneuvers listed in NOTE 2(a) when the equipment required by NOTE 1 is installed per Beech Dwg. 169-002000 and Beech Kit 23-4007-1S is installed per AD 74-23-09.

NOTE 9. Model M19A, S/N MB-461 through MB-480, must be reworked in accordance with Mod. C.O. #E32136 prior to U.S. Registration.

Contact Beech Aircraft Corporation as necessary to obtain availability information concerning the drawings and kits which are referenced by this publication.

In addition to the placards specified above, the prescribed operating limitations indicated by an asterisk (*) under Sections I through IX of this data sheet must be displayed by permanent markings.

END