DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

4A30
Revision 7
AeroXin Industries, Inc.
30
30A
June 13, 2012

TYPE CERTIFICATE DATA SHEET NO. 4A30

This data sheet which is a part of type certificate No. 4A30 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Civil Air Regulations.

Type Certificate Holder

AeroXin Industries, Inc.
5840 West Craig Road, #120-262
Las Vegas, Nevada 89130

Type Certificate Ownership Record

D & R Nevada, LLC
5840 West Craig Road, #120-262
Las Vegas, Nevada 89130

Lost Bird Aviation Historical Society & Museum
3172 North Rainbow Blvd.
Las Vegas, Nevada 89108

Tracor Flight Systems
1326 Flight Line, Hangar 75
Mojave, California 93501-1665

General Dynamics Corporation
P. O. Box 1950
San Diego, California 92112

I - Model 30 (Transport Aircraft, approved December 15, 1961 (See NOTE 4 for explanation of model identification)
Model 30A (Transport Aircraft), approved October 10, 1962 (See NOTE 4 for explanation of model identification)

Engines

Model 30 and Model 30A
4 General Electric Turbojet CJ805-23 k, o or CJ805-23B n Specification.
See NOTE 7 for installation requirements.

Fuel

Commercial Jet Fuel, JP-4, JP-5, conforming to General Electric Specification D50TF2-S2. See NOTE 8 regarding use of Phillips anti-icing additive PFA55MB.

Engine limits

Static Thrust, S.L.

Standard Day:	Takeoff (5 min.)	Max. Continuous
CJ805-23 k Spec.	15,850 lbs.	14,100 lbs.
CJ805-23 o Spec.	15,940 lbs.	14,100 lbs.
CJ805-23B n Spec.	16,100 lbs.	14,400 lbs.

Maximum permissible engine and fan rotor operating speeds, all engine models:

Forward thrust:	Engine rotor	7684 r.p.m. (103% max.)
	Fan rotor	5965 r.p.m. (99.4% max.)
Reverse thrust:	Engine rotor	7198 r.p.m. (96.5% max.)
	Fan rotor	5965 r.p.m. (99.4% max.)

Maximum permissible temperatures, all engine models:
(1) Turbine exhaust gas temperatures:
Forward thrust:

	Takeoff	652°C	1170°F
	Maximum Continuous	500°C	1005 F
	Maximum for Acceleration (applies concurrently for 2 min. within 5 min. T.O. rating)	650°C	1202°F
	Maximum Transient for Starting (4 sec.)	760°C	1400°F
	Reverse thrust	632°C	1170°F
(2)	Oil temperature, scavenge	149°C	300°F

Maximum permissible compressor air bleed, percentage of total engine airflow, all engine models:

Idle to 6714 r.p.m. (90%)	10%
6714 r.p.m. (90%) to maximum speed	5%

Airspeed limits - KNOTS (IAS) and M (IND.)	Models 30 & 3CA -5, -6 & -8 Versions Outboard Anti-Shock Bodies Empty	Models 30 & 30A -5 Version Outboard Anti-Shock Bodies With Fuel	*Models 30 & 30A -6 & 8 Versions Outboard Anti-Shock Bodies With Fuel
Vmo/Mmo (Max. Operating Speed)	377K at S.L. to 417 K at 21,500 ft. 0.912M above 21,500 ft.	357K S.L. to 21,400 ft. 0.784M above 21,400 ft.	321K S.L. to 21,600 ft. 0.718M above 21,600 ft.
Vne/Mne (For Use in Emergency and Pilot Training Only)	432K S.L. to 20,200 ft. 0.912M above 20,200 ft.	See Vmo/Mmo limits	See Vmo/Mmo limits
Va (Maneuvering)	See Maneuvering Speeds and Buffet Envelope in FAA Approved Airplane Flight Manual Certificate Limitations Page 1-38.		

		KNOTS	M
Vfe (Flaps and Slats Extended Speeds)	Model 30		
	Flaps, slats and Kruegers extended 10°	246	0.602
	Flaps, slats and Kruegers extended 27°	241	0.587
	Flaps, slats and Kruegers extended 36°	221	0.512
	Flaps, slats and Kruegers extended 50°	195	0.401
	Model 30A		
	Flaps and Kruegers extended 10°	246	0.602
	Flaps and Kruegers extended 27°	241	0.587
	Flaps and Kruegers extended 36°	221	0.512
	Flaps and Kruegers extended 50°	195	0.401
Maximum speed with both hydraulic systems failed		362	0.784
Maximum speed with speed stability system inoperative			
Emergency descent		402	0.835
Climb, cruise, and normal descent		362	0.784
Maximum speed with power rudder inoperative			
S.L.		377	
at 21,400 ft.		417	0.888
Vlo (Landing Gear Operation)			
(Main and Nose Gear Extension)		321	0.835
(Main and Nose Gear Retraction)		271	0.703
Vle (Landing Gear Extension)		321	0.835
V (Landing Gear Door Speed Limitation) If the landing gear door unlocked warning light illuminates during gear retracted flight operation, the airspeed must be reduced to		321	0.835

V	(Landing Light Extension)	342	
V	(Fuel Jettison Speed)	Vmo	Mmo
V	(Inboard Spoilers When Used for Longitudinal Control)	246	0.602
V	(Spoiler Speed)	Vne	Mne
	Vmca (Minimum Control Speed, one engine inoperative, S.L., standard day)	110	
	$Vmca_2$ (Minimum Control Speed, two engines inoperative, S.L., standard day)	140	
	Maximum speed anti-fog system inoperative up to 10,000 ft.	301	

**Applicable to Model 30A-5 version modified in accordance with Model 30 Service Bulletin 990 S.B. No. 28-12.*

Model 30A

NOTE: In the event of a failure of the No. 2 hydraulic system, or any failure which does not permit application of the full closing load to the Krueger Flaps, or any mechanical defect which does not permit full closing of the Krueger Flaps, the following speed restrictions shall apply:

Vmo = 366 knots at sea level varying linearly to Vmo = 385 knots at 22,000 feet and
Mmo = .855 at 22,000 feet varying linearly at Mmo = .835 at 41,000 feet.

C.G. range — LEVEL ATTITUDE LANDING GEAR EXTENDED (Straight Line Variation Between Weights Shown)

Model 30 -5, -6, and -8 Versions

	FLIGHT				LANDING				GROUND			
Gross Wt.	Fwd. Limit		Aft Limit		Fwd. Limit		Aft Limit		Fwd. Limit		Aft Limit	
(lbs.)	%MAC	F.S.	% MAC	F.S.	% MAC	F.S.	% MAC	F.S.	% MAC	F.S.	% MAC	F.S.
247,000									19.6	870.0	31.0	898.5
245,000	18.6	867.6	31.4	899.5					19.0	868.6	31.4	899.5
242,000	18.5	867.4	32.0	901.0					19.0	868.6	32.0	901.0
202,000	16.6	862.6	32.0	901.0	20.1	871.3	32.0	901.0	19.0	868.	632.0	901.0
190,000	16.0	861.1	32.0	901.0	19.5	869.8	32.0	901.0	19.0	868.6	32.0	901.0
185,000	15.8	860.6	32.0	901.0	19.3	869.3	32.0	901.0	19.0	868.6	32.0	901.0
180,000	15.7	860.4	32.0	901.0	19.0	868.6	32.0	901.0	19.0	868.6	32.0	901.0
150,000	15.5	859.9	32.0	901.0	19.0	868.6	32.0	901.0	19.0	868.6	32.0	901.0
125,000	15.5	859.9	32.0	901.0	19.0	868.6	32.0	901.0	19.0	868.6	32.0	901.0
Model 30A -5, -6, and -8 Versions												
255,000									20.3	871.8	29.6	895.0
253,000	19.9	870.8	30.0	896.0					20.1	871.3	30.0	896.0
246,200	18.9	868.3	31.2	899.0					19.3	869.3	31.2	899.0
245,000	19.0	868.6	31.4	899.5					19.2	867.0	31.4	899.5
243,500	18.8	868.0	31.7	900.2					19.0	868.6	31.7	900.2
242,000	18.6	867.6	32.0	901.0					19.0	868.6	32.0	901.0
202,000	16.6	862.6	32.0	901.0	20.1	871.3	32.0	901.0	19.0	868.6	32.0	901.0
190,000	16.0	861.1	32.0	901.0	19.5	869.8	32.0	901.0	19.0	868.6	32.0	901.0
185,000	15.8	860.6	32.0	901.0	19.3	869.3	32.0	901.0	19.0	868.6	32.0	901.0
180,000	15.7	860.4	32.0	901.0	19.0	868.6	32.0	901.0	19.0	868.6	32.0	901.0
150,000	15.5	859.9	32.0	901.0	19.0	868.6	32.0	901.0	19.0	868.6	32.0	901.0
125,000	15.5	859.9	32.0	901.0	19.0	868.6	32.0	901.0	19.0	868.6	32.0	901.0

Maximum weights

Model 30 - 5, -6, and -8 Versions

Ramp weight	247,000 lb.
Takeoff weight	246,200 lb.
Landing weight	202,000 lb.
Zero fuel weight	160,000 lb.

Model 30A -5, -6, and -8 Versions

Ramp weight	255,000 lb.

*Takeoff weight	253,000 lb.
Landing weight	202,000 lb.
Zero fuel weight	160,000 lb.

(Fuel dump valves required for operation in excess of maximum landing weight). (All weight in excess of 160,000 lb. must consist of fuel. All weight in excess of 202,000 lb. must consist of jettisonable fuel.)

**Model 30A-5 Versions are limited to 246,200 pounds takeoff weight prior to incorporating Model 30 Service Bulletin 990 S.B. No. 28- 12. Model 30A-5 Versions modified in accordance with Model 30 Service Bulletin 990 S.B. No. 28-12 may be operated at 253,000 lbs. takeoff wt.*

Minimum crew — For all flights: Pilot, Copilot and Flight Engineer

Maximum passengers — 121

Maximum baggage

	Compt.	Sta.	Capacity (lb.)	Maximum Loading (lb./ft·2)	Maximum Loading (lb./running ft.)	Maximum Loading C.G. (in.)
Model 30-5 Version and 30A	Forward	375-622	9820	100	571	+ 498
	Aft	1040-1363	9900	100	396	+1188
Model 30-6 Version and 30A	Forward	375-622	9820	100	477	+ 498
	Aft	1040-1266	8800	100	477	+1156
Model 30-8 Version and 30A	Forward	375-622	9820	100	471	+ 498
	Aft	1040-1268	8800	100	436	+1156

Fuel capacity

Model 30

	Total Refuel *(1)* (lbs. each tank)	Usable (lbs. each tank)	Arm
-5 Version			
2 outboard main tanks	12,027	11,866	924
2 outboard replenish tanks	4,362	4,362	1078
2 outboard anti-shock body tanks	1,460	1,440	1072
2 inboard main tanks	20,140	19,920	810
2 inboard anti-shock body tanks	2,371	2,365	1002
Center section	20,938	20,863	779
-6 Version			
2 outboard main tanks	12,027	11,866	924
2 outboard replenish tanks	4,362	4,362	1078
2 outboard anti-shock body tanks	3,008	2,997	1062
2 inboard main tanks	20,140	19,920	810
2 inboard anti-shock body tanks	2,372	2,365	1002
Center section	20,938	20,863	779
-8 Version			
2 outboard main tanks	12,027	11,866	924
2 outboard replenish tanks	4,362	4,362	1078
2 outboard anti-shock body tanks	3,008	2,997	1062
2 inboard main tanks	20,140	19,920	810
2 inboard anti-shock body tanks	2,372	2,365	1002
Center section	21,426	21,352	779

Model 30A

-5 Version			
2 outboard main tanks	12,027	11,866	924
2 outboard replenish tanks	4,362	4,362	1078
2 outboard anti-shock body tanks	1,460	1,449	1072
2 inboard main tanks	20,140	19,920	810

2 inboard anti-shock body tanks	2,371	2,365	1002
Center section	20,938	20,863	779

Fuel capacity (cont'd)

-6 Version

2 outboard main tanks	12,027	11,876	924
2 outboard replenish tanks	4,362	4,362	1078
2 outboard anti-shock body tanks	3,008	2,997	1062
2 inboard main tanks	20,140	20,106	810
2 inboard anti-shock body tanks	2,372	2,365	1002
Center section	20,938	20,863	779

Model 30A (cont'd)

-5 and -8 Versions *(2)*

2 outboard main tanks	12,027	11,876	924
2 outboard replenish tanks	4,362	4,362	1078
2 outboard anti-shock body tanks	3,008	2,997	1062
2 inboard main tanks	20,140	20,106	810
2 inboard anti-shock body tanks	2,372	2,365	1002
Center section	21,426	21,352	779

(1) "Total Refuel Capacity" consists of Unusable (drainable and undrainable quantities) and Usable Fuel. See NOTE 1 for disposition of these fuel weights and fuel system limitations.

(2) Applies to Model 30A 5 Versions modified in accordance with Model 30 Service Bulletin 990 S.B. No. 28-12.

Fuel weights are based on 6.7 lb./gal.

Oil capacity

Engine Oil	Arm Inboard	Arm Outboard
42.35 lb.ea. Total Capacity	686.0	901.0
26.56 lb.ea. Usable Oil		
5.78 lb.ea. Tank System Including Unusable Oil		
10.01 lb.ea. Engine System Oil		

NOTE: The total oil tank capacity is equal to the sum of the "usable" and "tank system including unusable oil" (4.10 gal. at 7.7 lb./gal. each tank).

Constant Speed Drive and Thrust Reverser (Common Supply)	Arm Inboard	Arm Outboard
24.87 lb.ea. Total Capacity	675.0	890.0
7.93 lb.ea. Usable Oil		
3.32 lb.ea. Reverser Reserve		
2.00 lb.ea. Tank System Oil		
4.00 lb.ea. CSD System Oil		
7.63 lb.ea. Reverser System Oil		

NOTE: The total oil tank capacity is equal to the sum of the usable, tank system and reverser reserve oil (1.7 gal. at 7.7 lb./gal. each tank).

Maximum operating altitude: 41,000 ft.

Other operating limitations: See FAA Approved Airplane Flight Manual.

Control surface movements: The airplane must be rigged in accordance with the following data:

*(a) Convair Dwg. 30-40051, "Operational Data - Leading Edge Slats"
(b) Convair Dwg. 30-40071, "Operational Data - Rudder"
(c) Convair Dwg. 30-40070, "Operational Data - Rudder Trim"
(d) Convair Dwg. 30-40053, "Operational Data - Elevator"
(e) Convair Dwg. 30-40066, "Operational Data - Stabilizer Trim Controls"
(f) Convair Dwg. 30-40054, "Operational Data - Aileron and Spoiler"

(g) Convair Dwg. 30-40067, "Operational Data - Aileron Trim Control General"
*(h) Convair Dwg. 30-40055, "Operational Data - Flap"
(i) Convair Dwg. 30-40057, "Operational Data - Power Plant"
(j) Convair Dwg. 30-40060, "Operational Data - Landing Gear"
(k) Convair Dwg. 30-40061, "Operational Data - Nose Wheel Steering"
(l) Convair Dwg. 30-40062, "Operational Data - Brakes"
(m) Convair Dwg. 30-40063, "Operational Data - Emergency Landing Gear"
For Model 30A, these drawings are replaced by Drawings 30-40051, Revision E, and 30-40055, Revision K, respectively.

Datum	100 in. forward of nose (Nose is F.S. 100).
MAC	249.7 in. L.E. of MAC (+821.1)
Leveling means	Provisions for lateral and longitudinal leveling are installed in the left main landing gear well. The lateral leveling lugs are installed on the lower forward bulkhead stiffeners in the left main wheel well along W.L. 3.5. The longitudinal leveling lugs are located on the stiffeners of the center line web in the left main wheel well along W.L. 5.0.
Serial Nos. eligible	30-1 thru 30-31. 30A - 32 and up, and all Model 30 Serial Nos. when modified in accordance with NOTE 4.
Certification basis	CAR 4b dated December 31, 1953; Amendments 4b-1 through 4b-10 thereto; Special Civil Air Regulation No. SR422B; and the Special Conditions contained in Attachment "A" of the FAA Minutes of the Model 30 Preliminary Type Certification Board Meeting dated May 21, 1959. Type Certificate No. 4A30 issued December 15, 1961, Model 30. Application for Type Certificate dated July 21, 1958, Model 30. Type Certificate No. 4A30 revised October 10, 1962, to include Model 30A. Application for Amended Type Certificate for Model 30A dated March 21, 1962. Compliance with the following optional requirements has been established: Ditching Provisions only 4b.361 Ice Protection Provisions 4b.640
Production basis	Model 30 and 30A, Production Certificate No. 605
Required equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. Convair Report ZM-30-069, "Master Equipment List, Models 30 and 30A," contains a list of all required equipment that must be installed as well as optional equipment installations approved by FAA.
Service information	Convair Report CS-61-053, "Convair Models 30 and 30A Structural Repair Manual" is FAA Approved. Service Bulletins and other service information, when FAA approved, will carry a statement to that effect.

NOTE 1. (a) Current weight and balance report, including list of equipment included in certificated empty weight, and loading instructions, must be provided for each aircraft at the time of original certification. Convair Report ZW-30-029-, "Weight and Balance Report," for Airplane No. ____", is applicable to both the Model 30 and 30A as indicated therein.

(b) The airplane must be loaded so that the C.G. is within the specified limits at all times, with the effects of fuel use, gear retraction and crew and passenger movement being considered. See "C.G. Range" for restrictions on center of gravity limits for takeoff at gross weights below 155,000 lb.

(c) The weight of system fuel and oil as defined below and hydraulic fluid, all of which must be included in the airplane empty weight, is listed in Convair Report ZM-30-069, "Master Equipment List, Models 30 and 30A."

System Fuel: The weight of all fuel required to fill all lines and tanks up to the zero fuel point on the fuel gages in the most critical flight altitude. This includes the unusable tank fuel as defined by CAR 4b.416.

System Oil Including Usable: The weight of oil remaining in the engine, constant speed drive, thrust reverser, tanks and lines after subtracting the usable and reverser reserve oil from the total capacity. These values are noted under "Oil Capacity" and must be added to the empty weight of the airplane.

(d) The "unusable" fuel, including drainable and undrainable quantities, is the amount of fuel in the tanks which is unavailable to the engines under critical flight conditions as defined by CAR 4b.416 and may be obtained by taking the difference between "total refuel" and "usable" tank capacities shown under "Fuel Capacity." This "unusable" fuel is included in System Fuel as indicated in 1(c) above.

(e) Fuel loading and usable procedures are dictated by structural design and to maintain airplane C.G. within approved limits. Refer to Convair Report ZW-30-029-, the airplane weight and balance report for the Model 30 and 30A for loading, takeoff and landing fuel distribution limitations.

(f) Fuel Jettison: Fuel jettisoning must be available for operation of the airplane in excess of the maximum landing weight. Refer to FAA Approved Airplane Flight Manual for limitations to be observed during fuel jettison operation. The unjettisonable fuel must be included in the airplane landing weight and the amount of usable fuel remaining in the tanks after complete jettisoning is as follows:

	Model 30 All Versions Model 30A -5 Version	Model 30A -6 & -8 Versions
Outboard tanks (1 and 4)	2452 lb. ea.	2462 lb. ea.
Inboard tanks (2 and 3)	2600 lb. ea.	*2786 lb. ea.

**Applicable to Model 30A-5 Version when modified in accordance with Model 30 Service Bulletin 990 S.B. No. 28-12.*

Fuel weights are based on 6.7 lb./gal.

NOTE 2. Reserved.

NOTE 3. All replacement seats (crew, passenger and lounge), although they may comply with TSO-C39, must also be demonstrated to comply with CAR 4b.358(c). Other installations, such as berths, buffets, compartments or items of mass which could create a hazard to the safety of passengers and crew must also be demonstrated to meet the same requirements.

NOTE 4. The 30-5, 30-6, 30-8, 30A-5, 30A-6, 30A-6AASC, and 30A-8 are versions of the basic Model 30 and 30A, respectively, the certification basis for which is Type Certificate No. 4A30. These dash numbers were selected by Convair primarily for contractual and clerical purposes and should not be considered to define different models of airplanes. One version may be converted to another by incorporating pertinent required equipment and complete conformity with corresponding approved drawings.

It should be noted that the identification plate in the cockpit identifies the specific airplane version and that different airplane flight manuals, primarily the result of different autopilot installations, air-conditioning system, and electrical system, are applicable. Accordingly, when converting from one version to another, the identification plate must be suitably revised. The airplane flight manual pertinent to the new version must also be installed.

Model 30 airplanes may be modified to like versions of Model 30A airplanes in accordance with Addendum I to General Dynamics/Convair Report ZM-30-070, dated September 28, 1962, "FAA Certification Drawing Index. When Model 30 airplanes are modified to model 30A airplanes, the "Nameplate" must be revised to indicate Model 30A, and the date of modification must be shown.

NOTE 5. Air Turbine Starter Ground Carts. Limitations on the use of ground bleed air sources used for starting the CJ805-23 series engines have been established and are noted under the recommendation section on Page 9 of Convair Report ZK-30-004. "Failure Analysis of the Model 30 Engine Starting System."

NOTE 6. The engine thrust reverser lubrication and servicing must be accomplished per the schedule shown in Chapter 78 of the CJ805-23 series Aft Fan Engine Maintenance Manual, GEI 67837.

NOTE 7. Applicable to the Model 30 and 30A Airplanes.

(a) Installation of the CJ805-23 "k" and "o" Specification engines on the same airplane is permitted.

(b) Limitations, procedures, and performance applicable to the Model 30 equipped with any combination of these engines, including 4 CJ805-23 "o" Specification engines, are contained in Supplement C to the FAA approved Model 30 Airplane Flight Manual, CS- 61-048.

(c) The G.E. CJ805-23B ("n" Specification) engine is approved for installation in the Model 30 and Model 30A airplanes (all versions), subject to the limitations, procedures, and airplane performance contained in Supplement B to the FAA approved Model 30 Airplane Flight Manual CS-61-048 and the FAA approved basic Model 30A Airplane Flight Manual CS-62-046,. This engine must be trimmed in accordance with the applicable procedures and limitations contained in Section 71 of the Model 30/30A Maintenance Manual.

(d) Supplement B to the FAA approved Model 30A Airplane Flight Manual CS-62-046 is applicable for Model 30A airplanes equipped with 4 CJ805-23 "o" Specification engines or any combination of "o" and "n" Specification engines. (See NOTE 7(e).)

(e) Installation of the CJ805-23 "o" and "n" Specification engines on the same airplane is permitted. Supplement F to the FAA approved Model 30A Airplane Flight Manual, CS- 62-046, is applicable for Model 30A airplanes equipped with CJ805-23 "o" Specification engines intermixed with CJ805-23B "n" Specification engines.

(f) Supplement C to the FAA approved Model 30A Airplane Flight Manual is applicable for Model 30A airplanes equipped with 4 CJ805-23 "k" Specification engines or any combination of intermixed "k" or "o" Specification engines.

(g) The use of the data presented in Supplement D to the FAA approved Model 30A Airplane Flight Manual is permitted only when CJ805-23 "o" Specification engines are installed and derated takeoff power performance is utilized.

(h) The use of the data presented in Supplement E to the FAA approved Model 30A Airplane Flight Manual is permitted only when one or more CJ805-23 "k" Specification engines are installed and derated performance is utilized.

(i) The basic FAA approved Model 30 Airplane Flight Manual is applicable for those airplanes equipped with 4 CJ805-23 "k" Specification engines.

(j) Engines must be trimmed in accordance with applicable procedures and limitations contained in Section 71 of the Model 30/30A Maintenance Manual.

NOTE 8. Kerosene, JP-4 and JP-5 may be used separately or mixed in any proportions without adversely affecting the engine operation or power output. No fuel control adjustment is required when switching fuel types.

Phillips anti-icing fuel additive PFA-55MB may be used at a maximum concentration of 0.15% by volume. No fuel system anti-icing credit is allowed.

NOTE 9. The Model 30 and 30A airplanes are approved for operation with the General Electric 7H- TR-30 and 7H-TR-30A thrust reverser operating systems installed or an intermix of any combination thereof. Each system, when installed on the Model 30 engine installation, is approved for operation with either the TR-30 or the TR-30A blocker doors.

NOTE 10. Airplane 30A-5, S/M 2, was converted by AiResearch Aviation Service Company to a 30A-6 version and is described by General Dynamics/Convair Reports ZM-30-070 and GDC-63-130 plus AiResearch Aviation Service Company Report C-1447.

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