



# PROP WASH

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## Welcome

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## Operating Hours

### Memorial Day to Labor Day

Open Monday thru Saturday

9:00 AM to 5:00 PM

### Labor Day to Memorial Day

Saturdays only

10:00 AM to 4:00 PM

### Other days by Appointment Only

Contact: Joe Stephan

864.569.3986

### To Schedule Events

Contact: Grant McClellan

208.690.0896

Location: 400 Airport Rd, Rexburg, Idaho 83440

Phone: 208.359.5905

## Howard Timeline

1922: Ben O. Howard, Chicago IL.  
1936: Howard Aircraft Corp formed, occupying old Laird factory at Chicago Municipal Airport. 1939: Ben Howard left the presidency of his company to start a new career as test pilot, aviation consultant, etc.  
1945: Howard Aircraft Corp liquidated. 1957: Ben Howard & Associates formed in Santa Monica CA to produce conversion kits for DC-3's.



## Howard DGA-15

The Howard DGA-15 provides a rare and revealing window into aviation's golden age. The two-decade span between the world wars was known for rapid technological advancement and wild aviation experimentation. It also produced outsized personalities, entrepreneurial daring, and bold new uses for increasingly capable airplanes that offered previously unattainable speed, range, and luxury.

Former air racer Benjamin O. "Benny" Howard, the scrappy, obsessive founder of the Howard Aircraft Corp., was at the epicenter of this tumultuous time—and the DGA-15 was his commercial expression of it. The self-taught pilot and designer got his start in aviation by helping Prohibition-era rumrunners modify airplanes to distribute liquor—and one of them, a plainspoken Houston bootlegger, called an early Howard creation a "damned good airplane." Howard carried that moniker proudly, and every subsequent model carried the DGA designation.

Born in 1904 in Palestine, Texas, Howard grew up poor, left school at 16, and worked as a roustabout in west Texas oil fields. He became infatuated with aviation after seeing an itinerant flying circus, saved enough money to buy a Standard biplane, and crashed it at 18 while attempting to teach himself to fly, breaking a leg and killing his passenger. Howard moved to Dallas at 19 to work as a rigger at Curtiss Aeroplane and Motor Co., and he built his first airplane from spare parts.

Howard focused on speed, and he entered a series of air races flying airplanes of his own design. He became an airline pilot in the 1920s

## Special Visitor

Doug Beijer, a retired airline pilot, recently traveled to the Legacy Flight Museum from his home in Hawaii to meet an old friend...the Bell Aircraft P-63 King Cobra. He first saw this particular aircraft while a young man at the Van Nuys airport in Southern California where the Cobra was a derelict, pushed against a fence and subject to the elements and petty vandalism. (See our February 2022 edition of our newsletter for more information about this airplane and its history.)

The occasion for his visit was the museum's annual open house event where he interacted with the staff and pilots who then took him for a ride in the museum's Boeing Stearman PT-17.



Here is Doug discussing the particulars of flying the P-63 King Cobra with Owner/Pilot: John Bagley.



Doug returned home to Hawaii a happy man! ☺

and flew Ford Tri-Motors but kept active in burgeoning air races. In 1929, he teamed up with Gordon Israel,



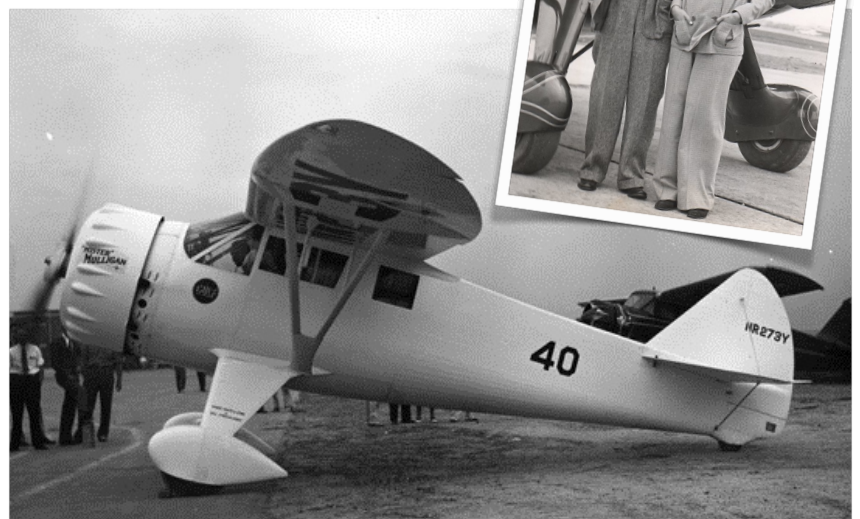
Ben O Howard at the 1930 NARs, Chicago

then an engineering student, to produce a series of diminutive racers that pushed 200 miles an hour in closed-course races.

The hulking Mister Mulligan, with its radial engine, high wing, and spacious cabin, was totally different from Howard and Israel's previous designs. The brawny airplane could carry several hundred gallons of avgas, climb to more than 20,000 feet, and cover vast distances.

But its reign as a racer was short, and it didn't end well.

In the 1936 Bendix race from New York to Los Angeles, Howard and wife Maxine were crossing New Mexico when Mister Mulligan's propeller threw a blade. The instantaneous shaking was so violent that Howard was knocked unconscious, then came to and crash landed in rough terrain. He and Maxine were seriously injured, and Howard lost a leg below the knee as a result of the crash.





Mister Mulligan was destroyed in the accident, and no detailed engineering drawings of the one-of-a-kind airplane had been created. But the roomy, fast, long-range airplane captured the imagination of investors, and the young Howard Aircraft company on Chicago's south side created the DGA-15 for this new market.

The Howard Aircraft Company (later Howard Aircraft Corporation) was formed in 1936 to build commercial derivatives of the Howard DGA-6 (named Mister Mulligan), a successful four-seat racing aircraft which had won both the Bendix and the Thompson Trophies in 1935, the only aircraft ever to win both races. These successes did indeed bring the DGA series much attention, and Howard produced a series of closely related models differing mainly in the engine type, consisting of the DGA-7, -8, -9, -11 and -12. Offering high performance and being comprehensively equipped, despite a high



purchase price (with the DGA-11 selling for \$17,865), these became coveted aircraft owned by corporations, wealthy individuals, and movie stars, such as Wallace Beery, who was himself a pilot. (In the movie *Bugsy*, Warren Beatty, playing the title role, is flown from Los Angeles to Las Vegas in a red Howard DGA-15.)

In 1939, the Howard Aircraft Corporation produced a new development of the basic design, the DGA-15. Like its predecessors, the DGA-15 was a single-engine high-winged monoplane with a wooden wing

and a steel-tube-truss fuselage, but it was distinguished by a deeper and wider fuselage, allowing five people to be seated in comfort.

It was available in several versions, differing in the engine fitted. The DGA-15P was powered by a Pratt & Whitney Wasp Junior radial engine, while the DGA-15J used a Jacobs L6MB and the DGA-15W a Wright R-760-E2 Whirlwind. In an era when airlines were flying Douglas DC-3s, the Howards cruising at 160 to 170 mph could match their speed, range and comfort with the rear seat leg room exceeding airline standards with limousine-like capaciousness, and high wing loading allowing the Howards to ride through most turbulence comfortably.

Prior to the attack on Pearl Harbor in December 1941, about 80 DGA-8 through -15 aircraft had been built at the Howard Aircraft Corporation factory on the south side of Chicago Municipal Airport. With America's entry into World War II, most of the civilian Howards were commandeered by the military. The Army used them as officer transports and as air ambulances, with the designation UC-70. The Navy, in particular, much liked the aircraft and contracted Howard Aircraft Corporation to build hundreds of DGA-15Ps to its own specifications. They were used variously under several designations such



as the GH-1 model which was a communications and liaison version of the DGA-15P, built for the United States Navy and United States Coast Guard; consisting of 29 which were built new and four impressed civil aircraft.



In 1942, the GH-2 "Nightingale" model was introduced as an aerial ambulance for the US Navy of which 131 were built. And, in 1943, 115 GH-3's (a variant of the GH-1 with equipment changes and a 122-gal fuel tank) were built as personnel transports. GH-3 USN BuNo's: 44921/44922, 44935/44937, 44939, 44941/45049.

In 1943, the NH-1 version was introduced as an instrument training variant with a third set of controls in the rear seat for the United States Navy, of which 205 were built. NH-1 USN BuNo's: 29376/29550, 44905/44920, 44923/44934, 44938, 44940/45049.



Ten civil DGA-15Ps (UC-70) were impressed into service by the United States Army Air Force and one aircraft leased. Four civil DGA-15Js (UC-70B)

were impressed into service by the United States Army Air Force.

A second factory was opened at Dupage County airport, west of Chicago, and about 520 DGA-15s were eventually completed.

In their vintage years, Howards DGA series are prized more for their utility than for their clean lines. Contemporary cabin aircraft have already become antiques, living pampered lives as show pieces rather than working aircraft. In the 1960s a modification was offered by the Jobmaster company of Renton, Washington, including additional seating, windows, and float installation making Howard DGA-15s attractive to bush operators, and the large cabin proved popular with sky-divers as low-capital-outlay, low-operating-cost jumping platforms.



With most of the working Howard DGAs retired from active commercial service, they have become popular as restoration subjects and as alternatives to more modern equivalents with higher cost of ownership. Almost 100 of the Howard variants are still flying, mostly DGA-15s. A few of the DGA-11s also still fly, including one out of Santa Paula, California, which is probably the world headquarters for Howards, with at least five flying out of that field.

Superb traveling airplanes with much better visibility, headroom, and shoulder room than some contemporary cabin aircraft, they have very long "legs" with a fuel capacity of 151 gallons in 3 belly-mounted tanks, giving an endurance of more than 7 hours, for a range, at normal cruise (150 mph), of over



## Specifications (Howard DGA-15P)

### General characteristics

Crew: 1 pilot  
 Capacity: 4 passengers  
 Length: 25 ft 0 in  
 Wingspan: 38 ft 0 in  
 Height: 8 ft 5 in  
 Wing area: 210 sq ft  
 Empty weight: 2,705 lb  
 Max takeoff weight: 4,350 lb  
 Fuel capacity: 122 US gal  
 Powerplant: 1 × Pratt & Whitney  
 Wasp Jr (R-985-AN-1), 400 hp

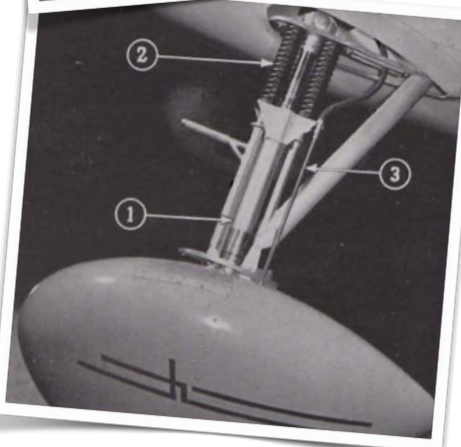
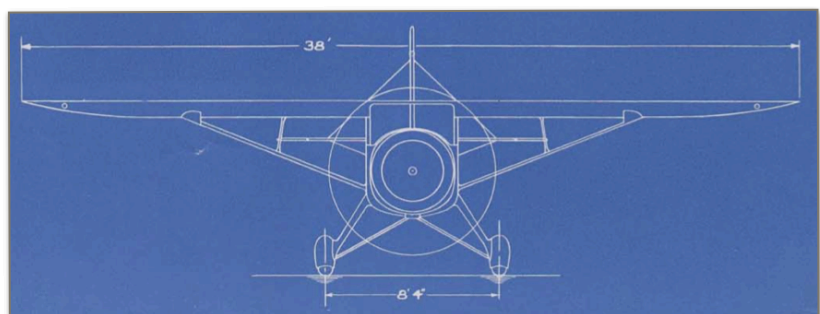
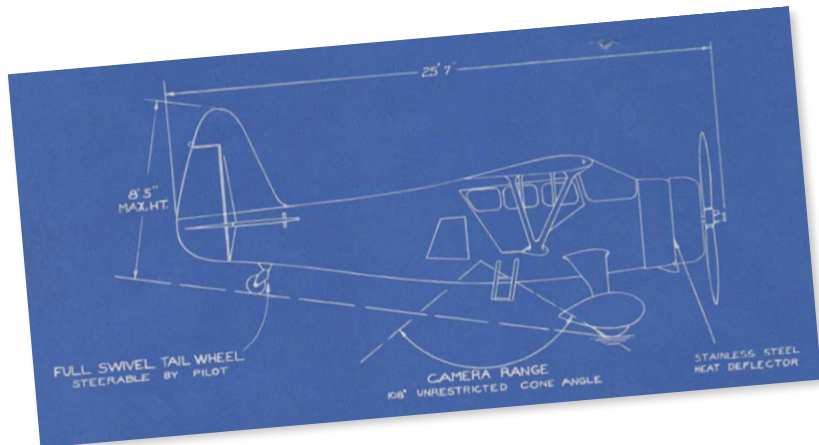
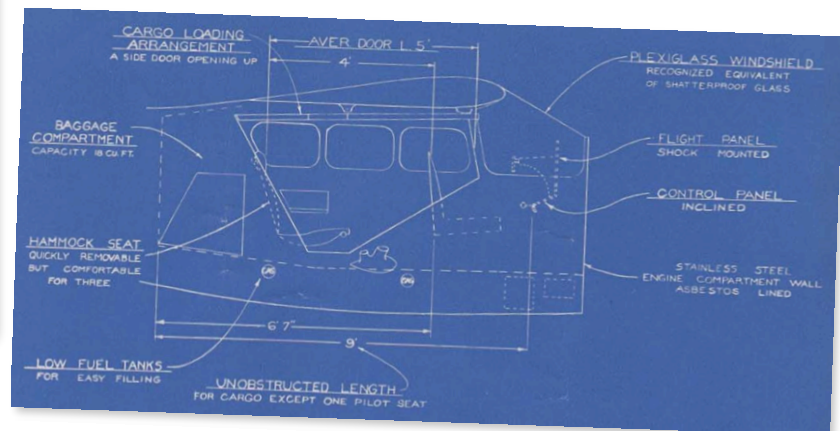
### Performance

Maximum speed: 175 kn / 201 mph  
 Range: 920 mi @ 150 mph  
 Service ceiling: 21,500 ft  
 Rate of climb: 1,560 ft/min  
 Burn Rate: 25 gals/hr

1,000 statute miles. With modern avionics, the Howard can compete in many respects with many contemporary light aircraft, due to its combination of room, comfort, speed, range and carrying capacity. A DGA-15P competed in the 1971 London (England) to Victoria (British Columbia, Canada) air race.

Howard, however, was drawn to new aviation achievements—not entrepreneurship. When Howard Aircraft folded after World War II, he became a test pilot and project manager for Douglas Aircraft in California. He made initial flights in the DC-4E, A-26 Invader, DC-6, and others.

He was still obsessed with speed at the end of his life and worked with auto designer Carroll Shelby on his Cobra race car. 🏁



Howard DGA-15P, GH-3  
NC5299I S/N 925, Built 1943



The museum's Howard DGA-15 is a single-engine civil aircraft produced in the United States by the Howard Aircraft Corporation from 1939 to 1944. After the United States' entry into World War II, they were built in large numbers for the United States Navy and also served various roles in the United States Army Air Forces.

Manufacturer's serial #925 was built in 1943 at Howard Aircraft's St. Charles, Illinois plant and taken on Strength/Charge with the United States Navy with BuNo 44954 as a GH-3.

According to the Individual Aircraft History Cards (IAHC) for Howard GH-3 BuNo 44954 (as provided by the Smithsonian National Air & Space Museum Archive), the card indicates an acceptance date of December 31, 1943. But the delivery date is much later as May 26, 1944. This was to the newly commissioned Naval Air Station Patuxent River (Maryland). It was used as both a Stations Operations aircraft and as a test aircraft. It may have car-

ried the lettering “TEST” when at Pax River; many of their aircraft did.

From there it went to Mustin Field, Philadelphia, then to NAS Miami (now Opa Locka airport) for reconditioning.

Next, it was back north to NAS Jacksonville, and finally again to Miami where it was stricken from the Navy rolls and put up for surplus August 31, 1946.

It was originally sold to someone in the Los Angeles, California area in 1947 before making its way to Dallas, Texas in 1958 where it remained for the next four years.

A 15 Nov 1958 log entry for Certificate of Airworthiness indicated that “Aircraft painted Fuller’s Insignia White Enamel with Topaz Tan Metallic Speed Stripe and Numbers.”

After going back to California for a few years (1962-1970) it was ferried to Georgia and then back west to Arizona where the original Pratt & Whitney R-985-AN-1 engine (S/N: 3866, 400 hp) was replaced with a Pratt & Whitney R-985-14B engine (S/N: 22179, 450 hp) on 4 Apr 1974.

Next, in 1977, it went to Gardiner, New York for two years before returning to California again.

Finally, it went to Montana in 1992 before being acquired by the Legacy Flight Museum on 05 Oct 2017. ★

AIRCRAFT DESCRIPTION

Manufacturer	HOWARD AIRCRAFT CORP.	Place	ST. CHARLES, ILLINOIS	Date	1944
License No.	N 52991	Type	GH-3	Serial No.	744
Description	PAINTED INSIGNIA WHITE WITH BROWN METAL				
SPEED STRIKE 4 NUMBERS. A/C IS A HIGH WING MONOPLANE, 50 IN. GAP 7 GAL. 132 GAL. 132 GAL.					
5 PEOPLE AND CARRIES 135 LBS. OF GAGE. GAS GAP 132 GAL. 132 GAL.					
Reconstructed By			Place	Date	
Seating Capacity (Crew Included)		5 PLACE		Weight Loaded	
Wing Area 249.81		Sq. Ft. Control Area		Sq. Ft. Span 38.0 Ft. Length	
Tires Main 8.50x10.00		Tire Tail 10.00 5.0.		Brakes GOOD YEAR	
Owner	B. T. LAWLER, JR. 41 Barry		Address 5836 RICHMOND		
			336 1/2 W. 11th		
			State TEXAS		
City	DALLAS, TEXAS		714 879 4740		
Owner	16/4/77 74 Clench Head Trail		505 87490		
	Gardner, 4/4, 125 25				

DATE	NATURE OF FLIGHT	No. of Pass.	TIME OF FLIGHT		TIME IN AIR		Miles Flown	
			Up	Down	Hours	Min.		
12/25	TEST	2			1	25		
12/25	TEST	2			2	00		
12/25	X-C	2				35		
12/25	LOCAL	2				20		
12/25	LOCAL	2				40		
12/25	LOCAL	1				25		
1/1/59	LOCAL	1			1	00	5	
1/1/59	LOCAL	2			1	00	5	
1/1/59	LOCAL	2				15		
1/1/59	LOCAL	4				50		
1/1/59	LOCAL	4				20		
1/1/59	LOCAL	4				30		
TOTALS FORWARD								
TOTALS TO DATE								

REMARKS	
INSPECTION - MAINTENANCE - REPAIRS - ALTERATIONS	
DATE	
TOTAL TIME ON AIRFRAME: 467:50.	
TOTAL TIME SINCE MAJOR OVERHAUL: 00:0 HRS.	
AIRFRAME COMPLETELY DISASSEMBLED & OVERHAULED AND	
FOLLOWS:	
1. COMPLETE REWIRE OF ENTIRE ELECTRICAL SYSTEM USING NEW CIRCUIT BREAKS.	
2. PRESSURE CHECK FUEL TANKS @ (3"PSI).	
3. RECOVER FUSELAGE - IRISH LINEN	
4. RECOVER EMPENNAGE & WINGS GRADE A COTTON	
1 COATS CLEAR BUTYRATE DOPE	
8 " SILVER BUTYRATE "	
3 " FULLER'S INSIGNIA WHITE ENAMEL	
1 " DULUX " 11-11/27 H TOPAZ TAN	
TRIM PAINT (SPRUE & NUMBERS)	



*Miami*

Serial No. 44954 Model GH 3 Contract No. XXS 5986

Acceptance Date 12-31-43 Date Reconditioning Completed \_\_\_\_\_  
Delivery Date 5-26-44

Date In	Unit	Date out	Time in status	For use of CNO	TRANSFER RECORD	Date out	Time in status	For use of CNO
J F M A M J J A S O N D					STR. OP.			
J F M A M J J A S O N D					VATUENT RIVER			
J F M A M J J A S O N D					FUT TEST			
J F M A M J J A S O N D					PATIENT			
J F M A M J J A S O N D					NAC			
J F M A M J J A S O N D					MUSTANTIA			
J F M A M J J A S O N D					1946 MUSTON SLD			
J F M A M J J A S O N D					WIF H A M J J A S O N D			
J F M A M J J A S O N D					AUT ACONE			
J F M A M J J A S O N D					MIAMI			
J F M A M J J A S O N D					under record			
J F M A M J J A S O N D					Miami			
J F M A M J J A S O N D								

(For use of CNO and Fleet Air & Area Com)

AIRCRAFT HISTORY CARD NAVAER-1577 (Rev. 1-2-44)



Howard  
AIRCRAFT CORPORATION  
CHICAGO  
U.S.A.

**\*\*\* SAD NEWS \*\*\***

During this year's annual event (Free Pancake Breakfast/Open House/Fly In) at the museum last month, the Howard suffered an unfortunate incident when the right landing gear collapsed while taxiing for takeoff. No injuries to crew were reported. It is not known at this time what the fate of the aircraft will be but it is likely that it's time at the Legacy Flight Museum may be at an end.✪





