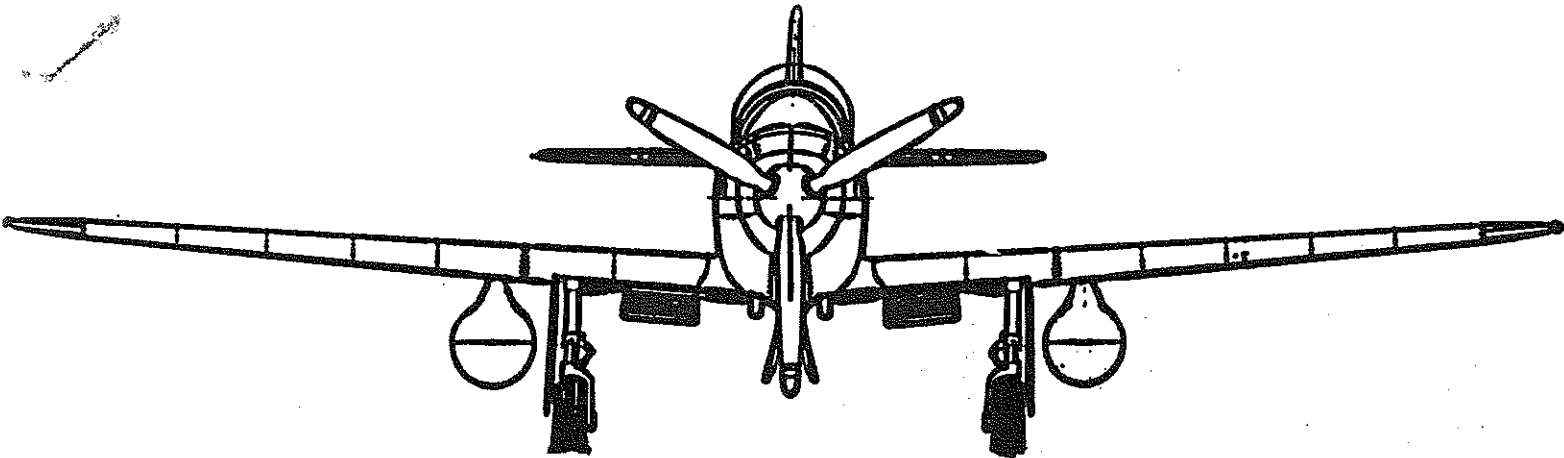


EARLY
DATED
BROCHURE
MATERIAL



May 14, 1990

Gentlemen,

No, this is not a mailing error. Everyone here at Prowler wants to build planes---no one wants to do paper work. Unfortunately, this attitude led us to ignore our brochure material. Now that we are advertising in the trade magazines we are getting many phone calls with questions that should be answered in the brochures but are not. After reading our own material we decided they were not worth the \$12.50 we were charging for them. We put a "high priority" tag on updating the material and decided to mail the new version to anyone who had purchased a brochure in 1990.

Like I said in the beginning, we want to build airplanes, not sell brochures and videos. With that in mind we tried to keep it as simple as possible and enclose as much information as possible.

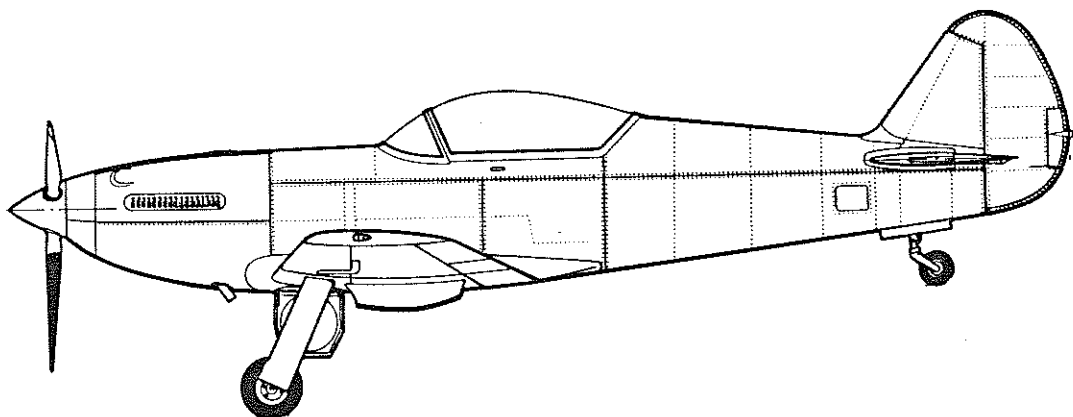
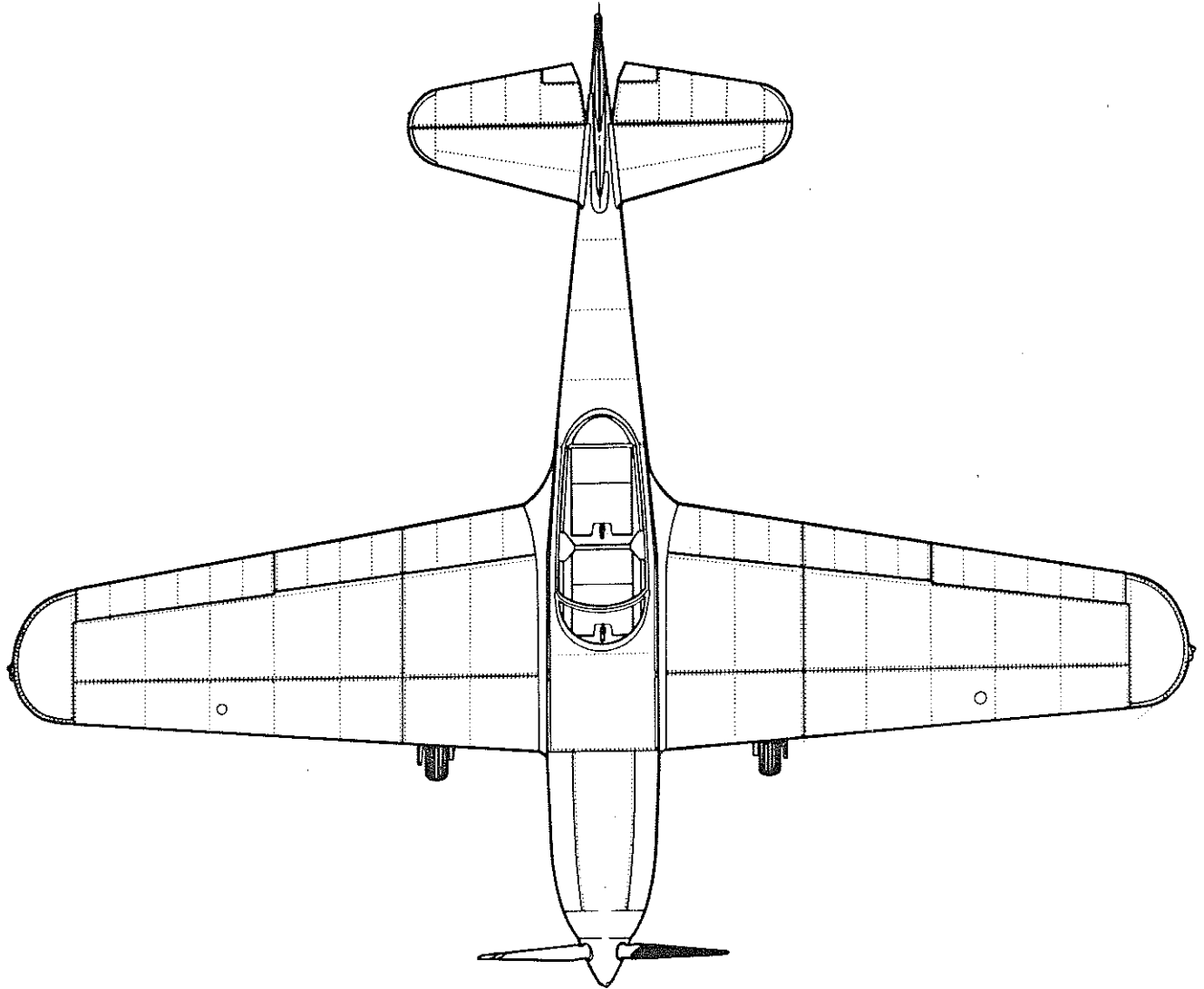
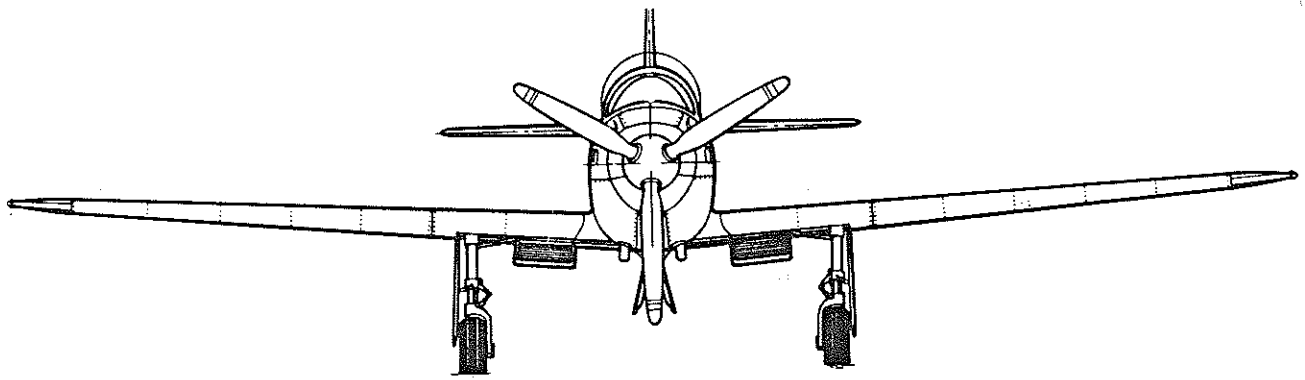
Of special note is our new marketing policy of selling empennage assemblies outright without a binding deposit as many customers have asked for. This policy is detailed in the text.

Since we are fast approaching "OSHKOSH 90" we thought this would also be an opportune time to announce Prowler Aviation's first ever "OSHKOSH SPECIAL" price. This price is over 18% below our regular price. In fact this may be the lowest price you will ever see for a PROWLER aircraft. As you may be aware, we custom build the PROWLER on an individual order basis. With this special price we anticipate filling our 1990-91 work schedule quickly.

We hope the following material will answer more of your questions about the PROWLER and help you make a more intelligent decision on which aircraft is best suited for you.

Sincerely,

Randy Echtenaw
Prowler Aviation



PROWLER AIRCRAFT SPECIFICATIONS

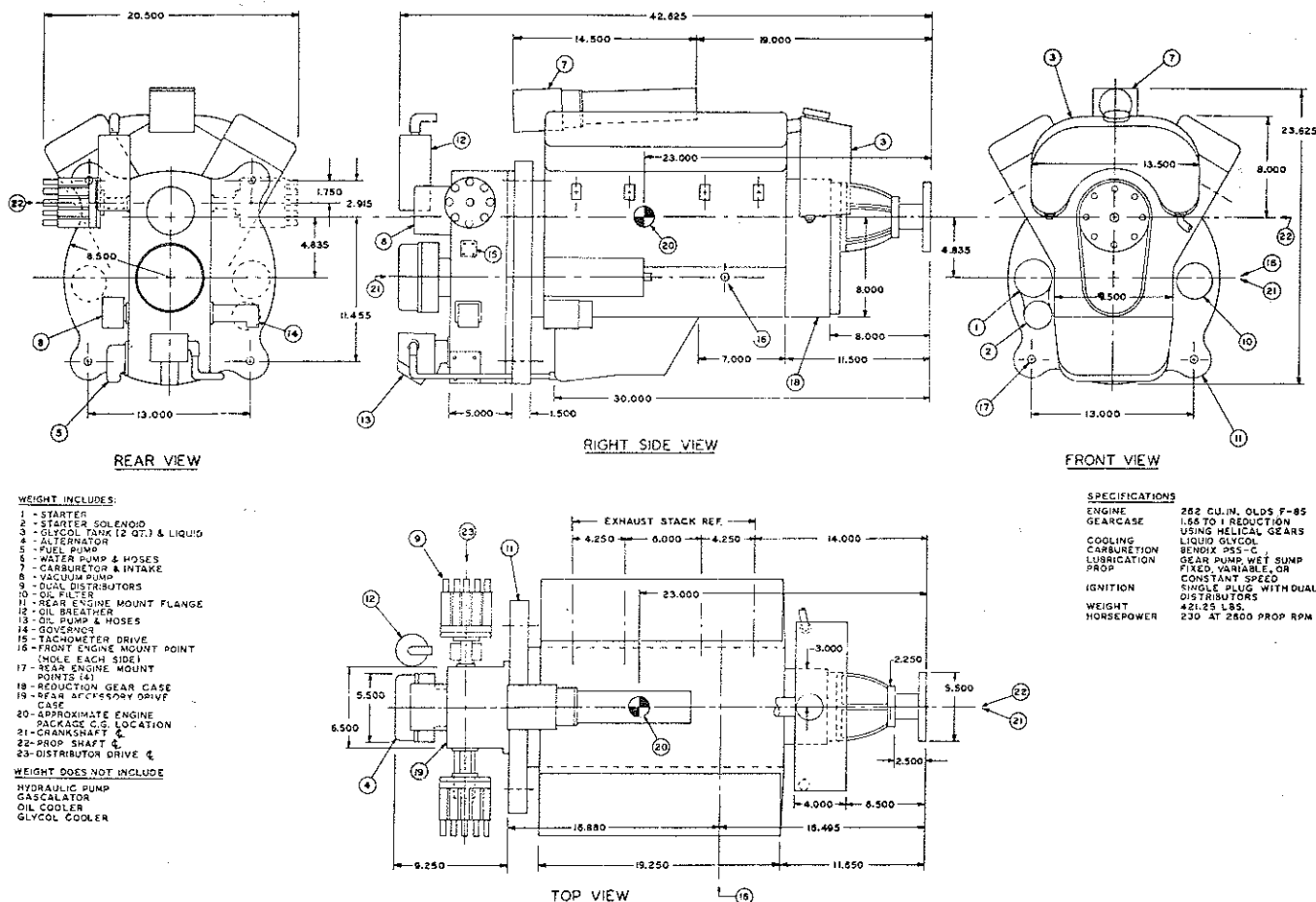
Type aircraft	Low wing tractor monoplane
Construction	All metal, stress skin
Wing span	304"
Length	252"
Height	87"
Seating	Two place tandem
Empty weight	1392 lbs.
Gross weight	2150 lbs. with 60 gal. fuel
Useful load	758 lbs.
Baggage weight	40 lbs.
Baggage capacity	4.5 cubic feet
Areas, Wing	104 sq. ft.
Horizontal tail surface	18.5 sq. ft.
Vertical tail surface	8.25 sq. ft.
Airfoils, Root	NACA 64 A 212
Tip	NACA 64 A 210
Tail	NACA 64 A 009
Dihedral	5 deg.
Wing washout	3 deg. from root
Wing loading	20.87 lbs. PSF
Span loading	84.87 lbs. per foot
Design loading	+6-5 with 10Gs ultimate
C G Range	20 to 35% MAC
Engine thrust line	¼ deg. down
Power loading	9.55 lbs. per HP
Aspect ratio	6
Propeller	McCauley 78" 3 blade D3A 32C90/82 NC-2

PERFORMANCE SPECIFICATIONS
TO BE UPGRADED WITH ADDITION
OF NEW 350HP ENGINE

PROWLER AIRCRAFT PERFORMANCE

Condition	1650 lbs. 225 HP	2150 lbs. 225 HP
Take off ground roll	900 ft.	1200 ft.
Take off 50 ft. obstacle	2200 ft.	2500 ft.
Rate of climb	1800 FPM	1400 FPM
Max speed, sea level, 59 deg. F	220 MPH CAS	215 MPH CAS
Cruise speed, 2000 ft., 59 deg. F, 70% power, 23", 2200 propeller RPM	195 MPH CAS	190 MPH CAS
Cruise speed, 2000 ft., 59 deg. F, 50% power, 20", 2200 propeller RPM	175 MPH CAS	170 MPH CAS
Cruise speed, 8000 ft., 56 deg. F, 21.5", 2200 propeller RPM	196 TAS	190 TAS
Cruise speed, 10,000 ft., 50 deg. F, 19.5", 2500 propeller RPM	198 TAS	NA
Cruise speed, 13,000 ft., 40 deg. F, 18.5", 2400 propeller RPM	182 TAS	NA
Service ceiling	16,500	NA
Range 23", 2200 propeller RPM, 10 GPH, 60 Gal.	5500 ft.	1200 SM
Range 20", 2200 propeller RPM, 7.5 GPH, 60 Gal.	9500 ft.	1400 SM
Stall speed, clean	55 MPH IAS	60 MPH IAS
Stall speed, clean, 15" MP	52 MPH IAS	57 MPH IAS
Stall speed, gear & flaps	55 MPH IAS	65 MPH IAS
Landing roll	1000 ft.	1500 ft.
Landing roll, 50 ft. obstacle	1500 ft.	2000 ft.
Never exceed speed		250 MPH IAS

AUTO AVIATION ENGINE SPECIFICATIONS



AUTO AVIATION V-8, 266 CID. Olds. aluminum block

w/stock valves, Intake & Exhaust, Low Compression,
Normally Aspirated *200 HP

w/stock valves, Intake & Exhaust High Compression
Normally Aspirated 225 HP

w/large valves, Intake & Exhaust Low Compression
Normally Aspirated 230 HP

Gearcase Ratio: 1.67 to 1

Cooling: Ethylene glycol, 50%, water 50%

Carburetion: Bendix PSH-5BD

Lubrication: Gear pump with inverted oil and fuel system.

Ignition: Single plugs w/dual distributors, electronic or mechanical.

Weight: 420 pounds.

The Chevrolet Rodeck block 350 will be available in the near future. Specifications will be published as soon as they are available. Horsepower estimates are currently 350 HP.

*Estimated HP Ratings.



PROWLER AVIATION , INC.

3707 MEADOW VIEW DR., REDDING, CA. 96002

The silver-grey airplane shot morning sunlight off its wings as it climbed and then gracefully pulled up to cruise at a comfortable 190 mph. Down on the field heads turned, attracted at first by the distinctive sound of the engine, but hooked by the grace and power of the plane's performance.

Someone guessed they were watching a P-51, another argued that it had to be a Spitfire, but after the plane circled the field and touched down in a perfect landing it was obviously neither one, and yet it looked like a little bit of both.

The Prowler, a sturdy all-metal, two-place tandem tail-dragger, resembles the classic warbirds of its time but it's a smaller, lighter plane—and one that's significantly less expensive to operate and maintain.

Only two years old the Prowler is already the proud owner of an Outstanding Workmanship Award from Oshkosh. Designer George

Morse is now making his unique plane and engine kits available to the sportsflyer who's been looking for the perfect combination of economy, style and performance.

Morse, designer and builder of the Prowler and the Auto Aviation engine, is an inventor, designer, craftsman with over 30 years of experience in the automotive and aviation industries.

It's with Morse's unique engine, the Auto Aviation, that you'll realize your greatest savings in building this plane. The Auto Aviation powerplant is a customized, liquid-cooled V8 with 225 hp. It burns only 8.5 to 10.5 gph and the entire engine can be overhauled for what it would cost you to do one cylinder on most other planes. The Prowler is distinct not only in its classic lines and economical operation, but in how it flies. The ride for passenger and pilot alike is much less stressful, thanks to the

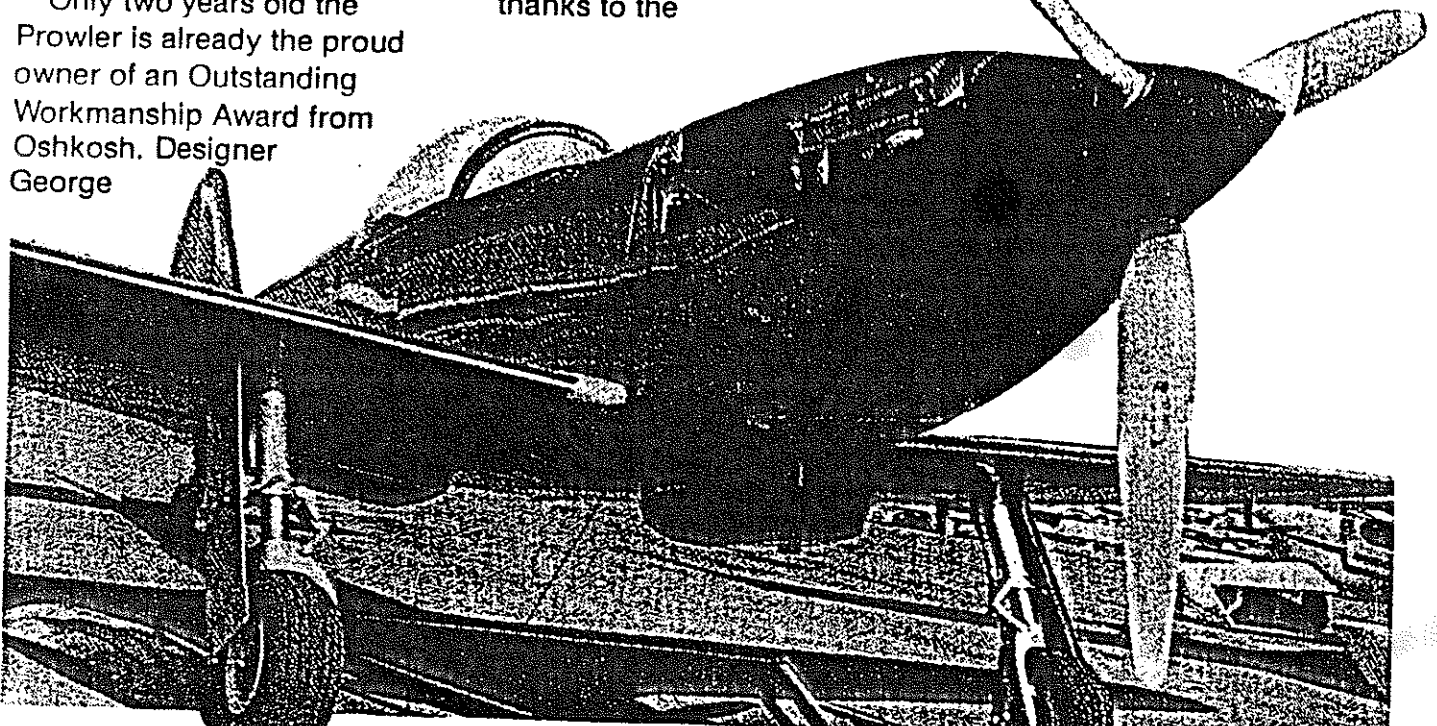
smooth and steady pull of the engine. Auto Aviation sounds like a mini-Merlin, but quieter, so that it's possible to have conversations in the cockpit in a normal tone of voice.

The Prowler is extremely responsive. Faster than most single engine planes, it trues out at 200 to 225 mph. It's flown almost every aerobatic maneuver, from Cuban eights to rolls and inverted flight and executed them with eye-catching beauty and grace.

Whether you want to do some sport flying or travel cross country, the Prowler can accommodate you. There's room for two and luggage.

In the following pages you'll find descriptions for the twelve kits needed to build the Prowler, including the engine kit. They

can be easily assembled using standard aircraft assembly tools.



PROWLER

Prowler Tail Structure: Preformed ribs and spars, preformed skin and trim tab components, trim tab linkages, control surface hinges, rivets, and AN hardware.

Prowler Wing Structure: Preformed wing spars and ribs, preformed aileron and flap spars, preformed aileron and flap ribs. Preformed wing tips. Preformed wing wiring harness. Fuel ports with filler caps. Fuel tank sending units. Aileron and flap hinges. Preformed main landing gear retraction box. Control rods and brackets. Fuel and hydraulic line components. Pitot tube with pitot and static lines. Jig fixture components. Landing, position and strobe lights. Wing skins with preformed leading edges. All AN hardware.

Prowler Coolant Radiators & Landing Gear: Machined main landing gear components including landing gear legs, wheel mounting yokes, scissors mechanism, brackets and gear retraction cylinders. All electro-hydraulic gear system components. Cleveland wheels and brakes, axles, tires, and tubes. Dual coolant radiators and coolant lines and fittings, preformed radiator ducts, and AN hardware.

Prowler Fuselage Structure: Preformed bulkheads, firewall, longerons, cockpit consoles, engine mount brackets, tail wheel mounting brackets, tail wheel doors, tail wheel assembly, tail wheel retraction mechanism, hydraulic lines, fitting, and AN hardware.

Prowler Windshield Canopy: Vacuum-formed canopy bubble, prewelded windshield and canopy frame, preformed metal windshield and canopy fairings, canopy hinges and locking mechanism, and AN hardware.

Prowler Cockpit Equipment: Front and rear control sticks with grips, prewelded control stick torque tube assembly, prewelded rudder and brake pedal assemblies. Throttle, prop and mixture quadrants and cables. Elevator torque tubes and brackets, rudder cables. Preformed aluminum fuselage fuel tank, fuel valve and plumbing lines. Preformed seats and cushions. Preformed fuselage wiring harness with circuit breaker switches and electric fuel pump, and AN hardware.

OPTIONAL

Prowler Instruments: Airspeed, sensitive altimeter, rate of climb, tachometer, manifold pressure, turn coordinator, fuel quantity gauges, fuel pressure, coolant temperature, oil temperature, amp and volt meter, oil pressure, and AN hardware.

OPTIONAL

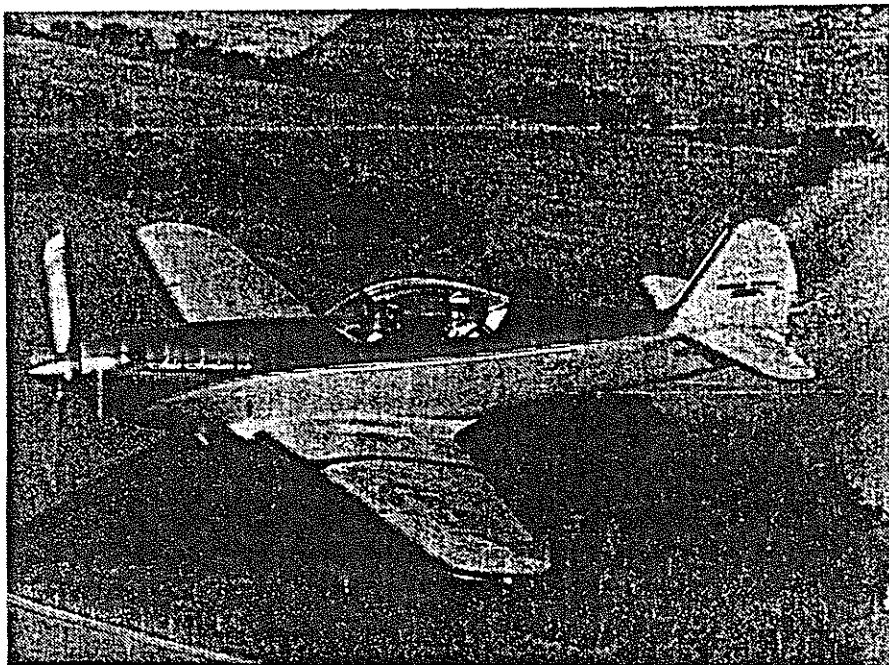
Prowler Radio: King KX155 with KI209 omni head, transponder, Loran C, radio mounting console—nav. and comm. antennas, cables, and AN hardware.

Prowler Engine: Auto Aviation aircraft modified Oldsmobile F-85 or Chevrolet 350 V8 engine with integral prop reduction gear box, dual distributor, single spark plug ignition — oil pump, fuel pump, dual coolant pumps, alternator, prop. governor, tachometer drives located on rear accessory case, starter motor, pressure carburetor. Preformed oil tank. Prewelded engine mount with rubber vibration dampeners, oil cooler and plumbing. Preformed coolant header tank, hoses, fittings, and AN hardware.

Prowler Propeller: McCauley 3 blade constant speed propeller with spinner and hub, and AN hardware.

Prowler Cowling: Preformed engine cowl bulkheads and stringers. Preformed cowling skins, engine exhaust manifold, and louvered panels. Preformed aluminum wing and tail fairings; fittings, and AN hardware.

Prowler Manuals: Flight manual, maintenance manual, all aircraft placards, registration numbers and Prowler logos.



SPECIAL FEATURES

Special Features of the Auto Aviation Engine

Engine blocks: Either the aluminum Buick engine or the Olds F85 engine can be used for the Auto Aviation powerplant. We use the Olds engine for the Prowler aircraft because of cowling. Our design philosophy is based on a completely stock engine and ample tests have been done to assure safe operation. If attempts are made to get more power, which is undoubtedly there, previous test results become useless. We do not endorse or project untested modifications.

Engine Weight: When matched with air-cooled engines in its horsepower class, the Auto Aviation compares favorably to

continental engines. Weight quotes include all normal accessories, glycol pump, alternator, dual ignition, engine driven fuel pump and carburetor. The weight is slightly higher than the 200 hp Lycoming but this may well be offset by the much smaller frontal area and a greatly reduced cooling drag.

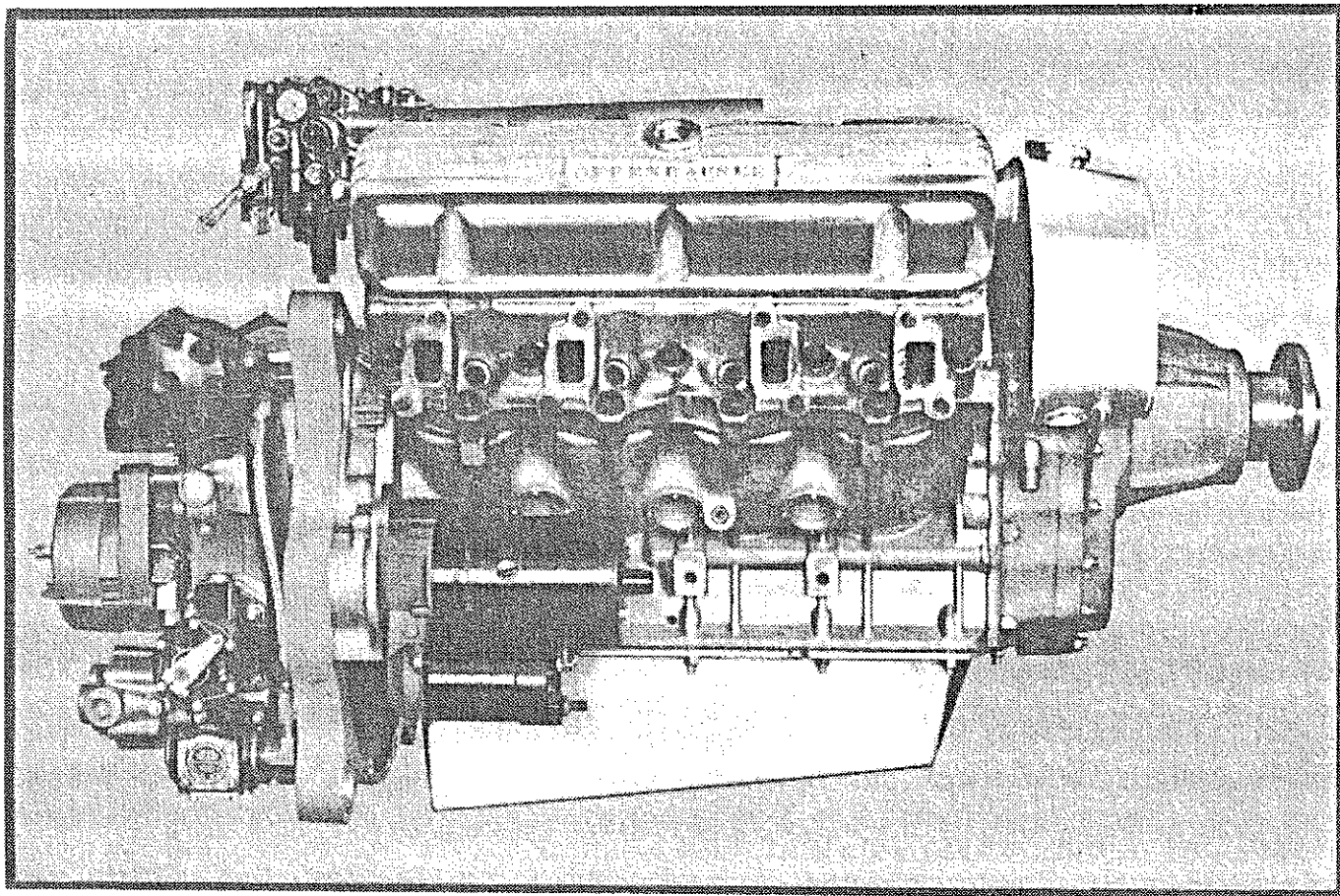
Because the Auto Aviation burns less fuel per hour than other engines (8.5 to 10.5 gph) you need less fuel to reach your destination. This translates to a lighter takeoff weight for the aircraft.

Crankshafts and Harmonic

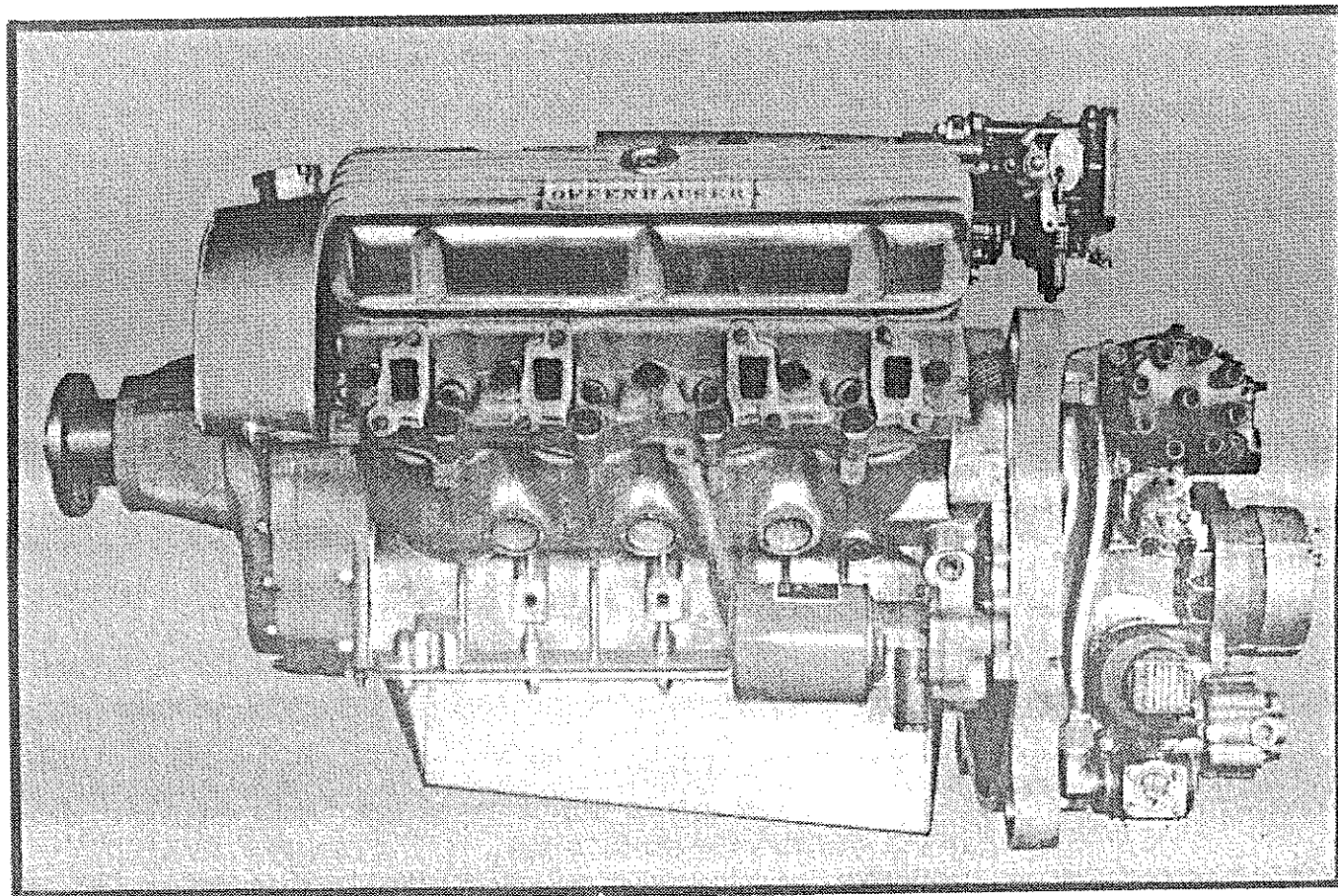
Vibration: When we researched the possibility of harmonic vibration we found that the Alli-

son and Merlin engines were coupled to gear boxes similar to what we planned for the Auto Aviation. Many engines are successfully geared in much the same manner as our engine: the Aero Commander twins, Cessna 175s and others.

Because the engine has more cylinders, each with smaller displacement, we achieve a smoother power input than the six cylinder engines and lessen the pounding the gear train is subjected to. The early GM V8s had no harmonic balancers or harmonic problems. Our testing program has shown no problems associated with harmonics. The engine runs very smoothly and is noticeably free of the harsh vibration usually found in aircraft engines.



SPECIAL FEATURES



Recommended Fuel Grade: We prefer 100/130 Avgas in our engines but the engine is designed for automotive premium so there's no need to burn Avgas unless you plan flight altitudes over 10,000 feet (vapor pressure on auto gas might be a problem over 15,000 feet).

Recommended Oil: Any top quality, multi-grade detergent auto engine oil is satisfactory. We use Pennzoil for at least 25 hours and then have switched to synthetic.

Use as a Pusher: This engine can be used as a pusher as the propeller shaft bearings are identical and thrust may be applied in either direction without any changes in the engine.

Radiator Placement: The radiator can be placed wherever design and thermal cooling will permit. The Glycol Pump will circulate coolant over long distances. Increasing the distance from engine to radiator will allow heat loss in lines that is compensated by a smaller radiator requirement.

Propellers: Three and four blade props are available for scale replica fighters. They can be made by Hartzell, McCauley or independent shops using standard parts in non-standard, non-certified configurations.

Recommended Propellers: We supply continental prop flanges for McCauley. Match your prop requirements to your aircraft

and the stated hp and rpms. All gear cases are set up with oil passages for constant speed props, but you can start out with a fixed pitch and add the constant speed later by removing pipe plug in shaft and bolting the prop governor on the accessory drive.

We will try to have a complete parts inventory at all times in order to fill orders on notice. The engine can not be used in a certified aircraft without placing it in a restricted category. Suitability for use in your aircraft is up to your discretion. We will deliver engines as soon as possible after you place your order. Our only requirement is adequate time for testing and quality control for the engine and components.

January 1, 1990

ADDENDUM TO ENCLOSED BROCHURES

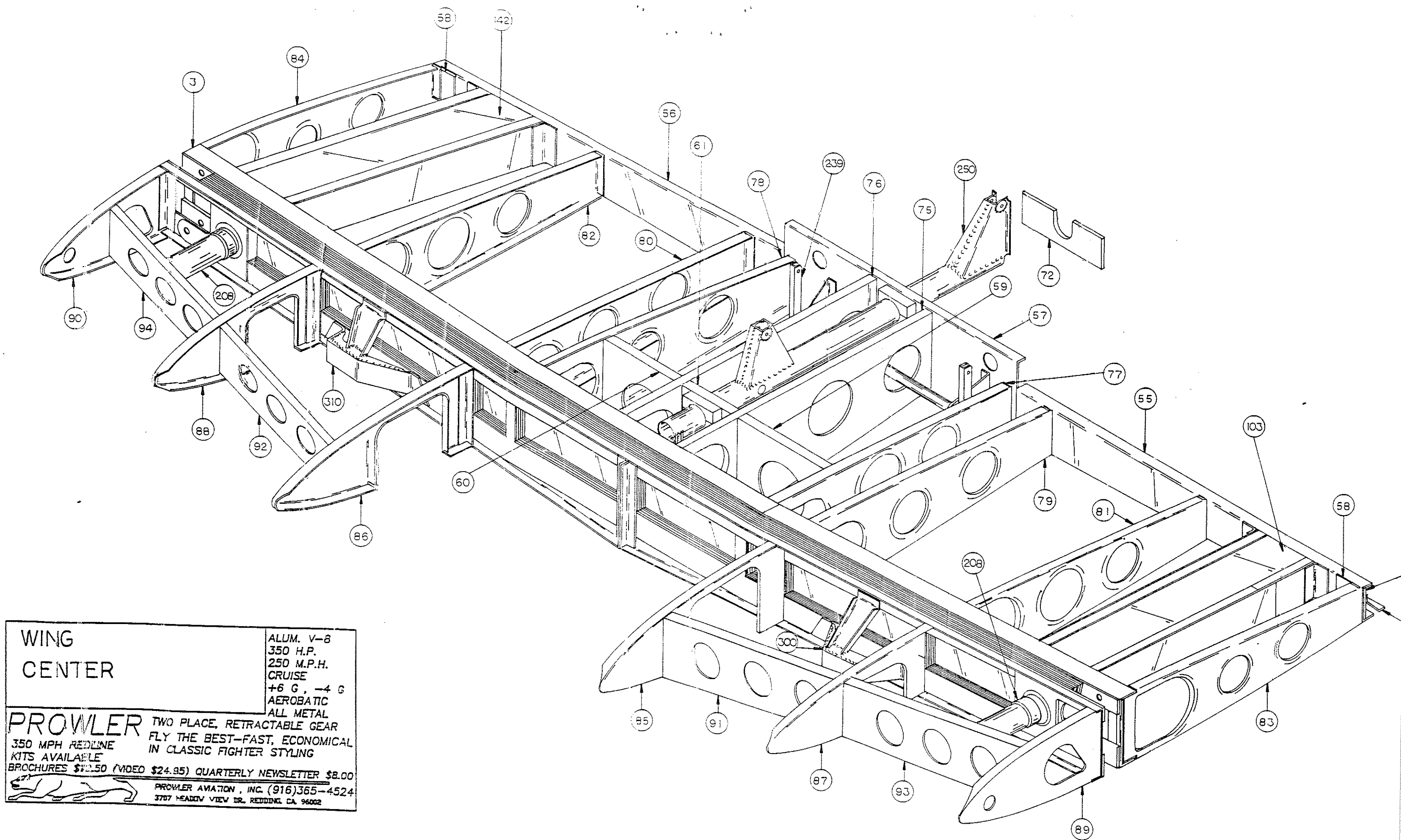
Prowler Aviation has increased the performance, comfort and combat capabilities of the Prowler with the following:

Engine Upgrades:

The aircraft power plant is a 350 hp 364 C.I.D. aluminum Rodeck "Y" block V-8 featuring stainless steel valves, special billet forged 4340 steel crankshaft and multi-port fuel injection with 10 to 1 compression. The engine is 2" longer and approximately 25 pounds heavier than the Olds F-85 engine it replaces and generates approximately 125 more horsepower. The accessory case and gear reduction units are described in the text.

Airframe Upgrades:

Increased baggage capacity and cockpit width with aft sliding canopy and rear seat parachute cavity. Also, electric 3-axis trim control and external hard points under each wing with a 200 lb. capacity for extra fuel or baggage on each pylon. The new VNE redline will be 350 mph with a projected cruise of 250-260 mph.



WING CENTER

ALUM. V-8
350 H.P.
250 M.P.H.
CRUISE
+6 G, -4 G
AEROBATIC
ALL METAL

PROWLER TWO PLACE, RETRACTABLE GEAR
FLY THE BEST-FAST, ECONOMICAL
IN CLASSIC FIGHTER STYLING
350 MPH REDLINE
KITS AVAILABLE
BROCHURES \$12.50 (VIDEO \$24.95) QUARTERLY NEWSLETTER \$8.00

PROWLER AVIATION, INC. (916)365-4524
3707 MEADOW VIEW DR., REDDING, CA. 96002