

Due again to time pressures from my work (thank goodness summer has come to an end) the written content is less than I hoped to have, but I have tried to include some interesting other information which includes a couple drawings, an article about NASA U-2's by Patricia Groves that ran in the now defunct American Aircraft Modeler and copies of original Shelby American literature on the 427 Cobra, Street & Competition models and the 1966 GT-350 Mustang that I have had for 20 years.

REMEMBER: The date code on your mailing label is the month your dues are last paid for.

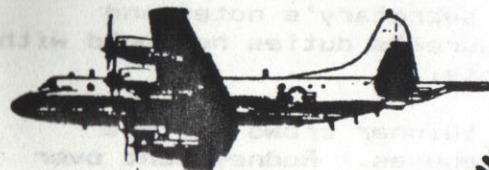
DAN BUNTON
910 NIDO DRIVE
CAMPBELL CA 12345

DEC86

Alan Wolcott
10129 S. Blaney
Cupertino, CA 95014



SAN JOSE SCALE MODELERS



San Jose
Chapter IPMS



OCTOBER 1986

Next Meeting: October 17, 1986

Time: 7:30 - Juniors Workshop
8:00 - Seniors Bullshop

Location: Mercury Savings
19376 Stevens Creek Blvd.
Cupertino

SEPTEMBER MEETING MINUTES

Operation of the September meeting was dropped in the lap of Rodney Williams, VP, as Barry Bauer was unable to attend due to other obligations, and this editor/secretary/treasurer was unable to leave work on time (7:15 pm) due to complications from the ill health of my assistant manager, so that I did not arrive until 40 minutes into the meeting.

Rex Barton has been functioning as an assistant treasurer to me as very thankfully sat in taking both secretary's notes and handling what treasurer's duties he could with no change or receipts.

There was a little thinner crowd at this meeting with 46 attendees. Rodney went over some information about the 2/87 Regional Contest we are hosting including displaying a 1st, 2nd & 3rd place trophies in nearly final form as chosen by the contest committee. The trophies are very attractive, good-sized and distinctive in both color & size for each of the 3 places. Rodney will display a 1st place trophy in final form at the October meeting.

A report from Cliff Kranz is that Moffet field is very excited over the aircraft display that we have donated so far. If you have finished any more of the display models, please contact Cliff. See Cliff if you would like to build a model for the display. A target has been set to complete all presently assigned models before 1987.

There were three visitors at this meeting with one of them garnering the majority of attention, an 8-1/2 year old GIRL. I do not have her name, but she built a nice model RR building and a very nice Me109 that had many seniors secretly hoping she does not make it to age 12. At this rate of progress, she will be interested in the nationals before boys!

Mike Burton was strong-arm volunteered as head judge for the quarterly contest. That is what he gets for questioning if we should only have 2 theme contests per year instead of four!

There was a nice selection of models entered with 6 entries in the theme category of naval aircraft. Matt Matsushita won with a 1/72nd Helldiver but it was close battle with a 1/48th A-7 Corsair and a 1/72nd F4B, with the F4B ending up second and the A-7 third place.

NATIONAL IPMS

Good News! A new regional coordinator has been accepted, and it is Jim Ireland of the Sacramento's Silver Wings. He is editor of their Tech Order news and very personable fellow. I look forward to his representation. The day after the October Meeting, Rodney and I will go to Jim's in Sacto to represent our club and meet with other club contacts.

UPCOMING EVENT

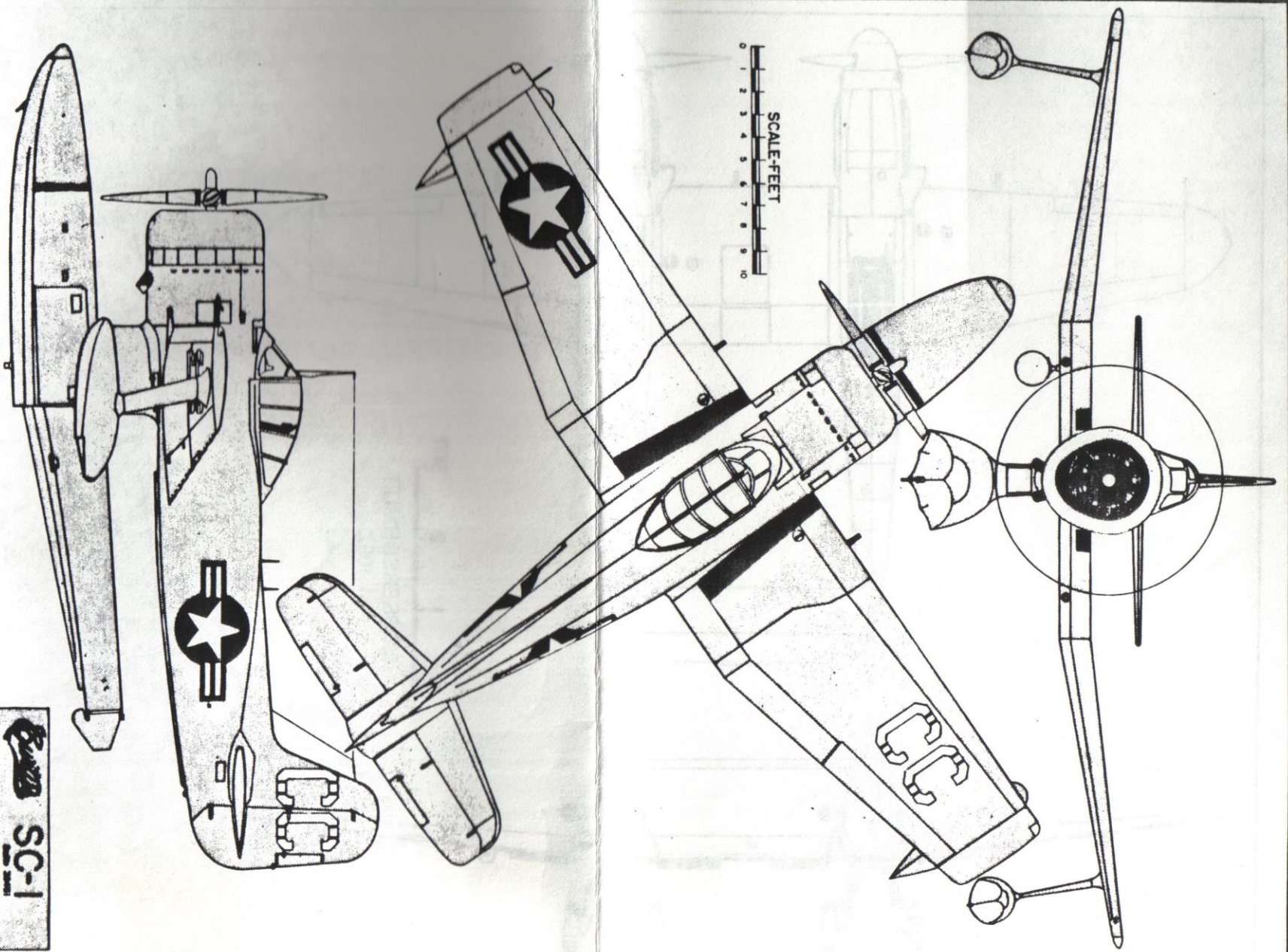
January 17, 1987 will mark the second NNL Western Nationals. The first event last year attracted many of the area's top auto modelers and models with over 100 modelers and 300 models on display.

For 1987, the event is expanding dramatically. Again held at the Sunnyvale Hilton Inn, the event will again use the Gamay I & II rooms, but these will be completely dedicated to display of the automotive models. The Petit Sirah room will be used for constant video programs, speakers, and other support activities. And the speaker this year is none other than the eccentric "Big Daddy" Ed Roth! If you ever had even a curiosity about model cars, stop by, you will not see another event like it, especially one that is NOT a contest.

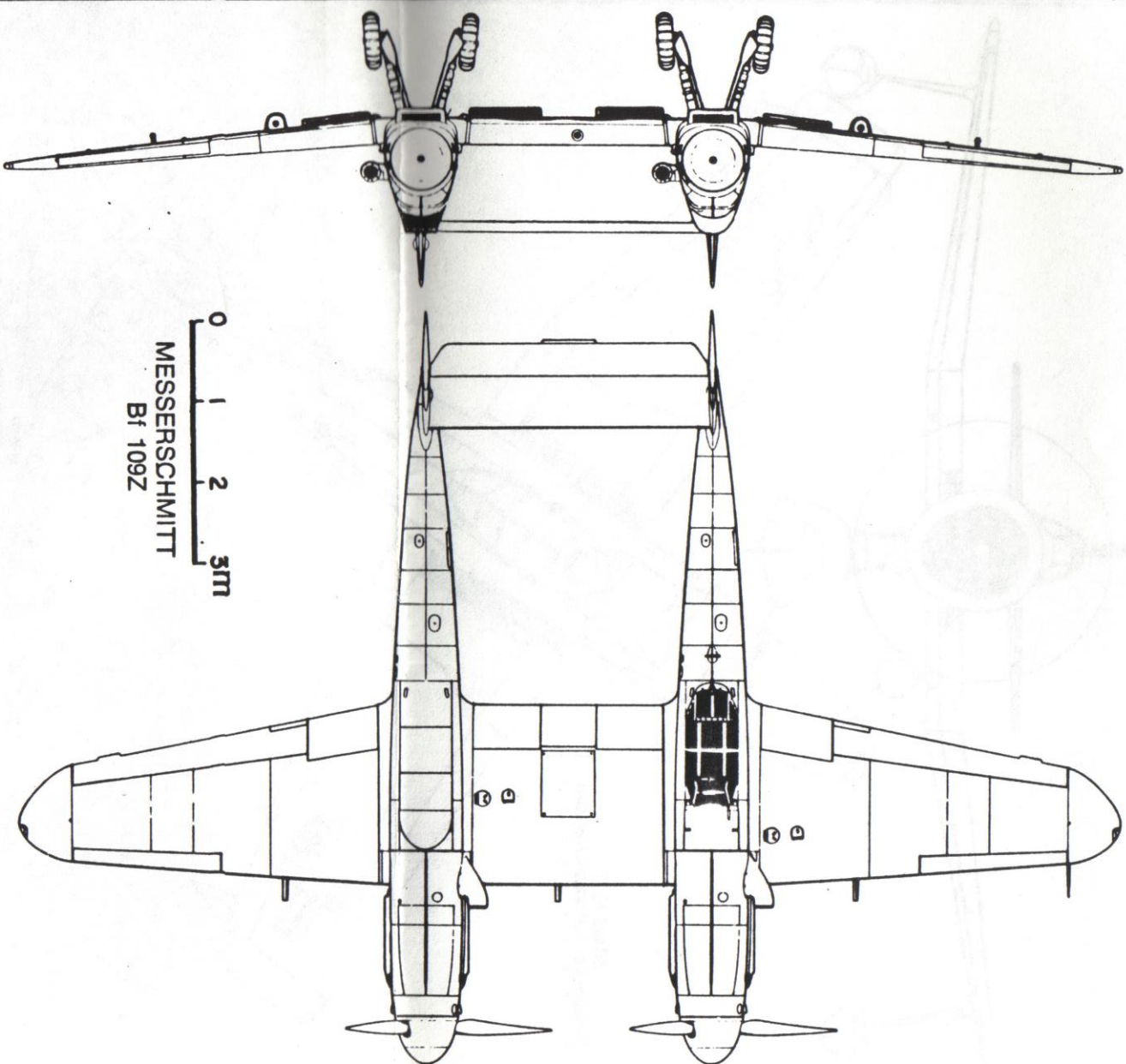
ALL MODELERS, TAKE NOTE - The following day, January 18th, the NNL Western Nationals will hold an ALL MODEL SWAP MEET in the Ballroom Not just cars, but aircraft, boats, ships, tanks, etc., etc. This could become the event of the year in Northern California!

THIS MEETING

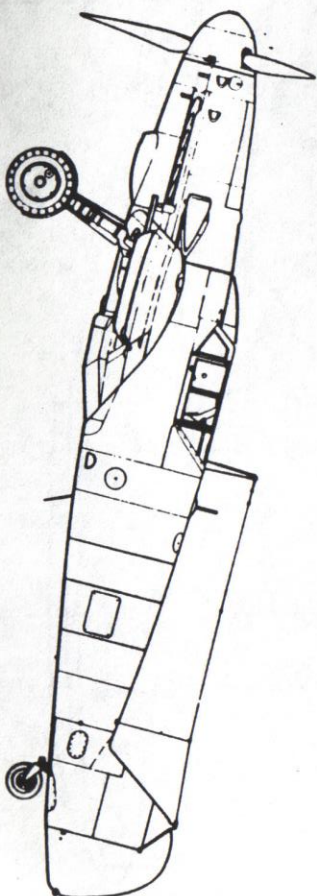
After hopefully a brief meeting, there will be an open demonstration of how a 3-man team of judges arrive at a decision. IF you have any curiosity about judging or being a judge, be there. There will then be a video of the '86 Nationals in Sacto, shot by Rodney.

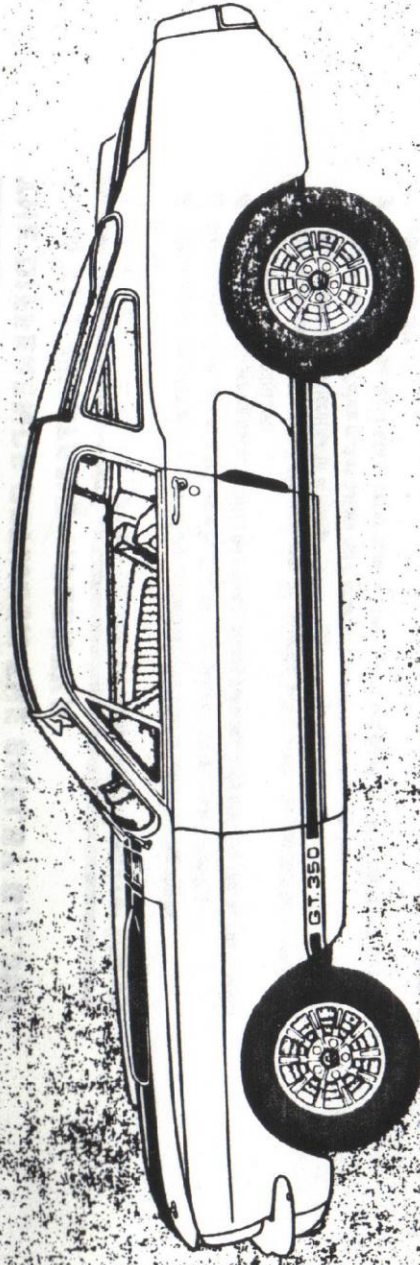



SC-1
From By Lt(jg) Charles Roth
USS Providence (CL 82) 1947



0 1 2 3mm
MESSERSCHMITT
Bf 109Z





SHELBY GT-350

G.T. 350 SPORTS CAR

Two-place fastback coupe; Shelby American prepared 289 cubic inch OHV Cobra V-8 engine equipped with special high riser manifold, center pivot float four barrel carburetor, specially designed hand built tubular "tuned" exhaust system featuring straight through glass packed mufflers, finned Cobra aluminum valve covers, extra capacity finned and baffled aluminum oil pan; fully synchronized Borg Warner special Sebring close ratio four speed transmission; computer designed competition suspension geometry; one inch diameter front anti-roll bar; fully stabilized, torque controlled rear axle; wide base steel wheels mounted with 130 m.p.h. rated, low profile nylon tires; Kelsey Hayes front disc brakes with ventilated disc and special full competition pads; wide drum rear brakes with metallic linings; adjustable shock absorbers; integrally-designed functional hood air scoop; all black interior with bucket type seats and Shelby approved competition "quick release" seat belts; cowl mounted tachometer; two speed electric windshield wipers and washers; competition type wheel; 19:1 quick ratio steering; rear brake air scoops; rear quarter panel windows; rocker panel identification stripes; heater. Complete With Above Standard

Equipment.....\$4428.00*
 Factory Installed Options:
 Cast Alloy Wheels \$257.00
 Rear Seat \$ 50.00
 Rallye Stripes \$ 64.00
 Dealer Installed Option:
 No Spin Rear Axle Unit (Not Available on Automatic Transmission Models) \$189.00

The G.T. 350 is available in White, Sapphire Blue, Candy Apple Red & Ivy Green. *plus license, taxes and freight, FOB St. Louis, Mo.

DIMENSIONS

Wheelbase, in. 108
 Tread Front and Rear, in. (std. wheels) . . . 57
 Length, Overall, in. 181.6
 Width, in. 68.2
 Height, in. 55

SPECIFICATIONS

Curb Weight, Lbs. 2800
 Tire Size. 7.75 x 15 or 6.95 x 14
 Brakes Disc front, Special drum rear
 Engine Type 289 cu. in. OHV V-8
 Compression Ratio 10:1
 BHP 6000 RPM 306
 Torque 4200 RPM 329 ft/lbs
 Weight Distribution % 53/47
 Construction Steel, monocoque

ENGINE

Type V-8 High Performance (Special) premium only
 Fuel 289 C.I.D.
 Capacity 1.5,4.2,6.3,7.8
 Firing Order 4.0.0 inches
 Bore 2.87 inches
 Stroke 306 @ 6000
 H.P. 329 @ 4200
 Torque Aluminum
 Oil Sump Cast Iron
 Cylinder Block Cast Iron
 Cylinder Heads Aluminum
 Intake manifold Cast iron, supported in five main bearings with external counter balances

Crankshaft Copper-lead
 Bearings 2.25 inches
 Main bearings diameter 2.125 inches
 Rod bearing diameter Push rod, from cam in block
 Valve operation Inlet 1.68 inches
 Valve diameter Exhaust 1.46 inches
 Special Order Inlet 1.88 inches
 Valve Springs Exhaust 1.63 inches
 Valve lift 1 & 1 damper spring per valve
 Carburetor Holley, four barrel, 715CFM

IGNITION
 Dual breaker-point distributor centrifugal advance 12V
 Voltage Ford
 Coil Ford
 Alternator Ford

GEARBOX

Borg Warner T10M—Close ratio 4 speed.
 Ratios 1:1
 High 1.20:1
 3rd 1.62:1
 2nd 2.36:1
 1st

CLUTCH

Ford, heavy duty, diameter 10.5 inches

OPTIONAL AUTOMATIC TRANSMISSION

Make and model Ford 289 Cruise-O-Matic high performance

Type Vacuum controlled shifting with torque converter multiplication
 Number of speeds Three and one reverse

REAR AXLE

Ford—heavy duty Ratio standard 3.89
 Limited slip differential optional equipment

SUSPENSION

Front, coil spring above upper "A" frame with strut type hydraulic shock absorber heavy duty adjustable. Extra heavy duty springs and sway bar standard equipment. Rear, heavy duty leaf springs with additional radius rods to control axle wind up, strut type hydraulic shock absorbers heavy duty adjustable.

BRAKES

Kelsey Hayes caliper disc front with special racing pads, drum rear with metallic linings
 Front discs 11.3 inches diameter, ventilated
 Rear drums 10 inch x 2.5 inches

TIRES

7.75 inches x 15.0 inches or 6.95 inches x 14 inches. High speed, low profile, nylon tires.

WHEELS

Steel—15 inches—6 inch rim
 Steel—14 inches—6 inch rim
 (optional alloy) 14 inches—6½ inch rim

CAPACITIES

Radiator 15 quarts
 Engine 7.5 quarts (with filter)
 Fuel 17 gallons

BODY STYLE

Fastback, two passenger coupe. Hood with functional air scoop and racing type positive locking devices, rear brake air scoops, rear quarter panel windows.

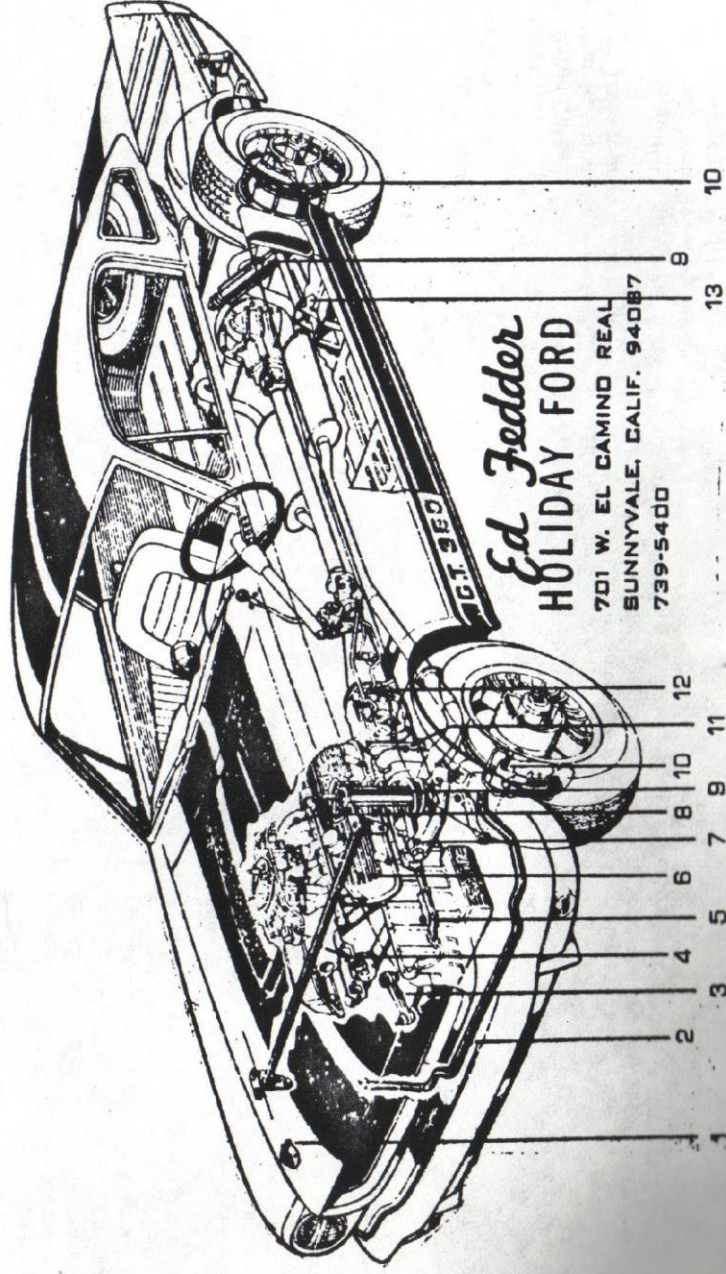
THE DIFFERENCE BETWEEN THE SHELBY G.T. 350 AND THE MUSTANG...PLENTY!

- 1 Competition type locking studs and safety pins eliminate the danger of the hood ever flying open at high speeds.
- 2 Full one inch diameter anti-roll bar further increases roll stiffness and cornering ability.
- 3 Overall steering ratio is reduced from 21:1 to 19:1 for quicker, more precise steering.
- 4 Monte Carlo reinforcing bar plus extra heavy reinforcing yoke add body stability and strength under severe driving conditions.
- 5 The Cobra cast and finned oil pan increases oil capacity, aids cooling and prevents oil surge during hard cornering, acceleration or braking.
- 6 Custom aluminum Cobra rocker covers have excellent sound deadening qualities.
- 7 Inner pivots of the front wheel upper control arms are moved down one inch improving cornering power and bite.

ONLY IN THE SHELBY G.T. 350, REAR QUARTER WINDOWS AND REAR BRAKE AIR SCOOPS.

- 8 The cast aluminum high-rise manifold increases the engine's ability to breathe at high speeds and extends its useful power range. Matched to the manifold is a Holley low-restriction four-barrel carburetor with center pivot floats which prevent flooding or fuel starvation under the most severe driving conditions.
- 9 Heavy duty shock absorbers are adjustable.
- 10 At the front, Kelsey Hayes disc brakes are added with ventilated discs and special full competition pads. At the rear, the G.T. 350 has 10" drums with metallic linings. This combination is practically fade-free. Special wheels are mounted with 130 mph-rated low profile nylon high performance tires.
- 11 The breathing ability of the engine is improved further by the use of hand-made steel tube exhaust headers and low restriction, straight-through mufflers.
- 12 The Borg Warner special Sebring close ratio four speed transmission is fully synchronized.
- 13 A pair of torque reaction arms are added to take the burden of acceleration and braking forces and allow the springs to handle the weight of the car effectively.

PLUS: special instrumentation including cowl-mounted illuminated tachometer; competition seat belts; true two-seater; interior luggage shelf. Optional: Self locking rear end, folding rear seat, alloy wheels, automatic transmission, Le Mans stripes.



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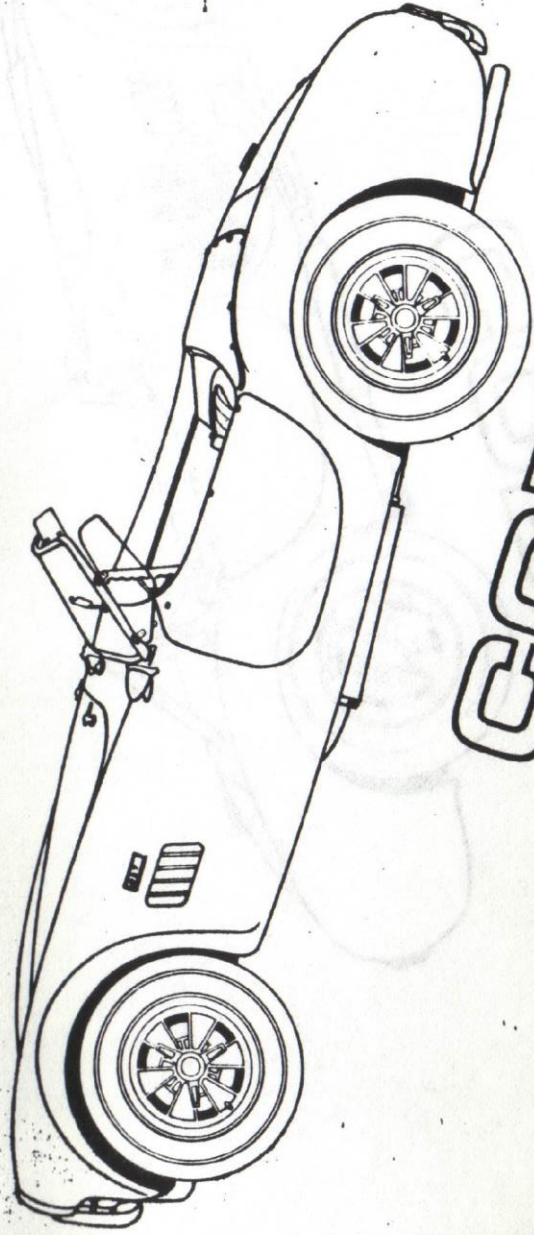
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COBRA

Ed Jeddler

HOLIDAY FORD

701 W. EL CAMINO REAL
SUNNYVALE, CALIF. 94087
739-5400

427
POWERED BY FORD

SPORTS CAR

ENGINE

Water-cooled V-8, with cast iron block, 5 main bearings
Bore & stroke 4.24 x 3.78 in, 107 x 96 mm
Displacement 427 cu in, 6998 cc
Compression ratio 10.4 to one
Carburetion Two 4-bbl Holley
Valve gear Pushrod-OHV
Horsepower (SAE) 425 bhp @ 6000 rpm
Torque 480 ft.-lbs @ 3700 rpm
Electrical system . . . 12-volt battery, alternator
Fuel recommended Premium only
Mileage 9-12 mpg
Range on 18-gallon tank 162-216 miles

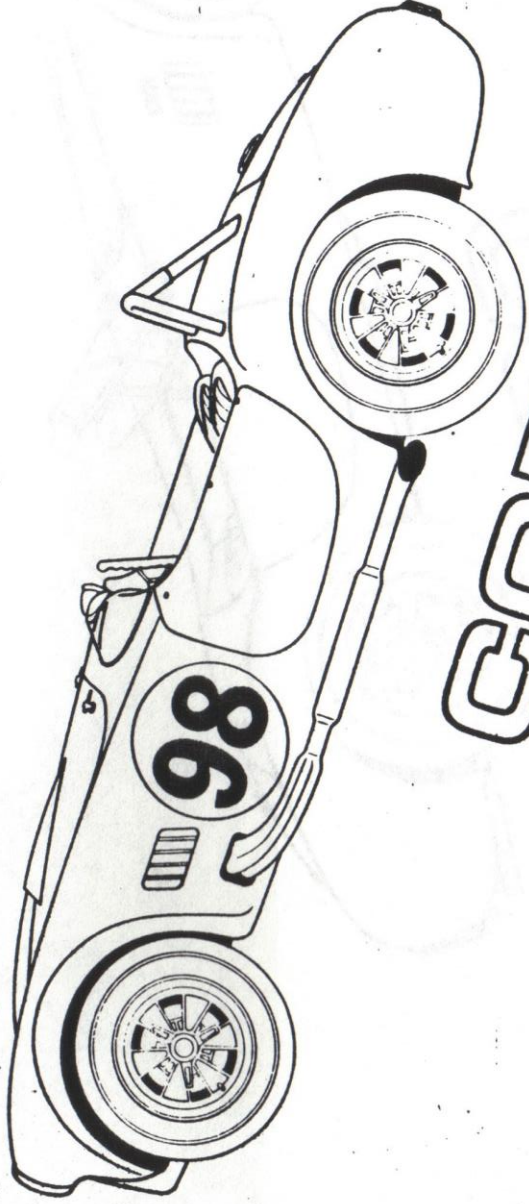
CHASSIS

Wheelbase 90 in
Track F 56, R 56 in
Length 156 in
Width 68 in
Height 49 in
Ground clearance 4.35 in
Dry weight 2354 lbs
Curb weight 2529 lbs
Test weight 2890 lbs

Weight distribution front/rear 48/52%
Pounds per bhp (test weight) 5.95
Suspension F: Ind., unequal-length wishbones with anti-dive and anti-squat, coil springs
Suspension R: Ind., unequal-length wishbones with anti-dive and anti-squat, coil springs
Brakes disc, 11.63-in front, 10.75-in rear, 580 sq in swept area
Steering Rack and pinion
Tires 8.15 x 15 Goodyear Blue Dot
Wheels 7½ x 15 cast alloy pin drive, knock-off hub

DRIVE TRAIN

Clutch 11.5-inch single dry plate, hydraulic release
Transmission 4-speed, all synchro
Gear Ratio Over-all Max rpm/1000 Max mph
Rev 2.32 8.21 9.86 69
1st 2.32 8.21 9.86 69
2nd 1.69 5.98 13.54 95
3rd 1.29 4.57 17.71 124
4th 1.00 3.54 22.91 160
Salisbury limited slip differential
Final drive ratio 3.54 to one



COBRA 427

POWERED BY FORD

COMPETITION

All "Sports" specifications apply except as follows:

BODY CONSTRUCTION

Aluminum panels, large diameter lightweight steel tube frame carrying suspension mounts.

ENGINE

Water cooled V-8, with cast iron block, magnesium intake manifold, alloy cylinder heads, lightweight valves and alloy water pump.

Bore & stroke 4.24 x 3.78 in

Displacement 427 cu in

Compression ratio 12.4:1

Horsepower 480 @ 6500 rpm

Torque 510 ft-lbs @ 3700 rpm

Carburetion 4 V Holley

w/center pivot float bowls

STANDARD GEAR RATIO

4th 1:1

3rd 1.29:1

2nd 1.69:1

1st 2.32:1

CLUTCH

Ford, single plate, 11.5 in diameter

STANDARD REAR AXLE RATIO

3.77 to one

WHEELS

7½ x 15 front, 9½ x 15 rear, alloy

TIRES

Front, 9.90 x 15 Speedway Specials

Rear, 11.90 x 15 Speedway Specials

CAPACITIES

Radiator 20 quarts

Engine Oil 13 quarts wet sump—

14 quarts dry sump

Fuel Tank 42 gallons

w/dual electric fuel booster pumps

Sway bars front and rear, special tuned exhaust

system, roll-over protection, seat belts, rear

axle oil cooler and pump, engine oil cooler, all

standard equipment.

OPTIONAL EQUIPMENT

Optional gear and rear axle ratios; special racing

bucket seat, shoulder harness, quick

change brake pad kit, mechanical chromometric

tachometer, dry sump kit, competition wind-

screen.

SPECIAL-PURPOSE HIGH-ALTITUDE AIRCRAFT NOW FLYING IN NASA-SPONSORED EARTH RESOURCES AIRCRAFT PROJECT. "AT ALTI-TUDE, GOING AS FAST AS IT'LL GO, IS JUST ABOUT AS SLOW AS IT'LL GO."

Standing within a hundred feet of a Pratt & Whitney J-75 going full-bore is a thrill you really can afford to miss. But mounted inside a Lockheed U-2 that's about to STOL in its own inimitable fashion, who cares about a busted ear-drum? Short field performance? You betchum, Red Rider. Departing at 10,000 feet-the-first-minute, U-2s don't encourage long "good-byes," and U-2 pilot Bob Ericson on his way to work is—out of sight.

Since being mustered out of the Air Force in April 1971, two Lockheed U-2Cs, decked out in brand-new civies, have been flying out of Moffett Field (Mountain View) California. On "permanent temporary loan" to NASA's Ames Research Center, the U-2s, now designated N708NA and N709NA, carry out a variety of scientific experiments. Complimenting three other NASA aircraft based in Houston, Texas—a Lockheed P3A Orion, a Lockheed C-130B Hercules, and a Convair RB-57F—the NASA-Ames aircraft were introduced into an already existing Earth Resources Aircraft Project. In preparation for the future Earth Resources Technology Satellite, the U-2s augment the high altitude capabilities that were needed.

Engaged in the remote sensing of data, all the NASA aircraft are contributing towards establishing a basis of experience in data collection, interpretation, cataloguing and dissemination before the ERTs satellite becomes operational.

By simulating the satellite's eighteen-day cyclical coverage, the U-2s fly over five control areas chosen for their particular ecological idiosyncrasies. Because of the unique situations each test site presents, the areas covered are: the entire Chesapeake Bay region of the eastern U.S.; a 25,950 sq. mi. section around Phoenix/Tucson, Arizona; and (because of the proximity and diversity it offers) California's northern coast to Lake Tahoe, Nevada; the San Francisco Bay Area and California's prolific agricultural Central Valley region including the entire Los Angeles Basin. Data gained from the flights is available free to requesting federal, state and local agencies.

Since we on the ground often can't "see the forest for the trees," high-altitude photography in this instance functions as a learning tool for scientists to study and promote the general health and well-being of the Earth. Somewhat like the Intensive Care Unit of your local hospital, the current physiological status of the "patient" is systematically monitored and the results studied by various specialists. Ideally, for example,

should the patient be threatened by an encroaching attack of corn blight through its mid(west)section, the Department of Agriculture can immediately notify farmers in the infested area.

It's precisely this sense of immediate purpose and the possibilities of future good that's noticeable in all the operations crew at NASA-Ames. Shortly after the April 2, 1971 budgetary approval was given the NASA-Ames portion of the project, the flight operations crew became more than mere ciphers on a piece of paper.

In Plant 42 at Lockheed's Palmdale, California facility, the Lockheed mechanics permanently assigned to the two fifteen-year-old "vets," began the rejuvenation. Meanwhile, up at Moffett Field, NASA Project Manager Marty Knutson gathered together the necessary ground handling and data facility personnel and equipment. By June 3, when the "08" and "09" flew into Moffett Field, the "birds" were stripped down to a comely 13,800 lb. each, and repainted white with just the right touch of two shades of blue trim. After various shakedown flights of the aircraft, the sensor package and camera systems, the full crew of 23 had jelled into a solid unit. With the first official data acquisition flight taking place on August 31, they were off and running.

As Bob Ericson's jet blast faded over Hangar 211, in a nearby trailer Ivor Webster prepared to suit up for a shore hop to test out a cranky oil pressure system in the "08." Joining the ranks of unusual characters who get dressed by putting their "hat" on first, "Chunky" was already helmeted and pre-breathing oxygen for the required 45 minutes prior to takeoff.

In the operations trailer next door, pilot Jim Barnes spoke of the crew's sense of dedication to the project. Jerking his thumb towards Webster's direction, Barnes ripped off an emphatic: "It's not just him. Or me. We all feel that way. The gent over there that's putting the suit on 'im, the mech out there with the greasy clothes on, every man in this unit does. Every one. Because they all work so hard. And there's nobody else. You can't say 'help.' There is no help. This is it!"

It's a small unit with a bare-bones government budget. Everyone knows everyone else. Each is dependent on the other. Each is interested and participates in the outcome. Often the pilots and the mechanics will study the day's photographs along with the data crew, since in reality they all participate in the operations and planning.

As Knutson says of the Lockheed pilots, "...and if they weren't motivated for the project—not just flying this airplane, the kind of work we hope to do for the country, mind you—we couldn't survive, because we're asking them to do a lot more than just flying an airplane."

What's it like to fly the N708NA or

the N709NA?

"They're slightly different. Each individual U-2 is an individual. Since they were hand-built, there are slight differences."

"Do you talk to 'em?"

"Oh no. We just sit there quietly and do our job."

"As a pilot's airplane, how is it?"

"Very exciting really. After that, when you're doing your work—if all systems are behaving—it's very pleasant and quite easy."

"Can you relax?"

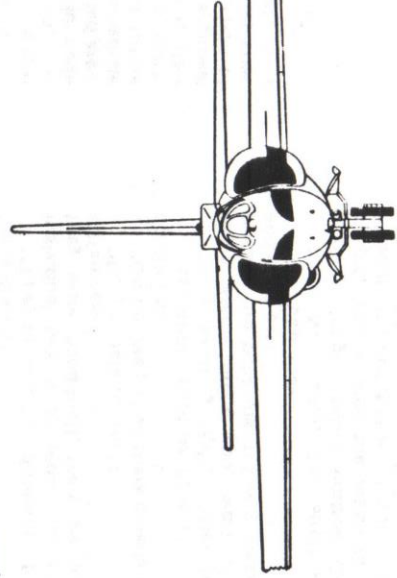
"No. Not really. The airplane is quite a straightforward airplane. Quite simple. You've seen the inside of the cockpit. It's not modern. It's not state of the art, if you will. But it's quite a simple, straightforward device. As long as you abide by the basic rules, it's quite an easy airplane to fly..."

Born in the brain of Lockheed's legendary Kelly Johnson during the early Fifties, a prototype Utility-2 airplane is reported to have been begun in January 1955. Successfully flight-tested in August 1955, the aircraft entered into limited production to specific requirements. Said to have been built to have a life span of no longer than eighteen months, obviously later models of the aircraft were structurally strengthened to increase their durability factor. The additional weight forced an engine upgrading (originally P&W J-57) and resulted in better aircraft performance.

They basically have a glider configuration, for executing a "tight" 1800 at 65,000 feet "there are sixteen miles scribbled by the turn." The U-2, then, is not exactly what you would call "aerobatic." Also, the differences between mach buffeting and stall-out tend to keep one alert. At altitude, going as fast as it'll go, is just about as slow as it'll go. Thus, having so narrow a flight margin, "it can bite you if you get outside its flight envelope. You've gotta mind the store!"

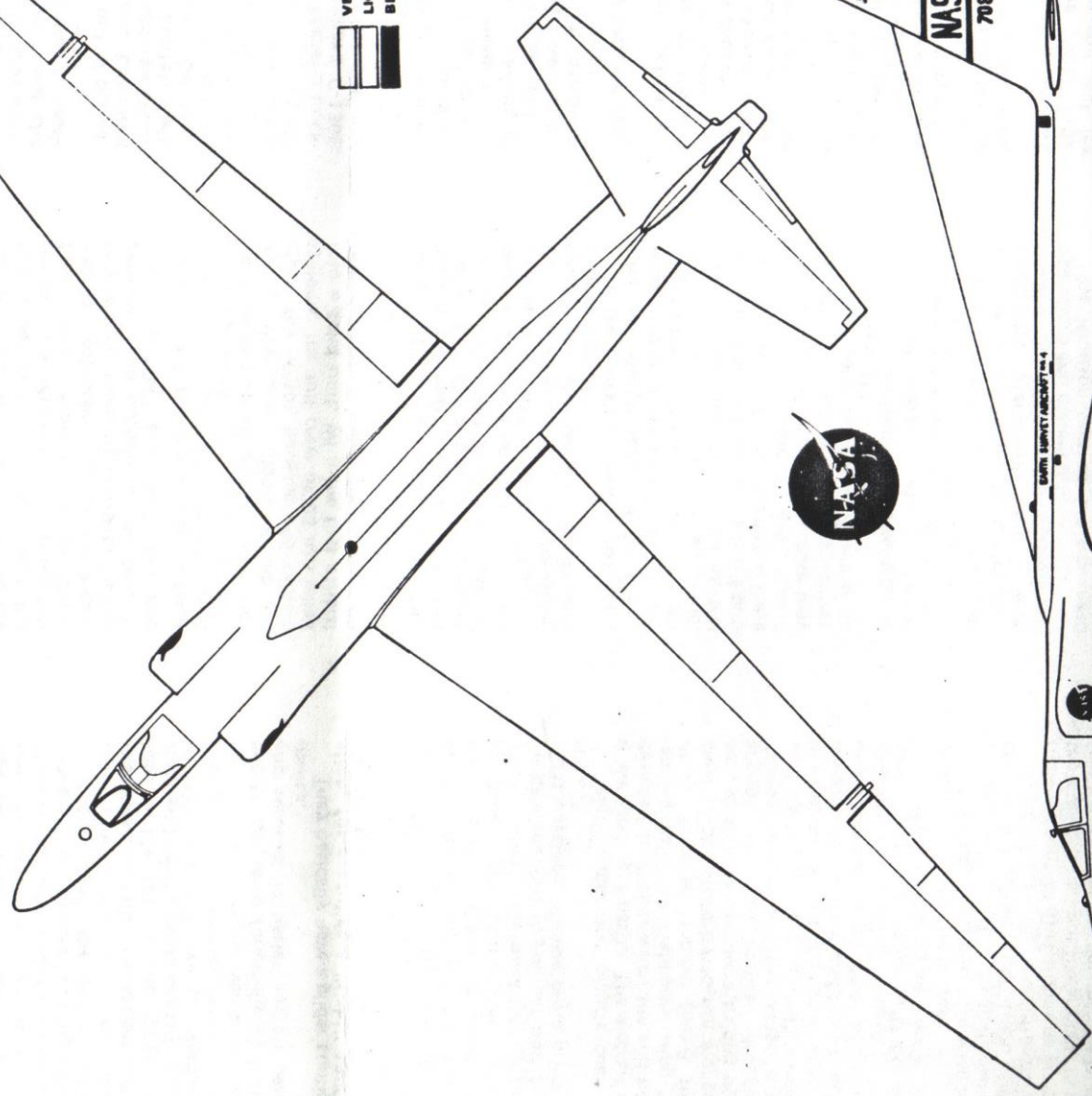
"Wet" wings and bicycle gear can make landing a hassle. The aircraft was designed so that towards the end of its landing roll, the fuel-heavy wing falls down. Prior to landing, NASA flight crew trucks stand by to run alongside and, as soon as the aircraft slows down enough, the crew re-insert droppable "pogos" underneath the wings to prevent its flopping over. But it's a matter of pilot and crew pride not to allow the wings to touch the ground. It's a matter of crew pride to "get there" before that happens. It's a matter of pilot pride to have the aircraft sashay past the crew trucks before the built-in metal wing skids scrape along the runway.

In the final moments before landing, the pilot will fly close to stall speed to determine his lateral CG. Then, using a cross transfer pump, he will transfer the right amount of fuel from one wing to the other. If he's got the airplane in perfect balance, he can "go into his landing roll and come to a dead stop. It's just there. Like a teeter-totter. Perfectly balanced. Fuel weighs six lb. a gallon, and he's got it right-down-to-the-gallon!" Now you know no self-respecting maintenance crew is going to allow that kind of arrogance.



SCALE 0 2 4 6 8 10 11 12 14 16 18 FEET

VERY LIGHT GREY
LIGHT BLUE
BLUE



NASA
708

SPACE SURVEY AIRCRAFT NO. 4

N708NA

LOCKHEED

LOCKHEED U-2C