# DOLLAR FIFTY
# DOLLAR FIFTY-TWO

*As long as there are students and commuters, the 150/152 will endure.*

BY THOMAS A. HORNE

Cramped and drafty, slow and skittery, loud, poorly heated and built without an abundant concern for style, Cessna 150s and 152s are the airplanes we love to hate. From the beginning of a student pilot's flying career, the idea sets in that 150s and 152s are something you strive to surpass, a necessary evil one must endure before moving on to bigger and better things.

Still, anyone who has spent his share of time behind the wheel of a 150 or 152 looks on them with more than a trace of fondness. After all, the cockpit of a 150 is where thousands of pilots first experienced the thrills and sensations of flying. But the urge to criticize some of the airplane's characteristics seems to be ingrained in the pilot mentality, probably because it serves as an excellent means of massaging one's ego and impressing others. We have all heard stories of hair-raising flights in Cessna 150s and 152s and might have even told a few of these tales ourselves.

It is easy to be critical of an airplane as ubiquitous as the 150 and 152. But these airplanes have many undeniable strong points.

Their low operating cost, sturdiness and ease of maintenance make them *the* popular choice of fixed-base operators who train large numbers of students. In the 24 years they have been in production, more than 28,000 Cessna 150s and 152s have been built. Another 2,200 were built by Cessna's French subsidiary, Reims Aviation, for sales in Europe.

This success has not been entirely due to cost considerations, though. The fact is that the 150 and 152 make fine training airplanes because of the way they behave. Even their so-called

shortcomings have value. In many respects, they are demanding trainers.

Underpowered and easy to overload? Well, yes. With full fuel and two average-size pilots aboard, any 150 or 152 will be very close to—if not over—its maximum gross weight. If he takes off in this condition on a hot day, the student realizes the effects of density altitude, and the importance of computing weight and balance before each flight.

Funny pitching moments when the flaps are extended or raised? Yes again. When the flaps are extended, the nose pitches up; raise the flaps and the nose drops. If airspeed and altitude are to be preserved during these moves, the pilot must learn to apply the correct pitch and trim inputs. This skill is emphasized when the student learns his pattern work and practices his first go-arounds.

Bounces around wildly in turbulence, and challenging to land in a crosswind? What would you expect from an airplane with such a light wing loading and slow speed? Although these features make the pilot's job a bit more difficult, they will give him a good feel for the airplane and promote good crosswind technique. Compared to landing a low-wing trainer—such as the Piper Cherokee 140 or Tomahawk—the Cessna 150/152 requires more skill in playing the ailerons and rudder against a stiff crosswind. It is easier for the wind to lift a wing in a high-wing airplane, and the fuselage acts as a sort of keel, helping the airplane weathercock into the wind during the critical moments of the landing flare and touchdown.

Stalls and spins readily? Yes, if provoked. The student who allows airspeed to dissipate while in uncoordinated flight will soon find himself faced with a spin or spiral, an experience not likely to be forgotten. But forever after, he will be aware of the problem and know how to avoid it, if instructed properly. And all 150s and 152s are certificated for spins, chandelles and lazy 8s. This gives students and licensed pilots alike the chance to practice the skills needed to perform these maneuvers safely.

For the more adventuresome, there is the Aerobat version of the 150 and 152. Stressed for six positive and three negative Gs, this airplane is certificated for barrel rolls, aileron rolls, snap rolls, Immelmann turns, Cuban 8s, loops, spins and vertical reversements.

Prone to carburetor icing? National Transportation Safety Board statistics do show that a large proportion of the accidents attributable to carburetor ice occur in Cessna 150s and 152s. This is why the use of carburetor heat is stressed so heavily in training programs that use these airplanes. From

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continued

the very beginning, students are made aware of carburetor icing and are accustomed to using carburetor heat prior to any power reduction. The carburetor-heat knob should not be unfamiliar to any pilot who has ever had instruction in a 150 or 152.

With the ink on his private certificate still wet, the last thing the newly rated pilot in the market for an airplane wants to think about is buying a Cessna 150 or 152. But after a realistic assessment of his operational needs, the practical virtues of these airplanes often prove to be too irresistible. In fact, there is evidence of a new surge of interest in the 150 and 152. The newly formed Cessna 150/152 Club, Post Office Box 15388, Durham, North Carolina 27704, has a membership of 1,200 and publishes a monthly newsletter.

Sales of new 150s and 152s traditionally have come from high tax-

*Practicality, not performance, beauty or comfort, has provided 150/152s with lasting appeal.*

bracket investors. After purchasing the airplane, the owner typically leases it back to the fixed-base operator who sold it to him. By depreciating his new investment, taking an investment tax credit, deducting the interest payments and leasing the airplane at the same time, the owner can have the advantages of tax deferment without some of the high carrying costs. At least that is the theory. Most owners find that they are stuck with the maintenance bills, even though his "leaseback" airplane is being used as one of the FBO's trainers.

New sales of 152s, however, have been dropping off sharply in the past few years, and for good reason. A Cessna 152 with a $37,000 price tag is enough to give sticker shock to even the most affluent buyers. The high interest rates of the past three years and the decline in student starts complete the dismal sales picture. The best seller of Cessna's entire line, the 150 series' most prosperous year was 1966, when a whopping 3,087 150s were sold, almost double the number sold the year before. This contrasts sharply with the mere 80 Model 152s sold so far in 1982. In fact, the sales climate is now so bad that production of the Cessna 152 has been suspended indefinitely since March of this year.


As used airplanes, however, the Cessna 150 series make a lot of sense. These airplanes first arrive on the used market after spending 500 hours or so as a trainer. This can take $5,000 or more from the new list price. The *Aviation Price Digest*, general aviation's equivalent of the auto industry's blue book, indicates that a well-equipped 1981 Cessna 152 is worth about $19,000. New, they sold for $30,100.

You may be skeptical about the condition of a trainer that has been subjected to a full year of hard landings, abusive engine treatment or other student-induced forms of mayhem. In some cases, your fears may be justified; but for the most part, training airplanes receive more than adequate maintenance. Because they are operated for hire, they must be serviced at 100-hour intervals. A two- or three-year-old Cessna 152 can be in perfectly good condition, in spite of what we may be tempted to believe. And most can be purchased for half their original cost.

As for the older (1959 through 1970) models, prices seem to bottom out at approximately $4,000 to $5,000. It is not until the 1979 model year that average used prices start climbing to five digits. Of course, if the model you are interested in is an Aerobat, or has been modified, the price could be significantly higher than average. (For more on 150 modifications, see "Style: Uncommon Cessnas," p. 48.)

In 1958 the two-seat lightplane market belonged to the Piper Aircraft Corporation. Its 150-hp Super Cub was unopposed in the marketplace. Cessna introduced the 150 as a modern alternative to the somewhat antiquated Cub. The 150's tricycle gear made the decision easy for FBOs who wanted a new trainer. Tricycle gear is much more forgiving of poor landing technique, and all FBOs are concerned with preserving their capital. Cessna's last efforts in the two-seat market were tailwheel airplanes—the 120/140 series—that were built between

# 150
# 152

*The new 152, a re-tweaked version of the original design, has a modern panel and Nylafil rudder pedals.*

1946 and 1951. Sales fell off at the end of the production run, and Cessna went out of the two-seat business for the next seven years. By 1958, Cessna's market analysts must have figured that it was time for a tricycle gear trainer. They were right.

The 150/152 series has been in production so long that it now seems older models have acquired an appeal as classic airplanes. With their manual flaps, fastback fuselage, straight tail and tiny, narrowly tracked gear, the 1959 through 1964 models show some of the heritage of their predecessor—the Cessna 140. After 1964, the basic design did not change much, but there were a large number of minor changes over the years. (See "Telling One From Another," page 96.)

The most radical change occurred in the 1978 model year, when production of the 150 ceased and a new model—the 152—was introduced. At that time, 80-octane aviation fuel was being phased out by the major refiners and replaced with 100 low-lead avgas. The 150's O-200 engine, Cessna learned, could suffer lead fouling from the new, higher octane fuel. The 150 needed a new engine, one designed to run on 100LL; thus the switch to the more powerful 110-hp Lycoming O-235 engine. Other major differences between the 152 and the 150 were a beefed-up electrical system and a reduction of the maximum flap travel from 40 to 30 degrees.

Apparently, many student pilots attempted go-arounds with a full 40 degrees of flap in the 150. By limiting the flap travel to 30 degrees, Cessna claimed that the initial climb in a 152's full-flap go-around would be 450 fpm under standard conditions.

What you pay to buy a used airplane is but one of the costs of ownership. Routine maintenance costs and airworthiness directives (ADs) are another consideration. Happily for many 150/152 owners, the worst case

scenario involves a maximum of only four recurrent ADs.

AD 80-11-4 applies to both the 150 and 152. This requires a visual inspection of eight nut plates on the vertical aft fin attach brackets for cracks in the body or base of the nut plate. Cracked plates must be replaced, and this inspection must occur every 100 hours.

Another AD that may still affect some low-time 150s and 152s is AD 80-6-3. If the airplane has less than 900 hours time in service, a new flap clamp must be installed before 1,000 hours is accumulated. If the airplane had more than 900 total hours in service as of April 21, 1980, this fix must be accomplished within 100 hours. The new clamp is designed to prevent "a possible, sudden, unexpected retraction of the left wing flap" in the 150M and certain 152 models.

AD 80-25-R1 applies to those 152s with engine serial numbers L-12500-15 through L-20676-15 (this takes care of most 152s up through the 1980 model year), remanufactured O-235 engines shipped between December 10, 1976, and November 8, 1979, and with push rods replaced between December 10, 1976, and November 24, 1980. A shipment of faulty push rods brought this directive about. Every 25 hours, the valve tappet clearances on the affected engines must be measured and recorded.

The last recurrent AD is 80-25-7-R1, which applies to virtually all 152s. This calls for an inspection of the O-235's Stewart Warner oil coolers for leakage. If the oil cooler has less than 10 hours time in service, a replacement unit must be installed. If the airplane has accumulated more than 10 hours since the September 24, 1981, issue date of the AD, the oil cooler must be inspected prior to each flight for signs of leakage. A placard also must be installed, reminding the pilot to check the oil cooler before each flight. If leakage is detected, the cooler must be replaced.

Apart from these ADs, there are specific maintenance items that a prospective 150/152 owner should be aware of. The more common maintenance problems center on the cumulative abuse that students may have dealt.

You should look at the main gear and tires for signs of damage from those very firm student arrivals. The nose gear may have inherited a case of the infamous "Cessna shake," the result of poor landing technique and improper servicing of the nose gear's shimmy dampener.

Cracked cylinder heads are another probability. Abrupt power reductions can cause the cylinders to cool so rapidly that shock cooling can take place. This causes the cylinders to crack because of drastic temperature changes and the resultant thermal stresses on the metal in the cylinders. This occurs most often as a result of practicing power-off approaches. A low score on a compression check is one indication of cracked cylinders, but a borescope examination of the cylinder walls is a more certain means of detection.

The cost of parts should be another factor in the decision to buy. Those with their hearts set on a 152 will be interested to know that an exhaust valve for the O-235 engine costs about $150; for the 150's O-200, the price is only $33. Other engine parts are equally disparate in price. A 152's piston is $46, a 150's is $23.

With a fixed-pitch propeller, fixed gear and very simple construction, the 150 and 152 are a breeze for mechanics to work on. Parts are readily available, most areas of the airplane are easily accessible, and an annual inspection usually can be performed for a flat fee of $350. However, taking care of any squawks, ADs or other repairs customarily pushes the cost of an annual up to approximately $600.

In 1981, the Federal Aviation Administration, aware of several acci-

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dents caused by icing in the fuel lines of Cessna 150s and 152s, issued a notice of proposed rule making that may require the installation of an additional fuel quick-drain valve between the fuel selector and the strainer drain. It has been learned that the lowest part of the 150's and 152's fuel system is *not* located at the strainer drain. The lowest portion of the fuel line plumbing is at a T fitting just forward of the fuel selector, in the belly of the airplane. Water and foreign material can collect and remain there, unaffected by draining the standard-equipment quick drains.

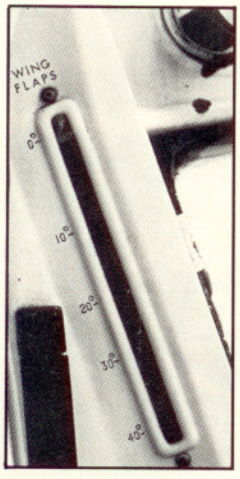
So far, this NPRM has not progressed to AD status. But quick-drain kits are now available, allowing the pilot to drain this critical area before each flight. In the past, Cessna service manuals had recommended that the T fitting be drained as part of a 100-hour inspection. Most mechanics, though, neglect this procedure.

Cessna now installs the T fitting quick-drain, at a cost of $82.20. The Middle Tennessee Aircraft Components Company (Post Office Box 472, Smithville, Tennessee 37166, telephone 615/597-7714) also will sell you a quick-drain kit for the T fitting for only $12. Installation of the drain is simple. Just remove the existing fitting and the drain plug and replace it with the quick drain. For such a simple, inexpensive modification, this drain is an invaluable safety feature.

Any airplane is a patchwork of compromises, and the Cessna 150 series is no exception. If they are inexpensive to buy, maintain and operate,

**150**
**152**

*Production was suspended in March 1982, ending a great tradition.*




*Did the switch to electric flaps cause the tremendous sales spike of 1966?*

| CESSNA 150 | MODEL YEAR | REIMS AVIATION F150 |
|---|---|---|
| 122 | 1958 | |
| 648 | 1959 | |
| 354 | 1960 | |
| 344 | 1961 | |
| 331 | 1962 | |
| 472 | 1963 | |
| 804 | 1964 | |
| 1,637 | 1965 | |
| 3,087 | 1966 | 100 |
| 2,114 | 1967 | 150 |
| 2,007 | 1968 | 152 |
| 1,714 | 1969 | 136 |
| 832 | 1970 | 169 |
| 879 | 1971 | 150 |
| 1,100 | 1972 | 170 |
| 1,460 | 1973 | 214 |
| 1,080 | 1974 | 144 |
| 1,269 | 1975 | 132 |
| 1,399 | 1976 | 129 |
| 429 | 1977 | 108 |
| | 1978 | 4 |
| 22,082 | TOTALS | 1,758 |

| 152 | | F152 |
|---|---|---|
| 1,522 | 1977 | 19 |
| 1,918 | 1978 | 110 |
| 1,268 | 1979 | 142 |
| 887 | 1980 | 142 |
| 634 | 1981 | 79 |
| 80 | 1982 | 11 |
| 6,309 | TOTALS | 503 |

they are also slow and uncomfortable. At 2,400 rpm and 7,500 feet you can count on a true airspeed of approximately 102 knots, give or take a few. All the while burning only five to six gallons of fuel per hour. The pilot's operating handbook claims speeds of 105 or 107 knots (depending on the model), but these speeds are calculated with wheel fairings.

The 152 is only two to three knots faster than the 150, in spite of its extra 10 horsepower. This is because its engine is redlined at 2,550 rpm. This rpm restriction makes the 152 quieter than the 150 at takeoff power. But the trade-off goes beyond this. By de-rating the 152's engine, the time between overhauls can be stretched to 2,000 hours—200 more than the 150's.

With speeds hovering around 100 knots, it is no surprise that 150/152 pilots acquire a keen sensitivity to winds aloft. Even normal headwinds can drop groundspeeds to pre-1973 highway cruising ranges. Still, it beats driving, and on trips of 300 nautical miles or less the two-seater Cessnas are well-suited as intercity commuters, which is just how Cessna promoted 18 years' worth of 150s.

Spend much more than three hours a day in a 150, though, and you can tax even the most stalwart passenger's constitution. All but the most recent models have very little seat padding and few seat adjustment positions.

But seasoned pilots soon come to accept their inconveniences and settle down to the realization that flying the good old "one-filthy" can be fun. It is an airplane that will never let you forget your flying skills—or lack of them. Every flight in a 150 or 152 has immense educational value because it teaches one of the most important piloting skills, the ability to do several things at once. Ask a high-time King Air or Learjet pilot his impressions after deigning to fly a 150, and you will be amused at the color of his language and his sudden animation.

And that is the bottom line. Whether used for fun, short business hops or proficiency flying, the 150 series does its job in a way that reminds you you are still alive, not lulled into complacency by autopilots, eight-waypoint RNAVs and system redundancy. That, and their economy, is enough to continue to attract allegiance from 150 and 152 owners and aficionados for years to come. □

*"Telling One From Another" overleaf*

| **1959 Cessna 150** | | **1982 Cessna 152** |
|---|---|---|
| $8,795 | Base price | $24,200 |
| $5,000, current market | Price | $32,235, as tested |
| Cross Country | *AOPA Pilot* Operations/Equipment Category* | Cross Country |
| | **Specifications** | |
| Continental O-200-A, 4 cylinders, 100 hp @2,750 rpm | Powerplant | Lycoming O-235-L2C, 4 cylinders, 110 hp @ 2,550 rpm |
| 1,800 hr | Recommended TBO | 2,000 hr |
| Sensenich M69CK-52, fixed-pitch, 2-blade | Propeller | McCauley 1A103/ TCM 6958, fixed-pitch, 2-blade |
| 33 ft 4 in | Wingspan | 33 ft 4 in |
| 21 ft | Length | 24 ft 1 in |
| 6 ft 11 in | Height | 8 ft 6 in |
| 160 sq ft | Wing area | 159.5 sq ft |
| 9.4 lb/sq ft | Wing loading | 10.5 lb/sq ft |
| 15 lb/hp | Power loading | 15.2 lb/hp |
| 2 | Seats | 2 |
| 5 ft 3 in | Cabin length | 7 ft 9 in |
| 2 ft 9 in | Cabin width | 3 ft 3.8 in |
| 3 ft 3 in | Cabin height | 3 ft 5.8 in |
| 962 lb | Empty weight | 1,107 lb |
| 538 lb | Useful load | 568 lb |
| 382 lb | Payload w/full fuel (std tanks) | 412 lb |
| 328 lb | Payload w/full fuel (opt tanks) | 334 lb |
| — | Max ramp weight | 1,675 lb |
| 1,500 lb | Gross weight | 1,670 lb |
| 156 lb (135 lb usable) | Fuel capacity, std | 156 lb (147 lb usable) |
| 26 gal (22.5 gal usable) | | 26 gal (24.5 gal usable) |
| 210 lb (189 lb usable) | Fuel capacity w/opt tanks | 234 lb (225 lb usable) |
| 35 gal (31.5 gal usable) | | 39 gal (37.5 gal usable) |
| 5 qt | Oil capacity | 7 qt |
| 80 lb | Baggage capacity | 120 lb |
| | **Performance** | |
| 680 ft | Takeoff distance (ground roll) | 725 ft |
| 1,205 ft | Takeoff over 50-ft obst | 1,340 ft |
| — | Max demonstrated crosswind component | 12 kt |
| 740 fpm | Rate of climb, sea level | 715 fpm |
| 108 kt | Max level speed, sea level | 110 kt |
| 9,000 ft: 105 kt | Max level speed | 8,000 ft: 107 kt |
| | Cruise speed @ 75% power | |
| 99 kt | 2,000 ft | 101 kt |
| 106 kt | 7,500 ft | 106 kt |
| 33 pph/5.5 gph | Fuel consumption | 36.6 pph/6.1 gph |
| | Cruise speed @ 65% power | |
| 96 kt | 2,500 ft | 96 kt |
| 103 kt | 10,000 ft | 102 kt |
| 29.4 pph/4.9 gph | Fuel consumption | 31.2 pph/5.2 gph |
| | Cruise speed @ 55% power | |
| 90 kt | 2,500 ft | 88 kt |
| 93 kt | 10,000 ft | 93 kt |
| 25.2 pph/4.2 gph | Fuel consumption | 27 pph/4.5 gph |
| | Range† @ 75% cruise, std fuel (w/opt tanks) | |
| 415 nm (640 nm) | 2,000 ft | 317 nm (535 nm) |
| 430 nm (677 nm) | 7,500 ft | 319 nm (546 nm) |
| | Range† @ 65% cruise, std fuel (w/opt tanks) | |
| 445 nm (692 nm) | 2,000 ft | 351 nm (588 nm) |
| 469 nm (734 nm) | 10,000 ft | 353 nm (603 nm) |
| 15,300 ft | Service ceiling | 14,700 ft |
| 1,055 ft | Landing distance over 50-ft obst | 1,200 ft |
| 360 ft | Landing distance (ground roll) | 475 ft |
| | **Limiting and Recommended Airspeeds** | |
| 48 KIAS | Vx (Best angle of climb) | 55 KIAS |
| 62 KIAS | Vy (Best rate of climb) | 67 KIAS |
| 92 KIAS | Va (Design maneuvering) | 104 KIAS |
| 74 KIAS | Vfe (Max flap extended) | 85 KIAS |
| 104 KIAS | Vno (Max structural cruising) | 111 KIAS |
| 136 KIAS | Vne (Never exceed) | 149 KIAS |
| 46 KIAS | $V_{S_1}$ (Stall clean) | 40 KIAS |
| 42 KIAS | Vso (Stall in landing configuration) | 35 KIAS |

*All specifications are based on manufacturer's calculations. All performance figures are based on standard day, standard atmosphere, at sea level and gross weight, unless otherwise noted.*
**Operations/Equipment Category reflects this aircraft's maximum potential. See June Pilot, p. 93.*
*†Range figures for 1959 are based on best power, no reserves; range figures for 1982 are based on best economy, 45-minute reserves.*

continued

# TELLING ONE FROM ANOTHER


*In 1965, the famous 150 rear-view mirror was introduced. Has anyone ever figured out why?*

As nondescript as the Cessna 150/152 series may appear, there are subtle differences between each of the model years. Just as a Volkswagen fanatic can tell a 1966 from a 1967 Beetle at a glance (the 1967s were the first to have the hump in the hood), so a 150/152 enthusiast who has done his homework can spot a 1964 or 1965 model ("Omni-vision" rear windows with a straight vertical tail) from across the ramp. For those of you who have not done your homework, here is a list of changes made to the 150/152 series over the years, along with some little-known facts guaranteed to win bets in a trivia contest.

**1959**

- Cessna announces the first model year in October 1958.
- Models available were the Standard 150 ($6,995), the Trainer ($7,940) and the Intercity Commuter ($8,545). The Standard was the bare-bones model. Trainers came with a Narco Superhomer VOR receiver with nine crystals, dual controls, a landing light, clock, sun visors, outside air temperature gauge and a cigarette lighter. The Intercity Commuters had all the above plus gyro instruments.
- Initially, the 1959 Model 150s' Continental O-200-A engines were given a recommended time between overhaul (TBO) of only 600 hours. The TBO was raised to 1,800 hours later in the model year.
- All used 12-volt, 20-amp generators.

**1960**

- Heated pitot tubes and stall warning units were offered as an option.
- Thirty-five-amp generators were made standard on the Commuters, optional on all other models.
- A "patroller" package was offered. This included larger fuel tanks (35 gallons usable fuel, compared to the standard 22.5), plexiglass doors and a message chute in the floor.
- Engine control knobs were restyled. The throttle knob was made smaller, and the mixture knob's color was changed from white to red.

**1961 Model A**

- Main gear was moved two inches aft.
- Electrical and ignition switches were moved to the top of the panel; radios were stacked in the center.
- Adjustable seats were introduced, as were red overhead lights.
- Flush inside door handles were introduced.
- Cockpit glass area increased 15 percent.

**1962 Model B**

- Because of a new propeller airfoil and spinner, 75-percent cruise speed went from 105 to 107 knots, rate of climb went from 740 to 760 fpm, and service ceiling rose from 15,300 feet to 15,600 feet.
- Contoured wing tips and navigation light fairings.
- Purchasers were offered either a child's seat or a hat shelf.
- Nav-O-Matic autopilot made available.

**1963 Model C**

- Wing-mounted courtesy lights and 6.00 × 6 inch main-gear tires were offered as an option.
- Quick-drain fuel strainers introduced.

**1964 Model D**

- "Omni-vision" wrap-around rear windshield ended the "fastback" 150s.
- Gross weight increased from 1,500 pounds to 1,600.
- The battery was moved from the tailcone to the right forward side of the firewall.
- Baggage allowance increased from 80 to 120 pounds.

**1965 Model E**

- Rear-view mirror installed on top of panel.
- Bucket seats introduced.

**1966 Model F**

- Swept vertical stabilizer introduced.
- Cabin doors made wider and deeper; taper at the bottom of the door eliminated.
- 6.00 × 6-inch main-gear tires standardized on all models.
- Electrical flaps replaced manual flaps. Flap control became a chrome toggle switch. The flap-position indicator traveled in a slot running fore and aft in the headliner above the pilot's door.
- Elevator trim wheel moved from the floor to a new center pedestal.
- Rear cabin wall moved aft one bay, providing 50 percent more baggage space.
- A pneumatic reed stall horn replaced the electrical stall-warning vane.

**1967 Model G**

- Sixty-amp alternators replaced generators in all models.
- "Short-stroke" nose-gear strut extended only four inches in flight (older struts extended seven inches).
- Rubber fittings between the cowling and fuselage reduced noise.
- Floatplane certification earned.
- New heat system allowed mixing outside air with heated air; windshield defroster outlets installed.
- Cabin interior widened three inches.
- Door pulls standardized on all models.
- Padding was installed on top of instrument panel.
- Magneto, starter and master switches moved to lower left panel.
- Flap switch changed from toggle switch to an airfoil-shaped lever.

**1968 Model H**

- Flap-position indicator moved to left doorpost.
- Center pedestal narrowed by two inches.
- Ratchet-type mixture control introduced.
- New flap switch—flaps retracted with-

*The early 150s are distinguished by their square tails and fastback empennage design.*

out holding the switch in the Up position.

**1969 Model J**

- Pull starter replaced with key-actuated starter on the magneto switch.
- Flight instruments arranged in the standard "T" configuration.
- Fueling assist steps and handles were introduced.
- Rocker-type master switch replaced push/pull master switch.

**1970 Model K**

- Aerobat introduced. Stressed for six positive Gs and three negative Gs, the Aerobat is certificated for rolls, loops, spins, Immelmann turns, Cuban 8s and vertical reversements. Aerobats could be identified by their checkerboard paint schemes and quick-release doors.
- Split-rocker master switch with battery and alternator functions introduced, as was a ground adjustable rudder trim tab.
- Conical cambered (drooped) wing tips became standard on the Commuter, optional on the other models.

**1971 Model L**

- Tube-type main-gear legs replaced the leaf-type gear legs used in previous years.
- The main-gear track widened from six feet 6.5 inches to seven feet 7.25 inches.
- Propeller shaft extended three inches; new "aerodynamic" nose cap.
- Landing light was moved from left wing to nose cap.
- More padding was added to upper panel; padding was installed on lower panel and doorposts.

**1972 Model L**

- Over-voltage protection circuit and warning light introduced.
- Seat tracks lengthened by two inches.
- More padding added to lower panel.
- New fuel filler necks and caps, added to prevent water from entering tanks.
- Check lists laminated with plastic.

**1973 Model L**

- Fiberglass-filled nylon control yokes with urethane padding introduced.

**1974 Model L**

- Improved right-hand control column shaft bearing introduced.
- The Aerobat received the new Clark-Y propeller airfoil. This increased the Aerobat's 75-percent cruise speed from 100 to 113 knots and raised its service ceiling from 12,650 to 14,000 feet.

**1975 Model M**

- The 150 Commuter II was introduced. This model came with a second ARC 330 nav/com, a transponder, ground service plug, emergency locator transmitter and true airspeed indicator.
- Vertical fin and rudder areas were increased. Six inches were added to the height of the vertical tail. These changes were made to improve the spin recovery characteristics of the 150 and Aerobat. This also helped make the Aerobat's snap rolls easier to perform.
- Check lists affixed to the right doorpost.

*continued overleaf*

• Push-button release was centered on mixture knob.
• Inertial-reel shoulder harnesess offered.

**1976 Model M**

• Circuit breakers replaced fuses.
• Panel redesigned: fuel and engine gauges moved from the right panel to the lower left, in front of the pilot.
• Vertically adjustable seats introduced.
• Soundproofing added to the aft doorpost covers and upper doorjambs.
• Owner's manuals enlarged and more details added, in conformity with the new General Aviation Manufacturers Association (GAMA) format.

**1977 Model M**

• Flap-control detents for 10-, 20- and 40-degree settings added. Flap-position indicator located next to the flap switch.
• Vernier mixture control introduced.
• The last Cessna 150s were delivered in April 1977.
• Introduction of the Cessna 152 series (the Standard 152, the 152 Trainer, the 152 II and the 152 Aerobat) announced in April 1977; first deliveries were made in May 1977.

**1978 Model 152**

• The 152 brought the following changes to the basic 150 design:
• The 150's 100-hp Continental engine was replaced with the 110-hp Lycoming O-235-L2C engine. TBO for the Lycoming engine is 2,000 hours.
• Oil cooler standardized.
• A 28-volt electrical system with a heavy-duty voltage regulator introduced.
• New fuel tanks reduced unusable fuel to 1.5 gallons.
• A one-piece removable cowl was added.
• Flap travel reduced from 40 degrees to 30 degrees.

**1979**

• Dual impulse couplings installed on the Lycoming's magnetos improved starting characteristics.
• Direct priming into all four cylinders.
• Seat padding increased 30 percent.
• Rear-view mirrors eliminated.

**1980**

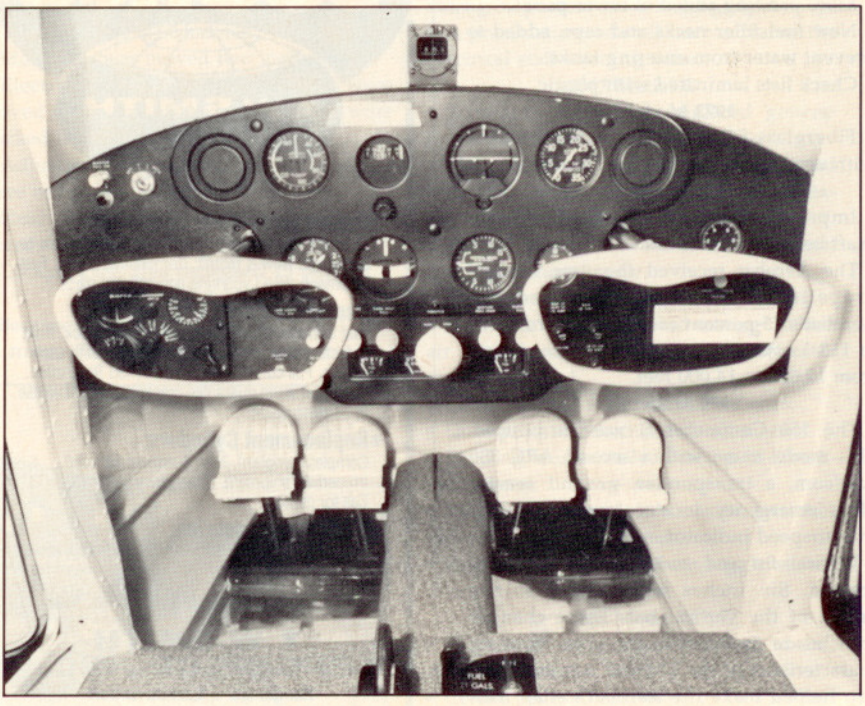
• New, accelerator pump-equipped carburetor introduced. The pump injected vaporized fuel directly into the carburetor, limiting the need to use the primer.
• Dual windshield defrosters offered.
• Simulated-wood instrument panels were added.

**1981**

• Intercom system standardized on 152 Trainers, optional on other models.

**1982**

• A third quick fuel drain added to all models, located in the belly between the fuel selector and the fuel strainer drain. This allowed drainage at the fuel system's lowest point and minimized the chance of icing in the fuel system.
• White toggle switches for avionics equipment introduced.
• "Bow-tie" glideslope antenna eliminated. An antenna coupler allowed the nav receivers to receive glideslope signals.
• Smaller wing-root air vents sealed better.
• Prices reached an all-time high: $24,200 for a Standard 152; $30,000 for a 152 II; $31,800 for a Trainer; and $32,400 for a 152 Aerobat.
• Due to a sharp drop in demand, production of the 152 was suspended indefinitely on March 29, 1982. □



*The 1959 Cessna 150 panel, with its Army-surplus gyros, pull starter, Narco Superhomer VOR and bulbous throttle knob, looks quaint now but was fashionable at the time.*