

# ROBERTSON

HI-PERFORMANCE 310



## TECHNOLOGY: HOW ROBERTSON MAKES IT HAPPEN

Flying slow with confidence calls for more lift from less airflow around the wings. Robertson achieves an impressive increase in lift for 310 aircraft by removing standard Cessna split flaps and replacing them with all-new Fowler-action flaps. New flaps travel rearward on bearing rollers in tracks to increase wing area by 25.3 square feet. With flaps at the preselected 10-degree takeoff position, wings generate added lift with minimum

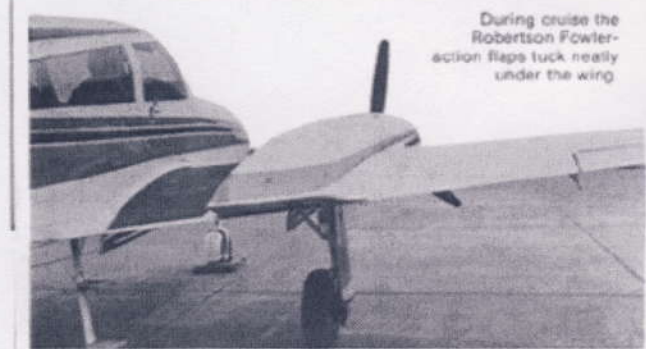
drag. Airflow from props generates more lift from the longer chord and greater camber of the modified wing section on both sides of the nacelle. Because the Fowler flaps generate comparable lift at slower airspeeds, a Robertson-equipped 310 climbs at a steeper gradient. Climbing at the same rate while covering less distance results in a steep climb gradient to clear obstacles at the end of short fields. Or, taking off with reduced takeoff power when long runways are available saves wear and tear on engines while flying usual takeoff profiles.

Similar benefits from low-speed lift aid landing approaches and touchdowns. Instead of approaching at 94 KCAS in a standard 310, for example, a fully loaded Robertson 310 approaches at 76 KCAS as a result of the sharply lower certified stall speed.

At the preselected 30-degree flap approach position the Robertson wing generates more lift than in the 10-degree takeoff position but with increased drag. By adjusting power to control the glideslope, a pilot can touch down with precision time after time. Sharply lower stall speeds result from the all-new Fowler flaps.



At the preselected flap takeoff position (10-degree deployment), the aft movement of the flap adds 25.3 sq. ft. of wing area.



During cruise the Robertson Fowler-action flaps tuck neatly under the wing.



For landing, the flaps translate to their maximum aft position, 30 degrees for maximum lift.

# ROBERTSON HI-LIFT SYSTEMS ADD A DISTINCTIVE DIFFERENCE FOR 310 TWINS

## IN PERFORMANCE

- Reduces takeoff distance over a 50-foot obstacle by 15%.
- Reduces liftoff speed by 18%.
- Reduces accelerate-stop distance by 1300 feet.
- Adds fun and excitement to your flying.

## IN SAFETY

- Lowers single-engine control speed ( $V_{MC}$ ) by 1.3 KCAS.
- Reduces stall speed by 9 knots. Lower stall speeds with flaps in takeoff or landing position lengthen decision times during flight operations near the ground.
- Slow flight complements pilot skills by stretching time for response to gusts, crosswinds and wind shear during takeoffs and landings.
- Up to 35% lower insurance premiums for Robertson owners following a study that proved Robertson-equipped aircraft experienced fewer accidents and that accidents were less severe when they did occur. When an insurance company reduces premiums, you can be sure that Robertson's claim of an "Extra Margin of Safety" means what it says.

## IN PRODUCTIVITY & FLEXIBILITY

- Opens thousands of short and/or high airfields previously inaccessible with confidence and a degree of safety not available on a standard 310 twin.
- Permits operating into airfields closer to your job site or vacation destination that would be marginal without the Robertson Hi-Lift System.
- Expands load-lifting capability at high-density altitudes to help avoid off-loading payload and to reduce fuel stops.

## IN VALUE

- Increases value at resale or trade-in time by 75 - 80% of the Robertson System's cost.
- Affords the unique and savored feeling of flying "the best" — a unique aircraft like few others.

## IN COST SAVINGS

- Quicker liftoffs and softer touchdowns reduce wear and tear on tires, brakes, wheels and structure to reduce maintenance costs substantially.
- Reduced-power takeoffs when long runways are available extend engine life and cut routine maintenance expense.
- Time and money-saving procedures available to Robertson owners for operation around major airports are detailed in a special bulletin, "How To Save Time & Money With ROBERTSON".

You get a bonus from the added performance of a Robertson-equipped 310 twin. Sure — you lift off quickly and climb steeply out of short grass strips or unimproved runways. You expect that kind of performance with a

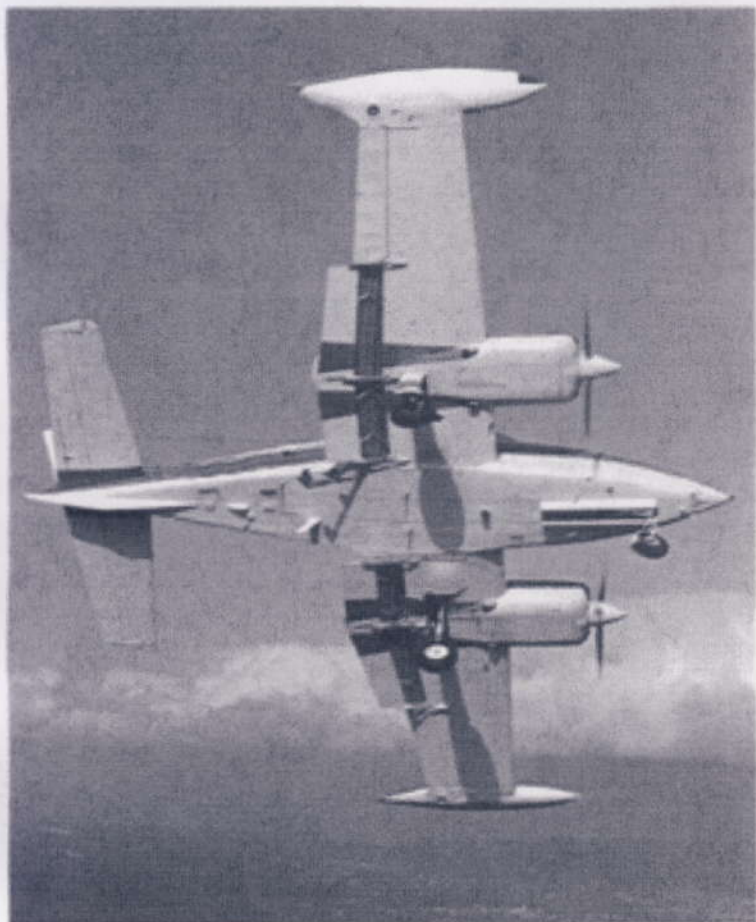
Robertson. But, Robertson's Hi-Lift Performance delivers a bonus of safety. Slow-speed capability makes flying safer four ways...

- Because Robertson Hi-Lift Systems let you fly slower during the critical liftoff and touchdown phases, you can react to gusts, change glideslope or adjust alignment with the runway over a longer time span. A Robertson System stretches time...events happen in slow motion.
- With single-engine control speed ( $V_{MC}$ ) only 2 or 3 knots above stall and much lower than liftoff or approach speeds, you can be assured of control even if one engine quits.
- Sharp control during slow-speed flight assures confident handling close to the ground.
- Slow-flight reduces injury hazard in the unlikely, but always possible, case of a forced landing under adverse conditions.

NOTICE: Flying a Robertson-equipped 310 twin could change your concept of flying. A Robertson-equipped 310 will feel like a tame pussycat after flying a standard 310.

Now's the time to LIVE A LITTLE! Fly the best...fly a Robertson-equipped 310.





## PERFORMANCE SPECIFICATIONS

<b>GROSS WEIGHT</b> (POUNDS).....	5,500
<b>TAKEOFF SPEED</b> (KNOTS CAS)	
ROBERTSON .....	68
CESSNA HANDBOOK .....	84
<b>APPROACH SPEED</b> (KNOTS CAS)	
ROBERTSON .....	76
CESSNA HANDBOOK .....	94
<b>BEST CLIMB SPEED</b> (KNOTS CAS)	
ROBERTSON .....	83
CESSNA HANDBOOK .....	108
<b>SINGLE ENGINE CONTROL SPEED</b> ( $V_{mc}$ - KNOTS CAS)	
ROBERTSON .....	69
CESSNA HANDBOOK .....	82
<b>STALL SPEED — LANDING FLAPS</b> (KNOTS CAS)	
ROBERTSON .....	59
CESSNA HANDBOOK .....	68
<b>STALL SPEED — TAKEOFF FLAPS</b> (KNOTS CAS)	
ROBERTSON .....	67
CESSNA HANDBOOK .....	74
<b>TAKEOFF DISTANCE OVER 50'</b> (FEET)	
ROBERTSON .....	1,470
CESSNA HANDBOOK .....	2,040
<b>LANDING DISTANCE OVER 50'</b> (FEET)	
ROBERTSON .....	1,165
CESSNA HANDBOOK .....	1,790
<b>SERVICE CEILING</b> (FEET).....	NO CHANGE
<b>ACCELERATE-STOP DISTANCE</b> (FEET)	
ROBERTSON .....	1,680
CESSNA HANDBOOK .....	2,980

SEA LEVEL, STANDARD DAY CONDITIONS.