RAJAY TURBO-CHARGER SYSTEM PRICE & PERFORMANCE CHART

Performance numbers may vary due to condition of your particular airplane and power plant.

AIRCRAFT MAKE AND MODEL	2 ENGINE ALTITUDE CAPABILITY IS OVER	SINGLE ENGINE ALTITUDE CAPABILITY IS OVER	CRUISE 75% POWER M.P.H. T.A.S. @ 10,000 FEET	CRUISE 75% POWER M.P.H. T.A.S. @ 12,000 FEET	CRUISE 75% POWER M.P.H. T.A.S. @ 20,000 FEET	COMPLETE PRICE TC SYSTEM F.O.B. RAJAY	FLAT-RATE FACTORY INSTALLATION CHARGE	APPROX. MAN HOURS OF LABOR TO FIELD INSTALL	APPROX. INSTALLED WEIGHT (LBS.)	REMARKS
AERO COMMANDER 500 B, U & Shrike	32,000	20,000	225	233	265	$13,150	$2,700	150	70	

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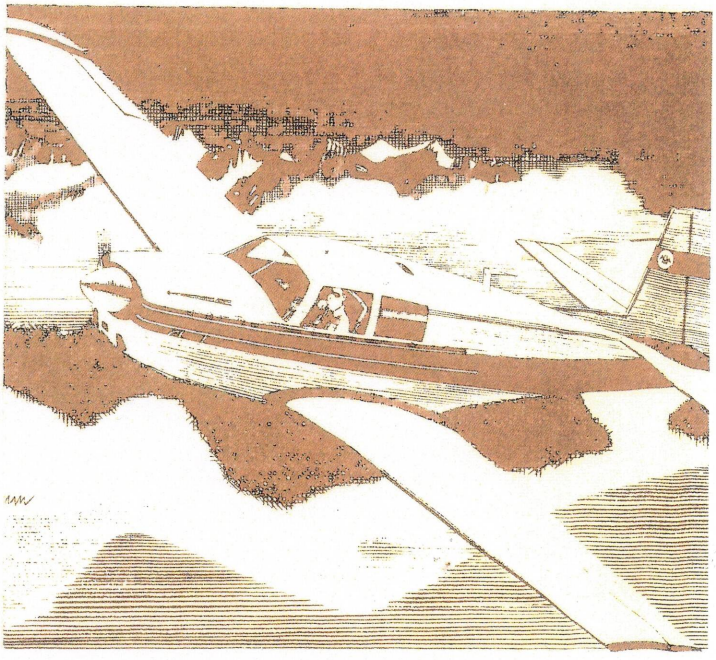


The ABC's of Aircraft Turbocharging

WHAT TURBOCHARGING REALLY COSTS!

1. TRADE UP VERSUS RETROFIT TURBOCHARGING

One of the financial aspects you should evaluate when considering a turbo system is how much would it cost to trade up to an aircraft of equivalent performance to yours when retrofitted with a turbocharging system. In almost every case you will find that adding a turbo system to your current aircraft will involve only a fraction of the cost required to trade up to comparable performance.

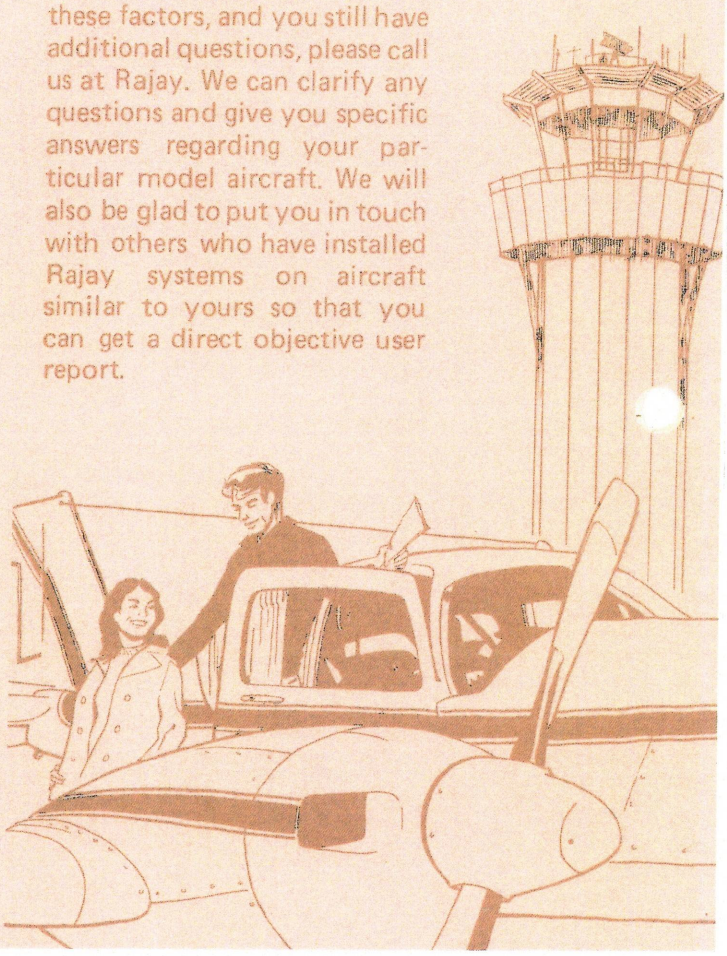
2. RESALE

If you check any published used aircraft blue book (such as Aircraft Price Digest) and compare the resale value of any Rajay turbocharged aircraft with the non-turbocharged equipment of the same condition, you will find that aircraft equipped with a Rajay turbocharging system will return between 60% and 75% of your original investment. This effectively reduces your cost of owning the system since you recover most of its cost when you sell your aircraft.

3. TAXES

Don't forget to consult your tax advisor to get a complete picture of the real cost for the turbocharging system.

If you have evaluated the benefits of turbocharging in light of these factors, and you still have additional questions, please call us at Rajay. We can clarify any questions and give you specific answers regarding your particular model aircraft. We will also be glad to put you in touch with others who have installed Rajay systems on aircraft similar to yours so that you can get a direct objective user report.



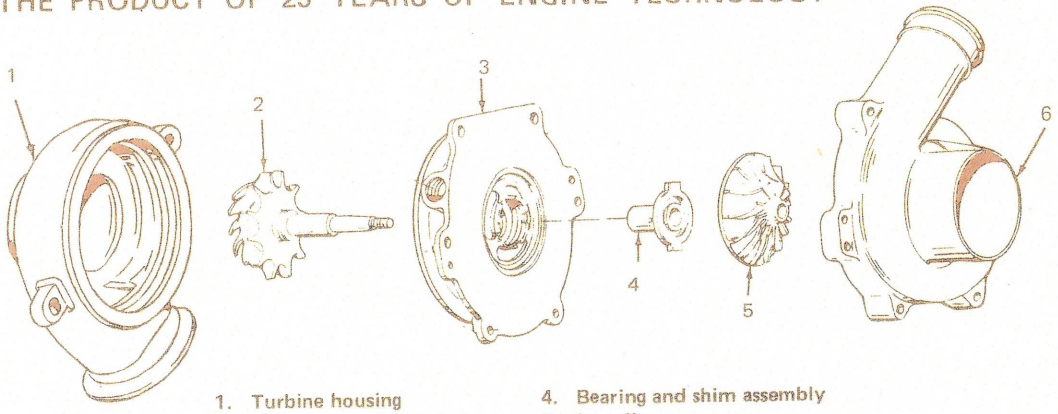
The turbocharger system's output is controlled by varying the amount of exhaust gas that goes through the turbine. A valve (usually called a waste gate) can be opened or closed so that all, part or none of the engine's exhaust is utilized by the turbo system. The waste gate may be controlled by the pilot, it may be linked to the throttle, or it may be automatically controlled.

A TURBOCHARGER S.T.C.

A turbocharger Supplemental Type Certificate (STC), constitutes a design that has been tested and approved by the F.A.A. When an airframe STC is issued, it is not valid nor transferable to a similar airframe with a different power-

The RAJAY Turbocharger

THE PRODUCT OF 25 YEARS OF ENGINE TECHNOLOGY



1. Turbine housing
2. Turbine wheel and shaft
3. Bearing housing
4. Bearing and shim assembly
5. Impeller
6. Compressor housing

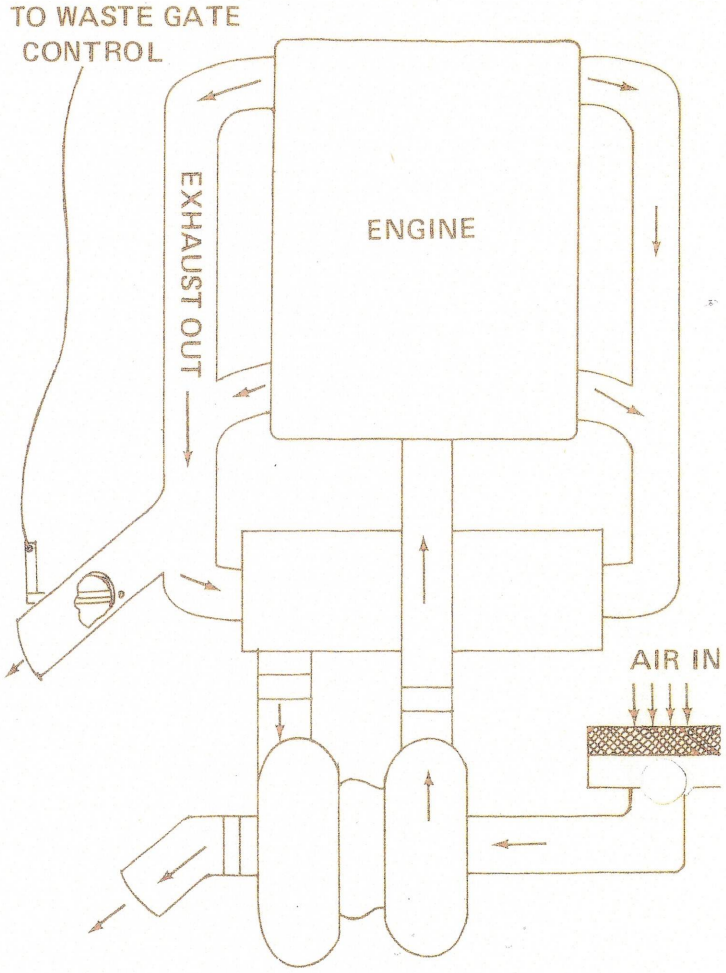
The Rajay Turbocharger, the standard by which all aircraft turbochargers are measured, is lightweight yet extremely rugged for high reliability. Its patented non-coking bearing was designed for long service life, low replacement cost and it requires no special engine shut-down procedure. Normally, no maintenance should be required on the Rajay Turbocharger between engine overhauls. At engine overhaul time, we do recommend that the turbos be exchanged.

ALL RAJAY TURBO SYSTEMS ARE FULLY F.A.A. APPROVED

WHY TURBOCHARGE?

A light aircraft internal combustion engine is powered by a fuel/air mixture which in a cruise condition is approximately 1 part of gasoline to 15 parts of air by weight! So long as this ideal ratio is maintained, the engine will continue to produce power efficiently. However, at all altitudes above sea level, the ambient air becomes less dense and a climbing aircraft with a naturally-aspirated (non-turbocharged) engine cannot, on its own, maintain the desirable 15-1 fuel/air mixture in the thinner atmosphere. Thus, the further the aircraft climbs above sea level, the more engine horsepower is lost at the crankshaft, resulting in an overall loss in aircraft performance.

The most cost-effective solution to this problem of lost engine power at altitude for piston engines is found by fitting a turbo-charger system to the engine. The function of this turbo system is, essentially, to compress the thin ambient air increasing its density so that the engine again is able to deliver most of its sea level rated power.



HOW A TURBOCHARGER WORKS!

Simply stated, a turbocharger is an air compressor, driven by engine exhaust gas. It consists of one rotating assembly, a shaft with a turbine wheel on one end and a compressor impeller on the other. The turbine wheel and the compressor impeller are isolated from each other in their respective housings. As the exhaust gas enters the turbine housing and strikes the turbine wheel, the rotating assembly begins to spin, and the impeller begins to compress the air being delivered to the induction system. This simple operation will enable an engine to maintain near sea level manifold pressure up to 16,000 feet (and higher, depending on the specific engine).

SHOULD YOU TURBOCHARGE YOUR PRESENT AIRPLANE?

Some general reasons are listed below why the typical pilot might choose to add a turbocharging system to his present aircraft. An evaluation of the kind and amount of flying you do, balanced against the financial ramifications involved, should help you make this important decision.

☐ SAFETY

Safety is the single most important benefit of any turbocharged aircraft. With turbocharging you have the ability to fly out of high density altitude fields at maximum gross weight. Turbocharging additionally gives you the ability to climb to higher altitudes to clear terrain and frequently to escape icing conditions and turbulence. Furthermore, the higher climb performance of a turbocharged aircraft minimizes the time spent in the climb attitude where forward visibility is less than optimum.

☐ SPEED

Turbocharging will give your aircraft a significant increase in cruise true air speed. This increased TAS comes from the aircraft's new ability to fly at higher altitudes where the air is less dense while maintaining near sea level horsepower.

☐ ECONOMY

Turbocharged aircraft have the ability to cruise at higher altitudes while maintaining high manifold pressure at reduced prop speeds. The ability to cruise in the rarified air while maintaining a substantial percentage of sea level horsepower affords the turbocharged aircraft significant cruise economies in seat-miles-per-gallon. This means you arrive sooner with the same fuel burn (plus the attendant benefits of lower rpm's).

☐ SINGLE ENGINE PERFORMANCE

Most twins have excellent performance with both engines operating, yet their performance turns frighteningly marginal when one engine is lost. Turbocharging tremendously increases the single engine ceiling of virtually every light twin and could give you the necessary terrain clearance should trouble develop while operating over mountainous areas.