

Resolving one of the more confusing
issues in personal aviation:

How to lean your engine for takeoff and climb at *any* altitude.

presented by:
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The science appears complex;
the solution is quite simple.

The object is to identify a **Target EGT** that you can use during all takeoffs and climbs from *any* airport at *any* altitude.

The **Target EGT** is that EGT value noted soon after takeoff at a sea level standard day airport (use any one of the EGT readings).

It's as simple as the pilot making small adjustments (leaning) to the mixture in order to hold the **Target EGT** during the climb.

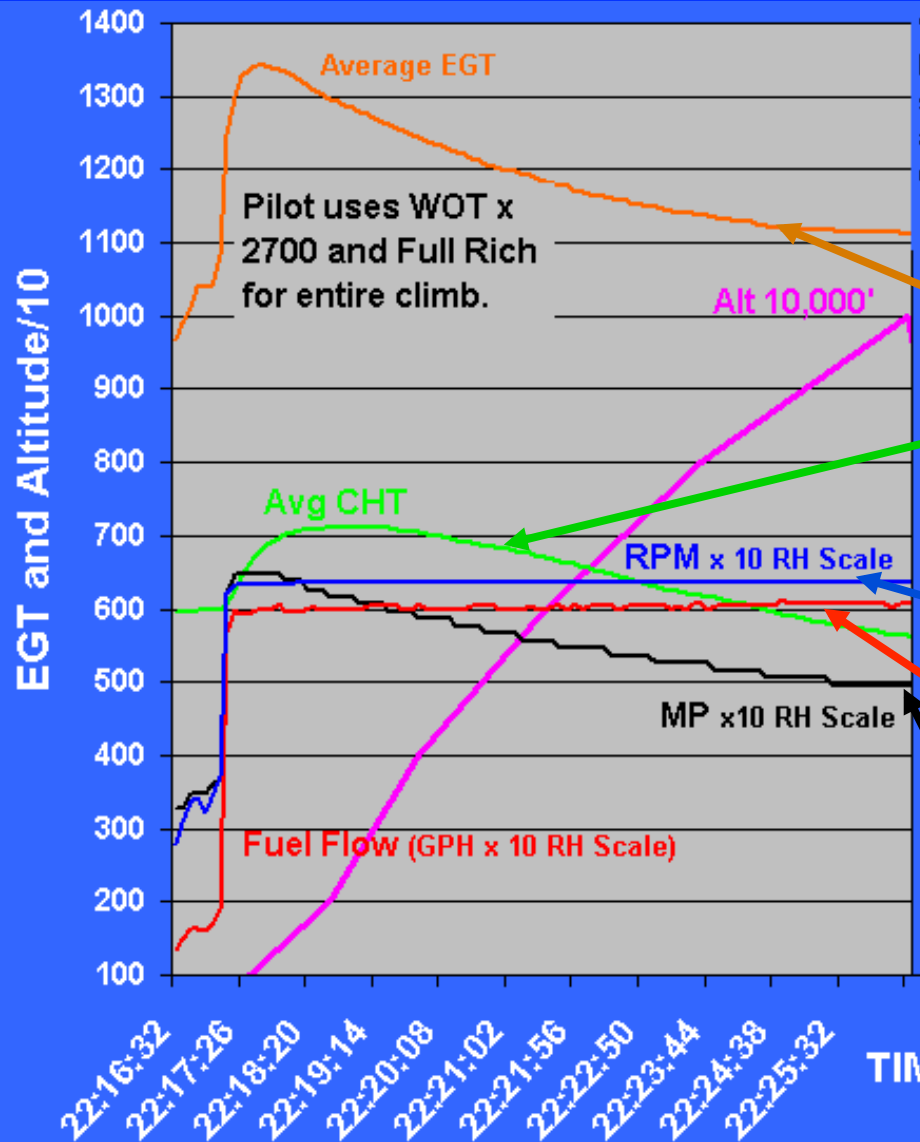
You'll climb faster on less fuel.

Here's how and why it works...
from *any* airport.

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Don't panic; hang in there! Let's take it one step at a time.

The science appears complex;
the solution is quite simple.



This chart is the graphed data from a JPI engine monitor.
(Full rich mixture to 10,000 feet.)

This is the EGT trace.
(The mixture gets richer as the climb continues.)

This is the CHT trace.
(It gets cooler as the mixture naturally richens.)

The RPM remains constant.

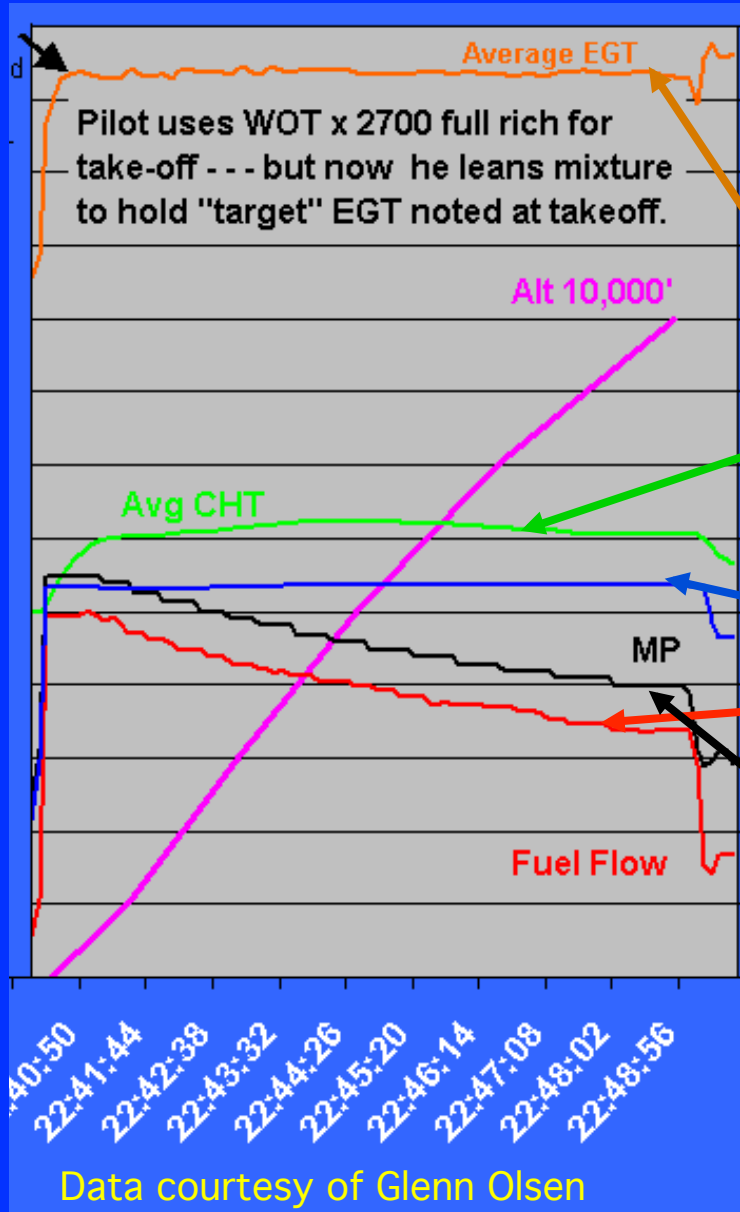
Fuel flow remains constant.

This is the MP trace.
(It decreases normally in the climb.)

This simple chart will be used to explain the science.
(Click [HERE](#) when you're ready to continue.)

A comparison flight.

The science appears complex; the solution is quite simple.



Another data chart; same airplane, same day. (Leaning the mixture to 10,000 feet.)

This is the EGT trace. (It remains constant as the climb continues.)

This is the CHT trace. (It varies little as the climb continues.)

The RPM remains constant.

Fuel flow decreases.

This is the MP trace. (It decreases normally in the climb.)

This second chart will be used to explain the science.

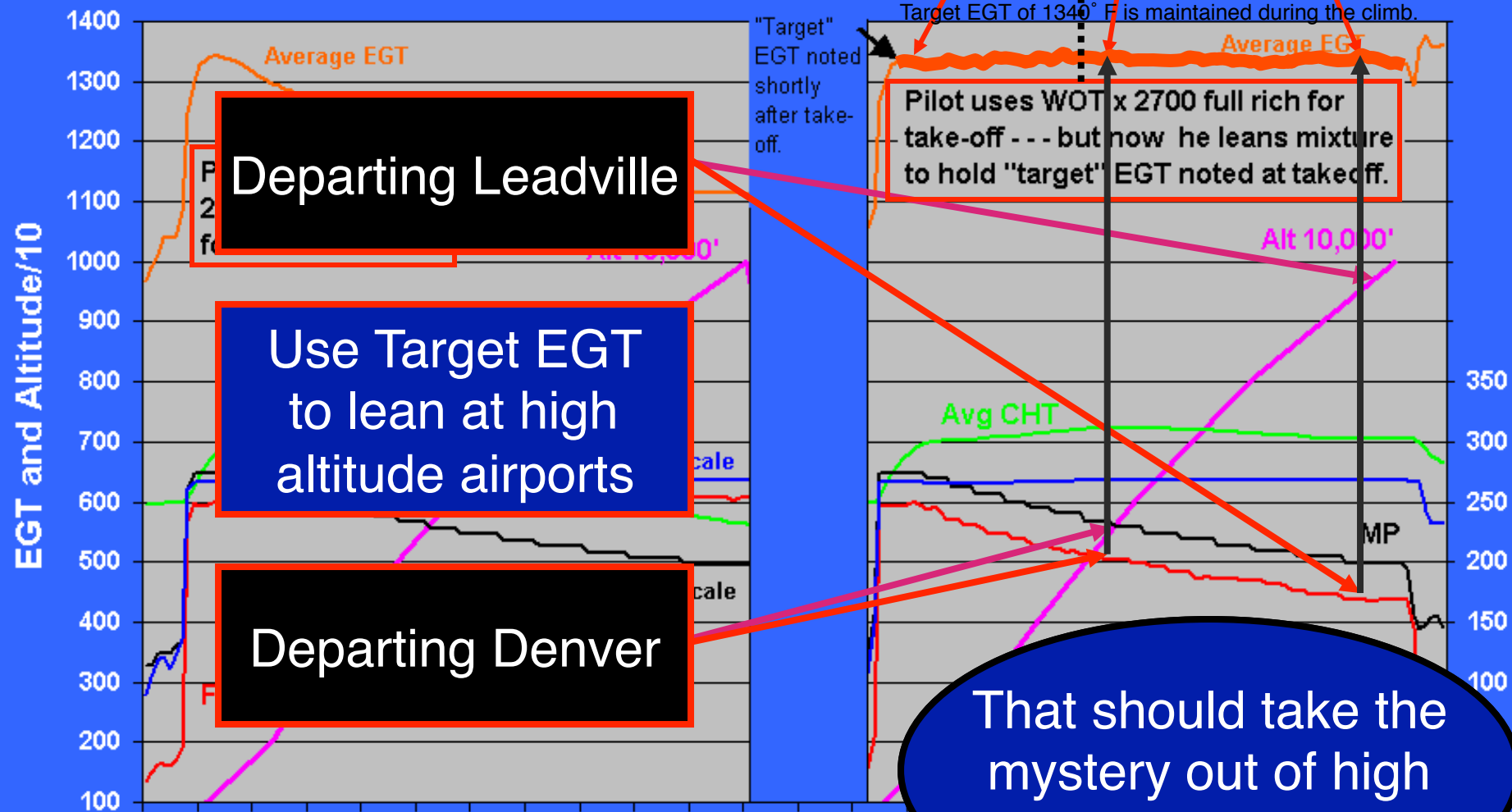
(Click [HERE](#) when you're ready to continue.)

Data courtesy of Glenn Olsen

Carefully note the differences in mixture management.

WOT - wide open throttle.
Same EGT values

IO-520 - Two Normally Aspirated Climbs to 10,000'



Departing Leadville

Use Target EGT to lean at high altitude airports

Departing Denver

Pilot uses WOT x 2700 full rich for take-off - - - but now he leans mixture to hold "target" EGT noted at takeoff.

That should take the mystery out of high DA leaning for T.O.

Take all the time you need to study the charts, then... [Click HERE Learn more](#)

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At any airport at any altitude, simply add power and lean to your Target EGT and start the take-off roll.

You are no longer guessing
at your mixture management.



Click here to
review!

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Once identified, the “memorized” target EGT takeoff leaning method can be relied upon to give the same good takeoff performance regardless of changes in altitude/temperature – hot day or cold – winter or summer at Nassau, Melbourne, Zurich, La Paz, or even departing after visiting the Tibetan Monks.

This presentation is a short example of the valuable information presented during the **Engine Management Made Easy** course taught by **Advanced Pilot Seminars**.

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