

Cruise

1. Oxygen AS REQUIRED
2. Cruise Altitude ESTABLISHED
3. Power Lever REDUCE to 30.5 in.Hg or less
4. Fuel Pump AS REQUIRED
5. Mixture ADJUST
6. Engine Parameters MONITOR
7. Fuel Flow and Balance MONITOR

If any CHT's exceed 420°F:

8. Mixture LEAN 0.5 GPH and MONITOR

Amplification

Recommended cruise is at a Lean of Peak / "Best Economy" mixture setting. Cruise leaning, i.e. leaning below full rich fuel flow, is only approved with manifold pressure settings of 30.5 in.Hg or less. Once power is reduced below this level, the green arc expands and a cyan colored Target Fuel Flow que is displayed on the fuel flow gage. With higher manifold pressures, the fuel flow gage provides a narrow green arc which defines full rich fuel flow settings.

Target fuel flow is determined using a calculated engine air flow based on Engine Speed, Manifold Air Temperature and Manifold Air Pressure and indicates a fuel flow that will give the approximate air-to-fuel ratio for best economy operation. Alternatively, the mixture can be set by finding a fuel flow that provides peak TIT and then leaning until TIT is 50°-75°F less than its peak value.

Target Fuel Flow is advisory only. This indicator or the Peak leaning method will provide an initial lean point only. As this setting is dependant on ambient air temperatures, it may not ensure sufficient cylinder cooling. If any CHT's are greater than 420°F, lean the mixture to maintain cylinders below 420°F. As an approximation, a 0.5 GPH reduction in fuel flow will reduce CHT's by 15°F.

Running the engine at mixture levels leaner than the target will improve cooling, but provide lower cruise power because engine power scales in proportion to fuel flow when the engine is running at lean of peak. Other than lower cruise power, the only undesirable affect of an overly lean-of-peak setting is engine misfire. Cruise mixture should be rich enough to avoid lean misfire, but no richer than target indicator for cruise.