CESSNA ECONOMY MIXTURE INDICATOR

The Cessna Economy Mixture Indicator is an exhaust gas temperature sensing device which is used to aid the pilot in selecting the most desirable fuel-air mixture for cruising flight at less than 75% power. Exhaust gas temperature (EGT) varies with the ratio of fuel-to-air mixture entering the engine cylinders. The EGT will peak at a value that is approximately maximum range mixture.

Operation at peak EGT is not authorized, except to establish peak EGT for reference. A richer mixture which provides a drop of approximately 100°F from peak EGT is recommended for normal cruise at less than 75% power. Leaning in this manner will provide fuel consumption very close to the Cessna Flight Computer and Owner's Manual values and will result in a decrease of only 1 MPH in airspeed from that obtainable with the same power setting and best power mixture.

OPERATING INSTRUCTIONS.

(1) In take-off and full power climb, use full rich mixture.

(2) In level flight (or cruising climb at less than 75% power), lean the mixture to peak EGT, then enrichen one large division (-100°F) below peak EGT. While leaning the mixture under some operating conditions, engine roughness may occur before peak EGT is reached. In this case, enrichen the mixture approximately 100°F from the EGT corresponding to the onset of roughness.

NOTE

Changes in altitude or power setting require the EGT to be re-checked and the mixture re-set.

(3) Use rich mixture (or mixture appropriate for field elevation) in idle descents or landing approaches. Leaning technique for cruise descents may be with EGT reference method (at least every 5000 feet) or by simply enriching to avoid engine roughness, if numerous power reductions are made.

ALPHABETICAL INDEX

A

After Landing, 1-4
Airplane,
before entering, 1-1
file, 4-5
mooring, 4-1
secure, 1-4
Airspeed Correction Table, 5-1
Airspeed Limitations, 3-2
Aluminum Surfaces, 4-2
Authorized Operations, 3-1

B

Baggage, Weight, inside front cover Beacon, Rotating, 2-3 Before Entering Airplane, 1-1 Before Landing, 1-4 Before Starting Engine, 1-1 Before Take-Off, 1-2, 2-6

C

Cabin Heating, Ventilating and
Defrosting System, 2-3
Capacity,
fuel, inside front cover
oil, inside front cover
Carburetor, 2-2
Care,
interior, 4-3
propeller, 4-3
Center of Gravity Moment
Envelope, 3-6
Check List, Servicing Intervals, 4-7

Circuit Breakers, 2-3
Climb, 1-3, 2-7
maximum performance, 1-3
normal, 1-3
Cold Weather Equipment, 6-1
Cold Weather Operation, 2-10
operation, 2-12
starting, 2-10
Correction Table, Airspeed, 5-1
Cruise Performance, Optimum, 2-8
Cruise Performance, 5-4, 5-5, 5-6
Cruising, 1-3, 2-8

D

Diagram,
exterior inspection, iv
fuel system schematic, 2-2
principal dimensions, ii
taxiing, 2-5
Dilution System, Oil, 6-2
dilution table, 6-2
Dimensions, Principal, ii

F

Economy Mixture Indicator, 6-10 operating instructions, 6-10 Electrical System, 2-3 circuit breakers, 2-3 ground service plug receptacle, 6-1 rotating beacon, 2-3 Empty Weight, inside front cover before starting, 1-1 instrument markings, 3-2

F

File, Airplane, 4-5
Fuel System, 2-1
capacity, inside front cover
carburetor, 2-2
engine primer, 2-2
fuel strainer, 2-2
long range tanks, 6-1
mixture control, 2-2
schematic, 2-2
selector valve, 2-2
throttle, 2-2
wing tanks, 2-2

G

Graph,
center of gravity moment
envelope, 3-6
loading, 3-5
Gross Weight, inside front cover
Ground Handling, 4-1
Ground Service Plug Receptacle, 6-1

H

Handling Airplane On Ground, 4-1
Heating, Ventilating and Defrosting
System, Cabin, 2-3
Hot Weather Operation, 2-12

1

Inspection Diagram, Exterior, iv

Index-2

Inspection Service — Inspection Periods, 4-4 Instrument Markings, Engine, 3-2 Interior Care, 4-3

L

Landing, inside front cover, 1-4, 2-9 after, 1-4 before, 1-4 distance table, 5-7 normal, 1-4 Let-Down, 1-4 Limitations, Airspeed, 3-2 Limitations, Engine Operation, 3-2 Loading, Power, inside front cover Loading, Wing, inside front cover Loading Graph, 3-5 Loading Problem, Sample, 3-4 Long Range Fuel Tanks, 6-1 Lubrication and Servicing Procedures, 4-6

M

Maneuvers — Normal Category, 3-1
Maximum Performance Climb, 1-3
Maximum Performance Take-Off,
1-3
Mixture Control, 2-2
Moment Envelope, Center of
Gravity, 3-6
Mooring Your Airplane, 4-1

N

Normal Category — Maneuvers, 3-1 Normal Climb, 1-3 Normal Landing, 1-4 Normal Take-Off, 1-3

0

Oil System,
capacity, inside front cover
dilution system, 6-2
dilution system table, 6-2
Operation, Cold Weather, 2-10
Operation, Hot Weather, 2-12
Operation Limitations, Engine, 3-2
Operations Authorized, 3-1
Optimum Cruise Performance, 2-8
Owner Follow-Up System, 4-8
Oxygen System, 6-6
duration calculation, 6-8
duration table, 6-7
operation, 6-6
servicing, 6-9

P

Painted Surfaces, 4-2
Performance - Specifications,
inside front cover
Power, inside front cover
Power Loading, inside front cover
Primer, Engine, 2-2
Principal Dimensions Diagram, ii
Propeller, inside front cover
care, 4-3

R

Radio Selector Switches, 6-4
autopilot-omni switch, 6-4, 6-5
operation, 6-4
speaker-phone, 6-4, 6-5
transmitter selector, 6-4
Range, inside front cover
Rate of Climb at Sea Level,
inside front cover,
Rotating Beacon, 2-3

Sample Loading Problem, 3-4 Securing Aircraft, 1-4 Selector Valve, Fuel, 2-2 Service Ceiling, inside front cover Servicing and Lubrication Procedures, 4-6 Servicing Intervals Check List, 4-7 Servicing Requirements, inside back cover Specifications - Performance, inside front cover Speed, inside front cover Spins, 2-9 Stalls, 2-9 speed chart, 5-2 Starting Engine, 1-2, 2-4 Static-Pressure Alternate-Source Valve, 6-3 Strainer, Fuel, 2-2 Surfaces. aluminum, 4-2 painted, 4-2 System, cabin heating, ventilating and defrosting, 2-3 electrical, 2-3 fuel, 2-1 oil dilution, 6-2 owner follow-up, 4-8 oxygen, 6-6

T

Take-Off, inside front cover, 1-3, 2-6
before, 1-2, 2-6
maximum performance, 1-3
normal, 1-3
Take-Off and Climb Data Table, 5-3
Taxing, 2-6
diagram, 2-5
Throttle, 2-2

W

Weight, baggage, inside front cover empty, inside front cover gross, inside front cover Weight and Balance, 3-4 Windshield and Windows, 4-2 Wing Loading, inside front cover Wing Tanks, Fuel, 2-2 Winterization Kit and Non-Congeal ing Oil Cooler, 6-1

WARRANTY

- The Cessna Aircraft Company (Cessna) warrants each new aircraft, including factory installed equipment and accessories, and warrants all new aircraft equipment and accessories bearing the name "Cessna," to be free from defects in material and workmanship under normal use and service. Cessna's obligation under this warranty is limited to supplying a part or parts to replace any part or parts which, within six (6) months after delivery of such aircraft or such aircraft equipment or accessories to the original retail purchaser or first user, shall be returned transportation charges prepaid to Cessna at Wichita, Kansas, or such other place as Cessna may designate and which upon examination shall disclose to Cessna's satisfaction to have been thus defective.
- The provisions of this warranty shall not apply to any aircraft, equipment or accessories which have been subject to misuse, negligence or accident, or which shall have been repaired or altered outside of Cessna's factory in any way so as in the judgment of Cessna to affect adversely its performance, stability or reliability. This warranty is expressly in lieu of any other warranties, expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose, and of any other obligation or liability on the part of Cessna of any nature whatsoever and Cessna neither assumes nor authorizes any one to assume for it any other obligation or liability in connection with such aircraft, equipment and accessories.

SERVICING REQUIREMENTS

+182

FUEL:

AVIATION GRADE -- 80/87 MINIMUM GRADE CAPACITY EACH STANDARD TANK -- 32.5 GALLONS CAPACITY EACH LONG RANGE TANK -- 42.0 GALLONS

INGINE OIL:

AVIATION GRADE -- SAE 30 BELOW 40° F. SAE 50 ABOVE 40° F.

(AIRCRAFT DELIVERED WITH STRAIGHT MINERAL OIL. EITHER MINERAL OIL OR DETERGENT OIL MAY BE USED. IF DETERGENT OIL IS USED, IT MUST CONFORM TO CONTINENTAL MOTORS SPECIFICATION MHS-24.)

CAPACITY OF ENGINE SUMP -- 12 QUARTS
(DO NOT OPERATE ON LESS THAN 9 QUARTS. TO
MINIMIZE LOSS OF OIL THROUGH BREATHER, FILL
TO 10 QUART LEVEL FOR NORMAL FLIGHTS OF LESS
THAN 3 HOURS. FOR EXTENDED FLIGHT, FILL TO
12 QUARTS. IF OPTIONAL OIL FILTER IS INSTALLED,
ONE ADDITIONAL QUART IS REQUIRED WHEN THE
FILTER ELEMENT IS CHANGED.)

HYDRAULIC FLUID:

MIL-H-5606 HYDRAULIC FLUID

OXYGEN:

AVIATOR'S BREATHING OXYGEN -- SPEC. NO. MIL-O-27210 MAXIMUM PRESSURE -- 1800 PSI

TIRE PRESSURE:

MAIN WHEELS -- 32 PSI ON 6.00 × 6 TIRES

-- 25 TO 35 PSI ON 8. 00 × 6 TIRES (OPT)

NOSE WHEEL -- 32 PSI ON 5.00 × 5 TIRE

-- 20 TO 29 PSI ON 6.00 × 6 TIRE (OPT)