

## **A116-42 - FOR LYCOMING ENGINES -**

### **STANDARD MANUFACTURING PROCEDURE - ENGINE RUN-UP**

#### **SAFETY**

- ENSURE AIRCRAFT IS IN THE DESIGNATED SAFE AREA AND THAT ANY OBSERVERS ARE IN A SAFE AREA.

#### **PREPARATION**

- USUAL CHECK FOR DEBRIS, NESTING, ETC. - FRONT PROP OPENING, OIL DOOR ACCESS AREA, COWL EXHAUST OPENING
- ENSURE COWL IS SECURE
- CHECK OIL LEVEL 5-6 U.S. QUARTS. CHECK FOR OIL DISCOLORATION AND GRIT
- CHECK FUEL FOR WATER AND DRAIN
- ENSURE PROP AND SPINNER ARE SECURE
- CHECK PROP FOR CLEARANCE AT COWL AND CHECK FOR NICKS IN PROP
- ENSURE SURROUNDING AREA IS CLEAR OF OBSTRUCTIONS AND BYSTANDERS
- ENSURE GROUND IS CLEAR OF DEBRIS THAT MAY BE PICKED UP BY PROP WASH
- HAVE SOMEONE STAND BY THE AIRCRAFT WITH A GOOD FIRE EXTINGUISHER

#### **RUN-UP**

- KEY **IN** → MASTER **ON** -- FIELD **ON** -- ALTERNATOR **ON**
- CHECK GAUGES - VOLTAGE (12V) - FUEL QUANTITY (SUFFICIENT FOR TEST?)
- AUX. FUEL PUMP **ON** - CHECK FUEL PRESSURE (3 LBS.?)
- ENSURE ALL BREAKERS ARE RESET
- RECORD HOURS ON TACH. (NOT HOBBS)
- TURN FUEL SELECTOR **ON**
- MIXTURE **RICH** (FULL)
- THROTTLE - PRIME THREE TIMES AND CLOSE
- CARB HEAT **COLD**
- PUMP BRAKES TO ENSURE OPERATION AND HOLD
- PRIMER INSTALLATION ONLY.  
COLD ENGINE ONLY: USE 1 SHOT OF THE PRIMER PUMP THEN RE-LOCK PUMP.
- KEY → **BOTH**
- KEY → **START** (ENGINE TURNS OVER AND FIRES)
- COLD IDLE ENGINE 1000 RPM (MINIMUM)(2-3 MINUTES)
- **CHECK OIL PRESSURE** (SHOULD RISE TO 60 LBS. WITHIN 30 SECONDS - IF NOT, GO TO SHUTDOWN PROCEDURE)
- ENGINE → 1200 RPM (2 MINUTES)
- CHECK ALL GAUGES TO ENSURE PROPER OPERATION
- ENGINE → 1700 RPM (UNTIL OIL TEMPERATURE IS INDICATED)
- MAGNETO CHECK AT 1700 RPM
  - LEFT \_\_\_\_\_ (MAX. 100 RPM DROP)
  - BOTH \_\_\_\_\_ (1700 RPM)
  - RIGHT \_\_\_\_\_ (MAX. 100 RPM DROP)
  - BOTH \_\_\_\_\_ (1700 RPM)
- ENGINE → 1600 RPM (MINIMUM) (1 MINUTE) BEFORE SHUTDOWN

#### **SHUTDOWN**

- QUICKLY AND SMOOTHLY, TURN KEY TO **OFF** POSITION THEN BACK TO **BOTH**. ENGINE **SHOULD** MOMENTARILY SHUT DOWN.
  - **CLOSE** THROTTLE, THEN PULL MIXTURE **LEAN!**
  - MAGNETOS **OFF**, - MASTER **OFF** - (LEAVE FIELD AND ALT. **BREAKERS** ON)
  - RECORD HOURS ON TACHOMETER (NOT HOBBS)
  - ENSURE AIRCRAFT IS IN ORDER AND LOCKED
  - DOCUMENT ANY RELEVANT INFORMATION
- REMOVE COWLING, CHECK ENGINE AND ENGINE RUBBING ON COWLING ETC..

