

PRE-START (1ST Flight of Day)
(Quick turn items in Green)

CK PROP!..... ▶ **FREE Movmt.**

Preflight..... ▶ **COMPLETE**
 Control Lock..... ▶ **REMOVE**
 Rudder..... ▶ **UNLOCKED**
 Parking Brake..... ▶ **CHECK/SET**

Seat Belts/Harn.... ▶ SECURE
 ER Flaps..... ▶ **NORM**

Fuel Select..... ▶ ON (BOTH)
 Bleed Air Heat..... ▶ **OFF**
 Power Lever..... ▶ **IDLE**
 Speed Lever..... ▶ **MIN (Full Aft.)**
 Fuel Shutoff/Feather Lever ▶ **NORM**

Fuel Shutoff..... ▶ **IN**
 Heat Shutoff..... ▶ **IN**

Circuit Bkrs..... ▶ CHECK
 Static Drains..... ▶ **CLOSED**
 Alt Static..... ▶ **NORM**

All Switches..... ▶ OFF
 All Anti-Ice..... ▶ **OFF**
 SRL & TTL Switches ▶ **ON**
 Starter..... ▶ **OFF**
 Avionics 1 & 2..... ▶ **OFF**
 Standby Pwr..... ▶ **OFF** (if installed)
 Battery Switch..... ▶ **ON**
 Battery Volts..... ▶ **CK, Min 24V**
 Lights..... ▶ **AS REQ'D**

Fire Detect..... ▶ **TEST**
 Annunciators..... ▶ **TEST**

Engine Inst..... ▶ NORM
 Fuel Qty (Min 325 Lbs) ▶ **BALANCED**

START (See Limitations, Pg 4)
 Ground / Air Switch.. ▶ **GROUND**
 Ignition..... ▶ **AUTO**

APU START (See Pg 4 - Starter Limits):
 Battery Switch..... ▶ **ON**
 APU..... ▶ **ENGAGE / ON**
 Volt/Ammeter..... ▶ **CK (~26-28.5V)**
 Start Mode (APU). ▶ **PARALLEL**
CONTINUE PER BATTERY START

BATTERY START*:
 *Use APU unless flown > 1.5 hr.

Battery Switch..... ▶ **ON (Min 24V)**
 Start Mode *W/Battery Only* ▶ **PARA/SERIES***
 *Unless Weak Battery or APU: **PARA Mode**

Prop UNFEATHERED ▶ **CONFIRM**
 SRL Switch*... ▶ **ON, CK INOP LIGHT OFF**
 *If INOP See POH for **MANUAL START**

TTL Switch..... ▶ **ON**
 Fuel Boost..... ▶ **ON, Check:**
AUX FUEL LIGHT-ON, LOW FUEL PRESS-OFF
Fuel PRESS: > 12 PSI, ZERO FF

Fuel Valve Switch..... ▶ **RUN**

***Keep right hand on Fuel Shutoff / Feather Lever until a good start is confirmed! See pg. 4**

Start/Gen Switch..... ▶ **START**
STARTER ENERGIZED LIGHT ON
Oil Press - CONFIRM
Engine RPM - RISING

Engine RPM @ 10%.. ▶ **OBSERVE**
IGNITION LIGHT - CK ON
FUEL FLOW - CK 90 - 140 pph
RPM Rising >1% Per Second

Engine RPM @ 60%:
 Start/Gen switch..... ▶ **OFF**
 Power Lever..... ▶ **GND IDLE**
(1/2" AFT of FLIGHT IDLE detent)

POST START OBSERVE
 Starter & Ignition Lights . ▶ **Ck OFF**
 Engine RPM Stabilized ▶ **68 - 70%**
 EGT..... ▶ **STABILIZED**
 Oil Pressure..... ▶ **ABOVE 40 PSI**
 APU (If used)..... ▶ **OFF & CLEAR**
 Start/Gen Switch..... ▶ **GEN**
 Fuel Boost Switch... ▶ **NORM**
 Engine Instruments.. ▶ **CHECK**
 Annunciators..... ▶ **CHECK**
 Suction..... ▶ **CHECK**

BEFORE TAXI

Flight Instruments... ▶ **CHECK/SET**
 Standby Pwr..... ▶ **ON/CHECK**
 Avionics # 1 & 2... ▶ **ON - TEST**
 Trim..... ▶ **SET (3)**
 Flaps..... ▶ **CHECK/SET**
 Controls..... ▶ **FREE**
 Lights..... ▶ **AS REQ'D**
 Seat Belts..... ▶ **SECURED**
 Prop Start Locks.. ▶ **RELEASE**
 Parking Brake..... ▶ **RELEASE**
 Brakes..... ▶ **TEST**

SYSTEMS CHECK per POH

Overspeed Governor ▶ **AS REQ'D**
 SRL & TTL..... ▶ **AS REQ'D**
 NTS (1st flt of day).... ▶ **AS REQ'D**
 Anti-Ice..... ▶ **AS REQ'D**
 Autopilot (If installed) ▶ **ON - TEST**

PRE-TAKEOFF

Timer / clock ▶ **Ck & SET**
Avionics & GPS ▶ **Ck & SET**
Ice Protection..... ▶ **AS REQ'D**
Lights..... ▶ **AS REQ'D**

Gas - Qty & Bal..... ▶ **CHECK**
Undercarriage..... ▶ **SET**
Mixture (Fuel Shutoff) ▶ **NORM**
Prop (Speed Lever) . ▶ **MAX**
Seat Belts..... ▶ **ON**

Flaps (10 - 30°) ▶ **AS REQ'D**
Inst, Ignition, Ice ▶ **AS REQ'D**
Trim Tabs..... ▶ **SET (3)**
Speeds..... ▶ **REVIEW**
 Rotate: 71 Kts Climb: 85 - 105 Kts

TAKE OFF

Fuel Boost Switch ▶ **ON**
 Ignition Switch..... ▶ **AUTO or CONT**
 Speed Lever..... ▶ **MAX**
CK Eng. RPM 96 to 97.5%
CK SRL INOP Light ▶ NOT ON*
 *If SRL Off / INOP use EGT Table for **MAX EGT Limits, Pg 4 (or see POH)**

Advance Power... ▶ **SET**
MAX TQE 100%, TEMP 650° C (SRL)

Engine RPM..... ▶ **100 to 101%**
 Rotate..... ▶ **71 Kts**
 Climb Speed..... ▶ **85 - 95 Kts**
 Flaps..... ▶ **RETRACT**
 (10° after 85 Kts. 0° after 95 Kts)
 Accelerate To... ▶ **105 Kts***

CLIMB & CRUISE

Flaps..... ▶ **UP**
 Fuel Boost Switch... ▶ **NORM**
 Power..... ▶ **SET**
MAX TQE: 100% TEMP*: 650° C (SRL)
 *If SRL Off / INOP use EGT Table.

BEST Climb..... ▶ 105 Kts.
Cruise Climb..... ▶ 110-125 Kts
 Ignition Switch ▶ **AS REQ'D**
 Lights..... ▶ **AS REQ'D**
 Engine Inst..... ▶ **CK NORMAL**

FOR SKYDIVING - JUMP RUN

Unicom, 2 Min. Prior. ▶ **CALL**
 ATC, 1 Min. Prior..... ▶ **CALL**
 Flaps..... ▶ **10 - 20°**
 Power Lever..... ▶ **< 20%**
 Speed Lever (Prop)... ▶ **MAX**
 Speed..... ▶ **80 - 90 KIAS**
 Door Open **RED** or **YEL.** Light ▶ **ON**
 Exit..... **GREEN** Light ▶ **ON**
NO JUMP..... RED Light ▶ ON
 Go Around: Bank Right & **RED** Light **ON**

Fold -----

DESCENT

Speed Lever..... ▶ MIN*
 *To prevent Engine overspeed
 (For noise issues always use MIN.)
 Power Lever..... ▶ AS REQ'D
 (To prevent NTS)
 Flaps..... ▶ UP
 Door..... ▶ CLOSED
 Jump Light ▶ OFF
 Lights..... ▶ AS REQ'D
 Anti-Ice..... ▶ AS REQ'D
 Ignition..... ▶ AS REQ'D
 Max Speed..... ▶ 165 KIAS

PRE LANDING

Fuel Boost Switch..... ▶ ON
Gas – Both ON..... ▶ CHECK
Undercarriage ▶ SET
Mixture (Fuel Shutoff).. ▶ NORM
Prop (Speed Lever).. ▶ MAX
Seat Belts..... ▶ ON
Flaps..... ▶ AS REQ'D
Inst, Ignition, Ice..... ▶ AS REQ'D
Trim (3-Set)..... ▶ SET
Speeds..... ▶ REVIEW
 Bleed Air..... ▶ OFF
 Lights..... ▶ AS REQ'D

LANDING

Flaps..... ▶ AS REQ'D
 Airspeed..... ▶ 75-85 Kts

POST LANDING

Flaps..... ▶ UP (AS REQ'D)
 Speed Lever..... ▶ MIN (Full Aft)
 Fuel Boost Switch..... ▶ NORM
 Lights..... ▶ AS REQ'D
 Anti-Ice..... ▶ OFF
 Ignition..... ▶ OFF
 Transponder..... ▶ STANDBY

SHUT DOWN

Parking Brake..... ▶ AS REQ'D
 Avionics..... ▶ OFF
 Standby Pwr..... ▶ OFF
 Fuel Boost Switch... ▶ OFF
 Bleed Air, Vent fans.. ▶ OFF
 Pwr Lever (1/2" Aft Detent) ▶ GND IDLE
 Cool Down..... ▶ 3 Min < 20% TQE
Keep right hand on FUEL SHUTOFF / FEATHER lever until good shutdown confirmed! See Pg. 4
 Fuel Valve Switch..... ▶ OFF
Monitor ITT
Use FUEL SHUTOFF lever if needed.
 Once good shutdown confirmed:
 Power Lever..... ▶ Reverse
 (@ ~ 50% to place Prop on Start Locks)
 Start/Gen Switch..... ▶ OFF
 Lights..... ▶ OFF
 Battery..... ▶ OFF
 Fuel Tank Selectors.. ▶ ONE OFF
PROP: SPIN - 30 BLADES, Min.
 OPEN RT. Cowl, for Battery Cooling

POST FLIGHT (End of Day)

Battery..... ▶ ON
 Lights..... ▶ CHECK
 Battery..... ▶ OFF
 Control Lock..... ▶ INSTALLED
Components
 Fuel Filter Bypass... ▶ CHECK
 Brake Fluid..... ▶ CHECK
 Oil Filter Bypass..... ▶ CHECK
 Oil Qty..... ▶ CHECK

SECURITY & RECORDS

Tie Downs..... ▶ INSTALL
 Tail..... ▶ RUDDER LOCK
 Plugs..... ▶ INSTALL
 Wheel Chocks..... ▶ INSTALL
 Flt / Maint Log..... ▶ COMPLETE

STARTER LIMITS *

For Battery Only Start:
 60 sec – ON 60 sec OFF
 60 sec – ON 60 sec OFF
 60 sec – ON 30 MIN OFF

For Battery w/APU Start:
 45 sec – ON 120 sec OFF
 45 sec – ON 120 sec OFF
 45 sec – ON 60 MIN OFF

MAX TEMPS (EGT° C)

W/ SRL Control Sys On
***W/SRL Off, SEE EGT TABLE ->>**

Start..... ▶ 770 (1 sec.)
 Idle..... ▶ 770 (1 sec.)
 Take Off..... ▶ 650
 Climb Out..... ▶ 650
 Max Cont. ▶ 650
 Max Rev. ▶ 565

AIRSPEEDS - ER OPS

Engine out
 Flaps Up..... ▶ 100 KIAS
 Flaps Down..... ▶ 80 KIAS
Best Glide
 9062 Lbs. ▶ 98 KIAS
 8750 Lbs. ▶ 97 KIAS
 7500 Lbs. ▶ 90 KIAS
 6250 Lbs. ▶ 82 KIAS
 5000 Lbs. ▶ 74 KIAS

TPE331-12JR MANUAL MODE
 SRL OFF OR INOP - EGT TABLE

OAT (° C)	EGT (° C) @ 100% RPM	EGT (° C) @ 96% RPM
-60	556	535
-55	558	537
-50	559	539
-45	561	540
-40	563	542
-35	564	544
-30	566	546
-25	568	547
-20	569	549
-15	574	551
-10	578	552
-5	582	554
0	587	556
5	591	557
10	595	561
15	600	565
20	604	569
25	608	574
30	613	578
35	617	582
40	622	587
45	626	591
50	630	596
55	635	600
60	639	605

EMERGENCY FUEL SHUTOFF / FEATHER LEVER. If used on startup or shut down, follow with Engine Clearing Procedures.

1. Fuel Valve Switch **OFF**.
2. Ignition Switch **OFF**.
3. Battery **ON**.
4. Start Mode Switch **MOTOR**.
5. Start/Gen Switch **START (< 45 sec. unless fire persist)**.

TO RE-SET FUEL SHUTOFF / FEATHER LEVER

1. Shutoff / Feather lever to **NORM**
2. See AFM Section 4, Systems Checks - Prop Unfeathering