

PERFORMANCE TAKE-OFF AND LANDING A152

Short Field Take-Off and Clear 50ft Obstruction

- **Objective: Use all available runway and climb at V_X to avoid 50' obstruction.**
- Position: - USE ALL RUNWAY – NOSE CENTERED
- Flaps: - 10 DEGREES (FIRST NOTCH)
- Carb. Heat: - OFF (COLD)
- Mixture: - ABOVE 3,000', LEAN FOR RPM
- Brakes: - ON
- Throttle: - FULL OPEN – CHECK GAUGES
- Brakes: - RELEASE
- Controls: - LOW DRAG
- Pitch near V_R : -HOLD FOR 54 Kts
- Rotation: - FIRM AND PRECISE AT $V_R = 54$ Kts.
- Climb pitch: - PRECISE 54 Kts - CLEAR OBSTACLES
- Climb speed: - ABOVE 50-100': PITCH FOR $V_Y = 67$ Kts.
- Flaps: - >100' & > 60Kts: RETRACT FLAPS.

Short Field Landing and Clear 50ft Obstruction

Objective: Precise, steep, powered descent rate and speed control.

- Final Approach: - 500' AGL
- Approach: - STEEP WITH FIRM LANDING
- Flaps: - 30° (<85Kts.)
- Airspeed: - ACCURATE 54Kts.
- Power: - POWER – CONTROL GLIDE PATH
- Clear of Obsrt: - REDUCE POWER
- Pitch: - PITCH FOR 54Kts.
- Flare: - NOSE HIGH
- Touchdown: - FULL YOKE BACK: MAIN WHEELS
- Roll: - LOWER NOSE (SMARTLY)
- Flaps: - RETRACT EARLY (KILL LIFT)
- Braking: - APPLY (HEAVILY)
- Pitch: - KEEP YOKE FULLY BACK

Soft Field Take-Off

Objective: Transfer weight to wings ASAP to get off soft surface.

- Run-up: - SET-UP ON HARD SURFACE
- Flaps: - 10 DEGREES (FIRST NOTCH)
- Carb. Heat: - OFF (COLD)
- Mixture: - ABOVE 3,000', LEAN FOR RPM
- Clearance: - CLEAR AREA BUT KEEP MOVING
- Throttle: - FULL OPEN – CHECK GAUGES
- Pitch: - YOKE FULLY BACK
- Pitch near V_R : - NOSE-HIGH
- Lift-off(1): - LIFT OFF AT MIN AIRSPEED ~ 45Kts.
- Lift-off(2): - **PITCH TO HOLD IN GND EFFECT**
- Accelerate: - ACCL IN GND. EFFECT TO $V_X = 54$ Kts.
- Climb: - CLIMB AT $V_X = 54$ Kts TO >100'
- Climb: - PITCH FOR $V_Y = 67$ Kts
- Flaps: - >100' & > 60Kts: RETRACT FLAPS.

Soft Field Landing

Objective: Gentle-touch landing, nose high, no brakes.

- Approach: - STANDARD – 400' final
- Flaps: - 30° (<85Kts.)
- Airspeed: - ACCURATE 60 Kts.
- Power: - CONTROL FLOAT: 2-5' OFF SURFACE
- Pitch: - NOSE HIGH
- Round-out: - WITH SLIGHT POWER – NOSE HIGH
- Flare-2: - PWR FOR SOFT TOUCH – NOSE HIGH
- Touchdown: - SLOW & SOFT MAIN WHEELS ONLY
- Braking: - **NONE**
- Pitch: - KEEP YOKE FULLY BACK
- Roll: - LET NOSE LOWER SLOWLY
- Flaps: - RETRACT

NO BRAKES - KEEP MOVING OFF SOFT SURFACE