QUICK REFERENCE MULTI -ENGINE MANEUVERS
STANDARD OPERATING PROCEDURES

Slow Flight
Make two 90° clearing turns – outside references and altitude
Premaneuver check
HEADING/ALTITUDE/HORIZON → Power to approx. 15"
HEADING/ALTITUDE/HORIZON → Gear down
HEADING/ALTITUDE/HORIZON → Flaps 10°
HEADING/ALTITUDE/HORIZON → Flaps 25°
HEADING/ALTITUDE/HORIZON → Flaps 40°
HEADING/ALTITUDE/HORIZON → Props forward
HEADING/ALTITUDE/HORIZON → Power to approx. 20"
Pitch controls airspeed – for 90 MPH
Power controls altitude

Power off stalls
Upon reaching Slow Flight
Power smoothly to idle
Pitch nose up smoothly until stall warning or buffet
Lower nose to horizon – full power 1° positive pitch
Flaps – 25° - maintain a visual reference with the horizon
Flaps – 10° - maintain a visual reference with the horizon
Gear up
Look at airspeed for blue line
Flaps – 0 - maintain a visual reference with the horizon

Power on Stalls
Make two 90° clearing turns – outside references and altitude
HEADING/ALTITUDE/HORIZON → power to approx. 15"
HEADING/ALTITUDE/HORIZON → waiting for speed to drop to blue line
Say above several times & **DO NOT** rush to slow to blue line
Blue line – props forward
Nose up slightly - 1° to 2° to slow down 10 mph below blue line
At 10 MPH below blue line – power to 18"
Nose slowly pitching up – until stall warning or buffet occurs
Lower nose with full power
Positive pitch 1° to 2° for airspeed to blue line

VMC Demonstration and Recovery
Make two 90° clearing turns – outside references and altitude
HEADING/ALTITUDE/HORIZON → power to approx. 15"
Waiting for speed to drop to blue line say several times:
Upon reaching blue line
Blue props forward – left engine power back smoothly give it right rudder
Right engine full power smoothly with more right rudder
Do not raise the nose, do not use right aileron
Now raise the nose slowly without using aileron – maximum rudder only
When the directional control begins to go to the left use your side scan

Recovery to VMC
Power back to ¾ - which bring nose to the right
Let nose go to below horizon 1° to 2°
Pick a spot on the ground and count 3 seconds
Bring in right engine, right aileron and right rudder
Airspeed must go back to blue line

Drag Demonstration
This maneuver is to demonstrate how the aircraft will perform with a single engine under different scenarios.
Make two 90° clearing turns – outside references and altitude
HEADING/ALTITUDE/HORIZON → Power to approx. 15"
HEADING/ALTITUDE/HORIZON → waiting
Blue line – blue props forward
Left engine to 12" – maintain blue line – outside reference
Right engine to approx. 22"-24" – maintain blue line/outside reference/maintain altitude
Pitch up 1° to 2° for airspeed to drop to 10 MPH below blue line (aircraft will climb and then it will start slow descent back to blue line)
Pitch 1° to 2° down for airspeed to increase 10 MPH above blue line, obviously aircraft will descend back to blue line
Gear down – maintain blue line (aircraft will descend at approx 250 FPM)
Flaps 25° - maintain blue line (aircraft will descend at approx 200 FPM)
Left engine back to idle – which is a Windmilling prop – maintain blue line (aircraft will descend 400 to 500 FPM)

Short Field Take-off
Brakes
0° flaps
Full power – oil pressure/temp/RPM
Release brakes
Rotate at 85 MPH – pitch smoothly to 10° to 12°pitch
Climb at 95 MPH to 50 feet
Lower nose to 5° pitch for blue line
Climb at blue line

Short Field Landing
On final blue line 105 MPH
Pitch for 95 MPH on ¼ mile final (DO NOT GO BELOW 95)
Aim for 200 feet prior to touch down point