

Grob  
Twin Astir  
  
Checklist  
And  
Quick Reference

# Normal Procedures

## *Airspeeds For Normal Operations (kts)*

	<u>Solo</u>	<u>Dual</u>
Best Glide ( $V_{L/D}$ )	<u>51</u>	<u>60</u>
Minimum Sink ( $V_{MS}$ )	<u>40</u>	<u>49</u>
Maneuvering ( $V_A$ )	<u>92</u>	<u>92</u>
Never Exceed ( $V_{NE}$ )	<u>135</u>	<u>135</u>
Stall ( $V_S$ )	<u>36</u>	<u>43</u>
Stall - Spoilers Open ( $V_{S1}$ )	<u>41</u>	<u>49</u>
Max Speed - Spoilers Open	<u>135</u>	<u>135</u>
Maximum Aero Tow	<u>92</u>	<u>92</u>
Maximum Ground Launch	<u>65</u>	<u>65</u>
Minimum Pattern	<u>53</u>	<u>65</u>
Minimum Approach Speed	<u>50</u>	<u>56</u>

(Plus 1/2 kt for each 1 kt of wind)

# *Preflight Checklist*

## COCKPIT

- Required Documents ..... In Aircraft  
    Airworthiness Certificate  
    Registration  
    Operating Limitations (Placards, Instrument  
    Markings, POH)  
    Weight and Balance Information
- Seats and Seat Cushions ..... Adjust  
Seat Ballast ..... Correct  
Rudder Pedal (front and rear) ..... Adjust  
Controls ..... Free and Correct  
Spoilers ..... Free and Correct  
Loose Objects ..... Remove or Secure  
Electrical Equipment ..... Off  
Altimeter ..... Set  
Battery ..... Connect  
Radio ..... On and Tuned  
Transponder (if installed).....On/1202  
Wing Attachment Connect ... Secured and Checked  
Control Connections ..... Secure  
Oxygen (if desired)..... On
- FOR SOLO FLIGHT
- Rear Seat Cushions ..... Remove  
Rear Seat Belt and Harness ..... Secure
- FOR ALL FLIGHTS
- Canopy ..... Closed and Latched

## EXTERIOR

### Left Wing

- Leading Edge ..... Check Condition
- Underside of Wing ..... Check Condition
- Spoilers ..... Check
- Wing Tip Wheel ..... Check
- Aileron ..... Check
- Trailing Edge ..... Check Condition

### Empennage

- Static Ports (if present) ..... Check Condition
- Underside of Tail Boom ..... Check Condition
- Rudder Gust Lock ..... Remove
- Pitot Tube Cover ..... Remove
- Total Energy Probe ..... Check Condition
- Tail Control Surfaces ..... Check
- Tail Wheel ..... Check

### Right Wing

- Trailing Edge ..... Check Condition
- Aileron ..... Check Condition
- Wing Tip Wheel ..... Check
- Spoilers ..... Check
- Leading Edge ..... Check Condition
- Underside of Wing ..... Check Condition

### Fuselage

- Main Wheel, Tire and Brake ..... Check
- Underside of Fuselage ..... Check Condition
- Nose Wheel ..... Check
- Tow Hook ..... Check
- Canopy Hinges and Latches ..... Check
- Canopy ..... Clean

# *First Flight Of The Day*

Positive Control Check ..... Accomplish  
Tow Rope ..... Inspect  
Tow Release ..... Check  
Main Brake ..... Check

## *Before Takeoff*

(ABBCCDDDE)

Altimeters ..... Set  
Ballast ..... If Required  
Belts and Harnesses ..... Secure and Adjusted  
Controls  
    Ailerons, Elevators ..... Free and Correct  
    Elevator Trim ..... Set  
Cable (Tow Rope) ..... Check and Attach  
Canopy ..... Closed and Latched  
Dolly (Tail/Wing)..... Checked  
Dive Brakes ..... Closed and Locked  
Direction (Wind)..... Checked  
Emergency Procedures ..... Review

# *Before Landing*

## (FUSTALL)

Wind ..... Assess  
Flaps ..... Set  
Undercarriage ..... Down and Locked  
Speed ..... Min Pattern +  $\frac{1}{2}$  Wind Speed  
Trim ..... Set  
Airbrakes ..... Check and Hold  
Look  
    Traffic Pattern ..... Look For Traffic  
    Landing Area ..... Clear  
    Wind Indicators ..... Check Direction  
Land ..... Adjust Pattern For Conditions

# *After Landing/Securing*

Electric Equipment ..... Off  
Flight Log ..... Filled Out  
Spoilers.....Closed and Locked  
Flight Controls..... Secured by Front Seat Belts  
Battery ..... Disconnected  
Oxygen ..... Off  
Seat Ballast ..... Installed, or Properly Stored  
Pitot Tube Cover..... Installed  
Rudder Lock ..... Installed  
Tie Down .....Sawhorses Oriented Properly  
Tie Down ..... Secure and Tight All Three Points  
Vents ..... All Closed  
Canopy ..... Closed and Locked  
Canopy Cover ..... Installed  
Leading Edges (all) ..... Clean

# Emergency Procedures

## **Spoiler Are Open**

Towplane .....Fans Rudder

## **Towplane Emergency**

Signal .....Towplane Displays Positive L-R Roll

Glider .....Release Immediately

### Note

For all in-flight emergencies, the most important pilot action is to maintain control of the aircraft.

## **Premature Termination of Tow (Rope Break)**

Approach Airspeed ... Establish and Maintain

Landing Area .....Select

< 200' AGL Land Straight Ahead

> 200' AGL 180° Turn, Land Downwind

> 800' AGL Complete Pattern and Land

Tow Rope Release ..... Pull

Land ..... Checklist



## **Off Airport Landing**

Suitable Field ..... Select  
Size  
Shape  
Slope  
Surface Winds  
Surface Condition  
Surrounding Obstructions  
Stock

Fly normal upwind next to field to assess.

Pattern ... Fly Without Reference to Altimeter

Final Approach ..... Normal

Touchdown ..... Minimum

Speed Brakes ..... Apply Heavily

## **Glider Release Failure (Aero Tow)**

Signal ..... Move To Side and Rock Wings  
When Towplane Releases

Land ..... As Soon As Possible

## **Neither The Towplane Nor Glider Can Release**

Signal ..... Towplane Yaws Back and Forth

Tow Position ..... Low Tow

Spoilers ..... As Necessary

Touchdown ..... Before Towplane

After The Towplane Touches Down

Brakes or Spoilers to Maintain Position