Precautions into Suspected or Known Windshear Conditions:

- **Before Takeoff:**
  - Delay Takeoff (until conditions improve).
  - Favorable Runway (in reference to location of likely windshear/downburst condition).
  - Lowest Flap Setting (compatible with takeoff requirement to maximize climb gradient).
  - Weather Radar (to analyze the flight path).
  - Maximum Takeoff Power (TOGA).
  - Monitor Airspeed (early evidence of windshear).
  - Select FPV after triggering Go Levers (on PFD of PNF).

- **During Approach:**
  - Delay Landing (until conditions are more favorable or divert).
  - Favorable Runway (in conjunction with an appropriate approach aid).
  - Select FPV (on PFD of PNF).
  - Weather Radar (to analyze flight path).
  - Flaps 20 for Landing.
  - Auto Pilot in CMD (for accurate approach and early information of beam deviation with ILS).
  - Set $V_{APP}$ (wind correction based on reported surface wind).
  - Monitor Ground Speed (maintain $GS \geq V_{APP} - 10$ knots).
  - Monitor IAS (maintain $IAS > V_{APP}$).
**Precautions into Predicted Windshear Conditions:**

1) **Message “W/S AHEAD” on PFD in RED:**

- Before Takeoff (associated with aural alert “Windshear Ahead”):
  - Delay Takeoff.
  - Select Favorable Runway (incase you have decided to takeoff).

- **During Takeoff Run:**
  - Reject Takeoff (predictive windshear alerts are inhibited above 100 knots and until 50 feet).

- **After Airborne:**
  - Max Takeoff Power (TOGA).
  - Slats/Flaps Configuration (change as normal, provided windshear condition is not entered).
  - Follow SRS Commands (without FD bar, pitch close to but not more than 17.5 deg).

- **Landing (associated with aural alert “Go Around Windshear Ahead”):**
  - Max Takeoff Power (TOGA).
  - Announce “Go Around Flaps”, retract flaps one step and select landing gear up.
  - If no hazard exists, warning may be considered precautionary.

2) **Message “W/S AHEAD” on PFD in AMBER:**

- Follow “Precautions into Suspected or Known Windshear Conditions”.

**Recovery Technique and Procedures:**

**TAKEOFF**

- **Before V1:**
  - Reject Takeoff (only if unacceptable airspeed variation occurs and there is sufficient runway remaining).
• After V1:
  - Disconnect Autothrottle and set Max Takeoff thrust.
  - Follow SRS Commands (without FD bar, pitch close to but not more than 17.5 deg).

• Initial Climb:
  - Disconnect Autothrottle and set Max Takeoff thrust.
  - If Auto Pilot is engaged in CMD then keep it engaged otherwise do not engage it.
  - Follow SRS Commands (without FD bar, pitch close to but not more than 17.5 deg).
  - Monitor flight path (using FPV on PFD of PNF) and airspeed.
  - Allow airspeed reduction to “intermittent stick shaker” activation (while checking speed margin on PFD).
  - No configuration changes (gear, flaps) until out of shear conditions.
  - Increase airspeed when positive climb is confirmed.

LANDING

- Trigger Go Levers, Set and maintain Max Go Around Thrust.
- If Auto Pilot is engaged in CMD then keep it engaged otherwise do not engage it.
- Follow SRS Commands (without FD bar, pitch close to but not more than 17.5 deg).
- No configuration changes (gear, flaps) until out of shear conditions.
- Allow airspeed reduction to “intermittent stick shaker” activation (while checking speed margin and speed trend on PFD).
- Monitor flight path (using FPV on PFD of PNF) and airspeed.
- Recover smoothly to normal climb when out of shear condition.
- Increase airspeed when positive climb is confirmed.

Disclaimer: "A310 Operation in Windshear / Downburst Conditions" are personal notes of the undersigned. These notes do not sanction any pilot to violate his/her Company's Standard Operating Procedures, Aircraft Manuals or Manufacturer's Recommendations.