ATTACHMENT L

Excerpts from A300-600 American Airlines Operating Manual Volume 1

(20 pages)

RUDDER TRAVEL FAULT

RUD TRAVEL (affected) ..... OFF

- **If both RUD TRAVEL OFF and FAULT Lights extinguished:**
  USE RUD WITH CARE ABOVE SPD 170.
- **If both RUD TRAVEL OFF and FAULT Lights illuminated:**
  RUD TRAVEL IN HIGH SPEED.
  MAX X-WIND FOR LDG 20

CAUTION

With rudder travel in high speed mode, an engine failure will result in limited aircraft controllability.

- **If only one RUD TRAVEL set OFF, without any other warning activation:**

or

- **If both RUD TRAVEL set OFF and both FAULT Lights extinguished:**

After 1 minute:

RUD TRAVEL(S) ..... ON

- **If unsuccessful and if both RUD TRAVEL affected:**
  Use rudder with care above 170 kts.

NOTES

- Use rudder with care above 170 knots to prevent overcontrolling with loss of rudder travel limiter.
- When both Rudder Travel Switch / Lights are OFF, both Rudder Travel Fault Lights are extinguished, and flaps are extended 20° or greater, Rudder Travel is in low speed configuration.
- When both Rudder Travel Switch / Lights are OFF, but both Rudder Travel Fault Lights are illuminated, and flaps are extended 20° or greater, Rudder Travel is in high speed configuration. Expect higher control forces during approach and landing.

Rudder Trim Reset Fault

TRIM RESET ..... MANUAL

NOTE

Use of the Rud Trim Selector is the only way to neutralize rudder trim.

Uncommanded Flight Control Inputs

CAUTION

The rudder is not controlled by the autopilot with the slats retracted. If abnormal rudder control ceases upon slat retraction without deselection of either the Green or Yellow SERVO CTL, be alert for possible uncommanded rudder inputs upon subsequent slat extension.

GREEN SERVO CONTROL SWITCH.....OFF

- **If normal flight control behavior returns:**
  Leave Green Servo Control Switch OFF for remainder of flight.
  LAND AS SOON AS PRACTICAL.

NOTES

- AP 2 is available as required, however, turn AP 2 OFF and conduct controllability check prior to commencing approach.
- The following equipment is lost with the Green Servo Control Switch OFF:
  - AP1
  - PITCH FEEL 1
  - SPLR 6

- **If abnormal flight control behavior continues:**
  GREEN SERVO CONTROL SWITCH.....ON
  YELLOW SERVO CONTROL SWITCH.....OFF

  - **If normal flight control behavior returns:**
    Leave Yellow Servo Control Switch OFF for remainder of flight.
    LAND AS SOON AS PRACTICAL.

NOTES

- AP 1 is available as required, however, turn AP 1 OFF and conduct controllability check prior to commencing approach.
- The following equipment is lost with the Yellow Servo Control Switch OFF:
  - AP2
  - PITCH FEEL 2
  - YAW DAMPER 2
  - SPLR 2,3,5

LDG DIST (MISC 25).....MULTIPLY BY 1.3

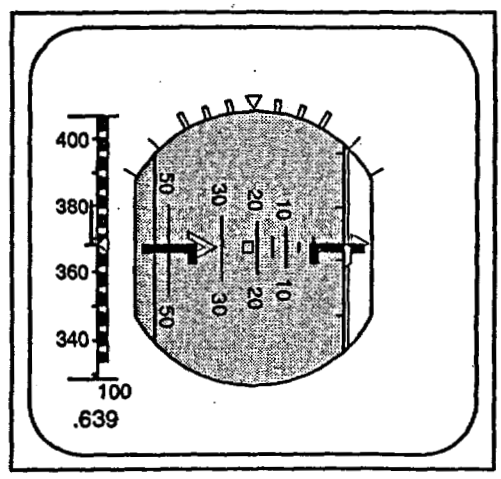
- **If abnormal flight control behavior continues:**
  YELLOW SERVO CONTROL SWITCH.....ON
  LAND AS SOON AS POSSIBLE.

(END)

Unusual Attitudes

Recovery from an unusual attitude is accomplished by recognizing airplane attitude and maneuvering the airplane to recover.

Recognition



- Locate sky pointer.
- Determine pitch attitude.
- Locate horizon line (or use pitch ladder).

Recovery

Autopilots / Autothrottles..... DISCONNECT

CAUTION

If roll rate exceeds 45° per second, SGU's will fault and diagonal line will be displayed on both PFDs and both NDs for three seconds.

Accomplish the following procedures to the extent necessary to effect recovery.

Nose High

- Unload with forward yoke pressure toward "0" g force.
- Roll the airplane toward the nearest horizon - limit bank angle to approximately 60°.
- Increase thrust in most nose high recoveries.
- As airplane symbol approaches the horizon, make a coordinated roll to wings level with a slight nose down attitude.
- Adjust airspeed, thrust, and pitch as necessary.

Nose Low

- Roll the airplane in the shortest direction toward the sky pointer.
- If bank angle is greater than 90°, maintain neutral to forward yoke pressure.
- Coordinate rudder with the roll.
- With bank angle less than 60°, increase back pressure on the yoke.
- Adjust airspeed, thrust, drag devices, and pitch as necessary.

Inverted - ROLL FIRST THEN PULL

END

Windshear / Microburst During Takeoff Roll

- Windshear encountered during the takeoff roll can cause airspeed indications to stagnate or even decline. In this situation, balanced field conditions (analysis) and the associated V speeds no longer apply.
- The Captain must make a decision to continue or reject the takeoff considering that if the decision is made to reject the takeoff, adequate remaining runway may not be available.

If the decision is made to continue the takeoff:

THROTTLES ..... FULL FORWARD

VR ..... INCREASE

Increase V_R by up to 20 knots. Begin rotation no later than 2000 feet from departure end of the runway even though increased V_R has not been attained.

If windshear conditions still evident once airborne:

Accomplish Windshear / Microburst Go-Around Procedure -next page.

END

Windshear / Microburst Go-Around Procedure

NOTE

The Windshear / Microburst Go-Around Procedure is intended for the takeoff and landing phase of flight where there is a risk of ground contact.

Announce – "*Escape*" and -

Immediately and simultaneously -

TOGA LEVERS	PRESS
AUTOPILOT / AUTOTHROTTLES	DISCONNECT
THROTTLES	FULL FORWARD
PITCH	ROTATE to 15° or FOLLOW FD COMMANDS
SPEED BRAKES	RETRACTED

CALLOUTS ..... RADIO ALTITUDE / VERTICAL SPEED

ATC ..... ADVISE

NOTES

- **Pitch / Flight Path**
  - Following FD commands (if available) will result in the safest possible recovery maneuver.
  - If the airplane is maintaining level flight or climbing, maintain pitch attitude.
  - Always respect stick shaker.
  - Stick shaker speed (Vss) is shown as a red and black strip at the bottom of the speed scale on each PFD.
    - Vss is equal to 1.12 Vs.
    - Vss is not displayed until 5 seconds after takeoff.
    - Vss is g-load sensitive.
- **Configuration**
  - Do not change flap, gear, or trim position until terrain contact is no longer a factor.
  - Studies have shown it is highly probable that multiple windshear spikes can occur during one recovery procedure. For this reason, do not anticipate conditions and do not begin airplane clean-up until a positive climb gradient is established and the airplane is unquestionably under control.
  - When the possibility of terrain contact is no longer a factor, continue with normal takeoff or go-around procedure.

- **Callouts**

  The pilot-not-flying must closely monitor and call out pertinent flight path indications and also call out directive commentary when appropriate; for example, "Airspeed increasing, altitude decreasing - pull the nose up."

- **ATC**

  Report the encounter to ATC as soon as practicable. Include the airspeed change, location, altitude and airplane type.

(END)

Supplemental Information

Avoidance Is the First Rule

General

Avoid areas of known severe windshear. PIREPS of windshear in excess of 20 knots or 500 fpm climb or descent below 1000 feet AFL are a good indication of such areas. However, the Captain must consider the time elapsed since the report and the change in reported or observed (radar or visual) weather. Microbursts in particular can create severe windshear conditions, but these conditions develop, change, and dissipate rapidly.

The most dangerous form of windshear is a convective microburst. Some have been documented with wind changes in excess of 150 knots. Because microbursts intensify for several minutes after they first impact the ground, the severity may be up to twice that which is initially reported.

Search for clues which may indicate the presence of severe windshear. Severe windshear has been encountered under the following conditions:

- Thunderstorm and convective clouds
- Rain and snow showers
- Frontal systems
- Low altitude jet streams
- Strong or gusty surface winds

Takeoff

When positive indications of wind shear exist, delay take-off until conditions improve. When conditions are such that moderate wind shear may be encountered even though not reported, the following precautions are recommended.

- Use maximum takeoff thrust instead of standard thrust
- Use the longest suitable runway.
- Do not use any pitch mode of the Flight Director for takeoff.
- Maximize available margins between VR and stick shaker through runway selection, flap selection, and delayed rotation. The delayed rotation speed must not exceed either: (1) the runway weight limit VR speed or (2) a 20 knot increase. For example, if the actual gross weight is 350,000 pounds, mentally remember to rotate at the VR speed which corresponds to the runway limit of 380,000 pounds.

Before Starting Engines

Preface

The items on the Before Starting Engines checklist will have previously been or will be accomplished by the appropriate crewmember(s) as indicated by the duty assignment column.

This checklist is accomplished by challenge and response. The F/O will read the challenge portion. The Captain will respond aloud to all items, ensuring accomplishment of all checks and items. The F/O will also respond aloud to those items with a (‡) following them.

If accomplishment of the checklist is interrupted due to a crewmember leaving the cockpit and, during the crewmember's absence, there has been a non-crewmember in the cockpit, who may have inadvertently moved a switch, control, etc., the checklist shall be re-accomplished in its entirety.

Expanded Checklist

Captain	First Officer
RUDDER PEDALS and SEATS ..... ADJUSTED and LOCKED ‡ Check that seat is adjusted and properly locked in the forward and aft tracks and that rudder pedals are properly adjusted for seat position.	
WINDOWS..... CLOSED and LOCKED ‡	
OXYGEN QTY/ MASK/ INTERPHONE/ GOGGLES..... SET and CHECKED ‡ • O2 Flow – TEST • Mask Microphone – CHECK • Diluter Demand Lever – 100% • Goggles – On crew originations, check that goggles are readily available and serviceable.	
IRS's ..... NAV MODE Ensure no warning lights are displayed.	
NO SMOKING SIGN ..... ON	
HYDRAULIC PANEL and QUANTITIES. SET and CHECKED • Hydraulic Quantity – CHECK **NOTE** Use ECAM to determine HYD servicing requirements. • Engine Pump Switches – ON • Electric Pump Switch – OFF	

FLIGHT CONTROLS ..... CHECKED

ECAM – Select F/CTL page.

CAUTION

Do not slam stops when making fight controls check.

Slowly move the rudder pedals, Control Wheel and control column to their furthermost position checking for freedom of movement, normal control forces and pointer deflection on ECAM F/CTL Page.

NOTE

In some cases, after the aileron check is completed the Control Wheel may not return to the neutral position even though the ailerons have neutralized. Aileron position should be confirmed on the ECAM F/CTL Page.

ECAM – Deselect F/CTL Page.

ATS ..... ON

EGPWS ..... AS REQUIRED

At least one pilot shall have Terrain Display selected if terrain / obstacles may be a factor.

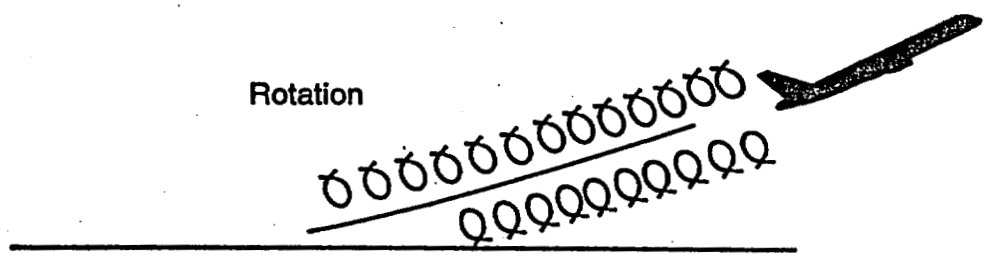
Accomplish for One Engine Taxi Only	
	AIR BLEED X-FEED ..... IN LINE The No. 2 engine will be used to supply air to the left and right packs.
Command No. 1 engine shutdown. See NOTES.	**NO. 1 ENGINE (on command) ..... SHUTDOWN**
Restart No.1 engine using Crossbleed Start procedure - See SYSTEMS 39.	
After No. 1 Engine Is Started	
	ENGINE START SELECTOR ..... OFF

4. WAKE TURBULENCE

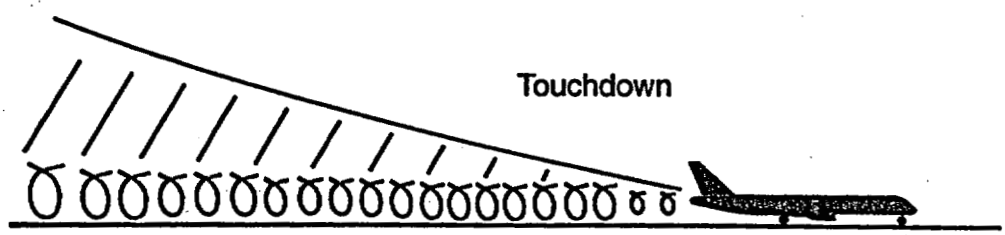
4.1 General

Wake Turbulence is the vortex formed at the wingtip by every aircraft in flight as a by-product of lift. Following are general characteristics of wake turbulence:

A. Wake vortices are generated from the point of aircraft rotation for takeoff to the point of touchdown.



Wake Begins

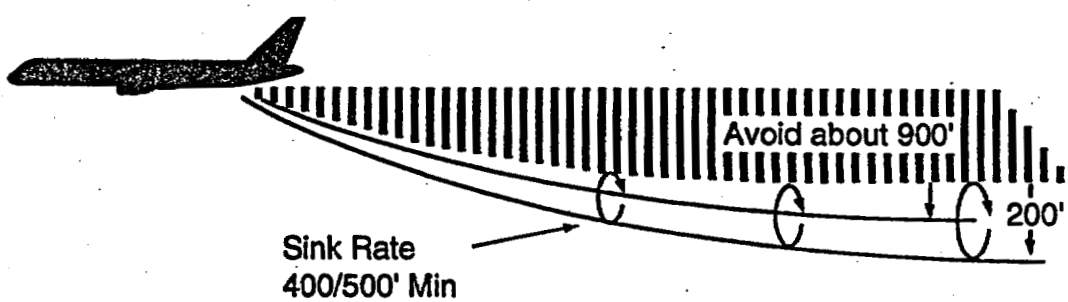


Wake Ends

B. Intensity is greatest from a heavy aircraft flying slow in a clean configuration.

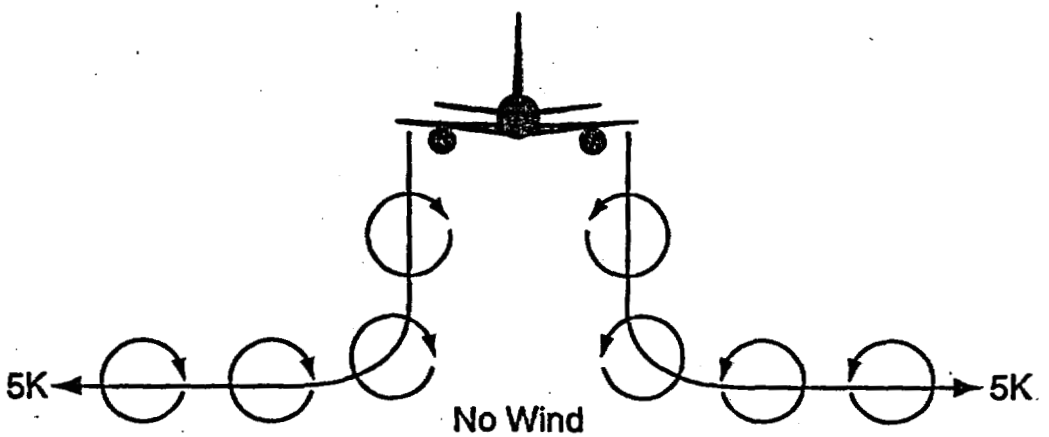
C. Intensity is greater from recently designed aircraft with higher lift wings (e.g. - 757).

D. Wake vortices formed from aircraft in flight will sink approximately 400 to 500 ft. per minute and level off approximately 900 ft. below the generating aircraft, diminishing with time and distance behind the aircraft.



E. The vortex will tend to induce a roll in the aircraft flying into another aircraft's wake.

F. A vortex generated from an aircraft near the ground will tend to move laterally over the ground at about 5 kts.



4.2 Avoidance, Separation, and Containment

A. Avoidance - use caution when operating or flying behind and just below larger aircraft, on parallel runways closer than 2500 feet for vortex drift from the adjacent runway, or approaching at or slightly above a larger aircraft you are behind.

B. Air Traffic Control Turbulence Separation Standards

1. Because of the possible effects of wake turbulence, controllers are required to apply no less than specified minimum separation for aircraft operating behind a heavy jet and 757 aircraft.
   a) Separation is applied to aircraft operating directly behind a heavy / 757 jet at the same altitude or less than 1000 ft. below:
      - Heavy jet behind heavy jet - 4 miles
      - Large / heavy behind 757 - 4 miles
      - Small behind 757 - 5 miles
      - Small / large aircraft behind heavy jet - 5 miles

   The MD-11, DC-10, A300, 767 and 777 are "Heavy" aircraft.
   The F100, DC-9, 727, 737, and 757 are "Large" aircraft.

C. Air Traffic Control Takeoff Separation Standards

1. Two minutes, or the appropriate 4 or 5 mile radar separation when takeoff behind a heavy or 757 jet will be:
   a) from the same threshold
   b) on a crossing runway and projected flight paths will cross
   c) from the threshold of a parallel runway when staggered ahead of that of the adjacent runway by less than 500 feet and when the runways are separated by less than 2500 feet.

NOTE: Controllers may not reduce or waive these intervals.

L/G UNSAFE INDICATION

If Landing Gear Handle is Selected DOWN

If the gear is extended at speeds near V_{LO}, deceleration may be required to obtain a satisfactory gear door uplock.

- **If green light(s) extinguished on both panels:**
  L/G NOT DOWN LOCKED
  L/G GRAVITY EXT [LAND 4] ..... PERFORM
  - **If unsuccessful:**
    LDG WITH ABNORM L/G PROC [LAND 1]..... APPLY
- **If green light extinguished on one panel:**
  L/G POS DET SYS 1 (2) FAULT
  [The unsafe indication on the other panel is spurious.]
  L/G POS DET SYS..... SYS 2 (1)
  [Select other detection system.]

NOTE

If one gear remains unlocked, perform turns to increase load factor and perform alternating side slips in an attempt to lock the gear. Prior to performing any side slip maneuver, ensure all Flight Attendants and passengers are seated.

- **If nose gear indication unsafe on overhead panel only;**
  GPWS "TOO LOW GEAR" WARNING..... DISREGARD

If Landing Gear Handle Is Selected UP

- **If red light(s) illuminated on both panels:**
  L/G NOT UP LOCKED
  MAX SPD 270
  L/G..... DOWN
  FUEL CONSUMPTION INCREASED
  [Flight with extended gear has a significant effect on fuel consumption and climb gradient.]
- **If red light(s) illuminated on one panel:**
  [If light(s) are illuminated on one panel, but indications are normal on the other panel, the unsafe indication is spurious.]
  L/G POS DET SYS 1 (2) FAULT
  L/G POS DET SYS..... SYS 2 (1)
  [Select other detection system.]

45 – Satellite Communications System

A Satellite Communications (SATCOM) system is installed. A description of the Controls and Indicators is located in the COMM Section of Volume 2.

47 – Power Ports for Lap Top Computers

Seat-mounted DC electrical power outlets have been installed in the main cabin for electronic devices such as lap top computers and compact disc players. The master switch, labeled PASS SEAT OUTLETS, is located on the Purser panel adjacent to Door 1L. There are three circuit breakers located in the 800VU ceiling panel just outside the cockpit door. The cockpit is not affected by this modification.

48 – Rudder Trim Control Mod

Several operators have experienced inadvertent rudder trim operation with the autopilot engaged. Airbus has issued a Service Bulletin which inhibits the rudder trim while the autopilot is engaged and the slats are extended. The Service Bulletin has been accomplished on this airplane.

49 – New SATCOM Call Alerting

A new SATCOM SELCAL Light annunciation and chime are installed. An incoming SATCOM call is recognized by the steady illumination of the associated SATCOM SELCAL Light and a new multi-ring chime. The new chime is similar to a standard telephone ring.

The chime may be silenced by pressing either SATCOM SELCAL Light. The caller will continue to hear the sound of a ringing telephone until the call times out (after approximately two to four minutes) or is answered.

50 – New Automated Altitude Callouts

The EGPWS is being modified with automated altitude callouts based on Radio Altitude.

Automated voice callouts will occur at the following altitudes:

- 2500
- 1000
- 500
- 100
- 50, 40, 30, 20, 10.

These automated callouts replace the verbal callouts of *"Radio Altimeter Alive", "1000", "500", and "100."*

NOTE

At some stations with close-in terrain, RA altitudes can vary considerably from corresponding AFL baro altitudes.

On CAT II and CAT III approaches, pilot-not-landing must make the 300 and 200 foot RA callouts. For additional callouts associated with a particular approach, refer to applicable Crew Coordination Procedures.

Maximum Airspeed Limitations

Maximum Operating Speed - VMO / MMO (AFM)

VMO ..... 335 kts

VMO indicated by the Maximum Operating Airspeed pointer on the PFD airspeed display.

MMO ..... .82 M

Landing Gear Extended (AFM)

VLE / MLE ..... 270 kts / .65 M, whichever is lower

Landing Gear Operating (AFM)

VLO / MLO - Extending ..... 270 kts / .59 M, whichever is lower

VLO / MLO - Retracting ..... 240 kts / .53 M, whichever is lower

Maximum Slat / Flap Speeds - VFE (AFM)

	Slats	Flaps	Speed (Kts)
Takeoff	15	0	250
Takeoff and Approach	15	15	215
	15	20	205
Landing	15	20	205
	30	40	175

Kruger Extended ..... 300 kts / .65 M, whichever is lower

Manual Pitch Trim Only ..... 285 kts / .78 M, whichever is lower

Turbulence Penetration Speed - VA (AFM)

270 knots / .78 Mach, whichever is lower.

NOTE

If turbulence penetration is necessary below 10,000 feet MSL, 250 knots can be used from sea level to 10,000 feet.

Cockpit Window Operation

Windshield Wipers in Use ..... 230 kts

Cockpit Windows Open ..... 225 kts

AA

A300 Operating Manual

BULLETIN

Subject: L/G UNSAFE INDICATION Procedure	No. 300-1-141
	Date 7-17-02

File: Vol. I – LAND 3

Remove:

WARNING
Do not perform the alternating sideslips as described in the **NOTE** in the subject procedure.

The **NOTE** in the subject procedure is revised as follows:

NOTE
If one gear remains unlocked, perform coordinated turns to increase load factor (not to exceed 45° of bank). Prior to performing the turns, ensure all Flight Attendants and passengers are seated with seat belts fastened.

For the A300 Fleet Support Team
Captain Delvin Young

Distribution: List 646 and all A300 Captains and F/Os

A300 Operating Manual

BULLETIN

Subject: Upset Recovery / Unusual Attitudes	No. 300-1-137
	Date 3-8-02

File: Vol. I – MANEUVERS 13

Upset Recovery / Unusual Attitudes

General

The information contained in this bulletin provides recommended piloting techniques, maneuvers and guidelines for recovery from an upset / unusual attitude as recommended by Airbus, and replaces the Unusual Attitudes procedure on MANEUVERS 12.

Introduction

An upset / unusual attitude can generally be defined as unintentionally exceeding the following conditions:

- Pitch attitude more than 25° nose up, or
- Pitch attitude more than 10° nose down, or
- Bank angle more than 45°, or
- Within the above parameters, but flying at airspeeds inappropriate for these conditions.

Aerodynamic Fundamentals

Pitch Control

When an airplane is at a balanced "in-trim" angle of attack, it will seek to return to the trimmed angle of attack if upset by external forces or momentary pilot inputs. This is due to the longitudinal stability of the airplane.

Changes of airplane configuration affect pitch attitude:

- Flap extension usually generates a nose-down pitching moment.
- Flap retraction usually generates a nose-up pitching moment.
- When extended, speed brakes usually produce a nose-up pitching moment.

Pitch attitude is also affected by thrust variation. Reducing thrust generates a nose-down pitching moment, and conversely, increasing thrust generates a nose-up pitching moment.

Lateral and Directional Control

Unusually large amounts of aileron and spoiler input may be required to recover from an upset / unusual attitude.

If during an upset / unusual attitude, the angle of attack increases beyond a certain value (stick shaker and buffeting), then the airflow over the wing separates and the efficiency of ailerons and spoilers decreases.

CAUTION

At high angles of attack, pilots must be extremely careful when using the rudder for assisting lateral control. Excessive rudder can cause excessive sideslip, which could lead to departure from controlled flight.

Recovery Techniques

The techniques assume that the airplane is not stalled. If it is, recovery from the stall must be accomplished first.

Stall Recovery

To recover from the stall, the angle of attack must be reduced.

Nose down pitch control must be applied and maintained until wings are unstalled. Under certain conditions, it may be necessary to reduce thrust in order to increase the nose-down pitching moment necessary to reduce the angle of attack.

Once unstalled, unusual attitude recovery actions may be taken and thrust reapplied as needed.

Recovery from a Nose High, Wings Level Upset / Unusual Attitude

Indications:

- Pitch attitude is unintentionally more than 25 degrees nose-up and increasing.
- The airspeed is decreasing rapidly.

As airspeed decreases, the pilot's ability to maneuver the airplane also decreases. If the pitch trim setting is nose-up, as for low speed flight, it partially reduces the nose-down authority of the elevator. As the airspeed decreases, the pilot could intuitively make a large thrust increase; this will cause additional pitch up effect further complicating the situation. At full thrust setting and very low airspeed and with pitch trim set for low speed, the elevator may have only very limited ability to reduce pitch attitude.

In this situation, the pilot should trade altitude for airspeed. This is accomplished by an input of up to full nose-down elevator accompanied by some nose-down pitch trim.

NOTE

Pilots should not fly the airplane using pitch trim only.

If altitude permits, reducing thrust may help to achieve a nose-down pitch rate.

If normal pitch control inputs do not stop an increasing pitch rate, it may be necessary to roll the aircraft to a bank angle sufficient to bring the nose down. A bank angle of between 45 and 60 degrees could be needed.

Finally, if normal control is ineffective, careful rudder input in the direction of the desired roll may be required to induce a rolling maneuver recovery.

CAUTION

Only a small amount of rudder is needed. Too much rudder applied too quickly or held too long may result in a loss of lateral and directional control. Because of the low energy condition, pilots should exercise caution when applying rudder.

Recovery from a Nose Low, Wings Level Upset / Unusual Attitude

Indications:

- Pitch attitude is unintentionally more than 10 degrees nose down and going lower.
- The airspeed is increasing rapidly.

At moderate pitch attitude, applying nose-up elevator, reducing thrust and extending speed brakes, if necessary, will recover the aircraft to a normal attitude.

At extremely low pitch attitude and high airspeed (well above VMO / MMO), the ability to command a nose-up pitch rate with elevator alone may be reduced because of extreme aerodynamic loads on the elevator. Nose-up elevator and nose-up pitch trim may be required to establish a nose-up pitch rate.

Recovery from a High Bank Angle

Indications:

- Though the bank angle for an upset / unusual attitude has been defined as unintentionally more than 45 degrees, it is possible to experience bank angles greater than 90 degrees.

A smooth application of up to full lateral control should provide enough roll control to establish a very positive recovery roll rate. If full roll control application is not satisfactory, it may then be necessary to apply some rudder in the direction of the desired roll.

CAUTION

Only a small amount of rudder is needed. Too much rudder applied too quickly or held too long may result in loss of lateral and directional control or structural failure.

Recovery from Nose High, High Bank Angle

Pilots must apply nose down elevator but maintain bank angle in order to quickly reduce pitch attitude. As the nose approaches the horizon, bank angle should be reduced to zero and pitch attitude adjusted to recover normal airspeed.

Recovery from Nose Low, High Bank Angle

The nose-down, high bank angle upset / unusual attitude requires prompt action from the pilot since altitude is rapidly exchanged for airspeed. Airspeed in that situation can rapidly increase beyond airplane design limits.

It is important to roll the aircraft to wings level before applying nose-up elevator, especially if bank angle exceeds 90 degrees.

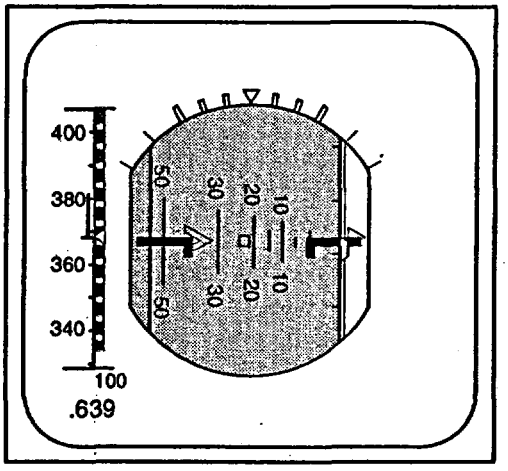
Simultaneous application of roll control and thrust reduction may be necessary.

The pilot should also extend the speed brakes as necessary.

Summary

- These techniques assume that the airplane is not stalled. If it is, recovery from the stall must be accomplished first.
- It is possible to consolidate and incorporate recovery techniques into the two basic scenarios of nose high and nose low.

Recognition



- Locate sky pointer.
- Determine pitch attitude.
- Locate horizon line (or use pitch ladder).

NOTE

If roll rate exceeds 45° per second, SGU's will fault and diagonal line will be displayed on both PFDs and both NDs for three seconds.

Procedure

AUTOPILOT / AUTOTHROTTLE..... DISCONNECT

CAUTION

Excessive use of pitch trim or rudder may aggravate an upset / unusual attitude situation or may result in loss of control and / or structural failure.

Nose High

Pilot-Flying	Pilot-Not-Flying
Recognize and confirm the situation.	
• Apply nose-down elevator up to full deflection. • Apply nose-down trim as appropriate. • Reduce thrust (altitude permitting). • Roll to obtain a nose down pitch rate (if necessary). • Complete the recovery: – When approaching the nearest horizon, roll to wings level. – Check airspeed and adjust thrust. – Establish pitch attitude.	• Call out attitude, airspeed, and altitude throughout the recovery. • Verify all required actions have been completed and call out any omissions.

Nose Low

Pilot-Flying	Pilot-Not-Flying
Recognize and confirm the situation.	
• Roll in the shortest direction to wings level (unload and roll if bank angle is more than 90 degrees). • Reduce thrust. • Recover to level flight: – Apply nose-up elevator. – Apply nose-up trim, if required. – Adjust thrust and drag, as required.	• Call out attitude, airspeed, and altitude throughout the recovery. • Verify all required actions have been completed and call out any omissions.

For the A300 Fleet Support Team
Captain Delvin Young