

ALERT BULLETIN

AB 2024:11/8-4
4/18/2024
2085092, 2082586

TO: Airport Manager, John Wayne-Orange County Airport, (SNA), CA, FAA
(ATM SNA ATCT, AAS-1)

INFO: FAA (Director of Air Traffic Operations WSA, AAS-300, AVP-1, AVP-200, AWP
-600, AFS-260, AFS-200, AJI-144, Runway Safety Team), A4A, AAAE, ALPA,
AOPA, APA, ASAP, ATSAP, ATSG, CAPA, IATA, ICASS, IFALPA, IPA, NATCA,
NBAA, NTSB, RAA, SWAPA

FROM: Becky L. Hooley, Director
NASA Aviation Safety Reporting System

SUBJ: SNA Wake Turbulence Encounters

We recently received ASRS reports describing a safety concern that may involve your area of operational responsibility. We do not have sufficient details to assess either the factual accuracy or possible gravity of the report. It is our policy to relay the reported information to the appropriate authority for evaluation and any necessary follow-up. We feel you should be aware of the following:

ASRS received reports from small aircraft pilots describing wake turbulence encounters that caused upsets and loss of control followed by low altitude recoveries.

(ACN 2085092) Pilot stated they were on approach to Runway 20L, with air carrier traffic landing on Runway 20R. They encountered the wake at about 100 feet above the ground, and the wake was strong enough to roll the aircraft over 45 degrees while pitching the nose down.

Recovery was accomplished about 50 feet above the ground. Reporter stated conditions were ideal for wake encounters, and Tower issues cautions but does not try to separate traffic to avoid wake encounters.

(ACN 2082586) Cessna 172 instructor pilot reported an inflight upset and loss of control incident from an A320 on approach to SNA airport.

Control was regained at low altitude, narrowly averting a collision with a taxiing B737NG.

To properly assess the usefulness of our alert message service, we would appreciate it if you would take the time to give us your feedback on the value of the information that we have provided. Please contact Dr. Becky Hooley at (408) 541-2854 or email at becky.l.hooley@nasa.gov.



Aviation Safety Reporting System
P.O. Box 189 | Moffett Field, CA | 94035-0189



ACN 2085092

DATE / TIME

Date of Occurrence 202402
Local Time Of Day 1201 to 1800

PLACE

Locale SNA.Airport
State CA
Altitude - MSL 100

AIRCRAFT / EQUIPMENT X

ATC / Advisory - Tower SNA
Make Model Name Skyhawk 172/Cutlass 172
Operating Under FAR Part 91

AIRCRAFT / EQUIPMENT Y

ATC / Advisory - Tower SNA
Make Model Name B737 Undifferentiated or Other Model
Operating Under FAR Part 121

PERSON 1

Function - Flight Crew Pilot Flying
Function - Flight Crew Single Pilot
ASRS Report Number 2085092

EVENTS

Anomaly Inflight Event / Encounter - CFTT / CFIT
Anomaly Inflight Event / Encounter - Loss Of Aircraft Control
Anomaly Inflight Event / Encounter - Unstabilized Approach
Anomaly Inflight Event / Encounter - Wake Vortex Encounter
Detector - Person Flight Crew
Result - Flight Crew Executed Go Around / Missed Approach
Result - Flight Crew Regained Aircraft Control

NARRATIVE 1

Sequencing and separation of aircraft are notoriously tight with the volume of traffic into the airport (SNA).

Landing aircraft landed longer than usual on Runway 20R and winds were blowing wake turbulence towards Runway 20L.

Approximately 100 feet above ground we encountered what was presumably violent wake turbulence. I thought I had given adequate altitude, distance, and time separation, but it required immediate evasive recovery action. Aircraft rolled over 45° to the right and nose down. Leveling using full left deflection, recovering pitch, and applying full power, aircraft was easily less than 50 ft from the ground. Executed go-around with uneventful landing on second approach.

This is my home airport and I've had repeat training on wake turbulence, so I like to think that I'm familiar with the area and hazards, but this was terrifyingly close. I have to wonder if different sequencing should be applied, such as more guidance on go-around criteria or extended legs. On my second approach I flew an extended downwind because another heavy aircraft was landing on the parallel runway.

Tower does not provide wake turbulence separation (only states caution), but perhaps a different policy should be considered. I will clearly be applying even more time, altitude, and distance separation in all my future flights, I just hope someone else doesn't encounter the same event with a tragic outcome.

CALLBACK 1

Reporter stated that high volume of traffic at SNA frequently results in tight sequencing and increases the possibility of wake encounters.

SYNOPSIS

Cessna 172 pilot reported a violent wake turbulence encounter on short final at SNA that resulted in an inflight upset with recovery not accomplished until the aircraft was within 50 feet of the ground.

ACN 2082586**DATE / TIME**

Date of Occurrence 202402
Local Time Of Day 0601 to 1200

PLACE

Locale SNA.Airport
State CA
Altitude - AGL 75

ENVIRONMENT

Flight Conditions VMC
Weather Turbulence
Weather Windshear

AIRCRAFT / EQUIPMENT X

ATC / Advisory - Tower SNA
Make Model Name Skyhawk 172/Cutlass 172
Operating Under FAR Part 91

AIRCRAFT / EQUIPMENT Y

ATC / Advisory - Tower SNA
Make Model Name A320
Operating Under FAR Part 121

AIRCRAFT / EQUIPMENT Z

ATC / Advisory - Tower SNA
Make Model Name B737 Next Generation Undifferentiated
Operating Under FAR Part 121

PERSON 1

Function - Flight Crew Instructor
Function - Flight Crew Pilot Not Flying
ASRS Report Number 2082586

EVENTS

Anomaly Conflict - Ground Conflict, Critical
Anomaly Inflight Event / Encounter - CFTT / CFIT
Anomaly Inflight Event / Encounter - Loss Of Aircraft Control
Anomaly Inflight Event / Encounter - Unstabilized Approach
Anomaly Inflight Event / Encounter - Wake Vortex Encounter
Detector - Person Flight Crew
Miss Distance - Horizontal 40
Miss Distance - Vertical 20
Result - Flight Crew Regained Aircraft Control
Result - Flight Crew Took Evasive Action

NARRATIVE 1

Conducting continuous left closed traffic operations on Runway 20L SNA in a Cessna 172S with myself sitting left seat and student sitting right seat as they are training for CFI. An Airbus A320 was landing on the parallel Runway 20R and was advised to maintain visible separation and caution wake turbulence from SNA tower 119.9 for that Airbus. We accepted and were cleared for the option Runway 20L. Airbus A320 continued to

land and made it to Runway 20R while we were turning base to final Runway 20L. We altered our flight path to remain above that of the Airbus as winds were reported and observed to be a right crosswind. Meanwhile a B737 moved forward to cross Runway 20L and hold short 20R on Lima. This reaffirmed our decision to remain high to avoid jet blast as well as the landing Airbus's wake. Continuing the descent to land, stable and configured, aircraft encountered the onset of wake turbulence forces and began to roll right uncommanded directly above 20L runway threshold at approximately 75-100 ft. AGL. I instructed the student to immediately initiate a go-around to which there was a delayed reaction, within 1-2 seconds after command was given, aircraft encountered substantially stronger wake turbulence forces and abruptly rolled uncommanded to the right departing controlled flight rolling to approximately 40+ degrees of bank and -10+ degrees of nose pitch down. With student's delayed reaction to go-around I commanded "my controls" which were not relinquished causing me to forcefully take the controls with continuous verbal command given in a raised voice.

With forceful takeover of the controls, immediate full power was commanded and began to maneuver to avoid contacting the ground and the B737 holding between the runways on L. Aircraft was on a collision course with the B737's left wing section which was narrowly avoided after regaining controlled flight by a margin of 20-50 ft. from the B737 and 15-30 ft. from the ground. After successful maneuvering to avoid collision, continued a recovery and climb back towards Runway 20L center line as the aircraft made it roughly to location of the Runway 20R PAPIs at its furthest deviation. John Wayne Tower was then advised of the go-around and presence of severe wake turbulence event. Tower acknowledged and was startled as well as they witnessed the occurrence and asked if we request any assistance. Advised we did not require assistance and no aircraft damage was observed followed by requesting to terminate. Flight was terminated, returned to parking and assessed for any damage. None observed.

CALLBACK 1

Reporter stated this type of wake turbulence incident has become so common his flight school now recommends not using SNA for training operations when there is a right crosswind.

SYNOPSIS

Cessna 172 instructor pilot reported an inflight upset and loss of control incident from an A320 on approach to SNA airport. Control was regained at low altitude, narrowly averting a collision with a taxiing B737NG.