Compliance with SASEB Requirements.

1. FAA Certified as a Normal or Transport Category Aircraft.
CN-235 is FAA certified in the Transport Category.

2. FAA approved to fly with the jumper exit door removed.
CN-235 is approved to fly with the jumper door opened. The design of the door does enable the operation without the need to remove the door.

3. Airspeed at 1.3 V stall (jump configuration) not to exceed 115 Kts.
CN-235 with 20 jumpers and fuel to fly for five hours has a Stall Speed, in jumping configuration, of 82 Kts. That means 1.3 V stall (jump configuration) is 106.6 Kts.

4. Jumper exit door at least 25 inches wide and 36 inches high.
There are two Jumping doors at the rear of the cabin (35,43 inches wide and 67 inches high) and also jumping may be perform through the rear ramp (93 inches wide and 67 inches high)

Multi-engine Aircraft

1. 1 to achieve a single engine (critical engine inoperative) rate of climb of 50 feet per minute (fpm) at 9,000 feet density altitude.
With 95 % of MTOW , the CN-235 has a single engine rate of climb of 291 fpm

2. Ability to achieve a single engine climb capability of +.6 percent ……
In these conditions, CN-235 has a rate of climb of 386 fpm

Administrative Considerations The "Sponsor's Report" needs to provide agency managers with information needed to make an informed judgment about the prospects for the proposed aircraft to fulfilling agency needs at an acceptable cost. Successful completion of this part of the report will generally require the skills of both experienced aviators and smokejumpers.

1. Support the need for the aircraft. Why are you proposing that this aircraft be evaluated? Why do you want to use this particular aircraft? What are the perceived advantages over aircraft already on the approved list? How many aircraft of this type do you propose to use, and how soon? Note: Careful reasoning here will help preclude the expenditure of time and money for aircraft that may "look good" but for which there is no real identifiable need.

2. Number of aircraft potentially available for smokejumper use? This information is necessary to determine whether there will likely be a "payoff" following an aircraft evaluation. The candidate aircraft may Offer excellent performance and an optimum configuration for smoke jumping. But if it is not available for smoke jumping contracts, or is too expensive, the costs of conducting an evaluation will be wasted.

3. Versatility of the aircraft; multi-use capabilities (i.e., crew and/or cargo haul, administrative use, etc. Describe how the aircraft can be effectively used for non-smokejumping missions and indicate if this was a consideration in your decision to sponsor the aircraft.

4. Payload capabilities - Smokejumper/pax crew and cargo haul ….

CN-235-300 Weights (FAR 25)

Maximum Ramp/Taxi weight: 34,940 lb

Maximum Take-Off weight: 34,830 lb

Maximum Landing weight: 34,390 lb

Maximum Zero Fuel Weight: 31,080 lb

Operating Empty Weight for the basic CN-235 is 20,850 lb. It includes engine oil, unusable fuel, two pilots, miscellaneous aircraft equipment (manuals, covers, tool bag, emergency equipment and some allowance for other optional items, including static lines).

All items specifically related to the Smoke Jumper role will be referred to as "payload" – even those that will be permanently installed in the aircraft.

Maximum number of smokejumpers

The Spanish AF routinely operates with 28 paratroops, but the actual capability of the CN-235 is well over 30.

The military style side seats that EADS CASA offers as standard are 18 inches wide. These seats are easily foldable against the sidewalls.

PAYLOAD CASES

Three different payload cases will be considered for the performance calculations:

Case 1. Eight Jumpers

Case 2. Twenty jumpers

Case 3. Maximum Payload (Transport mission)

The weight of the seats will be taken as 495 lb: 11 SIMLA seats at 45 lb each, providing a seat capacity of 22. This weight has also been considered for Case 1 (8 jumpers).

The provided table "Fire Load and Weights" shows a weight of 2430 lb, including the spotter and 6 jumpers at 250 lb each. Without the jumpers the weight would be 970 lb, which has been rounded to 1,000 lb.

Case 1 Eight Jumpers

Payload:	1,000 lb (Fire load, Spotter, Equipment)
	495 lb (11 SIMLA seats)
	2,240 lb (8 jumpers at 280 lb each)
Total :	3,735 lb payload

Case 2 Twenty Jumpers

Payload:	1,000 lb (Fire load, Spotter, Equipment)
	495 lb (11 SIMLA seats)
	5,600 lb (20 jumpers at 280 lb each)
Total:	7,095 lb payload

Case 3 Maximum Payload, limited by MFFW is 10,230 lb

5. Range and cruise speeds with operational loads.

Case 1:

8 jumpers, ISA, SL

Max. Cruise	Range (nm)	KTAS	Time (hrs)
FL 20	1,387	234	6.21
FL 120	1,792	236	7.83
FL 200	2,165	244	9.34

Normal Cruise			
FL 20	1,449	229	6.62
FL 120	1,794	239	7.76
FL 200	2,156	244	9.30

Long Range Cruise			
FL 20	1,761	179	10.19
FL 120	2,202	184	12.09
FL 200	2508	202	12.82

8 jumpers, ISA, 5,000 ft

Max. Cruise	Range (nm)	KTAS	Time (hrs)
FL 70	1,580	239	6.94
FL 120	1,801	237	7.84
FL 200	2,177	244	9.37

Normal Cruise			
FL 70	1,593	240	6.95
FL 120	1,803	239	7.78
FL 200	2,168	244	9.33

Long Range Cruise			
FL 70	1,996	182	11.31
FL 120	2,214	184	12.13
FL 200	2,522	202	12.87

Case 2:

20 jumpers, ISA, SL

Max. Cruise	Range (nm)	KTAS	Time (hrs)
FL 20	934	234	4.28
FL 120	1,203	236	5.39
FL 200	1,441	242	6.40

Normal Cruise			
FL 20	975	229	4.55
FL 120	1,204	239	5.34
FL 200	1,436	243	6.38

Long Range Cruise			
FL 20	1,171	179	6.84
FL 120	1,442	188	7.87
FL 200	1,617	207	8.22

20 jumpers, ISA, 5,000 ft

Max. Cruise	Range (nm)	KTAS	Time (hrs)
FL 70	1,065	238	4.78
FL 120	1,212	236	5.40
FL 200	1,454	242	6.43

Normal Cruise			
FL 70	1,074	240	4.79
FL 120	1,213	239	5.36
FL 200	1,449	243	6.40

Long Range Cruise			
FL 70	1,322	184	7.48
FL 120	1,454	188	7.91
FL 200	1,632	207	8.27

Case 3:

10,230 lb of payload, ISA, SL

Max. Cruise	Range (nm)	KTAS	Time (hrs)
FL 20	456	234	2.24
FL 120	583	236	2.80
FL 200	688	240	4.29

Normal Cruise			
FL 20	476	229	2.37
FL 120	584	238	2.78
FL 200	686	241	3.28

Long Range Cruise			
FL 20	565	180	3.43
FL 120	682	192	3.83
FL 200	748	210	3.93

10,230 lb of payload, ISA, 5,000 ft

Max. Cruise	Range (nm)	KTAS	Time (hrs)
FL 70	523	238	2.50
FL 120	592	236	2.82
FL 200	701	240	3.32

Normal Cruise			
FL 70	527	239	2.50
FL 120	593	238	2.80
FL 200	699	241	3.31

Long Range Cruise			
FL 70	638	187	3.70
FL 120	694	192	3.88
FL 200	763	210	

	Take-off Weight (lb) (MTOW: 34,830 lb)	
Airport	ISA	ISA+15
Grand Junction Colorado	34,830	34,510
Durango Colorado	34,172	32,100
Telluride Colorado	32,430	30,360
Carson City Nevada	34,830	34,690
Boise Idaho	34,830	34,830

6. Landing field requirements.

MLW: 34,390 lb	ISA, SL	ISA, 5000 ft	84ºF, 5000 ft
Landing Distante(ft)	2,251	2,473	2,389
Landing Field Length (ft)	3,752	4,122	3,982

7. Total aircraft purchase cost. List the cost to acquire this aircraft. If new, show equipped price with IFR avionics, seats, and "other normal and required equipment". If used, show the range of prices for aircraft in the age class and equipment range that you would contract.

The catalogue price for a basic CN-235-300 brand new aircraft is $17.085 M (E.C. 2003).

Estimated Fleet (Gov owned) rate:

- - Rate per hour

- -Daily availability

- -Other costs

Estimated contract rate:

- - Rate per hour

- -Daily availability

- -Other costs

Note: Maintenance Aircraft Contracting Officer may be able to suggest techniques that help estimate a contract rate.

8. Date of certification date and last manufacture.

FAA certification: December 3, 1986.

CN-235 is currently in production

9. Maintenance/support requirements.

The initial scheduled maintenance program for the CN-235-300 is based on the Maintenance Review Board (MRB) procedure outlined in the FAA Advisory Circular 121-22A.

The program minimises scheduled maintenance requirements and maximises aircraft availability without degrading flight safety or reliability. It is focused to prevent deterioration of inherent design reliability and safety of the equipment and to accomplish this at a minimum cost.

The aircraft will be maintained basically “on condition” by means of maintenance tasks that determine the condition of systems, subsystems or components and ascertain whether the equipment involved can continue to operate satisfactorily until the next scheduled inspection.

A complementary Zonal Inspection program will assure that all systems, components, installation contained in a Zone receive adequate surveillance to determine security of installation and general condition. It provides a package of general visual tasks generated against Maintenance Significant Items into one or more Zonal surveillance tasks.

PERIODIC INSPECTION	FREQUENCY
1. Servicing	72 hours (elapsed time)
2. "A" Check	200 flight hours
3. “C" Check	2,000 flight hours
4. "Y" Check	Every year

	ON AIRCRAFT		OFF AIRCRAFT	
	SCHEDULED	UNSCHEDULED	SCHEDULED	UNSCHEDULED
LEVEL "0"	PF/TR "D" "S"	-Failure investigation until LRU level (Troubleshooting). -LRU Removal/Replace		
LEVEL "I"	“A”	- Corrective actions exceeding maintenance level "0". - Minor Structural Repair. - Minor Modifications/SB.	-Batteries	-Battery -Wheels -Brakes -Components repair (up to the level defined).

LEVEL "D"	"C" "Y" Structural Inspections	- Major Modifications /SB. - Major Structural Repairs	-Components Overhaul.	-Components Repair

10. Single pilot certification. Is the aircraft certificated for single pilot?

CN-235 is not certified for single pilot.

Flight Performance Data This section is designed to compile as much relevant information as possible from the Aircraft Flight Manual. Along with the informed provided by operators or the aircraft's manufacturer, this should enable a judgement as to the suitability of the aircraft's flight performance characteristics as these relate to the smokejumper mission.

1. General performance envelope (all calculations made with aircraft at maximum gross weight).

Performance data is presented for two weight conditions:

a) 34,830 lb (MTOW)

b) 31,350 lb (90% MTOW)

The MTOW case (34,830 lb) is more relevant for the use of the CN-235 as a transport aircraft than for its use as a smokejumper platform. In fact, even the most demanding smokejumper missions would normally use considerably lower weights. The performance data for 31,350 lb is given as reference: this weight would allow for 20 smokejumpers and 6885 lb of fuel (more than 5 hours).

Stall Speed (knots)	MTOW	90 % MTOW (*)
Clean	99	94
Landing configuration (Flaps 23º)	79	75
Jumping configuration (Flaps 10º)	86	82

(*) 20 smokejumpers + 5 hours fuel

Rate of Climb (fpm)	MTOW	90 % MTOW
AEO Sea Level ISA conditions	1,450	1,700
AEO 5,000 ft ISA + 25 C (OAT= 30 C)	800	1,050

Critical engine out, Sea Level, ISA	500	680
Critical engine out, 5,000 ft ISA + 25 C	260	400

Service Ceiling, all engines (ft) (100 fpm residual climb)	MTOW	90 % MTOW
ISA	25,200	27,700
ISA+20 C	21,800	24,400

Critical engine out ceiling (ft)	MTOW	90 % MTOW
ISA, residual 100 fpm climb	11,500	14,700
ISA+20 C, residual 100 fpm climb	7,400	11,200

Note: CN-235 AFM has no ceiling data for 50 fpm climb

Landing Distance, 50 ft obstacle (ft)	MLW	90 % MTOW
Sea Level, ISA	2,250 ft @ 34,390 lb	2,130 ft @ 31,350 lb
5,000 ft airport elevation, ISA + 25 C	2,370 ft @ 32,190 lb	2,340 ft @ 31,350 lb

Notes: The required Landing Runway Length (FAR25 definition) can be obtained by applying a factor of 1.66 to the Landing Distance values of the table.

34,390 lb is the FAA certified Maximum Landing Weight (structural);

32,190 lb is the maximum allowable landing weight for 5,000 ft/ISA+25, as limited by the FAR25 requirement of 2.1° climb gradient in approach configuration with critical engine out.

Takeoff Distance, 35 ft obstacle (ft)	MTOW	90 % MTOW

Sea Level, ISA	3,870 ft @ 34,830 lb	3,120 ft @ 31,350 lb
5,000 ft airport elevation, ISA + 25 C	5,420 ft @ 32,190 lb	4,950 ft @ 31,350 lb

Notes: The above AFM values are FAR25 TOD for 35ft obstacle clearance, with critical engine failure at V1.

32,190 lb is the maximum allowable takeoff weight for 5000 ft/ISA+25, as limited by FAR25 requirement of 2.4º climb gradient (critical engine out)

Approximate TODs for 50 ft obstacle, with critical engine failure at V1:

S/L ISA 34,830 lb 4,220 ft

S/L ISA 31,350 lb 3,395 ft

5000 ft/ISA+25, 32,190 lb 6,045 ft

5000 ft/ISA+25, 31,350 lb 5,495 ft

Maximum Cruise Speed (knots)	MTOW	90 % MTOW
15,000 ft cruise altitude, ISA	244	246
15,000 ft cruise altitude, ISA+10 C	238	241

Long Range Cruise Speed (knots)	MTOW	90 % MTOW
22,000 ft cruise altitude, ISA	214	210
22,000 ft cruise altitude, ISA+10 C	217	213

2. Stall and stall recovery characteristics.

Stall Warning System

Impending stall warning is provided by the illumination of the STALL annunciators and the simultaneous activation of the associated warning horn, when any AOA indication reaches the appropriate value.

Stall Characteristics in Different Configurations

With a clean configuration and idle power, stall is unattainable. With a pilot control wheel input of around 130 lbs, the aircraft engages in a high nose smooth descent that is easily recovered.

With 10° flaps and idle power, stall is attained with almost half the pilot control wheel input and with no buffeting. Audio and visual warnings appear 10 Kt before stall.

In all of the remaining configurations and power situations, the warnings activate at least 10 Kt before buffeting starts. Inputs get lower in proportion to "uncleanliness" and power, so that, with 23° flaps, and landing gear down and maximum power, only 5-10 lbs are required to attain stall.

NOTE

During stall, all flight controls remain effective, and recovery is obtained by smoothly lowering nose a few degrees and correcting A/C bank as required.

When the ball of the inclinometer has not been maintained in the centre, stall is accompanied by a wing drop (RH, generally) which is slight with a clean configuration and becomes proportional higher with flap deflection. When in landing configuration and powered, it will require a rapid bank correction order to avoid wing drops greater than 20°.

PRACTICE STALLS

Flight at or near the stall is not normally required in service. However, the procedure below is included for use in those cases in which it is desired to acquaint the users with the airplane flight handling characteristics which are present when effecting aircraft recovery from a stall.

Procedure

When intentional stalls are carried out the initial altitude should be 6 000 ft AGL, minimum. Furthermore, the following conditions must be met:

1. Autopilot / yaw damper, if fitted, to be disengaged.

2. Stall warning system to be operative.

3. Aerodynamic surfaces free from ice and, if fitted, the Stall Warning Shift System (SWSS) turned off.

4. Weather radar, if fitted, to be set at standby.

5. Synchrophaser off.

6. Ventral door closed.

7. Wing and tail de-icing system turned off.

Technique

The stalling technique is as follows:

1. Stalls must be performed with symmetrical power and condition levers at MAX RPM. Engine torque settings in power-on stalls should not exceed 41% TQ. Power, once set, should not be reduced during the approach to the stall and recovery.

2. The airplane should be trimmed at an airspeed approximately 1.3 VS in the appropriate configuration after setting the required power.

3. With wings held level throughout the approach to stall by appropriate use of roll control, and heading held fixed by appropriate use of rudder, airspeed should be reduced at not more than one knot per second. Do not retrim during manoeuvre. Any tendency to sideslip during the approach to stall should be corrected by normal use of rudder. Rapid

or violent movement of any control during the approach to the stall should be avoided, particularly at airspeeds below the operation of the impeding stall warning system.

Stalls with landing (23°) flaps at higher than normal (1kt/sec) entry rates may lead to wing drop values in excess of 20°.

4. When the stall is recognized, conventional positive recovery action should be taken. Stall recovery is prompt following relaxation of rearward pressure or application of gentle forward pressure on the control column until normal flight resumes. Any existing wing drop should be corrected by use of ailerons.

Characteristics

There is no clear distinctive natural warning or aerodynamic buffet prior to the stall; however, under certain flap/power setting configurations, a mild aerodynamic buffet may be noticeable. Impeding stall warning is artificially provided by an aural/visual warning system which is set to operate at 32 AOA units, corresponding to an indicated airspeed of 7% to 10% above the stalling speed.

The stall occurs smoothly, is docile and, when the airplane is in a clean configuration, is characterized by the high pilot forces required (with the longitudinal control reaching near maximum travel). With the flaps deflected, the stall is defined by a nose-down pitch accompanied by a moderate wing drop. Both the nose-down pitch and the wing drop become more marked as flap deflection increases, especially for the power-on, aft C.G., 23° flap configuration.

4. Slow flight characteristics and attitude. What type of slow flight characteristics do you anticipate from this aircraft? Is there a distinct "tail low" attitude in slow flight?

CN-235 has been certified under FAR 25 and JAR 25 Airworthiness Regulations showing in all flight conditions an excellent manoeuvring and controllability characteristics. Furthermore, CN-235 has been designed to operate for Military Mission where the flight characteristics out of normal civil flight envelope have to be guaranteed.

Comprehensive flight tests were conducted to demonstrate aircraft capability to successfully achieve this Military role, especially in the low speed missions:

- During Stall Tests in level and turning flight (30º bank), the aircraft remains controllable throughout the manoeuvre. The reduction of airspeed results in a progressive stick forces without any reversal or inversion. Normal use of rudder and aileron control allow to hold wings level/turning condition and maintain heading/zero sideslip while approaching the stall. In addition, elevator and aileron control remain effective during the post-stall phase making very easy the stall recovery, which is accomplished by relaxing rearward pressure on column and correcting bank angle by counteractive action on wheel control.

- Takeoff performance has been improved reducing rotation speed to 0.95 VS in order to lift off at VS (Short Field Takeoff Technique). Full elevator and aileron control was demonstrated at speed of 80 KIAS with light weight in order to guarantee the aircraft manoeuvrability during the initial climb. Nor pitch up neither wing drop tendency appear at this flight condition. The control effectiveness at this low speed (80 KIAS) provides full control of the aircraft allowing for turning, level, climb/dive manoeuvres and airspeed changes.

- Landing distance has been improved reducing the reference speed at 1.15 VS. The aircraft is able to follow the landing flight path, to perform offset landings and to achieve a precise touch-down point.

- In the Paratroops Airdropping role the aircraft is flown at 110 KIAS, FLAP TO (10º) with a pitch attitude always lower than 5º, even for the maximum logistic takeoff weight, to allow an easy paratroops exit. The aircraft exhibits full manoeuvrability to achieve the airdrooping zone, to stabilise at level flight and to perform the escape manoeuvre. During paratroops stand up, hook up and exit, the aircraft attitude is fully controllable with the elevator control preventing from a pitch up due to the rearward shift in airplane C.G.

5. Turning capability into dead critical engine at 1.3V for deep canyon get-away. Are there any indications of problems or concerns with the engine-out turning capabilities of this aircraft?

Engine-out turning capability was demonstrated during FAR and JAR certification test campaign.

The aircraft achieves more than 30º bank angle without stall warning appearance when trimmed at V2 (1.2VS), FLAP TO, one engine inoperative and the alive engine at MTP, as required by FAR/JAR Takeoff Manoeuvre Margin demonstration. In this condition, the excellent controllability of the aircraft allows to perform a ± 30º bank to bank (60º bank travel) in 6 seconds.

When aircraft is trimmed at 1.25 VS, FLAP UP, one engine inoperative and the alive engine at MCP (final takeoff configuration), more than 40º bank angle is achieved without stall warning appearance as required by FAR/JAR Takeoff Manoeuvre Margin demonstration. The aircraft proves to be controllable and manoeuvrable with normal use of controls without special pilot skill or losing control.

Finally, to exhibit the good engine-out turning capability at low speed, the aircraft is able to be rolled through an angle of 20º towards the operating engine in 5 seconds when it is trimmed at VMCL (about 80 KIAS), FLAP APP(15º) - LDN (23º), one engine inoperative and the alive engine at MTP.

6. Center of gravity limits ……
The CN-235-300 has a relatively wide center of gravity limits, from 16% to 30% of MAC. These limits are very unlikely to be exceeded for any reasonable distribution of smokejumper loads.

Only one condition might require some care: with medium payload (meaning some15 occupants for the CN-235) an excessive concentration of weight at the forward part of the cabin without any loads at the rear of the aircraft could cause an excess of the forward CG limit. This can be easily avoided with a more even distribution of occupants or payload.

7. Engine compatibility to a wide range of power settings and……

The aircraft is equipped with two General Electric CT7-9C3 turboprop engines driving a four-bladed Hamilton Standard 14RF-37 variable-pitch propeller.

Each engine provides a nominal power of 1750 SHP at sea level at up to a temperature of approximately 39°C. In the case of an engine failure during the takeoff, the integral APR (Automatic Power Reserve) system immediately increases the power of the remaining engine to about 1870 SHP.

The engine consists of a Gas Generator and a Free Turbine whose shaft passes through the inside of the Gas Generator to drive a Propeller Reduction Gear Box (PGB).

The Gas Generator - following the direction of the airflow - is made up of a six-stage compressor (five axial and one centrifugal), an annular combustion-chamber, and a two-stage turbine. After this is the two-stage Free Turbine, whose purpose is to drive the propeller through the propeller gearbox. The PGB is above the engine air-intake. It includes the reduction gear-train, the propeller pitch control components, various oil pumps, and an Alternator. This Alternator supplies the engine air-intake anti-icing heater-mats and acts as an alternative supply source to the aircraft electrical system. The RH engine PGB includes, in addition, a Hydraulic Propeller Brake. This allows the engine to be used in the APU mode on the ground in order to supply air conditioning and electric current to the aircraft, with the propeller stopped.

The PGB lubrication oil, which also serves as the pitch change control medium, is independent of the engine lubrication.

8. Trim change with speed and power variations and gear or flap deployment and retraction. Address the pitch changes associated with power changes and gear and flap deployment and retraction. Examine the trim response needed to deal with these changes, both manual and power trim (if applicable). Does the aircraft have any interconnect systems associated with the trim/flaps, and how will their function affect the pilot's feel for the aircraft and the workload?

Flight controls - particularly ailerons - require trimming in order to reduce the amount of force needed to move them.

Change of trim is slightly nose-down with increasing power; however, change of trim with landing gear extension is negligible. A significant nose-down change of trim is required as flaps are extended. Pitch trim is sensitive and should be applied in small increments, assessing the effect of each applicationin arriving at the desired setting.

When trimmed, the aircraft stability is very satisfactory along its three axis.

For aileron and stabilizer trimming it is required to push and move at the same time the required selector.

Bank control is very rapid, and yaw trimming, when applied, is immediate.

Turns with a bank above 30° or any power decrease originate a slight nose down attitude which is easily corrected.

During approach in turbulent conditions, bank forces are slightly above their normal values.

Rudder pedal displacements are asymmetrical, with a longer displacement for RH side pedal. Normal input strength on the rudder pedals is constant for RH foot pedal, from half travel onwards.

With one engine stopped - particularly RH engine - the control column will oscillate slightly forward and backwards with no aircraft movement.

Inflight Maneuvering

Aerobatic maneuvering is forbidden.

Normal maneuvering is performed with moderate effort input on flight controls.

During combat manoeuvering, remember that the maximum bank angle is 65°.

The minimum turning radius is with 15° of flap and IAS between 120 kt (weight less than 13,000 kg) and 130 kt (high weights).

For 10° of flap the recommended IAS is 140 kt. For clean aircraft the minimum turning radius is 160 kt at sea level (150 kt at 5,000 feet).

DIVING

Maintain VMO and VD limitations.

Avoid harsh recoveries at high speeds. The aircrafts response to its flight controls is excellent.

ABNORMAL FLIGHT CHARACTERISTICS

Single Engine: After engine failure oppose yaw and roll using rudder and aileron control in the normal way. The pedal forces required will be high at low speeds with high power settings. When steady flight has been regained, the airplane should be trimmed. In the event of port engine failure, a decrease in pedal force gradient will be apparent beyond mid-travel.
Critical Engine: The critical engine is the left engine (i.e., failure of such engine gives the critical asymmetric condition). More rudder control movement and force will have to be applied than with the opposite engine failed. Use of ailerons and bank has a significant effect on reducing rudder control force in asymmetric conditions. The rate of climb in the asymmetric condition with the left engine failed is similar to that with the opposite engine failed.

9. Straight forward and easy to manage systems. Look at the aircraft systems and evaluate them for ease of use and emergency procedures in relation to pilot workload, especially in single-pilot aircraft.

10. Gear retraction time and gear speeds. What is the gear retraction time, and what is the maximum air speed to extend and retract the gear? What is maximum speed with gear extended? Are these speeds compatible with using the gear as a drag device for cargo dropping?

The maximum speed at which it is safe to extend or retract the landing gear, VLO, and the maximum speed at which the airplane can be safely flown with the landing gear extended and locked, VLE, are the same: 150 KIAS.

Landing gear extension above 18 000 feet is prohibited

11. Door removed cruise speed? What are the penalties for in-flight performance with the smokejumper exit door removed? Are these penalties verified from the Aircraft Flight Manual, or as estimated?

The aircraft may be flown with either or both rear cabin parachute doors open.

The maximum speed at which the parachute doors can be opened or closed is 130 KIAS. With the doors open, the maximum permissible speed is 150 KIAS.

Smokejumper Functional Suitability Data Completing of this section will almost certainly require that the sponsor gain physical access to a representative aircraft.

1. Proximity of the horizontal stabilizer position to the jump and cargo door in slow flight at maximum forward CG. Is there a potential for tail strikes (either by jumpers or Paracargo)? Is there a possibility for parachutes to deploy over the top of the stabilizer or in the area of the elevator hinge? Is the distance from the anticipated primary static-line anchor location to the horizontal stabilizer compatible with the use of standard 15-foot static-lines?

2. Potential to deploy smokejumper personnel and cargo parachutes without damage to static-lines caused by contact with parts of the aircraft or exit door. Is the aircraft "clean" around the exit door and aft along the fuselage? If not, what would be required to "clean up" any conflict item or area? This is a critical safety issue which, if not resolvable, would be sufficient sole cause to reject an aircraft that might otherwise prove suitable.

3. Amenability of the aircraft to installation o fa functionally adequate smokejumper and cargo restraint system. What provisions exist, or can as a practical matter be arranged, to restrain smokejumpers and Paracargo? Is the aircraft compatible with installation of 42-inch smokejumper restraint benches? Or, are there raised bulkheads, etc., that would prevent their use? Are suitable alternatives to smokejumper restraint benches available for the aircraft?

4. Is the jumper exit door opening flush with the floor? If not, could a ramp be configured to level the opening in an acceptable fashion?

5. Flight and environmental characteristics with the exit door removed. Is a spoiler likely to be necessary? Are exhaust fumes in the cabin a likely possibility? If so, how sever a problem will they be, and during what phases of flight/ground operation will fumes be a problem?

6. Are the pilots and spotter's external field of view and overall visibility adequate for smokejumper/Paracargo operations?

7. Is the aircraft amenable for install a standard smokejumper communications package?

11. Are there any other factors (positive or negative), not addressed above, that would assist in making a case (for or against) adapting the aircraft for smokejumping?

12. Has the aircraft been used by the military for delivery of personnel equipment with static-line parachutes? If such history can be established, indicate where and by whom. Attempt to obtain operational information relating to this use.

SASEB Review the SASEB board will review the Sponsor's Report and recommend if the proposal to evaluate a candidate aircraft should be accepted or rejected. The SASEB will not recommend a formal evaluation if the "sponsor's report" does not provide the information needed.

The CN-235 is certified for Patratroops jumping. There are about 250 aircraft with 35 operators in the world. Among the different Air Forces that regularly utilise the CN-235 in Paratroops Configuration are: Spanish AF, French AF, South Korean AF, Turkey AF.