



U.S. Department
of Transportation

**Federal Aviation
Administration**

Memorandum

Subject: ACTION: Equivalent Level of Safety,
Cessna 526, FAR 23.777, Cockpit Controls;
Finding No. ACE-94-7

From: Manager, Standards Office, ACE-110

Date: MAY 10 1994

Reply to
Attn. of:

To: Manager, Small Airplane Directorate, ACE-100

This memorandum requests your office to review and provide concurrence to the proposed finding of equivalent level of safety to the cockpit controls of FAR 23.777.

Background: See attached Issue Paper SG-6.

Applicable Regulations: Federal Aviation Regulation (FAR) Section 23.777, cockpit controls.

Applicant's Position: See attached Issue Paper SG-6.

FAA's Position: See attached Issue Paper SG-6.

Compensating Features: See attached Issue Paper SG-6.

Recommendation: We concur with Cessna's position as stated in Issue Paper SG-6. The certification basis for the Model 526 will include an equivalent safety finding for Section 23.777, cockpit controls.

Concurred by:

Manager, Standards Office, ACE-110

Date

Manager, Small Airplane Directorate
Aircraft Certification Service, ACE-100

Date

ISSUE PAPER

Project:Cessna Aircraft Company
Model 526(JPATS), Proj.# TC0155WI-A

Item: SG-6

Stage: 1

Reg. Ref.:FAR 23.777

Date: April 29,
1994

National Policy Ref.: None

Issue Status:Closed

Subject:General Arrangement of Cock-
pit Controls to Include Throttles,
Flap Lever and Gear Handle

Branch Action:
115W/120W/130W/140W/
160W

Compliance

Target:Pre TC

Statement of Issue:

The Cessna 526 cannot comply literally with FAR 23.777, Cockpit Controls.

Discussion:

The certification of the Cessna 526 cockpit layout became an issue following the Preflight Certification Board Meeting on March 15, 1994. The FAA noted the throttles, flap lever and gear handle locations do not comply with certain criteria in FAR 23.777 and suggested Cessna apply for an equivalent level of safety.

FAA Position:

The Wichita ACO has reviewed Cessna's request for an equivalent level of safety submitted in their Letter L178-61-94-426, dated 12 April 1994, and agree that the cockpit arrangement of the Model 526 meets the safety intent of FAR 23.777.

As Cessna states in their letter, there is conflicting guidance within 23.777 as to the correct location for throttle levers on multi-engine versus tandem configured airplanes. Multi-engine airplanes must have the throttles located on the pedestal or overhead, at or near the center of the cockpit while tandem airplanes may locate the throttles on the left side of the cabin compartment. This paragraph does not clearly address throttle location for a multi-engine, tandem configured airplane. In fact, paragraph 23.777(c)(2) limits tandem airplanes to single engine.

The second area of concern involves the location of the flap lever to the left of the throttle control centerline. This conflicts with the FAR 23.777(f)(1) requirement to locate the flap lever to the right of the throttle centerline. The Wichita ACO agrees with Cessna's position that placing the flap lever to the right of the throttles would increase the risk of

interference with the pilot's left sleeve during throttle movement and violate the intent of FAR 23.777(a) & (b). Placing the flap lever to the left of the throttles conforms to a long standing convention used in military aircraft and is the required configuration as defined by the Department of Defense for the JPATS airplane.

The last area of concern involves the location of the landing gear handle. FAR 23.777(g) requires the landing gear control to be located to the left of the throttle centerline. The Model 526 complies with this requirement by placing the gear handle approximately 12 inches in front of the left throttle. The gear handle is also located in a position to prevent confusion from the wing flap lever.

Applicant's Position:

See attached Cessna Letter L178-61-94-426, dated 12 April 1994.

Conclusion:

The FAA concurs with the applicant's position as stated in Letter L178-61-94-426. The certification basis for the Model 526 will include an equivalent level of safety finding for 23.777.

Coordination: (Initial and date)

ACE-115W	ACE-120W	ACE-130W	ACE-140W	ACE-160W	ACE-107
<i>M. B. ...</i> 5/2/94	<i>S. K. ...</i> 5/2/94	<i>James M. ...</i> 29 Apr 94	<i>C. D. ...</i> 5-2-94 <i>James L. ...</i> 5/2/94	<i>K. Campbell</i> 4/29/94 <i>M. B. ...</i> 5/2/94	<i>R. ...</i> 5/4/94