

GAO

Fact Sheet for the Chairwoman,
Subcommittee on Government Activities
and Transportation, Committee on
Government Operations, House of
Representatives

April 1987

AVIATION SECURITY

FAA Preboard Passenger Screening Test Results



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Resources, Community, and
Economic Development Division

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April 30, 1987

The Honorable Cardiss Collins
Chairwoman, Subcommittee on Government
Activities and Transportation
Committee on Government Operations
House of Representatives

Dear Madam Chairwoman:

On July 29, 1986, you requested that we evaluate the Federal Aviation Administration's (FAA) Civil Aviation Security Program, including the adequacy of policies and procedures governing airport security as well as program implementation and administration. Later your office requested that we prepare a fact sheet summarizing the results of recent FAA tests of preboard passenger screening. This document provides that information. The more comprehensive report on FAA's overall management of the security program will be completed later this year.

Preboard screening of aircraft passengers and their carry-on baggage is required by the Federal Aviation Act of 1958, as amended, and implementing Federal Aviation Regulations. Additional requirements are contained in FAA's Approved Air Carrier Standard Security Program. Air carriers are responsible for screening passengers and their hand-carried items before they board an airplane. The preboard screening is to prevent or deter passengers from carrying any explosives, incendiary devices, or other deadly or dangerous weapons aboard an aircraft. Walk-through metal detectors are normally used to screen individuals while carry-on items are screened either by using x-ray machines or by physical search. Physical searches may be required by screening personnel or requested by passengers or others in lieu of having carry-on items inspected by an x-ray machine. Additional details on these requirements are spelled out in section 1 of this fact sheet.

From September through December 1986, FAA tested the passenger screening process 2,419 times, primarily at major airports (those that screen over 2 million persons annually), to determine whether the screening process

identified weapons or other dangerous test objects when FAA inspectors attempted to pass them through the system. The overall results of the 1986 tests showed that in 1,923 screenings, or 80 percent, the dangerous test items were correctly identified while in 496 screenings, or 20 percent, the dangerous test items went through the screening process undetected. Test results varied significantly among individual regions, ranging from an overall 63 percent detection rate in one region to a 99 percent rate in another. On an individual airport basis, the detection rate at 28 major airports ranged from a low of 34 percent to a high of 99 percent. Section 2 summarizes these tests nationwide, by region, and by 28 major airports. For security reasons, we do not identify regions and airports by name. In section 2, regions are designated by letter while individual airports are designated by numbers.

We reviewed federal statutes and regulations governing preboard screening for aircraft passengers and, as requested, obtained and summarized the individual results of FAA's recent preboard screening tests. We made only a limited analysis of these data and did not validate them. Although FAA has made similar system tests since 1978, each past evaluation involved a different approach and sample size, and we did not compare current and past test results.

Information presented in this fact sheet was discussed with FAA officials who agreed with the facts as presented. At your request, however, we did not obtain official agency comments. Unless you publicly announce its contents earlier, we plan no further distribution of this fact sheet until 30 days after the date of this letter. At that time, we will send copies to the Secretary of Transportation, and the FAA Administrator. We will also make copies available to others upon request. If you have further questions, please contact me on (202) 366-1743.

Major contributors to this fact sheet are listed in appendix I.

Sincerely yours,



Kenneth M. Mead
Associate Director

Contents

<u>SECTION</u>		<u>Page</u>
1	REQUIREMENTS FOR PREBOARD PASSENGER SCREENING	5
2	RESULTS OF FAA'S PREBOARD PASSENGER SCREENING TESTS	7
 FIGURES		
2.1	Nationwide Tests Results	8
2.2	Region A Total Results	9
2.3	Region B Total Results	10
2.4	Region C Total Results	11
2.5	Region D Total Results	12
2.6	Region E Total Results	13
2.7	Region F Total Results	14
2.8	Region G Total Results	15
2.9	Region H Total Results	16
2.10	Region I Total Results	17
 TABLES		
2.1	Regional Summary of Tests Results	8
2.2	Region A Results By Airport	9
2.3	Region B Results By Airport	10
2.4	Region C Results By Airport	11
2.5	Region D Results By Airport	12
2.6	Region E Results By Airport	13
2.7	Region F Results By Airport	14
2.8	Region G Results By Airport	15
2.9	Region H Results By Airport	16
2.10	Region I Results By Airport	17
2.11	Ranking of Screening Tests Results for 28 Major Airports	18
 APPENDIX		
I	Major Contributors to This Report	19

ABBREVIATIONS

FAA	Federal Aviation Administration
GAO	General Accounting Office

SECTION 1

REQUIREMENTS FOR PREBOARD

PASSENGER SCREENING

To counteract a growing number of aircraft hijackings, the Federal Aviation Administration (FAA) directed that beginning in January 1973, all passengers and their carry-on baggage would be screened before they boarded an airplane. The air carriers are responsible for screening passengers and their carry-on baggage. However, this process is typically done by private security firms under contract to an air carrier. The preboard passenger screening process was made statutory with the enactment of Public Law 93-366.

Public Law 93-366 added Section 315 to the Federal Aviation Act of 1958, which states:¹

"The Administrator shall prescribe or continue in effect reasonable regulations requiring that all passengers and all property intended to be carried in the aircraft cabin in air transportation or intrastate air transportation be screened by weapon-detecting procedures or facilities employed or operated by employees or agents of the air carrier, intrastate air carrier, or foreign air carrier prior to boarding the aircraft for such transportation. . ."

Section 108.9(a) of Federal Aviation Regulation 108 states:

"Each certificate holder² required to conduct screening under a security program shall use the procedures included, and the facilities and equipment described, in its [FAA] approved security program to prevent or deter the carriage aboard airplanes of any explosive, incendiary, or a deadly or dangerous weapon on or about each individual's person or accessible property, and the carriage of any explosive or incendiary in checked baggage."

The FAA-approved Air Carrier Standard Security Program, among other things, requires Air Carriers to:

¹ 49 U.S.C. App. 1356.

² ". . . a person holding an FAA operating certificate . . . that engages in scheduled passenger or public charter operations or both."

- Screen passengers and other persons and property to prevent explosives, incendiary devices, or other deadly or dangerous weapons from being carried aboard an airplane or into certain restricted airport areas.
- Ensure that only those persons who are authorized to carry firearms are permitted to carry them aboard an airplane or into certain restricted airport areas.
- Ensure that the screening of all persons affords for uniform, courteous, and efficient treatment to the maximum extent practicable.

SECTION 2

RESULTS OF FAA'S

PREBOARD PASSENGER SCREENING TESTS

This section summarizes test results nationwide, by FAA region and by airport for FAA tests made from September through December 1986. Basically, we found that

- the pass rate, or rate at which test objects were identified in the screening process, varied by region from a low of 63 percent to a high of 99 percent; the overall pass rate was 80 percent and
- the pass rate for 28 major airports varied from a low of 34 percent to a high of 99 percent; the pass rate for most of the major airports clustered between 70 and 90 percent while four had a pass rate below 70 percent.

Figure 2.1: Nationwide Tests Results--2,419 Tests³

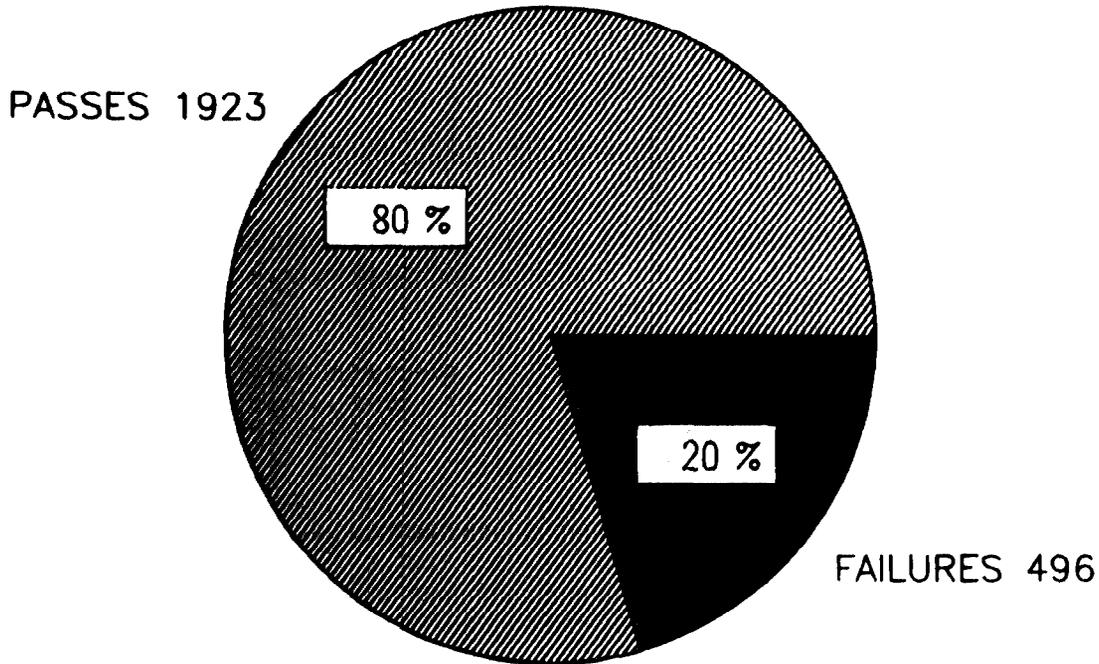


Table 2.1: Regional Summary of Tests Results

<u>Region</u>	<u>Passes</u>	<u>(%)</u>	<u>Failures</u>	<u>(%)</u>	<u>Total Tests</u>
A	123	(99)	1	(1)	124
B	134	(82)	29	(18)	163
C	277	(80)	69	(20)	346
D	169	(70)	73	(30)	242
E	42	(93)	3	(7)	45
F	220	(81)	51	(19)	271
G	323	(87)	50	(13)	373
H	408	(83)	86	(17)	494
I	227	(63)	134	(37)	361
Total	<u>1,923</u>	(80)	<u>496</u>	(20)	<u>2,419</u>

³FAA recorded each test made as a pass if the screening process identified the test object or a failure if the test object was not identified.

REGION A

Figure 2.2: Region A Total Results--124 Tests

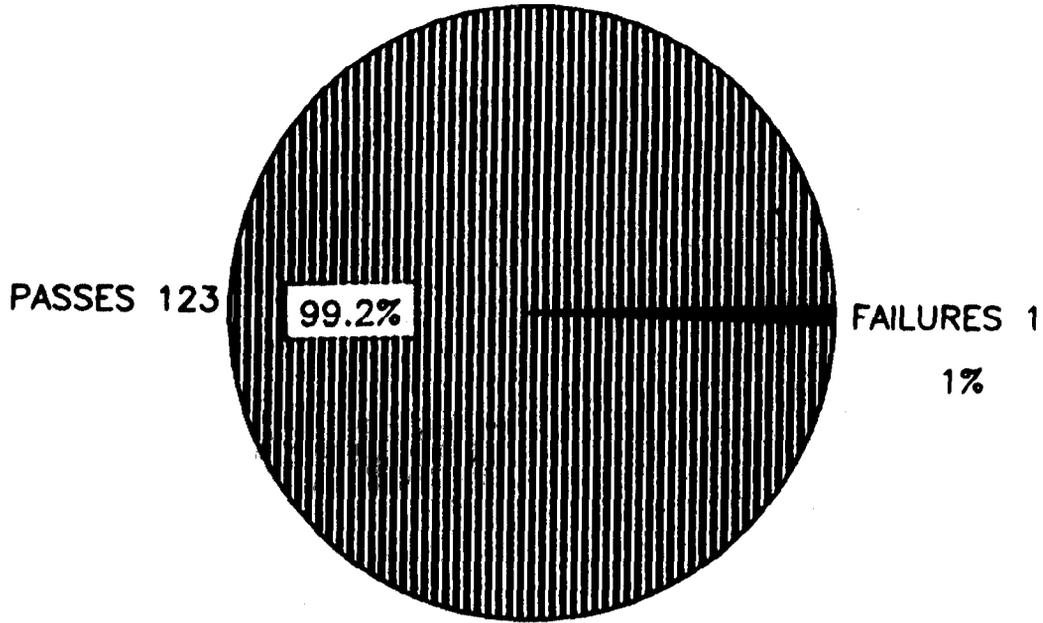


Table 2.2: Region A Results by Airport

<u>Airport</u>	<u>X-Ray Tests</u>		<u>Metal Detector Tests</u>		<u>Physical Search Tests</u>	
	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>
1	76(99%)	1(1%)	15(100%)	0	32(100%)	0

REGION B

Figure 2.3: Region B Total Results--163 Tests

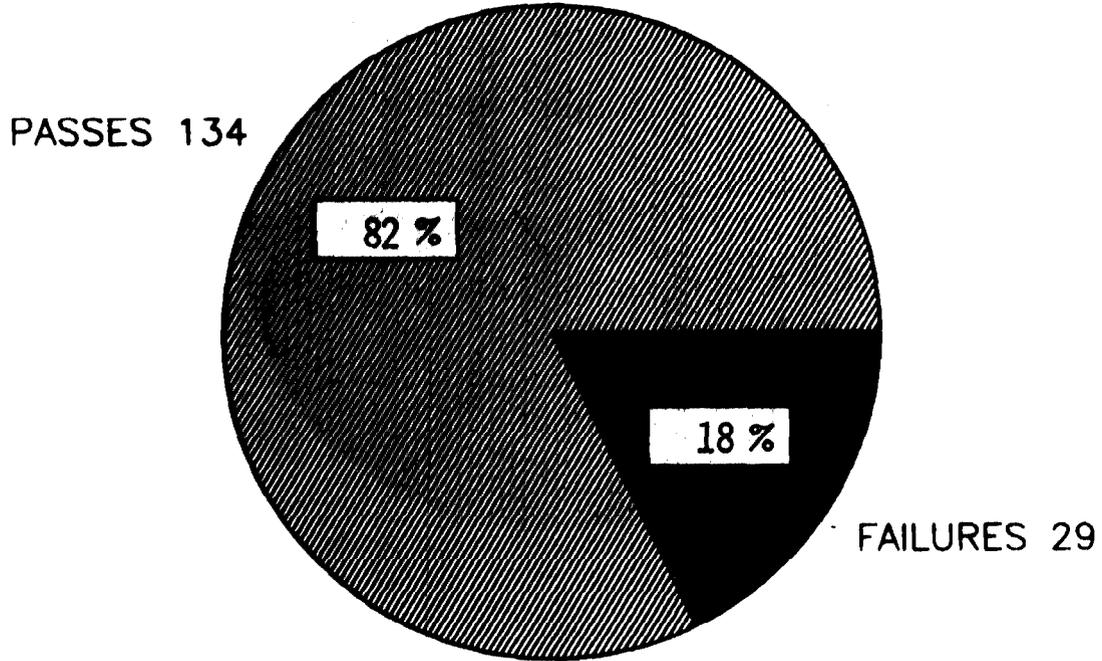


Table 2.3: Region B Results by Airport

<u>Airport</u>	<u>X-Ray Tests</u>		<u>Metal Detector Tests</u>		<u>Physical Search Tests</u>	
	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>
1	13	4	2	0	7	2
2	58	15	40	7	5	1
Four others	<u>6</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3</u>	<u>0</u>
Total	<u>77(80%)</u>	<u>19(20%)</u>	<u>42(86%)</u>	<u>7(14%)</u>	<u>15(83%)</u>	<u>3(17%)</u>

REGION C

Figure 2.4: Region C Total Results--346 Tests

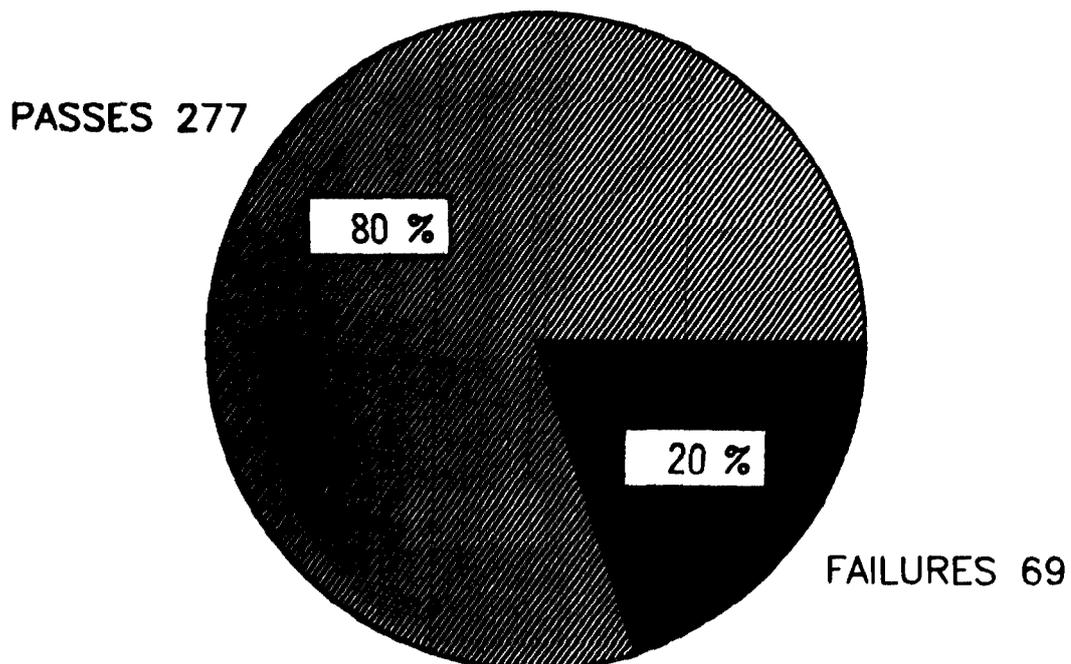


Table 2.4: Region C Results by Airport

<u>Airport</u>	<u>X-Ray Tests</u>		<u>Metal Detector Tests</u>		<u>Physical Search Tests</u>	
	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>
1	28	3	1	0	0	0
2	55	19	0	0	0	0
3	95	36	1	0	1	0
4	47	10	5	0	0	0
Seven others	35	1	2	0	7	0
Total	<u>260</u> (79%)	<u>69</u> (21%)	<u>9</u> (100%)	<u>0</u>	<u>8</u> (100%)	<u>0</u>

REGION D

Figure 2.5: Region D Total Results--242 Tests

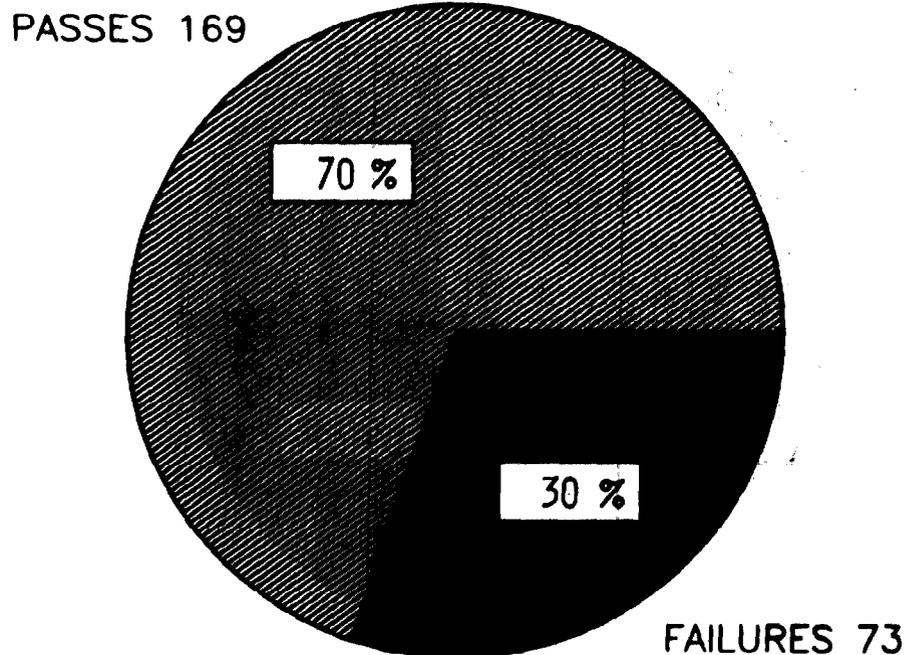


Table 2.5: Region D Results by Airport

<u>Airport</u>	<u>X-Ray Tests</u>		<u>Metal Detector Tests</u>		<u>Physical Search Tests</u>	
	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>
1	50	31	8	5	13	4
2	13	10	2	0	1	0
3	25	6	14	2	5	2
4	12	5	0	0	0	0
Eleven others	<u>20</u>	<u>8</u>	<u>5</u>	<u>0</u>	<u>1</u>	<u>0</u>
Total	<u>120</u> (67%)	<u>60</u> (33%)	<u>29</u> (81%)	<u>7</u> (19%)	<u>20</u> (77%)	<u>6</u> (23%)

REGION E

Figure 2.6: Region E Total Results--45 Tests

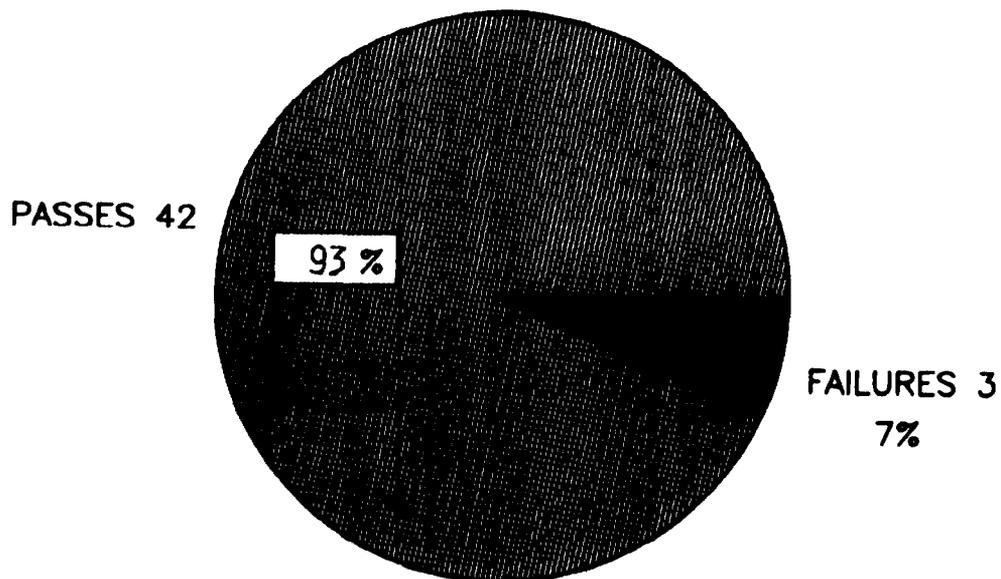


Table 2.6: Region E Results by Airport

<u>Airport</u>	<u>X-Ray Tests</u>		<u>Metal Detector Tests</u>		<u>Physical Search Tests</u>	
	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>
1	33(94%)	2(6%)	0	0	9(90%)	1(10%)

REGION F

Figure 2.7: Region F Total Results--271 Tests

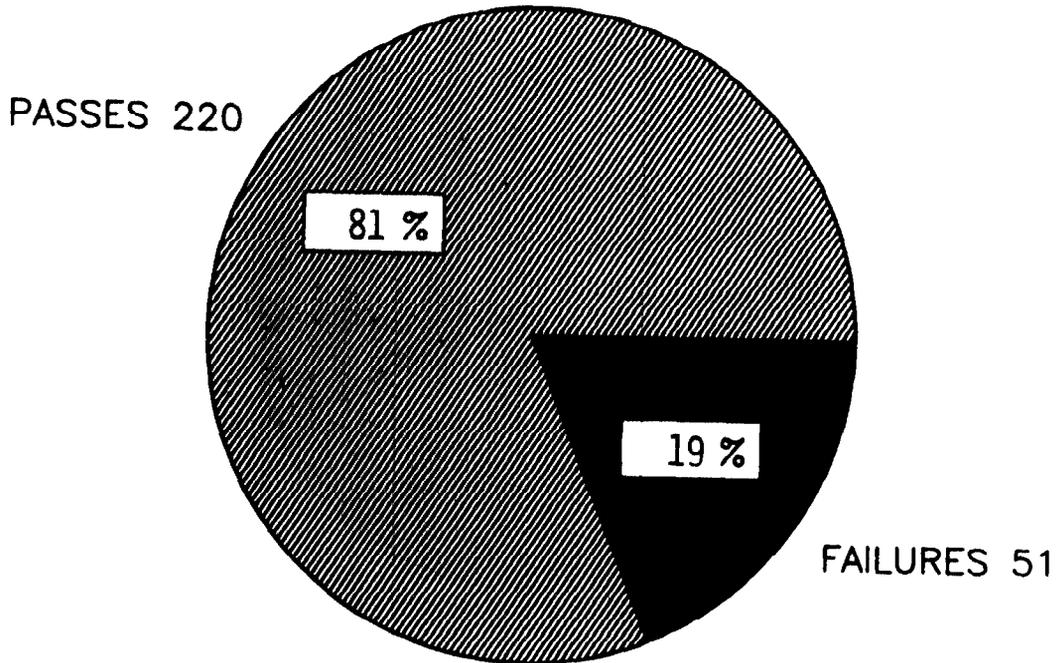


Table 2.7: Region F Results by Airport

<u>Airport</u>	<u>X-Ray Tests</u>		<u>Metal Detector Tests</u>		<u>Physical Search Tests</u>	
	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>
1	44	11	12	0	18	2
2	15	1	12	0	6	2
3	37	19	4	1	15	3
4	21	10	3	0	8	0
Seven others	23	2	0	0	2	0
Total	140 (77%)	43 (23%)	31 (97%)	1 (3%)	49 (87%)	7 (13%)

REGION G

Figure 2.8: Region G Total Results--373 Tests

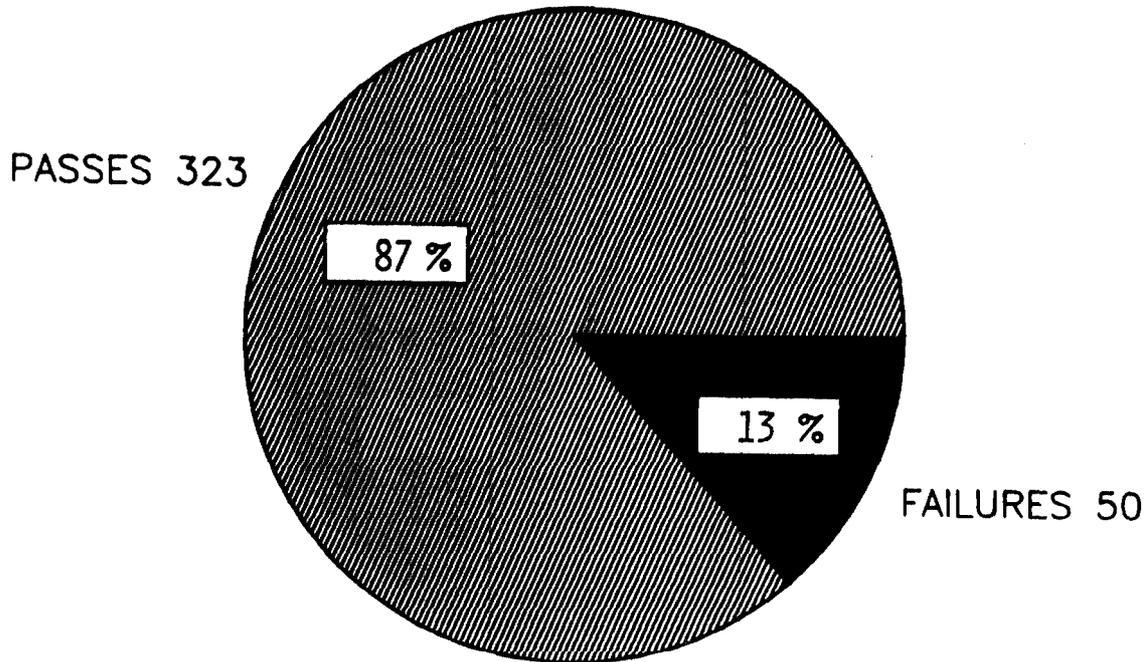


Table 2.8: Region G Results by Airport

<u>Airport</u>	<u>X-Ray Tests</u>		<u>Metal Detector Tests</u>		<u>Physical Search Tests</u>	
	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>
1	21	5	3	0	0	0
2	60	10	0	0	4	0
3	72	9	21	5	1	0
4	41	3	22	6	2	2
Fourteen others	<u>53</u>	<u>8</u>	<u>9</u>	<u>1</u>	<u>14</u>	<u>1</u>
Total	<u>247</u>(88%)	<u>35</u>(12%)	<u>55</u>(82%)	<u>12</u>(18%)	<u>21</u>(87%)	<u>3</u>(13%)

REGION H

Figure 2.9: Region H Total Results--494 Tests

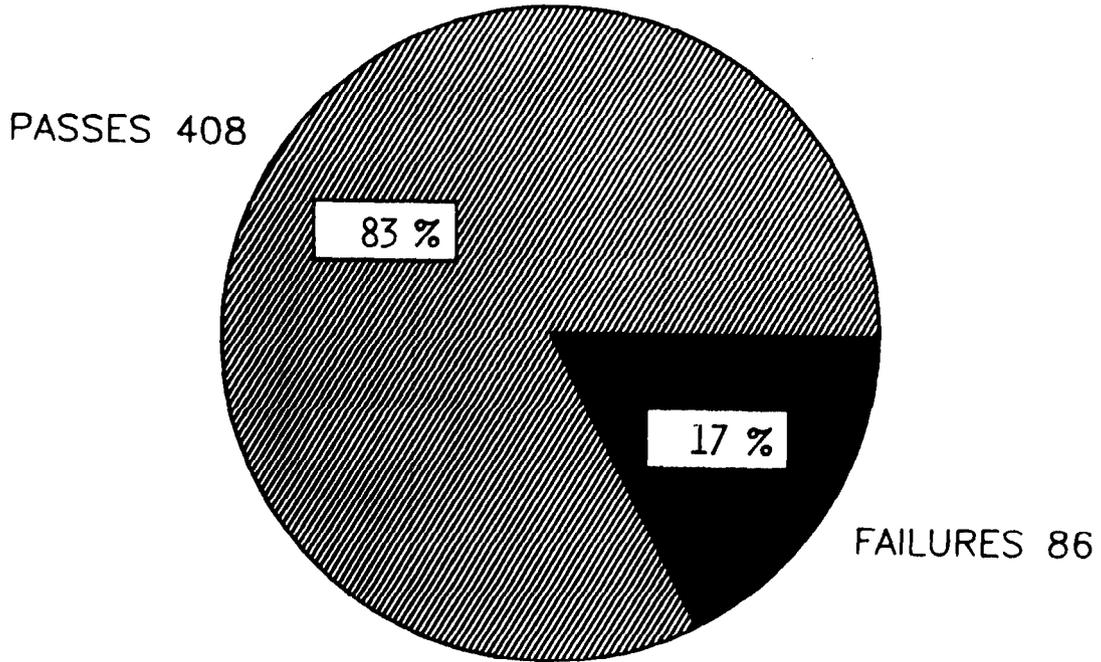


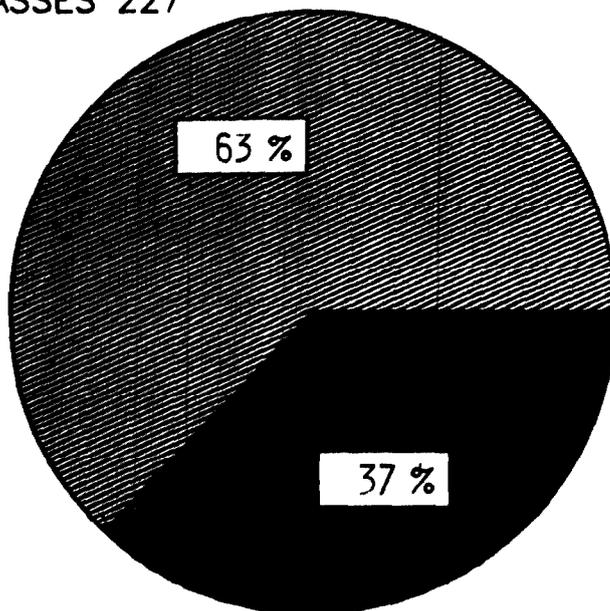
Table 2.9: Region H Results by Airport

<u>Airport</u>	<u>X-Ray Tests</u>		<u>Metal Detector Tests</u>		<u>Physical Search Tests</u>	
	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>
1	221	46	27	11	3	0
2	29	5	5	1	1	2
3	79	9	10	3	9	0
Five others	19	6	3	3	2	0
Total	348(84%)	66(16%)	45(71%)	18(29%)	15(88%)	2(12%)

REGION I

Figure 2.10: Region I Total Results--361 Tests

PASSES 227



FAILURES 134

Table 2.10: Region I Results By Airport

<u>Airport</u>	<u>X-Ray Tests</u>		<u>Metal Detector Tests</u>		<u>Physical Search Tests</u>	
	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>	<u>Pass</u>	<u>Fail</u>
1a	37	11	7	2	9	9
2	42	10	1	0	0	0
3	7	15	1	0	13	11
4	22	3	0	0	11	5
5	24	44	0	3	0	0
Four others	<u>22</u>	<u>10</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	<u>154</u> (62%)	<u>93</u> (38%)	<u>9</u> (64%)	<u>5</u> (36%)	<u>33</u> (57%)	<u>25</u> (43%)

^aResults shown exclude 42 tests (31 pass, 11 fail) that were not broken out by type of test.

Table 2.11: Ranking of Screening Tests Results for 28 Major Airports⁴

<u>Airport</u>	<u>Pass rate</u>
1	99%
2	93%
3	92%
4	91%
5	89%
6	87%
7	87%
8	86%
9	85%
10	84%
11	83%
12	82%
13	81%
14	81%
15	81%
16	81%
17	80%
18	79%
19	76%
20	74%
21	73%
22	72%
23	71%
24	71%
25	64%
26	62%
27	45%
28	34%

⁴These 28 major airports are those identified by number in the preceding tables.

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