THE ECONOMIC AND FISCAL IMPACTS OF CALIFORNIA'S AIRCRAFT GROUND TIME EXEMPTION

(PURSUANT TO CHAPTER 1169, STATUTES OF 1973)

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INTRODUCTION

Chapter 1169, Statutes of 1973 (SB 911), modifies, for purposes of property taxation, the allocation formula used to assess aircraft owned by certificated air carriers and scheduled air taxis. This act revises the aircraft assessment formula to exclude (1) all time prior to an aircraft's first revenue flight and (2) ground time in excess of 12 consecutive hours. The provisions of Chapter 1169 are effective for the 1974-75 through 1979-80 fiscal years, after which time the specified exclusions from the formula become inoperative. Chapter 1169 also requires the Legislative Analyst to report to the Legislature on the economic and revenue effects of this exemption.

This report, which is submitted in response to Chapter 1169, was prepared by Jeffrey Rudolph, under the supervision of James Patterson. The report discusses (1) provisions of Chapter 1169, (2) background information on the aircraft maintenance industry, (3) state reimbursements under Chapter 1169, and (4) economic impacts of the exemption.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

Examination of the provisions and impacts of Chapter 1169 suggests the following:

1. The aircraft ground time exemption provided in Chapter 1169 will result in a property tax savings to the airlines of about $3.5 million in 1979-80. The tax loss to local government is reimbursed by the state.

2. If the exemption provided in Chapter 1169 is not continued, the state would save about $3.5 million per year in subvention costs.

3. Termination of the aircraft ground time exemption could result in some diversion of existing aircraft maintenance work or new maintenance facilities to other states. However, in light of the relatively minor increase in industry costs that would result from imposing the property tax at the post-Proposition 13 rate, we believe such diversion, if any, would be minimal.

4. Thus, we believe that the elimination of the exemption would have a favorable impact on the state's budget because subvention cost savings are likely to exceed any induced revenue losses resulting from a decline in aircraft maintenance activity.

5. We recommend that the Legislature reduce state subventions to local governments under Chapter 1169 in 1979-80, to reflect the effect of Proposition 13. The existing subvention formula is based on pre-Proposition 13 property tax rates. A change in this formula to reflect Proposition 13 would reduce state subvention costs by over 50 percent, or about $2 billion in 1979-80.

6. If the exemption is extended beyond 1979-80, we recommend that counties be required to collect data on the actual revenue losses attributable to this exemption. Such information should be used as a basis for revising the statutory subvention formula to reflect more accurately actual revenue losses.

PROVISIONS OF CHAPTER 1169

Aircraft owned by certificated air carriers and scheduled air taxis are assessed by those counties in which a taxable situs is maintained, using a statutory allocation formula. Chapter 1169 modified this formula to exclude specified aircraft "ground time". The basic allocation formula incorporates both (1) a time-in-state factor and (2) an aircraft's arrivals and departures factor. The "time-in-state" factor is the ratio of the amount of time, both in the air and on the ground, that certificated aircraft has spent within the state to the total amount of all ground and flight time of the aircraft. The "arrivals and departures" factor is the ratio of the number of arrivals in and departures from airports within the state to the total number of arrivals in and departures from all airports within and without the state. To determine the portion of an aircraft's assessed value taxed by local government, the assessed value of the aircraft (25 percent of its market value) is multiplied by the sum of (1) the time-in-state factor multiplied by 75 percent and (2) the arrivals and departures factor multiplied by 25 percent.

Chapter 1169 modified the aircraft assessment formula to exclude from the time-in-state factor (1) all time, both in the air and on the ground, that certificated aircraft has spent within the state prior to the aircraft's first revenue flight and (2) ground time in excess of 12 consecutive hours. Local governments are reimbursed for property tax losses under Chapter 1169 based on the revenue reduction computed for 1972-73 by the State Board of Equalization increased by 12 percent for the 1974-75 fiscal year and by 6 percent for each subsequent year. According to Board of Equalization estimates, Chapter 1169 would have resulted in a revenue reduction of $2.36 million in 1972-73 representing about 9 percent of the total property taxes paid on certificated aircraft in that year.

BACKGROUND INFORMATION ON THE AIRCRAFT MAINTENANCE INDUSTRY

FAA MAINTENANCE REQUIREMENTS

The Federal Aviation Administration (FAA) requires that all aircraft undergo a prescribed level of maintenance. The requirements vary depending on the experience of the airline and the model and age of the aircraft. Generally, there are four different levels of inspection required of aircraft in addition to the minor service (turnaround or terminal checks) performed every time a plane is at an airport which has a maintenance station. These inspections (usually called an "A", "B", "C", or "D" check) are required at intervals ranging from every 50 flying hours to every four to eight years.

Generally, an "A" check is required every 50 to 250 flying hours (depending on airline and type of plane) and can usually be completed in less than 12 hours. Most airlines perform "A" checks at several different airports rather than specifically routing planes to one particular location. A "B" check, required every 400 to 500 flying hours, or up to about 110 days, can also be completed in less than 12 hours. The "B" check is usually done overnight and most airlines do the work at several airports.

"C" and "D" checks, on the other hand, usually involve a thorough inspection of the aircraft or a complete overhaul. The "C" check is required approximately once a year (3,500 flying hours or 13 to 15 months) and may involve a week's work. A "D" check, or "heavy maintenance visit", is generally required every four to eight years and involves two to three weeks work. Some airlines complete the "C" and "D" checks in phases approved by the FAA. These "progressive maintenance" programs are designed to reduce the loss of aircraft service time due to maintenance. Under this approach, a "C" check phase can usually be completed overnight.

The "C" and "D" checks are performed at the airline's major maintenance facilities. When scheduling flights, airlines consider the service requirements of each aircraft so that each craft can be scheduled for a revenue flight which will arrive and depart from an airport where the required maintenance check can be performed.

EMPLOYMENT IN AIRCRAFT MAINTENANCE

The federal government estimated that there were about 110,000 airplane mechanics employed in the U.S. in 1976, of which over one-half worked for airlines, one-third for the federal government and the remainder in general aviation. The California Employment Development Department (EDD) estimated that there were about 30,000 aircraft mechanics employed in California in 1975, of which about 13,000 worked for airlines.

Airline industry representatives indicate that there has been a very slight increase in aircraft mechanic employment since the exemption was adopted in 1973, but that specific numbers are not available because accounting practices do not always categorize maintenance employees separately.

STATE REIMBURSEMENTS UNDER CHAPTER 1169

STATE SUBVENTION PAYMENTS TO LOCAL GOVERNMENTS

As indicated previously, local reimbursements under Chapter 1169 are based on a statutory formula (using computed 1972-73 base-year local revenue losses) and, therefore, do not necessarily represent actual property tax revenue losses. For fiscal year 1974-75, the act requires the local reimbursement to be the computed base-year loss increased by 12 percent. For 1975-76 and each subsequent year, the reimbursement is the prior-year reimbursement increased by 6 percent.

Tables 1 and 2 provide a breakdown distributed by county and by airline, respectively, of the 1972-73 base-year revenue losses computed by the Board of Equalization. The cost to the state for total local reimbursements over the six-year period of the legislation is shown in Table 3, and Table 4 shows the 1977-78 reimbursements by county.

TABLE 1

COMPUTED LOCAL PROPERTY TAX LOSSES
UNDER CHAPTER 1169 BY COUNTY
1972-73 BASE YEAR

County	Computed Revenue Losses
Los Angeles	$1,080,055
San Mateo	864,173
Alameda	278,690
San Diego	110,962
San Bernardino	12,208
Orange	10,301
Sacramento	8,691
Others	1,660
Total	$2,366,740

Source: State Board of Equalization.

TABLE 2

COMPUTED LOCAL PROPERTY TAX LOSSES
(AIRLINE SAVINGS) UNDER CHAPTER 1169 BY AIRLINE
1972-73 BASE YEAR

Airline	Computed Revenue Losses
American Airlines	$ 598,833
United Airlines	447,161
Trans World Airlines	363,931
Western Airlines	208,175
World Airways	123,611
Pacific Southwest Airlines	95,206
Pan American	86,647
Trans International Airlines	69,135
Flying Tiger	66,017
Saturn	56,471
Northwest Airlines	55,544
National Airlines	30,226
Airlift International	28,862
Continental Airlines	28,272
Others	108,649
Total	$2,366,740

Source: State Board of Equalization.

TABLE 3

TOTAL STATE REIMBURSEMENTS UNDER CHAPTER 1169
1974-75 THROUGH 1979-80
ACTUAL AND PROJECTED

Fiscal Year	State Reimbursements
1974-75	$2,650,749
1975-76	2,809,793
1976-77	2,978,381
1977-78	3,157,084
1978-79	3,346,504
1979-80	3,547,300

Source: State Board of Equalization.

TABLE 4

STATE REIMBURSEMENTS TO LOCAL GOVERNMENTS
UNDER CHAPTER 1169 BY COUNTY
1977-78 FISCAL YEAR

County	State Reimbursements
Los Angeles	$1,440,726
San Mateo	1,152,753
Alameda	371,755
San Diego	148,017
San Bernardino	16,285
Orange	13,741
Sacramento	11,592
Others	2,215
Total	$3,157,084

Source: State Board of Equalization.

STATE REIMBURSEMENTS VERSUS ACTUAL PROPERTY TAX REVENUE LOSSES

Counties do not collect data on the actual revenue losses attributable to Chapter 1169. Therefore, we have been unable to determine whether the state subventions provided by formula under Chapter 1169 have been higher or lower than actual local government revenue losses resulting from the aircraft ground time exemption.

We have collected data on the value of aircraft subject to property taxation for the three largest airlines operating in San Mateo County. Those data show substantial variation between the airlines, but indicate that the total value of all assessed aircraft owned by the airlines has increased at a rate only slightly greater than 6 percent annually. Because the percentage of total value allocated to the county under the statutory aircraft assessment formula has decreased over the same period, the net increase in aircraft assessed value attributable to the county has been slightly less than 6 percent a year. However, we are unable to determine the extent to which the change in assessed value attributable to San Mateo County by these three airlines reflects statewide trends for all airlines.

In an attempt to estimate the statewide growth rate in property tax losses due to the exemption, we looked at several factors which have affected the rate at which the assessed value of aircraft in the state grew and the amount of time aircraft spent in the state since 1972. Among these are (1) changes in aircraft assessment standards by the State Board of Equalization, (2) the advent of wide-body aircraft (such as the Boeing 747 and Lockheed L1011), (3) increased fleet utilization by the airlines (that is, the average number of hours planes fly daily), (4) load factors (that is, the percentage of seats occupied), and (5) changes in regulation of the airline industry by the Civil Aeronautics Board (CAB). However, because of the substantial changes in the industry over this period, we have been unable to quantify the net effect of these factors on the total aircraft assessed value attributable to the state.

The reduction in property tax rates brought about by Proposition 13 will also have a dramatic impact on the actual property tax losses of counties under Chapter 1169. On the average, property tax losses resulting from the subvention should decline by over 50 percent. Since the current subvention formula was based on property tax rates that are considerably higher than existing rates, this formula presumably results in a reimbursement that exceeds the actual local revenue loss in fiscal year 1978-79 and 1979-80. Therefore, we recommend that the Legislature reduce state subventions to local governments under Chapter 1169 in 1979-80 to reflect the impact of Proposition 13.

We further recommend that, if the exemption is extended, counties should be required to submit data to the State Controller on the actual property tax loss attributable to the aircraft ground time exemption. This would permit the adjustment of the reimbursement formula to reflect more accurately actual post-Proposition 13 revenue losses due to the exemption.

ECONOMIC EFFECTS OF CHAPTER 1169

The economic effect of Chapter 1169 can be measured by both the tax effect (as discussed in the preceding section) and by aircraft maintenance activities in the state. The following discussion assesses the likely impact of Chapter 1169 on both existing and new maintenance facilities.

EXISTING MAINTENANCE FACILITIES

Aircraft maintenance is done in two ways--in-house by the airlines' own employees or contractually by other airlines.

Maintenance of Own Aircraft

There are several reasons why it is unlikely that an airline which has already established maintenance facilities in the state would relocate these facilities because of failure to extend the ground time exemption provided under Chapter 1169. First, a large portion of aircraft maintenance activity involves FAA-prescribed "A" or "B" checks which, as described earlier, usually involve less than 12 hours of work. Such maintenance is, therefore, normally not affected by the exemption, which applies only to ground time in excess of 12 hours. Moreover, for those airlines which engage in a progressive maintenance program, many of the "C" checks are completed in phases involving less than 12 hours each and, thus, also are not affected by the exemption.

Second, there are important nontax advantages to siting maintenance facilities in California. This state serves as a terminus and originating point for many flights; thus, airlines do not have to schedule nonrevenue flights to reach their California-based maintenance facilities. For the same reason, those airlines which operate only in California are unlikely to locate their maintenance operations out of state. Other advantages from locating in California include the mild weather (which permits more outside maintenance work) and the existence of a skilled labor market. Third, a large investment in existing California facilities would represent a major disincentive to relocating maintenance operations--at least during the economic life of that investment. For example, United Airlines, with the largest maintenance facility in the world located in California (Burlingame), would be unlikely to incur the cost of moving its entire operation merely because of the elimination of a property tax exemption equal to about $500,000 a year.

Third, the magnitude of the property tax savings under Chapter 1169 generally is so small relative to a major airline's total operating costs for maintenance that it is unlikely airlines would base a decision to locate or relocate maintenance facilities on this factor. For example, United Airlines estimates that it incurred maintenance expenses of $421 million in California during calendar 1978, while its estimated property tax savings under Chapter 1169 were in excess of $600,000. Thus, the savings amount to only about one-tenth of 1 percent of total maintenance expenses for the airline in the state.

Finally, Proposition 13 has reduced property tax rates by over 50 percent and, consequently, has substantially reduced the value of the ground time exemption as well.

Contract Maintenance

It is possible that the ground time exemption provided under Chapter 1169 has helped aircraft maintenance facilities in California maintain or expand the volume of contract maintenance done for other airlines or for aircraft brokers. To the extent the exemption reduces the total cost of maintenance to the customer, California-based maintenance facilities, in theory at least, may have a marginal advantage in competing for contracts with out-of-state facilities.

Although we have been unable to collect any comprehensive data on aircraft contract maintenance revenue, United Airlines has indicated that the airline increased its interest in contract maintenance sales in the early 1970's, and that the largest increase in such sales occurred between 1970 (sales of about $15 million) and 1973 (sales of $42 million), which was prior to the enactment of the ground time exemption.

Again, Proposition 13 has lowered the property tax rate in the state, thereby reducing any relative advantages to airlines and aircraft brokers buying contract maintenance which the ground time exemption provided in the past.

New Aircraft

Chapter 1169 also excludes from the aircraft assessment formula all time which an aircraft spends in the state prior to its first revenue flight. This is unlikely to have a significant impact on the aircraft maintenance industry, however, because maintenance work on aircraft prior to the first revenue flight tends to represent only a small portion of all aircraft maintenance.

NEW MAINTENANCE FACILITIES

It is possible that Chapter 1169 could affect the construction of new maintenance facilities more than the relocation of existing facilities. However, the available data do not suggest that maintenance facility construction has increased since the passage of the exemption. Table 5 contains data reported by the Board of Equalization on maintenance facility construction costs incurred by various airlines for the 1969 through 1977 lien dates.

TABLE 5

AIRCRAFT MAINTENANCE FACILITIES
CONSTRUCTION COSTS
(Millions)

County	1969 Through 1973	1974 Through 1977
Alameda:		
World Airways	$ 10.5	--
Los Angeles:		
American Airlines	27.9	--
Continental Airlines	11.1	--
Trans World Airlines	3.9	$ .3
Western Airlines	--	2.4
San Mateo:		
United Airlines	46.3	1.3
American Airlines	25.5	--
Western Airlines	3.1	--
San Diego:		
Pacific Southwest Airlines	3.7	3.5
Total	$132.0	$7.5

Source: 1978 Survey by the Board of Equalization.

Airline industry representatives report total construction of over $30 million since January 1, 1974, including facilities being leased by the airlines. They have no comparative data available for years prior to 1974. The difference between the Board of Equalization's and the airlines' total construction estimates may in part reflect facilities leased, but not owned, by airline companies, which is included in the airline's estimate, but not in the Board of Equalization's data.

Other measures of aircraft maintenance activity in the state include the purchase of maintenance parts and of maintenance and engineering equipment. Airline representatives report an increase of about $60 million in parts inventory from 1974 and 1978 ($240 million to $300 million). Maintenance and engineering equipment inventory has increased from about $30 million to about $45 million--an increase of $14.5 million in that same period. Much of these increases, however, can be explained by general price inflation.