

# INVESTIGATION OF THE NATIONAL DEFENSE PROGRAM

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## HEARINGS

BEFORE A

### SPECIAL COMMITTEE INVESTIGATING THE NATIONAL DEFENSE PROGRAM

UNITED STATES SENATE

SEVENTY-NINTH CONGRESS

FIRST SESSION

PURSUANT TO

### **S. Res. 55**

(79th Congress)

(Extending S. Res. 71—77th Congress)

A RESOLUTION AUTHORIZING AND DIRECTING  
AN INVESTIGATION OF THE NATIONAL  
DEFENSE PROGRAM

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### **PART 32**

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#### **TIN SHORTAGE**

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DISPOSAL OF SURPLUS PROPERTY  
(Municipalities—Small Business—Veterans)

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RECONVERSION  
(West Virginia—Aviation Industry)

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IRREGULARITIES IN FOURTEENTH NAVAL DISTRICT

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MERCHANT SHIPPING—PACIFIC

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SEPTEMBER 21, 24; OCTOBER 4, 10, 11, 22, 23, 25;  
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the National Defense Program

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The following data are included in connection with the testimony of Alfred Marchev, supra, p. 15913:

REPUBLIC AVIATION CORP.,  
Farmingdale, Long Island, N. Y., October 18, 1945.

Mr. GEORGE MEADER,  
Chief Counsel, Special Committee Investigating the  
National Defense Program, United States Senate, Washington D. C.

DEAR MR. MEADER: During the hearings before your subcommittee on October 10, at which you graciously invited Mr. Marchev to testify, he promised to file with you an additional statement containing certain material of interest to your study accordingly, at his request and in his absence, I am enclosing this material in order that you may have a full story of Republic's part in the military production effort.

The enclosures include (1) (exhibit A), a brief statement on our negotiations to lease the manufacturing facilities at Farmingdale, N. Y. (2) Detailed information on our operations since 1939, when Republic Aviation Corp. was formed to succeed Seversky Aviation Corp. Included in the latter, (exhibits B through F), are figures on our contracts, both with the Governments of Sweden and the United States of America to manufacture military airplanes, examples of costs of these planes, from the manufacture of the initial planes through the period of reaching peak production, figures on production schedules, labor productivity and a brief statement on profits from 1940 to 1945. While many of these must be estimated figures, some of them are actual and final. They will be properly indicated where they appear.

Republic appreciates this opportunity to place its record before responsible Members of Congress and trusts that the answers we have given during the hearing will be of assistance to you in reaching your important decisions necessary for planning the future security and well-being of the Nation.

Sincerely,

C. H. MILLER,  
Vice President, Republic Aviation Corp.

EXHIBIT A. RETENTION OF MANUFACTURING FACILITIES

During World War II, Republic Aviation Corp. followed the pattern of other plane manufacturers in expanding its production many times. From a small plant on Long Island, grew a factory establishment which operated not only at Farmingdale, but at Evansville, Ind. Elsewhere (in our original statement made October 10) we have listed this growth in square feet of floor space as well as in dollar costs. With the end of the war, the Evansville plant reverts to the Government, which owns it completely.

The facilities at Farmingdale, however, are suitable for a continued operation by Republic and we are desirous of retaining the full manufacturing space, along with the majority of contiguous space, including airport, hangars, small buildings, etc. Most of this was built and equipped under agreement with the Defense Plant Corporation. This agreement provides for our purchasing the DPC owned portions (at prices which have proved to be completely unworkable) or else vacating the facilities.

The Reconstruction Finance Corporation, which is now the disposal authority for the Surplus Property Board, realizes, along with us, that the purchase option agreement is impossible of fulfillment, not only in our case but in the case of hundreds of other war contractors. RFC officials have been most sympathetic with our situation, and in conferences with them they have shown an understanding of the problem as it affects our company. I told you a week ago it seemed to be their feeling that they do not have the authority to complete suggested arrangements which would be workable and would bring revenue to the Government. In the meantime, some of these obstacles have been overcome and negotiations seem to be progressing favorably.

Specifically, Republic has offered to lease the entire Farmingdale facility on a 5-year basis at a rate of 1 percent of sales—both commercial and military sales, and also pay all maintenance, real property taxes, and insurance premiums.

The RFC has shown interest in this simple method of leasing, but indicates a belief that a minimum guaranteed rent should accompany the 1 percent. They have generally been most cooperative in our conversations to date. The RFC officials obviously are looking to higher authority for a determination of policy.

Republic firmly believes that this method of leasing is sound and, based on our own estimated sales, that it would prove profitable to the Government both in a monetary sense and from the standpoint that it would keep active special facilities which were designed for aircraft manufacture and which are only operable with efficiency when they are run for the purpose of manufacturing aircraft, whether military or civil. Because of this, the Farmingdale facilities would remain a guaranty of maintaining available facilities for large-scale military manufacture should the need again arise.

Republic at present (as we testified on October 10) is engaged in preparing for quantity production of personal and commercial aircraft. We are presently converting military transport planes for commercial air-line use. Other production is contemplated for the future. Yet, it is difficult to schedule such production and to consummate contracts with customers when it may be necessary to vacate our facilities, even though they are not suitable for use by others. Our company, which has studied the facilities disposal problem at great length, is ready and anxious to negotiate any reasonable plan which can be operated without foreseeable loss. We believe that congressional action, in the form of a guiding policy to the surplus disposal agencies, is the only immediate solution to this perplexing situation.

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EXHIBIT B. P-35, AT-12—CONTRACTS WITH THE UNITED STATES AND SWEDEN

Republic Aviation Corp. succeeded Seversky Aviation Corp. on October 13, 1939. On June 29, 1939, a contract with Sweden for 15 P-35A fighter planes had been negotiated by the old company. This was followed by Swedish orders for 45 P-35's on October 11, 1939, and 60 P-35's on January 5, 1940. This totaled 120 airplanes to be sold for \$59,860 each.

Fifty-two AT-12 airplanes were ordered by Sweden, 24 on October 11, 1939, and 28 on December 19, 1939. Cost per airplane was \$67,307.

As it developed, the United States Army Air Forces took over a portion of this order and a total of 97 went to Sweden and 23 to the United States. A total of 34 AT-12s were delivered to the Swedes and 18 were taken over by the United States. Delivery to the Swedes commenced with 2 airplanes (P-35's), being delivered on November 15, 1939, and 1 AT-12, June 29, 1940. The remainder of the order was completed on November 4, 1940.

Due to the process of taking over the company, records on exact total costs (development, etc.) on the P-35 and the AT-12 are not clear. However, we point out that between 1936 and 1940, the Company chalked up a loss of nearly \$2,400,000, which went for development on this airplane and its predecessors before an airplane was sufficiently improved for quantity sales.

The Swedish contract was financed as follows: The Government agency of Kungl. Flyg Forvaltningen, in Stockholm, set up credit in the National City Bank and the New York Trust Co. A letter of credit for the full amount of the contract was given to Republic and as the airplanes were accepted a draft was issued and the credit was drawn upon.

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EXHIBIT C. P-43

The next airplane designed by Republic and accepted in quantity was the P-43, or Lancer, fighter plane. This followed in the Republic tradition of designing fighters around air-cooled radial engines, instead of liquid-cooled, inline engines. (The P-43 and P-47 were, as it turned out, the only air-cooled, radial engine-equipped fighters to be built for the Army and flown by them in World War II. This gave the AAF the opportunity to protect against failure by one or the other type fighter and records proved this to be a wise decision in that both types fought with distinction.)

A contract for 272 planes was completed. This contract was completed at an average cost of \$45,815 per airplane. The last 40 of these planes cost \$37,781. By itself, and considering the possibility that no order might have been placed therefor, the last airplane cost \$462,928. This is based on the following estimate:

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*Estimated cost of one YP-43 airplane. Costs of 13 airplanes adjusted to assumption that only 1 experimental plane was manufactured. These costs included experimental development, static airplane, models, etc.*

|                               |           |                                                     |           |
|-------------------------------|-----------|-----------------------------------------------------|-----------|
| Material.....                 | \$15, 823 | Experimental development.....                       | \$13, 471 |
| Labor (75,076 hours).....     | 64, 565   | Administration and sales (15 percent) of labor..... | 9, 685    |
| Burden:                       |           | Burden variation (1.9 percent).....                 | 184       |
| Normal.....                   | 51, 652   | Insurance.....                                      | 952       |
| Variation.....                | 2, 195    | Performance bond.....                               |           |
|                               | 136, 236  | Static.....                                         | 65, 032   |
| Engineering (80,472 hours)--- | 170, 655  |                                                     |           |
| Tooling.....                  | 60, 048   |                                                     |           |
| Purchased tools.....          | 7, 034    | Total.....                                          | 462, 928  |

The P-43 was a definite forerunner of the P-47 series, in general design, engine-type and other characteristics. As such, its manufacture contributed much to the engineering skill and production know-how that later was to go into the P-47's.

EXHIBIT D. THE P-47 THUNDERBOLT

The first airplane to be completed and accepted in this series was the XP-47B. Based on the same method of estimate as used for the first P-43, this airplane, delivered on May 2, 1941, cost \$756,341.29. Since that time, 15,327 P-47's have been delivered to the United States Army Air Forces. The last one has rolled off the assembly lines since our statement to your committee on October 10. A table of cost reductions is shown here. Six airplanes, including one which was destroyed, were completed before March 1942 and were used for experimental testing. Production models began in the latter month and are indicated in the table.

*Total cost per unit airplane, Farmingdale and Evansville*

| Month          | Farm-<br>ingdale | Evans-<br>ville | Month          | Farm-<br>ingdale | Evans-<br>ville |
|----------------|------------------|-----------------|----------------|------------------|-----------------|
| 1942:          |                  |                 | 1944:          |                  |                 |
| March.....     | \$123, 588       |                 | January.....   | \$43, 575        | \$41, 804       |
| April.....     |                  |                 | February.....  | 42, 905          | 41, 034         |
| May.....       | 103, 081         |                 | March.....     | 43, 117          | 40, 600         |
| June.....      | 86, 668          |                 | April.....     | 47, 628          | 40, 585         |
| July.....      | 74, 027          |                 | May.....       | 44, 561          | 42, 015         |
| August.....    | 66, 650          |                 | June.....      | 43, 725          | 41, 539         |
| September..... | 63, 942          |                 | July.....      | 43, 517          | 39, 927         |
| October.....   | 61, 819          | \$71, 236       | August.....    | 43, 544          | 39, 040         |
| November.....  | 57, 326          | 71, 236         | September..... | 43, 001          | 38, 707         |
| December.....  | 53, 712          | 66, 438         | October.....   | 42, 276          | 38, 653         |
| 1943:          |                  |                 | November.....  | 42, 064          | 37, 783         |
| January.....   | 51, 310          | 66, 670         | December.....  | 42, 064          | 36, 947         |
| February.....  | 52, 354          | 65, 149         | 1945:          |                  |                 |
| March.....     | 56, 635          | 60, 720         | January.....   | 69, 060          | 37, 141         |
| April.....     | 54, 602          | 62, 002         | February.....  | 52, 651          | 37, 601         |
| May.....       | 53, 785          | 63, 044         | March.....     | 51, 342          | 37, 314         |
| June.....      | 52, 844          | 58, 922         | April.....     | 44, 561          | 36, 590         |
| July.....      | 47, 035          | 58, 520         | May.....       | 44, 553          | 36, 637         |
| August.....    | 45, 559          | 56, 050         | June.....      | 44, 303          | 35, 935         |
| September..... | 45, 333          | 51, 886         |                |                  |                 |
| October.....   | 45, 610          | 49, 329         |                |                  |                 |
| November.....  | 45, 225          | 48, 262         |                |                  |                 |
| December.....  | 43, 726          | 45, 503         |                |                  |                 |

NOTE.—Costs shown prior to January 1945 for P-47D airplanes only. Since then, P-47M's and P-47N's (improved models) are included.

The differential in unit cost between Farmingdale and Evansville is explained by the fact that all design and production engineering was handled at Farmingdale and is charged to that facility. When design or production changes were effected they were worked out at Farmingdale and then put into operation at Evansville.

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Complementing the cost reduction is the direct labor time reduction. On the P-47B, through the P-47D, the first 6,442 airplanes built show a reduction in direct labor time from 7 hours per pound to approximately 1 hour per pound. Expressed in other terms, in May 1942, 44,840 man-hours were required per ship. This was reduced to 6,350 man-hours by August 1944, when major changes increased it to 7,350 by progressive stages, as follows:

|                     |       |
|---------------------|-------|
| September 1944..... | 6,579 |
| October 1944.....   | 7,240 |
| November 1944.....  | 7,305 |
| December 1944.....  | 7,350 |
| January 1945.....   | 7,350 |

During this time, the shift was made from the P-47D to the P-47N (which represented approximately 70 percent fuselage change to accommodate the new bubble canopy). The P-47N began in September 1944 with 26,316 man-hours and was progressively reduced by June 1945 to 7,206 man-hours. In the meantime, the P-47D was taken out of production. It is significant that, during this hectic period of design and production change, schedules were maintained without let-up.

## EXHIBIT E. EXISTING MILITARY CONTRACTS

At the present time, Republic is carrying on the following projects for the AAF.

1. Contract No. W33038 AC2135. (Experimental.) A four-engine airplane (details restricted). The dollar amount of this contract for two planes is \$6,545,669.26, including spares, and readjustment, etc. The fixed fee is \$258,985.66. Production began January 29, 1944, and the contract is scheduled to be completed in February 1946.

2. Contract No. W33038 AC6248. (Experimental and production.) An advanced fighter plane (details restricted). The dollar amount of the contract is \$26,633,265.19. This is for 103 airplanes, including experimental and production units. Production began in December 1944 and the contract is scheduled for completion in December 1946.

## EXHIBIT F. REPUBLIC INCOME ON WAR PRODUCTION

Republic has operated on both fixed-price and fixed-fee contracts throughout the war. Based on these contracts, the attached simplified accounting on profits is hereby submitted.

These figures are, necessarily, incomplete, since final settlements of many contracts will not be possible for some time. They are based on known factors, plus estimates based partially on experience and partially on frank conjecture. Republic Aviation Corp., like other aircraft manufacturers, feels itself unable to guarantee any statement about profits until policies within the various procurement and accounting agencies and their definition shall have been more clearly examined. Sudden shifts of policies or interpretations of said policies could alter our estimates drastically.

### EXHIBIT F

| Profit                                                                                         | 1945<br>(through<br>Sept. 30) | 1944        | 1943        | 1942        | 1941        |
|------------------------------------------------------------------------------------------------|-------------------------------|-------------|-------------|-------------|-------------|
| Total fixed price.....                                                                         | 1 \$19,905                    | 1 \$533,005 | \$7,165,099 | \$4,736,166 | \$1,532,837 |
| Total fixed fee.....                                                                           | 8,029,693                     | 21,423,184  | 16,420,881  | 70,048      | .....       |
| Less provision for disallowed costs.....                                                       | 614,187                       | 2,387,816   | 580,866     | 72,908      | .....       |
| Total net fees.....                                                                            | 7,385,506                     | 19,035,368  | 15,839,815  | 12,860      | .....       |
| Total operating profit (before other income, provision for Federal taxes, reserves, etc.)..... | 7,365,601                     | 18,502,273  | 23,004,914  | 4,733,306   | 1,532,837   |

<sup>1</sup> Loss.

1940