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DEPARTMENT OF JUSTICE  
WAR DIVISION  
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FOREIGN ECONOMIC ADMINISTRATION  
ECONOMIC INTELLIGENCE DIVISION

REPORT ON

TACHIKAWA AIRCRAFT CO.  
(Tachikawa Hikoki K.K.)

April 18, 1944

Prepared by:  
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Economic Warfare Section  
War Division  
Department of Justice  
Washington, D. C.

Confidential Report  
April 18, 1944 (Report No. 321)  
Re: Tachikawa Aircraft Co.  
(Tachikawa Hikoki K.K.)  
Submitted by: Hildemar E. Johnson,  
Department of Justice  
New York, New York

REPORT ON TACHIKAWA AIRCRAFT CO.  
(Tachikawa Hikoki K.K.)

I. INTRODUCTION

Tachikawa Aircraft Co. is located near the Aviation Branch Arsenal of the Japanese Army in a section which appears to be something of a nerve center of Japanese Army Aviation.<sup>(1)</sup> Its relationship to the Army is so close that it has been said that "Tachikawa (Aircraft Co.) is the Army's aeroplane factory."<sup>(2)</sup> In 1939 it was reported to have 10,000 employees.

Purchases made in the United States during the period from 1937 to December 1941 tend to indicate that Tachikawa confined its activities to the manufacture of air-frames and possibly to assembly work. This might mean that it received engines manufactured at the Army Aviation Branch Arsenal near-by.

Although formerly interested in light planes, training planes, etc.,<sup>(3)</sup> Tachikawa subsequently dealt with heavier types of aircraft. It received the manufacturing license for the Lockheed "14" ("Electra"), a high speed commercial transport plane readily adaptable to military use, and a number of these planes were apparently constructed for the use of Japan Air Transport, the semi-official and monopolistic commercial airline of Japan.<sup>(4)</sup> Tachikawa also received a number of these planes manufactured by Lockheed for the use of Japan Air Transport and the Japanese Army.

Purchases in the United States through the Japanese trading companies after January 1, 1937, included the following:

25 Lockheed "14" transport planes	\$1,942,862.50
Aircraft parts and materials	945,134.08
Machinery and machine tools	217,864.75
	<u>\$3,105,861.33</u>

(This includes \$8,123.89 worth of machine tools, etc., for High Speed Engine Industry Co., a subsidiary.)

Most of the business went to Okura, as follows:

Okura	\$3,066,332.88
Mitsui	32,039.09
Ataka	3,978.06
Yamatake	3,511.30
	<u>\$3,105,861.33</u>

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These figures seem to show that Okura was more closely related to Tachikawa than any of the other trading companies. The connection is explained somewhat in the following excerpt from the letter from Okura, Tokio, December 29, 1937 (Order File #11718):

"Taking this opportunity we beg to inform you that our real intention of giving the manufacturing license for Lockheed type 14-WH3 to Tachikawa at an extremely moderate price beyond your expectation comes chiefly from the fact that they are one of our associated concerns.

"As you are well aware, our Mr. C. Kadono is President of Tachikawa Hikoki and their Managing Director Mr. T. Yokoyama is the retired general of the Military Aeronautical Department and further our Mr. K. Tsutsumi is also managing director representing Okura. You will now well understand our position in this respect."

## II. DIGEST OF INFORMATION FROM PUBLISHED SOURCES

Tachikawa Aircraft Co. was established in 1924 as the Ishikawajima Airplane Co., the name being changed in 1936.<sup>(5)</sup> Its authorized capital rose from Yen 4,000,000 in 1937 to Yen 25,000,000 (Yen 22,000,000 paid up) in 1941.<sup>(6)</sup>

The principal plant is the original one at Tachikawa-machi, which has been expanded greatly since 1937,<sup>(5)</sup> but the new plant at Sumagawa appears also to be of substantial proportions.<sup>(7)</sup>

In February 1939 Tachikawa acquired the High Speed Engine Industry Company (Kosoku Kikan Kogyo Kaisha), a small company manufacturing internal combustion engines in Tokio.

## III. INSTALLATION OF INTERNATIONAL BUSINESS MACHINES

Tachikawa Aircraft Co. was the only Japanese aircraft company shown by the New York files of the International Business Machines Corp. to have received an installation of IBM tabulating machines.

Mr. H. Virgil Gaudette, Manager of Lockheed's Industrial Engineering Department was in Japan in 1939 when the 2,000 ton Farrel-Birmingham press was delivered to Tachikawa (Okura Order #11807). A letter from the files of the International Business Machines Corp., dated July 10, 1939, states that Mr. Gaudette had been permitted to visit the Tachikawa plant but was not permitted to study operations at close range. A letter to IBM from its associated company in Belgium, dated August 14, 1937, states that Mr. Gaudette

".....was invited by the Japanese War Office to survey the conditions of mass production of aircraft in Japan and to help the Japanese in this connection by conferences and lectures made for the benefit of the production engineers of the various aircraft manufacturing corporations operating under the supervision of the Imperial Japanese Government."

The letter goes on to say that

"As a result of Mr. Gaudette's visit in Japan the Japanese Air Department requested us to organize a tabulating procedure for the Tachikawa Aircraft Production Centre."

The "New Accounts Report" of Charles M. Decker of Watson Business Machines Japan Ltd., dated July 23, 1939, states that equipment for Production Planning Control, Payroll and Labor Distribution, and a special Payroll Deductions Report was delivered on May 22, 1939 to Tachikawa Aircraft Co., Tachikawa-machi. The report notes that Tachikawa had 10,000 men on its payroll and that its office force was then "housed in a rebuilt hangar, which, owing to their recent tremendous expansion" was the only building available. The equipment was installed by Japanese representatives of the Watson Company. The report states that ".....the Japanese Government will not grant permission for any foreigner to enter the premises of this aircraft manufacturing company."

#### IV. THE LOCKHEED "14"

Tachikawa Aircraft is apparently engaged in building the Lockheed "14" and in servicing those planes purchased from Lockheed in the United States.

The files show that a total of 30 such planes were purchased from Lockheed. The first order for 5 planes was placed by Japan Air Transport through the Beech Aircraft Co. of Wichita, Kansas. The second order (#11560) which was for 20 planes, was placed on November 15, 1937, after Okura had obtained an exclusive agency contract with Lockheed. At first Okura thought the order was going to be for Manchukuo Aviation Co. (Manshu Kohku) according to an Okura, Tokio letter of November 4, 1937 which stated further that Manshu Kohku had a "special connection with the Japanese Army" and that it was also going to buy a number of Junkers JU-88's as per the Manchukuo-German Economic Agreement. Subsequently, it appeared that the planes were to be delivered to Tachikawa Aircraft and that they were to be used by Japan Air Transport on the run from Japan to Manchukuo. However, it appears that the Army Aviation Department, through Col. Kanda, paid for the planes and there are subsequent references to this transaction as the "Army order".

Two employees of Lockheed, Mr. Parker, a pilot, and Mr. Upshaw, a master mechanic, accompanied the first shipment of planes to Japan.

The manufacturing rights for the Model 14 "Electra" were transferred to Tachikawa Aircraft through Okura as a part of the same transaction. For an added fee of \$4,500.00, Lockheed furnished complete manufacturing drawings. The files show that Tachikawa took the manufacturing rights with the complete approval of the Japanese Army.

The third order (#11650) for 5 planes, was placed on March 14, 1938. The name of Japan Air Transport appears consistently as the ultimate user of these planes, except that the Bills of Sale, the Application for Export License, and the Certificates of Airworthiness all name Tachikawa as the purchaser.

The same file contains a letter dated March 8, 1938 from Okura, Tokio, stating that Japan Air Transport was negotiating for the manufacture by Tachikawa of 10 additional transport planes of the Lockheed 14 type. Tachikawa, at that time, had been negotiating for several months for exchange permits to buy materials and parts for these planes. The Okura, Tokio letter of December 29, 1937 (File #11718) stated that Tachikawa was to receive a Governmental subsidy (from Teishinsho) in connection with the manufacture of these planes. The letter from Okura, Tokio, dated February 25, 1938, states that the plan at that time was to buy materials and instruments for 20 planes and motors for 10. However, the Japanese foreign exchange situation became progressively more difficult and permits were issued only for materials and instruments for 7 planes and motors for 2. The orders were placed during the middle months of 1938.

A Tachikawa engineer, Mr. Terazawa, studied production methods at the Lockheed plant in early 1938.

#### V. MISCELLANEOUS COMMENTS

The 2,000 ton Farrel-Birmingham press on Okura order 11807 was set up at the Tachikawa-machi plant by Mr. Karl Kansher, of Farrel-Birmingham, who was a German National at that time. Mr. J. O. Griffin, a skilled press operator employed by Lockheed, supervised the operation of the press for a certain period of time and instructed Japanese workmen. Mr. George Kanzaki, an Okura employee who is understood to be an American-born Japanese, acted as interpreter. The employment of an engineer and an operator had been recommended to Tachikawa Aircraft by Mr. Gaudette of Lockheed while he was in Japan.

According to the files, the press was in operation about January 1, 1940. Shortly thereafter, negotiations were begun for a second press of the same type but no actual order was placed. See Okura Inquiry #23644, etc.

The Farrel-Birmingham press and at least one Federal spot-welder (Okura Order #11802) were machines which the Army Aviation Department had ordered, probably for its own Aviation Branch Arsenal at Tachikawa, and subsequently diverted to the factory of Tachikawa Aircraft. Because of the particularly close relationship between Army Aviation and Tachikawa Aircraft, it is likely that other machinery purchased by Army Aviation was similarly diverted. (1)

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Okura order #11779 for Fafnir ball bearings for the Lockheed 14 transport plane seems to have resulted in deliveries to Tachikawa Aircraft and to Kawasaki Aircraft as well.

No mention of the Sumagawa works was noted in the files. However, many orders bore shipping marks only for Yokohama and could have been delivered to either plant.

This report was prepared following an examination of the files of the major Japanese trading companies in New York.

#### VI. FOOTNOTES

- (1) See Report on Japanese Army Arsenal, Department of Justice, New York, #272, p. 101.
  - (2) Letter from Okura, Tokio to Okura, New York, December 2, 1937 (Order File #11560). There are numerous other indications in the files of the close relationship between the Army and Tachikawa Aircraft. For example, the letter from Okura, Tokio, October 6, 1937, with reference to an order (#11533) for machine tools, states:  

"We are now applying for Government permission for this import, through the assistance of the Military Aeronautical Department, and sooner or later permission will be granted to us without fail."
  - (3) The letter from Okura, Tokio (Correspondence File #31), May 4, 1937, states:  

"The Tachikawa Aircraft Co. are now contemplating to manufacture a light training Plane which will be used for training the youth to be an aviator, in accordance with the suggestion of the Japanese Army. The Plane must be two-seater with control and powered with the Engine-50-100 HP."
- See also Okura Inquiry File III-11 and File III-14. The file on the latter inquiry includes a letter from Okura, New York to Okura, Tokio stating that Major Honda, of the Japanese Army Inspectors' office in New York had inquired for 60 Lockheed Model 112's to be used as a bomber-trainer.
- (4) See Report on Japan Air Transport, Department of Justice, New York, #320.
  - (5) Diayamondo, June 11, 1938, as reported in "A Directory of Certain Japanese Industrial Companies", John Williams, OEW, August 1943.
  - (6) Oriental Economist, February 1941, p. 91, and Company Reports, July 1941, p. 82, as reported in "A Directory of Certain Japanese Industrial Companies", John Williams, OEW, August 1943.
  - (7) Oriental Economist, January 1, 1941, p. 110, as reported in "A Directory of Certain Japanese Industrial Companies", John Williams, OEW, August 1943.

VII. ORDERS AND INQUIRIES1. Okura Orders for Tachikawa Hikoki.

Order #	Date	Manufacturer	No.	Product	Price
11533	10/6/37	Cincinnati (A & G)	10	#2 Plain L type milling machines	
			10	#1 A-12 Arbors	
			10	#2 Plain M.H. milling machines	
			2	#2 Universal cutter grinders	\$71,947.30
Add	3/3/38	Cincinnati	10	Arbors, 1" x 24" for #2 MH plain milling machines	590.00
11536	10/8/37	Air Associates	162,720 lbs	#17ST Alcoa round bars	24,931.20
11538	10/11/37	Air Associates	8,800 lbs	Alcoa flat sheets	3,622.84
11541	10/16/37	U. S. Steel	46,000 lbs	Chrome-molybdenum round steel bars	2,000.00
11537	10/18/37	Air Associates	103,280 lbs	Alcoa flat sheets	104,204.80
11560 (Army Order)	11/15/37	Lockheed	20	Model 14 WG 3 transport planes	1,532,800.00
	11/29/37		X	Contract for manufacturing rights and Drawings for Model 14 WG 3 plane	4,500.00
Add	5/25/38	Lockheed	X	De-Icer equipment	2,836.25
11550	11/19/37	Fafnir	50	#KA-10 Ball bearings	
			125	#SIK-6 Ball bearings	121.16
11551	11/19/37	Torrington	50	#B-1212 Roller bearings	13.61
11552	11/19/37	Schatz	1,200	#4020 Ball bearings	120.00
11562	12/18/37	Air Associates	51,473 lbs	Extruded duralumin sections for airplanes (prints in file)	63,232.23

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Order #	Date	Manufacturer	No.	Product	Price
11593 (Army Order)	1/12/38	Lockheed	8	Spare Wright Cyclone engines Model SGR 1820-G 3B for 20 Lockheed Model 14 WG 3 transport airplanes	\$73,280.00
11595 (Army Order)	1/12/38	Lockheed		Propeller overhaul and service equipment for 48 Hamilton Propellers on 20 Lockheed Model 14 WG 3 transport airplanes	2,352.20
11596 (Army Order)	1/12/38	Lockheed	8	Hamilton Standard constant Speed Propellers for use with 20 Lockheed Model 14 WG 3 transport airplanes	23,800.00
11598	2/ 3/38	Air Associates	47,241 lbs	Aluminum bars	31,868.71
11616	2/ 3/38	Air Associates	20,188 lbs	Extruded duralumin sections (prints in file)	25,811.78
11650	3/14/38	Lockheed	5	Model 14G3B transport planes	410,062.50
11658	4/11/38	Air Associates	1,126 lbs	Aluminum alloy extruded sections (drawings in file)	1,100.98
11659	4/11/38	Air Associates	12,478 lbs	Aluminum alloy extruded sections (drawings in file)	11,829.53
11617 Rev.	4/14/38	Lockheed	X	Spare parts for Lockheed Model 14-WG 3 transport planes	125,322.52
11703	6/30/38	Seversky	45,965 lbs	Alcoa duralumin sheets	31,350.77
11707	7/13/38	Lockheed	31	Diamond chains 1/2" x 3/16"	76.86
11708	7/13/38	Fafnir	30	#A-514 ball bearings	94.50
11709	7/13/38	Lockheed	1	Empennage for Model 14 plane	2,646.00

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Order #	Date	Manufacturer	No.	Product	Price
11714	7/26/38	Lockheed	7	Neoprene cement and tuluol gals thinner	\$55.50
11718	7/26/38	Lockheed	X	Materials for 7 airplanes	94,540.52
11724	7/26/38	Lockheed	X	Jigs and tools for con- struction of Lockheed "14"	26,812.00
11719	7/27/38	Lockheed	X	General equipment for 7 Model 14 airplanes	31,665.27
Add.	9/29/38	Cambridge Instrument	5	Aeromixture indicators for Wright cyclones en- gines using 84 cctane gas	1,106.75
11720	7/27/38	Lockheed	X	General equipment for 7 Model 14 airplanes	4,424.70
11721	7/27/38	Lockheed	X	Instruments for 7 Model 14 planes	18,942.00
11722	7/27/38	Lockheed	X	Electrical equipment for 7 Model 14 planes	26,993.12
11723	7/27/38	Lockheed	4	Wright cyclone engines and accessories	62,501.00
Add. #1	9/22/38	Cambridge Instrument	2	Mixture indicators	442.50
Add. #2	9/22/38	Lockheed	4	Firewalls and engine mounts	1,540.00
11729	8/4/38	Norma Hoffman	2,365	SX-0, SX-1, SX-3, KS-4, X-143, and K-4 Bearings	1,769.83
11730	8/4/38	Fafnir	400	Bearings, A544 & SIK-6	1,004.85
11731	8/4/38	Molded Insula- tion	3,000	Pulleys	3,960.60
11741	8/17/38	Fafnir	100	Ball bearings, #37D	
			100	Ball bearings, #38D	118.12
11743	8/22/38	Lockheed	28,611 lbs	Standard extruded shapes	23,630.24
11767	9/27/38	Pneumatic Drop Hammer	1	Double lift air drop hammer 24" x 24"	9,263.50
			1	Sullivan air compressor	1,125.75

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Order #	Date	Manufacturer	No.	Products	Price
11777	10/11/38	Lockheed	35	Neoprene cement and zinc chromate	\$445.00
11779	10/20/38	Lockheed	45,198	Miscellaneous ball bearings	62,892.55
11779 (2)	10/20/38	Fafnir	18,516	Ball bearings for Lockheed 14 G3B Planes (48 sets delivered to Tachikawa; 45 sets to Kawasaki)	15,996.59
11782	10/25/38	Pneumatic Drop Hammer	1	Double lift gravity drop hammer, 46" x 36"	12,350.00
11782 (2)	10/25/38	Sullivan Machinery	1	#WG-8 single stage water cooled air compressor	2,039.45
11788 Rev.	11/ 7/38	Norma Hoffman	4,345	Ball bearings	3,000.81
11807 (Army Order)	11/17/38	Farrel Birmingham	1	2,000 Metric ton hydraulic metal forming press moving down type	72,790.00
11802 (Army Order)	12/ 5/38	Federal Machinery	1	Aluminum Spot welder	7,463.25
11787	1/10/39	Air Associates	27,793	Extruded duralumin sections	25,444.99
11847	1/18/39	Lockheed	279	Neoprene cement	2,622.60
11873	3/23/39	Lockheed	1	Ousrud router set-up consisting of swinging arm stand, 2 outer tables, 1 drill motor	5,605.00

2. Mitsui Orders for Tachikawa Hikoki

EO 1741-42 TO 3934	12/16/36 1/11/37	Kearney & Trecker	2	#2H Vertical milling machines	5,773.62
#1 Add.	1/14/37	Kearney & Trecker	4	Attachments	122.74
#2 Add.	3/ 4/37	Kearney & Trecker	4	Attachments	637.92

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Order. #	Date	Manufacturer	No.	Product	Price
EO 1745	12/16/36	Kearney & Trecker	1	#2H Vertical milling machine	\$2,886.81
#1 Add.	1/14/37	Kearney & Trecker	3	Attachments	101.74
#2 Add.	2/10/37	Kearney & Trecker	1	Attachment	351.26
EO 3104 TO 6268	3/15/38 12/ 3/37	Norma Hoffman	1,970	Ball bearings	1,537.45
EO 3105 TO 6269	3/25/38 12/ 3/37	Molded Insula- tion	2,500	Pulleys for aircraft	3,300.50
EO 1746-48 TO 3933	12/16/36 1/25/37	Kearney & Trecker	3	#2H Universal milling machines	8,660.43
Adds.	2/10/37	Kearney & Trecker	X	Attachments	542.73

3. Ataka Orders for Tachikawa Hikoki

5064	3/ 2/37	Heald	1	#48A "Borematic"	1,792.77
5702	10/14/40	Brown & Sharpe	79	Measuring instruments	675.29
7-7844	11/25/36	Brown & Sharpe	1	#5 Surface grinder	1,510.00

4. Yamatake Orders for Tachikawa Hikoki

13/522	2/14/38	Continental Mach- ine Specialties	2	Model M "Doall Metal- master" sawing and fil- ing machines	2,886.30
15/793	3/ 5/40	Continental Mach- ine Specialties	100	Band saws	625.00

5. Okura Inquiries for Tachikawa Hikoki

Inquiry # & Date	No.	Product
File III-11 5/20/37	1	North American NA-16 General Purpose military plane, with drawings showing position of armament. Tokio letter dated 5/28/37 stated:  "Tachikawa people are now investigating the so-called cooperative plane and they want to have the NA-16 for their reference plane. But their present appropriation for this purpose is not more than 120,000 yen, and our estimate could not be accepted....."

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Inquiry #  
& Date

No. Product

File III-14  
5/31/37

1 Curtiss-Wright 19R Training plane. (Tokio letter, 9/17/37 states that Tachikawa had designed a training plane and would therefore not buy the Curtiss model. It was stated further that the Japanese Army had discouraged them from purchasing the Curtiss model.)

23309  
9/11/39

3 Ranger 6-401-B-1 aircraft engines. Okura letter to Fairchild, 10/4/39, states that the High Engine Industry Co., a subsidiary of Tachikawa Hikoki, was interested in the manufacture of the Ranger engine.

23310  
9/11/39

3 Menasco C4 aircraft engines.

3 Menasco B6S aircraft engines.

Letter, Tokio to New York, 11/16/39, states that Kokuyoku had refused to grant import permission and that the plan was to obtain this engine from Aichi Tokei Denki. File shows plan to deliver engine to Kosoku Kikan Kogyo.

23607  
1/2/40

1,900 Terne plates, 36" x 120", 22, 24 and 26 gauge. (Tokio letter, 4/10/40, states that "home-made plates as those are difficult to obtain for prompt delivery". Japanese Army was to assist in obtaining exchange permit.)

23644, 23645  
and 23646  
4/4/40

1 2,000 ton Farrel hydraulic metal forming press with rubber die holder and mat and other equipment same as supplied on Order 11807. The Army had issued a previous inquiry, #23527, for the same press. Okura wrote to Farrel-Birmingham, May 24, 1940 ".....the Japanese Army has decided not to purchase the press directly, but is going to let the Tachikawa Aircraft Company buy and install the press in their factory for the Army....."

1 Federal Aluminum spot welder same as supplied on order 11,802.

2 Dries & Krump bending presses, bending length 3050 mm.

6. Orders for Kosoku Kikan Kogyo

Order #	Date	Manufacturer	No.	Product	Price
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a) Ataka Orders

5040	2/16/37	Gleason	1	Spiral Bevel Roughing Cutter	
			1	Spiral Bevel Finishing Cutter	\$172.85
			11		(OVER)

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Order #	Date	Manufacturer	No.	Product	Price
5921	12/27/38	Gleason	1	Spiral Bevel Roughing Cutter.	
			1	Spiral Bevel Finishing Cutter.	
			X	Roughing and finishing tools for 12" straight bevel gear generator	\$224.50

b) Mitsui Orders

TO 3512 EO 1847	2/ 6/37	La Pointe	6	High speed steel spline broading tools for an 8 spline transmission in- termediate sliding gear and a 10 spline differen- tial gear	274.14
TO 3941 EO 1673	3/ 3/37	Warner & Swasey	2	#5 Universal turret lathes	6,336.00
1673 A	4/ 6/37	Warner & Swasey	X	Additional bar and chucking equipment	1,116.40