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March 15, 1991

REP
توكيد

Mr. M. Kohonen
Acting Chief, Contracts Section
UNITED NATIONS INDUSTRIAL
DEVELOPMENT ORGANIZATION
P.O. Box 300, A-1400
Vienna, Austria01

Re: HS 748-2A Current Market Evaluation
HS 748-2A Appraisal, S/N 1748

Dear Mr. Kohonen:

Pursuant to your request and based on the information and specifications provided by GUYANA AIRWAYS, AVMARK SERVICES, LTD. is pleased to provide its Current Market Evaluation for the HS 748-2A, together with our Appraisal of the subject HS 748-2A, Serial Number 1748.

AVMARK SERVICES' appraisal of the Current Market Value for a 1962 HS 748 series aircraft, at standard levels of low utilization, would be SEVEN HUNDRED EIGHTY-FIVE THOUSAND AND NO/100 (\$785,000.00) DOLLARS, based on the assumptions and standards as set forth below.

The Current Fair Market Value for HS 748-2A Serial No. 1748 is SEVEN HUNDRED SIXTY-SEVEN THOUSAND SEVEN HUNDRED THIRTY-NINE AND NO/100 (\$767,739.00) DOLLARS based on adjustments from the Base



Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

Aircraft Current Market Value parameters, assumptions and standards as are applicable to this specific aircraft.

AVMARK SERVICES follows the traditional industry standards for market evaluations and sale offerings, which are based on half-life of Life Limited Parts, and TBO (Time Between Overhaul) on the airframe, engines, propellers, landing gear, and APU, as well as the traditional high cost maintenance items. The following parameters and assumptions are utilized for purposes of standardized comparisons, namely that the aircraft: (1) has half-life remaining on its airframe, engines, propellers and landing gear to their next major overhaul or scheduled shop visits; (2) is in current airline operations; (3) is under an approved maintenance program of international standards of airworthiness with all A.D.s, mandatory modifications and applicable service bulletins current to industry standards for compliance levels; (4) is in a standard airline configuration for its specific type, and; (5) is sold for cash.

This, moreover, assumes the aircraft is equipped with the buyer furnished equipment and options of the types and models generally accepted and utilized in the industry, and that it is in one of the standard or widely used configuration utilized in domestic or international operations by major carriers relative to equipment,

Page 2
cont'd.....



Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

seating, galleys and options such as avionics equipment. Other factors, such as date of delivery, total and ratio of hour/cycles and maintenance level are considered when making adjustments for this specific aircraft.

The assumption is made that the older models of the subject series aircraft, as well as higher timed aircraft, will be placed on the market prior to those later delivered, both industry-wide and within a performance segment of the specific aircraft's market.

Changes in the aforementioned parameters and assumptions, as well as the availability of long-term financing, can influence an upward movement in market price by as much as 15%. Likewise, compliance with current modifications and/or high cost A.D.s, inspections and repairs, such as those on wings, center sections, belly skins, empennage and spars, life extension programs, etc., can also affect both the price and marketability of a specific aircraft.

Conversely, market values, as well as actual appraised values, are detrimentally affected on aircraft which have been out of service for prolonged periods and/or off operating certificates. The same deterioration of value will apply to aircraft which have disproportionately high hour to cycle ratios relative to that specific type of aircraft.

Page 3
cont'd.....



Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

The question of value is interrelated with, and is a function of overall market conditions and the comparative economic utility of an aircraft currently and projected for discrete periods. In projecting comparative economic utility, AVMARK SERVICES considers a broad range of economic parameters which influence selective demand between aircraft, including: estimates of capacity needs; utilization; routes; crew; maintenance; operational and administrative cost; and, fuel cost and availability.

Estimates are made as to the impact of aircraft attrition and retirements, comparative obsolescence, production and delivery schedules, and potential delivery capacity of manufacturers, new tax laws, as well as depreciation, interest and lease rates, and terms generally available which influence ownership costs, as may be appropriate.

In analyzing values, AVMARK SERVICES attempts to determine the influence of the competitive milieu, including such factors as financial and regulatory barriers to production of newer and more advanced competitive aircraft. Having considered all these factors, a set of values is projected which we believe encompasses the certain median, with its upper and lower limits of possible values, as well

Page 4
cont'd.....



Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

as what we consider to be the probable value in a stable, predictable market, and which is reflected as the Current Market Value.

Additionally, market values are based on a knowledge of the industry as to the asking, offered and transaction prices for similar, competitive and alternative equipment, as well as transactions and/or negotiations involving basically identical aircraft acquired from AVMARK SERVICES' experience in keeping track of the market and transactions over the past three decades.

Based on three decades of direct appraisals by our professional staff, AVMARK SERVICES has developed its evaluation, appraisal and forecasting services, through which the historical transactions are accumulated and future values forecasted. This has become the basis for current and future aircraft values for airplane operators, aircraft manufacturers, the insurance and financial communities. Studies of the future cost and values of basically all existing commercial aircraft, and new models and modifications committed for production, continue to provide the ongoing analysis necessary for forecast values of this equipment through the next 25 to 30 years.

The continued increase in the cost of new and "new-technology generation" aircraft is a definite factor on inducing a stabilized value on the older models. This increasing and inflationary

Page 5
cont'd.....

Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

acquisition cost factor is presently being more than adequately offset by the inherent operating economics of the new generation aircraft, where there are new generation aircraft for any given designed operating parameters.

Other factors which tend to offset the value of used equipment relative to the values of new acquisitions, are the extending of finance and lease periods which are utilized. This, when translated to monthly rental/financial costs, results in very competitive factors relative to the shorter periods and terms now available for used aircraft and higher operating costs. The balance between the two sides of the ledger changes regularly as the current and forecasted parameters.

The realization of life cycles for aircraft more than conceived originally, or even acknowledge by the manufacturers, has led to second go around financing for periods frequently as extended as the first in some transactions.

This has helped to offset the used to new value ratio in certain situations. AVMARK SERVICES' analysis reflects a conservative posture, given the multiples of alternative decisions available to an operator, as well as manufacturers who have the ability to control their level of production to meet the forecasted demand and to time



Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

their production for introduction of committed new generation
equipment and development for introduction of even later models.

Page 7
cont'd.....



Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

Energy costs still remain as one of the most consequential factors in aircraft values as the proportionate cost of operations continues to change with fuel price increases, and the gap in operating cost, from one type of equipment to the other, is tied precariously close to this factor. As fuel prices change its percentage of the operating cost of any given aircraft, this change tends to become disproportionate to other factors which are affected by normal inflationary factors. This is especially true when comparing new generation and more fuel efficient aircraft to older, less fuel efficient aircraft. Even with fuel prices stabilizing recently, its consequences on two generations of aircraft originally designed for twenty cents (\$.20) a gallon operation, cannot be minimized. The recent extreme increase of fuel cost does not tend to impact regional/commuter aircraft values, unless the same fuel and energy cost move the country towards a recession. This is principally because of the low utilization of regional/commuter aircraft where 1,200 to 2,000 hours a year is normal, versus commercial with 3,800 to 4,400 hours a years is normal.

Page 8
cont'd.....



Mr. M. Kohonen
 March 15, 1991

Re: HS 748-2A
S/N 1748

The BRITISH AEROSPACE 748 short-range, twin-turbo prop 44-52 seat transport, powered by Rolls-Royce Dart engines. The 748 started life as an Avro project and made its first flight on 24 June 1960. The first production Series 1 with accommodation for 48 passengers and Dart 514 engines, was followed by the Series 2 and 2A with more powerful engines. In 1979, the 748-2A was replaced with the series 2B with improved hot and high Dart 536-2s, and the latest version, the Super 748, incorporates a number of significant new developments including engine hush kits. A total of 373 have been sold to date, to 79 different operators in 50 countries.

Aircraft status as of March 7, 1991 as utilized for the Current Fair Market Value is as follows:

<u>Registration Number</u>	<u>Serial Number</u>	<u>Delivery Date</u>	<u>Total Hours</u>	<u>Total Cycles</u>
8R-GEV	1748	1977	11,858	12,054
Engine #1	19405	1976	8,992	5,319
Engine #2	19398	1976	8,799	5,398
Propeller #1	186/58/14	1958	25,061	----
Propeller #2	DRG/2/76	1976	7,518	----

Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/: 1748

The airplane was viewed by AVMARK SERVICES at GUYANA AIRWAYS facilities in Georgetown, Guyana, March 6, 1991. The aircraft records were also audited for compliance with their regulatory mandates at this time.

The airplane is regulated by the British CAR/CAA (Civil Aviation Regulations/Civil Aviation Authority) and is maintained under the BAE HS 748 maintenance schedule.

Preflight: Daily

"A" Check: 75 hours or 14 days

"B" Check: 375 hours or 65 days

"C" Check: every 750 hours (Divided into 12 segments, P-1 thru P-12 then repeat).

The engines are maintained at a 4,200 hour overhaul interval with a Hot Section Inspection (HSI) at 4,200 hours, after overhaul. The propellers have an overhaul interval of 3,000 hours with the blades life-limited at 30,000 hours.

The landing gear are On Condition (OC) but are life limited, the nose gear at 60,000 cycles and the main gear at 39,500 cycles.

When viewed, the airplane was on the ramp with only the pitot tubes and engine inlets and exhaust areas covered.



Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

The aircraft has not flown since June 6, 1989 and the generally dull paint reflects this. There was no evidence of leaks from the fuselage or wings. All compartments were clean and dry. The gear strut are not greased but were clean. Steel gear parts, i.e., bolts etc. exhibit rust stains where the paint has worn off. There were no external patches noted on the fuselage, wings or empennage. There were (3) small patches on the left horizontal stabilizer leading edge deicer boot. There were no patches noted on the wing deicer boots. The leading edge paint between the fuselage and engine nacelles was worn through. There was some erosion on the prop blade leading edges anti-ice boots. The aft airstairs and large cargo door worked well and the interior, although musty smelling, was relatively clean. There were only 4 seats installed forward. The overhead bins are in need of a good cleaning. The forward lavatory and galley were odor free, but the mirror in the lavatory was cracked.

The cockpit was clean but showing its age. The seat cover were stained and worn. The radar scope was not installed nor was the gyro horizon or the two radio/nav control boxes (these units are stored for convenience as is the aircraft battery). All emergency equipment such as portable oxygen and fixed bottles are stowed in one of the

Page 11
cont'd.....

Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

overhead bins. There is more than average delamination on the first officers clear view window.

Aircraft and engine records are maintained at Guyana's facilities and are in compliance with their regulatory agency. Records are maintained in the old fashioned way mostly by manual clerical entry. Time controlled tasks are kept by Kardex. Aircraft and Engine Log Books were up to date with entries made of all services. Engine and Propeller log books had all removal, installation and repair data with the repair agency signed off documentation attached.

As mentioned, the airplane has not flown since June of 1989. The airplane is run-up and systems exercised every seven (7) days with an "A" Check accomplished each fourteen (14) days. Hours and cycles do not accrue on a parked airplane but the calendar does not stop. The airplane has flown 233 hours since the last "P" Check (P-19, April 13, 1989) but the calendar time controlled tasks have accrued 22 months. Since most tasks on the current program have an hourly/cycle limit or a calendar time whichever occurs first it is apparent that this has had a negative impact on the aircrafts' value. Two examples of this are the Hub and Blade Inspection (H.B.I.) for each propeller which coincides with the 3,000 hour overhaul limit.

Page 12
cont'd.....

Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

Records show that number 1 prop. S/N 186/58/14 has a T.S.O. of 934 hours (2,066 hours remaining) but its calendar time expired January 21, 1991. Number 2 prop. S/N DRG/2/76 has a T.S.O. of 1,319 hours (1,681 hours remaining) but its calendar time expired September 9, 1990. Many other calendar time components/tasks are in the same situation e.g. control surface servo-motors, fuel boost pumps, H.B.I. Engine Hot Section Inspections etc. The list provided by Guyana airways is comprised of (36) such items with a cost exceeding 350,000.00 Pounds (approximately \$650,000.00 U.S. dollars). In addition to the components most of the S.S.I. (Structurally Significant Inspections) will be due by 12,602 hours, or 744 hours which will probably coincide with the P-21 service in 750 hours.

The engine and propeller log books are maintained in an acceptable manner and provide all removal/repair data as is normally acceptable from the overhaul agencies. The aircraft log book has proper entries for the various services performed e.g. last P-19 accomplished April 13, 1989 at 11,625 hours, the last "B" August 29, 1990 @ 11,852 hours. Although a P-20 Check has been issued and mostly accomplished, it cannot be signed off until completed.

It may be noted here that the airworthiness of Guyana's airplanes is governed by the British CAA/CAR which requires an

Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

expiration for the Certificate of Airworthiness which must be renewed, unlike the U.S. "C" of "A" which remains in force until suspended or revoked. There is also a "C" of "M" (Certificate of Maintenance) and a "C" of "A" air test. An interesting requirement for application for renewal is that a complete listing must be provided of all services, modifications, repairs, Airworthiness Directives etc. accomplished since the last application. This provides a ready reference thru each application of the modification and inspection status of the airplane.

8R-GEV requires renewal of the C of A, C of M and the C of A air test prior to revenue service. These in addition to the time expired components/tasks have a major impact on the Current Fair Market Value of this airplane.

Mr. M. Kohonen
March 15, 1988

Re: HS 748-2A
S/N 1748

As stated in the beginning of this Report, the subject HS 748-2A, S/N 1,748 has a Current Fair Market Value of \$767,739.00. This is based on adjustments, as stated below, from the current half-life 1962 HS 748 aircraft, per those assumptions as previously stated.

The adjusted value is based on the Current Market Value of \$785,000.00 for a half-life, RR Dart powered 1962 delivered aircraft.

An increase is given in the amount of \$715,000.00 for the 1977 delivery and low hours/cycles and large cargo door.

A decrease in value in the amount of \$100,000.00 is given for the out of certification status since 1989.

A further decrease in value in the amount of \$652,384.00 is given for the cost to return to service those components/tasks that are past their expiration interval.

The subject aircraft has 750 hours remaining to its next scheduled "P" Check (750 hours) which is 375 hours more than half-life (375 hours). With an industry average cost of \$17.60 per hour results in an increase of \$6,600.00.

The subject aircraft has "0" time remaining to its next scheduled "B" Check (375 hours) which is 187.5 hours less than half-life (187.5 hours). With an industry average cost of \$8.30 per hour results in a decrease of \$1,556.00.



Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

The landing gear is maintained On Condition (OC) and is considered as half-life from which no value is added or subtracted.

The subject aircraft has 5,602 engine hours remaining to the schedule 8,400 hour cumulative interval which is 1,402 engine hours more than half-life. An industry average \$14.50 per engine hour is applied which results in an increase in value of \$20,329.00.

The subject aircraft has "0" propeller hours remaining to the scheduled 6,000 hour cumulative interval which is 3,000 propeller hours less than half-life. An industry average \$1.75 per propeller hour is applied which results in a decrease in value of \$5,250.00.

Thus, the Current Fair Market Value of HS 748-2A, Serial Number 1748 is \$767,739.00.



Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

CURRENT FAIR MARKET VALUE SUMMARY

Current Market Value Half-Life (TBO) Base 1962 HS 748-2A Aircraft	\$ 785,000.00
Adjustment for Low Time, Newer Aircraft	+ 715,000.00
	\$ 1,500,000.00
Adjustment for non-certificated airplane	- 100,000.00
	\$ 1,400,000.00
Adjustment for out of limit components/checks	- 652,384.00
	\$ 747,616.00
CURRENT FAIR MARKET VALUE HALF-LIFE 1977 HS 748-2A	\$ 747,616.00
Adjustment for 375 hours more than Half-Life (375 hours) remaining to next 750 hour inspection at \$17.60 per hour	+ 6,600.00
	\$ 754,216.00
Adjustment for 187.5 hours less than Half-Life (187.5 hours) remaining to next 375 hours inspection at \$8.30 per hour	- 1,556.00
	\$ 752,660.00
Adjustment for 1,402 hours more than Half-Life (4,200 hours) on the engine overhaul at \$14.50 per engine hour	+ 20,329.00
	\$ 772,989.00
Adjustment for 3,000 hours less than Half-Life (3,000 hours) on the propeller overhaul at \$1.75 per propeller hour	- 5,250.00
	\$ 767,739.00
CURRENT FAIR MARKET VALUE, HS 748-2A S/N 1748	\$ 767,739.00

Page 17
cont'd.....



Mr. M. Kohonen
March 15, 1991

Re: HS 748-2A
S/N 1748

This Appraisal is based on the information and representations provided to AVMARK SERVICES LTD. and on a viewing, inspection, and audit of the aircraft records.

This Analysis and Appraisal represents the opinion of AVMARK SERVICES LTD, as an independent and disinterested party to the transaction as well as the known parties thereto, and is not given for, or as an inducement for, any financial transaction; and, further is prepared for the exclusive use of UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION and shall not be provided to other parties without the express written consent of AVMARK SERVICES LTD. or UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION.

Very truly yours,

AVMARK SERVICES LTD.

James L. Starkey
Director
Technical Services

JLS/meb