

MAR 19/88

- Feb.13/46 Visit from Top Brass. ~~T.R.L. (LEASIDE)~~ WINNIPEG
- Mar.27/46 Start making 1st stage comp.blade L-00643-E Project L4 in brass
- Apr.30/46 Finished above blade. (LEASIDE)
- May 4/46 Alter root of above blade
- May 16/46 Sign Separation Notice from Turbo Research Ltd.
- May 29/46 Move to A.V.Roe, Malton in Fred Staines car with Perc.Watt, Bill Rigby & Albert Veale.
- June 6/46 Start estimating cost of TR-4 (I was working for Bill Hall, planning)
- June 11/46 To see Mr.Cyma re machine shop lay out.
- June 19/46 Estimate Material cost of Compressor Test Rig.
- June 25/46 List machines required for Gas Turbine Manufacture for Mr.Cyma.
- June 26/46 Make process planning sheets for Oil Pump Gear Box.
- Sept. 6/46 Tudor Plane contract cancelled.
- Oct.24/46 Moved down to machine shop to organize a blade shop.
- Dec.4/46 Make form tools for cascade blade L-00859.
- Dec.5/46 Started machining nimonic blade material shipped from Wiggins, Eng
- Dec.12/46 Len Baker & Ron.Waller start making 1st & 2nd stage comp.test rig master blades, L-00849 & L-00854.
- Apr.10/47 Visit from Ken Tupper.
- May 27/47 Jones & Lamson 30" Comparator installed. (Ordered Nov./46)
- Mar.12/48 First TR-4 (Chinook) completed in assembly and delivered to Test House.
- Mar.17/48 First Chinook runs successfully on the first start; 1st run 7 min. 2nd start made without blow off valves being used; starts in 30 s idles nicely at 1900 R.P.M.; accelerated to 5000 R.P.M.; run 50 mi
- Mar.22/48 Official Running of TR-4 at 11.30 A.M.
- Feb.10/49 TR-5 - Orenda No 1 runs on first start at 3500 R.P.M. about 2.20
- Apr.14/49 Mr.Hemmingway leaves the company.
- May 10/49 To Indiana Gear with Cec.Woods and Bill MacDonald.
- May 13/49 Sir Roy Dobson visits the shops.
- Aug.10/49 AVRO Jetliner first flies successfully.
- Aug.16/49 Jetliner forced to crash land. Jim Orrell pilot; Undercarriage Trou
- Nov.5/49 Can.Acme Screw & Gear deliver 1st set of spiral bevel gears - parts nos 3226 & 3272
- Jan.17/50 All work on Chinook parts ordered stopped; parts to be gathered & Stored.
- Jan.18/50 CF-100 first flight - Wally Crouter on CFRB
- OK Jan.19/50 CF-100 first flight - Larry Milberry in his book AVRO CF-100 page
- Apr.18/50 Jetliner carries mail Malton to New York.
- Jun.6/50 Orenda runs in F-86 in California - Ground Run only ✓
- Jul.4/50 Work on cost estimate of Waconda.
- Jul.13/50 Lancaster flies for first time on 2 Orendas - Nos 4 & 8. ✓
- Oct.5/50 F-86 Sabre flies for first time with Orenda No 11.
- Nov.10/50 W.Boyd resigns.

ABOVE COMPILED FOR W. BOYD

1951

- Apr.27 F86 Sabre with Orenda No.11 flies from Minneapolis to Toronto in 1 HR. 8 Min.
- Apr.27 Members from the House of Commons visit the plant.
- X June 21 CF 100 No18103 flies with Orendas No 15 &16.1st Can. craft to fly, powered with Can. Engines.
- Sept.18 M.C.Nix becomes Exp.manufacturing manager, Gas Turbine Div. (FROM R.R.)
E.K.Brownridge becomes Works manager, Production, reporting to F.SMYE
- Oct.15 Crawford Gordon takes control.
- Oct.17 1st Orenda powered CF-100 officially handed over to the R.C.A.F.
(Larry Milberry's book 'The AVRO CF 100' says it was a/c #18104)
- Dec.15 1st Production Orenda ran for 10 min.

1952

- Feb.1 McRae's new Organization became effective. (FROM U.S. G.E.)
- June 27 P.B.Dilworth leaves the company.
- Jul. 4 Orenda #33 delivered to test. 1st 2 stage turbine. I notice this clashes with an entry of May 15/53.
- Sept.29 G.T.Production Plant formally opened by C.D.Howe.

1953

- Jan.25 Type test completed on series 10 engine for F86
- Feb.16 Completed type test on R.E. blades.
- May 15 1st Series 11 (2 stage turbine) No.X30 delivered to test.(see Jul.4/53)
- Jun.30 Doug Knowles & company (LEAVES)
- Sept20 Orenda no.17 build no.6 delivered to test with Annular combustion sys
- Sept30 McRae leaves Orenda and Walter McLachlan takes control
- Oct.15 E.K.B. becomes General works manager with procurement & plant engineering reporting to him.
- Nov.1 F.W.Luker resigns. (FROM U.S. G.E.)

1954

- Jan.2 C.A.Grinyer becomes Chief Engineer.
- Jan.15 L.B.Gray becomes Experimental Manufacturing Manager, reporting to Grinyer.
- Feb.13 Series 11 Orenda passes type test.Thrust, fuel & oil consumption O.K.
- Feb.18 The 1000th Orenda tested and handed over to the R.C.A.F.
- Oct.20 Notice that Val Cronstedt will resign. (FROM U.S.)
- Dec. 6 1st PS/13 (Iroquois) delivered to test house about 5 P.M.
- Dec.15 1st PS/13 ran in evening for 5 min. - 5 yrs & 10 mos after 1st Orenda
- Dec.21 PS/13 logged 3 hrs.& 20 min.
- Dec.31 Fred Taylor leaves Orenda. (CAN.) (WAS PROCUREMENT MANAGER)

1955

- Jan.2 Gas Turbine Div. becomes Orenda Engines Ltd.
C.A.Grinyer V.P. Engineering
E.K.B. V.P. Manufacturing
F.L.Trethewey V.P. Sales & Service
W.R.McLachlan V.P. & General Manager
- Feb.8 Receive release to make a second batch of 3 more PS/13 Engines.
- Dec.1 Orenda and Avro 10 year club banquet at King Edward hotel.

1956

- Dec.17 Machine sample of titanium made by Atlas Steel. Raw material was not Canadian origin; quality was poor - had inclusions.

1957

- Jul.22 Defence Minister Pearkes unveils the Iroquois on the lawn of the Production Plant.
- Sept 30 7 year agreement signed by Orenda and Curtis - Wright corp. covering rights for manufacturing, sales and further development of the Iroquois.
- Oct.4 Avro unveil their Arrow.
- Oct.11 Government cancels CF 100 Mk 6 contract.

1958

- Feb.11 Iroquois up for test flight in B-47.
- Mar.17 Agreement signed with Fairchild.
- Mar.25 Arrow flies for 35 min. about 10 A.M.
- Apr.2 E.K.B. becomes Exec. Vice Pres. and Gen. Manager of Orenda Engines. F.L.Trethewey resigns.
- Apr.3 Arrow attains Mach. 1.1
- Jun 28 Last Orenda engine handed over to the R.C.A.F.
- Jun 23 Dr. Alex Muraszew leaves company. (He would come onto the test house and say "Why you no run?")
- Sept 24 Press reports cut backs in Avro Arrow and Orenda Iroquois. Crawford Gordon contradicts. E.K.B. reassures Dept.Heads.
- Sept 25 C.A.Grinyer re-assures all monthly paid staff of a job next spring.
- Dec 13 1st Production Iroquois #115 ran on test.
- Dec 16 Try explosive forming of shroud panels. (made of titanium for Iroquois)
KEN MCGIVRE

1959

- Feb 20 Termination of work at Orenda and Avro broadcast over P.A. system by E.K.B. (at Orenda)
- May 12 E.K.B. becomes President of Orenda
- May 15 Avro Aeronautical formed comprising :
Can.Steel Improvement
Can.Applied Research
Avro Aircraft
Orenda Engines
This union to be part of A.V.Roe Canada Ltd.
- Jul 2 Crawford Gordon resigns.
- Aug 1 Fred Smye & R.G.Plante resign.
Harvey Smith heads up A.V.Roe Aeronautical
- Aug 21 E.K.B. resigns.
- Nov 2 Burt Avery becomes Assistant General Manager of Orenda Engines
(DICK SPRING/91)

1962

- May 30 OT-5 runs on its own power.
- Sept 4 Jack May resigns. Sid Britton replaces him.

1963

- Jan 28 2 OT-5's shipped to the U.S. Pacific coast to drive 1000 kw generator for stand by radar power.
- Jan 31 OT-4 completed 25 hr.satisfactory shake down test on turbine test rig speed of 27000 rpm attained.
- Jun 16 OT-2 ran for about 10 min. at 8.30 P.M.
- Jul 16 OT-4 runs on its own power for the first time.
- Aug 15 1st J85-40 delivered to Can.Forces.
- Sept 3 T.J.Emmert presents Hon.C.M.Drury with the log book of the 1st J85-40. The ceremony was held in a tent beside the cafeteria. This was the 4120th engine produced by Orenda Engines.

1966

- Jan 10 Received from Ont.Hydro for 13 OT-5's - 6000 kw generating sets.
- Feb 3 Russians make successful soft landing on the moon. Pictures from the moon received by Jodrell Bank, England.

1966 cont.

- Feb 25 U.S. Army Tank powered by an OT-4 manouvers around the Orenda property.
- Jun 2 Americans make successfull soft landing on the moon.
- Aug 3 Daily papers tell us that C.G.E. are bidding to buy Orenda.
- Sept 22 Orenda Ltd. formed from Orenda Div. of Hawker-Siddely - to be 60% owned by Hawker-Siddely & 40% owned by United Aircraft.

- 1967 Jan 5 F.P.Mitchell becomes President of Orenda Ltd.
- Mar 31 White Truck tractor delivered to Orenda with an OT-4 as the power plant.
- May 24 J85-15 completes green run with slave A/B - 16600 rpm.
- Jul 11 J85-15 Engine officially presented to C.W.Drury by T.J.Emmert.
- Oct 6 Government support of OT-4 dropped causing lay off of approx. 200 employees plus a major reduction in Engineering.
- Nov 7 George Best leaves Orenda.
- Nov 17 Harry Keast leaves Orenda.
- Freddy Tarnawetski leaves Orenda.
- Nov 24 Ken McGuire leaves Orenda.

1968

May 3 Canadair's CF-5 flies with Orenda built J85-15 engines nos 8406 & 8419.

Nov 29 Mark Lonsdale leaves Orenda.

OCT 15 RCAF PHASES OUT F86 SABRES

1970

- Feb 27 Graham Eves leave Orenda for Thunder Bay plant
- C.E.Elliott's last day.
- Wils Hambly's last day.

- 1971 Apr 17 OT-390 backfires on re-light breaking windows in the cafeteria.
- Jun 15 M.E.Davis succeeds F.P.Mitchell as president of Orenda.

- 1972 Mar 22 Attend farewell dinner for E.C.Busby and Cy Marsden.

1973

- Sept 10 Hawker-Siddely buys back the 40% shares held by P.& W. so Orenda once more is 100% owned by Hawker - S.
- Nov 15 E.K.B. died.

1974

- Jan 2 Orenda Ltd. reverts to Orenda Div. of Hawker - Siddely.
- Oct 31 Murry Davis leaves; R.F.Tanner replaces him as President. (Later Tanner went to head office as president of Hawker-Siddely.)
- Nov 1 Pete Peterson becomes Director of Operations.
- Nov 13 Don Caple leaves Orenda.

DEC 31 I RETIRE FROM ORENDA

1980

- Mar 2 C.B.L. shows film "There never was an Arrow". See R.Dobson, F.Smye, C.Gordon, J.Floyd and J.Chamberlin in it.

1983

- Mar 26 Attend Avro Arrow reunion, Give short talk on manufacturing engines.

(SEE OVER)

DEAR MR & MRS H Y SHIP,

OCT 15/01

AFTER TALKING TO YOU OUT

I RECEIVED YOUR ENVELOPE RE YOUR $\frac{1}{2}$ SCALE
ARROW & FOUND IT VERY INTERESTING. KEEP
ON TRUCKING.

THESE SHOP NOTES FROM MY SHOP DIARY, WERE
ORIGINALLY TYPED UP FOR WINNETT BOYD, THE
DESIGNER OF BOTH THE CHINOOK ^{& ORENDAS} (MADE 5 SETS
PARTS) & ASSEMBLED ^{CHINOOK} 2 ENGINES & TEST COMPRESSOR
- THOUSANDS WERE LATER MADE AFTER THE PRODUCTION
PLANT WAS BUILT.

NOTE THE DATES ON THE FIRST 2 PAGES ARE ALMOST
2 YEARS APART. THIS IS BECAUSE, AFTER REQUESTING
- THEN GETTING THE 1ST SHEET OF EVENTS OF UP TO
HIM LEAVING THE COMPANY, HE THEN ASKED ME FOR
A LIST OF HAPPENINGS AFTER HE LEFT IN NOV/50. THE
LAST 3 PAGES WERE THEN GLEANED FROM THE DIARY & SENT TO
HIM. THE SHOP DIARY HAS BEEN REQUESTED BY THE CAN ARCHIVES
AND WILL BE SENT THERE WHEN THEY SEND MY ORBIT.

THE ARROW EXHIBIT WHICH IS TOURING THE COUNTRY CONTAINS A
PIECE OF TITANIUM MADE FROM CAN SPONGE AND MAY BE THE
ONLY PIECE OF ITS KIND IN THE COUNTRY. IT WAS ORIGINALLY
GIVEN TO OUR BUYER IN OUR OFFICE BACK ABOUT 1955. I GOT
IT BACK IN DEC/99.

FEEL FREE TO ASK ANY QUESTIONS.

Stan Ralney

P.S. PARDON THE POOR LETTER.

(OVER)

OCT 23

J. C. HAMBERLIN, CHIEF AERODYNAMIST FOR THE ARROW
RODE AS A PASSENGER IN MY CAR FOR A FEW YRS. YOU
SEE HIS FACE ON THE \$^{ARROW} 20 COIN MINTED IN 1996.

AFTER SEEING NOTE IN MACKEN'S ABOUT NIKOLAS
POSTYAN & HIS MOM WRITING A BOOK ON THE ARROW
FOR CHILDREN, I SENT HIM A COPY OF MY SHOP NOTES
BUT IT WAS RETURNED AS UNCLAIMED. YOU MAY COPY FOR HIM

BEFORE THE ENGINE PRODUCTION PLANT GOT GOING,
WE, IN THE EXPERIMENTAL ^{PLANT} HAD TO PRODUCE THE FIRST
20 ENGINES FOR THE FIRST BATCH OF CF-100'S.
WE CALLED THEM THE "BIRDSEYE" SERIES AS THE DESIGN
WAS SUPPOSED TO BE FROZEN FOR THE BATCH.