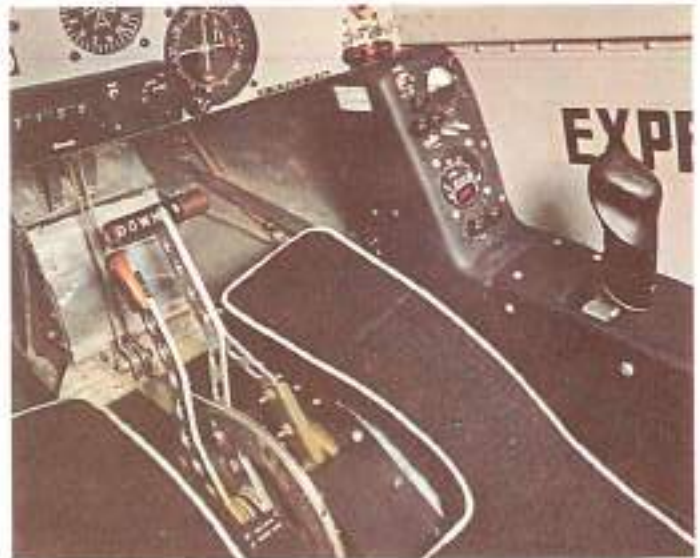
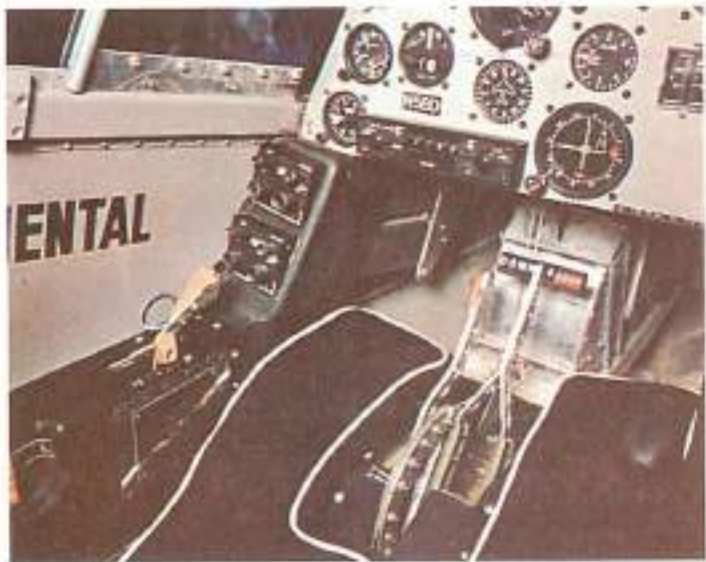


BD-5J





Bade Aircraft, Inc
Newton Municipal Airport
Newton, Kansas 67114, U.S.A.

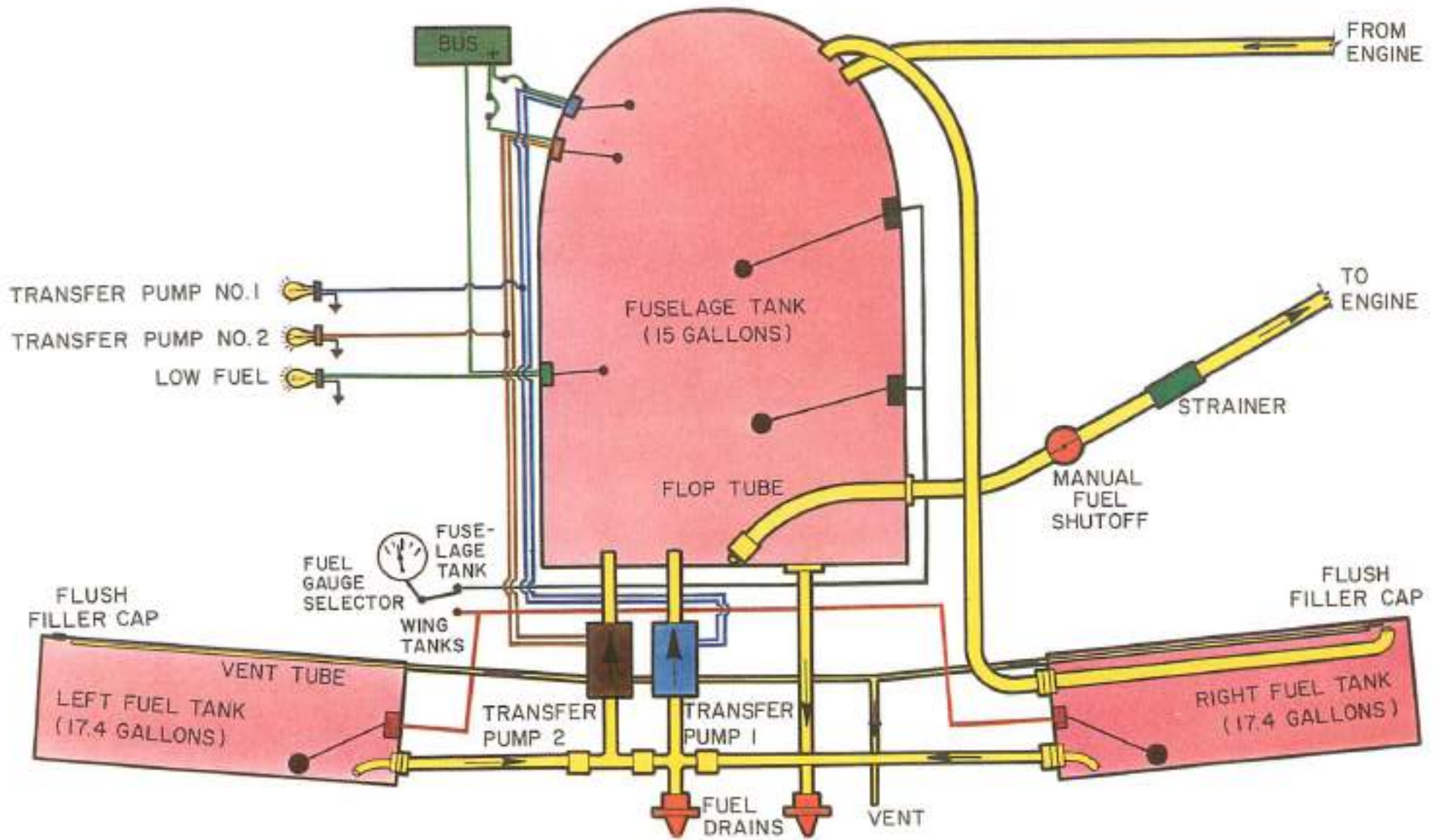




Eight Good Reasons For Buying The BD-5J

-
- 1 High Performance
 - 2 Low Initial Cost
 - 3 Economy of Operation
 - 4 Safety in Flight
 - 5 Ultimate in Personal Transportation
 - 6 Personal Jet Aircraft Ownership
 - 7 Easy to Build
 - 8 Integrity of Design





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N504BD

TR-661A

ALT 3 1 0 0

SRV

BEAD-X

LOW FUEL

LOW OIL PRESSURE

ENGINE

START

MAGNET

GENERATOR

FUEL ON

WATER

WATER

WATER

RT 241A

VOL OFF

122.80

BENDIX

RN 242A

VOL OFF

110.10

BENDIX



FUEL



A Fast Aircraft For The Discriminating Pilot

The BD-5J is designed for the individual who wants top performance, coupled with instrument flying capabilities and very low operating costs.

Using the same basic airframe design as the original BD-5, and a new "intermediate" wing, the outstanding handling qualities are also inherent in the jet version. The aircraft is supplied with a very complete instrument panel, enabling a qualified pilot to take advantage of the aircraft's full capabilities. A complete line of optional avionics is available to provide a full IFR panel.

Here is an aircraft that can cruise with the fastest turboprops for less than 5% of the initial and operating cost of those larger aircraft. For the price of a BD-5J one normally could only purchase a fixed-gear, fixed pitch prop aircraft with basic instrumentation.

In addition to the obvious advantages of owning a BD-5J, the following additional features make it an outstanding design: Removable wings and small overall size make transporting the aircraft easy, short takeoff and landing distances permit use of smaller airports; thrust attenuator (until now found only on military jets and the most expensive business jets); an automatic fuel transfer system to simplify fuel management; 2" flight instruments to conserve space and weight, fully-retractable landing gear featuring oleo struts and a low-force mechanical actuating system permitting one-second cycling of the gear.

An outstanding aircraft in many ways.

Performance

The BD-5J has a maximum speed in excess of 330 miles per hour (at sea level), a rate of climb better than 2400 feet per minute and a range of 550 miles (max.) at 24,000 ft.

It has a gross weight stall speed of 71 miles per hour (with full flaps), which reduces to 60 miles per hour at normal landing weight. With its economy of operation at only 18 miles per gallon and its service ceiling of 30,000 feet, the BD-5J is an exceptional aircraft.

Economy and Performance go hand in hand with the BD-5J. Fact is, performance is one of the reasons the BD-5J is so economical.

Fuel System

The fuel system consists of three separate fuel tanks with a total inclusive capacity of 50 gallons. Each wing is 'Wet', and there is a 15 gallon fuel tank in the fuselage containing the engine fuel feed and return line. Fuel is pumped from the wing to the fuselage tank by redundant transfer pumps operated automatically by means of a float switch to keep the fuselage tank full until the wings are empty. Should the float switch malfunction, allowing the pumps to remain on, a return line to the right wing tank prevents over-filling the fuselage tank. In addition, a switch for each pump is incorporated to allow manual actuation.

Both electric and manual fuel shut off systems are included. A "flop tube" in the fuselage tank assures proper fuel feed during aerobatics. Fuel gauges allow the pilot to determine the amount of fuel in the wings or in the fuselage tank. The result is a fuel system which to the pilot, can be thought of as a simple on-off system, thereby eliminating fuel management problems.

Engine

The TRS-18 turbojet engine used in the BD-5J is a recent development by the Sermel Company in France. Ames Industrial Corporation, New York, are manufacturing the engine.

The TRS-18 was designed as a turbojet from the outset. It is not just a modified auxiliary power unit. It produces 200lbT from a complete weight of 66 lbs. Fuel consumption is good for a turbojet at a S.F.C. value of 1.2.

The engine features automatic engine monitoring equipment, including automatic fuel shut off. Starting is also completely automatic and the engine does not require an auxiliary unit for that purpose.

In its class the TRS-18 is the finest turbojet engine available.

Operating Costs

Economy of operation is another key factor in the individual's choice of the BD-5J for his personal transportation.

The BD-5J costs less per mile than any other aircraft, because economy depends on low initial price, practical size and high performance. No other jet combines all three as effectively as the BD-5J.

The following figures are a breakdown of the approximate operating costs for the BD-5J:

Item	Description	Cost
Fuel	25 gal./hr @ \$0.15/gal	\$ 3.75
Oil	1 qt./50 hr	.05
Engine Overhaul	1 repair 2,000 hrs @ approx. \$2,000	1.00
Airframe Maintenance	avg. 100 hrs @ \$0.20	.20
Landing Maintenance	avg. 100 hrs @ \$10.00	1.00
Insurance		1.50
	Total per hr	\$10.57

Operating Cost - 3.7¢ per mile

Homebuilt & Manufactured

The BD-5J, as a homebuilt, falls into a special category under FAA regulations known as the "experimental category". Regulations permit an individual to build his own aircraft and fly it.

One of the main criteria under these regulations is that the individual can prove that he will himself perform at least 51 percent of the work required to build the aircraft.

The BD-5J meets these requirements.

Bede Aircraft, Inc. supplies all materials for construction of the BD-5J, as well as a detailed construction manual. Parts of the aircraft that would be extremely difficult for an individual amateur constructor to form are supplied preformed by Bede Aircraft, Inc., requiring only final trimming and drilling.

The BD-5J is, outwardly, similar in shape to the propeller-driven BD-5, and its control system is basically the same. Structurally it is identical, with changes having been made only for engine installation.

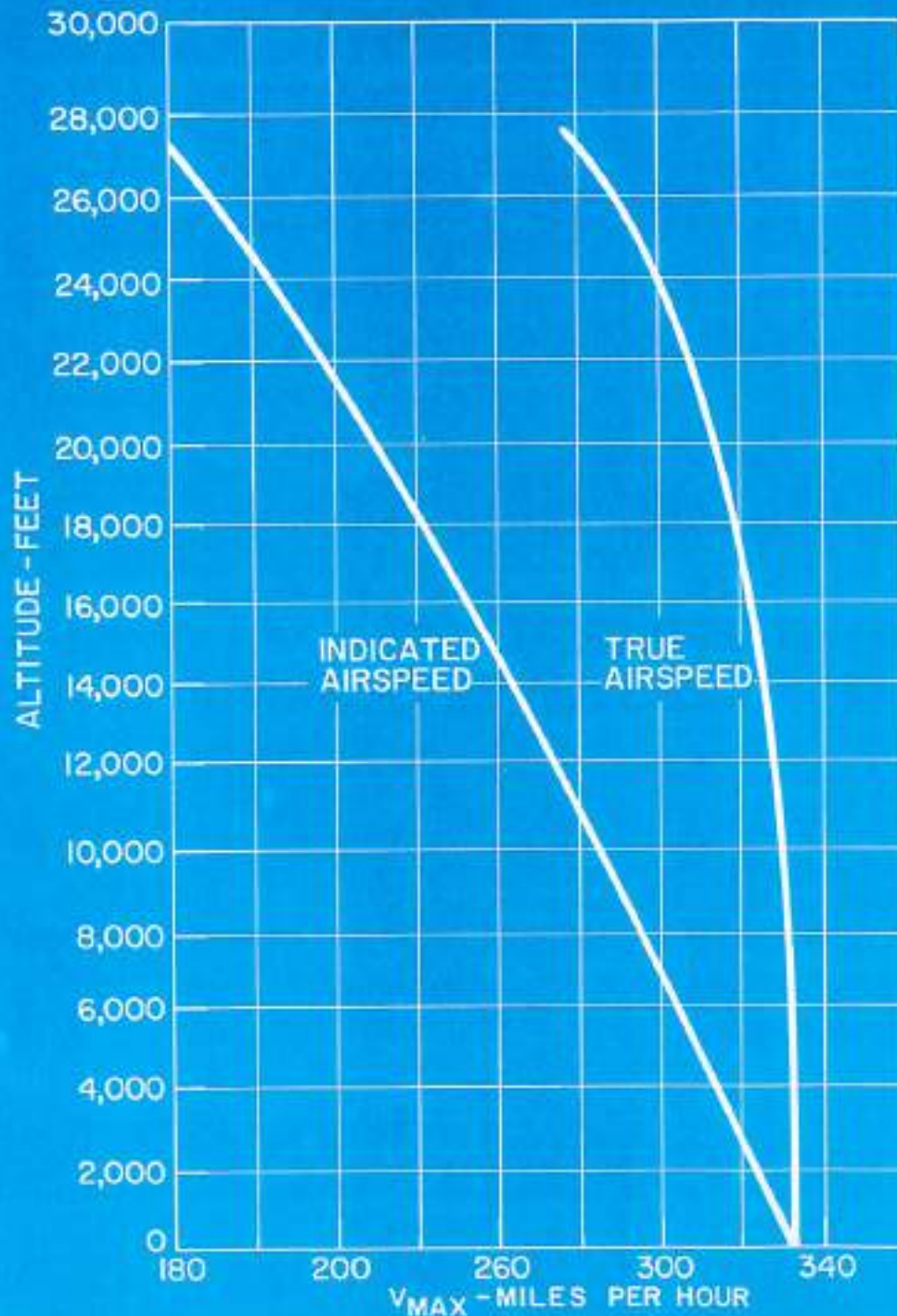
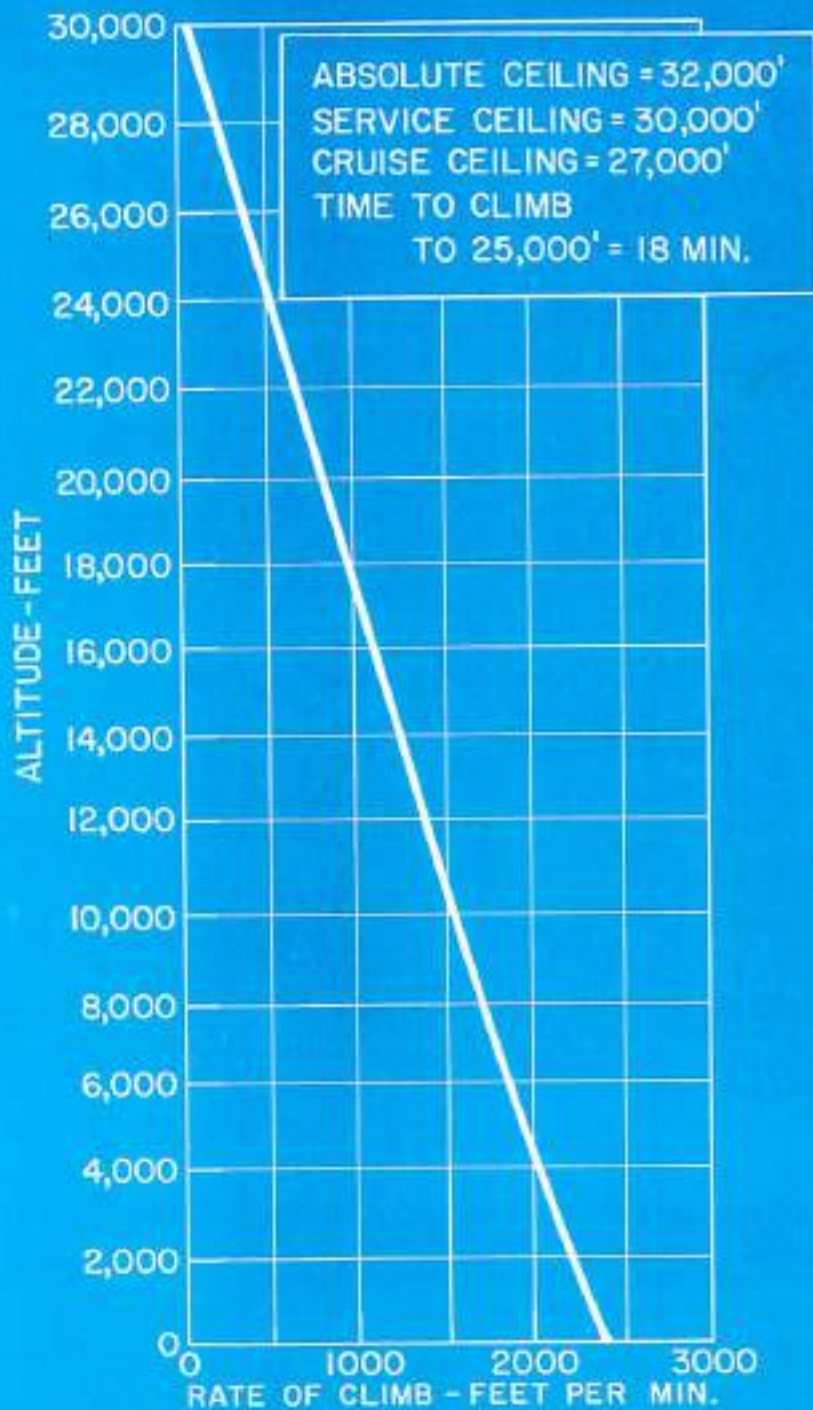
The BD-5J has an entirely new "wet" wing; that is, the whole wing is a gas tank (with an additional tank in the fuselage). The wing span is also different from the original BD-5, being 17 feet.

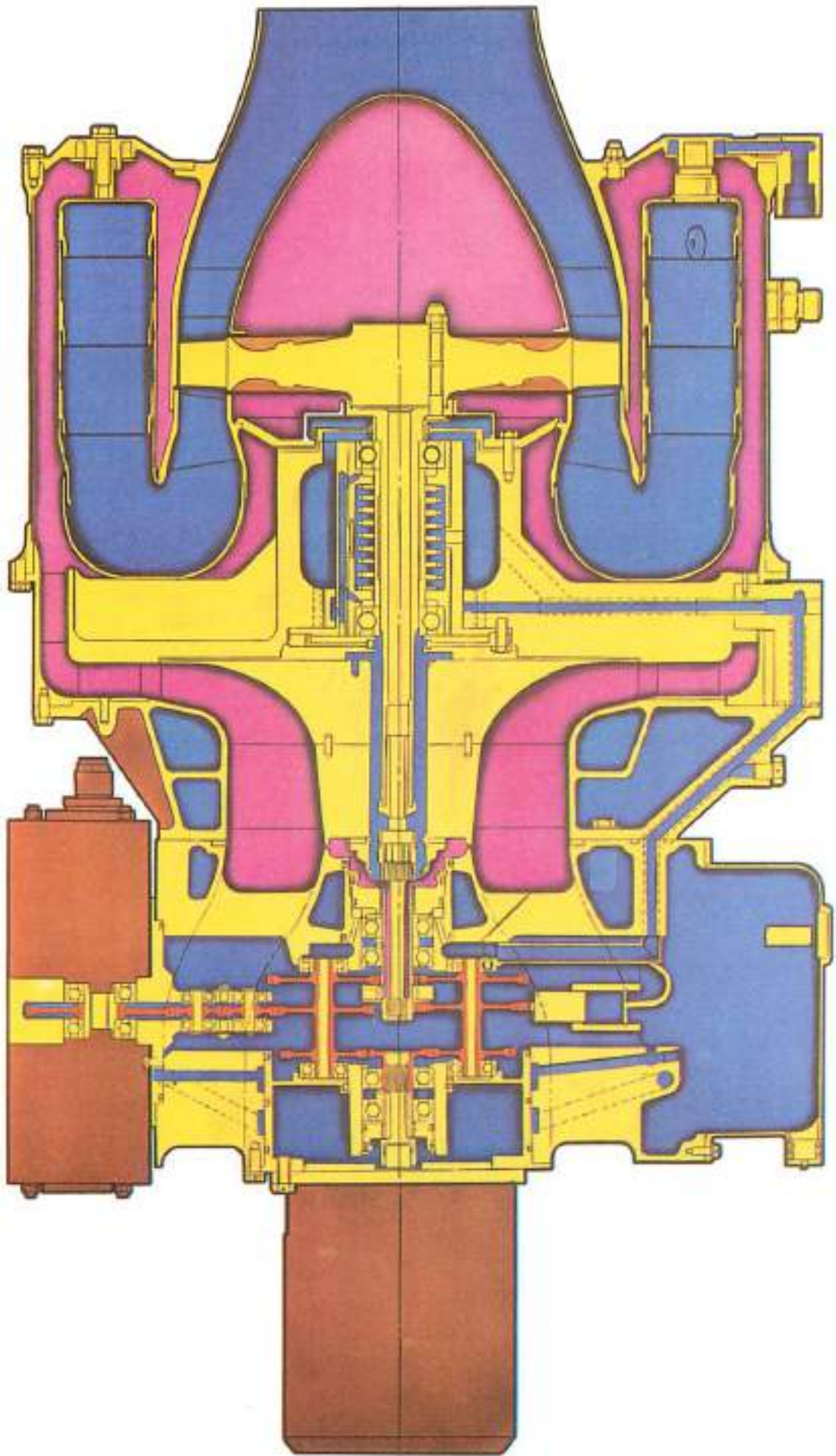
Other changes to the aircraft's original design include new air intake (larger flush side scoops) and a special mechanical "thrust attenuator" to regulate engine thrust when it is in the idle condition.

In addition to being available as a homebuilt, however, the BD-5J will be fully certificated and manufactured as a complete, ready-to-fly aircraft by Bede Aircraft, Inc.

BD-5J WITH TRS-18 TURBOJET

GROSS WT. 800 LB. STANDARD DAY







BD-5J

Equipment List

STANDARD EQUIPMENT

(Standard equipment will include 2" instruments.)

- 2" AIRSPEED INDICATOR
- 2" ALTIMETER
- 3" ATTITUDE INDICATOR (WITH INVERTOR)
- 2" MAGNETIC COMPASS
- 2" CLOCK
- 2" TURN & BANK
- 2" DIRFCTIONAL GYRO
- 2" VERTICAL SPEED INDICATOR
- 2" "G" METER
- VERTICAL ENGINE CLUSTER
 - Vertical engine cluster includes
 - RPM
 - EGT
 - OIL PRESSURE
 - ELECTRICAL SYSTEM VOLTMETER
- 1 ¼" ELECTRICAL LOAD METER
- 2" FUEL GAUGE
- COMPLETE ELECTRICAL SYSTEM
- WING TIP STROBE LIGHTS
- SEAT BELTS

OPTIONAL EQUIPMENT

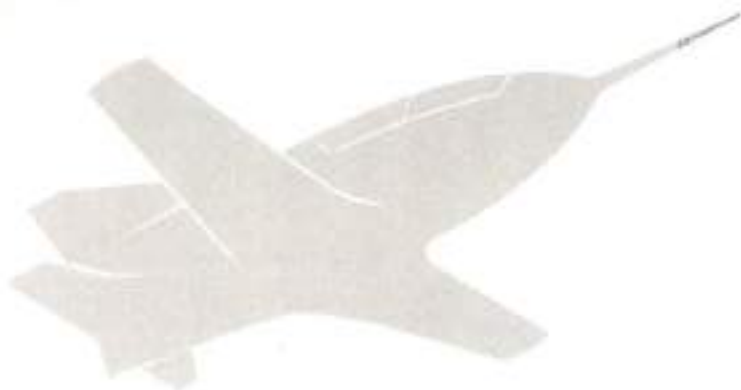
- 360/200-CHANNEL NAVCOM
- VOR/LOC HEAD W/GLIDE SLOPE
& MARKER BEACON
- TRANSPONDER
- D.M.E.
- NAVIGATIONAL LIGHTS
- INSTRUMENT LIGHTS
- LANDING LIGHTS



BD-5J

Dimensional Specifications

WING SPAN	17.0 ft.	FLAP CHORD	6 in.
LENGTH	12.4 ft.	FLAP DEFLECTION	45°
HEIGHT	6.0 ft.	AILERON AREA	1.8 sq. ft.
EMPTY WEIGHT	425 lbs.	AILERON SPAN	26 in.
GROSS WEIGHT	910 lbs.	AILERON CHORD	5 sq. ft.
USEFUL LOAD	485 lbs.	AILERON DEFLECTION	25° up
LIMIT "G"	±6.0		12° down
ULTIMATE "G"	±9.0	VERTICAL STABILIZER AREA	50 sq. ft.
MAXIMUM FUEL CAPACITY	50 gal.	RUDDER AREA	5.0 sq. ft.
WING AREA	37.8 sq. ft.	RUDDER DEFLECTION	25°
ASPECT RATIO	7.64	HORIZONTAL STABILIZER AREA	10.5 sq. ft.
WING LOADING GROSS	24.0 lb./sq. ft.	HORIZONTAL STABILIZER SPAN	7.3 ft.
WING LOADING LANDING	17.3 lb./sq. ft.	HORIZONTAL STABILIZER DEFLECTION	+15°
THRUST LOADING	4.5 lb./lbt.		-8°
WIDTH WITH WINGS REMOVED	4 ft.	CABIN LENGTH	64 in.
FLAP AREA	4.9 sq. ft.	CABIN WIDTH	23.5 in.
FLAP SPAN	58 in.	CABIN HEIGHT	36 in.



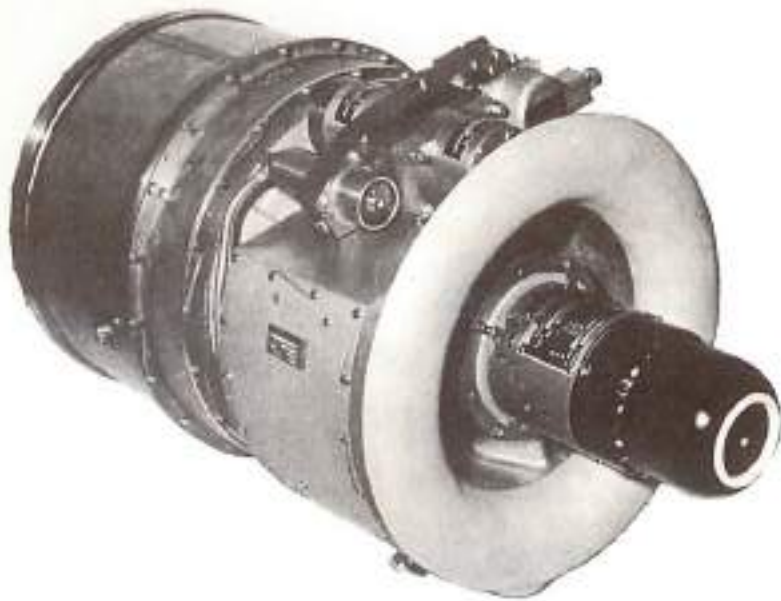
BD-5J

Performance Specifications

RANGE at MAXIMUM CRUISE SPEED (24,000 ft. altitude)	520 Statute Miles
OPTIMUM RANGE (24,000 ft. altitude) (Range includes start, taxi, takeoff, descent, landing and a 30 minute reserve)	550 Statute Miles
MAXIMUM SPEEDS	Sea Level 332 mph
	15,000 ft. 325 mph
	25,000 ft. 294 mph
RATE OF CLIMB	Sea Level 24.00 ft./min.
	15,000 ft. 1150 ft./min.
	25,000 ft. 475 ft./min.
STALL SPEED	at Gross Weight 81 mph clean flaps
	71 mph full flaps
	at Normal Landing Wt. 70 mph clean flaps
	60 mph full flaps
TAKEOFF DISTANCE	1100 ft.
LANDING DISTANCE	800 ft.
MILES PER GALLON (at 24,000 ft.)	18
CEILINGS	Absolute Ceiling 32,000 ft.
	Service Ceiling 30,000 ft.
	Cruise Ceiling 27,000 ft.
TIME TO CLIMB TO 25,000 ft.	18 minutes

BD-5J

TRS-18 Turbojet



TRS-18 is a small, compact turbojet engine, enclosing its main accessories in a cylindrical housing 12.5" in diameter. It consists of:

- A single stage, single axial entry, centrifugal compressor.
- A single stage, axial flow turbine wheel.
- The compressor and turbine rotation elements are mounted on a single shaft supported by two bearings.
- A gearbox drives the different accessories.
- Electronic safety devices and control system.
- The different sections of the unit permit quick and easy maintenance.
- Starting operation is completely automatic, with telecontrol start, stop and speed capability.
- The lubrication system is completely self-contained in the basic package.

SPECIFICATIONS

Standard conditions	Temp. 59°F Press. 14.69 psi
Maximum continuous thrust	200 lb
Corresponding consumption	283 lb/hr
Fuel consumption at cruise	102 lb/hr
Electric generator	600W @ 28V DC
Weight	66 lb
Overall length	22.6 in.
Maximum running altitude	40,000 ft.
Fuel types	JP1-JP4-JP5
Oil types	Standard Turbine Jet Oil

BD-5J
PURCHASE OFFER/SALES CONTRACT

STANDARD BD-5J - Wingspan: 17 ft., Length: 12.4 ft., Height: 6.0 ft., Includes TRS-18 Turbojet Engine (with Thrust Attenuator); Instruments and Equipment as listed herein; Fully-retractable Tricycle Landing Gear.

Bede Aircraft, Inc., intends to commence the manufacture and production of its BD-5J aircraft, and agrees to enter into the follow contract with:

NAME _____ (hereinafter referred to as Buyer)
ADDRESS _____ PHONE _____
CITY _____ STATE _____ ZIP _____ COUNTRY _____

1. The Buyer hereby deposits with Bede Aircraft the sum of \$2500 as down payment upon the total purchase price of a BD-5J.
2. Bede Aircraft agrees to sell to the Buyer one BD-5J for \$29,900 for the complete BD-5J aircraft with the following equipment:

AIRSPPEED	"G" METER
ALTIMETER	CLOCK
RATE OF CLIMB	ENGINE INSTRUMENTS:
GYRO COMPASS	Battery/Generator Voltage Meter
MAGNETIC COMPASS	Engine RPM
ATTITUDE INDICATOR	EGT
TURN & SLIP	Oil Pressure
3. Both parties agree that the balance of the total purchase price set out in paragraph 2 above, shall be paid in full at least ten days before scheduled production of the BD-5J.
4. Immediately upon acceptance of this purchase offer by Bede Aircraft, Inc., an Aircraft Serial Number shall be assigned to this contract and the contract shall be binding upon both parties and non-cancellable, except as provided for in paragraph 6, 7, and 8 below. Written Notice of Acceptance shall be immediately mailed to the Buyer.
5. As soon as an Aircraft Serial Number has been assigned to this contract, Bede Aircraft shall notify the Buyer of that number. As soon as a production date has been scheduled for the Buyer's production serial number, the Buyer shall be notified of such date.
6. This Purchase Offer/Sales Contract is non-cancellable after acceptance, unless Bede Aircraft fails to begin production of the BD-5J by August 1, 1975, or schedules to begin production within a reasonable time thereafter. If Bede Aircraft fails to begin production by August 1, 1975, or schedule production as stated above, the Buyer may at any time before production is scheduled, cancel this contract and his deposit shall be returned to him.
7. In the event that Bede Aircraft is unable to manufacture, build, construct, and/or produce the BD-5J because of its inability to gain FAA certification of the aircraft, or because of an increased cost of production or the unavailability of production materials or component parts, or for any other reason beyond Bede Aircraft's control, Bede Aircraft shall have the right to cancel this contract and return the Buyer's deposit without any further obligation.
8. The Buyer shall have the right to cancel this contract for a BD-5J providing Bede Aircraft, Inc., is notified of such cancellation in writing within three days after signing this contract.

Signed this _____ day of _____ 19 _____

By _____
(Buyer)

Accepted this _____ day of _____ 19 _____

Attested by: _____

BEDE AIRCRAFT, INC.

By _____

BEDE AIRCRAFT, INCORPORATED
P.O. BOX 706
NEWTON, KANSAS 67114, U.S.A.

Aircraft Serial No: BD-5J-

NAME _____ PHONE _____
STREET _____ CITY _____
STATE _____ ZIP CODE _____ COUNTRY _____

BD-5J PURCHASE ORDER

I (We) _____ hereby offer to purchase from Bede Aircraft, Inc., the Aircraft Materials Package specified below at the price stated. It is my (our) understanding and intent that if this offer is accepted by Bede Aircraft, then this written instrument shall become a contract of sale.

BD-5J Aircraft Materials Package consists of the following:

1. Complete set of BD-5J Plans and Instruction Manual.
2. Complete materials as called out in the plans for construction of the following: fuselage, wings, ailerons, flaps, tail, landing gear, drive system, canopy, seat, and complete hardware including nuts, bolts, screws, washers, rivets, cables, cotter pins, adhesives, primer and paint, as well as wheels, brakes and tires.
3. Airspeed Indicator, Altimeter, Rate-of-Climb, Gyro Compass, Magnetic Compass, Attitude Indicator, Turn & Slip, "G" Meter, Clock, Engine Instrument Group - including: Battery/Generator Voltage Meter, Engine RPM, EGT, Oil Pressure.
4. A complete new TRS-18 Turbojet engine with the following specifications: Thrust - 200 lbs., Weight - 66 lbs. Overall Length - 22.6 inches; Max. Running Alt. - 40,000 ft., Electric Generator - 600W @ 28V DC.
5. Tool box and set of tools for construction of one BD-5J.

BD-5J AIRCRAFT MATERIALS PACKAGE	\$21,400.00
Buyer agrees to pay \$10,700.00 in part payment of this order and to receive all materials for the construction of a BD-5J - less engine and accessories. Buyer further agrees to pay the balance of \$10,700.00 ten days before scheduled delivery of the engine and accessories, at which time Bede Aircraft will immediately ship to the Buyer the balance of this order.	
PAYMENT WITH THIS ORDER:	
BALANCE:	

Signed this _____ day of _____ 19 _____

By _____
(Buyer)

Accepted this _____ day of _____ 19 _____

Attested by _____ BEDE AIRCRAFT, INC.
By _____

BEDE AIRCRAFT, INCORPORATED
OVERSEAS DEALERS

AEROSPACE INDUSTRIES (AUST.) PTY. LTD.

Hangar 457, Bankstown Airport, New South Wales, Australia.

Dealer for: Australia, New Guinea, Indonesia

AGRO-COPTEROS LTDA.

Apartado Aereo 19, Cali-Colombia, South America.

Dealer for: Colombia, Peru, Ecuador, Venezuela

BEDE AIRCRAFT (AFRICA)

P.O. Box 268, Addis Ababa, Ethiopia.

Dealer for: Ethiopia, Kenya, Sudan, Uganda, Congo, Zambia, Tanzania, Somalia

BEDE AIRCRAFT SERVICES LTD.

7280 DAVOS-DORF, Promenade 144, Switzerland.

Dealer for: Switzerland, Germany, Austria, Italy

BEDE AIRCRAFT (SOUTH AFRICA) PTY. LTD.

P.O. Box 758, Pretoria, South Africa.

Dealer for: Republic of South Africa, Angola, S.W. Africa, Botswana, Malawi, Mozambique

BROCKMOOR-BEDE AIRCRAFT LTD.

Brockmoor, Brierley Hill, Staffordshire, England.

Dealer for: Great Britain, Northern Ireland, France, Belgium, Holland, Spain, Portugal, Malta, Cyprus, Denmark, Sweden, Norway, Finland

CANADIAN BD AIRCRAFT LIMITED.

Hangar 2, Winnipeg International Airport, Winnipeg 21, Manitoba, Canada.

Dealer for: Western Canada from Thunder Bay, Ontario, incl. Manitoba, Saskatchewan and Alberta

CANADIAN BD AIRCRAFT (PACIFIC) LIMITED

1106 Morgan South Crescent, Port Alberni, British Columbia, Canada.

Dealer for: British Columbia

CANADIAN BEDE AVIATION

2 Thorncliffe Park Drive - Unit 47, Toronto M4H-1H2, Ontario, Canada.

Dealer for: Eastern Canada from Thunder Bay, Ontario to Eastern Seaboard, incl. The Maritimes.

IMPORTADORA NACIONAL DE AVIOES LTDA.

Aeroporto Bacacheri - Hangar Piper, Curitiba, Pr. Brazil.

Dealer for: Brazil

MOHAMED BAKSH & SONS

1st Floor, Mohamed Baksh & Sons Building, P.O. Box 4459, 23 West Wharf Road, Karachi 2, Pakistan

Dealer for: East and West Pakistan

NEW ZEALAND AEROSPACE INDUSTRIES LTD.

Hamilton Airport, R.D. No.2, Hamilton, New Zealand.

Dealer for: New Zealand, Tasmania, Fiji, Tahiti, Philippines, Thailand, Burma

NOVA-BEDE LIMITED

Adachi P.O. Box 22, Tokyo 120-91, Japan.

Dealer for: Japan, Hong Kong, Formosa, South Korea, Guam, Mainland China

Inboard Profile

