

**CHEYENNE  
MODEL  
YEAR  
CHANGES**

***COURTESY OF CHEYENNE AIR SERVICE***

# **TOTAL PRODUCTION RUN**

## **CHEYENNE MODEL**

<b>PA 31T1</b>	<b>I</b>	<b>198</b>
<b>PA 31T1A</b>	<b>IA</b>	<b>17</b>
<b>PA 31T</b>	<b>II</b>	<b>525</b>
<b>PA 31T2</b>	<b>IIXL</b>	<b>82</b>
<b>PA 42</b>	<b>III</b>	<b>89</b>
<b>PA 42-720</b>	<b>IIIA</b>	<b>60</b>
<b>PA 42-1000</b>	<b>IV (400)</b>	<b>44</b>

**\*\*\*\*1974 MODEL YEAR\*\*\*\***

**CHEYENNE UNIT DELIVERED 5**

CHEYENNE IS BORN

The Cheyenne was introduced in May of 1974. After many years of flight tests, Piper was now in the turbine powered arena. The Cheyenne also gave birth to a new distribution system for Piper 'the Corporation Aircraft Center' (CORPAC).

**\*\*\*\*1975 MODEL YEAR\*\*\*\***

**CHEYENNE UNIT DELIVERED 46**

CIP AVIONICS PROGRAM

The customer program for avionics installations was born. The program has been very successful providing Piper installations on most any item our customers require. The program also slashed avionics lead times considerable.

**\*\*\*\*1976 MODEL YEAR\*\*\*\***

**CHEYENNE UNIT DELIVERED 51**

AVIONICS JUNCTION BOX

The junction box provides for simplified designs and ease of installation at the factory. For the customer, it provides improved reliability and ease of avionics troubleshooting. It also provides simplified field installations of avionics to satisfy last minute customer requirements.

**\*\*\*\*1977 MODEL YEAR\*\*\*\***

**CHEYENNE UNIT DELIVERED 69**

CREW SIDE WINDOWS

Crew side windows were enlarged in height. With this change the overhead pilot windows were eliminated.

## \*\*\*\*1978 MODEL YEAR\*\*\*\*

### CHEYENNE UNIT DELIVERED 100

#### CHEYENNE FAMILY IS BORN

In September of 1977, the Cheyenne family is born:

Cheyenne I  
Cheyenne II  
Cheyenne III

#### EXTERIOR PAINT SCHEME

New exterior paint scheme. Color matching GM trim stripe colors were introduced to match the GM interiors. Three (3) trim stripes replaced the two (2) stripes from the previous years.

#### GM INTERIOR PROGRAM

Cadillac division of General Motors Corporation interiors were introduced. Six (6) colors in the Florentine fabrics. This was the starting point for the General Motors program at Piper.

#### NEW ANNUNCIATOR PANEL

The annunciator panel was not only relocated but also totally redesigned. The three (3) inch round panel mounted unit was discontinued, with the new system installed in the glare shield. The easily readable lights are installed end to end, providing a more professional installation.

#### INTERIOR CABINETRY

The cabinet design plus the finish were changed for '78. A New England Cherry wood finish replaced the all white finish from the previous years.

## **\*\*\*\*1978 MODEL YEAR, continued\*\*\*\***

### ELECTRICAL SYSTEM

Several changes to CIRCUIT BREAKER LOCATION WERE MADE ALONG WITH THE ADDITION OF THE RIGHT ESSENTIAL BUS. Plug-in type circuit breakers were introduced to make bus system maintenance less consuming.

### WIDER CABIN INTERIORS

The interior side panels were redesigned, providing an additional three (3) inch cabin width.

### WIDER CABIN SEATS

Seats were redesigned providing nearly a two (2) inch increase in seat width.

### LOW PROFILE PANEL

A new low profile instrument panel was introduced providing improved pilot visibility.

### DUAL BELT AIR DRIVE

During mid year, dual drive belts were installed for the air conditioner compressor unit. This provided increased reliability for the air conditioning system.

### CLEVELAND WHEELS AND BRAKES

Beginning with serial number 016, the Cleveland wheels and brakes became the standard and Goodyear the option.

**\*\*\*\*1978 MODEL YEAR, continued\*\*\*\***

NEW AVIONICS

Avionics introduced in 1978 included:

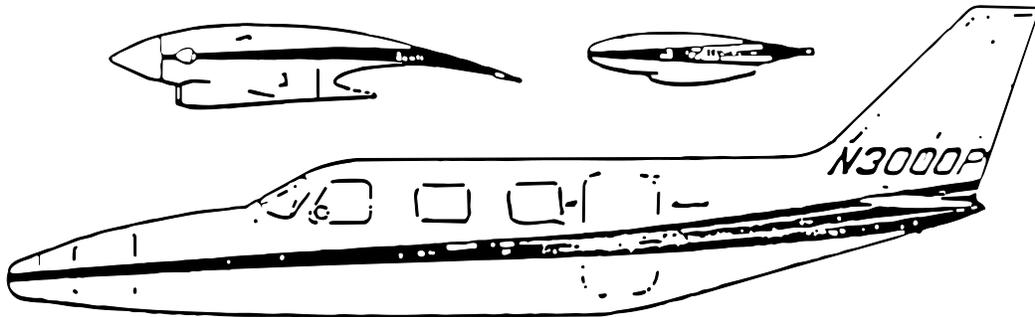
KFC 300	Autopilot
KRA 405	Radio Altimeter
KT 96	Radio Telephone
RDR 1100	Radar
RDR 150	Radar
Collins Micro-Line Avionics	

**\*\*\*\*1979 MODEL YEAR\*\*\*\***

**CHEYENNE UNIT DELIVERED 149**

EXTERIORS

Standard Exterior Paint Scheme



TAIL LOCATED "N" NUMBERS

The registration numbers were relocated from the fuselage to the tail.

FOUR (4) PAINT COLORS

Four (4) exterior paint colors were made standard, base plus the three (3) trim stripe colors.

INTERIORS

New fabric was made available – Halifax, in each of the six (6) available interiors.

AIR-RESEARCH PRESSURIZATION

The Garrett Air-Research Pressurization system was introduced replacing the Dukes control system. This gave the pilot the ability to select cabin altitude based on flight level without doing the math. It also alleviated the ascend/descent switch.

## \*\*\*\*1979 MODEL YEAR, continued\*\*\*\*

### CALICO FLAP SYSTEM

This system replaced the Dukes flap system. This improved asymmetric flap protection. The reliability of the flap system was also improved because of the solid state electronics. This system also afforded an infinite selection from 0-40 instead of the three (3) position limited Dukes system.

### JEPP SIZE POH

Pilot's operating handbook size was reduced from the large cumbersome type to Jeppesen manual size providing simple storage and ease of use in cockpit.

### EXPANDED POH CHARTS

POH charts were expanded to include:

- Range Payload
- Specific Range
- Recommended Holding Power

### FLIGHT PLANNING HANDBOOK

A pilot's flight planning handbook was prepared for the Cheyenne II.

### HIGHER ALTITUDE

The Cheyenne II received certification to increase the operational altitude from 29,000 feet to 31,000 feet.

### FLIGHT-SAFETY INTERNATIONAL

The first schools conducted by Flight Safety in the new training center were conducted in June/1979 with full motion visual simulators.

**\*\*\*\*1979 MODEL YEAR, continued\*\*\*\***

TEL-TAIL LIGHTING

During mid year, the flood lighting for the aircraft tail became available. This improved in flight as well as on ground recognition.

STRETCHED CHEYENNE III

A stretched version of the original Cheyenne III was introduced at NBAA. The aircraft is three (3) feet longer than the original Cheyenne III, providing a total five (5) feet longer cabin than the Cheyenne II.

PASSENGER BRIEFING CARDS

Cards contain both general and emergency information for use by the passengers. Satisfies Part 135 operations for most operators.

PROPELLER SYNCHROPHASER

The prop synchrophaser replaced the synchronizer during the year. Unit provides a fixed phase for reducing prop noise.

NEW AVIONICS

Avionics introduced in 1979 included:

Ground Clearance Energy Saver System – very useful and popular pilot option – especially as a back-up avionics power source.

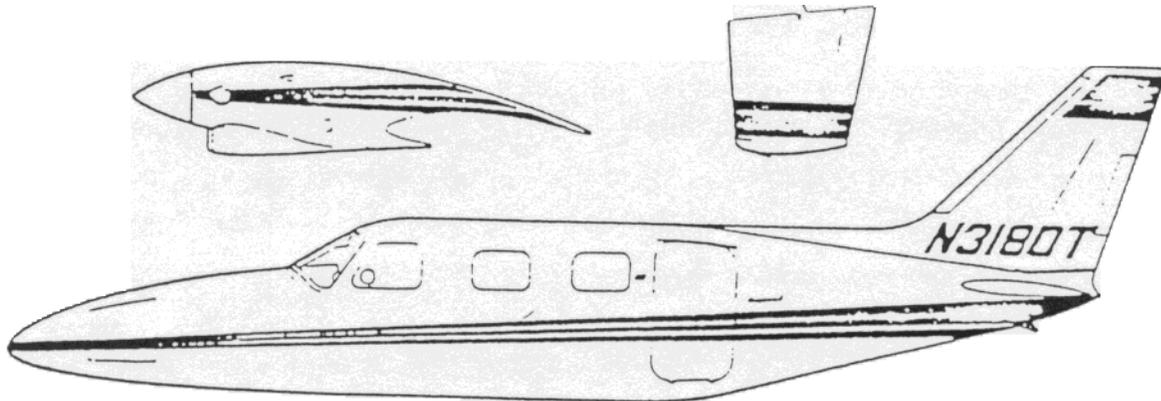
KN 72	VOR/LOC Converter
KN 75	GS Receiver
KI 206	NAV Indicator
PRIMUS	300 Radar
KI 207	NAV Repeater Indicator
Bend ix	Color Radar Indicators
KFC 250	System with three (3) inch air driven gyros for Cheyenne I
KAS 294	Altitude Preselect for Cheyenne I

**\*\*\*\*1980 MODEL YEAR\*\*\*\***

**CHEYENNE UNIT DELIVERED 160**

EXTERIORS

Standard Exterior Paint Scheme



INTERIORS

Choice of five (5) all new interior color themes/textiles: Dark Cedar Venetian, Blue Venetian, Burnished gold Venetian, Dark Green Venetian, and Dark Carmine all leather interior

The 1980 interior program provided for five (5) all new interiors and retained seven (7) of the popular 1979 selections for a total of 12 interior color/textile selections.

INCREASED VISIBILITY

Increased windshield area. The windshield area with 1980 models had been increased providing an increase effective vision of approximately 20%. The windshield was heightened even with the side windows.

DIGITAL CLOCK

A digital clock was standard in the pilot's panel with 1980 models.

## \*\*\*\*1980 MODEL YEAR, continued\*\*\*\*

### IMPROVED CABIN OVERHEAD

The center overhead panel in the cabin, containing the oxygen masks and reading lights, was greatly improved for 1980. The panel is flush with the headliner and the oxygen compartment covers have a positive latching mechanism.

### IMPROVED CABIN DOOR

The cabin entrance door was improved in the following areas:

The bottom side of the steps was painted to match the door frame so when the door is closed the whole door is the same coordinated interior color.

Standard lights were installed in the cabin entrance door steps for night time boarding convenience.

The cabin door frame was painted Sahara Beige, matching the interior overhead and window frames.

### PROTECTED FUEL PANEL

A protection plate was added over the fuel selector panel so as to provide additional protection for the fuel selector controls.

### RECLINING THIRD AND FOURTH SEATS

With 1980 models, the third and fourth (rear facing) seats have a reclining position as standard equipment. The seats recline two (2) inches, as well as move on the tracks to allow for the reclining travel.

### IMPROVEMENTS IN COCKPIT AREA

SAS VANE heater modification was installed and made available as a retrofit kit.

## **\*\*\*\*1980 MODEL YEAR, continued\*\*\*\***

### IMPROVEMENTS IN COCKPIT AREA (continued)

The following improvements were made in the cockpit area:

- SAS light was moved and taken off the Master Caution Horn
- New cockpit light rheostats – Cockpit light controls were relocated to the center overhead panel and are of the vernier type, making all cockpit light adjustments convenient and easy adjustable.
- For 1980 models, the rudder pedal angle was changed by addition of a removable  $\frac{3}{4}$ " pad on the lower bar of the rudder pedal.
- 1980 models had the gyro power switch and inverter power switch relocated to a location above the cabin pressurization controls.
- 1980 models had the emergency radio power switch recessed to avoid interference with the co-pilot's arm

### **NEW OPERATIONAL OPTIONS**

#### CABIN INSTRUMENTS

Optional cabin instruments were provided with 1980 models.

The instrument cluster is located in the sidewall above the left side executive table.

The following digital readout instruments are included with the option:

- True Airspeed – mph
- Clock
- Outside Air Temp. (OAT) F
- Altitude ft.

## \*\*\*\*1980 MODEL YEAR, continued\*\*\*\*

### COCKPIT SPEAKERS

New higher quality cockpit speakers were incorporated for 1980 models as well as improved speaker baffling.

### SEAT BELT / SMOKING CHIMES

An audible alert was incorporated into the seat belt and no smoking light circuitry, similar to that of the Airlines.

The system consists of a single alert for each, seat belt and no smoking actuation.

### PASSENGER SEAT SHOULDER HARNESS

In 1980 an optional passenger seat with shoulder harness system was available for all forward facing passenger seats, excluding toilet seats.

### IN-FLIGHT RECOGNITION LIGHT

With 1980 models, an optional in-flight recognition light was made available. The option consists of an embedded light on each wing tip fuel tank. When wing tip tanks are not ordered on the Cheyenne I, the lights are embedded in the wings leading edge at the wind tip area.

### ENGINE WASH RING

In 1980, an optional engine wash ring could be ordered and permanently installed on the engines at the factory.

### RADOME EROSION GUARD

In 1980, an optional rubber nose erosion guard was available.

**\*\*\*\*1980 MODEL YEAR, continued\*\*\*\***

BOB WEIGHT

Cheyenne II had a bob weight incorporated into the longitudinal control system providing improved dynamic stability.

NEW AVIONICS

Avionics introduced in 1980 included:

KN 63	DME
DME 451	with both large and small indicators
KNS 80	RNAV
ANS 351	RNAV
7100 RMI System	
Bendix	Encoding Altimeter
Radar Check List Displays	RCA and Bendix
CMA 734	VLF/Omega System
HF 200	
Dayton Static Discharge Wicks	
SPEERY SPZ-200 Autopilot/Flight Director (Cheyenne II)	

## \*\*\*\*1981 MODEL YEAR\*\*\*\*

### CHEYENNE UNIT DELIVERED 178

#### CHEYENNE FAMILY GROWS

In September of 1980, the Cheyenne IIXL was introduced.

#### COURTESY LIGHT TIME DELAY

The time delay circuit was added to the cabin entrance courtesy light system. The circuit automatically turns the courtesy lights on when the entrance door is opened and also automatically extinguishes the light after 20 minutes if the door is left open. The system also features a reset switch for turning lights on again after they have automatically been extinguished.

#### CABIN TEMPERATURE CONTROL

A cabin temperature control had been added to provide improved passenger comfort by allowing the passengers to adjust cabin temperature to satisfy their particular requirements (Cabin-Cockpit).

#### INTERIORS

Four (4) new luxurious Prima Knit fabrics were available in 1981:  
Dark Blue, Dark Saddle, Beige and Dark Carmine

The following colors/fabrics were discontinued in 1981:  
Buckskin – Florentine/Halifax  
Blue – Florentine/Halifax  
Green – Florentine/Halifax

#### EXTERIOR TRIM COLORS

Five (5) new exterior trim colors were introduced to color coordinate with the new interior fabrics. They are:  
Dark Beige, Dark Saddle, Dark Green, Light Blue and Gold

**\*\*\*\*1981 MODEL YEAR, continued\*\*\*\***

ENGINE CABLE SEALING

Additional sealing of engine control cables; power levers, propeller controls and condition lever controls provides smoother operation of these controls.

DEFROSTER CONTROL

A windshield defroster on/off control was added. This control was provided to allow the pilot the option of selecting windshield defroster air at this discretion.

SINGLE KEY

One key now fits both cabin entrance door and the forward luggage compartment door.

WING TIP LIGHT

A new wing tip strobe position light assembly was included that eliminates the need for a separate tail light strobe. The white tail light remains providing a redundant tail light.

SPLIT BUSS ELECTRICAL SYSTEM

A new split buss electrical system was introduced that simplifies both pilot management of the electrical system and also provides greater system reliability.

CREW SHOULDER BELTS

The pilot and co-pilot shoulder belt system is seat mounted with a built-in inertia reels system.

**\*\*\*\*1981 MODEL YEAR, continued\*\*\*\***

LIGHT GRAY PANEL

A light gray instrument panel color (same as Cheyenne III) was made available. The optional Beige panel was discontinued.

FOUR (4) POINT SHOULDER BELT

An optional four (4) point inertia shoulder belt system for pilot and co-pilot was made available.

AUTO-IGNITION

An auto-ignition system was optionally available. This system will automatically actuate the ignition when torque is below 200 ft./lbs. With the condition levers forward. The system also simplifies the starting sequence.

COMPARISON DIMENSIONS

A complete set of comparison booklet interior dimensions of all Piper Cheyennes and their respective competitors were distributed in the summer of '81.

RETAIL PRICE BOOK

Eliminated the printing individual aircraft retail price sheets in lieu of a complete Cheyenne family retail price notebook.

**\*\*\*\*1981 MODEL YEAR, continued\*\*\*\***

NEW AVIONICS

Avionics introduced in 1981 included:

KNS 81	RNAV
KR 87	ADF
KN 53	Digital NAV
KMA 24	Audio Selector Panel
PRIMUS 300	SL – Radar
Data NAV III	
FSC 8700	Auto-pilot for Cheyenne II
Bendix Radar Checklist	
Remote Transponder Ident Button	
PRIMUS 200 Radar for Cheyenne I	

## \*\*\*\*1982 MODEL YEAR\*\*\*\*

### INTERIORS

Choice of a crushed prima knit is made available in the popular colors of Dark Saddle and Dark Blue.

### OXYGEN SYSTEM

Oxygen system on Lock Haven Cheyennes was redesigned to accommodate the Scott Lanyard pull masks. These are the same as used on the Cheyenne III.

### IMPROVED FLOOR RUNNER

Lock Haven Cheyenne floor runner installation was improved by replacing the existing velcro with an improved type velcro. This provides better securing of the runner to the carpet.

### LOCKABLE FUEL CAPS

Optional lockable fuel caps operation is the same as standard fuel caps when in the unlocked position. The lock key will be the same as the aircraft door key. In the locked position, the tab can be raised on the cap, however, it cannot be rotated to the open position.

### 1900 RPM

Cheyenne I cruise data at 1900 rpm, provides lower cabin/cockpit noise levels.

### LATERAL TRACKING SEATS

Seats provide lateral movement inboard. The option is available with the forward facing cabin seats.

## \*\*\*\*1982 MODEL YEAR, continued\*\*\*\*

### SERIAL NUMBERS

Beginning with the 1982 fiscal priced models, the aircraft serial numbers will no longer start over at 001 by prefixing with the model year. Block point changes will now occur for major milestones – that is major aircraft changes and pricing changes.

### CHEYENNE MODELS

Aircraft models will be delivered with each aircraft delivered

Beginning with #047 Cheyenne IIXL a new yoke with clock, ident switch, and landing light switch. (Like the Cheyenne III yoke).

### NEW AVIONICS

Avionics introduced in 1982 include:

KX 165                      NAV/COM for use in Cheyenne I  
Gold Crown III for Cheyenne II and up  
Digital Collins Pro-Line Control Heads

### END OF PRODUCTION

Cheyenne II production ended in early 1983 with S/N 31T-8120104

## **\*\*\*\*CHEYENNE III CHANGES SINCE INTRODUCTION\*\*\*\***

### THREE (3) FOOT STRETCH

In 1979 the fuselage had three feet added to it in order to increase the cabin size and the size of the tail in order to improve stall characteristics. In addition, the PT6A-41 engines were used and moved forward by 14 inches. Deliveries from Lakeland commenced at the end of 1980.

### CABIN TABLES

The tables were restyled to provide a more slim style table.

### ICE PROTECTION PLATES

It was determined after testing, the ice protection plates were not required. The absence reduces both weight and cost.

### WINDOW PANEL FINISH

The window panel material was changed to the current material to provide an easily cleanable finish.

### IMPROVED COWLING

The engine cowl construction and fit has been improved considerably. The fairings just forward of the exhaust stacks have been eliminated.

### REDESIGNED TURTLE BACKS

The large one (1) piece nacelle skin cover was redesigned to provide two (2) smaller sections. Not only has the appearance been improved ten fold, there also has been much improved serviceability.

### ALL LEATHER SIDE PANELS

The option was made available to coincide with the other Cheyenne models.

**\*\*\*\*CHEYENNE III CHANGES SINCE INTRODUCTION\*\*\*\***  
**(Continued)**

PART 135 OXYGEN

Optional system provides larger bottle with additional plumbing to pilots control valve and is certified for part 135 operations.

NEW CONTROL WHEEL

Totally new design providing a custom fit wheel only in the Cheyenne. Also features an available remote transponder ident button.

LANDING LIGHT SWITCH

The switch was added to both control wheels for pilot ease of operation during the critical landing phase. Another one of those little features.

LATERAL TRACKING SEATS

Available as option for all forward facing cabin seats.

CABIN SOUND SYSTEM

This system features AM and FM stereo and cassette tape receiver and player. The sound can then be presented over cabin stereo speakers or by the flip of a switch, can be piped to each of the six (6) passenger seats. The passengers can then listen through their own individual acoustical tube headsets. Each seat affords its own volume control while the small flexible headsets can be easily stores when not in use.

AUTO-FEATHER

Available as an option. Future improvements in field performance will be predicated on an operable auto-feather system.

**\*\*\*\*CHEYENNE III CHANGES SINCE INTRODUCTION\*\*\*\***  
**(Continued)**

TIP TANK LIGHTS

The tip tank mounted in-flight recognition lights were introduced as an option. The original single tail mounted light was removed.

CONTROL WHEEL CLOCKS

The first Cheyenne control wheel mounted clocks were introduced in the Cheyenne III. Internal lighted mechanical and digital clocks are installed in the center hub of either control wheel.

IMPROVED FIELD PERFORMANCE

The accelerate/stop distance was reduced from approximately 5400 feet to 3985 feet. Additional testing is being conducted to reduce the acc/stop distances even further. This improvements was included in revision #1 in the POH.

USABLE FUEL

The original ten gallons of un-useable fuel was reduced to two (2) gallons providing an additional eight (8) gallons of useable fuel.

AFT CARGO NET/CABIN DIVIDER

The optional divider provides a baggage net, eliminating the need for the standard tie-down straps. The divider provides an excellent close out for the aft baggage area.

SLIM-LINE CABINETS

The front cabin cabinets permit an additional three (3) inches of cockpit leg room. Jepp chart storage is now behind both crew seats for a total of four (4) manual storage areas. Sliding cockpit doors are now included with the front cabinets.

**\*\*\*\*CHEYENNE III CHANGES SINCE INTRODUCTION\*\*\*\***  
**(Continued)**

CARGO DOOR OPTION

The option is now truly an option of your choice. Previously it was a mandatory option.

TINTED WINDOWS

The standard window tint has gone from the deep charcoal tint to the shade used in the other Cheyenne models.

REDESIGNED INSTRUMENT PANEL

All instrument columns were moved to the right such that the pilot's H.S.I. and horizon are now centered behind the pilot's control column.

GOLD CROWN III

Beginning with serial number 061, the new King Gold Crown III is available as an option.

AVIONICS

Other avionics available as a factory option beginning with serial number 061 are:

Global Series IIIB  
Digital Control Heads, etc.

## \*\*\*\*CHEYENNE IIIA INTRODUCTION\*\*\*\*

### NEW PA 42-720 MODEL

In late 1982 early 1983, Piper developed the Cheyenne IIIA. It was an updated model of the Cheyenne III.

### INTERIOR

The interior was updated with a higher service ceiling.

### ENGINES

720 shp Pratt and Whitney PT6A-61 turbo-prop engines were installed. The first prototype flew in August 1982 with new engines. FAA certification was granted on March 24, 1983.

### NEW CENTER OPENS

A new delivery center was opened in late summer of 1983 at Lakeland bringing the total Piper operation at the airport to 710,200 sq. ft.

### SERIAL NUMBER CHANGE

Also in August 1983 the serial number series was changed to remove the model year from the series and replace it with the Lakeland plant code (5) repeated. Ex: 42-8301xxx was changed to 42-5501xxx

### CLOSURE ANNOUNCED

In January 1985 the announcement came that Piper was closing the Lakeland plant, consolidating operations and building a new facility at Vero Beach. The production of the Cheyenne IIIA at Lakeland stopped with S/N 42-5501031 in October 1985 and re-started at Vero Beach with S/N 42-5501032 in 1986.

## \*\*\*\*CHEYENNE IV INTRODUCTION\*\*\*\*

### NEW PA 42-1000 MODEL

In 1983 Piper announced the PA 42-1000 Cheyenne IV.

### INTERIOR

The interior was basically a redesigned Cheyenne III airframe.

### ENGINES

Piper went to Garrett for the counter-rotating 1,000 sph TPE331-14 turbo prop engines. In August 1982, with new engines, the prototype N420PA made its flight. FAA certification was granted on March 24, 1983.

### PROTOTYPES RELEASED

The production prototype S/N 42-8427002 first flew on June 26, 1983. A second prototype S/N 42-8427003 flew later that same year.

### SERIAL NUMBER CHANGE

Like the IIIA, in August 1983 the serial number series was changed on the Cheyenne IV from 42-~~8427001~~, 2, and 3 to 42-~~5527001~~, 2, and 3. FAA certification of the IV was granted on July 13, 1984.

### RENAMED

In September 1984 it was renamed the Cheyenne 400LS. The '400' was in reference to the 400 mph that the aircraft could go to and the 'LS' referenced Lear Siegler its new parent company. Deliveries from Lakeland commenced with S/N 42-5527004 in December 1984. The price with IFR equipment was \$1,774,500.

### RECORDS SET

Chuck Yeager set a speed record of 568.86 km/hr between New York and Gander on October 1, 1984 in the Cheyenne 400LS. In April 1985 time-to-climb records were set in Oregon for 3000, 9000, and 12,000 meters