

Astra

Honeywell



**IMPROVED OPERABILITY. INCREASED RELIABILITY.
LOWER TOTAL COST OF OWNERSHIP.**

TFE731-3A to -3C Engine Upgrade Program



Featuring updated engine technology, Honeywell's TFE731-3C engine upgrade increases reliability, durability and operability, while also helping to lower your total cost of ownership. As the first high-bypass fuel-efficient business aviation engine, the TFE731 engine has logged over 51 million operational hours and features a long history of proven reliability. Honeywell

developed this engine upgrade as part of our commitment to the long-term performance and value of your Astra aircraft.

Propulsion upgrade that increases the v

The TFE731 engine upgrade features many value-added benefits, including:

Cost of Ownership

- MSP enrollment available at no cost
- Reduced MSP hourly rate
- Enhanced aircraft value
- Fresh CZI signoff
- Zero-time turbine disks and blades (select stages)
- Reduced turbine life-cycle cost
- MPI interval extension to 2100 hours

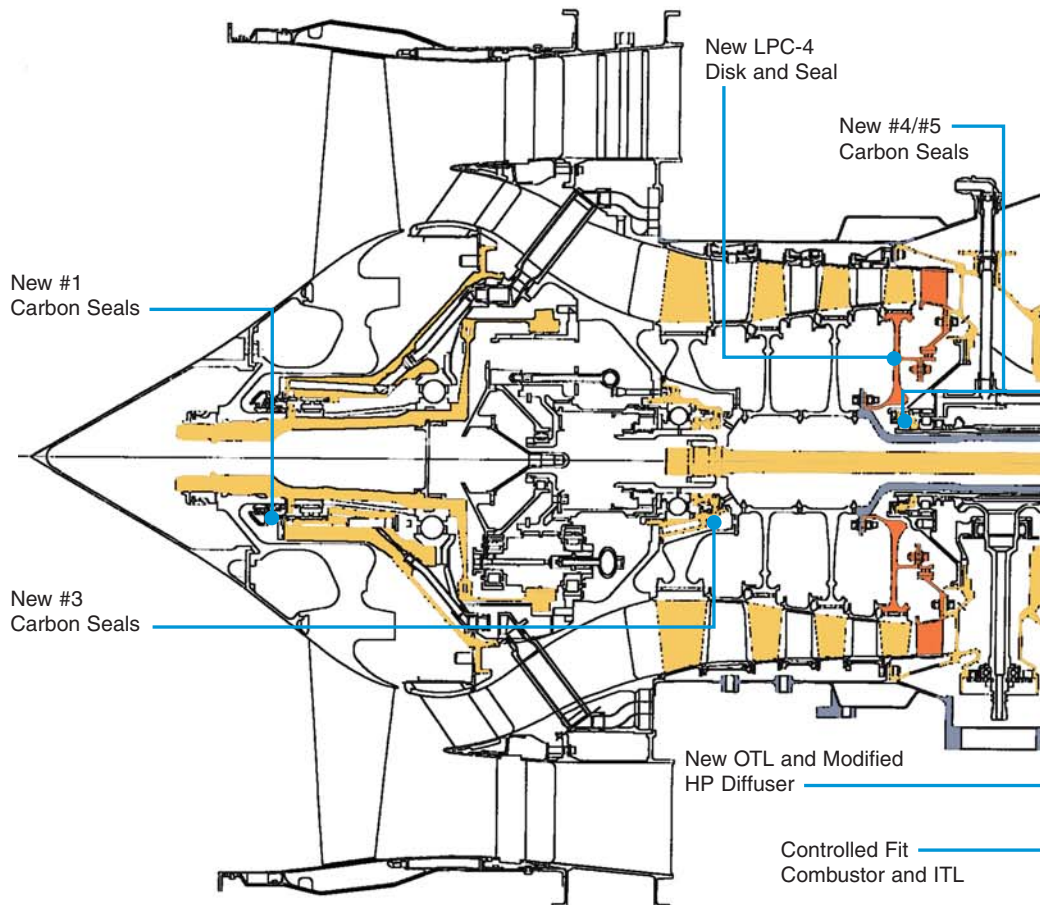
Technical

- Same TSFC/thrust
- 25°C increased ITT climb limit
- 20°C increased ITT cruise limit
- Improved engine durability/reliability/performance retention for components replaced during -3C upgrade
- Increased turbine disks lives
- New #1, #3, #4/#5 carbon ring seals
- Single-engine upgrade permitted in the event all engines are not on the same maintenance schedule

Additional Components Incorporated

- N1 DEEC
 - Included for MSP operators
 - Optional for non-MSP operators

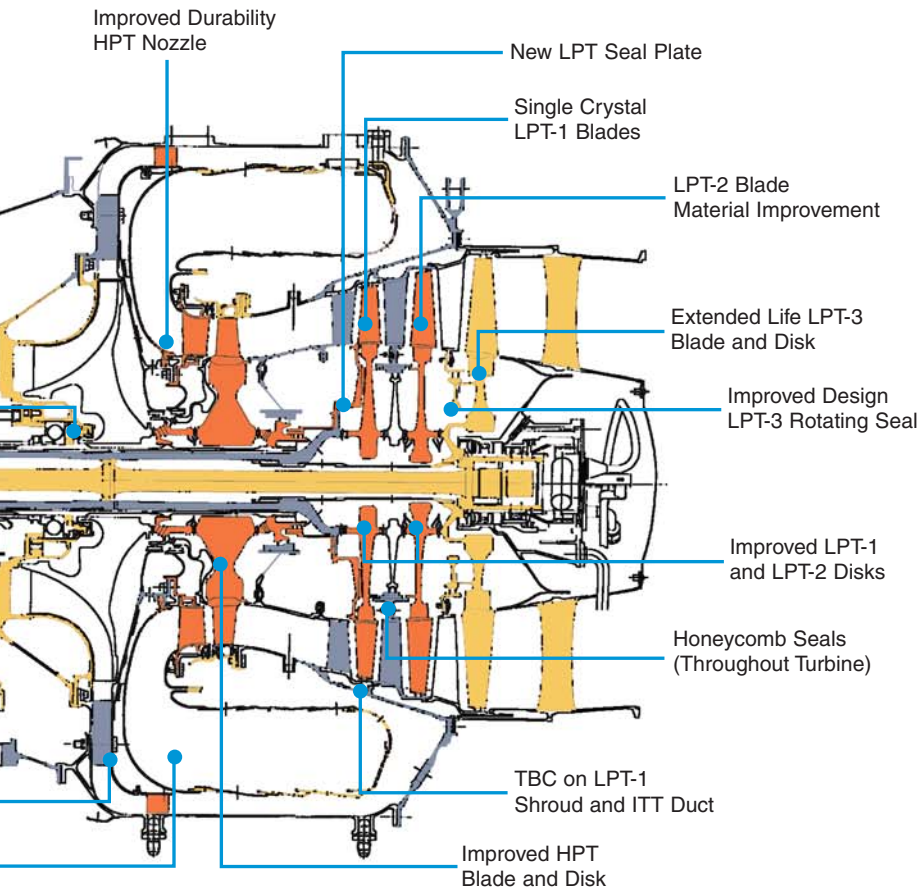
Design Features Included in the -3C Engine Upgrade



Engine Specification Comparison

	731-3A	731-3C
Takeoff Temperature Limit (°C)	907	910
Climb Temperature Limit (°C)	885	910
Cruise Temperature Limit (°C)	865	885
HPT Disk Life (Cycles)	7,000	10,000
LPT1 & 2 Disk Life (Cycles)	3,000	10,000
LPT3 Disk Life (Cycles)	3,000	7,000
Engine Weight (Lb)		+ 2
MPI Interval (Hours)	1,400	2,100

value of your aircraft



- Provided in -3C Kit
- Provided in MSP Standard Service Bulletins
- Reworked Hardware

Advantages of the TFE731-3A to -3C Engine Upgrade

- Increased durability/reliability/performance retention for components replaced during -3C upgrade
- Increased climb/cruise ITT limits
- Reduced cost of ownership
- Available for MSP and non-MSP operators
- Can be performed at CZI or MPI (requires CZI signoff)
- Upgraded to MSP standard list of service bulletins
- Enhances aircraft value
- Additional optional service bulletins can be incorporated**

** Optional hardware service bulletins incorporations:

- ITT harness
- FCU
- Fuel pump

Why Honeywell?

- 50 Years of Propulsion System Experience
- Industry Leader in Engine Integration
- Proven Performance - Over 11,400 TFE731 Engines Delivered
- Advanced Manufacturing, Production and Materials Processes
- Global Service and Support Network
- Commitment to Continuing Product Support and Enhancement

Honeywell Aerospace

Honeywell is a leading global provider of integrated avionics, engines, systems and service solutions for aircraft manufacturers, airlines, business and general aviation, military, space and airport operations.

For more information on Honeywell Aerospace, visit us online at www.honeywell.com/aero

Global Support Network

Designated TFE Engine Modification Facilities

The TFE731-3C Engine Upgrade can be performed at any of the following Honeywell Authorized Heavy Maintenance Facilities.

Honeywell

1944 East Sky Harbor Circle
Phoenix, AZ 85034
602-365-2703
FAX 602-365-2342

Garrett Aviation Services

Bush Field Airport
1550 Hangar Road
Augusta, GA 30906-9684
706-793-5600
FAX 706-793-0469
Toll Free 1-800-891-8889

Garrett Aviation Services

Capitol Airport
2 North Airport Drive
Springfield, IL 62707
217-544-3431
FAX 217-544-8911
Toll Free 1-800-731-7371

Garrett Aviation Services

Houston Intercontinental Airport
17250 Chanhute Road
P.O. Box 60218
Houston, TX 77205-0218
713-230-7800
FAX 713-443-1064
Toll Free 1-800-877-5411

Garrett Aviation Services

Long Island MacArthur Airport
2221 Smithtown Avenue
Ronkonkoma, NY 11779-7387
516-468-3000
FAX 516-585-2104
Toll Free 1-800-468-4480

Garrett Aviation Services

Los Angeles International Airport
6201 West Imperial Highway
Los Angeles, CA 90045
310-568-3700
FAX 310-568-3790
Toll Free 1-800-942-7738

International

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