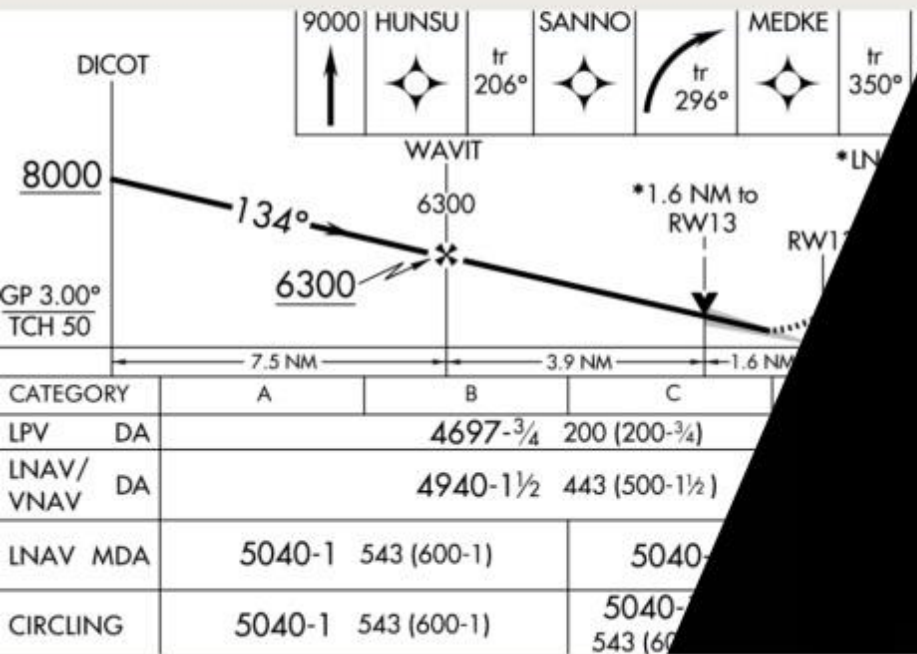


Business and Regional Systems Marketing Bulletin
**Localizer Performance with Vertical Guidance
 (LPV) FMS upgrade for Challenger 604**

Ref. No.: BRS-110114.06M

Pub Date: 01/2017



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ACT KTEB ARRIVAL 1/3
STARS APPROACHES
JAIKEZ RNV 06

LVZ3 ILS 06
      ILS 19
      V/D 06
      WAAS LPV
      ARR DATA>

<DEP/ARR IDX LEGS>
[MSG ]
  
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LPV will provide pilots unprecedented access to runways and airports that have not deployed an ILS approach.

Note:

To ensure RNP 4 capability for Oceanic MNPS (Minimum Navigation Performance Standard), this update is required prior to or in conjunction with The FANS 1A update.

Whether it is as a back up to ILS approach, a replacement for the aging ILS system, or adding lateral and vertical guidance to an airport without ILS, LPV approaches have changed aviation forever. FMS 4.0 with LPV is an essential upgrade for your Pro Line 4 equipped Challenger 604. LPV approaches add flexibility to land at more destinations more often, with lower LPV Decision Altitudes on RNAV (GPS) approaches. LPV minimums as low as 200 feet with 1/2 mile of visibility are now published on RNAV (GPS) approach charts, and the flight deck operation is very similar to Category I ILS approaches.

Localizer Performance with Vertical Guidance (LPV) takes advantage of the Satellite-Based Augmentation Systems (SBAS). Wide Area Augmentation System (WAAS) is the United States implementation of SBAS, which also provides signal coverage and operational benefits in Canada. WAAS uses a combination of satellites and ground stations to dramatically improve the GPS performance as measured by accuracy, availability, and integrity. This increased performance enables vertical navigation using GPS.

LPV further enhances operational flexibility and simplicity by enabling consistent approach procedures that are never subject to cold temperature limitations. Cold temperature limitations are commonly published on traditional RNAV approaches and must be observed by all aircraft using barometric VNAV for the approach. Vertical navigation when flying LPV approaches is satellite-derived and therefore not affected by the outside air temperature.

There are currently over 3,600 LPV approaches published at almost 1800 airports in the US. The FAA is adding more LPV approaches each year with the potential number of approaches reaching 4,000 runways. Additionally, Nav Canada has created over 170 LPV approaches with plans to add more over the next several months.



Building trust every day

KEY BENEFITS OF ROCKWELL COLLINS' LPV FMS VERSION 4.0 UPDATE

- > *Land more places, more often*
 - *Access to LPV minimums on RNAV approaches*
 - *Decision altitudes as low as 200 feet*
 - *Visibility minimums as low as 1/2 mile*
- > *Enhanced peace of mind through new vertically-guided approaches to airports and runways not equipped with ILS approach systems*
 - *Satellite-based vertical guidance supports highly repeatable, stabilized approaches*
 - *Flight deck operations for LPV are very similar to those for ILS approaches*
 - *Consistent approach procedures throughout the year- LPV approaches are not subject to cold temperature limitations*
- > *Additional FMS benefits*
 - *RNP 4, 2 & 1*
 - *RF Legs,*
 - *X,Y,Z Approaches*
 - *Expanded memory that supports world wide database*
 - *Reduce database loading time*
 - *Integrated RAIM prediction*

REQUIREMENTS

The aircraft must have the Rockwell Collins Enhanced DBU-5000/5010E or PCD-3000, WAAS Capable GPS-4000S and TSO c190 antennas to enable LPV. See Marketing Bulletins BRS-110091.08M on DBU-5000/5010E and BRS-110109.06M on GPS-4000S for part numbers and pricing. Aircraft must also have FMC-6000, CPN 822-0868-071 or newer; IOC-4000 CPN 822-9814-705 or newer; CSU-4100, CPN 822-1364-002 or newer. (Precision Plus Upgrade).

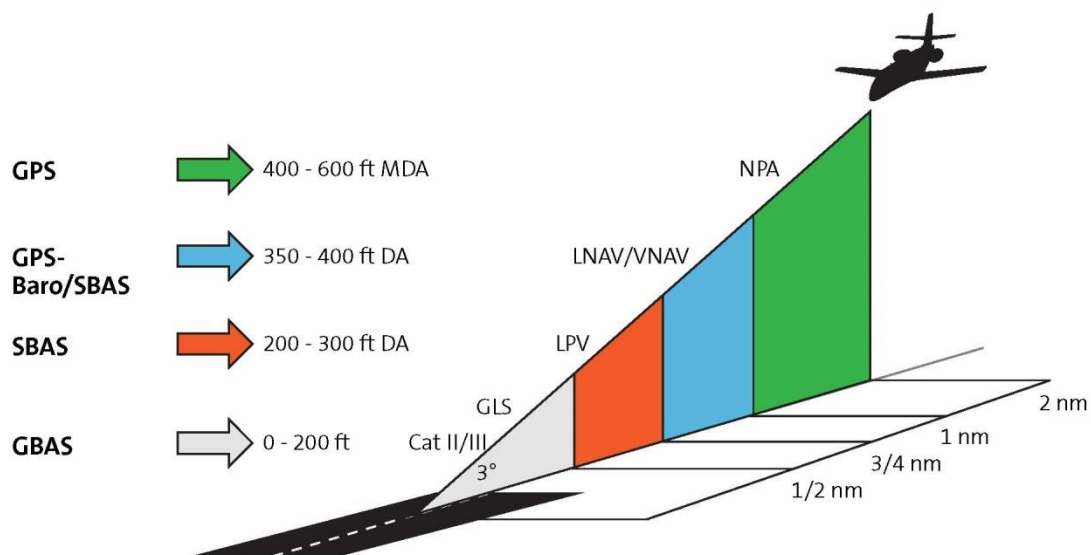
TERMS AND CONDITIONS

Unless otherwise noted, this program is valid for orders placed between January 1, 2017 and December 31, 2017, with delivery requested by April 1, 2018.

Warranty period is two years for new equipment and one year for modified equipment. Standard warranty does not apply to software.

Service Bulletin purchases should be made through your Rockwell Collins Service Center. Units submitted for modification outside of original product warranty must be in a serviceable condition. If the unit submitted is unserviceable, additional repair costs may be charged. Modified units will carry a 12 month warranty. Prerequisites required to reach the baseline will be quoted separately at the then current time and material rates.

For more information please contact your Rockwell Collins Regional Sales Manager.



CHALLENGER 604 LPV UPGRADE ^{1,2,3,4}

1) The following items must be purchased for LPV Upgrade through Customer Account Administration. See section 3 below for additional requirements.

Type Number	Notes	Existing Part Number	New Part Number	QTY
OCM-4100	3	822-1463-210	822-1463-228	2
or				
OCM-4100	3	822-1463-212	822-1463-231	2
or				
OCM-4100	3	822-1463-214	822-1463-230	2
or				
OCM-4100	3	822-1463-216	822-1463-233	2
CL604 LPV STC	5, 8	Place order using STC #ST01505WI-D		1
Computer Based LPV Training (CBT) for Pilots	4			1

2) The following items must be upgraded or exchanged, select 2A for service bulletin upgrade or 2B for exchange.

2A) To place an order for a Service Center upgrade, contact 316-677-4808 and reference this Marketing bulletin.

Note: Service Bulletin Pricing for LPV Upgrade - for IOC & FMC (must purchase new OCM).

Type Number	Notes	Existing Part Number	New Part Number	Service Bulletin	QTY
IOC-4000		622-9814-705/715/725	622-9814-730	507, 508	4
FMC-6000	6, 7, 9	822-0868-071/089	822-0868-113	536	2
or					
FMC-6000	6, 7, 9	822-0868-072/090	822-0868-082 (SAR)	536	2

2B) For an exchange upgrade, call Rental Exchange at exchangepoolmodsupport@rockwellcollins.com, and reference this Marketing bulletin.

Note: Exchange Pricing for LPV Upgrade - for IOC & FMC (must purchase new OCM).

Type Number	Notes	Existing Part Number	New Part Number	Service Bulletin	QTY
IOC-4000		622-9814-705/715/725	622-9814-730	N/A	4
FMC-6000	6, 7, 9	822-0868-071/089	822-0868-113	N/A	2
or					
FMC-6000	6, 7, 9	822-0868-072/090	822-0868-082 (SAR)	N/A	2

REQUIRED EQUIPMENT FOR LPV UPGRADE

3) The following equipment must be purchased, if not currently installed on the aircraft.

- *GPS-4000S¹ (see Marketing Bulletin BRS-110109.06M) and WAAS capable TSO c190 antennas*
- *Enhanced DBU-5000/5010E² (see Marketing Bulletin BRS-110091.08M), PCD-3000*

NOTES

1. *Aircraft must have the Rockwell Collins GPS-4000S and WAAS capable TSO c190 antennas installed to enable LPV. See Marketing Bulletin BRS-110109.06M GPS-4000S for part numbers and pricing. The installation of the GPS-4000S using Approved Model List (AML) STC, #ST01433WI-D, is available from Rockwell Collins.*
2. *Aircraft must have the Rockwell Collins enhanced DBU-5000/5010E or PCD-3000 installed to load FMS Nav Databases. See Marketing Bulletin BRS-110091.08M DBU-5000/5010E for part numbers and pricing. The installation of the enhanced DBU-5000/5010E using Approved Model List (AML) STC, #ST01431WI-D, is available from Rockwell Collins.*
3. *Caution: Deviation from existing OCM part number to new OCM part number, as listed, will introduce operational problems and deviate from the Rockwell Collins STC.*
4. *Two sessions of on-line computer based pilot LPV training are available free of charge. Please contact the training registrar at 319-295-4672 or email trainingregistrar@rockwellcollins.com. On-line LPV sales and installation training is also available. Please contact your Rockwell Collins Regional Sales Manager for more information.*
5. *After placing your order for the STC through Customer Account Administration, Customer Account Administration will coordinate delivery of the Rockwell Collins STC data package.*
6. *If aircraft is equipped with a third FMS, add an additional FMC-6000 unit program price to the Shipset Subtotal for either the Service Bulletin or Exchange Program solution.*
7. *For aircraft with FMC-6000, CPN 822-0868-029/030, please contact the Rockwell Collins Service Center at 316-677-4808 for upgrade information.*
8. *FAA STC #ST01505WI-D is Transport Canada (TC) Accepted for use on Canadian registered aircraft, SA09-64.*
9. *Type 7 FMS Nav Data Base is required for LPV. Customers' FMS Nav Data Base account must be updated to Type 7 Data Base. Please contact FMS Nav Data Base Subscriptions at 319-295-5000 to update your account.*

How can we help?

Please call Rockwell Collins Customer Support at +1.319.295.5000.

BUILDING TRUST EVERY DAY.

Rockwell Collins delivers innovative aviation and high-integrity solutions to commercial and government customers worldwide. Backed by a global network of service and support, we stand committed to putting technology and practical innovation to work for you whenever and wherever you need us. In this way, working together, we build trust. Every day.

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