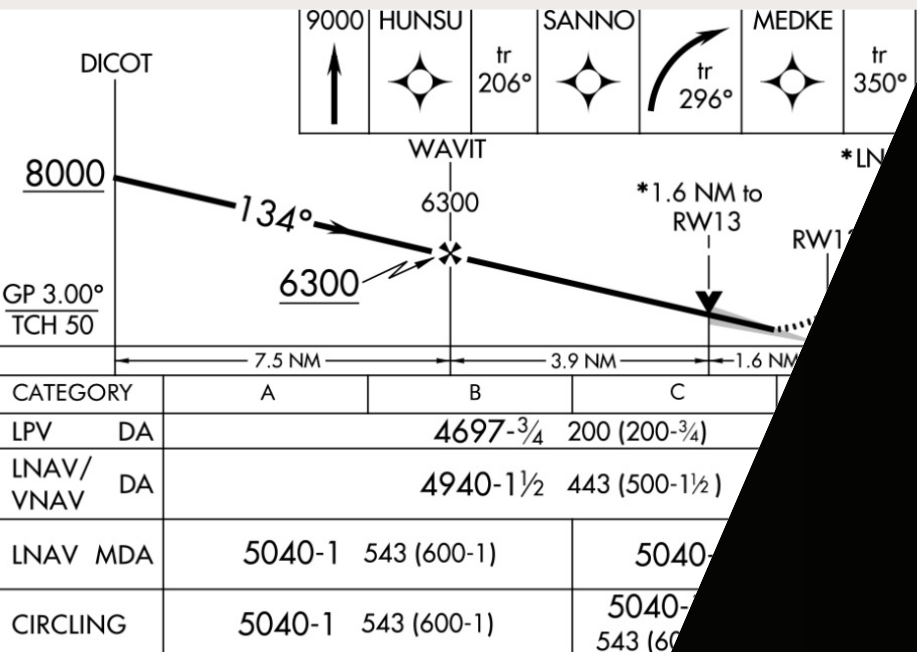


# Localizer Performance with Vertical Guidance (LPV) FMS upgrade for Hawker 750/800XP/850XP/900XP

Ref. No. BRS-110116.5M

Pub Date 01/2016



```

ACT KTEB ARRIVAL 1/3
STARS APPROACHES
JAIKEZ RNW 06
LVZ3 ILS 06
ILS 19
V/D 06
----- WAAS LPV
ARR DATA >
<DEP/ARR IDX LEGS>
[ MSG ]
    
```

*LPV will provide pilots unprecedented access to runways and airports that have not deployed an ILS approach.*

Whether it is as a back up to ILS approach or in some instances, a replacement for the aging ILS system, LPV approaches have changed aviation forever. LPV is an essential upgrade for your Pro Line 21-equipped Hawker 750/800XP/850XP/900XP. LPV approaches add flexibility to land at more destinations more often, with lower LPV Decision Altitudes on RNAV approaches. LPV minimums as low as 200 feet with ½ mile of visibility are now published on RNAV 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 3,300 LPV approaches published 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 backup for ILS
  - RNAV approaches with LPV to runways with an existing ILS provide an additional backup in the event that either localizer or glide slope is out of service
- No hardware installation requirements at the airport.

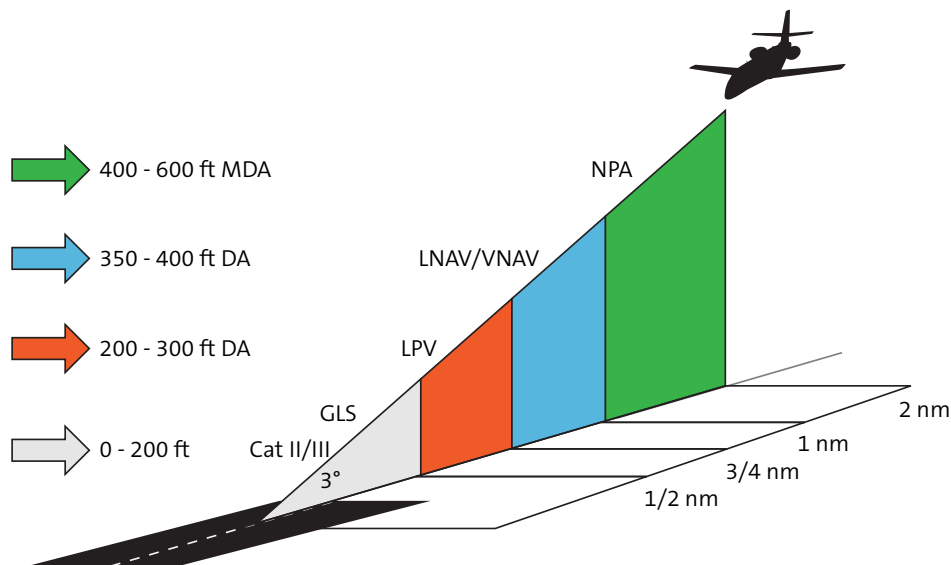
## REQUIREMENTS

The aircraft must have the Rockwell Collins Enhanced DBU-5000/5010E, PCD-3000, or CPAS, and GPS-4000S and WAAS capable TSO c190 antennas<sup>7</sup> installed to enable LPV. See Marketing Bulletins BRS-110091.7 on DBU-5000/5010E and BRS-110109.5 on GPS-4000S for part numbers and pricing.

## TERMS AND CONDITIONS

Unless otherwise noted, this program is valid for orders placed between January 1, 2016 and December 31, 2016, with delivery requested by April 1, 2017. Warranty period is two years for new equipment. Standard warranty does not apply to software.

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



Hawker 750/800XP/850XP/900XP LPV UPGRADE <sup>1,2,3,4</sup>

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

Type Number	Existing Part Number	New Part Number	QTY
OCM-3100 <sup>3</sup> or	822-1484-200	822-1484-227	2
OCM-3100 <sup>3</sup> or	822-1484-201	822-1484-228	2
OCM-3100 <sup>3</sup> or	822-1484-205	822-1484-229	2
OCM-3100 <sup>3</sup> or	822-1484-241	822-1484-248	2
OCM-3100 <sup>3</sup> or	822-1484-212	822-1484-252	2
MDT-3110 <sup>7</sup>	810-0042-090/091	810-0042-092	1
Hawker LPV STC <sup>5</sup>	Place order using STC #ST01547WI-D		1
Computer Based LPV Training (CBT) for Pilots <sup>4</sup>			1

2) The following items must be upgraded or exchanged, select 2A or 2B. To place an order for a Service Center upgrade, contact Mark Gibbs at 316-677-4808 or for an exchange upgrade, call Rental Exchange at 319-295-4361 or via e-mail at [rentalexchange@rockwellcollins.com](mailto:rentalexchange@rockwellcollins.com), and reference this Marketing bulletin.

2A) Service Bulletin for LPV Upgrade - for IOC & FMC (must purchase new OCM)

Type Number	Existing Part Number	New Part Number	Service Bulletin	QTY
IOC-3100	822-1361-101/102/103/104/105	822-1361-106	501, 505, 510, 516	2
FMC-6000 <sup>6,8</sup>	822-0868-044/051/069/083	822-0868-111	524, 532, 536	2

2B) Exchange for LPV Upgrade - for IOC & FMC (must purchase new OCM)

Type Number	Existing Part Number	New Part Number	Service Bulletin	QTY
IOC-3100	822-1361-101/102/103/104/105	822-1361-106	N/A	2
FMC-6000 <sup>6,8</sup>	822-0868-044/051/069/083	822-0868-111	N/A	2

REQUIRED EQUIPMENT FOR LPV UPGRADE

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

- GPS-4000S<sup>1</sup> (see Marketing Bulletin BRS-110109.5) and WAAS capable TSO c190 antennas
- Enhanced DBU-5000/5010E<sup>2</sup> (see Marketing Bulletin BRS-110091.7), 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-110109.5 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, PCD-3000 or CPAS installed to load FMS Nav Databases. See Marketing Bulletin BRS-110091.7 DBU-5000/5010E for part numbers and pricing. The installation of the 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](mailto: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. For Hawker 800XP aircraft with FMC-6000, part number 822-0868-044, please contact the Rockwell Collins Service Center at 316-677-4808, for upgrade information. The CDU-6200, part number 822-1485-032/102 must be upgraded to -038/108 via Service Bulletins #504 and #508. This upgrade is included in the cost of the FMC Service Bulletin.
7. MDT-3110 upgrade applies to Hawker 800XP with IFIS and all Hawker 750/850XP/900XP.
8. 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 319.295.5000.

Building trust every day.

Rockwell Collins delivers smart communication and aviation electronic solutions to 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.

For more information, contact:

Rockwell Collins  
400 Collins Road NE  
Cedar Rapids, Iowa 52498  
+1.319.295.4085  
email: [csmarketing@rockwellcollins.com](mailto:csmarketing@rockwellcollins.com)  
[www.rockwellcollins.com](http://www.rockwellcollins.com)

**Rockwell  
Collins**

Building trust every day