

SUBJECT: Allison DOC™ For PC-Service Tool V8.0.0

MODELS AFFECTED: All 1000, 2000, 3000, 4000 Product Families,  
5610, 6610, 8610, 9610 Series Transmissions,  
5000, 6000, 8000, 9000 Series Transmissions, and  
MT(B) 600, CL(B) T, V, HT(B) 700 Series Transmissions

AFFECTED SERIAL NUMBERS: All

### **Introduction:**

In January 2009, Allison Transmission is releasing Allison DOC™ For PC-Service Tool V8.0.0 which represents the latest PC diagnostic tool for use with 1000, 2000, 3000, 4000 Product Families, 5610, 6610, 8610, 9610 Series Transmissions, 5000, 6000, 8000, 9000 Series Transmissions, and electronically controlled MT(B) 600, CL(B)T, V, HT(B) 700 Series Transmissions. Allison Transmission recommends all Allison DOC™ For PC-Service Tool users upgrade to V8.0.0, as this latest version incorporates the new features and enhancements discussed below.

Allison DOC™ For PC-Service Tool V8.0.0 is only available on a CD which will automatically upgrade any previous version of the tool to V8.0.0. Current registered users of the program do not need to re-register the tool, nor re-enable the reprogramming function.

Allison DOC™ For PC-Service Tool V8.0.0 is considered a cumulative upgrade, which means that it includes all features and fixes available in any previously released updates, in addition to new enhancements.

New features, enhancements, essential tool status, purchasing information, PC platform requirements, and translator device support for Allison DOC™ For PC-Service Tool V8.0.0 are some of the topics described in this Service Information Letter (SIL).

### **Summary of New Features and Enhancements Included in Allison DOC™ For PC-Service Tool V8.0.0:**

- Updates to the User Guide
- Updates to the Advanced Help training videos
- Includes the TRANSHEALTH™ Report feature. This feature allows Allison DOC™ For PC-Service Tool V8.0.0 users (with Reprogramming section enabled) to generate reports for MY09 4th Generation Control Systems that do not have Prognostics active. The reports contain the following information:
  - Current status of transmission clutches (information read from TCM)
  - Summary of present Diagnostic Trouble Codes (information read from TCM)
  - Transmission service performed (technician's input)
  - Service recommendations/comments (technician's input and tool's condition assessment)
  - Vehicle/transmission information (technician's input)
  - Distributor/dealer information (technician's input)

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- Includes the TRANSHEALTH™ Monitor feature. This feature allows all Allison DOC™ For PC-Service Tool V8.0.0 users to obtain a general clutch condition indication for MY09 4th Generation Control Systems that do not have Prognostics active. The results of this test (Good: Green, Not Good: Red, Inconclusive: Gray) are based on the logic we currently have in TRANSHEALTH™ Reports.
- Updates the strip chart allowing the user to scale to a chosen item/data parameter or use custom scaling to specify a minimum and maximum y axis scale value.
- Adds custom data lists for 4th Generation Control Systems.
- Includes the latest available versions of every Allison Transmission troubleshooting manual supported by the service tool.
- Includes support for four additional languages: German, Portuguese, Simplified Chinese, Traditional Chinese.
  - The language selection occurs during the installation process
  - Translations include Allison DOC™ GUI and Allison 4th Generation Controls 3000/4000 Simplified Chinese troubleshooting manual

***NOTE: New and re-worded text strings recently added to this new version of Allison DOC™ For PC-Service Tool appear in English, due to normal timing discrepancies between the translations activities and new features supported by the Allison 4th Generation Controls system. Future versions of the tool will include translations for these strings.***

- Updates the Data Bus Viewer to support MY09 changes
    - Electronic Transmission Controller 1 (ETC1) - added Transmission TC Lock-Up Transition in Process parameter
    - Transmission Control 1 (TC1) - added Source Address 42 (Headway Controller) and added Transmission Mode 3 parameter
  - Includes new driver V2.14 for the Dearborn DPA4 and DPA4 Plus translator device - automatically installs.
- For more detailed information on these and other features and enhancements, refer to the Allison DOC™ User Guide located on the Help menu bar.

### **Essential Tool Status:**

Allison DOC™ For PC-Service Tool V8.0.0 has been classified as an **essential tool** for facilities authorized as Maintenance/Overhaul Service Outlets for one or more of the following transmission families/models:

- 1000, 2000, 3000, 4000 Product Families
- 5610, 6610, 8610, 9610 Series
- 5000, 6000, 8000, 9000 Series
- MT(B) 648, CL(B)T 700 Series
- V(R) 731(RH) Series
- HT(B) 741, HT 746, HT(B) 748, HT(B) 755(DR), HT(B) 755(CR) Series

Service outlets currently enrolled in the Essential Tool program have received the Essential Tool notification letter about the release of this new version of the service tool. While Allison DOC™ For PC-Service Tool V8.0.0 is an Essential Tool for MT(B) 600, V, and HT(B) 700 Series maintenance or overhaul dealers outlets, the installation CD will not be shipped under the sponsorship of the Essential Tool program subscription service to outlets only servicing (one or all) of the following: MT(B) 600, V, and HT(B) 700 Series transmissions.

### **Purchasing Information:**

Allison DOC™ For PC-Service Tool V8.0.0 is available on CD only and can be purchased through SPX Service Solutions using the following part numbers:

- New Users: J-44950-I
- Registered Users: J-44950-UPD8

For price and availability contact SPX Service Solutions. For contact information, refer to the Vendor Information section in this SIL.

### **Support Information and Updates:**

#### **Support Information:**

Allison DOC™ For PC-Service Tool is shipped with a comprehensive Help Topics section (available from the Help menu), User Guide (C:\Program Files\Allison Transmission\Allison DOC™ For PC-Service Tool\DOCS), and a laminated tri-fold Job Aid Card (JA3434EN). These additional resources provide the user with the necessary guidelines to install, use, and customize the software application.

The Technical Support Help Desk (US & Canada: 1-866-621-2128, Fax: 1-800-578-7375 or 1-586-578-7375; International: 1-507-455-7223 or 1-800-345-2233, Fax: 1-507-455-7063) is available to owners of Allison DOC™ For PC-Service Tool to address any topic or issues related to password activation, application and updates installation, and connectivity (such as translator devices, cables, diagnostic connectors or part numbers) to a vehicle.

Contact your company Information Technology (IT) department or refer to the documentation provided with your PC for operating system and other PC related issues. Contact your Allison Transmission Distributor or the Allison Technical Assistance Center (TAC) for transmission data interpretation.

Check the Allison Transmission Web site regularly for information that could clarify common questions/concerns relating to the different Allison Transmission diagnostic tools. Specifically, go to [www.allisontransmission.com](http://www.allisontransmission.com) | Service | Electronic Tools.

#### **Updates:**

The Allison DOC™ For PC-Service Tool application includes a feature allowing the user to check for, and download available updates by connecting (via the internet) to a tool update server. Due to the constant ECU/TCM calibration enhancements, it is important to regularly check for Allison DOC™ updates to ensure proper tool functionality. Updates can also be obtained from [www.allisontransmission.com](http://www.allisontransmission.com) | Service | Electronic Tools | Updates.

#### **Reprogramming Information:**

Allison DOC™ For PC-Service Tool is the only Allison authorized reprogramming tool. No other diagnostic tools shall be used to reprogram Allison Transmission controllers. Refer to SIL 28-TR-04\_Rev A, for detailed information on this topic.

For new users, or those who did not enable the Reprogramming function in an earlier version of Allison DOC™ For PC-Service Tool, the Allison DOC™ Diagnostic Tool Training program, or equivalent, must be completed to activate the Reprogramming function. Appropriate proof of certification needs to be submitted to SPX Service Solutions (along with the Serial Number provided on the installation CD case) to receive the corresponding authorization password, which will activate the Reprogramming function of the service tool. Registered owners of Allison DOC™ For PC-Service Tool who had previously enabled this function will not need to re-authorize it in Allison DOC™ For PC-Service Tool V8.0.0.

To learn more about the course availability, contact your local Allison Transmission distributor training facility or visit [www.allisontransmission.com](http://www.allisontransmission.com) | Service | Allison E-Learn (E-Learn is only visible under Service if user is logged onto the Allison Extranet).

**PC Platform Definition:**

Allison DOC™ For PC-Service Tool V8.0.0 has only been tested and validated on PCs with the following configurations:

- Microsoft® Windows XP® Professional, Windows 2000® (SP4 or later) Professional, and Windows Vista® Home Basic (or better)

***NOTE: To install and run Allison DOC™ For PC-Service Tool V8.0.0 on Windows Vista®, the user must have full administrator privileges and have the User Account Control feature turned OFF.***

- 20 GB Hard Drive, (40 GB or greater recommended)
- 600 MB free hard drive space required to install the program (after software installation, the operating system requires sufficient free hard disk space to run the program)
- 1 GHz (or greater) 32-bit (x86) or 64-bit (x64) processor
- 512MB of RAM system memory (1 GB recommended)
- One available USB port-USB 1.1 (USB 2.0 recommended)
- A serial port is required if connecting legacy CEC1 controllers, or if using the J-44652-A - SPX J1850-VPW (Class 2) translator device
- 16x CD-ROM, (48x or greater recommended)
- Full administrative privileges are required to install, use, and update the Allison DOC™ For PC-Service Tool
- Internet connection capability (Internet Explorer® 5.0.1 or greater) (NOTE: A broadband internet connection is recommended for receiving updates and file downloads)
- Adobe® Acrobat Reader® is installed by default

Error messages, sudden disconnections, and poor performance are some of the results users will experience if Allison DOC™ For PC-Service Tool V8.0.0 is installed on PCs that do not meet one or more of the above specifications.

### **Translator Device Support:**

Allison Transmission recommends using the Dearborn DPA4 USB / DPA4 Plus USB as the translator device for Allison DOC™ For PC-Service Tool V8.0.0.



#### **NOTES:**

- Driver DR121032 V2.14 (or later); Firmware: DPA4 USB - V37.146 (or later); DPA4 Plus USB - V60.006 (or later). If using Windows® Vista, DR121032 V2.14 (or later) is required.
- Allison DOC™ For PC-Service Tool V8.0.0 automatically installs V2.14 of the DR121032 drivers. However, it is recommended that you go to [www.allisontransmission.com](http://www.allisontransmission.com) to obtain information on the latest version of the DR121032 drivers for the DPA4 USB / DPA4 Plus USB. The DR121032 drivers (available on the J-47943-A DPA4 Plus installation CD) will not work with any of the Allison Transmission service tools.
- Download Quick Reference Guide for this device from [www.allisontransmission.com](http://www.allisontransmission.com) | Service | Electronic Tools | Support. This document contains detailed information on how to install and use the drivers, basic troubleshooting steps, and other relevant information.
- Supported Communication Protocols for DPA4 USB are J1939, J1708/J1587, and GMLAN.
- Supported Communication Protocols for DPA4 Plus USB are J1939, J1708/J1587, GMLAN and J1850.
- For availability contact SPX Service Solutions, P/N (Kit) J-47943-A.
- The J-47949-A GMLAN cable is required for GMLAN and J1850 communications. This cable is not included in the DPA4 USB / DPA4 Plus USB package, but is available for purchase from SPX Service Solutions.

Allison DOC™ For PC-Service Tool V8.0.0 was also tested and validated with the following translator devices:

- **NEXIQ USB-Link™ / NEXIQ RoHS USB-Link™**

The NEXIQ USB-Link™ was superseded by the NEXIQ RoHS USB-Link™ in August 2008. The NEXIQ RoHS USB-Link™ has a RoHS and Bluetooth logo on the front of the device.



#### **NOTES:**

- Driver V5.4 (or later). This driver version is required if using Windows® Vista.
- The NEXIQ USB-Link™ requires the user to manually install the driver set which can be found either on the Allison DOC™ For PC-Service Tool V8.0.0 installation CD, under the NEXIQ USB-Link folder, or at [www.nexiq.com](http://www.nexiq.com) | Support | Download section.
- Supported Communication Protocols for NEXIQ USB-Link™ are J1708/J1587, J1939, GMLAN, and J1850.
- Supported Communication Protocols for NEXIQ RoHS USB-Link™ are J1708/J1587, J1939, GMLAN, J1850, and CEC1.
- For availability contact NEXIQ Technologies, P/N (Kit) 125032, SPX Service Solutions P/N (Kit) J-48624, or Canton Parts Distribution Center, P/N (Kit) 125032.
- The 'OBDII/16-pin connector to a DB15 (socket)' J1962/A cable (Note: Nexiq P/N 443013 is now 448013) is required to connect the NEXIQ USB-Link™ / NEXIQ RoHS USB-Link™ device to the vehicle J1850 Protocol diagnostic connector. This cable can be purchased from NEXIQ Technologies.
- The J-47949-A GMLAN cable or the OBDII/16-pin connector to a DB15 (socket) J1962/A cable is required for GMLAN communications.

**NOTE: NEXIQ Technologies is offering the Allison Service Channel a special pricing and ordering process for the NEXIQ RoHS USB-Link. The NEXIQ RoHS USB-Link™ Special Product Offer form contains all of the details on this limited offer and can be found on the Allison Transmission Extranet: Service | Allison TCM Reflash (under the Downloads section).**

- **NEXIQ MagiKey® Parallel Port Data Module (PDM)**



**NOTES:**

- Driver V1.0 Universal (or later). This translator device might not work on Windows® Vista. Contact NEXIQ Technologies for more information.
- The NEXIQ MagiKey® PDM requires the user to manually install the driver set which can be found either on the Allison DOC™ For PC-Service Tool V8.0.0 installation CD, under the NEXIQ Universal Drivers folder, or at [www.nexiq.com](http://www.nexiq.com) | Support | Download section.
- Supported Communication Protocols are J1708/J1587 and J1939.
- For availability contact SPX Service Solutions, P/N (Kit) J-42660 or NEXIQ Technologies, P/N (Kit) 126032.

- **Noregon Systems Data Link Adapter (DLA)**



**NOTES:**

- Drivers:
  - S/P DLA V2.2.6 (or later)
  - USB DLA V1.7.0.0 (or later)
- The DLA requires the user to manually install the driver set which can be found on the Allison DOC™ For PC-Service Tool V8.0.0 installation CD:
  - Under the Noregon DLA V2.2.6 folder for the S/P DLA translator device.
  - Under the Noregon USB DLA V1.7.0.0 folder for the USB DLA translator device.
- Supported Communication Protocols are J1708/J1587 and J1939.
- For availability contact Noregon Systems, Item (Kit) Data Link Adapter Kit.

- **SPX Adapter J1850-VPW**



**NOTES:**

- The SPX J1850-VPW only supports J1850 communication protocol, and therefore it is only suitable for vehicles equipped with a J1850 communication link, such as Pre-A4GC GM Pickup Trucks (i.e. Chevrolet Silverado HD or GMC Sierra HD pickups), and Pre-A4GC GMT560.
- Allison DOC™ For PC-Service Tool V8.0.0 automatically installs the drivers for this device.
- The SPX J1850 VPW drivers do not support Windows® Vista. Users with PCs running Windows Vista® will need to use the Dearborn DPA4 Plus or NEXIQ USB-Link™ / NEXIQ RoHS USB-Link™ to communicate via J1850.
- Supported Communication Protocol is J1850.
- For users with PCs that do not have serial ports, a USB-To-Serial cable has been approved for use with this adapter. This USB-To-Serial cable can be purchased at RadioShack® (Model & Catalog #: 26-183). For more information, refer to the "Can I use the SPX J1850-vpw translator device with a USB-To Serial cable?" FAQ, located on our Web site, [www.allisontransmission.com](http://www.allisontransmission.com) | Service | Electronic Tools | Support -> FAQ.

- Refer to SIL 14-1K2K-06 for specific information on when this translator device should be used.
- If the user requires an adapter that communicates via J1850 and has not purchased the SPX J1850 VPW translator device yet, it is recommended they purchase the Dearborn DPA4 Plus or Nexiq RoHS USB-Link, instead. The SPX J1850 VPW has some technical issues (refer to SIL 14-1K2K-06) and the Dearborn DPA4 Plus and Nexiq USB-Link, in addition to supporting J1850, also support J1939, GMLAN and J1708/J1587, and offer some other advantages.

- **Softing CANCard2 (PCMCIA), Softing CAN-AC2-PCI (PCI bus), and Softing CANCard2 (USB)**



**NOTES:**

- In addition to the Softing driver that comes with the Softing adapter, the user must install the RP1210A-compliant driver to make any of these Softing CAN devices work with Allison DOC™ For PC-Service Tool V8.0.0. The RP1210A-compliant drivers are automatically installed with Allison DOC™ For PC-Service Tool V8.0.0 and can also be obtained from the Allison Transmission Extranet: Service | Allison TCM Reflash -> Softing CANCard2 (PCMCIA) Devices Drivers (For DOC USE ONLY).

**NOTE:** *To make the service tool work with the Softing translator devices, some PC systems with Windows® XP Professional require the user to manually find the "Cancard.dll" file, and copy it into the following two directories:*

1. C:\WINNT
2. C:\WINNT\system32

- Supported Communication Protocol is J1939.
- Only use Softing CAN devices on vehicles/transmission/TCM systems that communicate to the Allison DOC™ For PC-Service Tool through the J1939 data link. This translator device cannot be used for J1708/J1587, GMLAN, or J1850 communications. Consequently, these Softing CAN devices can only be used to connect Allison DOC™ For PC-Service Tool V8.0.0 with Allison 4th Generation Controls systems, and/or 1000/2000 (pre-Allison 4th Generation Controls) via J1939.
- A 'Deutsch 9-pin connector (SAE J1939-13) to a DB9 (socket)' cable is required to connect the Softing CAN devices to the vehicle diagnostic connector. This cable can be purchased from SPX Service Solutions, P/N J-46710.
- For availability contact Noregon Systems, P/N N-00001 or Softing North America, Inc.

**Vendor Information**

<p><b>SPX Service Solutions</b> 28635 Mound Road Warren, MI 48092 Phone: US and Canada: 1-866-621-2128 International: 1-507-455-7223 or 1-800-345-2233 Fax: US and Canada: 1-800-578-7375 or 1-586-578-7375 International: 1-507-455-7063</p>	<p><b>Snap-On OEM Group NEXIQ Technologies Products.</b> 2950 Waterview Rochester Hills, MI 48309 Phone: (248) 293-8200 or 1-800-639-6774 Fax: (248) 293-8211</p>
<p><b>SGI, Inc.</b> 8350 Allison Avenue Indianapolis, IN 46268 Phone: 1-888-666-5799 Fax: (317) 471-4996 E-mail: <a href="mailto:atd@sgi-net.com">atd@sgi-net.com</a></p>	<p><b>Softing North America, Inc.</b> 29 Water Street Newburyport, MA 01950 Phone: (978) 499-9650 Fax: (978) 499-9654 E-mail: <a href="mailto:info.usa@softing.com">info.usa@softing.com</a> <a href="http://www.softing.us">www.softing.us</a></p>
<p><b>Noregon Systems</b> 100 N. Main Street, Suite 2200 Winston-Salem, NC 27101 Phone: (336) 768-4337 Fax: (336) 760-2540 E-Mail: <a href="mailto:sales@noregon.com">sales@noregon.com</a> <a href="http://www.Noregon.com">www.Noregon.com</a></p>	<p><b>Canton Parts Distribution Center</b> 515 11<sup>th</sup> Street, S.E. Canton, OH 44707 Phone: (330) 430-4384</p>

**Acronyms List**

A4GC:	Allison 4th Generation Controls
CAN:	Controller Area Network
CD:	Compact Disc
CEC:	Commercial Electronic Controls for On-Highway and Off-Highway Transmission (formerly ATEC)
DOC:	Diagnostic Optimized Connection
DPA:	Dearborn Protocol Adapter
ECU:	Electronic Control Unit
GM:	General Motors
GMLAN:	General Motors proprietary communication protocol
GUI:	Graphical User Interface
MY:	Model Year
PC:	Personal Computer
P/N:	Part Number
ROM:	Read Only Memory
SIL:	Service Information Letter
S/P:	Serial/Parallel
TCM:	Transmission Control Module
USB:	Universal Serial Bus
V:	Version