# DA-ST512

## (ARC Systems Application)

## User's Manual

# ARC Systems Application

This application allows the operator to perform calibration, diagnostics and repair  procedures on the vehicle's ARC (Active Roll Control) systems.

# ARC Systems Process

The following ARC application shown below are available on the ST-512
On starting the application the menu displays five options  and they are  -

**HST     (Hydraulic Self Test)**         - This application tests operation of the ARC system by leaning the vehicle in each direction.  This will check Hydraulic pipe-work , Pressure Control valve and ARC Electrical /sensors faults.

**Auto Bleed**   - This application is designed to remove air from the hydraulic fluid by driving the Safety valve , Pressure, valve  and Pressure, relief valve . As fluid is displaced and pressurized air will be dissolved into the fluid and moved through the system.

To achieve (attempt) maximum displacement and dispersion of the air the pressure has both high and low frequency cyclic components. The low frequency is used to displace large volumes of fluid and the high frequencies to help dislodge trapped air into the main body of the oil. With large displacement in the secondary circuit and hence the actuators and connecting pipe work, any trapped air should be forced into the valve
block where it will join the flow in the primary circuit and return via the return line to the reservoir, where it can degas at atmospheric pressure.

**ODST   (On Demand Self Test)**     - This routine activates each output in turn, and monitors electrical connections. The routine takes around 30 seconds to complete but may be terminated immediately if the ignition is switched off.

**ARC Adaptive clear  -**  This application causes the ECU to set to zero the adaptive data that  has been learnt by the ECU during previous journeys and will be necessary if Valve block or Pressure transducer has been replaced.

**ARC Lateral Accelerometer calibration**  - This application calibrates the  upper and lower accelerometers. They are both subject to alignment and offset errors in their zero 'g' position.

⚠️ **Please ensure the vehicle is in a safe working mode prior to exercising the following procedure.**

- The trigger is for the operator to switch on the vehicle ignition.  If this is not currently on, then you will be asked to turn it on and to press '**OK**' when this has been done.

- On detecting the ignition state, the process starts to run and the message '**Please wait**' is displayed on the screen. The process will commence in approximately 10 seconds.

- Once the application has successfully completed and all instructions followed correctly a message "**PROCEDURE COMPLETE**" will be displayed. Pressing the '**OK**' button to return to the main application menu.

  **Note:**  If the process fails for whatever reason, a failure message will be displayed. At this time the process should be repeated ensuring that all conditions for the process have been met.

- To abort the procedure press the '**X**' button on the keypad at any time.

⚠️ When running these applications  ensure

  • All vehicle doors are closed
  • No obstruction are around or underneath the vehicle
  • No occupants in vehicle

# ARC Systems Model Year Updates

The software associated with the ARC Systems application is updated periodically to increase it's coverage for new JLR vehicles and model year updates. You can check for these updates by connecting your device to a PC via the supplied USB cable, and launching the DA App Hub.

This tool will connect to the Diagnostic Associates file server and check to see if a newer version of the ARC Systems applications is available to download.

# ARC Systems Supported JLR Vehicles

The following JLR vehicles and associated model years are supported by the ARC Systems application at the time this user manual was produced. To obtain an up-to-date version of this table you should visit the Diagnostic Associates website.

| Jaguar & Land Rover Vehicle Coverage | | | | | | | |
|---|---|---|---|---|---|---|---|
| ARC Systems | | | | | | | |
| Vehicle / Model Year | MY10 | MY11 | MY12 | MY13 | MY14 | MY15 | MY16 |
| Defender | - | - | - | - | - | - | - |
| Discovery /LR3/LR4 | - | - | - | - | - | - | - |
| Range Rover Sport | Yes* | Yes* | Yes* | Yes* | Yes | Yes | Yes |
| Range Rover | - | - | - | Yes | Yes | Yes | Yes |
| Freelander /LR2 | - | - | - | - | - | - | - |
| Evoque | - | - | - | - | - | - | - |
| Discovery Sport | - | - | - | - | - | - | - |
| XJ - New | - | - | - | - | - | - | - |
| XJ - Old | - | - | - | - | - | - | - |
| XK - New | - | - | - | - | - | - | - |
| XK - Old | - | - | - | - | - | - | - |
| XF | - | - | - | - | - | - | - |
| F-Type | - | - | - | - | - | - | - |
| S-Type | - | - | - | - | - | - | - |
| X-Type | - | - | - | - | - | - | - |

(Yes) - Covered for MY : (Yes*) - Auto bleed and ODST not supported : (-) - N/A

Note - ARC is an option fitment on Range Rover Sport