



FleetPlus

V 2.0

USER GUIDE



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Introduction



With **FleetPlus** you can use a standard personal computer to read **EB+** Fleet log data .

The PC Interface pod is the hardware to allow communications between a standard PC and a number of diagnostic interfaces. Connections to the PC interface are done through a 9 to 25 way cable connecting to the RS232 port on the computer and a additional cable connecting the diagnostic interface pod to the ECU. A USB to Serial converter can be used - recommended type 'Roline' (RS 450-3238).

The vehicle data is stored inside the **EB+** ECU. It will remain intact even after electrical power is removed from the **EB+** system.

NB: EB+ Interface Pod is different to the Interface Pod as used on MODAL / MODULAR ABS systems.

Minimum system specification

The minimum PC or Laptop specification to run the **DIAG+** package is as follows:

- ◆ Processor - 486 or above
- RAM - 8 Megabytes
 (16 recommended)
- Hard Drive - 20 Megabytes
- Monitor - 640 x 480 VGA Minimum

- ◆ MS Windows 95, 98, ME, XP, NT and 2000

In addition to the above, a CD drive is required for software installation and COM serial port required to connect to the interface pod.

The hardware

FleetPlus utilises the DIAG+ Interface kit which comprises of the PC Interface pod, together with its connecting cables.

The Interface pod is provided with a multi function LED to confirm correct function of the unit as follows:

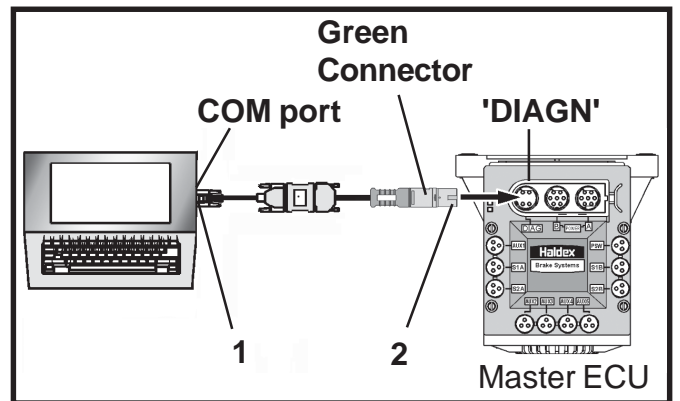
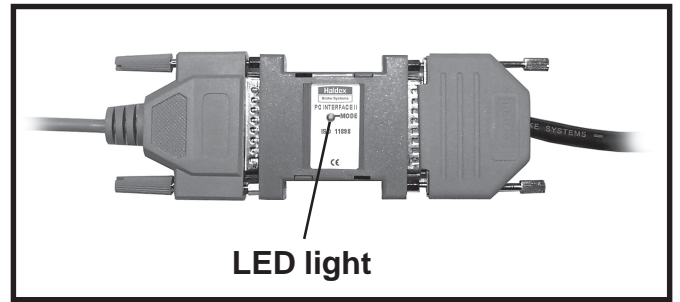
Red: To indicate that 24V power is connected to the **EB+** ECU.

Green: To indicate data is being transmitted.

NB: During connection the Red and Green alternate.

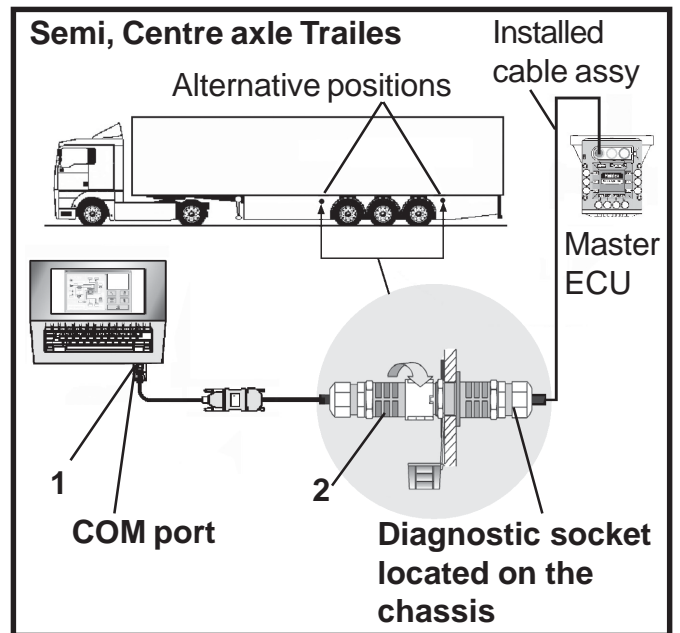
Installation Option 1

Gently push the plug '1' into the COM port socket on the back of your PC or Laptop and tighten the screws. Push the GREEN plug '2' into the **EB+** ECU socket marked 'DIAG'.



Installation Option 2

Gently push the plug '1' into the COM port socket on the back of your PC or Laptop and tighten the screws. Push plug '2' into the **EB+ Diagnostic socket** located on the chassis.



Power the **EB+** system from an external 24V supply and the LED light on the interface pod should now be on, coloured red. If it is not, please check your connections and try again.

The software

NB: It is possible to install the software without connecting the Interface hardware although no data will be available.

Switch on your machine and enter into the desktop mode of your PC. Insert the **FleetPlus** CD into your PC. Follow the on screen instructions to install the program in the relevant Language.

NB: For FleetPlus to work, your **EB+** system **MUST** be connected and powered by an ISO7638 power supply.

The files are installed in the PC folder :

C:\Program Files\Haldex\FleetPlus

Also Sub folders are installed as follows :

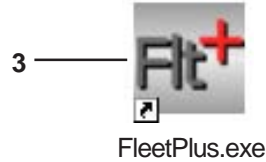
C:\Program Files\Haldex\FleetPlus\Vehicle Data Files

Installation is now complete.

Please keep your installation software in a safe place in case you need to reinstall at any point.

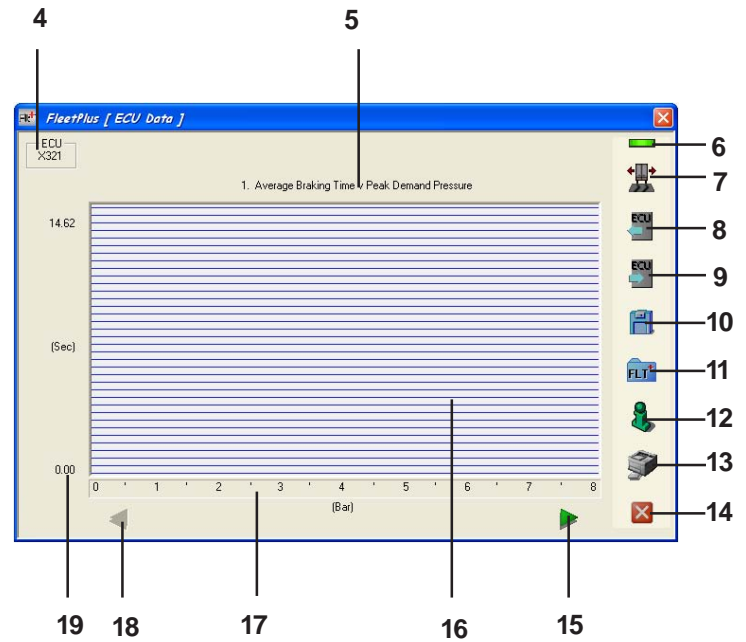
Initial entry

Enter into the **FleetPlus** program by the short-cut icon '3' created on your desktop. The following 'Initial' screen should appear.

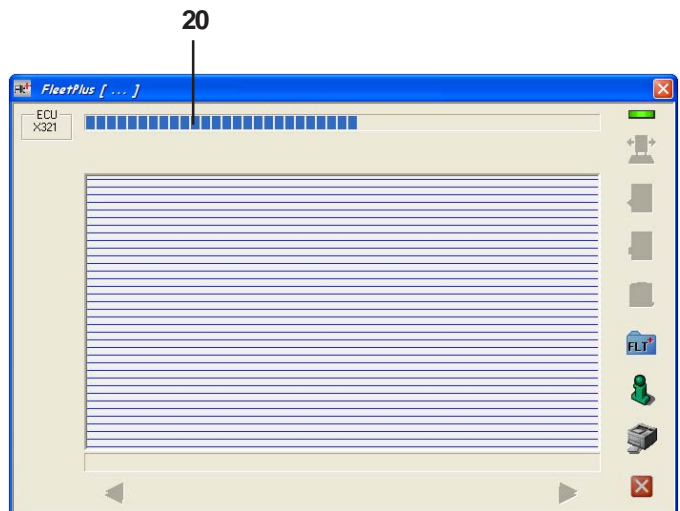


Understanding the initial screen display

- 4 - EB+ ECU Version number
- 5 - Histogram Title
- 6 - PC connection port indication
- 7 - View and print Stability data
- 8 - Reload Data from ECU
- 9 - Write to ECU
- 10 - Save to Dir: C:\Program Files\Haldex\FleetPlus\Vehicle Data Files
- 11 - Load from Dir: C:\Program Files\Haldex\FleetPlus\Vehicle Data Files
- 12 - Information about this Graph
- 13 - Preview/Print this Graph
- 14 - Close the Program
- 15 - View Next Graph
- 16 - Graph Display
- 17 - Horizontal Graph Scale
- 18 - View Previous Graph
- 19 - Vertical Graph Scale

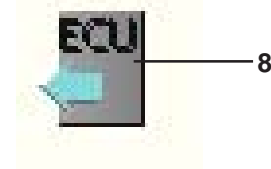


With the **EB+ ECU powered up** and connected, on entering into the **FleetPlus** program the following 'initial' screen should appear. A progress bar appears to show that data is being extracted from the EB+ ECU.



Further Options of opening data

Option 1 - ECU powered and connected
By selecting button '8'

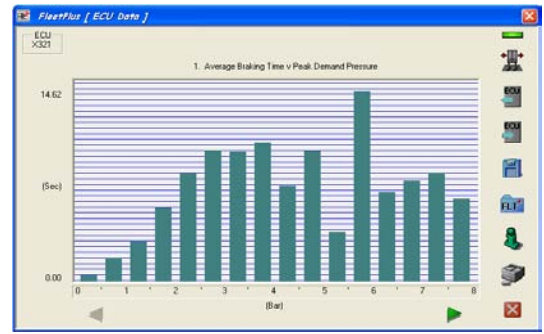


Option 2 - ECU not connected
By selecting button '11' a stored file can be opened.

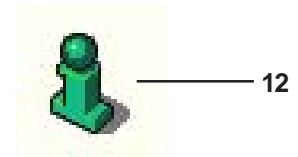
The following screen will appear to select a file.



When the EB+ ECU has acquired data the following screen will appear. The data displayed in a form of graphs (1 to 10).



Selecting button '12' further information is displayed in a form of an explanation of the current graph.



The following screen will appear.

Display Information

Graph

The duration of each brake application is recorded against the peak demand pressure. The data shows a graph of average time for a brake application in each of the 0.5 Bar pressure intervals,

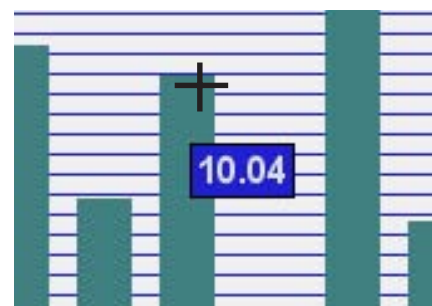
Interim Values

No Interim Data for this graph	...
...	...
...	...
...	...

On graphs 6 to 8 further information is displayed as shown.

Interim Values	
Number of 500km intervals	30
Km(s) in current interval (0..500)	147
Brake Apps in current interval	27
SLP Brake Apps in current interval	0

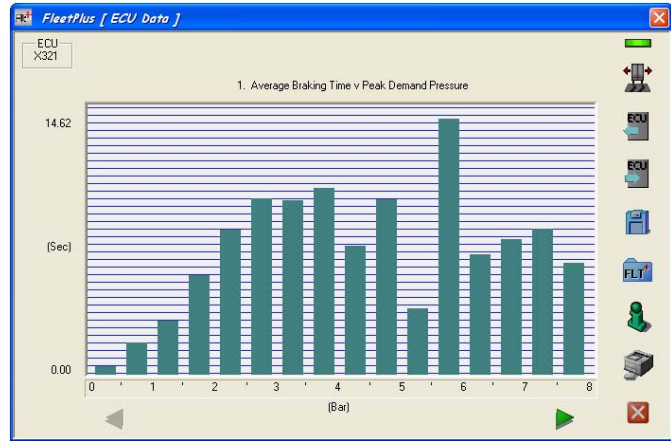
On any graph displayed a more accurate value can be obtained of a particular recording by positioning the cursor on the appropriate bar. A value will be displayed relating to the vertical scale of the graph.



Data Graphs

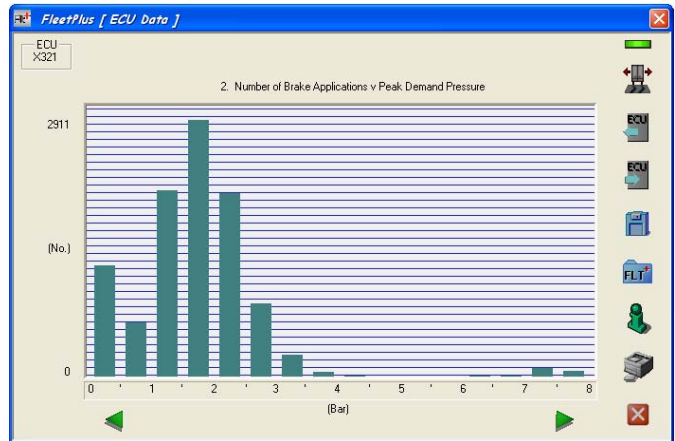
Graph No. 1

The duration of each brake application is recorded against the peak demand pressure. The data shows a graph of average time for a brake application in each of the 0.5 Bar pressure intervals, from 0 to 8 Bar.



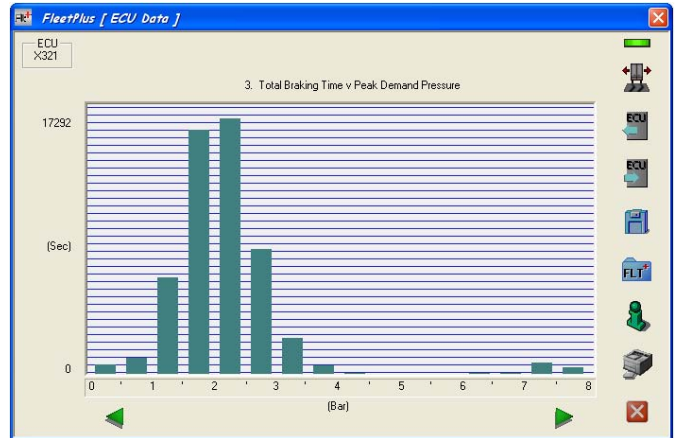
Graph No. 2

For each brake application, the peak demand pressure during the application is recorded. The data shows a graph of brake applications for 0.5 Bar pressure intervals, from 0 to 8 Bar.



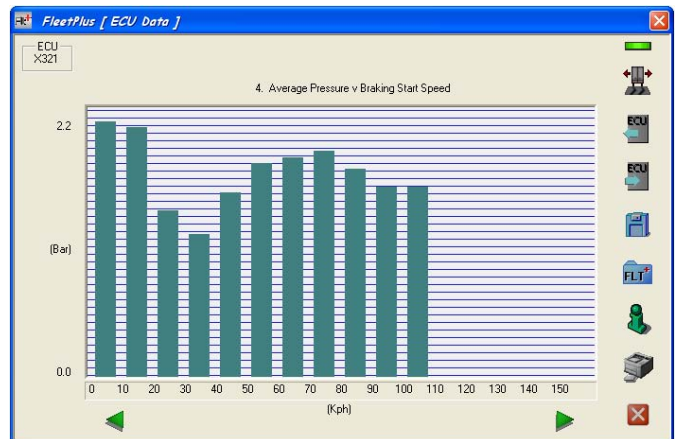
Graph No. 3

The duration of each brake application is measured and used to update the total braking time for the peak demand pressure in the brake application. The data shows a graph of the cumulative braking time for the 0.5 Bar pressure intervals, from 0 to 8 Bar.



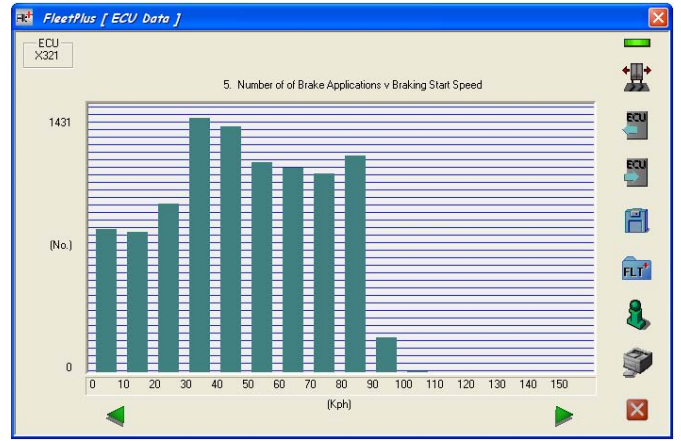
Graph No. 4

The peak demand pressure is monitored during each brake application and is then recorded against the speed measured at the start of the brake application. The data shows a graph of average pressure for brake application grouped into 10 kph intervals, from 0 to 160 kph.



Graph No. 5

For each brake application, the speed at the start of the brake application is recorded. The data shows a graph of brake application grouped into 10 kph intervals, from 0 to 160 kph.

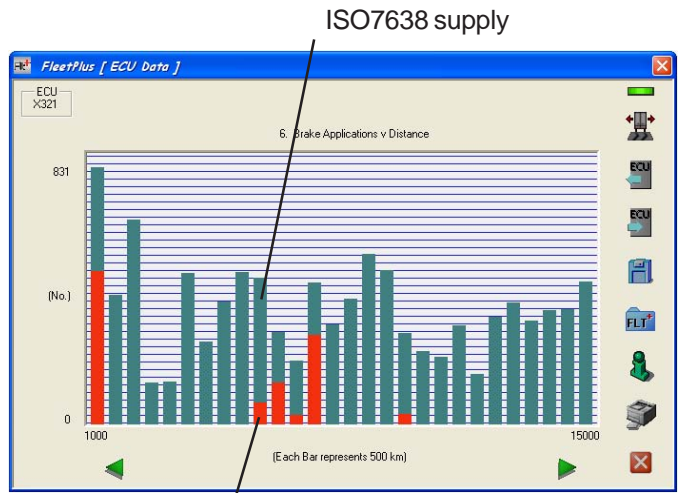


Graph No. 6

The data shows the total number of brake applications that occurred in groups of 500km interval, and the number of those which occurred when the trailer was powered only by the 24N supply. (Total graph range is 14000km)

Click on button for further information:

Interim Values	
Number of 500km intervals	30
Km(s) in current interval (0..500)	147
Brake Apps in current interval	27
SLP Brake Apps in current interval	0

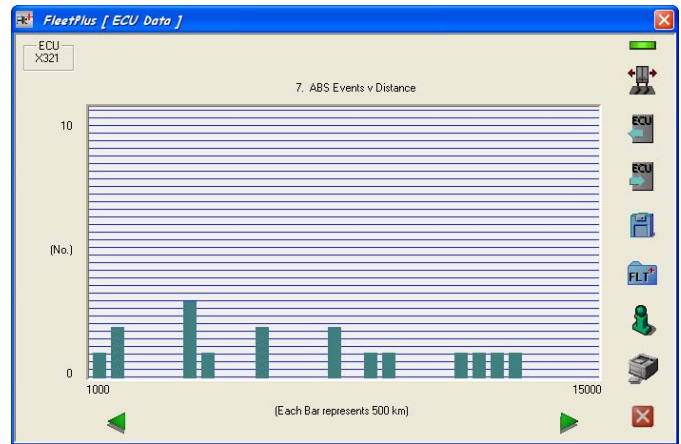


Graph No. 7

The data shows the total number of ABS events that have occurred, grouped into 500km interval. (Total graph range is 14000km)

Click on button for further information:

Interim Values	
Number of 500km intervals	30
Km(s) in current interval (0..500)	147
ABS Events in current interval	0
...	...

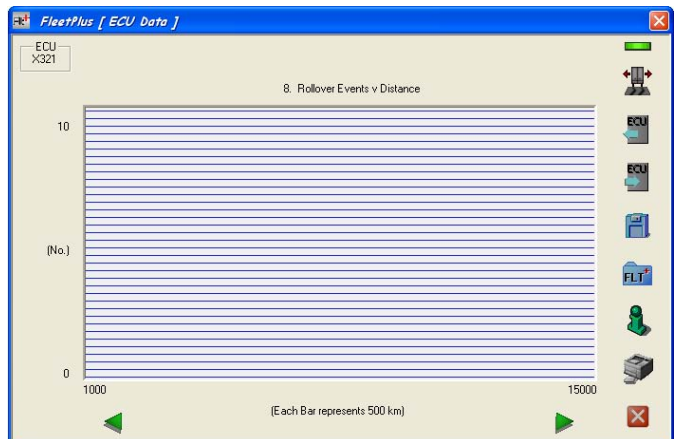


Graph No. 8

The data shows the total number of Rollover events that occurred, grouped into 500km interval. (Total graph range is 14000km)

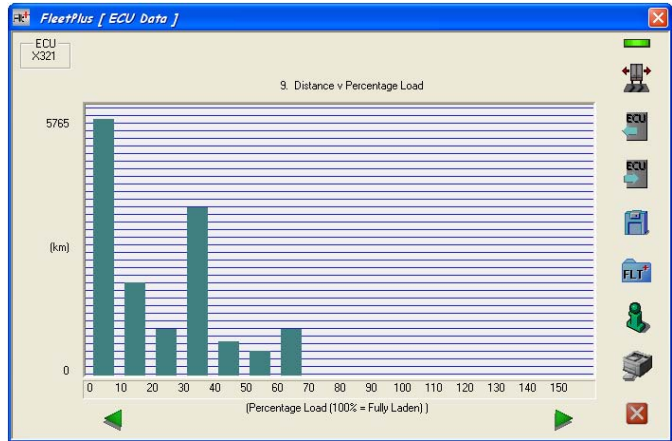
Click on button for further information:

Interim Values	
Number of 500km intervals	30
Km(s) in current interval (0..500)	147
Rollover Events in current interval	0
...	...



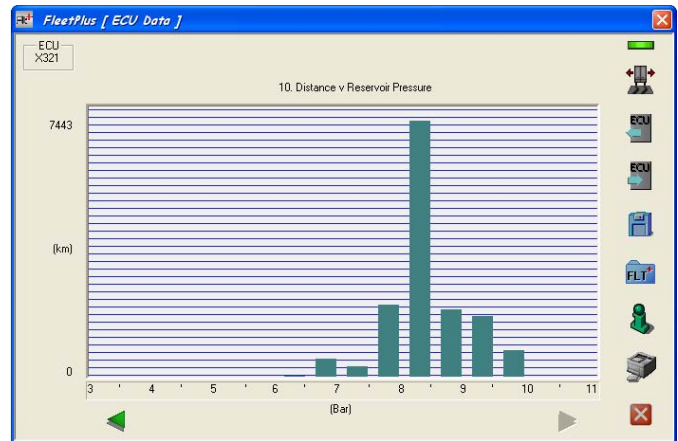
Graph No. 9

The data shows how the vehicle load has changed with distance. At the end of each Km travelled, the suspension pressure is recorded as a percentage (0% = Unladen, 100% = Fully Laden). In this way a 'Load Profile' is built up.



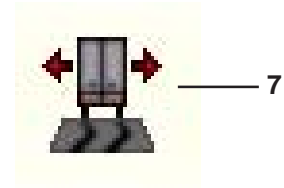
Graph No. 10

The data shows how the reservoir pressure has changed with distance. At the end of each Km travelled, the reservoir pressure in 0.5 Bar steps is recorded.



Stability data

By selecting button '7' the following screen appears.



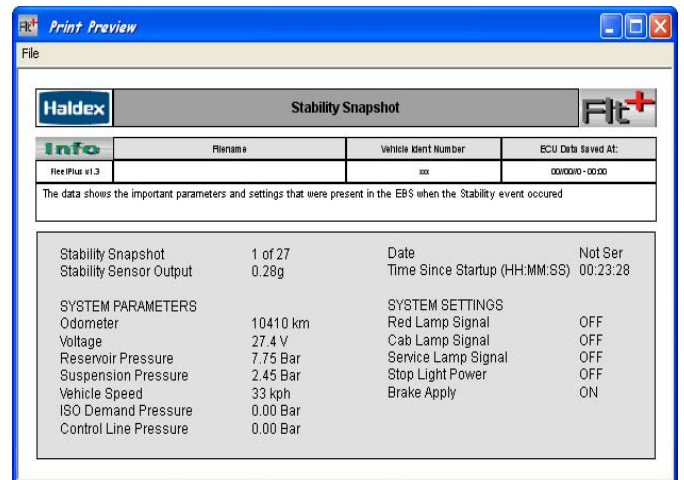
This dialog shows the total number of stability events available to view. The green arrows allow the user to navigate through the list. When the user clicks on the highlighted event another dialog appears with all the relevant data for that event.



The data shows the important parameters and settings that were present in the EBS when the stability events occurred.

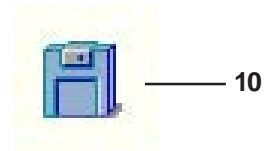
The stability sensor output is the acceleration force experienced by the trailer measured in g force i.e. $1\text{ g} = 9.8\text{m/sec}^2$ (32ft/sec²)

Red lamp signal, Cab lamp signal, Service lamp signal, Stop lamp power, Brake apply are signal requests and system information.



Stability data

By selecting button '10' the following screen will appear.



The file name is compiled from the following:

FleetPlus xxx = the VIN information of the vehicle

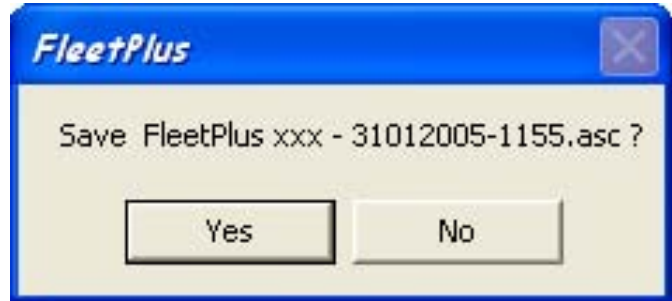
N.B. This is recorded only if a EB+ Info centre is installed.

If the VIN is not recorded in the EB+ ECU, 'xxx' is inserted in the file name. Other wise the 17-digit VIN is inserted.

31012005 = is the day, month and year (from PC)

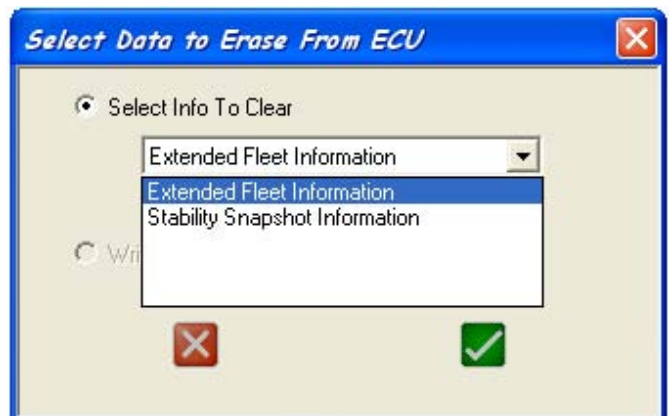
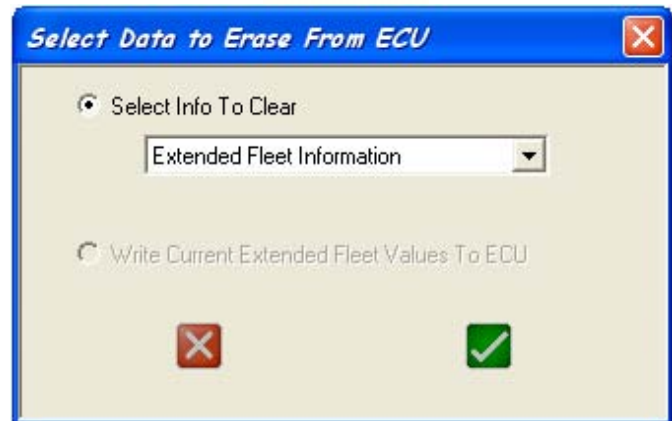
1155 = is time hour, minutes (from PC)

N.B. The file type can only be read via the FleetPlus program



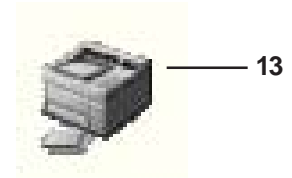
Erasing data

By selecting button '9' the following screen will appear.



Printing graph data

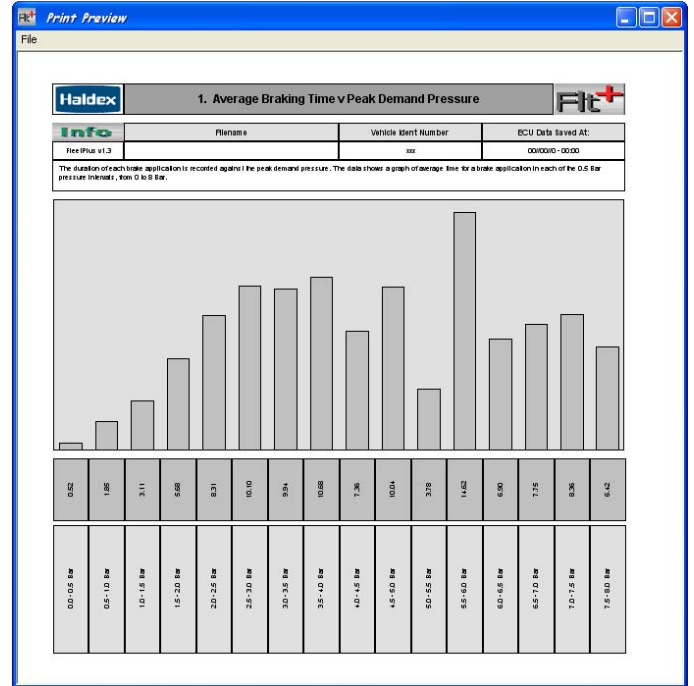
By selecting button '13' the current displayed graph can be printed.



The following screen will appear.

To print document choose: File then Print

N.B. On the PC screen the image is cropped to display the bar graph.



AUSTRIA

Haldex Wien Ges.m.b.H

Vienna
Tel: + 43 865 16 40
Fax: + 43 865 16 40 27
e-mail: office@baeder-haldex.at

BENELUX

Haldex N.V.

Balegem (Oosterzele)
Tel: + 32 9 3639 000
Fax: + 32 9 3639 009
e-mail: info.hbe@haldex.com

BRAZIL

Haldex do Brazil

São Paulo
Tel: + 55 11 5034 49 99
Fax: + 55 11 5034 95 15
e-mail: info@hbr.haldex.com

CHINA

Haldex International Trading Co. Ltd.

Shanghai
Tel: + 86 21 6289 4469
Fax: + 86 21 6279 0554
e-mail: haldex@public.sta.et.cn

FRANCE

Haldex Europe S.A.S

Weyersheim (Strasbourg)
Tel: + 333 88 68 22 00
Fax: + 333 88 68 22 09
e-mail: info@hfr.haldex.com

GERMANY

Haldex Brake Products G.m.b.H

Denkendorf (Stuttgart)
Tel: + 49 711 93 49 17 0
Fax: + 49 711 93 49 17 40
e-mail: info@hde.haldex.com

Haldex Brake Products G.m.b.H

Heidelberg
Tel: + 49 6221 70 30
Fax: + 49 6221 70 34 00
e-mail: info@hbpde.haldex.com

GREAT BRITAIN

Haldex Ltd.

Newton Aycliffe
Tel: + 44 1 325 310 110
Fax: + 44 1 325 311 834
e-mail: aycliffe.info@haldex.com

Haldex Brake Products Ltd.

Redditch
Tel: + 44 1527 499 499
Fax: + 44 1527 499 500
e-mail: redditch.info@haldex.com



The Haldex Group is a global supplier of proprietary products for trucks, cars and industrial vehicles, with special emphasis on performance and safety. The Group is organized in Divisions which focus on their respective product niche:

Haldex Brake Systems supplies ABS and brake components for heavy vehicle air brakes.

Haldex Barnes Hydraulics supplies gear pumps and hydraulic systems for power steering and lifting functions on industrial vehicles and trucks.

Haldex Garphyttan Wire supplies specially steel-alloyed wire products mainly for applications in combustion engines.

Haldex Traction Systems supplies 4WD systems for cars and trucks.

Sales companies are established in Europe, North and South America and Asia. Production takes place in 9 factories in USA, 9 factories in Europe and 1 joint venture in India.

The Haldex Group is listed on the Stockholm Stock Exchange.

ITALY

Haldex Italia Srl.

Muggiò
Tel: + 39 039 278 23 50
Fax: + 39 039 79 65 25
e-mail: info@hit.haldex.com

POLAND

Haldex Sp z o.o.

Praszka
Tel: + 48 34 350 11 00
Fax: + 48 34 350 11 11
e-mail: info@haldex.net.pl

SOUTH KOREA

Haldex Korea Ltd.

Seoul
Tel: + 82 2 2636 7545
Fax: + 82 2 2636 7548
e-mail: haldexk@mail.hkr.haldex.com

SPAIN

Haldex España S.A.

Parets del Valles (Barcelona)
Tel: + 34 93 573 1030
Fax: + 34 93 573 0728
e-mail: haldexsa_esp@passwordsta.es

SWEDEN

Haldex Brake Products AB

Landskrona
Tel: + 46 418 47 6000
Fax: + 46 418 47 6001
e-mail: info@hbps.se

USA

Haldex Brake Products Corp.

Kansas City
Tel: + 1 816 891 2470
Fax: + 1 816 891 9447
e-mail: info@hbpus.haldex.com

Company Vision

We use our demonstrated competence to provide innovative components, systems and service for trucks, trailers and buses, that lower life cycle costs and improve vehicle safety. Haldex wants to become the first choice business partner of commercial vehicle manufacturers world wide in the areas of braking and suspension control systems with special emphasis on heavy commercial vehicles.

Total Support

A uniquely wide range of services is available from Haldex. These include expert consultancy for braking and suspension development, brake calculations, type approvals and application engineering.

The aim is accurate specification for manufactures and low cost of owner ship for the operator.

Full aftermarket support includes a Worldwide parts distribution and service network, on-line technical advice, field visits and installation/ maintenance training held on-site or at Haldex facilities.

Research and Development

Continual, heavy investment in Research and Development is carried out in response to ever increasing commercial, legislative, environmental, performance and technological demands.

Quality and Production Standards

The very latest production technology ensures the very highest quality standards. All production sites are ISO 9001 approved.



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