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SERVICE BULLETIN D-MOTOR

Service Bulletin NO. 2019-013

SUBJECT : D-Soft (Optimex) ECU Software support – ECU

MODELS AFFECTED : All models

TIME OF COMPLIANCE : from 06/06/2019

AFFECTED SERIAL NUMBER(S) : All our engines with ECU units V3

D-Motor engines are equipped with a redundant **ECU (Engine Computer Unit) system**. The ECU box is connected tot he Host (engine) and the sensors, input contacts and outputs. Two independent computer units decide on the steering of the engine, by means of a third computer unit (The COM unit).

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The ECU box has a SUB DB-9 connector (female) serving the I/O connection to a laptop or computer.

The Protocols are RS422 and CAN-Bus.

Our redundant ECU system logs ALL Events 10 times per second ! In case of a failure, the service department of D-Motor or the OEM/Dealer can download the log files from the ECU and study the last 29 minutes of flight ! From voltage to RPM, Governor to Height, TPS to Lambda sensor, … all data is stored and available in graphs.

Setting up the download and management software, linking the RS422/CAN bus interface to a computer or a laptop is not so difficult. But, we are happy to assist you remotely!

When the ECU of your aircraft is connected to a laptop or computer **with internet connectivity,** we can take over (attended) your local system, install the management sofware for you, and download the logfiles.

We use the **Anydesk software** for this purpose.

D-Motor CAN NOT take over your PC or laptop, even after you installed the Anydesk software.

All activity our service team performs is shown on your screen, you are able to follow all actions our service engineers perform.

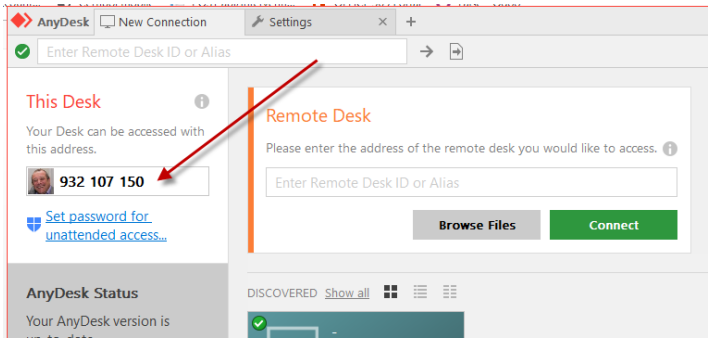
You can download and install the Anydesk software from the following url :

https://anydesk.com

Choose your language (upper right corner) and download this software for free !

Once you started the software you will get a screen that indicates YOUR DESK / PC number.
Our support service will have to get this number from you !

Once they try to connect to your system (Laptop/pc) YOU will have to allow the D-Motor technician to take control of your screen !



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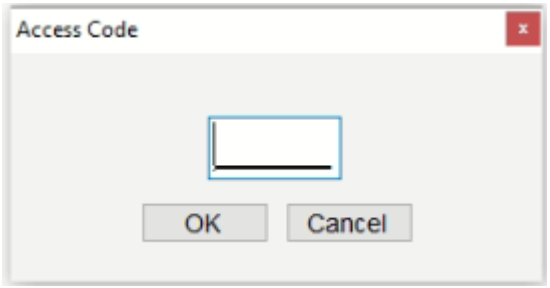
When our technician closes the session, you can either close the program or UNINSTALL it. No unattended access to your laptop or pc is possible after that session, without your approval.

We will install the D-Soft (By Optimex) Engine management software on your laptop or PC !

When this program is not used for your engine monitoring, it is not taking any resources from your system. The used space is maximum 5 Megabytes of disk !

In order to run the program unattended (whitout help of our support team) you will need to ask our helpdesk for a PASS Code ! This code will be sent to you by e-mail, and is limited in time.



The ECU Management software provides us in the monitoring, up- and download of ECU software versions, and the up- or download of Mapping files.

The ECU Setup TAB will do the UP / DOWNLOAD work

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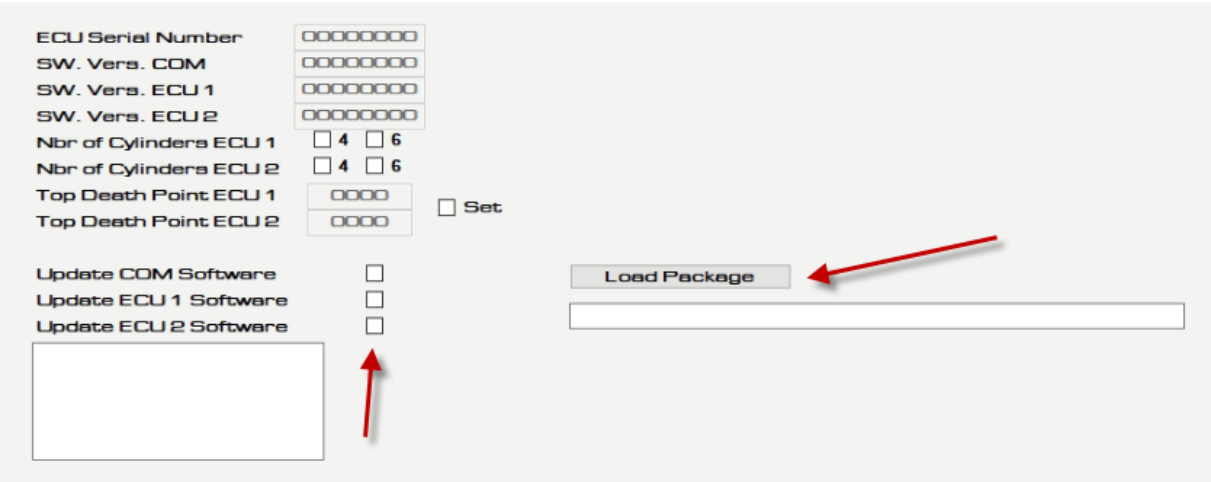
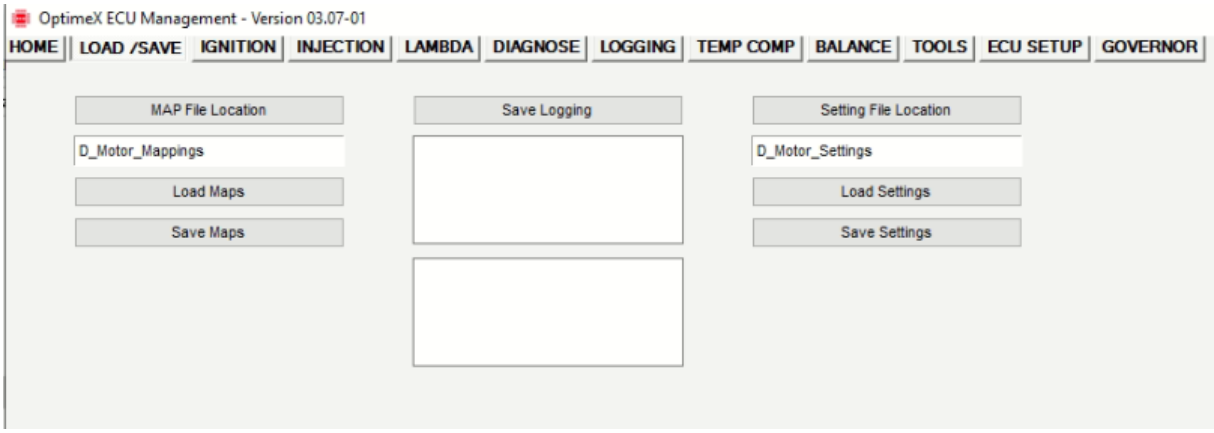
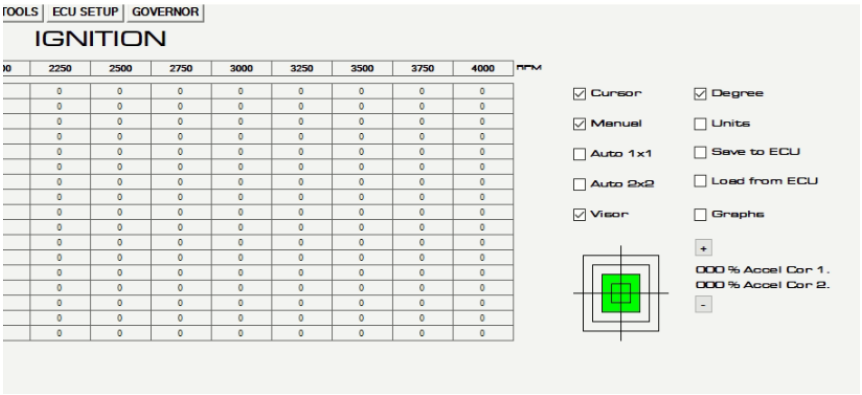


And the LOAD/SAVE Tab allows you/us to up or download the propper mapping tables !



IT IS IMPORTANT THAT – IN CASE OF A FAILURE – WE HAVE THE MOST RECENT LOGFILE.

AS WE SAMPLE AT A RATE OF 10 SAMPLES PER SECOND (!) WE HAVE LIMITED STORAGE OF ALL PAREMETERS OF THE TWO COMPUTERS. WHEN DOWNLOADING, WE ONLY GET THE LAST 29 Minutes of Operational time (starting from swithing on ECU1 and ECU2) !



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>> Screenshot of a logging (LF39 Engine, type helicopter)

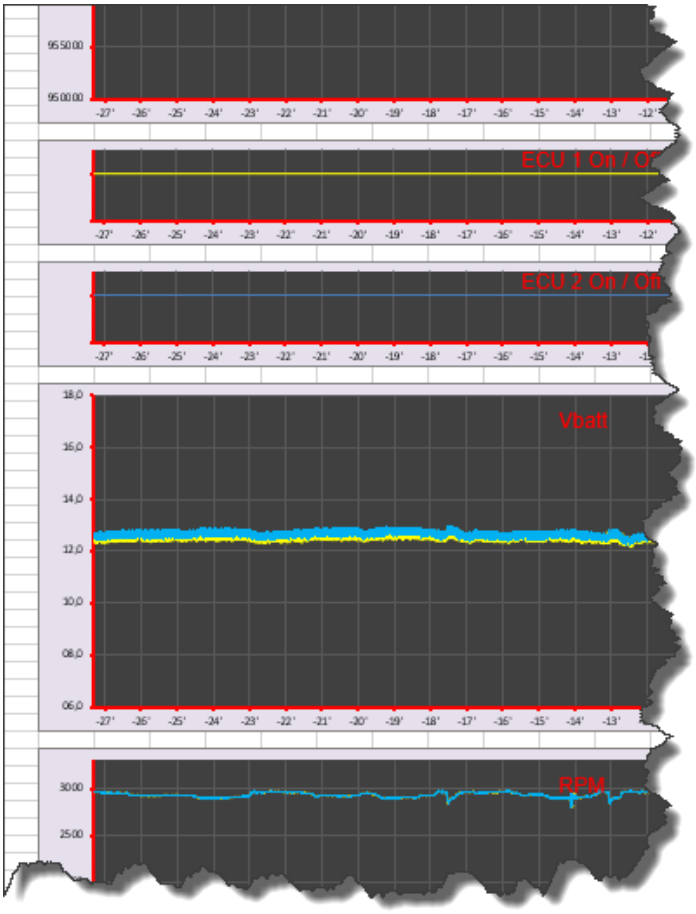
Excel table logging View

ECU Logging report

Serial Number ECU : 15060XXX
Date : DD.MM.YYY
Time : HH:MM:SS

	Engine RUN Time		ECU1 0=Off 1=On	ECU2 0=Off 1=On	ECU1 Bat. Volt	ECU2 Bat. Volt	ECU1 RPM	ECU2 RPM	ECU1 MAP	ECU2 MAP	Water Temp.	Air Temp Temp.	Lambda	TPS	TPS Target	Governor 0=Off 1=On	ECU Temp.	ECU Atm
	Hour:Min:Sec				Volt	Volt			inHg	inHg	°C	°C		%	%			
0'	0027:06:24.0		1	1	13,0	13,1	0	0	27,90	27,75	22	17	0,00	83,0	84,0	1	22,5	95
	0027:06:23.9		1	1	13,1	13,1	0	4095	27,90	27,75	22	17	0,00	83,0	84,0	1	22,5	95
	0027:06:23.8		1	1	13,1	13,1	0	4095	27,90	27,75	22	17	0,00	83,0	84,0	1	22,5	95
	0027:06:23.7		1	1	13,1	13,1	0	4095	27,90	27,75	22	17	0,00	83,0	84,0	1	22,5	95
	0027:06:23.6		1	1	13,1	13,1	0	4095	27,89	27,75	22	17	0,00	83,0	84,0	1	22,5	95
	0027:06:23.5		1	1	13,3	13,3	0	0	26,62	26,49	75	19	1,20	00,0	00,0	1	48,5	90
	0027:06:23.4		1	1	13,3	13,3	4079	4079	29,85	30,09	75	19	1,20	00,0	00,0	1	48,5	90
	0027:06:23.3		1	1	13,3	13,3	4089	4089	29,85	30,09	75	19	1,20	00,0	00,0	1	48,5	90
	0027:06:23.2		1	1	13,2	13,2	4045	4043	29,85	30,09	75	19	1,20	00,0	00,0	1	48,5	90
	0027:06:23.1		1	1	13,3	13,4	3895	3891	29,85	30,09	75	19	1,20	00,0	00,0	1	48,5	90
	0027:06:23.0		1	1	13,3	13,3	3805	3805	29,85	30,09	75	19	1,20	00,0	00,0	1	48,5	90
	0027:06:22.9		1	1	11,6	11,4	3894	3896	29,85	30,09	75	19	1,20	00,0	00,0	1	48,5	90
	0027:06:22.8		1	1	13,3	13,3	127	133	15,55	15,44	75	19	1,17	00,0	00,0	1	48,5	

Excel Graph View



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