

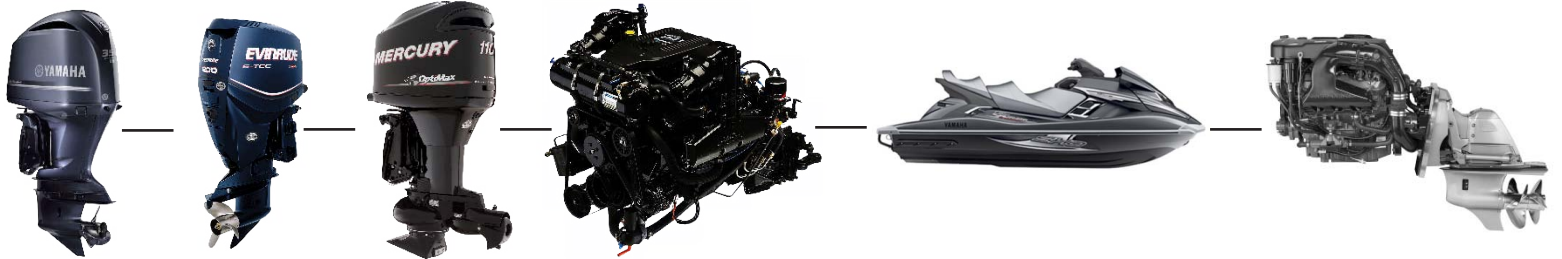


The World's Leading Ignition Specialists

CDI
Electronics®

M.E.D.S.

MARINE ENGINE DIAGNOSTIC SYSTEM



M.E.D.S. is an easy-to-use advanced software package specifically developed for troubleshooting marine engines. Compatible to test on Mercury, Mercruiser, Yamaha, Johnson Evinrude, Suzuki, and select Sterndrive engines, users now only need to buy and learn one system to test all the engines that come into their shop.

With M.E.D.S., you can understand engine faults and diagnose problems more efficiently and cost effectively. Benefit from M.E.D.S. in various ways, but most importantly:

- **Reduce Debug Time**
- **Improve Accuracy**
- **Run & Print M.E.D.S. Check Report for your customers**
- **Faster Turnaround = Happier Customers**
- **More Boats in Less Time = Extra Time, Extra Work, & Extra Profits**

Software Capabilities:

- Multi-Engine Platform
- Live 3D Digital Dashboard
- Live Digital Charts
- Engine System Data
- Auto Self Test
- Engine History Data
- Freeze Frames - Engine Faults in Operation
- Special Function, Tachometer, and Output Load Tests
- M.E.D.S. Check Report - Customized for Each Customer
- French & Spanish Versions Available
- And Many More...

Features:

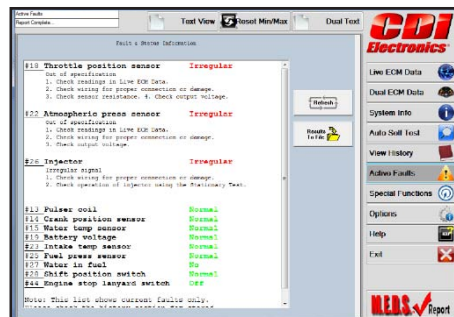
- Hands Free Information
- Engine Configuration Data
- Displays Active & Inactive Faults
- Clear Faults with a Single Click
- Displays Run History by RPM Range and # of Hours
- Can Set/Monitor Break In Period
- Display Engine Functions during a Fault (I.E. An Engine Stall)
- Drill Down to the Engine Failure (I.E. Injector)
- Individually Test Components (I.E. One Injector at a Time)
- And Many More...

*Please Note, Available Tests & Capabilities Depend Upon the Engine Type.

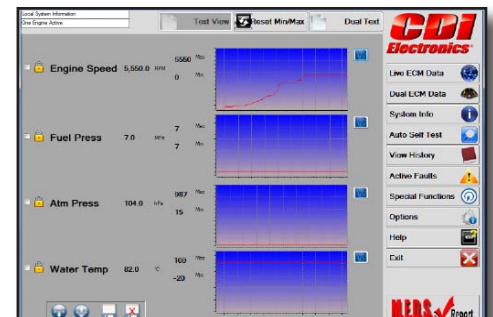
For A Demo, visit www.cdielelectronics.com/MEDS



New interactive gauges and easy-to-understand buttons help you navigate through the software in just minutes.



Complete engine tests to review data such as Active Faults, Run Time, and Freeze Frames on the History Tab.



Text View allows users to view parameters in numerical form and shows real-time graphs.

The M.E.D.S. Check Report is a customizable and comprehensive engine history report. In just seconds, run a M.E.D.S. Check Report for each engine that enters your shop.

- Charge a “Diagnostic Fee” to Run the Test
- Keep for Your Files
- Share with the Boat Owner
- Check Before/After Status on Rentals, Trade-Ins, New Boats

M.E.D.S. Check Report includes the engine serial data, configuration data, current fault readings, and run time history which features the RPM levels the boat has run down to the second, and much more. See pages from a sample report below.

A helpful and thorough report, mechanics everywhere are taking advantage of the M.E.D.S. Check Report to help service their customers better.

Run Time History Report

STANDARD
(Engine run times since last History Clear)

Total Run Time: 7 hrs 46 min

Details:		
0-749 RPM	0 hrs	7 min
750-1499 RPM	1 hrs	3 min
1500-2999 RPM	0 hrs	12 min
3000-3999 RPM	0 hrs	4 min
4000-4499 RPM	0 hrs	7 min
4500-4999 RPM	0 hrs	0 min
5000-5499 RPM	0 hrs	7 min
5500-6249 RPM	0 hrs	0 min
6250+ RPM	0 hrs	0 min

Break-in Time Left: 10 Min.

Details:	
RPM LIMIT	220 sec
CRD LIMIT	100 sec
ACT TEMP	60 sec
BLOCK PSI	20 sec
CTS TEMP	120 sec
LOW OIL	40 sec
OIL PUMP	40 sec

LIFETIME
(Engine run times since first start)

Total: 30 hr 10 min

Details:		
0-749 RPM	0 hrs	7 min
750-1499 RPM	1 hrs	3 min
1500-2999 RPM	0 hrs	12 min
3000-3999 RPM	0 hrs	4 min
4000-4499 RPM	0 hrs	7 min
4500-4999 RPM	0 hrs	0 min
5000-5499 RPM	0 hrs	7 min
5500-6249 RPM	0 hrs	0 min
6250+ RPM	0 hrs	0 min

Break-in Time: 0 Min.

Details:	
RPM LIMIT	220 sec
CRD LIMIT	100 sec
ACT TEMP	60 sec
BLOCK PSI	20 sec
CTS TEMP	120 sec
LOW OIL	40 sec
OIL PUMP	40 sec

Fault Seconds History

Standard	Lifetime	Description
0	0	BATT VOLT HI
0	0	BATT VOLT LO
0	0	BLOCK PRESS LOW
0	29	COMP OVRHEAT
0	0	ETC MOTOR OPEN
0	0	ETC MOTOR SHORT
0	0	FUEL P INPUT HI
0	0	FUEL P INPUT LO
15	183	GUARDIAN
0	0	KNOCK SENS1
0	0	KNOCK SENS2
0	0	OIL PSI STR
0	0	OIL REMOTE STR
0	0	OIL RESERVE STR
4	243	MAP INPUT HI
31889	49616	MAP INPUT LO
0	0	MAP IDLE CHECK
0	0	OIL PUMP
28	202	OVERSPEED
0	0	PRT OVERHEAT
55	208	STB OVERHEAT
0	0	WARNING HORN
0	0	H2O IN FUEL

Boat Owner Information:

Name: _____

Address: _____

City, State, Zip Code: _____

Phone Number: _____

Email Address: _____

Boat Make/Model: _____

Testing Location: _____

Tested By: _____

Tester Signature: _____ Date: _____

System Info

DFI 1.5L 115

ECM# 885557-003

DVZ DEC 2002

036_115di_008

RPM LIMIT 5850

PROP RPM 5000-5750

TROLL RANGE 650-1000 RPM

IGN PRL38-78 ohm

SEC 8.1-8.9 Kohm

DINJ 1.0-1.6 ohm

FINJ 1.7-1.9 ohm

TYPICAL TPI RANGE

TPI 0.19-1.0v IDLE

3.45-4.63v WOT

TGAP 0.025-0.04in

AIR COMPRESSOR: 1 Kohm @ 77F/25C

AIR TEMP/COOLANT: 10 Kohm @ 77F/25C

BATV 12.6-15.0

MAP 7-15 psi

FUEL - AIR + 10psi

AIR 78-82 psi >

PWR RLY 81-99 ohm

OIL PUMP COIL: 1.8-2.0 ohms >

REQUIRED FUEL: 87 OCTANE

1 FUSE-INJ/OIL PUMP

2 FUSE-FUEL PUMP

The M.E.D.S. Report is a trademark of CDI Electronics, Inc. and is based on the M.E.D.S. Marine Engine Diagnostic Software.

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M.E.D.S. Buying Options

First Time M.E.D.S. Buyers - Here are Your Options:

1. Purchase a **Total Bundle Platform** & Save up to 5%

Total Bundle Packages offer pre-packaged engine combinations, include a protective toolbox for storage and provide up to 5% savings by purchasing at once. *Savings Included in List Price

OR

2. Purchase any **M.E.D.S. Individual Platform**





OR

3. Create a **Custom Package**






Purchase a M.E.D.S. Individual Platform & a Single Engine Add-On to Test Engines You Need

EXTRA SAVINGS!
When You Buy a Total Bundle
(Savings Included in List Price)

M.E.D.S. TOTAL BUNDLE PACKAGES

531-0118T	531-0118T 1	531-0118T 2	531-0118T 3
<p>Includes :</p>  <p>See T Column on next page for a list of Compatible Engines for Testing.</p>	<p>Includes :</p>  <p>See T1 Column on next page for a list of Compatible Engines for Testing.</p>	<p>Includes :</p>  <p>See T2 Column on next page for a list of Compatible Engines for Testing.</p>	<p>Includes :</p>  <p>See T3 Column on next page for a list of Compatible Engines for Testing.</p>

M.E.D.S. INDIVIDUAL PLATFORMS

531-0118M	531-0118Y	531-0118B	531-0118S	531-0118I 4
MERCURY	YAMAHA	BRP	SUZUKI	STERNDRIVE
<p>Includes :</p>  <p>See Mercury Column on next page for a list of Compatible Engines for Testing.</p>	<p>Includes :</p>  <p>See Yamaha Column on next page for a list of Compatible Engines for Testing.</p>	<p>Includes :</p>  <p>See BRP Column on next page for a list of Compatible Engines for Testing.</p>	<p>Includes :</p>  <p>See Suzuki Column on next page for a list of Compatible Engines for Testing.</p>	<p>Includes :</p>  <p>See I4 Column on next page for a list of Compatible Engines for Testing.</p>

M.E.D.S. Buying Options

Current M.E.D.S. Owners - Here are Your Options:

1. Purchase a **Single Engine Add-On** to test additional engine types.

AND/OR






2. Purchase a **Software Only Upgrade**

This upgrade provides current owners with the latest version of software. Intended for customers who already test the engines needed, but would like to have the latest software for reasons such as the M.E.D.S. Check Report or 3D Live Gauges.

AND/OR

3. Purchase an **Additional Language**

M.E.D.S. is now available in French & Spanish Languages. See below to order an additional language.

SINGLE-ENGINE ADD-ON				
531-0119M	531-0119Y	531-0119B	531-0119S	531-0119I 4
MERCURY	YAMAHA	BRP	SUZUKI	STERNDRIVE
Includes : Software Disc & Activation Code to Access Mercury Cable (already included) 	Includes : 	Includes : 	Includes : 	Includes : 
See Mercury Column for a list of Compatible Engines for Testing.	See Yamaha Column for a list of Compatible Engines for Testing.	See BRP Column for a list of Compatible Engines for Testing.	See Suzuki Column for a list of Compatible Engines for Testing.	See I4 Column for a list of Compatible Engines for Testing.

**Please note, a customer cannot purchase any version in this table unless they already own a Individual Platform or Total Bundle Package. This is an "add-on" option only, not a stand-alone product. See previous page for first time buyers.

FRENCH & SPANISH VERSIONS NOW AVAILABLE

*All M.E.D.S. system's primary language is English. To access an additional language, you will need to order one of the above packages, plus one language part number below.

531-0119L 1 **FRENCH LANGUAGE ADD-ON**

This version of MEDS includes the Software Disc & Activation Code to allow users access to the French Language.

531-0119L 2 **SPANISH LANGUAGE ADD-ON**

This version of MEDS includes the Software Disc & Activation Code to allow users access to the Spanish Language.

531-0119L 3 **FRENCH & SPANISH ADD-ON**

This version of MEDS includes the Software Disc & Activation Code to allow users access to the French & Spanish Language.

531-0118U **SOFTWARE ONLY UPGRADE**

Upgrade to MEDS 6.0 to start experiencing the New 3D Gauges, In-Screen Graphing on Text View, Dual Engine Testing MEDS Check Report, and more.

531-0119MP **MERC-PLUS ADD-ON**

This version of MEDS includes the Software Disc & Activation Code to allow users to test a small selection of older Mercury DFI Engines (included in all new purchases).

M.E.D.S. Engine Capabilities

Manufacturer & Engine Type	Years	Mercury	Yamaha	BRP	Suzuki	I4	I5	T	T1	T2	T3	T4
MERCURY												
OptiMax V6 135, 150, 175, 200, 225, 250 HP, 2.5 L, 3.0 L	01 - 10	✓						✓	✓	✓	✓	✓
OptiMax I3 1.5L, 75, 90, 115 HP	02 - 10	✓						✓	✓	✓	✓	✓
V6 EFI and Sport Jet	02 - 10	✓						✓	✓	✓	✓	✓
OptiMax - DFI	97 - 01	✓						✓	✓	✓	✓	✓
2.5L EFI, 150, 175, 200, 225 HP	94 - 01	✓						✓	✓	✓	✓	✓
MERCURY MERCUISER												
4.3 L MPI, 5.0 MPI, 350 MAG MPI, MX 6.2MPI, Black Scorpion	03 - 10	✓						✓	✓	✓	✓	✓
496 MAG, 496 HO MAG, 8.1 L, 8.1 L HO	01 - 10	✓						✓	✓	✓	✓	✓
MERCURY MERCUISER RACING												
1075 SCi, 414 EFI, 600 SCi, 8.1 SHO	01 - 10	✓						✓	✓	✓	✓	✓
MERCURY RACING												
225X, 250XS, 300X, 300XS	01 - 10	✓						✓	✓	✓	✓	✓
2.5L (280) EFI	98 - 05	✓						✓	✓	✓	✓	✓
MERCURY VERADO												
I-4 135, 150, 175, 200 HP	01 - 10	✓						✓	✓	✓	✓	✓
I-6 200, 225, 250, 275, 300, 350 HP	01 - 10	✓						✓	✓	✓	✓	✓
MERCURY 4 STROKE EFI												
40, 50, 60, 75, 90, 115 HP	02 - 10	✓						✓	✓	✓	✓	✓
MERCURY MFG BY YAMAHA												
30, 40, 50, 60, 75 HP, 90 HP EFI, 115 HP EFI	01 - 06		✓					✓	✓	✓	✓	✓
YAMAHA												
4 Stroke EFI: F115, F150, F200, F225 HP	00 - Up		✓					✓	✓	✓	✓	✓
4 Stroke EFI: F50, F60, F40, F90, F250, F275, F300 HP	08 - Up		✓					✓	✓	✓	✓	✓
HPDI: 150, 175, 200, 225, 250, 300 HP	98 - Up		✓					✓	✓	✓	✓	✓
YAMAHA SNOWMOBILES												
Apex GT, Mountain, ER, RTX, GTX, MTX, LTX	06 - 09		✓					✓	✓	✓	✓	✓
Attak GT, Base	06 - 07		✓					✓	✓	✓	✓	✓
Nytro Base, MTX, RTX, RTX SE, FX Series	08 - 09		✓					✓	✓	✓	✓	✓
Phazer Base, GT, Mountain Lite, FX, RTX, MTX	07 - 09		✓					✓	✓	✓	✓	✓
Venture Lite, RS Venture GT	07 - 09		✓					✓	✓	✓	✓	✓
YAMAHA PERSONAL WATERCRAFT												
FX All Models	02 - 09		✓					✓	✓	✓	✓	✓
GP 1300	04 - 08		✓					✓	✓	✓	✓	✓
VX All Models	05 - 07		✓					✓	✓	✓	✓	✓
VX Deluxe	04 - 09		✓					✓	✓	✓	✓	✓
VZR, GS1800, XLT1200, XA1200AC-C	09		✓					✓	✓	✓	✓	✓
JOHNSON/EVINRUDE FICHT & E-TEC												
Ficht Air Cooled ECU	97 - 98			✓					✓	✓	✓	✓
Ficht Water Cooled EMM	99 - 07			✓					✓	✓	✓	✓
E-TEC Water Cooled EMM	04 - Up			✓					✓	✓	✓	✓

M.E.D.S. Engine Capabilities

Manufacturer & Engine Type	Years	Mercury	Yamaha	BRP	Suzuki	I4	I5	T	T1	T2	T3	T4
JOHNSON/EVINRUDE, SUZUKI BUILT 4-STROKE												
40, 50, 60, 70, 90, 115, 140, 200, 225 HP	99 - 06				✓					✓	✓	✓
SUZUKI 4-STROKE												
DF40, DF50	97 - Up				✓					✓	✓	✓
DF60, DF70	98 - Up				✓					✓	✓	✓
DF70A, 80A, 90A, 100	09 - Up				✓					✓	✓	✓
DF90	01 - Up				✓					✓	✓	✓
DF140	02 - Up				✓					✓	✓	✓
DF150, DF175	06 - Up				✓					✓	✓	✓
DF200, DF225, DF250	04 - Up				✓					✓	✓	✓
DF300	07 - Up				✓					✓	✓	✓
CRUSADER												
EFI Engines, GM MEFI Equipped	92 - 06					✓					✓	✓
FLAGSHIP MARINE												
GM EFI Engines, GM MEFI-1 thru MEFI-4 Equipped	92 - Up					✓					✓	✓
GM EFI Engines, GM MEFI-4B, 5, 6 Equipped	92 - Up						✓					✓
GM RAMJET CRATE ENGINES												
RamJet 350, GM MEFI Equipped	00 - Up					✓					✓	✓
INDMAR												
GM MEFI-1 thru MEFI-4 Equipped	92 - 07					✓					✓	✓
GM MEFI 5 Equipped	07 - 08						✓					✓
KODIAK MARINE												
GM MEFI-1 thru MEFI-4 Equipped	92 - 08					✓					✓	✓
GM MEFI -5 Equipped	08 - Up						✓					✓
MARINE POWER												
GM MEFI-1 thru MEFI-4	92-08					✓					✓	✓
GM MEFI-5, 6 Equipped	08 - Up						✓					✓
MERCURY MERCUISER												
GM MEFI-1 thru MEFI-4	92 - 00					✓					✓	✓
MERCURY MERCUISER RACING												
HP500 GM MEFI Equipped	98 - 10					✓					✓	✓
PANTHER AIR BOATS												
GM MEFI-1 thru MEFI-4	00 - Up					✓					✓	✓
GM MEFI-5	00 - Up						✓					✓
PLEASURECRAFT MARINE												
Gasoline EFI Engine, GM MEFI Equipped	92 - 06					✓					✓	✓
VOLVO PENTA												
Gasoline EFI Engine, GM MEFI-1 thru MEFI-4	92 - 05					✓					✓	✓

Meet the Design & Tech Team - Here to Help You Out

We're Proud to Design, Create & Support the Marine Engine Diagnostic System from our facilities in Madison, Alabama.



Joe Dennis, Lead Developer for M.E.D.S.

Joe comes to CDI with 15 years of programming experience, ranging from object oriented C# to embedded and windows programming. Joe has his Bachelor of Science Degree in Electrical Engineering from Florida State University and has worked for companies ranging from General Motors to Raytheon.



David McGowan, M.E.D.S. Technical Support

David brings over 30 years of automotive technician experience to CDI Electronics. He has numerous Chevrolet, BMW, and Hyundai certifications, ASE certification, and attended Universal Technical Institute. David's skill set is key to answering the various questions we receive via our Free Technical Service line every day.



Clark Beard, CDI Technical Support

Clark is a 20+ year veteran of the marine industry, serving as a part of the technical team at CDI Electronics for over twenty years, and also as a marine mechanic for numerous years. Clark is a certified BRP, Tohatsu and Yamaha technician and provides his skillset to mechanics in need every day.



Dale Buchanan, CDI Technical Support

Dale has 20+ years in the aviation industry, with a high concentration on inspection and identification of defects and root cause of mechanical, electrical, pneudraulic systems and the repairs necessary to return the systems to operational status. Dale's defect testing experience assists the team in review and research of any warranty returned products.