



### State of Health Check

#### Battery state of health check (SOH & Reset) battery in vehicle

Honda dealers MCS equipment is capable to perform these actions without the need of any 3rd party tool. Just install the MPP2 battery on the motorcycle and connect MCS to the vehicle.

#### Battery state of health check (SOH & Reset) battery without vehicle

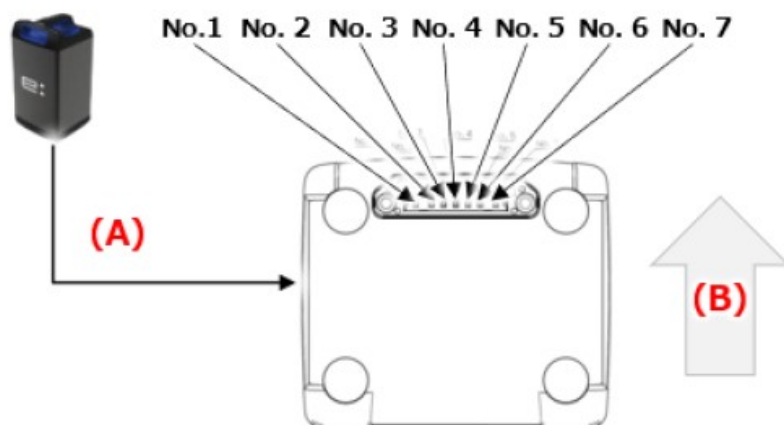
Recommended CAN Reader:

CAN Reader (Device): Vector VN16XX (e.g. VN1610, 1630) or equivalent tool compliant with ISO 14229-1. Note: ISO 14229-1 compliance is highly recommended for optimal performance.

Method of connect the battery:

Connect the CAN reader tool to Battery connector. Note: 12V must be applied.

Position of the battery connector



	Function
1	DC+
2	+12V
3	CP
4	CDE
5	COM 1
6	COM 2
7	DC-

A = Bottom

B = Front Direction



Method of reading Information on the state of health and expected lifetime of batteries data:

Data name	DID	Data Len.	Data Position	LSB	Unit	Sign	Initial value
Remaining capacity	0xDA50	2	0x00	0.1	Ah	unsigned	0
Capacity fade		1	0x02	1	%	unsigned	0
Evolution of self-discharge rates	0xDA51	4	0x00	1	%	unsigned	100
Current self-discharge rate		4	0x04	0.001	%/h	unsigned	0
Initial self-discharge rate		4	0x08	0.001	%/h	unsigned	0
The date of manufacturing of the battery (Year)	0xDA52	1	0x00	1	Year	unsigned	0
The date of manufacturing of the battery (Month)		1	0x01	1	Month	unsigned	0
The date of manufacturing of the battery (Day)		1	0x02	1	Day	unsigned	0
The date of start using the battery		2	0x03	1	Day	unsigned	0
Total energy delivered by the battery in discharge	0xDA53	4	0x00	0.1	Wh	unsigned	0
Total energy delivered by the battery in discharge	0xDA54	4	0x00	0.1	Ah	unsigned	0
Number of deep discharge	0xDA55	1	0x00	1	times	unsigned	0
Number of overcharge		1	0x01	1	times	unsigned	0
Number of inform on accidents		1	0x02	1	times	unsigned	0
Time spent in extreme temperatures above boundary		3	0x03	1	minutes	unsigned	0
Time spent in extreme temperatures below boundary		3	0x06	1	minutes	unsigned	0
Time spent charging during extreme temperatures above boundary		3	0x09	1	minutes	unsigned	0
Time spent charging during extreme temperatures below boundary		3	0x0C	1	minutes	unsigned	0
Number of full charge/discharge cycle	0xDA56	2	0x00	1	times	unsigned	0
Cell resistance increase	0xDA57	2	0x00	1	%	unsigned	0
Battery resistance increase		2	0x02	1	%	unsigned	0
Current cell resistance		2	0x04	1	mΩ	unsigned	0
Current battery resistance		2	0x06	1	mΩ	unsigned	0
Initial cell resistance		2	0x08	1	mΩ	unsigned	0
Initial battery resistance		2	0x0A	1	mΩ	unsigned	0

- Stored data length < 5 byte

1). Send ID:18DAD5XX DLC:8 [03 22 DZ ZZ 55 55 55 55] from Device to MPP.  
 2). Receive ID:18DAXXD5 DLC:8 [0Y 62 DZ ZZ ## ## ## ##] from MPP to Device.  
 XX: any value (depending on a device to read), ZZ: DID number, ##: stored data

Y: sending data length[byte],

- Stored data length = or > 5 byte

(1). Send ID:18DAD5XX DLC:8 [03 22 DZ ZZ55 55 55 55] from Device to MPP.  
 (2). Receive ID:18DAXXD5 DLC:8 [1Y YY 62 DZ ZZ## ## ##] from MPP to Device.  
 (3). Send ID:18DAD5XX DLC:8 [30 04 01 55 55 55 55 55] from Device to MPP.  
 (4). Receive ID:18DAXXD5 DLC:8 [21 ## ## ## ## ## ## ##] from MPP to Device.  
 (5). Receive ID:18DAXXD5 DLC:8 [22 ## ## ## ## ## ## ##] from MPP to Device.  
 XX: any value (depending on a device to read), Y: sending data length[byte], ZZ: DID number, ## : stored data

**How to convert each data:**

Calculate each stored value in decimal using following conversion formula;

(hex) convert to: (dec) \* LSB + Offset

Example:

DA50 (Remaining Capacity) [06 62 DA 50 01 05 64]

01 05(hex) convert to: 261(dec) \* 0.1 + 0 = 26.1[Ah]

**Method of software reset**

(1). Send ID:18DAD5XX DLC:8 [04 14 FF FF FF 55 55 55] from Device to MPP.

(2). Receive ID:18DAXXD5 DLC:8 [01 54 55 55 55 55 55 55] from MPP to Device.

XX: any value (depending on a device to read)

If the response for step (2) is received, the reset is completed.