

EU spec. - Modules Requiring Initialization (M-MDS Software : IDS 54, PDS 54)

* The term "Initialization" encompasses the tasks shown on the table below, which are performed during module replacement.

Initialization Tasks	Description
1 Configuration	Configuration (hereinafter "Config"), the action of setting the constants in the software, is performed to ensure that the operating environment of the module is compatible with vehicle specifications. Modules will not function properly when replaced if they are not configured.
2 Immobilizer Registration (PATS Registration) (Only for immobi-equipped vehicle)	The Immobilizer System (hereinafter "Immobi") is a vehicle theft prevention system. The vehicle's engine will not start properly if the Immobi's settings are not reconfigured (key registration and/or parameter reset) when related modules and keys are replaced.
3 Initialization / Calibration / Learning	The module will not function properly if its sensors or modules are not corrected. PDS does not support a portion of service functions which IDS supports. Please refer to the workshop manual and proceed the initialization, calibration, and learning using an alternate method (like Detallogger).
4 Module Reset / Data Reset	The module will not function properly if it is not reset.
5 Program Card/ Advanced Key (Only for advanced keyless system equipped)	The vehicle's engine will not start using card/ advanced key if the settings are not reconfigured when related modules and keys are replaced.
6 Steering Lock Unit Initialization (Only for advanced keyless system equipped)	The vehicle's engine will not start if the initialization is not performed when steering lock unit is replaced.
7 Injection Amount Correction	The PCM corrects any fluctuations in the injection amount for each cylinder. Since the PCM stores the correction amount in its memory, it is necessary to teach the PCM the fluctuation for each cylinder when either the PCM or the injector is replaced.
8 Injector ID Code	A unique ID code must be set for the injectors to ensure that an appropriate quantity of fuel is injected.
9 MAF Learning (Correction Value Upload)	An appropriate MAF correction value for the vehicle must be set to guarantee mileage and exhaust capabilities.
10 DPF Regeneration	Clean particulate matter (PM) collected by the DPF.
11 DPF Assessment	Checks that the DPF operates properly.
12 ASM Learning	Performs hydraulic bleed, gear and synchroniser position learning and clutch touch point adaptation.
13 Odometer Write	Copy the odometer data from the old cluster to the new (service part) cluster. (*1)

*1 Proceed "Programmable Parameters > Odometer Write" function immediately after completing IC configuration "Programmable Module Installation > IC".

*** Models Requiring Initialization / Module List**

Numbers on the table refer to items described above.

Hyphens "-" indicate items that do not require initialization. For module manes, refer to the Module Name List portion of this document.

For module names, refer to the list shown below.

	PCM	TCM/ASM	FACM	(Injectors)	(Fuel Pump)	(DPF)	(Pressure Sensor)	(Engine Oil)	(ETB/EGR)	(O2 Sensor)	(MAF)	RCM	HEC/IC	ABS	DSC	HCM/HID/AFS (Auto Leveling Sensor)	RKE/SKE	(Steering Lock Unit)	GEM/PL/LCM	BCM/GEM	(Rain Sensor)	(Tire)	FFH	EPS/EHPAS	AM
Mazda6 (GG/GY) Gasoline	1, 2	-	-	-	-	-	-	-	-	-	-	1	1	1	1, 3	1, 3	-	-	-	-	-	-	-	-	-
Mazda6 (GG/GY) RF	1, 2, 7, 8 *F	-	-	7, 8 *F	-	-	-	-	-	-	9	1	1	1	1, 3	1, 3	-	-	-	-	-	-	-	-	-
Mazda6 (GG/GY) Gasoline (Face-Lifted)	1, 2	-	-	-	-	-	-	-	-	-	-	1	1	1	1, 3	1, 3	1*E, 2, 5, 6	6	-	-	3*D	-	-	-	-
Mazda6 MPS (GG)	1, 2, 3, 4, 7, 8, 10, 11	-	-	4, 7, 8	4	4, 7, 10, 11	4, 11	4	3, 4	4	4	1	1	1	1, 3	1, 3	1*E, 2, 5, 6	6	-	-	3*D	-	-	-	-
New Mazda6 (GH) Gasoline	1, 2	-	-	-	-	-	-	-	-	-	-	1	1, 2, 13	1	1	3*D	-	-	-	1	3*D	-	-	1, 3	-
New Mazda6 (GH) Gasoline (w/ Advanced Keyless)	1, 2	-	-	-	-	-	-	-	-	-	-	1	1, 13	1	1	3*D	1*E, 2, 5, 6	6	-	1	3*D	-	-	1, 3	-
New Mazda6 (GH) RF	1, 2, 3, 4, 7, 10, 11	-	-	4, 7, 8	4	4, 7, 10, 11	4, 11	4	3	4	4	1	1, 2, 13	1	1	3*D	-	-	-	1	3*D	-	-	1, 3	-
New Mazda6 (GH) RF (w/ Advanced Keyless)	1, 2, 3, 4, 7, 10, 11	-	-	4, 7, 8	4	4, 7, 10, 11	4, 11	4	3	4	4	1	1, 13	1	1	3*D	1*E, 2, 5, 6	6	-	1	3*D	-	-	1, 3	-
Mazda2 EU	1, 2	1, 12	-	-	-	-	-	-	-	-	-	1	1	-	3	-	-	-	-	-	-	-	-	-	-
New Mazda2 (DE)	1*J, 2	-	-	-	-	-	-	-	-	-	-	1	1, 2, 13	1*H	1*H	3*D	-	-	-	1	3*D	-	-	1, 3	-
New Mazda2 (DE) (w/ Advanced Keyless)	1*J, 2	-	-	-	-	-	-	-	-	-	-	1	1, 13	1*H	1*H	3*D	1*E, 2, 5, 6	6	-	1	3*D	-	-	1, 3	-
MPV (LW) Gasoline	1(3.0L) *F	-	-	-	-	-	-	-	-	-	-	-	-	1*F	1*F	-	-	-	-	-	-	-	-	-	-
MPV (LW) RF	2, 7, 8 *F	-	-	7, 8 *F	-	-	-	-	-	-	9	-	-	1*F	1*F	-	-	-	-	-	-	-	-	-	-
RX-8 (SE)	1, 2	-	-	-	-	-	-	-	-	-	-	1	1	-	1, 3	-	1*E, 2	-	-	-	-	-	-	3	-
RX-8 (SE) (w/ Advanced Keyless)	1, 2	-	-	-	-	-	-	-	-	-	-	1	1	-	1, 3	-	1*E, 2, 5, 6	6	-	-	-	-	-	3	-
RX-8 (SE) (Face-Lifted)	1, 2	-	-	-	-	-	-	-	-	-	-	1	1	-	1, 3	-	1*E, 2	-	-	-	-	1*K	-	3	-
RX-8 (SE) (Face-Lifted) (w/ Advanced Keyless)	1, 2	-	-	-	-	-	-	-	-	-	-	1	1	-	1, 3	-	1*E, 2, 5, 6	6	-	-	-	1*K	-	3	-
Mazda MX5 (NC)	1, 2	-	-	-	-	-	-	-	-	-	-	1	1, 2, 13	1	1, 3	-	1*E, 2, 5, 6	6	-	-	-	-	-	-	-
Mazda3 (BK) Gasoline	1*B, 2	-	-	-	-	-	-	-	-	-	-	1	1, 2	1*C	1*C, 3	-	-	-	1, 4	-	-	-	-	1	-
Mazda3 (BK) Y6	1*B, 2, 3	-	1, 3	8	-	4	-	-	-	-	-	1	1, 2	1*C	1*C, 3	-	-	-	1, 4	-	-	-	-	1	-
Mazda3 (BK) Gasoline (Face-Lifted)	1*B, 2	-	-	-	-	-	-	-	-	-	-	1	1, 2, 13	1*C	1*C, 3	3*D	-	-	1, 4	-	-	-	-	1	-
Mazda3 (BK) Gasoline (Face-Lifted) (w/ Advanced Keyless)	1*B, 2	-	-	-	-	-	-	-	-	-	-	1	1, 13	1*C	1*C, 3	3*D	1*E, 2, 5, 6	6	1, 4	-	-	-	-	1	-
Mazda3 (BK) Y6 (Face-Lifted)	1*B, 2, 3	-	1, 3	8	-	4, 10	-	-	-	-	-	1	1, 2, 13	1*C	1*C, 3	3*D	-	-	1, 4	-	-	-	-	1	-
Mazda3 (BK) Y6 (Face-Lifted) (w/ Advanced Keyless)	1*B, 2, 3	-	1, 3	8	-	4, 10	-	-	-	-	-	1	1, 13	1*C	1*C, 3	3*D	1*E, 2, 5, 6	6	1, 4	-	-	-	-	1	-
Mazda3 (BK) RF (Face-Lifted)	1*B, 2, 3, 4, 7, 8, 10, 11	-	-	4, 7, 8	4	4, 7, 10, 11	4, 11	4	3, 4	4	4	1	1, 2, 13	1*C	1*C, 3	3*D	-	-	1, 4	-	-	-	1, 3*G	1	-
Mazda3 (BK) RF (Face-Lifted) (w/ Advanced Keyless)	1*B, 2, 3, 4, 7, 8, 10, 11	-	-	4, 7, 8	4	4, 7, 10, 11	4, 11	4	3, 4	4	4	1	1, 13	1*C	1*C, 3	3*D	1*E, 2, 5, 6	6	1, 4	-	-	-	1, 3*G	1	-
Mazda5 (CR) Gasoline	1*B, 2	-	-	-	-	-	-	-	-	-	-	1	1, 2, 13	1*C	1*C, 3	3*D	1*E, 2, 5, 6	6	-	-	3*D	-	-	1	-
Mazda5 (CR) RF	1, 2, 3, 4, 7, 8, 10, 11	-	-	4, 7, 8	4	4, 7, 10, 11	4, 11	4	3, 4	4	4	1	1, 2, 13	1*C	1*C, 3	3*D	1*E, 2, 5, 6	6	-	-	3*D	-	1, 3*G	1	-
Tribute (EP)	1, 2	-	-	-	-	-	-	-	-	-	-	-	1	1(2.3L)	1(2.3L)	-	-	-	1	-	-	-	-	-	-
CX-7 (ER)	1, 2	3	-	-	-	-	-	-	-	-	-	1	1, 2, 13	-	3	-	-	-	1	1	3*D	-	-	-	1
CX-7 (ER) (w/ Advanced Keyless)	1, 2	3	-	-	-	-	-	-	-	-	-	1	1, 13	-	3	-	1*E, 2, 5, 6	6	1	1	3*D	-	-	-	1
Mazda BT-50 (UN) (Common-rail Diesel Engine)	1, 2*A, 4	-	-	8	-	-	-	-	-	-	4, 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*A : Refer to Workshop Manual

*B : Body Type configuration is required for DSC equipped vehicles. (Programmable Parameters > TireSize / Axle Ratio)

*C : Configuration data is VIN data only. (When As-Built data is required, you will be able to complete the procedure by entering VIN only. You do not need to obtain the As-Built data sheet.)

*D : You can do the same operation without Diagnostic Tester, or you need it without Diagnostic Tester. (Refer to Workshop Manual)

*E : Keyless Control Unit configuration is required for Advanced Keyless equipped vehicle. Regarding RX-8, configuration is required for not only Advanced Keyless but also Immobilizer equipped vehicle.

*F : This operation is required for the applicable vehicles or modules only. (This functionality is available on the face-lifted models or models with module design changes.) Refer to workshop manual.

*G : Left hand drive only.

*H : Configuration using M-MDS is not required, however you need to set IG ON and keep it for specified time (see workshop manual). This procedure allows the module to install/refer configuration data from HEC/IC. Verify there are no DTC and warning lamp does not light up or blink after the procedure.

*J : For DV4 engine model, configuration data can be retrieved from IC. Proceed Programmable Module Installation function according to the M-MDS indication. Verify there are no DTC and warning lamp does not light up or blink after the procedure.

*K : When you change tire size (ex. you change wheel for 18 inch), you need to write tire size to PCM (change configuration data of PCM).

*** Module Name List**

Module Name (M-MDS Name)	Workshop Manual Name	Function	Module Numbers on the As-built Sheet
PCM	Powertrain Control Module	Controls the engine.	PCM1 - PCM9 7E0-01-01 (*A)
RCM	SAS Control Module	Sensors detect the degree of impact and transmit a signal, deploying (opening) the air bag.	58 or 737
HEC (IC)	Instrument Cluster	Controls the meters.	60 or 720
ABS (ABS/TCS)	Antilock Brake System	Controls brake fluid pressure to prevent the wheels from locking when the brakes are applied.	28 or 760
DSC (ABS/TCS/DSC)	Dynamic Stability Control	Controls brakes and engine output in order to prevent the vehicle from spinning and drifting laterally while moving.	28 or 760
HID (LHID/RHID)	Discharge Headlight Control Unit	Controls the auto leveling of the headlight	71/72
GEM	Generic Electronic Module	Controls the electronic components of the body, such as the door locks and the keyless entry system.	52
BCM (GEM)	Body Control Module	Controls the body's electronic components.	726
PJB (GEM)	Passenger Junction Box	Controls the body's electronic components. (Contains fuses and relays.)	726
LCM	Auto Light/Wiper Control Module	Controls the headlamp and wiper.	70
RKE/SKE	Keyless Control Module	Controls door lock and keyless entry systems; issues engine start permission.	731
EPS	Electric Power Steering	Electronically controls steering assistance.	730
EHPAS (EPS)	Electro Hydraulic Power Assist Steering	Electronically controls hydraulic (oil pressure) steering assistance.	730
AM	Audio Amplifier	Controls audio amplifier.	7A4
FACM	Fuel Additive Control Module	Controls fuel additive.	7C0
ASM (TCM)	Auto Shift Manual	Controls Auto Shift Manual transmission.	-
FFH (Fuel Fired Heater)	Water Heater Unit	Controls water heater system.	-
TCM	Transmission Control Unit	Controls transmission functions.	-

*A: If we use IDS/PDS 45 or older, "VIN", "Vehicle Data" and "PCM 1 through 13" (for non-applicable models, PCM 1 through 9) of the As-Built data must be entered during PCM configuration. However, if we use IDS/PDS 46 or newer, 7E0-01-01 through 7E0-04-01 must be entered instead of PCM 10 through 13. (Ref. Tool Equipment T046/06)

*** Initialization Failure Error List**

- A) DTCs can be set, warning lamp lit or blinking.
- B) DTCs can be set, warning lamp will not light up or blink.
- C) DTCs cannot be set, but warning lamp will light up or blink.
- D) DTCs cannot be set, warning lamps will not light up or blink.

	PCM	TCM	FACM	(Injectors)	(Fuel Pump)	(DPF)	(Pressure Sensor)	(Engine Oil)	(ETB/EGR)	(O2 Sensor)	(MAF)	RCM	HEC/IC	ABS	DSC	HCM/HID/AFS (Auto Leveling Sensor)	RKE/SKE	(Steering Lock Unit)	GEM/PJB/BCM/LCM	BCM	(Rain Sensor)	(Tire)	FFH	EPS/EHPAS	AM
Mazda6 (GG/GY) Gasoline	A	-	-	-	-	-	-	-	-	-	-	A	B	A	A	B	-	-	-	-	-	-	-	-	-
Mazda6 (GG/GY) RF	A	-	-	D	-	-	-	-	-	-	D	A	B	A	A	B	-	-	-	-	-	-	-	-	-
Mazda6 (GG/GY) Gasoline (Face-Lifted)	A	-	-	-	-	-	-	-	-	-	-	A	B	A	A	B	A	A	-	-	D	-	-	-	-
Mazda6 (GG/GY) RF	A	-	-	D	D	D	D	D	D	D	D	A	B	A	A	B	A	A	-	-	D	-	-	-	-
New Mazda6 (GH) Gasoline	A	-	-	-	-	-	-	-	-	-	-	A	1:B,2:A	A	A	C	-	-	-	B	D	-	-	-	A
New Mazda6 (GH) Gasoline (w/ Advanced Keyless)	A	-	-	-	-	-	-	-	-	-	-	A	B	A	A	C	A	A	-	B	D	-	-	A	-
New Mazda6 (GH) RF	A	-	-	A	C	A	D	D	D	C	C	A	1:B,2:A	A	A	C	-	-	-	B	D	-	D	A	-
New Mazda6 (GH) RF (w/ Advanced Keyless)	A	-	-	A	C	A	D	D	D	C	C	A	B	A	A	C	A	A	-	B	D	-	D	A	-
Mazda2 EU	A	A	-	-	-	-	-	-	-	-	-	A	B	-	D	-	-	-	-	-	-	-	-	-	-
New Mazda2 (DE)	A	-	-	-	-	-	-	-	-	-	-	A	1:B,2:A	-	-	C	-	-	-	B	D	-	-	-	A
New Mazda2 (DE) (w/ Advanced Keyless)	A	-	-	-	-	-	-	-	-	-	-	A	B	-	-	C	A	A	-	B	D	-	-	-	A
MPV (LW) Gasoline	A	-	-	-	-	-	-	-	-	-	-	A	-	A	A	-	-	-	-	-	-	-	-	-	-
MPV (LW) RF	D	-	-	D	-	-	-	-	-	-	D	-	-	A	A	-	-	-	-	-	-	-	-	-	-
RX-8 (SE)	A	-	-	-	-	-	-	-	-	-	-	A	B	-	A	-	1:B, 4:A	-	-	-	-	-	-	-	A
RX-8 (SE) (w/ Advanced Keyless)	A	-	-	-	-	-	-	-	-	-	-	A	B	-	A	-	A	-	-	-	-	-	-	-	A
RX-8 (SE) (Face-Lifted)	A	-	-	-	-	-	-	-	-	-	-	A	B	-	A	-	1:B, 4:A	-	-	-	-	D	-	-	A
RX-8 (SE) (Face-Lifted) (w/ Advanced Keyless)	A	-	-	-	-	-	-	-	-	-	-	A	B	-	A	-	A	-	-	-	-	D	-	-	A
Mazda MX5 (NC)	A	-	-	-	-	-	-	-	-	-	-	A	1:B,2:A	A	A	-	A	A	-	-	-	-	-	-	-
Mazda3 (BK) Gasoline	A	-	-	-	-	-	-	-	-	-	-	A	1:B, 2:A	A	A	-	-	-	-	1:B, 4:D	-	-	-	-	A
Mazda3 (BK) Y6	A	-	B	D	-	D	-	-	-	-	-	A	1:B, 2:A	A	A	-	-	-	-	1:B, 4:D	-	-	-	-	A
Mazda3 (BK) Gasoline (Face-Lifted)	A	-	-	-	-	-	-	-	-	-	-	A	1, 13:B 2:A	A	A	C	-	-	-	1:B, 4:D	-	-	-	-	A
Mazda3 (BK) Gasoline (Face-Lifted)	A	-	-	-	-	-	-	-	-	-	-	A	B	A	A	C	A	A	-	1:B, 4:D	-	-	-	-	A
Mazda3 (BK) Y6 (Face-Lifted)	A	-	B	D	-	D	-	-	-	-	-	A	1, 13:B 2:A	A	A	C	-	-	-	1:B, 4:D	-	-	-	-	A
Mazda3 (BK) Y6 (Face-Lifted)	A	-	B	D	-	D	-	-	-	-	-	A	B	A	A	C	A	A	-	1:B, 4:D	-	-	-	-	A
Mazda3 (BK) RF (Face-Lifted)	A	-	-	D	D	D	D	D	D	D	D	A	1, 13:B 2:A	A	A	C	-	-	-	1:B, 4:D	-	-	-	D	A
Mazda3 (BK) RF (Face-Lifted)	A	-	-	D	D	D	D	D	D	D	D	A	B	A	A	C	A	A	-	1:B, 4:D	-	-	-	D	A
Mazda5 (CR) Gasoline	A	-	-	-	-	-	-	-	-	-	-	A	1:B,2:A	A	A	C	A	A	-	-	-	D	-	-	A
Mazda5 (CR) RF	A	-	-	A (Face Lift)	D	A (Face Lift)	D	D	D	D	D	A	1:B,2:A	A	A	C	A	A	-	-	-	D	-	-	A
Tribute (EP)	A	-	-	-	-	-	-	-	-	-	-	-	B	A(2.3L)	A(2.3L)	-	-	-	-	B	-	-	-	-	-
CX-7 (ER)	A	D	-	-	-	-	-	-	-	-	-	A	1:B, 2:A	-	A	-	-	-	-	D	B	D	-	-	B
CX-7 (ER)	A	D	-	-	-	-	-	-	-	-	-	A	B	-	A	-	A	A	D	B	D	-	-	-	B
Mazda BT-50 (UN) (Common-rail Diesel Engine)	A	-	-	D	-	-	-	-	-	-	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*** Additional Notes**

1) Check service codes after completing configuration!

2) M-MDS will require As-Built data in the following circumstances:

M-MDS makes decisions automatically and reports the results to service engineers.

- (1) When configuration data cannot be retrieved from the old module. (including cases in which the old module was lost.)
- (2) If one of the following service codes was configured on the module: P0602, P0601, P1639, or B2477.

3) Some PDS menu locations are differ from IDS. And some functions which the IDS has are not supported in the PDS. Refer to the workshop manual and implement the necessary operation.