

**FUNCTIONS**

OIL

EPB

SAS

BRT

ABS

TPS

TPMS

DPF

IMMO

INJ

GEAR

Odometer

SUS

SUNROOF

GEARBOX

AFS

CLUTCH

LANG CHANGE

SEAT MATCH

WINDOWS DOOR

TURBO

PFP

## Description 1

### Service lamp reset:

- 1.If the service lamp is on, you must provide service for the car. After service, you need to reset the driving mileage or driving time so that the service lamp turns off and the system enables the new service cycle.
- 2.After changing engine oil or electric appliances that monitor oil life, you need to reset the service lamp.

### Brake pad replacement:

- 1.If the brake pad wears the brake pad sense line, the brake pad sense line sends a signal sense line to the on-board computer to replace the brake pad. After replacing the brake pad, you must reset the brake pad. Otherwise, the car alarms.
- 2.Reset must be performed in the following cases:
  - a) The brake pad and brake pad wear sensor are replaced.
  - b) The brake pad indicator lamp is on.
  - c) The brake pad sensor circuit is short, which is recovered.
  - d) The servo motor is replaced.

### Steering angle reset:

- 1.To reset the steering angle, first find the relative zero point position for the car to drive in straight line. Taking this position as reference, the ECU can calculate the accurate angle for left and right steering.
- 2.After replacing the steering angle position sensor, replacing steering mechanical parts (such as steering gearbox, steering column, end tie rod, steering knuckle), performing four-wheel alignment, or recovering car body, you must reset the steering angle.

### Battery matching:

- 1.Use the car diagnostic device to reset the car battery monitoring unit to clear original fault information about insufficient battery electric quantity, and match the battery again and monitor battery based on current battery information.
- 2.Battery matching must be performed in the following cases:
  - a) Main battery is replaced. Battery matching must be performed to clear original electric quantity insufficiency information and prevent the related control module from detecting false information. If the related control module detects false information, it will invalidate some electric auxiliary functions, such as automatic start&stop function, sunroof without one-key trigger function, power window without automatic function.
  - b) Battery monitoring sensor. Battery matching is performed to re-match the control module and monitoring sensor to detect battery electric quantity use information more accurately, which can avoid the instrument panel displaying false information.

ABS bleeding:

1. When the ABS contains air, the ABS bleeding function must be performed to bleed the brake system to restore ABS brake sensitivity.
2. If the ABS computer, ABS pump, brake master cylinder, brake cylinder, brake line, or brake fluid is replaced, the ABS bleeding function must be performed to bleed the ABS.

Throttle matching:

1. Use the car decoder to initialize the throttle actuation element so that the ECU learning value is returned to the initial status to more accurately regulate throttle (or idle motor) operations to control intake air quantity.
2. Throttle matching must be performed in the following cases:
  - a) The ECU is replaced and the ECU does not yet store throttle working features.
  - b) The ECU is disconnected and the ECU memory is lost.
  - c) The throttle assembly is replaced.
  - d) The intake passage is replaced or removed, which affects idle speed control by ECU and throttle body.
  - e) The throttle is cleaned. Although the idle throttle potentiometer features are not changed, with the same throttle opening, the intake quantity has changed and idle speed control features have changed.

Tire pressure reset:

1. After the tire pressure MIL turns on and maintenance is performed, the tire pressure resetting function must be performed to reset tire pressure and turn off the tire pressure MIL.
2. Tire pressure resetting must be performed after maintenance is performed in the following cases: tire pressure is too low, tire leaks, tire pressure monitoring device is replaced or installed, tire is replaced, tire pressure sensor is damaged, tire is

DPF regeneration:

1. DPF regeneration is used to regularly clear PM (particulate matter) from the trap in combustion oxidation mode (such as high temperature heating combustion, fuel additive or catalyst reduce PM fire point combustion) to stabilize trap performance.
2. DPF regeneration matching must be performed in the following cases:
  - a) The bleeding backpressure sensor is replaced.
  - b) The PM trap is removed or replaced.
  - c) The fuel additive injector is removed or replaced.
  - d) The catalytic oxygenizer is removed or replaced.
  - e) The DPF regeneration MIL is on and maintenance is performed.
  - f) The DPF regeneration control module is replaced.

Anti-theft matching:

1. To prevent the car being used by unauthorized keys, the anti-theft key matching function must be performed so that the immobilizer control system on the car identifies and authorizes remote control keys to normally use the car.
2. When the ignition switch key, ignition switch, combined instrument panel, ECU, BCM, or remote control battery is replaced, anti-theft key matching must be performed.

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#### Injector coding:

1. Write injector actual code or rewrite code in the ECU to the injector code of the corresponding cylinder so as to more accurately control or correct cylinder injection quantity.
  2. After the ECU or injector is replaced, injector code of each cylinder must be confirmed or re-coded so that the cylinder can better identify injectors to accurately control fuel.
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#### Tooth learning:

1. Crankshaft position sensor adaptive learning. The crankshaft position sensor learns crankshaft tooth machining tolerance and save to the computer to more accurately diagnose engine misfires. If tooth learning is not performed for a car equipped with Delphi engine, the MIL turns on after the engine is started. The diagnostic device detects the DTC P1336 'tooth not learned'. In this case, you must use the diagnostic device to perform tooth learning for the car. After tooth learning is successful, the MIL turns off.
  2. After the engine ECU, crankshaft position sensor, or crankshaft flywheel is replaced, or the DTC 'tooth not learned' is present, tooth learning must be performed.
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#### Odometer calibration:

1. Instrument panel mileage calibration is used to copy, write, or rewrite mileages. That is, use the car diagnostic computer and data line to copy, write, or rewrite chip data on the instrument panel to make the instrument panel display actual mileages.
  2. Usually, when the vehicle speed sensor is damaged or the mileage is incorrect due to instrument panel faults, you must perform mileage calibration after maintenance.
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#### Suspension matching:

1. This function is used to adjust car body height.
  2. When the car body height sensor and control module in the air suspension system are replaced or the car level is incorrect, perform this function to adjust the car body height sensor for horizontal calibration.
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#### Sunroof initialization:

This function is used to set sunroof lockup close, close on rainy days, slide/tilt sunroof memory function, outside temperature threshold, etc.

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#### Gearbox matching:

1. This function is used to learn the gearbox to improve shift quality.
  2. After the gearbox is dismounted or repaired (after battery powered off for some car series), shift delay or impact is caused. In this case, perform this function to make the gearbox compensate automatically according to driving conditions so as to reach more comfortable and ideal shift quality.
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#### Headlamp matching:

This function is used to initialize the adaptive headlight system. The adaptive headlight system determines whether to automatically turn on the headlight according to ambient light intensity, monitors driving speed and body posture, and adjusts the headlight lighting angle.

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Importance of clutch pedal free-play. Anything less than the correct amount of free play (or clearance) will result in clutch slip, because the pressure plate will be unable to exert its full pressure on the friction plate, clutch linkage adjustment to compensate

This routine is to change language displayed in the instrument.

A memory seat is essentially an electrically-adjustable car seat which can be moved into pre-set positions at the push of a button. As a result of the removal of the DCC fuse, the 'driving position memory' function of the driver and passenger side seat will be inoperative due to the loss of seat position memory stored in the seat ECU. The seat (position control) ECU may need to be initialized if the seat memory settings cannot be recorded.

When replacing door glass and after battery replacement on certain year, make, model vehicles special steps need to be taken in order to properly replace and reprogram the vehicle so the electric windows work properly, the door window glass position can be learned by executing this routine, which enables pinch protection and one touch up function.

This routine is required if the secondary turbo charger is replaced. This will learn the offset values for the turbine shut-off valve.

1. The program can detect the Prime Fuel Pump function.

2. Air often gets into the fuel line when a diesel vehicle change fuel or assembly fuel system. This causes a vehicle to have problems starting, forcing you to 'prime' the fuel system to remove the air.



## Description 2

### 保养灯归零：

1. 汽车保养灯亮，表示车辆该做保养了。做完保养要把行驶的里程数或行驶时间做复位归零设定，这样保养灯就会熄灭，同时系统启用新的保养周期。
2. 在更换发动机机油或者是更换监视机油寿命的电器配件后均要做保养灯归零。

### 刹车片更换：

1. 当刹车片使用到一定的厚度时，会磨到刹车片感应线，此时刹车片感应线会输送一个信号感应线给车载电脑，提示更换刹车片。更换刹车片后需做刹车片复位，否则汽车会继续报警。
2. 需要做复位的情况：
  - a) 更换刹车片和刹车片磨损传感器后；
  - b) 刹车片指示灯亮；
  - c) 刹车片传感器线路短路修复后；
  - d) 更换伺服马达后；

### 转向角复位：

1. 转向角复位就是找到汽车保持直线行驶的相对零点位置，以此位置作为参考，ECU方可计算出左右转向时的准确角度。
2. 一般在更换转向角位置传感器、更换转向系机械零部件（如：方向机、转向柱、横拉杆球头、羊角）、做完四轮定位、车身修复等后，都要求做转向角复位归零。

### 电池匹配：

1. 电池匹配就是利用汽车诊断设备对汽车电瓶的监控单元进行一个复位处理，清除原有的有关于电池电量不足的故障信息，使其重新匹配，以现有电瓶的相关信息为标准，让监控单元进行监控。
2. 在下列情况下需要做电池匹配：
  - a) 更换主蓄电池 需要利用电池匹配来清除原来的电量不足的信息，避免相关控制模块检测到虚假信息，造成车辆的一些电子辅助功能失效，例如，自动启停功能，天窗 无一键触发功能、电动窗无自动功能等；
  - b) 蓄电池监测传感器 利用电池匹配功能对控制模块与监测传感器重新匹配，以便能更准确的检测电池电量的使用情况，避免仪表提示错误信息，造成误报。

#### ABS排气:

1. 当ABS系统含有空气时, 需要通过ABS排气功能对制动系统进行排气, 从而恢复ABS系统制动的灵敏度。
2. 在更换ABS电脑、ABS泵、制动总泵、制动分泵、制动管路、制动油液的情况下都需要使用ABS排气功能, 对ABS系统进行排气。

#### 节气门匹配:

1. 节气门匹配就是利用汽车解码器对汽车节气门执行元件作初始化的设定, 使ECU的学习值回归到初始状态, 这样才能更加准确控制调节节气门(或怠速马达)的动作, 以调控进气量。
2. 需进行节气门匹配的情况:
  - a) 更换电控单元后, 电控单元内还没有存储节气门工作的相关的特性, 需进行节气门匹配。
  - b) 电控单元断电后, 电控单元存储器的记忆丢失, 需进行节气门匹配。
  - c) 更换节气门总成后, 需进行节气门匹配。
  - d) 更换或拆装进气道后, 影响到电控单元与节气门体协调工作对怠速的控制, 需进行节气门匹配。
  - e) 在清洗节气门后, 怠速节气门电位计的特性虽然没有改变, 但在相同的节气门开度下, 进气量已发生了变化, 怠速控制特性已发生变化, 此时就需进行节气门匹配。

#### 胎压复位:

1. 当汽车轮胎气压故障指示灯亮时, 进行维修后, 需要通过胎压复位功能对轮胎气压进行复位, 熄灭胎压故障指示灯。
2. 轮胎气压过低或者漏气、更换或者加装胎压监测设备、更换轮胎、胎压传感器损坏、带有胎压监测功能的汽车在轮胎换位等情况下, 在维修完成后都要对汽车进行胎压复位。

#### DPF再生:

1. DPF再生功能主要是定期利用燃烧氧化的方式(如: 高温加热燃烧、燃油添加剂或催化剂降低颗粒物燃点燃烧)清除捕集器中的颗粒物, 使捕集器性能始终保持最佳稳定。
2. 在以下情况需要做DPF再生匹配
  - a) 更换排气背压传感器;
  - b) 颗粒捕集器拆卸或更换;
  - c) 燃油添加剂喷嘴拆卸或更换;
  - d) 催化氧化剂器拆卸或更换;
  - e) DPF再生故障灯点亮, 维修后匹配;
  - f) DPF再生控制模块维修更换;

#### 防盗匹配:

1. 为了防止汽车被非法钥匙使用, 通过防盗钥匙匹配功能, 使汽车上的防盗器控制系统对遥控钥匙进行识别授权后, 汽车才能开启与正常使用。
2. 当更换点火开关钥匙、点火开关、组合仪表盘、发动机控制单元(ECU)、车身控制模块(BCM)以及遥控器电池时需进行防盗钥匙匹配。

#### 喷油嘴编码:

1. 把喷油嘴实际编码写入或将ECU里面存储的编码改写成对应各缸油嘴的编码, 这样才能更准确控制或修正各缸的喷油量。
2. 通常在更换ECU、喷油嘴后, 都需要对各缸油嘴进行编码确认或重新编码。以便气缸能更好的识别各缸油咀, 精准控制喷油。

#### 齿讯学习:

1. 曲轴位置传感器自适应学习, 曲轴位置传感器 学习 曲轴齿的加工误差 并存入电脑, 以便更精确的进行发动机失火诊断。安装了德尔福发动机的车辆如果没有进行过齿讯学习, 启动发动机后故障灯会点亮, 用诊断设备检测时会有P1336齿讯未学习的故障码, 此时必须用诊断设备对车辆执行齿讯学习这个特殊功能, 成功做完此功能后, 故障灯熄灭。
2. 在更换发动机ECU、曲轴位置传感器、曲轴飞轮、有齿讯未学习的故障码后, 均要做齿讯学习。

#### 里程表调校:

1. 仪表里程调校就是对公里数的复制、写入或改写。即用汽车诊断电脑和数据线将仪表里的芯片的数据复制、写入或改写, 使仪表显示实际的里程数。
2. 通常在车速传感器损坏、仪表故障导致里程不准时, 维修完成后都要做里程调校。

#### 悬挂匹配:

1. 该功能可调整车身高度。
2. 当更换空气悬挂系统中的车身高度传感器、控制模块后或汽车水平高度有误时, 需要执行该功能调节车身高度传感器进行水平校准。

#### 天窗初始化:

该功能可设定天窗锁止关闭、下雨时关闭、滑动/倾斜式天窗的记忆功能、车外温度阈值等。

#### 波箱匹配:

1. 该功能可完成变速箱的自学习, 提升换挡品质。
2. 当变速箱拆装或维修后(部分车系蓄电池断电后), 会导致换挡延迟或冲击问题, 此时需执行该功能, 以使变速箱根据行驶条件自动进行补偿, 以求达到更舒适、更理想的换挡品质。

#### 大灯匹配:

该功能可以对自适应大灯系统进行初始化。自适应大灯系统可根据环境光线强度决定是否自动开启大灯, 并对车辆的行驶速度, 车身姿态等进行检测, 适时调整大灯的照明角度。

离合器踏板自由操作的重要性。 小于正确空隙(或空隙)的任何量都会导致离合器打滑, 致使压盘将无法在摩擦盘上施加全部压力, 因此需要调节离合器连杆机构以补偿离合器磨损。

此功能是为了更改仪器中显示的语言。

记忆座椅本质上是电动可调式汽车座椅，只需按一下按钮即可将其移动到预设位置。由于拆除了DCC保险丝，驾驶员和副驾驶员侧座椅的'驾驶位置记忆'功能将由于存储在座椅ECU中的座椅位置记忆的丢失而无法使用。如果无法记录座椅存储器设置，则可能需要初始化座椅（位置控制）ECU。

在更换车门玻璃时以及在某一年更换蓄电池后，车型车辆需要采取特殊步骤才能正确更换和重新编程车辆，以便电动车窗正常工作，执行此例行程序可以了解车窗玻璃的位置，从而启动防夹保护和一触式升起功能。

当更换辅助涡轮增压器后，需要执行此常规程序。本操作将为涡轮切断阀获取补偿值

1. 此程序可检测燃油泵排气功能。
2. 当柴油车辆更换燃油或装配燃油系统时，空气经常进入燃料管路，这会导致车辆启动时出现问题，通过该功能将燃油系统中的空气排出。

0x07, 0x20, 0x19, 0x53, 0xDE, 0x38

0x07, 0x20, 0x19, 0x53, 0xDE, 0x3A

0x07, 0x20, 0x19, 0x53, 0xDE, 0x3B

0x07, 0x20, 0x19, 0x53, 0xDE, 0x3D

0x07, 0x20, 0x19, 0x53, 0xDE, 0x3F

0x07, 0x20, 0x19, 0x53, 0xDE, 0x3C

0x07, 0x20, 0x19, 0x53, 0xDE, 0x3E

0x07, 0x20, 0x19, 0x53, 0xDE, 0x31

0x07, 0x20, 0x19, 0x53, 0xDE, 0x30

0x07, 0x20, 0x19, 0x53, 0xDE, 0x33

0x07, 0x20, 0x19, 0x53, 0xDE, 0x32

0x07, 0x20, 0x19, 0x53, 0xDE, 0x35

0x07, 0x20, 0x19, 0x53, 0xDE, 0x37

0x07, 0x20, 0x19, 0x53, 0xDE, 0x28

0x07, 0x20, 0x19, 0x53, 0xDE, 0x36

0x07, 0x20, 0x19, 0x53, 0xDE, 0x2B

0x07, 0x20, 0xB8, 0xAC, 0x22, 0xC6

0x07, 0x20, 0x4C, 0xAC, 0x22, 0xC6

0x07, 0x20, 0x57, 0xAC, 0x22, 0xC6

0x07, 0x20, 0x7A, 0xAC, 0x22, 0xC6

0x07, 0x20, 0x7D, 0xAC, 0x22, 0xC6

0x07, 0x20, 0x29, 0xAC, 0x22, 0xC6