

Magneti Marelli IAW15P

For ASW-NEXT

Short User Manual



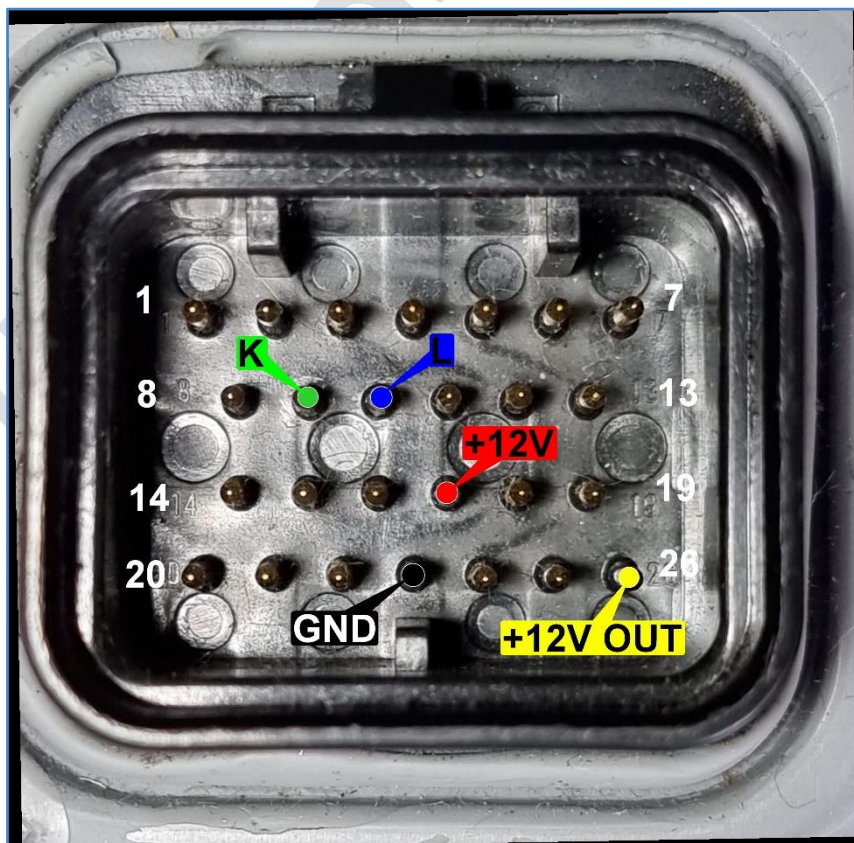
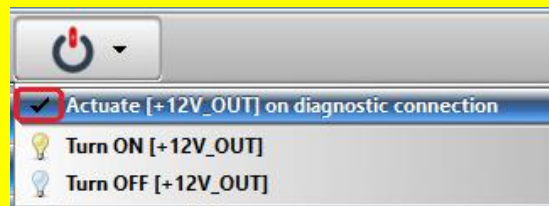
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1. How to connect?



Pinout of scooter diagnostic connector.
Connect red crocodile clip of ASW-NEXT to terminal "+" of scooter's battery

NOTE: Please enable external power control from the upper menu when programming *on-the-bench*



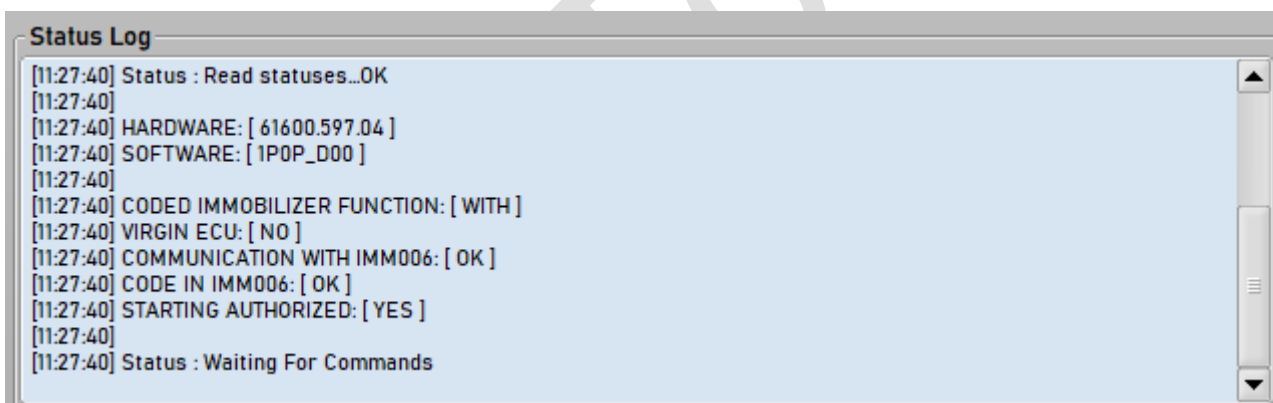
2. Software features

- ✓ Read / Write **internal EEPROM** of MC68HC11F1
- ✓ Read / Write **full external FLASH M29F010B**
- ✓ **Repair FLASH CRC**
- ✓ **Reset IAW15P** to **VIRGIN / IMMO-OFF** state
- ✓ **Transfer pairing data** to **IAW15P** from EEPROM dump of **IMM006**
- ✓ **Reset TPS learning**
- ✓ **Read / Erase diagnostic trouble codes (DTC)**

NOTE: Software of ASW-NEXT will save FLASH readout to 128 KB file regardless of fact that MC68HC11F1 can operate within address range only of 64 KB. This is made with intention to keep compatibility with files, created by FLASH programmers from unsoldered M29F010B (physical size of M29F010B is 128KB).

You are free to use files of both sizes - 64KB and 128KB for FLASH programming with ASW-NEXT.

Explanation of statuses:



```
Status Log
[11:27:40] Status : Read statuses...OK
[11:27:40]
[11:27:40] HARDWARE: [ 61600.597.04 ]
[11:27:40] SOFTWARE: [ 1P0P_D00 ]
[11:27:40]
[11:27:40] CODED IMMOBILIZER FUNCTION: [ WITH ]
[11:27:40] VIRGIN ECU: [ NO ]
[11:27:40] COMMUNICATION WITH IMM006: [ OK ]
[11:27:40] CODE IN IMM006: [ OK ]
[11:27:40] STARTING AUTHORIZED: [ YES ]
[11:27:40]
[11:27:40] Status : Waiting For Commands
```

CODED IMMOBILIZER FUNCTION

- WITH – IAW15 is configured to communicate with IMM006 immobilizer unit
- WITHOUT – IAW15 does not communicate to immobilizer (coded for APRILIA scooters)

VIRGIN ECU

- YES – IAW15 is blank and it is ready for self-pairing with IMM006 immobilizer unit
- NO – IAW15 has immobilizer code stored in the EEPROM already

COMMUNICATION WITH IMM006

- OK – physical communication by wire between IMM006 and IAW15 present
- NO COMM – physical communication by wire between IMM006 and IAW15 missing

CODE IN IMM006

- VALID – syncho data in IAW15 matches syncho data in IMM006
- WRONG – syncho data in IAW15 does not match syncho data in IMM006

STARTING AUTHORIZED

- YES – engine start enabled
- NO – engine start disabled

3. Different types of IAW15P

- **IAW15P for PIAGGIO** is configured to communicate with external immobilizer unit IMM006 by ECU pin 16. Engine control unit has master key value programmed in the EEPROM, that serves as a synchronization between IAW15P and IMM006. ECU status by diagnostic is read as:

CODED IMMOBILIZER FUNCTION: [WITH]

- **IAW15 for APRILIA** basically is in IMMO-OFF mode. Scooter has immobilizer unit made by **ZADI** that cuts power supply to IAW15P when ignition is turned on without a transponder key or with invalid transponder key. No synchronization data is stored in the EEPROM of engine control unit. ECU status by diagnostic is read as:

CODED IMMOBILIZER FUNCTION: [WITHOUT]

4. Dump utility

- ✓ **Check & Repair FLASH CRC**
Analyzes CRC validity of loaded FLASH file. CRC repair takes place if needed.
- ✓ **Set IMMO-OFF in FLASH**
Modifies loaded FLASH file to set ECU into IMMO-OFF mode. CRC is repaired automatically.
- ✓ **Read / Set MASTER key in IAW15**
Function to align synchronization between ECU and IMM006 in the EEPROM of IAW15P. **Does not apply to IAW15P without coded immobilizer function.**
- ✓ **Reset EEPROM to VIRGIN**
Erases immobilizer synchronization data from the EEPROM of IAW15P. ECU will self-learn new synchronization from IMM006 when ignition is turned with a valid MASTER key. **Does not apply to IAW15P without coded immobilizer function.**

5. Test circuit diagram

