

Tester Present (0x3E)

Purpose: The purpose of this service is to indicate that ECUs are connected to the tester. So that the previously enabled diagnostic session should be active.

Introduction

- Other than **default session**, this service can be used in this service. (Note)
- This can either be done by transmitting the **Tester Present** request message periodically or in case of the absence of other diagnostic services, preventing the ECUs from automatically returning to the default Session.

Sub-functions

Enum Values	Description
0x00	Zero Sub Function
0x80	Suppress Positive Response Message Indication Bit
0x01 to 0x7F	SAE Reserved

ECU Reset service does not support data-parameters in the request message.

The two sub-functions are

- **Zero Sub-function - 0x00:** This sub-function is send by the tester to ECU i.e zero sub-function not take part on suppressing response
- **Suppress Pos Resp Sub-Fn – 0x80 :** This sub-function is send by the tester to suppressing positive response (Note)

Request Frame:

1. Service Id
2. Sub-function (00 or 80)

Positive Response Frame:

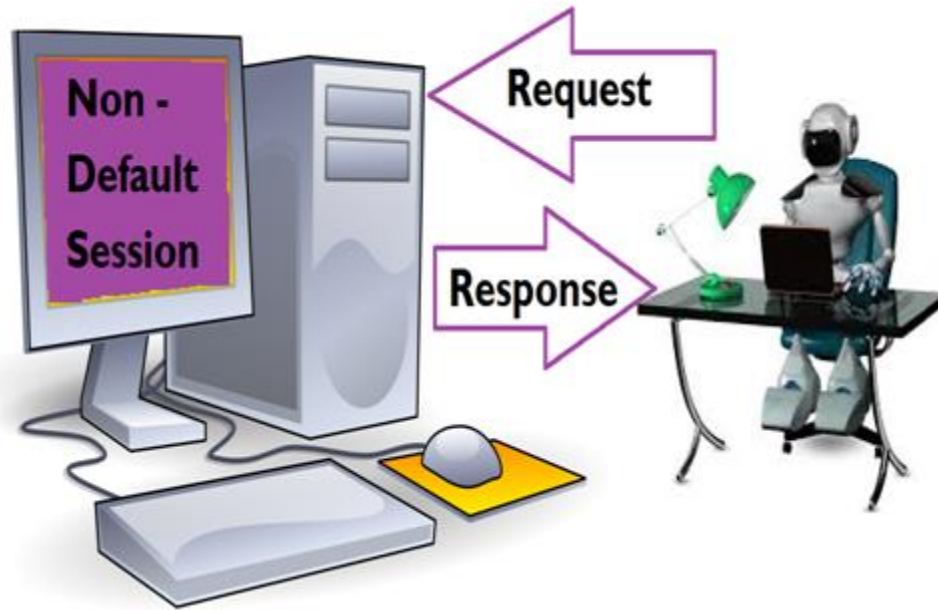
1. Service Id
2. Sub-function (00 or 80)

Negative Response Frame:

1. Negative Response (**7F**)
2. Service Id
3. NRC Code

Understanding on Tester Present !!





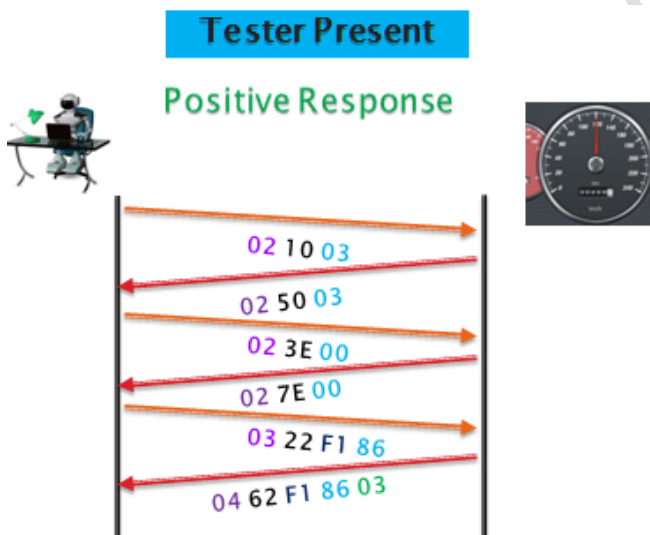


Assumption scenario:

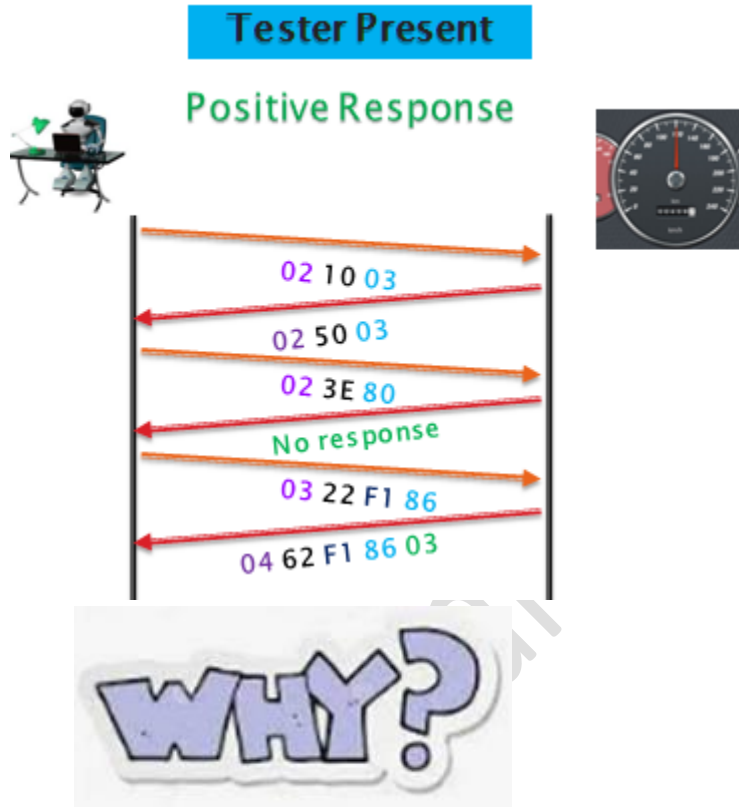
- In real-time tester require ECU to be active in non-default session for long time even there is no proper communication by other services (Such as security access or routine control or other services).
 - **But tester wants ECU to be in non-default session**
- To achieve the above expectation tester needed to use the service called **Tester present (0x3E)**. Hence the ECU will be stay in non-default session even tester is not communicate using other services
- The below sub-functions can be used for this service

Sub-Functions Explanation:

- **Zero Sub-function - 0x00:**
 - This sub-function is send by the tester to ECU i.e zero sub-function not take part on suppressing response
 - This sub-function indicates that no sub-function value beside the suppress Positive Response Message Indication Bit is false (ECU sends Response)



- **Suppress Pos Resp Sub-Fn – 0x80 :**
 - This sub-function is send by the tester to suppressing positive response (Note)
 - This sub-function indicates that no sub-function value beside the suppress Positive Response Message Indication Bit is True (ECU will not sends Response)



Why the session comes out of its own and whats the purpose of holding it in the same session :

1E 3D 11 – Wiper Motor Set timer mismatch

To fix the above DTC, ECU should run routine to adjust the 555 Timer IC (Wiper Control motor). The routine can be achieved only in extended session. Hence the service Tester Present is required to keep session in extended session

List of NRCs Supported

1. **0x12** Sub-function Not Supported
2. **0x13** Incorrect Message Length

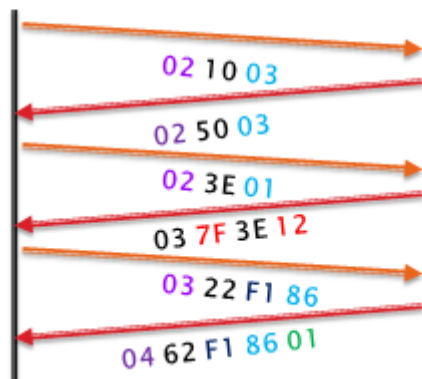


Sub-function Not Supported (0x12)

ECU responds with **NRC 12** if tester tries to request with unsupported sub-function and the **sub function is not supported** as per requirement

Tester Present

Negative Response



Incorrect Message Length (0x13)

ECU responds with **NRC 13** if tester tries to request with **incorrect message length**

