Toyota/Lexus Smart System ESL reset

I. Getting Started

Introduction

The following documentation relates to Barracuda software version 19 (September 2021). The system allows to **reset** ESL (Electric Steering Lock) box of Toyota/Lexus smart system vehicles 2013+. Reset of **both** ESL and ID code box allows resynchronization via standard Toyota diagnostic procedures (Techstream) and thus solve all keys lost situation for these vehicles by replacing the Certification ECU (Smart box) with a new one that has at least one paired key. Alternatively a second hand Certification ECU that matches the type / part number and is pre 2017 (not locked) can be used in conjunction with Tango+ for Toyota/Lexus SmartKey Systems OBD Framework to create an emulator on the bench and synchronize it with the reset ID code and ESL.

System requirements:

- Barracuda programmer
- Barracuda Adapter H-Immo
- Barracuda activation IDCode & ESL reset activation

Barracuda Adapter H-Immo
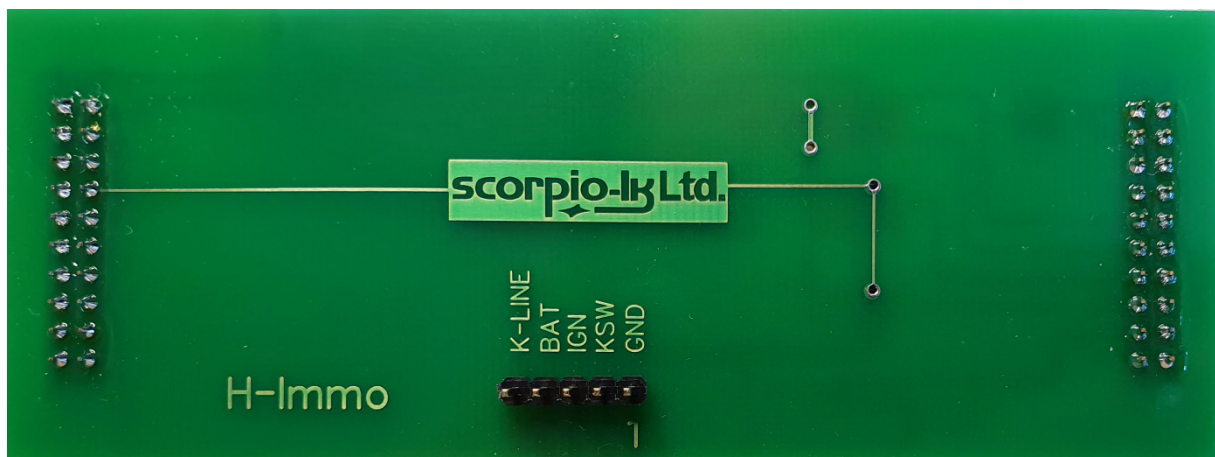
II. Operation Procedure

Reset ESL

1. **Disconnect** vehicle's Certification ECU (Smart box)
2. Access the vehicle's ESL (Electric Steering Lock), disconnect its plug and connect as shown on the diagram

ESL connector location
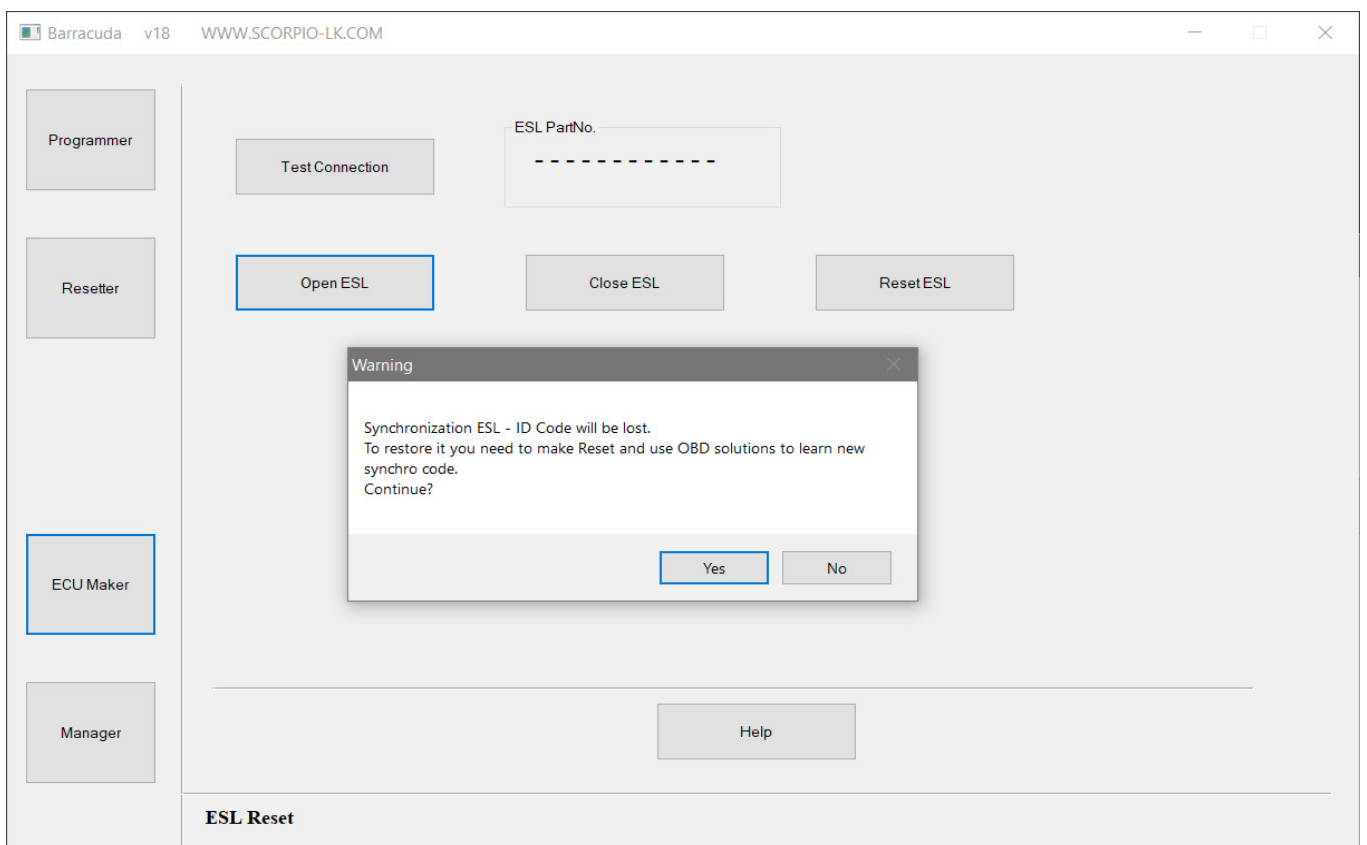
K-LINE
BAT
IGN
KSW
GND

3. Start Barracuda software and select ECU Maker->Toyota->ID Code Reset
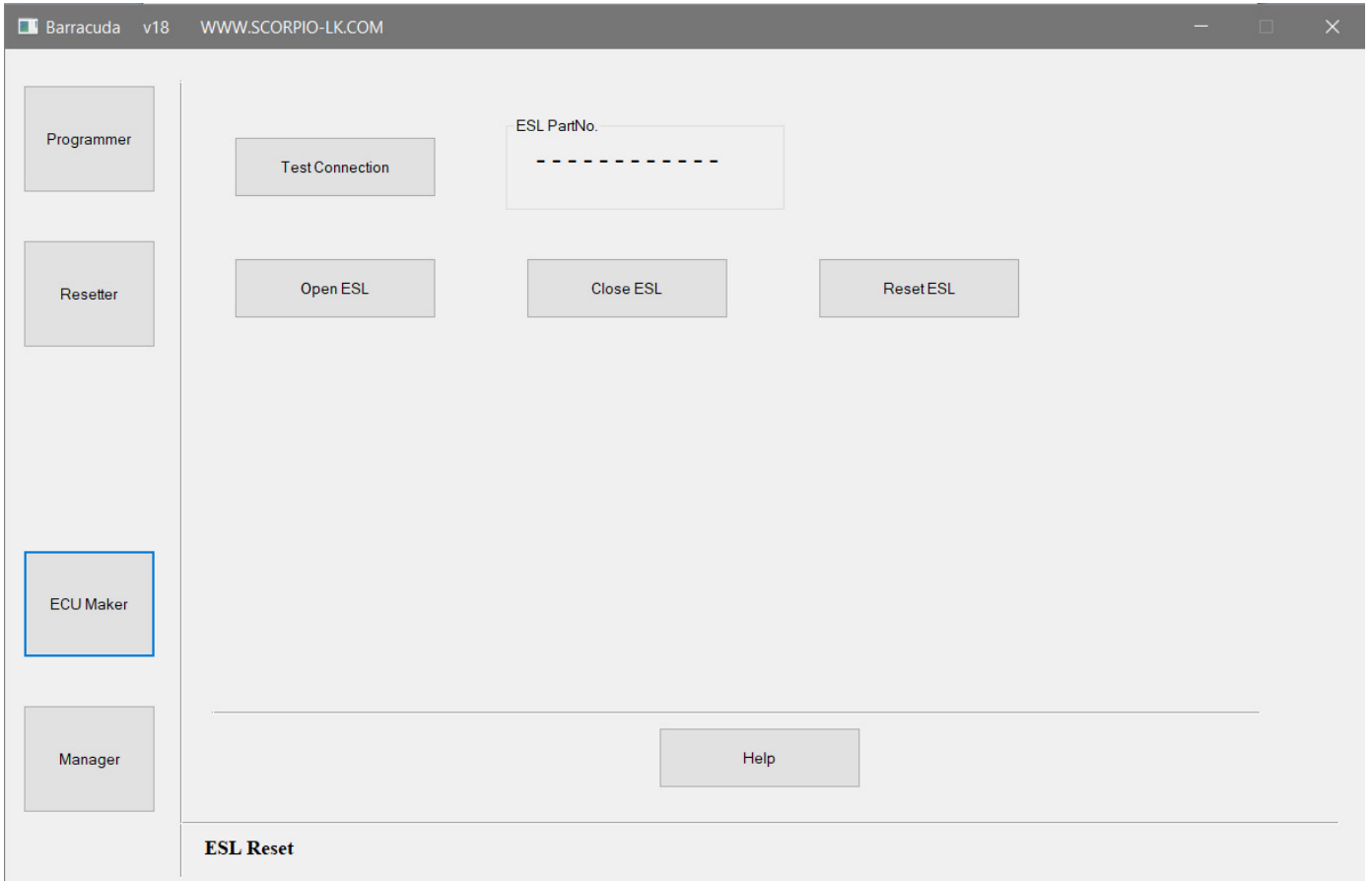
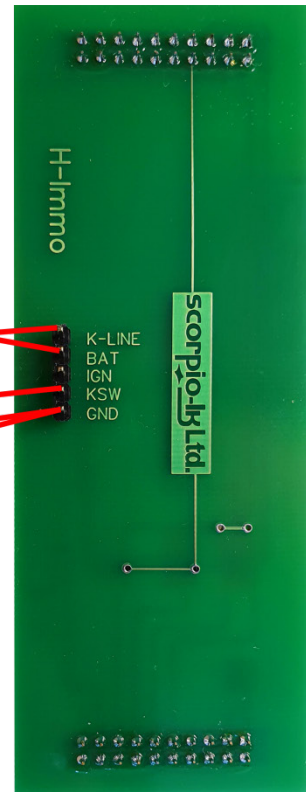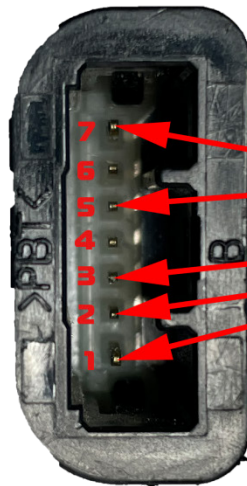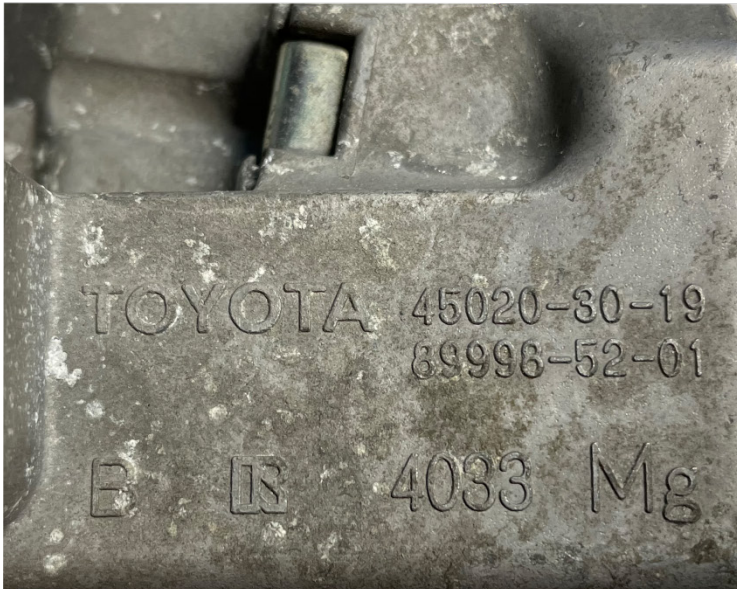4. Press **Test Connection** to verify wiring then proceed with **Reset ESL**

Additional functions

Open ESL and **Close ESL** functions allow disengage/engage the steering lock

III. Toyota 40 & 80bit Open/Close ESL

Connection Diagram

IV. Addendum

Barracuda Power Supply

In order to operate Barracuda requires 9-24V DC supplied to its 5.5x2.1mm center positive plug. When working mobile this can be easily achieved by using a Step-UP (5 to 9/12/24V DC) connected to a power bank, laptop USB port or getting 12V DC from a vehicle's lighter or other power supply port.

Note that for this function in particular (**Open ESL** and **Close ESL**) power requirement is **12V 1A**, which rules out laptop/PC USB port as source.