

# YELSHA D Nissan Skyline RB Cam Trigger Kit Install Instructions.

## Installation

### Tools Required

- 10mm Socket with suitable ratchet
- 11mm Socket with suitable ratchet
- Small Extension to suit the above ratchet
- 4mm Allen Key

### Step One;

Using your 10mm socket, remove the 3x bolts that hold the factory cam angle sensor (CAS). Then remove the CAS.

### Step Two:

Using your 11mm socket, remove the 4 bolts holding the factory cam gear on. Don't forget to hold the square washer as it might drop into the cam cover. You will not need this square washer for the installation of the YELSHA D Cam Trigger Kit.

### Step Three:

PLEASE NOTE THE DOWEL HOLE IN THE OEM CAM GEAR AND IN THE TRIGGER KIT.

This will ensure that the trigger kit offset will be close to the old unit for the start-up.

Fit the trigger wheel disc to the camgear using the factory bolts. Please be careful not to over tighten the bolts (the correct torque setting is 19NW) or round the bolts, your socket might not fit the same as the removal.

### Step Four;

For the R32-R33 Skyline, Please remove the factory rubber and or metal isolator from the cam cover. This will show the alloy mounting plate.

Please also remember given the age of the Skylines some rubber may have perished and broken apart when you remove the cam cover and fall down the cam cover.

For the R34 Skyline, you just remove the metal inserts from the rubber. Some cars may require the internal rubber loop to be cut back or trimmed.



## ECU Setup

The air gap between the wheel and sensor should be approx 1.3mm. you can use the enclosed spacers to ensure the air gap is correct. To ensure the trigger kit is picking up the signal, you can also use the Trigger Scope Function of the ECU (below is an example from Link ECU)

Your Laptop Must be connected to the ECU. It is also recommended to turn off the Fuel Pump or disconnect injectors before cranking or turning the motor over

The screenshot displays the PCLink Engine Management software interface. The main window is titled 'Calibrate' and shows a 'Searching for ECU' status. The interface is divided into several sections:

- Left Panel (ECU Settings):** A menu with options like 'Update Firmware', 'Clear ECU Fault Codes', 'ECU Log File Setup', 'CAN Setup', 'Show ECU Statistics', 'Store to ECU', 'ECU Unlock', 'Restore to Factory Settings', 'Setup Password Protection', 'TPS Setup', and 'MAP Sensor Calibration'. The 'Trigger Scope' option is highlighted.
- Central Panel:** A 'Calibrate' window with a 'Cold Start' indicator and a 'VVT' slider. The 'Calibrate' value is set to 10.0.
- Right Panel (Live Data):** A dashboard showing various engine parameters:
  - Engine Speed (RPM): 987
  - TPS (Main) (%): 0.0
  - MAP (psi): 5.4
  - ECT (°C): 68
  - IAT (°C): 34
  - Fuel Pressure (psi): 35.2
  - ECU Voltages: Batt Voltage (V) 13.97, 3.3V Internal (V) 3.31, 5V Out (V) 4.97, 12V Internal (V) 12.00, ECU Temperature (°C) 43.
  - Injector Duty Cycle (%): 1.3
- Bottom Panel (Parameters):** A grid of parameters with their status and values:
 

Inj 1 - Injection	Active	Ign 5 - Ignition	Active	An Volt 1 - MAP (V)	0.41	DI 1 - Power Steer Switch	Inactive	Engine Speed (RPM)	987	Batt Voltage (V)	13.97
Inj 2 - Injection	Active	Ign 6 - Ignition	Active	An Volt 2 - Fuel Pressure (V)	1.91	DI 2 - Start Position	Inactive	Trig1 Signal	Yes	3.3V Internal (V)	3.31
Inj 3 - Injection	Active	Ign 7 - Ignition	Off	An Volt 3 - TPS (Main) (V)	0.40	DI 3 - Wheel Speed	Inactive	Trig2 Signal	No	5V Out (V)	4.97
Inj 4 - Injection	Active	Ign 8 - Ignition	Off	An Volt 4 - Air Flow Meter (V)	0.02	DI 4 - AC Request	Inactive	Trig1 Err Counter	0	12V Internal (V)	12.00
Inj 5 - Injection	Active	Aux 1 - HIGH CAN	Active	An Volt 5 - Air Flow Meter (V)	0.01	DI 5	Off	Trig1 Arming (V)	1.0	ECU Temperature (°C)	43
Inj 6 - Injection	Active	Aux 2	Off	An Volt 6 - Lambda 1 (V)	1.66	DI 6	Off	Trig2 Arming (V)	2.0	Engine Kill	Inactive
Inj 7	Off	Aux 3 - AC Clutch	Inactive	An Volt 7 (V)	0.02	DI 7	Off	Engine Kill	Inactive	ECU Hold Power	Off
Inj 8 - Engine Fan	Inactive	Aux 4 - Tacho	Active	An Volt 8 - Oil Pressure (V)	1.03	DI 8	Off	Anti Theft	Off	% Fuel Cut (%)	0
Ign 1 - Ignition	Active	Aux 5	Off	An Volt 9 (V)	0.02	DI 9	Off	Anti Theft	Off	% Ignition Cut (%)	0
Ign 2 - Ignition	Active	Aux 6 - Fuel Pump	Active	An Volt 10 (V)	0.02	DI 10	Off	Fault Code Count	0		
Ign 3 - Ignition	Active	Aux 7 - CE Light	Inactive	An Volt 11 (V)	0.02	DI 11	Off				
Ign 4 - Ignition	Active	Aux 8 - Boost Control	Inactive	An Volt 12 (V)	0.02						

For setting up the trigger kit you will need a timing light to set the base timing

We recommend locking it at 10 degrees and adjusting off offset until it matches 10 degrees on the crank pulling timing mark.

Please note 90 degrees is just a reference point every vehicle is different. adjust the offset until the motor is sparking at 10 degrees.

Below are some ECU Settings;

The image shows two screenshots from an ECU configuration tool. The top screenshot is titled "Triggers" and shows a list of settings for two triggers. The bottom screenshot is titled "Trigger 1 Arming Threshold Table" and shows a table of voltage thresholds for different engine speeds.

**Triggers**

- Trigger Setup
  - Trigger Mode: MultiTooth / Missing
  - RPM Filtering: 1 - Default
- Trigger 1
  - Trigger 1 Type: Reluctor
  - Trigger 1 Filtering: Level 1 (Low)
  - Multi-Tooth Position: Cam
  - Tooth Count: 24
  - Missing Teeth: 1
  - Number of Gaps: 1
  - Sync Tooth: 1
  - Trigger 1 Arming Threshold Table: [Table]
- Trigger 2
  - Trigger 2 Type: Reluctor
  - Trigger 2 Filtering: Level 1 (Low)
  - Sync Mode: None
  - Trigger 2 Arming Threshold Table: [Table]
- Calibrate
  - Trigger Offset: 97.0 [Lock]
  - Ref. Timing: 10.0 [Lock]
  - Set Base Timing: [Key]

**Trigger 1 Arming Threshold Table**

Trigger 1 Arming Threshold (V)	Engine Speed (RPM)						
500	1000	2000	3000	4000	5000	6000	7000
0.2	1.5	3.0	3.5	3.5	3.5	3.5	3.5

Trigger Setup

Trigger Mode: MultiTooth / Missing  
RPM Filtering: 1 - Default

Trigger 1

Trigger 1 Type: Reluctor  
Trigger 1 Filtering: Level 1 (Low)  
Multi-Tooth Position: Cam  
Tooth Count: 24  
Missing Teeth: 1  
Number of Gaps: 1  
Sync Tooth: 1  
Trigger 1 Arming Threshold Table: [Table]

Trigger 2

Trigger 2 Type: Reluctor  
Trigger 2 Filtering: Level 1 (Low)  
Sync Mode: None  
Trigger 2 Arming Threshold Table: [Table]

Trigger 1 Arming Threshold Table

Trigger 1 Arming Threshold (V)		Engine Speed (RPM)					
500	1000	2000	3000	4000	5000	6000	7000
0.2	1.0	1.5	2.0	2.5	3.0	3.5	4.0

Calibrate

Trigger Offset: 90.0 [Lock Icon]  
Ref. Timing: 10.0 [Lock Icon]  
Set Base Timing: [Arrow Icon]

## Wiring Installation Details

