

An ISO 9001 - 2008 Certified Company

THINTURE TECHNOLOGIES PVT. LTD.



SPEED-EYE ELECTRONIC SPEED LIMITER

TAMPER RESISTANCE FEATURES



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Tampering of Speed Limiter

Even though Speed limiters are effective in controlling the over speeding of vehicles, most drivers are finding new ways to tamper the functionality. The major problem faced by the enforcement authorities is the on-road functionality testing of a speed limiter. Some of the different ways of speed limiter tampering are listed below.

- Removing of speed limiter connections after inspection.
- Fixing a temporary unit for the purpose of annual inspection.
- Adjusting to a higher speed limit after inspection



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Speed-Eye Anti-tampering features

We are working in the field of road safety products for 12+ years and are very much aware of the various tampering possibilities in a speed limiter device. Tampering cannot be completely eliminated but can be effectively resisted. In our latest device, Speed-eye Pedal interface, we have incorporated various features to reduce tampering which no other manufacturers are providing.

This include online certification, limp-home modes, laser marked tamper resistance seals, stickers and functionality testing.



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Speed-Eye Limp-home facility – Pedal Interface

In case of tampering/failure of speed limiter, the vehicle is restricted at a lower speed automatically. This feature will enable the driver to drive the vehicle to the nearest service centre safely. If somebody is tampering with the electrical connections of the device, the output towards the vehicle ECM is disturbed and accelerator pedal will be restricted automatically by ECM.

For protecting against speed sensor tampering, Speed-Eye ECU automatically adjusts the pedal value to low after waiting for 10sec. without speed pulse. The pedal will work normally once speed pulse starts coming in.

Speed-Eye is designed in a way that in all possible tampering attempts, the pedal value will be restricted to minimum level for not allowing acceleration.



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Speed-Eye Limp-home facility – Solenoid based device

In case of tampering/failure of speed limiter, the vehicle is restricted at a lower speed automatically. This feature will enable the driver to drive the vehicle to the nearest service centre safely.

For protecting against speed sensor tampering, Speed-Eye ECU checks the movement of the vehicle by using an inbuilt motion sensor. If motion sensor detects a movement and speed signal is not present, ECU will turn the error mode ON. With an error recorded, speed limiter function test cannot be activated.



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Speed-Eye Online Certification System

Thinture online platform is a secured server based software in which dealers can create certificate of installation. Once vehicle details are entered, the software will create a unique ID for the certificate and a QR code.

Through search option, enforcement authorities can check the validity of the certificate any time. As vehicle details like Reg.No, Chasis No, Engine No. and speed limiter details like serial No and tampering seal No is added, certificate cannot be duplicated.



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Speed-Eye Online Certification System



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Certificate Certificate ▾ About Us ▾

Vehicle Reg No	<input type="text"/>	Owner Name	<input type="text"/>
Chassis No	<input type="text"/>	Engine No	<input type="text"/>
Manufacture Year	<input type="text" value="-select-"/>	Make Of Vehicle	<input type="text"/>
Model Of Vehicle	<input type="text"/>	Type Of Speed Limiter	<input type="text" value="-select-"/>
Set Speed	<input type="text"/>	Serial No	<input type="text"/>
Tamper Seal No	<input type="text"/>	Install Date	<input type="text"/>
Technician Name	<input type="text"/>	Applicable Standard	<input type="text" value="-select-"/>
Country	<input type="text" value="-select-"/>		



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Speed-Eye Online Certification System



Dealer Name	thint
Address & Phone	thinture,132465

UIN (Unique identification number)	AE-KL092013-0002	Valid Upto
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	<p>Dealer Stamp</p>
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ROAD SPEED LIMITER CERTIFICATE

THINTURE TECHNOLOGIES PVT. LTD.
Bangalore, Karnataka INDIA
Phone: +91 80 23646920
sales@thinture.com, www.thinture.com

Applicable standard	GSO-1626/2002	Country of Installation	United Arab Emirates
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DECLARATION

This is to certify that, the vehicle with below mentioned details has been fitted with road speed limiter device, programmed for a top speed of maximum 100 km/hr. The speed limiter fitted to the vehicle complies with the applicable standard. The device is calibrated and sealed.

VEHICLE DETAILS

Vehicle Owner	RAGHU RAMAN		
Chassis No.	457896254	Registration No.	KL092013
Make of vehicle	MARUTHI	Model of vehicle	800
Engine No.	458258245	Year of manufacture	2013

SPEED LIMITER DETAILS

Type of speed limiter	Electronic Pedal	Set speed limit	100
Serial No.	4578/12/2013	Tamper Seal No.	457-54-879
Date of Installation	10/Sep/2013	Technician Name	SUDHEESH

DEALER DETAILS

Dealer Name	thint
Address & Phone	thinture,132465

UIN (Unique identification number)	AE-KL092013-0002	Valid Upto	10/Sep/2014
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	<p>Dealer Stamp</p>
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Search option

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Certificate About Us

Registration Number

KAO42140

Name	Details
Certificate No	IN-KAO42140-0001
Registration No	KAO42140
Owner Name	SUDHEESH
Chassis No	4124578935666
Engine No	478978979
Manufacture Year	2013
Make Of Vehicle	2013
Model Of Vehicle	ACE
Type of Speed Limiter No	Cable Control
Set Speed	100
Serial No	12315
Tamper Seal No	321452

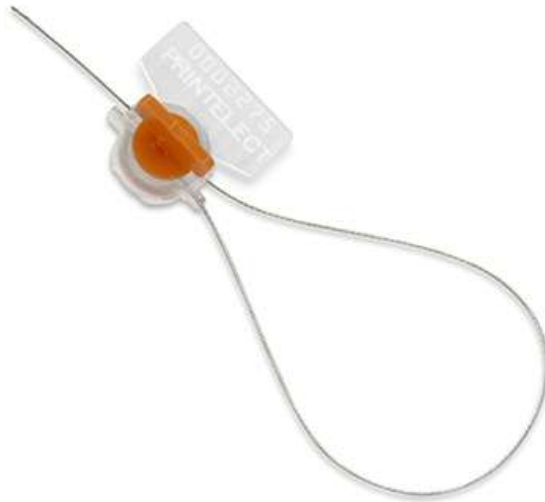
Scanning the QR code in the certificate using a mobile phone will also show speed limiter validity details.

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Other tamper resistant features



Using Roto seals for sealing the ECU box after setting the parameters is an advanced method of tamper resistance. The serial number, laser marked in the seal is added in the online certificate. Replacing of this seal can be easily identified by comparing with the certificate.

Availability of seals are also limited.



Connectors are sealed by using cable seals or sealing stickers.



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Speed-Eye On-Road device testing system



Dash board connector

Road safety authorities will carry the testing device and connects it to the dash board connector provided.

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Speed limiter testing device



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On-Road device testing system

PROCEDURE – PEDAL INTERFACE DEVICE

1. Park the vehicle at a suitable location.
2. Start the engine with gear in Neutral/Parking position.
3. Connect the testing device to dash board connector.
4. Press READ switch to see the set speed of the limiter.
5. Press START to initiate the test.

Note: speed sensor input checking is included in this test. In case speed sensor wire is tampered, accelerator pedal will response will be limited after 10 seconds. For overcoming that situation, pedal wire needs to be joined as original vehicle wiring which will fail the on-road test.

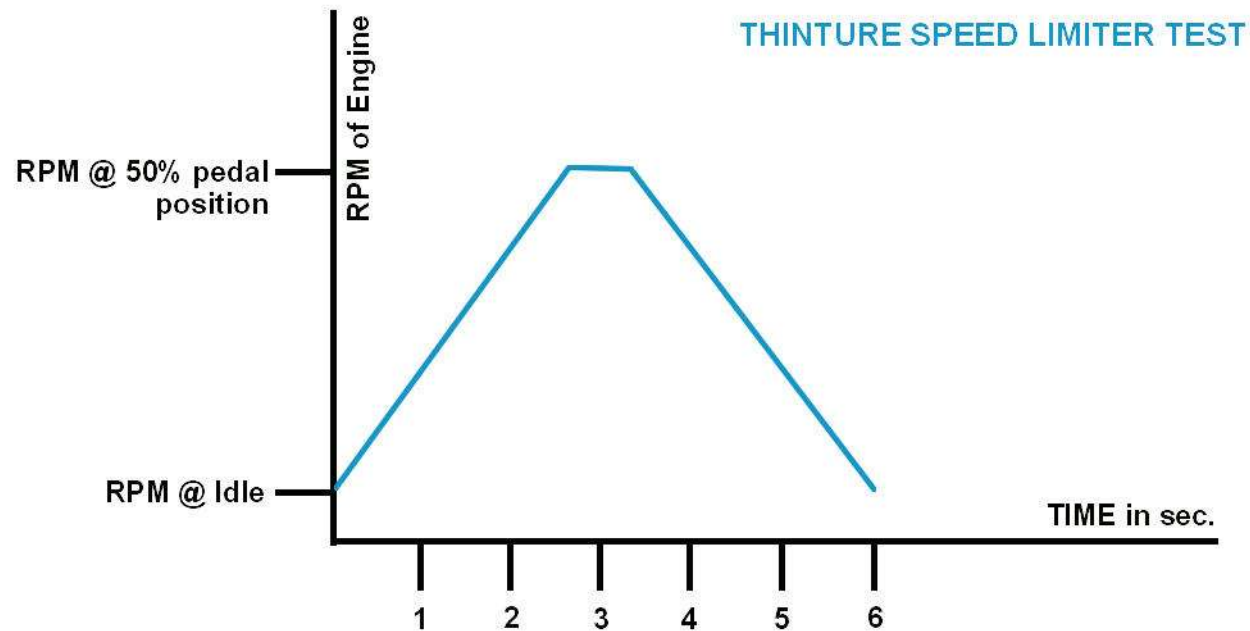


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Speed-Eye On-Road device testing system



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On-Road device testing system

PROCEDURE – SOLENOID BASED DEVICE

1. Park the vehicle at a suitable location.
2. Start the engine with gear in Neutral/Parking position.
3. Connect the testing device to dash board connector.
4. Press READ switch to see the set speed of the limiter.
5. Press accelerator at 25% to increase the engine RPM.
6. Press START to initiate the test.

Note: speed sensor input checking is included in this test. In case speed sensor wire is tampered, accelerometer based motion sensor will detect the attempt and record it. Test will not be started until error is cleared using the test system.

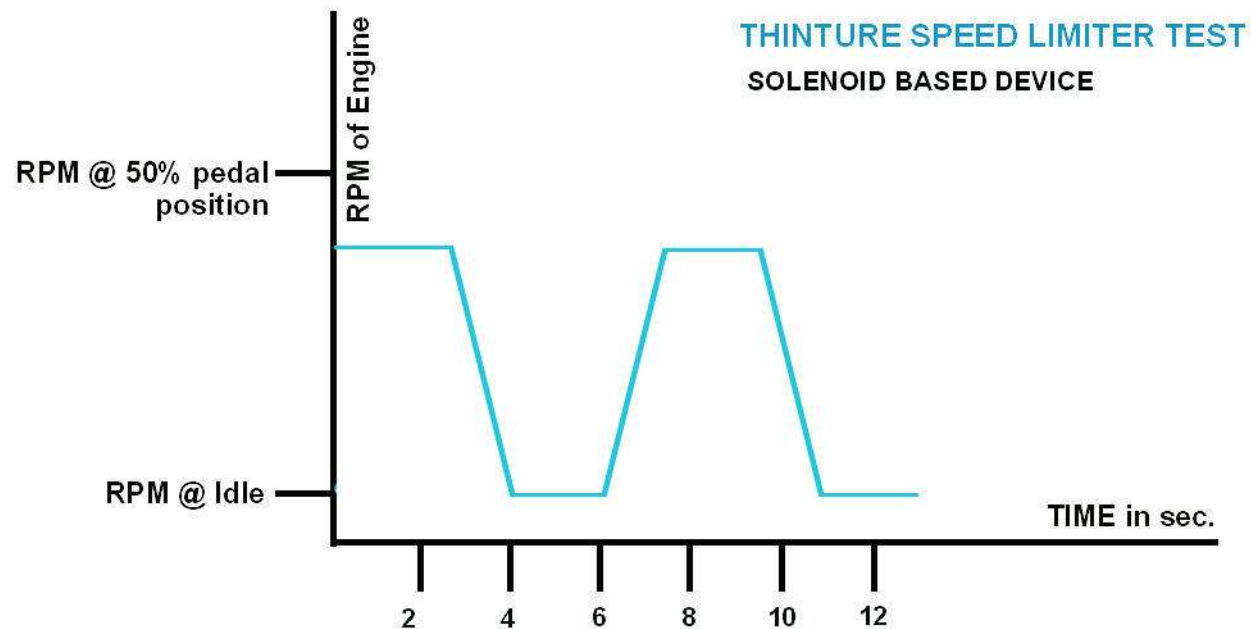


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