1254(T) / 2454(T)

Transponder Immobiliser

Fitting Instructions

Ranger / Scorpion

Please read entire content carefully before proceeding!

ATTENTION

- The system must be fitted in conjunction with the guidelines issued by the relevant motor manufacturer.

- It is important installers refer to the VSIB installation Code of Practice (Electronics) Part 2 Technical as installation quality may be subject to audit against the Code of Practice. The Code of Practices should be followed at all times in terms of technique, mounting positions and functionality checking,

- Any alterations or additions to the vehicle security system may invalidate the Certificate of Installation and warranty arrangement.

APPLICATION

The system is applicable to vehicles with petrol/diesel engines and 12v (1254) / 24v (2454) negative earth electrical systems.

SYSTEM COMPONENTS

The system comprises:

Qty.	Description	Code
1	Electronic Control Unit	2454 24v / 1254 12v
2	Transponder Keys	1075
1	LED	165
1	User PIN Code	

The following optional components are available:

Description
Additional Transponder Keys
Coded Fuel Valve (diesel)
Coded Handbrake Valve
Non-coded Handbrake Valve
Tamperproof Coded Module (Lucas or Bosch)
External 5-pin relay

IMPORTANT!

The following additional components are required for Insurance (Thatcham) installations:

	Description
24v Vehicles:	**Coded Fuel Valve 24v (diesel)** **Non-coded Handbrake Valve**
12v Vehicles:	**Tamperproof Coded Module (TCM - Lucas or Bosch diesel injection pumps) or Coded Fuel Valve 12v (diesel)**

SYSTEM INSTALLATION

Preliminary Actions

Obtain the code of the audio system. Disconnect the negative terminal of the battery and reconnect only when the installation has been completed.

Control Unit

Install the control unit behind the dashboard in a position away from heat sources and water ingress.

Loop Antenna

Fit the loop antenna within the steering column cowling around or below the ignition switch, in a position where the distance of the transponder key attached to your ignition key will be **less than 5 cm.**

LED

Drill a 9.5mm diameter hole in a visible position on the dashboard and fit the LED into the hole. The LED is self-locking.

Coded Fuel Valve

Locate the pipe that connects the diesel filter with the injector pump, in any case the valve should be installed (in relation to fuel flow) as close as possible to the engine. Using the bracket provided, install the coded valve along the pipe route, in the most practical and least accessible position.
Important! – Observe the direction of flow indicated on the valve body.

Handbrake Valve (Coded / Non-Coded)

Note: The Non-Coded handbrake valve will utilise the GR Circuit!

Locate the air supply pipe (Designated Port 1 or 11) of the vehicle's handbrake lever. Using the bracket provided, install the coded valve along the pipe, in the most practical and least accessible position.
Important! – Observe the direction of flow indicated on the valve body.

WIRING INSTALLATION

General Notes

All unused wires must either be removed or insulated. All wires to be connected must be soldered and insulated. Follow the **wiring instructions** and the installation diagram in Appendix 1.

Install the fuses in the immobiliser wiring harness in close proximity to the connection point, in order to protect the vehicle circuits in the event of a short circuit in the electrical system.

Wiring Instructions

Each wire is marked with a character. Once the connection point of the wire has been determined remove the character and connect the wire.

(R) - Connect to a positive supply (+30) via a 5-amp fuse at the vehicle fusebox.

(BL) - Connect to ignition key supply (+15) (Must remain live whilst cranking)

(M-) & (M) - Connect the wires to ground (-31) in two different locations on the vehicle.

(S) - Connect to the S wire of the optional coded valve / TCM.

(GR-) & (GR) - Engine Control Unit or Fuel Pump Immobilisation.
Cut the wire between the ignition supply and the engine control unit (+15) or fuel pump (+15). Connect the GR wire to the (+15) side of the cut wire and connect the GR- wire to the other side of the cut wire.
REMOVE AT LEAST 150mm (12v) / 300mm (24v) OF THE ORIGINAL WIRE

(Z) & (Z) - STARTER immobilisation.
Cut the wire between the ignition switch and starter. Connect one Z wire to one side of the cut wire and the other Z- wire to the other side of the cut wire.
REMOVE AT LEAST 150mm (12v) / 300mm (24v) OF THE ORIGINAL WIRE

(ZN) - ADDITIONAL IMMOBILISER CIRCUIT
Only utilised where an additional immobilisation cut is required. Utilising an additional 5-pin relay, connect the ZN wire to the coil of the relay (Pin 85); connect the other side of the external relay coil (Pin 86) to ground. Cut the designated wire and connect the supply (hot) side of the cut wire to (Pin 30) of the relay and connect the other side of the cut wire to (Pin87a) of the relay.

Note: If the additional immobilisation circuit is connected, ensure the GR- & GR wires are connected as described above.

Wiring Instructions – Coded Valve / TCM

Each wire is marked with a character. Once the connection point of the wire has been determined remove the character and connect the wire.

(R) - Connect to positive supply (+30) via 5A fuse at the vehicle fuse box.

(BL) - Connect the ignition key supply (+15) via a 5A fuse, must be live whilst cranking.

(M) & (M) - Connect the wires to ground in two different locations on the vehicle.

(S) - Connect to S wire of the immobiliser.

Wiring Instructions – Non-Coded Valve

Connect a twin core cable to the two outer terminals of the valve connector (the valve is not polarity conscious). Connect one of the wires to ground and the second wire to the GR wire of the immobiliser, finally connect the GR- wire of the immobiliser to an ignition (+15) that remains live whilst cranking via a 5A fuse.

Connectors

LED
Insert the LED 2-way black connector into the corresponding connector located in the immobiliser main harness.

Loop Antenna
Insert the LED 2-way connector into the corresponding connector located in the immobiliser main harness.

System Testing

Immobiliser Test

Switch off the engine, disconnect the transponder from the ignition key and remove it from the loop sensitive area.
Wait 15 seconds. Try to start the engine. The engine must not start.

Transponder test

Attach the transponder to the ignition key so that when the ignition key is in the ignition lock the transponder will be hanging near the loop. Switch off the ignition, remove the ignition key, wait more than 15 seconds, insert the ignition key and turn it on. The engine must start

Self-arming test

Switch off the ignition, after 15 sec's the immobiliser will arm automatically: the LED glow.

SERVICE INFORMATION

Replacement and Additional Transponders – Refer to operating booklet.

Coded Valve / TCM Recovery Procedure

Where an Immobiliser installed with a coded valve / TCM must be replaced from the armed condition, it is ONLY possible to operate the existing coded valve / TCM with a new immobiliser by following the procedure below:

1) Connect the new immobiliser to the vehicle.

2) Referring to the operating booklet, follow the “Emergency Disarming Procedure” from points 1 to 10.

3) Turn ignition off.

4) The LED will extinguish and then flash in accordance with the number of the Transponders: during this flashing time switch on the ignition.

5) The system will enter the PIN recovery procedure: Now enter the PIN of the previous immobiliser, the valve will now operate.

IMPORTANT! USE THIS DIAGRAM IN CONJUNCTION WITH THE WIRING INSTRUCTIONS.

+30 = +12v POSITIVE (1254)
+24v POSITIVE (2454)

+15 = IGNITION KEY

-31 = EARTH

+50 = STARTER CIRCUIT