JOHN COOPER WORKS TUNING.

Installation Instructions.

Gear Shift Indicator Retrofit

MINI ONE (R 56)
MINI COOPER (R 56)
MINI COOPER S (R 56)

Retrofit kit no.: 62 13 0 420 602 Gear Shift Indicator R56 retrofit kit

Installation time
The installation time is approx 0.75 hours, but may vary depending on the condition of the car and the equipment in it.

Important information
These installation instructions are primarily designed for use within the MINI dealership organisation and by authorised BMW service companies.

In any event the target group for these installation instructions is specialist personnel trained on MINI cars with the appropriate specialist knowledge.

All work must be completed using the latest MINI repair manuals, circuit diagrams, servicing manuals and work instructions, in a rational order, using the prescribed tools (special tools) and observing current health and safety regulations.

To avoid unnecessary extra work and/or costs, if any installation or function problems occur, after a brief troubleshooting session (approx. 0.5 hours), contact the following:
1. Either your national subsidiary or your regional office, or
2. The Support team via the Aftersales Assistance Portal (ASAP) using the optional technical parts support application.
Quote the VIN and the part number of the retrofit kit and provide a detailed description of the problem.

Do not archive the hard copy of these installation instructions since daily updates are made by ASAP!

Pictograms:

Denotes instructions that draw your attention to special features.

◀ Denotes the end of the instruction or other text.

Print out sections 8 and 9 of these installation instructions and give them to the customer.

Installation information
All pictures show LHD cars; proceed accordingly on RHD cars.

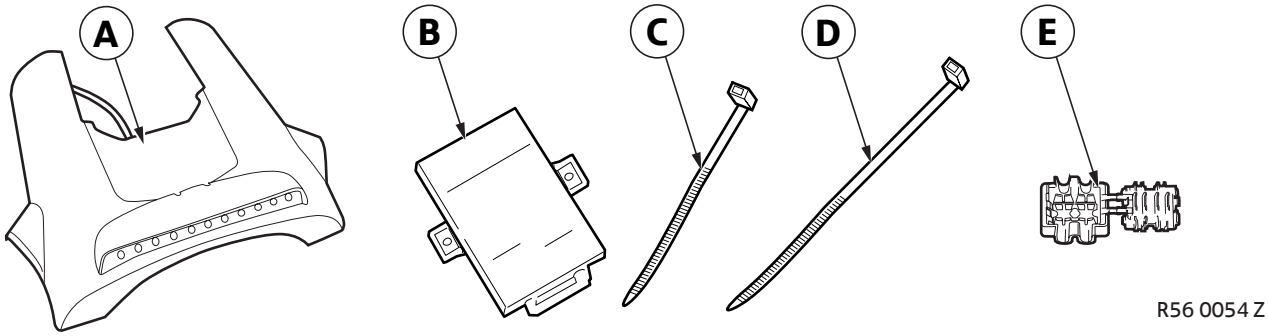
Ensure that the cables/lines are not kinked or damaged as you install them in the car. Costs incurred as a result of this will not be reimbursed by BMW AG.

Additional cables/lines that you install must be secured with cable ties.

Special tools required
None

Contents

1. Parts list



Legend

A Gear shift indicator

B Control unit

C Cable tie 200 x 3.6 mm (5x)

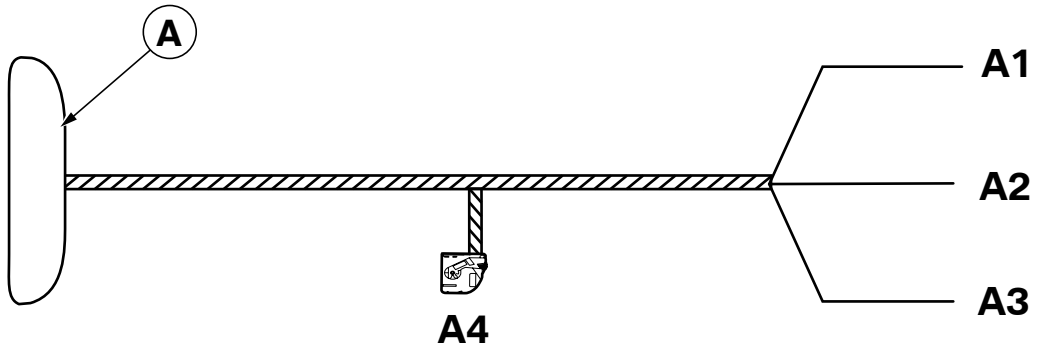
D Cable tie 445 x 4.8 mm (2x)

E Miniature connector (3x)

2. Preparatory work

	TIS No.
Conduct a brief test	---
Disconnect negative pole of battery	12 00 ...
The following components must be removed first of all	
Trim at the bottom left of the dashboard	51 45 180
Release the steering column rev counter	62 10 100
Steering column trim top section (no longer required)	---

3. Connection diagram



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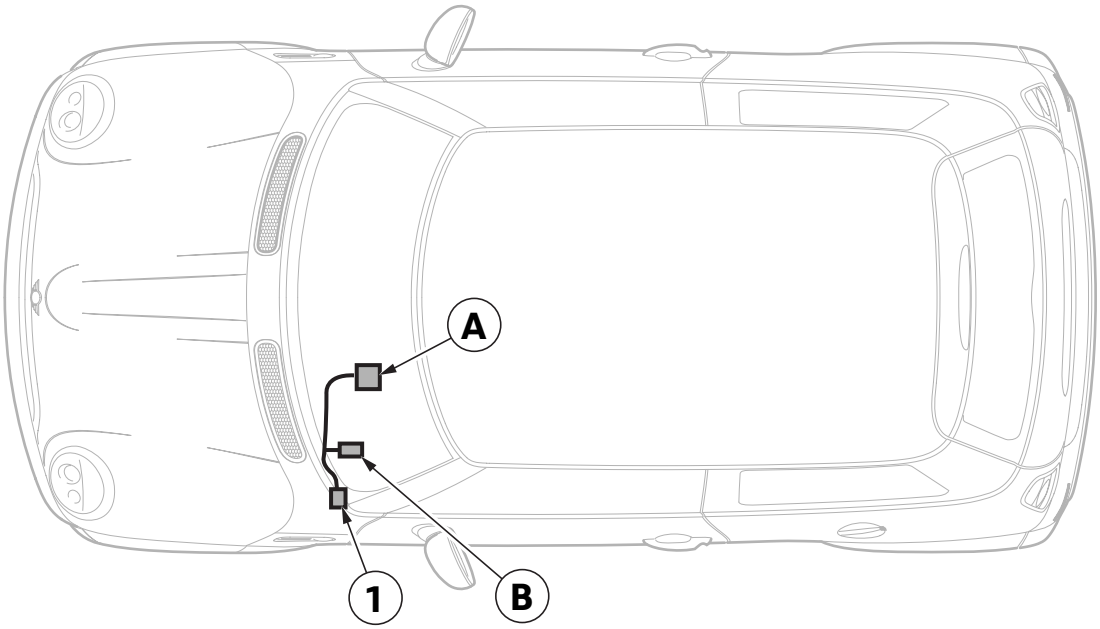
Item	Designation	Signal	Cable colour / Cross-section	Connection location in the car	Abbreviation / Slot
A	Gear shift indicator	---	---	---	---
A1	Cable end open	Terminal 15	GN 0.35 mm2	With miniature connector **E** on green/blue cable on OBD socket	X19527 PIN 1
A2	Cable end open	Terminal 31	BR 0.35 mm2	With miniature connector **E** on brown/black cable on OBD socket	X19527 PIN 4
A3	Cable end open	Engine speed	WS 0.35 mm2	With miniature connector **E** on violet/white cable on OBD socket	X19527 PIN 9
A4	Black 12-pin socket casing	---	---	On control unit **B**	---

4. Installation and cabling diagram



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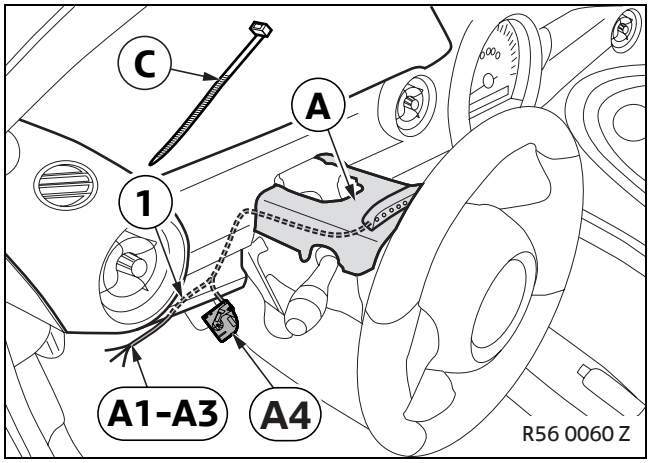
Legend

A Gear shift indicator

B Control unit

1 OBD socket, plug **X19527**

5. To install and connect the gear shift indicator

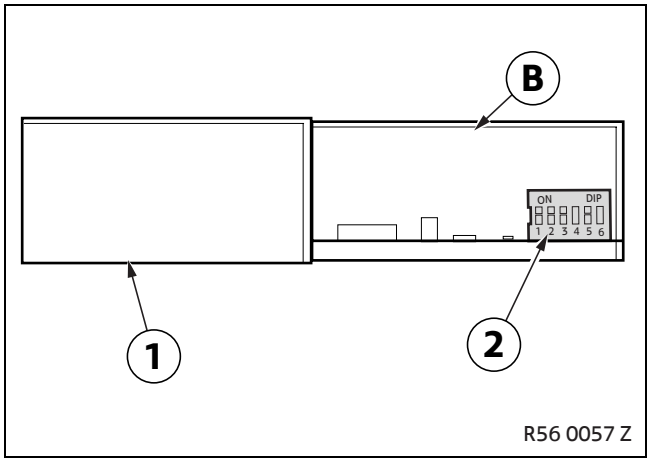


Place the gear shift indicator **A** on the steering column (1).

Route branch **A4** under the dashboard on the left.

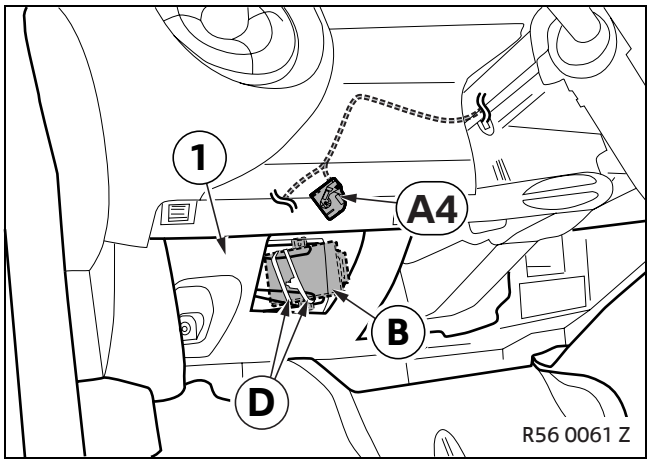
Route branch **A1 – A3** to the OBD socket.

Secure the cable (1) to the standard wiring harness using cable ties **C**.



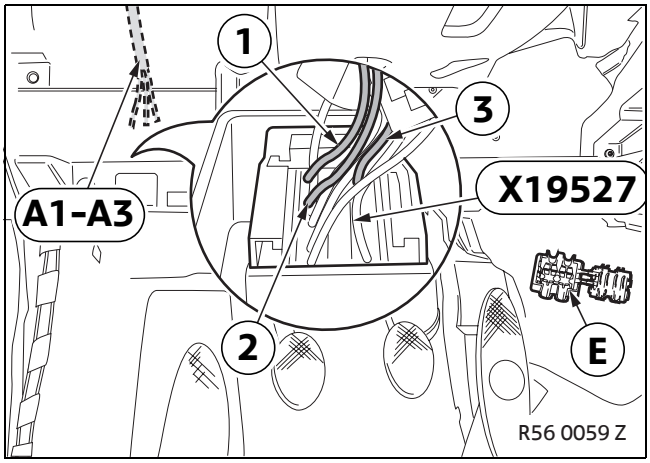
Open the cover (1) of control unit **B**.

Set the engine type and engine speed threshold on the switch unit (2) (see DIP switch settings, section 8).



Connect branch **A4** to control unit **B**.

Use cable ties **D** to secure control unit **B** to the dashboard (1).



Connect branches **A1** to **A3** with miniature connectors **E** to the cables leading to the plug of the OBD socket **X19527** as follows.

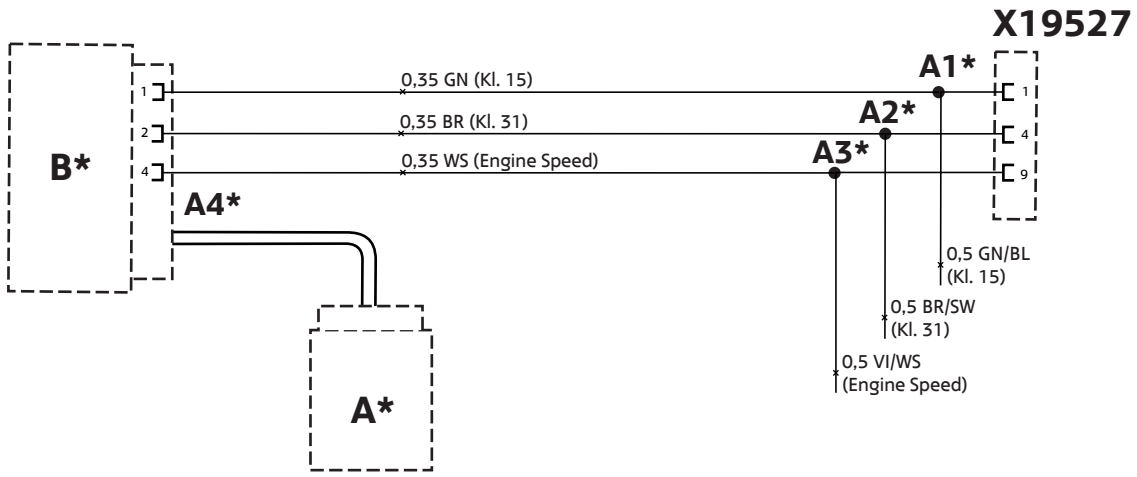
- Branch **A1**, green cable, to cable (1) on PIN 1, green/blue cable
- Branch **A2**, brown cable, to cable (2) on PIN 4, brown/black cable
- Branch **A3**, white cable, to cable (3) on PIN 9, violet/white cable

6. Concluding work and coding

This retrofit system does not require coding.

- Connect the battery
- Conduct a brief test
- Conduct a function test
- Re-assemble the car
- Print out sections 8 and 9 give them to the customer.

7. Circuit diagram



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Legend

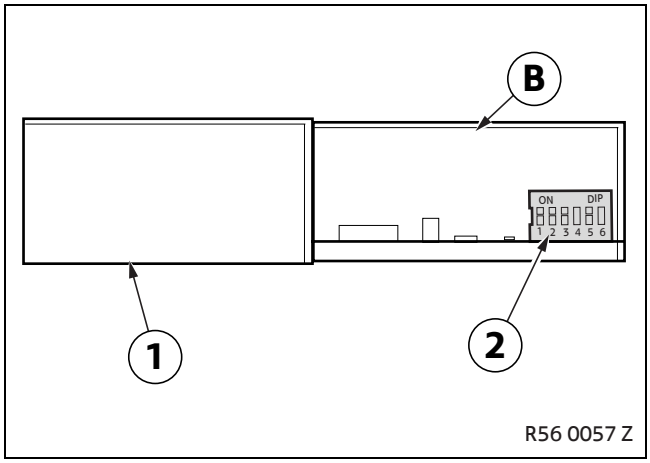
A*	Gear shift indicator
B*	Control unit
A1*	Open cable, terminal 15 tap on plug **X19527**, black 16-pin
A2*	Open cable, terminal 31 tap on plug **X19527**, black 16-pin
A3*	Open cable, engine revs pick-up on plug **X19527**, black 16-pin
A4*	Black 12-pin socket casing
X19527	Black 16-pin plug

All the designations marked with an asterisk (*) apply only to these installation instructions or this circuit diagram

Cable colours

BL	Blue
BR	Brown
GN	Green
SW	Black
WS	White
VI	Violet

8. DIP switch settings



Disconnect the connection plug of control unit **B** before opening the cover (1). ◂

Open the cover (1) of control unit **B**.

The following settings can be made on the switch unit (2) of control unit **B**.

Recommendation for engine speed threshold:

MINI ONE petrol: 6250 rpm

MINI COOPER petrol: 6250 rpm

MINI COOPER S: 6500 rpm

MINI diesel: 4500 rpm

Switches 1 and 2 (engine type)

DIP						Number of cylinders
■	■					4-cylinder
■		■				6-cylinder
	■		■			8-cylinder
■	■			■	■	Test mode (for internal use only)

Switches 3 to 6 (engine speed threshold)

DIP						Engine revs (rpm)
		■	■	■	■	3500
		■	■	■		3750
		■	■		■	4000
		■	■			4250
		■		■	■	4500
		■		■		4750
		■			■	5000
		■				5250
			■	■	■	5500
			■	■		5750
			■		■	6000
			■			6250
				■	■	6500
				■		6750
					■	7000
						7250

9. Operation

The gear shift indicator is switched on automatically when the ignition is switched on. It is ready to operate after the self-test (all diodes switch on one after the other).

The gear shift indicator can be switched off and back on again at any time using the button on the rear of the display unit.

The LEDs switch on symmetrically starting from the middle.

Switching thresholds

Status	Description	Engine revs
0	All off	Engine stopped or gear shift indicator switched off
1	LED 1 (middle LED) on	0 % to 80 % of engine speed threshold
2	LEDs 1 and 2 (middle 3 LEDs) on	80 % to 85 % of engine speed threshold
3	LEDs 1 to 3 (middle 5 LEDs) on	85 % to 90 % of engine speed threshold
4	LEDs 1 to 4 (middle 7 LEDs) on	90 % to 94 % of engine speed threshold
5	LEDs 1 to 5 (middle 9 LEDs) on	94 % to 97 % of engine speed threshold
6	LEDs 1 to 6 (all LEDs) on	97 % to 100 % of engine speed threshold
7	LEDs 1 to 6 (all LEDs) flashing	From 100 % of engine speed threshold