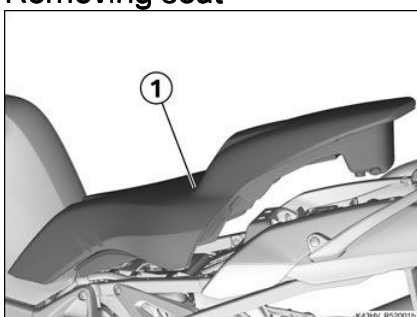


BMW Group - AIR: 2018-08-21 / 00:19
Retailer: 32934/01
Model: K1200S
Vehicle identification number: ZL96689
Development code: K40
Model code: 0581
Lead type: 0581
Order number: -

[Installing additional wiring harness, starter/alternator](#) »

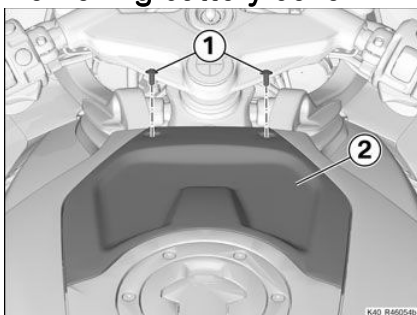
Vehicle configuration

Removing seat



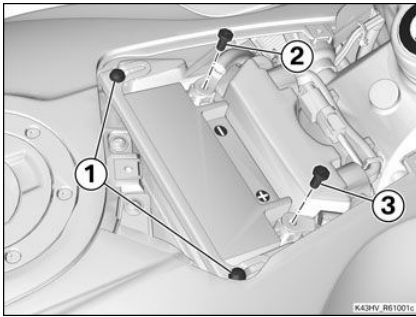
- Use the ignition key to unlock the seat lock and hold the lock in this position.
- Remove seat (1).

Removing battery cover



- Remove screws (1).
- Remove battery cover (2).

Removing battery



ATTENTION

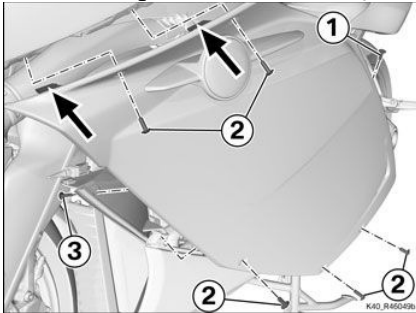
Battery not disconnected in accordance with correct procedure

Risk of short-circuit

- Always proceed in compliance with the specified disconnection sequence.

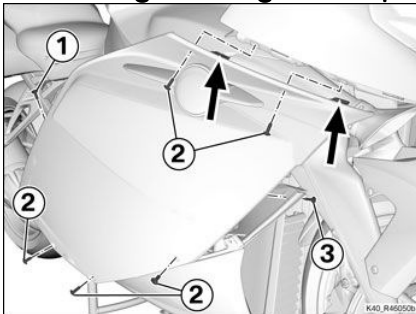
- Remove screw (2) and disconnect the negative lead from the negative terminal of the battery.
- Remove screw (3) and disconnect the positive lead from the positive terminal of the battery.
- Slacken screws (1), but **do not remove**, and push the battery holder to the rear.
- Remove the battery from its holder.

Removing front left side panel



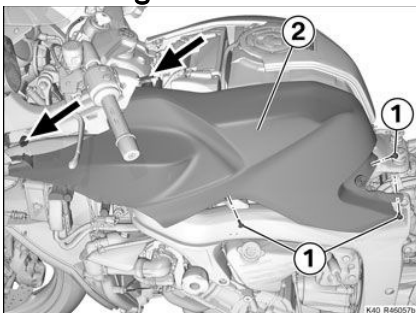
- Remove screws (1), (2), (3).
- Disengage the lugs (arrows).
- Remove the side panel.

Removing front right side panel



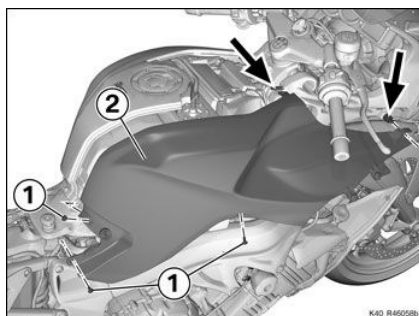
- Remove screws (1), (2), (3).
- Disengage the lugs (arrows).
- Remove the side panel.

Removing left fuel-tank cover



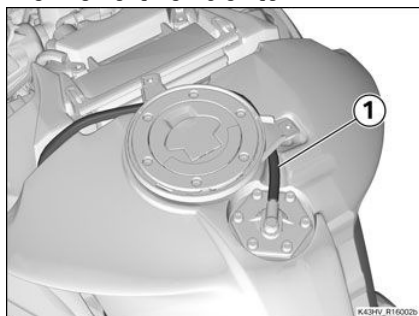
- Remove screws (1).
- Disengage left tank cover (2) from the middle tank cover
- Release tank cover (2) from the holders (arrows) and remove.

Removing right fuel-tank cover

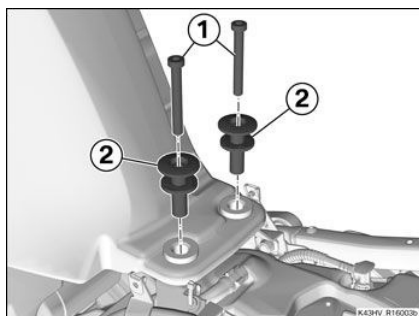


- Remove screws (1) .
- Disengage left tank cover (2) from the middle tank cover
- Release tank cover (2) from the holders (arrows) and remove.

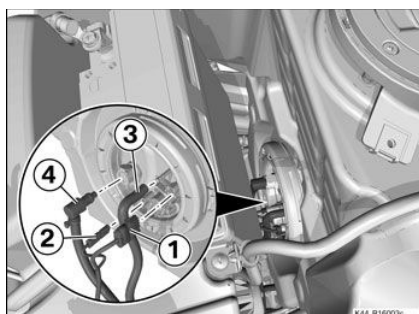
Remove the fuel tank



- Disconnect hose (1) .



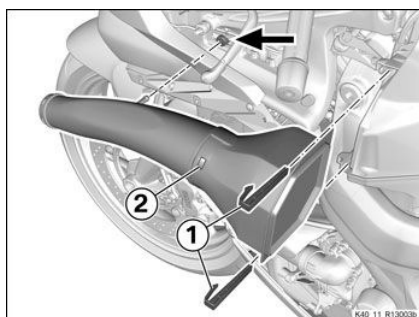
- Remove screws (1) and locating pin (2) .



- Pull the fuel tank slightly to the rear.
- Disconnect fuel-pump plug (1) and fuel-level sensor plug (2) .
- Disconnect breather hose (3) .
- Disconnect fuel feed line (4) and ease the fuel tank back to remove.

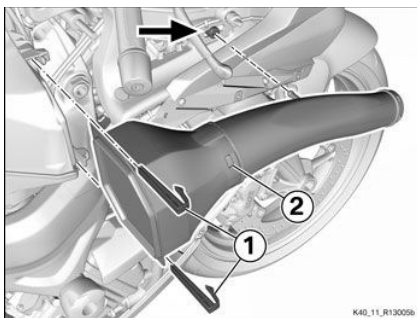
Removing left and right intake air pipes

► Removing left intake air pipe



- Disengage retainer (1) and remove.
- Remove intake air pipe (2) from the holder at the intake air silencer and from the rubber grommet (arrow) .

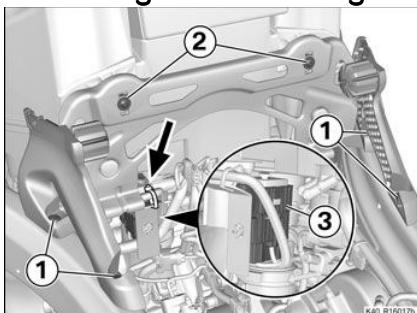
► Removing right intake air pipe



- Disengage retainer (1) and remove.
- Remove intake air pipe (2) from the holder at the intake air silencer and from the rubber grommet (arrow) .

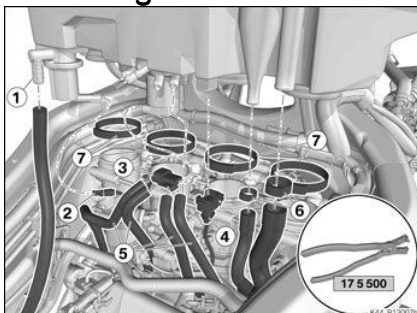


Removing front retaining bridge



- Remove screws (1) .
- Slacken screws (2) , but **do not remove** .
- Remove cable tie (arrow) .
- Remove starter relay (3) from the retaining bridge.
- Remove the retaining bridge with screws (2) and expander plugs.

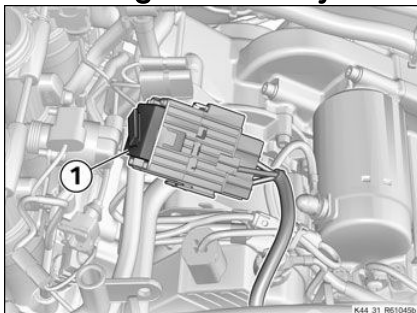
Removing intake air silencer



- Disconnect hose (1) .
- Disconnect plug (2) for the secondary-air valve.
- Disconnect plug (3) for the idle actuator.
- Disconnect plug (4) for the intake-air temperature sensor.
- Disconnect hoses (5) for the idle actuator.
- Open clips (6) and (7) with pliers (No. 17 5 500) and disconnect the hoses.

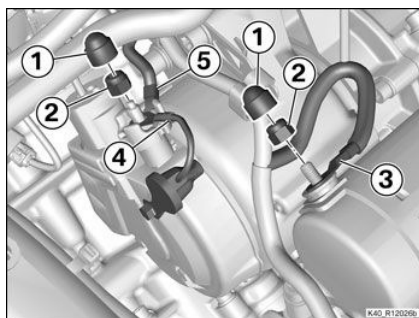
- Slacken the intake air silencer and tilt it forward, noting the guide on the main frame.
- Remove the intake air silencer with drain hose.

Removing starter relay



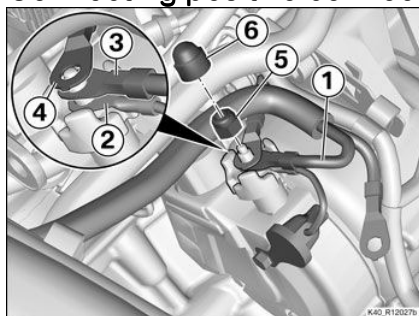
- Remove the starter relay.

Disconnecting positive connections at alternator and starter



- Remove dust caps (1) .
- Remove nuts (2) .
- Remove positive lead for starter (3) .
- Remove line for overvoltage surge protection (4) .
- Remove positive lead for alternator (5) .

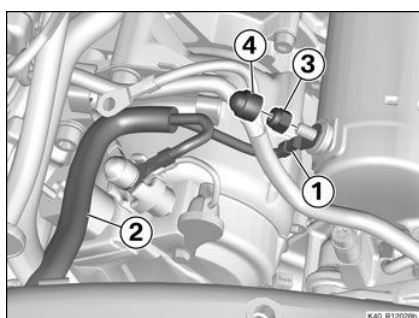
Connecting positive connections at alternator and starter



- Route red positive lead (1) with the additional wiring harness on the vehicle.
- Hold connection of overvoltage surge protection (2) , connection of positive lead additional wiring harness (3) and connection of original positive lead (4) in position.
- Install **new** nut (5) .

Tightening torques		
Wiring harness to alternator		
M6	10 Nm	

- Install dust cap (6) .

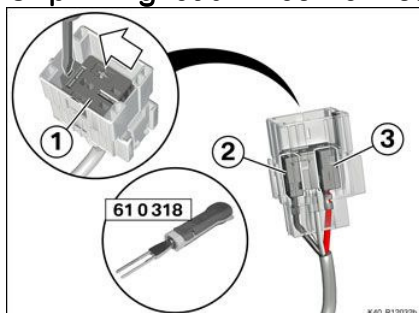


- Hold black positive lead (1) of additional wiring harness (2) in position and install **new** nut (3) .

Tightening torques		
Positive wire to starter motor		
M6	10 Nm	

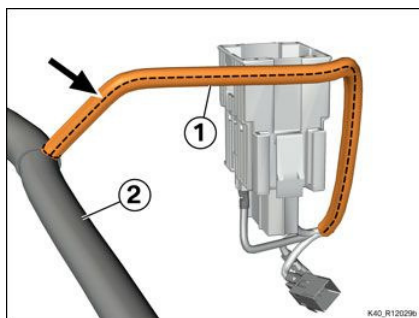
- Install dust cap (4) .

Unpinning load wires from starter relay

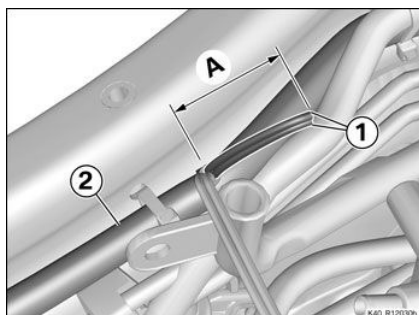


- Use a suitable tool, such as a screwdriver, to ease plug receptacle (1) aside.
- » Plug contacts are unlatched in the plug receptacle.
- Unpin plug contacts (2) and (3) with releasing tool (No. 61 0 318) .


Cutting off unused wires and insulating ends

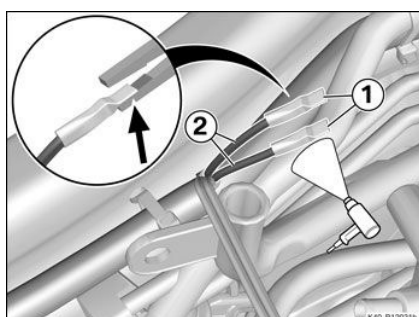


- Cut open protective grommet (1) of the unpinned leads all the way to the main wiring harness (2) and cut off.



- Cut off unused load wires (1) at length (A) from the main wiring harness (2) .

 Technical data	
Length (A) of cut cables	30 mm



- Slip heat-shrink tubing (1) on to the cut ends of load wires (2) and position correctly.

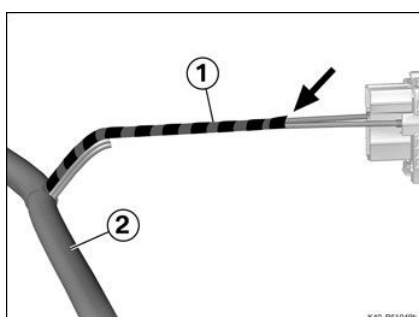
⚠ CAUTION

Working with hot components

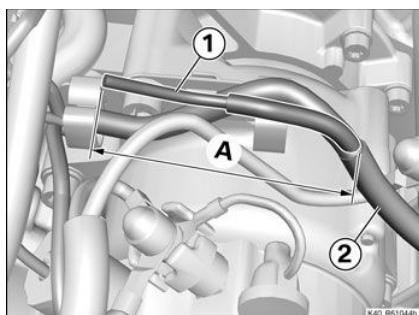
Risk of burn injury

- Wear protective gloves.


- Heat lengths of tubing (1) **uniformly** and **all round** . In this process, make sure that lengths of heat-shrink tubing (1) do not slip out of position.
- Using a suitable tool, compress each heated length of heat-shrink tubing (1) over the projecting end (arrow) .

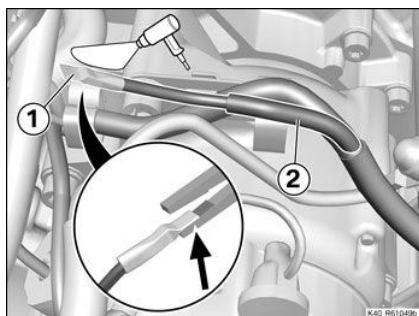


- Wrap insulating tape round remaining cable (1) of main wiring harness (2) as far as the point indicated by the mark (arrow) .



- Cut off unused positive lead (1) to the starter at length (A) from the main wiring harness (2) .

 Technical data	
Length (A) of cut cable	90 mm



- Slip heat-shrink tubing (1) on to the cut end of unused positive lead (2) and position correctly.

CAUTION

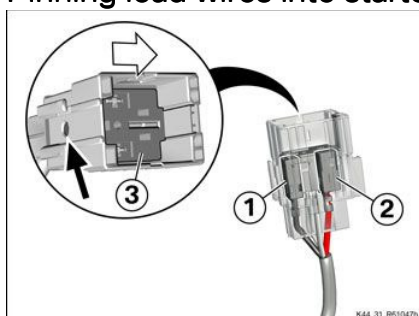
Working with hot components

Risk of burn injury

- Wear protective gloves.

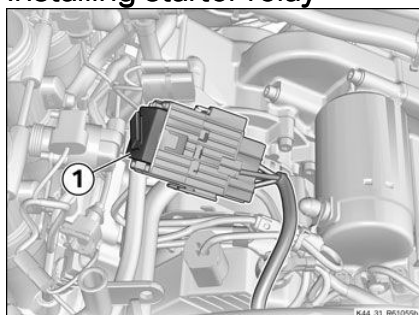
- Heat tubing (1) **uniformly** and **all round** . Make sure that heat-shrink tubing (1) does not slip out of position.
- Using a suitable tool, compress heated length of heat-shrink tubing (1) over the projecting end (arrow) .

Pinning load wires into starter relay



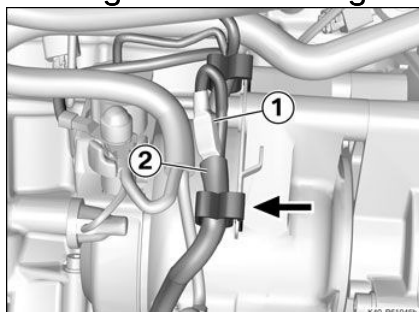
- Push black plug contact (1) and red plug contact (2) of the additional wiring harness into plug receptacle (3) and pin the contacts.
- Push plug receptacle (3) to the side through the opening (arrow) .
- » Plug contacts are latched in the plug receptacle.

Installing starter relay

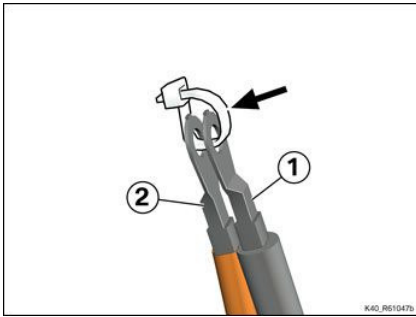


- Install **new** starter relay (1) .

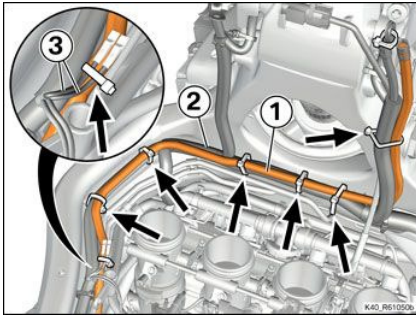
Routing additional wiring harness



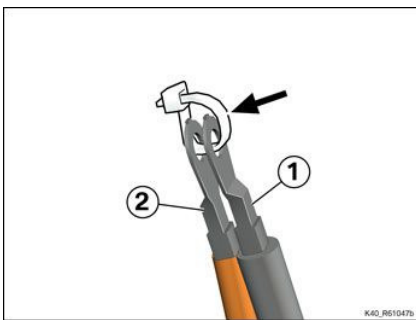
- Bend back the end of unused positive lead (1) of the starter and push it into cable sleeve (2) of the wiring harness.
- Secure unused positive lead (1) in the cable holder (arrow) .



- Position battery positive terminal (1) for the main wiring harness and battery positive terminal (2) for the additional wiring harness with the **flats toward each other** and secure with a cable tie (arrow) .



- Route additional wiring harness (1) , making sure that it is routed **above** main wiring harness (2) .
- Secure additional wiring harness (1) with cable ties (arrows) .
- Secure unused load wires (3) with a cable tie (arrow) to additional wiring harness (1) .

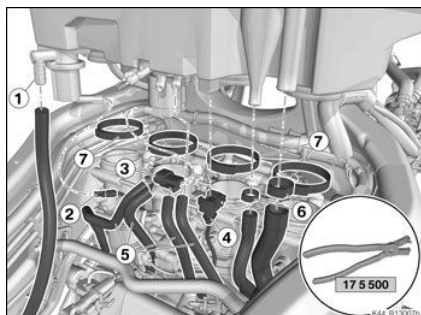


- Remove the cable tie (arrow) from battery positive terminals (1) and (2) .

Installing intake air silencer

NOTICE

Other, approved clamps can be installed when repairs are performed.



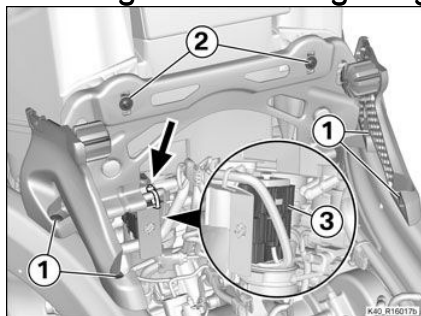
- Place the intake air silencer in position and route the drain hose forward.

NOTICE

It is permissible to use suitable screw-type clamps for the throttle-valve stubs when performing repair work. When you position the clamps, it is very important to ensure that they are clear of adjacent components.

- Push the intake air silencer onto the throttle-valve union, noting front guide on the main frame.
- Close clips (7) with pliers (No. 17 5 500) and tighten screw-type clamps, as applicable.
- Connect hose (1) of the secondary air system.
- Connect plug (2) for the secondary-air valve.
- Secure hoses (5) for the idle actuator.
- Connect plug (3) for the idle actuator.
- Connect plug (4) for the intake-air temperature sensor.
- Push the hoses on to the intake air silencer and close clips (6) with pliers (No. 17 5 500) .

Installing front retaining bridge



- Secure starter relay (3) to the retaining bridge.
- Secure the cable with cable ties (arrows) .
- Position the retaining bridge on the intake air silencer.
- Secure the retaining bridge with screws (1) and (2) .

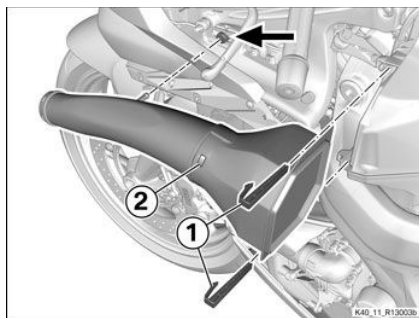
Tightening torques

Tank holder, front, to main frame

M6 x 20, Replace screw	6 Nm
Thread-locking compound (Micro-encapsulated)	

Installing left and right intake air pipes

► Installing left intake air pipe



- Lubricate the rubber grommet (arrow) .



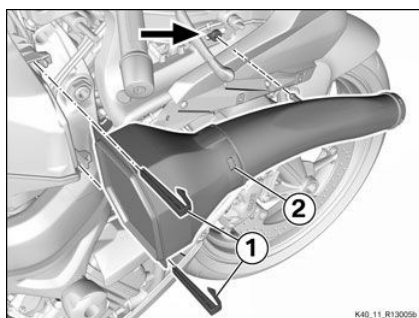
Care products

Rubber care product	83 12 0 397 018
---------------------	-----------------

- Install intake air pipe (2) .
- Insert retainers (1) and engage.



► Installing right intake air pipe



- Lubricate the rubber grommet (arrow) .



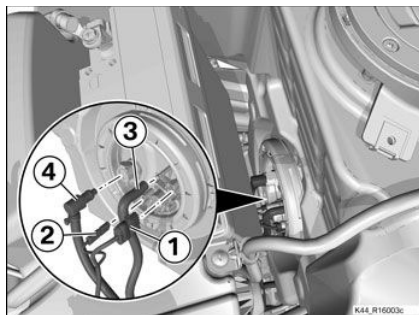
Care products

Rubber care product	83 12 0 397 018
---------------------	-----------------

- Install intake air pipe (2) .
- Insert retainers (1) and engage.



Install the fuel tank

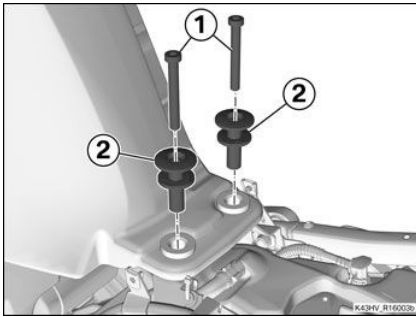


- Check the O-ring in quick-action coupling (4) for damage; replace if necessary.

ATTENTION

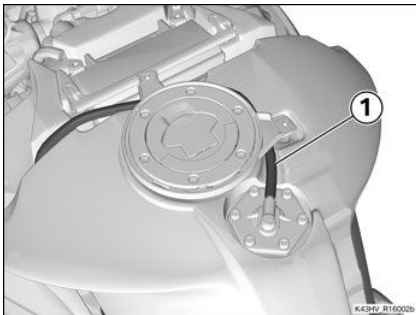
Application of force to close locked quick-action couplings Leak due to damaged O-rings

- Close the quick-action coupling of the fuel line only with the latch open/pressed.
- Place the fuel tank in position, open the latch on the female coupling of fuel delivery line (4) and, applying light pressure, press the male adapter into the female coupling until it engages with an audible click.
- Connect breather hose (3) .
- Connect plug (2) and fuel-pump plug (1) .



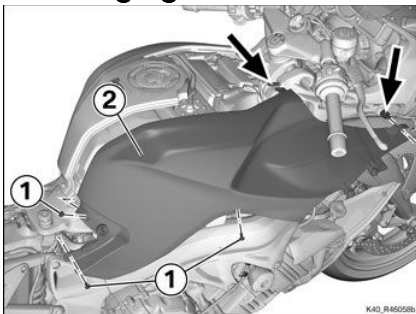
- Position the fuel tank in the motorcycle.
- Install screws (1) with locating pin (2) .

Tightening torques	
Fuel tank to retaining bridge, rear	
M8 x 60	13 Nm



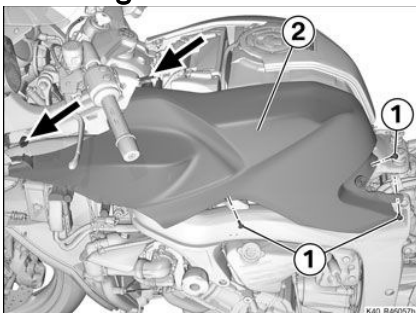
- Connect hose (1) .

Installing right fuel-tank cover



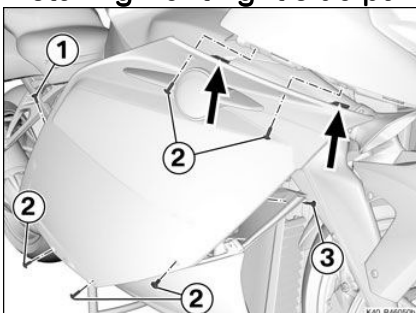
- Seat tank cover (2) in the holders (arrows) and in the middle tank cover.
- Install screws (1) .
- Note different lengths of screws.

Installing left fuel-tank cover



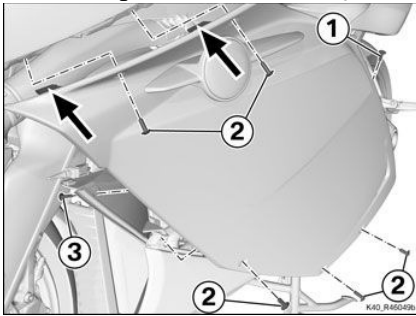
- Seat tank cover (2) in the holders (arrows) and in the middle tank cover.
- Install screws (1) .
- Note different lengths of screws.

Installing front right side panel



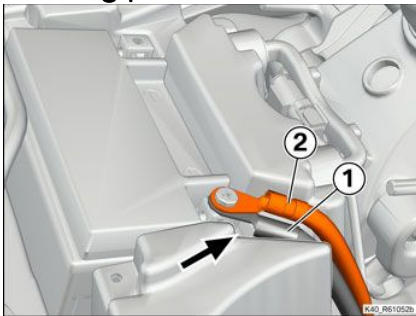
- Hold the side panel in position.
- Engage the lugs (arrows) .
- Install screws (1) , (2) , (3) .
- **Note different lengths of screws .**

Installing front left side panel



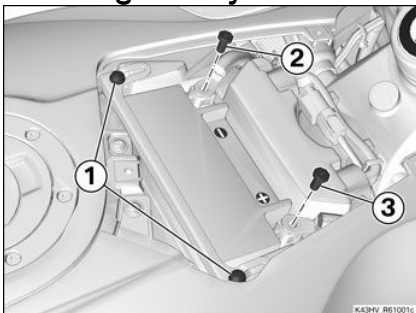
- Hold the side panel in position.
- Engage the lugs (arrows) .
- Install screws (1) , (2) , (3) .
- **Note different lengths of screws .**

Routing positive lead



- Route positive lead (1) of the main wiring harness under positive lead (2) of the additional wiring harness. Make sure that both leads are seated in the recess (arrow) .

Installing battery




- Seat the battery in the intake air silencer.
- Locate the battery with the retainer and tighten screws (1) .

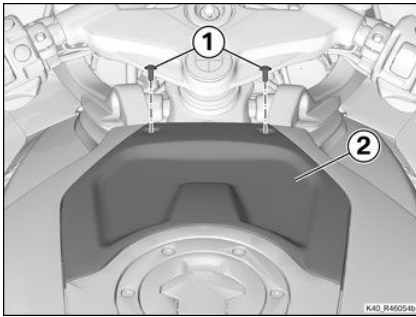
ATTENTION

Battery not connected in accordance with correct procedure
Risk of short-circuit

- Always proceed in compliance with specified installation sequence.
- Connect the positive lead to the battery's positive terminal and install screw (3) .
- Connect the negative lead to the battery's negative terminal and install screw (2) .

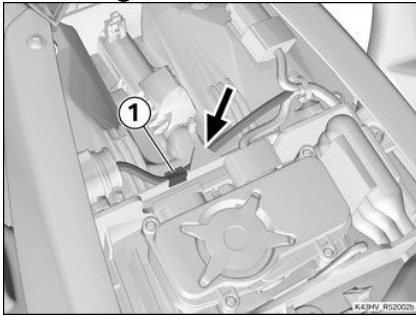
 Tightening torques	
Battery terminals	
M6 x 11	4 Nm

Installing battery cover

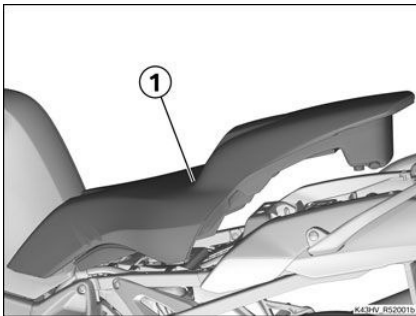


- Install battery cover (2) .
- Install screws (1) .

Installing seat



- Make sure that the cable passes underneath the bracket (arrow) and is secured in holder (1) .



- Engage seat (1) in the holder at the front.
- Engage the seat lock by pressing down on the rear seat.

Final check of work performed

- Check the following:
 - The work as performed achieved the intended purpose.
 - All reservoirs and containers have been filled and all fluids and lubricants are at their correct levels.
 - All threaded fasteners released beforehand have been correctly retightened.
 - The fuel system is free of leaks.
 - The lights and signalling equipment are fully operational and the vehicle is roadworthy.
 - The brake pads of the front and rear brakes are bedded against the brake discs.

► Function test, engine start suppression

NOTICE

Engine start is not enabled if you pull the clutch with a gear engaged before switching on the ignition.

- Deactivate the anti-theft alarm system.

Check

- Centre the kill switch ("ON" position).
- Select neutral.
- Switch on the ignition.
- » Neutral indicator light "N" lights up.
- Select a gear.
- » Neutral indicator light "N" goes out.
- Press the starter button.
- » Starter **does not** operate.
- Extend the side stand.
- Pull the clutch lever.
- Press the starter button.
- » Starter **does not** operate.
- Retract the side stand.
- Press the starter button without releasing the clutch lever.
- » Starter operates.

Result:

- Not all test steps completed successfully.

Measure:

- Check functional check of engine start suppression and functional check of emergency and safety stop of the engine with **BMW Motorrad** diagnosis system.

