



Mini Cooper S / JCW N14 → B58 Coil Pack Conversion Kit

Installation Guide

IMPORTANT

This guide is written as a general fitting instruction for the Airifix N14 to B58 coil pack conversion kit. Read the full guide before starting. Basic mechanical knowledge is required. If unsure, use a qualified technician.

Product summary: The Airifix conversion kit adapts the Mini N14 engine to accept BMW B58 coil packs using CF-ABS mounting brackets, plug-and-play wiring adaptors, and the original factory coil mounting points. The N14 plastic valve cover requires the existing raised coil seats to be removed and flattened to allow the larger B58 coils and brackets to sit correctly.

Compatible Models	Notes
Mini Cooper S R56 N14	Fits N14 engine only.
Mini JCW R56 N14	Fits N14 engine only.
Left and right-hand drive cars	Engine fitment is the same; suitable for both.
Before you begin	
Allow the engine to cool fully. Disconnect the battery. Work in a clean area so no debris enters the spark plug tubes or wiring connectors. The N14 valve cover is plastic. The existing raised coil seats / locating ribs need to be removed to create a flat area for the Airifix brackets. Keep the original mounting points intact, as these are reused to secure the brackets. This external trimming does not affect valve cover sealing when done correctly.	

1. What's Included

- ☐ CF-ABS 3D-printed coil pack mounting brackets
- ☐ Full bolt and fixing kit
- ☐ Pre-made wiring adaptors for B58 coils to N14 harness
- ☐ Digital installation guidance

Not included unless stated on your order

BMW B58 coil packs, spark plugs, replacement valve cover, cutting tools, hand tools and consumables are not included unless specifically listed on your invoice or product variation.

2. Recommended Tools

- ☐ Basic socket set and ratchet
- ☐ Torx / E-Torx bits suitable for MINI engine covers and coil area
- ☐ Trim tool or small flat tool for connector release tabs
- ☐ Dremel / rotary tool, fine cutting tool or suitable plastic trimming tool
- ☐ Marker pen and measuring tape / ruler
- ☐ Vacuum cleaner or compressed air to remove plastic swarf
- ☐ Torque wrench for final fixings where applicable
- ☐ Diagnostic tool for clearing any previous misfire codes after installation

Safety notes

Do not work on a hot engine. Disconnect the battery before unplugging ignition wiring. Keep loose clothing and tools away from the engine bay. Do not allow plastic swarf or debris to fall into the spark plug wells. Check all wiring is clear of heat, sharp edges and moving parts before starting the vehicle.

3. Installation Steps

Step 1 - Prepare the vehicle

1. Park the vehicle on level ground and apply the handbrake.
2. Allow the engine to cool fully.
3. Disconnect the negative battery terminal.
4. Remove any engine covers or intake parts that restrict access to the coil packs.

Step 2 - Remove the original N14 coil packs

5. Label the original coil pack connectors 1 to 4 if required.
6. Carefully release each OEM coil connector tab and unplug the wiring.
7. Pull the original coil packs upward one at a time.
8. Check the spark plug wells are clean and dry before continuing.

Step 3 - Trim the valve cover for clearance

9. The N14 valve cover is plastic. Remove or protect nearby wiring and components before cutting or grinding.
10. Remove the existing raised plastic coil seats / locating ribs where the original coils sat.
11. Create a flat, even area for the Airifix plastic brackets to sit on. Work slowly and remove only the material needed.
12. Keep the original mounting points intact, as these are reused to bolt down the Airifix brackets.
13. Clean all cut edges and remove any loose plastic.
14. Vacuum the area thoroughly so no plastic swarf remains around the spark plug tubes.
Test fit the B58 coil packs and brackets until the coils sit correctly without stress.

Step 5 - Fit the Airifix CF-ABS brackets

15. Position the Airifix CF-ABS brackets on the flattened areas of the plastic valve cover.
16. Align the brackets with the existing factory mounting points on the valve cover.
17. Install the supplied bolts and fixings finger-tight first.
18. Check that each B58 coil pack is seated correctly and that the bracket holds the coil straight.
19. Tighten the brackets securely using the existing mounting points. Do not overtighten, as the valve cover and brackets are plastic.
20. Check bracket alignment before continuing to the wiring stage.

Step 6 - Connect the wiring adaptors

21. Connect each Airifix wiring adaptor to the original N14 harness connector.
22. Connect the other end of each adaptor to the matching B58 coil pack.
23. Ensure each connector clicks fully into place.
24. Route wiring so it does not sit against sharp edges, the exhaust side, moving parts or high heat areas.

Step 7 - Final checks before first start

25. Confirm all four coil packs are seated correctly.
26. Confirm all bracket bolts are secure.
27. Confirm wiring adaptors are fully connected and correctly routed.
28. Refit any removed intake parts or covers where compatible.
29. Reconnect the negative battery terminal.

Step 8 - First start and test

30. Start the vehicle and allow it to idle.
31. Check for rough idle, misfire lights or unusual noises.
32. Clear any previous misfire codes if required.
33. Carry out a short road test and re-check all fittings once the engine has cooled.

4. Valve Cover Trimming Guidance

Use the trimming reference image below when preparing the plastic N14 valve cover. The raised coil seats must be trimmed flat, while the original factory mounting points must remain intact for the Airifix brackets.



N14 COIL SEAT TRIMMING
B58 COIL PACK CONVERSION



Trim the existing N14 coil seats flat as shown below for the Airifix B58 coil pack conversion.

1. BEFORE TRIMMING

2. TRIMMING AREA

REMOVE HIGHLIGHTED PLASTIC
FLUSH WITH SURFACE

3. TOOL RECOMMENDATION



DREMEL / ROTARY
TOOL
(Preferred)



FLAT FILE
(Alternative)



UTILITY KNIFE
(Fine Adjustment)



IMPORTANT:
Take your time and check fitment often.
Remove only the highlighted raised plastic.



PRO TIP:
Test fit the coil brackets during trimming.
Seats should be completely flat for a secure fit.

4. AFTER TRIMMING

5. READY FOR INSTALLATION



SURFACE IS FLAT AND SMOOTH
READY FOR AIRIFIX B58 BRACKETS

AF-N14-TRIM-01

Figure 1: N14 coil seat trimming reference - remove only the raised plastic coil seat material and leave the original mounting points in place.

Important: The N14 valve cover is plastic. The original raised coil seats must be removed and made flat so the Airifix CF-ABS brackets can sit correctly. Do not remove, drill or damage the existing factory mounting points, as the Airifix brackets use these mounting points to secure to the valve cover. Trim only the raised plastic material shown in the reference image. This modification does not affect valve cover sealing when carried out correctly, because the trimming is limited to the external coil seating area only.

- Do not remove or damage the original mounting points - they are required to secure the Airifix brackets.
- The goal is a flat bracket seating surface, not a deep cut into the valve cover.

Do	Do Not
Test fit first and mark the exact contact points.	Do not guess the cut area.
Remove the raised plastic coil seats slowly and create a flat bracket surface.	Do not cut into or damage the factory mounting points.
Clean all plastic swarf before starting the engine.	Do not leave debris around the plug wells.
Check coil packs and brackets sit naturally without pressure.	Do not force the coil packs or brackets into place.

5. Wiring and Coil Position Check

Firing order note
Keep each wiring adaptor connected to the same cylinder position as the original coil wiring. Do not swap coil wiring between cylinders. If the vehicle runs poorly after installation, switch the engine off and re-check each connector and coil
Installation guide - read fully before fitting. Made-to-order performance part.

position before further testing.

Cylinder	Coil seated	Adaptor clicked in	Wiring clear
1	☐	☐	☐
2	☐	☐	☐
3	☐	☐	☐
4	☐	☐	☐

6. Final Installation Checklist

- ☐ Battery disconnected during fitting and reconnected after final inspection
- ☐ All old coil packs removed and spark plug wells checked
- ☐ Existing raised coil seats removed and flattened neatly
- ☐ B58 coil packs fully seated
- ☐ Airifix CF-ABS brackets secured using the existing valve cover mounting points
- ☐ All wiring adaptors fully clicked into place
- ☐ Wiring routed away from heat, sharp edges and moving parts
- ☐ Engine starts and idles correctly
- ☐ No active misfire codes after test drive
- ☐ Fixings re-checked after first heat cycle

7. Troubleshooting

Symptom	Possible Cause	Check / Fix
Rough idle or misfire	Connector not fully seated or coil not seated	Switch off and re-check each coil and adaptor.
Misfire follows one cylinder	Coil pack, spark plug or adaptor issue	Inspect that cylinder first; swap parts only for diagnosis if you are confident.
Coil does not sit fully down	Valve cover clearance not sufficient	Remove coil and carefully trim the contact area further.
Wiring feels tight	Adaptor routed incorrectly	Re-route with more slack and secure away from heat.

Support

For order support or fitting questions, contact Airifix with your order number, vehicle model, engine, photos of the installation area, and any fault codes shown by your diagnostic tool.

Airifix 3D Parts - Performance and styling parts for BMW / MINI

