



5-0 IGNITE IGNITION COIL KIT INSTALLATION MANUAL

This installation manual is applicable to the following vehicle make and models;

- Nissan Skyline / Patrol, Holden VL Commodore

Engine: RB30 SOHC

Please read this installation manual carefully prior to installing the product.



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If in doubt, seek professional help.

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PREFACE

Thank you for purchasing 5-0 ignite ignition coil kit. We have done all the hard work to ensure that your installation is a breeze and clean. Your kit should include the following items;

- 1x Pre-made semi plug and play ignition coil harness
- 1x Male 8 pin Deutsch connector with pins and lock
- 6x Hitachi R35 ignition coils
- 1x Mounting bracket
- 6x M6X1-25LG. socket cap bolts
- 4x M6X1-30LG. socket cap bolts
- 1x M6X1-45LG. socket cap bolt
- 6x Black dress up washers

Hardware installation time is typically 20 mins, depending on your engine setup, requiring basic set of mechanical skills and hand tools;

- Basic hand tools (ratchet, extension, sockets, spanner, screwdriver)
- Allen key set



INFORMATION AND LIMITATIONS

- **Spark plugs to use (as per OEM)**
NGK BCPR series to your suitable heat range
- The coil kit has been designed to be compatible with only full-length injectors and top feed fuel rail setup. Minor adjustment to the rail position may be necessary depending on the brand of fuel rail you are using to provide clearance to the coil connector/wiring.
- Aftermarket ECU is required to convert from distributor to direct spark. The ECU will need to be able to allow you to set ignition dwell time table to maximise the coil's performance.
- Typical ignition dwell time setting is 4ms @ 14V. Your tuner will determine the appropriate dwell times across the remaining voltage and RPM axis range. **4ms @ 14V is the max dwell time for the R35 coil with sequential fire configuration. Dwell time will need to be reduced if configured to run in batch fire mode, failure to do so will detrimentally shorten the coil's life.**
- Any part of the ignition loom must be sufficiently protected or moved away from close proximity of any exhaust components or other potential areas of chafing to surrounding components.
- Wiring work is required to terminate the pre-made harness to your ECU for ignition signal, power and ground.

PROCEDURE

1. Disconnect battery and remove existing ignition leads.
2. Remove the 5 valve cover bolts indicated below;



Figure 1 – Remove the selected valve cover bolts

3. Install the mounting bracket using the supplied hardware. The centre bolt is the 45mm long type. The remaining bolts are the 30mm long type. You may need to rotate your injector for accessibility to your injector connector. **Do not overtighten bolt as it may result in cracked valve cover.**



Figure 2 – Install the coil mounting bracket

4. You may run the pre-made harness to sit on top of the fuel rail or feed it from below for a neater look. The example on this guide shows the harness fed from below the fuel rail. The 8-pin main connector on the pre-made harness to be positioned firewall side.



Figure 3 – Feeding the pre made harness from below the fuel rail

5. For each coil, plug the connector onto the coil first before completely mounting the coil onto the bracket (removal vice versa). The spark plugs on the RB30 SOHC head is mounted on an angle, the mounting bracket has been designed to match the required alignment. Note: Cyl 3 connector has purple signal wire, Cyl 4 connector has blue signal wire.



Figure 4 – Plug the connector onto the coil before completely mounting the coil onto the bracket

6. Bolt down the coil onto the mounting bracket using the supplied 25mm long type bolts and the dress up washer.



Figure 5 – Secure the coil onto the bracket

7. For certain brands of fuel rail, care must be taken to ensure that there is sufficient clearance between the wiring and the fuel rail to prevent the wires from chafing. Options are to zip tie the wires neatly or add clearance by spacing out the fuel rail, by a small amount, using washers. **Chafing of wires will create shorts that may damage the coil and/or your ECU.**



Figure 6 – Ensure there is sufficient clearance between the wiring and the fuel rail

If clearance by spacing out the fuel rail is required, add a washer (typically M5 size) **between** the fuel rail and all the mounting legs. Doing so will result in negligible amount of misalignment of your injectors.



Figure 7 – Washer position to space out fuel rail

8. Wiring on the main 8 pin connector;

Pin 1 – Cyl 1 Signal – Yellow

Pin 2 – Cyl 2 Signal – Green

Pin 3 – Cyl 3 Signal – Purple

Pin 4 – Cyl 4 Signal – Blue

Pin 5 – Cyl 5 Signal – Brown

Pin 6 – Cyl 6 Signal – White

Pin 7 – Ground – Black (typically grounded to cylinder head or intake manifold)

Pin 8 - 12V Power – Red (typically from the original single coil power wire)

- For power and ground, the minimum recommended wiring size is 16awg.
- Ignition type: Direct spark.
- Ignition/spark system edge: Falling edge (standard for most smart COP).

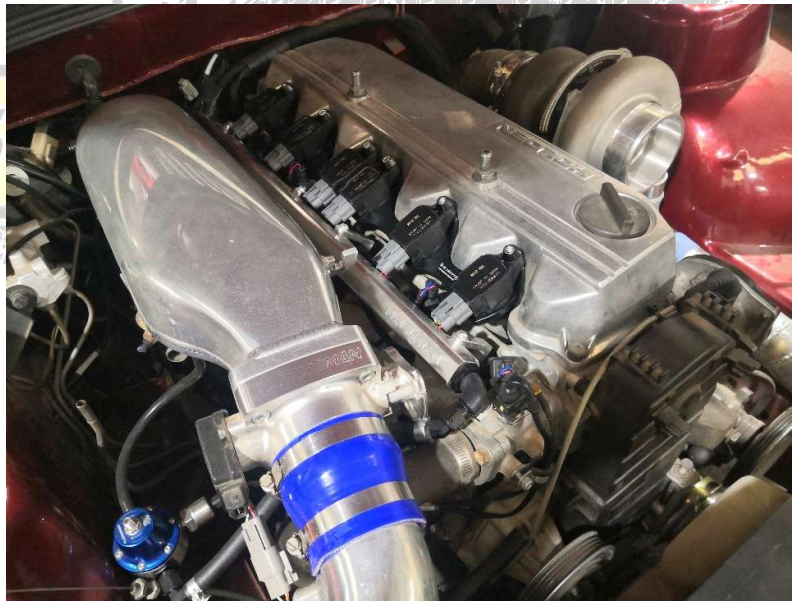


Figure 8 – Installation Complete

CONCLUSION

Installation is now complete. Re-check all steps in the procedure, if all good, re-connect battery, configure the ECU settings and start the engine. It is also recommended to check or replace your spark plugs on this installation and perform a check-up tune. The R35 coil dwell time can be found in our website under 'installation guide'.