Installation addendum - Electrical interference suppression

The RDS control system supplied for your machine has been rigorously tested and complies with the EMC Directive 89/336/EEC. Where the RDS control system interfaces with or is installed together with other electrical components or accessories, it is essential that they also conform to the Directive. Any device legitimately CE marked should already incorporate such suppression devices.

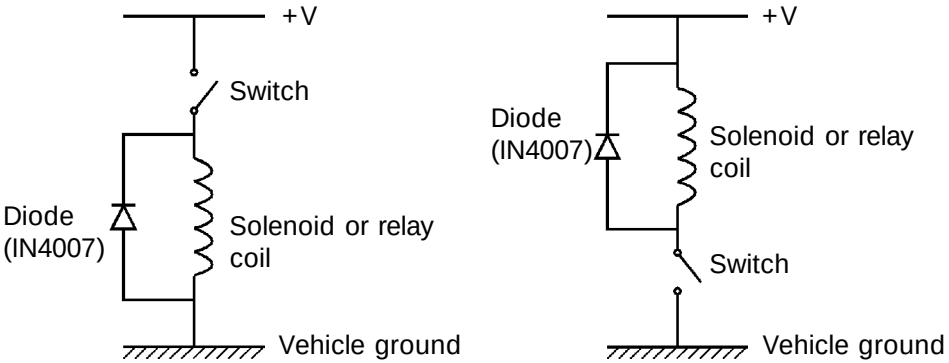
Switching of non-suppressed control valves can generate voltage spikes which can damage the instrument. If the RDS instrument is being fitted to a sprayer with electric control valves, it is essential that the sprayer control valves have been suppressed.

Suppressing a solenoid valve

The simplest method of suppressing a solenoid is the fitting of an IN4007 diode across the solenoid. The bar of the diode (the side with the white stripe) faces the positive terminal of the solenoid.

A varistor can be fitted instead of a diode, and is not polarity sensitive. If possible, a diode should be used.

Diode suppression for solenoids or relays



NOTE:

1. Ensure correct diode polarity when fitting.
2. In certain applications where fast switching of solenoids is required, diode suppression may cause an unacceptable delay in operation. This would be cured by using a varistor instead of a diode.
3. A diode however, is the preferred option since it is most effective.

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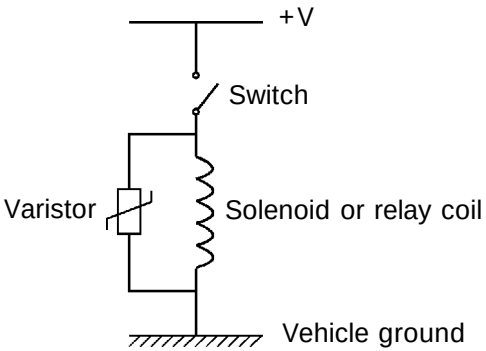
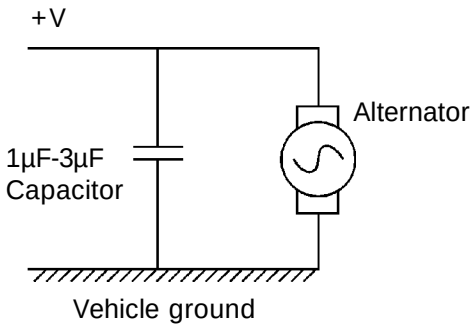
Varistor suppression for solenoids or relays

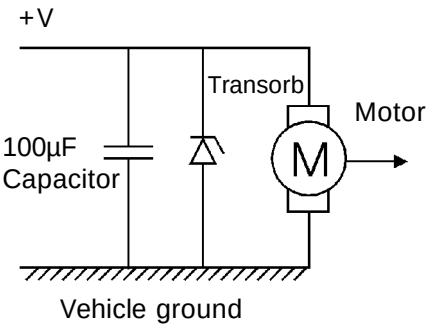


Suppressing a motor driven valve

Motor valves are less likely to generate voltage spikes but they cause interference to audio equipment and other electrical hardware. All electric motors on the vehicle must be protected by a 100 µF capacitor and a bi-directional Transorb (e.g. BZW04P19B) across the motor terminals. Alternators require a smaller 1µF - 3µF capacitor.

Capacitor suppression for alternators and motors





GENERAL RECOMMENDATIONS:

- Suppress all solenoids
- All components used for suppression should be connected as near to the source of interference as possible.
- Separate C.B. wiring from other wiring looms.
- Suppressed solenoid caps are available from *Richard Hirstmann Electronics UK Ltd* or *mPm Systems Ltd.*
- Individual components, e.g. diodes, varistors, etc. are available from RDS Technology Ltd.

If you have concerns regarding the suppression of your sprayer, contact your RDS distributor.