

Enginetech Inc
Tech Assistance 800-410-3664 ext. 340 or 237

TECHNICAL BULLETIN	
	January 2004 TB 2133
Mfg:	CHRYSLER
Model:	DURANGO
Liter:	5.9L
V I N:	Z
Year:	98-03

Spark Knock / Ignition Cross Fire
For 1994-99 Chrysler 3.9L, 5.2 & 5.9L Engines

The AERA Technical Committee offers the following information spark knock / ignition cross fire for 1994-99 Chrysler 3.9L, 5.2L & 5.9L engines.

Vehicles will exhibit one or more of the following:

- ☐ Spark knock when engine is under load.
- ☐ Engines having various single cylinder misfire 1, 3 or 7 especially 5 and 8.
- ☐ Surge in 4th gear with EECC engaged (Electronically Modulated Converter Clutch) or/and converter noise during lockup or un-locking around 45 mph.

After scanning the vehicle and making sure there are no DTC's (Diagnostic Trouble Codes) the very next procedure should be performed before any other spark knock repairs are attempted.

Simply separate the spark plug wires to avoid induction cross fire. If the spark plug wires to the suspect cylinders must cross each other, have them cross at 90° to reduce the possibility of cross fire. Use convolute coil and spark plug wire covering part # 04364375 as per figures, which will help reduce magnetic induction.

Note: Induction firing is how an ignition coil works. When current is supplied to the coil, a magnetic field is created by the primary windings. When primary current is switched off by opening of the points, reluctor wheel, photocell or other means, the magnetic field collapses. The secondary windings are engulfed by a powerful and changing magnetic field, which induces a very high current of up to 100,000 volts. This is how the spark plug wires are able to cross fire, magnetic induction

The AERA Technical Committee

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Bulletin Diagram: FIGURE ONE, ONE WIRE CLIPS, 3.9I SIMILAR - OTHER

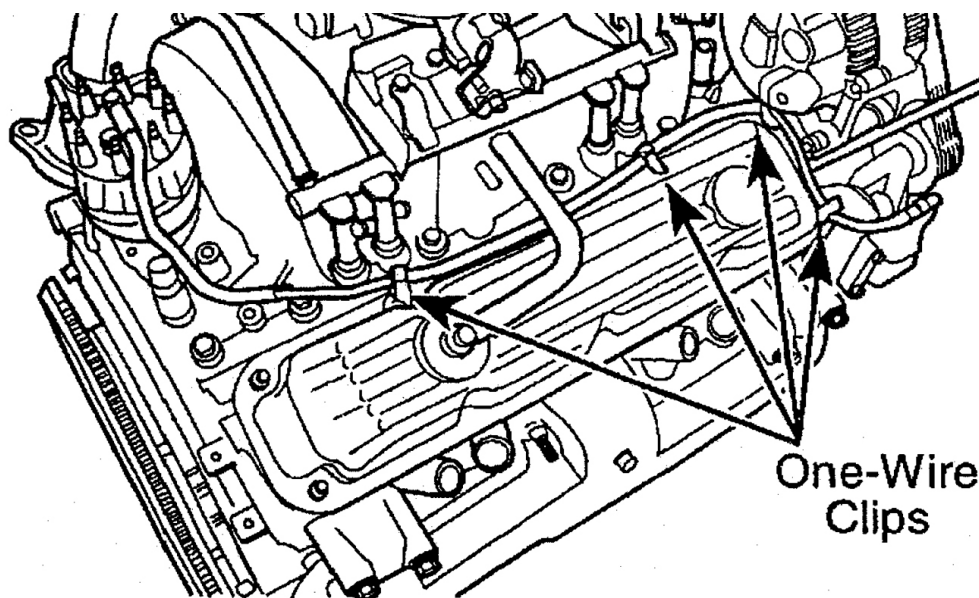


Fig. 1: One-Wire Clip Locations On Valve Cover (5.2L & 5.9L)

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Bulletin Diagram: FIGURE 2, PLUG WIRE ROUTING AND PROTECTIVE COVERIN - OTHER

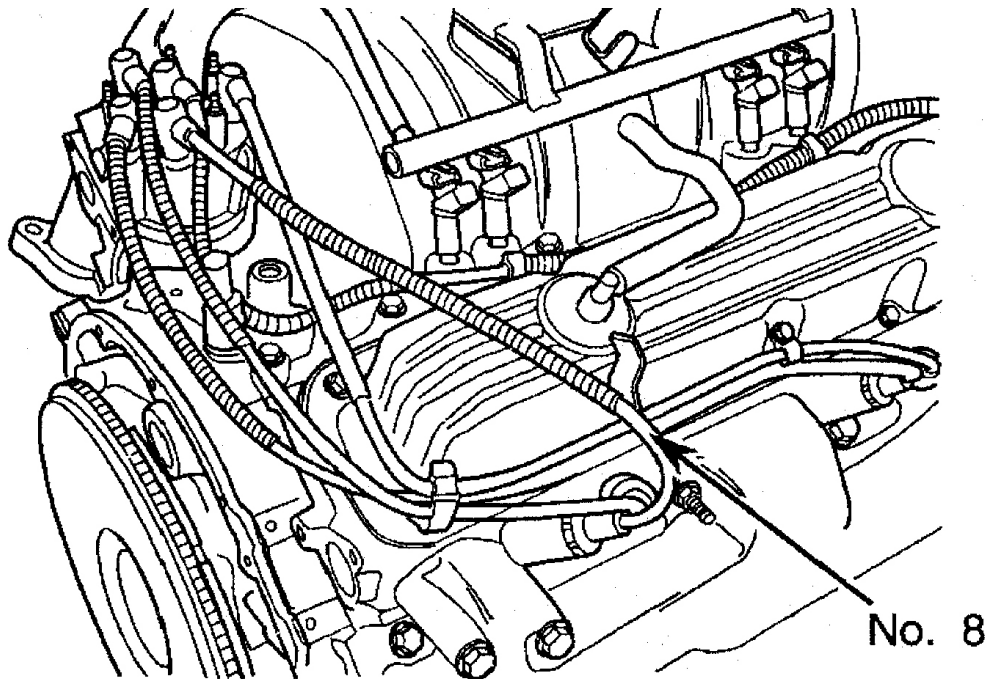


Fig. 3: No. 8 Plug Wire Routing (5.2L & 5.9L)

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