

## Engine switches to limp-home mode or has insufficient output

|                   |                        |
|-------------------|------------------------|
| Topic number      | L114.10-N-049797       |
| Version           | 2                      |
| Design group      | 14.10 Exhaust manifold |
| Date              | 08-08-2013             |
| Validity          | Model 906 with OM642   |
| Reason for change | Distribution extended  |
| Reason for block  |                        |

### Complaint:

Engine switches to limp-home mode or has insufficient output

Fault code P2510, P2359 or P2616 stored in CDI control unit

### Cause:

Turbocharger may have been damaged or had its function briefly impaired by material separation in the exhaust manifold.

### Remedy:

1. Function check of boost pressure positioner (Y77/1)

After ignition ON, the boost pressure positioner (Y77/1) must move to the upper position. If fault P2510 is stored in the process, replace turbocharger.

2. Check removed turbocharger for loose metal particles

If there are problems, replace both exhaust manifolds.

3. Check exhaust manifold while installed

- external/internal damage (illuminate with endoscope)
- noise test using rubber hammer (rattling noises)

If there are problems, replace both exhaust manifolds

| Symptoms                                                                                         |
|--------------------------------------------------------------------------------------------------|
| Power generation / Engine management / Engine management indicator lamp / Engine diagnosis / lit |
| Power generation / Engine management / Engine performance / Goes into limp-home mode             |
| Power generation / Engine management / Engine performance / No/poor output                       |
| Power generation / Engine management / Engine performance / Poor acceleration                    |

| Control unit/fault code                      |            |                                                 |
|----------------------------------------------|------------|-------------------------------------------------|
| Control unit                                 | Fault code | Fault text                                      |
| CDI4Common Rail Diesel Injection (CR4_NAFTA) | 2359 (001) | Charge pressure control- Too low boost pressure |

|                                              |            |                                                                       |
|----------------------------------------------|------------|-----------------------------------------------------------------------|
| CDI4Common Rail Diesel Injection (CR4_NAFTA) | 2510 (001) | Y77/1 (Boost pressure regulator)- Positioner signals fault.           |
| CDI4Common Rail Diesel Injection (CR4_NAFTA) | 2616 (001) | B60 (Exhaust back pressure sensor)- Exhaust backpressure is too high. |

| Parts           |     |     |                        |          |      |     |                 |
|-----------------|-----|-----|------------------------|----------|------|-----|-----------------|
| Part number     | ES1 | ES2 | Designation            | Quantity | Note | EPC | Other make part |
| A 642 140 06 61 |     |     | Right exhaust manifold | 1        |      | X   |                 |
| A 642 140 01 61 |     |     | Left exhaust manifold  | 1        |      | X   |                 |

| Work units |                                             |      |             |                                |
|------------|---------------------------------------------|------|-------------|--------------------------------|
| Op. no.    | Operation text                              | Time | Damage code | Note                           |
| 14-3915    | REPLACE EXHAUST MANIFOLDS (ALL)             |      | 14135 07    | Left exhaust manifold cracked  |
| 14-3915    | REPLACE EXHAUST MANIFOLDS (ALL)             |      | 14136 07    | Right exhaust manifold cracked |
| 09-6020    | Remove/install turbocharger                 |      |             |                                |
| 09-6043    | REPLACE TURBOCHARGER (TURBOCHARGER REMOVED) |      |             |                                |

| WIS-References   |                                       |      |            |
|------------------|---------------------------------------|------|------------|
| Document number  | Title                                 | Note | Allocation |
| AR14.10-D-3930SF | Remove/install left exhaust manifold  |      | Remedy     |
| AR14.10-D-4005SF | Remove/install right exhaust manifold |      | Remedy     |
| AR09.40-D-6020SF | Remove/install turbocharger           |      | Remedy     |

| Validity     |        |              |
|--------------|--------|--------------|
| Vehicle      | Engine | Transmission |
| Sprinter III | 642    | *            |