**Torque and Rebuild Specifications for Iveco NEF Four and Six Cylinder F4CE – F4DE – F4GE – F4HE Series Engines**

### Cylinder Head Bolts

![Cylinder Head Image](image)

**See Bolt Reuse Guidelines Below!**

<table>
<thead>
<tr>
<th>Bolt Type</th>
<th>Torque Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder Head Bolts</td>
<td>50Nm / 36.8 ft.lbs.</td>
</tr>
<tr>
<td></td>
<td>80Nm / 59 ft.lbs.</td>
</tr>
<tr>
<td></td>
<td>90°</td>
</tr>
</tbody>
</table>

Tighten all bolts to their specified torque in sequence;
- M12 x 70mm: 50Nm / 36.8 ft.lbs.
- M12 x 140mm: 40Nm / 29.5 ft.lbs.
- M12 x 180mm: 70Nm / 51 ft.lbs.

Tighten all bolts an additional 90° in sequence

Tighten all 140mm and 180mm length bolts an additional 90° in sequence

### Main Bearing Cap Torque

**See Bolt Reuse Guidelines Below!**

<table>
<thead>
<tr>
<th>Bolt Type</th>
<th>Torque Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Bearing Cap</td>
<td>50Nm / 36.8 ft.lbs.</td>
</tr>
<tr>
<td></td>
<td>80Nm / 59 ft.lbs.</td>
</tr>
<tr>
<td></td>
<td>90°</td>
</tr>
</tbody>
</table>

### Piston Cooling Nozzles

15Nm / 11 ft.lbs.

### Piston Protrusion

0.28 - 0.52 mm / 0.011” - 0.020”

### Piston Skirt to Cylinder Wall Clearance

0.252 - 2.94 mm / 0.010” - 0.011”

### Connecting Rod Bolt

**See Bolt Reuse Guidelines Below!**

30Nm / 22.1 ft.lbs.

60Nm / 44.2 ft.lbs.

### Standard Cylinder Bore

104.0 – 104.24 mm / 4.094” – 4.095”

### Rocker Assembly Torque

24Nm / 17.7 ft.lbs.

### Crankshaft End Play

0.07 - 0.41 mm / 0.003” – 0.016”

### Valve Adjust Sequence

<table>
<thead>
<tr>
<th>Cyl 1</th>
<th>Cyl 2</th>
<th>Cyl 3</th>
<th>Cyl 4</th>
<th>Cyl 5</th>
<th>Cyl 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>E</td>
<td>I</td>
<td>E</td>
<td>I</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDC #1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>TDC #6</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

### Valve Clearance (set cold)

- Intake: 0.25 mm / 0.010”
- Exhaust: 0.50 mm / 0.020”

### Rocker Cover

24Nm / 17.7 Ft Lb

---

**Cylinder head, Main bearing cap and Connecting rod cap bolt reuse guidelines**

Measure the bolt thread diameter at the top and bottom of the threaded portion. If the difference is greater than 0.1 mm (.004”), the bolt must be replaced.

![D1 and D2 Diagram](image)

If D1 – D2 < 0.1 mm Reuse

If D1 – D2 > 0.1 mm Discard