Description and Operation of the DD15 and DD16 Exhaust Gas Recirculation Cooler

January 2013

Additions, Revisions, or Updates

<table>
<thead>
<tr>
<th>Publication Number / Title</th>
<th>Platform</th>
<th>Section Title</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDC-SVC-MAN-0083</td>
<td>DD Platform</td>
<td>DD15 and DD16 Exhaust Gas Recirculation Cooler</td>
<td>Added details for the GHG14 DD15</td>
</tr>
</tbody>
</table>

13400 Outer Drive, West, Detroit, Michigan 48239-4001
Telephone: 313-592-5000
www.demanddetroit.com
2 Description and Operation of the DD15 and DD16 Exhaust Gas Recirculation Cooler

The primary purpose of the Exhaust Gas Recirculation (EGR) cooler is to cool the engine exhaust gases prior to entering the intake manifold. Exhaust gas cooling is accomplished by the flow of exhaust gases through the EGR cooler tubes. The EGR cooler core then transfers the heat removed from the exhaust gases to the engine coolant. The cooled exhaust gases are then mixed with incoming air from the Charge Air Cooler (CAC) before being sent to the intake manifold.

![Diagram of DD15 and DD16 Exhaust Gas Recirculation Cooler and Related Parts](image)

1. Venturi
2. Bolt
3. Gasket
4. Bolt
5. Exhaust Gas Crossover Tube
6. Bolt
7. Lifting Bracket
8. Connecting Tube
9. Connecting Tube
10. Seal Ring
11. Banjo Union
12. Banjo Bolt
13. Exhaust Gas Cooler
14. Strap
15. Shim
16. Marmon Clamp
17. Metal Seal Ring (if applicable)
18. Exhaust Pipe
19. Water Manifold
20. Support Bracket
21. Clamps
22. Connector Hose
23. Mixer Pipe
24. Coolant Crossover Pipe
25. Seal Ring

Figure 1. DD15 and DD16 Exhaust Gas Recirculation Cooler and Related Parts
1. Seal Ring  
2. Bolt  
3. Mixer Pipe  
4. Marmon Clamps  
5. Connector Hose  
6. Venturi Pipe  
7. Bolt  
8. Gasket  
9. EGR Crossover Pipe  
10. Bolt  
11. Lifting Bracket  
12. Connecting Tube  
13. EGR Cooler  
14. Banjo Bolt  
15. Seal Ring  
16. Banjo Union  
17. Strap  
18. Shim  
19. Marmon Clamps  
20. Metal Seal Ring  
21. EGR Valve Hot Pipe  
22. Connecting Tube  
23. Water Manifold  
24. Seal  
25. Coolant Outlet Pipe  
26. Water Manifold Gasket  
27. Connecting Tube  
28. Coolant Crossover Pipe  
29. Clamps  
30. Connector Hose  
31. Bolt  
32. Bolts  
33. Support Bracket  

Figure 2. GHG14 DD15 AT Exhaust Gas Recirculation Cooler and Related Parts