

Product: EXCAVATOR

Model: 325-A EXCAVATOR 8JG

Configuration: 325, 325L TRACK TYPE EXCAVATORS 8JG00001-UP (MACHINE) POWERED BY 3116 ENGINE

## Disassembly and Assembly

**446 and 446B Backhoe Loaders, Lexion 450 Combine, 3114 and 3116 Engines, IT18F Integrated Toolcarrier, D6M Track-Type Tractor and 928F, 950F and 950G Wheel Loaders**

Media Number -SEN3611-18

Publication Date -01/05/2009

Date Updated -27/05/2009

i01928788

# Exhaust Manifold - Remove and Install

SMCS - 1059-010

## Removal Procedure

Start By:

- a. Remove the turbocharger. Refer to Disassembly and Assembly, "Turbocharger - Remove".

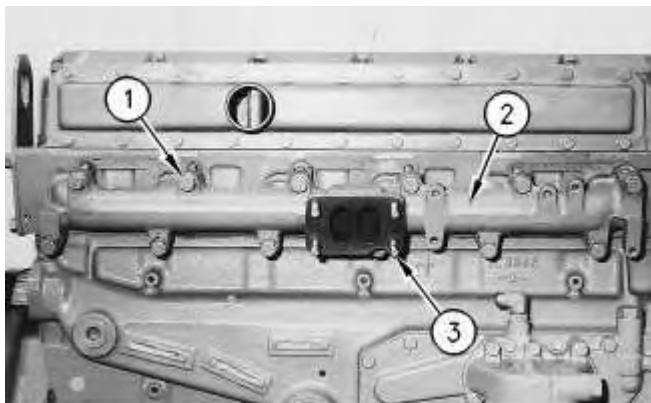


Illustration 1

g00652578

Typical example

1. Remove bolts (1), exhaust manifold (2), locks and the gaskets from the cylinder head assembly.
2. If the engine is equipped with a three-piece exhaust manifold, disassemble exhaust manifold (2) into three pieces.
3. Remove mounting studs (3) from exhaust manifold (2), if necessary.

# Installation Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	5P-3931	Anti-Seize Compound	1
B	2P-2333	High Temperature Sealer	1

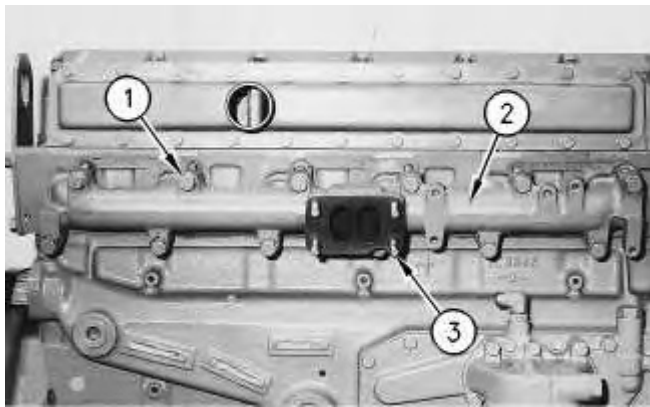
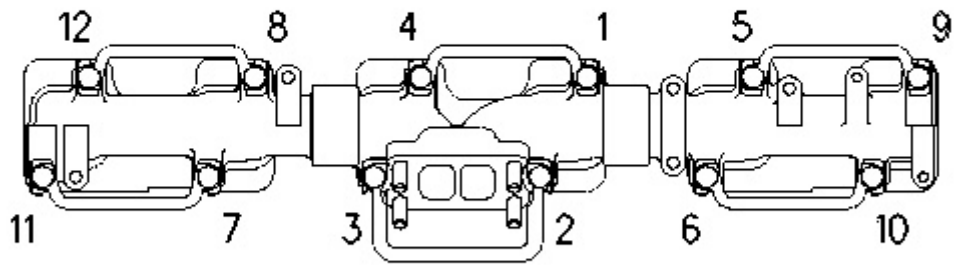


Illustration 2

g00652578

Typical example

1. Apply Tooling (A) to the threads of mounting studs (3).
2. Install mounting studs (3). Tighten mounting studs (3) to a torque of  $35 \pm 5$  N·m ( $26 \pm 4$  lb ft).
3. If the engine is equipped with a three-piece exhaust manifold, apply a thin coat of Tooling (B) to the male ends of exhaust manifold (2). Coat the inside of the female ends of exhaust manifold (2) with clean engine oil. Assemble exhaust manifold (2) and remove the excess sealant from the joints.
4. Install new exhaust manifold gaskets.
5. Apply Tooling (A) to the threads of bolts (1). Position the gaskets and exhaust manifold (2) on the cylinder head assembly. Install locks and bolts (1).



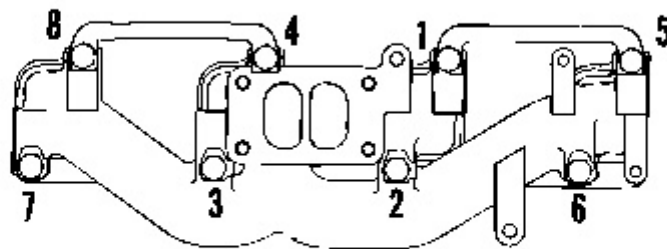
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Illustration 3

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Typical example of a three-piece exhaust manifold

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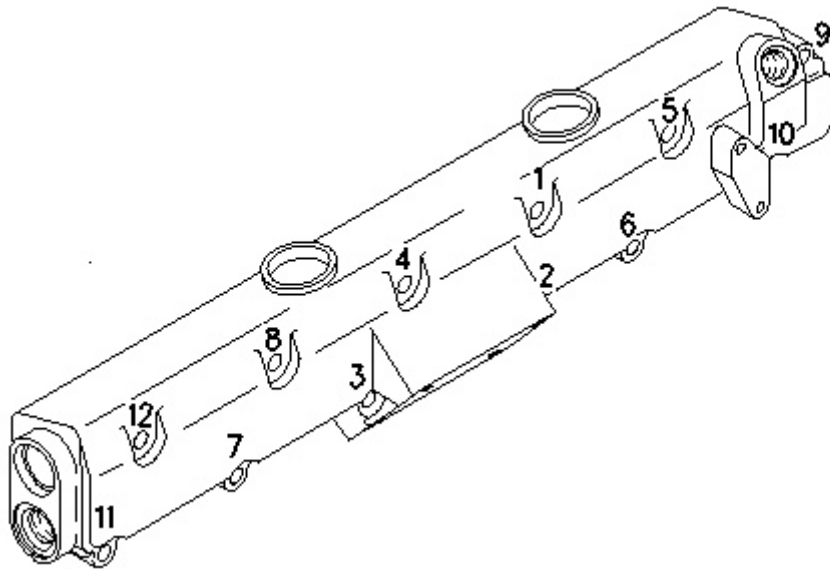
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Illustration 4

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Exhaust manifold for a Four cylinder engine

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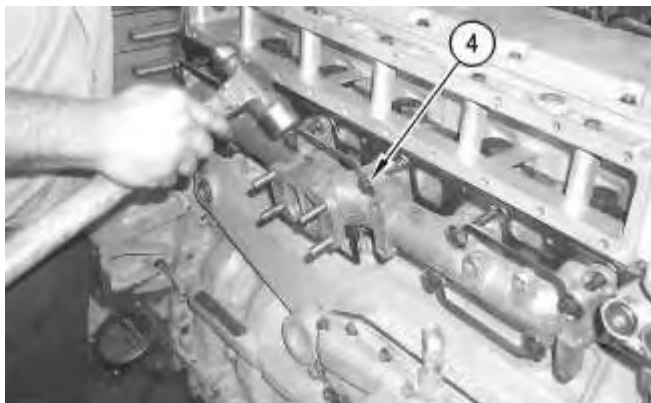
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Illustration 5

g00641092

Water cooled exhaust manifold

6. Tighten bolts (1) in a numerical sequence to a torque of  $4 \pm 1$  N·m ( $35 \pm 9$  lb in).
7. Tighten bolts (1) in a numerical sequence to a torque of  $45 \pm 5$  N·m ( $33 \pm 4$  lb ft).



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Illustration 6

g00675760

Typical example of locking tabs

8. Bend the locking tabs (4) over the flat of each bolt head.

**End By:**

- a. Install the turbocharger. Refer to Disassembly and Assembly, "Turbocharger - Install".
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Media Number -SEN3611-18

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i01328419

## **Inlet Manifold - Remove**

SMCS - 1058-011

### **Removal Procedure**

#### **Start By:**

- a. Remove the valve mechanism cover. Refer to Disassembly and Assembly, "Valve Mechanism Cover - Remove and Install".

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#### **NOTICE**

**Keep all parts clean from contaminants.**

**Contaminants may cause rapid wear and shortened component life.**

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#### **NOTICE**

**Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting, and repair of the product. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids.**

**Refer to Special Publication, NENG2500, "Dealer Service Tool Catalog" for tools and supplies suitable to collect and contain fluids on Cat products.**

**Dispose of all fluids according to local regulations and mandates.**

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1. Disconnect air inlet piping from the turbocharger to the aftercooler, if necessary.

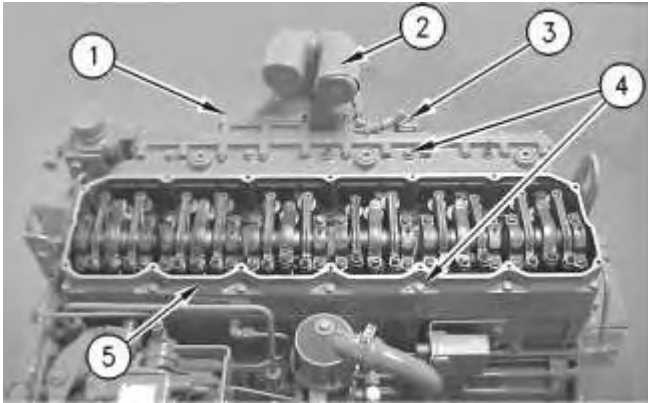


Illustration 1

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2. Remove bolts (1) and disconnect air inlet heater solenoid (3).
  3. Remove air inlet elbows (2) from air inlet manifold (5).
  4. Remove bolts (4) from air inlet manifold (5).
  5. Remove air inlet manifold (5) and the gasket.
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i01414226

## **Inlet Manifold - Install**

SMCS - 1058-012

## **Installation Procedure**

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### **NOTICE**

**Keep all parts clean from contaminants.**

**Contaminants may cause rapid wear and shortened component life.**

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### **NOTICE**

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Illustration 1

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1. Install a new gasket (6) on the cylinder head.

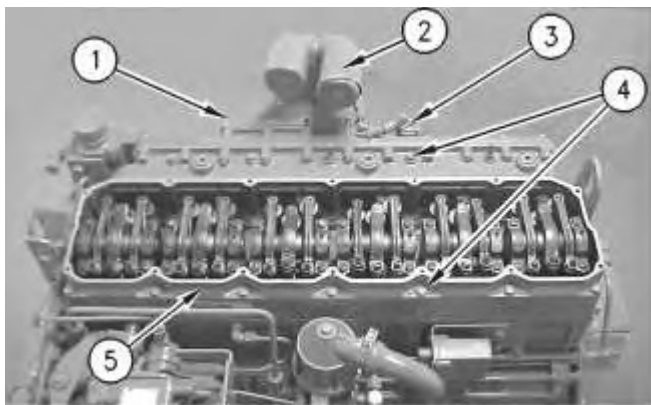


Illustration 2

g00629952

2. Position the air inlet manifold (5) on the engine.
3. Install bolts (4). Tighten the bolts to a torque of  $28 \pm 7$  N·m ( $21 \pm 5$  lb ft).
4. Install air inlet elbows (2) on air inlet manifold (5).
5. Install bolts (1) and connect air inlet heater solenoid (3).

**End By:**

- a. Install the valve mechanism cover. Refer to Disassembly and Assembly, "Valve Mechanism Cover - Remove and Install".
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