



Service Repair Manual

Models

C27 Industrial Engine

Product: INDUSTRIAL ENGINE
Model: C27 INDUSTRIAL ENGINE JFJ
Configuration: C27 Industrial Engine JFJ00001-UP

Disassembly and Assembly C27 and C32 Engines

Media Number -M0074364-00

Publication Date -01/08/2015

Date Updated -13/09/2016

i06750397

Inlet and Exhaust Valve Springs - Remove and Install

SMCS - 1108-010

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	9U-7241	Valve Spring Compressor	1
B	441-0714	Tool As	1

Start By:

- a. Remove the electronic unit injectors.

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

Note: Place the piston at the top of the compression stroke (TC). Remove the valve springs for that cylinder. If the valves fall into the cylinder liner, then the cylinder head must be removed.

1. Position the No. 1 piston at the top center of the compression stroke. Refer to Testing and Adjusting, "Finding Top Center Position for No. 1 Piston".
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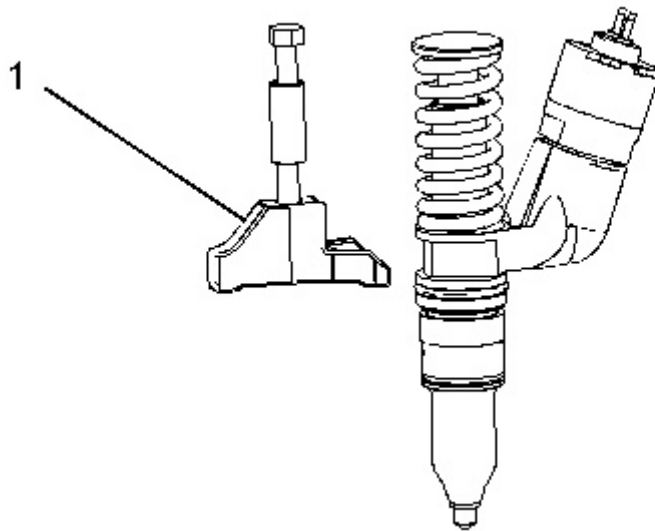


Illustration 1

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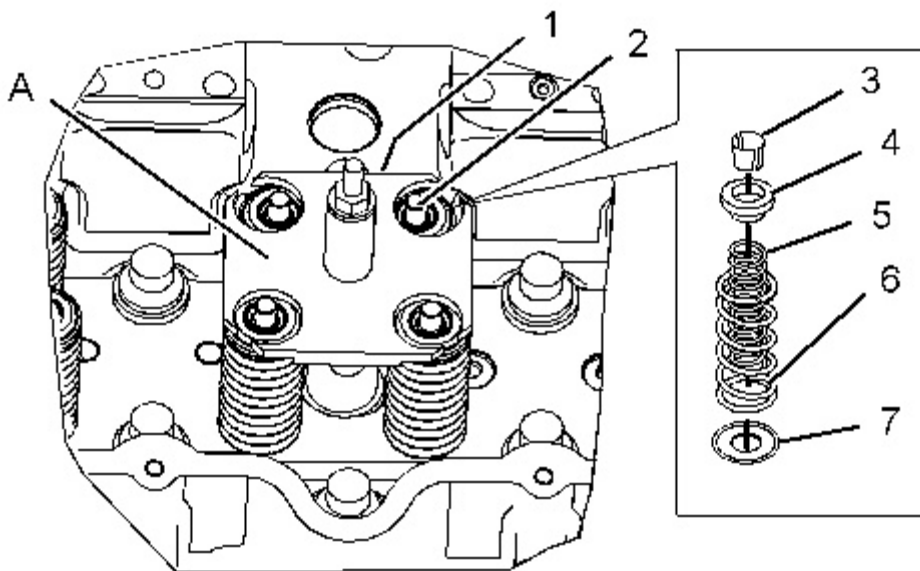


Illustration 2

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⚠ WARNING

Personal injury can result from being struck by parts propelled by a released spring force.

Make sure to wear all necessary protective equipment.

Follow the recommended procedure and use all recommended tooling to release the spring force.

2. Install Tooling (A) in the electronic unit injector sleeve. Secure Tooling (A) with unit injector clamp (1).
3. Tighten the full nut until valve spring keepers (3) are loose on valve (2).
4. Remove valve spring keepers (3) from the valve.
5. Carefully remove Tooling (A).
6. Remove valve rotator (4).
7. Remove outer valve spring (6) and inner valve spring (5) from the valve.
8. Remove washer (7) from the valve guide.
9. Use Tooling (B) to check the valve springs (spring force). Refer to Specifications, "Cylinder Head Valves" for additional information on the valve springs.

Installation Procedure

Table 2

Required Tools			
Tool	Part Number	Part Description	Qty
A	9U-7241	Valve Spring Compressor	1

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

1. Lubricate the valve stems with clean engine oil.
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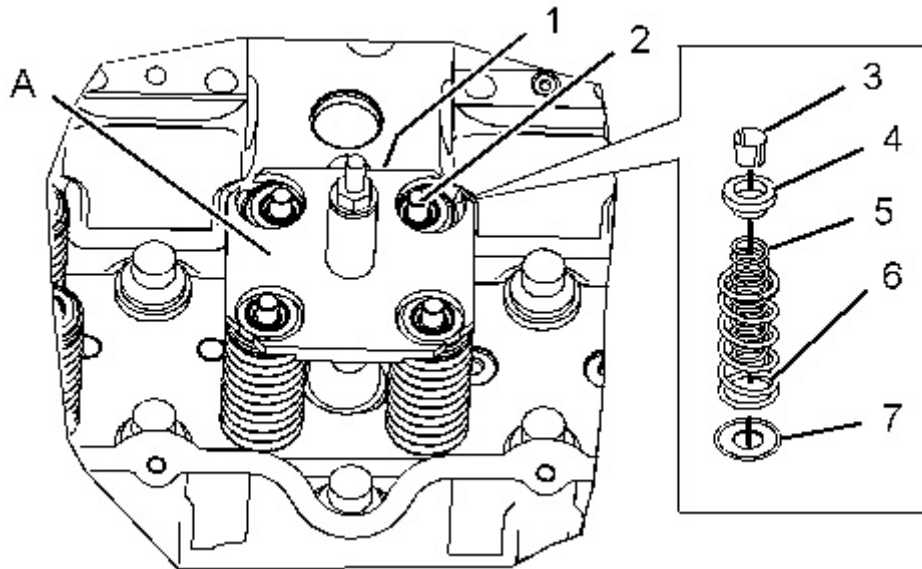


Illustration 3

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WARNING

Improper assembly of parts that are spring loaded can cause bodily injury.

To prevent possible injury, follow the established assembly procedure and wear protective equipment.

2. Ensure that washer (7) is installed on the valve guide.
3. Install inner valve spring (5) and outer valve spring (6) on valve (2).
4. Install valve rotator (4) on valve (2).

WARNING

The valve spring keepers can be thrown from the valve when the valve spring compressor is released. Ensure that the valve spring keepers are properly installed on the valve stem. To help prevent personal injury, keep away from the front of the valve spring keepers and valve springs during the installation of the valves.

5. Use Tooling (A) to compress inner valve spring (5) and outer valve spring (6). Install valve spring keepers (3) on valve (2). Remove unit injector clamp (1) and Tooling (A).

End By:

- a. Install the electronic unit injectors.

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i06750410

Inlet and Exhaust Valves - Remove and Install

SMCS - 1105-010

Removal Procedure

Table 1

Required Tools			
Tool	Part Number	Part Description	Qty
A	5S-1330	Valve Spring Compressor	1
B	441-0714	Tool As	1

Start By:

- a. Remove the cylinder head.

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

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