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Coding Information

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Title: Valve Train Component Changes For I6 Engines

Applies To: DT466E/530E 2 valve cylinder head engines built 1994 through 2003 & DT466/DT570/HT570 4 valve cylinder head engines built in 2004 - ESN range 2000001 through 2072379. These engines utilize a Small Geometry (SG) Valve Train.

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

01/26/2018 - Submit Draft
01/29/2018 - 1839971C1 – Replaced by 1839971C3, 1854756C3 – Correct part number is 1854756C1

DESCRIPTION

Small Geometry (SG) valve train Roller Tappets P/N **1809570C5** for DT466E/530E 3-box/single box ECM engines & DT466/DT570/HT570 (EGR) engines will no longer be available once PDC stock has been depleted. This article guides the User through the process to update to Large Geometry (LG) valve train components.

SYMPTOM(s)

N/A

SPECIAL TOOL(s) / SOFTWARE

As Needed

SERVICE PARTS INFORMATION

See Tables Below

REPAIR STEP(s)

Step	Action	Decision
#1	Does the Cylinder Head have 2 valves per cylinder?	Yes. Proceed to Step 2
		No. Proceed to Step 5

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Step	Action	Decision
#2	Which valve train components will be replaced?	Push Rods or Lifters - Refer to Table 1 under Step 3
		Rocker Arm(s)/Rocker Shaft - Go to Step 4

Step	Action	Decision
#3	SG Push Tubes cannot be used with LG Tappets - Retrofit parts are available. LG valve train components cannot be inter-mixed with SG valve train components. All Tappets, Tappet Guides and Push Rods for all 6 cylinders must be replaced. Refer to Table 1 below. 7099646C1 Push Rods have a larger ball end for the Tappets & standard ball ends for the Rocker Arms. Correct configuration of the Push Rod is critical during assembly. Refer to the appropriate Service Manual link below for Cylinder Head removal & installation.	See Service Parts Information Table 1 below
		Repair Complete

TABLE 1

SG to LG Hybrid Conversion - 2 Valve Cylinder Head When Original SG Rocker Arm Assembly Is Reused.

1850160C3	LG Tappet	12
7099646C1	Hybrid Push Rod	12
1813892C1	Roller Tappet Guide	12
Per ESN	Cylinder Head Gskt set W/Head Bolts	1

CAUTION:

7099646C1 PUSH RODS ARE SIZED DIFFERENT AT THE TAPPET END COMPARED TO THE ROCKER ARM END. IMPROPER INSTALLATION COULD CAUSE DAMAGE TO THE ENGINE.

CAUTION:

IF ANY SG VALVE TRAIN COMPONENTS ARE NO LONGER AVAILABLE - ALL COMPONENTS IN **TABLE 2** WILL NEED TO BE REPLACED.

Step	Action	Decision
#4	SG Rocker Arms cannot be replaced without converting the complete Rocker Arm assembly to LG Refer to the appropriate Service Manual link below for Cylinder Head removal & installation.	See Service Parts Information Table 2 below
		Repair Complete

TABLE 2**SG to LG Complete Conversion - 2 Valve Cylinder Head**

2517659C91	Kit, Shaft Assy	1
Per ESN	Cylinder Head Gskt set W/Head Bolts	1

Step	Action	Decision
#5	2004 MY ESN Range 2000001 - 2072879 4 valve cylinder head. Refer to the appropriate Service Manual link below for Cylinder Head removal & installation.	See Service Parts Information Table 3 below
		Repair Complete

TABLE 3

SG to LG Complete Conversion - 4 Valve Cylinder Head - ESN Range 2000001 - 2072879

1847942C92	Kit, Shaft Assy	1
1839971C3	Valve Bridge	12
1835658C1	Shaft Support Bracket	6
1850160C3	LG Tappet	12
1854756C1	Push Rod LG - Dry	12
Per ESN	Cylinder Head Gskt set W/Head Bolts	1

WARRANTY INFORMATION

N/A

OTHER RESOURCES

[DT-466E and 530E Diesel Engine Service \(1995 through 1999\)](#)

[International® DT 466E, DT 466, 530, 530E, and HT 530 Diesel Engines](#)

[DT 466, DT 570 and HT 570 Engine Service Manual - 2004 Emissions with EGR](#)

[I6 Camshaft and Lifter Service Overview](#)

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