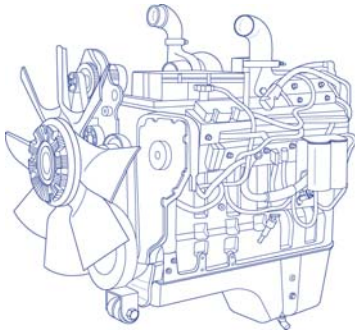


NEW HOLLAND REPAIR MANUAL

8.3 & 9.0L 6 Cylinder, 24 Valve CNH Engine with High Pressure Common Rail Fuel System

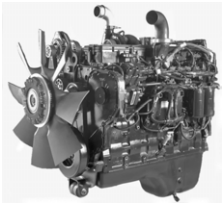
NEW HOLLAND

SERVICE

87515684 2/06

NEW HOLLAND

REPAIR MANUAL



TG215 , TG245 , TG275 , TG305 , TJ280 , TJ330

Contents

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INTRODUCTION

Contents

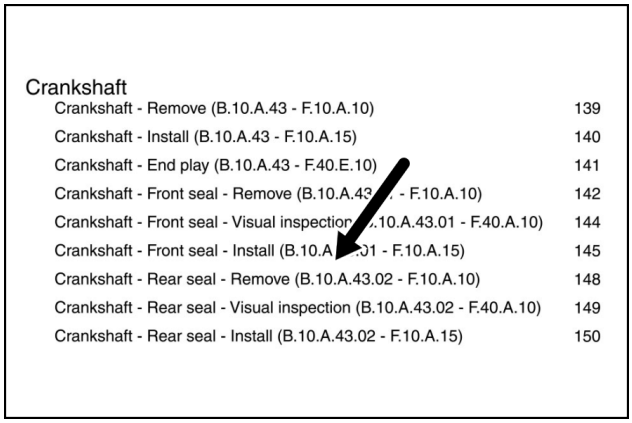
INTRODUCTION

Foreword – How to use this manual (- A.10.A.40)

The information in this manual is organized using the Integrated Coding Environment (ICE). ICE is a shorthand system for pointing to Sections, Chapters and sub-Chapters in the manual without using the words. ICE also identifies the type of information at that location.

A search for information on an engine component will likely begin at the Table of Contents (TOC) or the Index: for example, a search for information on the rear seal of the crankshaft. When you locate “crankshaft - rear seal” in the TOC with the indicated page number, this Foreword explains:

- how to proceed to the correct location in the manual based on the ICE code,
- how to identify the type of information you may expect at that location.



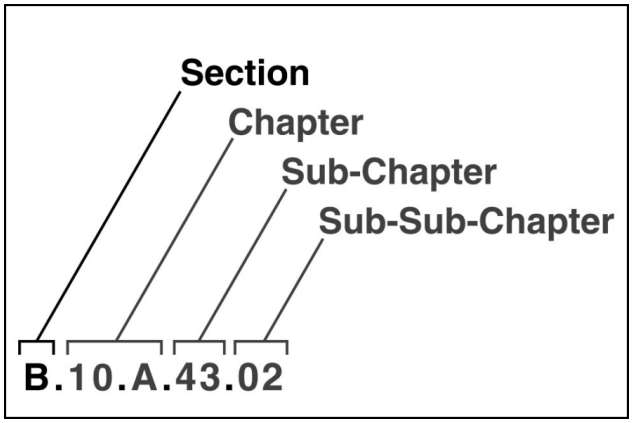
RCPH05CDC414ABA 1

NOTE: *Due to differences in languages and models, the page number indicated in the illustration may not applicable to your manual. Refer to the table of contents in your repair manual.*

Location

The first half of an ICE code describes the location of the information.

(The ICE code has two parts separated by a hyphen. The first part describes the location. The periods break up the ICE code into its parts.)



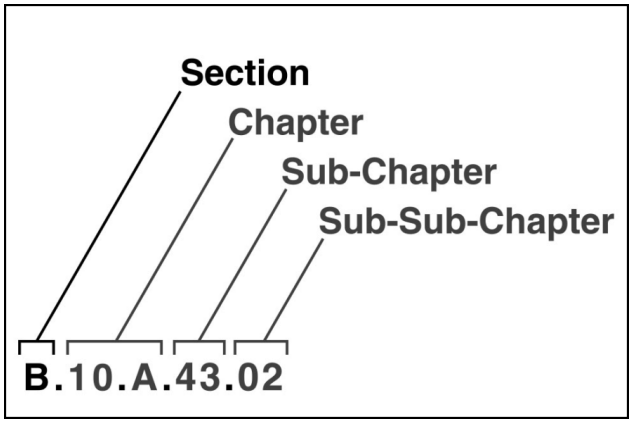
RCPH05CDC476ABA 2

The first letter identifies the section.

Sections are arranged alphabetically in a manual. This engine repair manual is contained within one section – the Power Production Section – signified by the letter “B,” and all ICE references in the manual begin with the letter “B.”

Do NOT confuse a section with a bound book. Because of its size, a section may require more than one bound book, sometimes a book for each chapter within a section.

This repair manual, although contained within one section, requires more than one bound book. The book cover always lists both the section(s) and chapter(s) contained inside the bound book.



RCPH05CDC476ABA 3

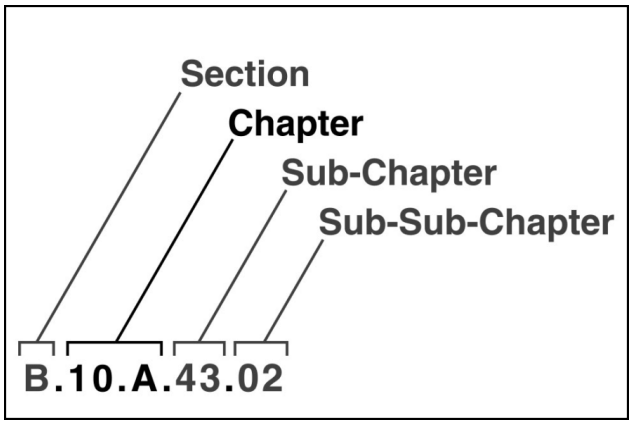
The second number and letter identify the chapter within the section.

Chapters are arranged numerically within the section.

The chapters used in this manual are listed below:

ENGINE (B.10.A)
FUEL AND INJECTION SYSTEM (B.20.A)
AIR INTAKE SYSTEM (B.30.A)
EXHAUST SYSTEM (B.40.A)
ENGINE COOLANT SYSTEM (B.50.A)
LUBRICATION SYSTEM (B.60.A)
STARTING SYSTEM (B.70.A)

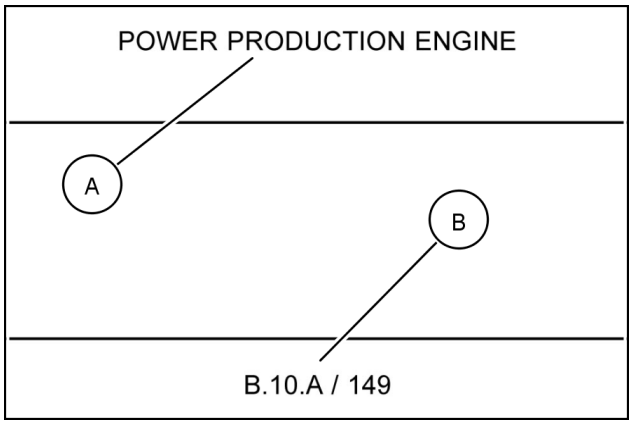
The coding indicates that the rear seal is located in Chapter 10.A (Engine), of Section B (Power Production).



RCPH05CDC483ABA 4

The section and chapter titles **(A)** are displayed at the top of each page in the body of the manual.

The ICE code for the section, chapter and page number (for example, B.10.A/149) **(B)** are displayed at the bottom of each page in the body of the manual.

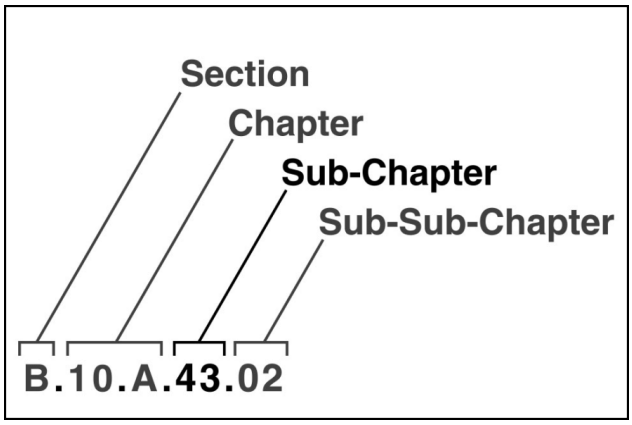


RCPH05CDC407ABA 5

The last two positions in the location code always form the title of the document – in this example, crankshaft - rear seal.

The third number identifies a sub-chapter within the chapter.

The number “43” represents the crankshaft and indicates that rear seal information is located under crankshaft in Chapter 10.A of Section B.



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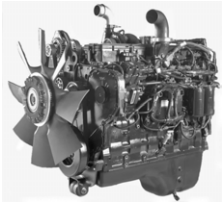
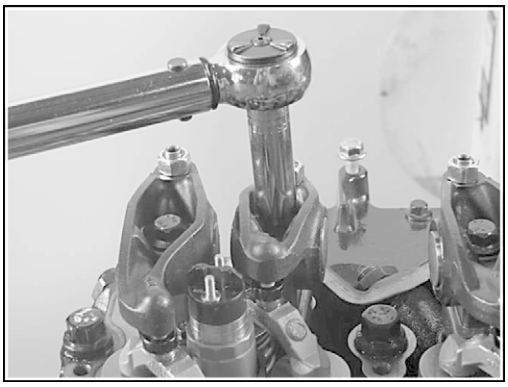
REPAIR MANUAL

POWER PRODUCTION



TG215 , TG245 , TG275 , TG305 , TJ280 , TJ330

Valve drive Rocker assembly - Torque (B.10.A.40.43 - D.20.A.10)

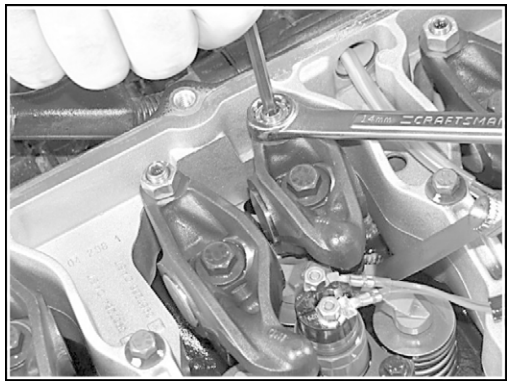
Component	N·m	Identification	lb-ft
Rocker arm cap screws	**65 Nm**	 RCPH05CDC855AAA 1	**48 lb ft**

Valve drive Rocker assembly - Service limits (B.10.A.40.43 - D.20.A.20)

Lash check limits

Reference: **Valve drive Rocker assembly - Check (B.10.A.40.43 - F.40.A.11)**

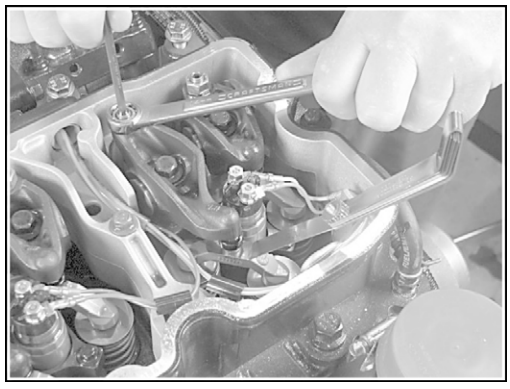
Intake		
Minimum	**0.152 mm**	**0.006 in**
Maximum	**0.559 mm**	**0.022 in**
Exhaust		
Minimum	**0.381 mm**	**0.015 in**
Maximum	**0.813 mm**	**0.032 in**



RCPH05CDC227AAA 1

Lash reset

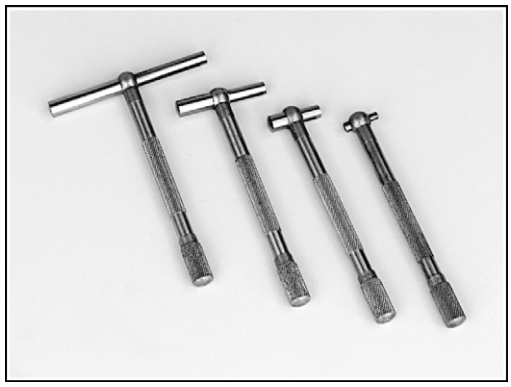
Intake	**0.305 mm**	**0.012 in**
Exhaust	**0.559 mm**	**0.022 in**


RCPH05CDC223AAA 2

Valve drive Rocker assembly - Special tools (B.10.A.40.43 - D.20.A.40)

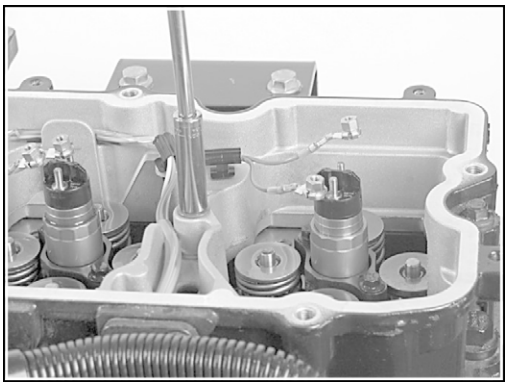
Telescoping gauge set – OEM1015

The gauges in this set permit accurate measurement of small bores, e.g., the rocker arm bore diameter. The gauge is inserted into the piece and tightened; measurement is read with an appropriate micrometer. Range is **8 - 54 mm (0.3125 - 2.125 in)**.



RCPH05CDC273AAA 1

Rocker assembly Housing - Torque (B.10.A.40.43.05 - D.20.A.10)

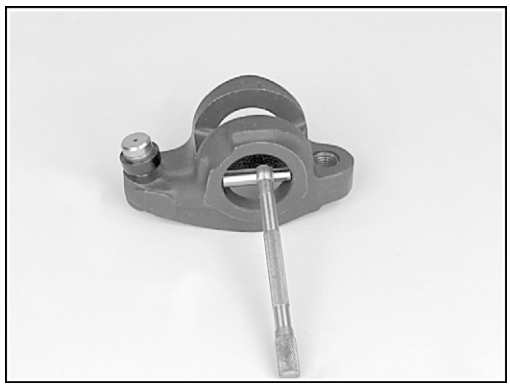
Component	N·m	Identification	lb-ft
Housing cap screws	**24 Nm**	 RCPH05CDC286AAA 1	**18 lb ft**

Rocker assembly Rocker arm - Service limits (B.10.A.40.43.10 - D.20.A.20)

Rocker arm shaft bore

Reference: **Valve drive Rocker assembly - Measure (B.10.A.40.43 - F.40.A.16)**

Minimum	**25.095 mm**	**0.988 in**



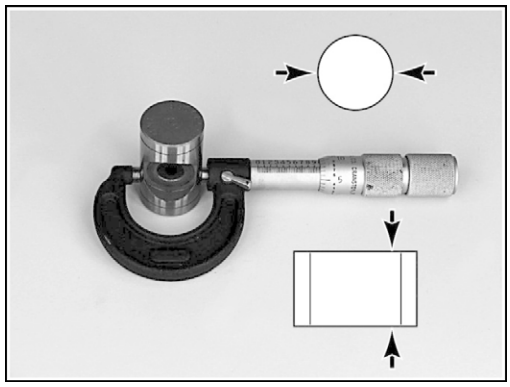
RCPH05CDC275AAA 1

Rocker assembly Shaft - Service limits (B.10.A.40.43.20 - D.20.A.20)

Rocker arm shaft

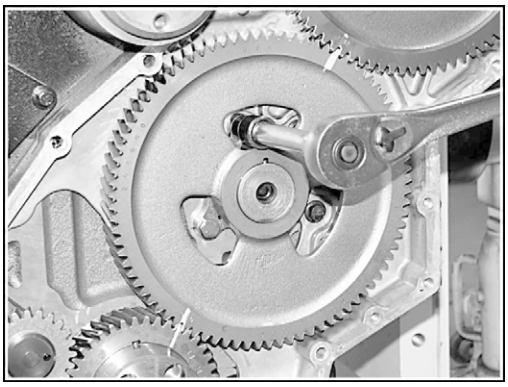
Reference: **Valve drive Rocker assembly - Measure (B.10.A.40.43 - F.40.A.16)**

Minimum	**25.044 mm**	**0.986 in**



RCPH05CDC274AAB 1

Valve drive Camshaft - Torque (B.10.A.40.44 - D.20.A.10)

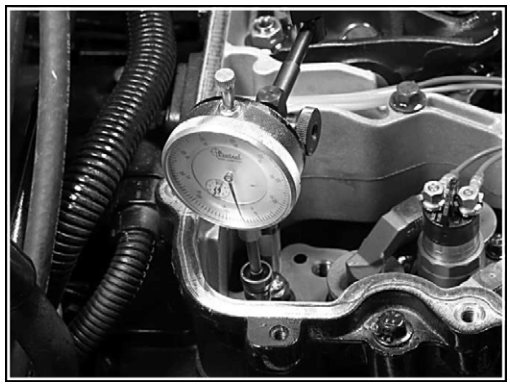
Component	N·m	Identification	lb-ft
Thrust plate cap screws	**24 Nm**	 RCPH05CDC250AAA 1	**18 lb ft**

Valve drive Camshaft - Service limits (B.10.A.40.44 - D.20.A.20)

Camshaft intake or exhaust lobe lift

Reference: **Valve drive Camshaft - Preliminary test (B.10.A.40.44 - F.40.A.20)**

Exhaust lobe lift (approximate)		
Maximum	**7.747 mm**	**0.305 in**
Intake lobe lift (approximate)		
Maximum	**7.747 mm**	**0.305 in**

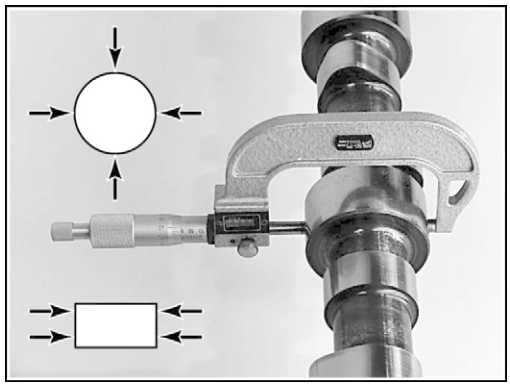


RCPH05CDC366ABA 1

Camshaft bearing journal

Reference: **Valve drive Camshaft - Measure (B.10.A.40.44 - F.40.A.16)**

Minimum	**59.962 mm**	**2.3607 in**
Maximum	**60.013 mm**	**2.3627 in**

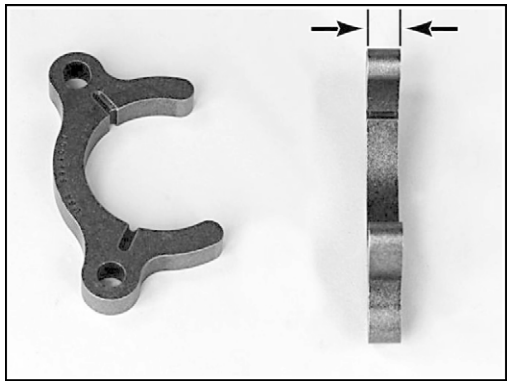


RCPH05CDC327AAB 2

Camshaft thrust plate

Reference: **Valve drive Camshaft - Measure (B.10.A.40.44 - F.40.A.16)**

Minimum	**9.40 mm**	**0.370 in**
Maximum	**9.60 mm**	**0.378 in**

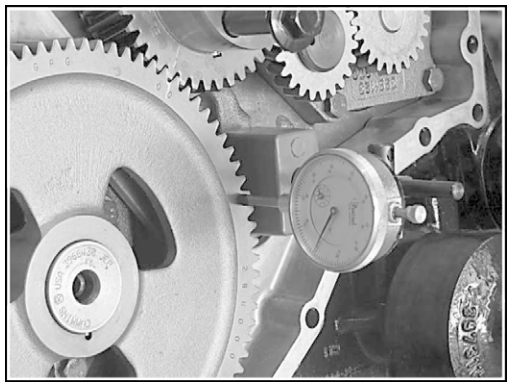


RCPH05CDC341AAB 3

Camshaft end play

Reference: **Valve drive Camshaft - End play (B.10.A.40.44 - F.40.E.10)**

Minimum	**0.12 mm**	**0.005 in**
Maximum	**0.50 mm**	**0.020 in**

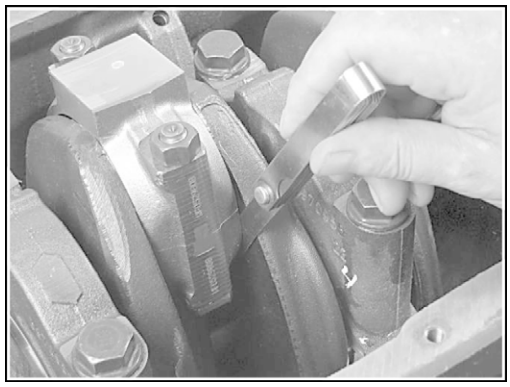


RCPH05CDC776AAA 4

Connecting rod to crankshaft side clearance

Reference: **Connecting rod and piston - Install (B.10.A.47 - F.10.A.15)**

Minimum	**0.10 mm**	**0.004 in**
Maximum	**0.30 mm**	**0.0012 in**



RCPH05CDC789AAA 5

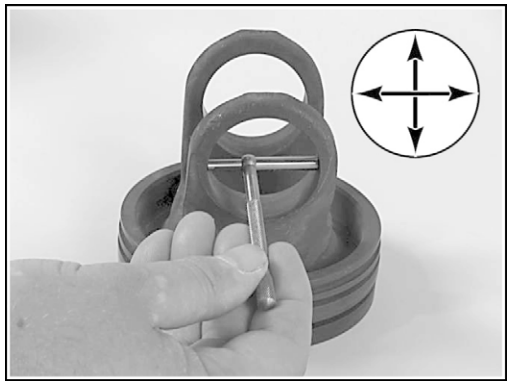
Connecting rod and piston Piston - Service limits (B.10.A.47.15 - D.20.A.20)

Piston, articulated – Piston pin bore inside diameter

Reference: **Connecting rod and piston Piston - Measure (B.10.A.47.15 - F.40.E.01)**

Crown

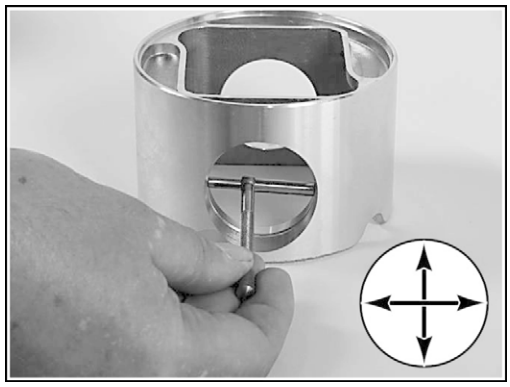
Minimum	**45.016 mm**	**1.7723 in**
Maximum	**45.036 mm**	**1.7731 in**



RCPH05CDC551AAB 1

Skirt

Minimum	**45.012 mm**	**1.7721 in**
Maximum	**45.026 mm**	**1.7727 in**



RCPH05CDC550AAB 2

Piston, single piece – Piston pin bore diameter

Reference: **Connecting rod and piston Piston - Measure (B.10.A.47.15 - F.40.A.16)**

Minimum	**45.006 mm**	**1.7719 in**
Maximum	**45.012 mm**	**1.7721 in**

RCPH05CDC549AAA 3

Piston Ring - Service limits (B.10.A.47.15.05 - D.20.A.20)

Piston ring gap

Reference: **Piston Ring - Measure (B.10.A.47.15.05 - F.40.A.16)**

Top ring		
Minimum	**0.30 mm**	**0.014 in**
Maximum	**0.65 mm**	**0.025 in**
Intermediate ring		
Minimum	**0.85 mm**	**0.033 in**
Maximum	**1.15 mm**	**0.045 in**
Oil control ring		
Minimum	**0.30 mm**	**0.012 in**
Maximum	**0.73 mm**	**0.028 in**

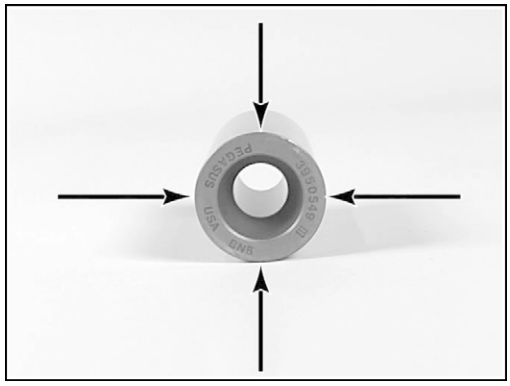
RCPH05CDC532AAA 1

Piston Pin - Service limits (B.10.A.47.15.10 - D.20.A.20)

Piston pin diameter

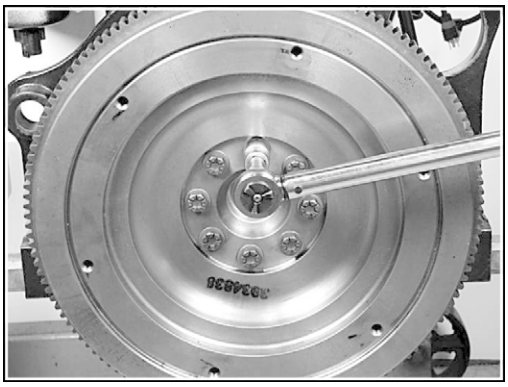
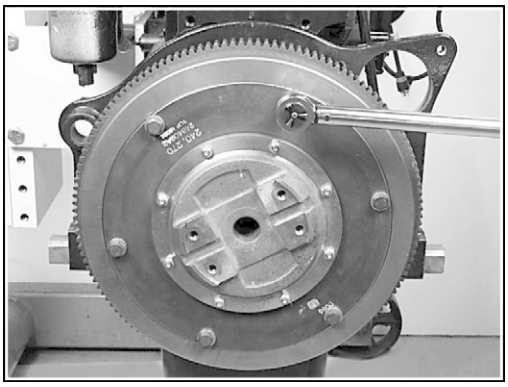
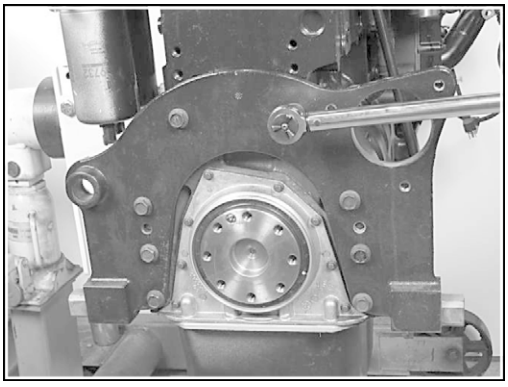
Reference: **Piston Pin - Measure (B.10.A.47.15.10 - F.40.A.16)**

Minimum	**44.997 mm**	**1.7715 in**
Maximum	**45.003 mm**	**1.7718 in**



RCPH05CDC439AAB 1

Flywheel - Torque (B.10.A.50 - D.20.A.10)

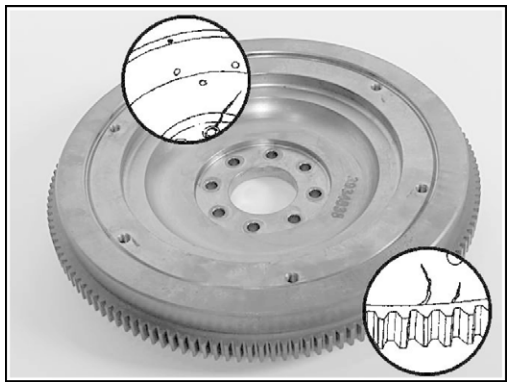
Component	N·m	Identification	lb-ft
Flywheel mounting cap screws	**137 Nm**	 RCPH05CDC139ABA 1	**101 lb ft**
Shock plate cap screws	**115 Nm**	 RCPH05CDC144ABA 2	**85 lb ft**
Rear engine support plate cap screws	**115 Nm**	 RCPH05CDC133ABA 3	**85 lb ft**

Flywheel - Service limits (B.10.A.50 - D.20.A.20)

Flywheel

Reference: **Flywheel - Visual inspection (B.10.A.50 - F.40.A.10)**

- Replace the flywheel if the flywheel is cracked.
- Replace the ring gear if the teeth are cracked or damaged.



RCPH05CDC130ABB 1

Flywheel bore runout

Reference: **Flywheel - Measure (B.10.A.50 - F.40.A.16)**

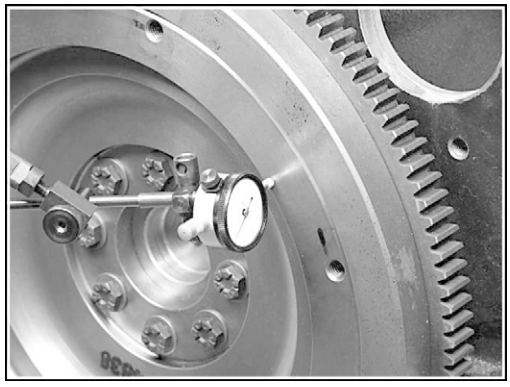
Maximum	**0.127 mm**	**0.005 in**

RCPH05CDC143ABA 2

Flywheel face runout

Reference: **Flywheel - Measure (B.10.A.50 - F.40.A.16)**

Maximum	**0.127 mm**	**0.005 in**



RCPH05CDC141ABA 3

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to download the complete manual.

Thank you so much for reading

Flywheel - Special tools (B.10.A.50 - D.20.A.40)

Dial indicator set – OEM1026

This tool is used to inspect bore and face runout on the flywheel. The dial is both continuous and balanced with a revolution counter and may be rotated for setting at any point. The set includes a powerful magnetic base.

RCPH05CDC702AAA 1

Magnetic base – OEM1030

The magnetic base, with the flexible arm to position a dial indicator for testing, is used to inspect bore and face runout on the flywheel.

RCPH05CDC701AAA 2

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