

Group:	Service Manual Update
Bulletin No.:	SB-15-004
Issue Date:	1/9/2015

SERVICE INFORMATION BULLETIN

Subject: CORRECTION OF WORKSHOP MANUAL FOR HINO 300 SERIES (ADDITION OF ENGINE SST)

The following is to inform you of the above caption. This service data should be attached to the relevant pages of the workshop manuals for maintenance and to use for servicing.

RELEVANT MODEL:

HINO 300 Series with engine (W04D)

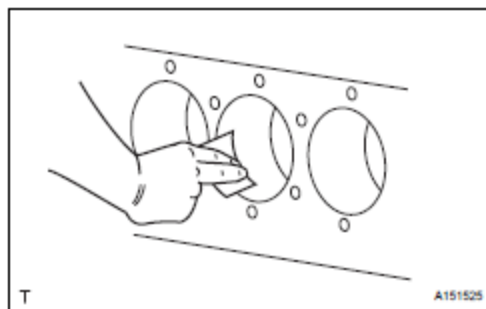
CONTENTS:

Addition of engine special service tool (SST).

RELEVANT MANUALS:

LANGUAGE	MANUAL No.	CHAPTER	PAGE No.
ENGLISH	S5-LW04E04A	ENGINE MECHANICAL	From EM-16 to EM-17, EM40
ENGLISH	S5-LW04E04B	ENGINE MECHANICAL	
SPANISH	S5-LW04SO4A	ENGINE MECHANICAL	From EM-20 to EM-21, EM-47
FRENCH	S5-LW04F04A	ENGINE MECHANICAL	From EM-18 to EM-19, EM-42

SERVICE INFORMATION BULLETIN



DISASSEMBLY

1. REMOVE PISTON AND CONNECTING ROD

- (a) Remove the connecting rod bearing cap mounting bolts and pull out the pistons along with the connecting rods from the cylinder block upper side.

HINT:

- Before pulling out the pistons, remove carbon deposits from the upper end inside the cylinder liner with a scraper or an emery paper (recommended: No. 150), working in a circular direction.
- When pulling out the pistons, be careful that the insides of the cylinder liners are not damaged by the connecting rod big ends.
- When pulling out the pistons, be careful not to drop the connecting rod bearings from the connecting rod big ends, which may cause deformation or damage.
- Arrange the removed parts in order of the cylinder numbers. Be careful not to change the combination of the connecting rod and cap.
- 2 pistons can be removed at a time (Nos. 1 and 4, Nos. 2 and 3).

2. REMOVE CONNECTING ROD BEARING

- (a) Remove the connecting rod bearings.

HINT:

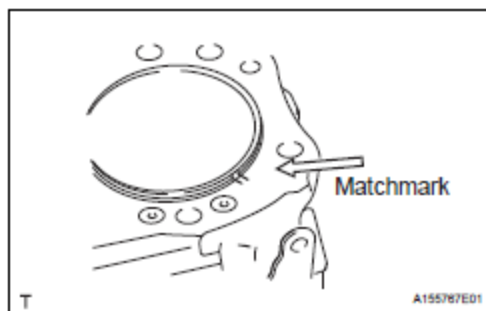
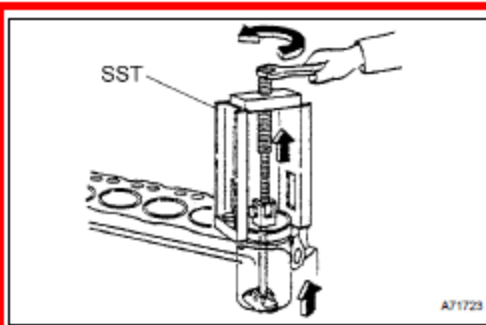
Arrange the removed parts in the correct order.

3. REMOVE CYLINDER LINER

- (a) Before removing the cylinder liner, put matchmarks on the cylinder liner and cylinder block.

HINT:

Before removing the piston, put matchmarks on the cylinder liner and cylinder is bent by "run-in". When reusing the cylinder liner, misalignment with the cylinder block may concentrate stress on the thin part of the cylinder liner and it may break.



- (b) Remove the cylinder liner can be pulled out by hand.

If this is difficult, use the SST.

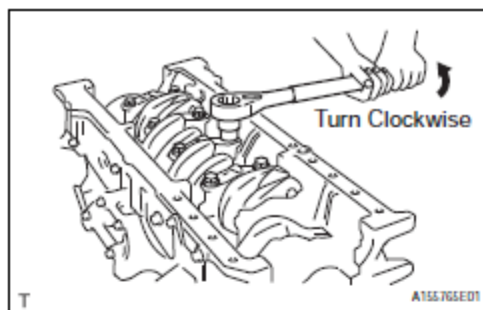
SST S0942-01460

HINT:

Arrange the removed parts in the order of the cylinder numbers.

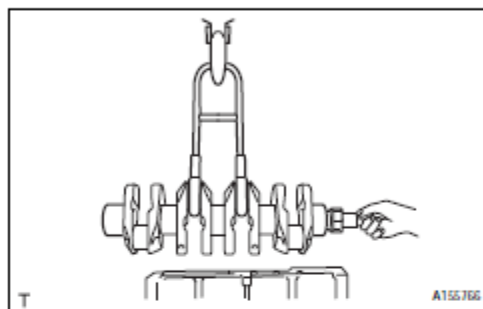
ADD

SERVICE INFORMATION BULLETIN

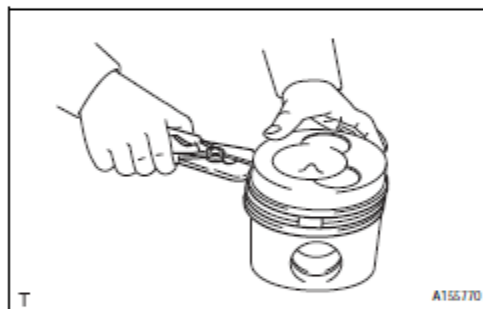


4. REMOVE CRANKSHAFT BEARING SET

- (a) Remove the bearing cap mounting bolts.



- (b) Remove the crankshaft.
(c) Remove the 5 upper main bearings from the cylinder block.
HINT:
Arrange the bearings in the correct order.
(d) Remove the 5 lower main bearings from the 5 main bearing caps.
HINT:
Arrange the bearings in the correct order.
(e) Remove the crankshaft thrust washers.

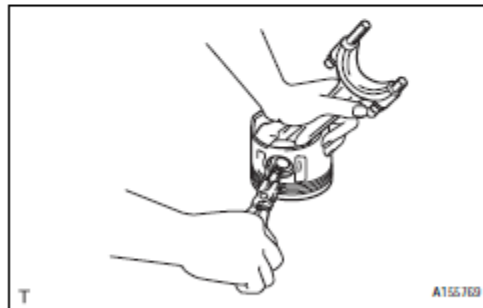


5. REMOVE PISTON RING SET

CHANGE

- (a) Using the SST, remove the piston ring.
SST S0944-21180

- HINT:
• Handle the piston rings carefully because they are made of a special casting which is easily broken.
• Arrange the piston rings in the order of the cylinder numbers.



6. REMOVE CONNECTING ROD SUB-ASSEMBLY

- (a) Using snap ring pliers, remove the retainer rings from both ends of the piston pin.

CAUTION:

Removing the retainer rings may cause the retainer rings to fly up. Be sure to wear protective goggles.

- (b) Using a hammer, apply the reinforcing plate to the piston pin and punch out the piston pin.

HINT:

If it is difficult to punch out the piston pin, first immerse the piston and piston pin in hot water (80 to 90°C (176 to 194°F)) for approximately 5 minutes to facilitate removal.

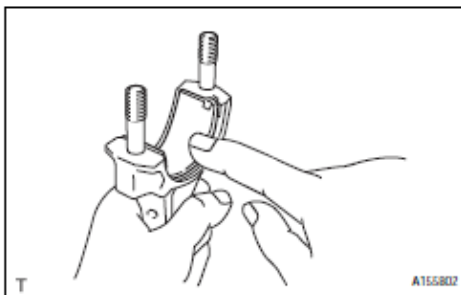
CAUTION:

Never touch the piston with your bare hands when it is hot.

7. REMOVE CONNECTING ROD SMALL END BUSH (See page EM-30)

8. REMOVE CAMSHAFT BEARING (See page EM-32)

SERVICE INFORMATION BULLETIN



13. INSTALL CONNECTING ROD BEARING

- (a) Install the connecting rod bearing to the connecting rod and bearing cap.

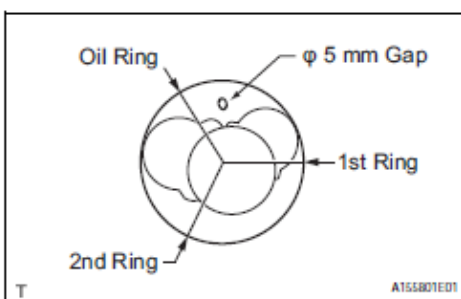
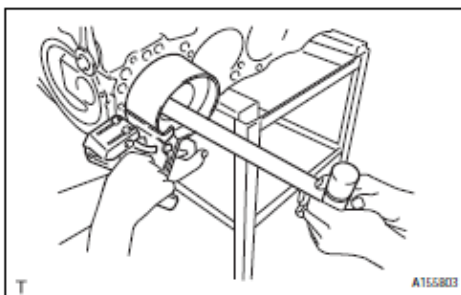
NOTICE:

- When reusing the bearing, make sure to reassemble the removed bearing as it was originally installed.
- Install the bearing with the oil hole on the connecting rod side and install the bearing without the oil hole on the cap side.
- Match the bearing protrusion with the notch of the connecting rod or cap.

- (b) Position the piston rings so that the ring ends are as shown in the illustration.

HINT:

Position the matching points of the piston ring at an even distance. Be careful not to position at the piston boss.



14. INSTALL PISTON AND CONNECTING ROD

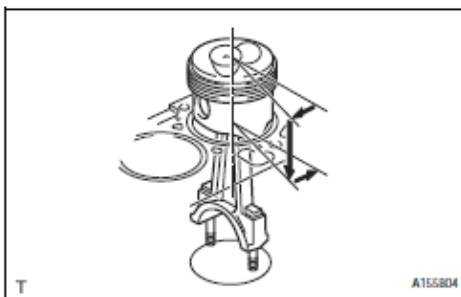
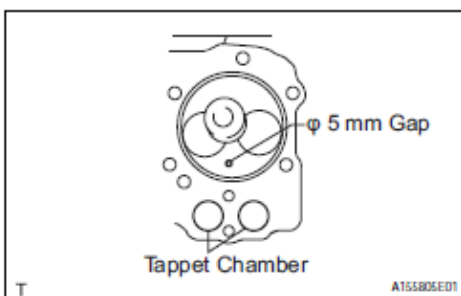
CHANGE

- (a) Using the SST and a hammer handle, insert the piston through the connecting rod assembly into the cylinder block.

SST S0944-11260

HINT:

- Before the installation, apply engine oil to the piston pin, piston ring, cylinder liner and connecting rod bearing.
- Recheck the matching point of each piston ring.



- Make sure that the ϕ 5 mm (0.20 in.) gap on the piston is at the tappet chamber side.
- Do not damage the inside of the liner.