FUSO

Recall Information Bulletin
No: C1002210 **Issued:** 8/9/2007
Re: 4M50 Idler Gear Shaft Flange
Group: 11 **Models:** FE, FG, FH

SUBJECT:
Safety Recall C1002210 - 4M50 Idler Gear Shaft Flange

MODELS:
FE640, FE83D, FE84D, FE85D, FG84D, FH210

VEHICLES INVOLVED:
Certain 2001 through 2006 model year FE640, FE83D, FE84D, FE85D, FG84D and FH210 vehicles produced from June 29, 2000 through November 5, 2005.

A list of vehicles your Dealership has sold that require this Recall can be found on the Dealer's "Open Campaigns" list supplied by MFTA via Fusonet. Some individual vehicles described above may not need the Recall. Always check the "VIN Inquiry" tab under "Service" or "Warranty" on Fusonet to verify that the VIN requires this Safety Recall.

Important note: It is a violation of Federal law for a dealer to deliver a new or used motor vehicle covered by this Recall Information Bulletin, under a sale or lease, until the Safety Recall has been completed.

OWNER NOTIFICATION:
Owners of affected vehicles will be notified by mail. A copy of the customer notification letter can be found on Fusonet.

CONDITION:
Mitsubishi Fuso Truck of America, Inc. has decided that a defect which relates to motor vehicle safety exists in the engine idler gear bushing. On affected vehicles, the cylinder head idler gear bushing may have been improperly machined, causing excessive stress on the cylinder head idler gear shaft. Continued operation in this condition could cause the idler gear shaft flange to break and generate abnormal engine noise and/or engine oil leaks. In the worst case, the engine could stall and would not restart.

MODIFICATION:
On vehicles that have accrued 15,000 miles (24,000 km) or less, the idler gear assembly will be replaced. On vehicles that have accrued more than 15,000 miles (24,000 km), the inside diameter of the cylinder head idler gear bushing will be measured. If the bushing is out of specification, the idler gear assembly will be replaced. The repair parts are available through normal parts channels in kit form. The contents of each kit (**LT-57-6, LT-57-7, LT-57-P & LT-57-Q**) are described below.

RECALL CLAIM SUBMITTAL:
Claim parts and labor via the DIN System using the Recall Claim Entry screen. Enter all requested information, including the Recall Number. Choose a Recall Number from the Recall Reimbursement table below that corresponds with the type of repair performed. The system will apply the labor allowance and parts pricing adjustment shown.

Recall Reimbursement					
Campaign Number	**Model Year(s)**	**Allowances**		**Labor Description**	**Part Numbers**
C1002210	'01-'04 standard & crew cab	Labor Time	1.5 hours	Idler gear bushing measurement	LT-57-6
		Parts Pricing	US$4.76		
C1002220	'01-'04 standard & crew cab	Labor Time	5.0 hours	Idler gear bushing measurement and idler gear assembly replacement	LT-57-6
		Parts Pricing	US$241.17		LT-57-P
C1002230	'05-'06 standard cab	Labor Time	3.0 hours	Idler gear bushing measurement	LT-57-7
		Parts Pricing	US$21.05		
C1002240	'05-'06 standard cab	Labor Time	7.0 hours	Idler gear bushing measurement and idler gear assembly replacement	LT-57-7
		Parts Pricing	US$289.56		LT-57-Q
C1002250	'05-'06 crew cab	Labor Time	10.0 hours	Idler gear bushing measurement	LT-57-7
		Parts Pricing	US$21.05		
C1002260	'05-'06 crew cab	Labor Time	15.0 hours	Idler gear bushing measurement and idler gear assembly replacement	LT-57-7
		Parts Pricing	US$289.56		LT-57-Q

RECALL PARTS RETENTION:

All parts that have been removed and replaced must be properly identified and retained, as outlined in the Warranty and Service Policy Manual, section 3.8. The Product Support Manager will inspect each part and authorize its scrapping.

LT-57-6 Parts Kit Contents (Model Years 2001 – 2004)		
Item #	**Part Name**	**Qty.**
1	Water outlet case gasket	1
2	O-ring (22.1)	1
LT-57-7 Parts Kit Contents (Model Years 2005 – 2006)		
Item #	**Part Name**	**Qty.**
3	Water outlet case gasket	1
4	Breather gasket	1
5	Rubber bushing	3
6	Gasket (12)	2
7	PCV valve o-ring	1
LT-57-P arts Kit Contents (Model Years 2001 – 2004)		
Item #	**Part Name**	**Qty.**
8	Rocker cover gasket	1
9	Fuel leak-off gasket	4
10	Gasket (10)	6
11	Gasket (12)	4
12	Circular Packing	4
13	Cylinder head idler gear assembly	1
14	Cylinder head idler gear shaft	1
15	Flange bolt (10x67)	1
LT-57-Q Parts Kit Contents (Model Years 2005 – 2006)		
Item #	**Part Name**	**Qty.**
16	Cam frame gasket	8
17	Cam frame o-ring	4
18	Rocker cover gasket A	1
19	Rocker cover gasket B	4
20	Rocker cover o-ring (15)	3
21	Circular packing	4
22	Fuel injection pipe nozzle tip gasket	4
23	Fuel injection pipe o-ring	4
24	Fuel injection pipe fuel return hose assembly	1
25	Cylinder head idler gear assembly	1
26	Cylinder head idler gear shaft	1
27	Flange bolt (10x67)	1
28	Silencer gasket	2

REPAIR PROCEDURE:

1. Park the vehicle on a flat, level surface, turn off the engine, apply the parking brake and chock the wheels. **CAUTION! Do not remove the wheel chocks until all modification work has been completed.**

2. If the truck has accrued 15,000 miles (24,000 km) or less, replace the cylinder head idler gear assembly using the repair kits that correspond to its model year. Refer to Recall Information Bulletin **R3150510** and the proper Service Manual section for detailed idler gear installation procedures:

   '01-'04 M/Y FE/FG TWSE0101-A 2002 FE/FG Service Manual, Section 11A 4M50 (TWSE0101-11A)
   '03-'04 M/Y FH210 TWME0202-A 2002-2004 FH Service Manual, Section 11A 4M50 (TWME0202-11A)
   '05-'06 M/Y FE/FG TWSE0405-A 2005 FE/FG Service Manual, Section 11 (TWSE0405-11)

3. If the truck has accrued more than 15,000 miles, gain access to the cylinder head idler gear bushing, referring to the Recall Information Bulletin and Service Manuals reference above.

   Refer to page **10** of this Bulletin for instructions on the proper use of the LT-57-W rocker shaft fixing tool (provided to each Dealer and Parts & Service Center at no charge), and pages **11** through **15** for additional repair tips.

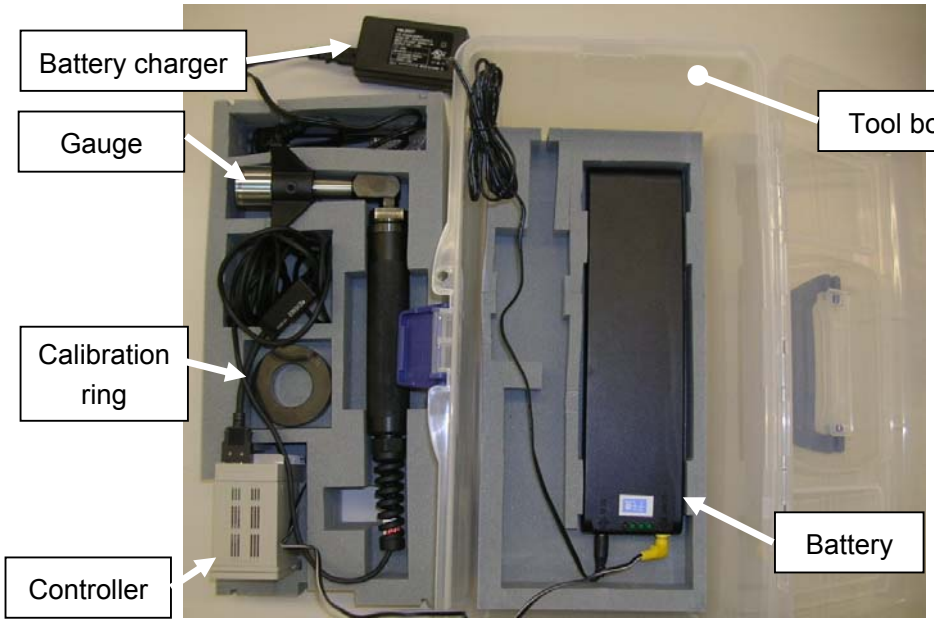
REPAIR PROCEDURE (cont'd):

4. Measure the inside diameter of the cylinder head idler gear bushing using the MH063589 measurement device loaned to each Dealer at no charge by MFTA in accordance with the attached measurement procedures.

   - If the inside diameter of the bushing measures **1.262" (32.043 mm) or less,** the bushing ***is within specification and the cylinder head idler gear assembly will not be replaced.*** Reassemble the engine with the existing idler gear in place.

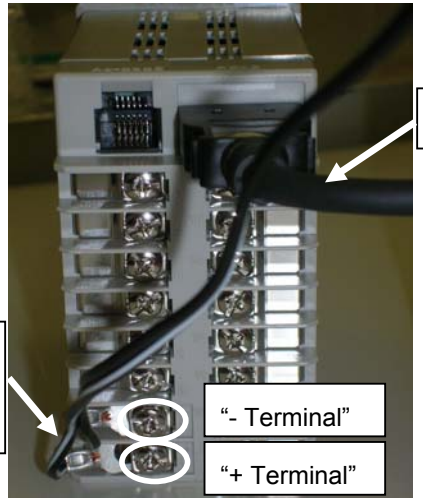
   - If the inside diameter of the bushing is **greater than 1.262" (32.043 mm),** the bushing ***is out of specification and the cylinder head idler gear must be replaced.*** Replace the cylinder head idler gear assembly using the repair kits that correspond to the truck's model year. Refer to Recall Information Bulletin **R3150410**, the proper Service Manual sections referenced above, and pages **10** through **15** of this Bulletin for detailed idler gear installation procedures.

Inspection tool operation procedure



Inspection tools in supplied tool box

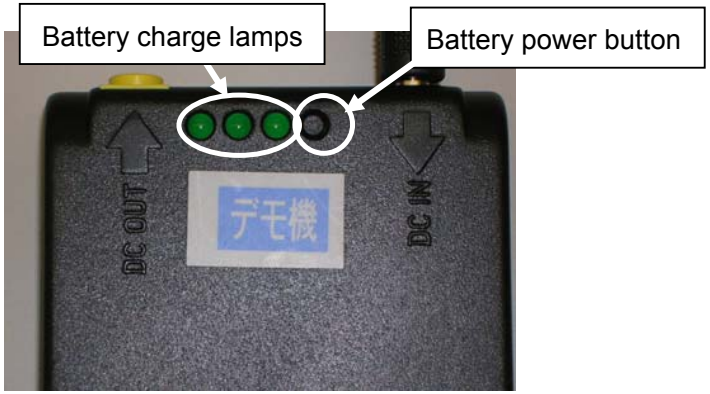
Connect the power cable (black w/white stripe) from the battery to "+ terminal".



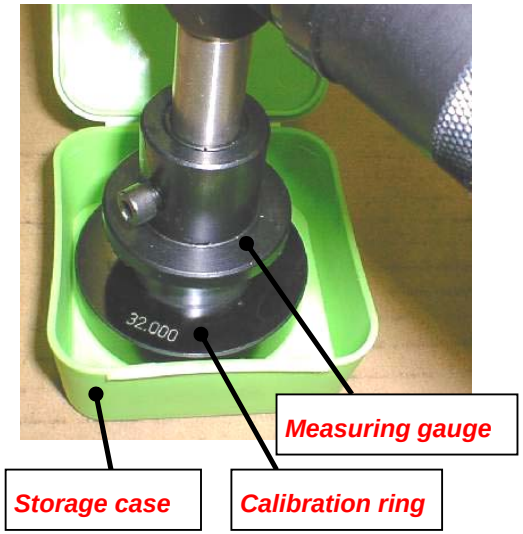
Controller Terminal Connection

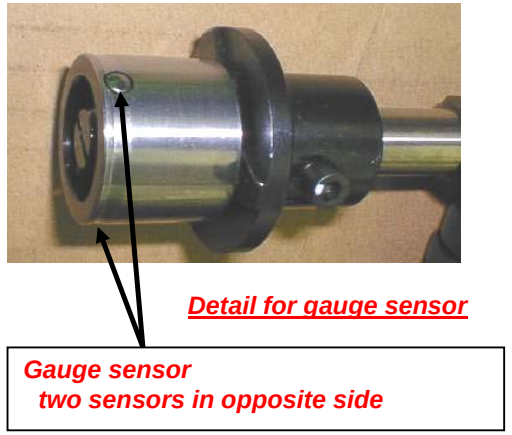
2. Check the battery's remaining power and charge battery by plugging the cord into a socket if the power is insufficient.
CAUTION: The battery is not fully charged until all three lamps are illuminated.

Battery power can be checked by pushing the battery power button.



- ***Before performing calibration, place the storage case on a flat surface and place the calibration ring in the storage case. Then fully insert the measuring gauge downward into the calibration ring, the gauge sensor must contact the calibration ring securely to ensure proper calibration.***





Unit Calibration

CAUTION: This inspection tool is a precision instrument and requires extreme care while handling.

1. Switch “ON” to turn on the controller.
2. Remove the protective cap for the gauge.
   While inserting the gauge into the calibration ring, push the ZERO button to set zero.
   Zero setting requires pushing the ZERO button one time.

   Confirm that 0.000 is displayed on the measurement screen of the controller after pushing the ZERO button.

   Do not push any other buttons other than ZERO button!
   Pushing other buttons changes the display mode.
   If the display mode is changed by mistake simply turn off the power, then, re-power to reset the display mode.

   After resetting the display mode, another ZERO calibration setting is required.

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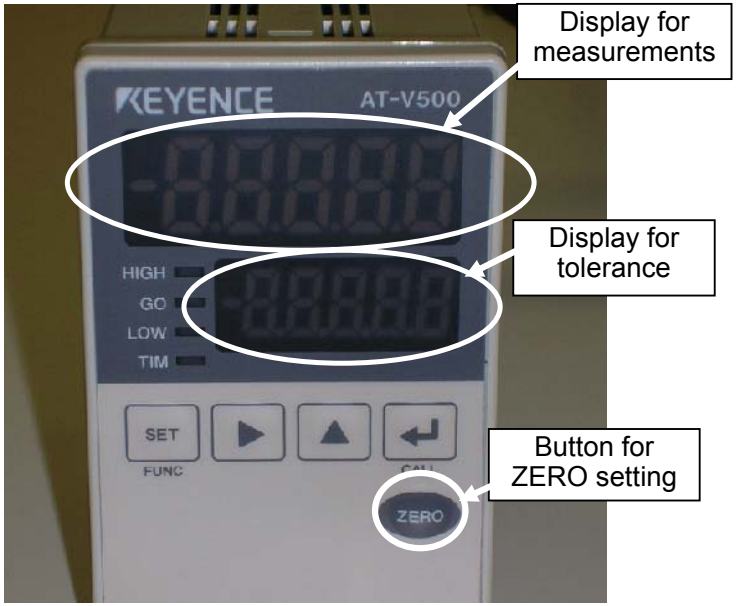
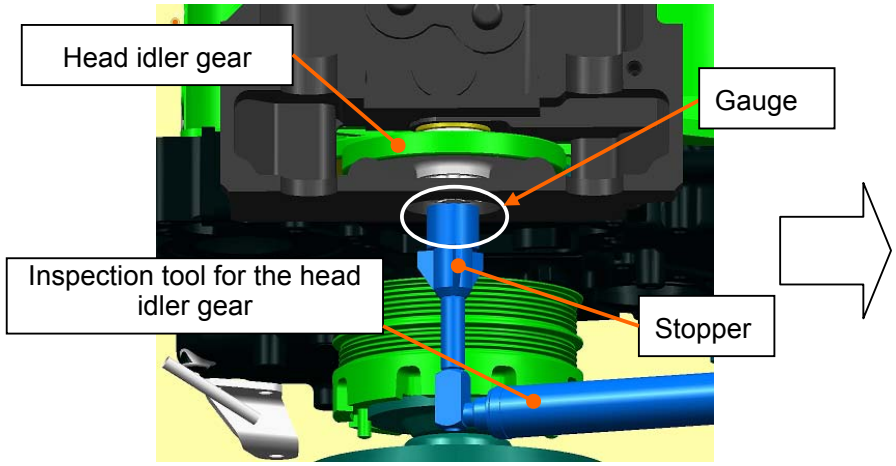
Display for battery charge



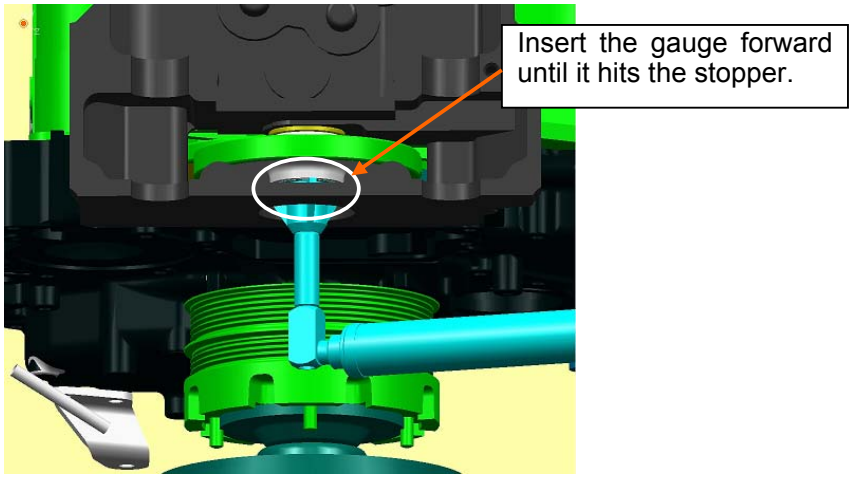
Controller Display

Measurement

1. Place the inspection tool between the cylinder head and the fan shroud, then insert the gauge into the head idler gear bushing.
CAUTION: Be careful not to damage the head idler gear bushing. Insert the gauge carefully.



Pre-insertion
(View from above the engine)



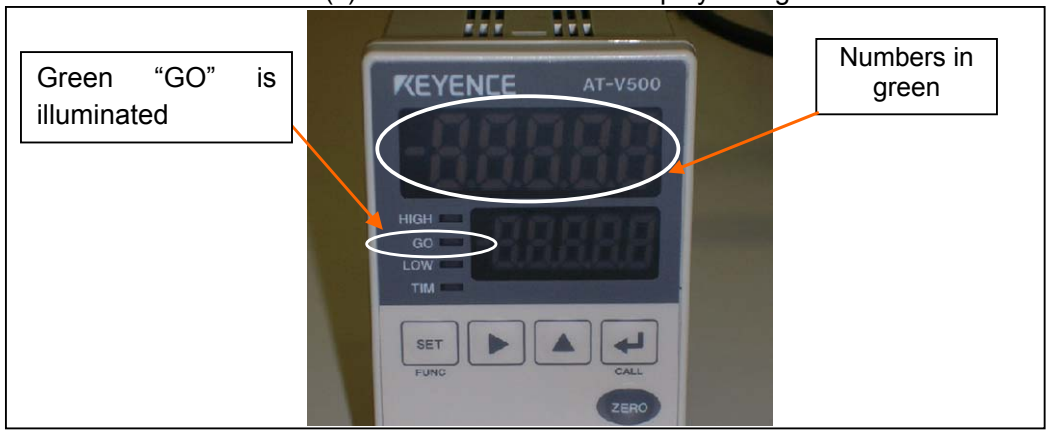
Post-insertion
(View from above the engine)

2. After inserting the inspection tool, hold it for one minute, and then check and record the measurement on the display.
(In order to stabilize I/D changes caused by humidity within the head idler gear bushing, the inspection tool must be held for one minute after the insertion.)
CAUTION: Insert the gauge until it hits the stopper.
The number on the measurement display indicates only the amount beyond the head idler gear bushing I/D (φ32.000). For example: A displayed value of “0.01” indicates an I/D of φ32.01 mm.
A new cylinder head idler gear bushing has and I/D of φ32 $^{+0.025}_{0}$

3. Measurements

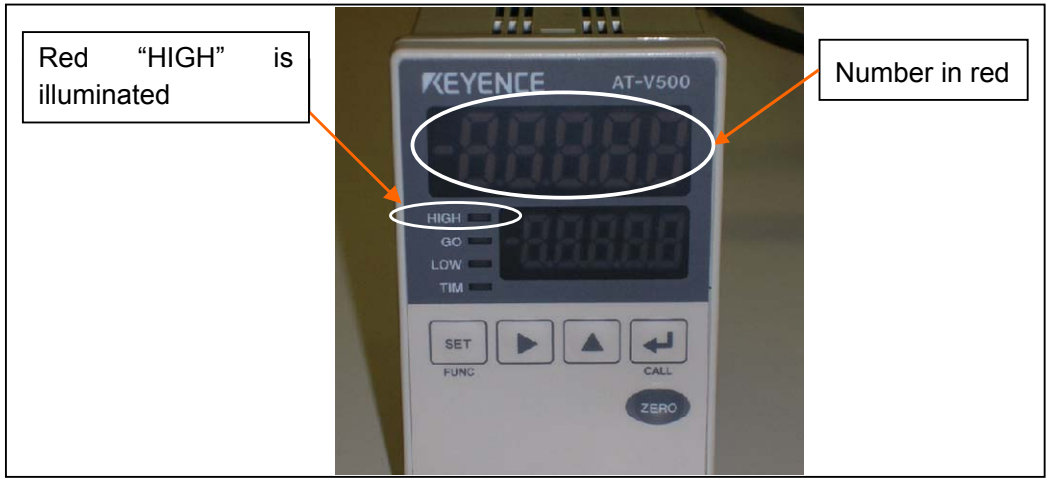
a. I/D of the head idler gear bushing is φ32.043mm/1.262” or below. Number(s) on the measurement display is in green and “GO” is illuminated.

➔ OK



b. I/D of the head idler gear bushing is over φ32.044mm/1.262”. Number(s) on the measurement display is in red and “HIGH” is illuminated.

➔ NG :Replace the cylinder head idler gear, shaft and shaft bolt.



4. NOTE

- After removing the protective cap from the gauge, be sure not to damage or wet the gauge with water or other liquids.

-After performing the measurement, put the protective cap back on the gauge and keep it in the storage case.

- Always apply a thin film of engine oil to the calibration ring to prevent rust and store it in the supplied case.

- Detailed instruction manuals are enclosed and provide more detail.

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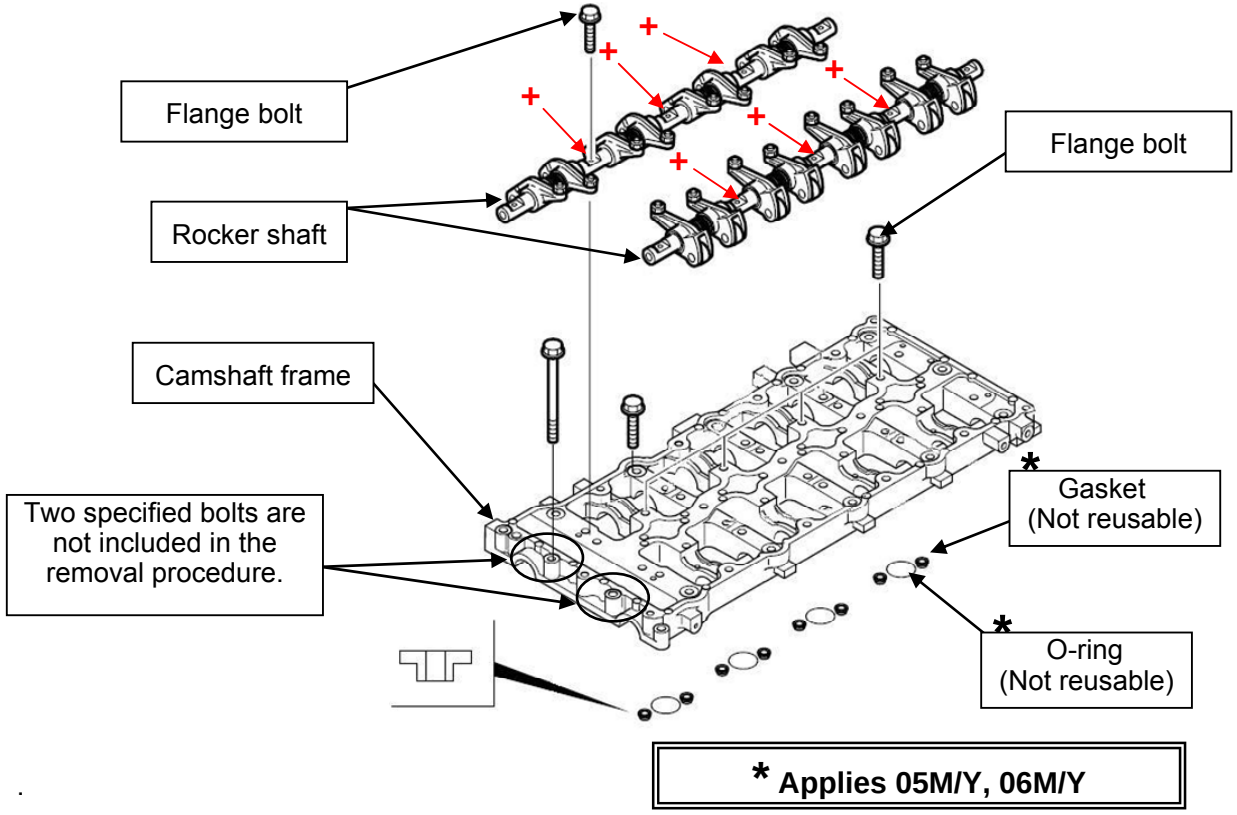
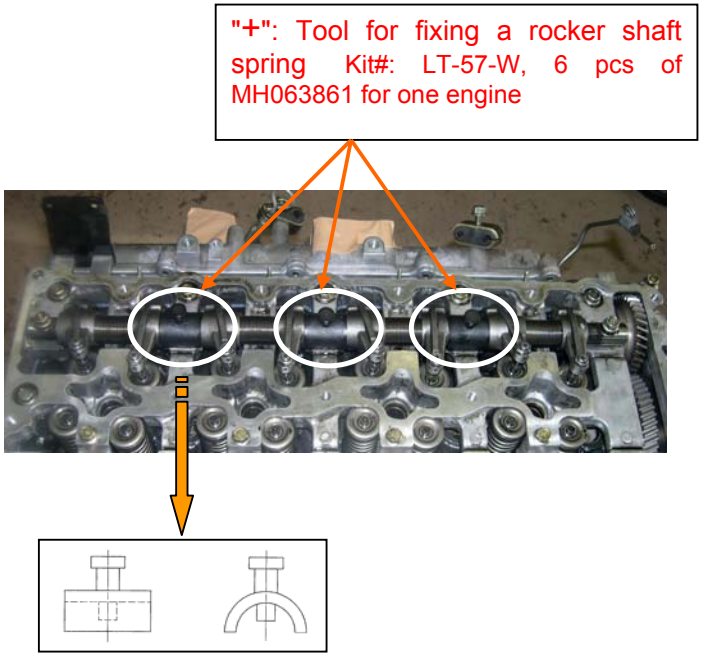
LT-57-W Rocker shaft spring fixing tool procedure

Before removing the rocker shafts, install kit# LT-57-W (Tool for fixing a rocker shaft spring) shown in the "+" locations shown in below figure.

Follow Service Manual for proper sequence of bolt removal.

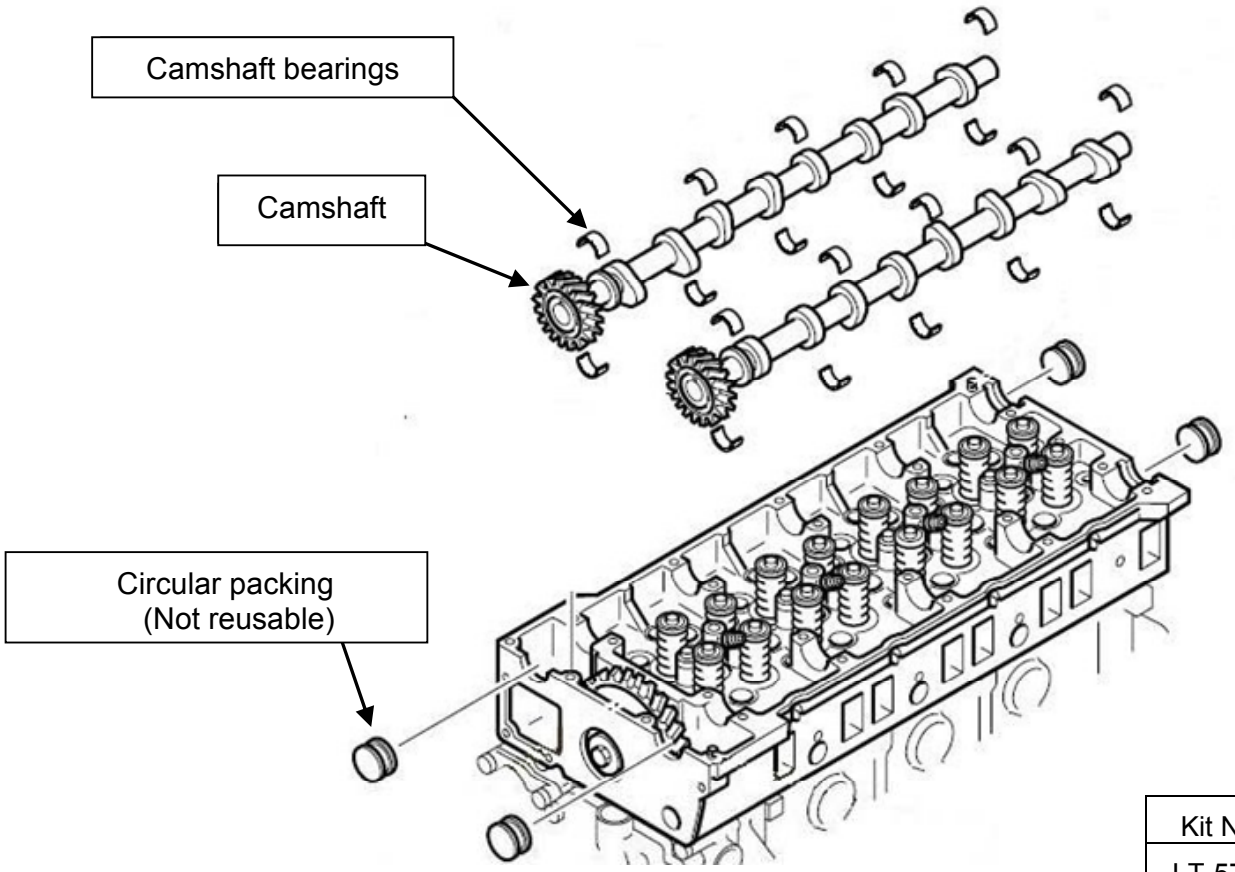
NOTE: The four O-rings and eight gaskets on the rear side of camshaft frame (or, cylinder head side) are not reusable so that they must be replaced. (05 M/Y, 06M/Y)





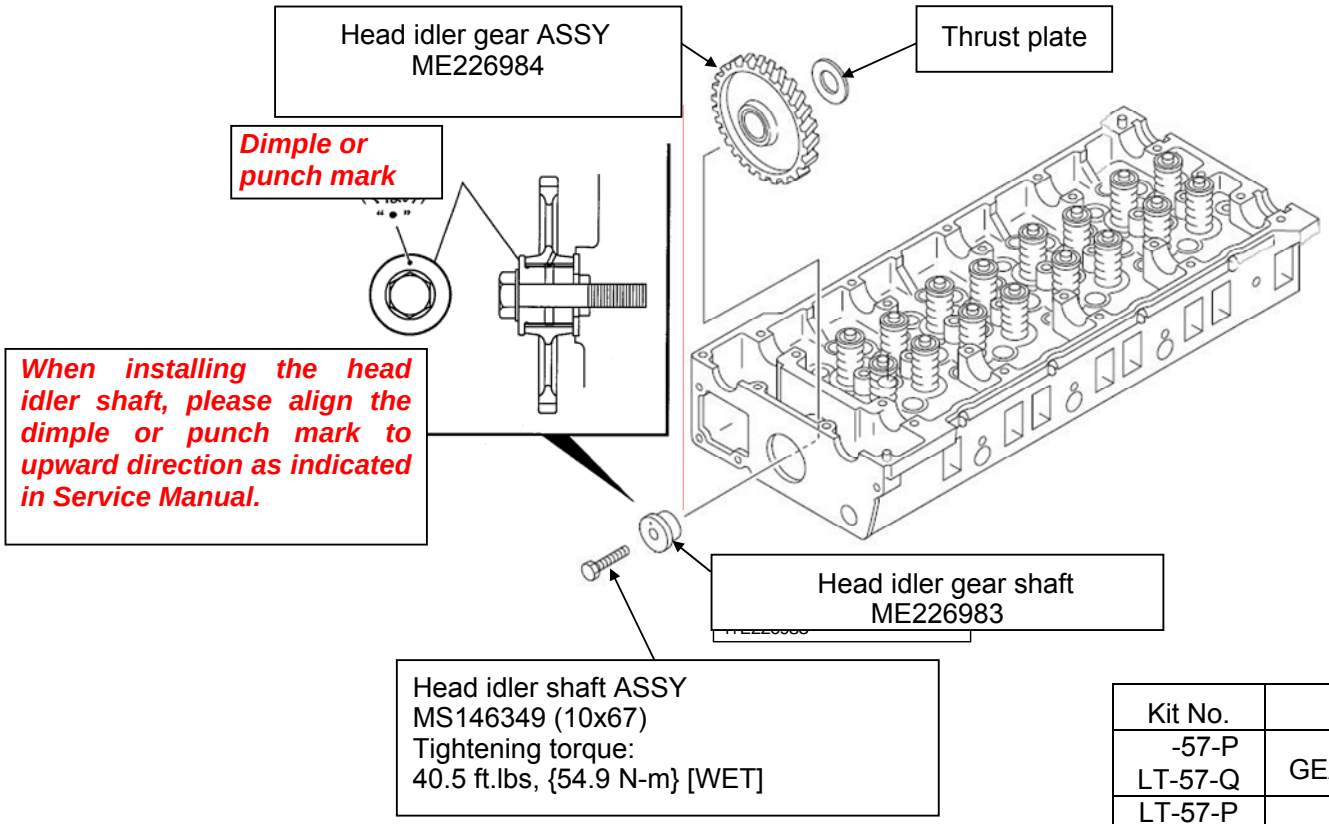
Kit No.	Part Name	Part No.	Q'ty
LT-57-Q	GASKET	ME223237	8
LT-57-Q	O-RING	ME223236	4
LT-57-W	***Tool***	***MH063861***	***6***

NOTE: Circular packing is not reusable and must be replaced. Do not mix of camshaft bearings or change from their original positions.



Kit No.	Part Name	Part No.	Q'ty
LT-57-P LT-57-Q	PACKING,CIRCULAR	ME220934	4

NOTE: When removing the head idler gear, be sure not to drop the thrust plate by pressing it against the cylinder head.



Kit No.	Pat Name	Part No.	Q'ty
-57-P LT-57-Q	GEAR ASSY,IDLER HEAD	ME226984	1
LT-57-P LT-57-Q	SHAFT,IDLER HEAD	ME226983	1
LT-57-P LT-57-Q	BOLT,FLANGE(10X67)	MS146349	1

CAUTION: Follow Service Manual for the procedure and tightening torque specifications.

Description of work	Tightening torque for the head idler shaft bolt
Inspection only (re-use of existing gear)	29.6 ft.lbs, {40.2 N m } [WET]
Replace gears	40.5 ft.lbs, {54.9N m } [WET]

-Apply engine oil to the bolt seating surface and screw.

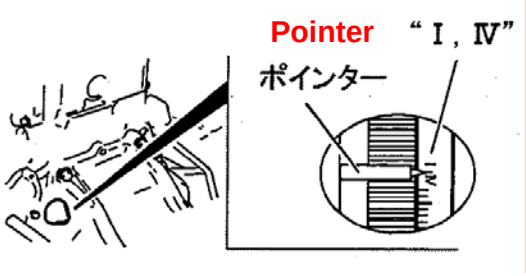
CAUTION: Apply sealant from Kit No.LT-57-Y to area between the camshaft frame and the cylinder head. (See Service Manual for details.)

<Caution Before removing head idler shaft, crank engine (turn the fan pulley) in normal rotation direction until #1&#4 piston position to TDC by referring below figure. Then detect position by rotating the fly wheel gradually in reverse direction on which head idler shaft is easy to be removed.

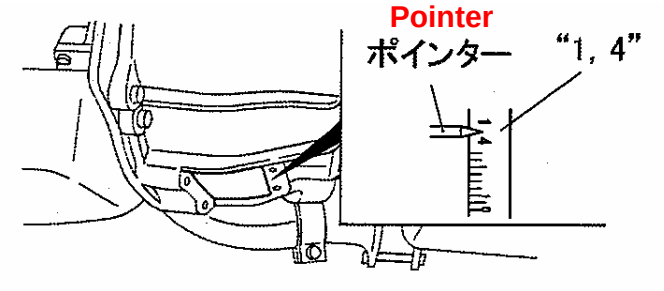
Caution 1: Don't rotate the crankshaft after setting at TDC until all installation work is completed.

Caution 2: Don't remove or install the head idler shaft without positioning properly on TDC. Removal or installation of the head idler shaft without positioning properly may cause severe engine damage.

- Care must be taken as the thrust plate may drop off during removal work of head idler shaft.



M/T



A/T

TDC position pointer

Measuring before removal and reassembling head idler shaft

Be sure to measure below distance before removal and reassembling of the head idler shaft

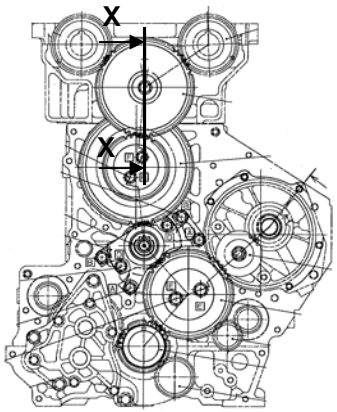
Caution 1: When removing the head idler shaft, measure the distance before loosening the head idler shaft bolt. The head idler shaft may come off due to the affection of valve spring remaining force and this may change the distance.

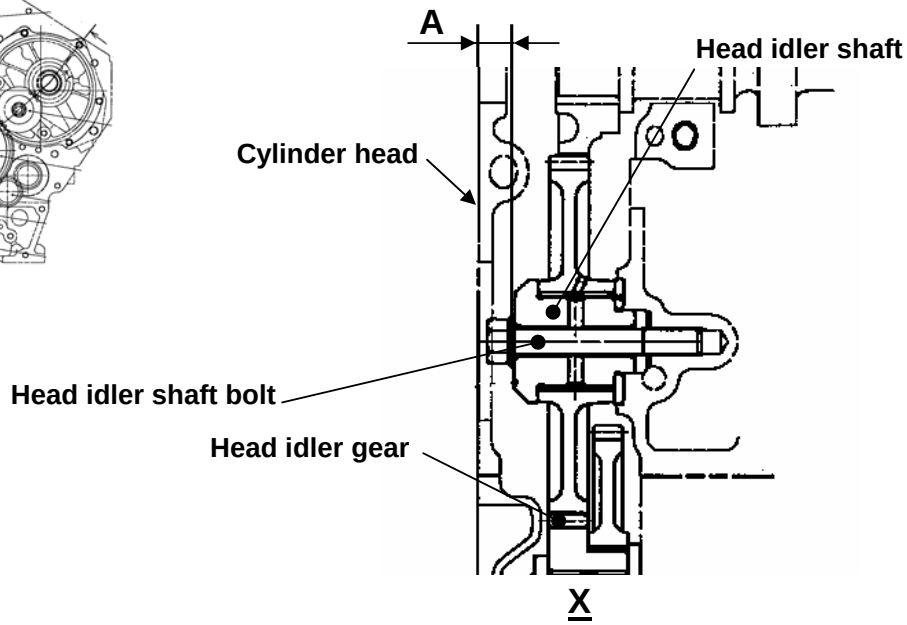
Caution 2: When reassembling the head idler shaft, measure the distance before tightening the head idler shaft bolt.

Distance "A" : From end surface of a cylinder head to end surface of a head idler shaft

1) Existing head idler shaft (Thin flange): 0.71" (18 mm)

2) New head idler shaft: 0.51" (13mm)





END

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SUPPLEMENT

Recall Information Bulletin
No: C1002210 **Issued:** 8/9/2007
Re: 4M50 Idler Gear Shaft Flange
Group: 11 **Models:** FE, FG, FH

SUBJECT:
Safety Recall C1002210 - 4M50 Idler Gear Shaft Flange - ***Supplemental Information***

MODELS:
FE640, FE83D, FE84D, FE85D, FG84D, FH210

SUPPLEMENTAL INFORMATION:
An Idler Gear Retention Tool (LT-57-T) will be provided to each Dealer in order to prevent the thrust plate from dropping out during idler shaft removal and reinstallation. Please review the tool installation instructions below to properly affix the retention tool.