

# INSTRUCTION

\* Be sure to read and understand the contents before installing the product and use it properly.

\* Please keep this instruction manual in a safe place so that you can take it out and read it at any time.

\* When transferring this product or the vehicle on which this product is installed to a third party, be sure to also hand over this instruction manual.

**DAYTONA**

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## Finger-Follower DOHC 4Valve CylinderHead UPGRADE KIT

MODEL

DT125 Engine  
(Narrow Pitch)

ITEM NUMBER

**80458**

Thank you for purchasing **DAYTONA**'s product. Please read this instruction manual carefully before using this product.

Be sure to check the contents of the product before installation.

If you notice any problem, please contact the dealer where you purchased the product.

### ■ Features ■

Completely revised DOHC 4-valve cylinder head

Adopted finger follower rocker arms

Port geometry designed to increase intake volume and velocity

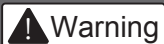
Ceramic coated all aluminum cylinder

Forged 2-ring piston, crankshaft with long connecting-rod

DLC coated piston pin

### ■ Please read the following before the installation. ■

We are not responsible for any accident or damage caused by using the product without following the precautions in the instruction manual.



**Warning** Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.



- If you are technically unskilled or inexperienced, leave the work to an experienced store or mechanic. Improper installation due to inexperienced skills or lack of knowledge may result in damage to parts or accidents.

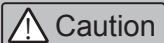


- Do not run the engine for long periods of time in poorly ventilated areas. Doing so may result in carbon monoxide poisoning.

- Gasoline is extremely flammable, so keep the work area away from fire.
- Evaporated gasoline may cause an explosion, so work in a well-ventilated area.



- If anything unusual happens while test riding, stop at a safe place and check engine parts.



**Caution** Indicates a potentially hazardous situation which, if not avoided, could result in personal injury or property damage.



- The installing of this kit requires jacking up your motorcycle and must be done under trained hands. Inadequate safety precautions and professional help could result in serious injury.
- When working on the engine and muffler, be sure to do so when they are cool. Doing so while the engine and muffler are hot may result in burns.
- Prepare appropriate tools and work equipment to avoid damage or injury to parts.
- Be sure to install an oil cooler and oil temperature gauge to control the oil temperature. (Keep under 110degree C) Continuous running at high temperatures may damage the engine.
- Check and maintain the oil pump and the strainer (wire mesh) at the bottom of the pump.
- After having installed the new parts, place check each part installed and tighten all nuts, bolts and screws after having ridden 100km. Regular inspection of parts should be done on every 500km.
- For spark plugs, use the specified product, NGK ER8EH.
- Be sure to use high-octane gasoline. Regular gasoline cannot be used because of the high compression engine.



- Avoid sudden engine braking by downshifting. In the worst case, this will result in damage to the crankshaft and engine.



- This product has some related parts required. In this manual, the installation procedure is omitted for related parts products. Please note.

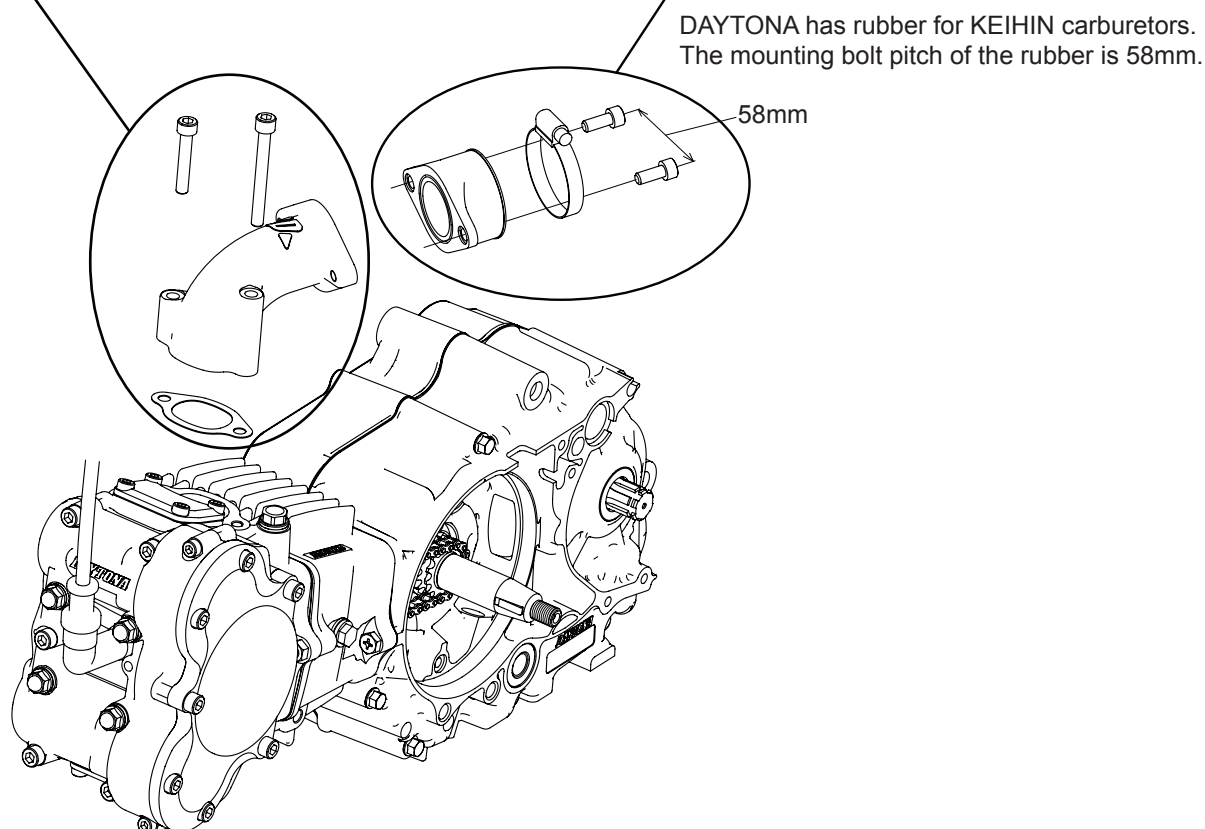
- The price and specifications of this product are subject to change without notice. The same applies to the products introduced in the text. Please note.

## Manifolds and carburetors

Intake manifold is sold separately.

NAME	ITEM CODE
MANIFOLD SET	75067

NAME	ITEM CODE
RUBBER SET for KEIHIN PE28/PWK28	46758
RUBBER SET for KEIHIN PE24/CR-mini22	28939



## Engine oil temperature

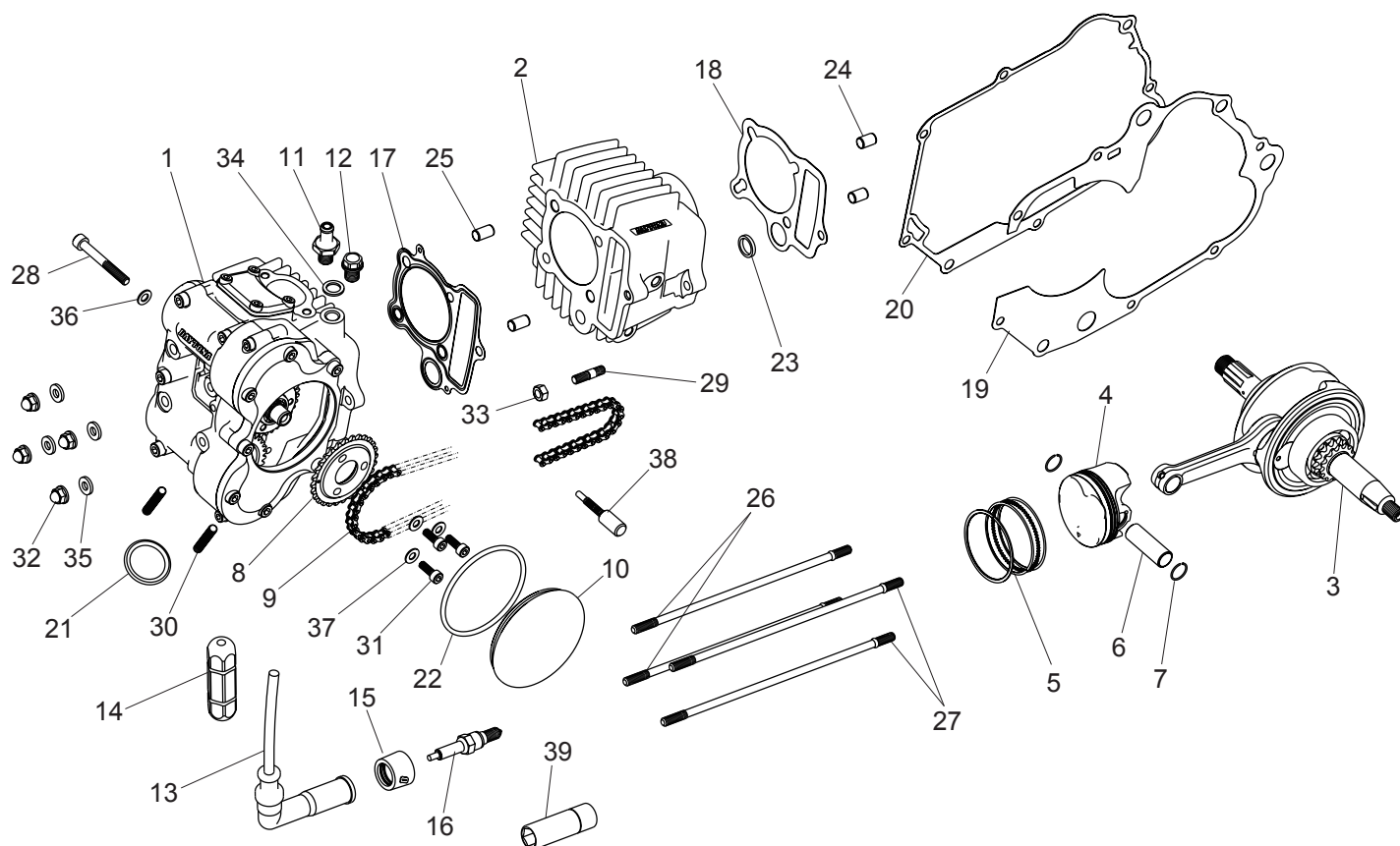
Be sure to install an oil cooler and oil temperature gauge to control the oil temperature.(Keep under 110degree C) Continuous running at high temperatures may damage the engine.

We recommend installing an oil cooler to keep the oil at the proper temperature and prevent oil film loss at high temperatures.

## Upper limit of engine revolutions

Over-revving the engine (high RPM) will adversely affect the engine and in the worst case scenario, the engine will break down. The engine speed should not exceed 13,000 rpm.

## COMPONENTS



#	NAME	QTY	#	NAME	QTY
1	CYLINDER HEAD ASSY.	1	21	GASKET, EXHAUST	1
2	CYLINDER	1	22	O-RING, G65	1
3	CRANKSHAFT ASSY.	1	23	GASKET, 12MM RUBBER	1
4	PISTON	1	24	PIN, DOWEL 8X12	2
5	RING SET, PISTON	1	25	PIN, DOWEL 8X14	2
6	PIN, PISTON	1	26	STUD BOLT A (197mm)	2
7	CIRCLIP	2	27	STUD BOLT B (209.5mm)	2
8	SPROCKET, TIMING	1	28	BOLT, HEX SOCKET M6X50	1
9	CAM CHAIN	1	29	BOLT, HEX SOCKET M5X15	3
10	COVER, TIMING GEAR	1	30	SET SCREW, HEX SOCKET M6X40	2
11	UNION, 8MM	1	31	BOLT, STUD M6X26	1
12	BOLT, M10	1	32	CAPNUT, FLANGE M6	4
13	CAP, SPARK PLUG	1	33	NUT M6	1
14	JOINT, SPARKPLUG CABLE	1	34	WASHER, SEALING 10mm	1
15	RUBBER, PLUGCAP	1	35	WASHER, SEALING 6mm (Cu)	4
16	SPARK PLUG (ER8EH)	1	36	WASHER, SEALING 6mm (AL)	1
17	GASKET, CYLINDER HEAD	1	37	WASHER, PLAIN 5mm	3
18	GASKET, CYLINDER	1	38	PIN, TIMING SET	1
19	GASKET, CRANKCASE	1	39	SOCKET, PLUG	1
20	GASKET, R. CASECOVER	1		STICKER (DAYTONA)	2

**DAYTONA**

## Installation procedures

The following procedures are omitted from this manual. Please have the work done by a knowledgeable and experienced person.

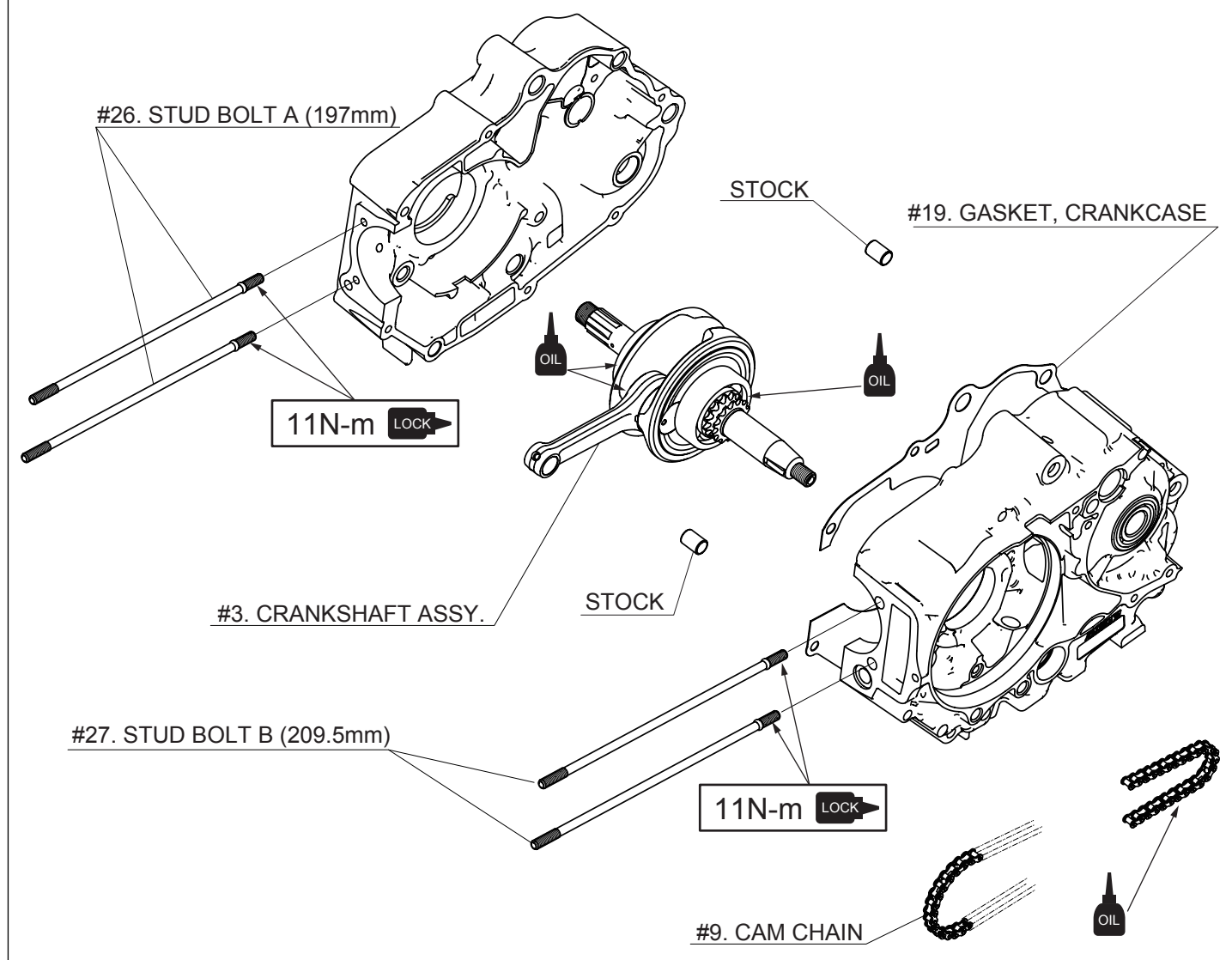
### Perform the necessary work before assembly.

Remove the crankcase gasket.

Clean and inspect the disassembled parts.

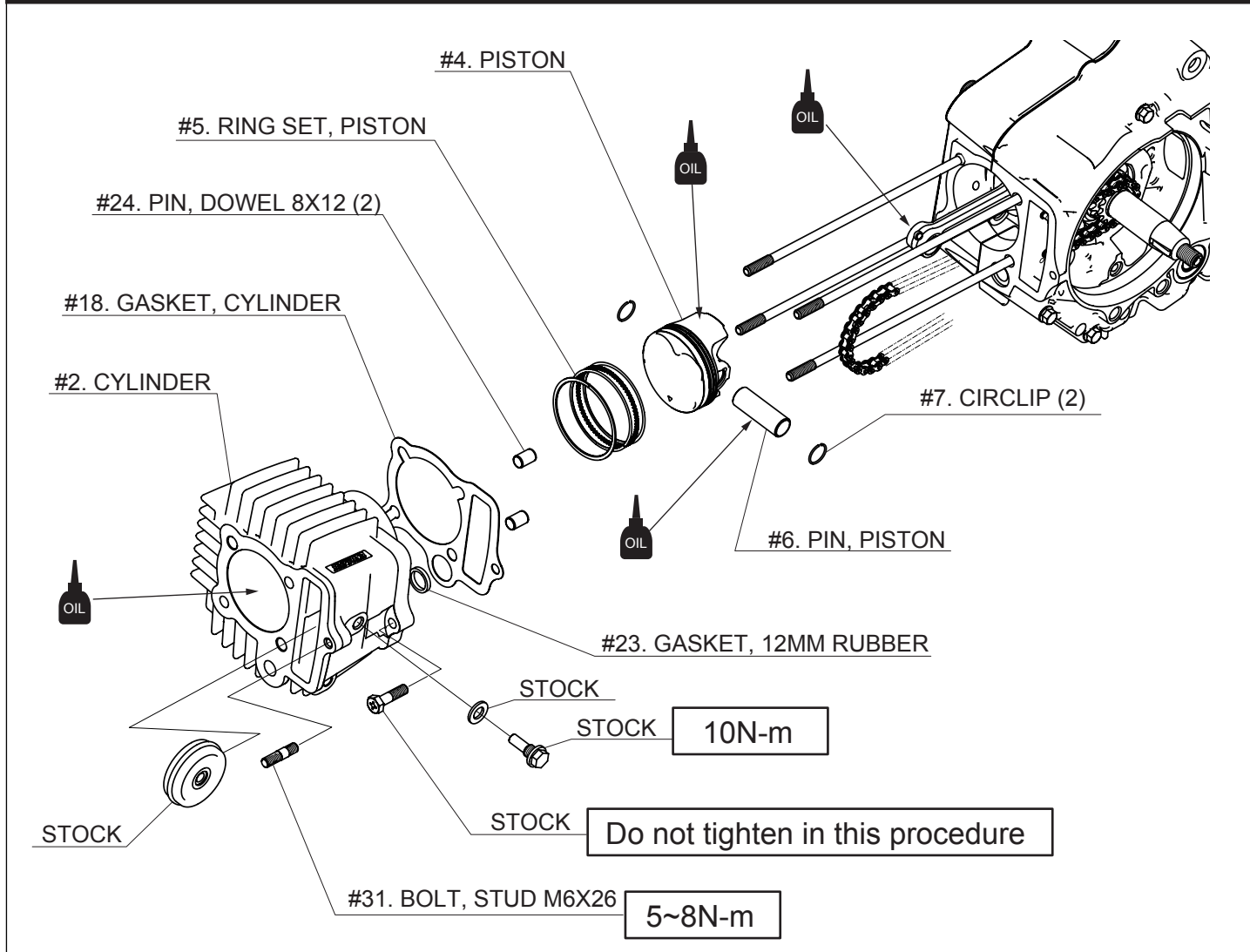
If you find any damaged or worn parts, replace them with new ones.

#### 1. CRANKSHAFT / CRANKCASE



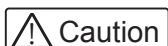
- Replace the cylinder stud bolt on the crankcase.
- Apply a sufficient amount of oil to the crankshaft.
- Install the crankshaft into the crankcase.
  - <Assembling the gearbox>
  - <Assembling the crankcase>
- Put the cam chain on the crankshaft.

## 2. PISTON / CYLINDER



- Assemble the piston rings to the piston.
- Assemble the piston to the connecting rod.  
(Pay attention to the direction.)
- Install the dowel pin (8x12mm) into the crankcase.
- Set the cylinder gasket and 12mm rubber gasket.

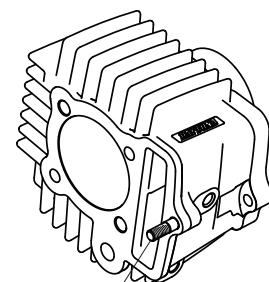
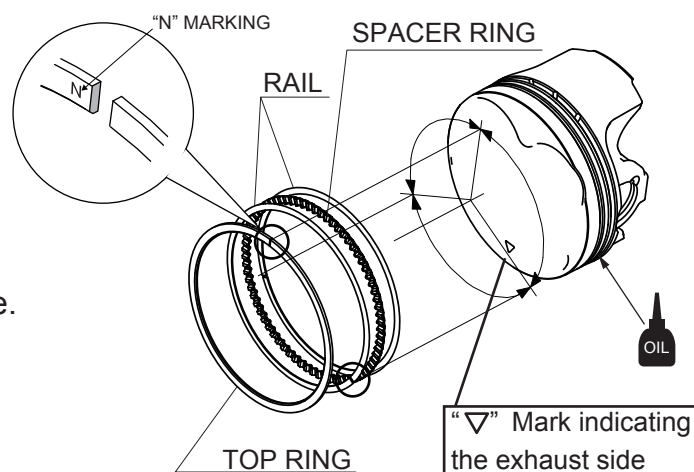
- Install the stud bolt to the cylinder.  
Be careful not to tighten too tightly.



**Caution**

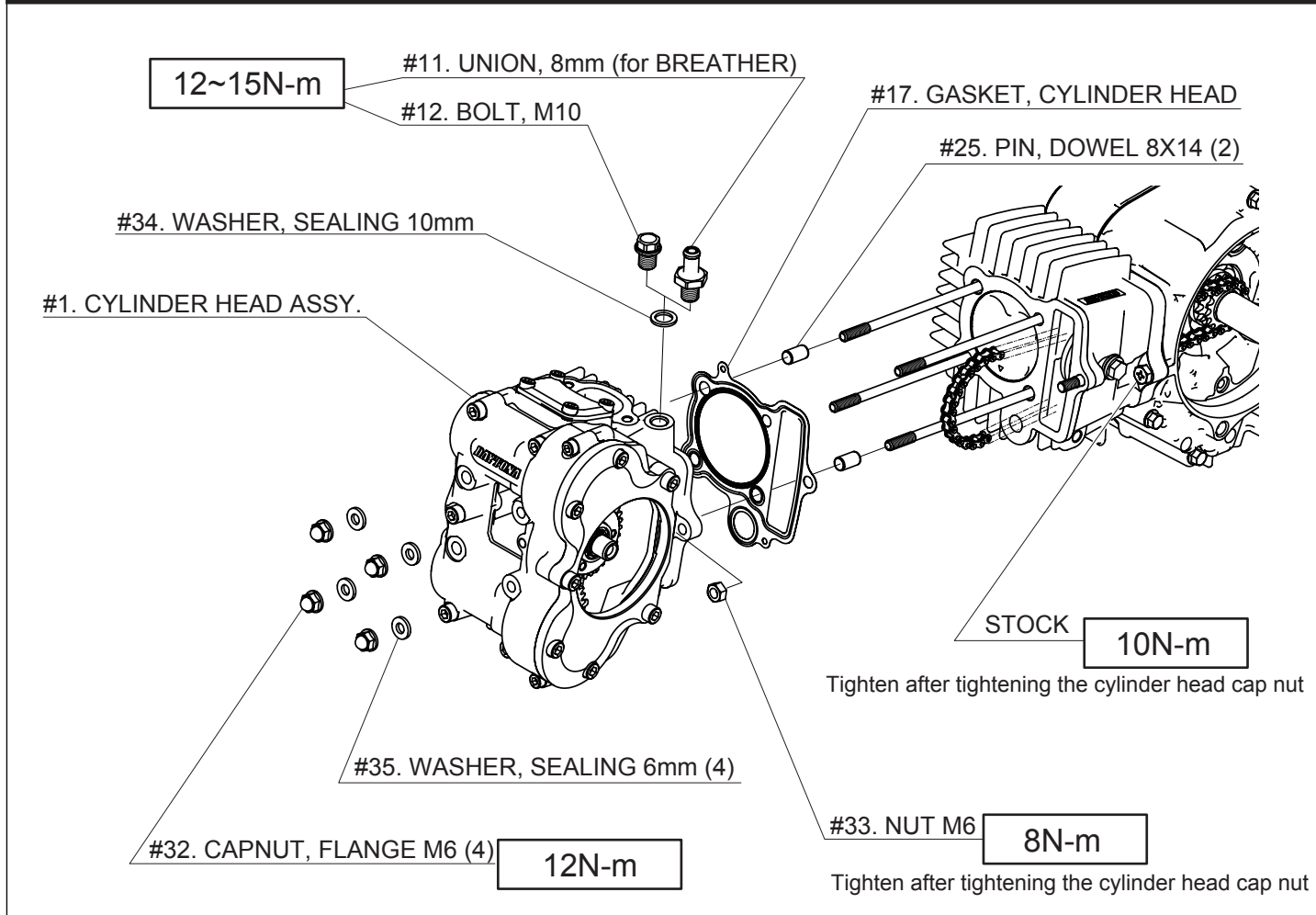
Do not over tighten or the flatness of the cylinder will be compromised.  
If the flatness is compromised, oil leakage may occur.

- Apply a generous amount of oil to the cylinder.
- Assemble the cylinder,  
and then assemble the guide roller (stock).



#31. BOLT, STUD M6X26

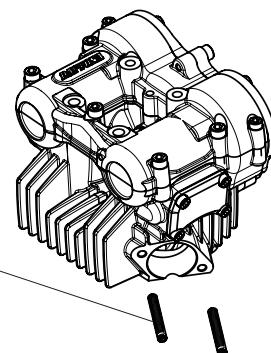
### 3. CYLINDER HEAD



- Install the set screw on the exhaust flange of the cylinder head.

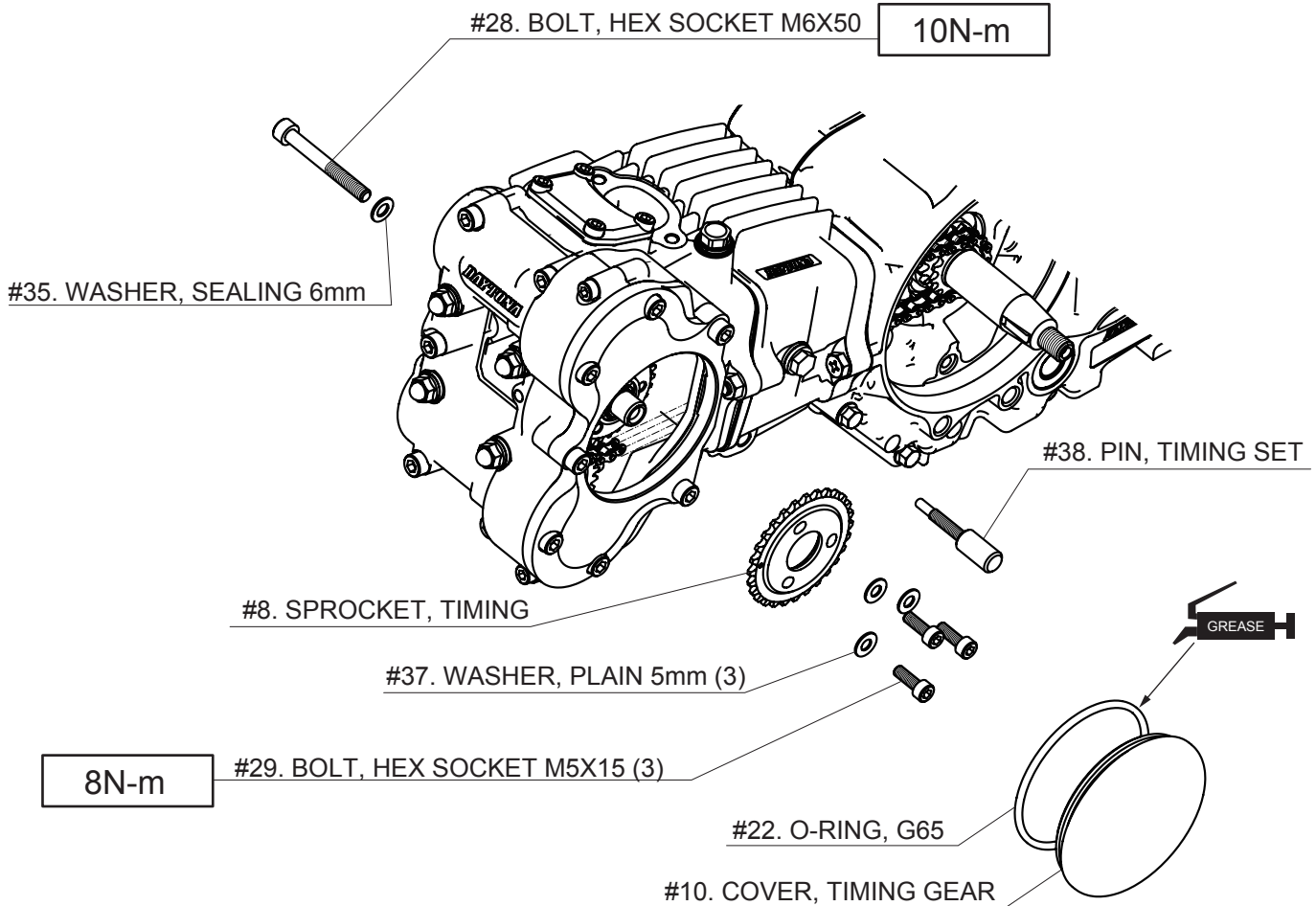
#30. SET SCREW, HEX SOCKET (2)

10N-m **LOCK**



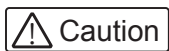
- Set the dowel pin (8X14) in the dowel pin hole on the cylinder.
- Install the cylinder head gasket.
- Install the cylinder head assembly. Put the M6 nut on the stud bolt installed on the cylinder.
- Install the cylinder head assembly using the sealing washer and flange cap nut.  
<When tightening the flange cap nut, tighten it in diagonal order.>
- Tighten the M6 nut next to the cylinder head and the bolt next to the cylinder to the specified torque.

## 4. VALVE TIMING SPROCKET



- Adjust the piston to top dead center.
- Attaching the cam sprocket to the cam chain.

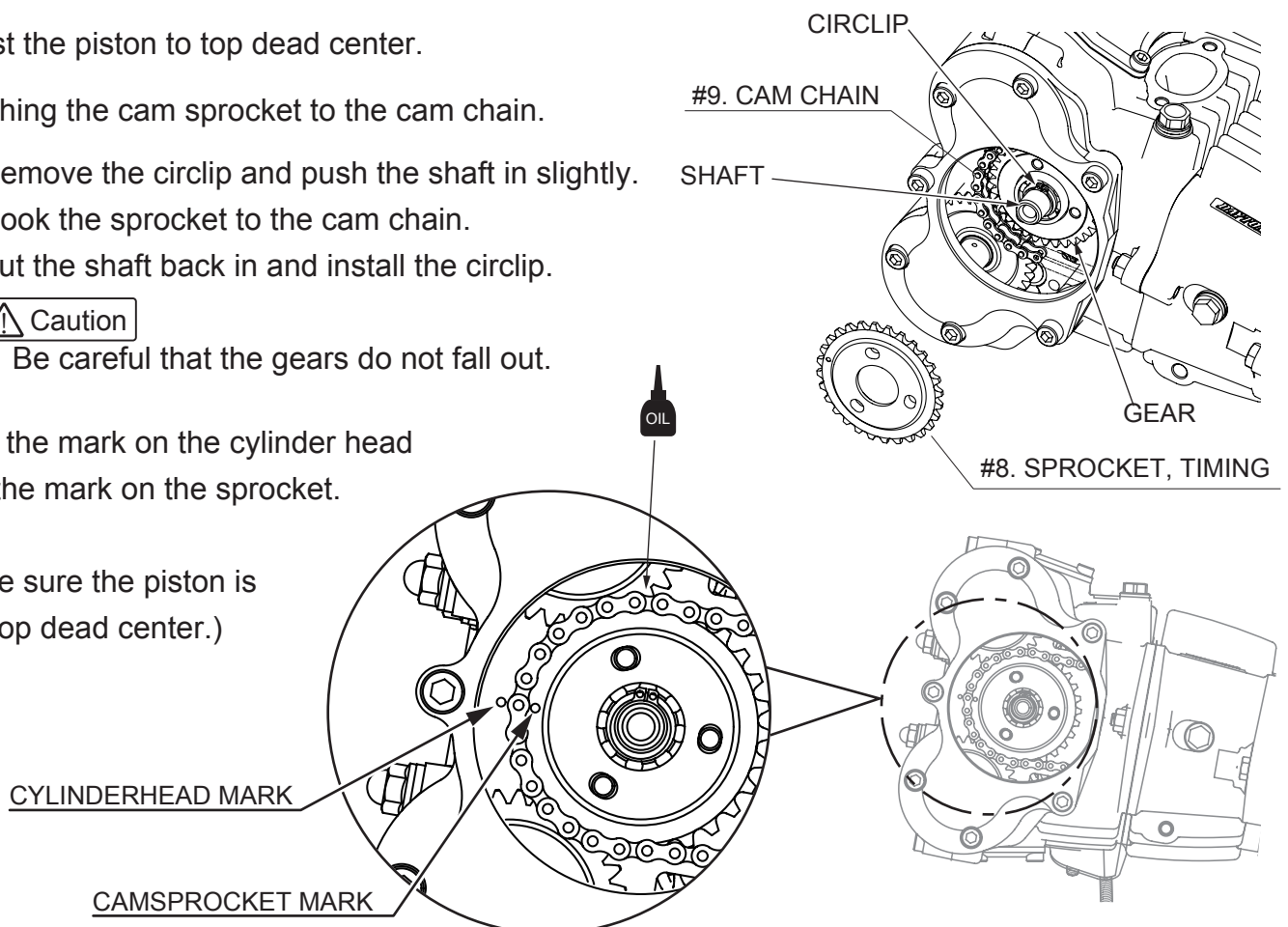
Remove the circlip and push the shaft in slightly.  
Hook the sprocket to the cam chain.  
Put the shaft back in and install the circlip.



Be careful that the gears do not fall out.

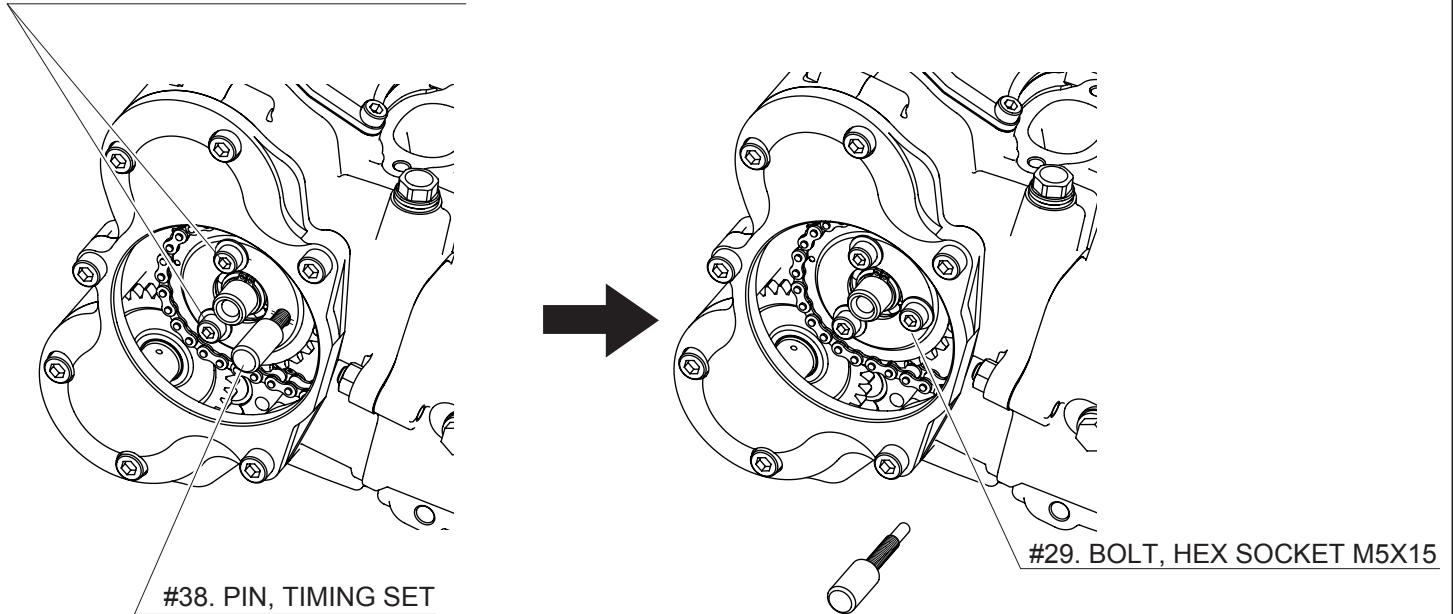
- Align the mark on the cylinder head with the mark on the sprocket.

(Make sure the piston is at top dead center.)



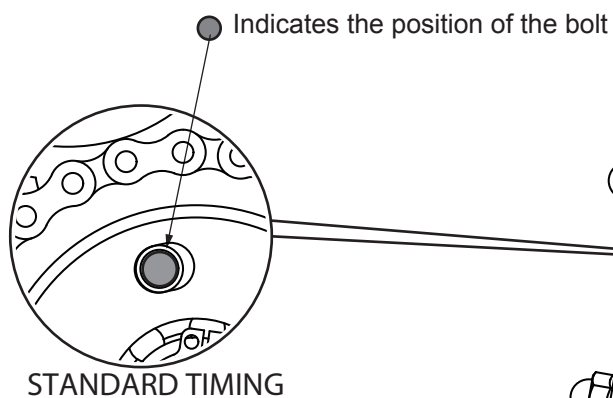
- Determine the position of the sprocket using the pin provided.  
Secure the sprocket using the M5x15 bolt and washer.
  - Then remove the pin.
- Tighten the third bolt with the M5x15 bolt.

#29. BOLT, HEX SOCKET M5X15



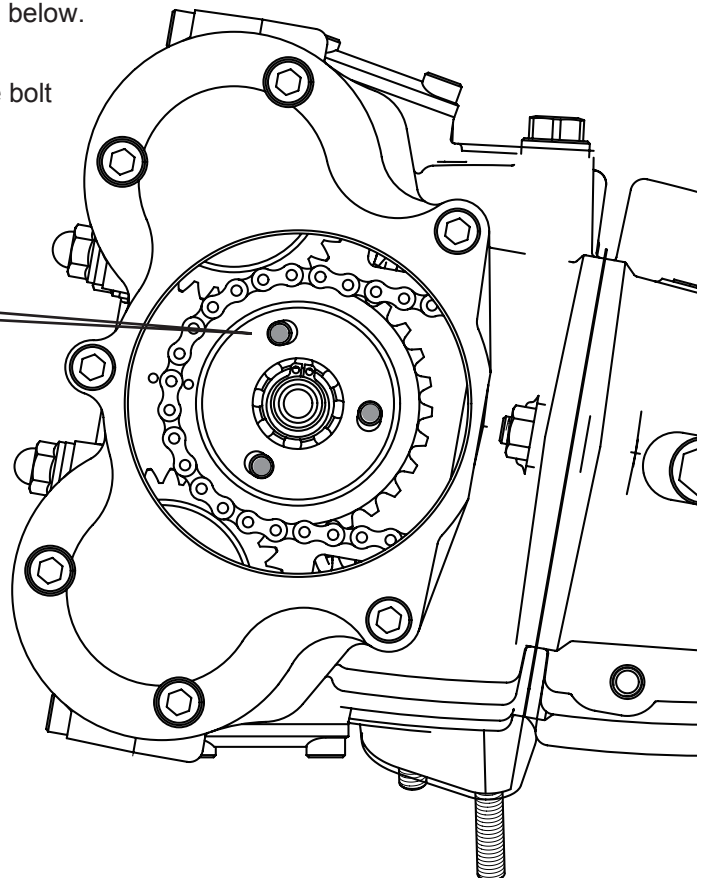
#29. BOLT, HEX SOCKET M5X15

The bolt holes of the sprocket are long holes.  
The valve timing can be adjusted.  
The standard fixing position is the one shown in the figure below.

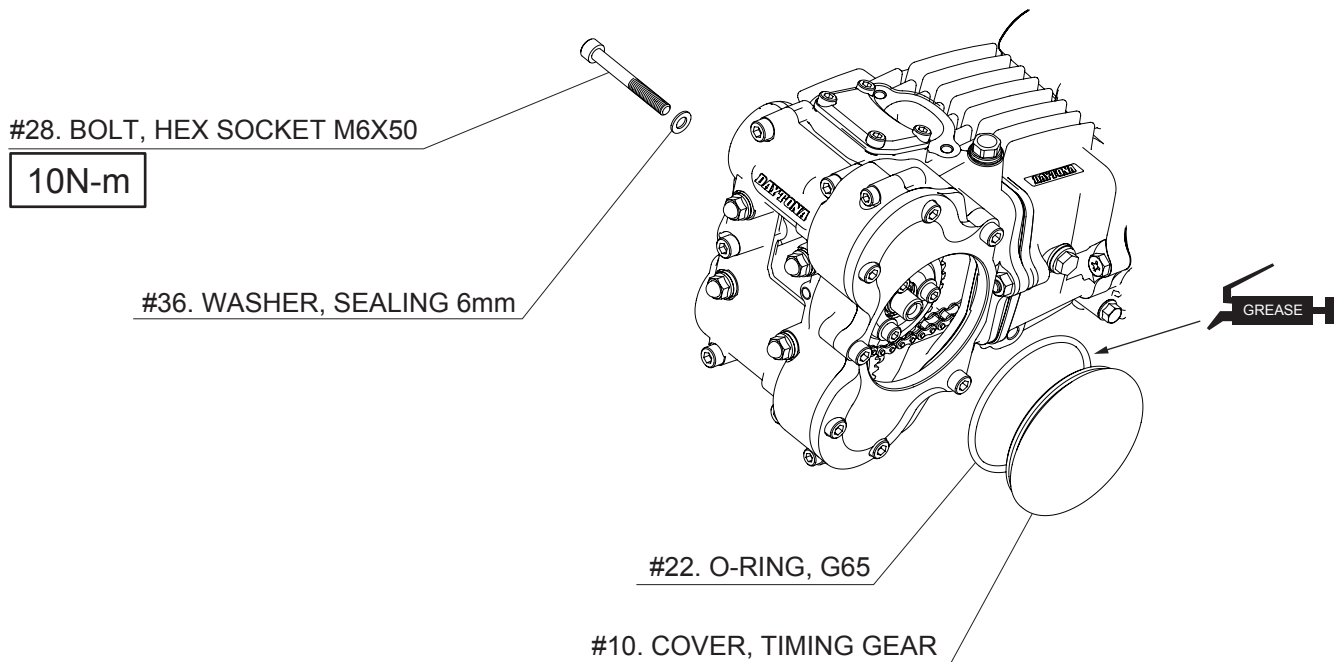


Advance the valve timing :  
The engine characteristics will be slightly lower rpm.

Delay the valve timing :  
The engine characteristic will be slightly higher rpm.

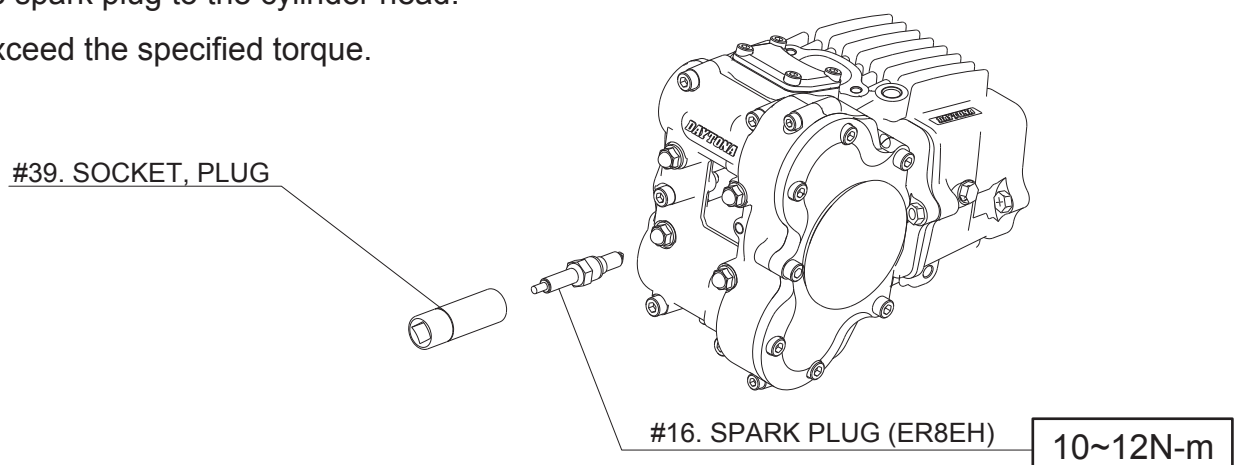


- Install the O-ring on the timing gear cover.
- Install the timing gear cover to the cylinder head and secure it with bolts from the other side.

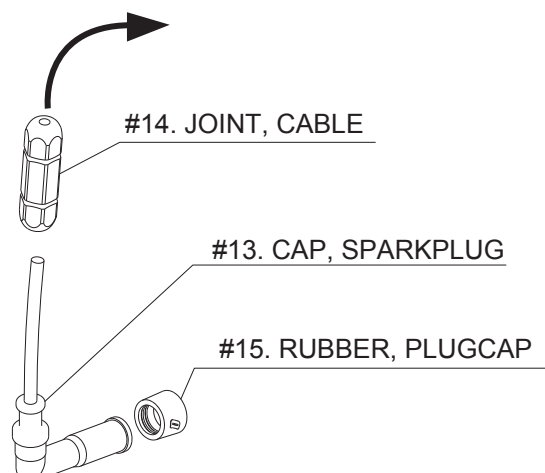


## 5. SPARK PLUG AND PLUGCAP

- Install the spark plug to the cylinder head.
- Do not exceed the specified torque.



- Replace the rubber at the end of the plug cap with the rubber from the kit.
- Connect the plug cable of the vehicle to the plug cap cable with the joint.



# INSTRUCTION

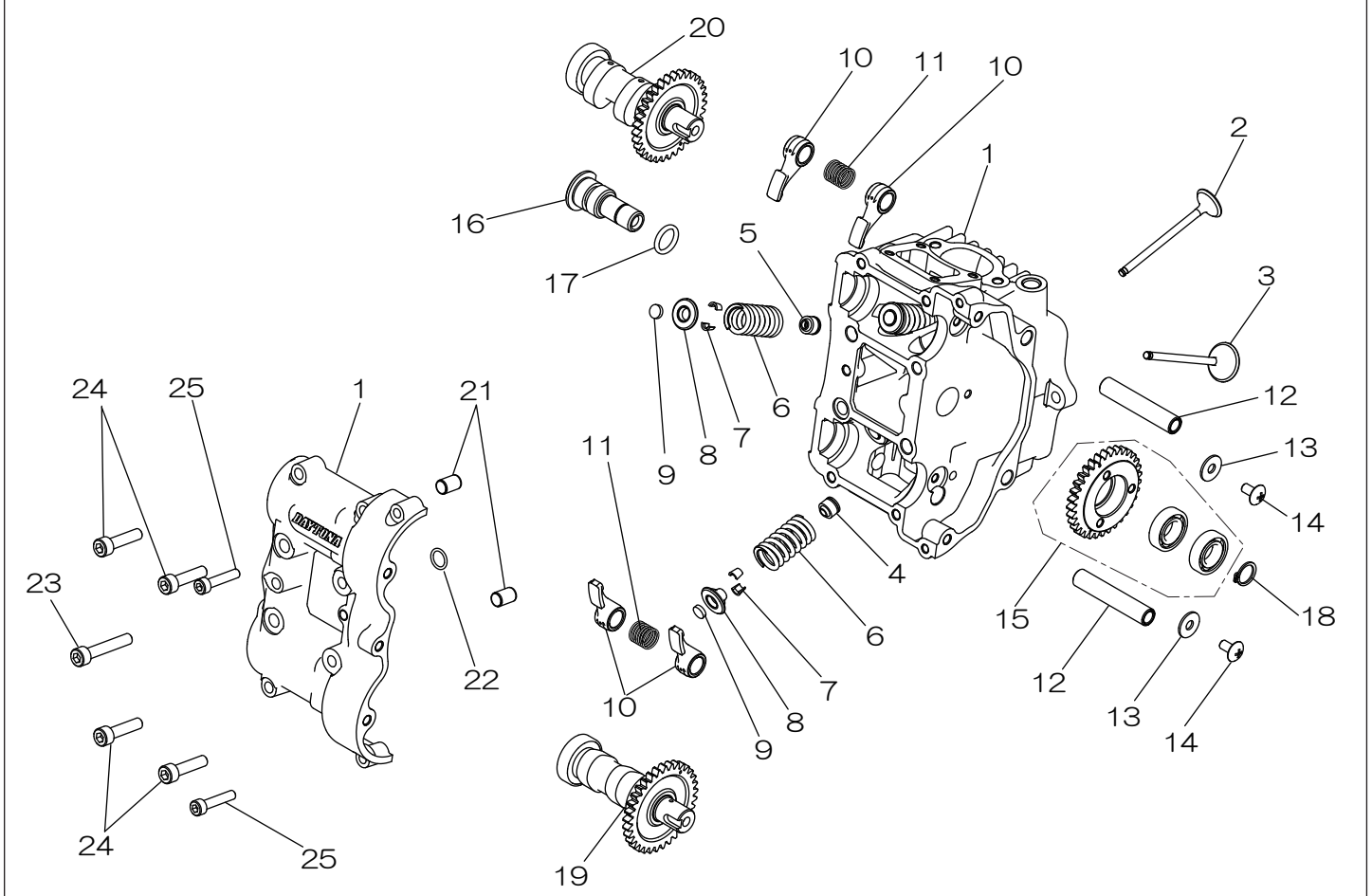
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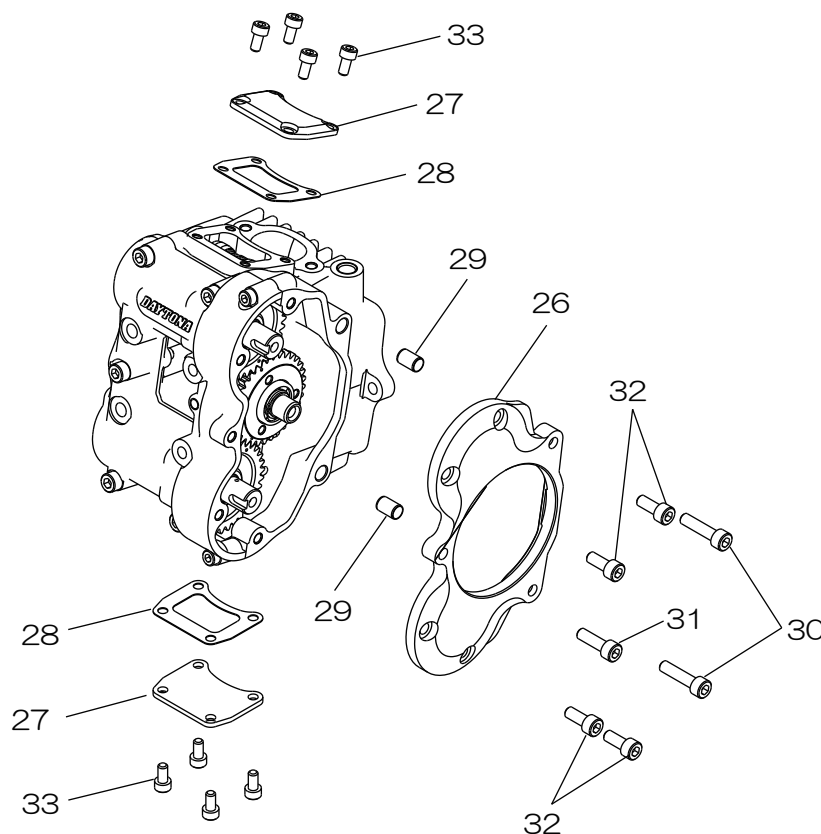
## Finger-Follower DOHC 4Valve CylinderHead MAINTENANCE MANUAL

### COMPONENTS 1 (Cylinder Head)



#	NAME	QTY	#	NAME	QTY
1	CYLINDER HEAD, UPPER&LOWER	1	14	SCREW, TRUSS M5x10	2
2	VALVE, EXHAUST	2	15	GEAR COMP., CAM IDLE	1
3	VALVE, INTAKE	2	16	SHAFT, IDLEGear	1
4	SEAL, VALVE STEM (EXH)	2	17	O-RING, 4D-P12.5	1
5	SEAL, VALVE STEM (INT)	2	18	CIRCLIP	1
6	SPRING, VALVE	4	19	CAMSHAFT ASSY., EXHAUST	1
7	COTTER, VALVE	8	20	CAMSHAFT ASSY., INTAKE	1
8	RETAINER, VALVESPRING	4	21	PIN, DOWEL 8X12	2
9	SIM, TAPPET	4	22	RUBBER GASKET	1
10	ARM, ROCKER	4	23	BOLT, HEX SOCKET M6X30	1
11	SPRING	2	24	BOLT, HEX SOCKET M6X25	4
12	SHAFT, ROCKER ARM	2	25	BOLT, HEX SOCKET M5X25	2
13	WASHER, PLAIN	2			

## COMPONENTS 2 (Head Cover)



#	NAME	QTY	#	NAME	QTY
26	COVER, CYLINDER HEAD SIDE	1	30	BOLT, HEX SOCKET M6x25	2
27	COVER, TAPPET	2	31	BOLT, HEX SOCKET M6X20	1
28	GASKET, TAPPET	2	32	BOLT, HEX SOCKET M6X15	4
29	PIN, DOWEL 8X12	2	33	BOLT, HEX SOCKET M5X10	8

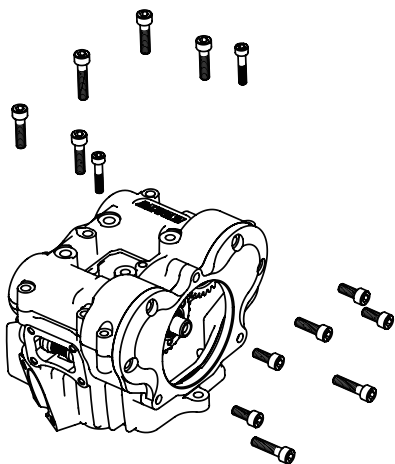
## SERVICE DATA

SPECIFICATIONS			Unit : mm	
ITEM			STANDARD	LIMIT
Cylinder Head Warp				0.05
Valve, Valveguide	Valve clearance	IN	0.08±0.03	
		EX	0.1±0.03	
	Valve stem O.D.	IN	3.975~3.990	3.965
		EX	3.960~3.975	3.950
	Valve guide I.D.	IN	4.000~4.012	4.040
		EX	4.000~4.012	4.045
	Stem-to-guide clearance	IN	0.010~0.037	0.075
		EX	0.025~0.052	0.095
	Valve seat width	IN/EX	0.8~1.2	1.8
Valve spring free length			37.26	35.76
Rocker arm I.D.			10.000~10.015	10.025
Rocker arm shaft O.D.			9.972~9.987	9.962

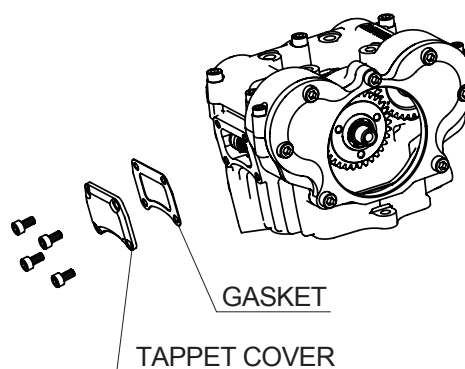
## DISASSEMBLY

- When removing the cylinder head cover and cylinder head, take care not to damage the mating surfaces.
- When disassembling, mark and store the disassembled parts to ensure that they are reinstalled in their original locations.

Remove the bolts on the head cover.

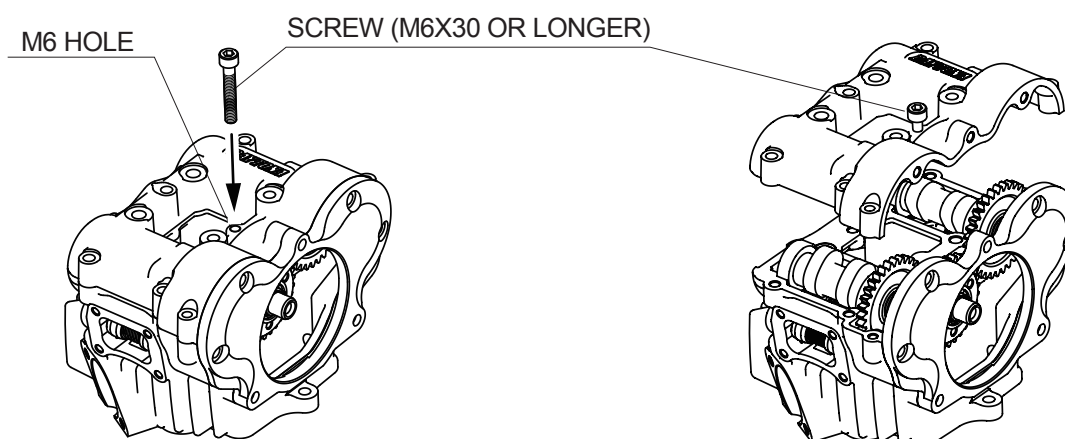


Remove the tappet covers.

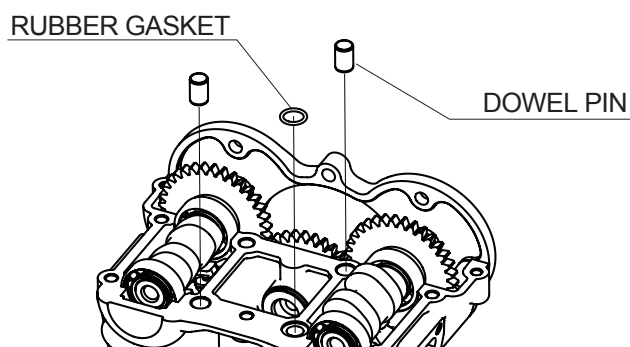


Remove the head upper cover.

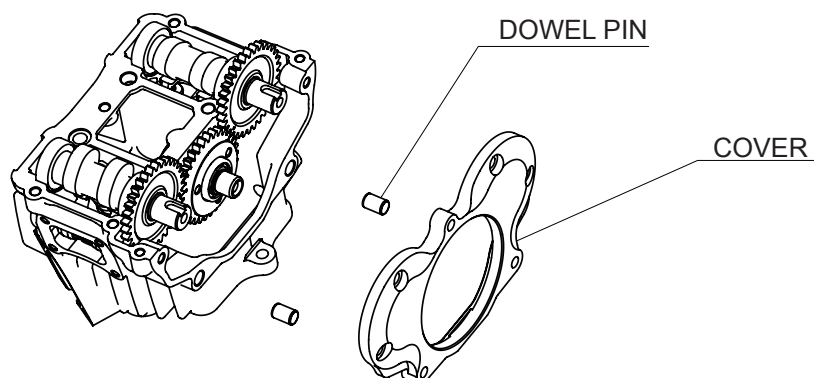
Put the bolt in the position shown in the figure and tighten the screw to raise the upper cover.



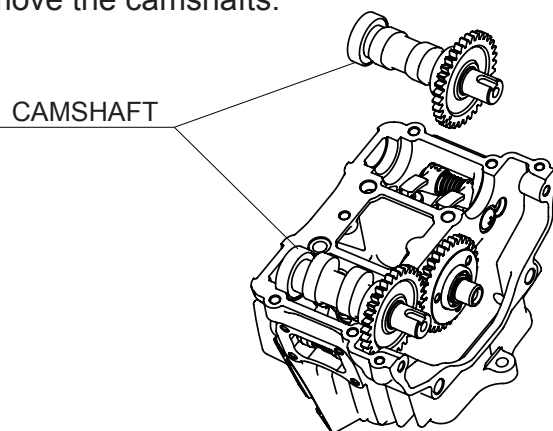
Remove the rubber gasket and dowel pin.



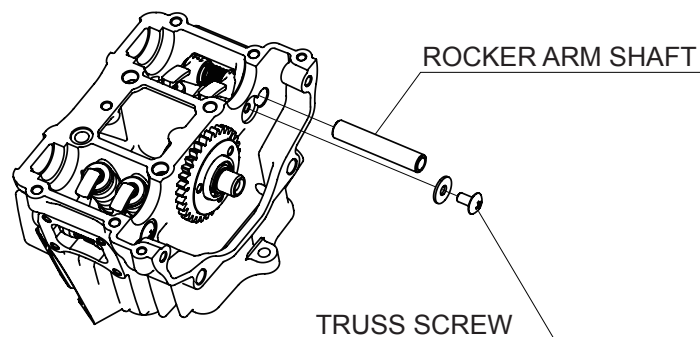
Remove the cover and dowel pin.



Remove the camshafts.

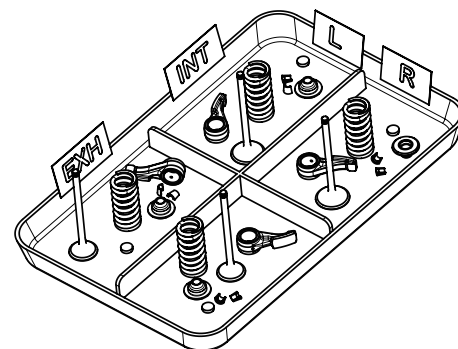
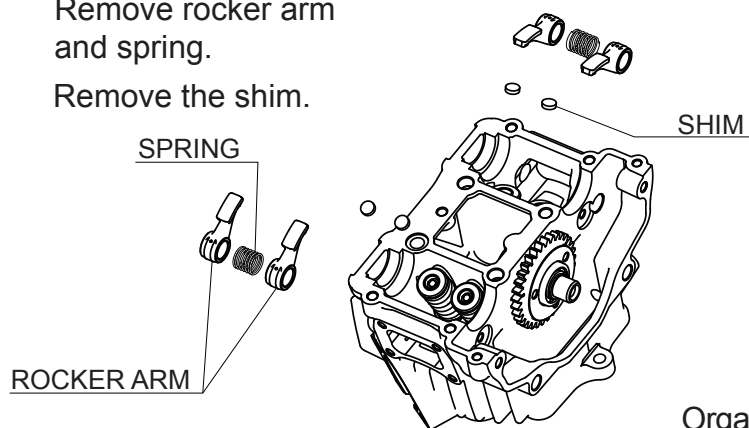


Remove the truss screw and remove the rocker arm shaft.



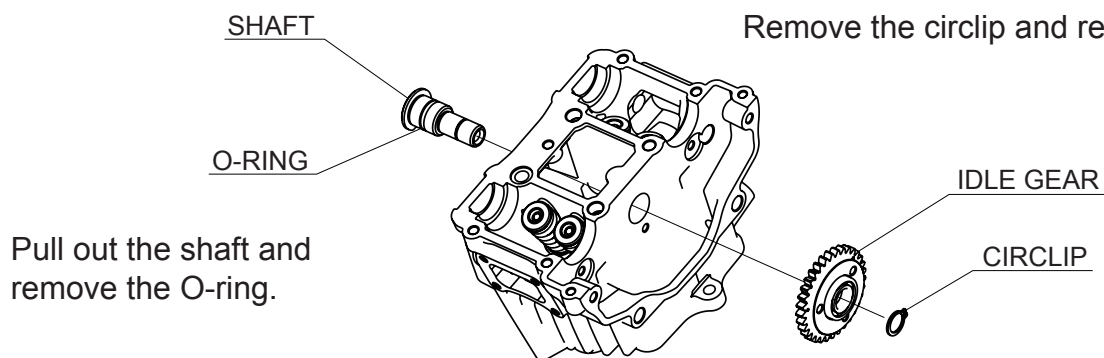
Remove rocker arm and spring.

Remove the shim.



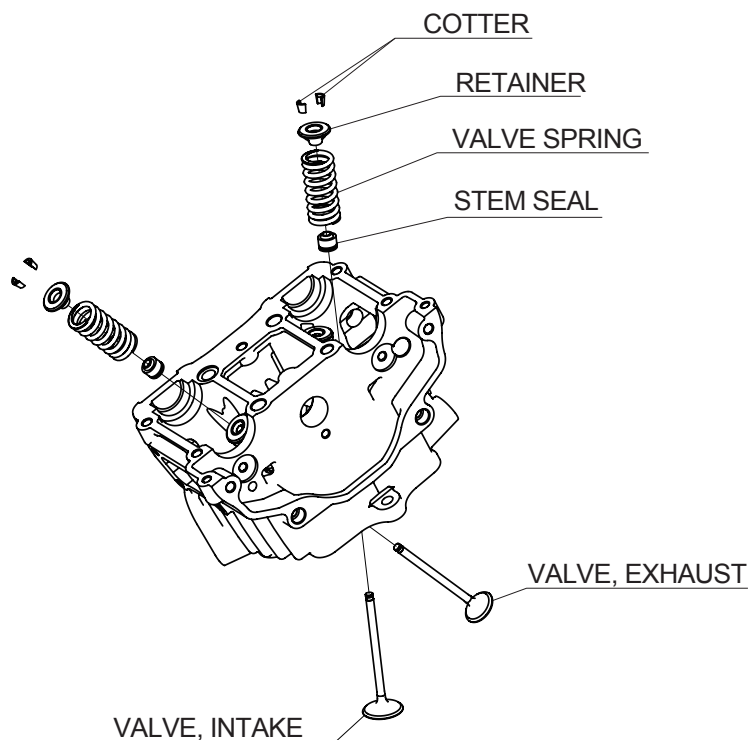
Organize each part so that it can be put back in its original place.

Remove the circlip and remove the idle gear.

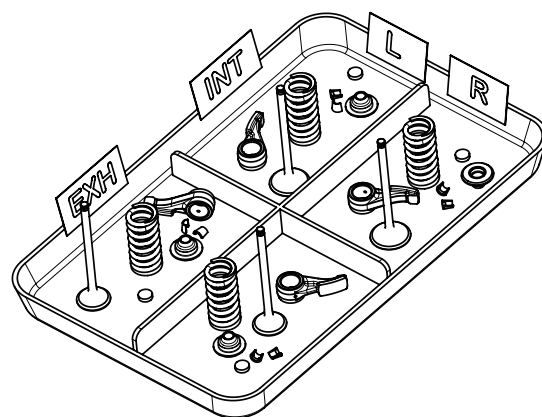


Pull out the shaft and remove the O-ring.

Remove the valve spring and valve.  
Remove the stem seal.



Organize each part so that it can be put back in its original place.



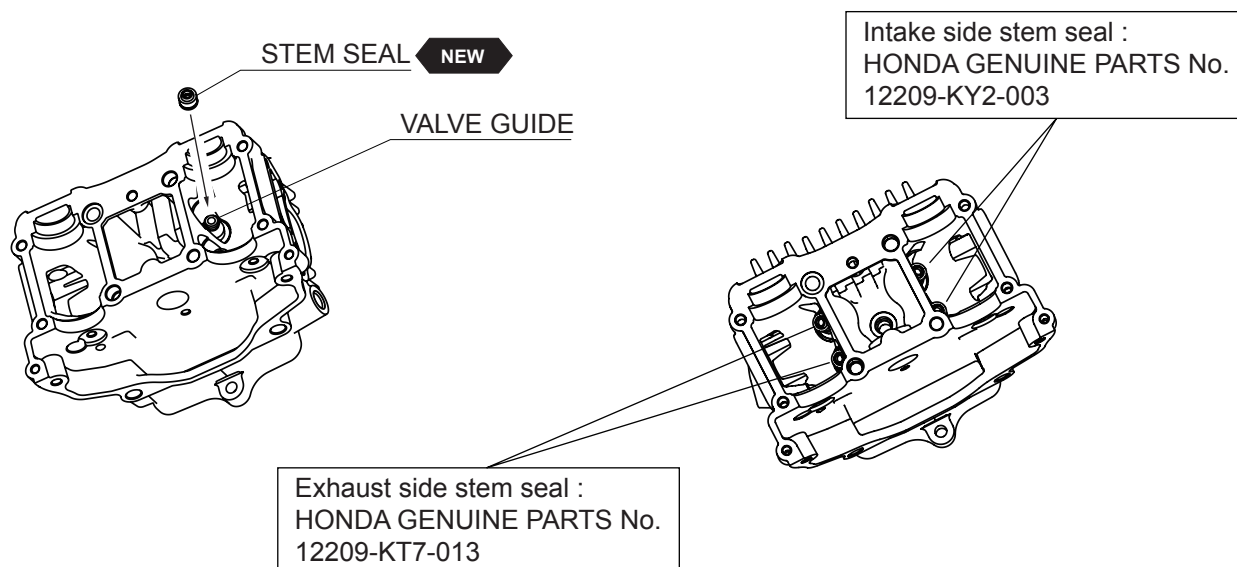
- When disassembling, mark and store the disassembled parts to ensure that they are reinstalled in their original locations.
- All disassembled parts should be washed with cleaning agent and blown dry with compressed air before inspection.

## PARTS INSPECTION

- Refer to the service data at the beginning of this manual, and if there is a problem, replace the part with a new one.
- Check that the bearing rotates smoothly and quietly by rotating it with your finger.
- Check the surface of the part for scratches or wear, and if there is a problem, replace the part with a new one.

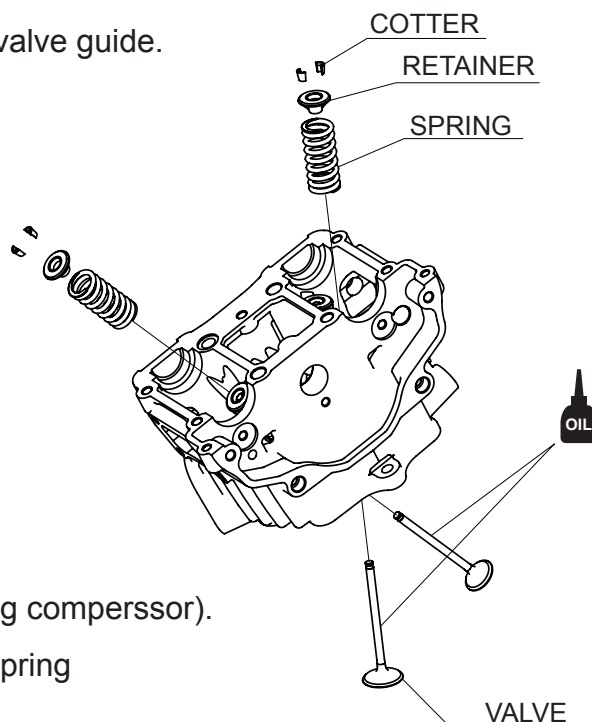
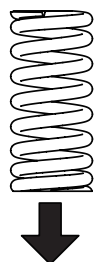
## ASSEMBLY

Install the new stem seals.



Lubricate the valve stems and insert the valve into the valve guide.

Install the valve springs with the tightly wound coils facing the combustion chamber.



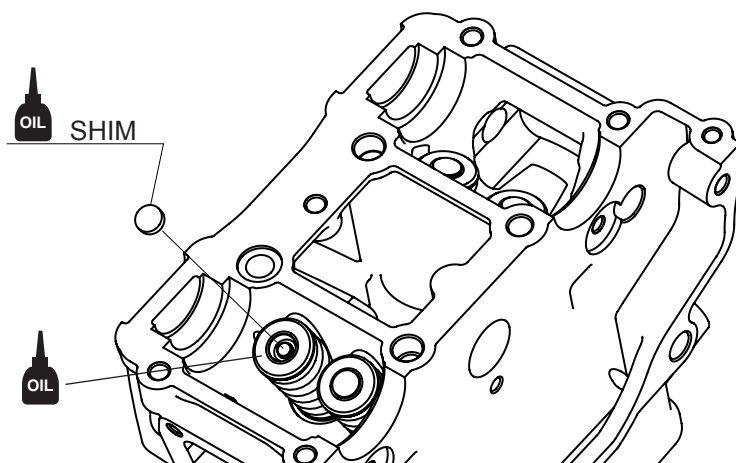
Install the valve spring retainer.

Install the valve cotters using a special tool (valve spring comperssor).

To prevent loss of tension, do not compress the valve spring more than necessary.

Apply oil to the valve tips and shims.

Set the shim in the retainer.

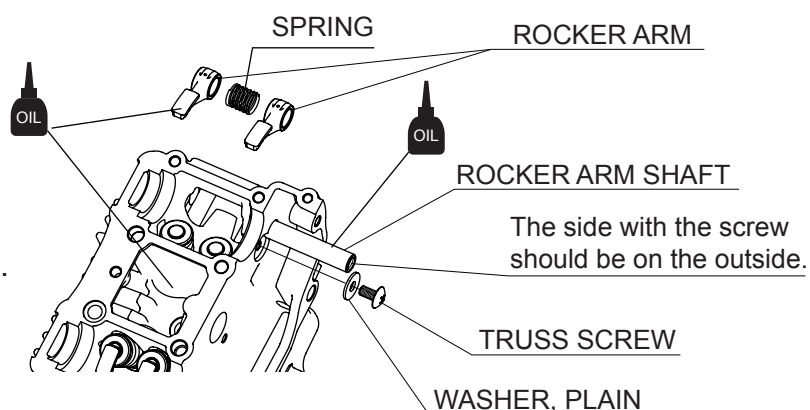


Install the rocker arm and spring.

Insert the rocker arm shaft.

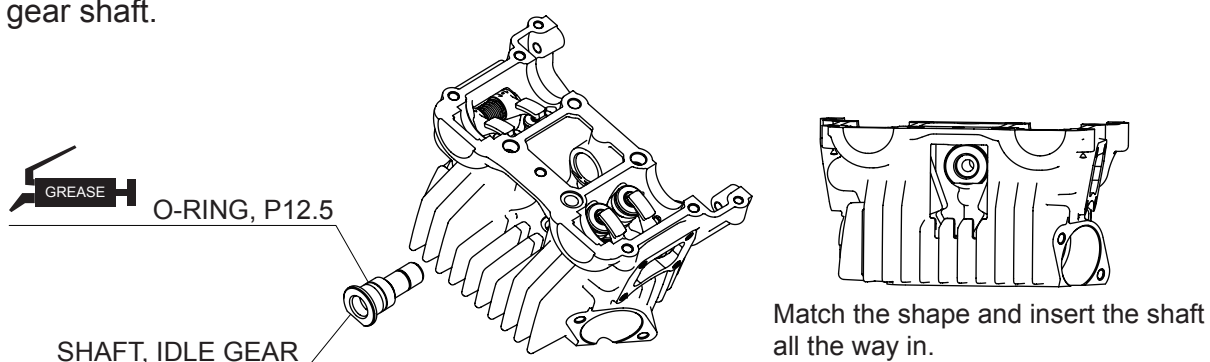
Install the truss screw.

Apply oil to the parts that come in contact.



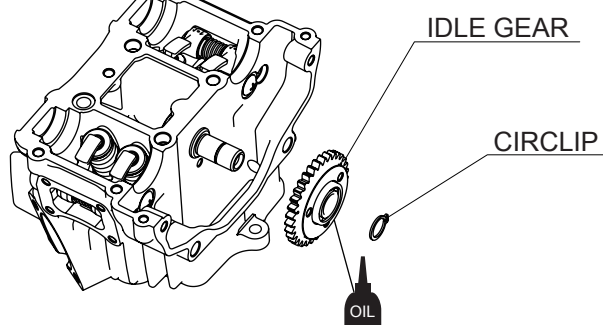
Install the O-ring on the idle gear shaft.

Install the idle gear shaft.

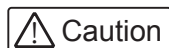


Install the cam idle gear and circlip.

Apply oil to the bearings.



Install the camshafts.



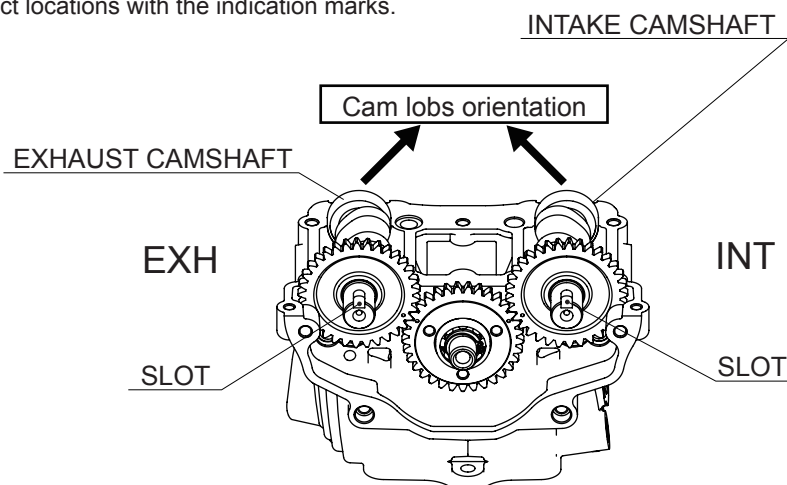
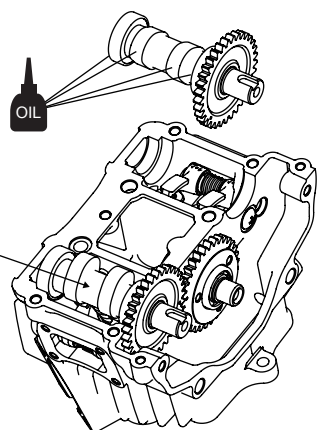
Install the each camshaft to the correct locations with the indication marks.

"IN" : Intake camshaft

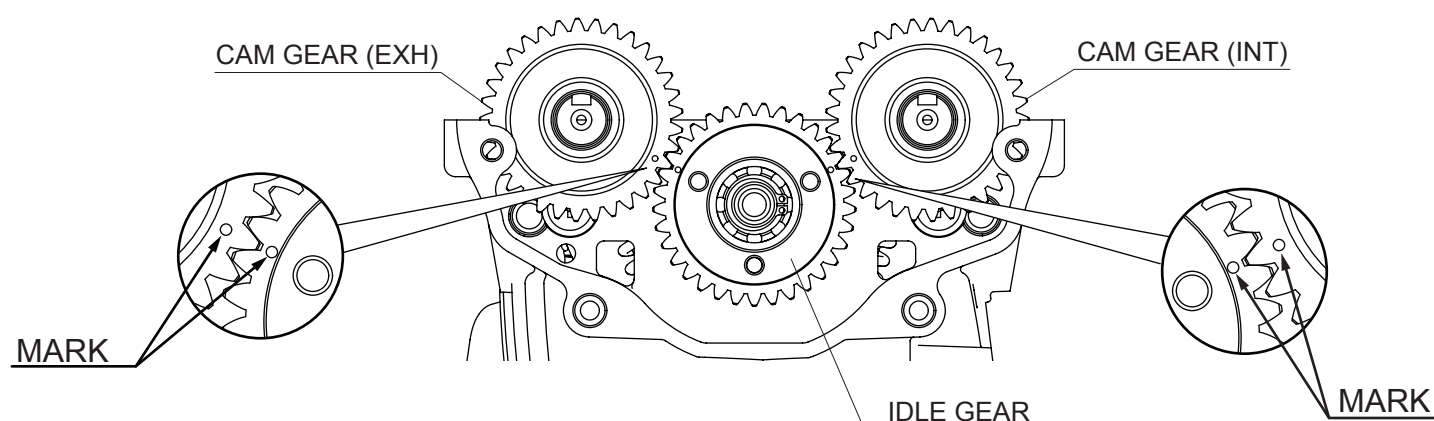
"EX" : Exhaust camshaft

Apply oil to cam face and bearings.

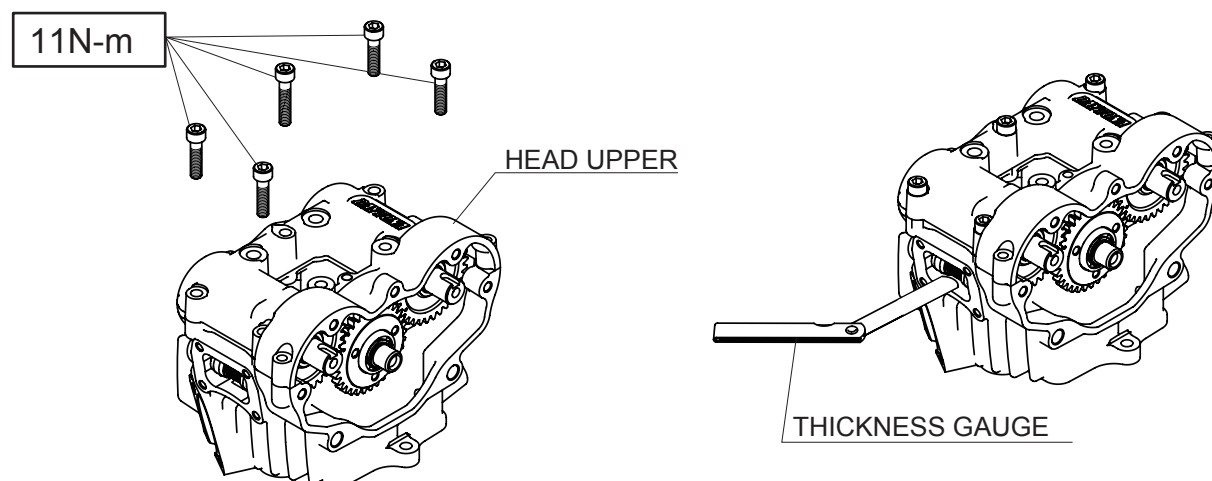
Indication marks



Align the marks on the cam gear and idle gear.



Assemble the cylinder head upper.  
Check the tappet clearance.



Tappet clearance Standard value

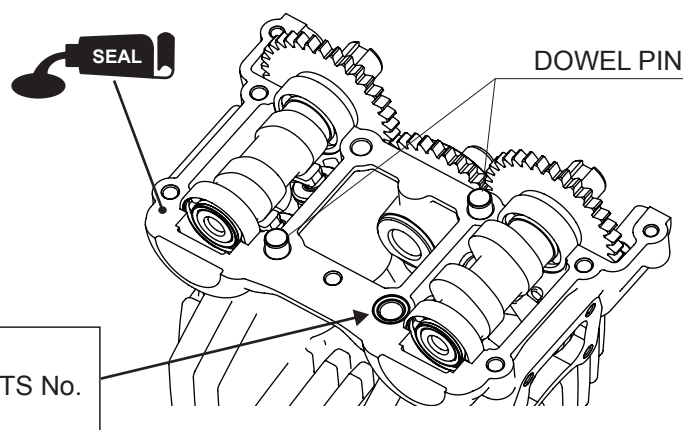
INT :  $0.08 \pm 0.03$  [mm]

EXH :  $0.10 \pm 0.03$  [mm]

If it is out of the standard value, replace the shim and adjust it.

Remove the cylinder head upper.  
Degrease the mating surface of the cylinder head lower and upper.

Apply liquid gasket to the mating surfaces.  
Set the dowell pin and rubber gasket.



NEW

RUBBER GASKET:  
HONDA GENUINE PARTS No.  
91305-028-900

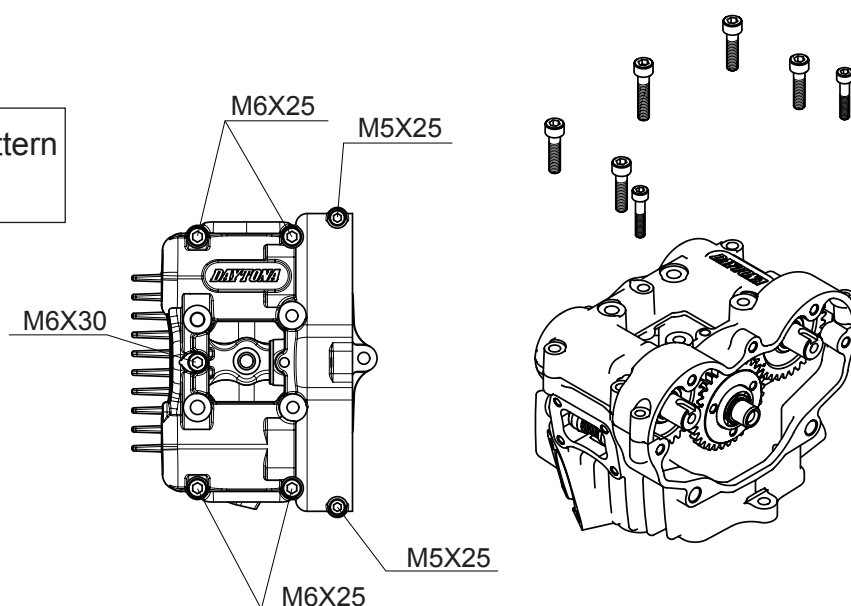
Install the cylinder head upper.

Tighten the M6 bolts in a crisscross pattern in 2-3 steps to the specified torque.

Torque value :

Hex socket bolt M6 11N-m

Hex socket bolr M5 5N-m



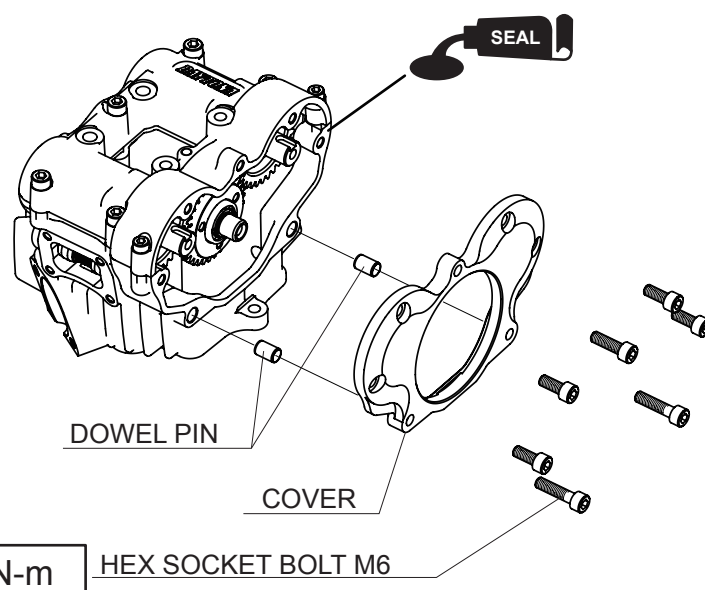
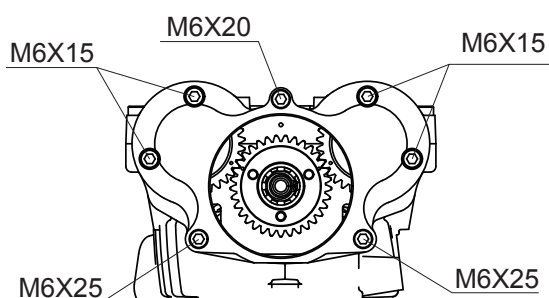
Degrease the mating surface of the cylinder head and sidecover.

Apply liquid gasket to the mating surfaces.

Set the dowel pins.

Install the cylinder head sidecover.

Tighten the M6 bolts in a crisscross pattern in 2-3 steps to the specified torque.



Install the tappet cover and gasket.

