DB58, DB58T & DB58TI DIESEL ENGINE

Shop Manual

65.99892-8026A

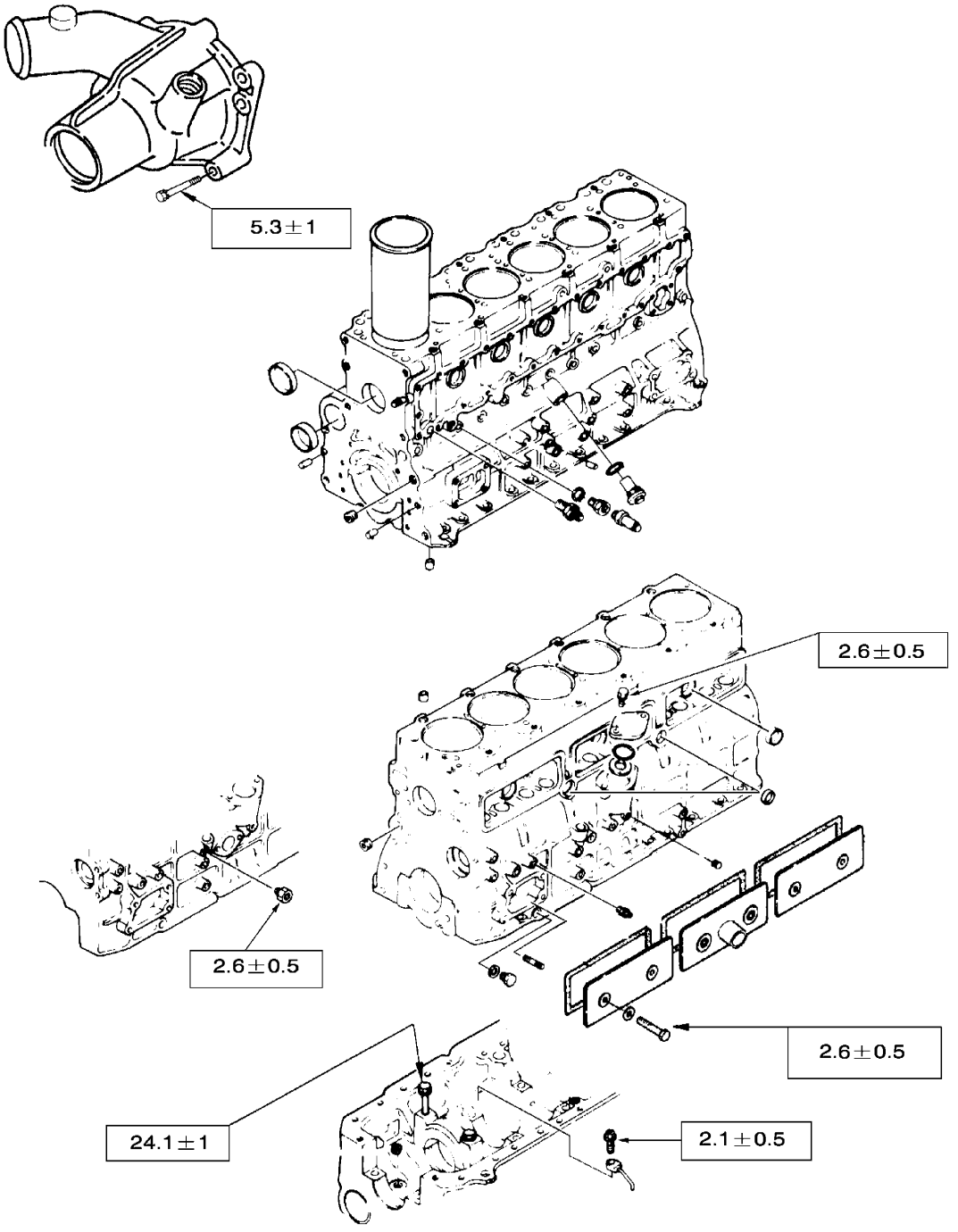
Daewoo reserves the right to improve our products in a continuing process to provide the best possible product to the market place. These improvements can be implemented at any time with no obligation to change materials on previously sold products. It is recommended that consumers periodically contact their distributors for recent documentation on purchased equipment.

This documentation may include attachments and optional equipment that is not available in your machine's package. Please call your distributor for additional items that you may require.

Illustrations used throughout this manual are used only as a representation of the actual piece of equipment, and may vary from the actual item.

• **Cylinder Block**

(Unit : kg · m)



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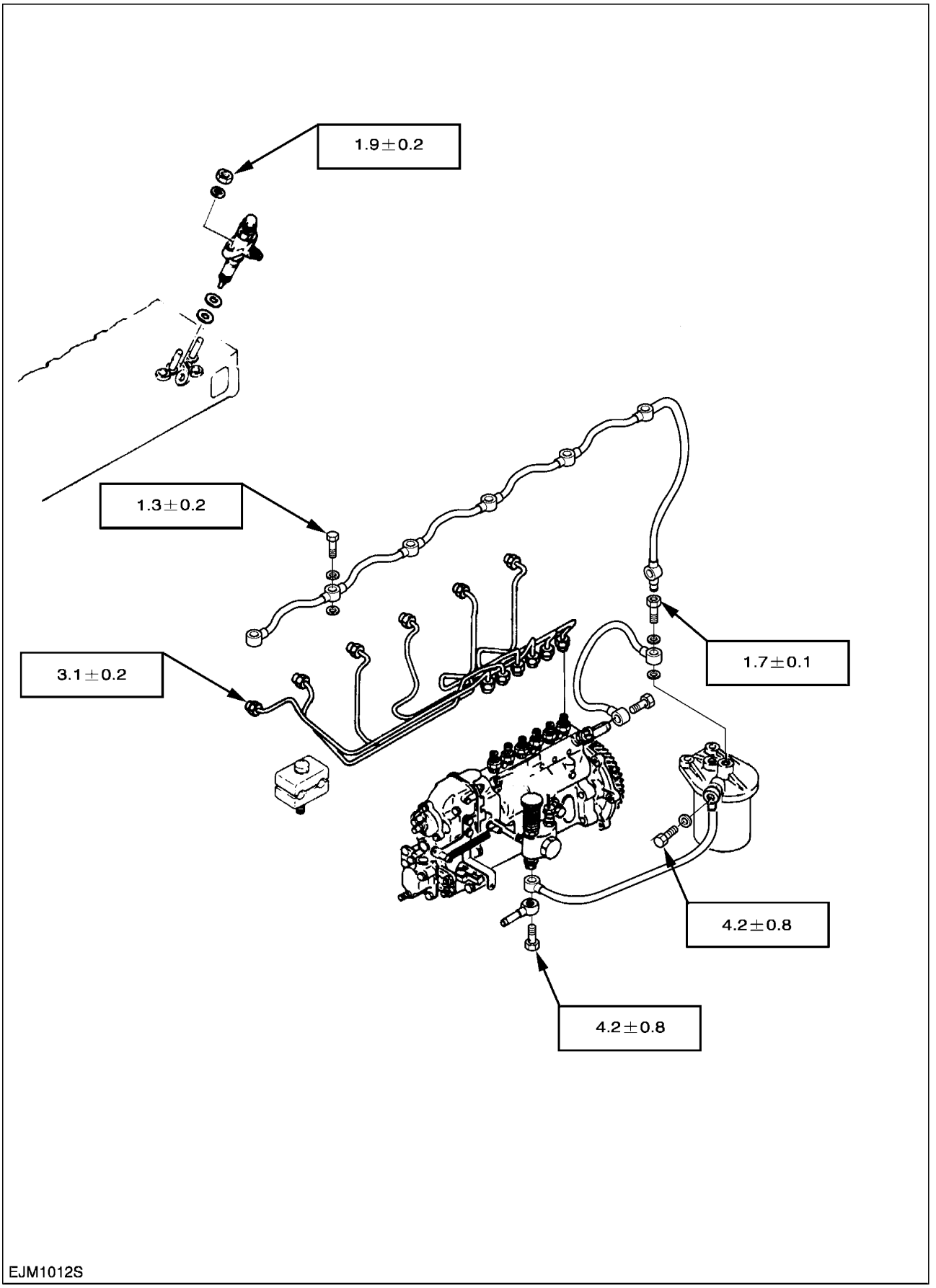
• **Fuel System (DB58, DB58T)**

(Unit : kg · m)



1.5.10. Injection Timing

⚠[CAUTION] Carefully keep away to be not entried dust or alien substance into injection pump when adjust injecting timing.

- **Check and Adjust of flange Mounted Pump Injection Timing.**

  Flange mounted injection pump injection timing checking and adjustment.

- **Checking Procedure**

1) Align the crankshaft pulley TDC mark with the pointer.

   Remove the inspection hole cover at the front of the injection pump on the timing gear case cover.

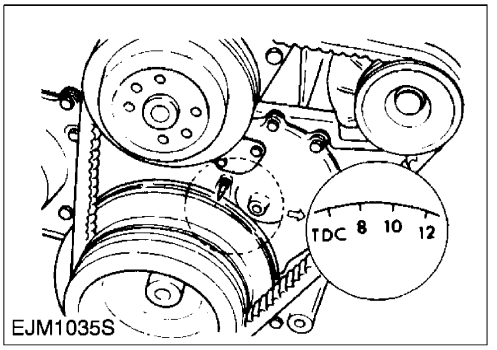
   Check the alignment between the pointer ④ on the injection pump gear nut lock plate and the projection area mark ③ on the injection pump gear case.

   If it is in misalignment, recheck with turning the crankshaft pulley one more turn to repeat the aforegoing procedure to mark sure to be aligned.

   Check the alignment of the notched lines ① and ②.(These notched lines were aligned at the plant to set injection pump body and mounting flange.)

   Make sure the position of next crank angle of in jection starting.

2) Turn the crankshaft pulley counterclockwise about 30° crankangle.



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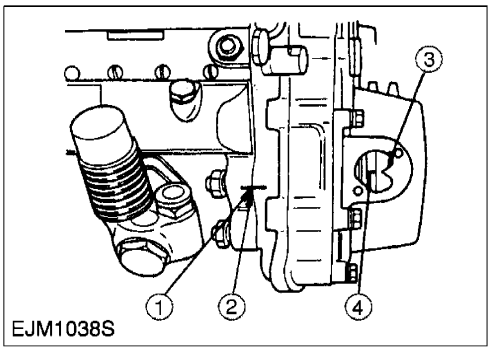

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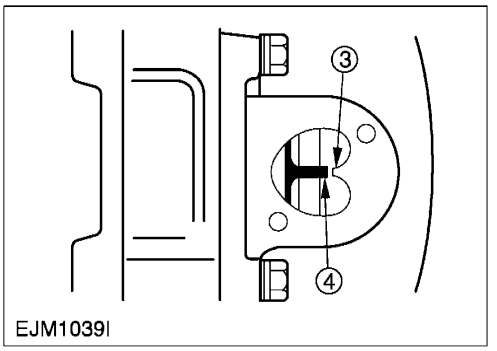

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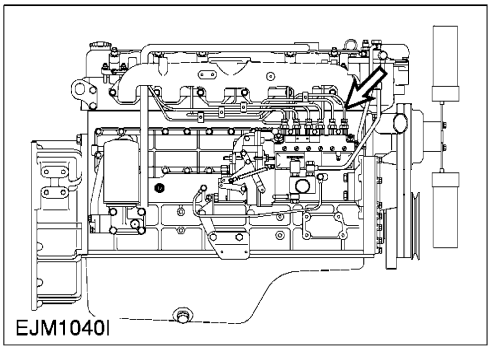
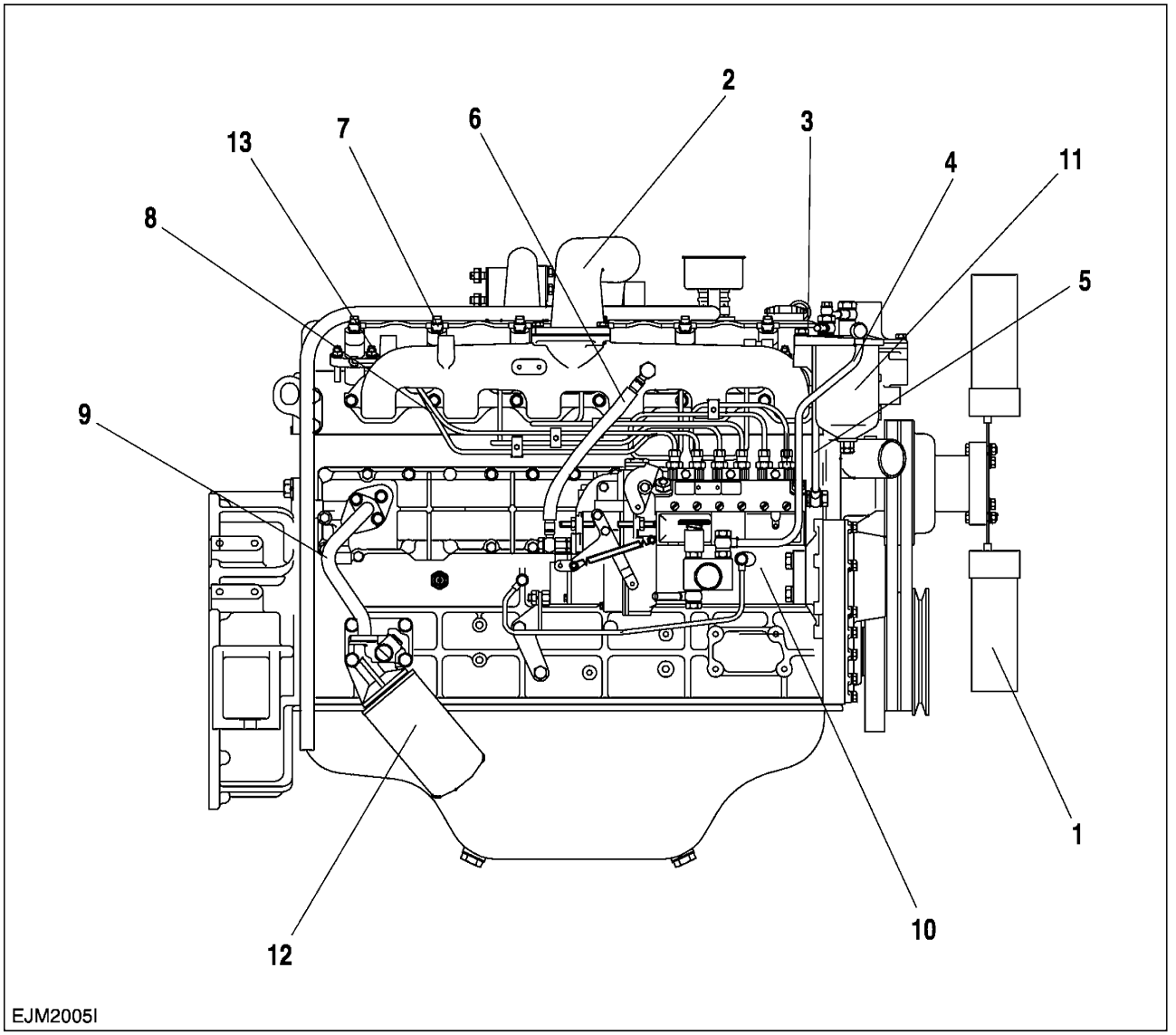
3) #1 plunger of injection can be visually sured when disconnect injection pipe.


EJM1040I

• DB58T

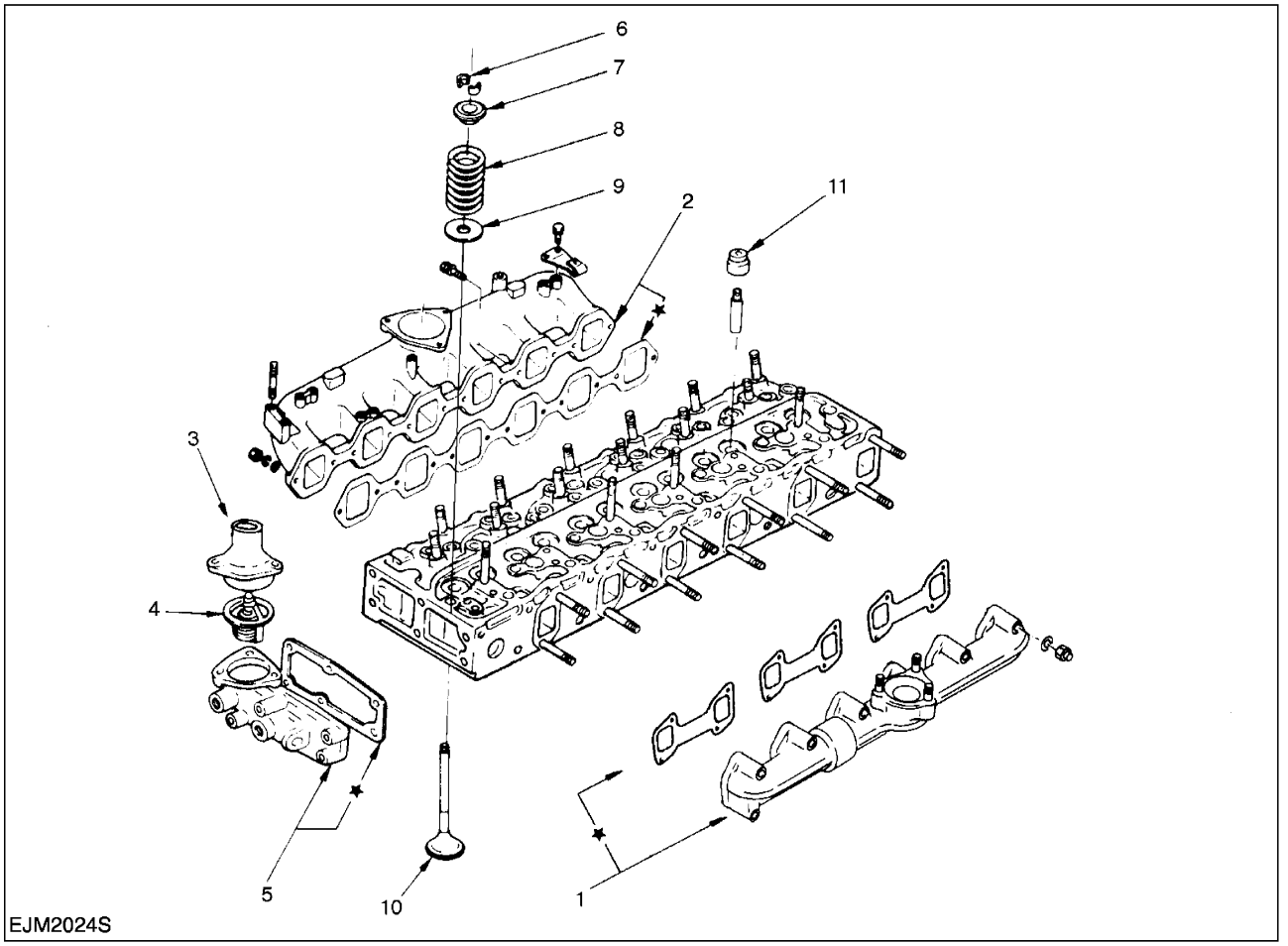


<Disassembly Steps>

1. Cooling fan
2. Intake pipe
3. Fuel retrun pipe
4. Fuel pipe: fuel filter to injection pump
5. Fuel pipe; feed pump to filter
6. I/P boocom hose (T)
7. Injection pipe
8. Injection nozzle
9. Oil pile: oil filter- oil cooler
10. Injection pump
11. Fuel filter
12. Oil filter
13. Preheating plug

2.2.6. Cylinder Head Disassembly Steps

• DB58



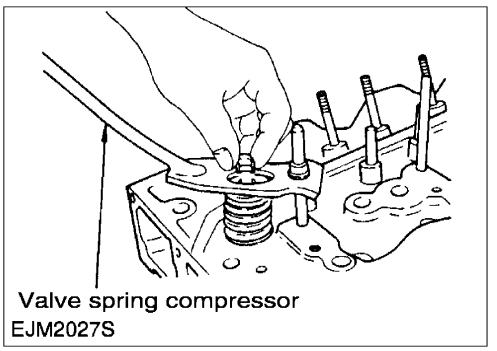
<Disassembly Steps>

1. Exhaust manifold and gasket
2. Intake manifold and gasket
3. Coolant outlet pipe
4. Thermostat
5. Thermostat housing and gasket
6. Sprint collar
7. Spring seat (upper) or *Valve rotator
8. Valve spring
9. Spring seat (lower)
10. Valve
11. Valve stem oil seal

Importance

• **Split collar**

Use the valve spring compressor when remove split collar

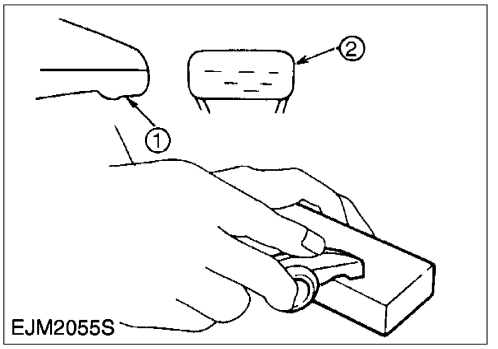


2.3.6. Rocker Arm Correction

Check of the valve stem contact part of roker arm

Grind contact surface with an abradant if it is irregualitly contacted.

Replace the rocker arm if it is extremely damaged contact surface.



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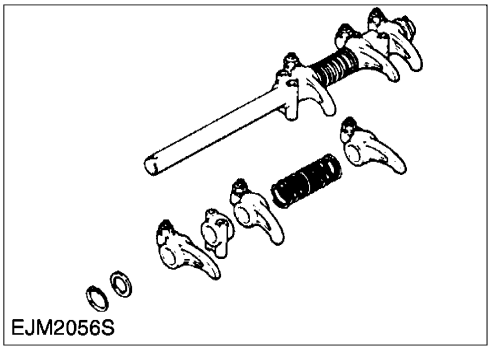
• **Rockder Arm Shaft and Rocker Arm**

Check the disassembled parts wehter damage or not.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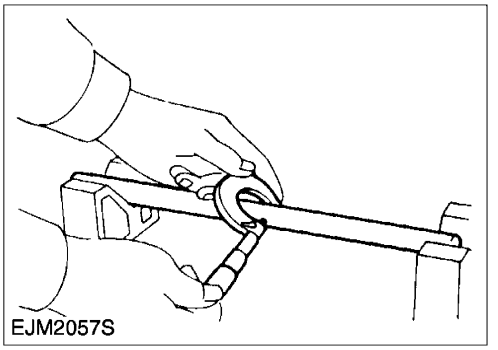
• **Outside Diameter of Rocker Arm Shaft**

Measure the outside diameter of rocker arm with the micrometer.

Replace shaft if measured value escaped from the specified limit.

	Standard	Limit
Outside Diameter of Rocker Arm Shaft	18.98-19.00 mm	18.85 mm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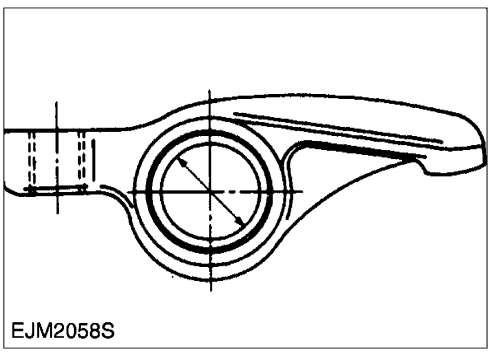
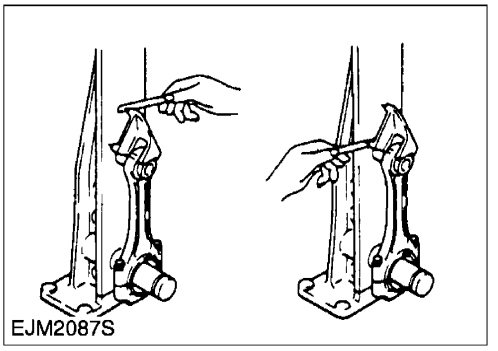
Clearance of Rocker Arm Shaft and Rccker Arm

1) Measure tne inside diameter of rocker arm bushing with tne vernier caliper.
2) Measure the outside diameter of rocker arm. Replace the rocker arm or rocker arm shaft if measured value escaped from the specified limit.


EJM2058S

	Standard	Limit
Inside Diameter of Rocker Arm Bushing	19.01-19.03 mm	19.05 mm

2.3.11. Connecting Rod


EJM2087S

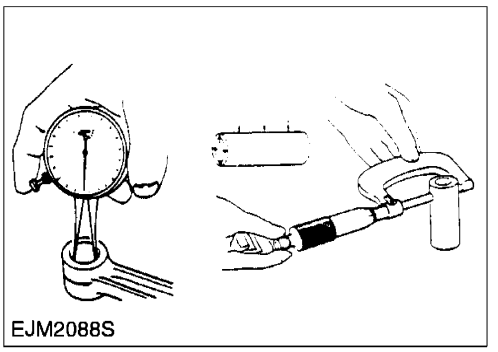
• Connecting Rod Alignment

Measure the changed between big end and small end from the calibration of connecting rod balancer.

Replace the connecting rod if the measured value escaped from the specified limit.

Connecting Rod Balancer (Standard 100 mm)

	Standard	Limit
Balancer	0.05 mm	0.20 mm


EJM2088S

• Piston Pin and Small End Bushing clearance

Measure an inside of small end pushing and outside of pin with the caliper gauge and micrometer.

Replace a connecting rod bush or piston pin if the measured value escaped from the specified limit.

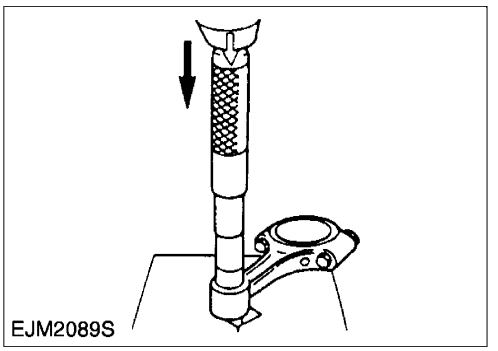
	Standard	Limit
Clearance of Piston Pin & Bushing	0.010-0.030 mm	0.05 mm

1) Fix connecting rod to vice.

2) Pull out connecting rod bush as of the using brass rod with the Press or hammer.

• Assemble of Connecting Rod Bush

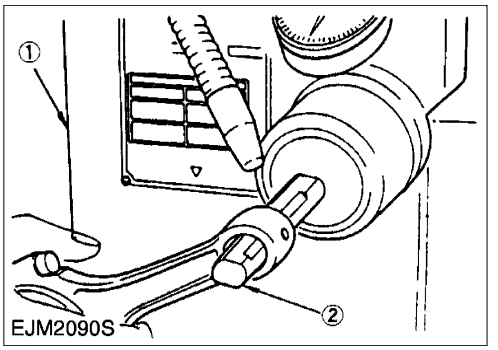
Use special jig when assemble connecting rod bush.


EJM2089S

⚠【CAUTION】 Align connecting rod bush oil port and connecting rod oil port.

3) Grinde the piston pin hole with grinder or adjustable pilot reamer.

	Standard
Connecting Rod Bush Inside Diameter	35.017-35.025 mm



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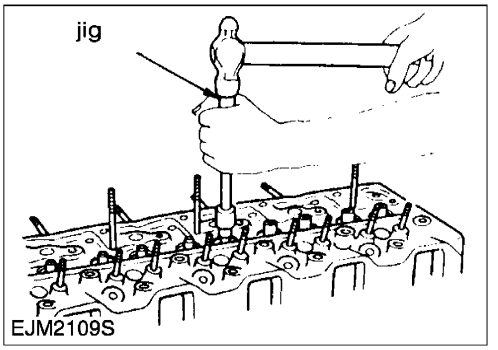
Warning

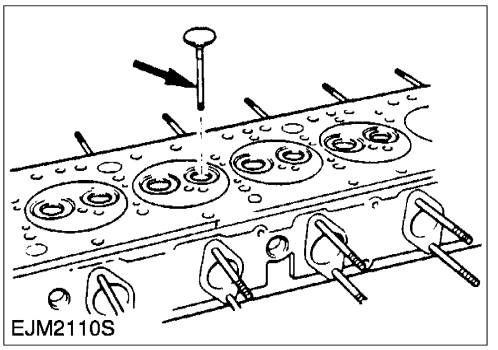
- **Valve Stem Oil Seal**

1) Spread the engine oil to oil seal and the assembled part.
2) Assemble the valve stem oil seal as it is the using jig.



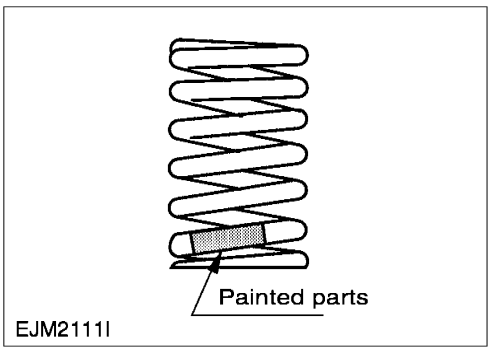
- **Intake and Exhaust Valves**

1) Put up the cylinder head on plate.
2) Spread the engine oil to valve stem.
3) Assemble guide position when it is an overhauling valve.



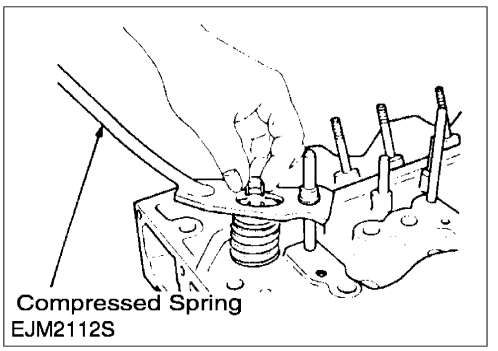
- **Spring of Intake and Exhaust Vavle**

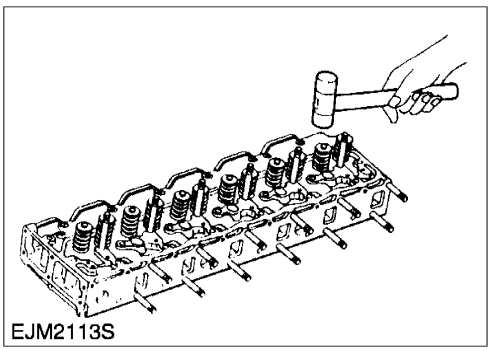
Assemble the valve spring that it is the bottom painted parts.



- **Spring Seat Split Pin**

1) Assemble the split pin with the spring compressed jig as it is a pressing spring.
2) After assemble split pin, completely assemble split pin as it is tapping with the rubber hammer.



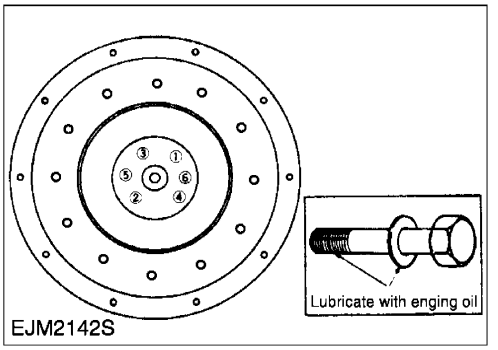


Importance

- **Flywheel**

1) Apply engine oil on the flywheel bolt.

2) Orderly tighten the fly wheel bolt.(see figure)

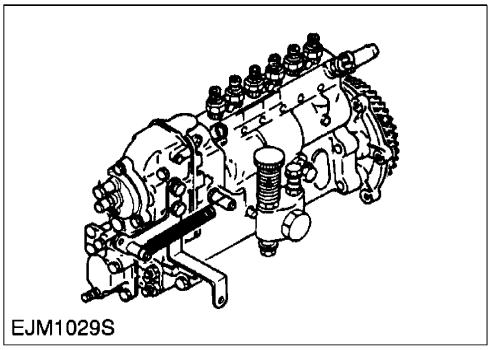


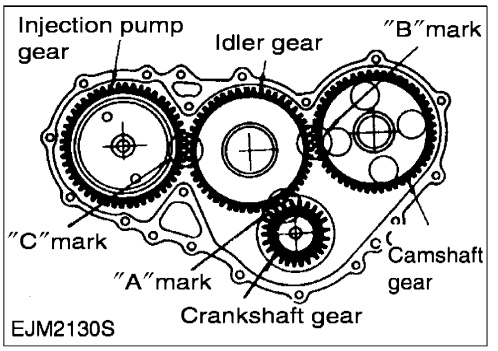
Bolt Torque	22.3±2.2 kg · m

- **Injection Pump**

Tighten the injection pump bolt as it is a specified torgue after assemble the injection pump that it was agreed idler gear angle "C" carving seal and injection pump driving gear angle "C".

Bolt Torque	2.6±0.5 kg · m

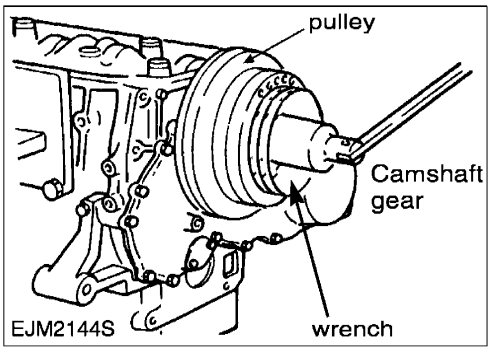




- **Crank shaft pulley nut**

Tighten a nut with wrench.

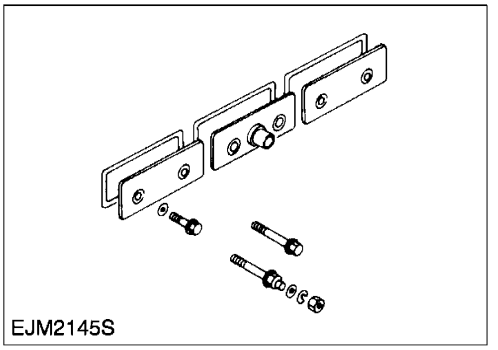
Torque	60.0±5.0 kg · m



- **Tappet Chamber Cover**

Tighten a bolt spread sealant at the gasket.

Torque	2.6±0.5 kg · m



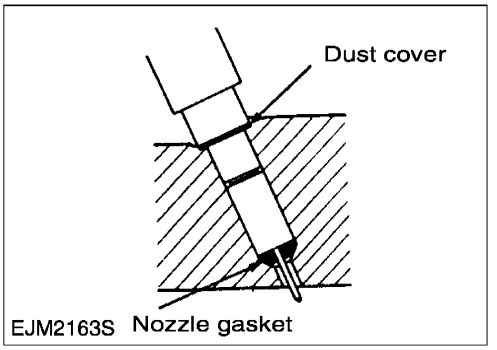
Importance

- **Injection Nozzle**

Ajdust the injection opening pressure with an adjustment screw which is utilizing the nozzle tester.

Utilize a new gasket and dust cover when it is assemble the nozzle.

Torque	1.9±0.2 kg · m



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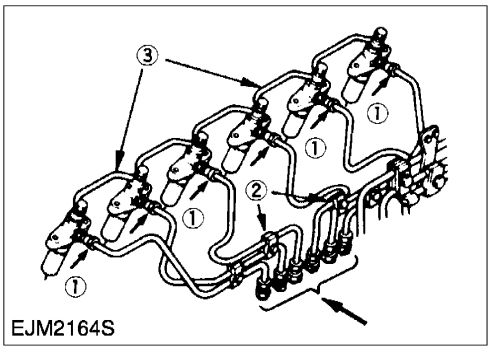
- **Fuel Injection Pipe**

Surely tighten the delivery valve holder as it is a specified torque.

It will be reason to leakage from the control rack and pipe if it is in excessive tightening.

Torque	3.1±0.2 kg · m



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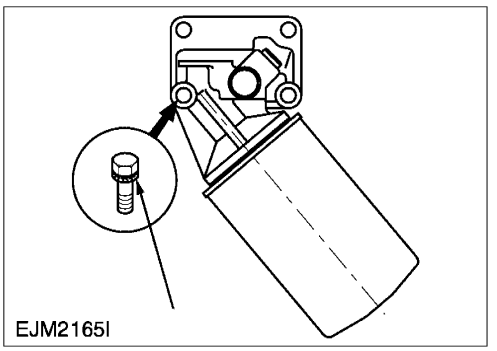
- **Oil Filter**

Torque	4.3 ~ 6.3 kg · m

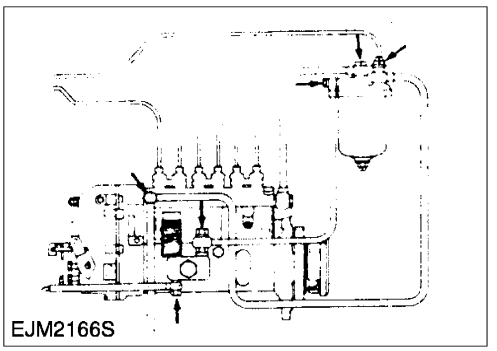

EJM2165I

- **Fuel Pipe**

Tighten the joint bolt as it is a specified torgue when it is setting up fuel pipe not so as it is a changed to combine check bolt or valve joint.

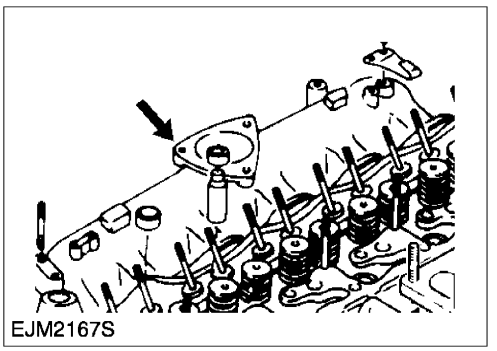
Install the intake pipe and tighten the intake pipe flange bolts to the specified torque.

Torque	1.7±0.1 kg · m


EJM2166S

- **Suction Pipe**

Torque	2.6±0.5 kg · m


EJM2167S

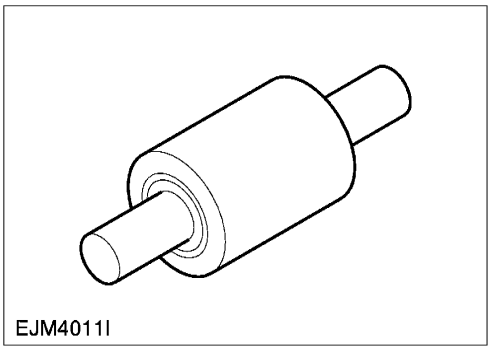
- **Adjustment of Injection Timing**

See 1.5. "maintenance".

• **Inspection And Repair**

Correct and replace if it is found the worn, defect or others when check it.

<Unit Bearing>



EJM4011I

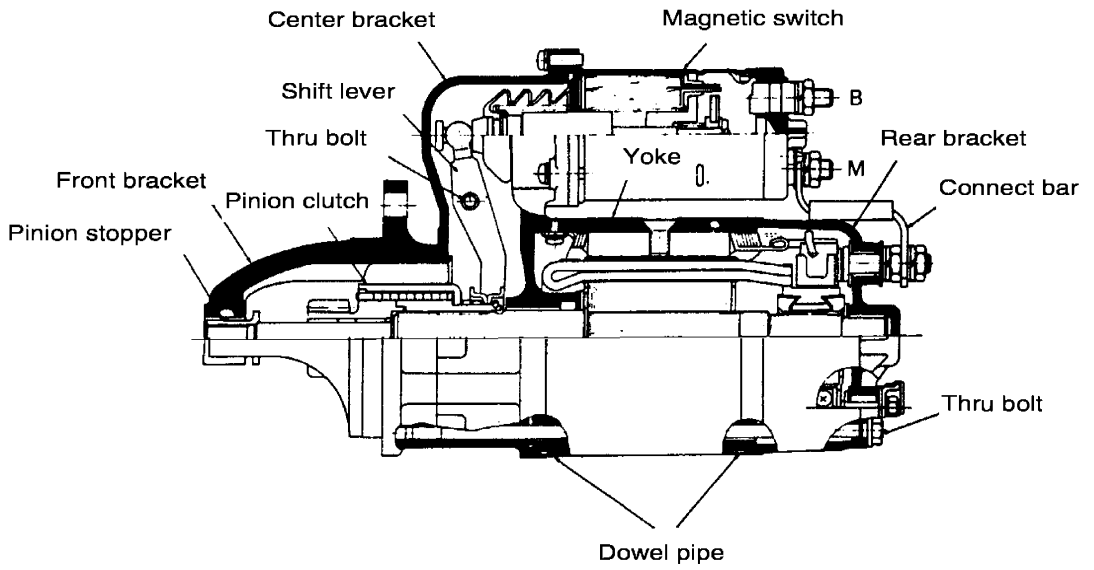
6. EINGINE ELECTRICALS

6.1. Starter motor

- **Main data and specifications**

Rated voltoge	24V
Rated output	4.5KW/2.5KW
Rating	30 sec
Direction of rotation	clockwise
(viewed from the pinion side)	
Operating speed	More than 6500 rpm(No load)
	More than 1600 rpm(Load)

- **Construction**



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