



SERVICE MANUAL INFORMATION

**SB-17-038 ENGINE COMPRESSION PRESSURE
LIMIT WORKSHOP MANUAL CORRECTION**

**GROUP: SERVICE MANUAL UPDATE
BULLETIN NO: SB-17-038
DATE: 12-19-2017**

SUBJECT VEHICLES: 11MY-18MY Conventional Trucks equipped with an J08E and 11MY-18MY COE Trucks equipped with an J05E.

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.

OVERVIEW:

Workshop manual correction of engine compression pressure limit.

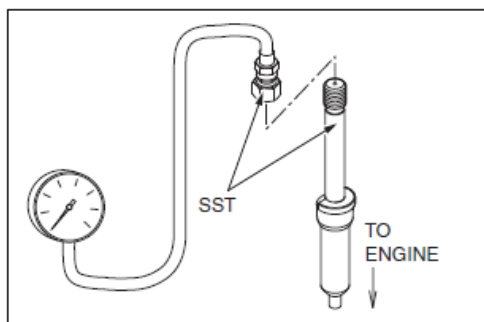
Engine	Items	Compression pressure : Unit: MPa {kgf/cm ² , lbf/in. ² }
J05E	Limit	2.7 {28, 392}
J08E	Limit	2.3 {24, 340}



COE (300)

5-4

MOUNTING AND DISMOUNTING THE ENGINE (J05E)



SHTS021270400002

2. MEASUREMENT

- (1) Attach the SST to the cylinder nozzle seat for measuring compression pressure by using the nozzle clamp and clamp mounting bolt.

SST: Compression gauge adapter

Part No.	Applicable parts
S0955-21110	Insert to the injector installation area.
S0955-21030	Adapter to be selected according to the thread size of air gauge.
S0955-21060	

- (2) Turn the starter to measure the compression pressure.

⚠ CAUTION

- Do not operate the starter continuously for 15 seconds or more.
- The air cleaner is removed; Make sure to avoid entry of dirt.

- (3) Measure the compression pressure of each cylinder continuously.

Engine speed: 190 r/min.

Items	Compression pressure: Unit: MPa {kgf/cm ² , lbf/in. ² }
Standard value	3.0 {31, 435}
Permissible limit	2.7 {28, 392}

- (4) Overhaul the engine if the compression pressure is at or below the permissible limit.
- (5) Put back the removed parts in place after measurement.
- (6) Use the HINO DX II to delete the past malfunctions.
(Refer to the HINO DX II user's manual.)

NO DTC

EN01H02127030602016023

ENGINE LOW POWER, MISS-FIRE, HESITATION, KNOCKING, RUNNING ROUGH

No	Parts	Check contents	Judgement	Check (Pass/Fail)	If fail
1	Injector	Injection quantity at 1,500r/min No load Coolant temp. more than 80 °C {176 °F}	10 (mm ³ /st) or more		Injector Replace
2	Injector	Cylinder cut-off test (Detail on next page A)	Find knocking cylinder		Injector Replace
3	Air filter	Check restriction or contamination of the air cleaner element (Detail on next page B)	No restriction Genuine parts		Filter Replace
4	Air hoses	Visually check (Detail on next page C)	No bending No leaking		Fix Replace
5	Diesel throttle (Intake throttle)	Visually check Active test by HINO DX II (Detail on next page D)	No excessive dirt inside Drilled 3 holes Following target		Drill holes
6	Mass air flow meter	Mass air flow test at 100% Free acceleration (Detail on next page E)	Difference between old and new sensor less than 10%		MAF Replace
7	Exhaust Brake	Visually check Open and close butterfly valve (Detail on next page F)	No sticking No seizing		Exhaust brake Replace
8	Engine	Compression test	More than 392psi		Overhaul

CHANGE

CONVENTIONAL (600)

ENGINE INTRODUCTION (J08E)

EN01-19

OVERHAUL CRITERIA

EN0160101H300002

FACTORS TO DETERMINE THE ENGINE OVERHAUL

1. LOW COMPRESSION PRESSURE.

(1) Before measurement

- Charge the battery completely.
- Set the valve clearance to the correct value.
- Idle the engine (Coolant temperature at 80°C {176°F}).
- Remove the air cleaner.
- Remove all injectors.

(2) Measurement

- Insert the gauge adaptor into the nozzles.

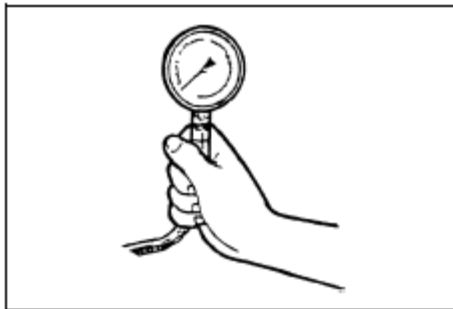
SST:

Compression gauge adaptor (A) (S0955-21110)

Compression gauge adaptor (B) (S0955-21030)

Compression gauge adaptor (B) (S0955-21060)

- Run the engine with the starter and measure the compression pressure.



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Standard	Limit	Difference between each cylinder
3.2-3.4 MPa {33-35 kgf/cm ² , 467-496 lbf/in ² }	2.3 MPa {24 kgf/cm ² , 340 lbf/in ² }	0.3 MPa {3 kgf/cm ² , 43 lbf/in. ² } or less
Engine revolution 150r/min		

NOTICE

Do not operate the starter for more than 15 seconds.

- Measure the compression pressure of each cylinder.

NOTICE

Do not allow gas leakage from the seal face.

- Reassemble the removed parts.

2. ENGINE OIL PRESSURE.

- Check the oil pressure warning light when the oil and coolant temperature is hot [about 80°C {176°F}].

- If the warning light lightens, check the oil level.
- Check oil deterioration.
If oil quality is poor, replace with a suitable grade oil.
- Remove the oil pressure switch and install the oil pressure gauge.



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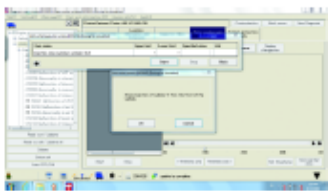
CHANGE

NO DTC

EN01H16F01030F03001014

Engine low power, miss-fire, hesitation, knocking, running rough

No	Parts	Check contents	Judgment	Check (Pass/Fail)	If fail
1	Injector	Cylinder cut-off test (Detail on next page A)	Find knocking cylinder		Injector replace
2	Air filter	Check restriction or contamination of the air cleaner element (Detail on next page B)	No restriction Genuine parts		Filter Replace
3	Air hoses	Visually check (Detail on next page C)	No bending No leaking		Fix Replace
4	Intake throttle	Visually check Activation test by HINO DX II (Detail on next page D)	No excessive dirt inside Drilled 3 holes Following target		Drill holes
5	Mass air flow sensor	Mass air flow test at 100 % Free acceleration (Detail on next page E)	Difference between old and new sensor less than 10 %		MAF Replace
6	Exhaust Brake	Visually check Open and close butterfly valve (Detail on next page F)	No sticking No seizing		ExB Replace
7	Engine	Compression test	More than 340 psi		Overhaul

A	Cylinder cut-off test		
		Engine ↓ Data monitor and Active test ↓ Active test Setting ↓ Injection stop cylinder, cylinder No.xx. ↓ Start/OK	1. Park vehicle with parking brake set, and chock wheels. 2. Set engine speed at 1,500 r/min by cruise control switch. 3. Check each cylinder for decreased level of knock. If the knock decreases during cut out test, that cylinder should be considered abnormal fueling injector.
B	Air filter visual inspection		
			