

TECH TIP

2011MY-2014MY Conventional Expected Values

SUBJECT VEHICLES:

2011MY-2014MY conventional trucks with a J08E engine

Note: This technical tip is provided as technical information and is not authorization for a warrantable repair.

CONDITION:

During engine performance diagnostics, comparative readings from a like engine can be useful. Below are data points from a known good engine to use for comparisons.

14 MY Conventional Truck J08E 70 Degree Ambient Temperature

	Idle	Idle With Brake On	980 RPM	980 With Brake On	1500 RPM
Engine revolution	750 rpm	750 rpm	980 rpm	980 rpm	1500 rpm
Speed	0 mph	0 mph	0 mph	0 mph	0 mph
Intake air temperature (Intake Manifold)	87.8° F (31° C)	89.6° F (32° C)	116.6° F (47° C)	96.8° F (36° C)	122° F (50° C)
Intake air flow rate	43 g/s	43 g/s	32.1 g/s	53 g/s	55 g/s
PTO status identification	0	0	0	0	0
Actual common rail pressure	5061.8 psi (34.9 MPa)	5061.8 psi (34.9 MPa)	8948.8 psi (61.7 MPa)	9659.5 psi (66.6 MPa)	13619.04 psi (93.9 MPa)
Atmospheric pressure	14.2 psi (98 Kpa)	14.2 psi (98 Kpa)	14.2 psi (98 Kpa)	14.2 psi (98 Kpa)	14.2 psi (98 Kpa)
Power supply voltage	13.7 v	13.7 v	13.7 v	13.7 v	13.7 v
Intake air temperature (Air flow)	86° F (30° C)	84.2° F (29° C)	84.2° F (29° C)	84.2° F (29° C)	84.2° F (29° C)
Engine coolant temperature	174.2° F (79° C)	174.2° F (79° C)	177.8° F (81° C)	177.8° F (81° C)	181.4° F (83° C)
Accelerator pedal position sensor 1	1.6 v	1.6 v	1.6 v	1.6 v	1.6 v
Accelerator pedal position sensor 2	3.2v	3.2v	3.2v	3.2v	3.2v
Parking switch (CAN reception)	1	1	1	1	1
Injection quantity	10.65 mm3/st	19.05 mm3/st	10.38 mm3/st	21.43 mm3/st	12.15 mm3/st
Target EGR opening	38%	0%	40%	0%	42%
Target VNT opening	70%	74%	65%	0%	59%
Target engine speed	750 rpm	750 rpm	980 rpm	980 rpm	1500 rpm
Target common rail pressure	5076.3 psi (35 MPa)	5076.3 psi (62 MPa)	5076.3 psi (62 MPa)	9717.53 psi (67 MPa)	13633.55 psi (94 MPa)
Final accelerator opening	0	0	0	0	0
G Active identification	1	1	1	1	1
NE Active identification	1	1	1	1	1
Catalyst deterioration temporary judgment identification	0	0	0	0	0
Regeneration switch ON identification	0	0	0	0	0
Cruise cancellation identification	1	1	1	1	1
Cruise enabling identification	0	0	0	0	1
PCV closing valve time	0	0	0	0	0
DPR mode	0	0	0	0	0

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	Idle	Idle With Brake On	980 RPM	980 With Brake On	1500 RPM
DPR deposit volume	0.35 g	0.35 g	0.35 g	0.35 g	0.35 g
Completion identification for pump difference learning	2	2	2	2	2
Actual VNT opening	0	0	64	0	59
SCV last drive Duty	49%	49%	49%	47%	46%
SCV drive current value	2032 mA	1999 mA	1977 mA	1907 mA	1881 mA
SCV drive current feedback value	0	0	0	0	0
#1 Final injection quantity for FCCB Intercylinder correction	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st
#2 Final injection quantity for FCCB Intercylinder correction	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st
#3 Final injection quantity for FCCB Intercylinder correction	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st
#4 Final injection quantity for FCCB Intercylinder correction	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st
#5 Final injection quantity for FCCB Intercylinder correction	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st
#6 Final injection quantity for FCCB Intercylinder correction	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st	-0.2 mm3/st
VNT diagnosis information 1	0	0	0	0	0
VNT diagnosis information 2	0	0	0	0	0
EGR diagnosis information 1	0	0	0	0	0
EGR diagnosis information 2	0	0	0	0	0
Additional quantity of fuel	0	0	0	0	0
Urea tank refill identification	0	0	0	0	0
Lock-up signal	0	0	0	0	0
AMT clutch connection (CAN reception)	0	0	0	0	0
Neutral signal (CAN reception)	1	1	1	1	1
Power cut request (CAN reception)	0	0	0	0	0
Economy running requirement	0	0	0	0	0
SCR catalyst exhaust gas temperature (DCU reception)	292.64° F (144.8° C)	292.64° F (144.8° C)	288.32° F (142.4° C)	288.32° F (142.4° C)	284.36° F (140.2° C)
Exhaust temperature sensor at ATC	-20	-20	-20	-20	-20
Exhaust gas temperature before oxidation catalyst	320.9° F (160.5° C)	318.3° F (159.1° C)	312.62° F (155.9° C)	307.22° F (152.9° C)	298.04° F (147.8° C)
PWM accelerator opening	0	0	0	0	0
Actual opening of intake throttle valve (%)	0	0	0	0	0
Exhaust brake light	0	1	0	1	0
Preheater light	0	0	0	0	0
MIL(Check engine light)	0	0	0	0	0
WIF light	0	0	0	0	0
oil pressure lights	0	0	0	0	0
DPR regenerating indicator light	0	0	0	0	0
DPR regenerating display light	0	0	0	0	0
Engine retarder light	0	0	0	0	0
Exhaust brake solenoid valve	0	1	0	1	0
Starter block relay	1	1	1	1	1
Idle stop enabling signal	1	1	1	1	1
PTO accelerator sensor opening	0	0	0	0	0

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	Idle	Idle With Brake On	980 RPM	980 With Brake On	1500 RPM
PTO accelerator sensor voltage	0	0	0	0	0
Fuel filter water level sensor	0	0	0	0	0
Immobilizer engine injection stop request	0	0	0	0	0
ABS operations identification	0	0	0	0	0
Idle stop suspension request	0	0	0	0	0
Brake switch	0	0	0	0	0
Fuel temperature	46	46	46	46	46
Target opening of intake throttle valve (%)	0	0	0	0	0
Pump current target final value	1827.152 mA	1796.713 mA	1776.411 mA	1718.31 mA	1681.07 mA
Turbocharger speed	0	0	0	0	0
Accelerator sensor voltage 1	0.78 v	0.78 v	0.78 v	0.78 v	0.78 v
Accelerator sensor voltage 2	1.61 v	1.6 v	1.59 v	1.59 v	1.59 v
Start switch	0	0	0	0	0
Neutral switch	1	1	1	1	1
Stop light switch	0	0	0	0	0
DPR manual regeneration switch	0	0	0	0	0
Oil pressure warning switch	0	0	0	0	0
Engine stop switch	0	0	0	0	0
PTO switch	0	0	0	0	0
Power cut system switch	0	0	0	0	0
Key switch	1	1	1	1	1
Idle switch	1	1	1	1	1
Glow relay	0	0	0	0	0
Actual EGR opening	0	0	38	0	39
EGR cooler outlet coolant temperature	0	0	0	0	0
Intake air pressure	14.5 psi (100 Kpa)	14.0 psi (97 Kpa)	14.7 psi (102 Kpa)	13.9 psi (96 Kpa)	15.5 psi (107 Kpa)
DPR differential pressure	.12 psi (.82 Kpa)	.03 psi (.25 Kpa)	.02 psi (.16 Kpa)	.04 psi (.3 Kpa)	.04 psi (.31 Kpa)
DPR exhaust gas temperature (IN)	257° F (125° C)	257° F (125° C)	260.6° F (127° C)	266° F (130° C)	269.6° F (132° C)
DPR exhaust gas temperature (OUT)	293° F (145° C)	289.4° F (143° C)	284° F (140° C)	282.2° F (139° C)	282.2° F (139° C)