

Cummins Engine Co. Ltd

Diesel Engine for Vehicle Performance Data

Technical Request	
Aspiration:	Turbocharged & Inter-cooled
Emission Certification	GB17691/GB14761
Net Weight(Dry)-Engine Only-Average:	650kg
Net Weight(Dry)-Engine with Heat Exchanger-Average	680kg
Compression Ratio:	16.6:1
Distance from Center of Gravity to the Front Engine Block	427mm
Distance from Center of Gravity to the Crankshaft Centerline	163mm
Maximum Bending Moment at Rear Face of Block	1356 N.m
Limit load of Thrust Bearing:	
Instantaneous maximum:	5338 N
Continuous maximum	2670 N
Performance Characteristic	
Idle Speed:	700 ± 100 rpm
Maximum non-load speed:	2500rpm
Over speed performance(within 15 seconds):	3500rpm
Maximum Altitude at Continuous Operation:	2000m
The clutch torque @ 800rpm:	1210N.m
When install exhaust braking:	
The limit exhaust pressure of Turbocharger export @3150 rpm	450 kPa
Maximum power of Exhaust brake	114kw

Engine	Oil	Air	Air Pressurized		Exhaust	Exhaust	Fuel	Heat Energy	
Speed	Pressure	Flow			Flow	Temperature	Consumption	Loss	
(RPM)	(kPa)	(m3/min)	Flow	Pressure	(m3/min)	(°C)	(l/hr)	Coolant	Air
			(kg/min)	kPa				(KW)	(KW)
2200	370	25	1618	180	62	515	75	120	75
1400	250	16.5	1043	140	38	526	48	74	34

Engine Model: L360 30 Curve No.: FR93032 All values within ±5%.

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LUBRICATION SYSTEM		
Oil Sump Capacity:		
Upper Limit:		19.0L
Lower Limit:		15.2L
Capacity of the whole system:	27.6 L	
AIR SYSTEM		
Air intake maximum temperature rise from Outside to the Turbocharger	15℃	
The allowable maximum restriction when use Dry Air Filter		
Medium: kPa (mmH2O)	2.9(300)	
Heavy: kPa (mmH2O)	3.7(380)	
The allowable maximum restriction when use dirty Filter Element: kPa (mmH2O)	6.2(635)	
TURBOCHARGED & INTERCOOLED		
Environment design parameters	Stage II	Stage III
The highest temperature of intake manifold:	55°C	50°C
Temperature after the cooling of the intercooler	25°C	20°C
The maximum allowiable cold pressure difference before and after the intercooler:	-	kPa(mmHg)
The allowable minimum diameter of the intake manifold:	100/(120) in u(inining)	
EXHAUST SYSTEM		
The maximum exhaust resistance with exhaust manifold and muffler: kPa(mmHg)	1().0(75)
The allowable minimum diameter of the exhaust manifold:	75mm	
FUEL SYSTEM		
The maximum resistance of Fuel Pump when use clean filter	15	0mmHg
Maximum fuel return oil resistance:	520mmHg	
COOLING SYSTEM		
Engine Coolant Capacity:	1	1.1 L
The range of temperature adjustment for the Thermostat:		-95 ℃
The maximum pressure of Coolant(without pressure cap and thermostat closed)		90kPa
The highest coolant temperature (at engine exports):		100°C
Maximum degassing time		25mins
Maximum coolant flow to accessories		6 L/min
The lowest coolant temperature		0 £/mm 70℃
Minimum speed of water-filling		9 l/min
Minimum coolant expansion volume relative to the system capacity	1	6 %
Water tank capacity without water expansion		6 L
water tank capacity without water expansion		υL

Minimum allows pressure of pressure cap:	50	kPa	
The alarm temperature of the coolant	10	104°C	
The open temperature of louver	N/	N/A	
Cooling ability of cooling system:	Stage II	Stage III	
The limit environmental temperature at rated speed	45 ℃	42 °C	
The limit environmental temperature at peak torque	40℃	37℃	
24V ELECTRICAL SYSTEM			
Maximum resistance of starting circuit	0.00	0.002Ω	
The cold start current when engine and the clutch separate: CCA	510		
COLD STARTING SYSTEM			
The lowest cold starting temperature without auxiliary starting device	-12°C @120rpm		
The lowest cold starting temperature with starting device	-35°C@	180rpm	
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All data is subject to change without notice- contact Cummins for most recent date	α.		