

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2001	1DZXL04.8006	3.19, 4.79	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Smoke Puff Limiter			Pump, Generator Set	
ENGINE MODELS (rated power in kilowatts, kw)	See Attachment (4 pages)			

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
37≤KW<130	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
		CERT	--	8.4	--	--	--	3	3	5

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 31ST day of May 2001.



R. B. Summerfield, Chief
 Mobile Source Operations Division

Model Attachment (pg 1 of 4)

List of emission and components

ED# U-R-13-35

1DZ .8006

Engine type	Displacement	Engine code	Nominal Power ± 5%	Nominal Power ± 5%	Nominal speed ± 50 rpm	Mean effective pressure	Injection rate at nom. speed, ±4mm³	Peak torque ± 5%	Speed at peak torque ± 100 rpm	Mean effective pressure at peak torque	Injection rate at peak torque ±4mm³	Torque at 1000 rpm	Mean effective pressure at 1000 rpm	Injection rate at 1000 rpm	Low idle (+ 800rpm, dep. on engine applic.)	High idle (+300 rpm, dep. on engine applic.)	Fuel injection pump	Fuel injection nozzle	Camshaft	Injection timing (±1°)	Speed governor	Speed governor, optionally	Smoke limiter, part of speed governor, - 5mm³	Turbocharger
	cm³		HP	kW	rpm	bar	mm³/ stroke	Nm	rpm	bar	mm³/ stroke	Nm	bar	mm³/ stroke	rpm	rpm	part number	description	draw. numb.	*btcd	description	mm³/ stroke - rpm	description	
BF6M1012C	4788	C123	165	123	2500	12.33	75	566	1500	14.86	82				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C118	158	118	2500	11.83	72	535	1500	14.04	78				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C111	149	111	2500	11.13	68	508	1500	13.34	74				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C104	139	104	2500	10.43	64	479	1500	12.57	70				650	2600	02111636KZ	02126844KZ	04195607UA	10	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C116	155	116	2300	12.64	75	566	1500	14.86	82				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C112	150	112	2300	12.20	73	535	1500	14.04	78				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C105	141	105	2300	11.44	68	508	1500	13.34	74				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C99	133	99	2300	10.79	65	479	1500	12.57	70				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C113	151	113	2200	12.87	74	566	1500	14.86	82				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C108	145	108	2200	12.30	71	535	1500	14.04	78				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C102	137	102	2200	11.62	67	508	1500	13.34	74				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C96	129	96	2200	10.94	64	479	1500	12.57	70				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C110	147	110	2100	13.13	74	566	1500	14.86	82				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C104/1	139	104	2100	12.41	70	535	1500	14.04	78				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C99/1	133	99	2100	11.81	67	508	1500	13.34	74				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C94	126	94	2100	11.22	63	479	1500	12.57	70				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012C	4788	C101	135	101	2000	12.66	72	535	1500	14.04	78				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S2A157B	
BF6M1012C	4788	C96/1	129	96	2000	12.03	68	508	1500	13.34	74				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S2A157B	
BF6M1012C	4788	C90	121	90	2000	11.28	67	479	1500	12.57	70				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S2A157B	
BF6M1012C	4788	D119	159	119	2400	12.43	74	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02111710KZ	04195607UA	10	02111252UA	n. a.	S2A149C	
BF6M1012C	4788	D108	145	108	2400	11.28	67	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02111710KZ	04195607UA	10	02111252UA	n. a.	S2A149C	
BF6M1012C	4788	D111	149	111	2000	13.91	79	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S2A157B	
BF6M1012C	4788	D100	134	100	2000	12.53	72	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S2A157B	
BF6M1012C	4788	D105	141	105	1846	14.25	81	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S2A157B	
BF6M1012C	4788	D95	127	95	1846	12.90	73	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S2A157B	
BF6M1012C	4788	D97	130	97	1800	13.50	76	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126846KZ	04195607UA	9	02111252UA	n. a.	S2A157B	
BF6M1012C	4788	D92	123	92	1800	12.81	73	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126846KZ	04195607UA	9	02111252UA	n. a.	S2A157B	
BF6M1012C	4788	D88	118	88	1800	12.25	69	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126846KZ	04195607UA	9	02111252UA	n. a.	S2A157B	
BF4M1012C	3192	C82	110	82	2500	12.33	75	376	1500	14.81	82				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C78	105	78	2500	11.73	72	357	1500	14.06	78				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C74	99	74	2500	11.13	69	338	1500	13.31	74				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C70	94	70	2500	10.53	65	319	1500	12.56	70				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C78/1	105	78	2300	12.75	75	376	1500	14.81	82				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C74/1	99	74	2300	12.09	72	357	1500	14.06	78				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C69	92	69	2300	11.28	67	338	1500	13.31	74				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C66	88	66	2300	10.79	67	319	1500	12.56	74				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	

Engine type	Displacement	Engine code	Nominal Power ± 5%	Nominal Power ± 5%	Nominal speed ± 50 rpm	Mean effective pressure	Injection rate at nom. speed, ±4mm³	Peak torque ± 5%	Speed at peak torque ± 100 rpm	Mean effective pressure at peak torque	Injection rate at peak torque ±4mm³	Torque at 1000 rpm	Mean effective pressure at 1000 rpm	Injection rate at 1000 rpm	Low idle (+800rpm, dep. on engine applic.)	High idle (+300 rpm, dep. on engine applic.)	Fuel injection pump	Fuel injection nozzle	Camshaft	Injection timing (±1°)	Speed governor	Speed governor, optionally	Smoke limiter, part of speed governor, -5mm³	Turbocharger
	cm³		HP	KW	rpm	bar	mm³/stroke	Nm	rpm	bar	mm³/stroke	Nm	bar	mm³/stroke	rpm	rpm	part number	description	draw. numb.	*btcd	description	mm³/stroke - rpm	description	
BF4M1012C	3192	C65/3	87	65	2300	10.62	66	351	1600	13.82	78				650	2400	02111636KZ	02111710KZ	04195607UA	9	02111252UA	66-800	S1BS010D	
BF4M1012C	3192	C60/1	80	60	2300	9.81	61	324	1600	12.76	74				650	2400	02111636KZ	02111710KZ	04195607UA	9	02111252UA	66-800	S1BS010D	
BF4M1012C	3192	C75	101	75	2200	12.81	75	376	1500	14.81	82				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C72	96	72	2200	12.30	72	357	1500	14.06	78				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C68	91	68	2200	11.62	68	338	1500	13.31	74				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C64	86	64	2200	10.94	64	319	1500	12.56	70				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C73	98	73	2100	13.07	75	376	1500	14.81	82				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C69/1	92	69	2100	12.35	71	357	1500	14.06	78				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C66/1	88	66	2100	11.81	69	338	1500	13.31	74				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C63	84	63	2100	11.28	65	319	1500	12.56	70				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012C	3192	C71	95	71	2000	13.34	75	376	1500	14.81	82				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S1BS010D	
BF4M1012C	3192	C67	90	67	2000	12.59	74	357	1500	14.06	78				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S1BS010D	
BF4M1012C	3192	C64/1	86	64	2000	12.03	71	338	1500	13.31	74				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S1BS010D	
BF4M1012C	3192	C60	80	60	2000	11.28	66	319	1500	12.56	70				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S1BS010D	
BF4M1012C	3192	D79	106	79	2400	12.37	75	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02111710KZ	04195607UA	10	02111252UA	n. a.	S1BS010F	
BF4M1012C	3192	D72	96	72	2400	11.28	68	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02111710KZ	04195607UA	10	02111252UA	n. a.	S1BS010F	
BF4M1012C	3192	D73	98	73	2000	13.72	79	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S1BS010D	
BF4M1012C	3192	D66	88	66	2000	12.40	73	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S1BS010D	
BF4M1012C	3192	D70	94	70	1846	14.25	81	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S1BS010D	
BF4M1012C	3192	D64	86	64	1846	13.03	77	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S1BS010D	
BF4M1012C	3192	D65	87	65	1800	13.57	74	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126846KZ	04195607UA	9	02111252UA	n. a.	S1BS010D	
BF4M1012C	3192	D62	83	62	1800	12.95	74	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126846KZ	04195607UA	9	02111252UA	n. a.	S1BS010D	
BF4M1012C	3192	D59	79	59	1800	12.32	72	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126846KZ	04195607UA	9	02111252UA	n. a.	S1BS010D	
BF6M1012EC	4788	C125	168	125	2500	12.53	75	569	1500	14.94	82				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C120	161	120	2500	12.03	72	538	1500	14.12	78				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C113/1	151	113	2500	11.33	68	511	1500	13.41	74				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C106	142	106	2500	10.63	64	482	1500	12.65	70				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C118/1	158	118	2300	12.86	75	569	1500	14.94	82				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C114	153	114	2300	12.42	73	538	1500	14.12	78				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C107	143	107	2300	11.66	68	511	1500	13.41	74				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C101/1	135	101	2300	11.00	65	482	1500	12.65	70				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C115	154	115	2200	13.10	74	569	1500	14.94	82				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C110/1	147	110	2200	12.53	71	538	1500	14.12	78				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C104/2	139	104	2200	11.85	67	511	1500	13.41	74				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C98	131	98	2200	11.16	64	482	1500	12.65	70				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C111/1	149	111	2100	13.25	74	569	1500	14.94	82				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	

Engine type	Displacement	Engine code	Nominal Power ± 5%	Nominal Power ± 5%	Nominal speed ± 50 rpm	Mean effective pressure	Injection rate at nom. speed, ±4mm³	Peak torque ± 5%	Speed at peak torque ± 100 rpm	Mean effective pressure at peak torque	Injection rate at peak torque ±4mm³	Torque at 1000 rpm	Mean effective pressure at 1000 rpm	Injection rate at 1000 rpm	Low idle (+ 800rpm, dep. on engine applic.)	High idle (+300 rpm, dep. on engine applic.)	Fuel injection pump	Fuel injection nozzle	Camshaft	Injection timing (±1°)	Speed governor	Speed governor, optionally	Smoke limiter, part of speed governor, - 5mm³	Turbocharger
	cm³		HP	KW	rpm	bar	mm³/ stroke	Nm	rpm	bar	mm³/ stroke	Nm	bar	mm³/ stroke	rpm	rpm	part number	description	draw. numb.	°btdc	description	mm³/ stroke - rpm	description	
BF6M1012EC	4788	C105/1	141	105	2100	12.53	70	538	1500	14.12	78				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C100	134	100	2100	11.93	67	511	1500	13.41	74				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C95	127	95	2100	11.34	63	482	1500	12.65	70				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S2A149C	
BF6M1012EC	4788	C102/1	137	102	2000	12.78	72	538	1500	14.12	78				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S2A157B	
BF6M1012EC	4788	C97	130	97	2000	12.15	68	511	1500	13.41	74				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S2A157B	
BF6M1012EC	4788	C91	122	91	2000	11.40	67	482	1500	12.65	70				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S2A157B	
BF6M1012EC	4788	D122	163	122	2400	12.74	74	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02111710KZ	04195607UA	10	02111252UA	n. a.	S2A149C	
BF6M1012EC	4788	D111/1	149	111	2400	11.59	67	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02111710KZ	04195607UA	10	02111252UA	n. a.	S2A149C	
BF6M1012EC	4788	D112	150	112	2000	14.03	79	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S2A157B	
BF6M1012EC	4788	D102	137	102	2000	12.78	72	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S2A157B	
BF6M1012EC	4788	D106	142	106	1846	14.39	81	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S2A157B	
BF6M1012EC	4788	D96	129	96	1846	13.03	73	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S2A157B	
BF6M1012EC	4788	D98	131	98	1800	13.64	76	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126846KZ	04195607UA	9	02111252UA	n. a.	S2A157B	
BF6M1012EC	4788	D93	125	93	1800	12.95	73	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126846KZ	04195607UA	9	02111252UA	n. a.	S2A157B	
BF6M1012EC	4788	D89	119	89	1800	12.39	70	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126846KZ	04195607UA	9	02111252UA	n. a.	S2A157B	
BF4M1012EC	3192	C84	113	84	2500	12.63	75	378	1500	14.88	82				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C80/1	107	80	2500	12.03	72	359	1500	14.14	78				650	2600	02111246KZ	02111710KZ	04195607UA	13	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C80	107	80	2500	12.03	72	359	1500	14.14	78				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C76	102	76	2500	11.43	69	340	1500	13.39	74				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C72/1	96	72	2500	10.83	65	321	1600	12.64	70				650	2600	02111636KZ	02111710KZ	04195607UA	10	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C79	106	79	2300	12.91	75	378	1500	14.88	82				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C75/1	101	75	2300	12.26	72	359	1500	14.14	78				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C74/3	99	74	2300	12.09	71	359	1500	14.14	78				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C70/1	94	70	2300	11.44	67	340	1500	13.39	74				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C67/1	90	67	2300	10.95	65	321	1500	12.64	70				650	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C65/3	87	65	2300	10.62	65	340	1500	13.39	74				700	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	65-800	S1BS010D	
BF4M1012EC	3192	C60/1	80	60	2300	9.81	62	321	1500	12.64	70				700	2400	02111636KZ	02126844KZ	04195607UA	9	02111252UA	65-800	S1BS010D	
BF4M1012EC	3192	C76/1	102	76	2200	12.99	75	378	1500	14.88	82				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C73/1	98	73	2200	12.47	72	359	1500	14.14	78				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C69/2	92	69	2200	11.79	68	340	1500	13.39	74				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C65	87	65	2200	11.11	64	321	1500	12.64	70				650	2290	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C74/2	99	74	2100	13.25	75	378	1500	14.88	82				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C70/2	94	70	2100	12.53	71	359	1500	14.14	78				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C67/2	90	67	2100	11.99	69	340	1500	13.39	74				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C64/2	86	64	2100	11.46	65	321	1500	12.64	70				650	2190	02111636KZ	02126844KZ	04195607UA	9	02111252UA	66-800	S1BS010F	
BF4M1012EC	3192	C68/1	91	68	2000	12.78	74	359	1500	14.14	78				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S1BS010D	

Engine type	Displacement	Engine code	Nominal Power ± 5%	Nominal Power ± 5%	Nominal speed ± 50 rpm	Mean effective pressure	Injection rate at nom. speed, ±4mm³	Peak torque ± 5%	Speed at peak torque ± 100 rpm	Mean effective pressure at peak torque	Injection rate at peak torque ±4mm³	Torque at 1000 rpm	Mean effective pressure at 1000 rpm	Injection rate at 1000 rpm	Low idle (+ 800rpm, dep. on engine applic.)	High idle (+300 rpm, dep. on engine applic.)	Fuel injection pump	Fuel injection nozzle	Camshaft	Injection timing (±1°)	Speed governor	Speed governor, optionally	Smoke limiter, part of speed governor, - 5mm³	Turbocharger
	cm³		HP	KW	rpm	bar	mm³/ stroke	Nm	rpm	bar	mm³/ stroke	Nm	bar	mm³/ stroke	rpm	rpm	part number	description	draw. numb.	*bt/dc	description	mm³/ stroke - rpm	description	
BF4M1012EC	3192	C65/1	87	65	2000	12.22	71	340	1500	13.39	74				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S1BS010D	
BF4M1012EC	3192	C61	82	61	2000	11.47	66	321	1500	12.64	70				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S1BS010D	
BF4M1012EC	3192	C65/2	87	65	1900	12.86	73	359	1500	14.14	78				650	2080	02111636KZ	02126846KZ	04195607UA	8	02111252UA	66-800	S1BS010D	
BF4M1012EC	3192	D81	109	81	2400	12.69	75	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02111710KZ	04195607UA	10	02111252UA	n. a.	S1BS010F	
BF4M1012EC	3192	D74	99	74	2400	11.59	68	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02111710KZ	04195607UA	10	02111252UA	n. a.	S1BS010F	
BF4M1012EC	3192	D74/1	99	74	2000	13.91	79	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S1BS010D	
BF4M1012EC	3192	D67/1	90	67	2000	12.59	73	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S1BS010D	
BF4M1012EC	3192	D71	95	71	1846	14.46	81	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S1BS010D	
BF4M1012EC	3192	D65/1	87	65	1846	13.24	74	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S1BS010D	
BF4M1012EC	3192	D70/1	94	70	1800	14.62	82	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	8	02111252UA	n. a.	S1BS010D	
BF4M1012EC	3192	D67	90	67	1800	13.99	80	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126844KZ	04195607UA	7	02111252UA	n. a.	S1B012D	
BF4M1012EC	3192	D66/1	88	66	1800	13.78	77	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126846KZ	04195607UA	7	02111252UA	n. a.	S1B012D	
BF4M1012EC	3192	D63	84	63	1800	13.16	74	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126846KZ	04195607UA	7	02111252UA	n. a.	S1BS010D	
BF4M1012EC	3192	D60	80	60	1800	12.53	72	n. a.	n. a.	n. a.	n. a.				n. a.	n. a.	02111636KZ	02126846KZ	04195607UA	7	02111252UA	n. a.	S1BS010D	