

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	1DZXL02.7014	2.73	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Turbocharger			Pump, Generator Set, Other Industrial Equipment	
ENGINE MODELS (rated power in kilowatts, kw)	See Attachment (1page)			

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):

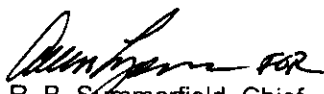
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
37≤KW<75	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
		CERT	--	8.0	--	--	--	3	3	9

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 18TH day of June 2001.


 R. B. Summerfield, Chief
 Mobile Source Operations Division

Engine type	Displacement	Engine code	Nominal Power ± 5%		Nominal speed ± 50 rpm	Mean effective pressure	Injection rate at nom. speed, ±4mm³	Peak torque ± 5%	Speed at peak torque ± 200 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 (+ 400rpm, 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	Turbocharger
	cm³		HP	kW	rpm	bar	mm³/stroke	Nm	rpm	bar	mm³/stroke	Nm	bar	mm³/stroke	rpm	rpm	description	description	draw. number	*btdc	description	description	description
BF4L1011F	2732	C53/3	71	53.0	3000	7.8	46.5	207	1800	9.5	48.5				900	3120	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C55,5/2	74	55.5	2800	8.7	49.5	218	1800	10.0	51.5				900	2920	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C53/2	71	53.0	2800	8.3	47.5	207	1800	9.5	48.5				900	2920	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C51,5/4	69	51.5	2800	8.1	46.5	207	1800	9.5	48.5				900	2920	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C55	74	55.0	2750	8.8	49.5	218	1800	10.0	51.5				900	2920	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C54/1	72	54.0	2700	8.8	47.5	207	1800	9.5	48.5				900	2820	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C53,5/1	72	53.5	2650	8.9	49	218	1800	10.0	51.5				900	2760	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C48	64	48.0	2650	8.0	44.0	207	1800	9.5	48.5				900	2760	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C43	58	43.0	2650	7.1	39.5	189	1800	8.7	44				900	2760	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C51,5/5	69	51.5	2650	8.5	47	207	1800	9.5	48.5				900	2760	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C51/1	68	51.0	2650	8.5	47	189	1800	8.7	44				900	2760	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C51,5/3	69	51.5	2550	8.9	49	218	1800	10.0	51.5				900	2650	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C51,5/2	69	51.5	2500	9.0	49	218	1800	10.0	51.5				900	2600	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C51/2	68	51.0	2500	9.0	48.5	218	1800	10.0	51.5				900	2600	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C49/1	66	49.0	2500	8.6	46.5	207	1800	9.5	48.5				900	2600	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C44/6	59	44.0	2500	7.7	42	189	1800	8.7	44				900	2600	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C50,5	68	50.5	2350	9.4	49.0	218	1800	10.0	51.5				900	2400	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C48,5/1	65	48.5	2300	9.3	48.5	218	1800	10.0	51.5				900	2400	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C46/4	62	46.0	2300	8.8	46	207	1800	9.5	48.5				900	2400	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	C46,5	62	46.5	2200	9.3	48	218	1800	10.0	51.5				900	2400	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	D53	71	53.0	3000	7.8	46.5	n.a.	n.a.	n.a.	n.a.				n.a.	n.a.	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	D40	54	40.0	1800	9.8	50	n.a.	n.a.	n.a.	n.a.				n.a.	n.a.	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	D38	51	38.0	1800	9.3	48	n.a.	n.a.	n.a.	n.a.				n.a.	n.a.	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011F	2732	D36	48	36.0	1800	8.8	45	n.a.	n.a.	n.a.	n.a.				n.a.	n.a.	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011FT	2732	C44/6	59	44.0	3000	6.4	40.0	189	1800	8.7	44				900	3120	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011FT	2732	C46/2	62	46.0	2600	7.8	42.5	199	1800	9.2	46.5				900	2710	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011FT	2732	C44/3	59	44.0	2600	7.4	41	189	1800	8.7	44				900	2710	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011FT	2732	C46/3	62	46.0	2500	8.1	43.5	199	1800	9.2	46.5				900	2600	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011FT	2732	C44/4	59	44.0	2500	7.7	42	189	1800	8.7	44				900	2600	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011FT	2732	C43,5/1	58	43.5	2500	7.6	41	189	1800	8.7	44				900	2600	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011FT	2732	C44/5	59	44.0	2300	8.4	44	199	1800	9.2	46.5				900	2400	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011FT	2732	C43,5	58	43.5	2300	8.3	41	189	1800	8.7	44				900	2400	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011FT	2732	C42,5	57	42.5	2300	8.1	42.5	189	1800	8.7	44				900	2600	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011FT	2732	C42/1	56	42.0	2300	8.0	42	189	1800	8.7	44				900	2400	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4L1011FT	2732	C42,3	57	42.3	2200	8.4	43	199	1800	9.2	46.5				900	2400	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4M1011	2732	C54	72	54.0	2600	9.1	45.0	218	1800	10.0	51.5				900	2710	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY
BF4M1011	2732	C55,5/3	74	55.5	2800	8.7	45.0	218	1800	10.0	51.5				900	2710	PFE1A80S3010	DLA144P527	04178277UB	5	04178095UA		04272458EY