



Volvo Construction Equipment

ASPHALT PAVING EQUIPMENT

Environmental Declaration



Environmental Declaration

Asphalt Paving Equipment

The following information is specified by the manufacturer and applies to machines when they leave the factory. For other technical information, see product specifications as well as the Operator's Manual.

Volvo Construction Equipment
312 Volvo Way
Shippensburg, PA USA 17257

Manufacturer:
Volvo Construction Equipment
ABG Allgemeine Baumaschinen-Gesellschaft mbH
Kuhbrueckenstrasse 18
D-31785 Hameln / Germany

Paver model	Unit	PF2181	P4410B	P4820D ABG	P5770C ABG
Engine		Deutz TCD2013 LO4 2V	Deutz TCD 4.1 LO4 4V	Volvo D4J	Volvo D6
Engine power acc. to ISO 9249 SAE J1349 net	kW	118	115	98	129
	Metric hp	160	156	133	175
	Imperial hp	158	154	131	173
Emissions compliance EU		n/a	n/a	COM 4	COM 3B
Emissions compliance USA		EPA Tier 3	EPA Tier 4F	EPA Tier 4f	EPA Tier 4i
Transmission		Hydrostatic	Hydrostatic	Hydrostatic	Hydrostatic
Paver model	Unit	P5870C ABG	P6820C ABG	P6820D ABG	P6870C ABG
Engine		Volvo D6	Volvo D6H	Volvo D6J	Volvo D6
Engine power acc. to ISO 9249 SAE J1349 net	kW	129	140	140	129
	Metric hp	175	190	190	175
	Imperial hp	173	188	188	173
Emissions compliance EU		COM 3B	COM 3B	COM 4	COM 3B
Emissions compliance USA		EPA Tier 4i	EPA Tier 4i	EPA Tier 4f	EPA Tier 4i
Transmission		Hydrostatic	Hydrostatic	Hydrostatic	Hydrostatic
Paver model	Unit	P7110B	P7171B	P7820D ABG	
Engine		Volvo D8	Volvo D8	Volvo D8J	
Engine power acc. to ISO 9249 SAE J1349 net	kW	175	175	175	
	Metric hp	238	238	238	
	Imperial hp	235	235	235	
Emissions compliance EU		n/a	n/a	COM 4	
Emissions compliance USA		EPA Tier 4F	EPA Tier 4F	EPA Tier 4f	
Transmission		Hydrostatic	Hydrostatic	Hydrostatic	

Core values

Along with quality and safety, caring for the environment is one of the Volvo core values. This means that Volvo Construction Equipment works with an overall perspective of the products that extends throughout their entire life cycle. This includes engineering and design, material selection, manufacturing processes, use, and recycling.

Manufacturing

Manufacturing of the main components as well as the assembly of the complete paver/milling machine takes place at Volvo Construction Equipment's production facilities. All of these are certified according to ISO 14001. A lot of our components and parts are purchased from suppliers. We work in close cooperation with our suppliers to ensure that purchased components and parts meet our environmental requirements.

Declarations

Upholstery or other operator station materials do not contain mercury.

Plastics and other operator station materials are fire-classed according to Volvo standard 104-0001.

Tires do not contain highly aromatic oils (HA-oils) in the tread.

The entire machine contains no cadmium or asbestos.

Paint and Surface Treatment

Shippensburg machines - PF2181, P4410B, P7110B, P7171B:

In order to reduce emissions, machines in Shippensburg are painted using a vegetable oil-based high solids coating. Metal preparation is done by blasting, eliminating the use of water and chemicals.

Hamel machines - P4820D ABG, P5770C ABG, P5870C ABG, P6820C ABG, P6820D ABG, P6870C ABG, P7820D ABG

To save our environment the products in Hameln are treated by washing with phosphate-free add-ons in a water recirculation system and painted with a marginal percentage of solvent (e.g. waterborne primer and topcoat).

Specification of paint

Machine parts	Paint type	Paint description	Chlorine	Pre-treatment
Frames and structural steel	Solvent	HAPS-free (hazardous air pollutants) vegetable-based polyester epoxy	No	Blasting
Steel tanks and sheet metal	Powder	Superdurable polyester TGIC (triglycidyl isocyanurate)	No	Iron-phosphatizing

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Engine/emissions

For EU Stage IIIA and EPA Tier 3 engines:

- In Europe, engines are certified through official testing according to Directive 97 / 98 / EC, Stage III A.
- In the US, engines are certified according to EPA Tier 3 and California Tier 3 requirements.
- In India, engines are certified according to Bharat Stage III (CEV) requirements.

No aftertreatment of exhausts (catalytic converter, particle filter, etc.), is needed to fulfill legal requirements. Exhaust emissions are measured as specific emissions in g / kWh according to ISO 8178-1 and ISO 8178-4, run cycle C1.

All emission certified EU stage 3A and US EPA Tier 3 engines fulfill the legal requirements as outlined below.

Emission levels	NO x + HC (g/kWh)	PM (g/kWh)	CO (g/kWh)	Power range (kW)
EU Directive 97/ 68 / EC, Stage 3A	7.5	0.6	5.5	19 – 37
EU Directive 97/ 68 / EC, Stage 3A	4.7	0.4	5.0	37 – 75
EU Directive 97/ 68 / EC, Stage 3A	4.0	0.3	5.0	75 – 130
EU Directive 97/ 68 / EC, Stage 3A	4.0	0.2	3.5	130 – 560
US EPA Tier 3 US EPA	7.5	0.6	5.5	19 – 37
US EPA Tier 3 US EPA	4.7	0.4	5.0	37 – 75
US EPA Tier 3 US EPA	4.0	0.3	5.0	75 – 130
US EPA Tier 3 US EPA	4.0	0.2	3.5	130 – 560

Engine/emissions

For EU Stage IIIB and EPA Tier 4i engines:

- In Europe, engines are certified through official testing according to EU directive 97/68/EC, stage III B.
- In US engines are certified according to US requirements US EPA and CARB Tier 4i.

To comply with the regulated PM-levels, a DPF (Diesel Particulate Filter) is used as exhaust after treatment system. Exhaust emissions are measured as specific emissions in g/kWh according to NRSC and NRTC for EU as well as RMC (C1) and RRTC for US.

All engines fulfill the legal requirements as outlined below.

Emission levels	NMHC (g/kWh)	NO x + HC (g/kWh)	PM (g/kWh)	CO (g/kWh)	Power range (kW)
EU Directive 97/ 68 / EC, Stage 3B	0.19	3.3	0.025	5.0	56 - 130
EU Directive 97/ 68 / EC, Stage 3B	0.19	2.0	0.025	3.5	130 - 560
US EPA and CARB Tier 4i	0.19	3.4	0.02	5.0	56 - 130
US EPA and CARB Tier 4i	0.19	2.0	0.02	3.5	130 - 560

Sound levels

Model	PF2181	P4410B	P4820D ABG	P5770C ABG
Engine Make and Model	Deutz TCD2013 LO4 2V	Deutz TCD 4.1 LO4 4V	Volvo D4J	Volvo D6
	118 kW / 160 HP	115 kW / 156 HP	98 kW / 133 HP	129 kW / 175 HP
	COM 3A / EPA Tier 3	COM 4 / EPA Tier 4f	COM 4 / EPA Tier 4f	COM 3B / EPA Tier 4i
External sound power level, dB(A)	N/A	N/A	104	104

Model	P5870C ABG	P6820C ABG	P6820D ABG	P6870C ABG
Engine Make and Model	Volvo D6	Volvo D6H	Volvo D6J	Volvo D6
	129 kW / 175 HP	140 kW / 190 HP	140 kW / 190 HP	129 kW / 175 HP
	COM 3B / EPA Tier 4i	COM 3B / EPA Tier 4i	COM 4 / EPA Tier 4f	COM 3B / EPA Tier 4i
External sound power level, dB(A)	104	105	105	104

Model	P7110B	P7171B	P7820D ABG
Engine Make and Model	Volvo D8	Volvo D8	Volvo D7J
	175 kW / 238 HP	175 kW / 238 HP	175 kW / 238 HP
	COM 4 / EPA Tier 4f	COM 4 / EPA Tier 4f	COM 4 / EPA Tier 4f
External sound power level, dB(A)	N/A	N/A	105

Service

There are dedicated hoses supplied with many machines for easier draining and also to reduce the risk of spilling engine or hydraulic oil.

For venting air from engine, transmission, fuel tank and hydraulic oil tank, there is a breather filter to reduce any occurrence of oil mist.

The fuel tank cap seals tightly to prevent fuel leaks in case of machine turn-over / rollover.

The transmission, hydraulic oil tank, and fuel tank breathers have a check valve to minimize leaks in case of machine turn-over / rollover.

For service intervals and other maintenance, see applicable maintenance label or operator's manuals for each respective machine model.

Oils and fluids

Volvo Extended Life Coolant (Volvo VCS) does not use supplemental coolant additives (SCA's).

Biologically degradable oil for the hydraulic system is available upon request.

For other oil and fluids, see the operator's manual.

Tires

Tires without high-aromatic oil (HA-oils) are available from our suppliers by special order. HA-oils that result from tire wear is a contaminant to aquatic organisms.

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Recycling

Thoroughly planned recycling of the machine is the foundation for ending the life cycle and for being able to recycle materials for use in new Volvo products.

According to our calculations, Volvo pavers are 95 percent recyclable by weight.

The majority of our plastic parts are marked for recycling according to Volvo standard 103 0002; 5052, 41; 5052, 411, and 5052, 412. The materials included in machines are divided into the following approximate weights:

Paver model	Units (rounded)	PF2181	P4410B	P4820D ABG	P5770C ABG
Steel / iron	kg	10 862	12 049	11 246	12 640
Copper	kg	20	23	20	20
Aluminum	kg	131	147	130	75
Lead batteries	kg	50	56	50	50
Polymer materials and rubber	kg	339	380	337	180
Tires	kg	453	636	Not applicable	430
Fluids, oils and chemicals	kg	299	335	297	285
Composite materials	kg	126	141	125	125
Other	kg	101	113	100	50
Total*	kg	12 381	13 880	12 305	13 855

Paver model	Units (rounded)	P5870C ABG	P6820C ABG	P6820D ABG	P6870C ABG
Steel / iron	kg	13 170	13 210	13 093	13 170
Copper	kg	20	20	20	20
Aluminum	kg	75	75	130	75
Lead batteries	kg	50	50	50	50
Polymer materials and rubber	kg	180	340	340	180
Tires	kg	450	Not applicable	Not applicable	450
Fluids, oils and chemicals	kg	285	285	297	285
Composite materials	kg	125	125	125	125
Other	kg	50	50	100	50
Total*	kg	14 405	14 155	14 155	14 405

Paver model	Units (rounded)	P7110B	P7171B	P7820D ABG
Steel / iron	kg	16 697	15 761	13 643
Copper	kg	31	29	20
Aluminum	kg	200	187	130
Lead batteries	kg	77	72	50
Polymer materials and rubber	kg	519	486	340
Tires	kg	636	453	Not applicable
Fluids, oils and chemicals	kg	458	428	297
Composite materials	kg	193	180	125
Other	kg	154	144	100
Total*	kg	18 965	17 740	14 705

These material fractions can be recycled (material and energy recycling) where such recycling possibilities are available.

Paver model	Units (rounded)	PF2181	P4410B	P4820D ABG	P5770C ABG
Steel / iron	lb	23 947	26 564	24 797	27 871
Copper	lb	44	50	44	44
Aluminum	lb	288	323	287	165
Lead batteries	lb	111	124	110	110
Polymer materials and rubber	lb	748	838	743	397
Tires	lb	999	1 402	Not applicable	948
Fluids, oils and chemicals	lb	659	739	655	628
Composite materials	lb	277	311	276	276
Other	lb	222	249	221	110
Total*	lb	27 295	30 600	27 133	30 549

Paver model	Units (rounded)	P5870C ABG	P6820C ABG	P6820D ABG	P6870C ABG
Steel / iron	lb	29 040	29 128	28 870	29 040
Copper	lb	44	44	44	44
Aluminum	lb	165	165	287	165
Lead batteries	lb	110	110	110	110
Polymer materials and rubber	lb	397	750	750	397
Tires	lb	992	Not applicable	Not applicable	992
Fluids, oils and chemicals	lb	628	628	655	628
Composite materials	lb	276	276	276	276
Other	lb	110	110	221	110
Total*	lb	31 762	31 211	31 213	31 762

Paver model	Units (rounded)	P7110B	P7171B	P7820D ABG
Steel / iron	lb	36 810	34 747	30 083
Copper	lb	68	64	44
Aluminum	lb	442	413	287
Lead batteries	lb	170	159	110
Polymer materials and rubber	lb	1 145	1 071	750
Tires	lb	1 402	999	Not applicable
Fluids, oils and chemicals	lb	1 009	944	655
Composite materials	lb	425	397	276
Other	lb	340	318	221
Total*	lb	41 811	39 112	32 426

* Varies depending on equipment, e.g., options and field kits

Producer responsibility

In most countries today, there is a producer responsibility for our products, applicable to components such as batteries, tires, etc. There are special regulations for these components.

For further information, contact your dealer.

Machine model: _____

Place for stamp

Delivery date: _____

Machine's serial number: _____

Engine Type: _____

Engine's manufacturing number: _____

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