FACT SHEET

BATTERY SOLUTION



It is becoming increasingly important to use the appropriate batteries to fit the different transport purposes. With the proper battery solution, drivers can ensure reliability during startup and increase their comfort when being on the road.

Sales variants

Battery system type

BATS-S	Single battery system (two batteries)
BATS-D	Dual battery system (two vehicle batteries and two starter batteries)

Battery box position

BBOX-L	Battery box on the left-hand side
BBOX-EF	Battery box at the end of the frame

Battery charger

BATTC	Integrated battery charger

Battery capacity

2BATT170	Enhanced flooded batteries extra 2 x 170 Ah
2BATT225	Enhanced flooded batteries extra 2 x 225 Ah
2BAT210B	Gel batteries, 2 x 210 Ah
2BAT210C	AGM batteries, 2 x 210 Ah

Main switch

MSWI-C	Chassis-installed main switch
MSWI-R	Remote-controlled main switch
MSWI-A	ADR main switch

UPTIME

- Allows more energy usage and deeper discharges.
- Secures startability in any climate conditions.
- Manages smooth and, occasionally, rough conditions.

DRIVER APPEAL

- Improves in-cab comfort with extended energy for parking heater/cooler use.
- The user-friendly Self-Start Assist supports jump-start without cables.

ENERGY EFFICIENCY

- Reduced need for idling, resulting in decreased fuel consumption.

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FACT SHEET

BATTERY SOLUTION

Dual battery system

The dual battery system, BATS-D, is a system where the starter motor and the onboard facilities use different batteries. It is the optimal solution for customers who want to maximize the usage of the vehicle batteries without jeopardizing startability. It also enhances the lifetime of the batteries. With separate start and vehicle batteries, the living capacity will increase with up to 50% compared to a single battery system and the starter battery can secure engine crankability and uptime.

BATS-D can be used in combination with both BBOX-L (on the left-hand side) and BBOX-EF (at the end of frame). BATS-D is available only for trucks with a single front axle (FAA10).

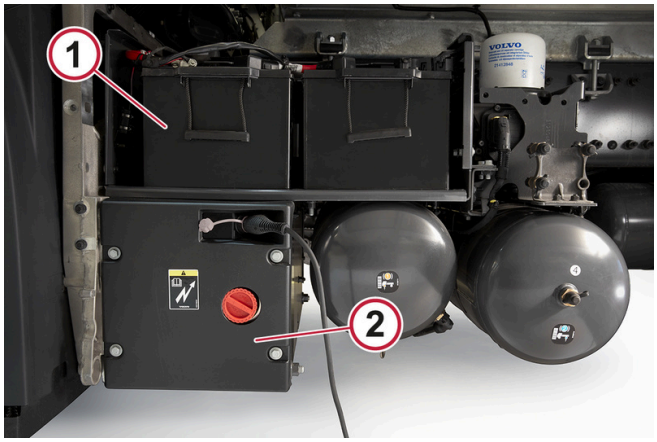
Integrated battery charger

BATS-D can be combined with an integrated battery charger (BATTC). When connected, it can support both the vehicle and the starter batteries by up to 20 A. It is a good option to ensure that the starter batteries are kept fully charged and ready to perform.

The charging progress and status for each battery set is monitored in the side display. If the charger has been used, a friendly reminder will inform the driver that the charger cable might need to be removed in order to avoid departure while still being connected.

BBOX-L and BATS-D

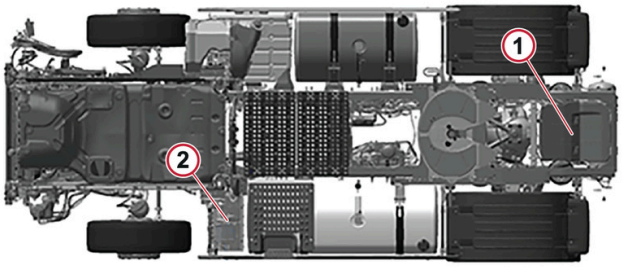
The vehicle batteries are located on the left-hand side behind the front mudguard, with the starter batteries mounted below. The battery box is 60 cm wide and has a robust lid with antislip ribbing. On tractors without chassis fairings, steps or a ladder is fitted to the battery box for access to the rear deck.



Truck with BATS-D and BBOX-L. The vehicle batteries are placed in the battery box on the left-hand side (1), and the starter batteries are placed in a battery box (2) below the vehicle batteries.

BBOX-EF and BATS-D

The vehicle batteries are located at the rear frame end, while the starter batteries are located on the left-hand side behind the front mudguard. This allows for better access to the optional battery charger (BATTC) and self-start assist. The starter battery box is 40 cm wide, freeing up an extra 20 cm of space on the frame side compared to BBOX-L.



Tractor with BATS-D and BBOX-EF. The vehicle batteries are placed in the battery box at the end of frame (1), and the starter batteries are placed in a battery box on the left-hand side (2).

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FACT SHEET

BATTERY SOLUTION

Batteries in the dual battery system

BATS-D uses gel batteries as vehicle batteries and enhanced flooded batteries (EFB) as starter batteries.

Vehicle batteries

As vehicle batteries, gel batteries are used. This battery type is a robust and reliable alternative with excellent cycling ability. In gel batteries, the electrolyte is mixed with silica, solidifying it to a gel mass. This allows for more and deeper discharge cycles, which in turn make them suitable for trucks with high power consumption.

The gel battery is a VRLA (Valve Regulated Lead Acid) battery, meaning that the lid is sealed. It is spill-proof and cannot be refilled.



SPECIFICATION

Vehicle batteries

Sales variant	2BAT210B
Battery type	Gel
Battery capacity	210 Ah
Output current at -18 °C (cold start capacity)	800 A
Weight (battery set)	132 kg
Available for	FH, FH16, FM, FMX

Starter batteries

As starter batteries, enhanced flooded batteries (EFB) are used. Designed and dedicated to ensure startability, the starter battery supports only the actual starter motor. It is prioritized when recharging the truck, meaning that the starter battery is kept fully charged and ready to perform.



SPECIFICATION

Starter batteries

Sales variant	BATS-D
Battery type	EFB
Battery capacity	75 Ah
Output current at -18 °C (cold start capacity)	800 A
Weight (battery set)	42 kg
Available for	FH, FH16, FM

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FACT SHEET

BATTERY SOLUTION

Single battery system

In the single battery system, BATS-S, the starter motor and the onboard facilities use the same set of batteries. The battery types available are absorbent glass mat (AGM) batteries and enhanced flooded batteries (EFB).

BATS-S can be used in combination with both BBOX-L and BBOX-EF.

Battery chargers for BATS-S are offered as accessories.

BBOX-L and BATS-S

As on BATS-D, the battery box is located on the left-hand side behind the front mudguard. On vehicles with dual front axles, it is positioned behind the second front axle.



BBOX-L and BATS-S.

BBOX-EF and BATS-S

As for the dual battery system, there is a rubber-suspended battery box at the rear frame end. However, compared to the dual battery system, BATS-S allows for 60 cm of extra space for fuel on the left-hand side of the chassis.



BBOX-EF and BATS-S.

An auxiliary starter connection to enable jump starting is located at the rear end of the battery box. For battery installation at the end of the frame, it is recommended to have slide members (RAMP-BAS, RAMP-HD or RAMP-LW) on the truck. For further information, see the fact sheet for slide members.

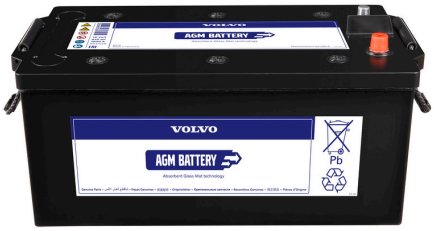
FACT SHEET

BATTERY SOLUTION

Absorbent glass mat battery

The absorbent glass mat (AGM) battery has excellent cycling ability and cold cranking performance. It comes with a capacity of 210 Ah. In the battery, the electrolyte is absorbed and held in place by a layer of glass fibre.

The AGM battery is a VRLA (Valve Regulated Lead Acid) battery, meaning that the lid is sealed. It is spill-proof and cannot be refilled.



SPECIFICATION

AGM batteries

Sales variant..... 2BAT210C
Battery type..... AGM
Battery capacity..... 210 Ah
Output current at -18 °C (cold start capacity).....1200 A
Weight (battery set)..... 124 kg
Available for.....FH, FH16, FM, FMX

Enhanced flooded batteries

The enhanced flooded battery (EFB) is lighter and has less cycle performance compared to the AGM battery. It is equipped with plugs, making refill possible in hot conditions. The need for refill can be detected through the battery plug, along with a status indicator on the battery. It comes with a capacity of either 170 Ah or 225 Ah.



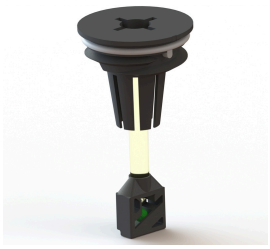
Specifications of the EFB

Sales variant	2BATT170	2BATT225*
Battery type	EFB	EFB
Battery capacity	170 Ah	225 Ah
Output current at -18 °C (cold start capacity)	1000 A	1150 A
Weight (battery set)	92 kg	118 kg
Available for	FH, FM, FMX	FH, FH16, FM, FMX

*** Available only outside of the EU.**



Status indicator.



Battery plug with a status indicator.

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FACT SHEET

BATTERY SOLUTION

Main switch

The main switch allows for better control of the electrical consumption. There are three different types of main switches: chassis-installed, ADR and remote-controlled. The truck is equipped with timers for turning off the living functionality, the body builder functionality and the refrigerator. The timers can be changed at a Volvo workshop.

Chassis-installed main switch (MSWI-C)

A physical main switch located on the chassis.



Chassis-installed main switch for BATS-S (BBOX-L).



Chassis-installed main switch for BATS-S (BBOX-EF).

Remote-controlled main switch (MSWI-R)

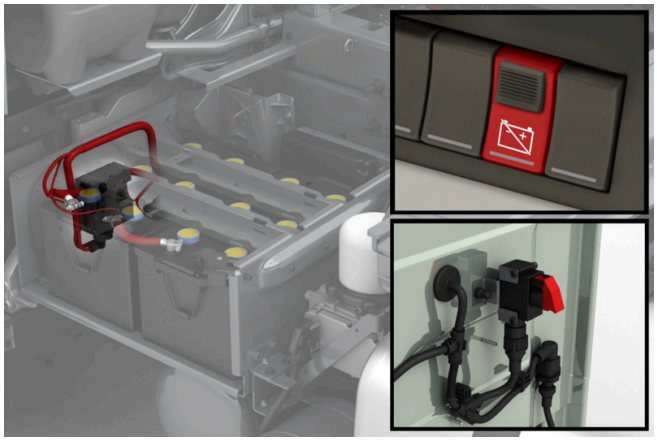
The main switch is controlled with the key fob.



Remote control (MSWI-R and LOCK-REM).

ADR main switch (MSWI-A)

A power relay that is triggered by any of the ADR switches (see the ADR fact sheet for more info).



ADR main switches, one in the instrument panel (ADR1) and one extra outer (ADR2) at the cab rear wall on the passenger side (MSWI-A).

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FACT SHEET

BATTERY SOLUTION

Combinations of sales variants

	Battery system type		Battery box position		Battery capacity			
	BATS-D	BATS-S	BBOX-L	BBOX-EF	2BAT210B	2BAT210C	2BATT170	2BATT225*
Dual battery system with the vehicle batteries on the left-hand side of the frame, gel batteries	x		x		x			
Dual battery system with the vehicle batteries at the end of the frame, gel batteries	x			x	x			
Single battery system with the vehicle batteries on the left-hand side of the frame, AGM batteries		x	x			x		
Single battery system with the vehicle batteries at the end of the frame, AGM batteries		x		x		x		
Single battery system with the vehicle batteries on the left-hand side of the frame, EFB batteries		x	x				x	
Single battery system with the vehicle batteries on the left-hand side of the frame, EFB batteries		x	x					x
Single battery system with the vehicle batteries at the end of the frame, EFB batteries		x		x				x

*** Available only outside of the EU.**

To assist in correctly specifying the truck, a sales guide - Power Management Guide - is available on STPI.

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FACT SHEET

BATTERY SOLUTION

Available combinations per vehicle type and road conditions

In the following tables, these two symbols are used to describe availability:

● Available

- Not available

TRACTOR and RC-SMOOT					
Battery system type	**Battery box position**	**Battery capacity**			
		2BAT210B	**2BAT210C**	**2BATT170**	**2BATT225[1]**
BATS-D[2]	BBOX-L	●	-	-	-
	BBOX-EF	●	-	-	-
BATS-S	BBOX-L	-	●	●	●
	BBOX-EF	-	●	-	●

[1] **Available only outside of the EU.**

[2] **Available only for FAA10.**

TRACTOR and RC-ROUGH					
Battery system type	**Battery box position**	**Battery capacity**			
		2BAT210B	**2BAT210C**	**2BATT170**	**2BATT225[1]**
BATS-D[2]	BBOX-L	●	-	-	-
BATS-S	BBOX-L	-	●	●	●
	BBOX-EF	-	●	-	●

[1] **Available only outside of the EU.**

[2] **Available only for FAA10.**

TRACTOR and RC-VROUG					
Battery system type	**Battery box position**	**Battery capacity**			
		2BAT210B	**2BAT210C**	**2BATT170**	**2BATT225[1]**
BATS-S	BBOX-L	-	●	●	●

[1] **Available only outside of the EU.**

RIGID and RC-SMOOT					
Battery system type	**Battery box position**	**Battery capacity**			
		2BAT210B	**2BAT210C**	**2BATT170**	**2BATT225[1]**
BATS-D[2]	BBOX-L	●	-	-	-
BATS-S	BBOX-L	-	●	●	●

[1] **Available only outside of the EU.**

[2] **Available only for FAA10.**

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FACT SHEET

BATTERY SOLUTION

RIGID and RC-ROUGH					
Battery system type	**Battery box position**	**Battery capacity**			
		2BAT210B	**2BAT210C**	**2BATT170**	**2BATT225**[1]
BATS-D[2]	BBOX-L	●	-	-	-
BATS-S	BBOX-L	-	●	●	●

[1] **Available only outside of the EU.**

[2] **Available only for FAA10.**

RIGID and RC-VROUG					
Battery system type	**Battery box position**	**Battery capacity**			
		2BAT210B	**2BAT210C**	**2BATT170**	**2BATT225**[1]
BATS-S	BBOX-L	-	●	●	●

[1] **Available only outside of the EU.**

Available main switches per battery system type and battery box position

Battery system type	**Battery box position**	**Main switch**		
		MSWI-C	**MSWI-R**	**MSWI-A**
BATS-D	BBOX-L	-	●	●
	BBOX-EF	-	●	●
BATS-S	BBOX-L	●	●	●
	BBOX-EF	●	●	●

Battery type and capacity

Battery type	**Battery capacity**			
	75 Ah	**170 Ah**	**210 Ah**	**225 Ah**
Starter batteries	BATS-D	-	-	-
Gel batteries	-	-	BATS-D and 2BAT210B	-
AGM batteries	-	-	BATS-S and 2BAT210C	-
EFB	-	BATS-S and 2BATT170	-	BATS-S and 2BATT225[1]

[1] **Available only outside of the EU.**

Volvo retains the right to modify design and specifications without prior notification.