

## FACT SHEET

# ADR ADAPTION



### The ADR regulations cover all substances that are inflammable, toxic or corrosive.

The ADR-adaption means that the vehicle is adapted to the regulations for safe transportation of hazardous substances (to people or the environment) according to an international agreement between most European countries.

Volvo's ADR equipment conforms to these regulations, which means that the vehicle's electrical system is encapsulated and protected against mechanical wear and that electrical connections are fitted with sealed connections.

The cab front is fitted with a retainer for a warning sign indicating the type of hazardous goods being transported.

It is possible to fit a smoke detector on all ADR-adapted trucks, except for trucks carrying FL ADR classified goods (fluid with flash point max. 60 degrees, variant ADRC-FL).

The ADR adaptation fulfils ADR types AT, FL, EX/II and EX/III. AT can be combined with EXD-VERR (vertical exhaust).

The carriage of other substances that also have an ADR classification (hospital waste, miscellaneous abattoir waste, etc.) does not require the ADR equipment described here.

Volvo's ADR equipment is fitted directly at the factory and is both designed and installed with the same high level of quality that characterises Volvo's vehicles.



## UPTIME

- The equipment is factory-fitted, which guarantees high operational reliability and short lead time.
- Easily accessible controls in the cab and on the outside of the cab, so that the electric power can be switched off quickly.



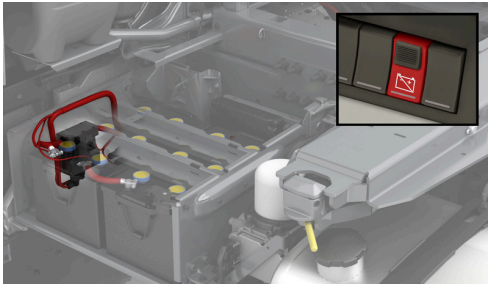
## SAFETY

- Well-protected electrical cables and sealed electrical connection fittings minimise the risk of sparking and short-circuiting.

<b>ADR1</b>	ADR-adaptation with one switch inside cab (dashboard).
<b>ADR2</b>	ADR-adaptation with two switches, one inside cab (dashboard) and one on cab back.
<b>ADRC-FL</b>	FL, AT, EXII/EXIII on ADR labe
<b>ADRC-BAS</b>	AT, EXII/EXIII on ADR label
<b>ADRC-AT</b>	AT on ADR labe

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ADR1

### Easily accessible emergency circuit breaker

To enable the driver to quickly switch off the electric power if there is an accident, a main switch has been conveniently located in the dashboard (sales variant ADR1). This switch is a two-step safety circuit breaker, designed to prevent the current from being switched off inadvertently.

In addition, there is also an exterior switch fitted at the rear of the cab on the passenger's side (sales variant ADR2). ADR1 and ADR2 only switch positive battery terminal. Both switches are clearly marked.

The main switch can be timer controlled and manoeuvred by the key remote. The timer can be changed at a Volvo workshop.

### Well-protected electric cables and sealed connections

All the electric cables in the chassis behind the cab are especially well protected against all forms of wear and impact by a durable corrugated plastic hose. This eliminates the risk of sparking and short-circuiting in the electrical system.

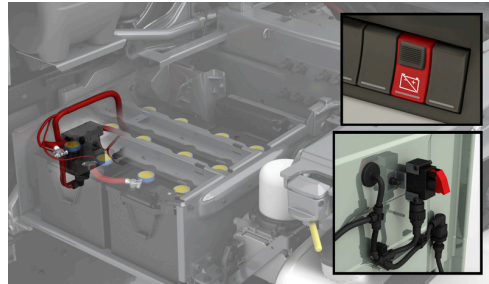
The rear frame-mounted junction box, side marker lamps and tail lamps are similarly well insulated to prevent leaking gas or inflammable liquids from coming into contact with live parts.

Vehicles specified with trailer connections are supplied with a 15-pole trailer connection approved for the transportation of hazardous goods.

### Battery box with an electronic ADR unit

Inside the battery box, there is an electronic ADR unit that transmits the signal from each respective switch (inside and outside the cab) and thus disconnect the battery.

Plastic covers protect all the cable connectors. The battery box also features ventilation holes in order to evacuate any explosive gases that may build up in the batteries.



ADR2

### Prepared with warning sign retainer on front of cab

When transporting substances covered by the ADR regulations, most vehicles has to be fitted with a rectangular, reflective and orange-coloured warning sign. Volvo's ADR-adapted cabs have an ADR warning sign retainer (EC approved) fitted on the front of the cab.

### ADR requires fire extinguisher(s).

A vehicle intended for transporting hazardous goods must be equipped with one or more portable fire extinguishers, with a minimum total capacity of 12 kg dry powder (or an equivalent capacity for any other suitable extinguishing agent). One of them must have a minimum capacity of 6 kg.

The fire extinguishers are not included and must be ordered separately.

### Optional equipment

Some safety equipment can be ordered directly from the factory, such as wheel chocks, reflective vests and warning triangles. According to the ADR regulations from 1 January 1999, two warning triangles are sufficient in the safety equipment.

### Responsibility

Above mentioned legal provisions apply to the driving of the vehicle, i.e. must be fulfilled by the user of the vehicle.