

**VOLVO**

for life



Course Code: 0819

2004 Model Year Product, Featuring the R-Range

# TECHNICAL UPDATE 1



## IMPORTANT SAFETY NOTICE

**WARNING:** Before performing service, diagnosis or troubleshooting procedures on a vehicle equipped with safety devices containing pyro-technical igniters, i.e., airbags, seatbelt tensioners, side impact curtains, etc., **you must be aware of certain precautions, and follow special procedures to help ensure your safety.** Refer to applicable SAFETY SYSTEM service information for these procedures and precautions.

**NOTE:** The information contained in this manual is intended for technical training purposes **ONLY.** Always refer to appropriate Volvo service information & wiring diagram manuals when performing fault tracing or service procedures.

Following proper service and repair procedures is essential for the safe, reliable operation of motor vehicles, as well as for the personal safety of the individual doing the work. This manual provides general directions for accomplishing service and repair work with tested, effective techniques.

Numerous variations in procedures, techniques, tools and parts for servicing vehicles, as well as the skill of individual doing the work cannot possibly be anticipated or provided for. Accordingly, anyone who departs from instructions provided in this manual must first establish that they compromise neither their own personal safety nor the vehicle integrity by their choice of methods, tools or parts.

As you read through the procedures, you will come across NOTES, CAUTIONS, and WARNINGS. Each one is there for a specific purpose. NOTES give you added information that can help you to complete a particular procedure. CAUTIONS are given to help prevent you from making an error that could damage the vehicle. WARNINGS remind you to be especially careful in areas where carelessness can cause personal injury. The following list contains some general WARNINGS that you should follow whenever you work on a vehicle.

- Always wear safety glasses for eye protection.
- Use safety stands whenever a procedure requires you to be under the vehicle.
- Turn the ignition switch OFF unless otherwise required by the procedure.
- Set the parking brake when working on the vehicle. If you have an automatic transmission, set it in PARK unless instructed otherwise for a specific service operation. If you have a manual transmission it should be in NEUTRAL unless instructed otherwise for a specific service operation.
- Operate the engine only in a well-ventilated area to avoid the danger from carbon monoxide.
- Keep yourself and your clothing away from moving parts when the engine is running, especially the cooling fan and belts.
- To prevent serious burns, avoid contact with hot metal parts such as the radiator, exhaust manifold, tail pipe, catalytic converter and muffler.
- Do not smoke while working on the vehicle.
- To avoid injury, always remove rings, watches, loose hanging jewelry, and loose clothing before beginning to work on a vehicle. Tie long hair securely behind your head.
- Keep hands and other objects clear of the radiator fan blades. Electric cooling fans can start to operate at any time even with the ignition turned OFF.

Date:

Retailer/Code:

S.S.N./S.I.N.:

Name:

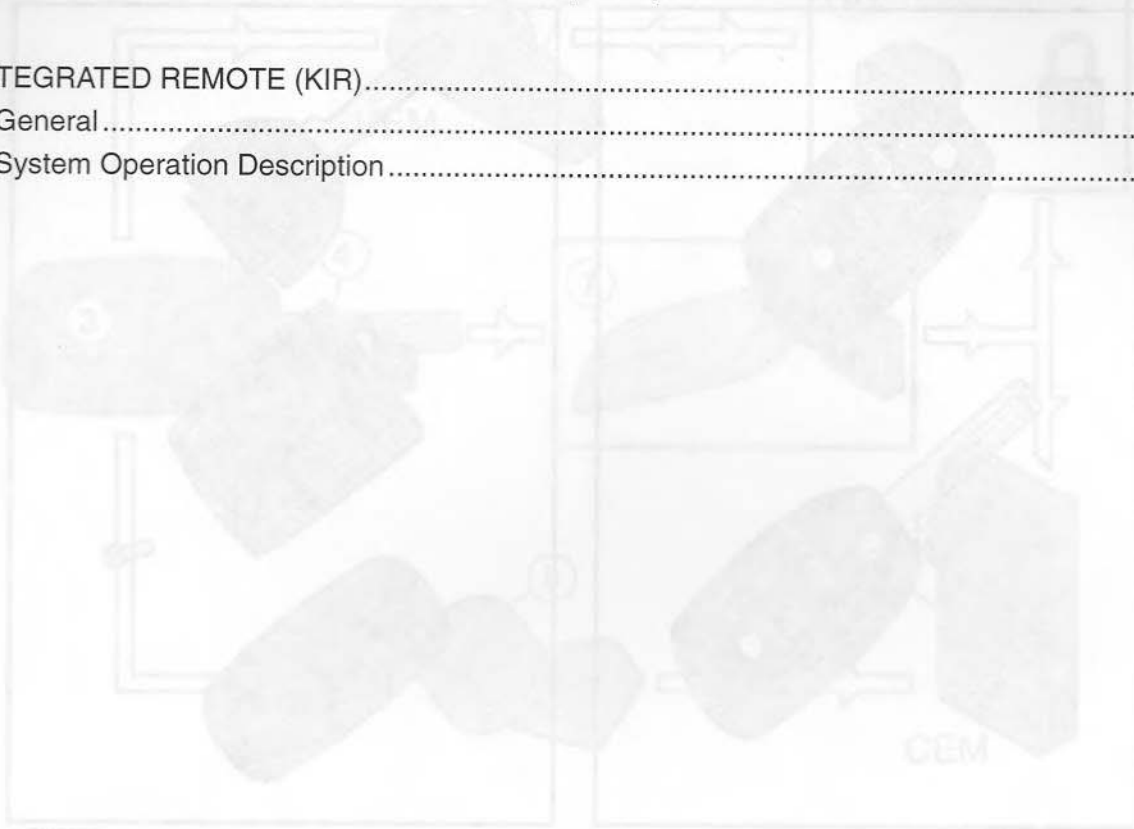
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## SYSTEM OPERATION DESCRIPTION KEY INTEGRATED REMOTE (KIR)

1	KIR	4	Receiver	7	Mechanical locking system
2	Transponder	5	Remote control	8	Battery
3	Transmitter	6	Lock/unlock system	9	Horn

- \* A lithium battery and has a service life of about two years.
- \* A combined function of ignition key (immobilizer slave transponder) and remote ACS switch.
- \* An approach light function.
- \* A panic alarm function.
- \* A remote alarm function.
- \* An integrated key and remote control.

### KIR Programming

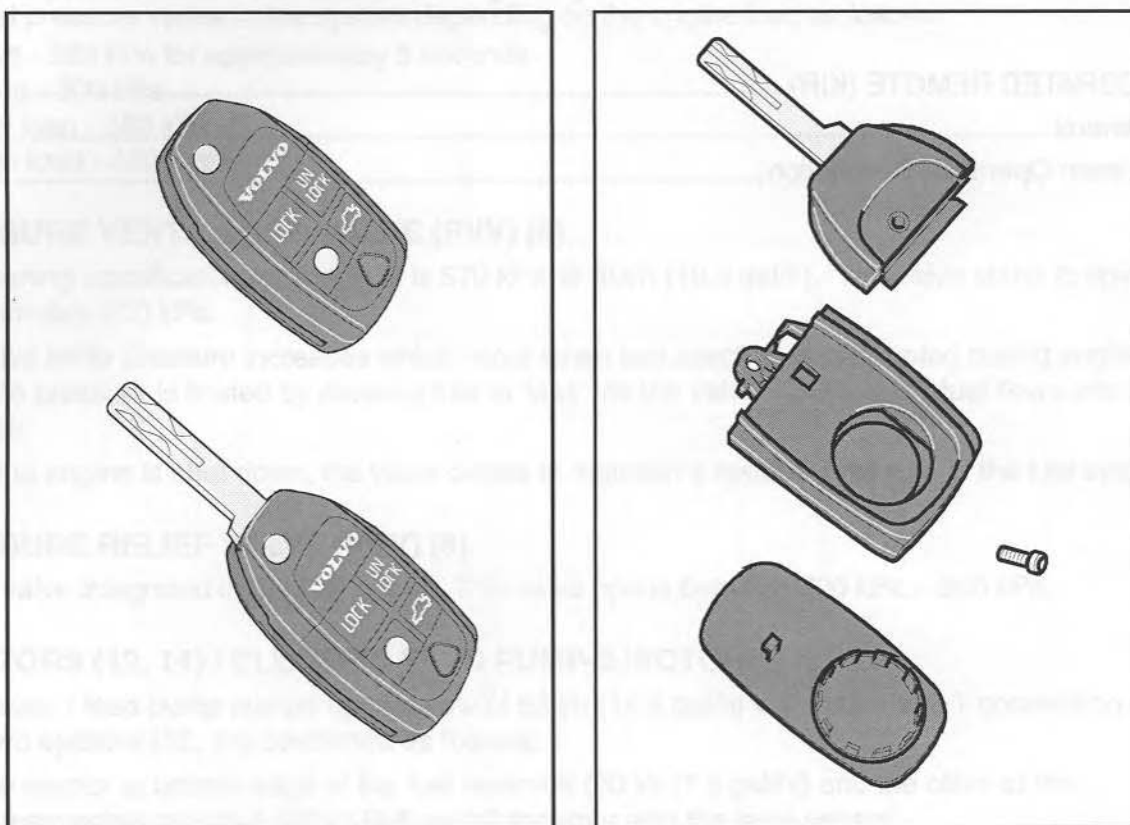
#### Lost Key / 5-Star Key:

The KIR contains functions for both the immobilizer and the remote key.

This means that if a complete KIR is replaced, both immobilizer and remote control functions must be programmed.

### Ordering Software

NOTE: Software has to be ordered to program new KIR functions for both central locking (remote) and anti-immobilizer. Replacing a key / adding a new key is carried out in the same way as other programming.



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## KEY INTEGRATED REMOTE (KIR) GENERAL

KIR includes:

- An integrated key and remote control.
- A retractable key blade.
- A panic alarm function.
- An approach light function.
- A combined function of ignition key (immobilizer slave transponder) and remote ACS switch.
- A 3V lithium battery and has a service life of about two years.

### KIR Programming

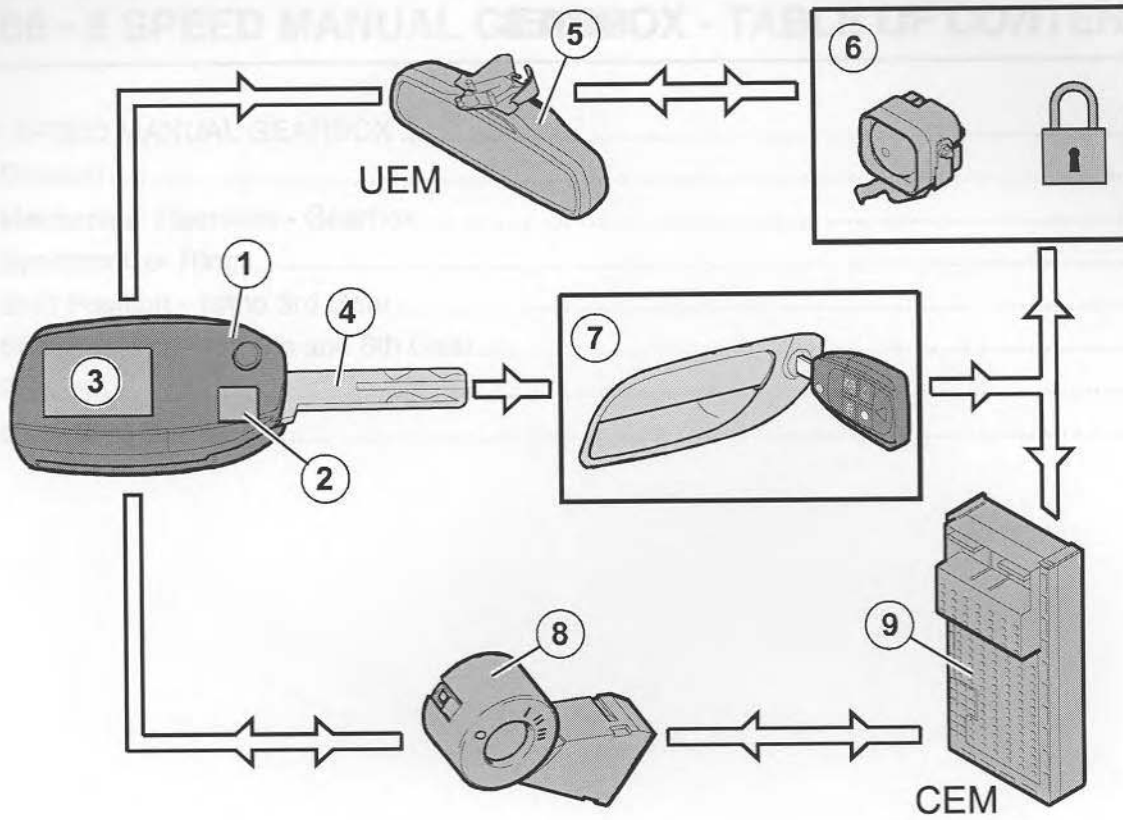
#### Lost Key / Extra Key:

The KIR contains functions for both the immobilizer and the remote key.

This means that if a complete KIR is replaced, both immobilizer and remote control functions must be programmed.

#### Ordering Software

**NOTE:** Software has to be ordered to program new KIR functions for both central locking (remote) and alarm (immobilizer). Replacing a key / adding a new key is carried out in the same way as earlier programming.

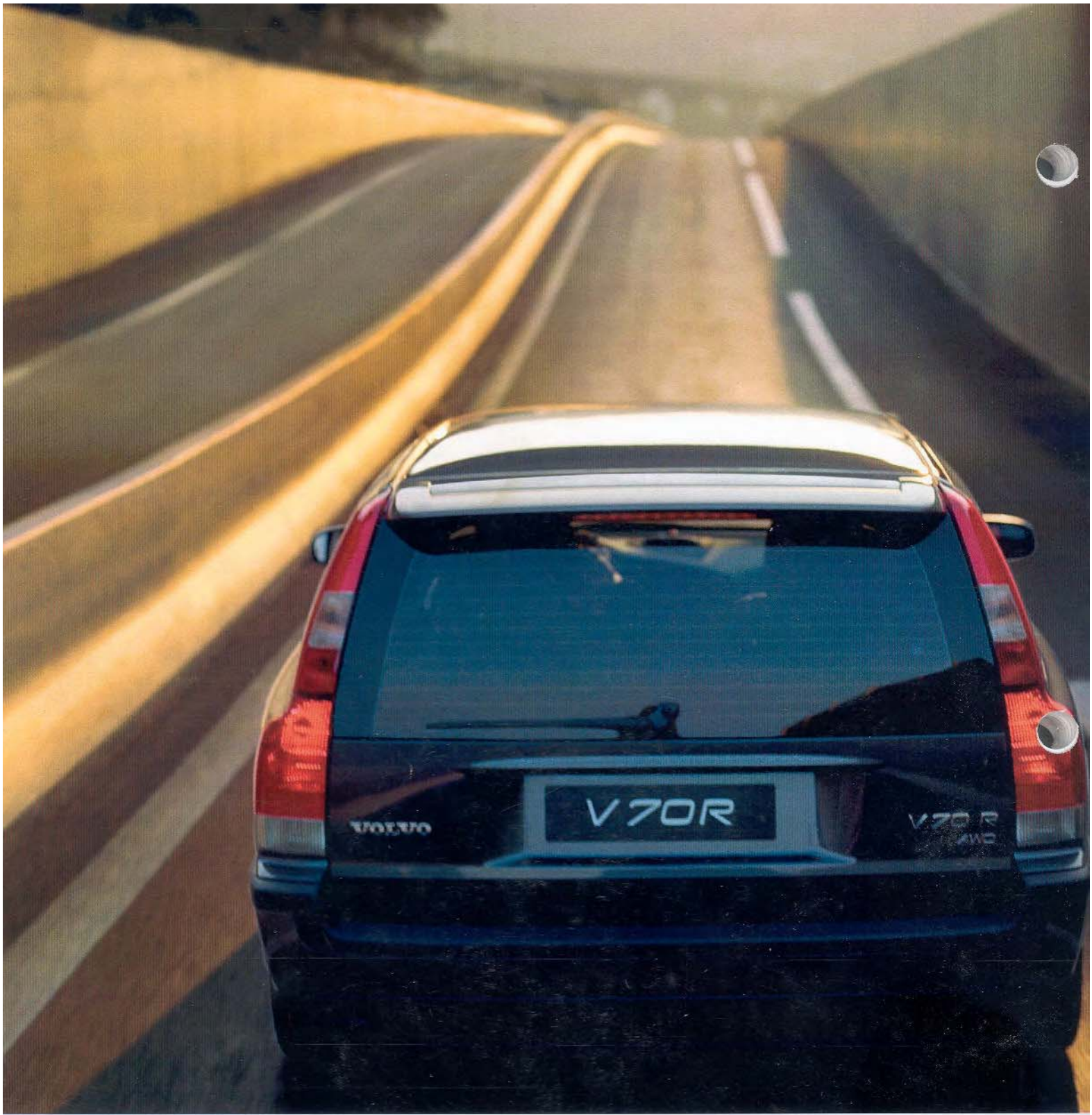


**SYSTEM OPERATION DESCRIPTION**

1	KIR	4	Retractable key	7	Mechanical locking system
2	Transponder	5	Remote control receiver	8	Antenna
3	Transmitter	6	Lock/alarm system	9	CEM

## GLOSSARY

<b>ABS</b>	<b>Anti-lock Braking System</b>	<b>KIR</b>	<b>Key Integrated Remote</b>
<b>A/C</b>	<b>Air Conditioning</b>	<b>LDC</b>	<b>Load Dependable Control</b>
<b>ACS</b>	<b>Active Chassis Setting</b>	<b>LED</b>	<b>Light Emitting Diode</b>
<b>AUX</b>	<b>AUXiliary</b>	<b>LEV</b>	<b>Low Emission Vehicle</b>
<b>AWD</b>	<b>All Wheel Drive</b>	<b>LSM</b>	<b>Light Switch Module</b>
<b>AYC</b>	<b>Active Yaw Control</b>	<b>MHz</b>	<b>MegaHertz</b>
<b>BCM</b>	<b>Brake Control Module</b>	<b>MLS</b>	<b>Multi Layer Sealing</b>
<b>BGC</b>	<b>Brake Grip Control</b>	<b>MMS</b>	<b>Mass Movement Sensor</b>
<b>BRC</b>	<b>Bump and Rebound Control</b>	<b>MOST</b>	<b>Media Oriented Systems Transport</b>
<b>CAN</b>	<b>Controller Area Network</b>	<b>PDM</b>	<b>Passenger Door Module</b>
<b>CCC</b>	<b>Close Coupled Catalyst</b>	<b>PEM</b>	<b>Pump Electronic Module</b>
<b>CCM</b>	<b>Climate Control Module</b>	<b>Prog-mode</b>	<b>Programming mode</b>
<b>CEM</b>	<b>Central Electronic Module</b>	<b>PRV</b>	<b>Pressure Regulation Valve</b>
<b>CM</b>	<b>Control Module</b>	<b>PVV</b>	<b>Pressure Ventilation Valve</b>
<b>CVVT</b>	<b>Continuously Variable Valve Timing</b>	<b>PWM</b>	<b>Pulse Width Modulated</b>
<b>DBC</b>	<b>Dynamic Body Control</b>	<b>RSC</b>	<b>Roll Stability Control</b>
<b>DCC</b>	<b>Dynamic Cornering Control</b>	<b>REM</b>	<b>Rear Electronic Module</b>
<b>DDM</b>	<b>Driver Door Module</b>	<b>SAS</b>	<b>Steering Angle Sensor</b>
<b>DEM</b>	<b>Differential Electronic Module</b>	<b>SBL</b>	<b>Secondary BootLoader</b>
<b>DIM</b>	<b>Driver Information Module</b>	<b>SC</b>	<b>Stability Control</b>
<b>DLC</b>	<b>Dive and Lift Control</b>	<b>SCM</b>	<b>Siren Control Module</b>
<b>DSTC</b>	<b>Dynamic Stability and Traction Control</b>	<b>SRS</b>	<b>Supplementary Restraint System</b>
<b>DTC</b>	<b>Diagnostic Trouble Code</b>	<b>SULEV</b>	<b>Super Ultra Low Emission Vehicle</b>
<b>DVD</b>	<b>Digital Versatile/Video Disc</b>	<b>SUM</b>	<b>SUspension Module</b>
<b>EBA</b>	<b>Emergency Brake Assistance</b>	<b>TCM</b>	<b>Transmission Control Module</b>
<b>ECM</b>	<b>Engine Control Module</b>	<b>TCV</b>	<b>Turbo Control Valve</b>
<b>FOUR-C</b>	<b>Continuously Controlled Chassis Concept</b>	<b>TRACS</b>	<b>TRACtion Control System</b>
<b>FWD</b>	<b>Front Wheel Drive</b>	<b>UEM</b>	<b>Upper Electronic Module</b>
<b>GDL</b>	<b>Gas Discharge Lightning</b>	<b>VADIS</b>	<b>Volvo Aftersales Diagnostics &amp; Information System</b>
<b>IR</b>	<b>Infra Red</b>	<b>WHC</b>	<b>Wheel Hop Control</b>
<b>ISM</b>	<b>Inclination Sensor Module</b>		



**VOLVO**

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Service Training and Development Department

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