

This Service Bulletin replaces Service Bulletin 082-01, "Special Tools, Group 2 Engine VN, VHD VERSION2" (09.2003), publication no. PV776-TSP196548.

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Engine
VN,VHD VERSION2
From build date 11.2002

Special Tools, Group 2

Engine

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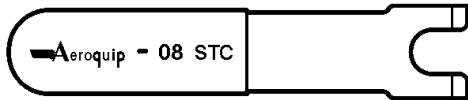
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Tools

85104846, STC Fitting Release Tool

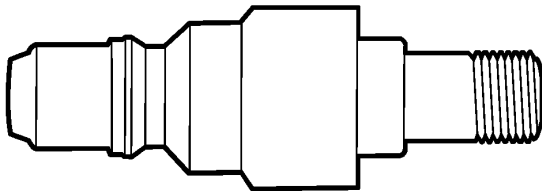


Order number: 85104846
Qty. per operation: 1
Used with: N/A
Variant / component: VN, VHD VERSION2 Engine
Tool class: 1
Essential tool: Yes

This tool is used to release Aeroquip Snap-To-Connect (STC) type fittings.

This tool can be ordered from Volvo.

85105034, Catalytic Muffler Test Fitting

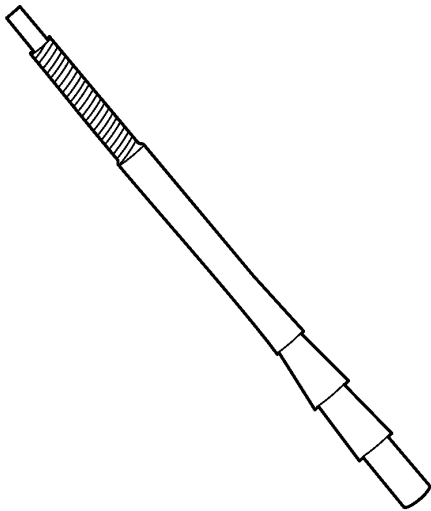


Order number: 85105034
Qty. per operation: 1
Used with: N/A
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

This tool is used to test for exhaust back pressure on vehicles equipped with catalytic mufflers.

This tool can be ordered from Volvo.

85105262, Swedging Bit

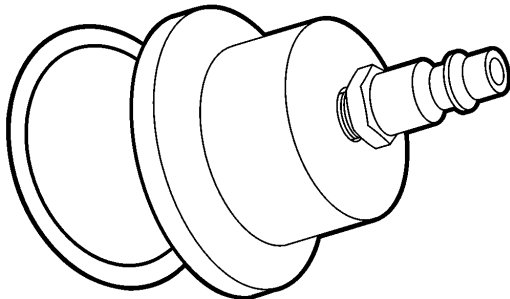


Order number: 85105262
Qty. per operation: 1
Used with: "9998688, Flaring Tool" page 30
Variant / component: D12D Engine
Tool class: 2
Essential tool: No

Swedging Bit 85105262 is a spare part for Flaring Tool 9998688.

This tool can be ordered from Volvo.

85105390, EGR Reed Valve Test Adapter Kit

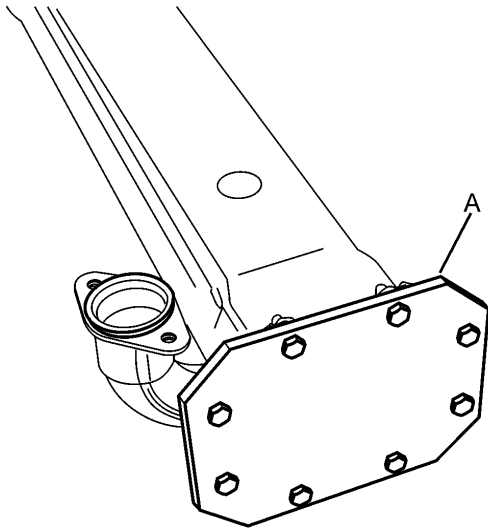


Order number: 85105390
Qty. per operation: 1
Used with: N/A
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

This tool is used to test for leakage in the EGR reed valve assembly. The tool includes Adapter 85105390, O ring 967944, and Fitting 9999265..

This tool can be ordered from Volvo.

85105410, EGR Cooler Cleaning Plate



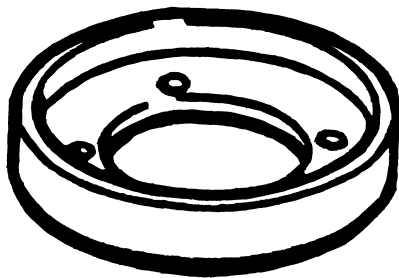
A: 85105410

Order number: 85105410
Qty. per operation: 1
Used with: 20441353 Gasket
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

This tool is used with gasket 20441353 (not supplied) to seal one end of the EGR cooler. The sealed EGR cooler can then be filled with cleaning solvent and allowed to soak to improve cleaning efficiency.

This tool can be ordered from Volvo.

884983, Front Crankshaft Seal Installation Tool

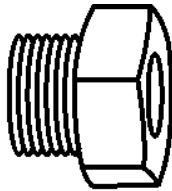


Order number: 884983
Qty. per operation: 1
Used with: N/A
Variant / component: VHD VERSION2 w/ D12D Engine
Tool class: 1
Essential tool: Yes

884983 is used to install the front crankshaft seal on engines with a front engine mounted power take-off.

This tool can be ordered from Volvo.

949513, Fitting



949513

Order number: 949513

Qty. per operation: 1

Used with:

"9990123, Pressure Gauge" page 13,
"9998494, Fuel Pressure Hose" page 20 and
"976282, Fitting" page 7

Variant / component: D12D

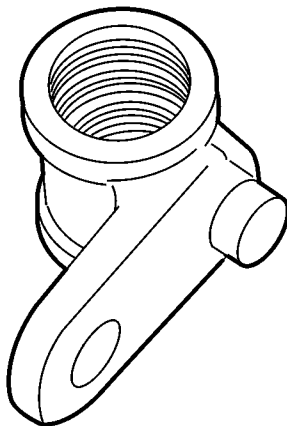
Tool class: 1

Essential tool: Yes

949513 is used with 9990123, 976282 and 9998494 to
check the fuel pressure overflow valve.

This tool can be ordered from Volvo.

976282, Fitting



Order number: 976282

Qty. per operation: 1

Used with:

"9990123, Pressure Gauge" page 13,
"949513, Fitting" page 7 and
"9998494, Fuel Pressure Hose" page 20

Variant / component: D12D

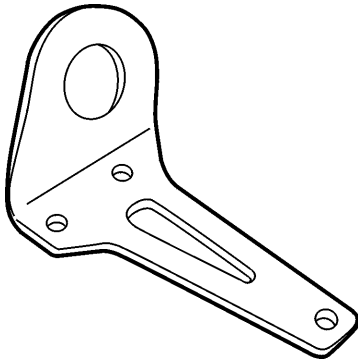
Tool class: 1

Essential tool: Yes

976282 is used with 9990123, 949513 and 9998494 to
check the fuel pressure overflow valve.

This tool can be ordered from Volvo.

3680656, Lifting Bracket

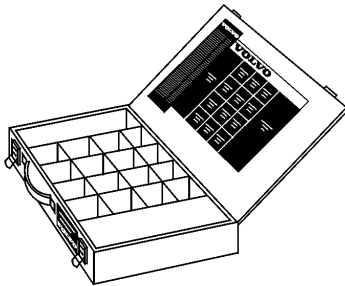


Order number:	3680656
Qty. per operation:	1
Used with:	N/A
Variant / component:	Cummins ISX
Tool class:	1
Essential tool:	No

3680656 is used on Cummins ISX engines to lift the front end of the engine when removing the engine from the chassis.

This tool is available and can be purchased from your local Cummins dealer.

3949521, VEB Shim Kit

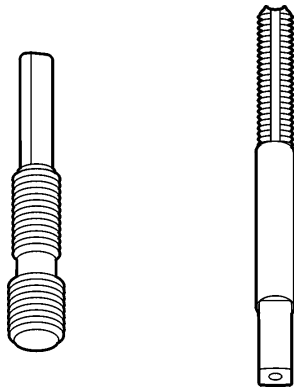


Order Number:	3949521
Qty. per Operation:	1
Used Together With:	"J41610, Feeler Gauge Set" page 35
Variant / Component:	D12D Engine
Tool Class:	1
Essential Tool:	Yes

The VEB Shim Kit is used when adjusting or repairing the Volvo Engine Brake.

This tool can be ordered from Volvo.

9809667 and 9809668, Copper Sleeve Removal Adapters



Order number: 9809667, 9809668

Qty. per operation: 1 of each

Used with:

"9998252, Die Tool" page 18 and
"9998253, Copper Sleeve Extractor" page 18

Variant / component: D12D Engine

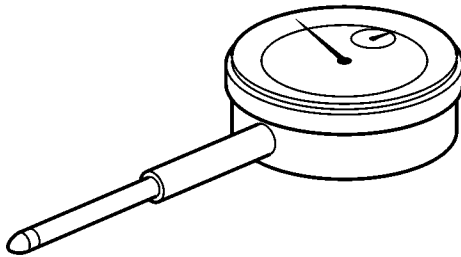
Tool class: 1

Essential tool: Yes

9809667 and 9809668 are used together with 9998252 and 9998253 to remove the injector copper sleeve from the cylinder head.

These tools can be ordered from Volvo.

9989876, Dial Indicator



Order number: 9989876

Qty. per operation: 1

Used with:

"9999696, Magnetic Stand" page 31

Variant / component: D12D Engine

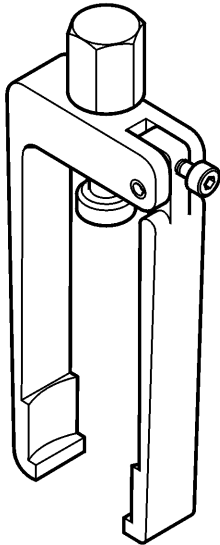
Tool class: 1

Essential tool: Yes

9989876 is used with 9999696 to perform various measurements.

This tool can be ordered from Volvo.

9990006, Puller



9990006

Order number: 9990006

Qty. per operation: 1

Used with:

“9990013, Slide Hammer” page 10

Variant / component: D12D Engine

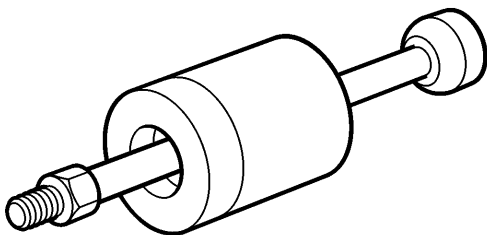
Tool class: 1

Essential tool: Yes

9990006 is used with 9990013 to remove injectors from the cylinder head.

This tool can be ordered from Volvo.

9990013, Slide Hammer



9990013

Order number: 9990013

Qty. per operation: 1

Used with:

“9990006, Puller” page 10

Variant / component: D12D Engine

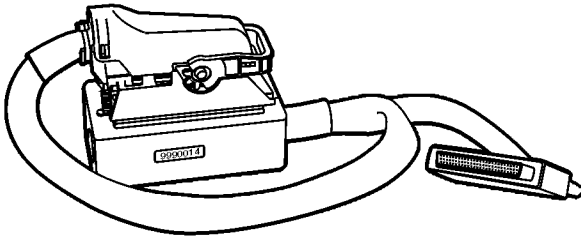
Tool class: 1

Essential tool: Yes

9990013 is used with 9990006 to remove injectors from the cylinder head.

This tool can be ordered from Volvo.

9990014, Adapter



Order number: 9990014
Qty per operation: 1 or 2

Used with:

9998699, 62 Pin Breakout Box

Variant / component: D12D Engine

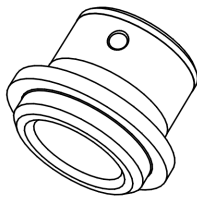
Tool class: 1

Essential tool: Yes

9990014 is used with 9998699 to interface the Engine ECU connector.

This tool can be ordered from Volvo.

9990032, Coolant Plug Installation Tool



9990032

Order number: 9990032

Qty. per operation: 1

Used with: N/A

Variant / component: D12D Engine

Tool class: 1

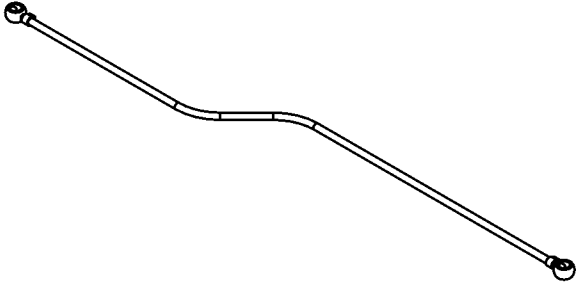
Essential tool: Yes

9990032 is used to properly install the coolant plug in the cylinder head.

Note: The coolant plug is located in front of the cylinder head, behind the camshaft gear.

This tool can be ordered from Volvo.

9990056, Hose



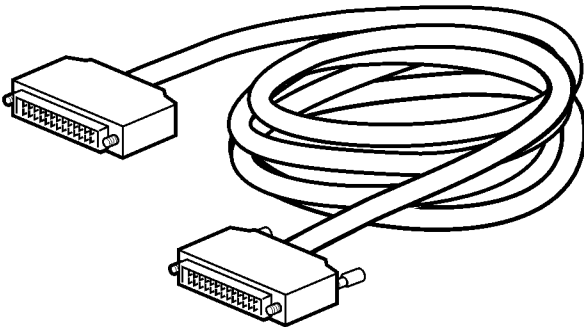
9990056

Order number: 9990056
Qty. per operation: 1
Used with: N/A
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

9990056 is used to visually check for air bubbles in the fuel system return side.

This tool can be ordered from Volvo.

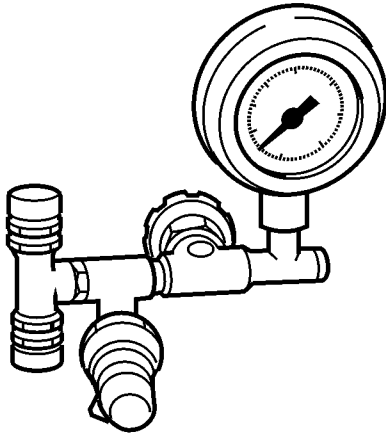
9990062, Extension Cable



Order number: 9990062
Qty. per operation: 1
Used with:
9998699, 62 Pin Breakout Box
Variant / component: VN, VHD VERSION2
Tool class: 1
Essential tool: Yes

This tool can be ordered from Volvo.

9990123, Pressure Gauge

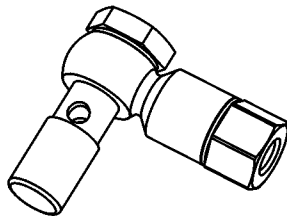


Order number: 9990123
Qty per operation: 1
Use with: N /A
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

9990123 is used for pressure testing various systems/components.

This tool can be ordered from Volvo.

9990124, Nipple

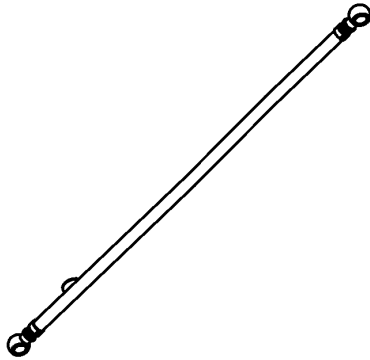


Order number: 9990124
Qty per operation: 1
Used with:
"9998494, Fuel Pressure Hose" page 20
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

9990124 is used with 9998494 for testing fuel pressure restriction.

This tool can be ordered from Volvo.

9990149, Hose

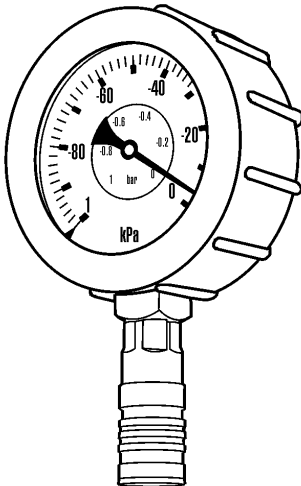


Order number: 9990149
Qty. per operation: 1
Used with: N/A
Variant / component: D12D Engine
Tool class: 1
Essential Tool: Yes

9990149 is used to visually check for air in the fuel system suction side.

This tool can be ordered from Volvo.

9990150, Vacuum Gauge

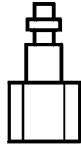


Order number: 9990150
Qty. per operation: 1
Used with:
"9998494, Fuel Pressure Hose" page 20 and
"9990124, Nipple" page 13
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

9990150 is used with 9998494 and 9990124 to check for fuel supply (suction) restriction.

This tool can be ordered from Volvo.

9992976, Connection Adapter



2976

Order number: 9992976

Qty. per operation: 1

Used with:

"9996465, Air Pressure Gauge" page 15

Variant / component: D12D Engine

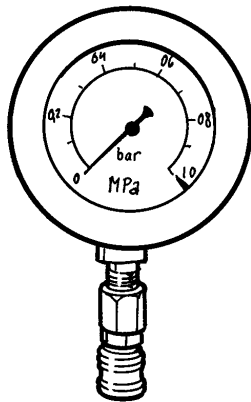
Tool class: 1

Essential tool: Yes

9992976 is used with 9996465 when testing the Volvo engine Exhaust Pressure Governor (EPG) supply air pressure.

This tool can be ordered from Volvo.

9996465, Air Pressure Gauge



999 6465

Order number: 9996465

Qty. per operation: 1

Used with:

"9992976, Connection Adapter" page 15

Variant / component: D12D Engine

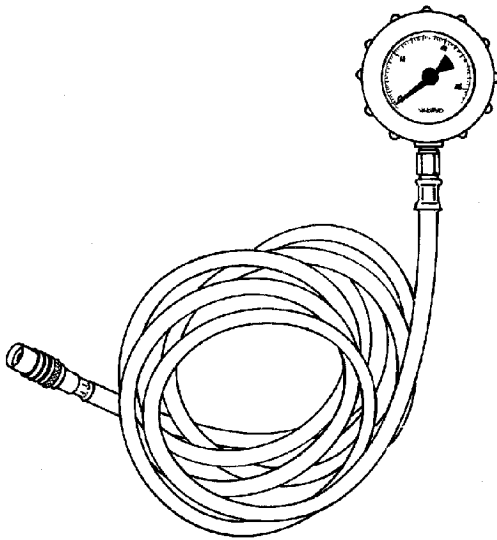
Tool class: 1

Essential tool: Yes

9996465 is used with 9992976 when testing the Exhaust Pressure Governor (EPG) supply air pressure.

This tool can be ordered from Volvo.

9996534, Gauge



999 6534

Order number: 9996534

Qty per operation: 1

Use with:

"9998502, Coolant Pressure Test Hose" page 22

Variant / component: D12D Engine

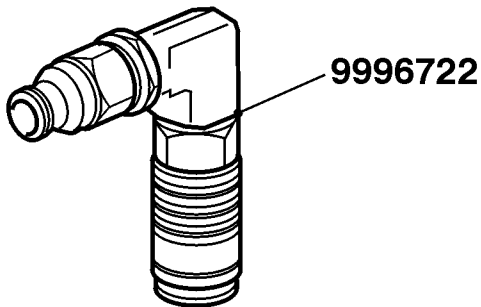
Tool class: 1

Essential tool: Yes

9996534 is used with 9998502 to check coolant pump pressure.

This tool can be ordered from Volvo.

9996722, Connection Adapter



9996722

Order number: 9996722

Qty. per operation: 1

Used with:

9998029 and
"9998496, Pressure Transducer" page 21

Variant / component: D12D Engine

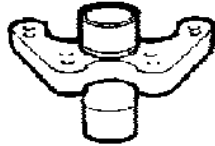
Tool class: 1

Essential tool: Yes

9996722 90° is used with 9998029 and 9998496 to check oil pressure.

This tool can be ordered from Volvo.

9996956, Flywheel Turning Tool

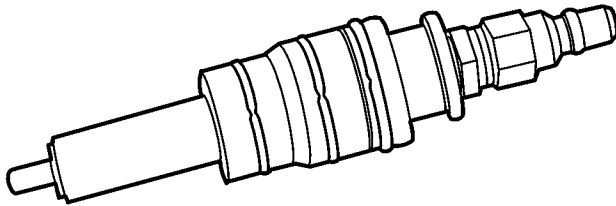


Order number:	9996956
Qty. per operation:	1
Used with:	N/A
Variant / component:	D12D Engine
Tool class:	1
Essential tool:	Yes

9996956 is used to rotate the engine by engaging the flywheel teeth and turning with a 1/2 inch drive ratchet.

This tool can be ordered from Volvo.

9998242, Injector Adapter

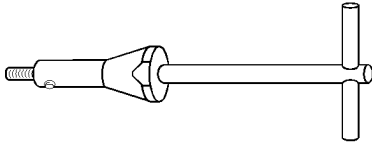


Order number:	9998242
Qty. per operation:	1
Used with:	"9990123, Pressure Gauge" page 13
Variant / component:	D12D Engine
Tool class:	1
Essential tool:	Yes

9998242 is used with 9990123 to pressure check cylinders.

This tool can be ordered from Volvo.

9998252, Die Tool



Order no: 9998252

Qty. per operation: 1

Used with:

9809667, Injector Sleeve Tap (9 mm). See "9809667 and 9809668, Copper Sleeve Removal Adapters" page 9

Variant / component: D12D Engine

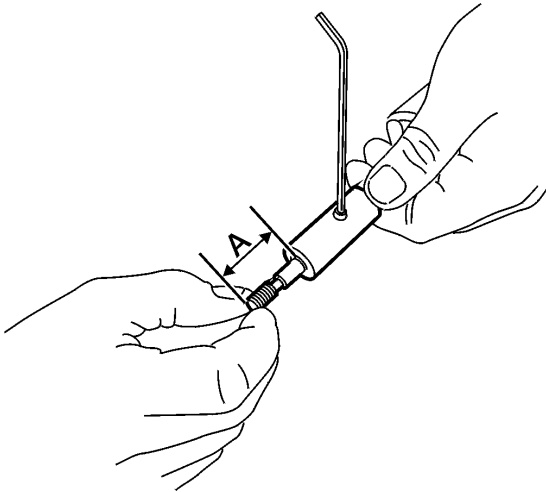
Tool class: 1

Essential tool: Yes

9998252 is used with 9809667 to tap threads into injector copper sleeves.

This tool can be ordered from Volvo.

9998253, Copper Sleeve Extractor



Order no: 9998253

Qty. per operation: 1

Used with:

9809668 (9mm) See "9809667 and 9809668, Copper Sleeve Removal Adapters" page 9.

Variant / component: D12D Engine

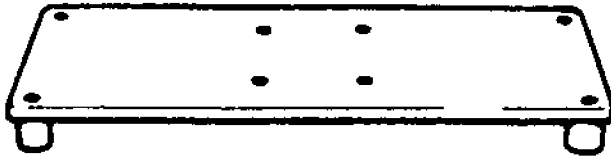
Tool class: 1

Essential tool: Yes

9998253 is used with 9809668 to remove injector copper sleeves.

This tool can be ordered from Volvo.

9998258, Fixture



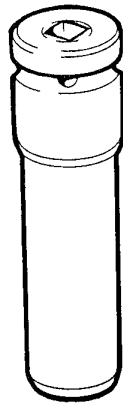
9998258

Order no: 9998258
Qty. per operation: 1
Used with: N/A
Variant / component: D12D Engine
Tool class: 2
Essential tool: No

9998258 is used to attach the cylinder head to an overhaul stand.

This tool can be ordered from Volvo.

9998327, Socket



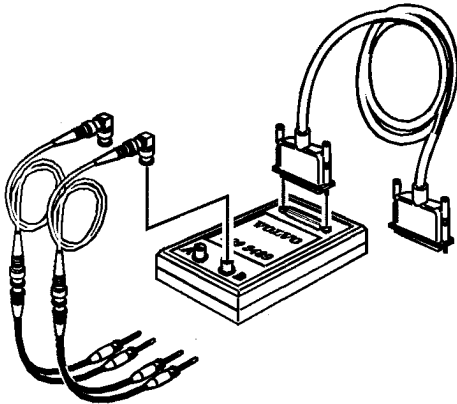
8327

Order no: 9998327
Qty. per operation: 1
Used with: N/A
Variant / component: D12D Engine
Tool class: 2
Essential tool: No

9998327 is used to remove and install studs on the cam shaft bearing cap.

This tool can be ordered from Volvo.

9998489, Oscilloscope Interface



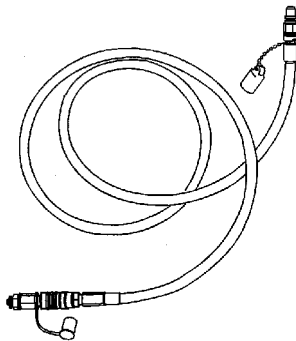
9998489

Order number:	9998489
Qty. per operation:	1
Used with:	N/A
Variant / component:	D12D Engine
Tool class:	1
Essential tool:	Yes

9998489 is used with a VCADS Pro tool for diagnostic tests.

There are two spare parts available and can be purchased separately from the oscilloscope interface (9998489). They are the BNC cable (9808554) and the 25 pin parallel cable (9808553).

9998494, Fuel Pressure Hose



9998494

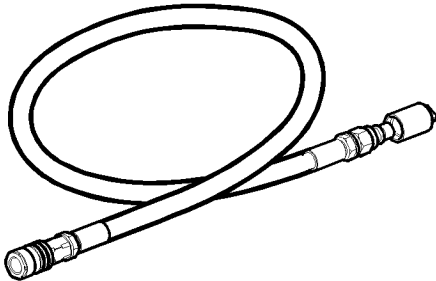
Order number:	9998494
Qty. per operation:	1
Used with:	N/A
Variant / component:	D12D Engine
Tool class:	1
Essential tool:	Yes

9998494 is used together with various fittings and gauges to troubleshoot engine fuel supply problems.

Note: 9808029 Fitting, included with the fuel pressure hose can be ordered as a spare part.

This tool can be ordered from Volvo.

9998495, Air Pressure Hose



8495

Order number: 9998495

Qty. per operation: 1

Used with:

VCADS Pro or oscilloscope,
"9998496, Pressure Transducer" page 21

Variant / component: D12D Engine

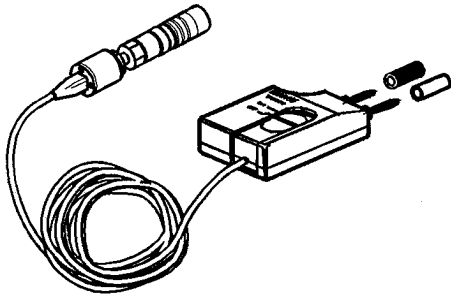
Tool class: 1

Essential tool: Yes

Used with VCADS Pro or oscilloscope for diagnostic tests.

This tool can be ordered from Volvo.

9998496, Pressure Transducer



9998496

Order number: 9998496

Qty. per operation: 1

Used with:

VCADS Pro, oscilloscope or "J39200, Fluke 87
Multimeter" page 33.

Variant / component: D12D Engine

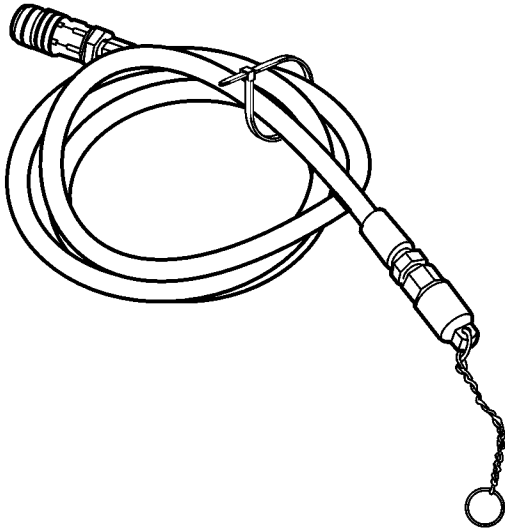
Tool class: 1

Essential tool: Yes

9998496 is used with VCADS Pro, an oscilloscope or multimeter for diagnostic tests.

This tool can be ordered from Volvo.

9998502, Coolant Pressure Test Hose

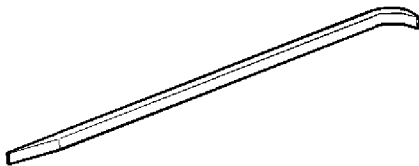


Order number: 9998502
Qty. per operation: 1
Used with: "9996534, Gauge" page 16
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

9998502 is used with 9996534 to check coolant pump pressure.

This tool can be ordered from Volvo.

9998511, Lever

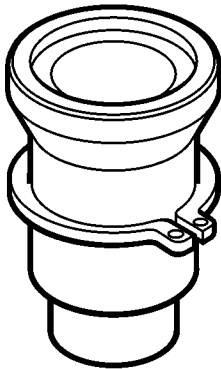


Order number: 9998511
Qty. per operation: 1
Used with: "9998619, Thermostat Seal Installation Tool" page 28
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

9998511 is used for installing the thermostat seal in the cylinder head. It is used with 9998619.

This tool can be ordered from Volvo.

9998517, Setting Tool



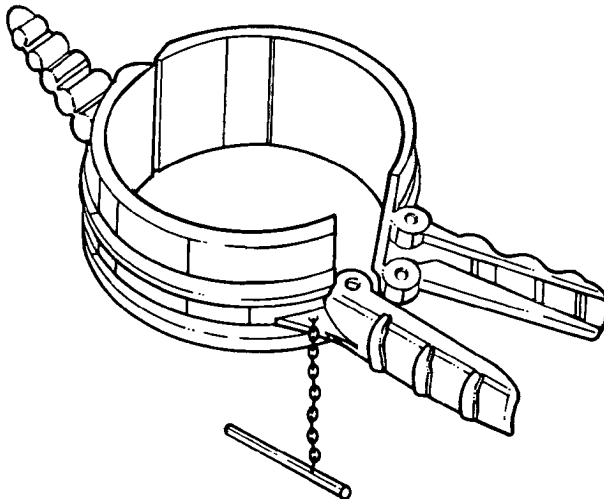
9998517

Order number: 9998517
Qty. per operation: 1
Use with: N/A
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

9998517 is used to set the air gap between the engine speed sensor and flywheel.

This tool can be ordered from Volvo.

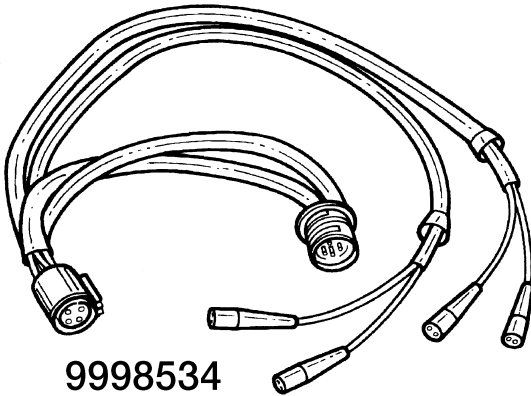
9998531, Piston Ring Compressor



Order number: 9998531
Qty. per operation: 1
Used with: N/A
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

This tool can be ordered from Volvo.

9998534, 4-Pin Breakout Harness

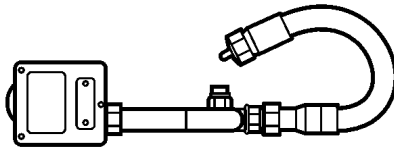


Order number: 9998534
Qty. per operation: 1
Used with: N/A
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

9998534 is used to troubleshoot various components and wiring with 4 Pin DIN Connectors.

This tool can be ordered from Volvo.

9988539, Compression Tester



Order number: 9988539
Qty. per operation: 1
Used with:

“J44621, Compression Gauge Adapter Set” page 40 and “9998248, Adapter” page 41.

Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

This tool can be ordered from Volvo.

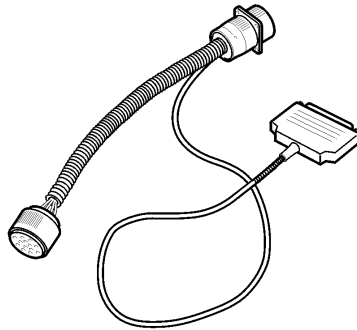
9998538, Boost Sensor Adapter



Order number: 9998538
Qty. per operation: 1
Used with: N/A
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

This adapter is used to troubleshoot the boost sensor.
This tool can be ordered from Volvo.

9998563, Adapter

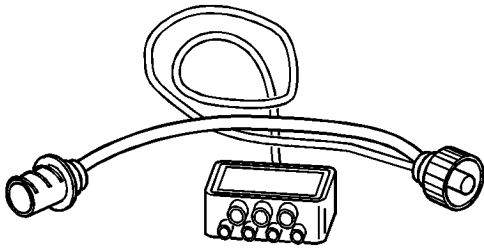


Order number: 9998563
Qty. per operation: 1
Used with:
9998699, 62 Pin Breakout Box
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

9998563 is used with 9998699 to interface the 12 pin connector on the engine wiring harness.

This tool can be ordered from Volvo.

9998567, Breakout Harness



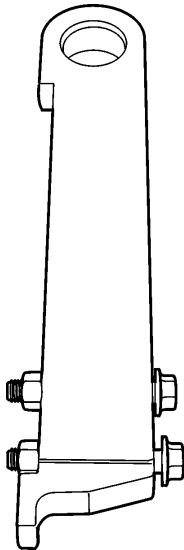
9998567

Order number: 9998567
Qty. per operation: 1
Used with: N/A
Variant / component: VN, VHD VERSION2
Tool class: 1
Essential tool: Yes

9998567 Break Out Harness is used to access 7 Pin DIN connectors.

This tool can be ordered from Volvo.

9998569, Engine Front Lift Bracket

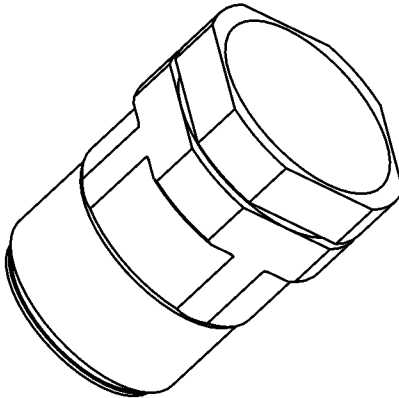


Order number: 9998569
Qty. per operation: 1
Used with: N/A
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

The Engine Front Lift Bracket is used for smaller jobs where only the front of the engine is lifted.

This tool can be ordered from Volvo.

9998580, Protective Sleeve



Order number: 9998580

Qty. per operation: 1

Used with:

“J42885, Injector Bore Cleaning Kit” page 36

Variant / component: D12D Engine

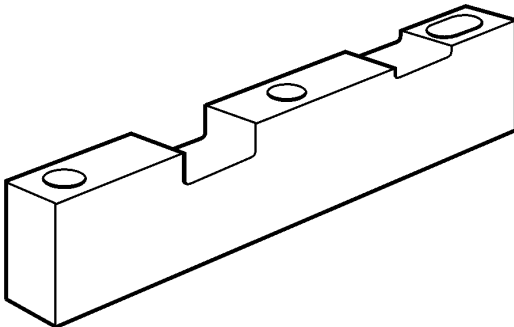
Tool class: 1

Essential tool: Yes

9998580 is used to prevent particles from entering the fuel gallery when cleaning the injector sleeve.

This tool can be ordered from Volvo.

9998601, Cylinder Head Front Alignment Block



Order number: 9998601

Qty. per operation: 1

Used with:

“9998624, Cylinder Head Side Alignment Block” page 28.

Variant / component: D12D Engine

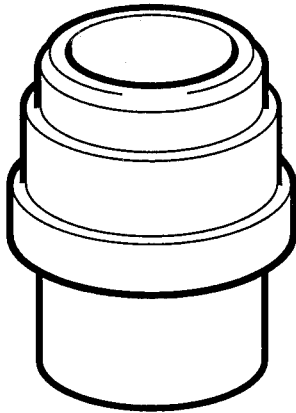
Tool class: 1

Essential tool: Yes

This alignment tool is used when installing the cylinder head to get the correct location to the front of the cylinder block.

This tool can be ordered from Volvo.

9998619, Thermostat Seal Installation Tool



Order number: 9998619

Qty. per operation: 1

Used with:

"9998511, Lever" page 22

Variant / component: D12D Engine

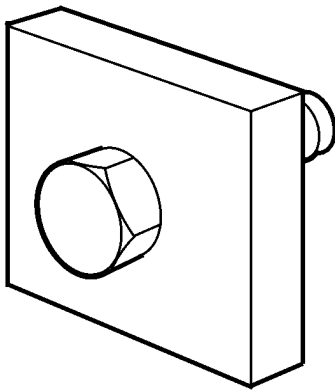
Tool class: 1

Essential tool: Yes

9998619 is used with 9998511 for installing the seal onto the thermostat.

This tool can be ordered from Volvo.

9998624, Cylinder Head Side Alignment Block



Order number: 9998624

Qty. per operation: 1

Used with:

"9998601, Cylinder Head
Front Alignment Block"
page 27.

Variant / component: D12D Engine

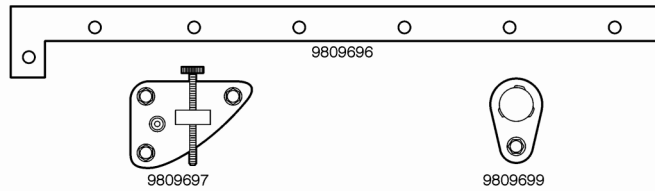
Tool class: 1

Essential tool: Yes

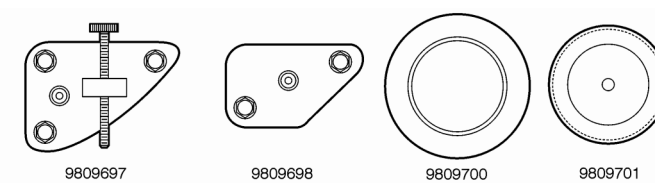
9998624 is used when installing the cylinder head to get the correct location to the side of the cylinder block.

This tool can be ordered from Volvo.

9998666 and 9998668, Connecting Washer

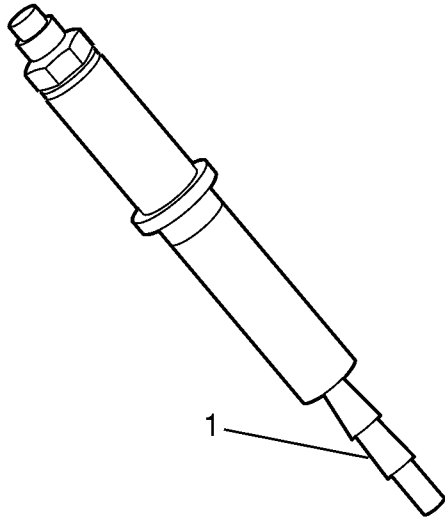


Order Number: 9998666
Qty. per operation: 1
Used with: 9998266
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes
This tool can be ordered from Volvo.



Order number: 9998668
Qty. per operation: 1
Used with: N/A
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes
9998668 is used to test for leaks in the D12C thermostat housing.
This tool can be ordered from Volvo.

9998688, Flaring Tool



1 Replaceable Swedging Bit 85105262

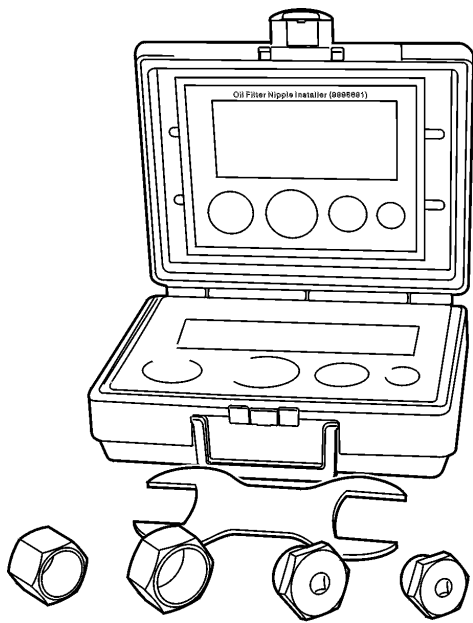
Order number: 9998688
Qty. per operation: 1
Used with: N/A
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

9998688 is used to install the injector cup.

Note: Flaring tool 9998688 includes Swedging Bit 85105262, which can be ordered individually as a spare part.

This tool can be ordered from Volvo.

9998691, Oil Filter Nipple Installer Kit



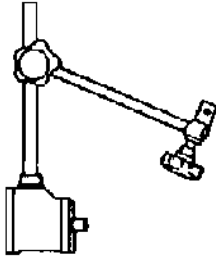
W2003547

Order number: 9998691
Qty. per operation: 1
Used with: N/A
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

9998691 is used for installing the oil filter nipple. The kit contains one wrench, a large nut and jam nut for installing the bypass filter nipple, and a small nut and jam nut for installing the full flow filter nipple.

This tool can be ordered from Volvo.

9999696, Magnetic Stand

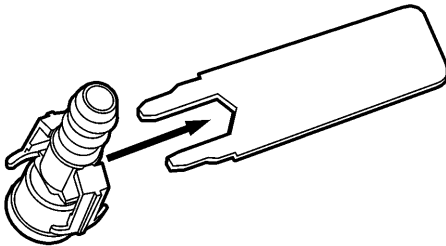


Order number:	9999696
Qty. per operation:	1
Used with:	"9989876, Dial Indicator" page 9
Variant / component:	D12D
Tool class:	1
Essential tool:	Yes

9999696 is used with 9989876 to perform various measurements.

This tool can be ordered from Volvo.

20449325, Fuel Line Fitting Release Tool

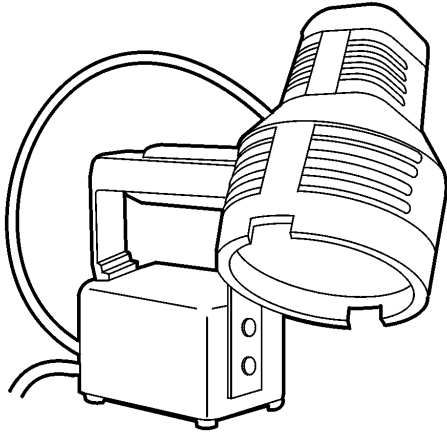


Order number:	20449325
Qty. per operation:	1
Used with:	N/A
Variant / component:	VN/VHD VERSION2
Tool class:	1
Essential tool:	Yes

20449325 is used to release VOSS type fuel fittings in the fuel system on the truck.

This tool can be ordered from Volvo.

J28428-E, High Intensity Black Light Lamp

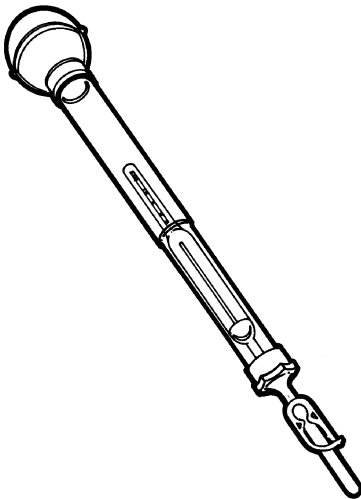


Order number:	J28428-E
Qty. per operation:	1
Used with:	N/A
Variant / component:	All Engines
Tool class:	2
Essential tool:	No

J28428-E is used for oil, fuel and coolant leak detection.

This tool can be ordered directly from Kent-Moore at 800-328-6657.

J38641-B, Diesel Fuel Hydrometer

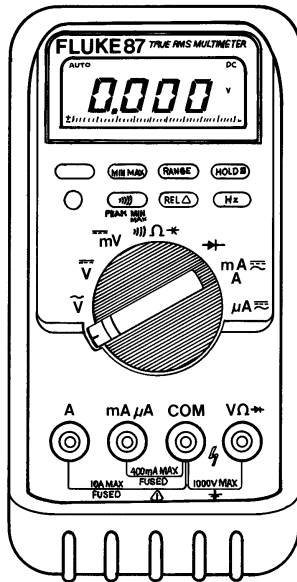


Order number:	J38641-B
Qty. per operation:	1
Used with:	N/A
Variant / component:	D12D Engine
Tool class:	1
Essential tool:	Yes

J38641-B is used when troubleshooting engine performance problems. The reading is given in the API rating standard.

This tool can be ordered directly from Kent-Moore at 800-328-6657.

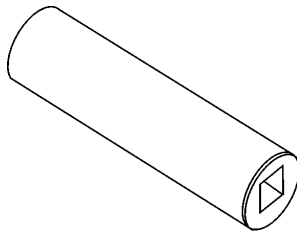
J39200, Fluke 87 Multimeter



Order number:	J39200
Qty. per operation:	1
Used with:	Various test components and "J44403, Exhaust Back Pressure Adapter" page 39.
Variant / component:	VN,VHD VERSION2
Tool class:	1
Essential tool:	Yes

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

J41203, Stud Removal and Installation Socket

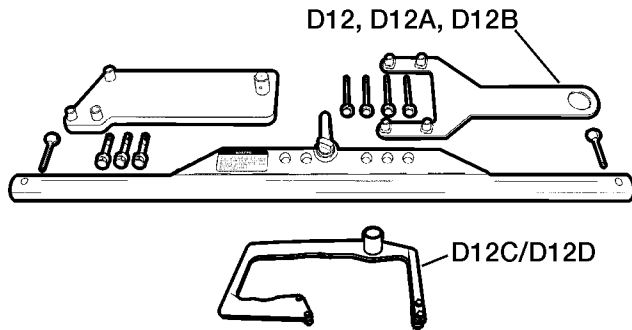


Order number:	J41203
Qty. per operation:	1
Used with:	N/A
Variant / component:	D12D Engine
Tool class:	1
Essential tool:	Yes

J41203 is used for removing and installing studs for the valve cover.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

J41359-C, Engine Lifting Fixture



Order number: J41359-C

Qty. per operation: 1

Used with: N/A

J41359-50, Bracket

Variant / component: D12D Engine

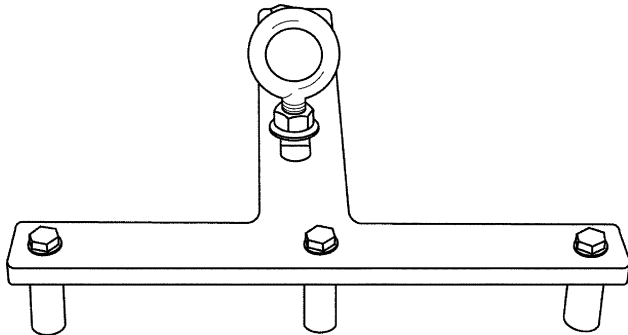
Tool class: 1

Essential tool: Yes

J41359-C is used for all Volvo D12 engines. The front bracket and the lifting beam are the same for all versions. There are two rear brackets in the kit, one for D12, D12A and D12B versions and one (J41359-50) for the D12C/D version.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

J41503, Cylinder Head Lifting Fixture



Order number: J41503

Qty. per operation: 1

Used with: N/A

Variant / component: D12D Engine

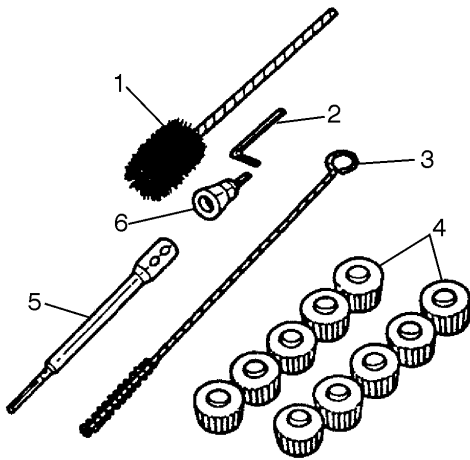
Tool class: 1

Essential tool: Yes

J41503 is used for removing and installing the cylinder head. It can be used with or without manifolds or turbocharger removed.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

J42885, Injector Bore Cleaning Kit



Order number: J42885

Qty. per operation: 1

Used with:

"9998580, Protective Sleeve" page 27

Variant / component: D12D Engine

Tool class: 1

Essential tool: Yes

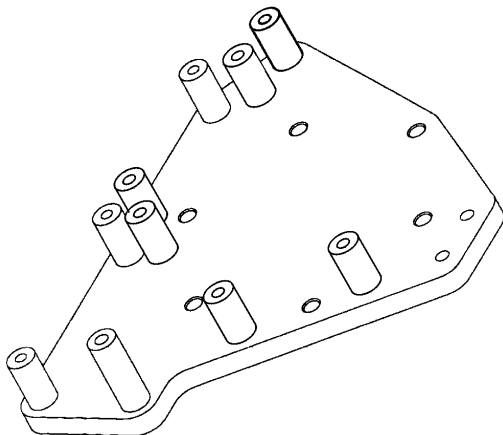
When replacing the injector copper sleeves in the cylinder head, it is important that the sleeve bore in the head is free from any carbon deposits and any other residue (pieces of the O-ring, etc.) before installing the new sleeve. Use the cleaning kit for bore, O-ring groove, seat and tip area.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

The individual pieces of the kit can be ordered if needed:

- 1 J42885-6 Brush tube 1 1/2 in. diameter
- 2 J42885-4 Threaded shaft
- 3 J42885-5 Brush tube 7/16 in. diameter
- 4 J42885-2 Bristle disc set
- 5 J42885-1 Extension holder
- 6 J42885-3 Disc backup rod

J43050-A, Engine Stand Adapter



Order number: J43050-A

Qty. per operation: 1

Used with:

J29109, Engine Stand

Variant / component: D12D Engine

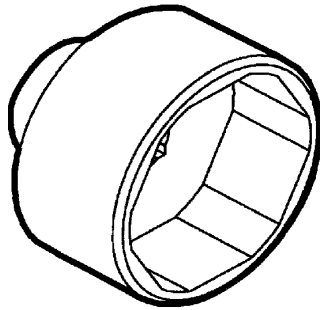
Tool class: 2

Essential tool: No

J43050-A is used with J29109 (only available from Kent-Moore).

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

J43051, Reduction Valve Cap Socket

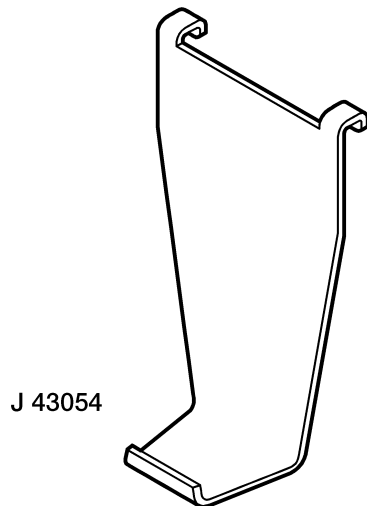


Order number:	J43051
Qty. per operation:	1
Used with:	N/A
Variant / component:	D12D Engine
Tool class:	1
Essential tool:	Yes

J43051 is used for removing the cap for the oil pressure reduction valve on the side of the engine block.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

J43054, Muffler Alignment Bracket

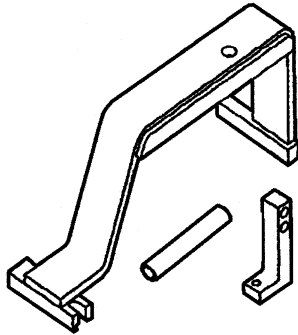


Order number:	J43054
Qty. per operation:	1
Used with:	N/A
Variant / component:	D12D Engine
Tool class:	1
Essential tool:	Yes

J43054 is used to properly position the vertical muffler during installation.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

J44301, Front Cover Alignment Fixture



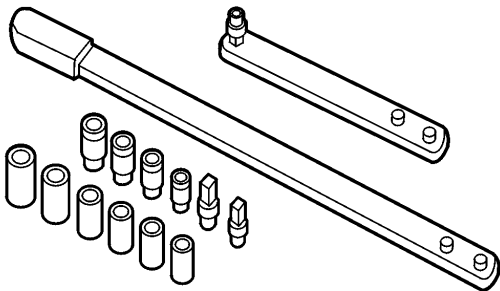
Order number:	J44301
Qty. per operation:	1
Used with:	N/A
Variant / component:	D12D Engine
Tool class:	1
Essential tool:	Yes

J44301 is used when installing the front transmission gear cover for aligning the cover with the cylinder head.

Note: Tool J44301 may be stamped with numbers 9998602-2 or 9998602-6. Disregard these numbers.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

J44392, Fan Belt Tensioner Tool

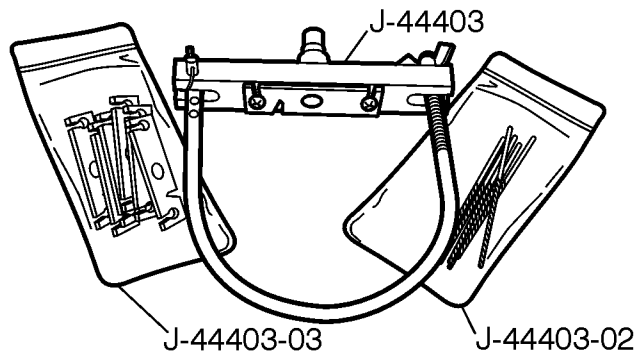


Order number:	J44392
Qty. per operation:	1
Used with:	N/A
Variant / component:	D12D Engine
Tool class:	1
Essential tool:	Yes

J44392 is used for reaching into a small space between radiator and front of engine to fit into the belt tension roller.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

J44403, Exhaust Back Pressure Adapter



Order number: J44403

Qty. per operation: 1

Used with:

"J39200, Fluke 87 Multimeter" page 33 and "9998496, Pressure Transducer" page 21.

Variant / component: D12D Engine

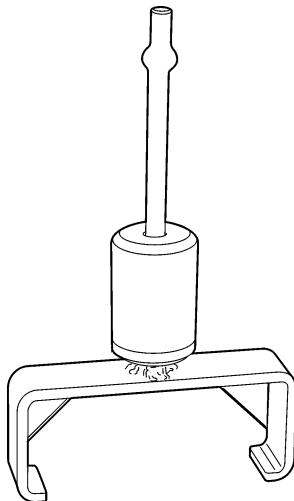
Tool class: 1

Essential tool: Yes

J44403 is used to measure the exhaust back pressure.

This tool can be ordered from Kent Moore at (800) 328-6657.

J44457, Camshaft Bearing Cap Puller



Order number: J44457

Qty. per operation: 1

Used with: N/A

Variant / component: D12D Engine

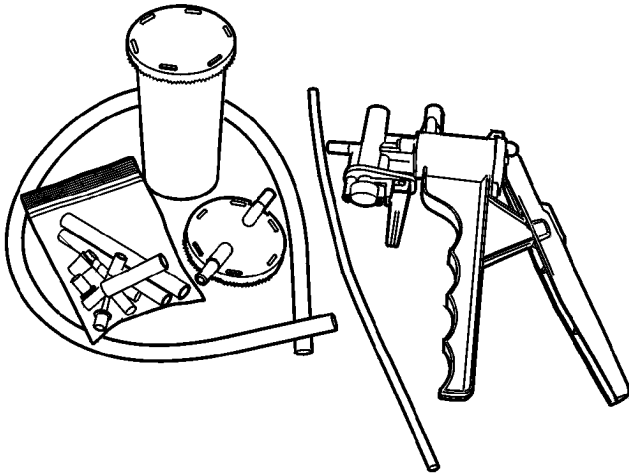
Tool class: 1

Essential tool: Yes

J44457 is used for removing the camshaft bearing cap.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

J44515, Fuel Extraction Pump Kit

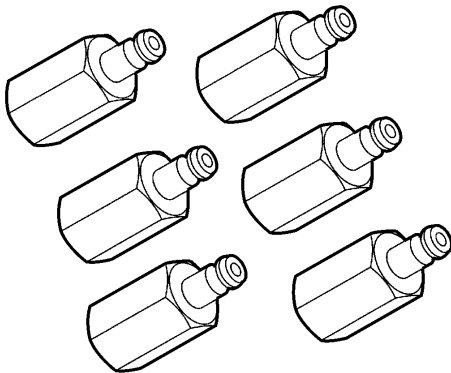


Order number: J44515
Qty. per operation: 1 kit
Used with: N/A
Variant / component: D12D Engine
Tool class: 2
Essential tool: No

J44515 is used for removing excess fuel from the top of the piston before installing a new injector.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

J44621, Compression Gauge Adapter Set



Order number: J44621
Qty. per operation: 1 set (6 adapters)
Used with: "9988539, Compression Tester" page 24 and 9998248, Adapter.

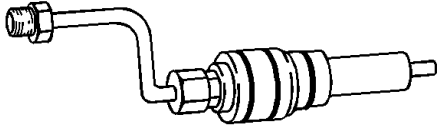
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

J44621 is used to connect to the unit injector compression test tool, 9988539.

Note: The adapters should be tightened to a torque of only 30 Nm (22 ft-lb).

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

9998248, Adapter

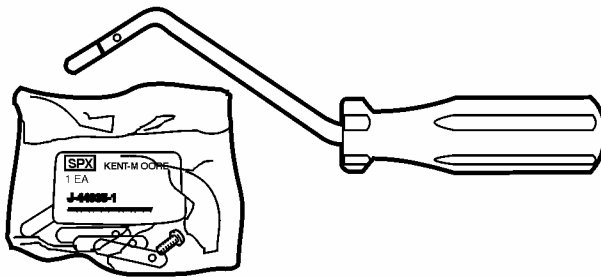


Order number: 9998248
Qty. per operation: 1
Used with: "J44621, Compression Gauge Adapter Set" page 40 and "9988539, Compression Tester" page 24
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

This adapter is used to connect to the Compression Gauge Adapter Set.

This tool can be ordered from Volvo.

J44935, Gear Lash Setting Tool

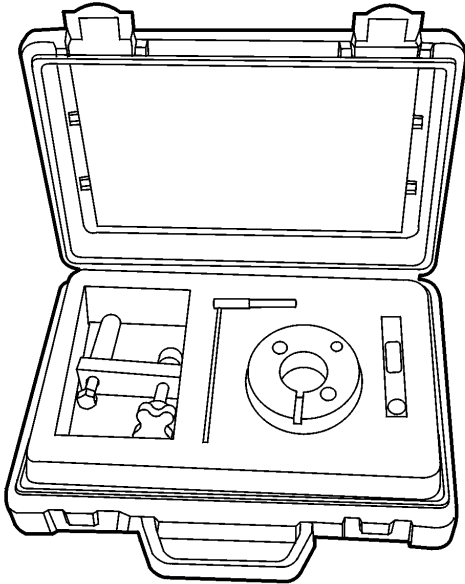


Order number: J44935
Qty. per operation: 1
Used together with: J44514, Camshaft Alignment Tool Kit
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

J44935 is used to set the gear lash with the lower front cover still in place.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

J44514, Camshaft Alignment Tool Kit



Order number: J44514

Qty. per operation: 1

Used with:

"J44935, Gear Lash Setting Tool"

Variant / component: D12D Engine

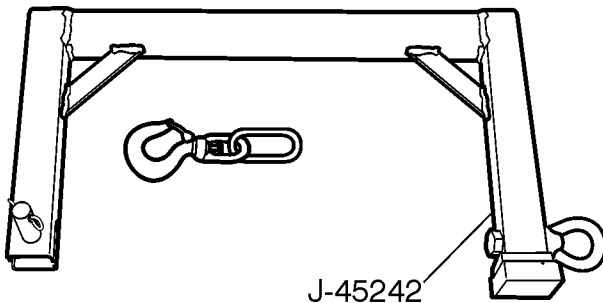
Tool class: 1

Essential tool: Yes

J44514 is used for camshaft timing, checking and setting.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

J45242, Lifting Bracket



Order number: J45242

Qty. per operation: 1

Used with:

9998255,
9998264, and
"J41503, Cylinder Head Lifting Fixture" page 34

Variant / component: VNM,VHD VERSION2 w/
D12D Engine

Tool class: 1

Essential tool: Yes

J45242 is used with J41503, to lift the cylinder head.

The lifting bracket is also used together with 9998255 and 9998264 to lift the rocker assembly and the camshaft as shown.

Note: A hook is included when the lifting bracket is ordered, which should be used only for lifting the camshaft and rocker arm assembly.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

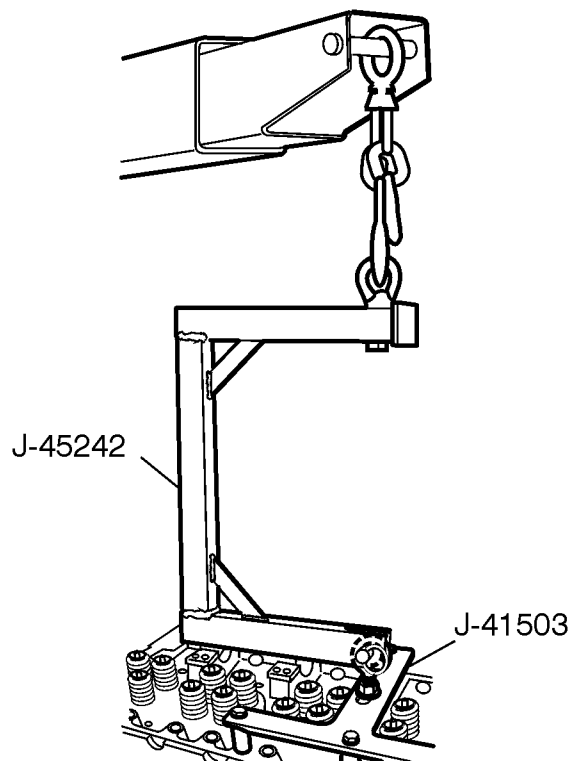


Fig. 1: J-45242 and J-41503, for cylinder head

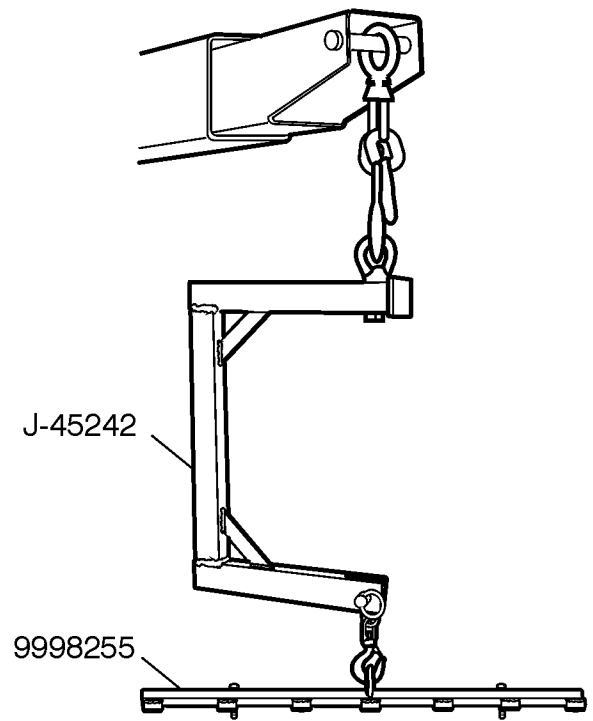


Fig. 2: J-45142 and 9998255, for rocker assembly

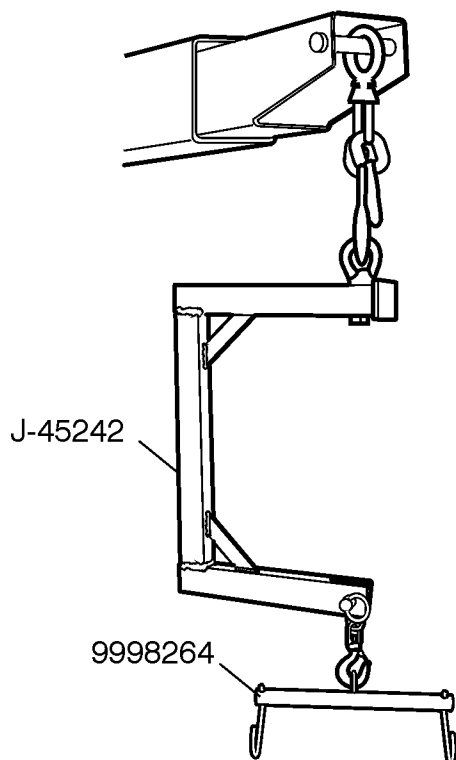
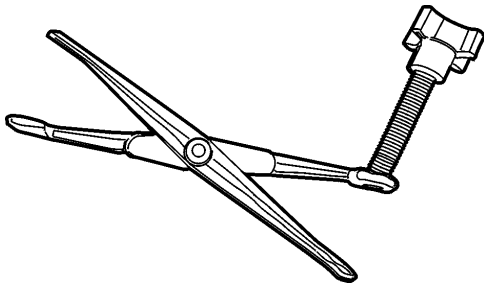


Fig. 3: J-45242 and 9998264, for camshaft

J44772, Thermostat Housing Installer

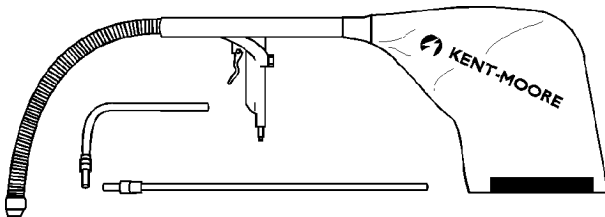


Order number:	J44772
Qty. per operation:	1
Used with:	N/A
Variant / component:	D12D Engine
Tool class:	1
Essential tool:	Yes

J44772 is used to install the thermostat housing on the Volvo D12D Engine.

This tool can be ordered from Volvo by adding the prefix 'KEM' to the tool number or directly from Kent-Moore at 800-328-6657.

PT-2900, Chip Vacuum

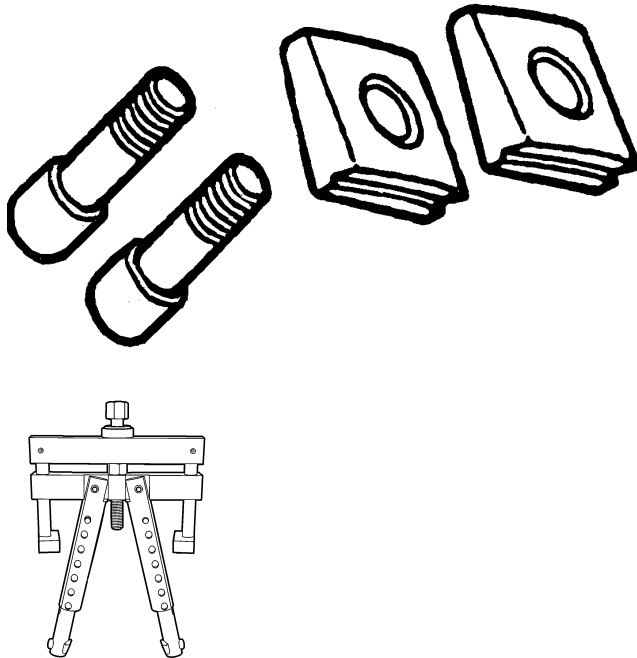


Order number:	PT-2900
Qty. per operation:	1
Used with:	N/A
Variant / component:	D12D Engine
Tool class:	2
Essential tool:	No

Chip Vacuum Tool for Removing Machining Debris and Other Cleaning.

This tool can be ordered directly from Kent-Moore at 800-328-6657.

PT6410-4A, Cylinder Liner Puller Feet



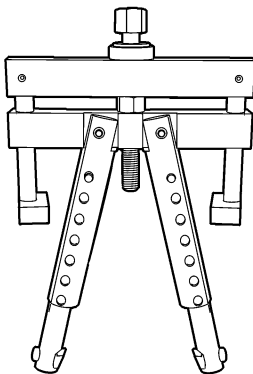
PT6400C Cylinder Liner Puller

Order number: PT6410-4A
Qty. per operation: 2
Used with: PT6400 Series
Variant / component: D12D Engine
Tool class: 1
Essential tool: Yes

PT6400 cylinder liner puller series has been distributed to all Cummins, Caterpillar and Detroit Diesel dealers as part of their dealer agreement. The Volvo engines require two PT6410-4A and two 3/8-16 x 1 in. socket head cap screws along with the PT6400 series cylinder liner puller to remove cylinder liners.

This tool can be ordered directly from Kent-Moore at 800-328-6657.

PT6400-C, Cylinder Liner Puller



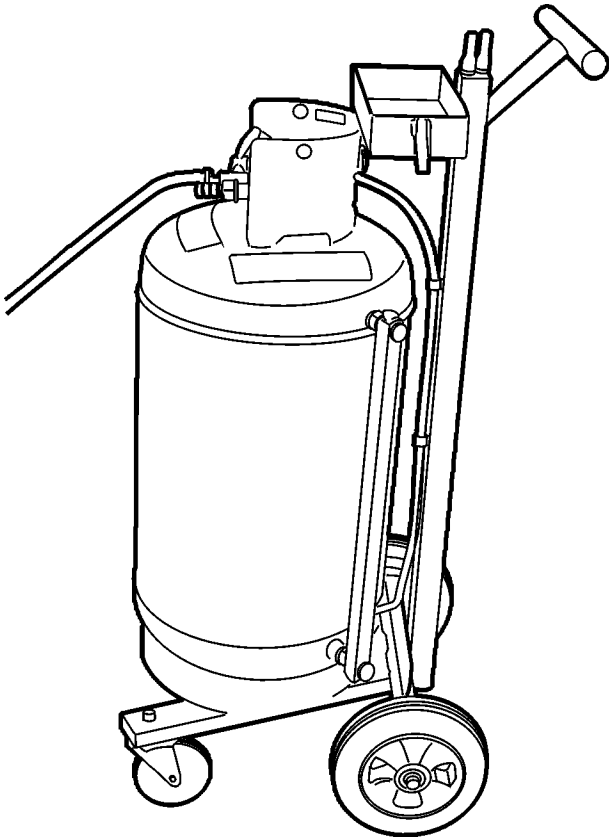
Order number: PT6400-C
Qty. per operation: 1
Used with: PT6410-4A Series

Variant / component: D12D Engine
Tool class: 2
Essential tool: No

The PT6400 series cylinder liner puller is required to remove cylinder liners.

This tool can be ordered directly from Kent-Moore at 800-328-6657.

DBT2V700, Coolant Extractor/Injector

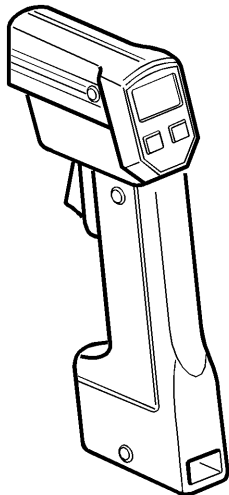


Order number:	DBT2V700
Qty. per operation:	1
Used with:	N/A
Variant / component:	VN, VHD VERSION2
Tool class:	1
Essential tool:	Yes

Coolant Extractor/Injector DBT2V700 is used to remove and install coolant through the factory installed fitting on the lower radiator hose and lower radiator tank. Accessories for retrofitting are also available.

This tool and accessories can be ordered from Volvo.

PT-7147, Infrared Thermometer



Order number:	PT-7147
Qty. per operation:	1
Used with:	N/A
Variant / component:	VN, VHD VERSION2
Tool class:	2
Essential tool:	No

PT-7147 is used to troubleshoot engines, cooling systems and brake systems.

This tool can be ordered directly from Kent-Moore at 800-328-6657.