

Document Title: <b>Volvo standard tightening torques</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo, L350H Volvo</b>			

## Volvo standard tightening torques

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			
L350H Volvo			

The tightening torques in the following tables apply to bolts and nuts with tensile strength. The tables should be used as a general instruction for tightening bolts and nuts without specified values. The charts contains values for course thread bolts and nuts.

Torque values should be increased with  $\approx 10\%$ , for flange bolts.

All standard torques for bolts are without surface treatment.

The standard torque for bolts lubricated with oil should be reduced with 20% of the given value.

### Standard tightening torque charts

Bolt size Metric Coarse Threads	Tensile strength 8.8		Tensile strength 10.9	
	(Nm)	(lbf ft)	(Nm)	(lbf ft)
M5	6	4	8	6
M6	10	7	14	11
M8	25	18	35	26
M10	50	37	70	52
M12	87	64	122	90
M14	139	103	195	144
M16	213	157	299	220
M18	293	216	413	305
M20	416	307	585	432
M24	719	530	1010	745
M27	1060	782	1490	1100
M30	1140	840	2025	1493
M36	2500	1844	3600	2653

Bolt size Inch SAE Coarse Threads	Tensile strength 5		Tensile strength 8	
	(lbf ft)	(Nm)	(lbf ft)	(Nm)
1/4	10	13,6	14	19
5/16	21	28,5	29	39,3
3/8	37	50,2	52	70
7/16	59	80	84	114
1/2	90	122	128	174
5/8	130	177	184	250

Sample manual, Download All 4755 pages at:

<https://www.arepairmanual.com/downloads/l350h-volvo-wheel-loaders-service-manual/>

Product: L350H Volvo Wheel Loaders Service Manual

Full Download: <https://www.arepairmanual.com/downloads/l350h-volvo-wheel-loaders-service-manual/>

5/8	180	244	254	345
3/4	320	434	451	612
7/8	515	700	728	988
1	775	1052	1091	1480
1 1/8	953	1290	1545	2100
1 1/4	1344	1823	2180	2960
1 3/8	1600	2170	2650	3600
1 1/2	2000	2714	3200	4340

Sample manual. Download All 4755 pages at:

<https://www.arepairmanual.com/downloads/l350h-volvo-wheel-loaders-service-manual/>

Document Title: <b>Conversion tables</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

## Conversion tables

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			

### Length

Unit	cm	m	km	in	ft	yd	mile
cm	1	0.01	0.00001	0.3937	0.03281	0.01094	0.000006
m	100	1	0.001	39.37	3.2808	1.0936	0.00062
km	100000	1000	1	39370.7	3280.8	1093.6	0.62137
in	2.54	0.0254	0.000025	1	0.08333	0.02777	0.000015
ft	30.48	0.3048	0.000304	12	1	0.3333	0.000189
yd	91.44	0.9144	0.000914	36	3	1	0.000568
mile	160930	1609.3	1.6093	63360	5280	1760	1

1 mm = 0.1 cm - 1 mm = 0.001 m

### Area

Unit	cm <sup>2</sup>	m <sup>2</sup>	km <sup>2</sup>	a	ft <sup>2</sup>	yd <sup>2</sup>	in <sup>2</sup>
cm <sup>2</sup>	1	0.0001	-	0.000001	0.001076	0.000012	0.155000
m <sup>2</sup>	10000	1	0.000001	0.01	10.764	1.1958	1550.000
km <sup>2</sup>	-	1000000	1	10000	1076400	1195800	-
a	0.01	100	0.0001	1	1076.4	119.58	-
ft <sup>2</sup>	-	0.092903	-	0.000929	1	0.1111	144.000
yd <sup>2</sup>	-	0.83613	-	0.008361	9	1	1296.00
in <sup>2</sup>	6.4516	0.000645	-	-	0.006943	0.000771	1

1 ha = 100 a - 1 mile<sup>2</sup> = 259 ha = 2.59 km<sup>2</sup>

### Volume

Unit	cm <sup>3</sup> = cc	m <sup>3</sup>	l	in <sup>3</sup>	ft <sup>3</sup>	yd <sup>3</sup>
cm <sup>3</sup> = ml	1	0.000001	0.001	0.061024	0.000035	0.000001
m <sup>3</sup>	1000000	1	1000	61024	35.315	1.30796
dm <sup>3</sup> (l)	1000	0.001	1	61.024	0.035315	0.001308
in <sup>3</sup>	16.387	0.000016	0.01638	1	0.000578	0.000021
ft <sup>3</sup>	28316.8	0.028317	28.317	1728	1	0.03704
yd <sup>3</sup>	764529.8	0.76453	764.53	46656	27	1

1 gal (US) = 3785.41 cm<sup>3</sup> = 231 in<sup>3</sup> = 0.83267 gal (UK)

### Weight

Unit	g	kg	t	oz	lb
g	1	0.001	0.000001	0.03527	0.0022
kg	1000	1	0.001	35.273	2.20459
t	1000000	1000	1	35273	2204.59
oz	28.3495	0.02835	0.000028	1	0.0625
lb	453.592	0.45359	0.000454	16	1

1 ton (metric) = 1.1023 ton (US) = 0.9842 ton (UK)

### Pressure

Unit	kp/cm <sup>2</sup>	bar	Pa=N/m <sup>2</sup>	kPa	lbf/in <sup>2</sup>	lbf/ft <sup>2</sup>
kp/cm <sup>2</sup>	1	0.98067	98066.5	98.0665	14.2233	2048.16
bar	1.01972	1	100000	100	14.5037	2088.6
Pa=N/m <sup>2</sup>	0.00001	0.001	1	0.001	0.00015	0.02086
kPa	0.01020	0.01	1000	1	0.14504	20.886
lbf/in <sup>2</sup>	0.07032	0.0689	6894.76	6.89476	1	144
lbf/ft <sup>2</sup>	0.00047	0.00047	47.88028	0.04788	0.00694	1

kg/cm<sup>2</sup> = 735.56 Dry (mmHg) = 0.96784 atm

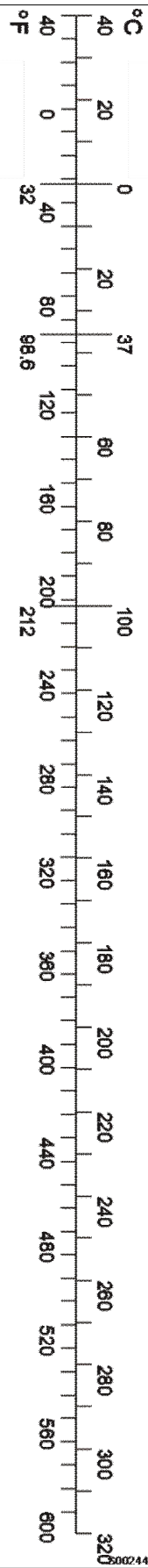
### Unit explanations

Unit	abbreviation
Newton meter	Nm
Kilopoundmeter	kpm
Kilopascal	kPa
Megapascal	MPa
Kilowatt	kW
kilojoule	kJ
British thermal unit	Btu
Calorie	cal

### Approx. conversion

SI unit	Conversion factor	Non SI	Conversion factor	SI
<b>Torque</b>				
Nm	x10.2	=kg/cm	x0.8664	=lb in
Nm	x0.74	=lbf-ft	x1.36	=Nm
Nm	x0.102	=kg/m	x7.22	=lbft
<b>Pressure (Pa = N/m<sup>2</sup>)</b>				
kPa	x4.0	=in.H <sub>2</sub> O	x0.249	=kPa
kPa	x0.30	=in.Hg	x3.38	=kPa
kPa	x0.145	=psi	x6.89	=kPa
bar	x14.5	=psi	x0.069	=bar
kp/cm <sup>2</sup>	x14.22	=psi	x0.070	=kp/cm <sup>2</sup>
N/mm <sup>2</sup>	x145.04	=psi	x0.069	=bar
MPa	x145	=psi	x0.00689	=MPa
<b>Power (W = J/s)</b>				
kW	x1.36	=hp(cv)	x0.736	=kW

kW	x1.34	= bhp	x0.746	= kW
kW	x0.948	= Btu/s	x1.055	= kW
W	x0.74	= ft-lb/s	x1.36	= W
Energy (J = Nm)				
kJ	x0.948	= Btu	x1.055	= kJ
J	x0.239	= calorie	x4.19	= J
Speed and acceleration				
m/s <sup>2</sup>	x3.28	= ft/s <sup>2</sup>	x0.305	= m/s <sup>2</sup>
m/s	x3.28	= ft/s	x0.305	= m/s
km/h	x0.62	= mph	x1.61	= km/h
Horsepower/torque				
Bhp x5252 rpm = TQ (lb-ft)			TQ x rpm 5252 = bhp	
Temperature				
$^{\circ}\text{C} = (^{\circ}\text{F} - 32) / 1.8$			$^{\circ}\text{F} = (^{\circ}\text{C} \times 1.8) + 32$	
Flow factor				
l/min (dm <sup>3</sup> /min)	x0.264	= US gal/min	x3.785	= liter/min



Document Title: <b>Torque wrench extension</b>	Function Group: <b>030</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

## Torque wrench extension

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			

When an extension is used together with a torque wrench (e.g.88830381 Wrench), the torque applied to the screw increases since the lever arm is extended.

The following formula is used to calculate the correct torque wrench settings:

$$M1 = M2 \times (L1/L2)$$

**M1** is the torque to be set on the torque wrench.

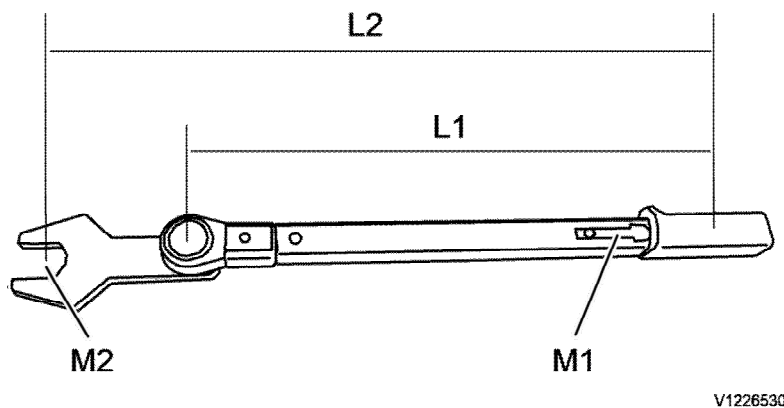
**L1** is the normal length of the torque wrench.

**M2** is the tightening torque according to specification.

**L2** is the total length of the torque wrench and extension.

### NOTE!

The extension and the torque wrench must be in a straight line for the calculation to be correct.



**Figure 1**

### Calculation example

M1 is the torque to be set on the torque wrench.

M2 is the tightening torque according to specification, e.g. 100 Nm.

L1 is the measured length of the torque wrench, e.g. 45 cm.

L2 is the measured length of the extension and the torque wrench, e.g. 60 cm.

L1 = 45 cm

L2 = 60 cm

M2 = 100 Nm

$$M1 = 100 \text{ Nm} \times (45 \text{ cm}/60 \text{ cm}) = 75 \text{ Nm}$$

Document Title: <b>Operation numbers for additional work</b>	Function Group: <b>070</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>Wheel Loaders (WLO)</b>			

## Operation numbers for additional work

Showing Selected Profile

These operations can be used to identify work that is not included in the time guide or described in the methods in the Service Manual. When these operations are used, a description of the work that has been performed must be provided.

### Other work related to engine

Op. no. 070-210

This operation can be used when work has been done related to the engine and function group 2 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

### Other work related to electrical system

Op. no. 070-310

This operation can be used when work has been done related to the electrical system and function group 3 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

### Other work related to transmission, gearbox, travel motor, swing motor

Op. no. 070-410

This operation can be used when work has been done related to the transmission, gearbox, travel motor or swing motor and function group 4 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

### Other work related to drive axle

Op. no. 070-470

This operation can be used when work has been done related to the drive axle and function group 46 when no applicable method description was available. When this operation is used, additional information is required:

- Description of required work that have been done

### Other work related to brake system

Op. no. 070-510

This operation can be used when work has been done related to the brake system and function group 5 when no applicable

method description was available. When this operation is used, additional information is required:

- Description of work that has been done

**Other work related to steering system**

Op. no. 070-610

This operation can be used when work has been done related to the steering system and function group 6 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

**Other work related to frame link, axle suspension**

Op. no. 070-710

This operation can be used when work has been done related to the frame link, axle suspension and other parts related to function group 7 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

**Other work related to cab, air conditioning**

Op. no. 070-810

This operation can be used when work has been done related to the cab, air conditioning and other parts related to function group 8 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

**Other work related to hydraulic system**

Op. no. 070-910

This operation can be used when work has been done related to the hydraulic system and other parts related to function group 9 when no applicable method description was available. When this operation is used, additional information is required:

- Description of work that has been done

Document Title: <b>E1706</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

### E1706

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo	Arvika	2001	2999
L350H Volvo	Arvika	4001	4999
L350H Volvo	Arvika	5001	5999

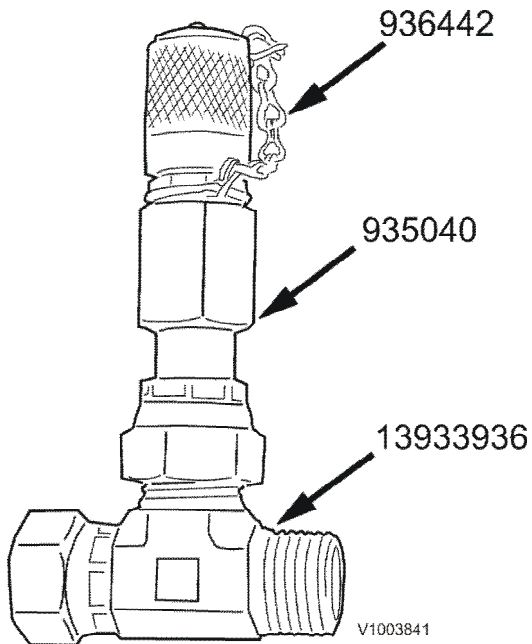


Figure 1

Document Title: <b>E 1708, Checking point</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

### E 1708, Checking point

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			

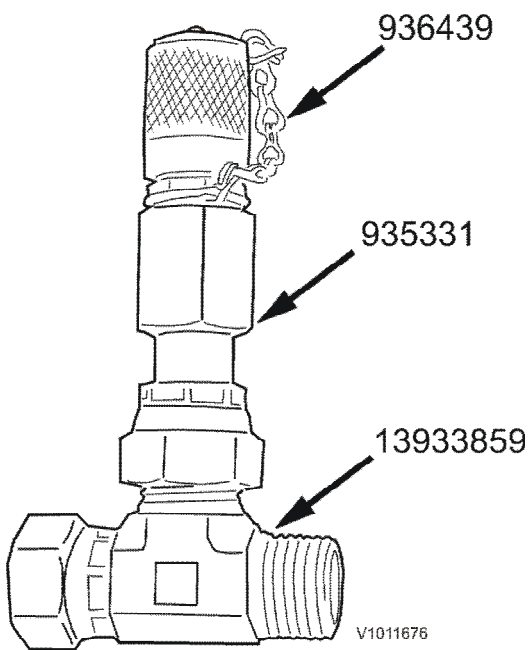


Figure 1

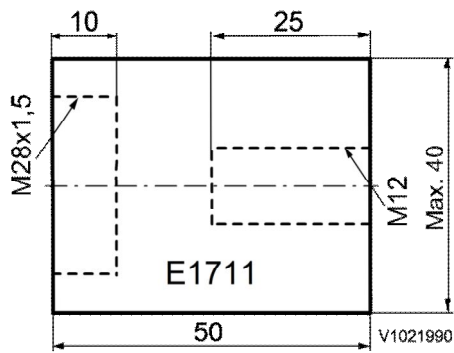
Document Title: <b>E1711</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

### E1711

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			

### E1711



**Figure 1**  
E1711

Document Title: <b>E-2001</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

### E-2001

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			

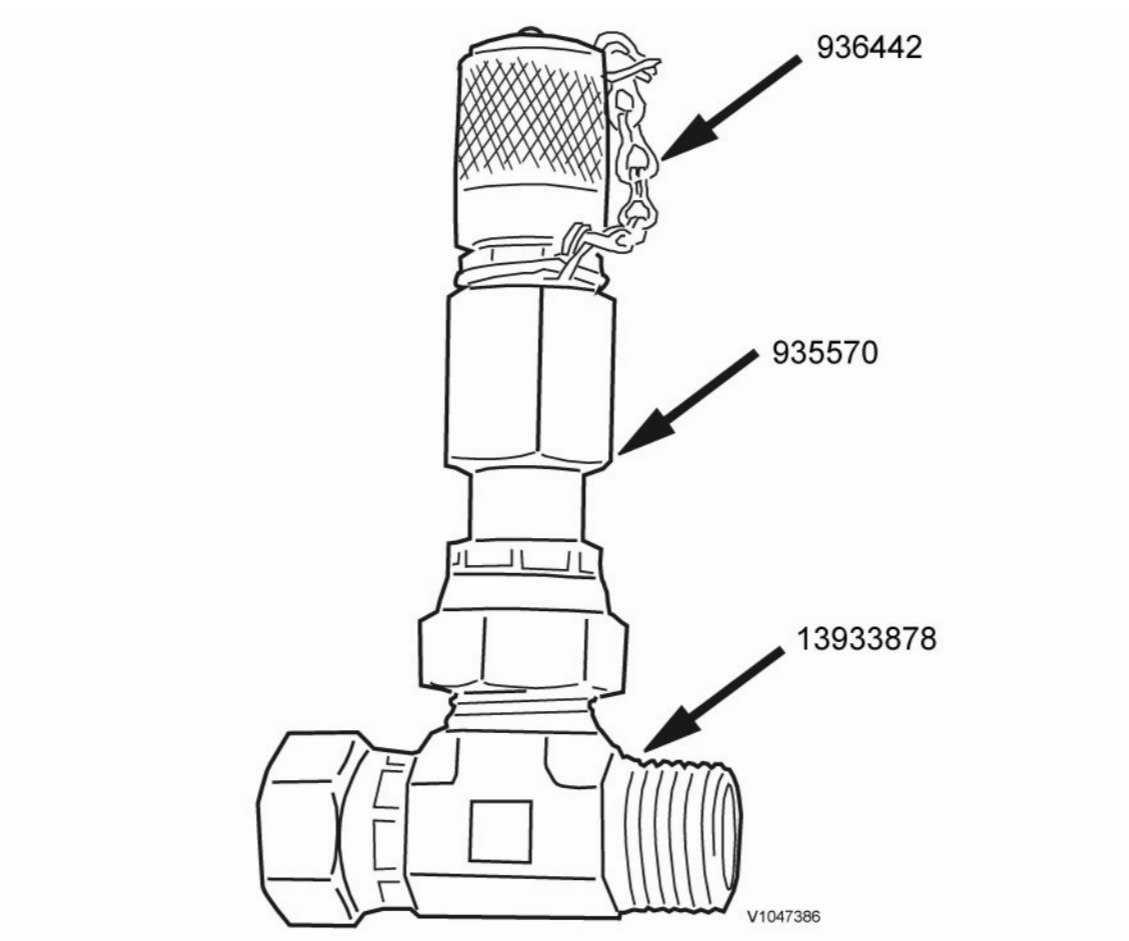


Figure 1

Document Title: <b>E-2002</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

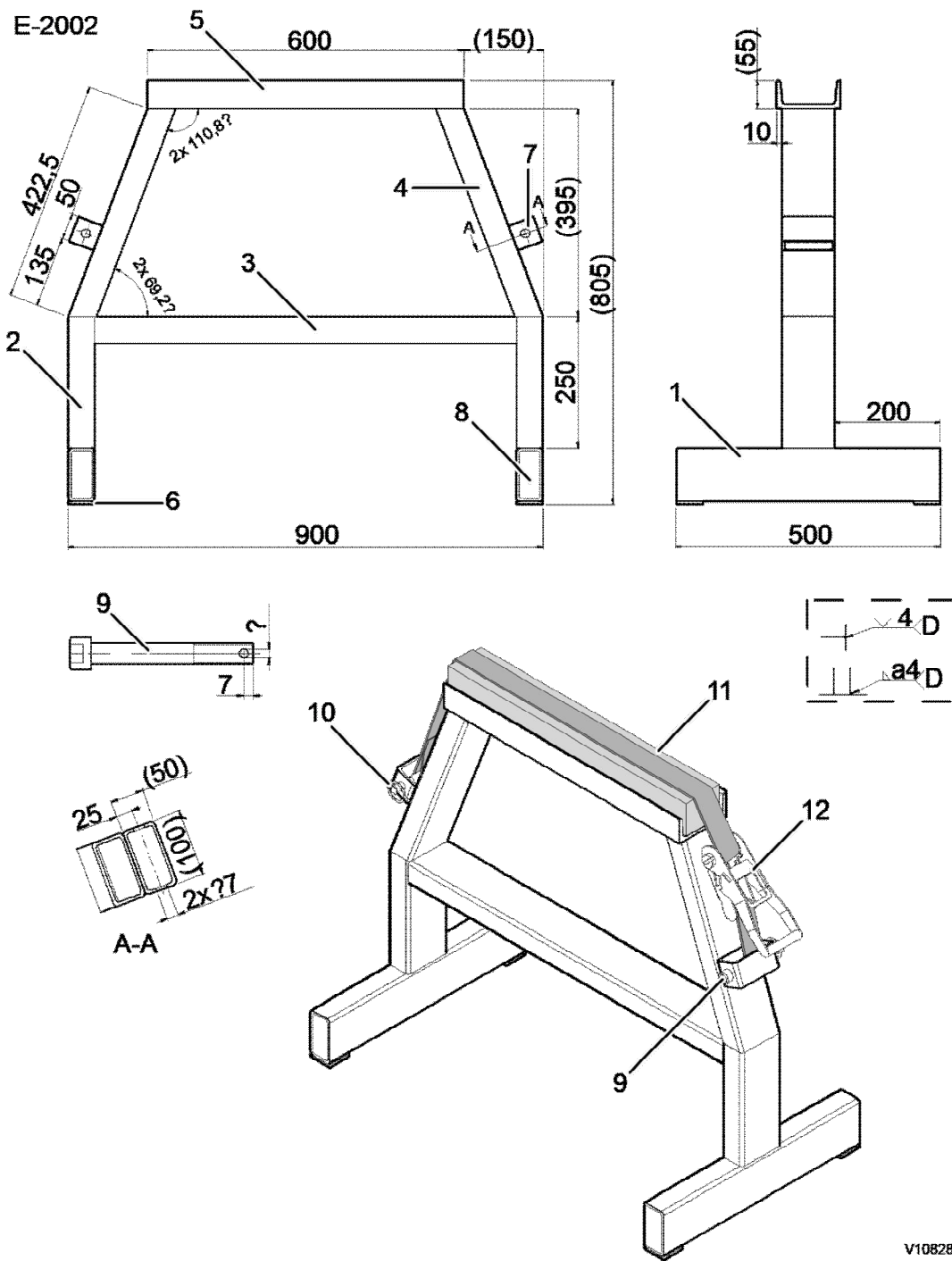
**E-2002**

Showing Selected Profile

<b>Valid for serial numbers</b>			
<b>Model</b>	<b>Production site</b>	<b>Serial number start</b>	<b>Serial number stop</b>
L350H Volvo	Arvika	2001	2999
L350H Volvo	Arvika	4001	4999
L350H Volvo	Arvika	5001	5999

**Fixture for components**

Dimensions on the drawing are given in mm.



V1082820

**Figure 1**  
Fixture for components

Pos.	Designation	Quantity	Material/Part no.
1	KKR 100x50x5	2	S 355 J2H
2	KKR 100x50x5	2	S 355 J2H
3	KKR 100x50x5	1	S 355 J2H
4	KKR 100x50x5	2	S 355 J2H
5	U-120	1	S 235 JR G2
6	Flat bar 50x50x5	4	SS 1312-06
7	KKR 100x50x5	2	S 355 J2H
8	Flat bar 90x40x3	4	SS 1312-06
9	Bolt MC6S M16x120	2	

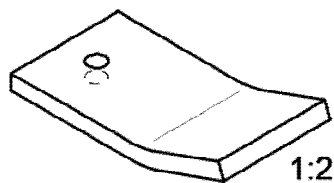
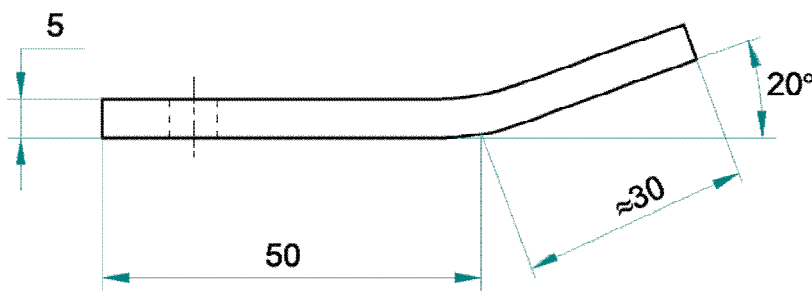
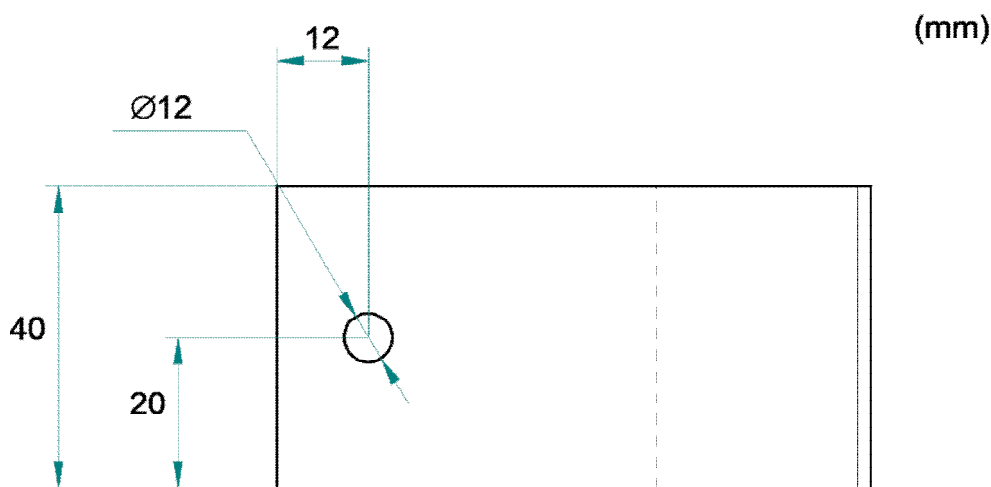
10	Pin	2	6619405
11	Wooden joist	1	600x95x70
12	Tensioning strap	1	

Document Title: <b>E-2004</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

### E-2004

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			



V1074423

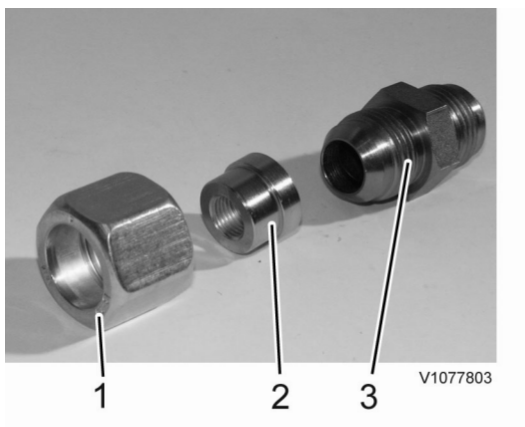
Figure 1

Document Title: <b>E-2005</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

## E-2005

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			



**Figure 1**

E-tool 2005

1. Coupling nut 931206
2. Test nipple 11054368 Thread R1/4"
3. Nipple 929315

Document Title: <b>E-2007</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

### E-2007

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			



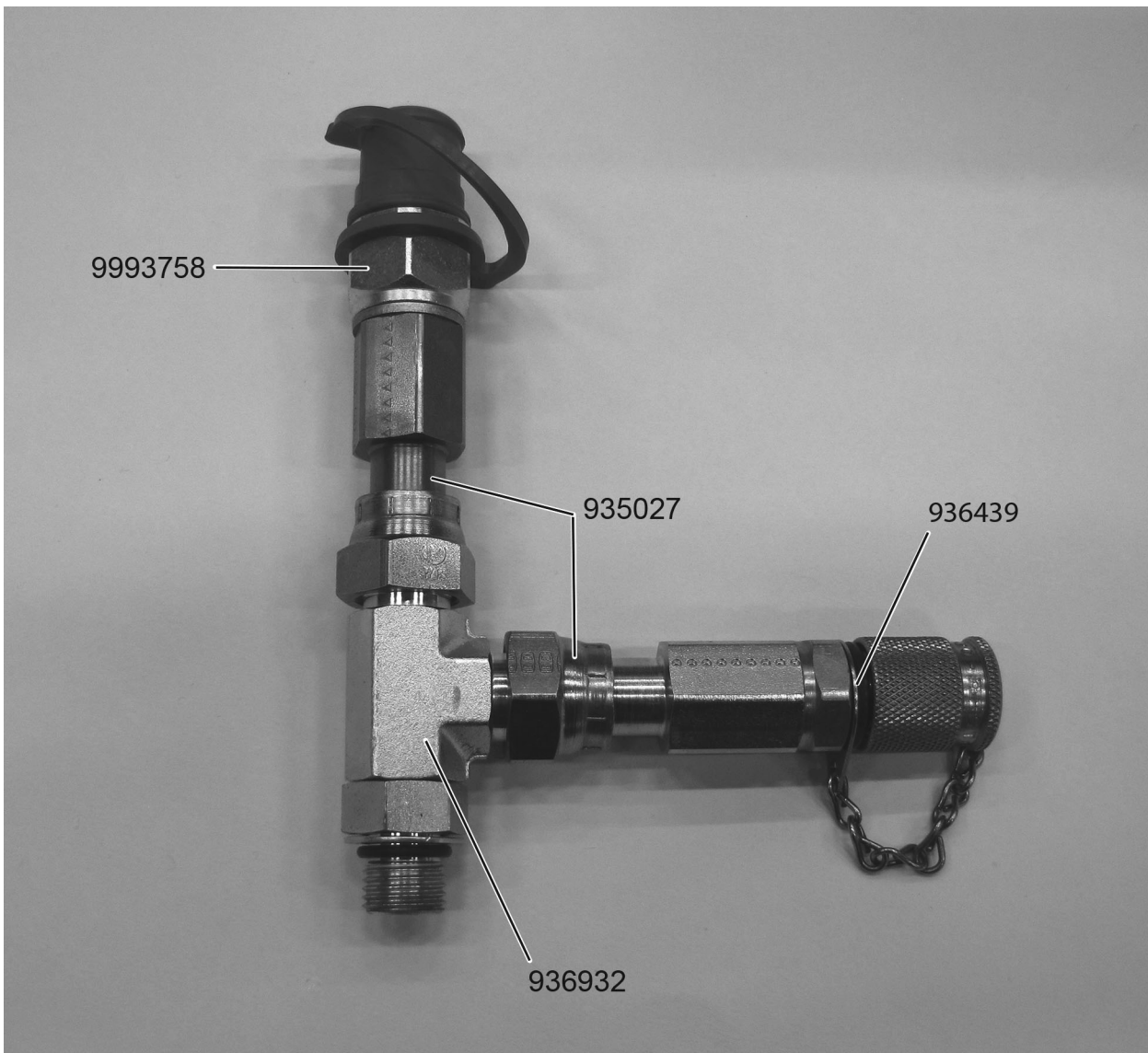
Figure 1

Document Title: <b>E-2014</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

### E-2014

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			



V1138633

Figure 1

Document Title: <b>E-2015</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

### E-2015

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			

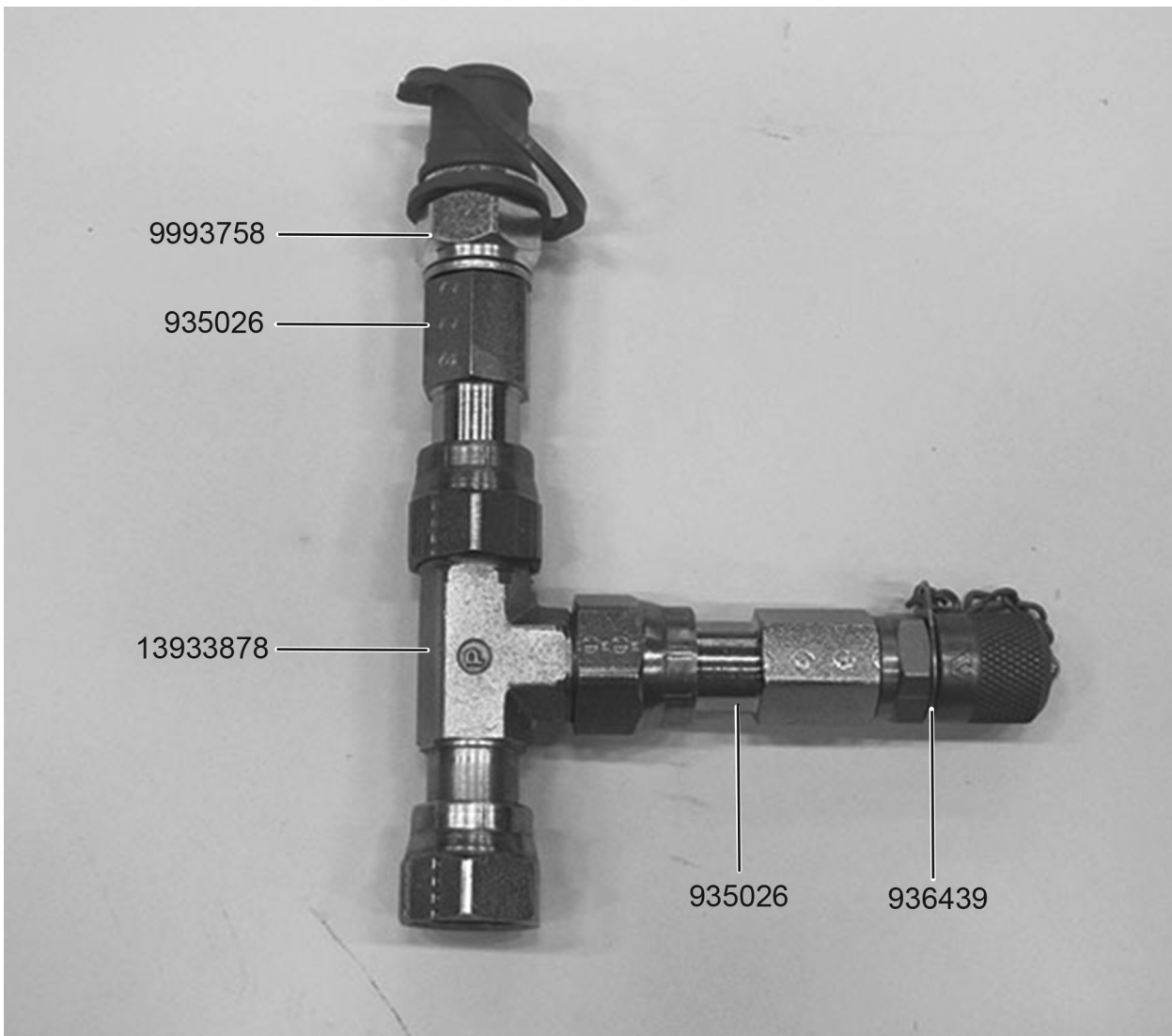


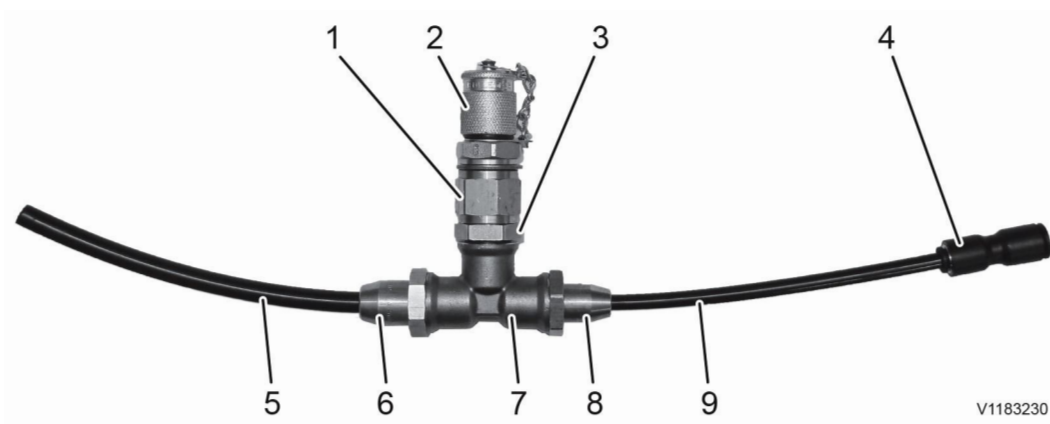
Figure 1

Document Title: <b>E-2016</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

### E-2016

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			



V1183230

**Figure 1**

1. 88830130 Nipple
2. 15018967 Testing nipple
3. 11196161 Nipple
4. 17413665 Connector Ø 6/8 mm
5. 980832 Tube Ø 8 mm
6. 977789 Fitting Ø 8 mm
7. 15023142 T-coupling
8. 979282 Fitting Ø 6 mm
9. 980831 Tube Ø 6mm

Document Title: <b>E-2040</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

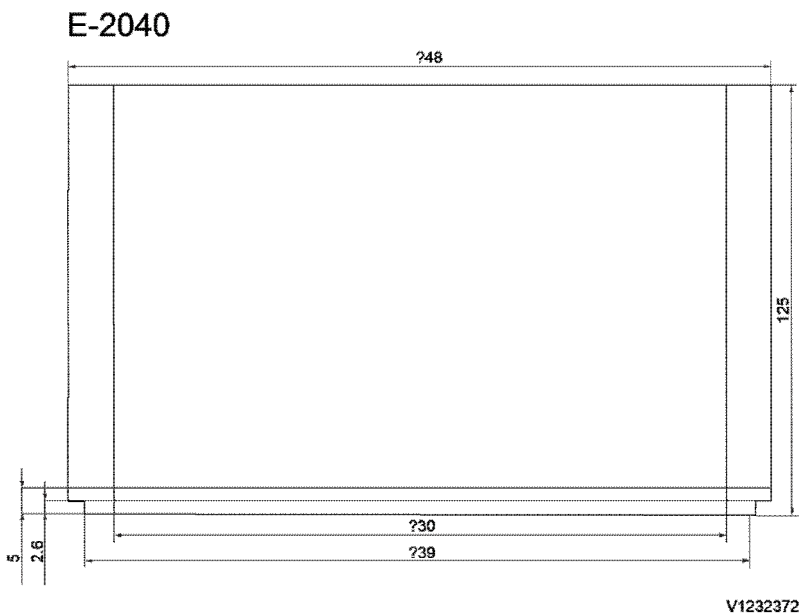
## E-2040

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			

### Installation ring

Dimensions on the drawing are given in mm.



**Figure 1**

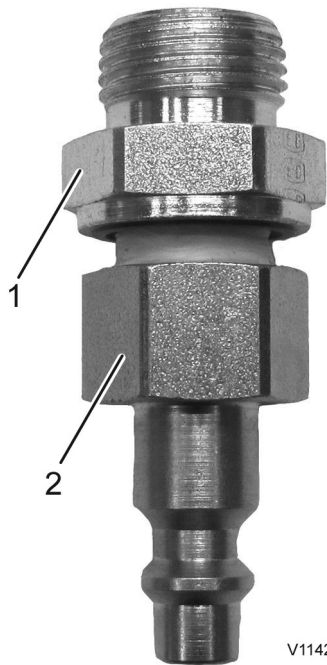
Material: S355J2

Document Title: <b>E-2018</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

## E-2018

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			



V1142422

**Figure 1**

1. 963948
2. 17420996

Document Title: <b>E-2037</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

### E-2037

Showing Selected Profile

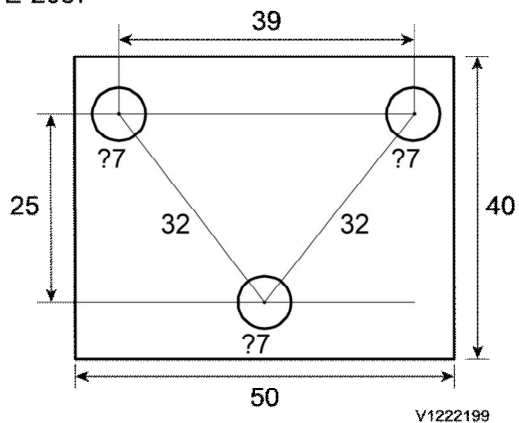
Valid for option/configuration			
Model	Option no.	Option	Configuration
L350H Volvo	53170319	Engine	D16J China IV
L350H Volvo	86933	Engine	D16J EU Stage IV
L350H Volvo	86934	Engine	D16J US Tier 4 final
L350H Volvo	87719	Engine	D16J US Tier 4 final
L350H Volvo	87739	Engine	D16J EU Stage V

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo	Arvika	1001	1098
L350H Volvo	Arvika	1099	1300
L350H Volvo	Arvika	1301	3000

#### Plate

Dimensions on the drawing are given in mm.

#### E-2037



**Figure 1**

E-2037

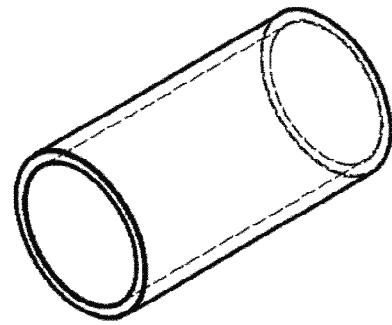
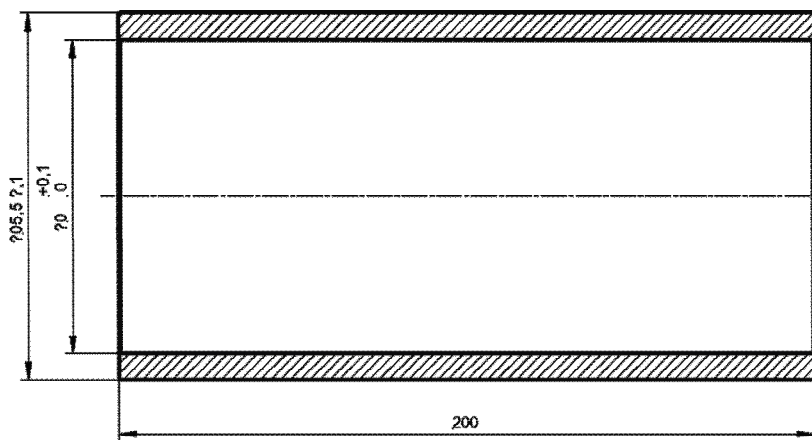
Flat iron bar, thickness 6 mm

Document Title: <b>E-2026</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

### E-2026

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			



V1195151

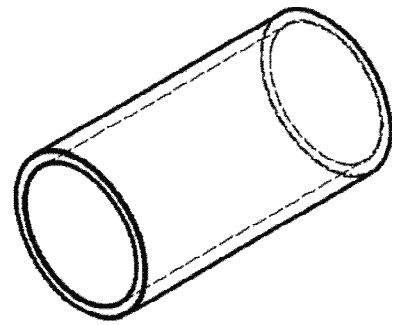
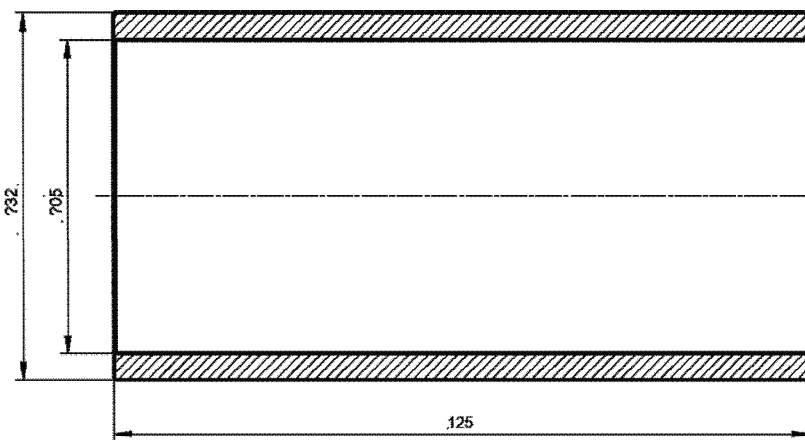
**Figure 1**  
Steel sleeve

Document Title: <b>E-2027</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

### E-2027

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			



V1197017

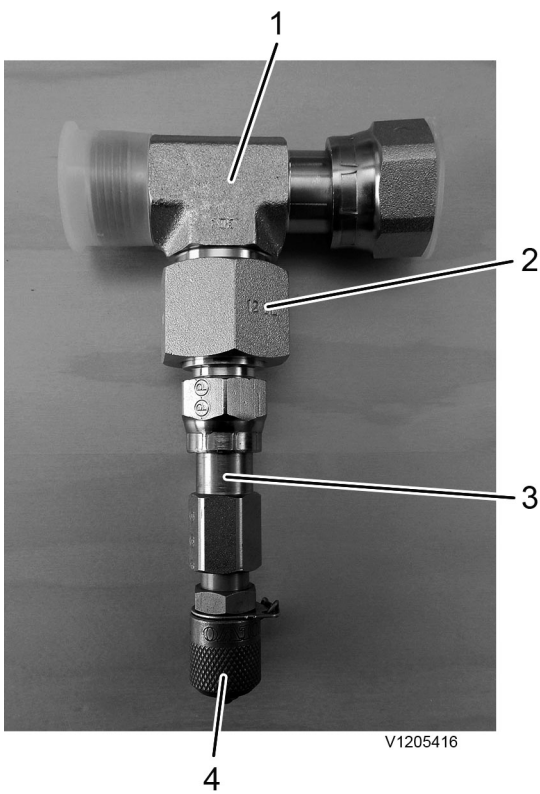
**Figure 1**  
Steel sleeve

Document Title: <b>E-2029</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

## E-2029

Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo			



**Figure 1**

- 1. 13933874
- 2. 15193696
- 3. 935570
- 4. 936442

Document Title: <b>E-2038</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

### E-2038

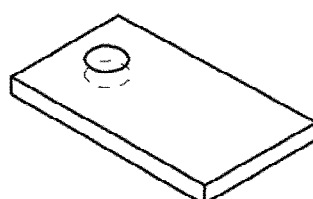
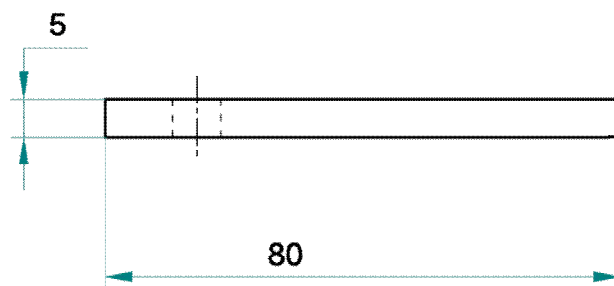
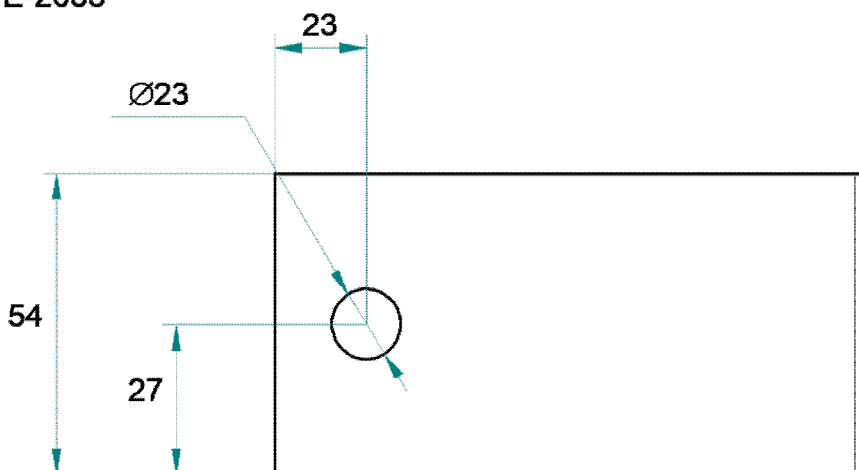
Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo	Arvika	2001	2999
L350H Volvo	Arvika	4001	4999
L350H Volvo	Arvika	5001	5999

#### Holder

Dimensions on the drawing are given in mm.

#### E-2038



**Figure 1**

Holder

Material: SS 2172

Document Title: <b>E-2039</b>	Function Group: <b>080</b>	Information Type: <b>Service Information</b>	Date: <b>4/15/2026</b>
Profile: <b>L350H Volvo</b>			

## E-2039

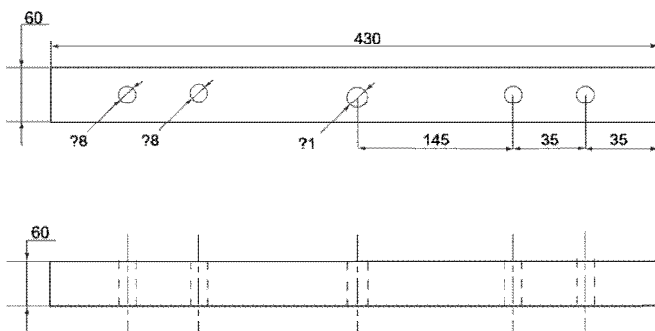
Showing Selected Profile

Valid for serial numbers			
Model	Production site	Serial number start	Serial number stop
L350H Volvo	Arvika	2001	2999
L350H Volvo	Arvika	4001	4999
L350H Volvo	Arvika	5001	5999

### Counterhold

Dimensions on the drawing are given in mm.

### E-2039



V1231659

**Figure 1**

Material: 235JR