

Volvo A35e Fs Articulated Dump Truck

Workshop Service Repair Manual



Volvo A35E FS A35EFS Articulated Dump Truck Service Repair Manual INSTANT
DOWNLOAD

Volvo A35E FS A35EFS Articulated Dump Truck Service Repair Manual is an electronic version of the best original maintenance manual. Compared to the electronic version and paper version, there is a great advantage. It can zoom in anywhere on your computer, so you can see it clearly. Your Volvo A35E FS A35EFS Articulated Dump Truck parts correspond with the number of pages printed on it in this manual, very easy to use.

Document Title: Description	Function Group: 000	Information Type: Service Information	Date: 2014/8/27
Profile: ART, A35E FS [GB]			

Description

Articulated haulers A35E/A40E and A35E FS/A40E FS consist of two main sections, the tractor unit and the load unit. The two units are joined by means of the articulation joint, which allows movement about a vertical bearing for steering. The articulation joint also allows the units to rotate in relation to each other around the longitudinal axis.

The tractor unit consists of a six-cylinder diesel engine, transmission and dropbox as well as a drive shaft. The cab is suspended on rubber mountings in the frame. The frame is independently suspended in relation to the drive shaft. For a more detailed description of the FS machines, see [720 Full Suspension description](#)

The load unit consists of a frame, elevation load body, as well as a front and rear drive axle, which are linked by the bogie suspension.

The articulated hauler has constant 4-wheel drive with the possibility of engaging and disengaging 6-wheel drive. It has a longitudinal differential lock in the dropbox and differential locks in the drive axles.

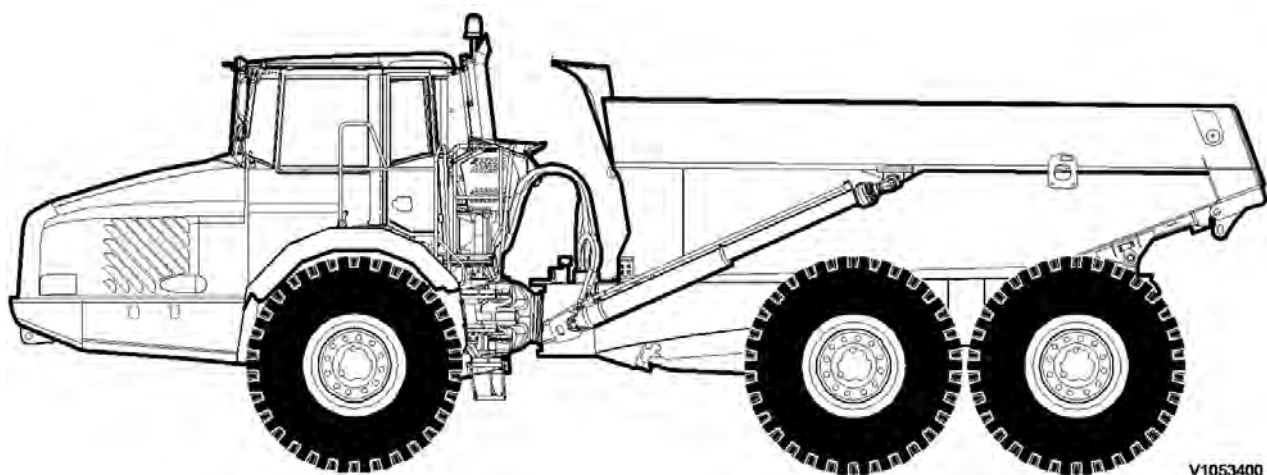
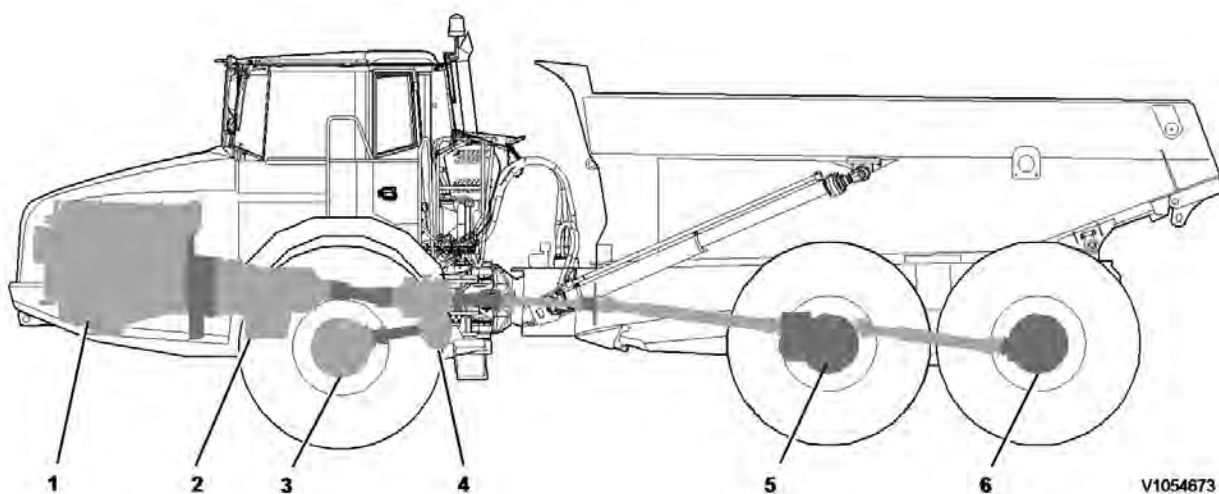


Figure 1



Document Title: Coolant with anti-freeze and corrosion protection, recommendation	Function Group: 030	Information Type: Service Information	Date: 2014/8/27
Profile: ART, A35E FS [GB]			

Coolant with anti-freeze and corrosion protection, recommendation

Coolant

The cooling system is filled with **Volvo Coolant VCS**. Always use the same coolant that the system was previously filled with.

NOTE!

To avoid damage to the engine, different coolants must NOT be mixed. Nor may pure water be used alone.

When using concentrated coolant and pure water the mixture must contain 40–60% concentrated coolant and 40–60% pure water. The content of coolant must not be less than 40% of the total mixture, see table below

Anti-freeze protection down to	Mixture of concentrated coolant
–25°C	40%
–35°C	50%
–46°C	60%

If there is any doubt whether or not the water is absolutely pure then ready mixed coolant must be used.

Pure water for the cooling system must also fulfil the following requirements

Description	Value
Total quantity of fixed particles	< 340 ppm
Total hardness	< 9.5° dH
Chloride	< 40 ppm
Sulphate	< 100 ppm
pH-value	5.5 – 9
Silicon	< 20 mg SiO ₂ /litre
Iron	< 0.10 mg FE/litre
Manganese	< 0.05 mg Mn/litre
Electrical conductive capacity	< 500 µS/cm
Organic content, COD-Mn	<15 mg/litre

NOTE!

To avoid damage to the engine, different ready mixed coolants must not be mixed.

Document Title: Recovering and towing	Function Group: 050	Information Type: Service Information	Date: 2014/8/27
Profile: ART, A25E, A40E FS, A40E, A35E FS, A35E, A25E 4x4, A30E [GB]			

Recovering and towing

WARNING

Before starting any recovery or towing work, make sure that the parking brake is applied and the wheels are blocked to prevent the machine from rolling. Extreme caution must be observed in connection with towing to prevent accidents and personal injuries.

WARNING

If the engine cannot be started, the brake and steering functions will be severely limited. In such cases, towing should only be performed in an emergency situation by experienced and trained personnel and only for the shortest possible distance (see towing). If possible, transport the machine on a trailer.

General

If possible, the engine should be running while recovering/towing the machine to ensure satisfactory braking and steering performance.

Recovering

Use a towbar, heavy-gauge cable or chain connected to the towing eyes at the front or rear of the machine to tow the machine to a suitable place or passable road.

Towing

- If the machine has to be towed to a workshop after recovery, use a towbar or heavy-gauge towing cable connected to the front towing eyes.
- A towbar must always be used if the machine that is to be towed has no brake function.
- The towing vehicle or machine must always be at least as heavy as the towed machine and have sufficient engine and braking power to tow and brake both machines on uphill and downhill grades.
- Always tow the shortest possible distance.
- Maximum towing speed under all conditions is 10 km/h.

NOTE!

The engine cannot be started by towing the vehicle.

Case 1 (with engine running)

The gearshift selector should be in neutral and the parking brake in the operating position. The machine can be towed for 10 km without taking special action.

Case 2 (without engine running)

Since the transmission is not lubricated when the engine is not running, the propeller shaft between the transmission and dropbox shall be removed. Then lubrication to the dropbox is maintained at the same time as the machine can be steered.

Removing the propeller shaft

1. Place the machine in service position.
2. Block the wheels so that the machine cannot start to roll and release all brakes.
3. Make sure that the front or rear wheels are slightly raised off the ground before removing the propeller shaft's bolts.

Filling compressed air system

Document Title: Lifting machine	Function Group: 050	Information Type: Service Information	Date: 2014/8/27
Profile: ART, A35E, A35E FS, A40E, A40E FS [GB]			

Lifting machine

Op nbr 09001-1

WARNING

Never stand under the machine when it is suspended in the air.

WARNING

The lifting tool may only be installed with the special nuts supplied with the tool.

The lifting tool is considered to be equipment

NOTE!

The lifting tool must only be installed on the machine when lifting and transporting it.

NOTE!

It is important that the correct tools and special nuts are used and that the lifting tool is fitted correctly.

Lifting tool	Nut
Part no. 15011655	Part no. 11193630

1. Park the machine on a level surface.
2. The machine must be switched off and the main current disconnected.
3. Lock the steering joint with the steering joint lock.

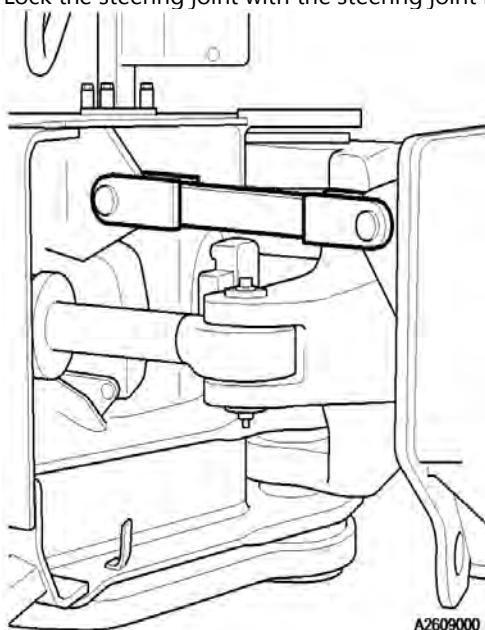


Figure 1

Steering joint lock

4. Fit the lifting tool onto the front axle and the front bogie axle and tighten the nuts crosswise **200 Nm (148 lbf ft)**.

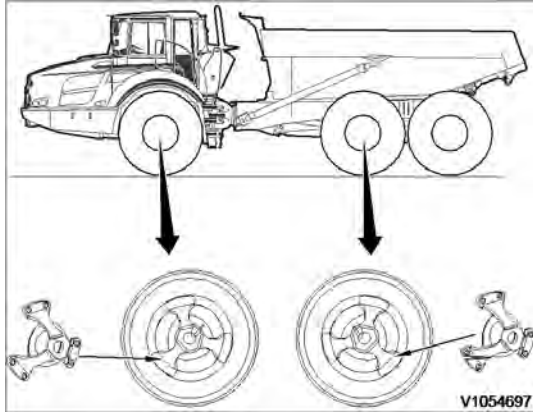


Figure 2



Do not lift the machine by the load body eyes.

The four lifting slings must have the same length and be at least 8.5 m (335 in)

5. Connect four lifting slings to the lifting tools.

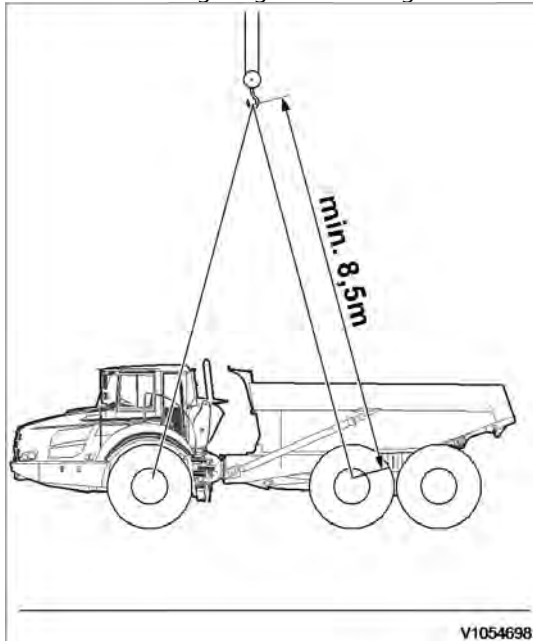


Figure 3

6. Lift the machine by the lifting eyes on the wheels.
7. Lower the machine.
8. Disconnect the steering joint lock before the machine is operated.
9. Remove the lifting tool and store the associated nuts on the cable.



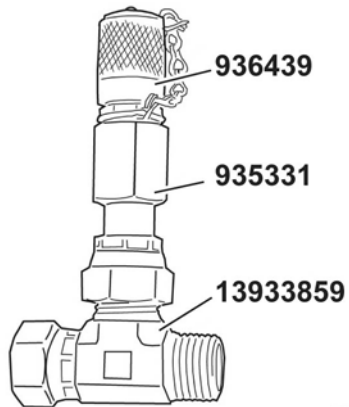
Construction Equipment

Service Information

Document Title: Drawings of E-tools	Function Group: 080	Information Type: Service Information	Date: 2014/8/27
Profile: ART, A35E FS [GB]			

Drawings of E-tools

E-2503 Measuring nipple



V1058819

Figure 1

E-2503 Measuring nipple

Document Title: 88830051 User Instruction	Function Group: 080	Information Type: Service Information	Date: 2014/8/27
Profile: ART, A35E FS [GB]			

88830051 User Instruction

Foreword

Intended use

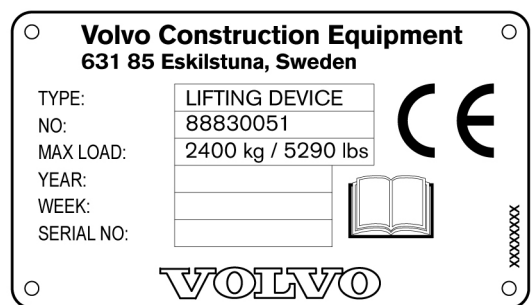
Lifting tool 88830051 is intended to be used for connection to and lifting out and in of diesel engines (D9B, D12D, D16E) for Volvo CE's machines.

The lifting tool is intended to be used globally in Volvo workshops.

Intended users of the lifting tool are persons appointed by each Volvo workshop. The lifting tool may not be used by unauthorized persons or minors.

Marking

CE-plates, machine plates, or any other markings may not be removed or made illegible.



V1071585

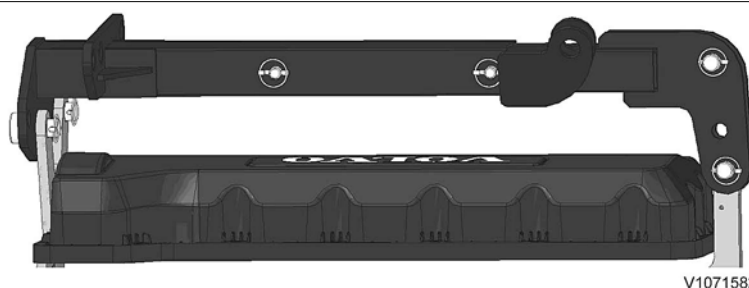
Figure 1
CE-plate

Make

Volvo Construction Equipment Customer Support Division
Carl Lihnell's väg
SE-360 42 Braås

Max. load

Max. load is 2,400 kg.



V1071585

Figure 2
Lifting tool 88830051 connected to engine D9B

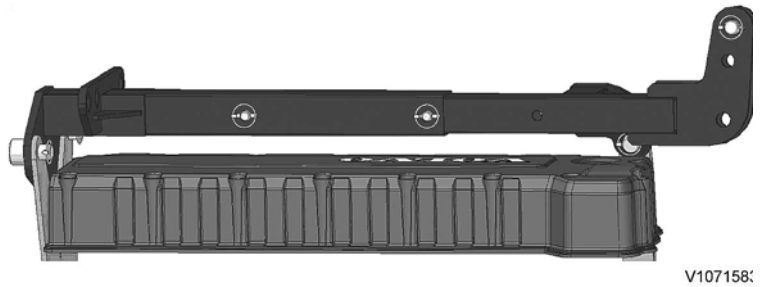


Figure 3
Lifting tool 88830051 connected to engine D12D

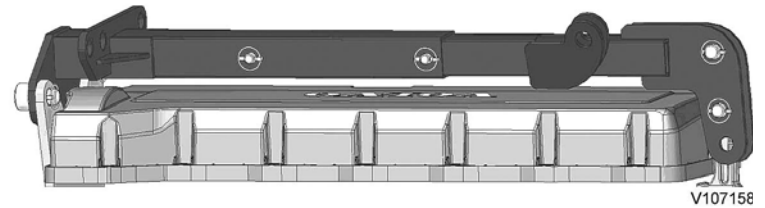


Figure 4
Lifting tool 88830051 connected to engine D16E

Safety

General



Read the user instruction before use or in connection with initial use, pay special attention to the publication's warning texts.

Use restrictions



Application

Do not use and overload the lifting tool and its connected lifting equipment for anything else than their intended use, risk of personal injuries as well as risk of rendering the lifting tool unusable.



Connection

It is important to connect the lifting tool correctly depending on the engine to be handled. The lifting tool is intended to handle engines D9B, D12D, and D16E. See additional user instructions.



Failures and/or deformations

It is absolutely forbidden to use the lifting tool in case of visible failures or deformations.

Changes and modifications

The supplier does not accept any responsibility in case of changes or modifications to the lifting tool, or in case the lifting tool is used in any other way than that intended at the time of delivery. Arbitrary modifications, reworking, and changes of the lifting tool are forbidden for safety reasons.

Requirements of personal protective equipment



Safety shoes

Safety shoes must be worn during all use of the lifting tool.

Risk area, and personnel requirements



Risk area, suspended load

Never stand under a suspended load as this may be associated with fatal danger.



Personnel requirements

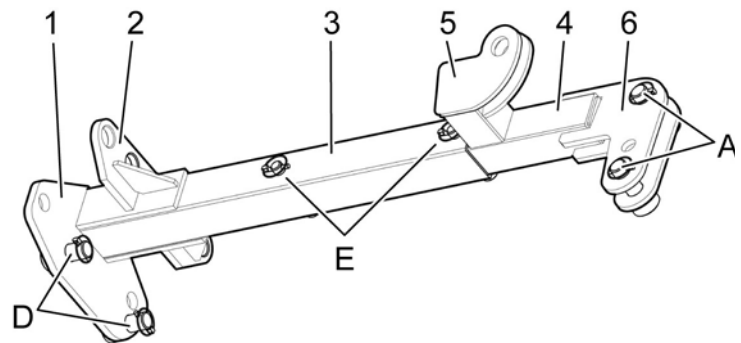
Personnel shall be aware of the risks associated with being in or near the risk area where loads are lifted. Personnel shall also have sufficient instructions to be able to use the lifting tool in a safe way.

Authorization

It is the employer's and the management's responsibility to make sure that persons only are authorized to handle the tools for which they have received instructions or training. Only persons appointed by each company are authorized to use the lifting tool.

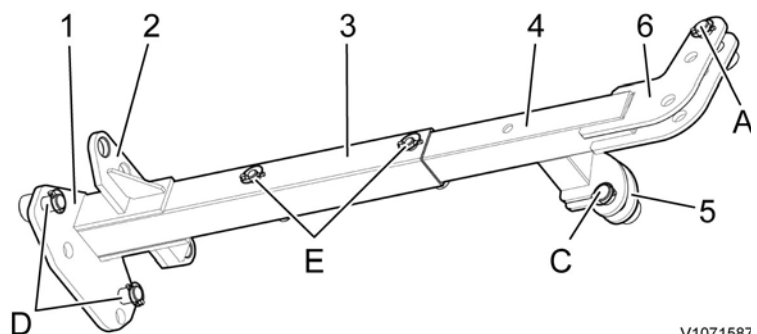
Product description and use description

Product description



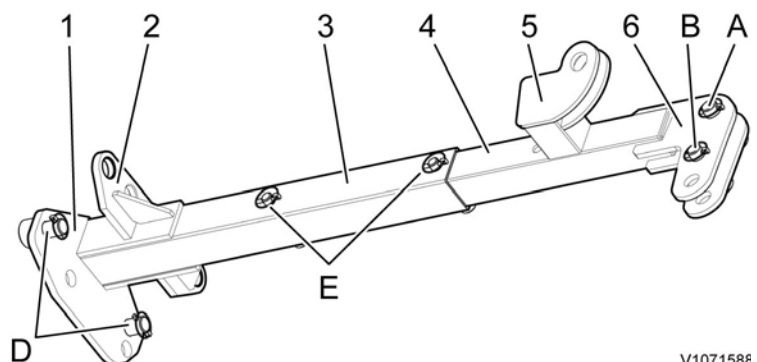
V1071586

Figure 5
Lifting tool adapted to engine D9B



V1071587

Figure 6
Lifting tool adapted to engine D12D



V1071588

Figure 7
Lifting tool adapted to engine D16E

1. Lifting eye with pins that are to be adapted to each engine's rear hole pattern.
2. Lifting eye for connecting lift hook with chain that is to be installed depending on the engine to be lifted.
3. Outer square pipe with pins.
4. Inner square pipe with telescopic function that is length-adapted/rotated 180° depending on the engine to be lifted.
5. Lifting eye with pin that is to be installed in the D12D-engine's lifting eye.
6. Lifting eye with pins that are to be installed in the D9B/D16E-engines' lifting eyes and lifting device hook.

A, B, C, D, and E are pin markings to identify where the pins are to be installed.

Other included equipment

Supplied equipment.



V1071589

Figure 8

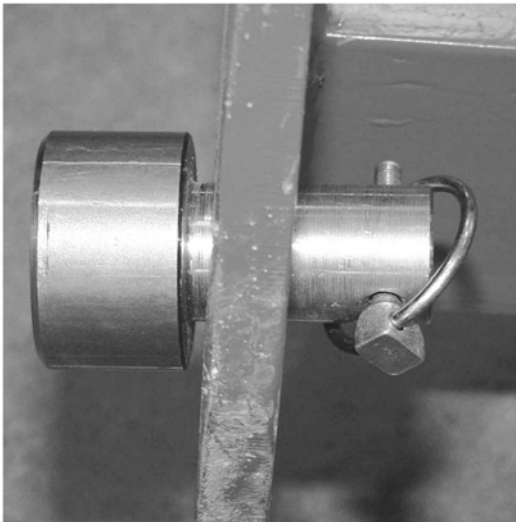
Lift ring for connecting to lifting equipment. Shackles and chain with shortening hooks.



V1071590

Figure 9

Fixed shackle and hook



V1071591

Figure 10

Pins with lock pin



V1071592

Figure 11

Lift ring

Not supplied equipment

The ratchet block 1.5 ton (not supplied) is used to change and adapt the engine's lift angle when lifting the engine in and out of the machine.



Figure 12
Ratchet block 1.5 ton

Connecting lifting tool to engine D9B

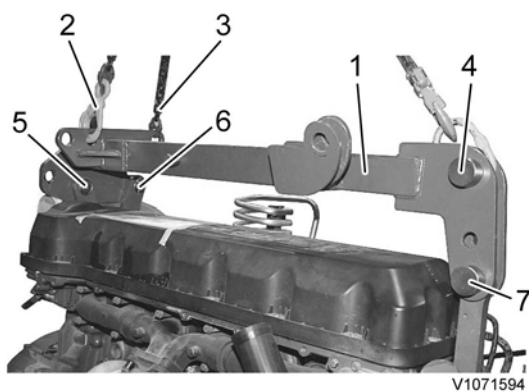


Figure 13
Engine D9B

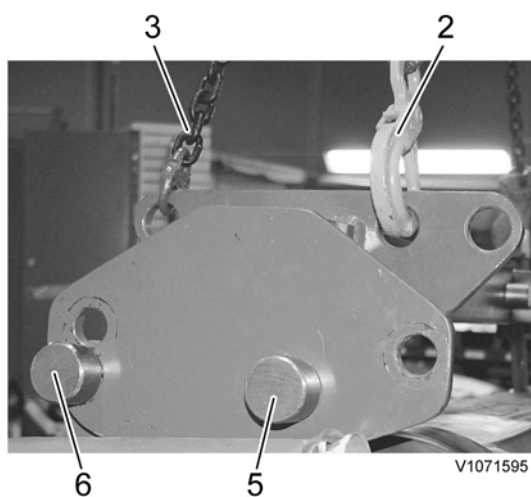


Figure 14

1. Inner pipe with telescopic function is adapted to the short position and turned down according to the figure (4, 7.) Install the pins and secure them with the lock pins.

2. Connect the lifting hook to the inner hole.
3. Permanent connection with shackle.
4. Connect the lift ring with chain from the ratchet block. Install the pin and secure it with the lock pin.

5, 6, 7 - Connect the lifting tool to the engine's attaching points. Install the pins and secure them with the lock pins.

Lift carefully and adjust the lift angle with the ratchet block, depending on the engine and machine being handled.

NOTE!

Risk area, suspended load.

Never stand under a suspended load as this may be associated with fatal danger.

Connecting lifting tool to engine D12D

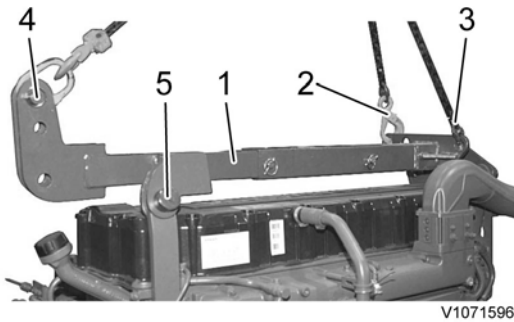


Figure 15
Engine D12D

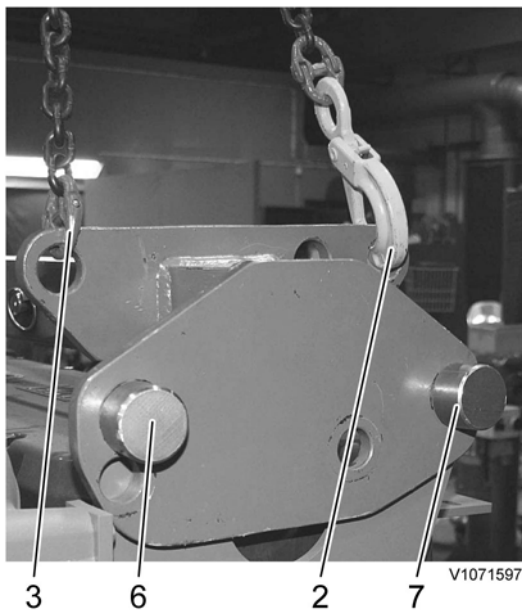


Figure 16

1. Inner pipe with telescopic function is adapted to the long position and turned up according to the figure (4.) Install the pins and secure them with the lock pins.
2. Connect the lifting hook to the outer hole.
3. Permanent connection with shackle.
4. Connect the lift ring with chain from the ratchet block. Install the pin and secure it with the lock pin.

5, 6, 7 - Connect the lifting tool to the engine's attaching points. Install the pins and secure them with the lock pins.

Lift carefully and adjust the lift angle with the ratchet block, depending on the engine and machine being handled.

Volvo A35E FS A35EFS Articulated Dump Truck Service Repair Manual is a perfect manual, which contains a lot of information. I believe that would be what you need.

Covers the following serials:

Serial numbers: ALL

Service Repair Manual Covers:

Safety

0 General

1 Standard Parts, Service

2 Engine with Mounting and Equipment

3 Elec. System, Warning System, Information System, Instruments

4 Power Transmission

5 Brake

6 Steering

7 Frame and Wheel

8 Machinery House, Cab, Exterior Trim Parts Anywhere

9 Hydraulic System, Load Carrier

