



MAINTENANCE INFORMATION

MI13-16

DATE :	MARCH 2013	SECTION :	14 - Steering
SUBJECT :	DRAGLINK TURNBUCKLE CLAMPS ORIENTATION - ALL MODELS		

IMPORTANT NOTICE

This Maintenance Information supersedes the info contained in your maintenance manual. This modification is recommended by PrevoSt to increase your vehicle's performance. Note that no reimbursement will be awarded for carrying out this modification.

APPLICATION

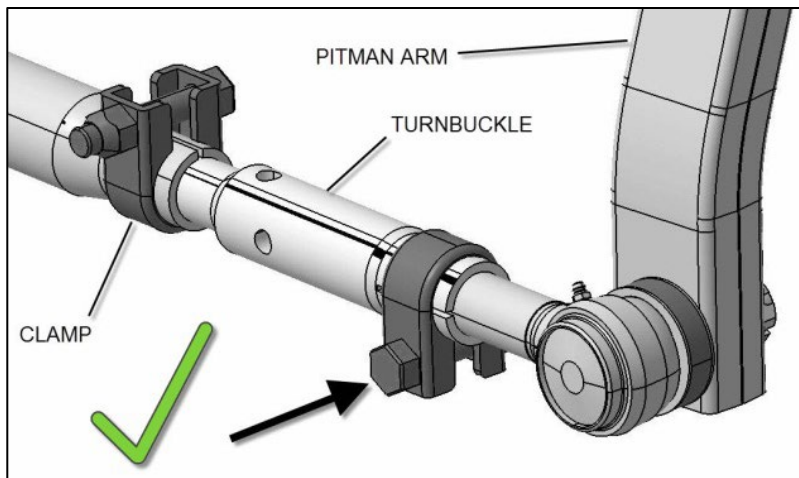
Model
All models with I-beam front axle and turnbuckle draglink. Model Year : 1994 up to 2013

DESCRIPTION

This Maintenance Information supersedes the info contained in your maintenance manual. Add this bulletin to the steering section of the pertaining maintenance manuals.

On all models starting with model year 1994, particular attention must be awarded to draglink turnbuckle clamp orientation at part removal and replacement.

Proper clamp position is shown here and should be maintained at all times.



*Note horizontal orientation of clamp bolt and bolt insertion direction.
Prescribed torque for clamp bolt (arrow) is between 50 and 60 lbf-ft. Applies to both clamps.*

If replacement is required, order the following parts:

Part No.	Description	Qty
160932	Turnbuckle	1
661133	Clamp	2

NOTE

Material can be obtained through regular channels.

PROCEDURE

The scope of this procedure is to inspect the steering draglink turnbuckle clamp orientation on vehicles with an I-beam front axle.

If required the procedure details how to perform the replacement of the turnbuckle and clamps without undergoing a vehicle alignment.



DANGER

Park vehicle safely, apply parking brake, stop engine and set battery master switch(es) to the OFF position prior to working on the vehicle.

1. Setting-up for the procedure

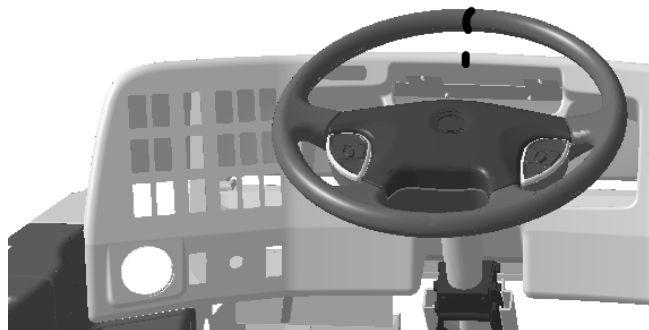
Drive the vehicle in the service bay, making sure to leave the steering wheel as straight as possible.

Mark steering wheel position with a pair of masking tape. Align the tapes by placing one piece on the dashboard and the other on the steering wheel.

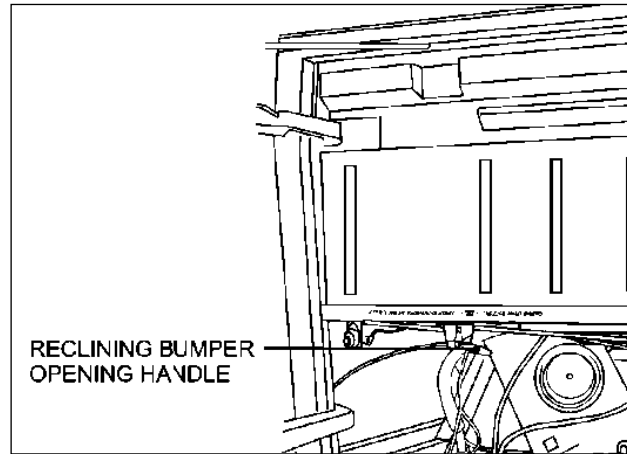
This will be your reference to restore the steering to its original state if any part replacement is required.

Note that on vehicles having a substantial steering wheel indexation or offset, the vehicle wheels may not be straight ahead when starting procedure. This does not affect the procedure in itself.

Leave vehicle on the ground to make sure the wheels will not move.



Recline the front bumper and remove spare tire.



Locate the steering gear pitman arm on the driver's side of the spare tire compartment.



2. Steering operation inspection

Turn wheels all the way left.

No contact should occur between pitman arm and bolt.

If contact occurs, replace both clamps and turnbuckle.

Refer to Catbase parts manual to select appropriate parts for your vehicle.

Follow replacement procedure below.



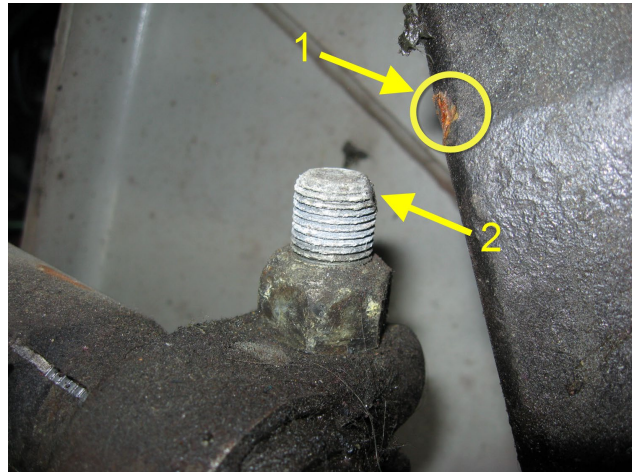
3. Pitman arm and bolt shank inspection

If no contact occurs in the above inspection, visually inspect the fore clamp bolt shank and pitman arm surface for previous contact marks.

Typical signs of contact may be a circular rust spot (1) on the pitman arm and/or flattened threads on bolt shank end (2).

If any one of these contact marks is visible, replace clamps and turnbuckle following procedure below.

If there is no contact evidence, proceed to clamp inspection.



4. Clamp inspection

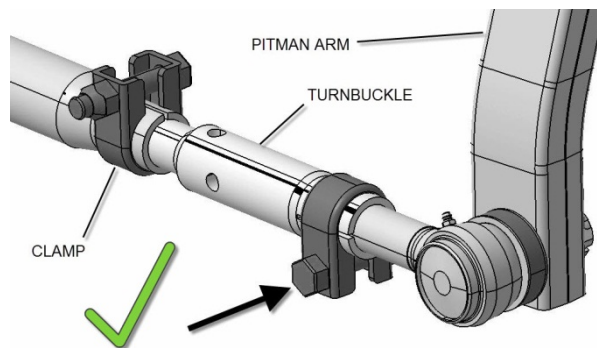
Proper draglink clamp orientation is shown here.

Note horizontal orientation of clamp bolt and bolt insertion direction.

Clamps should not be bent or squeezed by the bolt. If this is the case, they have been over torqued and should be replaced. Refer to replacement procedure below.

If clamps are in good condition but are not properly oriented, rotate the clamps as shown.

If clamps are properly oriented and in good condition, proceed to interference inspection.



Clamp is bent. Replace clamp.

5. Turnbuckle replacement procedure

Apply this procedure to change the turnbuckle without undergoing a vehicle alignment.

Mark center of ball joint.

Measure distance **(A)** between center of ball joint on pitman arm and draglink end.

A : _____

Unfasten clamps.

Release the clamps.

Rotate turnbuckle by inserting a tool like a round nose chisel in the turnbuckle holes.

Install the new clamps on the new turnbuckle. Make sure bolts are inserted as shown on the clamps.

Apply a small amount of anti-seize compound to the turnbuckle threads.

Engage the turnbuckle female threads two or three turns on the ball joint end.

➤ **Two people are required for next steps.**

Align turnbuckle and draglink. Have a partner turn the steering wheel to position the turnbuckle male threads ready to engage in the draglink.

Engage by turning the turnbuckle in the draglink while applying a light tension on the steering wheel to help thread insertion.

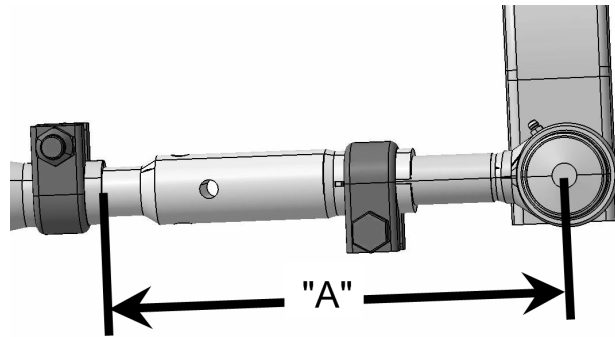
Adjust the turnbuckle until you reach measure **(A)** noted earlier.

At this point, make sure threads are visible the entire length of the slots on the draglink and turnbuckle female ends.

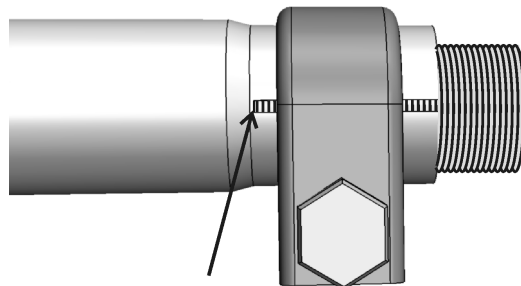
Finish by making fine adjustments to align the tape marks on the steering wheel.

This will return the steering to its original state.

Make sure the ball joints at each end of the draglink assembly are in neutral



THREADS MUST BE VISIBLE
THE ENTIRE LENGTH OF THE SLOT

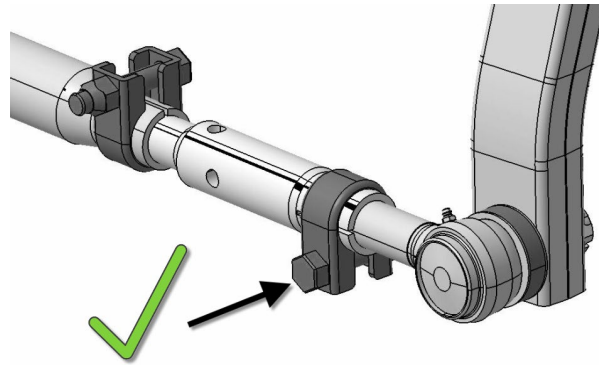


position (centered) before final clamp tightening.

Clamp bolts should be installed horizontal with bolt head as shown. Tighten clamp bolts to 50-60 lbf-ft.

Mark bolt head with torque seal.

Remove rust and restore the paint finish on the pitman arm to mask any contact marks. This way any future contact will be revealed.



6. Interference inspection

➤ **Two people are required for next steps.**

Turn the wheels fully in both directions while another person inspects the linkage for interference with surrounding structural parts and components.

Minimum acceptable clearance is 3/8".

Waste disposal:

Discard according to applicable environmental regulations (Municipal/State[Prov.]/ Federal)

Access all our Service Bulletins on
<http://prevostparts.volvo.com/technicalpublicatios/en/pub.asp>
 Or scan the QR-Code with your smart phone.

E-mail us at technicalpublications_prev@volvo.com and type "ADD" in the subject to receive our warranty bulletins by e-mail.

