



Service Bulletin No. 1082

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COACH MODEL	: C 2045
BULLETIN TYPE	: Service Information
MANUAL & SECTION	: Maintenance Manual : Chapter 3 - Drive train Spare Parts Manual : Section 621409 - Exhaust piping
DATE	: May 31st, 2001
SUBJECT	: Exhaust downpipe with compensator
TERMS & CONDITIONS	: No claims will be accepted with reference to this Bulletin.

APPLICATION :

The procedure supplement to this Bulletin is applicable to C2045 units equipped with Cummins engine and exhaust downpipe VH 10701367.

DESCRIPTION :

The attached procedure explains how to replace an exhaust downpipe with compensator and fit an additional support bracket.

SERVICE INFORMATION :

Service bulletins are issued to supplement or supersede information in the Van Hool manuals. Note Service Bulletin number, date and subject on the register at the end of the relevant chapter(s). File Service Bulletin separately for future reference.

Service personnel : please read, initial and circulate

Service Manager	Parts Manager	Warranty Administrator	Workshop Foreman	Service Technician

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TO REMOVE AND INSTALL VAN HOOL EXHAUST DOWNPIPE WITH COMPENSATOR VH10748892

APPLICATION :

The procedure below is applicable to C2045 Commuter coaches equipped with Cummins engine and exhaust downpipe VH 10701367.

DESCRIPTION :

This procedure describes how to replace an exhaust downpipe with compensator and fit an additional support bracket, if not yet installed.

PARTS :

- Parts may be obtained through regular channels.
- Order one kit VH 10750108 to replace the downpipe and fit the bracket. This kit contains the following parts :

Description	Qty.
Exhaust downpipe with compensator	1
Clamp	1
Bracket	1
Bolt, bracket to muffler 10x1,5x30 mm (grade 8.8)	1
Lock nut 10x1.5 mm	1
Plain washer 10.5x21x2 mm	2
Bolt, bracket to clamp 12x1.75x40 mm (grade 8.8)	1
Lock nut 12x1.75 mm	1
Plain washer 13x24x2.5 mm	2
Sealclamp	1

PROCEDURE :

1. General :

- The time required to replace the exhaust downpipe and install the additional support bracket is approximately 1.5 hours.

2. Special tools :

No special tools are needed.

3. Preparations :

- Park the coach on a level surface, apply the parking brake and shut down the engine.
- Switch off all systems and turn off the battery master switch.
- Allow the engine and the exhaust system to cool down to 86 °F (30 °C) before beginning to work.
- Put a "DO NOT OPERATE" tag on the steering wheel.
- Observe safe shop practices at all times.
- Read the entire procedure before beginning to work.

4. To remove the exhaust downpipe with compensator :

- 1) Open the hatch giving access to the charge air cooler, air cleaner and batteries.
- 2) Undo and remove the three bolts securing the left-hand panel, which gives access to the turbo. Push the panel to the right and tilt it out.
- 3) Undo and remove the clamp securing the exhaust downpipe to the turbo (see Figure 1).

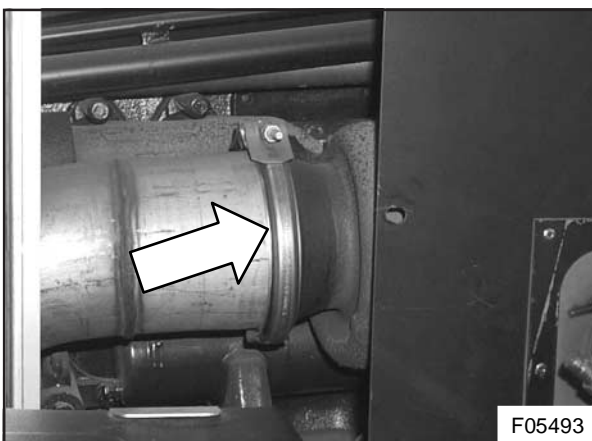


Figure 1: Downpipe to turbo exhaust clamp

- 4) Working underneath the coach, undo and remove the two bolts securing the sealclamp (see Figure 2).

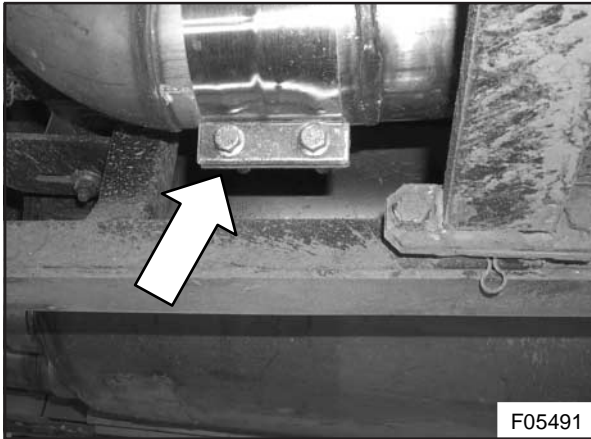


Figure 2 : Downpipe sealclamp

- 5) Remove the old downpipe from the muffler to downpipe tube by tapping it with a soft face dead blow hammer. If the downpipe refuses to come out, use heat on the section where the outer and inner tube meet.
- 6) Inspect the muffler downpipe tube for rust, dents and distortions. Clean and rectify as necessary. Tube orifice should be round and smooth to ensure perfect sealing. Discard the old downpipe.

5. To install additional support bracket VH 10748850 :

The support bracket bolts to the right rearmost muffler support through the rubber bobbin stud, and bolt VH 660224501. It serves to secure the lower section of the downpipe through clamp VH 10611499 and bolt 660226706 (see Figure 3 and 4).

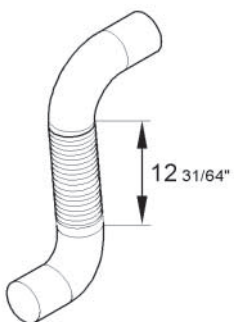
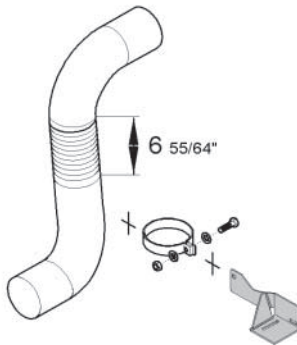
OLD	NEW
	
PART# 10701367	PART# 10748892 <small>T05938</small>

Figure 3 : Old and new part comparison

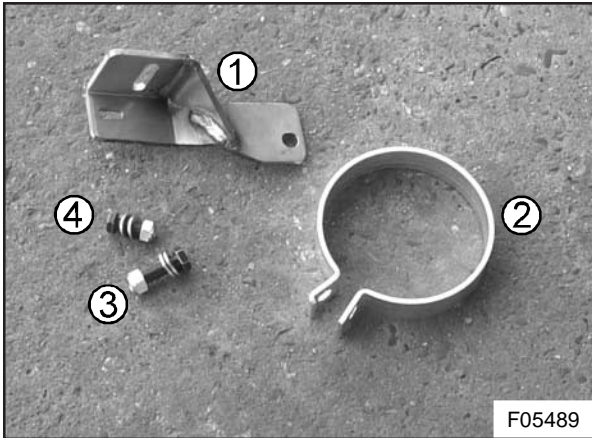


Figure 4 :
 1. Support bracket VH 10748850
 2. Clamp VH 10611499
 3. Bolt VH 660226706
 4. Bolt VH 660224501

Install the support bracket as follows :

- 1) Undo and remove the nut from the top stud of the right rearmost rubber bobbin (see Figure 5). Remove the spring washer and plain washer as well.

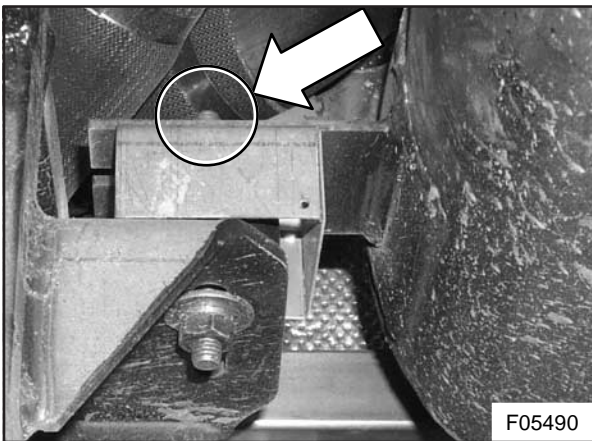


Figure 5 : Right rearmost muffler support with rubber bobbin

- 2) Trial fit the support bracket as shown in Figure 6. Make sure the cooling system hose clamps do not interfere with the bracket. Correct, if necessary. Mark the slot outline indicated by the arrow on the muffler support with a scribe. Remove the support bracket.

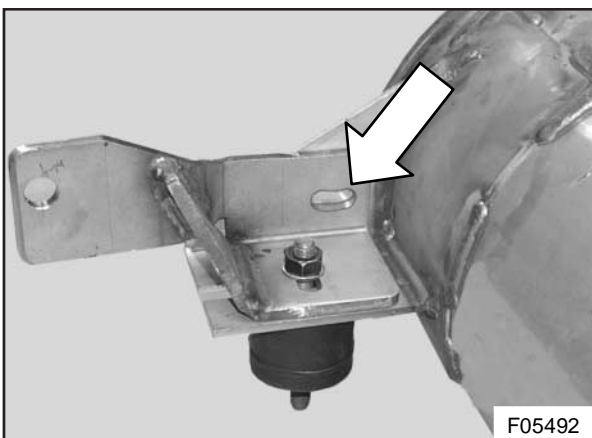


Figure 6 : Position of support bracket on muffler

- 3) Drill a $\frac{7}{16}$ hole (11 mm) in the center of the scribed area on the muffler support. Reinstall support bracket VH 10748850. Secure the bracket base with washers and nut using the rubber bobbin stud. Secure the bracket upright to the muffler support with bolt VH 660224501 and assorted washers and nut. Tighten both nuts to a torque on 30 ft.lbf (40 Nm).

6. To install exhaust downpipe with compensator VH 10748892 :

- 1) Slip the clamp over the non-flanged elbow of the new downpipe. **DO NOT REMOVE THE INSTALLATION SLEEVE AROUND THE COMPENSATOR** (see Figure 6).
- 2) Smear the downpipe section of the muffler to downpipe tube lightly with exhaust sealer.

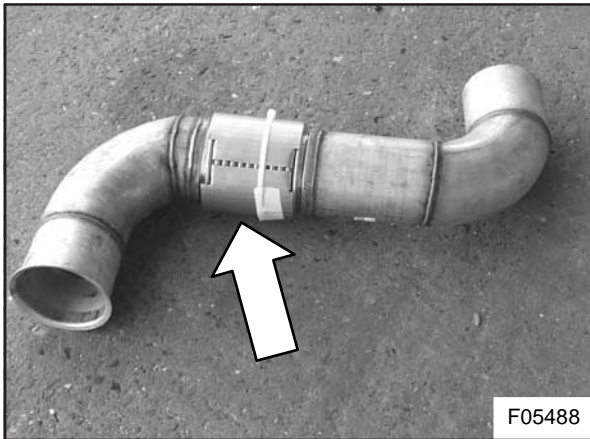


Figure 6 : Downpipe compensator with installation sleeve

- 3) With the aid of an assistant, offer up the new pipe with the flanged section facing the turbo exhaust. Slip the lower straight section of the downpipe into the muffler to downpipe tube. Use a soft face dead blow hammer to assist, if necessary. Adjust the flanged section to fit the turbo exhaust mouth snugly. The downpipe with compensator should make a tight fit while keeping its overall length. If necessary, undo the muffler clamp and rubber bobbin nuts to adjust and ensure stress-free installation. The installation should be free of strain, twist or tension. Retighten the nuts undone for adjustment.
- 4) Attach the new clamp for a loose fit to the additional support bracket using bolt VH 660224501 and assorted washers and nut.
- 5) Secure the downpipe to the turbo exhaust mouth with the appropriate clamp. Tighten to a torque of 72 in.lbf (8 Nm).
Reinstall the turbo access panel. Tighten the panel bolts to a torque of 8 ft.lbf (10 Nm).
- 6) Tighten the bolt and nut securing clamp VH 10611499 to the additional support bracket to a torque of 50 lf.lbf (70 Nm).
- 7) Install a new sealclamp at the downpipe to muffler tube connection. Proceed as follows :
 - Position the sealclamp so that $\frac{1}{2}$ to $\frac{2}{3}$ of it covers the small diameter side of the connection.
 - Assemble the bolts and position the gasket strip between the bolts and the pipe.
 - Tighten by turning the nuts alternating between bolts several times, beginning with the large diameter side of the connection. Torque to 50 to 75 ft.lbf (70 to 75 Nm).
- 8) Cut the tie wrap securing the installation sleeve. Remove the sleeve.

Procedure complete.

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