

ADDRESSEES	: ABC Customer Care and parts Source Owners and operators of coaches with Van Hool independent wheel suspension and disc brakes on all axles
VEHICLE MODEL	: Coaches with Van Hool independent wheel suspension and disc brakes on all axles
MANUAL CHAPTER	: 12.06 Axles – front axle 12.10 Axles – trailing axle
BULLETIN TYPE	: Product improvement
DATE	: January 26 th , 2018
SUBJECT	: Introduction of M20 fastening bolts and "reinforced" rubber bushings for wheel-suspension arm joints
TERMS AND CONDITIONS	: This product improvement does not entitle to any reimbursement.

APPLICATION:

As from following units, Van Hool has improved the wheel-suspension arms installation.

Model	VIN		Model	VIN
CX35	49729		TX45	41574
CX45	49737		TDX25	42953

DESCRIPTION:

Since June 2017, Van Hool is using a M20 assembly bolt in combination with "reinforced" rubber bushings 11556702 for fastening the wheel-suspension arms to the steering knuckle carrier/hub carrier. The M20 assembly bolt allows for an increased tightening torque, resulting in a tighter tensioning of the joint, which in turn has a beneficial effect on the life of the rubber bushings.

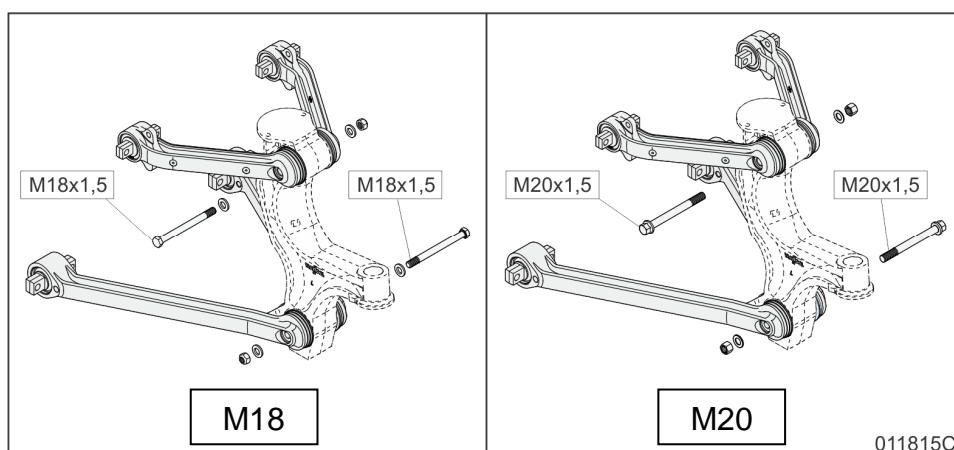
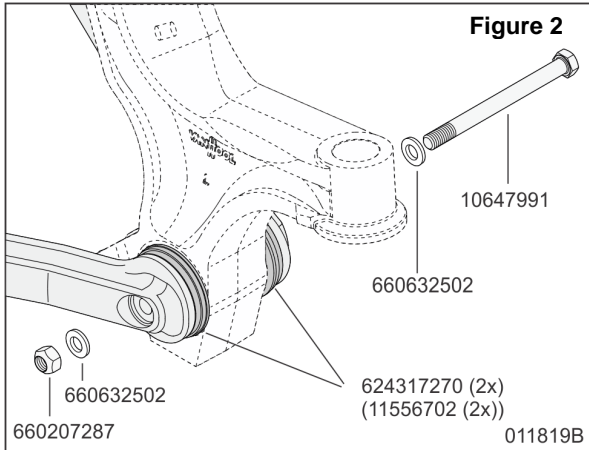
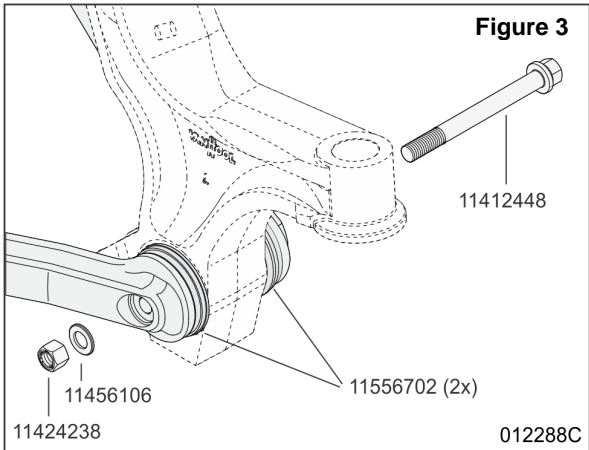


Figure 1: Fastening of wheel-suspension arm joints (figure shows front-wheel suspension)

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COMPARISON OF FASTENING SYSTEMS:

M18 fastening system	M20 fastening system
 <p>Figure 2</p> <p>10647991</p> <p>660632502</p> <p>624317270 (2x) (11556702 (2x))</p> <p>660207287</p> <p>011819B</p>	 <p>Figure 3</p> <p>11412448</p> <p>11456106</p> <p>11556702 (2x)</p> <p>11424238</p> <p>012288C</p>
<p>Properties of screw 10647991:</p> <ul style="list-style-type: none"> • width across flats: 27 mm (1.06 inch) • screw shaft thickness: 18 mm (0.71 inch) • screw shaft length: 210 mm (8.27 inch) • thread type: M18x1,5 mm 	<p>Properties of screw 11412448:</p> <ul style="list-style-type: none"> • width across flats: 27 mm (1.06 inch) • screw shaft thickness: 20 mm (0.79 inch) • screw shaft length: 205 mm (8.07 inch) • thread type: M20x1,5 mm <p><i>NOTE: Notwithstanding the thicker screw shaft, the width across flats of the M20 screw has remained 27 mm!</i></p>
<p>Properties of nut 660207287:</p> <ul style="list-style-type: none"> • width across flats: 27 mm (1.06 inch) • height: 18 mm (0.71 inch) • self-locking (by mechanical deformation of nut) 	<p>Properties of nut 11424238:</p> <ul style="list-style-type: none"> • width across flats: 27 mm (1.06 inch) • height: 20 mm (0.79 inch) • self-locking (by notches at end of thread)
<p>Tightening torque: 300 + 50 Nm (220 + 35 ft.lbf)</p>	<p>Tightening torque: 500 + 50 Nm (370 + 35 ft.lbf)⁽¹⁾</p>
<p>Van Hool ordering number of joint bolt kit: 11431005 (contains screw 10647991, nut 660207287 and two special spring lock washers 660632502)</p>	<p>Van Hool ordering number of joint bolt kit: 11499934 (contains screw 11412448, nut 11424238 and washer 11456106)</p>
<p>Which rubber bushings to use? The M18 bolt may be used in combination with the "normal" as well as with the "reinforced" rubber bushings.</p>	<p>Which rubber bushings to use? Only use the M20 bolt in combination with the "reinforced" rubber bushings.</p>
<p>Reusing: Screws, nuts and washers should never be reused.</p>	<p>Reusing: Screws, nuts and washers should never be reused.</p>
<p>Interchangeability: The old and new versions are interchangeable. However, with the M20 bolt, bear in mind:</p> <ul style="list-style-type: none"> • that it may only be used in combination with the "reinforced" rubber bushings. The use of "normal" bushings in combination with the M20 bolt and the increased tightening torque, could damage the vulcanized metal rings of the bushing; • the increased tightening torque of 500 + 50 Nm (370 + 35 ft.lbf); • that there is a washer only on the side of the nut. 	

⁽¹⁾ Place the socket of the torque wrench by preference on the screw head instead of on the nut.

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VISUAL IDENTIFICATION OF RUBBER BUSHINGS- Figure 4:

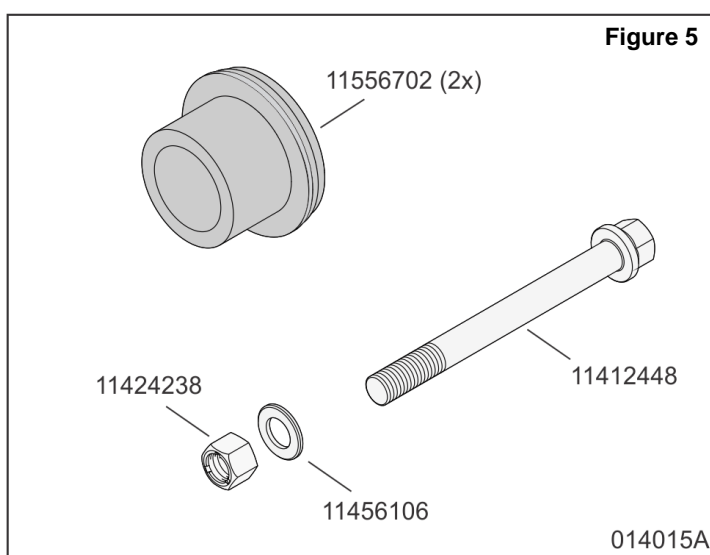
“Normal” and “reinforced” rubber bushings are identical in size and shape. For visual identification purposes, a limited number of “reinforced” rubber bushings have been marked blue in production. Thereafter rubber bushings are only determined by means of the production date stamped on the bushing. This production date consists of two digits surrounded with a number of dots (each dot is a quarter of a year). For example: “16” surrounded with three dots means that the rubber bushing is produced during the third quarter of 2016. Rubber bushings without a blue mark are “reinforced” when they are produced in the fourth quarter of 2017 or later.



Figure 4: Location of production date. Example shows a rubber bushing produced in the third quarter of 2016 = “normal” bushing

COMPONENTS AND PRODUCTS:

Parts of M20 joint bolt kit 11499707



VH reference	Description	Quantity *
11556702	Rubber bushings	2
11412448	Screw	1
11424238	Self-locking nut	1
11456106	Washer	1

*Quantity suited for one joint

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AFTER SALES:

- Only the M20 joint bolt kit will be offered as service replacement.
- “Reinforced” rubber bushings will come together with the M20 joint bolt as kit # 11499707 (contains two rubber bushings 11556702, screw 11412448, nut 11424238 and washer 11456106).
- This service bulletin is not applicable to vehicles with drum brakes on all axles, and on vehicles with a combination of D3-disc brakes on front /tag axle and drum brakes. The wheel suspension arms on these vehicles are different and do not accept the larger M20 screw. The “normal” rubber bushings 624317270 and the “reinforced” rubber bushings 11556702 may be used on these vehicles. The rubber bushings will for these vehicles not come in a kit but will be sold separately.

HELP DESK:

If there are any questions regarding this subject, please call ABC Customer Care & Parts Source toll-free for guidance on 1-877-427-7278.

DISCLAIMER:

The procedures contained herein are not exclusive. Van Hool cannot possibly know, evaluate, or advise the transportation industry of all conceivable ways in which a procedure may be undertaken or of the possible consequences of each such procedure. Other procedures may be as good, or better, depending upon the particular circumstances involved. Each carrier who uses the procedures herein must first satisfy itself thoroughly that neither the safety of its employees or agents, nor the safety or usefulness of any products, will be jeopardized by any procedure selected.

INFORMATION HANDLING:

Important supplements to and modifications of technical information not yet included in the manual, are communicated by means of Service Bulletins.

VAN HOOL CUSTOMER PORTAL:

Consult the customer portal regularly for the latest service documentation. In addition to the maintenance manual, you will also find the operating manual and the spare parts catalogue of your vehicle on the customer portal. The customer portal is accessible through www.vanhool.be, and only with a code (password) from Van Hool. If you do not have a password yet, request it by using the link on the Van Hool website.