

TRAILER BROCHURE

FOR MIDDLE EAST



WABCO

TRAILER BROCHURE

FOR MIDDLE EAST



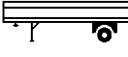
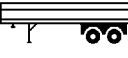
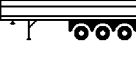


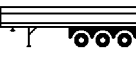
Edition 2






This publication is not subject to any updating service.
You will find new versions on the internet at
<http://www.wabco.info/8150101253>



© 2012/2014 WABCO Europe BVBA – All rights reserved

WABCO

1. Introduction									6
2. General Remarks									7
3. Brake Calculation									9
4. Trailer System Specification									14
5. Trailer drawings and parts lists									16
Trailer brake systems with single brake chambers and no ABS function									
	Braking Diagram	Type of Trailer	Load Sensing Valve		Suspension		Brake Chamber		
			manual	automatic	steel	air	single	tristop	
	841 600 000 0	2 axle drawbar trailer / 12 16t	X				4		17
	841 600 406 0	2 axle drawbar trailer / 12 16t		X	X		4		18
	841 600 407 0	2 axle drawbar trailer / 12 16t		X		X	4		19
	841 600 413 0	1+2 axle drawbar trailer / 12 16t		X	X		6		21
	841 600 414 0	1+2 axle drawbar trailer / 12 16t		X		X	6		22
	841 600 415 0	1+2 axle drawbar trailer / 12 16t	X				6		23
	841 700 871 0	1 axle semi-trailer / 8 10t	X				2		25
	841 700 872 0	1 axle semi-trailer / 8 10t		X	X		2		27
	841 700 873 0	1 axle semi-trailer / 8 10t		X		X	2		29
	841 700 861 0	2 axle semi-trailer / 12 16t		X		X	4		31
	841 700 862 0	2 axle semi-trailer / 12 16t		X	X		4		33
	841 700 863 0	2 axle semi-trailer / 12 16t	X		X		4		35
	841 700 511 0	3 axle semi-trailer / 12 16t	X				6		37
	841 700 516 0	3 axle semi-trailer / 12 16t		X		X	6		39
	841 700 517 0	3 axle semi-trailer / 12 16t		X	X		6		41
	841 700 880 0	4 axle semi-trailer / 12 16t	X				8		43
	841 700 881 0	4 axle semi-trailer / 12 16t		X	X		8		45
	841 700 882 0	4 axle semi-trailer / 12 16t		X		X	8		47
Trailer brake systems with TRISTOP brake chambers and no ABS function									
	841 700 256 0	2 axle semi-trailer / 12 16t		X	X			4	49
	841 700 556 0	2 axle semi-trailer / 12 16t		X		X	2	2	51
	841 700 557 0	2 axle semi-trailer / 12 16t		X	X		2	2	53
	841 700 243 0	3 axle semi-trailer / 12 16t		X		X	2	4	55
	841 700 244 0	3 axle semi-trailer / 12 16t		X	X		2	4	57

Brake system for 3 axle semi-trailer with ABS									
	Braking Diagram	Type of Trailer	Load Sensing Valve		Suspension		Brake Chamber		
			manual	automatic	steel	air	single	tristop	
	841 700 972 0	3 axle semi-trailer		X	X	X	2	4	61, 63
	841 700 973 0	3 axle semi-trailer		X	X	X	2	4	67, 69
	841 701 063 0	3 axle semi-trailer		X	X		6		60
	841 701 065 0	3 axle semi-trailer		X		X	6		62
	841 701 066 0	3 axle semi-trailer		X	X		2	4	66
	841 701 067 0	3 axle semi-trailer		X		X	2	4	68
Brake system for 3 axle semi-trailer with TEBS									
	841 701 101 0	3 axle semi-trailer / TEBS E without PEM				X	2	4	71
	841 701 239 0	3 axle semi-trailer / TEBS E with PEM				X	2	4	73
Brake system for road train trailers – no ABS function									
2 axle dolly trailer									
	841 600 543 0	2 axle dolly trailer	X				4		75
	841 600 544 0	2 axle dolly trailer		X	X		4		77
3 axle semi-trailer "trailer-to-tow-trailer"									
	841 700 247 0	3 axle semi-trailer / 12 16t	X				6		79
	841 700 519 0	3 axle semi-trailer / 12 16t		X	X		6		81
Air suspension and lifting axle control systems									
	841 801 448 0	3 axle semi-trailer / air suspension without rotary slide valve / lift axle control with 2 circuit lift-axle control valve (mech. controlled) / to use for conventional brake systems							83
	841 802 150 0	3 axle semi-trailer / GIO feature "conventional air suspension with rotary slide valve and lift axle control" / to use for trailer EBS E version only							85
	841 802 153 3	3 axle semi-trailer / GIO feature "mech. Suspension" / to use for trailer EBS E version only							89
	841 802 175 0	3 axle semi-trailer / air suspension with rotary slide valve / lift axle control with 2 circuit lift-axle control valve (mech. controlled) / to use for conventional brake systems							91
	841 802 176 0	3 axle semi-trailer / air suspension without rotary slide valve / lift axle control with 2 circuit lift-axle control valve (mech. controlled) / to use for conventional brake systems							97

Purpose of the Publication

This brochure is intended to be for guidance purposes only and its contents are purely of a general informational nature. The diagrams appearing in this brochure do not adhere to all regulations of all countries, so please do not forget:

- To follow the legal regulations in your country when applying and maintaining brake systems.
- To follow your country's regulations and safety instructions for work behaviour and environment to avoid accidents.

- That brake tests are mandatory before putting vehicles on the road.

We have taken care to try and ensure the accuracy of the information in this brochure. However, WABCO is not responsible for any harm or damage caused by error or inaccuracies that may be contained in this brochure.

This brochure is not intended to replace appropriate advice and confirmation. Do always get WABCO confirmation based on the trailer configuration you are intending to build before proceeding.

1. Introduction

This "TRAILER BROCHURE for MEA" is the successor of the brochure 815 010 125 3 "TRAILER BROCHURE for MEA" – 1st edition from June 2007.

The demands in trailer systems of the trailer manufacturers in the region "Middle East & Africa" (MEA) increased in the last few years. This brochure should give an overview of trailer systems WABCO may offer to trailer manufacturers in this region.

The shown trailer systems give a choice WABCO handles as "standard systems" in the MEA region. Of course there won't be any problem to modify these schemes due to customer requests or to design solutions for trailer systems based on customer's specification.

In chapter "General remarks" therein might be found some general points about the system layout that should help you to choose the right system.

In chapter "Trailer specification" therein might be found an overview of questions trailer manufacturers have to think about, when they choose a trailer brake system. The complete answering of all these questions should help to improve the communication and avoid time delay with excessive communication to specify the system.

In chapter "Brake calculation" therein might be found some remarks what data needed from trailer manufacturer's side to get a proper brake calculation without unnecessary communication.

This brochure includes low-price trailer systems as well as high advanced trailer systems which follow the regulation ECE R-13. Herein it's also to find trailer systems which are not used in Europe e.g. as Road-Train-Brake systems (dolly and trailer-to-tow).

The trailer systems are shared in groups as:

- brake systems with single brake chambers without ABS/TEBS for semi and drawbar trailers
- brake systems with single brake chambers and TRISTOP cylinders without ABS/TEBS for semitrailers
- brake systems with WABCO ABS "VCSII" for 3 axle semitrailers
- brake systems with WABCO TEBS E generation for 3 axle semitrailers
- brake systems for road train vehicles:
 - 2 axle dollies
 - 3 axle semitrailers to tow other trailers
- Air suspension systems without lift axle control for 3 axle semitrailers
- Air suspension systems with lift axle control for 3 axle semitrailers
- Suspension systems to use with WABCO TEBS E generation only

2. General remarks

There are some general remarks to read before choosing the right trailer system.

1. The drawings are modified to the newest technical standard

The pipe and hose sizes are redesigned due to a clear structure as:

- Hose size in general: hose 11x4
- Pipe size "supply pressure" power between air tank and consumer during brake process: pipe 15x1.5 at least
- Pipe size in general for other connections (fill lines and control lines) in the brake system: pipe 12x1.5 (except TEBS E)
- Pipe size in general for fill and control lines in the TEBS E system: pipe 8x1
- Pipe size in the air suspension system in general: pipe 12x1.5
- Pipe size for lift bellow control: pipe 8x1
- Coupling heads with integrated line filter for semi-trailers

2. The parts lists (esp. the fittings and pipe lengths) are proposals – PROTOTYPE INSTALLATION IS RECOMMENDED

- WABCO gives a proposal for a system only
- Prototype installation is recommended strongly before ordering the selected system in higher quantities
- It's important to check
 - If the proposed size and volume of pipes / hoses is correct
 - If the proposed number and type of fittings is correct
 - If some changes in fact of the specific trailer design are necessary (e.g. change straight fitting into elbow version).

This job only can be done at the specific trailer model.

- You may find more information concerning fittings in the WABCO brochure: 815 010 080 3 "Pipe Couplings – For workshop and vehicle construction"

3. Adaptation possible of the proposed brake chambers in the brake systems

- The selection of the brake chambers depends on the axle load of the trailer in full laden situation. From our experiences there is defined:
 - Axle load 8 ... 10t => brake chamber type 24"
 - Axle load 12 ... 14t => brake chamber type 30"
 - Axle load >16t => brake chamber type 36"
- These values are general assessments. In every case the brake cylinder proposal has to be checked at the trailer.
- Recommended tools:
 - brake calculation
 - roller test bench

4. Automatically load-sensing valves are to adjust

- The automatically load-sensing valves (LSV) in trailers are "universal valves"
 - Universal" means the valve can be used for several types of trailers.
 - „Universal" doesn't mean "plug-and-play" – the LSV can't be taken out of the box and assembled into the trailer brake system without any further handling.
- It is necessary to do an adjustment of the LSV before installation into the brake system. The information about the needed tools and adjustment procedure you'll find in the WABCO brochure "LSV testing equipment" (Publication number: 815 010 032 3)
- The values for the adjustment must be calculated
 - First of all – there is a need for a brake calculation – this service may be requested from WABCO.
For that WABCO needs a filled application form for brake calculation.
For further information see also the remarks for brake calculation in the chapter "brake calculation".
 - Afterwards the lengths and adjustment of several screws / levers / springs have to be calculated with the LSV calculation software you may get this software as freeware from our WABCO homepage http://www.wabco-auto.com/service_and_support/download
 - or you'll get it from your WABCO partner.

5. TEBS is a universal system

- The trailer electronically brake system (TEBS) is a "universal system". It can be used for most of the popular types of trailers.
- It is necessary urgently to adjust the TEBS to the specific trailer conditions after the installation
- This adjustment only can be done
 - with a PC and the WABCO diagnostic software. WABCO offers also the adapter cabling to connect the PC with the trailer system.
For more information please contact your WABCO partner.
 - by trained people.
For that it is necessary to contact your WABCO partner for training and support.
- The values for adjustment (= parameters) will be calculated with a brake calculation. The brake calculation
 - have to be done under the own responsibility of the trailer manufacturer.
 - can be ordered as service from WABCO.
For further information see chapter "Brake calculation".
- If there is no adjustment of the TEBS after installation the TEBS won't work properly and the vehicle user will get several problems.

6. Start-up procedure demanded in trailers brake systems with ABS and TEBS

- WABCO insists on a start-up procedure in trailer brake systems with electronically components (ABS, TEBS).
- The start-up procedure
 - gives the certainty that the parts are assembled in the right position.
 - let the system work properly only.
 - generates a certificate to show the successful job.
- The start-up has to be done
 - with a PC and the WABCO diagnostic software. WABCO offers also the adapter cabling to connect the PC with the trailer system.
For more information, please contact your WABCO partner.
 - by trained people.
For that it is necessary to contact your WABCO partner for training and support.

7. Levelling valves in trailer air suspension are to adjust

The lever length of levelling valves is to adjust for optimal suspension conditions. The levelling valve 464 006 100 0 has the additional feature "height restriction", which is adjustable. For that the rubber cap on the valve bottom is to remove and therein is a screw to adjust.

For more information

- see WABCO brochure "Air Braking Equipment for Trailers" (Publication number: 815 010 034 3).
- contact your WABCO partner.

8. Lift axle control valve 463 084 000 0 / ...020 0 is to adjust before installation

- The lift axle control valves (LACV) in trailers are "universal valves"
 - "Universal" means the valve can be used for several operation requests of lift axles.
 - "Universal" doesn't mean "plug-and-play" - the LACV can't be taken out of the box and assembled into the trailer brake system without any further handling.
- It is necessary to do an adjustment of the LACV before installation into the lift axle control system.
- The information about the needed tools and adjustment procedure you'll find in the WABCO brochure 815 010 034 3 "Air Braking Equipment for Trailers".
- The values for the adjustment must be calculated:
 - The bellow pressure when the axle should LOWER must not exceed than the equivalent bellow pressure of 100% axle load.
 - The bellow pressure when the axle might LIFT must be less than the bellow pressure to LOWER. It might not be too enclosed to the value for axle LOWER.
Contact you WABCO partner if more information is needed.

3. Brake Calculation

WABCO recommends a brake calculation for each type of trailer brake system in general.

WABCO requests a brake calculation for trailer brake systems with adjustable brake components as...

- >> Automatic load-sensing valve
- >> TEBS modulator

The proposed brake systems don't consider the specific conditions on the trailer like trailer dimensions, axle type, wheel brake type, tyre type, etc.

Why a brake calculation is important?

- A brake calculation gives an overview of the expected brake characteristic of the trailer.
- A brake calculation considers influences as ...
 - Trailer dimensions
 - Trailer and axle weights
 - Tyre diameters
 - Brake force alignment from the brake cylinders to the road surface
- On the basis of the brake calculation, it is possible to analyse the brake system concerning legality for different regulations (e.g. ECE R-13, national rules etc.)
- A brake calculation gives the values for adjustment of "universal brake units" as:
 - Automatic load-sensing valve
 - TEBS modulator

Please note - the result of a brake calculation is only as good as the available input values.

What information is needed?

- Important to fill the application form "technical vehicle data ...".
- The application form is attached at the end of this chapter. There is also an example how to fill this form.

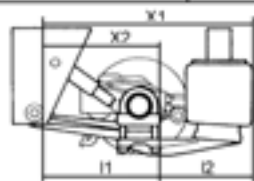




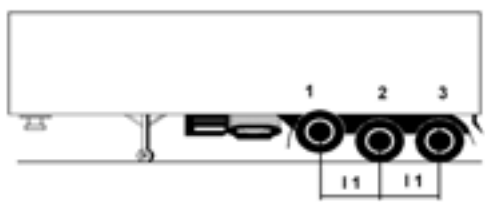
In case of doubt or need of support, don't hesitate to contact your WABCO partner.

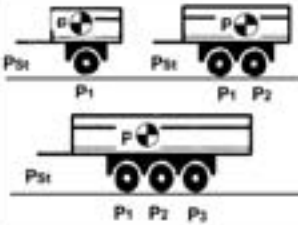
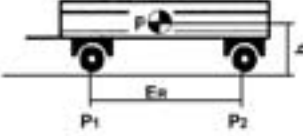
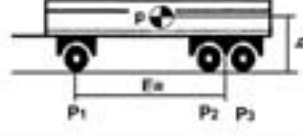
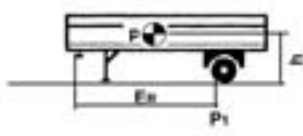

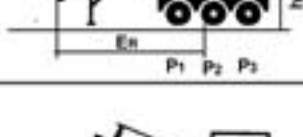
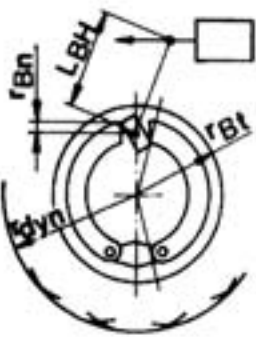
Additional remarks:

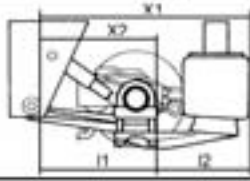






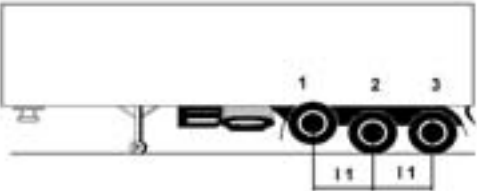
- Attention! The data sheet has 2 pages to fill.
- Trailer mass

- there is a chance to give in a tolerance range of minimal and maximal trailer mass
- centre-of-gravity
 - realistic value LADEN: 1.800 ... 1.900 mm
 - realistic value UNLADEN: 1.100 ... 1.200 mm
- wheel base on semitrailers:
 - 1- or 3-axle trailers: from king-pin to the middle of the middle axle
 - 2- or 4-axle trailers: from king-pin to the middle between the 2 middle axles
- Axle load
 - Put in the axle load as planned for the trailer but not the max. permitted axle load
 - E.g. a 12t-axle could be limited in a trailer to 9t-load from constructive reasons or by law
- Possible lever lengths; drum/disk radius; C* or brake factor; mechanical efficiency; cam radius
 - These parameters covers the foundation brake - they are important to calculate the brake force alignment in the foundation brake
 - These parameters are available from your axle manufacturer
- Axle manufacturer / type / test report number
 - Alternatively to the parameters of the foundation brake you could send us the test report number of the axle (available from your axle manufacturer - either in the documents or at the type label on the axle)
 - Typical layout of a test protocol number is...
TDB xxx" resp. "TBD xxx ECE"
361..." resp. "361-..." resp. "361-...ECE"
RDW..." resp. "RDW ... ECE"
- Axle boogie
 - Choose the axle configuration as in use - it's important for the brake dynamic
 - For air suspension are important:
 - >> the bellow diameter
 - >> bellow pressure laden/unladen
 - >> the lever ratio at the axle
- to calculate the ration to load
- (if there is a request for lift axle control) to design of the lift axle control

WABCO	technical vehicle data for the brake calculation of trailers							
vehicle manufacturer:				type:				
approval as per:		EG / ECE <input type="checkbox"/>		other <input type="text"/>		max. speed <input type="text"/>		
centre-axle trailer		designations		laden		unladen		
		maximum mass	P	kg	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		drawbar load	P _{st}	kg	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		axle load axle 1	P ₁	kg	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		axle load axle 2	P ₂	kg	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		maximum mass	P	kg	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		axle load axle 1	P ₁	kg	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		axle load axle 2	P ₂	kg	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		axle load axle 3	P ₃	kg	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		centre of gravity-height	h	mm	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		exist wheel base	E _R	mm	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		range of wheel base	E _R	mm	<input type="text"/>	<input type="text"/>	<input type="text"/>	
				maximum	min. max.	P kg P kg	<input type="text"/>	<input type="text"/>
axle load axle 1	P ₁			kg	<input type="text"/>	<input type="text"/>	<input type="text"/>	
axle load axle 2	P ₂			kg	<input type="text"/>	<input type="text"/>	<input type="text"/>	
axle load axle 3	P ₃			kg	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		centre of gravity-height	h	mm	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		exist wheel base	E _R	mm	<input type="text"/>	<input type="text"/>	<input type="text"/>	
		range of wheel base	E _R	mm	<input type="text"/>	<input type="text"/>	<input type="text"/>	
				axle:			1	2
brake chamber: numb./type	K ₀₂				<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
possible lever lengths	l ₀₄			mm	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
drum radius	r ₀₁			mm	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
C*					<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
mechanical efficiency	η			%	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
cam radius	r ₀₃			mm	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
dynamic tyre radius or tyre type	min. exis max			r ₀₅	mm	<input type="text"/>	<input type="text"/>	<input type="text"/>
threshold torque	M _{AL}	Nm	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		
axle manufacturer	type:		test report number:					
brake size:	With "standard axles", only the manufacturer and test report number necessary!							
WABCO-brake diagram-no.:			For axle assembly please see reverse!					
ABS: <input type="checkbox"/>	spring brake: <input type="checkbox"/>	steer. axle: <input type="checkbox"/>	EBS: <input type="checkbox"/>					

<h2 style="margin: 0;">WABCO</h2>		technical vehicle data <small>for the brake calculation of trailers</small>																									
axle bogie	manufacturer:	type:																									
air suspension 	or	distance I1 / I2 [mm]: / distance X1 / X2 [mm]: / bellows diameter [mm]: drawing-no.:	<input style="width: 100%; height: 20px;" type="text"/> <input style="width: 100%; height: 20px;" type="text"/> <input style="width: 100%; height: 20px;" type="text"/> <input style="width: 100%; height: 20px;" type="text"/>																								
leaf spring bogie (with dyn. compensation)																											
leaf spring bogie (without dyn. compensation)																											
balance beam bogie		individual axes mechanical																									
																											
<small>In case of another axle suspension, please add !</small>																											
bag pressure laden + unladen [bar]: axle 1 <input style="width: 40px; height: 20px;" type="text"/> <input style="width: 40px; height: 20px;" type="text"/> axle 2 <input style="width: 40px; height: 20px;" type="text"/> <input style="width: 40px; height: 20px;" type="text"/>		spring deflection (unladen/laden) [mm]: axle 1 <input style="width: 40px; height: 20px;" type="text"/> <input style="width: 40px; height: 20px;" type="text"/> axle 2 <input style="width: 40px; height: 20px;" type="text"/> <input style="width: 40px; height: 20px;" type="text"/>																									
semitrailer with lift axle/s																											
axle which axle/s shall be lifted [x] wheel base I1 [mm]: bag pressure laden [bar]: bag pressure unladen (with axle/s lifted) [bar] bag pressure unladen (all axles on bottom) [bar] axle load unladen (with axle/s lifted) [kg] axle load unladen (all axles on bottom) [kg]		<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">1</th> <th style="width: 33%;">2</th> <th style="width: 33%;">3</th> </tr> </thead> <tbody> <tr><td style="height: 20px;"> </td><td> </td><td> </td></tr> <tr><td style="height: 20px;"> </td><td> </td><td> </td></tr> <tr><td style="height: 20px;"> </td><td> </td><td> </td></tr> <tr><td style="height: 20px;"> </td><td> </td><td> </td></tr> <tr><td style="height: 20px;"> </td><td> </td><td> </td></tr> <tr><td style="height: 20px;"> </td><td> </td><td> </td></tr> <tr><td style="height: 20px;"> </td><td> </td><td> </td></tr> </tbody> </table>		1	2	3																					
1	2	3																									
remarks:																											
company:		street:																									
researcher:		city:																									
telephone:		telefax:																									
e-mail:																											

WABCO		technical vehicle data for the brake calculation of trailers						
vehicle manufacturer:		Example Co.			type: Example Trailer Model			
approval as per:		EG / ECE <input checked="" type="checkbox"/>		other <input type="text"/>		max. speed <input type="text" value="105 km/h"/>		
		designations		laden		unladen		
centre-axle trailer								
		maximum mass		P	kg			
		drawbar load		P _{st}	kg			
		axle load axle 1		P ₁	kg			
		axle load axle 2		P ₂	kg			
		axle load axle 3		P ₃	kg			
full trailer								
		maximum mass		P	kg			
		axle load axle 1		P ₁	kg			
		axle load axle 2		P ₂	kg			
		axle load axle 3		P ₃	kg			
		centre of gravity-height		h	mm			
		exist wheel base		E _{st}	mm			
		range of wheel base		E _{st}	mm			
semitrailer								
		maximum		min. P	kg	36.000	6.000	
				max. P	kg	40.000	8.000	
		axle load axle 1		P ₁	kg	12.000	2.000	
		axle load axle 2		P ₂	kg	12.000	2.000	
		axle load axle 3		P ₃	kg	12.000	2.000	
		centre of gravity-height		h	mm	1.800	1.200	
		exist wheel base		E _{st}	mm	8.000		
		range of wheel base		E _{st}	mm			
		axle:				1	2	3
		brake chamber: numb./type		K ₀₂		24"	24"/30"	24"/30"
		possible lever lengths		l _{BH}	mm			
		drum radius		r _{Bt}	mm			
		C*						
		mechanical efficiency		η	%			
		cam radius		r _{Bn}	mm			
		dynamic tyre radius		min. f _{dyn}	mm			
		or		axis				
		tyre type		max. f _{dyn}				
		threshold torque		M _{AL}	Nm			
axle manufacturer BPW		type H120		test report number: TDB 753 ECE				
brake size: SN 4220		With "standard axes", only the manufacturer and test report number necessary!						
WABCO-brake diagram-no.:		For axle assembly please see reverse!						
ABS: <input type="checkbox"/>		spring brake: <input checked="" type="checkbox"/>		steer. axle: <input type="checkbox"/>		EBS: <input checked="" type="checkbox"/>		

<h2 style="margin: 0;">WABCO</h2>		technical vehicle data for the brake calculation of trailers																			
axle bogie		manufacturer: BPW	type: H 120																		
air suspension	or	distance I1 / I2 [mm]:	/																		
		distance X1 / X2 [mm]:	/																		
		bellows diameter [mm]:																			
		drawing-no.:																			
leaf spring bogie (with dyn. compensation)																					
																					
leaf spring bogie (without dyn. compensation)																					
																					
balance beam bogie		individual axles mechanical																			
																					
<i>In case of another axle suspension, please add !</i>																					
bag pressure laden + unladen [bar]:		spring deflection (unladen/laden) [mm]:																			
axle 1	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	axle 1 <input style="width: 50px; height: 20px;" type="text"/>																		
axle 2	<input style="width: 50px; height: 20px;" type="text"/>	<input style="width: 50px; height: 20px;" type="text"/>	axle 2 <input style="width: 50px; height: 20px;" type="text"/>																		
semitrailer with lift axle/s																					
axle		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center;">1</td> <td style="width: 33%; text-align: center;">2</td> <td style="width: 33%; text-align: center;">3</td> </tr> <tr> <td style="height: 20px;"></td> <td style="height: 20px;"></td> <td style="height: 20px;"></td> </tr> <tr> <td style="height: 20px;"></td> <td style="height: 20px;"></td> <td style="height: 20px;"></td> </tr> <tr> <td style="height: 20px;"></td> <td style="height: 20px;"></td> <td style="height: 20px;"></td> </tr> <tr> <td style="height: 20px;"></td> <td style="height: 20px;"></td> <td style="height: 20px;"></td> </tr> <tr> <td style="height: 20px;"></td> <td style="height: 20px;"></td> <td style="height: 20px;"></td> </tr> </table>		1	2	3															
1	2	3																			
which axle/s shall be lifted [x]																					
wheel base I1 [mm]:																					
bag pressure laden [bar]:																					
bag pressure unladen (with axle/s lifted [bar]																					
bag pressure unladen (all axles on bottom) [bar]																					
axle load unladen (with axle/s lifted) [kg]:																					
axle load unladen (all axles on bottom) [kg]																					
remarks:																					
company: Example Co.		street: milky way 123																			
researcher: Engineer Bigfoot		city: new packham																			
telephone: +0012 (0) 345 678		telefax: +0012 (0) 345 999																			
e-mail: bigfoot@web.com																					

4. Trailer System Specification

Sometimes Trailer OE manufacturer ask for trailer brake systems without sufficient information. However it's necessary to give a basic specification to request a trailer brake system. It will avoid additional communication to get the correct information for a system offer.

This chapter should give a tool to the customers to transfer the proper information to WABCO for a selection of a trailer brake system.

The customer has...

... to think about the trailer system he wants to use

... to define the below subjects for a first proposal

For that WABCO has to know at least the following subjects:

1. Kind of trailer

- Semi-trailer
- Drawbar trailer
- Central axle trailer

2. Trailer load ...

... empty: _____kg

... full-laden: _____kg

3. Number of axles: _____

4. Max. permitted axle load in the trailer

Axle1: _____kg

Axle2: _____kg

Axle3: _____kg

Axle4: _____kg

Axle5: _____kg

5. Length from front wall to the middle of the rear axle(s)

_____m

6. Basic layout of the brake system

- Pure pneumatic brake system
- Pneumatic brake system+ ABS
- Trailer EBS

7. Kind of foundation brake

- Drum brake
- Disk brake

8. Regulation requests (Which?)

- ECE R13
- Others? If YES, which? _____
- nothing special

9. Kind of suspension

- Leaf spring
- Air suspension

9.1 Air suspension delivery (only if "Air suspension")

- WABCO delivery requested
- Air suspension from other source

9.1.1 Air suspension layout (only if "WABCO delivery requested")

- Basic (levelling valve only)
- Advanced (with chassis-lift-lower valve / rotary slide valve)
- ECAS (only in combination with ABS or TEBS)
- eTASC (only in combination with TEBS E)

10. Trailer with lift axle control

- 1 lift axle
- 2 lift axles parallel controlled
- 2 lift axles controlled separately
- No lift axle in the trailer

10.1 Lift axle control delivery

- WABCO delivery requested
- Lift axle control from other source

11. Trailer with steering axle control

- 1 steering axle
- 2 steering axles
- No steering axle in the trailer

11.1 Steering axle control delivery

- WABCO delivery requested
- Steering axle control from other source

12. Requested brake cylinder layout

- Only single brake chambers
- Only Tristop cylinders
- Combination single brake chambers and Tristop cylinders
- No special request

12.1 Brake cylinder delivery

- WABCO delivery requested
- Brake cylinders from other source (axle manufacturer)

12.2 Manual trailer park brake function (only if Tristop cylinders in the system)

- Yes
- No

13. Trailer brake release function

- Yes
- No

14. Load detection

- No load detection requested
- Manual load adjuster
- Automatic load sensing valve (LSV)
- Trailer EBS

Remark:

In case of selection of "Automatic Load-Sensing Valve (LSV)" or "Trailer EBS" a brake calculation is requested urgently. The parameters for adjustment are calculated in the brake calculation.

For more information see chapter "Brake calculation" in this brochure.

15. Brake calculation

- Requested from WABCO
- No

Remark:

In case of "Requested from WABCO" there is a technical data sheet, which is to fill and to send to WABCO further support. For more information see chapter "Brake calculation" in this brochure.

16. Component range

- Full trailer kit with fittings and pipes
- Main components only (no fittings; no pipes)

16.1 Fitting style (only if "Full trailer kit with fittings and pipes")

- DIN fittings (fittings to screw)
- Quick-In fittings (the pipe is to plug in)

17. Extras

- No further extras
- Trailer-to-tow
- ECAS
- SmartBoard (only with TEBS)
- Further extras as

The following items have to be known, if there is a request for an electrical system like ABS or TEBS...

18. Electrical POWER supply from truck side

- 12V
- 24V (Standard version)

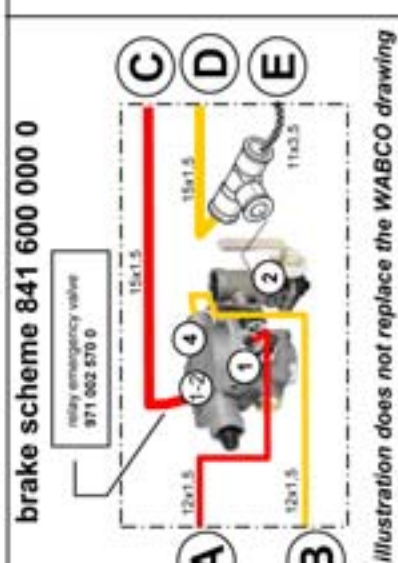
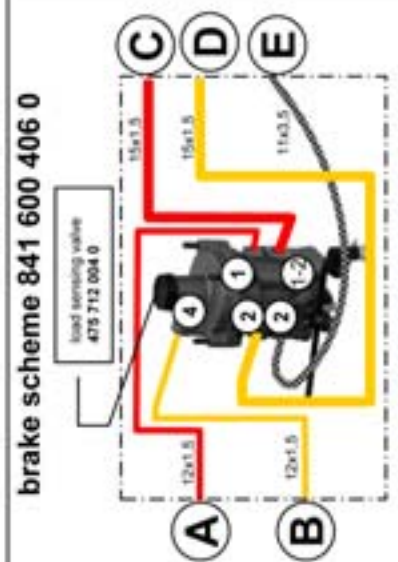
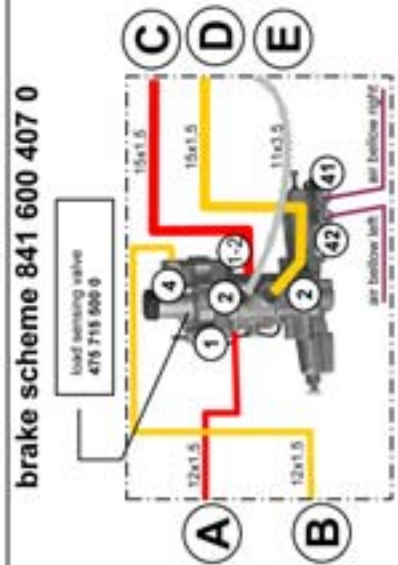
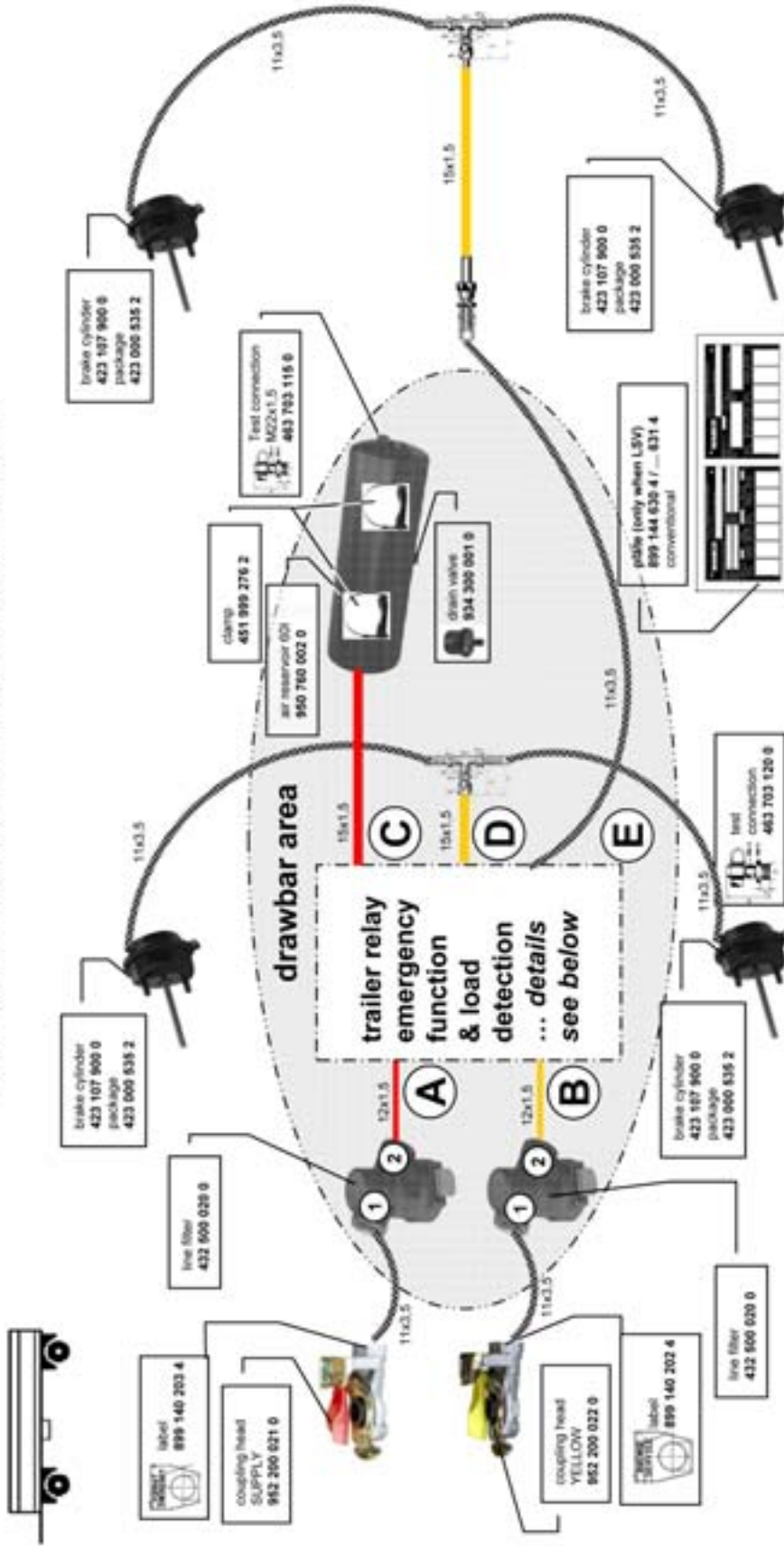
19. Requested ABS sensor configuration

- 2S/2M
- 4S/2M
- 4S/3M
- 4S/2M+1M (TEBS only)
- No special request

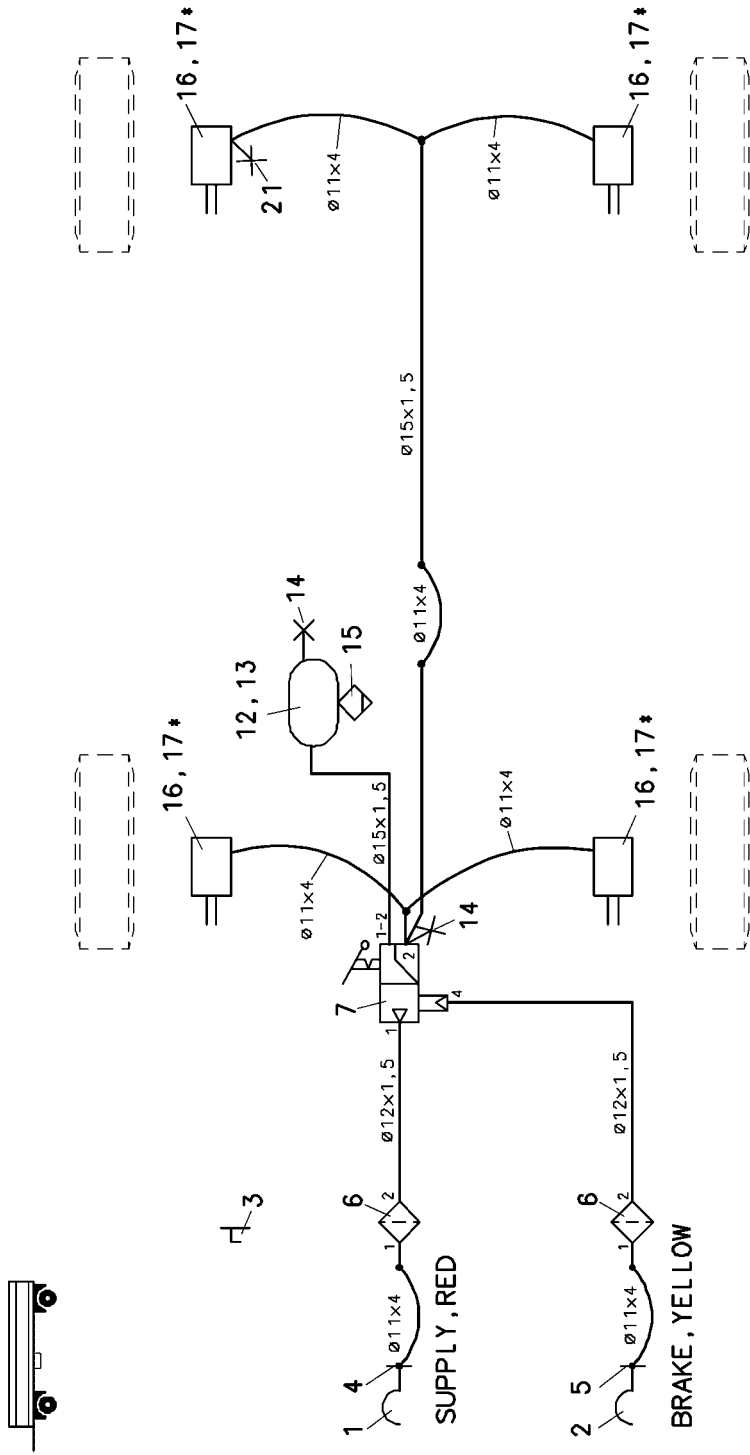
20. ABS sensor delivery

- WABCO delivery requested
- ABS sensors from other source (axle manufacturer)

MEA standard trailer – 2axle drawbar trailer
schemes 841 600 000 0 / 841 600 406 0 / 841 600 407 0

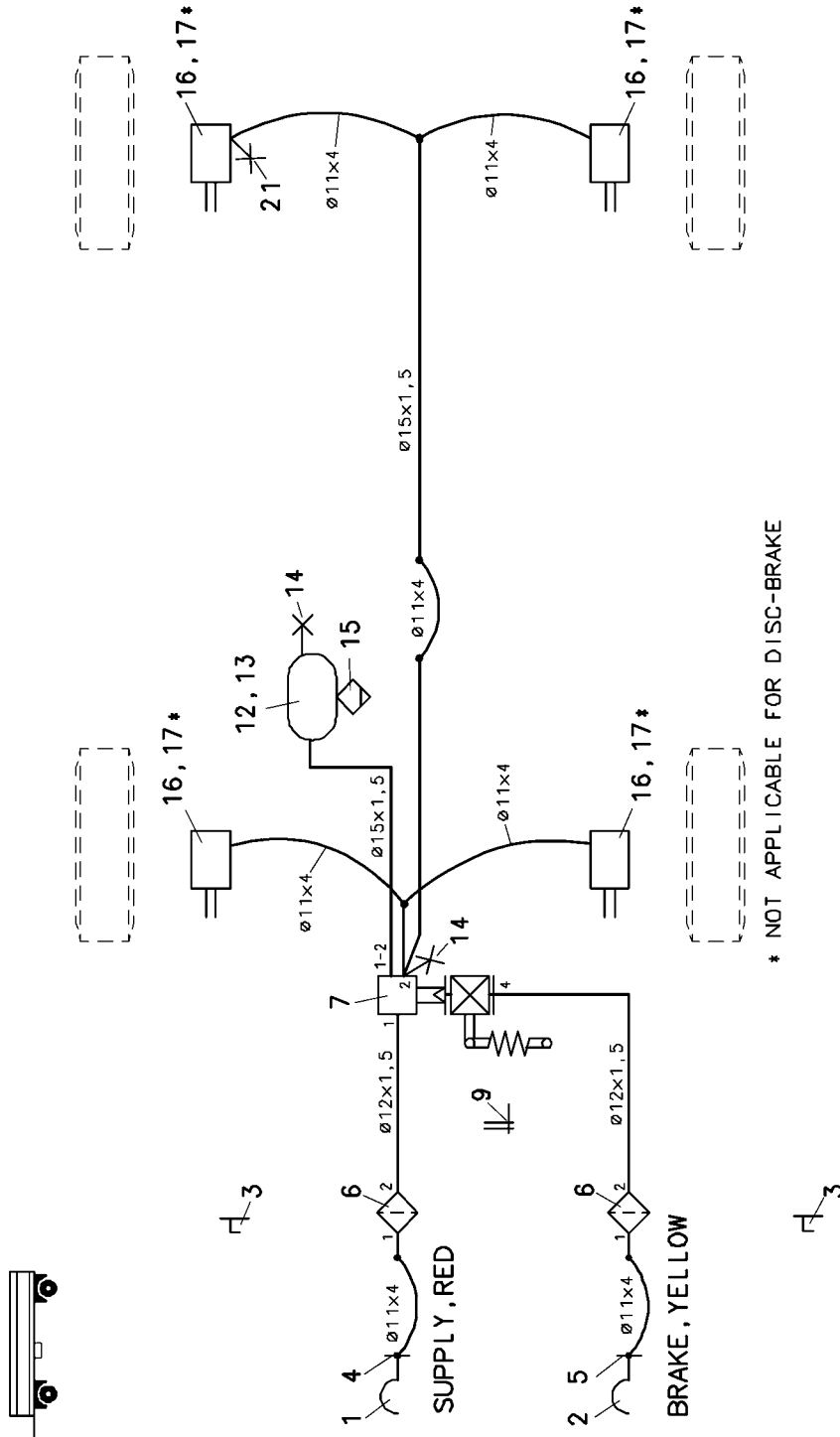


the illustration does not replace the WABCO drawing



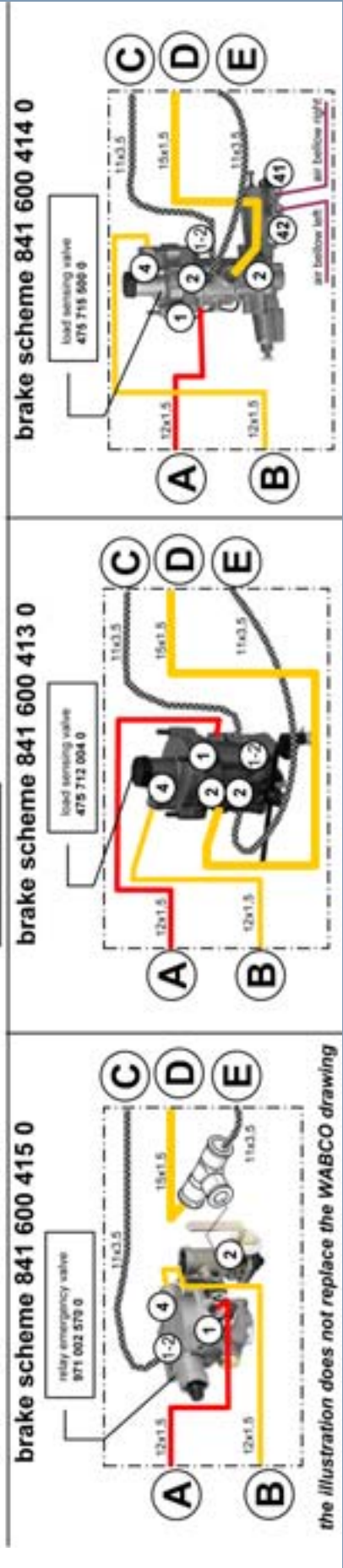
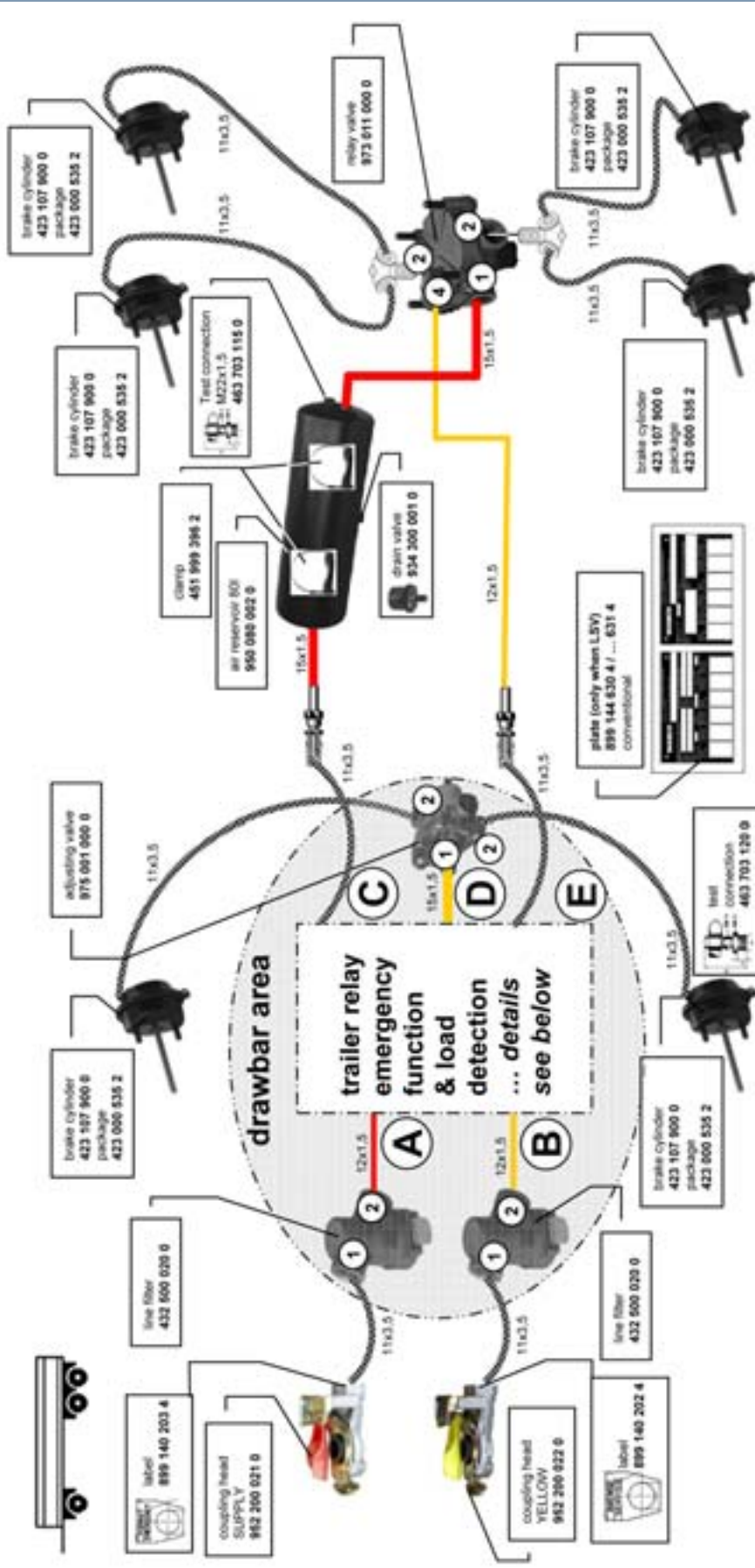
HOSE Ø11x4 828 676 011 6
 NYLON PIPE Ø12x1,5 828 251 112 6
 NYLON PIPE Ø15x1,5 828 251 115 6

DRAWING		DATE		SIGNATURE		WABCO	
DRAWN		07-03-06		API THY		TWO LINE-AIR BRAKING SYSTEM	
CHECKED		07-03-06		SCHRAEDER		FOR 2-AXLES-TRAILER	
STANDARDIZATION						2x12-16 TONS	
T.R.T.		PRODUCT IDENTIFICATION NO.		CODE FOR DOCUMENT SHEET		CODE FOR REPLACEMENT FOR	
171		841 600 000 0		402		01	
SIZE		CODE FOR SHAPE		REPLACEMENT FOR		841 600 000 0 OF 96-02-21	
A 3		2012					
DATE		DCON-NO.		REI			
				463 703 120 0			
				423 ... 53. 2			
				423 107 900 0			
				934 300 001 0			
				463 703 115 0			
				112652 A 107-03-06			
				PRODUCT IDENTIFICATION NO.		DENOMINATION	
				21 1 TEST CONNECTION			
				971 002 570 0 70			
				432 500 020 0 19			
				899 140 202 4 18			
				899 140 203 4 17		4 KIT	
				452 402 000 0 16		4 BRAKE CHAMBER	
				952 200 022 0 15		1 DRAIN VALVE	
				952 200 021 0 14		2 TEST CONNECTION	
REI		PRODUCT IDENTIFICATION NO.		PES		RES	

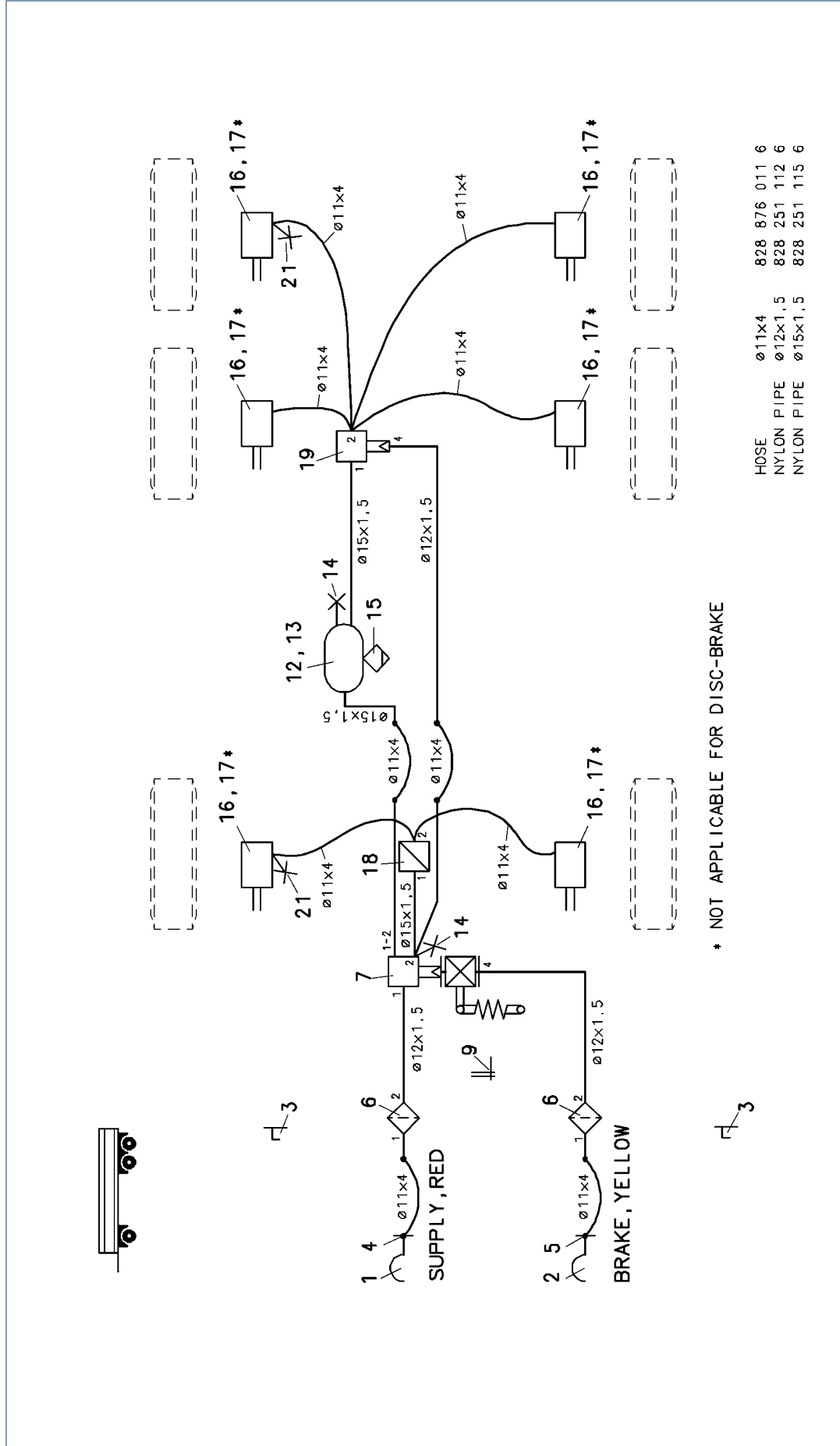


CAD-DRAWING COPY-RIGHT		DATE		SIGNATURE		WABCO	
13	2	451 999 276 2				TWO LINE-AIR BRAKING SYSTEM FOR 2-AXLES-TRAILER	
12	1	980 760 002 0				LOAD-SENS-RELAY EMERGENCY VALVE, MECH. 2x12-16 TONS	
11	.					PRODUCT IDENTIFICATION NO.	
10	.					171	
9	1	TAG"-SETTING VALUE OF LSREV" MECH.	899 144 630 4			841 600 406 0	
8	.					SIZE	
7	1	LOAD-SENS-RELAY EMERGENCY VALVE	475 712 004 0	21	1	A 3	
6	2	LINE FILTER	432 500 020 0	19		CODE FOR FUNCTION	
5	1	PLATE BRAKE LINE	899 140 202 4	18		2012	
4	1	PLATE SUPPLY LINE	899 140 203 4	17	4	DOE FOR SHAPE	
3	2	DUMMY COUPLING WITH FIXTURE	452 402 000 0	16	4	DOE FOR ODDMENT SHEET	
2	1	COUPLING HEAD	952 200 022 0	15	1	402 01	
1	1	COUPLING HEAD	952 200 021 0	14	2	REPLACEMENT FOR	
RS.	RS.	DENOMINATION	RS.	RS.	RS.	RS.	
			112836 B 07-03-06		841 600 406 0 OF 96-02-28		

MEA standard trailer – 1+2axle drawbar trailer
schemes 841 600 413 0 / 841 600 414 0 /841 600 415 0

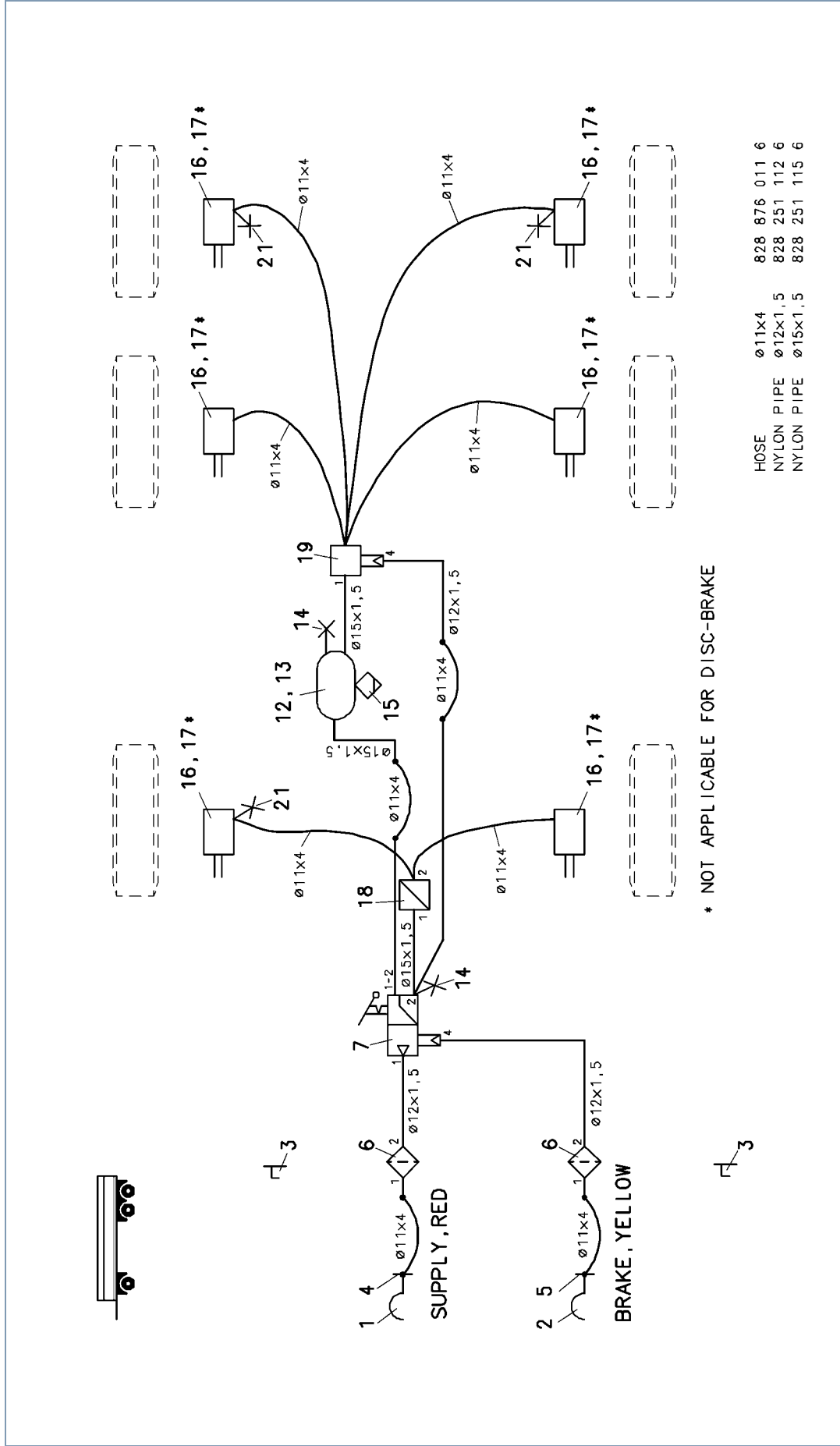


the illustration does not replace the WABCO drawing



* NOT APPLICABLE FOR DISC-BRAKE

CALC-DRAWING (COPYRIGHT)				WABCO			
DATE	SIGNATURE						
07-03-06	AP/PHY	DRAWN		TWO LINE-AIR BRAKING SYSTEM		CODE FOR DOCUMENT SHEET	
07-03-06	SCHRADER	CHECKED		FOR 3-AXLES-TRAILER		REPLACEMENT FOR	
	STANDARDIZATION	PRODUCT IDENTIFICATION NO.		LOAD-SENS-RELAY EMERGENCY VALVE, MECH.		402 01	
		T.R.I.		3x12-16 TONS		-EXPORT-	
	171	841 600 413 0		CODE FOR SHAPE			
	A 3	3012		CODE FOR FUNCTION		841 600 413 0 OF 95-05-29	
13 2 HOSE CLAMP	451 999 396 2						
12 1 AIR RESERVOIR	950 080 002 0						
11 . . .							
10 . . .							
9 1 TAG"SETTING VALVE OF LSREY" MECH.	899 144 630 4			463 703 120 0			
8 . . .							
7 1 LOAD-SENS.RELAY EMERGENCY VALVE	475 712 004 0 20 .						
6 2 LINE FILTER	432 500 020 0 19 .			973 011 000 0			
5 1 PLATE BRAKE LINE	899 140 202 4 18 .			975 001 000 0			
4 1 PLATE SUPPLY LINE	899 140 203 4 17 .			423 . . . 53 . 2			
3 2 DUMMY COUPLING WITH FIXTURE	452 402 000 0 16 .			423 107 900 0			
2 1 COUPLING HEAD	952 200 022 0 15 .			934 300 001 0			
1 1 COUPLING HEAD	952 200 021 0 14 .			463 703 115 0			
PQS: PQS:	DENOMINATION	PQS: PQS:	DENOMINATION	PRODUCT IDENTIFICATION NO.	PQS: PQS:	DENOMINATION	

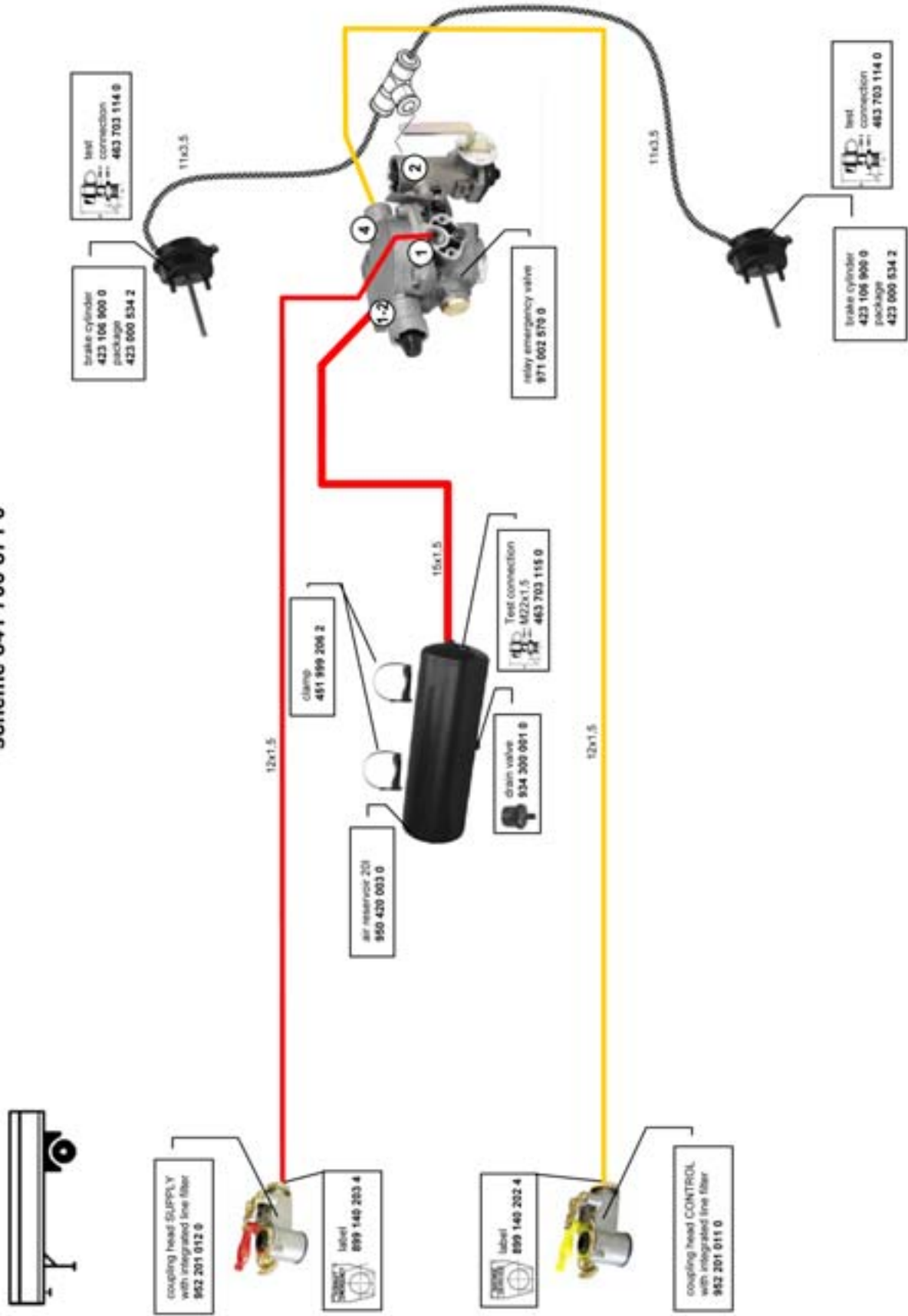


HOSE $\varnothing 11 \times 4$ 828 876 011 6
 NYLON PIPE $\varnothing 12 \times 1,5$ 828 251 112 6
 NYLON PIPE $\varnothing 15 \times 1,5$ 828 251 115 6

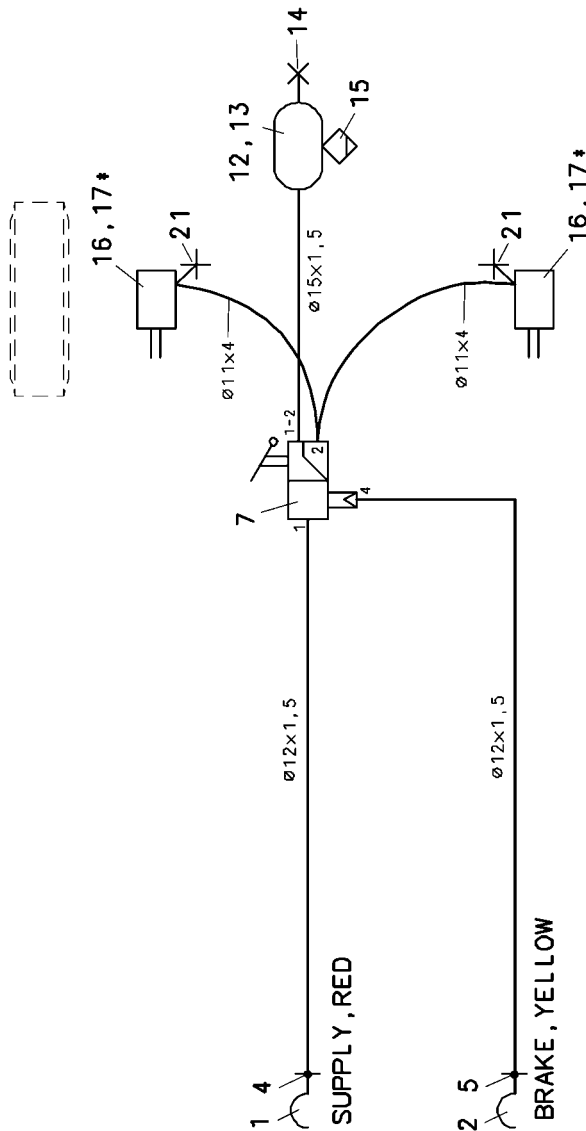
CAD-DRAWING EXP-PROB		WABCO	
DATE	SIGNATURE		
07-03-06	API THY	TWO LINE-AIR BRAKING SYSTEM	
	CHECKED	FOR 3-AXLES-TRAILER	
07-03-06	SCHRADER	3x12-16 TONS	
STANDARDIZATION		PRODUCT IDENTIFICATION NO.	
		171	841 600 415 0
		SIZE	CODE FOR DIMENSION SHEET
		A 3	402 01
		CODE FOR FUNCTION	REPLACEMENT FOR
		3012	841 600 415 0 OF 95-05-25

POS.	DENOMINATION	QTY.	PS.	PS.	PRODUCT IDENTIFICATION NO.	DENOMINATION	QTY.	PS.	PS.	PRODUCT IDENTIFICATION NO.	DENOMINATION	QTY.	PS.	PS.
13	2 HOSE CLAMP	451 999 396 2												
12	1 AIR RESERVOIR	950 080 002 0												
11														
10														
9														
8														
7	1 RELAY EMERGENCY V.	971 002 570 0	20											
6	2 LINE FILTER	432 500 020 0	19	1	RELAY VALVE					973 011 000 0				
5	1 PLATE BRAKE LINE	899 140 202 4	18	1	ADJUSTING VALVE					975 001 000 0				
4	1 PLATE SUPPLY LINE	899 140 203 4	17	6	KIT	*				423 ... 53 2				
3	2 DUMMY COUPLING	452 402 000 0	16	6	BRAKE CHAMBER	WITH FIXTURE				423 107 900 0				
2	1 COUPLING HEAD	952 200 022 0	15	1	DRAIN VALVE					934 300 001 0				
*.1	1 COUPLING HEAD	952 200 021 0	14	2	TEST CONNECTION					463 703 115 0				
POS. PS.	DENOMINATION	PRODUCT IDENTIFICATION NO.	QTY.	PS.	PS.	DENOMINATION	QTY.	PS.	PS.	PRODUCT IDENTIFICATION NO.	DENOMINATION	QTY.	PS.	PS.

MEA standard trailer
1 axle semi-trailer with manual load-detection
scheme 841 700 871 0



the illustration does not replace the WABCO drawing



* NOT APPLICABLE FOR DISC-BRAKE

HOSE Ø11x4 828 876 011 6
 NYLON PIPE Ø12x1,5 828 251 112 6
 NYLON PIPE Ø15x1,5 828 251 115 6

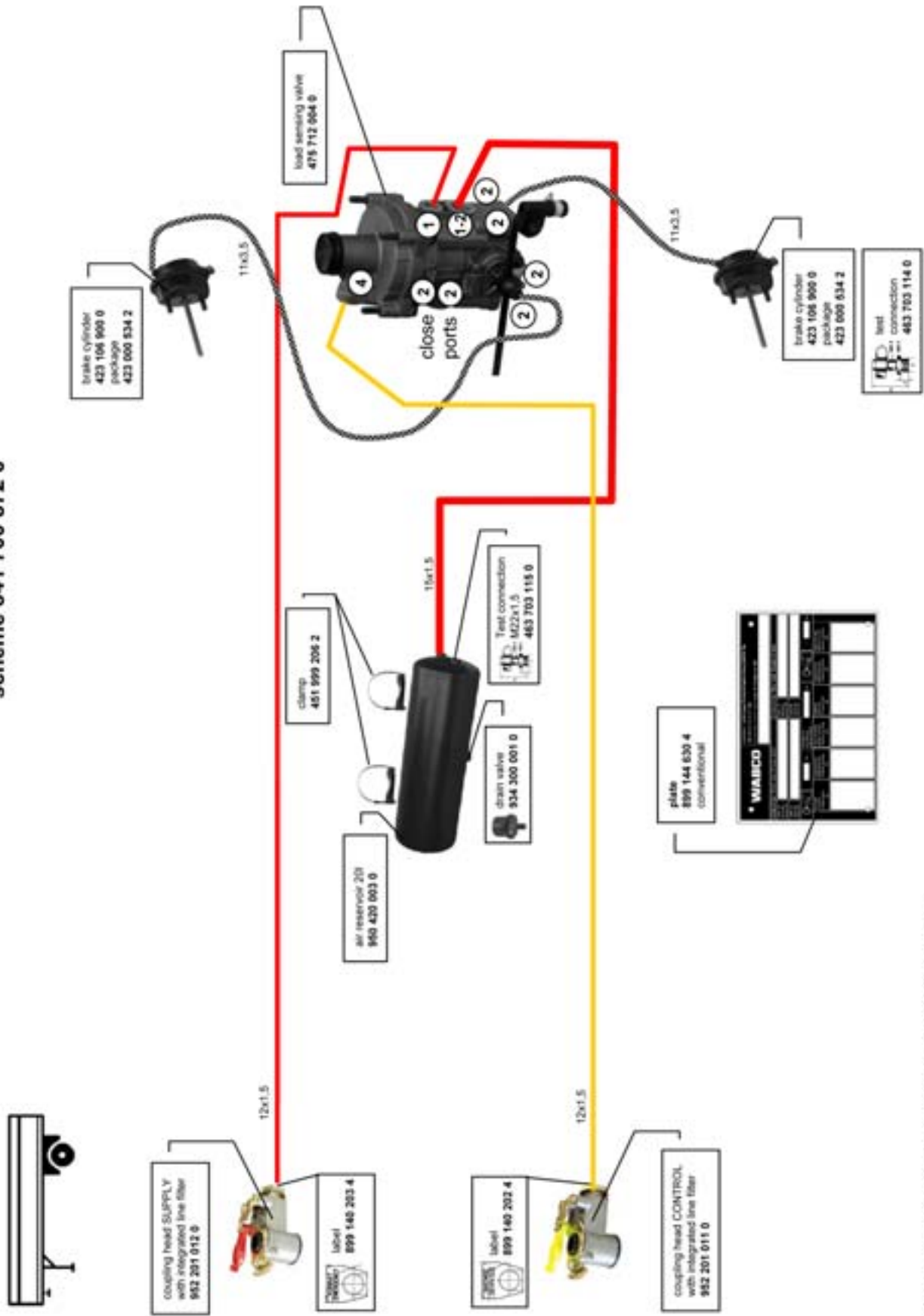
13	2	HOSE CLAMP	451 999 206 2																		
12	1	AIR RESERVOIR	20L																		
11	.	.	.																		
10	.	.																			
9	.	.																			
8	.	.																			
7	1	RELAY EMERGENCY V.	70				21	2	TEST CONNECTION	463 703 120 0											
6	.	.					19	.	.												
5	1	PLATE BRAKE LINE	899 140 202 4	18			20	2	KIT	423 ... 53. 2											
4	1	PLATE SUPPLY LINE	899 140 203 4	17			16	2	BRAKE CHAMBER	423 106 800 0											
3	.	.					15	1	DRAIN VALVE	934 300 001 0											
2	1	COUPLING HEAD W. INT.	952 201 001 0	14			14	1	TEST CONNECTION	463 703 115 0											
1	1	COUPLING HEAD W. INT.	952 201 002 0	14			14	1	TEST CONNECTION	463 703 115 0											
RES.	RES.	DENOMINATION							DENOMINATION												

WABCO

DATE	SIGNATURE	
07-03-06	API THY	
CHECKED		
07-03-06	SCHRADER	
STANDARDIZATION		
PRODUCT IDENTIFICATION NO.		
171		841 700 871 0
SIZE		402 01
A 3		1022
CODE FOR FUNCTION		
CODE FOR SHIM		
CODE FOR DOCUMENT SHEET		
REPLACEMENT FOR		
841 700 871 0 OF 96-02-15		

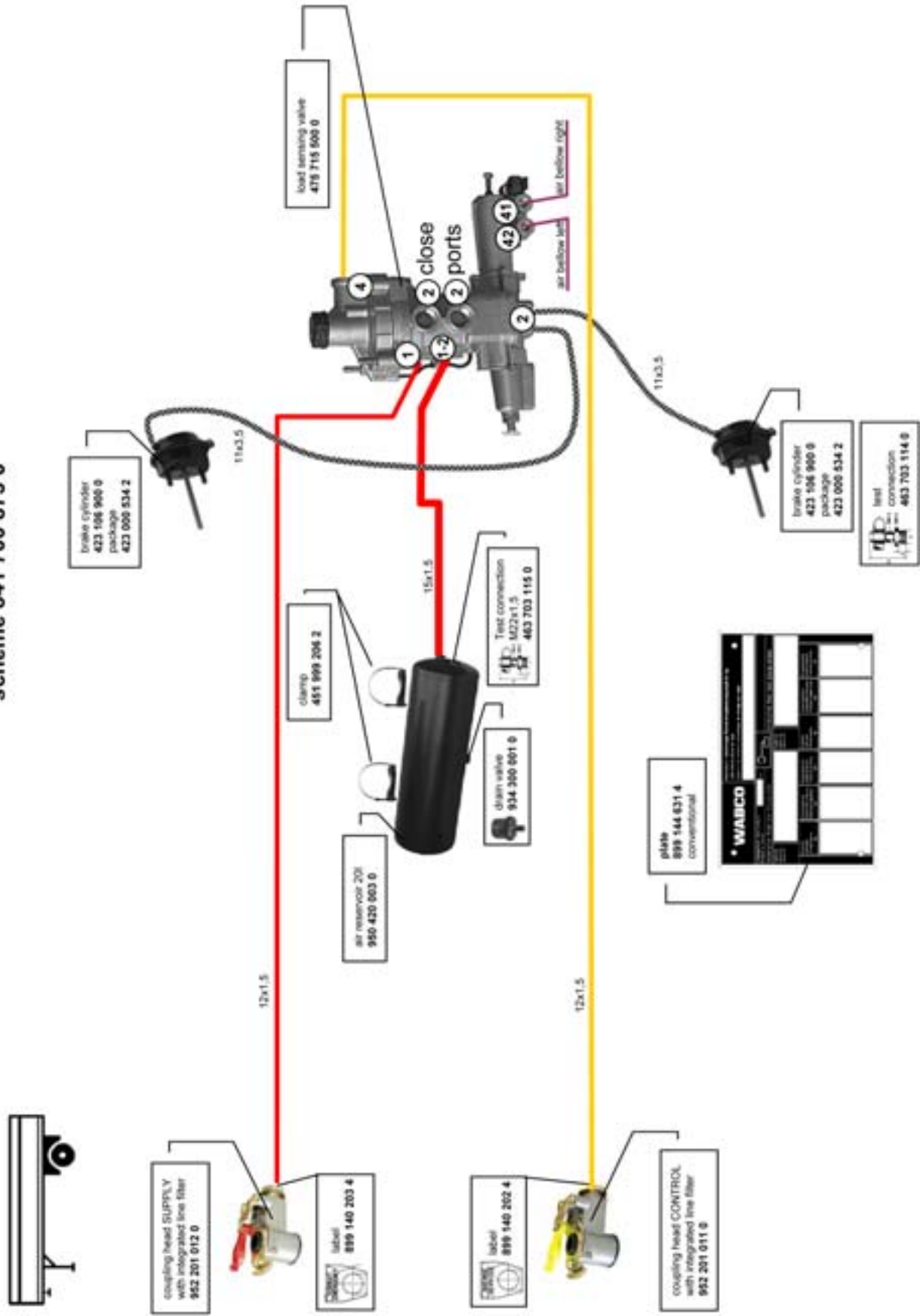
TWO LINE-AIR BRAKING SYSTEM
 FOR 1-AXLES-SEMI TRAILER
 1x 10 TONS
 -EXPORT-

MEA standard trailer
1axle semi-trailer with automatic load-sensing valve (leaf spring)
scheme 841 700 872 0

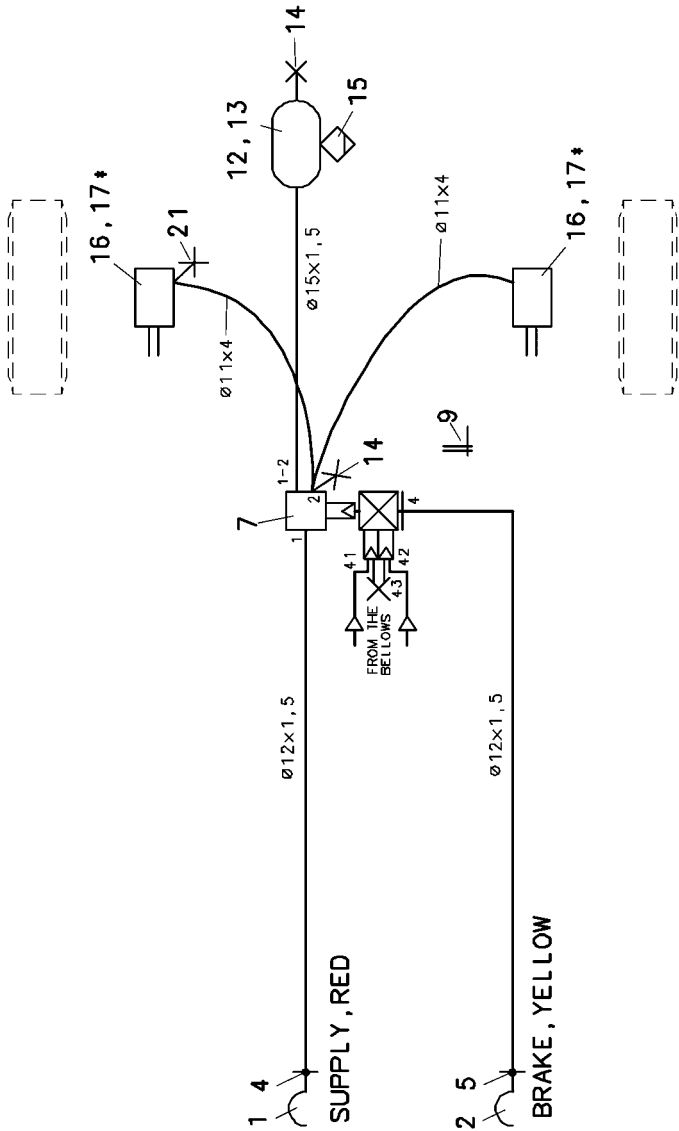


the illustration does not replace the WABCO drawing

**MEA standard trailer
1axle semi-trailer with automatic load-sensing valve (air suspension)
scheme 841 700 873 0**



the illustration does not replace the WABCO drawing



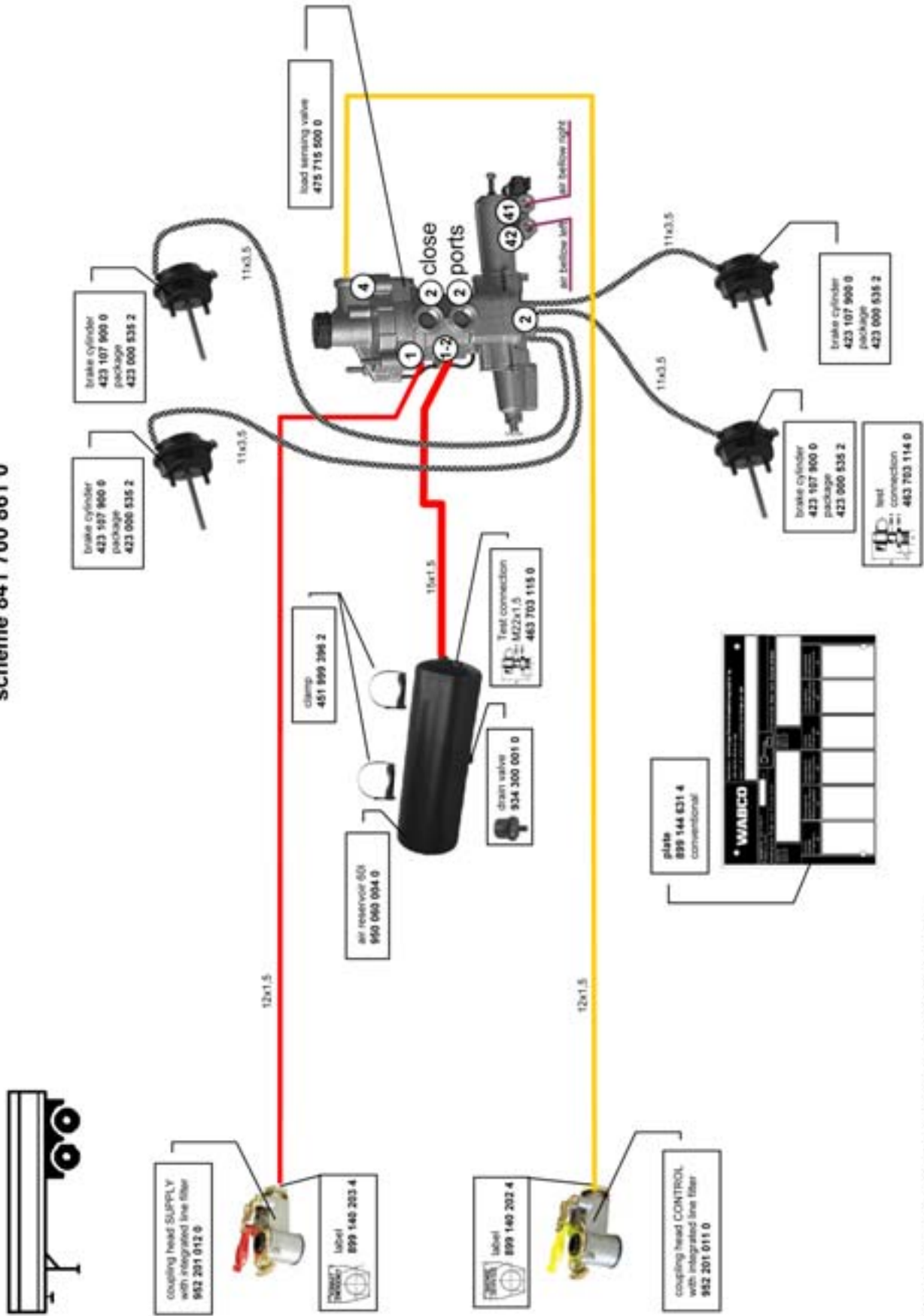
HOSE \varnothing 11x4 828 876 011 6
 NYLON PIPE \varnothing 12x1,5 828 251 112 6
 NYLON PIPE \varnothing 15x1,5 828 251 115 6

* NOT APPLICABLE FOR DISC-BRAKE

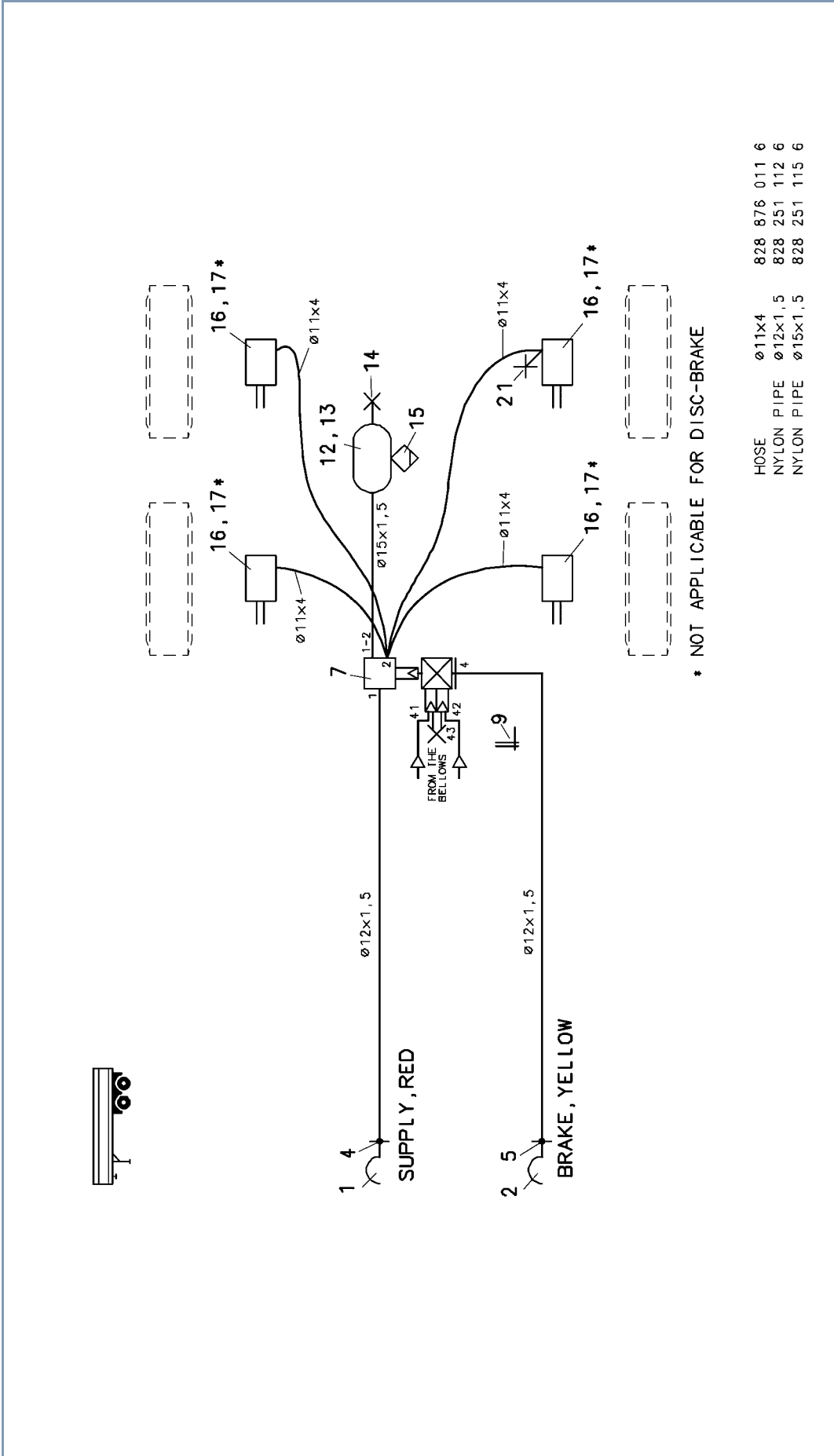
CAD-DRAWING		SIGNATURE		WABCO	
DATE	SIGNATURE	DATE	SIGNATURE	DATE	SIGNATURE
07-03-06	API THY	07-03-06	API THY	TWO LINE-AIR BRAKING SYSTEM	
07-03-06	SCHRADER	07-03-06	SCHRADER	FOR 1-AXLES-SEMI TRAILER	
	STANDARDIZATION		STANDARDIZATION	LOAD-SENS-RELAY EMERGENCY VALVE, AIR 1,1 TONS	
I.R.I.		PRODUCT IDENTIFICATION NO.		CODE FOR DOCUMENT SHEET	
		841 700 873 0		402 01	
SIZE		CODE FOR SHEET		REPLACEMENT FOR	
A 3		1022		841 700 873 0 OF 95-02-15	

FIG. NOS.	DENOMINATION	FIG. NOS.	DENOMINATION	FIG. NOS.	DENOMINATION
13	2 HOSE CLAMP	451 999 206 2			
12	1 AIR RESERVOIR	950 420 003 0			
11	.				
10	.				
9	1 TAP*SETTING VALVE OF LSREV" AIR	899 144 631 4	21	1 TEST CONNECTION	
8	1 LOAD-SENS-RELAY EMERGENCY VALVE	475 715 500 0	20	.	
7	1 PLATE BRAKE LINE	899 140 202 4	18	.	
6	1 PLATE SUPPLY LINE	899 140 203 4	17	2 KIT	
5	1 COUPLING HEAD W. INT. LINE FILTER	952 201 001 0	16	2 BRAKE CHAMBER	
4	1 COUPLING HEAD W. INT. LINE FILTER	952 201 002 0	15	1 DRAIN VALVE	
3	.				
2	1 LINE FILTER				
1	1 LINE FILTER				

MEA standard trailer
2axle semi-trailer with automatic load-sensing valve (air suspension)
scheme 841 700 861 0



the illustration does not replace the WABCO drawing



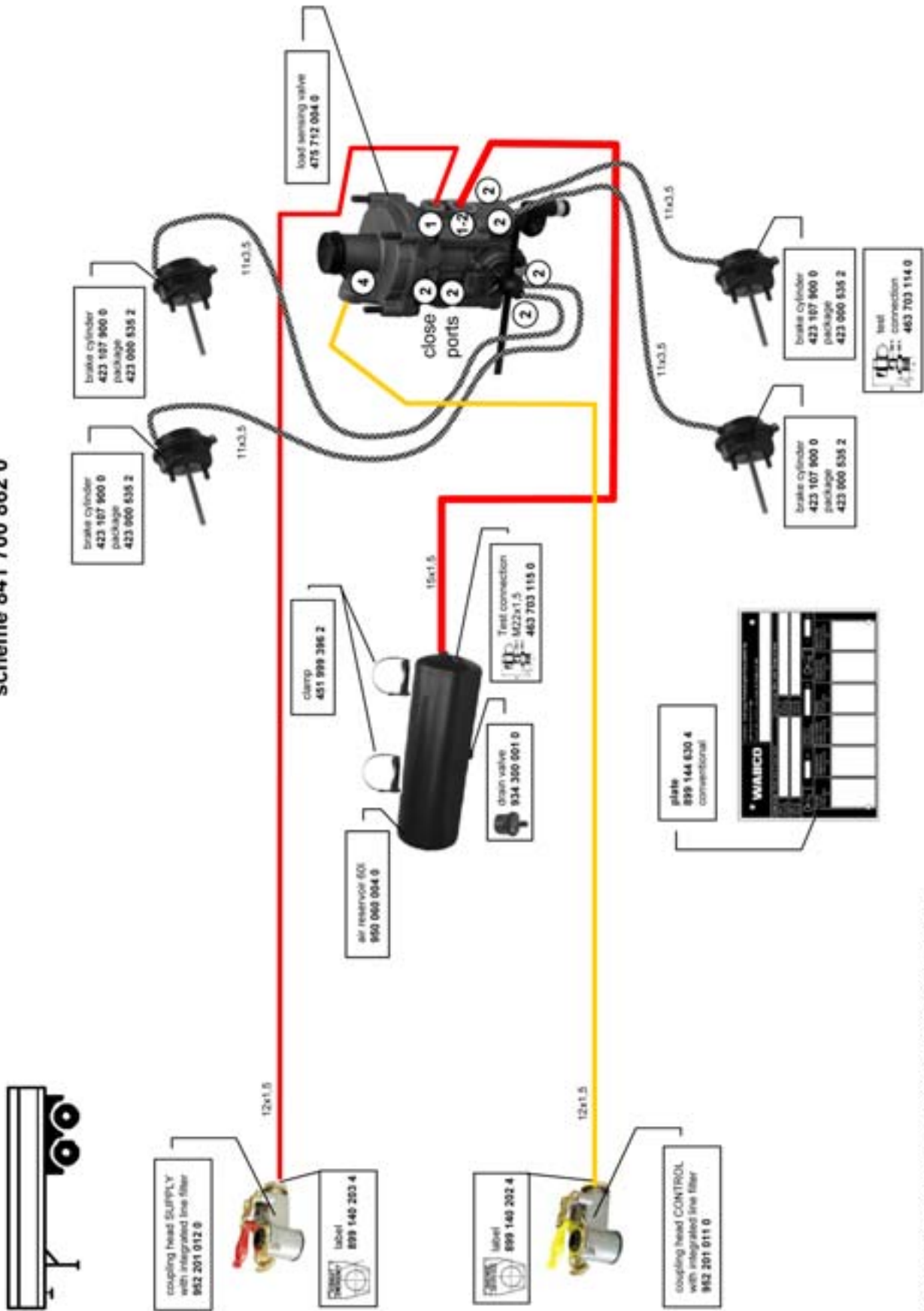
- HOSE $\phi 11 \times 4$ 828 876 011 6
- NYLON PIPE $\phi 12 \times 1,5$ 828 251 112 6
- NYLON PIPE $\phi 15 \times 1,5$ 828 251 115 6

* NOT APPLICABLE FOR DISC-BRAKE

13	HOSE CLAMP	451 999 396 2							
12	AIR RESERVOIR	60L							
11									
10									
9	TAG/SETTING VALUE OF LSREV" AIR	899 144 631 4							
8			21	1	TEST CONNECTION				
7	LOAD-SENS.RELAY EMER GENCY VALVE	475 715 500 0 20				463 703 120 0			
6			19						
5	PLATE BRAKE LINE	899 140 202 4 18				423 ... 53. 2			
4	PLATE SUPPLY LINE	899 140 203 4 17				423 107 900 0			
3			16	4	BRAKE CHAMBER TYPE 30"				
2	COUPLING HEAD W. INT. LINE FILTER	952 201 001 0 15				934 300 001 0			
1	COUPLING HEAD W. INT. LINE FILTER	952 201 002 0 14				463 703 115 0	112866 A 07-03-08		
Pcs.	DENOMINATION	PRODUCT IDENTIFICATION NO.	Pcs.	Pcs.	DENOMINATION		DCN-NO. (EU)	DATE	

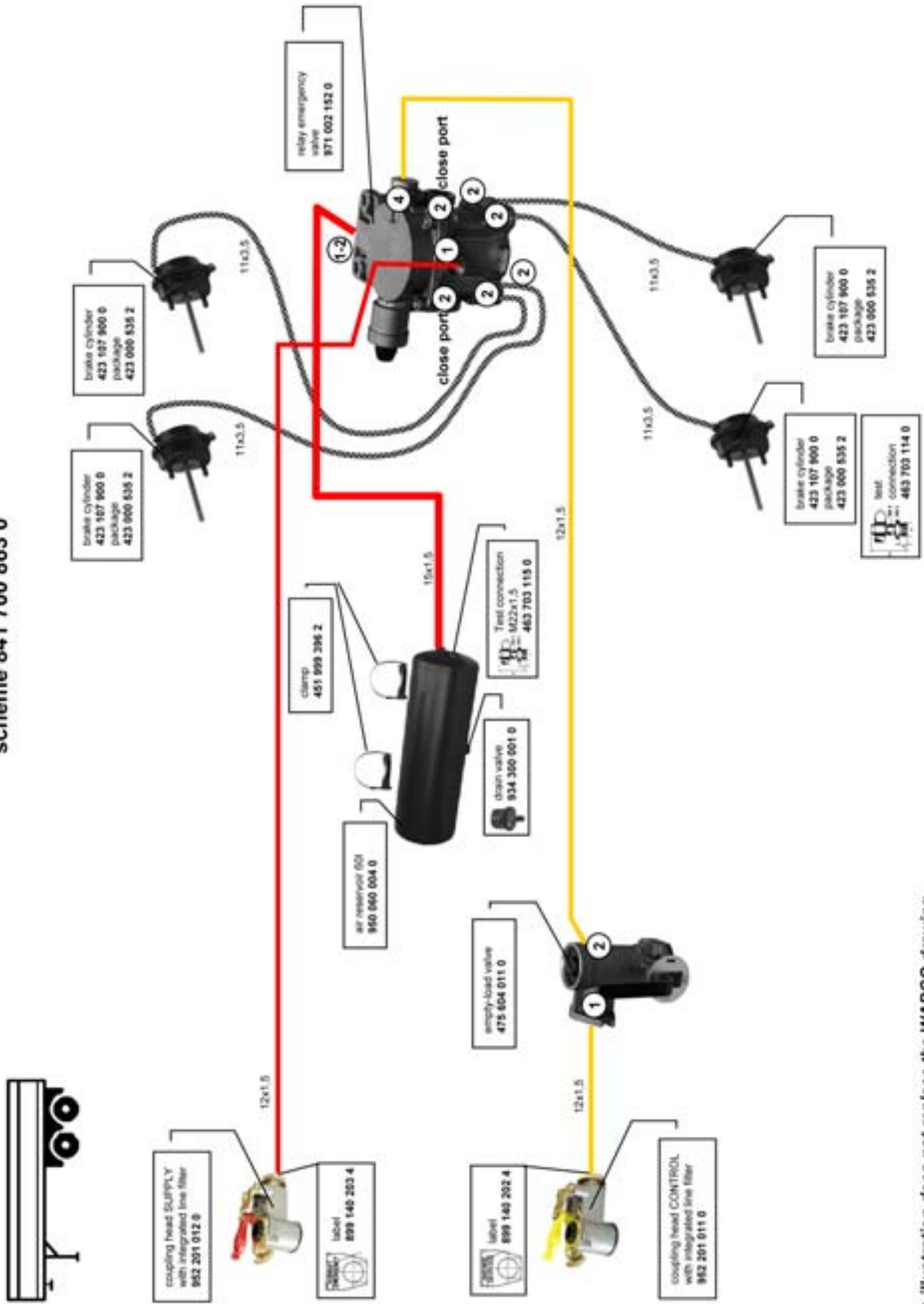
WABCO	
DATE	SIGNATURE
07-03-06	API THY
CHECKED	
07-03-06	SCHRADER
STANDARDIZATION	
T.R.I.	PRODUCT IDENTIFICATION NO.
171	841 700 861 0
SIZE	CODE FOR SHIP
A 3	2022
	CODE FOR FUNCTION
	402
	REPLACEMENT FOR
	841 700 861 0 0 95-11-2

MEA standard trailer
2axle semi-trailer with automatic load-sensing valve (leaf spring)
scheme 841 700 862 0

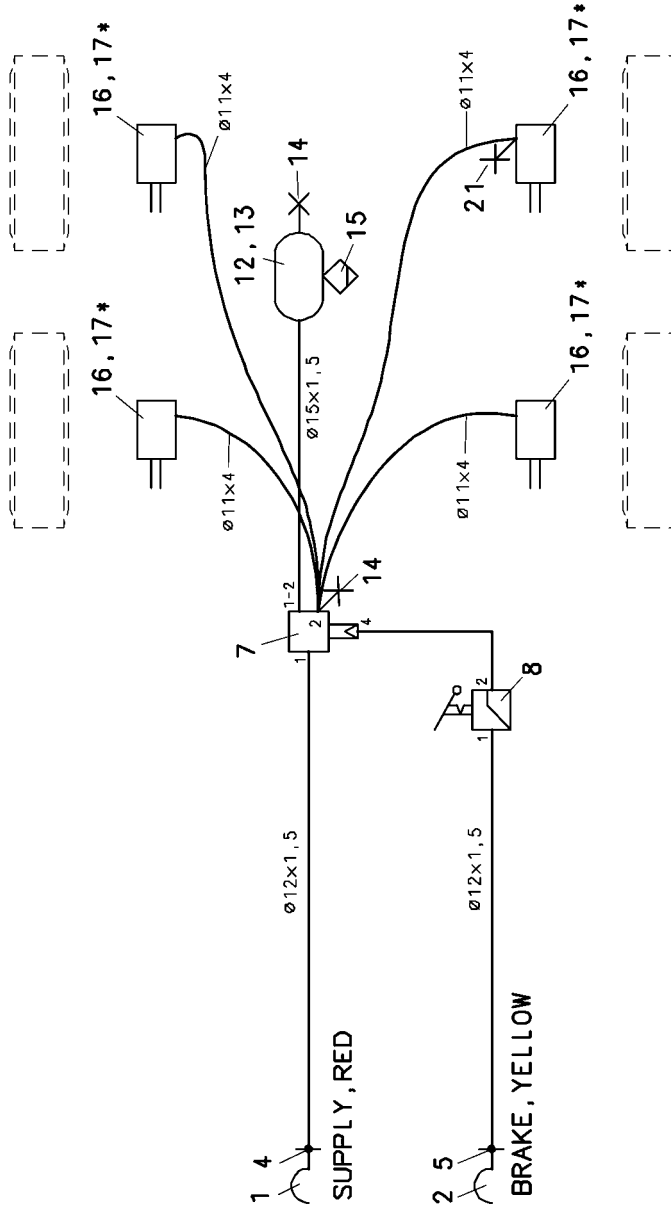


the illustration does not replace the WABCO drawing

MEA standard trailer
2axle semi-trailer with manual load-detection
scheme 841 700 863 0



the illustration does not replace the WABCO drawing



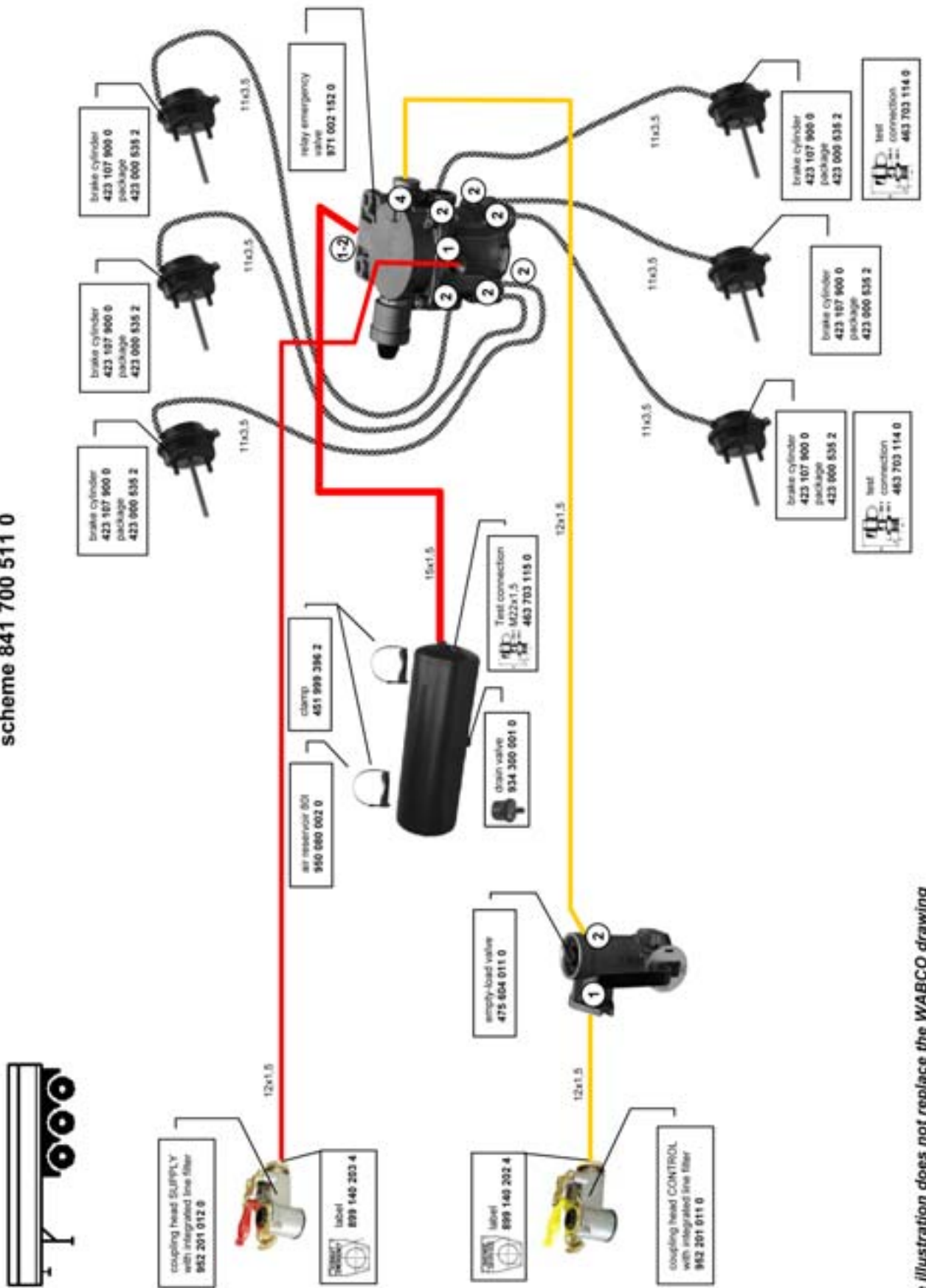
* NOT APPLICABLE FOR DISC-BRAKE

- HOSE $\varnothing 11 \times 4$ 828 876 011 6
- NYLON PIPE $\varnothing 12 \times 1,5$ 828 251 112 6
- NYLON PIPE $\varnothing 15 \times 1,5$ 828 251 115 6

CADD-DRAWING IDENTIFICATION		WABCO	
DATE	SIGNATURE		
07-03-06	API THY	TWO LINE-AIR BRAKING SYSTEM	
07-03-06	SCHRADER	FOR 2-AXLES-SEMITRAILER	
STANDARDIZATION		2x12-16 TONS	
T.R.I.		PRODUCT IDENTIFICATION NO.	
171	841 700 863 0	CODE FOR DOCUMENT SHEET	
SIZE	A 3	CODE FOR REPLACEMENT FOR	
CODE FOR FUNCTION	2002	CODE FOR SHAPE	
DATE	07-03-06	841 700 863 0 OF 94-07-28	

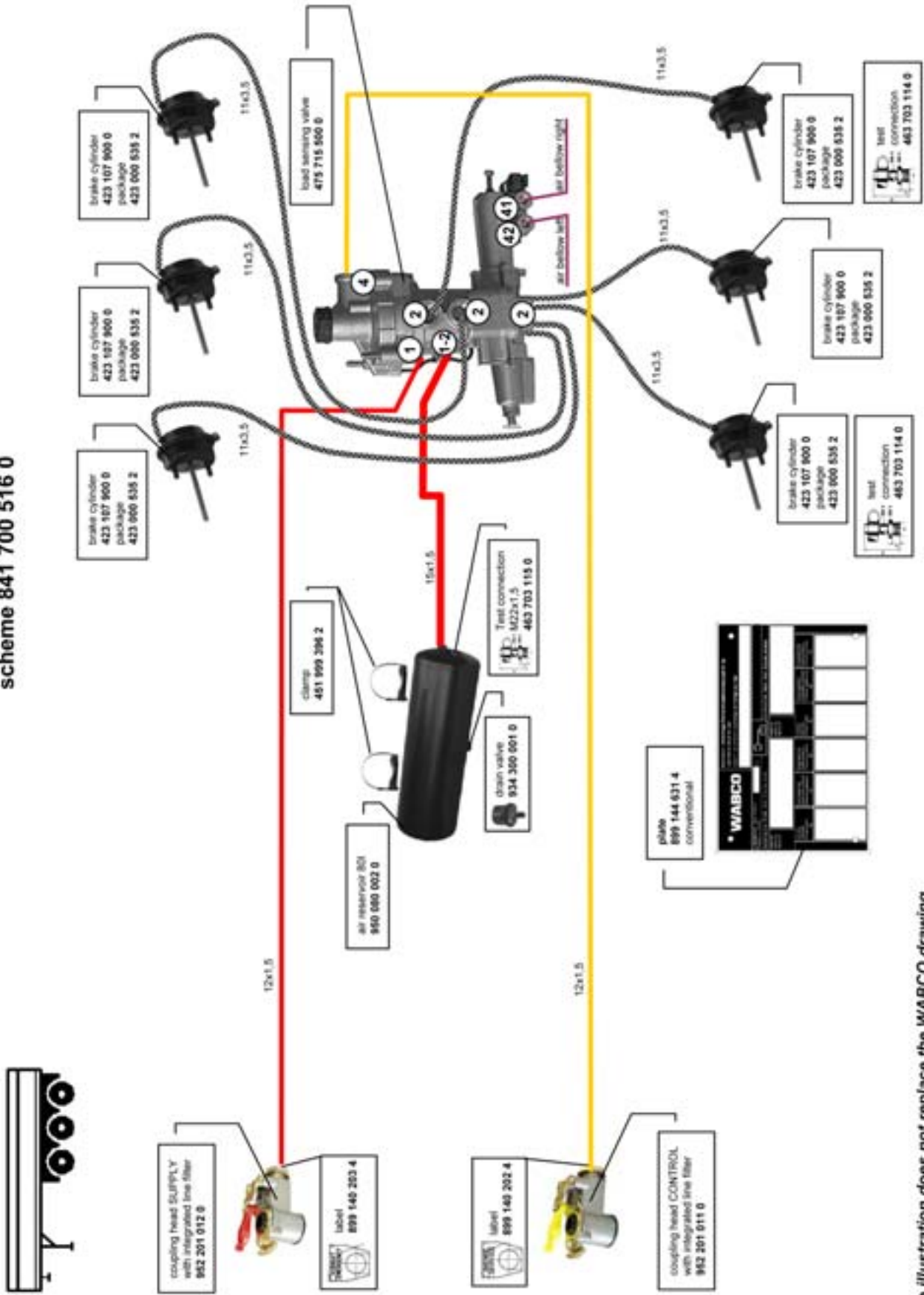
QTY	DESCRIPTION	POS.	POS.	DENOMINATION	POS.	POS.
2	HOSE CLAMP	451 999 386 2				
1	AIR RESERVOIR	950 060 004 0	60L			
0						
0						
8	EMPTY-LOAD VALVE	475 604 011 0	21	1 TEST CONNECTION		
7	RELAY EMERGENCY V.	971 002 152 0	20			
6			19			
5	PLATE BRAKE LINE	899 140 202 4	18			
4	PLATE SUPPLY LINE	899 140 203 4	17	4 KIT		
3			16	4 BRAKE CHAMBER		
2	COUPLING HEAD W. INT. LINE FILTER	952 201 001 0	15	1 DRAIN VALVE		
1	COUPLING HEAD W. INT. LINE FILTER	952 201 002 0	14	2 TEST CONNECTION		
5	DENOMINATION					

MEA standard trailer
3axle semi-trailer with manual load-detection
scheme 841 700 511 0

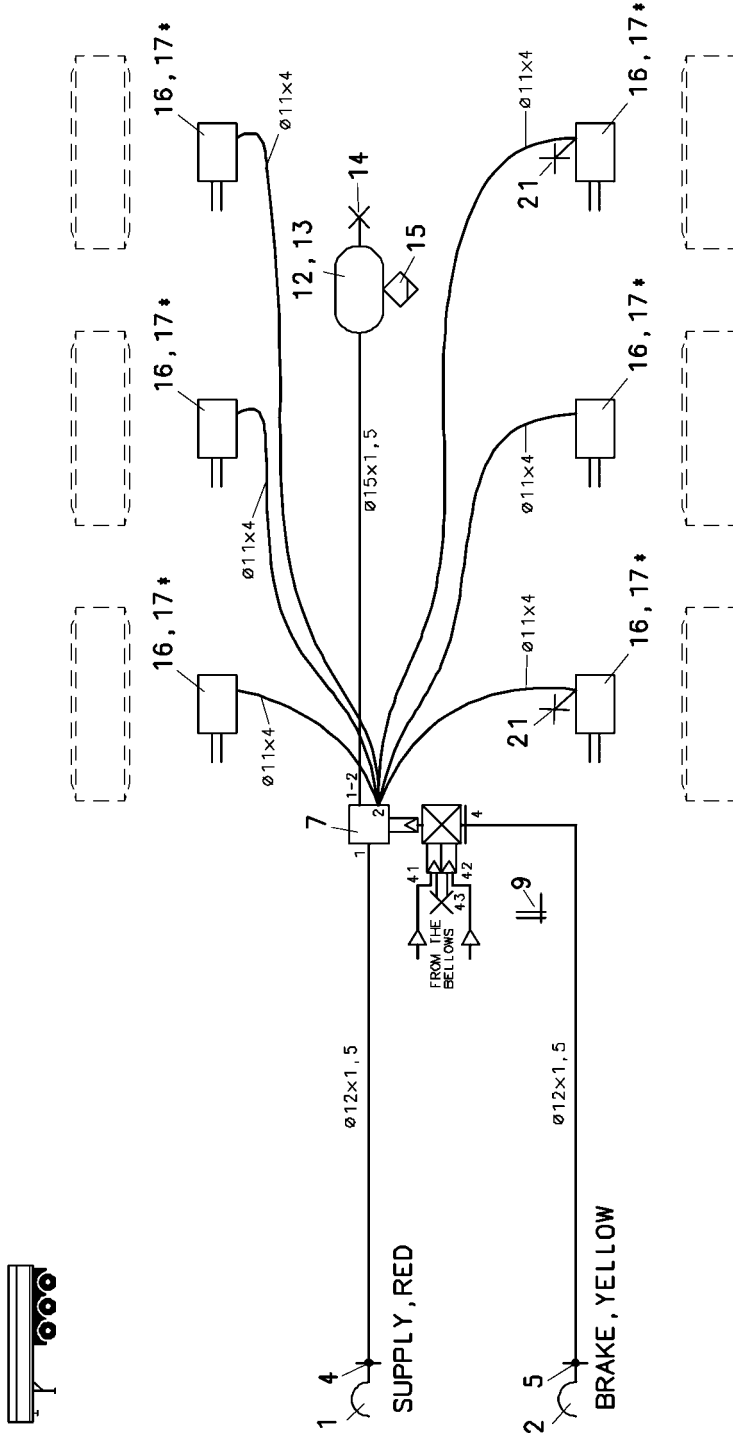


the illustration does not replace the WABCO drawing

**MEA standard trailer
3axle semi-trailer with automatic load-sensing valve (air suspension)
scheme 841 700 516 0**



the illustration does not replace the WABCO drawing

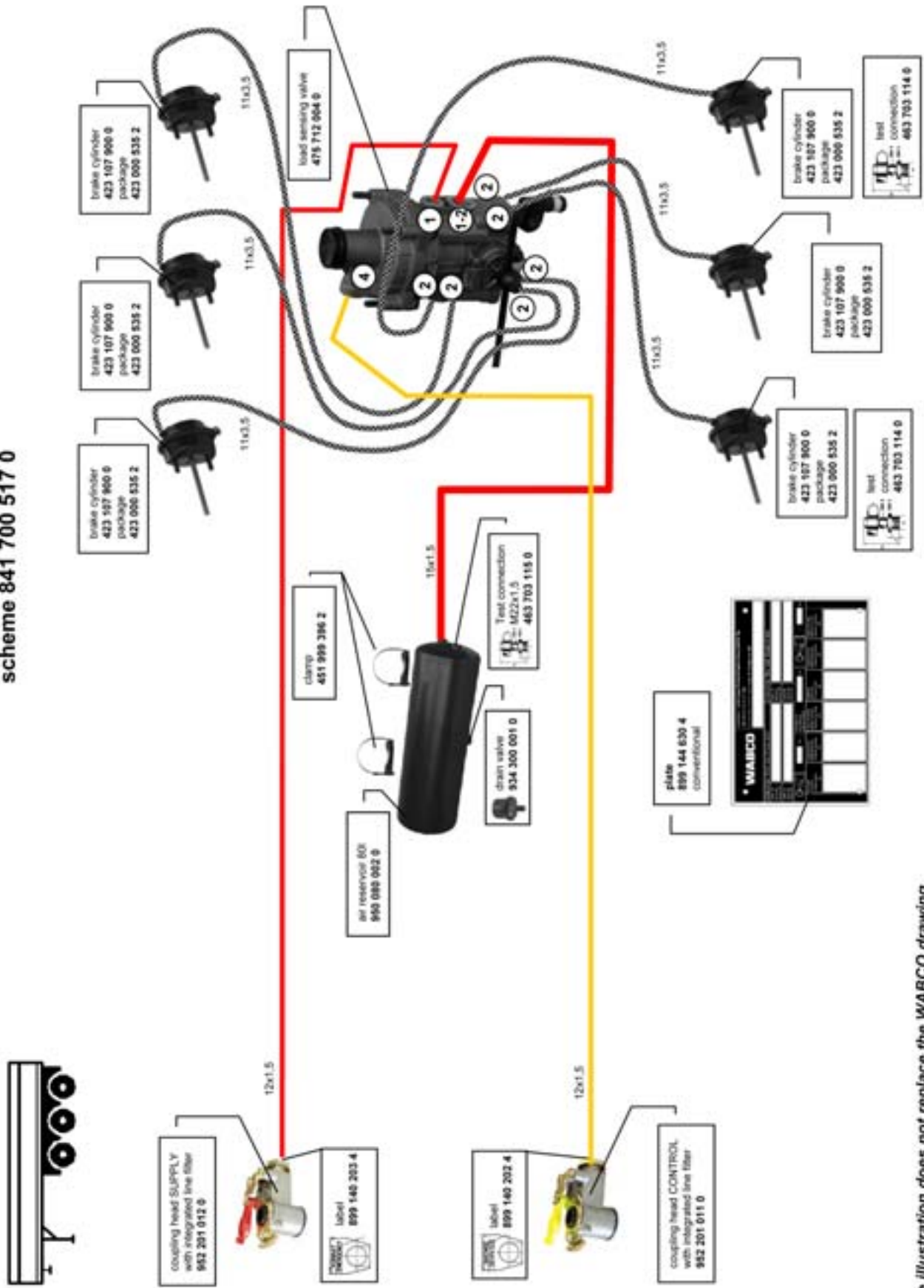


* NOT APPLICABLE FOR DISC-BRAKE

HOSE Ø11x4 828 876 011 6
 NYLON PIPE Ø12x1,5 828 251 112 6
 NYLON PIPE Ø15x1,5 828 251 115 6

DRAWING INFORMATION		WABCO	
DATE	SIGNATURE	TWO LINE-AIR BRAKING SYSTEM	
DATE	DRAWN	FOR 3-AXLES-SEMI TRAILER	
07-03-06	APITHY	LOAD-SENS.RELAY EMERGENCY VALVE, AIR	
CHECKED		3x 12-16 TONS	
07-03-06	SCHRADER		
STANDARDIZATION			
T.R.L.		PRODUCT IDENTIFICATION NO.	
171		841 700 516 0	
SIZE		CODE FOR DOCUMENT SHEET	
A 3		402 01	
CODE FOR FUNCTION		REPLACEMENT FOR	
3022		841 700 516 0 OF 95-11-2	
DCN-NO.	REF.	DATE	
112668 A	107-03-06		
PRODUCT IDENTIFICATION NO.	PCS.	DENOMINATION	
451 959 396 2			
950 080 002 0			
80L			
899 144 631 4			
475 715 500 0	21	2	TEST CONNECTION
899 140 202 4	19		
899 140 203 4	17	7	KIT
952 201 001 0	16	6	BRAKE CHAMBER
952 201 002 0	15	1	DRAIN VALVE
952 201 002 0	14	1	TEST CONNECTION
	13		HOSE CLAMP
	12		AIR RESERVOIR
	11		COUPLING HEAD W. INT. LINE FILTER
	10		COUPLING HEAD W. INT. LINE FILTER
	9		TAG/SETTLING VALVE OF LSREV™ AIR
	8		LOAD-SENS.RELAY EMERGENCY VALVE
	7		PLATE BRAKE LINE
	6		PLATE SUPPLY LINE
	5		COUPLING HEAD W. INT. LINE FILTER
	4		COUPLING HEAD W. INT. LINE FILTER
	3		BRAKE CHAMBER
	2		DRAIN VALVE
	1		TEST CONNECTION

MEA standard trailer
3axle semi-trailer with automatic load-sensing valve (leaf spring)
scheme 841 700 517 0



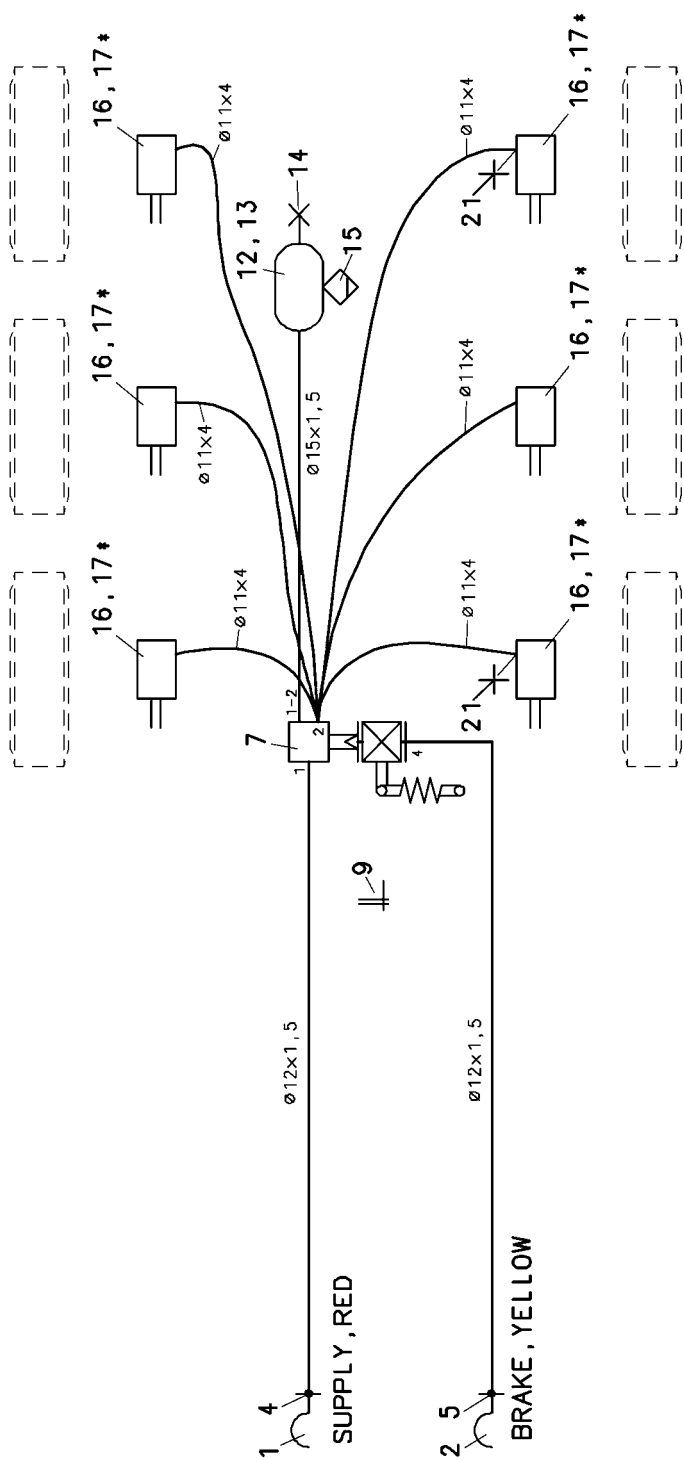
the illustration does not replace the WABCO drawing

3 Axle semi-trailer with automatic LSV

841 700 517 0

MEA

5

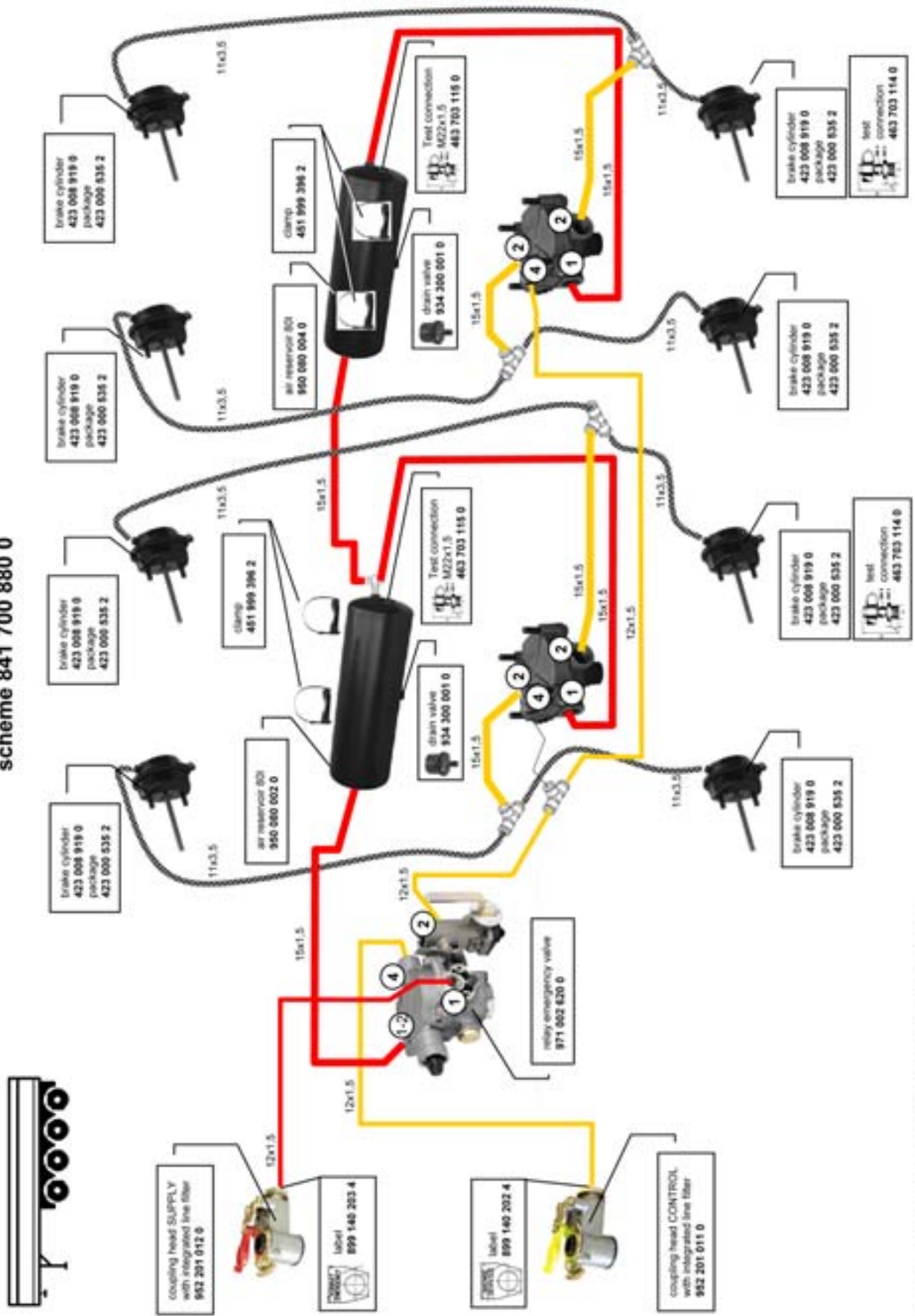


* NOT APPLICABLE FOR DISC-BRAKE

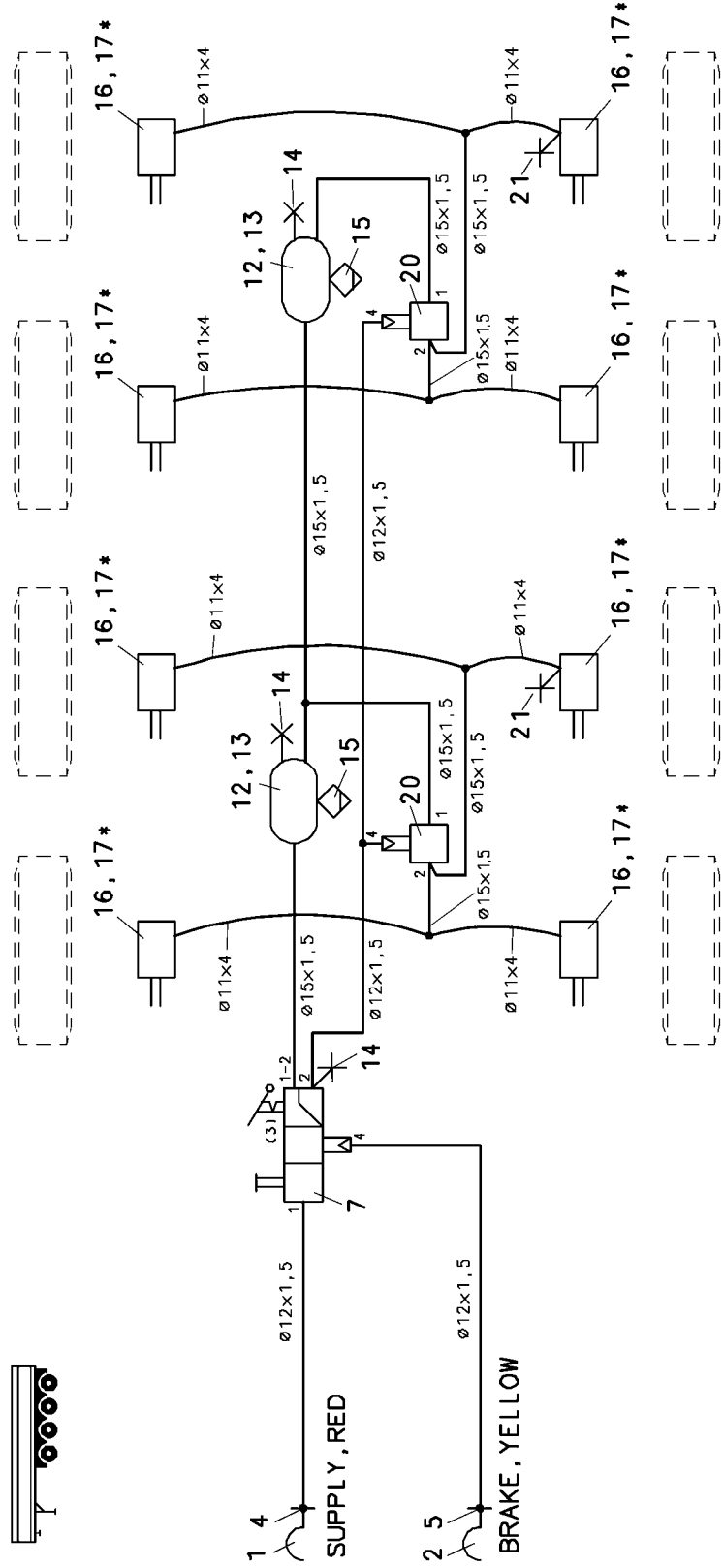
HOSE $\phi 11 \times 4$ 828 876 011 6
 NYLON PIPE $\phi 12 \times 1,5$ 828 251 112 6
 NYLON PIPE $\phi 15 \times 1,5$ 828 251 115 6

DRAWING COMPARTMENT		WABCO		DATE		SIGNATURE	
13	2 HOSE CLAMP	451 999 396 2		07-03-06	API THY	TWO LINE-AIR BRAKING SYSTEM FOR 3-AXLES-SEMI TRAILER	
12	1 AIR RESERVOIR	80L			CHECKED	LOAD-SENS-RELAY EMERGENCY VALVE, MECH. -EXPORT-	
11					STANDARDIZATION	3x12-16 TONS	
10					T.R.I.	PRODUCT IDENTIFICATION NO.	
9	1 TAG-SETTING VALVE OF LSV [®] MECH.	899 144 630 4			171	841 700 517 0	
8					SIZE	A 3	
7	1 LOAD-SENS-RELAY EMERGENCY VALVE	475 712 004 0			CODE FOR FUNCTION	3012	
6					CODE FOR ODDMENT SHEET	402	
5	1 PLATE BRAKE LINE	899 140 202 4			REPLACEMENT FOR	841 700 517 0 OF 94-11-01	
4	1 PLATE SUPPLY LINE	899 140 203 4					
3							
2	1 COUPLING HEAD W. INT. LINE FILTER	952 201 001 0	1	LINE FILTER			
1	1 COUPLING HEAD W. INT. LINE FILTER	952 201 002 0	1	LINE FILTER			
NG. RES.	DENOMINATION	PRODUCT IDENTIFICATION NO.	PAS. RES.	DENOMINATION	DCN-NO. (REV.)	DATE	

MEA standard trailer
4 axle semi-trailer with manual load-detection
scheme 841 700 880 0



the illustration does not replace the WABCO drawing

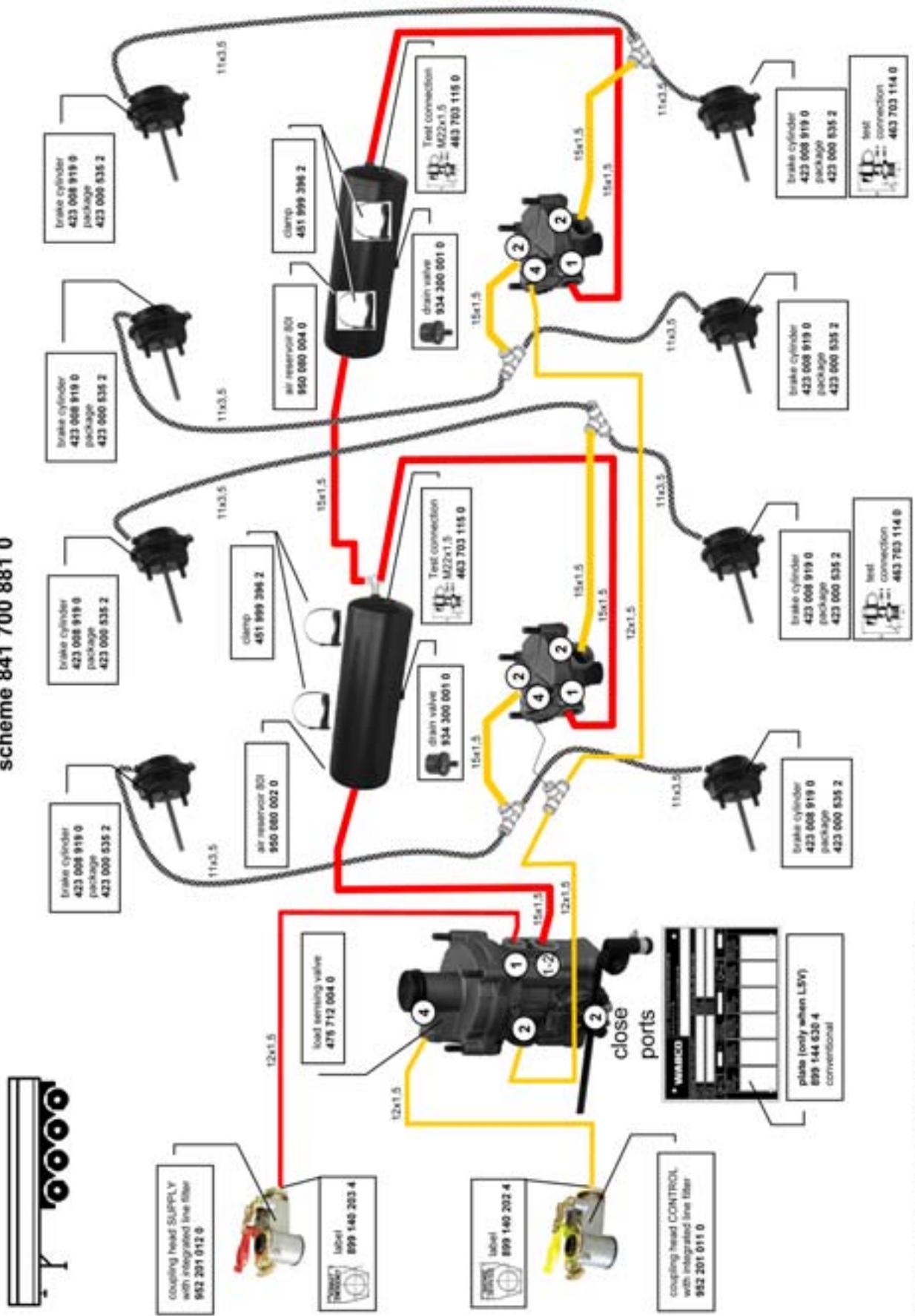


* NOT APPLICABLE FOR DISC-BRAKE

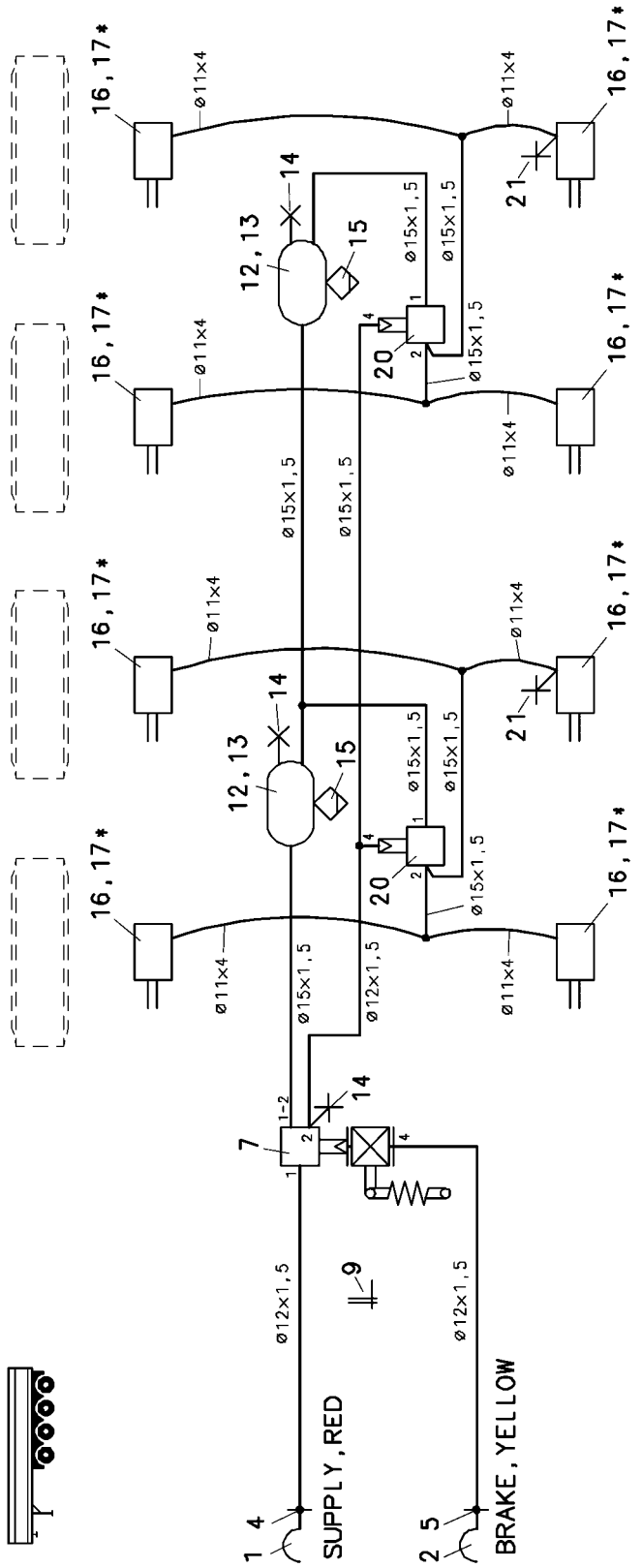
- HOSE Ø11x4 828 876 011 6
- NYLON PIPE Ø12x1,5 828 251 112 6
- NYLON PIPE Ø15x1,5 828 251 115 6

CADAW-DRAWING FOR PARTS		DATE		SIGNATURE		WABCO		PRODUCT IDENTIFICATION NO.	
3	4 HOSE CLAMP	451 999 396 2						171	841 700 880 0
2	AIR RESERVOIR	950 080 002 0						SIZE	402
10	RELAY VALVE							CODE FOR REPLACEMENT FOR	841 700 880 0 OF 96-02-15
9	RELAY EMERGENCY V.							CODE FOR FUNCTION	4000
7	1 RELAY EMERGENCY V.	971 002 620 0	2	TEST CONNECTION	463 703 120 0			PRODUCT IDENTIFICATION NO.	841 700 880 0
6	1 PLATE BRAKE LINE	899 140 202 4	18	2 RELAY VALVE	973 011 000 0			CODE FOR DIMENSION SHEET	01
5	1 PLATE SUPPLY LINE	899 140 203 4	17	3 KIT				REPLACEMENT FOR	
4	1 COUPLING HEAD W. INT. LINE FILTER	952 201 001 0	15	4 BRAKE CHAMBER	423 008 919 0				
3	1 COUPLING HEAD W. INT. LINE FILTER	952 201 002 0	14	5 DRAIN VALVE	934 300 001 0				
2	1 COUPLING HEAD W. INT. LINE FILTER	952 201 002 0	13	6 TEST CONNECTION	463 703 115 0	094171 A	06-04-20		
1	1 COUPLING HEAD W. INT. LINE FILTER	952 201 002 0	12	7 TEST CONNECTION					
08. PPS.	DENOMINATION	PRODUCT IDENTIFICATION NO.	PPS. PPS.	DENOMINATION				TRAILER NO.	REF. DATE

MEA standard trailer
4axle semi-trailer with automatic LSV (steel spring)
scheme 841 700 881 0



the illustration does not replace the WABCO drawing

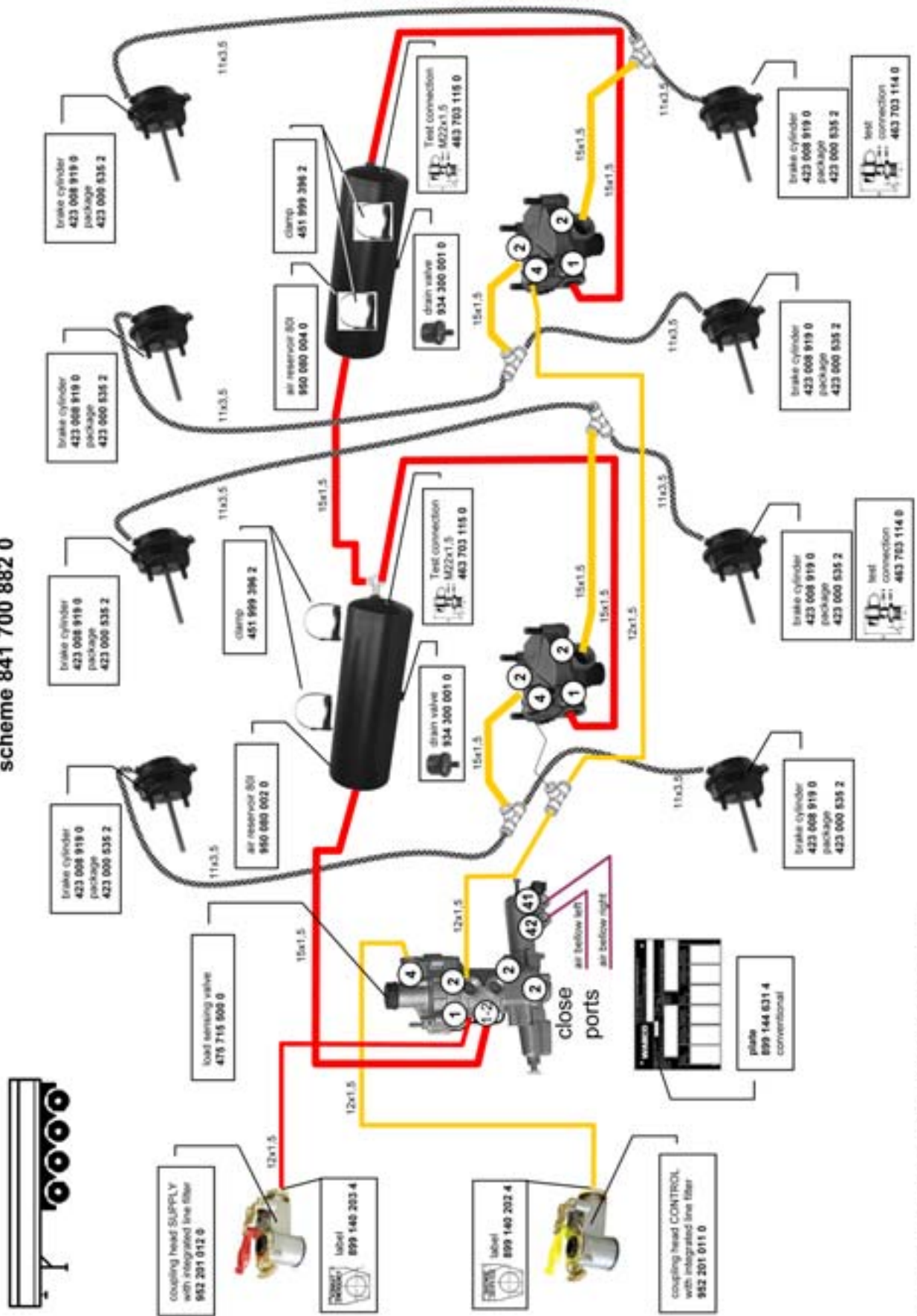


HOSE ø11x4 828 876 011 6
 NYLON PIPE ø12x1,5 828 251 112 6
 NYLON PIPE ø15x1,5 828 251 115 6

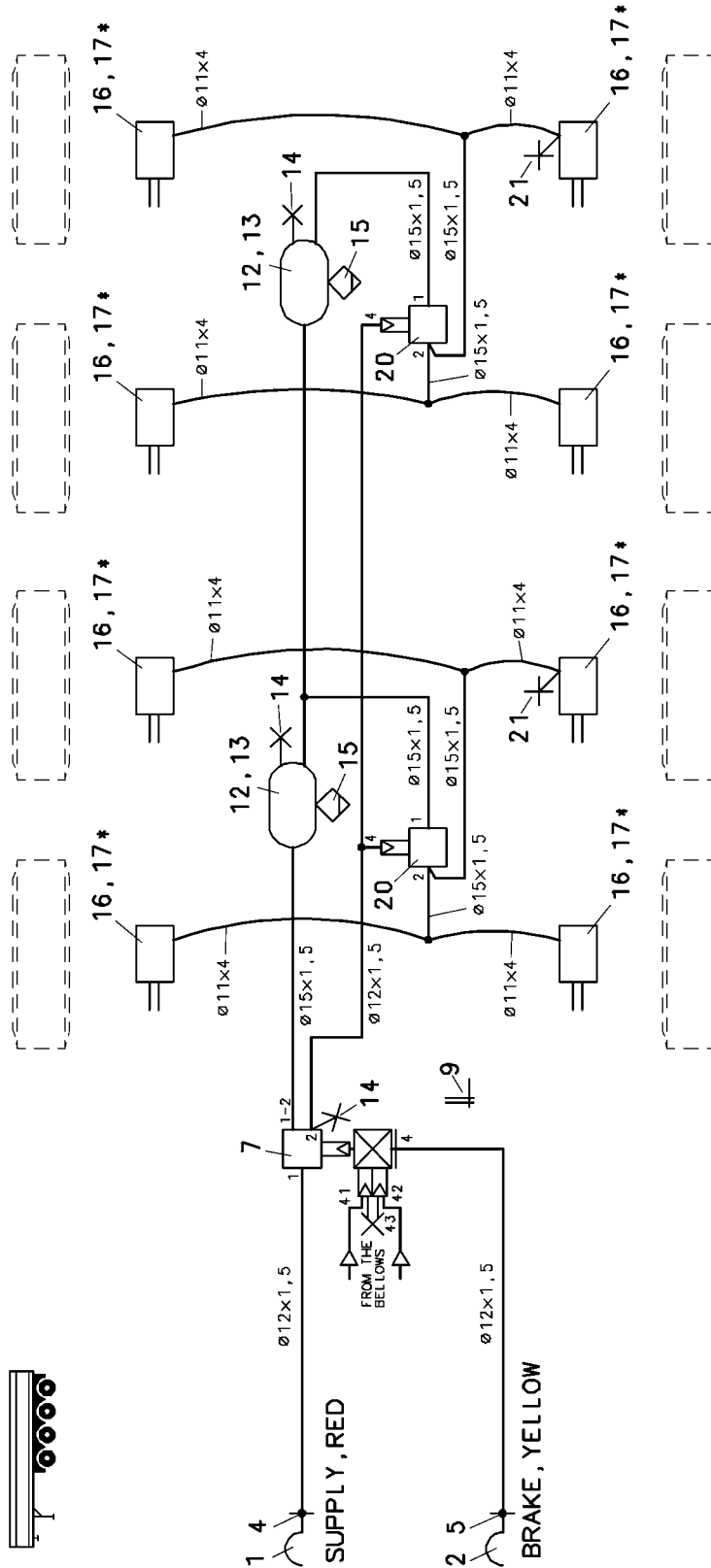
* NOT APPLICABLE FOR DISC-BRAKE

DRAWING CONTROL		DATE		SIGNATURE		WABCO TWO LINE-AIR BRAKING SYSTEM FOR 4-AXLES-SEMI TRAILER LOAD-SENS.RELAY EMERGENCY VALVE., MECH. 4x12-16 TONS -EXPORT-			CODE FOR DOCUMENT SHEET				
DATE	DRAWN	CHECKED	PRODUCT IDENTIFICATION NO.						171	841 700 881 0	402 01		
07-03-06			API THY						CODE FOR BRAKE			REPLACEMENT FOR	
07-03-06			SCHRADER						SIZE			841 700 881 0 OF 96-02-15	
T.R.I.		PRODUCT IDENTIFICATION NO.		171		841 700 881 0		402		4012			
A 3		CODE FOR FUNCTION		A 3		DATE		112676 A 07-03-06		DCN-NO. (REV)			
13 4		HOSE CLAMP		451 999 396 2		2				DATE			
12 2		AIR RESERVOIR		80L		950 080 002 0							
11 .													
10 .													
9 1		TAG-SETTING VALVE OF 'LSREV' MECH.		899 144 630 4		21		2 TEST CONNECTION					
8 .						19		2 RELAY VALVE					
7 1		LOAD-SENS.RELAY EMERGENCY VALVE		475 712 004 0		20							
6 .						19							
5 1		PLATE BRAKE LINE		899 140 202 4		18		8 KIT					
4 1		PLATE SUPPLY LINE		899 140 203 4		17		TYPE 36"					
3 .						16		BRAKE CHAMBER					
2 1		COUPLING HEAD W. INT. LINE FILTER		952 201 001 0		15		DRAIN VALVE					
*1 1		COUPLING HEAD W. INT. LINE FILTER		952 201 002 0		14		3 TEST CONNECTION					
REQ. REQ.		DENOMINATION		PRODUCT IDENTIFICATION NO.		REQ. REQ.		DENOMINATION					

MEA standard trailer
4axle semi-trailer with automatic LSV (air suspension)
scheme 841 700 882 0



the illustration does not replace the WABCO drawing

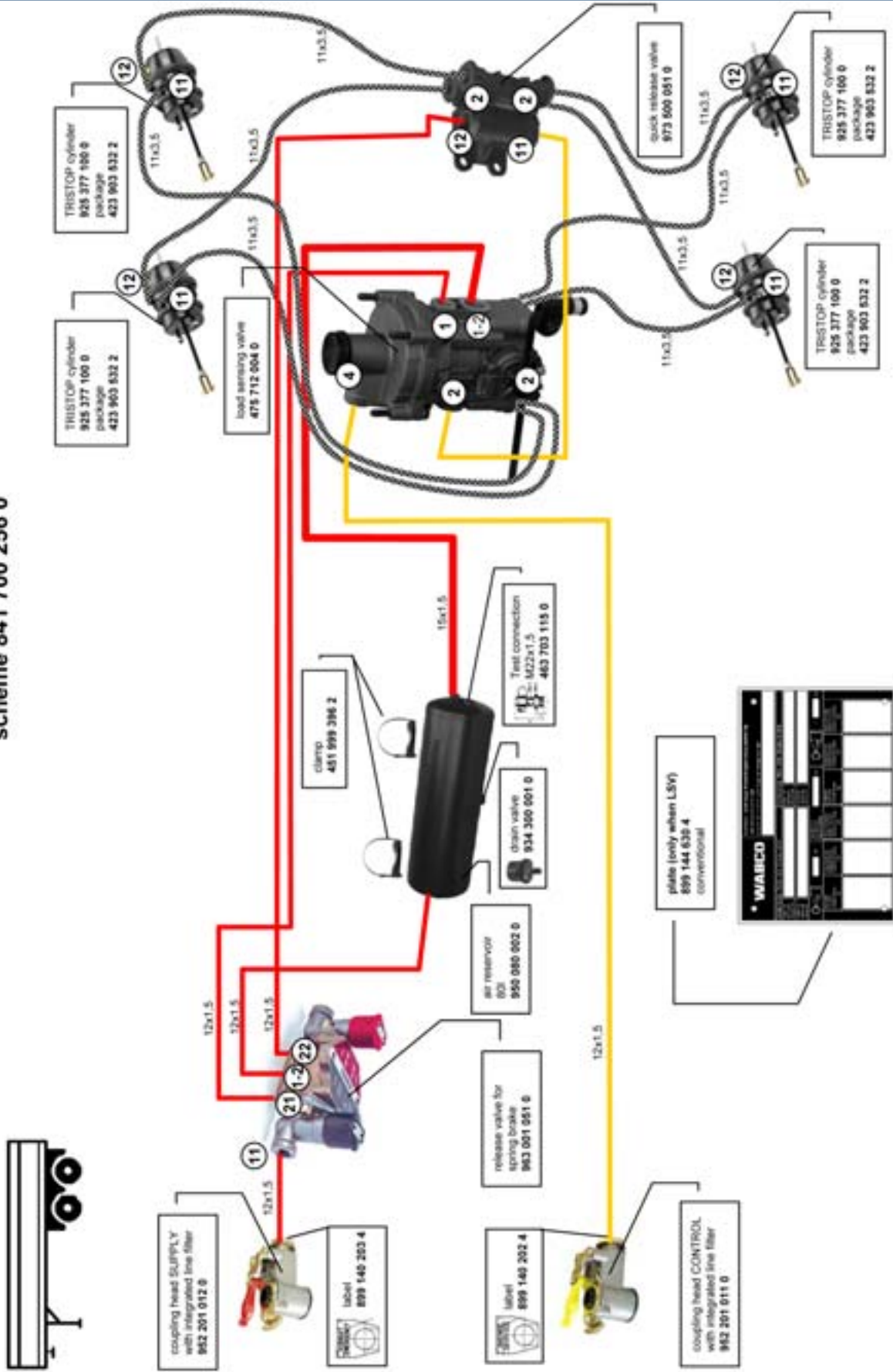


* NOT APPLICABLE FOR DISC-BRAKE

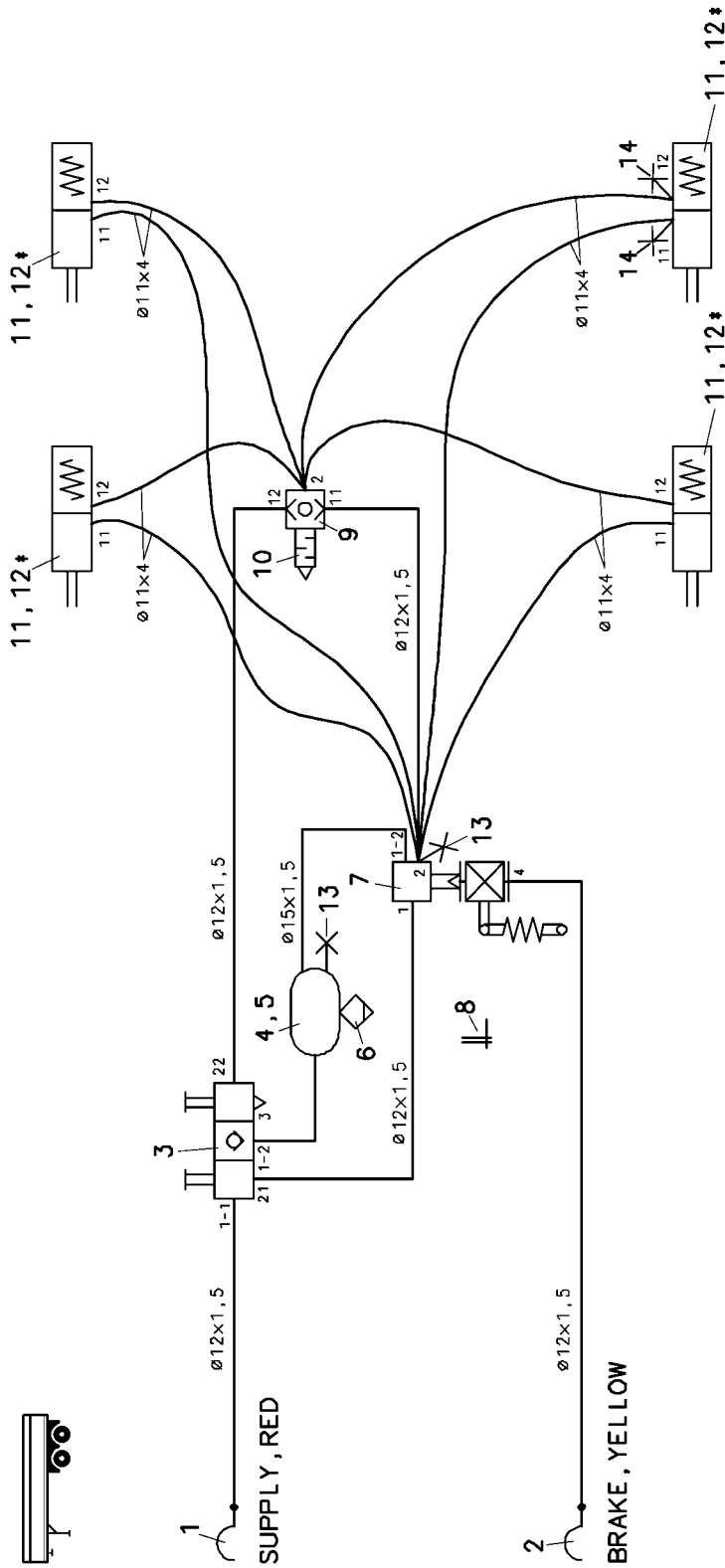
- HOSE Ø11x4 828 876 011 6
- NYLON PIPE Ø12x1,5 828 251 112 6
- NYLON PIPE Ø15x1,5 828 251 115 6

CUSTOMER ORDER NO.		WABCO	
DATE	SIGNATURE	DATE	SIGNATURE
06-04-20	APITHY	06-04-20	SCHRADER
CHECKED		STANDARDIZATION	
TWO LINE-AIR BRAKING SYSTEM FOR 4-AXLES-SEMI TRAILER LOAD-SENS-RELAY EMERGENCY VALVE, AIR -EXPORT-			
I.R.L.		PRODUCT IDENTIFICATION NO.	
171	841 700 882 0	CODE FOR DOCUMENT SHEET	
SIZE	A 3	CODE FOR FUNCTION	4022
DATE		REPLACEMENT FOR	
06-04-20	09.4.17.1 A	841 700 882 0 OF 96-02-15	
PC. NO.	DENOMINATION	PC. NO.	DENOMINATION
13	451 999 396 2	21	2 TEST CONNECTION
12	950 080 002 0	20	2 RELAY VALVE
11		19	
10		18	
9	899 144 631 4	17	8 KIT
8	475 715 500 0	16	8 BRAKE CHAMBER
7	475 715 500 0	15	2 DRAIN VALVE
6		14	3 TEST CONNECTION
5	899 140 202 4	13	
4	899 140 203 4	12	
3		11	
2	952 201 001 0	10	
1	952 201 002 0	9	
PC. NO.	DENOMINATION	PC. NO.	DENOMINATION

MEA trailer with TRISTOP cylinders
2 axle semi-trailer with automatic load-sensing valve (leaf spring)
scheme 841 700 256 0



the illustration does not replace the WABCO drawing

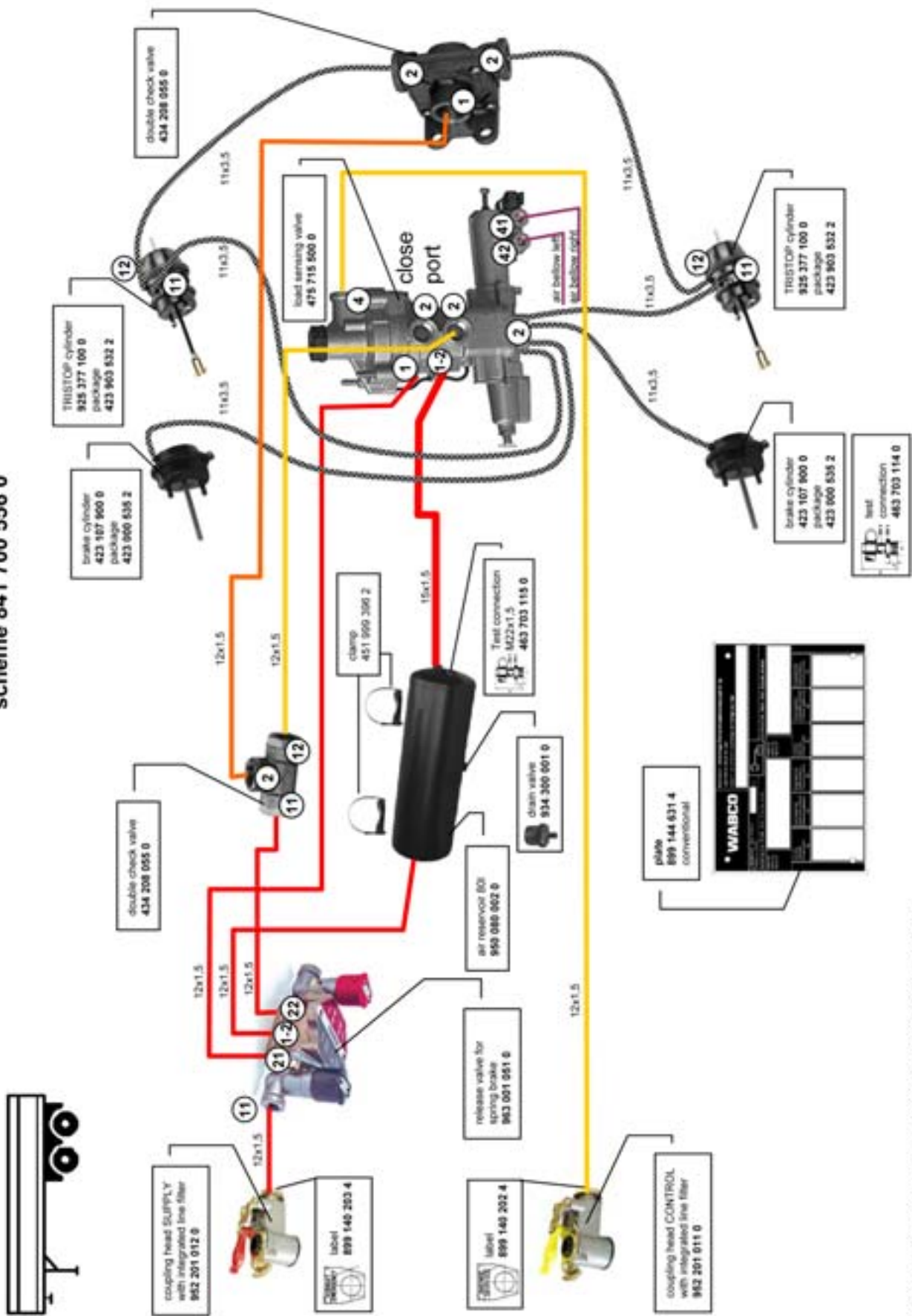


* NOT APPLICABLE FOR DISC-BRAKE

- HOSE $\varnothing 11 \times 4$ 828 876 011 6
- NYLON PIPE $\varnothing 12 \times 1,5$ 828 251 112 6
- NYLON PIPE $\varnothing 15 \times 1,5$ 828 251 115 6

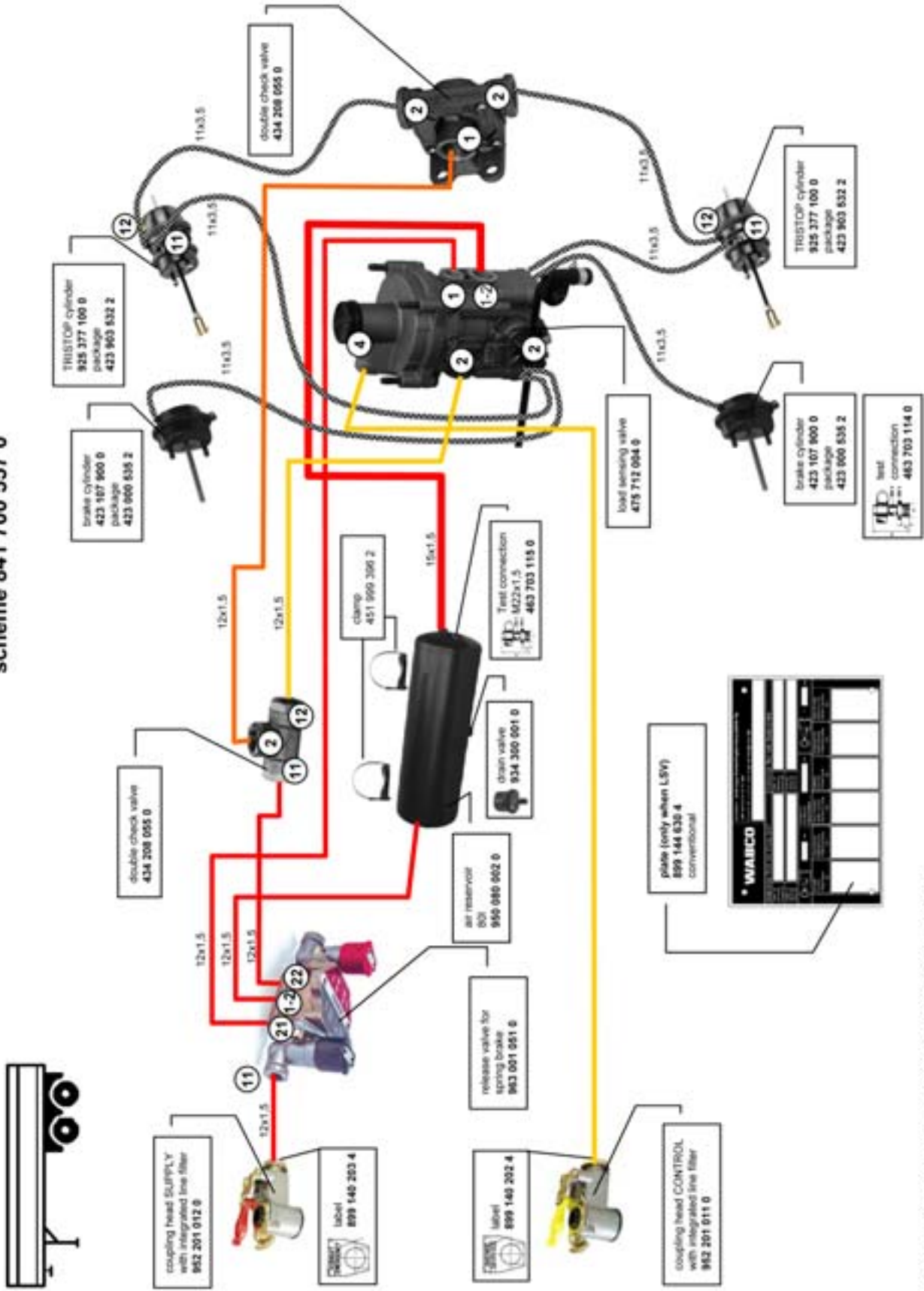
DRAWING IDENTIFICATION		WABCO	
DATE	SIGNATURE	TWO LINE-AIR BRAKING SYSTEM	
06-08-14	APITHY	FOR 2-AXLES -SEMITRAILER	
CHECKED		LOAD-SENS.RELAY EMERGENCY VALVE, MECH.	
06-08-14	SCHRADER		
STANDARDIZATION			
L.R.I.		PRODUCT IDENTIFICATION NO.	
171		841 700 256 0	CODE FOR DOCUMENT SHEET
SIZE	A 3	402	REPLACEMENT FOR
CODE FOR FUNCTION	2012		
DCN-NO.	REF.	DATE	
463 703 036 0			
PRODUCT IDENTIFICATION NO.	PCS.	DENOMINATION	
952 201 002 0 14	2	TEST CONNECTION	
PRODUCT IDENTIFICATION No.	PCS.	DENOMINATION	
463 703 115 0			
423 2			
925 0			
432 407 060 0			
973 500 051 0			
899 144 630 4			
475 712 004 0			
934 300 ... 0			
451 989 ... 2			
950 0			
963 006 ... 0			
952 201 001 0			
952 201 002 0 14	2	TEST CONNECTION	
PRODUCT IDENTIFICATION No.	PCS.	DENOMINATION	
463 703 115 0			
423 2			
925 0			
432 407 060 0			
973 500 051 0			
899 144 630 4			
475 712 004 0			
934 300 ... 0			
451 989 ... 2			
950 0			
963 006 ... 0			
952 201 001 0			
952 201 002 0 14	2	TEST CONNECTION	
PRODUCT IDENTIFICATION No.	PCS.	DENOMINATION	

MEA trailer with TRISTOP cylinders
2axle semi-trailer with automatic load-sensing valve (air suspension)
scheme 841 700 556 0

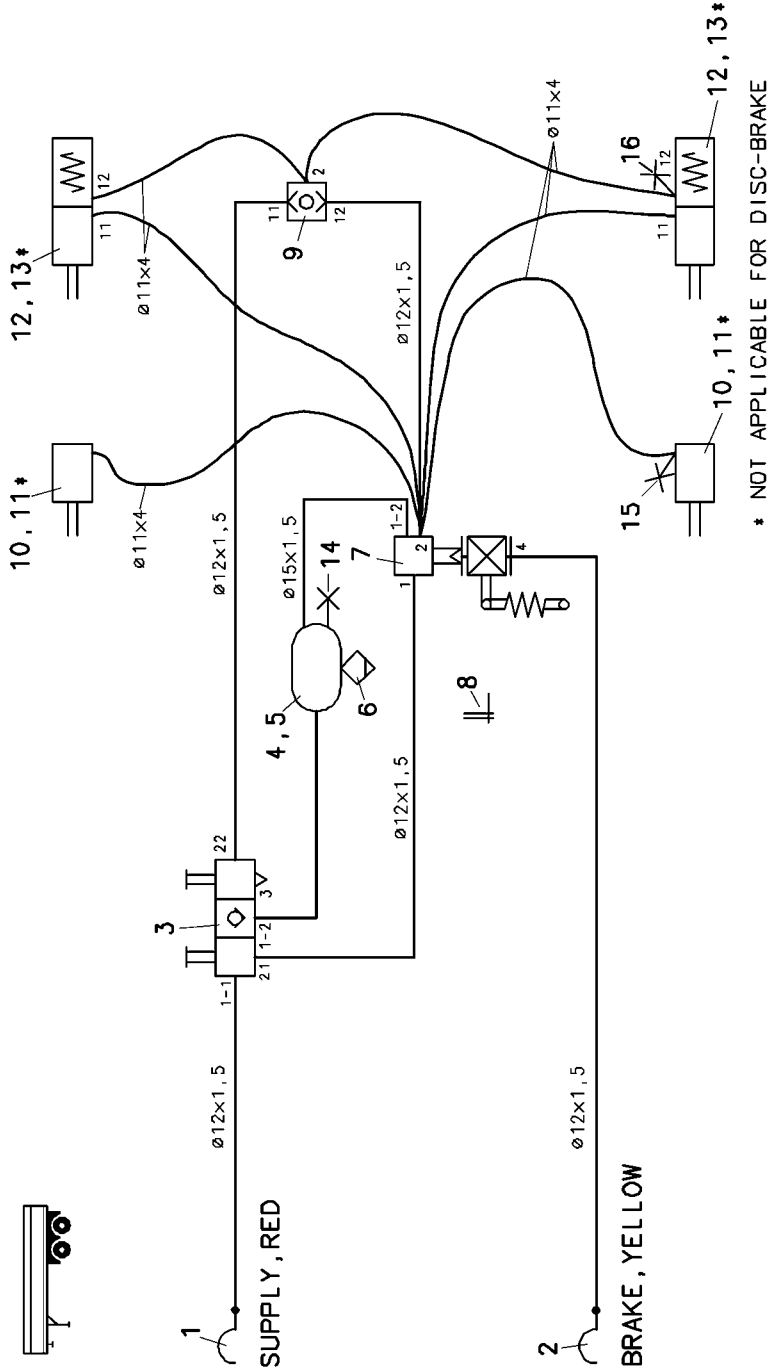


the illustration does not replace the WABCO drawing

MEA trailer with TRISTOP cylinders
2axle semi-trailer with automatic load-sensing valve (leaf spring)
scheme 841 700 557 0



the illustration does not replace the WABCO drawing

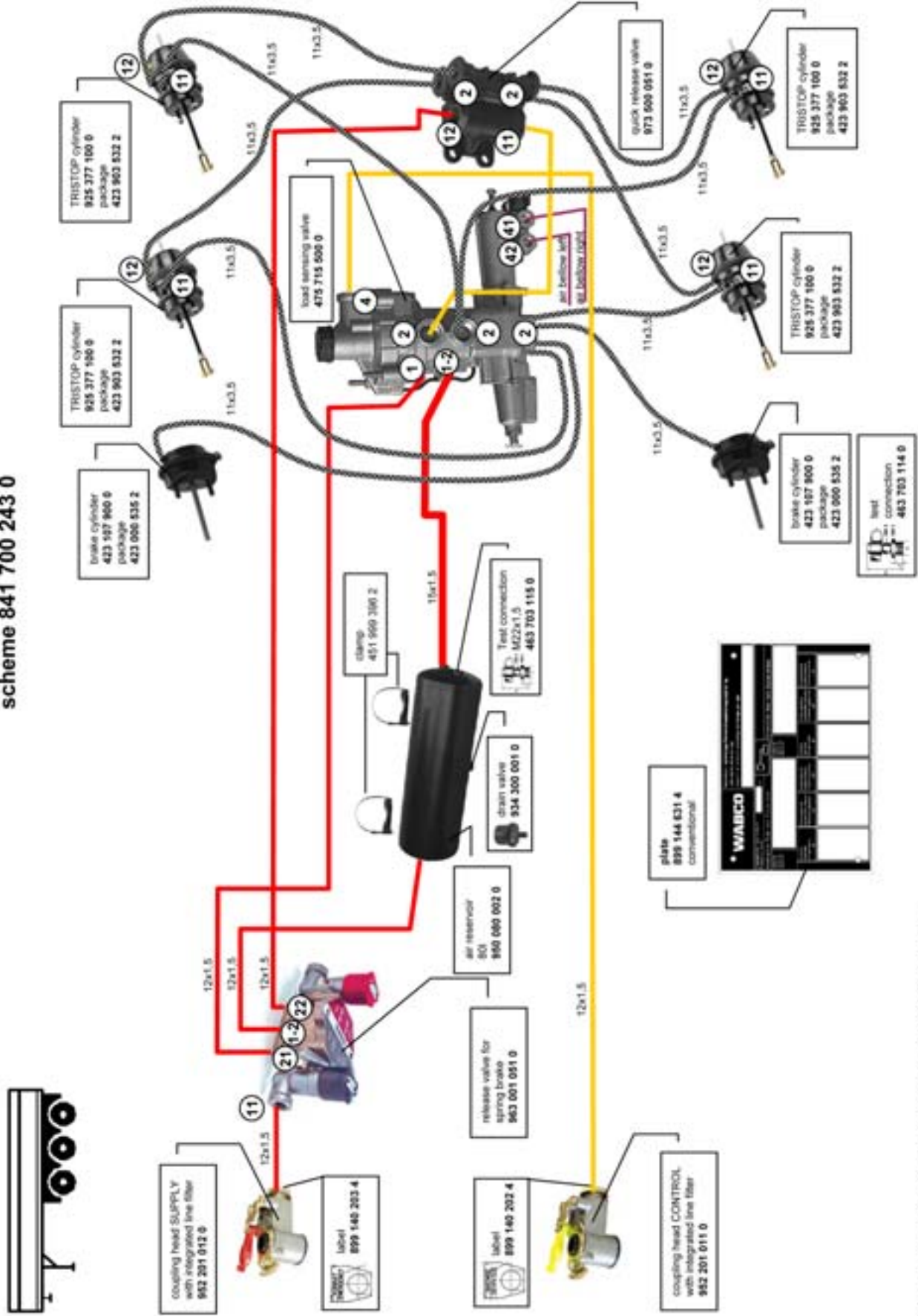


HOSE $\varnothing 11 \times 4$ 828 876 411 6
 NYLON PIPE $\varnothing 12 \times 1,5$ 828 251 112 6
 NYLON PIPE $\varnothing 15 \times 1,5$ 828 251 115 6

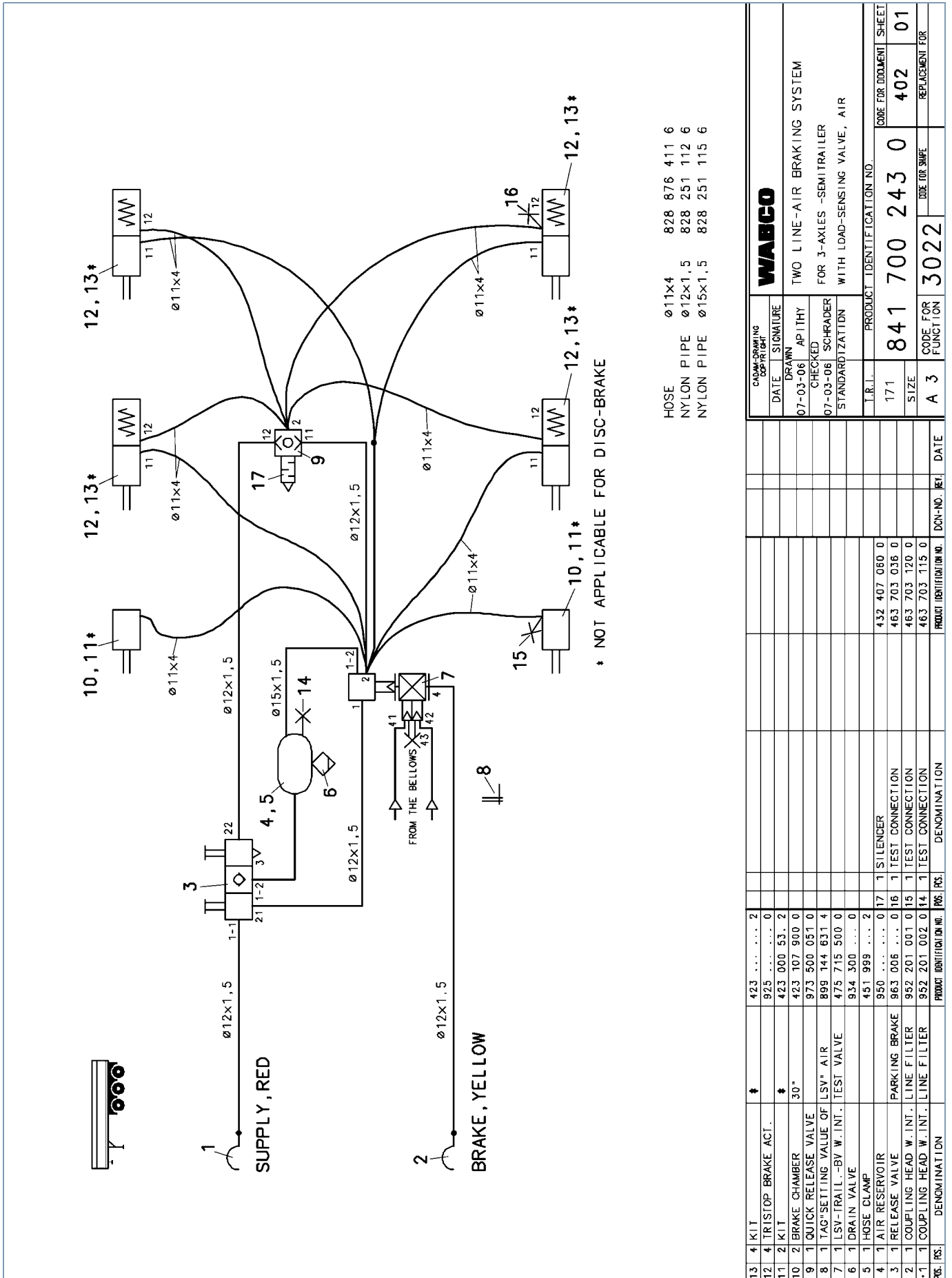
CROSS-BRANDING		WABCO	
DATE	SIGNATURE	DATE	SIGNATURE
07-03-06	AP ITHY	07-03-06	AP ITHY
DRAWN		DRAWN	
CHECKED		CHECKED	
07-03-06		07-03-06	
STANDARDIZATION		STANDARDIZATION	
WITH LOAD-SENSING VALVE, MECH.		WITH LOAD-SENSING VALVE, MECH.	
T.R.I.		PRODUCT IDENTIFICATION NO.	
171	841 700 557 0	171	841 700 557 0
SIZE	CODE FOR DOCUMENT	SIZE	CODE FOR DOCUMENT
A 3	402	A 3	402
CODE FOR FUNCTION	REPLACEMENT FOR	CODE FOR FUNCTION	REPLACEMENT FOR
2012		2012	

POS. NOS.	DENOMINATION	QTY.	UNIT	POS. NOS.	DENOMINATION	QTY.	UNIT
13	2 KIT	423	...	2			
12	2 TRISTOP BRAKE ACT.	925	...	0			
11	2 KIT	423	000	53	2		
10	2 BRAKE CHAMBER	423	107	900	0		
9	1 TWO WAY-VALVE	434	208	035	0		
8	1 TAG-SETTING VALVE OF LSV" MECH.	899	144	630	4		
7	1 LOAD-SENS. V. W. INTEGR. FLEX. ARM	475	712	004	0		
6	1 DRAIN VALVE	934	300	...	0		
5	1 HOSE CLAMP	451	999	...	2		
4	1 AIR RESERVOIR	950	0		
3	1 RELEASE VALVE	963	006	...	0	16	1 TEST CONNECTION
2	1 COUPLING HEAD W. INT. LINE FILTER	952	201	001	0	15	1 TEST CONNECTION
1	1 COUPLING HEAD W. INT. LINE FILTER	952	201	002	0	14	1 TEST CONNECTION
POS. NOS.	DENOMINATION	QTY.	UNIT	POS. NOS.	DENOMINATION	QTY.	UNIT

MEA trailer with TRISTOP cylinders
3axle semi-trailer with automatic load-sensing valve (air suspension)
scheme 841 700 243 0



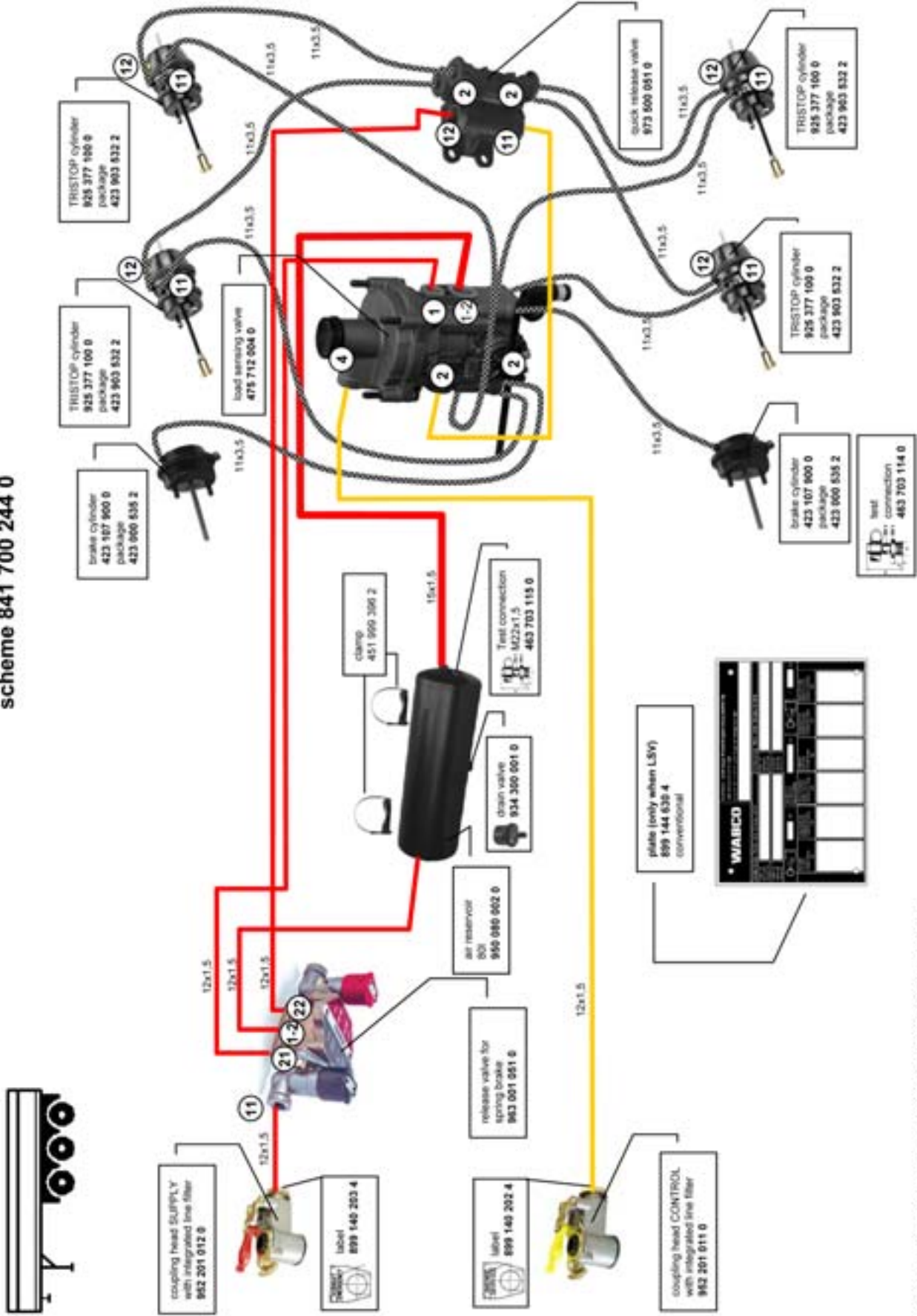
the illustration does not replace the WABCO drawing



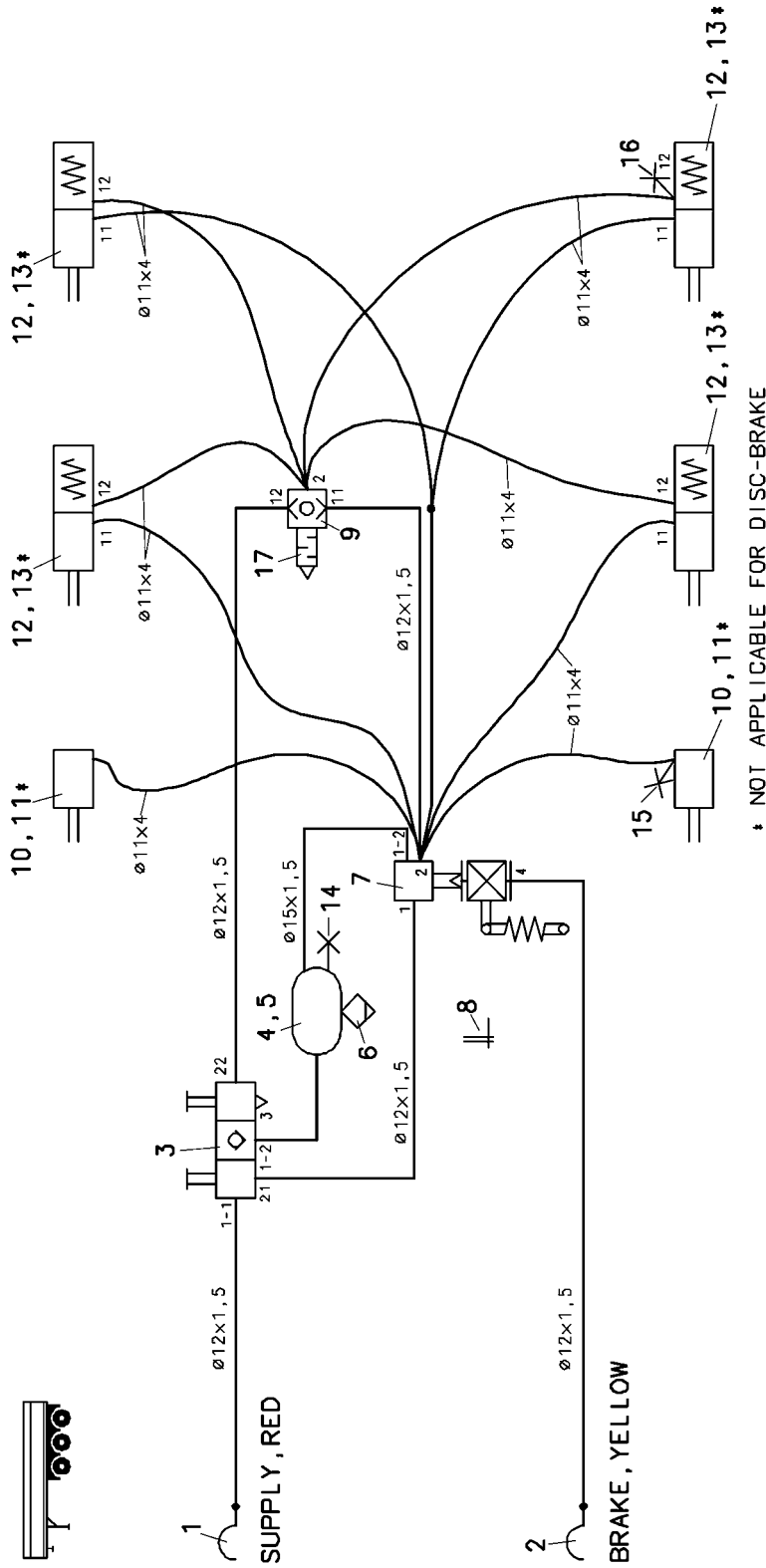
HOSE \varnothing 11x4 828 876 411 6
 NYLON PIPE \varnothing 12x1,5 828 251 112 6
 NYLON PIPE \varnothing 15x1,5 828 251 115 6

CAD-DRAWING COPYRIGHT		WABCO	
DATE	SIGNATURE	TWO LINE-AIR BRAKING SYSTEM	
07-03-06	APLITY	FOR 3-AXLES -SEMITRAILER	
CHECKED	SCHRADER	WITH LOAD-SENSING VALVE, AIR	
STANDARDIZATION			
T.R.L.		PRODUCT IDENTIFICATION NO.	
171	841 700 243 0	CODE FOR DDDMM	SHEET
SIZE	402	402	01
A 3	3022	CODE FOR SHWF	REPLACEMENT FOR

MEA trailer with TRISTOP cylinders
3 axle semi-trailer with automatic load-sensing valve (leaf spring)
scheme 841 700 244 0



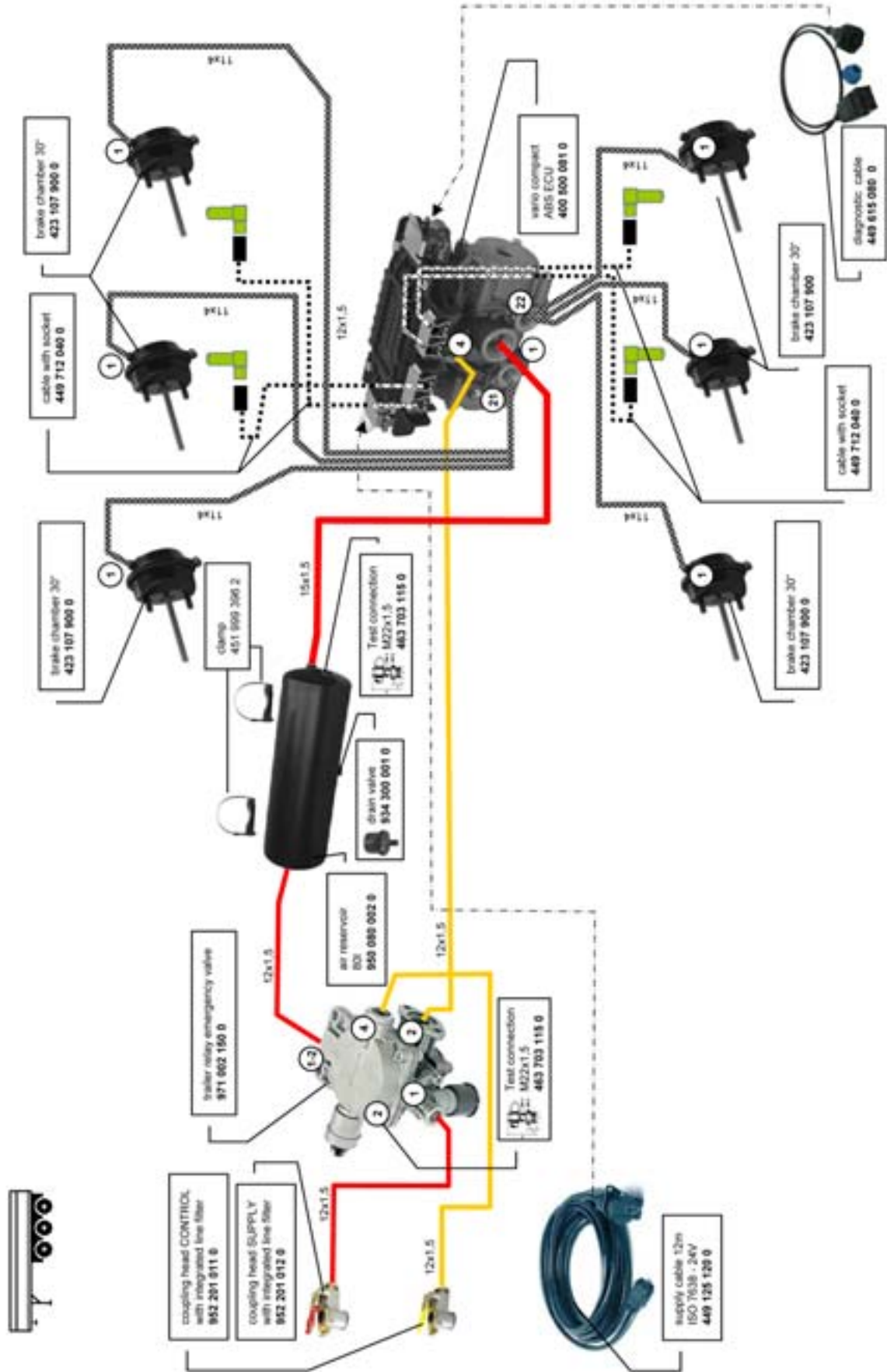
the illustration does not replace the WABCO drawing



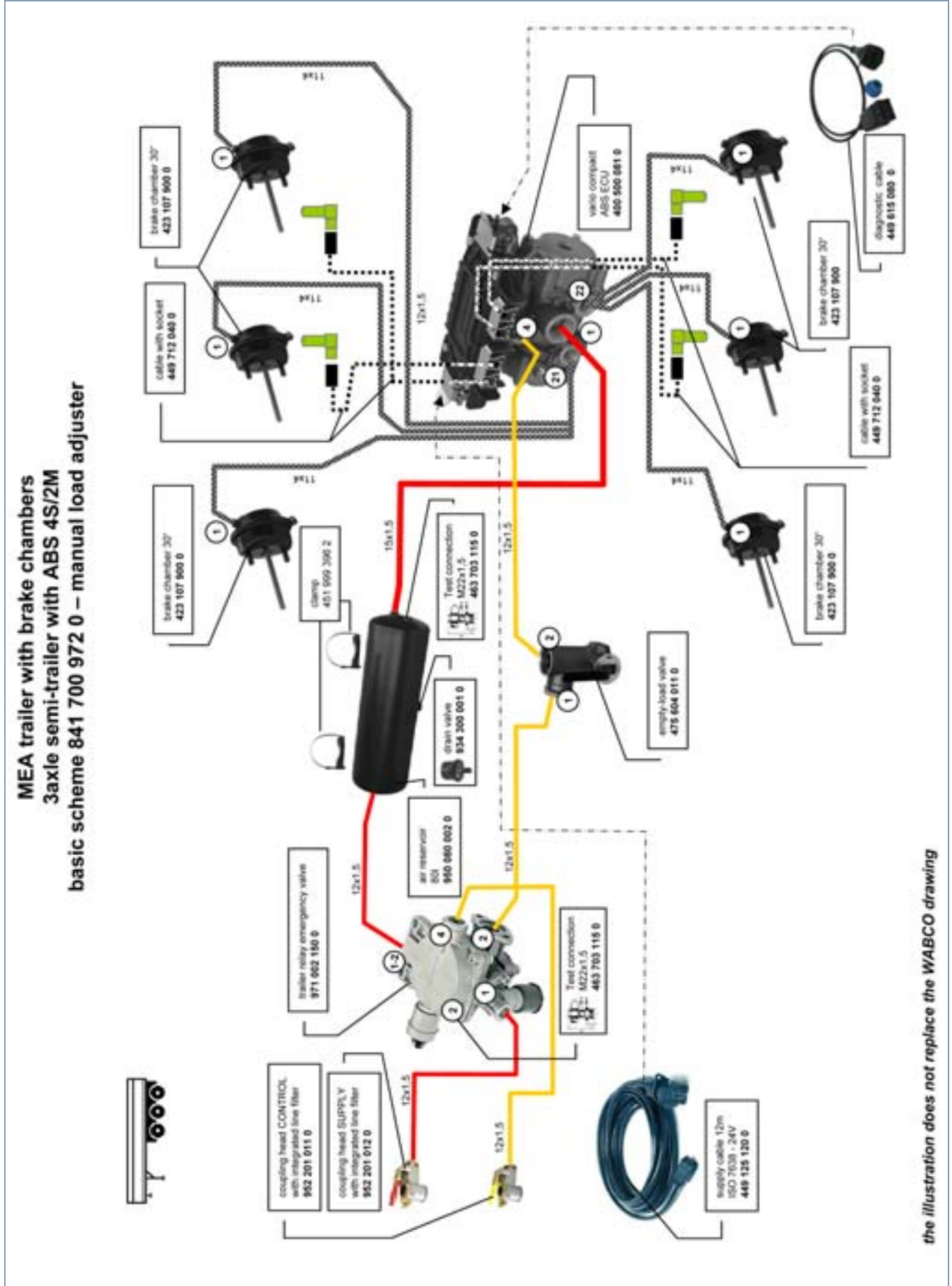
HOSE $\varnothing 11 \times 4$ 828 876 411 6
 NYLON PIPE $\varnothing 12 \times 1,5$ 828 251 112 6
 NYLON PIPE $\varnothing 15 \times 1,5$ 828 251 115 6

DATE		SIGNATURE		WABCO		
07-03-06	APITHY	DRAWN		TWO LINE-AIR BRAKING SYSTEM		
07-03-06	SCHRADER	CHECKED		FOR 3-AXLES -SEMITRAILER		
		STANDARDIZATION		LOAD-SENS-RELAY EMERGENCY VALVE, MECH.		
T.R.L.		PRODUCT IDENTIFICATION NO.		CODE FOR DOCUMENT SHEET		
171		841 700 244 0		402 01		
A 3		CODE FOR FUNCTION		CODE FOR SHIP		
3012		3012		REPLACEMENT FOR		
DCN-NO.	REV.	DATE	DESCRIPTION	QTY.	UNIT	
432 407 080 0			1 SILINDER	1		
463 703 036 0			1 TEST CONNECTION	1		
463 703 120 0			1 TEST CONNECTION	1		
463 703 115 0			1 TEST CONNECTION	1		
			PRODUCT IDENTIFICATION NO.	PCS.	PCS.	
			DENOMINATION			
13	4	K1T	*	423	...	2
12	4	TRISTOP BRAKE ACT.	*	925	...	0
11	2	K1T	*	423	000 53.	2
10	2	BRAKE CHAMBER	30"	423	107 900 0	0
9	1	QUICK RELEASE VALVE		973	500 051 0	0
8	1	TAG-SETTING VALVE OF LSREV" MECH.		899	144 630 4	0
7	1	LOAD-SENS.RELAY EMERGENCY VALVE		475	712 004 0	0
6	1	DRAIN VALVE		934	300	...
5	1	HOSE CLAMP		431	989	...
4	1	AIR RESERVOIR		950
3	1	RELEASE VALVE	PARKING BRAKE	963	006	...
2	1	COUPLING HEAD W. INT.	LINE FILTER	952	201 001 0	15
*.1	1	COUPLING HEAD W. INT.	LINE FILTER	952	201 002 0	14
PCS. PCS.						

MEA trailer with brake chambers
3axle semi-trailer with ABS 4S/2M
basic scheme 841 700 972 0 – no load detection

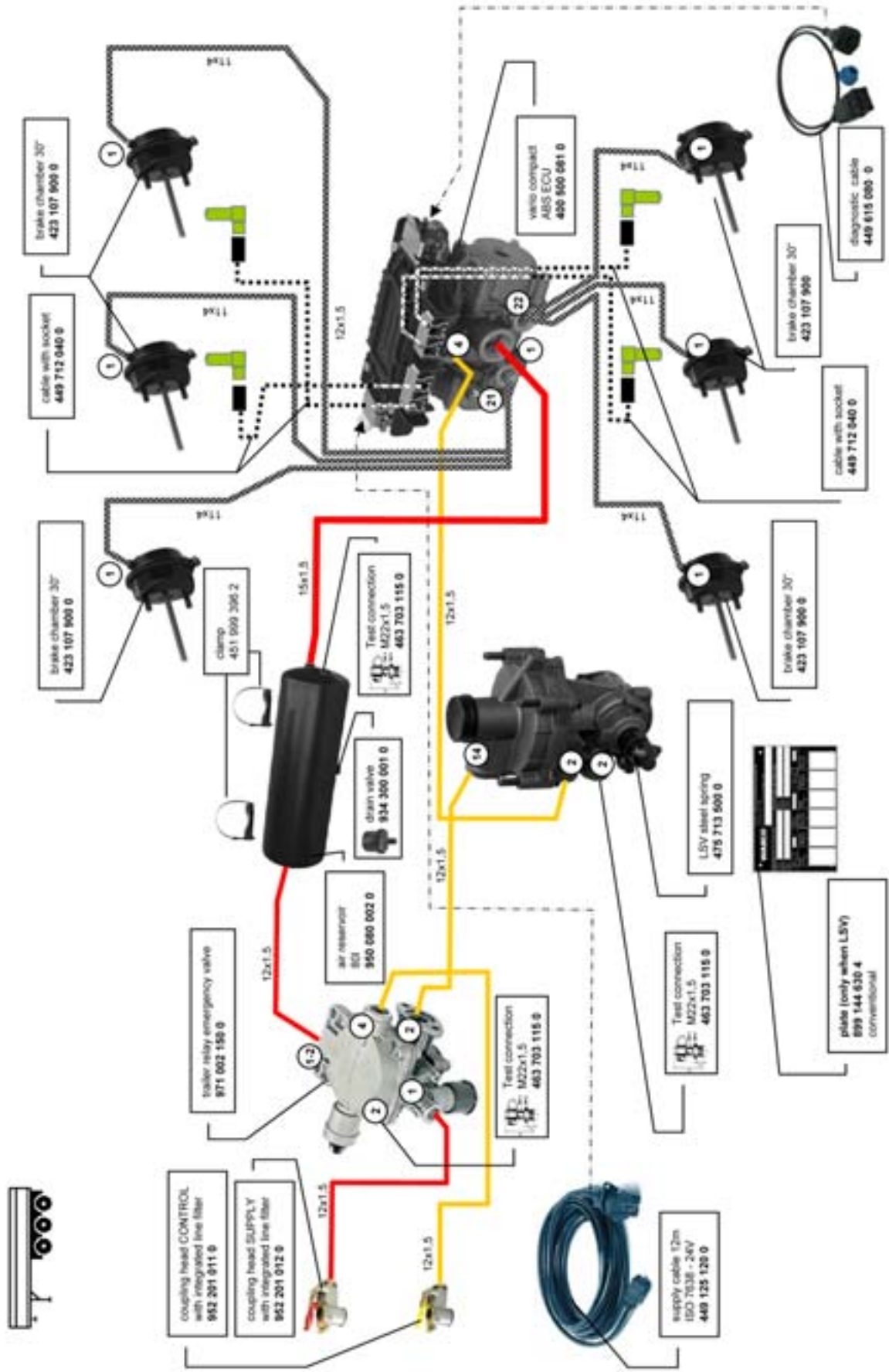


the illustration does not replace the WABCO drawing

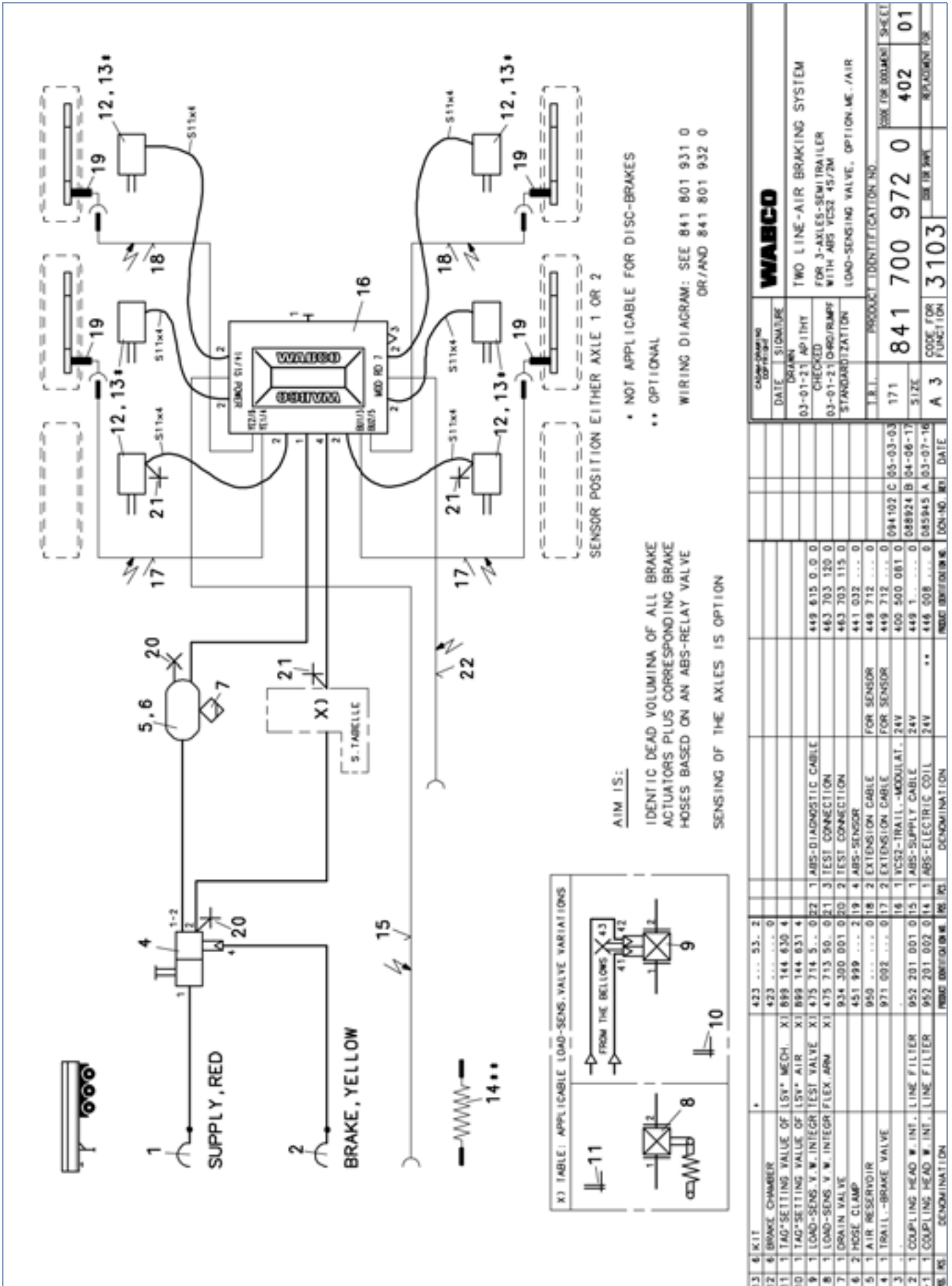


the illustration does not replace the WABCO drawing

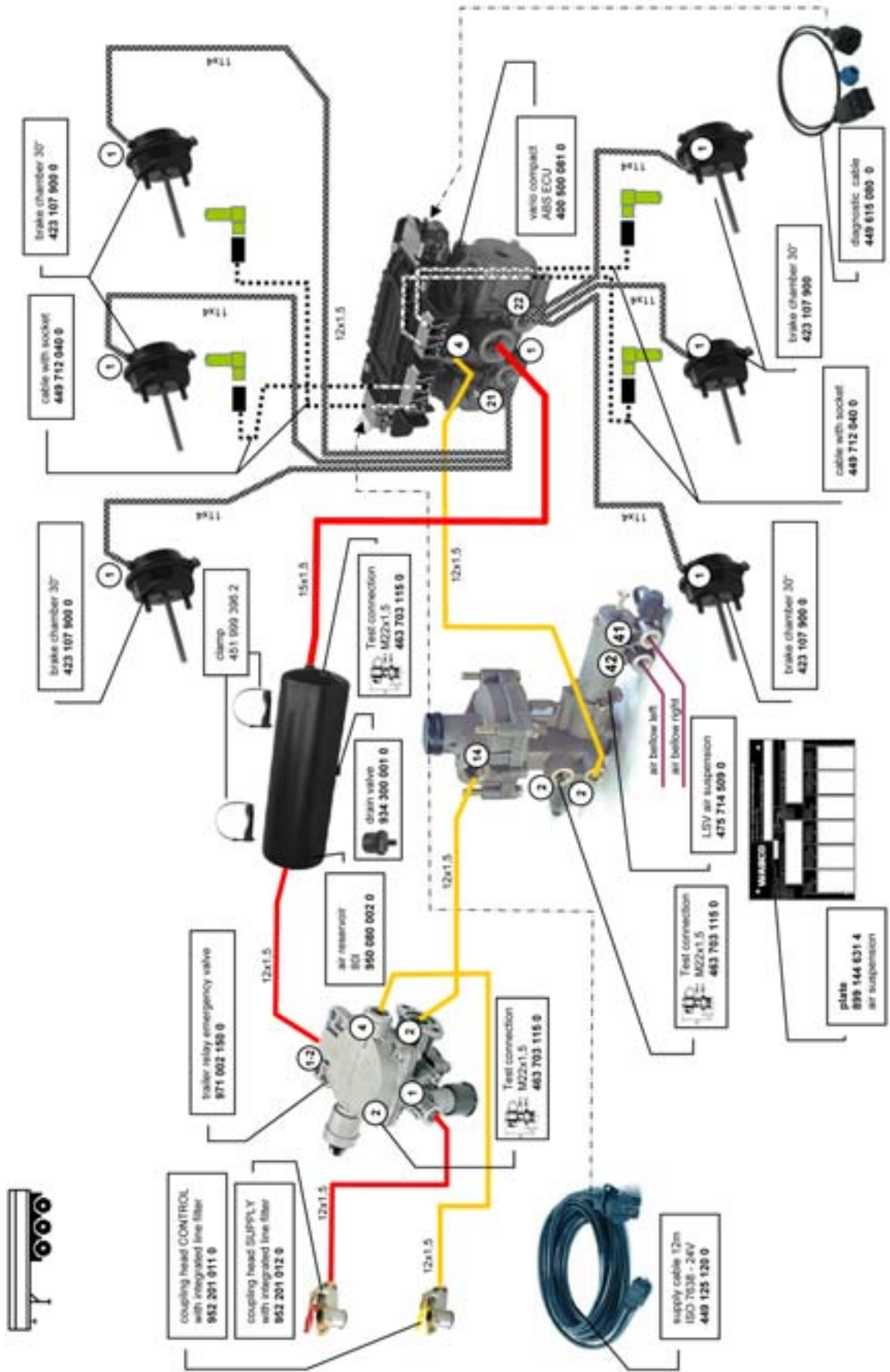
MEA trailer with brake chambers
3axle semi-trailer with ABS 4S/2M
basic scheme 841 700 972 0 / 841 701 063 0 – automatic LSV for steel spring



the illustration does not replace the WABCO drawing

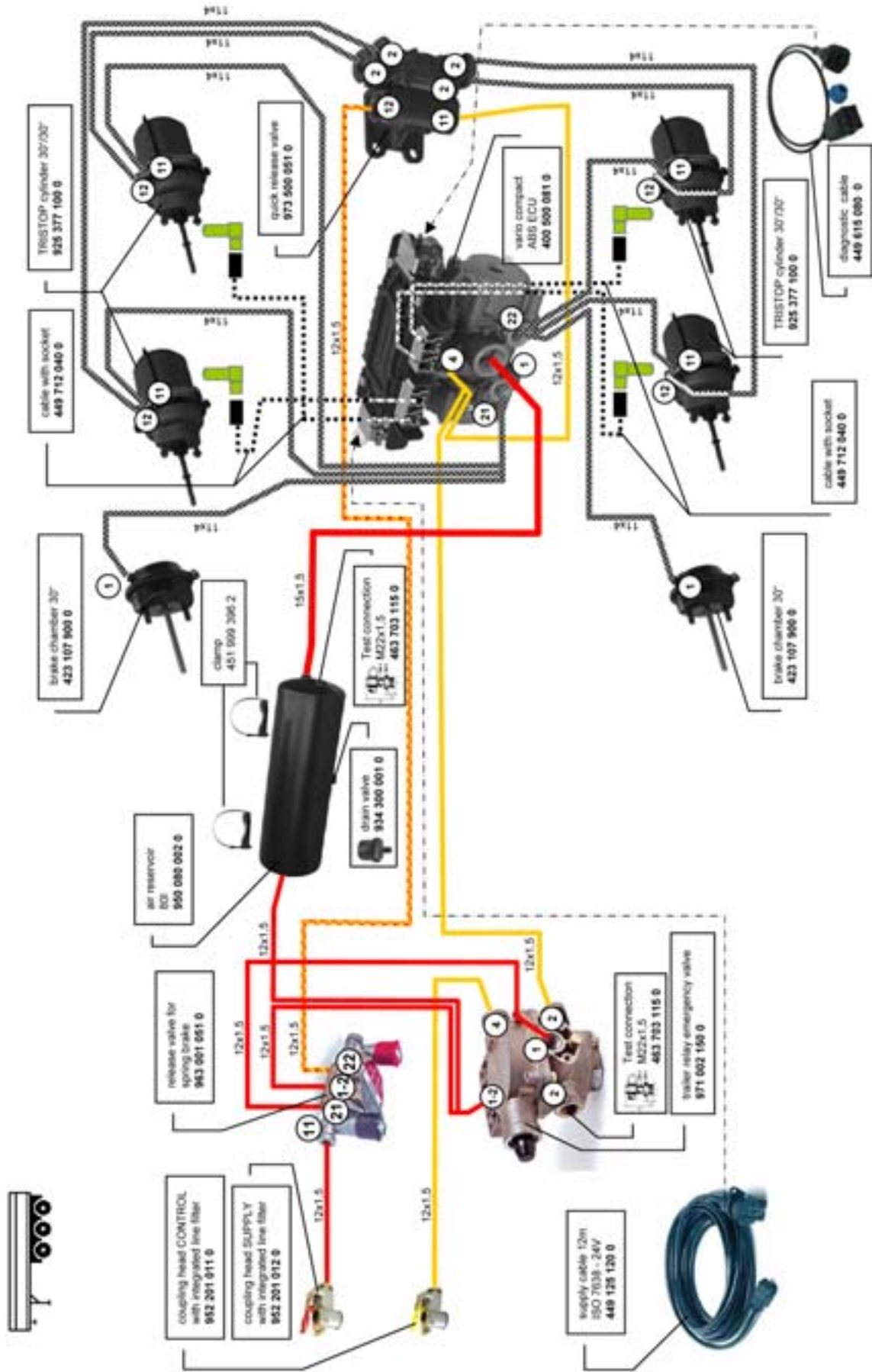


MEA trailer with brake chambers
3axle semi-trailer with ABS 4S/2M
basic scheme 841 700 972 0 / 841 701 065 0 – automatic LSV for air suspension



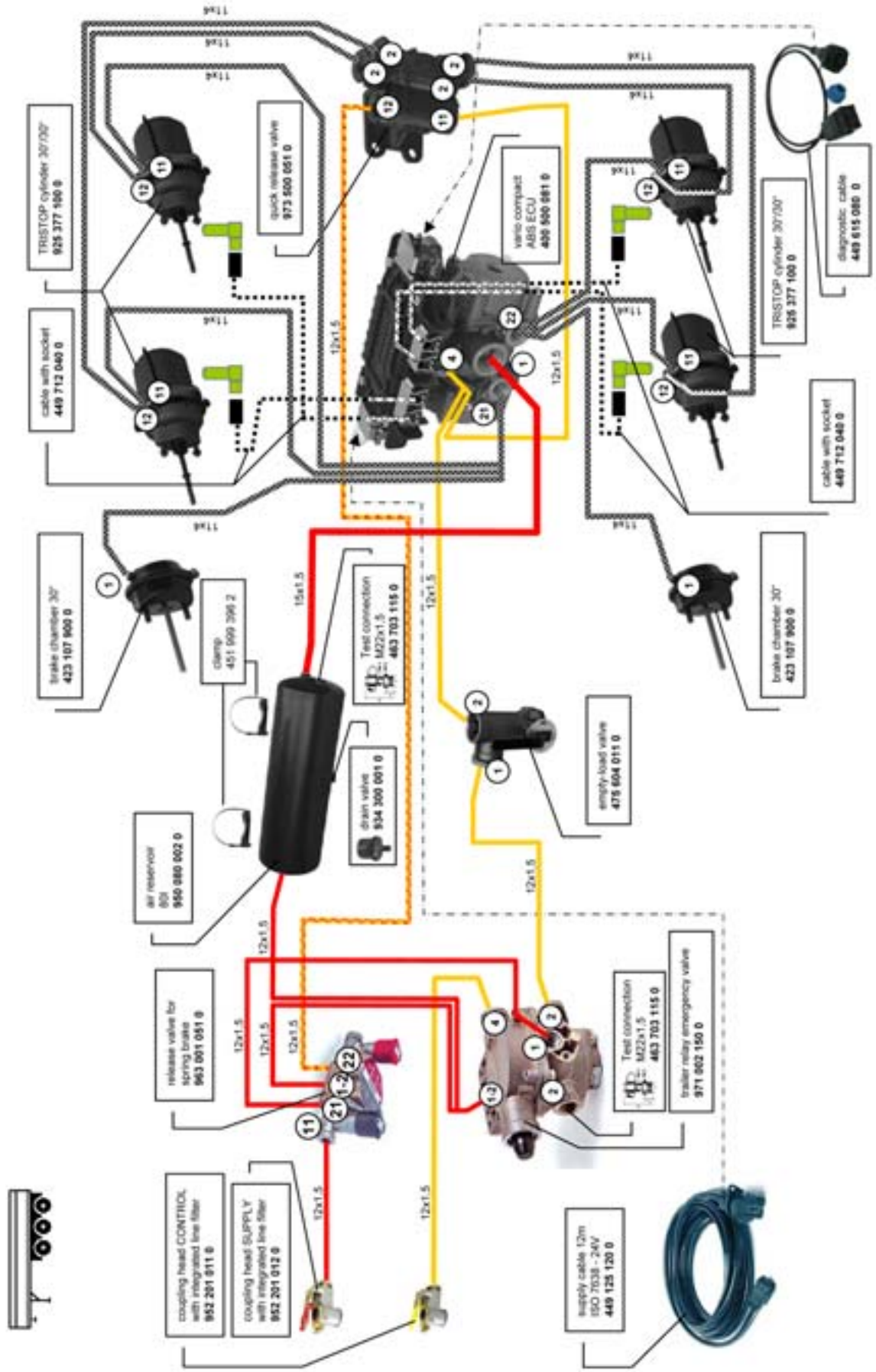
the illustration does not replace the WABCO drawing

MEA trailer with TRISTOP cylinders
3axle semi-trailer with ABS 4S/2M
basic scheme 841 700 973 0 – no load detection



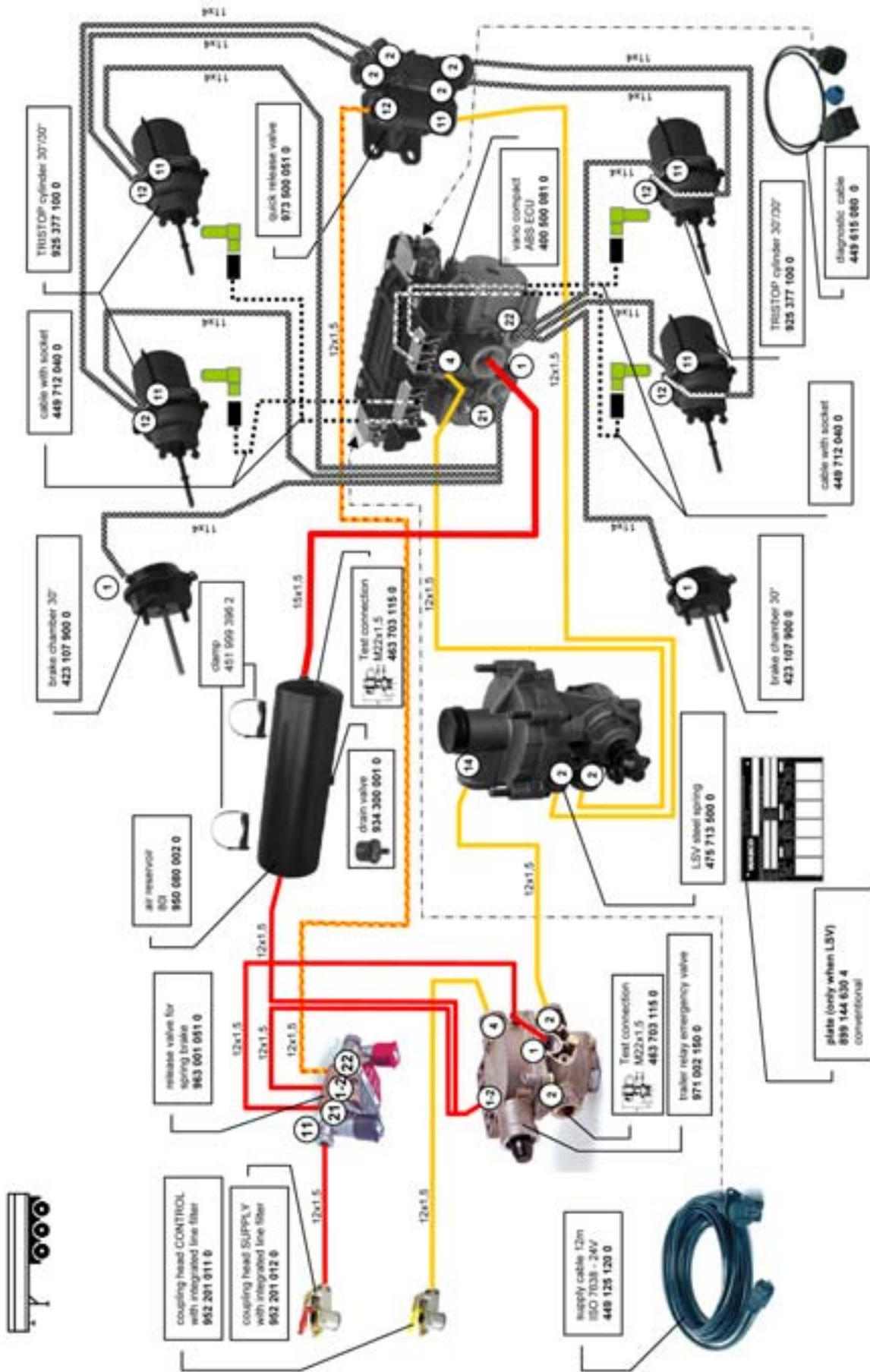
the illustration does not replace the WABCO drawing

MEA trailer with TRISTOP cylinders
3axle semi-trailer with ABS 4S/2M
basic scheme 841 700 973 0 – manual load adjuster

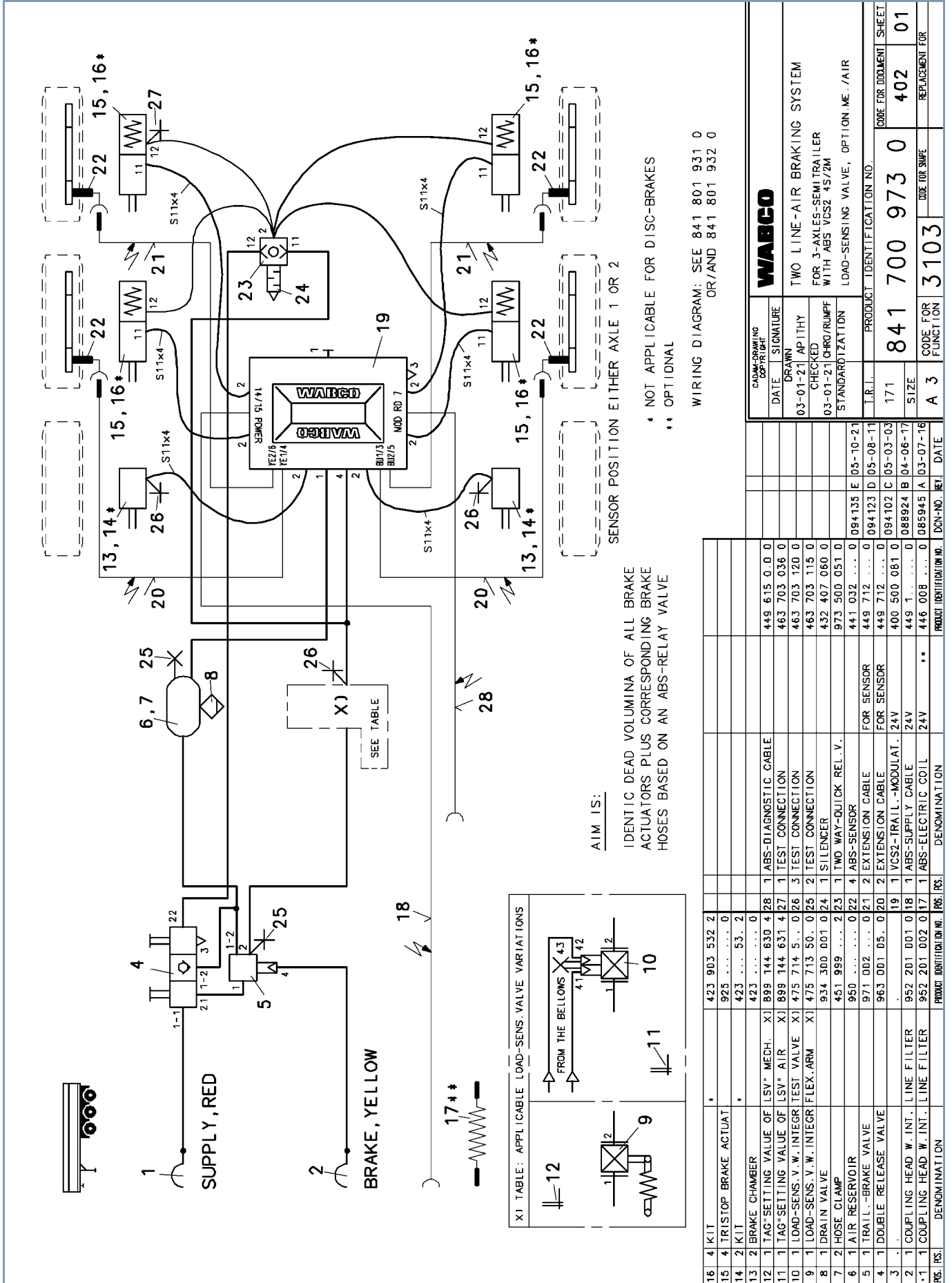


the illustration does not replace the WABCO drawing

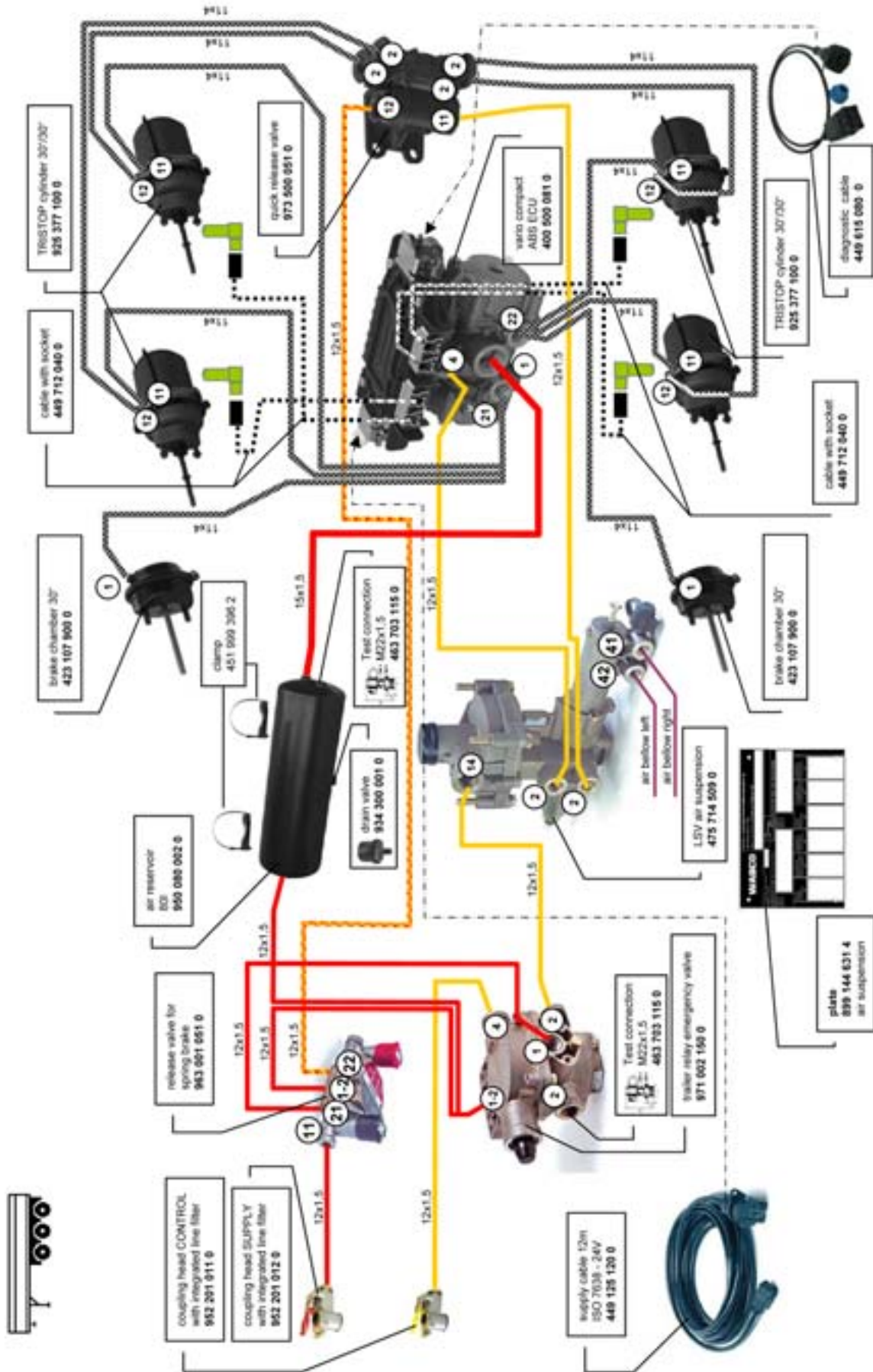
MEA trailer with TRISTOP cylinders
3 axle semi-trailer with ABS 4S/2M
basic scheme 841 700 973 0 / 841 701 066 0 – automatic LSV for steel spring



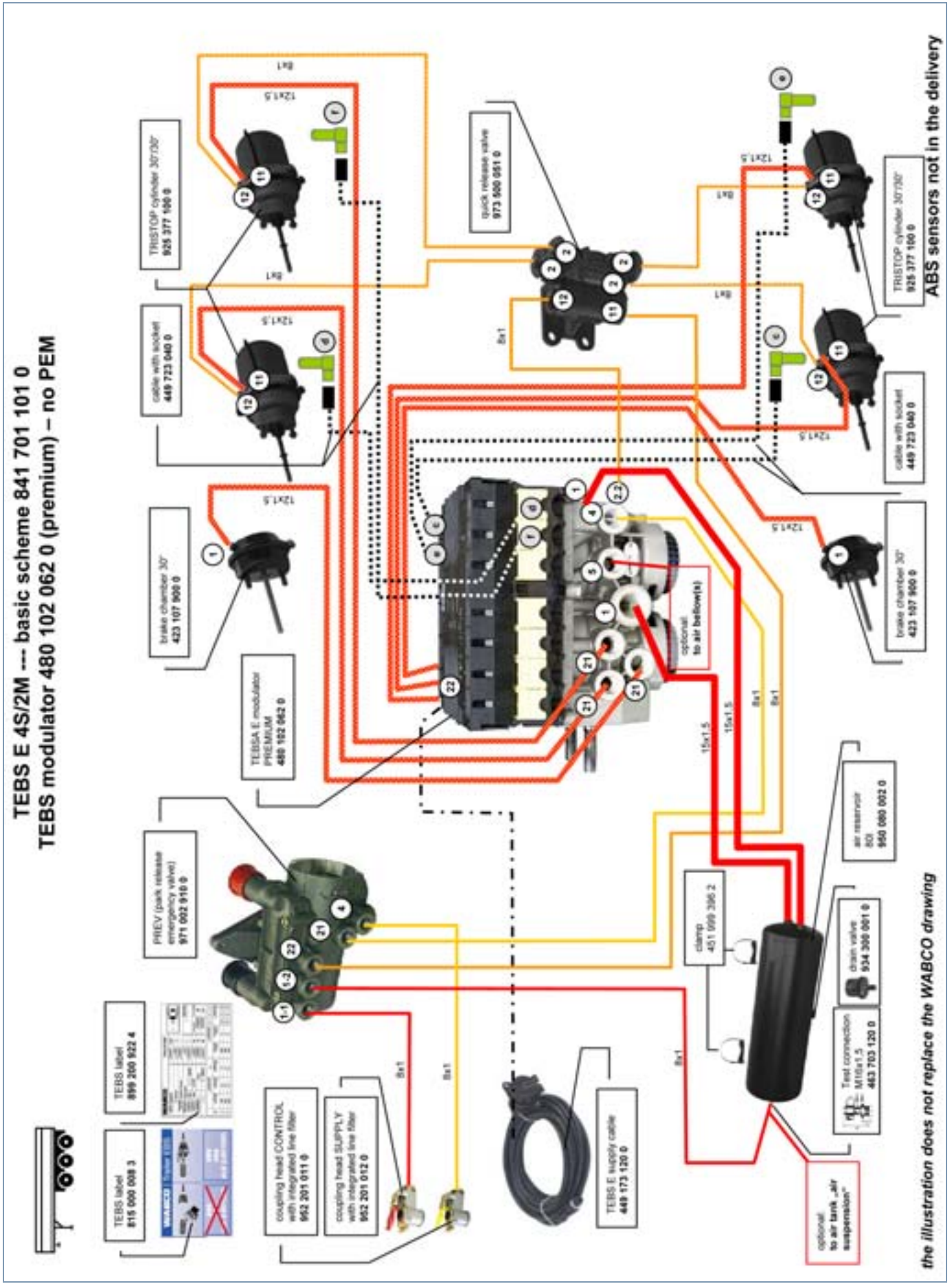
the illustration does not replace the WABCO drawing



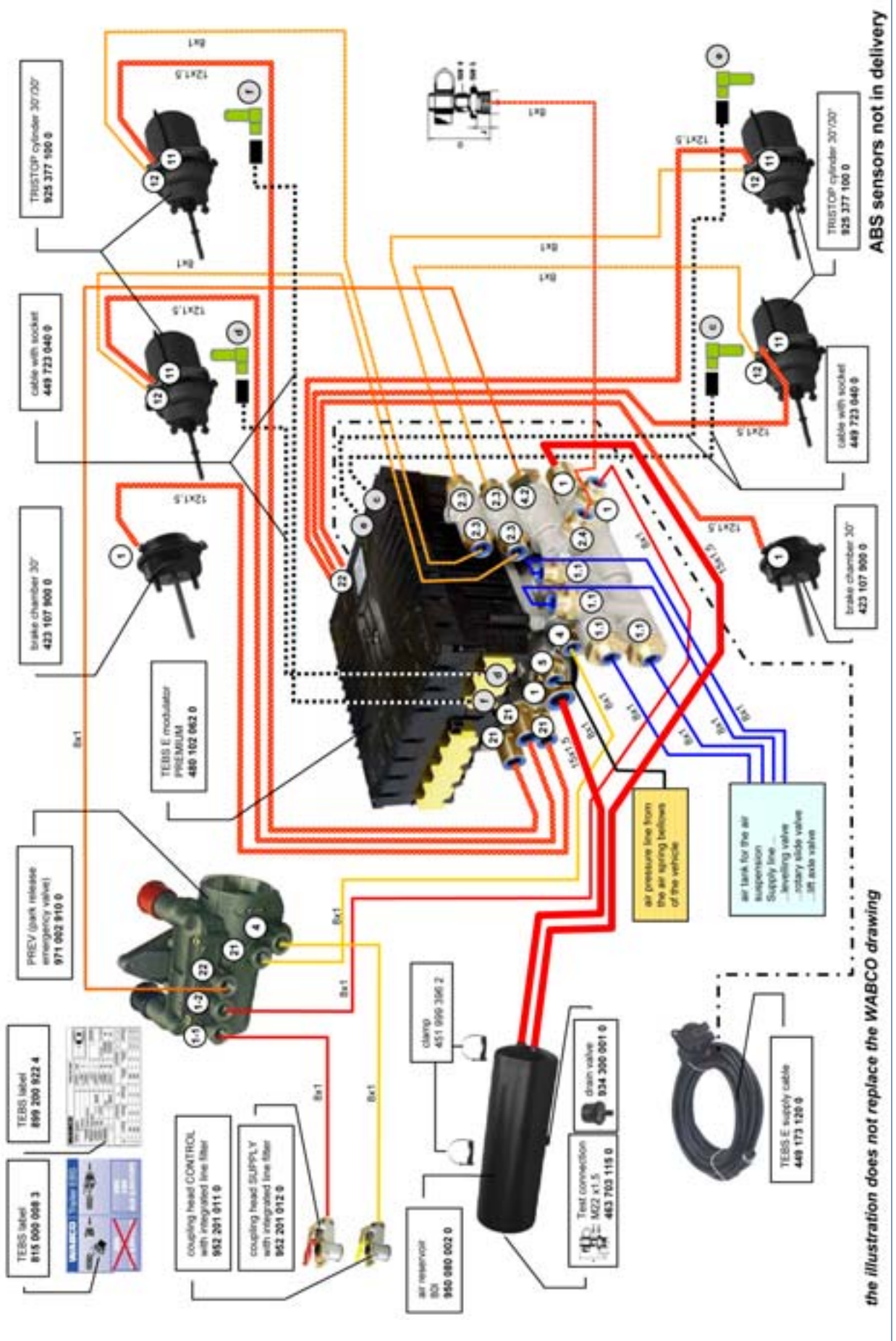
**MEA trailer with TRISTOP cylinders
3axle semi-trailer with ABS 4S/2M
basic scheme 841 700 973 0 / 841 701 067 0 – automatic LSV for air suspension**

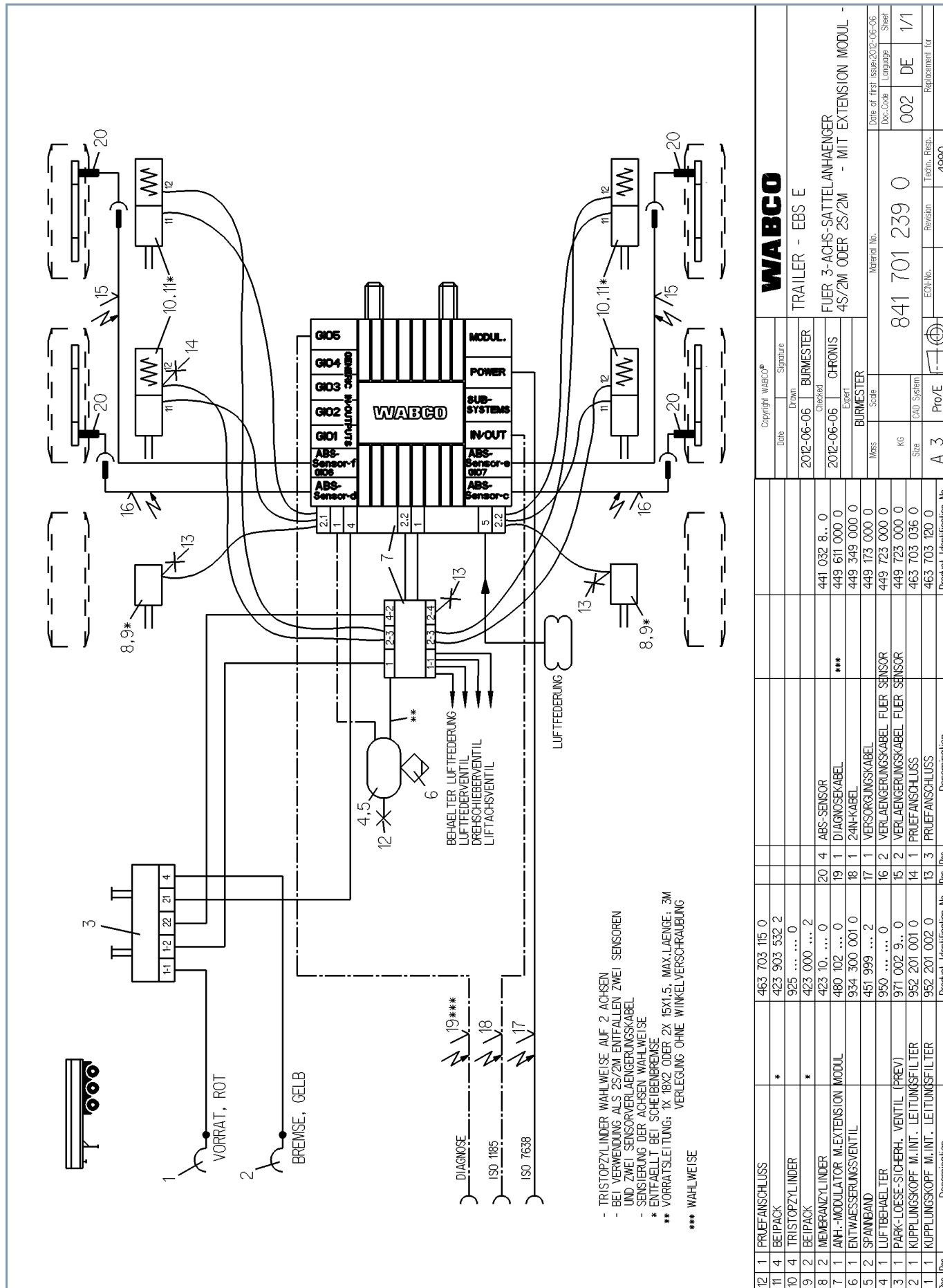


the illustration does not replace the WABCO drawing

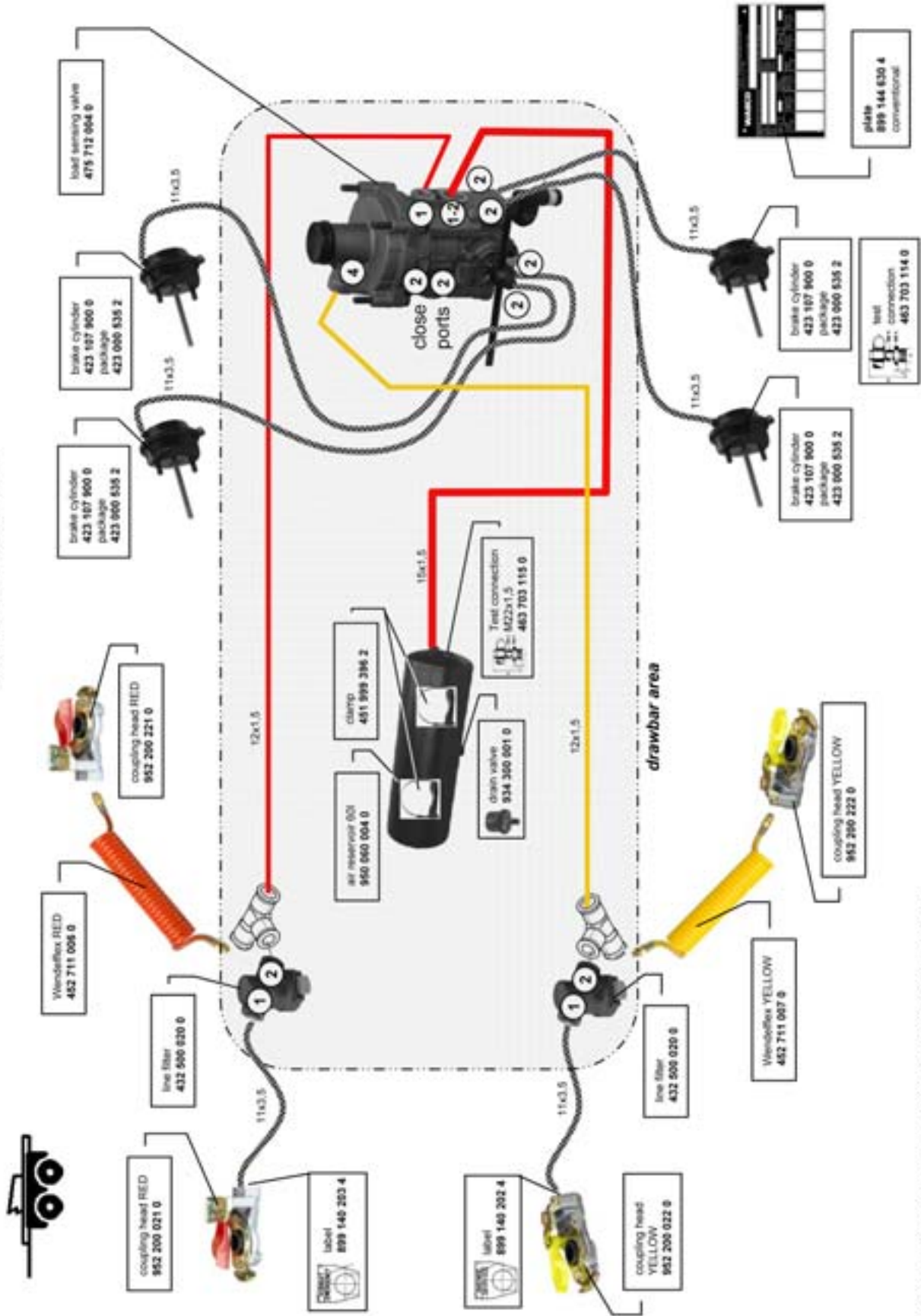


TEBS E 4S/2M --- basic plan 841 701 239 0
TEBS modulator 480 102 064 0 (premium) -- with PEM

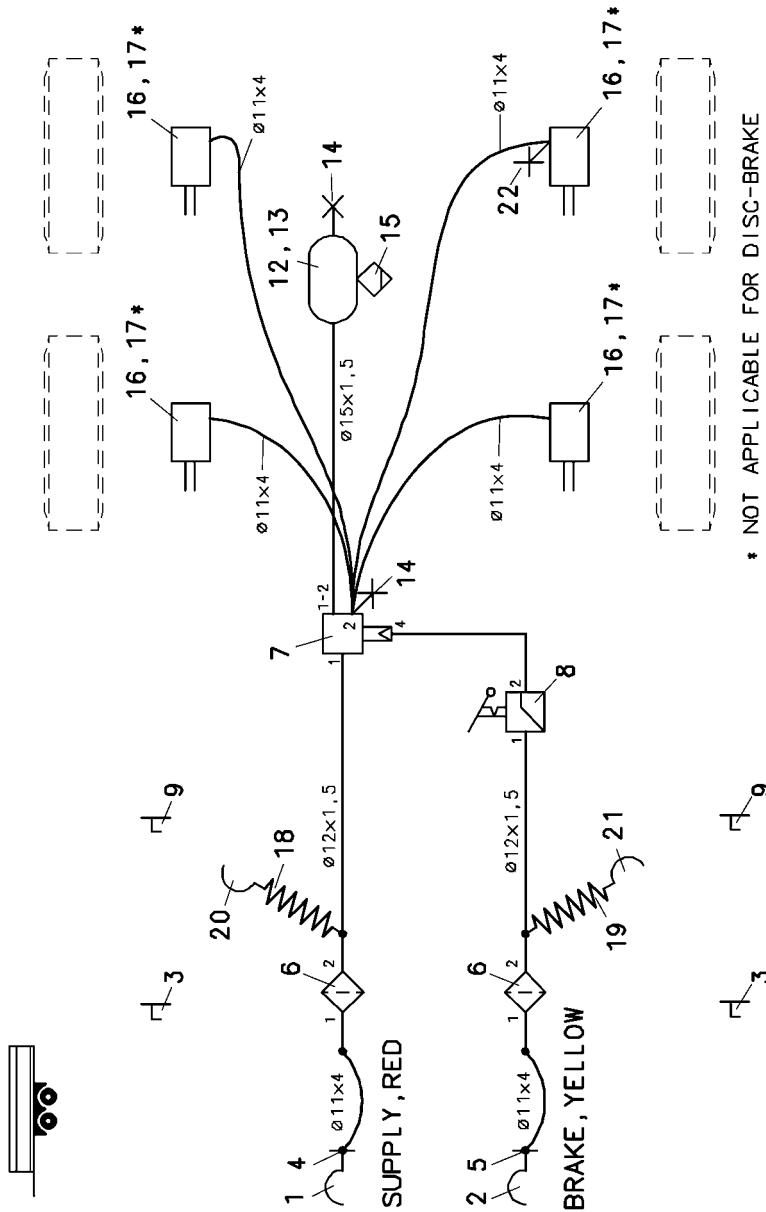




MEA standard trailer
2axle dolly with automatic load-sensing valve (leaf spring)
scheme 841 600 544 0



the illustration does not replace the WABCO drawing

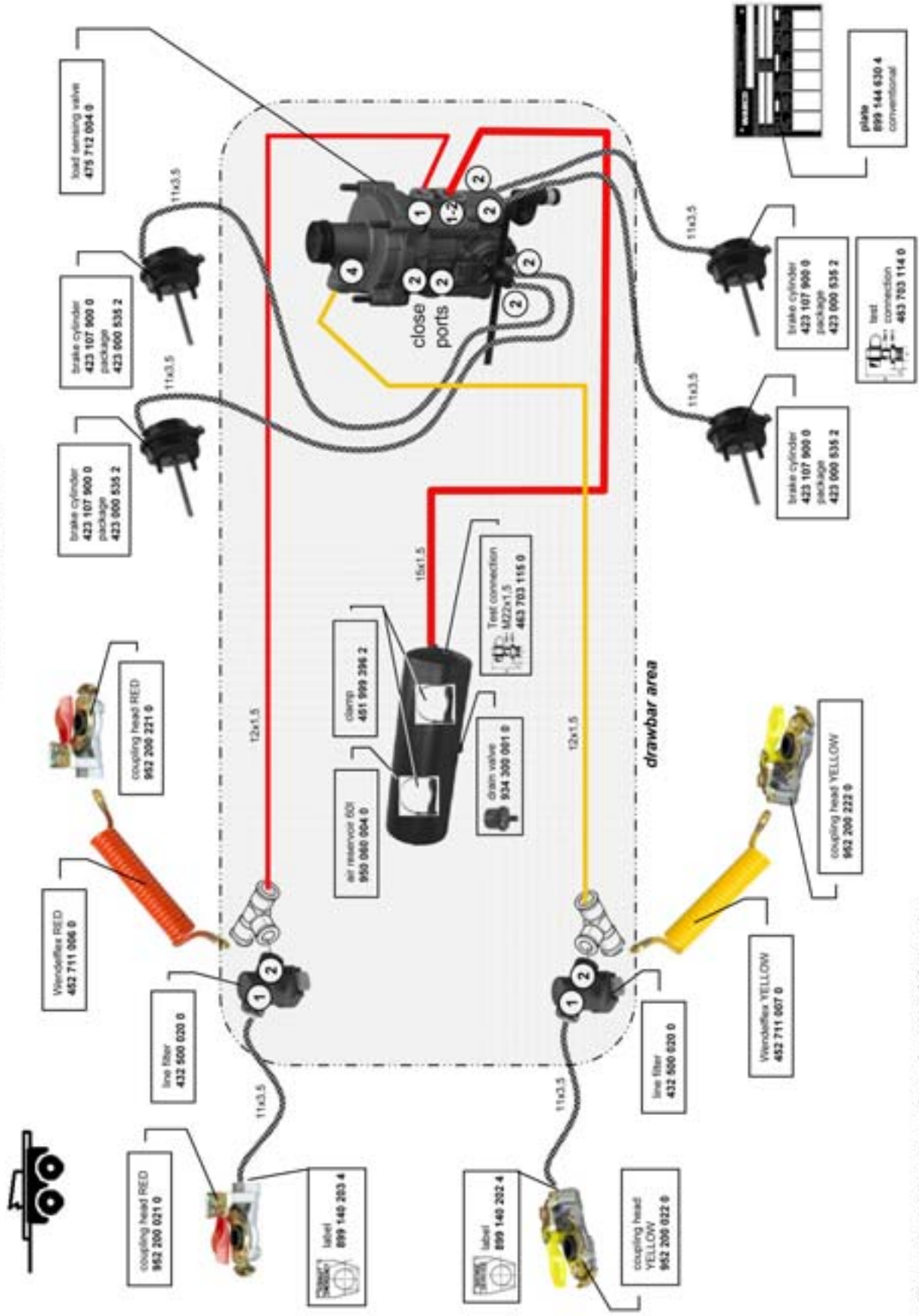


* NOT APPLICABLE FOR DISC-BRAKE

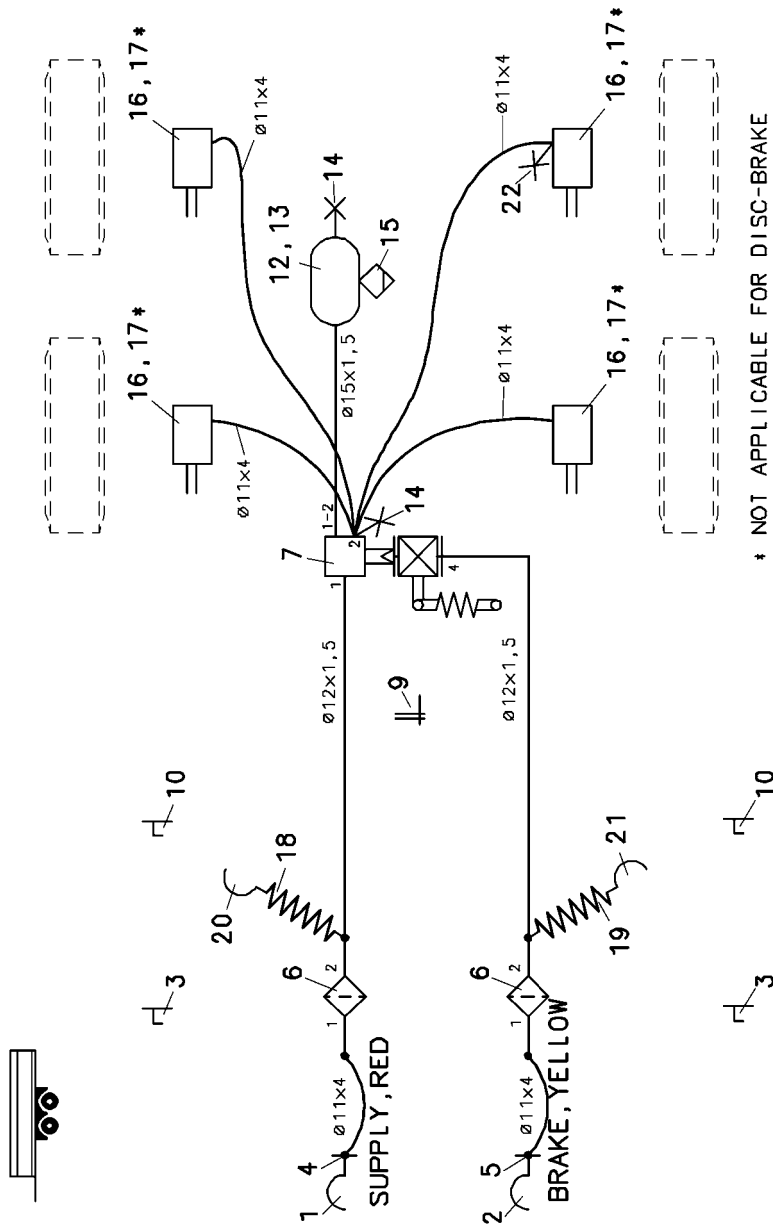
- HOSE ø11x4 828 876 011 6
- NYLON PIPE ø12x1,5 828 251 112 6
- NYLON PIPE ø15x1,5 828 251 115 6

13 2 HOSE CLAMP 451 999 396 2			WABCO	
12 1 AIR RESERVOIR 60L			TWO LINE - AIR BRAKING SYSTEM	
11			FOR 2-AXLES-TRAILER -DOLLY-	
10			2x12 TONS	
9 2 DUMMY COUPLING WITH FIXTURE	452 401 000 0 22	1 TEST CONNECTION	463 703 120 0	
8 1 EMPTY-LOAD VALVE	475 604 011 0 21	1 COUPLING HEAD	BRAKE, YELLOW	952 200 222 0
7 1 RELAY-EMERGENCY V.	971 002 152 0 20	1 COUPLING HEAD	SUPPLY, RED	952 200 221 0
6 2 LINE FILTER	432 500 020 0 19	1 COILED HOSE		452 711 022 0
5 1 PLATE BRAKE LINE	899 140 202 4 18	1 COILED HOSE		452 711 021 0
4 1 PLATE SUPPLY LINE	899 140 203 4 17	4 KIT	*	423 . . . 53 . 2
3 2 DUMMY COUPLING WITH FIXTURE	452 402 000 0 16	4 BRAKE CHAMBER	TYPE 30*	934 300 001 0
2 1 COUPLING HEAD W. INT. LINE FILTER	952 201 001 0 15	1 DRAIN VALVE		463 703 115 0
*1 1 COUPLING HEAD W. INT. LINE FILTER	952 201 002 0 14	2 TEST CONNECTION	DENOMINATION	
PCS. RES.	DENOMINATION	PCS. RES.	DENOMINATION	
			PRODUCT IDENTIFICATION NO.	DCN-NO. REF. DATE
			171	841 600 543 0
			SIZE	CODE FOR SHAPE
			A 3	2002
			CODE FOR FUNCTION	REPLACEMENT FOR
			402	01
			CODE FOR DOCUMENT SHEET	

MEA standard trailer
2axle dolly with automatic load-sensing valve (leaf spring)
scheme 841 600 544 0



the illustration does not replace the WABCO drawing

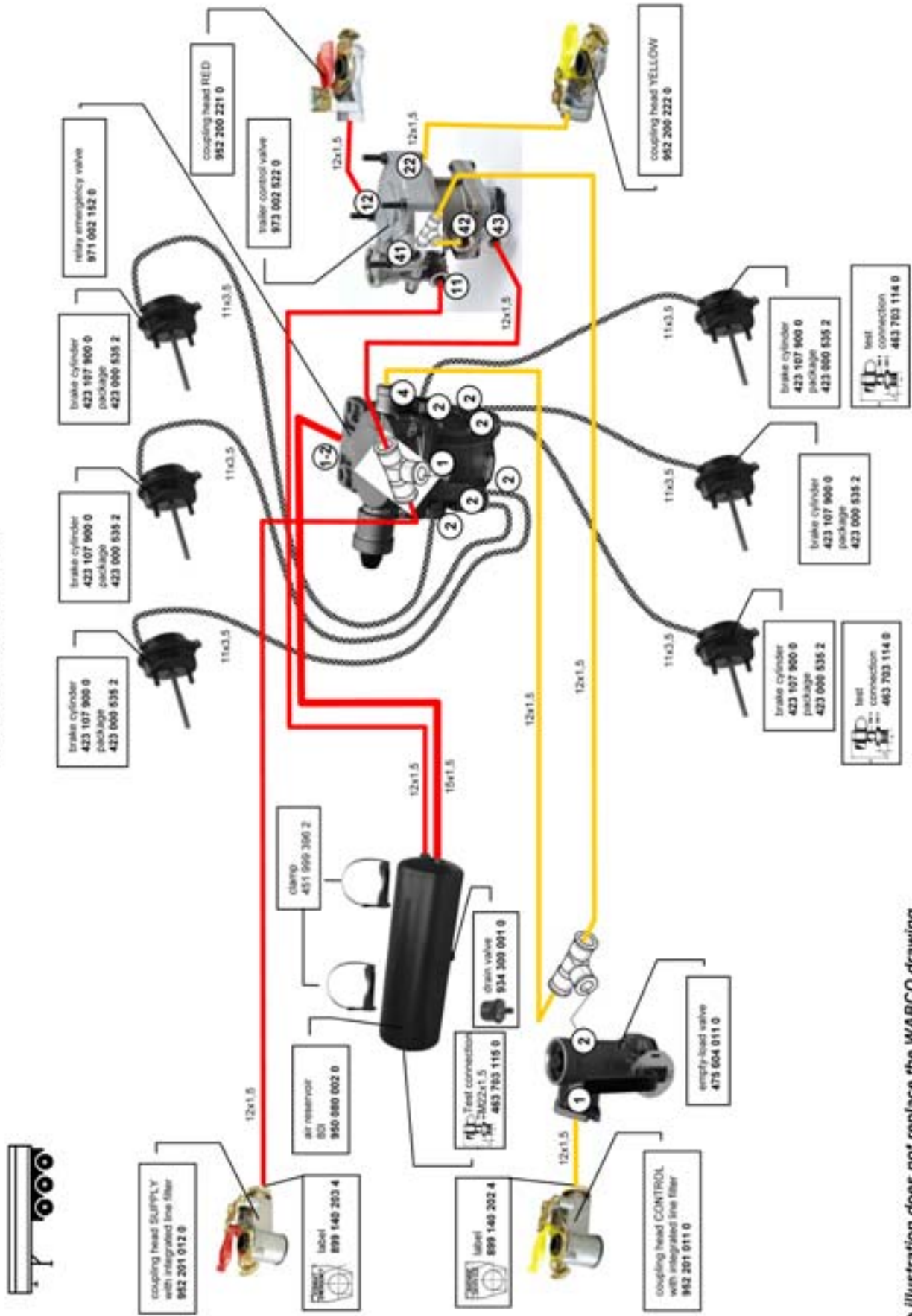


- HOSE Ø11x4 828 876 011 6
- NYLON PIPE Ø12x1,5 828 251 112 6
- NYLON PIPE Ø15x1,5 828 251 115 6

* NOT APPLICABLE FOR DISC-BRAKE

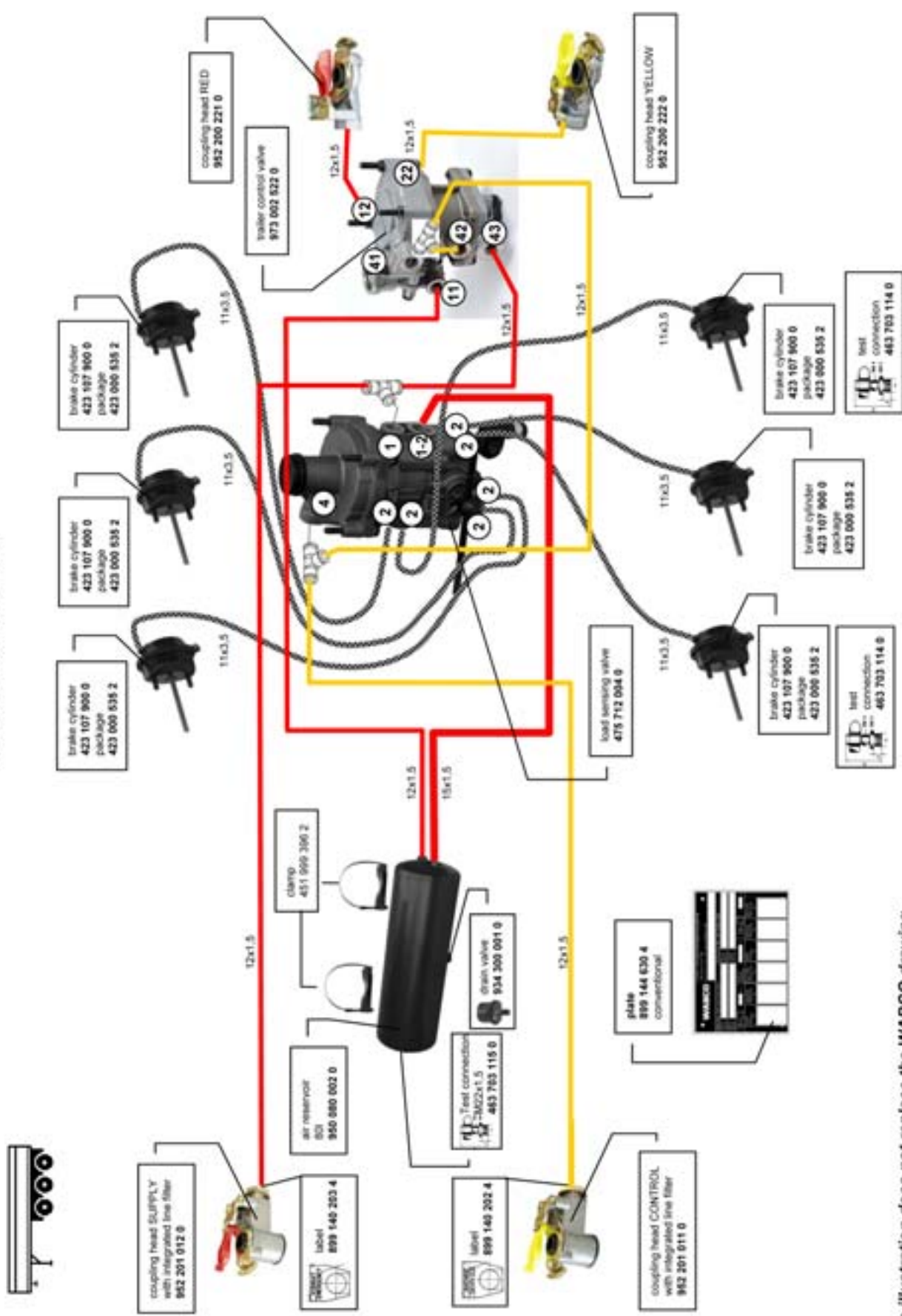
CAD/DRAWING		DATE		SIGNATURE		WABCO	
COPYRIGHT		DATE		SIGNATURE		TWO LINE-AIR BRAKING SYSTEM	
DRAWN		07-03-06		APIPHY		FOR 2-AXLES-TRAILER -DOLLY-	
CHECKED		07-03-06		SCHRAEDER		LOAD-SENS.RELAY EMERGENCY VALVE, MECH.	
STANDARDIZATION						2x12 TONS	
T.R.L.		PRODUCT IDENTIFICATION NO.		CODE FOR DODJMENT		SHEET	
171		841 600 544 0		402		01	
SIZE		DATE FOR SHIP		CODE FOR FUNCTION		REPLACEMENT FOR	
A 3		2012					
DCN-NO.		REF.		DATE			
451 999 396 2							
950 060 094 0							
452 401 000 0							
899 144 630 4		22		1 TEST CONNECTION			
475 712 004 0		21		1 COUPLING HEAD			
432 500 020 0		19		1 COUPLING HEAD			
899 140 202 4		18		1 COILED HOSE			
899 140 203 4		17		4 KIT			
452 402 000 0		16		4 BRAKE CHAMBER			
952 201 001 0		15		1 DRAIN VALVE			
952 201 002 0		14		2 TEST CONNECTION			
PRODUCT IDENTIFICATION NO.		FIG. RES.		DENOMINATION			

MEA standard trailer
3axle semi-trailer-to-tow with manual load-detection
scheme 841 700 247 0

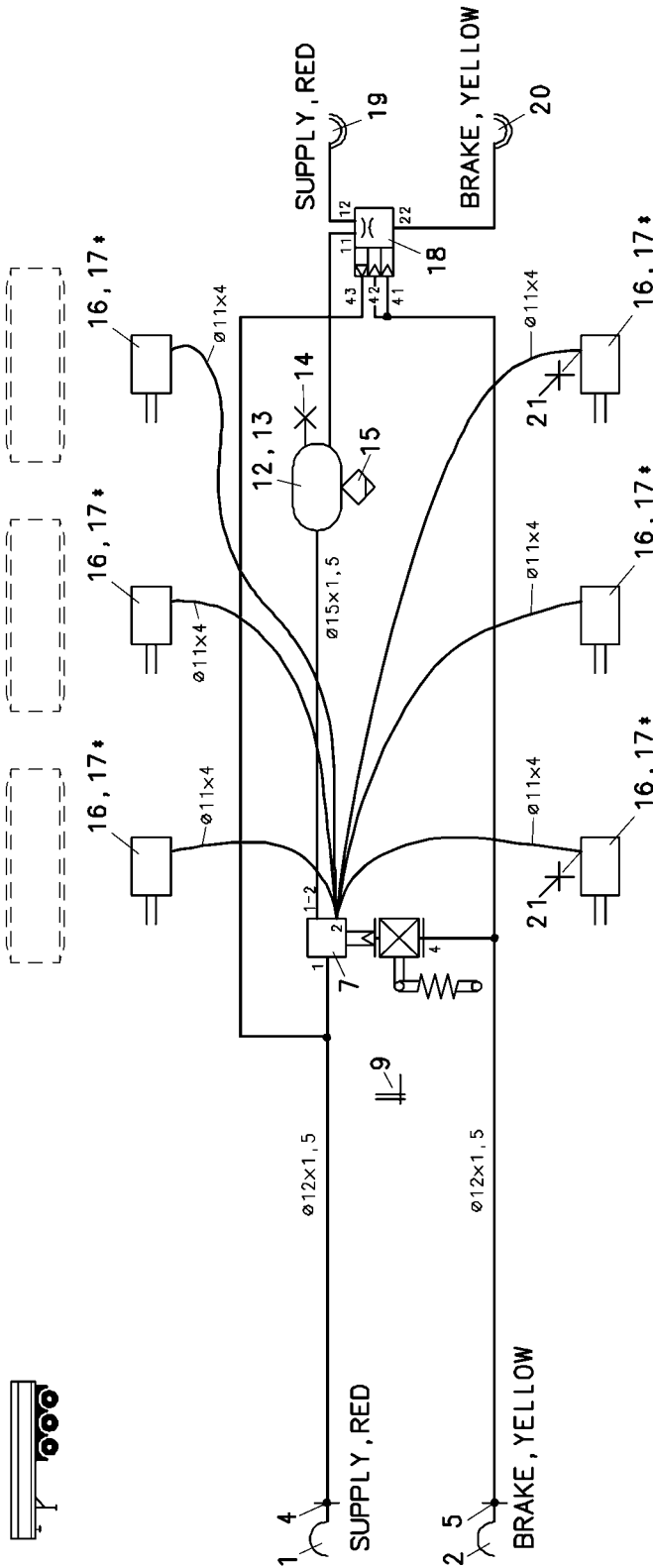


the illustration does not replace the WABCO drawing

MEA standard trailer
3axle semi-trailer-to-tow with manual load-detection
scheme 841 700 519 0



the illustration does not replace the WABCO drawing

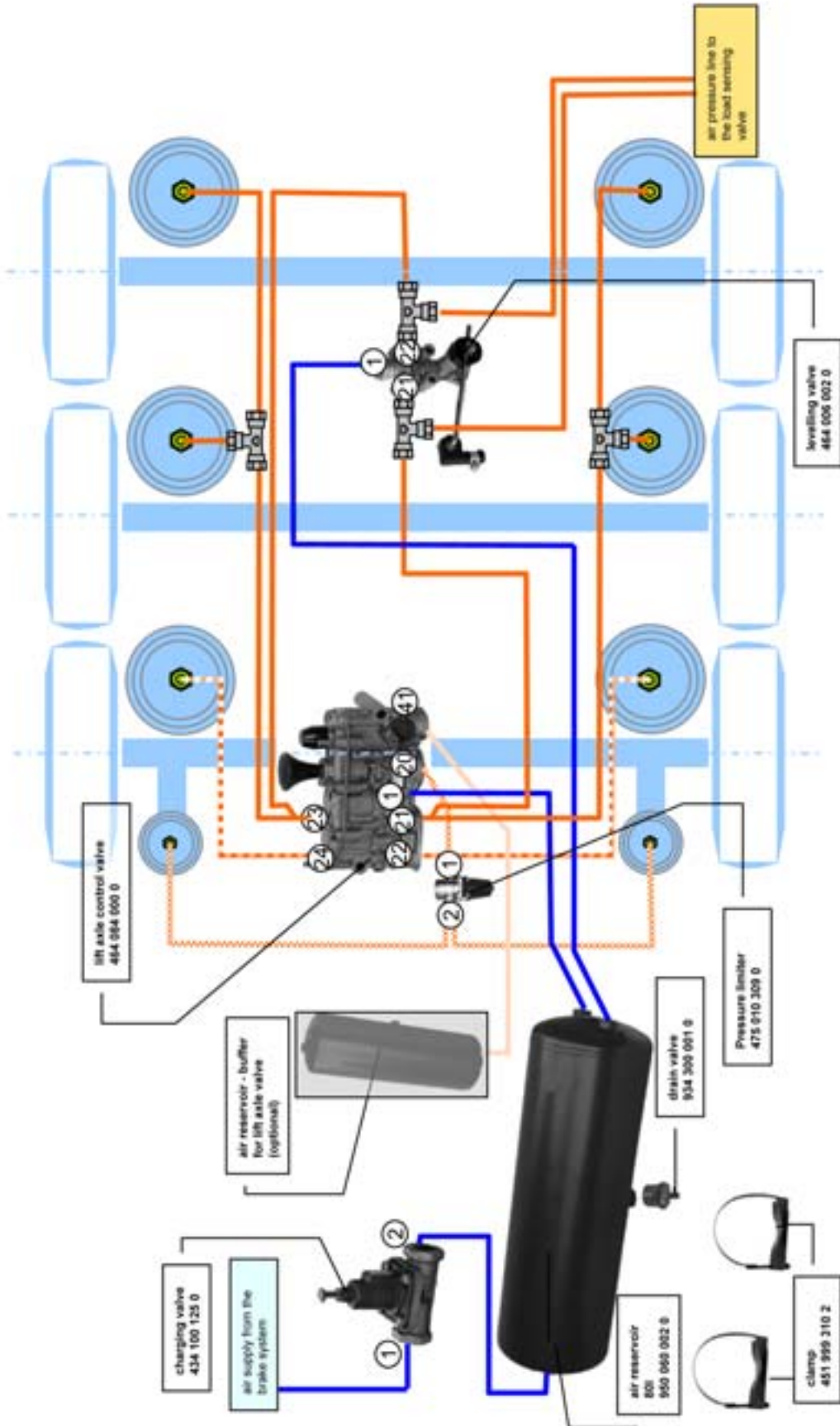


- HOSE $\phi 11 \times 4$ 828 876 011 6
- NYLON PIPE $\phi 12 \times 1,5$ 828 251 112 6
- NYLON PIPE $\phi 15 \times 1,5$ 828 251 115 6

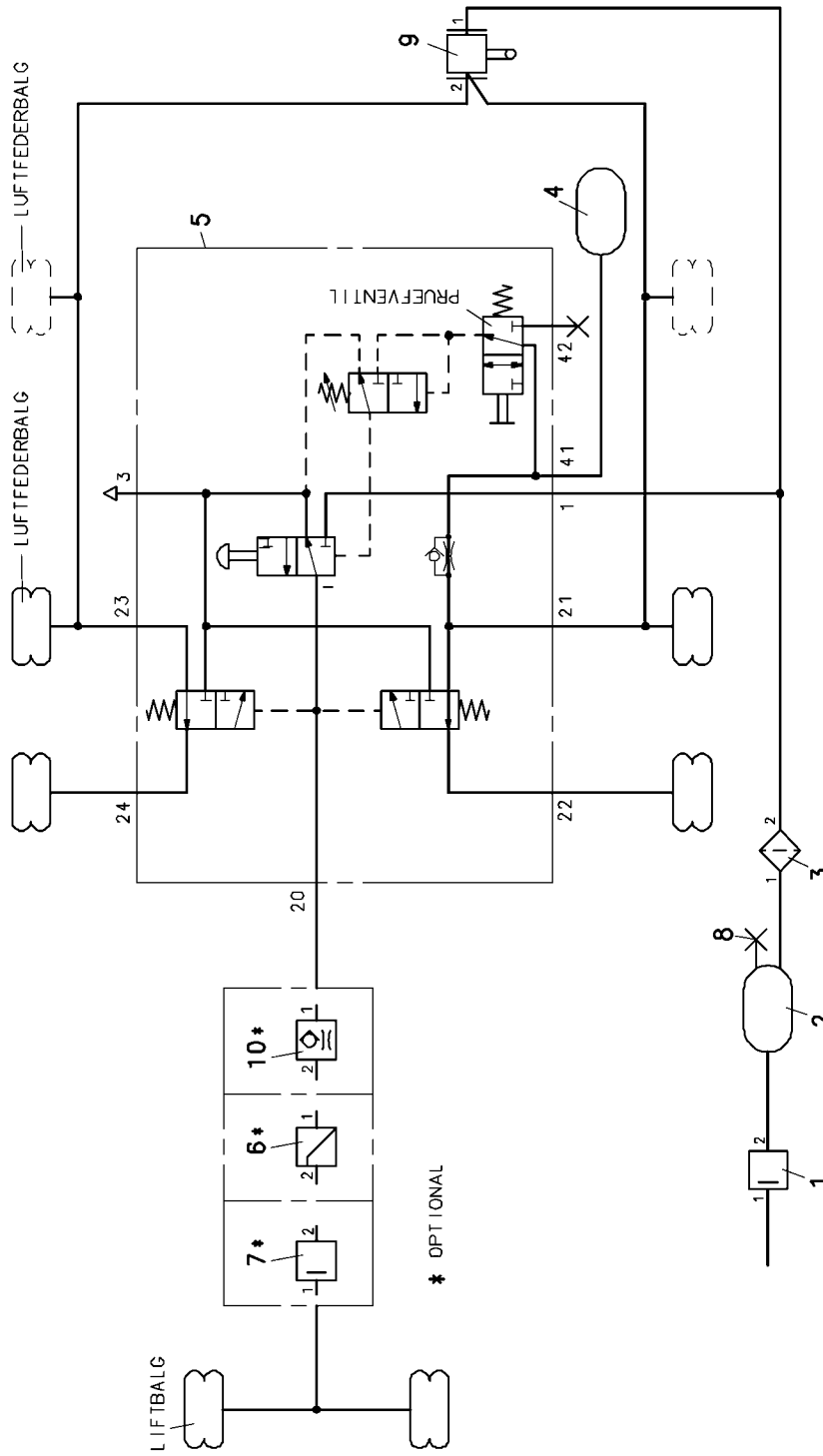
* NOT APPLICABLE FOR DISC-BRAKE

CAD/DRAWING		WABCO	
DATE	SIGNATURE		
07-03-06	API FHY	TWO LINE-AIR BRAKING SYSTEM	
CHECKED	STANDARDIZATION	FOR 3-AXLES-SEMI TRAILER	
		LOAD-SENS.RELAY EMERGENCY VALVE, MECH. 3x12-16 TONS -EXPORT-	
PRODUCT IDENTIFICATION NO.			
I.R.L.	171	841 700 519 0	CODE FOR IDENTIFICATION SHEET
SIZE	A 3	CODE FOR SHAPE	REPLACEMENT FOR
		3012	
		DCN-NO. REF.	DATE
13	2	HOSE CLAMP	451 899 386 2
12	1	AIR RESERVOIR	80L 950 080 002 0
11	.	.	.
10	.	.	.
9	1	TAG*SETTING VALVE OF LSREV" MECH.	899 144 630 4
8	.	.	.
7	1	LOAD-SENS.RELAY EMERGENCY VALVE	475 712 004 0 20
6	.	.	.
5	1	PLATE BRAKE LINE	899 140 202 4 18
4	1	PLATE SUPPLY LINE	899 140 203 4 17
3	.	.	.
2	1	COUPLING HEAD W.INT. LINE FILTER	952 201 001 0 15
1	1	COUPLING HEAD W.INT. LINE FILTER	952 201 002 0 14
PRODUCT IDENTIFICATION NO. (RS. PCS.) DENOMINATION			

air-suspension for a 3axle semi-trailer
With automatically lift axle control (LAV)
Basic plan 841 801 448 0



all pipes with dimension 12x1,5



KUNSTSTOFFROHR 12x1 .5
 ALTERNATIV 10x .5

94-06-27 AP ITHY
 94-06-27 SCHRADER
LIFTACHSSCHALTUNG
 MECH. BETÄTIGT

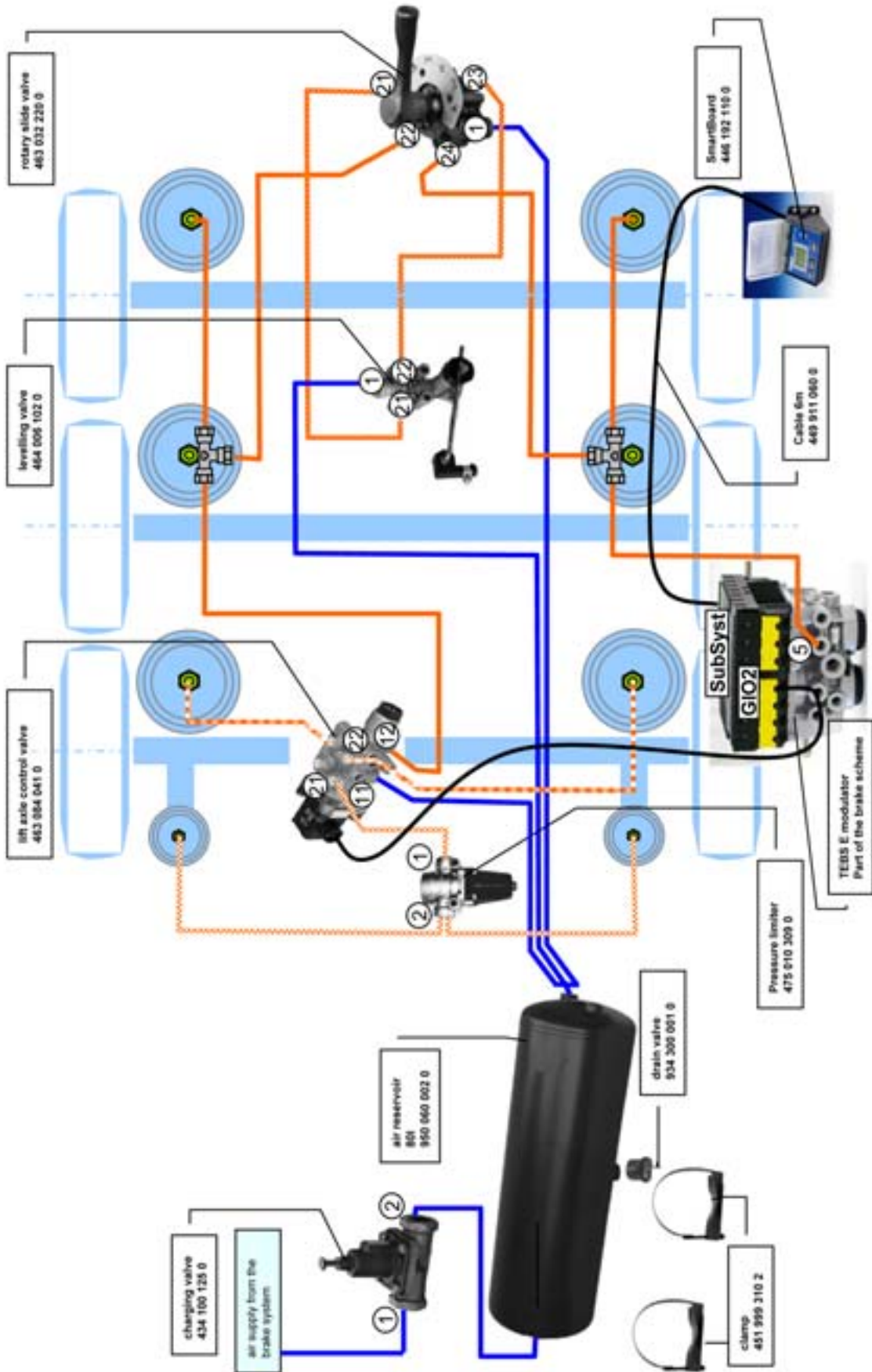
171 841 801 448 0 502 01
 0107

112956 A 07-04-05

- 10 1 RUECKSCHLAGV. M. GEDRO SS. RUECKSTR. # 434 014 ... 0
- 9 1 LUFTFEDERVENTIL 464 006 ... 0
- 8 1 PRUEFANSCHLUSS 463 703 100 0
- 7 1 UEBERSTROMVENTIL # 434 100 027 0
- 6 1 DRUCKBEGRENZUNGSV. # 475 010 ... 0
- 5 1 LIFTACHSVENTIL 463 084 000 0
- 4 1 BEHAELTER 950 410 004 0
- 3 1 FILTER 432 500 020 0
- 2 1 BEHAELTER 950 0
- 1 1 UEBERSTROMVENTIL 434 100 125 0

* OPTIONAL

air-suspension TEBS E (no PEM) for a 3axle semi-trailer
With Rotary Slide Valve (RSV) and automatically lift axle control (LAV)
Basic plan 841 802 150 0



all pipes with dimension 8x1

3 Axle semi-trailer

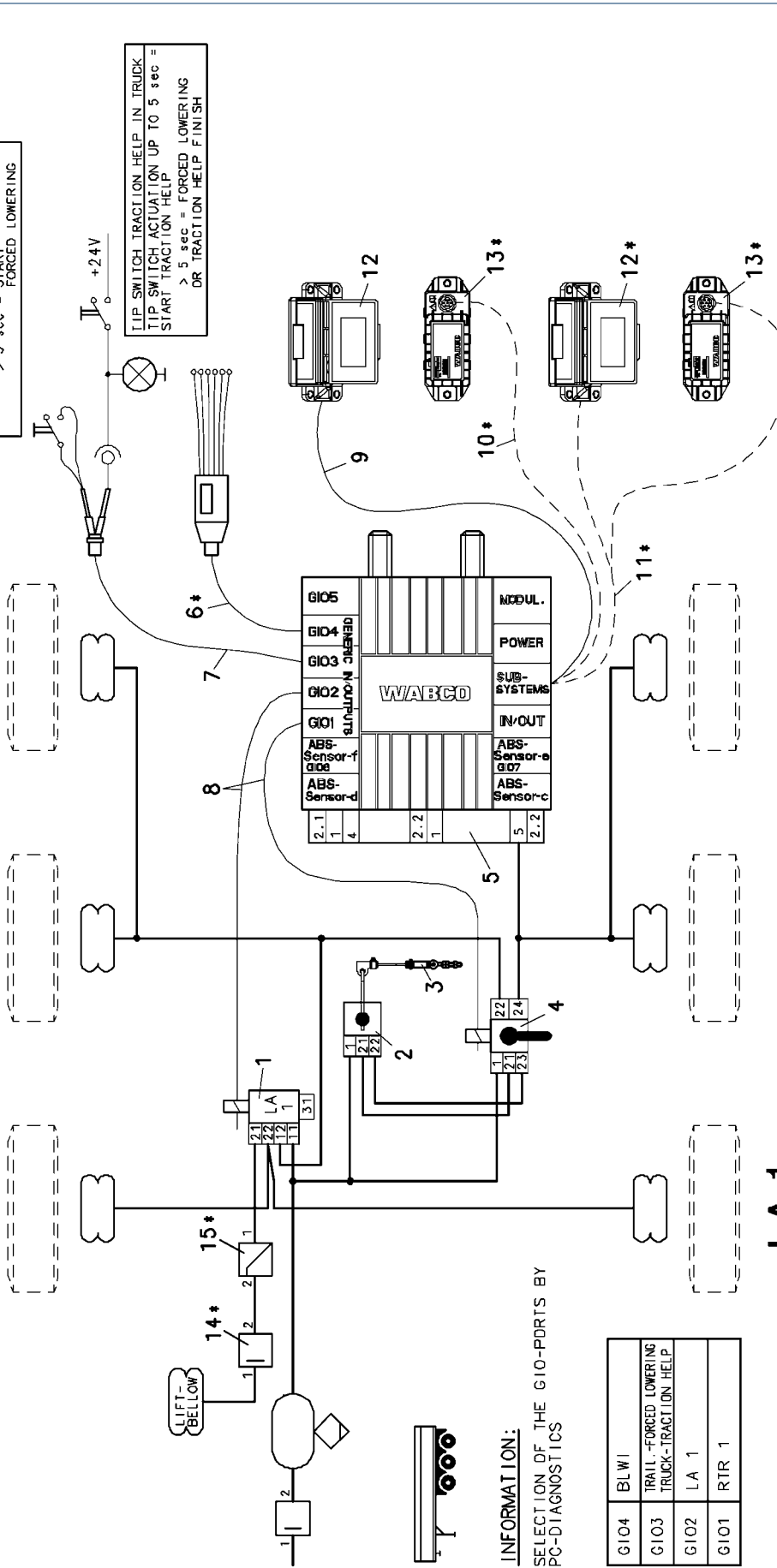
841 802 150 0

TEBS E (with PEM), Air suspension with Rotary Slide Valve (RSV), automatically lift axle control

MEA

5

ONE-CIRCUIT AIR SUSPENSION SYSTEMS AND TRACTION HELP MUST BE AGREED WITH THE AXLE MANUFACTURER § 97 / 27 / EG-DIRECTIVE MUST BE OBSERVED



LA 1

* OPTIONALLY

INFORMATION:
SELECTION OF THE GIO-PORTS BY
PC-DIAGNOSTICS

G104	BLW I
G103	TRAIL-FORCED LOWERING TRUCK-TRACTION HELP
G102	LA 1
G101	RTR 1

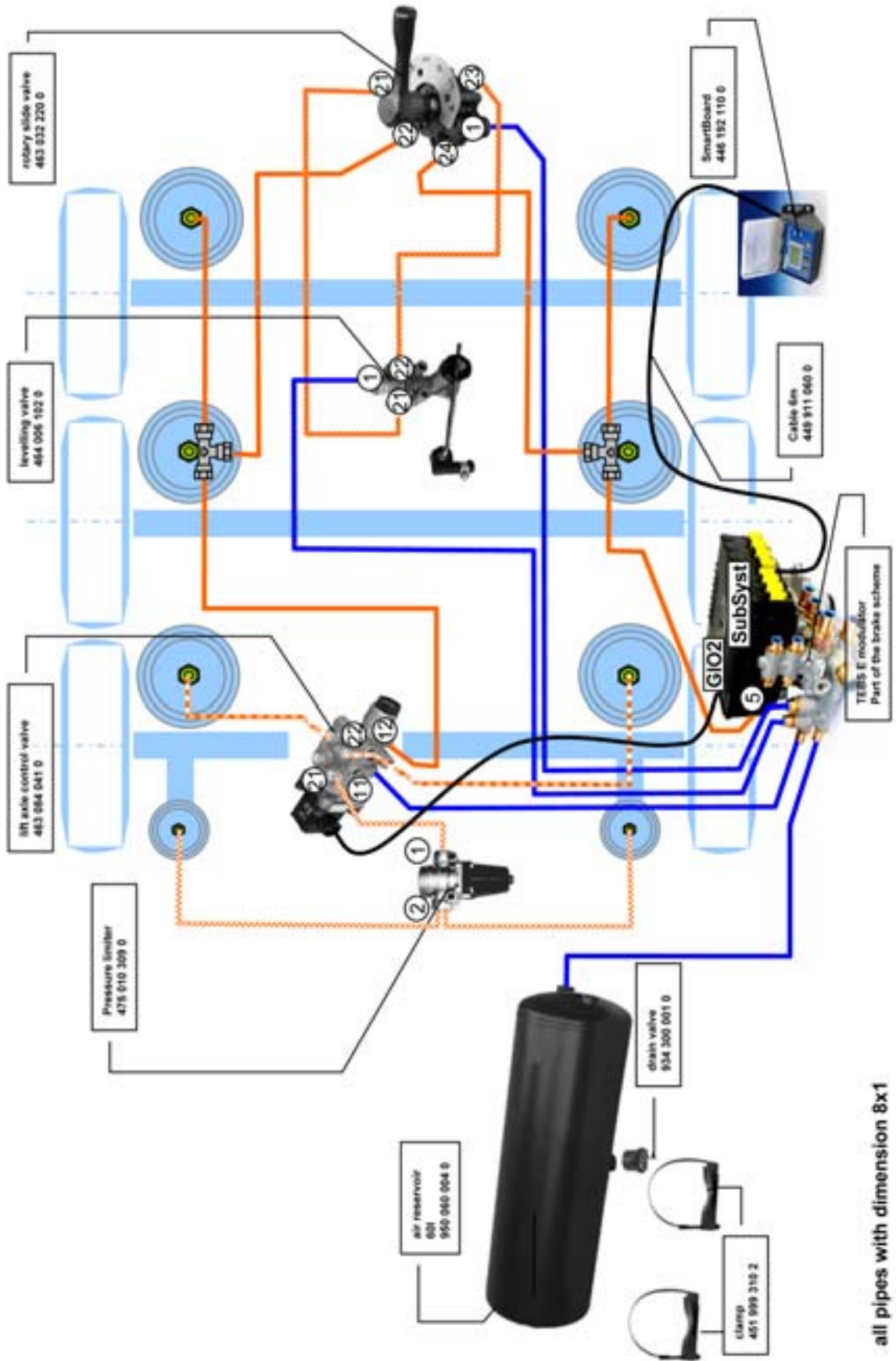
POS.	RS.	DENOMINATION	ONE-CIRCUIT	W/D	HEIGHT LIMIT.	PUSHROD WITH LINKAGE	W.RTR-FUNCT.	(TASC)	433 401 003 0	463 090 00 0	480 102 ... 0	449 816 000 0	449 815 000 0	449 443 000 0	449 911 000 0	419 913 000 0	CABLE-IVTM	449 0	446 192 110 0	446 220 0	TIRE-PRESSURE MONIT RING (IVTM)
3	1	TIRE-PRESSURE MONIT RING (IVTM)																			
2	1	SMARTBOARD																			
1	1	CABLE-SMARTBOARD AND IVTM																			
10	1	CABLE-IVTM																			
9	1	CABLE-SMARTBOARD																			
8	2	CABLE-TASC (RTR) AND LIFTAXLE																			
7	1	CABLE-TRACT HELP AND FORCED LOWER.																			
6	1	CABLE-BRAKE LIN. WEAR INDIC. (BLW I)																			
5	1	T-EBS E-MODULATOR																			
4	1	ROT.-SLIDE V. W.RTR-FUNCT.																			
3	1	PUSHROD WITH LINKAGE																			
2	1	LEVELLING VALVE W/D																			
1	1	LIFTAXLE VALVE																			
RS.		DENOMINATION																			

DATE	SIGNATURE	WABCO TRAILER - EBS E FOR SEMITRAILER AIR SUSPENSION W-LEVELLING VALVE A. ONE-CIRCUIT LIFTAXLE VALVE (VARIATION A)	CODE FOR DOCUMENT SHEET
06-12-04	AP/PHY		402 01
06-12-04	GROSSK. STANDARD ZATION		REPLACEMENT FOR
T.R.	PRODUCT IDENTIFICATION NO.	841 802 150 0	
171	SIZE	A 3	
	CODE FOR FUNCTION	0425	

3 Axle semi-trailer

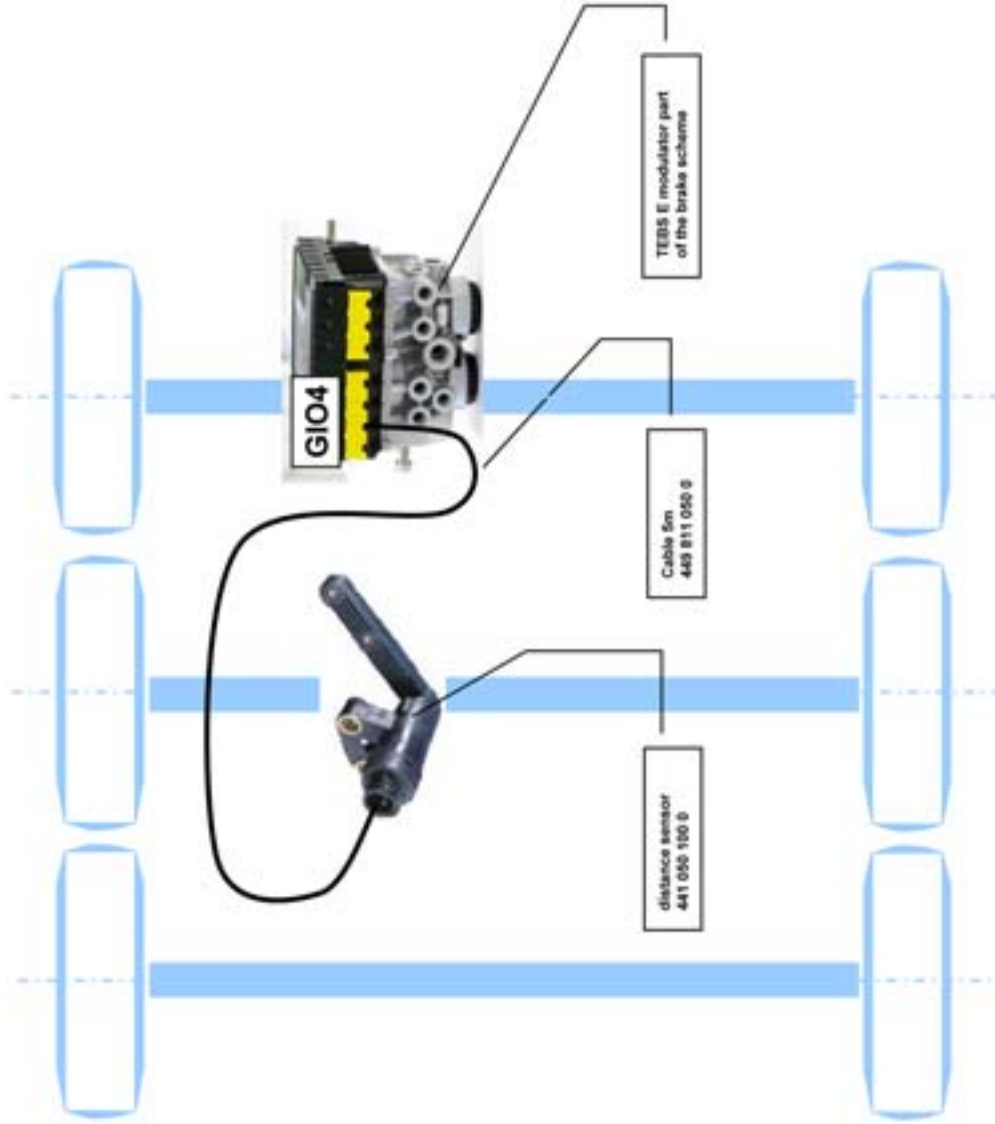
TEBS E (with PEM), Air suspension with Rotary Slide Valve (RSV), automatically lift axle control

air-suspension TEBS E (with PEM) for a 3axle semi-trailer
With Rotary Slide Valve (RSV) and automatically lift axle control (LAV)
Basic plan 841 802 150 0

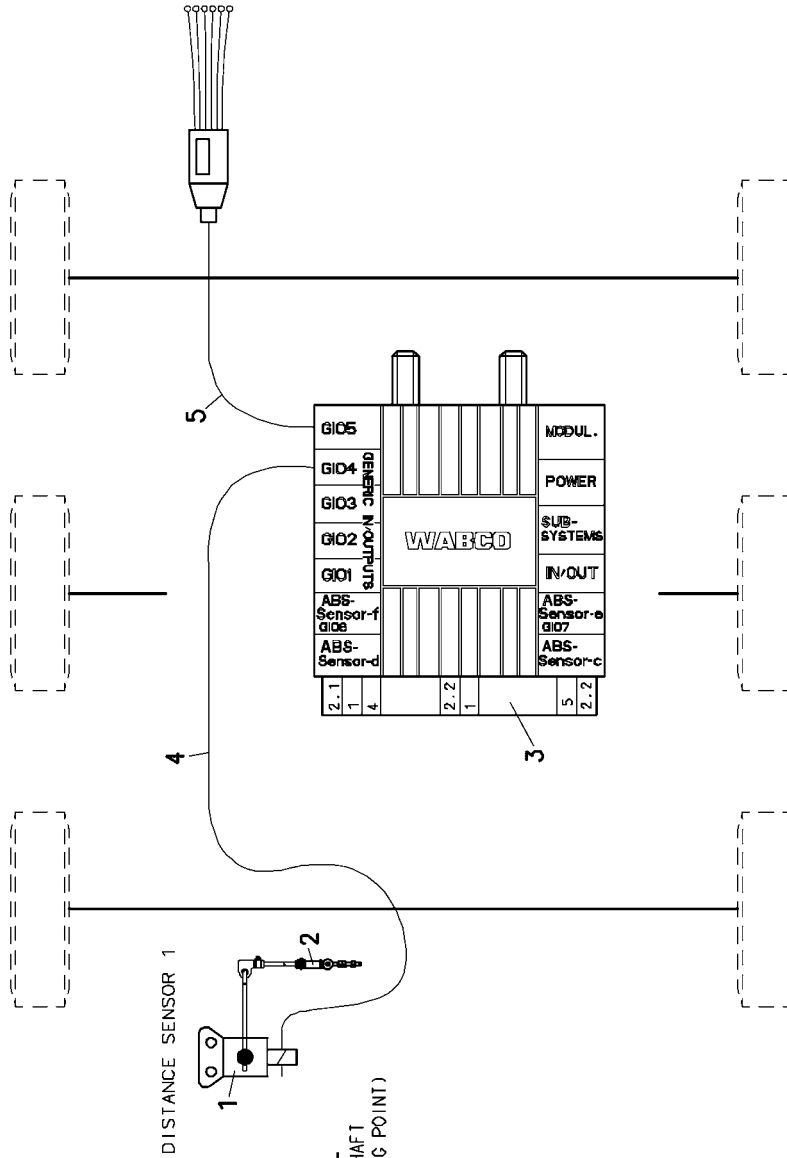


all pipes with dimension 8x1

Mech.suspension for a 3axle semi-trailer with TEBS E
Basic plan 841 802 153 0



all pipes with dimension 12x1,5



DISTANCE SENSOR 1

INSTALLAT. DIST. SENSOR
DIRECTLY INTO THE DS'S SHAFT
(HOLE 100 mm OF THE TURNING POINT)

INFORMATION:
SELECTION OF THE GIO-PORTS BY
PC-DIAGNOSTICS

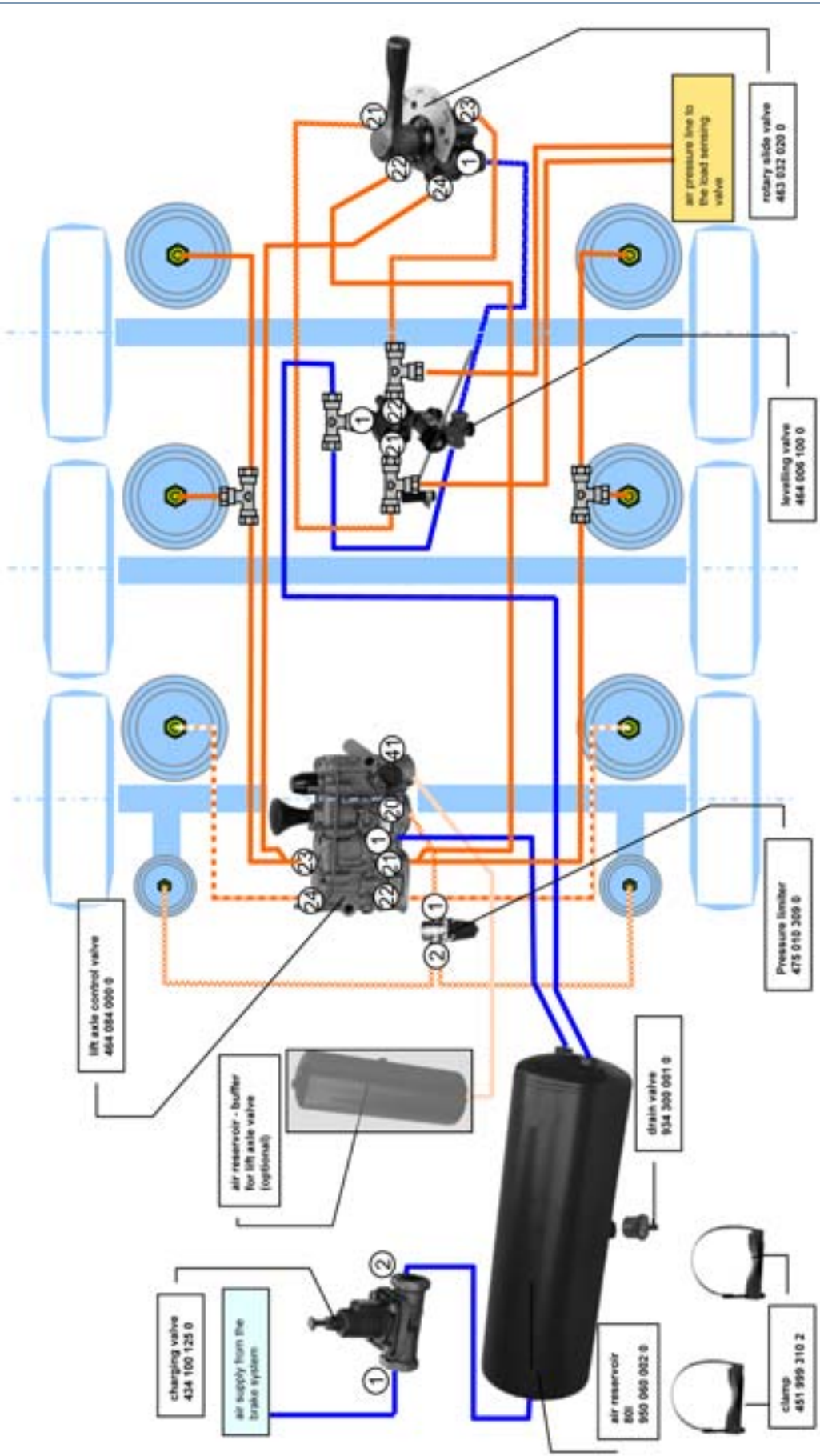
GIO5	BLWI
GIO4	DIST. SENSOR 1
GIO3	—
GIO2	—
GIO1	—

DRAWING DATE		SIGNATURE		WABCO	
06-12-04		APITHY		TRAILER - EBS E	
CHECKED		GROSSK.		FOR SEMI TRAILER	
STANDARDIZATION		PRODUCT IDENTIFICATION NO.		(VARIATION E)	
T.R.I.		171		841 802 153 0	
SIZE		A 3		CODE FOR DOCUMENT SHEET	
CODE FOR FUNCTION		0425		402 01	
CODE FOR SHAPE		111998 A 07-01-05		REPLACEMENT FOR	
PRODUCT IDENTIFICATION NO.		DCN-NO. (RET.)		DATE	
449 816 000 0		449 811 000 0		441 050 71. 2	
441 050 100 0		441 050 100 0		441 050 100 0	
CABLE-BRAKE LIN. WEAR INDIC. (BLWI)		CABLE-DIST. SENSOR		T-EBS E-MODULATOR	
CABLE-DIST. SENSOR		T-EBS E-MODULATOR		PUSHROD WITH LINKAGE	
DISTANCE SENSOR 1		DISTANCE SENSOR 1		DISTANCE SENSOR 1	

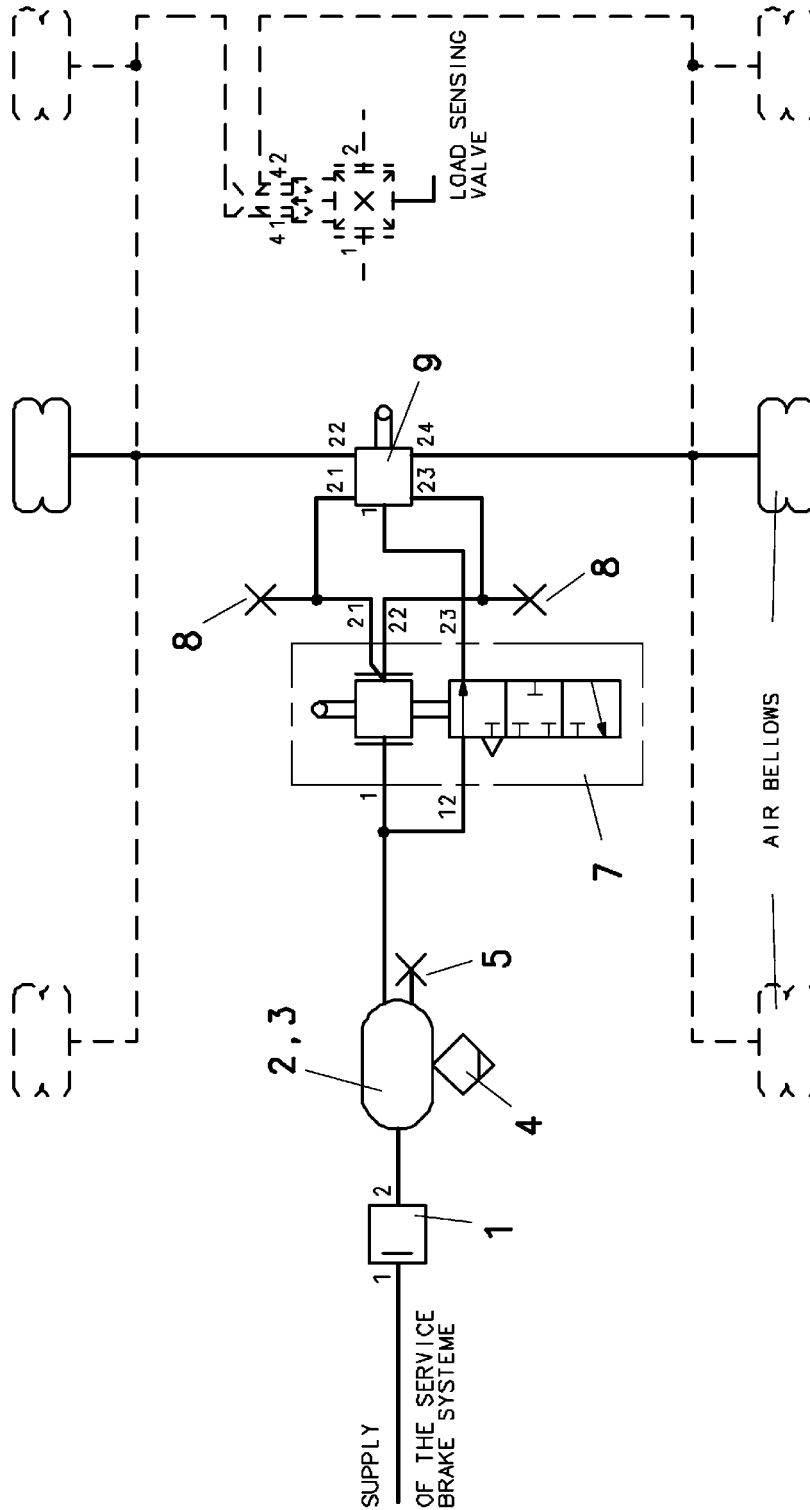
3 Axle semi-trailer

Air suspension with RSV, Height Limitation, automatically lift axle control

air-suspension for a 3axle semi-trailer
With Rotary Slide Valve (RSV) height-limitation and automatically lift axle control (LAV)
Basic plan 841 802 175 0



all pipes with dimension 12x1,5

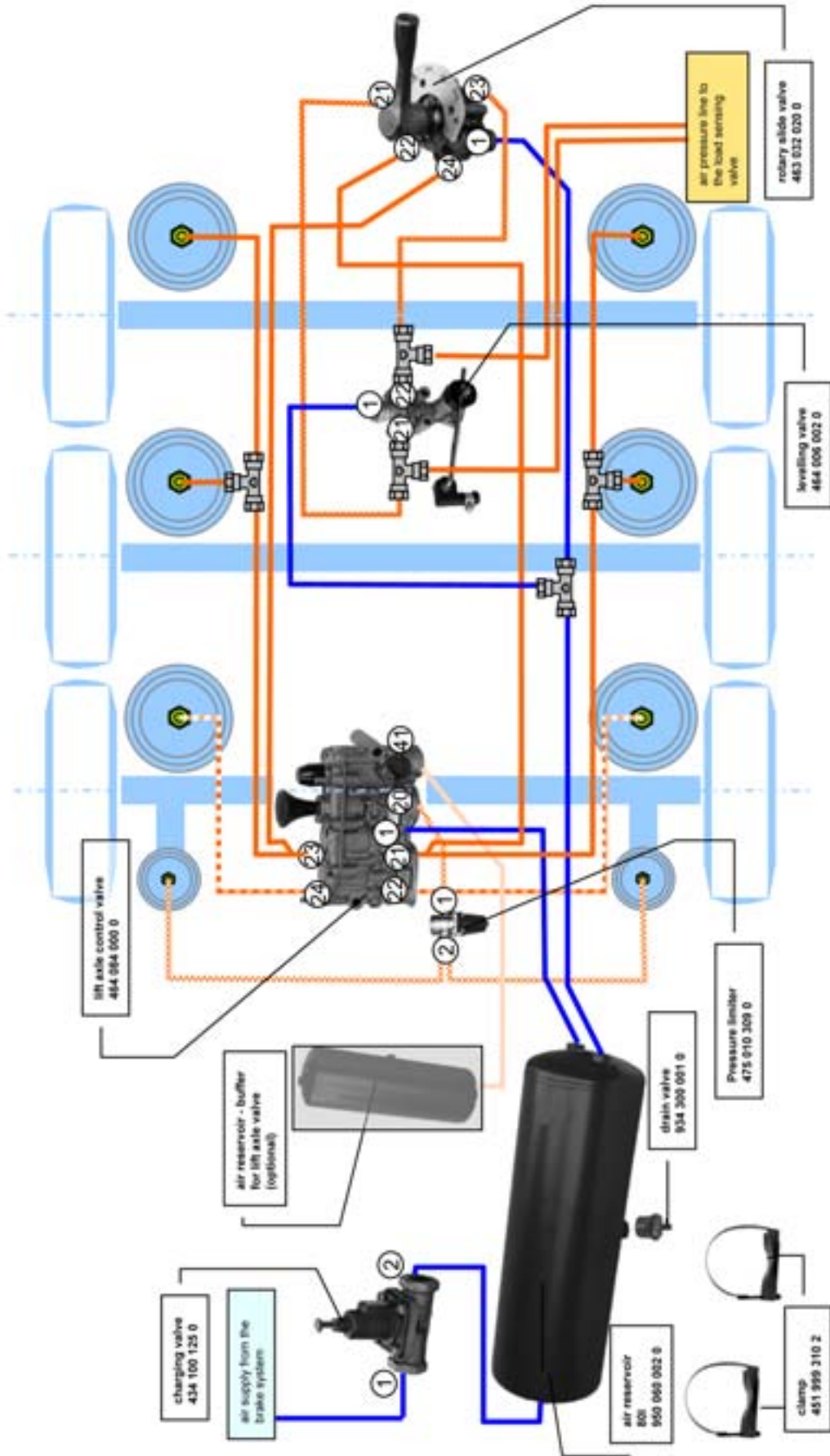


CADAM-DRAWING COPYRIGHT	
DATE	SIGNATURE
07-03-06	APL THY
DRAWN	
07-03-06	SCHRADER
CHECKED	
STANDARDIZATION	

WABCO	
AIR LEVELLING VALVE	
WITH AIR LEVELLING VALVE AND HEIGHT LIMITATION	

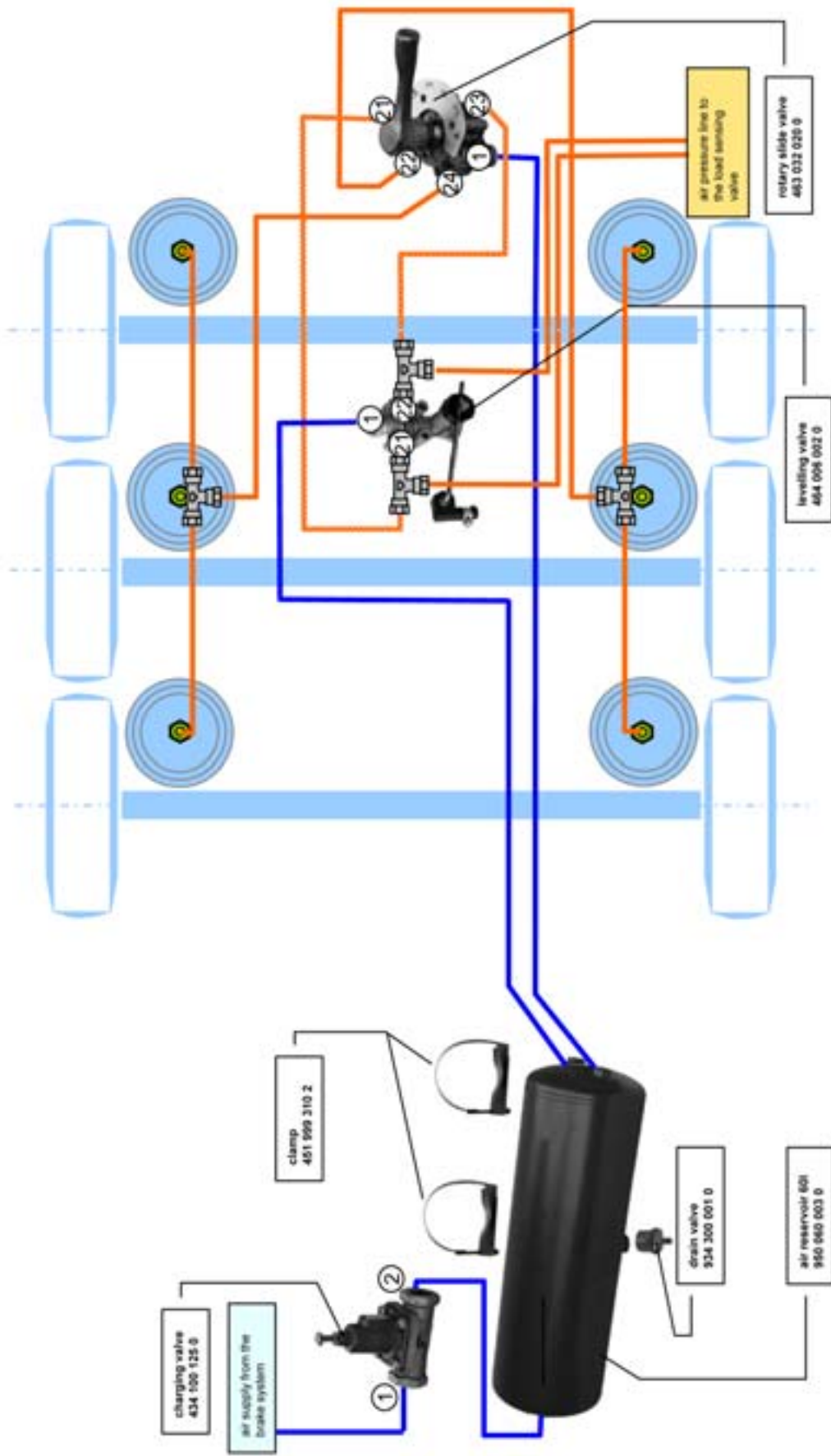
QTY.	PCS.	DENOMINATION	PRODUCT IDENTIFICATION NO.	PCS.	PCS.	DENOMINATION	PRODUCT IDENTIFICATION NO.
8	2	TEST CONNECTION	463 703 0				
7	1	ROTARY SLIDE VALVE	463 032 0				
6	1	LEVELLING VALVE	464 006 100 0				
5	1	TEST CONNECTION	463 703 0				
4	1	DRAIN VALVE	934 300 001 0				
3	2	HOSE CLAMP	451 901 10. 2				
2	1	AIR RESERVOIR	950 0				
1	1	CHARGING VALVE W/O BACK FLOW 6.0 BAR	434 100 125 0				
PCS.		DENOMINATION	PRODUCT IDENTIFICATION NO.	PCS.	PCS.	DENOMINATION	PRODUCT IDENTIFICATION NO.

air-suspension for a 3axle semi-trailer
 With Rotary Slide Valve (RSV) and automatically lift axle control (LAV)
 Basic plan 841 802 175 0 modified



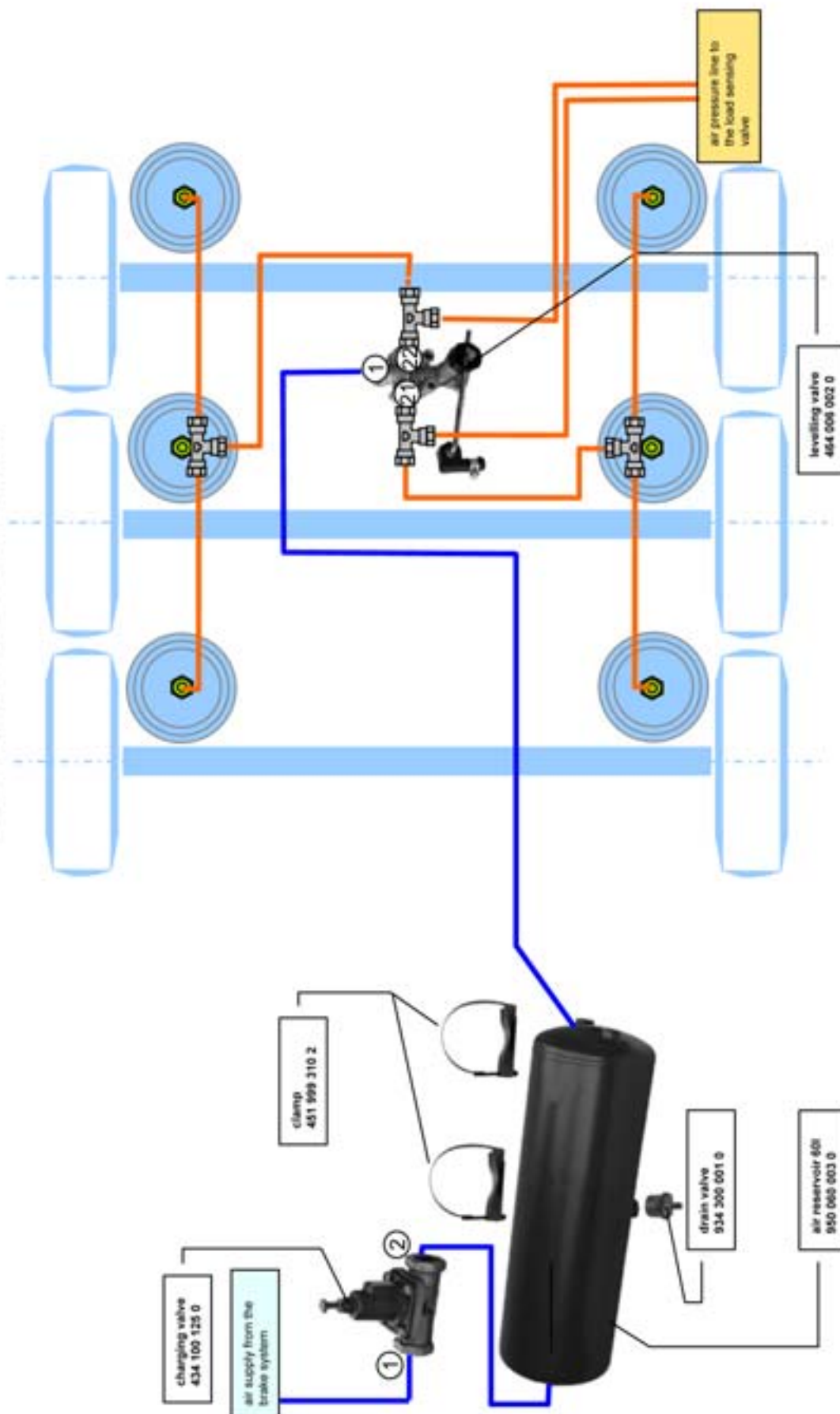
all pipes with dimension 12x1,5

air-suspension for a 3axle semi-trailer
With Rotary Slide Valve (RSV) no height-limitation
Basic plan 841 802 176 0 modified

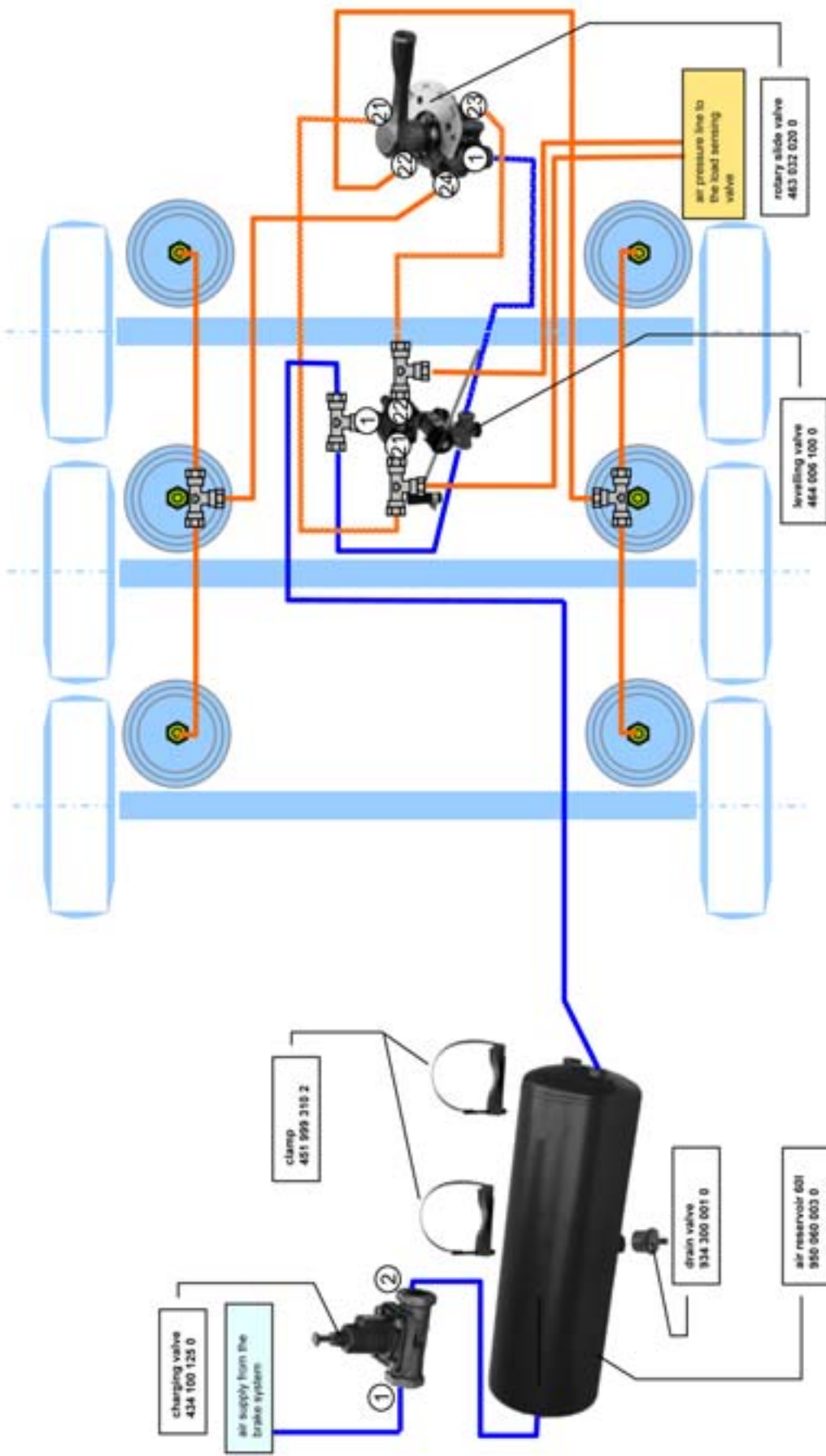


all pipes with dimension 12x1,5

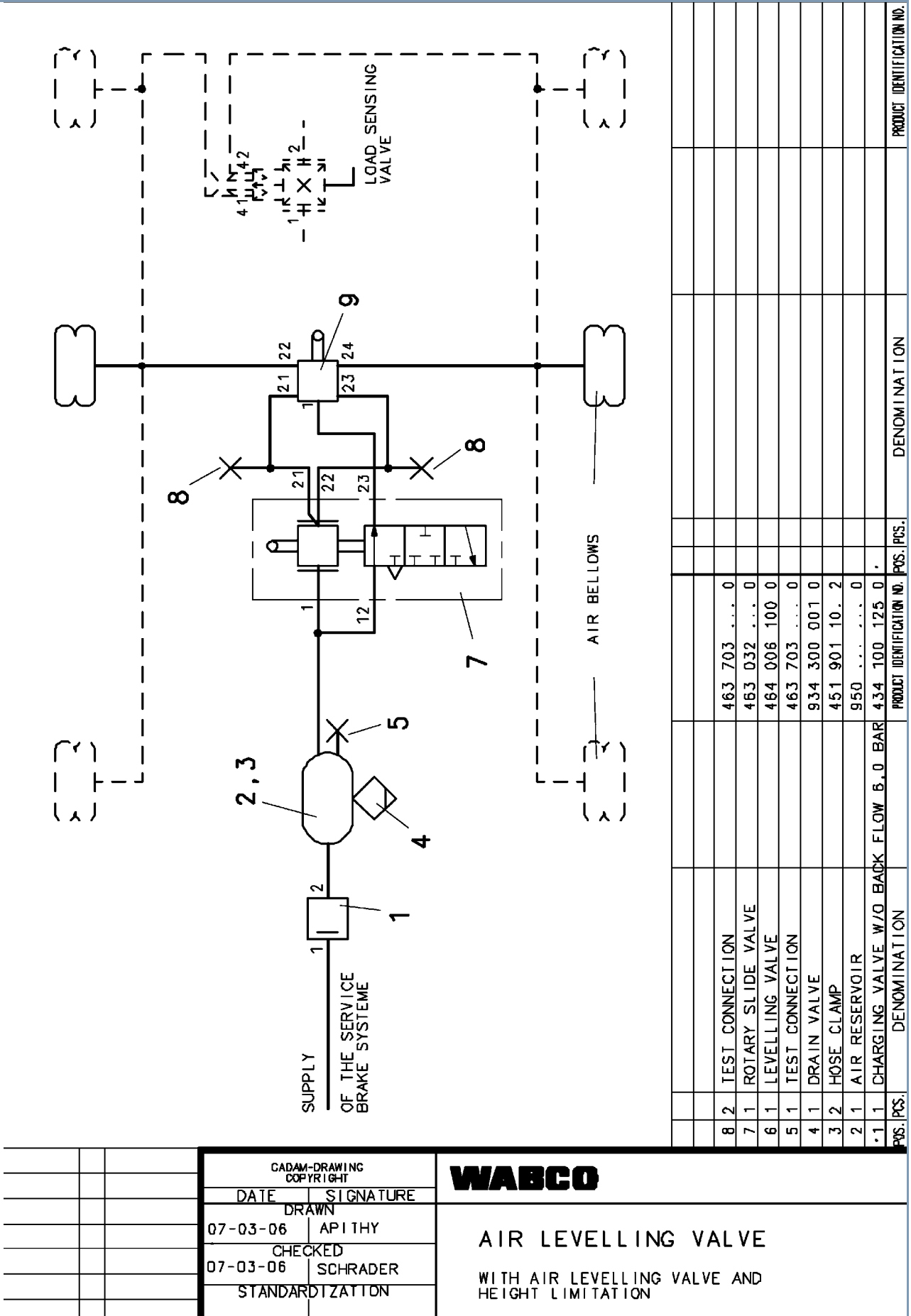
**air-suspension for a 3axle semi-trailer
 Without Rotary Slide Valve (RSV)
 Basic plan 841 802 176 0 modified**



air-suspension for a 3axle semi-trailer
With Rotary Slide Valve (RSV) height-limitation
Basic plan 841 802 176 0



all pipes with dimension 12x1,5



CADAM-DRAWING COPYRIGHT	
DATE	SIGNATURE
07-03-06	APITHY
DRAWN	
07-03-06	SCHRADER
CHECKED	
STANDARDIZATION	

WABCO

AIR LEVELLING VALVE

WITH AIR LEVELLING VALVE AND HEIGHT LIMITATION



WABCO (NYSE: WBC) is a leading global supplier of technologies and control systems for the safety and efficiency of commercial vehicles. Founded nearly 150 years ago, WABCO continues to pioneer breakthrough electronic, mechanical and mechatronic technologies for braking, stability

and transmission automation systems supplied to the world's leading commercial truck, bus and trailer manufacturers. With sales of \$2.7 billion in 2013, WABCO is headquartered in Brussels, Belgium. For more information, visit

www.wabco-auto.com