O P E R A T I N G
M A N U A L

- Original -

Product	**Seacom Rolltrailer** **RT 80’ 100-120t**
Serial no.	**A 5526-8 / 1-11**
Customer	**Grimaldi - Italy**
Supplier	**Transport Systems Seacom AG** **Berbiceweg 5** **CH – 8212 Neuhausen** **Tel. +41 (0) 52 632 04 00** **Fax +41 (0) 52 632 04 09**

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1 CE DECLARATION OF CONFORMITY

	Transport Systems Seacom AG **Neuhausen, Schweiz**
EG-Konformitäts-Erklärung ***EC Declaration of Conformity*** im Sinne der EG-Richtlinie Maschinen 2006/42/EG, Anhang II A *in the sense of EC Machinery Directive 2006/42/EC, annex II A*	
Produktbezeichnung: *Product:*	**Rolltrailer 80' 100-120t** **25,0x2,9x0,85/0,9m**
STS-Nummer: *STS-Number:*	**A 5526-5 / 1-11**
Hersteller: *Manufacturer:*	**Transport Systems Seacom AG** Berbiceweg 5 CH – 8212 Neuhausen
Der Hersteller deklariert, dass das bezeichnete Produkt in Übereinstimmung mit folgender Richtlinie entwickelt, konstruiert und gefertigt wurde: *The manufacturer declares that the above mentioned product is developed, designed and manufactured according to:*	EG-Maschinen Richtlinien (2006/42/EG) *EC Machinery Directive (2006/42/EC)*
Folgende harmonisierte Normen sind angewandt: *The following national standards, directives and specifications have been applied:*	EN ISO 12100-1/ -2 (Sicherheit von Maschinen - Grundbegriffe, allgemeine Gestaltungsleitsätze) / *(Safety of machinery - Basic concepts, general principles)* EN ISO 14121-1 (Sicherheit von Maschinen - Risikobeurteilung) / *(Safety of machinery - Risk assessment)* EN 287-1 (Prüfung von Schweißern - Schmelzschweißen - Teil 1: Stähle) / *(Qualification test of welders - Fusion welding - Part 1: Steels)*
Neuhausen, 11. October 2011	Heinz Althammer **Trailer Systems Seacom AG**

2 PREFACE

Please read this documentation carefully in order to avoid accidents. This way you can make sure that all warranty conditions are complied with and the trailer will be working well at any time.

HOW TO USE THE TRAILER CORRECTLY

- The trailer is produced for internal transport only.
  Please do not exceed the max. capacity stated on the type plate.
  Damages caused by overloading are not covered by warranty.

- Please observe the following operating instructions carefully.
  The trailer may only be operated, maintained and repaired by trained persons.

- Unauthorized modifications of the trailer will lead to expiry of warranty.

- All rules and regulations for accident preventions have to be adhered to.

WARRANTY

- Any warranty claims can only be considered, if all service and maintenance works has been carried out on schedule. The operator has to keep records about all maintenance and repair works.

3 RESIDUAL RISK

Danger
of getting caught or crushed during the coupling by the trailer.
Persons that are near the trailer during hitching and unhitching can get caught or run over.

- It needs to be ensured that no persons are in the danger area during the coupling operation.

Warning
Dangers from overloading.
An overload of the trailer can cause major damages to the trailer and endanger persons.

- The load limitations must be observed.

Warning
Dangers from collision.
Parts of the load that extend over the cargo bed can collide with the surroundings, cause damage and endanger persons.

- Before the transport, the driver must make sure that no collision is possible.

Warning
Danger of getting caught or crushed by the trailer.
Danger when driving on inclines: The trailer or the cargo can slide away or tip, especially when:

- the trailer is loaded to maximum
- the load has a high centre of gravity
- the road surface is uneven or slippery (dirt, ice)
- the speed is too high
- braking or accelerating suddenly

The road surface should be paved well enough. Speed should be reduced on inclines and driven with greatest caution. The cargo's centre of gravity should lie in the middle of the loading area if possible. Adapt the speed to the conditions.

Danger
of getting caught by the trailer.
Persons situated in front or close next to the moving trailer are in danger of being caught and crushed by it.

- As long as the trailer is moving, the driver must ensure that no persons are situated in the danger area of the trailer.

Warning
Danger during maintenance.
Danger of injury from improper operation and maintenance.
All specifications concerning operation, inspection and maintenance must be observed. In case of doubt, the supplier needs to be consulted.

Danger
during maintenance on a jacked up trailer.
The trailer needs to be sufficiently supported before maintenance and secured against rolling away.

4 SPECIFICATION

Load capacity			120 t
Dead weight		approx.	18,2 t
Maximum speed		fully laden	6 km/h
		empty	16 km/h
Platform length		approx.	25.000 mm
Platform width		approx.	2.900 mm
Platform height front/rear		approx.	850 / 900 mm
Rear overhang			6.500 mm
Axle load			4x 27,5 t
Fifth wheel load			28 t
Axle			2 pcs
Tyres		solid rubber	28x16x22
		number of tyres	8 pcs
Loading platform		steel plate	10 mm
		pine wood	60 mm
Accessories		lashings	32 (2+15+15+0)
		D-Rings	22 (2+8+8+4)
		triangle marks	white

Finish

Primer:	Hempathane HS 55610 (2 component zinc phosphate paint)	
Top coat:	Hempadur Fast Dry 17410 (2 component epoxy paint)	
Colour:	brown red	RAL 3011

Measurements and weight may vary slightly.

5 OPERATING INSTRUCTIONS

Intended use

- The rolltrailer's intended use is for internal transport of any kind of general cargo.
- The driver of the tractor has to inspect the rolltrailer for detectable faults before the start of operation.

Hitching of a rolltailer with gooseneck

- Reverse the tractor with gooseneck coupled to the fifth wheel towards front side of rolltrailer.
- Adjust height of gooseneck to correct coupling height. Drive the toe of the gooseneck completely into the opening in the rolltrailer.
- Lift fifth wheel with engaged reverse gear until gooseneck is firmly coupled with rolltrailer.
- Disengage reverse gear and lift further until front leg of trailer has reached sufficient ground clearance (150 to 200 mm)

Driving

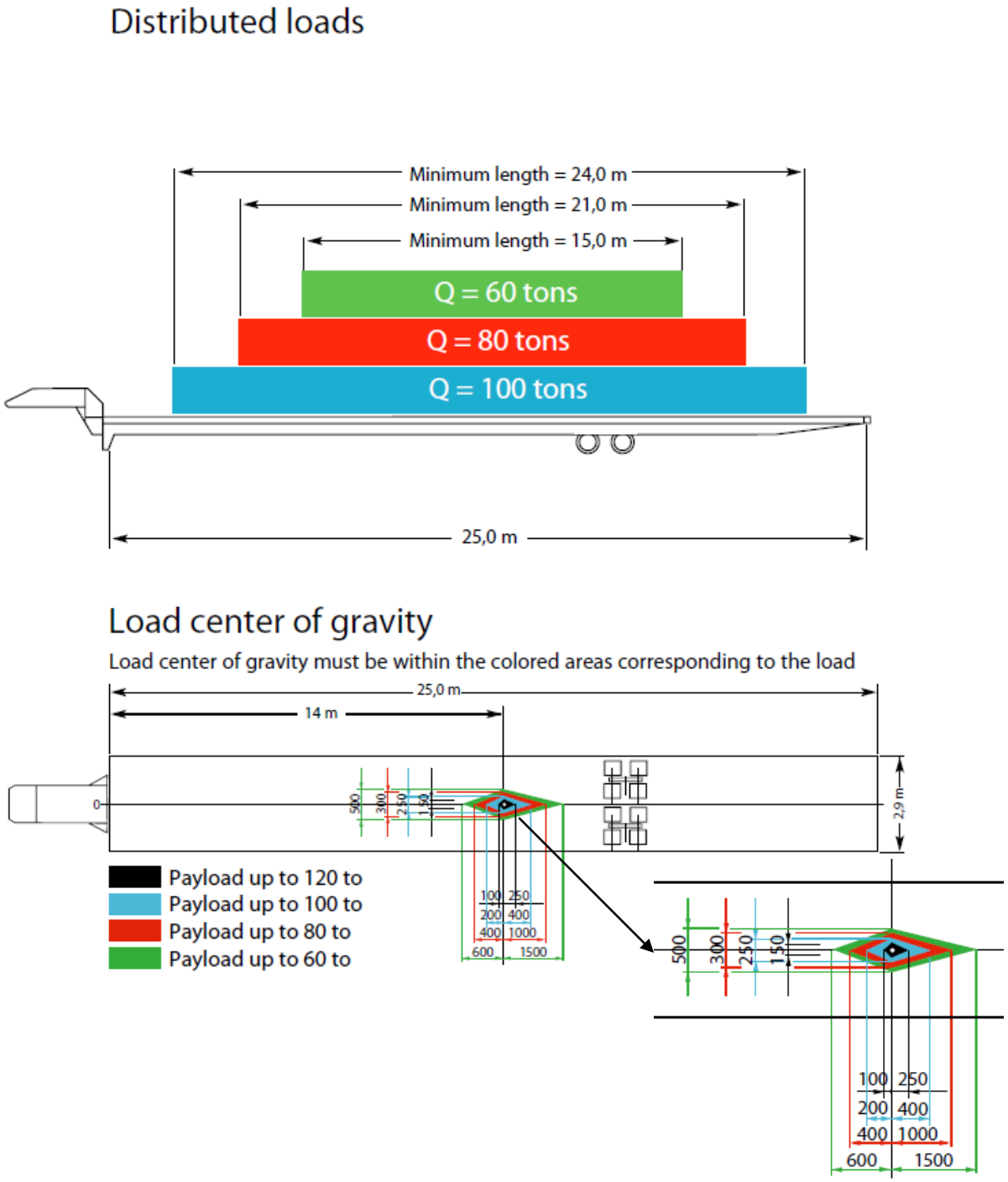
- The rolltrailer shall only be towed by suitable towing vehicles with a lifting capacity of at least 35 t and a lifting height of at least 800 mm.
- The transport of persons is not permitted.
- The road surface should be in reasonable condition, and without obstacles.
- In any case, the prescribed speeds and safety regulations must be observed.
  The maximum permitted speed, straight ahead with full load of 120 t is 6 km/h.
- In curves the speed should be reduced appropriately.
- When reversing, seek a guide, if visibility is insufficient.

Loading

- Make sure that the rolltrailer is parked on horizontal ground.
- The weight of the cargo put on the rolltrailer shall not exceed the maximum capacity.

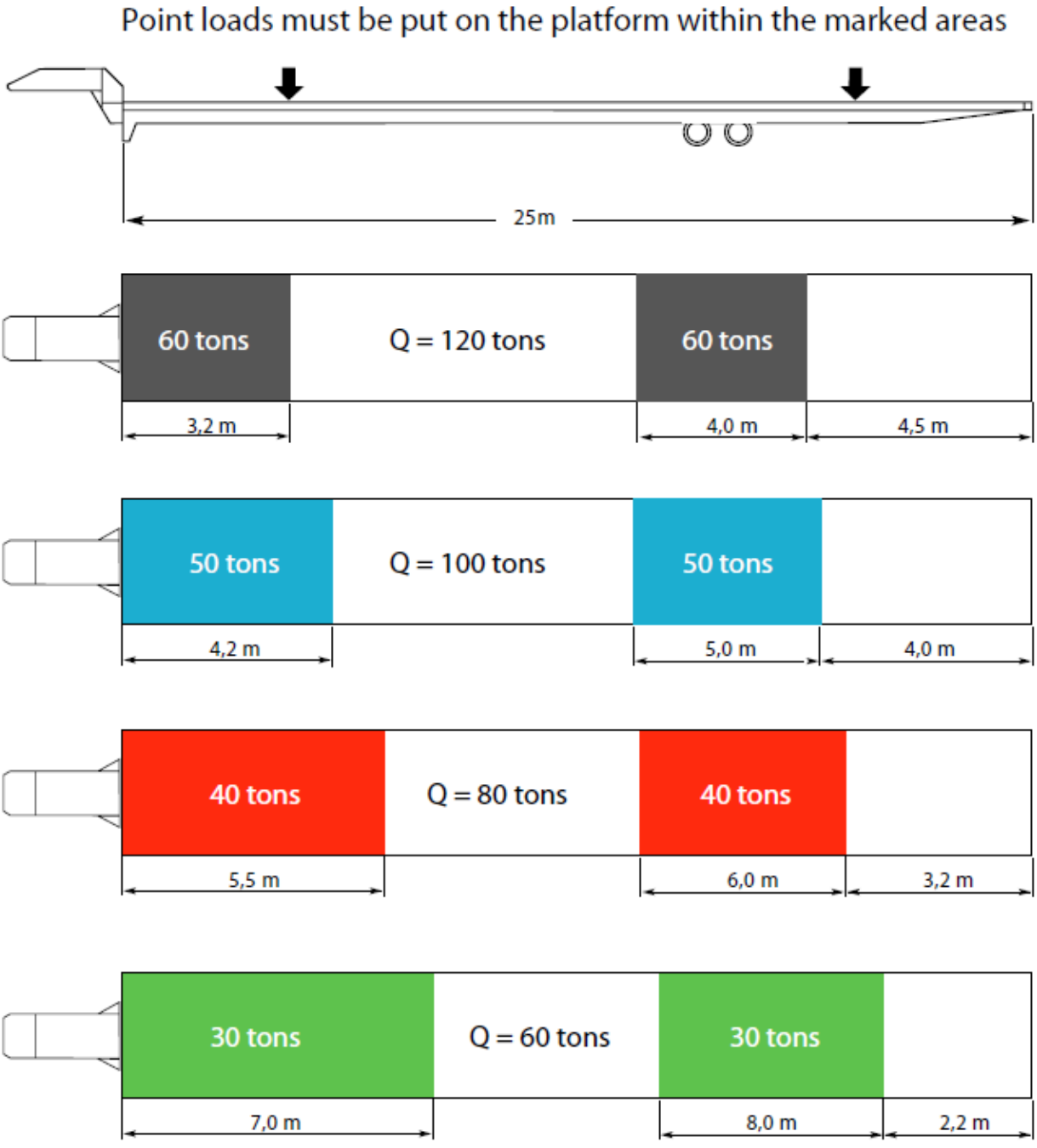
Distributed load

- To avoid overloading always ensure that the centre of gravity of the load is within the respective areas in the diagram (see the following loading scheme).



Point load

- For the distribution of the load see the following scheme.
- When point loads are applied to the platform make sure that each load is supported by the longitudinal beams of the trailer, e. g. use some support cross beams. Point loads can be applied only in the areas according to below diagram. The position of cross beams are marked in the longitudinal beams with white triangles.



6 SERVICE MANUAL

General information

The trailer is a simple and solid construction. The following inspections and maintenance tasks should be done at regular intervals in order to ensure a trouble free and safe operation. Faulty parts need to be replaced in time. They need to meet the specified requirements of the supplier and the pertinent safety regulations.

Wheel set

Inspect the wheel sets regularly (in about 6–month intervals) for external damages.

Tyres

Inspect the tyres for mechanical damages (about once a month).

Wheels

Check the wheels regularly:

1. Does the wheel turn without noise and without axial movement?
2. If there is a noticeable noise, then dismount the wheel and check the taper roller bearings; if necessary replace them.
3. Check axial movement of wheel. In case of axial movement readjust taper roller bearing.

How to readjust wheel-bearing

- Make sure that trailer is in parking position.
- Lift rear side of trailer with a forklift or hydraulic jack so that wheels can be rotated by hand. Take into account that the hydraulic will lower the wheels.
- Put suitable supports under lifted trailer.
- Check wheel: In case of axial movement or not smooth rotation
  - Remove hub cap
  - Unlock shaft nut
  - Tighten shaft nut until wheel is blocked
  - Untighten shaft nut until wheel rotates free but without any axial movement
  - Lock shaft nut (bent one lip of safety washer into next slot of shaft nut)
  - Refit hub cap
- No parts forgotten to refit?
- Lower rear side of trailer.

Frame

The frame and the welding points should be checked regularly. The frame construction consists of structural steel and can be repaired by qualified repair technicians in case of damages. In case of questions, call your supplier.

Lubrication

Greasing point	Greasing interval
Rocker arm bearing	3 month
Swivel axle bearing	3 month
Wheel set	3 month

The lubrication intervals depend on the operational conditions of the trailer: If the conditions are rough, then more frequent lubrication is needed.

Tightening torque for screws and nuts

Screws and nuts need to be inspected regularly (monthly) or retightened.
Coefficient of friction: µ tot.= 0.12 for screws and nuts without reworking, as well as phosphated nuts. Tighten by hand!
Tightening torques, if not specified otherwise, can be found in the following tables.

Metric ISO standard thread DIN 13, sheet 13

Size	8.8		10.9		12.9
M4	2,8		4,1		4,8
M5	5,5		8,1		9,5
M6	9,5		14		16,5
M7	15		23		28
M8	23		34		40
M10	46		68		79
M12	79		115		135
M14	125		185		215
M16	195		280		330
M18	280		390		460
M20	390		560		650
M22	530		750		880
M24	670		960		1100
M27	1000		1400		1650
M30	1350		1900		2250
M33	1850		2600		3000
M36	2350		3300		3900
M39	3000		4300		5100

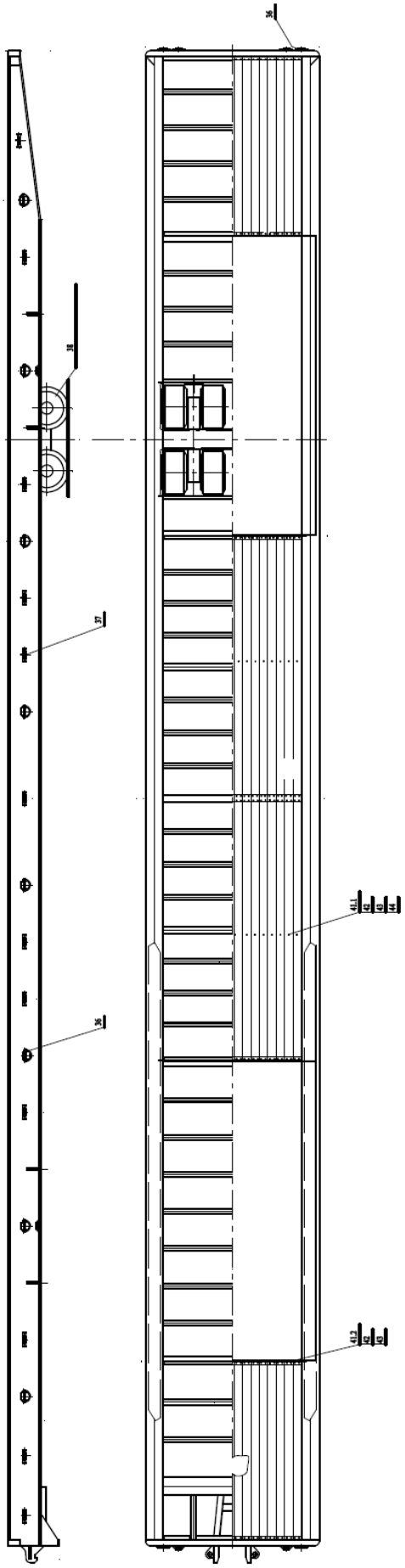
Metric ISO fine thread DIN 13, sheet 13

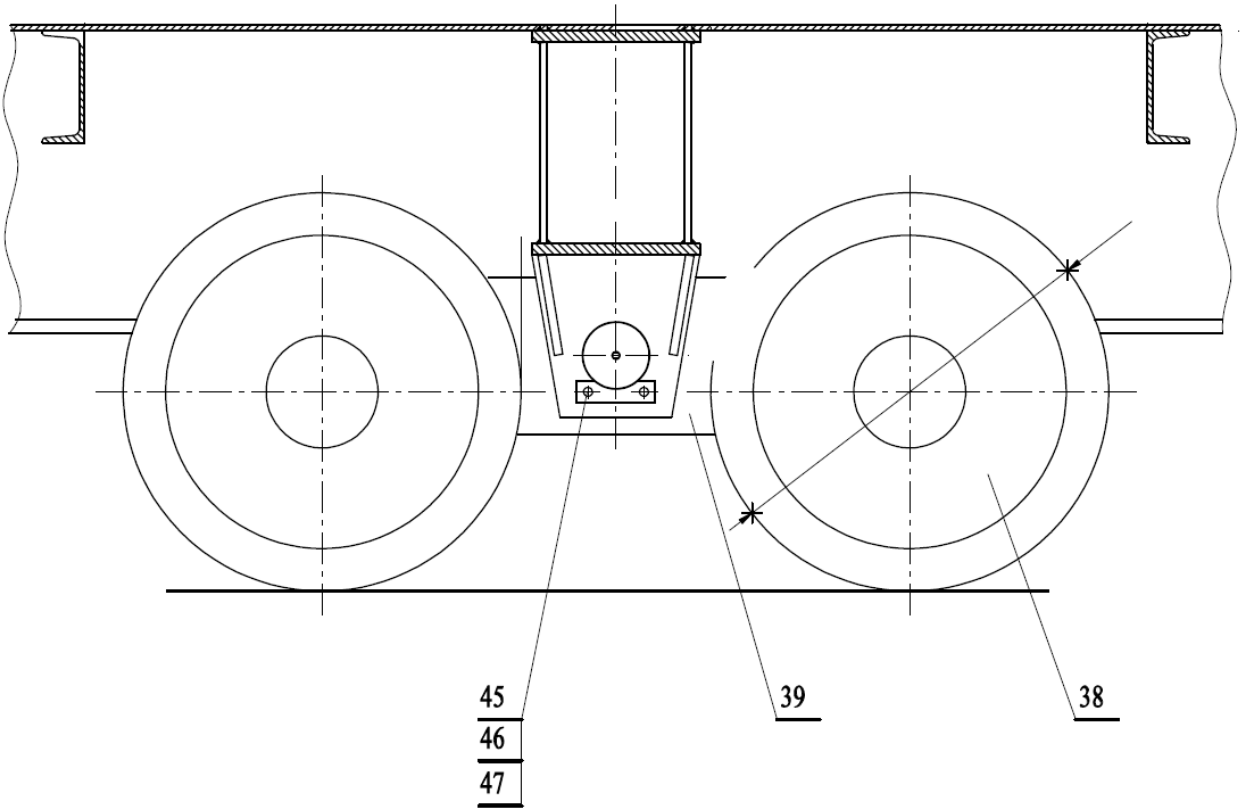
Size	8.8		10.9		12.9
M 8 x 1	24		36		43
M 9 x 1	36		53		62
M 10 x 1	52		76		89
M 10 x 1.25	49		72		84
M 12 x 1.25	87		125		150
M 12 x 1.5	83		120		145
M 14 x 1.5	135		200		235
M 16 x 1.5	205		300		360
M 18 x 1.5	310		440		520
M 18 x 2	290		420		490
M 20 x 1.5	430		620		720
M 22 x 1.5	580		820		960
M 24 x 1.5	760		1100		1250
M 24 x 2	730		1050		1200
M 27 x 1.5	1100		1600		1850
M 27 x 2	1050		1500		1800
M 30 x 1.5	1550		2200		2550
M 30 x 2	1500		2100		2500
M33 x 1.5	2050		2900		3400
M 33 x 2	2000		2800		3300
M 36 x 1.5	2700		3800		4450
M 36 x 3	2500		3500		4100
M 39 x 1.5	3450		4900		5700
M 39 x 3	3200		4600		5300

7 SPARE PARTS

7.1 GENERAL VIEW

Dwg. No. 5526-5		
Item	**Description**	**Part. No**
36	D-Ring	5526-5.36
37	Lashing	5526-5.37
38	Wheel set 711/406-1050	5526-5.38
39	Rocker beam	5526-5.39
40	Bolt for rocker beam	5526-5.40
41.1	Screw M8x100 DIN605	5526-5.41.1
41.2	Screw M8x90 DIN605	5526-5.41.2
42	Nut M8 DIN980	5526-5.42
43	Washer A8,2 DIN125	5526-5.43
44	Clamp	5526-5.44
45	Screw M16x50 DIN933	5526-5.45
46	Washer B16,5 DIN127	5526-5.46
47	Axle guard	5526-5.47
48	Lubrication nipple AM 10x1 DIN71142	5526-5.48

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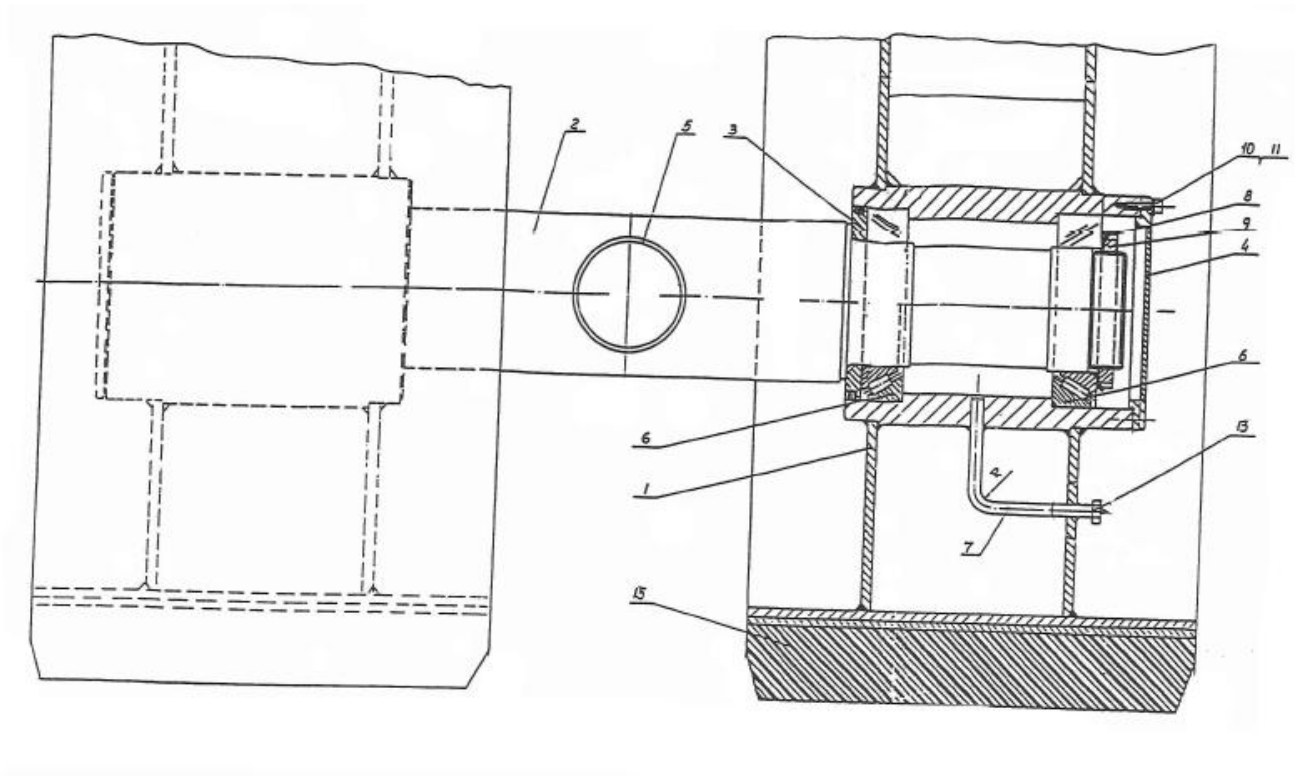
7.2 WHEEL SET 711/406-1050

Dwg. No. 5526-5.38		
Item	**Description**	**Part. No**
1	Wheel body	5526-5.38.1
2	Axle	5526-5.38.2
3	Seal washer	5526-5.38.3
4	Hub cap d=160	5526-5.38.4
5	Bush 95x90x40	5526-5.38.5
6	Taper roller bearing 32022	5526-5.38.6
7	Tube	5526-5.38.7
8	Safety washer KM20	5526-5.38.8
9	Shaft nut MB20	5526-5.38.9
10	Screw M8x30	5526-5.38.10
11	Washer A16,5	5526-5.38.11
12	Tube	5526-5.38.12
13	Lubrication nipple AM10x1	5526-5.38.13
14	Fey-Ring FK6 170 ASD	5526-5.38.14
15	Tyre 28x16x22	5526-5.38.15



7.3 ROCKER BEAM

Dwg. No. 5526-5.39		
Item	**Description**	**Part. No**
4	Bolt d=90	5526-5.39.4
9	Bush 115x110x60	5526-5.39.9
10	Bolt d=110	5526-5.39.10
12	Washer	5526-5.39.12
14	Axle guard	5526-5.39.14
15	Screw M16x50 DIN933	5526-5.39.15
16	Washer B16,5 DIN127	5526-5.39.16
17	Lubrication nipple AM10x1 DIN71412	5526-5.39.17