OPERATOR : GRIMALDI COMPAGNIA DI NAVIGAZIONE S.P.A.

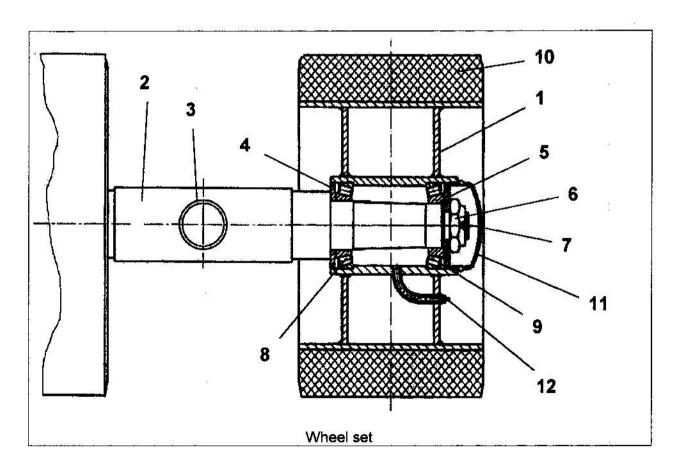
FLEET SERIAL NOS:

18.5m - 100 ton General Cargo Rolltrailer

Grimaldi Fleet Nos :	Serial Nos	
ELGC 105001 - 3	TSC 30159 1	
ELGC 105002 - 0	TSC 30159 - 2	
ELGC 105003 - 4	TSC 30159 - 3	
ELGC 105004 - 1	TSC 30159 - 4	
ELGC 105005 - 5	TSC 30159 - 5	
ELGC 105006 - 0	TSC 30159 - 6	
ELGC 105007 - 6	TSC 30159 - 7	
ELGC 105008 - 1	TSC 30159 - 8	
ELGC 105009 - 7	TSC 30159 - 9	
ELGC 105010 - 0	TSC 30159 - 10	
ELGC 105011 - 6	TSC 30159 - 11	
ELGC 105012 - 1	TSC 30159 - 12	
ELGC 105013 - 7	TSC 30159 - 13	
ELGC 105014 - 2	TSC 30159 - 14	
ELGC 105015 - 8	TSC 30159 - 15	

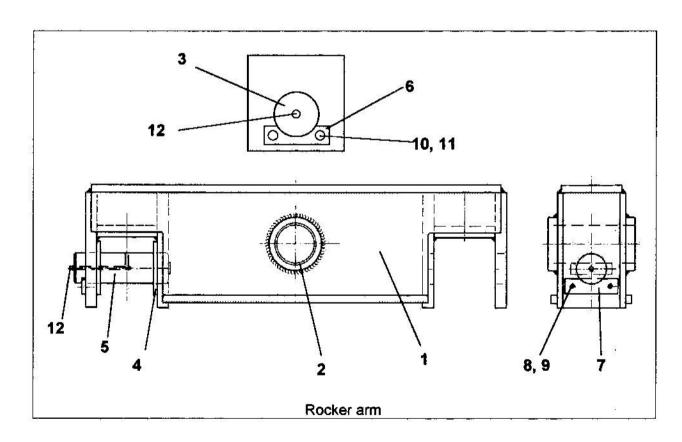
WHEEL SET

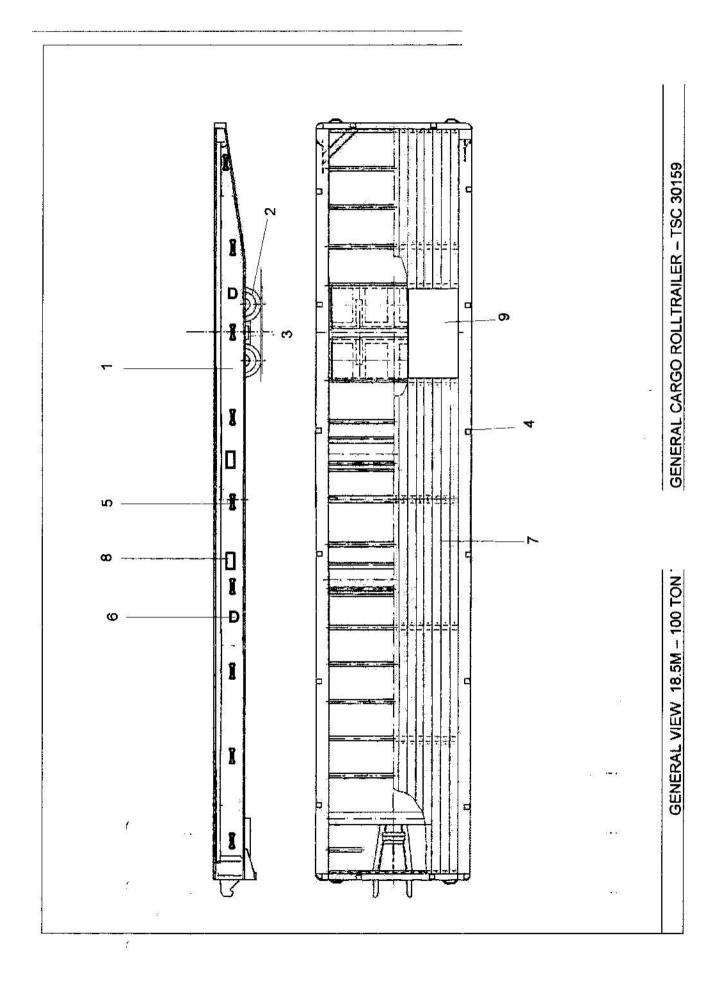
Number of spare part list 0.10.29.6018		IN.	
ltem	Description	Part no	
1	Rim	0.10.29.6018.01	- 33
2	Pendular axle	0.10.29.6018.02	
3	Bushing	0.10.29.6018.03	
4	Disk plate inside with sealing ring	0.10.29.6018.04	8 2
5	Disk plate outside with sealing ring	0.10.29.6018.05	
6	Homed nut	0.10.29.6018.06	
7	Split pin	0.10.29.6018.07	000 700
8	Roller bearing inside	32020	
9	Roller bearing outside	30216	22.
10	Solid rubber tyre	0.10.29.6018.10	
11	Wheel cap	0.10.29.6018.11	
12	Greasing nipple	0.10.29.6018.12	



ROCKER ARM

Number of spare part list 0.06.29. 6035		
Item	Description	Part no
1	Rocker beam	0.06.29. 6035.01
2	Bushing	0.06.29. 6035.02
3	Rocker bolt	0.06.29. 6035.03
4	Disk	0.06.29. 6035.04
5	Axle bolt	0.06.29. 6035.05
6	Retaining plate rocker bolt	0.06.29. 6035.06
7	Retaining plate axle bolt	0.06.29. 6035.07
8	Screw	0.06.29, 6035.08
9	Spring washer	0.06.29, 6035.09
10	Screw	0.06.29, 6035.10
11	Spring washer	0.06.29, 6035.11
12	Greasing nipple	0.06.29, 6035.12





GENERAL ARRANGEMENT DRAWING

See attached drawing no. 03.06.29.6037

SPARE PARTS

GENERAL VIEW

Number of spare part list 0.06.29. 6034		
ltem	Description	Part no
1	Frame	0.06.29.6034.01
2	Wheel set	0.10.29.6018
3	Rocker arm	0.06.29.6035
4	Stanchion pockets	0.06.29.6034.04
5	Lashing	0.06.29.6034.05
6	D-ring	0.06.29.6034.06
7	Wood cover	0.06.29.6034.07
8	Forklift pocket	0.06.29.6034.08
9	Tear plate	0.06.29.6034.09

18.5M - 100 TON

GENERAL CARGO ROLLTRAILER

TSC 30159

How to demount axle

- 1. Lift rear side of trailer by hydraulic jack to the extent that frame weight does not rest on the wheels
- 2. Remove safety plate and axle bolt
- 3. Lift frame further until axle is free from rocker arm
- 4. Shift axle out of the rocker arm
- 5. Lift axle
- 6. Remove hub cap
- 7. Unlock and remove securing pin and axle nut
- 8. Pull out wheel
- 9. Pull out disk plate with sealing-ring

Frame

The frame structure and weldings should be checked regularly in order to prevent major damages. In case of any bending or cracks please contact your supplier.

Lubrication

Greasing point	No	Greasing interval
Rocker arm pins	2	3 months
Axle pins	4	3 months
Hubs	8	6 months

Use multi purpose bearing grease.

SERVICE MANUAL

General

The rolltrailers are of simple and strong construction. The following inspections and maintenance works should be effected within regular periods to assure safe and trouble free operation. Damaged parts have to be replaced. Replaced parts must have the same characteristics as the original part. Preferably buy spares from the manufacturer.

First time inspection

Wheel bearings have to be checked and if necessary readjusted after the first 50 operating hours.

How to readjust wheel-bearing

- · Make sure that trailer is in parking position
- · Lift rear side of trailer so that wheels can be rotated by hand
- Put suitable supports under lifted trailer
- Check wheel: In case of axial movement or not smooth rotation
 - Remove hub cap (warm cap up to appr. 60 °C)
 - Remove split pin from horned nut
 - Tighten homed nut until wheel is blocked
 - Untighten homed nut until wheel rotates free but without any axial movement
 - Refit split pin
 - Refit hub cap (warm cap up to appr. 60 °C)
- No parts forgotten to refit?
- Lower rear side of trailer

Running gear

Make visual inspection of running gear regularly (approx. in 6 months intervals).

Solid rubber tyres

Make visual inspection of tyres within regular intervals (approx. every 1 month).

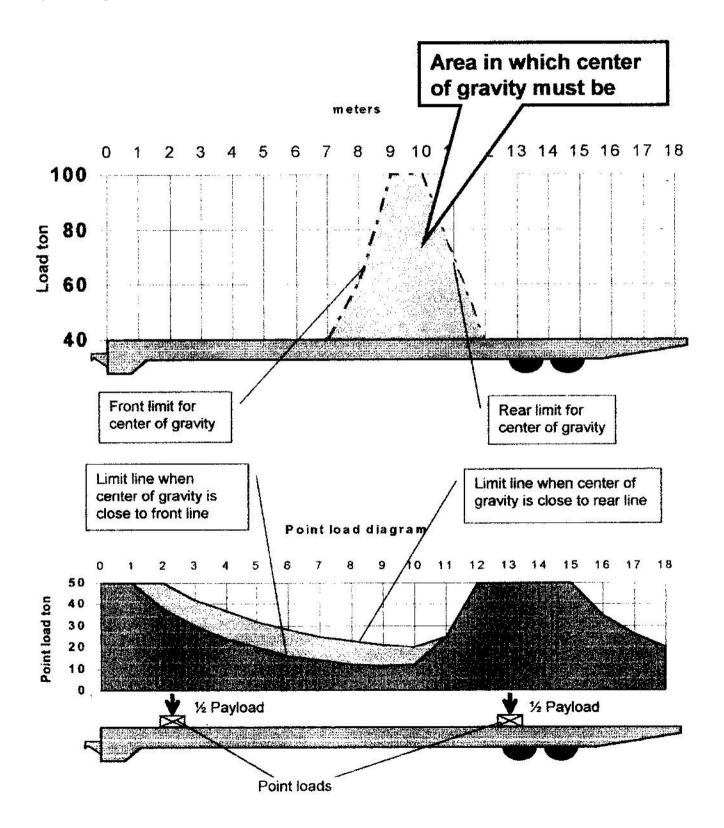
Wheels

Inspect wheels regularly (approx. in 6 months intervals):

- Check wheel rotation
- 2. Check noise, if abnormal then demount wheel and check roller-bearings replace it if necessary
- 3. Check axial movement of wheel. In case of axial movement readjust roller bearings (see above "How to readjust wheel-bearing")

LOADING SCHEME: CENTRE OF GRAVITY

The centre of gravity (COG) of the load must be within the "grey" area as indicated for preventing overload.



RESIDUAL RISK

Danger

Danger of getting crushed during coupling and uncoupling or operation. Persons standing between tractor and trailer during coupling and uncoupling or operation might seriously get crushed.

Before starting with coupling and uncoupling, make sure that nobody is standing within the danger area.

Warning!

Danger when driving over gradients.

Travelling on gradients involves the risk of slipping and tilting, especially when

- trailer is loaded to maximum capacity
- · load has a high centre of gravity
- uneven and/or slippery road surface
- high speed
- sudden braking or speeding up
- travelling across slopes

Travel only on routes sufficiently paved and signposted.

On gradients only travel at reduced speed and with utmost attention. Lift the fifth wheel of tractor not more than necessary to achieve sufficient ground clearance under the trailer front leg.

Observe the maximum permissible payloads.

Warning!

Danger of getting crushed when working under lifted trailer.

Always put strong supports under a lifted trailer before you start any work under the trailer.

Warning!

Risk of injuries because of incorrect operation.

incorrect operation may cause personal and material damages.

Follow all indications stated in these operating instructions concerning operation, inspection and maintenance. In case of doubt always consult experts or your supplier.

OPERATING INSTRUCTIONS

General

The rolltrailer is suitable for handling heavy parcels and miscellaneous cargo.

Loading

- The Rolltrailer may only be loaded up to the specified payload. The load must be placed in accordance with enclosed loading scheme.
- Make sure that the load can not shift

Operation

- The rolltrailer can only be moved by special trucks with an elevating fifth wheel coupling, minimum capacity 30 t and minimum lifting height 800 mm, using a suitable detachable gooseneck with a minimum capacity of 30 tons.
- The trailer is not suitable for transportation of persons
- The roadway should be even and without big obstacles
- · When reversing and the sight is not good use a guide

Coupling

- Reverse the truck with the gooseneck completely lowered, directing the gooseneck toe into the coupling mouth of the rolltrailer
- · Then lift the fifth wheel coupling. The rolltrailer will be coupled automatically
- Make sure that the gooseneck-brackets are firmly engaged with the hooks of the trailer
- Lift until front support of trailer has sufficient ground clearance (100 150 mm)

Speed

Maximum speed of a rolltrailer should not exceed 6 km/h fully loaded and 20 km/h empty.

SPECIFICATION

TSC 30159

18.5M - 100 TON

GENERAL CARGO ROLLTRAILER

Platform length		18500 mm
Platform width		2600 mm
Rear overhang		5000 mm
Platform height	front / rear	ca. 900 / 950 mm

Payload	distributed cargo	100 ton
Tare weight, without gooseneck		ca. 10,5 ton
Fifth wheel load, without gooseneck		27 ton
Total load on running gear		84 ton

No. of pendular axles	4 in 2 axle lines
	on rocker
	beams
No. of wheels	8 pcs

Speed	loaded	6 km/h
	empty	20 km/h

Tyre dimension	solid rubber	22x16x16 inch
Platform cover	wood	50 mm

Lashings	on each long side 13	totally 30 pcs
	front 2, rear 2	
D-ring	on each long side 2	totally 4 pcs
Retractable pins		totally 4 pcs
Stanchion pockets	front 2, per side 10, rear 2	totally 24 pcs
Forklift pockets		totally 2 pcs

Painting	top coat colour similar HEMPEL
	5225

CE CONFORMITY DECLARATION EC-Homologation Declaration

conforming to EC directive on machines 98/37/EEC, Annex II A

Type of machine

18.5m - 100 ton Rolltrailer

Serial Nos: from ELGC 105001 – 3 ELGC 105015 – 8 Operator:

Grimaldi Compagnia di Navigazione S.p.A. 13 Via Marchese Compodisola 80133 Naples Italy

developed, designed and manufactured according to

EC Directives for Machinery (98/37/EG)

The following national standards, directives and specifications have been applied:

DIN EN 287-1

(Re-Welding and Weld Preparation of Steelwork – Part 1)

DIN EN 292

(Safety of Machines, General Rules & General Design Regulations)

The following national standards, directives and specification have been applied: VBG 36