



Meijer Holland

bale handling systems

Limo Hydra

Manual

Bale collector



Content

1. Introduction.....	4
2. Technical specifications.....	5
3. Safety precautions.....	6
4. The functioning of the bale collector	7
5. Installation, starting up, adjustment.....	9
6. Operation and use	11
7. Maintenance	14
8. Problems and solutions	15
9. Environment and disposal.....	16
10. Assembly drawings.....	17
11. Parts.....	18
12. Extra parts	20
CE-Declaration of conformity.....	22

1. Introduction

The bale collector Meijer Holland Limo Hydra is designed to be attached behind a baler in order to collect 8 to 15 straw or hay bales. The Limo Hydra is mechanically powered by the tractor. This manual provides an overview of all the aspects that have to be kept in mind, before, during and after the use of the machine.



It is important to read the manual carefully before using the machine. Should this not be the case, there can be the risk of serious injury or death for the user and damages to the environment. Moreover, there is the risk of damage to the materials or to the machine. Therefore it is essential that you follow the instructions of this manual.

2. Technical specifications

		Limo Hydra 8	Limo Hydra 15M
Lenght	cm	315	350
Width	cm	255	300
Height	cm	100	100
Weight	kg	circa 650	circa 900
Volume flow hydraulic circuit	liter p/min	circa 30-35	circa 30-35
Max. load		8	15
Dimension bales (lxbxh)	cm	105x50x40	85x50x40
Minimum length bale	cm	100	80
Minimum weight bale	kg	15	15
Max. pressure hydraulic circuit	bar	155	155



The Limo Hydra is not optimally working on slopes and on very uneven ground.



With short hay there is a risk of wrapping around the roll.

CE-marking

This machine is certified with the CE-marking. This means that the machine meets the requirements of the applicable EC directives on safety and health. These directives are specified in the attached declaration of conformity.



- The non-observance of the rules and instructions stated in this manual is to be considered as serious negligence which leads to the extinguishment of any liability on the part of Meijer Holland concerning the resulting consequences. In this case, the risk lies exclusively with the user.
- Meijer Holland is constantly improving her products. Therefore she reserves the right to make any change that is considered necessary. There is no obligation to apply these changes to earlier delivered machines.

3. Safety precautions

The following precautions are important to prevent injuries and damages.

1. Read the manual before use.
2. Only experts should use the collector.
3. Use the collector only for bales.
4. It is forbidden to stand on the bale collector or on the roller conveyor at any time.
5. It is not permitted to stand any closer than five metres to the bale collector while it is being operated.
6. Check whether the hydraulic system is working well:
right after mounting
before every use
7. Mind the rules for max. load (chapter 2).
8. Be aware of oil leakage:
 - check the hydraulic hoses and cylinders at least once per day.
9. When the bale collector is attached while driving long distances or on public roads:
mount the warning sign clearly visible to other road users
there should be no bales in the collector!
10. The vehicle has a permitted maximum speed of 25 km/h with the bale collector (10V engine).
11. The driver must be aware of the relevant laws and regulations.

4. The functioning of the bale collector

See the assembly drawings in chapter 10 for the order of positioning of the bales.

1. The first three bales of the Limo Hydra 8 are pushed sideways by the spiral rollers. For the Limo Hydra 15M this applies to the first four bales.
2. The red lever operates the mechanism partially (**photo A, position 1**).
3. The fourth bale (the fifth bale for the Limo Hydra 15M) triggers the second lever completely (**photo A, position**) which unlocks the smaller roller (**photo B**) that folds down for the first time. The first set of bales are now transported to the tailgate.



Photo A — red lever operates mechanism



Photo B — Unlocking smaller roller

4. At the Limo Hydra 8 the plate on the tailgate will be pushed down by the bales after the first set of four bales (**photo C**).
5. At the Limo Hydra 15M the second set of five bales pushes down the flap that is above the roller (**photo D**).



Photo C – tailgate pushed down Limo Hydra 8



Photo D – flap pushed down Limo Hydra 15

The smaller roller will spring back to its idle position. After that, the next set of bales will fill the forward half of the collector. The last bale on the collector will operate the mechanism and consequently the smaller roller will be unlocked. As a result it will fold back again. The smaller roller will now also trigger the tailgate which will tilt backwards. In that moment a hydraulic motor assures that the rollers are turning around at maximal speed so that the bales are discharged quickly and close to each other. When the bales have left the collector, the smaller roller and the tailgate will switch back to their idle position and the process will start from the beginning.

5. Installation, starting up, adjustment



Check if the bale grab is undamaged and in good condition on delivery. Please contact the supplier or Meijer Holland if you notice any damages. Only use the bale collector if it is found to be in good order and after this manual has been read.



Make sure that the baler and the collector stand horizontally.

5.1 Installation

1. Remove the standard platform that is attached to the baler.
2. Drive the tractor up to the collector so that mounting surface of the baler is as close as possible to the mounting point of the bale collector.
3. Make sure that the machines stand on an even ground during the installation of the collector.
4. Mount the supplied platform (**photo E**) to the Limo Hydra.
5. Mount the platform to the baler with the respective pin (**photo F**) and the shore strips. The platform with the shore strips works as a kind of funnel. It assures that the bales fall gradually on the collector and not too close to each other.



Photo E — platform



Photo F — pin for platform

6. See the example for a complete assembly (**Photo G, page 9**).
7. The strips, the platform and pin must always be secured properly.
8. Connect the supply lines and return lines to the baler. The bale collector is supplied with the lines until the press channel. A single acting valve with a unpressurised return flow is required.
9. Check that there is no leakage and that the rollers rotate in the correct way (**Photo H, page 9**).



Photo G — complete assembly Limo Hydra

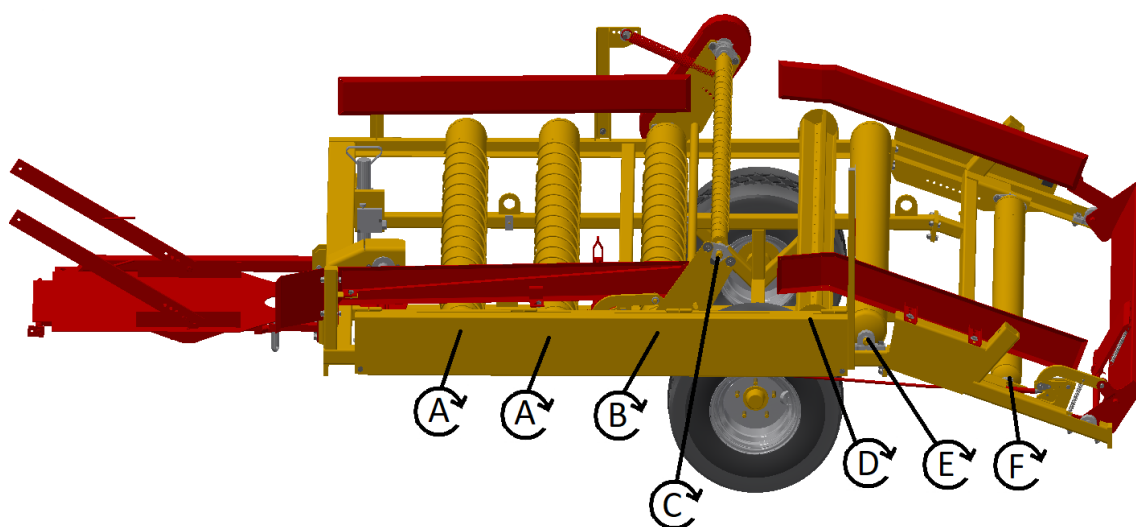


Photo H — rotational movement rollers

6. Operation and use

1. Adjust the bale guides

Before the use, the four red bale guides must be adjusted to the correct width of the bales. Adjust the bale guides in such a way that the device can be operated optimally and that the bales are moving smoothly on the machine. The two front bale guides should be closer to each other than the last ones. This prevents blockage.

2. Adjust flow control valve

The speed of the spiral rollers can be adapted to the capacity of the baler by adjusting the flow control valve (**photo I**). Don't open it completely, as the rollers must be able to rotate faster when the bales are being discharged. This acceleration is powered by the latching valve that simultaneously opens with the tailgate (**photo J**).

3. Adjust spring tailgate

Adjust the spring (**Photo K**) in such a way that the tailgate will spring back to its ideal position after the bales have been discharged. A spring that is too tight can cause the tailgate to close too quickly during the release of the bales, because of this the bales won't be placed in the right position. This may also result in that the tailgate will be launched back too hard in its initial position, in which case it isn't locked properly. Hereby the tailgate will open with four bales in it already. It may also happen that the tailgate doesn't hit the flow control valve, in this case the machine will make the rollers rotate too quickly.

4. Adjust spring smaller roller

Adjust the spring (**Photo L**) in such a way that the smaller roller, after releasing the bales, that will launch back in its starting position. Too much tension on the spring can cause the valve to close during the passing of the bales. Because of this the bales won't be placed in their optimal position on the back part of the Limo, the bales can get jammed in the machine. If there is not enough spring tension the roller won't return in its locked position after releasing the bales, in this case the roller will release the next batch of bales too early.



Photo I – flow control valve



Photo J – latching valve

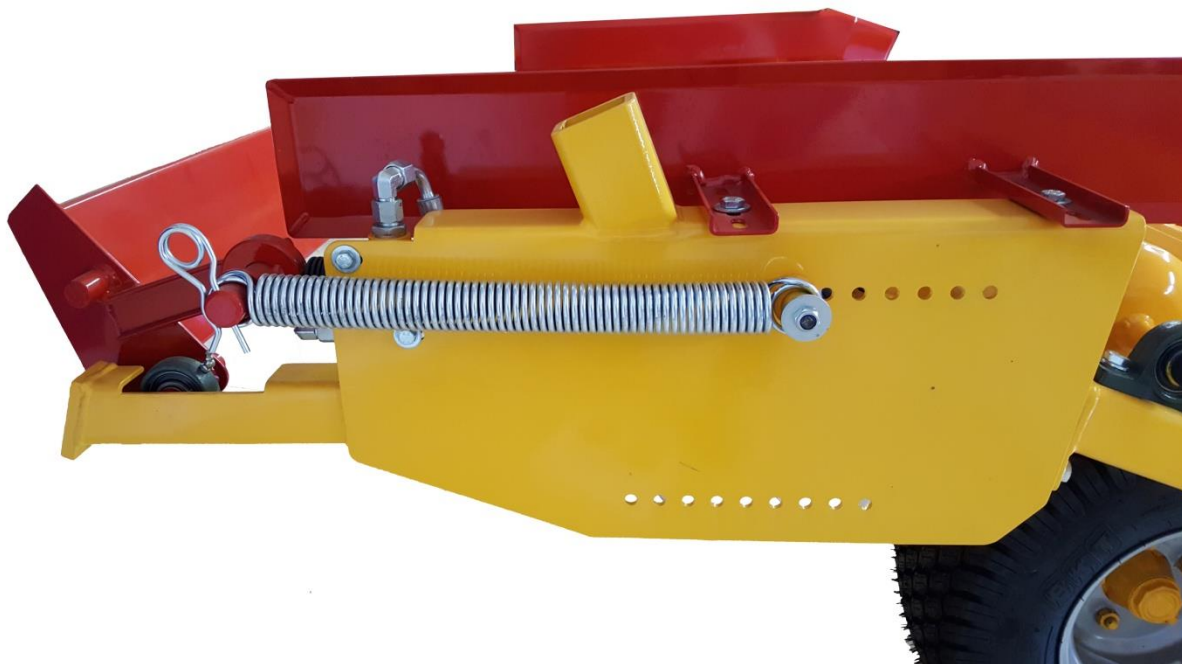


Photo K – spring tailgate



Photo L – spring smaller roller

5. After use

1. Place the bale collector with the tractor on a solid and even ground.
2. Disconnect the hydraulic hoses and check them for leakage.
3. Dismount the junction of the tractor/baler from the bale collector and drive the tractor straight away.



Assure that the bale collector is stored in a dry and clean environment until the next use.

7. Maintenance

Regular maintenance extends the life span and prevents injuries, leakage of hydraulic oil and damages.

Maintenance schedule

Before every use	Check the bale collector for damages and wear. Replace damaged or worn parts immediately.
	Check the hydraulic clutch, hoses and cylinders for leakage, wear and damages. Let problems be fixed immediately by a competent mechanic.
At least once a week	Clean the collector of caked dirt and dust. When using a high-pressure cleaner, avoid the electrical parts.
	Put grease on the grease nipples. At extensive use: after every 8 working hours add a bit of grease (0,86 grams per grease nipple).

8. Problems and solutions

The bale collector is composed by several moveable parts. Repair or replace damaged or worn parts immediately. Spare parts are available at Meijer Holland or at suppliers.



- Hydraulic fluid is a poisonous liquid that is harmful to the environment. Never try to shut a leak with your hand. Fluid under high pressure easily penetrates through skin and clothing and can cause serious injuries.
- Assure that the baler and the tractor are turned off and that turning and moving parts are blocked during repair works. Do this to prevent entrapment.
- In case welding works are performed at the bale collector, assure that the bale collector is completely disconnected from the baler and tractor. If this is not possible, uncouple the battery of the tractor.

Problem	Possible cause	Solution	
The rollers don't move.	The hydraulic circuit of the bale collector is not attached correctly to the hydraulic system of the tractor.	Attach the hoses correctly.	
	Malfunction in the hydraulic system of the tractor.	Consult the manual of the tractor.	
	The rollers are blocked.	Look for the blockade and remove it.	
	Hydraulic leakage.	Look for the leakage and seal it up.	
	The chain is broken.	Replace the chain.	
The tailgate opens to early.	The spring of the tailgate has not enough tension on it.	Adjust the spring (see chapter 6).	
The tailgate close to soon.	The spring of the tailgate has to much tension on it.		
The rollers keep rolling at increased speed.	The tailgate won't reach locked position after releasing the bales.		
The smaller roller tilts back to soon.	The spring of the smaller roller has to much tension on it.		
The bales are released to early.	The spring of the smaller roller has not enough tension on it.		
The bales get jammed.	The bale guides aren't in the right position		Adjust the bale guides (see chapter 6)

9. Environment and disposal

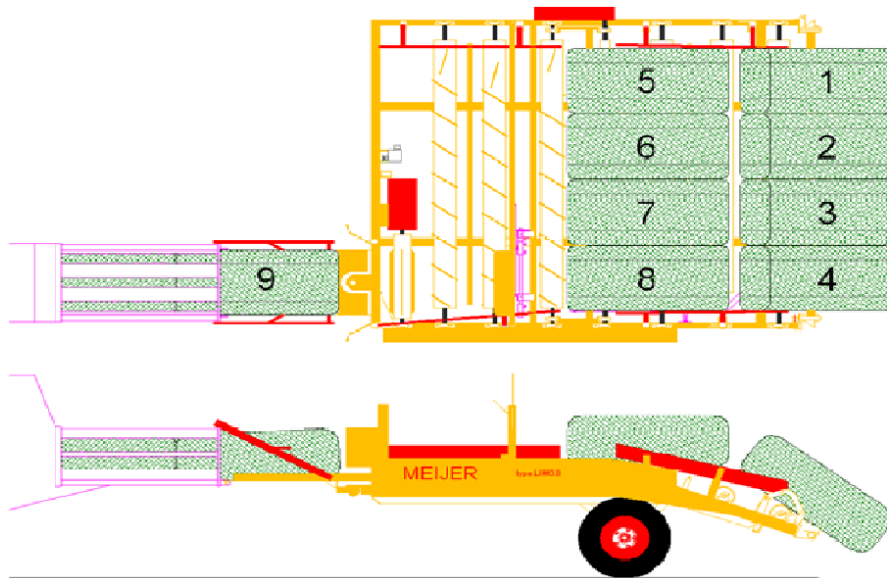
The bale collector has a hydraulic circuit that contains hydraulic fluid, a poisonous liquid that is harmful to the environment. Regularly check the bale collector for leakage and replace damaged or worn parts immediately.

9.1 Disposal of the bale collector

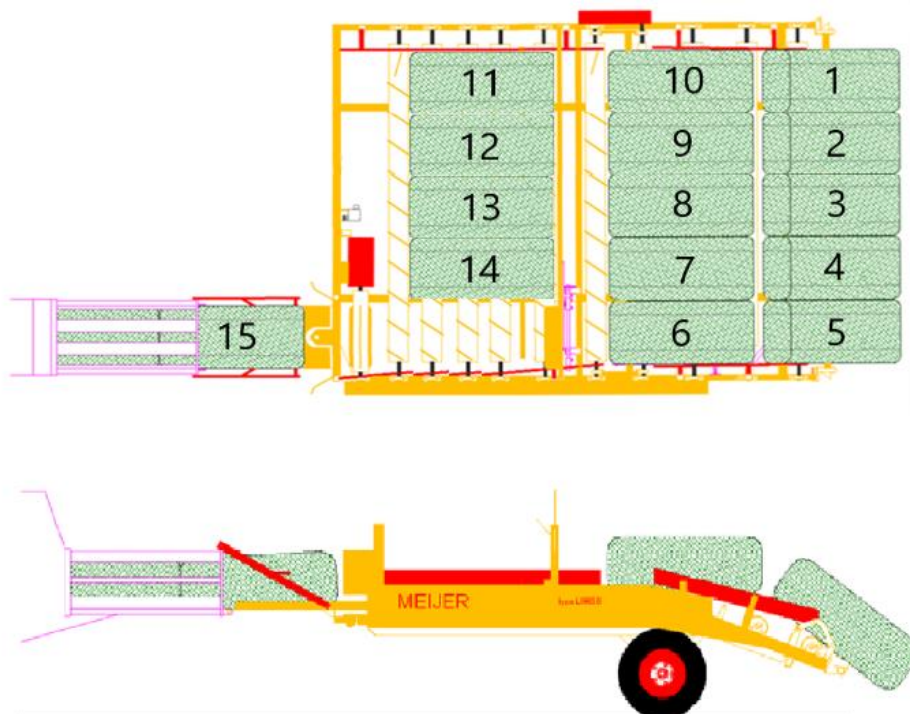
- Drain the hydraulic system and let the fluid be disposed by an authorised company.
- The rest of the bale grab is made of coated steel and can be disposed of as scrap.

10. Assembly drawings

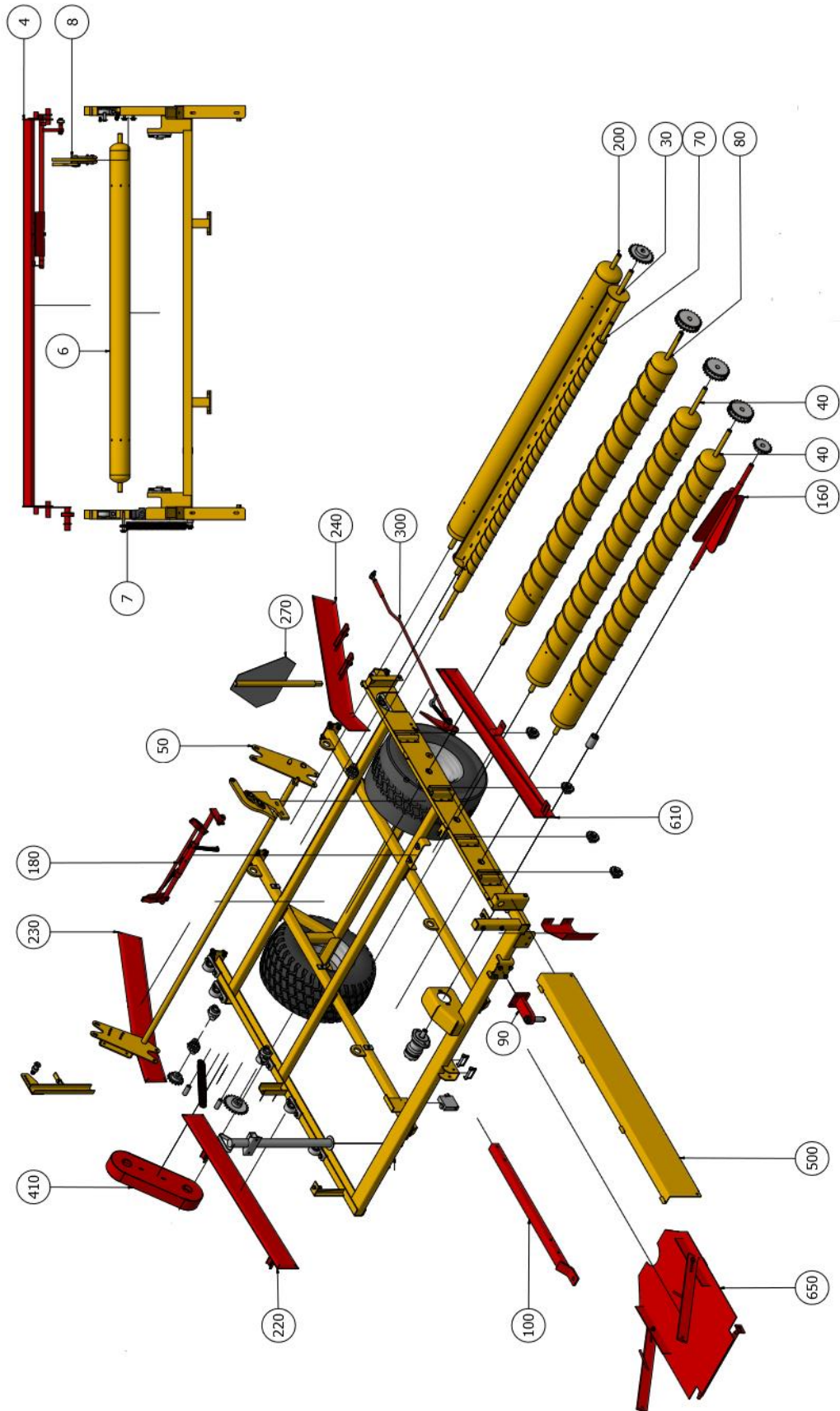
Top/side view Limo Hydra 8



Top/side view Limo Hydra 15



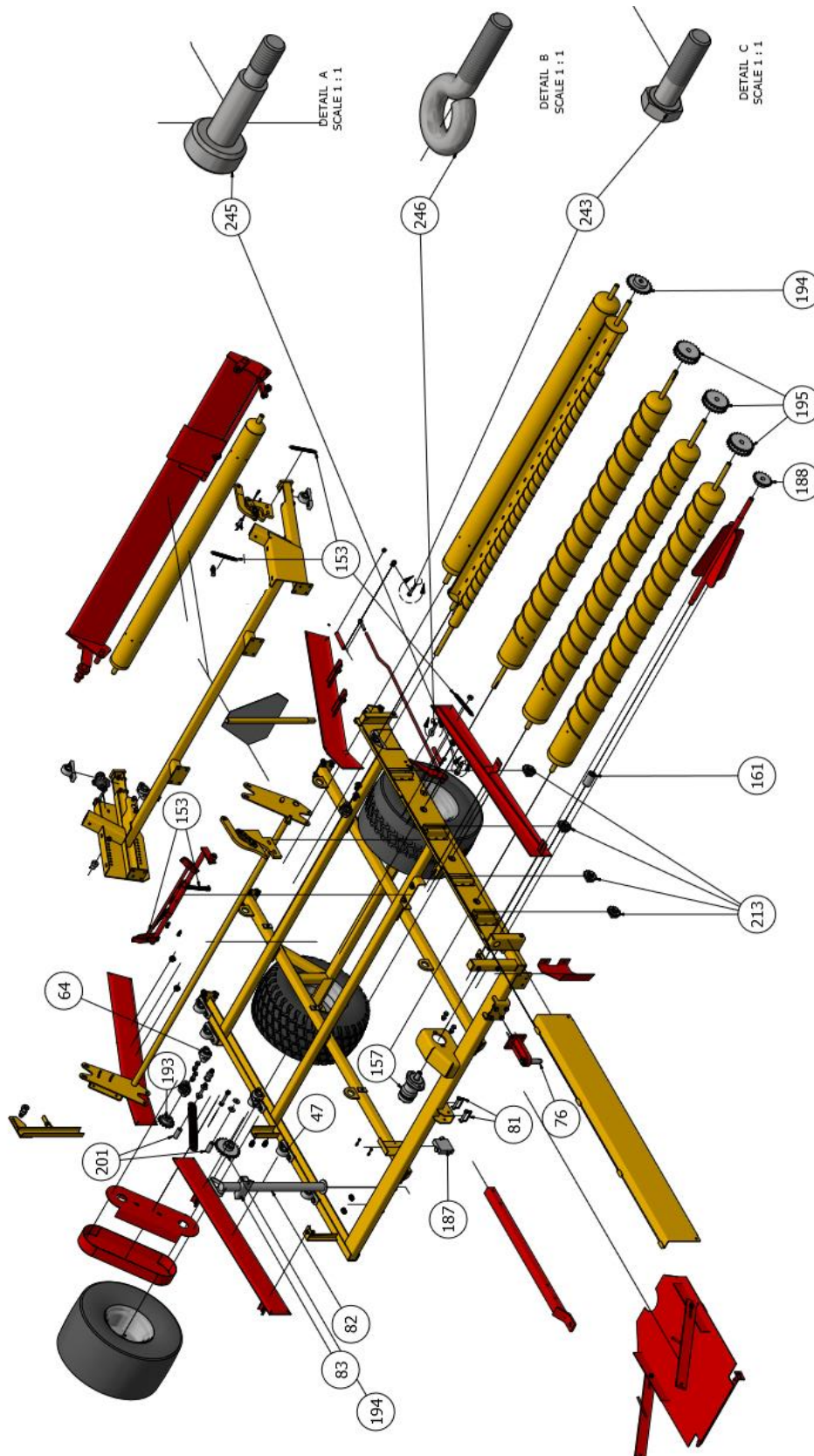
11. Parts



Legend parts

nr.	onderdeel	artikelnummer
4	Tailgate	MHLH10-28
6	roller F	MHLH10-16
7	MH spring Hydra	MHVEER04B
8	Tailgate mechanism	MHLH10-21
30	roller D	MHLH10-18
40	roller A	MHLH10-12
70	roller C	MHLH10-13
80	roller B	MHLH10-14
100	Pull bar	MHLH10-11
160	Rotor blade	MHLH10-17
180	Tilting mechanism	MHLH10-05
200	roller E	MHLH10-15
220	Guide plate right front	MHLH10-01
230	Guide plate right back	MHLH10-02
240	Guide plate left back	MHLH10-04
270	Warning sign	MHLH10-61
300	Shifting rod	MHLH10-30
410	Chain cover right side	MHLH10-23
500	Chain cover gears	MHLH10-24
610	Guide plate left front	MHLH10-03
650	Platform	MHLH10-60

12. Extra parts



Legend extra parts

no.	part	art.no.
47	bearing	MHLH10-58
64	flange bearing	MHLH10-59
76	lower link pin	MHLH10-64
81	closing pin	MHLH10-68
82	stand jack	MHLH10-20
83	wheel jack holder	MHLH10-25
153	galvanized spring	MHVEER13
157	hydro motor	MHLH10-62
161	connecting rod	MHLH10-27
187	flow control valve	MHLH10-63
188	chainwheel z17	MHLH10-65
193	chainwheel z14	MHLH10-53
194	chainwheel simplex z23	MHLH10-66
195	chainwheel duplex z23	MHLH10-67
213	sprocket z14	MHLH10-54
243	M12 hex bolt	BSBT12*040
245	cylinder screw	BSSPAS012
246	eyebolt	BSSFGM8*050

CE-Declaration of conformity

We, Meijer Holland
Bale handling systems
Duinkerkenstraat 11
NL-9723 BN GRONINGEN
The Netherlands

declare under our sole responsibility that:

1. we are the manufacturer of:

MH Limo Hydra 8 (model MHLH08)
MH Limo Hydra 15M (model MHLH15M)

2. the machine complies with the following applicable directives:

Machinery directive	2006/42/EG
EMC-directive	2004/108/EC
LVD-directive	2006/95/EC

3. The machine is designed and constructed according to European standards, including:

- EN 349:1993+A1:2008
- EN 614-1:2006+A1:2009
- EN 614-2:2000+A1:2008
- EN-ISO 4413:2010
- EN-ISO 12100:2010

The electrics, hydraulic and the control section are the responsibility of the customer.

Groningen, 18 May 2018

J.F. Lommerts, *director*