



Meijer Holland

bale handling systems

Limo Hydra 8, 12M, 15M

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	8
6. Operation and use.....	10
7. Maintenance.....	13
8. Problems and solutions	14
9. Environment and disposal	15
10. Assembly drawings.....	16
11. Parts.....	17
12. Extra parts.....	19
CE-Declaration of conformity.....	21

1. Introduction

The Meijer Holland bale collectors of the 'Limo Hydra' type are designed to be attached behind a baler in order to collect 8, 12 or 15 straw or hay bales. The Limo Hydra is hydraulically powered from 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. There could be a risk of serious injury or damage to the environment if the bale collector is not used properly. Moreover, damages to the material or to the machine might occur. It is therefore important to follow the instructions of this manual.

2. Technical specifications

Features		Limo Hydra 8	Limo Hydra 12M	Limo Hydra 15M
length	cm	320	350	360
width	cm	273	255	300
height	cm	155	100	110
weight	kg	600	750	900
volume hydraulic circuit	ltr p/min	circa 30-35	30-35	circa 30-35
max. load		8	12	15
dimension bales (lxwxh)	cm	105x50x40	85x50x40	85x50x40
minimum length bale	cm	100	80	80
minimum weight bale	kg	15	15	15
max. pressure hydraulic circuit	bar	180	180	180



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



Using short hay might cause 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. It therefore reserves the right to make any changes and improvements it deems 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 (dis)mount the collector to the vehicle.
3. Only experts should operate the collector
4. Use the collector only for bales.
5. Do not stand on the bale collector or the roller conveyor – this is dangerous
6. Immediately after installation and before each use, check whether the hydraulic system is working properly.
7. Connect the mounting platform to the baler according to the instructions (chapter 5)
8. Follow the instructions for installation and adjustment (chapter 5).
9. Follow the instructions for use (chapter 6).
10. The working area of the machine is five meters:
 - no persons are allowed within that range!
11. Mind the rules for maximum load (chapter 2).
12. Be aware of oil leakage:
 - check the hydraulic hoses and cylinders at least once a day.
13. Replace damaged or worn wires and cylinders immediately.
14. Follow the instructions for maintenance (chapter 7).
8. Check whether the hydraulic system is working well:
 - right after mounting
 - before every use
15. When driving long distances or driving on a public road:
 - mount the warning sign clearly visible to other road users
 - no bales are permitted in the collector!
16. The maximum permitted speed of the vehicle with the bale collector is 25 km/h. (10V engine).
17. When reversing:
 - make sure that there are no people behind the vehicle
18. 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 and the Limo 12M 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 2**) which unlocks the smaller roller (**photo B**) This will now folds down for the first time and the first series will move towards the tailgate.



Photo A — red lever operates mechanism



Photo B — Unlocking tilt roller

4. With the Limo Hydra 8, after the first series of four bales, the plate on the tailgate is pressed down by the bales. (**photo C**).
5. With the Limo Hydra 12M and 15M the second series of four or five bales pushes down a flap that is above the roller (**photo D**).



Photo C – pressing the tailgate Limo Hydra 8



Photo D – pressing the flap Limo Hydra 15M

6. The tilt roller springs back into its rest position. Then the last series of bales fills the front half of the collector. The last bale on the collector operates the machine, causing the tilt roller to unlock again. This causes the tilt roller to fold backwards again. The tilt roller now also operates the tailgate, which folds backwards. At that moment, a hydraulic motor rotates the rollers at maximum speed, so that all bales are unloaded quickly and close to each other. Once the bales have been released, the tilt roller, automatic transmission and tailgate return to their rest position and the process starts all over again.

5. Installation, starting up, adjustment



Check if the bale collector is undamaged and in good condition on delivery. Please contact 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 using a pin (**photo F**) and the associated 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 — mounting pin for platform

6. See the example for a complete assembly (**photo G**).
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 an unpressurised return flow is required.
9. Check that there is no leakage and that the rollers rotate in the correct way (**photo H**).



Photo G — complete assembly Limo Hydra

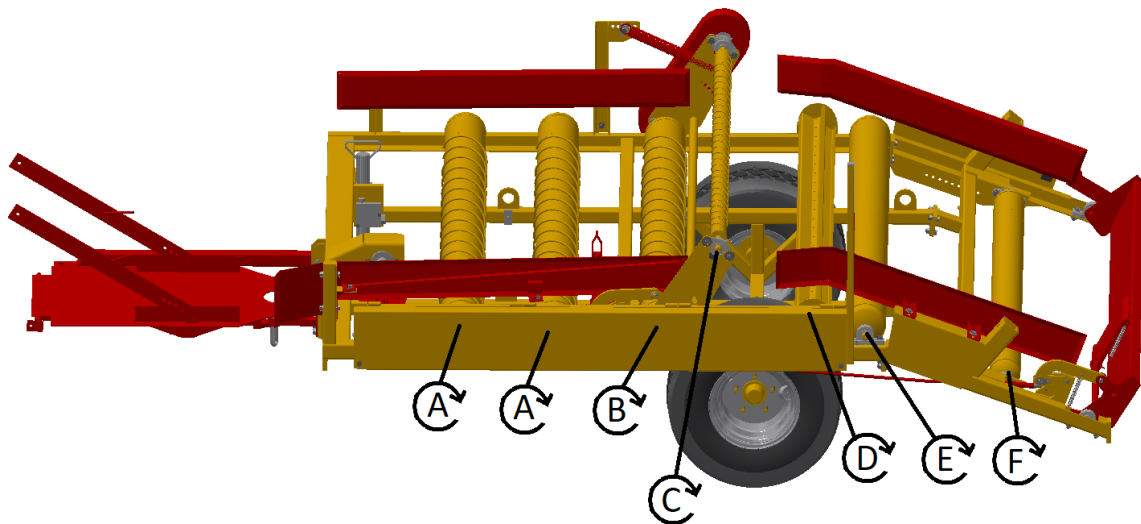


Photo H — rotational movement rollers

6. Operation and use

6.1 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.

6.2 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**).

6.3 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.

6.4 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

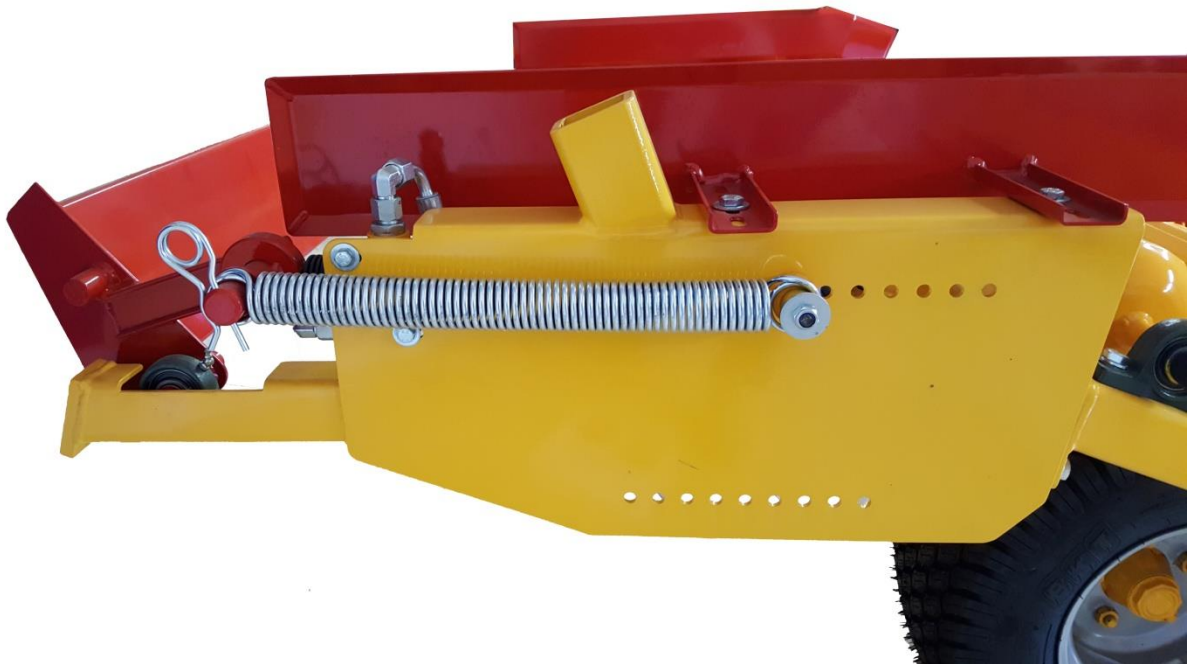


Photo K – spring tailgate



Photo L – spring smaller roller

6.5 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 eight 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 too 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 too soon.	The spring of the smaller roller has too much tension on it.	
The bales are released too 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	

9. Environment and disposal

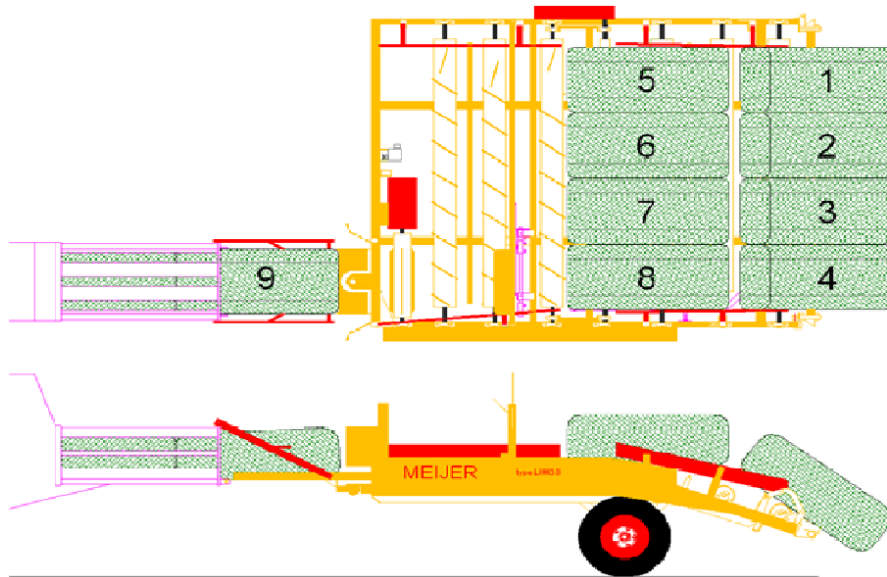
The bale collector has a hydraulic circuit that contains hydraulic fluid, a poisonous liquid that is harmful to the environment. Regularly check the bale collector for leakage and replace damaged or worn parts immediately.

9.1 Disposal of the bale collector

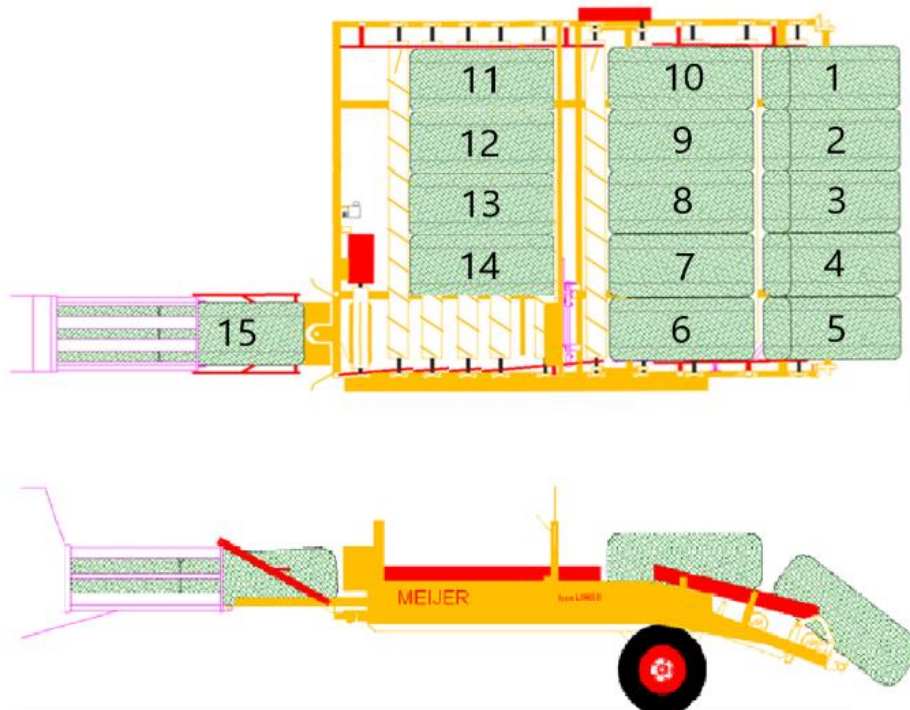
- Drain the hydraulic system and let the fluid be disposed by an authorised company.
- The rest of the bale collector is made of coated steel and can be disposed of as scrap.

10. Assembly drawings

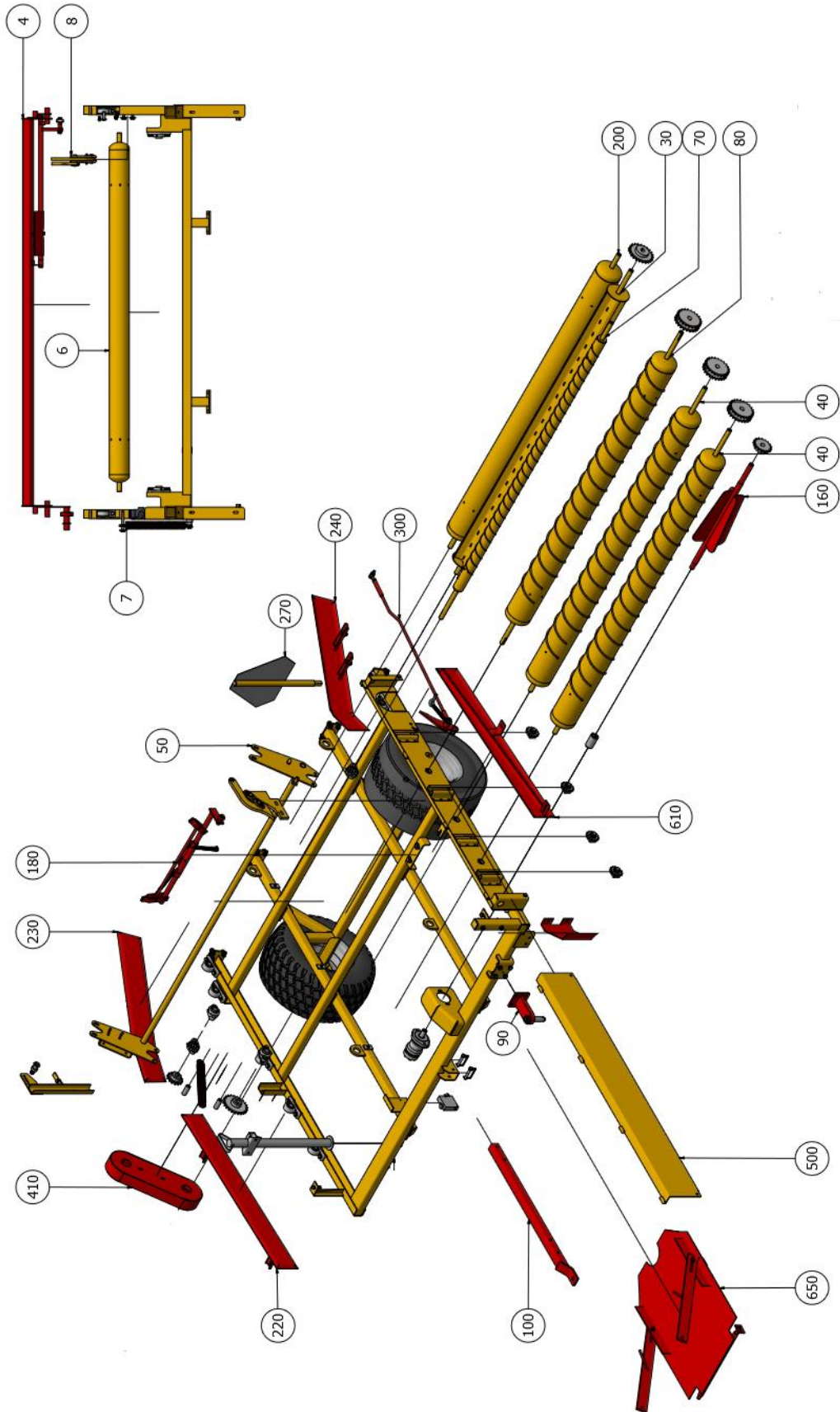
Top/side view Limo Hydra 8



Top/side view Limo Hydra 15



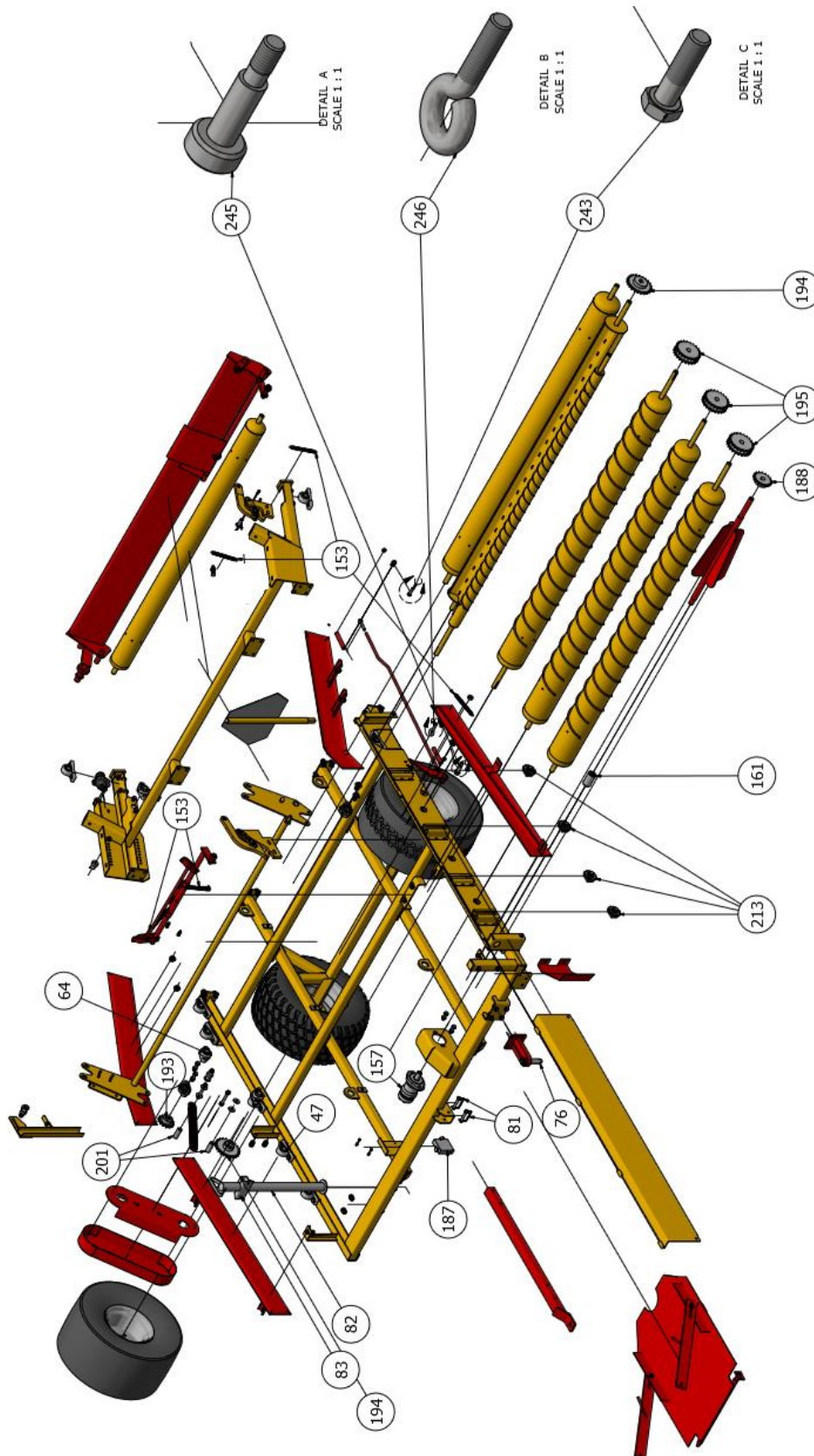
11. Parts



Legend parts

nr.	part	article number
4	tailgate	MHLH10-28
6	roller F	MHLH10-16
7	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 shaft with blades	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	plattform	MHLH10-60

12. Extra parts



Legend extra parts

no.	part	article number
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	shoulder screw	BSSPAS012
246	screw eye	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 12M (model MHLH12M)
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, the hydraulic and the control section are the responsibility of the customer.

Groningen, 18 May 2018

J.F. Lommerts, *director*