KEENAN

an Alltech company

Operators Manual

KEENAN MechFiber345+ & 365+

Effective from models MF345N115 and MF365N115

Revision B01 April 2022 EN

CONTENTS

Contents: MechFiber345+ and 365+ service and maintenance section

The MechFiber345+ and 365+ operator's manual presents information on model-specific maintenance, specifications and spare parts.

Part 1: Service and maintenance, MechFiber345+ and 365+ models

1 Introduction

1.1 Purpose of this manual

This manual has been designed to present the specific information you need to operate and maintain the KEENAN MechFiber345+ and 365+ models. Further information on general service and maintenance is included in the general KEENAN MechFiber operator's manual.

> ⚠ **WARNING:**
> **Prior to carrying out any maintenance on the machine, always ensure that the tractor engine is stopped, and disconnect the P.T.O. and hydraulic hoses from the tractor. Observe safety precautions at all times when working on the machine. Read Section 4 in the general machine information manual on safety before attempting to work on the machine.**

1.2 Maintenance checklist

Daily	
Cleaning:	Clean all old feed from around the body to prevent corrosion and damage to the paint.
VFC-door:	Before using the machine, check that the door opens and shuts fully and operates smoothly.
Wheel nuts:	Check the torque settings.
Oil sump:	Check the oil level, and replenish with Total/Finol Chainac MP oil as required.
Weekly (40 hours)	
PTO input shaft:	Grease the universal joints (two fittings) and the sliding half shafts (smear grease on surfaces). For further information, please refer to the PTO Maintenance Booklet supplied with the PTO.
Drive (gear) box:	Grease the drive input-shaft bearings (two fittings).
Rotor bearings:	Grease the front and rear rotor bearings (two fittings).
Feed discharge auger:	Grease the front and rear auger bearings (two fittings).
Idler shaft:	Grease the front and rear idler shaft bearings (two fittings).
Drive chains:	Check the condition of the primary and secondary chains.
Chain tensioners:	Grease the pivot points on the primary and secondary chain tensioner mechanisms.

VFC-door:	Grease the door's hydraulic cylinders (four fittings) and the slide plates (smear food-grade grease on surfaces). The recommended grease is Ceran FG, supplied by TOTAL Lubricants, or similar food and feed industry-grade grease.
Chassis:	Grease the hitch pivot tube (where the swivel hitch is fitted).
Single axle:	Grease all six pivot points listed below: - Two on each brake rod (four in total) - One on each brake arm (two in total)
Tandem axle (if fitted):	Grease all 14 pivot points listed below: - Two on each brake rod (eight in total) - One on each brake arm (four in total) - One on each spring bogie pivot pin (two in total)
Axle U-bolts:	Check axle U-bolt torque settings (tandem only).
Tyres:	Check that tyres are inflated to the recommended pressures, and make sure the wheel nuts are tight.
Monthly	
Bale handler:	Grease each tine pivot and check the tines for looseness. Check tine buffers for cracks, splits or degradation.
Yearly (end of season or 450 hours)	
Drive system:	Open oil bath drain bung and drain off existing oil. Wash off all dirt and old oil using paraffin, then dry. Refill bath with new oil to required level (see Section 1.5) and run machine for 5 to 10 minutes to ensure that all chains have been lubricated.
Overall machine:	Before storage, wash the complete machine, then grease or oil all weekly lubrication points as outlined above. Open the drain bung in the mixing hopper. Check tyre pressures. Store the machine under a cover or tarpaulin, if possible.
Electronic weigh-box:	If the machine is to be stored, remove the weigh box unit from the machine and keep it in a dry place. Lightly grease the load cell cable connector end and place it into a plastic bag.
Wheels:	Remove and inspect wheel hub. Replace worn parts, redress and re-fit.
Blades:	Blades need to be kept sharpened. This will have to be done without taking the temper from (i.e., overheating) the blades. If the machine is operated with blunt blades, it will place major stress on the drive system. Blades may have to be replaced when it is not practical to sharpen them.

Table 1: Maintenance checklist

WARNING:

Due to hazards involved in entering the mixing chamber, it is recommended that all blade replacement is carried out by a KEENAN-authorized service agent who is specially trained to do so. Contact your local agent (see back cover for details).

1.3 Chains

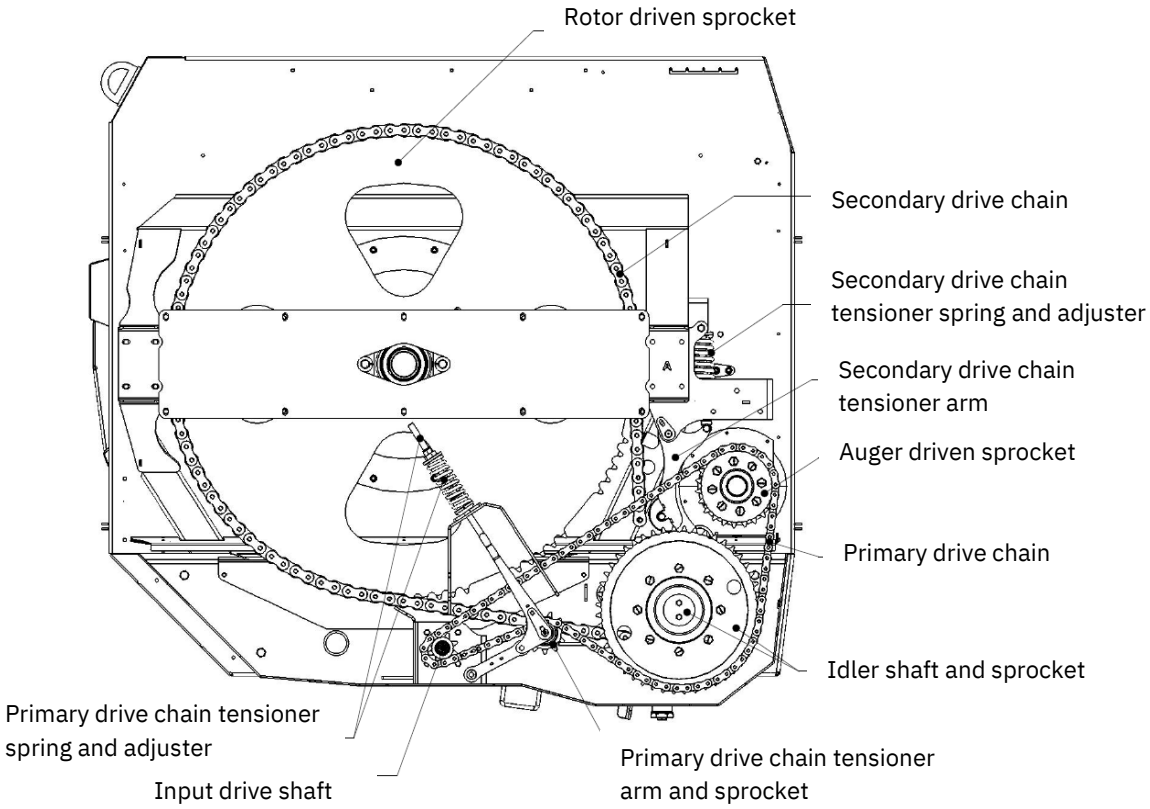


Figure 1

Each week, check the condition of the chain tension arms and adjust as required. There are two chains used on the KEENAN MechFiber345+ and MechFiber365+ models. The primary drive chain (ASA120) drives the idler shaft and the auger shaft from the input shaft (see Figure 2), and the secondary chain (ASA160SH) drives the rotor. Both chains are tensioned by spring assemblies on the slack side of the chain.

Primary drive chain	ASA120
Links	92 (including joiner)
Pitch (mm)	38.1
Pitch (inches)	1.5”
Chain length (mm)	3,505
Chain length (inches)	138
Rotor drive chain	**ASA 160**
Links	120 (including joiner)
Pitch (mm)	50.8
Pitch (inches)	2”
Chain length (mm)	6,096
Chain length (inches)	240

Table 2: MechFiber345+ and MechFiber365+ drive chains

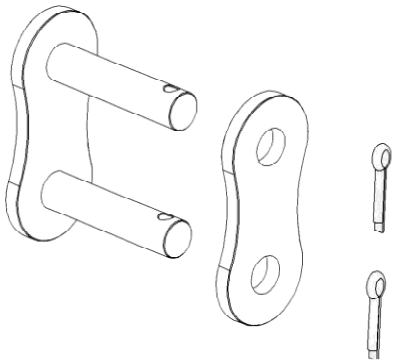


Figure 2: Chain joiner link

Note: *The ASA120 chain uses split pins in the joiner link, as shown, while the ASA160SH chain uses roll pins due to the high loads involved.*

CAUTION:

- Failure to maintain oil on the chains may reduce their working life by 90%. Chain damage is not covered by factory warranty. See the warranty section for more details.

  It is also essential to monitor and maintain the required chain tension. Chain tension is adjustable for both the primary and secondary chains. (See section on chain tensioning.)

CAUTION:

- For the first month of ownership (i.e., during the chain bedding-in period), it is recommended to check chain tension daily. (See section on chain tensioning.)

1.4 Oil level

The oil reservoir (or sump) is located on the left side of the drive system. Each day, check the level of the oil reservoir. Before checking the oil level, ensure that the machine is sitting level (both front to rear and left to right). An oil-level viewing window has been fitted to the front panel of the drive system and can be viewed through a recess in the lower face of the left-side front cover. The recommended oil level should be midway along this window. This represents 20 litres of oil in the sump. The minimum level is -15 mm from the centre, which represents an oil level of 14 litres in the sump. The maximum level is +15 mm from the centre, which represents an oil level of 26 litres in the sump.

If the oil level is low, top it up with chain-bar oil (the properties of which allow it cling to the chains longer). Use Total/Finol Chainac MP if available or a suitable equivalent (volumetric mass of 879 kg/m^3 @ 15°C and viscosity rating of 150mm^2/s @ 40°C). Do not use grease on the chains, as it is unsuitable for the application and will not allow for the lubrication of the vital internal parts of the chain.

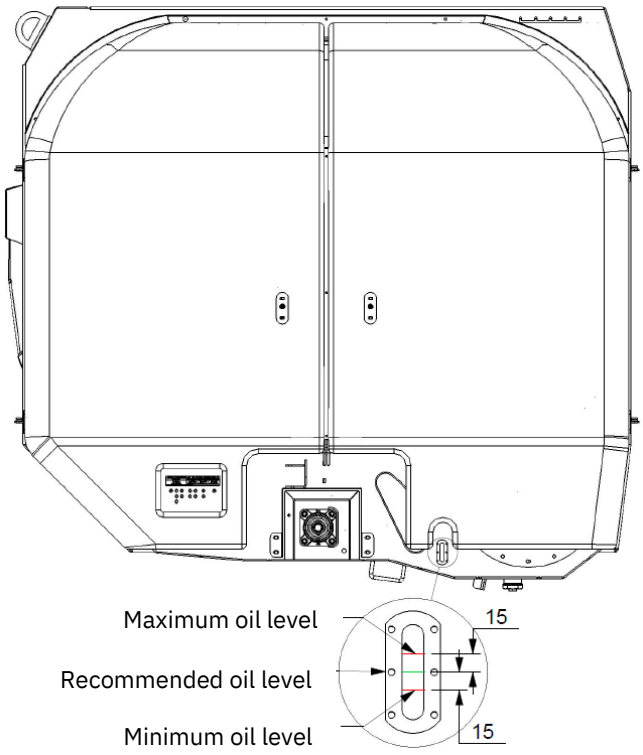


Figure 3

1.5 Chain tensioning

With use, the drive chains will extend slightly over time. To compensate for this, all KEENAN MechFiber machines are fitted with a tensioner mechanism on the slack side of the chain. The primary chain tensioner comprises a linear tension arm, which is held in position with a lower connecting arm. A pull rod at the top of the tensioner arm passes through a shoulder plate on the drive system housing. Tension is achieved by use of a compression spring seated above the shoulder plate. The preload can be adjusted using the threaded upper spring seat.

The rotor chain tensioner comprises a pivoting tension arm connected to a compression spring strut. The preload can be adjusted using the threaded upper spring seat. In order to prevent the chain from jumping and premature wear, the chain must be held at the correct preload tension at all times and should be checked weekly.

1. Setting tension on the primary chain

The primary chain preload tension is set by adjusting the upper spring seat above the tensioner arm. The spring assembly is fitted with an adjustment indicator, which uses the upper edge of the spring as its marker. When it aligns with the green or “OK” portion of the decal, then the tension is set correctly and does not require adjustment. But if the upper edge of the spring is outside of this section or in the red, then adjustment is required. The decal arrow indicates the direction in which to adjust.

The upper spring seat is an internally threaded sleeve that sits on the guide shaft. It has a shoulder for the spring to sit against and a 40-mm A/F hexagon section at the top for adjustment. A standard M20 nut is used to lock the seat in position.

To adjust, first remove the two wrenches from their storage location on the front right face of the drive system reduction gearbox (see Figure 4).

Swing the tensioner indicator downwards to allow full access to the spring seat nuts. Using the 40-mm wrench and the 30-mm wrench, open the locknut (top nut) and screw clear of the spring seat. The spring seat can now be adjusted up or down to set the compressed length to 165 mm (its free length is 200 mm). The upper edge of the spring should now be positioned in the centre of the green section of the indicator. This provides the correct tension of approximately 70 kg to the chain. To lock the setting, hold the spring seat in position with the 40-mm wrench and tighten the locknut against it with the 30-mm wrench.

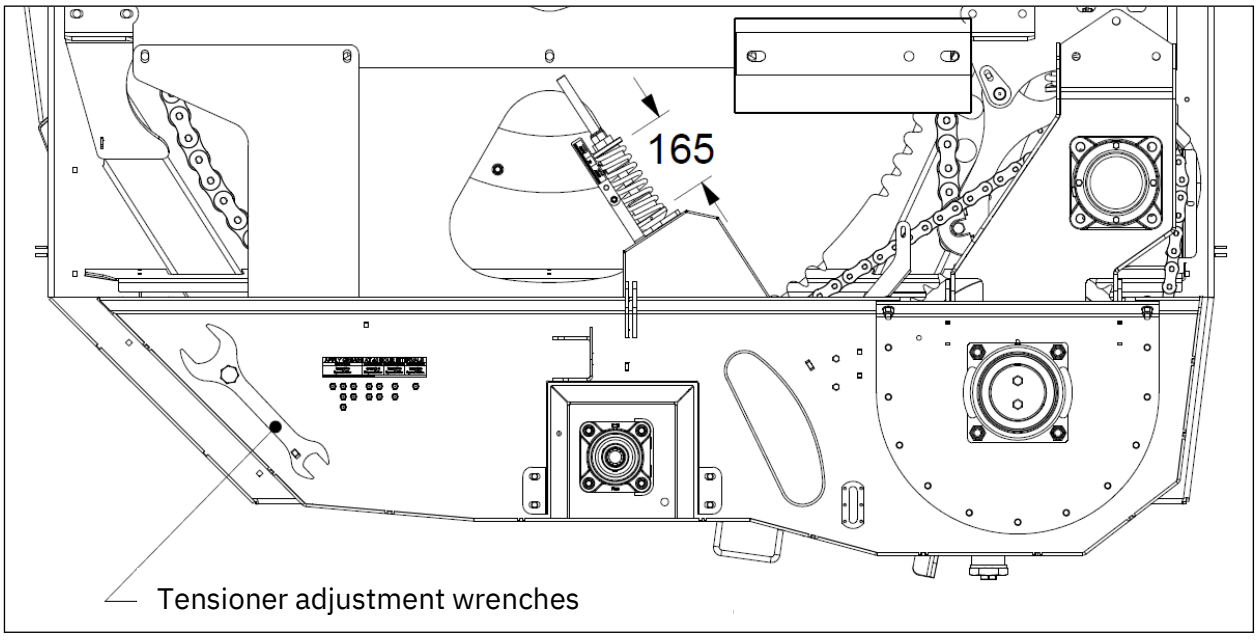


Figure 4: Storage position of tensioner adjustment wrenches and primary chain tensioner spring setting

2. Setting tension on the secondary chain (rotor chain)

The tension is set by adjusting the upper spring seat above the tensioner arm. The spring assembly is fitted with an adjustment indicator that uses the upper edge of the spring as its marker. When it aligns with the green or “OK” portion of the decal, then the tension is set correctly and does not require adjustment. But if the upper edge of the spring is outside of this section in the red, then adjustment is required. The decal arrow indicates the direction in which to adjust.

The upper spring seat is an internally threaded sleeve that sits on the guide shaft. It has a shoulder for the spring to sit against and a hexagon section at the top for adjustment. A similarly sized hexagon nut is used to lock the seat in position.

To adjust, first remove the two wrenches from their storage location on the front right face of the drive system reduction gearbox.

Swing the tensioner indicator downwards to allow full access to the spring seat nuts. Using the wrenches, open the locknut (upper nut) and screw clear of the spring seat. The spring seat can now be adjusted up or down to set the compressed length to 250 mm (its free length is 280 mm). The upper edge of the spring should now be positioned in the centre of the green section of the indicator. This provides the correct tension of approximately 360 kg to the chain. To lock the setting, hold the spring seat in position with one of the wrenches and tighten the locknut against it with the other.

It is recommended to check the tension weekly in the first few weeks of operation, as the chain, sprockets and tensioner “beds in” and may need to be adjusted

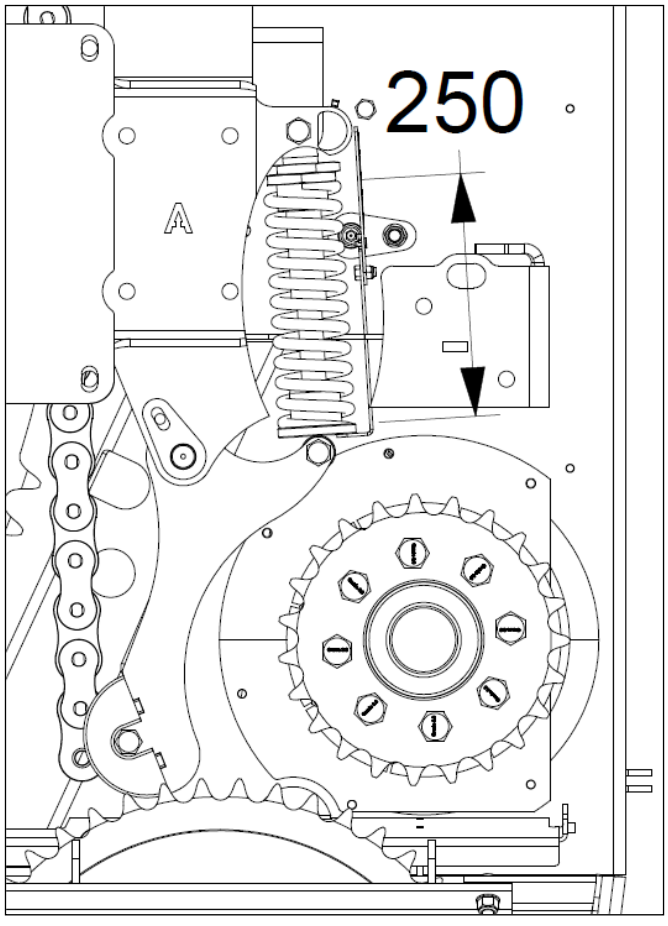


Figure 5: Secondary chain tension spring setting

1.6 Greasing

The KEENAN MechFiber345+ and MechFiber365+ are fitted with a 13-port central greasing manifold as standard, located at the right side of the machine on the inside front cover. It allows for the greasing of all the inaccessible grease points of the drive system of the machine from that one location.

An instruction decal is fitted above the manifold detailing the greasing interval (40 hours) and the amount of grease to be applied to each point (see below). All other bearings and pivot points not serviced by this manifold should receive 3 cc (5 g/0.175 oz) of grease at the same 40-hour intervals.

Apply grease at 40-hour intervals			
Pivot points 3 pumps/3 cc 5 grams/0.175 oz	**Large bearings** 4 pumps/4 cc 7.2 grams/0.26 oz	**Medium bearings** 3 pumps/3 cc 5 grams/0.175 oz	**Small bearings** 1 pump/1 cc 2 grams/0.035 oz
Note: One pump/stroke of a manual grease gun typically produces 1 cc of grease			

Figure 6: Central greasing manifold instruction decal

1. Bearings

After every 40 hours of operation, apply grease to all bearings through the grease fittings. These are as follows:

Grease point 1	Input shaft bearing (front)	See Figures 7 and 8
Grease point 2	Input shaft bearing (rear)	See Figures 7 and 8
Grease point 3	Idler shaft bearing (front)	See Figures 7 and 8
Grease point 4	Idler shaft bearing (rear)	See Figures 7 and 8
Grease point 5	Auger bearing (front)	See Figures 7 and 8
Grease point 6	Rotor bearing (front)	See Figures 7 and 8
Grease point 7	Primary drive tensioner sprocket	See Figures 7 and 8
Grease point 15	Rotor bearing (rear)	See Figure 9
Grease point 14	Auger bearing (rear)	See Figure 9

2. Pivot points

After every 40 hours of operation, apply grease to the following pivot points through the grease fittings.

Grease point 8	Primary chain tensioner compression spring seat	See Figures 7 and 8
Grease point 9	Rotor drive tensioner arm pivot	See Figures 7 and 8
Grease point 10	Rotor drive chain tensioner strut lower pivot bush	See Figures 7 and 8
Grease point 11	Rotor drive chain tensioner strut Upper pivot bush	See Figures 7 and 8
Grease point 12	Rotor drive chain tensioner spring seat shaft	See Figures 7 and 8
Grease point 13	VFC-door ram top pin (front)	See Figures 7 and 8

Grease point 16	VFC-door ram top pin (rear)	See Figure 9
Grease point 17	VFC-door ram lower pin (rear)	See Figure 9
Grease point 18	VFC-door ram lower pin (front)	See Figure 9

3. **VFC-door**: Check that the VFC-door is able to move freely each day, and grease it as appropriate.

4. **PTO drive shaft**: Refer to the PTO operators' manual for greasing instructions and recommendations.

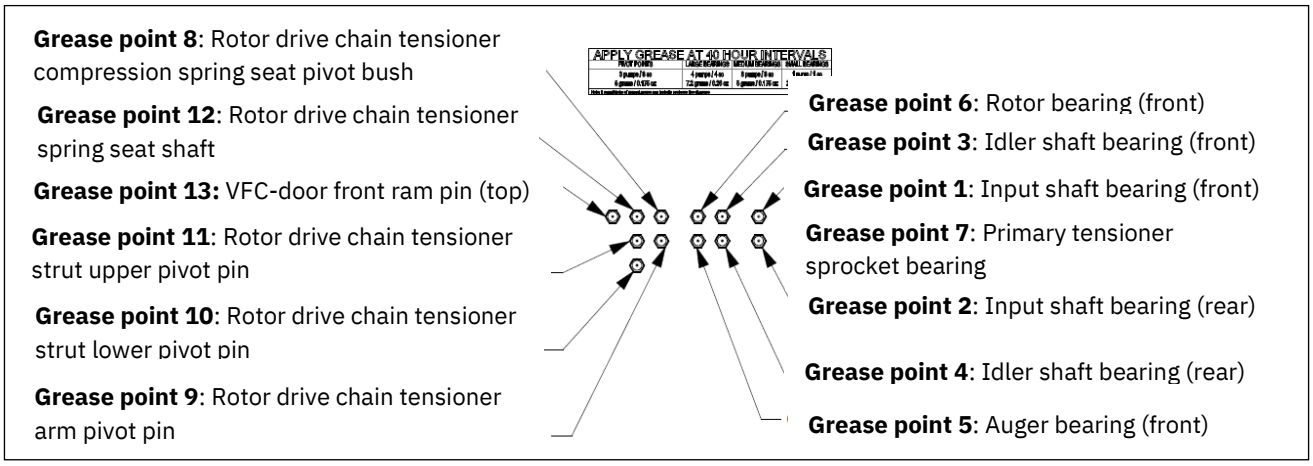


Figure 7: Grease points on central greasing manifold

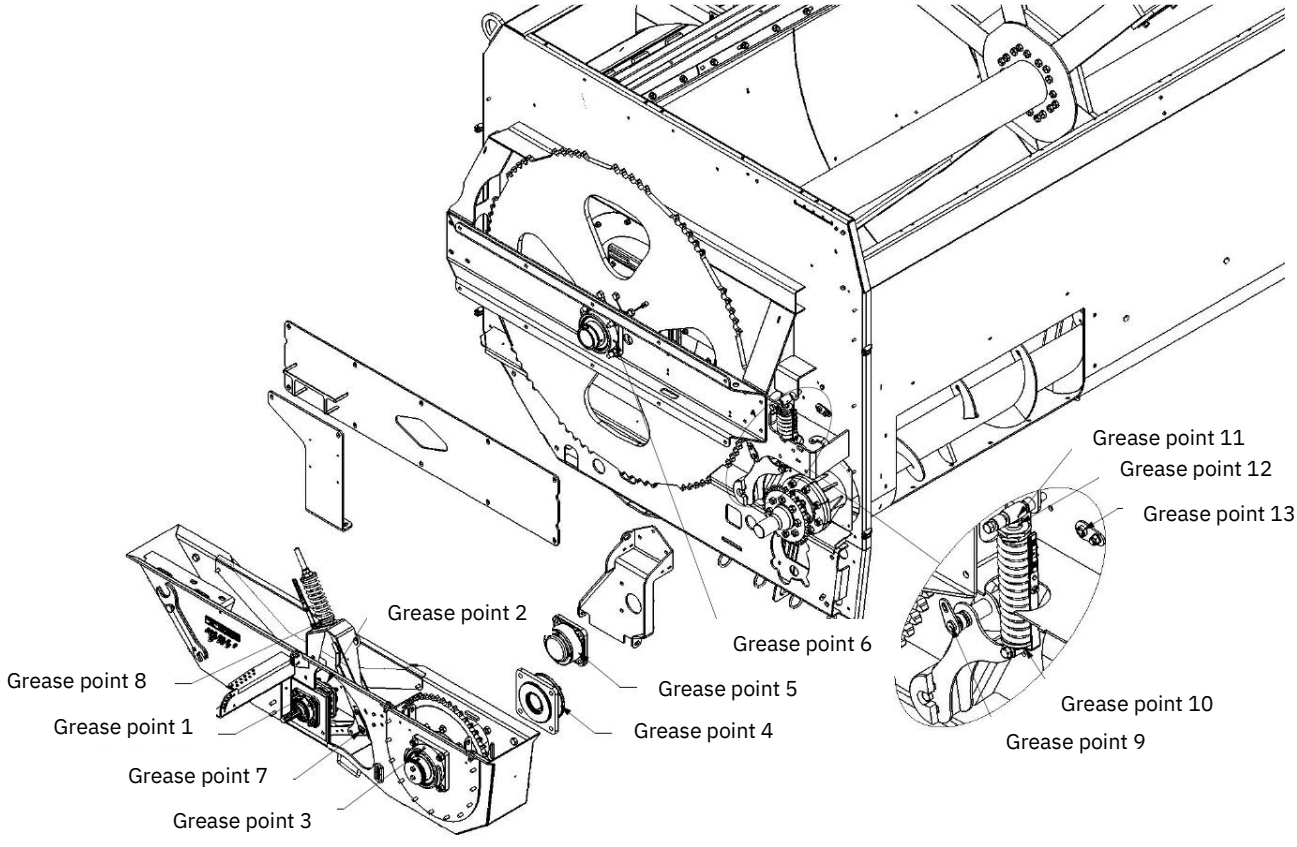


Figure 8: Drive system bearings and pivot grease points

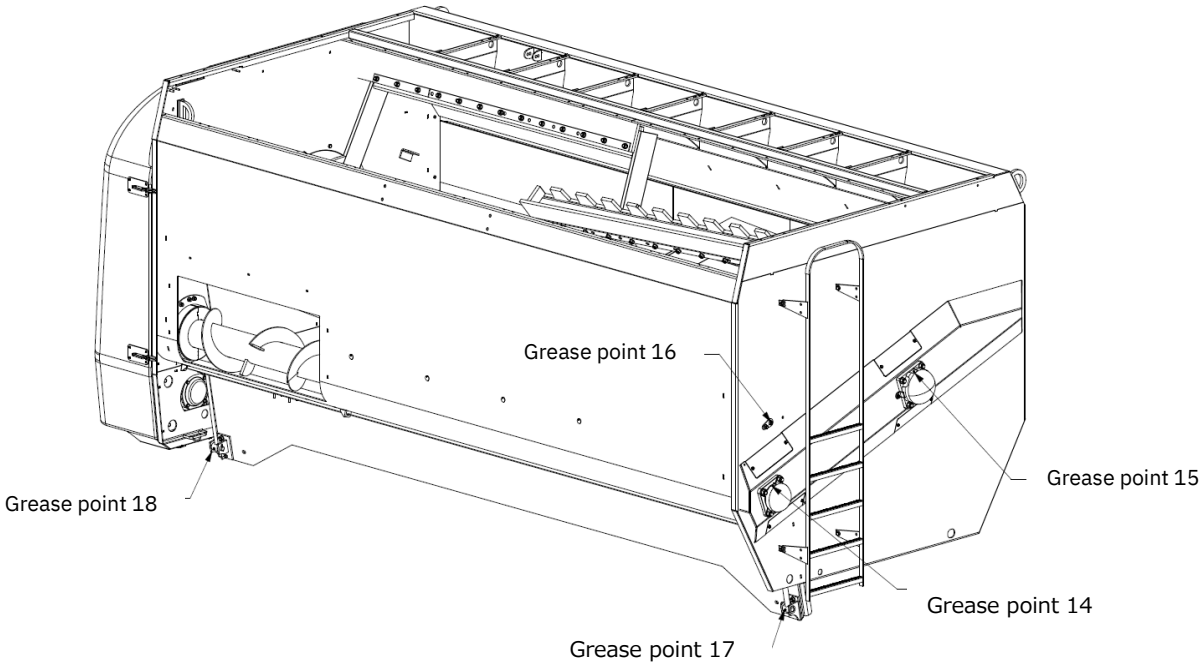


Figure 9: Rear bearings and VFC-door pivot grease points

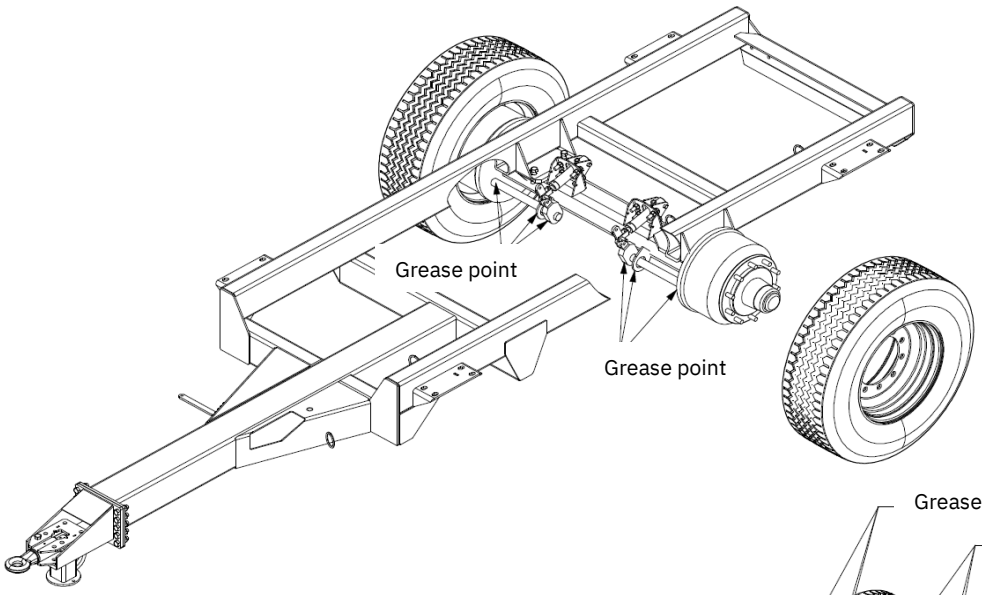


Figure 10: Single-axle chassis grease points

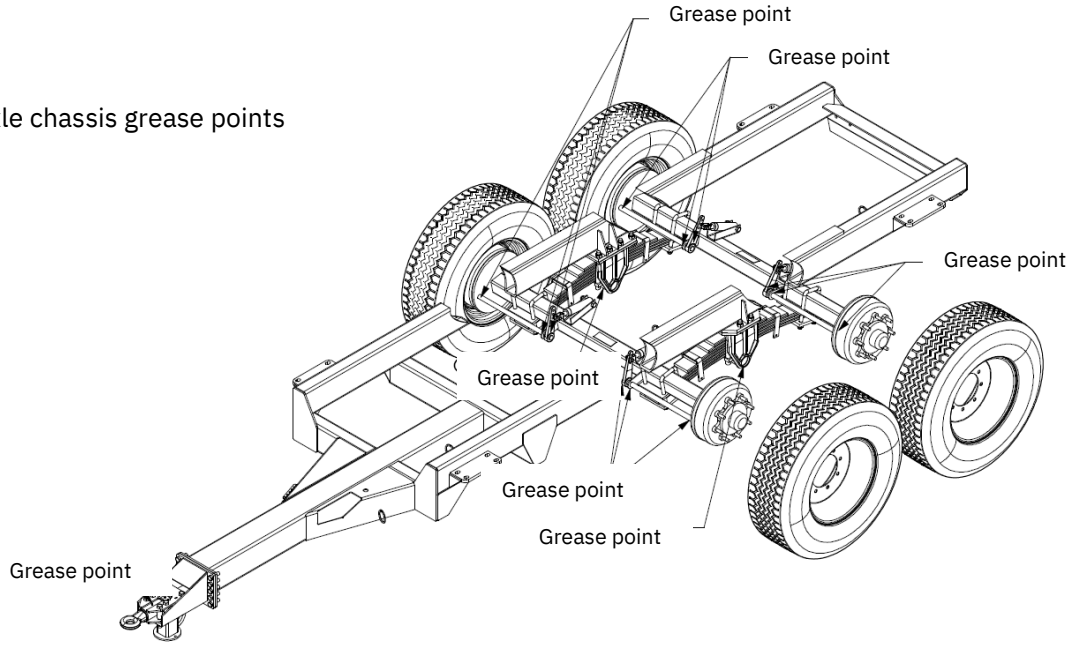


Figure 11: Tandem-axle chassis grease points

1.7 Blade maintenance

Blade sharpening and/or replacement: It is recommended that only KEENAN-trained and/or qualified maintenance personnel should perform this task.

Blades need to be kept sharp. Blunt blades will increase power requirements. Sharpening must be done without taking the temper from the blades (i.e., without overheating). Blades can be sharpened many times, but when they reach the point where this is no longer practical, they must be replaced.

1.8 Shear bolts

The following are the recommended shear bolts to be used with the KEENAN MechFiber345+ and MechFiber365+.

Machine type	PTO shaft	Shear bolt	Colour code
540 RPM input	T60	M10 x 60 x 8.8	Red
1000 RPM input	T50	M8 x 55 x 4.6	Green
Heavy-duty PTO option (540 RPM)	T80	M12 x 75 x 4.6	Red

Table 3: Shear bolt size and grade

> **CAUTION:**
> Failure to use the correct grade of shear bolt can result in overload failure of the machine and will invalidate your warranty.

1.9 Nuts and bolts

1. After the first day, and regularly thereafter, inspect wheel nuts and tandem-axle U-bolts (where fitted).
2. After the first week, and each week thereafter, check all nuts and bolts, including bearing nuts, for tightness.

General torque

Stud/bolt type	FT/LB	N.M
M22	335	450
M20	260	350
M18	200	270

Table 4: General torque for wheel studs

U-bolt diameter (mm)	Tightening torque (Nm)
18	230
22	450
24	500
27	600

Table 5: Recommended torque for U-bolts for tandem axles (where fitted)

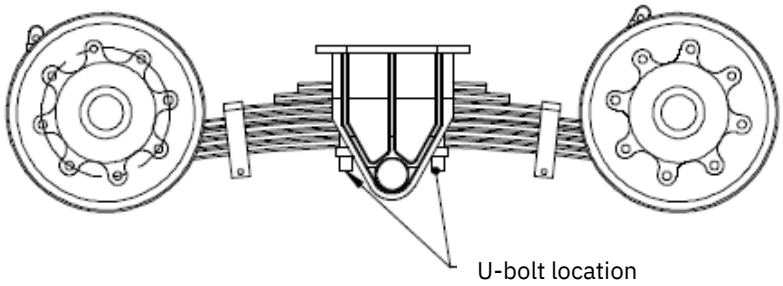


Figure 12: U-bolt position on bogie axle

1.10 Tyres

1. Each week, check the tyres for wear and damage.
2. Each week, check the tyre pressure. Optimal tyre pressures are shown in Table 6.

This information is given as guidance. If in doubt, please contact your KEENAN service partner.

> **WARNING:**
> When refitting and re-inflating tyre/wheel assemblies, a safety cage should be used to prevent possible injury. Incorrectly fitted tyres are dangerous. Please make sure tyre repairs are carried out by experienced tyre fitters.

Type	Bar	PSI
305/55 R 22.5	7.0	110
285/70 R 19.5	8.5	125
385/55 R 22.5	9.0	132
385/65 R 22.5 (8-stud)	5.5	81
385/65 R 22.5 (10-stud)	9.0	132
445/45 R 19.5	9.0	132
445/65 R 22.5	9.0	132

Table 6: Tyre pressure

1.11 Hitch height adjustment

The hitches of the KEENAN MechFiber345+ and KEENAN MechFiber365+ have been designed to allow for a number of various hitch height options with the same components used. The hitch height is normally selected for the application and set at the factory per the options below.

The main standard hitch assembly is a bolt-on assembly, and once the main setting is completed at the factory, it may also be adjusted on-farm by moving the assembly up or down within the bolt holes or turning the complete hitch over, as it is suitable to operate facing either way up.

Note:
*1: A minimum of four M20 x 100-mm **grade 8.8** bolts must be used to secure the swivel ring hitch and the clevis hitch to the drawbar.*
2: Care must be taken when adjusting the hitch height so that there is adequate PTO clearance and that there is enough ground clearance below the stand.

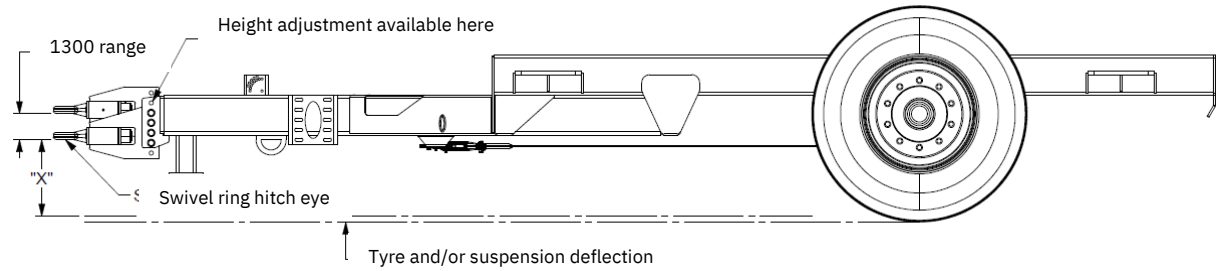


Figure 13.1: Standard hitch adjustment

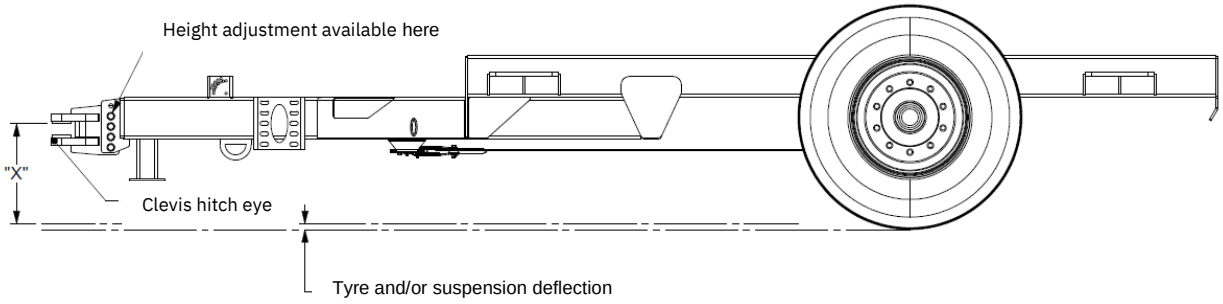


Figure 13.2: Clevis hitch adjustment

1.12 Specifications

Model		MechFiber345+		MechFiber365+	
		Single axle	Tandem axle	Single axle	Tandem axle
Unladen	kgs	8,450	9,850	10,200	10,950
	lbs.	20,062	21,715	22,481	24,134
Payload	kgs	6,000		6,000	8,000
	lbs.	13,224		14,326	17,632
Gross	kgs	15,100	15,850	16,700	18,950
	lbs.	33,280	34,933	36,807	41,766

Table 7: Machine weights

1. Weights given include the bale handler option.
2. Weights may vary depending on the exact specifications.
3. The MechFiber365+ payload is restricted to a maximum of 5,500 kg when fitted with 445/45R 19.5 wheels/tyres on a single axle.

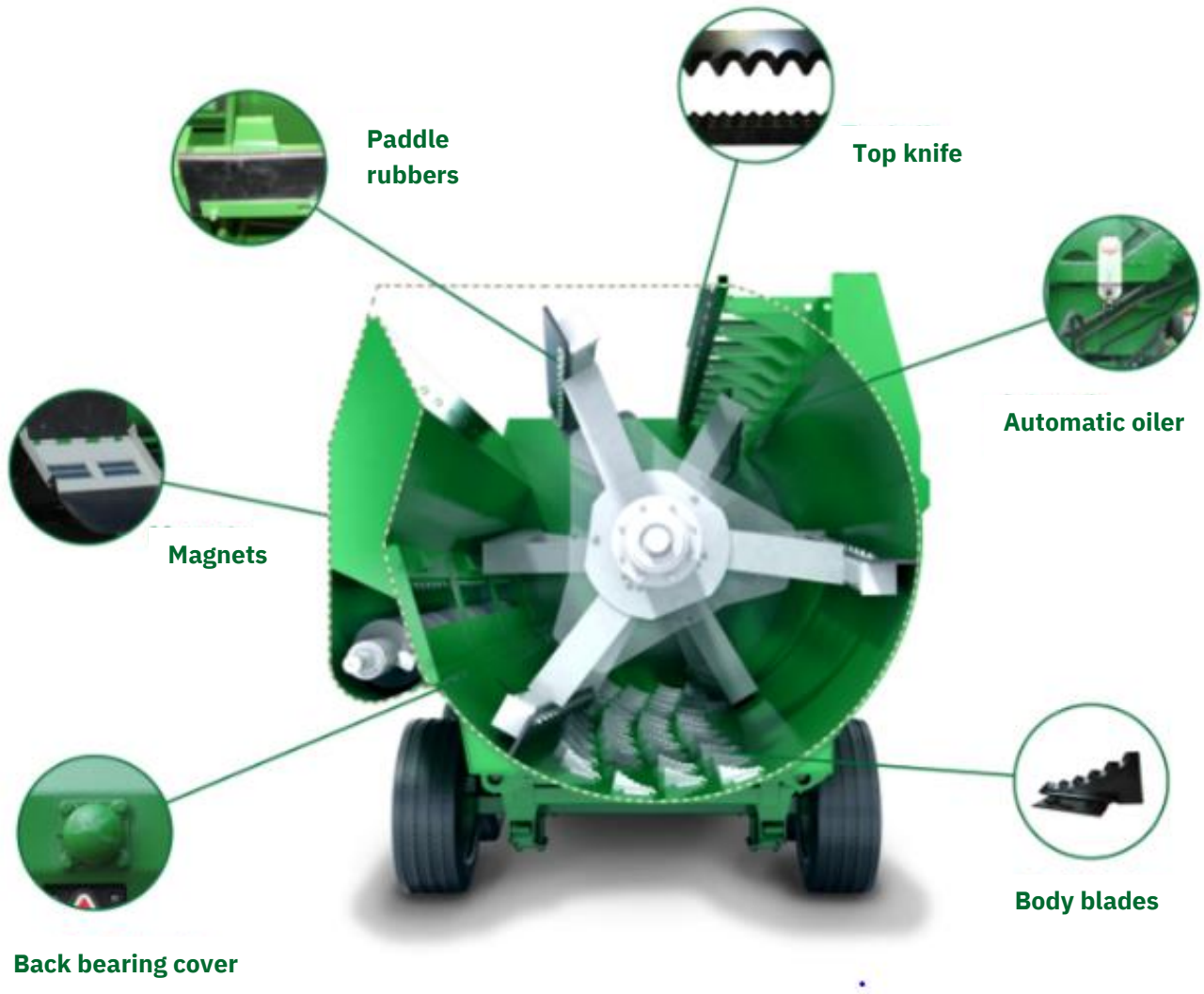
1.13 Soda grain

Additional safety instructions and warnings are available and covered in the soda grain leaflet, which should be read carefully before soda-treating grain. When you are finished treating the grain, clean out any remaining material in the mixing and/or auger chamber by loading in 200–300 kg of silage or 50 kg of straw, and allow the machine to mix before unloading in the normal manner.

Note that when mixing soda grain, the maximum gross load that can be mixed in the KEENAN MechFiber345+ is 5,000 kg, and the maximum for the KEENAN MechFiber365+ is 6,000 kg.

The soda-grain process can be completed using a KEENAN diet feeder, but before completing treatment on your farm, make sure you are adhering to the local animal feed legislation and health and safety guidelines involving the treatment of grain.

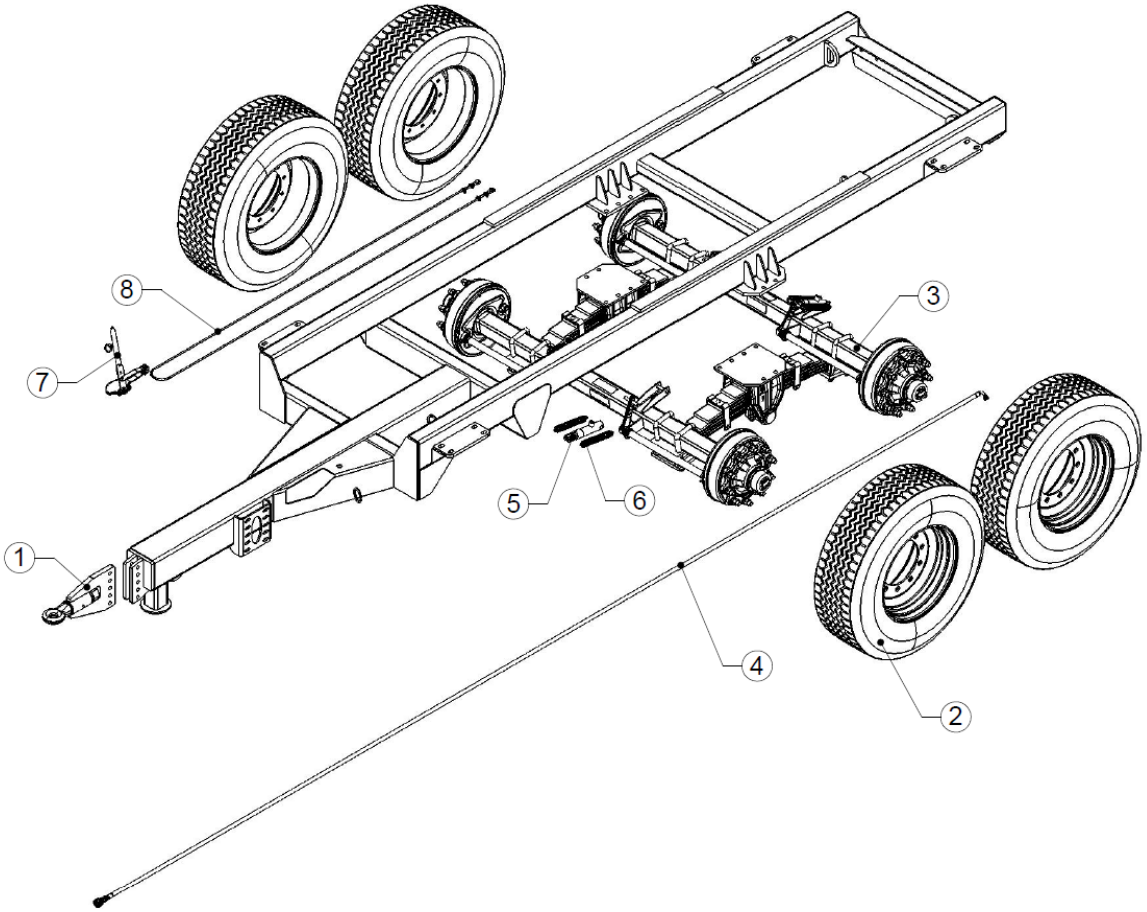
Part II: Parts list

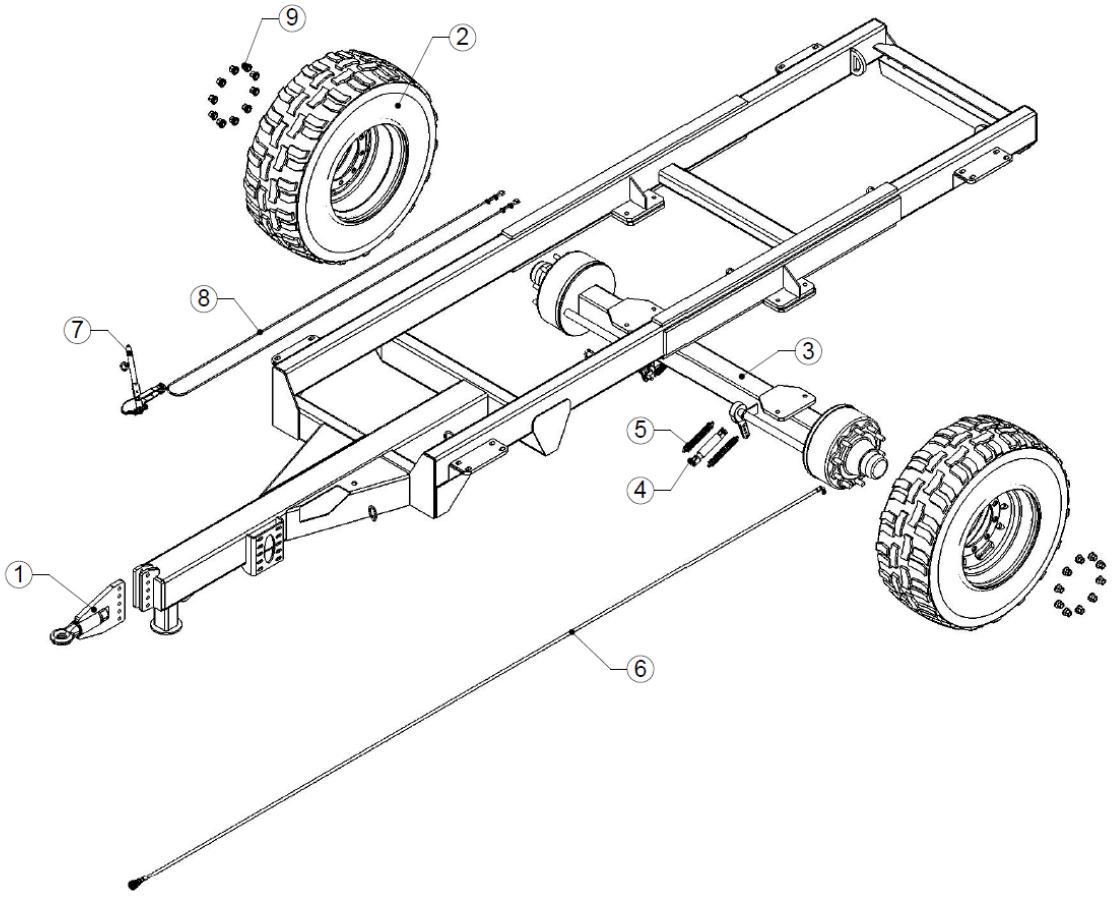


List of abbreviations:

P/N	Part number
Qty	Quantity
ID	Inner diameter
OD	Outer diameter
N/A	Not applicable
c/w	Complete with
OE	Optional Extra
RH	Right-hand side
LH	Left-hand side

2.1 Chassis parts





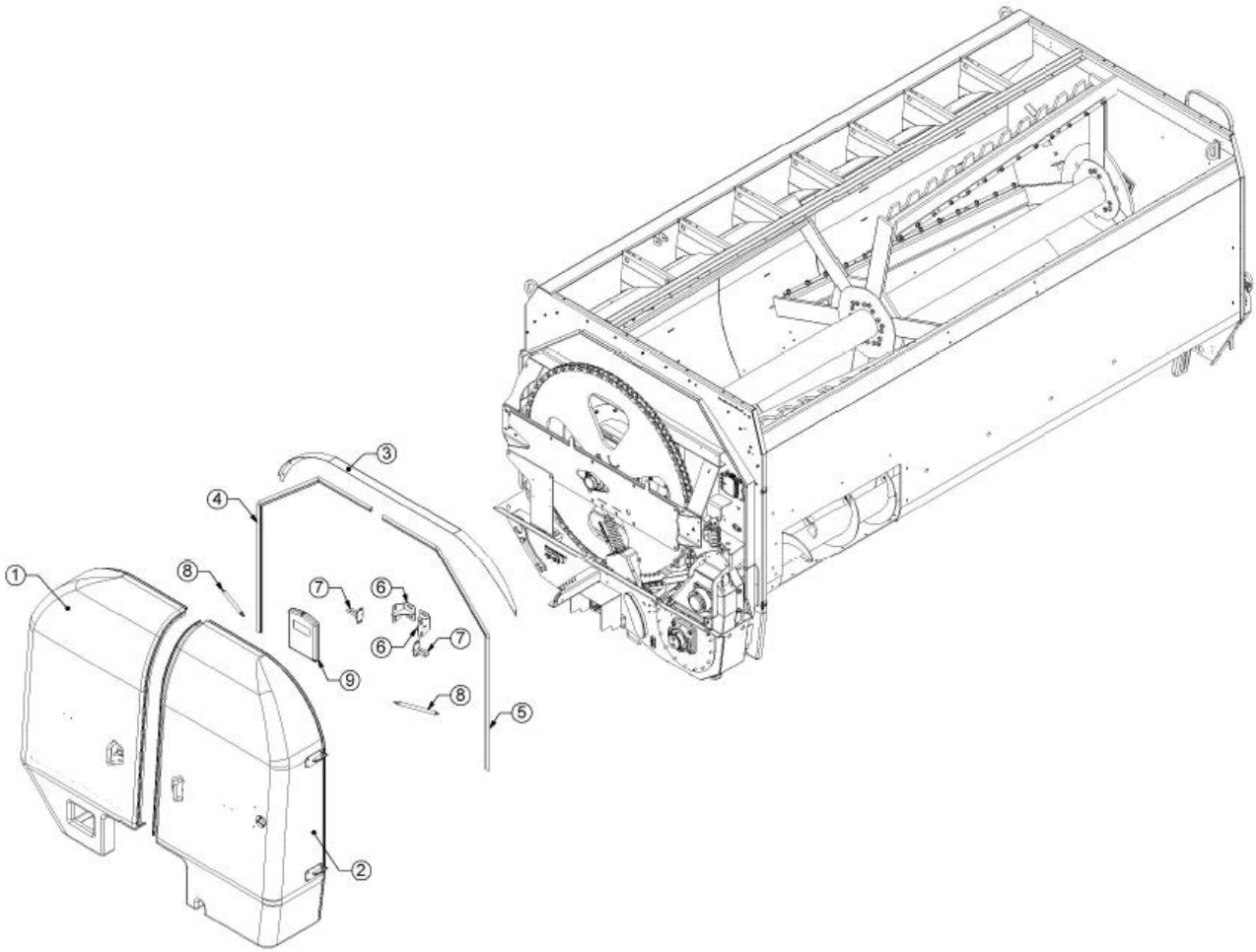
Item	P/N		Qty	Description
	345+	365+		
1	FP170-001-0097	FP170-001-0097	2	Hitch eye assembly
2	701952	701952	1	385/65 R 22.5 wheel and tyre assembly
	703934	703934	1	385/55 R 22.5 wheel and tyre assembly
	704570	704570	1	305/55 R 22.5 wheel and tyre assembly
	702879	702879	1	285/70 R 19.5 wheel and tyre assembly
	703860	703860	1	445/65 R 22.5 wheel and tyre assembly
	702817	702817	1	445/45 R 22.5 wheel and tyre assembly
3	703718	703718	1	16.5T bogie c/w 2,200-mm wide 10-stud axles
	N/A	703063	1	2,250-mm wide x 140-mm straight single axle
	N/A	703667	1	2,400-mm wide x 140-mm cranked single axle
4	702105	702105	1	Brake hose assembly
5	704584	704584	2/4	Brake ram assembly
6	704586	704586	2/4	Brake ram return spring
7	704441	704441	1	Handbrake ratchet assembly
8	702502	702502	1	Handbrake cable
9	700306	700306	20/40	M22 wheel nut

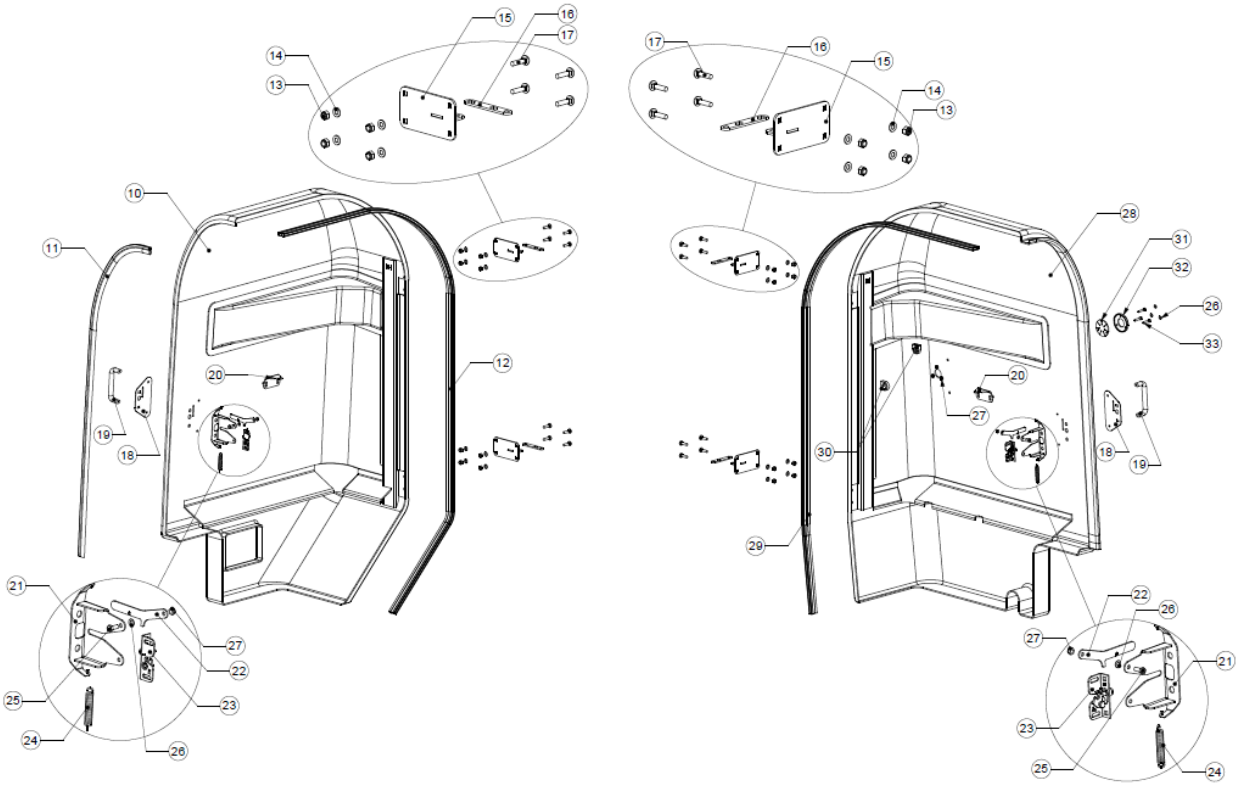
Table 8: Chassis

Optional parts (not shown)			
Hydraulic jacks	FP170-001-0006	1	Hydraulic jack, single-acting
	704289	1	Hydraulic jack, double-acting
	702044	1	Mechanical sack, side winding, U.S. option 10,000 lbs.
Hydraulic jack brackets	EF2033-12	1	Hydraulic jack mounting bracket
	FP160-001-0070	1	Heavy-duty hydraulic jack mounting bracket
	FP160-001-0078	1	Low-option hydraulic jack mounting bracket
	704288-2	1	Double-acting hydraulic jack mounting bracket
	EF1033-14	1	Sidewinding jack mounting bracket
Hitches	FP160-001-0119	1	Swivel hitch assembly (60-mm offset)
	FP170-001-0197	1	Swivel hitch assembly (100-mm offset)
	FP170-001-0171	1	Swivel hitch assembly (additional hole)
Bushes	704154	1	Towing eye bush, 32.5-mm ID
	702324	1	Towing eye bush, 30-mm ID

Table 9: Chassis optional parts

2.2 Front cover parts

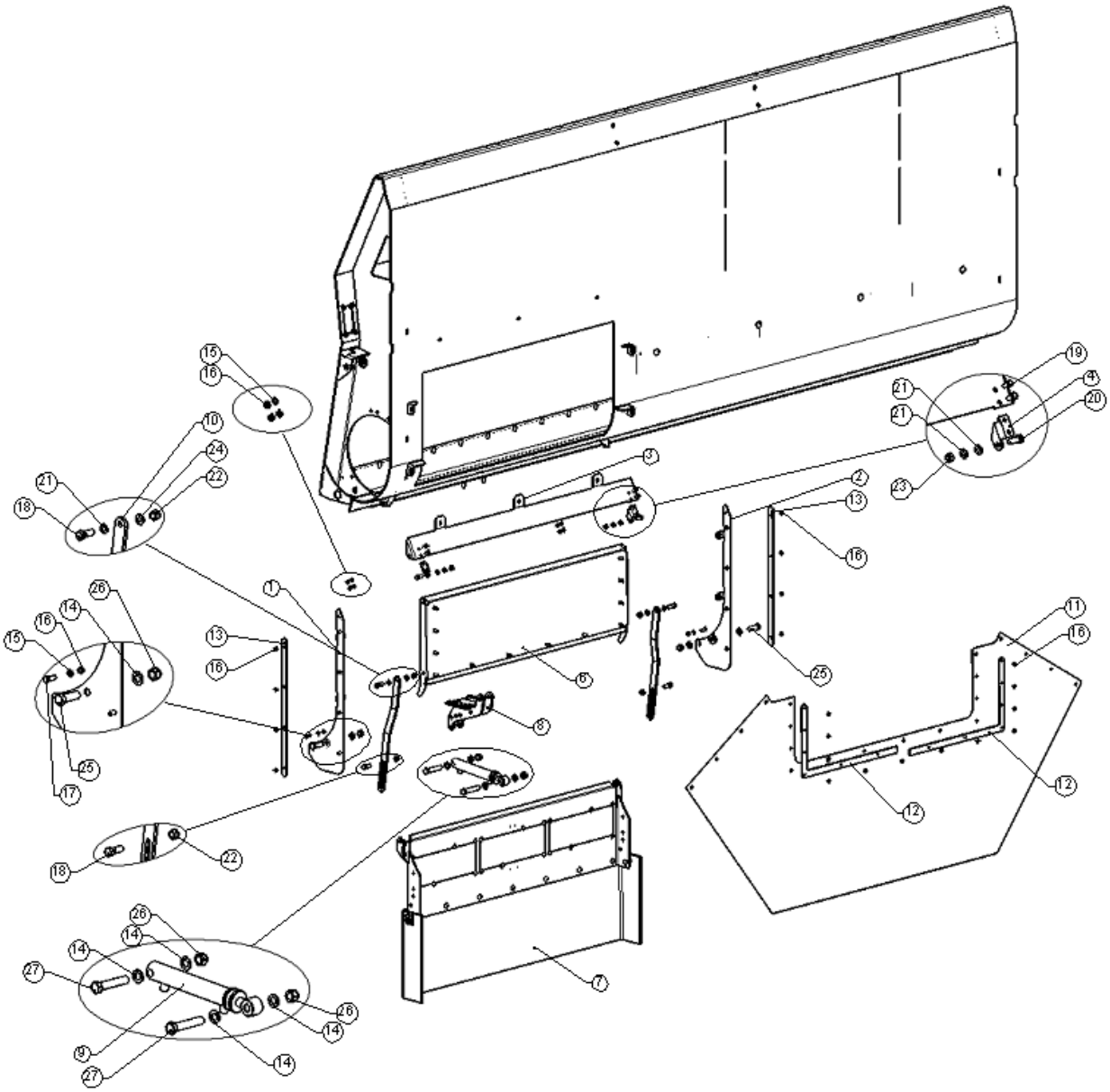


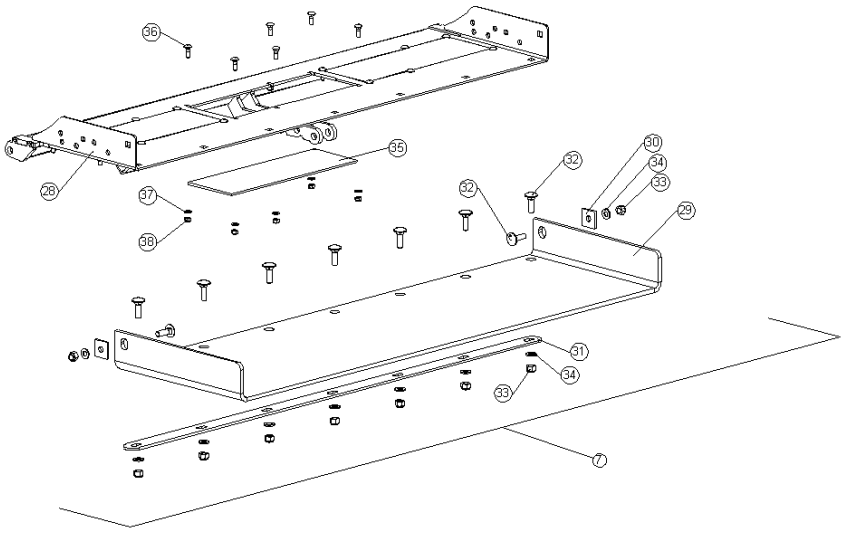


Item	P/N	Qty	Description
1	FP200-038-0047	1	Right side cover assembly 2 (black)
2	FP200-037-0165	1	Left side cover assembly 2 (black – inbuilt centre channel)
3	FP200-002-0173	1	Front panel curved rain channel assembly — top section
4	FP200-038-0052	1	MF345/365 drip channel edge bead RH (Length = 2,445 mm)
5	FP200-037-0167	1	MF345/365 drip channel edge bead LH (Length = 2,522 mm)
6	FP200-038-0050	2	MF345/365 door latch bracket
7	FP200-048-0244	2	Camlock striker plate assembly
8	706101	2	Gas strut CA102911 (600 mm open, 200 N, 250 stroke)
9	706086	1	A4 flat document box
10	FP200-038-0046	1	MF345/365 GRP front cover (right side)
11	FP200-037-0168	1	MF345/365 front cover inner seal (Length = 1,910 mm)
12	FP200-038-0051	1	MF345/365 front cover outer seal — RH (Length = 3,193 mm)
13	700241	16	M10 locknut
14	700729	16	M10 flat washer
15	FP200-037-0064	4	Front cover hinge mount assembly
16	FP380-037-0057	4	Front cover hinge adjustment plate
17	700251	16	M10 x 40 cuphead bolt
18	FP200-037-0095	2	Camlock outer plate
19	701363	2	Handle
20	FP200-037-0113	2	Gas strut outer mounting bracket
21	FP200-037-0093	2	Camlock mounting bracket
22	FP200-037-0094	2	Secondary fail-safe latch
23	706015	2	Fibreglass door camlock unit
24	701277	2	3" spring
25	700208	2	M8 x 20-mm setscrew
26	700736	8	M8 flat washer
27	700223	5	M8 locknut
28	FP200-037-0164	1	MF345/365 GRP front cover (left side)
29	FP200-037-0166	1	MF345/365 front cover outer seal — LH (Length = 3,043 mm)
30	705826	3	Adaptaflex conduit clip 28 mm
31	FP200-037-0114	1	Weighing cable gland seal (7-hole)
31a	FP200-037-0149	1	Weighing cable gland seal (1-hole)
32	FP200-037-0115	1	Weighing cable gland seal outer retainer
33	700214	3	M8 x 40-mm setscrew (8.8 grade)

Table 10: Front covers

2.3 Standard feed-out tray parts





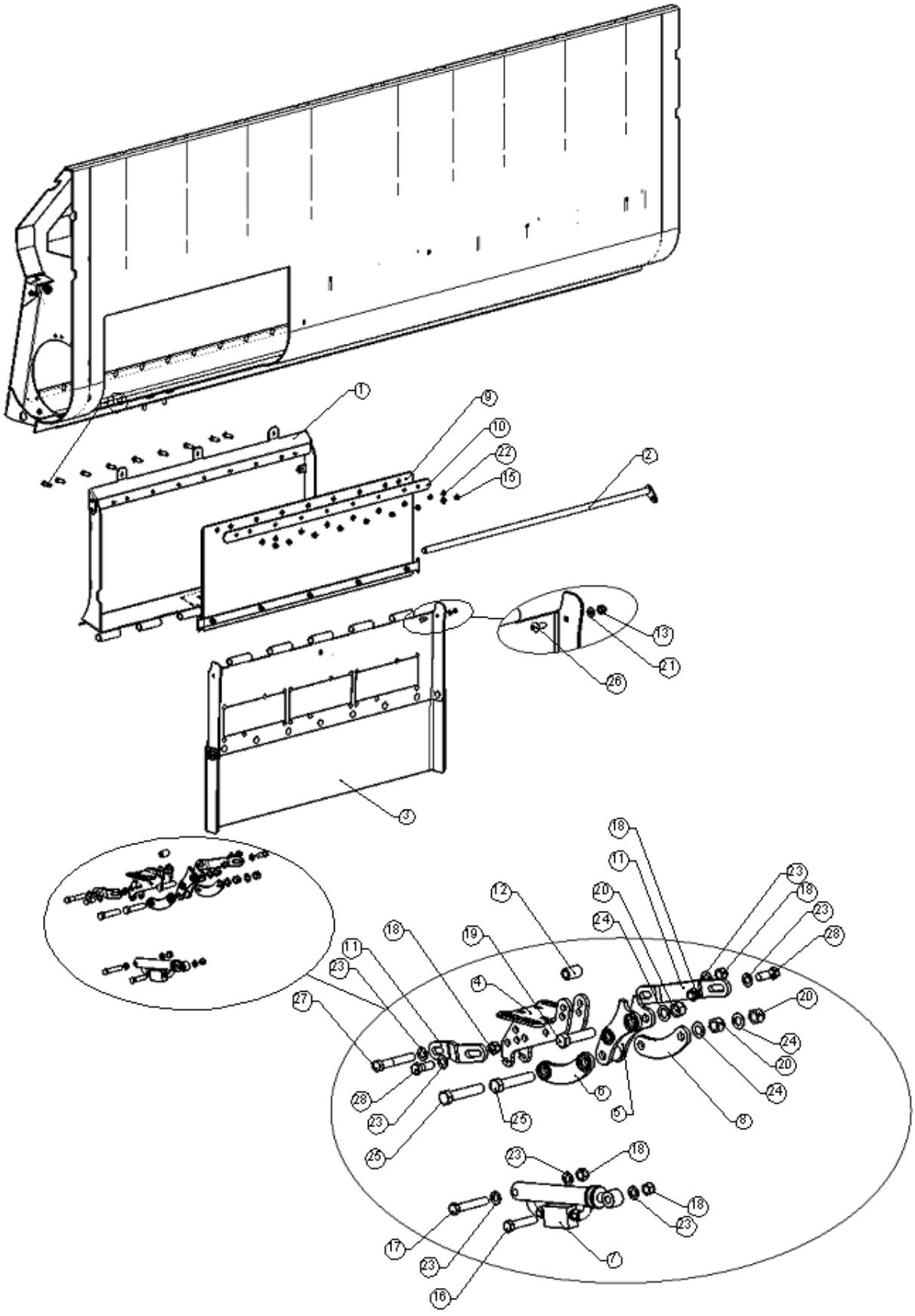
Item:	P/N:	Qty:	Description:
1	FP160-006-0429	1	Feed-out shroud front side plate assembly
2	FP160-006-0430	1	Feed-out shroud rear side plate assembly
3	FP160-006-0432	1	Feed-out shroud top plate
4	FP160-006-0088	1	Hinge bracket, feed-out door, right-hand side
5	FP160-006-0087	1	Hinge bracket, feed-out door, left-hand side
6	FP160-006-0090	1	Feed-out door assembly
7	FP160-006-0123	1	Tray assembly with rubber extension (standard)
8	FP160-006-0044	1	Feed-out tray ram mounting plate assembly
9	703591	1	6” stroke hydraulic ram (KEEN-63)
10	FP080-006-0012	2	Feed-out door link arm
11	FP160-006-0072	1	Feed-out rubber shroud, rubber curtain
12	FP300-006-0095	2	Feed-out door shroud retainer
13	FP300-006-0096	2	Feed-out door shroud side retainer
14	700732	7	M16 flat washer
15	700736	6	M8 flat washer
16	700223	26	M8 nylock nut
17	700210	2	M8 x 25 setscrew (HT)
18	700249	4	M12 x 35 setscrew
19	700208	4	M8 x 20 setscrew
20	702111	2	M10 x 30 setscrew
21	700729	6	M10 flat washer
22	700266	4	M12 locknut
23	700241	2	M10 locknut
24	700730	2	M12 flat washer
25	700275	2	M16 x 50 bolt
26	700283	4	M16 locknut
27	700281	2	M16 x 90 bolt
28	FP160-006-0124	1	Feed-out tray assembly (standard)
29	701403	1	Feed-out rubber extension (standard)
30	EF106-79	2	Feed-out tray side rubber retainer
31	FP160-006-0224	1	Rubber retainer
32	705405	9	M12 x 40 cuphead bolt
33	700266	9	M12 locknut
34	700730	9	M12 flat washer
35	FP160-006-0270	3	Tray magnet hole blanking plate (standard)
35a	701366	3	Magnet plate (OE)
36	702256	18	M8 x 25 cuphead bolt
37	700736	18	M8 flat washer
38	700223	18	M8 nylock nut

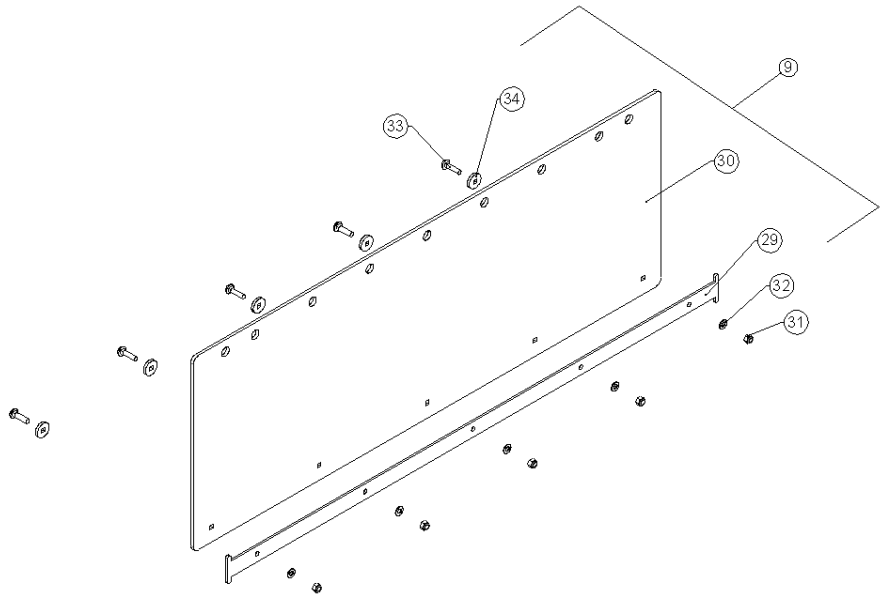
Table 11: Feed-out tray details (for both the MechFiber345+ and MechFiber365+)

Note:
Complete standard feed-out kit P/N FP160-006-0428

Feed-out tray can be supplied with the magnet assembly P/N FP160-006-0071

2.4 Fold-down tray parts (optional extra)

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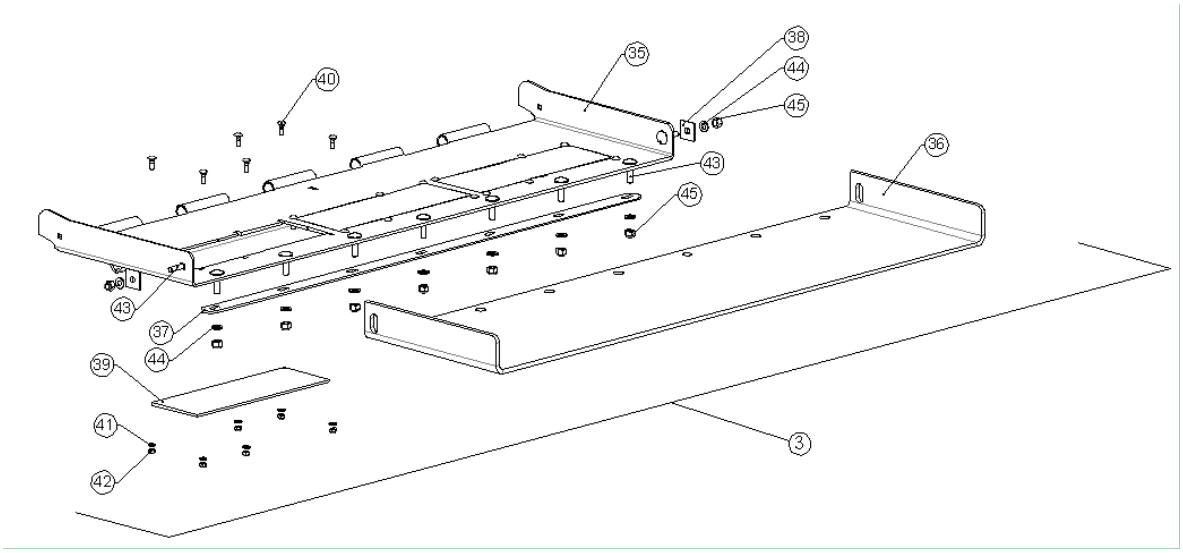
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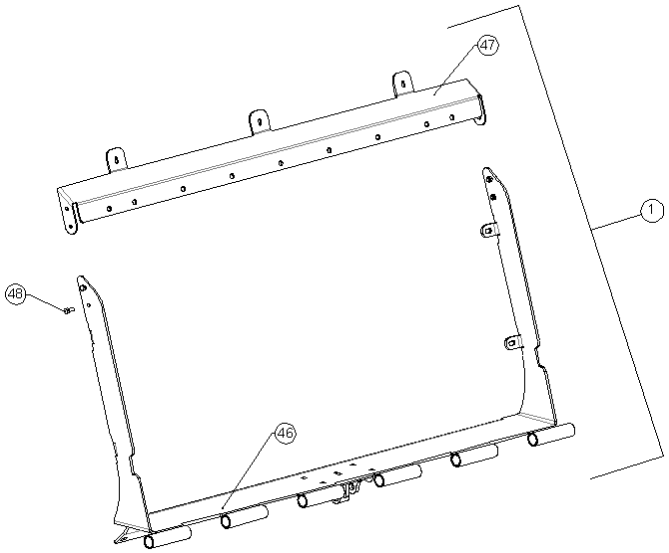
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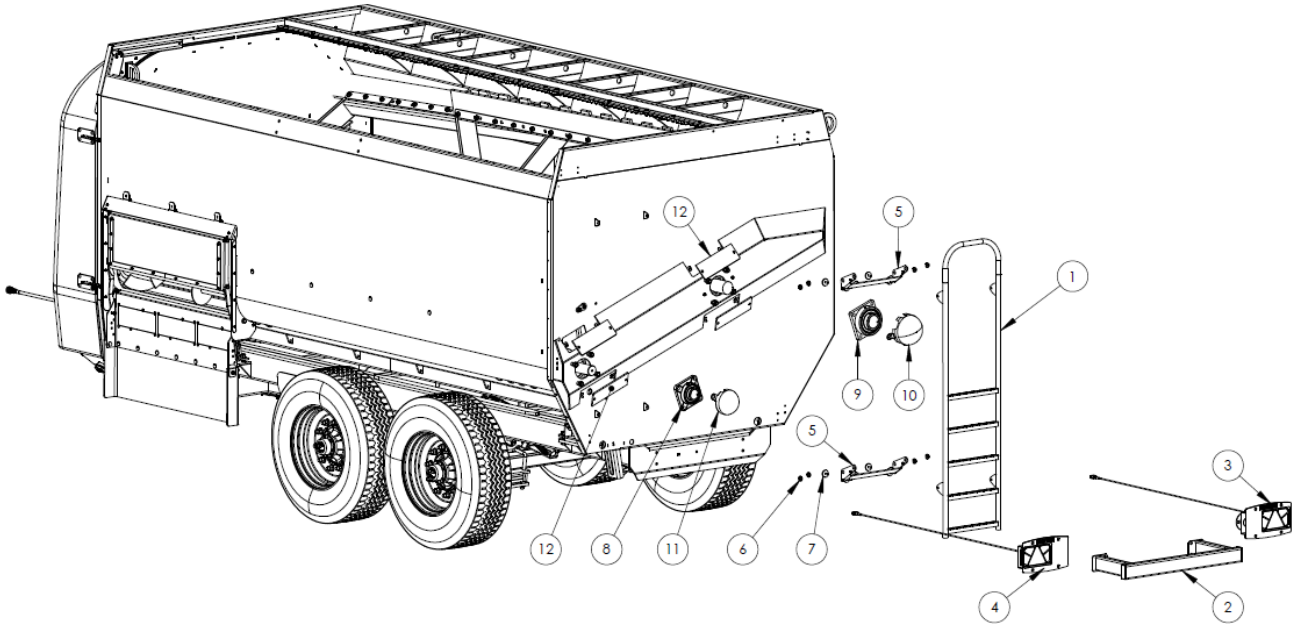
Item:	P/N:	Qty:	Description:
1	FP160-006-0417	1	Fold-down tray shelf assembly
2	FP170-006-0182	1	Fold-down tray hinge bar assembly
3	FP170-006-0191	1	Fold-down tray assembly and rubber
4	FP160-006-0044	1	Fold-down tray mounting plate assembly
5	FP170-006-0162	1	Fold-down tray inner link arm assembly
6	FP200-006-0340	1	Fold-down tray outer link arm assembly
7	705268	1	6” ram assembly with check valve (KEEN-63SP)
8	FP200-006-0332	1	Fold-down tray outer link arm — 127-mm centres
9	FP160-006-0427	1	Feed-out shroud rubber assembly
10	FP160-006-0061	1	Rubber retainer 1,400 mm wide
11	FP160-006-0420	2	Fold-down tray shelf to auger chamber tie plate
12	FP170-006-0156	1	Feed-out tray ram bracket spacer bush
13	700241	1	M10 lock nut
14	700250	9	M12 x 40 setscrew
15	700266	9	M12 lock nut
16	700280	1	M16 x 80 bolt
17	700268	1	M16 x 100 bolt
18	700283	5	M16 locknut
19	700302	1	M20 x 90 bolt HT
20	700305	3	M20 nylock nut
21	700729	1	M12 locknut
22	700730	18	M12 flat washer
23	700732	7	M16 flat washer
24	700733	3	M20 flat washer
25	701488	2	M20 x 110 bolt HT
26	700226	1	M10 x 30 cuphead bolt
27	700269	1	M16 x 110 bolt
28	700274	2	M16 x 45 bolt
29	FP170-006-0187	1	Feed-out shroud rubber lower retainer plate
30	FP160-006-0422	1	Feed-out shroud rubber
31	700241	5	M10 lock nut
32	700729	5	M10 flat washer
33	700251	5	M10 x 40 cuphead bolt
34	FP170-006-0188	5	Retainer plate washer
35	FP170-006-0178	1	Fold-down tray assembly
36	FP170-006-0186	1	Fold-down tray rubber extension
37	FP160-006-0224	1	Rubber retainer
38	EF106-79	2	Side rubber retainer plate
39	FP160-006-0272	3	Tray magnet hole blanking plate (standard)
39a	701366	3	Magnet plate (optional extra)
40	700212	18	M8 x 30 bolt
41	700736	18	M8 flat washer
42	700223	18	M8 nylock nut
43	702500	9	M12 x 45 cuphead bolt
44	700730	9	M12 flat washer
45	700266	9	M12 lock nut
46	FP160-006-0418	1	Fold-down tray shelf assembly
47	FP160-006-0421	1	Fold-down tray shelf top plate
48	700208	4	M8 x 20 setscrew
49	700223	4	M8 nylock nut

Table 12: Fold-down-tray parts

Note:
Complete fold-down tray kit (standard): P/N FP160-006-0416
Complete fold-down tray kit (OE-100): P/N FP160-006-0423

Fold-down tray can be supplied with the magnet assembly P/N FP170-006-0177.

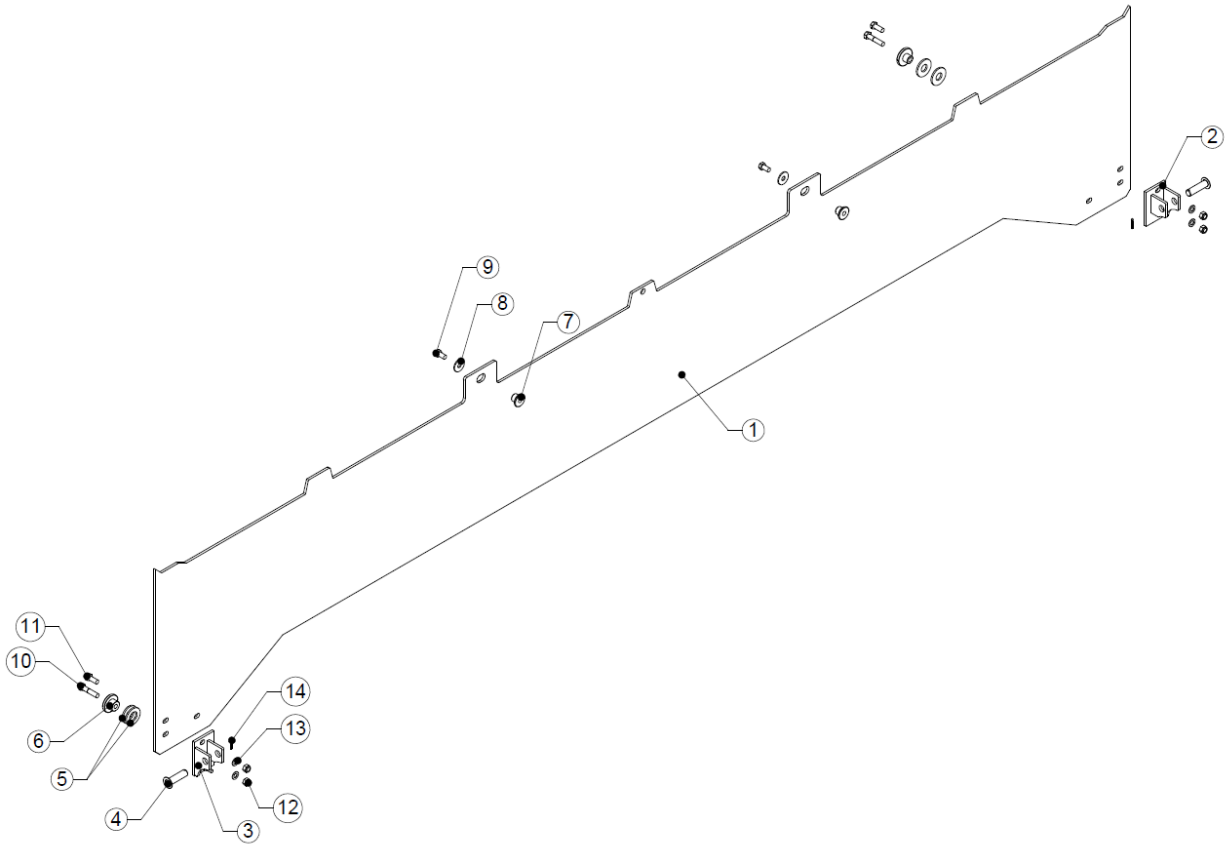
2.5 Rear parts



Item:	P/N:	Qty:	Description:
1	FP200-013-0028	1	Viewing ladder (tubular frame)
2	FP160-001-0027	1	Bumper bar
3	FP200-003-0262	1	Rear LED light cluster (right-hand side)
4	FP280-003-0261	1	Rear LED light cluster (left-hand side)
5	FP200-013-0025	2	Ladder arm assembly
6	FP200-013-0015	8	Ladder pivot bush
7	704416	4	Rubber buffer
8	700842	1	UCF X14 70-mm bearing assembly
9	702294	1	UCF X18 90-mm bearing assembly
10	701274	1	Rear rotor bearing cover
11	701273	1	Rear auger bearing cover
12	FP160-003-0015	4	Rear bearing access slot cover plate

Table 13: Rear parts

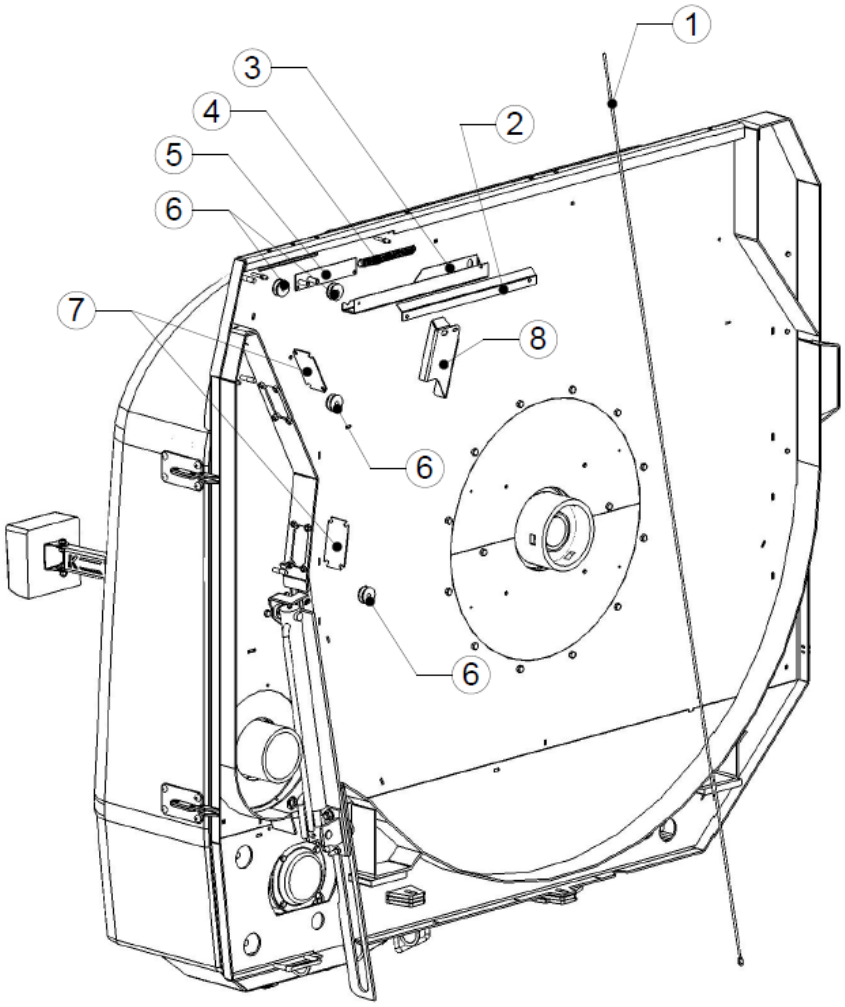
2.6 VFC-door parts



Item:	P/N:		Qty:	Description:
	345+	365+		
1	FP160-010-0001	FP200-010-0102	1	VFC-door plate
2	FP160-010-0006	FP160-010-0006	1	VFC-door rear ram bracket assembly
3	FP160-010-0005	FP160-010-0005	1	VFC-door rear ram bracket assembly
4	701591	701591	2	VFC-door lower ram pin assembly
5	FP160-010-0015	FP160-010-0015	4	VFC-door front end guide collar wear washer
6	FP160-010-0014	FP160-010-0014	2	VFC-door front end guide collar
7	701504	701504	2	VFC-door centre stepped collar
8	702453	702453	2	17-mm ID x 50-mm OD x 4-mm thick flat washer
9	701519	701519	2	M16 x 30-mm setscrew
10	700279	700279	2	M16 x 75-mm bolt
11	703148	703148	2	M16 x 40-mm setscrew
12	700283	700283	4	M16 locknut
13	700732	700732	4	M16 flat washer
14	701111	701111	2	Split pin — 3/16” diameter x 1.5”

Table 14: VFC-door parts

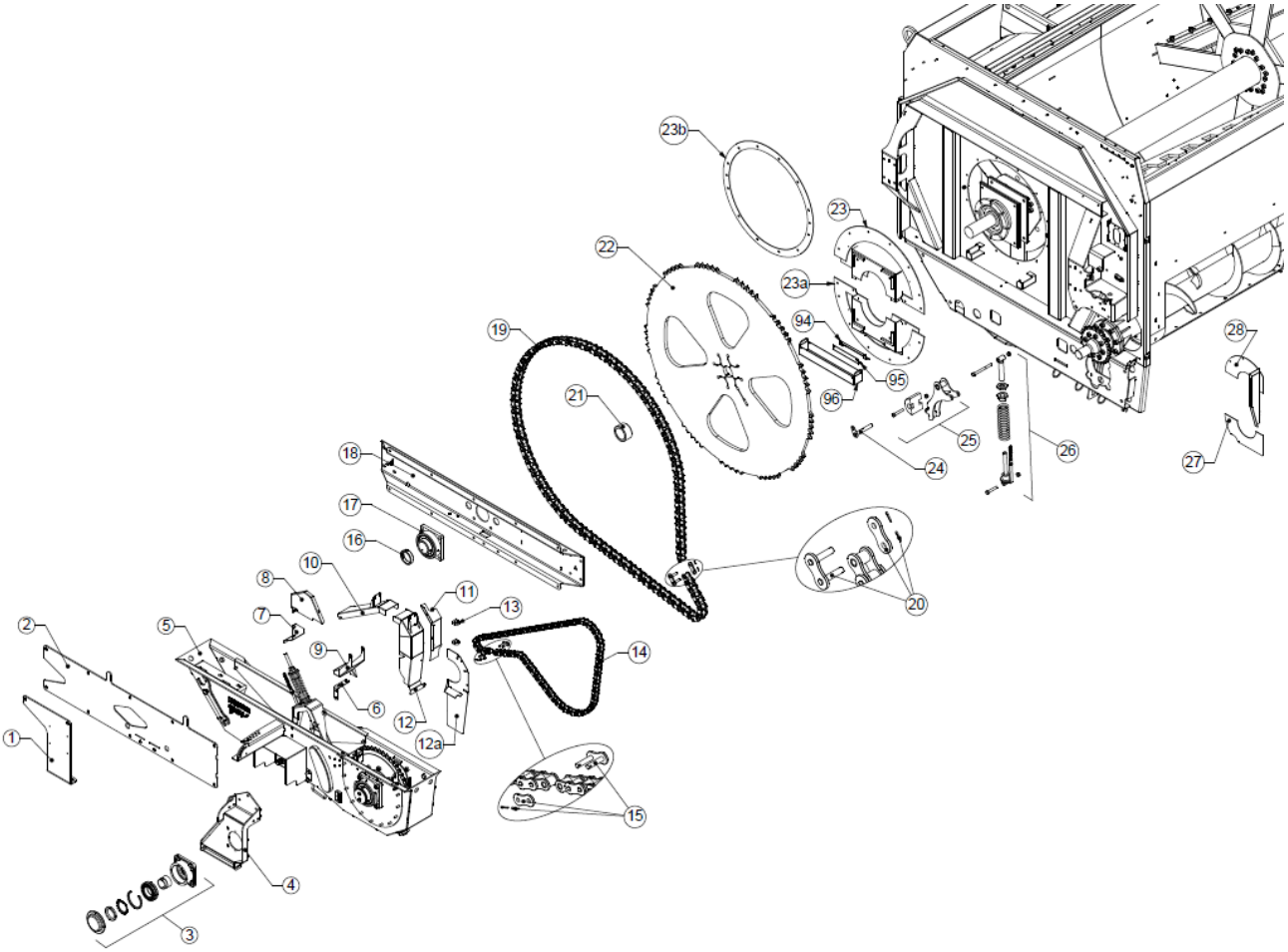
2.7 VFC-door indicator parts

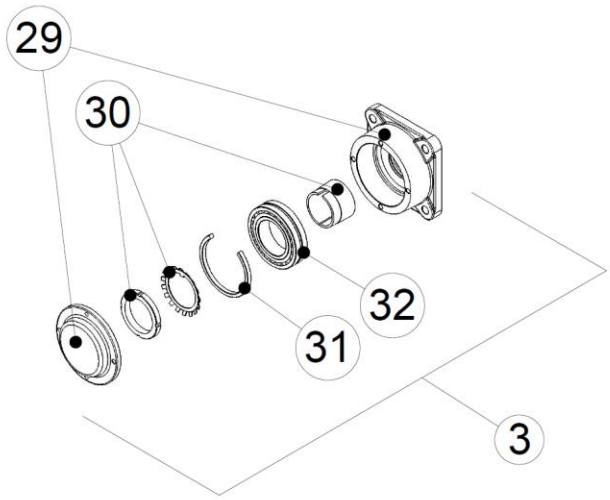


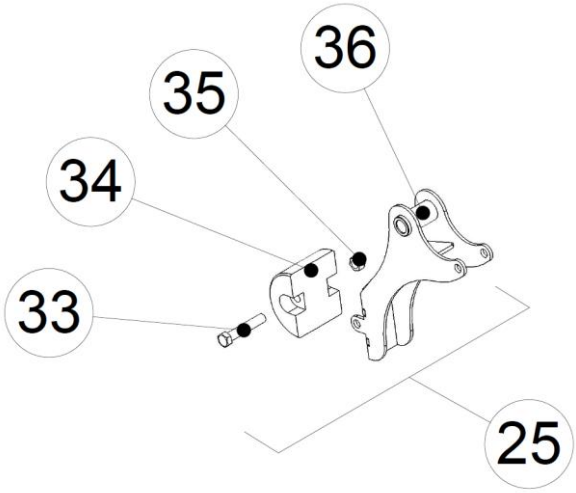
Item:	P/N:	Qty:	Description:
1	FP280-010-0022	1	VFC-door indicator wire rope assembly (2,970 mm)
2	FP300-010-0011	1	VFC-door indicator cover
3	FP300-010-0013	1	VFC-door indicator cover
4	703625	1	8" expansion spring, 22 mm OD, 2 mm wire diameter
5	RD8010-61	1	VFC-door indicator slider assembly
6	701559	4	Pulley wheel — 50 mm OD x 20 mm thick
7	FP280-006-0179	2	VFC-door indicator cable access slot cover plate
8	FP200-006-0385	1	VFC-door indicator cable cover plate

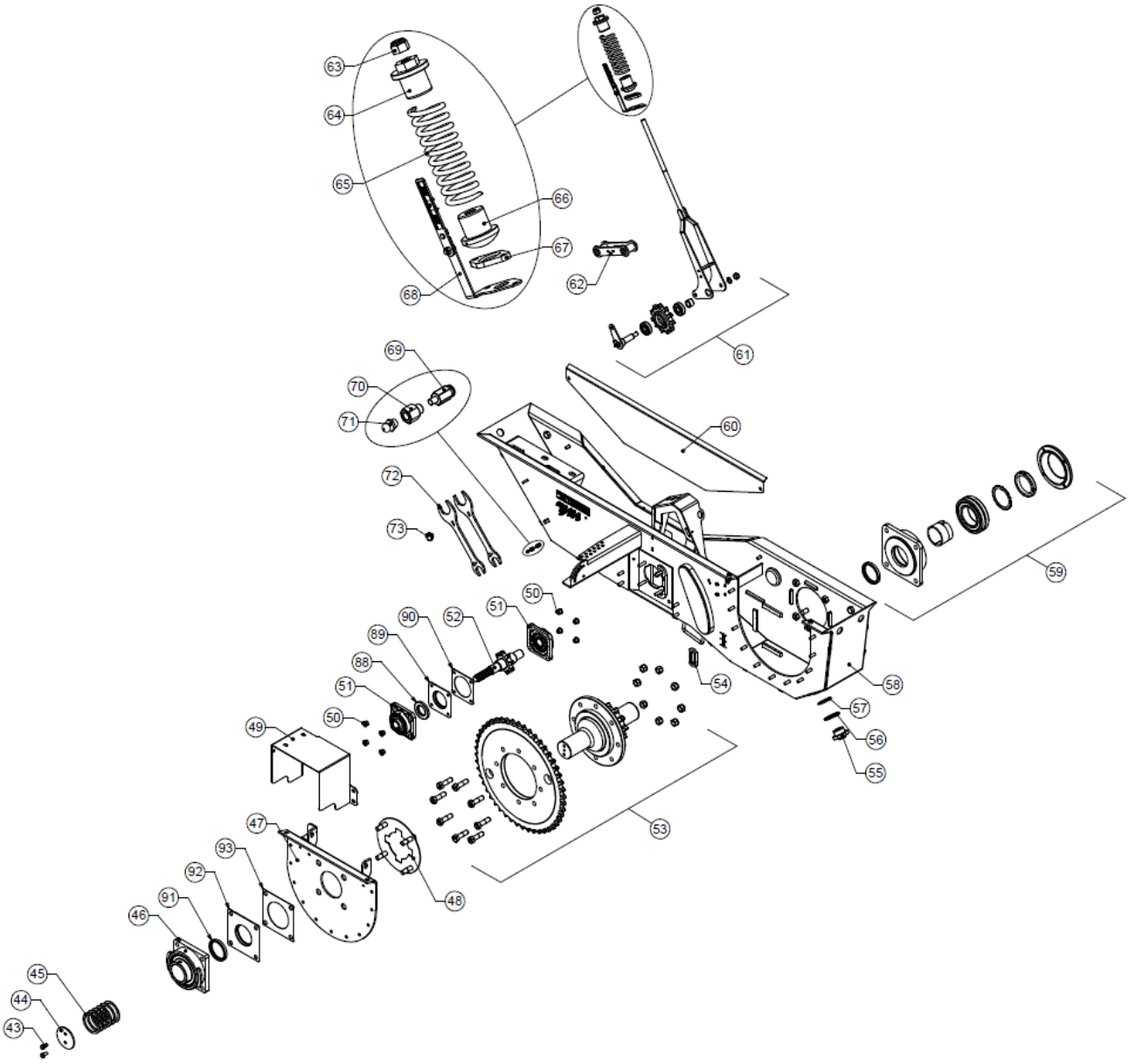
Table 15: VFC-door indicator parts

2.8 Driveline parts





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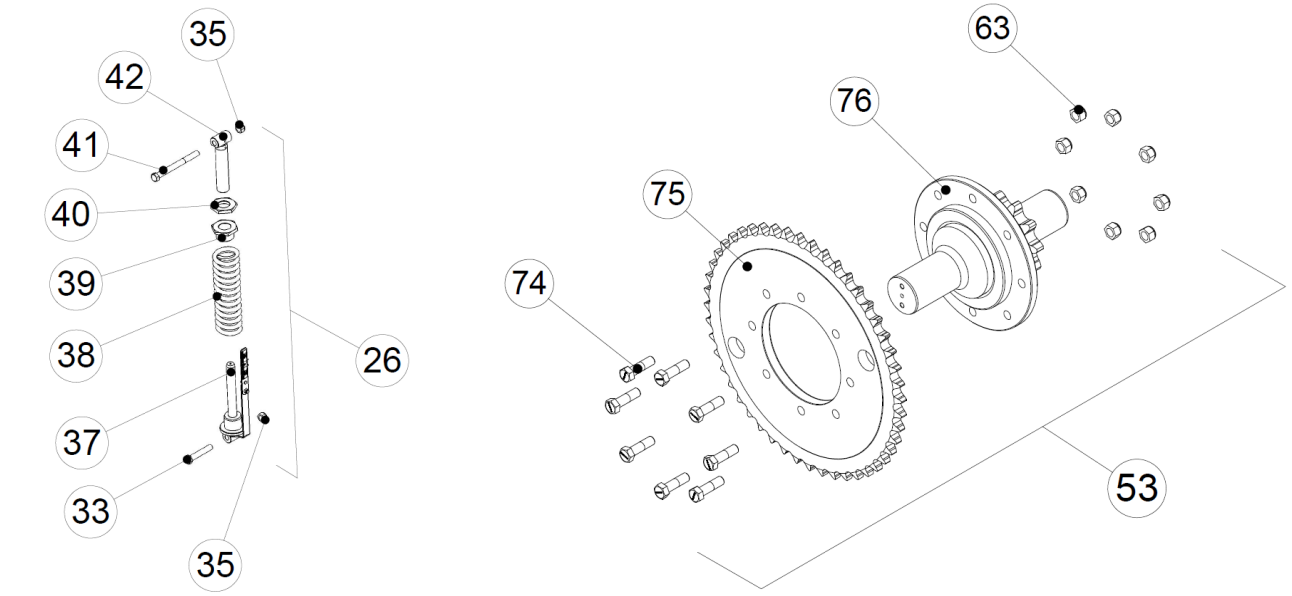
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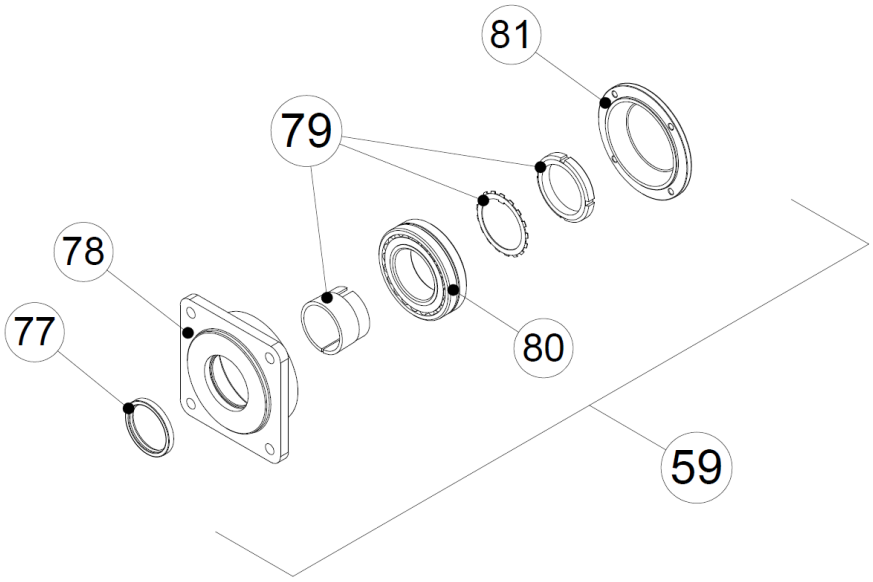
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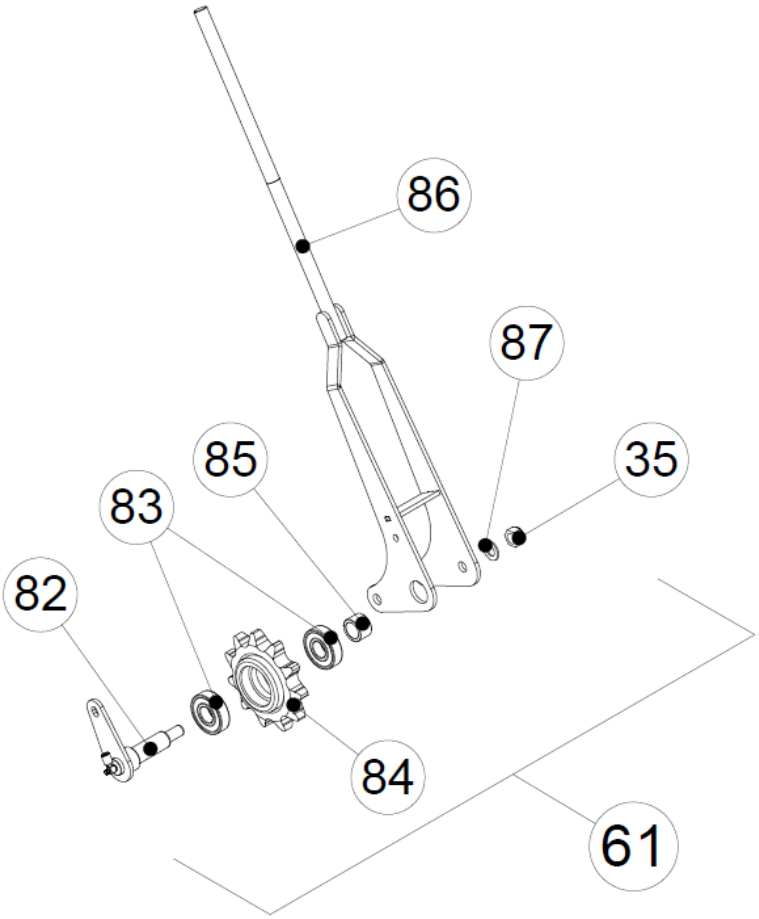
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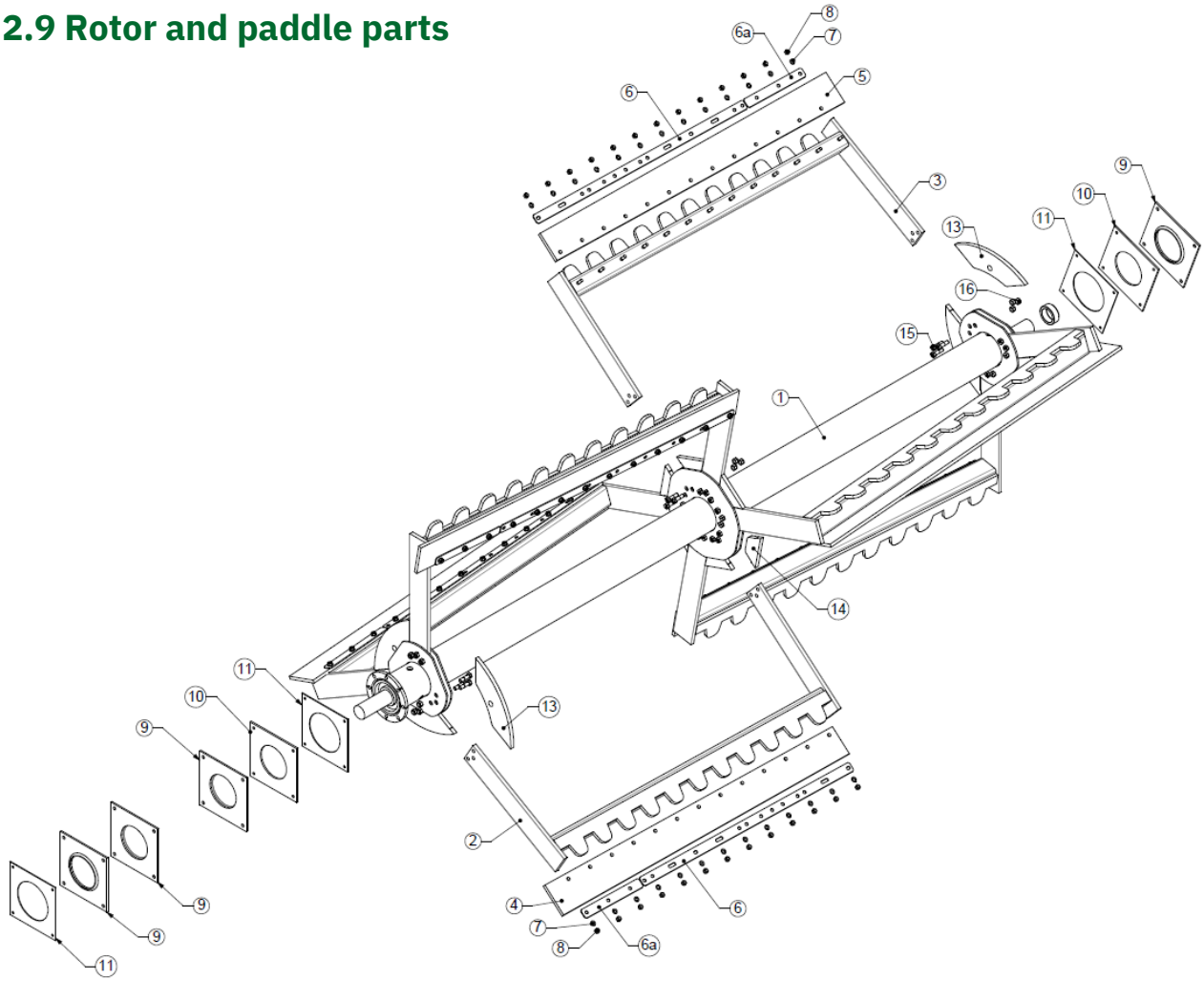
Item	P/N	Qty	Description
1	FP200-048-0142	1	Chain drive reduction gearbox assembly brace plate
2	FP200-048-0271	1	Rotor front bearing carrier cover plate assembly
3	FP160-009-0025	1	Bearing assembly, 70 mm, 516 taper lock, flange mount
4	FP200-048-0159	1	Front auger bearing mounting plate assembly
5	FP200-048-0457	1	MechFiber345/365 drive system reduction gearbox assembly 2
6	FP200-048-0188	1	Drive chain oil collector tray mounting bracket
7	FP200-048-0182	1	Primary drive chain splined shaft oil baffle plate
8	FP200-048-0207	1	Primary drive chain tensioner mount oil baffle plate
9	FP200-048-0186	1	Drive chain oil collector tray assembly
10	FP200-048-0193	1	Primary drive chain inner oil baffle assembly
11	FP200-048-0245	1	Auger flange baffle plate
12	FP200-048-0227	1	Primary drive chain outer oil baffle assembly
12a	FP200-048-0307	1	Primary drive chain outer oil baffle scraper plate assembly
13	705826	2	Adaptaflex conduit clip 28 mm
14	704188	1	Primary drive chain — ASA120 — 91 pitches + joiner link (Diamond)
	705018	1	Primary drive chain — ASA120 — 91 pitches + joiner link (Sapphire)
15	704097	1	Joiner link — ASA120 — 1 pitch — slip fit (Diamond)
	705027	1	Joiner link — ASA120 — 1 pitch — slip fit (Sapphire)
16	FP200-007-0006	1	Front rotor stub shaft thrust collar assembly
17	702294	1	UCF X18 — 90-mm bearing assembly with steel housing
18	FP200-017-0004	1	Rotor front bearing carrier
19	705019	1	Rotor drive chain — ASA160SH, 119 pitches + joiner link (Sapphire)
	704189	1	Rotor drive chain — ASA160SH, 119 pitches + joiner link (Diamond)
20	705029	1	Joiner link — ASA160 – 1 pitch — slip fit (Sapphire)
	704099	1	Joiner link — ASA160 – 1 pitch — slip fit (Diamond)
21	FP160-007-0013	1	Front rotor spacer
22	EF207-34	1	Rotor sprocket — 104-tooth ASA160
23	FP200-007-0236	1	Rotor front cover upper assembly — 60 mm gap
23a	FP200-007-0237	1	Rotor front cover lower assembly — 60 mm gap
23b	FP200-007-0199	1	Front rotor window gasket
24	FP280-048-0445	1	Rotor chain tensioner pivot pin assembly
25	FP380-048-0046	1	Rotor chain tensioner arm assembly 2
26	FP200-048-0251	1	Rotor chain tensioner compression spring and seat assembly
27	FP200-009-0219	1	Auger front cover — lower plate extended
28	FP200-009-0220	1	Upper auger front cover with rain channel
9	703753	1	F516A bearing housing and cover
30	701457	1	H316, 70-mm bore adaptor sleeve, ring nut and castellated washer
31	704122	1	Bearing spacer ring, SR140 x 10
32	700847	1	22216K bearing insert
33	700281	1	M16 x 90-mm bolt
34	FP280-048-0452	1	Rotor drive chain tensioner wear block
35	700283	3	M16 locknut
36	FP380-048-0043	1	Rotor chain tensioner arm assembly 1
37	FP200-048-0252	1	Rotor chain tensioner spring seat shaft assembly (345/365/380)
38	704196	1	Compression spring — 12-mm wire, 80-mm OD, 280 mm long
39	FP160-048-0148	1	Chain tensioner lower spring seat
40	FP160-048-0147	1	Chain tensioner lower spring seat locking nut
41	705862	1	M16 x 175-mm bolt
42	FP160-048-0145	1	Chain tensioner lower spring seat adjuster tube assembly
43	700246	2	M12 x 25-mm setscrew
44	FP280-048-0395	1	Idler shaft thrust washer
45	FP280-048-0396	6	Idler shaft thrust shim (2 mm)
46	FP200-048-0160	1	X18 steel housing bearing with bearing puller shoulder plate

Item	P/N	Qty	Description
47	FP200-048-0162	1	Idler shaft front bearing mounting plate assembly
48	FP280-048-0386	1	Front idler bearing bolt positioning ring assembly
49	FP200-037-0071	1	PTO guard — MF345/MF365
50	FP160-048-0194	8	Bearing bolt hole reducer and collar (FYH bearing)
51	705145	2	FYH UCF308 40-mm bearing with cast 4-bolt flange housing
52	700628	1	Z6 spline shaft with 8-tooth ASA120 sprocket
53	FP200-048-0153	1	Idler shaft assembly 2
54	705828	1	Oil level window
55	FP280-037-0200	1	Oil sump drain plug
56	FP280-037-0249	1	Oil sump drain plug seal washer
57	FP280-037-0202	1	Oil sump drain plug seal
58	FP200-048-0456	1	MF345/365 drive system reduction gearbox assembly 1
59	FP280-048-0723	1	90-mm taper lock bearing assembly complete (steel housing)
60	FP200-048-0138	1	Drive system reduction gearbox rear cover plate
61	FP200-048-0144	1	Primary drive chain tensioner arm assembly 2
62	FP200-048-0156	1	Primary chain tensioner stabilising arm assembly
63	700305	8	M20 locknut
64	FP380-048-0101	1	Primary chain tensioner inner spring seat
65	704882	1	Compression spring — 9.53-mm wire, 54-mm ID, 200 mm long
66	FP380-048-0024	1	Primary chain tensioner inner spring seat
67	FP200-048-0082	1	Primary chain tensioner inner spring seat socket
68	FP200-048-0249	1	MF345/365 primary drive tension setting indicator assembly 2
69	704914	13	Grease tube connector — straight — M6 thread
70	704947	13	Adaptor — 1/8 BSP external to M6 internal to 1/8 BSP internal
71	701129	13	1/8 BSP grease fitting
72	FP160-048-0175	2	70-mm and 40-mm spring seat spanner
73	704439	1	M8 star control knob
74	700298	8	M20 x 70-mm bolt (grade 8.8)
75	FP160-048-0064	1	48-tooth ASA120 idler sprocket
76	FP200-048-0154	1	Idler shaft assembly 1 (MF345/MF365)
77	705818	1	Oil seal — 90 mm x 110 mm x 13 mm
78	FP280-048-0720	1	Idler shaft inner bearing housing assembly (steel)
79	701166	1	H520, 90-mm bore adaptor sleeve, ring nut and castellated washer
80	700861	1	22220K bearing insert
81	705816	1	722520A bearing cap
82	FP280-048-0232	1	ASA120 chain tensioner sprocket axle assembly 2 (oilbath)
83	704227	2	6305.2RS C3 deep groove ball bearing
84	FP280-048-0224	1	ASA120 chain tensioner sprocket assembly 1
85	FP200-048-0158	1	Primary chain tensioner axle spacer (oilbath)
86	FP200-048-0145	1	Primary chain tension adjuster assembly 1
87	700283	1	M16 locknut
88	706170	1	90 x 50 x 10 oil seal
89	FP200-048-0392	1	Input shaft front seal holder plate
90	FP200-048-0388	1	Front input shaft bearing seal housing gasket
91	705818	1	Oil seal — 90 mm x 110 mm x 12 mm
92	FP200-048-0395	1	Idler shaft front seal holder plate
93	FP200-048-0389	1	Front idler bearing seal housing gasket
94	FP200-007-0200	1	Rotor seal access hatch gasket
95	FP200-007-0180	1	Rotor seal access hatch cover plate
96	FP200-007-0181	1	Rotor seal drip tray

Table 16: Drive system parts

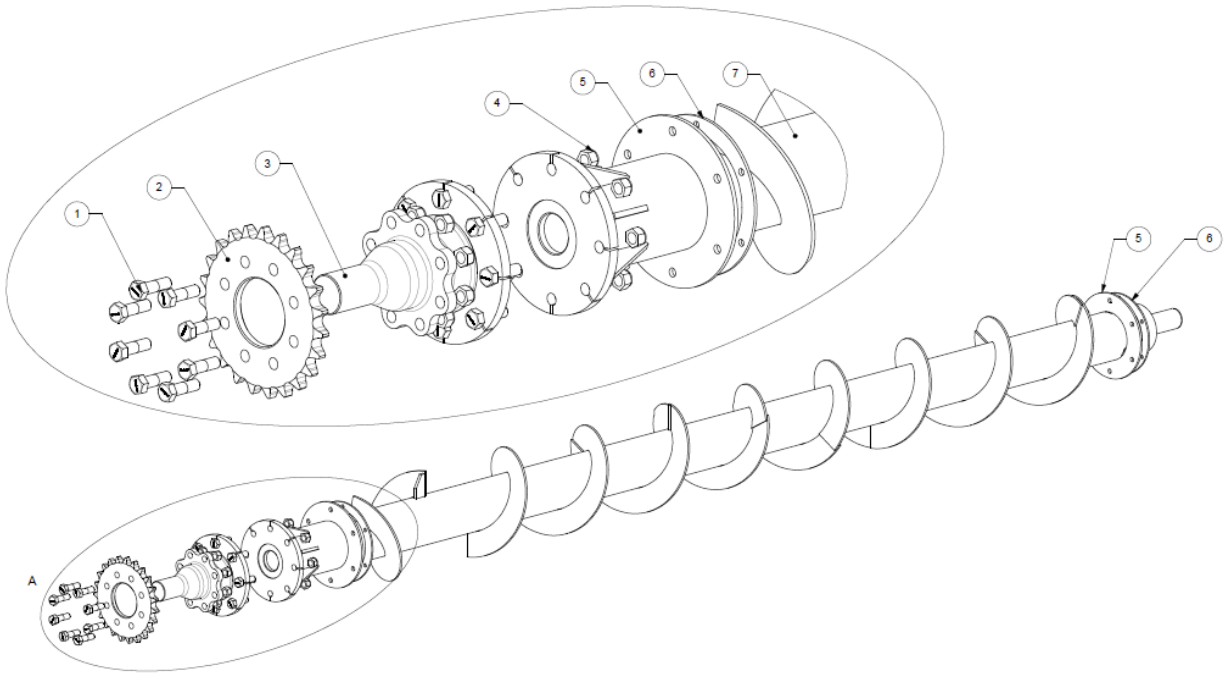
2.9 Rotor and paddle parts



Item:	P/N:		Qty:	Description:
	345+	365+		
1	FP160-007-0075	FP200-007-0271	1	Rotor assembly
2	FP160-008-0077	FP200-008-0240	3	Front paddle assembly (round castellation)
3	FP160-008-0076	FP200-008-0241	3	Rear paddle assembly (round castellation)
4	702288	702289	3	Paddle rubber (front)
5	702287	702290	3	Paddle rubber (rear)
6	FP140-008-0009	FP140-008-0009	6	Paddle rubber retainer
6a	N/A	FP200-008-0010	6	Paddle rubber retainer (short extension)
7	700732	700732	56/78	M16 flat washer
8	700283	700283	56/78	M16 nylock nut
9	701822	701822	4	Rotor lip seal rubber
10	FP140-007-0017	FP140-007-0017	2	Braided rotor seal, rubber
11	FP140-007-0006	FP140-007-0006	3	Rotor seal retainer
12	701541	701541	1	Rotor spacer (90 mm ID x 120 mm OD x 40 mm long)
13	FP160-007-0026	FP160-007-0026	6	End paddle block
14	RDTP207	RDTP207	6	Centre paddle block
15	700298	700298	36	M20 x 70 bolts
16	700305	700305	36	M20 locknuts

Table 17: Rotor assembly

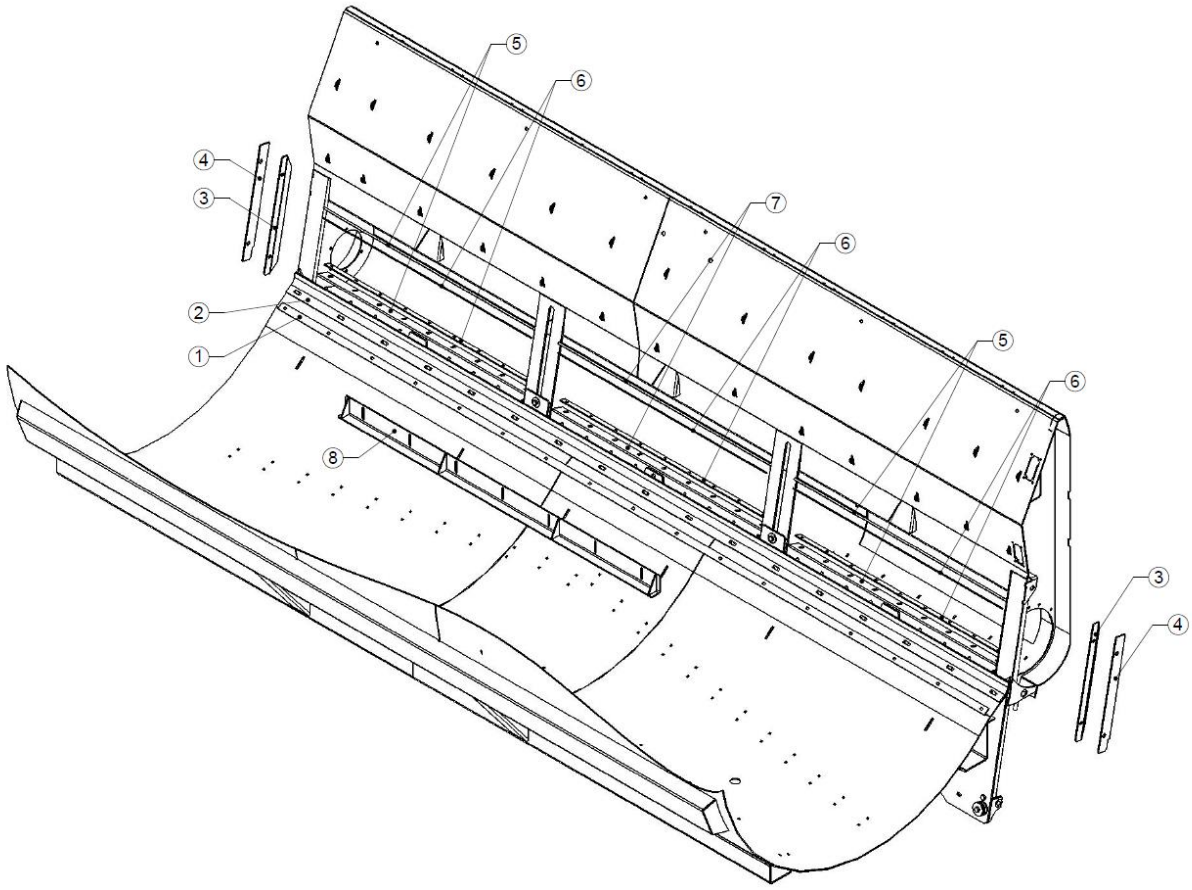
2.10 Auger parts



Item:	P/N:		Qty:	Description:
	345+	365+		
1	700297	700297	16	M20 x 65-mm bolts
2	FP160-009-0026	FP160-009-0026	1	23-tooth ASA120 auger driven sprocket
3	FP160-009-0024	FP160-009-0024	1	Auger stub shaft assembly (forged)
4	700305	700305	16	M20 locknuts
5	FP280-009-0070	FP280-009-0070	2	Auger seal rubber
6	FP280-002-055	FP280-002-055	2	Auger seal retainer
7	N/A	FP200-009-0031	1	Auger assembly

Table 18: Auger assembly

2.11 Body sealing parts

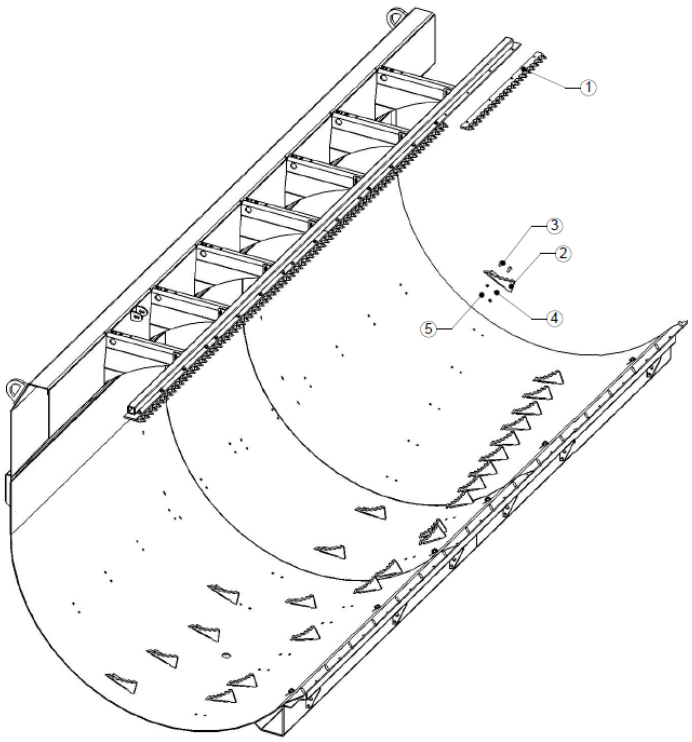


Item:	P/N:		Qty:	Description:
	345+	365+		
1	FP140-004-0003	FP200-004-0028	1	VFC-door inner seal retainer
2	701290	701293	1	VFC-door inner rubber seal — 5,005 mm
3	FP280-010-009	FP280-010-009	2	VFC-door front and rear end retainer
4	704876	704876	2	VFC-door front and rear end seal
5	N/A	704880	4	VFC-door outer end seal rubber
6	FP140-006-0022	FP200-006-0076	6	VFC-door shroud seal retaining flat
7	701195	701199	4/2	VFC-door outer seal rubber
8	FP160-006-0093	FP160-006-0093	1	Auger chamber material deflector

Table 19: Body seals

Note: MechFiber365+ uses two types of VFC-door outer seals: 701199 for the middle section of the auger chamber and 704880 (a shorter version) for either end.

2.12 Body blade parts

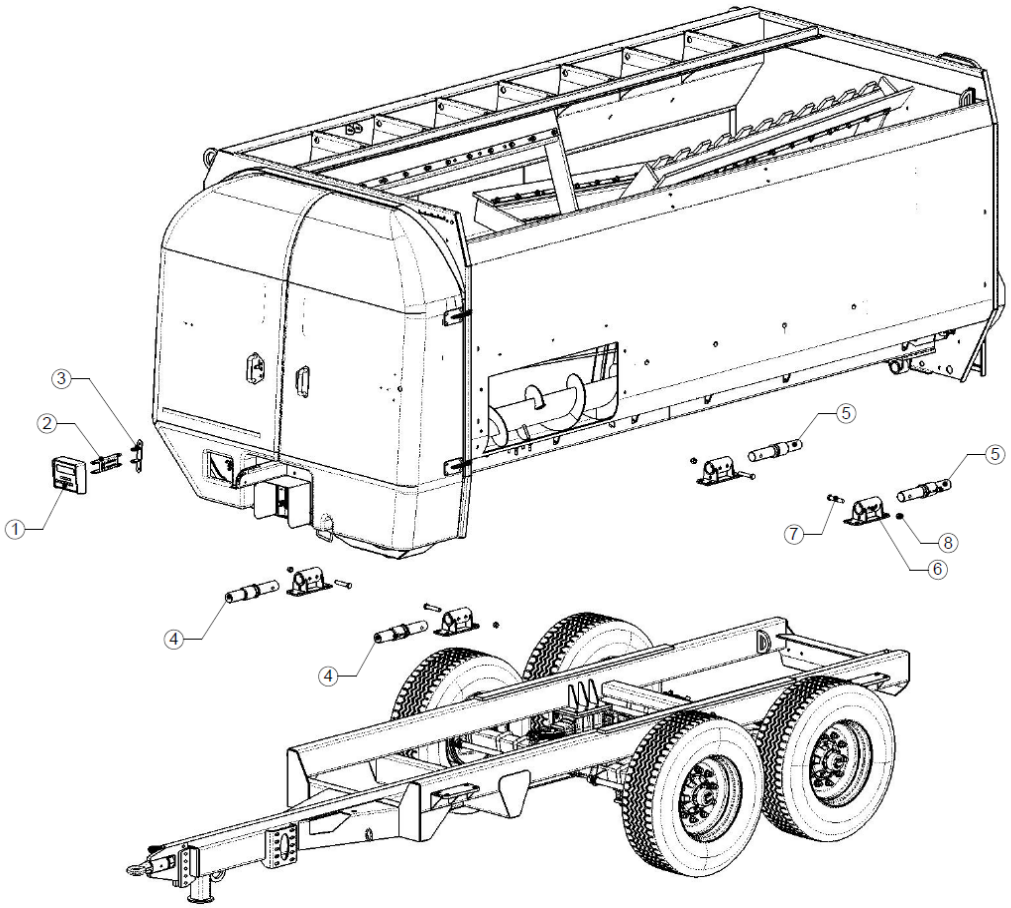


Item:	P/N:		Qty:	Description:
	345+	365+		
1	701518	701518	4/5	Top knife blade — 990 mm long
	704229	704229	4/5	Top knife blade — 990 mm long — deep serrations
2	703955	703955	24/28*	Body blade — 5 mm thick
	703957	703957	24/28*	Body blade — 6.25 mm thick
3	700226	700226	48/56	M10 x 30-mm cuphead bolt (8.8 grade)
	705405**	705405**	48/56	M10 x 40-mm cuphead bolt (8.8 grade)
4	700241	700241	48/56	M10 hex nut
5	700737	700737	48/56	M10 spring washer

Table 20: Blades

*There are 24 blades used as the standard on the MechFiber345+ and 28 as the standard on the MechFiber365+. Extra blades may be added depending on the machine specifications.
**Used only in conjunction with body liner.

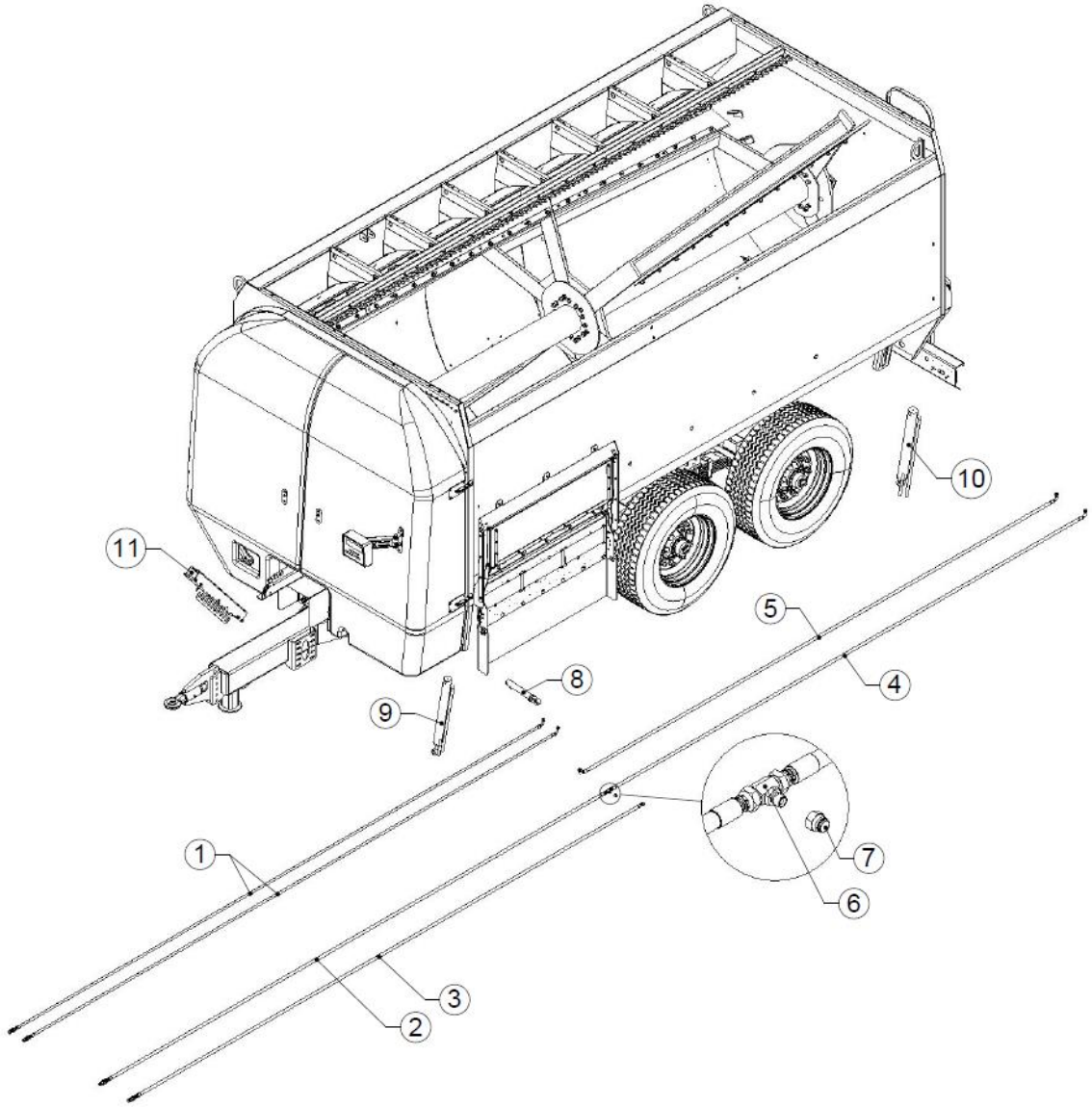
2.13 Weighing system



Item:	P/N:	Qty:	Description:
1	703353	1	Weight display box
2	EF102-115	1	Weight display box pivot arm
3	FP380-037-0082	1	Weight display box mounting bracket
4	704140	2	Weigh cell — 2 ½” diameter — 5.2-m cable (DG 969-0076)
5	704141	2	Weigh cell — 2 ½” diameter — 10.7-m cable (DG 969-0077)
6	EF201-12	4	Weigh bar bracket assembly
7	701496	4	M20 x 120-mm bolt (8.8 grade)
8	700305	4	M20 locknut

Table 21: Weighing system

2.14 Hydraulic system parts



Item	P/N		Qty	Description
	345+	365+		
1	702106	702106	2	Hydraulic feed-out tray hose assembly — 5,502 mm
2	704916	704916	1	Tractor to VFC-door hydraulic hose assembly
3	705807	705807	1	Tractor to T-connector hydraulic hose assembly
4	705808	705810	1	T-connector to VFC-door hydraulic hose assembly
5	701510	701513	1	VFC-door ram to VFC-door ram hydraulic hose
6	705806	705806	1	T-connector
7	705812	705812	1	1/4" BSP female hydraulic cap
8	703591	703591		Feed-out tray hydraulic ram (Keen 63)
9	704955	704955		VFC-door front ram (Keen 52)
10	704954	704954		VFC-door rear ram (Keen 51)
11	FP160-001-0095	FP160-001-0095	1	Hydraulic hose holder assembly

Table 22: Hydraulic system

2.15 Axle Parts

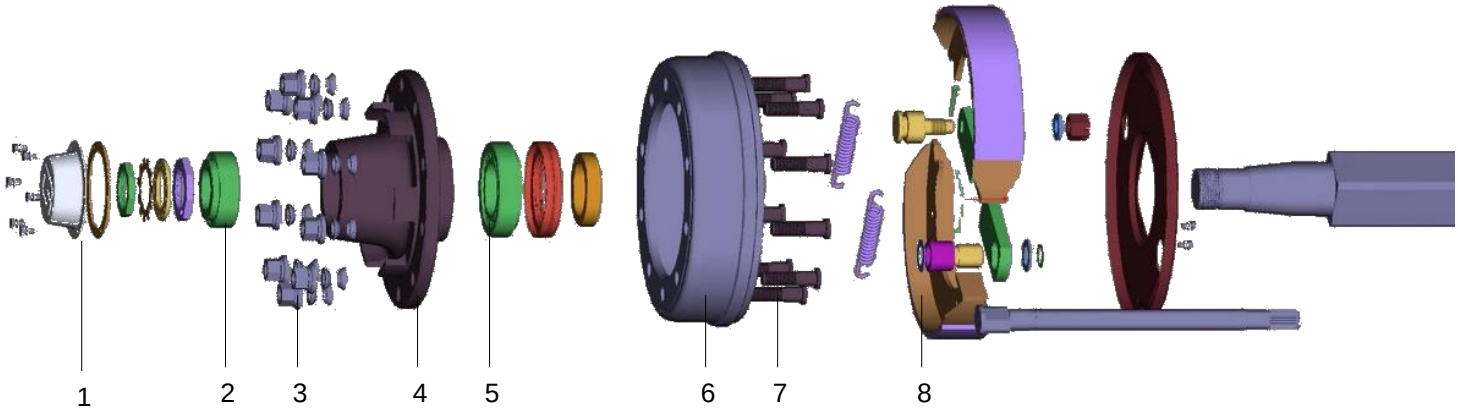


Figure 14: Typical axle (exploded view)

Axle options

Axle types			
Axle application	**MechFiber 345+**	**MechFiber 365+**	**MechFiber 345+/365+**
Axle spec.	HS12A1-00	EUR1410 414S	EF1058/EF1050
Axle type	Straight	Straight/cranked	Tandem bogie
Axle width (mm)	2,100	2,250/2,400	2,200
Brake type/dimensions (type/dia. x width mm)	Series S, 420 x 180	414S, 406 x 140	408E, 400 x 80
No. studs	10	10	8/10
Nut size	M22 x 1.5	M22 x 1.5	M18 x 1.5/M22 x 1.5
Axle spare parts			
Item No.	**MechFiber 345+**	**MechFiber 365+**	**MechFiber 345+/365+**
1. Hub cap	704167	703994	703732
2. Outer bearing	704176	704450*	702987
3. Nut	704166	702644	702992/702644
4. Hub	704171	704449	704453/704454
5. Inner bearing	704177	704450*	700838
6. Brake drum	704172	704451	702466/704455
7. Stud	704173	700307	702868/700307
8. Brake shoes	704170*	704452*	704233*

Table 23: Axle types and axle spare parts

*Note: *Supplied as a kit*

2.16 Ancillary parts

PTO Shaft		
P/N	**Qty**	**Description**
700616	1	PTO, T60 shaft, 1-3/8” Z6 x 1-3/8” Z6. M10 x 6.8 shear bolt
Planetary gearbox		
P/N	**Qty**	**Description**
701421	1	Planetary gearbox
Grease fittings		
P/N	**Qty**	**Description**
704913	1	Grease tube swivel connector – 90-degree bend – M6 thread
704914	1	Grease tube connector – straight – M6 thread
704915	1	Grease fitting connector – straight – 1/8" BSP to M6
704941	1	Grease tube connector – straight – 6-mm thread
704942	1	Grease tube connector – straight – 8-mm thread
704943	1	Grease tube connector – straight – 1/8" BSP thread
704944	1	Grease tube connector – 90-degree bend – 1/8" BSP thread
704945	1	Grease tube connector – 90-degree bend – M6 thread
704946	1	Grease tube swivel connector – 90-degree bend – 1/8" BSP thread
704947	1	Grease fitting connector – straight – 1/8" BSP to M6
Spool valve parts		
P/N	**Qty**	**Description**
701215	1	2 bank with detent
701216	1	2 bank without detent
701218	1	3 bank with detent
701219	1	3 bank without detent
702269	1	4 bank with detent
701208	1	4 bank without detent
702450	1	5 bank with detent
704447*	1	Electro-hydraulic spool valve kit, 4 bank (contains 704445 and 704446)
704525	1	Electro-hydraulic spool valve kit, 5 bank
Diverter valve parts (used on French machines)		
P/N	**Qty**	**Description**
704139	1	Diverter valve kit (contains 703535 and 704394)
703894	1	Electro-hydraulic diverter valve kit (6 port)
Heavy-duty top knife (standard on all bale handlers)		
P/N	**Qty**	**Description**
704229	4/5	Top knife blade, 990 mm long, deep serrations
Mechanical adjuster		
P/N	**Qty**	**Description**
FP160-006-0129	1	Mechanical adjuster complete assembly

Table 24: Ancillary parts

*4 bank can be reduced to 3 bank if required using the same part number.

3 Annexes

3.1 EC Declaration of Conformity

EC Declaration of Conformity.

In accordance with Directive 2006/42/EC.

Manufacturer:

Alltech Farming Solutions Ltd.

Borris

Co. Carlow

Ireland

Certifies that the KEENAN MechFiber345+ and MechFiber365+ comply with the essential safety requirements of the Directive 2006/42/EC.

To conform to these essential health and safety requirements, the provisions of the following harmonized standards were particularly considered:

BS EN ISO 12100, I.S. EN ISO 13857, I.S. EN ISO 5674, EN349, EN703, I.S. EN ISO 4254-1, ISO 11684, ISO 12140

Date: Feb 2022

Signed: _____

Robert Walker, CEO

3.2 International Patents

The KEENAN MechFiber diet feeder and the KEENAN MechFiber bale blend machines are subject to international patents, including the following:

Europe:	E0, 833,558	USA:	5,967,433
Japan:	Pending	Canada:	Pending
Australia:	691418	New Zealand:	305943
South Africa:	96/3148		

4 KEENAN Contact Details

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