



# Operators Manual

## KEENAN MechFiber270+ and 320+

Effective for models MF27N101 and MF32N120

Revision F01 July 2022 EN





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The MechFiber270+ and 320+ operator's manual presents information on model-specific maintenance, specifications and spare parts.

# Part 1: Service and maintenance, MechFiber270+ and 320+ 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 MechFiber270+ and 320+ 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	
<b>Cleaning:</b>	Clean all old feed from around the body to prevent corrosion and damage to the paint.
<b>VFC-door:</b>	Before using the machine, check that the door opens and shuts fully and operates smoothly.
<b>Wheel nuts:</b>	Check the torque settings.
<b>Automatic oiler (where fitted):</b>	Check the oil level, and replenish with light oil, grade SAE 10 or similar oil, as required. Reservoir capacity: 1.89 litres
Weekly (40 hours)	
<b>PTO input shaft:</b>	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.
<b>Drive (gear) box:</b>	Grease the drive input-shaft bearings (two fittings).
<b>Rotor bearings:</b>	Grease the front and rear rotor bearings (two fittings).
<b>Feed discharge auger:</b>	Grease the front and rear auger bearings (two fittings).
<b>Drive chains:</b>	Check the condition of the primary and secondary chains.
<b>Chain tensioners:</b>	Grease the pivot points on the primary and secondary chain tensioner mechanisms.
<b>VFC-door:</b>	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.

<b>Chassis:</b>	Grease the hitch pivot tube (where the swivel hitch is fitted).
<b>Single axle:</b>	Grease all six pivot points listed below: <ul style="list-style-type: none"> <li>- Two on each brake rod (four in total)</li> <li>- One on each brake arm (two in total)</li> </ul>
<b>Tandem axle (if fitted):</b>	Grease all 14 pivot points listed below: <ul style="list-style-type: none"> <li>- Two on each brake rod (eight in total)</li> <li>- One on each brake arm (four in total)</li> <li>- One on each spring bogie pivot pin (two in total)</li> </ul>
<b>Axle U-bolts:</b>	Check axle U-bolt torque settings (tandem only).
<b>Tyres:</b>	Check that tyres are inflated to the recommended pressures, and make sure the wheel nuts are tight.
<b>Monthly</b>	
<b>Bale handler:</b>	Grease each tine pivot and check the tines for looseness. Check tine buffers for cracks, splits or degradation.
<b>Yearly (end of season or 450 hours)</b>	
<b>Drive system:</b>	Remove all chains by loosening the tensioners and removing the joiner links (see Figure 2). Wash off all dirt using paraffin. Dry the chains before soaking overnight in oil and then refit.
<b>Overall machine:</b>	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.
<b>Electronic weigh-box:</b>	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.
<b>Wheels:</b>	Remove and inspect wheel hub. Replace worn parts, redress and re-fit.
<b>Blades:</b>	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

<p><b>WARNING:</b></p> <p> 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).</p>	
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## 1.3 Chains

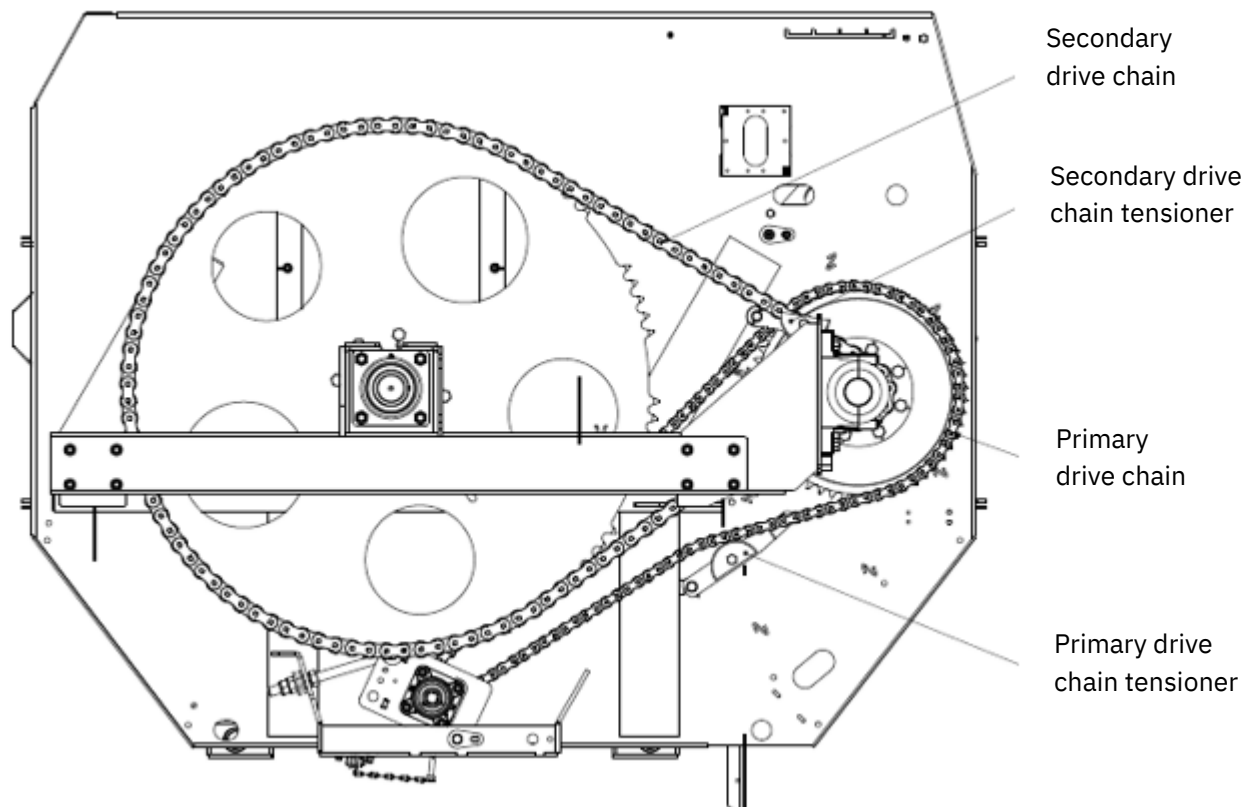


Figure 1

Each week, check the condition of the chain tension arms and adjust as required. There are two chains used on the KEENAN MechFiber270+ and MechFiber320+ models. The primary drive chain (ASA100) drives the auger shaft from the input shaft (see Figure 1), and the secondary chain (ASA140HS) drives the rotor. Both chains are tensioned by spring assemblies on the slack side of the chain.

Primary drive chain	ASA100
Links	118 (including joiner)
Pitch (mm)	31.75
Pitch (inches)	1.25"
Chain length (mm)	3,747
Chain length (inches)	147.5"
Rotor drive chain	ASA 140HS
Links	115 (including joiner)
Pitch (mm)	44.45
Pitch (inches)	1.75"
Chain length (mm)	5,112
Chain length (inches)	201.2"

Table 2: MechFiber270+ and MechFiber320+ drive chains



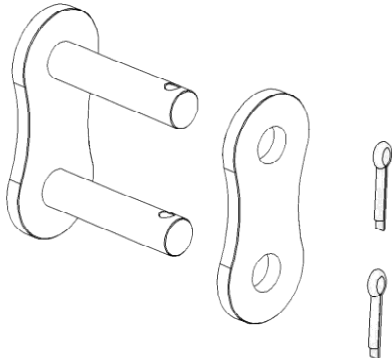


Figure 2: Chain joiner link

**Note:** The ASA100 chain uses split pins in the joiner link, as shown, while the ASA140HS 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 Changing the oil

The automatic oiler (when fitted) is located inside the front left-hand cover of the machine. When changing the oil in this unit, take the steps in the following procedure:

1. Since the oil filler can is higher than eye-level, a suitable stepladder should be used to raise the person above eye-level. Being above eye-level can help prevent any splash or over-fill from pouring onto the user's head.
2. Before climbing the ladder, make sure to push the control box toward the front cover to allow for sufficient clearance when working and to avoid head or eye injury when performing maintenance.
3. When handling the oil, and depending on the oil product used, we recommend checking the datasheet on the product. This will tell you the manufacturer's instructions for handling the oil, including any necessary precautions to take. The datasheet refers to the instructions that are provided with the product upon purchase from your local retailer.
4. A suitable oil can, preferably with a nozzle attachment, should be used, as it will prevent unnecessary spill and will allow for consistent and safe filling of the oil tank.



Figure 3: Automatic oiler



## 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.

Tension is set on the primary chain to remove excess slack and to prevent sagging or whipping under heavy loads. The secondary drive chain is adjusted automatically.

The primary chain tension is adjusted by turning the adjuster nut on the gearbox retaining bolt (**A**) (see Figure 4). The final adjustment is applied by adjusting the tensioner spring on the chain links attached to the body. **35 mm (1.5 inches)** deflection from a straight line (**B**) is advised. Do not overtighten, as doing so can damage the bearings. The primary drive chain spring is nominally stretched to **270–290 mm** coil length, and the secondary drive chain spring is nominally stretched to **600–700 mm** coil length. If the springs overstretch, they must be replaced.

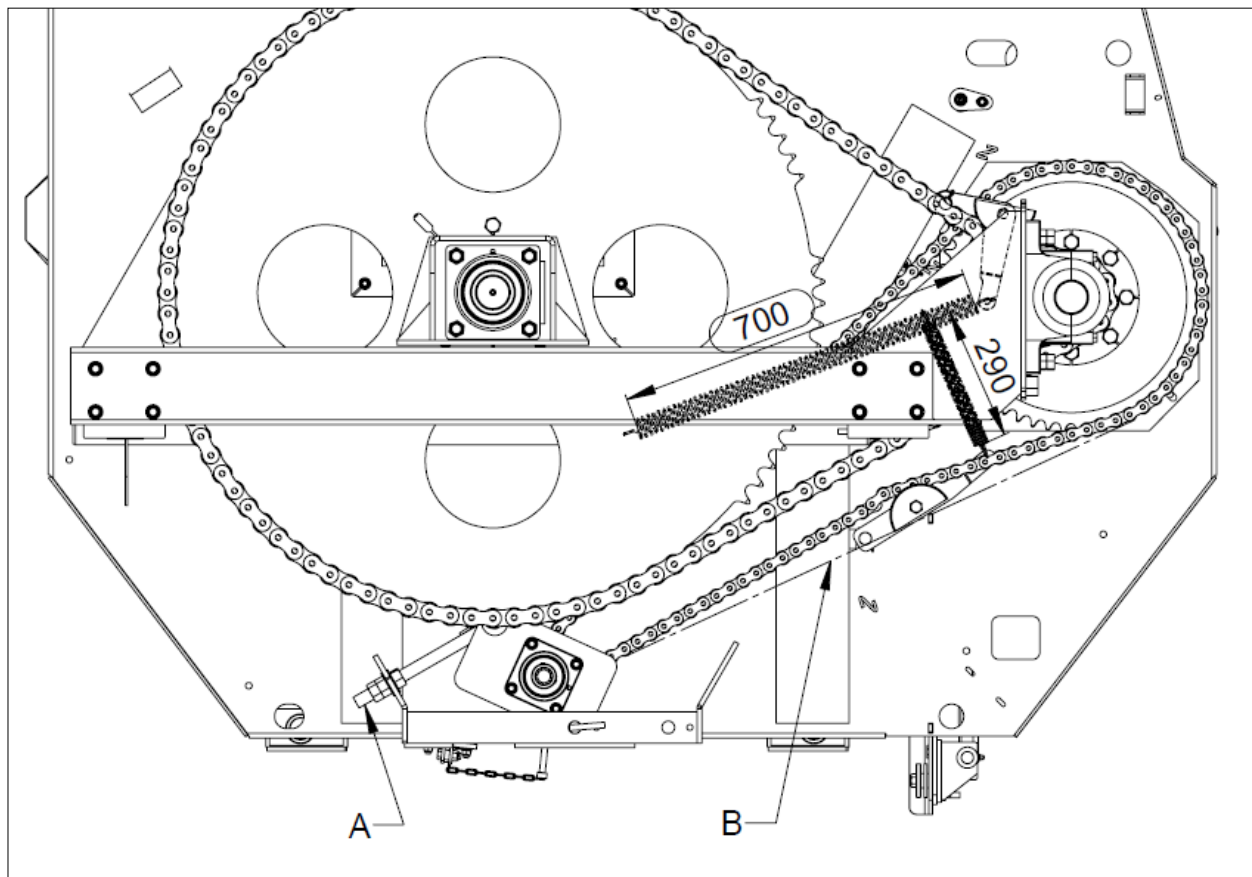


Figure 4: Chain tensioning (showing springs fully stretched)

## 1.6 Greasing

### 1. Bearings

Each week, apply grease to the eight bearings with grease fittings. The bearings are as follows:

- The main rotor bearing at the front of the KEENAN MechFiber (A, Figure 5).
- Two main bearings on the front and rear of the input drive shaft (B and C, Figure 5).
- The auger bearing at the front of the KEENAN MechFiber+ (D, Figure 5)
- The two main bearings at the rear of the KEENAN MechFiber+ (G and H, Figure 6).

### 2. Pivot points

Each week, apply grease to the following points with grease fittings (there are up to 25).

The points are as follows:

- Two pins and two bushes on the VFC-door lifting rams (I, J, K and L, Figure 7)
- 18 grease fittings on the tandem axle assembly (where fitted):
  - Two on each brake rod, one on each pivot (eight in total)
  - One on each brake arm (four in total)
  - One on each front spring pin (four in total)
  - One on each centre spring assembly pivot (two in total)
- Two grease fittings, one on the secondary chain tension arm and one on the primary chain tension arm (see Figure 8)
- Grease fitting in pivot bush on gearbox pin

### 3. VFC-door:

Check the VFC-door is able to move freely each day, and grease as appropriate.

### 4. PTO drive shaft:

Refer to the PTO operators' manual for greasing instructions and recommendations.

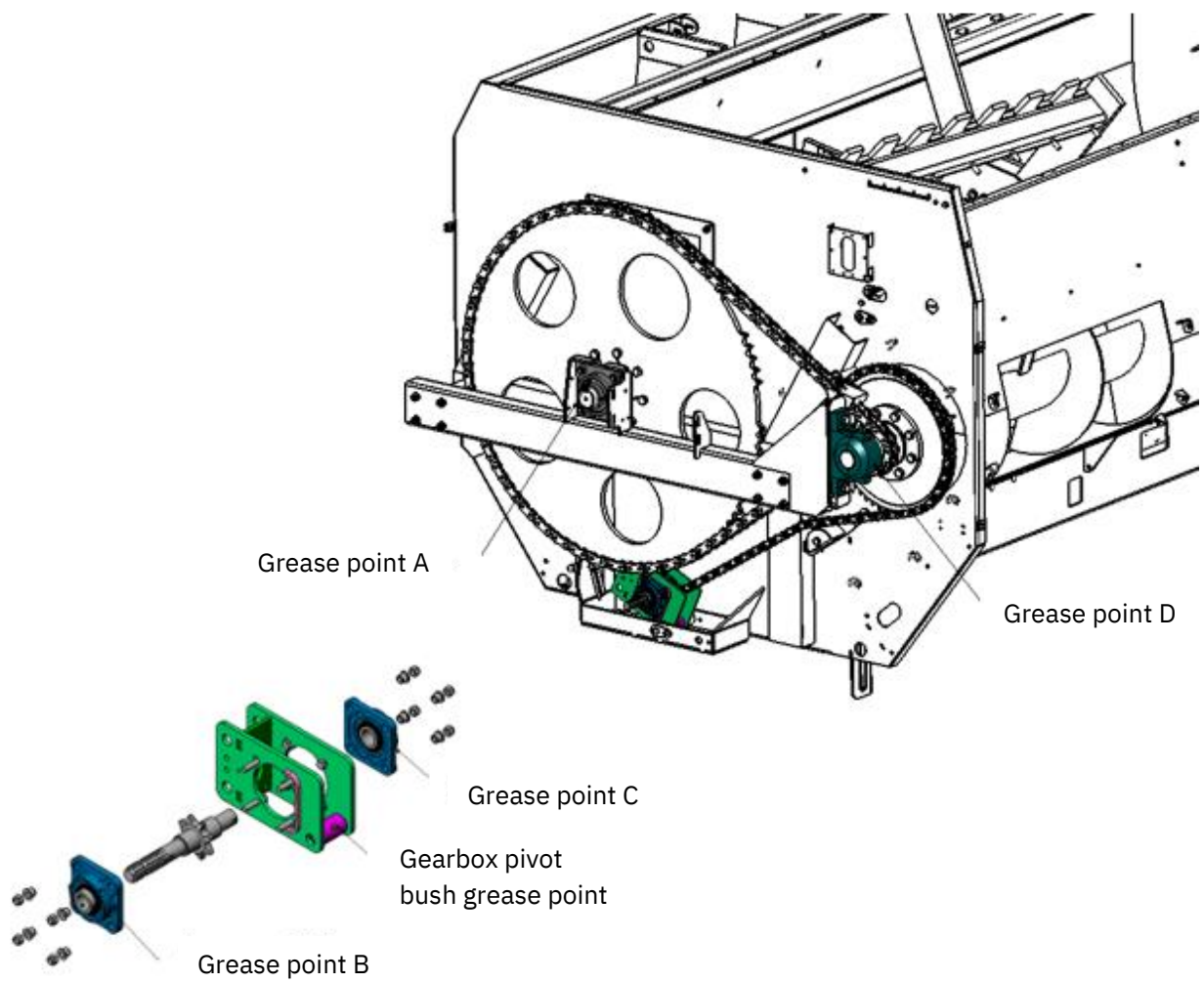


Figure 5: Front grease points

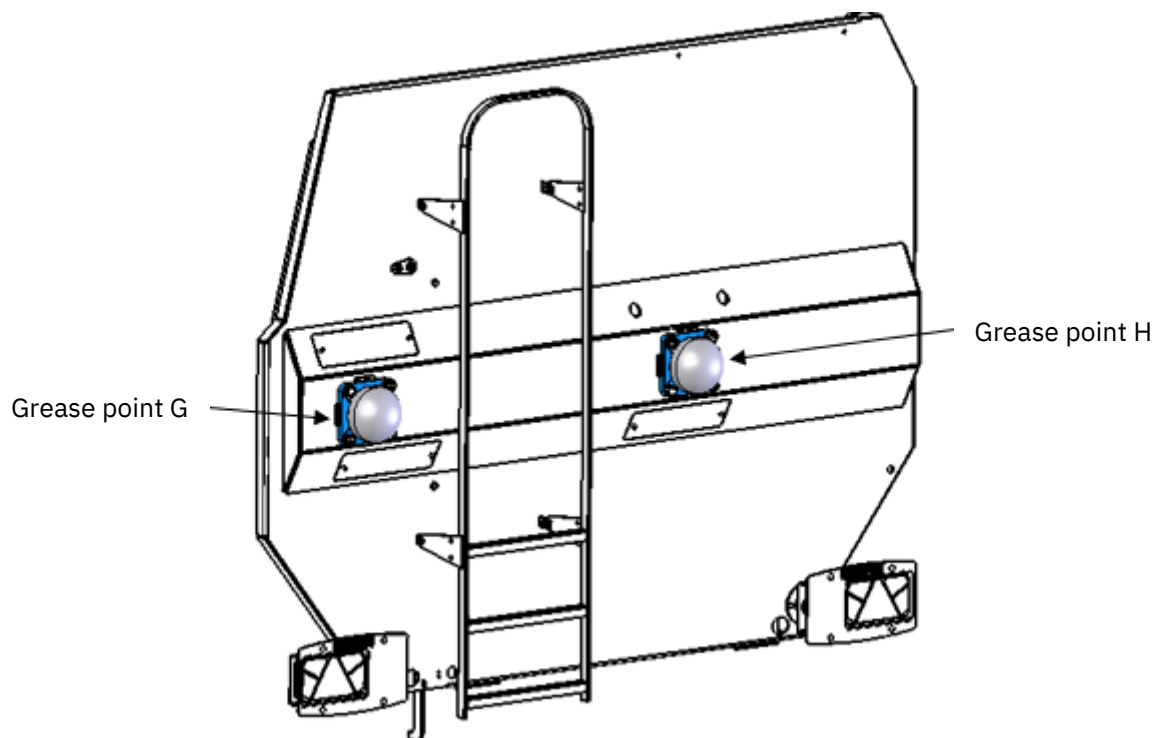


Figure 6: Rear grease points

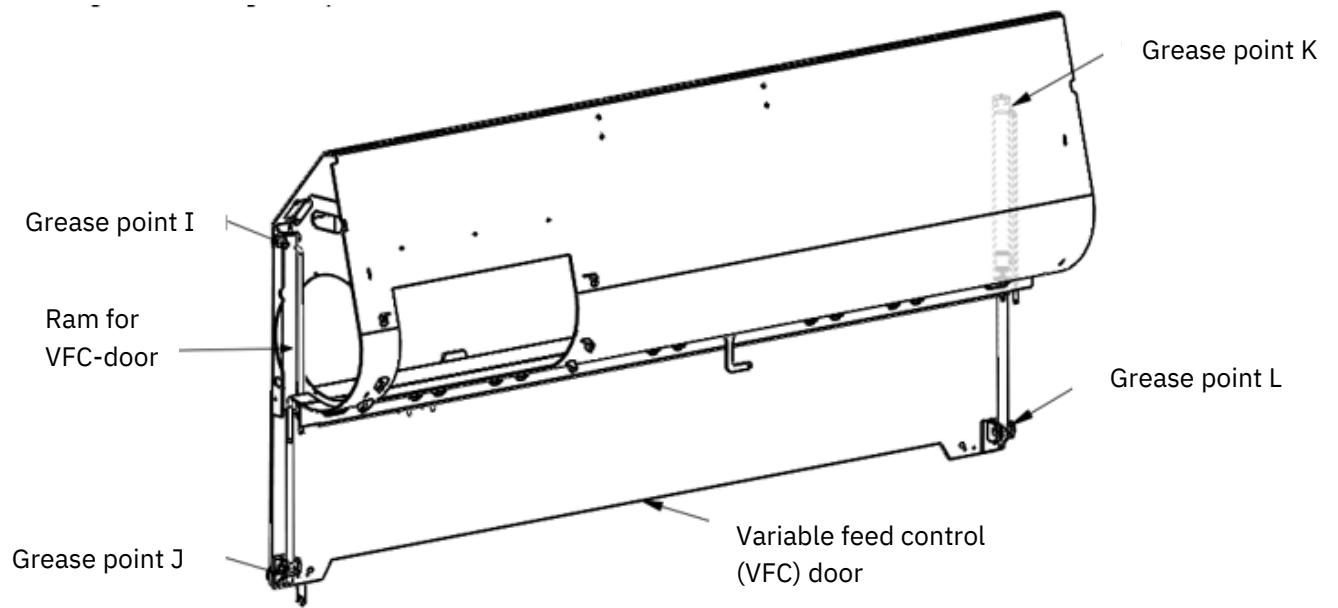


Figure 7: VFC-door grease points

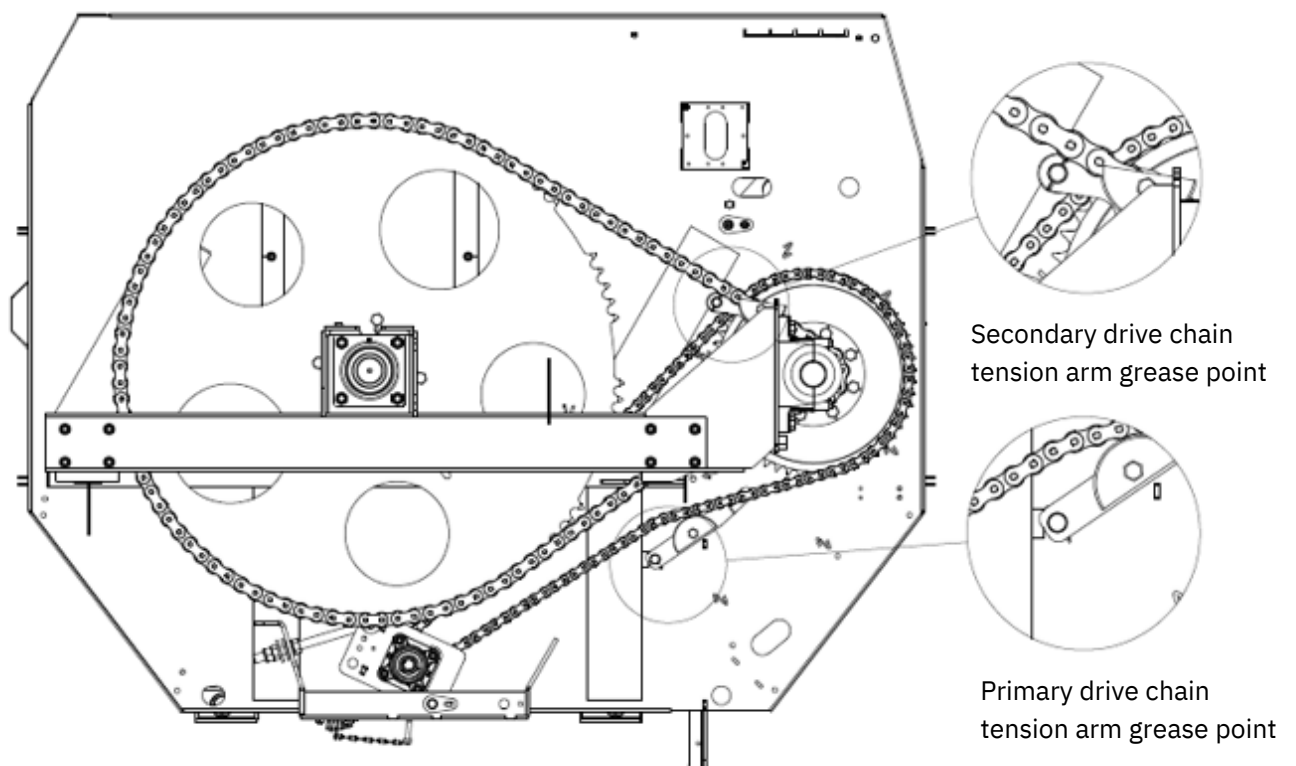


Figure 8: Tension arm grease points

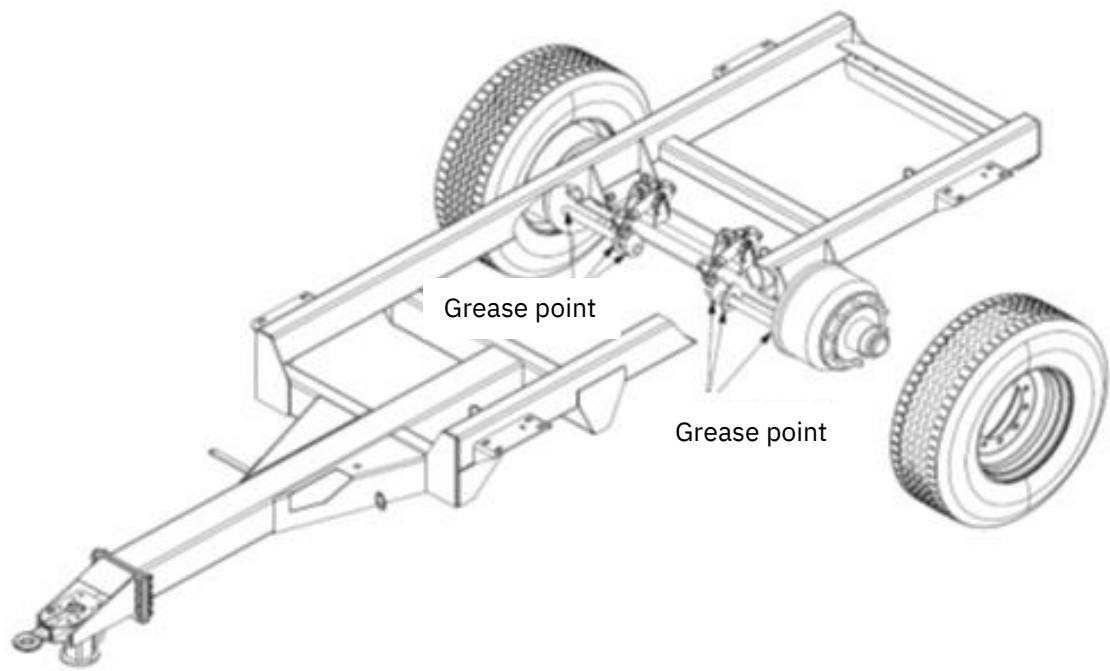


Figure 9: Single-axle chassis grease points

## 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 MechFiber270+ and MechFiber320+.

Machine type	PTO shaft	Shear bolt	Colour code
MF270+	T50	M8 x 55 x 8.8	Red
MF320+	T60	M10 x 60 x 6.8	Yellow

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)



## 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	5.5	81
385/65 R 22.5	5.5	81

Table 6: Tyre pressure

## 1.11 Hitch height adjustment

The hitches of the KEENAN MechFiber270+ and KEENAN MechFiber320+ 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.

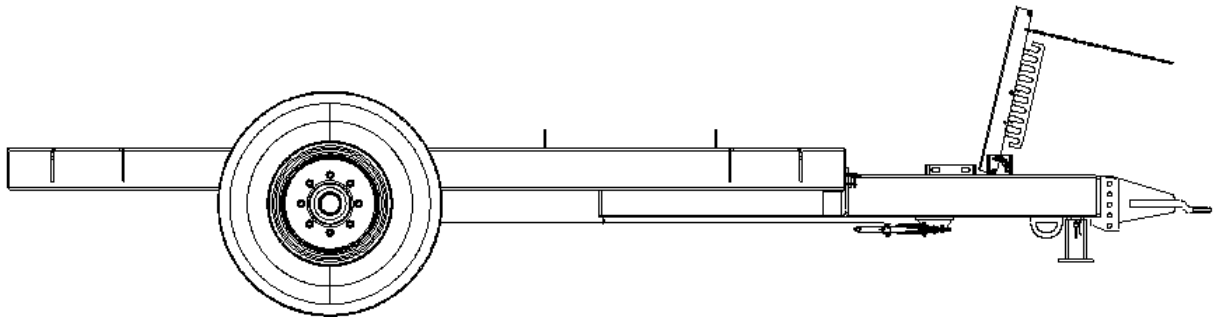


Figure 10.1: Standard hitch adjustment

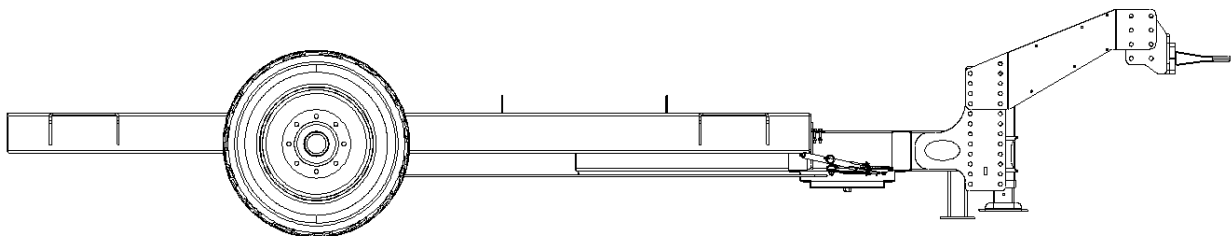


Figure 10.2: High hitch (typically for German market)

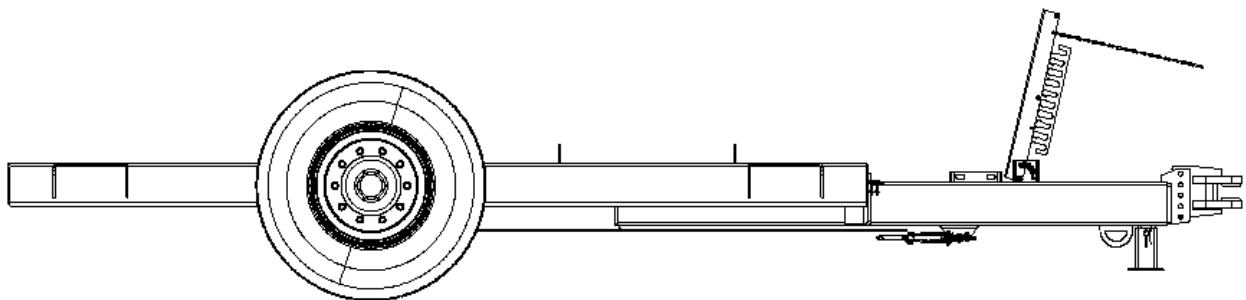


Figure 10.3: Clevis hitch adjustment

## 1.12 Specifications

Model		MechFiber270+		MechFiber320+	
			+ Bale handler		+ Bale handler
Unladen	kgs	5,000	5,250	6,250	6,500
	lbs.	11,025	11,575	13,778	14,330
Payload	kgs	3,000		3,800	
	lbs.	6,615		8,377	
Gross	kgs	8,000	8,250	10,050	10,300
	lbs.	17,637	18,188	22,156	22,707

Table 7: Machine weights

1. Weights may vary depending on the exact specifications.
2. The MechFiber320+ weight based on single axle. For a twin axle, add aprox. 500 kgs (1,102 lbs).

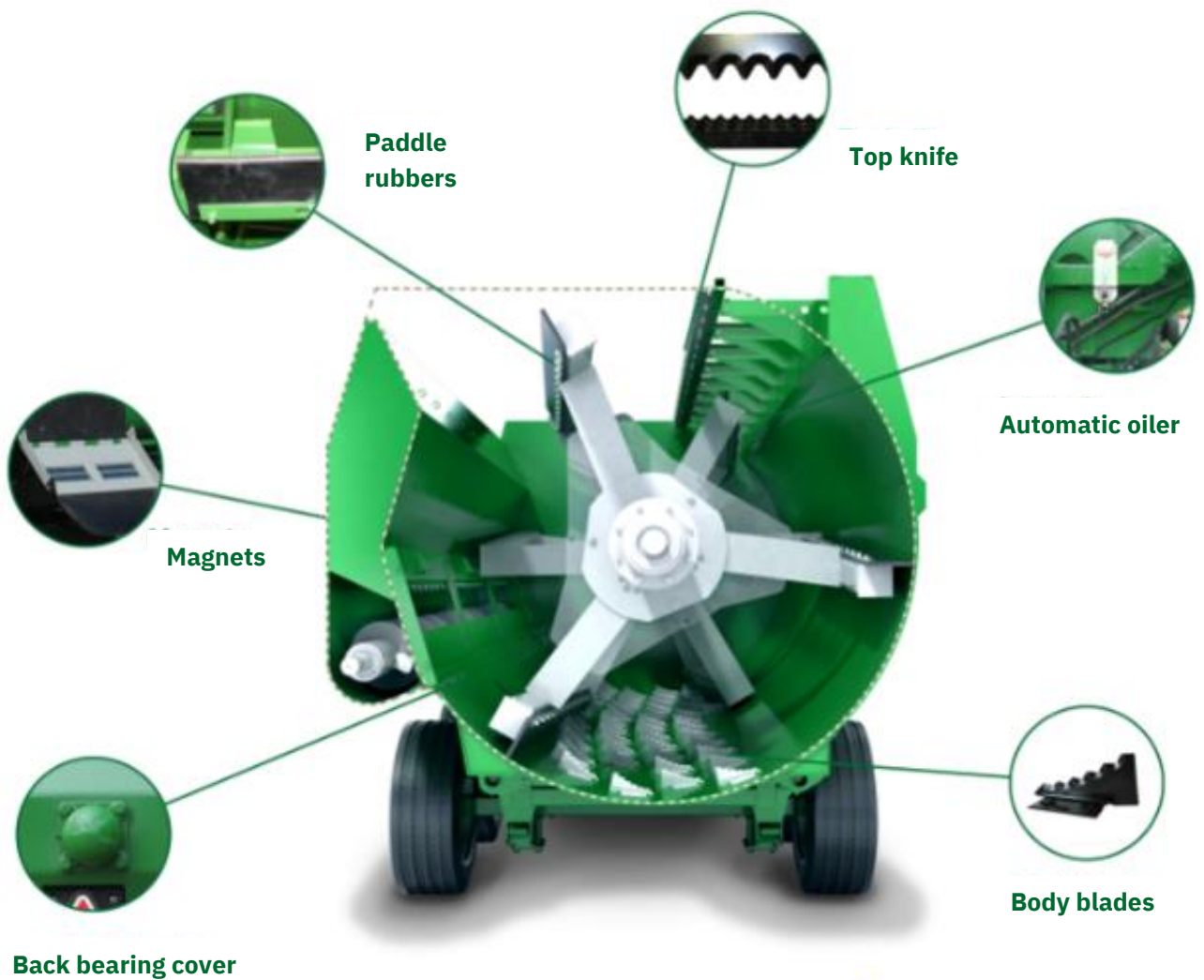
## 1.13 Soda grain

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:** When mixing soda grain, the maximum gross load that can be mixed in the KEENAN MechFiber 270+ is 3,000 kg and in the MechFiber 320+ is 3,800 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.

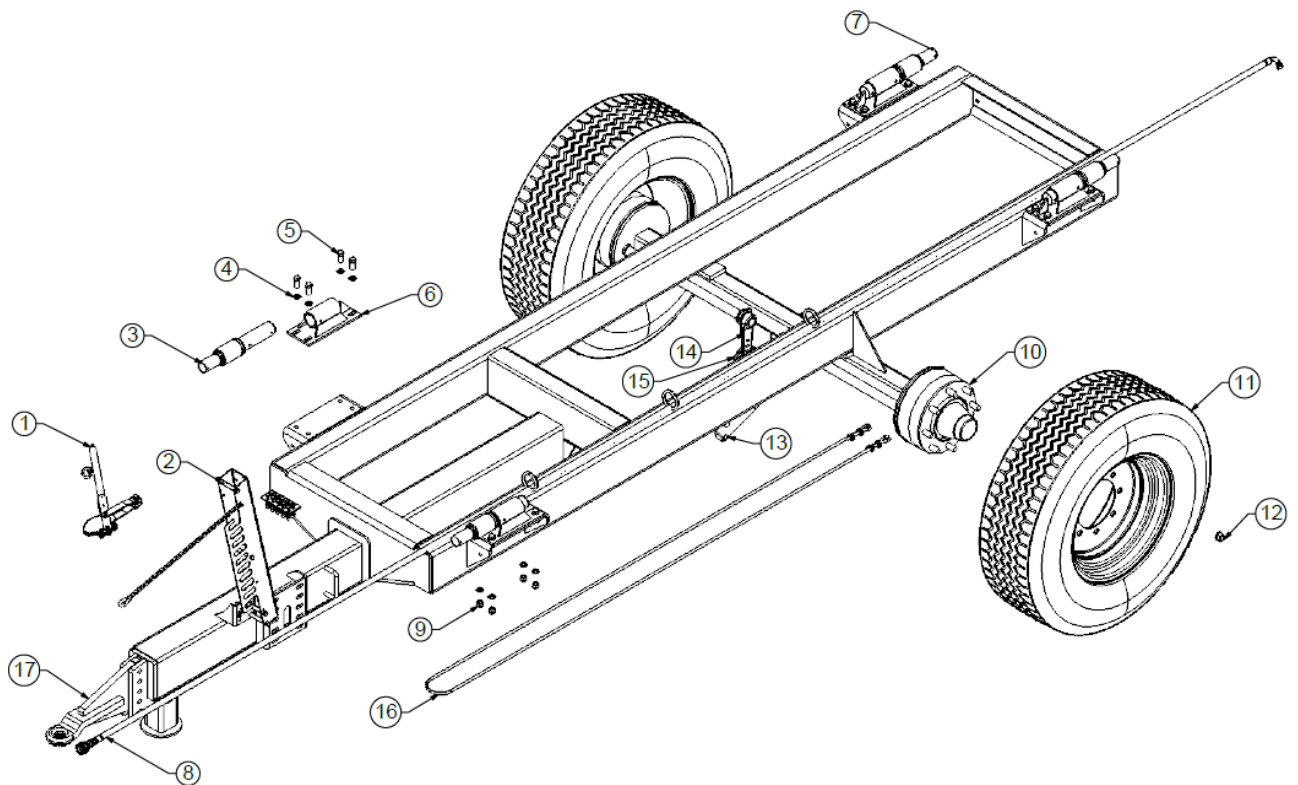
## Part II: Parts list



### 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
HT	High tensile
GRP	Glass reinforced plastic

## 2.1 Chassis parts



Item:	P/N:	Qty:	Description:
1	704441	1	Handbrake assembly
2	FP160-001-0095	1	Hydraulic hose holder assembly
3	703350	2	Front weigh bar, 4.6 m cable
4	700732	16	M16 washer
5	703148	16	M16 x 40 bolt
6	EF101-9	4	Weigh bar bracket assembly
7	703351	2	Rear weigh bar, 9.2 m cable
8	702105	1	Hydraulic hose, 20-foot, brake hose assembly
9	700283	16	M16 locknut
10	700505	1	Axle, 90 mm square, 1,930 mm track, with 8 x M20 studs (other options available)
11	700474	2	Wheel assembly, 385/65 R22.5, 8 stud (other options available)
12	700288	16	M20 wheel nut (used with M20 spring washer P/N 700740)
13	700832	1	Brake ram
14	703936	2	Brake arm
15	703918	1	Brake lever tie bar
16	702502	1	Handbrake cable, 6 mm cable x 5,600 mm long
17	FP300-001-0133	1	Adjustable hitch welded unit

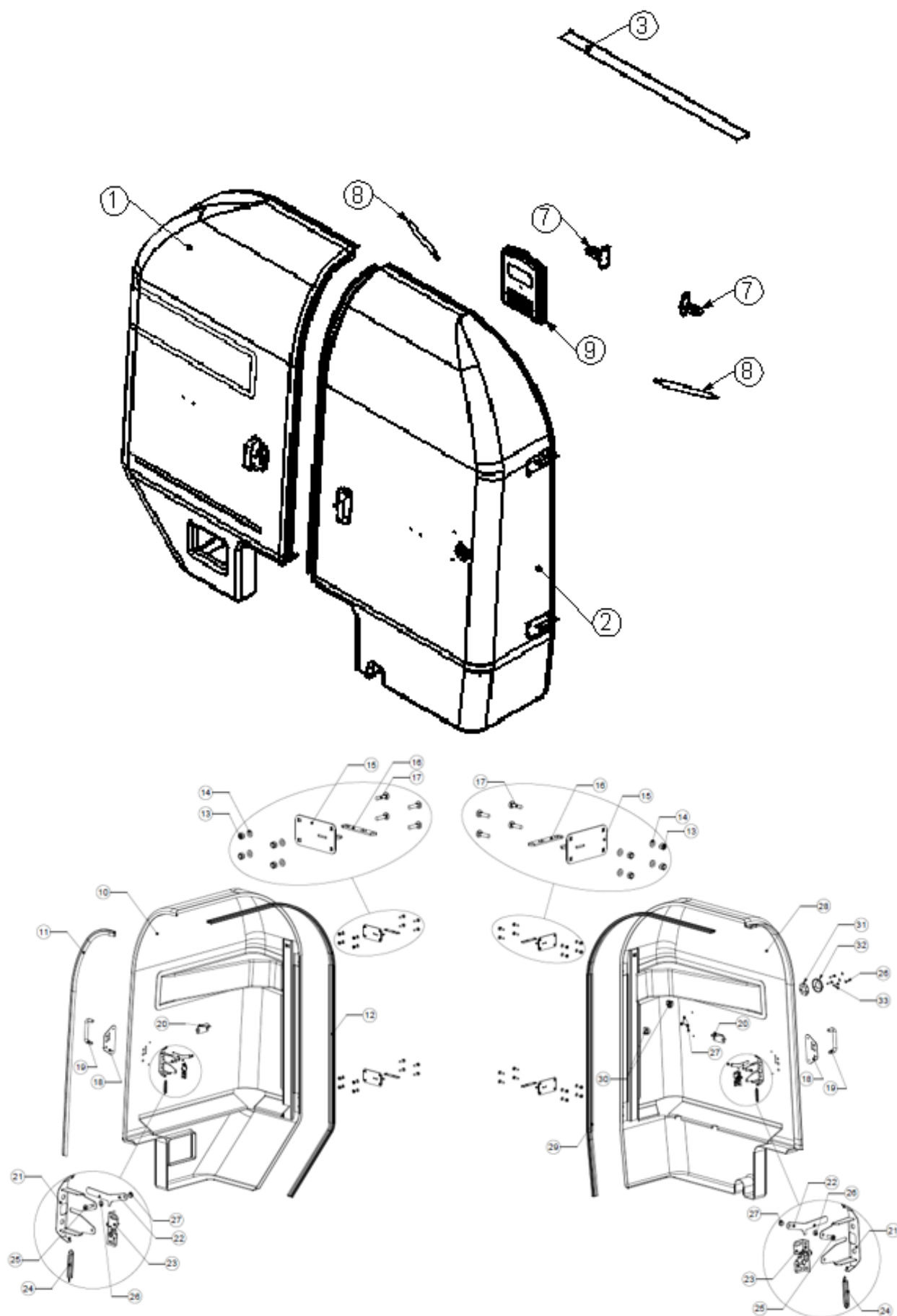
Table 8: Chassis

Optional parts		
	P/N:	Description:
Hydraulic jacks	704897	Hydraulic jack, single-acting
	704288	Hydraulic jack, double-acting
	702043	Mechanical jack, sidewinding, U.S. option, 7,000 lbs.
Hydraulic jack brackets	700723-1	Hydraulic jack mounting bracket
	FP140-001-0030	Hydraulic jack mounting bracket (high hitch)
	EF1033-14	Sidewinding jack mounting bracket
	701885	Bulldog jack mounting tube
Bushes	704154	Towing eye bush, 32.5 mm ID
	702324	Towing eye bush, 30 mm ID

Table 9: Chassis optional parts

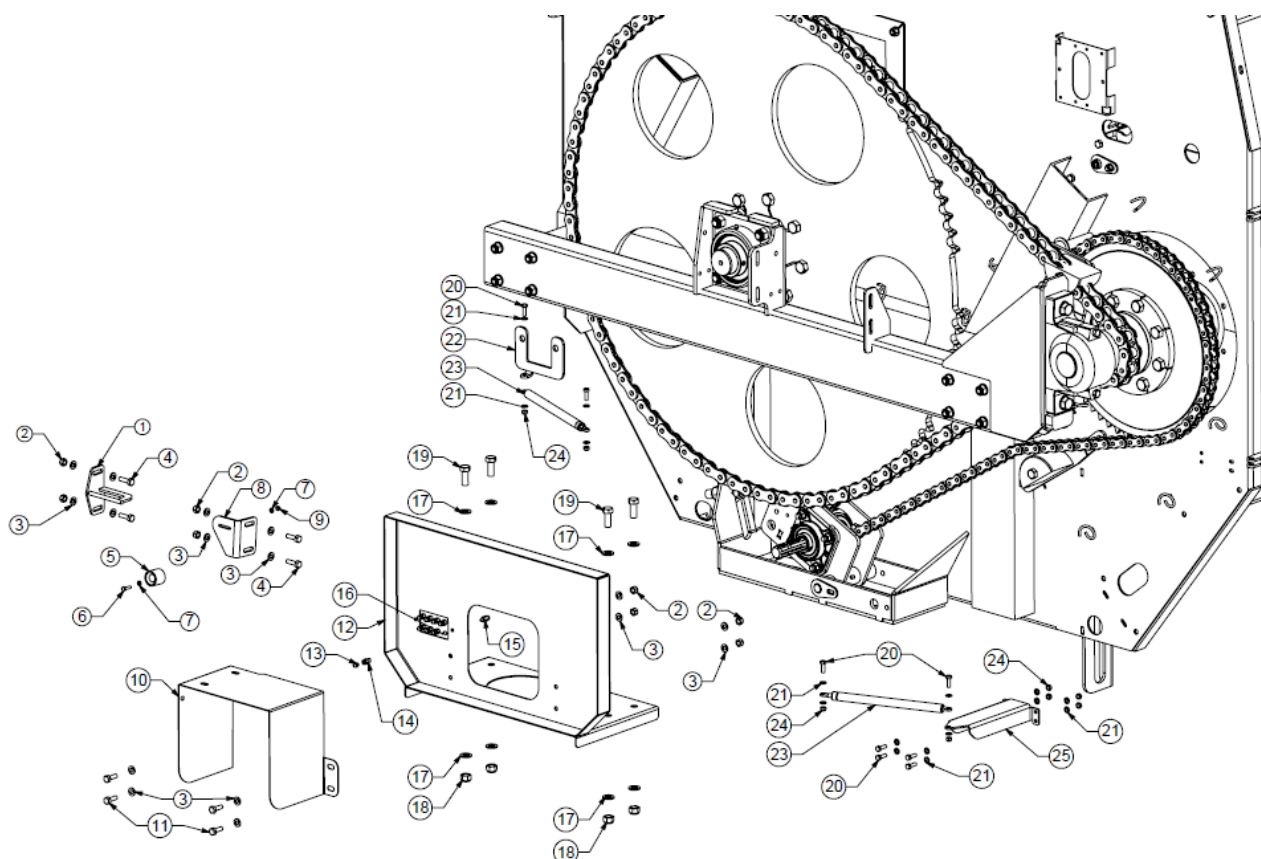


## 2.2 Front cover parts



Item	P/N	Qty	Description
1	FP140-038-0029	1	Right side cover assembly 2 (black)
2	FP140-037-0069	1	Left side cover assembly 2 (black – inbuilt centre channel)
3	FP140-002-0127	1	Front panel curved rain channel assembly
4	-		Not required on this model
5	-		Not required on this model
6	-		Not required on this model
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	FP140-038-0028	1	MF270/320 GRP front cover (right side)
11	FP140-038-0026	1	MF270/320 front cover inner seal (Length = 1,910 mm)
12	FP140-038-0025	1	MF270/320 front cover outer seal – RH (Length = 2,785 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 cup-head 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	FP140-037-0068	1	MF270/320 GRP front cover (left side)
29	FP140-037-0066	1	MF270/320 front cover outer seal – LH (Length = 3,218 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)

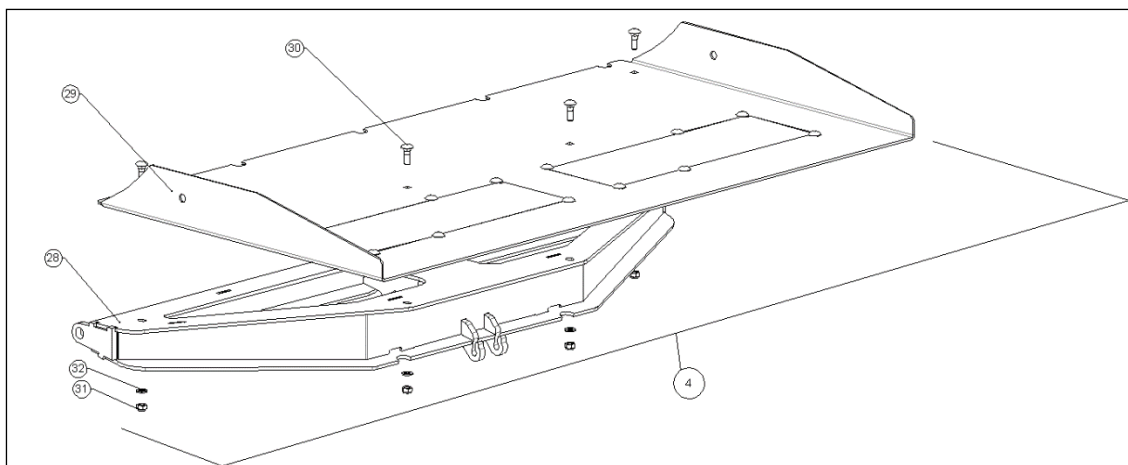
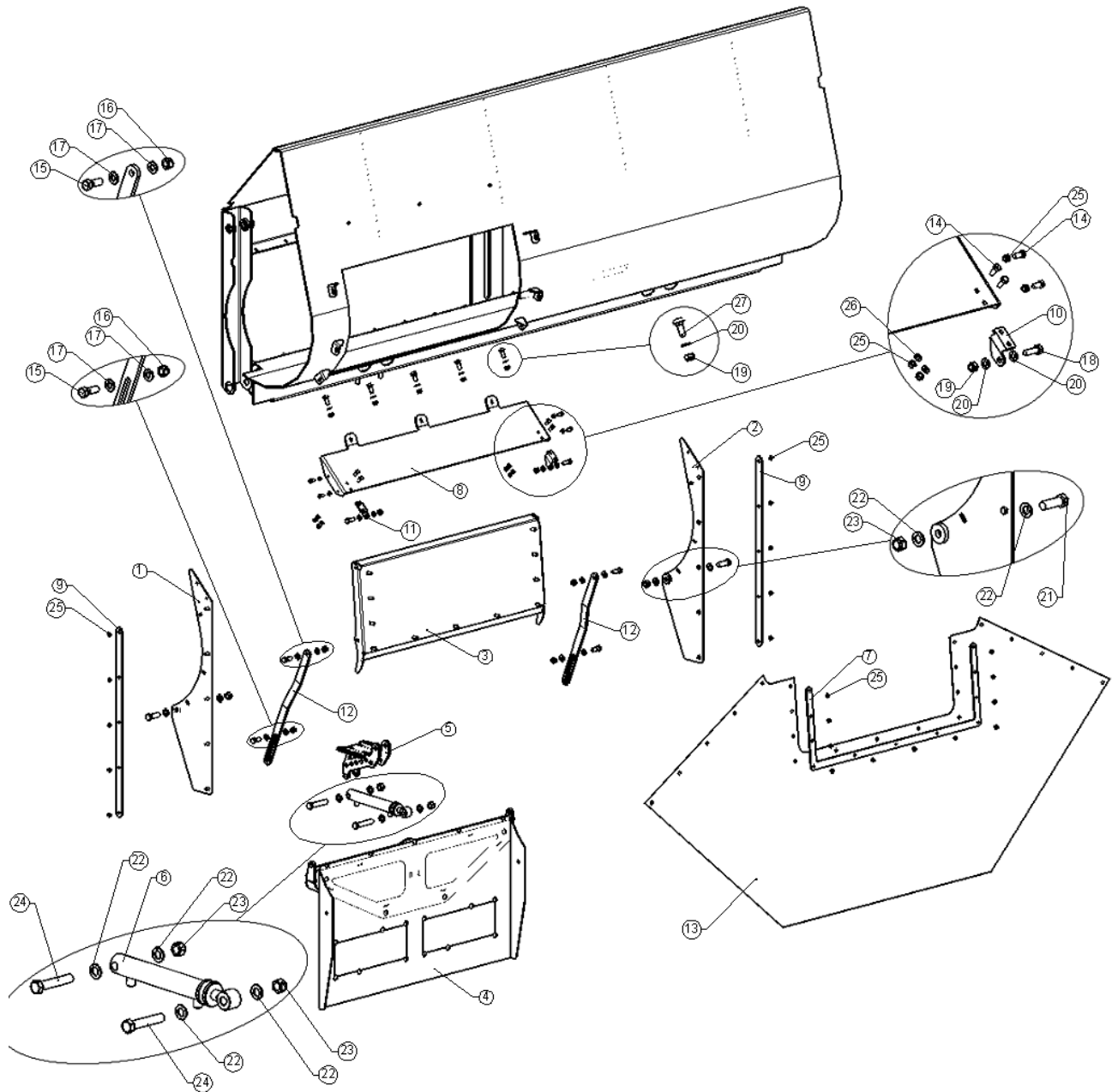
Table 10: Front cover parts

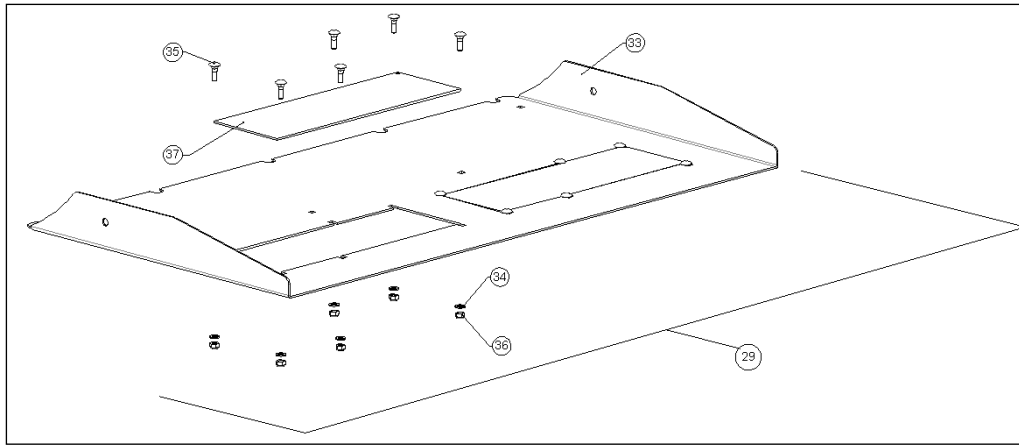


Item:	P/N:	Qty:	Description:
1	FP200-048-0244	1	Camlock striker assembly
2	700241	8	M10 locknut
3	700729	16	M10 flat washer
4	700228	4	M10 x 35 bolt
5	706127-1	1	Door holder — female side
6	700200	1	M6 x 25 bolt
7	700751	2	M6 flat washer
8	FP200-017-0014	1	Door holder bracket
9	700204	1	M6 locknut
10	FP200-037-0071	1	PTO guard
11	702111	4	M10 x 30 bolt
12	FP200-002-0148	1	Gearbox/PTO guard assembly
13	701129	8	Straight grease fitting 1/8" BSP
14	704947	8	Grease fitting adaptor 1/8" BSP external and M6 internal to 1/8" BSP internal
15	704914	8	Grease tube connector — straight — M6 thread
16	FP170-002-0037	1	Grease manifold
17	700732	8	M16 flat washer
18	700283	4	M16 locknut
19	703148	4	M16 x 40 bolt
20	700210	4	M8 x 25 bolt
21	700736	16	M8 flat washer
22	FP140-038-0024	1	MF270/320 RH door strut bracket
23	706101	2	Gas strut (600 mm open, 200 N, 250 mm stroke)
24	700223	8	M8 locknut
25	FP170-037-0026	1	MechFiber270/320/350/370 LH door strut bracket

Table 11: Front cover ancillary parts

## 2.3 Standard feed-out tray parts





Item:	P/N:	Qty:	Description:
1	EF106-179	1	Feed-out shroud front side plate assembly
2	EF106-180	1	Feed-out shroud rear side plate assembly
3	FP100-006-0074	1	Feed-out door arm assembly
4	FP100-006-0013	1	Feed-out tray and sub-frame assembly
5	FP100-006-0003	1	Feed-out tray ram upper mounting bracket assembly
6	703591	1	6" stroke feed-out tray ram assembly (KEEN-63)
7	FP100-006-0080	1	Feed-out door shroud retainer
8	FP100-006-0073	1	Top shroud feed-out
9	FP100-006-0081	2	Feed-out door shroud side retainer
10	FP160-006-0088	1	Hinge bracket, feed-out door right-hand side
11	FP160-006-0087	1	Hinge bracket, feed-out door left-hand side
12	FP080-006-0012	2	Feed-out door link arm
13	FP100-006-0016	1	Feed-out shroud curtain
14	700208	8	M8 x 20 set screw
15	700249	4	M12 x 35 set screw
16	700266	4	M12 locknut
17	700730	8	M12 flat washer
18	700228	2	M10 x 35 set screw
19	700241	7	M10 locknut
20	700729	9	M10 flat washer
21	700275	2	M16 x 50 bolt
22	700732	8	M16 flat washer
23	700283	4	M16 locknut
24	700281	2	M16 x 90 bolt
25	700223	29	M8 nyloc nut
26	700736	4	M8 flat washer
27	700226	5	M10 x 30 cup-head bolt
28	FP100-006-0006	1	Feed-out tray subframe assembly
29	FP100-006-0088	1	Feed-out tray and blanks
30	702256	4	M8 x 25 mm cup-head bolt
31	700223	4	M8 nyloc nut
32	700736	4	M8 flat washer
33	FP100-006-0033	1	Feed-out tray panel
34	700736	12	M8 flat washer
35	702256	12	M8 x 25 mm cuphead bolt
36	700223	12	M8 nyloc nut
37	FP160-006-0271	2	Tray hole blanking plate (3 mm)
37a	701366	2	Magnet plate (OE)

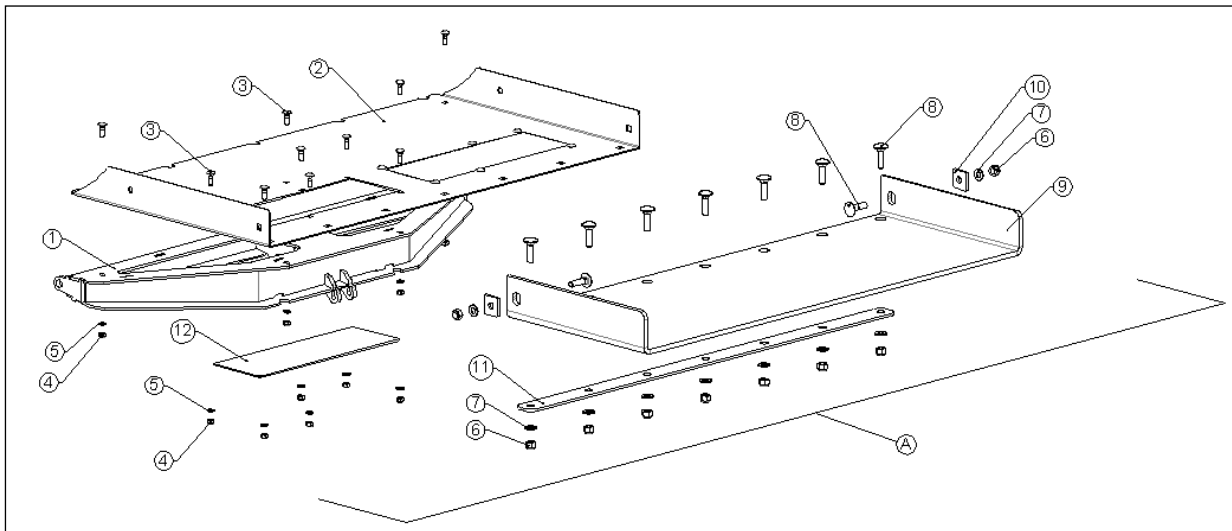
Table 12: Feed-out tray details (for both the MechFiber270+ and MechFiber320+)  
KEENAN MechFiber270+ and 320+ operator's manual, revision F01, July 2022

**Note:**

Complete standard feed-out kit P/N FP100-006-0130

Feed-out tray can be supplied with the following:

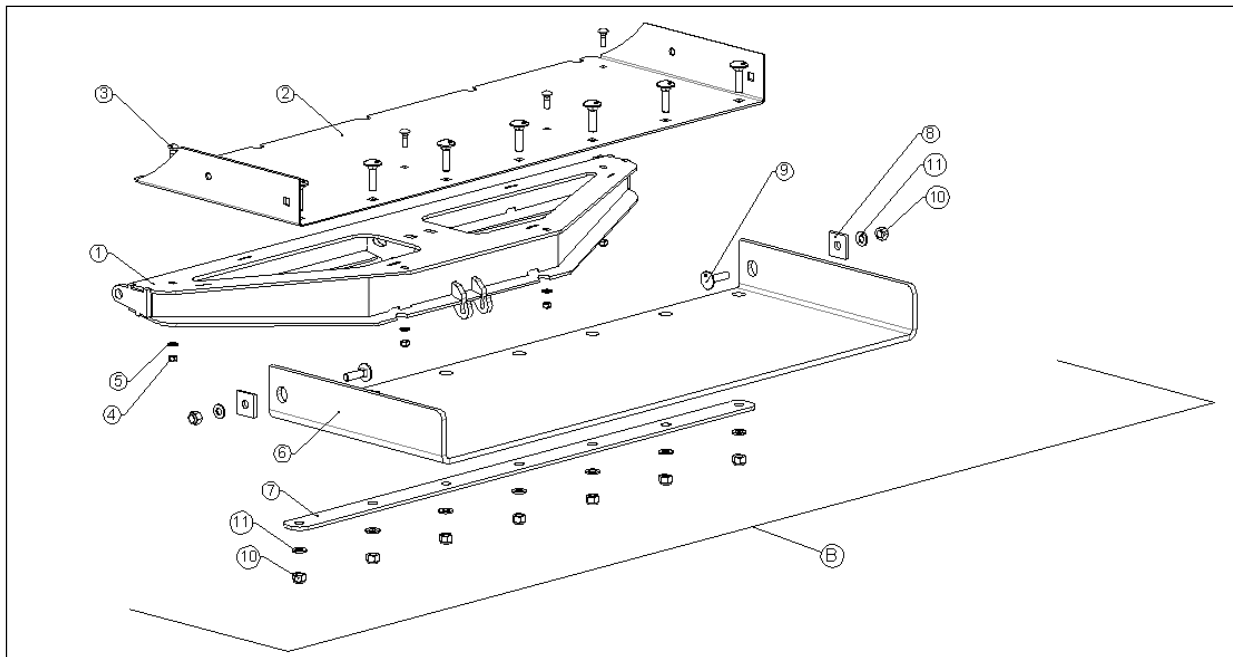
- Magnet assembly P/N FP100-006-0035
- Standard and rubber extension P/N FP100-006-0036
- Magnets and rubber extension P/N FP100-006-0037
- ½ rubber P/N FP100-006-0038



Item:	P/N:	Qty:	Description:
<b>A</b>	<b>FP100-006-0036</b>	<b>1</b>	<b>Std tray with rubber extension</b>
1	FP100-006-0006	1	Feed-out tray sub-frame assembly
2	FP140-006-0075	1	Feed-out tray panel for rubber extension
3	702256	16	M8 x 25 mm cup-head bolt
4	700223	16	M8 nyloc nut
5	700736	16	M8 flat washer
6	700266	9	M12 locknut
7	700730	9	M12 flat washer
8	703500	9	M12 x 45 mm cup-head bolt
9	700802	1	Rubber extension
10	EF106-79	2	Rubber side retainer
11	FP100-006-0092	1	Rubber retainer flat
12	FP160-006-0271	2	Tray hole blanking plate (3 mm)
12a	701366	2	Magnet plate (OE) used on FP100-006-0037

Table 13: Feed-out tray with rubber extension

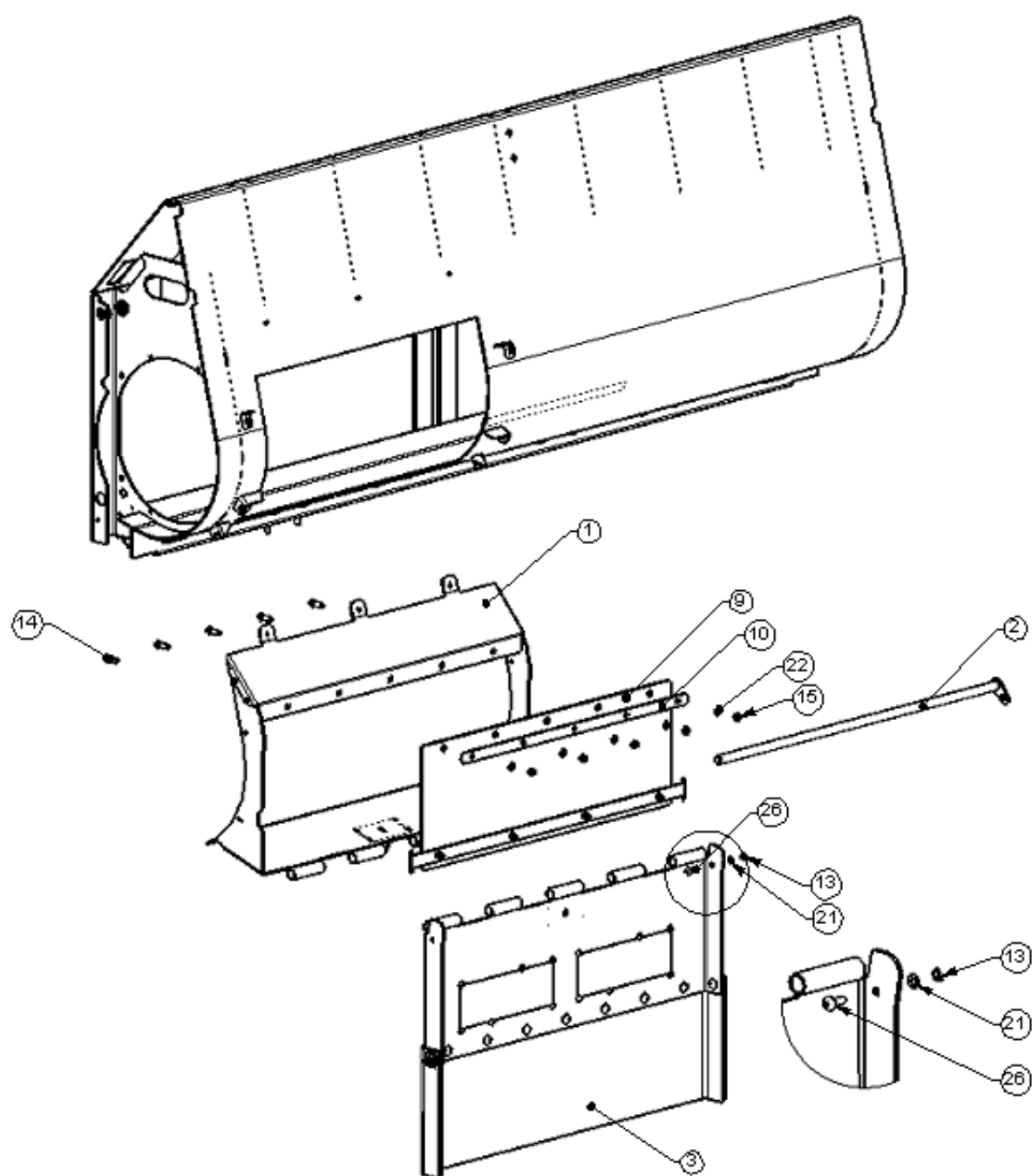


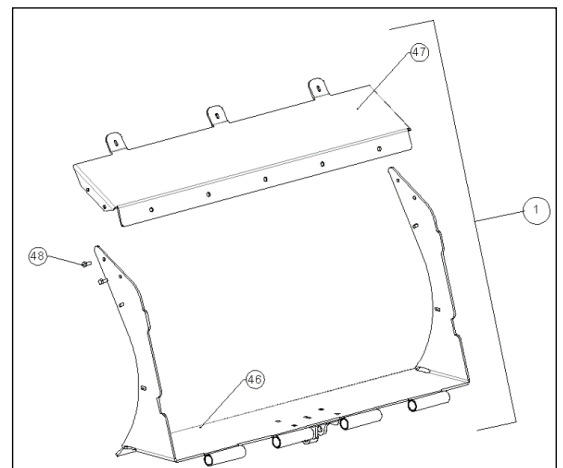
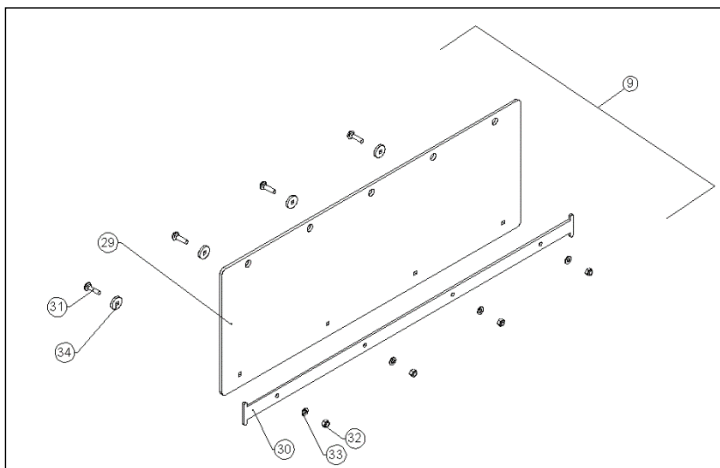
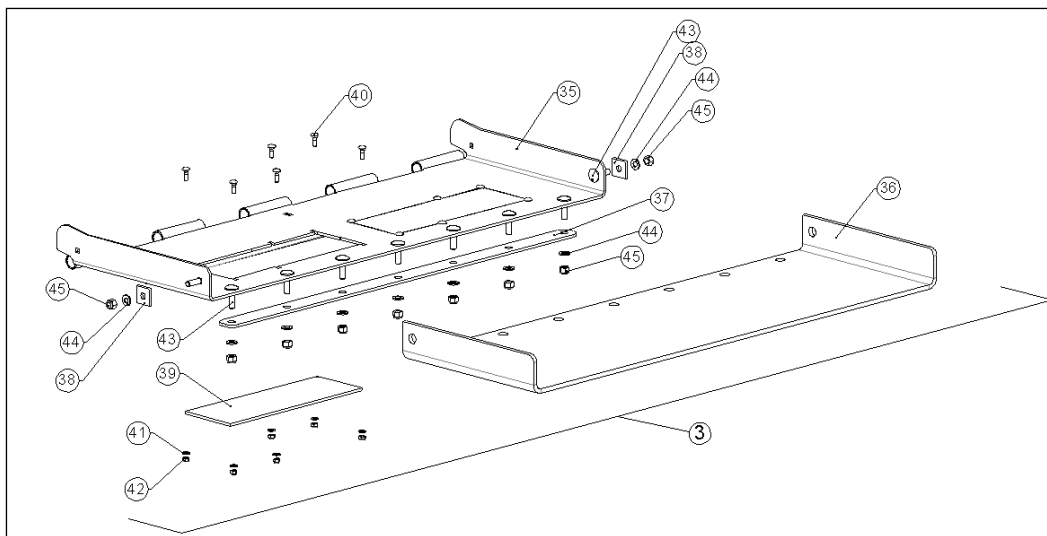
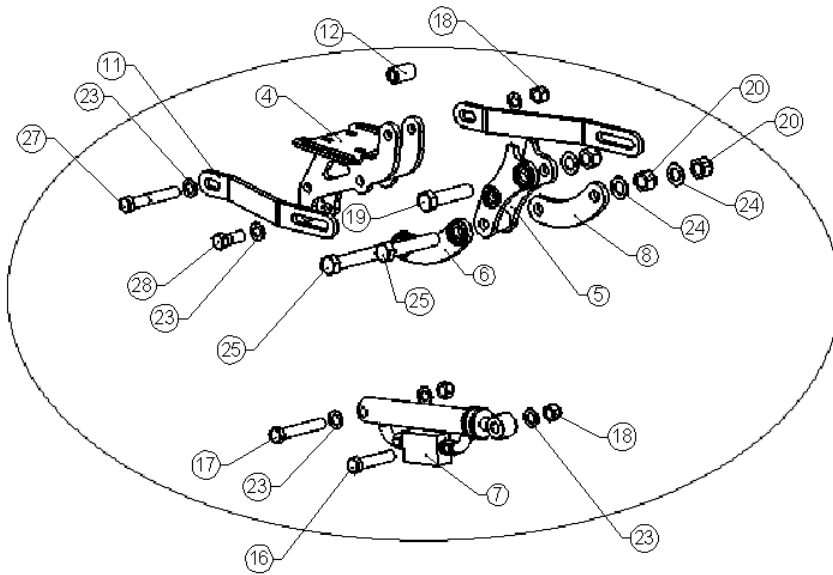


Item:	P/N:	Qty:	Description:
<b>B</b>	<b>FP100-006-0038</b>	1	<b>Feed-out tray ½ rubber</b>
1	FP100-006-0006	1	Feed-out tray sub-frame assembly
2	FP140-006-0031	1	Feed out tray panel ½ rubber
3	702256	4	M8 x 25 mm cup-head bolt
4	700223	4	M8 nyloc nut
5	700736	4	M8 flat washer
6	700802	1	Rubber extension
7	FP100-006-0092	1	Rubber retainer flat
8	EF106-79	2	Rubber side retainer
9	702500	9	M12 x 45 mm cup-head bolt
10	700266	9	M12 locknut
11	700730	9	M12 flat washer

Table 14: Feed-out tray with ½ rubber

## 2.4 Fold-down tray parts (optional extra)





Item:	P/N:	Qty:	Description:
1	FP140-006-0308	1	Feed-out shroud assembly (fold-down tray)
2	FP140-006-0321	1	Fold-down tray hinge bar assembly
3	FP140-006-0328	1	Fold-down tray assembly 2
4	FP100-006-0003	1	Feed-out tray ram upper mounting bracket assembly
5	FP170-006-0162	5	Fold-down tray inner link arm assembly
6	FP200-006-0340	1	Fold-down tray outer link arm assembly
7	705268	1	6" stroke ram with check valve (KEEN-63SP)
8	FP200-006-0332	1	Fold-down tray outer link arm (127 mm centres)
9	FP140-006-0325	1	Feed-out shroud rubber assembly
10	FP100-006-0101	1	Fold-down tray door rubber retainer
11	FP170-006-0168	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 locknut
14	700250	5	M12 x 40 set screw
15	700266	5	M12 locknut
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 nyloc nut
21	700729	1	M10 flat washer
22	700730	10	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 cup-head bolt
27	700269	1	M16 x 110 bolt
28	700274	2	M16 x 45 bolt
29	FP140-006-0324	1	Feed-out shroud rubber
30	FP140-006-0326	1	Rubber retainer plate
31	700251	4	M10 x 40 mm cup-head bolt
32	700241	4	M10 locknut
33	700729	4	M10 flat washer
34	FP170-006-0188	4	Rubber retainer washer
35	FP140-006-0319	1	Fold-down tray assembly
36	FP140-006-0323	1	Rubber extension
37	FP100-006-0092	1	Rubber retainer plate
38	EF106-79	2	Rubber retainer side plate
39	FP160-006-0272	2	Magnet hole blanking plate 6 mm
39a	701366	2	Magnet plate (OE)
40	702256	12	M8 x 25 mm cup-head bolt
41	700736	12	M8 flat washer
42	700223	12	M8 nyloc nut
43	702500	9	M12 x 45 mm cup-head bolt
44	700730	9	M12 flat washer
45	700266	9	M12 locknut
46	FP140-006-0310	1	Feed-out shroud lower plate assembly
47	FP140-006-0317	1	Feed-out shroud top plate
48	700208	4	M8 x 20 set screw

Table 15: Fold-down-tray parts

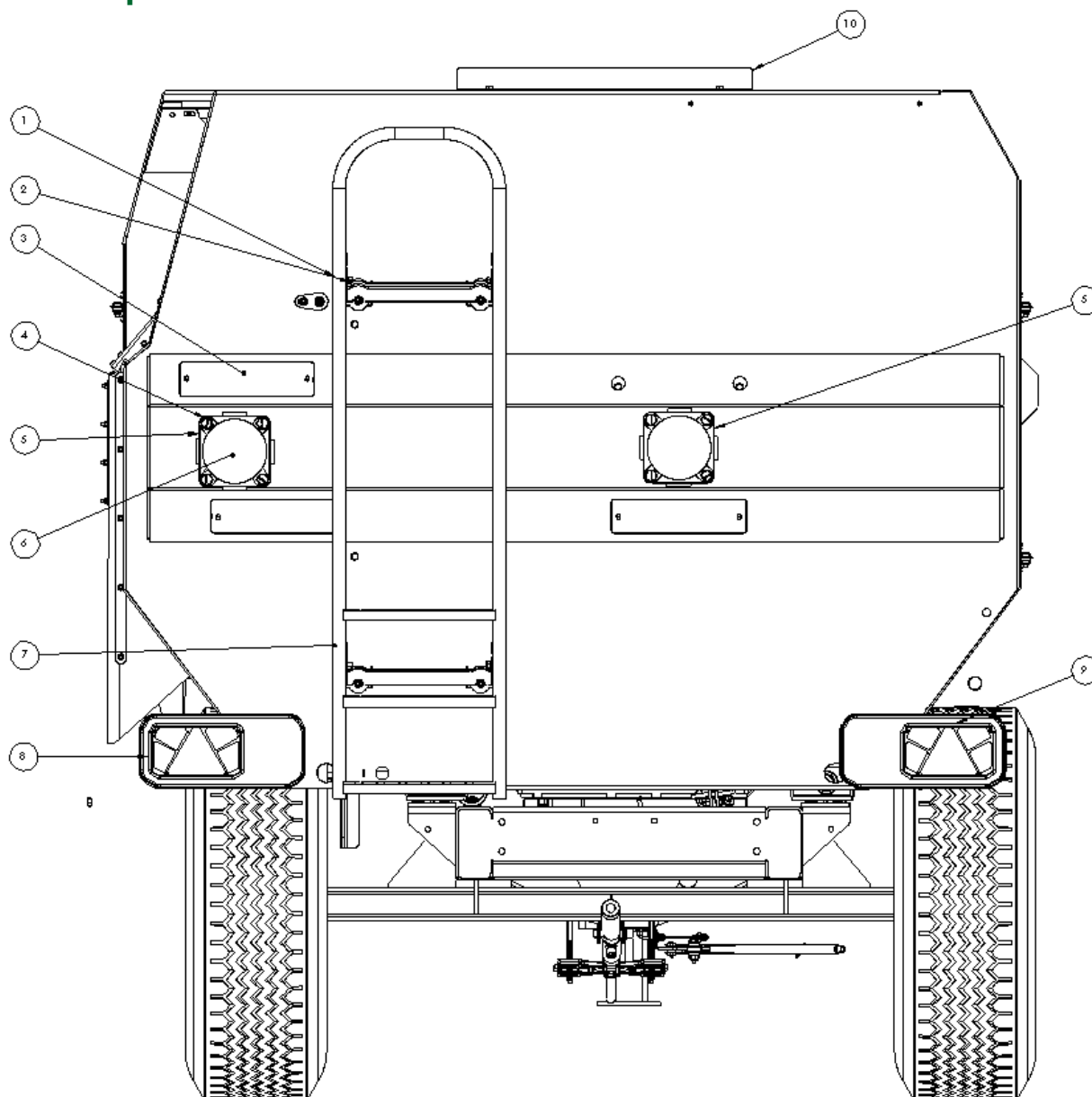
**Note:**

Complete fold-down tray kit (standard): P/N FP100-006-0128

Complete fold-down tray kit (OE-100): P/N FP100-006-0129

Fold-down tray can be supplied with the magnet assembly P/N FP140-006-0318

## 2.5 Rear parts

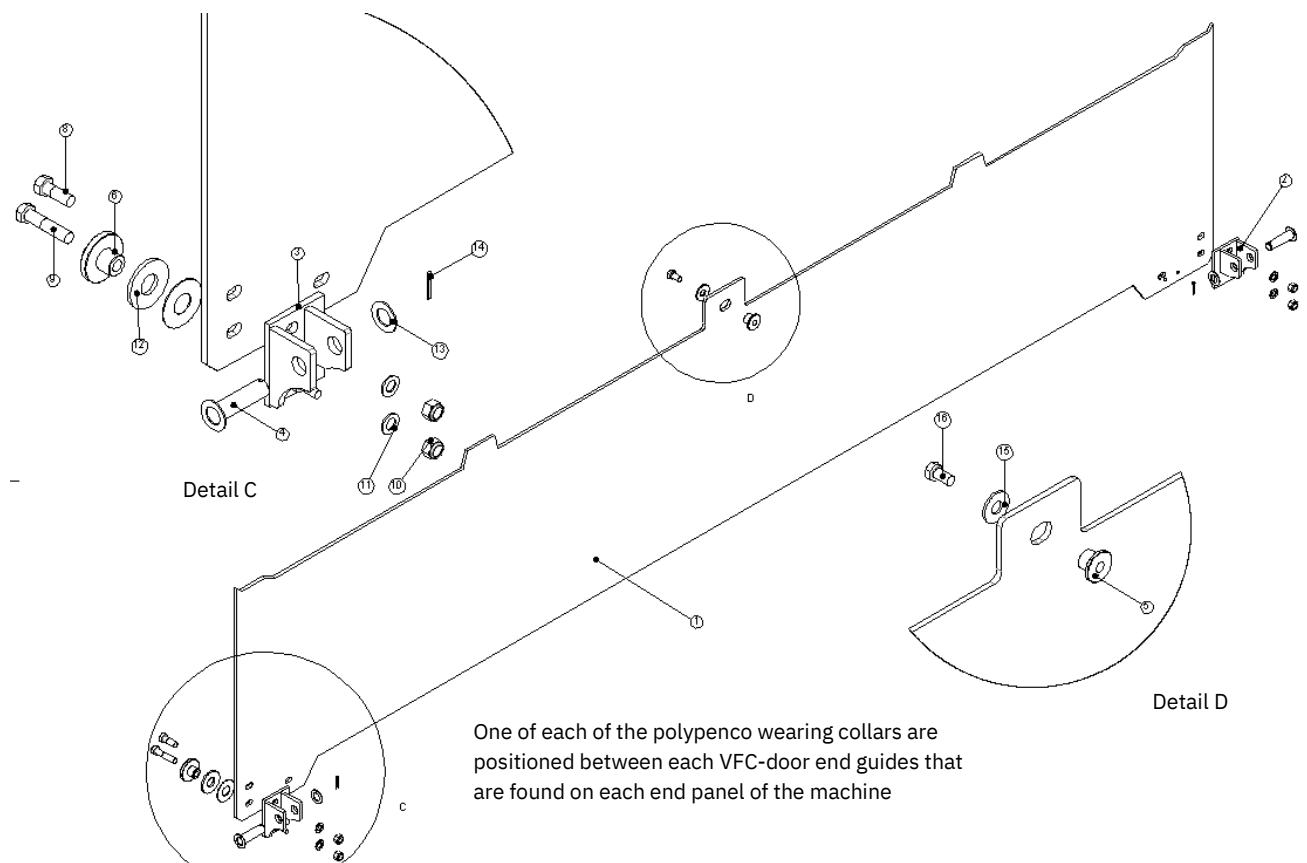


Item:	P/N:	Qty:	Description:
1	FP200-013-0015	8	Ladder pivot bush
2	FP200-013-0025	2	Ladder arm assembly
3	FP140-003-0104	3	Rear channel blank
4	700297	8	M20 x 65 bolt
5	700842	2	70 mm flange bearing, UCF X14, cast housing
6	701273	2	Rear bearing cover
7	FP140-013-0017	1	Viewing ladder (tubular frame)
8	FP200-003-0261	1	Rear LED light cluster (left-hand side)
9	FP200-003-0262	1	Rear LED light cluster (right-hand side)
10*	EF1041-1	1	Cover plate, 3 mm

Table 16: Rear parts

\*Not used on bale handler models.

## 2.6 VFC-door parts

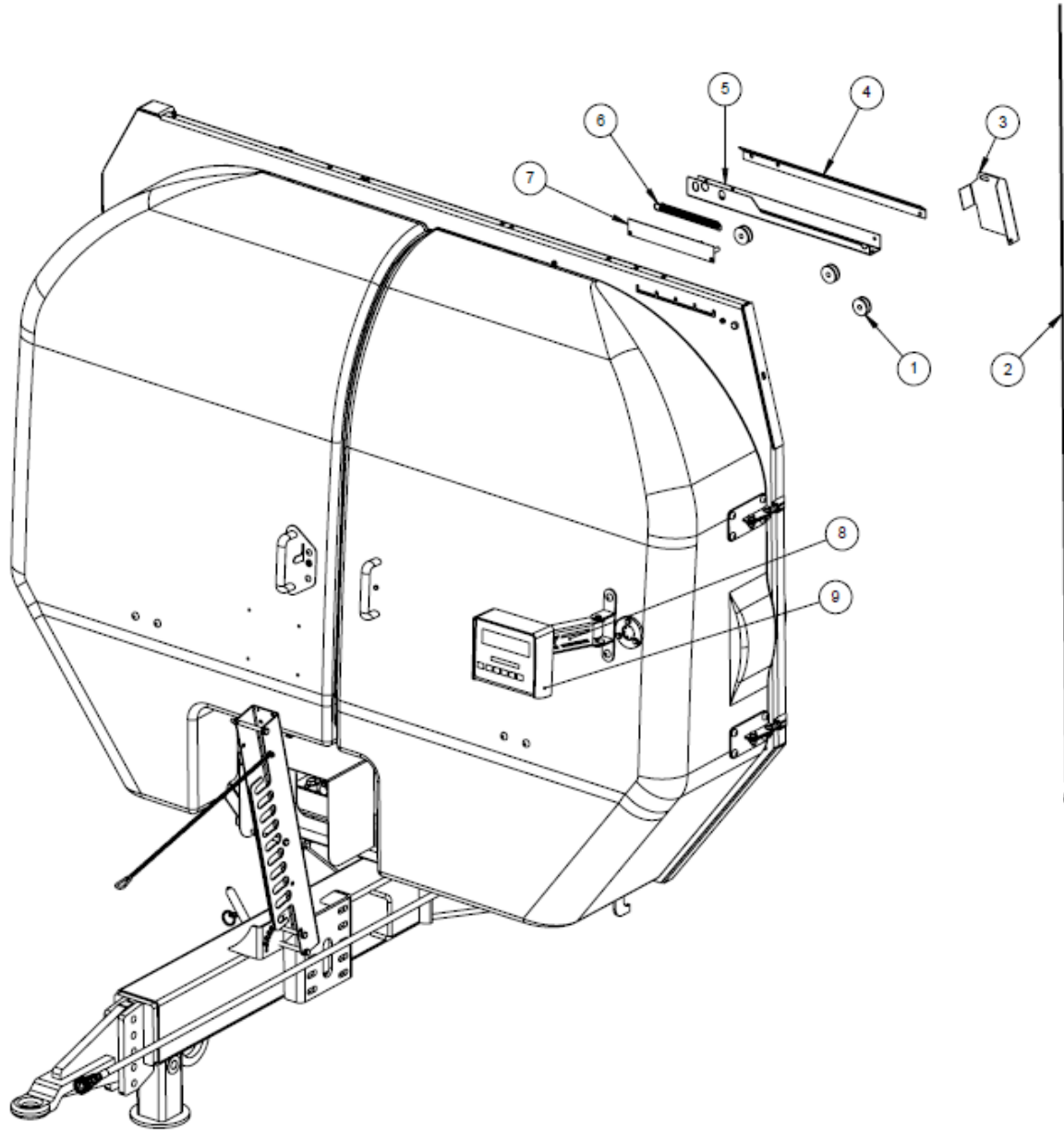


Item:	P/N:		Qty:	Description:
	270+	320+		
1	FP100-010-0004	FP140-010-0001	1	VFC-door plate
2	RD1010-45	RD1010-45	1	Bracket assembly, door rear ram
3	RD1010-44	RD1010-44	1	Bracket assembly, door front ram
4	701591	701591	2	VFC-door lower ram pin assembly
5	701504	701504	1	VFC-door centre stepped collar
6	701503	701503	2	VFC-door end stepped collar
7	701502	701502	2	VFC-door polypenco wearing collar
8	700274	700274	2	M16 x 45 mm bolt
9	700279	700279	2	M16 x 75 mm bolt
10	700283	700283	2	M16 locknut
11	700732	700732	2	M16 flat washer
12	700502	700502	2	VFC-door polypenco wearing collar
13	700746	700746	2	M25 flat washer
14	701111	701111	2	Split pin – 3/16" diameter x 1.5"
15	FP160-010-0031	FP160-010-0031	1	M20 washer

Table 17: VFC-door parts



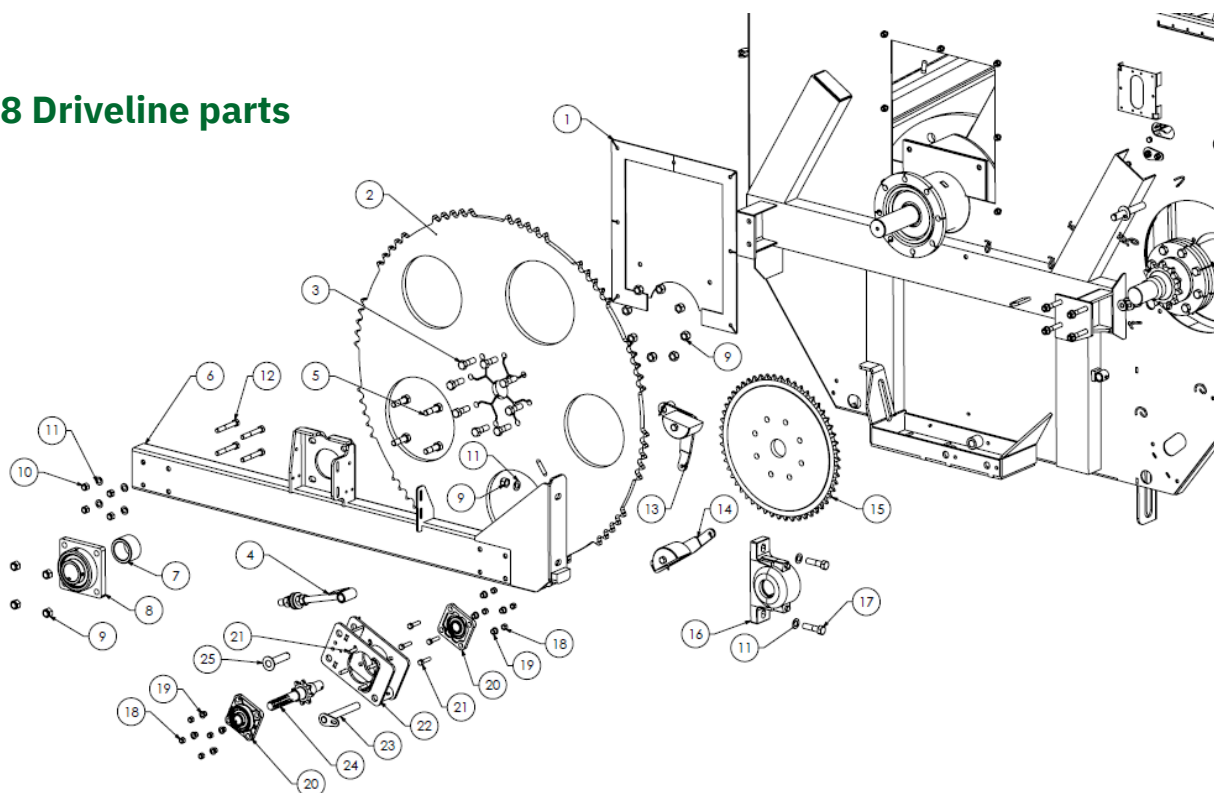
## 2.7 VFC-door indicator parts



Item:	P/N:	Qty:	Description:
1	701559	3	Pulley wheel, 50 mm OD, 20 mm thick, for indicator
2	703629	1	Wire rope for door indicator, 2,470 mm
3	FP140-002-0106	1	MF270/320+ wire rope cover
4	FP170-010-0012	1	VFC-door indicator upper cover
5	FP170-010-0013	1	VFC-door indicator lower cover
6	703625	1	Spring, 8" expansion, 22 mm OD, 2 mm thick
7	FP170-010-0015	1	VFC-door indicator slider assembly
8	EF102-115	1	Weigh-box bracket straight
9	703353	1	Stad 04 weigh-box (optional 706168: InTouch controller)

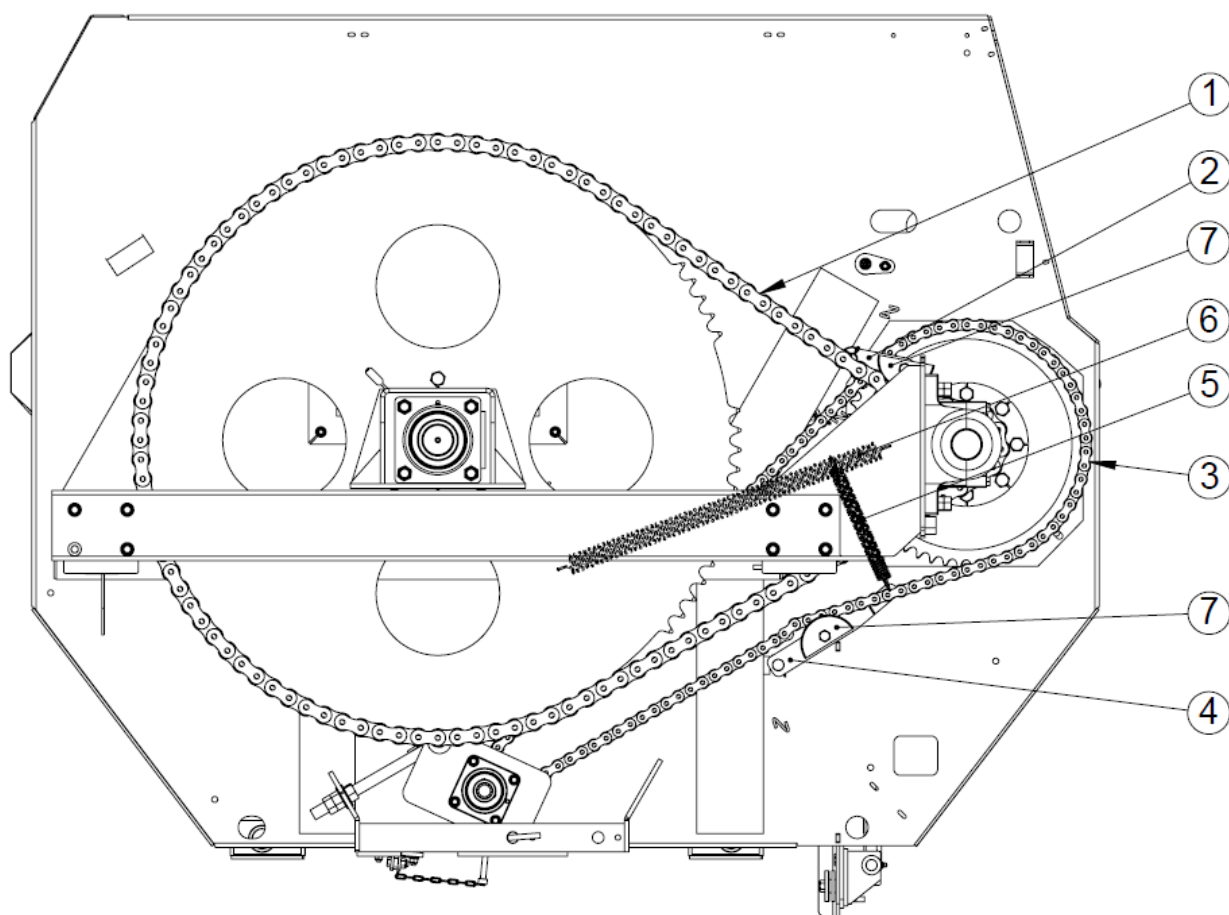
Table 18: VFC-door indicator parts

## 2.8 Driveline parts



Item:	P/N:	Qty:	Description:
1	EF142-10	1	Rotor window plate assembly
2	EF147-34	1	Sprocket, ASA140, 96 teeth, 20 mm plate
3	700296	8	M20 x 65 bolt
4	FP160-048-0110	1	Chain tensioner assembly 2
5	700298	4	M20 x 10 bolt 8.8 grade
6	EF1017-14	1	Front box 90-degree bearing assembly
7	701534	1	Rotor spacer, 95 mm OD, 70 mm ID, 64 mm long
8	701520	1	70 mm bearing flange mount UCFX14
9	700305	14	M20 locknut
10	700283	8	M16 locknut
11	700732	8	M16 flat washer
12	700269	8	M16 x 110 bolt
13	EF1014	1	Secondary drive chain tensioner assembly (wear block: 701970)
14	EF1015	1	Primary drive chain tensioner assembly (wear block: 701970)
15	701832	1	54 tooth ASA 100 sprocket
16	EF109-35* containing:	1	70 mm pillow bearing assembly, SNX 516
	701251	1	70 mm pillow bearing housing, SNX 516
	700847	1	Bearing insert, 80 mm ID, 140 mm OD, SNX 516 22216K
	701457	1	Bearing taperlock SNX 516 H316, 70 mm ID
	701258	2	Bearing spacer ring, SR140 x 12.5
	702903	1	Shaft seal, KEENAN 85
	702467	1	Bearing seal SNX 516
17	700300	2	M20 x 75 bolt
18	700266	8	M12 locknut
19	FP160-048-0194	8	Bearing bolt hole reducer and collar (FYH bearing)
20	705144	2	Bearing, 35 mm, 4 bolt, flange mount, UCF 307
21	700257	8	M12 x 50 bolt
22	FP140-048-0015	1	Input shaft casing assembly (gearbox)
23	FP140-018-0006	1	Gearbox holder pivot pin
24	700627	1	Shaft, 6 spline with 8 tooth ASA 100 sprocket
25	701588	1	Gearbox adjuster pivot pin

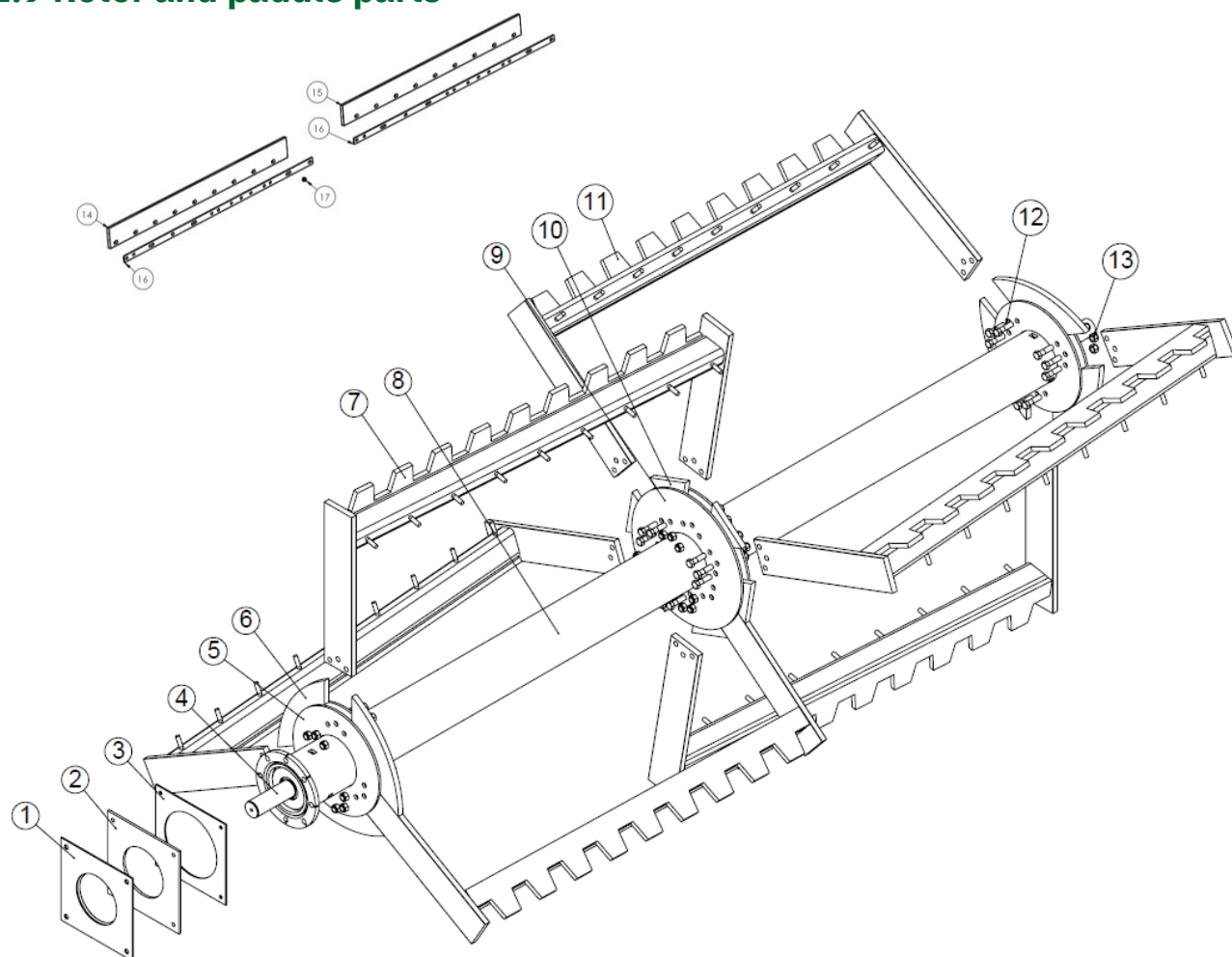
Table 19: Drive system parts



Item:	P/N:	Qty:	Description:
1	705015	1	Secondary drive chain (Sapphire ASA 140HS)
2	EF1014	1	Secondary drive chain tensioner assembly
3	705014	1	Primary drive chain (Sapphire ASA 100)
4	EF1015	1	Primary drive chain tensioner assembly
5	701275	1	Primary drive chain tension spring, 8", 3.6 mm wire, 32 mm OD
6	701278	1	Secondary drive chain tension spring, 12", 4 mm wire, 40 mm OD
<b>Wearing parts:</b>			
7	701970	2	Polypenco wear block 85 mm
<b>Spare parts:</b>			
-	705025	1	ASA100 joiner link
-	705028	1	ASA140HS joiner link

Table 20: Chain and tensioner details (showing springs fully stretched)

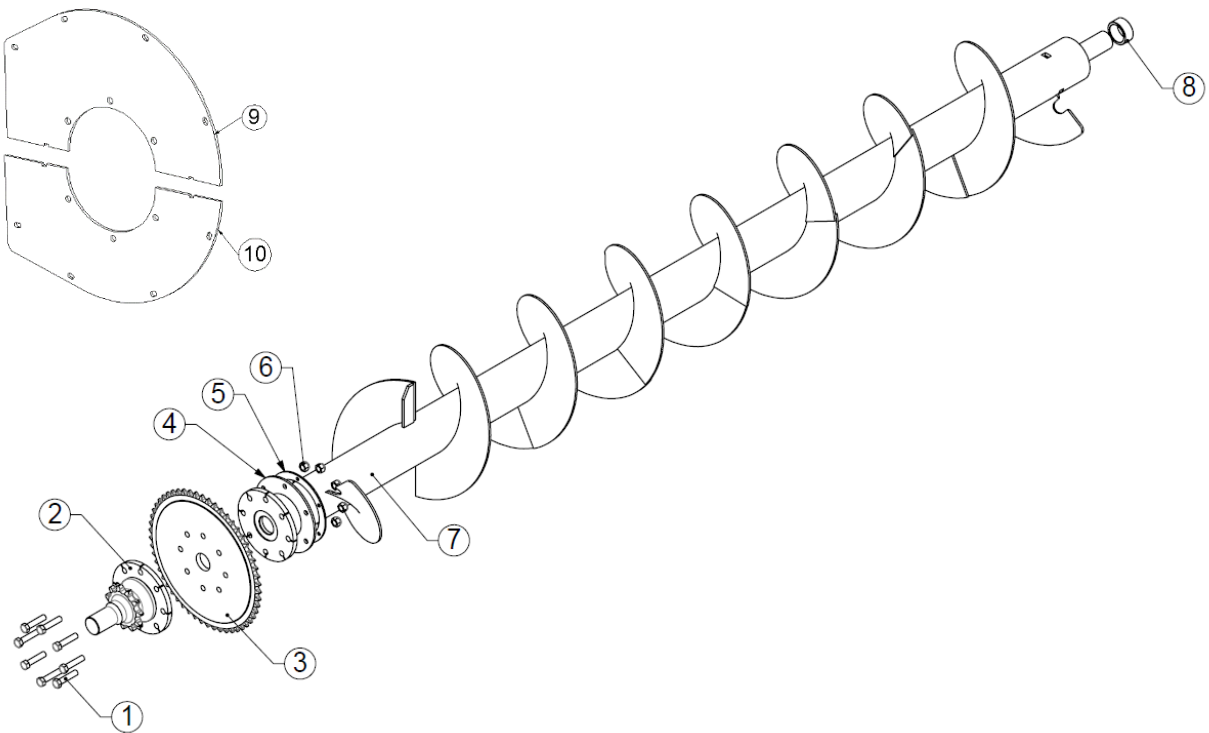
## 2.9 Rotor and paddle parts



Item:	P/N:		Qty:	Description:
	<b>270+</b>	<b>320+</b>		
1	701821	701822	2	Rubber seal for rotor, 10 mm
2	FP100-007-0008	FP140-007-0017	2	Braided rubber seal for rotor, 10 mm
3	FP100-007-0009	FP140-007-0018	2	Rotor seal retainer
4	EF107-7	EF147-7	1	Front rotor stub shaft assembly
5	FP100-007-0025	FP200-007-0049	4	End paddle mounting flange
6	RDTP147-3	RDTP147-3	6	End paddle blocks
6a	FP100-008-0026	FP140-008-0060	3	Front paddle assembly ( <i>rounded castellations</i> )
7	FP100-007-0024	FP140-007-0048	1	Rotor assembly
8	FP100-007-0001	FP200-007-0009	2	Centre paddle mounting flange
9	RDTP147-4	RDTP147-4	6	Centre paddle blocks
10	FP100-008-0027	FP140-008-0062	3	Rear paddle assembly ( <i>rounded castellations</i> )
11	700298	700298	36	M20 x 70 bolts
12	700305	700305	36	M20 locknuts
13	702285	702288	3	Front paddle rubber
14	702286	702287	3	Rear paddle rubber
15	FP100-008-0006	FP140-008-0009	6	Paddle rubber retainer
16	700283	700283	48/54	M16 locknut
17	701821	701822	2	Rubber seal for rotor, 10 mm

Table 21: Rotor assembly

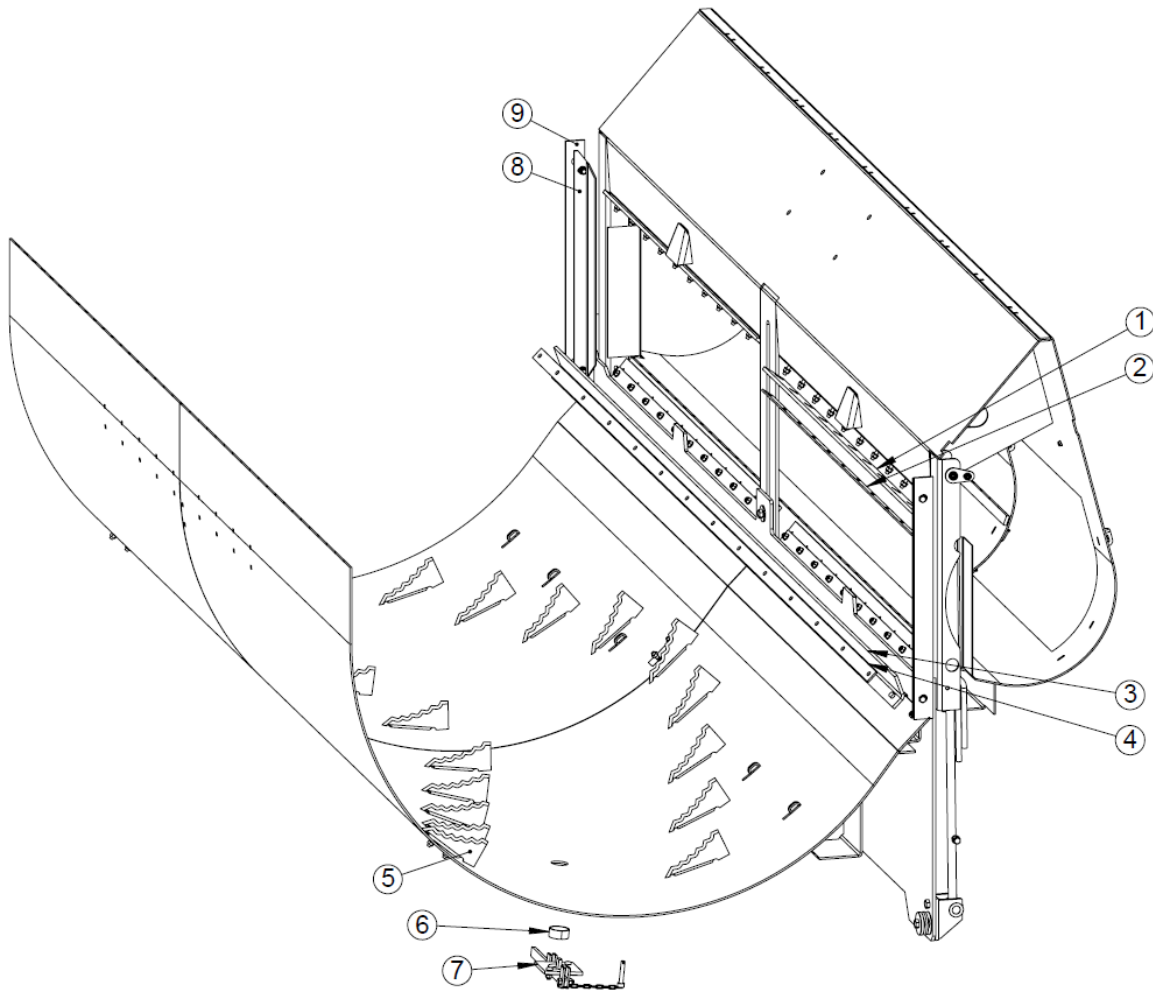
## 2.10 Auger parts



Item:	P/N:		Qty:	Description:
	270+	320+		
1	700302	same as 270+	8	M20 x 90 mm bolts
2	702007	same as 270+	1	Auger stub shaft assembly, 70 mm, forged
3	701832	same as 270+	1	Sprocket, 20 mm, ASA100, 54 tooth
4	FP280-009-0070	same as 270+	2	Auger front seal rubber
5	FP280-002-055	same as 270+	2	Auger rubber seal retainer
6	700305	same as 270+	8	M20 locknuts
7	FP100-009-0001	FP140-009-0001	1	Auger assembly
8	701598	same as 270+	1	Rotor spacer, 70.5 mm ID, 90 mm OD, 40 mm long
9	FP140-006-0190	same as 270+	1	Auger upper front cover plate
10	FP140-006-0191	same as 270+	1	Auger lower front cover plate

Table 22: Auger assembly

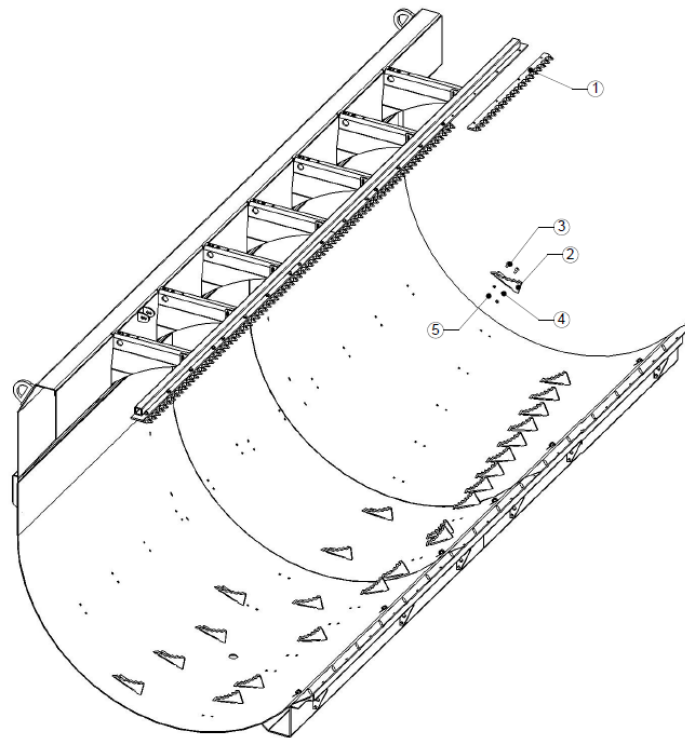
## 2.11 Body sealing parts



Item:	P/N:		Qty:	Description:
	<b>270+</b>	<b>270+</b>		
1	701196	701195	4	VFC-door outer rubber seal
2	FP100-006-0053	FP140-006-0022	4	VFC-door outer seal retainer
3	701291	701290	1	VFC-door lower inner seal
4	FP100-004-0001	FP140-004-0003	1	VFC-door lower inner seal retainer
5	-	-		See section 2.12 for body blade parts
6	EF104-6	same as 270+	1	Drain bung tube
7	EF104-12	same as 270+	1	Drain bung cover plate assembly
8	RD1010-12	same as 270+	2	VFC-door front and rear-end retainer plate
9	701521	same as 270+	2	VFC-door front and rear-end rubber
<b>Body reline plates:</b>				
-	FP100-004-0011	FP140-004-0029	1	Hardened body liner — front
-	FP100-004-0012	FP140-004-0030	1	Hardened body liner — rear

Table 23: Body seals

## 2.12 Body blade parts



Item:	P/N:		Qty:	Description:
	<b>270+</b>	<b>320+</b>		
1	701518	701518	3/4	Top knife blade — 990 mm long
	704229	704229	3/4	Top knife blade — 990 mm long — deep serrations
2	703955	703955	18/22*	Body blade — 5 mm thick
	703957	703957	18/22*	Body blade — 6.25 mm thick
3	700226	700226	36/44	M10 x 30 mm cup-head bolt (8.8 grade)
	705405**	705405**	36/44	M10 x 40 mm cup-head bolt (8.8 grade)
4	700241	700241	48/56	M10 hex nut
5	700737	700737	48/56	M10 spring washer

Table 24: Blades

\*There are 18 blades used as standard on the MechFiber270+ and 22 as standard on the MechFiber320+. Extra blades may be added, depending on the machine specifications.

\*\*Used only in conjunction with body liner.



## 2.13 Axle parts

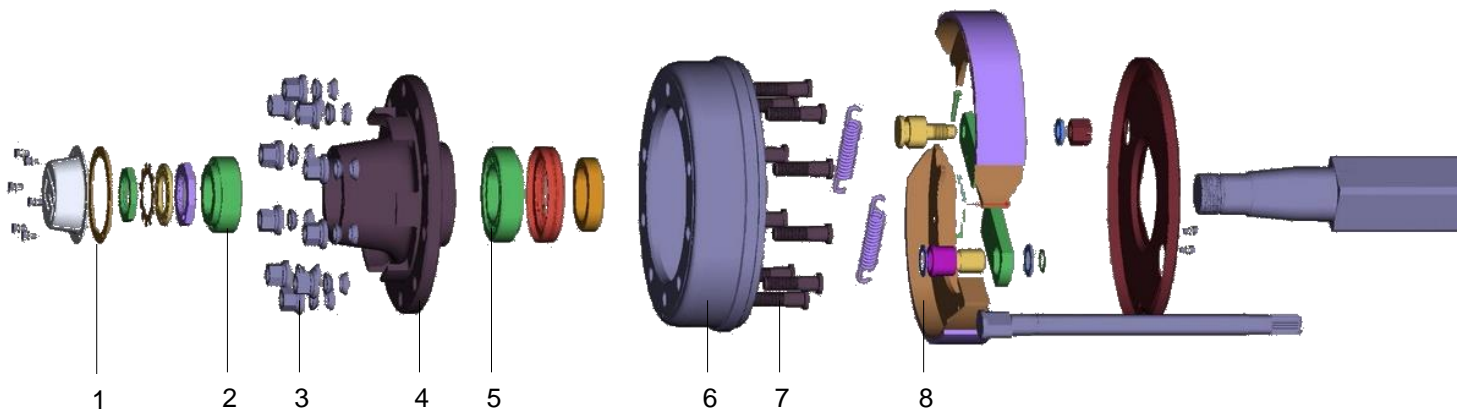


Figure 11: Typical axle (exploded view)

### Axle options

Axle types					
Axle application	MechFiber270+ and 320+				
No. studs	8*	8	10	10 (MF320+ only)	
Axle type	Straight	Cranked	Straight/cranked	Double cranked	
Axle width (mm)	1,830/1,930	2,130	1,950	2,130	
Brake type/dimensions (type/diameter x width, mm)	309E, 300 x 90	309E, 300 x 90	Unbraked	Unbraked	Braked 408E, 400 x 80
Nut size	M18 x 1.5	M20 x 1.5		M22 x 1.5	

\*Also available as a tandem option

Table 25: Axle types and axle spare parts

Axle spare parts	
Item No:	Description:
1	Hub cap
2	Outer bearing
3	Nut (with washer)
4	Hub
5	Inner bearing
6	Brake drum
7	Stud
8	Brake shoe

Table 26: Axle spare parts

## 2.14 Ancillary parts

<b>PTO shaft</b>		
<b>P/N:</b>	<b>Qty:</b>	<b>Description:</b>
700616	1	PTO, T60 shaft, 1-3/8" Z6 x 1-3/8" Z6. M10 x 6.8 shear bolt (standard)
704368	1	PTO, T60 shaft, 1-3/8" Z6 x 1-3/8" Z6. M10 x 6.8 shear bolt (long option)
700644	1	PTO, T50 shaft, 1-3/8" Z6 x 1-3/8" Z6. M8 x 4.6 shear bolt (planetary gearbox)
700632	1	PTO, V60 shaft, 1-3/8" Z6 x 1-3/8" Z6. M10 x 6.8 shear bolt (wide-angle)
<b>Planetary gearbox</b>		
<b>P/N:</b>	<b>Qty:</b>	<b>Description:</b>
FP140-018-0010	1	Planetary gearbox complete kit
<b>Grease fittings</b>		
<b>P/N:</b>	<b>Qty:</b>	<b>Description:</b>
704913	1	Grease tube swivel connector — 90-degree bend — M6 thread
704914	1	Grease tube connector — straight — M6 thread
704915	1	Grease nipple 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 nipple connector — straight — 1/8" BSP to M6
<b>Auto oiler parts</b>		
<b>P/N:</b>	<b>Qty:</b>	<b>Description:</b>
703624	1	Automatic oiler kit (3 chains)
703624-1	1	2 quart (1.89 litre) reservoir
703724	1	Brush assembly
704351	1	Brass manifold — mounts to top of lubeminder pump
703765	1	In-line check valve, to be used before brushes
703725	4	5/32" (4 mm) ferrule kits — used to replace ferrules in 704351 (4 pk)
703726	4	Sleeve nut (4 pk)
704517	1	Repair kit — seal, piston and O-rings
<b>Spool valve parts</b>		
<b>P/N:</b>	<b>Qty:</b>	<b>Description:</b>
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
<b>Diverter valve parts (used on French machines)</b>		
<b>P/N:</b>	<b>Qty:</b>	<b>Description:</b>
704139	1	Diverter valve kit (contains 703535 and 704394)
703894	1	Electro-hydraulic diverter valve kit (6 port)
<b>Heavy-duty top knife (standard on all Bale handlers)</b>		
704229	4	Top knife blade, 990 mm-long, deep serrations

Table 27: 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 MechFiber270+ and MechFiber320+ 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 harmonised 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: April 2022

Signed:

A handwritten signature in black ink, appearing to read 'R Walker', is written over a horizontal dashed line.

Robert Walker, CEO

## 3.2 UKCA Declaration of Conformity

### UKCA Declaration of Conformity.

In accordance with UK SMSR 2008.

#### Manufacturer:


Alltech Farming Solutions Ltd.  
Borris  
Co. Carlow  
Ireland

Certifies that the KEENAN MechFiber270+ and MechFiber320+ comply with the essential safety requirements of the UK SMSR 2008.

To conform to these essential health and safety requirements, the provisions of the following harmonised 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: April 2022

Signed:   
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Robert Walker, CEO

## 3.3 International Patents

The KEENAN MechFiber diet feeder and the KEENAN MechFiber bale handler 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

### 4.1 Details

#### Head Office

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