

M E C H A N I C A L S E R V I C E

Klassik Mechanical Service

The following section outlines the main service procedures for the Keenan Klassik, models 80 to 200. This section should be used in conjunction with Section 4, which covers the spare part numbers and ordering procedures. Reference should also be made to Section 6 Health and Safety when working around the machine.

If at any time the service procedure is unclear please contact Keenan for further advice and direction.

3.1 Standard Time Allocations For Warranty Claims

3.1 Standard Time Allocations For Warranty Claims

Description	Hours
Rotor Change & Paddles	7.5
Auger Change	5.5
Change Paddle	1.25 Per Paddle
Replace Auger Flighting (1 Section)	1.5
Guillotine Door Replace/Repair	1.5
Fitting New Belts To Conveyor	1.75
Splined Shaft & Bearings	1.25
Rotor Bearing Insert Or Casing	1
Replace Stub shaft - Auger/Rotor	5.25
Weighing Problems - Cables, Boxes, Bars & Brackets	1
Changing Primary Chain	0.5
Changing Secondary Chain	0.75
Add Or Remove Raiser Blocks	2.25
Fit Beet Grid	2
Re-Align Rotor/Auger Shafts	0.75
Fit New Rotor Seal	0.5
Fit Single Blade	0.25
Fit Planetary Gearbox	1.5
Replace Back Bearing	1
Fit Top Blade	1.5
Fit VFC Wire Rope	1
Fit Paddle Rubbers	0.75
Bent Rotor	1.5
Replace Front Cross Member	1.5
Do Full Service	2
Fit/Replace Guill Door Ram	1
54 Tooth Sprocket	2
Replace Gearbox	1

Note: The above times are for labour only and do include travel time.

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Drive System

3.2.1

Transmission

See Table 1. For correct PTO type and shearbolt combination

Drives/Gearbox

To access drives:

1. Remove PTO from machine.
2. Unfasten the door catch.
3. Open left-hand door (with PTO cowl), then open the right door.

To remove gearbox (see Photos 1 & 2)

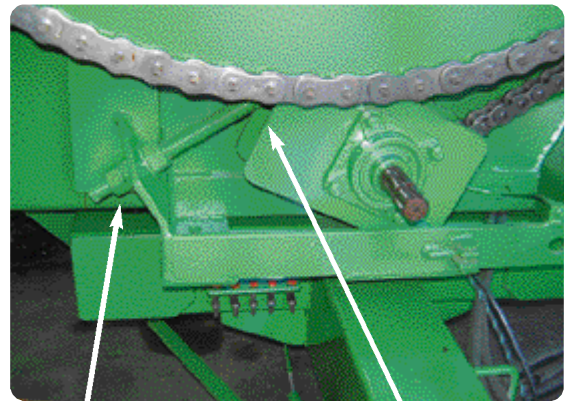
1. Slacken gearbox adjusters.
2. Break chain at auger sprocket
3. Remove grease extension.
4. Remove M12 x 45 bolt and nut retaining pivot pin.
5. Pull out pivot pin.
6. Remove 'R' clip in adjuster pin.
7. Pull out pin.
8. Gearbox can now be removed from right-hand side mounting.

To dismantle gearbox (see Diagram 1)

1. Slacken 4 allen screws (2 in each bearing).
2. Remove 4 x M12 x 45 nuts and the retaining bolt for the front bearing.
3. The splined shaft can now be withdrawn from rear bearing and pulled through front of housing.
4. Assemble in reverse order checking that the sprocket runs central of housing sides.

Table 1 PTO type and shearbolt combination

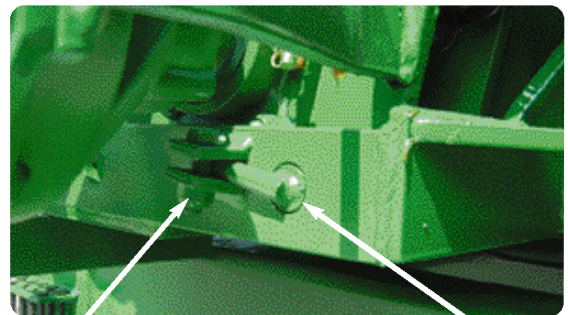
Machine Type	Shaft	Shearbolt
80,100,115	T50	M8 x 55 x 8.8
140	T60	M10 x 65 x 6.8
170S,200	T60	M10 x 65 x 8.8
Planetary box	T50	M8 x 65 x 4.6



GEARBOX ADJUSTER

ADJUSTER PIN

Photo 1 Gearbox adjuster



RETAINING BOLT

PIVOT PIN

Photo 2 Gearbox pivot pin

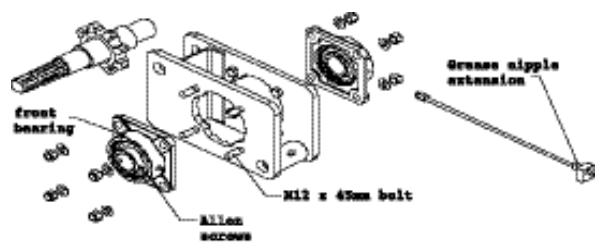


Diagram 1 Gearbox assembly

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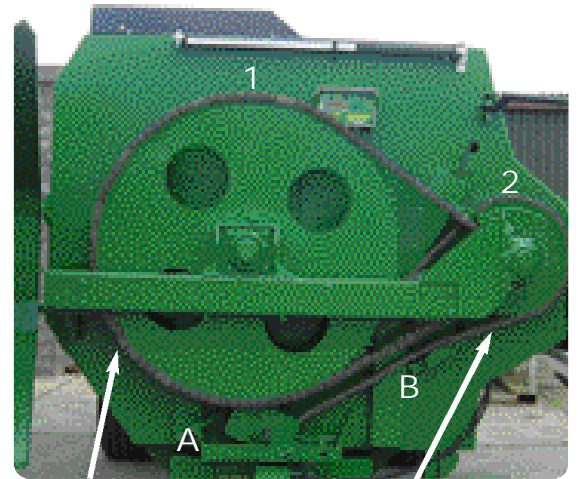
Drive System

3.2.2

Drive Chains:

- For ease of dismantling or re-fitting chains, it is recommended to break and join at points 1 & 2 (see Photo 3).
- The Primary drive chain is adjusted by chain adjuster to the left-hand side of the gearbox at A until 35mm deflection is achieved at B over bottom jockey roller.
- The Secondary drive chain has a simple spring loading and it can be adjusted by moving the chain down to a lower link at the spring hook.
- Never over tighten chains as premature failure and wear could occur.
- When new springs are fitted the hook should be closed up to stop it jumping from the anchor point.

Photo 3 - front assembly



SECONDARY CHAIN

PRIMARY CHAIN

Jockey Spring Sizes:

Top Jockey Spring = 12"
Bottom Jockey Spring = 6"
Synthetic chain oil is recommended to lubricate the chains.

Chain Lengths:

Table 2
Number of links and chain length (mm) by model

Model	80	100	115	140	170	200
Primary Drive Chain	ASA 100	ASA 100	ASA 100	ASA 100	ASA 120	ASA 120
Links	53.5	59	53.5	59	52.5	52.5
Chain Length (mm)	3397.25	3746.5	3397.25	3746.5	4533.9	4533.9
Secondary Drive Chain	ASA 140SH	ASA 140SH	ASA 140SH	ASA 140SH	ASA 160SH	ASA 160SH
Links	53	57.5	53	57.5	59.5	59.5
Chain Length (mm)	4711.7	5111.75	4711.7	5111.75	6045.2	6045.2

Note: Chain Lengths are exclusive of joiner link
For Australian Machines add 1 extra link to number of links for primary chain for 170 and 200 models

M E C H A N I C A L S E R V I C E

Drive System

3.2.3

Bearings

Procedure to replace the front rotor bearing and housing

- This is a flange bearing, with a renewable housing and insert.

To replace:

1. Slacken nuts A & B (See Photo 4).
2. Take the weight off bearing by jacking from chassis to bottom of rotor sprocket.
3. Slacken two allen screws in bearing.
4. Remove bolts B.
5. Pull bearing and bracket from rotor shaft.
6. Remove 4 bolts A.
7. The bearing housing or centre can now be replaced.
8. To replace the bearing housing, rotate bearing insert through 90 degrees and remove the insert through slot in back of bearing housing.
9. Check for bearing housing damage i.e. twisting.
10. Re-assemble in reverse order making sure allen screws lines up with indentation in rotor shaft, stud lock should be used on allen screws before tightening.

Procedure to replace front auger bearing

- This is a 70mm pillow block bearing with taper locking insert.
1. Remove the two M12 bearing cap retaining bolts.
 2. Tap the bearings cap and lift off.
 3. Turn the auger shaft to locate where the lock tab is retaining the castle nut (this is easier with chains removed, but not necessary).
 4. Release tab.
 5. Undo the castle nut (anti-clockwise) to end of thread, 3 to 4 turns.
 6. With semi-circular profile or wide drift, release taper lock with firm blows (see Photo 5).
 7. Jack up auger (at the feedout opening).
 8. Remove the two M20 x 70 bolts that are holding the bottom half of the bearing housing to the cross beam section.
 9. The bearing and half housing can now be removed from shaft (note where aluminium spacer is located).
 10. Re-assemble in reverse order, making sure drive chains are aligned and taper lock is tight (as this stops the auger moving backwards) and that tab on locking ring is bent down and located into castle nut.
 11. Re-pack with multi-purpose grease before re-fitting the bearing cap

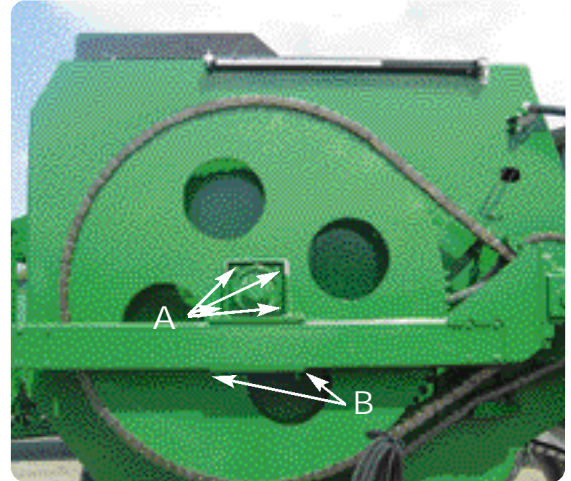


Photo 4 - Rotor bearing Bracket

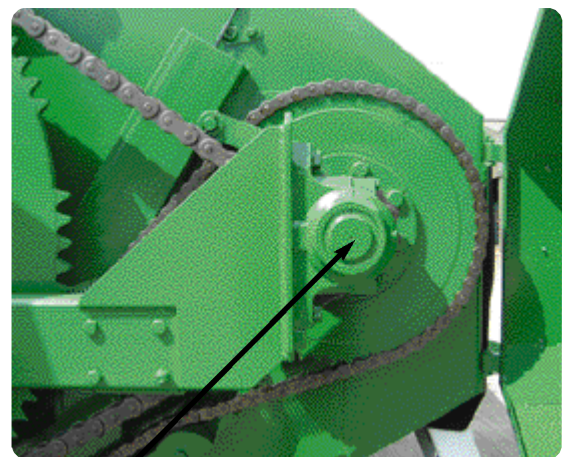


Photo 5 - Front auger bearing

When bearing cap is removed, tab can be released. Then with semi-circular profile or wide drift taper lock is released with firm blow.

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Drive System

3.2.3

Procedure to replace rear bearings

1. Remove covers (see Diagram 3).
2. Slacken 2 allen screws (per bearing).
3. Undo the four M20 nuts.
4. Pull bearing off.
5. The bearing insert can be replaced separately by turning 90 degree in housing and pulling out through the slots in rear of housing.
6. Refit in reverse order making sure allen screw lines up with indentation on shafts.

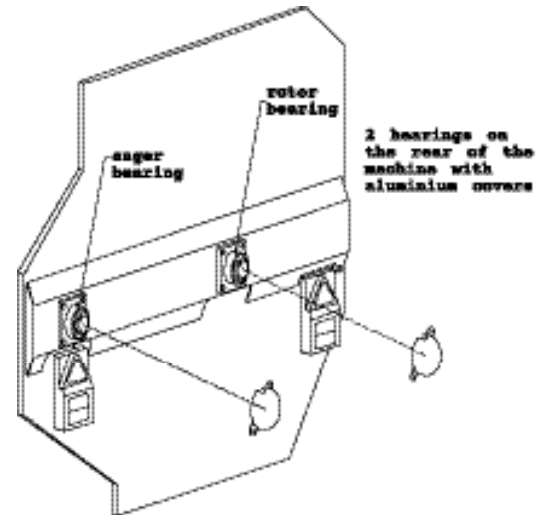


Diagram 2 - Rear bearing location

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Drive System

3.2.4

Auger Re-alignment

If the auger moves back this causes the chains to run out of line and the chain may off the rotor sprocket:

To re-align the auger bearing

- 1 Follow steps 1-6 of front auger bearing replacement procedure, section 3.2.2.
- 2 Follow procedure for rear bearing section 3.2.3 if necessary.
- 3 Remove rear left side light pod to allow access to rear auger stub shaft.
- 4 Cut short welds which hold the rear auger thrush collar in place.
- 5 Lever auger (from inside machine) towards the front (See Diagram 3).
- 6 Re-align dent in auger rear shaft to located one allen screw.
- 7 Lock up front and rear bearings.
- 8 Press thrush collar on re-aligned auger tightly against rear bearing. Stitch weld collar to position.

NB:- Always run machine to check it runs OK.

Rotor re-alignment

If rotor moves back or forwards this will causes the secondary chain to run off the rotor sprocket.

To re-align:

1. Slacken the allen screws in front rotor bearing.
2. Check the rotor bearing and bracket are not damaged.
3. Remove rear bearing cover and slacken the two allen screws in the bearing.
4. Lever the rotor backwards into the correct position between the rotor sprocket and front cross beam, (see Diagram 4). To move rotor forward see section 4.3 (similar procedure to auger).
5. Re-Align dents for allen screws.
6. Tighten bearings, ensuring both thrust collars are tight against each bearing.
7. Run machine to check it runs OK.

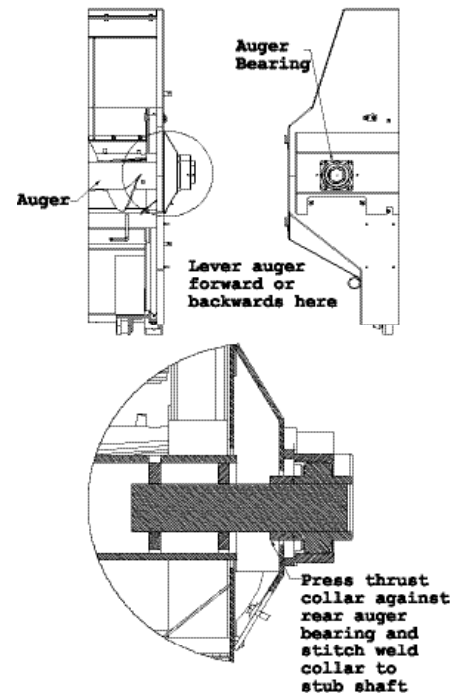


Diagram 3 - Position to lever auger forward or backwards

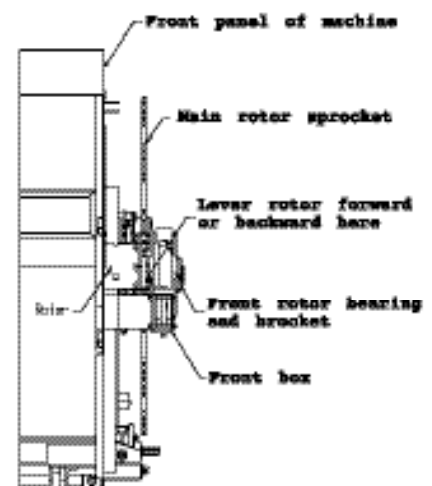


Diagram 4 - Position to lever rotor forward or backwards

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Drive System

3.2.4

Procedure for auger stub shaft replacement

Instructions for replacing old arrangement with new design

- 1 Remove old 11 tooth sprocket flange and cut off broken stub shaft.
- 2 Grind off face of existing stub shaft to ensure it does not protrude past the 54 tooth/48 tooth sprocket mounting flange on the front of the auger.
- 3 Place 54 tooth/48 tooth sprocket onto rear spigot of new auger stub shaft (For retro-fit applications this should only be long enough to pass through the sprocket.).
- 4 Offer up the new bolt on arrangement to the flange.
- 5 Bolt up the new stub shaft and shim if necessary to ensure that the assembly is running true.
- 6 Ensure that bolts are fully tightened.

Instructions for new design stub shaft replacement

- 1 Remove bolts holding stub shaft to auger flange.
- 2 If stub is very tight in housing hit the assembly with a heavy hammer to loosen it up.
- 3 Working at each side prise a flat lever between the flanges and work old stub out of the flange prising at alternate sides to ensure shaft is coming out straight.
- 4 When old stub has been withdrawn offer up the new bolt on arrangement to the flange.
- 5 Bolt up new stub shaft and shim if necessary to ensure that the assembly is running true.
- 6 Ensure that bolts are fully tightened.

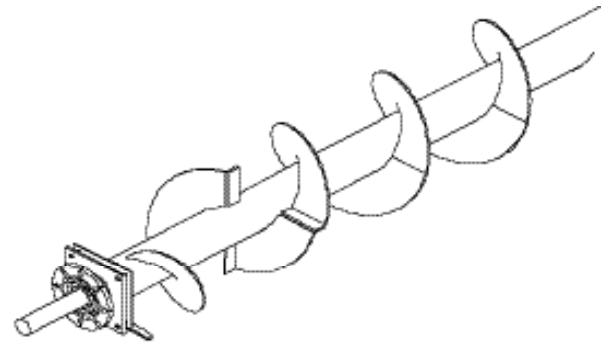


Diagram 5 - Old Stub Shaft arrangement

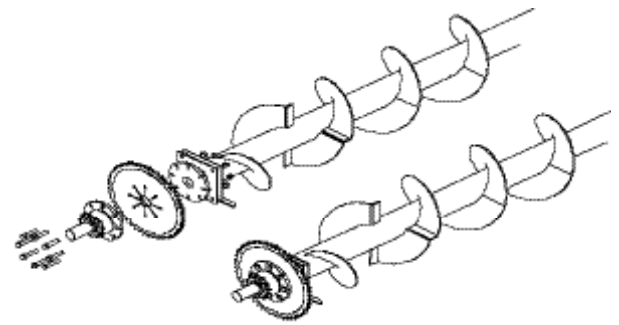


Diagram 6 - New Stub Shaft arrangement

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Klassik Weighing System

3.3.1

Set-up

1. Attach the power cable to connector J901 on the weighbox and the load cell cable to connector J902 (see Photo 1).
2. Press the ON Key. A brief message is displayed (such as HELLO). The scale enters the GROSS mode.
3. Allow weighbox to warm up. If the scale is holding a load for a big period of time, for example overnight, the weight displayed may vary because of a zero shift created by changes in temperature. This does not affect the accuracy of the scale.

For example, if the system was loaded with 1000kgs, it might read 1200kgs the following day. The change in temperature "zero shifted" the ZERO/BALANCE from 0 to 200kgs. When unloading the scale, the display will count from 1200 to 200kgs for a total of 1000kgs.

4. After this warm up period, press and release NET/GROSS button. Then, within three seconds, press ZERO. The word ZERO is displayed to show completion of the ZERO/BALANCE step.
5. The scale is now ready to weigh.



Photo 1 - Location of Connection points



Photo 2 - Klassik weighing model EZ3200

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Klassik Weighing System

EZ3200 Weighbox Calibration

All weighboxes are calibrated leaving the factory, however if for some reason the weighbox needs to be recalibrate or as a check to ensure it is calibrated correctly the follow procedure is to be used.

1. Turn on the weighbox.
2. Push and hold the 'ZERO' key and, at the same time, push and hold the 'ON' key. Keep these keys pressed until "SETUP" is displayed on the screen. This will take 5 seconds approx.
3. The set-up number will appear. This is '575019' and should be the same for all models.
4. Press the 'ON' key.
5. 'CAL' will then be displayed on the screen followed by the calibration number. For models 80 to 140 this should read '6625'. For models 170 to 200 this should read '11376'.
6. If these numbers are not displayed then they should be keyed in.
7. Press the 'ON' key.
8. Press the 'NET/GROSS' key.
9. Press the 'ZERO' key to return to normal weighing.

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Klassik Weighing System

3.3.2

Trouble shooting guide for weighing system on all Keenan Klassik Models

Weighbox will not switch on

- Check connections at the tractor, check all fuses in the power supply line.
- Check the correct voltage is being supplied.
10 Volts minimum
16 Volts maximum
- Check the cable connections at the weigh box.
- Make sure the power cable has no damage to it.
- Disconnect the display cable (Photo 3).
 - If a weigh bar has a short on the excitation the weighbox will not light up
 - If the unit will not light up the problem is internal

Weighbox will not stabilise

- Disconnect the display cable (Photo 3) and zero the scale, check the screen
 - If the weighbox is still drifting the problem is in the weigh box
- Reconnect the display cable and disconnect it at the junction box. Located on the chassis under the feedout tray (Photo 4).
- Zero the scale and check the screen.
- If the weighbox is drifting the problem is the display cable.
- As this cable runs under the guards of the machine check the cable for vermin damage.
- Reconnect display cable at junction box and disconnect all weighbar connections (Photo 5).
- Zero the scale again and check the screen.
- If the weigh box is drifting the problem is the junction box.
- Connect one weighbar and zero the scale again and check the display (Photo 6).
- Repeat with each weighbar to determine which one is causing the drift.
- When the faulty weighbar has been identified check the cable for vermin damage.
- Connect the faulty weighbar into a different port on the junction box, if drift persists change the weighbar.



Photo 3 - Display cable disconnected from weighbox



Photo 4 - Display cable disconnected at junction box

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Klassik Weighing System

Weighbox weighs incorrectly

- Position a known weight over each weighbar (one bar at a time).
- Make sure all four readings are consistent and give a positive reading.
- If a reading goes negative the weighbar may be installed upside down.
- Also check the locating bolt has not been broken and the weighbar has not turned in the bracket.
- Check the condition of the weighbar mounting bracket (Photo 7).
- Check that all the mounting brackets are free and not seized, also check all the cables have not been damaged.

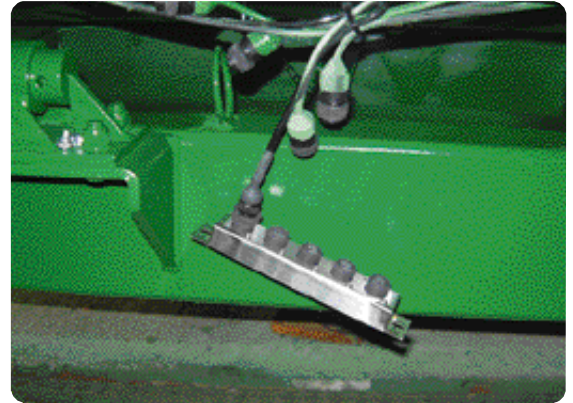


Photo 5 - All weigh bar connections disconnected

Weighbox is locked on ERROR or +/- RANGE

- Disconnect the display cable and zero the weighbox. If the weighbox does not zero the problem is the weighbox (See Photo 8).
- If the weighbox does zero then repeat the process of elimination as before when finding the drifting problem.

ERROR or +/- RANGE usually indicates a faulty weighbar.

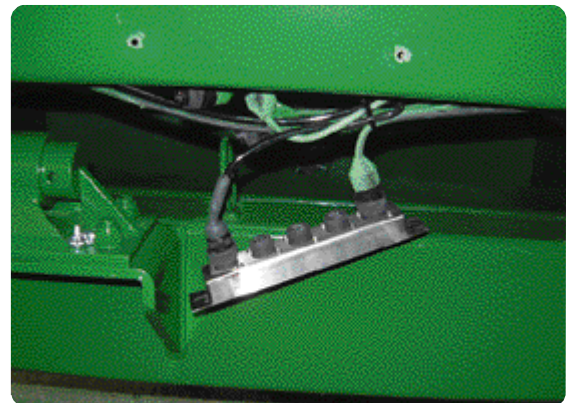


Photo 6 - One weigh bar connected

Procedure to replace weighbar saddles

1. Cut 8mm slot around the weighbar box bracket.
2. Slide the saddle in and weld it all around to the body and bracket (see Diagram 1).
3. Repeat same for all four corners of the machine.
4. Check inside the machine to ensure that holes have not been pierced in the main body. If there are these will have to be filled in with weld.

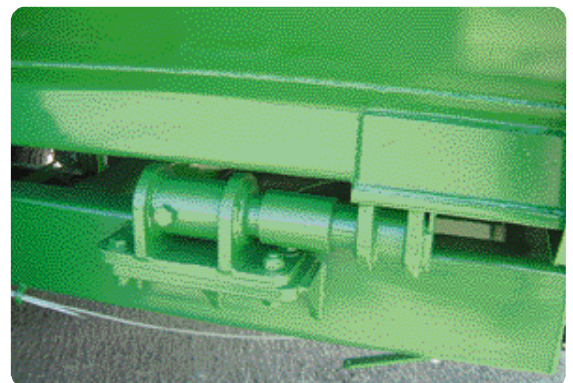


Photo 7 - Weighbar mounting bracket

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Klassik Weighing System

Procedure to repair weighbar mounts

To repair weighbar mounts:

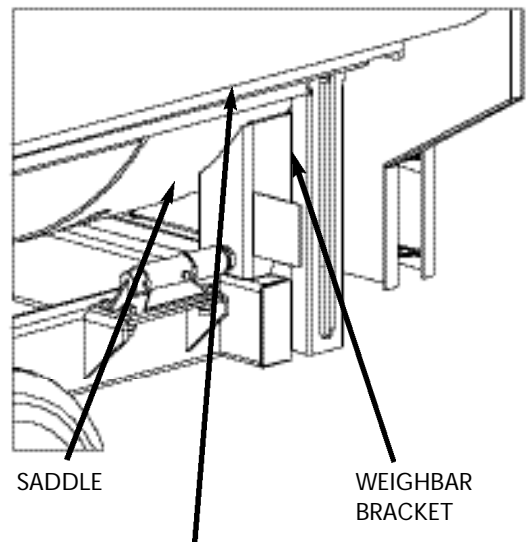
1. Remove weighbar by opening 4 x M16 x 45 bolts and nuts. Jack machine up on corner of chassis and drive in a wedge to remove weighbar. NB – Never open more than one weighbar at a time as the machine could slip on chassis if all four were opened.
2. Re-weld cracks around the tube or any other cracks on weighbar mount.
3. Fit profiled plate to front of mount and fully weld all round.

To replace weighbar mount:

1. It is not necessary to cut off all the old weighbar mounts. Cut off the base of the mount approximately 75mm over the tube on the mount and refit a new section (see Diagram 1).
2. It is sometimes necessary to cut back the folded leg on the new section to keep it flush with the old one, weld bracket completely.
3. Now repeat section above on repairing weighbar mount and weld profiled plate to the front of the mount.



Photo 8 - Disconnected display cable



SLOT CUT HERE IN THE WEIGHBAR BRACKET TO ALLOW THE SADDLE TO SLIDE IN

Diagram 1 - Weighbar mounting assembly

M E C H A N I C A L S E R V I C E

Main Body

3.4.1

Rotor

Bent rotor tube

- If the rotor is bent severely then either the chains run-off or the paddles rub on the body.
 - It is not always necessary to replace the rotor, in some circumstances the rotor can be cut and straightened successfully (but be aware of the twist that may exist in the tube).
1. Turn the rotor so that the bend is facing upwards (determine this by measuring from rotor to the floor).
 2. Determine the highest point of the bend.
 3. Cut through the rotor tube to approximately 2/3 of radius of tube to create a wedge. Watch the centre of the rotor (if rotor starts to twist, stop cutting). See Diagram 1.
 4. Open cut into a wedge shape.
 5. Jack down rotor tube until it is parallel with the floor.
 6. Weld up the cut in the rotor tube, turn the rotor to check that the paddles clear the body.
 7. Weld a 'collar' over the welded area at least 200mm wide all around the tube.
 8. Run the machine to ensure that there is not excessive run out on the rotor sprocket and that the paddles clear the body.

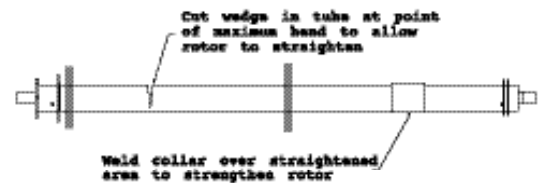


Diagram 1 - Cut at highest point of bend

M E C H A N I C A L S E R V I C E

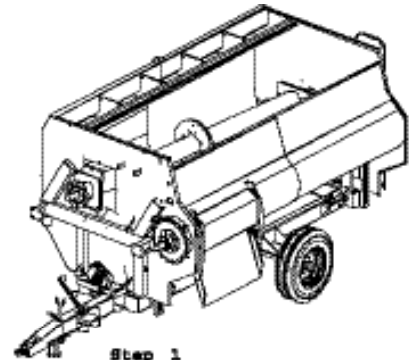
Main Body

3.4.1

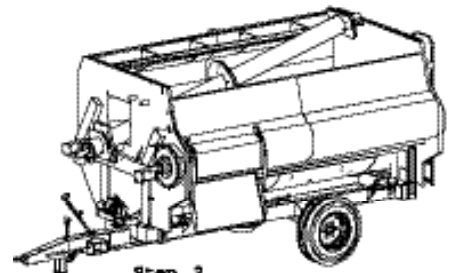
Rotor

Replacing the rotor shaft

1. Never replace the rotor shaft if it can be straightened.
2. To remove the paddles refer to the procedure for paddle replacement.
3. Remove front cross beam completely.
4. Remove big rotor sprocket by removing 8 x M20 x 70 bolts, secure and lift off.
5. Remove both seals (see section below).
6. Remove back rotor bearing (see section 3.2.3).
7. Remove front bolts in panel around rotor.
8. Secure sling around centre of rotor lift and pull through centre of front panel, until the rotor is free of the end of machine, then remove out over top of machine (Diagram 2).
9. Re-assemble in reverse order and refit thrust collar on rear rotor stub shaft.
10. Weld in paddle blocks.



Step 1
To remove, raise front of rotor and slide forward through opening in front panel of machine until rotor clears rear bearing.



Step 2
Lifting from centre raise rear of rotor above the top of rear panel and slide backwards through opening in front panel and clear of machine.

Diagram 2 - Procedure for removing rotor shaft

Rotor Seals

To remove front seal

1. Remove bolts at A & B as indicated on diagram 3.
2. Removed the damaged seal by simply cutting it in half.
3. When fitting a new seal cut completely through one side of the seal to allow it to be fitted over the rotor tube. Ensure the cut in the seal is put in an upright position i.e the cut is above the rotor tube.
4. Glue the slot using locktite 406.
5. Replace bolts and tighten.

For rear seals repeat above steps.

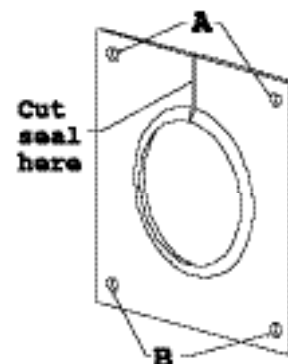


Diagram 3 - Front rotor seal

M E C H A N I C A L S E R V I C E

Main Body

3.4.2

Paddles

Procedure to replace a paddle

1. Lock paddles in a secure manner.
2. The paddle to be replaced should always be turned so as to be vertical.
3. Open and remove M20 x 60 bolts (3 per paddle).
4. Using a hydraulic jack (10 tonne) jack the paddle arm up until bottom holes protrude over the flange on the rotor (jack from rotor). Place M20 bolt in one bottom hole to prevent the paddle from slipping back when the jack is released.

NB – On the 4 x paddle system always jack the paddle arm nearest the end of the machine. This will make removal easier so that the paddle will not get caught on the folded lip on front or back ends of the machine.

5. Move the jack to other side of paddle and repeat step 3. It is vital that a sling is fitted to the paddle to a lifting device to prevent the paddle falling.
6. Before fitting the new paddle grind a slight bevel on the bottom of the paddle arms and smear grease on. This will ease the replacement. Line up the holes and refit bolts and nuts.

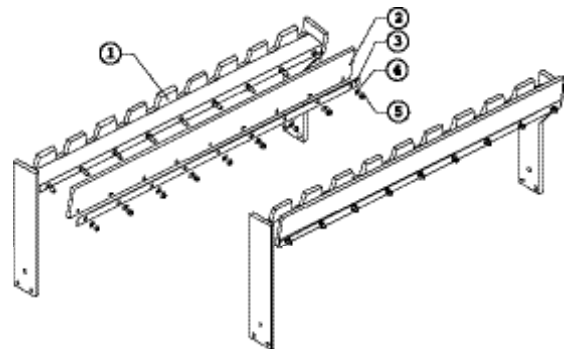


Diagram 4 - Paddle rubber assembly

Paddle rubber replacement**Paddle rubber replacement**

1. Loosen nuts and remove washers and nuts (4 & 5 on Diagram 4).
2. Remove retaining plate (3 on Diagram 4).
3. Remove from bolts (2 on Diagram 4).
4. Fit new rubber by aligning with bolts.
5. Fit retaining plate back on and secure washers and nut back on.

M E C H A N I C A L S E R V I C E

Main Body

3.4.3

Auger

Fitting new auger

1. Open front covers and insure machine is parked safely.
2. Remove tension on gearbox chain adjuster.
3. Remove both drive chains as per section 3.2.2.
4. Remove top section of front auger shaft bearing as per section 3.2.3.
5. Move locking ring tab to the upright position and then loosen the taper lock bearing insert. Hit taper lock back towards the main bearing to loosen it from stub shaft, see section 3.2.3.
6. Remove all bolts holding front cross beam (on which bearings are mounted) and allow this beam to rotate to the side of the front rotor shaft. This will facilitate re-assembly once the stub shaft has been replaced.
7. Remove 11 tooth and 54/48 tooth sprockets by removing all 8 bolts. If the auger seal is fitted remove it by opening and removing the four M12 x 35 bolts.
8. Remove the auger chamber front cover plates.
9. Remove rear bearing as per section 3.2.3.
10. Remove damaged auger by screwing auger outward through opening in front of machine.
12. Re-fit new auger in and re-assemble in reverse order and re-align.

Screw auger out
of auger chamber
through opening in
front of machine.

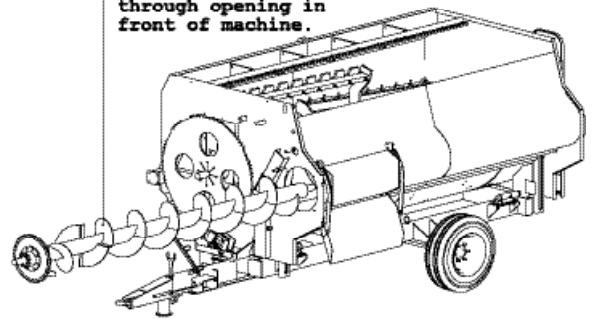


Diagram 5 - Fitting new auger

M E C H A N I C A L S E R V I C E

Main Body

3.4.3

Auger

Replace section of auger flighting

1. Empty machine and open guillotine door fully.
2. Disengage PTO and unhitch machine from tractor.
3. Open front covers and secure in a safe manner.
4. Relieve tension on gearbox chain adjuster.
5. Remove both drive chains.
6. This will allow auger to turn freely.
7. Fit covers on blades & enter machine.
8. Identify bent flighting section.
9. Cut flighting at straightest point section and remove.
10. Add in new flighting section/sections accordingly and stitch weld back in.
11. Re-assemble machine.

Note:-

If all flighting is gone it is easier to remove auger and refit while auger is out of machine.

If the flighting around the feedout door is bent it is possible to change from feedout opening.

Feedout restrictors

All 140 machines are fitted with a restrictor fitted on the auger side of the VFC guillotine door to the floor of the auger chamber.

It is bolted in but can be removed if required however it is strongly recommended that this is not removed as removal will result in power surges at feed-out (See Photo 9).

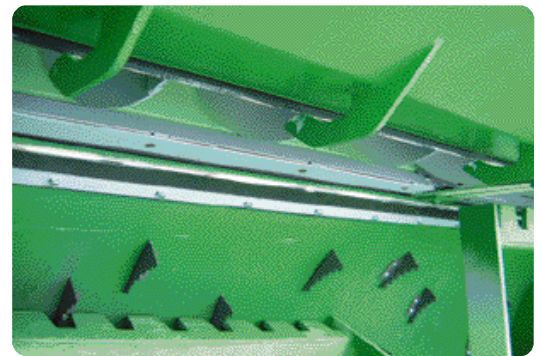


Photo 9 - Feedout restrictor

M E C H A N I C A L S E R V I C E

Main Body

3.4.4

Blades/Top Knife

Blades

- 1 Ensure blade covers are fitted to knives before doing any work inside the machine (Photo 1)
- 2 Blades are removed by loosening the two M10 hex nuts on the outside of the machine.
- 3 Then remove the blade from inside of the machine by taking out the two bolts (M10 X 30)
- 4 There are two types of blades fitted in the body - left sided blade and right sided blade. To distinguish between types place point of blade towards you if the bracket with bolt holes is to the left side of you then this is a left sided blade and vice versa for right handed side.
- 5 Table 1 shows number of knives in the body for each model by market.

Top Knife

The top knife is made up of sections of 1 Metre blades bolted to a retainer plate.

Table 2 gives the number of metre blades to each model.

The retaining plate is bolted and welded to support arms which are welded to the side of the machine.

To replace a section of top knife:

- 1 Simply unbolt the four bolts (M10 X30).
- 2 Fit new section and tighten.

There is a beaded strip provided for protection purposes to be fitted while working around the top knife. (See Photo 2)

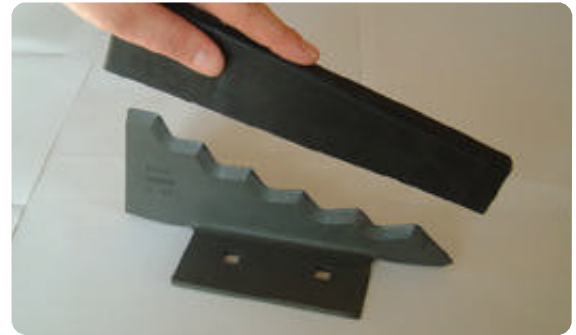


Photo 1 - Left Sided blade showing cover

Table 1 *Blades in body per model*

Model	80	100	115	140	170	200
Ireland	16	17	19	18	20	20
UK	16	17	19	18	20	20
France	16	17	19	18	20	20
Denmark	16	17	19	18	20	20
Sweden	16	17	19	18	20	20
Germany	16	17	19	18	20	20
Belgium	16	17	19	18	20	20
Holland	16	17	19	18	20	20
USA	16	17	19	18	20	20
Australia	17	17	18	18	22	28
N.Zealand	16	17	19	18	20	20
Africa	16	17	19	18	22	28
East Europe*	16	17	19	18	20	20

* Eastern European covers Hungary, Poland & Russia

Table 2 *Top Knife sections per model*

Model	80	100	115	140	170	200
1 Metre Blade Sections	3	3	4	4	4	5



Photo 2 - Beaded strip fitted for protection from top knife

M E C H A N I C A L S E R V I C E

VFC Guillotine Door

3.5

Removal of VFC (variable feed control) guillotine door

1. Fully lower guillotine door.
2. Place 2 timber supports underneath to prevent it dropping onto the ground.
3. Remove the 2 holding pins from the bottom ram brackets.
4. Remove bottom ram brackets from guillotine door by withdrawing the bolts from same.
5. Remove inner guillotine door slides.
6. Centre sliding bolt and bushen, loosen off and remove.
7. Hook an overhead hoist to centre hole in guillotine door, raise to appropriate height, swing clear of ends and lift out of machine.

Hydraulic rams are removed by withdrawing the top holding pin from the ram and bracket and lowering the ram, ensuring it is not allowed to drop down in freefall.

Replacing VFC Door Indicator Spring

1. Make sure the VFC door is in the 'up' position.
2. Fit the wire rope end to the bolt welded on the ram bracket **A** on diagram (Photo 1) .
3. Feed the wire rope **B** around the pulleys and fit to one end of the spring **C**.
4. Use the spring pulling tool **D** to extend the spring through the indicator box section **E** (Shown cut-away in diagram 1) and lock in place with the pin **F** through the holes provided.

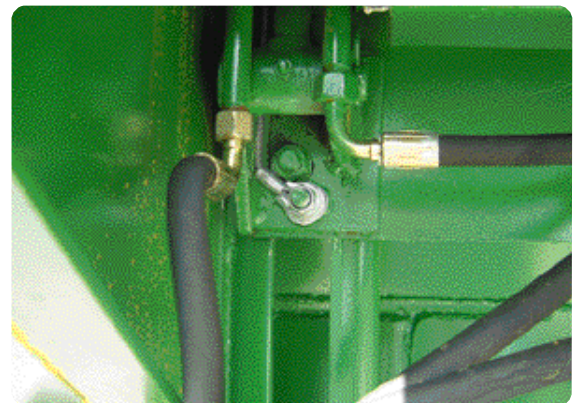


Photo 1 - Position for wire rope attachment

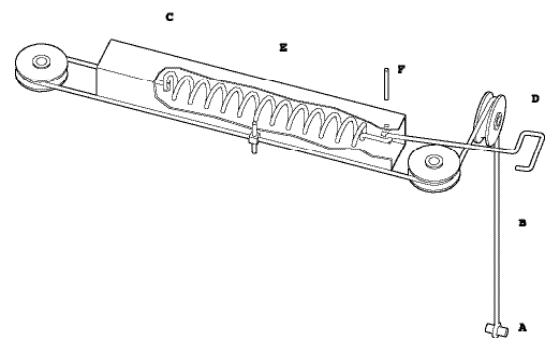


Diagram 1 - Replacement of VFC indicator spring

M E C H A N I C A L S E R V I C E

Miscellaneous

3.6

Fitting raisers (increase feedout height)

If the machine is too low to feed over a barrier, it can be raised by placing spacers between chassis and weighbar brackets (ranging from 4" to 6" high)

1. Always fit the auger side first, and one corner at a time.
2. Remove 8 x M16 x 45 bolts and pull weighbar cables to achieve enough slack.
3. Place jack between chassis and auger gusset, fit raiser and tighten.
4. Repeat on right-hand side one corner at a time (Photo 1).

NOTE: Always ensure that:

- There is enough head-room in building.
- The farmers loader will reach to load easily.

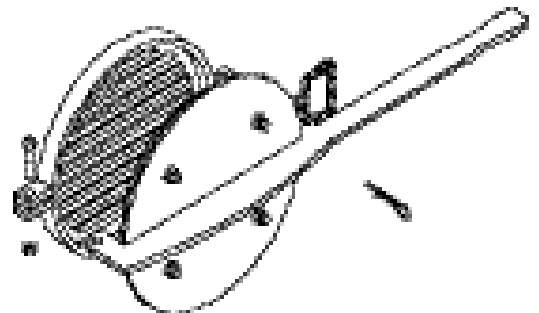


Photo 1 - Raisers fitted to Klassik

Fitting a manual beet grid

This can be fitted where a customer wishes to wash beet/potatoes and one has not already been fitted to the machine.

1. From inside the machine cut using gas a small hole in the rear panel at the lowest point.
2. Remove door from the beet grid assembly (drawing1).
3. Tack grid to the rear of the machine approximately 3mm above the hole.
4. Cut around the grid using gas.
5. Set the grid in position so the handle points to the right-hand side.
6. Weld completely around inside and out of the grid (Drawing 2).
7. Reattach door.



Drawing 1 - Drawing 1 Fitting a manual beet grid

M E C H A N I C A L S E R V I C E

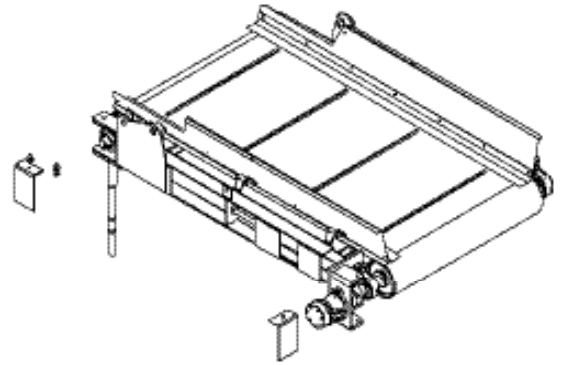
Miscellaneous

3.6

Fitting new belts to the feedout conveyor (where fitted)

All rear feedouts are fitted during manufacture and the only on-farm job may be the replacement of worn or damaged belts.

1. Remove the side covers (See drawing 2).
2. Adjust the threaded bar to slacken the belt.
3. Remove the old belt and fit new one.
4. Tighten the adjuster threaded bar and check the inside and outside measurements to make sure the belt is evenly tightened.
5. Refit covers.



Drawing 2 - Fitting new belts to feedout conveyor

Wheels, part numbers and inflation pressures

Wheel Description	Part Number	Bar	PSI
12/18 Simex 6 Stud 16 Ply	700396	5	72
12/18 Simez 8 Stud 16 Ply	700397	5	72
Continental 6 Stud 285/70R 19.5	700465	8	116
Continental 8 Stud 285/70R 19.5	700466	8	116
Continental 6 Stud 245/70R 19.5	701873	8	116
Continental 8 Stud 245/70R 19.5	700462	8	116
400 X 15.5 - 6 stud	700479	5	72
Super Singles 385/65R-22.5 6 Stud Remoulds	700473	5	72
Super Singles 385/65R-22.5 8 Stud Remoulds	700474	5	72
Super Singles 385/65R-22.5 10 Stud Remoulds	701952	5	72
385/65R-22.5 10 Stud New	700477	5	72
385/65R-19.5 10 Stud New	700478	5	72
Rib Aircraft 30/11.5 X 14.54 6 Stud	700438	7	101
Rib Aircraft 30/11.5 X 14.54 8 Stud	700439	7	101

Complete wheels are only stocked, if a wheel rim or tyre is required it will be ordered in specially