



608, 610, 612, 614, 616 & 618

Operator's Manual

Date of publication	08/2008
Date printed	08/2008
Language	GB
Application as from machine No.	KVT6001208
Reference No.	KD1561049

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NOTATION

	The safety alert symbol is used throughout the Operator's Manual whenever there is the danger of injury or death. DO NOT ignore these instructions.
IMPORTANT!	When you see this heading, be aware of possible damage to the machine and/or surroundings.
NOTE!	This heading is used to indicate an instruction to make a task safer and easier.

THIS MANUAL MUST BE HANDED TO THE
CUSTOMER BEFORE THE MACHINE IS
USED FOR THE FIRST TIME

KVERNELAND

MODELS 608, 610, 612, 614, 616 and 618

Serial No.	Delivery Date

Please complete the above details for easy reference.

Kverneland pursues a policy of constant development of its products and reserves the right to improve or alter its products without any obligation to modify or replace machines previously sold.

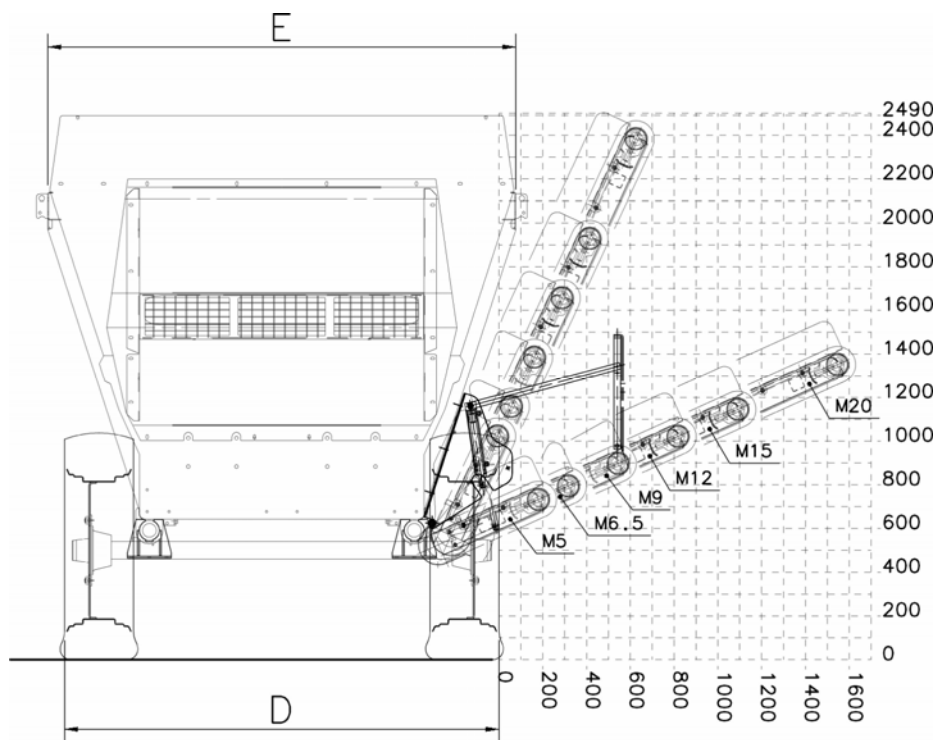
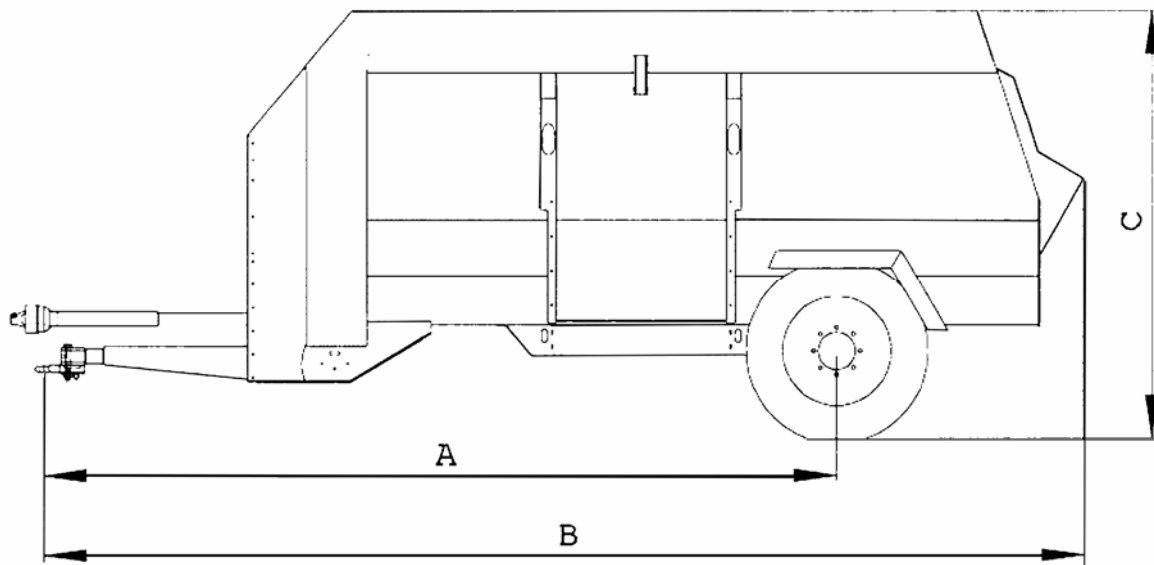
It is essential to quote the Machine Model and Serial Number when making service enquiries or ordering spare parts; this will help to avoid delay.

Your Kverneland 608, 610, 612, 614, 616 and 618

is supplied by:-

to whom all your enquiries and servicing requirements should be directed, and whose SERVICE ENGINEERS are specially trained to maintain and service your machine.

SPECIFICATIONS



Conveyor dimensions based on the Kverneland 600 series
fitted with 315/80 x 15.3 wheels

SPECIFICATIONS

	608	610	612	614	616	618
Capacity	8.5	10.5	12	14	16	18
Maximum payload (mix load weight):						
Standard hitch: Kg	3500	4400	5200	6100	7200	8000
'German' hitch: Kg	2500	3100	3500	4100	5600	6200
Unladen weight: Kg	3500	3600	4600	4700	5300	5400
Overall height 'C' – 12.50/80 x 15.3 wheels	2.42 m	2.69 m	-			
Overall height 'C' – 315/80 x R22.5 wheels	-	-	2.50 m	2.78 m		
Overall height 'C' – 385 /65 x R22.5 wheels					2.70 m	2.88 m
Overall height 'C' – 40 x 14 wheels			2.44 m	2.71 m	2.64 m	2.83 m
Overall width 'D' (over tyres)	2.01 m	2.01 m	2.01 m	2.01 m	2.13 m	2.13 m
Overall width mixing chamber 'E'	2.10 m	2.10 m	2.10 m	2.10 m	2.10 m	2.10 m
Overall machine length 'B'	5.16 m	5.16 m	6.16 m	6.16 m	7.16 m	7.16 m
Length 'A'	4.18 m	4.18 m	4.69 m	4.69 m	5.16 m	5.16 m
Maximum round bale size	1.20m x1.20m					
Power requirements at PTO	50kw 65hp	50kw 65hp	60kw 80hp	60kw 80hp	70kw 95hp	80kw 110hp
PTO input speed	540 rpm					
Safety protection	With PTO shearbolt overload					
Tractor hydraulic outlet requirement	1 x flow & 1 x free flow return					
Tractor hydraulic flow requirement	35 litres/min @ 170 bar					
Wheel option - 12.50/80 x 15.3	Standard	Standard	-			
Wheel option - 315/80 x R22.5	-	-	Option	Option		
Wheel option - 40 X 14			Option	Option	Option	Option
Wheel option – 385/65 x R22.5					Option	Option
Right side discharge	Standard					
Left side discharge	Option					
Weigh bars	3					
Weighing system optional	TMRscale 401 TMRscale 402 with remote control TMRscale 403 programmable					

OPTIONAL EQUIPMENT & ACCESSORIES

Hydraulic jack	Manual jack
Wheel chocks	Hitch Insert (for horizontal drawbar)
Knife blade sections	Discharge chute
Weighing system with remote control	Programmable weighing system



SAFETY FIRST!

All references to 'tractor' apply equally to any power source used to drive the machine.

1. ALL GUARDS MUST BE CORRECTLY FITTED!

Always ensure that ALL GUARDS are in position, correctly fitted and maintained. DO NOT ATTEMPT TO OPERATE THE MACHINE before checking this each time the machine is used.

2. FIT PTO GUARD CHECK CHAINS!

PTO guard check chains MUST always be attached to a suitable point on the tractor and machine to prevent movement of the outer plastic shields.

3. BEWARE OF BYSTANDERS AND ANIMALS!

BEFORE STARTING the tractor engine and moving off, check that it is safe to do so, NEVER operate the machine with bystanders or animals near or on the machine or tractor. NEVER stand in or walk through the flow of any material being discharged. NEVER STAND BETWEEN TRACTOR WHEELS AND THE MACHINE.

4. ALWAYS OPERATE SAFELY!

NEVER operate the machine without maintaining FULL control of the tractor.

5. NEVER WEAR LOOSE FITTING OR RAGGED CLOTHING!

Avoid injury - ALWAYS wear clothing, which cannot get caught in machinery.

6. NEVER OPERATE THE MACHINE WITH ANY PARTS MISSING!

Check the machine regularly for loose or damaged parts. Pay particular attention to the condition of ALL safety guards. Always use genuine Kverneland replacement parts in the interest of SAFETY. Failures caused by the use of unofficial replacement parts will NOT be covered by our warranty, nor will any liability be accepted for damages or injury thus incurred.

7. ALWAYS CARRY OUT SAFE MAINTENANCE!

Before attempting any repair or maintenance to the machine, ALWAYS SWITCH OFF the tractor engine AND REMOVE THE PTO SHAFT. DO NOT work under any part of the machine unless it is securely supported by solid safety supports capable of withstanding its weight.

8. BEWARE OF DUST!

Whenever possible, keep tractor cab windows and doors CLOSED to reduce the risk of dust and flying debris from entering. In dusty conditions the use of a suitable mask to EN 149, is strongly recommended.

9. BEWARE OF EXCESSIVE NOISE LEVELS!



Certain tractor implement combinations, dependent on operating conditions, may generate a noise level in excess of 90dB at the operator's ear, even in a 'Q' cab. In these circumstances ear defenders should be worn. Where possible keep cab windows and doors CLOSED to reduce noise level. Employers should be aware that HSE Regulations demand a full assessment of the workplace in order to eliminate hazards or minimise risks to the Health and Safety of their employees. Further information for noise assessment is available on request.

10. HYDRAULIC FLUID!

Never handle leaks in hydraulic hoses that are under pressure. High-pressure hydraulic oil can pierce skin and enter blood stream.

11. BEWARE OF ASBESTOS!



Asbestos in clutch and brake linings - Health Risk - when removing clutch or brake assemblies a dust respirator should be worn. NEVER use an airline or dry brush to clean dust away. Wash dust away using a solvent based cleaning agent to prevent it from becoming airborne.



SAFETY FIRST!

MODELS KVERNELAND 608, 610, 612, 614, 616 and 618

To the owner and operator

ALWAYS have this operator's manual available for quick and easy reference



DO NOT START OR CARRY OUT MAINTENANCE ON THIS MACHINE UNTIL YOU HAVE READ AND UNDERSTOOD THE SAFETY PRECAUTIONS TO BE OBSERVED (AS STATED ON PAGES 6 AND 7 OF THIS MANUAL) AND UNTIL YOU FULLY UNDERSTAND THE CONTROLS AND FUNCTIONS OF THE MACHINE AS DETAILED IN THE FOLLOWING SECTIONS. IF YOU DO NOT UNDERSTAND ANY PART OF THIS MANUAL

NOTE! Where reference is made to left or right in the following sections, it is assumed that you are facing in the direction in which the machine operates.

1. **MACHINE BLOCKAGE:** In the unlikely event of machine blockage, ALWAYS ensure tractor engine and machine are stopped before attempting to clear any blockage. REMOVE P.T.O SHAFT. NEVER attempt to clear blockages with bare hands, the auger blades are extremely SHARP, ALWAYS use the correct tools PROTECTIVE HAND WEAR and clothing.
2. DO NOT stand between the rear tractor wheels and the machine at any time.
3. NEVER attempt to carry out any maintenance or adjustments to the driveline, augers or discharge conveyor, or enter the mixing chamber, with the tractor engine running or the PTO shaft connected.
4. DO NOT work under ANY PART of the machine unless it is securely supported by solid safety supports capable of withstanding its weight.
5. The operator MUST retain full control of machine and tractor functions at all times whilst the machine is in operation. NEVER operate the machine with bystanders present.
6. It is the responsibility of the owner/operator to ensure that the machine complies with any regulations applicable to the country in which it may be used: notably its use on public highways.
7. NO LIABILITY WILL BE ACCEPTED in respect of machines modified without specific written permission from Kverneland.
8. NO LIABILITY WILL BE ACCEPTED where using the machine in any manner other than that detailed in this manual causes injury or damage.
9. LUBRICANTS: Kverneland will not be held responsible for failure caused by the use of incorrect lubricants (see Sections 4 and 6) .
10. It is the responsibility of the owner/operator to ensure that the tractor used to operate this machine is used in accordance with the instructions contained within this manual. Failure to do so may cause damage to the tractor, liability for which will not be accepted.

LUBRICATION CHART

Description	Lubrication Period	Recommended Lubricant	Method & Access
PTO Shaft	Daily	High melting point grease: Shell Calithia EPT2	Grease nipples at U/J
PTO Guards	Daily	High melting point grease: Shell Calithia EPT2	Grease nipples at guard cone
Bank of grease nipples	Every 8 hours	High melting point grease: Shell Calithia EPT2	Grease gun, one shot through each 2 grease nipples
Oil Bath	Weekly	Universal engine oil: Shell Super Universal Farm Oil	Level to a depth of 4 cm
Drive Hub Bearing (Dual Sprocket)	Yearly	Multi-complex grease k2 EP	Important one shot through grease nipple in drive hub
Hydraulic oil reservoir (option)	Check weekly. Drain and refill yearly	AGIP OSO 46 ESSO NUTOH 46 MOBIL DTE 25 SHELL TELLUS 46 TOTAL AZZOLLA 46	Filler cap on top cover (access via ladder.) Fill to volume of 45 litres
		Temperatures below and up to -15°C: Shell Tellus 32 AGIP OSO 32	
Input Shaft Gearbox (option)	Drain and refill yearly	CPL/CC (150) SAE 90 Gear oil	Remove front panel on pump housing. Fill to level plug. Total 0.6 litres

Shell Calithia EPT2 industrial multi-purpose grease and Shell Super Universal Farm Oil are recommended by Kverneland for the above applications. Where other lubricants are used, they must meet the specifications of the Shell products.

IMPORTANT! The oil bath must be filled with **20 litres** of universal farm oil or equivalent to a depth of **4 cm** prior to use - see lubrication chart.

SECTION 1 - ATTACHING MACHINE TO TRACTOR



WARNING - ENSURE THAT ALL OPERATOR'S HAVE READ AND THOROUGHLY UNDERSTOOD THE SAFETY PROCEDURES AS STATED ON PAGES 6 AND 7.

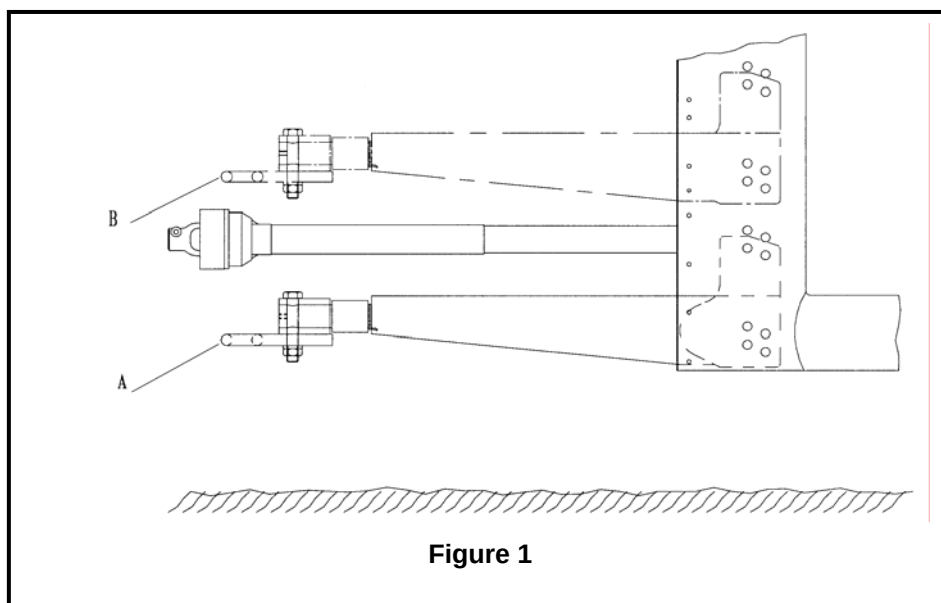
IMPORTANT! The oil bath must be filled with 20 litres of SHELL SUPER UNIVERSAL FARM OIL or equivalent to a depth of 4cm prior to use – see lubrication chart.

TRACTOR PREPARATION



BEFORE ATTACHING THE MACHINE, IT IS RECOMMENDED THAT REFERENCE IS MADE TO THE TRACTOR OPERATING INSTRUCTIONS.

1. The 600 series diet feeders are supplied with the drawbar in either the **LOW (A)** or in the **HIGH (B)** position as shown in figure 1 and can be used with any of the following tractor hitches:
 - (i) Hydraulic pick-up hitch –
 - (ii) Clevis hitch –
 - (iii) 'Rockinger' type hitch -



2. The tractor PTO shaft must be 6-spline set to run at 540 r.p.m.
3. Kverneland 600 series diet feeders require as standard a double acting hydraulic service and if a weighing system is specified, a 12 Volt d.c. electrical supply.
4. For machines equipped with air brakes, the tractor must be able to provide a pneumatic supply pressure of not less than 7 bar.

SETTING THE DRAWBAR HEIGHT ON THE MACHINE

1. PROCEDURE



Carry out the following procedure with the machine on firm level ground and with the parking brake applied (where fitted). For machines without a parking brake ensure that the chocks (available as an accessory) are fitted to the wheels.

NOTE! The following procedure **MUST** be carried out whenever attaching the machine to a tractor for the first time and also checked if the tractor is changed. The machine needs to be set as level as possible behind the tractor to ensure maximum accuracy of the weighing mechanism.

1. Drawbar set in the LOW position: raise the front of the machine to a LEVEL position with a suitable lifting device (minimum capacity 5 tonnes) located under the front of the transmission casing. To determine a level position, take measurements from the corners of the body to the ground, front and back.
2. Drawbar set in HIGH position: a hydraulic or manual jack is fitted as standard and can be used to raise the front of the machine to a LEVEL position. Refer to the section on hydraulic jack operation.



SAFETY FIRST! Ensure machine is safely supported under the front of the transmission casing using a suitable solid support. **DO NOT** rely on the lifting device alone.

2. ADJUSTING THE TOWING EYE / DRAWBAR HEIGHT

1. The towing eye and drawbar has a combination of height positions (figure 2) to give sufficient adjustment to suit most tractors. Measure the height of the hitch on the tractor and adjust the towing eye / drawbar accordingly.

NOTE: Drawbar set in LOW position: to gain access to bolts reference B it will be necessary to REMOVE the front cover surrounding the P.T.O shaft and if fitted, either the hydraulic or manual jack support bracket.

NOTE: Drawbar set in HIGH position: to gain access to bolts reference B it will be necessary to REMOVE both upper and lower front covers.

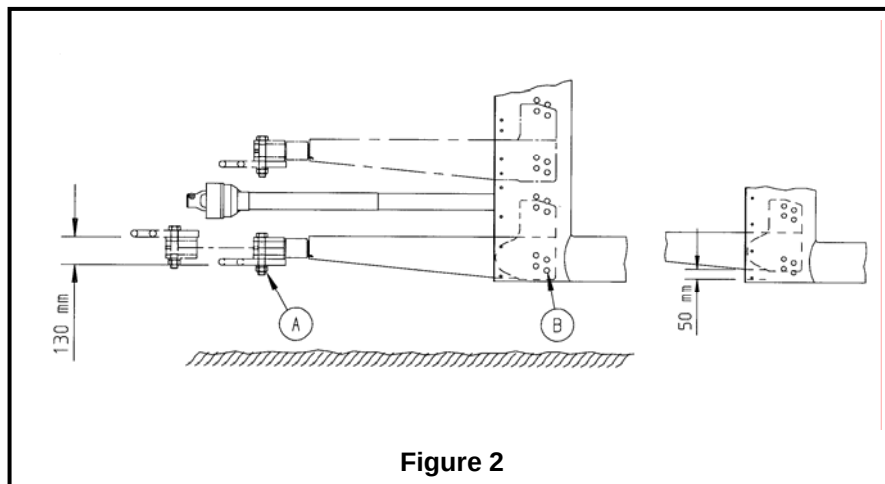


Figure 2

2. Replace all bolts and tighten nuts. **IMPORTANT!** The bolts **MUST** be tightened to the correct torque:

Bolts, reference	A:-	1400 Nm
Bolts, reference	B:-	840 Nm

3. Slowly reverse tractor to machine and connect to the towing hitch.
4. Remove the lifting device and solid support from under the transmission casing.

HYDRAULIC SERVICES

1. Connect the ½" hydraulic **pressure** (Green ring) and **return** (Blue ring) hoses to suitable **supply** and **return** outlets on the spool valve at the rear of tractor.

Ensure that the return port has free flow and "zero pressure", as some spool valves can create a backpressure that may damage the hydraulic motor and valve block seals.

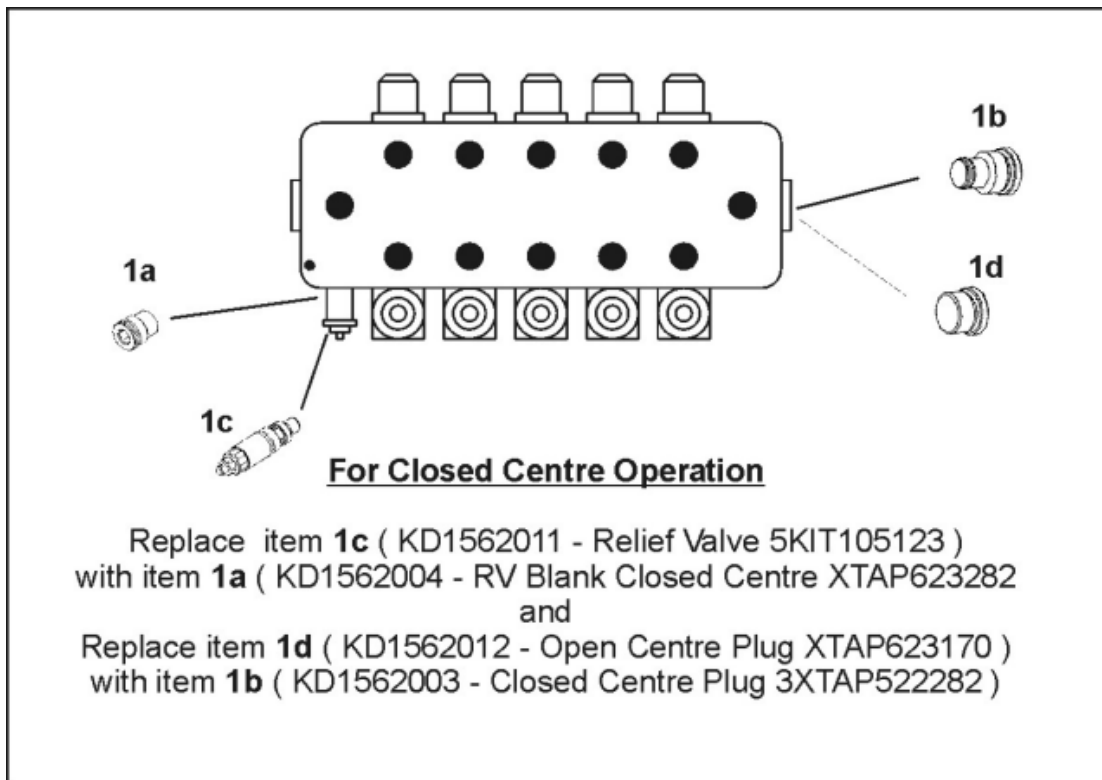
NOTE! When the machine is disconnected from the tractor, the hoses should be safely stowed by placing their quick release connectors into the slots provided on the front panel.

2. The Kverneland 600 series is supplied with either 3, 4 or 5 bank cable or electric remote control.

CLOSED CENTRE HYDRAULIC SYSTEMS

The Kverneland 600 series diet feeders are supplied for use with tractors equipped with **open centre hydraulics**. If the machine is to be used with a tractor which has **closed centre hydraulics**, it will be necessary to purchase a closed centre hydraulics conversion kit (please refer to your Kverneland dealer for details).

When fitting the kit, refer to the instructions below :



CABLE CONTROLS

1. The control levers for the valve block are mounted on a detachable bracket that can be located inside the tractor cab (Figure 3)

The base bracket must be securely fixed to a suitable fixing point on the tractor, the tractor manufactures manual should be consulted to find the most appropriate area.

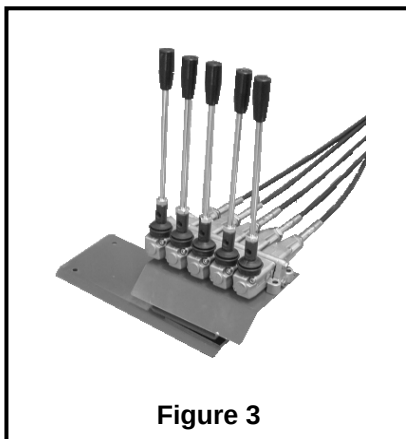


Figure 3

WARNING! – Drilling or welding to the tractor cab may severely weaken the structure, and is not recommended.

When disconnected from the tractor, the lever cluster can be stored on the front of the machine as shown in figure 4.

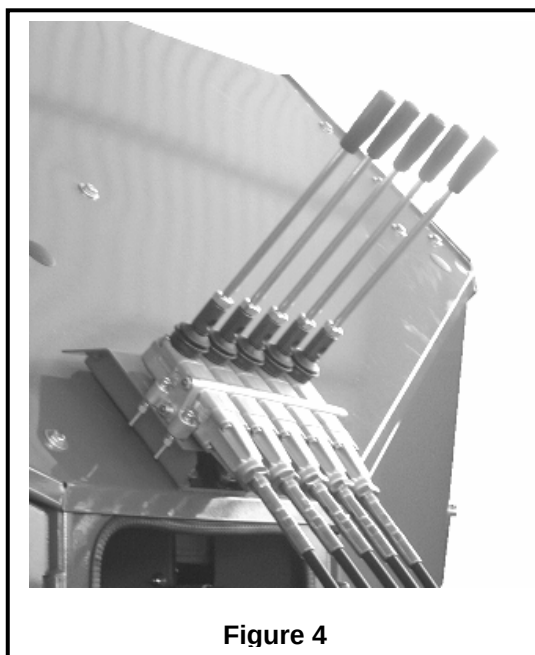
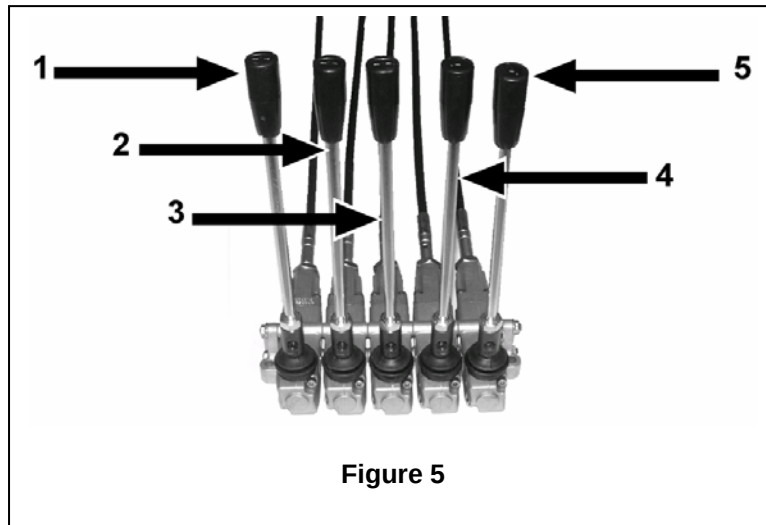


Figure 4

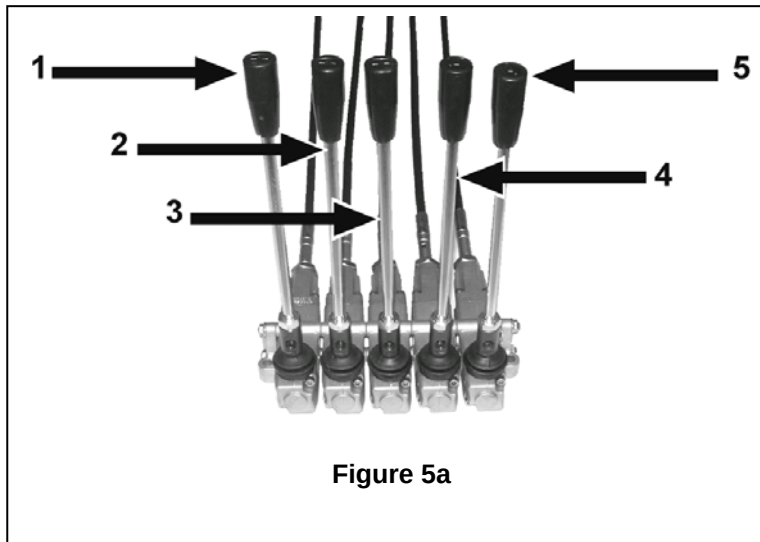
2. **5 BANK** control levers operate the following machine functions: in the direction shown on the control panel (Figure 5)



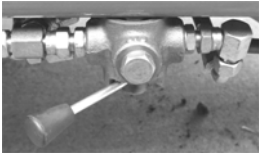
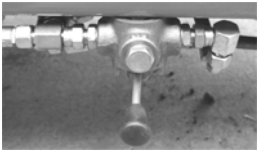
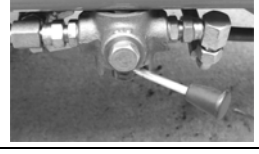
Lever 1	OPENING AND CLOSING THE DISCHARGE DOOR RIGHT 3 position lever - open - stop - close.
Lever 2	OPENING AND CLOSING THE DISCHARGE DOOR LEFT 3 position lever - open - stop - close.
Lever 3	CONTROL FOR RAISING AND LOWERING CONVEYOR BELT RIGHT. For safety reasons and so that the machine works efficiently the lever must be brought back to the stop position before starting another operation. 3 position lever - raise - stop - lower.
Lever 4	CONTROL FOR RAISING AND LOWERING CONVEYOR BELT LEFT. For safety reasons and so that the machine works efficiently the lever must be brought back to the stop position before starting another operation. 3 position lever - raise - stop - lower
Lever 5	ROTATION OF THE CONVEYOR BELT For safety reasons and so that the machine works efficiently 2 position lever - stop - rotate conveyor belt. The lever must be brought back to the stop position before starting another operation

3. On machines fitted with Cable Operated Remote Controls, the discharge conveyor speed is controlled by the rotary knob located near the conveyor on the body of the machine.

5 BANK control levers in conjunction with dual discharge conveyors.



Discharge door positions are as viewed from the tractor seat

Lever 1	OPENING AND CLOSING DISCHARGE DOOR < 3 position lever – pull to open – centre to stop – push to close.
Lever 2	OPENING AND CLOSING DISCHARGE DOOR > 3 position lever – pull to open – centre to stop – push to close.
Lever 3	RAISING AND LOWERING CONVEYOR BELTS Select < OR > with lever 5 3 position lever – pull to raise – centre to stop – push to lower.
Lever 4 & Rotary Valve	ROTATION OF CONVEYOR BELTS BOTH BELTS TOGETHER - pull to run < and > – centre to stop  Rotary valve lever left position
	< OR > BELT – pull to run < belt – centre to stop – push to run > belt  Rotary valve lever centre position
	< BELT ONLY – pull to run < belt – centre to stop  Rotary valve lever right position
Lever 5	SELECT < OR > RAISING AND LOWERING OF CONVEYOR BELTS 3 position – pull to select < – centre to stop – push to select >.

The rotary valve is located next to the discharge conveyor on the right side of the machine (looking from rear of machine).

On machines fitted with Cable Operated Remote Controls, the discharge conveyor speed is controlled by the rotary knob located near the conveyor on the body of the machine.

REMOTE ELECTRIC HYDRAULIC CONTROLS – TYPE A

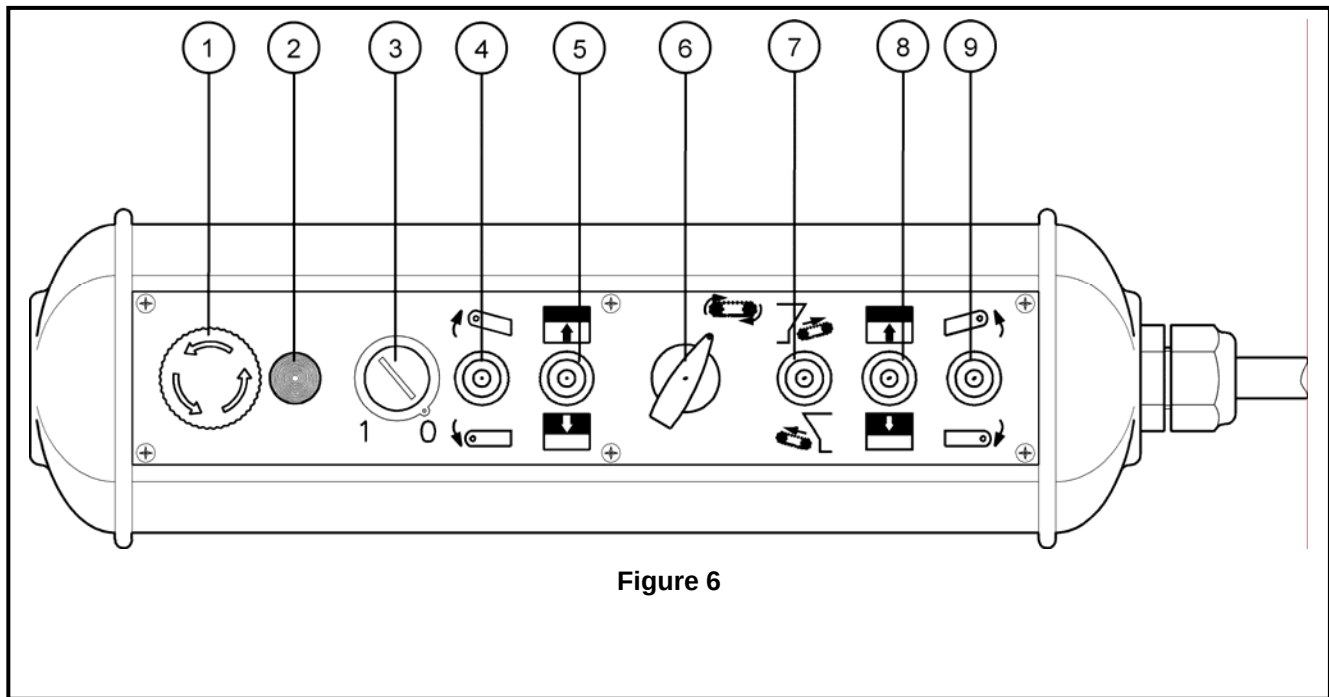
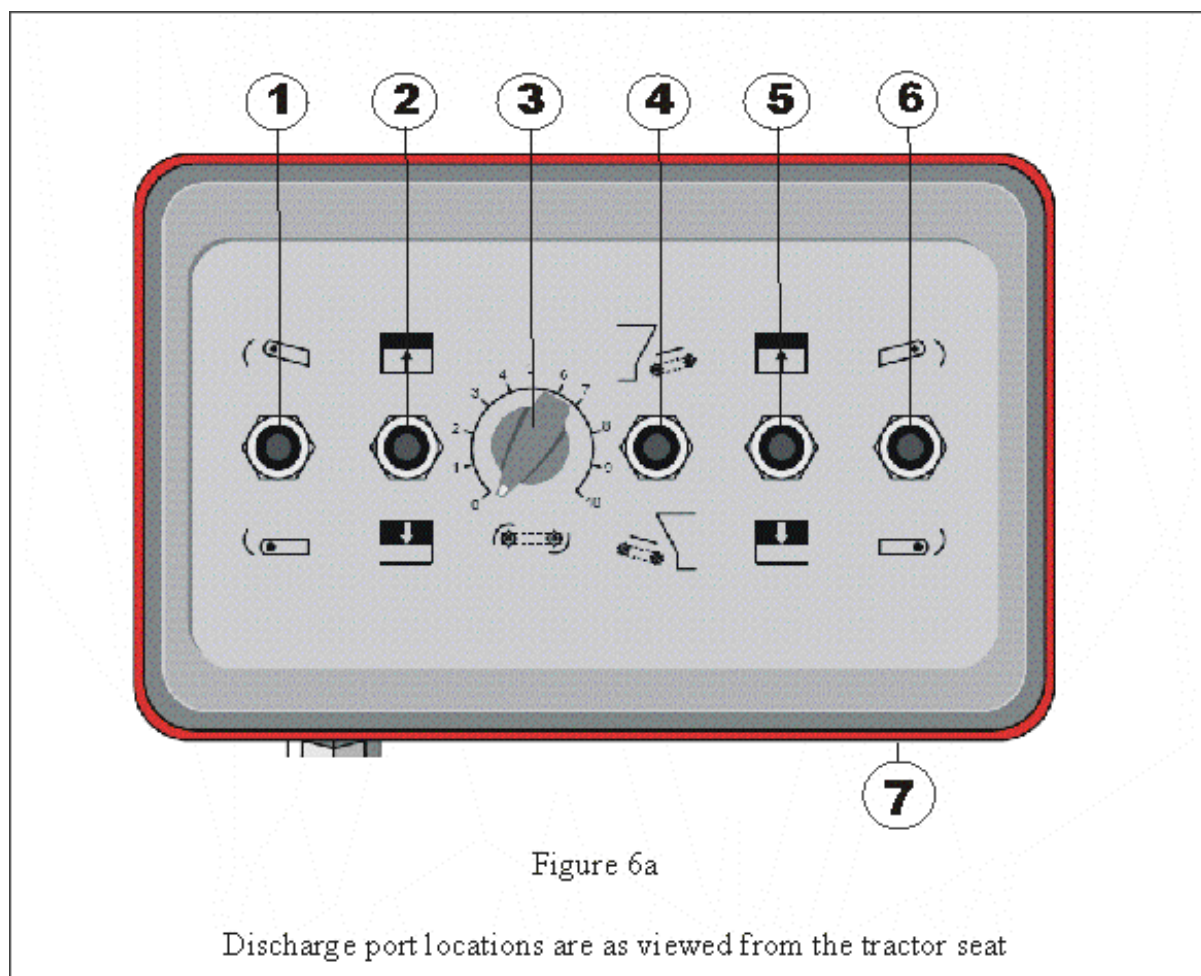


Figure 6

No 1	EMERGENCY STOP SWITCH In case of need press the red button to stop the machine. Twist anti-clockwise to reset.
No 2	RED OPERATING LIGHT On = control panel operating Off = control panel not operating.
No 3	KEY SWITCH Position 0 = control panel off Position 1 = control panel on
No 4	RAISING AND LOWERING CONVEYOR BELT For safety reasons and so that the machine works efficiently the switch must be brought back to the stop position before starting another operation
No 5	OPENING AND CLOSING DISCHARGE DOOR 3 position switch - open - stop - close.
No 6	CONVEYOR SPEED CONTROL Variable position 1-10
No 7	ROTATION OF THE CONVEYOR BELT 2 position switch - stop - rotate conveyor belt. For safety reasons and so that the machine works efficiently the switch must be brought back to the stop position before starting another operation.
No 8	OPENING AND CLOSING SECOND DISCHARGE DOOR 3 position switch - open - stop - close.
No 9	RAISING AND LOWERING SECOND CONVEYOR BELT For safety reasons and so that the machine works efficiently the switch must be brought back to the stop position before starting another operation.

REMOTE ELECTRIC HYDRAULIC CONTROLS – TYPE B

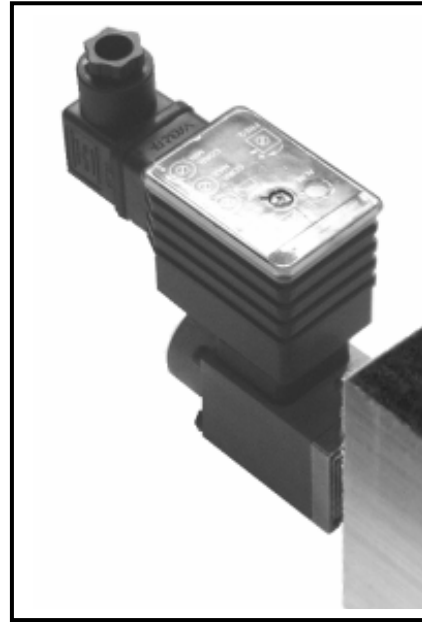


No 1	RAISING AND LOWERING CONVEYOR BELT < For safety reasons and so that the machine works efficiently the switch must be brought back to the stop position before starting another operation.
No 2	OPENING AND CLOSING DISCHARGE DOOR < 3 position switch - open - stop - close.
No 3	CONVEYOR SPEED CONTROL Variable position 0-10
No 4	ROTATION OF CONVEYOR BELT < OR CONVEYOR BELT > 2 position switch - stop - rotate conveyor belt. For safety reasons and so that the machine works efficiently the switch must be brought back to the stop position before starting another operation.
No 5	OPENING AND CLOSING DISCHARGE DOOR > 3 position switch - open - stop - close.
No 6	RAISING AND LOWERING CONVEYOR BELT > For safety reasons and so that the machine works efficiently the switch must be brought back to the stop position before starting another operation.
No 7	POWER ON / POWER OFF Located on rear of control box. Turn to off position when not in use. Position 0 = control panel OFF Position 1 = control panel ON

ELECTRIC FLOW REGULATION VALVE

The flow regulation valve (Figure 7) is available with electric controls.

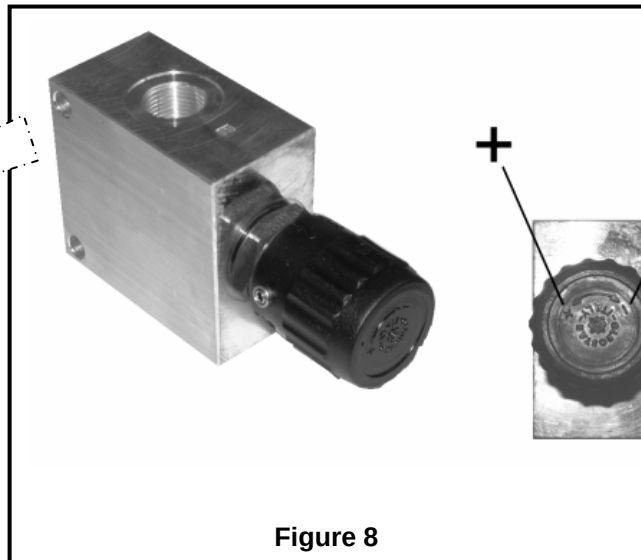
It can be controlled by the knob on the control panel and it regulates the discharge conveyor speed.



MANUAL FLOW REGULATION VALVE

for the adjustment of the discharge belt speed (figure 8).

1. Operation: the discharge belt speed can be adjusted by turning the knob's arrow towards the symbol "-" to reduce the speed and towards the symbol "+" to increase the speed.

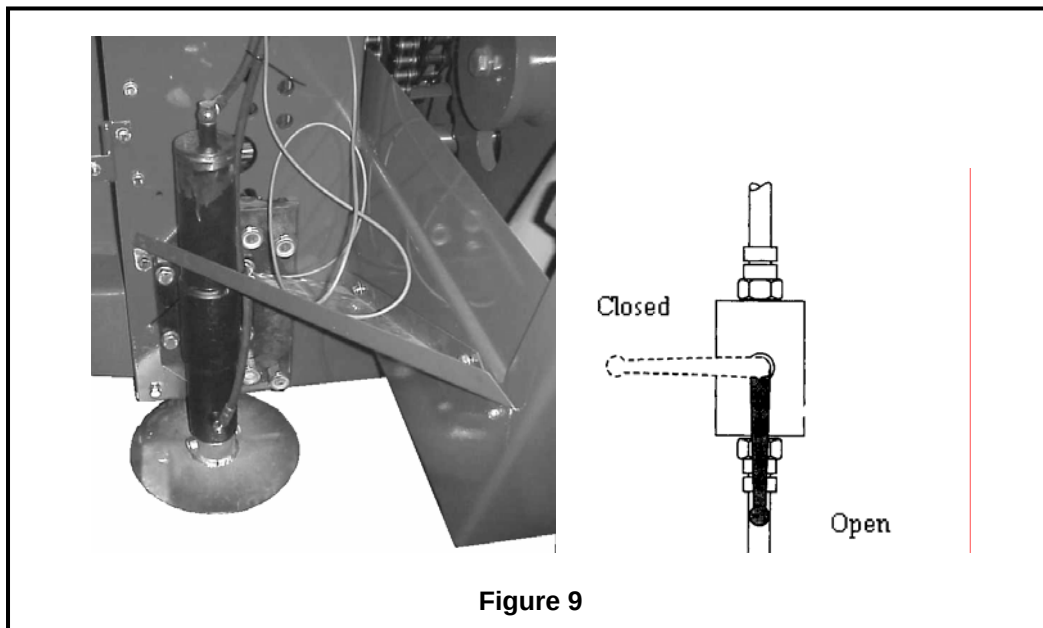


OPTIONAL EQUIPMENT

HYDRAULIC PARKING JACK (WHERE FITTED)

The hydraulic parking jack is available as an accessory for Kverneland 600 series machines. The jack raises the drawbar to the required height for hitching to a tractor and can also be used as a parking stand when uncoupling the machine (figure 9). However, **DO NOT** rely on the hydraulic jack alone. For any maintenance, use a safety support as outlined above.

If the machine is fitted with a hydraulic jack, proceed as follows:



- i) Reverse the tractor to the machine.
- ii) Connect the $\frac{1}{4}$ " hydraulic **pressure** (White ring) and **return** (Yellow ring) hoses to the tractor **supply** and **return** hydraulic services.
- iii) Move the stop valve lever to the **open** position. Operate the hydraulic service to the jack (1) and raise the drawbar to the required position.
- iv) Turn the stop valve lever to the **closed** position to lock the hydraulic jack at this height.
- v) With the machine correctly hitched to the tractor, turn stop valve lever to the **open** position and fully retract the hydraulic jack. Turn stop valve lever back to the **closed** position
- vi) When the machine is disconnected from the tractor, the hoses should be safely stowed by placing their quick release connectors into the slots provided on the front panel.

ELECTRONIC WEIGHING SYSTEM (WHERE FITTED)

1. The electronic weighing system display unit is mounted on a swinging arm at the front of machine and can be positioned to suit operator requirements. For the unit to operate plug the power cable 7-pin connector into the tractor 12-Volt d.c lighting socket. Refer to the Operator's Manual supplied with the tractor or consult your dealer.
2. Check that the electrical supply is working and available by pressing the **ON** button on the display unit control panel and observing whether the LCD display screen is activated.



Figure 10

OPTIONAL PROGRAMMABLE DISPLAY UNIT

The programmable version of the electronic display unit can store various pre-set weight values and feed recipes in its memory. Programming instructions can be found within the Operator's Manual supplied with the unit.

ROAD SAFETY LIGHTS (IF SPECIFIED)

A road safety lighting kit is available for the machine if it is to be transported on the public highways. If fitted, the lighting kit is powered by connecting the standard 7-pin plug to the rear of the tractor.

NOTE! It is the responsibility of the owner/operator to provide the correct road safety lamps and reflectors for the machine and to ensure their correct operation, in accordance with local traffic regulations.

HYDRAULIC BRAKES (WHERE FITTED)

Connect the hydraulic brake hose (Red ring) to a proprietary brake line connection on the tractor, which is linked to its braking system. The hydraulic brakes will be engaged automatically when the tractor brakes are applied.

AIR BRAKES (WHERE FITTED)



An optional air braking kit is available for certain markets and is connected to the tractor air supply via the palm couplings on the pneumatic hoses.

The pneumatic hoses are colour coded and **MUST** be connected to the appropriate outlet on the tractor:
Red- supply
Yellow- control

NOTE! Ensure cover plate is fully open before attempting to connect hose to tractor.

NOTE! When the machine is uncoupled the air brakes will be automatically applied. In order to transport the machine without re-connecting the air brakes, open the dump valve (item 1, figure 11) to release the air pressure within the braking mechanism.

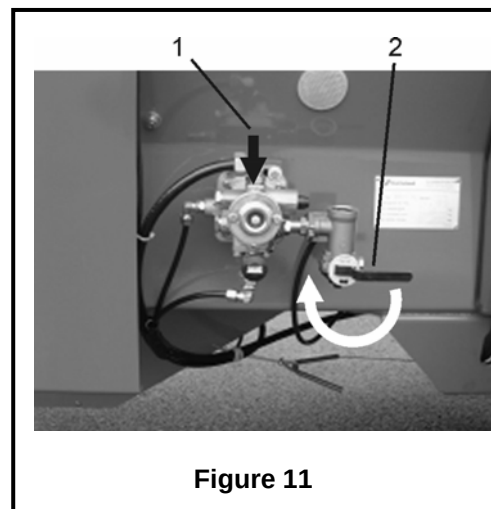


Figure 11



SAFETY FIRST! When the machine is being transported, the load compensation valve (2) **MUST** be turned to the appropriate position (**unladen, semi-laden or fully laden**). Failure to do so may cause the brakes to be applied with incorrect pressure and could result in either wheel lock-up and skidding, or the brakes responding with insufficient pressure.

CONNECTING THE PTO SHAFT

1. Separate the two halves of the PTO shaft and remove the plastic guards from both sections (Figure 12). Release and remove retaining ring catches (1) with a screwdriver. Withdraw cone (2) down length of plastic guard tube (3) and remove. Slide plastic guard tube from shaft; prise open retaining ring and remove from yoke. Assembly is reverse of above procedure.

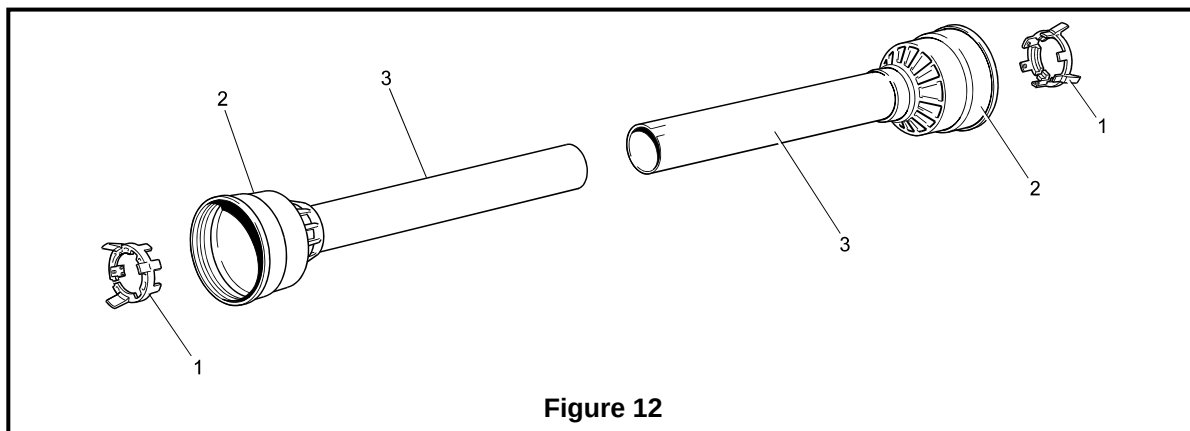


Figure 12

2. With the machine safely hitched to the tractor, drive forward on full R.H. lock. Stop the tractor engine and apply the handbrake.
3. Referring to figure 13, attach the bare PTO shaft to tractor (Yoke, A) and machine (Yoke, B). With the tractor in the fully turned position, the PTO shaft will be at its shortest compressed length. Check that there is a minimum clearance of 25mm (1") as shown in the diagram. This should ensure that there is no risk of bottoming when in work.

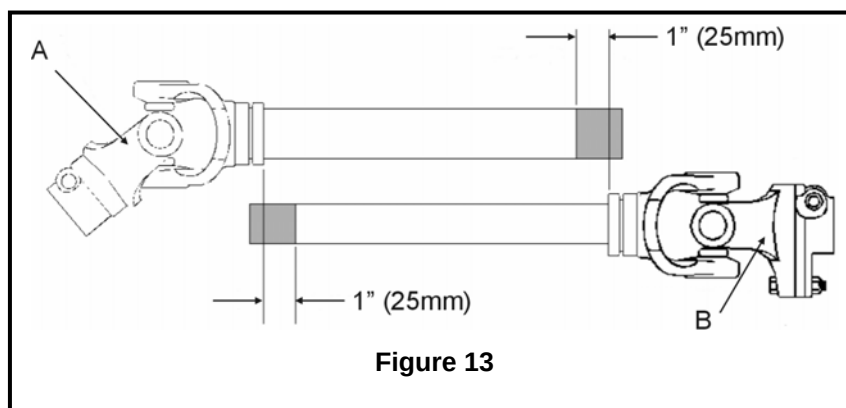


Figure 13

4. Start tractor engine, release hand brake and drive forward slowly, steering to the left; observe the PTO shaft closely when making this manoeuvre and satisfy yourself 25mm (1") minimum clearance is maintained throughout the steering arc. If there is no risk of bottoming, remove the shaft, fit safety guards and attach complete shaft to tractor/machine. PTO shaft minimal engagement must be 150mm (6"). Fit safety chains and ensure that the PTO shaft does not foul machine or tractor.
5. If it proves impossible to attach the PTO shaft with the clearance as shown in figure 13, the shaft must be shortened. Separate the two halves and proceed as follows:-Attach bare half shaft (A) to tractor and bare half shaft (B) to machine, with the sliding tubes side by side and parallel (figure 13). Mark the tubes so that when cut, assembled and refitted to tractor/machine, they correspond to figure 13.
6. Clean off burrs and swarf. Fit assembled bare PTO shaft to tractor/machine and ensure that the clearance as shown in figure 13 is maintained. Proceed as in 4.

The inner half shaft may be plastic coated and must not be damaged. **Do not use an angle grinder.**

7. For subsequent installations, simply connect the PTO shaft between the tractor and the machine, and connect the safety chains to prevent the guards from rotating.



NOTE! Disengage PTO shaft when turning.

8. Before operating the machine, check that the PTO shaft does not:

Foul the tractor PTO guard when the machine is turned
Foul the tractor three-point linkage when machine is turned.

9. When uncoupling machine from tractor, ALWAYS rest the PTO on the support device provided:

- (i) Horizontal drawbar - support strut on drawbar.
- (ii) Raised drawbar - chain suspended from mounting bracket.

NOTE! Check that the PTO shaft satisfies the preceding conditions on ALL tractors that may be used to drive your 600 series Diet Feeder. A wide angle PTO shaft is available as an option to allow greater manoeuvrability. Please refer to your dealer for details.

IMPORTANT! On new machines fitted with on-board hydraulic pump option check before engaging P.T.O. drive ensure that the oil tank STOP VALVE is OPEN. If closed possible damage to the hydraulic pump may occur. The valve is situated at the bottom of the oil tank (in the large oil feed hose) and can be accessed by opening the left-hand panel at the front of the machine.

SECTION 2 - OPERATION



SAFETY FIRST! Before loading and operating the machine, ensure that all operator's have read and thoroughly understood the safety procedures as stated on pages 6 and 7 of this manual.

LOADING THE MACHINE



SAFETY FIRST! All ingredients **MUST** be loaded mechanically. **NEVER** attempt to load the machine by hand except via the mesh covered rear aperture.

IMPORTANT! Prior to loading into the mixing chamber_remove all plastic wrap / net and string from round or rectangular bales.

1. Ensure that the machine is properly installed and hitched to the tractor as described in Section 1. Check that the drain plugs on the underside of the machine are securely fitted and that the parking brake is applied or wheels securely chocked (if applicable).
2. Optional serrated shear bars can be fitted into the mixing chamber to assist the breakdown of long material within the mixture.
3. Position the electronic display unit (where fitted) to face either the tractor cab or to the side of the machine, as required. If fitted, refer to the weighing system manual supplied with the machine, switch on and zero the system as instructed.
4. Start the tractor engine.
5. Check that the discharge doors are closed and conveyor mechanism (if fitted) is stationary.
6. Operate the weighing system as instructed in the accompanying operator's manual. The weight will be displayed on the screen.
7. Engage PTO to start the mixing augers and run at approx. 540 r.p.m.

NOTE! Unless full length roughage (silage / hay) is to be incorporated into the mix, the augers do not need to be running at this stage.

8. **Loading sequence for ingredients:**

- 1 - Round baled material (load with machine running and from this point onwards)
- 2 - Other baled materials
- 3 - Rolled cereals
- 4 - Minerals & concentrates
- 5 - Liquids (i.e.. molasses)
- 6 - Grass silage
- 7 - Sugar beet pulp/brewers grains
- 8 - Maize silage



IMPORTANT! Load to only approximately 85-90% of load volume so as to allow room for the ingredients to mix thoroughly.

DO NOT exceed the maximum payload capacity of the machine (see page 5)

OVERLOADING the mixing chamber can lead to a notable increase in power consumption and mixing time.

If the machine becomes blocked counter rotation of the augers will relieve the pressure. Stop the tractor, remove the P.T.O shaft, and using a Power shaft reversing tool (Pt No: KD1563039 - optional) fitted to the transmission splined input shaft. Counter rotate the augers manually.

Open discharge doors to relieve the pressure.

MIXING THE INGREDIENTS

1. The optimum mixing time can be determined by analysing samples taken from the feed after discharge. Disengage the PTO after mixing is completed.

NOTE! For the best results, use the shortest possible mixing time; over-mixing can reduce the quality of the feed.

2. Repeat the loading, pre-cutting, mixing and weighing procedure as required.

TRANSPORTING THE MACHINE

1. Ensure PTO is disengaged. Check that the discharge doors are closed and the safety valve next to the discharge conveyor lift cylinder is closed (figure 14).
2. Release parking brake and/or remove wheel chocks (where applicable).

SAFETY FIRST! Whenever the wagon is taken onto a public road, or it is not working, ALWAYS make sure that the safety valve next to the discharge conveyor lift cylinder is closed (fig. 14).

DISCHARGE CONVEYOR



On arrival at the discharge site, open the security valve (figure 14) for the discharge conveyor lift cylinder.

SAFETY FIRST! Ensure PTO is disengaged before approaching the machine. NEVER stand on the loading mesh at the rear of machine.

1. Operate the appropriate control lever to set the height of the conveyor for feeding onto the floor, into manger or a trough. Visually check the position of the conveyor.

IMPORTANT! It is not recommended that the conveyor mechanism is not operated above the angle shown in figure 15. If the conveyor is too steep, discharge flow will be poor and the mechanism may become blocked.

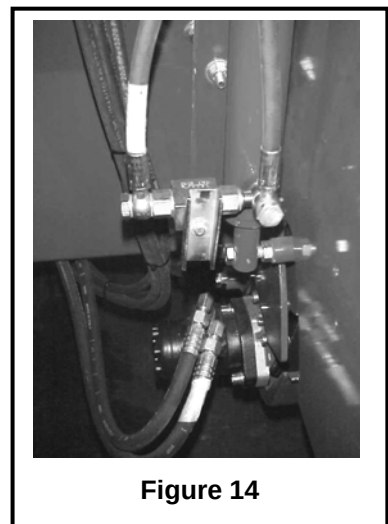


Figure 14

2. Engage the PTO at low revs. **IMPORTANT!** Only engage the PTO when the conveyor is stopped and discharge door is fully closed.
3. Using the appropriate control lever, start the conveyor mechanism.
4. Drive forward to the feeding area and open the discharge door (using the appropriate control lever). The mechanical scale (1) indicates the height of the discharge door.
5. Discharge rate is controlled by adjusting the door height and auger speed.
6. The discharge conveyor speed is controlled by the rotary knob located on the body of the machine near the discharge conveyor.

IMPORTANT! Disengage the PTO when turning (unless optional wide angle PTO is fitted). Excessive turning may cause PTO shaft damage.

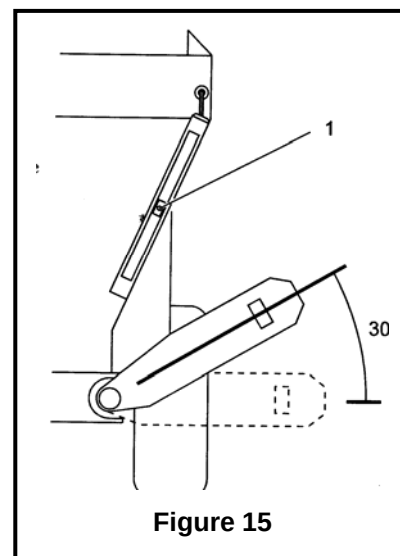


Figure 15

7. When the feed has been discharged, disengage the PTO wait until the discharge conveyor is clear of feed, then stop the conveyor. Close the discharge door, raise the conveyor mechanism and re-secure with safety catch.

IMPORTANT! DO NOT close the discharge door before the conveyor is clear of material and has stopped moving.

NOTE! Always switch off the electronic weighing system when discharge operations are complete.

DISCHARGE CHUTE (WHERE FITTED)



SAFETY FIRST! NEVER stand on the loading mesh at the rear of machine.

The Kverneland 600 series machines can be fitted with a discharge chute instead of the hydraulically driven conveyor mechanism. The chute is designed for discharging feed directly onto the floor or into low sided troughs, but is not suitable for discharging into mangers or raised troughs.

1. On arrival at the discharge site, ensure that the protective safety screen is lowered.
2. Engage the PTO at low revs.
3. Drive forward to the feeding area and open the discharge door (using the appropriate control lever). The mechanical scale (1) indicates the height of the discharge door.
4. Discharge rate is controlled by adjusting the height of the discharge door.

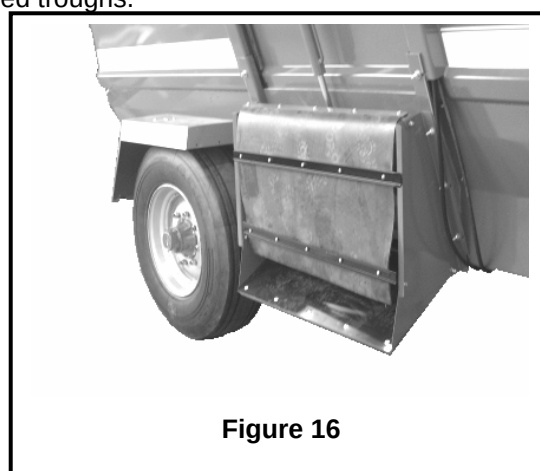


Figure 16

IMPORTANT! Disengage the PTO when turning (unless optional wide angle PTO is fitted - see parts book). Excessive turning may cause PTO shaft damage.

IMPORTANT! DO NOT close the discharge door before the chute is clear of material

NOTE! Always switch off the electronic weighing system when discharge operations are complete.

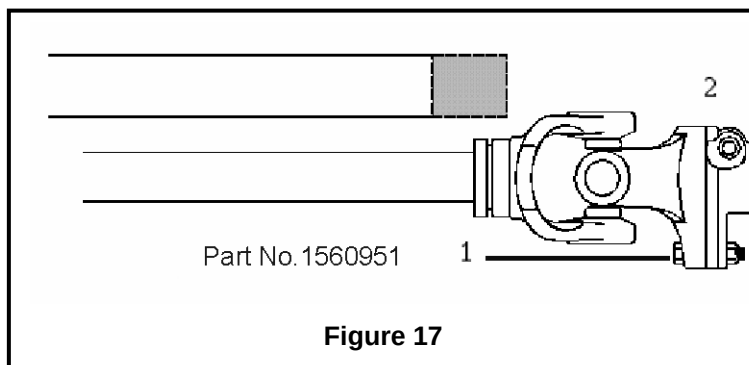
SECTION 3 - MACHINE SETTINGS & ADJUSTMENTS

OVERLOAD PROTECTION

The Kverneland 600 series transmission is protected by a P.T.O shaft shear bolt flange. Use only shear bolt size: M8 x 60 grade 8,8 unplated.

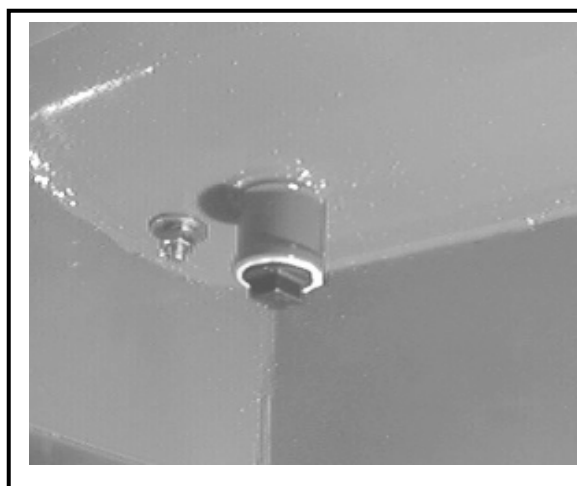
NOTE! Always fully investigate the reason for any shearbolt failure. Disengage and remove the P.T.O shaft, stop the tractor engine and remove key. Inspect the machine to establish cause of failure; if possible, remove the obstruction.

Replace broken shearbolt. (see Section 4)



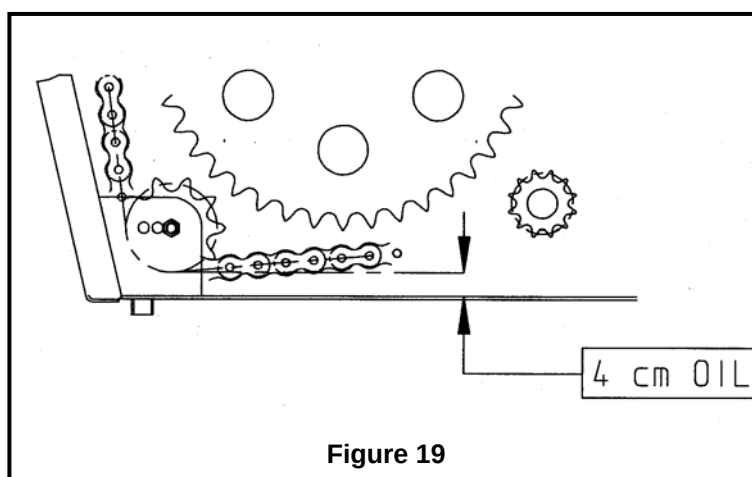
DRAIN PLUGS

Drain plug are accessed at the front of the machine on the under side of the auger troughs. The drain plugs allow liquid to drain from the mixing chamber (figure 18). To ensure complete drainage the machine will need to be parked with the drawbar down.



TRANSMISSION OIL LEVEL

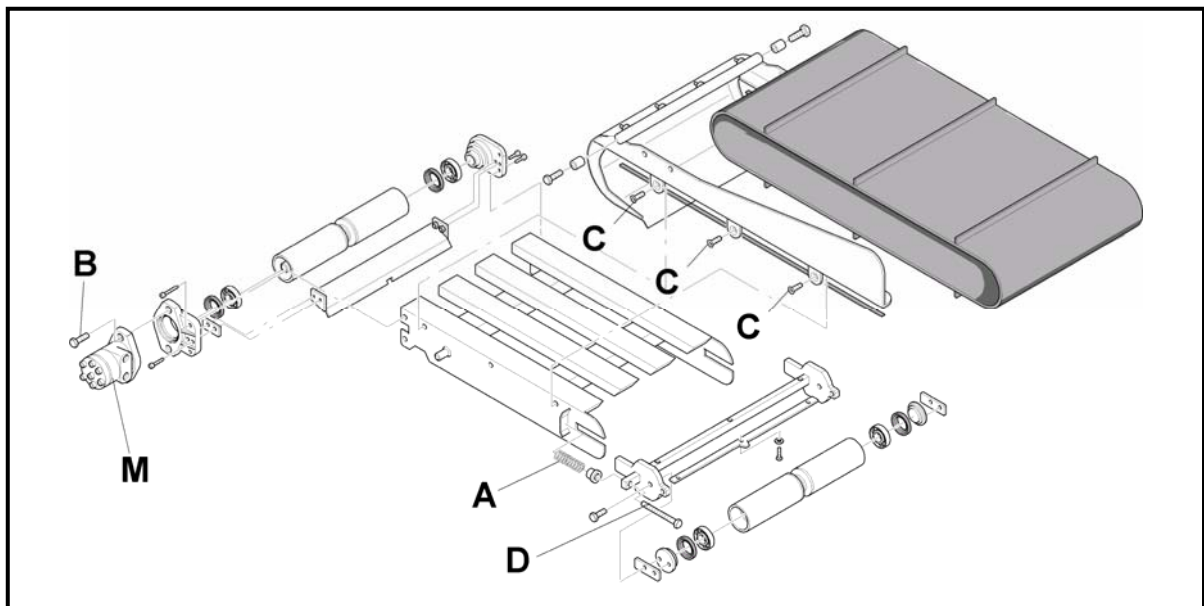
1. Using a 6mm 'Allen Key' open the left and right hand front transmission panels to gain access to the transmission.
2. It is IMPORTANT for chain lubrication that the transmission case is filled with the correct grade of oil (see lubrication chart) and to the correct level, figure 19



DISCHARGE CONVEYOR BELT - REMOVAL OF BELT AND BELT TENSION (Figure 21)



1. Turn off the tractor engine, remove the keys and put them in your pocket.
2. Remove motor M, by unscrewing screws B. BE CAREFUL not to lose the key on the drive shaft.
3. Remove the 4 screws C from the body sides. N.B. Given the weight of the frame, it is recommended that this procedure be carried out by 2 persons.
4. Place the unit on the ground in a vertical position, on the side of the motor housing.
5. Remove tension springs A by unscrewing screws D.
6. Take the roller to the internal limit stop.
7. Extract the belt by pulling upwards. At this point it is possible to see whether there is dirt in the unit. Blow away using compressed air and clean. Check the position of the scrapers, which must be close to the roller (around $\frac{1}{2}$ mm clearance). N.B. If the scraper touches the roller there is a risk of causing a high level of wear and irritating squeaking. The scrapers are fixed to the frame using screws, to adjust them loosen the screws and move them into the appropriate position.
8. Reassemble everything by reversing the sequence of the last 7 steps.
9. The unloading belt is kept in tension by the springs (Detail A) positioned in the front part of the belt. The tension of these must be adjusted with the belt at a standstill, checking that the space between the coils is between 0.5 mm and 1 mm.
10. If the belt has shifted over to one side, adjust one of the 2 spring tension screws, tightening or unscrewing until the belt is centred. N.B. For trouble free operation of the unloading conveyor, check that the inside of the belt and also the rollers are clean and that the scrapers are in the correct position.

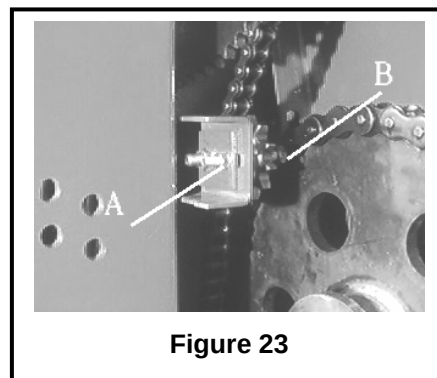
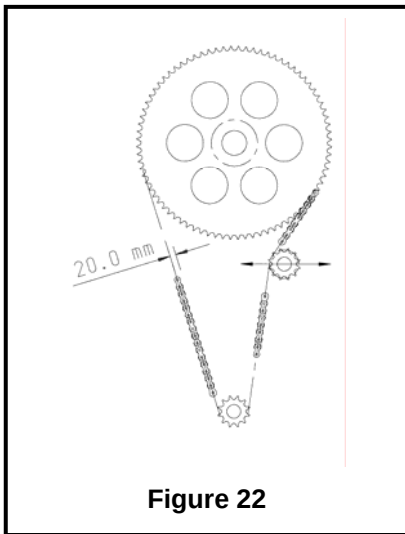


TRANSMISSION DRIVE CHAIN ADJUSTMENTS

Use a 6mm 'Allen Key' open the left & right hand front transmission panels to gain access to the transmission.

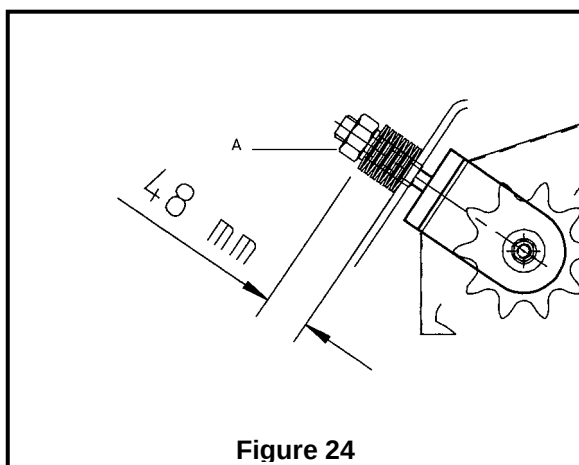
PRIMARY DRIVE CHAIN ADJUSTMENT

1. The primary drive chain is located behind the front transmission panels.
2. The correct adjustment setting for this chain is a maximum of 25mm play on the tension side (figure 22)
3. This is adjusted by slackening the sprocket idler bolt 'A' and lock bolt 'B'. Move the assembly in, to tension the chain (figure 23). When correct tension is achieved, re-tighten lock bolt 'A' and lock bolt 'B'.

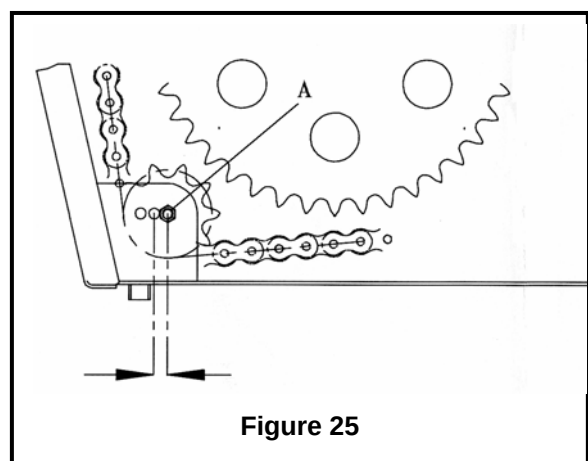


AUGER DRIVE CHAIN ADJUSTMENT

1. The main auger drive chain tensioner is located behind the front transmission panels
2. The correct adjustment setting for the chain is a total 48mm compressed length of the 'Belleville' washers (figure 24).
3. Adjust nut 'A' to obtain the correct compressive length.
4. If correct chain tension can no longer be obtained by the chain tensioner (due to initial chain stretch). Further adjustment can be obtained by moving the lower chain idler sprocket to an alternative hole position Figure 25.
5. Slacken and remove clamp bolt 'A'. Reposition idler sprocket assembly, chain and bolt 'A'. Re-tension the

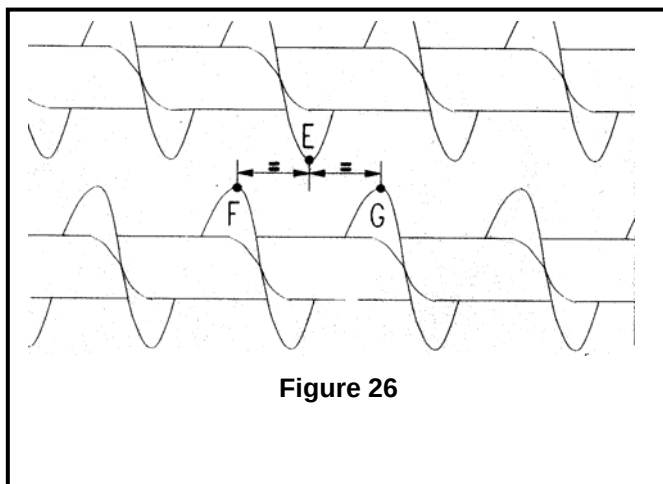


chain as described above.



AUGER TIMING

If for maintenance reasons the main drive chain has been disconnected, then the auger timing will require checking as shown in the diagram below (figure 26). If necessary rotate one of the augers to reset the timing and refit the main drive chain.

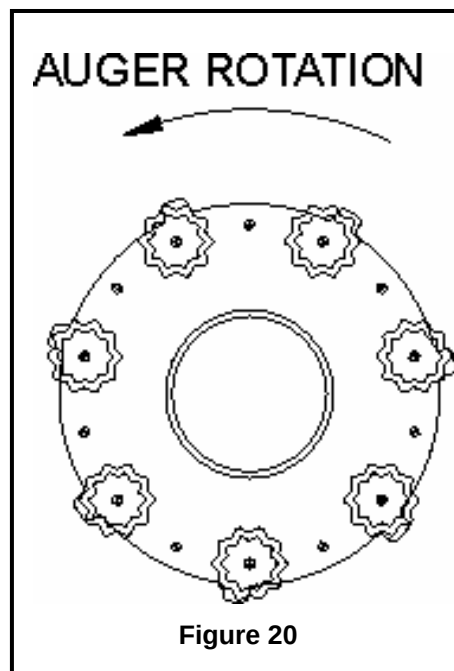


AUGER BLADES



BLADES ARE EXTREMELY SHARP. USE PROTECTIVE HAND WEAR AND CLOTHING.

NOTE: auger blade orientation (figure 20). Blades can be rotated to expose fresh sharp edges.

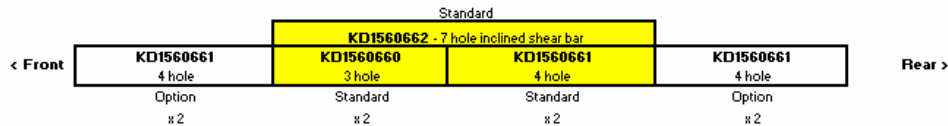


SHEARBAR CONFIGURATIONS

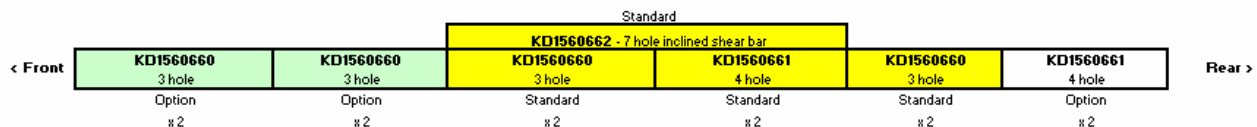
- **Standard serrated shearbar set** - factory fitted 'standard' configuration - 7 hole inclined shearbar and minimal low level shearbar kit
- **7 hole inclined shearbar in** - prevents round bales from swamping the augers, reduces power requirement and reduces auger aggression
- **7 hole inclined shearbar removed** - increases auger aggression and speeds cutting of round baled material - requires a little more horsepower
- **Optional additional front and rear shearbar sections** - improves cutting action and reduces mixing time.
- **Optional additional auger knives** - improves cutting action and reduces mixing time.

Serrated Shearbar Layouts

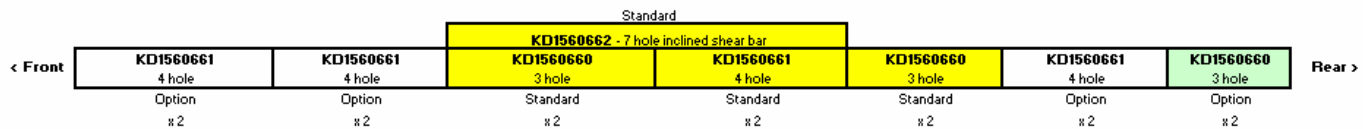
608-2 & 610-2



612-2 & 614-2



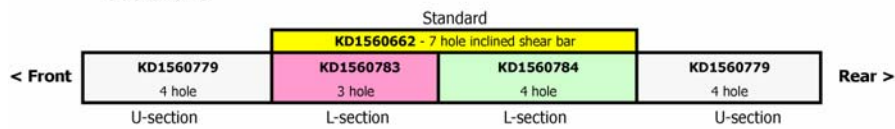
616-2 & 618-2



- **.Optional U-section shearbar set** - special order option for fibrous products like ammonia treated straw

U-Section Shearbar Layouts 1 **With Inclined Shear Bar Fitted**

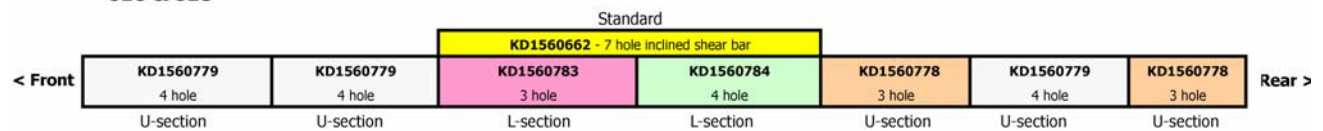
608 & 610



612 & 614

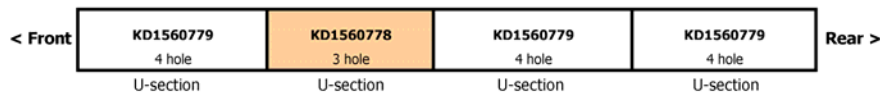


616 & 618

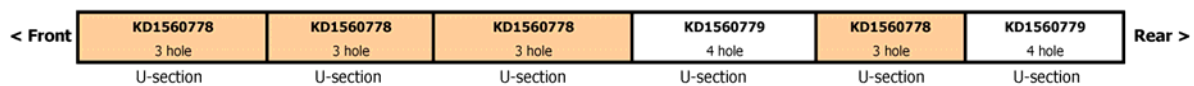


U-Section Shearbar Layouts 2 **No Inclined Shear Bar Fitted**

608 & 610



612 & 614



616 & 618



SECTION 4 – FAULT FINDING



SAFETY FIRST! Before investigating any problem, ALWAYS stop tractor engine, remove key and disconnect PTO shaft. Apply parking brake or securely block wheels to prevent movement.

NEVER attempt to clear any blockage by hand, ALWAYS use a suitable tool, protective hand ware and clothing.

1. SHEARBOLT FAILURE

SYMPTOM	REMEDY
(a) Machine overloaded: • Quantity of material exceeding mixing chamber capacity. • Auger knife blades missing, blunt or broken.	Remove part of load. - Replace missing and broken blades
(b) Machine blocked. (use of long stem, high strength, fibrous material)	Alter loading sequence. Load the material into the mixing chamber in smaller quantities.
(c) Foreign objects (stones, metal etc.) in feed material.	- Remove object(s).
(d) P.T.O engaged too suddenly (especially when using hydraulically engaged drive shafts).	- Engage PTO at minimum revs.
(e) Feed material left in mixing chamber overnight becoming compacted and harder to mix.	- Engage PTO at minimum revs.
(f) Shearbolts installed incorrectly or incorrect type used.	- Use original Kverneland spare parts.
(g) PTO shaft shearbolt flange, worn holes	- Use original Kverneland spare parts.

If shearbolts fail frequently, check for correct alignment of universal joints and drives, and listen for any other abnormal operating sounds and vibrations.

2. DISCHARGE STOPPED

SYMPTOM	REMEDY
(a) Augers not running.	- Shearbolt failure (see above).
(b) Discharge door blocked.	- Open door wider. - Clear obstruction.
(c) Conveyor not running.	
(i) Drive mechanism blocked.	Reduce angle (height) of conveyor mechanism. Clear obstruction.
(ii) Conveyor chains too tight.	- Slacken chain tension.
(iii) Hydraulic Fluid supply incorrectly connected.	- Check operation of tractor spool valve. - Ensure hydraulic hoses are connected to correct tractor outlets.
(iv) Flow control valve closed.	- Engage control lever re-adjust flow control valve start conveyor.
(v) Cable control adjustment incorrect	- Re-adjust cable control connection.

3. TRACTOR HYDRAULICS

SYMPTOM	REMEDY
(a) Hydraulic fluid overheating or cavitating.	- Ensure hydraulic circuit is correctly set for CLOSED CENTRE hydraulics.
(b) Tractor spool valve overload.	- Ensure hydraulic circuit is correctly set for OPEN CENTRE hydraulics.

4. ELECTRONIC DISPLAY UNIT

Please refer to the weighing system instruction manual supplied with the machine.

NOTE! If the machine is left for a long period of time (e.g. overnight) without being unloaded, the value of weight displayed on the screen may vary due to "Zero shift" caused by changes in temperature.

This does not affect the accuracy of the scale and can be rectified by Zero-Balancing the scale.

SECTION 5 - ROUTINE MAINTENANCE



SAFETY FIRST! Kverneland recommend that major maintenance or repair work, other than detailed in Sections 4 and 5, are carried out by your Kverneland dealer. No liability will be accepted for any mechanical failure or personal injury sustained as a result of work carried out by unauthorised personnel.

IMPORTANT! The maintenance procedures detailed in this section are essential to prolonging the effective operation of the machine and ensuring the safety of its operator. No liability will be accepted for any mechanical failure or personal injury sustained as a result of neglecting these instructions. Ensure that safe working practices are used at all times and **ALWAYS** use the correct tools. **REMEMBER, THE SAFETY OF YOURSELF AND OTHERS COULD BE AT RISK!**

SAFETY FIRST! Prior to carrying out ANY form of maintenance, **STOP TRACTOR ENGINE** and **REMOVE KEY**. **APPLY PARKING BRAKE** and **REMOVE PTO SHAFT FROM TRACTOR**.



NOTE! Consult your Dealer for advice over any doubts concerning maintenance procedures.

AFTER FIRST TWO HOURS USE

1. Check that wheel nuts are tightened to the correct torque:

Kverneland 608 / 610, 70 mm square axle - 300 Nm.
Kverneland 612 / 614, 80 mm square axle - 420 Nm.
Kverneland 616 / 618, 90 mm square axle - 420 Nm.
2. Check axle plate clamping bolts and re-torque to 110 Nm.
3. Check drawbar bolts and re-torque to 840 Nm.
4. Check M30 hitch bolt and re-torque to 1400 Nm.
5. Check Load Cell securing bolts and re-torque to 420 Nm.
6. Check primary and main transmission chain tensions - adjust if necessary.
7. Check conveyor of the tape tensions - adjust if necessary.

DAILY

1. Carry out all lubrication checks as detailed in the lubrication chart.
2. Clear any material from moving parts such as conveyor mechanism and discharge door.
3. Check brake operation and efficiency.
4. Visually check for missing auger blades, condition, sharpness and blade orientation.
5. Check that **ALL** inspection panels, guards, conveyor/chute safety screens and **ALL** safety decals are in place and are legible.

WEEKLY

1. Check machine for worn, damage or missing parts. Replace with genuine Kverneland Parts.
2. Check parking brake effectiveness (where fitted). Adjust if necessary.
3. Check that wheel nuts are tightened to the correct torque:
Kverneland 608 / 610, 70 mm square axle - 300 Nm.
Kverneland 612 / 614, 80 mm square axle - 420 Nm.
Kverneland 616 / 618, 90 mm square axle - 420 Nm.
4. Check tyres are inflated to correct pressure:
12.5 / 80 x 15.75: 6 BAR
(315 / 80) x R 22.5 tyres: 7,9 BAR
40 x 14 tyres: 4 BAR
385 / 65 x R22,5 tyres: 6 BAR
5. Check transmission oil level.
6. Check primary and main transmission chain tensions - adjust if necessary.
7. Check conveyor of the tape tensions - adjust if necessary

MONTHLY MAINTENANCE

1. Check and ensure axle clamping plates are secure, check bolts re-torque to 110 Nm.
2. Check drawbar bolts and re-torque to 840 Nm.
3. Check M30 hitch bolt and re-torque to 1400 Nm.
4. Check Load Cell securing bolts and re-torque to 420 Nm.
3. Check that all safety decals are clearly legible; replace if necessary.
5. Check auger sprocket retaining plate bolts and re-torque 420 Nm.
6. Carry out lubrication checks as detailed in the lubrication chart.
7. Dismantle sliding sections of PTO shafts. Clean and re-grease using Shell Calithia EPT2 grease or equivalent. Lubricate PTO guard bearing collars.

PTO SHAFT

The PTO shaft guards **MUST** be maintained in good order at all times and replaced immediately when worn or damaged. Ensure that the PTO shaft is safely secured to the support bracket, or remove the shaft from the machine and store separately to prevent damage and deterioration when the machine is not in use.

HYDRAULIC HOSES

IMPORTANT! The condition of all hoses should be carefully checked during routine service of the machine. Damage to brake lines must be corrected before any use.

AIR BRAKES (WHERE FITTED)

The pressure within the air reservoir should be released occasionally to reduce the risk of condensation; which could lead to corrosion and damage to the braking mechanism. It is recommended that braking systems are checked by your Kverneland dealer at least once per year.

IMPORTANT! If any component requires repeated adjustment and/or maintenance, you **MUST** consult your Kverneland dealer.

SECTION 6 - SPARE PARTS

Spare parts for Kverneland 600 series machines can be obtained from your Kverneland dealer. For a detailed list of available parts, refer to the Parts Book held by your dealer.

When ordering spare parts, please give the following information:

1. Name and Serial Number of machine.
2. Model Type.
3. Description of part required.
4. Quantity of parts required.
5. Customer's name and full postal address

The following parts are recommended to be held in stock for maintenance purposes:

Part Description	Part No.	Quantity
PTO shaft shearbolt kit (M8 x 60).	KD1560951	1
Circular auger blades	KD1560635	20

(Refer to parts book or dealer for more part numbers)



SAFETY FIRST! Before dismantling the machine in order to replace worn or damaged parts, ALWAYS ensure that the following procedures are obeyed:

- a) Machine is uncoupled from tractor and securely supported on firm, level ground.
- b) Ensure that machine is stable.
- c) A clearly visible notice is placed on the machine, stating it is NOT to be used.
- d) Any bystanders are suitably warned and protected against injury.
- e) Suitable protective clothing MUST be worn AT ALL TIMES.



SAFETY FIRST! When re-assembling the machine, ALWAYS ensure that the following steps are obeyed:

- a) ALL tools are removed from the machine and surrounding area and put in a safe place.
- b) ALL guards are replaced and bolts securely re-tightened.
- c) Any bystanders are suitably warned and protected against injury.

After re-assembling the machine, engage the PTO at low revs. and check for satisfactory operation. Listen for any unusual noises and excessive vibrations.

If any dismantled parts are fit for re-use, thoroughly clean and lubricate them and store in a clean, dry place.

SECTION 7 - ANNUAL MAINTENANCE AND STORAGE

At the end of the season's use and prior to storing the machine, proceed as follows:



SAFETY FIRST! Tractor handbrake must be applied, machine brakes applied (or wheels chocked), tractor engine must be switched off and key removed. The PTO shaft **MUST** be removed before attempting this operation.

1. Remove the front drain plugs and thoroughly wash all material and dirt from the machine.
2. Carry out all lubrication checks. Grease all adjuster screws and exposed ram pistons.
3. Clean PTO shaft, re-grease and store in dry conditions to prevent damage and deterioration.
5. It is recommended that the machine is placed under cover or protected by a tarpaulin or canvas sheet. **DO NOT** use plastic sheeting, as this can cause rapid corrosion.

IMPORTANT! If the machine is to be stored outside, position it so that any rain and moisture will drain towards the front, where the drain plugs are located. Ensure that the drains plug are open at all times when the machine is not in use.

6. Where possible, relieve hydraulic pressure that may be stored in hoses and rams.



SAFETY FIRST! If the machine is fitted with the hydraulic jack, **DO NOT** release the pressure in the cylinder unless the drawbar is securely supported on firm, level ground

For extended periods of inactivity, it is recommended that the machine is parked on firm level ground; chock the wheels and place the drawbar/chassis on adequate supports - do not rely upon the brakes or chassis jack.

SECTION 8 - PRE-SEASON CHECKS

1. Remove protective grease from ALL ram pistons.
2. Carry out all maintenance and lubrication instructions as detailed in Section 4.
3. Check that ALL guards and warning decals are in place. Replace any that are damaged or missing.
4. Ensure drain plugs are re-fitted correctly
5. Inflate tyres to correct pressures and remove supports
6. Ensure that all hydraulic (and pneumatic, if applicable) hoses are in good condition and the fittings are intact and secure.
7. Check the condition and level of the oil in the transmission case. Fill to the correct level if required.
8. Re-fit the PTO shaft and connect machine to tractor as detailed in Section 1.
9. Check operation of brakes.

NOTE! Carry out all pre-operational checks as detailed in this manual

SECTION 9 – EU CONFORMITY DECLARATION

In accordance
with EU Directive
98/37/EC

We

Kverneland Devizes Ltd. Danish Branch
Kvernelandstrandvej 25
DK-5300 Kerteminde
Denmark

declare under our sole responsibility that the product



Kverneland 608 - 618 and accessories

to which this declaration relates conforms to the relevant basic
safety and health requirements of EU Directive 98/37/EC.

For the relevant implementation of the safety and health
requirements mentioned in the EU Directive, the following
standards have been taken into account:

- EN ISO 12100-1;2 (12/2003)
- EN 294 (07/1994)
- EN 703 (06/2004)
- EN 1553 (11/1999)

Kverneland Devizes Ltd. Danish Branch
Kerteminde, Denmark. 01.08.2005

Niels Erik Andersen
General Manager