

operations manual

Cutting
Forme



Operators Manual

Cutting Forme

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Thankyou

Congratulations!

You are now a proud owner of a Ben Wye Piranha Slasher. Please do not hesitate to contact your local dealer or Ben Wye Engineering and Design should you require any further information to supplement this manual. You can be assured of the highest quality and customer service at all times.

About

The Company

Ben Wye Engineering & Design Pty Ltd is an Australian owned company, specialising in the manufacture of horticultural machinery. The company was established in 1989 and has grown to become an Australian market leader in the production of rotary slashers.

Using This Manual

It is important that you thoroughly read and understand this manual before operation of the machine. You should also familiarise yourself with all aspects of operation, maintenance, troubleshooting and first and foremost safety.

Machine Description

The slasher a is Power Take Off (PTO) driven rotary machine designed to be attached to a tractor. The slashing blades are driven via one or more gearboxes mounted to the slasher body.

The Purpose

This machine is designed and manufactured solely for the purpose of cutting grass and covercrops. Under no circumstances should it be used for any other purpose.

The Application and Limitations

The slashers main application is the cutting of grass and covercrops on roadsides, ovals and paddocks. It is not recommended that it be used during wet or slippery conditions, or during poor visibility.

Safety Instructions

Safety and Precautions



The information symbol is used to instantly bring to your attention important information following.



The warning symbol is used to illustrate a hazardous situation where personal injury could occur. This applies to operation of the equipment and maintenance.



The caution symbol is used when equipment damage may result if instructions are not followed.

Important Information

General



A number of precautions are to be observed when operating or maintaining this equipment to prevent injury or equipment damage.

Owners and operators must use appropriate methods to reduce hazards.

Assessments of equipment, operators and maintenance procedures must be made on a regular basis to identify hazards. Once hazards or problems have been identified, appropriate action can be taken.

These precautions apply to:

- Worn or damaged equipment.
- Operators that haven't used the equipment for long periods.
- Operators who are unfamiliar with this equipment.

Under no circumstances is there to be anybody riding on the implement whilst in motion or operation. Ensure all guards or shields are in place before operation. If guards are removed for maintenance work, be sure they are correctly replaced upon completion. Worn or damaged guards need to be repaired or replaced.

All safety and instruction decals must be kept clean & visible and must be replaced if unreadable.

Rotary slashers have the ability to discharge objects at high speeds. To prevent personal injury caused by thrown objects, front and rear safety guards are recommended. When cutting roadsides and public areas or within 150m of buildings or people, front and rear safety chains are recommended.

Do not operate machine in wet or slippery conditions or when visibility is poor.

Remain alert for solid objects in slasher path and remove or avoid at all times.

If equipment sound changes or equipment behaves differently during operation, shut machine down and check for loose, worn or damaged parts - refer section on troubleshooting.

Be sure to wear protective clothing whilst operating the machine. Avoid loose clothing. Wear suitable hearing protection eg earmuffs or plugs, safety boots, correct fitting safety goggles or glasses and a high visibility safety vest.

Practice safe maintenance. Always lower the machine to the ground, put the tractor in park position, turn the engine off and remove the key before beginning maintenance or dismantling the tractor.

Always perform maintenance in a clean dry area with solid and level ground.

Never rely on the tractor hydraulics to support the machine while working beneath it. Never work under an unsupported machine. Use suitable supports while carrying out any maintenance under the machine.

Do not stand or put any part of body between the machine and tractor while tractor is moving, or likely to move.



Safety Instructions

Safety and Precautions



CAUTION

- Only use equipment that is designed for the work intended.
- This machine is designed to be run at 540rpm PTO speed (unless otherwise noted). Do not overspeed the PTO or machine damage may result.
- Maintenance is to be carried out in accordance with the recommended maintenance schedule.
- Caution should be used when fitting machine to tractor.
- Ensure the machine is attached correctly to the tractor using the correct pins and clips.
- Ensure all guards are in place.
- Power Take Off shafts must be correctly attached with clips in grooves.
- All safety and instruction decals must be clearly visible.
- Slow moving tractors carrying or towing implements can create a hazard when on public roads, especially at night when they may be difficult to see.
- Use accessory lights and fit reflectors to give sufficient visual warning to operators of other vehicles.
- Make sure your any modifications made to improve the visibility of the machine comply with federal, state and local laws.
- Be sure to wear protective clothing whilst operating the machine.

- Avoid loose clothing.

- Wear suitable hearing protection eg earmuffs or plugs, safety boots, correct fitting safety goggles or glasses, a high visibility safety vest and protective gloves.



Fig. iv.1
Wear suitable hearing & eye protection.

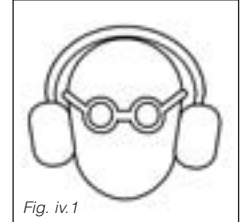


Fig. iv.2
Wear safety boots.

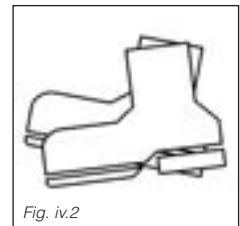
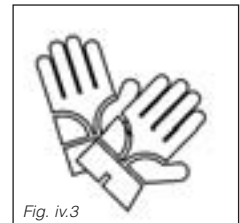


Fig. iv.3
Wear protective gloves.



Be prepared for emergencies.

- Rotary slashers can cause fires and it is recommended that fire fighting equipment eg fire fighting knapsack, small fire extinguisher or rake is carried on board.

- A first aid kit, fire extinguisher along with a mobile phone and a list of emergency numbers could prove invaluable in an emergency situation.

Fig. iv.4
Always carry a first aid kit.

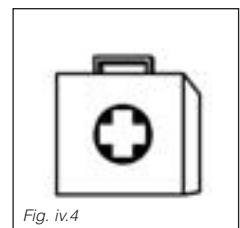


Fig. iv.5
Keep a mobile phone with emergency numbers handy.



Fig. iv.6
Carry a fire extinguisher.



Safety Instructions

Sequence of Job steps	Potential Hazard of each step	Standard Operating Procedure	Personal Protective Equipment
Special note.	WARNING	No personnel are to use this equipment prior to; Reading and understanding the operators manual. Reading the standard operating procedure. Undergoing thorough practical training while properly supervised.	CAUTION
Pre-start maintenance checks.	<i>Flying machine parts Severe bodily injury.</i>	Ensure the slasher is checked prior to use and is in good working condition.	<i>Overalls safety boots gloves.</i>
Special note.	<i>Flying debris.</i>	Where the tractor being used does not have an enclosed cab, sylon or other protective material should be fitted to stop flying debris hitting the operator.	
Start up machine.	<i>Flying machine parts Severe bodily injury.</i>	As an added safety precaution, when visual assessment of the machine has been completed, perform a test run prior to commencing field operations. Engage the PTO and check the slasher from the tractor cab If all ok, disengage PTO prior to travelling to the job site.	<i>Eye protection. Overalls. High visibility safety vest. Safety boots.</i>
Travelling to job site.	<i>Accident. Veer off course. Tip over. Risk of being crushed.</i>	Ensure the slasher is at maximum height when travelling at road speed as the slasher could strike the road or other objects and cause the tractor to veer of course. Periodically check that the slasher is still at maximum height.	<i>Eye protection. Overalls. High visibility safety vest. Safety boots.</i>
Commence slashing operation.	<i>Flying debris. Eye injury. Bodily injury. Tip over. Risk off being crushed. Cuts and gashes. Fire. Hearing damage.</i>	Clear the entire area of any people before commencing slashing. Survey the area to be slashed. Check the slope of the land, if applicable. Clear the area to be slashed of any obvious hazards, eg large stones, large twigs, boughs from trees, wire. Select the correct height adjustment for the slasher for the task at hand. Should wire or other objects become caught in the blades, apply the brakes to tractor and switch off the motor. When the slasher is lifted to remove objects from the blade, it must be supported by safety stands or the equivalent. Continually perform visual checks of the area and the slasher throughout the entire operation as there could be the possibility of starting a fire.	<i>Eye protection. Overalls. High visibility safety vest. Safety boots. Gloves. Hearing protection.</i>
Special note.		Thoroughly check the slasher every 2 hours, tractor gear must be in neutral, the motor switched off and PTO disengaged.	
Finish slashing operation.	<i>Accident. Veer off course. Tip over. Risk of being crushed.</i>	When returning to the storage shed, ensure the slasher is at maximum height When travelling at road speed as the slasher could strike the road or other objects causing the tractor to veer off course. Periodically check that the slasher is still at maximum height.	<i>Eye protection. Overalls. High visibility safety vest. Safety boots.</i>
Clean up.	<i>Cuts and gashes. Burns. Slipping.</i>	Thoroughly check the equipment for any damage. Report any equipment damage to the manager. Place safety tag (danger - do not operate) on the equipment until repaired, indicating faults on tag. Once the equipment is repair, tag is not to be removed or equipment operated until sanctioned by appointed safety officer and/or manager. On completion of repairs and service, clean the slasher thoroughly (with high pressure cleaner if available), ensuring proper care is taken and the correct protective clothing/equipment is being worn.	<i>Eye protection. Face sheild. Overalls. Safety boots. Gloves.</i>

Setup Instructions

Connecting to tractor and setting up adjustments

1. Three point linkage units

1. Locate the cutter on a flat, level surface.
2. Determine the category pin size to suit the tractor:
Cat. 1 Bottom link 7/8" top link 3/4"
Cat. 2 Bottom link 1 1/8" top link 1"
3. Carefully reverse the tractor and line up the lower link pins.
4. Engage the park brake, shut off the tractor and remove key before dismounting the tractor.
5. Fit the correct size pins and secure with lynch pins.
6. Adjust the top link so that it fits between tractor and slasher. Slotted top link will enable 60mm of float to reduce skids ploughing.
7. Adjust the sway bars/chains to hold the slasher central to the tractor and prevent the slasher from swinging sideways.
8. To fit the Power Take Off (PTO) shaft to the slasher and tractor, press the quick disconnect pin and simultaneously slide the female spline onto the male spline until the pin engages.
9. Check that the locks are securely engaged after coupling.
10. Start the tractor and slowly engage the tractor's hydraulic 3 point linkage to lift the slasher.
11. Check for sufficient draw bar clearance and adjust as required.
12. Watch the telescoping movement of the shaft to ensure that it does not bottom out while lifting the 3 point linkage. If it does, refer to the link adjustment.
13. Raise the slasher to check that the PTO shaft does not contact the front of the slasher. Lock out the hydraulic lift so the lift cannot touch the shaft.
14. Measure the distance between the tractor PTO shaft and the clutch input shaft. The overall length of the PTO drive shaft should be approximately 50 mm less than the distance between the tractor PTO and the clutch shaft when the PTO is in the closed

position, but still must be checked when fitted, to ensure the shaft does not bottom out and has an adequate amount of shaft insertion when in the extended position.

15. Fit the Power Take Off shaft to the slasher. Secure the other end to the tractor shaft, making sure the clips are secure in the shaft grooves.

16. Raise the slasher to make sure the drive shaft does not foul on the front body. If it appears to come close to touching, raise the slasher to give a safe clearance and lock the linkage stop to prevent it fouling.

17. Never raise the slasher higher than necessary when turning or moving from one area to another.

18. Always lower the slasher gently to the ground, adjusting the drop rate on tractor hydraulics if necessary.

2. Slashers with skids only

1. Adjust the top link to bring the front of the slasher skids clear of the ground by approximately 15mm.

3. Slashers with roller or wheels at rear

1. Adjust the top link to the cutting height required. The adjustment on the roller or wheels may be used to level the slasher if desired.

4. Trailed units

1. Carefully reverse the tractor to line up the tow bar to the draw bar. Fit the correct size pin and secure. The drive shaft set up is the same as the three point linkage.
2. Height adjustment is made through either hydraulic rams, ratchet adjustment or parking jack.



Location of slasher components

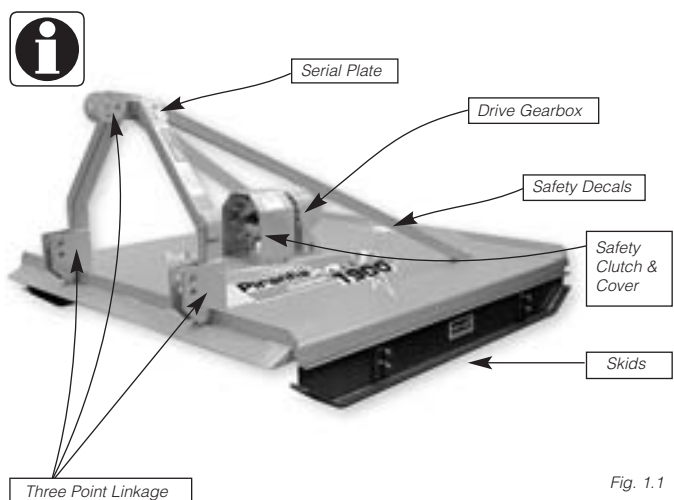


Fig. 1.1

Operating Instructions

Important Information

1. Running instructions

1. Always disengage the tractor's PTO before lifting the slasher to transport position.
2. When raising the cutter to the transport position check that the driveshaft does not contact the tractor or slasher, refer back to setup instructions if contact occurs.
3. Leave enough clearance so the slasher does not come into contact with obstacles or ground.
4. Limit transportation speed to 20Km/h. When travelling on roadways do so in a manner that allows faster vehicles to pass safely. Be sure to reduce tractor speed when turning.
5. In addition to design, accident prevention and hazard control are dependant on awareness, concentration, correct training and an attentive operator. Before beginning to cut, the following inspection checklist should be performed.

Complete the following

2. Operating checklist

- ☐ Read and thoroughly understand the operators manual.
- ☐ Check the oil levels in gearboxes.
- ☐ Be certain that all guards and covers are in position and correctly fitted.
- ☐ Check for oil leaks from gearboxes both above and below the slasher.
- ☐ Check that all nuts and bolts are tight.
- ☐ Check blades and bushes for wear and damage.
- ☐ Lubricate the slasher as needed, (refer maintenance and lubrication).
- ☐ Check blade beams for any play and tighten bolts and gearbox nut as necessary.
- ☐ Check tractor hitches are secure with correct linkage pins and lynch pins.
- ☐ Check PTO quick release pins are correctly engaged and secure.

Operate with CAUTION



CAUTION

3. Instructions for operation

1. Lower the slasher down on a clear, level area to check the set up.
2. Set the hand brake on and set the tractor gears to neutral.
3. Select the correct Power Take Off (PTO.) speed and set the tractor rpm. to just above idle.
4. Slowly engage the PTO, do not use full throttle. The slasher is equipped with swing back blades to reduce shock loads if the slasher strikes an obstacle. Allow 10 seconds for the blades to align themselves and when the slasher is running smoothly, increase the PTO to the correct speed.
5. Ground speed is determined by three things:
 - The density of the material being cut
 - The difficulty of the terrain
 - The size of the tractor
6. Never run the slasher through material at speeds that will cause the tractor to overload.
7. When slashing on sloping surfaces, operate at a reduced speed to ensure that the risk of loss of control or tractor rollover is minimised.
8. It is important to retain the correct PTO speed (540 rpm unless specified), loss of PTO speed will allow blades to hinge back and may result in an uneven or ragged cut.
9. Slow down when changing direction or coming in and out of rows. If necessary turn off PTO and lift unit to stop dragging while turning.
10. These instructions are a guide only and should be read in conjunction with the tractor manual and with safety instructions given by qualified training instructors.



Maintenance & Lubrication

To carry out maintenance on this machine follow the safety recommendation listed in this manual.



1. Engage park brake, disengage PTO, shut off tractor and remove key before proceeding with any of the following maintenance.
2. Be sure that the area where the maintenance is to be carried out is dry, clean and level.
3. Suitable safety stands are always to be used if the slasher is required to be raised. Never rely on the tractor hydraulics when working beneath the slasher.
4. Correct servicing and adjustment is the key to the long life of any farm implement. With careful and systematic inspection you can avoid costly downtime, maintenance and repairs.



Important Information

1. Pre-Operating Checks

1. Check all bolts are tight, pins and clips are in the correct position.
2. Check Power Take Off (PTO) shaft is connected correctly.
3. Check for oil leaks from the gearbox, above and below the slasher body.
4. Clear any foreign material from the cutter bar and check for oil leaks from the bottom seal of the gearbox.
5. Check the blades and blade bushes for wear or damage and replace if necessary. Blade bolts must be screwed tight as possible on the blade bar.
6. Check that blade bar and boss are tight on the gearbox shaft. Check the friction clutch is tight on the gearbox shaft, and the plates are in good order.



Maintenance

2. Initial Operation of Slasher

1. Ensure gearbox(es) have correct amount of 80w-90 gear oil. Check all nuts and bolts are correctly tightened and check clutch settings. Repeat this procedure after two hours.

3. Annual Check

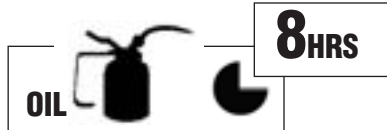
1. Back off the clutch spring bolts yearly. Spin the clutch to remove rust etc. from the plates and retighten the bolts to the manufacturers specified tension.

4. Daily Maintenance

1. Separate and lubricate all PTO shafts as per PTO lubrication info.
2. Grease all universal joints on all PTO shafts



3. Check the level of the 80W-90 gear oil in the gearbox(es) at the level plug and top up if necessary.



4. Check underside of slasher body and report damage or damaged parts.
5. Check blades for visible signs of damage or excessive wear and service or repair.
6. Ensure blade beam and gearbox hub are tight on the gearbox output shaft and tighten if required.
7. Clear any foreign material from slasher on top and below the deck and check all gearbox seals for leaking oil.



Maintenance & Lubrication



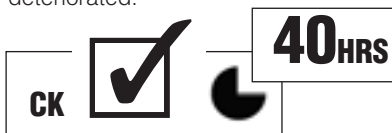
Maintenance

1. Weekly Maintenance

1. Check and tighten all nuts and bolts on slasher and replace if faulty.
2. Check safety friction clutch by completely compressing clutch spring and then backing off 2½ turns.

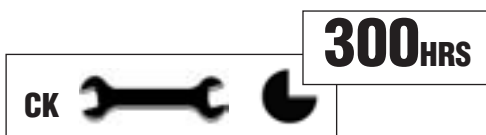
2. 40hr Maintenance

1. Check over entire unit for any damaged, worn or fatigued parts and report, repair or replace as necessary.
2. Check universal joints for any excessive wear.
3. If a roller is fitted, check for any play in the bearings and service if necessary. If wheels are fitted, check for play in bearings, and service if necessary. Check the tyre pressure (approx 22 p.s.i.) and check the rim and tyre for wear and damage.
4. Check for play in the castor bushes, replace if necessary.
5. Replace danger/safety decals if deteriorated.



3. 300hr Maintenance

1. Complete full service as per 8 hour and 40 hour procedures.
2. Dismantle friction clutch and inspect the friction discs for wear, distortion or damage. Clutch faces may be polished by loosening the clutch springs and engaging the PTO at low revs to allow the clutch to spin. Do not allow the clutch to overheat. Stop the tractor and remove the key. Reset the clutch by compressing the springs completely then backing the nuts off 2½ turns.



Service Instructions



Important Information

CAUTION

1. General

1. It is dangerous to use the PTO drive shaft without guard and the restraining members correctly attached. A driveshaft guard restraining system is required in most areas. If you are unsure, check local regulations.
2. Do Not expose guarded parts of the shaft by cutting or enlarging the grease access holes.
3. Do Not step on or over a driveshaft.
4. PTO drive shafts and (safety) clutches have to match the power take off of the machine type. See the instructions with your machine for recommended type and size of shaft and clutches. Overloading can cause damage.
5. Do not operate above recommended speeds.
6. It is against regulations to connect clutches to the tractor PTO in most areas. If you are unsure, check local regulations.
7. No device (e.g. adaptors) shall be installed between the tractor PTO and the PTO drive shaft.
8. No changes except length adjustment may be made to the PTO drive shaft and its guard.
9. Do not operate without all driveline guards, tractor and equipment shield in place. Drivelines must be securely attached at both ends and driveline guards must turn freely on driveline.



Fig. 5.1. Rotating driveline warning decals.



PTO Drive Shaft

2. Coupling the PTO Drive Shaft

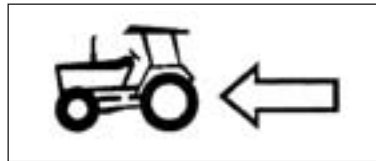


Fig. 5.2
Assemble the PTO shaft with the arrow (if marked on the guard) pointed to the tractor.

1. Clean and grease the tractor PTO and machine Implement shaft (Fig. 5.3).

2. QD Pin: Press quick-disconnect pin and simultaneously slide the PTO drive shaft onto PTO until the pin engages.

3. Twist-Lock: Turn the ring and slide the PTO drive shaft into the PTO until the ring turns back into the "locked" position.

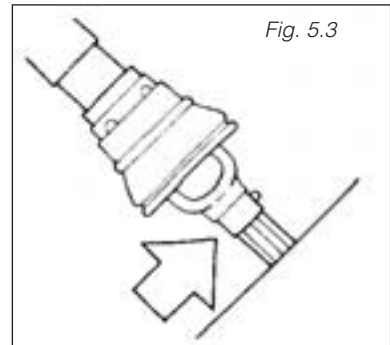


Fig. 5.3

4. Safety Slide Lock: Slide the tractor yoke partially on the tractor PTO shaft and then slide and hold the Safety Slide Lock collar rearward. Then slide the yoke on the tractor shaft can be moved forward into the locked position.

5. Auto-Lock: Slide the collar rearward until the collar locks in the rear position. Then slide the yoke on the tractor PTO shaft until the collar clicks into the locked position.

6. Always check if the locks are securely engaged after coupling.

3. Restraining Members

1. A drive shaft guard restraining system is required in most areas. If a chain is the method of restraining the drive shaft guard, the following must be taken into account.

2. Chains must be securely attached to the master shield of the tractor and the guard on the implement, in order to prevent the guard from rotating. Be careful to allow sufficient movement of the shaft in all working and transport positions (Fig. 5.4).

3. Damaged chains need to be replaced immediately. Never use the chain to support the PTO drive shaft. If the PTO shaft is uncoupled from the tractor PTO, or self-propelled machine, always connect the shaft to the support point of the implement.

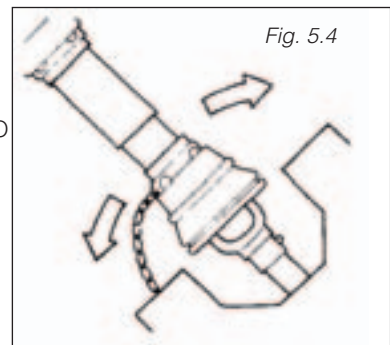


Fig. 5.4

Service Instructions



PTO Drive Shaft

4. Lubrication

1. Lubricate the PTO shaft with high quality multipurpose grease every 8 shaft operating hours as shown see (Fig. 6.1.). If access holes are available, lubricate fittings through access holes. E-kits need lubrication every 50 hours. See decal on guard if applicable.

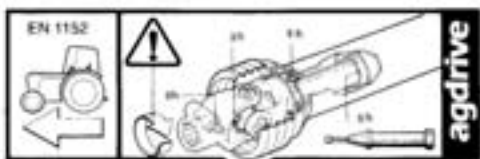


Fig. 6.1

5. Maintenance

1. Before putting into operation, after any prolonged period of non-use, or after seasonal storage, inspect the shaft carefully. Lubricate the PTO shaft with high quality multipurpose grease as shown in the figure above. Inspect the whole safety guard of the shaft, as well as the tractor master shield and the Implement shield. If the driveline guard does not rotate free from the shaft, is damaged, or the safety signs are missing or illegible, parts must be repaired or replaced. Replacing or repairing has to be done by your dealer. Make sure the drive line is stored in a manner which will not damage the drive line guard.

2. Check if the safety guard is complete and that there are no damaged parts.

6. Guarding

1. After connecting the PTO drive shaft to the implement, always check for sufficient overlap of 50mm between the guard on the implement and the PTO drive shaft guard (Fig. 6.2.). Do not operate if this overlap is less than 50mm.

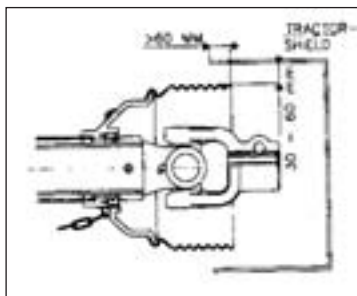


Fig. 6.2



PTO Drive Shaft



Fig. 6.3
Always read the operators manual.



Fig. 6.4
Do not operate the driveline without the guards in place.

7. Maximum Working Angles for Standard Joints

- 25° at continuous operation.
- 45° at short duration.
- 90° at standstill.

1. Always ensure equal joint angles (Fig. 6.5.). Disengage the PTO if joint Angles are too large or unequal. Check that the guard of the driveline does not interfere with parts of the tractor or implement (e.g. drawbar, master shield, tyres). Decrease the maximum working angles in those conditions.

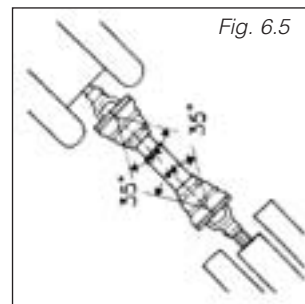


Fig. 6.5

8. Minimum and Maximum Length (Profile Tubes)

1. Try to obtain the greatest possible overlap on the profile tubes. In its working position, the PTO drive shaft must not be extended by more than half of the profile overlap (Pu) available when fully compressed (Fig. 6.6.). The minimum overlap should be at least two times the diameter of the inner profile tube.

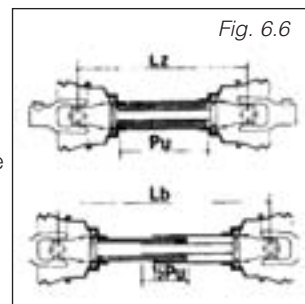


Fig. 6.6

9. Disassembly of the Safety Guard

1. Remove the EASY LOCK grease nipple with a screwdriver (Fig. 6.7.). Remove or hold back the chain (as it may block the bearing).

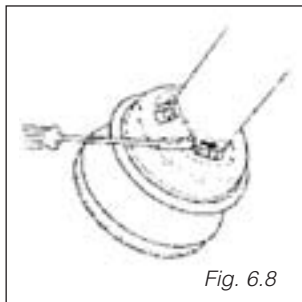


Fig. 6.8

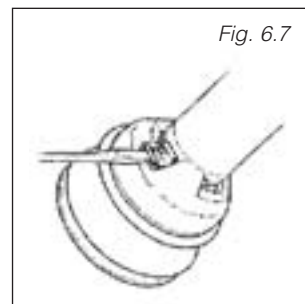


Fig. 6.7

Turn the bearing in the direction indicated and remove the safety guard (Fig. 6.8.).

Service Instructions

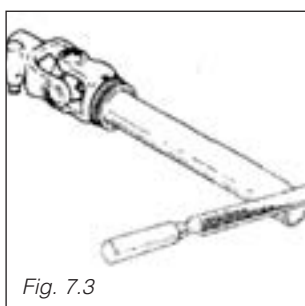
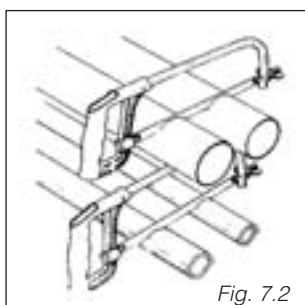
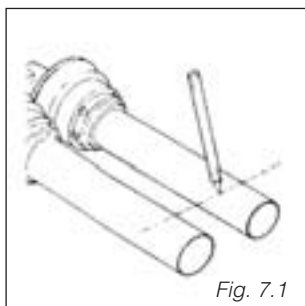


PTO Drive Shaft

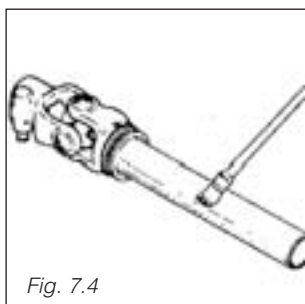
10. Length Adjustment (Profile Tubes)

1. To adjust the length on the profile tubes, place the half shafts next to each other in the shortest working position and mark them (Fig. 7.1.).

2. Shorten inner guard tube as marked. Shorten outer guard tube 40mm shorter than inner guard tube. Shorten inner and outer sliding profiles by the same length as the inner guard tube. (Fig. 7.2.).



3. Round off all sharp edges and remove burrs (Fig. 7.3.).



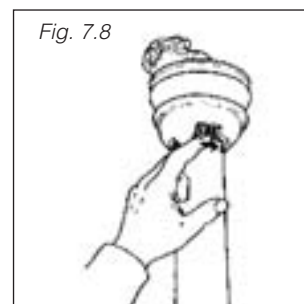
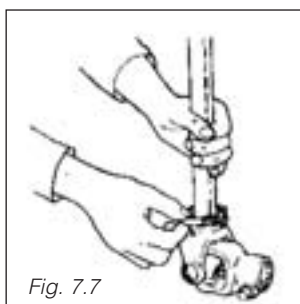
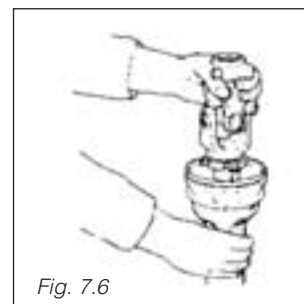
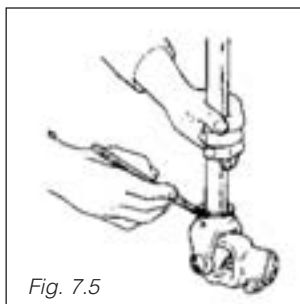
4. Grease sliding profiles (Fig. 7.4.).



PTO Drive Shaft

11. Assembly of the Safety Guard

1. Grease the yoke groove and the inner profile tube (Fig. 7.5.).
2. Place the bearing in the groove of the yoke (Fig. 7.6.).
3. Slip on the guard tube (Fig. 7.7.).
4. Turn the bearing in the direction indicated (Fig. 7.8.).
5. Press the EASY LOCK grease nipple into position until it clicks and cannot be removed manually .



Service Instructions



Clutches

12. Friction Clutches

1. When overload occurs, the torque is limited and transmitted constantly during the period of slipping. Short duration torque peaks are limited. After prolonged periods of non-use, the friction clutch must be checked for freeze-up. Release the friction discs and adjust to correct torque before putting into operation. Before seasonal storage, release spring tension. Store the clutch dry. Do not exceed the manufacturer's recommended settings or use a spring that is not recommended. (Fig. 8.1.).

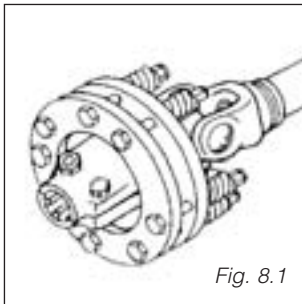


Fig. 8.1



Safety Clutches & Wide Angle Joints

13. Overrunning Clutches

1. Overrunning clutches protect the drive against heavy rotating masses. Lubricate the clutch every 8 shaft operating hours. (Fig. 8.2.).

Fig. 8.2



14. Shock Absorbing Clutches

1. Shock absorbing clutch dampens torsional vibrations and tunes the shaft to have critical speeds outside the operating range. (Fig. 8.3.).

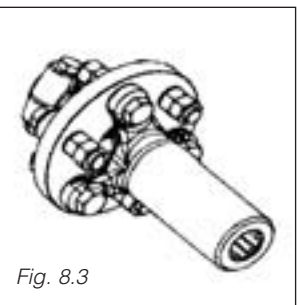


Fig. 8.3

15. Automatic Clutches

1. When the torque exceed its limits, the power flow is interrupted. After disengaging the PTO shaft, the torque is re-established. (Fig. 8.4.).

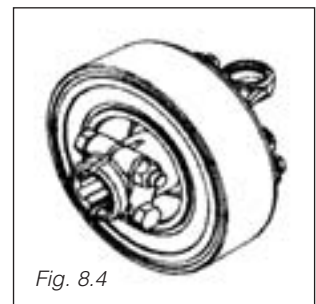


Fig. 8.4

16. Wide Angle CV Joints 50°

1. To ensure uniform transmission of rotary motion in any angular position. Maximum articulation of the wide-angle CV joint 25° at continuous operation 50° at standstill and short duration. Lubricate the joint every 8 shaft operating hours. (Fig. 8.5.).

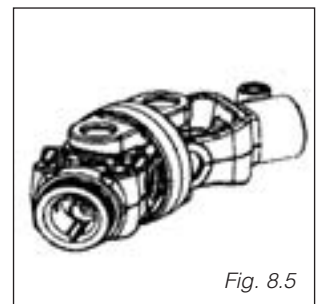


Fig. 8.5

17. Wide Angle CV Joints 80°

1. To ensure uniform transmission of motion in any angular position Maximum articulation of the wide-angle CV joint 25° at continuous operation 80° at standstill and short duration. Lubricate the joint every 8 shaft operating hours. (Fig. 8.6.).

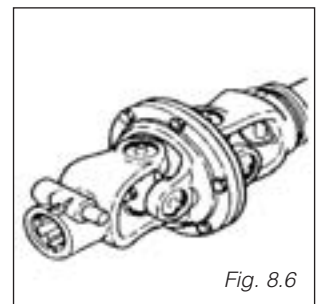


Fig. 8.6



2 YEAR WARRANTY

Ben Wye Engineering & Design Pty Ltd warrants to the original purchaser that it will repair or replace, without charge for parts or labour, any defects in materials or workmanship for a period of two years, when used as intended and under normal service conditions.

This warranty is limited to the replacement of any defective part by Ben Wye Engineering & Design and the installation by an authorised dealer. This warranty does not cover common wear items such as blades, skids, tyres etc.

Any part or product which in Ben Wye Engineering & Design's judgement has been:

- misused or damaged by accident or by lack of normal maintenance or care
- repaired in a way that adversely affects its performance or reliability
- used for a purpose for which the product is not designed will not be covered by this warranty.

Failure to properly maintain oil levels, grease points, and PTO shafts is classed as misuse.

The warranty does not cover:

- loss of productivity
 - crop loss
- inconvenience
- down time

or other consequential damages.

Delivery of the product or part is at the owner's cost to the original place of purchase.

Any penalty rates or travel time shall be at the owner's expense.

This warranty is not valid unless the product is registered with Ben Wye engineering & Design Pty Ltd within 14 days from date of delivery to the end user.

All warranty claims must be reported to Ben Wye Eng. through the original dealer and all warranty approvals must come from Ben Wye Engineering. Before warranty work can commence.



Delivery Checklist

Dealer Pre-Delivery (Please Tick)

1. Dealer Pre-Delivery Checklist

- ☐ 1. The product is complete and correctly assembled.
- ☐ 2. All Guarding, Safety equipment and Decals are in place and securely attached.
- ☐ 3. All lubrication has been completed and checked.
- ☐ 4. The model and serial numbers have been recorded above.
- ☐ 5. The blades have been checked and are free to swing and do not jam.
- ☐ 6. The rotors have been checked and are free to rotate and do not contact any obstacles.
- ☐ 7. All bolts and nuts are tightened and the safety clutch is correctly adjusted.

Customer Delivery (Please Tick)

2. Customer Delivery Checklist

- ☐ 1. The customer or person responsible has been given the operators manual.
- ☐ 2. The customer undertakes to read the complete operators manual, and understands all aspects of the manual before operation of the machine.
- ☐ 3. All safety, operational and maintenance information has been explained and demonstrated.
- ☐ 4. All greasing and oil points, stickers, guarding and ID plate has been identified and physically pointed out.
- ☐ 5. The customer agrees that it is their responsibility to read and carry out the safety, maintenance and operation as per this operators manual.



Please Complete all Dealer information Below

Dealer Information

Dealer's Name
 Address

 State Postcode
 Phone Fax
 Email
 Service Person

I confirm that the pre-delivery service was performed on this machine.

Signature
 Date
 Comments



Please Complete all Customer Information Below

Customer Information

Customer's Name
 Address

 State Postcode
 Phone Fax
 Email
 Delivery Person

I confirm that all of the delivery checks were explained and performed.

Signature
 Delivery Date
 Comments



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