



# DOUBLE PACKER



**GB 80/80 + 90/90**



# DAL-BO DOUBLE PACKER

## 205-335 80/80 + 90/90

Congratulations on the purchase of your new soil packer. For **safety reasons** and to achieve optimum service from the product, please read the User Guide **before use**.

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Points of major significance to safety are marked by a **V**.

- V** Tighten all screw connections after a few hours use.  
NB: do not overtighten brake screws on towers. See page 7.
- V** Keep area around machine clear of personnel when in operation.
- V** NB: remember machine cannot be braked when going downhill especially when running on hard surfaces.
- V** Do not tow on public roads.
- V** Operators must be 18 years old or over.

### **This product has:**

Type no.: \_\_\_\_\_ Serial no.: \_\_\_\_\_  
Month of manufacture: \_\_\_\_\_ Net weight kg: \_\_\_\_\_

If contacting the manufacturer regarding spare parts or service, please state type and serial number. A spare parts list is included at the back of this manual.

## EU DECLARATION OF COMPLIANCE

**DAL-BO A/S**  
**DK-7183 Randbøl**  
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declares herewith that the above machine is manufactured in accordance with the provisions of directive 2006/42/EC, which replaced directive 98/37/EC and change directives 91/368/ECC, 93/44/ECC and 93/68/ECC on harmonization of member state legislation concerning health and safety requirements related to the construction and manufacture of machines.



This machine corresponds to the safety requirements in the European Safety Guidelines.

DAL-BO A/S

Date: \_\_\_\_\_

Managing Director Kaj Pedersen



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## Construction

This product consists of a basic module consisting of a frame with rings. It can be fitted as required with the following:

1. **Draw chain** for use with a **lift plough**.
2. **Towing brackets for use with a reversible plough**.
3. **Lift frame for transport**.

Optional extras include: levelling boards, runners (reversible packers) and transport wheel. These are not covered in this manual. Please refer to their special user manuals.

## Use:

The packer is towed after a plough to break up lumps and pack the soil down, making subsequent operations easier.

It is primarily intended for use when sowing immediately after ploughing. In most instances, it can also be used to great effect for traditional winter ploughing. If ploughing up or down steep hillsides on light soils, wet winters can aggravate soil erosion.

**V** Always take steps to prevent the packer rolling when parked on a hard surface.

**V** **Do not tow on public roads.** No brakes are fitted!

**V** Do **not** use for carrying tractor weights, supporting other implements etc. If in doubt, please contact your dealer or DAL-BO.

**V** Keep area around machine clear of personnel when in operation. It can swing out and has no brakes fitted!

Operate with extreme caution on stony fields to avoid breaking the rings.

## Handling:

The packer is supplied as a basic module (frame with rings) fitted with a triangular A-frame for lift- or reversible ploughs and suspension.

**V** Crane or forklift truck are to be used for handling.

When using a **crane**, **always use two straps, with one strap only attached to each ring on each shaft**. If attaching two straps to the same shaft, the rings may break!

If using a **forklift**, carefully insert the forks from the side between the spokes of the rings.

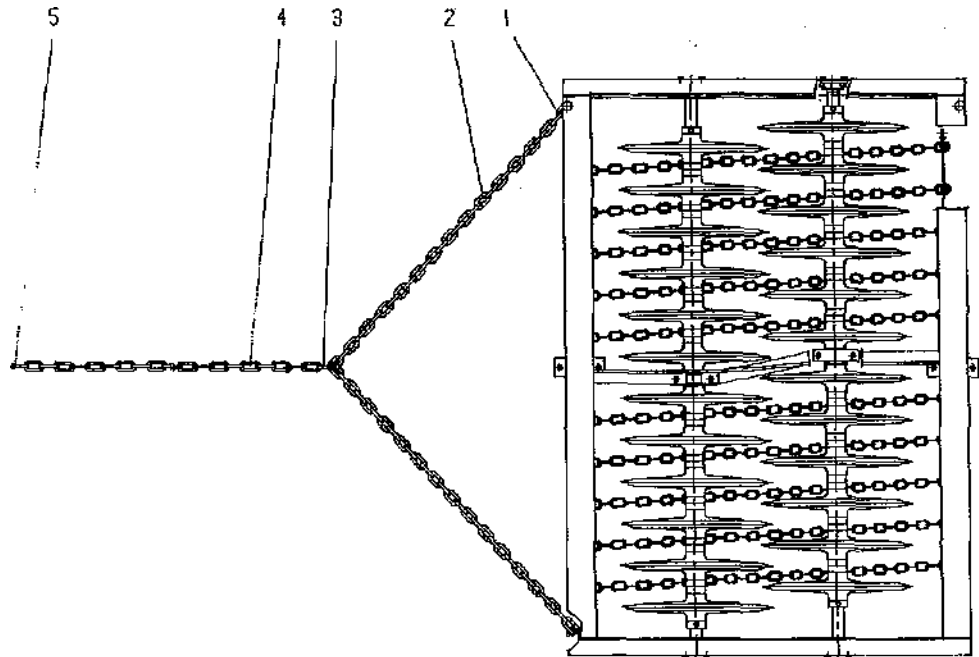
3 machines can be stacked on top of each other with due care. Machine weight is stated on page 1 and on the type plate.

## Mounting:

DRAW CHAIN FOR LIFT PLOUGH (see fig. 1).

Attach shackles at pos. 1 to the holes in the frame. Ensure the twin attachment chains (pos. 2) are straight.

Fig. 1:



TOWING BRACKETS FOR LIFT PLOUGH (see fig. 2)

Fit tower plates (pos. 1).

Fit towers, pos. 2, using main bolts, pos. 3. Do not tighten bolts too hard.

Fit towing brackets pos. 4, using pins, pos. 5.

Fit draw arms pos. 6, using pins, pos. 7, so that the hooks face in the direction shown and are approx. 30 cm outside the frame.

The pins at pos. 7 should ideally be inserted from below, with the pins uppermost.

Suspend the arms using the chains, pos. 8 and springs, pos. 9, to ensure they are slightly inclined.

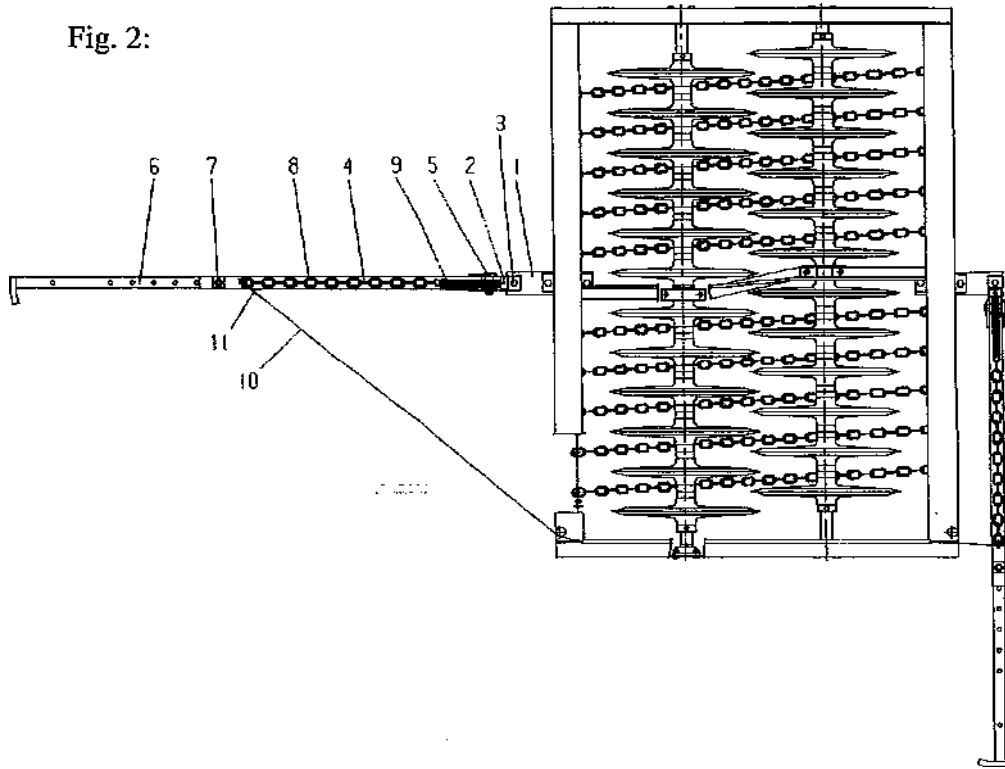
Secure the steel wire, pos. 10 to one arm using the wire lock, pos. 11.

Pass wire through the guides and roller to the other arm.

Adjust length to allow one arm to turn all the way from one side to the other without the wire tightening.

Tighten main bolts pos. 3 so that the arms are slack.

Fig. 2:

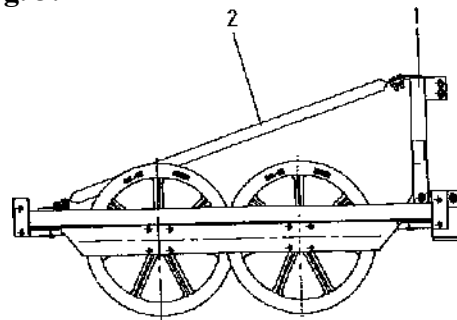


LIFT FRAME for transport (see fig. 3).

Fit A-frame pos. 1 at the bottom using two bolts (weight 27 kg).

Fit brace bar pos. 2 (weight 11 kg).

Fig. 3:



### Operating techniques:

#### LIFT PLOUGH

The plough used must have an outrigger arm fitted. See fig. 4.

This will hold the draw chain away from the plough leaving approx. 1 furrow between plough and packer.

The control point at pos. 1 must be aligned approximately with the middle of the last furrow. Table 1 provides a guide to setting the arm.

Secure draw chain pos. 2 in front of the plough, e.g. on the crossbar.

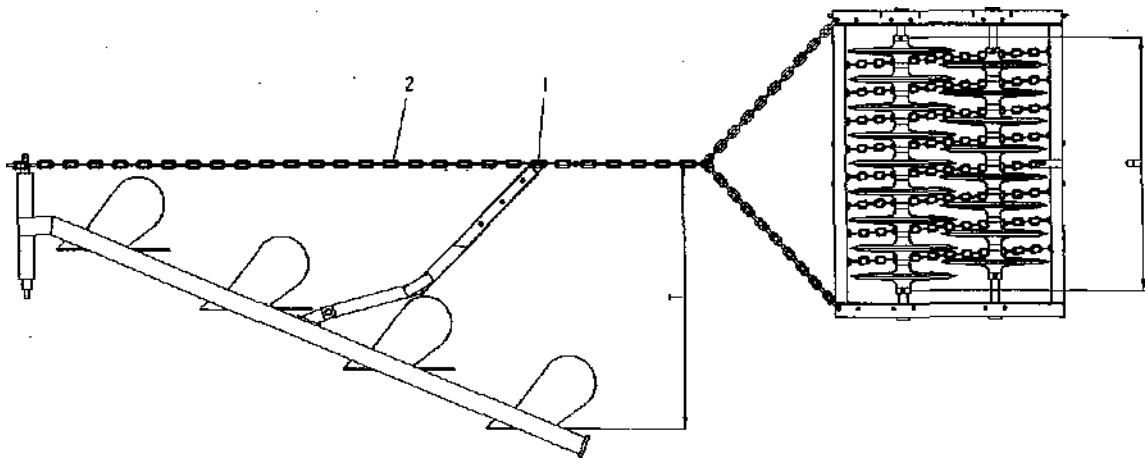
When securing control point, check there is no play in the outrigger arm.



To reduce strain on the outrigger arm, the plough should not be lifted more than necessary.

When ploughing the first furrow close to a hedge or fence, it may be necessary to plough without the packer attached.

**Fig. 4:**



**Table 1:**

Working width A	Distance T
205 cm	185 cm
220 cm	195 cm
240 cm	205 cm
260 cm	215 cm
295 cm	235 cm

#### REVERSIBLE PLOUGH

The plough used must have an outrigger arm fitted. See fig. 5

The arm must be adjusted such that the draw point pos. 1 is approx. 30 cm away from the edge of the tractor's rear wheel.

When starting on a field, plough the first set of furrows without the packer.

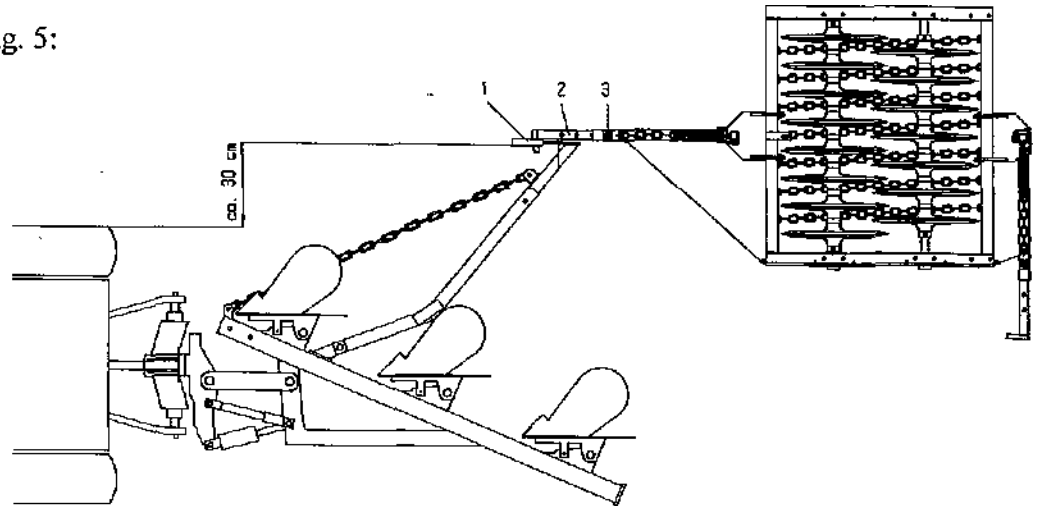
Pick up the packer from the head of the field using a short

chain between the outrigger on the plough and the relevant towing bracket on the packer (the opposite bracket should point towards the unploughed area).

Detach the chain at the opposite end of the field before lifting the plough.

Adjust length of towing brackets pos. 2 so that they reach to approx. the edge of the furrow nearest the packer when at right angles to the chain direction. Insert the pins pos. 3 from below to avoid losing the split pins. Adjust height to align with the 'V' on the plough outrigger.

Fig. 5:



Reverse plough and carefully begin to drive in the opposite direction. Check that the packer is in tow. The plough arm must not be in contact with the packer. If the plough arm can automatically detach the packer, **stop** before lifting the plough. A sudden stop will help release the packer.

#### Adjustment:

After a period of use, the towing brackets will have too much play when attaching them after a turn. Tighten the brake screws (fig. 2, pos. 12) slightly.

#### Maintenance:

**All bolt assemblies** (with the exception of the main bolts) must be tightened after the first day of use, and checked regularly thereafter.

Lubricating bearings: Grease ball bearings after every 50 hours. Do not use excessive force to avoid damaging the gaskets.

#### V

Check steel wire after each use. Beware of danger to fingers.

Cleaning: Before long-term storage, **always** ensure machine is clean and ensure that the rings can turn freely on their shafts. This will make them easier to replace should it be necessary at a later date. If the rings do not revolve freely on their shafts, the result will be affected.

Adjusting stop rings: Clean machine thoroughly after first use. Push rings close together, and secure by moving the stop rings (fig. 8, pos. 3). Slacken and tighten the stop ring screws a couple of times to ensure they obtain a firm grip.

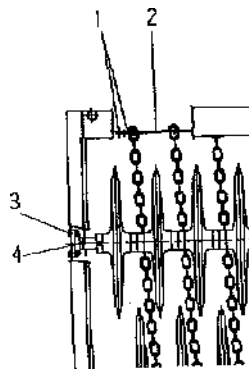
## REPAIRS:

### Replacing smoother bar chains:

See fig. 6.  
Remove pins pos. 1.  
Remove chain locks pos. 2, free chains.

Reverse procedure to replace.  
Remember that the chains must pass below the shafts.

**Fig. 6:**



### Replacing side bearings:

See fig. 6.  
A crane able to lift min. 500 kg is required.  
Position machine under the crane to ensure both shafts are prevented from revolving.  
Securing lifting straps in middle of one end of the frame to take the weight off the two bearings.  
Remove bearing bolts pos. 3.  
If machine has intermediate bearings, remove their bolts (fig. 7, pos. 5).  
Lift frame until bearings are free.  
Slacken screws pos. 4.  
The two bearings can now be withdrawn from the shaft.

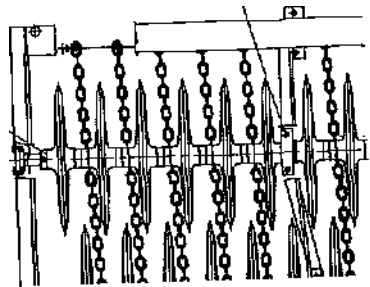
Reverse procedure for assembly. Check bearing grease nipples face towards machine centre.  
Secure screws pos. 4 with a drop of Locktite no. 270 before tightening.

### Replacing intermediate bearings, rings and/or shafts:

See fig. 7.

Remove smoother bar and side bearings as described above (page 8). Lift frame clear. Note direction to ensure correct assembly later. Remove stop rings pos. 6. Roll a shaft onto a board placed under a ring close to the middle. The rings can now be extracted. An 80 cm ring weighs 45 kg, and a 90 cm ring weighs 68 kg. Sand and soil can have worked their way between shaft and ring if they have not been cleaned and slackened regularly and can be difficult to remove. A high pressure washer can help. If necessary, a hole can be drilled into the middle of the hub followed by high pressure cleaning. In extreme cases, the shaft can be cut between every other ring, and pressed out using a hydraulic press. Intermediate bearings should be extracted on the side where the shaft has been turned. Note which way the bearing faces to ensure correct fitting of a new one.

**Fig. 7:**



Reverse procedure for assembly.

Check that the rings on one shaft fit exactly between the rings of the opposite shaft.

Slacken and tighten the stop ring screws a couple of times to ensure they obtain a firm grip.

Secure bearing screws with a drop of Loctite no. 270 before tightening.

### Replacing steel wire:

See section on fitting wire.

### Replacing towers:

See section on fitting towers (towing brackets for reversible plough)

**Scrapping:**

When finished with the machine, dismount as described under 'Repairs'.

**Rings are made of cast iron.**

**Shafts, ball bearings and steel wire** are made of special steel.

The rest is standard steel and can be recycled.