SEMI MOUNTED REVERSIBLE PLOUGH

USER GUIDE

ALPLER

ATTENTION

DO NOT
OPERATE THE MACHINES
BEFORE READING THIS MANUEL!

INDEX

WARNING SIGNS & MEANINGS

WARNING

This sign warms that the operations described could cause serious lesions or long term health risks, if they are not carried out correctly.

THE RISK OF FALLING DOWN

This symbol expresses the risk of falling down by loosing the balance or because of other causes.

READ MANUAL FIRST

Read the “Operating and Maintenance Manual” carefully before first start and keep the manual nearest.

KEEP CHILDREN AWAY

This symbol expresses to keep the children away against any risk.

Do not carry people or loads on the plough.

There is a danger of impact while plough is being turned. Stand away.

Be careful against the pointed and sharp edges on the plough.

Use the balance leg against danger of tipping over while detaching the plough from tractor.

Be careful against danger of entrapment.

Do not hammer or apply force.

Be careful against danger of entrapment between the tractor.

Locations which need to be greased in each use.

1. INTRODUCTION

Dear Farmer,

Firstly, we congratulate you for your correct preference on the way to efficiency by selecting the brand “ALPLER”. As your agricultural partner, we offer you our product in which we combined high quality, low operational cost and effective after-sale service concept.

All of “ALPLER” products are designed for the most efficient and the safest use and tested accordingly in cooperation with the relevant university departments, agricultural establishments and farmers. We request you to read the user manual before the first operation in order to use our product in a more effective manner as well as for product and your own safety. The failures that may result from using the product beyond the instructions for use specified in this manual are not covered by “ALPLER” warranty.

“ALPLER” products are manufactured for agricultural utilisation purposes only, and our company does not assume any liability against the conditions arising from misuse. Maintenance, repair and operation of our products must be carried out by those who were informed on the relevant and possible dangers.

Enjoy your new product and we wish you productive and fruitful years.

We hope to serve you for a long time...

CAUTION

If the product owner changes in the future, please submit this manual to the new owner of the product and inform on safety measures.

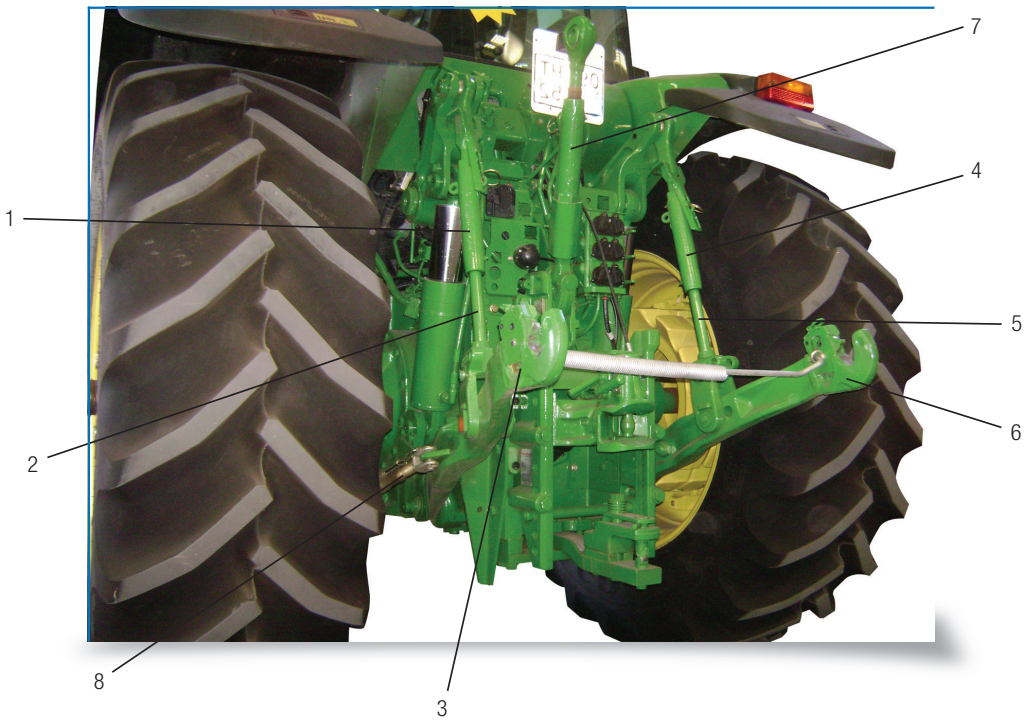
2. SAFETY RULES

2.1. RULES TO BE OBSERVED

1. Before moving, while attaching the plough to tractor please be sure that it is fixed and while detaching the plough be sure there is no connection left between the leveler and the tractor.
2. Before beginning to drive the tractor, check surroundings area (CHILDREN)!
3. Never stay or allow anyone to stay within the operating area.
4. Never stay in the turning and slew area of the implement!
5. The hydraulic pipes are under pressure!
6. When connecting hydraulic sockets, the pipes must be connected as directed.
7. Always release hydraulic pressure from both tractor and plough before attaching and detaching the plough
8. When connecting hydraulic pipes to the tractor ensure that incorrect connection is avoided. If the connections are reversed, the opposite function is carried out (e.g. raising/lowering) and there is a risk of accidents.
9. Regularly check the hydraulic pipes and replace the damaged or aged ones with the pipes comply with the technical specifications as described by ALPLER.
10. Do not operate the equipment with hydraulic oil leaking. Oil is flammable and their presence could present a hazard. Do not check for leaks with your naked hand! Hydraulic oil escaping at high pressures can penetrate the skin and cause injury. When injured see a doctor immediately. To check for a hose leak, SHUT the tractor ENGINE OFF and remove all hydraulic pressure. Wear oil impenetrable gloves and use a cardboard to check for evidence of oil leaks.
11. When working on tires make sure that the implement has been placed on the ground safely and that is secured by chocks against unintentional rolling
12. After each use, check all bolts and nuts if they need tightening, also for the missing ones, replace them with the original ones.
13. Sitting or standing on the implement during operation or during transport is not permissible.
14. Operator competence. The operator must be well acquainted with the
15. Different functions of the plough and be knowledgeable of how to operate it with safety
16. Ensure that the plough is locked with the correct locking pins onto the three-point linkage on the tractor.
17. Secure the lower link stabilizers on the tractor when the plough is transported on the road.
18. The brake pedals on the tractor must be locked together when driving on the road.
19. All hydraulic connections between tractor and plough must be made in accordance with the instructions given.
20. Always lift the plough prior to the turn-over action.
21. Make sure the lever for the turn-over action is in neutral prior to starting the tractor.
22. Never park the tractor with the plough in an uplifted position.Always use the support leg when parking the plough.
23. Never attempt to clean or adjust the plough during operation.
24. Never touch the gas valve on the accumulator.
25. Adapt the ploughing speed to suit the ground conditions. DRIVE CAREFULLY. Maximum transport speed 25 km/h.
26. The user is responsible for ensuring the implement complies with the law when diriving on public roads.

3. SETTINGS

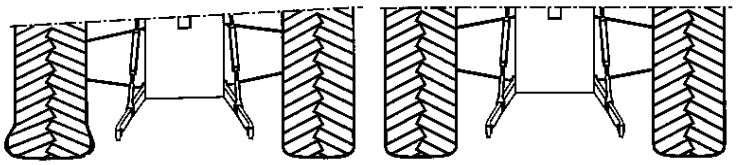
3.1. PREPARATION OF THE TRACTOR



1. Left lower link arm height adjustment mechanism
2. Left lower link arm height adjustment lever
3. Left lower link arm
4. Right lower link arm height adjustment mechanism
5. Right lower link arm height adjustment lever
6. Right lower link arm
7. Upper link arm (Middle arm)
8. Right lower link arm tensioning mechanism

3.1.1. TIRE PRESSURES

Both tyre life and optimum traction are achieved by using the correct tyre pressure. Over-inflation will increase wheel slip. Make sure that both rear tyres are inflated to the same pressure.



Wrong Right

3.1.2 FRONT BALLAST WEIGHTS

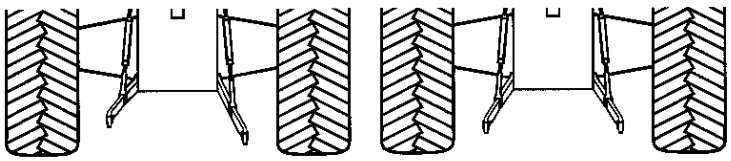
The front of the tractor should be fitted with balance weights as required to maintain optimal traction and directional stability.

3.1.3 LIGHTS

The tractor should be equipped with proper working lights when ploughing in the dark.

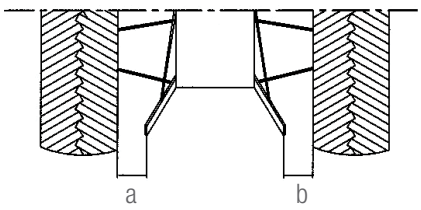
3.1.4 LIFT RODS

Adjust lift rods to equal length (See manufacturer's instructions)



Wrong Right

Adjust lift rods to equal distance from the tractor tyres and the distance between the rods should be appropriate for the plough connection pins.



a=b

3.2 MOUNTING THE PLOUGH FOR TRANSPORT POSITION

1- The hydraulic system of the tractor is set to position control
2- The plough is positioned to a suitable place so that the tractor approaches easily.

3. SETTINGS

3- The tractor is driven back and approached to the plough averagely.
4- The hitch handles are lifted so to meet the lower linkage points on the plough and the tractor is stopped. Firstly the lower linkage of the tractor should be attached to the plough and secured by the pin.
5- Before attaching the top link to the tractor, be sure that the chain on the plough to keep the head stock of the plough raised on parking position is taken away from the chain fixer. Attach the top link of the plough and secure by the pin.

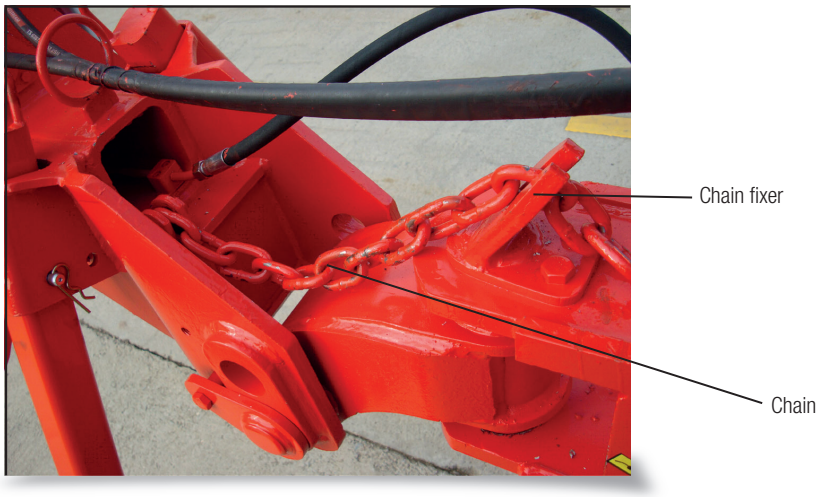


Figure 1

7- Check chains or Sway blogs of the tractor are tightened in order to prevent any blanks. In transport position, The plough should not be able to swing out and collide with the tractor wheels or fenders.
8- The plough can be fitted in two height positions. Position H gives more weight transfer to the tractor. Position L gives less weight transfer to the tractor. High weight transfer gives better traction but takes weight off the tractor's front axle. Suitable position is chosen considering front axle ballast and tractor type (See Figure 2).

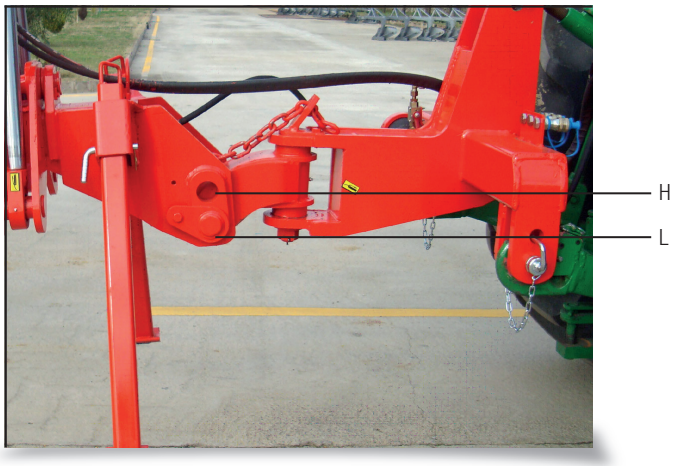


Figure 2

3. SETTINGS

The plough has three hydraulic hoses that are connected to the tractor.The two of the hydraulic hoses for the reversing mechanism are packed in one plastic cover.The remaining single hydraulic hose is to control the depth and transport tyre. Connect the hose to the cylinder for the depth and transport tyre to the tractor's single-acting hydraulic outlet. Connect the two hoses from the reversing cylinders to a double-acting outlet on the tractor (See Figure 3).

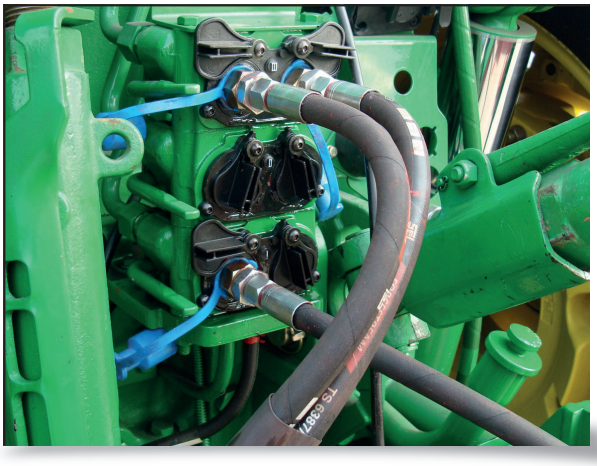


Figure 3

NOTE !

Always raise the plough fully before reversing is started. Do not reverse the plough before it is made sure that the reversing cylinders are filled with oil. (If the cylinder has not been filled with oil the plough falls without any restriction down against the adjustment screws, which can cause damage to the plough).

Fill the reversing cylinders with oil

Pressurize the cylinder starting the reversing; stop the reversing before reaching the intermediate position. Pressurize the other cylinder and let the plough frame down to the starting position. Repeat this a few times before a complete reversing is made. The cylinder filling process has to be done only one time before the first use or in case of any reason that the oil in the cylinder is leaked.

Function

Figure 4
Reversing cylinder Shut off valve (open position)

The turn-over action is achieved by the reversing cylinders that press the plough frame over the intermediate position, then the plough falls by its own weight restricted by the second cylinder letting the oil out through a restrictor valve. To achieve the turn over action, the shut off valves on the reversing cylinders must be open position. (See Figure 4)

3. SETTINGS

KEEP THE LEVER IN POSITION DURING THE COMPLETE REVERSING ACTION.
At next reversing the lever is pushed in opposite direction. The two cylinders are equipped with adjustable restriction valves controlling the speed of the second half of the reversing.

Troubleshooting	Fault Possible reasons	Check list
Plough does not reverse	Tractor oil level too low, or pressure too low	Top up with oil
	Quick couplings	Check that the quick couplings are the same type as on the tractor, correctly connected and not deductive
	Restriction valve is closed	Adjust the restrictor Valve
	Hydroulic hoses mounted wrongly	Check the hoses

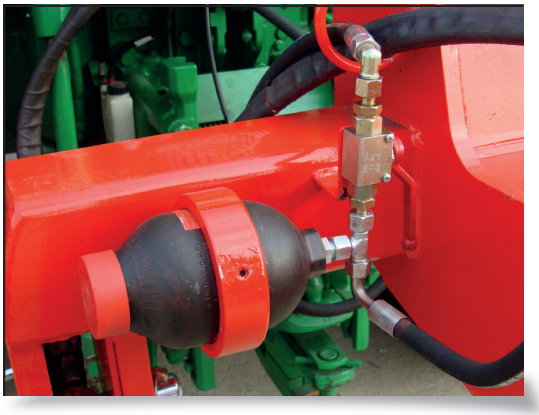


Figure 5
Tyre cylinder shut off valve (open position)

8- While transforming the plough to transport position, the plough must be raised to its maximum position by the tyre cylinder after the shut off valve opened on the cylinder (See Figure 5). Pressurize the cylinder till the plough is raised to its maximum position and then drop the pressure arm to its neutral position then move it slightly to opposite direction for few seconds. This will reduce the excessive pressure on the cylinder and act for the tyres as a shock observer while transporting the plough. Close the shut off valve on the tyre hydraulic system.

9- Finaly, reverse the plough half the arch to its top (butterfly) position (See Figure 6), then close all of the shut off valves on the cylinders.

Figure 6

4. BASIC SETTINGS

In ploughing position: The plough should be able to move slightly sideways (not being tensioned into place).

Attention!

Some tractors are equipped with automatic “check devices” which require special adjustments. If a tractor suddenly shows side draft or if the L/H and R/H front furrow width of the plough is different, an unlocked “check device” could be the reason for that. In such a case the function of the automatic “check device” must be checked. (See manufacturer’s instructions).

1. Open the shut off valves on the reversing cylinders (See Figure 4) and the tyre hydraulic system (See Figure 5) to transform the plough from butterfly position to working position.
2. While ploughing, the tractor top link should be leading towards the tractor.
3. The working depth adjustment for the rear and the front of the plough is done as fallows;

To reduce the working depth of the plough rear, the adjustment bolt placed on the tyre system should be turned clock wise, vice versa the working depth is increased by turning the bolt counter clock wise (See Figure 7). Since the hydraulic cylinder on the rear wheel is single acting, the hydraulic adjustment arm on the tractor should be keep pushing till the cylinder rests on the depth adjustment bolt.

Figure 7

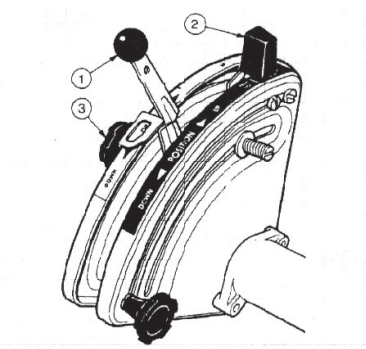


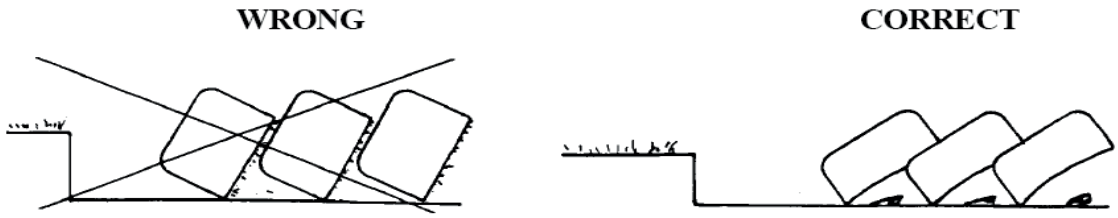
Figure 8

The working depth of the first body is adjusted from the tractor hydraulic (See part 1 in Figure 8). To assure the constant working depth for the first body, use either the automatic hydraulic fixer that is standard for most of the tractor models or the secure pin on the tractor control adjustment arm for lower linkage of the tractor (See part 3 in Figure 8).

4. The basic setting can be started when the desired ploughing depth has been reached and when the tractor wheels (right or left hand pair) are running in a furrow with the same depth.

4. BASIC SETTINGS

Select the correct depth, The working depth must always be proportional to the ploughing width, i.e. the maximum depth should not exceed 2/3 of the furrow width. This to ensure that the furrow slices are correctly balanced and turned over.

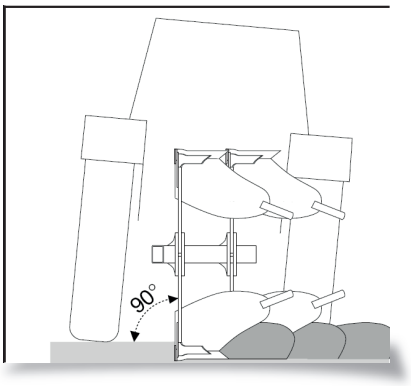


4.1 VERTICAL ADJUSTMENT

The tractor lower links must be at the same height to give the correct vertical angle. The vertical setting can be checked by observing the plough from the rear. The beams should be at right angle (90 °) to the ground.

The vertical adjustment is altered separately for the right and left hand side with the adjustment screws situated both at the back and at the front of the plough (See Figure 7 & 9).

ADJUSTING: Lift the plough out of the ground, turn the plough over, adjust the stop screw, turn the plough back over, lower the plough and continue ploughing.



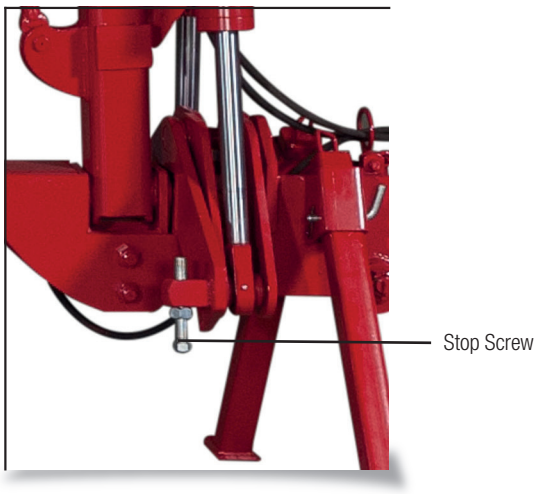
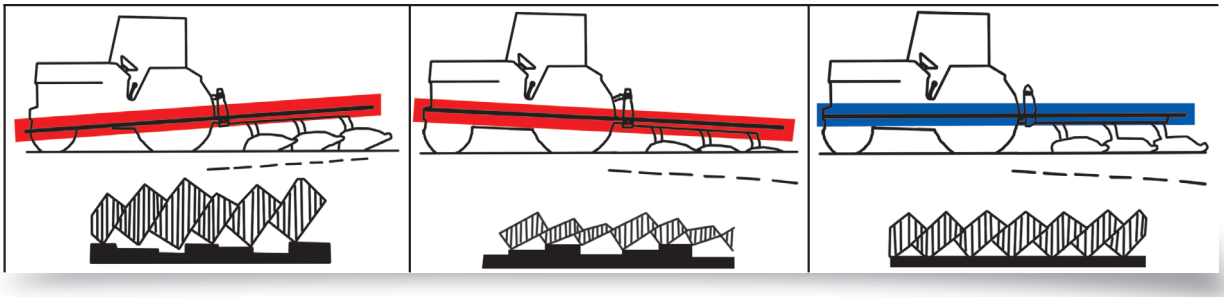


Figure 9

4.2 HORIZONTAL ADJUSTMENT

Adjust the ploughing depth for the rear of the plough with the Depth adjustment bolt (See Fig 7). Adjust the front of the plough to the same depth by means of the tree point hitch so that the plough frame is parallel with the ground. Do not use too much draft control which causes big differences in ploughing depth in the front of the plough.
Use mainly position control. The constant weight transfer from the plough is enough to avoid slipping tyres.



Tractor upper link arm shorter than required

Tractor upper link arm longer than required

Tractor upper link arm as it should be

4.3 FRONT FURROW WIDTH

Since the back tire distances of the tractors varies with respect to different tractor brands and models. This difference causes different front furrow width, to adjust the first furrow width for desired values for different tractor inter tire distances; the front furrow adjustment arm is used. If the first furrow width is less than the desired value, the adjustment arm should be shorten till the value is reached, vice versa if the front width is more than the desired value than the arm should be longer as necessary.

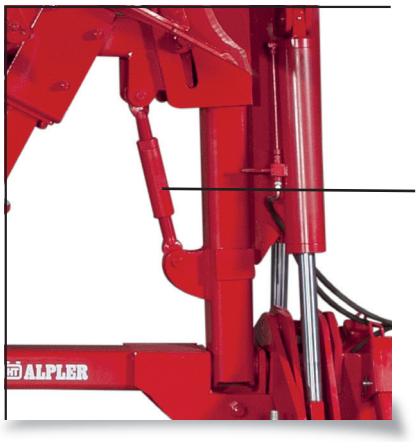


Figure 10

4.3 WORKING WIDTH ADJUSTMENT

The plough is designed for three position adjustable working width for 30-35-40 cm working width for each body. Each body can swivel around bolt A by removing the bolt D and insert it to other option holes C & E. To do this also the bolts A & B should be loosen to make the movement possible. After adjusting the new working width of the plough bodies, the direction of the tractor and the plough must be parallel to each other and this adjustment can be done from the adjustment arm F.

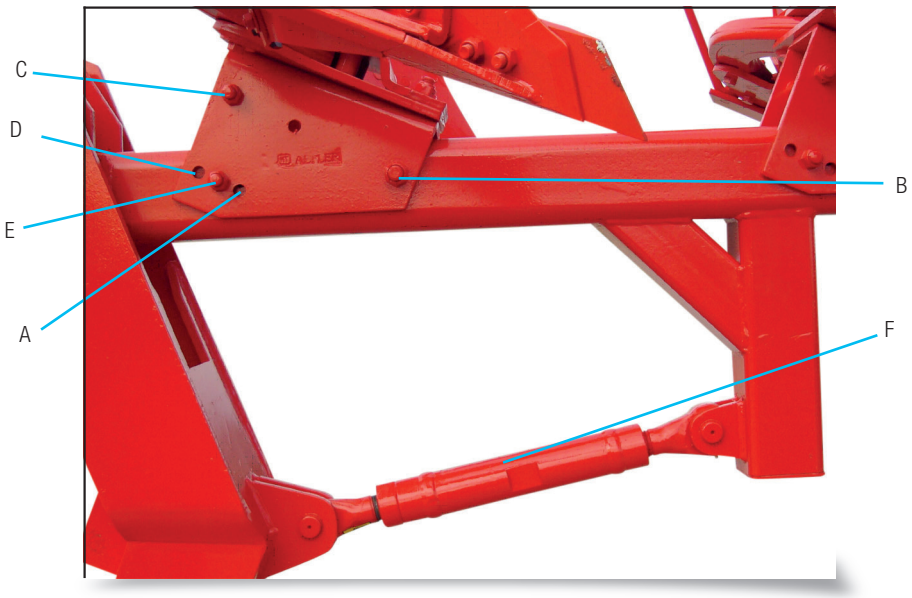


Figure 11

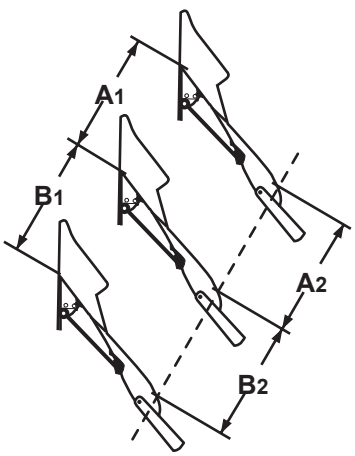


Figure 12

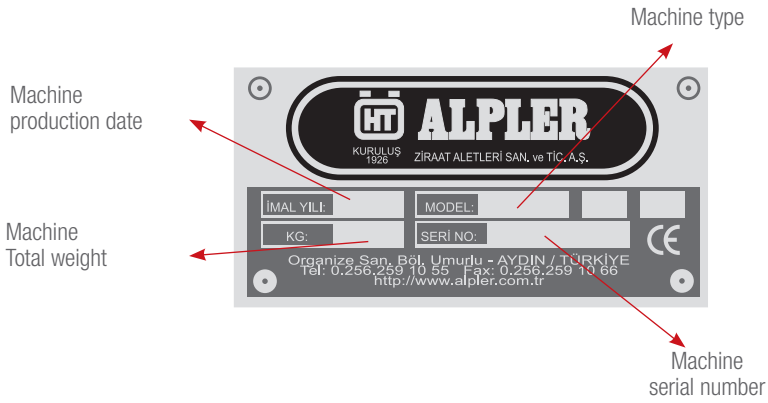
Note: Please note that the parallelism of the moldboards is important to obtain uniform furrow slices; to obtain this the adjustment of the moldboards must be done by the moldboard stay like shown in figure 12. This adjustment should be check each time the moldboard, landside, moldboard stay exchanged with the new ones.

Drive Straight!

Crooked furrows impose high stress on both tractor and plough, and contribute to an unsatisfactory result due to poor matching. Consequently, the furrows should be straightened as quickly as possible.

Always use the plough bodies alternately to equalize the wear on both right and left hand sides, otherwise, it will be impossible to produce uniform furrow slices on both sides.

5. WARRANTY



Use original spare parts in ALPLER branded products. The customer will be responsible for the problems that occur due to not using original spare parts. The Semi Mounted Reversible Plough will not covered by the warranty when non-original parts are installed on the machine, additional equipment is attached on the machine or it is used after removing standard parts.

While ordering spare parts, for the codes beginning with '0', machine serial number together with the part code should be provided. For other codes, it is not necessary to provide the machine serial number.

Label information are important for identifying the machine and for spare part orders. As a measure against the illegibility of the label due to deformation or its loss, label information on the machine should be written literally in the corresponding fields of the following label picture, and it should be retained.

Our Semi Mounted Reversible Ploughs are **warranted for 2 years** for faults that may occur due to material, workmanship and mounting errors.

Faults resulting from improper use are not covered by the warranty. The average lifetime is 10 years.

5. WARRANTY

WARRANTY CERTIFICATE

Warranted by ALPLER for a period of two years

BRAND: ALPLER
PRODUCT TYPE:
MODEL:
SERIAL NUMBER:
DATE OF PRODUCTION:

Seller's

Title:.....
Address:.....
Phone:.....
Fax:.....
Invoice Date:.....

Signature & Seal

Exports to 75 countries
on 5 continents.

ALPLER

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