

Dowdeswell

100 MR-FR

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This guide has been produced primarily for the Dowdeswell 100 Series MR (manual furrow width adjustment with auto-reset) plough available in three, four and five furrow versions.

The auto reset system is designed to prevent damage to the plough and its components when working in stony or flinty soils, or on land with obstacles such as tree roots, or in shallow soils over bedrock.

The Dowdeswell auto-reset system is unique in having a six ball and socket location system between the leg and beam. This enables the leg to trip back positively in any one of three directions (straight up or at 60 degrees to the left or right) and always be supported on two balls located in sockets. It also ensures positive and correct relocation when the leg returns to its normal working position, avoiding any risk of contract damage with other parts of the plough.

Another important feature of the Dowdeswell auto-reset system is its high fall-off load. This allows the leg to trip swiftly and smoothly once it has overcome the initial tension of its retaining spring. In practice, the plough point is able to move rearwards about 12in to absorb shock loads before the complete assembly trips, swinging back rapidly out of the soil to avoid damage to the plough or to the tractor. Resetting is fully automatic once the obstruction has been cleared.

Much of the following information particularly on the setting and maintenance of the break-back system is applicable to other Dowdeswell auto-reset ploughs.



! IMPORTANT

For best results and maximum safety, always refer to the operator's manual when adjusting, setting or servicing your Dowdeswell plough.

In The Yard

Before connecting the plough to the tractor, ensure that the tractor is fitted with appropriately ballast, that the tyre pressure are correct, that both lower lift arms are the same height from the ground and that the inside wheel track measurement is between 1.27m and 1.42m (50-56in).



When using an auto-reset plough, It is recommended that the top link is fitted to the elongated hole in the ploughs headstock (Pic 1), enabling the plough to move independently of the tractor in work. This is

beneficial on undulating or rough ground.

The standard underbeam clearance on a 100 Series MR plough fitted with DD bodies is 686mm (27in). This clearance has been shown to give the best all-round ploughing performance in most field conditions. it is important to note that the underbeam clearance will be affected if, for any reason, the pitch of the body is adjusted (Pic 2). The deeper the rear of the mouldboard is set, the less will be the distance from the beam to the point and vice versa.



N.B Dowdeswell auto-reset ploughs still have shearbolts. One is fitted to each leg to provide secondary protection in case the point becomes jammed beneath an immovable object such as a tree root or bedrock, preventing the leg from swinging back. Two shearbolts are available (Pic 3), red for normal

conditions, or a stronger black bolt for really tough going.



In The Field

Depending on soil conditions and stone content, it may be necessary to adjust the spring tension on the auto-reset mechanism. Under most Circumstances, the tension will need to be increased because the legs are tripping too easily. Occasionally, a reduction in spring tension may be required.



Tension is adjusted with the bodies in the ground using the turnbuckle at the rear of each large coil spring. Slacken the lock nut and rotate the turnbuckle (Pic 4) to lengthen or shorten the spring, the greater the force required to trip the body. Spring length is set at the factory to give a 3mm gap between the coils. In the field, it is easier to use a tape measure. Overall coil length should be set between 360mm and 420mm (14in –16.5in), (Pic 5).



Three mounting positions are provided for the plough's depth wheel. If the wheel is running too close to the rear furrow wall, its support arm can be relocated away from the ploughed land. If the wheel or mounting arm are sticking out too far, then the arm can be moved in. It is best to experiment in the field to determine the ideal position

NB: If a furrow press tow arm is bolted to the plough, but a press is not being used, move the arm away from the beam and lock it in its working position (Pic 6). Otherwise the bodies may trip back into the arm, causing damage to the arm, point or mouldboard.

REGULAR MAINTENANCE

The auto-reset assembly should be greased daily. There are two grease points at the rear of the mechanism on the spring's connecting rod ball joint and one on the front pivot rod (Pic 7).



The six balls and locating sockets between the leg and beam need to be greased periodically, say, two or three times a season. To access the sockets, begin with the plough on the ground and remove pressure on the springs by slackening the turnbuckle. Apart from the initial movement, do not move the locknut as this marks the point to where the turnbuckle must be returned to correctly retension the springs. Having removed spring pressure, lift the plough on the tractor linkage and "break- back" the leg and body assembly by physically pulling down on the mouldboard (Pic 8).



This will fully expose four cups which should be lightly greased before resetting the plough (Pic 9). Repeat on each body and then reverse the plough so that the remaining two locating sockets on the opposite side can be greased. Retighten the turnbuckles back to their locknuts and secure.

NB: There are a total of 13 grease nipples on the plough including four on the depth wheel. An often overlooked grease point is on the main pivot pin just behind the mounting bracket (Pic 10).



If in doubt, always consult the operator's manual or call your supplying dealer or the Dowdeswell sales office at the address given below.



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