

OWNER'S MANUAL MODEL 5240 25" DOUBLE SIDE JOINTING PLANER



#### WARRANTY

Thank you for your purchase of a genuine Oliver woodworking machine. Oliver Machinery has made every attempt to provide a machine that is safe and durable. All Oliver products are guaranteed, to the original customer, to be free from defects for one year from the date of purchase. Oliver Machinery will repair or replace, at its option, any component that fails under normal use. Please note that the customer is responsible for returning the failed component to Oliver Machinery prepaid for inspection. This warranty does not cover damages caused by misuse, accident, unauthorized repair, alteration or improper maintenance.

### WARNING

Read this manual thoroughly before operating the machine. Oliver Machinery disclaims any liability for machines that have been altered or abused.

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#### 1. SAFETY

Read this manual completely and observe all warning labels on the machine. Oliver Machinery has made every attempt to provide a safe, reliable, easy-to-use piece of machinery. Safety, however, is ultimately the responsibility of the individual machine operator. As with any piece of machinery, the operator must exercise caution, patience, and common sense to safely run the machine. Before operating this product, become familiar with the safety rules in the following sections. Feel free to contact your local dealer with any safety concerns.

#### 1.1 GENERAL WOODWORKING SAFETY RULES

- 1. Read the owner's manual completely before operating the machine.
- 2. Observe the warning labels on the machine.
- 3. Use the machine for its intended purpose only.
- 4. Obtain training before operating the machine.
- 5. Do not operate this machine while under the influence of drugs, alcohol or medication.
- 6. Make certain the machine is electrically grounded and that all electrical connections are secure.
- 7. Wear eye protection and hearing protection when operating this machine.
- Keep the floor and area around the machine free of sawdust, oil, scrap materials, rags or other items to minimize the risk of slippage and/or injury.
- 9. Make certain the area around the machine is well lighted.
- 10. Utilize guards and other safety features whenever possible. Keep all guards and safety features in good working order.
- 11. Do not wear loose clothing, neckties, rings, watches, bracelets or other items that could become caught in the machine. Keep long hair contained, and keep shirtsleeves above the elbow.
- 12. Attach adequate dust collection to the machine, and wear dust protection masks when appropriate.
- 13. Never leave the machine running unattended. Always wait until the machine has come to a complete stop before leaving it.
- 14. Remove all wrenches and adjustment tools prior to starting the machine.
- 15. Disconnect the machine from power before making any adjustments.
- 16. Use extension tables or a helper when working with large pieces.

## 1.2 SPECIFIC WOODWORKING SAFETY RULES FOR DOUBLE SIDE JOINTING PLANERS

- 1. Make certain that the knives are sharp, rust free and in good working order.
- 2. Always feed stock from the infeed side to the outfeed side. Never feed stock backwards through the machine.
- 3. Never place your hands under the workpiece. They could become trapped between the table and the workpiece.
- 4. Do not try to remove a workpiece after the machine has started to feed. Instead, turn off the machine, raise the carriage and then remove the piece.
- 5. Do not feed stacked material.
- 6. Turn the machine off before clearing chips and shavings.
- 7. Do not feed wood that contains loose knots, nails, staples or other foreign materials.

## **2** Machine Specifications

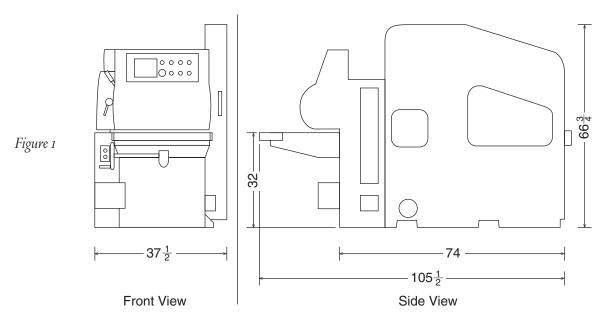
This machine was designed to cut hardwoods, softwoods, and most panel products. Do not use this machine for any other purposes. **Table 1** describes the specifications of the Oliver 5240 double side jointing planer.

5240	Bottom Cutterhead Motor	20 HP
	Top Cutterhead Motor	15 HP
	Feed Motor	3 HP
5	Table Height Motor	1/2 HP
SN	Maximum Stock Width	25"
SPECIFICATIONS	Maximum Stock Thickness	7.75"
	Minimum Stock Length	12"
	Feed Speed	Variable, 21-66 FPM
IF.	Knife Size	14.6 x 14.6 x 2.5 mm
SPEC	Knives per Cutterhead	164
	Electrical	3 Phase, 220/440 V
	Gross Weight	7900 lbs.

An overall dimensional sketch of the assembled 5240 is given in **Figure 1**.

**DIMENSIONS** All dimensions in inches.

Table 1



## 3. SETUP

Before unpacking the machine, check it carefully for signs of shipping damage. If damage is suspected, contact your dealer immediately.

## 3.1 UNPACKING THE MACHINE

Carefully uncrate the machine. Again, inspect the unit for signs of shipping damage. If damage is found, contact your dealer immediately. For protection against shifting, the double side jointing planer was bolted to the shipping pallet in four places (see **Figure 1**). Remove these bolts before lifting the planer off the pallet.

The machine may be lifted from the pallet by forklift or crane (see **Figure 2** and **Figure 3**). Retain all packaging materials in case it becomes necessary to ship the machine back to the dealer or to another site.



Figure 1



Figure 2



Figure 3

## 3.2 MACHINE PREPARATION AND SETUP

Situate the double side jointing planer on a smooth, level surface. Install the leveling feet in the four corners of the machine, as shown in **Figure 4**. Use a level to ensure that the planers bed is level from front to back and left to right.

Note: Even if your shop floor is level, installation of the leveling feet will improve stability and reduce vibration.

A protective anti-rust agent was applied to the non-painted cast iron and steel components of this double side jointing planer. This should be removed with a soft cloth and kerosene. Do not use paint thinner. Do not allow the kerosene to come into contact with electrical cords or connections.

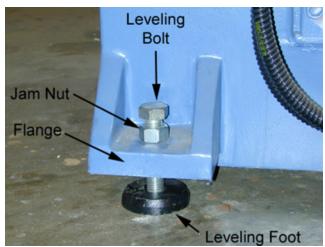


Figure 4

# 3.3 Installation of Dust Collection

The Oliver 5240 double side jointing planer is equipped with two 6" dust collection ports, one for each cutterhead. Make certain to secure all dust hoses to the dust ports with hose clamps or similar devices.

- Attach a dust collection hose to the dust chute for the bottom cutterhead. This chute is located at the lower right side of the machine, as shown in **Figure 5**. The operator may find it helpful to open the side door when making this connection.
- 2. Attach a dust collection hose to the dust chute for the top cutterhead. This chute is located at the top, rear of the machine, as shown in **Figure 6**.



Figure 5



Figure 6

## 3.4 ELECTRICAL CONNECTIONS



ELECTRICAL CONNECTION MUST BE MADE BY QUALIFIED PERSONNEL ONLY.

This double side jointing planer has been pre-wired to accept 3-Phase, 208-230V. Maximum current draw is approximately 100 amps. Oliver Machinery recommends the use of a 4-gauge, 4-conductor electrical cable.

- The electrical connections are made in the electrical panel at the lower left side of the machine. See Figure 7.
- 2. Open the door of the electrical panel. Slide the electrical cable through the hole at the lower left side of the electrical box.
- 3. Connect the 3 power wires at the *terminal block* shown in **Figure 8**. The ground wire must be connected at the *grounding terminal block* shown in **Figure 8**.

Note: If the 3-Phase power in your shop consists of one high leg and two low legs, then you must connect the high leg to terminal T.

- The properly installed electrical cable should look like Figure 9.
- 5. Close the door to the electrical panel and secure it with the handle.



Make certain that your machine is properly grounded. Failure to do so can lead to injury or death.

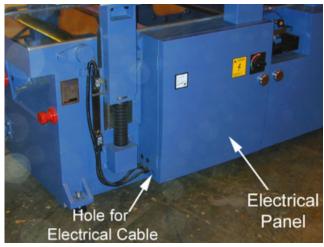


Figure 7

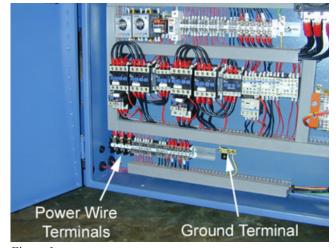


Figure 8

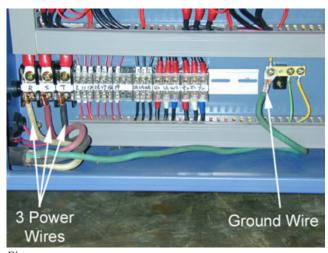


Figure 9

## 4. Explanation of Controls

This section is designed to be a quick overview of all the levers, handwheels, buttons, etc. on the Oliver 5240 double side jointing planer. A general description of each item follows **Figure 10**. Detailed instructions on the use of these controls can be found in Sections 3 and 5.

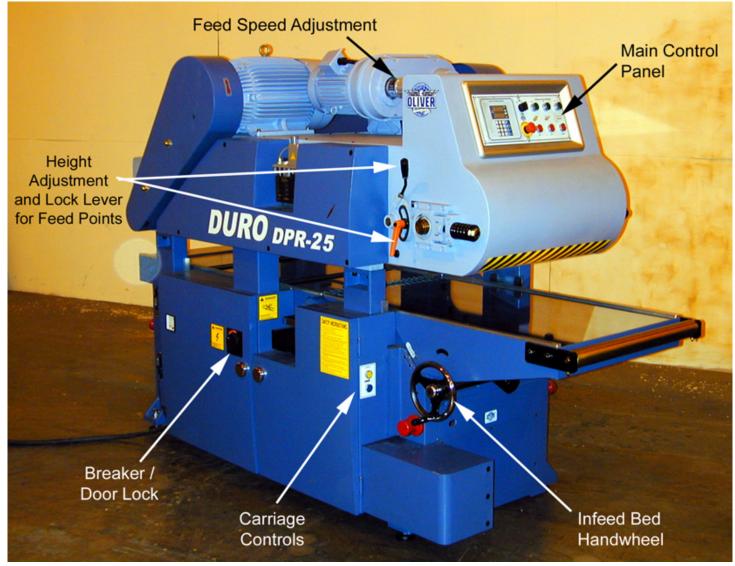


Figure 10

#### Main Control Panel

This is the main control panel for the double side jointing planer. It contains several items: global ON/OFF controls for the machine, ON/OFF controls for both cutterheads, ON/OFF controls for the feed system, digital thickness controls and an emergency stop button.

#### Feed Speed Adjustment

By rotating this knob the feed speed can be adjusted from 21 to 66 feet per minute. Note that the scale on the knob displays values from 1 to 11 (21 to 66 fpm).

#### Height Adjustment and Lock Lever for Feed Points

The black handle shown in Figure 10 is the adjustment lever for the vertical position of the spring-loaded feed points of the feed system. The entire bed of feed points can be moved up or down to decrease or increase the amount of pressure applied to the workpiece. The orange lever is the lock lever for this height adjustment.

#### Breaker / Door Lock

This door lock is actually a 100 amp breaker for the machine. In order to open the door of the electrical panel, the breaker must be switched off.

#### Carriage Controls

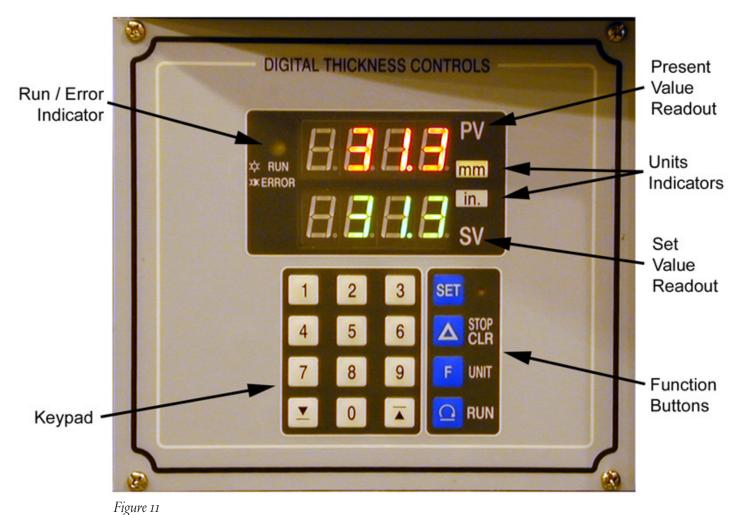
This pair of buttons is used to move the carriage up or down. The operator may wish to move the carriage when cleaning chips, setting the planer to an approximate thickness or when cleaning the machine's bed.

#### Infeed Bed Handwheel

This handwheel is used to raise or lower the infeed bed. This is how the depth of cut, taken by the lower cutterhead, is adjusted.

## 5. Operating the Double Side Jointing Planer

The following sections describe the steps to several common procedures performed when using the Oliver 5240 double side jointing planer. These instructions are not meant to replace training by an experienced user.



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#### 5.1

#### DIGITAL CONTROLLER OPERATION

#### Run / Error Indicator

This indicator light will illuminate a steady yellow when the table is moving up or down. This light will blink if there is an error of any sort. The indicator light is currently unlit.

#### Keypad

The keypad is used to input set values (the operator's desired thickness setting). The up and down arrows can be used to move the table up or down without keying in an exact numerical thickness value.

#### Present Value (PV) Readout

This LED readout displays the current thickness setting of the machine. The readout currently displays a value of 31.3.

#### Set Value Readout (SV)

This LED readout displays the value input by the operator on the keypad. The readout currently displays a value of 31.3.

#### **Units Indicator**

The digital thickness controls are capable of operating and displaying in either inches or millimeters. The controller is currently displaying information in millimeters.

#### **Function Buttons**

Four function buttons are available to the user: SET, STOP/CLEAR, UNITS, and RUN. The use of these buttons is detailed in the following sections.

### 5.1.1 CHANGING UNITS OF MEASURE

- 1. The digital thickness controller in **Figure 12** shows a *present value* of 55.0mm.
- 2. Press the SET button once, and two changes will occur. First the present value will change to "uuuu". Second the SET button *indicator light* will illuminate, see **Figure 13**.
- 3. Now press the UNIT button once. The present value should read 2.17, and the "Inches" indicator light should be illuminated, as shown in **Figure 14**.

Note: To change back to millimeters from inches follow the same procedure — press the SET button then UNIT button.



Figure 12



Figure 13



Figure 14

### 5.1.2 SETTING THE CONTROLLER TO A SPECIFIC THICKNESS

- 1. The digital thickness controller in **Figure 15** shows a *present value* of 2.25 inches.
- 2. Key-in the desired thickness setting on the *keypad*. The desired thickness setting will be displayed as the *set value*. For this example, a thickness setting of 3.50 inches has been keyed into the controller (see **Figure 16**).
- 3. Press the *RUN button*. This will cause the carriage to move up or down (up in this example) until the set value is achieved.
- 4. While the carriage is moving, you will notice that the *run indicator light* is illuminated, see **Figure 17**.



DO NOT FEED MATERIAL THROUGH THE PLANER WHILE THE RUN LIGHT IS ILLUMINATED!



Figure 15



Figure 16



Figure 17

#### 5.1.3

#### CALIBRATING THE DIGITAL THICKNESS CONTROLLER

Calibrating or "re-zeroing" the controller is an important process to understand when operating the Oliver 5240. The controller should be recalibrated in a variety of circumstances: whenever knives are rotated or replaced, when setting up the machine for the first time or whenever the operator feels that the machine is not planing to exactly the proper thickness.

The steps that follow describe a convenient way to recalibrate the digital thickness controller on your Oliver 5240 double side jointing planer. The following sections will describe the use of a *calibrating board*, this is simply a rectangular board that will be run through the planer several times to help verify planing thicknesses. The ideal calibrating board would be made of hardwood (any wood that will plane uniformly), measure approximately  $23" \times 30" \times 1"$  (width x length x thickness), possess smooth, evenly planed faces and be of uniform thickness.

- Set the infeed table to zero, so that the bottom cutterhead does not remove any material.
- 2. Use the UP button on the *carriage controls* (or the UP button on the *digital thickness controls*) to move the carriage to the highest possible position. (This will be approximately 8", even if the *digital thickness controller* displays otherwise.)
- With the cutterheads and feed system NOT running, place your *calibrating board* on the infeed table and slide it into the machine, as shown in **Figure 18**.
- 4. Use the DOWN button on the *carriage controls* to move the carriage down so that the *pressure fingers* are approximately 1/32" above the *calibrating board*, as shown in the close-up photo in **Figure 19**.
- 5. Remove the calibrating board from the planer.
- 6. Turn the cutterheads and feed system ON.
- 7. Use the DOWN button on the to move the carriage down 0.05", as indicated by the Present Value (PV) on the digital thickness controller.
- 8. Run the calibrating board through the planer.
- 9. If the planer does not plane the top of your board, move the carriage down 0.02" and re-run the board.
- 10. Repeat Step 8 until the double side jointing planer lightly planes the entire top surface of your calibrating board.



Figure 18

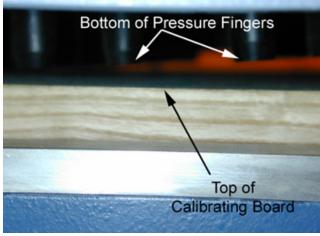


Figure 19

- 11. Measure the thickness of your evenly planed calibrating board using an accurate, reliable device, as shown in **Figure 20**. In this example the measured thickness displayed on the calipers is 0.8410".
- 12. Again reference Figure 20, note that the PV on the controller in our example indicates a current thickness of 1.11". But, from Step 11, we know that this readout should display a value of 0.8410".
- 13. Enter the measured thickness value from Step 11 on the keypad. In our example, the operator would enter 0.84". The value keyed-in will be displayed as the SV (Set Value). See **Figure 21**.
- 14. Press the SET button. The PV readout will now display "uuuu". Also, the SET indicator light will be illuminated. See **Figure 22**.
- 15. Press the SET button again.
- 16. That is all. The PV and SV readouts should now both display the measured thickness of your calibrating board. (0.84" in our example.) See **Figure 23**.

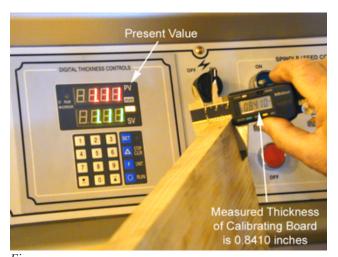


Figure 20



Figure 22



Figure 21



Figure 23

#### 5.2 Changing Feed Speed

The Oliver 5240 double side jointing planer is capable of feeding stock from 21 to 66 feet per minute. The feed speed is controlled by the variable position pulley transmission mounted on top of the planer.

The transmission is capable of approximately 80 different feed speeds between 21 and 66 FPM. There are two scales on this unit – both are reference scales for feed speed. The *side scale* displays value between 0 and 10. The *front scale* displays values between 0 and 12 with 12 graduations (clicks) between major divisions.



Make feed speed adjustments only while the feed system is running!

Refer to **Figure 24**, rotate the *speed control knob* clockwise to decrease the speed and counter-clockwise to increase the speed.

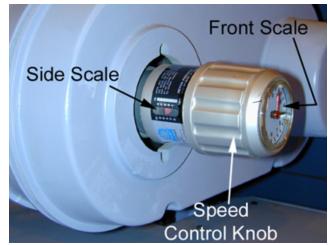


Figure 24

## 5.3 ADJUSTING CUTTING THICKNESS/SETTING DEPTH OF CUT

The Oliver 5240 double side jointing planer has two cutterheads. The first cutterhead is positioned *below* the workpiece. This cutterhead will remove material from the bottom of the workpiece. The second cutterhead is positioned *above* the workpiece. This cutterhead will remove material from the top of the workpiece.

The clearest way to describe the "thickness setting" procedure is through an example. Read the following procedure – keep in mind that the exact dimensions of your workpieces will vary.

In this example, we will begin with a 1-1/4" thick piece of rough lumber. We want the final product to have a thickness of 1". Therefore, we want the double planer to remove 1/4" of material. For this example, we will remove 1/8" from the bottom and 1/8" from the top of the board.

- 1. Enter the desired final thickness of the board into the digital controller. In our example [1.00]. Refer to **Figure 25**.
- 2. Determine how much material should be removed from the bottom of the workpiece (1/8" in our example). Use the *handwheel* and *scale* shown in **Figure 26** to move the *infeed bed* to the proper position.
- 3. We know that our rough lumber was 1-1/4" thick to begin. In Step 2, we adjusted the infeed bed such that 1/8" of material will be removed from the bottom of the board. From Step 1, the final thickness entered into the controller was 1.00". Therefore, we know that the remaining 1/8" of material will be removed by the upper cutterhead.



Figure 25

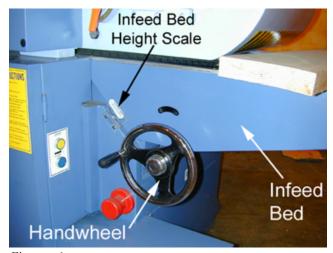


Figure 26

## 5.4

#### REPLACING KNIVES IN THE CUTTERHEAD

The Oliver 5240 double side jointing planer possesses two identical spiral cutterheads. Each cutterhead contains six rows of knives. There are four rows of 27 knives and two rows of 28 knives, for a total of 164 knives per cutterhead. These cutterheads were designed to use a 14.6  $\times$  14.6  $\times$  2.5 mm knife with rounded corners. Each square knife possesses 4 cutting edges, so each cutter can be used 4 times before being replaced.

Note: Oliver Machinery recommends that these insert knives NOT be re-sharpened. The knives should be used on all four sides then discarded.

### 5.4.1 PROCEDURE FOR TOP CUTTERHEAD



DISCONNECT THE MACHINE FROM POWER BEFORE ROTATING OR REPLACING KNIVES!

- Figure 27 shows the rear of the planer. Loosen the two bolts shown in Figure 27, and then remove the dust chute.
- 2. With the dust chute removed the *cutterhead* and the *knives* are exposed, see **Figure 28**.

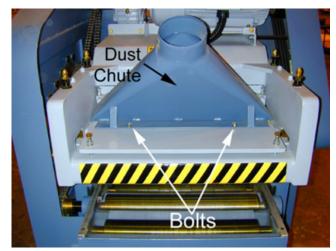


Figure 27

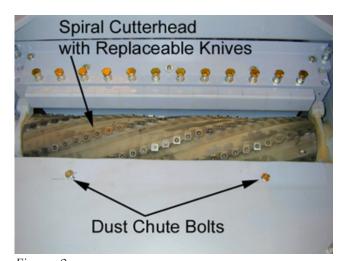


Figure 28

- 3. The operator can now rotate or replace the knives using a Torx wrench (included in the tool kit).
- 4. **Figure 29** shows a closeup of the cutterhead. Notice the *indexing marks* on each knife. Set a practice in your shop to always rotate the knives clockwise. When the index mark is next in the upper left position (after 4 rotations), it is time to replace all the knives.
- 5. After rotating/replacing all knives, re-install the dust chute from Step 2 and secure it with the two bolts.

### 5.4.2 PROCEDURE FOR BOTTOM CUTTERHEAD



DISCONNECT THE MACHINE FROM POWER BEFORE ROTATING OR REPLACING KNIVES!

- 1. Begin by opening the *door* on the right side of the double side jointing planer. See **Figure 30**.
- 2. Unhook the two *latches* of the *belt cover* (see **Figure 31**).
- 3. Fold open the *belt cover* to reveal the *cutterhead*, *pulley* and *vee belts*. See **Figure 32**.
- 4. Use the *belt tension lever* to create slack in the belts as shown in **Figure 32**.



Figure 31

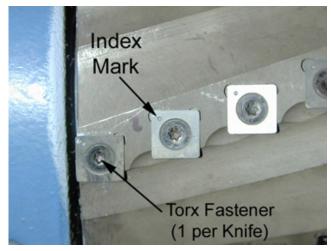


Figure 29



Figure 30

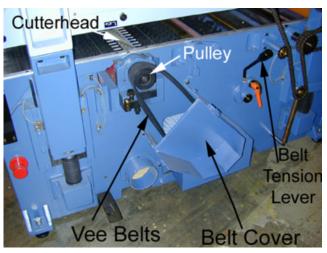


Figure 32

- 5. Carefully pull the *vee belts* off the *pulley*, as shown in **Figure 33**.
- 6. Loosen the *lock bolt* shown in **Figure 33**.
- 7. Move to the left side of the double side jointing planer. Loosen the *lock nut* shown in **Figure 34**.
- 8. Pull the cutterhead out to the side of the machine using the *handle* shown in **Figure 34**.
- 9. Once the cutterhead is pulled to the side of the machine, the scene should look like **Figure 35**.
- 10. Engage the *cutterhead lock* shown in **Figure 35**. This will keep the cutterhead from rotating while the knives are being rotated or changed.
- 11. The operator can now rotate or replace the knives using a Torx wrench (included in the tool kit).

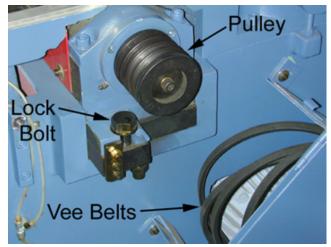


Figure 33



Figure 34



Figure 35

- 12. **Figure 36** shows a closeup of the cutterhead. Notice the *indexing marks* on each knife. Set a practice in your shop to always rotate the knives clockwise. When the index mark is next in the upper left position (after 4 rotations), it is time to replace all the knives.
- 13. After all knives have been rotated/replaced, disengage the cutterhead lock.
- 14. Slide the cutterhead back into the machine. Tighten the lock nut from Step 8.
- 15. Move back to the right side of the machine. Replace the vee belts use the belt tension lever from Step 5 to re-tension the vee belts.
- 16. Tighten the lock bolt from Step 7.
- 17. Replace the belt cover and lock it down using the latches from Step 3.
- 18. Close and secure the right side door from Step 2.

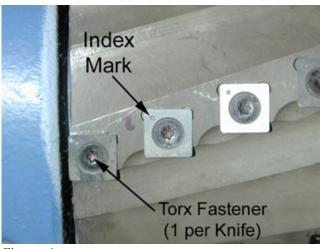


Figure 36

## 5.5 BED ROLLER ADJUSTMENT

the bed.

There are three bed rollers on the 5240 double side jointing planer. The bed roller height is set at the factory.

The bed rollers should be 0.1 to 0.2mm above the surface of

Should adjustment be necessary, a measuring gage has been included with this machine. The height of the bed rollers can be changed by using the adjustment nut/bolts shown in **Figure 37**.

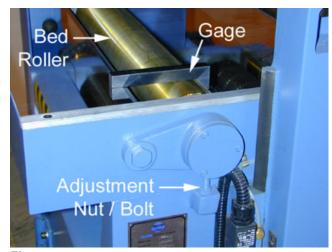


Figure 37

## 5.6 LOWER CUTTERHEAD HEIGHT ADJUSTMENT

The top of the lower cutterhead's cutting circle should be at the same height as the outfeed table. The lower cutterhead height is set at the factory.

Should adjustment become necessary, a measuring *gage* has been included with the machine — see **Figure 38**. The height of the *lower cutterhead* can be adjusted by using the *nut/bolts* shown in **Figure 39**.

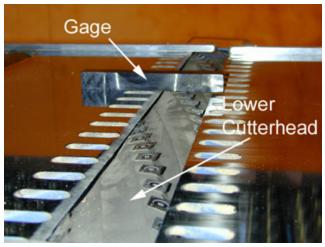


Figure 38

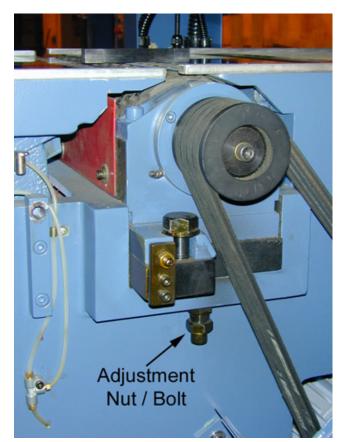


Figure 39

### 5.7 CHIPBREAKER HEIGHT ADJUSTMENT

The bottom of the segmented chipbreaker should be at the same level as the bottom of the cutting circle of the upper cutterhead. This is adjusted at the factory.

Should adjustment be necessary, the chipbreaker assembly can be raised or lowered using the two *bolt/nuts* shown in **Figure 40**. To access these adjustment bolts, the rear dust chute must be removed.



The bottom of the pressure bar should be set approximately 0.5mm below the lowest point of the upper cutterhead's cutting circle. This is adjusted at the factory.

Should adjustment be necessary, the height of the pressure bar can be adjusted by using the *bolt/nuts* shown in **Figure 41**.

## 5.9 OUTFEED ROLLER HEIGHT ADJUSTMENT

The bottom of the outfeed rollers should be set approximately 0.5mm below the lowest point of the upper cutterhead's cutting circle. This is adjusted at the factory.

Should adjustment be necessary, the height of the outfeed rollers can be adjusted using the *bolt/nuts* shown in **Figure 42**.

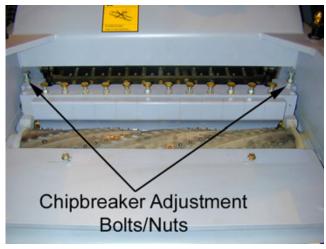


Figure 40



Figure 41

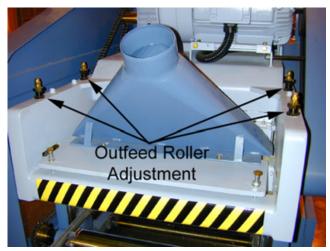


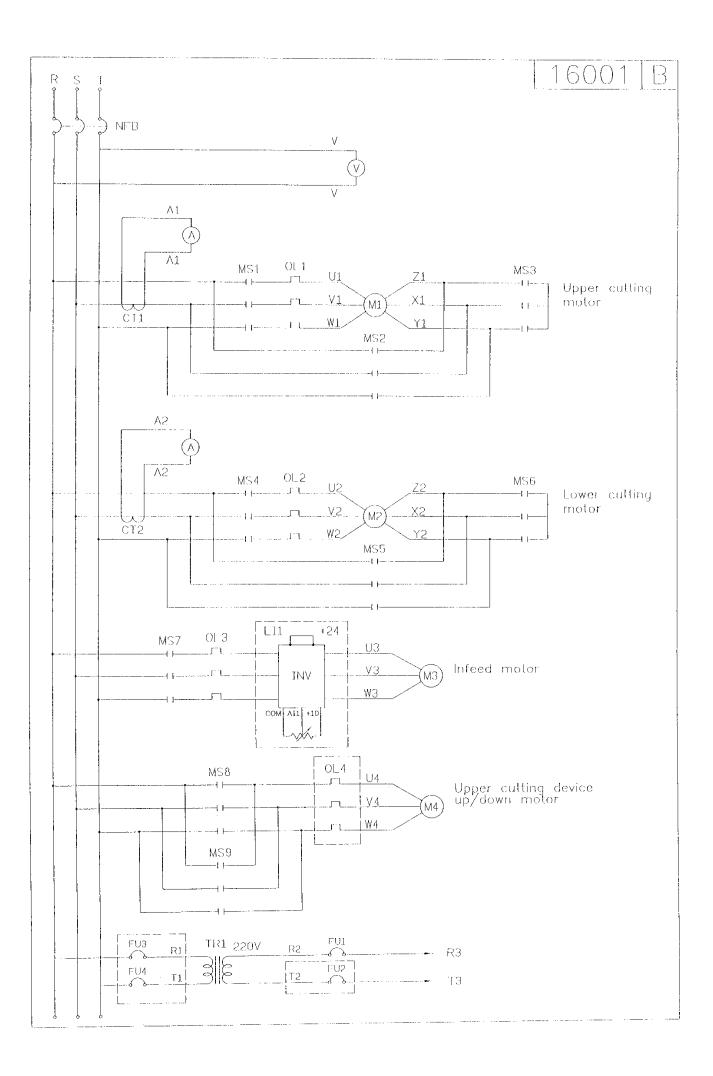
Figure 42

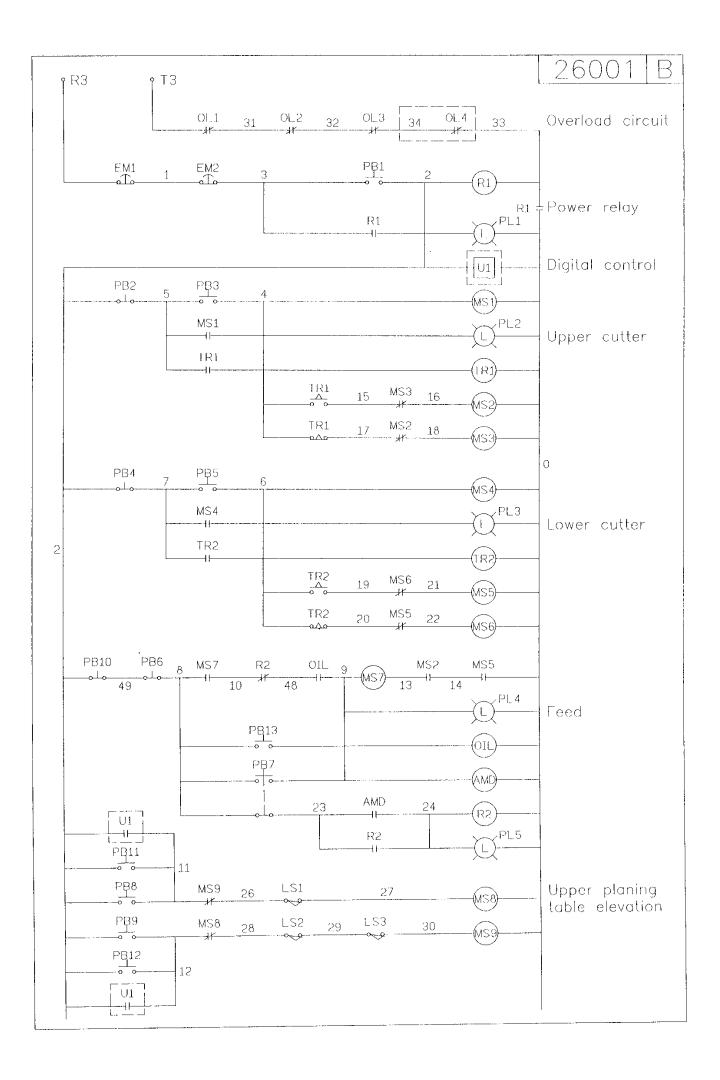
## 6 Maintenance

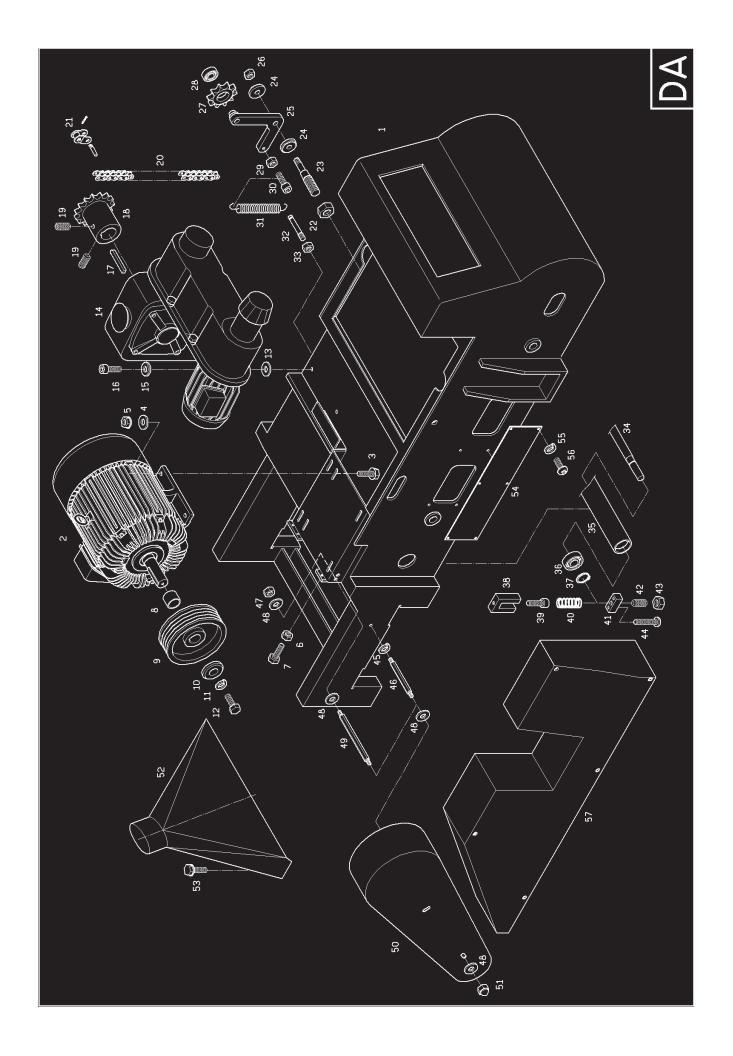
Maintenance Item	Daily	Weekly	Monthly	Annually	As Needed
Lubricate feed chains and sprockets with a lightweight					
chain oil (such as Mobil® Vactra Oil #2)		X			
Remove sawdust and chips	X				
Check lubricant level in automatic lubrication reservoir					
– if low, fill with a lightweight chain oil					
(such as Mobil® Vactra Oil #2)		X			
Check lubricant level in the manual pump lubrication					
reservoir – if low, fill with a lightweight chain oil					
(such as Mobil® Vactra Oil #2)		X			
Check tension on upper and lower cutterhead vee belts			X		
Lubricate oil cups on the left and right sides of the					
infeed bed ways with a lightweight chain oil					
(such as Mobil® Vactra Oil #2)			X		
Lubricate the left and right bearings of the upper and					
lower cutterheads with a multipurpose grease					
(such as Mobil® Mobilith AW2 grease)			X		
Lubricate the left and right bearings for the feed rollers					
with a multipurpose grease					
(such as Mobil® Mobilith AW2 grease)			X		
Lubricate the gibs and ways of the carriage with					
hand pump lubricator			X		
Replace the gear box oil with a multipurpose gear oil					
(such as Mobil® SHC 630)				X	

## 7 Trouble-Shooting

Description of Symptoms	Possible Cause	Corrective Action
Machine will not run	No power	Check the electrical connections
	Emergency Stop button is depressed	Release the Emergency Stop button
	Breaker/Door handle is turned off	Turn the breaker to the ON position
	Overloaded thermal relay tripped	Reset the thermal relays
Poor surface finish	Dull knives	Rotate or replace all insert knives
	Feed speed too fast	Reduce the feed speed
	Removing too much material	Make two passes instead of one
Material not feeding smoothly	Dull knives	Rotate or replace all insert knives
	Feed speed too fast	Reduce the feed speed
	Removing too much material	Make two passes instead of one
	Chipbreaker set too low	Raise the chipbreaker
	Pressure bar set too low	Raise the pressure bar
Snipe at the beginning or end	Bed rollers set too high	Adjust bed rollers
of boards	Chipbreaker improperly set	Adjust chipbreaker
	Pressure bar improperly set	Adjust pressure bar

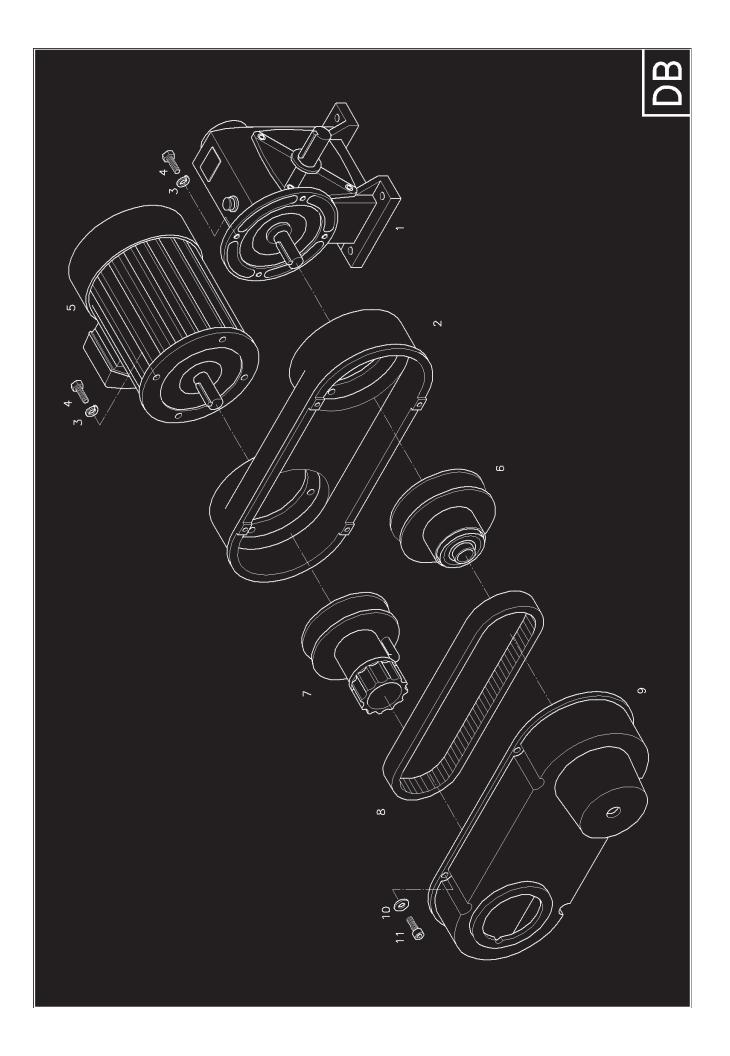




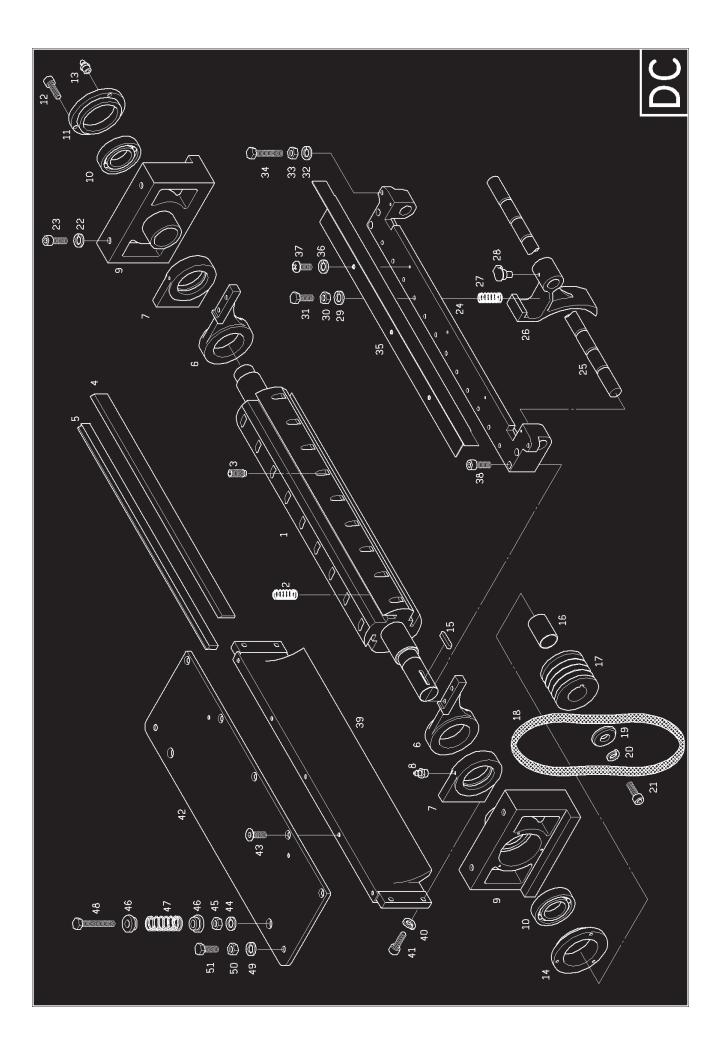


Upper Planning Table Unit (DA) (DP01-201)				
Oliver Model: 5240				
Key No.	Part No	Description	Specification	Q'ty
1	DP010001	Upper planning table		1
2	DP010002	Motor		1
3	Н	Hex HD Bolt	M10x35	4
4	Н	Flat Washer	ψ21xψ11.7x2	4
5	HC011000	Hexagon nut	M10	4
6	HC011000	Hexagon nut	M10	2
7	HA010633	Hex HD Bolt	M10x55	2
8	DP010003	Bush		1
9	DP010004	V-belt pulley		1
10	DP010005	Washer		1
11	HE022000	Spring washer	M16	1
12	Н	Hex HD Bolt	M16x35	1
13	Н	Filat Washer	ψ34xψ13x3	4
14	DP010006	Variable speed unit		1
15	Н	Flat Washer	M10x	4
16	HA020733	Socket HD Bolt	M12x55	4
17	DP010007	Key		1
18	DP010008	Chain Gear		1
19	HA030508	Set Screw	M8x16	2
20	DP010009	Chain		1
21	DP010010	Joint		1
22	HC011900	Hexagon nut	M22	1
23	DP010011	Shaft		1
24	Н	Flat Washer	Mxx	2
25	DP010012	Link		1
26	Н	Hexagon nut	M12	1
27	DP010013	Gear (Chain Wheel)	3/4"x10T	1
28	Н	Bearing	6002Z	1
29	HC010600	Hexagon nut	M6	1
30	HA020410	Socket HD Bolt	M6x20	1
31	DP010014	Spring		1
32	DP010015	Shaft		1
33	HC011200	Hexagon nut	M12	1
34	DP010016	Shaft		1
35	DP010017	Roller		1
36	HJ022100	Bearing	6203ZZ	2
37	HF011000	Retaining ring	S12	2
38	DP010018	Adjustment piece		2
39	HA020510	Socket HD Bolt	M8x20	2

40	DP010019	Spring		2
41	DP010020	Fixing piece		2
42	HA030616	Set Screw	M10x30	2
43	HC011000	Hexagon nut	M10	2
44	HA040713	Round HD Screw	M6x25	2
45	HE021500	Spring washer	M12	1
46	DP010021	V-belt guard shaft		1
47	HC011200	Hexagon nut	M12	1
48	Н	Flat Washer	ψ34xψ13x3	6
49	DP010022	V-belt guard shaft	ĺ	1
50	DP010023	V-belt guard		1
51	DP010024	Cap HD Nut	M12	2
52	DP010025	Dust suction hood		1
53	Н	Hex HD Bolt	M8x25	2
54	DP010026	Plate		2
55	HE020900	Spring washer	M6	12
56	HA040705	Round HD Screw	M6x12	12
57	DP010027	Guard		1
58				
59				
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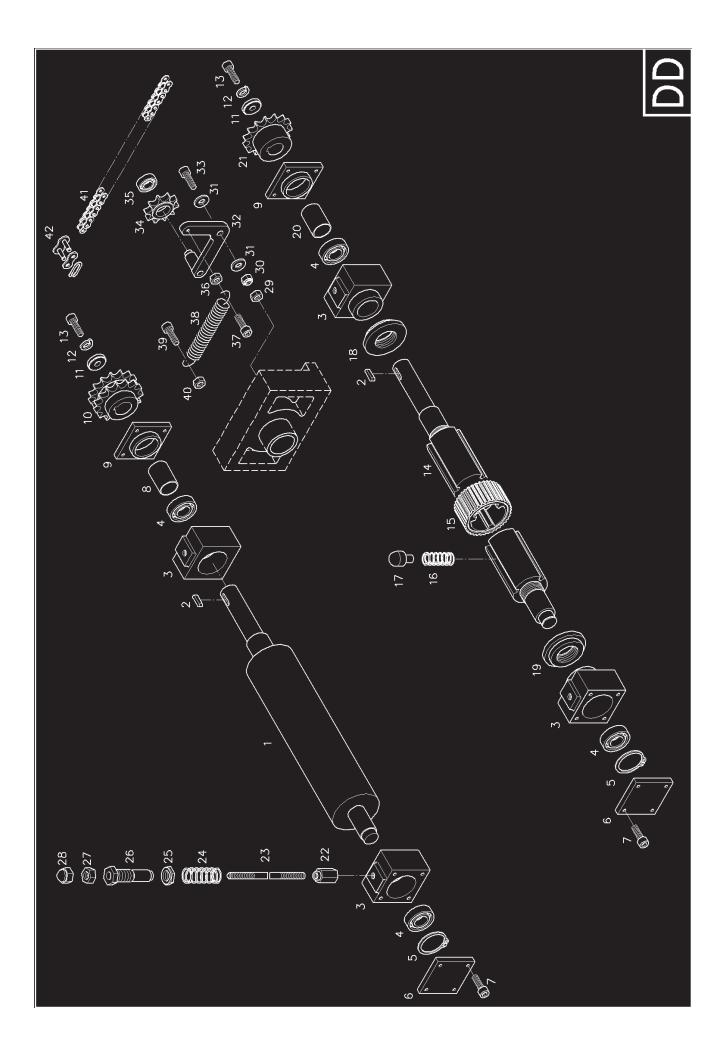


Upper Cutter Head Unit (DB) (DP01-				
Oliver Model: 5240				
	Part No.	Description	Charification	O'tr
Key No.	+	Description Warrange and a second	Specification HMW-100	Q'ty
1	DP010028	Worm gear reducer	HIVI W-100	1
2	DP010029	Rear cover	M10	1
3	HE021300	Spring washer	M10	8
4	HA010616		M10x30	8
5	DP010030	Motor		1
6	DP010031	Driven pulley		1
7	DP010032	Drive pulley		1
8	DP010033	Belt	1922V 376	1
9	DP010034	Front cover		1
10	Н	Flat Washer	ψ22xψ8.3x2.5	4
11	HA020516	Socket HD Bolt	M8x30	4
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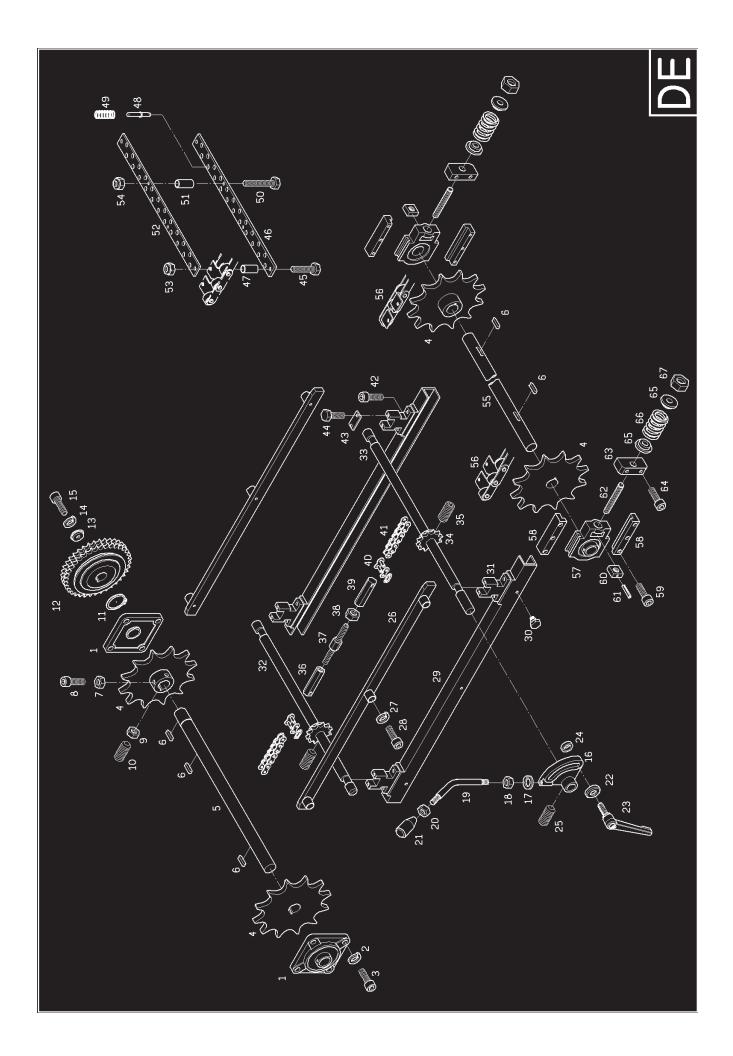
Upper Cutter Head Unit (DC) (DP01-203)				
Oliver Model: 5240				
Key No.	Part No.	Description	Specification	Q'ty
1	DP010035	Upper cutterhead		1
2	DP010036	Spring		8
3	HA0307169	Set screw	M12x30	36
4	DP010037	Knife		4
5	DP010038	Gib		4
6	DP010039	Pressure plate bracket		2
7	DP010040	Outfeed pressure plate bracket		2
8	DP010041	Grease nipple		2
9	DP010042	Bearing housing		2
10	HA0307169	Bearing	6308ZC3	2
11	DP010043	Bearing cap		1
12	HA020410	Socket HD Bolt	M6x20	6
13	DP010044	Grease nipple		2
14	DP010045	Bearing cap		1
15	HH013523	Key	8x8x40	1
16	DP010046	Bush		1
17	DP010047	Pulley		1
18	HK025800	Belt	A72	1
19	DP010048	Spacer		1
20	HE021300	Spring washer	M10	1
21	HA020619	Socket HD Bolt	M10x35	1
22	HE021500	Spring washer	M12	4
23	HA020722	Socket HD Bolt	M12x40	4
24	DP010049	Front pressure plate bracket		1
25	DP010050	Shaft		1
26	DP010051	Front bracket trunnion		12
27	DP010052	Spring		12
28	DP010053	Oil cap		12
29	HE021300	Spring washer	M10	12
30	HC011000	Hexagon nut	M10	12
31	HA010643	Hex HD Bolt	M10x65	12
32	HE021300	Spring Washer	M10	2
33	HC011000	Hexagon nut	M10	2
34	HA010679	Hex HD Bolt	M10x120	2
35	DP010054	Plate guard		1
36	HE020900	Spring washer	M6	5
37	HA040705	Round HD Screw	M6x12	5
38	HA020525	Socket HD Bolt	M8x45	4
39	DP010055	Outfeed plate		1

40	HE021100	Spring washer	M8	4
41	HA020519	Socket HD Bolt	M8x35	4
42	DP010056	Plate		1
43	HA090510	Flat HD SKT Bolt	M8x20	5
44	HE021300	Spring washer	M10	2
45	HC011000	Hexagon nut	M10	2
46	DP010057	Ring		4
47	DP010058	Spring		2
48	HA010659	Hex HD Bolt	M10x100	2
49	HE021500	Spring washer	M12	2
50	HE021500	Hexagon nut	M12	2
51	HA010742	Hex HD Bolt	M12x70	2
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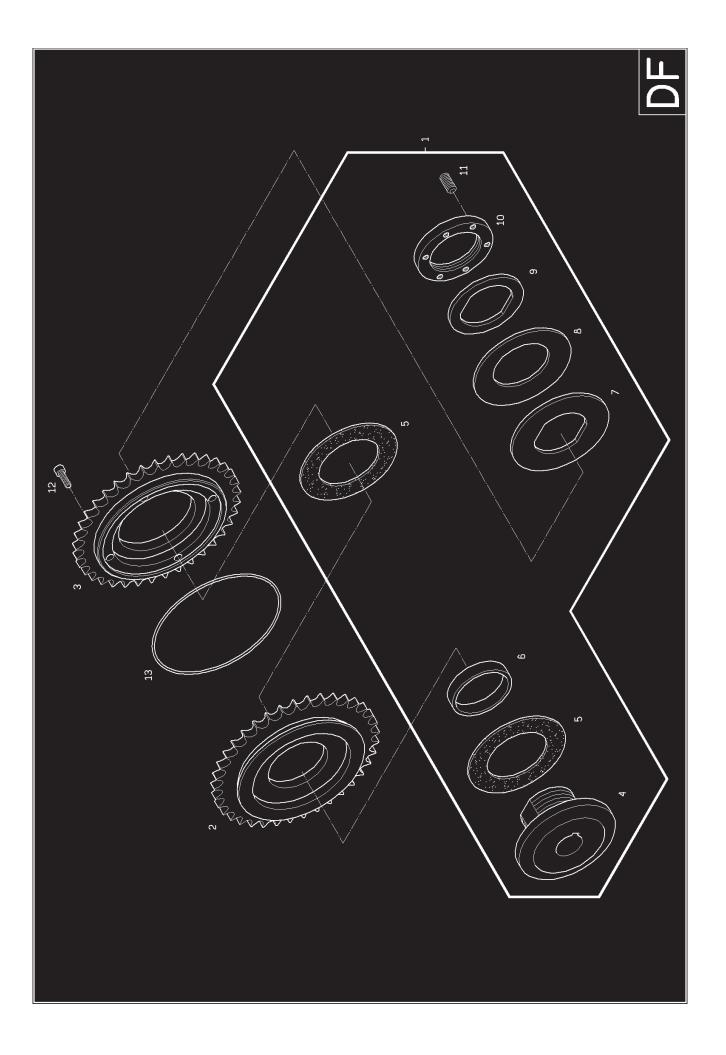
Pressure Roller Unit (DD) (DP01-204)				
Oliver Model: 5240				
Key No.	Part No.	Description	Specification	Q'ty
1	DP010059	Outfeed roller		1
2	HH013515	Key	8x8x30	2
3	DP010060	Bearing housing		2
4	HJ021100	Bearing	6206ZZ	4
5	HF012800	Retaining ring	S30	2
6	DP010061	Bearing cover		2
7	HA020408	Socket HD Bolt	M6x16	16
8	Н	Bearing		4
9	Н	Bushing		1
10	DP010062	Bearing Cover		2
11	DP010063	Chain wheel Gear)	5/8"x20T	1
12	Н	Spacer		2
13	Н	Spring washer	M10	2
14	HA020616	Socket HD Bolt	M10x30	2
15	DP010064	Corrugated shaft		1
16	DP010065	Corrugated wheel		12
17	DP010066	Spring		72
18	DP010067	Spring needle		72
19	DP010068	Wheel holder		1
		(right))		
20	DP010069	Wheel holder		1
		(left)		
21	DP010070	Bearing Housing		2
22	DP010071	Bushing		1
23	DP010072	Chain wheel	5/8"x20T	1
	DD010072	(Gear)		4
24	DP010073	Fix nut		4
25	DP010074	Adjustment screw		4
26	DP010075	Adjustment spring		4
27	DP010076	Adjustment nut		4
28	DP010077	Pressure adjust-		4
20	110011200	ment nut	M12	1
29	HC011200	Hexagon nut	M12	4
30	H	Domed cap nut	M12	4
31	HC011200	Hexagon nut	M12	1
32	HC011200	Hexagon nut	M12	1
33	H	Flat Washer	ψ34xψ13x3	2
34	DP010078	Link	N412 55	1
35	HA020733	Socket HD Bolt	M12x55	1
36	DP010079	Chain wheel	5/8"x12T	1
37	HJ020700	Bearing	6002ZZ	1

38	HC010600	Hexagon nut	M6	1
39	HA020413	Socket HD Bolt	M6x25	1
40	DP010080	Spring		1
41	HA020413	Socket HD Bolt	M6x25	1
42	HC010600	Hexagon nut	M6	1
43	Н	Chain		1
44	Н	Chain joint		1

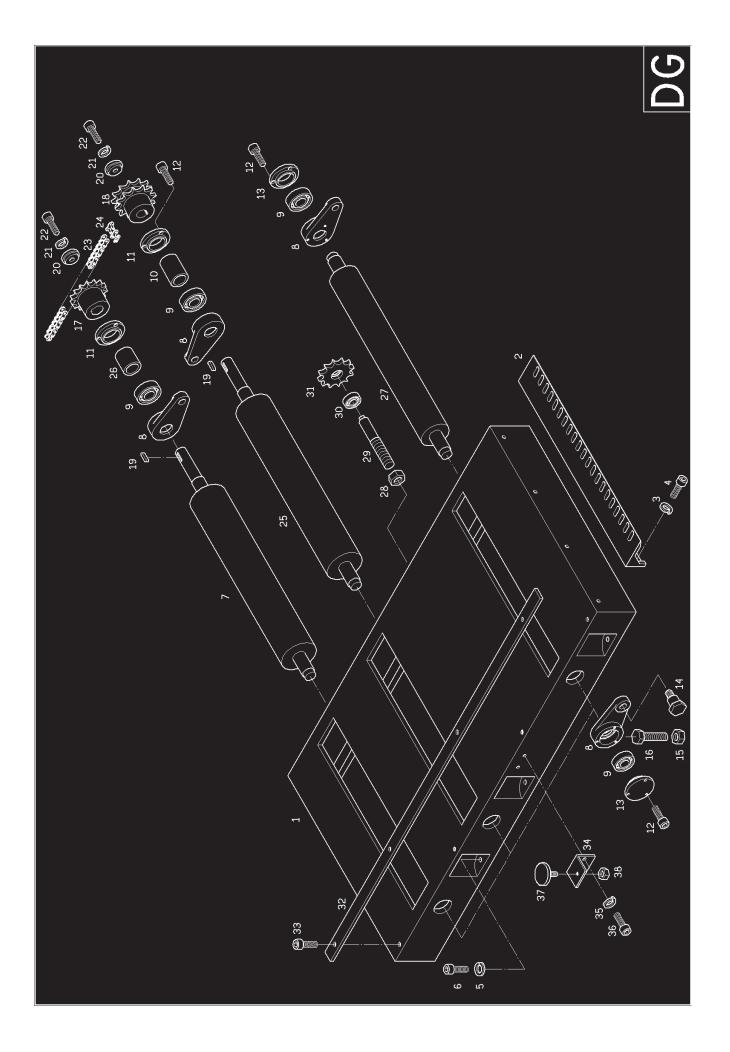


Spike Conveyor Unit (DE) (DP01-205)				
Oliver Model: 5240				
Key No	Part No	Description	Specification	Q'ty
1	DP010081	Flange bearing		2
2	HE021500	Spring washer	M12	8
3	HA020716	Socket HD Bolt	M12x30	8
4	DP010082	Spike chain wheel	10T	4
5	DP010083	Shaft		1
6	HH010923	Kay	10x10x40	5
7	HC011000	Hexagon nut	M10	4
8	HA020616	Socket HD Bolt	M10x30	4
9	HC011000	Hexagon nut	M10	4
10	HA030613	Set screw	M10x25	4
11	HF013200	Retaining ring	S38	1
12	DP010084	Torque limiter	??	1
13	DP010085	Fixing piece		1
14	HE021300	Spring washer	M10	1
15	HA020616	Socket HD Bolt	M10x30	1
16	DP010086	Adjustment base (Tension)		1
17	HE021500	Spring washer	M12	1
18	HC011200	Hexagon nut	M12	1
19	DP010087	Adjustment lever		1
20	HC011200	Hexagon nut	M12	1
21	DP010088	Hand knob		1
22	DP010089	Spacer		1
23	DP010090	Adjustable hand lever		1
24	DP010091	Spacer		1
25	HA030508	Set screw	M8x16	1
26	DP010092	Spike conveyor guide chute		2
27	HE021300	Spring washer	M10	6
28	HA020633	Socket HD Bolt	M10x55	6
29	DP010093	Spike conveyor upper bracket		2
30	DP010094	Fix screw		6
31	DP010095	Bracket		4
32	DP010096	Shaft		1
33	DP010097	Shaft		1
34	DP010098	Chain wheel	5/8"X15t	2
35	HA030504	Set screw	M8x10	4
36	DP010099	Tension adjustment nut		1
37	DP010100	Tension adjustment screw		1
38	HC010800	Hexagon nut	M8	1

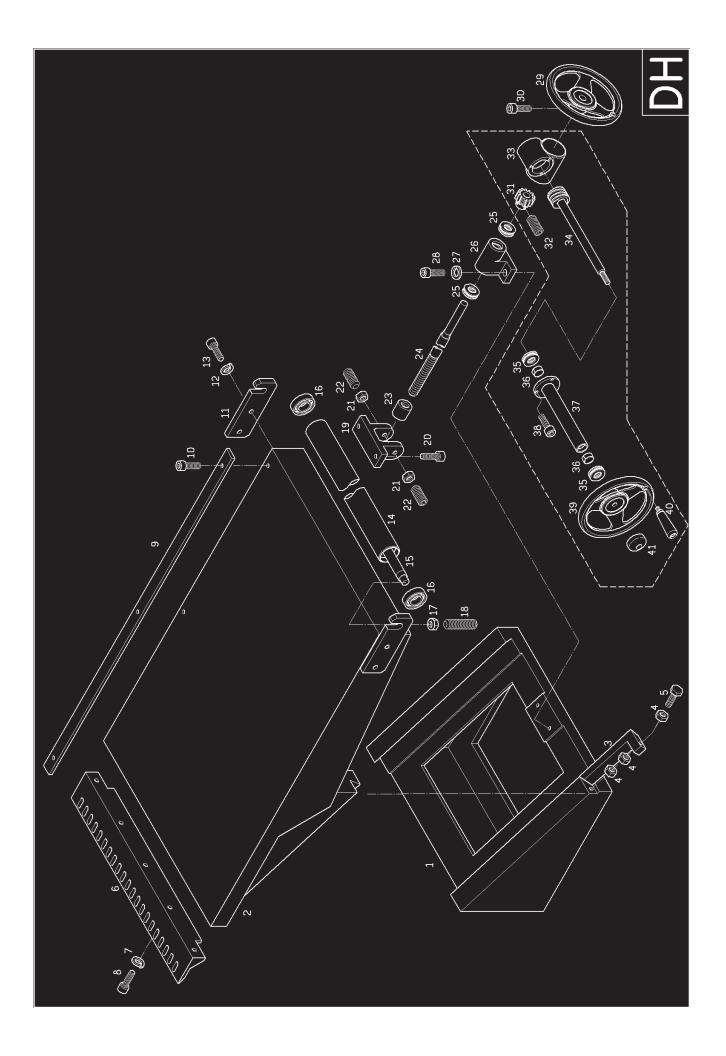
39	DP010101	Tension adjustment nut		1
40	DP010102	Chain joint		1
41	DP010103	Roller chain		1
42	HA020516	Socket HD Bolt	M8x30	8
43	DP010104	Plate		4
44	HA010510	Hex HD Bolt	M8x20	8
45	HA010537	Hex HD Bolt	M8x65	100
46	DP010105	Pin fix plate		50
47	DP010106	Bush		100
48	DP010107	Feed pin		1100
49	DP010108	Spring		1100
50	HA010637	Hex HD Bolt	M10x65	100
51	DP010109	Bush		100
52	DP010110	Pin fix plate		50
53	HC040800	Nylon Nut	M8	100
54	HC041000	Nylon Nut	M10	100
55	DP010111	Driven shaft		1
56	DP010112	Spike conveyor chain		2
57	DP010113	Flange bearing		2
58	DP010114	Slideway		4
59	HA020522	Socket HD Bolt	M8x40	12
60	DP010115	Fixing block		2
61	HG010914	Spring pin	ψ4x25	2
62	DP010116	Shaft Screw		2
63	DP010117	Bracket		2
64	HA020638	Socket HD Bolt	M10x50	4
65	DP010118	Ring		4
66	DP010119	Spring		2
67	HC012000	Hexagon nut	M20	2



Torque limiter unit (DF) (DP01-206)				
Oliver Model: 5240				
NO.	Part No	Description	Specification	Q'ty
1	DP010120	Torque limiter		1
2	DP010121	Chain wheel	5/8"x41T	1
3	DP010122	Chain wheel	3/4"x37T	1
4	DP010123	Body		1
5	DP010124	Lining		2
6	DP010125	Bush		1
7	DP010126	Friction piece		1
8	DP010127	Disk spring		1
9	DP010128	Pressure adjustment piece		1
10	DP010129	Adjustment nut		1
11	HA030508	Set screw	M8x16	6
12	HA020613	Socket HD Bolt	M10x25	4
13	Н	O-ring	AS-261	1

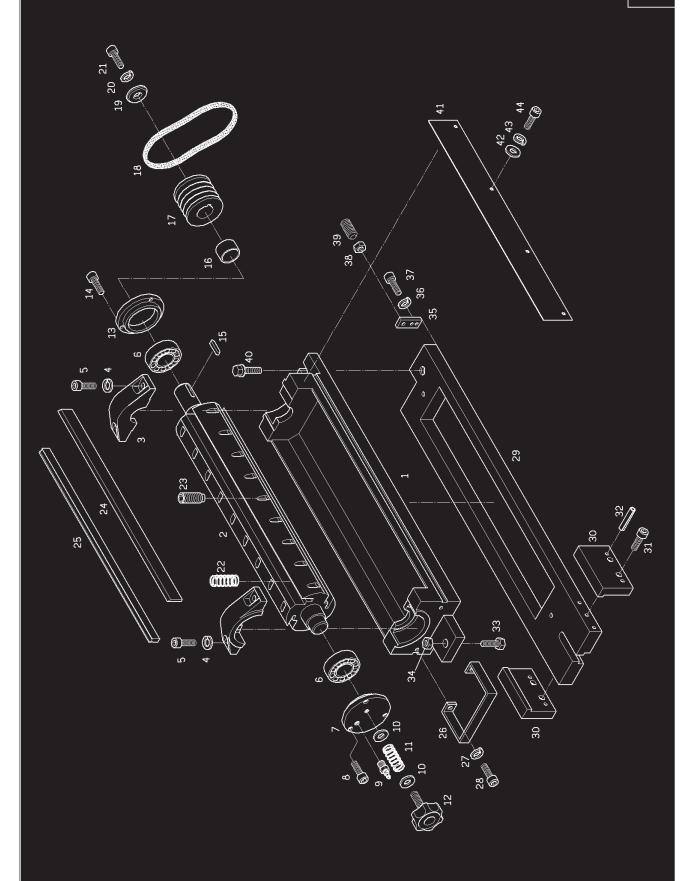


Rear working unit (DG) (DP01-207)				
Oliver Model: 5240				
Key No	Part No	Description	Specification	Q'ty
1	DP010030	Rear working table		1
2	DP010031	Outlet plate		2
3	HE021300	Spring washer	M10	5
4	HA020619	SocketH HD Bolt	M10x35	5
5	HE021300	Spring washer	M10	6
6	HA020619	SocketH HD Bolt	M10x35	6
7	DP010132	Roller		1
8	DP010133	Bearing housing		6
9	HJ021100	Bearing	6006ZZ	6
10	DP010134	Bush		1
11	DP010135	Bearing cover		2
12	HA020408	Socket HD Bolt	M6x16	18
13	DP010136	Bearing cover		4
14	DP010137	Fix screw		6
15	HC011000	Hexagon nut	M10	6
16	HA010633	Hex HD Bolt	M10x55	6
17	DP010138	Chain wheel	5/8"x20T	1
18	DP010139	Chain wheel	5/8"x20T	1
19	HH013515	Key	8x8x30	2
20	DP010140	Fixing piece		2
21	HE021300	Spring washer	M10	2
22	HA020616	Socket HD Bolt	M10x30	2
23	DP010141	Roller chain		1
24	DP010142	Chain joint		1
25	DP010143	Roller		1
26	DP010144	Bush		1
27	DP010145	Roller		1
28	HC012700	Hexagon nut	M27	1
29	DP010146	Shaft		1
30	HJ020700	Bearing	6002ZZ	2
31	DP010147	Chain wheel	5/8"x12T	8
32	DP010148	Fence		1
33	HA020408	Socket HD Bolt	M6x16	2
34	DP010149	Bracket		2
35	HE021100	Spring washer	M8	1
36	HA020510	Socket HD Bolt	M8x20	1
37	DP010150	Adjustment screw		1
38	HC011200	Hexagon nut	M12	1

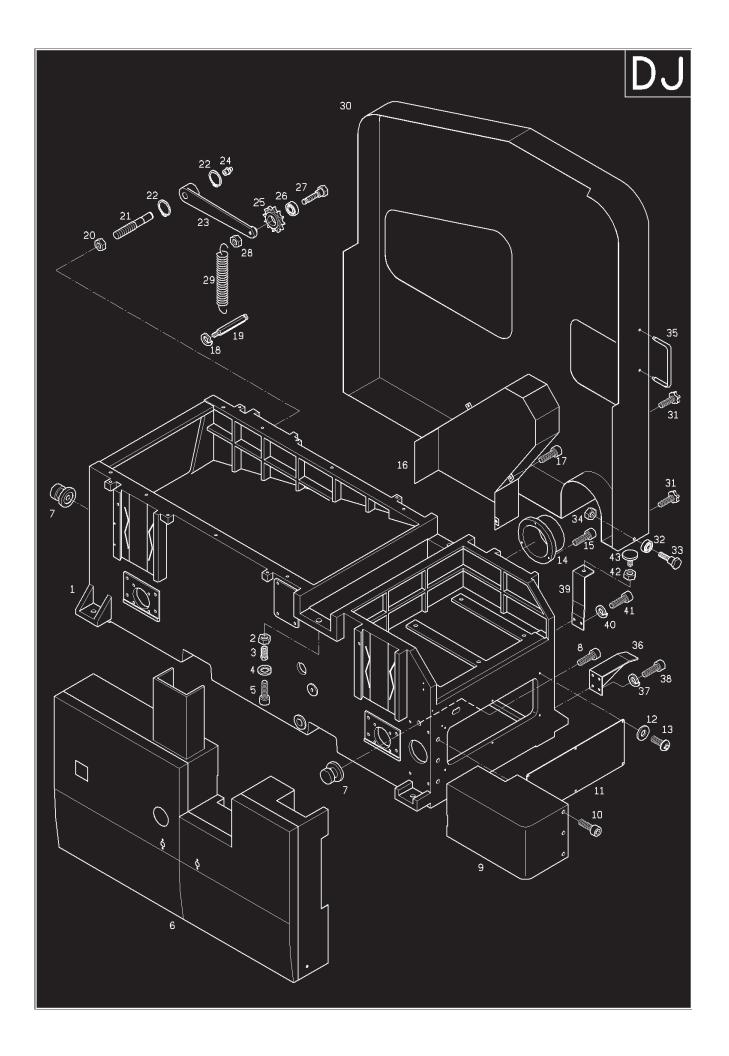


Infeed table unit (DH) (DP01-208)				
Oliver Model: 5240				
Key No	Part No	Description	Specification	Q'ty
1	DP010151	Table elevation base		1
2	DP010152	Infeed table		1
3	DP010153	Tapered gib		1
4	HC011000	Hexagon nut	M10	3
5	HC010659	Hex HD Bolt	M10x100	1
6	DP010154	Outlet plate		1
7	DP010155	Spring washer	M10	5
8	DP010156	Socket HD Bolt	M10x35	5
9	DP010157	Fence		2
10	HA020408	Socket HD Bolt	M6x16	6
11	DP010158	Roller bracket		2
12	HE021500	Spring washer	M12	4
13	HA020719	Socket HD Bolt	M12x35	4
14	DP010159	Roller		1
15	DP010160	Shaft		1
16	HJ022300	Bearing	6205ZZ	2
17	HC010800	Hexagon nut	M8	2
18	HA030522	Set Screw	M8x40	2
19	DP010161	Adjustment nut holder		1
20	HA020616	Socket HD Bolt	M10x30	2
21	HC011000	Hexagon nut	M10	2
22	HA030622	Set screw	M10x40	2
23	DP010162	Elevation adjustment nut		1
24	DP010163	Elevation adjustment screw		1
25	HJ0102800	Thrust ball bearing	2904	2
26	DP010164	Bearing housing		1
27	HE021300	Spring washer	M10	2
28	HA020619	Socket HD Bolt	M10x35	2
29	DP010165	Adjustment hand wheel		1
30	HA020613	Socket HD Bolt	M10x25	1
31	DP010166	Worm gear	19T	1
32	HA030504	Set screw worm box	M8x10	1
33	DP010167	Worm Box		2
34	DP010168	Worm Shaft		2
35	DP010169	Thrust Ball Bearing	2904	2
36	DP010170	Bushing		1
37	DP010171	Bearing Housing		3
38	HA020408	Socket HD Bolt	M6x16	1
39	DP010172	Hand Wheel		1
40	DP010173	Handle Knob		1
41	DP010174	Fixed Nut		1

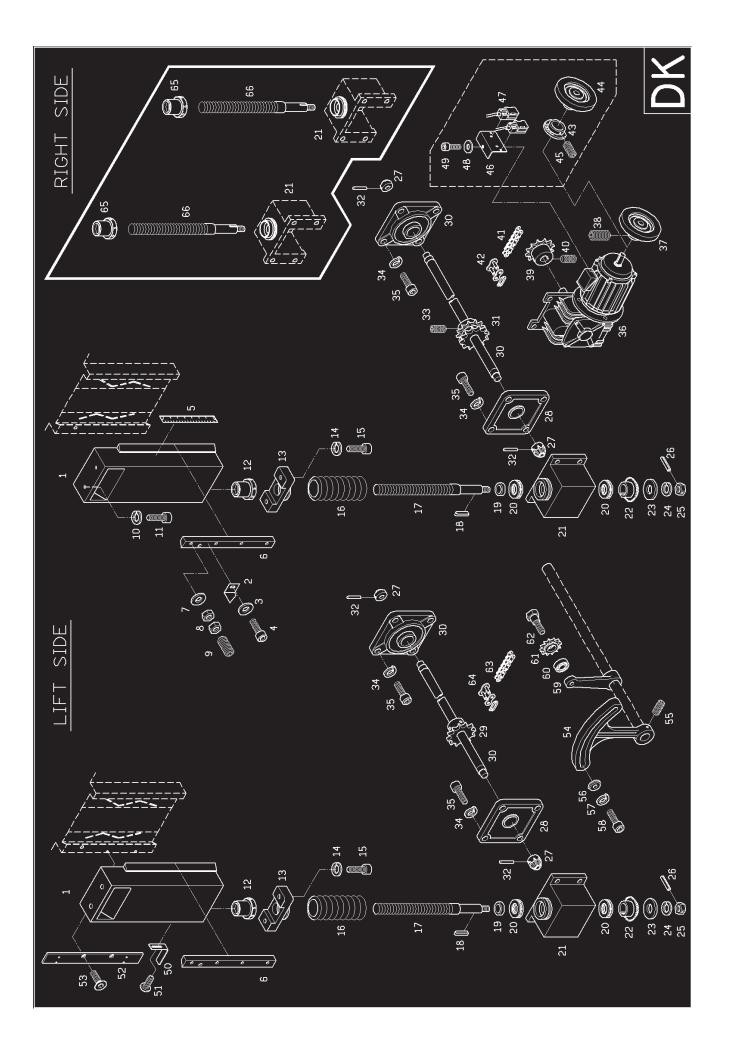




Lower Cutter Head unit (DI) (DP01-209)	Oliver Model:	5240		
Oliver Model: 5240				
Key No.	Part No	Description	Specification	Q'ty
1	DP010175	Cutterhead holder		1
2	DP010176	Cutterhead		1
3	DP010177	Bearing upper housing		2
4	HE021500	Spring washer	M12	4
5	HA020719	Socket HD Bolt	M12x35	4
6	Н	Bearing	6308ZC3	2
7	DP010178	Bearing cover		1
8	HA020410	Socket HD Bolt	M6x20	3
9	DP010179	Grease nipple		2
10	Н	Flat Washer	ψ21xψ11.7x2	2
11	DP010180	Spring		1
12	DP010181	Knob		1
13	DP010182	Bearing cover		1
14	HA020410	Socket HD Bolt	M6x20	3
15	Н	Key	8x8x4	1
16	DP010183	Bush		1
17	DP010184	Pulley		1
18	HK025200	Belt	A66	1
19	DP010185	Fixing piece		1
20	HE021300	Spring washer	M10	1
21	HA020619	Socket HD Bolt	M10x35	1
22	DP010186	Spring		8
23	HA030721	Set screw	M12x35	36
24	DP010187	Knife		4
25	DP010188	Gib		4
26	DP010189	Pulling handle		1
27	HE021100	Spring washer	M8	2
28	HA020510	Socket HD Bolt	M8x20	2
29	DP010190	Lower plate		1
30	DP010191	Guide		2
31	HA020619	Socket HD Bolt	M10x35	4
32	HG011026	Spring pin	ψ5x45	4
33	Н	Hex HD Bolt	M20x60	1
34	Н	Hexagon nut	M20	1
35	DP010192	Fixing piece		1
36	HE021000	Spring Washer	M6x20	2
37	HA020408	Socket HD Bolt	M6x16	2
38	HC011000	Hexagon nut	M10	1
39	HA030613	Set Screw	M10x25	1
40	Н	Fixing screw		1
41	DP010193	Plate		1
42	Н	Flat Washer	ψ19xψ7x1	4
43	HE021000	Spring washer	M6	4
44	HA020405	Socket HD Bolt	M6x12	4

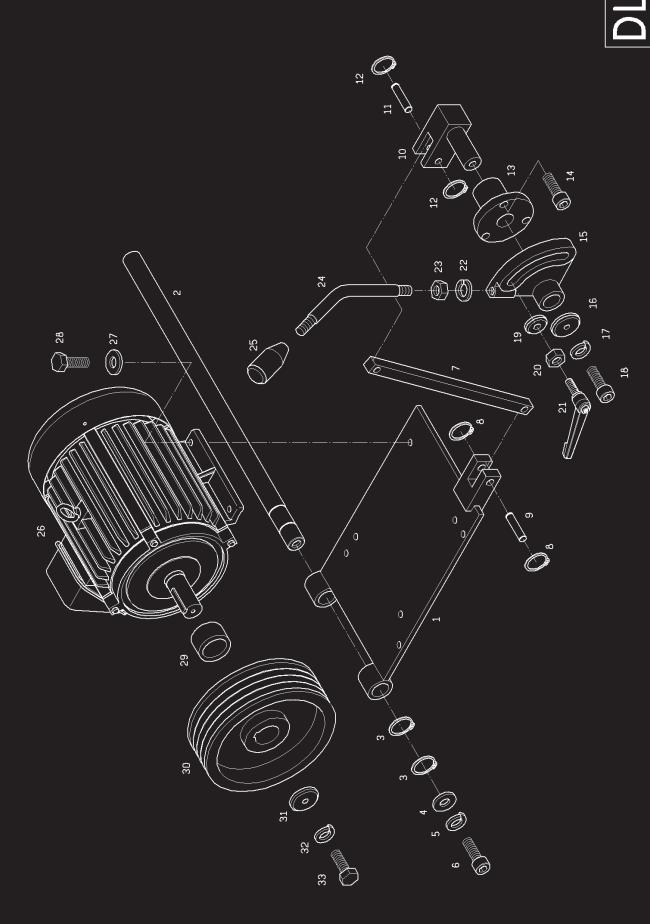


Machine Bad unit (DJ) (DP01-210)	Oliver Model: 5	5240		
Key No	Part No	Description	Specification	Q'ty
1	DP010194	Machine body		1
2	HC011800	Hexagon nut	M18	2
3	Н	Adjustment screw	M18x80L	2
4	Н	Fixing Nut		1
5	DP010195	Adjustment Nut		1
6	HE021500	Spring Washer	M12	2
7	HA020764	Socket HD Bolt	M12x90	2
8	DP010196	Side Cap Ass'y		1
9	DP010197	Lifting hook		4
10	HA020919	Socket HD Bolt	M16x35	4
11	DP010198	Motor Guard		1
12	HA020510	Socket HD Bolt	M8x20	3
13	DP010199	Plate		1
14	HE021000	Flat Washer	M6	8
15	HA040705	Round HD Phil Bolt	M6x12	1
16	DP010200	Dust hood outlet		2
17	HA020408	Socket HD Bolt	M6x16	6
18	DP010201	Belt guard		1
19	HA020408	Socket HD Bolt	M6x16	3
20	Н	Spring washer	ψ19xψ7x1	1
21	HE021500	Spring Washer	M12	1
22	DP010202	Extend Shaft		1
23	HC012700	Hexagon Nut	M27	1
24	DP010203	Shaft		1
25	HF012300	Retaining ring	S25	2
26	DP010204	Arm		1
27	DP010205	Grease nipple		1
28	DP010206	Chain wheel	5/8"x15T	1
29	HJ022100	Bearing	6203ZZ	1
30	DP010207	Shaft		1
31	HC011200	Hexagon nut	M12	1
32	DP010208	Spring		1
33	DP010209	Chain guard		1
34	DP010210	Knob		2
35	HJ021900	Bering	6201ZZ	1
36	DP010211	Fixing screw		1
37	HC011200	Hexagon nut	M12	1
38	DP010212	U-handle		1
39	DP010213	Bracket		1
40	HE021100	Spring washer	M8	4
41	HA020510	Socket HD Bolt	M8x20	4
42	DP010214	Bracket		1
43	HE021100	Spring washer	M8	2
44	HA020510	Socket HD Bolt	M8x20	2
45	HC011200	Hexagon nut	M12	1
46	DP010215	Adjustment screw		1



Elevation unit (DK) (DP01-211)				
Oliver Model: 5240				
Key No	Part No	Description	Specification	Q'ty
1	DP010216	Elevation block		4
2	DP010217	Thickness indication		1
		pointer		
3	Н	Flat Washer	ψ19xψ6.5x1.2	1
4	HA020305	Socket HD Bolt	M5x12	1
5	DP010218	Graduation scale		1
6	DP010219	Gib		4
7	Н	Flat Washer	ψ18xψ8x3	16
8	HC010800	Hexagon nut	M8	32
9	HA030533	Set screw	M8x55	32
10	HE021500	Spring washer	M12	8
11	HA020725	Socket HD Bolt	M12x45	8
12	DP010220	Elevation nut (L)		2
13	DP010221	Bearing housing		4
14	HE021300	Spring washer	M10	8
15	HA020628	Socket HD Bolt	M10x50	8
16	DP010222	Dust guard bellow		4
17	DP010223	Elevation screw		2
18	Н	Key	7x7x25	4
19	DP010224	Spacer		4
20	HJ102900	Thrust bearing	2905	8
21	DP010225	Elevation bracket		4
22	DP010226	Bevel gear	24T	4
23	DP010227	Spacer		4
24	HE021900	Spring washer	M16	4
25	DP010228	Hexagon nut	M16	4
26	HG010914	Spring pin	ψ4x25	4
27	DP010229	Bevel gear	14T	4
28	DP010230	Flange bearing		4
29	DP010231	Chain wheel	5/8"x20T	1
30	DP010232	Shaft		1
31	DP010233	Chain wheel	5/8"20T	2
32	Н	Pin	#3x50	4
33	HA030504	Set Screw	M8x10	4
34	HE021300	Spring Washer	M10	16
35	HA020616	Socket HD Bolt	M10x30	16
36	DP010234	Elevation motor		1
37	DP010235	Hand wheel		1
38	HA030403	Set Screw	M6x8	1

39	DP010236	Chain wheel	5/8"x15T	1
40	HA030504	Set Screw	M8x10	1
41	DP010237	Chain		1
42	DP010238	Chain joint		1
43	DP010239	Sensor ring		1
44	DP010240	Hand wheel		1
45	HA030302	set Screw	M5x6	2
46	DP010241	Bracket		1
47	DP010242	Sensor		2
48	Н	Flat Washer	ψ12xψ5x1	1
49	HA020305	Socket HD Bolt	M5x12	1
50	DP010243	Touch bracket		1
51	HA040705	Round HD Phil Bolt	M6x12	1
52	DP010244	Plate		1
53	DP010245	Flat HD Socket Bolt	M6x12	2
54	DP010246	Tension adjustment base		1
55	HA030508	Set Screw	M8x16	1
56	DP010247	Washer		1
57	HE021500	Spring washer	M12	1
58	HA020733	Socket HD Bolt	M12x55	1
59	DP010248	Support base		1
60	HJ020700	Bearing	6002ZZ	1
61	DP010249	Chain wheel	5/8"x12T	1
62	DP010250	Fix screw		1
63	DP010251	Chain		1
64	DP010252	Chain joint		1
65	DP010253	Elevation nut (R)		2
66	DP010254	Elevation screw (R)		2



Lower Cutter Head Driver unit (DL) (DP01-212)				
Oliver Model: 5240			1	
Key No	Part No.	Description	Specification	Q'ty
1	DP010255	Motor bracket	~ P * * * * * * * * * * * * * * * * * *	1
2	DP010256	Shaft		1
3	HF012300	Retaining ring	S25	2
4	DP010257	Filat Washer	ψ37xψ17x2.5	1
5	DP010258	Spring washer	M10	1
6	HA020616	Socket HD Bolt	M10x30	1
7	DP010259	Connection rod		1
8	HF011000	Retaining ring	S12	2
9	DP010260	Dowel pin		1
10	DP010261	Fork		1
11	DP010262	Dowel pin		1
12	HF011000	Retaining ring	S12	2
13	DP010263	Housing		1
14	HA020510	Socket HD Bolt	M8x20	3
15	DP010264	Adjustment base		1
16	DP010265	Fixing piece		1
17	HE021300	Spring washer	M10	1
18	HA020616	Socket HD Bolt	M10x30	1
19	DP010266	Fixing piece		1
20	HC011200	Hexagon nut	M12	1
21	DP010267	Adjustable hand lever		1
22	HE021500	Spring washer	M12	1
23	HC011200	Hexagon nut	M12	1
24	DP010268	Adjustment lever		1
25	DP010269	Hand knob		1
26	DP010270	Drive motor		1
27	Н	Flat Washer	ψ21xψ11.7x2	4
28	HA010619	Hex HD Bolt	M10x35	4
29	DP010271	Spacer		1
30	DP010272	Pulley		1
31	DP010273	Fixing piece		1
32	HE021900	Spring washer	M16	1
33	HA010919	Hex HD Bolt	M16x35	1



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