

**Item # 54-315-YELLOW-K****Conversion Kit, To Dual Feed, 11 FPM & Multipass**

Issue Date: March 7, 2022

The parts enclosed are to convert W&H Molders that have no power either infeed or outfeed or W&H Molders that are power infeed only to power infeed and outfeed. If your W&H Molder already has power infeed you will have extra parts, these are noted below. Extra parts can be used later for replacements if needed.

Our technical/sales representatives are available Monday-Friday 8:30-4:30 EST for questions regarding usage, repair, custom & in-stock knives and accessories we have available.

Kit Includes: (see back page for a breakdown of parts for each assembly)

- (4) 54-15 Screw, Pivot (2 extra)
- (2) 54-16 Screw, Rest
- (1) 54-23 Bolt, Hex Head, Grade 5, 3/8"-16 x 1"
- (4) 54-24 Rev A Spring
- (4) 54-25 Screw, Pressure, Finished (2 extra if already have power infeed)
- (4) 54-26 Guide, Spring, Finished (2 extra if already have power infeed)
- (4) 54-51 Nut, Check, 5/8"-18, 13/16" Round (2 extra if already have power infeed)
- (1) 54-46 Nut, Jam, 3/8"-16
- (1) 54-507 Swing Arm, Outfeed, GREEN Assembly
- (1) 54-513-YELLOW Swing Arm, Infeed, Multipass Retro, Assembly
- (2) P-111 Sprocket, 15 Tooth
- (1) P-117 Coupling, Fiber Drive
- (1) P-155 Chain #25, Short, Infeed, 30 Pitch
- (1) P-156 Chain #25, Long, Outfeed, 56 Pitch
- (1) P-239 Bolt, Hex Head, 1/4"-20 x 3-1/2"
- (2) P-240 Bolt, Hex Head, 1/4"-20 x 2
- (1) P-242 Thread Locker
- (1) 54-416 Oil, Pint, Mobil Gear 600XP
- (1) P-511 Rev A Gear Box Assembly, 11 FPM, Complete

## **Conversion Installation Instructions**

1. **DISCONNECT POWER** from power source, remove chip deflector, raise head.
2. Remove the following parts from the molder; these will be replaced with new parts:
  - (2) 54-25 Pressure Screws, (2) 54-26 Spring Guides, (2) 54-51 Check Nuts.
    - **If you do not have power infeed your molder will not have the parts listed above.**
  - (1) 54-16 Rest Screw to lower outfeed roll.
  - (2) 54-15 Pivot Screws to remove Outfeed Swing Arm Assembly.
3. Install the following parts/assemblies to the molder using the new parts supplied:
  - (1) 54-507 Outfeed Swing Arm Assembly reversing the above procedure. **Use thread locker on 54-15 Pivot Screws and 54-16 Rest Screws.**
  - (1) 54-513-GREEN Infeed Swing Arm Multipass Assembly with (2) 54-15 Pivot Screws, leave in swung down position. **Use thread locker on 54-15 Pivot Screws.**
  - **Insert (1) P-117 Fiber Drive Coupling in slot in the end of 54-10 Arbor. Tap in to 1/8" below flush.**
4. While holding the new P-511 Rev A Gear Box Assembly install the P-156 long chain on the P-150 12 Tooth Sprocket that is the closest to the P-202 Chain Guard wall. Place the P-213 Nylon Bushing onto the P-203 slotted shaft first, followed by the P-214 Nylon Washer. Install the P-155 Short Chain on the remaining P-150 12 Tooth Sprocket. The P-156 Long Chain rides over and under the P-213 Bushing, and against the P-214 Washer.
5. Line up the P-511 Rev A Gear Box Assembly along side the mounting area of the head and place the P-156 Long Chain over the P-111 15 Tooth Sprocket (outfeed roll). Insert the P-203 Drive Shaft into the slot in the end of the 54-10 Arbor. Pivot the assembly down on the infeed side and install the P-155 Short Chain over the P-111 15 Tooth Sprocket (infeed roll).
6. Pivot the Gear Box Assembly back to the mounting position of the head and install (3 or 4) **older models have four** P-240 Mounting Bolts. **DO NOT TIGHTEN.**
7. Fill the gear box with W&H oil to 1/3 up the filler cup (2 oz). This takes some time, the oil runs in slowly.
8. Raise the 54-505 Infeed Swing Arm Assembly, install the 54-16 Rest Screw **use thread locker.**
9. Install the following:
  - (4) 54-25 Pressure Screws
  - (4) 52-26 Spring Guides
  - (4) 54-51 Check Nuts 5/8"-18, 13/16" Round
  - Screwing them all the way in.

10. Attach the 54-3 Chip Deflector, attach the 54-23 Hex Head Bolt and 54-46 Jam Nut. The Chip Deflector should be raised off the stock  $1/32$ " with this screw. Tighten the check nut.
11. Tighten P-239 **long center** Mounting Bolt. Check to see that all belt guards are in place and all is clear in the arbor area, and around the machine. Start the machine. Loosen the P-239 bolt while holding onto gear box and index power unit within the bolt clearance limits to attempt to find an optimum central running position of the primary shaft in the end of the arbor. Once this ideal position is found hold the unit steady and tighten the (3 or 4) attaching bolts.

### **MULTI-PASS OPERATION**

Our Multipass system allows you to take multiple passes while keeping proper roller pressure on stock. The head can be raised  $3/16$ " above stock height, run stock through, lower the head  $1/16$ " run stock through, repeat until desired profile is cut.

***Example,*** I want to take a first cut at  $3/16$ " above the "full cut" setting. I have a  $1/2$ " sub plate on the machine bed and I am molding a  $3/4$ " piece of stock. I set the machine head at  $1\ 7/16$ ", adding  $1/2$ " +  $3/4$ " +  $3/16$ " =  $1\ 7/16$ ". After this first pass I may take three more passes at  $1/16$ " each to get to "full profile cut", or two passes at  $3/32$ " each, etc. A complete revolution of the elevation handle is equal to  $3/32$ " in knife height.

Not all profiles require multiple passes. Profiles with deep cuts, wide profiles, various wood species may require multiple passes. Profiles with shallow cuts, small profiles, softer wood may not need multiple passes.

This new design will, in most cases, eliminate the need for an initial roughing knife pass or dado cut.

**CAUTION.** Some profile shapes are **hazardous** to run in multiple passes. The machine **must have a secure hold** on the stock when reinserting the stock for a second pass. Some profiles have a **tendency to roll up** on one side into the knife.

**CAUTION.** When and if you switch to the planing mode you will need to **back off the (4) 54-25 Pressure Screws  $1/4$ "**. This is **to avoid excessive pressure** on the feed system. When you return to molding mode return the pressure screws to the **fully screwed in position**.

**CAUTION.** There may be **some very wide and deep molding** cuts that will still require a separate and initial relieving cut with another knife or a dado cut.

**\*The maximum height above "finish height" for a first cut is  $3/16$ ". A higher setting than  $3/16$ " will result in inadequate feed roller tension and a hazard for the operator.**

**BREAKDOWN OF ASSEMBLIES****54-507 Swing Arm, Outfeed, YELLOW Assembly**

- |     |       |                        |
|-----|-------|------------------------|
| (1) | 54-4  | Swing Arm, Outfeed     |
| (2) | P-137 | Bushing, Bronze, ½" OD |
| (1) | P-160 | Feed Roll, YELLOW      |
| (1) | P-122 | Axle, Post Side        |
| (1) | P-224 | Axle, Outfeed          |

**P-511 Rev A Gear Box Assembly, 11 FPM, Complete**

- |     |             |  |
|-----|-------------|--|
| (1) | P-101       | Housing, Gear Box, Painted                   |
| (2) | P-114       | Bushing, Bronze, 7/16" OD                    |
| (1) | P-502       | Shaft, Primary, Assembly                     |
| (1) | P-503       | Shaft, Secondary, Assembly                   |
| (1) | P-127       | Spacer, .027 Length X ½ OD                   |
| (1) | P-504       | Shaft, Drive, Assembly                       |
| (1) | P-120       | Spacer, .540 Length X 5/8 OD                 |
| (1) | P-202       | Guard, Chain, Original Model                 |
| (1) | P-214       | Collar, Nylon                                |
| (1) | P-118       | Retainer, Ring                               |
| (1) | P-128       | Gasket                                       |
| (1) | P-143       | Pin, Dowel, 1/8" x 1-3/4"                    |
| (4) | P-218       | Screw, Pan Phillips, 8-32 X 3/8"             |
| (4) | P-219       | Washer, Flat, #8 SAE                         |
| (4) | P-220       | Screw, Socket Head Cap, 10-24 x 5/8"         |
| (1) | P-213       | Bushing, Nylon                               |
| (2) | P-150       | Sprocket, 12 Tooth                           |
| (1) | P-116 Rev A | Cup, Oil, Threaded, 1/8"-27, 5/16"L, 15/16"H |

**54-505 Swing Arm, Infeed, Multipass Retro Assembly**

- |     |             |                                    |
|-----|-------------|------------------------------------|
| (1) | P-100 Rev A | Swing Arm, Infeed, Multipass Retro |
| (1) | P-122       | Axle, Post Side                    |
| (1) | P-160       | Feed Roll, YELLOW                  |
| (1) | P-124       | Axle, Infeed                       |
| (2) | P-137       | Bushing, Bronze, ½" OD             |

Exploded view diagram of a mechanical assembly. The diagram shows the following components and their labels:

- 54-31: Upper curved housing part.
- 54-355: Flange or base plate.
- 54-514 ASSEMBLY: Internal assembly within the housing.
- 54-333: Lower housing or support plate.
- 54-25: Small screw or pin.
- 54-24 REV A: Another small screw or pin.
- 54-26: Small cylindrical component.
- 54-51: Small pin or dowel.
- 54-45: Small pin or dowel.
- 54-6: Small pin or dowel.
- 54-18: Small pin or dowel.
- 54-38: Small pin or dowel.
- 54-19: Small pin or dowel.
- 54-45: Small pin or dowel.
- 54-5 REV A: Small pin or dowel.
- 54-7: Small pin or dowel.
- 54-11: Small pin or dowel.
- 54-34 REV A: Small pin or dowel.
- 54-9: Small pin or dowel.
- 54-48: Small pin or dowel.
- 54-21: Small pin or dowel.
- 54-36: Small pin or dowel.
- 54-46: Small pin or dowel.
- 54-2 REV A: Small pin or dowel.
- 54-47: Small pin or dowel.
- 54-16: Small pin or dowel.
- 54-14: Small pin or dowel.
- 54-1 REV A: Small pin or dowel.
- 54-20: Small pin or dowel.
- 54-28: Small pin or dowel.
- 54-53: Small pin or dowel.
- 54-10: Small pin or dowel.
- P-117: Small pin or dowel.
- 54-20: Small pin or dowel.
- P-156: Small pin or dowel.
- P-155: Small pin or dowel.
- P-150: Small pin or dowel.
- P-150: Small pin or dowel.
- P-240: Small pin or dowel.
- P-239: Small pin or dowel.
- P-511 REV A: Small pin or dowel.
- P-240: Small pin or dowel.
- 54-506 ASSEMBLY: Assembly on the left side.
- 54-505 ASSEMBLY: Assembly on the right side.

**EXPLODED VIEW FEED ROLL ASSEMBLIES**

