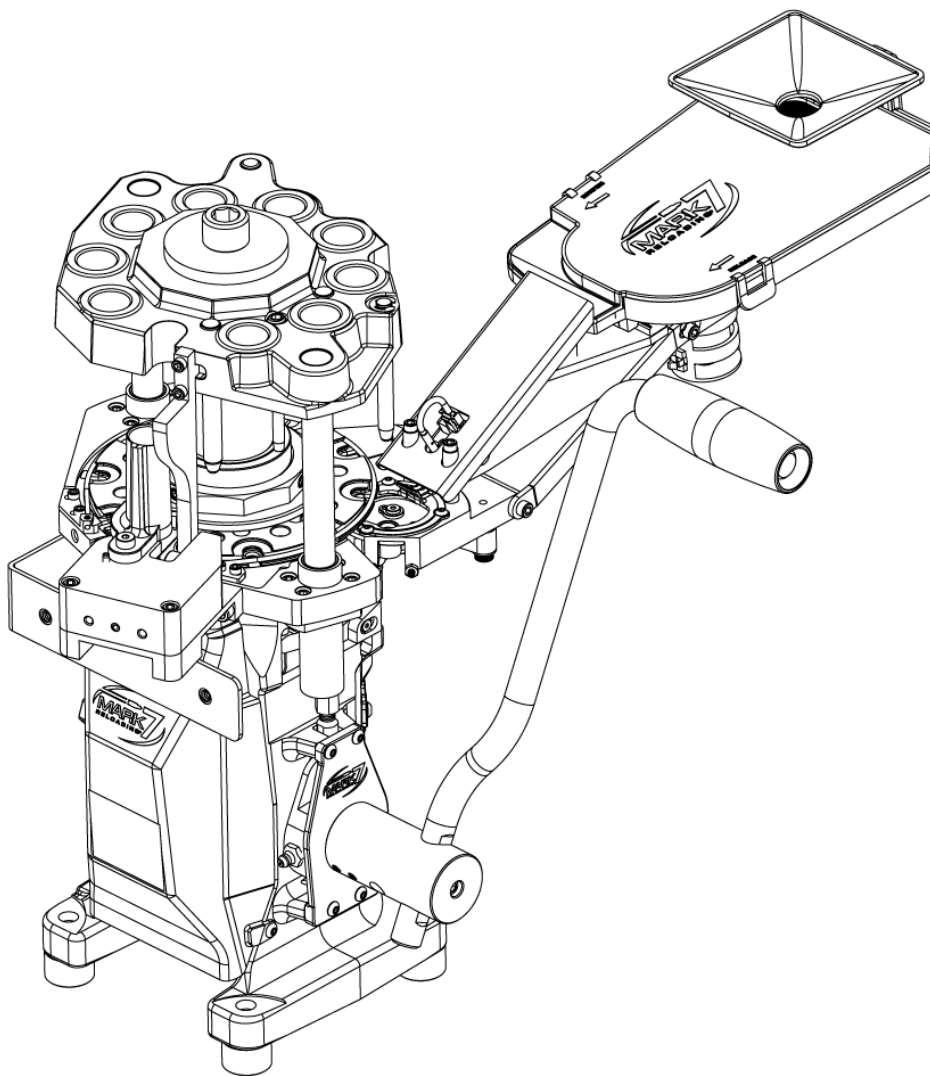




Mark 7® Primer Xpress

User Manual

v 1.0



Read this manual. Understand all safety and operating instructions. Failure to comply with the warnings and instructions may result in serious injury, illness or death.



Mark 7's Automated Primer Xpress is a totally new, patent pending technology which provides nearly 100% successful primer orientation for your loading machine. This completely unique design features an oscillating primer reservoir which effortlessly orients primers and allows continuous primer feeding. No more stopping your machine to reload primers using clumsy tubes! Simply add more primers into the built-in funnel without interruption to your loading operation. The large hopper can hold 300+ primers and includes a tough polycarbonate safety cover, which also keeps dust and debris out of the system. In the unlikely event that an up-side-down primer does make it into the feed ramp, our failsafe sensor will detect it and sound an alarm for manual presses and stop the operation on automated machines. In addition, change over between small and large size primers is easy to do and all parts are included. Dual optical sensors automatically start/stop the feed system to provide primers as needed. Primers are fed into your machine using a simplified single slot feed disc mechanism for positive, reliable primer positioning.

Warning!

- Primers are explosive and improper handling can lead to primer detonation and injury to the user. Follow all safety guidelines when operating this device.
- Always have the steel safety shield installed before operating this device.
- Always wear safety glass when working with primers.
- Never force any primers. If a jam occurs, carefully remove excess primers, and gently clear the jam.
- Primer dust can accumulate on the surfaces where primers travel. Periodically clean all surfaces of the Primer Xpress with a clean, damp cloth.
- Never smoke when reloading or around primers and/or powder.
- Only store primers in their original packaging. If primers are left in the tray after loading, remove them and return them to the original packaging.
- Always keep the cover on the primer hopper when operating the device.
- Primer pockets should be clean and military cases must have the primer crimp removed before seating primers.



Two versions of the Primer Xpress are offered. One for the APEX-10 and one for Evolution presses.

- **Primer Xpress for APEX-10** includes fully assembled Primer Xpress unit with wiring harness, control box, power adapter, steel safety shield and mounting hardware.
- **Primer Xpress for Evolution** includes fully assembled Primer Xpress unit, shuttle disk priming unit with large/small primer disks and punches, wiring harness, control box, steel safety shield, power adapter, and mounting hardware.

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Assembly

APEX-10 Press

- 1) Following the APEX-10 press instructions, remove the tool head and shell plate from your press.

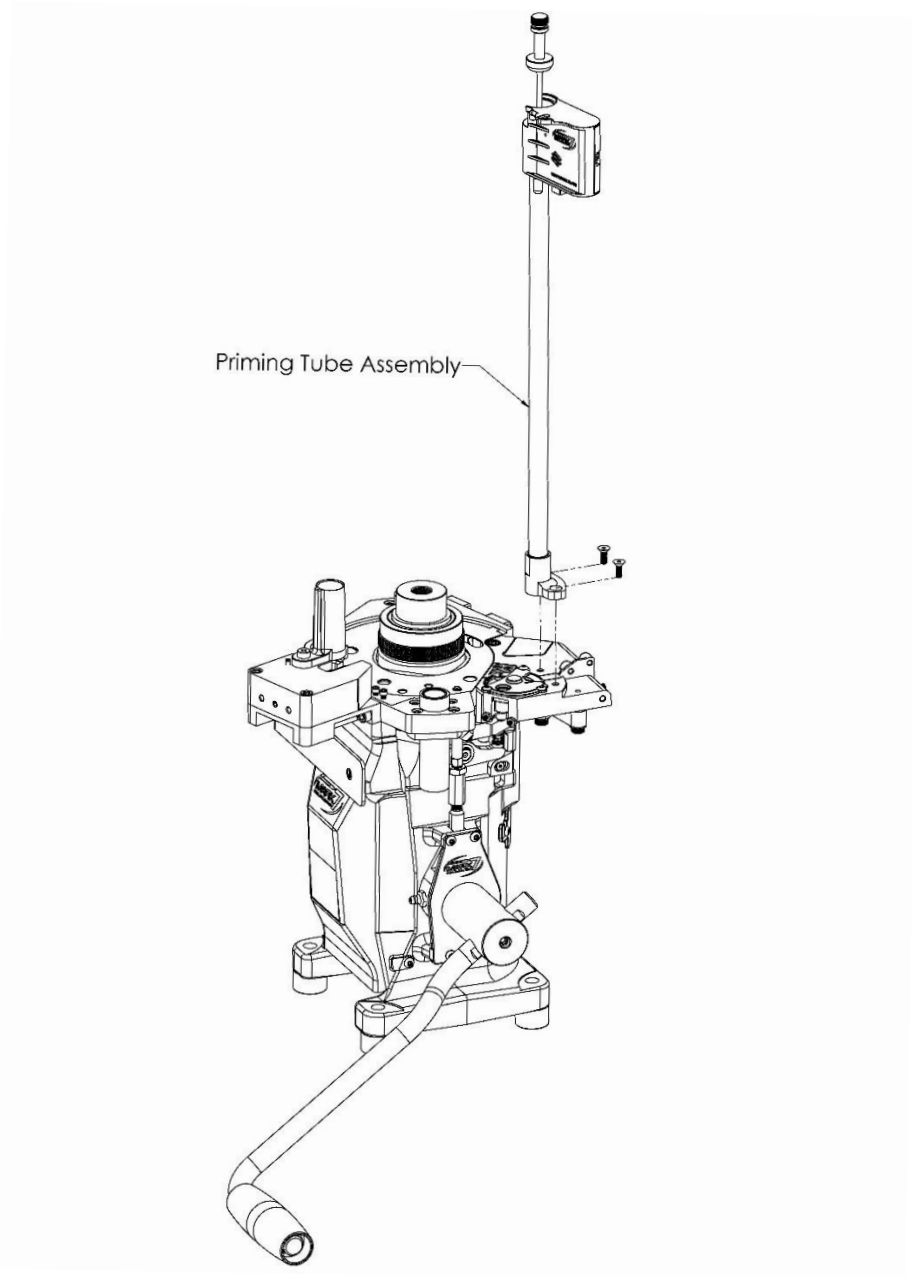


Figure 1. Priming Tube Assembly removal



- 2) Remove the priming tube assembly from the press by removing the two flat head screws on the primer tube base.

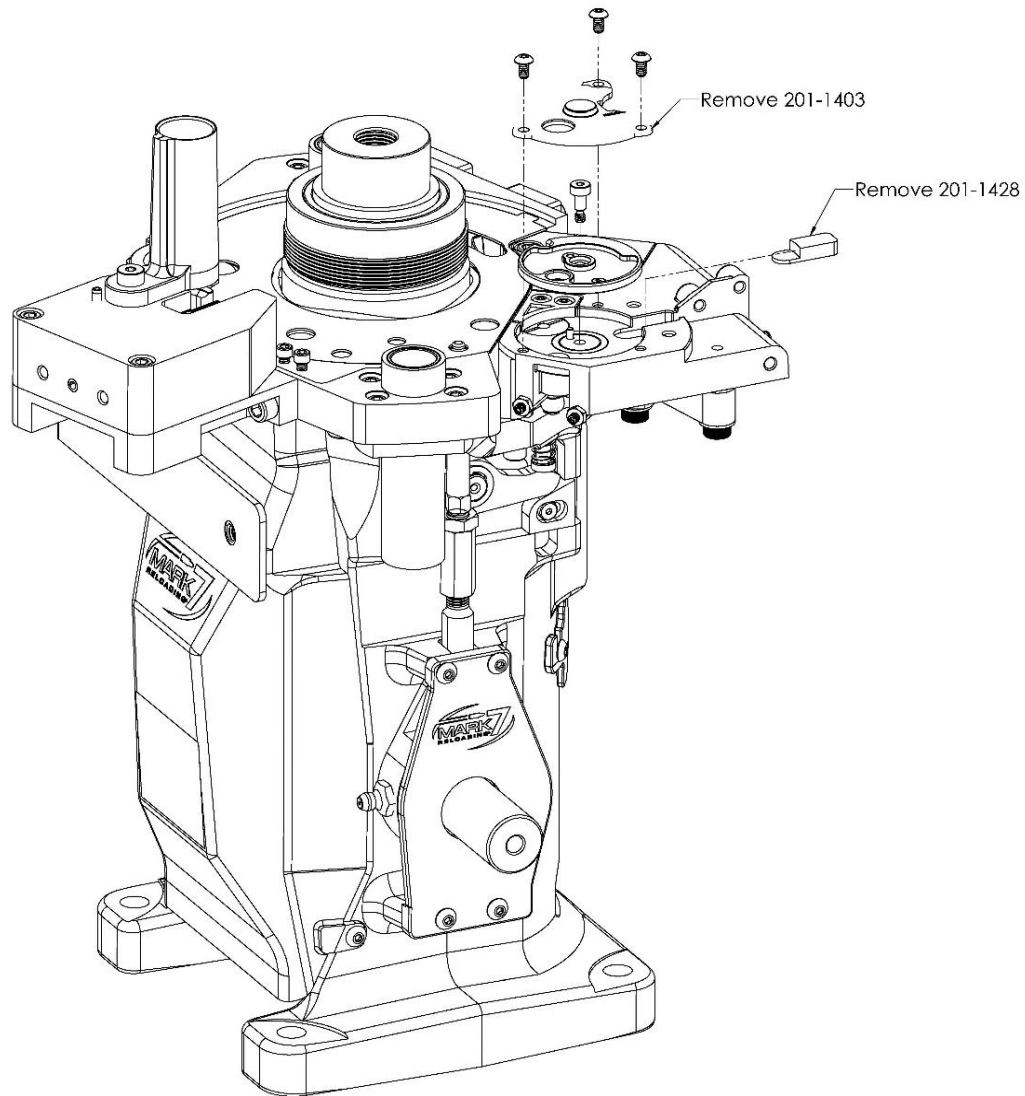


Figure 2. Primer Tube Assembly component removal

- 3) Remove the plastic insert (201-1428) from the slot in the shuttle housing and remove the plastic primer disc cover (201-1403).

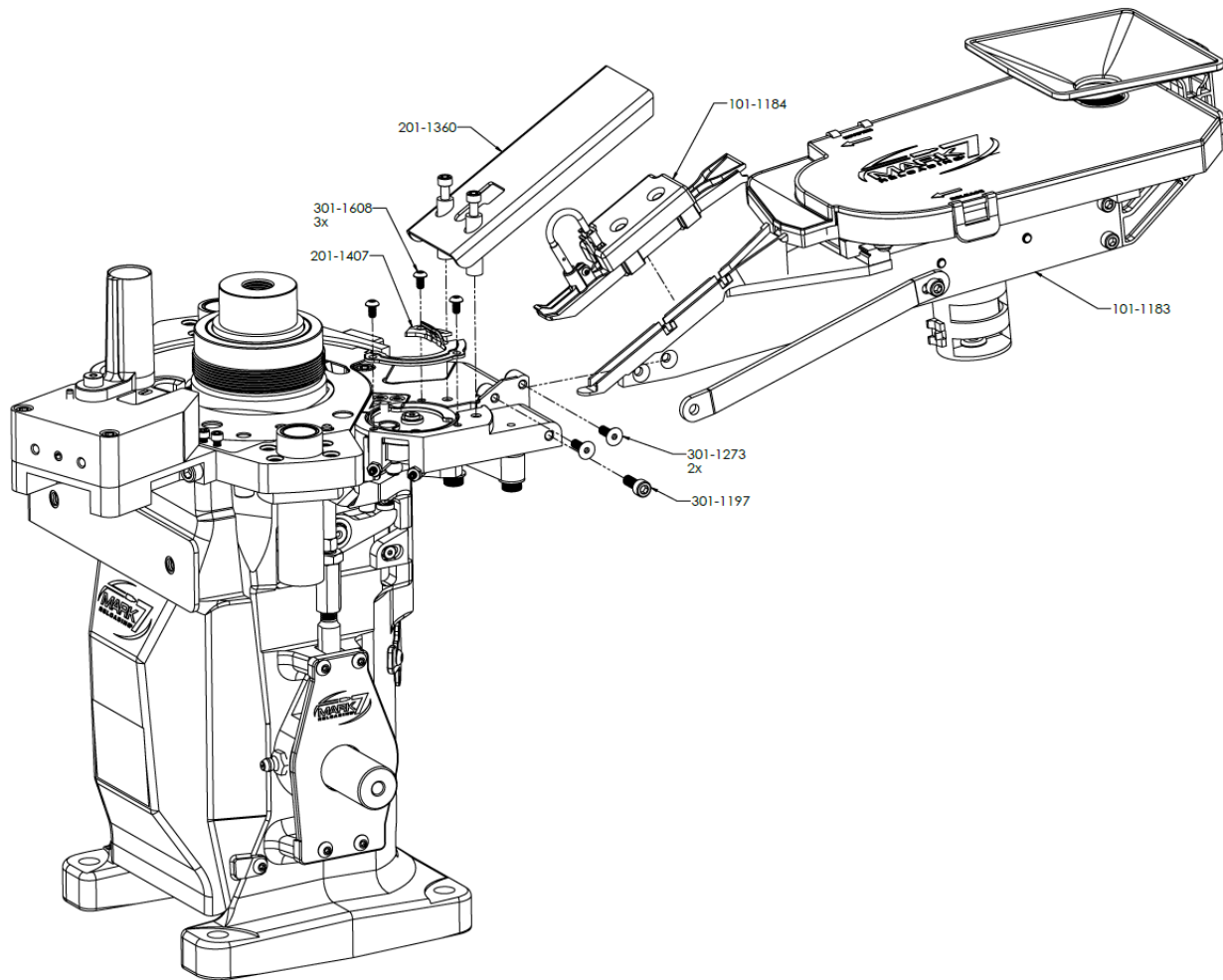


Figure 3. Primer Xpress exploded view

- 4) Place the Primer Xpress primer chute in the slot in the shuttle primer housing where the insert (201-1428) was removed. Make sure it is fully seated in the slot. Attach the chassis (101-1183) to the shuttle housing using the supplied mounting screws (301-1273). The two flat head screws are positioned into the two chamfered holes and thread into the shuttle housing. The third hex head screw (301-1197) passes through the stabilizing brace and into the shuttle housing. Apply upwards pressure on the Primer Xpress chassis as the mounting screws are tightened. See drawing.
- 5) Install the clear cover (201-1407) over the shuttle disk.

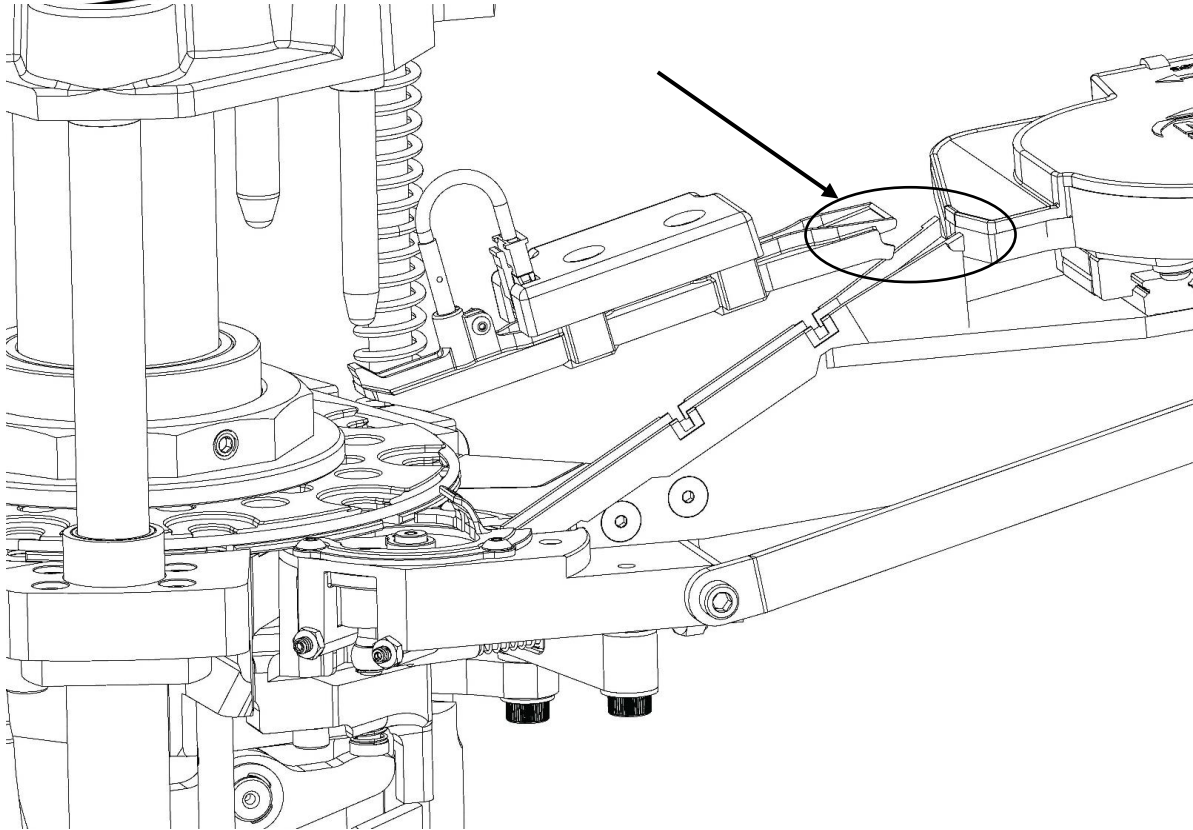


Figure 4. Primer Chute Cover installation

- 6) Install the primer chute cover with sensors (101-1184) onto the chute. Note that there are two notches on the top of the cover which fit onto two lugs on the top of the chute. Hold the cover at angle and slide the notches into the lugs, then push the cover down so that it snaps into the latch on the shuttle disk cover. (When needing to remove the cover, release the latch first and then lift the cover up and off the lugs.)
- 7) Attach the plugs from the wiring harness into the receptacles in the back of the control box marked Motor and Sensors.
- 8) Plug the power adapter into the receptacle in the back of the control box marked DC12V.



Evolution Press

Note: the shuttle disk priming assembly has the small primer disk installed when received. If you want to use large primers, first change the primer punch, primer punch bushing and the shuttle disk following the instructions titled "Primer Size Change".

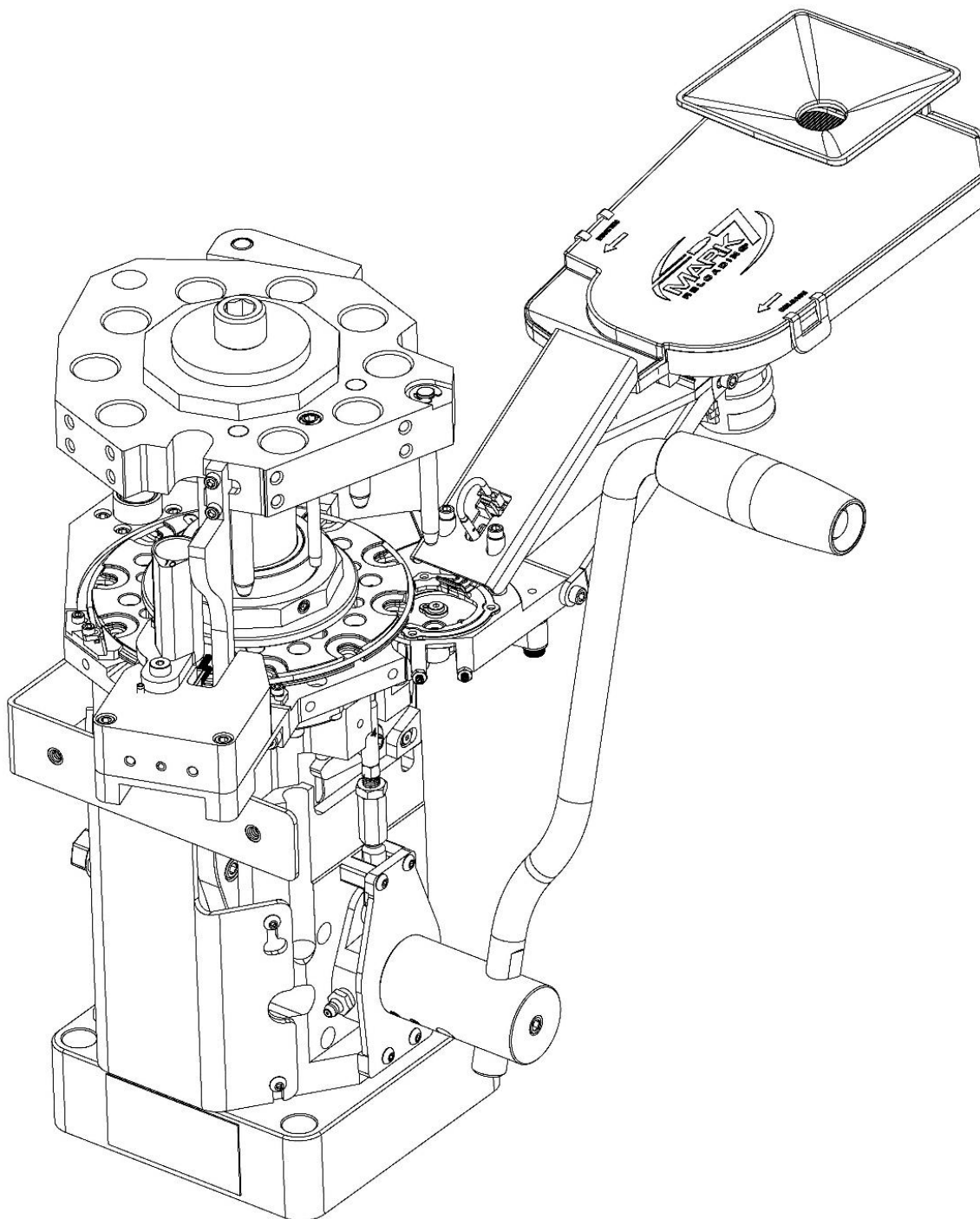




Figure 5. Primer Xpress installed on an Evolution

- 1) Following the Evolution press instructions, remove the stacked priming assembly, the tool head, and shell plate from your press.
- 2) Place the shuttle disk priming assembly onto the press frame and secure it using the two supplied hex head screws. The shorter screw will be installed from below the press frame and the longer screw will install from the top.
- 3) Slide the shouldered bushing into the connecting arm on the bottom of the shuttle disk assembly. Hold the press link arm against the bushing and slide the shouldered hex head screw and washer through the link arm and attach it to the connecting arm. (See drawing.)
- 4) Remove the shuttle disk by unscrewing the hex head screw in the center of the disk and lifting the disk off the alignment pin.
- 5) Remove the plastic insert from the slot in the shuttle housing.
- 6) Place the Primer Xpress primer chute in the slot in the shuttle primer housing where the insert was removed. Make sure it is fully seated in the slot. Attach the chassis to the shuttle housing using the supplied mounting screws. The two flat head screws are positioned into the two chamfered holes and thread into the shuttle housing. The third hex head screw passes through the stabilizing brace and into the shuttle housing. Apply upwards pressure on the Primer Xpress chassis as the mounting screws are tightened. See drawing.
- 7) Reinstall the shuttle disk.
- 8) Install the clear cover over the shuttle disk.
- 9) Install the primer chute cover and sensor onto the chute. Note that there are two notches on the top of the cover which fit onto two lugs on the top of the chute. Hold the cover at angle and slide the notches into the lugs, then push the cover down so that it snaps into the latch on the shuttle disk cover. (When needing to remove the cover, release the latch first and then lift the cover up and off the lugs.)
- 10) Attach the plugs from the wiring harness into the receptacles in the back of the control box marked Motor and Sensors. See drawing.
- 11) Plug the power adapter into the receptacle in the back of the control box marked DC12V.
- 12) Install the cover on the primer hopper by sliding the two lugs at the rear of the cover into the two notches in the hopper, and then push the cover down to snap over the latches on the sides of the hopper.

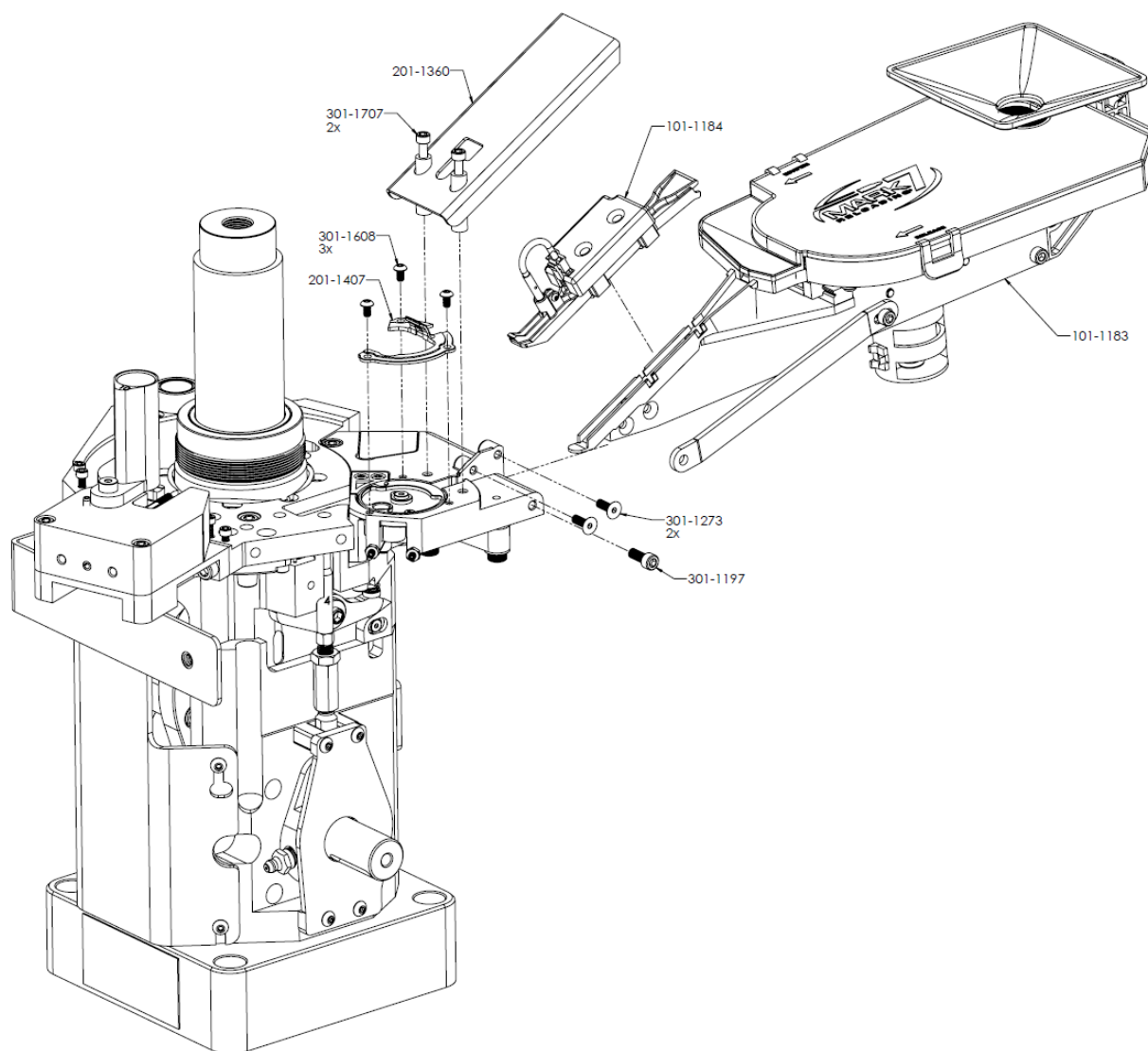


Figure 6. Primer Xpress exploded view on Evolution



Changing Primer Size

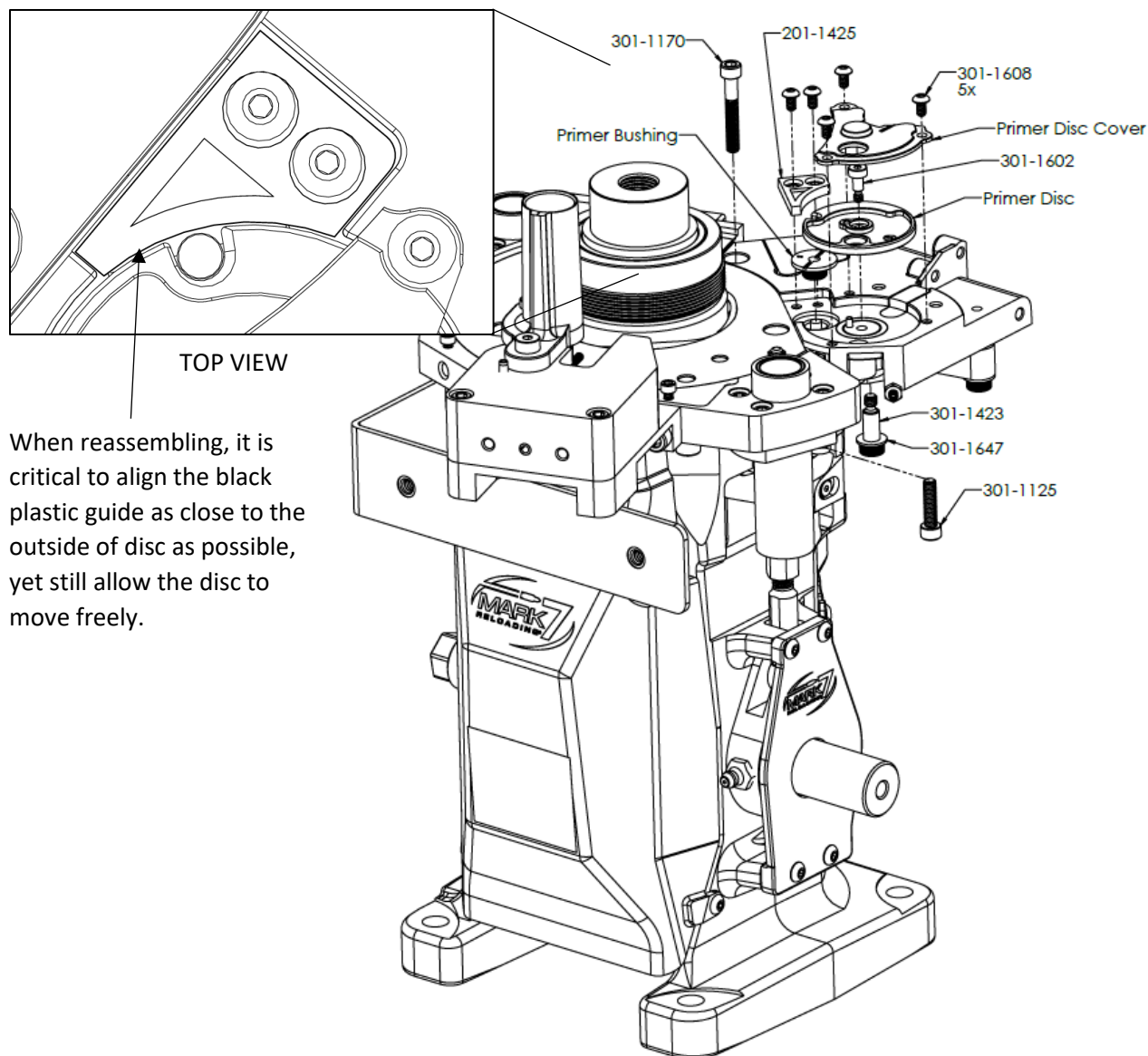


Figure 7. Priming assembly exploded view

- 1) Remove the 3 screws holding the plastic cover and remove the cover.
- 2) Remove the screw in the center of the primer disc and lift off the disc.
- 3) Remove the 2 screws holding the primer guide plate and remove it.
- 4) Remove the 2 screws holding the body of the priming mechanism to the press frame and the 1 screw connecting the link arm from the press to the primer mechanism. Be careful not to lose the bushing in the link arm.

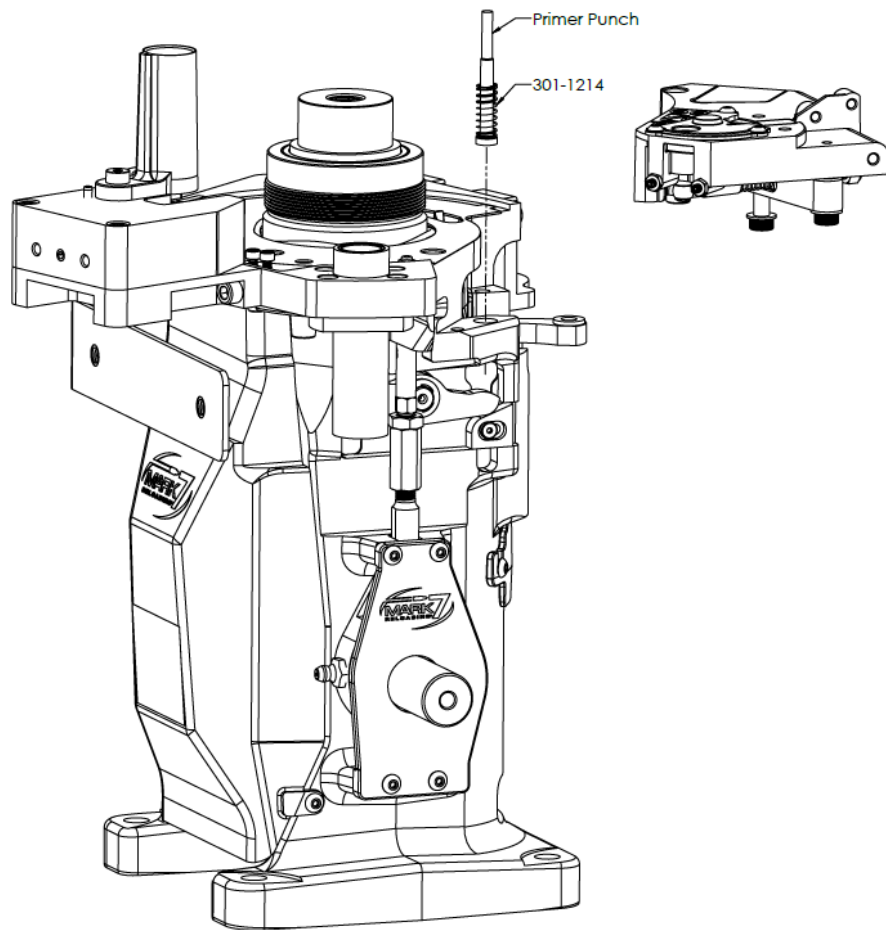


Figure 8. Primer Punch removal

- 5) Move the priming mechanism up and away from the press body and lift out the primer punch as shown above.
- 6) Using a large, proper fitting, slotted screwdriver, unthread and remove the primer punch bushing from the priming mechanism. Replace the punch with the desired size punch and reassemble the unit in reverse order from above. Be sure to also install the correct size primer punch bushing and primer disk.
- 7) Change the primer tube installed inside the blast shield.



Control Box Functions

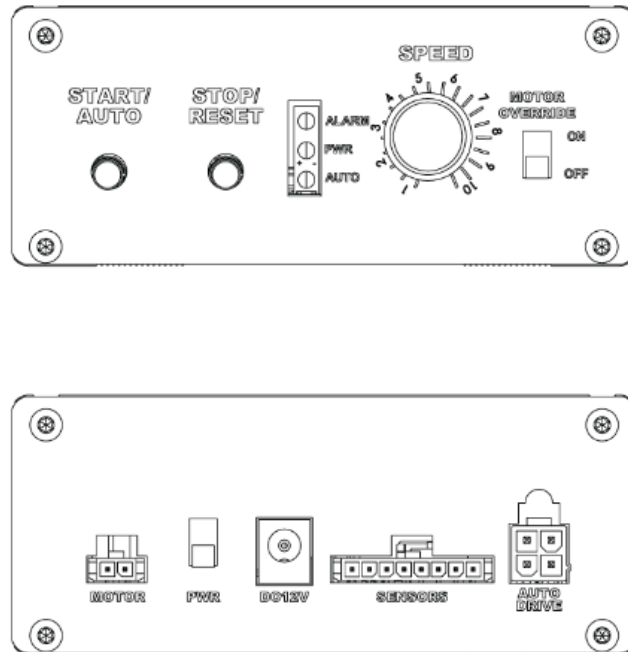


Figure 9. Control Box faceplates

Power Switch: Located at the back of the control box, the switch turns the power On and Off.

Start/Auto Button: This button is pressed to turn on the oscillation unit and to set the unit to run automatically.

Stop/Reset: This button is used to stop the action of the unit and to clear alarm signals.

Speed: This dial is used to control the oscillation speed of the unit.

Motor Override: This switch is used to override the sensors and allow the oscillation to continue non-stop when the **Start/Auto** button is pressed. Oscillation will continue until the **Stop/Reset** button is pressed. This feature is useful when a new batch of primers are added to the hopper and you want to oscillate them down to fill the primer chute.

Alarm, PWR, Auto Lights: The alarm light will go on and a tone will sound when the primer sensor detects an improperly oriented (anvil end facing down rather than up) primer. The alarm is also triggered when out of primers. If the unit oscillates for approximately 15 seconds without sensing a primer in the chute, the alarm will sound. Note this is with the **Motor Override** in the Off position.

The power light will be on when the power switch on the back of the unit is in the On position and will go off when the switch is moved to the Off position. The auto light will be on when the unit is running and the start and stop sensors are working.



Operating the Primer Xpress

- 1) Add 100 to 300 primers by pouring them into the funnel over the hopper.
- 2) Loosen the screw behind the **Primer Orientation Sensor** and lift the sensor up so the bottom of the sensor is about $\frac{1}{2}$ halfway up the cylinder.
- 3) Set the **Motor Override** to On and press the **Start/Auto** button.
- 4) Move the **Speed** knob to a low setting and slowly increase the oscillation speed until primers start to move along the guides inside the hopper and primers upset so that the anvils are facing up. Note: different brand and different size primers will require their own speed settings. You may need to experiment with the speed setting until the best results are obtained each time primers are changed.
- 5) Once primers begin to enter the chute, press the **Stop/Reset** button. Then switch the **Motor Override** to Off.
- 6) Press the **Start/Auto** button and the unit will run until primers reach the stop sensor.
- 7) Slowly push the **Primer Orientation Sensor** downwards until the alarm sounds. Press the **Stop/Reset** button to silence the alarm, then carefully pull the sensor back upwards slightly. There is a light on the sensor itself that will go on when it is too close to a primer and go off when it is further away. This light will go off when you pull the sensor up slightly. It is recommended that the sensor position be tested by placing a primer into the chute oriented incorrectly (anvil down). The alarm should sound when positioned over this primer but should not sound when over correctly oriented primers.
- 8) Tighten the screw behind the **Primer Orientation Sensor** once the sensor is properly positioned. Note: large and small primers will need different settings for the sensor height. Sometimes even different brand primers of the same size may require sensor adjustment.

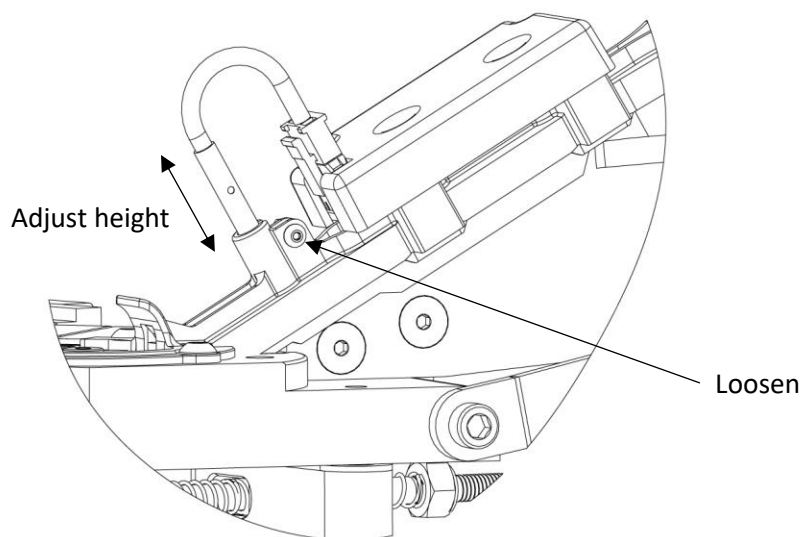


Figure 10. Primer Orientation Sensor



- 9) Install the steel **Safety Shield** over the primer chute with the two provided screws. We recommend that the shield **always** be in place when loading.
- 10) Press the **Start/Auto** and begin operating your press. Refill the hopper with primers as needed while reloading.

Troubleshooting

- The Primer Xpress should be level side to side. If not level, adjust the press feet to correct this.
- If primers settle on one side of the hopper and do not move down the guides, the press feet may need to be lowered slightly on the opposite side of where the primers settle.
- If the shuttle disk binds after installing the Primer Xpress, make sure that the tab at the end of the primer chute is fully seated into the slot under the shuttle disk.
- If primers are repeatedly flipping over (correct orientation to incorrect orientation) in the hopper, the speed setting is too high.