

# TX-40™

## Reloading Press

### Instruction Manual



**TEN-X**  
**TACTICAL**

A division of Ten-X Ammunition, Inc.

## **Less-Lethal & the TX-40™**

The use of 40mm less-lethal impact munitions has become a popular tool in law enforcement. These munitions offer increased engagement distances, providing greater standoff from physical contact. The ability to disorient or incapacitate an individual without engaging in physical contact inevitably ensures better safety of the officer, while providing a favorable alternative to deadly force when officer or public safety is not compromised. However, for less-lethal impact munitions to be effective, the user must have the ability to consistently deliver the projectile on target across a wide range of distances. To accomplish this, officers must be provided with proper training which necessitates a sufficient number of rounds downrange. Unfortunately, this amount of training has been financially impossible for most departments.

The TX-40™ Reloading Press, by Ten-X Ammunition, Inc., is an economical way to increase training time and the number of practice rounds without increasing cost. The TX-40™ is a reloading system specifically designed for use with 40mm less-lethal launching systems that utilize reusable projectiles including those made by Defense Technology, CTS, ALS, MAST, and others based on a standard M212 case. The TX-40™ single-stage reloader only requires one tool change to accomplish the reloading functions and use of it is very simple and can be accomplished with minimal training.

The Propelling Charges designed by Ten-X Ammunition, Inc. utilize smokeless .38 caliber blanks (along with a Burst Disk in certain cases) designed to consistently replicate stated muzzle energy and velocities from the original manufacturers of the duty ammunition. The smokeless powder reduces barrel fouling and minimizes smoke that can obscure vision when targeting during training.

# Unpacking and Setup

The TX-40™ Reloading Press for 40mm Less Lethal ammunition includes all the tooling that is required to reload the cartridges of your choice.

[Note: When ordering Propelling charges, the specific brand being reloaded must be stated to ensure the proper charge is provided.]

## **Packing List (the reloading kit includes the press and the following):**

- Shell Plate (1)
- Propelling Charge Extraction Pin (1)
- Propelling Charge Seating Punch (1)
- Propelling Charge Seating Block (1)
- 10-32 Stainless Set Screws (2)
- #18 drill bit (1)
- 10-32 tap (1)
- Tap T-Handle (1)
- 3mm Hex L-Key (1)
- 4" Magnetic Tool Holder (1)

## ***Optional item:***

- #24 drill bit (1) required for reloading CTS cases (Part # TX40-001-09)
- Expander Die (1) for repairing dented aluminum cases (Part # TX40-001-10)
- Size T drill bit (1) for removing stuck DefTech brass burst cups (Part # TX40-001-12)

The TX-40™ reloader should be securely bolted to a sturdy surface for reloading. If a temporary mounting is preferred, the TX-40™ can be bolted to a sturdy board, and then affixed to a worktable using clamps.

# Proper Handle Adjustment

1. Place the Shell Plate flat side down into the alignment flange on the reloading press.



2. Insert the Propelling Charge Seating Punch fully into the ram, and hand-tighten the set screw to hold the seating punch in place.



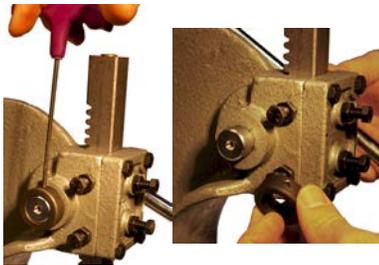
3. Insert the Propelling Charge Seating Block into the shell plate. There is a nipple on one end that goes through the hole in the shell plate.



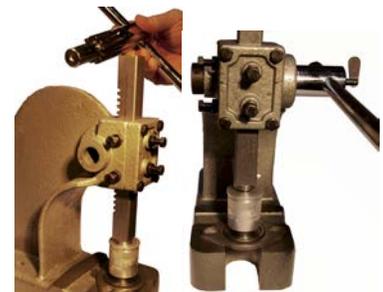
4. Place an empty casing upside-down on the seating block.



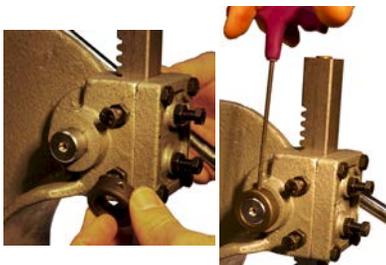
5. Bring the ram down to the base of the empty casing.



6. Loosen the retaining ring set screw with the 3mm Hex L-Key; remove the crank handle retaining ring.



7. Pull the handle straight out, and insert it back in with the handle as close to parallel to the table as possible.



8. Replace the retaining ring and tighten the set screw.

9. The handle is now adjusted and the TX-40™ Reloading System is ready for use.

# Instructions for Reloading

1. Make sure the TX-40™ Reloading Press is securely mounted and the handle is properly adjusted. It is strongly recommended that reloading be done in batches; stage by stage (e.g., extract all spent propelling charges before seating new charges).

2. To extract a fired propelling charge, loosen the Set Screw on the side of the ram and remove any installed accessory. Insert the Propelling Charge Extraction Pin fully into the ram (large end goes into the ram). Tighten the set screw to hold the extraction pin in place. **Do not over tighten!**



3. Place the Shell Plate flat side down into the alignment flange on the reloading press. Place a fired casing into the Shell Plate with the propelling



charge down. Carefully bring the ram down by slowly turning the handle. Make sure the extraction pin is not bent and goes easily into the flash-hole of the casing. Just inside the flash-hole, the pin will make contact with the fired propelling charge. Use firm, steady pressure on the ram handle to extract the spent cartridge



(this may require some effort). It may be necessary to bring the ram up and then down a second time to release the spent propelling charge from the casing. Recycle or discard the spent charges and burst disks (if any) that collect in the space under the press.

4. When a fired factory round is being reloaded for the first time, it is not uncommon for the Propelling Charge Extraction Pin to push out the propelling charge “primer” only and leave the propelling charge brass stuck in the casing. Factory propelling charges are typically glued or sealed in place and can cause a fired propelling charge to not fully extract. In the event that happens, follow these steps:





a. Drill out the brass primer pocket of the stuck propelling charge with the #18 drill bit. [If you are reloading a CTS casing, a #24 drill bit is required to open the flash hole of the metal insert from the inside of the plastic casing.]

b. Using the 10-32 tap and Tap T-Handle, tap the hole until the tap turns easily.



c. Take the additional 10-32 stainless set screw and screw in by hand until flush.

d. Follow Step #3 above. When the propelling charge falls out, unscrew the set screw and save for future use.



5. DefTech casings often have a brass burst cup pressed into the propelling charge hole. **Remove it before reloading!** To remove, use a Letter T drill bit (not included) at a very low speed with light pressure to grab the cup. Pull it out as the drill bit spins.

6. To seat a new propelling charge, loosen the Set Screw on the side of the ram and remove the Propelling Charge Extraction Pin (or any other installed accessory). Insert the Propelling Charge Seating Punch fully into the ram and hand-tighten the Set Screw to hold the seating punch in place. **Do not over tighten!**



7. Clean propelling charge hole with a .40 caliber brush (not included) to ensure that it is clean and free of debris. **DO NOT** use solvent to clean the hole, as this may damage the casings.

8. Place the Propelling Charge Seating Block onto the shell plate. There is a nipple on one end of the seating block that goes through the hole in the shell plate.



9. Take the empty casing and turn it upside-down.

Note: For reloading DefTech casings only; drop ONE burst disk into the propelling charge hole. The burst disk must lay flat

in the hole. Look into the hole to make sure the shiny disk is visible.

**ONLY USE ONE BURST DISK AT A TIME!**

**Use of more than one burst disk may cause excessive pressure and may result in damage to personnel and launcher.**

10. Put a new propelling charge nose down into the hole, and press lightly until there is resistance. Different propelling charges are used for different casings (viz., DefTech, CTS, ALS, SDI, and MAST). **Do not attempt to fully seat the propelling charge in any manner other than with the Reloading Press.**



11. Place the casing on the Propelling Charge Seating Block so that the protruding cartridge is on top. Carefully bring the ram down by slowly turning the handle to bring the seating punch into contact with the propelling charge. Use firm, steady pressure on the ram handle to seat the new cartridge flush to the casing (this may require some effort).



If propelling charge will not seat perfectly flush, try loading the shell into the launcher to assure that the breach will fully close. The propelling charge does not have to be perfectly flush, it simply needs to chamber and allow for the breach to close.

12. To insert a projectile, align the bottom of the projectile with the case mouth and force together. If this can not be done by hand, stand the casing up on a sturdy surface and press the projectile down with your hand. Sometimes, it may be necessary



to seat the projectile with the Reloading Press. To do this, remove the seating block from the Shell Plate and place the primed casing into the Shell Holder. Align the projectile with the case mouth and bring the ram down by turning the handle. The seating punch will provide even pressure to seat the projectile. This results in a fully reloaded cartridge.

## TX-40 Expander Die: Optional

Use the optional TX-40 Expander Die to repair even moderate case mouth dents. These dents are usually caused by casings being dropped onto a hard surface, like concrete or asphalt, after being extracted from the launcher. It is always recommended that a rubber mat, carpet, grass or even cardboard be located under the shooter during training to reduce the cost of lost casings.



Steps for using the TX-40 Expander Die to repair dented case mouths:

1. Make sure the TX-40™ Reloading Press is securely mounted. It is strongly recommended that repairing case mouths should be done in batches. During the reloading process, cases that are identified as being dented sufficiently enough to not allow the seating of a projectile, would be put aside for repair. The TX-40™ Expander Die can be used at any stage in the reloading process, including with a seated propelling charge.



2. Loosen the set screw on the side of the ram and remove any installed accessory. Insert the TX-40™ Expander Die fully into the ram. Tighten the set screw snugly enough to hold the TX-40™ Expander Die in place.



3. Use the wax lubricant stick to apply a thin line of lube around the beveled face of the TX-40™ Expander Die.



4. Place the Shell Plate flat side up into the alignment flange on the reloading press.
5. Place a dented casing to be repaired onto the shell-holder with the base down. Carefully bring the ram down by slowly turning the handle to ensure the expander die goes easily into the case mouth until it stops. The expander die has a positive stop so that no overexpansion of the case mouth can occur.

6. With the left hand rotating the casing on the shell holder, the right hand should apply firm pressure on the ram handle on the down stroke. Without pulling the expander die completely out of the case mouth, the ram should be brought up and then down several times. This process should be repeated until the case mouth is rounded out enough to accept the seating of a projectile.



## Safety Considerations

Reloaded less lethal munitions are only to be used for training purposes and are NEVER suitable for duty use. They should be used **strictly for point of aim training against non-living targets such as paper, cardboard, plywood, rip-stop material, etc.** Never use this kit to extract an unfired propelling charge!

## Casing Compatibility

The casing type intended for use must be specified when ordering. Some manufacturers have standardized the 40mm casing dimensions, which can be made of aluminum or a synthetic/plastic material. The synthetic/plastic casings are manufactured by companies that include CTS, ALS, and MAST. Defense Technology uses two different aluminum casings.

Just as the projectile weights are different for each manufacturer, **the propelling charges used for each manufacturer are unique and should not be substituted into another manufacturer's shell.** If you are not sure which propelling charge your launcher uses, contact us and we will help find the answers.

## Casing Suitability for Reloading

Only casings in good condition should be reloaded. Casings which have any of the following defects should not be reloaded:

- Propelling charge does not stay in propelling charge hole.
- Case mouth severely dinged or damaged, beyond what can be repaired by the optional Expander Die.
- Case rim severely dinged or damaged.
- Casing is damaged and will not allow weapon breech to close and lock.

Dirty or heavily used casings should be cleaned with hot soapy water. The propelling charge hole should be cleaned with a brush, and the casing should be completely dried before reloading.

# WARNINGS

To avoid serious injury/death to shooter and bystanders:

- USE only in 40mm launchers in good condition which are specifically designed for use of the munitions being reloaded.
- Always check barrel and remove obstructions before firing, or if light recoil or off sound occurs.
- If launcher fails to fire, point muzzle in safe direction and avoid exposure to breech while carefully unloading.
- USE shooting glasses and ear protection at all times when reloading.
- Keep launcher pointed in a safe direction at all times.
- Do NOT shoot at hard surfaces or water. Doing so could create a ricochet risk.
- Always keep munitions dry. Store in a cool, dry place.
- Discharging launchers in poorly ventilated areas, cleaning launchers or handling these munitions may result in exposure to lead, a substance known to cause birth defects, reproductive harm and other serious physical injury. Have adequate ventilation at all times. Wash hands thoroughly after exposure.
- Since reloading practices are beyond our control, we disclaim all liability for damage, injury or death that may result.
- We warrant the exercise of reasonable care in the manufacture of this reloading press and its components, but make no other warranty, express or implied.
- Propelling charges older than 3 years should not be used. Safely discharge them to ensure that they are not used in less lethal munitions.

# Replacement & Optional Parts

<b>Part #</b>	<b>Description</b>
TX40-001-CK	TX-40™ Complete Reloading Kit
PC-38DT	Propelling charges w/ burst disks (for Defense Technology cases); 250 per box
PC-38DTLF	Lead Free Propelling charges w/ burst disks (for Defense Technology cases); 250 per box
PC-38CTS	Propelling charges (for CTS cases); 250 per box
PC-38ALS	Propelling charges (for ALS cases); 250 per box
TX40-001-01	TX-40™ 40mm Shell Plate
TX40-001-02	TX-40™ Propelling Charge Extraction Pin
TX40-001-03	TX-40™ Propelling Charge Seating Punch
TX40-001-04	TX-40™ Propelling Charge Seating Block
TX40-001-05	10-32 Stainless Set Screws
TX40-001-06	#18 Drill Bit
TX40-001-07	10-32 Tap
TX40-001-08	Tap T-Handle
TX40-001-09	#24 Drill Bit (required for reloading CTS casings)
TX40-001-10	TX-40™ Expander Die for repairing aluminum casings
TX40-001-11	3mm Hex L-Key
TX40-001-12	Size T Drill Bit (for removing stuck DefTech brass burst cups)

## Contact Information

Should you have any questions about the TX-40™ operations and use, require replacement parts, or need to reorder propelling charges and burst disks, please contact us at:

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