# CAPTIVE BOLT GUNS & ELECTRICAL STUNNERS

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## Overview

There are several manufacturers of captive bolt tools – this presentation is intended to provide guidance in regards to safety, cleaning, maintenance and testing procedures for all types of stunners. It is recommended that all users of captive bolt tools read and understand the specific manufacturers operator manual for their specific stunner equipment.

# **CAPTIVE BOLT GUN STYLES**

#### IN LINE

- PENETRATING BOLT
- NON PENETRATING (CONCUSSION)

#### PISTOL STYLE

- PENETRATING BOLT
- NON PENETRATING (CONCUSSION)

#### LONG HANDLE

- CONTACT FIRE
- PENETRATING BOLT

# IN LINE

#### PRODUCT CHARACTERISTICS

- AUTO BOLT RESET
- MANUAL BOLT RESET
- 2 PIECE CONSTRUCTION
- EXTERNAL SAFETY
- REGULAR LENGTH AND LONG BARREL
- PRIMARY USE
  - SLAUGHTER FACILITIES PRIMARY & SECONDARY
  - SOME ON FARM



# **SAFE HANDLING – IN LINE**

- ▶ READ THE OPERATORS MANUAL
- HAND OFF IN TWO PIECES
- STORE IT BROKEN DOWN



- USE MANUAL SAFETY IF AVAILABLE
- HANDS AWAY FROM END OF BARREL
- NEVER LEAVE IT LOADED
- USE PROPER POWER LOADS FOR APPLICATION

#### MAINTENANCE - IN LINE If you shoot it clean it!

- Gun cleaning solvent (no WD 40)
- Oil usage
- Cleaning brushes
- Proper tools
- Barrel and breech
- Bolt retention system
- Bolt & buffers
- Breech cap
- Record keeping



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# PISTOL STYLE

- .25 and .22 Caliber
- Automatic bolt retraction
- Primary use
  Slaughter facilities
  On farm



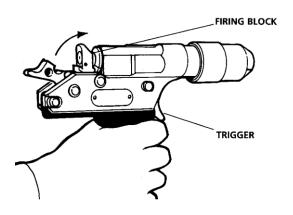
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# **SAFE HANDLING – PISTOL STYLE**

- Read the operators manual
- Hands away from barrel
- Never leave it loaded
- Remington rolling block safety
- One hand operation
- Use proper power loads for application



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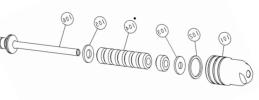
#### MAINTENANCE – PISTOL STYLE If you shoot it clean it!

- Gun cleaning solvent (no WD40)
- Oil Usage
- Cleaning brushes
- Muzzle
- Barrel
  - Undercut cleaner
  - Breech cleaner
- Bolt & recuperator sleeves
- Record Keeping











# LONG HANDLE

#### **Contact Fire Stunners**

- .25 Caliber
- Automatic Bolt Retraction
- Penetrating Bolt Only
- Contact Fire
- Two Piece Construction
- Primary Uses
  - Large Plant
  - Small Plant







# **SAFE HANDLING – LONG HANDLE**

- Read the operators manual
- Hands away from barrel
- Never leave it loaded



- Rotate to fire only when ready to use
- Store broken down
- Uses proper power loads for application

#### MAINTENANCE – LONG HANDLE If you shoot it clean it!

- Gun cleaning solvent (no WD40)
- Cleaning brushes
- Muzzle
- Barrel
  - Undercut cleaner
  - Breech cleaner
- Bolt & recuperator sleeves/buffers
- Record Keeping

# **POWER LOADS**

- Use Proper power loads for application
- Storage
  - Long Term
    - Clean
    - Dry
    - Climate Controlled
    - First in First out
    - Lot number recorded
    - Don't carry in pockets
  - Daily use
    - Keep dry
    - Small quantities
    - Container





#### MAINTENANCE AREA ALL CAPTIVE BOLT TOOLS

- Tools
  - Wrench's
  - Hammer
  - Punches (properly sized)
  - Pick
  - Specific stunner tools (undercut & breech cleaner)
- Spare parts inventory
- Bench Vise
- Cleaning supplies
  - Stunner cleaning solvent
  - Shop towels
  - Green scratch pads

#### STUNNER PERFORMANCE TESTER ALL CAPTIVE BOLT TOOLS

#### Suggested information

- Date & Time of test
- Tool number
- Serial #
- Power load used
- Service Technician ID
- Bolt Speed
- Download to any spreadsheet



Stun Test Data Records										
Date/Time	Stunner #	Serial #	Power Load Code	Operator ID	SPEED					
5/4/2016 8:19	16	110016	7	1234	191					
5/4/2016 8:24	16	110016	7	1234	179					
5/4/2016 8:38	16	110016	9	1234	196					
5/4/2016 9:04	17	110017	7	1235	184					







# OPERATOR SAFETY EQUIPMENT

Knocker Vest

Carden -

- Chest Protection
- Groin Protection
- Ear Protection



#### Eye Protection



# **ELECTRIC HOG STUNNERS**





## ELECTRIC STUNNING Control Box

- Installed in clean & dry environment
- Easily accessible
  - Maintenance
  - Setting changes
- Installed on dedicated electrical circuit
- Back up system





# CHECK LIST

#### Verification of system performance

- Verify voltage
- Verify amperage
- Stunner settings confirmed
  - Amperage voltage frequencies stun time
- Verify infeed line voltage to Control Box
  - Idle
  - Operating
- Inspect all connections
  - Is there water in the outlet or plug?
  - Loose or frayed wires?

# **SPARE PARTS**

- Maintain a critical parts inventory
  - Control Cards
  - Display Cards
  - Transformers
  - Fuses
- Regular PM schedule
  - Replace Contactors at least once per year
  - Replace male/female plugs Weekly? Monthly?
  - Wiring from panel to restrainer/stunning area

# **STUNNER WANDS**

- Use properly designed wand
  - Hog restraint required?
  - Wand extensions needed?
- Clean and maintain daily
  - Clean wand tips volume dictates how often
  - Check wiring
  - Verify switch operation replace if necessary
- Storage
  - Warm dry environment
  - Drying cabinet is ideal





# **OPERATOR SAFETY**

- Personal Protection
  - Gloves
  - Boots
  - Safety chaps or Apron
- Stunning area
  - Cover all metal
  - Animal restraint
  - Rubber mat on floor
  - Emergency shut off?

# DOCUMENTATION

- Create daily maintenance log sheet
  - Include control unit and wands
- Make sure Stun Tracker software is operational (if available)
  - Print daily stunner log for file

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# **QUESTIONS?**

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### Thank you!

