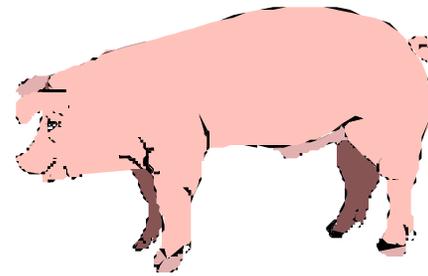


Stunning Pigs with a B&D Stunner



Erika L. Voogd
Voogd Consulting, Inc.

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**For pigs larger than 200 pounds,
extend wand tips to assure
correct stun wand contact**



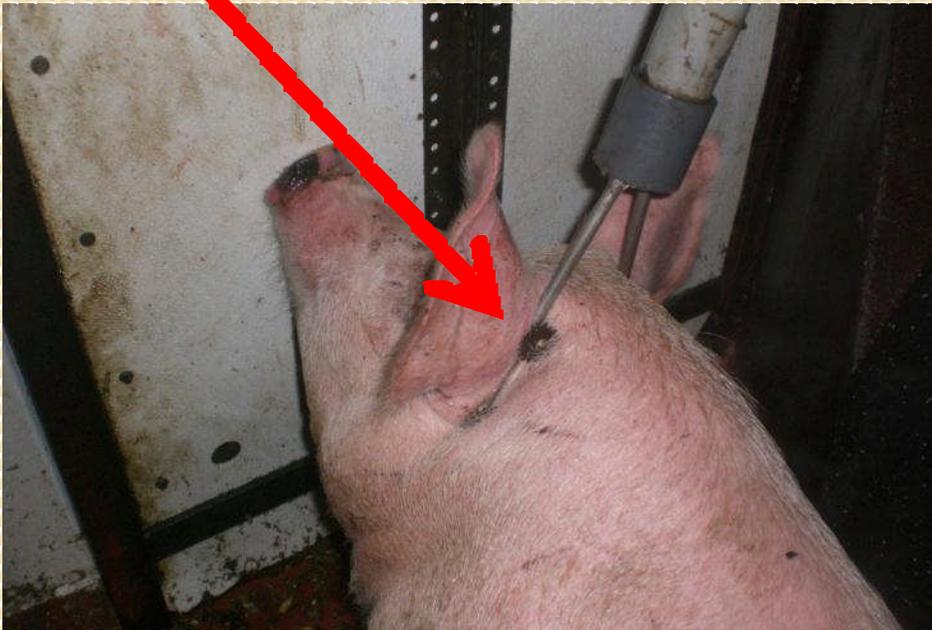
**Extended tips with extra star wheels. Stainless steel star wheels
(spurs) conduct better than carbon steel**

Wand extensions and star wheels (spurs) are now available from Best and Donovan



Wand extensions, Part # 9600017 and additional stainless steel star wheels (spurs) Part # 9603900 are available from Best and Donovan

The extended wand tips and extra star wheels (spurs) assure correct stun wand contact with brain



Locate wand as close to the ear as possible, in the thin crevice. Note that this wand has two sets of star wheels for small and large pigs



Longer, wider wand tips help to facilitate secure contact on the head of larger pigs

It is best to restrain the pig, during stunning to prevent stun wand slips or pig falling



Insulated swing gate and wall to restrain the animal during stun



Restraining the pig during stun can assure an effective stun. Wooden gate is non-conductive

Truck rubber mats on floor and wall. Coated metal gate.



Plastic lining in stun box area to insulate electrical current



Insulate the stun box to prevent grounding during stun

Turn on the stunner. Press the stunner button to test wand



Observe wand for electrical shorts. Service if necessary

At startup: Inspect and test the wand, prior to use

Select the Correct Voltage for the size and weight of the pig



Model 'ES' Stunner settings

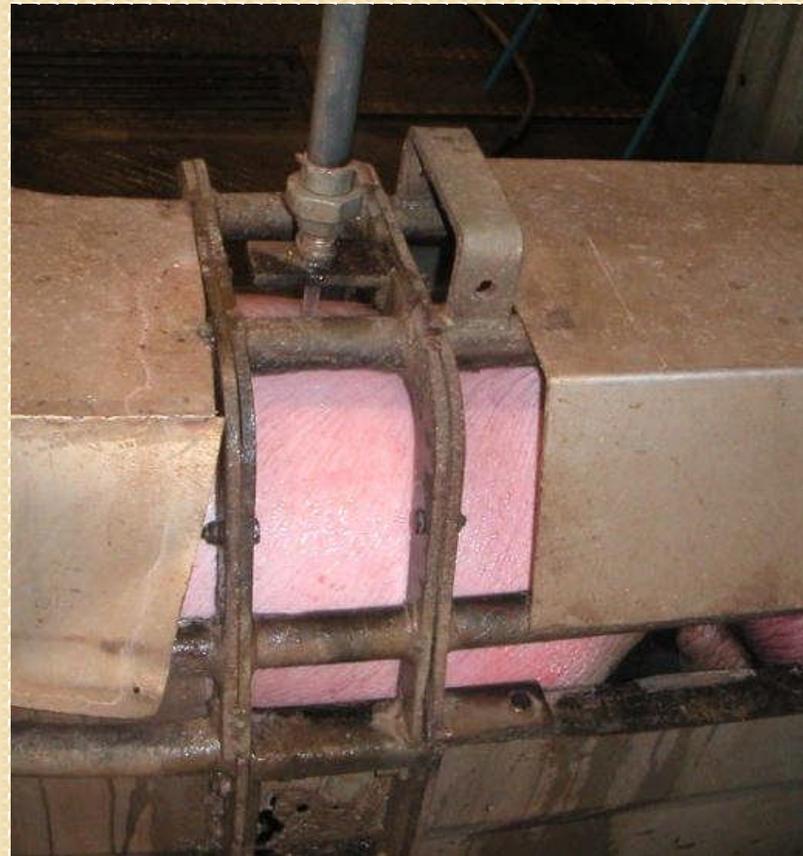
Hog Weight (lbs.)	Voltage
100 to 250	360
250 to 350	400
350 to 500	420
500 to 650	460
650 to 800	520
800 to 1200	580

Best and Donovan recommended voltages

Prior to stunning, be sure the head and heart of each pig is wet

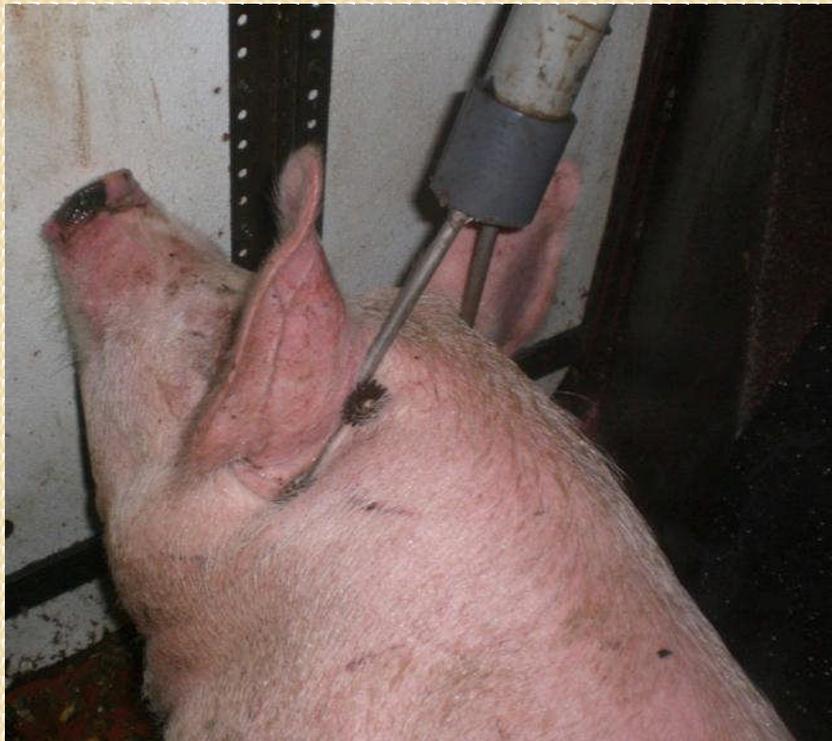


Automatic shower in holding pen

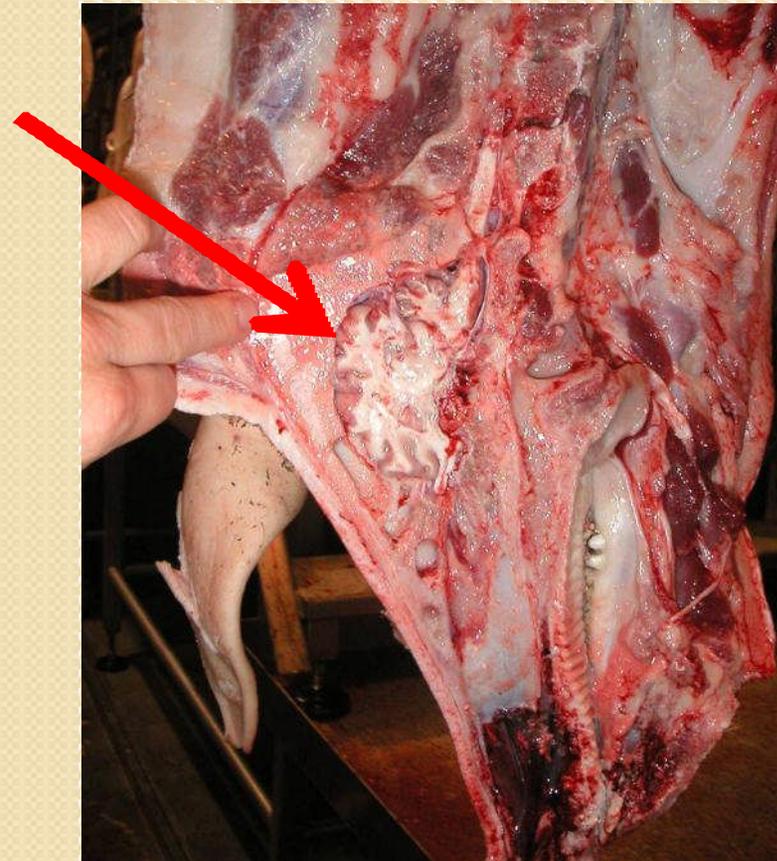


It is best to wet hogs prior to entry in the stun box area

Stun the head for a minimum of 3 seconds



Place wand as close to the ear as possible



Target the pocket of the ear to assure that the brain is stunned

Check the eye to assure that the pig is insensible before stunning the heart



Inspect the eye of the pig, but do not touch it. There should be no natural blinking



If the pig is still sensible, re-stun the head before stunning the heart

Stun the heart for a minimum of 3 seconds



Stun the heart of the pig



**Target placement of the wand
contacts behind the arm pit and
on the chest**

Check the eye to assure that the pig is insensible before hoisting and before bleeding

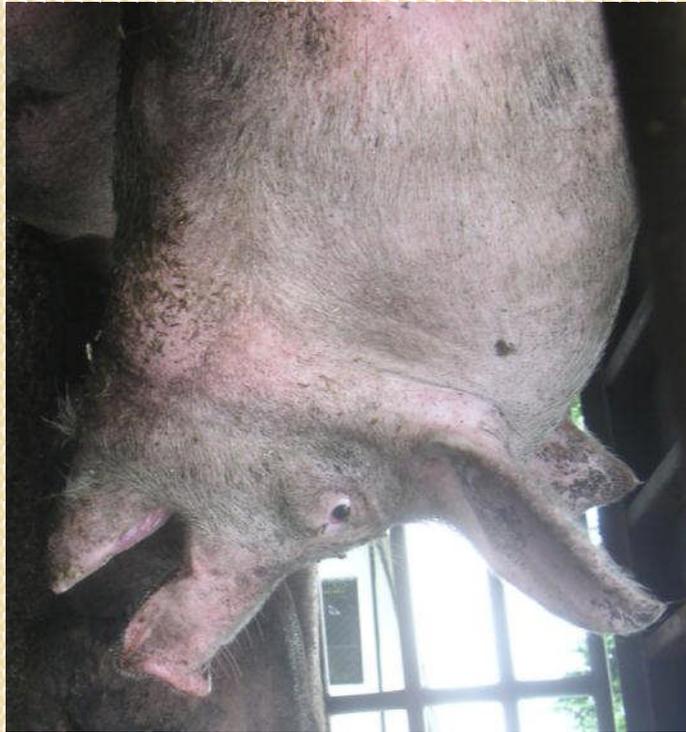


Inspect the eye of the pig, there should be no natural blinking. You can wave a hand in front of the eye and look for “tracking or movement”.



Do not touch the eye, as corneal reflex may still be present in an electrically stunned pig

In electrically stunned pigs, gaspng is a sign of a dying brain



Agonal gasping occurs when the pig's mouth opens and closes and the head jerks slightly (like a fish out of water)

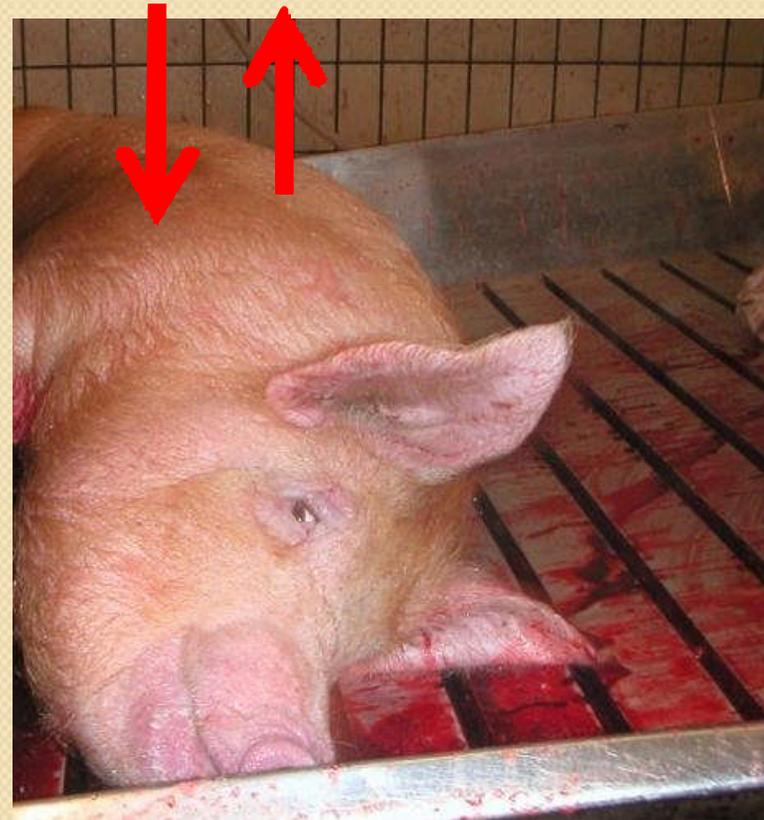


Rapid seizure blinking and nystagmus (eye vibration) can also occur in electrically stunned animals

Signs of Return to Sensibility (Beginning to regain consciousness)



**Eye is focused and pig is
blinking naturally**



**Rhythmic breathing: Sides are
moving up and down**

Signs of Sensibility (Fully Conscious)



Vocalization



Righting Reflex: The pig tries to lift it's head and right itself

Order of Events During Return to Sensibility in CO₂ Stunned Pigs

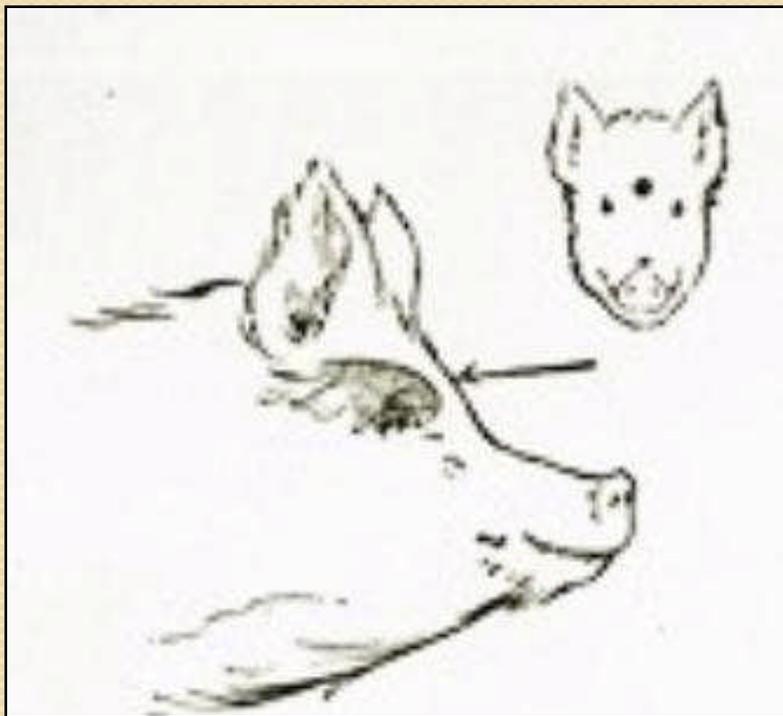
	Average Time
Corneal reflex (touch eye)	42 sec
Rhythmic breathing	68 sec
Excitation	76 sec
Nystagmus (vibrating eye)	86 sec
Spontaneous natural blinking (don't touch)	93 sec
Conscious movement (Righting Reflex)	171 sec
Attempt to stand up	387 sec

These events are very variable.

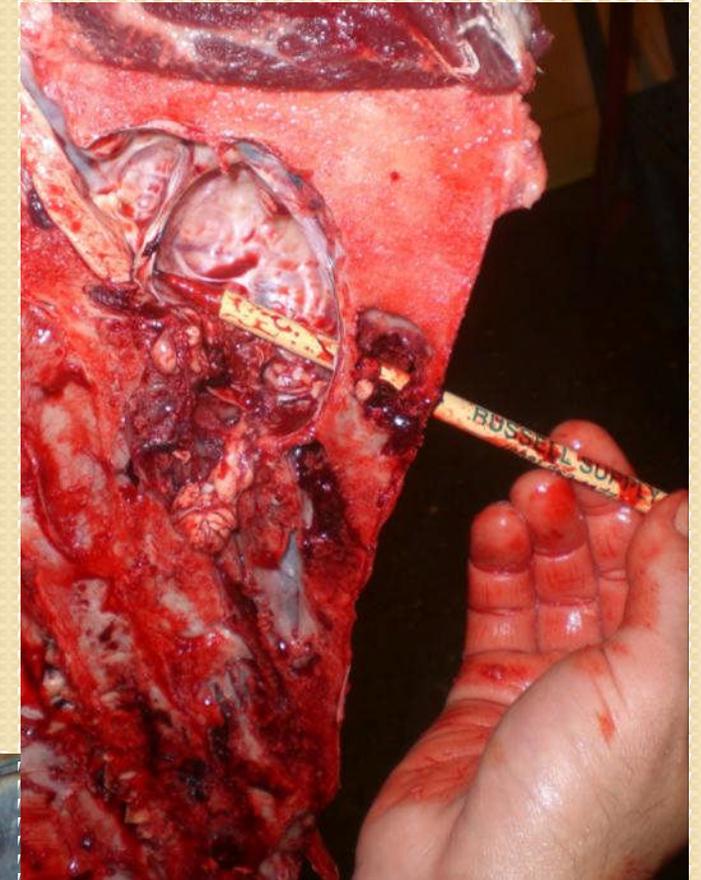
Danish Meat Research Institute, Holst (2001)

CO₂ return to sensibility sequence.

Re-stun (if necessary) before bleeding (captive bolt)

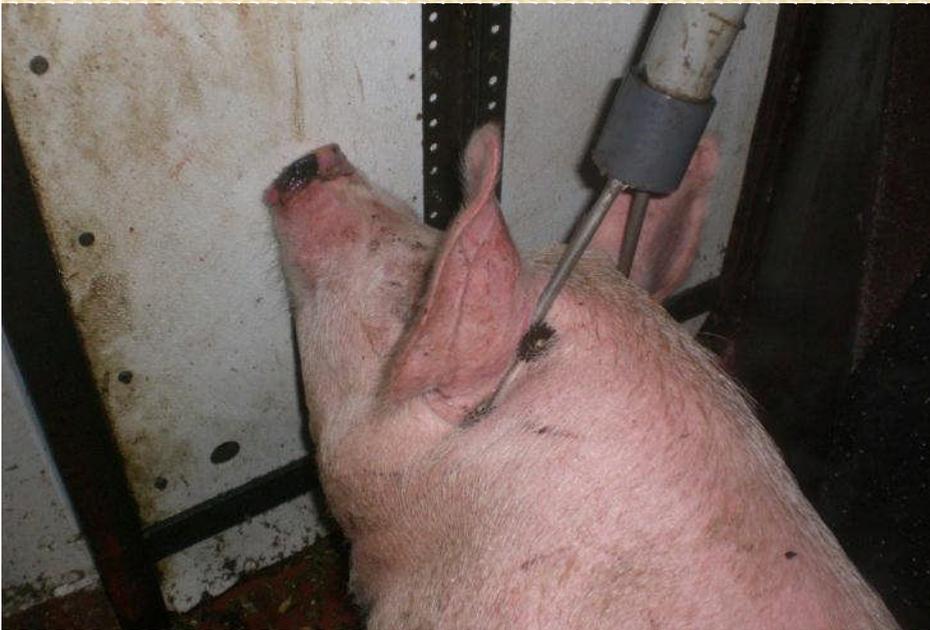


**Correct location for captive bolt
or free bullet stunning of a pig**



**Correct bolt
location and
angle to show
brain destruction**

Re-stun if necessary, before bleeding (electrical)



**If the pig is still sensible,
re-stun the head first**



Then re-stun the heart

Bleeding should be rapid with a large volume

For head/heart stun, target to bleed the pig within 30 seconds, with a maximum of 60 seconds between stun and bleed



**Good
Bleed**

If a large volume of blood does not appear, re-stick the pig



**Weak bleed
(small stick
wound)**

Routinely clean the stun wand, approximately every 5 pigs



**Unplug the stun wand prior to
cleaning**



**Use a steel brush or a green pad
to clean the wand**

Smoking indicates poor stun wand conductivity, immediately clean the stun wand contacts



Smoking indicates poor conductivity



Use a steel brush or a green pad to clean the wand

Routinely test wand voltage, using a voltage tester



**Voltage should be
sufficient to meet
manufacturer's
recommendations**

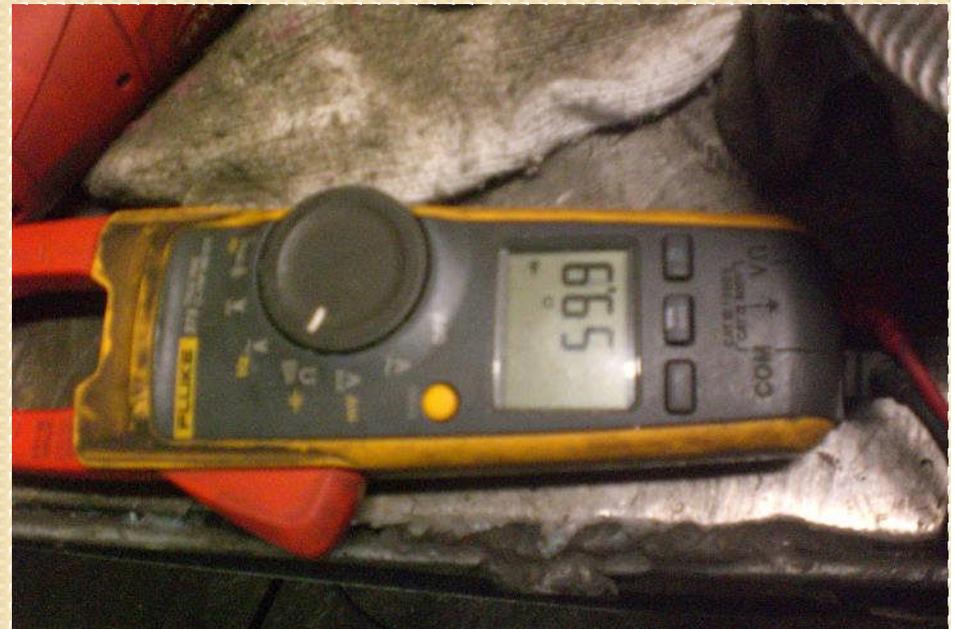


**Clean wand contacts and
retest until reading is
correct (Mounted wire
brush)**

Wand conductivity can be tested using an Ohm meter



OL (Open Line) indicates poor conductivity



Clean wand contacts and retest until reading is high

After production, clean the stun wand and store the stunner and wand in a clean, dry location away from the plant floor

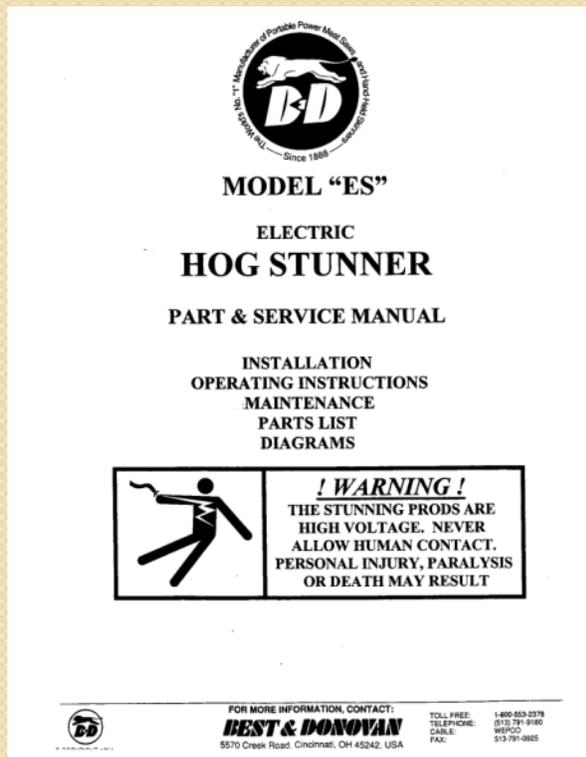


Do not store the stunner on the plant floor

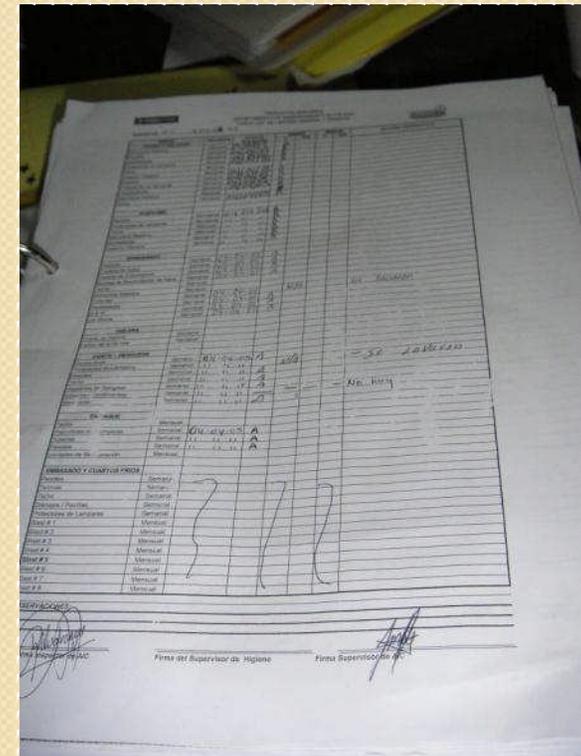


Store equipment in a dry location when not in use

Follow manufacturer's recommendations for equipment maintenance



Manufacturer's recommendations



Document equipment cleaning and maintenance

For more information

**[www.bestanddonovan.com/
stunner/stunner.htm](http://www.bestanddonovan.com/stunner/stunner.htm)**

1-800-553-BEST (2378) Ext. 3737

Best and Donovan Webpage

www.voogdconsulting.com

www.grandin.com

Dr. Temple Grandin's Webpage

**Voogd Consulting, Inc.
Webpage
contains information about
head/heart stunning of pigs**