



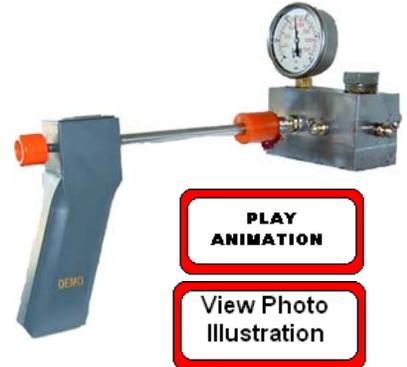
## U. S. Department of Labor MSHA's Accident Prevention Program Innovative Products

Safety and  
Health are  
Values!

### Grease Pressure Release Gun

Mine operators should perform a risk analysis on their equipment to identify grease fittings and lubrication chambers which may contain residual high pressure.

Since 1983, forty accidents involving release of grease under high pressure have been reported to MSHA. Twenty-seven of these accidents were associated with relieving stored grease energy or removal of the grease fitting. These accidents have resulted in eye injuries, lacerations, punctures, dislocated finger joints, and grease injections into the body. Equipment associated with the accidents included continuous miner cat track take-ups, conveyor grease jacks, machine mounted drills, mobile equipment (i.e. dozer track cylinders), feeder/breakers, surface coal mine augers, and mobile bridge conveyor units.



The problem can occur when grease is forced under pressure through a small opening. The force applied places the grease under tremendous pressure. The pressures can build up in the lubrication chamber to an extremely high level creating an unsuspected stored energy condition. In addition, trapped air can be compressed, making the release of grease more violent and dangerous. Using a pressure-release tool before disassembling/servicing or welding/heating lubricated components can eliminate the hazard of stored energy.

After an experienced Australian miner lost an eye while removing a grease fitting to check for proper lubrication on a dragline, a hydraulic/lubrication engineering design/manufacturing company and a mining company teamed up to solve this safety problem. They developed an innovative “Grease Pressure Release Gun.”

The handheld “Grease Pressure Release Gun” tool is engineered to:

1. Detect and indicate the presence of stored grease energy.
2. Safely relieve the stored energy when used properly.

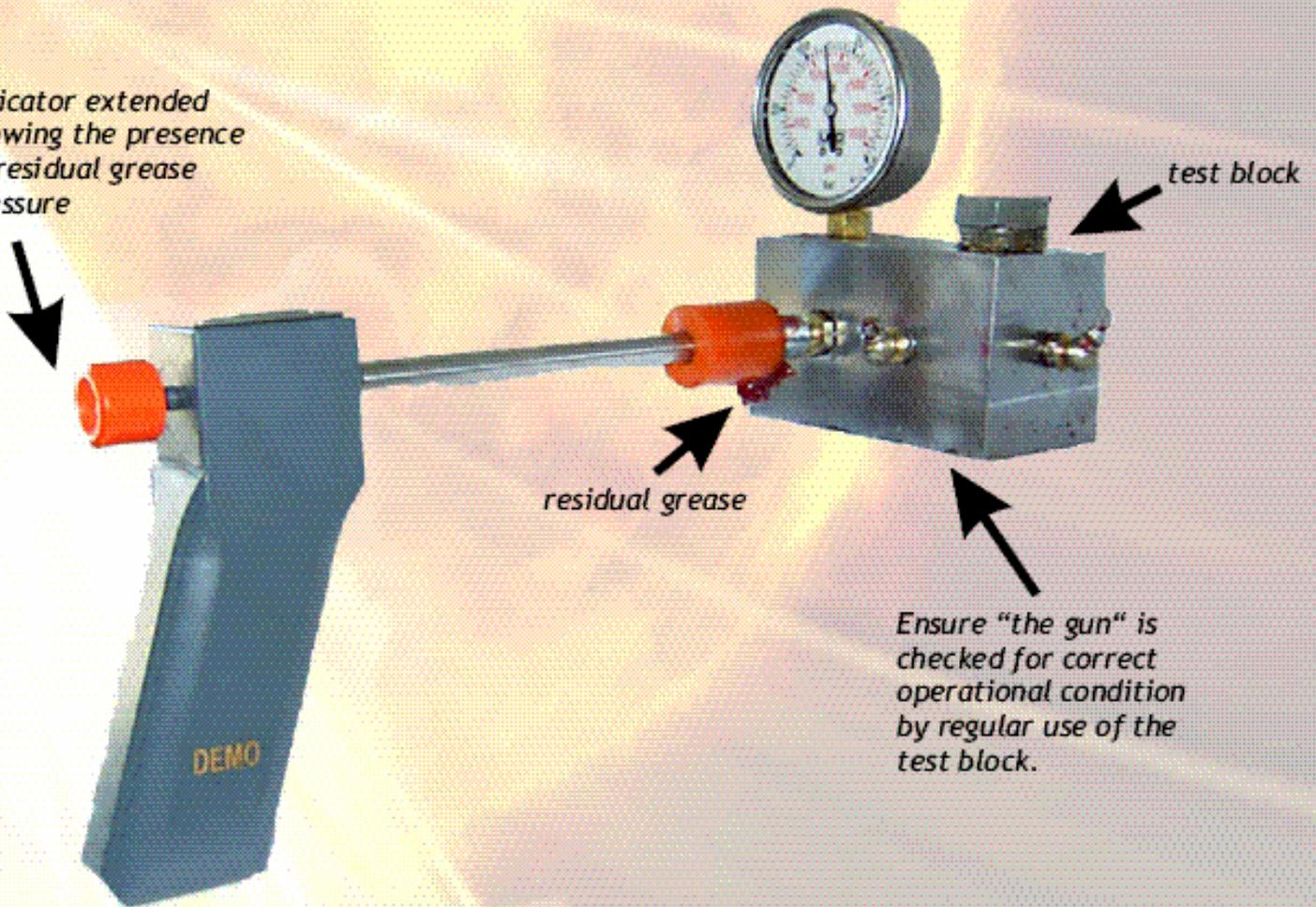
For information on manufacturers that are known to MSHA to have such products available, contact MSHA's Applied Engineering Division at 304-547-0400 or e-mail [zzMSHA-InnovativeProducts@dol.gov](mailto:zzMSHA-InnovativeProducts@dol.gov).

Indicator extended showing the presence of residual grease pressure



Residual grease released from beneath the protective shroud

Indicator extended showing the presence of residual grease pressure

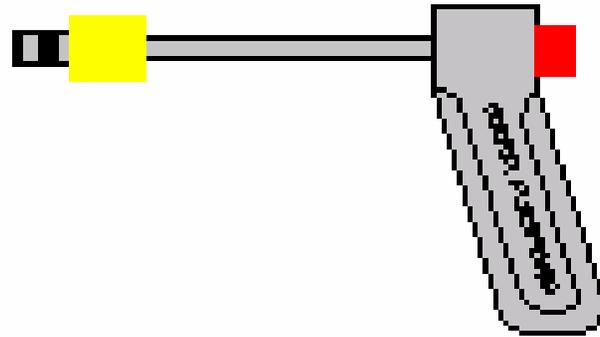


residual grease

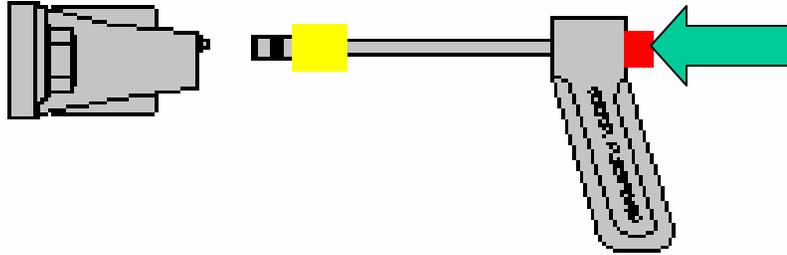
Ensure "the gun" is checked for correct operational condition by regular use of the test block.

# Grease Pressure Release Gun

patent pending SPEI-00981334

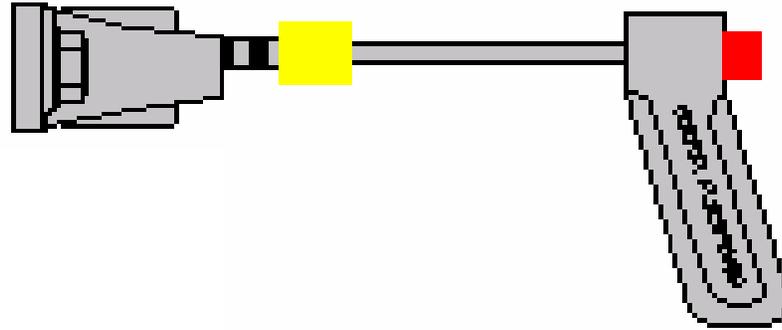


# Step 1



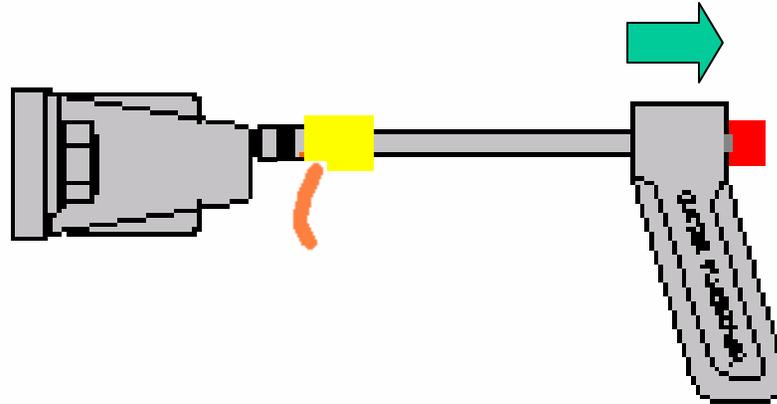
Before attaching gun to nipple press button  
home

## Step 2



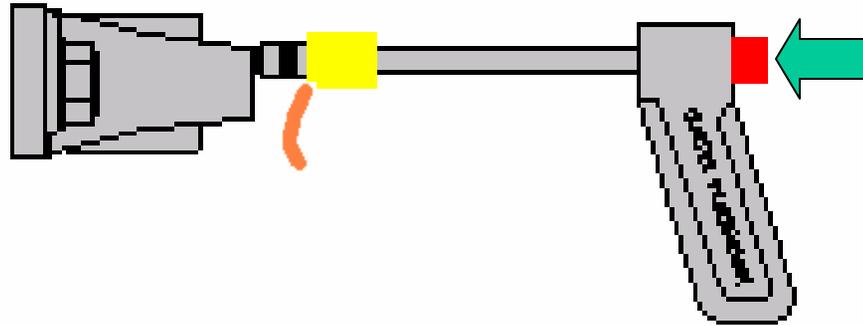
Fully connect pressure release gun to nipple

## Step 3



If the grease is under any pressure the button will move outwards to indicate this pressure and relieve the grease from under the shroud

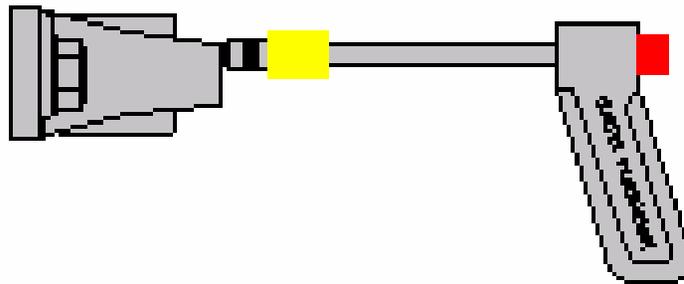
## Step 4



Push button in again, this will dispense grease from under the shroud.

If pressure remains the button will move outwards indicating pressure present.

## Step 5



If the button doesn't move and there's no grease discharging from the shroud, it can be considered that there is no pressure at the grease point

When working on grease system always proceed with care and verify the operation of the grease pressure release gun on test block frequently