BENCH AND PEDESTAL GRINDER PRACTICE WITH RING TEST PROCEDURE

A. SAFETY

1. When operating the grinder always wear a face shield which provides you with clear visibility.
2. Never grind in an area which contains flammable materials.
3. Direct sparks away from yourself and others.
4. Handle the grinder with care to prevent damage and reduce possible risk or injury.

B. INSPECTION

1. Visually inspect the grinder before using for the following:
   a) Damage to the cord or plug. (no bare wires , cuts , or broken prongs)
   b) Cracks in the tool body.
   c) Wheel guards are in place and secure.
   d) Ensure that the grinder is securely fastened to the work bench or floor.
   e) The tool rests are in place and at a height which is **not** below the horizontal center line of the wheel and no more than 3/32” from the face of the wheel.
2. Visually inspect the stone or brush before grinding to ensure:
   a) The stone has no chips, cracks, uneven wear, or a plugged face profile.
   b) The stone is equipped with blotters.
   c) The stone is rated at or higher than the RPM rating of the grinder.
   d) The brush does not have uneven or excessive wear.

C. OPERATION

1. All grinding wheels can break therefore do not stand directly in front of the wheels when starting the grinder.
2. Approach the wheel with your work piece gently, never bump the work piece against the wheel or use excessive force by pushing the material into the wheel. This may cause the wheel to crack or shatter.
3. Use vise grips for holding small parts where there may be a danger of hand to wheel contact.
4. Never grind on the side of a wheel unless it is designed for this purpose.

5. When installing a new stone perform a ring test to detect any cracks or damage to the stone.

RING TEST PROCEDURE

If the wheel is not too heavy, it may be suspended from the hole on a small pin or finger. (See Illustration No. 63.) Heavier wheels may be allowed to rest in a vertical position on a clean hard floor.

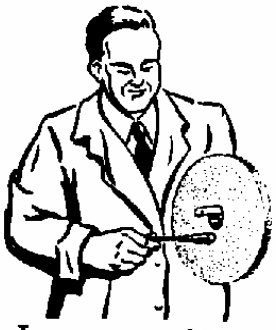

ILLUSTRATION NO. 63

Tap the wheel gently with a **NON-METALLIC** implement such as a wooden screw driver handle for light wheels and a wooden mallet for heavy wheels. The best spot to tap a wheel for the ring test is about 45 degrees either side of the vertical center line and about 1 or 2" from the periphery. (See figures 44 and 45.)

If struck directly along the vertical center line, the ring, even in a sound wheel, is sometimes muffled and may give the erroneous impression that the wheel is cracked. This is especially true with large wheels which are supported on the floor when conducting this test. (See figure 45.) Also, it is sometimes noticeable when the wheel is suspended from the hole. It is recommended that the test be repeated after rotating the wheel 45 degrees to the right or left.

Apply this ring test immediately before mounting either a new or used wheel on a machine. Comparison of the sound with other wheels of the same lot and specification will allow rejection of any wheel with a suspiciously different ring.

The ring test depends on the damping characteristics of a cracked wheel to alter the sound emitted when the wheel is tapped lightly. It is subject to interpretation by the inspector and is primarily applicable to vitrified bonded wheels.

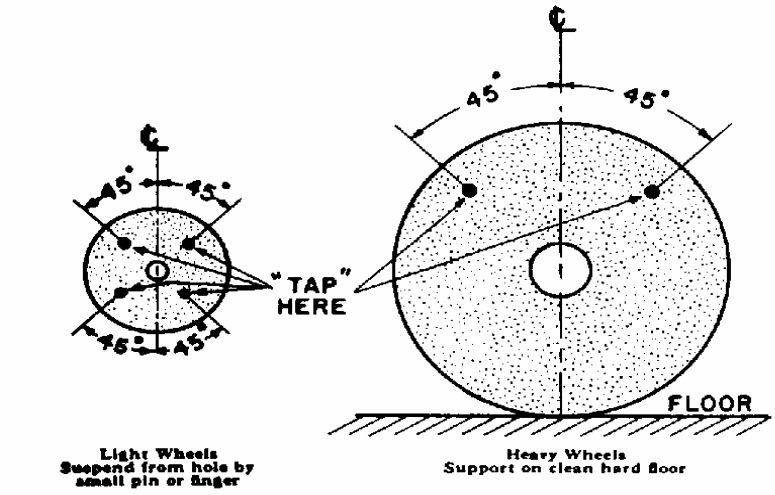

FIGURE NO. 44 FIGURE NO. 45

6. Truing a wheel corrects the run out condition on a wheel's grinding surface. Dressing a wheel alters the cutting action or shape of the grinding surface. Both procedures are done by using a "dressing tool", and can be performed by any trained operator as follows:

   a.) Set the tool rest back far enough from the surface of the wheel to allow the heel of the dressing tool to hook over the tool rest. (See drawing below.)
   b.) Start the grinder and move the "dressing tool" slowly back and forth across the face of the wheel. The tool must rest on and be guided by the tool rest as you gently hold it against the face of the wheel. Continue until the condition is corrected. Stop grinder and check. Continue as needed.
   c.) After the condition has been corrected, stop the grinder and readjust the tool rest as per heading INSPECTION # 1 e.)

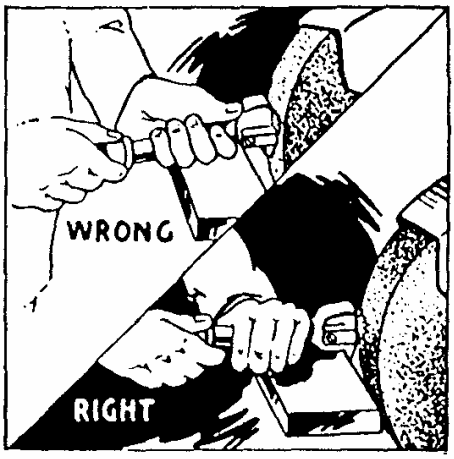

Figure 1 - grph097

7. Never leave a running grinder unattended.
8. Report any unusual vibrations, rattles, odors, etc... To supervisor immediately.