

# PENETRANT KIT OPERATING INSTRUCTIONS

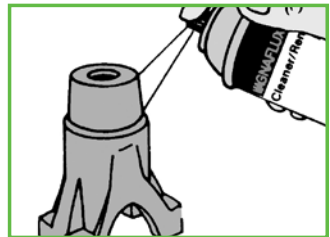
## HOW TO USE YOUR ZYGLO® KIT

Smooth surfaces such as those produced by clean cutting tools give best results. These include ground, machined, and sand blasted surfaces. Shot blasting, polishing, etc., which tend to smear over and close up surface openings, can give finishes that can cause poor results. Zyglo is an extremely sensitive fluorescent penetrant inspection method that reveals cracks and other surface discontinuities in virtually any non-porous material.

Surfaces should be free of foreign materials and paint that would prevent penetration of defects or hold unwanted penetrant. Grease, oils, etc. prevent penetration and should be removed by precleaning. Scale, sand, dirt, etc. trap penetrant and hinder removal, therefore wire brushing or similar precleaning is necessary. For most reliable results, paint should be removed from areas to be tested.

Just before starting the test, plug the black light into a 115 Volt A.C. supply. Allow the light to warm up to maximum brilliance, in 5 or 10 minutes. Leave the light on throughout the tests. If turned off, it must cool before it will relight. **This Zyglo kit is not recommended for the inspection of plastic materials, as it may stain, soften, or even dissolve the plastic material under test.**

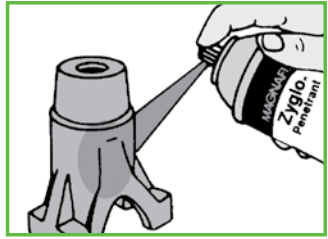
**1. CLEANING**—For precleaning, spray the part or section to be inspected with SKC-S. Allow SKC-S to remain on part long enough to dissolve dirt or film. Wipe dry with a clean rag. A check with black light will show any oils remaining, by their fluorescence. Repeat if necessary. After final wiping, allow time to dry before using ZYGLO® Penetrant.



**1. CLEANING**

**2. APPLY PENETRANT**—Spray the part or section to be inspected so that the surface is covered with ZYGLO® Penetrant. Allow Penetrant to remain on the part for a period of time. Generally a 10 minute dwell time is sufficient on clean castings and welds.

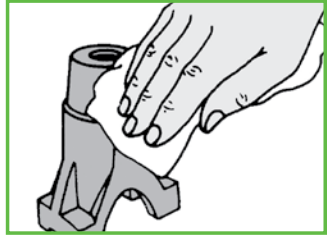
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**2. APPLY PENETRANT**

**3. REMOVE PENETRANT**—When sufficient penetration time has been allowed, wipe the surface clean with a clean towel or cloth. Repeat if necessary. Some surfaces will require only wiping. In general, however, remove excess surface penetrant with clean cloths premoistened with SKC-S. **Do not flush surface with SKC-S because this will impair sensitivity.** Repeat this procedure with additional wiping until residual surface penetrant has been removed.

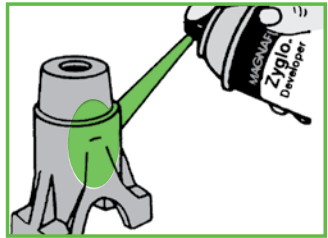
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**3. REMOVE PENETRANT**

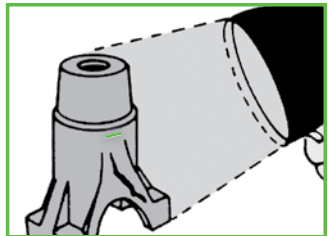
**4. DEVELOP**—*Shake the can vigorously until agitators rattle inside.* Spray the part or section with developer, enough to wet the part thinly and evenly, *no more.* Proper thickness will dry to a thin white layer. Too much developer will mask indications; too little will not develop the indication sufficiently. Apply to 6-8 inch sections at a time. Allow developer to dry. Large cracks show up immediately. Minute cracks may take a few minutes to develop.

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**4. DEVELOP**

**5. INSPECT**—Defects will be marked by a bright indication when viewed with the portable black light. A glowing line marks a crack, lap, forging burst, or cold shut. If wide and deep, the indication will grow and spread. Porosity, shrinkage, lack of bond, and leaks will appear as dots or bright areas under the black light. These, too, will grow and spread if the defect is large or extensive.



**5. INSPECT**