OPERATION (cont.)

6. Adjust the interpupillary distance by using the eyepiece interpupillary slide adjustment.
7. Observe using the right eyepiece adjusting the coarse and fine focus and adjust the diopter ring until image is clear and sharp.
8. Observe with the left eyepiece and adjust the diopter ring until image is clear and sharp.
9. Rotate the fine focus adjustment when using other objectives. NOTE: This instrument is equipped with patent objectives so the precision or parfocalization is very high.

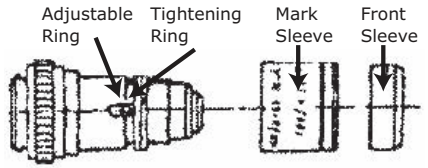

Fig. 1 - Objective Parts

10. If the image is in focus with the 10x objective, you can select other objectives and observe the specimen even if the fine adjustment knob has not been used by using the following method (See Fig. 1):
    1. Unscrew the 40x or 100x objective and remove from turret.
    2. Remove the mark sleeve.
    3. Turn the ring on the objective to adjust its parfocal distance.
    4. Re-insert the objective and compare with the 10x.
    5. Adjust until the 40x and 100x objectives image is clear.

USING THE CEDAR OIL

1. Drop some cedar oil on to the top of the 100x objective when the 100x objective is being used. NOTE: To maintain a good quality image, rotate the turret right and left several times to eliminate bubbles in the cedar oil.
2. After finishing the observation, wipe off the cedar oil.
3. Do not use the 40x objective until you have wiped off all of the cedar oil.

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OPERATION (cont.)

ADJUSTING THE CONDENSER APERTURE

1. The numerical aperture of the condenser should match the numerical aperture of the objective being used.
2. To make sure that the objectives are imaging properly (especially the 40x and 100x), follow this procedure:
    1. Take off the eyepiece.
    2. Look through the eyepiece.
    3. The smallest circle or light that you can see is the eyepiece's exit pupil.
    4. Adjust the aperture of the iris diaphragm in the condenser to 70% or 80% for the best contrast for observation (See Fig. 2.).

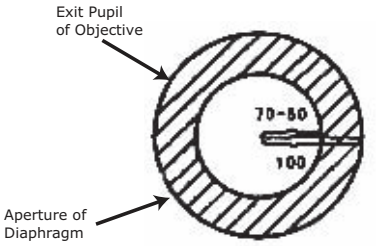

Fig. 2 - Condenser Diaphram Aperture

TROUBLESHOOTING

Problem	Possible Cause	Solution
1. Image not clear.	1.Specimen is in incorrect position. 2. Lens is dirty. 3. Cedar oil not placed on immersion objective. 4. Bubbles in Cedar oil. 5. Cedar oil on 40x objective. 6. Iris diaphragm open too wide.	1. Re-position specimen. 2. Clean lens. 3. Put a drop of Cedar oil on immersion objective. 4. Rotate turret several times to eliminate bubbles. 5. Clean 40x objective. 6. Reduce size of iris diaphragm.
2. Poor illumination.	1. Condenser position is incorrect. 2. Lens is dirty. 3. Specimen is not placed level.	1. Re-position condenser. 2. Clean lens. 3. Re-position specimen so it is level.
3. Illumination not bright.	1. Iris diaphragm opening too small. 2. Position of condenser too low. 3. Lens is dirty.	1. Open iris diaphragm wider. 2. Raise condenser. 3. Clean lens.
4. Cannot focus at high magnification.	1. Specimen is in incorrect position.	1. Re-position specimen.
5. Objective lenses touch specimen.	1. Stage is too high.	1. Re-position stage.

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