

Fig. 4: Broken Porcelain Remains In Cylinder Head**Fig. 5: Flowchart Of Procedure****Mode 1 Procedure**

Use Rotunda special service tool 303-1203 to remove an empty ground electrode shield from the cylinder head. (**Fig. 6**)

Fig. 6: Rotunda Special Service Tool 303-1203

NOTE: THIS TOOL IS ONLY DESIGNED TO WORK WITH AN EMPTY GROUND ELECTRODE SHIELD. IF PORCELAIN REMAINS, PROCEED TO MODE 2 OR 3 REMOVAL.

1. Modify vacuum cap to a 3/8" (10 mm) length for each ground electrode shield that needs to be removed. (**Fig. 7**)

Fig. 7: Installing Modified Vacuum Cap

2. Use the installation rod (J) provided with service tool 303-1203 update to install the modified vacuum cap. Push the cap into the ground shield down to the electrode strap. This will plug and protect the combustion chamber from contamination. (**Fig. 7**)
3. Thread-tap the ground electrode shield using a 9.0 x 1.0 mm plug tap (tap profile is about 3-4 reduced diameter threads on the tip end).
 - a. Coat the end of the tap with general purpose grease. (**Fig. 8**)

Fig. 8: Coating Tap With Grease

- b. Turn the tap about 3 to 4 turns into the ground electrode shield. Back the tap up frequently to break chips and avoid cut material from coiling-up in the spark plug well. A tap socket adaptor (K) is provided with service tool 303-1203 update to connect the tap to a 3/8" socket drive.

CAUTION: DO NOT ATTEMPT TO REMOVE THE GROUND ELECTRODE SHIELD WITH THE TAP AND WRENCH. THE TAP MAY BREAK IF THIS IS ATTEMPTED.

4. Thread Rotunda special service tool 303-1203 into the ground electrode shield. (**Fig. 9**)

Fig. 9: Details Of Tool As Installed In Head

- a. Install the stepped end of the tool pilot bushing into the spark plug well ensuring it bottoms out.
 - b. Screw the center shank into the ground electrode shield. Do not over tighten the shank, to prevent thread stripping.
 - c. Install the nylon washer and jack nut until finger tight.
 - d. Turn the jack nut until the ground electrode is freed from the cavity and withdraw the