



## “QUICK CHANGE” SECONDARY DIAPHRAGM KIT P/N 20-59 & 20-73



### INSTALLATION & TUNING INSTRUCTIONS 199R9809

#### INTRODUCTION:

This kit contains the necessary pieces to give your vacuum secondary carburetor the capability of changing the secondary diaphragm springs without removing and disassembling the secondary housing. It is recommended to purchase Holley kit 20-13 (two kits will be necessary with kit 20-73), which is an assortment of secondary springs and instructions that will help you tailor the secondary opening characteristics to a particular engine and vehicle configuration.

#### REMOVAL:

1. On carburetors with a manual choke, remove the 3 screws that hold the fast idle cam plate and the “C” clip on the stem of the secondary vacuum diaphragm.
2. On carburetors with an automatic choke, remove the 3 screws that hold the choke cap (**Figure 1**). Next, remove the 3 screws that hold the choke housing to the carburetor and the “C” clip (**Figure 2**). Move the housing to the side.

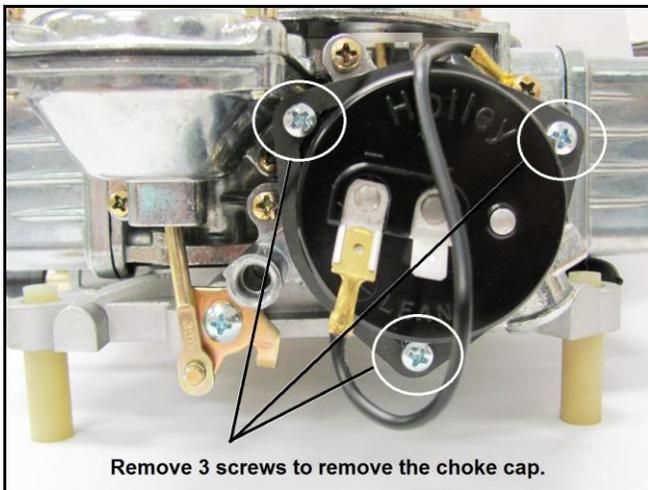


Figure 1

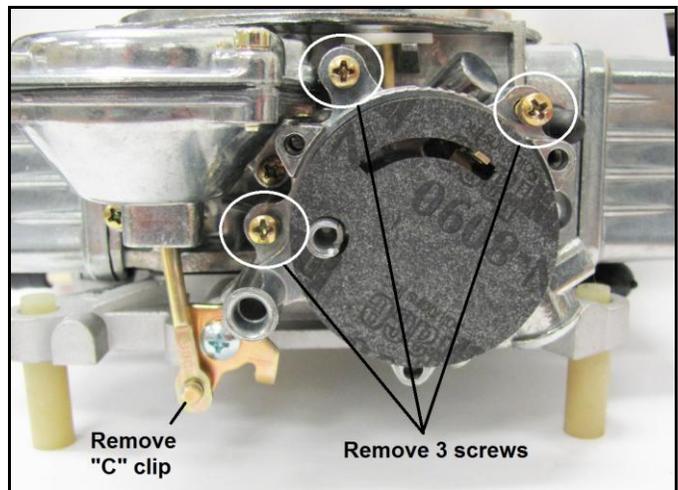
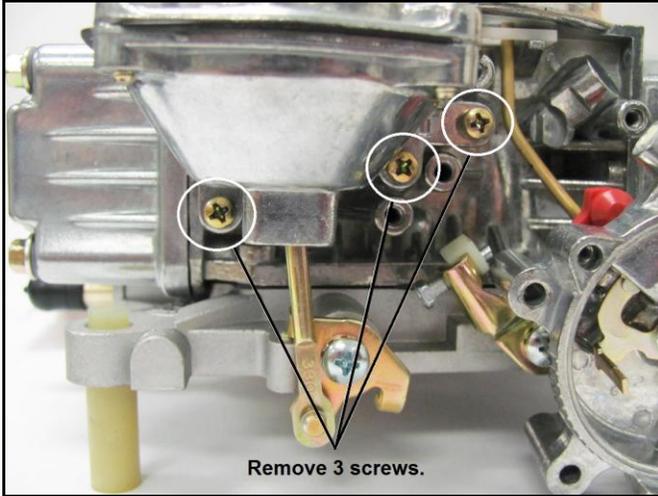
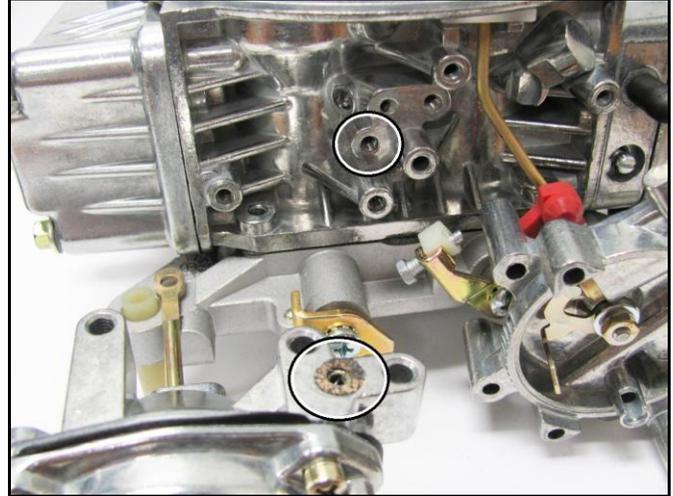


Figure 2

3. **Figure 3** shows the removal of the 3 screws that secure the vacuum housing to the carburetor. After this is done, you may separate the housing from the carburetor.
4. Once the secondary housing is removed, you may find residue of the cork o-ring gasket that seals the housing to the carburetor. Clean off any gasket residue left on the carburetor and on the lower vacuum housing (**Figure 4**).



**Figure 3**



**Figure 4**

5. Remove the 4 screws that secure the top cover to the lower housing. Place them aside since you will reuse them later. Next, remove the top cover. As shown in **Figure 5**, some of the carburetors come equipped with a restrictor and some have a check ball in the lower housing. If it has a check ball in this location, it **MUST** be retained for proper activation of the secondaries.
6. With the check ball in place (if equipped) and the vacuum diaphragm positioned correctly, the top cover may now be placed onto the lower housing. **Figure 6** shows the correct relationship of the top cover to the lower housing in **Figure 5**. When installing the first two screws (diagonally from each other), it is recommended to apply a light coat of petroleum jelly to the tip of each screw. This will help prevent the screws from catching on the diaphragm when they are tightened. Snug down the 2 screws first, and then tighten.



**Figure 5**



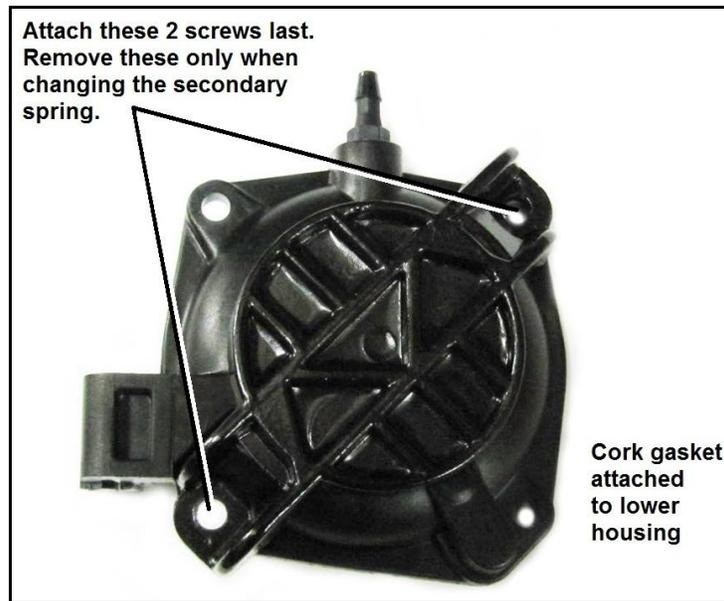
**Figure 6**

7. **Figure 7** shows the correct way to attach the vacuum diaphragm spring onto the removable top cover.



**Figure 7**

8. In **Figure 8**, you can see where to place the final 2 screws on the removable top cover. Once installed, torque all 4 screws to 18 in./lbs. Before installing the cork gasket to the lower housing, make sure the area is clean of the old gasket, or secondary vacuum operation will suffer. Be sure to center the new gasket to ensure the vacuum passage is free of obstruction. To install the complete secondary housing, reverse the disassembly procedure.
9. Install the washer, screw, and nut onto the choke cable bracket, which is used only on passenger car applications. Whenever the secondary spring is changed, remove only the 2 screws pointed out in **Figure 8**. Extra rubber o-rings are provided should the original ones begin to leak. When using the kit 20-73, two secondary diaphragm housing covers are included. These covers are equipped with tubes to enable you to connect a piece of vacuum hose from one carburetor to the other. This connection will equalize the vacuum, so that both secondaries will open at the same time.



**CAUTION!** After the modification and before starting the engine, check the secondary throttle and also the primary throttle for freeness of operation. Be certain that there is no manner of interference when the throttle lever is operated between idle and the wide-open position. Any binding or interference could cause the throttle to stick during operation and could possibly result in a loss of carburetor throttle control (uncontrolled engine speed).

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