



DEMON™ CARBURETOR MANUAL CHOKE KIT #421441

CHOKE INSTALLATION INSTRUCTIONS LIT703

This manual choke kit is designed to be used on any Demon™ Carburetor with a choke tower. This covers the Road Demon Jr.™ and Road Demon™ series carburetors as well as both Twin Squirter (mechanical secondary) and Vacuum Secondary Speed Demon™ carburetors. **READ THESE INSTRUCTIONS THOROUGHLY** before installing the Demon™ Carburetion Manual Choke Kit. **If you have any questions, please contact our technical department at 270-901-3346.**



INCLUDED IN THIS BOX

Item	Description	Qty.	Item	Description	Qty.
1	Manual Choke Pod Assembly	1	10	1/2" Cotter Pin	1
2	Choke Flap	1	11	6 ft. Choke Cable	1
3	Choke Shaft with Lever	1	12	Tube of Loctite® 271 (packaged)	1
4	#8 x 32 TPI Torx® Head Screws	2	13	Fast Idle Assembly (plate, spring, & screw)	1
5	Choke Rod	1	14	Shaft Spring	1
6	Nylon Main Body Block Off Plate	1	15	Outer Shaft End Plate	1
7	#8 Lock Washers	3	16	#10-32 x .31" Phillips Pan Head Screw w/ Lockwasher	1
8	#8 1-3/4" Socket Head Cap Screws	3	17	#10-32 x .38" Set Screw	1
9	1/2" Retainer Pin	1			

You will need the following tools to help with the installation:

- Small Hammer
- Small Drift (punch)
- 3/32" Allen Wrench
- 9/64" Allen Wrench
- T15 Torx Driver
- .316 Diameter Drill
- Needle Nose Pliers
- Small Flat Blade Screw Driver
- #2 Phillips Head Screw Driver
- Small File

INSTALLATION

1. Remove the carburetor from the vehicle and drain any fuel into a "fuel safe" container.
2. If your carburetor is a Speed Demon™ Twin Squirter (mechanical secondary), it is equipped with a slotted screw to control the secondary butterfly position. This must be changed to the #10-32 x .38 set screw included with the kit (if you do not, the linkage can bind). This will require you to reset the secondary throttle shaft. Set the secondary butterflies to the bottom of the transfer slot so you cannot see any of the slot at idle (butterflies closed), but with any movement of the secondary butterflies you will begin to see the slot. (*Refer to the Demon™ carburetor instruction manual for further information.*)

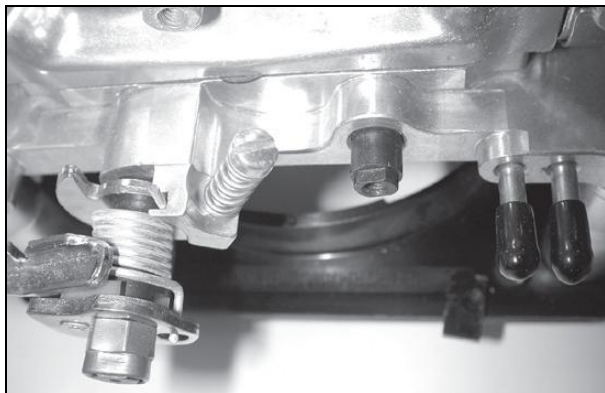


Figure 2

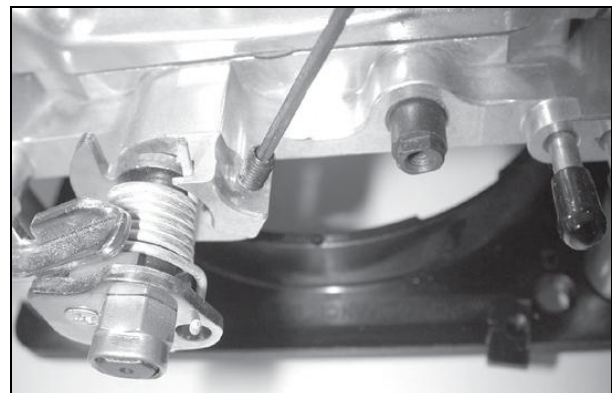


Figure 3

3. Using a small drift pin punch, knock out the sealing slug on the right side of the choke horn in the main body. It is pre-cut at the factory and should press out very easily. Once you've removed the slug, deburr the hole to make sure the choke rod doesn't bind or hang.

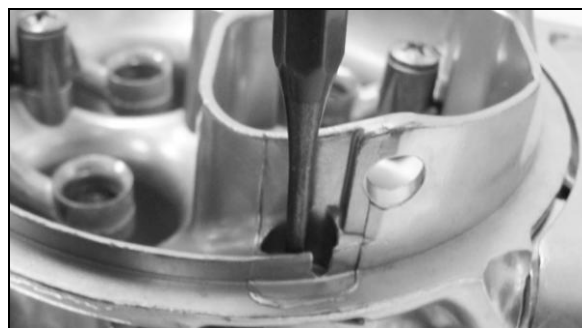


Figure 4

4. Insert the nylon main body block off plate into the cut out slot in the side of the main body.
5. Insert the small end of the choke rod through the bottom of the nylon main body block off plate towards the top (Fig. 5).

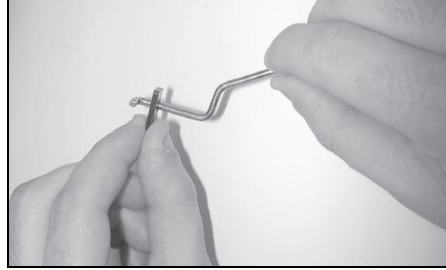


Figure 5

6. Insert the choke shaft with lever through the choke tower (Fig. 6). Make sure the choke shaft with lever moves freely before proceeding. If it does not you may need to resize the hole(s) going through the choke tower or use a 0.316" drill bit to make sure the hole is the proper size.

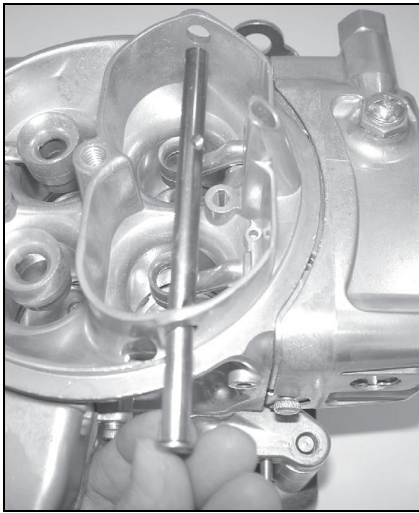


Figure 6



Figure 7

7. Insert the choke rod through the hole on the end of the bracket on the choke shaft. Secure the rod with the 1/2" cotter pin (Fig. 7).
8. Use the two T15 Torx® head screws to secure the choke flap to the choke shaft (Fig. 8). The flap has instructions stamped on its upper side. Make sure you can read the instructions and that the arrow points towards the choke rod. **NOTE:** It is extremely important that the choke flap is centered so it moves freely and does not bind. You may need to remove the flap to deburr the edges if it binds and reinstall. Once the choke flap is centered and moving freely, remove the Torx® head screws one at a time. Place a drop of Loctite® 271 on them and reinstall. Wipe any excess Loctite® off the screw heads or shafts before proceeding.

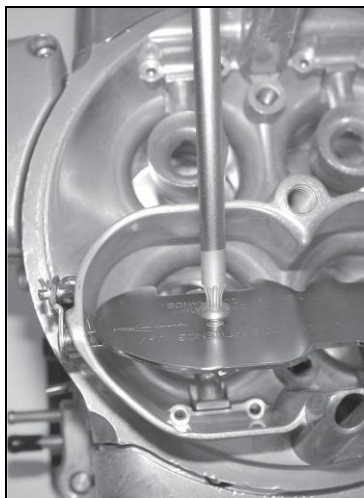


Figure 8

9. Install the endplate/spring combination. The spring slides into the u-shaped endplate with the fast idle speed screw (Fig. 10) and then slide this onto the left (passenger) side of the primary throttle shaft. When installed, the head of the fast idle speed screw should be facing towards the base of the carburetor and the threads should be pointing upward. Now install the outer bracket with the double D-shaped hole onto the end of the shaft. It is advisable to keep the long straight portion of the spring unhooked and after the outer bracket is secured with the Phillips head screw to the shaft, use your little finger to lift the straight portion of the spring up and drop it into the slot on the right side of the outer bracket (Fig. 11). If installed properly you should be able to push the fast idle speed screw forward (up) and have it return smoothly.



Figure 9



Figure 10

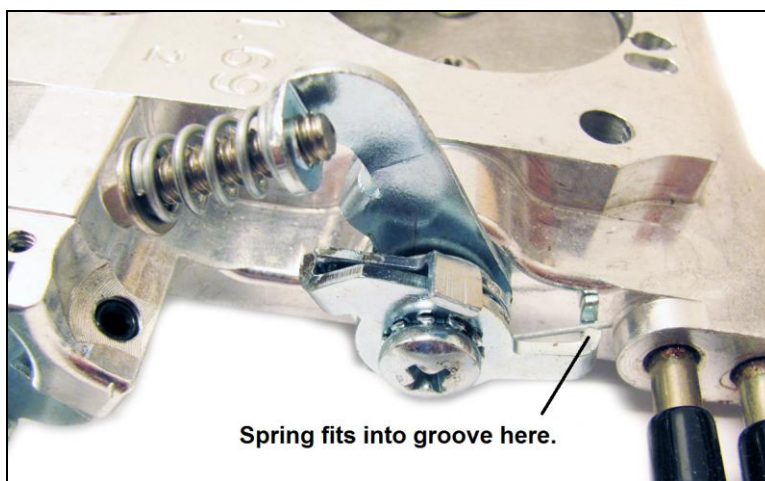


Figure 11

10. Install the manual choke pod assembly. Use one of the 1-3/4" SHCS with a #8 lock washer in the upper left mounting hole to hold the pod in place while you make the other connections. Insert the end of the choke rod through the hole in the end plate of the pod, with the end of the plastic cam above the rod where it comes through the hole in the bracket. Use the 1/2" retainer pin to secure the choke rod in place (Fig. 12). Install the rest of the 1-3/4" SHCS with a #8 lock washer on the upper right hand portion of the choke pod (leave the bottom left mounting screw out at this time). Before tightening the mounting screws open the throttle linkage with the primary throttle linkage and push the adjuster on the side of the choke pod forward. The choke flap shop should be open to the vertical position and the fast idle speed screw should be in-line with, but not touch the plastic fast idle cam (Fig. 13). If it does not align with the cam it may be necessary to slightly bend the bracket to line it up properly.



Figure 12

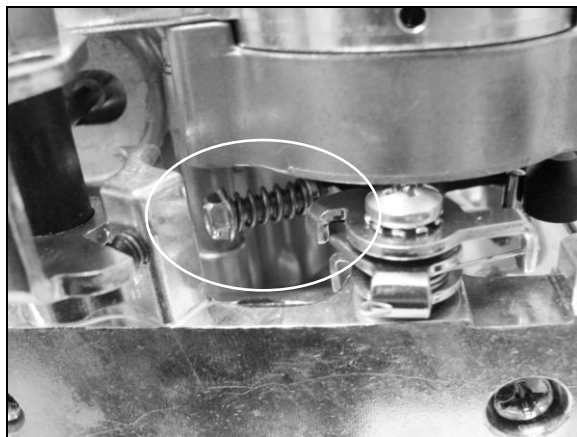


Figure 13

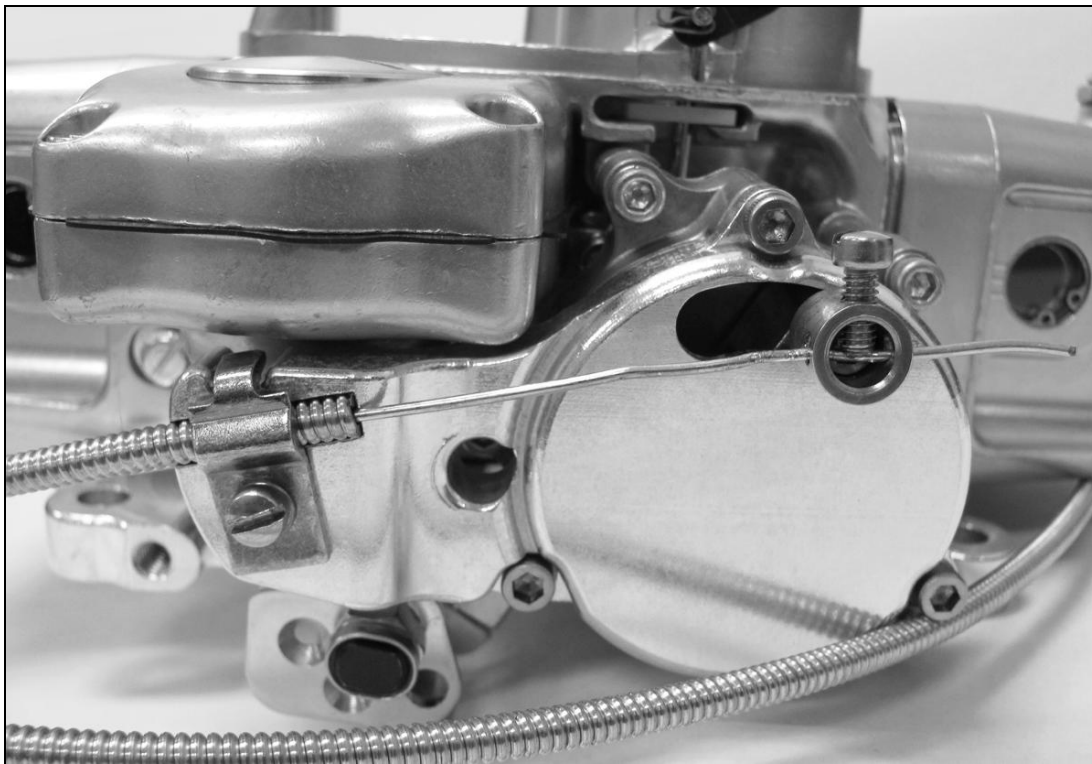


Figure 14

Note: The choke linkage will only close when you depress the throttle. If you try to close the choke flap without depressing the throttle you can damage the linkage.

11. Now check the operation of the choke. First, double check that all of the screws that were installed are tight and that the 1/2" cotter pin and key are secured (ends bent outward on the cotter pin) so they will not come out. Open the carburetor linkage to wide open and pull the choke mechanism back (towards the rear of the carburetor - Fig. 15). The choke flap should now be shut and the throttle should be in the "fast idle" position. If you look at your idle speed screw on the left (driver's) side linkage of the carburetor, it should not be touching the bracket at this time. Now, push the choke mechanism forward and this should fully open the choke (flap vertical). When you operate the throttle linkage again, the carburetor should return to its normal idle position with the idle speed screw on the left (driver's) side touching the throttle linkage.



Figure 15

NOTE: IF THE CHOKE AND LINKAGE ARE NOT OPENING AND CLOSING PROPERLY AS LISTED ABOVE GO BACK THROUGH AND DOUBLE CHECK YOUR INSTALLATION INSTRUCTIONS OR CONTACT OUR TECHNICAL DEPARTMENT DIRECTLY AT 270-901-3346 BEFORE PROCEEDING ANY FURTHER.

12. Re-install the carburetor on the engine, reconnecting all fuel lines, vacuum hoses, throttle linkage, return springs and any other components were removed for installation.
13. Find a place in the vehicle to mount the choke cable and run it through the firewall into the engine compartment. Make sure to seal the hole through your firewall with a rubber grommet (available at any auto parts store). Avoid making contact with any objects that may get hot, move or have electrical power connected to them. Route the cable to the bracket on the side of the carburetor, avoiding sharp turns that could bind the cable and securing the cable as needed.
14. Get in the vehicle and depress the throttle to the floor, pull the choke cable knob out and release the throttle. Check to see that the choke flap is closed and the vehicle is ready to start. Before starting the vehicle open and close the choke system a few times to make sure there is no binding in the mechanism. Make certain that when choke cable is pushed in that the choke flap is completely open.

Note: The Choke linkage will only close while you depress the throttle. If you try to close the choke flap without depressing the throttle you can damage the linkage. Now it is time to start the vehicle and check for leaks and proper operation.

Operation

To start the vehicle, press the accelerator pedal to the floor and pull the choke cable knob out (to the full closed flap position), release the throttle pedal and crank the engine. You may need to experiment with different amounts of choke closure depending on your specific combination and the weather conditions. If you need to change the "fast idle" speed of the engine while the choke is engaged, you can increase the RPM by turning the fast idle screw clockwise or decrease the RPM by turning the screw counterclockwise.

This can be done easily by using a small 1/4" open-end wrench on most engines. **Make certain once the engine is up to normal operating temperature the choke knob is pushed forward to fully open the choke flap. This can affect the vehicle's performance and fuel economy.**

Note: The choke linkage will only close when you depress the throttle. If you try to close the choke flap without depressing the throttle you can damage the linkage.

NOTE: ALWAYS CHECK FOR FUEL LEAKS AND PROPER OPERATION OF THE THROTTLE LINKAGE FROM IDLE TO WIDE OPEN THROTTLE AND BACK TO IDLE BEFORE USING ANY CARBURETOR. YOUR SAFETY DEPENDS ON IT.

Demon Carburetion™ Limited Warranty

All Demon Carburetion™ Limited Warranties are extended to the original consumer only. This Limited Warranty is not assignable or otherwise transferable. There are no warranties that extend beyond those stated herein. Demon Carburetion™ offers no other warranties expressed or implied beyond this Limited Warranty.

In the event of an alleged defect in material or workmanship, the responsibility of Demon Carburetion™ is strictly limited to the repair or replacement of the defective product. Demon Carburetion™ has no other obligation expressed or implied. Final warranty determination will be in the sole discretion of Demon Carburetion™. Demon Carburetion™ shall not be responsible for; (a) actual or alleged labor, transportation, or other incidental charges; or (b) actual or alleged consequential or other damages incurred by use of any product of Demon Carburetion™.

To initiate the warranty process, the consumer must return the alleged defective product to the place of purchase with a dated receipt and completed applicable warranty claim tag. Warranty claims will be rejected if the date of purchase cannot be established by the consumer. Do not send products directly to Demon Carburetion™. Demon Carburetion™ assumes no responsibility for products sent directly to Demon Carburetion™.

This Limited Warranty sets forth specific legal rights. The consumer may have other rights as a result of variations in state laws or provincial laws. This Limited Warranty supersedes all prior warranty statements.

DEMON CARBURETION – NEW PRODUCT

Demon Carburetion™ warrants its new Speed Demon products to be free from defects in material and workmanship for a period of 90 days from date of purchase.

Demon Carburetion™ Limited Warranty specifically does not apply to products, which have been (a) modified or altered in any way; (b) subjected to adverse conditions, such as misuse, neglect, accident, improper installation or adjustment, dirt or other contaminants, water, corrosion, or faulty repair; or (c) used in other than those applications recommended by Demon Carburetion™. Demon Carburetion™ also does not warrant, and disclaims all liability for products used in racing activities and/or applications other than those specifically recommended in the current brand catalog.

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