



# HS6 Carburetor Conversion Installation Instructions

**For: TR6**

PART # 370-847, 370-848, 370-489  
440 Rutherford St. Goleta, CA 93117  
1-800-667-7872 • FAX 805-692-2525 • www.MossMotors.com

## Tools required:

- Shop manual
- 1/4" Drill bit
- Drill motor
- SU carburetor manual and tuning guide
- Carburetor synchronization tool
- Hose cutters
- Combination wrenches:  
7/16", 3/8", 1/2" and 1/8" Whitworth

## Before you begin:

Your engine must be in good mechanical running condition before installing these carburetors. This kit is not a fix for a poorly running engine. The HS6 carburetors are simply an alternative to the Zenith Stromberg.

This kit is not compatible with the vacuum retard units found on some TR6's. The HS6 carburetor does not provide for the decelerator by-pass valves which are critical for this systems operation. Therefore the vacuum retard port on the distributor must be disconnected and plugged.

You may need to reset your base ignition timing once the vacuum retard unit has been disabled. You also may want to recurve the distributor to take advantage of the HS6 carburetors, particularly if your car was equipped with vacuum retard.

There is ported vacuum provided on the front carburetor for vacuum advance distributors than need a ported source.

These instructions do not cover tuning SU carburetors. You will need SU manuals and/or tuning guides. Moss part numbers 211-305 and 211-345 are two such guides.

## Warning:

**You will be working around raw fuel. Keep all sources of ignition and open flame away from the vehicle. Work in a well-ventilated area. Use safety glasses and gasoline resistant gloves.**

1. Remove your stock air filter. Disconnect the throttle linkage from the lever attached to the throttle shaft. Remove the carburetor support bracket with throttle linkage assembly attached, from the carburetors, but do not remove it from the car. It will be used to operate the HS6's. The carburetor isolators and hardware which secured the carburetors to the intake manifold will also be reused. Refer to a shop manual for more detailed instructions on carburetor removal. Prepare carburetor isolators and intake manifold to receive the new carburetors. Remove old gaskets and install new ones if necessary.
2. Find the supplied throttle shaft. Remove one of the lost motion levers and then the stamped steel throttle arm from the throttle shaft. Figure 2.



**Figure 2**

3. Drill the throttle link end of the lever out to 1/4" to accept the TR6 throttle link. Figure 3.



**Figure 3**

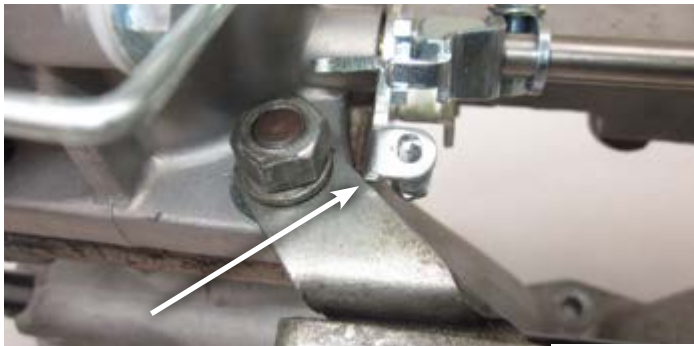
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4. Install the modified throttle arm on to the throttle shaft. Reinstall the lost motion arm onto the throttle shaft. Leave the hardware finger tight until the carbs have been installed on the intake manifold, to allow for adjustment. Figure 4.



**Figure 4**

5. Test fit the carburetors to the intake manifold without the throttle or choke shafts. Install the TR6 carburetor support bracket and throttle actuator assembly. Operate the throttles to check for interference with any of the linkages. Look at the rear carburetor's fast idle arm and see if it makes contact with the support bracket while opening and closing the throttle. If so mark the area on the support bracket, remove the bracket and file a notch into the bracket to clear the fast idle arm. Test fit the support bracket and file the notch larger there is a least 1/8 inch between the fast idle arm and the support bracket. Figure 5.



**Figure 5**



6. Your Zenith carbs had throttle return springs built onto the throttle shafts, the HS6s do not.

Identify the hole in the carburetor support bracket which is lower and close to the center. Drill this hole out to 1/4". Install the provided 1/4" bolt through the hole and then install the regular 1/4" nut to secure the bolt to the support bracket. Lastly, thread the 1/4" lock nut onto the bolt only until the end of the bolt is flush with the nut. The throttle return spring will be installed in-between the two nuts. The lock nut will act as a stop so the spring cannot fall off the end of the bolt. Figure 6.



**Figure 6**



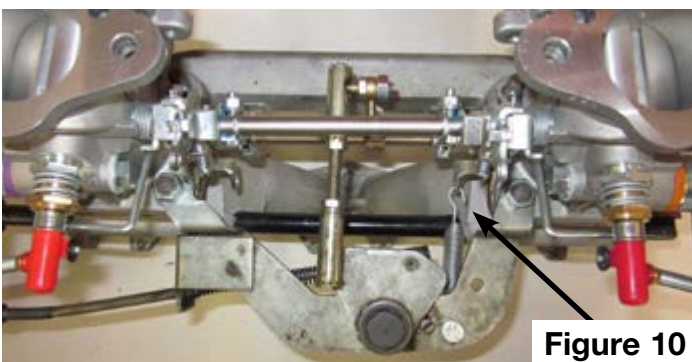
7. Remove the carbs from the intake manifold and install the throttle and choke shafts. Make sure the lost motion levers on each side of the throttle and choke shafts are engaged with their appropriate counterparts on the carburetors. Install both carburetors and both shafts together as a unit back onto the intake manifold. Make sure both shafts are still installed correctly once the carbs are on the manifold. Figure 7.



**Figure 7**



8. Install the carburetor support bracket and throttle assembly permanently this time, using the stock hardware. Install the rest of the nuts and washers that secured the Zenith carburetors to the manifold.
9. Assemble the TR6 throttle link to the modified brass throttle arm using the stock hardware. You will need to adjust the throttle arm on the shaft so that:
  - a. The throttle link is perpendicular to the throttle shaft. Slide the arm fore and aft to achieve this.
  - b. The throttles on both carburetors are held closed by the TR6 throttle actuator assembly. Rotate the arm around the shaft to achieve this.
10. Install the provided throttle return spring. Hook one end on the bolt you installed earlier on the carburetor support bracket and the other end on the forward carbs throttle shaft bracket. Figure 10.

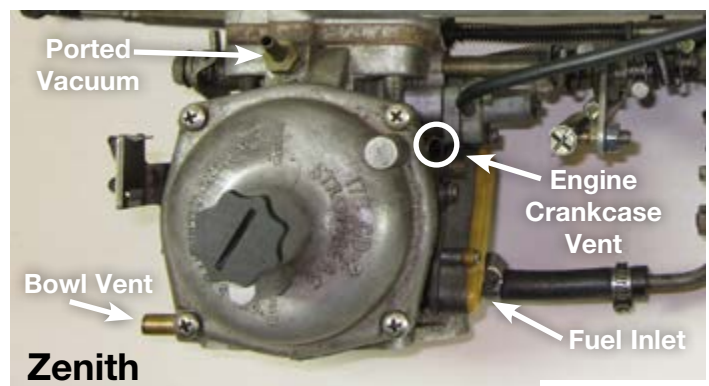


**Figure 10**

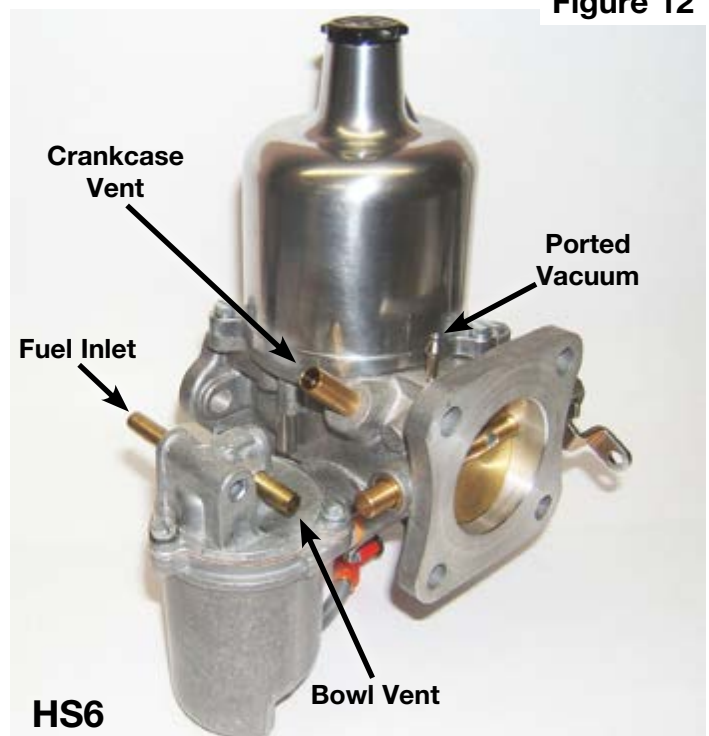
11. Hook the choke up using the original TR6 split cable and the provided cable stop. Only hook up the longer cable to the forward carburetor. The shorter cable will not reach the rear carburetor and is not needed due to the choke shaft connecting the two HS6 carbs.

The shorter cable can either be cut off under the dash or be hidden in the engine compartment by attaching it to the longer cable (using cable ties or heat shrink). Do not loop the shorter cable up under the dash as it will make the choke very stiff or impossible to pull.

12. Various hoses and vacuum lines need to be hooked to the HS6's just as they were on the Zenith's. Use the diagrams of carburetors to accomplish this. Provided in the kit are PCV or fuel rated hose in the correct diameter to fit the HS6 carburetors. Also provided are a few reducers and tees to help step to the TR6's hose sizes. Only the forward HS6 carb has ported vacuum. Use provided vacuum caps to plug ported vacuum and/or crankcase vent ports on carburetors if you will not be using them. Figure 12.

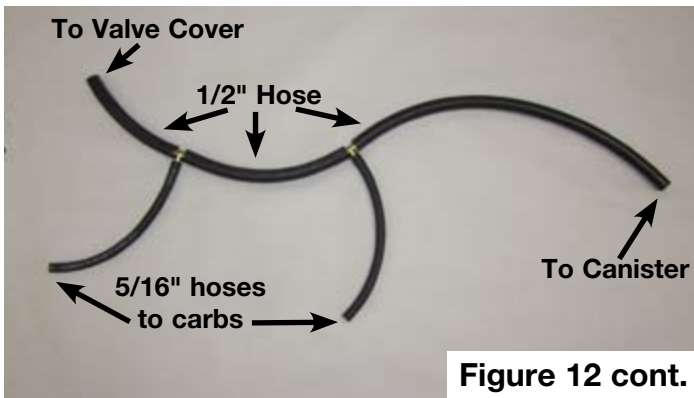


**Figure 12**



## Installation Instructions

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13. Now that the carburetors are installed, all the hardware is tight, all hoses are hooked up, the throttle linkage is hooked up and not binding, it is time to synchronize the carburetors. Use your tuning manual to help you through this process. Once the carburetors are synced, make sure to tighten the hardware on the throttle and choke shafts so that both carbs act exactly in unison. While the vehicle is running make sure to check for fuel leaks. Turn the engine off immediately and fix any fuel leaks before continuing synchronization or tuning the carbs.
14. Once the carbs have been synced and you have determined there are no fuel leaks, install the provided air filters, using the cork gaskets. The paper gasket is too thin and should be discarded.
15. Test drive the vehicle, Use your SU tuning manual as needed to adjust the carburetors. Enjoy your new HS6 carburetors and see MossMotors.com for all of you classic British car needs.

## Installation Instructions

# Bill of Materials

### CARB Conversion, Twin HS6 Only

### 370-847 Stage 2 KIT

#### CARB Conversion Kit, Twin HS6 Plus Fitting Kit, without K&N Air Filters

Part #	Description	Qty	Unit
370-848	CARBS, SU HS6 KIT 1 Carbs	1	ea
379-214	HOSE, FUEL, ETHANOL PROOF, 1/4 60" Fuel line from pump to carbs and bowl vents	60"	inch
434-451	HOSE, FUEL, ETHANOL PROOF, 5/16 20" Crankcase vent hose	20"	inch
367-460	HOSE, EMISSION, PER INCH, 1/2 36" Crankcase vent hose	36"	inch
053-480	1/2" X 5/16" X 1/2" TEE 2 Crankcase vent hose tees	2	ea
051-259	HOSE, VACUUM, 5/32 IN., BULK 48" Vaccum advance to ported vaccum	48"	inch
051-151	CAP, VACUUM, RUBBER, 5/32 1 Cap for unused ported port	1	ea
051-242	CAP, VACUUM, RUBBER, 5/16 2 Caps for unused PCV ports	2	ea
053-481	1/4" BRASS TEE 2 For splitting fuel lines to both carbs and slitting bowl vents	2	ea
052-054	HOSE BARB, REDUCER, 1/4 X 5/16 1 Stepping TR6 5/16" line down to 1/4" for bowl vents	1	ea
370-335	SPRING, 2.5" 1 Throttle return	1	ea
322-247	BOLT, 1/4-28 X 1" 1 Throttle return	1	ea
365-740	NUT, JAM, 1/4-28 1 Throttle return	1	ea
312-000	NUT, NYLOC, 1/4-28 1 Throttle return	1	ea
322-290	BOLT, 5/16-24 X 1" 4 Air filters	4	ea
365-730	WASHER, LOCK, 5/16" 4 Air filters	4	ea
310-140	Nut, 5/16-24 4 Air filters	4	ea
375-128	CABLE STOP	2	ea
053-486	INSTRUCTIONS	1	ea

### 370-849 Stage 3 KIT

#### CARB Conversion, Twin HS6 with Fitting Kit and K&N Filters

222-995	Includes everything from 370-847 and FILTER, AIR, K&N, HS6, TAPERED
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*Although every effort has been made to ensure the accuracy and clarity of this information, any suggestions that you may have that will improve the information (especially detailed installation notes and photos) are welcome. These instructions were developed and written by Moss Technical Support. If you have any questions or difficulties with your installation of this product, telephone 800-667-7872 between 7:00 a.m. and 4:00 p.m., Pacific Time for assistance.*

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