



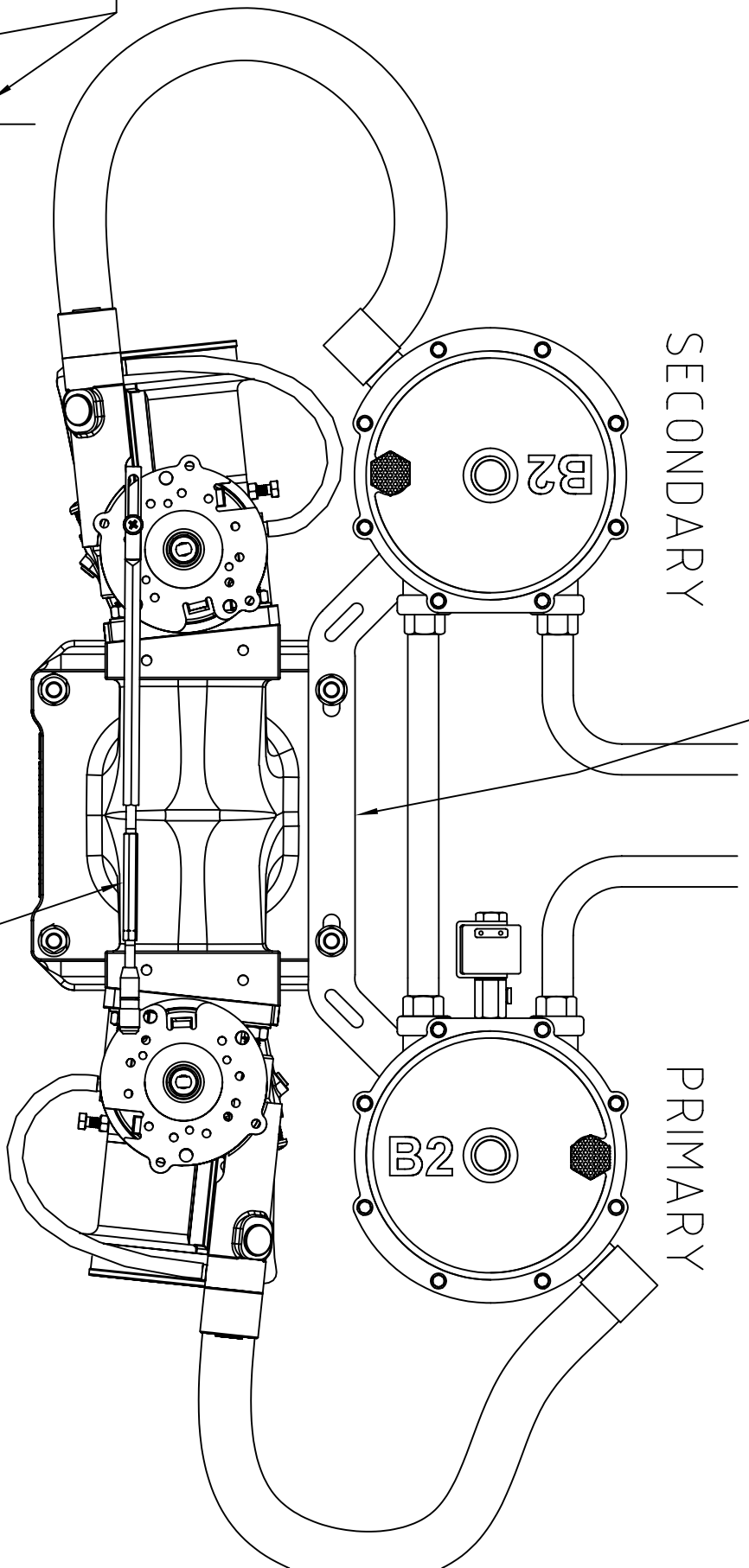
## UNIVERSAL TWIN THROTTLE BODY INSTALLATION

1. Remove petrol system from the vehicle. (I.e. Fuel tank, pump and lines. Carburetor and relevant emission equipment.)
2. Fit 4, 50mm studs to the intake manifold face opening.
  - ◆ Locate the new intake gasket over the manifold face.
3. Fit the fuel pump block off plate and gasket. Fit EGR block off plate where applicable.
4. Mount the GRA TWIN THROTTLE BODY adapter neck to the manifold throat. (The Throttle body units should be pre-mounted to the adapter neck.)
  - ◆ The mounting holes are semi pre-drilled at the base of the adapter.
  - ◆ Complete the passage of these holes to enable the adapter to be mounted over the manifold studs.
5. Mount Converter units to converter brackets. Ensure that two bolts are used that locates the converter on the longer section of the bracket. (Positioning converters either front or back of the manifold adapter is dependent on space.)
  - ◆ Using two 45° Converter Brackets, dummy mount against Manifold Studs. (The shorter section of the converter bracket has a 8mm-slotted hole. This hole is located over the manifold studs.)
  - ◆ The two brackets must be cut approx. 30mm from each of the short ends so that they can be welded together forming a 'Boomerang' shape.
6. Mount Lock Off/s and service line where applicable.
  - ◆ High output, two Converter applications can have twin lines with one Lock Off for each Converter. (Directly mount the lock offs to the converters.)
  - ◆ General twin throttle body applications should have Lock Off as close to the Converters as possible.
7. Secure the converter and bracket assembly to the manifold studs with the appropriate nuts and washers.
8. Connect water plumbing to Converter.
  - ◆ It is recommended that the water should be directed through Head Bypass hose where possible. (This is generally located at the front of the motor between the intake manifold and water pump.)
9. Fit Gann (vapor) hose between the throttle bodies and converters.
10. Mount the supplied accelerator cable bracket.
  - ◆ Fit the accelerator cable into the bracket and adjust cable travel.
  - ◆ Ensure the full throttle is achieved on primary throttle body.
  - ◆ Adjust drag link so the secondary throttle body is fully open when the primary fully opens.
11. Mount Air Filters assemblies.
  - ◆ It is recommended that where ever possible mount the filters in a position where cold air can be directed over the Filter. This will improve the performance the vehicle.
12. Carry out wiring of LPG system. Ensure that safety switch and primer switch are wired correctly.

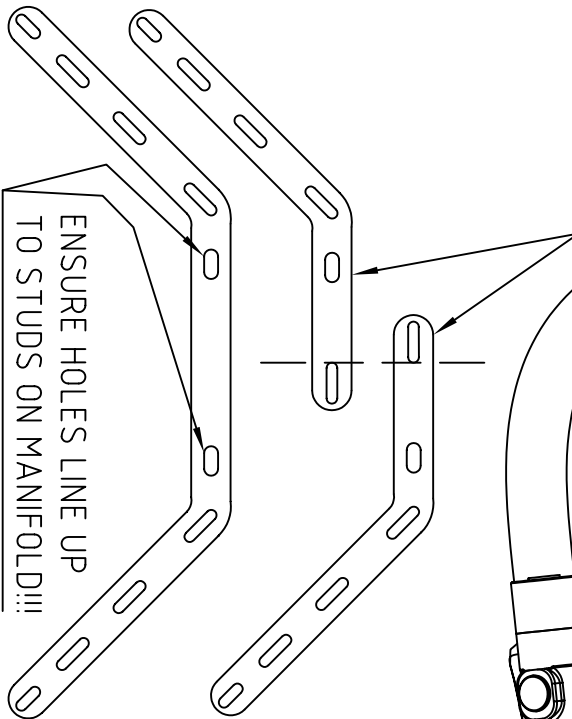
MODIFIED CONVERTOR BRACKET

SECONDARY

PRIMARY



2 OFF HAR-CB06  
CUT AND WELD



ENSURE HOLES LINE UP  
TO STUDS ON MANIFOLD!!!

FRONT OF  
VEHICLE

DRAG LINK ASSEMBLY

TITLE

TWIN CARBY / CONVERTOR SETUP



**GAS RESEARCH**

DATE

10/08/07

PART NO

N/A

DRAWING NO

IN-0002-B

DRAWN BY

S. VALLELY

SHEET

1/1

ALL INFORMATION DISCLOSED IN THIS DOCUMENT IS THE EXCLUSIVE PROPERTY OF GAS RESEARCH AUSTRALIA  
ANY UNAUTHORISED USE OR REPRODUCTION OF THIS DOCUMENT IS STRICTLY FORBIDDEN