Hydraulic Brake Adaption

BillyBigBeard's 2 Litre Sierra Trike

After purchasing my trike from a NABD member in February 2001, I set about converting the controls (from foot operated to all handle bar operated). My disability of a 'Peripheral Neuropathy' in the legs, meant hand controls would be the best and safest way.

So I purchased a second-hand 2000cc automatic Ford Sierra, and had the engine and gearbox put into the trike, this solved the problem of having to use the clutch on the bars, and then having to take the other hand off the bars to change gear.

I converted the throttle to a right hand twist grip (purchased from D&K Spares in Cheadle, Staffordshire, 01782 862200). This was a simple matter of getting a nipple and soldering it to the shortened throttle cable of the Sierra engine to allow it to fit the twist grip. The new throttle arrangement gave the feel of riding a bike again even though you can't lean it over on the bends.

The only real problem I had was the brakes. I didn't like the idea of having them all linked to a single lever on the bars. So when the NABD came across a 'Hydraulic to Cable' device, I decided to apply for an NABD grant myself to test this system out.

I decided to leave the foot brake on the trike and have a second lever on the bars. So I had all the brakes linked together but with two separate ways of operating them. As I get cramp in my leg when I used the foot brake after a long period of sitting still, I could use the Hydraulic to Cable lever when in traffic and have the foot brake as a last resort 'emergency' brake.

The lever was fitted to the bars and the hydraulic pipe ran down the back of the engine (avoiding it touching the engine, so as not to get the hydraulic fluid overheated). The end of the pipe was bolted to the frame. Then the cable bit was attached to an escort clutch lever which had a hole drilled in the middle of it, so it could pivot on a bolt welded to the frame, the other end was fitted loosely to the foot brake push rod. Then when the lever was pulled it pushed the rod into the servo unit, which operated the brakes.

A local car repair garage did this work, (it does not necessarily need to be a bike mechanic to do adaptions on your machine. In most cases, any qualified and competent engineer should be able to do the work).

The Hydraulic to Cable kit utilises a clutch cable of the type common on trial bikes. We think it could be adapted for use in operating the rear brake on bikes, as a twin lever, or for making heavy clutches lighter

recommendation by the NABD for the general use of this product in this way, as every adaption needs to be done by a qualified engineer and made to suit the needs of the rider and the vehicle in question.

(Though Billy is a member of the NABD National Committee, he took no part in the processing or awarding of this grant. As a member of the NABD Billy was fully entitled to apply for a grant the same as every other member. Rick Hulse, NABD Chairman)

This NABD grant of £150.00 was sponsored by a donation from the Leeds Motorcycle Show