



### New Buells, old Buells, and dry roads again ...

We'll its hello to a new year. Last year saw the release to market of the X1 White Lightning, whilst it is nice it was nothing much more than a white X1 with blue headers. But this year Buell release to market a bike that just can't be ignored, the new Buell Firebolt. The buzz at the National Exhibition Centre bike show was very positive. We've yet to see the bike in the flesh at the dealers, rumour-control tells us it'll be in the shops first quarter of this year. We haven't read any road tests but I'm sure the most reliable tests will come from the ranks of wish-I-had-one Buelligans via the UKBEG bulletin board. The Firebolt with its radical looks and design coupled with the reported excellent handling may well bring the Buell name into biker's daily vocabulary, we hope for all the right reasons!

But (there's always a 'but'!) we also hear that the rail-frame Buells are to be discontinued! This is our beloved X1 and M2. So, will our present rides be an even more exclusive bike supported by the Harley Davidson family or will they become quirky classics that are damn difficult to keep on the road?

The good side is the Thunderstorm engine is based on the highly successful XL engine; we don't expect to see a major spares problem from that side, and the cycle parts? Well because of the nature of the bike numerous third party suppliers have sprung-up to provide custom and performance parts. A hot subject on the UKBEG bulletin board you might want to add your 2c worth on-line. Oh and any spares for an X1 you don't want just leave them at the back of my garage.

UKBEG is an international community but I guess many will be 'enjoying' similar grotty weather. If the ice doesn't get us then the salt kills our bikes. Took the yellow tyre shredder out the other week and washed her over in the driveway afterwards only to create an ice-flow through the village, the water was freezing on the bike, then my fingers dropped off and I had to stop. Sprayed her down with WD40 and I could see her smile at me. Don't know why I ride through the year, its not doing me or the bike much good, but hey, it's not for looking at is it.

We're into February already the roads are drying out, and its time to remove those wuss bars from the side of my tyres. Roll on spring.

So to American Thunder your independent Buell look-see. A typical winter-type issue, more tecno stuff than ride-out news naturally. It's good to see Buelligans tinkering with their toys. A Buell is just built for tinkering with; I guess one of the things we do share with the Harley boys is the fact that no two Buells are exactly the same. Some tweak for speed and handling, some tweak for looks, and that's a fine thing in my books. I personally find some of the reports and pictures on the UKBEG site quite inspirational, gotta convince my house boss the same so I can get my hands on the kids pocket money, I've just seen some four valve heads that need bolting on my bike, ho humm. Till later ...

*Stan Evans, American Thunder Team.*

### In this issue : -

- Letting the X1 breath – Bernie Tiller  
there's a few things you're going to want to do with your Buell, changing the air-intake and installing headbreathers are popular mods, Bernie explains.
- Max-T 4 valve heads – Matt Purdey  
that Buell sitting in your garage there has two valve heads, what if you could have four? Hmmm! Matt's got the low-down on one hell of a modification
- Orange Buell – Alistair Strang  
its damn cold up in Scotland, all they have to do up there is build Buell customs and ride some of the best roads in the British isles, poor things. Alistair suffers and reports for us.
- Rear-Sets – Mickey Burke  
Mickey being a bit clever isn't one of your buy-em down the shop and screw-em onto the bike types. So he made his own rear-sets, just like in the olden days. My dad told me everything was built better back then ... he could've been right!
- Pennies from Hell – Eric Holford.  
One of the funniest and saddest stories is shared with us by Eric. You're having a bad hair day, you've just rounded off that nut using the adjustable spanner you knew you shouldn't have used, let Eric put it all into perspective for you!
- Clutch Replacement – Rik Twinham  
some tecno-tips from another Buelligan that's actually done the job rather than read it out of some manual



**Welcome** to the second edition of volume three, American Thunder. Again I'd like to thank the enthusiasts who give their time to make this publication possible. By now I think all of you will have visited our new website at [www.ukbeg.com](http://www.ukbeg.com). The last site had served us well, but it had become clear that the nature of the site was no longer meeting the needs of the members. So far, the new site has been a great success with the membership (and I hope with our sponsors also), so much so that in the first three days of the site we served over 28,300 pages! Though I am a little relieved that the traffic has settled down now to more realistic level. I hope that the membership and our Sponsors both feel the benefit of our new venture as a group run a little more

commercially and I look forward to developing the site in the future to meet the needs of both groups. I hope you all had a good Christmas and a happy New Year, may it be a prosperous and peaceful year for all of us.

*Steve Shakeshaft  
Founding Member  
'97 M2 Cyclone*

## Letting the X1 breath by Bernie Tiller

Please note that this information is aimed at the fitting of a free flow air cleaner to a fuel-injected bike. However the basic fitting principles are the same on the carburettor models.

When fitting a free flow air cleaner to a bike fitted with a carburettor. The carb will need re-adjusting or re-jetting after fitting or the bike could run weak and cause damage.

When fitting a free flow air cleaner to a fuel injected bike it may need the fitting of a race ECM, or a compensating unit such as a Power Commander. This would be dependent on other modifications on the bike. If you are just fitting an air cleaner then the standard ECM (Electronic Control Unit) will normally compensate by taking readings from the Oxygen and Air Temperature sensors.

It is very important that the bike is running correctly before the fitting of any free flow filter, or damage to the engine can occur.

Also please note that for safety reasons, the factory recommend that the battery leads be disconnected when working on the bike. You are working in an area where there is a lot of fuel and a spark could ignite this. Before disconnecting the battery please note that the fuel injected bikes will need to be taken to a dealer to have the throttle position sensor reset when the battery is re-connected. This is not a big problem, as the bike will run ok if you are unable to get it done straight away.

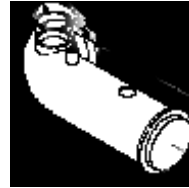
### X1 Model Stock Air Cleaner Removal

Remove two screws (2) and washers (3) from front and one bolt (4) and washer (5) from back of air cleaner cover (1). Remove air cleaner cover (1) and air filter (6). Remove IAT ( Inlet Air Temperature ) sensor (8) from top of snorkel (10). Remove hose (11) from snorkel (10). Remove three screws (12) from snorkel plate (13), snorkel (10) and gasket (14) from back plate (20). Remove back plate removing breather pipes as you go.

#### Important note.

Should the type of air filter you are fitting require the removal and refitting of the breather fittings from the cylinder head remove the petrol tank as well. You will need to loosen the inlet manifold bolts, removing the tank makes this job much easier.

The genuine Buell race filters come with instructions and all parts needed for fitting, the basic X1 filter kit is just a K&N filter that fits over the end of the snorkel tube. As we are covering aftermarket fitment as well we will remove the back plate and all standard fittings.



*Standard Tube, leave AIT in same position, route breathers to catch tank. Fill holes with grommets. Fit round air filter to end with clip.*



*Forcewinder Airfilter (DDFI Models)*

When fitting a filter that requires a new back plate, such as the Buell Race Filter, holes for the breather and IAT sensor will have to be made.

#### Tip 1:

It is also a good idea to loosen the inlet manifold bolts. The reason for this is, in most cases the breather fittings in the head will be removed and refitted. When refitting, it is very easy to put pressure onto the inlet manifold. This distorts the manifold and twists the

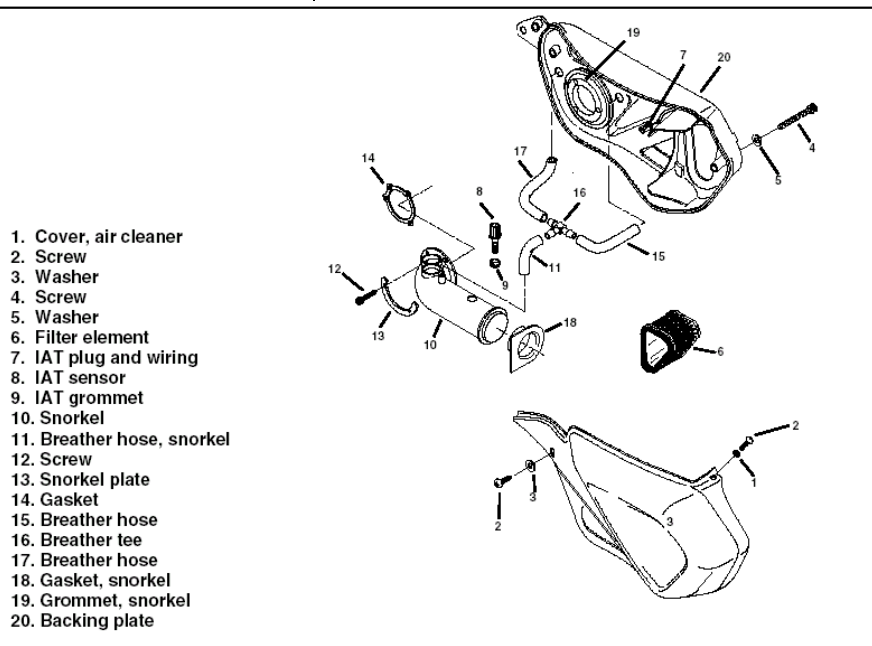


Figure 9. X1 Stock Air Cleaner

rubber inlet seals, allowing air to enter the engine and run weak. If the inlet bolts are a little loose the manifold can move without a problem and the bolts tightened up once the new air cleaner is fitted.

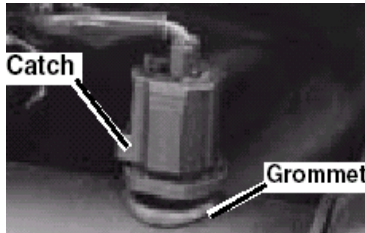
This is why the tank is best removed to get to the bolts. It is also a good idea to cut down an allen key so that it will fit between the manifold and the bolts.

**Tip 2:**

If you can get hold of a straight breather fitting, the same as fitted into the head as standard, you can make a hole in the back plate that this will screw into, giving you a fitting to push a breather pipe onto.

**Tip 3:**

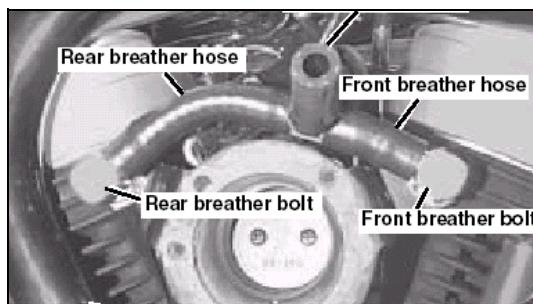
Measure the hole that the IAT sensor grommet fits into as you will need to make a hole the same size in your backing plate to fit the sensor.



Fitting Filter backing plate.

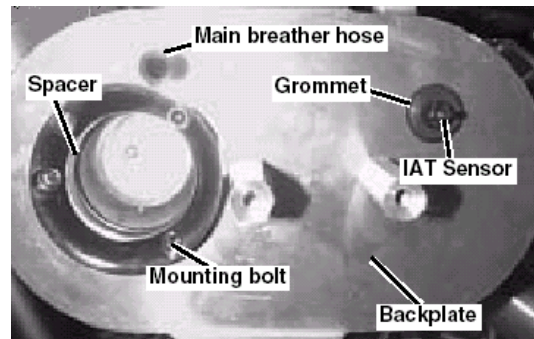
- 1/ Remove rear breather bolt.
- 2/ Install new rear 90° breather bolt until it no longer clears the bracket. Tighten jam nuts.
- 3/ Cut the new hose to lengths of 1-1/2 in. (38.1 mm), 2 in. (50.8 mm) and 3 in. (76.2 mm).
- 4/ Attach the 1-1/2 in. (38.1 mm) hose to the front breather bolt.
- 5/ Attach tee to front breather hose.
- 6/ Attach the 2 in. (50.8 mm) hose to the tee and to the rear breather bolt.
- 7/ Attach the 3 in. (76.2 mm) hose to tee.

This picture shows fitting with the use of right angle breather bolt fittings. If you are not using or cannot get hold of these fittings, you can use the moulded hose with a right angle bend in it. Please make sure that when it is fitted it does not go flat or it will cause the oil breather pressure to build and blow rocker oil seals.

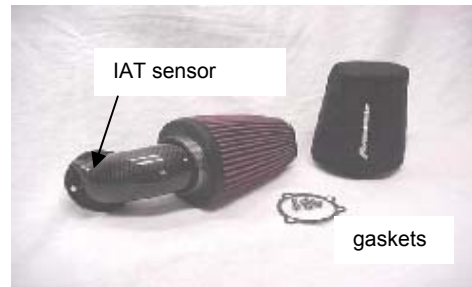


Carefully remove IAT grommet from snorkel. Install IAT sensor grommet into back plate. Retain the air cleaner support bracket if fitted.

A paper backing gasket should be cut and used on the back of the Back plate, between the back plate and the venturi. Ensure that the boltholes on the gasket and back plate are correctly aligned. Do not block the air inlet hole!



*Buell race filter backing plate*



*Forcewinder type air filter*



*Billet Aluminium Oval Filter*

After fitting the breather bolts and pipes and tightening the air filter backing plate into the correct position, pinch up the inlet manifold bolts so that they hold the manifold correctly. You will then have to remove the backing plate to tighten them properly. Refit the backing plate and then the filter its self.

The IAT sensor should be positioned in the airflow as close to the inlet venturi as you can get it. Make sure that the sensor or wiring cannot come into contact with engine or frame and tie the wires back with a small cable tie if necessary.

I have found that the best position for the breather is above and just to the front of the inlet. It should also extend into the air box in front of the inlet or just a little



further. If it is behind the entrance of the venturi it can cause the breather to suck oil for some reason. I have also found that round air filters tend to breath and suck oil, if the breather is routed into the backing plate. If using a round type air cleaner, I suggest using an oil catch tank from the breathers.

With a fuel injected bike you have to ride it between 10 and 30 miles for the ECM to recalibrate it's self to the new filter. If you have disconnected the battery, book the bike into a dealer so they can zero the throttle potentiometer with their scanalizer.

#### Things to remember:

When you fit a Ram Air type air cleaner or any free flow filter to a carburetted bike in the UK, you will get carb icing in the winter. Use the Harley-Davidson or any other good additive and it will cure it.

If you change the air filter on a carburetted bike expect to have to re-jet the carb.

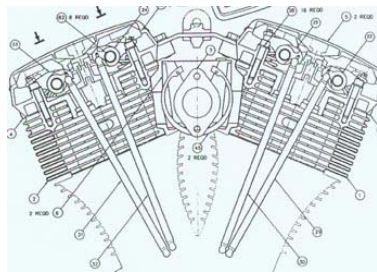
If you change the air filter and muffler on an injected bike, you might have to fit a race ECM to compensate. So check mixture at the plugs or on a C0 tester after bike has run for a while.

### MaxT four-valve heads

*graphics supplied by Matt Purdey courtesy of MaxT, text by Stan Evans*



Now here's something special. The good old Thunderstorm air cooled engine we all know and love is developed from Harley Davidson's Sportster XL engine. Throw in some decent heads a lighter crank and even fuel injection; mix it all together and voila, a Buell engine. But just check out the latest offering from MaxT. What you're looking at here are four valve heads. Matt Purdey from Trojan Horse



products sent us these pictures, just to torture us I guess. Matt believes that combined with the twin carb plenum chamber (also available from MaxT) we could be looking at 20% over stock power increases. Trojan Horse has just become the UK distributors for MaxT products, so if you need more information you can find their website and contact information on the UKBEG.com website, in the sponsors section.

## Orange Buell by Alistair Strang



Few people can say, "Our esteemed Prime Minister, Tony Blair made me buy this Buell" but lets face it, the guy does look like a salesman. So there I was, sitting in a traffic jam caused by Tony Blair's royal motorcade as they screwed the Friday evening traffic in Glasgow. Like all 'real' bikers, my eyes were carefully averted from the Harley Davidson showroom. A choir of angels twittered mercilessly as the great man looked out of his Jaguar, straight at me. Full on eye contact! My spirits lifted and suddenly the world was a better place. The angel chorus fluttered to new heights. Okay, that last bit is complete bull. I really do not like politicians, especially when they cause traffic jams. The moment was spoiled by my teenage daughter asking, 'Hey Dad, what's that bike in the showroom?'

West Coast HD had an orange and white bike sitting displayed in their shop window, an impossibly vulgar fully faired race type thing with Marlboro colours and a damn site more interesting than the 'lifestyle' heaps of chrome littering the showroom.

So we parked and walked across to the shop. Again, full on eye contact but this time with what was known as the Marlboro Buell.

Like most 'real' bikers, I've always had a weak spot for Buells. They look interesting, make fantastic sounds, and best of all are not directly associated with 'that HD lifestyle' statement and have the added advantage of not being Japanese.

I've been around bikes for a while - my first 1,000cc bike was a Brough. Okay, it wasn't the fabled machine of Laurence of Arabia fame and in fact was better known as a BRUF - Big Red Ugly F'r also known as a BMW K1. Sports bike looks cunningly concealed in something the weight and size of a bus. A love affair that lasted nearly 50k miles over 3 years. Other bikes followed, lighter, more powerful, and I drifted into that malaise known as being a 'real biker' - always wanting something better and never finding it. Recently I'd found I enjoyed taking my daughters Derbi GPR50 out for a run to the shops and tapdancing through twisties on my wife's RVF was making me re-evaluate just what I wanted out of a bike.

Saturday morning, 9am, and my wife and I are waiting for West Coast to open. Finally we rush in and I stand alongside the Buell for the first time. Once the salesman finishes his bullshit I'm given an injected M2 for a road test and go through the conventional 'Road to

Damascus' conversion, realising what was missing from the bikes I'd bought was FUN. This thing was FUN and kept kicking you in the arse to remind you.

A week later and I'm riding the Marlboro Buell home in the middle of a snowstorm. When I picked up the bike, the salesman added a quiet mumbled caveat that 'we cannot offer a guarantee on this bike as it's non-standard'. It had only done a couple of hundred miles, so what could go wrong?

Some details about the machine I hadn't noticed started to make themselves evident. The indicators didn't work because there weren't any! And the mirrors suffered from a similar affliction. So I'm in a snowstorm, using hand signals, and hurting my neck trying to see what's going on behind. And did I mention the vibration! Eventually we get home and I go through a charade of familiarising myself with the bike, keeping an eye on the patch of blue sky which is drifting closer to the village. Suddenly it's 3pm, the sky is blue, the sun is shining and I'm on a mission. Not only has traffic kept the main roads clear of snow but the March sunlight is drying the surface. Ten miles later I'm pulled by the police who'd noticed the melody from the SuperTrapp can was spoiling their peace. This was my first taste of what makes HD and Buell different. Ride a BMW and the police ignore you - these Germans use a crafty stealth paint formula or something. A Buell will get stopped for a looksee and checkover as quickly as any Jap bike but when plod discovers it's an HD without the bullshit, it's allowed to be noisy. To cut a long story short, the two policemen and I part on first name terms and I decide to drop down to a bike shop and sort out some mirrors and indicators for the fairing.

The Marlboro Buell was not a good bike to own initially. I parked outside a Yamaha showroom that promptly emptied as everyone came out to see what the hell it was. I was uncomfortable riding something that I hadn't made 'my own' and felt a bit of a fraud answering questions about it. Once the autograph session was over, I left with a pair of mirrors and a universal indicator set. Oh, and it started to snow again.

Actually looking back, that day was completely surreal. I hadn't been pulled by the police in over 20 years of riding and I'd NEVER been stalked by a double decker bus during a snowstorm. This lunatic bus driver became so focussed on trying to figure out what the bike was in front of him that he deviated from his route and hung onto my tail as I picked my way through the snow. Eventually at a set of lights I dropped the sidestand and walked back to the maniac who was grinning like a panting Golden Retriever and holding both thumbs up. He opened his window and shouted down, "Fantastic, did you build it" I eventually left him trying to figure out how to avoid the low bridge he was facing and return to his bus route.

At the end of this piece, I've given some of the technical stuff about the bike. I didn't build it; it was glued together for the 1999 NEC show and featured in a magazine shoot. Some of the 'good ideas' involved in the build didn't work and it was to require a damn site more than a pair of mirrors and indicators to make it roadworthy, if not necessarily road legal. It didn't even have an ignition key!

The cool single headlamp, hiding behind the cool black screen, was completely incapable of illuminating a car numberplate at night. My first 'fix' used a Cyclops driving lamp modified to fit inside the spoof ram-air vent on the r/h of the fairing. This actually worked rather well.

My daughter convinced me the Marlboro Buell was right. "Dad, it's utterly hideous," she exclaimed.

The next 1,000 miles passed in a blur of vibration, punctuated by a never ending battle to re-attach bits to the bike. And then one day...I noticed...the paintwork on the r/h of the fairing was bubbling. I'd just ridden 75 miles to a customer's on a hot Scottish summer day and was taking my usual walk round the bike to find what had come loose this time. The horrible realisation that heat build up from the pipes and #2 cylinder had nowhere to dissipate hit hard. My wonderful fairing was on its way to igniting.

When I rode home, I pulled the fairing off and started the first of the next 1,000 miles of bodge ups.

#### Plan #1

The first plan involved lining the r/h/s fairing inner with fireproof foil - from the bulkhead of a rally car. So now my left leg got nice and warm and the bike would 'pink' after just 10 miles of riding.

#### Plan #2

The next plan involved fitting a cooling fan inside the fairing to blast air from the left to right, fitting a switch to activate the fan on demand (ie; at under 60 mph). Whilst this worked, the warm air blasting up into my thighs was both erotic and uncomfortable - sort of getting a blow-job on the move and the noise was unbearable.

#### Plan #3

Time now to get clever. Plan two was ditched and replaced with heatsink and extraction fans such as found on the most powerful CPU's in computers. Of course, it didn't work but was quieter and not as kinky.

#### Plan #4

Ditch the fairing and return the bike to 'normal' M2 looks. Memory of the Day One bus driver made this a big no-no.

#### Plan #5

Ditch the front fairing and do something else. Something like the top fairing on a Yamaha Fazer for instance.

My wife and I jumped into the car and headed to a bike breaker (Freedom Motorcycles, Ayr - top guys). One of the blokes there mentioned he'd flogged a Peugeot Speedfighter headlamp assembly to a guy with a 1200 Bandit and the result looked quite cute. In fact, he had another one in stock...

So, out came the welding kit to make a sub frame, mated to the S1 front end mounting eyelets on the M2 headstock and tins of spray paint to match the colour scheme. Within a week the bike was back on the road with a 'good looking' front end and an engine exposed to the world. Georgie (my wife) and I celebrated by blasting down to Twynholm for lunch at David Coultharts parents place whilst watching their son win the F1 race in Austria. I've neatly avoided mentioning the last time we went down, David won in Brazil and I made an arse of myself with a DIY rear-set conversion. Take it from me; do not ever succumb to the good idea of moving the pegs back to the rear footrest position, building new mountings for the rear brake cylinder, machining a new actuator arm for the gear lever. The

result looks good, is comfortable to sit on, and completely impractical on the road. It also made Georgie weave all over the place as she realised I looked like a frog from the rear, her laughter spoiling the usual impeccable handling of the RVF. Matters were further complicated when the linkage vibrated loose and made changes virtually impossible. I rode home jammed mostly in 5th gear and achieved just over 70 miles to the gallon. Yup, a really bad idea.

So, we're sitting watching David do his magic in Austria and I'm avoiding mentioning that my left boot seems to be full of oil. Eventually I go outside for a fag and walk round the bike. The front of the engine is covered in oil. Borrowing tools from the Coultharts, I take the seat off the bike and find my oil level is perfect. Eventually I convince myself there must be a breather at the front of the engine and I've over-filled the reservoir. We take it VERY easy on the ride back to Glasgow and achieving 72mpg and a fully waterproofed left leg.

(As an aside, the Marlboro Buell is the reason David did not win the F1 title this year. We noticed he only won races when I rode down to Tynholm on the Buell. I only took it down twice. The rest of the time we took the Mercedes and watched him get podium 2nds or 3rds - the Coultharts run a cafe in Tynholm and do a fantastic Sunday lunch on GP days - BOOK WELL IN ADVANCE)

The bike gets stripped for inspection and I decide the front rocker gasket has let go. West Coast HD doesn't have any in stock but will get a full rocker gasket set within the week.

Job done, the new gaskets last for 500 miles before letting go, this time from the #2 cylinder as well. Taking some time to get opinions from 'The Bad Weather Bikers BBS', I decide Cometic gaskets ([www.cometic.com](http://www.cometic.com)) are the way to go. These mad people take my order, send out the gasket set along with an invoice and expect payment by return. Wow, that sort of thing never happens but I send payment anyway!

Of course, my wife was now getting a bit antsy about the Buell. "Been a mistake, hasn't it?" she asks/states one evening. I've just finished welding up a new subframe for the race seat mounting, this time incorporating somewhere to mount an immobiliser. *TIP - cut up a mouse mat to make the best material for insulating 'stuff' from Buell vibes.*

As the miles pass, fewer bits are working loose but at the back of my mind there are still a few jobs to be done. The Speedfighter front end is okay(ish) but when Georgie and I go north to my family at Lochcarron, it is hard work at 'legal' speeds <sic> - our standard pace is probably a touch quicker than most people due entirely to the fact my wife and her RVF attain the sort of natural synergy the rest of us can only dream about. She IS that good and I invariably arrive at our destination knackered from pushing my limits to the point where she will enjoy the run. Rushing back to the subject, I wanted a decent top half fairing for high speed work.

On one such run North we met got talking to a guy who had a couple of old Rickman fairings. Could I put them to any use? Memories of a 1970's Rickman Bonnie surfaced and the answer was a resounding yes. Georgie was now rebelling openly about the Buell as all

she ever did to the RVF was wash it after a run and occasionally dust it.

Finally, the Buell is stripped down to the bones to redo the wiring for an immobiliser, strip the top end and install the Cometic gaskets, make yet another subframe for the Rickman fairing which also needs some modifications to cope with the K&N S2 filter for which I am also making a ram air modification. While I am at it, I decide to mess around with the final drive gearing as it's a bit 'tall'.

With the bike in bits and the fairing away being repainted, I am now ready to start the real work. At this point someone gave my daughter a 1992 Cagiva Mito 125. The engine had been rebuilt and the fairing repainted. This work was done in 1996 and the damned thing had not been re-assembled. My daughter's 17th birthday was just a few weeks away, so I decided to build the Cagiva for her. Big mistake, a story which can be told somewhere else. The work kept me involved in the evenings for 4 weeks, costing ultimately £670 to put right and teaching me more about Italian junk than I wanted to know.

Eventually though, the Cagiva sails through its MOT and I spend 4 evenings getting the Buell back on the road. One Monday finally I ride it to work and park it outside the office. Martin, one of the programmers (rides a ZZR) gives it the final seal of approval by describing the results as an abomination.

Meanwhile, I spend the day answering questions about the Marlboro Buell which has finally metamorphosed into MY BIKE. How powerful is it? Dunno. Quick enough and the ram air mod really works. You can feel the bike change from one powerband to a new level, quite distinctly. The gearing modification has made the machine more civilised in town and traffic - kicking the back end out when going round a corner is now harder, the Cometic gaskets definitely work, and the Rickman fairing? At our cruising speed it works but I hanker after the Marlboro fairing. During winter I intend to make a mould of the original, then modify the mould to cope properly with the Buell engine, possibly by cutting a slash to expose the #2 pot.

Then again, I may do nothing else - but I do have a supercharger gathering dust in a corner and I've an idea...



Georgie and Alistair  
at the Coultharts



*...and the bike now, with further modifications by Alistair.*

#### Technical Stuff

1998 Buell M2  
 Buell S1 ported heads  
 Screaming Eagle cams  
 Stage 2 Dyno kit  
 K&N 7" filter  
 Straight cut gears  
 SuperTrapp silencer running with 10 baffles  
 Whitepower shock  
 AirTech single seat unit  
 Rickman Type 2 fairing  
 7" headlamp from Honda NTV (yes really)  
 Paint from Halfords (PlastiCoat fluorescent orange)

### **RearSets**

*by Mickey Burke*

I've always thought the bars fitted to Buells are at odds with the way the bike performs i.e. at high speed the wind buffeting is, to say the least, uncomfortable, so I did what any unreasonable man would do, change 'em. I rather fancied clip-ons, so a Saturday fossick at my



local breakers turned up a pair of Ducati bars, a bargain at £50, these were duly fitted, but then I found I couldn't get far enough back in the saddle with the standard S1 footrests. I had a long look at the options. I personally think the aftermarket rearsets a bit of a compromise, and anyway I'd binned the hanger brackets so this wasn't an option. So a cardboard set was made up, to check clearance etc. Then after buying a suitable piece of Dural, the pattern was drawn on the ally, and bandsawn out. Then marking out the relief area I milled out the levers, once the swivel holes had been reamed, off to the polishers. Next, how to mount them? The forging that forms the swingarm pivot, is quite hefty, so I made two cam shaped plates in 6mm stainless, to hold the controls. I made 'em so they covered the isolator bolts so cleaning this area up a treat I think. Then, marking the cam plates and drilling a 6 mm clearance

hole they were offered up and the frame spot-drilled. Two 6mm tapped holes to line up with the cam plates were sorted and the plates polished. I stuck some Oilite bushes in to keep the slop to a minimum. Come fit up, the stock shifter rod, didn't allow the angle I wanted for the gear change, so a length of 6mm round stainless was drilled and tapped to take a new pair of rose joints, it's about 40mm longer than the big fat stock one. This was sent off for a severe dose of stitch mop, and hey presto! a neat solution to those ugly stock footrests. Now I find that nervous feeling up front when you drop the hammer has disappeared, simply because my body weight is now more forward, over the tank, not behind it! And with the pegs 50mm back and 50mm higher, I am wrapped around the bike not sat on it! This makes for a real feeling of being part of the chassis now instead of being a spectator from the backseat. The bars are getting lower by the week, so those ugly headlight brackets are for the chop-----but that's the next story.

### **Pennies from Hell!!!!**

*by Eric Holford*

So, ever wondered what happens if you put a penny into your front cylinder and then went for a spin up the motorway? No? Neither had I until.....

I had had some work done on my breathers and air filter; this left three small holes in the backplate of the air filter. As I was planning to change the filter anyway a simple solution sprung to mind, glue some small coins over the holes with Araldite. Simple, eh!

I bet you can see this coming can't you? Yes you guessed it. On my way home on the motorway, there was a sudden loss of power. I phoned Green Flag, a guy came and drove Buell and I home in a van.

Removal of the filter revealed two coins still in place, but one missing. I hoped against hope that the other one had fallen out. But, unfortunately, not. I started the bike; the front header was cold. Took out the plug. The electrode looked like it had been hit with a hammer. So, where was the coin? Was it still in there? I straightened the electrode, put the plug back, thumbed the starter, and YES! It seemed to be running fine. Maybe there was a bit more noise than usual, but the air filter was still off so I was sure things were fine. Put the filter back took it for a wee spin. No problems to report. Then all of a sudden the engine started to get nosier and nosier – within seconds oil started to leak from the bottom of the front pushrod cover.

This was a job for a mechanic. Dealer (Dunedin Harley-Davidson, Dunfermline) picked up the bike, and took the head off. Damage was far more extensive than I could have imagined. Both valves, both pushrods, piston, plug and the head were all damaged beyond repair. It was amazing how much damage a one-penny piece could cause. Total repair bill over £700.

I'd like to, but I'm not going to say who was responsible for this. Not for the reasons you might be thinking. Quite the opposite in fact. The entire bill was paid for me without question or argument at a main dealer. I was back on the road in three weeks. All I will say is thank-you, you know who you are.



## Clutch Replacement by Rik Twinam

The prospect of renewing your clutch might seem daunting, especially if you don't have access to the special HD compressing tool. But with a bit of lateral thinking and improvisation, there is a way around it.

The clutch basket can be stripped/ built-up off the bike using an ordinary shop-press to compress the diaphragm spring. In my opinion this is actually a kinder method than submitting the tiny (5/16") clutch release mechanism screw to a force way in excess of its usual duty, especially if you're fitting an uprated diaphragm.

Refer to the Service Manual illustrations and text; these are additional directions.

Once the primary cover is off, remove the release mechanism from the centre of the clutch. Lock the sprockets against each other with a 4" x 2" piece of 1/4" plate and undo the 1 3/16" clutch nut. This has a LEFT HAND THREAD. Using a 1 1/8" deep socket, undo the front sprocket nut (conventional thread) and remove the clutch, front sprocket and chain as one assembly.

You then need a shallow ring with an internal diameter of about 80mm (I used an old bearing race but a slice of pipe would do) and some sort of tripod to push down onto the ring but still allow you access through it to remove the circlip (I used the centre yoke of a three legged puller). Use the press to exert only just enough pressure to free the circlip. You can then strip & rebuild the clutch basket

Then, to quote Mr. Haynes; "Reassembly is a direct reversal of the above procedure"!

Now you may not have a press, an old bearing race nor a three legged puller knocking around your shed, (incidentally, you could use a large bolt and nut to replace the compressing action of the press) but you may find them easier to access than the HD tool... and you won't stretch that clutch adjustment screw!

## End Words

OK folks its 'grateful-thanks' time. Buells are truly unique bikes, so its only right that the enthusiast club should be unique, being a virtual internet based bike club, and its only right that the clubs magazine should be unique. Firstly, American Thunder is an E-zine, that means its an electronic magazine, that means is free ( gulp, what ? stagger ) yup, free to Buelligans all over the planet. High resolution graphics and low resolution graphics are available from <http://www.ukbeg.com> the gathering place of the UK Buell Enthusiast Group. But the main reason why American Thunder is unique is because it's a co-operative effort. All the writers for each issue contribute freely of their time and efforts. This editions writers can all be found on the first page of

this issue. The writers can also be found hanging around the incredibly active bulletin board also found at <http://www.ukbeg.com> so if you want to find out the latest on any of the stories or tec articles please feel free to visit the bulletin board and ask away. And if you want contribute then all we need is a article on any subject that may be of interest to fellow Buell riders.

There's one other group of people without whom the website and American Thunder could not go from strength to strength, and that's our sponsors. These people care passionately about Buells as do we at UKBEG. We have Harley Davidson main dealers who don't just see Milwaukee's finest V-Twins as straight line cruisers, and we have specialist dealers who can sort you out anything from go faster to look nicer bits. Our sponsors are a little bit special, for starters they showed faith and put their hands in their pockets when we were still in start-up mode, and secondly they actually contribute valuable help to the bullet board.

You want to find out all their details it's easy. Simply hit the UKBEG website and go to the 'sponsors' section. You'll find out everything they have to offer, plus a link directly to their own websites.

So a very happy and prosperous new year to all our sponsors.  
Cheers guys ...



A happy new year to Buelligans everywhere, from the AT and UKBEG team.