HUSTLER

Journal of the kit car élite

no. 8

If anyone can remember which day summer was this year would they please write in and let me know because I missed it!!!!
For someone who is often accused of not using his Hustler in bad weather I think I miscalculated this year.

I was snowed on at Kenilworth, showered on at the Kit Car Garden Party, absolutely drowned at Sandown, complete with caravan up to it's axle in water. Battered by a force 8 gale on Bognor Regis Seafront, the caravan awning was torn to shreds as was the Hustler flag, and covered in wet sticky mud at Santa Pod. I am sure the sales of the H ustler Amphibian must have soared this year. I was sorely tempted to buy one myself.

But still I am full of optimism for next year, surely it cant be any worse than this year. Towards the end of the year the car roof started to let in water. I will have to take it off during the winter months and find out just where the water is coming in. I suspect that when I replaced the outer roof after fitting some new interior lights, I could'nt have put sufficient sealer around the edges, because it has never leaked before that.

I think I may have to replace the tyres on the car for next year, I am using Goodyear Rally Specials. They have been very good tyres. I don't know if anyone has any ideas for a better tyre for the car but I would be pleased to hear of any suggestions for an alternative.

The cover picture for this issue of the newsletter was spotted by Steve Kennedy on his way to the Newark show this year. Definitely not a Hustler pit stop. The proprietor must be a Dutton owner consumed with jealousy.

I am looking forward to next year already and a spate of new Hustlers on the club stand at Kenilworth. I know of at least two Force Fours that are almost completed, plus two new Wooden Sixes one of which I will be most interested to see, Keith Sharp's Maxi engined six, for further details see later in this issue of the newsletter.

Don't forget any articles for the newsletter are always gratefully recieved. The next issue is scheduled to appear January 86. Could I have any articles in about a week to ten days before the 1st of January.

I know its early but Isobel and I would like to wish you all a very happy Christmas and a prosperous New Year.

Frank

Articles for publication please to:

T B Faithfull
4 Lodge Close
Church Lane East
ALDERSHOT
Hants GU11 3TA

Tel. 0252 310191.

How to Unbuild a Hustler Peter W Dance

The dismantling of my Hustler Sprint for rebuilding is uncovering various problems, details of which should provide lessons and guidance for kit assembly of any Hustler to maximise the useful life of the car.

The Hustler Sprint had apparently been semi-professionally assembled in about 1982 using hydrolastic suspension, Cooper 998 engine and front disc brakes.

The initial problems were in discovering how to dismantle the car without build notes or other knowledge of its assembly. First, all the outer GRP panels were to be removed, and this involved trial and error removal of all lights and fasteners. The panels had been reasonably well assembled with the addition of rubber U-section and cushioned adhesive strip to prevent chafing and drumming. It was interesting to note that the side panels were attached to the wheelarch flares, but not to the chassis side rails. Most panels were attached with slotted mushroom head set screws, and even the less-rusted examples were not easy to remove. Disassembly would have been even more difficult overall without an impact screwdriver kit - a few pounds well spent.

It was at this point, after much struggling, and in spite of a comprehensive tool collection and well equipped workshop, that I vowed that any car to be assembled by me in future will not employ rust prone steel fasteners in vulnerable areas if I can avoid it at all. I strongly recommend stainless steel nuts, bolts, washers and self tappers from suppliers such as D.Middleton of Leeds, who provides a very good mail order service.

The next task was to remove the roof and windows. The roof was easy, using the impact driver, as all the self tapper heads were visible around the periphery. Note - don't fix it this way, as it causes unsightly distortion of the GRP, and each screw is a potential leak path. Removal of the flexible capping strips then revealed the self tappers holding the window channel to the upper chassis frame. Large amounts of sealant of several types had failed to prevent rust at the joint faces on the chassis frame.

Next major task was separation of the upper chassis frame. All the main nuts and bolts securing it to the lower frame were badly rusted, and two of them required drilling down the bolt shank with increasing drill sizes. After separation of the frames and removal of the joint sealant, extensive rusting was found on the mating faces and in areas hidden from normal view. Over half a litre of chemical paint stripper was then used on the upper frame alone, prior to anti-rust treatment.

I conclude that to minimise rusting it is necessary to use rust neutraliser, rust inhibiting primer such as Finnigans No.1, and a good top coat, on all surfaces of the frames prior to wet assembly with a high quality sealant such as Sikaflex. Note that domestic window putty and bath sealant are not suitable, as they both encourage corrosion.

MAXI ENGINED SIX

As promised in my last letter here is a detailed break down of my now completed (AT LAST !!)wooden Hustler 6.

It is based on a 1972 Austin 1300 MK III.

It's powered by a Maxi 1500 engine, which sits in a modified 1300 sub frame, with 13" wheels at the front and 12" wheels at the rear. The remote gear change is off a Maxi as 5th gear cannot be engaged using a remote change of a Mini. The side raditor is replaced with a front mounted radiator off a 1750 Allegro along with the water pump from same.

The exhaust is off a Maxi with some slight modification to its shape. It meant cutting a small section off the front pipe and brazing it back on to the rear pipe just after the second "box". Therefore the the length of the exhaust system stays the same so, theoretically, I shouldn't have to alter the carburation at all and it fits quite snuggly under the car so I don't lose any ground clearence. (The front sub frame also had to be modified to allow for clearence for the front pipe).

The drive shafts are from :- a) the near side is from an Allegro shortened by approx. 1". b) the off side is off a Maxi (unmodified)
The CV joints are again off an Allegro 1500/1750. (They fit straight into the 1300 front hub).

So that the CV boot on the Maxi drive shaft is not to be over stretched, a new groove about 3/4" towards the CV end of the shaft has to be ground to accomodate the CV boot.

Instead of having bench seats in the back, I have modified the well to take two convetional forward facing seats (possible because I could make the well wider with not having to worry about shock absorbers as the 1300 is Hydrolastic suspension and by also moving the middle bulkhead towards the back by some 6") and with a rear roll bar to accomodate rear inertia seat belts. The "boot" well now contains the spare wheel. Access to the rear seats is possible because on a 6 wheeler the glass slides back as far as the roll bar and with the seats tipped forward there is plenty of room to get in the back

The hand brake operates on all 4 rear wheels. I eventually decided not to use Mini one piece cables but to use the originals off the 1300 but still to utilise the Mini compensators

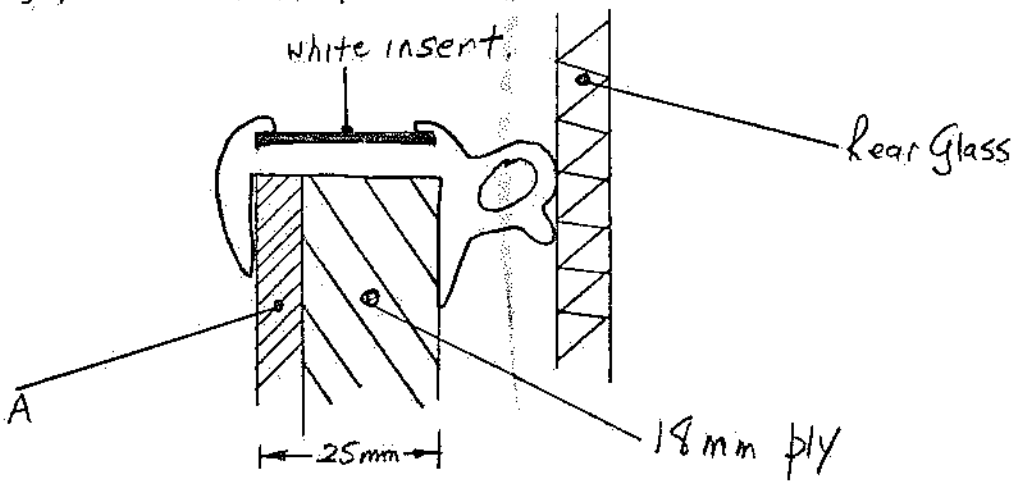
As already mentioned in N/L No.6; brake servo off 1300 GT all wheels braked, steering column off a Triumph 1500 (I managed to get fixed up with a new ignition/steering lock from a new Car Breaker's yard that opened up near where I work - very useful !); petrol tank off original 1300 (that too fits very snuggly within the rear sub frame); windscreen wiper motor off the 1300: wiper and wiper arm from a Princess; Hydrolastic on each side; all 3 wheels connected together.

I eventually intend to fit a rear wash/wipe to the rear glass, when money permits. (Either off a Sierra estate or a Montego estate - both have 180° sweep). At last years Hustler at home weekend I met Mr. Gates from Perryform (they make the windows for the Hustlers) and approached him as to whether I could swap the original glass for one with a exta hole in the top to accomodate a rear wash/wipe. He agreed and to cut a long story short I eventually did the swap?? (It cost me £17 inc. VAT!!)

Because the 6 wheeler wooden Hustler requires the purchase of one extra piece of 8'x 4' 12mm marine plywood soley for the roof, I decided to omit the sun roof (wasn't very keen on the design) and do the roof in one piece, which also did away with the need for the drain channels thus making it less "leak" prone. I hopefully, at a later stage, intend to fit 2 conventinal sunroofs (one over the front seat and one over the rear seats). Basically for ventilation on hot days (when we occationally have them !!!!!) for the rear passengers and for when the car is parked up.
Incidentally I had thought of the idea before WT incorporated it in the Highlander

The rubber trim around the rear apature I obtained from a firm of caravan fitters (as the original trim supplied is OK for metal & fibre glass Hustlers but unsuitable for wooden Hustlers). Unfortunately the smallest width they do is 25mm (SEE DIAGRAM) but because I've covered the rear panel with carpet the inside part of the rubber overhangs it. (A in dia)
The rubber trim and the white insert for the 4 metres required set me back £16.27p inc. VAT and p&p from:-

D. J. Russell (Sales) LTD.,
140a Waterloo ST.,
Burton-upon-Trent,
Staffs. DE14 2NG
Telephone:- (0283) 31541/2
but ring up first to check the price.



And now my experiance with getting the vehicle registered and licenced (taxed)
I sent my log book to Swansea months ago to register a change of engine number. No problem. It came back within 3 weeks. I then sent it off again when the car was almost complete with notification of a change in wheel base and name change. This time Swansea weren't happy 'caues there was a 'phone call from my local LVLO saying that I must fill in a form V55/S (which they sent me) to re-register the vehicle . So I sent the completed form back to them along with my receipts. A week later an inspector came to "look" at the car to make sure the specifications were correct.

Unfortunately I couldn't be at home when he called so my wife had to deal with him. The impreession I got from her it that he was very much anti - Kit car. He told my wife that no way could we keep the old number and that we would have to have a "Q" reg. (which we didn't want at all). He said that we couldn't use the same chassis number either but my wife quickly pointed out that it still had the original sub frames on it and that most of the parts came from the donor vehicle. So he rang up his office to ascertain whether or not we could use the same chassis number. And yes we could, but it wasn't his decition whether or not we would be able to use the old reg. number. The next day I received a 'phone call to say that we could keep our old number because there were insufficient changes to warrant a new registration and that when I have had it MOT'ed to send in the MOT cert., Insurance cert., and the money for the tax, and they would then issue a new licence. This I did and I'm now awaiting the arrival of my new tax disc and new registration document.

THE M.O.T.. Fortuneatly the chap who did the MOT had already seen the vehicle in its raw state when he came to pump up the Hydrolastic, so when he now saw it standing on the forecourt I think he was quite impressed. As far as MOT's go it's about the only one that I've actually enjoyed. (I'd rather go to the dentist than take a car for an MOT !!) I asked him to adjust the tracking and the headlamps and apart from him being unhappy about a couple of things, that was it.

The couple of things he wasn't happy about were :-

1) The handbrake cable serving the rear most set of wheels was rubbing on the sub frames and the exhaust and
2) Some of the brake pipes needed fixing down.

Both those items I've now put right.

Incidentally he confirmed that because I wasn't using a split hydrolic braking system that my secondary system, my hand brake, had to be 25% averaged out on all 4 wheels. Another thing he wanted to know was the weight of the vehicle so he could work out the braking efficiency!! As the car can only be legally driven to and from an MOT (and with a prior appointment and one day insurance cover) I told him to use the weight of a Maxi, which weighs approx. a ton, and that if it passed using those figures then it would be well inside the MOT requirements.
This he did and the figures were 67% for primary circuit and 29% for secondary. (minimum is 50% & 25%).
One of the first things I must do is go and get it weighed! then next time I will be able to have a realistic reading.

My insurance company only wanted to see the MOT cert. to insure the car and they also issued a one day cover to enable me to take it to the garage for it's MOT.(cost me £3). I'm insured with Frizzels on a multi car policy and they wanted £49 TP,F&T (thats with 50% NCD).

Any way that's just about up to date. On it's inital test drive, ie for it's MOT, it performed OK. I will keep you informed of any developements or necessary mods.. Hope I havn't drivvled on to long.
Looking forward to the next news letter.

Yours sincerly,

Keith (Sharp)

Walton Stone, Staffs.

JOHN'S JOTTINGS

Fuel Pumps

Anyone who has suffered the symptoms of a sticking needle-valve in the float chamber of the carburettor will need no convincing that it is important to maintain the fuel level in that carburettor accurately. After taking a great deal of trouble to get good performance and good fuel consumption, it is well worth giving some consideration to the fuel supply system. The main influence apart from that needle-valve is the fuel pump.

It is fashionable these days to fit a high-pressure pump, but to my mind this is mistaken for the following reasoning. Consider what happens when you demand acceleration by opening the throttle. The flow of fuel sucked through the jets increases substantially, causing the fuel level in the float chamber to drop, and the valve to open. Then comes the critical question: can the fuel pump deliver more fuel sufficiently quickly to keep the level up in the chamber? If not, the fuel-air mixture entering the engine will be weaker than it should be, and if acceleration is sustained for more than a short burst, the problem gets worse. What is needed then is a pump which can rapidly respond to the demand with a high flow-rate.

A high-pressure pump on the other hand is only beneficial if there is a resilient reservoir, such as an air-filled bell or a rubber diaphragm with one side open to the atmosphere. Even then, in response to a high demand, the best it can provide is just a short surge. Moreover, I suspect that a high-pressure pump may have the undesirable effect of encouraging the needle-valve to leak when it should be shut tightly.

My choice for the high-performance 1275 engine in my Hustler Six was the S.U. pump type AUF 306, as used in the MGB and Triumph Stag. Its delivery rate is 140 pints per hour at 3ft head or 2.7 psi static pressure: quite a difference from the 4.5 to 7 psi of the Facet-Bendix "racing" pumps. It cost me £27 a year ago, with a £5 exchange surcharge.

On first installing the fuel system (before trying to set up and tune the engine) and at intervals thereafter (say every 24000 miles) it is well worth checking it as follows, assuming you are using an electric pump. Disconnect the fuel feed to each carburettor in turn, and measure the time it takes (with the ignition on, of course) to fill a calibrated vessel. Simple arithmetic then tells you if the pump is delivering what it should. If any reader is unaware of what his pump should deliver, and can supply me a full manufacturer/model no/part no for it, I will try to help.

The faults which this procedure will show up, and which are mighty difficult to find any other way, are:

(a) faulty pump

(b) line filter blocked

(c) constricted hoses, due to substandard or unsuitable rubber compound swelling or flaking. If you ever suffer this, it is essential to strip and clean the carburettors because rubber particles will lodge there.

The AUF 306 design is not capable of sucking very hard because it uses a single-acting solenoid with spring return, and so should only be used when the pipe run from the tank is relatively short - 4 or 5 feet. For a rear-mounted tank and underbonnet pump with consequently longer suction pipe run, it would be advisable to use a double-acting pump such as fitted in Jaguars.

The S.U. HIF6 Carburettor

Transpeed in Portland Road, Hove, Sussex have a few S.U. HIF6 carburettors of the manual choke type at the bargain price of £15 + VAT, and so I have changed to that from the automatic choke arrangement previously described (Journal No 6), to get simpler plumbing. I have always believed that "simple is beautiful".

JOHN'S JOTTINGS

Engine Tuning

Having covered just about enough miles (900) to have run the engine in, I drove the car over to Tom Airey at Crossroads Garage, New Alresford, who specialises in tuning high-performance engines. He sets up engines on his rolling road for a fixed fee (£60 at that time) plus parts. This may seem expensive, especially if there are no snags that he has to overcome, but I found this was more than compensated by having the engine delivering the power it is really built for.

I chose to go that distance rather than stay with a local firm because Tom Airey was recommended by my rallying friends. If you have built a non-standard high-performance engine, it is simply a waste of time and money trying to get it set up by someone who tries to look up standard manufacturer's reference data.

Cut-Price Parts

Because I decided to build my Hustler from all new parts, I used many parts from a specialist Mini parts supplier (mail order) rather than a Leyland dealer, to save money. In retrospect this turned out to be a big mistake: the result has been a series of failures in these non-Leyland parts:

1. Oil pump which seized on assembly.
2. Water pump which leaked after 300 miles.
3. Oil filter head which cracked at 400 miles.
4. Rear wheel bearing which disintegrated at 800 miles.
5. Primary and idler gears which despite the most pains-taking setting-up procedure now produce a horrible noise, probably due to substandard tooth profiles. I will now have to take out the engine to replace them with proper Leyland ones.

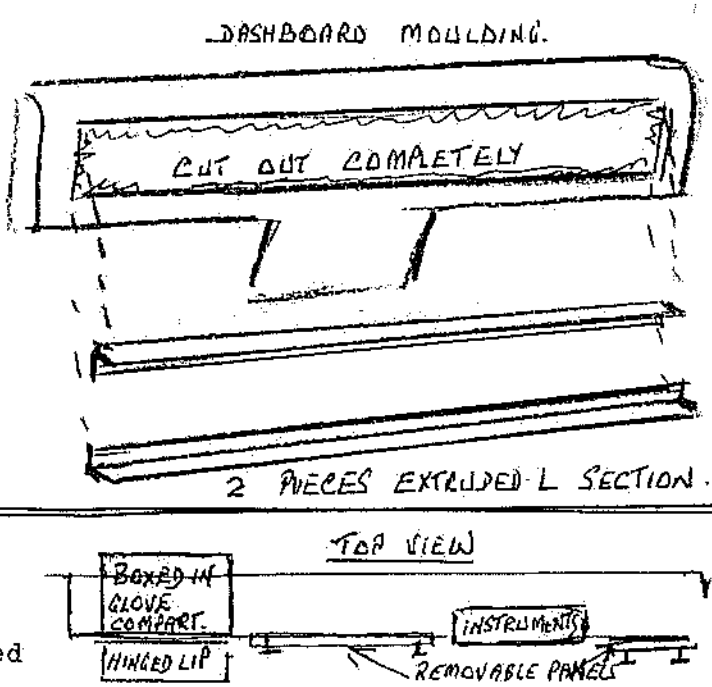
When one relies on a car, such a series of failures is extremely irritating. I would advise anyone comparing parts prices to give due regard to the risks involved and to the value of reliability. Surprisingly perhaps, using a good secondhand Mini as the donor, in which all the parts have been proven over a period, could well result in a more reliable end product.

John Hother. Hove.

FORCE FOUR

The Hustler is the second kit car I have built. About 4 years ago I built and am still running a Mini Marcos, so at least some of the problems are'nt new. I have not worked very fast on the Force Four. I am building it at my parents house in Newbury and have'nt been down there too many weekends. Currently its got 4 wheels and I am working on dashboard, seats, rear panels, trim, etc.,etc,.

Re Dashboard: you may be interested in the treatment with the Mini Marcos I grew fed up with lying on my back under the dashboard fixing wiring looms etc. and getting fibreglass dust and bits in my eye. So for the H ustler, I've arranged it so that the dashboard front comes off with quick release fasteners. Result: any wiring, demister or other work can be done from a comfortable upright sitting position. Basically the complete dash recess is cut away Then, L section extrusion is screwed and resined in top and bottom for reinforcement and to provide a recess for the dash panel proper. The left hand end is boxed in to ppovide a larger, deeper glove box and a hinged lid is fitted. This can be done with the dash on or off the car. I found it easier with it off, but frequent trial fits were needed to get everything OK. The instrument panel fits around the Steering wheel either the Clubman Pod, or a sheet of thick ply with a quick-release fastener in each corner. I used a Clubman pod. The remaining gaps at either side have panels cut to fit, each again with quick-release fasteners in each corner. These fasteners are the quarter-turn to release type, try the local ironmonger or builders merchants. One trade name is DZUS but there are several types. You could also use screws/bolts if you feel it looks better but this takes longer to undo. Switches and extra instruments are mounted on the removable panels- remember to leave the leads long enough, then you can check operation with the panel sitting in your lap.



I also ran the harness to the rear lights down the Drivers side headrail, the opposite side to the Mini. this gives a little more length on my car since the loom comes through the bulkhead on the drivers side. Remember to swap over the indicator leads if you do this!

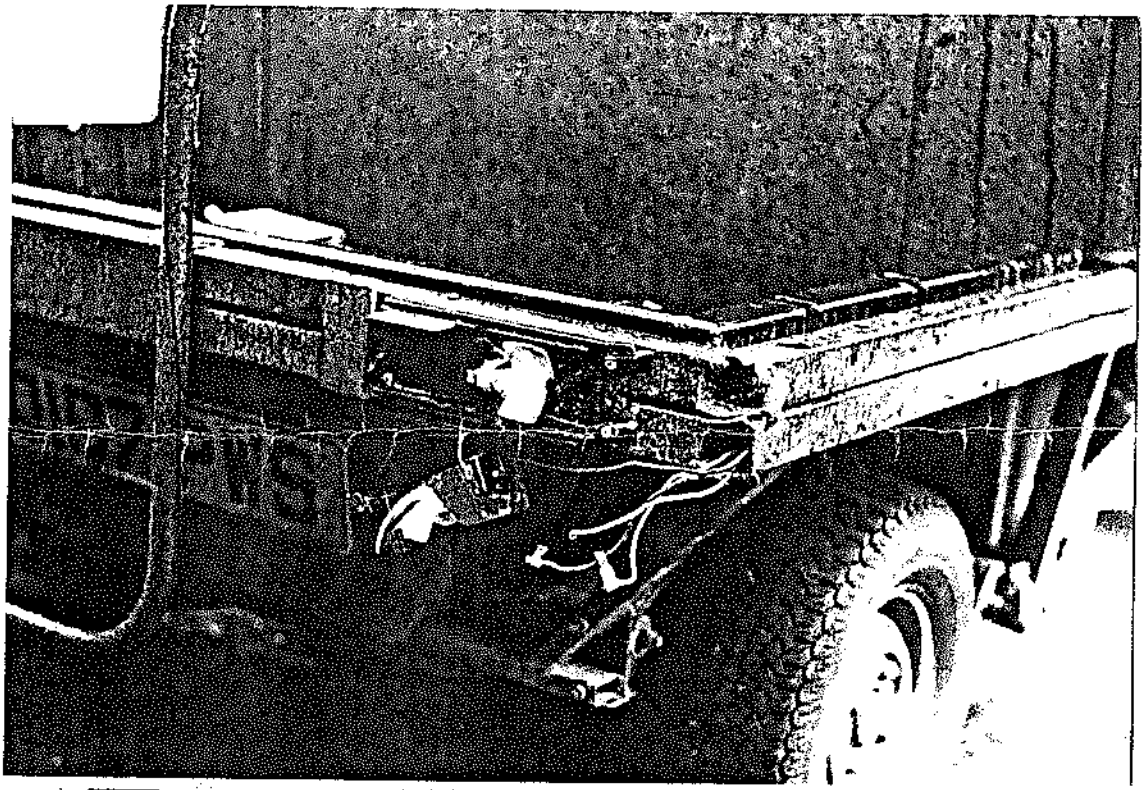
Alistair Dunlop, LONDON NW3.

FOR SALE

Five 100+ White Eight spoke Wheels, 12" Brand new , never been used.
$60. the set. contact, Pat Moulder, 4 Castle Grove, Oldwinsford.
Tel. STOURBRIDGE 390515

OOPS !!!

I'll bet the owner of this Volvo wishes he had stayed home the day he ran into Dan Keene's HELLCAT , which was parked outside Dan's house. The Volvo was ripped open from the rear door to the Boot. Very expensive !!!!!!



CLUB SWEATSHIRTS

1	**SIZES** *Chest or bust size in inches. 2" size steps*														
1	Inches	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50
2	Ladies' Bust						10	12	14	16	18	20	22	24	26	28
3	Men's Collar						13½	14	14½	15	15½	16	16½	17	17½	18
4	Children's Ages	2	4	6	8	10	12									

A. LOOK AT THE PRICE GUIDE

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	From	Average
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Sweatshirts	4.95	8.95
Sports Shirts	6.95	12.95
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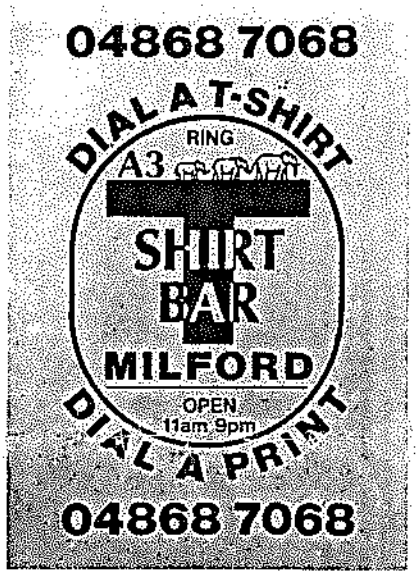
Ladies' Blouses	6.95	10.95
Overalls	19.95	24.95
Jogsuits	19.95	24.95
Tracksuits	24.95	29.95



The address for those who wish to visit the shop is:

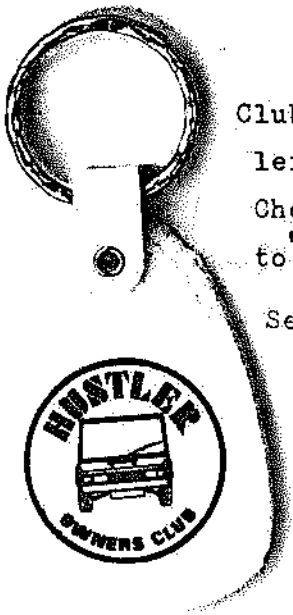
3 New Road, MILFORD. Surrey.

On the A3 next to the 'White Lion Pub!

Club Badges as on the right.

Cloth, Black & White.

£1.20 each.



Club Keyrings as on the left. 30. pence each.

Cheques made payable to 'Hustler Owners Club'.

Send to :

Trevor Faithfull

4 Lodge Close

Church Lane East.

ALDERSHOT

Hants GU11 3TA