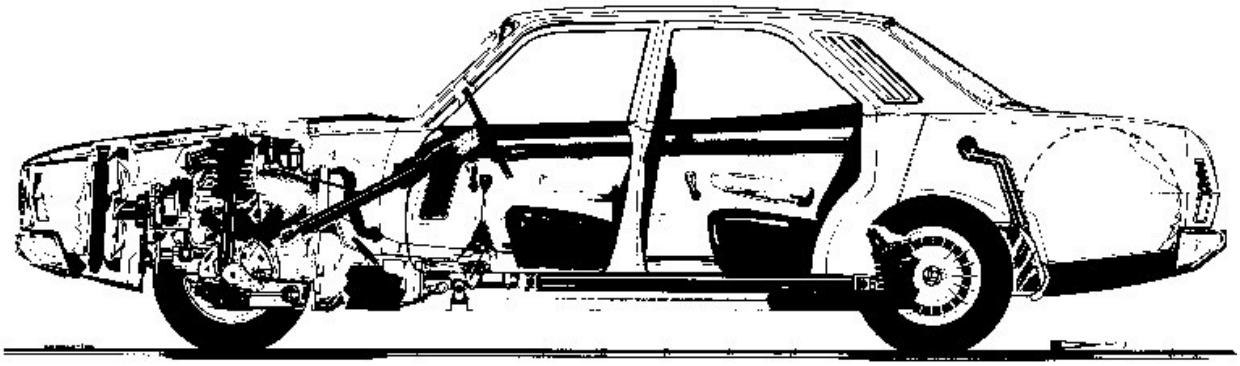
Leylines

Canberra and Districts Leyland P76 Club Newsletter December 2004



4 DOOR SALOON

Next Meeting:

Christmas Dinner - 7pm Tuesday 14 December at the Weston Creek Labor Club

Presidential Pearls

Another year is almost gone, but at least we have plenty to show for it. The club is getting bigger and stronger with more active members as well as a few club outings.

I was a bit offended a few weeks ago, whilst driving in my car in Belconnen. Two blokes with bright yellow vests on jumped out of the bushes and directed me down a laneway near a sign that said 'Marques in the park'. A bit presumptuous I thought and wound down my window and said "For all you know I could be out for a Sunday drive on my way to the shops to buy a paper" They simply replied, "Yeah right, turn in here, down towards the lake."

I was the first one there for a change and found what was a good spot in the shade, but still in full view. That was until a bunch of Chook cookers turned up and proceeded to line up in front of me. By the time the others turned up we were well and truly in the back row, still in the shade though. It was a good day with a good turnout of P76's and some other cars as well.

I have a few of you to thank for bringing to my wife's attention that not only is she the only better half that comes to these sort of events, but that she is also unusual in her tolerance of repeated P76-type purchases of either entire cars or memorabilia. You know who you are and I will take it upon myself to thank you all individually.

There was a P76 for sale in the Canberra Times on sat Dec 4, so I went to have a look. It is a bit rough with the engine removed and at a repairer in a state of disassembly. It has a few dents and a bit of rust. It was last registered in 1998 and apparently the owner, Mario, was a member of the club, and has had the car since 1976.

It comes with a few new chrome trims and the original wheels but with only one cap. The current owner wants $1400 for it and I did not have the heart to tell him, the most I could get last year for one in similar condition, but complete and running, was $650.

Here are a few pix, his contact details are 0423 431 943

I also have a Force 7 tacho, which would be better off in a P76 than sitting on my shelf as I already have one in my car. One recently sold on eBay for $232 and so I am after expressions of interest. But if all you want to pay is two flat rocks and a bit of string then I am prepared to leave it on the shelf, let me know if you are interested.

I look forward to seeing you all at the Christmas dinner.

Alex

Editor's Note

Thanks to Damien and Alex, we have a bumper Christmas issue of Leylines. Eighteen pages, would you believe! You've already seen Alex's news for the month. Now read on to find out about water pumps, the availability of new parts, and unleaded fuel and your P76, all courtesy of Damien, our hard-working Parts Officer. Sorry about the file size and download time for those on dial up connections, but there were complaints when we tried to cut the size by using PDF files.

Marques in the Park at Belconnen last month was a good day out for the Club. Four members were able to come and the cars generated quite a deal of interest, all of it

positive. There were also plenty of other interesting cars to perve on, and owners to chat to. On the personal car front, I've made no further progress with the power steering problems on my P76. Too many other distractions at this time of the year. It doesn't help being retired - there's no time left to do anything. Sometimes I wish I was back at work so that I had more spare time...

See you on Tuesday

Col

The Water Pump Situation

By Damien

As summer and its cooling challenges approach, I investigated the P76 V8 water pump situation and have found that there are two alternatives:

- Replace with a reconditioned water pump
- Replace water pump with electric Davies Craig unit.

The costs for each are similar.

New water pumps

I could not find a source for 'new' water pumps. There have been rumours regarding new castings but I could find nothing concrete to substantiate these whisperings.

Our President informs me that at the Easter meeting (last year) he bought a new water pump, which originated from old Fred's parts at Kiama. Alex says that the pump looks different to the others and has different casting marks.

Replacement water pumps.

There are ‘reconditioned’ water pumps available and they can be obtained from JED Motors or Minibits (same company, two names) in Melbourne for around $250.

- JED can be contacted on (03) 9707 1666

Morwood Motors in Canberra also have these in stock and quoted $250.

- Morwood Motors can be contacted on (02) 62806876

I looked at the other clubs' websites but couldn't see any listings for water pumps.

Electric water pumps

Davies Craig manufactures an electric water pump, which replaces the function of the existing water pump. You do not remove the existing water pump, but remove the impeller inside it, and connect the electric pump into the lower radiator hose.

I know of one person who performed this modification to their ancient Ford Cortina and raves about it. It remedied 10 years of cooling problems.

Tony from Morwood Motors also advises that this would be a better option to fitting a reconditioned water pump, and that it also frees up a few more horses of power.

Davies Craig electric water pumps retail for around $280 at Repco.

Let me know

If club members from other states have any info on newly cast water pumps, pumps from other cars which fit or other info on water pumps can they please email me at: dchaas67@yahoo.com

The P76 and Unleaded Fuel

Damien Haas dchaas67@yahoo.com

> *Can we run our P76s straight from the petrol pump or will we have to start pouring additives into our fuel systems?*

In mid November, the Sydney Morning Herald published an article featuring Joe Green from the NSW Leyland club, focussing on the phase-out of Lead Replacement Petrol (LRP) in vehicles designed to use leaded fuel.

"They're a beautiful car, an under-rated car from the start, and people who criticise them have never been for a good drive in one."

I agree with this! In fact, the article had several nice photos of Joe's cars.

“Mr Green and the other owners of Australia's 1 million cars made before 1986 face a problem. Many Sydney petrol stations have stopped selling lead-replacement fuel, and in seven weeks, a nationwide phase-out will be complete.

…Engines built to run on leaded petrol have soft valves and valve seats. The lead in older fuel coats and protects the valves; unleaded petrol does not, leading to the valves being inevitably damaged.”

This is probably true for the majority of pre-1986 vehicles out there, but I’m not so sure that it relates to the P76 V8 alloy engine. Like most alloy cylinder heads, the V8 P76 engine has cast iron valve inserts, rather than hardened alloy steel. Under 'General description' on pD-7 of the Factory Manual, it says:

'The two cylinder heads are also cast, heat treated aluminium alloy, and incorporate cast iron valve seat inserts and valve guides'.

The P76 V8 engine was designed from the factory without exhaust valve stem seals. The cylinder heads were designed to use a little oil, and can run for 300,000 km or more without any added valve lubricant. They are capable of running on LPG for many years without trouble, and LPG has no lubricant whatsoever in it.

However, the P76 six cylinder engine is different. It was a conversion of the existing six cylinder engine, which was made of cast iron. The six cylinder engine cylinder head is not made of alloy and if operated using ULP **will wear out and burn the valves without lubricant**. There are two options for the six cylinder P76 owner.

1. Fitting hard valve seats to the cylinder head.
2. Using a device called a 'Fuelstar', which adds a tin catalyst to petrol. They claim to fix both the valve wear and octane rating problems.

This indicates to me that while the six cylinder engine **will** be affected, the V8 engine **should not** be adversely affected when it is run on PULP, LRP or even ordinary unleaded petrol.

What may be affected is performance. The RACV has several web pages with information on ULP and LRP on them. I’ve grabbed this spiel on LRP:

“…Lead replacement petrol (LRP) was developed by the oil companies to replace leaded petrol, and enable pre-1986 vehicles to continue to operate satisfactorily. LRP is essentially unleaded petrol with a RON of 95 to 96, which has had anti-valve seat recession additives included to protect leaded engines from valve and valve seat damage. LRP is suitable for vehicles made before 1986, which are not fitted with catalytic converters. LRP is covered by the national fuel quality standards.

Owners of pre-1986 vehicles can also use a high-octane PULP, although an aftermarket anti-valve seat recession additive may need to be used to protect the engine. Otherwise, modifications to the engine could be considered."

The BP web page on LRP has this:

"Vehicles currently using Lead Replacement Petrol (LRP) can also use BP Premium Unleaded™, or BP Ultimate™ in conjunction with an easy to use valve seat recession (VSR) additive. These additives are available at all BP service stations and enable you to switch to a premium unleaded petrol while still enjoying octane performance and VSR protection."

This accords with my research and indicates that the P76 V8 engine should operate efficiently on LRP or a PULP, such as Shell Optimax. The greatest difficulty in running our cars is related to the octane rating in ordinary ULP. Jilden Reichhardt from the SA P76 Club agrees, and advises that there are two issues with ULP:

1. **Octane rating**. Standard ULP has a lower octane rating than super; therefore, a pre-1986 engine will probably need to be run with retarded ignition to cope with it. Premium ULP has a higher octane rating and can be run at the same settings as super. A standard P76 V8 engine running 9:1 compression will ping like crazy on standard ULP under load, but is very happy to run on premium ULP.

2. **Valve lubricant**. ULP has a low level of valve lubricant, so can cause valve seat recession in an engine designed to run with high lead levels in the fuel. Valve lubricant can be added to an engine by using Flashlube or similar.

So in short, this is his advice: LRP grots up the plugs and PULP is clean and runs fine. If you have a P76 V8, run it on PULP.

(Jilden also adds that both of his P76 V8's are on LPG only and have done 220,000 km and 320,000 km without any additives or any signs of valve wear.)

- Trying to determine if Joe's claims on LRP were accurate, I emailed several of the oil companies. To date **none** has replied. I hope that Joe reads this article and lets me know. He must have a 'deep throat' in the oil industry. I note that the NRMA also put out a press release on the same issue recently. I think we can take it as read that LRP will be disappearing from the market.

- If anyone has torn down an engine recently, which was run on one type of fuel exclusively, please email me and let me know your findings.

- I have placed a file on the **p76act** yahoo group with advice on tuning your car for ULP, from BP Australia.

Thanks to: Col Gardner (ACT P76 Club) and especially Jilden Reichhardt (SA P76 Club)

A few additional thoughts from the editor

Valve seats

It's interesting that the inserts in the P76 alloy head are cast iron. Cast iron is relatively soft and inserts in aluminium heads are usually some kind of alloy steel. Nevertheless, the P76 V8 seems happy enough to run without lead. It may have something to do with the relatively low revs that the engine mostly operates at. I have read that most problems with valve seat recession occur at speeds above 3000rpm.

Tin based catalysts

These devices are somewhat controversial. Many have been sold and the buyers swear by them. Tony de Luca from the Sydney club gave the Fuelstar a good wrap up several years ago. I also found this comment on a French car discussion group about using a tin catalyst on a Peugeot.

Well, my experience is this...

I had a 1970/71 TI head on my engine and used LRP. Every so often, maybe each two months or so, one exhaust valve would need adjusting. After twelve months I changed the head and there was about 3mm eaten away from the seat.

I didn't have a chance to have the replacement head fitted with hard seats, so I got the best advice I could and finished up adding about twice the recommended dose of a zinc-rich oil to the petrol.

I drove 1700kms with the combination of LRP (which is supposed to give the valve seat protection, after all...) and every valve needed 0.015" (15 thou) adjusted. I had already ordered a Doring fuel catalyst and that arrived in the mail. It was then fitted...

I then drove for another year without problem, but at that point I had the same trouble. I contacted Bob Doring and he explained that some fuel comes with a fungus in it and that I needed to clean the tin pellets. This was to be done with bleach, though I could have sandpapered them.

This done, I drove another eleven months before the same happened again, but at that time I put on a head with hard seats fitted. I now use premium unleaded.

I unhesitatingly recommend the catalysts. I've just described over a quarter of a million kilometres, with protection from the catalyst on a head proven to be unable to cope without leaded fuel being total when all was well over about 160,000kms.

That's better than five years use for most people... is that long term enough?

On the other hand, I have yet to see any independent tests that show that these devices actually work. At the request of the New Zealand Automobile Association, a Fuelstar was tested at Melbourne University for compliance with the Australian Standard for lead replacement products. It failed both the valve seat recession test and the octane enhancement test, being no better than straight unleaded fuel on both counts. The manufacturer strongly contested the results and the way that the tests were conducted, but to my knowledge, has not provided any other independent testing data.

In the UK, tests were conducted for the British Historic Vehicle Federation on lead replacement products. Two tin catalyst devices were included in the tests. Both of these showed *more* valve seat recession than running on straight unleaded fuel. I understand that advertising claims of reduced vsr and octane improvements from using tin catalysts are banned by consumer legislation in both the UK and Sweden, because they cannot be proven.

So you can take your choice. Do you go with the user reports and spend several hundred dollars on one of these devices, or do you believe the objective testing, which is still disputed by the makers?

Ask the man who drives one

The following thoughts appeared on the P76 discussion group from P76 guru Hal Moloney.

Adrian,
Am I missing something here about fuels? Tetraethyl or lead as we know it, was never put in petrol to lubricate valves, it was put in to stop high compression engines from pinging. All cars in Australia prior to 1959 used unleaded petrol. I have run my 1952 Vanguard in historic rallies and have run the P76 on unleaded since it was introduced and as long as they don't ping, there is no problem. LPG is one of the driest fuels you can use and Falcons will do up to a million Km on this fuel in cab use without valve trouble. I would like to hear what David Waters and Jilden have to say on this subject.
Regards
Hal

A couple of notes on Hal's comments. My understanding is that tetraethyl lead was introduced into petrol sometime in the early 1930s. As Hal says, it was intended to allow the use of higher compression engines without pinging. There is also apparently a 'lead memory' by which the effects of lead remain on the valves for a considerable period before wearing off. I have seen it given as up to 15,000 km. This may account for some of the positive comments about tin catalyst devices.

Col

From the Press

From the SMH
For purists, clean fuel goes down like a leaded balloon

By Michael Bradley
November 15, 2004

Joe Green has never owned a car designed to run on unleaded petrol, and he has no intention of doing so.

Mr Green is the president of the Leyland P76 Classic Car Club and knows what he likes. He has lost count of how many of the much-maligned 1970s classics he and his sons own.

"We've got quite a few, more than 10," he says. "They're a beautiful car, an under-rated car from the start, and people who criticise them have never been for a good drive in one."

Mr Green and the other owners of Australia's 1 million cars made before 1986 face a problem. Many Sydney petrol stations have stopped selling lead-replacement fuel, and in seven weeks a nationwide phase-out will be complete.

About 10 per cent of the country's car fleet was built before unleaded petrol was introduced in 1986. Tasmania has the highest proportion of old cars and NSW the lowest.

Jack Haley, a vehicle policy specialist for NRMA Motoring Services, says about one-third of these cars can use unleaded petrol because they were made in Japan, which switched to unleaded many years before Australia. But this still leaves about 700,000 drivers who will have to use a fuel additive every time they fill their petrol tank.

Engines built to run on leaded petrol have soft valves and valve seats. The lead in older fuel coats and protects the valves; unleaded petrol does not, leading to the valves being inevitably damaged.

The fuel additives now available contain potassium which, like lead, will coat the valves and protect against heat and wear.

Ken Dudley, founder of the Morris Minor Car Club, has been doing this with his 1959 model since leaded petrol came off the market at the end of 2001.

The 74-year-old from Sylvania, who prefers his Morris to his wife's new car, says he has "not had one problem" since making the switch and finds it only a slight inconvenience.

Asked why he did not just buy a new car, he said: "Who knows? I've always liked the Morris. They look like little Holdens, and the only thing wrong with them is they don't go too good and they don't stop too good."

Petrol shortage alert

By MATT SUN Commuter Reporter
November 18, 2004

PREMIUM petrol users will be forced to pump standard unleaded fuel in their vehicles because of a state-wide shortage.

Drivers who use Shell Optimax and premium unleaded were strongly recommended last night to check their owners' manuals to see if they could use an alternative fuel – and what problems it may cause.

A maintenance problem last weekend has halted production of both Optimax and premium unleaded at Shell's Kurnell refinery, affecting supply to NSW, the ACT and Victoria.

Shell premium bowsers across NSW are now drying up.

There are also signs the shortage is starting to affect stations supplied by Shell.

Premium petrol makes up 15 per cent of all Shell fuel sales.

Shell spokeswoman Helen Morgner said that some bowsers could be flowing again by Monday, November 22.

"There are a number of sites without premium fuel available . . . but we will have extra trucks on the road to get the fuel out as soon as supply resumes," Ms Morgner said.

"Vehicles that use Optimax and premium unleaded may be able to use standard unleaded, but we strongly recommend motorists check owners' manuals."

"We do sincerely apologise to customers about the inconvenience caused."

Service Stations Association CEO Ron Bowden said he had been affected by the shortage.

"I normally buy from Shell and over the past two weeks the place I go to hasn't had any [premium unleaded]," Mr Bowden said yesterday.

"It seems to be getting worse. Shell sites and other companies they supply are short on premium unleaded."

Typically, European and high-performance cars run on premium unleaded fuel.

NRMA's Jack Haley said the shortage affected European and high-performance cars.

"Only the WRX and Porsches use the [Optimax] 98 octane and some will run OK on premium unleaded if it can be found," he said.

"But using a lower octane fuel can cause pre-ignition problems, basically an erosion of the pistons over time."

Leylines Parts

New parts for the P76 available commercially.

A Publication of the Canberra and Districts Leyland P76 Club

New Parts Guide December 2004 Issue One

Prepared by Damien Haas – Spare Parts Officer – ACT P76 Club

Please advise me of any new parts or companies to be added.

Email: dchaas67@yahoo.com

Available at p76act yahoo groups website

Accessories

Auto Cables and Auto Shades (one company two names) offer new parts for the P76. They are:

- Perspex Weather Shields for drivers window
- Auto Shade (interior rear window louvres)
- Solid and Mesh Sunvisors

url: http://www.autocables.com.au

Carpets

Tru-fit carpets offers moulded carpets in several grades of quality (and cost) and colour.

They offer front and back separately, as well as various types of sound deadener and insulation.

url: http://www.tru-fitcarpets.com.au

Interior Trim

Polyweld Automotive manufactures P76 door trims. They will manufacture any colour you want. They don't have a website, but they advertise in Just Cars magazine. I called the ACT Rare Spares outlet (listed as a distributor) who quoted me $535 for four doors.

I am not sure if this includes the 'upper' door trim part (that metal thing).

Email: polyweld@optusnet.com.au

Engine Parts

Yella Terra manufactures the following components.

LEYLAND P76 V8

Yella Terra - Ultra heavy duty road and race performance extruded aluminium rocker.

PRODUCT	DESCRIPTION	APPLICATION P76 alloy V8
Stud Mount Adjustable	1.5 Ratio, 3/8" Stud [1]	YT5000
Stud Mount Adjustable	1.5 Ratio, 7/16" Stud [1]	YT5001
Stud Mount Adjustable [*]	1.6 Ratio, 3/8" Stud [1]	YT5019
Stud Mount adjustable [*]	1.6 Ratio,7/16" Stud [1]	YT5002

url: http://www.yellaterra.com.au/p11.html

JP Pistons in South Australia manufactures pistons for the P76 V8. They also list a range of pistons under Rover, which are similar in size to the Leyland piston. Take your mechanic's advice. They also list six cylinder pistons under Marina 1750, but state two different capacities. Anyone able to clarify this?

P76, 4.4 Litre Terrier	JP 0676	max. oversize +040"
Marina 1750	JP 1008	1746cc/2623cc, OHV
3.5 Litre, V8	JP 0675	max. oversize +030", CR8.25:1
3.5 Litre, V8	JP 0679	max. oversize +030", CR9.35:1
3.5 Litre, V8	JP 0690	max. oversize +030", CR10.5:1

JP Performance manufactures timing chain sets, although there is no Leyland P76 set listed, the following is listed for Rover V8 and Buick/Oldsmobile V6.

JP 5984 to suit 3500 V8, Range Rover

url: http://www.jp.com.au

Max Wedge Performance manufactures new 4 barrel manifolds and alloy rocker covers. I have *no contact details* for this company, but have seen a flyer on these products.

Suspension and Drivetrain

Super Pro / Super Flex polyurethane bushings - increasing the road holding of your car through better design! – says their website. Updating 30 year old suspension rubber is also a safety must. The following products were available in November 2004.

Part #	Series	Description	Notes
SPF703K	73-74	Rack Mount Bush	RHS
SPF272K	' '	Lower Control Arm Inner Bush	-
SPF269K	' '	Strut Bar to Chassis Mount	-
A1	' '	Strut Bar to Lower Control Arm	-
SP92BK	' '	Sway Bar Link Bush	-
A1	' '	Sway Bar Mount to Chassis	-
SPF792K	' '	Upper trailing Arm bush	Use OE Shell
SPF791K	' '	Lower Trailing Arm Bush	Use OE Shell

British Auto Care Brisbane, 07 3274 2828
url: http://www.bac.com.au

Scots Old Auto Rubber stocks the following suspension items. I took this from their website in November 2004.

SUSPENSION/STEERING

Control arm bushes - urethane	1 pr/car	N52269 $97.42 pr
Radius rod bushes urethane - to chassis	1 pr/car	N82386 $
Radius rod bushes urethane - to control arm	1 pr/car	N52270 $55.55 pr
Strut top mounts urethane - wheel alignment	1 pr/car	N44045 $506.00 pr
rectification (camber/castor adjustable)		
Trailing arm bushes urethane - lower	1 set 4/car	N62291 $319.62 set
Trailing arm bushes urethane - upper	1 set 4/car	N62290 $108.08 set

Phone: (03) 9563 3023

URL**:** www.scottsoldautorubber.com.au

Kings Springs offer new coil springs for the P76.

LEYLAND 73-74 P76 (Front) KLFS-01 (Back) KLRS-02

url: http://www.kingsprings.com

Pedders Suspension lists the following items for the P76:

Front Shocks	8730 Comfort Gas Cartridge
Front Spring Standard	7195 Heavy Duty Coil Spring
Rear Shock	3303 Touring Black Gas Shock
	8003 Comfort Gas Shock
	GSR9034 Gas Sports Ryder
Rear Spring Standard	7196 Heavy Duty Coil Spring
Rear Polyair	12032 Polyair Rear Coil Kit

url: http://www.pedders.com.au

K-Mac manufactures suspension items. They offer the following products:

P76 springs in any height	$330 set 4 incl GST
Front 24mm diam anti sway bar	$180.00
Rear 20mm anti sway bar	$225

url: http://www.k-mac.com.au

Disc Brakes Australia or DBA manufactures new front brake discs for Leyland P76s. In the SA newsletter, Jilden writes, "(the disc) is much more robust in the braking area than the old one. In fact, it is nearly twice as heavy as the original. I paid around $140 each (trade) for two"

Front brake discs (vented) - DBA part no. 068

url: http://www.dba.com.au

Rubber

The best source of new rubber for your P76 is Scots Old Auto Rubber. I took this from their website in November 2004.

BONNET & GRILLE			
Bonnet bump stops	1 pr	232.045	$ 7.37 pr
BOOT/DICKIE LID/BEAVER			
Boot seal	1	225.019	$81.42 ea
DOORS/TAILGATE			
Door seals - complete - front LH	1	530.037	$64.77 ea
Door seals - complete - front RH	1	530.038	$64.77 ea
Door seals - complete - rear LH	1	530.039	$64.32 ea
Door seals - complete - rear RH	1	530.040	$64.32 ea
Door lock ferrules - chrome	4	892.036	$ 2.12 ea
Door bump stops	4	236.415	$ 2.77 ea
Door seal clips (pack of 20)	1	261.003	$ 6.51 pack
ELECTRICAL			
Horn plate insulator	1	238.076	$ 4.54 ea
Wiper motor mount grommet	1 set (3)	238.077	$11.11 set
ENGINE/FIREWALL/GEAR BOX			
Gear box mount (rerubber)	1	277.076	$118.36 ea
Firewall strip	2m	322.004	$19.14/m
Engine mount (rerubber) V8 only	ea	277.117	$70.81 ea
Speedo cable assembly V8	ea	17260.200	$82.50 ea
GLASS			
Bailey channel - main	9.5m/car	350.458	$ 8.18/m
Weather strip - front inner	1 pr	351.085	$57.20 pr
Weather strip - front outer	1 pr	351.086	$57.20 pr
Weather strip - rear inner	1 pr	351.087	$61.60 pr
Weather strip - rear outer	1 pr	351.088	$62.69 pr
W/screen mould clips - front/rear	ea	892.529	$ 0.20 ea
CLIPS & FASTENERS			
Many available - enquire with samples	as reqd	892...	
Badge clips	ea	892.235M	$ 1.23 ea
Chrome mould clips - 8mm wide	ea	892.265	$ 0.41 ea
Top chrome mould clips - on side of car	60/car	892.368	$ 0.51 ea
Wheelarch plus sill mould clips - 10.5mm wide	ea	892.271	$ 0.37 ea
Windscreen mould clips	ea	892.529	$ 0.20 ea

Phone: (03) 9563 3023

URL: www.scottsoldautorubber.com.au

Parts Suppliers – Second hand and New

JED/Minibits
British Auto Parts

Please email me with companies and contact details for this section.

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