Supercharged Lynx Peugeot

The magic name of Lynx is perpetuated in a lean white car with the unusual combination of a blown Peugeot engine.

By Chris Beck

Rarely, on the Australian motor racing scene, has supercharged Formula machinery done well. During these days of the 2.5 petrol formula, with a 1500 cc class as well as F3, one would tend to think that most forms of open-wheeler racing are catered for. But over the last 12 months a new class seems to have emerged; although not yet a force, it has several ardent exponents who believe it is the only way of combating the wealthier driver/owners who can afford the prohibitively expensive 2.5-litre cars. The members of this "splinter group" — which is not as yet recognised in any formula — all follow the same line of thought and believe that the only way by which the 2.5-litre formula can pay for its cost of survival is to have a class which will produce close racing at a more reasonable cost to the driver/enthusiast who cannot afford 8000 pounds for a new 2.5-litre Repco Brabham or Cooper Climax. The new thinkers believe that by supercharging a pushrod 1500 cc mass-production engine and placing it in a lighter-than-FJ-chassis they would have a car that would be as fast and possibly handle better than the heavier 2.5-litre Climax-engined cars.

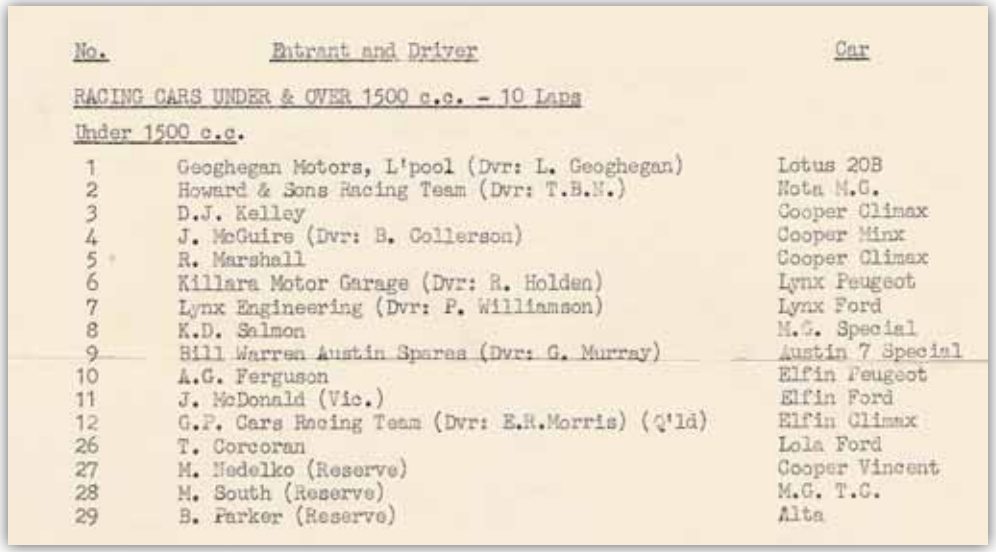
Here at SCW we agree with the broad idea, but feel that to establish a sense of proportion one of the main requirements of a blown 1500 would be a weight limit; for otherwise people will build lighter and lighter cars until they may eventually be driving something closely resembling a supercharged 1.5-litre hairpin.

We feel that other restrictions should be kept to a minimum and a weight limit of 850 lb imposed.

Well-known Peugeot and Lynx single-seater driver, Bob Holden, from Killara, near Sydney, is a leading member of this group; earlier last year his car was converted from a normal 1500cc racing car fitted with a worked motor to a fully blown unit.

Originally finished and first raced in March, 1962, the white car became a common sight on major Australian circuits and quite often picked up

The Bob Holden Lynx Peugeot. Bob Holden collection.



No.	Entrant and Driver	Car
RACING CARS UNDER & OVER 1500 c.c. - 10 Laps		
Under 1500 c.c.		
1	Geoghegan Motors, L'pool (Dvr: L. Geoghegan)	Lotus 20B
2	Howard & Sons Racing Team (Dvr: T.B.H.)	Nota M.G.
3	D.J. Kelley	Cooper Climax
4	J. McGuire (Dvr: B. Collerson)	Cooper Minx
5	R. Marshall	Cooper Climax
6	Killara Motor Garage (Dvr: R. Holden)	Lynx Peugeot
7	Lynx Engineering (Dvr: P. Williamson)	Lynx Ford
8	K.D. Salmon	M.G. Special
9	Bill Warren Austin Spares (Dvr: G. Murray)	Austin 7 Special
10	A.G. Ferguson	Elfin Peugeot
11	J. McDonald (Vic.)	Elfin Ford
12	G.P. Cars Racing Team (Dvr: E.R.Morris) (Q'ld)	Elfin Climax
26	T. Corcoran	Lola Ford
27	M. Nedelko (Reserve)	Cooper Vincent
28	M. South (Reserve)	M.G. T.C.
29	B. Parker (Reserve)	Alta

Bob Holden and his Lynx Peugeot (6) entered at Warwick Farm, 5 August 1962.

minor placings without really outstanding success. Dissatisfied with the car's output and performance, Holden decided to rebuild it from the tyres up and fit a supercharged engine for more torque and reliability. The 1962 car was originally fitted with a 403 Peugeot motor, which was extensively modified and aspirated by two 45DCOE Weber carburettors. In its final form, before it was pulled down for rebuilding, the engine was developing about 120bhp and top speed was close to 150mph.

The 403 engine was removed and it was decided that it would be replaced with the later more technically advanced 404 engine. Because the normal capacity of a 404 engine is 1618cc the bore was sleeved back from 84 to 81 mm to get it under the 1500 cc mark. Actually, the capacity is now right on the borderline at 1498cc.

Bob Holden in the Lynx Peugeot at Catalina Park, Katoomba, 1962.
Autopics.com.au

Then work began on the head. The common inlet tract was filled with metal and four separate ports made, then the whole unit was ported and polished and fitted with bigger intake and exhaust valves. Standard springs were retained, but special aluminium collets fitted. The compression was kept at 7.4:1 to ensure reliability in supercharged form and to give longer engine life. To take the power that the engine was to produce, Waggott front and centre high-tensile steel main bearing caps were used to harness any bottom-end trouble. Sump baffling wasn't necessary to combat cornering and braking surge.

Remembering that a blower was to be employed, the cam timing was changed, but not greatly. A boost of six pounds is provided by the Rootes-type supercharger, which is driven by a rubber belt from a pulley at the front of the motor. A solitary 45DCOE Weber which, because of intake problems runs parallel with the motor, feeds the fuel to the blower.

Canted 45 degrees to the right, the engine fills most of the available space because even though the motor is now lower in profile than previously, the supercharger takes up a lot of room on the left-hand side. On the right-hand side of the head there is a four-port extractor manifold.

From a 356B Porsche, the gearbox is fitted with a full set of B ratios, which although a little wide in an unblown car are most satisfactory in the supercharged Peugeot Lynx because of the wide torque band. Running on super grade petrol and not alcohol based fuels as used in some blown cars the motor is at present developing 130 reliable bhp but with more experimentation and research it is hoped to lift this by 20bhp to 150bhp. A Porsche Carrera eight-inch clutch, hydraulically operated, is fitted between the engine and the gearbox and has the typical "bitey" racing feel. Gearchange pattern is the normal four-speed and reverse and the linkage is rather vague and indefinite.

Due to the installation of the new motor the rear section of the chassis has been triangulated and strengthened because the engine mounting points were altered. At the front strengthening has also been added to take the higher braking forces of the disc brakes, which were made by Bobby Britten of Rennmax fame.

Wider Cooper wheels have been fitted to the rear and these, combined with a frame that is much more taut, have increased stability.

Our test was conducted at Warwick Farm during Bob's initial sorting out period when the car had a bad carburetion flat spot. After testing it out and trying to remove the "spot" Bob let me take it for a run around the circuit. First thing I noticed as I climbed into the cockpit, which is roomy when compared to FJ standards, was the well set-out instrument panel. On the left is the boost gauge, followed by the oil pressure gauge, tachometer and finally on the right-hand side there is a combination oil-pressure and water-temp gauge. Further across still are the two switches for the ignition and starter.

Taking it out to about 5000rpm in first gear I changed to second as quickly as I could while getting used to the pedal positions and gear slots.

Holding it in second all the way across the Causeway, I accelerated evenly, but not hard and then changed to third. Everything was going smoothly.

Just before Polo corner a change back to second became necessary and then the fun began. I whipped it out of third and blissfully blipped the engine

before putting the gear lever back into second slot. Thinking the car was in gear I then let out the clutch and started to apply the power.

Apparently I was in neutral because the motor sang to six-or-so. So I tried again and this time I got the gear, but on letting out the clutch I had the rear wheels lock up on me. Gently I applied the power around and out of Polo before tramping on it for the run d-own to Leger. Taking it quietly through Leger I squirted the accelerator down Pit Straight, holding third through Paddock and then changing down just before the Causeway. Out of the Causeway up to third again and then back to second for Polo, and again I made a muck of the down change. At this juncture I seriously thought of giving up motoring writing.

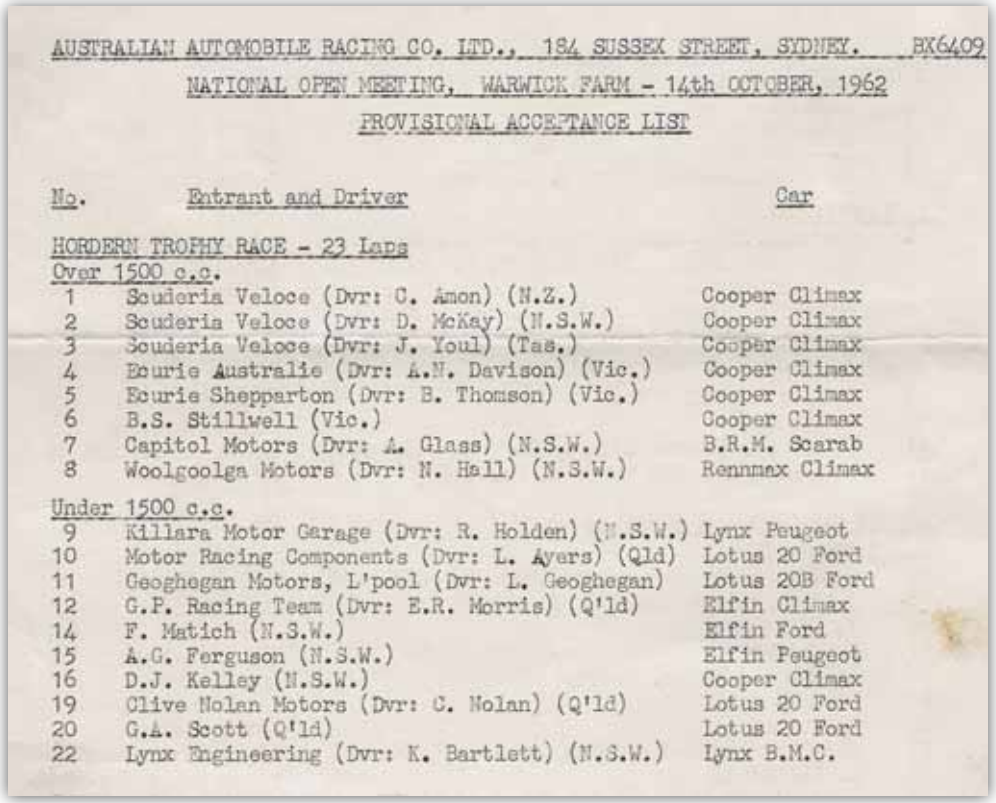
The disc/drum braking combination is not quite as effective as a full disc-all-round system, but does what is required of it, although high pedal pressures are needed. In the open-wheeler tradition the steering wheel is a tri-spoke alloy unit with a padded rim, and only two turns are needed to move the front wheels from lock to lock.

As a formula racing car the supercharged Lynx Peugeot has a lot of personal appeal. It is one of those race cars you like or you don't, and if the crowds will come to watch these machines vying for honours with the bigger 2.5-litre machinery then why shouldn't we have them racing?

From Sports Car World Motor Racing Annual, published by Australian Consolidated Press, circa 1963

Notes: The Lynx Peugeot was built to Bob Holden's order by Lynx Engineering in Sydney. Phil Chittock, who worked for Lynx and helped to build the car, was an electrical fitter but had learned about cars by building and racing cars himself, using the Ford 100E motor. Phil left Lynx when Bob offered him a job. For about two years in the 1960s he was in charge of maintenance and transport of the car, as well as working as pit crew. Phil later ran a boat business in Brisbane for 25 years but is now retired.

Bob Holden thinks (but is not certain) that the 404 motor was given to him by Peugeot. "I must have got it from somewhere. I obviously didn't steal it because there weren't any to steal."



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NATIONAL OPEN MEETING, WARWICK FARM - 14th OCTOBER, 1962

PROVISIONAL ACCEPTANCE LIST

No.	Entrant and Driver	Car
HORDERN TROPHY RACE - 23 Laps		
Over 1500 c.c.		
1	Scuderia Veloce (Dvr: C. Amon) (N.Z.)	Cooper Climax
2	Scuderia Veloce (Dvr: D. McKay) (N.S.W.)	Cooper Climax
3	Scuderia Veloce (Dvr: J. Youl) (Tas.)	Cooper Climax
4	Ecurie Australie (Dvr: A.N. Davison) (Vic.)	Cooper Climax
5	Ecurie Shepparton (Dvr: B. Thomson) (Vic.)	Cooper Climax
6	B.S. Stillwell (Vic.)	Cooper Climax
7	Capitol Motors (Dvr: A. Glass) (N.S.W.)	B.R.M. Scarab
8	Woolgoolga Motors (Dvr: N. Hall) (N.S.W.)	Rennmax Climax
Under 1500 c.c.		
9	Killara Motor Garage (Dvr: R. Holden) (N.S.W.)	Lynx Peugeot
10	Motor Racing Components (Dvr: L. Ayers) (Qld)	Lotus 20 Ford
11	Geoghegan Motors, L'pool (Dvr: L. Geoghegan)	Lotus 20B Ford
12	G.P. Racing Team (Dvr: E.R. Morris) (Q'ld)	Elfin Climax
14	F. Matich (N.S.W.)	Elfin Ford
15	A.G. Ferguson (N.S.W.)	Elfin Peugeot
16	D.J. Kelley (N.S.W.)	Cooper Climax
19	Clive Nolan Motors (Dvr: C. Nolan) (Q'ld)	Lotus 20 Ford
20	G.A. Scott (Q'ld)	Lotus 20 Ford
22	Lynx Engineering (Dvr: K. Bartlett) (N.S.W.)	Lynx B.M.C.

The Lynx Peugeot (9) entered at Warwick Farm, 14 October 1962.