



FIAT'S TOUGH NEW OFF-ROADER

The tough new all-terrain Panda challenges the Japanese four-wheel drive brigade. Test overleaf by Bob Cooke with photographs by Andrew Yeadon



AUTOCAR ROAD TEST UPDATE

MAKE NO mistake, this little car is a real off-roader. It may not be as rugged as a Range Rover, but it's just as much at home in the rough. Fiat is aiming its all-terrain mouse strongly towards the recreational market, as a sensible car for mountaineers, skiers, surfers and the like who need an economical road car to get them to their sporting destination and an off-roader to get them right into the foothills or down to the water's edge. The Panda combines these features, which incidentally also make sense for farmers, country vets and doctors who need to be out and about in rural areas regardless of the weather, and the car also suggests itself as a usefully comfortable little personnel carrier for construction companies and local councils.

The Panda 4x4 gets its four-wheel drive system from a notably reputable source — Steyr-Daimler-Puch, a concern that has vast experience of all-terrain vehicles of all types. The Panda is the first four-wheel drive car with a transverse engine, an arrangement which called for a unique solution to the problem of how to take drive to the rear wheels. The front differential takes drive from the side of the gearbox facing the rear of the car, but while the crown wheel, as in any normal differential, drives a set of pinion gears, it also delivers drive direct to a rearward facing bevel gear.

A simple dog clutch arrangement, operated easily by lifting a little T-handle lever in the cab behind the main gear lever, allows the bevel gear shaft to be connected to the three-piece propellor shaft which takes drive to a conventional differential and live axle at the rear.

This live axle replaces the dead axle of the standard Panda, so there is no need to alter the suspension arrangement at the rear — three blade, rear-shackled leaf springs are used, but with revised damper settings and more ground clearance for improved ride quality and better off-road capability.

The front suspension is also uprated to take care of rough terrain, and the front drive shafts, sump and clutch housing are protected by a strong frame. Each wheel arch sports a mud flap, to protect bodywork from stone damage.

To match its rugged suspension, the Panda 4x4 gets a bigger engine: the 965cc unit from the Autobianchi A112 Elite and LX



Live rear axle, uprated front suspension and a larger engine make the Panda a good off-roader



The transverse engine required a unique solution for four-wheel drive

models. Power output is 48bhp at 5,600rpm, and torque is 51bhp at 3,500rpm, giving the Panda 4x4 more punch than the 45bhp, 903cc standard Pandas.

The gearing is also aimed at off-road use, with a lower final drive turning first gear into a "crawler" for use in heavy going or steep gradients — we are satisfied after a test session in our off-road claypit, that Fiat's claim that the Panda 4x4 can tackle 1-in-2 inclines successfully, is no exaggeration.

There is, however, a modicum of exaggeration in the claim that the Panda 4x4, when driven on normal roads in two-wheel drive, behaves exactly like its stablemates.

The car's all-terrain character shows up in a bouncier ride quality, the result of firmer springing combined with softish damping to withstand and soak up off-road shocks. Though this bounciness is further complicated by a tendency to pitch (a consequence of the short wheelbase), the overall ride quality is not annoyingly uncomfortable — merely less so than in the two-wheel drive Pandas.

Performance is up to Fiat's claim — acceleration times proved better. We managed a 16.8 second 0-60mph run, while Fiat claim and 18.2 second 0-100km (62mph) time. We achieved Fiat's claimed 84mph maximum speed though as a



An economical off-roader



Rear legroom is good

one-way best; against the wind the maximum speed fell to 82mph, giving a mean of 83mph.

In spite of the lowered ratios, the figures suggest a degree of overgearing, since the 83 mph comes up at 5,200 rpm, some 400 rpm below the engine's peak power speed. In the lower gears we revved the engine right up to 7,000 rpm to achieve maxima of 21 mph, 40 mph and 61 mph. In fourth the Panda was a little less willing to reach those peak revs, but settled at 6,550 rpm to give 80 mph. The engine is reasonably flexible, as can be seen by the ability to pull without fuss from 10 mph in fourth gear, with fairly steady acceleration up to 60 mph.

First gear is very low, so it is

SPECIFICATION



Instruments and controls are packed around the wheel

WHAT IT COSTS

Prices	
Basic	£3,524.00
Special Car Tax	£293.67
VAT	£572.65
Total (inc GB)	£4,390.32
Licence	£90.00
Delivery charge (London)	£180.00
Number plates	£15.00
Total on the Road	£4,575.32
(exc insurance)	
EXTRAS (inc VAT)	
Metallic paint	£53.57
* Fitted to test car	
Total as tested on the road	£4,575.32

WARRANTY

12 months/unlimited mileage, six-year anti-perforation corrosion warranty

TEST CONDITIONS

Wind:	7mph
Temperature:	16deg C (60deg F)
Barometer:	29.0in Hg (982mbar)
Humidity:	82 per cent
Surface:	dry asphalt and concrete
Test distance:	980 miles

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ACCELERATION

MAXIMUM SPEEDS

Gear	mph	kph	rpm
OD Top (Mean)	83	134	5,100
(Best)	84	135	5,200
4th	80	129	6,550
3rd	61	98	7,000
2nd	40	64	7,000
1st	21	34	7,000

PERFORMANCE

FROM REST

True mph	Time (sec)	Speedo mph
30	4.6	30
40	7.3	40
50	10.9	50
60	16.8	61
70	24.3	72
80	—	83

Standing 1/4-mile: 21.2sec, 65mph
Standing km: 41.2sec, 76mph

IN EACH GEAR

mph	Top	4th	3rd	2nd
10-30	—	11.5	7.9	4.4
20-40	17.7	10.6	6.9	4.6
30-50	16.1	10.8	7.0	—
40-60	20.0	12.1	9.9	—
50-70	31.5	16.2	—	—

CONSUMPTION

FUEL

Overall mpg:	29.8 (9.5 litres/100km)
6.6 mpl	
Autocar formula:	Hard 26.8 mpg
Driving	Average 32.8 mpg
and conditions	Gentle 38.7 mpg

Grade of fuel: Premium, 4-star (98 RM)
Fuel tank: 7.75 imp galls (35 litres)
Mileage recorder reads: 1.3 per cent long
Oil: (SAE 15W/40) negligible

WEIGHT

Kerb: 14.7cwt/1,642lb/745kg
(Distribution F/R, 58.2/41.8)
Test: 17.9cwt/2,005lb/909kg
Max payload: 882lb/400kg

SPECIFICATION

ENGINE

Transverse front, front and rear-wheel drive. Head/block Al alloy/cast iron. 4 cylinders in line, bored block, 3 main bearings. Water cooled, electric fan. Bore 67.2mm (2.65in), stroke 68mm (2.68in), capacity 965cc (58.9 cu in). Valve gear ohv, 2 valves per cylinder, chain camshaft drive. Compression ratio 9.2 to 1. Contact breaker ignition, Weber twin-choke downdraught carburettor. Max power 48 bhp (PS-DIN) (35 kW ISO) at 5,600 rpm. Max torque 51 lb ft at 3,500 rpm.

TRANSMISSION

5-speed manual clutch 6.7in dia.

Gear	Ratio	mph/1,000 rpm
Top	0.723	16.2
4th	0.964	12.2
3rd	1.342	8.7
2nd	2.055	5.7
1st	3.909	3.0

Final drive: Helical, cylindrical, ratio 5.455.

SUSPENSION

Front, independent, MacPherson strut, coil springs, telescopic dampers, anti-roll bar.

Rear, live axle, leaf springs, telescopic dampers, anti-roll bar.

STEERING

Rack and pinion, no power assistance. Steering wheel diameter 14.4in, 3.4 turns lock to lock.

BRAKES

Dual circuits, split front/rear. Front 8.9in (226mm) dia discs. Rear 7.3in (185.4mm) dia drums. Handbrake, centre lever acting on rear drums.

WHEELS

Pressed steel, 4in rims. Radial tubed tyres (Pirelli MS, Winter 160 on test car), size 145/R13, pressures F29, R29 psi (normal driving).

DIMENSIONS

Wheelbase 85.4in (2170mm); track, front 49.4in (1254mm), rear 49.5in (1258mm). Overall length 133.5in (3390mm); width 58.5in (1485mm); height 57.5in (1461mm). Turning circle 35ft 6in (10.8m). Boot capacity 9.6/31.9/38.4 cu ft.

generally possible to start off in second in normal driving — in effect the top four gears tend to be used as a four-speed gearbox. The slight overgearing suggests that there should be fair economy, and this turns out to be the case. We recorded 29.8 mpg over our 980-mile test session, and while this falls well below the 38.7 mpg achieved with the Panda tested in June, 1981, and the 35.8 claimed by Fiat for the Urban Cycle, it should be remembered that our test session included some tough off-roading as well, with lots of low-gear work. We suspect that an average owner, using the car's off-road capability as intended, should see 32 mpg as a matter of course, with nearly 39 mpg available with gentle treatment.

The 7.75-gallon petrol tank is perhaps a little small since it gives the Panda 4x4 a range of around 225 miles at our consumption figure, but then it is hardly a car that lends itself to long distance touring; that sort of mileage is probably quite adequate for a rugged little runabout.

Fiat bills the Panda 4x4 as the least expensive four-wheel drive car on the market, yet it has not compromised on the equipment; offering the same interior trim material as on the Super (though the seats, unfortunately, lack the Super's extra padding) and two external rear view mirrors, dipping internal mirror, rear wash/wipe and tinted glass are standard features.

Externally the car is distinguished by side rubbing strips incorporating "4x4" badging, extended wheel arches and "Steyr-Puch" emblem on the rear. Colours are limited to white, Alpine green or (as a cost option) metallic grey.

The interior is standard Panda, and repeats the efforts to achieve good space efficiency. As on the Mini, both tall and short are catered for by dictating a relatively upright sitting position, so that the steering-wheel-seat-pedal relationship is reasonably good for all sizes of driver. To make the most of the car's interior length, the thickness of the seat backs is kept to a minimum. The disadvantage is that knees of rear-seat occupants can be felt by the driver if they press even quite gently into the seat back, and also there is a lack of good back support for larger drivers. We would have preferred to see the better-padded seats from the Super adopted as standard on the 4x4, particularly when bouncing

through rugged off-road terrain.

The instruments and controls are packed around the steering wheel, the former clearly visible through the top of the steering wheel, the latter well within fingertip reach but partly obscured by the rim of the wheel. The driver has to reach around the steering wheel to work these switches — they include the important headlamp control — which is rather an awkward movement, but one which a regular driver will probably get used to in time.

The comprehensive warning lamp system increases by one in the Panda 4x4 — there is also a lamp to indicate when four-wheel drive is engaged. Since there is no central differential in the Panda 4x4 arrangement, four-wheel drive should not be engaged when driving on hard, dry surfaces since variations in the rate at which the four wheels turn will lead to transmission wind-up which could lead to excess tyre wear or even cause mechanical damage.

An additional control is the hand throttle which, though it looks like a choke control, serves to alter the idle speed and can be used to compensate when the car is operated at high altitudes. Needless to say we found little use for that control in Britain.

Interior storage space is good, with the full-width tray under the fascia in front — complete with its sliding ashtray moulding — a small storage box in the central console and door pockets. Luggage space versatility is also good, with that distinctive Panda feature of being able to turn the back seat into a hammock, fold it down or remove it completely. The figures for luggage capacity quoted in our reference tables accompanying this report, refer to the load space with the rear seat in position, with the seat folded and with the seat removed.

This tough little Fiat may be small, but it shouldn't be shrugged off as a gimmick. The Panda 4x4 is a thoroughly competent all-terrain vehicle, quite able to make an impression in the market which up to now (in Britain, at any rate), has been dominated by the Subarus and Toyota Tercels. The Panda could also make a serious alternative to small but far less refined off-roaders like the Suzuki SJ410 or the Daihatsu Fourtrak in applications where on-road economy outweighs an occasional demand for off-road agility. ■