



Would you call 4WD people movers *shakers* or *fakers*? Grabbing his umpire's whistle, Allan Whiting put the question to Australia's best 4WD vans

People movers. It's a difficult concept to grasp. Difficult enough to confuse the auto makers so what hope do we have? To some buyers a 'people mover' is a seven-seater – and that covers machinery like Toyota's Troop Carrier and the Pajero V6. To others a people mover is purely and simply a converted cargo van.

We finally defined a people mover as a vehicle with three rows of forward facing seats, with side door access to the rear two – and, where cargo space has to be created by moving or folding the seats. That eliminated three-row bonneted wagons and those with inward facing seats – leaving us with three contenders for the people moving four-wheel drive crown: Volkswagen's latest Caravelle Syncro, Toyota's GLS Tarago and Mitsubishi's now somewhat dated Starwagon 4WD.

We reasoned that most 4WD people mover buyers have a fair sized mob to transport on good and not so good surfaces, with maybe trips to the snow, to



Photography : Warwick Kent

Fraser Island or the Great Around Aussie expedition thrown in. We surmised that the vehicles' abilities to haul trailers of cargo around would take second place to their ability to haul bodies – otherwise 4WD buyers would be better served for their investment by a long wheelbase wagon with more towing grunt.

The available 4WD people movers are a mixed bag – VW's rear engine, on-demand four wheel drive layout against Toyota's mid-engine, full-time four wheel drive and Mitsubishi's forward engine, part-time four wheel drive system.

An additional complication is the fact that the Tarago has never been touted as an off-road machine. The previous model was hampered by low ground clearance and the new model is even more so. Therefore, we restricted off-road driving to well maintained trails – which we've run comfortably in a Holden V6 ute – then took the VW and the Mitsubishi on spur tracks of increasing difficulty to separate their abilities.

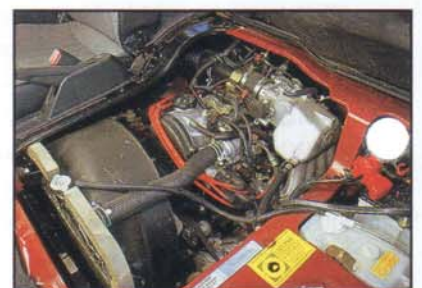
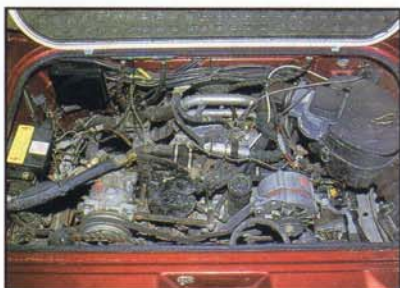
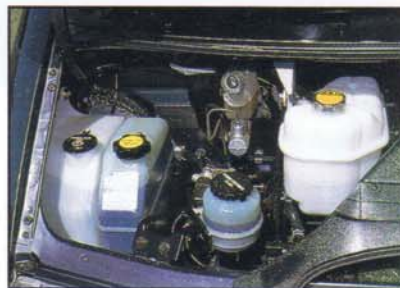
PRICES/EQUIPMENT

The price range of the vehicles tested spanned \$31,300 to \$49,000 and could have been filled in further if we'd evaluated the Tarago RV model, which retails at \$33,500. It shares the GLS model's full-time 4WD driveline, but has a live rear axle on coils, rather than independent suspension.

The Mitsubishi Starwagon was the lowest priced machine on test, and its level of equipment shows where the three-diamond crew saved a few yen.

Standard gear on your Starwagon 4WD includes a limited slip rear diff, but that's everybody's offering on part-time 4WDs these days. It works inside a live axle which is suspended on leaf springs. Brakes are discs up front and drums rear.

Four-wheel drive engagement is manual after you stop to make the front hubs work – still those awful automatic types which click in and out as you move backwards and forwards. Air-conditioning is a \$1500 option, which sounds okay until you use it



Although it is by no means the best looking van around, the interior is starting to look a bit dated and the flat 2.1 litre engine may be the smallest and least powerful of the group, the VW Caravelle Syncho is clearly the best 4WD van. Both on and off-road, the solid and dependable VW's the most capable performer

The Toyota's 2.4 litre 2TZ-FE engine is both the largest and most powerful of the 4WD contenders, and this is reflected in the fairly thirsty fuel consumption figures. But, without doubt, the Tarago is a styling masterpiece. Ergonomically, it's the most brilliantly executed people mover ever seen

The prize for the quickest 4WD van goes to the Mitsubishi Starwagon. With it's 81 kW sohc four thumping away, its performance easily outshone the VW and Toyota. Overall it's fuel economy was best too. The rest of the news, however, wasn't good. Interior accommodation was least liked by test crew

and discover it's not very effective. The AM/FM radio plays through two weenie speakers, which do nothing to entertain the rear occupants.

On the positive side, the Starwagon's gear shift is slick and its central tunnel handbrake position the most convenient of all three. The Tarago's handbrake lever is on the right-hand side of the driver's seat, where it lifts wide leg shorts and skirts like an accomplished voyeur. The VW's is on the left-hand side of the driver's seat, but you have to mash your face on the steering wheel to reach down to it.

The Tarago comes with full-time 4WD, independent suspension at all corners, a viscous coupling for front/rear torque proportioning, alloy wheels, anti-lock disc brakes, optional front/rear air-con, a four-speaker sound system with anti-theft and acoustic bias adjustment. On top of that, it has a sophisticated self-checking system which monitors liquid levels and tells the driver when it's service time. On the negative side, the Tarago lacks a low range transfer to provide off-road gearing.

The VW can't match the Toyota's pizzazz, but is impressive in its own way – it feels solid and has doors which make your ears pop when they're slammed. Standard Syncro gear includes an original demand-4WD system with viscous coupling, which brings in the front driveline when the rear starts to slip. This feature is complemented by locking diffs front and rear.

The Caravelle Syncro has independent suspension all around, disc/drum brakes, alloy wheels and effective underbody protection bars. Like the Toyota, it doesn't have a two-speed transfer case, but it does have a "crawler" gear for low speed, off-road use. Unfortunately, the Syncro's gear lever is short and its action is rubbery. Complicating things further is the need to push hard against a spring to pick up crawl gear and reverse.

The VW switches and controls are dated, and have the wiper and blinker functions reversed from common Australian market practice. A nice functional touch is the washer/wiper wand action – forward for the rear screen and back for the front. The optional air-conditioning system – ugly and \$3000 – pumps cold air down a central tunnel on the roof lining and works throughout the whole vehicle.

ACCOMMODATION

The Toyota Tarago is really space-age when you're seated in it, conscious of the projectile shape and tastefully blended contours and colours of the furniture. Its ergonomics are unequalled, for

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the driver and the first three passengers. However, the last seat – a split bench – is uncomfortably short on legroom for two adults. No centre headrest and the fitment of child seat restraint points suggests the middle rear seat occupant should be small.

Our six testers found that the Tarago had the best driver and passenger ride comfort on smooth surfaces, but it became rougher than the Caravelle on secondary and dirt roads.

Armrests on the Tarago's first four seats give useful support, except for the driver – unless he's a gorilla, content to drive with stumpy legs on the pedals and long arms extending to the wheel from a well-reclined seat back. Otherwise, the non-adjustable left armrest is too low to be useful. Another problem for Tarago drivers is the lack of real lumbar support.

The Caravelle's front seat armrests – two on each front seat – have knurled adjustment knobs to adjust the height, and they worked well. All rear seats have dividing armrests, which swing up into the seat back for easy entry and exit. There's no provision for lumbar support adjustment in the Caravelle's front seats, but all testers liked the shape of the standard seat.

The Caravelle scored best points for rear seat entry, but was not liked for its awkward driver and front passenger access. The front doors need to swing wider and the step needs redesigning.

The VW's roughly chamfered, forward-control brick shape gives it a spacious interior, which provides plenty of legroom and shoulder room for seven adults. Although it didn't ride as well as the Toyota in the opinions of the first four seat occupants, it had the best back row accommodation of all three people movers. The VW's ride quality was the most consistent on varying surfaces.

The Mitsubishi Starwagon's accommodation was least liked by drivers and passengers. Access to the front seats means climbing to mudguard height and once there, the driver and front seat passenger have

Our sand running was done at low speed, out of deference to the Tarago's vulnerable underbelly... The VW and the Mitsubishi were quite at home in sand...

scant space, a thin seat cushion and not much in the way of back support.

Rear section occupants of the second row have very restricted leg room and non-supporting seats. In particular, the folding third seat is extremely uncomfortable. But the Starwagon is the only vehicle of the trio to have convertible seating. The second row seat back can be flopped forward, letting the second row occupants face rearwards. It's a great idea for kids in child seats or baby shells.

The converted van concept of the Starwagon shows up in the huge bulkhead behind the front seats and the engine. It's no problem when it's a van, but prevents walk-through access to the rear seats when converted into a people mover.

Passenger and driver ride quality was much better than the leaf spring rear end would indicate and actually equalled the Tarago's on corrugated dirt surfaces, but was below the level of the two other vehicles on good surfaces. Opinions on the Starwagon were influenced by the stifling heat in the back, unrelieved by the ineffective air-con system.

ON THE ROAD

On smooth, dry bitumen the Tarago and the Starwagon will show a clean pair of heels to the Caravelle. The VW lacks the power to weight ratio and the gearing to mix it with the Japanese machines. When pushed on hilly roads, it needs much use of third gear and fuel consumption suffers as a result. You can get a five-speed transmission in a two-wheel-drive Caravelle, but the crawl

gear takes that space away from the 4WD's gear case. Once the road deteriorates, the margin isn't so clear cut, as the VW's supple coils cope well with lumpy, bumpy bitumen.

Directional stability in cross winds was best in the egg-shaped Tarago and worst in the Starwagon. The VW needed some correction, but didn't dart as sharply as the Mitsubishi did. On smooth bitumen and dirt roads, the Tarago is blindingly quick, getting superb traction from the full-time 4WD powertrain and beautiful balance from its mid-engine layout. It's able to put its power advantage to the ground and very quick trip times result.

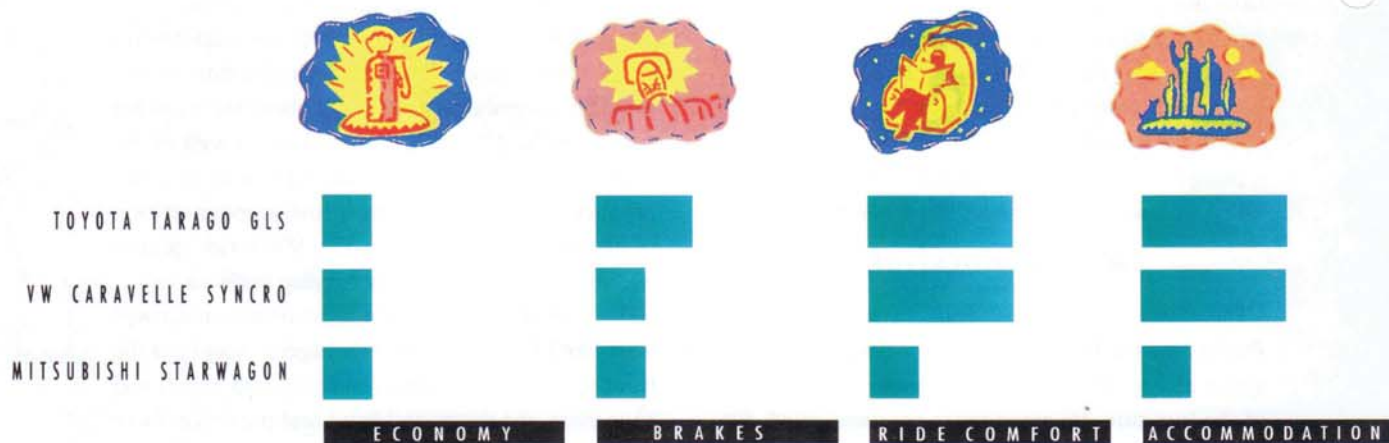
The Tarago's steering feels odd at first, almost front-wheel drive in its torque-steer reaction. However, once the driver is confident of the front end grip and puts his boot into it a little more, the steering lightens up and needs no correction whatsoever at high cornering speeds.

The VW is next best on smooth dirt roads, having almost equal front/rear weight distribution – the front seat occupants balance the rear engine weight while the passengers' weight sits in between. It lags behind the Tarago because it hasn't the power nor the fine balance which comes from a long wheelbase and little weight in the extremities.

The VW has almost fool-proof handling on dirt, because it understeers with the throttle on and changes to gentle oversteer when the throttle is eased. A Caravelle Syncro driver coming too rapidly into a dirt corner can just back off the gas to be rewarded with a helpful moment of turn-in.

The Starwagon's less refined suspension and high roll centre at the rear give it a tail-happy feel on smooth dirt surfaces, but the sensitive steering allows easy correction. In experienced hands, a Starwagon can make good trip times on dirt roads.

Neither Japanese machine was too keen on corrugated roads. The Tarago's suspension felt too



firm and one of the push-out side windows rattled in protest. This situation was worse with a full load of passengers on board and handling suffered from the weight and the chattering suspension.

The Starwagon's suspension took the ruts without transmitting so much shock to the occupants, but it axle tramped at the back and under brakes and acceleration. The VW's suspension made a lot of noise, but the vehicle didn't move about noticeably. It held its line better than the other two and was still nicely balanced with a full complement of passengers on board. No complaints there.

OFF THE ROAD

We took the less rugged nature of the Tarago into account in our off-road evaluations, but were still very disappointed with its ability to cope with the most innocuous obstacles.

We don't think it's unreasonable to expect any vehicle – car, 4WD or motorcycle, for that matter – to do some minor off-road tasks. An Australian buying a new motor vehicle would expect to be able to drive it a short way at low speed across a paddock or a camping site. Buyers would not expect to incur vehicle damage climbing a gutter or negotiating a property access road. But the new Tarago is at risk in the above situations, because of its low ground clearance and its long wheelbase.

We didn't pick up the difficulty in any on-road situation, but we'd hardly turned off the main dirt road onto a property trail than we had a rock rolling noisily along under the belly. Remember, we've taken a Holden Berlina and a Holden V6 ute along the same track without grounding anything.

Measurement soon revealed the problem. The Tarago is less than 200 mm greater in length than the Syncro, but is a whopping 400 mm longer in the wheelbase. It is less than 400 mm longer than the Starwagon, but 620 mm longer between the axles.



INSTRUMENTS

VENTILATION



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	VOLKSWAGEN	TOYOTA	MITSUBISHI
Make, model:	Caravelle GL Syncro	Tarago GLS	Starwagon 4WD
Price —			
Basic:	\$45,995	\$39,000	\$31,322
As Tested:	\$48,995	\$41,677	\$32,822
ENGINE	ohv flat 4	2TZ-FE	sohc 4 cyl
Induction:	efi	efi	efi
Valves:	8	16	8
Bore x stroke (mm):	94x76	95x86	86.5x100
Capacity (litres):	2.109	2.44	2.35
Compression ratio (:1):	9.0	9.3	8.6
Max. power: kW @ rpm:	70 @ 4800	102 @ 5000	81 @ 5000
Max. torque: Nm @ rpm:	160 @ 2800	208 @ 4000	182 @ 3500
Redline:	5400	6000	6000
TRANSMISSION	5-spd man	4-spd auto	5 spd man
Gear ratios:			
First:	3.780	2.452	3.967
Second:	2.060	1.452	2.136
Third:	1.225	1.000	1.360
Fourth:	0.850	0.730	1.000
Fifth:	--	na	--
Low/first:	6.030	na	7.636
Final drive:	5.430	4.300	4.625
Transfer case:	-	-	1.925
CHASSIS			
Drive:	constant 4WD	selectable	part-time 4WD
Suspension — front:	wishbones	McPherson	wishbones
	coils/dampers	strut	torsion bar
Suspension — rear:	3/4 trailing arms,	wishbones	leaf springs,
	coils/dampers	coils/dampers	dampers
Wheelbase (mm):	2460	2860	2240
Track front/rear (mm):	1568/1560	1560/1550	1430/1415
Minimum clearance (mm):	210	160	220
Steering:	rack & pinion	rack & pinion	rack & pinion
description:	power	power	power
Turns lock to lock:	-	3.5	-
Turning circle (m):	10.9	11.4	10.0
Brakes — front/rear:	disc/drum	disc/disc	disc/drum
Tyres — size:	27 x 8.5R14	215/65R15	215SR15
Tyres — make:	Toyo Open Country	Dunlop SPD8	Bridgestone SF402
Kerb mass (kg):	1655	1855	1610
Fuel tank (litres):	70	75	60
BODY			
Length (mm)	4570	4750	4365
Width (mm)	1845	1800	1695
Height (mm)	2003	1790	1975
PERFORMANCE	Volkswagen	Toyota	Mitsubishi
Speedo corrections —			
Speedo km/h 60 true km/h:	54.7	59.2	59.5
80:	71.9	77.7	77.7
100:	91.5	95.8	95.8
Top speeds km/h @ rpm			
First gear:	40/5400	70/6000 (held)	46/6000
Second gear:	68/5400	118/6000 (held)	82/6000
Third gear:	110/5400	-	131/6000
Fourth gear:	-	-	-
Fifth gear:	-	-	-
Acceleration (seconds): standing start to —			
60 km/h:	6.6	6.4	5.3
80 km/h:	11.9	10.0	8.8
100 km/h:	19.4	14.1	14.5
400 metres:	21.8	19.9	19.2

UNDER THE SKIN

The radical Tarago uses car-like suspension components in its fully independent suspension layout. Up front are struts with lower control arms and an anti-sway bar. At the rear are fabricated lower wishbones and forged upper arms. The springs are coils at all four corners.

Inspection of the underbody suggests that the design rationale has been minimum intrusion of the mechanicals into the body space. The wheel arches are very small, allowing barely enough space to fit snow chains to the front tyres. V-bar chains will not fit and the larger than standard types are out of the question.

At the back end, the suspension fits under the floor, so the coil and shocker length are restricted. The same space-saving rationale extends to the powertrain. In the interest of a low floor and minimal engine intrusion, the car's vitals hang below — like a male Tasmanian Devil's genitals.

With the engine designed to lie on its side, the exhaust manifold is also an underbody component and has been a contributor to side-measured noise emissions. For this reason, the pipes are double-skinned, as are the cat converter and large muffler.

Vestigial protection plates are attached to the engine and the driveline, but the sump and the fuel tank are vulnerable. Our test vehicle already bore scars on its sump, fuel tank and rear diff plate — and we added some more, despite being careful.

The spare is located under the rear overhang and tools are beneath the front passenger seat. Two front and two rear towing eyes are provided.

The Starwagon's underbelly has changed little since the old L300 model. Up front, double wishbones twist torsion bars, with control from small telescopic dampers. At the back, leaf springs and bias-mounted dampers do the trick. There's a pressed steel protection plate over the front diff and the steering linkages, while bars and a tubular belly band protect the sump. The transfer case is not protected, but the fuel tank is — and tucked away. The side step on the near side can be a ground clearance problem on rough trails, but is easily removed by undoing six attachment screws.

The spare is under the rear floor and tools are squeezed into the base of the door pillar. Two towing eyes are fitted to the front of the chassis and two at the rear.

The VW's underbody is dominated by a double-rail protection system which runs full length, in three sections. Large section square tubes flank the propeller shaft, while smaller sections protect the front-mounted spare and the rear-mounted engine/transmission.

The front suspension consists of double

Rolling start	3rd 4th	kickdown	3rd 4th 5th
40-70 km/h:	7.9 13.9	4.1	6.4 9.5 13.7
60-90 km/h:	9.0 14.4	5.5	7.2 10.5 14.2
80-110 km/h:	12.6 20.3	7.1	8.5 14.0 21.1

FUEL CONSUMPTION

Litres/100km (mpg):

Best on test:	13.4 (21.1)	15.9 (17.8)	15.5 (18.2)
Worst on test:	24.5 (11.5)	18.9 (14.9)	18.7 (15.1)
Overall average:	17.4 (16.2)	17.4 (16.2)	17.1 (16.5)
Av. range (km)	400	430	350
Test distance (km):	370	370	370

SOUND LEVEL - dBA

Idle:	57	53	53
Steady 60 km/h:	71	73	72
Steady 100 km/h:	75	75	77

DIMENSIONS Interior (mm)

Dash to tailgate:	3770	3200	3500
Driver's seat to wheel (min/max):	500/700	540/730	500/680
Driver's seat to pedals (min/max):	300/500	370/550	400/530
Rear kneeroom (min):	290	350	400
Shoulder width, front/rear:	1550/1580	1500/1560	1460/1590
Front cushion depth/height:	500/390	530/350	510/430
Rear cushion depth/height:	500/410	450/380	470/390
Front door opening length/height:	1110/1330	870/1170	1090/1260
Door sill to wide open door:	1230	980	1100
Luggage compartment -			
Floor length - seat up/seat down:	990/-	1520/670	900/490
Floor width (min/max):	1580/1670	1230/1520	1060/1540
Floor to roof:	940	1130	1160
Opening height:	1040	1210	-
Opening width (min/max):	1290/1550	1050/1350	1280/1370
Loading height (lip to ground):	900	670	780

EQUIPMENT/FEATURES

S = standard O = optional X = not included

Auto transmission:	X	S	X
Diff locks (front/rear):	S/S		
Power steering:	S	S	S
Air conditioning:	O	O	O
Alloy wheels:	S	S	O
Electric mirrors:	S	S	
Central locking:	S	S	
Metallic paint:	S	S	
Trim (vinyl,fabric,leather):	fabric	fabric	fabric
Steer wheel height/reach adj.:		tilt only	tilt only
Headrest adj.:	S	S	S
Cervical armrest (front):	S	S	
Removable fuel cover:		S	S
Overhead assistant handles:	S	S	S
Map light:		S	S
Rear compartment light:	S	S	S
Intermittent wipers:	S	S	S
Car alarm:	X	X	X
Gauges -			
Trip meter:	S	S	S
Tachometer:	S	S	S
Coolant temp:	S	S	S
Clock:	S digital	S digital	S digital
Sound system -			
Anti-theft:	X	S	X
Stereo AM/FM:	S	S	X
Speakers:	4	4	2
Auto rewind:	S	S	S
Dolby:	S	S	S

wishbones, with concentric coils and dampers. At the rear are semi-trailing lower arms, with coils and rear-mounted telescopic dampers. The VW's dampers are significantly larger than those fitted to the Japanese machines. The Syncro has one towing eye at the front and one at the rear.

UNDERBONNET

The Tarago's mid-engine layout dictated an up-front bonnet with easily checked reservoirs. The large, translucent containers give good indication of their contents. The battery, wiper motor and brake master cylinder are also housed in this front bay and are easily reached.

The bay is partially covered by the fresh air scoop for the vehicle's ventilation system, but it can be removed easily after undoing six small screws. That clears the way for belt changes.

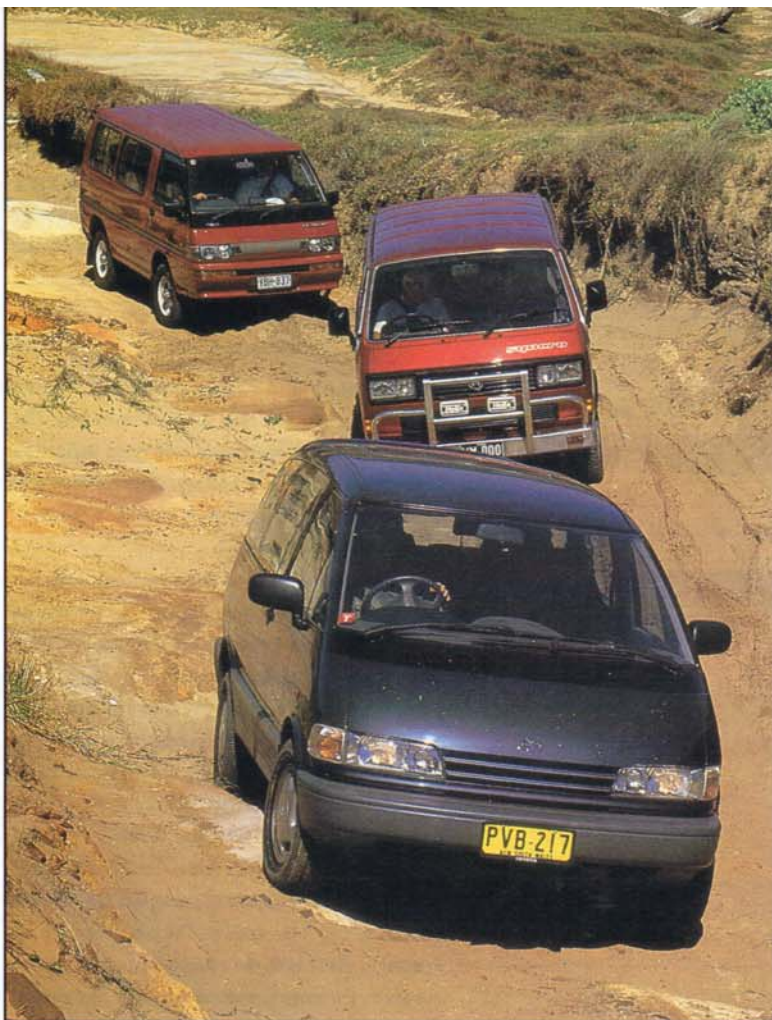
Another access panel sits under the front passenger's seat. This panel opens to reveal some of the engine air inlet plumbing and the dipsticks for the automatic transmission and the engine. Tools and the engine's computer are located under the seat, while the jack hides under the driver's seat.

The Mitsubishi's passenger seat lifts up, taking a section of the floor with it. The assembly can be hooked in place with the strap provided. This gives access to the battery, coolant reservoir and most of the engine service components, including the fuel injection system. However, the alternator is tucked away on the right-hand side of the engine and is best reached from under the vehicle. Belt changes seem straightforward and the distributor is mounted high up in the engine bay. The power steering reservoir and the air cleaner are located under a panel behind the driver's seat.

The VW's engine bay is the most accessible of all three vehicles, under a lift-out plastic panel in the rear floor. It's only drawback is the need to unload any gear before the panel can be raised.

Like Subaru, VW enjoys a flat engine design, which makes it easy to mount the ancillaries high up in the engine bay. That said, the Syncro had a non-standard distributor water exclusion device - part number Glad Bag Three Oh - zip-clipped to its high tension leads. We're not sure what the troops in Wolfsburg would make of that little item, but it does suggest that the electrics could do with some water protection. If the filthy state of the engine bay is anything to go by, some splash plates beneath the engine and the transmission are long overdue.

Belts are easily changed, with no radiator and shroud to get in the way and all the reservoirs are obvious. The air cleaner canister is awkward to open, mainly because of all the fuel injection equipment attached to it.



We don't think it's unreasonable to expect any vehicle to do some off-road tasks. But the Tarago is at risk in the above situations

This wheel-in-each-corner design is combined with a ground clearance 50 mm less than the VW's and 60 mm less than the Starwagon's – and the Tarago's lowest point is right in the critical belly angle area.

Another Tarago quirk on this slow driving section was the heat build-up under the bonnet – enough to boil the power steering fluid.

Our sand running was done at low speed, out of deference to the Tarago's vulnerable underbelly and the machine put up a good performance where the terrain was fairly flat and free from nasty, buried surprises.

The VW and the Mitsubishi were quite at home in sand and on property roads, so we took them to more demanding, rocky country to compare abilities. The Caravelle Syncro's demand-4WD and its independent suspension gave it excellent traction, while we expected the Starwagon to have more slip-and-grip action than it did. Old fashioned

leaf springs can still work quite well in rocky country and the Starwagon's are more supple than those fitted to the company's load-carrying 4WDs. With its limited slip differential controlling wheelspin, the Mitsubishi stayed with the VW until the Syncro needed its diff locks to clamber up a steeply stepped, rocky climb.

Interestingly, there is no off-road compromise we can find in the VW's lack of a low range transfer case. The crawl ratio multiplied by the final drive ratio works out at nearly 33:1, which isn't far off the Starwagon's 35:1 in low range first gear.

The VW engine's maximum torque point being some 700 rpm lower than the Mitsubishi's also makes up for any apparent further advantage of the two-speed transfer case.

Neither machine could match its climbing ability with engine braking effort and both had to be slowed with brake pressure on steep slopes.

Fuel consumption was measured at two points – a city and sand driving section, followed by dirt, trail and high speed running. The VW beat them at the low speed stuff, but suffered dramatically when pushed on faster roads. It needs to rev higher than the Japanese engines because of its higher ratio final drive, working at nearly twice their engine speed when legally cruising. All were disappointing fuel users, suggesting that 4WD people mover makers need to rethink their powertrains – maybe bigger, lazier petrol engines or turbo diesels.

CONCLUSIONS

The VW Caravelle Syncro is the best all-round 4WD people mover. It's not the most stylish, the quietest or the quickest, but it does everything an on/off-road people mover should. Those venturing into diff lock country with the VW will embarrass many a square-rigged 4WD. Another point in its favour is its ready conversion to a pop-top camper van – using the cheaper Kombi Syncro as a base.

The Tarago's an enigma – brilliant on good roads and totally out of place on anything ungraded. It accurately portrays its North American market origin and isn't cut out to be an around-Aussie tourer or even a hobby farm commuter vehicle.

The Starwagon is in need of an upgrade and the Mitsubishi people know it. There's very little Starwagon 4WD stock in the country and you have to commit yourself to an irrevocable order to get one brought from Japan. It's unlikely, but not impossible, the upgrade will come in a year which sees the major revamp of the Pajero. *