

319 - Nuova Panda 1.3 Multijet FRONT WHEEL GEOMETRY - CHECK USING OPTICAL EQUIPMENT - INCLUDES ADJUSTMENT IF NECESSARY 4450A10

- This check procedure must be carried out after each operation on the front suspension mechanical components since its purpose is to define the position of the wheels in relation to the body (e.g.: wishbones, steering knuckles, shock absorbers, springs etc.).

 Detail  Detail

OPERATING CYCLE

General information

- Wheel geometry/angle checks must be carried out using appropriate optical equipment after checking and adjusting tyre inflation pressure to 3.0 ± 0.3 bar and ensuring that the vehicle complies with one of the following load conditions:
- “Standard 0” - vehicle unladen including spare wheel, tools, accessories, with 5 litres of fuel;
- “Standard A” - vehicle unladen including spare wheel, tools, accessories and consumables (full tank of fuel).
- At the end of the wheel geometry operation, bring the pressure value to the on-road values in accordance with the table below:

Tyres	Unladen/medium load		Full load		Space-saver wheel (*)
	Front	Rear	Front	Rear	
165/65 R14 79T (*)	2.5	2.2	2.7	2.4	2.8
165/70 R14 81T(*)	2.3	2.0	2.5	2.2	2.8
175/65 R14 82T	2.2	2.0	2.5	2.5	2.8
185/55 R15 82T	2.2	2.0	2.5	2.5	2.8
175/65 R15 84T M+S (4WD)	2.2	2.1	2.5	2.5	2.8

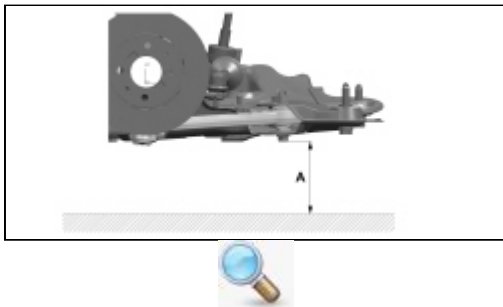
175/65 R15 84T (4WD)	2.2	2.1	2.5	2.5	2.8
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(*) For versions/markets, where provided

CHECKING AND ADJUSTING FRONT SUSPENSION GEOMETRY/ANGLES

Geometry check



- Before checking the front wheel geometry, ensure that the ground clearance "A" indicated in the figure is within the prescribed value.

Engine type	Equipment	Tyres	Standard 0	Standard A
0.9 TwinAir 64 HP	One	175/65-14	169	162
	One	185/55-15	173	169
	One Full Opt. 5 doors	175/65-14	162	155
	One Full Opt. 5 doors	185/55-15	167	162
0.9 TwinAir 85 HP	Easy	175/65-14	175	169
	Easy Full Opt. 5 doors	175/65-14	167	160
	Easy Full Opt. 5 doors	185/55-15	172	168
	MTA Easy	175/65-14	173	167
	MTA Easy F.O.	175/65-14	165	158
		185/55-15	170	166

	MTA Easy F.O.			
	Climbing	175/65-15 (4WD)	195	190
	Climbing	175/65-15 (4WD) Full Opt. 4 doors	187	181
	Climbing	175/65-15 (4WD) Full Opt. 5 doors	189	183
0.9 Natural Power	Easy	175/65-15	187	181
	Easy	175/65-15 Full Opt. 4 doors	179	173
	Easy	175/65-15 Full Opt. 5 doors	182	176
	Trekking	175/65-15	186	179
	Trekking	175/65-15 Full Opt. 4 doors	181	175
	Trekking	175/65-15 Full Opt. 5 doors	179	173
1.2 LPG	Easy	175/65-14	169	163
	Easy Full Opt. 5 doors	175/65-14	163	156
		185/55-15	168	163

	Easy Full Opt. 5 doors			
1.2 69 HP	One	175/65-14	173	167
	One	185/55-15	178	173
	One Full Opt. 5 doors	175/65-14	165	159
	One Full Opt. 5 doors	185/55-15	170	166
	Easy	175/65-14	173	166
	Easy	185/55-15	177	173
	Easy Full Opt. 5 doors	175/65-14	164	157
	Easy Full Opt. 5 doors	185/55-15	169	164
1.3 MultiJet 75 HP	One	175/65-14	166	159
	One	185/55-15	171	166
	One Full Opt. 5 doors	175/65-14	159	152
	One Full Opt. 5 doors	185/55-15	165	160
	Climbing	175/65-15 (4WD)	199	193
	Climbing	175/65-15 (4WD)	191	185

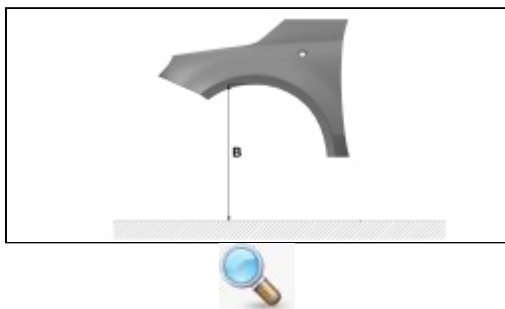
		Full Opt. 4 doors		
	Climbing	175/65-15 (4WD) Full Opt. 5 doors	193	187



"A" - height from the ground of the head of the wishbone
(vertical) fixing screw



"F.O." - Full Optional



- Make sure that the ground clearance "B" shown in the figure is within the prescribed value.

Engine type	Equipment	Tyres	Standard 0 H front protrusion [mm]	Standard A H front protrusion [mm]
0.9 TwinAir 64 HP	One	175/65-14	632	626
	One	185/55-15	637	633
	One Full Opt. 5 doors	175/65-14	625	619
	One Full Opt. 5 doors	185/55-15	630	626
0.9 TwinAir 85 HP	Easy	175/65-14	640	634
	Easy Full Opt. 5 doors Full Opt. 5 doors	175/65-14	631	625
	Easy Full Opt. 5 doors	185/55-15	636	632
	MTA Easy		637	631

		175/65-14		
	MTA Easy F.O.	175/65-14	629	623
	MTA Easy F.O.	185/55-15	634	630
	Climbing	175/65-15 (4WD)	678	672
	Climbing	175/65-15 (4WD) Full Opt. 4 doors	669	664
	Climbing	175/65-15 (4WD) Full Opt. 5 doors	671	666
0.9 Natural Power	Easy	175/65-15	668	663
	Easy	175/65-15 Full Opt. 4 doors	659	654
	Easy	175/65-15 Full Opt. 5 doors	662	656
	Trekking	175/65-15	666	661
	Trekking	175/65-15 Full Opt. 4 doors	661	655

	Trekking	175/65-15 Full Opt. 5 doors	660	654
1.2 LPG	Easy	175/65-14	634	628
	Easy Full Opt. 5 doors	175/65-14	627	621
	Easy Full Opt. 5 doors	185/55-15	632	628
1.2 69 HP	One	175/65-14	637	631
	One	185/55-15	642	638
	One Full Opt. 5 doors	175/65-14	629	623
	One Full Opt. 5 doors	185/55-15	634	630
	Easy	175/65-14	636	631
	Easy	185/55-15	641	637
	Easy Full Opt. 5 doors	175/65-14	627	621
	Easy Full Opt. 5 doors	185/55-15	632	628
1.3 MultiJet 75 HP	One	175/65-14	629	622

	One	185/55-15	634	630
	One Full Opt. 5 doors	175/65-14	622	616
	One Full Opt. 5 doors	185/55-15	628	623
	Climbing	175/65-15 (4WD)	682	677
	Climbing	175/65-15 (4WD) Full Opt. 4 doors	674	669
	Climbing	175/65-15 (4WD) Full Opt. 5 doors	676	670



"B" - Height from the ground of the front protrusion



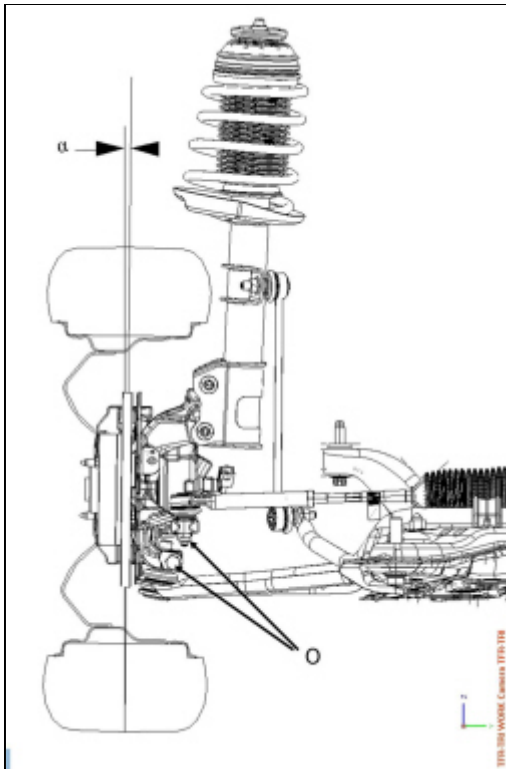
"F.O." - Full Optional

CHECK CONDITIONS

Before carrying out checks, check that the vehicle is in one of the following setup conditions:

a) Std 0;

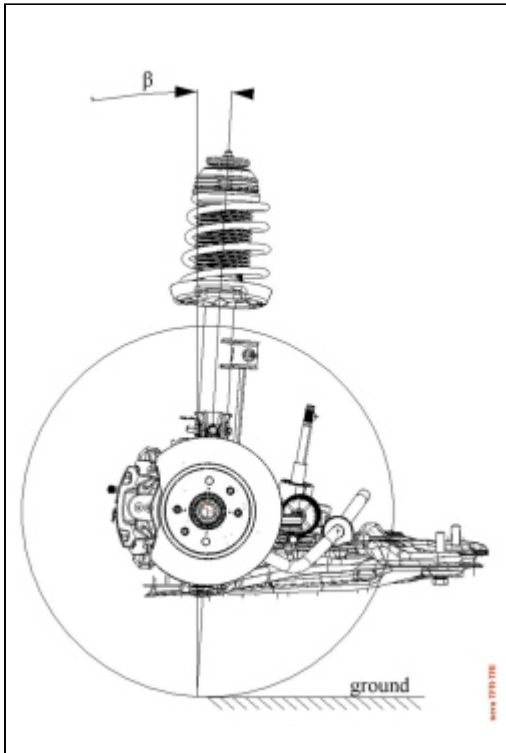
a) Std A.



WHEEL CAMBER alfa ANGLE

Toll. $\pm 0^{\circ} 30'$ for all versions and must be:

Size	Value	Validity
Front wheel camber (Standard 0)	$-0^{\circ} 36'$	
Size	Value	Validity
Front wheel camber (Standard A)	$-0^{\circ} 36'$	



KNUCKLE CAMBER beta ANGLE

Toll. $\pm 0^{\circ} 30'$ for all versions and must be:

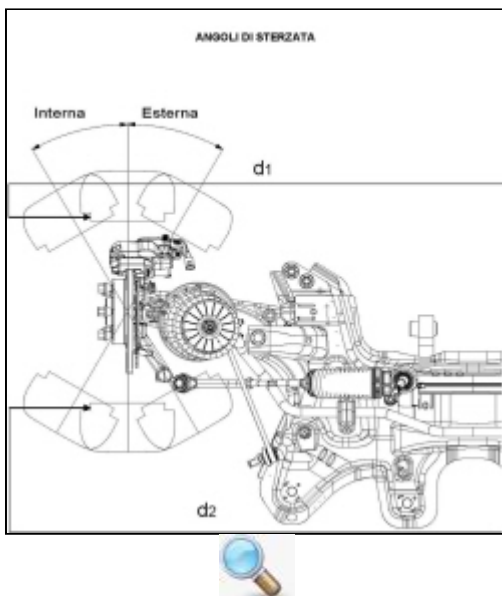
Size	Value	Validity
Front wheel camber (Standard 0)	$2^{\circ} 16'$	0.9 85 HP 1.2 69 HP 1.3 MultiJet
Size	Value	Validity
Front wheel camber (Standard A)	$2^{\circ} 24'$	0.9 85 HP 1.2 69 HP 1.3 MultiJet
Size	Value	Validity
Front wheel camber (Standard 0)	$1^{\circ} 45'$	4WD versions

Size	Value	Validity
Front wheel camber (Standard A)	1° 50'	4WD versions
Size	Value	Validity
Front wheel camber (Standard 0)	1° 20'	0.9 65 HP 0.9 80 HP Natural Power 1.3 MultiJet Trekking
Size	Value	Validity
Front wheel camber (Standard A)	1° 28'	0.9 65 HP 0.9 80 HP Natural Power 1.3 MultiJet Trekking

The knuckle caster values are to be meant with respect to the ground.

STEERING ANGLES

Toll. $\pm 1^\circ$ for all versions and must be:



Size	Value	Validity
Inner wheel left steering angle	-39° 00'	2WD versions
Size	Value	Validity
Outer wheel left steering angle	-32° 34'	2WD versions
Size	Value	Validity
	-37° 02'	2WD versions

Inner wheel right steering angle		
Size	Value	Validity
Outer wheel right steering angle	-33° 52'	2WD versions
Size	Value	Validity
Inner wheel left steering angle	-37° 04'	4WD versions Natural Power versions Trekking versions
Size	Value	Validity
Outer wheel left steering angle	-30° 54'	4WD versions Natural Power versions Trekking versions
Size	Value	Validity
Inner wheel right steering angle	-35° 16'	4WD versions Natural Power versions Trekking versions
Size	Value	Validity
Outer wheel right steering angle	-32° 05'	4WD versions Natural Power versions Trekking versions

WHEEL TOE IN

- On assembly line (vehicles with 0 km)

Size	Value	Validity
Front wheel toe in (d2 - d1)	1 mm \pm 1 mm	0.9 85 HP 1.2 69 HP 1.3 MultiJet
Size	Value	Validity
Front wheel toe in (d2 - d1)	0 mm \pm 1 mm	0.9 65 HP 0.9 80 HP Natural Power 1.3 MultiJet Trekking

WHEEL SEMI TOE IN

- On assembly line (vehicles with 0 km)

Size	Value	Validity
Front wheel half toe in (d2 - d1)	0.5 mm \pm 0.5 mm	0.9 85 HP 1.2 69 HP 1.3 MultiJet
Size	Value	Validity
Front wheel half toe in (d2 - d1)	0 mm \pm 0.5 mm	0.9 65 HP 0.9 80 HP Natural Power 1.3 MultiJet Trekking



Connect the diagnosis equipment to calibrate the "steering electrically controlled device position sensor".