

Check it out

This year's Vertikal Check, the eighth, was held at Platformers' Days in Germany at the end of August. The products covered were self-propelled Rough Terrain articulated boom lifts with platform heights of between 50 and 60ft (16 to 18 metres) with machines from JLG, Genie, Haulotte, UpRight, Manitou and Airo. The other significant producer of self-propelled articulated booms - Niftylift - did not attend this year's event and so did not have a machine on site to enter. For the sake of a balanced view of the sector we will include the Niftylift HR18 details in our summary comparison.

The models were generally the latest offerings from each manufacturer, however JLG chose to enter a used machine, a 60ft/18m JLG 600AJ from 2002. While being some six years old, few if any of those watching would have known that it was not new. It had passed through the company's factory reconditioning centre and only a very close inspection or look at the serial number plate gave the game away. Genie chose to enter its 51ft/17.6 metre Z-51/30J RT which has been developed from its best selling Z-45/25. Haulotte put forward its well regarded 60ft/18 metre HA20PX, Manitou its 51ft/15.6 metre 180 ATJ, and UpRight the 60ft/18 metre

Snorkel-designed AB60JRT while Italian manufacturer Airo entered a brand new model the 61ft/18.5 metre SG 1850 JD4WD.

In a slight change to the usual format the Check this year focused less on comparing actual specifications with those published and more on subjective opinions of the judges with practical tests. The process was split into three sections:

1) Scrutiny of the machines including a few measurements, but mostly comprising a detailed inspection by the judges, focussing on the build quality, serviceability and built-in features. 2) A practical operational evaluation by the judges, including operating each unit and driving it on the rough terrain test pad with a



Rüdiger Kopf (R) of Vertikal with the judges (L-R) Hugo Fasselt, Andreas Münzel and Adrian van der Geer.

focus on ease of operation, smoothness of controls and platform feel. And 3) Completion of an off-road course by the manufacturer's staff with an opportunity for each entrant to present the key benefits of its machine to the judges and audience.

This year's three judges were all highly experienced rental professionals: Hugo Fasselt, for many years the technical director at Gardemann; Adrian van der Geer, technical director of Mateco and Andreas Münzel, technical manager at Weidler Arbeitsbühnen.

Unlike previous Vertikal Checks, this year's entries had wide diversity in terms of technology, ranging from high tech 'all singing - all dancing' models to more basic units with two wheel steer, fixed axles and traditional controls. In addition

some companies such as Genie and Manitou entered 45ft derivatives while others such as Haulotte and UpRight put forward 60ft machines. As a result of this diversity it is important to remember that there is an unusually wide variation in terms of prices for the machines on test.

Judge Adrian van der Geer briefs Roman Heindl of UpRight on the off road course.



UpRight AB60JRT

The UpRight AB60JRT was without doubt the most senior product in this year's Check. Until recently it was known as the Snorkel AB60J which was first launched as the Snorkel ATB60 in 1990 with updates in 1994 and 2000 when the T was dropped from its name. The product has a strong reputation for being a 'tough as old boots' heavy duty, no-nonsense machine which

was originally launched to go head to head with the first 60 ft articulated boom, the Grove AMZ66. As such it has a single stage riser - a feature it shares with the Haulotte - which limits its up and over reach but does give it significantly more outreach than the dual riser models, along with the required weight that such outreach demands.

The Judges comments included:

"Some details on this machine are no longer state of the art."

"Moisture protection of wiring and components is not up to the latest standards in some areas."

"Access for routine service could be better, including hoses, wiring and engine components."

"The paint finish seems a little rough and ready - not the best."

On the positive side the machine put in a solid performance on the



The UpRight/Snorkel was appreciated for its rugged simplicity.

rough terrain course. Although it was not the fastest nor offered the tightest turning, it coped very well and outperformed many of the more sophisticated models and this without the added complexity of four wheel steering and an oscillating

axle. The judges said: "While this unit is no beauty we liked the steel covers and felt that its down to earth simplicity and 'solid manner' make it easy to work on and will definitely appeal to many buyers and users."

Model	Upright AB60JRT
Platform height	60ft /28.3m
Outreach	13.1m
Up and over reach	6.0 m
Jib length - articulation	1.8m - 90°
Platform capacity	227kg
Platform size	760mm x 1.52m
Length/width/height	8.9m/2.4m/2.5m
Ground clearance	300mm
Gradeability	57%
GVW	11,249kg
Drive - steer	4 x 4 x 2
Oscillating axle	No
Controls	
Slew	proportional
Drive	proportional
Lift	proportional
Telescope	prop - rheostat





The JLG was the only unit with a telescopic riser



The judges felt that the JLG controls were very easy to use.

They did not like the quality of the hose routing though and felt that in some areas it would lead to unnecessary failures. This is an area where the old model would have let JLG down.

Other comments included:

"The paint is not the best."

"The performance during the test drive was in most respects good."

"The unit does not include the latest technical developments such as a platform overload device, although this could be an advantage."

Model	JLG 600 AJ Recon
Platform height	60ft 10"/18.54m
Outreach	12.3m
Up and over reach	8.1 m
Jib length and articulation	1.83m - 130°
Platform capacity	230kg
Platform size	910mm x 1.83m
Length/width/Height	8.82m /2.44m/ 2.56m
Ground clearance	300mm
Gradeability	45%
GVW	10,650kg
Drive - steer	4 x 4 x 2*
Oscillating axle	Yes
Controls	
Slew	proportional
Drive	proportional
Lift	Proportional-Rheostat
Telescope	Proportional-Rheostat

*Four Wheel Steer optional



The Airo impressed the judges but it was not entered into the off road test

Airo SG 1850 JD4WD

Of all the machines entered for the Check the Airo was certainly the least well-known and interestingly caused some surprises. The Airo also qualifies as the most recently introduced product in the test.

Positive comments included:

"This is an easy machine for maintenance."

"The moisture protection for components and the protection of the drive train as well as the controls is good."

"The routing of cables and hoses is okay."

The fact that Airo uses steel tubing wherever possible, limiting the use of flexible hoses to joints and moving areas, was applauded by the judges, in that it kept hose replacement to short easy to handle and less expensive lengths and was more efficient.

"The electrical system and wiring in the central control box is clear and easy to understand and work on."

The judges also appreciated the diagnostic unit supplied for tracking faults.



JLG 600AJ

JLG took an unusual approach with its entry by choosing a six year old model JLG 600AJ which had been subject to its factory rebuild programme. The 600AJ is also no spring chicken, it was the first of JLG's new booms launched in 1996 and is unique among the entries in that it features a telescopic riser giving it the best of both worlds in terms of outreach and up and over capability. When the riser is elevated but retracted it provides an outreach almost as good as the UpRight and Haulotte models with their single stage risers and yet when telescoped it competes head- to head with the dual riser models for up and over reach.

The judges liked the layout under the covers, with easy access to the electrics and hydraulics:

"A joy for any mechanic and very clearly laid out."

"The controls are very easy to operate."

"The boom and the telescopic configuration provide a very stable feel in the platform."

nifty lift



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On the negative side they did not like the 'rough' finish of the cast iron counterweight and the three judges were divided over the 'look' of the machine.

Airo decided not to allow the machine to be used on the off-road course, concerned that a company mechanic was not present in case of a fault or improper use. The judges did say that the machine had a rigid feel in the platform but were unable to comment on any other performance criteria.



The Airo controls were well protected and had a vinyl cover to provide extra protection in wet weather

Model	Airo SG 1850 JD4WD
Platform height	60ft 10"/18.55m
Outreach	11.25m
Up and over reach	9.4 m
Jib - length and articulation	1.83m - 130°
Platform capacity	230kg
Platform size	800mm x 1.70m
Length/width/height	7.96m /2.4m/ 2.65m (6.61/2.4/3.16) ²
Ground clearance	480mm
Gradeability	50%
GVW	12,250kg
Drive - steer	4 x 4 x 2*
Oscillating axle	Optional
Controls	
Slew	Proportional
Drive	Proportional
Lift	Proportional
Telescope	Proportional

* Four Wheel Steer optional

² With jib tucked for transport

The Genie performed exceptionally well on the rough terrain course



Genie Z51/30JRT

Genie chose to enter its Z51/30JRT, a development of its highly successful Z45/25 series. The company also competes in this market with its Z60/34 which would have been at the top end of this height range.

The judges were extremely positive about the Z51, they thought that the central electronics unit and wiring was very clear, well designed and laid out. They commented that the cable and hose routing was beautifully installed and well protected. They also liked the engine installation with its swing out bracket which made access to the rear of the engine very easy.

Other comments included:

"The controls are adequate and functional."

"The boom and basket components are well protected against damage."

"In terms of performance the machine managed the rough terrain course very well

C&a vertikal check



The Genie controls were described as functional

but the rigidity of the platform, while perfectly adequate, was not as good as several of the other models."

Model	Genie Z51/30JRT
Platform height	51ft /15.62m
Outreach	9.25m
Up and over reach	7.0 m
Jib	1.52m - 135°
Platform capacity	227kg
Platform size	760mm x 1.83m
Length/width/height	7.5m /2.29m/ 2.16m
Ground clearance	390mm
Gradeability	45%
GVW	7,213kg
Drive - steer	4 x 4 x 2
Oscillating axle	Yes
Controls	
Slew	proportional
Drive	proportional
Lift	proportional
Telescope	proportional



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Haulotte 20PX

The Haulotte - the second machine with a single fixed riser - impressed, perhaps even surprised, the judges with its build quality.

Comments included:

"This machine has good hose and cable routing as well as good electronics layout."

"The critical components have good moisture protection."

"The paint finish is excellent even if it is all black."

The majority of the Judges were also complimentary about the controls, the platform rigidity and the smooth telescope and boom lift functions.

However they were unanimous in not liking the fact that the engine was not as accessible as the other models with no swing-out tray to reach rear mounted components.

They were also not impressed by the fact that the steering linkage was exposed in front of the axle. Haulotte's claim that it had not experienced any cases of damage, did not sway their opinion on the matter.

The HA20PX generally performed well on the rough terrain although the judges commented that the lack of an oscillating axle caused a wheel to lift off the ground at one point.



The Haulotte HA20PX scored well, although it did lift a wheel on the course.



The Haulotte controls were one of the few that use joysticks for all functions.

Model	Haulotte HA20PX
Platform height	61.5ft /18.65m
Outreach	13.5m
Up and over reach	6.8 m
Jib - length and articulation	1.58m - 140°
Platform capacity	230kg
Platform size	800mm x 1.80m
Length/width/height	8.93m /2.38m/ 2.67m(6.8/2.38/3.1) ²
Ground clearance	420mm
Gradeability	40%
GVW	11,710kg
Drive - steer	4 x 4 x 4
Oscillating axle	No
Controls	
Slew	proportional
Drive	proportional
Lift	proportional
Telescope	proportional

² With jib tucked for transport



The Manitou controls impressed the judges in terms of their ease of use and protection.



The Manitou 180AJ was the only unit to find unanimous agreement among the judges

Model	Manitou 180AJ
Platform height	51.6ft /15.65m
Outreach	10.1m
Up and over reach	7.15 m
Jib	1.55m - 140°
Platform capacity	230kg
Platform size	800mm x 1.80m
Length/width/height	7.77m /2.3m/ 2.67m (5.8/2.3/2.5) ²
Ground clearance	425mm
Gradeability	40%
GVW	8,090kg
Drive - steer	4 x 4 x 4
Oscillating axle	Yes
Controls	
Slew	proportional
Drive	proportional
Lift	proportional
Telescope	proportional

² With jib tucked for transport

Manitou 180AJ

The Manitou was the only lift in the Vertikal Check that elicited a unanimous response from the three jurors on every single point.

Comments included:

"The CanBus controls are excellent, this is the future with fewer cables running between the platform and base."

"The build quality - including hose and cable routing and protection of components from moisture is first class."

"The paint quality on this machine is of a very high standard."

"The controls are well laid out and protected. They were also easy mastered on the rough terrain and practical test course."

However the judges criticized - again unanimously - the poor accessibility to some of the components pointing out, as with other units, that the engine was not mounted on a swing-out tray.

Overall the Manitou probably scored highest with the judges who clearly had a penchant for sophistication and high-tech solutions.

Summary

The machines this year were quite different and so direct comparisons are not particularly meaningful. However one thing is clear, since we did our first articulated rough terrain boom lift Check back in 2001, the performance and build quality of the products available has risen significantly. Another interesting point is that the number of products on the market has increased during the period, in spite of much talk about consolidation and domination by two or three suppliers.

It is true though that in this market sector, almost nine buyers out of 10 would choose a product from one of the big three - JLG, Genie or Haulotte leaving the others to fight over the rest. If we had done this Check next year it



The judges descend on the JLG 600AJ for the scrutiny section of the Vertikal Check

is likely that the current range of producers will have grown with the arrival of Skyjack and Aichi into the market. The big question is will this, along with the steady, if slow, progress of Manitou in this market eventually wrest more share away from the big three - or will they be forced to join the fight for the remaining 10 to 15 percent?

Given the current economic climate it has to be anyone's guess.



Niftylift did not attend Platformer Days this year so the HR18 4x4 was not entered. In terms of specification it would have been a strong performer.

	Genie	JLG	Haulotte	Manitou	UpRight	Airo	Nifty
	Z51/30JRT	600AJ	HA20PX	180AJ	AB60JRT	SG1850JD4	180 4x4
Outreach	9.25	12.3	13.5	10.1	13.0	11.25	9.5
Up & Over	7.0	8.1	6.8	7.15	6.0	9.4	7.0
Jib	1.52-135°	1.83-130°	1.58-140°	1.55-140°	1.80-90°	2.00-140°	1.55-130°
GVW	7,213	10,650	11,710	8,090	11,249	12,250	6,300
Ground Clearance	390	300	420	425	300	480	503
Gradeability	45%	45%	40%	40%	57%	50%	50%
Oscillating axle	Yes	Yes	No	Yes	No	Yes	Yes





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