

Summary

Project Name: Testing & Validation

Scope: Testing & Validation for Backhoe loader

- Complete Protobuild, Testing & Validation has been carried out at the Center according to the Testing standards specified.
- Snapshot of the detail Tests carried out:

Sl no	Product Standards / Features
1	Machine Safety Directive
2	General Requirements Earthmoving m/c Backhoe Loader -
3	Safety Requirements Earthmoving m/c Backhoe Loader -
Regulation Tests	
4	Stability
5	Fluid Fill Capacities
6	Visibility
7	Noise Test
8	Cab Noise
9	Brake Testing(Service & Parking)
10	Dead Engine Steer
11	Weight distribution
12	Speed in each Gear(Speedo Calibration)
13	Steering Effort



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➤ Snapshot of the detail Tests carried out:

Sl no	Product Standards / Features
Performance Tests(Hydraulics)	
14	Relief Valve Settings
15	Ram installation
16	Control lever Efforts
17	Pressure Drops
18	Hydraulic Cleanliness
19	Cycle Times
Stall Tests	
20	Hydraulic
21	Torque Converter
22	Combined
Engine	
22	Exhaust Back Pressure
23	Induction Depression
24	Coolant Fill Rate
25	Water Expansion Volume
26	Hot Shut Down
Loader Performance	
27	Tilt Tear Out
28	Beam Tear Out
29	Lift Capacity



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- Snapshot of the detail Tests carried out:

Sl no	Product Standards / Features
Excavator Performance	
30	Dipper Tear Out
31	Bucket Break Out
32	Lift Capacity
33	Craining
34	Slew Torque
Electrical Circuit Performance	
35	Electrical Load Balance
36	Light Position Effectiveness
37	Connector Sealing-IP69
38	Alternator Performance
39	Starter Performance
40	Battery Performance



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- Snapshot of the detail Tests carried out:

Sl no	Product Standards / Features
Cooling Trials	
41	Roading
42	Basement Digging
43	Loading
44	Excavating
46	Fuel Consumption
47	Work Output
48	Operating Angle Conformance
49	Drawbar Pull
50	Hand & Foot Throttle Operation
51	Brake System Bleed
52	Park Brake hold on Slope
53	Overall dimension Check
54	Turning Circle Radius



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- Snapshot of the detail Tests carried out:

Sl no	Product Standards / Features
Supplier Sign Off (Driveline)	
55	Wheel/Tyre Assembly
56	Steering Cylinder Checks
57	Axles
58	Gearbox
59	Torque Converter
60	Engine
61	Exhaust
62	Induction
63	Cooling Pack
64	Master Cylinder
Supplier Sign Off (Hydraulics)	
65	Filtration
66	Digger Loader Valves
67	Pumps
68	Hosing
69	Steering
70	Rams

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SI no	Product Standards / Features
(Cab Testing)	
71	Water Ingres
72	Door Slam
73	Vibration Endurance
74	Rear Window Endurance
75	ROP/FOPS
76	Windscreens
77	Grab Handles
78	Cab Combustion Test
Regulation Tests	
79	Regulation Tests at VRDE
80	Calculations