



AMTEC
Agricultural Machinery Testing and Evaluation Center
1977

ACR 045:2023 CHECKLIST AND REMINDERS FOR THE AMTEC TEST CONDITIONS AND REQUIREMENTS FOR MIST BLOWER

■ Application for AMTEC Test	
The test applicant shall submit AMTEC-OP-F01 (Agricultural Machinery Test Application Form) together with the following requirements:	
<input type="checkbox"/> AMTEC-OP-F16 (Waiver for Machine Specifications) <input type="checkbox"/> AMTEC-OP-F18 (Data Privacy Consent Form)	
■ Technical Specifications of the Machine	
The test applicant shall submit any document/s indicating the specifications and other relevant information of the machine upon application for testing.	
<input type="checkbox"/> Operator's manual with complete specifications as indicated in Annex B of PNS/PAES 156:2010 <input type="checkbox"/> Brochure <input type="checkbox"/> Machine specifications sheet (shall be filled out upon request and receipt of copy from AMTEC in case the manual or brochure is not available)	
■ Preparation and Operation of the Machine	
The mist blower shall be ready for testing. The officially designated representative of the test applicant shall decide on matters related to the operation (operate, demonstrate, adjust, and repair) of the machine.	
■ Running-in of the Machine	
A test run shall be conducted prior the official test as to check its condition and make necessary adjustments to the machine.	
■ Other Test Necessities	
The following shall also be adequately supplied during the conduct of testing:	
<input type="checkbox"/> Fuel sufficient for the entire duration of test trials; and <input type="checkbox"/> Engine oil.	
■ Machine Setting	
The mist blower shall be tested at all its settings to compare its results to one another. Cut-off valve shall be preset at maximum setting.	
■ Performance and/or Fabrication Test Requirements	
AMTEC shall conduct various tests and verification on different performance parameters of the machine including the following requirements as per PNS/PAES 155:2010:	
■ Fabrication Requirements	
Criteria	Requirement as per PNS/PAES 155:2010
Backpack Mist Blower	
General	<input type="checkbox"/> Shall consist of tank, hose, nozzle, wand, and engine. <input type="checkbox"/> Shall conform to the operator's body, distributing weight evenly, and presenting operating controls in a reasonable location and configuration to avoid exhaustion to the operator. <input type="checkbox"/> Shall have a net weight of not more than 15 kg.
Wand	<input type="checkbox"/> Shall be made of chemical resistant polyvinylchloride or better material. <input type="checkbox"/> Shall have a length of at least 0.3 m. <input type="checkbox"/> An adjustment knob shall be attached to the wand.



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Tank	<input type="checkbox"/> Shall be made of non-corrosive material (e.g., engineering plastic) and shall be made of polyethylene or better material. <input type="checkbox"/> Shall have an airtight and water-tight construction to avoid leakage. It shall have a drain valve for maintenance and cleaning. <input type="checkbox"/> Shall also have a provision for filtration materials. <input type="checkbox"/> Tank cover and gasket shall be made of chemical-resistant polyvinylchloride or better material.
Hose	<input type="checkbox"/> Flexible hose shall be used to attach the nozzle to the engine and tank. <input type="checkbox"/> Shall be made of chemical resistant polyvinylchloride or better material. <input type="checkbox"/> Hose clamps shall be made of non-corrosive material.
Strap	<input type="checkbox"/> The load bearing part of the strap shall be at least 50 mm wide. A load-bearing waist strap is desirable. <input type="checkbox"/> Shall be made of durable and non-absorbent material (e.g., nylon fabric) with at least 1.5 mm thickness and 35 mm width. It shall have an adjustment provision. <input type="checkbox"/> Strap pads shall be provided for operator's comfort. It shall have a thickness of at least 10 mm and a width of at least 65 mm.
Cut-off valve	<input type="checkbox"/> Shall be installed on the handle of the mist blower for instant stopping of the blower. <input type="checkbox"/> Shall have a variable setting for adjusting droplet sizes.
Nozzle	<input type="checkbox"/> Shall be made of non-corrosive material.
Quick release mechanism	<input type="checkbox"/> Shall be provided for emergency purposes.
Mounted Mist Blower	
General	<input type="checkbox"/> Shall consist of the main frame, tank, blower, and engine. <input type="checkbox"/> The main frame shall be made of AISI 1020 or better material with a thickness of at least 6 mm. <input type="checkbox"/> All welded parts shall be in accordance with the criteria set in AWS D1.1:2000. <input type="checkbox"/> There shall be no crack on welded area. <input type="checkbox"/> There shall be no fusion between adjacent layers of weld metal and between weld and base metal.
Tank	<input type="checkbox"/> Shall be made of non-corrosive material (e.g., engineering plastic). <input type="checkbox"/> Shall have an airtight and water-tight construction to avoid leakage. <input type="checkbox"/> Shall have a drain valve for maintenance and cleaning. <input type="checkbox"/> Tank cover and gasket shall be made of chemical-resistant polyvinylchloride or better material.
■ Performance Requirements	
Criteria	Requirement as per PNS/PAES 155:2010
Noise level, maximum, dB(A)	92 (6-hour operation)
Discharge rate per nozzle, range, Lpm	0.12-0.17
Air velocity, minimum, m/s	90
Uniformity of droplets produced	Uniform/evenly sized
Run-off	Shall not occur/be produced.



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■ Safety, Workmanship and Finish

General

- The tank and sprayer frame shall have rounded corners.
- There shall be a gap between the fuel tank and the engine.
- Safety locks shall be provided to avoid accidental opening of the valve.
- Mufflers shall have a protective cover to protect from burns.
- Cushions shall be installed for backpack mist blowers for comfort.
- Fuel lines and other fuel components shall have protective sleeves to help prevent rupture of lines from snagging over incidental damages.

■ Suspension and Termination of Test

If the machine stops due to breakdown or malfunction during the test run affecting the machine's performance, the test may be suspended. If the machine cannot continue the operation, the test shall be consequently terminated.

Should the test applicant request the conduct of the test despite the non-conformity to the test requirements identified by AMTEC, the applicant shall sign the AMTEC Waiver for Nonconformity to Test Requirements.

- AMTEC-OP-F24 (Waiver for Nonconformity to Test Requirements)

■ Testing Fee

1. The testing fee for mist blower is PHP 13,000.
2. To proceed through AMTEC test, the test applicant shall settle at least 50 % of the testing fee which is non-refundable but transferrable.
3. In cases of additional testing during the field, the test applicant shall immediately submit the required documents and settle at least 50% of the testing fee within five (5) working days after the testing proper.
 - Additional testing, number of machines: _____
4. Payment/s shall be directed to the following:
 - Through UPLB Cashier's Office (8AM to 12PM): AMTEC Trust Fund Code No. 8271632-40A2040101000
 - Through Landbank (8:30AM to 3PM): UPLB Trust Fund Account No. 1892100507 or UPLB FI Account No. 1892-1003-29

■ Other Reminders

1. All manufacturers, fabricators, assemblers, and importers (MFAI) shall secure a Certificate of Conformity (CC) from the Bureau of Agricultural and Fisheries Engineering (BAFE) which guarantees that their agricultural and fisheries machinery conforms with PNS/BAFS PABES or other relevant standards identified by BAFE. More information about the application for CC can be found at <http://bafe.da.gov.ph/index.php/certificate-of-conformity-of-manufacturers-fabricators-assemblers-distributors-dealers-importers-and-exporters/>.
2. All MFAI shall employ an Agricultural and Biosystems Engineer (ABE), as mandated by RA 10915 (ABE Law), who shall facilitate all activities and concerns pertinent to AMTEC testing and BAFE requirements. Do you currently have an ABE in your roster of employees? Yes No