

Sierra® Integrated Pest Management Guide



 **ProTeam**®
Cleaning for Health® Since 1987

Sierra

Integrated Pest Management Manual

Congratulations on your purchase of the Sierra backpack vacuum! You are now in a select circle of pest control professionals who actually practice IPM. That sets you apart because it demonstrates that you are proactive and on the cutting edge of the industry. Using a commercial backpack vacuum demonstrates your professionalism to your customer. Your job is not to become a janitor and clean the clients' premises. Rather, you are using a backpack vacuum so you can easily and quickly reach and correct very specific problem sites and minimize the real or perceived toxic insult to the environment. You can, in some cases, be solving problems with the Sierra during the same amount of time you formerly took just to do your thorough inspection. Using the Sierra, you will demonstrate your expertise in identifying not only the problems pests create but the sources of those problems and you can educate your customer as to their ability to prevent infestations before they ever start. You will be able to reduce the toxic chemicals needed to eliminate pests, demonstrating your concern about improving indoor air quality and contamination of food products.

Here are some suggestions on how to improve your IPM work with the Sierra:

Spiders:

Pesticides can't penetrate spider egg cases. Dead insects at the site become food for other insects. Spider webs are a prime food source for the plaster bag worm. With the Sierra, you can remove the spiders, webs and the dead insects and offer a chemical free approach. Impress your customers by leaving the area free from unsightly webs and dead bodies. Using the aluminum extension wands allows you to reach as high as 40 feet with less than five pounds of weight in your hands, reaching beyond the clutter in basements and storage rooms. You can get webs in the highest ceilings standing safely on the ground.

Cockroaches:

In badly infested apartments, tests have shown that more cockroaches were killed with the Sierra than were killed with a pyrethrum fog. Cockroaches can instantly retreat into crack and crevices or their lair where air currents do not deliver the fog. The vacuum can pull them out along with the egg capsules, which are not affected by the fog.

There are many advantages to removing the dead cockroaches. Many studies have shown a serious problem with asthma exists in low-income housing, caused by particulate from cockroach carcasses.

There are alternatives to pesticides that can flush out cockroaches so they can be picked up with the vacuum. These include hot air from a hair dryer, a plain air aerosol can or air from a compressed air sprayer. The Sierra must be ready to capture the cockroaches when they flee their hiding places.

The initial and annual treatment should include the use of the "down and under" long crevice tool to remove food particles, egg cases, dead roaches, etc., in hard to reach areas under and behind machinery. Doing this will make the bait more enticing.

A few cockroaches could survive the bumpy ride down the hose. To keep them from escaping, leave the motor running when closing and removing the bag. Place the paper bag in a plastic bag and seal it before discarding it.

Periodic removal of organic debris under and behind equipment and appliances can easily be made with the Sierra "down and under" long crevice tool. This accumulation of debris is rich with allergens and roach-attracting body odors, inviting more roaches to the site. Particles of this allergen saturated detritus become airborne and contaminate the indoor air. Recycled in the air, these particles can be life threatening to thousands of asthmatics. A High-filtration Disc in the dome filter of the Sierra filters out over 99% of potentially harmful particulate in the air we breath.

Wasps:

Elevated wasps nests (including larvae and adults) can easily be removed by using the Sierra with extension wands. You can reach up 15 feet or more and suck up chunks of the nest and larvae with the open end of the wand. Do this late in the day or very early in the morning when the wasps are settled in their hive. If the nest is inside a foundation wall block, the wasps can be sucked into the wand extension as they are returning to the nest. Leave the motor running when the bag is removed. Put the paper bag inside a plastic bag and seal it. If the client objects to a liquid drench, use the Sierra to suck out adult ground nesting wasps late in the afternoon. Dusting wasp nests afterwards with a desiccant can control additional insect activity.

Bees:

Bees are beneficial and should be protected except in instances where the customer is in danger of being stung. DO NOT attempt to remove a swarm hanging on a tree limb with a vacuum cleaner unless you are properly protected from their stings. The noise of the motor will aggravate bees and they will probably attack. To control bee nests inside walls, check instructions in the Mallis' Handbook for Pest Control or Smith and Whitman's NPCA Field Guide to Structural Pests.

House Dust Mites:

Just about every home in the world has dust mites. They live in dust balls, sofas, mattresses, and even rugs. Their principal food is the thousands of microscopic particles of skin which people and pets shed daily. These tiny pests are the most common cause of indoor allergies. After ten years, dead house dust mites could comprise one sixth of the weight of a well-used sofa cushion. Just sitting on the cushion spews a cloud of the troublemakers into the air. Simply attempting to kill the mites with a miticide is not enough to prevent the allergies. The microscopic particles from dead bodies, eggs and feces will be constantly recycled by a conventional vacuum cleaner. The High Filtration Disc available for the Sierra traps and retains these particles. Shop vacs, which pick up liquids, actually aerosolize the allergens and intensify the problem.

Many companies advertise elimination of dust mites in air ducts for a low price. The price is low because dust mites don't live in air ducts. They need dead air pockets where the relative humidity is above 50%. If only 1% of them survive they can repopulate the colony rapidly at humidity levels higher than 50%. The Sierra with its various attachments can remove pockets of dust and the house dust mites from mattresses, sofas, rugs and from behind beds and furniture.

Clover Mites:

This pest comes in from the turf to overwinter behind the walls, especially on the sunny side of the house. In early spring, when the sun heats up the wall, they come boiling out of openings around the windows and they cover the walls. When touched, they leave a red stain on the wall. The vacuum is the best way to remove them without staining the wall. Dusting a desiccant into the crevices around the window will stop more from coming in.

Other Invaders:

There are numerous other pests that you may be called on to remove. Pest control textbooks such as the Mallis Handbook on Pest Control and Smith and Whitman's "NPCA Field Guide to Structural Pests" recommend the vacuum cleaner as an alternative to pesticides to control occasional invaders. This group includes: box elder bugs, mold or plaster beetles, elm leaf beetles, cluster flies, face flies, phorid flies, wheel bugs, centipedes, camel crickets, field crickets, house crickets, daddy long legs (or harvest men), millipedes, clover mites, pill bugs, scorpions, silverfish, bristle tails, sow bugs, spring tails, thrips, and weevils. Removing these insects with the Sierra is the most effective and versatile method in the industry.

Booklice:

This psocid insect is sometimes found in enormous numbers in damp situations, especially around books. Reducing the humidity to below 50% can control them. The Sierra is ideal to remove the unsightly accumulation of dead booklice on books and shelves.

Pantry Pests:

Vacuuming dead insects that have emerged from infested packages of food can help avoid repeated callbacks. The Sierra can also remove live insects hiding behind the shelf or under shelf paper, a practice which can keep them from spreading. Some people are very sensitive and fearful of using pesticides in a pantry area. Even if a residual is used, new pests can still emerge from cartons or packages that were infested from the grocery store. The pest control operator may need to inspect and discard each infested package in the pantry that contains condiments, grains, candy, pet food, birdseed, etc.

Fabric pests:

Moths and carpet beetles are increasing, partly because of an increase in international traffic with untreated wool products. Once introduced into a home or institution, these fabric pests can live in the accumulation of hair, dead insects and lint behind and under furniture and along and under baseboards, especially in clothes closets. Running a Sierra upholstery tool over each wool garment that has been stored for long periods can dislodge and destroy the fragile carpet beetle eggs. The PMP can do it as an add-on-service or the customer can have each garment dry cleaned.

Carpet beetles can enter homes from shrubbery such as Spiraea, Ceanothus, daisies and wild buckwheat. Other outside sources of carpet beetle infestations include nest of chipmunks, birds, bats and bees. Dead insect galleries or birds in a chimney flue or an attic are prime food sources for carpet beetles.

The Sierra has tools that can remove pockets of dead insects from light fixtures, behind baseboards, hard-to-reach sites on rugs under furniture, dense cobwebs, etc.

Rodents:

Scavenger insects are often attracted to bait that has been strewn about from bait boxes by rodents. Sometimes the bait is years old. A previous owner or a PMP may have left it. It can be easily removed with several of the tools in the Sierra kit. Rodent droppings must be removed because they are a strong attractant for more rodents.

Hantavirus:

Inhalation of dust containing dried feces and urine from some species of mice can cause Hantavirus and other viral diseases such as Lymphocytic Choriomeningitis (LCM). Hantavirus strains have also been found in squirrels, domestic rats and chipmunks. Cleaning up accumulations of these rodent feces with the Sierra with its High Filtration Disc is a profitable add-on business. No other discipline is better suited for this task than the pest control industry.

Extreme caution must be taken in removing suspected Hantavirus sources. The manufacturer assumes no liability for operators or others exposed to possible Hantavirus and other viral infections. The following recommendations are based on the best available knowledge to date. Always continue to educate yourself on the current methods involving the lowest possible risk to the operator and the customer. You must wear rubber gloves, a half face respirator with HEPA filter and then treat the site with one and a half cups of bleach or ammonia (**not both**) in one gallon of water. Wait until the feces are dry before removing them. **Extreme care must be used in disposing of the Micro Filter and High Filtration Disc. Incineration is recommended.** Also clean the cloth bag in a disinfectant solution immediately upon completion of the job and replace the High Filtration Disc. Wet-dry vacs are not recommended because they compound the problem by aerosolizing the pathogenic organisms.

Bats:

Bat nest debris can cause serious illnesses. Before doing work in a bat infested attic, the Sierra with its High Filtration Disc can remove the pathogenic organisms while minimizing the risk to the PMP or the client. Follow the precautions noted in the section about Hantavirus.

Bedbugs:

DDT almost eliminated these bloodsuckers in the fifties but today they are making a comeback. Treating a mattress with any pesticide is unwise considering the associated liability problems. The Sierra kit has several tools that can safely and effectively eliminate them from the seams and buttons in the mattress and in the bed-springs, crevices in the bed and baseboard, walls and floor under and behind the beds.

Wood Destroying Insects:

Even after you have successfully eradicated an infestation of termites or wood borers, evidence of the old infestation (the wings, pellets, or frass) may remain behind. This can cause problems when the structure is examined for resale. The inspector will note the evidence of wood borers and perpetual buyers may be discouraged from purchasing the home or building. Pellets from an inactive gallery of dry wood can spill out due to strong traffic or heavy indoor activity. This may mean that the pest control operator is called back to retreat the structure. In order to avoid giving the consumer the impression that the job was left unfinished, you should always vacuum before leaving a job. The Sierra's specialty attachments make thorough cleanup simple. Your customers will appreciate the difference between cleaning with a broom or the average vacuum cleaner and using the Sierra because it is the quickest, most efficient way to clean.

Bug Zappers:

Dead insects accumulate in the pan of electric bug zappers. These then attract more insect scavengers. Cleaning the zapper pan periodically with the Sierra provides another add-on-service.

Public Relations:

Walking into an account with a backpack vacuum instead of a compressed air sprayer positions you a cut above the conventional serviceperson. You can impress customers by removing the dust around the coils under the refrigerator, and by removing cobwebs in corners, basements and storage sheds. These are extra services that demonstrate your attention to details and aesthetics. Affixing a label with your company name or logo on the Sierra will give your company further recognition and attention.

About The Equipment:

Before operating your Sierra for pest control, read the ProTeam Owner's Manual carefully for safety, preparation, operation and maintenance instructions.