

## Three Types of Patching!

**COLD PATCH  
HOT PATCH  
REBASING**



# VIBCO

## VIBRATORS

# VIBRATORY POTHOLE PACKER

## Model GR-1600

- One Man Operation
- Self Propelled Forward
- Water Tank Standard
- Over 1000 lbs Force
- 8" Compaction Depth

### “Fix Your Potholes Permanently”

VIBCO Model GR-1600 is a gasoline operated vibratory roller with an 8" diameter 12" long drum. This 3.0 hp Honda engine provides a compaction depth up to 8" with a compaction force of over 1,000 lbs at 6500 vibrations per minute. The watertank is standard and the simple to operate controls turns the vibration on and off instantly.

## Throw-and-Roll

### *Made more permanent with Vibco GR-1600*

The throw-and-roll method consists of the following steps:

1. Place mixture into the pothole which may or may not be filled with water and debris. Use any type of hand tool such as a shovel or pitchfork to fill the hole. Fill the hole so that there is a crown in the center.
2. Compact the material by rolling over it 6 to 8 times with truck tires. Some crews have found it useful to cover the patch with sand before rolling a truck over the patch to prevent material from sticking to tires.
3. Check the level of the patch to make sure the center of the patch is  $\frac{1}{4}$ " to  $\frac{1}{2}$ " above the pavement surface.
4. If the patch is low add more cold mix and repeat the patching steps again.



*The preferred method, similar to the standard "throw-and-go", "dump-and-run" or the "pitch-and-pat" methods, utilizes compaction with a vibratory roller, (VIBCO GR-1600) which provides a tighter patch for traffic to drive over it without creating depressions and it provides better water runoff. The extra 1 to 2 minutes to compact the patches will produce a significantly better patch.*

## Semi-Permanent - VIBCO can help!

Semi-permanent patching is the most widely recommended method of repair. It includes the following procedures:

1. Remove water and debris from the pothole, using a broom, shovel, compressed air or whatever is available.
  2. Straighten pothole edges making sides as vertical as possible. This can be done using a jackhammer, pavement saw, or milling machine, etc.
  3. Place the mix by hand using a shovel and rake. Placement should be made in no more than 3" lifts.
  4. Compact patch from the center towards the edges to provide better compaction at the edges and corners. Hand devices such as single-drum vibratory rollers (VIBCO GR-1600) are highly recommended for this task.
- This repair requires more equipment and workers than the throw-and-roll, but this method results in a very tightly compacted semi-permanent patch of a superior quality.

# Hizzoner's Pothole Blitz

## DOT Planning to fix 25,000 sites citywide.

James Rutenberg  
Daily News Staff Writer

Mayor Giuliani yesterday announced an all-out assault on the No 1 scourge plaguing city driven -- the estimated 25,000 potholes across town that wreak havoc on axles, wheel rims and dental work. 'We're announcing a pothole repair blitz, which is designed to Via thousands and thousands of potholes throughout the City of New York,' said Giuliani, who called Operation Pothole Blitz past of his ongoing quality-of-life campaign "I think this is a wonderful thing to do"

For the next 2 weeks, Department of Transportation crews will work every weekday to plug the estimated 25,000 potholes identified by agency surveyors and fed-up residents. As opposed to the usual four pothole crews that work sporadically, seven to 12 teams will be activated to tackle the problem.

DOT Commissioner Wilbur Chapman said the crews will targets different borough each day They also will fill any new potholes they come across that have not been reported. The asphalt blitz is a city attempt to have all of the completing craters filled before the first freeze, officials said. 'Our new crew level is such- and their dedication level is such- that we're definitely going to beat this by winter,' Chapman said.

City records show the department has stepped up its efforts to plug potholes over the pastycar Crews filled 64309 in fiscal 1997 and another 71833 in fiscal 1998.

The "Mayor's Management Report" also shows that crews responded to pothole complaints more rapidly last year filling most within 30 days about 44% of the time, as opposed to 28% of the time the year before.

Still, potholes are considered the most dangerous road hazard facing city motorists-- costing them an estimated \$382 million in auto repairs a year, according to one recent study.

"We get a lot of cars in here because of potholes," said Robert Choo, endanager of Fleet Auto Repair in Park Slope, Brooklyn. "We get broken axles, under- carnage damage, torn oil pans-- we do quite well with those".

Grulsam formally announced the campaign by wearing an orange DOT vest and helping to fill a footwide, half-foot-deep crater on 64th St. near Queens BlvdWoodsidedssde, Queens.

Residents said it was a welcome sight.

'That one's been there for two years,' said Raymond Ortix, 46, a porter, pointing to the crater Giuliani helped fill.

"Once I saw the whole front drop out of a taxicab after it hit it,"

Anthony Fasulo, DOT second deputy commissioner, said the agency is using new techniques that promise to keep a hole plugged for at least three years.

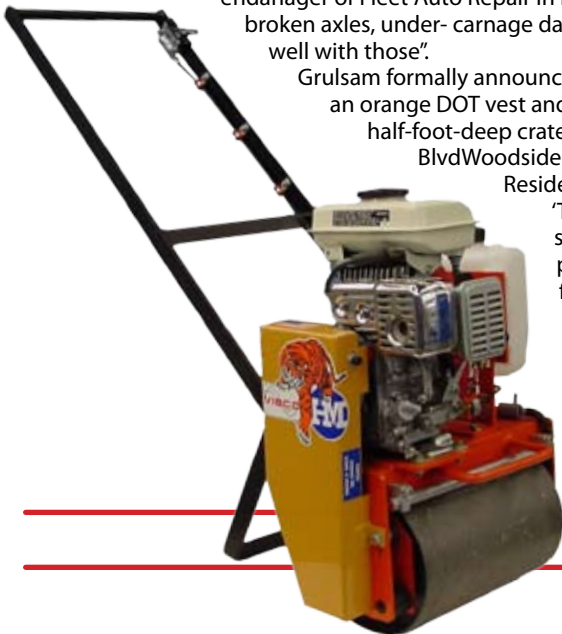


FILL 'ER UP: Mayor Giuliani, flanked by DOT COMMISSIONER Wilbur Chapman (l.) and DOT worker, fills a pothole at 64th St. and Queens BlvdWoodsidedsde, Queens, yesterday as Hizzoner kicks off Operation Pothole Blitz.

**NEW YORK CITY DOT HAS PURCHASED 45 DCR-1600 VIBRATORY ROLLERS.**

**THE CITY OF ST. LOUIS, MO, PURCHASED 10 UNITS.**

**A MULTITUDE OF STATE AND MUNICIPAL DOT'S HAVE PURCHASED THE DCR-1600 TO REPAIR THEIR POT HOLES**



Now With 3 HP Honda Engine!

## USEFUL LINKS

From the Federal Highway Administration

[Materials and Procedures for Repair of Potholes in Asphalt-Surfaced Pavements - Manual of Practice](#)

From the University of New Hampshire

[Cost Effective Pothole Repairs](#)

From 'Better Roads'

[The Pothole Playbook](#)

# SIX STEPS TO LONG-LASTING POTHOLE REPAIR

To create a pothole patch that “can be considered a permanent repair and should last for years,” we recommend a full-depth patch where crews have removed the pavement down to the subgrade or intermediate subbase layer. Below is an outline of the steps necessary for a successful patch.

1. **Set up traffic control measures.** Depending on the class of highway, crews need the protection of correct signing, flaggers, or other traffic control.
2. **Mark the area to remove.** Crews use paint or chalk to mark a straight-sided rectangle or polygon. Lines should delineate the inclusion of at least a foot of sound pavement surrounding the pothole.
3. **Prepare the pothole.** Remove damaged material to reach a firm base and make certain the remaining material is sound and free of cracks. This step usually involves three operations: (1) cutting to remove deteriorated pavement material, (2) cleaning the hole of dirt and debris and backfilling if subgrade is removed, and (3) drying with air or heat to eliminate moisture that would negatively affect adhesion.
4. **Apply tack to sides and bottom.** Immediately before filling, the crew hot mops, pours, or sprays a tack coat onto the sides and bottom of the pothole. The tack improves adhesion between the old pavement and the patching mixture.
5. **Place layers of Hot Mix Asphalt,** compacting each layer, and extend final uncompacted lift above the surrounding pavement. Crews should layer filler four inches at a time and compact each layer. **Compacting “reduces the ability of water to penetrate, ties the stones together, and increases resistance to rutting and shoving.” The most effective compacting technique is a vibratory roller followed, in order of decreasing effectiveness, by steel-wheeled or rubber-tired roller, vibrating plate, hand tamper, delivery truck tires, and the back of a shovel.** We recommend extending the final lift above the surrounding pavement “about 0.25 inch (6.25 mm) per inch (25 mm) of the compacted height of the last lift to ensure the compacted patch will have adequate density and be at the same height as, or slightly higher than, the original pavement.”
6. **Seal the edges of the patch.** To reduce water penetration, crews should seal patch edges with a sand or chip seal. Sealing involves applying a light, six-to-eight-inch-wide coat of hot asphalt cement or cold-applied liquid asphalt and blotting the liquid with sand or aggregate chips.

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## Winter Patching

The best results are obtained by scheduling repair work during dry, warm weather. However, potholes usually form of wet and cold weather. In such cases, careful selection of materials and procedures is important to obtain a long-lasting patch.

Aggregates for winter patching should be high quality, crushed aggregate with few fines. The binder should be emulsified asphalts with some anti-strip additive to prevent stripping of the asphalt. The mixture should be workable at low temperatures to allow both easier handling and compaction. The most important aspect is that the binder-aggregate-additive mixture be compatible. Since winter patching seldom allows the time to use the semi-permanent procedure, use the throw-and-roll method, a Vibco GR-1600 vibratory compactor, and a high quality or highway department specified mix to provide a longer-lasting patch.

## Spring Patching

Patches placed in the spring have a longer life than those in the winter because of the more favorable weather and the end of the freeze-thaw cycle. Spring patching can be done by any of the procedures discussed above: the throw-and-roll or the semi-permanent procedures. Cost and the availability of equipment and workers should be the most important criteria. The Vibco GR-1600 is ideal for springtime patching.

Managers should make sure that material stockpiled over the winter is workable in a range of temperatures. Materials workable at very low temperatures tend to be very sticky and hard to use at higher temperatures. High-quality crushed aggregate with few fines, and emulsified asphalt, should be used for spring patching. Antistripping additives are recommended to keep asphalt from stripping away from aggregates.



We're The Vibrator Guys.™

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