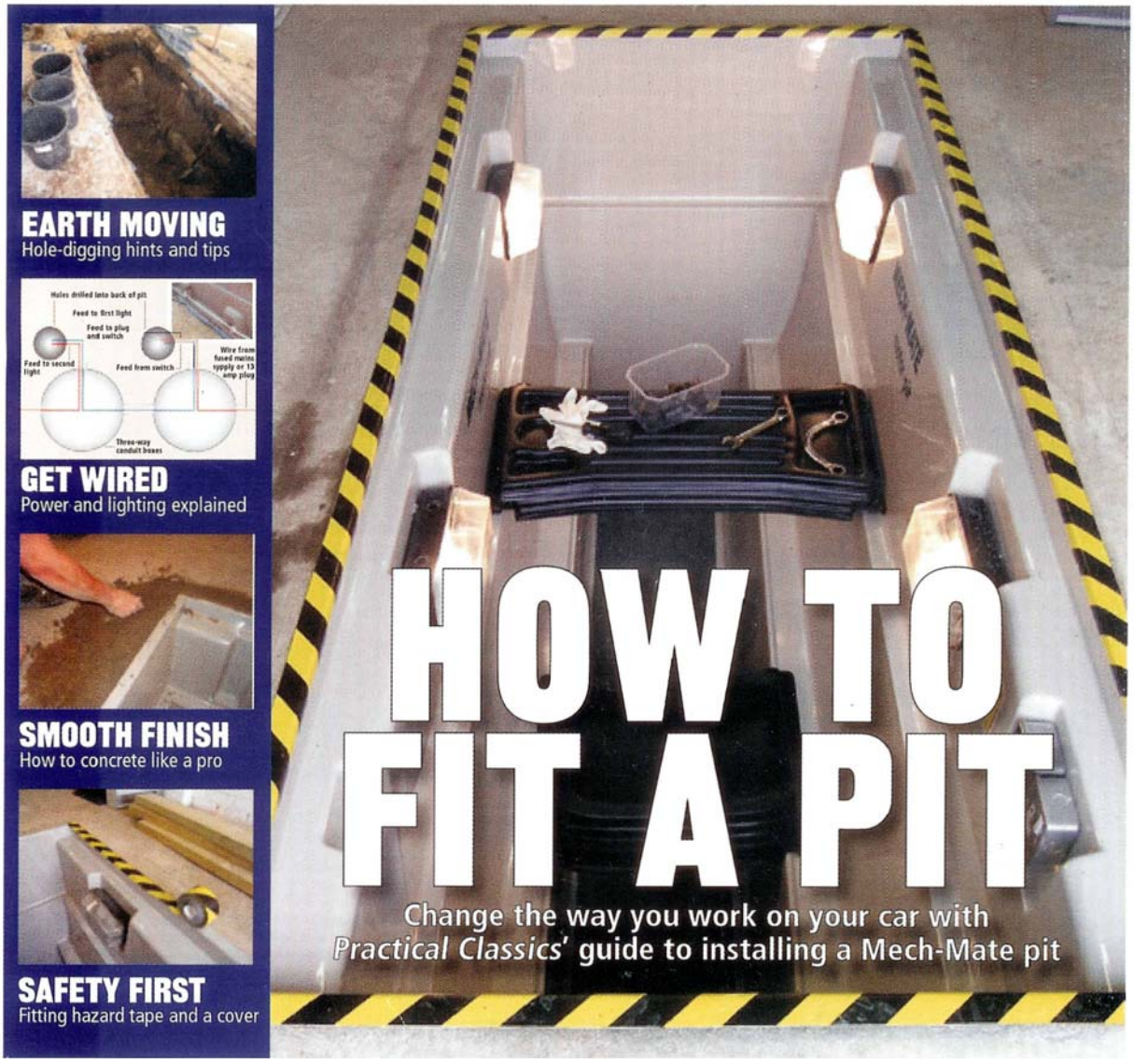
15 STEPS TO FITTING AN INSPECTION PIT

www.practicalclassics.co.uk

practical CLASSICS

BUY
RESTORE
MAINTAIN
SAVE MONEY

BRITAIN'S BEST-SELLING CLASSIC CAR MAGAZINE



EARTH MOVING
Hole-digging hints and tips

GET WIRED
Power and lighting explained

SMOOTH FINISH
How to concrete like a pro

SAFETY FIRST
Fitting hazard tape and a cover

HOW TO FIT A PIT

Change the way you work on your car with *Practical Classics*' guide to installing a Mech-Mate pit

FITTING A GARAGE PIT

Working on your car is much easier with an inspection pit in your garage

Think of all the jobs that force you to crawl about underneath your car: oil changes, exhaust swaps, greasing, welding – the list is long and, let's face it, pretty unpleasant. An inspection pit makes access to the underside of your car easy, allowing you to work in well-lit comfort with all your tools to hand.

Where traditional brick-built pits had a habit of getting damp and crumbly, the new generation of pits are fully insulated from the earth by their tough glassfibre construction.

The next 15 steps will show you how to get better access to your cars nether regions.

AFRAID TO ASK?

Where's the best place for a pit?

Ideally the pit steps should be facing your workbench or where you store your tools. You should be able to access the steps with the car fully in the garage. Circumstances differ, of course. The pit in the pictures is fitted in a double length garage and is positioned the opposite way round to suit the needs of the owner.

I'm about to build a garage, what can I do to the help the pit installation?

Before the concrete base for the garage is laid, ask the builder to box-off the area set aside for the pit. This way you don't have to break out the concrete before you start digging the hole for the pit.

Will I find this job difficult?

It's straight forward but the digging and lowering are physically demanding. A hired mini-digger and strong friends will help.

YOU WILL NEED

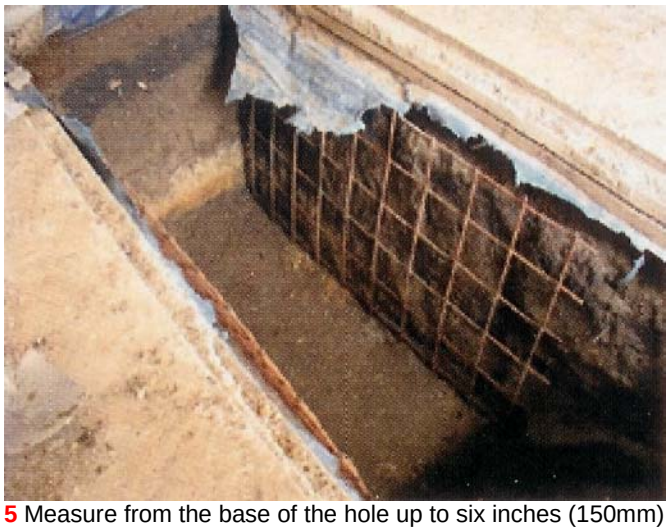
- ✓ Glassfibre Pit
- ✓ Grinder with stone-cutting discs
- ✓ Ear plugs
- ✓ Goggles
- ✓ Dust Mask
- ✓ Sledge Hammer
- ✓ Spade / shovel
- ✓ Pick
- ✓ Mini-digger (optional)
- ✓ Wire cutters / strippers
- ✓ Waterproof bulkhead lights
- ✓ Three-core electrical wire
- ✓ ½ in (13mm) hole cutter
- ✓ Conduit
- ✓ Five three-way conduit boxes
- ✓ Reinforcement mesh
- ✓ Ten bags of cement
- ✓ 1 ½ tons of ballast
- ✓ Skip (optional)
- ✓ Boards for cover

1 Decide where you want the pit (see Afraid To Ask). If you are installing the pit in an existing garage, mark out the hole and cut through the concrete with a stone-cutting, disc-equipped grinder. Break the concrete out with a sledge hammer. The earth can be removed with a mini-digger, but you'll need buckets and a shovel for the lower reaches.

2 Make up a template that matches the end profile of the pit and another that follows the angle of the steps. Use pieces of 1 in x ½ in (25mm x 13mm) baton. These templates need to be exactly the same shape as the glassfibre pit but 4in (100mm) bigger all round. Ten minutes spent making these will save you a lot of unnecessary digging.

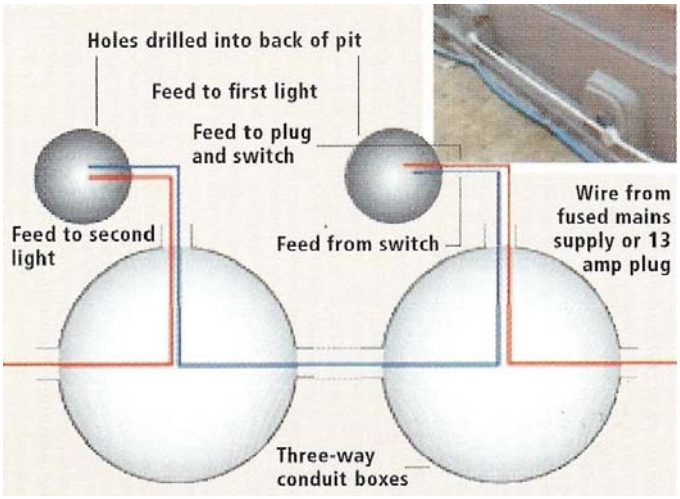
3 As you dig out the hole, check it regularly with your wooden templates. When you think enough earth has been removed, walk the end profile template through the hole. If any part of the template catches, mark the area and scrape off the excess earth before walking the template through again.

4 Dig out a shallow channel in the hard-packed earth under the concrete floor. This allows the concrete that will be added later to flow in and add strength and support to the floor. At the base of the hole a similar channel should be dug into the walls. This helps to 'lock' the base of the pit in the concrete.



5 Measure from the base of the hole up to six inches (150mm) beneath the existing floor level. Now measure the length of the walls. Mark these two measurements onto the steel reinforcement mesh and cut out using a grinder. You'll need two of these reinforcement panels, one for each side. Position both against the walls of the hole.

6 There will now be a lot of dust, earth and tools around the top of a very deep hole. In the interests of safety, sweep up the mess and put away the tools. You will also have accumulated a large pile of earth. A skip costs around £100, but landscape gardeners are often on the lookout for good soil.A phone call could knock that £100 off the price of the job.



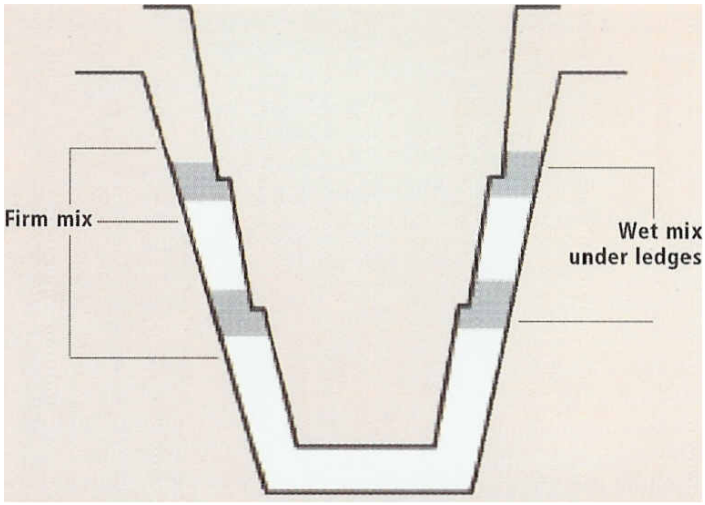
7 Route the wires for switch, plug socket and lights. Use one conduit box behind the light switch and plug, and one each for the four lights. Use conduit (tube to protect wiring) for the wires between boxes (see inset). The feed from the switch to the first light goes into a connector. From here power is fed to the light and a live feed taken to the next light.

8 With three assistants, carry the pit to the hole. Wear gloves to protect from glassfibre splinters. Loop rope at the front and back of the pit and, with a person at each corner, lower it into the hole. Check the fit and mark any tight spots. Pull the pit out and place it next to the hole - it's better to know the pit is going to fit before you've mixed up any concrete.

9 Carry out any necessary adjustments to the hole and make up a wet concrete mix. Pour this mix into the hole to a depth of 4in (100mm). The 8ft (2.5m) long pit pictured here needed 220lbs (100kg) of ballast and two bags of cement. Mark off 4in (100mm) on a long piece of baton and push it into the concrete to check the depth.

10 With three assistants, lower the pit into the hole. The corners should be supported on lengths of ½ in (13mm) baton. This lifts the pit off the floor and will stop water running into it when it's in use. Climb into the pit to help it bed down in the concrete. Use planks and weights to help hold the pit in place while the concrete is drying (inset).

11 Leave the pit overnight (12 hours minimum) to let the base harden. Make up a firm concrete mix and pour down the sides of the pit until it's 2in (50 mm) beneath the first ledge. Follow this with a wet mix around the ledge. Work the concrete down with baton and repeat as per the diagram to 2in (50mm) below the level of the wiring conduit.



12 Pull through the wires you fitted earlier and connect up the plug socket, light switch and lights (see step seven). If in any doubt, consult an electrician. You can either connect the main power-feed wire to a 13·amp plug or pay an electrician to permanently wire the pit's electrics into the garage ring main.

13 Check all the electrics work, then apply silicone sealant to make the wiring holes watertight. Leave the silicone to dry for two or three hours and then make up another firm concrete mix. Pour in, taking care not to spill concrete into the pit. Finish off the concrete with a trowel, forming a slight slope to stop water getting into the pit.

14 0nce the concrete is dry, measure across the top recess to find the length of the boards needed for the cover. Take ½ in (13mm) off this measurement to allow the boards to be easily removed. Mech-Mate recommends 2 ¼ in (60mm) by 12in (300mm) boards. Very light cars could be safely driven over 2in (50 mm) boards (as in the pictures).

15 Clean up any cement overspill and then apply safety tape to the edge of the pit. Extending the safety tape in front of the pit by a few feet makes lining up your car much easier. The concrete will need two days to harden fully, so don't be tempted to drive over the pit until then.