FANS TO THE READY!

by Glen Everett

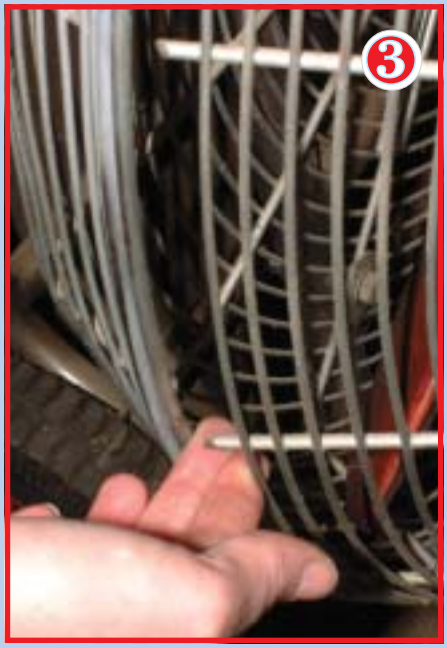
There are detail differences between fans and engines, even of the same type, but the procedures for maintaining your fan are similar in each case. No engineering expertise is necessary, and you only need a few basic household tools.

In use, the fan is probably one of the most dangerous items you own, yet it usually receives no attention and, with the first season since foot and mouth getting well underway, now is the time to get out the duster and prevent embarrassment on that first inflation.

Make sure that the ignition is turned off, and remove the spark plug lead if you feel nervous. Mark the rim of the cage in adjacent places, this will make it much easier to realign when you put it back together. Undo the screws holding the cage together.

Check the propellor for cracks, chips or other damage. A splintering prop is potentially lethal. Check the bolts are tight [see picture 1] (you will usually need a 13 or 17mm spanner/socket for this) as wooden propellors shrink and expand with changes of temperature and humidity. Varnished, this can be kept to a minimum. While you've got it out, clean off the dried grass that's stuck to it to give an ounce more blow!

Grasp the propellor with both hands and wiggle it on its shaft to check for any loosening of the hub on the crankshaft. This can also be done by a quarter pull on the recoil, at the same time pushing the prop the way it doesn't want to go. However, do make sure the ignition is switched off. Any indication that the hub is loose means you will have to remove the prop. There may be crank or keyway damage.



Check that the cage is bolted securely to the frame and/or engine and any rubber or steel washers are bridging several cage wires to prevent the welds failing. Check the cage carefully for loose wires and make sure you can't get your fingers between them [picture 2]. If one weld fails, this tends to propagate quickly around the cage. Also check the welds on the frame for cracking and stress fractures. It is best to have any repairs on the cage or frame TIG welded. I welded this fan's cage damage successfully [picture 3]. Plastic-coated ones never look the same afterwards though!

Remove the air filter [picture 4]. If you have a paper element, remove the sponge round the outside.

Check for traces of contamination inside and out [picture 5]. Any sign of oil means it is most likely the fan has been tipped over at some point. If there is any dirt or oil contamination, replace the filter. You will probably be able to get one from your nearest lawnmower service centre or similar. The sponge can be washed out in warm soapy water. Regular cleaning will prolong its life but make certain the sponge is dry before you reassemble it.

For oil bath filters, usually found on older models, remove the oil, wipe clean of sediment and replace to the mark with engine oil. Replacing these filters with a paper element type is a good idea as they were not designed to be fitted on engines destined to be bounced in the back of trailers. You could always try a K&N performance filter designed for Honda engines fitted to racing karts!

While you've got the air filter off, pull off the spark plug cap and remove the spark plug with a 14mm spark plug spanner. Generally these spark plugs are of the type BPR 4 on Honda G-200s or BPR 6ES on the Honda 5 – 13hp fans. The spark plug gap should be 28 thou, but unless your engine always starts on the first or second pull, throw the plug away and spend a couple of pounds on a new one, however good your old one looks. Check round the spark plug hole for signs of cracking, over tightening or cross threading. Replace the spark plug and tighten hand tight – do not overtighten as the head is aluminium. Replace the cap and then the air filter.

If your petrol has been in the fan for more than six months, it will probably have gone off. In this case, it is best to completely drain and replace it. This is done by undoing the nut near the bottom edge of the the fuel bowl with a 10mm spanner or a large posidrive screwdriver (do not undo the nut at the very bottom of the fuel bowl – this is what holds it on!) [picture 6]. ***No naked lights!***

If the fuel is less than 6 months old, make sure the fuel tap is turned off and drain off the fuel and sediment in the fuel bowl using a suitable container. When the fuel bowl is empty, open the fuel tap for a few seconds to flush it through, then replace the drain plug. If the petrol is more than 6 months old, leave the fuel tap on and drain the tank completely. It will take a short time but the tank will eventually empty. Replace with fresh petrol (after you're replaced the nut!)

If you plan to store your fan for more than 6 months it is best to drain all your fuel this way to prevent the carb gumming up.

Using a small screwdriver, locate the mixture screw; it has an anti-vibration spring under the head [picture 7]. Wind it in gently, clockwise, half a turn at a time until resistance is felt, counting the number of turns. Keep this old setting for future reference. ***Do not wind home tight***.

If your fan has a 5hp engine, wind it back 1 $^{1}/_{4}$ – 1 $^{1}/_{2}$ turns. If it is an 8hp fan, wind it back 1 $^{3}/_{4}$ – 2 turns. These are the factory settings.

Reassemble the fan cage using your alignment marks to get it back