Inserting an identichip into a vulture

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SAVE recommends that both free-living and captive vultures should be fitted with identification chips by a trained person wherever possible. This is because most other kinds of individual marks detach from, or are removed by, vultures. Only rivetted metal rings are likely to be retained indefinitely and this has still to be confirmed by long term field studies of vultures. The placement of an 'identichip' into a free-living bird, is not a universally legal procedure, so local legislation needs to be checked prior to undertaking this procedure. In some areas, the placement of a foreign object into a free-living bird is illegal, whilst in some areas it must be conducted by a suitably qualified person (e.g. veterinary surgeon / nurses / technician).

Equipment required:

- An ISO 'Internationally recognized and approved' chip, this will normally be supplied with a set of self adhesive labels with the chip number pre printed..
- Chip insertion device (some are single use and come with chip inside), others you have the applicator and load the chip into it prior to insertion.
- A chip reader, battery or plug in mains rechargeable – ready charged & tested.
- Means to safely restrain the vulture (see below)
- 2 bottles of cyanoacrylic (superglue or equivalent) glue for skin closure.
- Surgical spirit or similar to sanitise the skin prior to insertion.

Background, 'identichips' have been used in all sorts of animals, for many years now, so safe procedures and chips are standard. However, you do need to use an ISO approved chip (i.e. so that it will be read by any approved reader), and it should be one supplied and relevant to the country or region in which it is going to be used. All chips now come with an anti migration sleeve on one end, but also it makes sense to only use 'micro'chips, i.e. the smallest size.

Training, no one should insert and id chip without at least first watching it being done, by someone who knows what they are doing, then doing one supervised, before they do one alone.
The whole process should not take more than 2-3 minutes.

Technical Guidance #3. Inserting an Identichip

The process

Site of insertion – although historically chips have been inserted either at the rear of the base of the neck, or in the lower left superficial pectoral muscle, the internationally recognized site is in the left rear superficial pectoral muscles. The reasons being: a chip in this location is easier to read without upsetting the bird, the chip can be read by a ground sited reader as a free-living bird walks over it, the chip is more secure when placed into muscle, there is no risk of it entering the air sac, when placed in this location, with the correct procedure as shown below there is no risk of it coming out or any other adverse effect.

1. Get everything ready:
   Disinfectant, skin prep solution / surgical spirit, charged identichip reader (working), two pots of cyanoacrylic (super) glue, identichip.

2. Scan the chip, to ensure it is reading and the number is correct.

3. The operative must sanitise their hands.

4. Check the bird doesn't already have a chip. Check Neck and chest.

5. Cast the bird, hold it in an upright position, against the handlers chest, one lower leg restrained in each hand. The head should be covered or restrained by hand, if so hold the bones of the skull, rather than putting a hand around the neck which could result in tracheal damage. The left lower sternal area is sanitized with a surgical spirit swab or skin surgical preparation solution.

6. Using the surgical swab, the feathers are parted and the skin treated with surgical spirit. The bird's condition is assessed by visualizing and feeling the sternal muscles either side of the keel of the sternum. No bird that is under weight should have a chip implanted, but instead to subjected to veterinary assessment.

7. The caudal border of the sternum is identified. The insertion point will be 1-2cm left of the keel and 1-2cm above the bottom edge of the sternum. As the needle is inserted it will be angled towards the birds armpit (axilla).

8. Before the needle is inserted, using the thumb of the left hand, the skin over the sternal muscle is pulled as far as possible to the right side of the bird. Before inserting the needle 1-2cm up from the bottom edge of the sternum and 1-2cm left of the keel, aiming towards the axilla (armpit).

9. The skin is held firmly in position, by the thumb of the left hand as the needle is inserted.

10. When the needle is fully inserted, the chip is pushed into the muscle, in this case by depressing the syringe plunger. Then the needle is withdrawn. It is handy to have a sterile / clean (soaked in skin prep or skin disinfectant) ready, so if there is any bleeding at all, you can press the swab on the wound to control the bleeding.

11. Here you see a cotton bud, with skin prep solution being applied, although typically there is no bleeding. As you lift the tension off as you lift your left thumb, the skin slides back to the bird's left, thereby having the effect that the skin wound is now at least 1cm away from the wound into the sternal muscles.

12. Even so it is prudent to put a drop of cyanoacrylic (super) glue on the wound, to keep the wound closed (note the tiny skin wound – small red dot).

13. Then read the chip now that it is in place.

14. Now before you forget, log the identichip number in the vulture chip data base, including place and date of chip insertion, name of operative, species, gender and approximate age (adult, sub adult, juvenile), together with any other data (e.g. ring number, injury sustained etc.).