

V1.0 03/2015

DISCLAIMER

Following instructions are generic and could be not identical for all devices.

Where possible, special notes are added to differentiate between devices/options. Device names/options are in square brackets [].

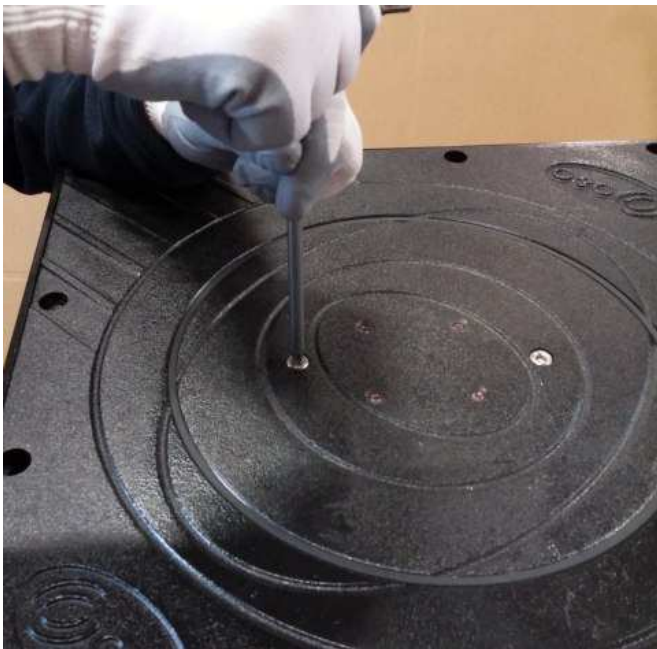
In any case the general concepts are always valid and applicable.

1.0 REPLACING TOP COVER

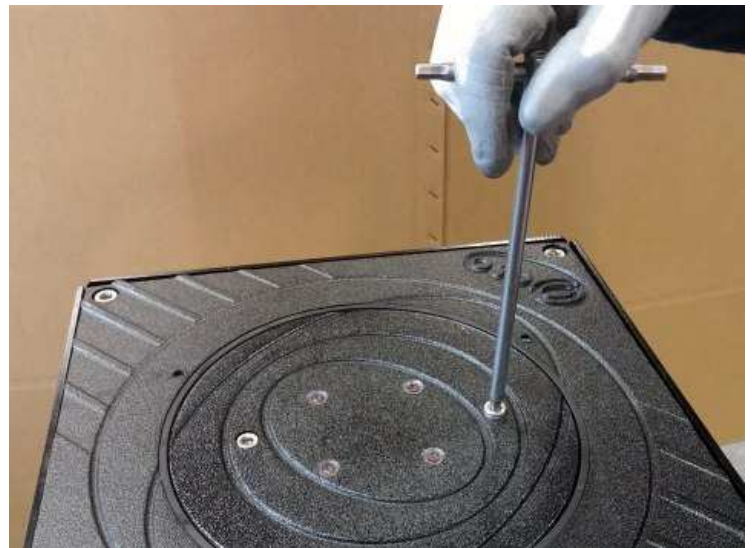
1.1 REMOVING THE TOP COVER

- remove fixing screws (2x)

[Grizzly]



[Dakota]



- lift the top cover



- unlock the light connector by lifting the clip and pulling the wires [option light]



1.2 MOUNTING THE TOP COVER

- lock the light connector [option light]
- slide the top cover in place
- **BE CAREFUL NOT TO CRUSH THE WIRE BETWEEN TOP COVER AND BOLLARD [option light].** Follow the flange pattern for correct placement
- lock the screws (2x)

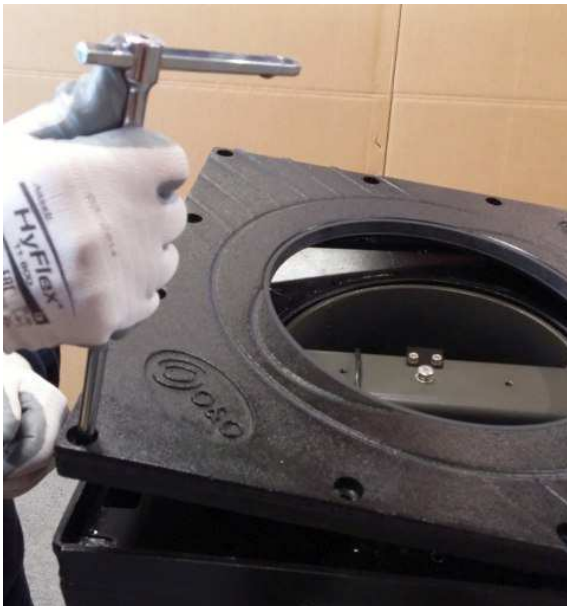
2.0 REPLACING MAIN FLANGE

2.1 REMOVING THE FLANGE

- remove fixing screws (12x [Grizzly] 4x [Dakota])



- lift the flange and remove it



2.2 INSTALLING THE FLANGE

- slide the flange in the correct position. Be careful that some devices have a fixed position (hole for emergency lowering [Grizzly SCT/OAK 800.4]).
- lock the screws

3.0 REPLACING THE INTERNAL STRUCTURE

3.1 REMOVING THE TOP COVER. SEE 1.1

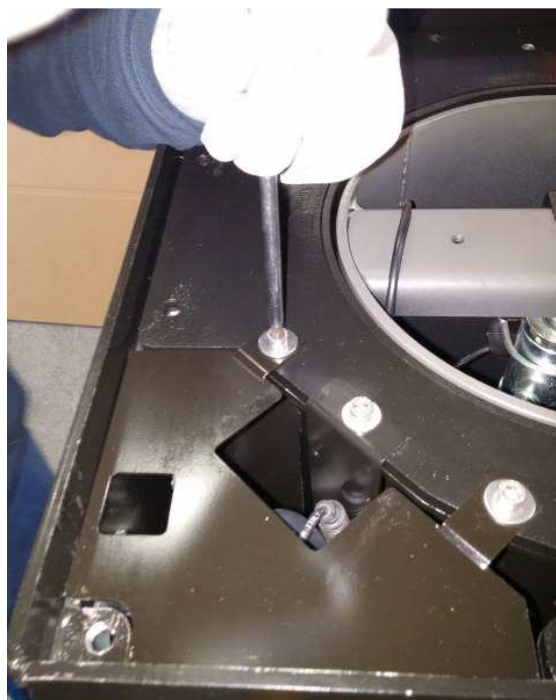
3.2 REMOVING THE FLANGE. SEE 2.1

3.3 REMOVING INTERNAL STRUCTURE

- unlock the fixing screws (4x)



- unlock the pump cover (2x) [Grizzly/OAK 800.4]



- lift and remove the pump cover [Grizzly/OAK 800.4]



- unlock the electrical box fixing (1x) [Grizzly/OAK 800.4]



- remove the electrical box from the inside [Grizzly/OAK 800.4]



- unlock the 2x connectors by lifting the plastic tabs and pulling [Grizzly/OAK 800.4]



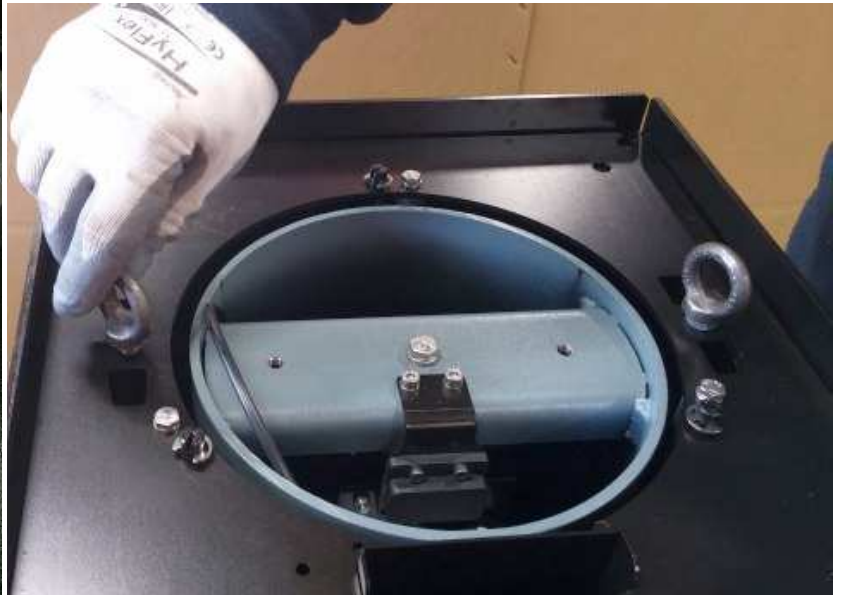
- clean carefully around hydraulic hose. **WARNING: ANY DUST ENTERING THE HYDRAULIC CIRCUIT WILL CAUSE SEVERE FAILURE.** [Grizzly/OAK 800.4]



- unlock the hydraulic hose by hand, by pulling the external ring down while pulling the hose
- protect the hydraulic hose by means of a small plastic bag kept in place by a tie or electrical tape



- manually screw eyelets (2x) M8



- lift the internal structure by means of a winch, or manually for lighter devices



- while lifting the structure, let the hydraulic hose and the 2x cables pass through the slot [Grizzly/OAK 800.4]



- while lifting the structure, turn around slightly the structure to free the cable harness [Dakota]

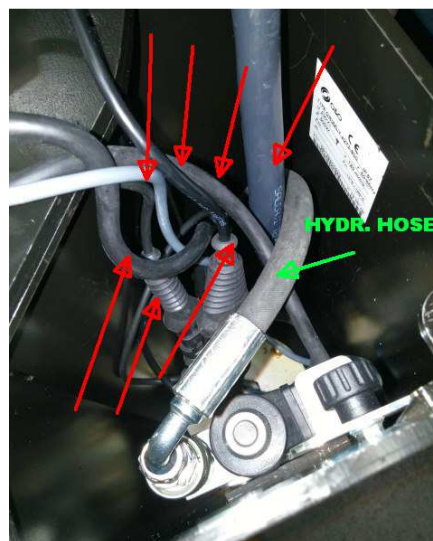


- drop the structure onto the ground



3.4 INSTALLING INTERNAL STRUCTURE

- follow 3.3 from end to start, doing reversed actions
- be careful that all electrical cabling must be between hydraulic hose and the inside of the device [Grizzly/OAK 800.4]



3.5 INSTALLING THE FLANGE. SEE 2.2

3.6 INSTALLING THE TOP COVER. SEE 1.2

4.0 REPLACING BOLLARD TUBE [GRIZZLY/OAK 800.4]

4.1 REMOVING THE INTERNAL STRUCTURE. SEE 3.

4.2 REMOVING THE BOLLARD TUBE

- UNSCREW THE RAM/TUBE BEAM CONNECTION. INSTALL 2x EYELETS M8 ON THE TUBE BEAM.



- LIFT THE TUBE BY USING THE EYELETS AND A CHAIN. LIFT UP TO AROUND 1/2 OR 3/4 OF TOTAL RUN.



- UNSCREW THE TUBE DAMPERS (3x), 2x SCREWS EACH. **PLEASE NOTE THAT THE DAMPERS ARE NOT IDENTICAL AND MUST BE REFITTED AT THE SAME POSITION.** MAKE A SIGN ON THEM IF NECESSARY.

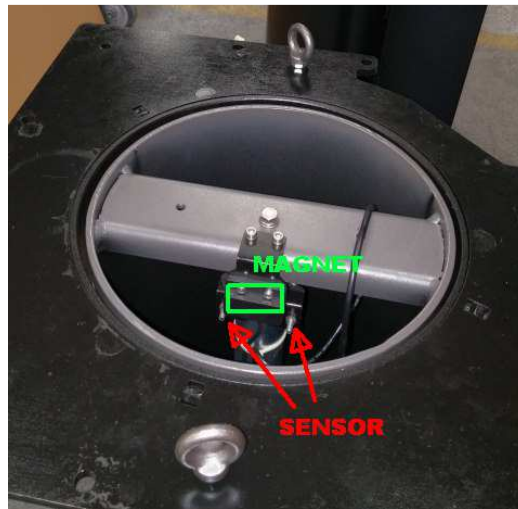


- LIFT THE TUBE COMPLETELY AND DROP ASIDE.



4.3 REINSTALLING THE TUBE

- FOLLOWS THE INSTRUCTIONS IN 4.2 FROM END TO START. NOTE THE POSITION BETWEEN THE TUBE AND THE RAM: **THE MAGNET MUST FACE THE SENSOR FIXED TO THE RAM**

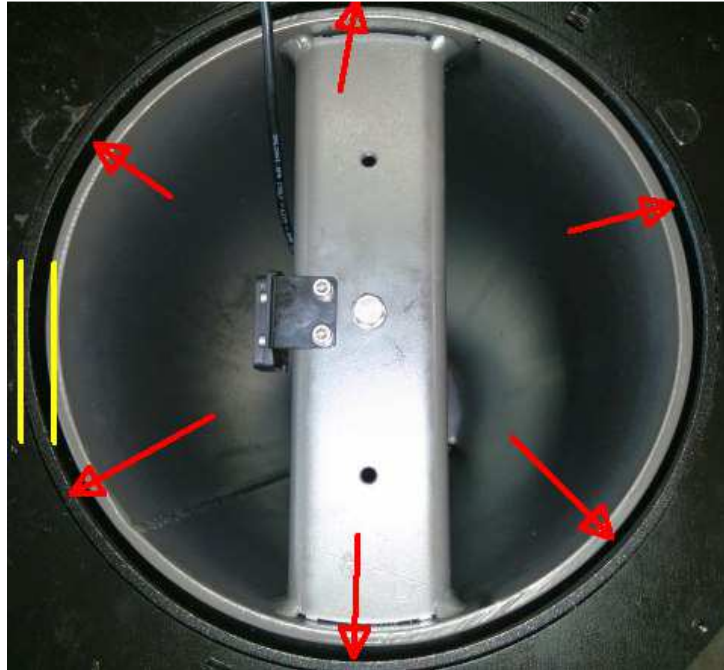


4.3 VERTICAL ADJUSTMENT/CENTERING OF THE BOLLARD TUBE

- USE THE THREE NUTS/BOLTS AT THE BASE OF THE BOLLARD TO ADJUST THE TUBE



- TUBE ADJUSTMENT MUST:
 - LEAVE AN UNIFORM GAP BETWEEN TUBE AND INTERNAL STRUCTURE
 - KEEP THE TOP OF THE TUBE 3mm **LOWER** THAN THE STRUCTURE. SEE YELLOW LINES, VERTICAL DISTANCE.



4.4 REINSTALLING THE INTERNAL STRUCTURE

- SEE 3.4, 3.5, 3.6.

5.0 REPLACING THE BOLLARD TUBE [DAKOTA]

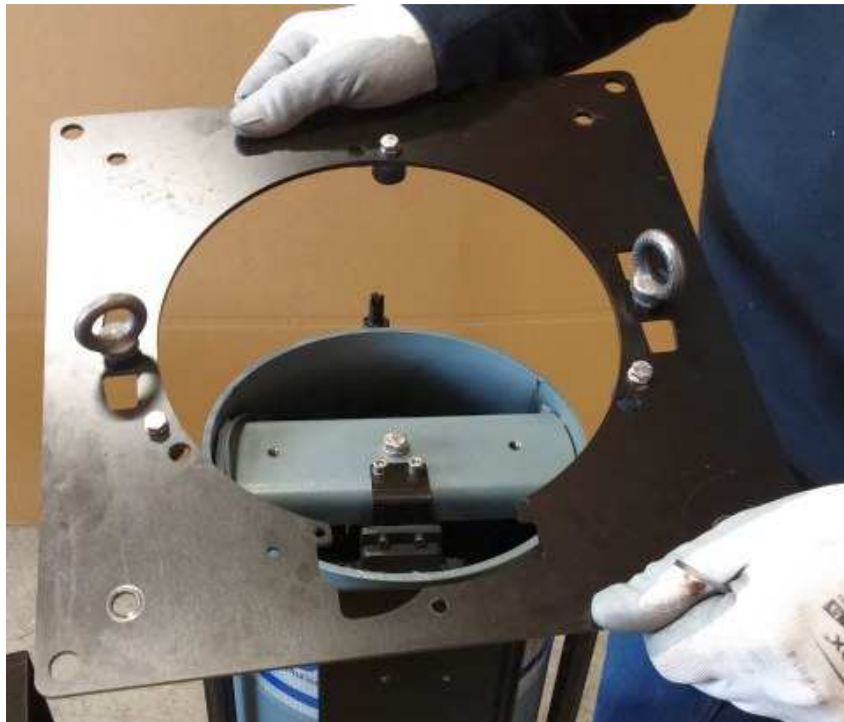
5.1 REMOVING THE INTERNAL STRUCTURE. SEE 3.

5.2 REMOVING THE BOLLARD TUBE

- REMOVE 3x SEEGER



- REMOVE MAIN PLATE



- UNSCREW THE BOLT BETWEEN THE RAM AND TUBE BEAM



- INSERT 2x EYELETS M8 AND LIFT THE TUBE



- REMOVE THE TEFLON GUIDES (3x). FIXING IS BY PRESSURE (SCREWLESS). INSERT THE TEFLON GUIDES INTO THE NEW TUBE. REPLACE GUIDES IF WORN OR DEFECTIVE. WARNING: NOTE THE EXACT FIXING POSITION OTHERWISE REASSEMBLING WILL BE IMPOSSIBLE.



5.3 INSTALLING THE BOLLARD TUBE

- FOLLOW 5.2 FROM END TO START

5.4 REINSTALLING THE INTERNAL STRUCTURE.

- SEE 3.

5.5 VERTICAL ADJUSTMENT OF THE TUBE: SEE 6

6.0 VERTICAL ADJUSTMENT/CENTERING OF THE BOLLARD TUBE [DAKOTA]

This operation may be needed when:

- bollard tube replacement
- tube scratched abnormally
- after an impact to bollard tube

6.1 VERTICAL ADJUSTMENT

- CONNECT A CONTROL BOARD CDS or similar
- POWER THE UNIT
- MAKE A CLOSE MOVEMENT (USE START OR CLOSE INPUT)
- CHECK IF BOLLARD RISES WITHOUT SCRATCHING THE FLANGE. OTHERWISE:
 - REMOVE THE GRUB SCREWS (3x)
 - USING A FLAT SCREWDRIVER, TURN CLOCKWISE TO MAKE THE TUBE FARTHER FROM THE FLANGE, AND VICEVERSA
 - REFIT THE GRUB SCREWS (3x)



7.0 REPLACING THE HYDRAULIC RAM [GRIZZLY/OAK 800.4]

7.1 REMOVING THE INTERNAL STRUCTURE. SEE 3.

7.2 REMOVING THE BOLLARD TUBE. SEE 4.

7.3 REMOVING THE RAM:

- UNSCREW THE RAM FIXING BOLTS (3x, BIGGER, INSIDE).



- CUT TIES THAT KEEPS CABLE HARNESS FIXED TO THE RAM. **TAKE NOTE OF THE LIGHT WIRING HARNESS LENGTH, FOR LATER FIXING TO THE NEW RAM.**



- REMOVE THE TOP BUMPER BY HAND.
- REMOVE THE SENSOR SUPPORT (CIRCLED SCREWS). RECORD THE RELATIVE POSITION BETWEEN SENSOR SUPPORT AND THE OIL PIPE AT THE BOTTOM.



- REMOVE THE RAM



7.4 INSTALLING THE RAM:

- THE ADJUSTMENT SCREWS MUST BE RETRACTED FULLY



- FOLLOW 7.3 FROM END TO START. TIGHT LOOSELY THE RAM FIXING SCREWS.
- CHECK RAM CENTERING **AT LEAST AT TWO PERPENDICULAR DIRECTION**. MEASURE THE TUBE DIAMETER D , **THE EXACT CENTER OF THE BUMPER MUST LAY AT $D/2 \pm 1\text{MM}$** . IN CASE OF NEED ADJUST WITH THE THREE SMALLER ADJUSTMENT SCREWS AT RAM BASE.



- DEFINITELY TIGHT THE RAM FIXING SCREWS.