

## Tools Checklist - HADCP

**Procedure Number: SOP # 6.2.1.2.1**

**Created: August 16, 2011**

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**Approved By: Field Operation Branch Chief – David Lane**

1. **Title**

Tools Checklist - HADCP

2. **Purpose**

The purpose for this SOP is to ensure that CO-OPS field crews and CO-OPS Contractors are properly prepared with the essential tools needed to perform the scheduled maintenance of the Horizontal Acoustic Doppler Current Profiler (HADCP). Adhering to this checklist will safeguard against lost time and resources in the field. There may be instances when special tools and equipment are required and are NOT reflected in this document.

3. **Background/History**

CO-OPS and CO-OPS contracted field teams are tasked to perform maintenance procedures on a CO-OPS HADCP. The maintenance procedures for conducting a routine or unscheduled visit are provided in *Maintenance Checklist 6.2.2.2.3 Horizontally Mounted Current Meter (HADCP)*. Field crews are required to be prepared for a wide variety of tasks when visiting each CO-OPS HADCP station.

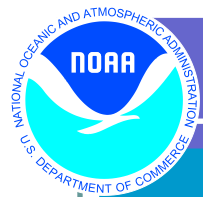
4. **Scope/Applicability**

This SOP applies to all CO-OPS personnel and CO-OPS contracted personnel performing maintenance of HADCP stations. All CO-OPS field parties and field contractors are required to coordinate with CORMS, Data Monitoring and Assessment Team (DMAT), Chesapeake Instrument Lab (CIL) before and after performing the maintenance procedures. CO-OPS field parties and field contractors are required to submit documentation to DMAT, CIL, and Contract Task Managers.

5. **Main Processes**

Before field crew departs the office;

- 1) Chief of Party performs the checklist, or delegates responsibility to a member of field party
- 2) Chief of Party ensures required tools are made available, and loaded onto the vehicle before departing for HADCP station
- 3) Chief of Party or member of field party ensures all tools are operable, i.e. maintained if subjected to harsh conditions



## 6. Detailed Sub-Processes/Checklists

<u>Tool</u>	<u>#</u>	<u>Needed Use</u>
50 ohm dummy load	1	GOES testing (ADCPX)
Anti-fouling paint, Trinidad-75 Red	*	Underwater portions of ladder, sled and I-beam
CLR / Lime-Away	1	Assists in removing hard Bio-fouling, i.e., Barnacles
APX door key	1	APX door locks
Bolt cutters, large	1	Winch chain installation and adjustment (chain winch systems)
Brush, stiff nylon bristles / Scot-Bright Pads	1	Sensor and underwater hardware cleaning
Cleaning fluid, biodegradable	*	Cleaning sensor and other underwater hardware (Simple Green or equiv)
Cleaning fluid, glass	*	Cleaning solar panels and other surfaces (Windex or equiv)
Crimp tool	1	Cable maintenance (i.e. solar panel power, battery power)
Db9 null modem	1	PC db9 serial connection to Spreke board J1 (IP/radio communications port)
Db9 serial cable	1	PC connection to Spreke board J2 (PC connection), IP and/or radio serial port
Duct seal compound	1	Weather sealing weather hood and other openings (i.e. enclosure piercings)
Fall arresting harness	1	Solar panel and mast maintenance
Multimeter	1	Battery and solar panel testing (require 10 amp setting to test panel's short circuit current)
Paint brushes	*	Application of anti-fouling paint
PC with ProComm (or equiv) and Xterm	1	Communication with sensor , DCP (ADCPX), or Spreke board
Personal floatation device	1	Per individual working within 3' of open/unprotected deck edge
RF power meter (Shakespeare ART-2 or equiv)	1	GOES testing, also needs VSWR function (ADCPX)
Scraper, plastic	1	Sensor and underwater hardware cleaning
Screwdriver, #2 phillips	1	Spreke board cover screws and mounting screws, solar panel regulator terminal screws
Screwdriver, common	1	Winch box cover screws, APX enclosure door locks (ADCPX)
Screwdriver, common 1/8" wide	1	Terminal connector screws and serial connector screws
Scrubs pads	1	Sensor and underwater hardware cleaning
SD card reader	1	Downloading data files (ADCPX)
Side cutters	1	Zip tie removal/installation
Tape, electrical	*	Weather sealing antenna connections
Tape, vulcanizing	*	Weather sealing antenna connections
Towels, paper	*	For use with cleaning fluids
Wire strippers	1	Cable maintenance (i.e. sensor data cable, solar panel power, battery power)
Wrench set, allen, standard	1	Sensor and ladder zinc removal/installation
Wrench, 5/8"	1	Sled U-bolts (chain connection points for chain winch systems)
Wrench, 11/16"	2	Sled hardware (chain winch systems)
Wrench, 1/2"	2	Various mounting hardware (solar panels, Andrew clamps, etc)
Wrench, 10 mm	2	Battery terminal bolts
Wrench, 7/16"	2	Sensor mounting bolts
Wrench, 9/16"	2	Ladder stop bolt, various mounting hardware
Zip ties, UV resistant plastic	*	Securing sensor cable and other cables (e.g. solar panels, communication, etc)

\* = as required/needed

Refer to Anti-Fouling SOP for guidance on Bio-fouling.

### 5.3.3.3 Anti-Fouling Procedures for Current Meters

## 7. Management/Responsibility

The Branch Chief, Field Operations Division is responsible for maintaining this Checklist.