

# NORTHERN DIVER

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GUARDIAN / FLIGHT / LADIES EVE  
BCD MANUAL

# NORTHERN DIVER BCD MANUAL

Thank you for your purchase. We're sure you'll love your new Northern Diver BCD. Please take the time to read this manual, and retain it for future reference.

This manual provides you with easy access to the key features and functions of our BCDs, along with recommendations on how best to service and care for your BCD. Should you wish to know more about Northern Diver diving equipment, please visit our website [www.ndiver.com](http://www.ndiver.com).



## DEFINITIONS OF WARNING, CAUTIONS AND NOTES



### WARNING

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Indicates a situation that, if not avoidable, will result in serious injury or death.



### CAUTION

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Indicates a situation that, if not avoidable, may result in serious injury or death.



### NOTE

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Indicates a situation that, if not avoidable, may result in minor or moderate injury or damage to the BCD.

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We are happy to answer any questions you may have. We are located in Appley Bridge, Lancashire, UK - only 5 mins from the M6 motorway (J27). Manchester & Liverpool international airports are only 40 mins away. Wigan North Western rail station is 2 hours & 3 mins from London Euston. We are more than happy to collect clients and return them after their visit.

Northern Diver International Ltd. East Quarry, Appley Lane North, Appley Bridge, Wigan, Lancashire, WN6 9AE, UK



## GENERAL WARNING AND CAUTIONS

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The following are important safety guidelines every diver should adopt before diving in a BCD:

Read this BCD manual and any labels affixed to the BCD thoroughly before use. If you do not completely understand these instructions, do not use this BCD.

Do not use this BCD if you have not received proper training and certification in SCUBA diving.

This is not a life jacket; it does not guarantee a head up position of the wearer at the surface.

Emergency face up flotation may not be provided for all wearers and in all conditions.

Improper use, or intentional misuse of this product may cause serious injury or death.

Do not inhale gases from within this BCD.

Prior to each dive, fully inflate the BCD and inspect for leakage, damage and proper operation.

Before diving this BCD in open water, it is important to familiarise yourself with it first in confined shallow water. Do not enter open water until you have weighted yourself properly and become familiar with using all of its features and adjustments.

Before entering water, check to ensure that you can release the dumpable weight pouch quickly and easily without any obstruction. You may need to do it when under water in the events of an out of air emergency or uncontrolled descent.

Obtain a full service for this BCD from NORTHERN DIVER at least once a year. The service consists of a complete check of the power inflator and a general air leak inspection of valve connections and bladder.

Repair and disassembly must only be performed by NORTHERN DIVER unauthorized service will void the warranty and may cause this product to malfunction.

The maximum depth covered by certification is 50 meters.

Limitation to use of compressed air in compliance with EN12021

Maximum recommended cylinder capacity is 20 liters (See Fig. 1)

Temperature range for use:

Air -20 °C to +50 °C

Water -2 °C to +40 °C



(Fig. 1)

A buoyancy compensator is not a breathing system and that gas should not be inhaled from the buoyancy compensator's bladder.

## MARKING

When fully inflated in fresh water at sea-level, approximate buoyancy capacity of each size is as follows which is printed on a label sewn on BCD :

### GUARDIAN BCD + FLIGHT BCD LIFT

Size	SM	MD	LG	XL
Part No.	BCD-GUARDIAN 15-S/BCD-FLIGHT 15-S	BCD-GUARDIAN 15-M/BCD-FLIGHT 15-M	BCD-GUARDIAN 15-L/BCD-FLIGHT 15-L	BCD-GUARDIAN 15-XL/BCD-FLIGHT 15-XL
Buoyancy	140N	170N	190N	230N

### LADIES EVE BCD LIFT

Size	SM	MD	LG	XL
Part No.	BCD-EVE-S	BCD-EVE-M	BCD-EVE-L	BCD-EVE-XL
Buoyancy	110N	120N	150N	160N

## AIRWAY

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### Power Inflator

Inflator's working pressures are 110 psi(7.58bars) minimum, 160 psi(11.03bars) maximum, and 140 psi(9.65bars) nominal.

Inflator button,press it to inflate BCD. **(See Fig. 1)**

Manual button and mouthpiece, press it to deflate BCD or oral inflate BCD **(See Fig. 2)**



**FIG. 1**



**FIG. 2**



**NOTE:** Oral inflation of your BCD under water is a skill that must be achieved under the supervision of a certified diving instructor.



**NOTE:** Depressing the oral inflator button while the BCD is empty may allow the water to enter the bladder.



**FIG. 3**

### Rapid Exhaust Valve

The rapid exhaust valve automatically releases air when the air pressure inside the bladder is nearly 2.4 pounds per square inch(0.165bar) over ambient.

You can pull to dump air through rapid exhaust valve too. **(see Fig. 3)**

## ATTACHING LOW PRESSURE INFLATOR HOSE



### WARNING:

Only attach the LP hose to the lower pressure (LP) port of regulator. Attach to the high pressure (HP) port may cause the hose to burst and result in serious injury.

FIG. 4



FIG. 5



FIG. 6



FIG. 7



Ensure the presence of an o-ring. **(See Fig. 4)**

Screw the male end into the low pressure port of the regulator, make sure its secured. **(See Fig. 5)**

Attach female end onto inflator nipple. **(See Fig. 6)**

Open the tank valve slowly and press the inflator button to hear the air flowing into BC. **(See Fig. 7)**

## THREADING THE TANK BAND AND BUCKLE



**NOTE:** BCD is shipped with the tank band pre-threaded through the buckle. (See Fig.8, Fig.9, Fig.10, Fig.11, Fig.12 & Fig.13)



FIG. 8



FIG. 9



FIG. 10



FIG. 11



FIG. 12



FIG. 13



## ATTACHING THE BCD TO THE TANK

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**NOTE:** Wet the tank band first, the nylon webbing stretches a little while wet.



**NOTE:** Make sure the metal loop of the tank band is as close to the rear of the BCD as possible, this will provide a great range of adjustment.

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Loop the tank locator strap over the tank valve; adjust it to hold the BCD at the desired height position. (See Fig.14)



**FIG. 14**

Open the buckle and pull the free end of the tank band until the backpack fits the tank very tight. (See Fig. 15)

Close the buckle half and thread the free end of the band through the end slot of the buckle. (See Fig. 16)

Close buckle and secure the Velcro closure of the tank band. (See Fig. 17)



**FIG. 15**



**FIG. 16**



**FIG. 17**

## DONNING THE BCD

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Loosen both straps to its maximum length by lifting up on the bottom tabs of the buckle.



Open the sternum strap buckle



Open the waist strap buckle if equipped, and open the waistband.



Have your dive buddy hold the BCD cylinder assembly behind you while you thread your arms through the shoulder straps.

## DONNING THE BCD

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Pull the BCD onto your back, adjust it comfortably, fit your height. Fasten closed the waistband until it is a close fit to your waist.



After your dive buddy releases the BCD/cylinder assembly, and the weight of the BCD was located on your hips and shoulders, bend forward at the waist and tighten the shoulder straps by pulling down on the D-rings located on the ends of the straps.



Close the sternum, and waist straps, if equipped, and pull the free ends until they are comfortably snug but not restricting.



Re-adjust the waistband, if necessary, so that it is a comfortable fit to your waist but not restricting. with 4 inches of overlapping closure.

## OVER PRESSURE RELIEF VALVES

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Some BCD models have this feature.



**FIG. 26**



**FIG. 27**



**FIG. 28**

It automatically releases air when the air pressure inside the bladder is nearly 2.4 psi (0.165bar) over ambient. **(See Fig. 26)**

You can pull the ball to rapidly dump the air too. **(See Fig. 27 & Fig. 28)**

The maximum outflow relief valve is the dump valve which assembles at the bottom or top of the BCD. **(See Fig. 26)**



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**NOTE:** Whenever you remove and replace the cap of the valve, make sure that the stainless spring is in the correct place, pull it to feel the spring function well and inflate the BCD to see if it is secured and no leaks are present.

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## CUMMERBUND ADJUSTMENT

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Some BCD models have this feature.

Adjust the ends and secure the Velcro. (See Fig. 29 Fig.30 & Fig. 31)  
The adjustment should leave an overlap of 4 inches when wearing the BCD. (See Fig. 32)



FIG. 29



FIG. 30

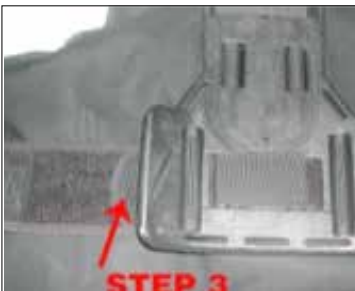


FIG. 31



FIG. 32

## DUMPABLE WEIGHT POUCH

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### WARNING:

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You must practice the release of these dumpable weight pouches prior to each dive.

Put weight into pouches (See Fig. 33 & Fig. 34)

Insert weight pouches into BCD and secure with Velcro and/or buckles. (See Fig. 35 Fig. 36)

Grasp the handles and pull them out firmly and completely out of BCD. (See Fig. 37 Fig. 38)



FIG. 33



FIG. 34



FIG. 35



FIG. 36



FIG. 37



FIG. 38



### CAUTION:

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To avoid injuring other divers, always look below you before dropping weights.

## NON-DUMPABLE WEIGHT POUCH

Some BCD models have this feature.



### WARNING:

It cannot be released to provide emergency ascending. Maximum weight for non-dumpable weight pouch is 5 pounds.



FIG. 39



FIG. 40

Put weight into weight pouches and secure with velcro / and or buckles  
(See Fig.39 & Fig.40)



Non-dumpable label

## MAINTENANCE

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**NOTE:** Improper maintenance will void the warranty and cause this product to malfunction.

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### During use:

**Do NOT pull the BCD on the sand and stone.**

**Do NOT sit on the BCD or set heavy/sharp objects on the BCD.**

**Do NOT leave the BCD in direct sunshine unattended or for long periods of time.**

**Do NOT dip the BCD in chlorine water.**

### After use:

Rinse the outside of the BCD thoroughly with fresh water.

Fill the BCD one third full with fresh water through the inflator mouthpiece.

Fully inflate the BCD, rotate and shake the BCD to rinse the interior thoroughly.

Drain the water out through the mouthpiece.

Fully inflate the BCD and allow it to dry inside and outside.

Slightly inflate the BCD for storage in a cool place.



### WARNING:

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Do not hang the BCD on the hooks like this, it will puncture the bladder (See Fig.41)



**FIG. 41**



## **LIMITED WARRANTY AND DISCLAIMER**

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### **Limited Warranty**

Northern Diver warrants the original purchaser for 12 months from the date of purchase. The product will be free from defects in material and workmanship provided it receives normal use and proper care. The warranty must be made through Northern Diver or a Northern Diver agent and a receipt must accompany the product to be returned. These warranties are limited to repair or replacement at the discretion of Northern Diver.

### **Disclaimer**

Northern Diver disclaims and excludes any liability for incidental or consequential damages.

### **Normative References**

EN1809:2014+A1:2016 diving equipment - buoyancy compensators - functional and safety requirements, test methods.

EN250:2014 respiratory equipment — open-circuit self-contained compressed air diving apparatus- requirements, testing, marking.

# SERVICE RECORD

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Purchase date: \_\_\_\_\_

BCD model: \_\_\_\_\_ Serial No: \_\_\_\_\_

OEM customer: \_\_\_\_\_

OEM customer phone no: \_\_\_\_\_

1. Service person signature \_\_\_\_\_ Date \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Service person signature \_\_\_\_\_ Date \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Service person signature \_\_\_\_\_ Date \_\_\_\_\_

Notes: \_\_\_\_\_

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4. Service person signature \_\_\_\_\_ Date \_\_\_\_\_

Notes: \_\_\_\_\_

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\_\_\_\_\_

5. Service person signature \_\_\_\_\_ Date \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. Service person signature \_\_\_\_\_ Date \_\_\_\_\_

Notes: \_\_\_\_\_

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## NOTICE

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The PPE (Personal Protective Equipment) mentioned in this user's manual was submitted to tests for validation of the design and certified according to Art.10 of Directive 89/686/EEC by ITALCERT – Viale Sarca 336, 20126 Milano ITALY, Notified body n° 0426.

This device is made by HIL in compliance with EN 1809:2014 (PPE belonging to category II) and EN 250:2014+A1:2016 (PPE belonging to category III). (Manufacturer address: No. 19-2 Zhujiang Road, Wuxi, Jiangsu, China)

The CE marking means the compliance of the device to the basic health and safety requirements of Annex II of Directive 89/686/EEC.

The number 0120 near the CE identifies the Notified Body SGS, entitled for the EC quality control system for the final product according to Art. 11.B of Directive 89/686/EEC.”



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