



**SELF – RIGHTING SYSTEM  
CHECK, MAINTENANCE &  
SERVICE - GUIDELINES**

Vessel HIN:	Date:
Date System Installed:	Installed By:
Bottle S/N:	System Checked By:
Firing Head S/N:	

To ensure the best possibility of your Self – Righting System operating when needed, it is recommended checking, maintenance and servicing of the system be conducted on a regular basis.

This involves three separate procedures.

First, is a “**CHECK**” of the system. Titan recommends this be done on a **WEEKLY** basis.

Second, is the “**MAINTENANCE**” of the system. It is recommended that maintenance be conducted **MONTHLY** and on an **AS NEEDED** basis.

Third, is the “**SERVICING**” of the system. This is recommended to be conducted every **FIVE YEARS** and /or **AS NEEDED** basis.

To assist in the checking and maintaining the Titan installed self-righting system on your vessel, the following recommended guidelines are provided.

Every effort has been made to be complete and thorough. There may be other items which have not been included depending on the configuration and model of your vessel.

**Your self-righting system should only be serviced by authorized agencies who are familiar with the complete system.**



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**CHECK**

ITEM	Inspection Frequency	As Per Guidelines
Self-righting Bag	weekly	√
High Pressure Hose	weekly	√
High Pressure Bottle	weekly	√
Firing Head	weekly	√
Pull Cable & Handle	weekly	√

**MAINTENANCE**

ITEM	ACTION	FREQUENCY	Authority
Self-righting Bag	Inflate bag	2 years	RCMSAR
Inflation Bag	Replace	10 years	Certified Authority
High Pressure Hose	Replace	5 years	Certified Authority
High Pressure Bottle	Hydrostatic test	5 years	Certified Authority
Firing Head	Service "O" rings and New Disc	5 years	Certified Authority
Pull Cable & Handle	Replace	5 years	Certified Authority





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## HIGH PRESSURE HOSE

	Notes:
HIGH PRESSURE HOSE: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Connection Fitting at Bag Tight: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Connection Fitting at the Firing Head Tight: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Fittings Showing Corrosion: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Bulges in the Hose: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Is the Hose Kinked: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Is There Any Sign of Wear on the Hose: <input type="checkbox"/> YES <input type="checkbox"/> NO	

The high pressure hose on your vessel is rated for 5,000 psi. It is important to check the hose for any nicks/cuts/cracking and sign of wearing. It is especially important to check where the hose passes through any metal framing etc. Check any sharp bends or kinks.

Corrosion and/or rust on the metal parts can weaken the fittings. This indicates that the hose needs to be replaced. It is recommended that the hose be replaced every 5 years at the time of the bottle being hydrostatically tested.

Hose connections at the bag and at the bottle firing head, need to be checked for tightness.



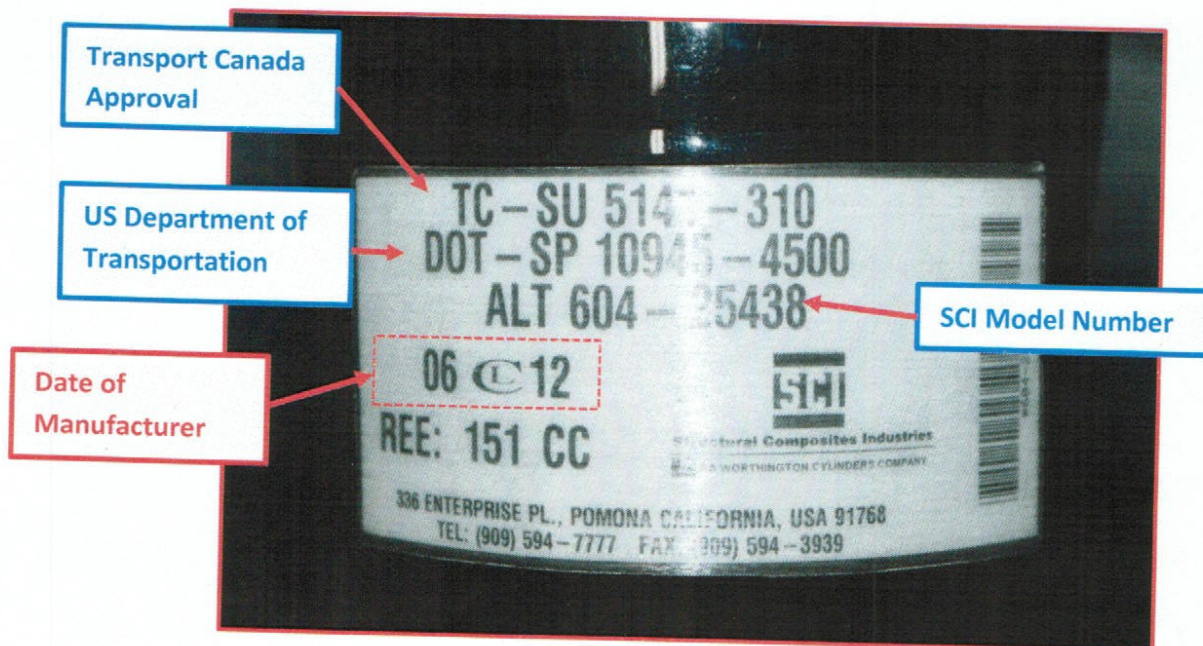
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**HIGH PRESSURE BOTTLE**

	Notes:
<b>BOTTLE:</b>	
Securely Mounted: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Mounting Fasteners are tight: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Date on Bottle:	
Hydro Static Test Due Date:	
Bottle Contains: <input type="checkbox"/> AIR <input type="checkbox"/> CO <sub>2</sub> <input type="checkbox"/> OTHER	
Signs of Corrosion/Rust: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Signs of Gouges/Scraps: <input type="checkbox"/> YES <input type="checkbox"/> NO	

The high pressure bottle can contain air pressure up to 4,500 psi. *This is a high pressure cylinder and needs to be handled with care.* The cylinder needs to be handled carefully. It needs to be secured within or on the vessel, in such a manner that the jarring of the boat in rough water the bottle will not come loose.







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Firing Head S/N:	

In the illustration above, this bottle will need to be **HYDROSTATIC** tested in **May 2017**. When hydrostatically tested, and found to be okay, the testing facility will affix a label with their **I.D. Code** and **TEST DATE**. This will be applied to the bottle and then epoxy applied over the label.

The bottle has a service life of 15 years. It must be hydrostatically tested and inspected every 5 years. It can only be hydrostatically tested twice. Each test is good for 5 years.

When checking the bottle, it is important to check for any gouges or cuts on the bottle wrapping.

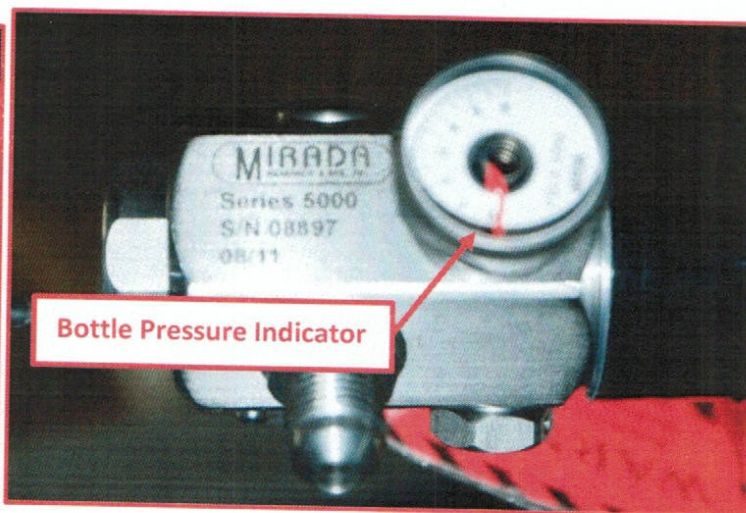


## SELF – RIGHTING SYSTEM CHECK, MAINTENANCE & SERVICE - GUIDELINES

Vessel HIN:	Date:
Date System Installed:	Installed By:
Bottle S/N:	System Checked By:
Firing Head S/N:	

### FIRING HEAD

	Notes:
<b>FIRING HEAD:</b>	
Pressure Gauge Reading:	
Signs of Corrosion: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Safety Pin Removed: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Firing Cable Connected to Pull Cable: <input type="checkbox"/> YES <input type="checkbox"/> NO	



The firing head is installed on top of the bottle. The model of head used is a Mirada 5000. It will have a Serial Number and a Manufacture date.

This firing needs to be inspected carefully for any sign of leakage (declining gauge pressure) and corrosion on or about the fitting. The service life of the "O" rings is 5 years. However, it is **NOT** recommended to bleed the air from the bottle and have it recharged using the same "O" rings and disc.





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Firing Head S/N:	

## PULL CABLE & HANDLE

	Notes:
<b>Weekly PULL CABLE &amp; HANDLE Check:</b>	
Cable Connected to Firing Head: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Is QUICK LINK closure closed and snug tight: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Cable Secure to Transom: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Cable Secure to Transom Outside: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Handle Secure to Cable: <input type="checkbox"/> YES <input type="checkbox"/> NO	
<b>MONTHLY "PULL TEST" OF CABLE (follow steps 1 through 6)</b>	
Pull Cable Disconnected From Firing Head Cable & Pull Tested. If so did it move freely: YES <input type="checkbox"/> NO <input type="checkbox"/>	
Are Lubrication Caps Attached to Each end of the Pull Cable Sheath: YES <input type="checkbox"/> NO <input type="checkbox"/>	
Pull Cable Re-Attached to Firing Head Cable: <input type="checkbox"/> YES <input type="checkbox"/> NO	

Titan recommends that the pull cable be "**checked**" weekly. It should be "**pull tested**" monthly.

Cables installed on the Titan vessels is stainless steel, coated and it is inside a lubricated sheath. Each end of the sheath has a cap to limit water getting inside and preventing helping to contain the lubricant within. The cable and sheath pass through a watertight gland in the transom.

It is important that this gland not be over tightened thereby squeezing the sheath which can restrict the cable inside the sheath.



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**CABLE PULL TEST**

When conducting a **"pull test"** of the cable for ease of movement, the following is recommended:

1. **REMOVE the breakaway pin** and **INSERT** the safety pin in the firing head
2. **DISCONNECT** the pull cable from the firing head cable by undoing the "QuickLink"
3. Gently pull the cable, checking to make sure it moves freely within the sheath
4. If the cable is hard to pull having resistance, the cable needs to be replaced.
5. Once the cable has been confirmed to move freely, **RECONNECT** the cable to the firing head cable using the "QuickLink".
6. **REMOVE the Safety Pin** and **INSERT the breakaway pin.**





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## SELF-RIGHTING BAG

	Notes:
BAG COVER: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Velcro Holding: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Is Bag and Cover Fasteners Secure: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Does Exposed Areas of Inflation Bag Show Wear: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Check Arch for cracks and that fasteners are tight: <input type="checkbox"/> YES <input type="checkbox"/> NO	

The Inflation **BAG** and **COVER** are folded and packed on a pan on top of the arch of the vessel. Both are secured to the pan using flat bar and bolts. As the pan and fastening bars are aluminum, the bolts need to be **"snug tight"**. Over tightening will strip the threads .

The bag when folded should be checked for any signs of wear or cracking of the material at the folds.  
***Should cracking or wear be found, the bag should be replaced.***

The bag can be removed from the vessel and inflated using an air source. Once inflated fully, air escaping from the air vent, the bag can be checked for air retention. If the bag shows any sign of leaking air, it should be replaced.

***The bag can be inflated using the system, every 5 years when the air bottle is due for a hydrostatic test.***

It is recommended that the bag and cover be replaced every 10 years.

The arch on your vessel should be checked for any signs of cracks. Fasteners securing the arch should be checked as well as all other appurtenances attached to the arch.



## CERTIFICATION FOR SELF-RIGHTING SYSTEM

Owner:	Contact Number:
Hull HIN:	Work Order Number:
Date In:	Work Done By:
Date Out:	Work Checked By:

New Self-Righting System	Previous Installed System
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Install New System <input type="checkbox"/>	Inspect Previous Installed System <input type="checkbox"/>
Bottle SIN:	Date Last Activated:
Bottle Charge Pressure:                      lbs.	Bottle SIN:
Firing Head SIN:	Bottle Hydrostatic Test Date:
Inflation Bag Date:	Bottle Pressure Gauge Pressure:
Inflation Bag Cover:	When System Activated: Functioned Yes <input type="checkbox"/> No <input type="checkbox"/>
High Pressure Hose:	Bag Installation Date:
Pull Cable SS c/w Handle:	Bag Checked: <input type="checkbox"/>
Cable Sheath, <input type="checkbox"/> : Lubricated & Sealed <input type="checkbox"/>	High Pressure Hose Checked <input type="checkbox"/>
Cable Pull Tested:                      pull pounds	Firing Head Checked: New Disc Installed <input type="checkbox"/>
Pull Here Labelled Affixed On Transom <input type="checkbox"/>	New Firing Head Installed <input type="checkbox"/>
	Pull Cable Checked: In Sheath Yes <input type="checkbox"/> No <input type="checkbox"/>
	Pull Cable & Sheath Replaced Yes <input type="checkbox"/> No <input type="checkbox"/>
	Cable Pull Tested:                      pull pounds

### NOTES: