

U.S. Navy Salvage and Battle Damage Response



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Combat Salvage Forces



□ Recent history and salvage response

- Falklands War
- Gulf War
- USS COLE attack in Yemen
- Other Groundings and Collisions



HMS Sheffield

□ ***Battle Damage Repair***



USS STARK



British Combat Salvage During Falklands War (1982)



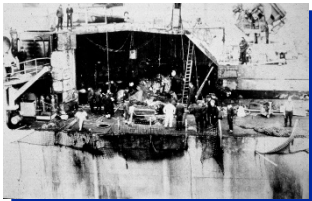
❑ When the RN invasion force sailed from PORTSMOUTH

- No organic salvage capability sailed with them.
- Vessels damaged
 - ◆ HMS Glamorgan (Type 42 DDG) Hit by shore launched Exocet missile. Extinguished fires and steamed under own power to safety.
- Vessels sunk
 - ◆ HMS Sheffield (Type 42 DDG) Struck by air launched Exocet missile, towed out to sea and scuttled
 - ◆ HMS Antelope (Type 21 Frigate) Magazine exploded during defusing of unexploded bomb. Ship broke in two and sank.
 - ◆ M/V Atlantic Conveyor (roll on roll off carrying helicopters and war supplies) struck by 2 Exocet missiles – sank under tow.
 - ◆ HMS Ardent (Type 21 Frigate) Struck by aircraft which dropped 9 bombs. Sailed to shallow waters and sank
 - ◆ HMS Coventry (Type 42 DDG) Hit by 3 bombs, attempted to head to port, severe flooding caused vessel to turn over and sink
 - ◆ Sir Galahad - LSL (Royal Fleet Auxiliary) Bombed in port waiting to deploy troops. Towed to sea and sank.

HMS Sheffield



HMS Coventry



HMS Glamorgan



HMS Antelope



USN Combat Salvage Support For Desert Storm



Iran Iraq War - 1987

❑ **USS Stark (FFG 31)**

- ◆ Struck by 2 Exocet missiles from Iraqi aircraft – May 1987
- ◆ Fires and flooding controlled – returned to Bahrain
- ◆ The destroyer tender USS Acadia sailed from the Indian ocean and restored the Stark's communications and navigation systems, while the Bahrain shipyard performed structural repairs.
- ◆ Stark set sail to Mayport on 3 July and permanent repairs were conducted by Ingalls Shipbuilding over a 10 month period.





USN Combat Salvage Support For Desert Storm



Desert Storm/ Gulf War - 1991

- ❑ **Prior to Desert Storm, OPLANs did not have a Salvage Annex/Addendum, so no salvage vessels were in the AOR.**
- ❑ **In Nov '90 USS BEAUFORT was directed to sail to the Gulf.**
- ❑ **In Nov/Dec/Jan SUPSALV established an ESSM base in Sharjah.**
- ❑ **Damaged vessels**
 - ◆ **Result of fire/breakdown/flooding**
 - USNS CAPE EDMONT (T-AKR 5069)
 - USNS CURTISS (T-AVB 4)
 - USNS CAPE BON (T-AK 5059)
 - USNS CAPE CHARLES (T-AK 5038)
 - USNS SANTA ANA (T-AK 5022)
 - M/V Mercs Horana (major fire, 5 vessels assisted)
 - ◆ **Groundings**
 - USNS Andrew J. Higgins (T-AO 190) Gulf of Oman 2 Jan '91
 - ◆ **Collisions**
 - USS KANSAS CITY (AOR 3) and USS HARRY W. HILL (DD 986)
 - ◆ **Mine Strikes**
 - USS TRIPOLI (LPH 10)
 - USS PRINCETON (CG 59)



Collisions And Groundings



❑ USS JOHN S MCCAIN Collision (Feb 2017)

- Collided with tanker Strait of Malacca.
- Made way into port on own power.
- Heavy lifted to Yokosuka on commercial HL Ship

*USS JOHN S
MCCAIN patch on
HL Ship*



❑ USS FITZGERALD Collision (Jun 2017)

- Collided with container ship SW Tokyo, Japan
- Returned to Yokosuka and drydocked
- Heavy lifted CONUS for permanent repairs on commercial HL Ship

❑ USS GUARDIAN Grounding (Jan 2013)

*USS FITZGERALD
stbd side damage*

- Grounded on Tubbataha Reef, Sula Sea.
- Broached and pushed further onto reef during heavy weather
- Hull damaged critically before a tow could be organized



USS GUARDIAN

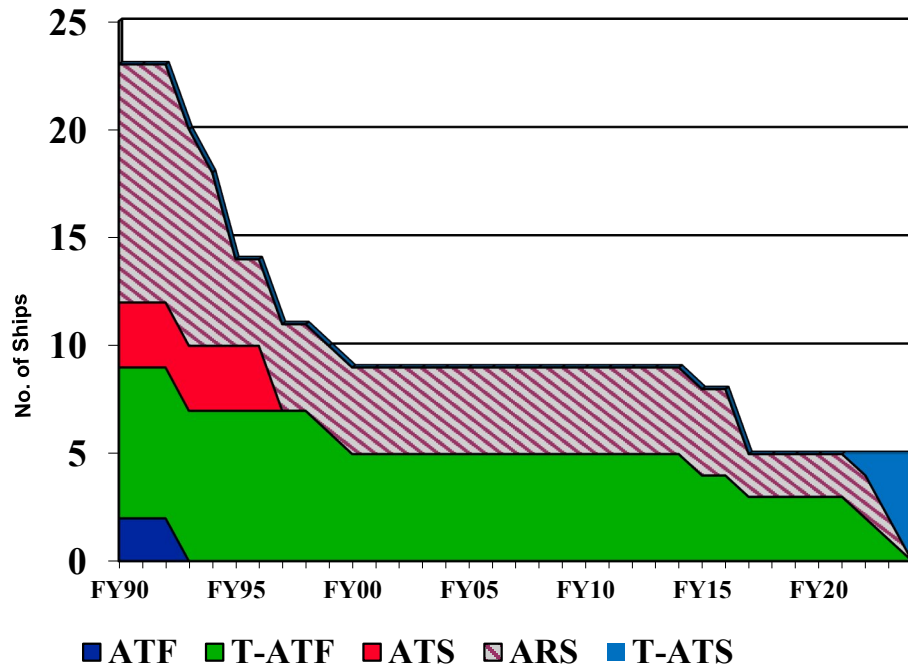




Salvage Ship Force Levels and Major Transitions



Trends



- MSC T-ARS only productive salvage platforms if deployed with MDSU company
- MSC T-ATF can embark MDSU divers but must return to port to offload in order to tow
- 5 T-ATS ships now under /contract/construction.
- Actual completion dates TBD

--1997: USN ARS transition to MSC. All Navy diver billets removed.

TIMELINESS IS CRITICAL: ships do ~13 knots and optimal position of Salvage Ship is within 1 hour of ships in harm's way



Three Tier Approach To Salvage

❑ Tier 1 – Mobile Diving and Salvage Units with Emergency Ship Salvage Material.

- Forward Deployed / Flyaway
- Rapid Initial Response

MDSU 1 Divers



❑ Tier 2 – Salvage Ships /Fleet Tugs with MDSU Augment

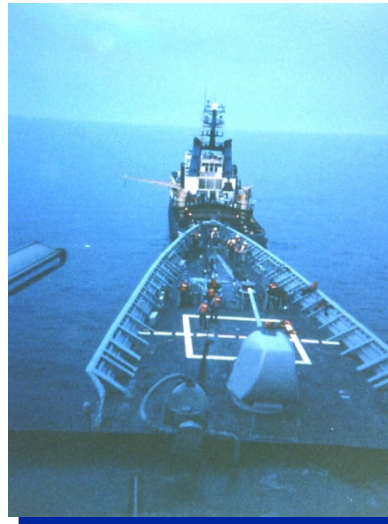
- T-ATF less capable salvage asset (towing OR salvage)
- T-ARS towing and salvage
- Heavy Combat Salvage / Towing



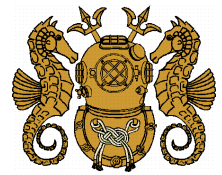
*ARS recovery of CH46
helicopter*

❑ Tier 3 - Commercial Support

- Relieves Pressure On U.S. Navy
Salvage / Towing Assets



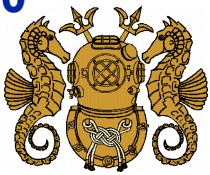
*USS PRINCETON under
commercial tow*



Commercial Salvage Availability

A Reassessment of the Marine Salvage Posture of the United States

- ❑ **1994 Marine Board Study Conclusions**
 - ◆ **Deficiencies exist in U.S. commercial salvage capabilities.**
 - ◆ **Next generation of civilian salvors is NOT being trained or attracted.**
 - ◆ **Adequate USN salvage capability augment by U.S. commercial sector is doubtful.**
 - ◆ **Foreign commercial assets may or may not deploy into war zone**
- ❑ **As a result we will rely on other allied navys or commercial salvage firms that may not support.**



Battle Damage Repair (BDR)

The First Step in the BDR Process... is COMBAT SALVAGE: aiding a stricken ship in a battle environment with dewatering, patching, firefighting, and emergency towing. The ship may be incapable of self damage control through casualties or being abandoned by its crew. This is NOT the BDR mission of forward ship repair assigned to the RMC's. This is also not shipboard R&A teams.



Gulf lessons unlearned:
USS STARK
USS PRINCETON
USS TRIPOLI

Recent reminders:
USS FITZGERALD
USS JOHN S. MCCAIN
USS GUARDIAN



Battle Damage Repair Construct

1. Damage Control

The crew controls the damage. The ship rejoins the fight or sails for repairs.



The crew controls the damage, but the ship has sustained heavy damage.



2. Rescue and Assistance

The stabilized ship is moved to a repair location while the damage analysis continues.



Salvage operations are unsuccessful and the ship is scuttled or sinks.



3. Repair

The ship is partially repaired and rejoins the fight.



The ship is fully repaired, which may take years.



The ship is dismantled for parts needed by other ships.





Battle Damage Repair



❑ **GAO issued GAO-21-246 in June 2021**

❑ **Recommendations:**

- ◆ **The Navy should designate an organization to lead and oversee battle damage planning efforts**
- ◆ **The Navy should issue guidance that clarifies the command and control responsibilities for executing battle damage repair**
- ◆ **The Navy should update battle ship vulnerability models for all ships**

❑ **WASP – Wartime Acquisition Support Plan**

❑ **WARP – Wartime Acquisition Response Plan**

❑ **BDR Exercises**

- ◆ **- ex-Bonhomme Richard; ex-Boone; ex-Denver**