

## PT658 FACT SHEET

## Propulsion

3 5M-2500 Packard-Marine V12 Engines.

These engines are 4 stroke, water cooled, 60 degree, V-type with a 6-3/8" bore and 6-1/2" stroke, for a total of 2490 cubic inches of displacement. Each engine has 48 valves, 2 inlet/2 outlet per cylinder. They have a compression ratio of 6.4:1, and are fitted with a gear-driven centrifugal supercharger and intercooler. The engines are installed with a Holley 1685F aircraft-type carburetor, and use aircraft-type dual magneto sparks, with 2 spark plugs per cylinder. The engines develop 1850 Hp at 2500 rpm. Max revolutions is 3000 rpm. Engine weight is 3100 pounds. These engines were designed to burn 100 octane aviation gasoline to achieve nominal power output.

## History of PT658

PT658 was built at Higgins Industries Boatworks, New Orleans LA, the keel was laid down 2-24-45, launched on 4-11-45 and completed on July 30, 1945. The boat was originally slated to be part of Squadron (RON) 45, which was never placed in commission. It was to consist of 11 Higgins PT's 649-660, and 11 Elco PT's 773-784 and assigned to the Pacific Fleet. Near the wars end in mid 1945, RON45 was scheduled to be "Lend-Leased" to the USSR. Several boats in the group (649 to 656) were already shipped to Russia when the transfer was halted; just before PT 657-660 were to be sent over. The Elco construction contract was also canceled at this time. PT657-660 had been moved from New Orleans to Seattle on an LST, where they would be piggybacked onto a transport ship bound for Russia. When the war ended, (Sept 45) the shipment was stopped and the boats returned to Port Hueneke, CA. Then all four boats were Reclassified as "Small Boat" C105342,3,4 and 5 (Crash Rescue Boat) in August 1946, and were then assigned to the Bureau of Aeronautics as a "Remote Controlled Target" at Naval Air Facility, Pt Mugu, CA. (ex-PT660 was actually sunk as a target by a "Bullpup" missile off Port Hueneke in the early 1990's) PT658 was reclassified again as "Floating Equipment" in Dec 3, 1948. Ten years later, on June 30, 1958; PT658 was sold off as "war surplus" by the US Navy to a private owner. PT658 was acquired from the estate of one of these private owners (Mr. Orlando Brown in Oakland, CA) in 1993, (35 years after being sold) who had intended on using her as a private pleasure craft. Since 1994, PT658 has been in the process of restoration by Save the PT Boat Inc.

## Goal

The goal of the Save the PT Boat Inc. is to restore the PT658 to her "as-built" condition which can then be used as a living history display. As much as possible, the PT658 will be restored with historically authentic items and configuration that was used in operational PT Boats during WWII. Some modern day items have been included on a case by case basis to ensure safety and meet legal requirements for an operating wooden boat. It is our belief that this boat is the only completely authentically restored operating US Navy PT Boat in the world

**Length:** 78 feet 6 inches **Width:** 20 feet 1 inch

**Draft:** 5 feet 3 inches **Displacement:** 48 tons

**Crew Complement:** 2 officers, 14 enlisted

**Armament:** As a late war Higgins (PT625 class) the PT658 was, for her size, one of the most heavily armed vessels in the US Navy

**40mm Bofors M3 cannon:** 4 round clips, 130 rpm, 2890 muzzle velocity, range 5420yds 2lb projectile weight

**37mm Oldsmobile M9 autocannon:** 30 rd magazine, 125rpm, muzzle velocity 2000 fps, range 8875 yds

**2 twin 0.50 cal Browning M2 Machine Guns:** belt fed, 550 rpm, muzzle velocity of 2930 fps, max effective range 2500 yds, max range 4.2 miles, air cooled, recoil operated, gun length 61.5 inches, 24 inch barrel, gun weight 84 pounds, 710 gr. FMJ bullet, powder charge 235 grains. Weight of 100 rds of linked M2 ball in ammunition can is approximately 35#

**2 M4 20mm Oerlikon cannons:** 60 rd cap mag, 480rpm, muzzle velocity 2740 fps, range 5500 yards, 8.5 oz round weight

**4 Mk13 Aircraft Torpedoes:** (600# warhead) 22.5 inch diameter, 13' 6" long, 33.5 knot speed, weight 2216#, range 6300yds (~3.5 miles) filled with 2800 psi air, grain alcohol and water to run a steam turbine turning gear operated counter rotating propellers. Used Mk8 Contact Exploder.

**2 M6 300# TNT depth charges:** Manual depth setting and manual release

**2 Small arms** Thompson .45cal SMG, M1A 0.30cal Carbine

**1-Smoke generator:** 35 gallon refillable, releasing Titanium Tetrachloride gas as a dense white smoke

**US Navy "SO" Type Radar :** This radar was fitted on PT Boats beginning in 1943 and was later replaced towards the end of the war with SJ. Both were 3000 MHz with 50kw pulse, surface search radars made by Raytheon. Approximate range was 25 Nautical Miles. The Navy's use of radar gave us a distinct advantage over the enemy throughout the war.

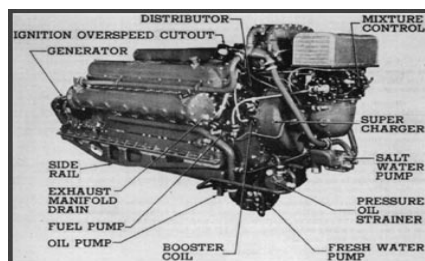
## Endurance

3000 gallons of 100-octane aviation gasoline (AVGAS) is enough to last 12 hours or 520 miles with engine speed limited to 2000 rpm. This works out to about 66 gallons of gasoline *per hour*, per engine at cruising speed of 35 knots. At maximum rpm, achieving 42+ knots, each engine consumes 166 gallons (or 500 gallons for all 3 engines) per hour. (3000 gallons lasts about 6 hours at top speed!) The gasoline is held in four 750 gallon self sealing rubber-lined gas tanks. PT658 had her 2 after gasoline tanks removed, so capacity is cut in half down to only 1500 gallons of gas.

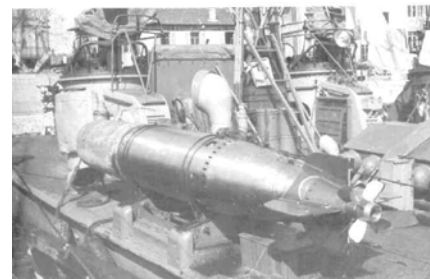
Two of the Packards in the PT658 Engine room



Packard 5M-2500 Engine



Bofors 40mm cannon and crew of 4



Mark 13 Torpedo



37mm M9 Automatic Cannon



Late war 78 ft Higgins PT Boat

Note 5" rocket launchers

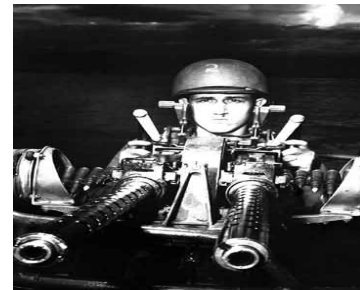


**A Dream Realized** In mid-September 2004. Under clear skies in 70 degree weather, the boat cleared the dock at the Swan Island Naval Training Center at 1300 hours. Bob Hostetter, former PT exec officer, stood at the helm as she headed out for the Willamette River. He later turned over the helm to former PT 231 Skipper, Ed Jepsen. Also by the helm was former PT150 Skipper, Russ Hamacheck. For approximately 45 minutes we patrolled the river, escorted by Portland Fire Boat 6. Aboard the 658 were Save The PT Boat, Inc. crew members and a few Navy visitors. Actually, this was the second trial run for the boat. The first occurred Monday, Aug 30, 2004, for a shorter period of time. Although a few minor problems emerged on both trips, the shakedown cruises were deemed successful. A third trip was taken on 23 Oct 2004, during the PT Boater's Bull Session, when we took 3 groups of 25 people each on the river for 30 minute excursions.

**Save the PT Boat, Inc. P.O. Box 13422, Portland OR 97123**  
website address: [www.savetheptboatinc.com](http://www.savetheptboatinc.com)

In this pamphlet are some interesting facts about the PT658 and of all WWII PT Boats in general

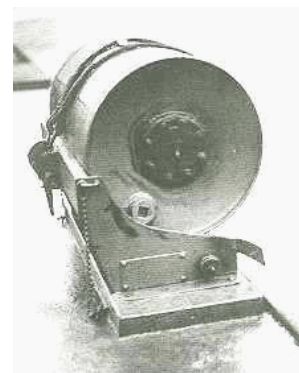
**The 78 Foot Higgins PT** Higgins 78' boats were periodically updated and reconfigured for the missions they were called upon to perform during World War 2. These boats also took on a "gun boat" configuration, rather than their traditional torpedo role, because of the nature of wartime tactics in the Pacific. Many PT boats were given the task of harassing and destroying enemy troop supply barges in shallow waters at night, since our larger destroyers would run aground in the shallow coastal waters. The PT boats became "Barge Busters" with their relentless attacks on the enemy barges used to supply and ferry the enemy from island to island. They were also called upon to support troop landings and downed pilot rescues. Higgins boats played a large role in the Mediterranean, combating enemy shipping; including duels with German E-boats, S-Boats (Schnellbooten) and heavily armored and armed barges known as F-lighters.



Twin 0.50 caliber Browning Machine Guns



20mm Oerlikon Cannon



300 Pound Type C TNT Depth Charge