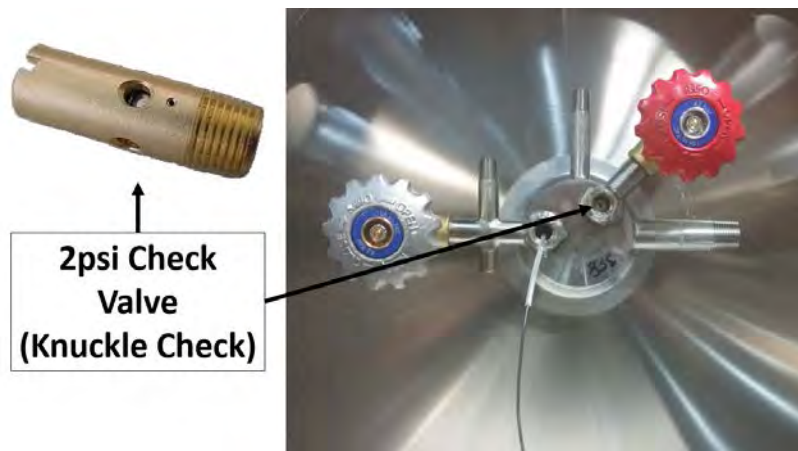
	VT-0053	000	07-17	CWH
	Chart LNG 2psi Check Valve Removal/Replacement (Knuckle Check)			

OVERVIEW

This document outlines the process for removing and replacing a Chart 2psi check valve (PN: 10524262), also known as a knuckle check. Its purpose is to aid the economizer in lowering tank pressure during use and maintaining a proper vapor pressure in the tank. Low engine supply pressure or constant high tank pressures may be indicative of a 2psi check valve issue. Refer to VT-0049 Chart LNG Tank General Troubleshooting.

2psi Check Valve Replacement (Knuckle Check)



TOOLS REQUIRED

- Knuckle Check Removal Tool – PN: 11188766
- Loctite 242 blue
- Nickel-impregnated tape - PN: 11811511
- Flaretite Seals –PN: 11751555
- Leak Detector
- Assorted Wrenches

SAFETY

Proper PPE – gloves, safety goggles, long sleeves, long pants, closed toe shoes, etc.

WARNING: LNG and LNG vapor is near or below -200°F/-129°C. Care must be taken as liquid, vapor, piping, components, and tools can reach cryogenic temperatures and burn exposed skin on contact

This procedure is intended for use by trained technicians with experience on systems using LNG. Review all applicable safety documents before beginning this procedure.



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CWH

Chart LNG 2psi Check Valve Removal/Replacement (Knuckle Check)

REMOVAL/REPLACEMENT

Before removing/replacing the knuckle check it is required to defuel and depressurize the LNG tank prior to attempting repairs. Follow VT-0017 Manually Defueling a Chart LNG Tank. Once the tank has been defueled and depressurized use two wrenches to stabilize and remove the economizer J-tube and the J-tube elbow closest to the red handled valve.




Locate the knuckle check in the port where the elbow was just removed. Note the positioning of the tabs in the knuckle check face. Align the tabs on the removal tool to match the knuckle check and insure they are fully engaged before trying to loosen.

NOTE: Attempting to remove the knuckle check while the tank knuckle is frozen will be difficult, and may damage the knuckle check. To ease removal of the knuckle check it is recommended to allow the knuckle to warm to above freezing prior to removal.

To remove the knuckle check turn the removal tool counter-clockwise.



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INSTALLATION

Clean mounting threads inside the knuckle to insure no debris is present. Before reinserting or replacing the knuckle check, apply a single small drop of Loctite 242 (blue) to the threads of the new knuckle check valve, do not use thread tape. Spread Loctite into threads insuring a good thin thread coverage. Wipe away any excess Loctite. Install the knuckle check onto the tool



Install knuckle check into the knuckle and hand tighten.

NOTE: The knuckle check will only turn a couple of threads into the tank plumbing. **DO NOT OVERTIGHTEN!**



Clean/replace fittings, tape pipe threads per VT-0030, install new Flaretite seals on flared fittings, and reinstall plumbing. Refuel tank and check connections for leaks before returning unit to service.



This procedure is intended for use by trained technicians with experience on systems using LNG. Review all applicable safety documents before beginning this procedure.