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NEW

Haskel Oxygen Booster Pump

Strip down rebuild course - 4 Days

Learn how to use & service a Haskel AGT 15/30 Oxygen booster with 100% oxygen up to 207bars/3,000psi

Then strip it down, rebuild and test it to manufacturer specifications

A new course introduced by popular demand from DITC students to teach the skills necessary to service and repair the Oxygen Booster pumps that support rebreather operations worldwide.

There are more than 10,000 rebreathers now in use, which together with a century of military rebreather use in the world's navies,the use of oxygen high pressure systems in aviation and other industries generates a requirement for technicians with the specialist skills to service these items.

The course covers general maintenance, operation, standards and relevant legislation across all major manufacturer's products.

Haskel Oxygen Booster Pump Academic Development Work (day 1)

- Basic operating principals.
- Types of Booster pumps.
- Operator Instructions for safe usage.
- Air facts drive issues and safe pumping rates for 100% oxygen usage.
- Explosion hazards.
- Single stage Haskel pumps advantages and disadvantages.
- Double stage Haskel pumps advantages and disadvantages.
- Choice of pumping ratio - efficiency versus Bank gas usage.
- Drive gas requirements - the need for large LP compressors.
- Dry lubrication engineering - separation of 'dirty' LP drive gas and pumped HP oxygen.
- Oxygen Service materials and engineering used in the Haskel pump.
- Freezing issues and prevention when operating the unit at low temperatures.
- Calculation of stall pressures.
- Understanding shuttle valve operation. Remote start stop features. Servicing issues.
- Spare parts ordering.
- Manufacturer's product reviews.
- THEORY EXAM.

Haskel Oxygen Booster pump workshop session (day 1)

- Hands on user servicing and run up tests. (all models)
- Pump / 'jam' an oxygen cylinder to 207bars/3,000psi
- Using Haskel double action 26968 block and SITEC GBT15/45 units – differences.
- Scavenging Oxygen Booster pumps – versus 'direct connect' pumps. Practical requirements

Workshop Strip down rebuild session Days (2,3,4)

** Chose from either: - Haskel 26968 Pumping unit or SITEC GBT15/45 pumping unit*

- Remove and replace low pressure drive system. Clean and re-assemble cyclone/water trap debris filter.
- Remove and replace High Pressure Oxygen input and output pipework.
- Remove and replace Plenum intercooler and associated Joule-Thompson cooling pipework.
- Remove and replace cylinder heads.
- Remove and replace cylinder barrels.
- Remove and replace barrel Joule-Thompson cooling jackets.
- Examine cylinder barrels for damage, wear and Oxygen cleanliness.
- Examine Air drive barrel and shuttle valve components for wear.
- Strip down and re-assemble all one way poppet valves in the cylinder heads.
- Strip down and replace both piston head seal packs.
- Strip down and replace piston thrust rod/air drive seal packs.
- Strip down and service end of travel sense valves.
- Proof Test compressor to 225 bars/3,250psi 100% Oxygen to confirm oxygen safety valve functionality and oxygen cleanliness.
- Check unit functionality at 25 psi drive pressure.

Includes:

- ASSET/IDEST approved Haskel Oxygen Booster Pump Maintenance Certification establishing the legal competent person status of the technician to work on these systems
- All student training Manuals used during the course + online access to the ScubaEngineer.com technician database.
- All spare parts & consumables used during the course.
- Free Tea/Coffee and high speed Wi-Fi internet access at the training center.

Pre-requisites:

- Applicant must show proof of Oxygen service technician training (Any agency accepted)

Key Benefits

- Prevents costly damage to the Haskel unit through incorrect use lack of proper maintenance
- Provides proof of formal Haskel pump service & repair training. When a new Booster pump stops working, manufacturers often blame the operator or the owner if the person responsible for the unit has no training. If the Haskel Booster pump operator has formal training and the unit was being maintained and used correctly, the blame for the system failure shifts to the manufacturer, supplier or previous repair agent involved in servicing the unit.