



EMERGENCY GAS SUPPLY (EGS)





KIRBY MORGAN DIVE SYSTEMS INCORPORATED MAINTENANCE AND REPAIR TECHNICIAN TRAINING



- Only selected Dive Lab trained Technicians are authorized to teach the Technicians Course
 - Only Dive Lab authorized Technicians may teach the KMDSI Operator/User Course
 - Course curriculum must be presented within the guidelines set-up in the repair technician's guide and slide show
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EMERGENCY GAS SUPPLY (EGS)



Emergency Gas System consists of:

- Emergency Gas Cylinder attached to a Harness Assembly
- Good quality First Stage Regulator equipped with an over pressure Bleed Valve
- Intermediate gas supply whip that attaches the EGS Valve on the Helmet Side Block





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- Different types of First Stage Regulators
- Adjustable First stage is preferred over a non adjustable
- It is important to always have gas lined up to the First Stage Regulator to keep it from flooding with water





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- Ensure the hydrostatic test date is current
- Hydrostatic test is done at least every five years





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- VIP is done at least annually and/or whenever contamination is suspected





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- Check the maintenance record of the EGS components to ensure first stage maintenance has been completed according to manufacturers recommendations
- Document maintenance in accordance with Mfr. recommendations in appropriate Log
- Types of First Stage Regulators that work best as EGS Regulators and why
- Always have the EGS cylinder on and side block EGS valve shut



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- Check all of the Hoses for signs of blisters, cover slippage, cuts, and abrasions
- Ensure all chaffing gear is removed from LP Whips to accommodate a thorough inspection





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- Replace any Hose(s) that show any signs of damage
- If a quick connect EGS Hose is being used, inspect quick connect and fittings for signs of wear / damage, replace the quick connect if any damage is found



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- If a Submersible Pressure Gauge is being used, verify that the Gauge has been compared with a Gauge of known accuracy within the past six months





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- It is recommended that a Submersible Pressure Gauge is used on all bail out systems
- There is no good excuse no to have one!!





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- Check the over pressure Bleed Valve for proper relief setting
- Purpose of the relief is to protect the Hose in the event the First Stage creeps





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- It is not intended to keep up with a First Stage that has carried away
- Document relief valve setting





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- Over haul relief valve annually
- Several types available
- Some relief valves cannot be serviced or repaired





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- This relief valve cannot be repaired, (it's a throw-away)



- KM relief valve has a repair kit available
- Seat, Spring, and Set screw are placed
- Only replace if defective





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- Most relief valves are set using an allen wrench/hex key





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- Set relief valve pressure (normally 180-190 PSI, 12.4-13.1 BAR)
- Re-set and check the over bottom setting of the First Stage to insure it is within the manufacturers recommendation





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Soft Lift

- Relief valve barely leaks
- Slight hissing can be heard
- HP seat on bailout regulator is leaking

Hard Lift

- Relief valve releasing high volume of gas
- Very loud
- HP seat on regulator has completely failed



RELIEF VALVE TESTING



Soft Lift

Pressure brought up slowly

- Relief valve barely leaks
- Slight hissing can be heard
- Valve normally reseats with a 10-15 psi drop

Hard Lift

Pressure Brought up too fast

- Relief valve releasing high volume of gas
- Very loud
- Valve will not reseat usually until about 75-100 PSI drop



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- All KMDSI Helmets and Band Masks are intended to be used with an emergency supply pressure of between 135-165 psig (9.3-11.4 bar)





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- Perform a leak check of all EGS components and fittings using soapy water while in a pressurized state
- Repair leaks as necessary
- Guidance O&M Manual



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- Inspect the Harness Assembly for signs of wear or damage
- Repair or replace as necessary





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- Need to have the Harness in good condition
- Document inspection of Harness Assembly in notes section of maintenance log





EMERGENCY GAS SUPPLY (EGS) SUMMARY



- First Stage Regulator
 - Cylinder
 - Relief Valve
- Submersible pressure gauge
 - Harness



QUESTIONS

