



Kirby Morgan Dive Systems, Inc.®

1430 Jason Way, Santa Maria, California 93455

Phone: 805/928-7772 Fax: 805/928-0342

www.kirbymorgan.com e-mail: kmdsi@kirbymorgan.com

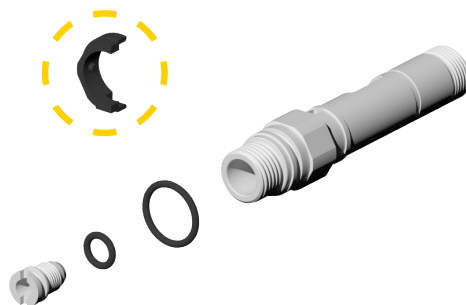
Bulletin #7 of 2025. November 4, 2025

⚠ SAFETY BULLETIN

455 Balanced Regulator P/N 505-455: Required Attention

Products Affected: P/N 505-455 455 Balanced Regulator.

There have been two recent reports of the 455 Balanced Regulator P/N 505-455 failing to supply air on demand at depth, causing divers to switch to steady flow and abort the dive; one was in a training environment and the other in the field. In both cases, when the demand regulator cover was removed, the plastic bearing clip P/N 220-056 was broken. Additionally, through industry communication, we have been informed of broken bearing clips that did not impact the demand regulator's performance.



The location of the P/N 220-056 bearing clip is shown above.

Immediate Action Required: All users should check their 455 Balanced Regulator following the recommendations in this safety bulletin and the new technical guidance provided by Kirby Morgan in the 455 Balanced Regulator (455BAL) module, available under Support > Manuals and BlowAparts.

Testing at Dive Lab has determined that the most likely cause of the clip failure is an excessive gap in the lever arm feet. This excessive gap could result from the lever bending during maintenance. The updated Kirby Morgan service module and Dive Lab technical training courses now stress the importance of maintaining the correct lever arm feet gap and include the revised, standard installation procedure.

If the lever arm's feet gap is too wide, it can exert pressure on the bearing clip and, over time, cause excessive wear. This wear may allow the lever arm's feet to expand enough to detach from the inlet valve. Extensive testing at Dive Lab with the bearing clip removed and the lever arm's feet set to the "proper gap" showed no performance loss or regulator failure. However, testing with the clip removed and the lever arm's leg gap larger than the acceptable range indicated that the inlet valve engagement could be lost.

Action Taken: Kirby Morgan has revised the reassembly procedure for the 455 Balanced Regulator to emphasize the importance of the correct lever arm's feet gap and to include detailed instructions on reassembly and the significance of the lever arm's feet gap. Additionally, the technician training course will follow the modular manual instructions. Kirby Morgan is also creating an online step-by-step video to supplement the 455 Balance Regulator manual module. Dive Lab continues to conduct trials on the 455 Balanced Regulator in their lab, service center, and classroom, providing daily updates on their findings. Over 400 function tests on both correct and incorrect reassembly of the main tubes have been





Kirby Morgan Dive Systems, Inc.®

1430 Jason Way, Santa Maria, California 93455

Phone: 805/928-7772 Fax: 805/928-0342

www.kirbymorgan.com e-mail: kmdsi@kirbymorgan.com

completed and documented by a third-party certified technician.

Ongoing action and investigation into two remaining possible causes:

- Bearing Clip: material review and environmental testing, including chemical exposure
- Ongoing efforts to induce a failure, but we have not yet been able to replicate one
- Updates will follow

Always purchase your Kirby Morgan® products from an authorized Kirby Morgan® dealer. A list of all authorized Kirby Morgan® dealers is available on our website, www.kirbymorgan.com/dealers.

Please contact your authorized KMDSI dealer or e-mail sales@kirbymorgan.com for more information.

