

Pro38 BULLETIN

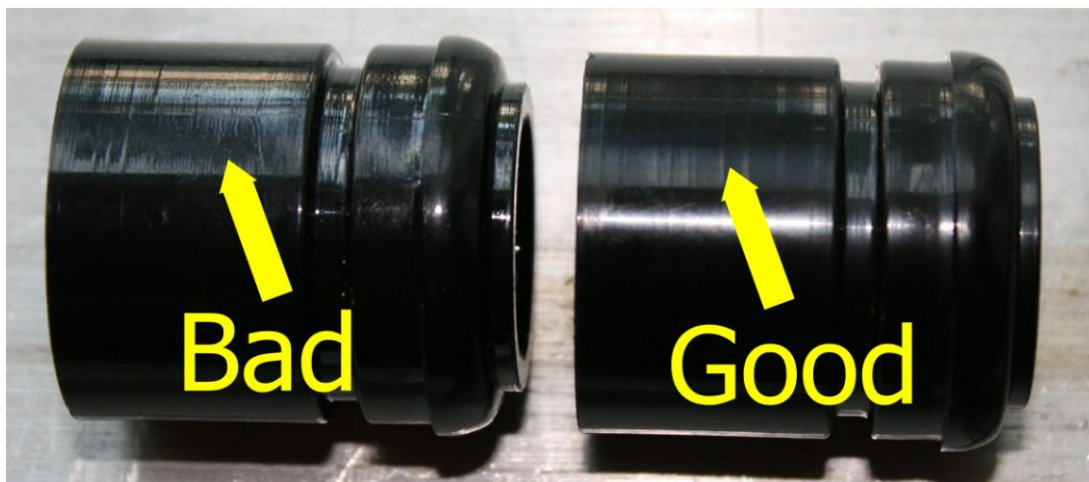
Forward Closure Failures

June 15, 2016

It has been brought to the attention of Cesaroni Technology Inc this past week that there has been a high failure rate on several types of Pro38 motors due to forward closure failures. Upon investigation, the root cause has been identified as a failure from de-bonding between the adhesive/epoxy and the forward closure wall. This adhesive is used to hold the delay grain within forward closure housing, and when a poor bond occurs under pressure this can lead to hot gases tracking through forward closure interface resulting in the failures shown.

With further investigation into the recent cause, our manufacturing records showed that our resin supplier of the material used while injection molding the forward closure housing had accidentally sent one (1) of four (4) box of material which was slightly different. This mislabeled box contained the same material but had an added lubricant/surfactant, which is compounded directly into the resin to promote/enhance flow during the injection molding process. The introduction of this resin lubricant has caused a bonding compatibility issue with the adhesive/epoxy CTI uses during potting of the delay grain within the forward closure assembly. CTI has already discussed this matter with our resin supplier to ensure this does not happen again.

Unfortunately the forward closure housing itself does not have a unique serial date to identify the effected motors. In a side by side comparison between bad & good forward closures it is extremely difficult to visually identify the difference. With a very keen eye, under the proper lighting & reflection conditions there is a tiny difference that can be seen. The surface of the bad forward closures will appear to be slightly "wavy."



Additionally, in a side-by-side comparison the bad forward closures will feel more "slippery" to the touch than the good forward closures. However without a side-by-side comparison this will almost be unnoticeable. Again both of

these indicators/checks of bad forward closures involve VERY subtle difference which will be difficult for people to notice without careful observation.

The forward closure housing itself is a common component amongst all Pro38 reloads and will not be specific to any particular reload, propellant type, or date. Therefore is no easily traceable way to identify the potentially effected forward closure except for establishing the time frame in which the Pro38 reloads were purchased (i.e. assembled) for our dealers. Our records for injection molding production show that the four (4) boxes of resin material in question were used between Oct 22, 2015 to Jan 12, 2016.

From our sales records, the dealers that purchased Pro38 reloads that are "potentially" infected by this issue between those dates are indicated below.

Oct 2, 2015 (Invoice SW1338) - Off We Go	Nov 12, 2015 (Invoice SW1347) - Animal Motor Works
Oct 2, 2015 (Invoice SW1340) - Wildman Rocketry	Dec 3, 2015 (Invoice SW1357) - Performance Hobbies
Nov 3, 2015 (Invoice SW1345) - Australian Rocketry	Dec 14, 2015 (Invoice SW1359) - Wildman Rocketry
Nov 6, 2015 (Invoice SW1346) - Rockets and Things	Jan 5, 2016 (Invoice SW1360) - Chris` Rocket
Oct 23, 2015 (Invoice SW1348) - Wildman Rocketry	Jan 27, 2016 (Invoice SW1361) - Apogee Components
Nov 18, 2015 (Invoice SW1349) - Rebel Space	Jan 11, 2016 (Invoice SW1362) - Animal Motor Works
Nov 4, 2016 (Invoice SW1351) - Good Luck Rocketry	Jan 29, 2016 (Invoice SW1371) - Animal Motor Works

Again not all of these ProX reloads will necessarily have faulty/bad forward closures. However CTI understands the work & effort the HPR community places into their model rockets and how devastating it can be if a failure occurs. As such to rectify this issue CTI will supply all of the listed dealers with replacement forward closures. Any HPR customer who believes they may have a "potentially" affected forward closure can contact their ProX dealer where they purchased the reload. The dealer will provide at no cost the replacement forward closure. Please identify to your dealer in advance the exact reload model number to receive the appropriate forward closure/delay module. Please dispose of the faulty forward closure/delay module as outline in the instructions and SDS.

We sincerely apologize for any inconvenience or hobby rockets that have been effect by these forward closure. For any hobby rocket failures in flight that occurred as a result of this forward closure issue please follow the regular warranty process by contacting your ProX dealer. The dealers will then provide all the details to CTI so we can ensure you receive the appropriate warranty.

Sincerely,

Cesaroni Technology Inc

2561 Stouffville Road
Gormley, Ontario
L0H 1G0

Phone: 905-887-2370

Fax: 905-887-2375

Web Site: www.cesaroni.net www.pro38.com

