



## **TECHNICAL SERVICE BULLETIN**

**Bulletin Number:** DC-2171

**Date:** 09/10/05

**Affected Model(s):** 84803, 84804, and 94804 Air Motors and Associated PM III Pump Assemblies

**Subject:** 241789 Adapter Failures

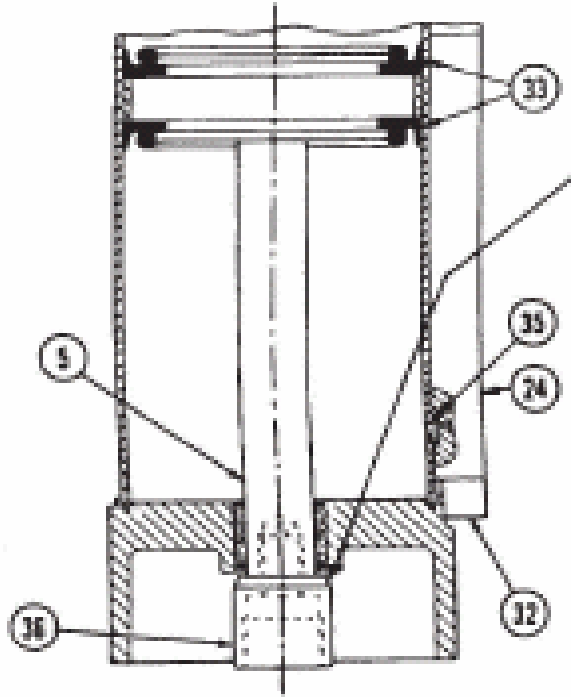
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The 241789 adapter fitting is used to connect the air motor (84803 and 84804) piston rod assembly to the pump tube plunger rod on several of our PowerMaster III pump offerings. Occasionally we hear reports that the fitting is breaking apart for no apparent reason resulting in pump failures. The general consensus has been that the adapter fails most frequently during pump runaway, but failures are not limited to runaways.

Extensive research of the issue by our Quality Assurance and Engineering departments was under taken, and the mutually agreed upon reason for the failures was the lack of recommended Loctite on the male threads that screw into the air motor piston rod assembly. Our best judgment as to what was occurring is that since little or no Loctite was applied to the adapters, they started working themselves loose. At some point, during the pushing and pulling, or up and down strokes, the adapter becomes tilted or off centered and a stress load is induced on the 241789 adapter. This slight misalignment induced on the adapter makes it the weak link between the air motor and pump tube. Due to the cyclic load on the male thread area of the adapter, the throat area of the adapter begins to crack and continues to crack until a total failure occurs.

Assembly procedures in our manufacturing facility have been reviewed and we suspect that in some cases not enough "Loctite 242 Blue" had been applied. More interesting however, is that several failed adapters have been sent in to us for inspection with little or no indication that Loctite was ever applied (factory installed or service replacements). It is imperative that service repair centers use adequate amounts of Loctite 242 on the adapter prior to screwing it into the piston rod assembly. An adequate amount would equate to 2-3 drops around the circumference of the male stud on the adapter. **PLEASE NOTE: There are no recommended torque specifications for tightening the air motor to the pump tube. Follow the instructions in Service Page A50-78.**

During any service repair of the air motor/pump tube assembly, careful attention should be paid to the notation in the service page (see attached "dotted line" depiction).



**-Assemble Adapter to Piston Rod  
-Use Loctite 242 Blue on threads.  
-Torque to 60-65 Ft. Lbs.**

**MODELS 84803 and 84804**

As always, if you have questions or concerns, please do not hesitate to call Lincoln Technical Services at 314/679-4200, Ext. 4782, or fax us at 314/679-HELP (4357).

Regards,

Barry Frankum