### PATTON DIVIDER BLOCK SYSTEMS Pro-Tecting "Your" Compressor

# PATTON'S TRAINING CLASS FOR "OPERATION, MAINTENANCE & TROUBLESHOOTING" COMPRESSOR DIVIDER BLOCK SYSTEMS By Curtis Roys

Due to the lack of recommended maintenance intervals for the compressor divider block systems, the compressor industry continues to struggle with continuous divider block system problems. Unfortunately, most of these problems are never solved due to the lack of knowledge for operation, maintenance and troubleshooting the divider block system. Compressors around the world are having premature wear and failure of no-flow devices which include springs and magnets in DNFTs', ProFlos' and Proximity Switches. To add to these failures, 3<sup>rd</sup> stage rings, rods, packing and cylinders are being replaced at an alarming rate and "There Is A Simple Fix" to correct these failures! Most problems that continue to plague divider block systems are the lack of incorrect components or maintenance intervals for divider block system. When the divider block system is ignored, compressors continue to run with deteriorating divider blocks, lubricator pumps, check valves and outdated lube no-flow devices. Mechanics and compressor operators never set out to intentionally cause the divider block system problems, they simply lack knowledge and the skills needed to correct issues with the divider block system.

Patton's training manual is provided to all attendees and ensures information shared in class is always available to operate, maintain and troubleshoot all divider block systems.

Training class is an in-depth 6 to 8 hour class and ATTENDEES ARE ENCOURAGED SHARE YOUR EXPERIENCE WITH DIVIDER BLOCK SYSTEM PROBLEMS DURING THE CLASS...... & ASK OUESTIONS!

Patton's training class addresses hundreds of problems compressor operators have been asking for years, such as:

- 1. Why do I continue having to replace lube no-flow devices?
- 2. Why should the "Lubricator Box" be cleaned and inspected annually?
- 3. Why should I install a "Low Cracking Pressure Check Valve" at the oil supply source?
- 4. Why should I always have a "Purge/Pre-Lube Gun" available in my tool box?
- 5. Why should I install a "Pressure Regulator" to reduce the oil supply pressure to the lube pump below 20 PSI?
- 6. Why should I install a "Delta-P Non By-Pass Filter" before the lubricator pump?
- 7. Why should I install a reliable "Pressure Relief Device or Atmospheric Rupture Assembly" in the discharge line of the lube pump?
- 8. Why should I install a 10 micron "Stainless Steel High Pressure Filter" with a SS pleated filter element downstream of the lubricator pump?

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- 9. Why should I upgrade the divider block system with a "Reliable Lube No-Flow Shutdown device?"
- 10. Why can't I tighten a divider block to stop it from leaking?
- 11. What is the correct procedure to install divider blocks on the compressor?
- 12. Why should the divider block assembly include "Base Plate Outlet Check Valves?"
- 13. Why should the divider block system include "Reset Pressure Indicators?"
- 14. Why should I have a "Visual Cycle Indicator" on the divider block assembly?
- 15. Why should compressors operating in medium to high pressure applications include "Balancing Valve Assemblies" to equalize the working pressure of each lubrication point?
- 16. Why do I continue having "check valve failures?"
- 17. Why do I have continue having "premature wear and failure of the rings, rods and packing?"
- 18. Why does the rupture disc continue to blowout at compressor startup?
- 19. Why should I control oil consumption?
- 20. What do the numbers and letters on the divider block mean?
- 21. How do I find the lubrication point that's causing the rupture disc to blowout?
- 22. How does a divider block work?
- 23. Why causes spring & magnet breakage and premature failure of DNFTs', Proflos' & Proximity Switches?
- 24. What are the NEVER, NEVER rules for all divider block systems?
- 25. What takes place when air or gas enters the divider block system?
- 26. How does air get into the divider block system?
- 27. How can I tell if my lube pumps are failing?
- 28. Why shouldn't I use degraded oil from the engine crankcase to lubricate rings, rods, cylinders and packing glands?
- 29. Why do springs and magnets continue breaking in my proximity switch?
- 30. What is the first thing I should look at when my compressor goes down on lube no-flow?



- 31. How do I troubleshoot the divider block system when the compressor goes down on lube no-flow?
- 32. How can I eliminate check valve failure?
- 33. Why causes force feed divider block systems to under lubricate cylinders and rod packing?

**NOTE:** A fully functioning force feed system installed on an Ariel JGP-2/3 compressor in the training facility. This enables class attendees to visually see all components of the divider block system as they inject oil into the lubrication points. Remote training classes are available but all manufacturers components available in Patton's Training Center cannot be transported for remote training.

WHAT DIVIDER BLOCK PRODUCTS ARE COVERED IN THIS CLASS? The training class covers all manufacturer's products & questions will be answered concerning problems experienced in the field with any system. As components are discussed, they're passed through the class to each person.

**COST:** Patton's training class is \$800 per person, with a maximum of 15 seats available for each class. We're excited about the prospect of training compressor technicians and engineering on the force feed system and kindly request payment upfront or a valid purchase order to hold a seat for each attendee. Upfront payment allows us to allocate the necessary time and resources to prepare for each class.

**CLASS DATES:** Contact Curtis Roys (432-967-2582) to setup training dates. To streamline our process classes are limited to a minimum of 6 and maximum of 15 attendees.

CLASS TIME: Attendees are requested to arrive by 7:30 am, class begins at 8:00 sharp. This class looks deep into problems and fixes for the divider block systems and can be as little as 6 to 8 hours, but please plan for round table discussions and test after class is completed.

**TEST:** A 25 question multiple choice test will be given at the end of class. Testing helps attendees to retain an acceptable working knowledge of the components and troubleshooting of the compressor force feed system.

**FOOD:** Lunch will be provided and coffee, fruit, muffins, bagels, yogurt etc. and snacks will be available throughout the day.

**LODGING:** Lodging in Fredericksburg Texas should be reserved a couple of weeks in advanced due high occupancy year-round.

#### **CONCLUSION:**

Through the years the compressor industry has lost reliable and proven methods for assembly, testing, operation and installation of compressor divider block systems. Patton's training class provides knowledge needed to properly maintain and troubleshoot these systems. Utilizing videos, animations and hands-on divider block components, attendees learn procedures to assemble, test and install system components correctly. Troubleshooting techniques are covered to ensure mechanics and operators can efficiently determine cause of system failure, how to correct the problem and get the compressor back on-line in a timely manner.

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Although you will be introduced to the latest technology to improve the operation of the divider block system, Patton's training class is not focused on product sales, this class concentrates on procedures and products needed to eliminate continued issues with compressor lube no-flow shutdowns and premature failure of rings, rods, packing and cylinders.

**QUESTION:** How much money does your company lose when a gas compressor is down for 24 hours?

Lost production due to one compressor shutdown caused by no-flow devices, proximity switches, lube pumps, divider blocks or leaking check valves can easily pay for a full divider block system upgrade or replacement.

Full Replacement or Upgrading Any Divider Block System,

"Does Not Cost Your Company Money"

Improvements Pay For Themselves By Eliminating Just One Compressor Shutdown!

#### **CERTIFICATES OF TRAINING:**

Certificates will be given to each person attending class, recognizing their participation & increased knowledge of the force feed divider block system.

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#### EDUCATE YOUR SALES REPRESENTATIVES ON DIVIDER BLOCK SYSTEMS

Educating the Compressor Industry on Divider Block System Components Is Not \Simply Handing A Brochure To An End User, Knowledge Of The Product Is Essential And Extremely Important!

When a sales representative presents a product, they must possess knowledge of the product to educate the end user for specific advantages of any part being presented. When a representative explains the advantages of any product, this helps compressor operators & mechanics understand the need to keep their compressor running. Patton offers specific classes to assist the sales force of Patton's distribution chain or for any company purchasing components for resale. Activities in classes for individuals in sales will include interacting with others to help sales representatives understand how to demonstrate and explain technical aspects and advantages of products to compressor mechanics, operators and engineering.