BULLSEYE
Armored Cycle Indicator

PATTON®
DIVIDER BLOCK SYSTEMS

Manage Lube Oil Consumption
Monitor Divider Block System Performance

"BULLSEYE" Armored Cycle Indicator
Features and Benefits:

MADE IN THE U.S.A
"2 YEAR WARRANTY"

▸ **Chemical Resistance**:
Glass viewing tube, unaffected by chemicals or spray brake cleaner.

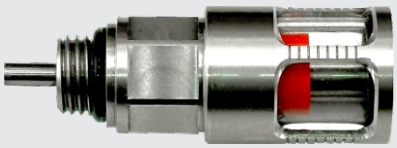
▸**Armored Protection**:
Prevents glass breakage of viewing tube.

▸**Precision Markings**:
Tick marks on shield validate piston travel to observe piston travel & operation.

▸**Diagnostics**:
Red indicator follows movement of divider block piston to identify system issues.

▸**Efficiency**:
Monitor cycle time of divider block assembly, set lube rates to manage lube oil consumption.

▸ **Compatibility**:
Retrofit for Ariel, Graco, Sloan, LSI, and CPI divider block systems.



Part# PLP-BACI

BULLSEYE
Armored Cycle Indicator

PATTON DIVIDER BLOCK SYSTEMS
Pro-Tecting "Your" Compressor

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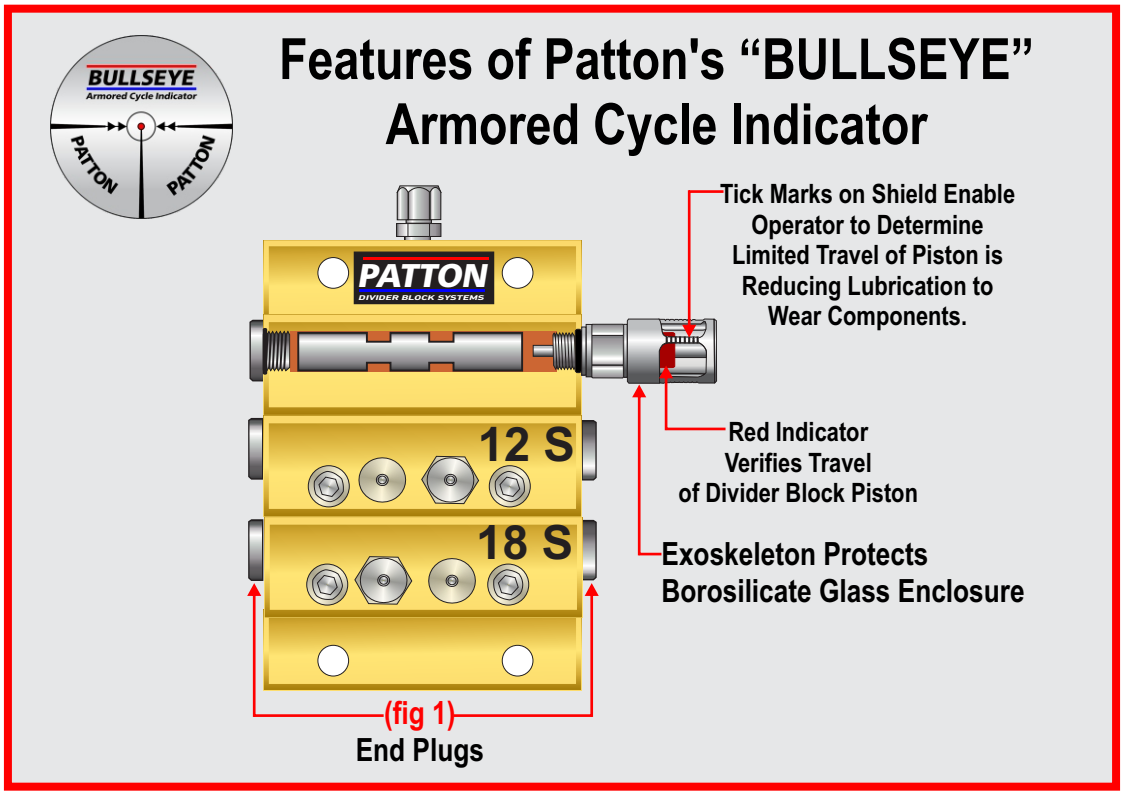
BUILT TANK TOUGH
2-Year Factory Warranty

"BULLSEYE" ARMORED CYCLE INDICATOR

OPERATION:
As oil flows through the divider block assembly, pistons in the divider block travel back and forth forcing oil into ring, rod, packing & cylinder lubrication points. The stainless steel pin is held against the end of piston by pre-loaded spring tension allowing the red indicator to mimic the exact movement of the divider block pistons.

Proper Method to Verify Divider Block Cycle Time & Set Lube Rates:
Watch cycle of the red indicator several times. Using stop watch, cell phone etc., start timing of the indicator, the instant inward movement begins. Indicator will move towards block, then away from block. The instant the indicator begins inward movement a second time, stop timing.



How to Install Cycle Indicator

NOTE: Patton's cycle indicator may be installed in any size divider block.
1) Remove end plug from divider block. **(fig 1)**
2) Ensure o-ring is in place on thread of indicator.
3) Screw indicator into end of divider block. Torque to 15 foot pounds max.
4) After installation assembly to remove air from system.

5) **NOTE:** Patton's "BULLSEYE" indicator is enclosed in Borosilicate glass and protected by a metal exoskeleton. Patton's cycle indicator is not affected by any type of chemicals including brake parts spray cleaner.

HOW TO CHECK CYCLE TIME OF THE DIVIDER BLOCK ASSEMBLY & DETERMINE LUBE OIL CONSUMPTION

NOTE: Suggested cycle time of divider block systems can be determined by contacting the Compressor OEM, or contacting Patton directly. Recommended cycle time for Ariel compressors, is stamped on metal tag on top right of lube box.

Step 1. Watch movement of red indicator moving left to right. (see figures **"B** & **C")**

Step 2. To determine cycle time of divider block assembly, you will need a device that displays in seconds, (watch, cell phone, stop watch etc.).

Step 3. Observe red indicator movement left and right several times, paying attention to the instant the red indicator begins inward movement from farthest outward position. (figure **"B"**)

Step 4. Start timing device the instant indicator begins inward travel towards divider block. (figure **"B"**)

Step 5. Stop timing device the instant cycle indicator reaches the farthest outward movement and begins moving inward towards the divider block a second time. (figure **"D"**)

Repeat steps **3 & 4** three (3) times and average time of 3 cycles to obtain accurate cycle rate of divider block assembly. **NOTE:** Forceful or Erratic movement of the indicator, or extreme differences in cycle time suggests there is an issue with a lube pump, oil supply, leaking check valve, excessive differential pressure of the system or divider block pistons sticking in block. (For tech support call Patton 1-888-788-4402)

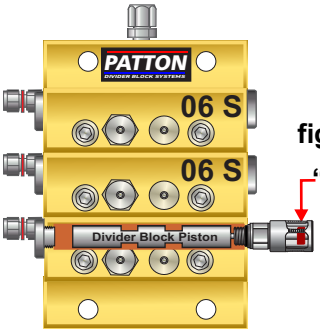


figure "B"

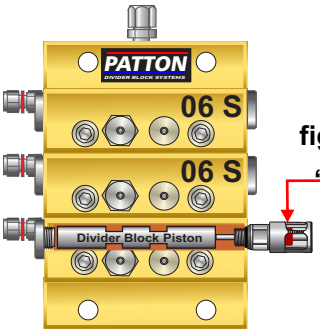


figure "C"

Adjusting lube pumps to obtain recommended lube rates, reduces lube oil waste, valve breakage and ensures compressor wear components are lubricated correctly, protecting rings, rods, packing and cylinders.

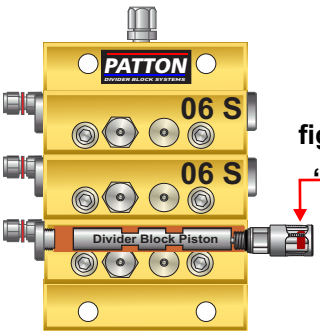


figure "D"

Caution: ***Never change lube rates on any divider block system unless approved by the compressor OEM or person responsible for the system design.***

Notice: Patton's design team can evaluate your current system design and furnish you with appropriate lube rates, for any manufacturers compressor.

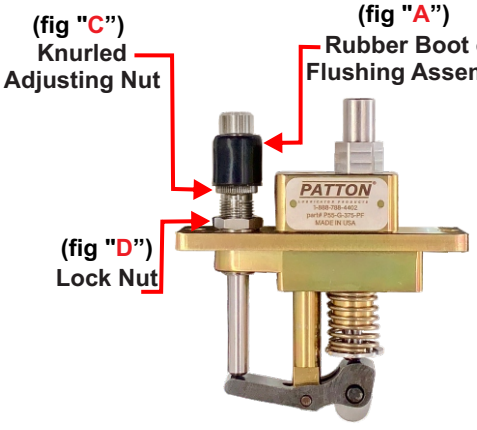
HOW TO ADJUST OIL OUTPUT OF LUBE PUMPS

Step 1: Raise rubber boot on flushing assembly (fig "**A**") & expose knurled adjusting nut (fig "**C**").

Step 2: Loosen lock nut on flushing assembly. (fig "**D**")

Step 3: Rotate adjusting nut on flushing assembly. (fig "**C**")
NOTE: *Clockwise (DOWN) to decrease lube oil output*
NOTE: Counter clockwise (UP) to increase lube oil output.

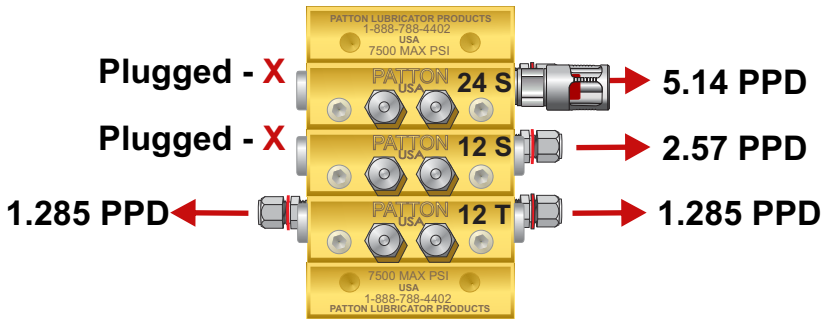
Step 5: When Recommended Divider Block Cycle Time is Established, System is Injecting Suggested Lube Rates, Tighten lock nut on flushing assembly. (fig "**D**")



PATTON DIVIDER BLOCK SYSTEMS
Protecting "Your" Compressor

How Do I Determine Oil Consumption of Divider Block Lubrication Systems?

Step 1. Find cycle time of the divider block assembly. (see page 3)
For this example, we will use **a 28 second cycle time**. You must use actual cycle time of the divider block system to calculate 24 hr. oil consumption in Pints Per Day.



Step 2 Total divider block value is 48 & Cycle time is 28 seconds

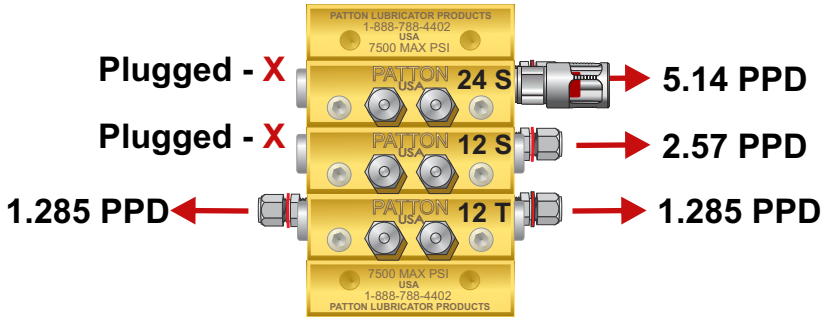
Step 3) Multiply Divider Block Total **48** x **6** = **288**

Step 4) Divide **288** by Divider Block Cycle Time **28** Secs."

Total PPD for this example **= 10.28** Pints Per Day

How Do I Determine What Cycle Time of The Divider Block Should Be If I Know What Oil Consumption Should Be?

EXAMPLE: Suggested oil consumption of system should be **10.28 PPD**.



Step 1) Add the divider blocks together, = 48, & cycle time is 28 Seconds

Step 2) Multiply Divider Block Total **48** x **6** = **288**

Step 3) Divide **288** By The Suggested Pints Per Day **10.28**

Adjust Lube Pump To Reach a **= 28** Second Cycle Time of The Divider Block