RCX Lo-Shok SPM Valve Overview

Sub Plate Mounted (SPM) valves are 3-way, 2-position fluid control valves. SPM valves are used throughout National Oilwell Varco (NOV) control systems to direct hydraulic fluid within hydraulic circuits.

- NOV RCX Lo-Shok SPM valve assemblies have been created to address industry requests for a more robust and reliable valve.
- RCX Lo-Shok SPM valves are direct circuit replacements with matched flow rates. Closing times are not affected.
- RCX Lo-Shok SPM valves utilize improved materials and are designed to reduce hydraulic shock (water hammer). Test data provided on sheet 2.
- RCX Lo-Shok SPM valves must be used with RCX Lo-Shok SPM valve blocks. RCX Lo-Shok SPM valve blocks may be re-machined to NOV specifications. Non-RCX Lo-Shok blocks cannot be re-machined.

RCX Lo-Shok SPM Valve Components







Detail View - A



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| Supply Port - Current SPM -Yellow pod |
|---------------------------------------|
| Work Port - Current SPM -Yellow pod |
| Supply Port - Lo-Shok SPM - Blue pod |
| Work Port - Lo-Shok SPM - Blue pod |



Time (s)

Standard

Time (s)

RCX Lo-Shok





Time (s

RCX Lo-Shok

RCX Lo-Shok SPM Assemblies - Part Number and Description

RCX Lo-Shock

Time (s)

Standard

| · · · · · · · · · · · · · · · · · · · | | | | | | |
|--|--|--|---|--|--|--|
| Valve Configuration | Valve + Block Assembly P/N | Valve Application | Valve Only P/N | Seak Kit P/N | Repair Kit P/N | **Block Only P/N |
| NC (Normally Closed) | 11448757-001 | FRS | 11394478-001 | 11444594-001 | 11444807-001 | 11327183-001 |
| | 11448766-001 | Non-FRS | | | | 11331583-001 |
| NO (Normaly Open) | 11449450-001 | Pod Select | 11395270-001 | 11444594-001 | 11444818-001 | 11398673-001 |
| NCB (Normally Closed Bi-Directional) | 16562565-001 | Stack Mounted (Accumulator isolation) | 11394477-001 | 11444594-001 | 11444813-001 | 16557295-001 |
| NOPB (Normally Open, Pressure Balanced) | - | *Rigid Conduit Manifold | 11450588-001 | - | - | - |
| | Valve Configuration NC (Normally Closed) NO (Normaly Open) NCB (Normally Closed Bi-Directional) NOPB (Normally Open, Pressure Balanced) | Valve ConfigurationValve + Block Assembly P/NNC (Normally Closed)11448757-001NO (Normaly Open)11448766-001NCB (Normally Closed Bi-Directional)16562565-001NOPB (Normally Open, Pressure Balanced)- | Valve ConfigurationValve + Block Assembly P/NValve ApplicationNC (Normally Closed)11448757-001FRS11448766-001Non-FRSNO (Normaly Open)11449450-001Pod SelectNCB (Normally Closed Bi-Directional)16562565-001Stack Mounted (Accumulator isolation)NOPB (Normally Open, Pressure Balanced)-*Rigid Conduit Manifold | Valve ConfigurationValve + Block Assembly P/NValve ApplicationValve Only P/NNC (Normally Closed)11448757-001FRS11394478-001NO (Normaly Open)11449766-001Non-FRS11395270-001NCB (Normally Closed Bi-Directional)16562565-001Stack Mounted (Accumulator isolation)11394477-001NOPB (Normally Open, Pressure Balanced)-*Rigid Conduit Manifold11450588-001 | Valve ConfigurationValve + Block Assembly P/NValve ApplicationValve Only P/NSeak Kit P/NNC (Normally Closed)11448757-001FRS11394478-0011144594-001NO (Normaly Open)11449766-001Non-FRS11395270-0011144594-001NCB (Normally Closed Bi-Directional)16562565-001Stack Mounted (Accumulator isolation)11394477-00111444594-001NOPB (Normally Open, Pressure Balanced)-*Rigid Conduit Manifold11450588-001- | Valve ConfigurationValve + Block Assembly P/NValve ApplicationValve Only P/NSeak Kit P/NRepair Kit P/NNC (Normally Closed)11448757-001FRS1394478-0011144594-0011144807-001NO (Normaly Open)1144950-001Non-FRS11395270-00111444594-0011144818-001NCB (Normally Closed Bi-Directional)1656256-001Stack Mounted (Accumulator isolation)11394477-00111444594-0011144813-001NOPB (Normally Open, Pressure Balanced)*Rigid Conduit Manifold11450588-001 |

* Rigid Conduit Manifold must be replaced as a unit.

Standard

* For blocks not listed, contact RA-AftermarketUpgrades@nov.com for information and quotations





Shear Block



Time (s

Time (s)

Standard



RCX Lo-Shok SPM - Identifying Block Style



Non-FRS



FRS