



**REPAIR**

**&**

**REFURBISHMENT**

**GBS**  
singapore

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# VALVE REPAIR

**GBS**  
singapore  
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# SCOPE OF REPAIR

## Valve Repair

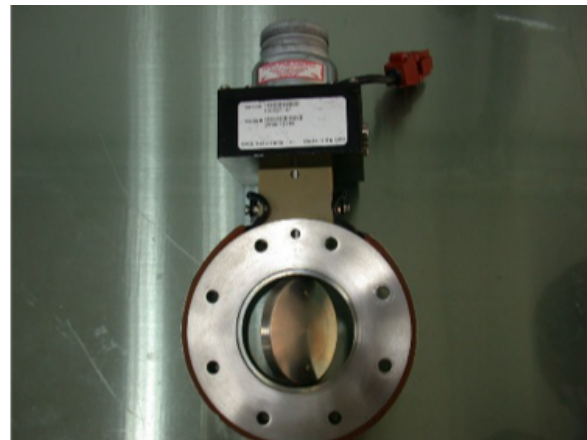
- Level 1 : Replace consumable items and defected items
- Level 2 : Level 1 + Replace possible worn out items  
(Enhanced repair)
- Level 3 : Full Refurbishment

Warranty: Lv1 3Month, Lv2 6Month, Lv3 1year

# VALVES OVERHAUL



VAT Gate Valve O/H



MKS Throttle Valve Overhaul



SMC Gate Valve O/H



200 Cylinder Slit Valve



300 Cylinder Slit Valve O/H

# MKS THROTTLE VALVE OVERHAUL

## Repair Model :

All MKS Type 253 and 683B Throttle Valve

## Model :

683B-23421  
253B-15186

## Normal Defect Condition :

1. Pressure can't servo or servo unstable
2. Valve jammed
3. Valve lose control
4. Valve can't reach initial position



ASM



ASM E-10



Novellus



Producer



RTP



Producer SE



# MKS THROTTLE VALVE OVERHAUL



Gear Assembly Damaged



Gear Damaged



Slip Plate Damaged



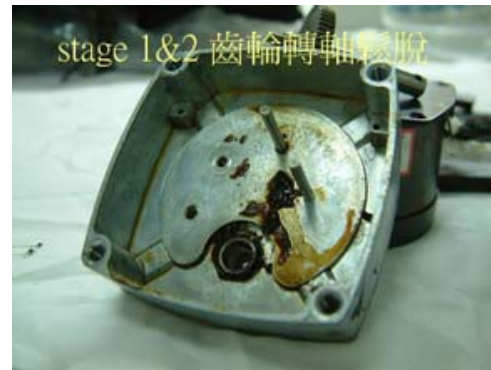
Slip Plate Damaged



Motor Gear & Bushing damaged



Gear Bushing Damaged



Gear Box Damaged



Shaft Damaged

# VAT GATE VALVE OVERHAUL

Disassembled & Assembled



# VACUUM VALVE REPAIR

## Repair Range

1. Gate Valve
2. Isolation Valve (Angle Valve )
  - a. MKS (HPS)
  - b. MDC
  - c. Nor-cal
  - d. IKC (IREA KOKEN)
  - e. SMC
  - f. VAT





# VACUUM VALVE REPAIR



MKS Valve



MKS Valve



Nor-Cal Valve



IKC Valve



SMC Valve



MDC Valve

# VALVE BELLOW UNIT



Matrix Applied Provide Valve  
Bellow for MKS (HPS) Valve  
Size : from NW25 to NW80

# VALVE OVERHAUL, SCV



Angle type



In-Line Type

Valve Assembly, SCV  
Valve (VEP Valve)



Cylinder assembly



Valve Housing assembly





# VALVE OVERHAUL, SCV



Cylinder & Spring Housing



Cylinder



Piston



Shaft & Bellow Screw



Fix Screws



Internal Heater & T/C

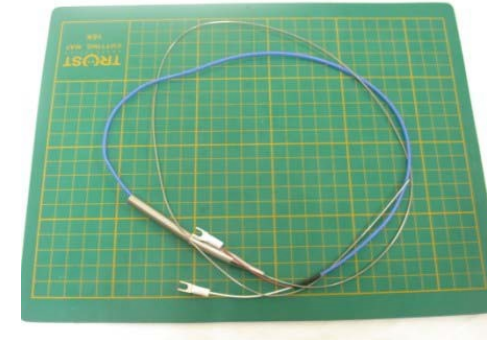


# VALVE OVERHAUL, SCV

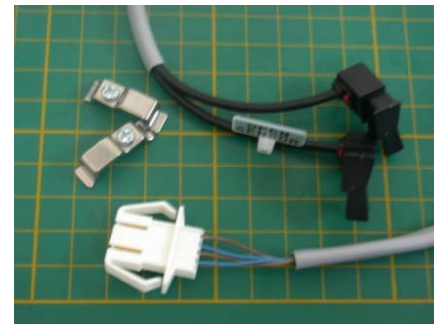
## Disassembly



Valve Bellow & Cylinder Seal



Internal T/C



Position Sensor



Thermal Switch I

## Repair Details

Replace Parts : Valve Bellow , Seals , Cylinder Seals , Thermal Switch

Repair Parts (Option ) : Internal T/C , Internal Heater, External T/C & Heater, Position Sensor

# VALVE OVERHAUL, SCV

## Test:

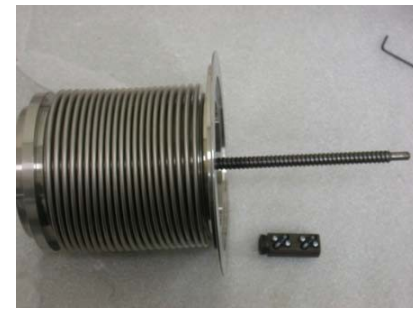
1. Vacuum Leak Test
2. Operation Test
3. Position Sensor Test
4. T/C Test
5. Heater Function Test



# THROTTLE ISOLATION VALVE REPAIR

## Repair Details:

- Valve Bellow Replace
- Screw Shaft Repair
- Ball Screw Repair
- Motor inspection
- All of parts clean
- Function Test
- Vacuum Leak Test



# Valve Repair

## Repairable Products

### ▪ SMC

- ✓ XLA-25
- ✓ XLDQ-40/50
- ✓ 3D80-001037-12
- ✓ XYD-63D-M9PA
- ✓ 60-254066-00
- ✓ XGT300

### ▪ AMAT

- ✓ 0010-20021/20664
- ✓ 0020-20345
- ✓ 0010-22609
- ✓ 0010-34370/35105
- ✓ 0010-70322/76392
- ✓ 0010-76428
- ✓ 61234-KAGQ-BFS1

### ▪ VAT

- ✓ 26428-KA01
- ✓ 26340-QA21-AGY1
- ✓ 62028-KE18-AAI3
- ✓ 62034-KA18-1006
- ✓ 02010-BA24
- ✓ 03109-NA24-AJX1
- ✓ 03012-LA24-0001
- ✓ 02112-BA24-APN1
- ✓ 60-052581-00
- ✓ 0750X-UE24
- ✓ 0310X-CA24-AKK3
- ✓ 10846-UE24-ALK1
- ✓ 10846-XE24
- ✓ 01028-KE14



AMAT Slit Valve (0010-34370)



VAT Slit Valve (03012-LA24-0001)



SMC Angle Valve (XLDQ-50)



# Valve Repair

## Repairable Products

### ▪ MKS

- ✓ UHV-25-AKK-ENVN
- ✓ 99F0065
- ✓ 99B0558
- ✓ E32000463
- ✓ 0190-76185
- ✓ L2-40-SP1
- ✓ LPV1-50-AK-CNVS
- ✓ 99D0654
- ✓ V2-100
- ✓ 11101056
- ✓ J2-100
- ✓ 99E0716
- ✓ 253B
- ✓ 653B

### ▪ SMC

- ✓ XLA-25
- ✓ XLDQ-40
- ✓ 3D80-001037-12
- ✓ XLD-50
- ✓ XYD-63D-M9PA
- ✓ 60-254066-00
- ✓ XGT300

### ▪ Nor-Cal

- ✓ 3870-02019
- ✓ 3870-01212/01215..
- ✓ 3870-01919
- ✓ 3870-01616
- ✓ 3870-01331

### ▪ MDC

- ✓ 3870-01335
- ✓ KAV-150



MKS Throttle Valve (683B-27048)



Nor-Cal Angle Valve (3870-01244)



## QUESTIONS? LET US KNOW!

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