# Industrial Gas Valves:

## GSRPV Adapters

## GSRPV Repair

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**Evergreen Midwest Co.**

**www.evergreenmidwest.com**

# GSRPV Series Adapters

## Two Piece Adapters

**Retractable pin adapters provide maximum operating flexibility to fill or evacuate a cylinder with either a conventional valve or a GSRPV.**

**FAR320R2-SSE**

**FAR580R2-SSE**

**FAR590R2-SSE**

**For use with conventional valve**

**Rotate the pin locking tool clockwise to depress the pin.**

**For use with a GSRPV valve**

**Rotate the pin locking tool counterclockwise to release the pin.**

# GSRPV Series Adapters

## One Piece Adapters

**Adapter features a rigid-mounted pin for use on manifolds dedicated to filling cylinders with Sherwood GSRPV valves.**


| | |
|---|---|
| FAF3202-BNB | FAF5402-BMB |
| FAF320R2-BNB | FAF540R2-BMB |
| FAF3462-SN0 | FAF555R2-BMB |
| FAF3472-SN0 | FAF580RC-BNB |
| FAF3502-BBE | FAF590RC-BNB |
| FAF3502-SN0 | FAF6262-SSV |
| FAF350R2-BBE | FAF6802-SN0 |

# GSRPV Series Adapters

## Checking Rod

**Simply insert the checking rod and push against the resistance of the check valve to check gas cylinder for content integrity. The sound of escaping gas indicates residual cylinder pressure.**

**TL580C**

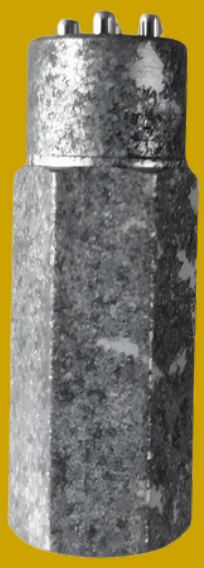
## Pin Locking Tool

**Use with retractable pin adapter.**

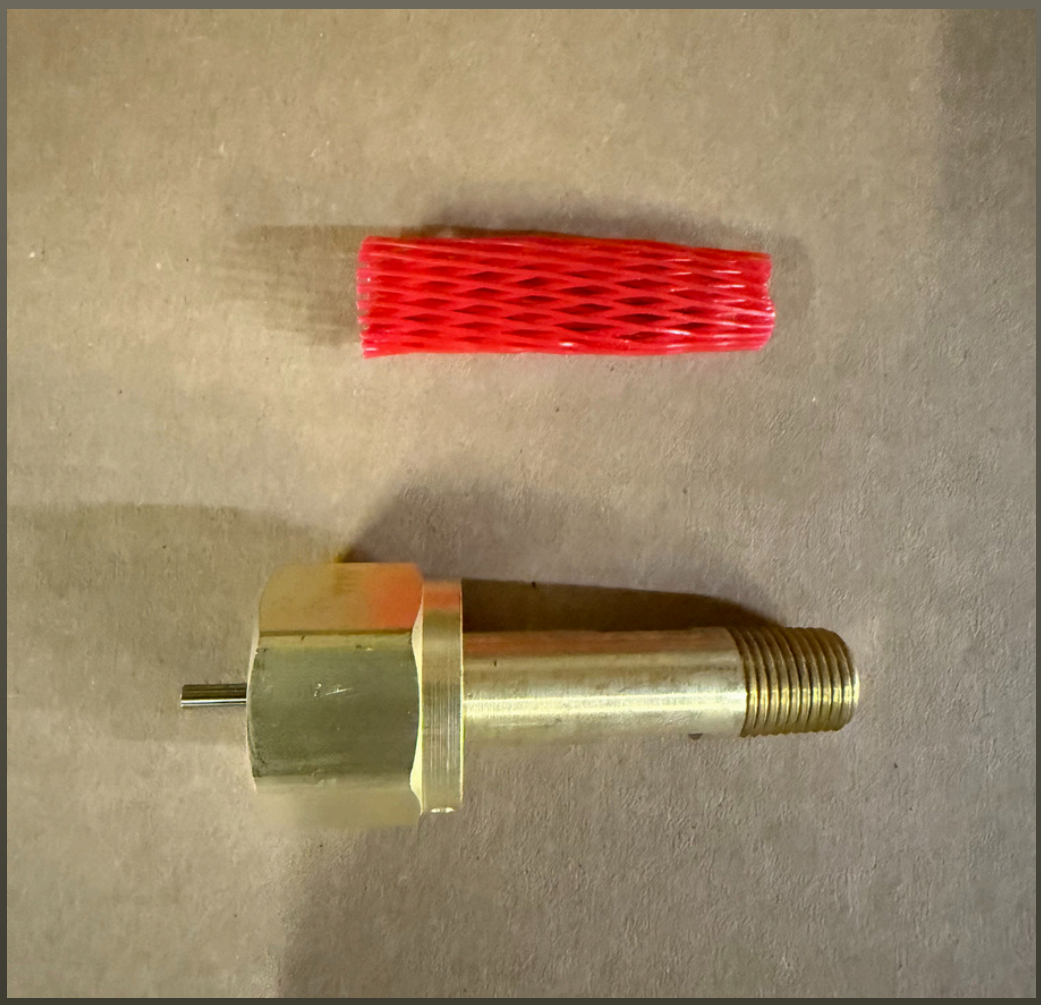
**TL580B**

# GSRPV Series Adapters

| Part | Description |
| --- | --- |
| TL580A-30-R | Rebuild Kit, Includes 25 Plunger & Pin Assemblies |
| TL580SP | Nose Bushing Torque Spanner, Sold Separately |



TL580SP




OXY

# GSRPV Series Adapters

### Nipples + Retractable Pin (Includes Brass Nut)

| Old Part # | Current Part # | Outlet | Inlet | Nipple | Pin | O-Ring | Pin Length Per CGA V1 |
|---|---|---|---|---|---|---|---|
| TLG320SLWC | FAR320R2-SSE | CGA 320 | 1/4" NPT | Stainless Steel | Stainless Steel | EPDM | 1.3 |
| TLG580SLW | FAR580R2-SSE | CGA 580R | 1/4" NPT | Stainless Steel | Stainless Steel | EPDM | 0.83 |
| TLG590SLW | FAR590R2-SSE | CGA 590R | 1/4" NPT | Stainless Steel | Stainless Steel | EPDM | 0.83 |

### Nipples + Fixed Pin (Includes Bass Nut)

| Old Part # | Current Part # | Outlet | Inlet | Nipple | Pin | O-Ring | Pin Length Per CGA V1 |
|---|---|---|---|---|---|---|---|
| TLG320W | FAF3202-BNB | CGA 320 | 1/4" NPT | Brass | Ni Plated Steel | Buna Nitrile | 1.30 |
| TLG320RW | FAF320R2-BNB | CGA 320R | 1/4" NPT | Brass | Ni Plated Steel | Buna Nitrile | 0.45 |
| TLG346S | FAF3462-SN0 | CGA 346 | 1/4" NPT | SS | Ni Plated Steel | None | 1.44 |
| TLG347S | FAF3472-SN0 | CGA 347 | 1/4" NPT | SS | Ni Plated Steel | None | 1.56 |
| TLG350BE | FAF3502-BBE | CGA 350 | 1/4" NPT | Brass | Brass | EPDM | 1.42 |
| TLG350S | FAF3502-SN0 | CGA 350 | 1/4" NPT | SS | Ni Plated Steel | None | 1.42 |
| | FAF350R2-BBE | CGA 350R | 1/4" NPT | Brass | Brass | EPDM | 0.89 |
| TLG540B | FAF5402-BMB | CGA 540 | 1/4" NPT | Brass | Monel | Buna Nitrile | 1.41 |
| TLG540RB | FAF540R2-BMB | CGA 540R | 1/4" NPT | Brass | Monel | Buna Nitrile | 0.94 |
| TLG555RB | FAF555R2-BMB | CGA 555R | 1/4" NPT | Brass | Monel | Buna Nitrile | 0.95 |
| TLG580RD | FAF580RC-BNB | CGA 580R | CGA 580 | Brass | Ni Plated Steel | Buna Nitrile | 0.83 |
| TLG590D | FAF590RC-BNB | CGA 580R | CGA 590 | Brass | Ni Plated Steel | Buna Nitrile | 0.83 |
| | FAF6262-SSV | CGA 626 | 1/4" NPT | SS | SS | Viton | 1.29 |
| TLG680S | FAF6802-SN0 | CGA 680 | 1/4" NPT | SS | Ni Plated Steel | None | 0.94 |

# GSRPV Series Repair

## DISASSEMBLY

- Carefully pace valve assembly into vise or similar. Make sure the grip on valve body is secure so no damage is done to internal bores, external threads, outlet, or PRD.
- Using a 13 mm socket, remove handwheel nut from handwheel by turning it counter-clockwise. Remove handwheel from stem square.
- Using an 11/16" socket wrench or hex box wrench, remove bonnet by turning it counter-clockwise. Stem subassembly may come off with the bonnet. If not, remove it from the valve after removing bonnet.
- Use square drive to remove lower plug from valve chamber by turning it counter-clockwise. Be careful not to scratch bonnet sealing surface in valve body.
- Remove PRD by turning it counter-clockwise with a 5/8" hex box wrench or socket. Be careful not to scratch the sealing surface of valve body.

## INSPECTION

- Inspect valve body chamber for dirt, debris, or damage. Where possible, blow out valve body chamber using clean, dry compressed air or nitrogen.
- If valve body is damaged, do not attempt repair. Order a new valve assembly.
- Always discard bonnet and stem subassembly and lower plug. Order replacement parts.
- NOTE: Lower plug replacement must correspond with valve body and relative application. For ex, standard valves have a .125" or .156" through hole in body, which uses a nylon seat diameter relative to that size, part number 1400-40. Carbon dioxide and manifold valves – except for oxygen – have a .272" through hole in the body and use a relative nylon seat, part number 1400-40A.
- Handwheels should only be reused if in good condition. Discard if damaged.
- Inspect PRD threads for damage. Inspect rupture disc and webbed washer for scratches.
- Discard if damaged, order replacements.

# GSRPV Series Repair

## ASSEMBLY

- Apply three dabs of lubricant around perimeter of lower plug threads (size of pencil eraser for each). Place lubricant toward lowermost threads (closest to crimped seat), but do not get lubricant on nylon seat.
- NOTE: Use Turmoxygen LC027 lubricant for oxygen service. Use Christo-Lube MCG-111 lubricant for all other gas applications.
- Install new lower plug into chamber, seat first, and tighten using a square drive until fully seated. Be careful not to damage bonnet sealing surface in valve body,
- Engage new bonnet and stem subassembly into valve body and hand tighten by turning clockwise. Rotate stem square until engaged in lower plug.
- Use 11/16" hex torque wrench to tighten bonnet to 50-60 ft. lbs.
- NOTE: A properly calibrated torque wrench must be used. Over-torquing will damage bonnet.
- Place handwheel over stem square. Thread handwheel nut to stem thread and tighten to 15-35 in. lbs.
- To ensure free and smooth operation, open and close valve several times.
- NOTE: Refer to CGA S-1.1 latest edition to select correct PRD type, according to cylinder pressure and application.
- Thread the proper PRD to PRD port until hand tight.
- Using a 5/8" socket and calibrated torque wrench, tighten PRD to 25-35 ft. lbs. Over-torquing will damage PRD.

## TESTING

- Thoroughly test each repaired valve assembly by inserting and tightening into a cylinder or suitable test fixture.
- Pressurize valve assembly with an inert gas to the working pressure of cylinder of intended use.
- With outlet suitably plugged, open valve assembly by turning handwheel counter-clockwise. Using leak detection solution or equipment, check bonnet, stem, and PRD for leaks.
- Close valve assembly by turning handwheel clockwise.
- Remove outlet plug and check for seat leakage through outlet using proper leak detection solution or equipment. If any leakage is detected, necessary repairs must be made before use.

# GSRPV Series Parts

A. 1251-6
B. 1919A or 1919L (Lexan)

C. 1500-30-101

D. 1500-40 (Standard)
1500-40A (CO2/Manifold)

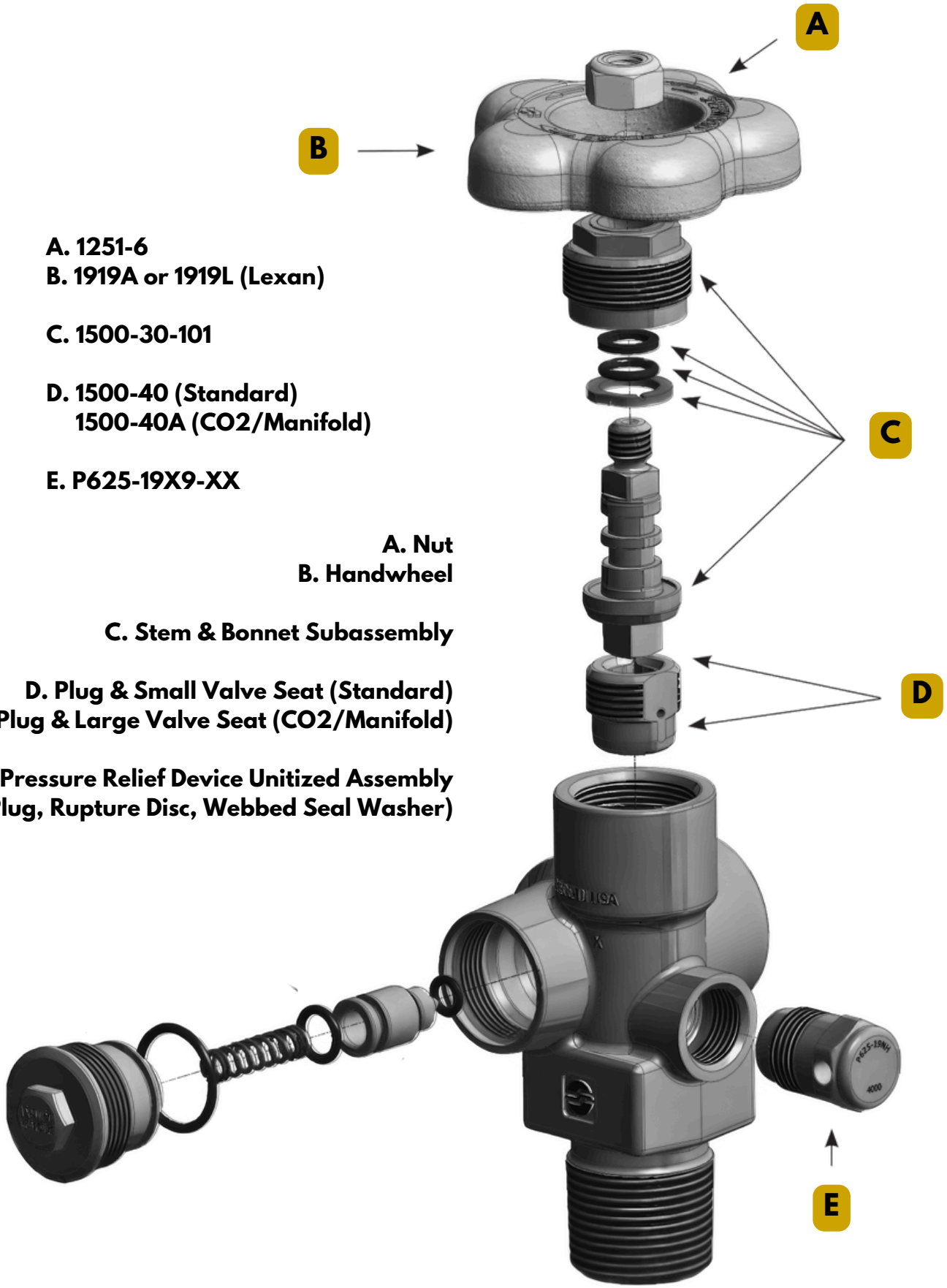
E. P625-19X9-XX

A. Nut
B. Handwheel

C. Stem & Bonnet Subassembly

D. Plug & Small Valve Seat (Standard)
Plug & Large Valve Seat (CO2/Manifold)

E. Pressure Relief Device Unitized Assembly
(Plug, Rupture Disc, Webbed Seal Washer)



Evergreen Midwest Company

Sherwood Master Distributor

Sherwood Preferred Vendor

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