

## Series SDC IOM

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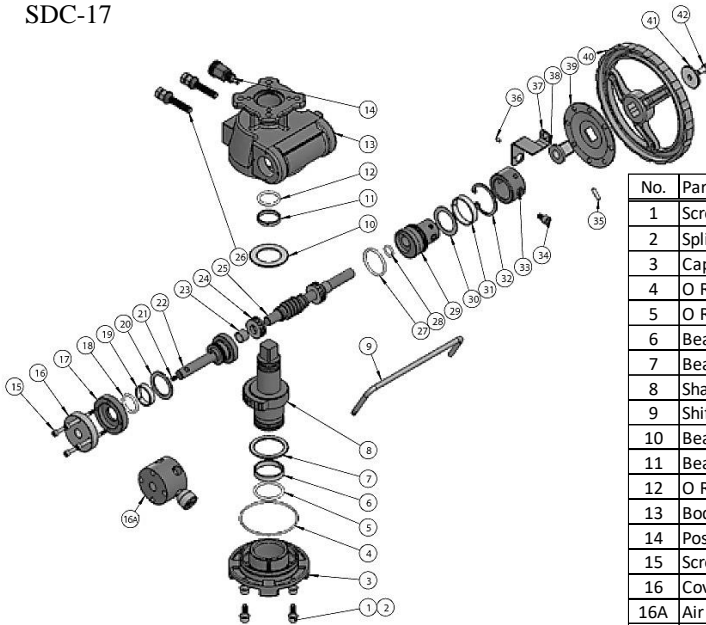
# INSTALLATION, OPERATION AND MAINTENANCE FOR SHARPE® SERIES SDC DECLUTCHABLE MANUAL OVERRIDE



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It is the responsibility of the customer to determine the suitability of ASC-ES products in their particular application.  
Disclaimer: Supplier shall not be liable or responsible for omissions or errors in its bulletin

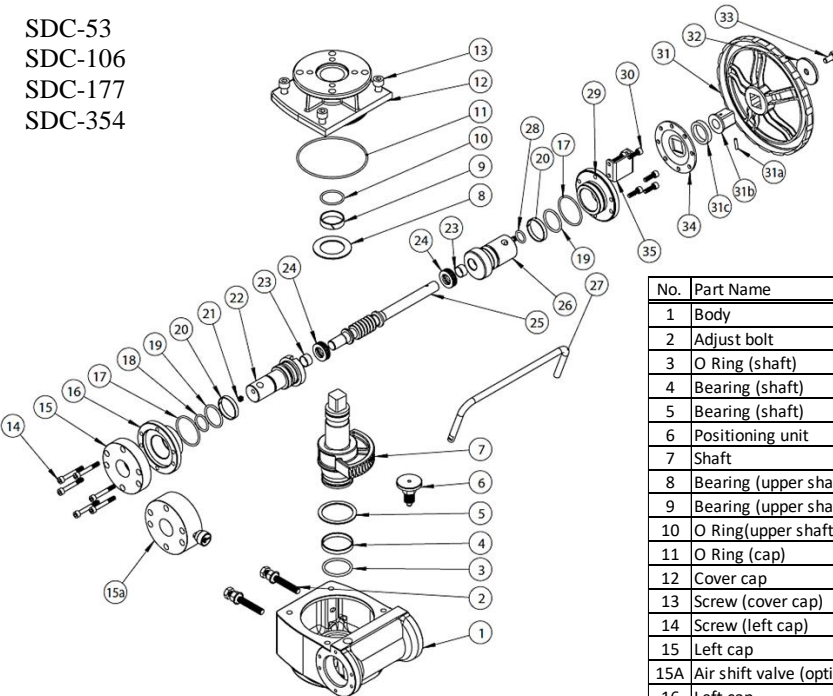
SDC-17



No.	Part Name	Qty	Material
1	Screw	4	304
2	Split washer	4	304
3	Cap	1	WCB
4	O Ring (cap)	1	NBR
5	O Ring (shaft)	1	NBR
6	Bearing (shaft)	1	POM
7	Bearing (shaft)	1	POM
8	Shaft	1	C45
9	Shift handle	1	Steel+Cr
10	Bearing (upper shaft)	1	POM
11	Bearing (upper shaft)	1	POM
12	O Ring (upper shaft)	1	NBR
13	Body	1	WCB
14	Positioning unit	1	AL
15	Screw (left cap)	4	SS304
16	Cover plate (left cap)	1	C45
16A	Air shift valve (optional)	1	AL
17	left cap	1	C45
18	O Ring	1	NBR
19	Bearing	1	POM
20	Bearing	1	POM
21	Bolt	2	SS304

No.	Part Name	Qty	Material
22	Left Eccentric half axle	1	C45
23	Bearing	2	Steel+PTFE
24	Thrust ball bearing	2	Steel
25	Worm shaft	1	C45
26	Adjust bolt	2	SS304+NBR
27	O Ring (right axle)	1	NBR
28	O Ring	1	NBR
29	Right eccentric half axle	1	C45
30	Bearing (right axle)	1	POM
31	Bearing (right axle)	1	POM
32	Circlip for shaft	1	SS304
33	Right cap	1	C45
34	Screw (right cap)	1	SS304
35	Cylindrical pin	1	C20
36	Cylindrical pin	1	C45
37	Lock bracket	1	C15
38	Adapter sleeve	1	C45
39	Lock disc	1	C15
40	Hand wheel	1	DI/20
41	Flat washer	1	C15
42	Screw	1	SS304

SDC-53  
SDC-106  
SDC-177  
SDC-354



No.	Part Name	Qty	Material
1	Body	1	WCB
2	Adjust bolt	2	SS304&NBR
3	O Ring (shaft)	1	NBR
4	Bearing (shaft)	1	POM
5	Bearing (shaft)	1	POM
6	Positioning unit	1	AL
7	Shaft	1	C45
8	Bearing (upper shaft)	1	POM
9	Bearing (upper shaft)	1	POM
10	O Ring (upper shaft)	1	NBR
11	O Ring (cap)	1	NBR
12	Cover cap	1	WCB
13	Screw (cover cap)	4	SS304
14	Screw (left cap)	6	SS304
15	Left cap	1	C45
15A	Air shift valve (optional)	1	AL
16	Left cap	1	C45
17	O Ring	2	NBR
18	O Ring (left axle)	1	NBR
19	O Ring (left axle)	2	NBR

No.	Part Name	Qty	Material
20	Eccentric axle bearing	2	POM
21	Bolt	1	SS304
22	Left eccentric half axle	1	C45
23	Bearing	2	Steel+PTFE
24	Thrust ball bearing	2	Steel
25	Worm shaft	1	C45
26	Right eccentric half axle	1	C45
27	Shift handle	1	Steel+Cr
28	O Ring (right axle)	1	NBR
29	Right cap	1	C45
30	Screw (right cap)	6	SS304
31	Hand wheel	1	DI/20
31A	Cylindrical pin	1	C20
31B	Adapter sleeve	1	C45
31C	Hand wheel washer	1	Steel+Zn
32	Flat washer	1	C15
33	Bolt	1	SS304
34	Lock disc	1	C15
35	Lock bracket	1	C15

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## INSTALLATION

Sharpe® brand declutchable manual overrides have been designed and engineered to provide long lasting and trouble-free service when used in accordance with the instructions and specifications herein.

### • General

- The following instructions only refer to Sharpe® standard items as described in this document.
- Keep all protective covering in place until the moment of installation. For long term storage keep in a cool dry place away from the weather and humidity.
- The SDC does not physically disconnect the actuator from the valve so parts will not get out of phase.

### • Safety Precautions

- It is suggested that at least the following safety precautions should be taken when handling and installing an SDC. More precautions may be required, refer to your companies safety requirements.
  1. Always wear eye shields
  2. Always wear gloves and overalls
  3. Wear protective footwear
  4. Wear protective headgear
  5. Ensure that running water is easily available
  6. Have suitable fire extinguisher ready if the media is flammable
- Always make sure the SDC is properly sized to accommodate the torque of the valve and actuator that it will be attached to.
- Never use excessive force or a cheater bar on the handwheel to operate it. Doing so may cause damage or bodily harm.
- Always make sure to disengage the SDC when not manually operating the valve assembly. Doing so will allow the actuator to function properly.

## OPERATION

### • Shift handle

- The shift handle is used to engage or disengage the worm shaft from the drive shaft.
  - To move the shift lever you must first lift the blue pin and rotate the handle. If the SDC is equipped with an RV option you will need to push on the arrow pin before you can shift the lever when engaging the clutch.
    - When the handle is up the SDC is engaged and you can operate it with the handwheel.
    - When the handle is down the SDC is disengaged and the actuator will open or close the valve.
      - For actuators that are spring return, you must always return the actuator to the position where the springs are relaxed before you disengage the SDC.

### • Handwheel

- To open the valve rotate the handwheel on SDC counter-clockwise
- To close the valve rotate the handwheel on SDC clockwise.

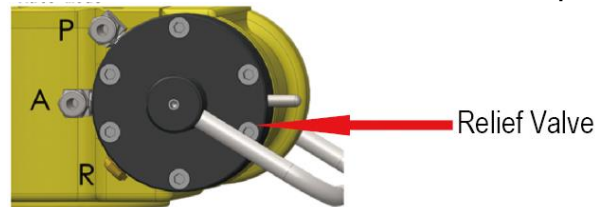
### • Travel Stops

- Setting the travel stops on the SDC is required to ensure that the proper 90° travel is achieved. They limit the travel of the gear which controls how far it rotates.
- The travel stops on the SDC should set while the actuator travel stops are backed out as far as possible.
  - The travel stops on the actuator should not be used to limit the travel or else it may cause damage.
- When facing the SDC and looking at the travel stops the stop on the left controls the open and the one the right controls the close.

### • Relief Valve (option)

- The SDC can be supplied with a Relief Valve (RV) option.
  - This valve is used to relieve the air pressure in the actuator during manual operation.

- The ports on the relief valve are as follows:
  - P = Pressure, Air supply
  - A = Actuator, To the solenoid or actuator supply
  - R = Relief, Vent to exhaust to the atmosphere.



- The air needs to be clean and dry. ASC Engineered Solutions recommends a filter with a 5-micron rating for normal applications.
- Valve assemblies with the SDC can be mounted 45° off of vertical or horizontal. Upside-down mounting is not recommended.

## INSTALLATION

- ASC Engineered Solutions cannot anticipate all of the situations a user may encounter while installing and using the SDC
- The user must know and follow all applicable industry specifications and government regulations for the safe installation and use of these.
- Only qualified personnel or technicians who are trained for maintenance work and have read the instructions are to install these.
- Misapplication of the product may result in injuries or property damage of which ASC Engineered Solutions is not liable for.
- Before installing the SDC make sure the SDC is properly sized to accommodate the torque of the valve and actuator that it will be attached to.
- Verify the bolt patterns match between the valve to SDC and SDC to actuator.
  - If the FO patters are not the same than a bracket and coupler can be supplied.
- Verify the valve, actuator, and SDC are all in the same phase, either open or closed.
- Make sure that all the mating surfaces are clean and do not contain any debris or contaminates.
- Make sure the correct grade of bolts/studs and nut are use that are rated for the torque they will see. Be sure not to use excessive force to tighten the bolts or nuts.

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- Ensure the handwheel orientation will not interfere with the pipe line or collide with the actuator or valve.

## MAINTENANCE

### • General

- Sharpe® brand products are designed to have a long, trouble-free life.
- Periodic cycling of the SDC is suggested to ensure all the internal parts remain in working condition and do not freeze up.
- The SDC comes sealed and pre-lubricated from the supplier so no additional greasing is required under normal working conditions.
- ASC Engineered Solutions does not offer any repair parts for the SDC so if anything breaks or wears out beyond the warranty period replacing the SDC is recommended.