



# INSTALLATION AND SERVICE INSTRUCTIONS

## Super 600 Series Sprinkler

### Introduction

Super 600 Series Sprinklers utilize a permanently sealed and lubricated gear drive assembly for smooth, vibration free performance and dependability. Available in three models: Shrub, 2" Pop-up, and 2" Pop-up Commercial. The Super 600 is designed for residential or commercial applications and works well in problem areas involving low pressure, sandy water, and debris.

The Super 600 Commercial sprinkler has a check valve to prevent drainage from the sprinkler after the water has been shut off. It keeps water in the lines of higher elevation sprinklers and prevents "weeping" from sprinklers in lower elevations. The check valve is effective to 10 feet of elevation drop.

The Super 600 Commercial and the Super 600 Shrub sprinklers feature a locking cap to resist vandalism.

### Specifications

	Super 600	Super 600C	Super 600 Shrub
Inlet Threads	3/4" NPT Female	3/4" NPT Female	3/4" NPT Female
Cap Diameter	3"	3"	---
Body Height	6-1/4"	6-1/4"	7"
Pop-Up to Nozzle	2"	2"	---
Operating Pressure	25 to 50 PSI	25 to 60 PSI	25 to 60 PSI
Maximum Pressure	75 PSI	75 PSI	75 PSI

### Model Numbers / Performance Charts

BODY STYLE	ARC	NOZZLE SIZE	PSI	GPM	RAD	PRECIP. RATE*			BODY STYLE	ARC	NOZZLE SIZE	PSI	GPM	RAD	PRECIP. RATE*				
						90°	180°	360°							90°	180°	360°		
S600	PC	1.3	25	1.20	35'	.36	NOT RECOMMENDED	NOT RECOMMENDED	S600S	PC/FC	3.0	25	2.40	41'	.53	.27	NOT RECOMMENDED		
			30	1.27	37'	.34						30	2.60	42'	.55	.28			
			35	1.36	38'	.34						35	2.80	43'	.56	.28			
			40	1.45	39'	.36						40	3.00	44'	.58	.29			
			45	1.53	39'	.36						45	3.10	45'	.56	.28			
S600	FC	1.3	50	1.61	40'	.36	NOT RECOMMENDED	NOT RECOMMENDED	S600C	FC/FC	3.0	50	3.30	45'	.60	.30	NOT RECOMMENDED		
			25	2.38	41'	.52						.26	25	4.80	38'	1.21		.61	.31
			30	2.56	42'	.52						.26	30	5.20	42'	1.09		.55	.28
			35	2.77	43'	.56						.28	35	5.70	45'	1.03		.52	.26
			40	2.94	44'	.56						.28	40	6.10	47'	1.00		.50	.25
S600	PC	2.5	45	3.14	45'	.56	.28	NOT RECOMMENDED	S600S	PC/FC	6.0	45	6.40	48'	1.01	.51	.25		
			50	3.34	45'	.60	.30					50	6.70	50'	.99	.50	.25		
			25	4.82	38'	1.24	.62					.31	35	6.90†	47'	---	---	---	
			30	5.19	42'	1.08	.54					.27	40	7.50	48'	1.10	.55	.28	
			35	5.69	45'	1.04	.52					.26	45	7.90	50'	1.16	.58	.29	
S600	FC	2.5	40	6.07	47'	1.00	.50	.25	NOT RECOMMENDED	S600C	FC/FC	6.0	50	8.30	52'	1.12	.56	.28	
			45	6.41	48'	1.04	.52	.26					55	8.70	54'	1.08	.54	.27	
			50	6.71	50'	1.00	.50	.25					60	9.10	55'	1.11	.56	.28	
			25	1.20	35'	.36	NOT RECOMMENDED	NOT RECOMMENDED					* Precipitation rates: Triangular spacing, shown in inches per hour, calculated at 55% of diameter. Square spacing, shown in inches per hour, calculated at 50% of diameter. † Not recommended at this pressure without using nozzle stream breaker adjustment screw.						
			30	1.30	37'	.34													
35	1.40	38'	.35																
40	1.50	39'	.36																
45	1.50	39'	.36																
S600S	PC	1.3	50	1.60	40'	.37	NOT RECOMMENDED	NOT RECOMMENDED											
			S600S	FC	1.3	40									1.50	39'	.36		

## Rubber Cover Kit

Attach rubber cover (optional) to sprinkler cap, using Loctite Super Bonder® 414 adhesive (or equivalent) as follows:

1. Assure bonding surfaces are dry and free of dirt, grease, and foreign substances.
2. Spread thin film of adhesive on underside of rubber cap cover and rubber nozzle cover.
3. Assemble immediately. Press retainer plug pins into two (2) holes in nozzle. (See Figure 1 and Parts Breakout.)
4. Apply firm pressure until set (approximately 15 seconds).

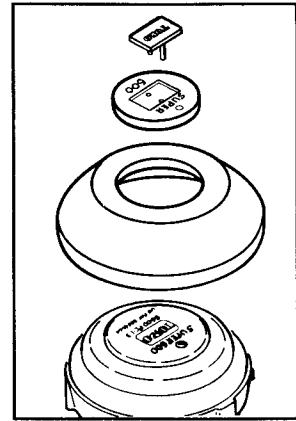


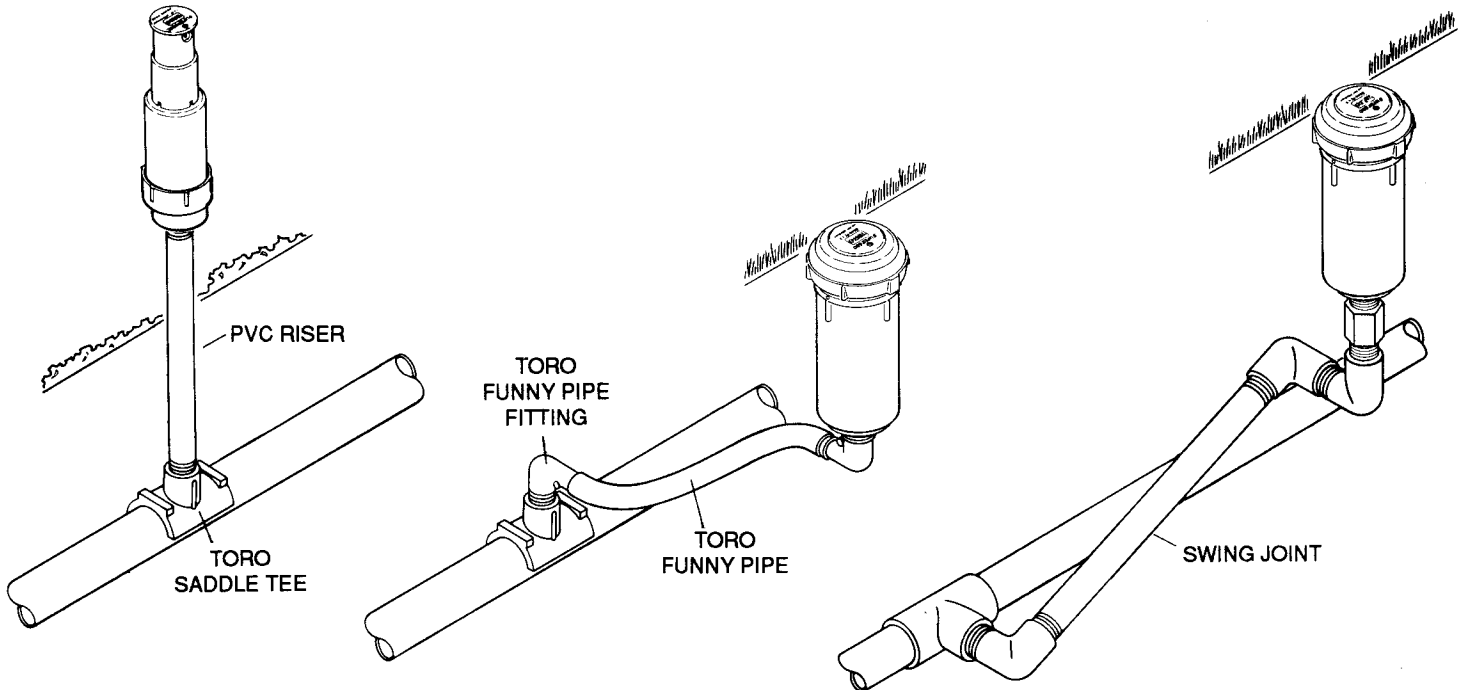
FIGURE 1

## Installation Procedure

The Super 600 Lawn sprinkler should be installed using an adjustable riser method as illustrated below. The adjustable riser permits easier sprinkler positioning and provides protection from damage due to displacement by foot traffic or turf maintenance equipment.

1. Prior to sprinkler head installation, flush lines thoroughly to eliminate all dirt and debris from system.

FIGURE 2



### Caution

Use only teflon tape on threaded connections between body and riser. Deterioration of plastic body may occur if other sealing compound types are used.

2. Install sprinkler using one of three methods illustrated above. Lawn sprinklers are correctly positioned when top of cap is level with finished grade. Rotate nozzles of part circle heads counterclockwise to left stop. Screw sprinkler body onto riser aligning nozzle port with left border of coverage area. Do not over torque, hand tight is sufficient.
3. Turn on water to system.
4. Observe part circle arc patterns and adjust as necessary. (See Part Circle Adjustment.)
5. Observe spray pattern radius and adjust as necessary. (See Spray Radius Adjustment.)

## Part Circle Arc Adjustment

**Note:** Left side of arc is non-adjustable and will change only if sprinkler body is turned on riser. Right side of arc is adjustable to produce a spray arc from 45° minimum to 315° maximum. It is recommended that arc pattern be adjusted during sprinkler operation, however, the Super 600 can be adjusted when not in operation.

1. Turn on water to sprinkler.
2. Rotate nozzle left and right to check arc setting.

**Note:** Do not forcibly turn nozzle. Always turn nozzle in direction of least resistance.

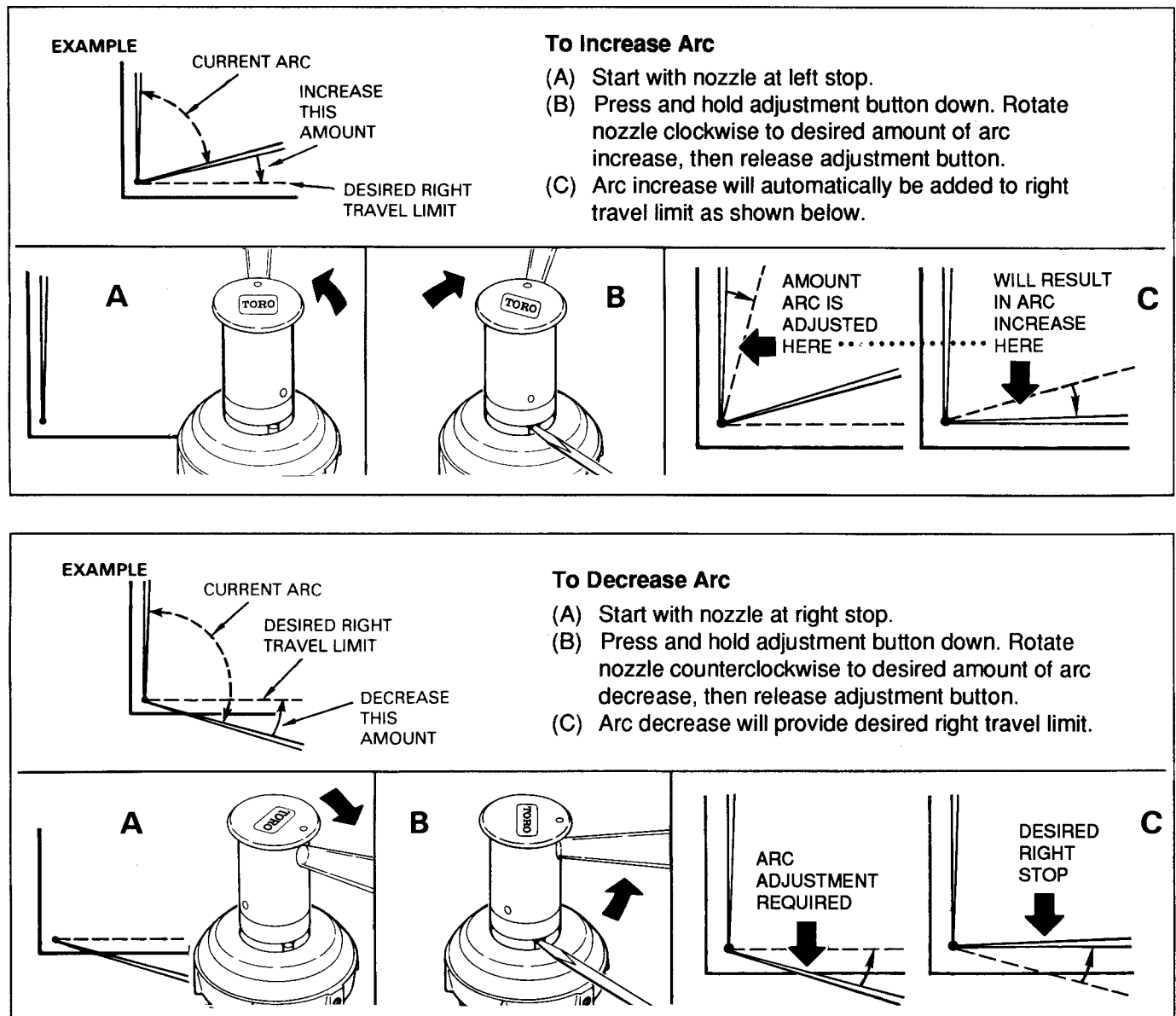
3. Rotate nozzle counterclockwise to left stop. Since left stop is non-adjustable, align spray with left side of watering area by turning sprinkler body in ground.

**Note:** This procedure must be accomplished before increasing or decreasing arc pattern.

4. To increase or decrease arc, follow directions shown in Figure 3.

**Note:** A small screwdriver or similar tool is required to depress adjustment button (located at top of drive assembly) when adjusting arc pattern.

FIGURE 3



## Spray Radius Adjustment

A stream breaker screw, accessible from top of nozzle with a 1/16" hex driver, is provided to shorten radius and/or diffuse spray.

**Note:** To prevent a possible dry area around head when operating at low pressure, adjust stream breaker to slightly diffuse spray.

### Caution

**Stream breaker screw will fall into water stream if decrease adjustment is excessive. Replacement will be necessary.**

### To Decrease Radius

1. Rotate stream breaker screw clockwise. (See Figure 4.)

### To Increase Radius

1. Rotate stream breaker screw counterclockwise. (See Figure 4.)

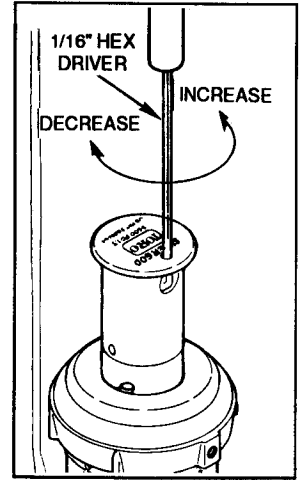


FIGURE 4

## Sprinkler Maintenance and Service

### Cleaning Pop-Up Sprinkler Heads (S600 and S600C)

1. Using 1/16" hex driver, loosen set screw on Locking Cap (S600C Only).
2. Unscrew cap while holding sprinkler body to avoid changing alignment (part circle models).
3. Remove cap, nozzle and drive assembly from body noting nozzle alignment for proper reassembly (part circle models).
4. Remove basket screen and flush thoroughly to eliminate all dirt and debris.
5. Inspect stator and clean thoroughly as required.
6. Reinstall basket screen.
7. Flush body thoroughly prior to reassembly.
8. Reinstall cap, nozzle and drive assembly aligning keyways for proper nozzle position (hand tighten).
9. Tighten set screw on Locking Cap (S600C Only). See **Caution** below.

### Cleaning Shrub Sprinkler Head (S600S)

1. Using 1/16" hex driver, loosen set screw on Locking Cap.
2. While holding cap, unscrew and remove sprinkler body assembly.
3. Using small pliers, grasp basket screen by a support rib and carefully remove from body. Flush screen thoroughly to remove all dirt and debris.
4. Inspect stator and clean thoroughly as required.
5. Reinstall basket screen.
6. Reinstall sprinkler body assembly (hand tighten only).
7. Tighten set screw on Locking Cap. See **Caution** below.
8. Check arc alignment (part circle models only) and adjust as required.

### Caution

**Overtightening set screw in S600C and S600S will cause severe thread damage on sprinkler body and is not required for set screw effectiveness.**

## Changing Nozzles (S600 and S600C)

**Note:** Prior to removal and replacement of nozzle, follow Steps 1 through 4 in section on "Cleaning Pop-Up Sprinkler Heads".

1. Push cap down, compressing return spring to expose set screw in nozzle.
2. Loosen set screw (see Figure 6) and unscrew nozzle from drive assembly.
3. Screw new nozzle onto drive assembly (do not over tighten). Secure nozzle with set screw (do not over tighten).
4. Release cap SLOWLY to avoid injury.

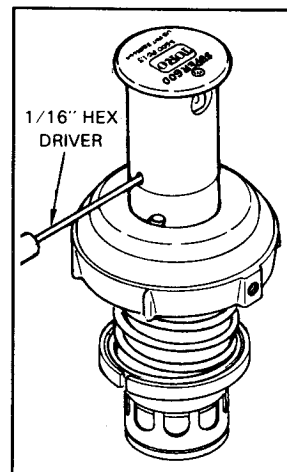
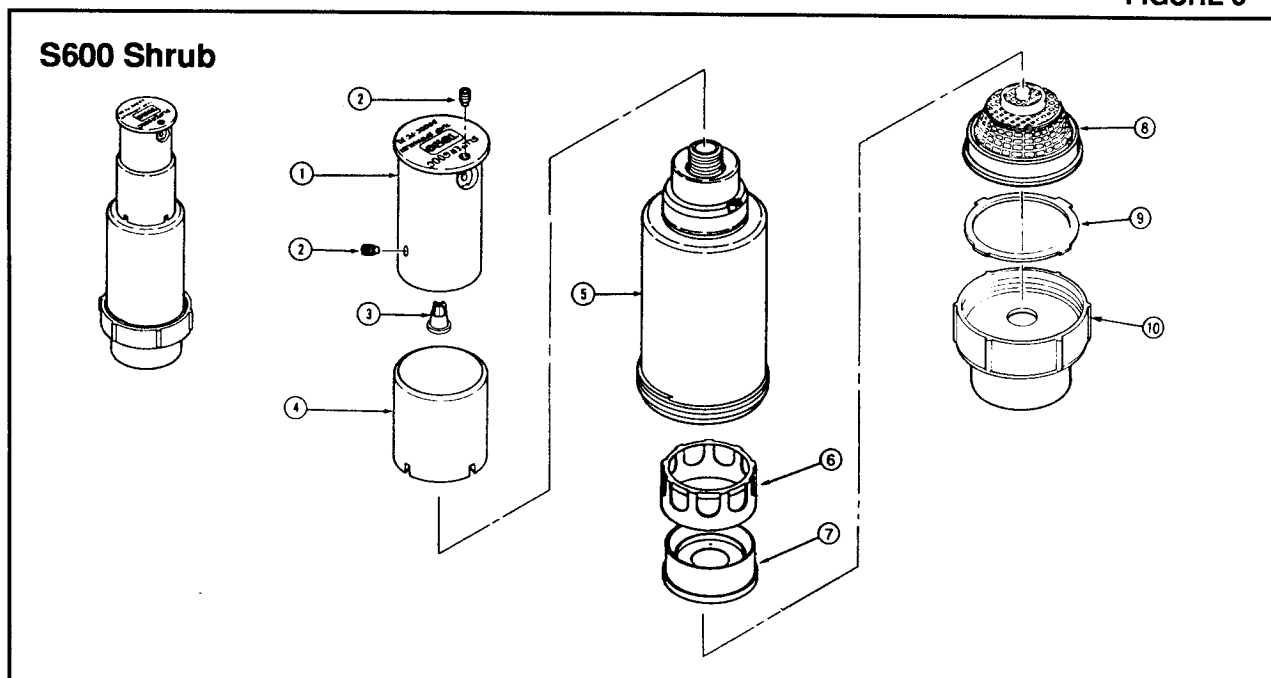


FIGURE 6

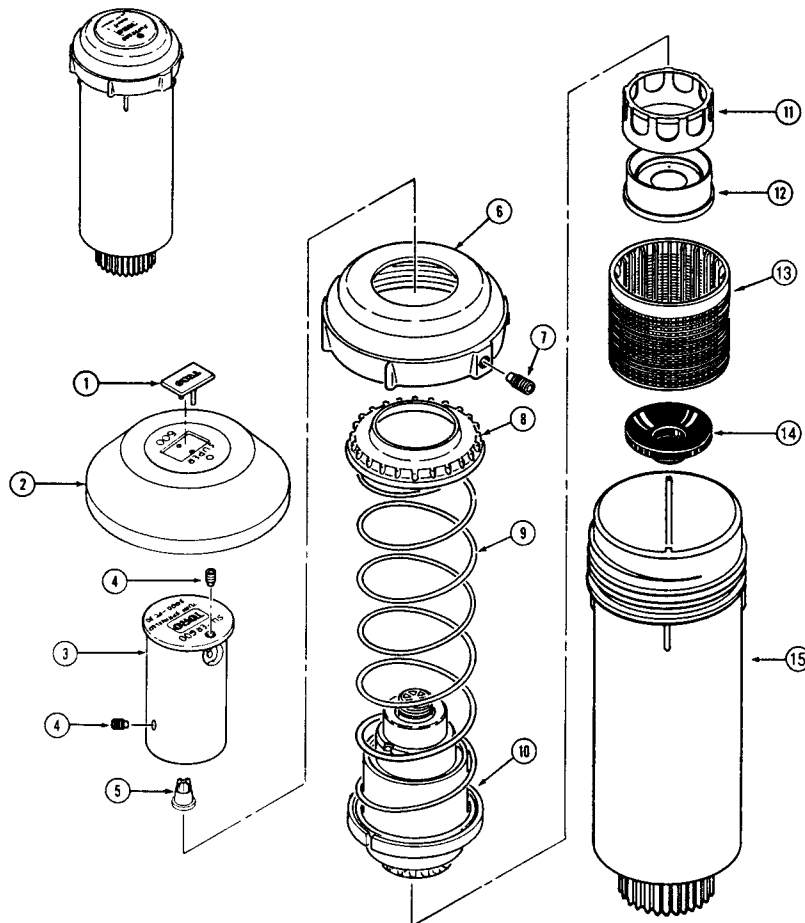
## Changing Nozzle (S600S)

1. To remove nozzle, raise cover to expose set screw in nozzle.
2. Loosen set screw and unscrew nozzle from drive assembly.
3. Screw new nozzle onto drive assembly (do not over tighten). Secure nozzle with set screw (do not overtighten).



Item No.	Part No.	Nomenclature	Quantity Per Assy.
1	35-1213	Nozzle Assy., PC 1.3 (Includes Item 2)	1
1	35-2402	Nozzle Assy., PC 3.0 (Includes Item 2)	1
1	35-2403	Nozzle Assy., PC 6.0 (Includes Item 2)	1
1	35-2404	Nozzle Assy., PC 9.0 (Includes Item 2)	1
1	35-1219	Nozzle Assy., FC 1.3 (Includes Item 2)	1
1	35-2405	Nozzle Assy., FC 3.0 (Includes Item 2)	1
1	35-2406	Nozzle Assy., FC 6.0 (Includes Item 2)	1
1	35-2407	Nozzle Assy., FC 9.0 (Includes Item 2)	1
2	360-0223	Screw, Set, Half Dog Point	2
3	35-2852	Seal, Nozzle	1
4	35-2177	Cover, Vandal Resistant	1
5	35-2433	Body Assy., Part Circle, Adjustable	1
5	35-2628	Body Assy., Full Circle	1
--	35-6323	Stator Assembly, Variable (Includes Items 6 and 7)	1
6	-----	Sleeve, Stator	1
7	-----	Diaphragm, Stator	1
8	35-2175	Screen	1
9	9-5211	Seal	1
10	9-6897	Cap & Insert Assy., 3/4 in. Female	1
		<b>Service Items</b>	
	35-2920	Cap Assy., Locking, 3/4 in.	
	35-2921	Cap Assy., Locking, 1/2 in.	

# S600 and S600C



Item No.	Part No.	Nomenclature	Quantity Per Assy.
1	35-1776	Plug, Retainer	1
2	35-1565	Cover, Rubber	1
3	35-1213	Nozzle Assy., PC 1.3 (Includes Item 4)	1
3	35-1215	Nozzle Assy., PC 2.5 (Includes Item 4)	1
3	35-1217	Nozzle Assy., PC 5.0 (Includes Item 4)	1
3	35-1219	Nozzle Assy., FC 1.3 (Includes Item 4)	1
3	35-1221	Nozzle Assy., FC 2.5 (Includes Item 4)	1
3	35-1223	Nozzle Assy., FC 5.0 (Includes Item 4)	1
4	360-0223	Screw, Set, Half Dog Point	2
5	35-2852	Seal, Nozzle	1
6	9-4394	Cap	1
6	35-1344	Cap Assy., Locking (Includes Item 7)	1
7	360-0223	Screw, Set, Half Dog Point	1
8	9-4395	Seal, Riser	1
9	9-1995	Spring, Retraction	1
10	35-2614	Drive Assy., Full Circle	1
10	35-2613	Drive Assy., Part Circle, Adjustable	1
--	35-6323	Stator Assembly, Variable (Includes Items 11 and 12)	1
11	-----	Sleeve, Stator	1
12	-----	Diaphragm, Stator	1
13	9-1691	Screen	1
14	35-2245	Valve, Check	1
15	9-1661	Body	1
		<b>Service Items</b>	
	600-01	Kit, Cover Rubber (Includes Items 1 & 2 and 6)	
	840-01	Kit, Check Valve (Includes Items 13 & 14)	
N/S	89-0805	Low Flush Seal, S600	