

EFFECTIVE: September 2016

# *American Dish Service*

ADS UPRIGHT DISHWASHER

**MODEL: AF/AFC ES**



3 Door Up Option Shown

# **PARTS MANUAL**

900 Blake Street  
Edwardsville, Kansas 66111  
(913)422-3700

© 9/16

# American Dish Service

The **American Dish Service** part numbers contained in this publication are replacement parts for equipment listed with governmental and regulatory agencies and are specified to maintain the regulatory mark and certification. These parts must only be replaced by those who are trained in the operation and service of commercial dishmachines. Aftermarket parts or modified parts are not compliant or listed with the standards of governmental and regulatory agencies; aftermarket parts are not authorized by ADS for replacement repairs. ADS will not be responsible for any liability if parts are used in the repair of the machine that are not ADS-specified, by those installing non-certified replacement parts or attempts to change the machine's cycle or operation other than as designed and certified. **Read the warnings and cautions provided below before working on or replacing parts on any ADS equipment.**



**DANGER**

The installation of electrical parts contained in this publication require the following precautions:

**The electrical power supplied to this machine is an imminent hazard to life that could result in severe bodily injury or death if not properly installed or connected correctly.** When working in the control box or on electrical parts, always disconnect power and perform the appropriate lock-out/tag-out procedure before servicing. Replace the cover to the control box and other protective covers when finished with servicing this equipment before returning the machine to normal operation.

**LOOSE ELECTRICAL CONNECTIONS:** Damage to the equipment can occur if the following precautions are not observed. Before connecting power to the machine, check all electrical terminals in the control box. Screws can loosen in transit. Loose connections on high amp load terminals such as the pump motor and tank heaters will cause wire burning and component damage during operation and will not be covered under ADS warranty.

**"CLEAN CIRCUIT"** means the electrical circuit breaker for the dishmachine supplies no other outlets, machines, or lights. GFCI outlets are not recommended for commercial dishmachines; ADS recommends that a single-rack machine be installed with the wire connection (hard-wired) directly from the circuit breaker. All high temp and conveyor equipment must be hard wired. If a plug and socket are used to provide electrical power to a dishmachine in a commercial kitchen, then according to electrical code it must be a GFCI, but not all GFCIs are the same. They must be rated for the Amp draw for the designed circuit.

**For Reference: The NEC Article 210.8 regarding GFCI Protection (B) Other Than Dwelling Units (2) Commercial and Institutional Kitchens. All 15 and 20A, 125V receptacles installed in kitchens, even those that do not supply the countertop surface, must be GFCI protected.**



**WARNING**

The chemical feeders and controls contained in this publication require the following precautions:

**READ Manufacturer's Manual before Using this Product. For your safety read and observe all warnings in these instructions.** While performing installation of parts described in this booklet, wear approved Personal Protective Equipment, including chemically resistant gloves and Safety Eye-Wear.

**CHEMICALS:** There are potentially hazardous situations when working with industrial cleaning chemicals for dishmachines. See chemical manufacturer's safe practices and SDS or MSDS sheets for handling and installing chemicals and supply containers.

Chemicals can damage or corrode plumbing and stainless parts of the dishmachine. Do not run chemical lines over controls or plumbing. Always secure chemical lines and check regularly for leaks. **If not properly handled, chemicals can cause serious bodily injury. In the event of chemical contact to skin or eyes; wash immediately with fresh water and seek medical attention.**

**DE-LIMING THE MACHINE: Because of potential hazards resulting from the combination of chlorine with acid solution, only authorized trained individuals must be allowed to de-lime a commercial dishmachine.**

**CONTAINERS:** The ADS chemical delivery system is designed for 5 gallon pails of industrial low-energy chemical products. Always use chemical resistant safety gloves and safety goggles (indirect-vented or non-vented) when changing chemical buckets. Immediately report spills and refer to your chemical suppliers SDS safety data sheet or MSDS material safety data sheet for information if chemical comes in contact with skin or eyes.

Any modifications to the chemical delivery system for smaller containers must include Closed Loop Chemical Containers (spill proof bottles) in a secured racking system. It is the responsibility of the user of the machine to purchase chemicals in spill proof containers. **FAILURE CAN RESULT IN SERIOUS INJURY.** Never place chemicals in open containers or containers that can be easily tipped over when moving or changing product. Failure to do so will void your ADS warranty.

Chemical supplies must be kept in closed delivery containers to avoid spills or contamination. Do not place chemical solutions in open containers or containers that can be easily tipped over in moving or changing.

Do not open the doors while the machine is in operation. Doing so could result in serious bodily injury from spraying hot water and chemicals.



## CAUTION

The door lever arm parts in this publication are installed under spring tension and caution is needed whenever parts are changed. Wear safety glasses when working on the doors and lever. Care should be taken when moving, installing, or replacing any door lever arm parts. Use the ADS lever arm tool to unload the door spring during replacement or adjustment. The spring tension suddenly released can result in pinch or blunt trauma, and puncture wounds. If a wound occurs from the release of spring tension, wash the wound area immediately because of the soils that can accumulate on the metal parts and seek medical attention.

## NOTICE

**BEFORE YOU BEGIN:** American Dish Service provides this information as a service to our customers. **Keep all instructions for future reference.** ADS reserves the right to alter or update this information at any time. Should you desire to make sure that you have the most up-to-date information, we would direct you to the appropriate document on our web site: [www.americandish.com](http://www.americandish.com). **It is your obligation as the customer to ensure that the replacement parts for the machine are installed safely and properly, and when completed, the machine is left in proper and safe working order.** Electrical, Plumbing, and Chemical hookup must be performed by a qualified professional who will ensure that the equipment is installed in accordance with all applicable Codes, Ordinances, and Safety requirements. Failure to follow the installation instructions will void the warranty. **ADS assumes no liability or control over the installation of the equipment or replacement parts. Product failure due to improper installation is not covered under the ADS Warranty.**

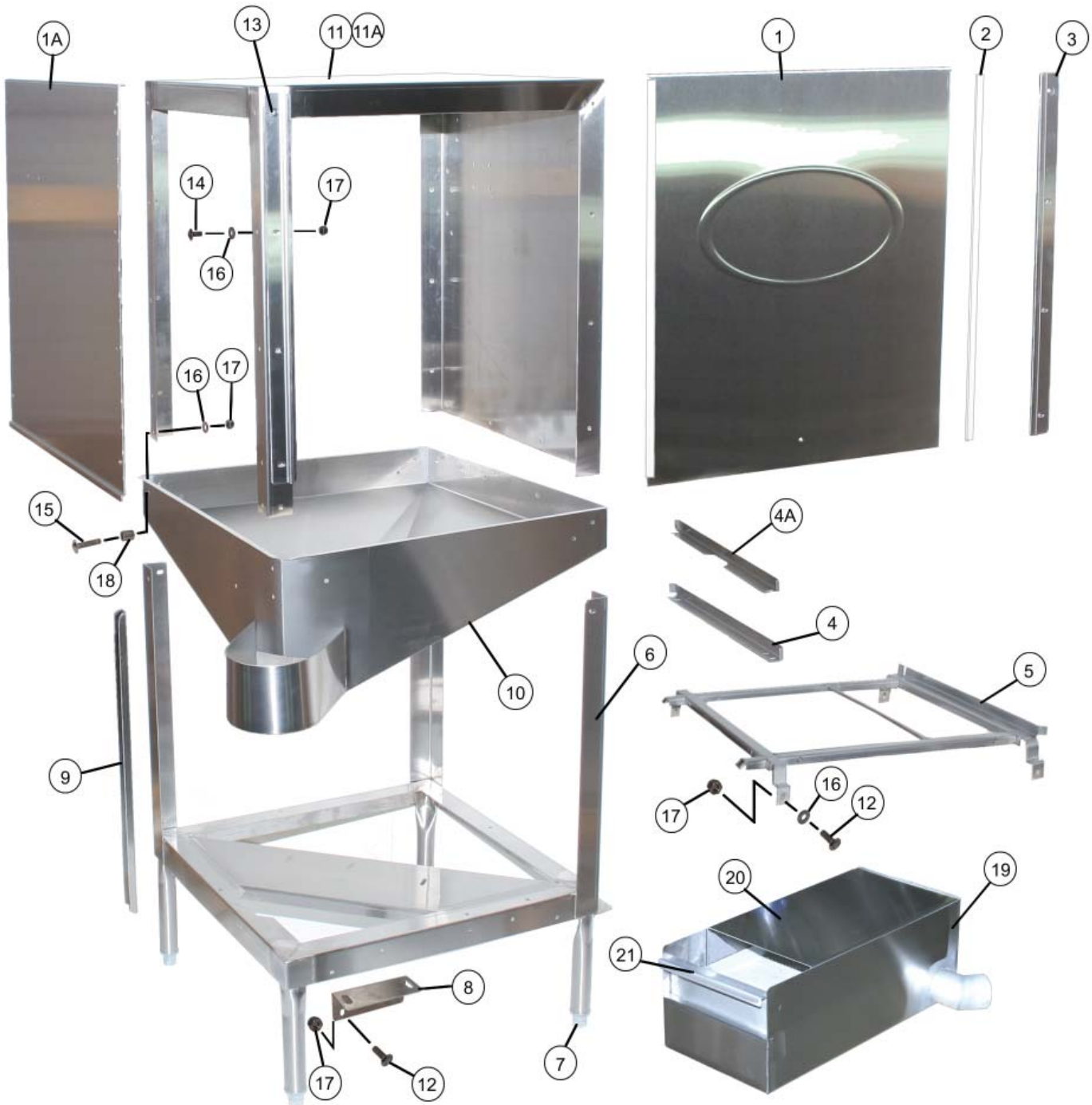
### Plumbing parts:

When working on the water inlet manifold, first relieve the water line pressure by turning off the water supply to the machine then energize the machine's fill valve. By doing this the manifold will empty of water. Turn off the electrical power and lock out/tag out the machine. It will then be safe to open the plumbing inlet manifold.

**TANKLESS WATER HEATERS** have shown to be problematic for commercial dishmachines. It has been the experience of ADS that tankless supply systems require multiple units plumbed in sequence with a recirculation loop to achieve proper pressure and temperature.

**Check with the tankless water heater manufacturer, they may recommend a storage tank to guarantee proper flow and line pressure to the machine. Failure to provide adequate water quantity, pressure and temperature to the machine will cause the machine to function improperly and is not the responsibility of ADS. Improperly installing ADS equipment or parts in this manner could void the warranty. All costs associated with providing an adequate water supply to the machine is the sole responsibility of the user.**

**Drain replacement parts should not be reduced in size, all drain lines should remain the same size as it exits the dishmachine or larger.** If you have questions, call 800-922-2178 or visit our website at [www.AmericanDish.com](http://www.AmericanDish.com)



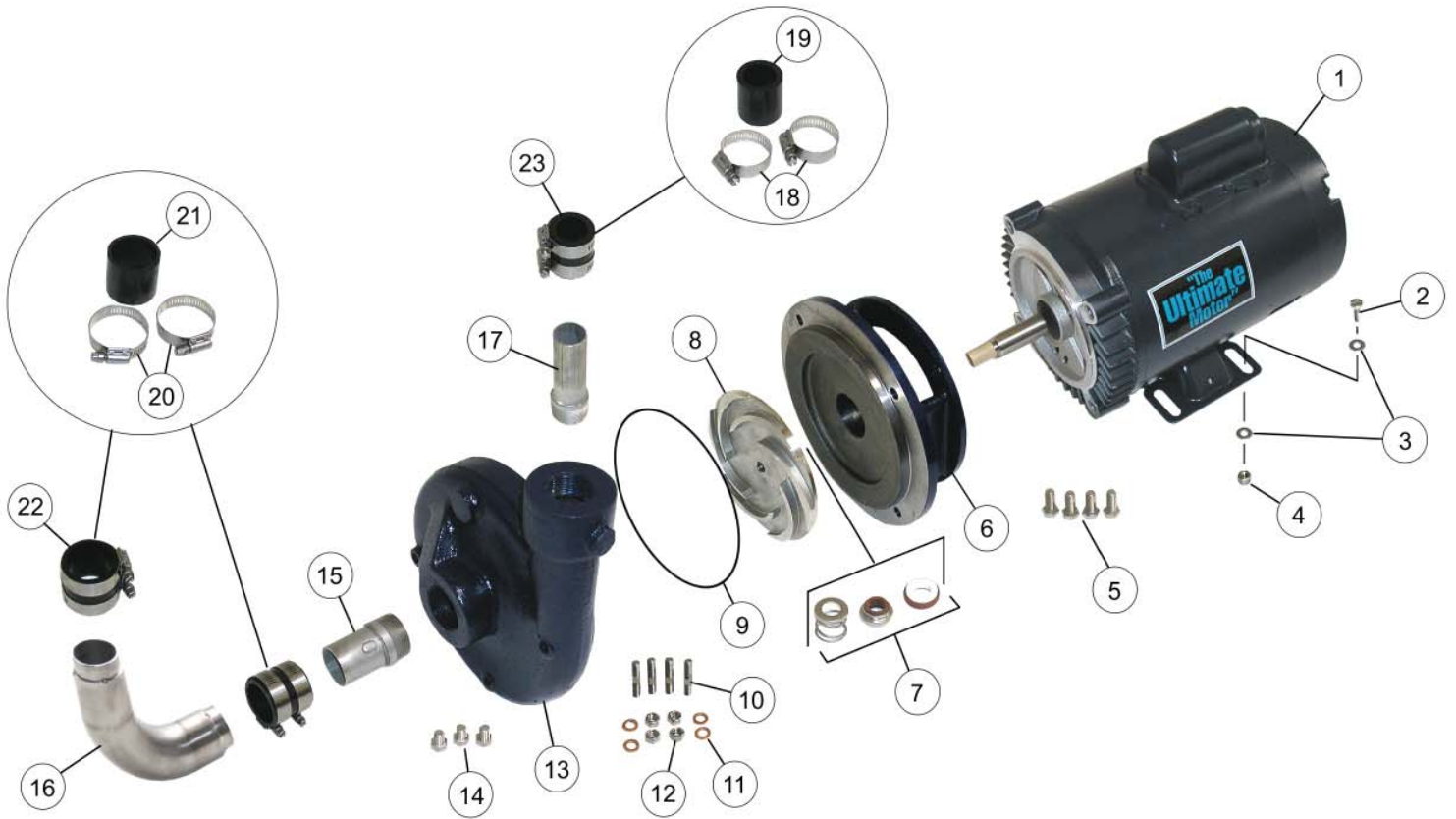
**061-2300 Cabinet Assembly  
AF/AFC ES**

***American Dish Service***

<b>Ref. No.</b>	<b>Part No.</b>	<b>No. Req.</b>	<b>Description</b>
1	087-6116	2	DOOR W/DOOR STRIPS
1A	087-6115	1	DOOR, "DUMMY"
2	083-6108	4	DOOR STRIP, CLEAR
3	087-6114	4	DOOR GUIDE, SS
4	086-6638	1	TRAY TRACK, CONVERSION BAR
4A	086-6683	OPT	TRAY TRACK, CONVERSION BAR, 3 DOOR UP
5	085-6146	1	TRAY TRACK, LESS CONVERSION BAR
6	085-6430	1	FRAME
7	099-1003	4	BULLET FOOT, METAL, (1 1/4")
8	086-6344	1	BRACKET, SCRAP TRAP SUPPORT
9	087-6326	1	BRACE "FRAME", (SUMP SUPPORT)
10	085-6427	1	PAN
11	085-6197	1	HOOD
11A	085-6423	OPT	HOOD, 3 DOOR UP
12	098-1423	34	BOLT, 1/4-20 X 1/2" HH SS
13	098-1414	20	SCREW, 1/4-20 X 1/2" TRUSS HEAD, SS
14	098-1447	4	SCREW, 1/4-20 X 5/8" TRUSS HEAD SS
15	098-1436	2	BOLT, 1/4-20 X 1 1/8" TRUSS HEAD SS
16	098-2416	58	WASHER, 1/4" FLAT SS
17	098-2507	62	NUT, LOCK, 1/4-20, SS, WITH NYLON INSERT
18	384-6118	2	SPACER, BUSHING
19	089-9064	1	SCRAP ACCUMULATOR, SIDE EXIT
20	089-9059	1	LID, "COVER" SCRAP ACCUMULATOR
21	089-9061	1	TRAY, SCRAP ACCUMULATOR
NS	292-1028	1	NO-HUB, 2" PIPE TO PIPE











064-3100  
Control System Assembly  
AF/AFC ES

**American Dish Service**

Ref. No.	Part No.	No. Req.	Description
1	087-6433	1	COVER, CONTROL BOX
2	096-1002	1	LOCK, CONTROL BOX, WITH KEYS
3	099-1004	1	KEY, TIMER ADJUSTMENT
4	087-6431	1	CONTROL BOX END PANEL, LEFT SIDE
5	087-6432	1	CONTROL BOX SHELF
6	091-3060	1	SWITCH, DELIME
7	091-3049	1	COUNTER, ELECTRIC, 110 VOLT
8	091-5033	1	HARNESS, WIRING
9	091-3073	1	TIMER, (7 CAM), 90 SECOND
10	086-6317	1	HANDLE, CONTROL BOX SHELF
11	091-3083	1	CONTACTOR
12	098-2507	5	NUT, LOCK, ¼-20 WITH NYLON INSERT
13	098-1420	1	SCREW, ¼-20 X 1 ¼" TRUSS HEAD SS
14	091-3059	1	RELAY, TIME DELAY, 110 VOLT "AUTO START SWITCH"
15	086-6678	4	HINGE, CONTROL BOX SHELF
16	086-6676	1	LATCH, CONTROL BOX SHELF SAFETY
17	098-2201	18	NUT, LOCK, 8-32 HEX WITH NYLON INSERT
18	098-2404	1	WASHER, ¼" SS FLAT
19	098-1204	25	SCREW, 8-32 X ½" RH SLOTTED SS
20	087-6430	1	CONTROL BOX END PANEL, RIGHT SIDE
21	086-6677	2	CONTROL BOX SHELF SUPPORT BRACKET
22	091-7006	1	LIGHT, INDICATOR
23	091-3001	1	SWITCH, BLACK FILL
24	091-3002	1	SWITCH, RED START
25	064-0032	3	CHEMICAL PUMP ASSEMBLY
26	089-9319	1	DECAL SET
27	087-6700	REP	TUBE, SQUEEZE, NORPRENE
28	098-1606	REP	CLAMP, TUBE, (CHEM. PUMP SQUEEZE TUBES)
29	093-1046	21'	TUBING, CHEMICAL LINE, ¼" RED VINYL
30	093-1045	21'	TUBING, CHEMICAL LINE, ¼" GREEN VINYL
31	093-1044	21'	TUBING, CHEMICAL LINE, ¼" BLUE VINYL
32	091-3009	3	SWITCH, PRIME, MOMENTARY



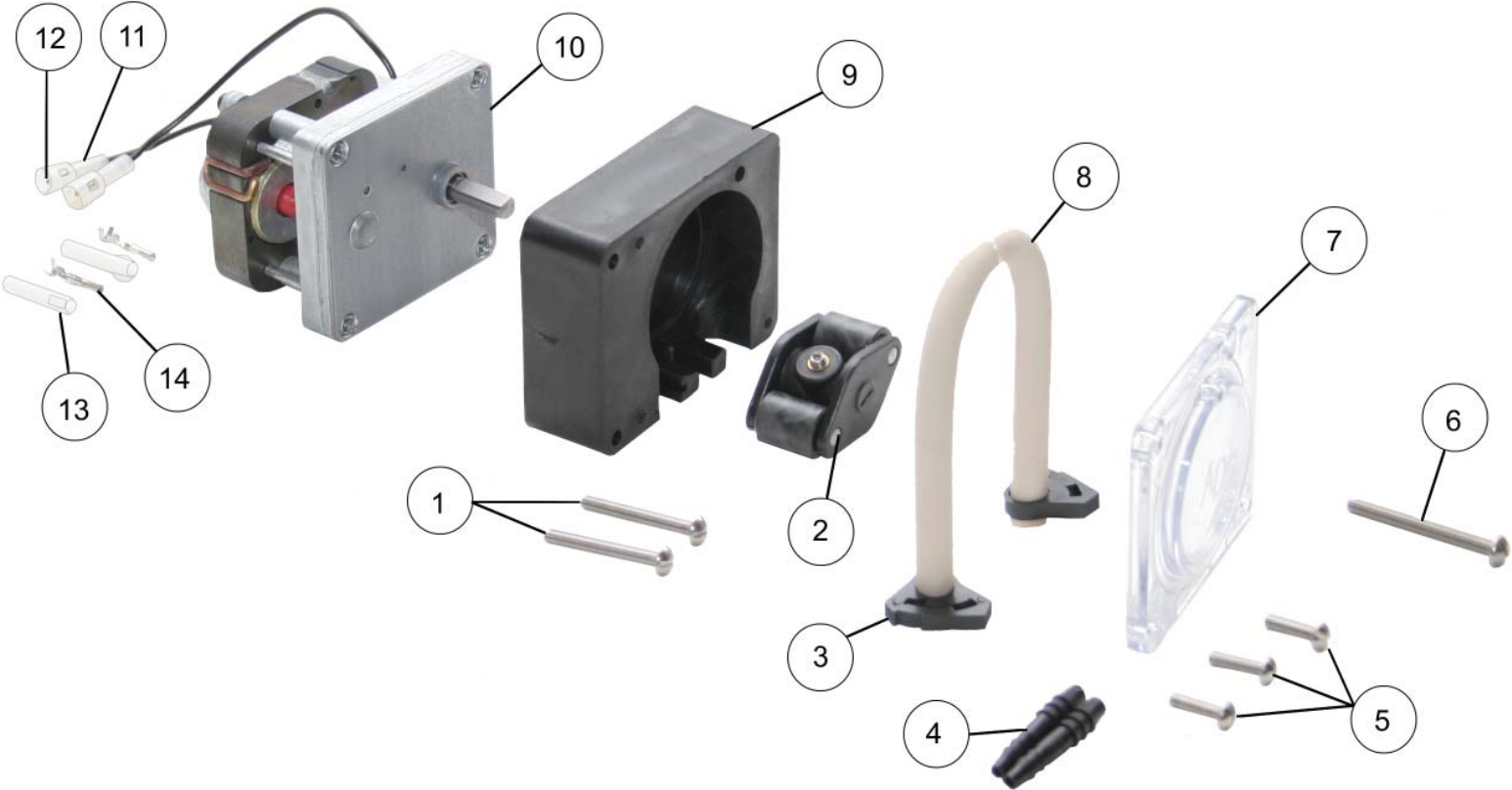
064-3100  
Control System Assembly  
AF/AFC ES

***American Dish Service***

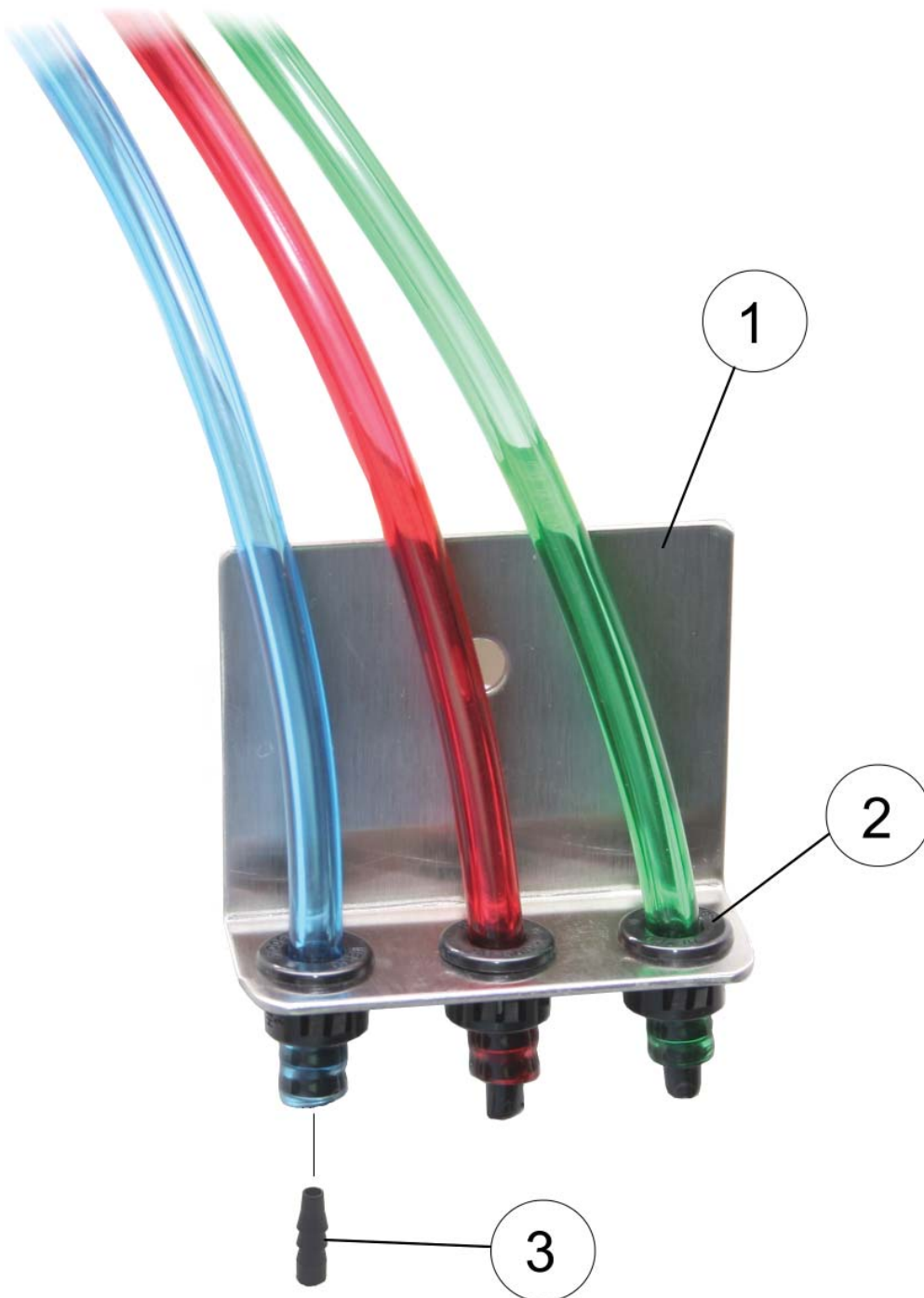
Ref. No.	Part No.	No. Req.	Description
33	087-6429	1	CONTROL BOX BOTTOM
34	091-3008	1	SWITCH, MASTER
35	091-4017	1	GROMMET, 1 5/16" ID
36	091-4002	1	GROMMET, 1/2" ID
37	098-1104	2	SCREW, 6-32 X 1/2" RH SS
38	098-2101	2	NUT, 6-32 HEX SS
39	098-2202	7	NUT, 8-32 HEX SS
40	098-1423	4	BOLT, 1/4-20 X 1/2" HH SS
41	098-1102	4	SCREW, 6-32 X 1/4" RH SLOTTED SS
42	098-9022	3	PLUG, 3/8" PLASTIC, (FITS 1/2" HOLE)
43	092-1030	1	FITTING, PLUMBING, 3/8" COMP. X 1/2" FPT 90 ELBOW
44	091-4144	1	CONDUIT NUT, LOCK
45	092-1029	1	FITTING, PLUMBING, 1/2" X 3/8" REDUCER SS
46	098-9020	2	Plug, 7/8" PLASTIC
47	091-4141	4	CONDUIT FITTING, 1/2" STRAIGHT
NS	091-4142	2	CONDUIT FITTING, 1/2" 90 DEGREE ELBOW
48	091-5156	12.5'	CONDUIT, 1/2" (SOLD BY THE FOOT)
49	091-4019	2	GROMMET, SWITCH HOLE (CHEMICAL ALARM)
50	098-1107	4	SCREW, 4-40 X 1/4" RH SLOTTED SS
51	098-2001	4	NUT, LOCK, 4-40 SS
52	091-4004	1	COVER, JUNCTION BOX
53	091-4016	1	BOX, JUNCTION
54	292-1006	2	NUT, 1/2" FPT
55	292-3003	1	NIPPLE, 1/2" X CLOSE, SS
56	064-0037	1	CHEMICAL FEEDER ASSEMBLY
57	098-1605	3	CLAMP, HOSE 1/2"
58	083-6407	3	TUBE STIFFENER (CHEMICAL CONTAINER-5 GALLON PAILS)
NS	089-0001	1	NAMEPLATE
NS	098-9011	6	RIVET, 1/8" POP
NS	099-4502	1	SWITCH, DOOR CUT-OFF
NS	086-6166	1	BRACKET, DOOR CUT-OFF
NS	098-2416	2	WASHER, 1/4" FLAT SS

064-0032  
Chemical Pump Assembly  
AF/AFC ES

**American Dish Service**



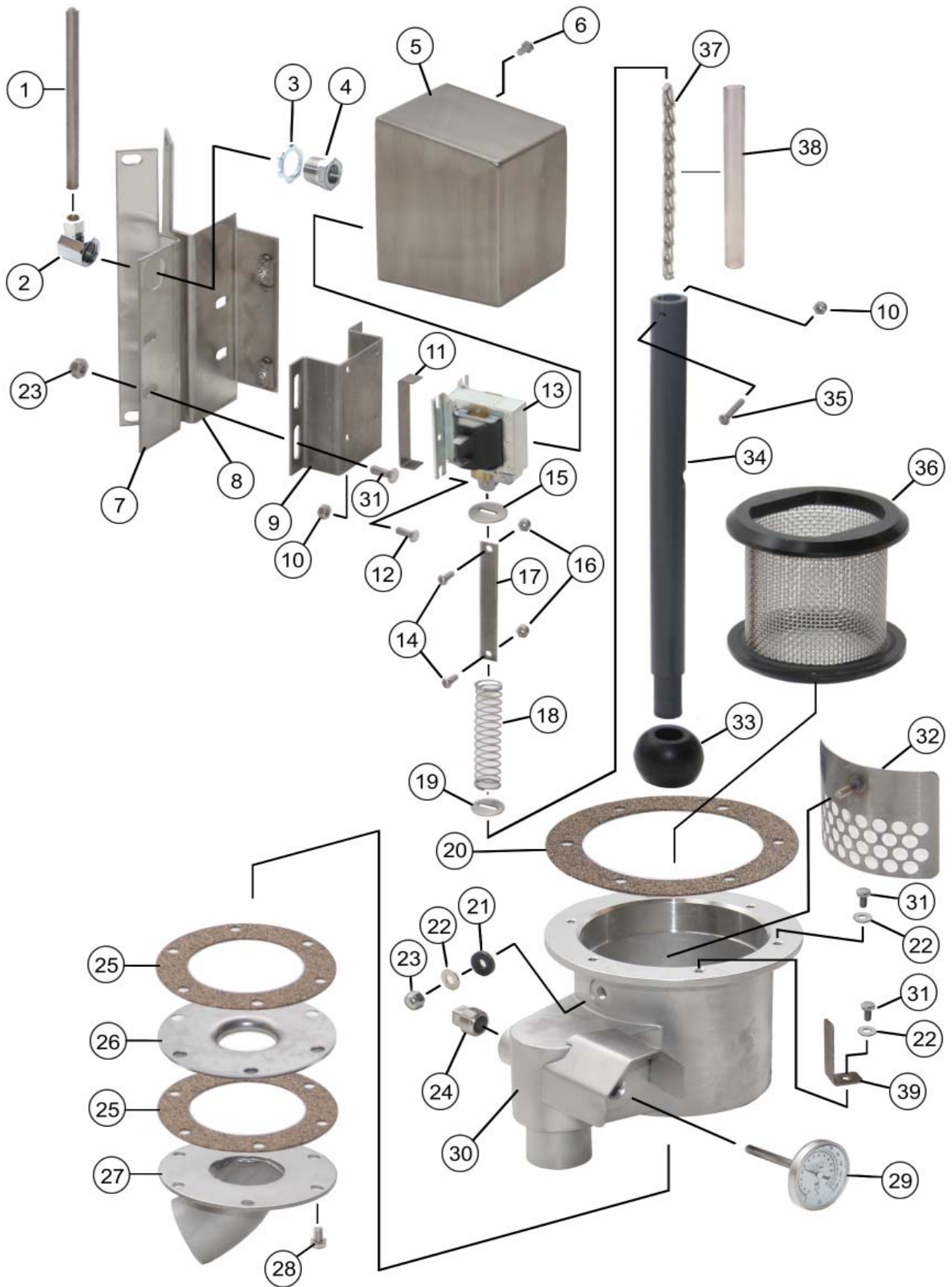








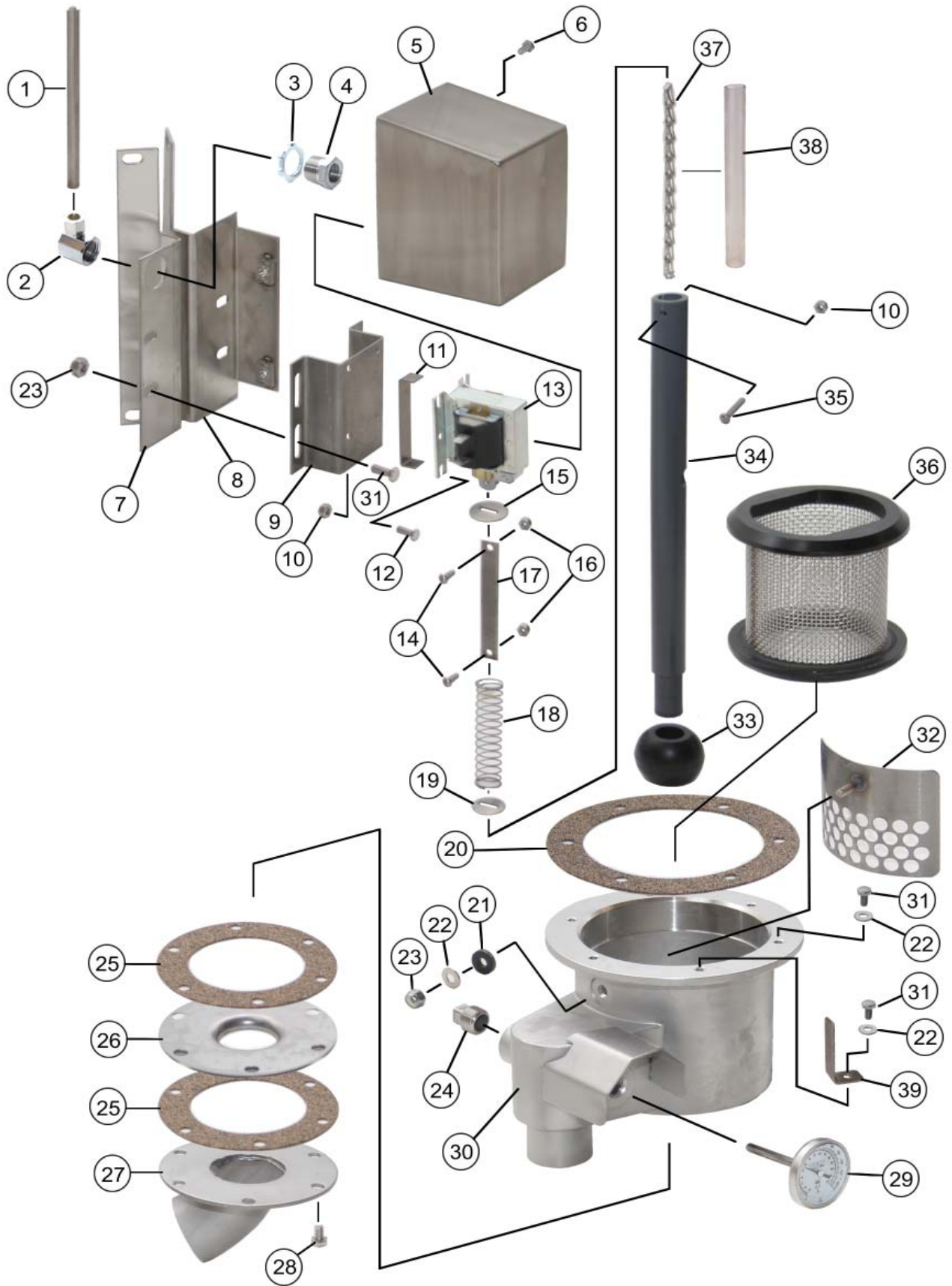




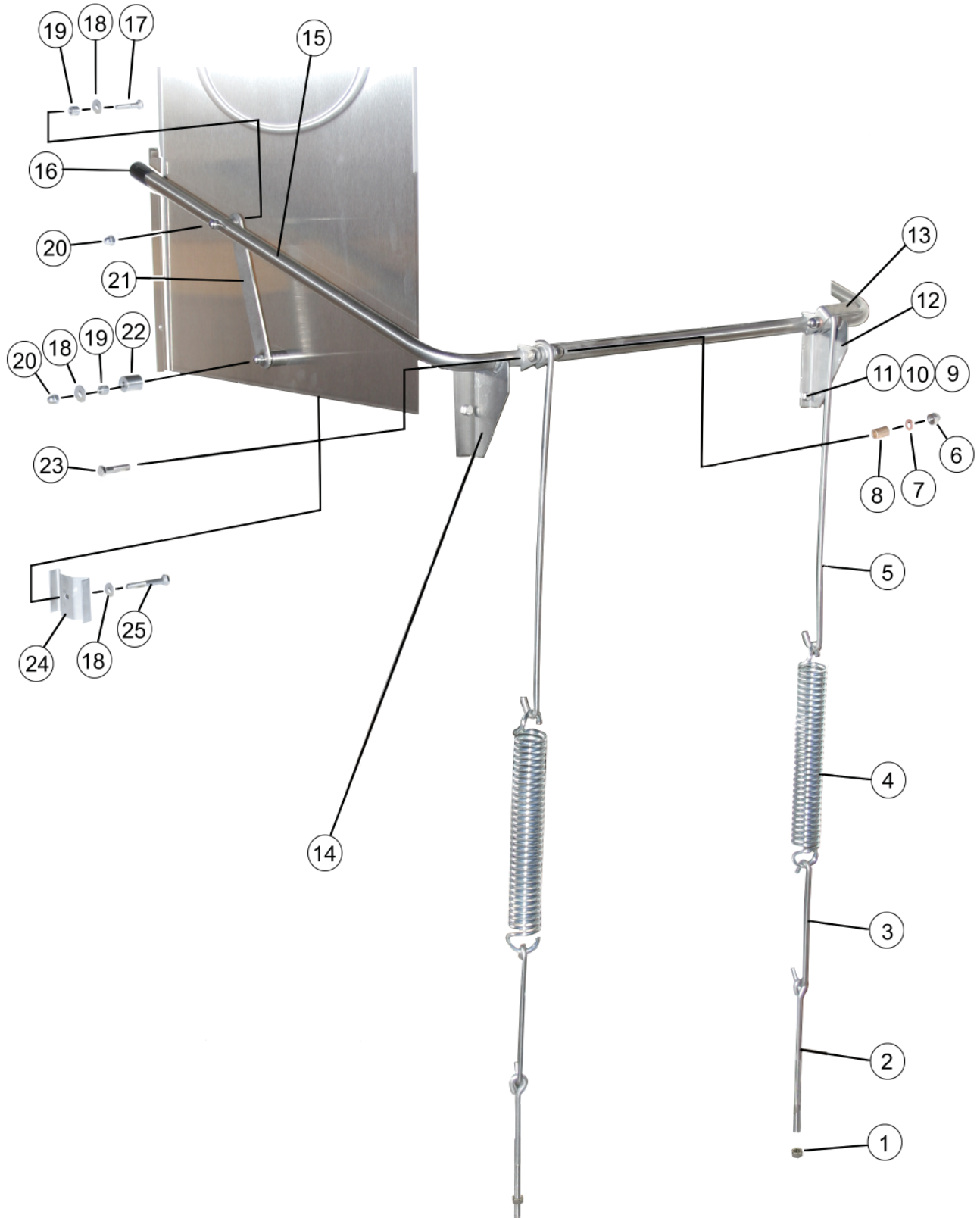
066-1900  
 Drain System Assembly  
 AF/AFC ES

**American Dish Service**

Ref. No.	Part No.	No. Req.	Description
1	086-6646	1	TUBE, "DRAIN" CONDUIT
2	092-1030	2	FITTING, PLUMBING, 3/8" COMP. X 1/2" FPT 90 ELBOW
3	091-4144	2	CONDUIT NUT, LOCK
4	092-1029	2	FITTING, PLUMBING, 1/2" X 3/8" REDUCER SS
5	085-6643	1	COVER, DRAIN SOLENOID
6	098-1413	2	SCREW, 1/4-20 X 3/8" TRUSS HEAD SLOTTED SS
7	086-6644	1	BRACKET, SOLENOID BASE MOUNTING (LH)
8	086-6645	1	BRACKET, SOLENOID BASE MOUNTING (RH)
9	086-6697	1	BASE, DRAIN SOLENOID
10	098-2301	5	NUT, LOCK, 10-32 WITH NYLON INSERT SS
11	086-6604	1	STOP, DRAIN SOLENOID
12	098-1306	4	SCREW, 10-32 X 1/2" HH SS
13	091-2001	1	SOLENOID, DRAIN, 110 VOLT
14	098-1205	2	SCREW, 8-32 X 1/2" RH SLOTTED SS
15	086-6607	1	WASHER, SLOTTED, LARGE
16	098-2201	2	NUT, LOCK, 8-32 WITH NYLON INSERT SS
17	086-6605	1	LINK, DRAIN SOLENOID
18	098-3001	1	SPRING, DRAIN SOLENOID
19	086-6606	1	WASHER, SLOTTED, SMALL
20	089-6601	1	GASKET, DRAIN CASTING "SUMP"
21	098-9028	1	WASHER, SECONDARY SCREEN - FLAT RUBBER
22	098-2416	7	WASHER, 1/4" FLAT SS
23	098-2507	5	NUT, LOCK, 1/4-20 WITH NYLON INSERT
24	292-1012	1	PLUG, 1/2" MPT SS
25	089-6602	2	GASKET, DRAIN ELBOW
26	086-6601	1	DRAIN SEAT, 1 1/2"
27	085-6199	1	DRAIN ELBOW
28	098-1502	6	BOLT, 5/16-18 X 1/2" HH SS
29	099-1001	1	GAUGE, TEMPERATURE
30	085-6204	1	DRAIN CASTING, WITH TAIL PIECE
31	098-1423	10	BOLT, 1/4-20 X 1/2" HH SS
32	085-6160	1	SCREEN, DRAIN, SECONDARY







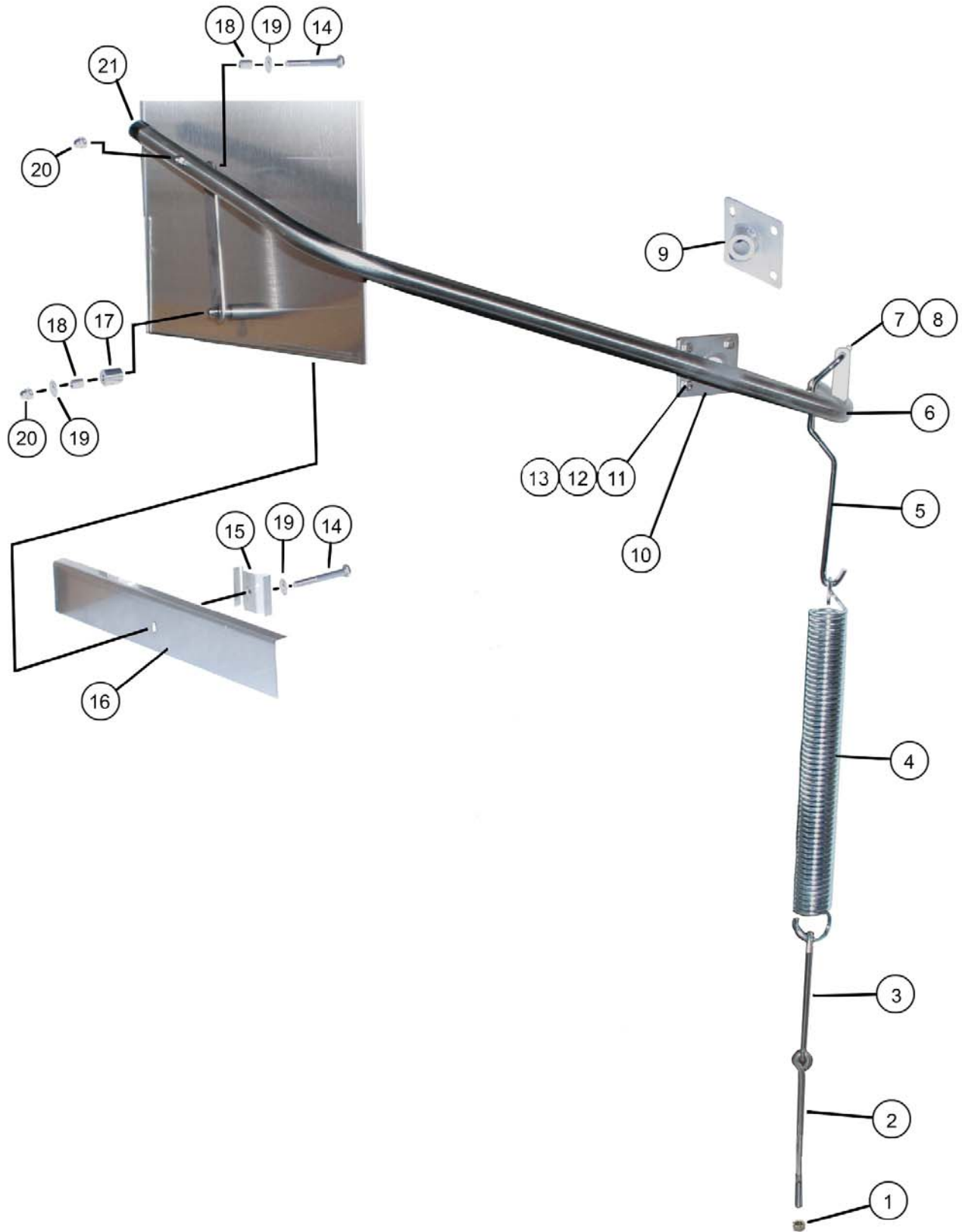
067-1600

Door Actuator Assembly

AF ES

**American Dish Service**

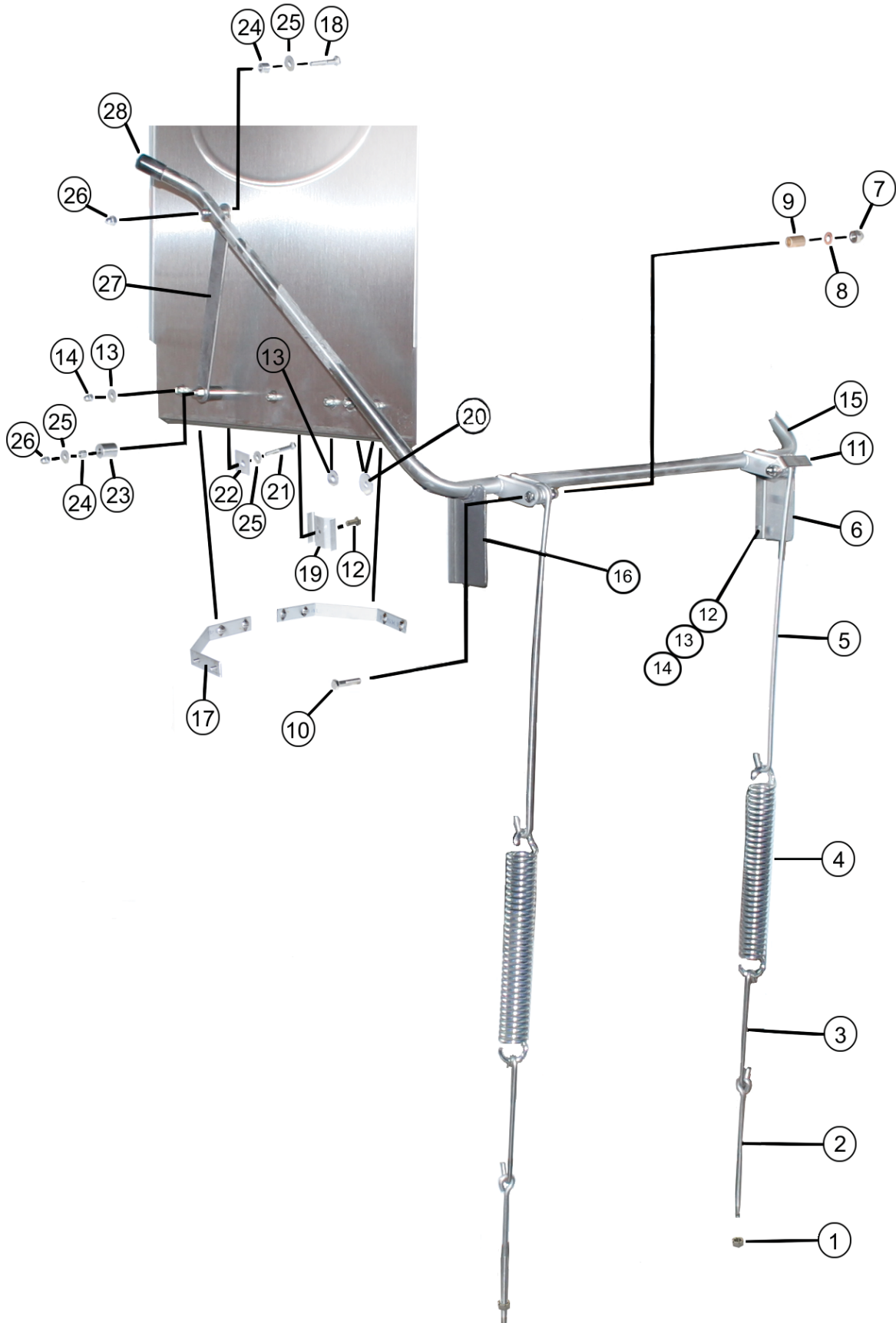
Ref. No.	Part No.	No. Req.	Description
1	098-2502	2	NUT, 5/16-18 HEX SS
2	098-1581	2	BOLT, EYE, 5/16-18 X 8 5/8" SS
3	086-6738	2	SPRING EXTENSION, SECONDARY, SS, (APPROX. 7")
4	098-3003	2	SPRING, DOOR
5	085-6701	2	SPRING EXTENSION,
6	098-2505	2	NUT, CAP, 5/16-18 SS
7	098-2503	2	WASHER, 5/16 COPPER
8	098-4002	2	BUSHING, BRONZE
9	098-1423	4	BOLT, 1/4-20 X 1/2" HH SS
10	098-2416	4	WASHER, 1/4" FLAT SS
11	098-2507	4	NUT, LOCK, 1/4-20, SS, WITH NYLON INSERT
12	085-6707	1	BRACKET, LEVER ARM SUPPORT, 7/8" RH
13	086-6623	1	BRACKET, DOOR CUT- OFF "L" SHAPED
14	085-6703	1	BRACKET, LEVER ARM SUPPORT, 7/8" LH
15	085-6726	1	LEVER ARM
16	099-1018	2	CAP, 3/4" LEVER ARM
17	098-1431	2	BOLT, 1/4-20 X 1 3/8" HH SS
18	098-2404	6	WASHER, 1/4" SS FLAT (LARGE)
19	084-6703	4	BUSHING, (DOWEL) , 3/8" LONG
20	098-2405	4	NUT, CAP, 1/4-20 SS
21	086-6702	2	DOOR LINK, STANDARD
22	084-6702	2	SPACER, DOOR
23	098-1514	2	BOLT, 5/16-18 X 1 1/2" HH SS
24	086-6701	2	DOOR STOP
25	098-1432	2	BOLT, 1/4-20 X 1 3/4" HH SS
N/S	088-1061	OPT.	KIT, LEVER ARM CONVERSION (CONVERTS STRAIGHT TO CORNER)





067-1900  
Door Actuator Assembly  
AF/AFC ES 3 Door Up Option

**American Dish Service**



067-1900

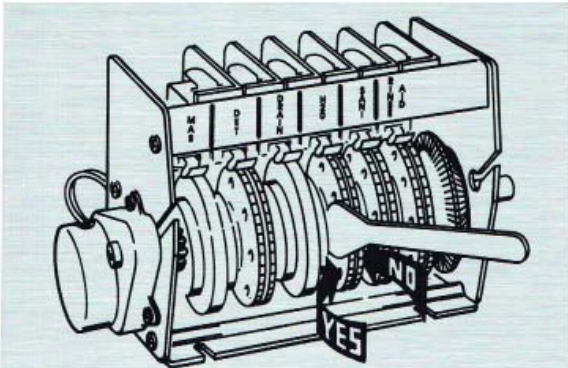
Door Actuator Assembly  
AF/AFC ES 3 Door Up Option

**American Dish Service**

Ref. No.	Part No.	No. Req.	Description
1	098-2502	2	NUT, 5/16-18 HEX SS
2	098-1581	2	BOLT, EYE, 5/16-18 X 8 5/8" SS
3	086-6738	2	SPRING EXTENSION, SECONDARY, SS, (APPROX. 7")
4	098-3003	2	SPRING, DOOR
5	085-6701	2	SPRING EXTENSION,
6	085-6184	1	BRACKET, LEVER ARM SUPPORT, RH
7	098-2505	2	NUT, CAP, 5/16-18 SS
8	098-2503	2	WASHER, 5/16 COPPER
9	098-4002	2	BUSHING, BRONZE
10	098-1514	2	BOLT, 5/16-18 x 1 1/2" HH SS
11	086-6623	1	BRACKET, DOOR CUT-OFF "L" SHAPED
12	098-1423	13	BOLT, 1/4-20 x 1/2" HH SS
13	098-2416	25	WASHER, 1/4" FLAT SS
14	098-2507	23	NUT, LOCK, 1/4-20, SS, WITH NYLON INSERT
15	085-6728	1	LEVER ARM, 3 DOOR UP
16	385-6119	1	BRACKET, LEVER ARM SUPPORT, LH
17	085-6414	2	BRACKET, (BRACE), DOOR, 3 DOOR UP
18	098-1431	2	BOLT, 1/4-20 x 1 3/8" HH SS
19	086-6701	2	DOOR STOP
20	098-2406	4	WASHER, 1/4" FENDER
21	098-1432	2	BOLT, 1/4-20 x 1 3/4" HH SS
22	086-6338	2	WASHER, SS, SQUARE
23	084-6702	2	SPACER, DOOR
24	084-6703	4	BUSHING, (DOWEL), 3/8" Long
25	098-2404	6	WASHER, 1/4" SS FLAT (LARGE)
26	098-2405	4	NUT, CAP, 1/4-20 SS
27	086-6828	2	DOOR LINK
28	099-1018	2	CAP, 3/4" LEVER ARM

**- CAUTION -**  
 Operation by authorized technician only.  
 Delime agent mixed with sanitizer will produce **DANGEROUS GASES.**  
 Use delime agent with clean water only.

**1** **CONNECT TO ELECTRICAL SUPPLY SOURCE**  
 USING 12-10 AWG COPPER WIRE  
 CIRCUIT PROTECTION: 20 AMP CIRCUIT BREAKER  
 OR FUSE WITH A 20 AMP RATING



**ADJUST CAM FROM LEFT SIDE ONLY!**  
 DO NOT MOVE OR ADJUST RIGHT SIDE OF CAM.

**2** **3**

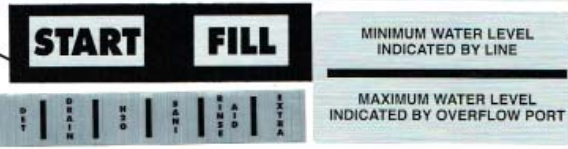


NSF Machine Operational Requirements as manufactured by AMERICAN DISH SERVICE.

MODEL SERIES:	AF-ES	AF-ES	AF-ES	AF-ES
Second per wash cycle:	50	40	75	75
Second per dwell (rinse/hold):	10	15	15	15
Second per rinse cycle:	30	45	60	60

Wash Temperature: 130° F minimum  
 Required: 20 ppm available chlorine rinse

Rinse Temperature: 120° F minimum  
 Total water demand: 0.3M gal per cycle pumped



**• DAILY CLEANING INSTRUCTIONS •**  
 NECESSARY TO MAKE MACHINE FUNCTION PROPERLY

**INSPECT TOP & BOTTOM SPRAY ARM JETS EACH SHIFT**

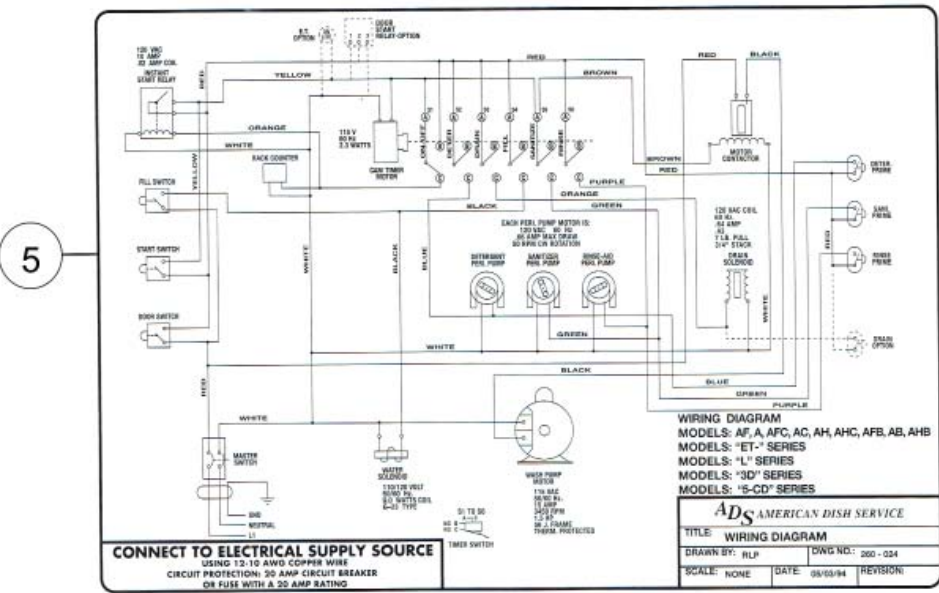
- REMOVE END PLUG**
- USE TOOTHPICK AND PUNCH TRASH INTO ARM**
- FLUSH TRASH FROM ARM BY RINSING UNDER FAUCET - REPLACE PLUGS.**

**CAUTION:** ARM WILL NOT TURN IF END JETS ARE PLUGGED

**CLEAN STRAINER SCREEN EVERY SHIFT**

- REMOVE SCREEN**
- THOROUGHLY CLEAN SCREEN**

SCRUB WITH HEAVY BRUSH; RINSE UNDER FAUCET. REINSTALL.





# ***American Dish Service***

*Manufacturer of low and high temperature  
Commercial Dishwashers and Glasswashers*

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