



# MARKET FORGE

## UNIVERSE PLUS STGL & STGM SERIES GAS TILTING SKILLETS PARTS AND SERVICE MANUAL

**EFFECTIVE SEPTEMBER 22, 2014**

Superseding All Previous Parts Lists.

The Company reserves the right to make substitution in the event that items specified are not available.

ERRORS: Descriptive and/or typographic errors are subject to correction.

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**MARKET FORGE**

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# TROUBLESHOOTING

## REPLACEMENT OF TEMPERATURE CONTROL

1. Place circuit breaker in off position.
2. Remove skirted dial knob by loosening two set screws in the knob. (Use a 5/64 Hex key to loosen screws).
3. Tilt control box up by first removing two pan head screws in the lower front of the console. Use the prop up arm located inside, in the rear vertical column, to keep the console cover tilted open.
4. Disconnect all wire leads from temperature control.

*NOTE: Leads should be marked appropriately to facilitate re-installation.*

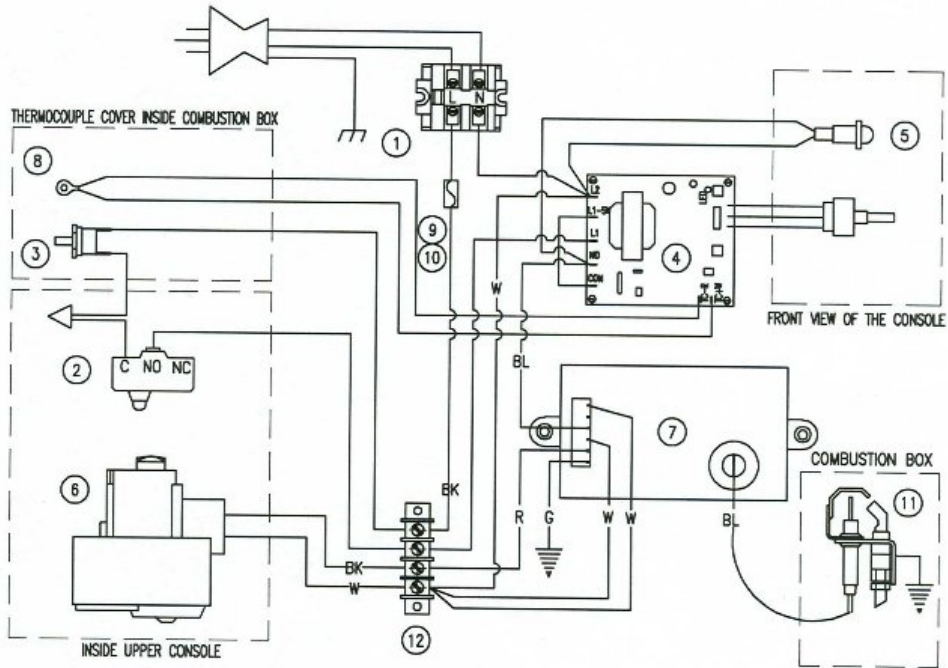
5. Remove temperature control by removing two (2) pan head screws from side of control box.
6. Install new temperature control and reverse steps 1 - 5.

## ADJUSTMENT OF INTERLOCK SWITCH:

1. Tilt skillet pan all the way in the downright position.
2. Place circuit breaker in off position.
3. Tilt control box up by first removing two pan head screws in the lower front of the console. Use the prop arm located inside, in the rear vertical column, to keep the console cover tilted open.
4. To reduce the angle where the switch disengages when the pan is tilted, use a pair of heavy duty needle nose pliers and lightly bend the tilt tab on the trunnion up. To increase the angle, bend the tilt-tab down. Test by tilting the pan and checking at what angle the switch clicks. The switch should click off at approximately 10° tilt of the pan from the horizontal position.
5. Close and fasten the control console by tightening the two screws at the lower front of the box.
6. Place circuit breaker in on position.

PROBLEM	PROBABLE CAUSE	REMEDY
Uneven or poor heating.	Temperature control out of calibration or defective.	Replace temperature control.
	Unit attached to wrong gas supply.	Compare to specifications on data plate.
	Combination gas control set to wrong pressure.	Adjust manifold pressure to equal that listed on data plate.
Signal light out.	Burnt out bulb.	Replace.
	Broken temperature control.	Replace.
	Loose electrical connection.	Repair.
Unit fails to heat.	Circuit breaker is off.	Reset circuit breaker.
	Malfunction of interlock switch.	Adjust or replace.
	Broken ignition module	Replace.
	Broken ignitor/sensor.	Replace.
No 110 Volts output.	Defective temperature control.	Replace.
	Broken temperature sensor.	Replace.
No gas to unit.	Defective gas valve.	Replace.

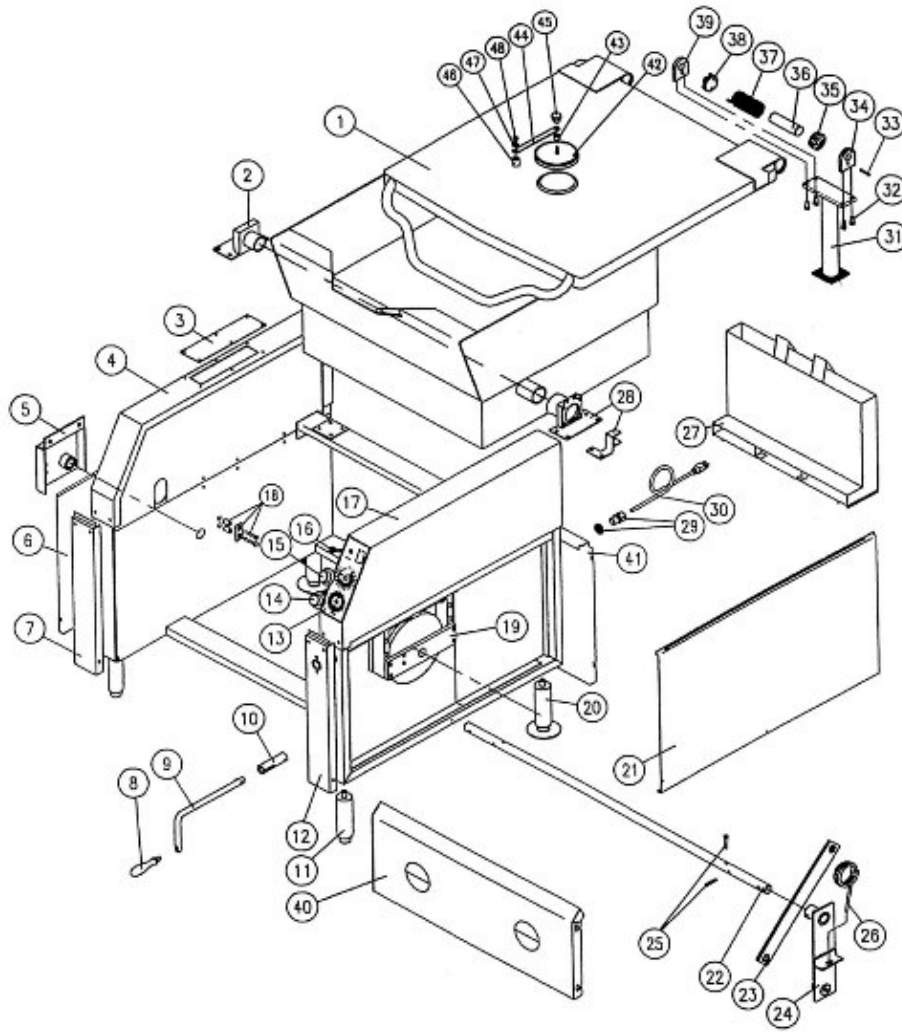
# WIRING



ITEM	PART NO.	DESCRIPTION	QTY
1A	10-6963	TERMINAL BLOCK	2
1B	10-6962	TERMINAL BLOCK END	1
2	97-5414	INTERLOCK SWITCH	1
3	97-6155	THERMOSTAT, HIGH LIMIT SAFETY	1
4	97-6030	TEMPERATURE CONTROL	1
5	97-5782	TEMPERATURE PILOT (RED)	1
*6	97-5808	GAS VALVE , NATURAL GAS	1
*6	97-5809	GAS VALVE, PROPANE GAS	1
7	97-6917	DSI IGNITION MODULE	1
	97-6195	IGNITION MODULE WIRING HARNESS	1
8	97-6289	THERMOCOUPLE	1
9	97-5476	FUSE, 3A, 250V	2
10	97-5864	FUSE HOLDER	2
*11	97-6157	PILOT ASSEMBLY, NATURAL	1
*11	97-6158	PILOT ASSEMBLY, PROPANE	1
12	98-6137	4 POLE TERMINAL STRIP	1

\* SELECT AS REQUIRED FOR GAS TYPE OR MODEL.

# MAIN ASSEMBLY



QTY	PART NO.	DESCRIPTION	30 GAL.	40 GAL.
1	<a href="#">98-6031</a>	PAN COVER ASSEMBLY	1	
	<a href="#">98-6032</a>	PAN COVER ASSEMBLY		1
2	98-6033	LEFT HAND TRUNNION ASSEMBLY	1	1
3**	<a href="#">98-6034</a>	FAUCET COVER PLATE	1	1
	~NPN~	FAUCET MOUNTING PLATE PANTRY FAUCET	1	1
	~NPN~	FAUCET MOUNTING PLATE DOUBLE FAUCET	1	1
4	<a href="#">98-6035</a>	LEFT HAND CONSOLE TOP COVER	1	1
5	<a href="#">98-6036</a>	LEFT HAND CONSOLE TILT SHAFT BEARING BRACKET	1	1
6	98-6037	LOWER CONSOLE SIDE PANEL LEFT HAND	1	1
7	98-6038	LEFT HAND CONSOLE FRONT COVER	1	1
8	<a href="#">97-5577</a>	GRIP HANDLE	1	1
9	<a href="#">98-6040</a>	CRANK SHAFT, 12"	1	1
9A	<a href="#">97-6609</a>	CRANK SHAFT, 14" (FOR PAN WITH DRAW-OFF VALVE)	1	1
10	<a href="#">98-6041</a>	INPUT SHAFT ADAPTOR	1	1
11	<a href="#">98-6042</a>	ADJUSTABLE BULLET FOOT	2	2

# MAIN ASSEMBLY

QTY	PART NO.	DESCRIPTION	30 GAL.	40 GAL.
12	98-6043	RIGHT HAND FRONT CONSOLE COVER	1	1
13	98-6044	DECAL	1	1
14	98-6045	TIMER COMPLETE WITH DIAL	1	1
15	98-6046	THERMOSTAT DIAL	1	1
*	98-6047	ROTARY SHAFT SEAL	1	1
16	98-6048	PILOT LIGHT - TEMPERATURE, RED	1	1
17	98-6049	RIGHT HAND CONSOLE TOP COVER	1	1
18	98-6050	SPRING RETAINER	2	2
*	98-6051	Hx. BOLT 3/8-16 x 1 1/2	4	4
*	98-6052	WASHER 3/8 STAINLESS STEEL	4	4
*	98-6053	SPACER	4	4
19	98-6054	GEAR BOX ASSEMBLY	1	1
	97-6396	WORM GEAR (NOT SHOWN)	1	1
20	98-6055	FLANGE ADJUSTABLE FOOT	2	2
21	98-6056	LOWER CONSOLE SIDE PANEL RIGHT HAND	1	1
22	98-6057	TILT SHAFT	1	
	98-6058	TILT SHAFT		1
23	98-6059	TILT ARM EXTENSION	2	2
24	98-6060	ARM, LIFT	2	2
25	98-6061	ROLL PIN, 1/4 x 1 1/2 STAINLESS STEEL	2	2
	98-6062	Hx. BOLT 1/4 x 1 1/2 STAINLESS STEEL	2	2
26	91-9145	SPRING, RIGHT HAND	1	1
	91-9144	SPRING, LEFT HAND	1	1
27	98-6065	FLUE ASSEMBLY	1	
	98-6066	FLUE ASSEMBLY		1
	98-6065	FLUE ASSEMBLY	1	
	98-6066	FLUE ASSEMBLY		1
28	98-6067	RIGHT HAND TRUNNION ASSEMBLY	1	1
	98-6068	SWIVEL BRACKET	1	1
29	98-6069	LIQUID TIGHT CONNECTOR 1/2"	1	1
	98-6070	LOCKNUT 1/2"	1	1
30	97-5702	CORD SET	1	1
31	98-6072	POST ASSEMBLY	2	2
32	97-5545	CAP SCREW 5/16-18 x 3/4 STAINLESS STEEL	8	8
33	97-5352	LOCK PIN	2	2
34	97-5343	END LOCK PIN	2	2
35	98-6073	STATIONARY DISC	2	2

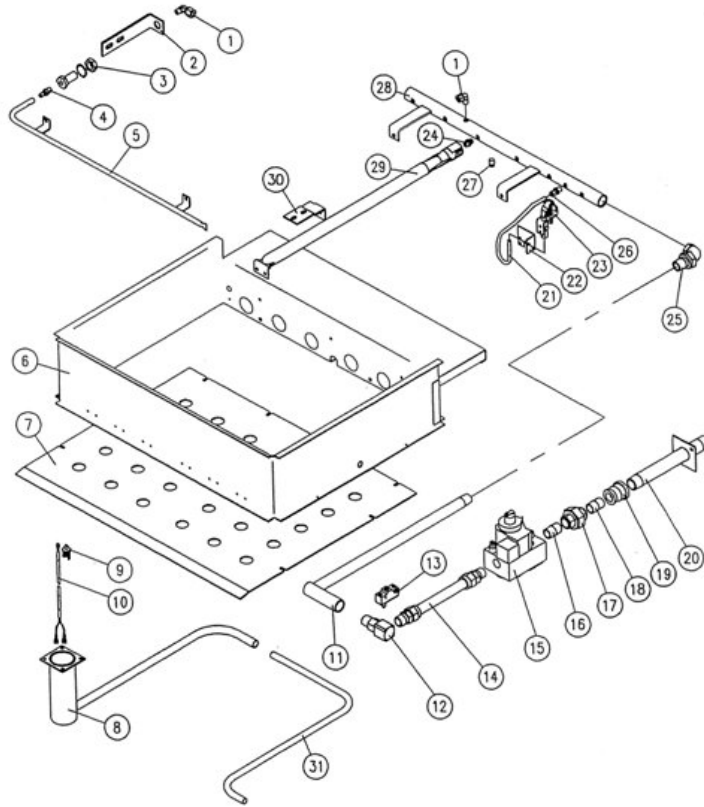
# MAIN ASSEMBLY

QTY	PART NO.	DESCRIPTION	30 GAL.	40 GAL.
36	<a href="#">98-6074</a>	CORE	2	2
37	<a href="#">97-5160</a>	SPRING	2	2
38	<a href="#">98-6076</a>	ROTARY DISC	2	2
39	<a href="#">97-5356</a>	END STOP PLATE	2	2
40	<a href="#">98-6078</a>	FRONT COVER PANEL (MODULAR UNITS)	1	
	<a href="#">98-6079</a>	FRONT COVER PANEL (MODULAR UNITS)		1
41	<a href="#">98-6080</a>	BACK COVER PANEL (MODULAR UNITS)	1	1
	98-6081	BACK COVER PANEL (MODULAR UNITS)		1
42	<a href="#">98-6082</a>	VENT COVER	1	1
43	98-6083	SWIVEL SPACER	1	1
44	91-9262	ARM	1	1
45	<a href="#">98-6084</a>	KNOB	1	1
46	<a href="#">98-6085</a>	SWIVEL BASE	1	1
47	<a href="#">98-6086</a>	WASHER 1/4 STAINLESS STEEL	1	1
48	<a href="#">98-6087</a>	Hx. Hd. SCREW 1/4-20 x 3/8 STAINLESS STEEL	1	1
49*	<a href="#">98-6013</a>	POUR LIP STRAINER	1	1
50*	<a href="#">97-6686</a>	BRACKET, FOR CRANK HANDLE	1	1

\* NOT SHOWN

\*\* SELECT AS REQUIRED

# GAS & ELECTRIC CONNECTIONS



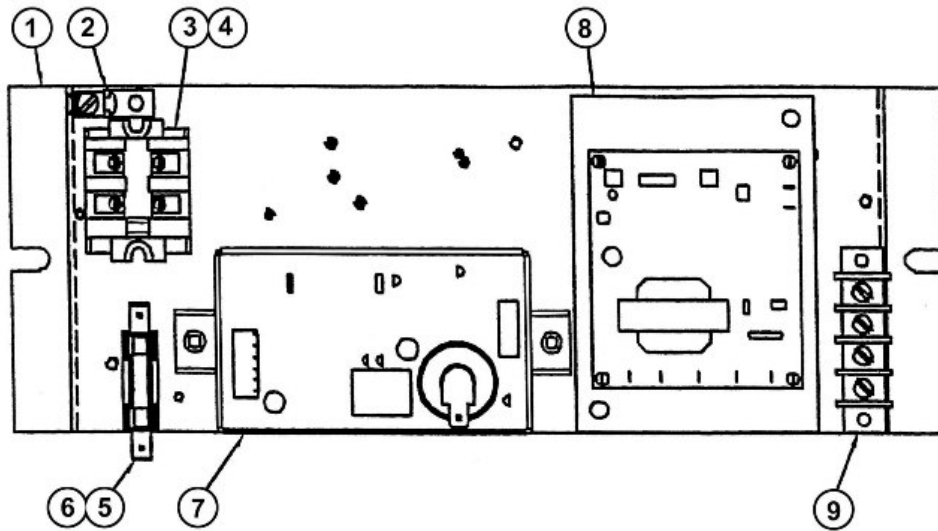
ITEM	PART NO.	DESCRIPTION	30 GAL.	40 GAL.
1	<a href="#">98-6089</a>	ELBOW 1/4 C x 1/8 MPT	2	2
2	98-6090	LIGHTER TUBE BRACKET	1	1
3	<a href="#">98-6091</a>	BULK HEAD	1	1
4**	<a href="#">98-6092</a>	LIGHTER TUBE ORIFICE - NATURAL #56	1	1
	<a href="#">98-6093</a>	LIGHTER TUBE ORIFICE - PROPANE #72	1	1
5	<a href="#">98-6094</a>	LIGHTER TUBE	1	
	<a href="#">98-6095</a>	LIGHTER TUBE		1
6	<a href="#">98-6096</a>	BURNER BASKET ASSEMBLY	1	
	98-6097	BURNER BASKET ASSEMBLY		1
7	<a href="#">98-6098</a>	BOTTOM COVER	1	
	<a href="#">98-6099</a>	BOTTOM COVER		1
8	<a href="#">98-6100</a>	HIGH LIMIT THERMOCOUPLE COVER	1	1
9	<a href="#">97-6155</a>	HIGH LIMIT SAFETY THERMOSTAT	1	1
10	<a href="#">97-6289</a>	THERMOCOUPLE	1	1
11	98-6103	GAS SUPPLY PIPE ASSEMBLY	1	1
12	<a href="#">98-6104</a>	SWIVEL	1	1
13	<a href="#">97-5414</a>	INTERLOCK SWITCH	1	1
14	<a href="#">98-6030</a>	CORRUGATED FLEX TUBE 1/2 x 7 1/2	1	1



## GAS & ELECTRIC CONNECTIONS

ITEM	PART NO.	DESCRIPTION	30 GAL.	40 GAL.
15**	97-5808	COMBINATION GAS CONTROL - NATURAL	1	1
	97-5809	COMBINATION GAS CONTROL - PROPANE	1	1
16	98-6109	CLOSE NIPPLE 1/2"	1	1
17	97-5490	GROUND JOINT UNION 1/2"	1	1
18	98-6111	NIPPLE 1/2 x 1 1/4"	1	1
19	98-6112	REDUCER BUSHING 3/4 x 1/2"	1	1
20	98-6113	GAS SUPPLY PIPE ASSEMBLY	1	1
21	98-6114	PILOT TUBE	1	1
22	98-6115	PILOT BRACKET	1	1
23**	97-6157	PILOT BURNER ASSEMBLY - NATURAL	1	1
	97-6158	PILOT BURNER ASSEMBLY - PROPANE	1	1
24**	98-6118	BURNER ORIFICE #48 - NATURAL	6	
	98-6119	BURNER ORIFICE #56 - PROPANE	6	
	98-6120	BURNER ORIFICE #51 - NATURAL		10
	98-6121	BURNER ORIFICE #59 - PROPANE		10
25	98-6122	UNION ELBOW	1	1
26	98-6123	CONNECTOR 1/4" COMPRESSION x 1/8" MPT	1	1
27	98-6124	SQUARE Hd. PIPE PLUG 1/8"	1	1
28	98-6125	MANIFOLD ASSEMBLY	1	
	98-6126	MANIFOLD ASSEMBLY		1
29	98-6127	BURNER	6	10
30	98-6128	BURNER BOX MOUNTING BRACKET	2	2
31	98-6129	THERMOCOUPLE HIGH LIMIT WIRE TUBE	1	
	98-6130	THERMOCOUPLE HIGH LIMIT WIRE TUBE		1
-	94-5131	GAS VALVE CONVERSION KIT, LP TO NATURAL	1	1
-	94-5128	GAS VALVE CONVERSION KIT, NATURAL TO LP	1	1

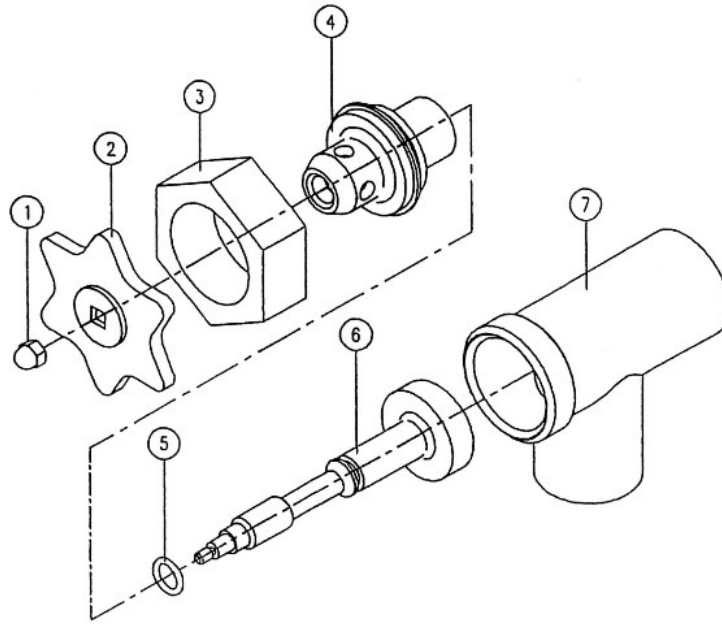
## CONTROL CIRCUIT COMPONENTS



ITEM	PART NO.	DESCRIPTION	QTY
1	98-6131	COMPONENT MOUNTING BOARD	1
2	97-5441	GROUND LUG	1
3	10-6963	TERMINAL BLOCK SECTION	2
4	10-6962	END SECTION	1
5	98-6132	FUSE HOLDER	1
6**	98-6133	FUSE, 3A, 250V (120V UNIT)	1
	98-6134	FUSE, 1A, 250V (220V UNIT)	1
7	97-5960	IGNITION MODULE	1
8	97-6030	TEMPERATURE CONTROL	1
9	98-6137	4 POLE TERMINAL STRIP	1
10*	98-6138	TRANSFORMER, 220-120V, 100VA (220V UNIT) (NOT SHOWN)	1

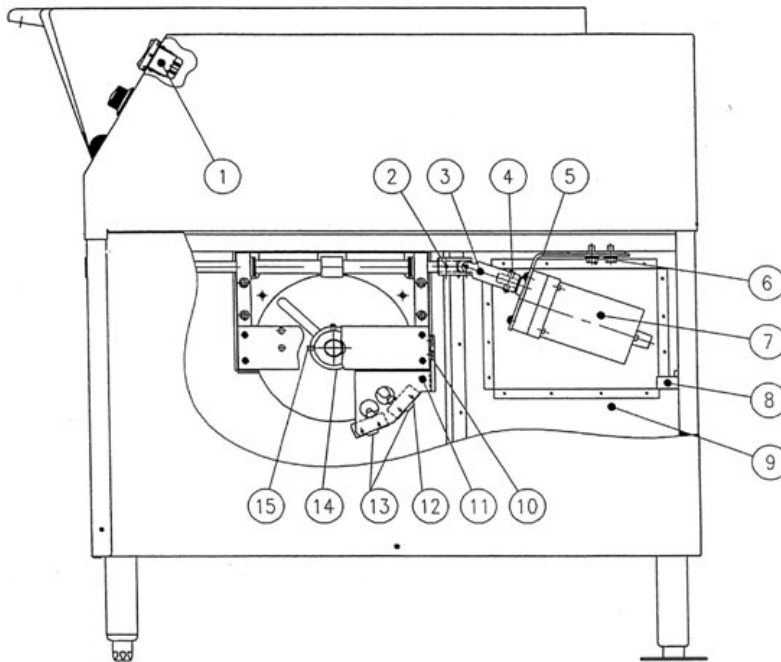
\*\* SELECT AS REQUIRED

## DRAW OFF VALVE ASSEMBLY



ITEM	PART NO.	DESCRIPTION	QTY.
	98-6014	2" DRAW-OFF VALVE ASSEMBLY	
1	<a href="#">98-6155</a>	ACORN NUT 10-24 UNC	1
2	<a href="#">97-5413</a>	HANDLE STAINLESS STEEL	1
3	<a href="#">97-5069</a>	GLAND NUT	1
4	<a href="#">97-5072</a>	BONNET	1
5	<a href="#">97-5078</a>	"O" RING	1
6	<a href="#">97-5075A</a>	STEM ASSEMBLY	1
7	<a href="#">98-6156</a>	VALVE BODY	1
8*	<a href="#">98-6010A</a>	DRAW-OFF STRAINER (OPTIONAL)	1

## OPTIONAL MOTOR TILT COMPONENTS (LX MODELS)



ITEM	PART NO.	DESCRIPTION	QTY.
1	98-6139	TILT SWITCH	1
2	97-5093.	SPRING TENSION PIN 3/16 x 1 1/4 LONG	1
3	98-6140	UNIVERSAL JOINT	1
4	98-6141	SET SCREW 5/16-18 x 3/8	2
5	98-6142	MOTOR MOUNTING BRACKET	1
6**	97-5595	Hx. SCREW 5/16-18 x 3/4	3
	~NPN~	FLAT WASHER 5/16	3
	~NPN~	LOCK WASHER 5/16	3
7**	98-6143	MOTOR 1/20 HP 115V	1
	98-6144	MOTOR 1/20 HP 230V	1
8**	98-6145	CAPACITOR 370 VAC 7.5 MFD (120V MOTOR)	1
	98-6146	CAPACITOR 440 VAC 2.0 MFD (230V MOTOR)	1
9	98-6147	MOTOR ACCESS PANEL	1
10	98-6148	Hx. BOLT 1/4-20 x 1/2	2
11	98-6149	SWITCH MOUNTING BRACKET	1
12	98-6150	SCREW 6-32 x 1	4
13	97-5414	LIMIT SWITCH	2
14	98-6151	CAM ACTUATOR	1
15	98-6152	SET SCREW 1/4-20 x 1/2"	2
16**	98-6153	FUSE 3/4 AMP TIME DELAY (120V MOTOR)	1
	98-6154	FUSE 0.3A TIME DELAY 250V (230V MOTOR)	1
	98-6132	FUSE HOLDER	1

\*\* SELECT AS REQUIRED