

DF-5

60 Inch

Gas Train

8/27/2019

**BILL OF MATERIALS**

ITEM NUMBER	Description	Quantity
1	1-1/2" Quick Seal	1
2	1-1/2" x 4" Nipple	1
3	1-1/2" 90° Elbow	5
4	1-1/2" Close Nipple (1-3/4")	13
5	1-1/2" Union	4
6	1-1/2" x 1-1/2" x 1/2" Tee	3
7	-5-15 w.c. Gas Pressure Gauge	1
8	1-1/2" 8214275 Solenoid Valve	1
9	1-1/2" V4055A1007 Hydraulic Actuator and V5055A1020 Valve	1
10	1-1/2" x 2-1/2" Nipple	2
11	Maxitrol 1-1/2" MR212D Modulating Valve	1
12	1/2" Male x 1/4" Female Reducer	2
13	1-1/2" Manual Ball Valve	1
14	1-1/2" x 10" Nipple	1
15	1-1/2" x 1-1/2" x 1-1/2" Tee	1
16	1-1/2" x 4" Nipple	2
17	1-1/2" Female x 2" Male Adapter	2
18	60" Dual Fuel Midco Burner	1
19	1/4" Brass Elbow	1
20	3/8" Male x 1/4" Female Reducer	1
21	325-3x3/8 Pilot Gas Regulator	1
22	3/8" 90° Elbow	1
23	3/8" x 1-1/2" Nipple	1
24	3/8" x 2" Nipple	1
25	3/8" Pilot Shut Off Valve	1
26	1/2" Male x 3/8" Female Reducer	1
27	3/8" x 3" Nipple	1
28	Pyroseal Furnace Cement (AX # 2220)	N/A
29	0-35" w.c. or 0-5 psi or 0-15 psi Pressure Gauge (check spec)	1

# Standard Gas Train

**NOTES:**  
 Gas Type: Natural or LP  
 Inlet Pressure: 7 in. w.c. - 5 psi.  
 Max. Natural Gas Manifold Pressure: 5 in. w.c.  
 Max. LP Manifold Pressure: 2.5 in. w.c.

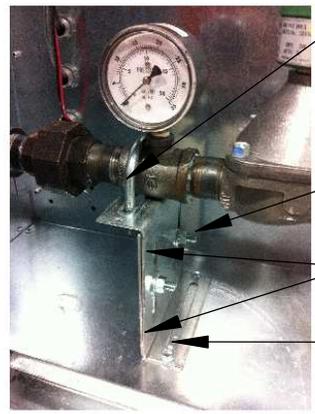
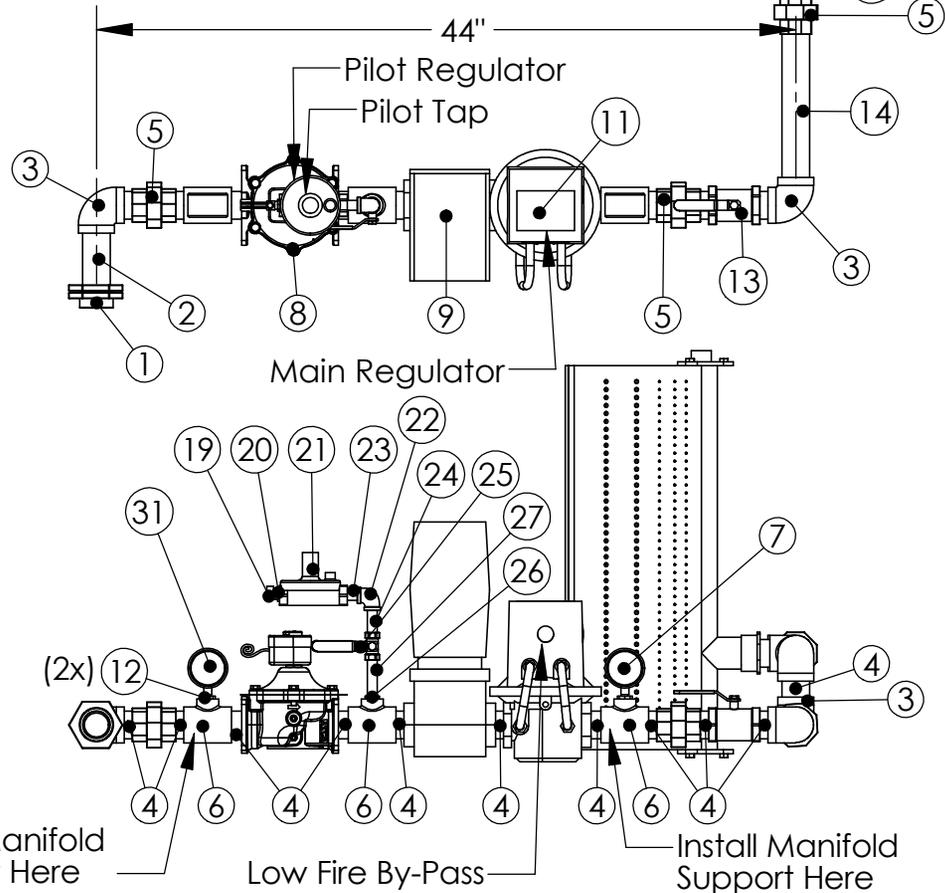
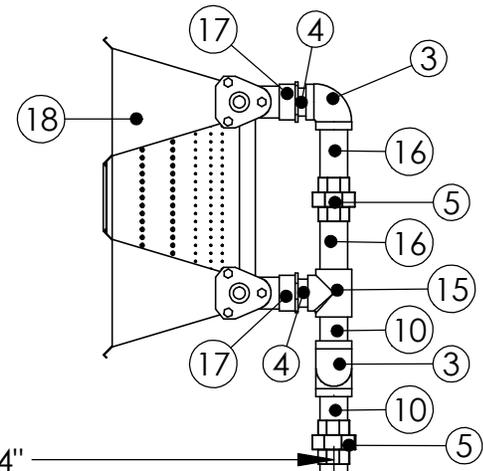
External High Gas Pressure Regulator required when gas pressure exceeds 5 psi.:  
 P/N = 243-8-2-1.5-OR-1-30 (25 psi. max.)

Item #9 is replaced by V4055D1019 and V5055C1059 for Proof of Closure Applications

Item # 28 (shown below) used for burners built in house.



Revision History				
#	Description	Revised by	ECN #	Date
0	Released to production	DAM		
1	Updated solenoid valve part	BFL	3067	8/27/2019



- 42026 3/8" U-Bolt, washer, and locknuts (2 Places)
- 5/16" Bolt, washer, and locknuts (2 Places)
- M1067H1M Bracket (2 Places)
- 5/16" x 3/4" Self Tapping Sheet Metal Screws (2 Places)

**Additional Notes:**  
 Burners riveted together with 3/16" rivets.  
 Burner Cement used at all casting joints only.

Install Manifold Support Here

Low Fire By-Pass

Install Manifold Support Here

Material: N/A	Part Number: N/A
Blank Size: N/A x N/A	MACOLA/AX Number: N/A
Weight: N/A lbs	Drawing Name: DF 5 60 Inch Gas Train
<b>CONFIDENTIAL</b>	Drawn By: DAM
	Parent Assembly: DF 5
	Sheet: 2 of 5

Unless Otherwise Specified Dimensions are in Inches.  
 Standard Tolerances are:  
 Fractions: ±1/16  
 Decimal: .XX ±.05  
 .XXX ±.015  
 Angles: ±1°

**BILL OF MATERIALS**

ITEM NUMBER	Description	Quantity
1	1-1/2" Quick Seal	1
2	1-1/2" x 4" Nipple	1
3	1-1/2" 90° Elbow	5
4	1-1/2" Close Nipple (1-3/4")	13
5	1-1/2" Union	4
6	1-1/2" x 1-1/2" x 1/2" Tee	3
7	1/4" Square Head Pipe Plug	2
8	1-1/2" 8214275 Solenoid Valve	1
9	1-1/2" V4055A1007 Hydraulic Actuator and V5055A1020 Valve	1
10	1-1/2" x 2-1/2" Nipple	2
11	Maxitrol 1-1/2" MR212D Modulating Valve	1
12	1/2" Male x 1/4" Female Reducer	2
13	1-1/2" Manual Ball Valve	1
14	1-1/2" x 10" Nipple	1
15	1-1/2" x 1-1/2" x 1-1/2" Tee	1
16	1-1/2" x 4" Nipple	2
17	1-1/2" Female x 2" Male Adapter	2
18	60" Dual Fuel Midco Burner	1
19	1/4" x 4" Nipple	4
20	1/4" x 1/4" x 1/4" Tee	2
21	1/4" Brass Elbow	1
22	3/8" Male x 1/4" Female Reducer	1
23	325-3x3/8 Pilot Gas Regulator	1
24	3/8" 90° Elbow	1
25	3/8" x 1-1/2" Nipple	1
26	3/8" x 2" Nipple	1
27	3/8" Pilot Shut Off Valve	1
28	1/2" Male x 3/8" Female Reducer	1
29	3/8" x 3" Nipple	1
30	Optional GMH-A4-4-4 Pressure Switch	1
31	Optional GML-A4-4-4 Pressure Switch	1
32	Pyroseal Furnace Cement (AX # 2220)	N/A

# Gas Train w/ Pressure Switch

**NOTES:**  
 Gas Type: Natural or LP  
 Inlet Pressure: 7 in. w.c. - 5 psi.  
 Max. Natural Gas Manifold Pressure: 5 in. w.c.  
 Max. LP Manifold Pressure: 2.5 in. w.c.

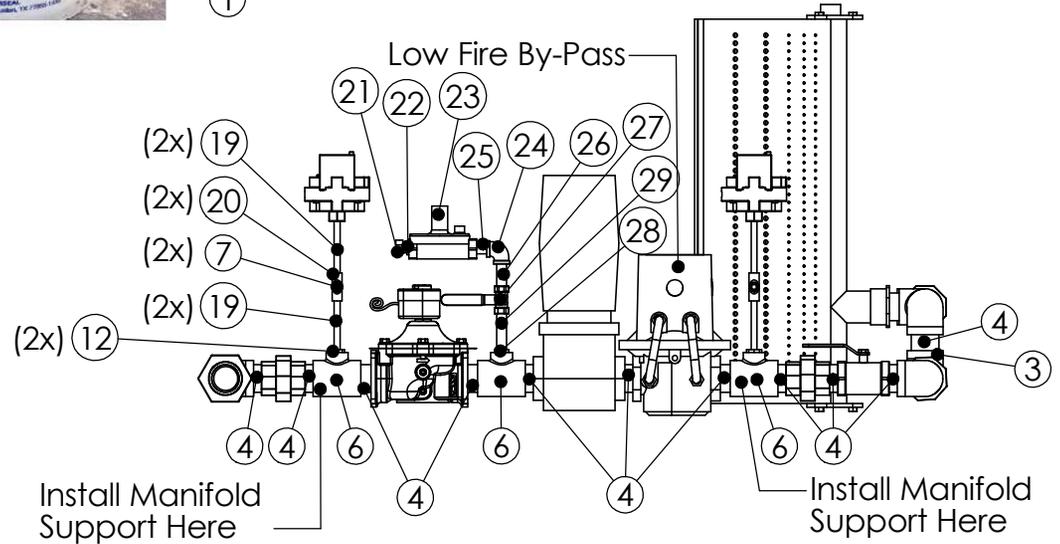
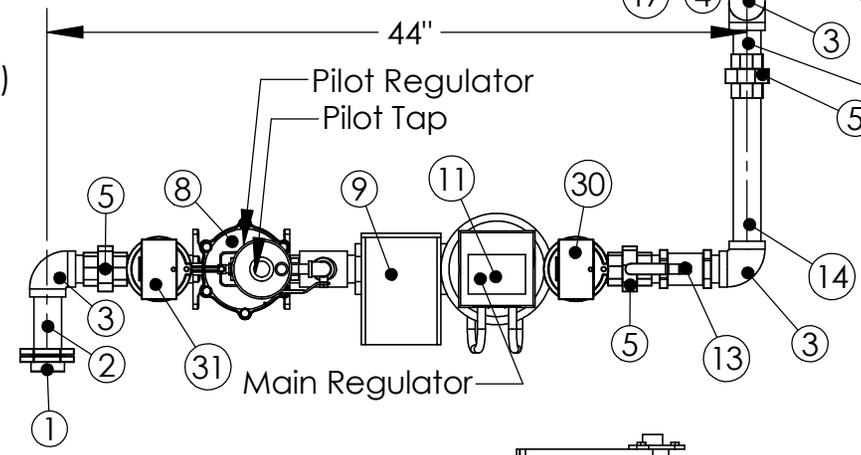
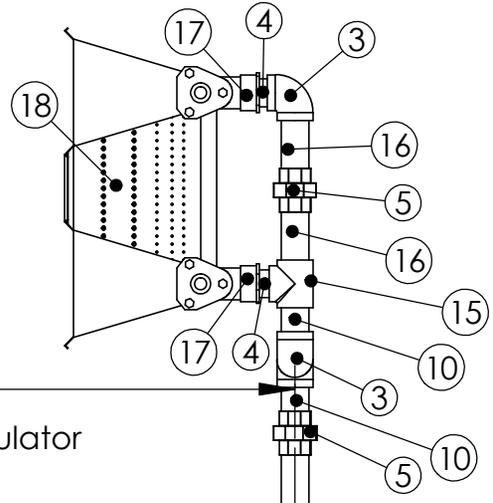
External High Gas Pressure Regulator required when gas pressure exceeds 5 psi.:  
 P/N = 243-8-2-1.5-OR-1-30 (25 psi. max.)

Item #9 is replaced by V4055D1019 and V5055C1059 for Proof of Closure Applications

Item # 32 (shown below) used for burners built in house.



Revision History				
#	Description	Revised by	ECN #	Date
0	Released to production	DAM		
1	Updated solenoid valve part	BFL	3067	8/27/2019



**Additional Notes:**  
 Burners riveted together with 3/16" rivets.  
 Burner Cement used at all casting joints only.

Material: N/A	Part Number: N/A
Blank Size: N/A x N/A	MACOLA/AX Number: N/A
Weight: N/A lbs	Drawing Name: DF 5 60 Inch Gas Train
	Drawn By: DAM
	Parent Assembly: DF 5
	Sheet: 3 of 5

Unless Otherwise Specified Dimensions are in Inches.  
 Standard Tolerances are:  
 Fractions: ±1/16  
 Decimal: .XX ±.05  
 .XXX ±.015  
 Angles: ±1°

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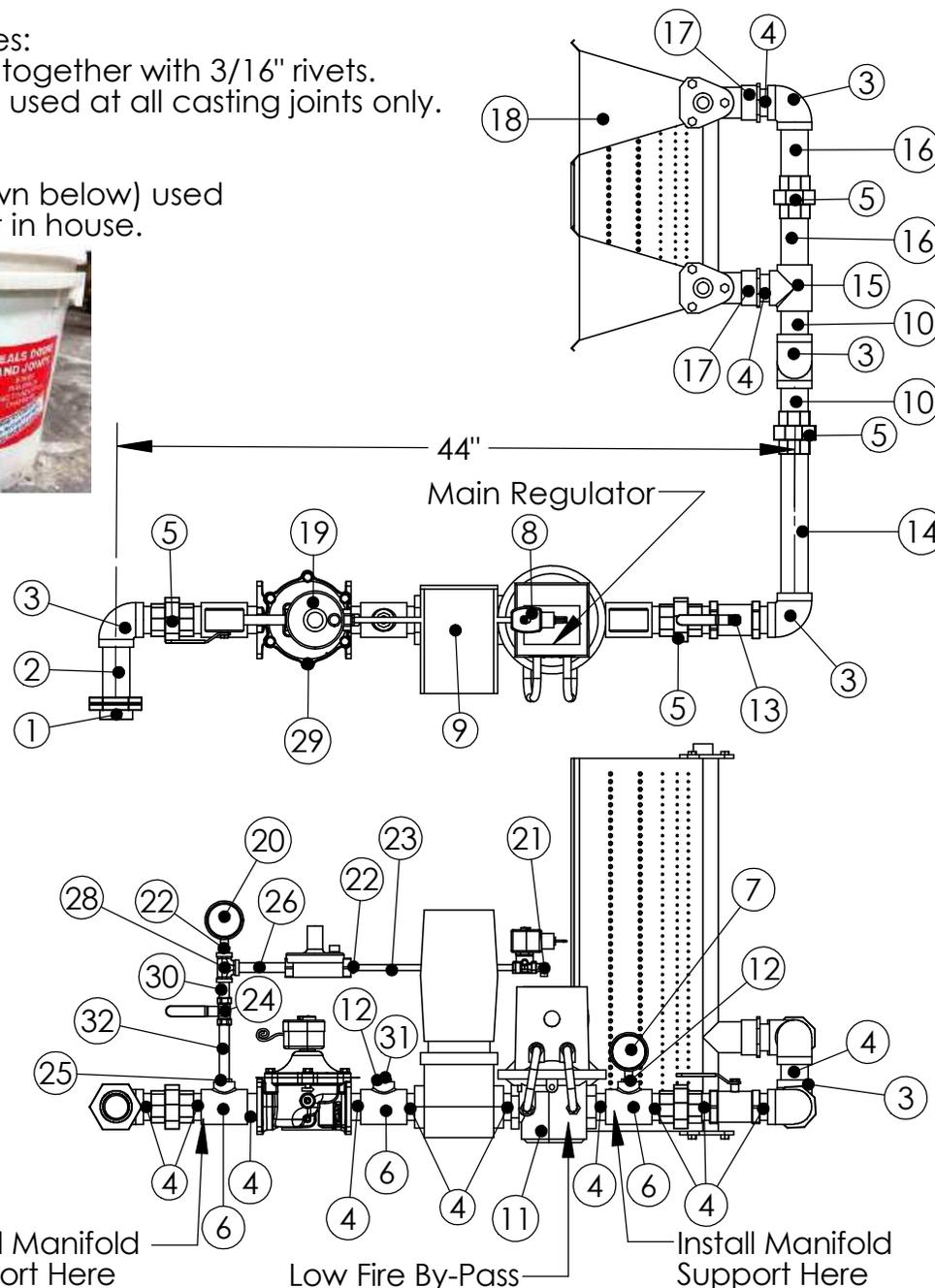
BILL OF MATERIALS		
ITEM NUMBER	Description	Quantity
1	1-1/2" Quick Seal	1
2	1-1/2" x 4" Nipple	1
3	1-1/2" 90° Elbow	5
4	1-1/2" Close Nipple (1-3/4")	13
5	1-1/2" Union	4
6	1-1/2" x 1-1/2" x 1/2" Tee	3
7	-5-15 w.c. Gas Pressure Gauge	1
8	V4046C1021 Solenoid	1
9	1-1/2" V4055A1007 Hydraulic Actuator and V5055A1020 Valve	1
10	1-1/2" x 2-1/2" Nipple	2
11	Maxitrol 1-1/2" MR212D Modulating Valve	1
12	1/2" Male x 1/4" Female Reducer	2
13	1-1/2" Manual Ball Valve	1
14	1-1/2" x 10" Nipple	1
15	1-1/2" x 1-1/2" x 1-1/2" Tee	1
16	1-1/2" x 4" Nipple	2
17	1-1/2" Female x 2" Male Adapter	2
18	60" Dual Fuel Midco Burner	1
19	325-3x3/8 Pilot Gas Regulator	1
20	0-35" w.c. or 0-5 psi or 0-15 psi Pressure Gauge (check spec)	1
21	1/4" Brass Elbow	1
22	3/8" Male x 1/4" Female Reducer	2
23	1/4" x 11" Nipple	1
24	3/8" Manual Ball Valve	1
25	1/2" Male x 3/8" Female Reducer	1
26	3/8" x 3-1/2" Nipple	1
27	Pyroseal Furnace Cement (AX # 2220)	N/A
28	3/8" Tee	1
29	1-1/2" 8214275 Solenoid Valve	1
30	3/8" x 1-1/2" Nipple	1
31	1/4" Plug	1
32	3/8" x 4" Nipple	1

# Gas Train w/ Upstream Pilot

Revision History				
#	Description	Revised by	ECN #	Date
0	Released to production	DAM		
1	Updated solenoid valve part	BFL	3067	8/27/2019

Additional Notes:  
Burners riveted together with 3/16" rivets.  
Burner Cement used at all casting joints only.

Item # 27 (shown below) used for burners built in house.



### NOTES:

Gas Type: Natural or LP  
Inlet Pressure: 7 in. w.c. - 5 psi.  
Max. Natural Gas Manifold Pressure: 5 in. w.c.  
Max. LP Manifold Pressure: 2.5 in. w.c.

External High Gas Pressure Regulator required when gas pressure exceeds 5 psi.:  
P/N = 243-8-2-1.5-OR-1-30 (25 psi. max.)  
Item #9 is replaced by V4055D1019 and V5055C1059 for Proof of Closure Applications

Material: N/A  
Blank Size: N/A x N/A  
Weight: N/A lbs

Part Number: N/A  
MACOLA/AX Number: N/A  
Drawing Name: DF 5 60 Inch Gas Train  
Drawn By: DAM  
Parent Assembly: DF 5  
Sheet: 4 of 5

Unless Otherwise Specified  
Dimensions are in Inches.

Standard Tolerances are:  
Fractions: ±1/16  
Decimal: .XX±.05  
.XXX±.015  
Angles: ±1°

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BILL OF MATERIALS

ITEM NUMBER	Description	Quantity
1	1-1/2" Quick Seal	1
2	1-1/2" x 4" Nipple	1
3	1-1/2" 90° Elbow	5
4	1-1/2" Close Nipple (1-3/4")	13
5	1-1/2" Union	4
6	1-1/2" x 1-1/2" x 1/2" Tee	3
7	-5-15 w.c. Gas Pressure Gauge	1
8	V4046C1021 Solenoid	1
9	1-1/2" V4055A1007 Hydraulic Actuator and V5055A1020 Valve	1
10	1-1/2" x 2-1/2" Nipple	2
11	Maxitrol 1-1/2" MR212D Modulating Valve	1
12	1/2" Male x 1/4" Female Reducer	1
13	1-1/2" Manual Ball Valve	1
14	1-1/2" x 10" Nipple	1
15	1-1/2" x 1-1/2" x 1-1/2" Tee	1
16	1-1/2" x 4" Nipple	2
17	1-1/2" Female x 2" Male Adapter	2
18	60" Dual Fuel Midco Burner	1
19	325-3x3/8 Pilot Gas Regulator	1
20	0-35" w.c. or 0-5 psi or 0-15 psi Pressure Gauge (check spec)	1
21	1/4" Brass Elbow	1
22	3/8" Male x 1/4" Female Reducer	5
23	1/4" x 11" Nipple	1
24	3/8" 90° Elbow	2
25	3/8" x 1-1/2" Nipple	4
26	1/4" Plug	1
27	3/8" Manual Ball Valve	1
28	1/2" Male x 3/8" Female Reducer	2
29	3/8" x 3" Nipple	2
30	Pyroseal Furnace Cement (AX # 2220)	N/A
31	3/8" Tee	3
32	1-1/2" 8214275 Solenoid Valve	1
33	Optional GML-A4-4-4 Pressure Switch	1
34	Optional GMH-A4-4-4 Pressure Switch	1
35	3/8" x 3-1/2" Nipple	1

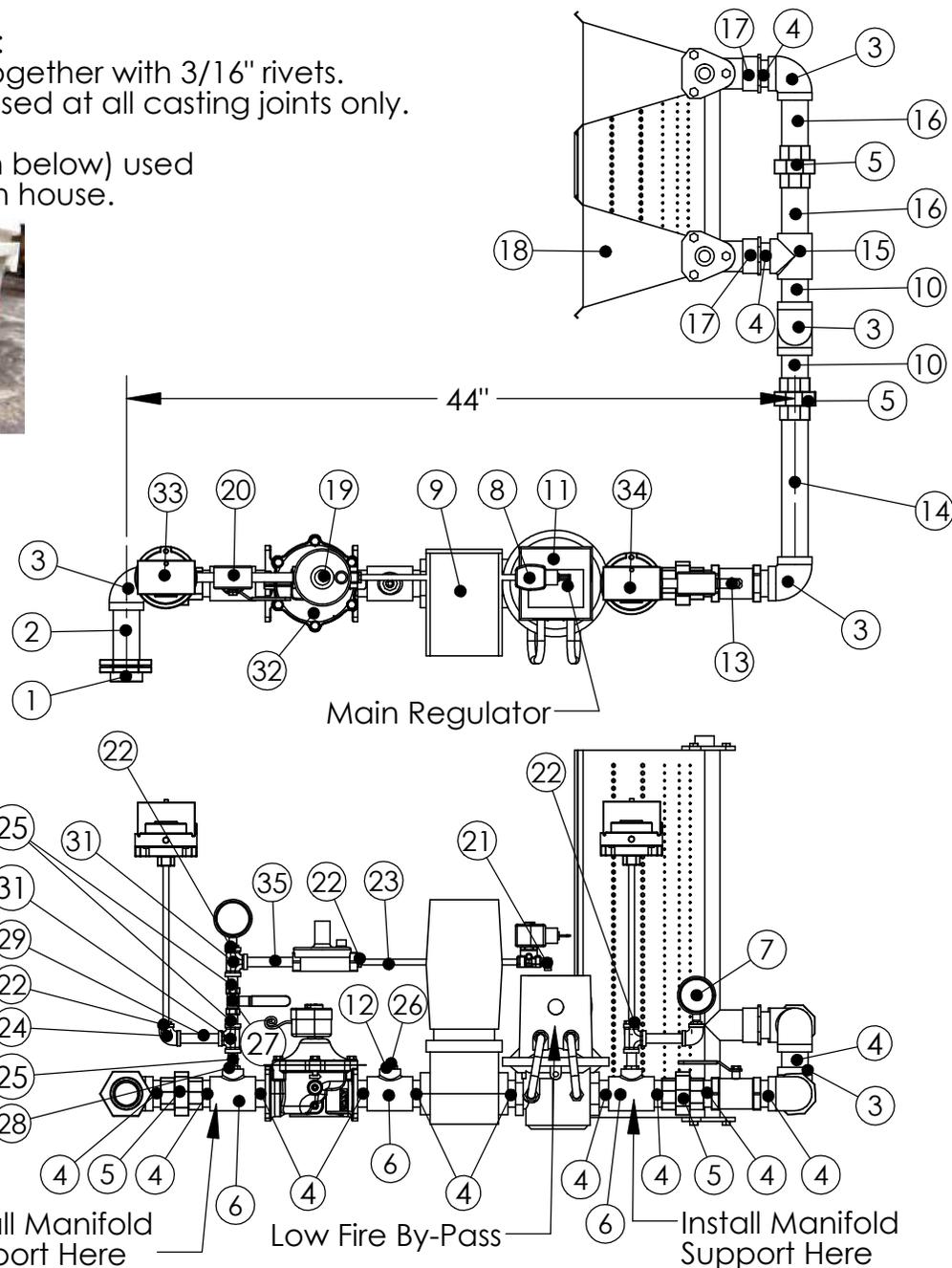
# Gas Train Upstream Pilot w/ Pressure Switches

Additional Notes:  
 Burners riveted together with 3/16" rivets.  
 Burner Cement used at all casting joints only.

Item # 30 (shown below) used for burners built in house.



Revision History				
#	Description	Revised by	ECN #	Date
0	Released to production	DAM		
1	Updated solenoid valve part	BFL	3067	8/27/2019



NOTES:  
 Gas Type: Natural or LP  
 Inlet Pressure: 7 in. w.c. - 5 psi.  
 Max. Natural Gas Manifold Pressure: 5 in. w.c.  
 Max. LP Manifold Pressure: 2.5 in. w.c.

External High Gas Pressure Regulator required when gas pressure exceeds 5 psi.:  
 P/N = 243-8-2-1.5-OR-1-30 (25 psi. max.)  
 Item #9 is replaced by V4055D1019 and V5055C1059 for Proof of Closure Applications

Material: N/A  
 Blank Size: N/A x N/A  
 Weight: N/A lbs

Part Number: N/A  
 MACOLA/AX Number: N/A  
 Drawing Name: DF 5 60 Inch Gas Train  
 Drawn By: DAM  
 Parent Assembly: DF 5  
 Sheet: 5 of 5

Unless Otherwise Specified  
 Dimensions are in Inches.  
 Standard Tolerances are:  
 Fractions: ±1/16  
 Decimal: .XX±.05  
 .XXX±.015  
 Angles: ±1°

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