



Installation Instructions Gravity Return Piping Kit MegaSteam™ Series Oil Boiler

GENERAL INFORMATION

- A. These instructions contain information related only to the assembly/installation of the Gravity Return Piping Kit on the MegaSteam™ Series 3-Pass Oil Boiler. This information can also be found in *Installation, Operating and Service Instructions for MegaSteam™ Series 3-Pass Oil Boiler* (I,O&S) manual furnished with the boiler.

WARNING

Difference in Piping Compound / method may effect pipe alignment.

B. Materials Provided with this kit.

1. Installation Instructions.
2. See Table 1 for Recommended material provided or Table 3 for Dropped Header material provided for Boiler Models MST288, MST396 and MST513.
3. See Table 2 for Recommended material provided or Table 4 for Dropped Header material provided for Boiler Model MST629.

C. Installation of Gravity Return Piping Kit.

1. Assemble Gravity Return Piping Kit for MST288, MST396 and MST513 as illustrated in Figure 1 for Recommended configuration or Figure 3 for Dropped Header configuration.
2. Assemble Gravity Return Piping Kit for MST629 as illustrated in Figure 2 for Recommended configuration or Figure 4 for Dropped Header configuration.

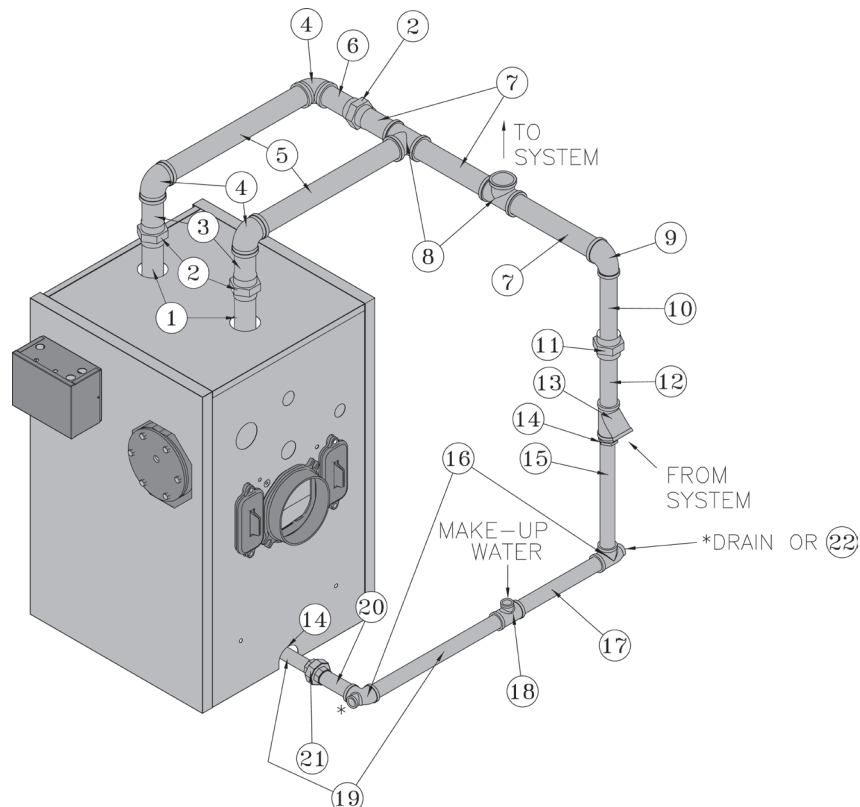
Note: Tighten unions only after all piping is in the proper position. Recommend using Pipe Dope or Teflon Tape on all threaded surfaces.

D. Place boiler in operation.

Refer to Section VIII: System Start-up in
Installation, Operating and Service Instructions
for MegaSteam™ Series 3-Pass Oil Boiler.

**TABLE 1: RECOMMENDED MATERIAL PROVIDED FOR BOILER MODELS
MST288, MST396 AND MST513**

Item	Fittings	Part Number	Quantity
1	2" x 12" Nipple	806600330	2
2	2" Union	806604019	3
3	2" x 6" Nipple	806600204	2
4	2" Elbow	806601538	3
5	2" x 15" Nipple	101435-01	2
6	2" x 3" Nipple (MST288 and MST396) or 2" x 9" Nipple (MST513)	806600010 or 806600443	1
7	2" x 4" Nipple	806600044	3
8	2" Tee	806601050	2
9	2" - 1½" Reducing Elbow	806601623	1
10	1-1/2" x 18" Nipple	806600011	1
11	1-1/2" Union	806604022	1
12	1-1/2" x 4-3/4" Nipple	101436-01	1
13	1-1/2" Wye	101437-01	1
14	1-1/2" - 1-1/4" Bush	806600539	2
15	1-1/4" x 22-3/16" Nipple	106711-01	1
16	1-1/4" x 3/4" x 1-1/4" Tee	806601002	2
17	1-1/4" x 9-7/8" Nipple	101457-01	1
18	1-1/4" x 1-1/4" x 3/4" Tee	806601032	1
19	1-1/4" x 5" Nipple	100090-01	2
20	1-1/4" x 3-3/4" Nipple	101456-01	1
21	1-1/4" Union	806604003	1
22	3/4" Plug	806603585	1



NOTE: Item 14 may need to be installed before the boiler is jacketed.

Figure 1: Recommended Gravity Return Diagram for MST288, MST396 and MST513

**TABLE 2: RECOMMENDED MATERIAL PROVIDED FOR BOILER MODEL
MST629**

Item	Fittings	Part Number	Quantity
1	2" x 12" Nipple	806600330	2
2	2" Union	806604019	3
3	2" x 6" Nipple	806600204	2
4	2" Elbow	806601538	2
5	2" x 15" Nipple	101435-01	2
6	3" x 2" Reducing Elbow	806601572	2
7	3" x 15-1/8" Nipple	101439-01	1
8	3" Union	806604018	1
9	3" to 4-3/4" Nipple	101440-01	3
10	3" x 3" x 2" Tee	806601079	1
11	3" Tee	806601108	1
12	2" x 10" Nipple	806600037	1
13	2" x 13-3/8" Nipple	101441-01	1
14	2" Wye	806601124	1
15	2" - 1-1/2" Bush	806600517	1
16	1-1/2" x 20-5/8" Nipple	101442-01	1
17	1-1/2" x 3/4" x 1-1/2" Tee	806601003	2
18	1-1/2" x 5" Nipple	806600336	1
19	1-1/2" x 1-1/2" x 3/4" Tee	806601105	1
20	1-1/2" x 5" Nipple	806600336	1
21	1-1/2" Union	806604022	1
22	1-1/2" x 8" Nipple	806600321	2
23	3/4" Plug	806603585	1

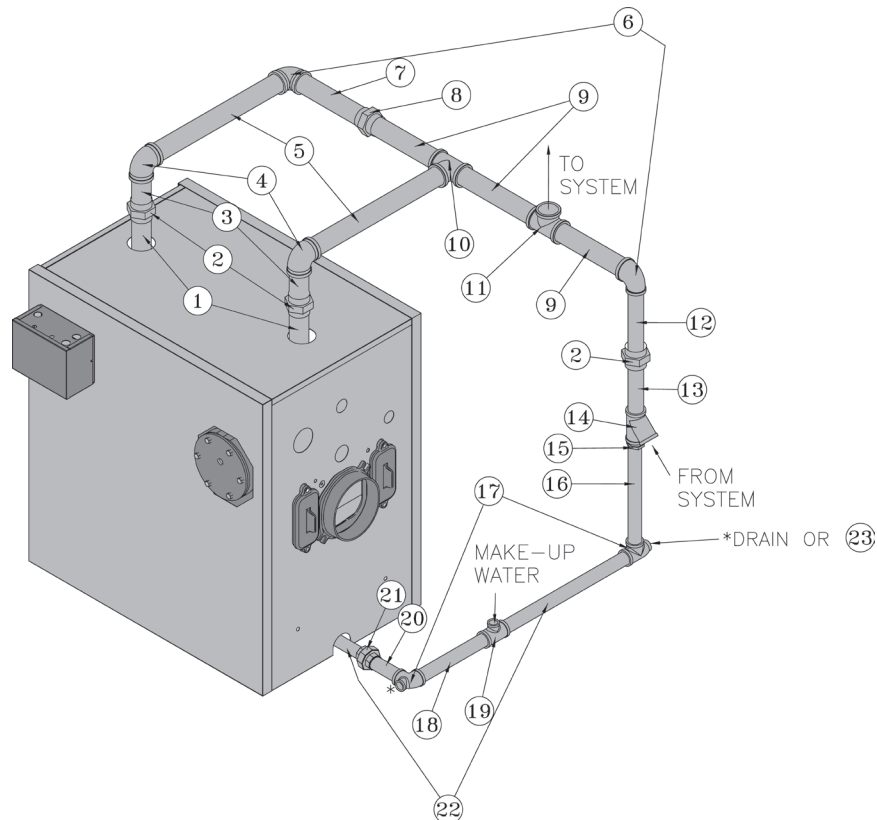
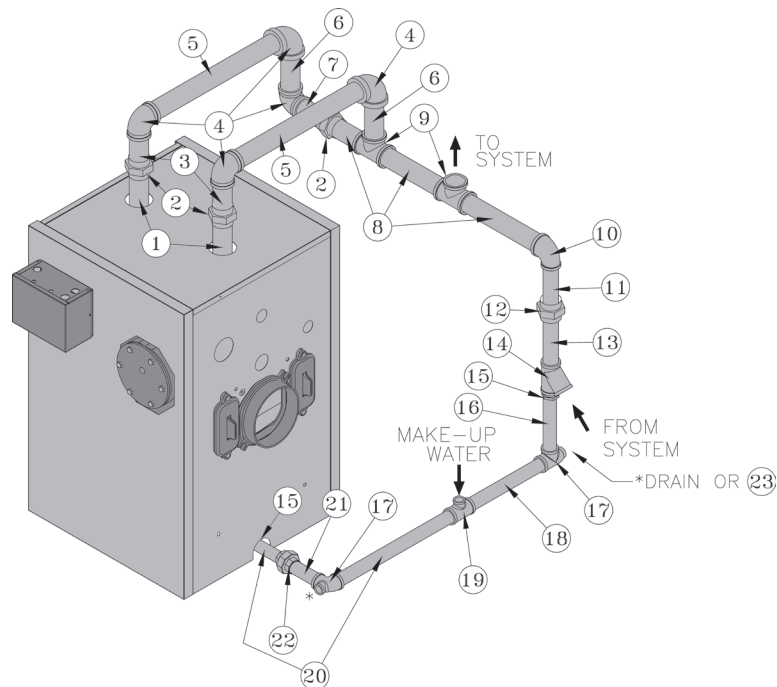


Figure 2: Recommended Gravity Return Diagram for MST629

**TABLE 3: DROPPED HEADER MATERIAL PROVIDED FOR BOILER MODELS
MST288, MST396 AND MST513**

Item	Fittings	Part Number	Quantity
1	2" x 12" Nipple	806600330	2
2	2" Union	806604019	3
3	2" x 6" Nipple	806600204	2
4	2" Elbow	806601538	5
5	2" x 15" Nipple	101435-01	2
6	2" x 7" Nipple	8066004231	2
7	2" x 3" Nipple (MST288 and MST396) or 2" x 9" Nipple (MST513)	806600010 or 806600443	1
8	2" x 4" Nipple	806600044	3
9	2" Tee	806601050	2
10	2" - 1½" Reducing Elbow	806601623	1
11	1-1/2" x 8-5/16" Nipple	806600423	1
12	1-1/2" Union	806604022	1
13	1-1/2" x 4-3/4" Nipple	101436-01	1
14	1-1/2" Wye	101437-01	1
15	1-1/2" - 1-1/4" Bush	806600539	2
16	1-1/4" x 22-3/16" Nipple	106711-01	1
17	1-1/4" x 3/4" x 1-1/4" Tee	806601002	2
18	1-1/4" x 9-7/8" Nipple	101457-01	1
19	1-1/4" x 1-1/4" x 3/4" Tee	806601032	1
20	1-1/4" x 5" Nipple	100090-01	2
21	1-1/4" x 3-3/4" Nipple	101456-01	1
22	1-1/4" Union	806604003	1
23	3/4" Plug	806603585	1



NOTE: Item 15 may need to be installed before the boiler is jacketed.

Figure 3: Dropped Header Gravity Return Diagram for MST288, MST396 and MST513

**TABLE 4: DROPPED HEADER MATERIAL PROVIDED FOR BOILER MODEL
MST629**

Item	Fittings	Part Number	Quantity
1	2" x 12" Nipple	806600330	2
2	2" Union	806604019	3
3	2" x 6" Nipple	806600204	3
4	2" Elbow	806601538	4
5	2" x 15" Nipple	101435-01	2
6	2" x 7" Nipple	8066004231	2
7	3" x 2" Reducing Elbow	806601572	2
8	3" x 15-1/8" Nipple	101439-01	1
9	3" Union	806604018	1
10	3" to 4-3/4" Nipple	101440-01	3
11	3" x 3" x 2" Tee	806601079	1
12	3" Tee	806601108	1
13	2" x 7-3/8" Nipple	101907-01	1
14	2" Wye	806601124	1
15	2" - 1-1/2" Bush	806600517	1
16	1-1/2" x 20-5/8" Nipple	101442-01	1
17	1-1/2" x 1-1/2" x 3/4" Tee	806601105	1
18	1-1/2" x 5" Nipple	806600336	1
19	1-1/2" x 3/4" x 1-1/2" Tee	806601003	2
20	1-1/2" x 5" Nipple	806600336	1
21	1-1/2" Union	806604022	1
22	1-1/2" x 8" Nipple	806600321	2
23	3/4" Plug	806603585	1

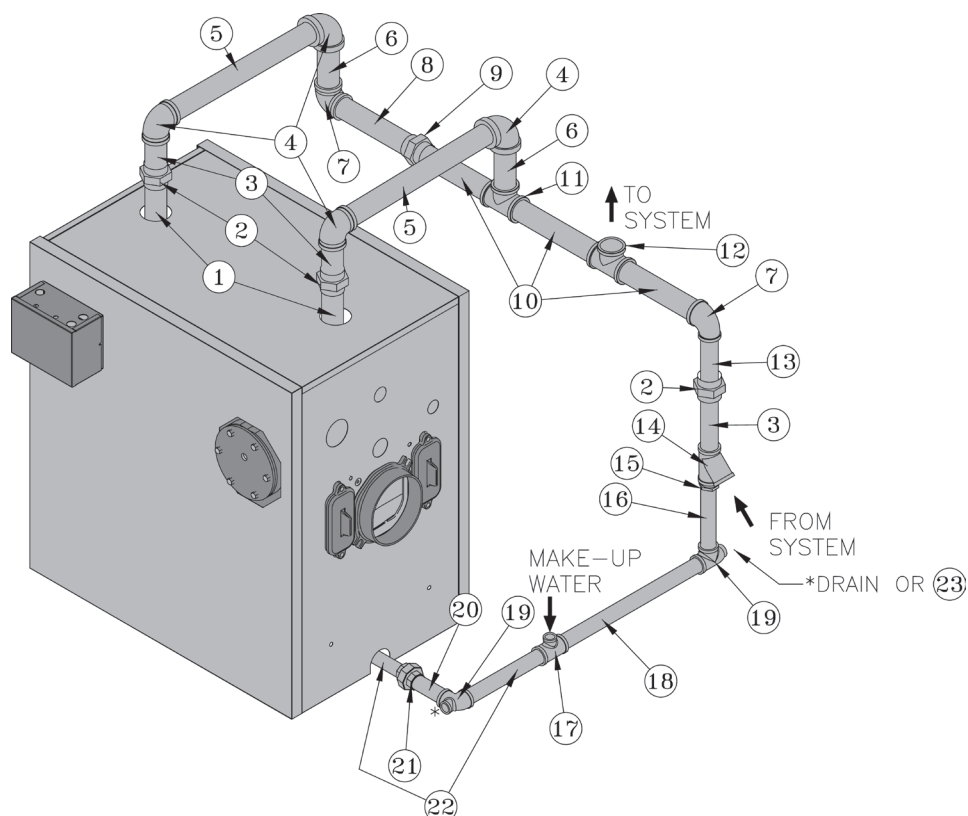


Figure 4: Dropped Header Gravity Return Diagram for MST629