

**Region:** 2

**Location:** NY067

**CSS #:** 34110

**Maximo Work Order No.:** 15899

**Asset #:** NA

**Date Issued:** 1/13/22

**Original Description:** Repair hydronic heating loop leaks in OMS. They are small drip leaks from several nut unions. Also there are some air bleeder valves that have rusted over and are not venting air.

**Repairs Needed:**

TWI proposes labor and materials to replace all leaking nut unions, expansion tank, and air vents. Cut out all nut unions and replace piping to the unions and install new. Remove old expansion tank and piping and install new, and repair piping where air is getting into hydronic loop.

**RS Means Line Buildup and Labor Summary (Data Version 2017, Q4):**

Quantity	Line Item Number	Description	Labor Hours	Labor Rate/Hr	Materials	Equipment	Total
--	NA	Materials (see attached detail)	--	--	\$3,827.59	--	\$3,827.59
--	NA	TW Labor (includes diagnostic)	20	\$80.00	--	--	\$1,600.00

**Estimate Summary:**

Labor Hours	Labor Cost	Material Cost	Equipment	Total Cost	CE Factor	Total Estimate
20	\$1,600.00	\$3,827.59		\$5,427.59	90%	\$4,884.83



# WORK ESTIMATE

CSS #: 34110

Work Order #: 15899

Emergency X

Urgent

Routine

Company Name:	Tidewater, Inc.		Facility ID:	NY067	
Contractor POC:	Adam Colopy				
Telephone No:	740-819-6207		Building/Location; (e.g., Classroom/Room #)		
E-Mail Address:	<a href="mailto:adam.colopy@tideh2o.net">adam.colopy@tideh2o.net</a>				
Assigned Technician(s):	Patrick Brown				

## DESCRIPTION of WORK and EXPLANATION for REPAIRS or REPLACEMENT

Labor and materials to replace all leaking nut unions, expansion tank, and air vents. Cut out all nut unions and replace piping to the unions and install new. Remove old expansion tank and piping and install new, and repair piping where air is getting into hydronic loop.

LABOR/MATERIAL		MATERIAL/ SUB UNIT DOLLAR AMOUNT	LBR/HR \$80	LINE ITEM TOTAL DOLLAR AMOUNT
ITEM	QUANTITY			
Diagnostic			4	\$320.00
Materials (see attached detail)	1	\$3,827.59		\$3,827.59
Labor			16	\$1,280.00
<b>SUB-TOTAL COSTS:</b>	Materials Total	\$3,827.59	<b>Labor</b>	\$1,600.00
			<b>TOTAL</b>	<b>\$5,427.59</b>



# Cart

Item	Quantity	Total Price	Item Availability
 <b>VIEGA PROPRESS</b> Low Lead Bronze Di-electric Union, Press x FPT Connection Type, 1 in x 1 in Tube Size Item #5ULZ8 Your Price: <b>\$72.34</b>	2	<b>\$144.68</b>	Expected to arrive <b>Fri. Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)
 <b>VIEGA PROPRESS</b> Low Lead Bronze Di-electric Union, Press x FPT Connection Type, 1-1/4 in x 1-1/4 in Tube Size Item #5ULZ9 Your Price: <b>\$89.19</b>	2	<b>\$178.38</b>	Expected to arrive <b>Fri. Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)
 <b>VIEGA PROPRESS</b> Low Lead Bronze Di-electric Union, Press x FPT Connection Type, 1-1/2 in x 1-1/2 in Tube Size Item #5UMA0 Your Price: <b>\$89.67</b>	2	<b>\$179.34</b>	Expected to arrive <b>Fri. Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)
 <b>VIEGA PROPRESS</b> Low Lead Bronze Di-electric Union, Press x FPT Connection Type, 2 in x 2 in Tube Size Item #5UMA1 Your Price: <b>\$148.30</b>	2	<b>\$296.60</b>	Expected to arrive <b>Fri. Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)

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	<b>WATTS 1 1/4 in Vent Dia. Brass Automatic Vent Valve, 1/8 in Inlet Size</b> Item #4A820 Your Price: <b>\$11.64</b>	4	<b>\$46.56</b>	Expected to arrive <b>Fri. Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)
	<b>WATTS 1 1/4 in Vent Dia. Brass Automatic Vent Valve, 1/4 in Inlet Size</b> Item #4A821 Your Price: <b>\$11.21</b>	4	<b>\$44.84</b>	Expected to arrive <b>Fri. Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)
	<b>GRAINGER APPROVED 3/4" Brass Boiler Drain Valve, MNPT x MGHT</b> Item #46A973 Your Price: <b>\$17.81</b>	4	<b>\$71.24</b>	Expected to arrive <b>Fri. Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)
	<b>GRAINGER APPROVED Garden Hose Cap, Material Brass, For Hose I.D. 3/4 in</b> Item #20XP93 Your Price: <b>\$3.32</b>	8	<b>\$26.56</b>	Expected to arrive <b>Fri. Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)

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**VIEGA PROGRESS** Copper Tee,  
Press x Press x Press Connection  
Type, 1 in x 1 in x 3/4 in Tube Size  
Item #1RRB1  
Your Price: **\$18.78**

2

**\$37.56**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**VIEGA PROGRESS** Copper Tee,  
Press x Press x Press Connection  
Type, 1-1/4 in x 1-1/4 in x 3/4 in Tube  
Size  
Item #1RRB7  
Your Price: **\$23.70**

2

**\$47.40**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**VIEGA PROGRESS** Copper Tee,  
Press x Press x Press Connection  
Type, 1-1/2 in x 1-1/2 in x 3/4 in Tube  
Size  
Item #1RRC9  
Your Price: **\$47.52**

2

**\$95.04**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**VIEGA PROGRESS** Copper 90 Degree  
Elbow, Press x Press Connection  
Type, 1 in x 1 in Tube Size  
Item #48RH54  
Your Price: **\$10.15**

4

**\$40.60**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**VIEGA PROGRESS** Copper 90 Degree  
Elbow, Press x Press Connection  
Type, 1-1/4 in x 1-1/4 in Tube Size  
Item #48RH55  
Your Price: **\$19.94**

4

**\$79.76**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)

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	<b>VIEGA PROGRESS</b> Copper 90 Degree Elbow, Press x Press Connection Type, 1-1/2 in x 1-1/2 in Tube Size Item #48RH56	4	\$148.80	Expected to arrive <b>Fri. Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)
	<b>VIEGA PROGRESS</b> Low Lead Bronze Adapter, Press x FPT Connection Type, 3/4 in x 3/4 in Tube Size Item #5UMD7	4	\$29.64	Expected to arrive <b>Fri. Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)
	<b>VIEGA PROGRESS</b> Copper Reducer, Press Connection Type, 1-1/2 in x 1 in Tube Size Item #1RPV7	4	\$157.72	Expected to arrive <b>Mon. Jan 17</b> using standard ground shipping (additional shipping options available at Checkout.)
	<b>VIEGA PROGRESS</b> Copper Reducer, Press x Press Connection Type, 1-1/2 in x 1-1/4 in Tube Size Item #1RPV8	4	\$128.48	Expected to arrive <b>Fri. Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)

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**VIEGA PROGRESS** Copper Reducer,

4

**\$152.12**Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)

Press x Press Connection Type, 1

1/2 in x 2 in Tube Size

Item #1RPW3

Your Price: **\$38.03****FLEXCON** Expansion Tank, Tank

1

**\$202.98**Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)

Type Pressurized

Item #2P670

Your Price: **\$202.98**

This item can only be sent via ground shipping.

**VIEGA PROGRESS** Low Lead Bronze

2

**\$50.56**Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)

Union, Press x Press Connection

Type, 1/2 in x 1/2 in Tube Size

Item #5ULZ0

Your Price: **\$25.28****VIEGA PROGRESS** Copper 90 Degree

2

**\$6.68**Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)

Elbow, Press x Press Connection

Type, 1/2 in x 1/2 in Tube Size

Item #1RPJ4

Your Price: **\$3.34**



**VIEGA PROGRESS** Low Lead Bronze  
Adapter, Press x MPT Connection  
Type, 1/2 in x 1/2 in Tube Size  
Item #5UMA7  
Your Price: **\$3.84**

2

**\$7.68**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**GRAINGER APPROVED** Nipple: Red  
Brass, 1/8 in Nominal Pipe Size, 2  
1/2 in Overall Lg, Threaded on Both  
Ends, Schedule 40  
Item #1VGG9  
Your Price: **\$3.01**

1

**\$3.01**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**GRAINGER APPROVED** Nipple: Red  
Brass, 1/8 in Nominal Pipe Size, 3 in  
Overall Lg, Threaded on Both Ends,  
Schedule 40  
Item #1VGH2  
Your Price: **\$3.08**

1

**\$3.08**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**GRAINGER APPROVED** Nipple: Red  
Brass, 1/2 in Nominal Pipe Size, 2  
1/2 in Overall Lg, Threaded on Both  
Ends, Schedule 40  
Item #1VGP9  
Your Price: **\$5.83**

1

**\$5.83**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**GRAINGER APPROVED** Nipple: Red  
Brass, 1/2 in Nominal Pipe Size, 3 in  
Overall Lg, Threaded on Both Ends,  
Schedule 40  
Item #1VGR2  
Your Price: **\$6.84**

1

**\$6.84**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**GRAINGER APPROVED** Nipple: Red  
Brass, 1/2 in Nominal Pipe Size, 3  
1/2 in Overall Lg, Threaded on Both  
Ends, Schedule 40  
Item #1VGR4  
Your Price: **\$8.67**

1

**\$8.67**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**GRAINGER APPROVED** Nipple: Red  
Brass, 1/2 in Nominal Pipe Size, 4 in  
Overall Lg, Threaded on Both Ends,  
Schedule 40  
Item #1VGR6  
Your Price: **\$8.88**

1

**\$8.88**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**GRAINGER APPROVED** Nipple: Red  
Brass, 1/2 in Nominal Pipe Size, 5 in  
Overall Lg, Threaded on Both Ends,  
Schedule 40  
Item #1VGR8  
Your Price: **\$12.11**

1

**\$12.11**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**GRAINGER APPROVED** Nipple: Red  
Brass, 1/2 in Nominal Pipe Size, 6 in  
Overall Lg, Threaded on Both Ends,  
Schedule 40  
Item #1VGT1  
Your Price: **\$13.09**

1

**\$13.09**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**GRAINGER APPROVED** Tee: Red  
Brass, 1/2 in x 1/2 in x 1/2 in Pipe  
Size, Female NPT x Female NPT x  
Female NPT, Class 125  
Item #1VEZ3  
Your Price: **\$9.07**

1

**\$9.07**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**VIEGA PROGRESS** Copper Coupling  
No Stop, Press x Press Connection  
Type, 1/2 in x 1/2 in Tube Size  
Item #1RPG9  
Your Price: **\$6.90**

4

**\$27.60**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)



**VIEGA PROGRESS** Copper Reducer,  
FTG x Press Connection Type, 2 in x  
1-1/2 in Tube Size  
Item #1RPX9  
Your Price: **\$25.15**

4

**\$100.60**

Expected to arrive **Fri. Jan 14** using standard ground shipping (additional shipping options available at Checkout.)

	<b>MUELLER INDUSTRIES</b> 10 ft. Hard	1	<b>\$44.88</b>	Expected to arrive <b>Fri.</b> <b>Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)
	<b>MUELLER INDUSTRIES</b> 10 ft. Hard	1	<b>\$109.39</b>	Expected to arrive <b>Fri.</b> <b>Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)
	<b>MUELLER INDUSTRIES</b> 10 ft. Hard	1	<b>\$135.62</b>	Expected to arrive <b>Mon.</b> <b>Jan 17</b> using standard ground shipping (additional shipping options available at Checkout.)
	<b>MUELLER INDUSTRIES</b> 10 ft. Hard	1	<b>\$183.04</b>	Expected to arrive <b>Fri.</b> <b>Jan 14</b> using standard ground shipping (additional shipping options available at Checkout.)













