



INSTRUCTION BULLETIN

No. 340561
Machine: 8200/8210
Published: 7-02
Rev. 00

NOTE: DO NOT DISCARD the Parts List from the Instruction Bulletin. Place the Parts List in the appropriate place in your machine manual for future reference. Retaining the Parts List will make it easier to reorder individual parts and will save you the cost of ordering an entire kit.

NOTE: Numbers in parenthesis () are reference numbers for parts listed in Bill of Materials.

Installation instructions for **kit number 375441**

DESCRIPTION:

This kit contains the parts needed to replace the Flowjet pump on the model 8200/8210 sweeper/scrubber ES™ systems.

Please follow step-by-step instructions.

SPECIAL TOOLS / CONSIDERATIONS: NONE

(Estimated time to complete: 2 hours)

PREPARATION:

(Refer to FIG. 1 and 2)

FOR SAFETY: Before leaving or servicing machine, stop on level surface and set parking brake. Then turn off machine and remove key.

1. Disconnect battery cables from machine.



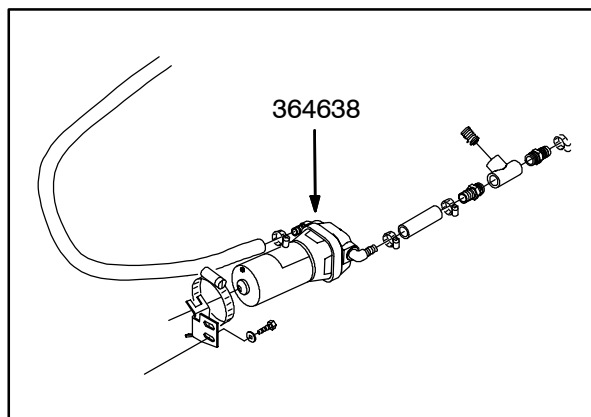
WARNING: Always disconnect battery cables from machine before working on electrical components.

OLD PUMP REMOVAL:

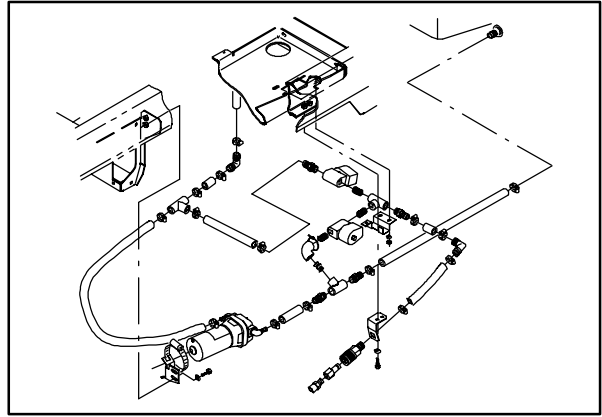
(Refer to FIG. 1 and 2)

NOTE: Set aside the fittings and hose clamps for re-use.

1. Disconnect and remove the old pump 364638 from the hose clamp.



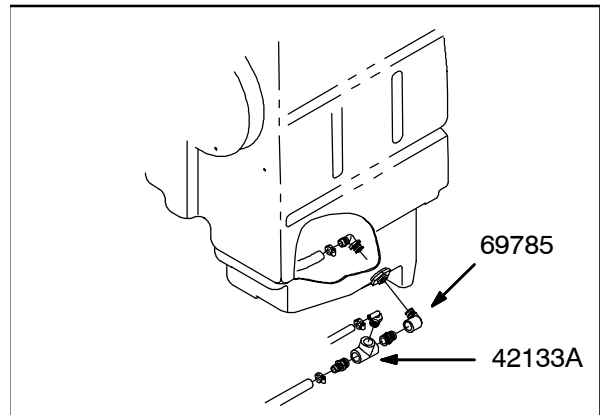
2. Remove all of the hoses, tees, elbows and solenoids in the ES™ system. Leave the autofill fittings up to the first tee fitting.



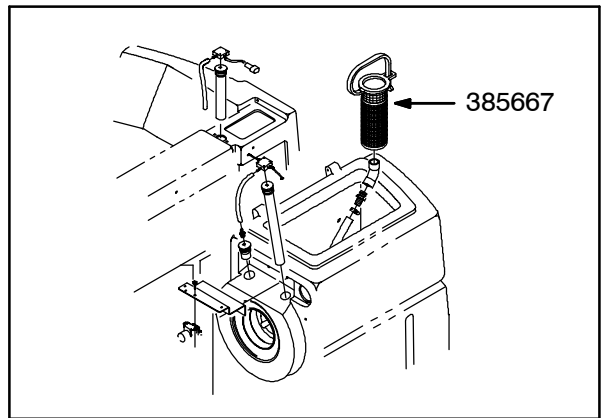
3. Remove and discard the elbow 69785 and tee 42133A coming out of the bottom of the recovery tank.

4. Remove the burp valve and the burp valve hose.

5. Remove the hose currently running from the bottom of the solution tank to the tee near the water manifold.



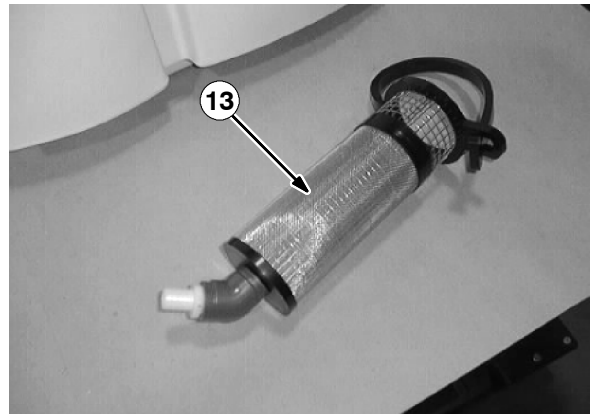
6. Disconnect and remove the strainer 385667 from the recovery tank.



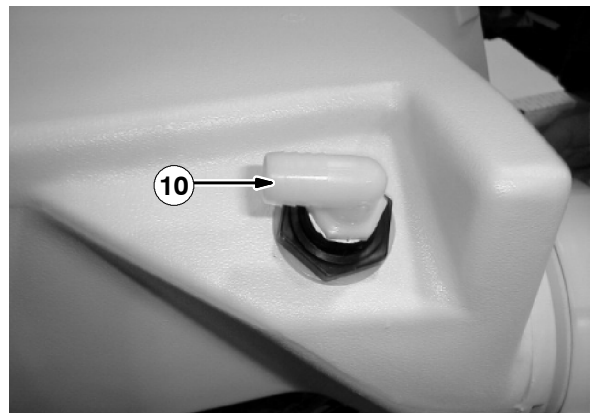
NEW PUMP INSTALLATION:

1. Install the new strainer (13) in the recovery tank.
(Refer to FIG. 2)

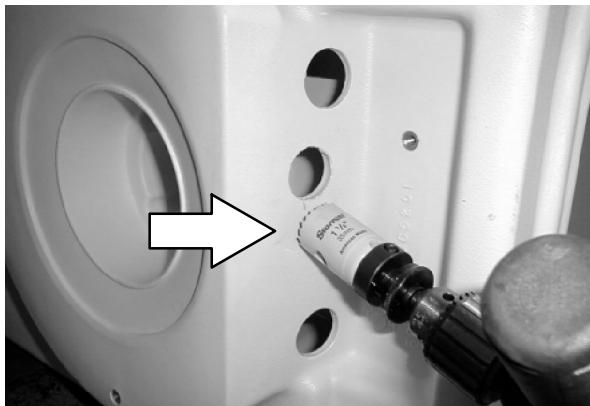
FOR SAFETY: Before leaving or servicing machine, stop on level surface and set parking brake.



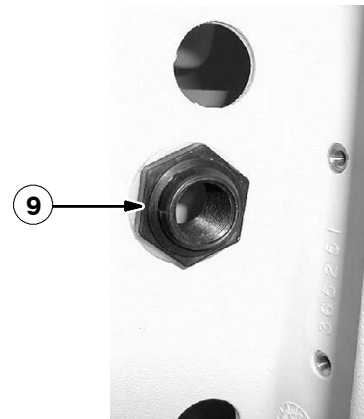
2. Mount the new E90 fitting (10) to the recovery tank.
(Refer to FIG. 2)



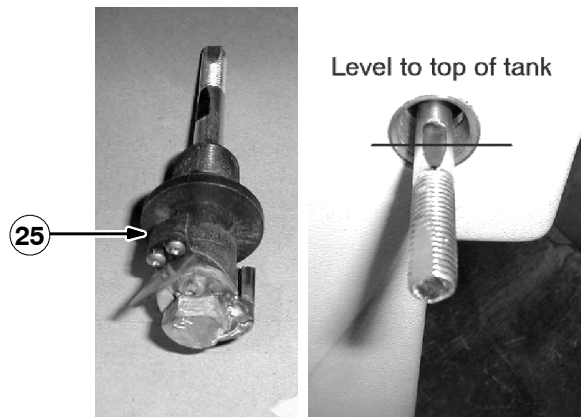
3. Mark and drill a 35mm (1 3/8" dia) hole for the recovery tank autofill.



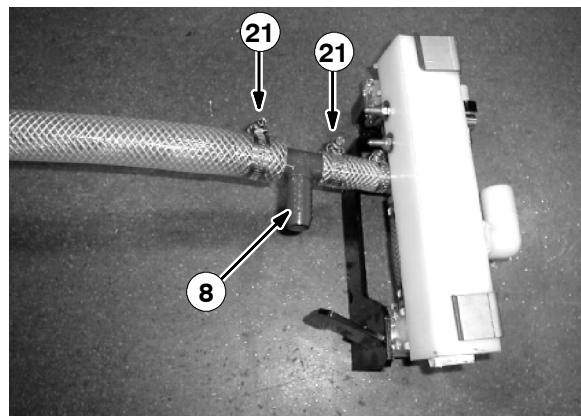
4. Install the bulkhead fitting (9) and elbow (10) to the recovery tank. (Refer to FIG. 2)



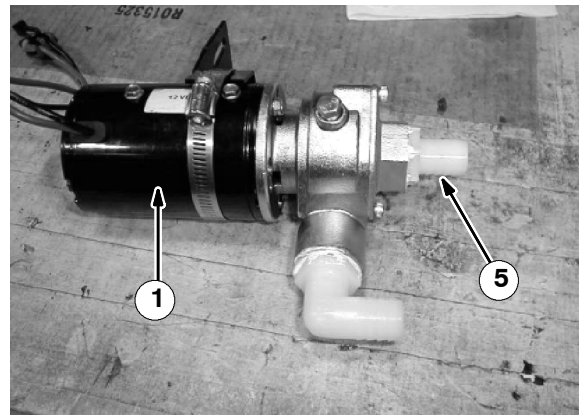
5. Install the check valve (25) in the recovery tank. Stop tightening when the flat edge of the valve is level at the top of the machine, to position the check valve correctly in the tank. (Refer to FIG. 2)



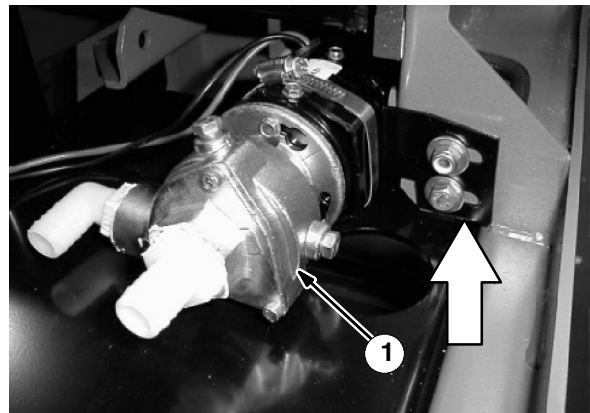
6. Connect the hoses (14, 20) and tee fitting (8) to the manifold block with hose clamps (21). (Refer to FIG. 2)
7. Remove the mounting plate from the pump. Reinstall the screws in the body of the pump.
8. Mount the new pump to the bracket and hose clamp.
9. Install connectors to the pump wires. Black wire in B, and the red wire in A.



10. Install the fittings 79273-2 (5) and 69785 to the pump (1). (Refer to FIG. 1)

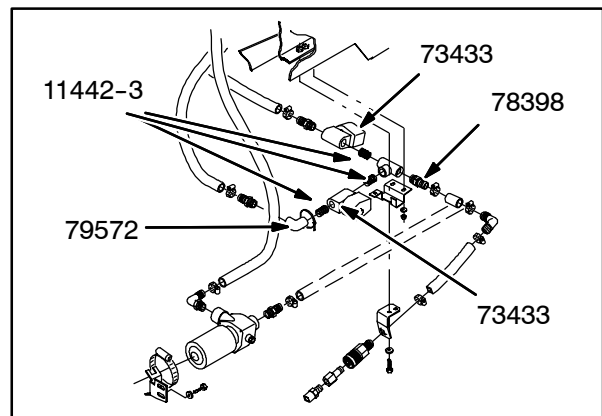


11. Remount the pump (1) assembly to the frame. (Refer to FIG. 1)



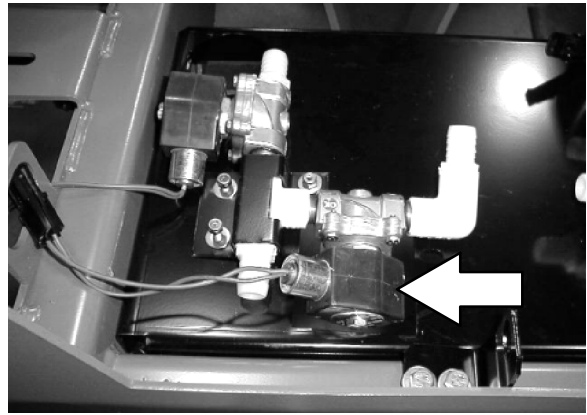
12. Build up the solenoid valve assembly, with the following set aside parts: (Refer to FIG. 1)

QTY	P/N	Description
2	73433	Solenoid Valve
3	11442-3	Fitting str, metal
1	79497	Fitting, tee
1	79572	Fitting, E90
3	78398	Fitting, str



13. Remount the solenoid valve assembly.

14. Mount the solution hose to the outlet side of the pump, hold to the frame with the same bracket as the old system.

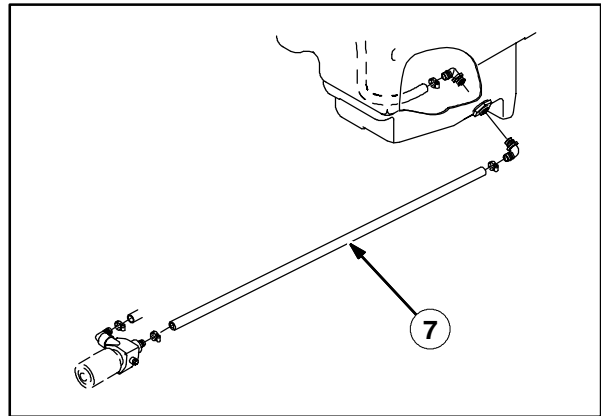


15. Connect the recovery tank hose (7) to the valve w/elbow fitting. (Refer to FIG. 2)

16. Connect the autofill hose to the tee at the manifold block and solenoid valve.

17. Connect the autofill hose to the tee at the manifold block and solenoid valve.

18. Connect the recovery tank hose to the pump inlet.



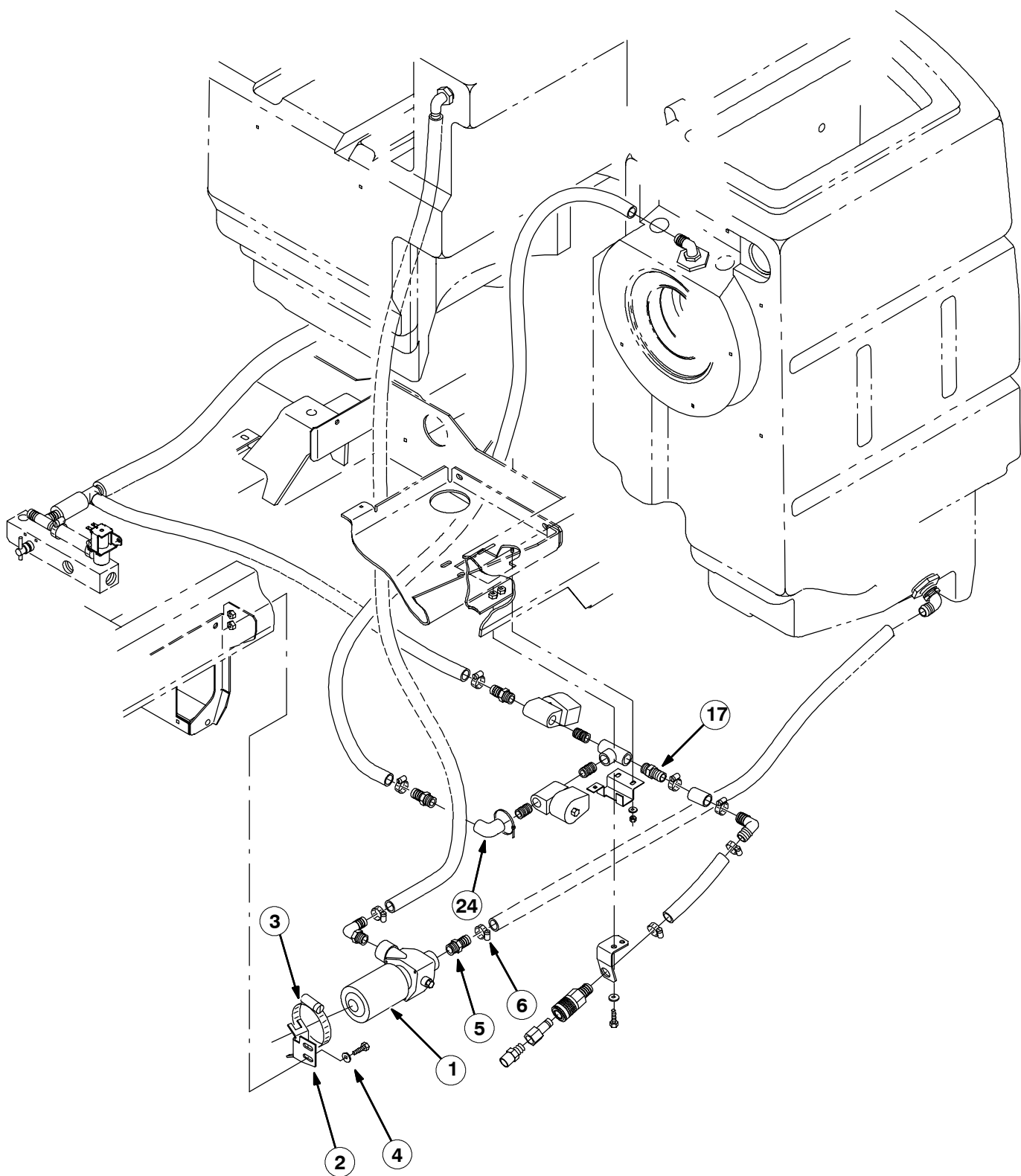


FIG. 1 - NEW ES™ PUMP AND AUTOFILL GROUP (xxxxxx-)

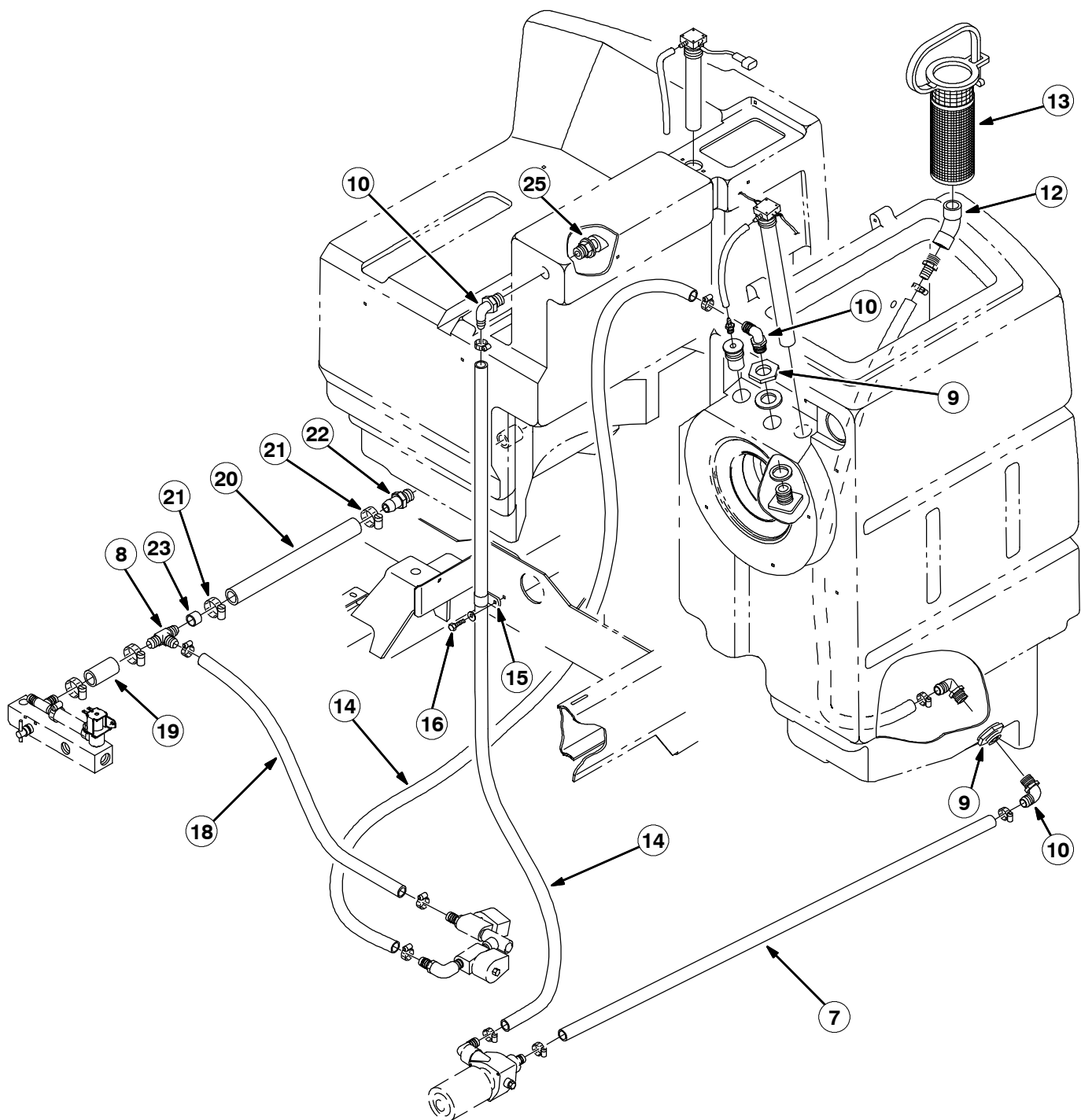


FIG. 2 - NEW ES™ TANKS GROUP (xxxxx-)

BILL OF MATERIALS FOR ES IMPELLER PUMP REPLACEMENT KIT 375441

Ref.	TENNANT Part No.	Description	Qty.
1	393414	Pump, solution, impeller, 12V	1
2	364542	Bracket, mtg, pump, ES™	1
3	17188	Clamp, hose, wormdrive, 1.62-3.50D	1
4	01685	Washer, flat, 0.31 Ss	1
5	79273-2	Fitting, plastic, str, BM12/PM12	3
6	63810	Clamp, hose, wormdrive 0.56-1.06D	10
7	364897	Hose, PVC, BRD, 0.75 ID 1.03 OD 30.0 L	1
8	75119	Fitting, plstc, tee, BM12/BM12/BM12	1
9	370112	Fitting, plstc, BKHD, PF12/PF12/cham	2
10	14877	Fitting, plstc, E90, BM12/PM12	4
11	25603	Hose, PVC, clr, 0.50 ID, 0.69 OD, 72.0 L	1
12	10575	Fitting, plstc, E45, PF12/PF12	1
13	375424	Strainer, soltn, 20 mesh cyl, 3.5 D, 7.5 L	1
14	393416	Hose, vyn brd, 0.75 ID, 53.01 G	2
15	40678-1	Clamp, cable, stl, 0.88D X 0.62W, 1H	1
16	15675	Screw, hex, M08 X 1.25 X 16, Ss	1
17	78398	Fitting, plastic, str, BM12/PM08, nyl	2
18	393417	Hose, vyn, brd, 0.75ID, 32.0 L	1
19	14734	Hose, PVC, brd, 0.75ID, 1.03 OD, 2.60 L	1
20	393419	Hose, vyn, brd, 1.0ID, 12.01G	1
21	11399	Clamp, hose, wormdrive, 0.81-1.5OD	4
22	364620	Fitting, plstc, str, BM16/PM16	1
23	364712	Hose, PVC, brd, 0.75ID, 1.03OD, 0.80L	1
24	79572	Fitting, plstc, E90, PF08/PF08	1
25	369869	Valve, check, soltn	1

TENNANT COMPANY
P. O. Box 1452
Minneapolis, MN 55440-1452