

# **INSTRUCTION BULLETIN**

No. 9007993 Machine: M20 / T20 / M30 Published: 04-2010 Rev. 00

### NOTE: DO NOT DISCARD the Parts List from the Instruction Bulletin. Place the Parts List in the appropriate place in the machine manual for future reference. Retaining the Parts List will make it easier to reorder individual parts and will save 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 9007992

#### SYNOPSIS:

This kit contains the parts needed to install the replacement hose kit on M20 machines (serial numbers 003123-003268) T20 machines (serial numbers 002141-002253) M30 machines (serial numbers 001321-001424)

#### SPECIAL TOOLS / CONSIDERATIONS: NONE

(Estimated time to complete: 1.25 hours)

#### **PREPARATION: (Gasoline & LPG Machines)**

1. Park the machine on a clean level surface, turn off the machine, remove the key, and set the parking brake.

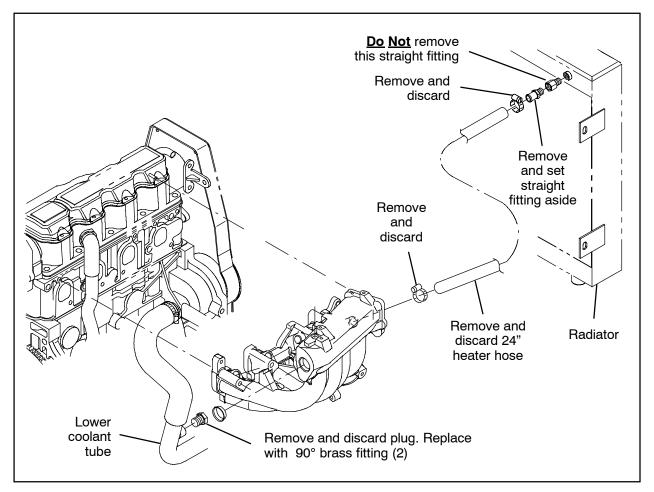
# FOR SAFETY: Before leaving or servicing machine, stop on level surface, turn off machine, and remove key.

2. Remove engine access panel from operator compartment. Set the panel and hardware aside. Refer to Fig. 1.



FIG. 1

3. Completely drain all coolant from the coolant system into a clean pan or container.



- FIG. 1
- 1. Disconnect the heater hose from the radiator and engine. Discard the heater hose and hose clamps. Refer to Fig. 1.
- 2. Remove the straight brass fitting from the radiator. Set the straight fitting aside. Refer to Fig. 1.
- 3. Remove the plug from the lower coolant tube. Discard the plug Refer to Fig. 1.
- Install the 90° brass fitting (2) onto the lower coolant tube where the plug was previously located. Refer to Fig. 1 and Fig. 5.
- 5. Cut a 3" section of hose from the molded end of the radiator hose (6).
- Cut a 24" section of hose from the 96" hose (5).
- 7. Install the adapter fitting (3) into the straight fitting left on the radiator. Refer to Fig. 5.
- 8. Install the saved straight fitting into the adapter fitting (3). Refer to Fig. 5.

9. Connect the plastic t-fitting (1) to the 28" radiator hose (6). Refer to Fig. 2 and Fig. 5.



FIG. 2

- 10. Connect the 3" radiator hose (6) to plastic t-fitting (1). Refer to Fig. 2 and Fig. 5.
- Use a hose clamp (4) to secure each hose from the previous steps to the plastic t-fitting (1). Refer to Fig. 2 and Fig. 5.

- Use a hose clamp (4) to connect the other end of the radiator hose (6) to the straight fitting attached to the radiator. Refer to Fig. 5.
- Use a hose clamp (4) to connect the other end of the 3" hose (6) to the engine. Refer to Fig. 5.
- 14. Use a hose clamp (4) to connect the 24" hose (5) to the plastic t-fitting (1). Refer to Fig. 5.
- 15. Route the 24" hose (5) down through the wires connected to the alternator, along the engine, and down to the lower coolant tube. Refer to Fig. 3.

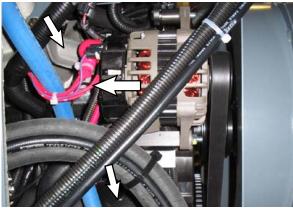


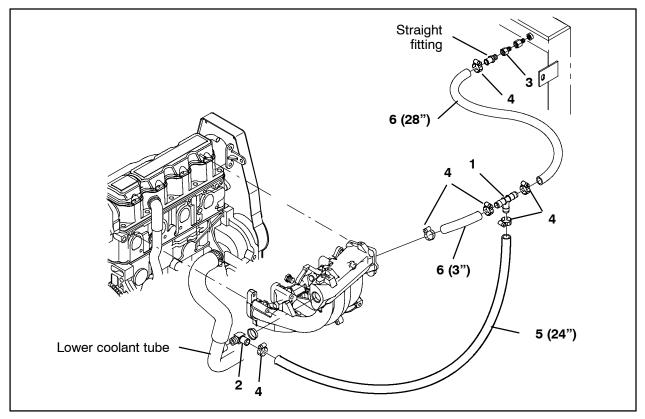
FIG. 3

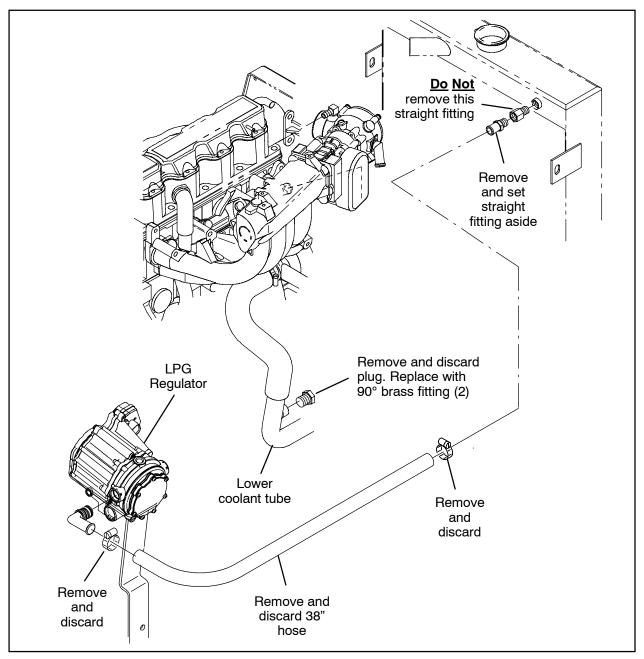
16. Use a hose clamp (4) to connect the 24" hose (5) to the 90° brass fitting (2) installed on the lower coolant tube. Refer to Fig. 4 and Fig. 5.





- 17. Refill the coolant system with coolant.
- Start and run the machine. Observe the newly installed hoses, fittings, and connections for leaks.
- 19. Turn off the machine. Recheck the coolant level. Add coolant as necessary.







- 1. Disconnect the 38" hose from the radiator and LPG regulation. Discard the heater hose and both hose clamps. Refer to Fig. 1.
- 2. Remove the straight brass fitting from the radiator. Set the straight fitting aside. Refer to Fig. 1.
- 3. Remove the plug from the lower coolant tube. Discard the plug Refer to Fig. 1.
- 4. Install the 90° brass fitting (2) onto the lower coolant tube. Refer to Fig. 3 and Fig. 6.

- 5. Install the adapter fitting (3) into the straight fitting left on the radiator. Refer to Fig. 6.
- 6. Install the saved straight fitting into the adapter fitting (3). Refer to Fig. 6.
- 7. Cut three 24" sections of hose from the 96" hose (5).
- Use a hose clamp (4) to connect the three 24" hoses (6) to the plastic t-fitting (1). Refer to Fig. 6.

9. Use a hose clamp (4) to connect one 24" hose (6) to the straight fitting installed in the radiator. Refer to Fig. 2 and Fig. 6.



FIG. 2

10. Use a hose clamp (4) to connect the one 24" hose (5) to the LPG regulator. Refer to Fig. 4 and Fig. 6.



FIG. 3

11. Route the 24" hose (5) down through the wires connected to the alternator, along the engine, and down to the lower coolant tube. Refer to Fig. 4.

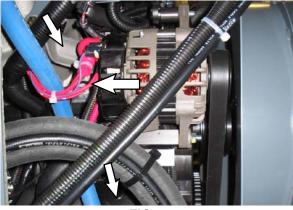


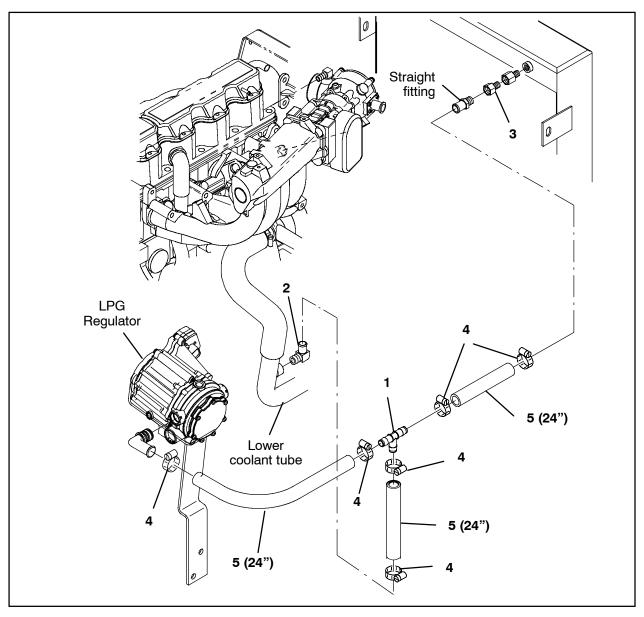
FIG. 4

 Use a hose clamp (4) to connect the 24" rubber hose (5) to the 90° brass fitting (2) on the lower coolant tube. Refer to Fig. 5 and Fig. 6.



FIG. 5

- 13. Refill the coolant system with coolant.
- 14. Start and run the machine. Observe the newly installed hoses, fittings, and connections for leaks.
- 15. Turn off the machine. Recheck the coolant level. Add coolant as necessary.



#### Bill Of Materials For Hose Kit, Replmt [GM1.6L 2010] - 9007992

		Tennant		
	Ref.	Part No.	Description	Qty.
$\Delta$		9007992	Hose Kit, Replmt [GM1.6L 2010]	1
	1	1062116	Fitting, Plstc, Tee, BM10/BM10/BM10, Nyl	1
	2	51839	Fitting, Brs, E90, EM10/PM06	1
	3	1015547	Fitting, Adapter, Orifice, PF06/PM06	1
	4	63810	Clamp, Hose, Wormdrive, 0.56-1.06D, .56W	6
	5	1016561	Hose, Afmkt, Rbr, Heater, 0.62ID, 08FT	1
	6	1015897	Hose, Radiator, Mold, .75ID X .62ID (Gasoline machines only)	1

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