



INSTRUCTION BULLETIN

No. 9021236
Machine: M20/T20/M30
Published: 05-2023
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 9021235**

Kit installation must be performed by TennantTrue[®] service or an authorized service provider.

SYNOPSIS:

This kit contains the parts needed to install the blue spotlight kit on M20/M30 sweeper scrubbers and T20 scrubbers.

Please follow step-by-step instructions.

SPECIAL TOOLS/CONSIDERATIONS: NONE

(Estimated time to complete: 3 hours)



PROTECT THE ENVIRONMENT

Please dispose of packaging materials, used machine components such as batteries and fluids in an environmentally safe way according to local waste disposal regulations.

Always remember to recycle.

PREPARATION:

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

1. **M20/M30 Only:** Turn on the machine and raise the hopper to the fully raised position.

 **WARNING: Lift arm pinch point. Stay clear of hopper lift arms.**

2. 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, set parking brake, and remove key.

3. **M20/M30 Only:** Insert the safety pin into the top support hole in the hopper lift arm.

 **WARNING: Raised hopper may fall. Engage hopper support pin.**

4. Open the front shroud, disconnect the battery cables from the battery, and remove the battery from the machine.

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

5. **M20/M30 Only:** Remove the lower cover from the machine. Set the lower cover and hardware aside. (Fig. 1)

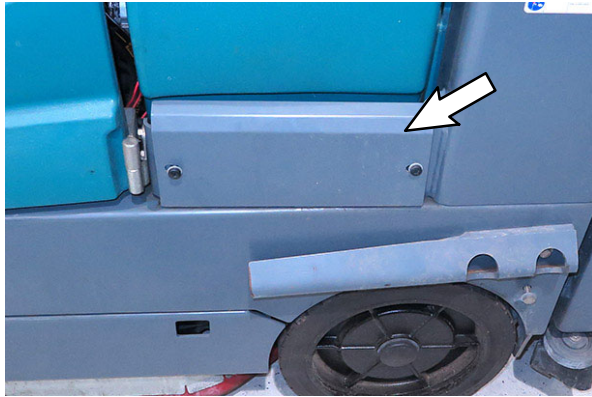


FIG. 1

6. Remove the engine shroud from the machine to allow easier access for routing/installing the blue spotlight harness (14). Set the engine shroud aside.
7. Lift and secure the recovery tank cover open.

INSTALLATION:

1. Position the front cover spotlight mounting bracket (3) onto the front cover and mark the locations for the three front cover spotlight mounting bracket mounting holes onto the front cover. (Fig. 2/Fig. 3)

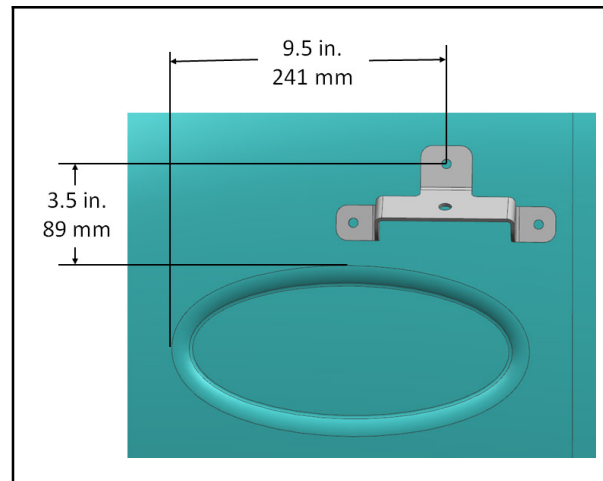


FIG. 2 - M20/T20

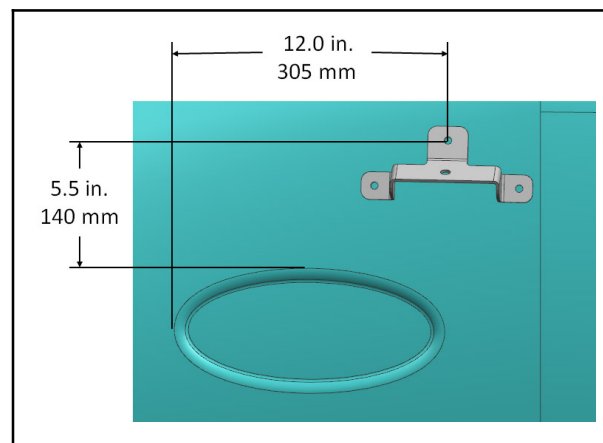


FIG. 3 - M30

2. Drill a 0.375 in. (9.5 mm) hole completely through each hole marked on the front shroud in the previous step. Drill completely through both sides of the shroud. **Do Not** drill into any parts/components located behind the front shroud. (Fig. 2/Fig. 3)

3. Measure and mark a location for the harness routing hole onto the front shroud. (Fig. 4)

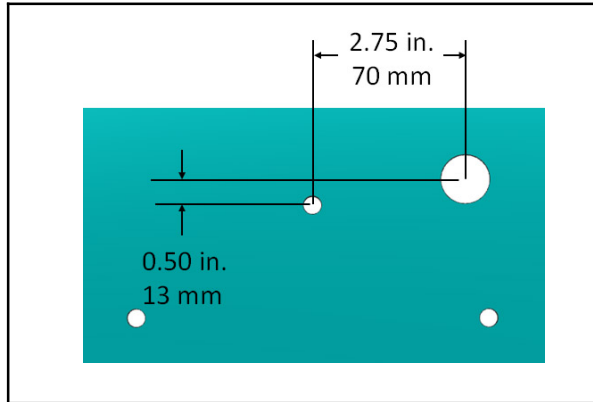


FIG. 4 - M20/T20/M30

4. Drill a 0.906 in. (23 mm) hole for harness routing completely through the front shroud. **Do Not** drill into any parts/components located behind the front shroud. (Fig. 4)
5. From the inside the front shroud, drill a 2 in. (51 mm) hole at the previously drilled locations. **Do Not** drill into/through the front of the front shroud. (Fig. 5)

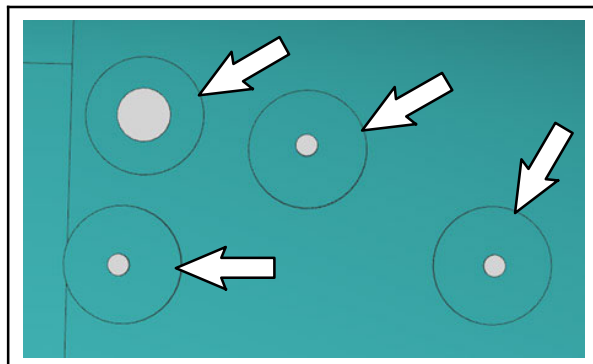


FIG. 5 - M20/T20/M30

6. From the inside the front shroud, drill two 1 in. (25 mm) holes into the front shroud. Drill through the inner wall only. **Do Not** drill into/through the front of the front shroud. (Fig. 6/Fig. 7)

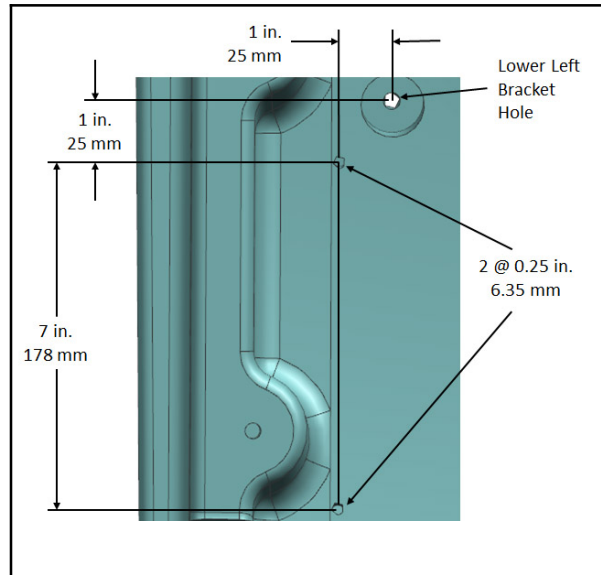


FIG. 6 - M20/T20

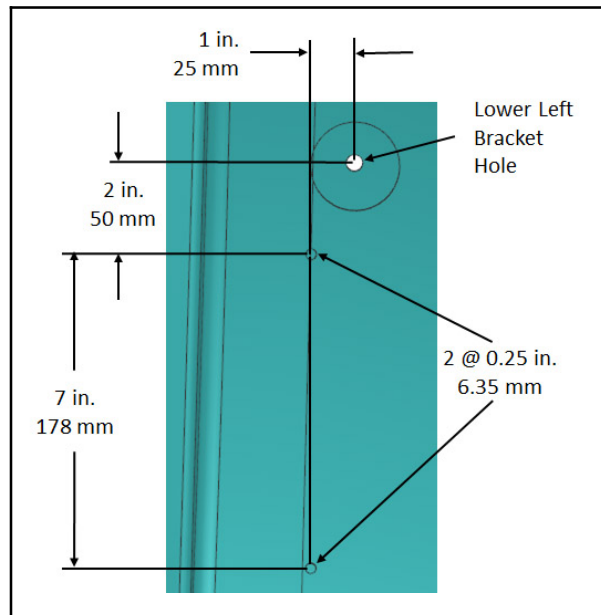


FIG. 7 - M30

7. Use three M8 pan screws (4), three M8 fender washers (5), and three M8 hex nuts (6) to install the front cover spotlight mounting bracket (3) onto the front shroud. (Fig. 8)
8. Remove the hex nut included with the blue LED spotlight (1) from the light. (Fig. 8)
9. Use the hex nut removed from the blue LED spotlight (1) in the previous step and a lock washer (2) to install the blue LED spotlight onto the front cover spotlight mounting bracket (3). (Fig. 8)

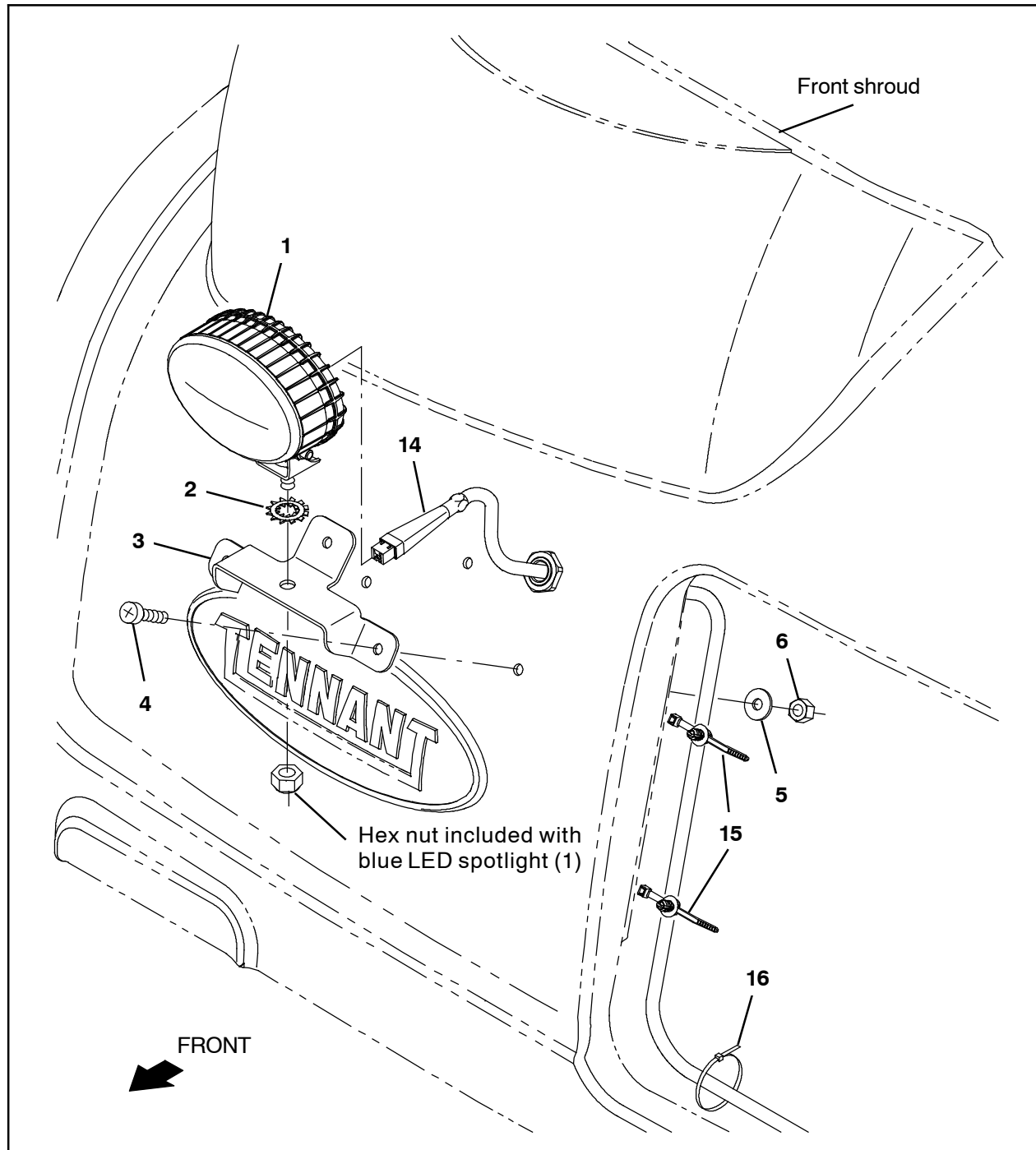


FIG. 8

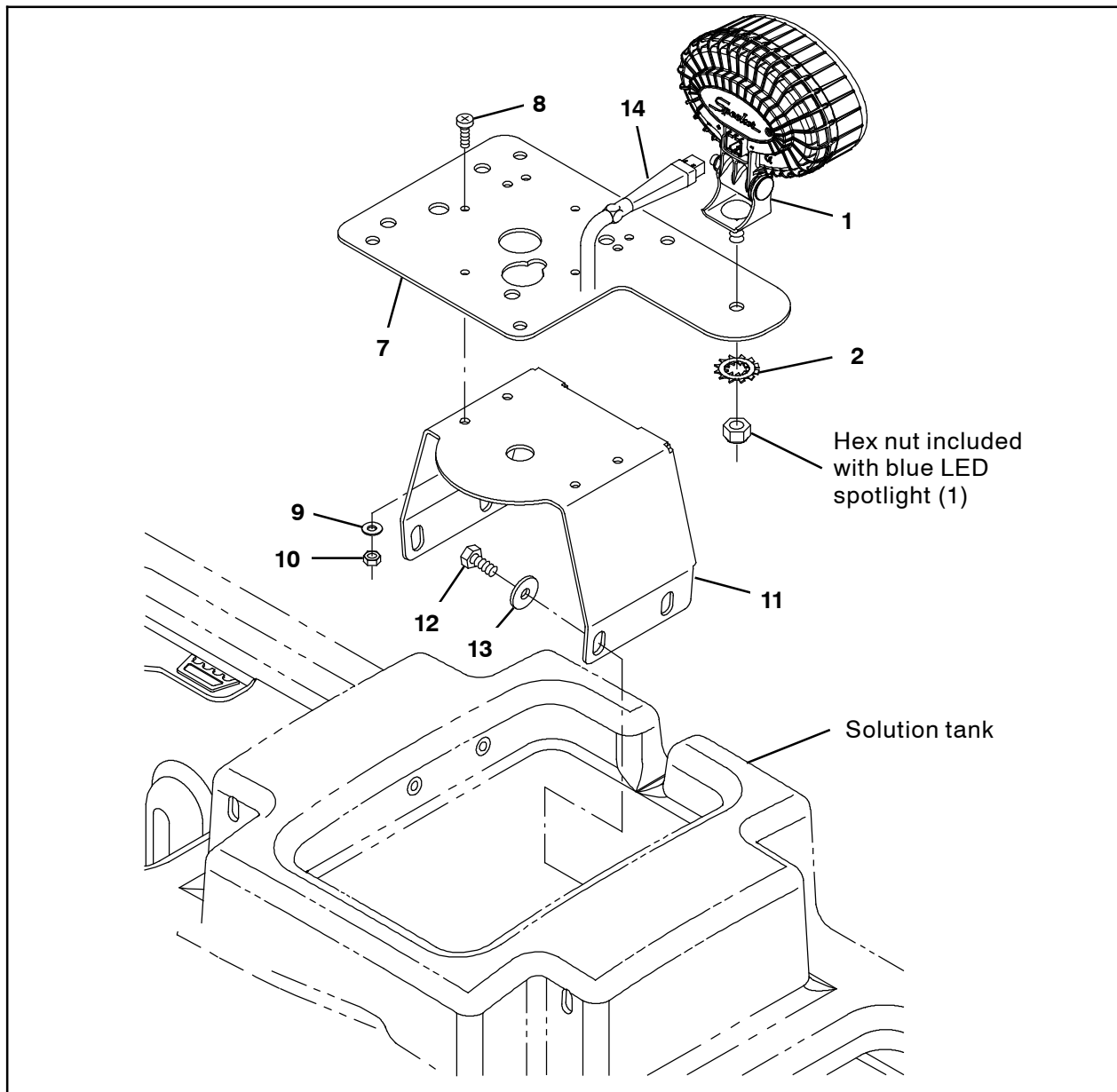


FIG. 9

10. Machines without optional strobe light:
Use four M8 hex screws (12) and four flat washers (13) to install the revolving light support bracket (11) onto the recovery tank. (Fig. 9)

11. Machines equipped with optional strobe light: Disconnect the wire harness from the strobe light and remove the strobe light from the bracket. Set the strobe light aside. (Fig. 9)

12. Use four M5 pan screws (8), four flat washers (9), and four M5 hex nuts (10) to install the blue spotlight mounting bracket (7) onto the revolving light support bracket (11). (Fig. 9)

13. Machines equipped with optional strobe light: Install the strobe light onto the blue spotlight mounting bracket (7) and reconnect the wire harness to the strobe light. (Fig. 9)

14. Remove the hex nut included with the blue LED spotlight (1) from the light. (Fig. 9)

15. Use the hex nut removed from the blue LED spotlight (1) in the previous step and a lock washer (2) to install the blue LED spotlight onto the blue spotlight mounting bracket (7). (Fig. 9)

16.Route the blue spotlight harness (14) to be connected to the blue LED spotlight (1) installed on the front shroud through the 0.906 in. (23 mm) hole previously drilled into the front shroud. (Fig. 8/Fig. 10)

17.Connect the blue spotlight harness (14) to the blue LED spotlight (1) installed on the front shroud. (Fig. 10/Fig. 22)



FIG. 10

18.Use the sealed chord grip/nut on the blue spotlight harness (14) to secure the harness to the front shroud. (Fig. 10)

19.Use cable ties (15) to secure the blue spotlight harness (14) to the front shroud. (Fig. 11)

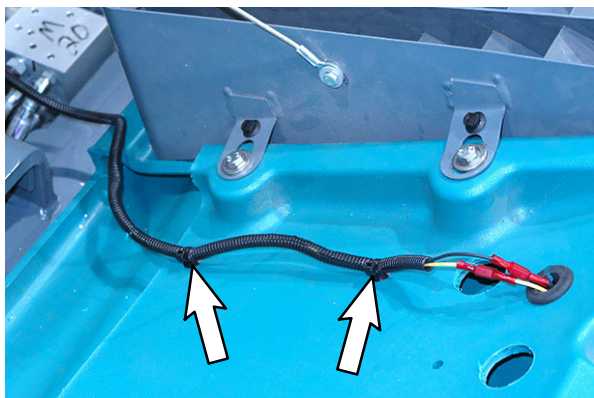


FIG. 11

20.Route the blue spotlight harness (14) ignition switch lead along the main wire harness, through the battery compartment so harness will be behind the battery, and to the ignition switch.

21.Lower the rubber boot from the ignition switch and connect the blue spotlight harness (14) to the ignition switch. Slide the boot back onto the ignition switch (Fig. 12/Fig. 22)

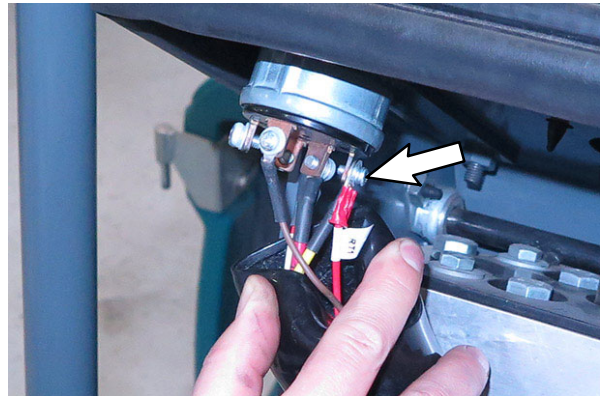


FIG. 12

22.Route the blue spotlight harness (14) along the main wire harness and into the front of the engine compartment. (Fig. 13)

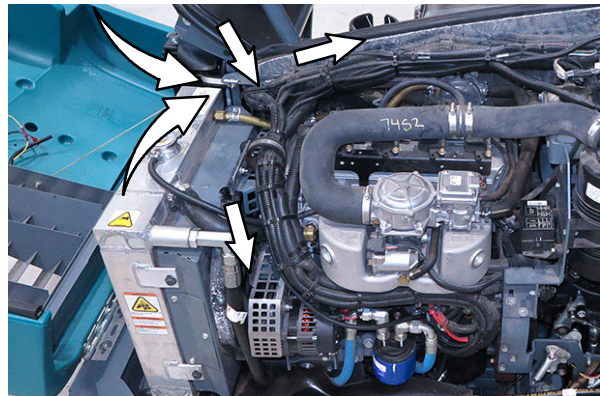


FIG. 13

23.Route the blue spotlight harness (14) ground lead down to the engine ground and connect it to engine ground. (Fig. 14/Fig. 22)

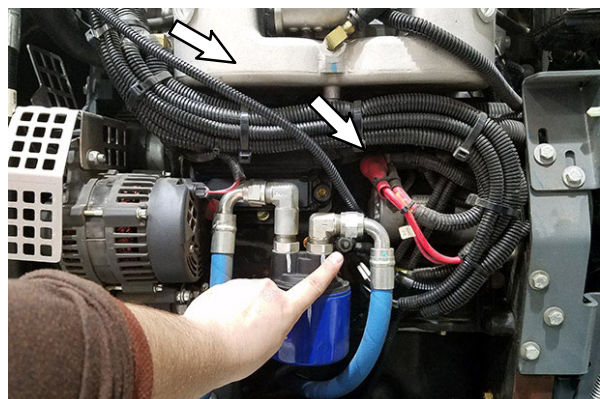


FIG. 14

24. Continue routing the blue spotlight harness (14) rear blue light lead along the main wire harness, to the back of the engine compartment, and down the back of the engine compartment. (Fig. 15/ Fig. 16)

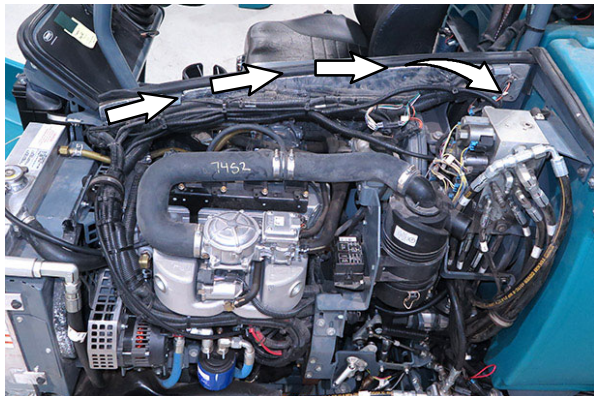


FIG. 15

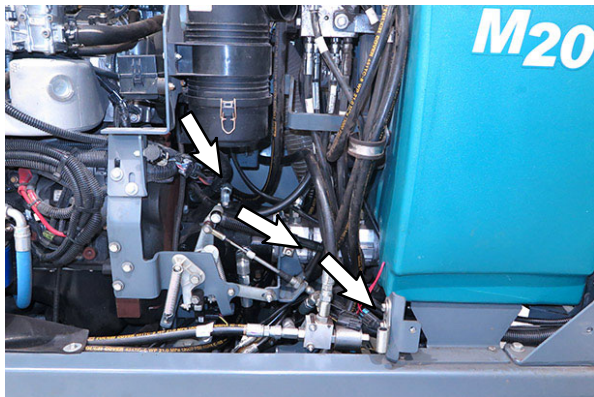


FIG. 16

25. **M20/M30 Only:** Continue routing the blue spotlight harness (14) rear blue light lead along the main wire harness and to the hopper lift leg. (Fig. 17)

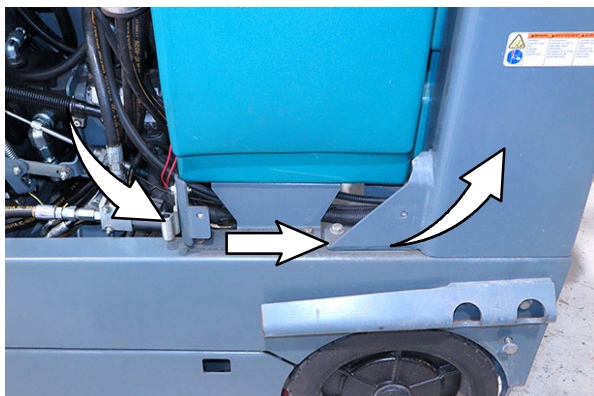


FIG. 17

T20 Only: Continue routing the blue spotlight harness (14) rear blue light lead along the main wire harness to center of machine between the solution tank and recovery tank.

26. **M20/M30 Only:** Route blue spotlight harness (14) rear blue light lead along the main wire harness, up the hopper lift leg, and through the hole in the lift leg. (Fig. 18/ Fig. 19)

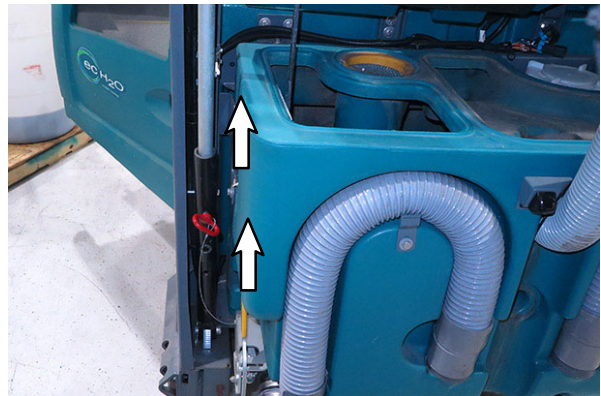


FIG. 18

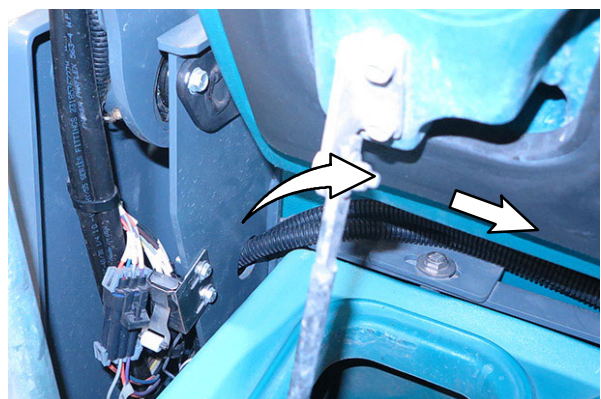


FIG. 19

T20 Only: Route blue spotlight harness (14) rear blue light lead up between the recovery tank and solution tank.

27. **M20/M30 Only:** Route blue spotlight harness (14) rear blue light lead along back of solution tanks and up through the channel in the solution tank and to the blue LED spotlight (1) assembly installed on the solution tank. (Fig. 20)

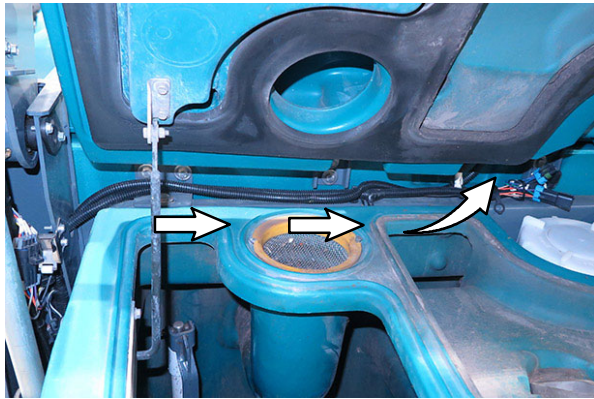


FIG. 20

- T20 Only:** Continue routing the blue spotlight harness (14) rear blue light lead up to the blue LED spotlight (1) assembly installed on the solution tank.
28. Connect blue spotlight harness (14) to the blue LED spotlight (1). (Fig. 21/Fig. 22)



FIG. 21

29. Use cable ties (16) as necessary to secure the blue spotlight harness (14) to the main wire harness so the blue spotlight harness does not touch any moving parts or parts that become hot when the engine is running.
30. Reinstall the lower cover onto the machine.
31. Reinstall the engine shroud onto the machine.
32. Reinstall the battery into the battery compartment and reconnect the battery cables to the battery.
33. **M20/M30 Only:** Remove the safety pin from the top support hole in the hopper lift arm and stow the pin in storage location.
34. **M20/M30 Only:** Turn on the machine and lower the hopper.

WARNING: Lift arm pinch point. Stay clear of hopper lift arms.

35. Start and test the machine. Both blue spotlights should illuminate when the machine is started and remain illuminated the entire time the machine is on. Both blue spotlights should turn off when the machine is turned off.
36. Adjust both blue spotlights to customer preference.

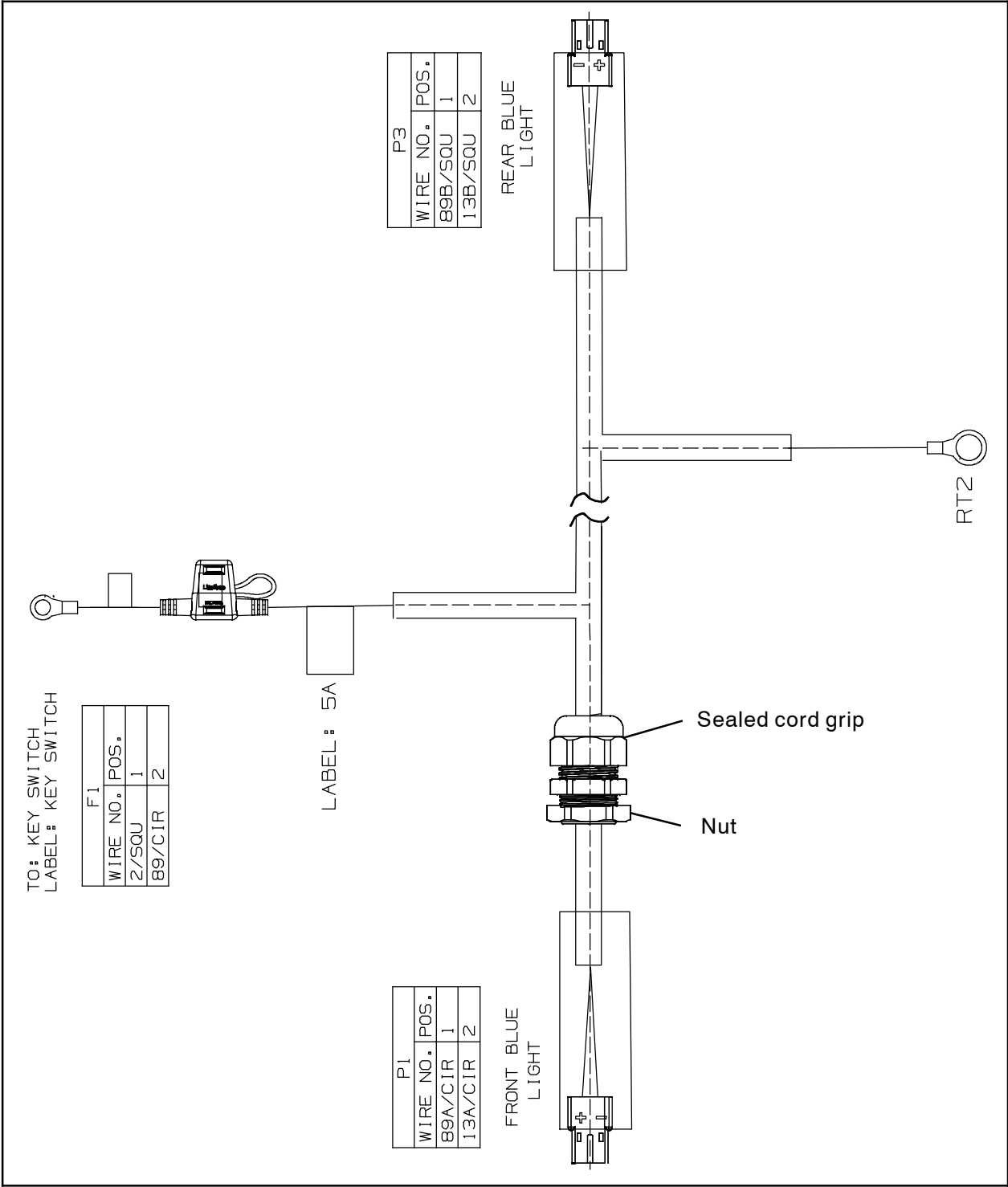


FIG. 22

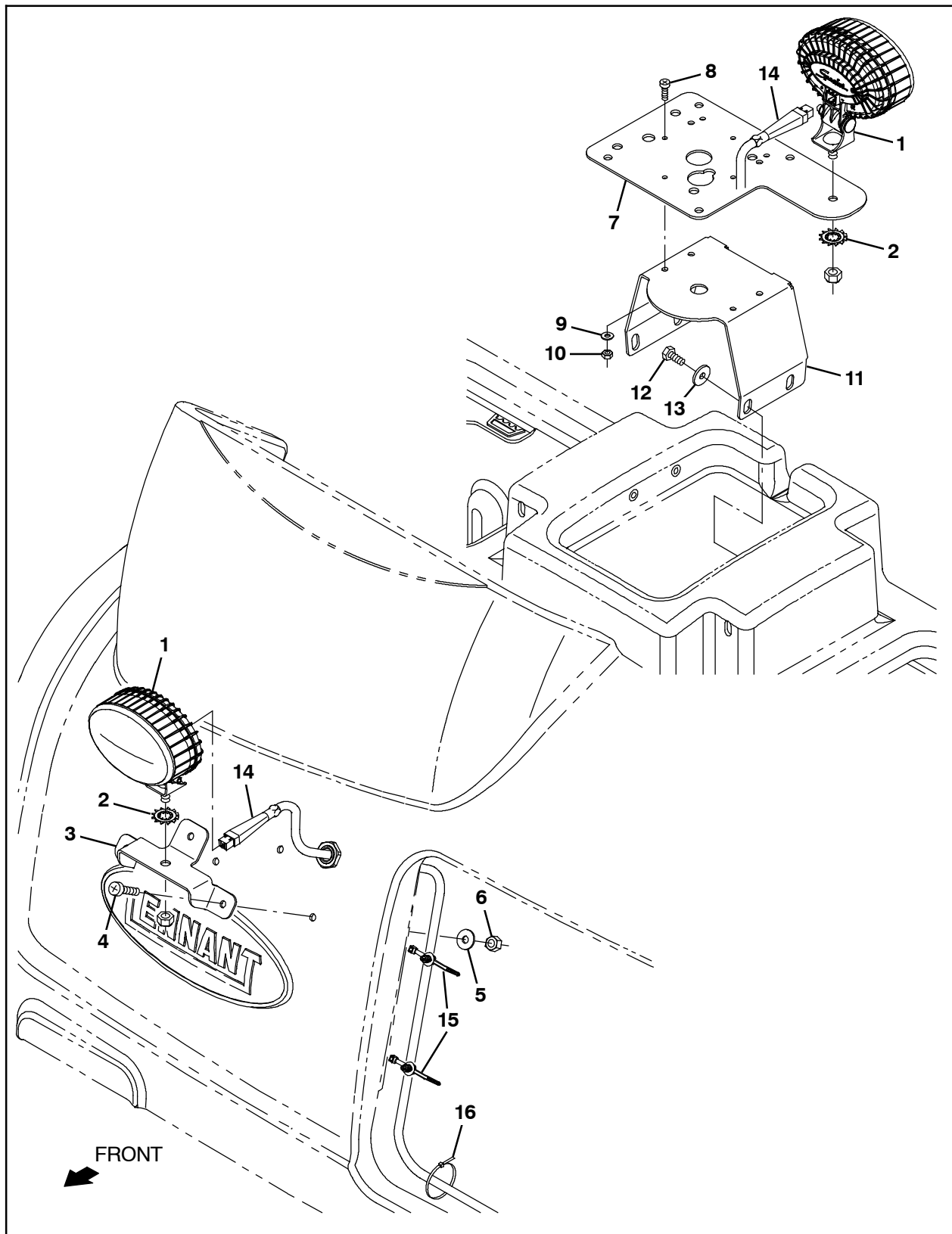


FIG. 23

Bill Of Materials For Spotlight Kit, Blue, CI [T20/M20/M30] - 9021235

Ref.	Tennant Part No.	Description	Qty.
1	1240687	Light, Spot, Blue, LED	2
2	41143	Washer, Lock, Int- Ext, 0.50	2
3	1076808	Brkt, Blu Spotlight, Fr, Cover Mtg	1
4	1031665	Screw, Pan, M8 X 1.25 X 25, Blk	3
5	39890	Washer, Flat, M8, Fendr	3
6	08713	Nut, Hex, Lock, M8 X 1.25, NI, SS	3
7	1076789	Brkt, Blu Spotlight, RR, Frame Mtg	1
8	24196	Screw, Pan, Phl, M5 X 0.80 X 20, SS	4
9	19066	Washer, Flat, 0.25B 0.56D .05, PL, 10	4
10	09739	Nut, Hex, Lock, M5 X 0.80, NI, SS	4
11	1019445	Bracket, Sppt, Revl Light	1
12	09740	Screw, Hex, M8 X 1.25 X 20, SS	4
13	1017218	Washer, Flat, 0.32B 1.00D .12, SS	4
14	1076999	Harness, Blu Spotlight [T20,M20,M30]	1
15	1210807	Wire, Tie [w/.25" Fir Tree Clip]	3
16	763114	Tie, Cable, 11.3L, 2.75D Max	10

TENNANT COMPANY
10400 Clean Street
Eden Prairie, MN 55344- 2650