



# INSTRUCTION BULLETIN

No. 9007878  
Machine: S20  
Published: 12-2014  
Rev. 01

**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 9007870**

## SYNOPSIS:

This kit contains the parts needed to install a backup alarm / strobe light kit on S20 machines equipped with the optional overhead guard (machines serial numbers 001319 and above only). Please follow step-by-step instructions.

## SPECIAL TOOLS / CONSIDERATIONS: NONE

(Estimated time to complete: 1.5 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:

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. Open the main cover.
3. Disconnect the battery cables from the battery.



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

4. Check the rear engine mounting bracket. If rear engine mounting bracket has a location for installing the reverse switch bracket (9) proceed to the next step. If rear engine mounting bracket does not have location for installing reverse switch bracket replace the rear engine mounting bracket with new rear engine mounting bracket (25). (Fig. 1)

Remove existing rear engine mounting bracket and replace with new rear engine mounting bracket (25) if existing bracket does not have location to install reverse switch bracket (9).

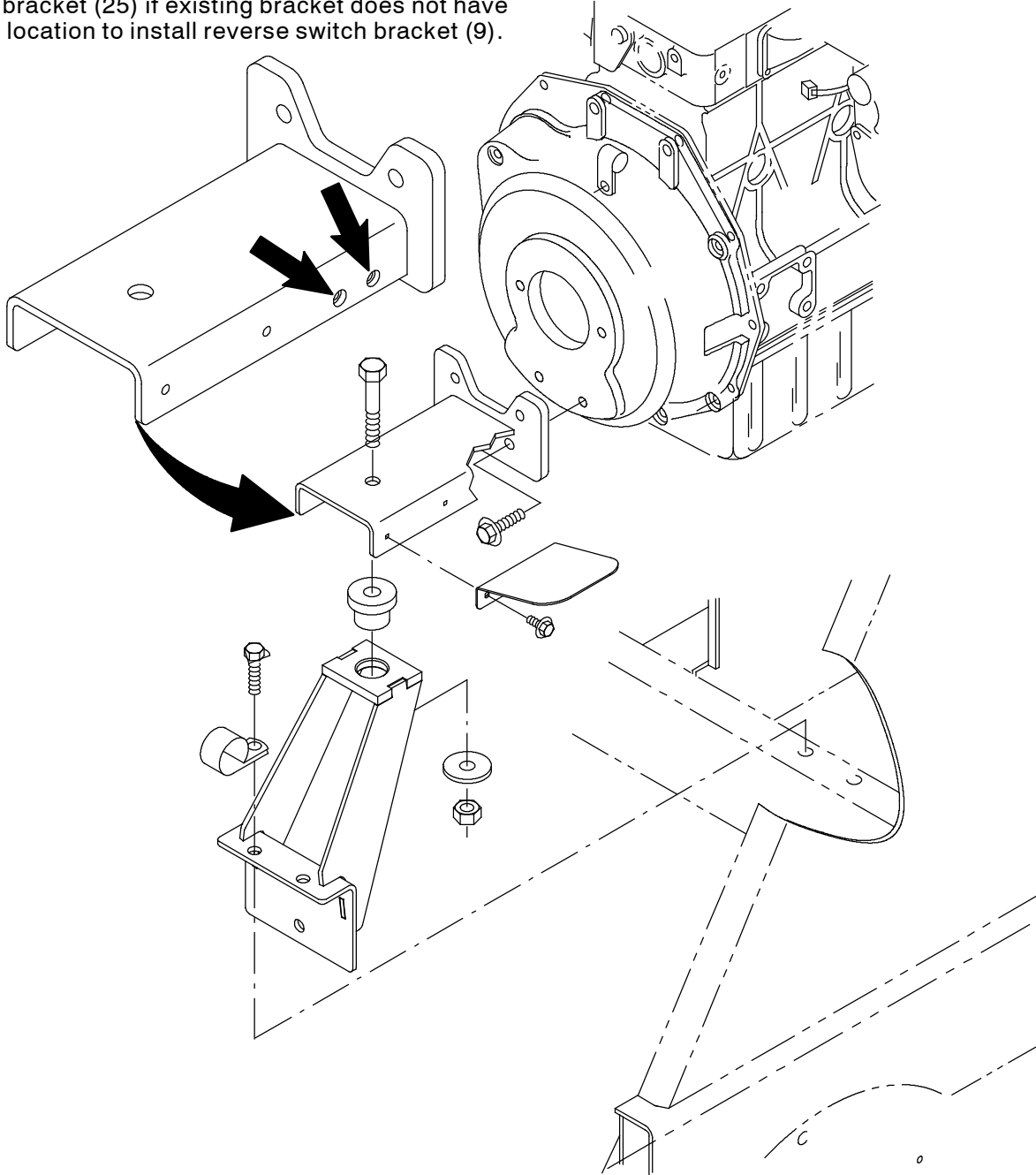


FIG. 1

5. Check the propel cable mounting bracket on the hydraulic pump. If propel cable mounting bracket has a tab located on bottom of bracket proceed to the *INSTALLATION* section. If the propel cable mounting bracket does not have tab located on the bottom of bracket, replace existing propel cable mounting bracket with new propel cable mounting bracket (26). (Fig. 2)

6. If the propel cable mounting bracket was replaced, adjust the new propel cable mounting bracket (26) so the machine does not move instantly upon start up, before the directional pedal is used to move the machine.

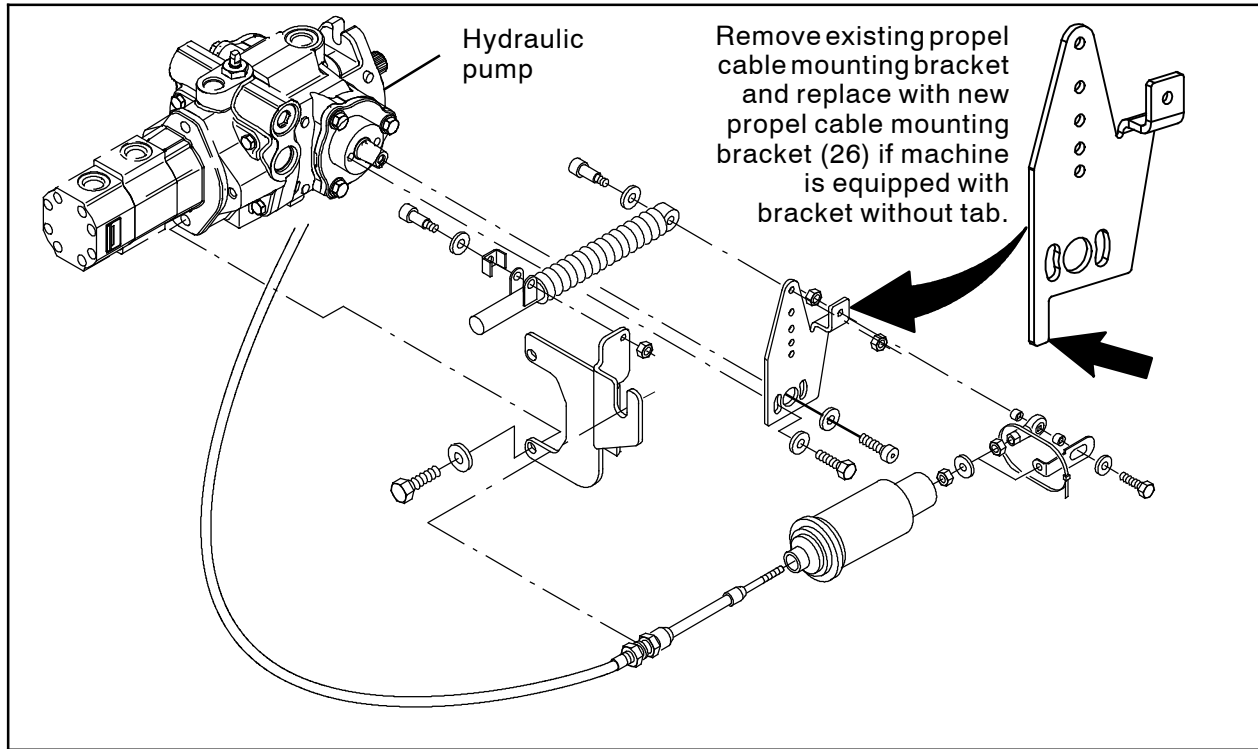


FIG. 2

**INSTALLATION:**

1. Use a M3 pan screw (5), lock washer (7), and a M3 hex nut (6) to install the grip clip (4) onto the mounting bracket (20). (Fig. 3)
2. Insert the 12 VDC flasher (8) into the previously installed grip clip (4). (Fig. 3)
3. Use the hardware included with the spot light (16) to install the spot light onto the mounting bracket (20). (Fig. 3)
4. Use two M8 SEMS hex screws (2) and two M8 hex nuts (3) to install the backup alarm (1) onto the mounting bracket (20). (Fig. 3)

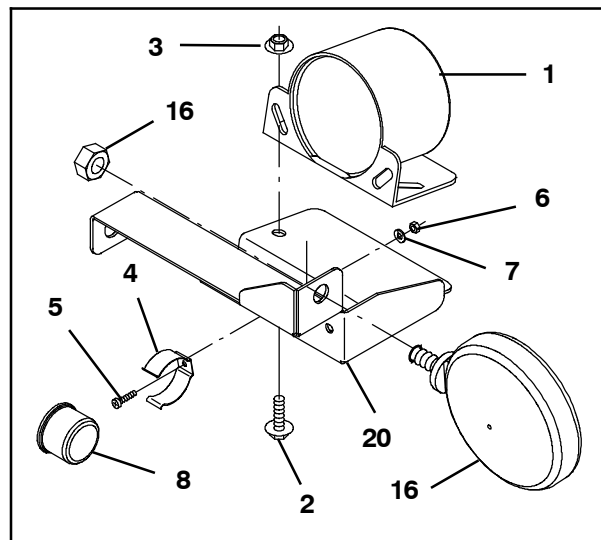
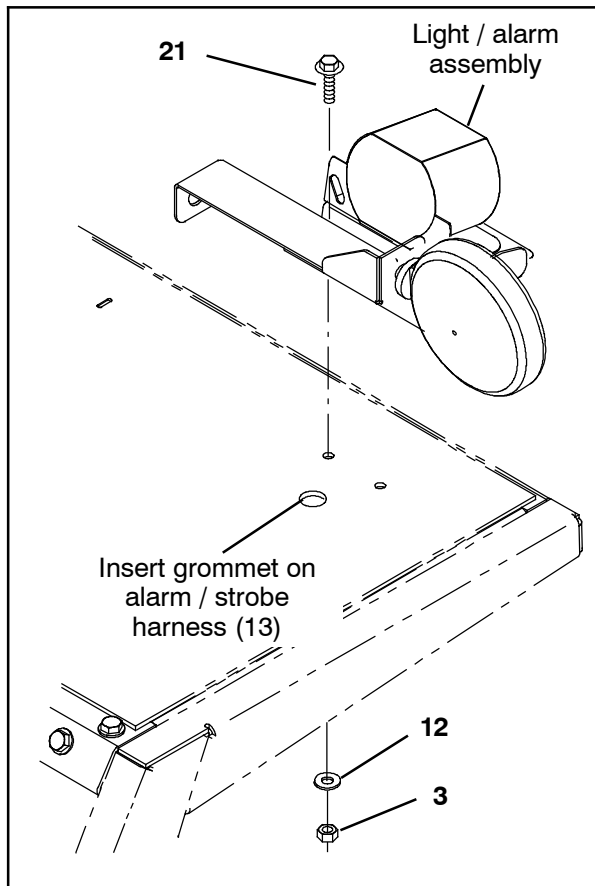


FIG. 3

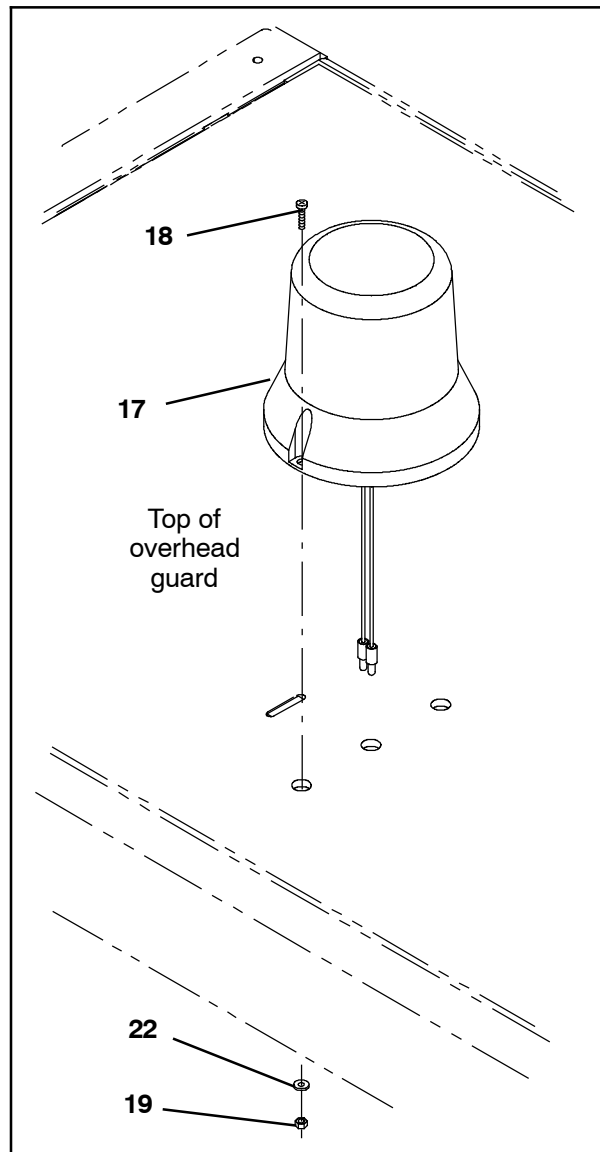
- Use two M8 SEMS hex screws (21), two flat washers (12), and two M8 hex nuts (3) to install the light / alarm assembly assembled in the previous several steps onto the overhead guard. (Fig. 4)



**FIG. 4**

- Trim the flashing light (17) wires to 6 in.
- Crimp a bullet terminal (24) onto each strobe light (17) wire.

- Route the strobe light (17) cable through the hole in the overhead guard and use two M5 pan screws (18), two flat washers (22), and two M5 hex nuts (19) to install the strobe light onto the overhead guard. (Fig. 5)



**FIG. 5**

- Connect the alarm / strobe harness (13) to the strobe light (17). (Fig. 5 / Fig. 6)
- Connect the alarm / strobe harness (13) to the backup alarm (1), spot light (16), and 12 VDC flasher (8). (Fig. 3 / Fig. 6)
- Insert the grommet on the alarm / strobe harness (13) into the hole in the top of the overhead guard. (Fig. 4)

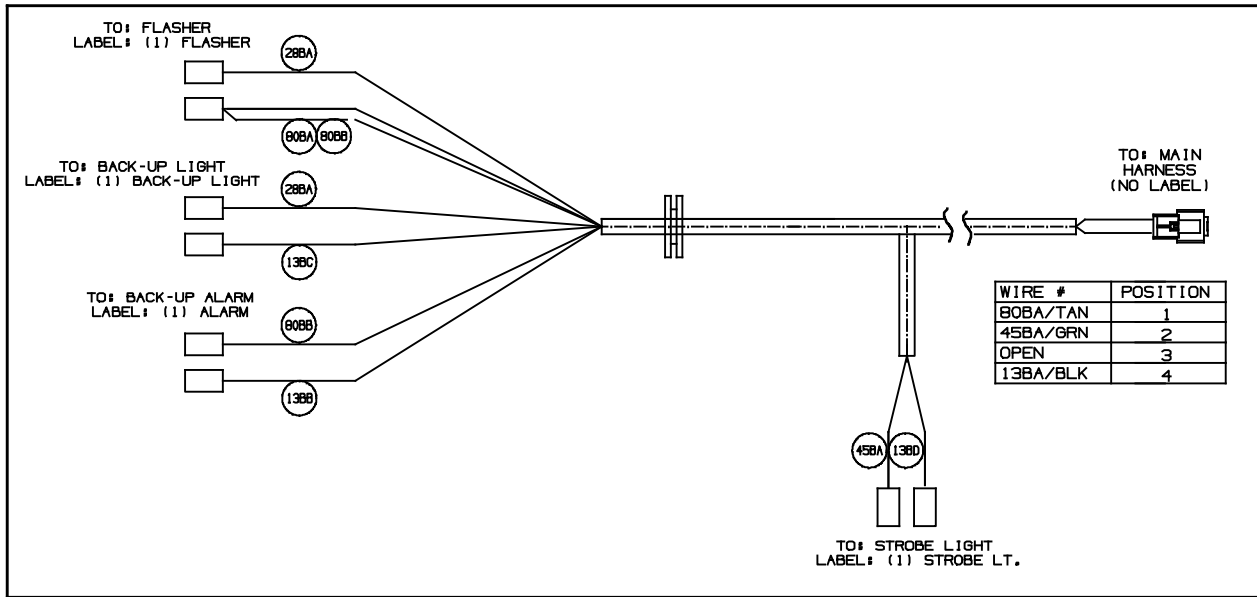


FIG. 6

12. Cut the vinyl duct (14) into one 28" section and two 10" sections.
13. Install the sections of vinyl duct (14) cut in the previous step onto the overhead guard. (Fig. 7 / Fig. 8 / Fig. 9 / Fig. 15)

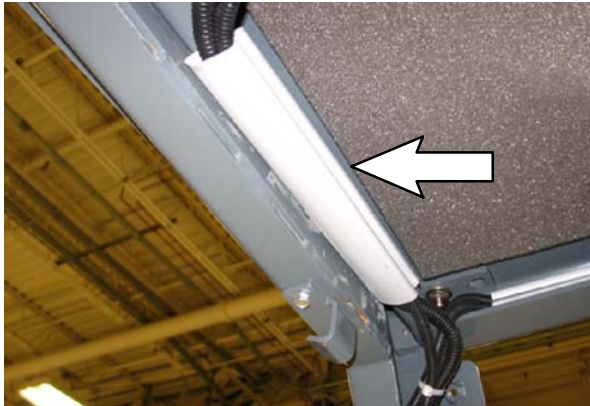


FIG. 7



FIG. 8



FIG. 9

14. Insert the grommet (15) into the hole in the operator compartment. (Fig. 10 / Fig. 11)

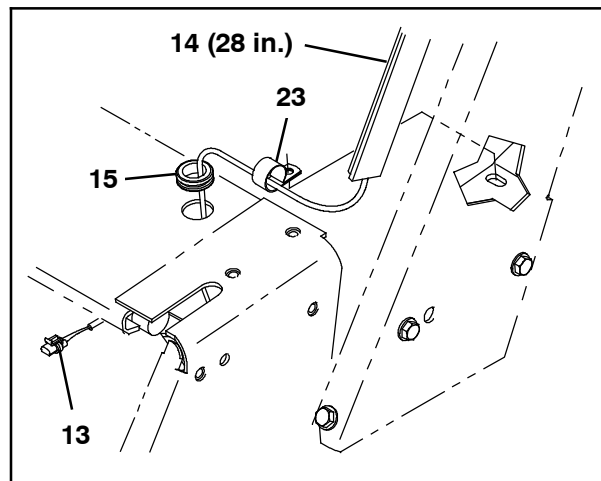


FIG. 10

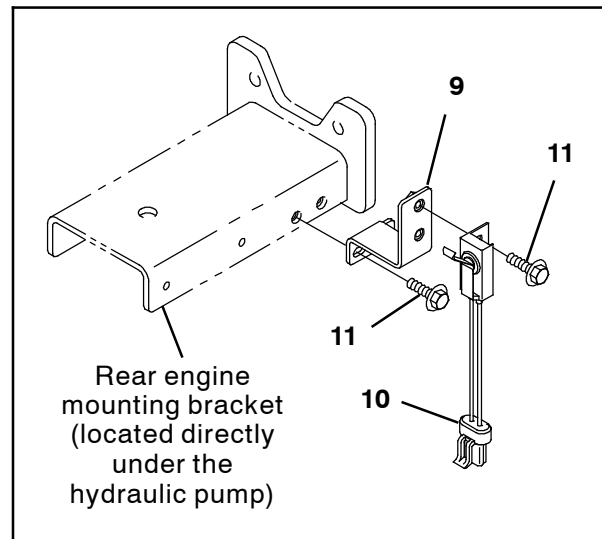
15. Remove the M12 hex screw and flat washer securing the overhead guard channel to the machine. Set the M12 hex screw and flat washer aside. (Fig. 11)
16. Route the alarm / strobe harness (13) through the sections of vinyl duct (14) and down to the front of the operator compartment. (Fig. 7 / Fig. 8 / Fig. 9 / Fig. 10 / Fig. 11)
17. Install the clamp (23) onto the alarm / strobe harness (13) and use the M12 hex screw and flat washer to secure the harness to the overhead guard channel. (Fig. 10 / Fig. 11)



**FIG. 11**

18. Route the alarm / strobe harness (13) through the grommet (15) in the hole in the operator compartment. (Fig. 11)
19. Connect the alarm / strobe harness (13) to the main wire harness. (Fig. 6 / Fig. 14)
20. Connect the main wire harness to the snap switch (10). (Fig. 12 / Fig. 14)
21. Wrap electrical tape around each electrical connection from the previous step. No metallic parts should touch the connections. Contact with other metallic parts could cause the system to short.

22. Use two SEMS M6 hex screws (11) to install the snap switch (10) onto the reverse switch bracket (9). (Fig. 12)



**FIG. 12**

23. Use two SEMS M6 hex screws (11) to install the snap switch (10) / reverse switch bracket (9) onto the rear engine mounting bracket (located directly under the hydraulic pump). (Fig. 12)
24. Reconnect the battery cables to the batteries.
25. Start and test the machine. Use the headlight/ flashing light switch to turn on the strobe light. Operate the machine in reverse and ensure all lights and the alarm function. If necessary, adjust the position for the snap switch (10) and / or reverse switch bracket (9) if the lights and alarm are not operating when the machine is in reverse.

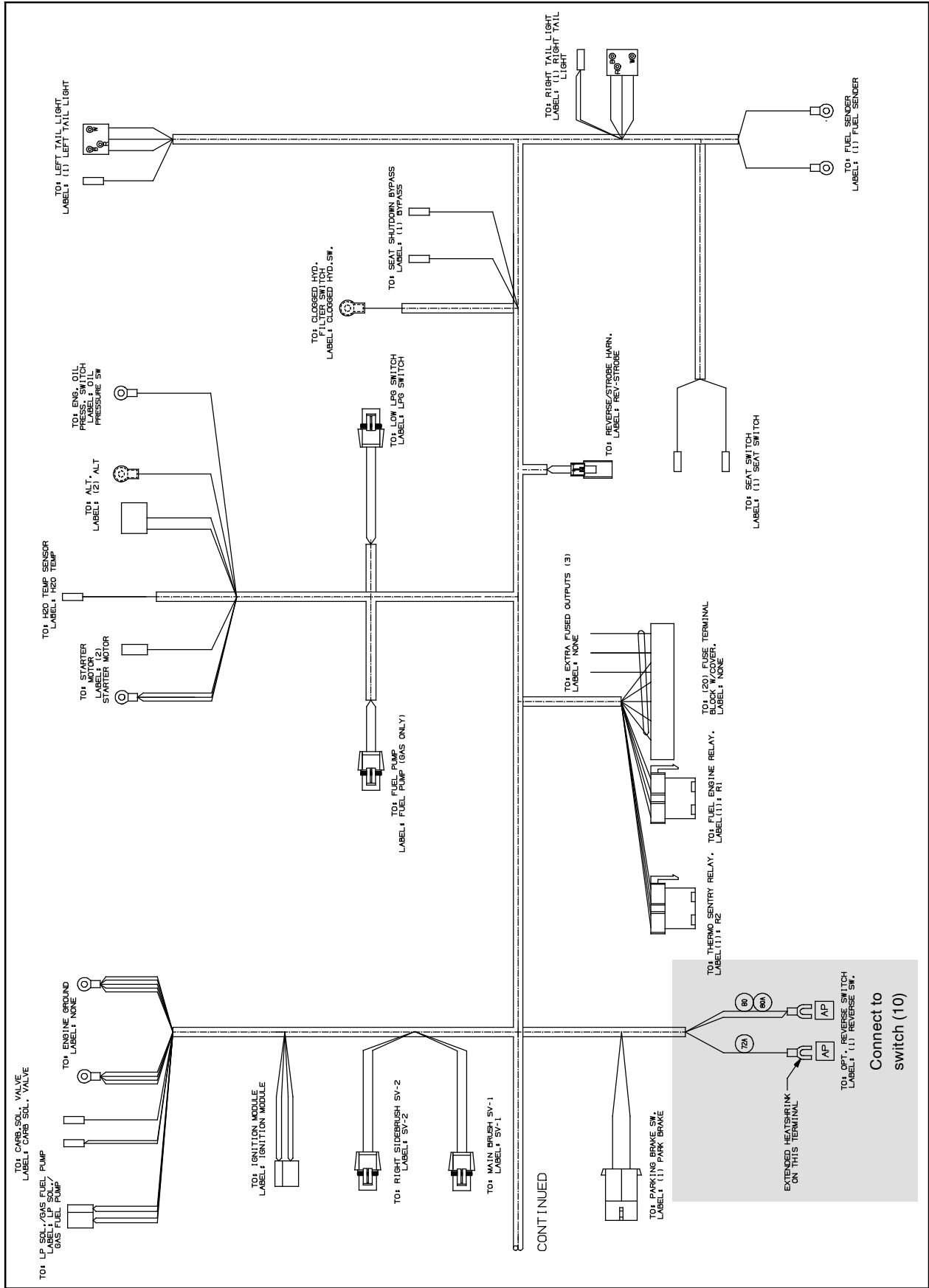


FIG. 13

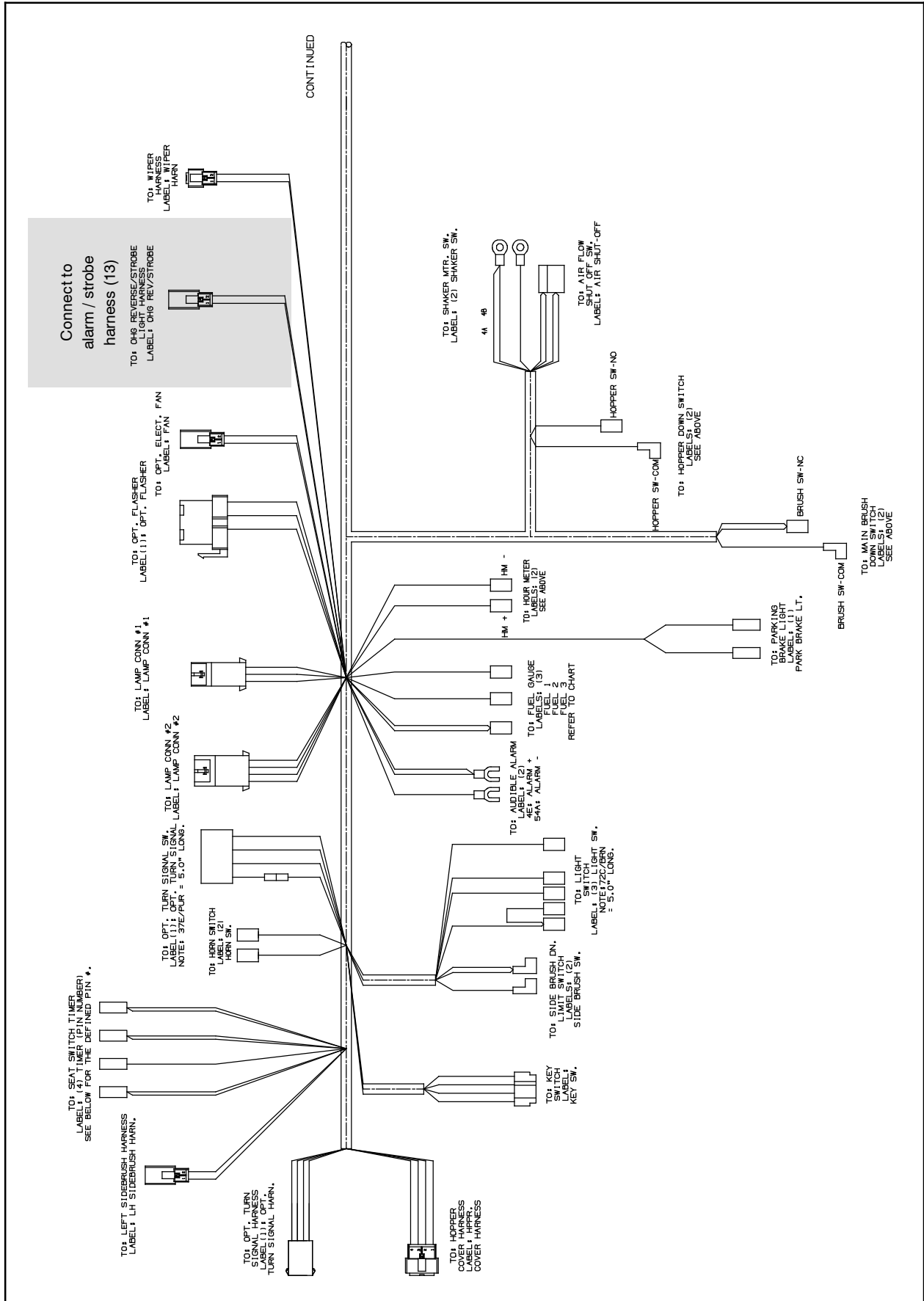


FIG. 14



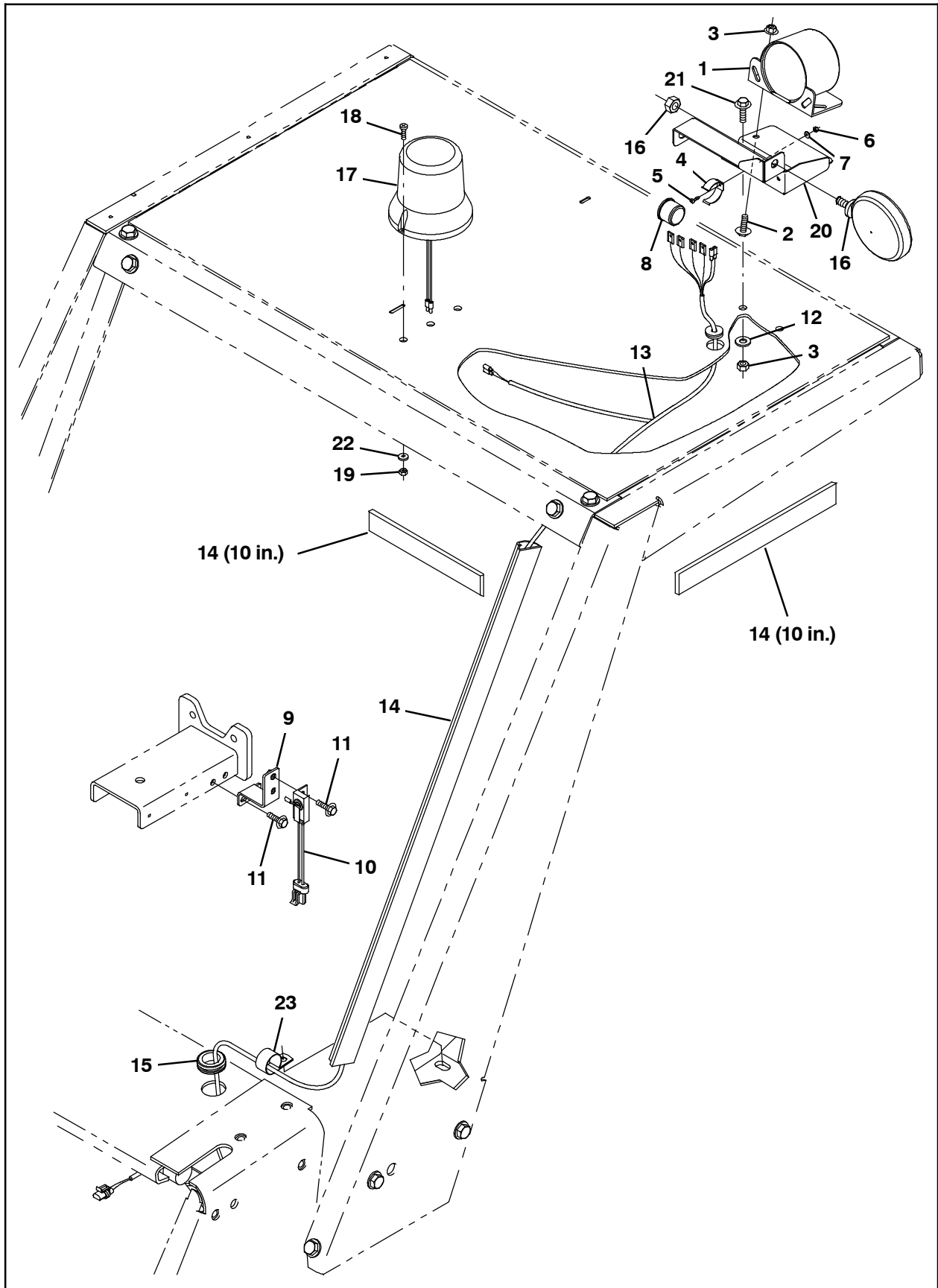


FIG. 15

**Bill of Materials for Alarm Kit, Backup, Strobe, OHG, IC, CI - 9007870**

Ref.	Tennant Part No.	Description	Qty.
▽	9007870	Alarm Kit, Backup, Strobe, OHG, IC, CI	1
▲	1 9007131	Alarm Assy, Backup, 12/48vdc	1
▲	2 1037346	Screw, Hex, M8 X 1.25 X 25, 9.8, SEMS	2
▲	3 08709	Nut, Hex, Lock, M8 X 1.25, NI	4
▲	4 24576- 1	Clip, Grip, Finger, 1.19- 1.35d, Nk PI	1
▲	5 06920	Screw, Pan, Phl, M3 X 0.50 X 10, 4.8	1
▲	6 01754	Nut, Hex, Std, M3 X 0.50, 8	1
▲	7 39658	Washer, Lock, Int, 04	1
▲	8 24576	Flasher, 12vdc [Hd552ps83]	1
▲	9 1067978	Bracket, Switch, Reverse	1
▲	10 1039735	Switch, Snap, 15a No	1
▲	11 1036892	Screw, Hex, M6 X 1.00 X 25, 9.8, SEMS	4
▲	12 32491	Washer, Flat, 0.31, Std	2
▲	13 1051779	Harness, Alarm / Strobe, OHG [S20]	1
▲	14 55034	Duct, Vyl, 0.74 X 1.50 .75d Max 48.0l	1
▲	15 10632- 1	Grommet, Rbr, 1.06id, F/1.4h, .19 Matl	1
▲	16 36438	Light, Spot, 12vdc, 21cp, Rwk 44025a	1
▲▽	17 1017250	Light, Strobe, Amb, 12- 48vdc	1
▲▲	9000846	Lamp, Bulb, Flash	1
▲▲	9000879	Lens, Amb, F/ Revl / Flasher	1
▲	18 06933	Screw, Pan, Phl, M5 X 0.80 X 16, 4.8	2
▲	19 06549	Nut, Hex, Lock, M5 X 0.80, NI	2
▲	20 1050046	Bracket, Mtg, Horn	1
▲	21 1020341	Screw, Hex, M8 X 1.25 X 20, SS, SEMS	2
▲	22 32483	Washer, Flat, 0.25, SAE	2
▲	23 58366	Clamp, Cable, Stl, 1.25d X 1.00w, 1hole	1
▲	24 55272	Terminal, Bullet, Mal, .157D, 12Ga	2
▲	25 1045645	Bracket Wldt, Mtg, Eng, Rear	1
▲	26 1046635	Bracket, Mtg, Cable, Propel	1

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