



INSTRUCTION BULLETIN

No. 9008201
Machine: S30/S30 X4/
S30 XP
Published: 08-2010
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 9008198**

SYNOPSIS:

This kit contains the parts needed to install an outdoor light kit (flashing light, backup alarm, signal lights, and backup light) on S30, S30 XP, and S30 X4 machines (serial numbers 002100 and above). Please follow step-by-step instructions.

SPECIAL TOOLS / CONSIDERATIONS: NONE

(Estimated time to complete: 2 hours)

PREPARATION:

1. Empty the hopper. Refer to the Operators Manual for instructions and safety information.



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

FOR SAFETY: When using machine, make sure adequate clearance is available before raising hopper.

2. Park the machine on a clean level surface, raise the hopper, engage the hopper support, turn off the machine, remove the key, and set the parking brake.



WARNING: Raised hopper may fall. Engage hopper support bar.

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

3. Disconnect the battery cables from the battery.



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

4. Open rear engine covers and the top cover.

INSTALLATION:

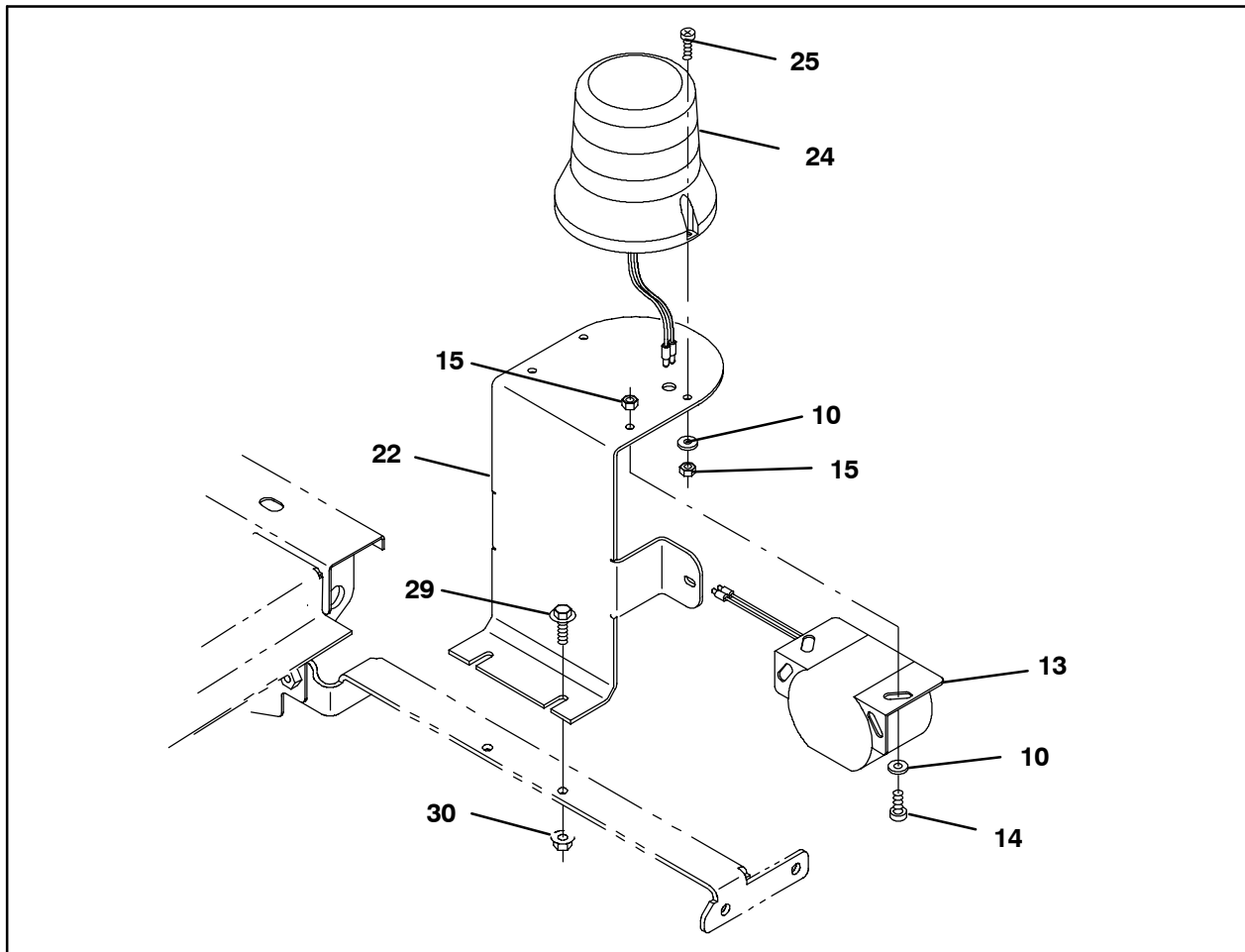


FIG. 1

1. **Machines without overhead guards:** Use two pan screws (25), two washers (10), and two hex nuts (15) to install the light (24) onto the backup alarm bracket (22). Refer to Fig. 1.
2. Use two pan screws (14), two flat washers (10), and two hex nuts (15) to install the backup alarm assembly (13) onto the backup alarm bracket (22). Refer to Fig. 1.
3. Use two SEMS hex screws (29) and two flange hex nuts (30) to install the backup alarm / flashing / strobe light assembly onto the machine. Refer to Fig. 1.
4. Cut 44 mm (1.75 in) notch into seal to allow space for routing the backup harness (6). Refer to Fig. 2.

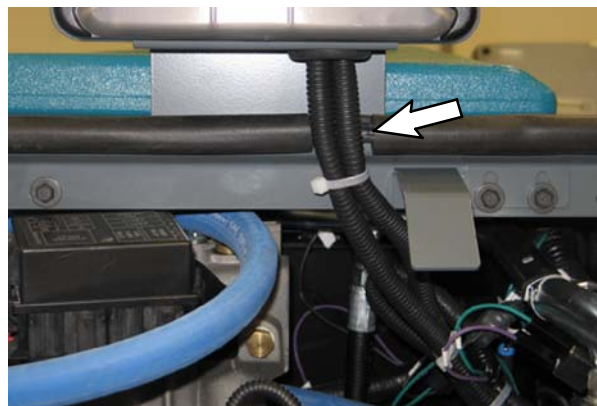


FIG. 2

- Machines with overhead guard:** Use two pan screws (25), two washers (10), and two hex nuts (8) to install the light (24) onto the overhead guard. Refer to Fig. 3.

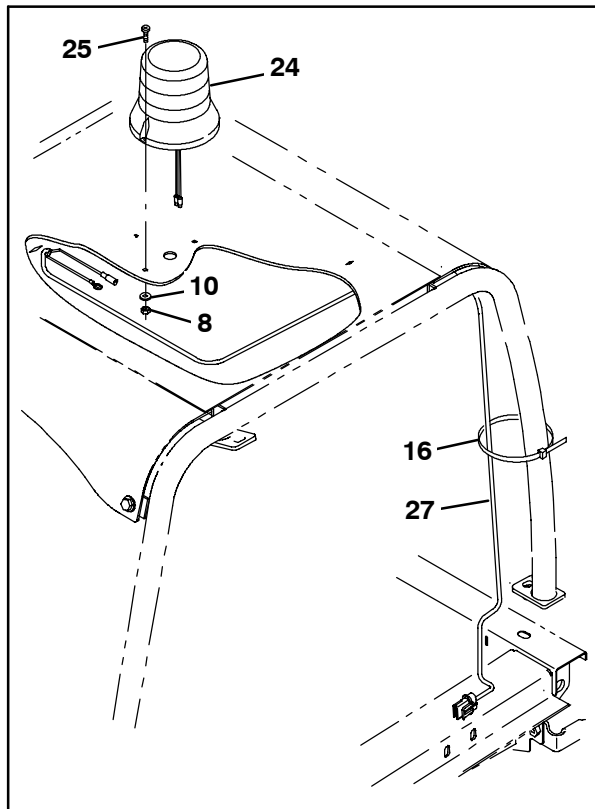


FIG. 3

- Machines with overhead guard:** Connect the overhead light harness (27) to the light (24). Refer to Fig. 3.
- Machines with overhead guard:** Route the overhead light harness (27) down the rear leg of the overhead guard and into the engine compartment. Refer to Fig. 3 and Fig. 16.
- Machines with overhead guard:** Use cable ties (16) to secure the overhead light harness (27) to the rear leg of the overhead guard. Refer to Fig. 3.
- If necessary, remove the propel pedal from the machine. Set all mounting hardware aside. Refer to Fig. 3.

- Use two hex nuts (8) and two pan screws (20) to install the switch (19) onto the reverse switch bracket (17). Refer to Fig. 4.

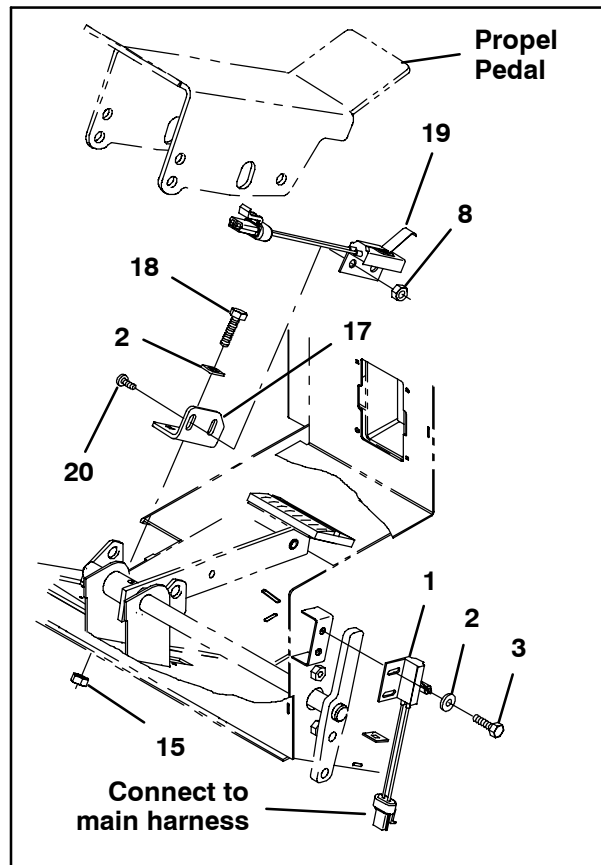


FIG. 4

- Use two hex screws (18), two washers (2), and two hex nuts (15) to install the reverse switch bracket (17) onto the machine. Refer to Fig. 4.
- Use two hex screws (3) and two washers (2) to install the limit switch (1) onto the machine. Refer to Fig. 4.
- Measure and mark 5" from one end of the strip included with the turn signal switch (4). Refer to Fig. 5.

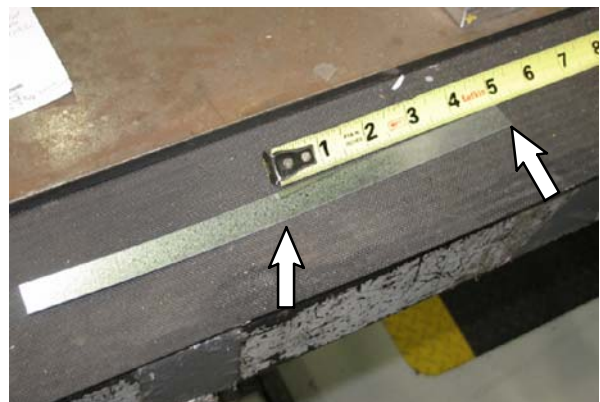


FIG. 5

14. Cut the strip at the mark made in the previous step. Refer to Fig. 6.



FIG. 6

15. Bend each end of the strip cut in the previous step an equal amount on each end so the strip is 3 5/8" long. Refer to Fig. 7.



FIG. 7

16. Use the strip from the previous several steps (bent ends against the steering column) to install the turn signal switch (4) onto the steering column. Insert the lock washer (31) between the strip and steering column before completely tightening the turn signal switch onto the steering column. Refer to Fig. 8.

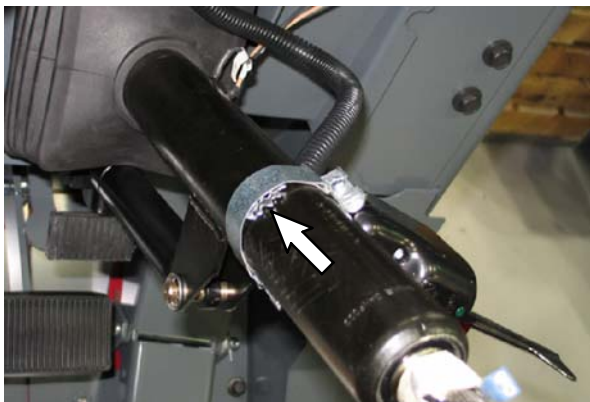


FIG. 8

17. Connect the main wire harness to the turn signal switch (4). Refer to Fig. 20.

18. Route the switch (19) cable down through the rubber gasket in the propel pedal access panel. Refer to Fig. 3.



FIG. 9

19. Reinstall the propel pedal.

20. Cut the cable ties from the bundled portion of the main harness and connect the main harness to the snap switch (19) and limit switch (1). Refer to cable labels and Fig. 10 and Fig. 20 for connection locations.

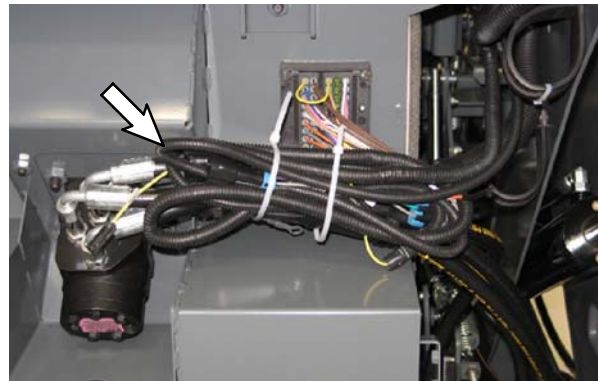


FIG. 10

21. Use two pan screws (12), two washers (10), and two hex nuts (8) to install a flasher (11) onto the engine control bracket. Refer to Fig. 11.

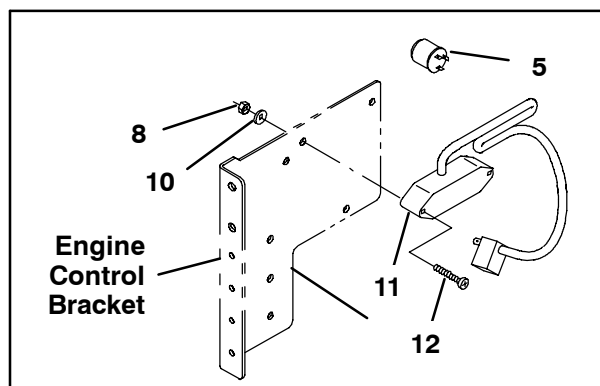


FIG. 11

22. Plug the flasher (5) into the main harness and tuck the flasher/harness connection back up into the main harness. Refer to Fig. 12.

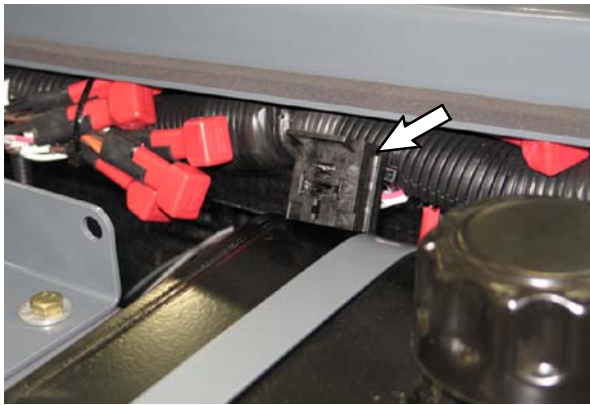


FIG. 12

23. **Machines with overhead guards:** Connect the overhead light harness (27) to the main harness. Refer to the cable labels and Fig. 13 and Fig. 20.

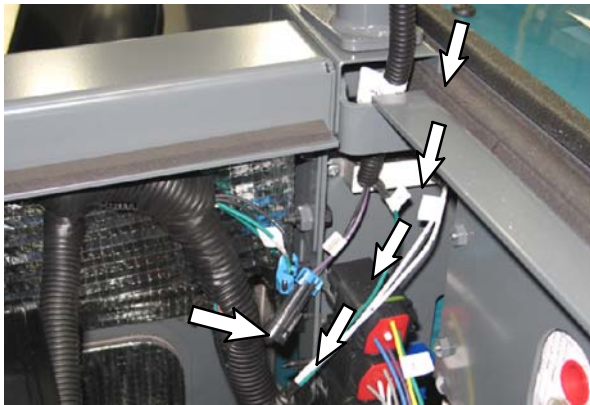


FIG. 13

24. **Machines without overhead guards:** Connect the backup harness (6) to the two main wire harness connectors located near the engine control bracket. Refer to the labels on each harness and Fig. 20 for connection locations.

Machines with overhead guards: Connect the backup harness (27) to the main wire harness connector located near the engine control bracket. Refer to the labels on each harness and Fig. 14 and Fig. 20 for connection locations.

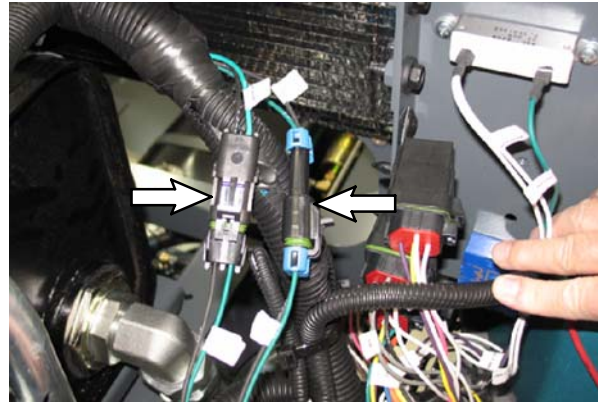


FIG. 14

25. Connect the backup harness (6) to the flasher (5). Refer to the cable labels and Fig. 20 for connection locations.

26. Neatly bundle excess backup harness (6) connected to the flasher (5) and secure the bundle with a cable tie (16). Refer to Fig. 15.

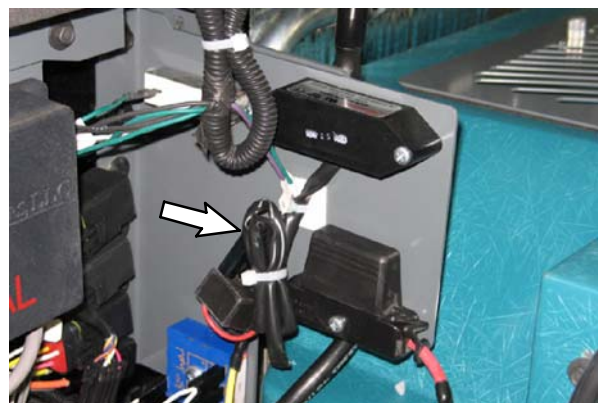


FIG. 15

27. Route the backup harness (6), through the cable clamp (35) and to the area where the backup alarm / flashing / strobe light assembly is located.

- Slide a piece of heat shrink (32) onto each backup alarm (13) wire. Refer to Fig. 16.

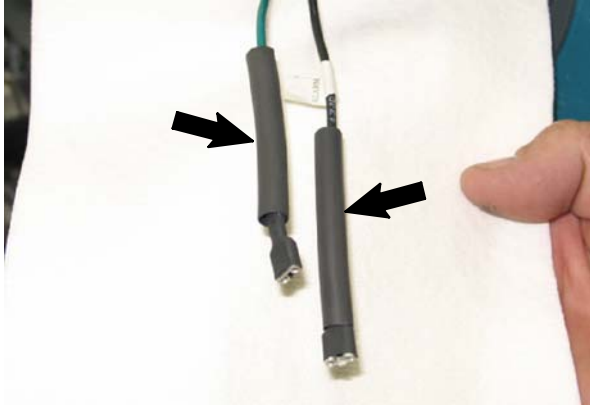


FIG. 16

- Install both grommets (23) and (28) into the light bracket (21). Refer to Fig. 18.
- Hold the light bracket (21) up to the backup alarm bracket (22) and route the wires from the flashing / strobe light (24) and backup alarm assembly (13) down through the smaller hole in the light bracket. Refer to Fig. 18.
- Route the backup harness (6) through the larger hole in the light bracket (21) and attach the wires from the flashing / strobe light (24) and backup alarm (13) to the backup harness.

- Connect the backup (7) light wires to the backup harness (6). Refer to Fig. 20.
- Use two pan screws (9) to install the backup light (7) and light bracket (21) onto the backup alarm bracket (22). Refer to Fig. 18.
- Position the 2" pieces of heat shrink (32) over the backup alarm (13) / backup harness (6) connections and heat the heat shrink over the connections. Refer to Fig. 16.

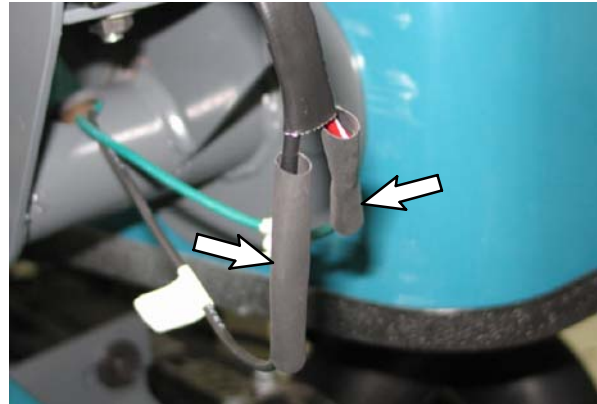


FIG. 17

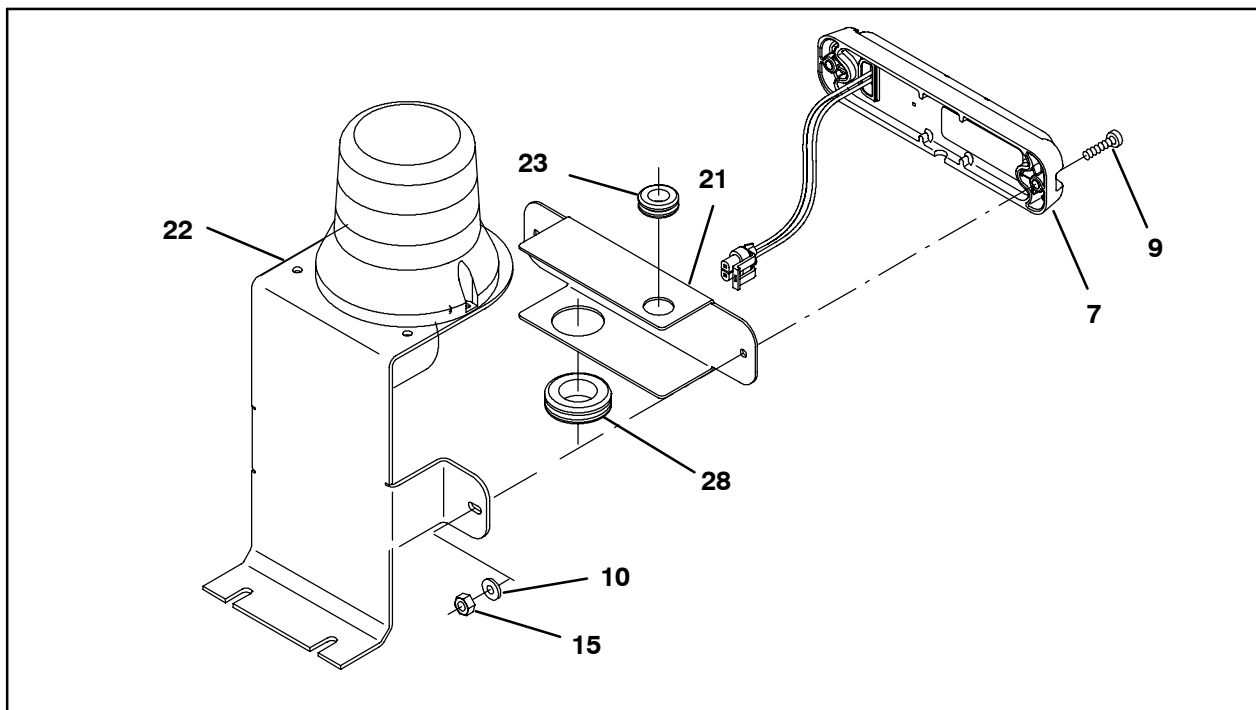


FIG. 18

- Remove the hopper harness light receptacles from the lens assemblies in the hopper cover, insert a light (26) into each receptacle, and reinsert the receptacles into the lens assemblies. Refer to Fig. 19.

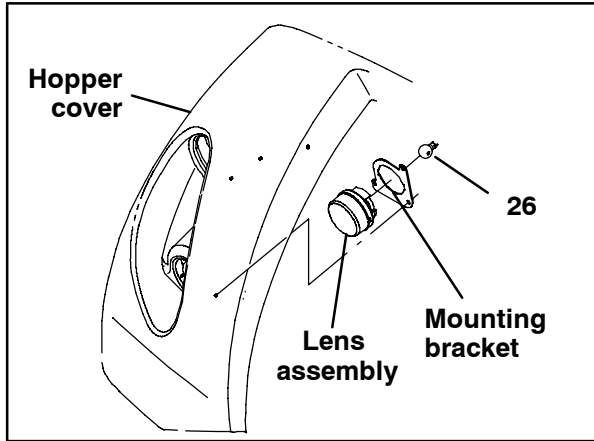


FIG. 19

- Reconnect the battery cables to the battery.
- Start the machine, disengage the hopper support, and lower the hopper.

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

- Test the machine to ensure all newly installed components function.

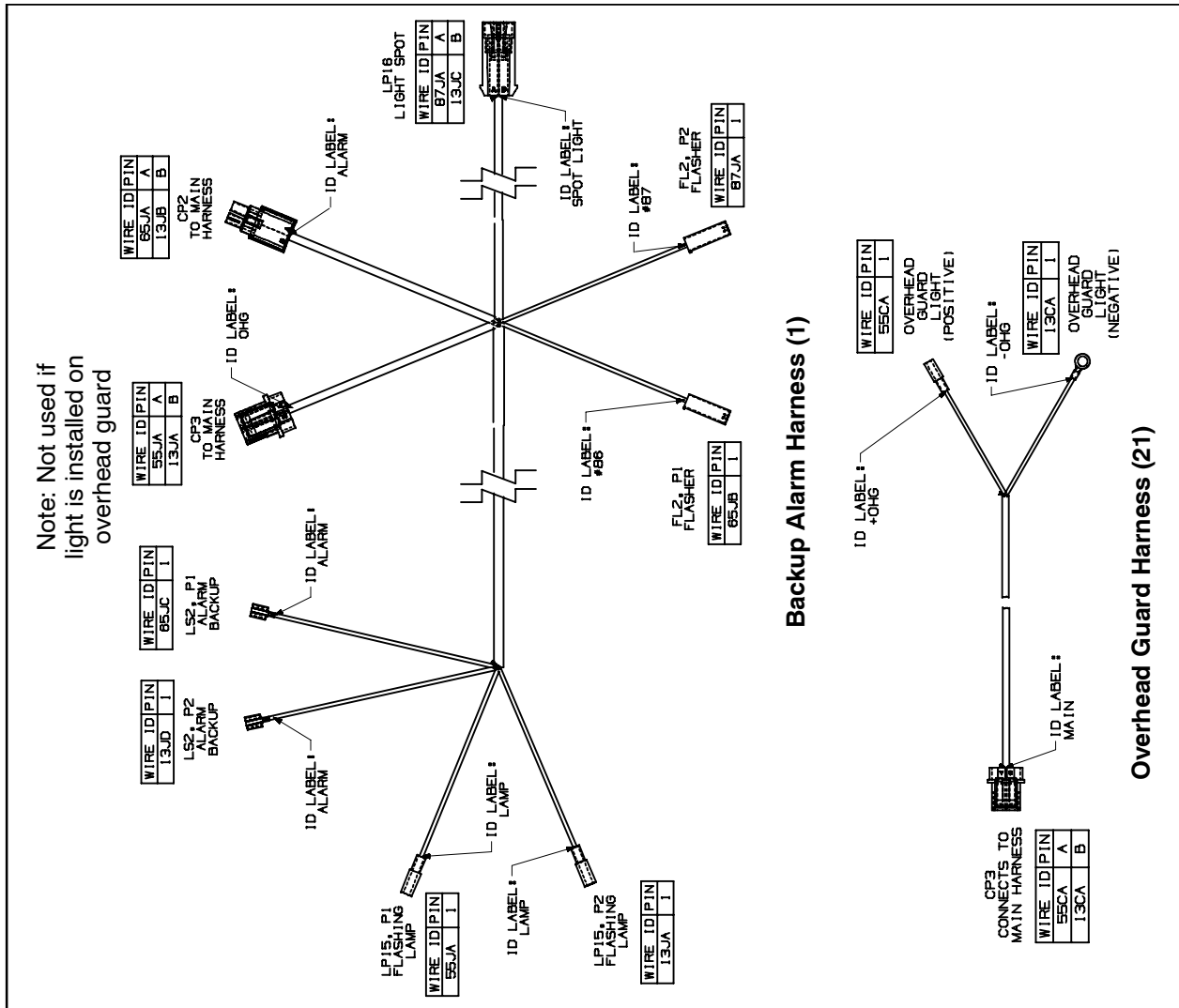


FIG. 20

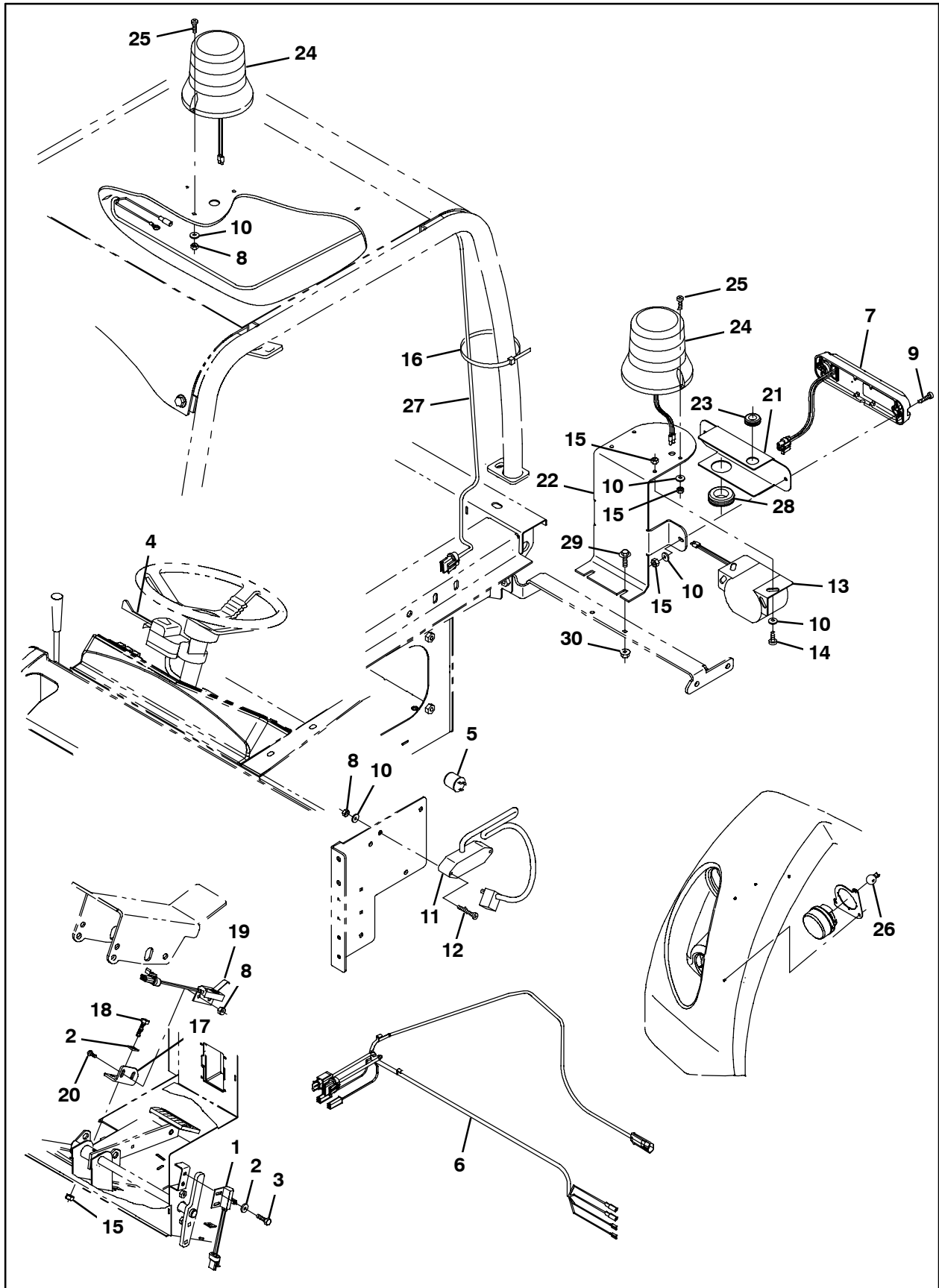


FIG. 22

Bill of Materials for Light Kit, Outdoor, CI [S30] - 9008198

	Ref.	Tennant Part No.	Description	Qty.
▽		9008198	Light Kit, Outdoor, Ci [S30]	1
▲	1	1040019	Switch, Limit, 15A, NC	1
▲	2	32483	Washer, Flat, 0.25, SAE	4
▲	3	09244	Screw, Hex, M5 X 0.80 X 16, 8.8	2
▲	4	60751	Switch, Turn Signal	1
▲	5	31922	Flasher, Hd, 12VDC 25A [10-57300]	1
▲	6	1034191	Harness, Backup, Rev [S30]	1
▲	7	1036173	Light, Led, White, 12-24VDC	1
▲	8	06549	Nut, Hex, Lock, M5 X 0.80, NI	8
▲	9	06935	Screw, Pan, Phl, M5 X 0.80 X 25, 4.8	2
▲	10	19066	Washer, Flat, 10	8
▲	11	1036985	Flasher, 12-80VDC, 2A	1
▲	12	06938	Screw, Pan, Phl, M5 X 0.80 X 40, 4.8	2
▲	13	83161	Alarm Assy, Backup, 12-24VDC 82-107dba	1
▲	14	09145	Screw, Pan, Phl, M6 X 1.00 X 16, 4.8	2
▲	15	07785	Nut, Hex, Std, M6 X 1.00, SS	4
▲	16	49266	Tie, Cable, Nyl, 07.3l .19w 1.8 Max D	4
▲	17	1036995	Bracket, Switch, Reverse	1
▲	18	08716	Screw, Hex, M6 X 1.00 X 20, SS	2
▲	19	1039735	Switch, Snap, 15A NO	1
▲	20	06933	Screw, Pan, Phl, M5 X 0.80 X 16, 4.8	2
▲	21	1061203	Bracket, Light	1
▲	22	1061140	Bracket, Alarm, Backup	1
▲	23	10632-9	Grommet, Rbr, 0.63id, F/0.8h, .12 Matl	1
▲▽	24	1017250	Light, Strobe, Amb, 12-48VDC	1
▲▲		9000879	Lens, Amb, F/ Revl / Flasher	1
▲▲		9000845	Lamp, Bulb, Strobe	1
▲▲		1027798	Lens, Red, F/ Revl / Flasher	1
▲▲		1027800	Lens, Blu, F/ Revl / Flasher	1
▲	25	06933	Screw, Pan, Phl, M5 X 0.80 X 16, 4.8	2
▲	26	1036183	Lamp, Clr, 12vdc [#3157 Series]	2
▲	27	1030973	Harness, OHG [S30]	1
▲	28	10632-14	Grommet, Rbr, 1.00id, F/1.4h, .12 Matl	1
▲	29	1036892	Screw, Hex, M6 X 1.00 X 25, 9.8, SEMS	2
▲	30	07790	Nut, Hex, Flng, M6 X 1.00	2
▲	31	41141	Washer, Lock, Int-Ext, 0.31	1
▲	32	C080154	Sleeve, Heatshrink, 0.25ID, Bulk (Qty 2 @ 2" each)	2
▲	33	82829	Clamp, Cable, Stl, 0.63d X 0.75w, 1 Hole	1

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