

PARTS & SERVICE NEWS

REF NO. AA03043

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(C)

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SUBJECT: FRONT AXLE OIL TEMPERATURE WARNING SYSTEM

PURPOSE: To introduce a front axle oil temperature warning system to the field.

APPLICATION: WA500-3 Wheel Loader Serial Number 50001 and Up
WA500-3A Wheel Loader Serial Number 50001 and Up
WA500-3L Wheel Loader Serial Number A70001 to A70832
WA500-3LK Wheel Loader Serial Number A70001 and Up

FAILURE CODE: 2C01NS

DESCRIPTION: When the wheel loader performs truck or hopper loading operations, it is necessary to maintain high engine RPM for optimum performance. This requires simultaneous use of the throttle and brake. This action will generate excessive heat if the T/M cut-off function is not used, thus causing the brakes to fail prematurely. A warning system has been developed to inform the operator when the front axle oil temperature rises. This news will introduce the procedure for installing this warning system.

MACHINE PREPARATION

1. Park the machine on a flat level surface; lower the work equipment to the ground. Shut off the engine and cycle the controls to remove any residual hydraulic pressure from the work equipment circuits. Turn the parking brake switch on and block the tires.
2. Remove the key from the ignition switch until the repairs are complete. Place a tag on the steering controls advising: "This machine is being repaired. It should not be started or moved for any reason until the tag is removed by the person doing the repairs."



WARNING! Observe all safety and precautionary standards as dictated by the environment and work conditions under which the equipment will be inspected, reworked and repaired. consult the "Shop Manual" and "Operator's and Maintenance Manual" and your "Komatsu district service manager" with any/all questions regarding safety.

Remark

These instructions are intended to supplement the service data contained in the appropriate "Shop Manual". Always refer to that manual for Removal, Installation, Disassembly and Reassembly instructions when not contained in this document.

PART LIST

Item	Part Number	Description	Qty.	Ref.	Old Part
1	425-06-A2240	WIRING HARNESS.	0	1	
2	421-54-15520	CLOP.	0	2	
3	569-06-61960	RELAY	0	2	
4	207-06-31160	BUZZER.	0	1	
5	01220-40412	SCREW	0	2	
6	01641-20405	WASHER.	0	2	
7	01120-40416	SCREW	0	2	
8	425-56-A2110	LEFT COVER - W/O AC	0	1	421-56-21211
		LEFT COVER - W/AC	0	1	419-526-2520
9	23S-06-13270	INDICATOR LAMP.	0	1	
10	421-06-15321	GROMMET	0	2	
11	421-06-15330	SCREW	0	2	
12	421-06-15340	WASHER.	0	2	
13	08037-02512	GROMMET	0	1	
14	425-06-A2230	WIRING HARNESS.	0	1	
15	425-43-A2110	LEFT GUARD.	0	1	
16	425-43-A2120	RIGHT GUARD	0	1	
17	01010-82065	BOLT.	0	4	01010-62060
18	01643-32045	WASHER.	0	4	01643-32060
19	425-43-A2130	TEMP SWITCH - TO LIGHT.	0	1	
20	425-43-A2140	TEMP SWITCH - TO BUZZER	0	1	
21	425-20-A2150	PLUG.	0	2	07040-11409
22	07002-12034	SEAL RING	0	2	07002-21423
23	08034-00519	TIE STRAP	0	20	

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EXPLANATION OF OPERATION

- The caution lamp located below the left dash panel will turn on when the axle oil temperature reaches 102°C (216°F).
- The caution lamp will turn on and the buzzer will sound continuously when the axle oil temperature reaches 102°C (216°F).

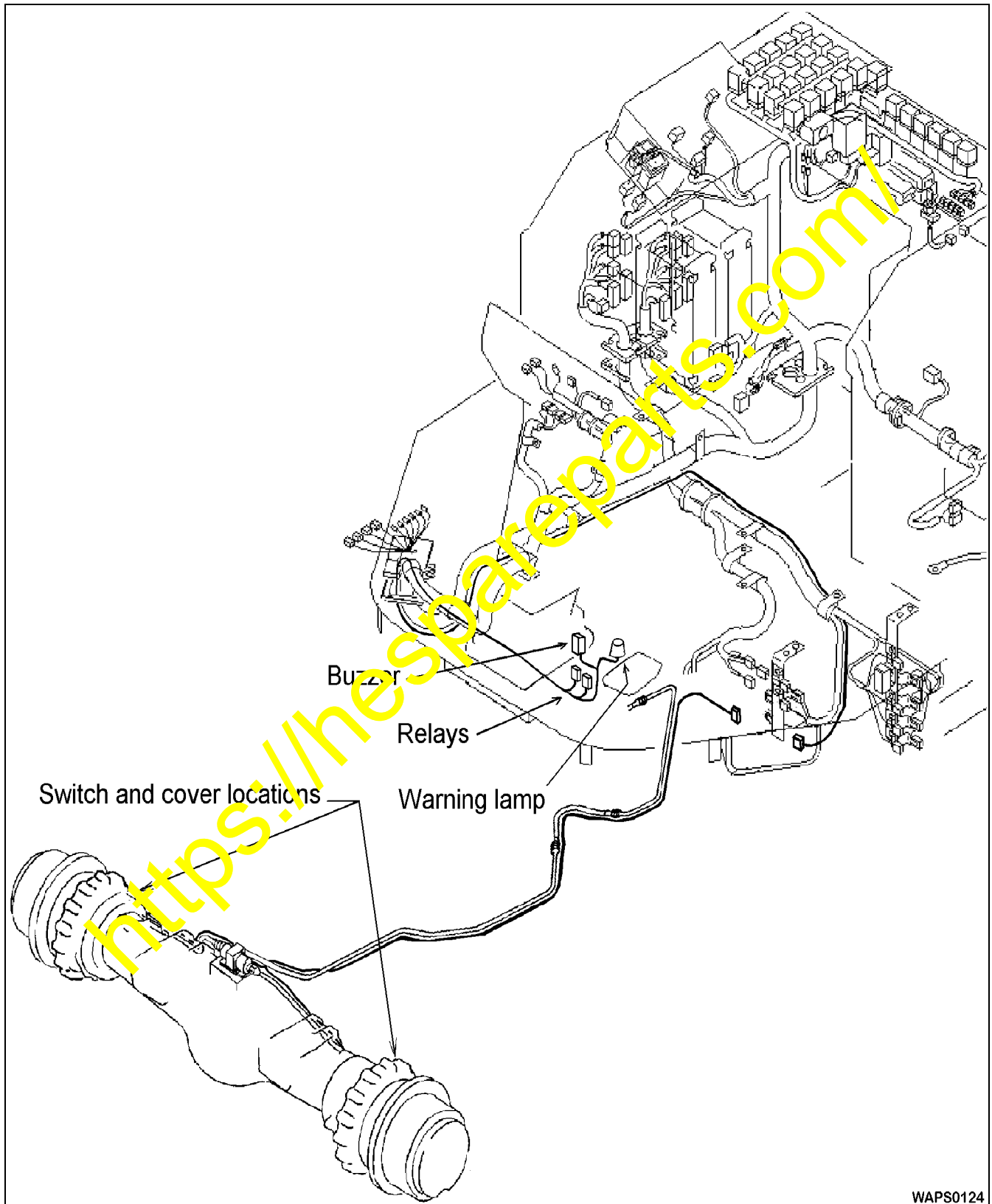
★ Operation Requirements

1. Requirements for the machine when the caution lamp and buzzer turns on.
 - a. Reduce travel speed as much as possible to lessen the frequency of braking application. Also, when traveling downhill, use the engine for slowing the machine down by selecting a lower gear range.
 - b. If the caution lamp will not turn off after trying the recommendations, stop the machine allow the oils to cool down. Only restart after the overheat warnings have stopped.

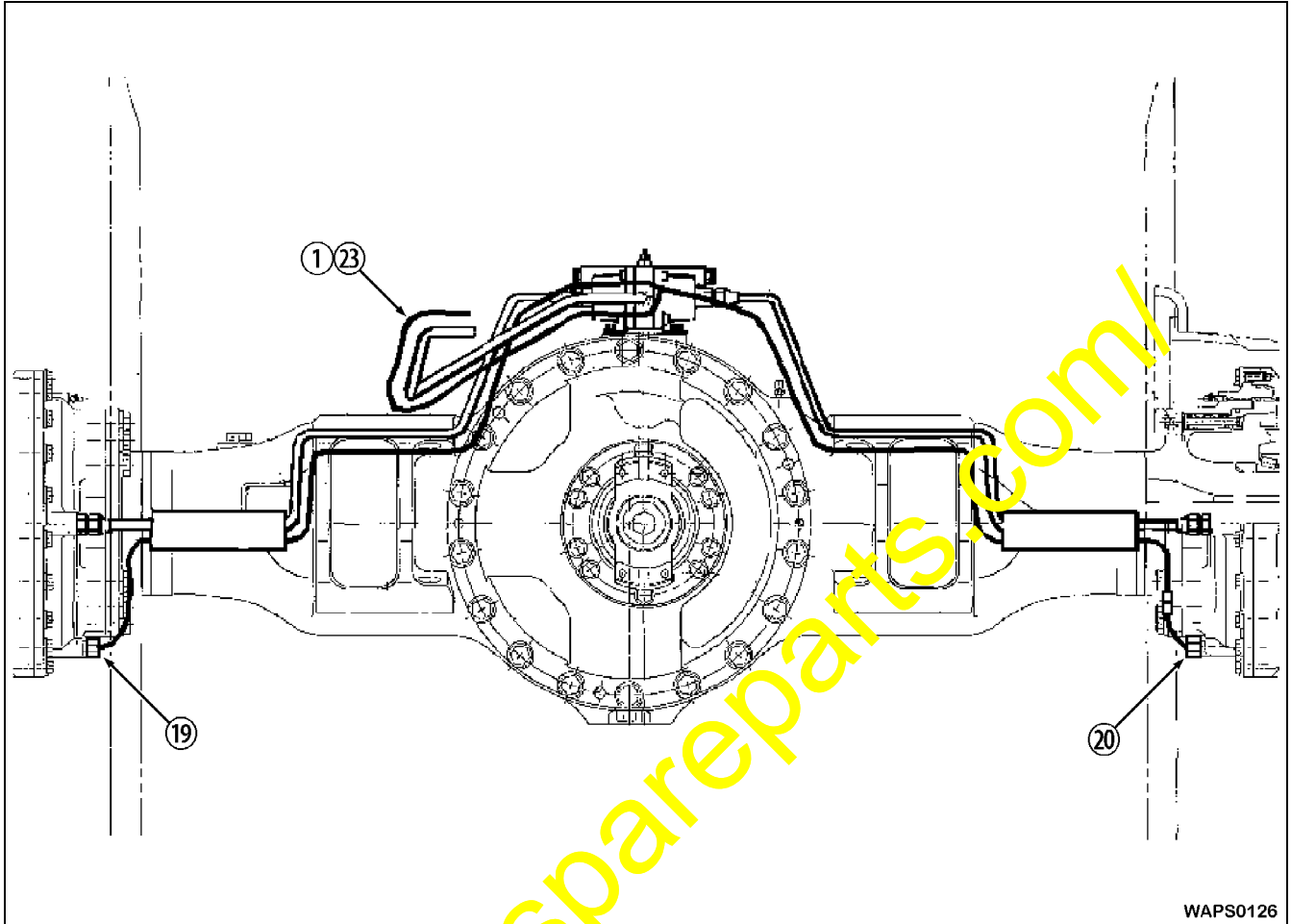
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INSTALLATION PROCEDURES

1. Install wiring harness as shown in the illustration below. Avoid excessive slack sections and interference with moving parts.




2. Rout the front axle wiring harness (1) with the brake line piping and secure the harness to the brake piping using the tie straps (23) to prevent harness movement.

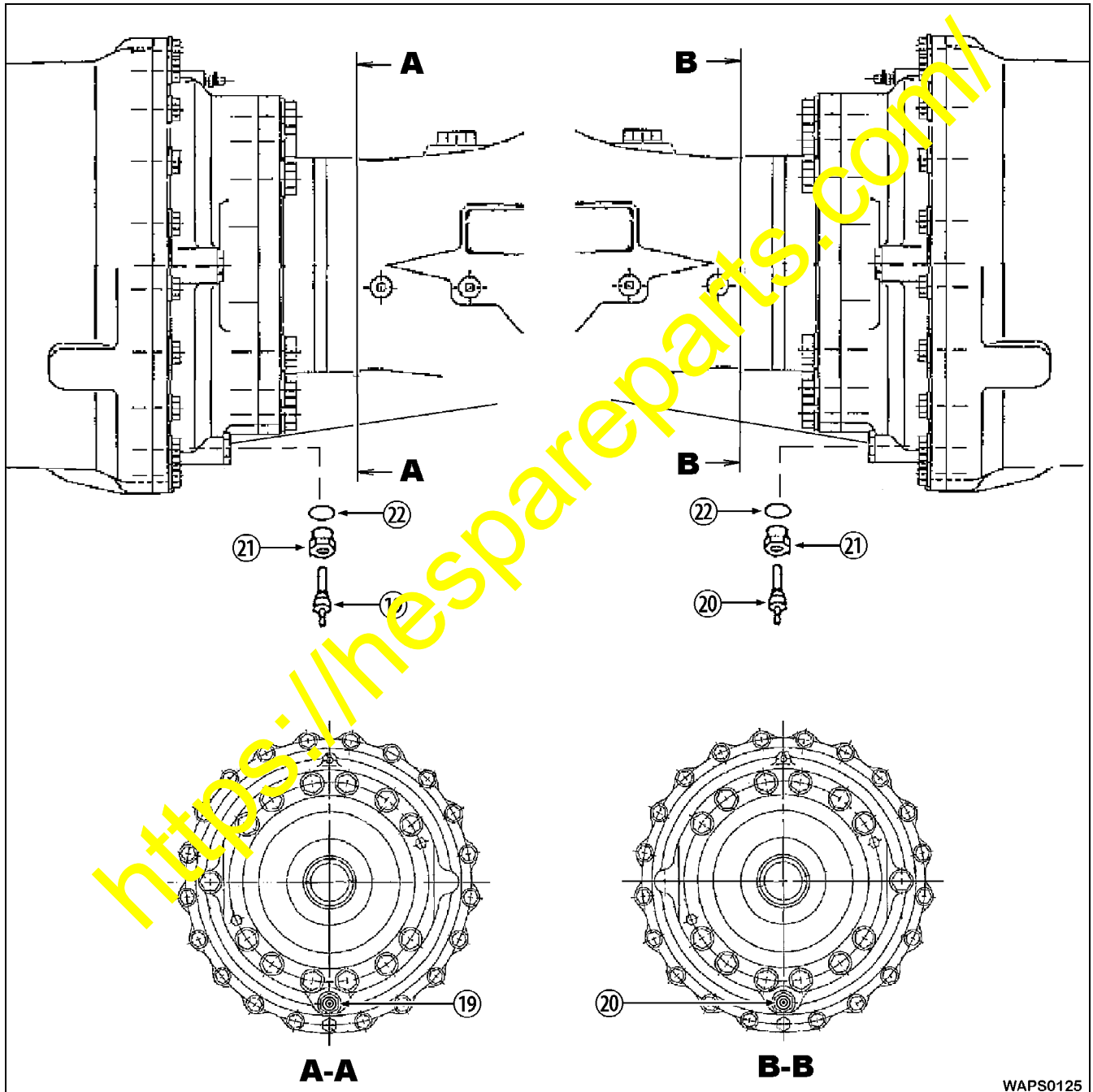


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3. Install the front axle oil temperature sensors.
 - a. Install two reducer plugs (21) with seals (22) and install sensors, left (19) and right (20). Torque to proper specifications:..

 Reducing plugs: **91 to 173 Nm (67 to 128 ft/lbs)**

 Sensor sealant: **LG-1 Sealant**

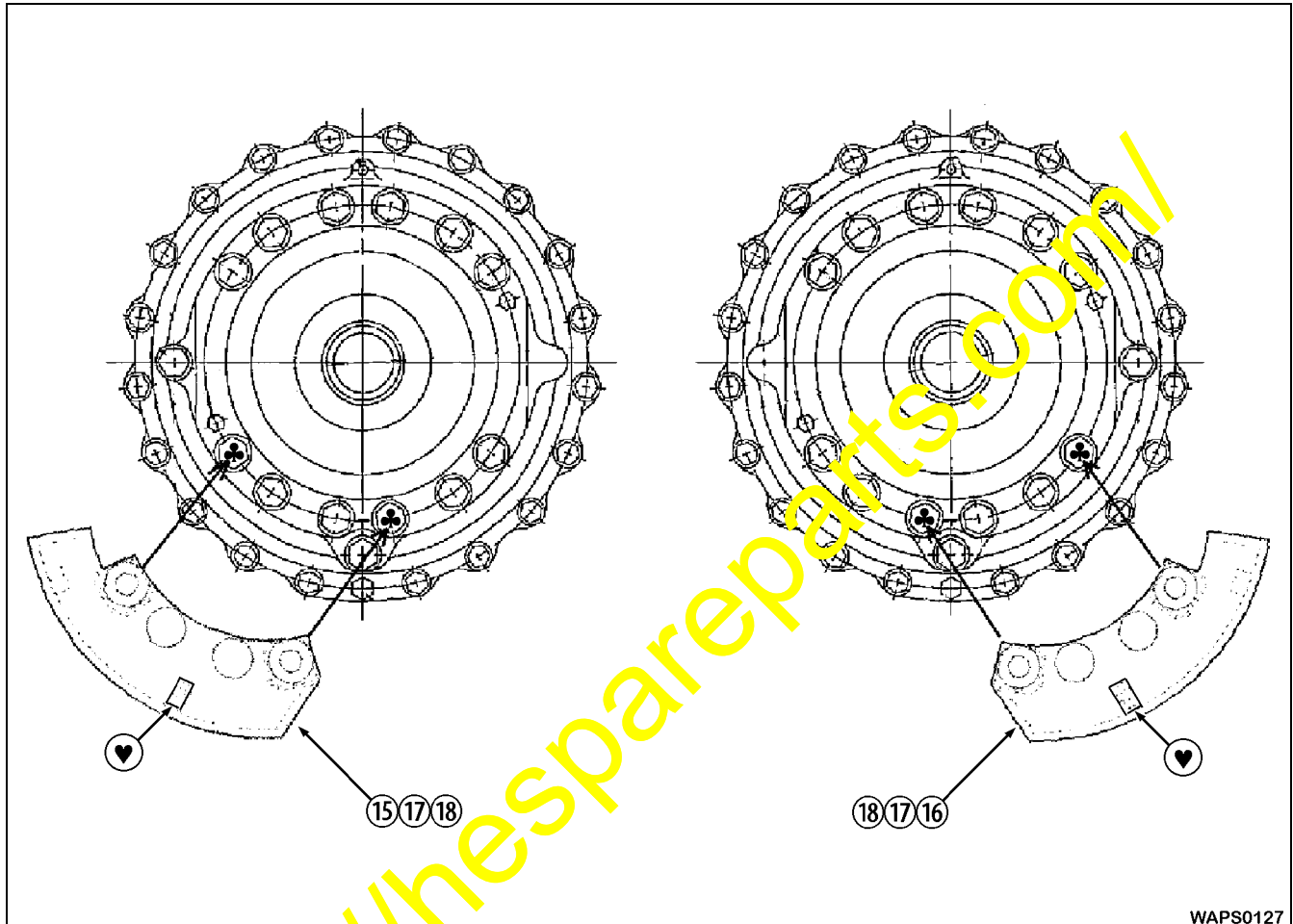


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- Install sensor guards. Remove and discard the bolts and washers marked ♣ on each side of the final drive. Install the guards (15) and (16) and secure with the hardware (17 and (16).

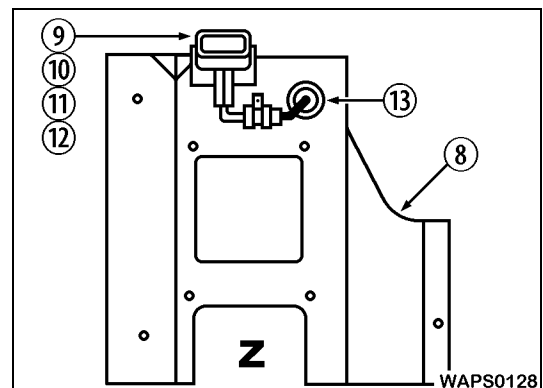
 Mounting bolts: **490 to 608 Nm (361 to 448 ft/lbs)**

- Connect the wiring harness to the clip ♡ at each guard.

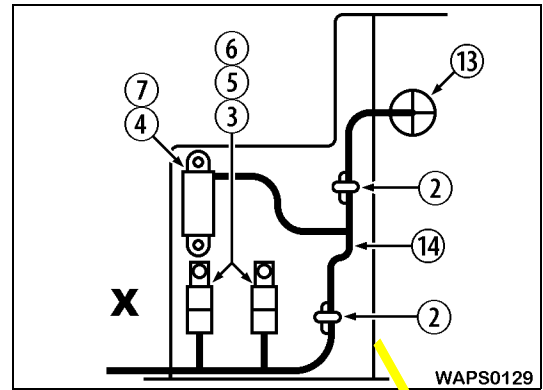


★ Lamps, Buzzer, Relays and Power Supply

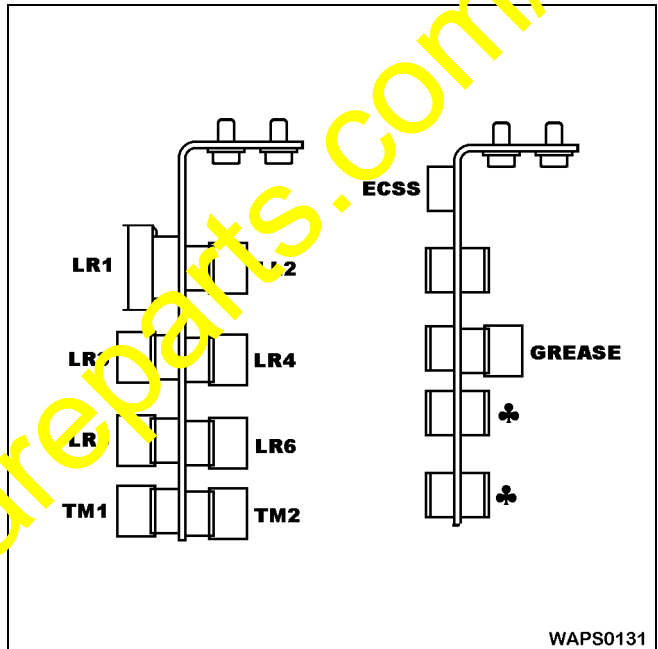
- Remove the cover (8) from the left lower dashboard.
- Install the indicator lamp (9) with the hardware (10), (11) and (12) to the new left cover.



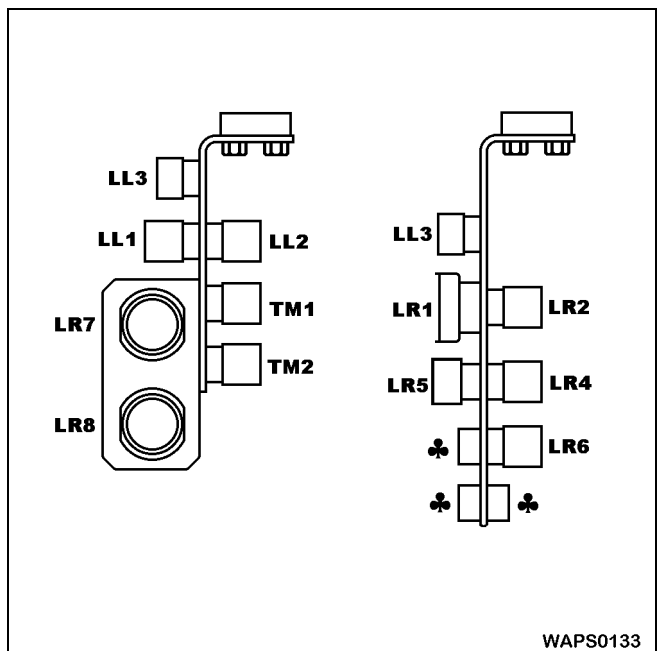
- Position the wire clips (2) as shown. Mount the buzzer (4) and relays (3) with hardware (5), (6) and (7) to the left cover (8), which will replace the prior cover.



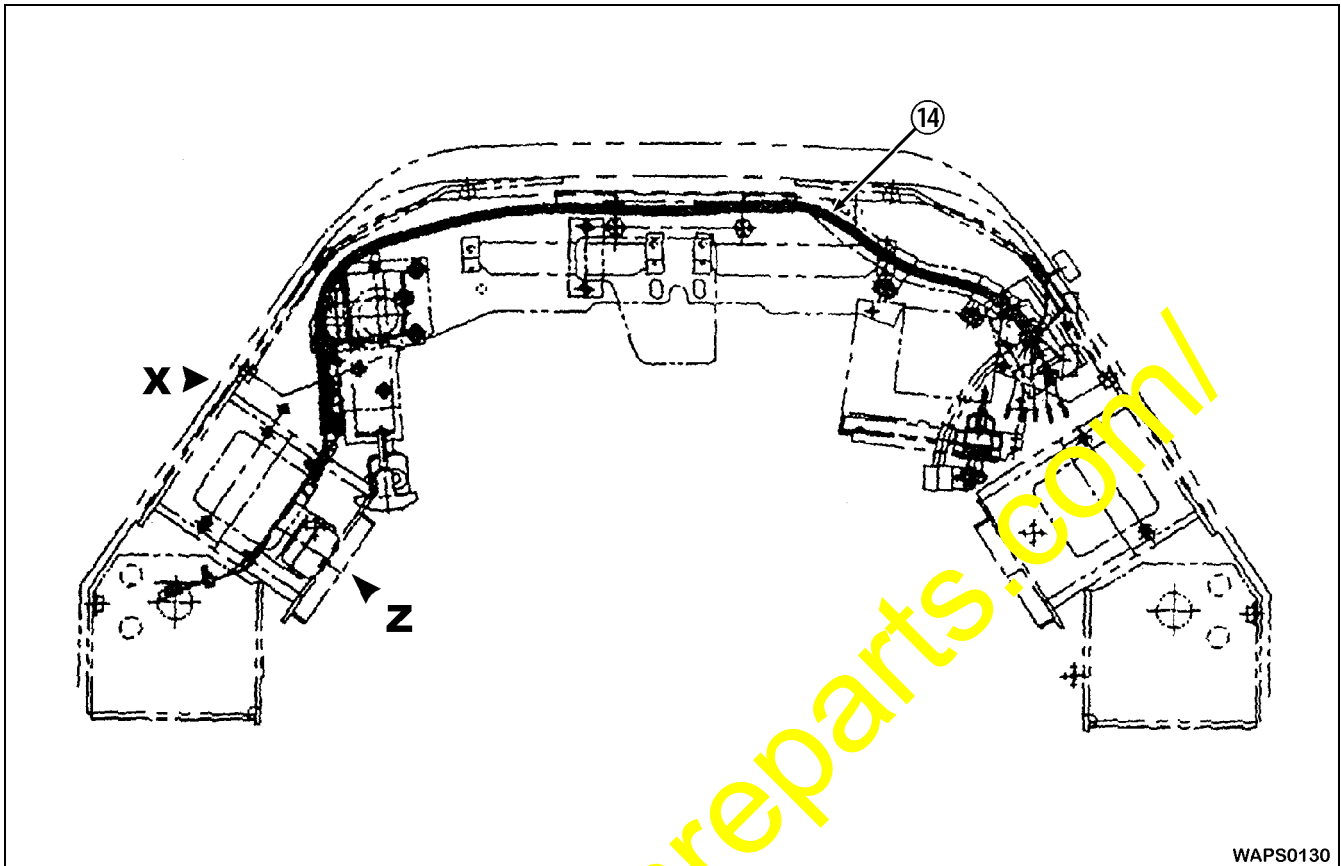
- Centralized connection section for:
WA500-3, 3A or 3L



WA500-3LK

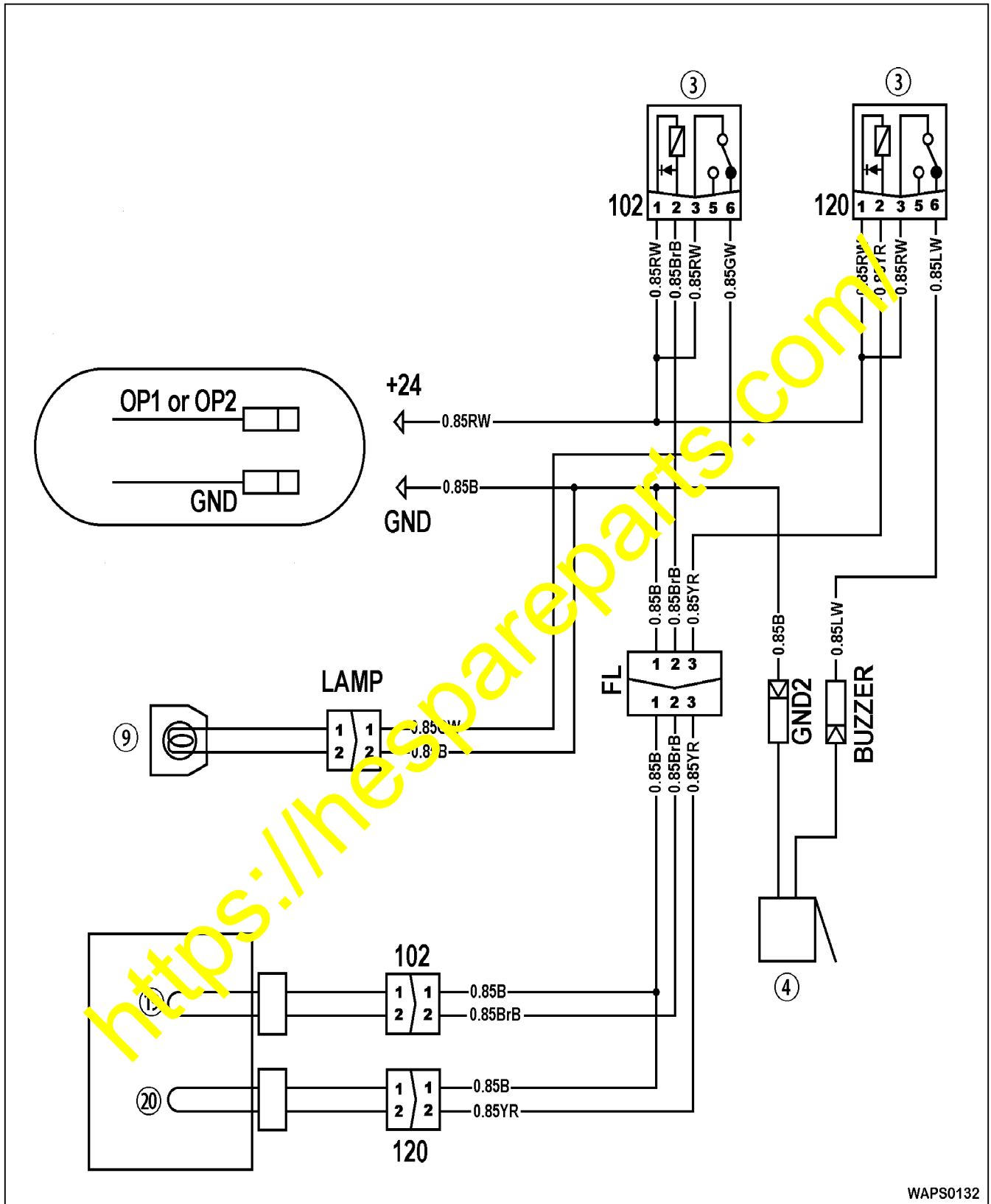


9. Attach the CN and FL connectors of each wiring harness (14).



10. Check operation of circuit before putting machine back into service.

★ Electrical Circuit Diagram



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