SERVICE MANUAL

TL60E / TL75E / TL85E / TL95E

Tractor

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TURNING CASE ADJUSTMENT

⚠ WARNING ⚠

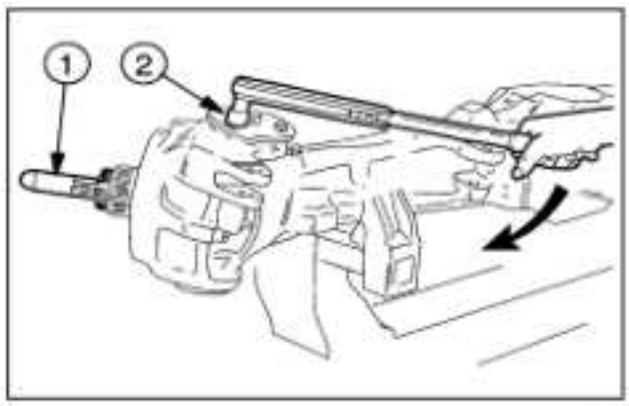
Handle all parts with great care. Do not place hands or fingers between two parts. Always wear the recommended safety clothes, including protection goggles, gloves and shoes.

Place the front wheel drive on the servicing trestle **293460** and proceed as follows.

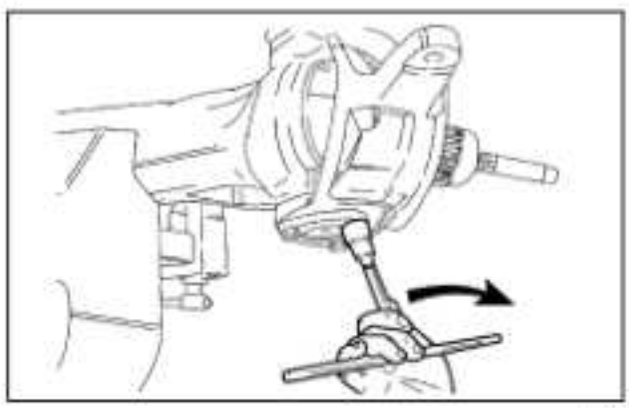
1. Smear AMBRA GR 75MD grease on the outer bush race and place the top pin without adjustment shims with tool **380000235** (2). Tighten the fixing bolts to a torque of 64 Nm (6,5 kgm) on the TL60E model (CNH shaft Class I HD) or 113 Nm (11.5 kgm) on the TL75E, TL85E and TL95E models (CNH shaft class II).

NOTE: *To make the casing installation easier, we recommend installing guide 293889 (1) on the shaft*

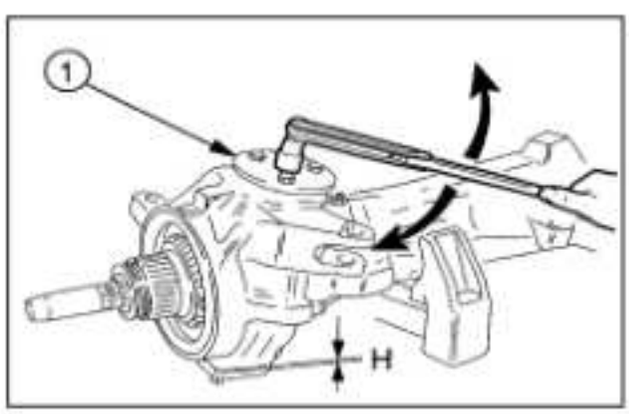
2. Fit in the lower pin without adjustment shims, lubricate the three fixing bolts with engine oil.
3. Gradually tighten the lower bolts in sequence turning the casing in order to allow the excess grease to drain out.
4. Use a torque wrench and tool **380000235** (1) to check if the torque required to turn the casing is of 2.9 Nm (0.3 kgm) on the TL60E model (CNH shaft Class I HD) or 15 – 25 Nm (1.5 – 2.5 kgm) on the TL75E, TL85E and TL95E models (CNH shaft class II) not considering the initial peak value. If that is not the value, adjust through the pin lower flange bolts.
5. Measure the distance (H) between the lower pin flange and the casing in relation to the three bolts.



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TROUBLESHOOTING THE HYDROSTATIC STEERING

PROBLEMS	POSSIBLE CAUSES	SOLUTION
Oil leak from the hydrostatic steering unit: a. Control side. b. Cover side.	1. Defective O–ring (7) fig. 8.	Replace the sealant and sealing ring with special tool 293955.
	2. Bolts (16) not tightened enough.	Tighten the bolts to the recommended torque (24–36 Nm, 2.5– 3.7 kgm).
	3. Sealing washers (15) or O–ring (17) defective.	Replace the washers and the O–ring
Heavy steering wheel.	1. Ineffective hydraulic pump.	Repair the pump
	2. Check if the valve (5) is being kept open by any foreign material or by the absence of the ball.	Eliminate foreign materials and clean the filter; install a ball in the seat (if missing).
	3. Pressure relief valve (22) incorrectly adjusted.	Adjust the valve.
	4. Pressure relief valve (22) jammed or kept open by foreign materials.	Eliminate foreign materials and replace the hydraulic filter.
	5. The steering column stiffened at the bushes due to rusting, jamming, etc.	Cleanout, remove rust and replace the bushes.
Excess steering play.	1. Excess play between the column and the coupling with the rotary valve (4).	Replace worn parts.
	2. Excess play on the coupling between the shaft (21) and the lock pin (12).	Replace worn parts.
	3. Excess play on the splined coupling between the shaft (21) and the rotor (18).	Replace worn parts.
	4. Combination of excess plays mentioned above.	Replace the majority of worn parts.
	5. Blade springs (11) broken or fatigued.	Replace the springs.

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7. Note the readout on the millivolt meter, it should not be over 400 millivolts.

If the readout is over 400 millivolts, this indicates a high resistance defect in the external circuit.

If the expected alternator debit cannot be reached and the millivolt meter readout is under 400 millivolts, it is because there is a defective alternator component. Perform the alternator components tests as described in this section.

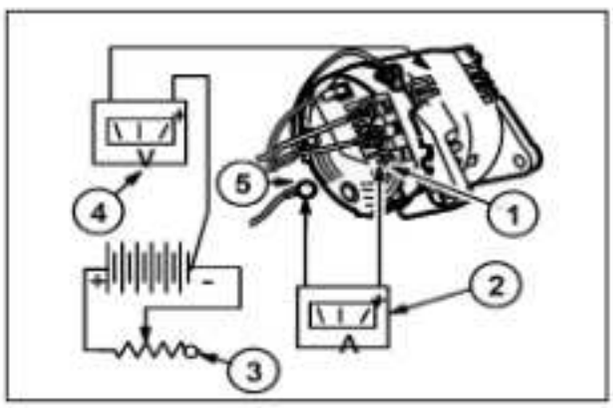
8. Stop engine.

(b) Drop in Voltage on the Mass Side Tests

With reference to Figure 10.

9. Check whether the starter switch is in the "off" position.

10. The circuit is the same as the one used on the previous test, except that the millivolt meter (4) is now connected between the battery negative terminal and the alternator housing (negative side to the housing).



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NOTE: *Check whether the potentiometer (3) is regulated for the passage of minimum current (maximum resistance).*

11. Start the engine and increase the speed to 2000 r.p.m.

12. Slowly increase the potentiometer current charge (diminish the resistance) until the amp meter records 85 Amperes or 120 Amperes, according to the respective model being tested.

13. Note the readout on the volt meter, it should not be over 200 millivolts.

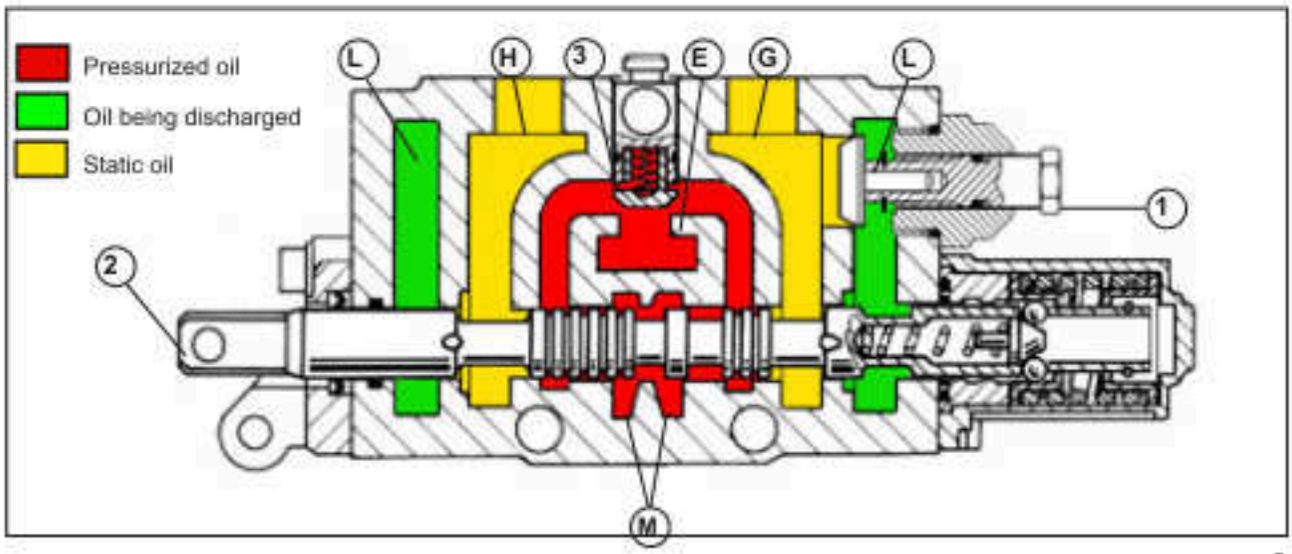
If the readout is over 200 millivolts, this indicates a high resistance defect in the external circuit.

If the expected alternator debit cannot be reached and the millivolt meter readout is under 200 millivolts, it is because there is a defective alternator component. Perform the alternator components tests as described in this section.

14. Stop engine.

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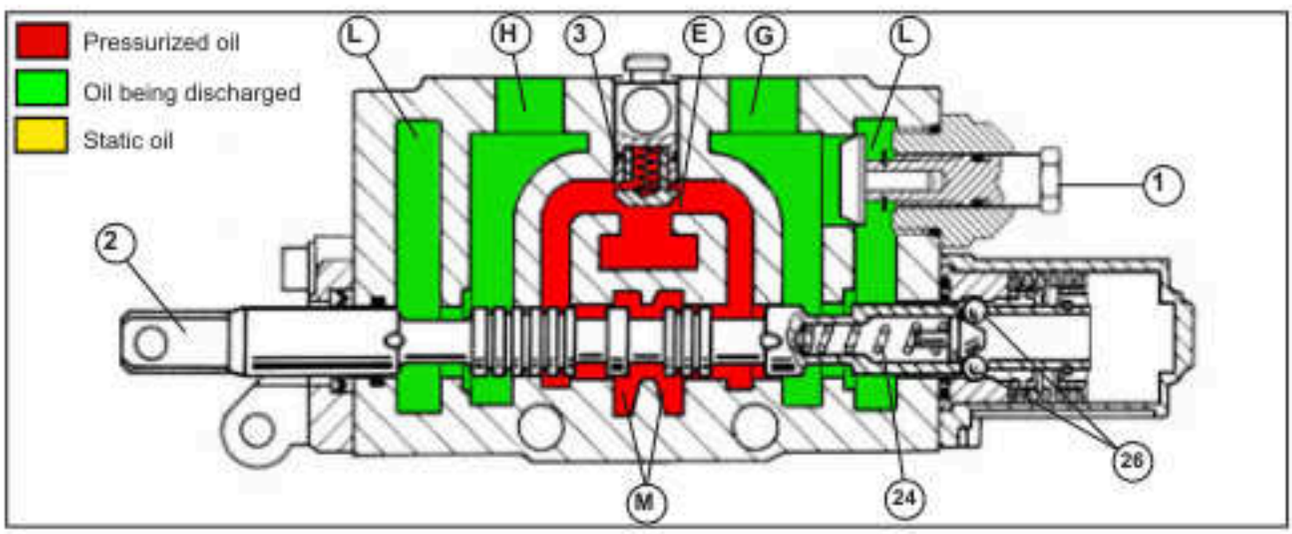
REMOTE CONTROL VALVE OPERATION PHASE TO OPERATE THE DUAL ACTION CYLINDER WITH ROD DETENT AND FLOAT POSITION



3

NEUTRAL

When the control rod (**2**) is in the central position, galleries **H** and **G** are not linked to galleries **L** and **E**, so that the oil turns static., In that situation, the full flow of oil from the hydraulic pump runs through gallery **M** to the other slices of the remote control (open center system), and if it is not used, follows on to feed the hydraulic lift control valve.

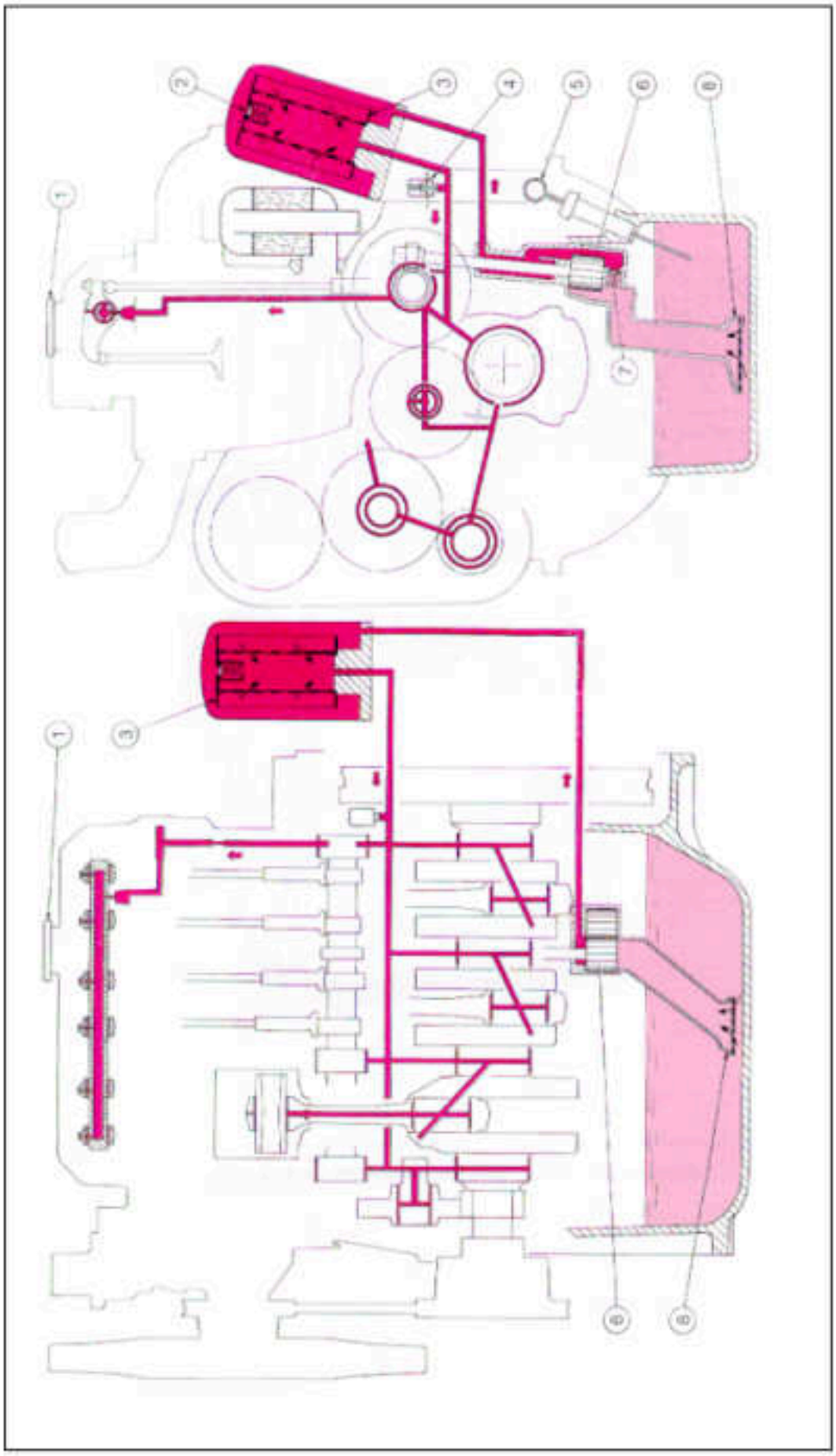


4

OPERATION OF REMOTE CONTROL IN FLOAT

To select the operating float control, activate the control lever (located in the cab) fully forward. The valve control rod (**2**) moves and the balls tab (**26**) engages on the groove to the right where they are kept in position by the support and spring (**24**). In that position the rod (**2**) links the gallery (**M**) that carries the full pump flow to the other slices of the remote control. Galleries **G** and **H** are linked with galleries **L**. In that condition, the only force acting on the coupled implement is that created by its weight and hydraulic lift may be activated. The automatic release tab does not operate with the float control because there is no pressure inside the remote control valve.

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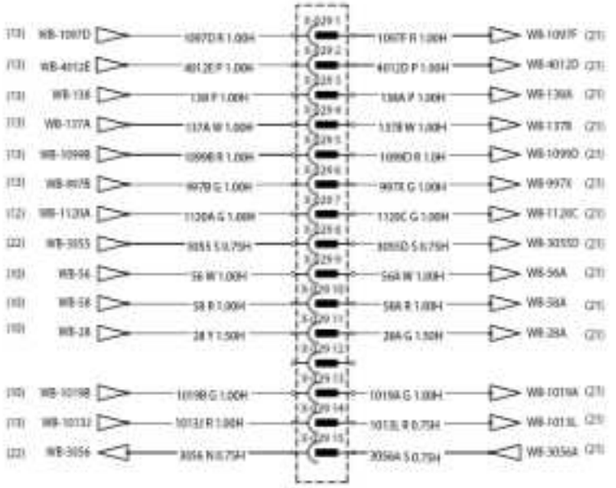


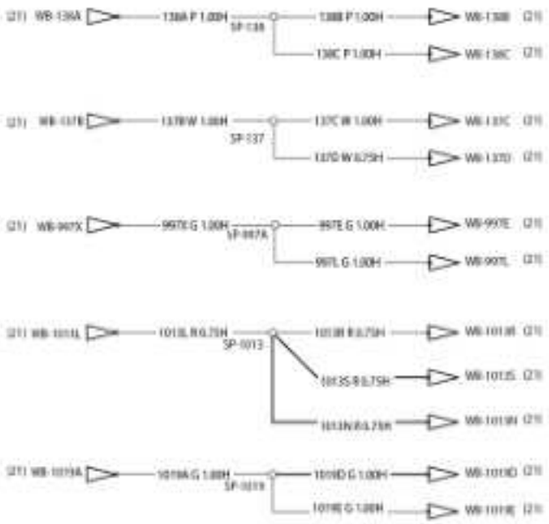
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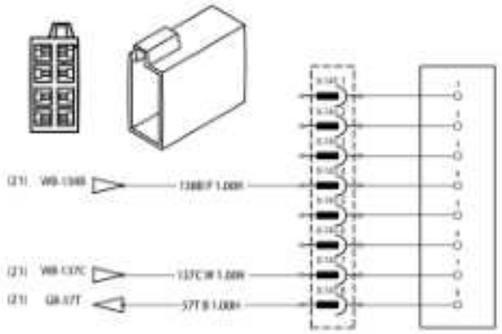
3 cylinder engine lubrication schematics

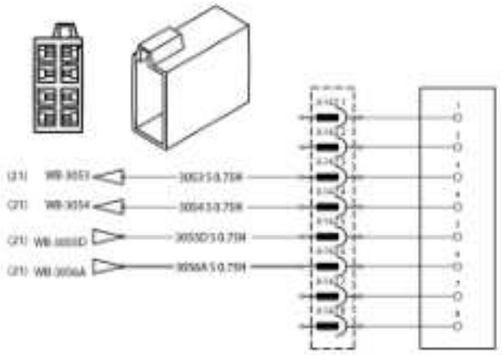
1. Oil filling cover **2.** Filter safety valve (intervenes when oil pressure at the filter input overcomes the output pressure by 1.5 – 1.7 bar) **3.** Filter **4.** Light switch to indicate low engine lubrication oil pressure (located on the panel) **5.** Oil level dipstick **6.** Pump **7.** Oil pressure limiter valve **8.** Filter with screen in aspiration

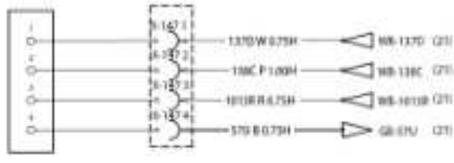
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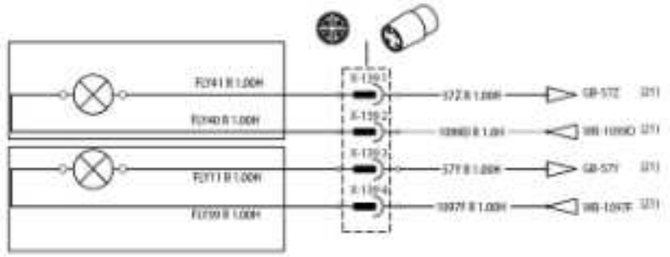


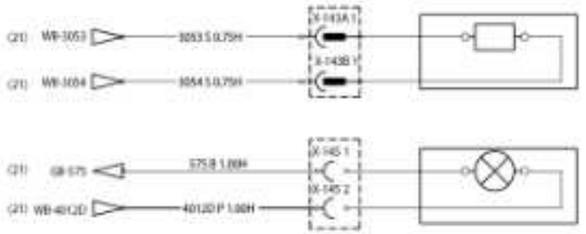


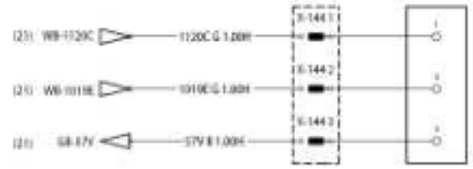


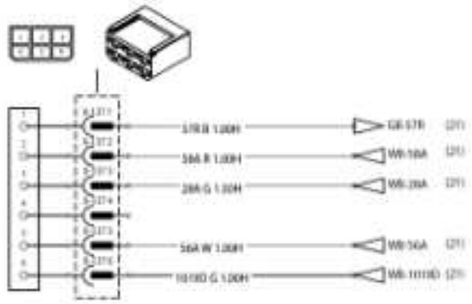


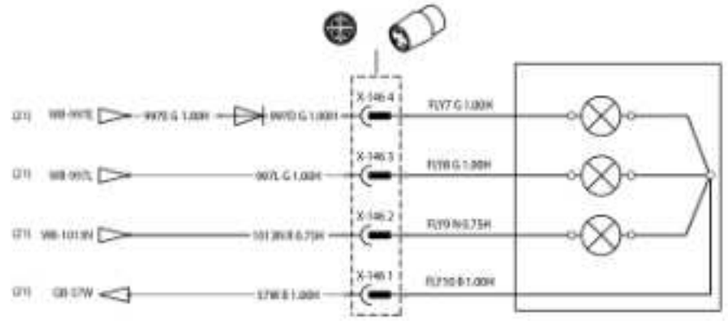












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