WHEEL LOADER

SERVICE MANUAL

HL660

HYUNDAI

MidWestTech | Hyundai HL660 Wheel Loader Service Manual | Publication HL660

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1. Inspection of time

(1) Make the bucket carry the materials that have reached its rated loading capacity and then lower to the lowest position, depress the accelerator pedal at the normal operating temperatures of the diesel engine and the hydraulic oil to make the diesel engine run at a rated rotational speed, operate the boom lever of the distribution valve, and the time for lifting the boom to the highest position should be no more than the regulated value.

(2) When the diesel engine idles, push the boom lever of the distribution valve to the lowering position, and the time for the empty-loaded bucket lowering from the highest position to the ground should be no more than the regulated value.

(3) Under the condition equivalent to that for the bucket to lift, the time for the bucket to move from the maximally backward position to the maximally upward position should be no more than the regulated value.

2. Inspection and regulation of the system pressure

Check the maximum working pressure of the system: unscrew the protection box of the pressure measurement joint at the oil outlet pipe of the working oil pump and install a pressure gauge with the 25MPa range, lift the boom to the horizontal position, with the normal operating temperatures of the diesel engine and the hydraulic oil, make the diesel engine run at a rated rotational speed, and operate the tilt slide valve of the distribution valve to make the bucket tilt backward until the pressure gauge indicates the highest pressure. At this moment, the reading should be 20MPa. If there is any difference, as is shown in the Illustration 5.4-6, adjust the distribution valve relief valve by taking following steps:

(1) Remove the plug 8

(2) Rotate the adjustment lead screw 7 clockwise or anticlockwise with an internal hex wrench to raise or lower the pressure

(3) After proper adjustment, hold the adjustment lead screw with the internal hex wrench, and then tighten the nut

(4) Repeat the bucket movement to check the pressure

3. Inspection and regulation of the safe pressure of the tilt chamber

Inspection and regulation of the safe pressure of the tilt large chamber: unscrew the plug of the joint body

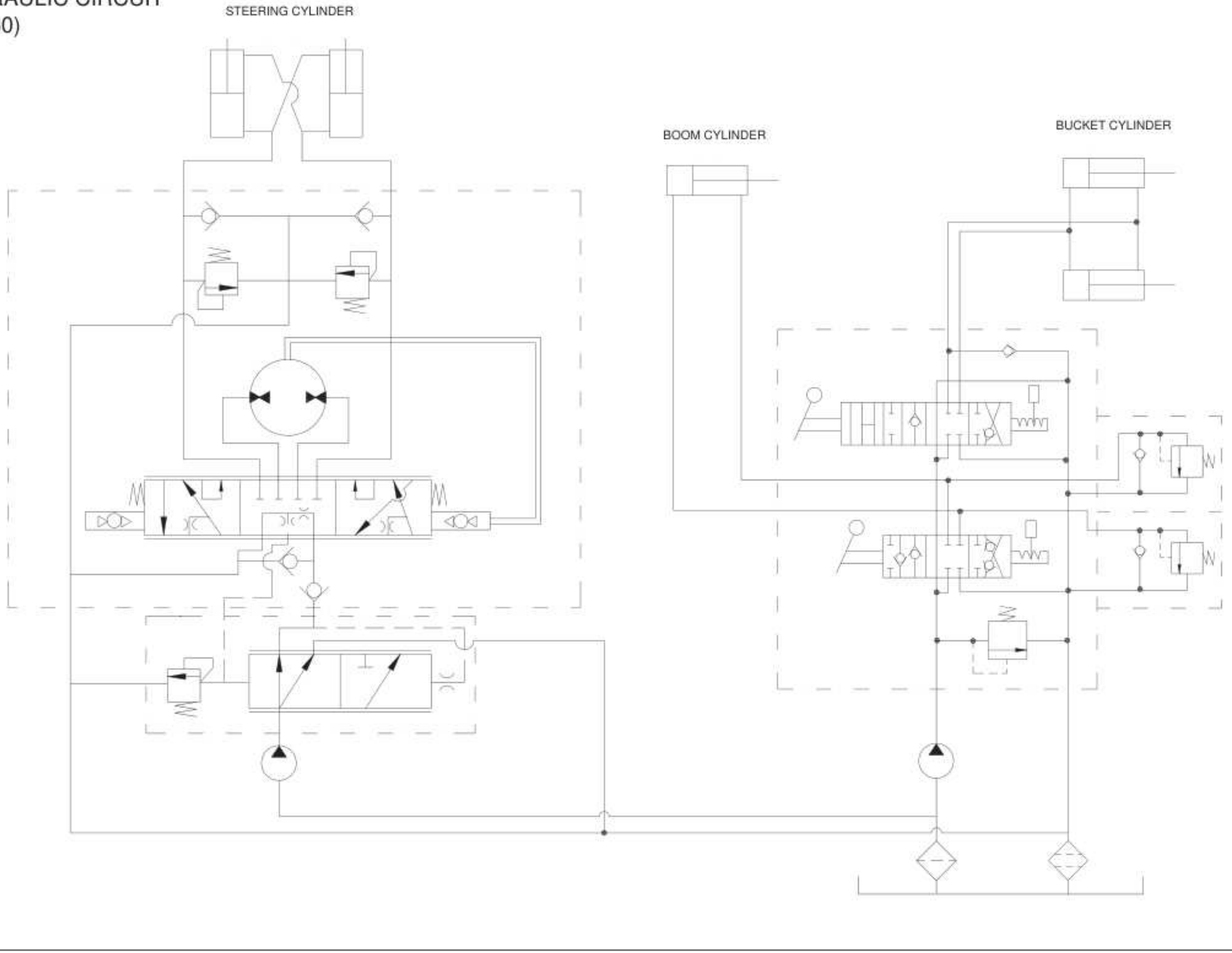
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Brake system faults and troubleshooting methods

No.	Fault description	Reason	Troubleshooting method
1	Insufficient service brake force and overlong brake distance	1) Air leakage or oil leakage in elements and lines 2) Insufficient brake fluid in the booster's oil storage chamber 3) Friction plates has worn to the limit 4) Damage to the seal plates (or drum diaphragm) of the brake valve 5) The piston of the brake valve gets rusty or stuck 6) The booster's air piston gets stuck, or the seal parts of the air piston or the oil piston are damaged 7) A blockage in the breather port at the oil filler cap of the booster's oil storage chamber 8) Oil leakage in the brake cylinder 9) Brake cylinder piston gets stuck 10) There is air in the brake hydraulic lines 11) Low system pressure 12) Oil leakage in the wheel hub, oil dirt on the friction plates	1) Check the sealing performance of the parts and lines 2) Add brake fluid 3) Replace the friction plates 4) Replace the brake valve 5) Clean the brake valve, and apply the grease to the outer part of the piston 6) Clean the booster, and replace the seal parts 7) Replace the oil filler cap 8) Replace the rectangular seal ring of the brake cylinder 9) Clean the booster 10) Perform air-discharging operation 11) Check the air compressor, the pressure control and the fuel-water separation devices, and the single-way valve 12) Check or replace the wheel hub oil seal, and replace the friction plates
2	The service brake cannot be normally relieved, the clamps lock or the friction plates drag	1) There is air in the brake hydraulic lines 2) Improper pedal stroke limit 3) Improper position of the top lever of the two-line pneumatic brake valve, and the piston gets stuck 4) The piston of the pneumatic brake vale gets stuck or the return spring is damaged 5) The booster's air piston or the oil piston gets stuck, the return spring is damaged, and the return oil port is blocked 6) The brake cylinder piston gets stuck and fails to return after the brake is relieved	1) Perform air-discharging operation 2) Readjust the pedal stroke limit 3) Readjust the position of the top lever 4) Remove, inspect and clean the pneumatic brake valve 5) Remove, inspect and clean the booster 6) Remove, inspect and clean the pneumatic brake valve
3	A desired gear fails to engaged after the service brake is relieved	1) Improper pedal stroke limit 2) Improper position of the top lever of the two-line pneumatic brake valve, and the piston gets stuck 3) The piston of the pneumatic brake vale gets stuck or the return spring is damaged	1) Readjust the pedal stroke limit 2) Readjust the position of the top lever 3) Remove, inspect and clean the pneumatic brake valve
4	The loader moves off-tracking during driving when or after the brake is actuated	1) The loader moves off-tracking after the brake is actuated: the brake cylinder piston of the service brake of the wheel on one side gets stuck and fails to return after the brake is relieved 2) The loader moves off-tracking when the brake is actuated: the service brake friction plates are worn	1) Remove, inspect and clean the service brake, and replace the rectangular seal ring 2) Replace the friction plates

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HYDRAULIC CIRCUIT (HL660)



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HL660 Series(*)
Reassembly procedure for equipment shipped in container

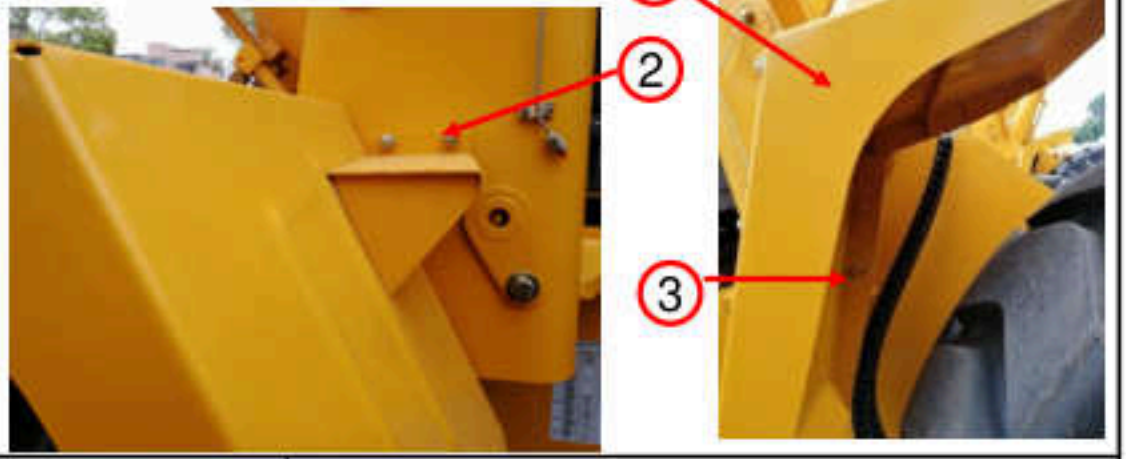
* HL660, HL660L, HL665, HL665L

2018. 09. 05.
Hyundai Construction Equipment
Oversea Customer Support Dept.

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#4-1 Fenders

Assemble



Part



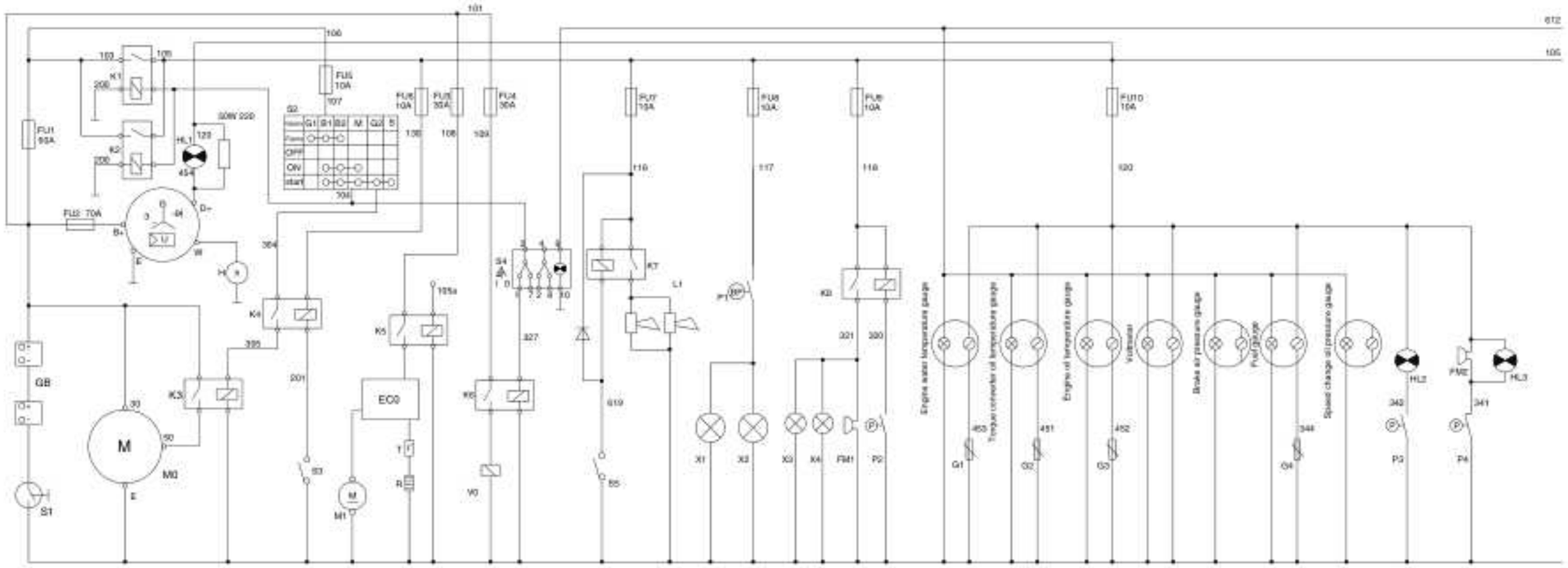
Remark:

① Assemble front fender
② Bolt tightening torque
M12 : 78~104N.M
③ Bolt tightening torque
M16 : 195~257N.M

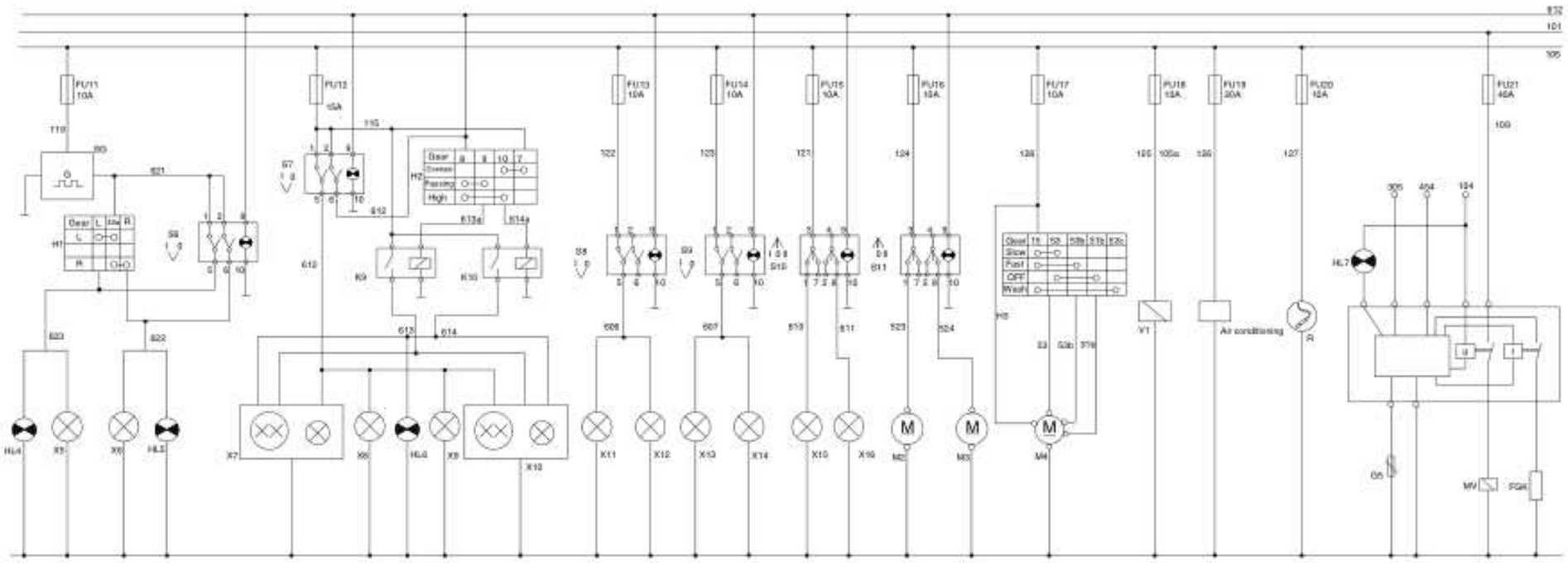
※ Refer to the attached video for more information

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Power system and start system	Fuel Warmer	Engine Stop	Horn	Brake light	Back Buzzer	Cluster, Parking, Brake low pressure, Alarm



Turn light and emergency lights	Width lamp and head lamp	Front and rear work lights	Cab light Warning light	Fan, heater	Wiper motor	Pilot, control	Air conditioning Cigarette lighter	Preheating device



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