Service Manual

2CX
& VARIANTS

Backhoe Loader

From M/c No. 930000 Onwards

PUBLISHED BY THE
TECHNICAL PUBLICATIONS DEPARTMENT
OF JCB SERVICE; © WORLD PARTS CENTRE,
WATERLOO PARK, UTTOXETER, ST14 5PA
ENGLAND
Tel. ROCESTER (01889) 590312
PRINTED IN ENGLAND

Publication No. 9803/7130

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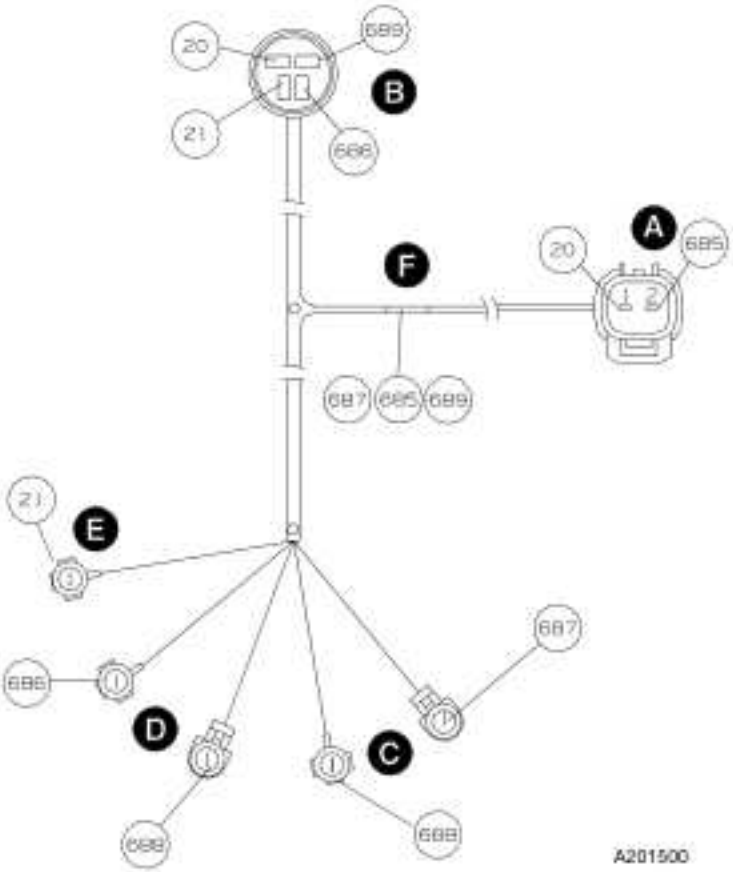
Air Conditioning (cont'd)

Wiring Continuity Checks

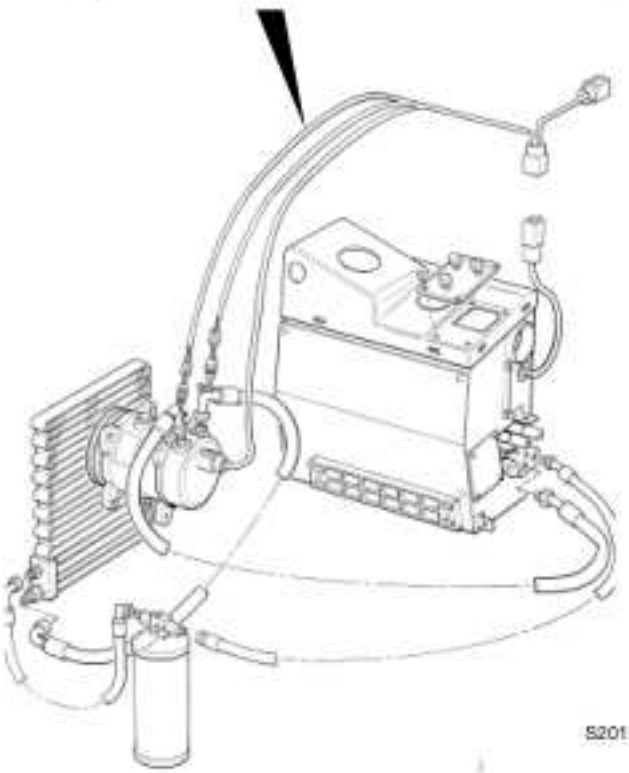
Use the harness illustration below to complete continuity checks on the air conditioning harness wires.The harness connects to the mainframe harness via connector **A**, located behind the side console panel.

ITEM	DESCRIPTION
A	Air Conditioning Power (from fuse C9)
B	Controls
C	Pressure Switch
D	Pressure Switch
E	Compressor
F	Splice

WIRE	DESCRIPTION
20	Controls to Power
21	Controls to Compressor
685	Power to Splice
686	Controls to Pressure Switch
687	Pressure Switch to Splice
688	Pressure Switch to Pressure Switch
689	Controls to Splice



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Technical Data

System Type	12 Volt, negative earth
Battery	
Cranking Performance at -18 °C (0 °F)	410 Amps to 1.4 V.P.C.
Reserve Capacity (minutes) for 25 amp load	180
Alternator	A127, 55 Amp max. output
Starter Motor	S12-85 (2M113)

The electrical circuits are protected by fuses. The fuses are located in the front console, underneath cover **A**. If a fuse ruptures, find out why and rectify the fault before fitting a new one.

The fuses are identified using column letters (A, B and C) and row numbers (1 to 9). Note that all the fuses are shown (including optional equipment fuses). Your machine may not be equipped with all the fuses shown on these pages.

Bulbs	**Rating (Watts)**
Headlights - main	45 W
Headlights - dip	37.5 W
Indicators	21 W (front & rear)
Instruments	1.2 W
Work lights	55 W Halogen (front & rear)
Number plate light	2 x 5 W
Side/tail lights	5W (front & rear)
Interior lights	10 W
Stop lights	21 W (rear)
Beacon	70 W Halogen
Inspection lamp (where fitted)	55 W (floodlight pattern)
Rear Fog	21 W
Warning lights	3 W

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Power Take Off Clutch

Dismantling and Assembly

Idler Assembly

The idler assembly (items **33** - **37**) can be dismantled after the PTO clutch has been removed and must be assembled before the PTO is replaced. Withdraw shaft **33** using an impulse extractor screwed into the M12 tapped hole in the end of the shaft, then remove the remaining components via the PTO cavity. Assembly is the reverse of the dismantling sequence.

Dismantling

Follow the numerical sequence on the illustration to dismantle the unit, noting the points listed below.

Use suitable screws, inserted into the threaded holes provided, to remove the brake piston **10**.

Dowels **9** (3 off) should be removed if they are loose, to prevent losing them.

Bearing **18** will either remain on the clutch shaft or in its housing in the gearbox when the clutch is removed.

Dismantling of the clutch assembly **7** will be easier if it is secured in a soft-jawed vice, coupling end lowermost.

Thrust washer **28** and ring **27** should be removed using a bearing puller applied to thrust washer **28**. Discard ring **27**. Take care not to damage the clutch housing and the oil holes in the end of the shaft when using the puller.

Note: Do not attempt to lever off these components. Always use the correct tool.

The clutch pack comprises alternate friction plates **24** and counter plates **25**, beginning and ending with a friction plate. The pack is sandwiched between two spacers **23** and **26**, and secured by circlip **22**. Retain these items as a set for assembly.

Note that the clutch housing cannot be removed from the shaft.

Discard all seals and O rings.

Inspection

Thoroughly clean all components. Ensure that all oil ways are clear.

Inspect generally for damage. Check for scoring inside the piston housing and at the oil feed end of the shaft. Polish out if necessary.

Check the operation of the non-return valve located in piston **30**.

Check the clutch pack for damage and excessive wear. Replace the complete set of friction and counter plates if necessary. Do not mix plates from different clutch packs.

Check the condition of brake disc **8**. Renew if necessary.

Assembly

Assembly is basically the reverse of the dismantling sequence, but please note the following.

Use new seals and O rings. Lightly oil components before installing them.

Pack the cavity between the lips of seal **13** with grease before assembly.

Thrust washer **28** should be installed using a bearing press, ensuring that the plate is pressed squarely onto its shoulder on the shaft. Ring **27** should similarly be installed using a bearing press.

When installing the clutch pack, ensure that the friction/counter plates are installed in the correct sequence, see **Dismantling**. Note that there are seven friction plates **24**, and six counter plates **25**. Use the pinion assembly **19** to align the inner teeth of the friction plates.

Lightly oil bearings **15**, **18** and **21** before installing and rotate them during setting.

After assembly, and using an airline, check that the clutch operates smoothly and that there is endfloat.

Measure the clutch pack end float using two screwdrivers as shown at **B**. The clutch pack endfloat should be 1.3 - 3.6 mm. If incorrect, check for damage, correct assembly and that the correct number of clutch plates have been installed. Note that shims are not necessary.

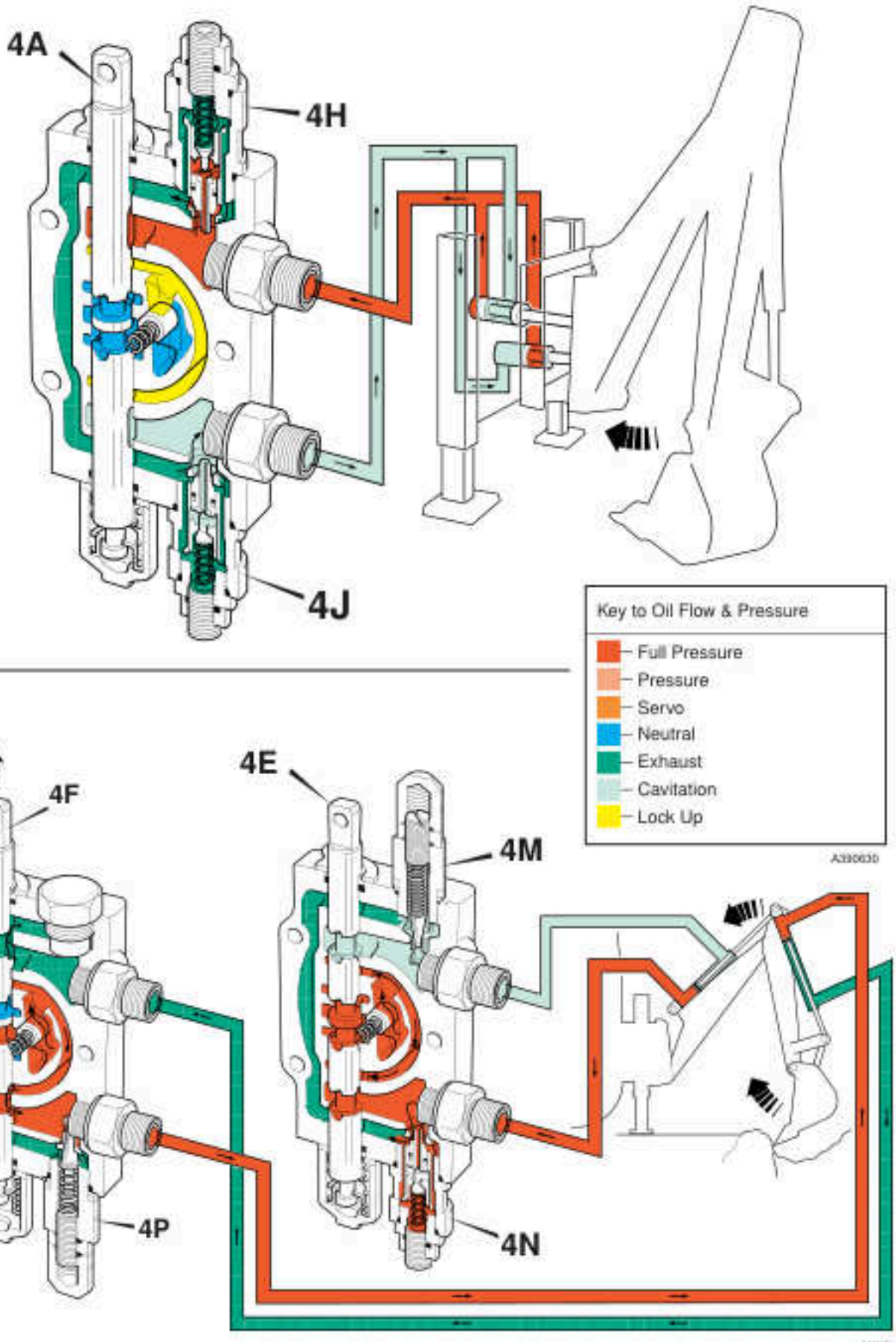
Fitting stake nut **4** may be easier performed after the clutch has been replaced in the gearbox, see **Removal and Replacement**.

Torque Settings

Item			
39	47-54 Nm	35-40 lbf ft	4.8-5.5 kgf m

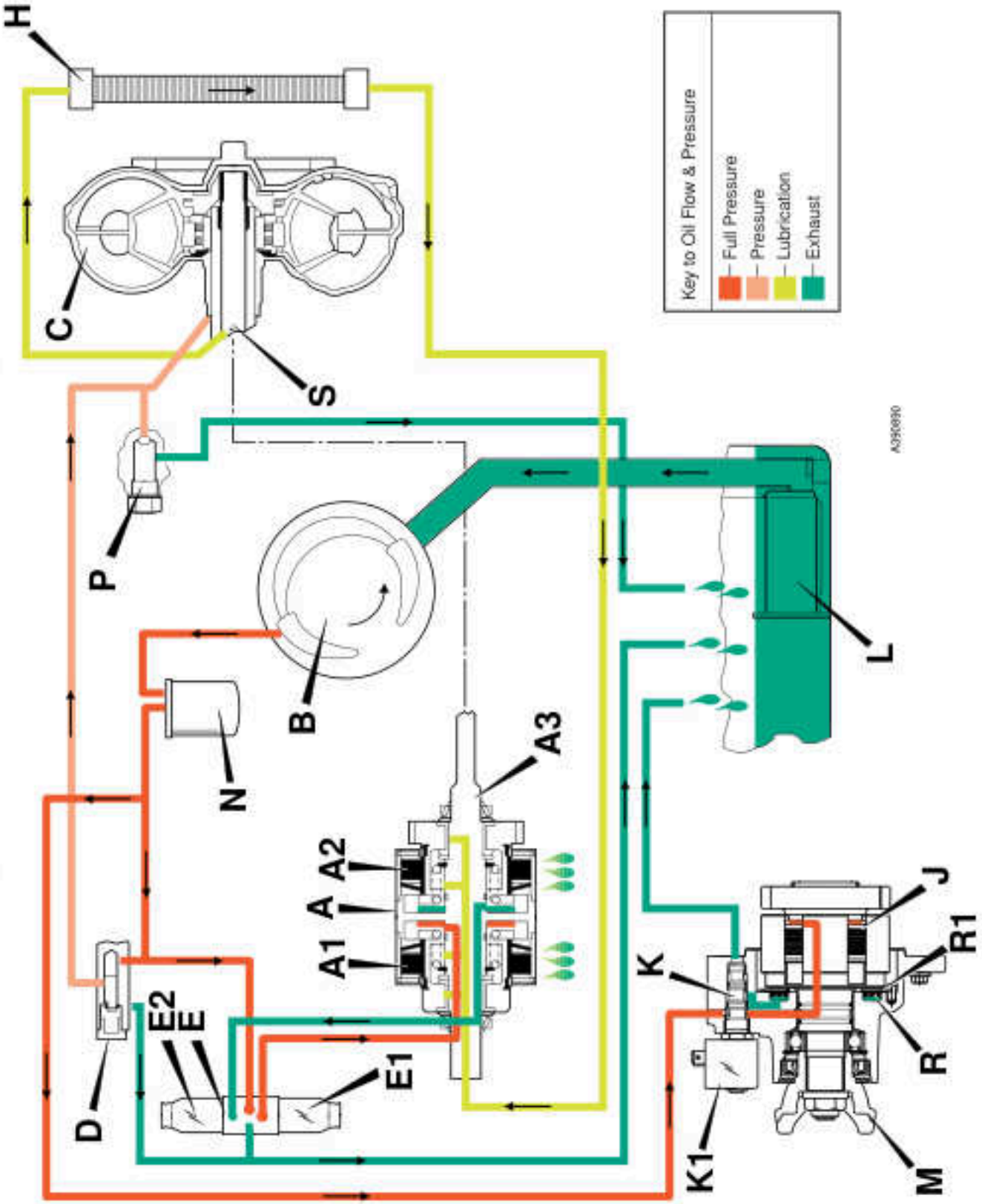
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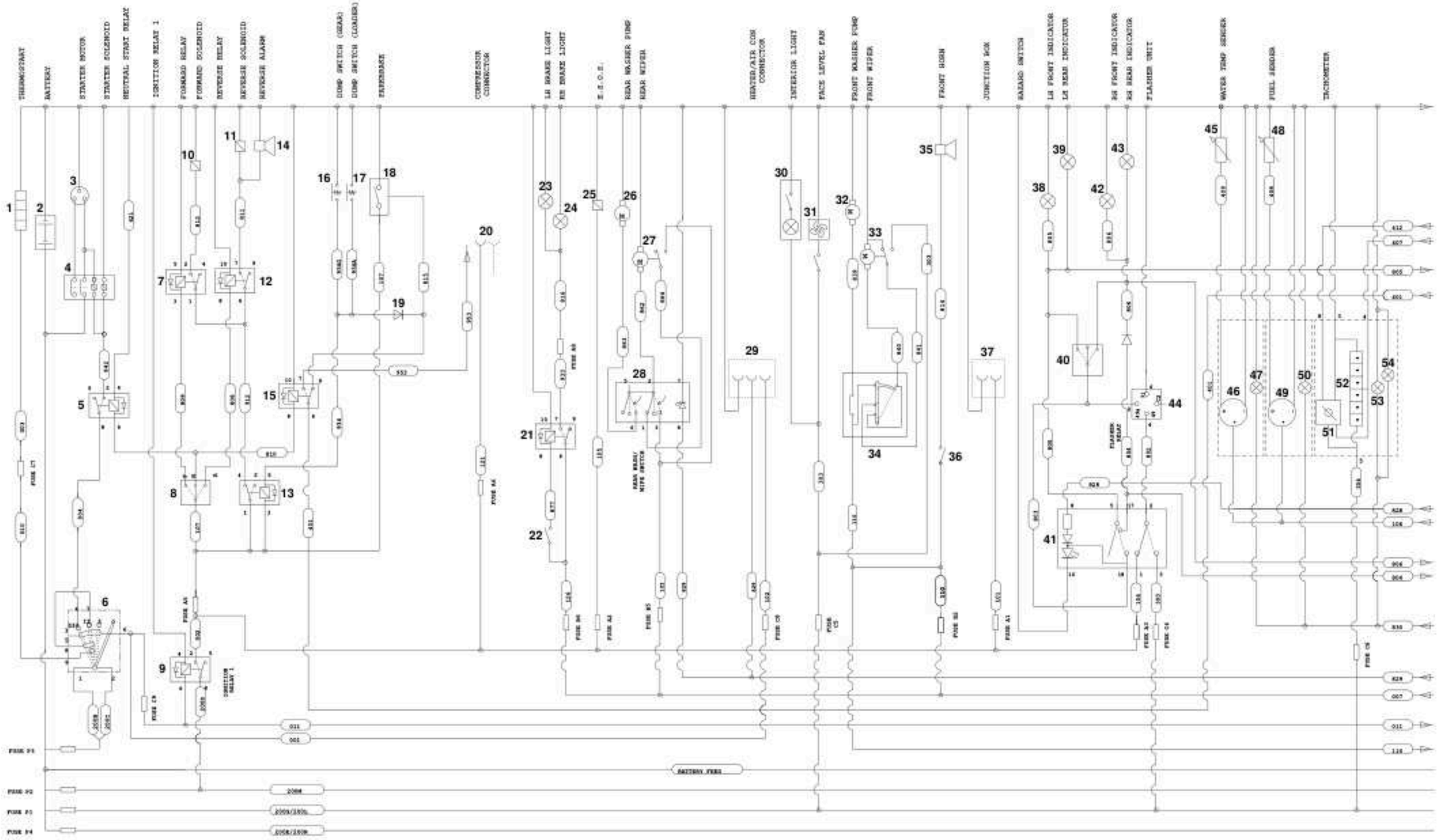
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