Service Manual

8025ZTS, 8026CTS, JS30, 8029CTS, 8030ZTS, 8035ZTS

Service Manual - 8025ZTS, 8026CTS, JS30, 8029CTS, 8030ZTS, 8035ZTS

Section 1 - General Information

Section 2 - Care and Safety

Section 3 - Maintenance

Section A - Attachments

Section B - Body and Framework

Section C - Electrics

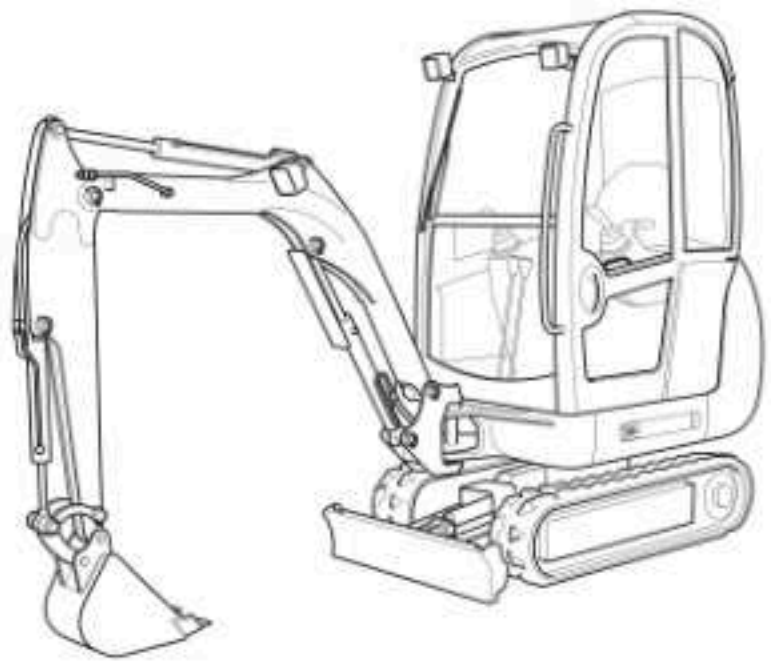
Section D - Controls

Section E - Hydraulics

Section F - Gearboxes

Section J - Track and Running Gear

Section K - Engine



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Contents Page No.

Introduction
About this Manual 3-1
Machine Model and Serial Number 3-1
Using the Service Manual 3-1
Section Numbering 3-1
Left Side, Right Side 3-2
Cross References 3-2

Identifying Your Machine
Identification Plates 3-3
Data Plate 3-3
Typical Product Identification Number (VIN) 3-3
Typical Product Identification Number (PIN) 3-3
Typical Engine Identification Number 3-3
ROPS, TOPS and FOGS 3-4

Standard Torque Settings
Zinc Plated Fasteners and Dacromet Fasteners 3-5
Introduction 3-5
Bolts and Screws 3-5
Hydraulic Connections 3-9
'O' Ring Face Seal System 3-9
'Torque Stop' Hose System 3-12

Service Tools
Numerical List 3-13
Tool Detail Reference 3-16
Section B - Frame and Bodywork 3-16
Section C - Electrics 3-20
Section E - Hydraulics 3-21
Section K - Engine 3-27

Service Consumables
Sealing and Retaining Compounds 3-29

Terms and Definitions
Colour Coding 3-31
Hydraulic Schematic Colour Codes 3-31

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Contents **Page No.**

Safety Notices
Important Information 2-1
The Operator Manual 2-1
Safety Warnings 2-1
Safety Check List 2-2
Safety - Yours and Others 2-2
General Safety 2-2
Operating Safety 2-4
Maintenance Safety 2-8
Safety Labels 2-12
Introduction 2-12
Safety Label Identification 2-13

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Contents **Page No.**

Routine Maintenance

Service Requirements 3-1
Introduction 3-1
Owner/Operator Support 3-1
Service/Maintenance Agreements 3-1
Fit for Purpose Tests for Lifting Equipment 3-1
Obtaining Replacement Parts 3-2
Health and Safety 3-3
Lubricants 3-3
Battery 3-5
Service Schedules 3-7
Introduction 3-7
How to Use the Service Schedules 3-7
Calendar Equivalents 3-7
Pre Start Cold Checks, Service Points and Fluid Levels 3-8
Functional Test and Final Inspection 3-11
Fluids, Lubricants and Capacities 3-12
Coolant Mixtures 3-12
Fuels 3-14
Tools 3-17
Toolbox (if fitted) 3-17
Carrying Tools onto the Machine 3-17
Prepare the Machine for Maintenance 3-18
How to Make the Machine Safe (Excavator Lowered) 3-18
Cleaning the Machine 3-19
Introduction 3-19
Cleaning the Machine 3-20
Checking for Damage 3-21
Check the Machine Body and Structure 3-21
Check the Seat and Seat Belt 3-21
Check the Hydraulic Hoses and Fittings 3-21
Check the Electrical Circuits 3-21
Checking the ROPS/FOPS Structure 3-22
Checking the Ram Piston Rods 3-22
Greasing 3-23
Introduction 3-23
Pivot Pins 3-24
Slew Ring Bearings 3-25
Slew Ring Gear Teeth 3-26
Access Panels 3-27
Introduction 3-27
Engine Cover 3-27
Hydraulic Bay Cover 3-28
Electrical System 3-29
Battery 3-29
Fuses 3-33
Engine 3-35
Oil and Filter 3-35
Cooling System 3-37
Fan Belt 3-39
Air Filter 3-40
Fuel System 3-42
Introduction 3-42
Water Separator and Engine Fuel Filter 3-43
Bleeding the System 3-46

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Additives

The additives listed below are advertised as being suitable for bringing the lubricity levels of kerosene/low sulphur fuels up to those of diesel fuels. They must be used as specified by your fuel supplier who will understand the concentration level necessary.

Important: *The lubricity wear scar diameter must not be more than 460 microns, as tested on a high frequency reciprocating rig at 60°C (140°F). Refer to* ***ISO 12156-1.***

- Elf 2S 1750. Dosage 1000-1500 ppm (0.1 - 0.15%), specifically for Indian Superior Kerosene (SKO) but may be applicable to other fuels.
- Lubrizol 539N. Dosage (on Swedish low sulphur fuel) 250 ppm.
- Paradyne 7505 (from Infineum). Dosage 500 ppm (0.05%).

Note: *These products are given as examples only. The information is derived from the manufacturers data. The products are not recommended or endorsed by JCB.*

Service Requirements for use of B5 Biodiesel

- The engine oil must be a grade CH4 as minimum specification.
- Do not leave unused B5 biodiesel in the fuel tank for extended periods (top up each day).
- Make sure that 1 in 5 fuel tank fills use standard diesel to EN590 specification, this will help to prevent 'gumming'.
- Make sure regular oil sampling is completed (look for excessive unburnt fuel content, water or wear particles.
- Change the engine oil and filter more frequently (as a minimum half the recommended intervals), or as indicated by oil sampling.
- Change the fuel filters more frequently (as a minimum half the recommended intervals), or if there are engine performance related issues.
- Make sure the fuel is stored correctly, care must be taken to make sure no water enters the machine fuel tank (or the storage tank). Water will encourage mico-bacterial growth.
- Make sure that the fuel pre-filter is drained daily.
- Only Tier 3 engines (factory filled with CH4 oil) - this is not approved with other manufacturers.
- Use heater kits in low ambient temperature territories.
- The biodiesel must meet the following standards: ASTM D6751, DIN 51606, ISO 14214

Note: *If necessary use a test kit to confirm the fuel specification. Testing kits are available (not from JCB currently), use the internet as a source for the kits.*

Note: *If performance related issues are to be reported to JCB Service, and the engine has been run on biodiesel, then the fuel system must be filled with standard diesel (at least 2 x tank fills) to EN590 specification and relevant stall speeds recorded prior to making the report.*

Warranty

JCB have shown a commitment to support the environment by approving the use of biodiesel blended fuels.

Using a B5 blend of biodiesel requires caution and additional servicing of the engine is required. ⇨ *Service Requirements for use of B5 Biodiesel (3-15).*

Failure to follow the additional recommended service requirements may lead to a warranty claim being declined.

Failures resulting by the incorrect use of biodiesels or other fuel additives are not defects of the engine workmanship and therefore will not be supported by JCB Warranty.

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Mainframe Harness (8025ZTS, 8030ZTS, 8035ZTS)

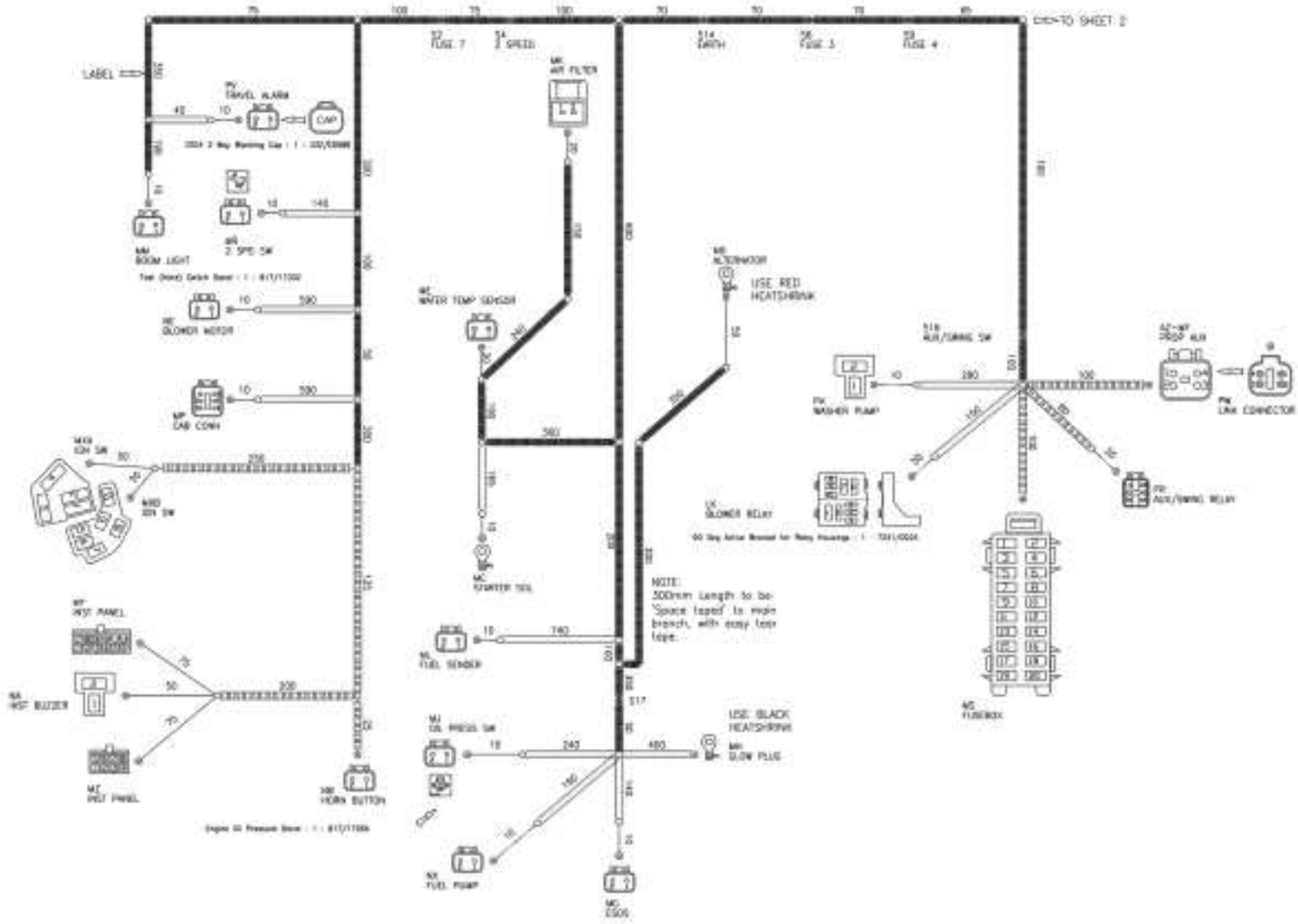


Fig 17. 333/T3910 issue 3 (sheet 1 of 4)

Sheet 2 of 4: ⇨ *Fig 18. (🗋 C-57)*	Sheet 3 of 4: ⇨ *Fig 19. (🗋 C-58)*	Sheet 4 of 4: ⇨ *Fig 20. (🗋 C-59)*

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Slew Motor and Gearbox

Fault	Possible Cause	Action
Motor does not turn	Relief valve pressure too low or faulty	Renew the relief valve
	Motor has too much internal leakage	Renew the motor assembly
	Motor has burned inner parts	Renew the motor assembly
	Reduction gears damaged	Renew the gears
	Overload	Remove the overload
Insufficient torque	Relief valve pressure too low or faulty	Renew the relief valve
	Motor has too much internal leakage	Renew the motor assembly
	Motor has burned inner parts	Renew the motor assembly
	Reduction gears damaged	Renew the gears
	Bearings damaged	Renew the bearings
Abnormal noise	Cavitation noise due to insufficient flow	Check oil level and pipework
	Motor has damaged sliding parts	Renew the motor assembly
	Reduction gears damaged	Renew the gears
	Bearings damaged	Renew the bearings
	Pinion gear damaged	Renew pinion
Oil leakage at housing joint face	Damaged 'O' rings	Renew 'O' rings
	Loose bolts	Retighten
Oil leakage at pinion gear	Damaged oil seal	Renew oil seal
Delay in starting	Relief valve pressure too low or faulty	Renew the relief valve
	Check valve internal leakage	Renew check valve
Excessive heat generation	Motor has burned or damaged sliding parts	Renew the motor assembly
	Reduction gears damaged	Renew the gears
	Bearings damaged	Renew the bearings

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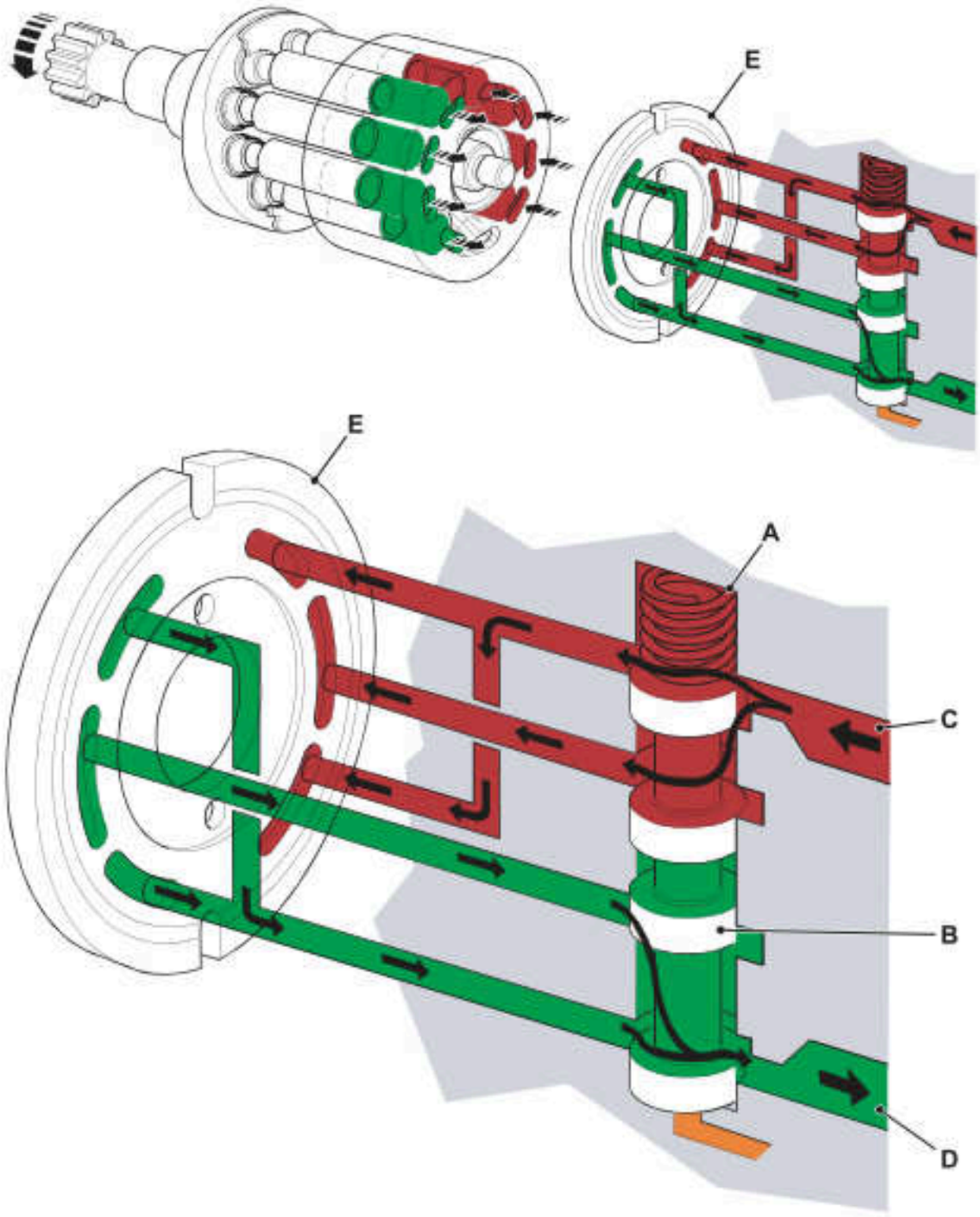


Fig 3.

⇨ *Motor Low Speed, High Traction Selected (E-63).*

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Dismantling and Assembly

All Rams

⚠ WARNING

If air or hydraulic pressure is used to force out the piston assembly, ensure that the end cap is securely fitted. Severe injury can be caused by a suddenly released piston rod.

HYD-1-2

Dismantling

The numerical sequence shown on the illustrations are intended as a guide to dismantling only.

For assembly the sequence should be reversed.

⇨ *Bucket Ram 8025ZTS, 8026CTS, JS30, 8029CTS (E-110)*

⇨ *Bucket Ram 8030ZTS, 8035ZTS (E-111)*

⇨ *Dozer Ram 8025ZTS, 8026CTS, JS30, 8029CTS, 8030ZTS, 8035ZTS (E-112)*

⇨ *Swing Ram 8025ZTS, 8026CTS, JS30, 8029CTS, 8030ZTS, 8035ZTS, (E-113)*

⇨ *Boom Ram 8025ZTS, 8026CTS, JS30, 8029CTS, 8030ZTS (E-114)*

⇨ *Boom Ram 8035ZTS (E-115)*

⇨ *Dipper Ram 8025ZTS, 8026CTS, JS30, 8029CTS, 8030ZTS (E-116)*

⇨ *Dipper Ram 8035ZTS (E-117)*

1 Support ram assembly as shown.



Fig 4.

2 Slacken end cap **1** using Hook spanner and remove the piston rod assembly **2** from the cylinder.

3 Position piston rod assembly on bench in place of ram cylinder. Remove seals **3** and wear rings from piston head.

4 Undo nut/locking pin and remove / unscrew piston head from rod.

5 Remove end cap **1** from piston rod and remove the remaining `O' rings and seals. Check the end cap bush for damage, scores or nicks. If damaged, the bush must be replaced as part of the end cap assembly.

6 Ensure that metal components are free from scoring, nicks and burrs. A damaged rod will impair the life of the seals.

7 Check the bore of the ram cylinder for damage.

8 Discard all seals and `O' rings.

Inspection

Piston Rod Warp

1 Support the piston rod on a pair of 'V' blocks.

2 Set a dial test indicator (D.T.I.) at the approximate centre of the rod. Set the D.T.I. to zero.

3 Rotate the piston rod in its blocks, noting any variation in D.T.I. reading.

4 If warp (half the difference between maximum and minimum readings) exceeds 0.5 mm (0.02 in) the piston rod must be replaced.

Pivot Bush Clearances

1 Using an internal micrometer measure the internal diameter (I.D.) of the pivot pin bushes in the piston rod and cylinder ends.

2 Compare the readings with the permitted tolerances shown. Remove and replace pin bushes as necessary.

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