580N
580SN WT
580SN
590SN
Tier 3

Tractor Loader Backhoe

SERVICE MANUAL

Part number 47860801

English

March 2015

CASE CONSTRUCTION

MidWestTech | Case 580N, 580SN WT, 580SN, 590SN Tier 3 Tractor Loader Backhoe Service Manual | Publication 47860801

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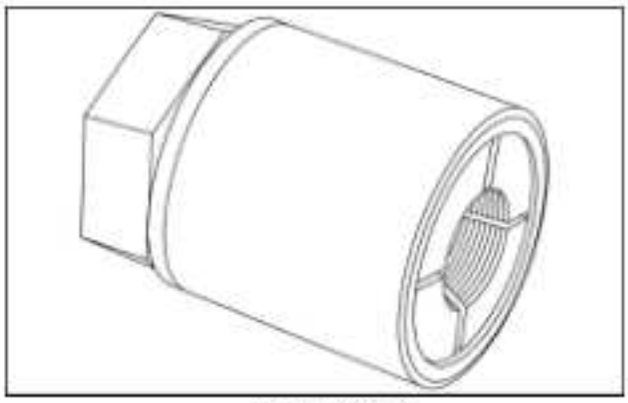
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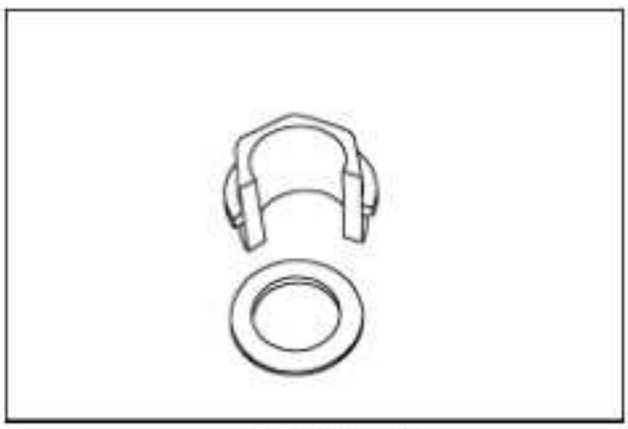
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CAS1968 Stud remover/installer - used to remove shoulder studs from wheel hubs



RCPH10TLE060AAL 8

Fabricate from locking differential cylinder, used to compress differential lock spring to remove "C" clip



RCPH10TLE058AAL 9

Powered rear axle - General specification - 580SN-WT and 590SN only

580SN WT Four-Wheel Drive (4WD) TIER 3
590SN Four-Wheel Drive (4WD) TIER 3
590SN Two-Wheel Drive (2WD) TIER 3

Gear lubricant	Wet brake/transmission lubricant - SAE 80W140 MAT 3510
Capacity	**18.6 l (19.7 US qt)**

Special torques	
Allen head bolts for hub housing	**226 N·m (166.7 lb ft)**
Bolts for ring gear	**155 N·m (114.3 lb ft)**
Bolts for differential support long bolts	**80 N·m (59.0 lb ft)**
Bolts for differential support short bolts	**169 N·m (124.6 lb ft)**
Drain hole plugs at wheel hub	**60 N·m (44.3 lb ft)**
Fill and drain hole plugs at differential	**80 N·m (59.0 lb ft)**
Ring nut for wheel hub	**1000 N·m (737.6 lb ft)**
Differential adjusting ring lock screws	**10 N·m (88.5 lb in)**
Brake self adjuster shouldered bolt	**16 N·m (141.6 lb in)**
Brake bleeder	**8 - 12 N·m (70.8 - 106.2 lb in)**
Differential pin plug	**25 N·m (18.4 lb ft)**
Differential lock plug	**180 N·m (132.8 lb ft)**
Wheel studs	**70 N·m (51.6 lb ft)**

Pinion rotating torque (without seal)	**2 - 2.4 N·m (17.7 - 21.2 lb in)**
Differential bearing preload rotating torque (without seal)	**2.6 - 3.3 N·m (23.0 - 29.2 lb in)**
Backlash for ring gear	**0.2 - 0.29 mm (0.008 - 0.011 in)**

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Wiring harnesses - Electrical schematic sheet 01 Power Distribution/ Charging System (55.100.DP-C.20.E.01)
Wiring harnesses - Electrical schematic sheet 02 Starting System (55.100.DP-C.20.E.02)
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9011-A/D fault foot throttle, internal error

Cause:

1. Instrument Cluster internal error

Solution:

1. Verify that the fault code is still active, refer to **0000 - Retrieving fault codes, Backhoes**.
   Prior to clearing fault codes write down all fault codes, number of occurrences, and engine hours at last occurrence.

   (1) Use the Electronic Service Tool to clear all fault codes.

   (2) To check for fault code: Start and operate machine.

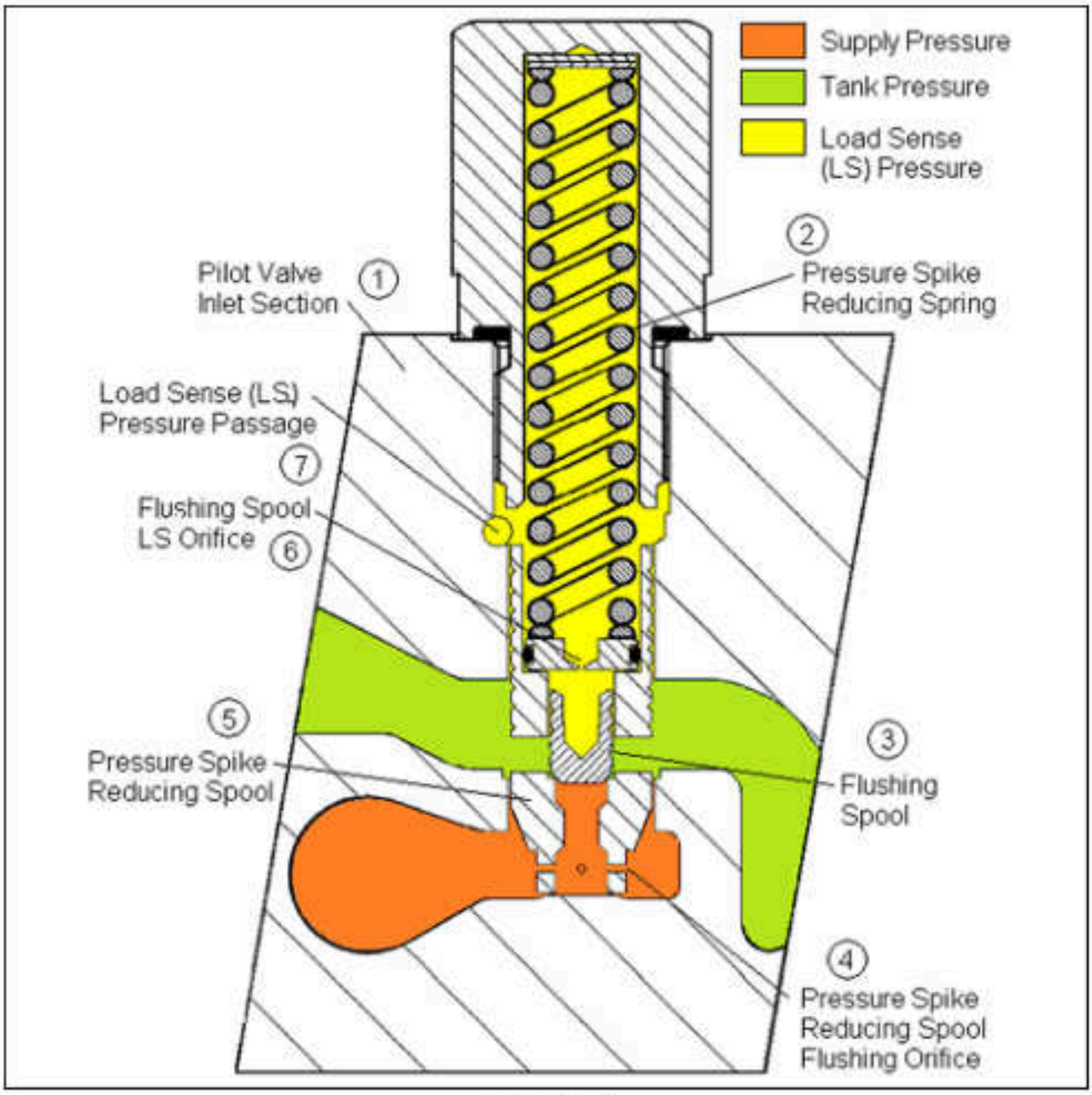
   A. OK – Fault is not recorded again. OK for return to service.

   B. NOT OK – Fault code 9011 is recorded again. Go to Step **2**.
2. Replace instrument cluster.

   A. Return to Step 1 to confirm elimination of fault. If fault is recorded again, contact Technical Services Group for assistance.

Wiring harnesses - Electrical schematic sheet 11 Instrument Cluster (55.100.DP-C.20.E.11)

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RAPH12TLB0121GA 9

Backhoe flushing valve cutaway

1. Pilot valve inlet section	5. Pressure spike reducing spool
2. Pressure spike reducing spring	6. Flushing spool load sense (LS) orifice
3. Flushing spool	7. Load sense (LS) pressure passage
4. Pressure spike reducing flushing orifice	

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speed Remove the sensor. The sensor is submerged in oil, care should be taken when removing the sensor so minimal fluid is lost. Inspect the sensor for damage Remove all metal shaving from the sensor.

A. The sensor is free of damage. Reinstall the speed sensor. Go to step **4**.

B. The sensor is damaged. Replace the sensor. Return to step **1** to confirm elimination of fault.

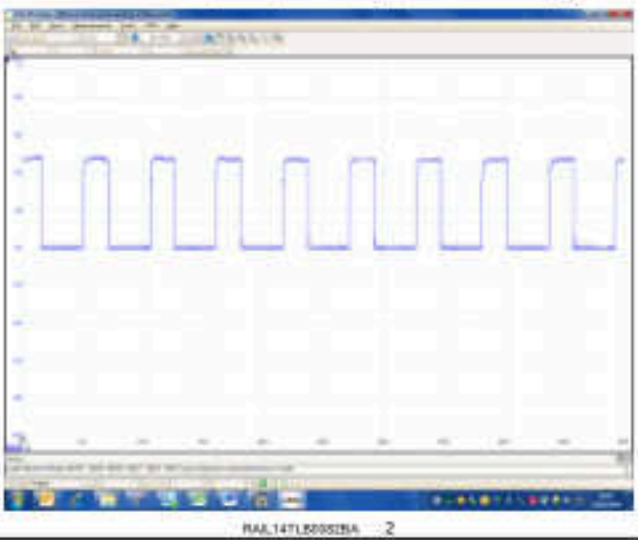
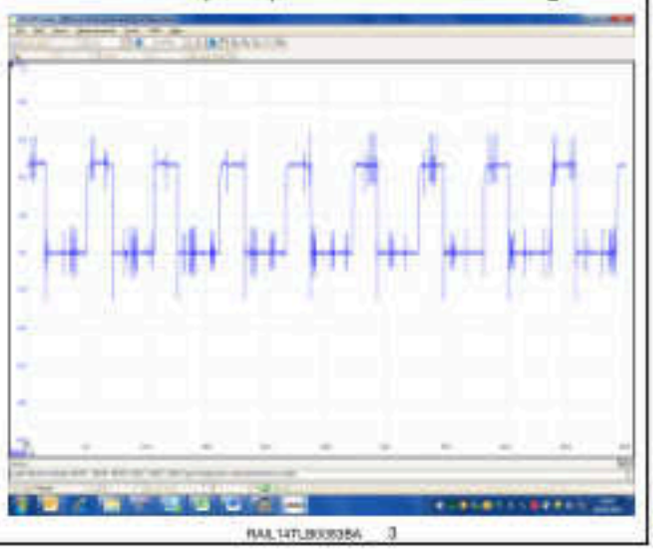
4. Measure the sensor signal.

Turn the ignition switch OFF.

Reinstall the sensor. Disconnect the sensor from the harness.

Start the engine.

Use the DATAR oscilloscope function to monitor the sensor signal.

DATAR oscilloscope capture of a good sensor signal.	DATAR oscilloscope capture of a bad sensor signal.
	

A. The data capture of sensor signal is good. Install the latest software in the VCM. Recturn to step **1** to confirm elimination of the fault.

B. The data capture of the sensor signal is bad. There is a problem in the wiring to the sensor. Repair as required. Return to step **1** to confirm elimination of the fault.

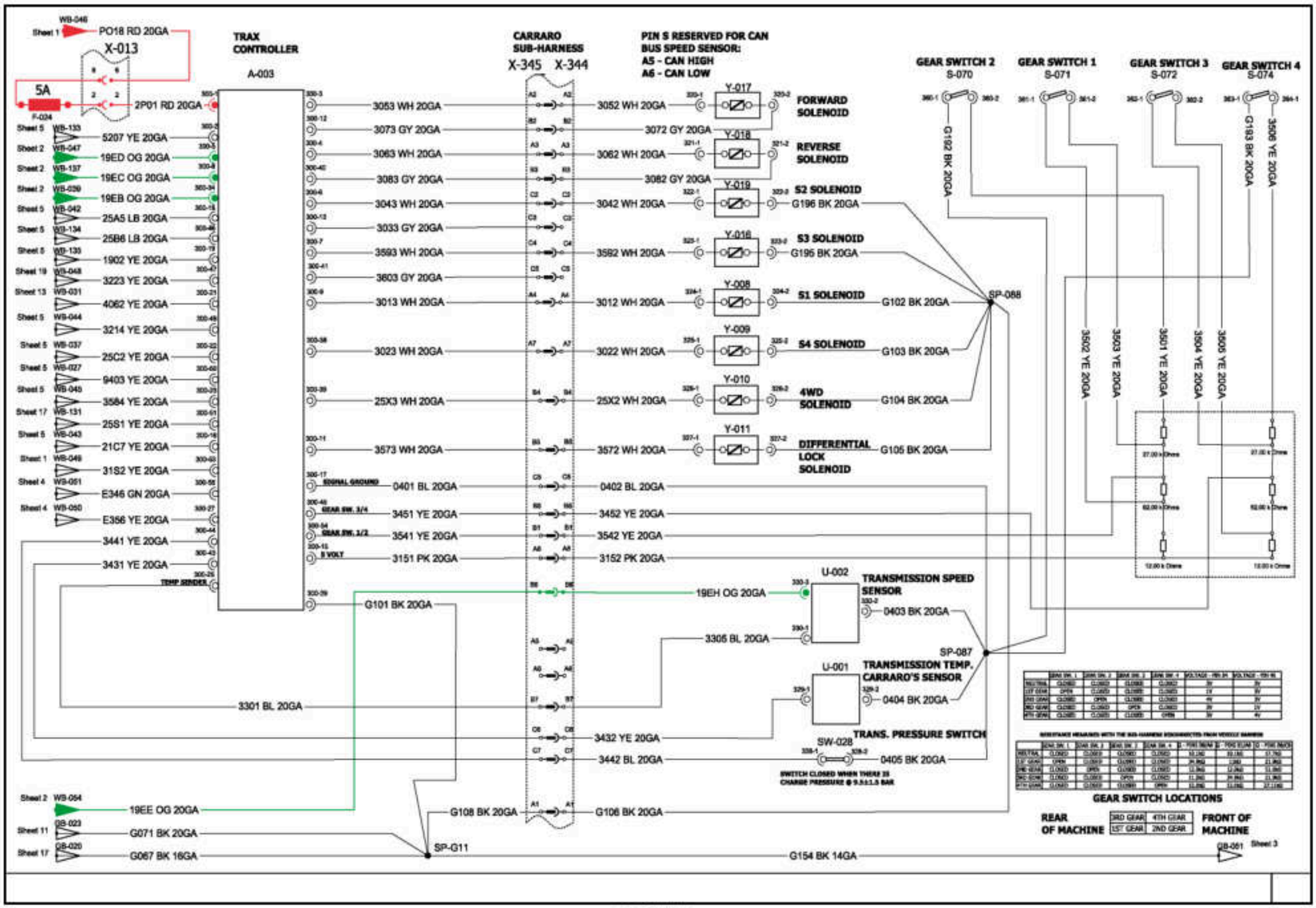
Power Shuttle

Wiring harnesses - Electrical schematic sheet 20 Comfort Steer/ Ride Control, Power Shuttle transmission with options (55.100.DP-C.20.E.20)

Powershift

Wiring harnesses - Electrical schematic sheet 20 Comfort Steer/ Ride Control, Powershift transmission with options (55.100.DP-C.20.E.20)

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