SERVICE MANUAL

E485C

Crawler Excavator

Part number 47483341A
English
January 2013

NEW HOLLAND CONSTRUCTION

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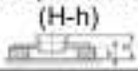
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Pump - Service instruction

Maintenance standard

Part name and inspection item	Standard dimension	Recommended value for replacement	Remedy
Clearance between piston and cylinder bore (D-d) 	**0.0375 mm (0.00147 in)**	**0.078 mm (0.00307 in)**	Replace piston or cylinder
Gap between piston and caulked part of shoe (d) 	**0 - 0.1 mm (0.000 - 0.004 in)**	**0.35 mm (0.0138 in)**	Replace piston shoe assy
Thickness of shoe (t) 	**5.4 mm (0.213 in)**	**5.0 mm (0.197 in)**	Replace piston shoe assy
Free height of cylinder spring (L) 	**40.8 mm (1.606 in)**	**40.0 mm (1.575 in)**	Replace cylinder spring
Combined height of retainer plate and spherical bushing (H-h) 	**24.5 mm (0.965 in)**	**23.5 mm (0.925 in)**	Replace a set of spherical bushing or retainer plate
Cylinder over pin diameter (spline in cylinder) Spline in spherical bushing	**37.49 mm (1.476 in)**	**37.89 mm (1.4917 in)**	Replace cylinder, spherical bushing

Repair standards for cylinder, valve plate and swash plate (shoe plate face)

Valve plate (sliding section) Swash plate (shoe plate face)	Surface roughness requiring correction	3-Z
Cylinder (sliding section) Roughness of each surface	Standard surface roughness (correction value)	Less than 0.4 Z (lapping)

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Electrical system - Electrical schematic frame 04

Reading key (No. 4)

Item	Description	Code
134	Fuse box	E–1
135	Engine emergency stop relay	R–25
136	Auto-Idle stop relay 1	R–23
137	Auto-Idle stop relay 2	R–24
138	Diode	D–9
139	Diode	D–12
140	Diode	D–14
141	Diode	D–13
142	Alternator relay	R–28
143	Safety relay	R–4
144	Lever lock relay	R–26
145	Horn relay	R–5
146	Reserve relay	RLY–26
147	Reserve relay	RLY–27
148	Reserve relay	RLY–16
149	Reserve relay	RLY–17
150	Diode	D–10
151	Diode	D–16
152	Diode	D–17
153	Diode	D–5
154	Diode	D–6

Electrical system diagram (No. 4)

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R184-Failure of lever lock relay.

Cause:

Symptom: Safety lock lever timer does not actuate.
Condition: The Mechatro controller output to the Lever lock relay is short-circuited with the power source.

1. Failure of the Lever lock relay **R-26** .
2. Faulty wiring or bad connection between **R-26** and the Mechatro controller.
3. Faulty Fuse and relay box.
4. Faulty Mechatro controller.

Solution:

1. Verify the fault code is still active on the Gauge Cluster Display. Refer to the Trouble History section in the Service Diagnosis screen if the fault is not currently active. To access the Service Diagnosis screen hold down the buzzer stop switch and turn the key switch ON. Hold down the menu switch and press the buzzer stop switch 3 times to access the Service Menu. Use the UP and DOWN keys to highlight Trouble History and press the NEXT key.

   A. If the fault code is still actively displayed, turn the key switch OFF and back ON. If the fault code is still active go to step **2**.

   B. If the fault code is not displayed return the unit to service.
2. Check the Lever lock relay **R-26**.

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Dipper cylinder - Disassemble

The disassembly procedure below starts on the premise that the hydraulic lines and the line securing bands have been removed.

NOTE: *Arm cylinder mass:* ***584 kg (1287.50 lb)***

1. Lift and securely place the cylinder on a workbench using a crane. Be sure that the cylinder is placed horizontally. Drain hydraulic oil from the cylinder.
2. Fully extend cylinder rod **(11)**. Secure the rod end using a crane. Remove socket bolts **(8)** from cylinder head **(7)**.

   ⌐ : **14 mm**

ATTENTION: *Be sure to pull cylinder rod* ***(11)*** *straight so as not to damage the sliding surfaces.*

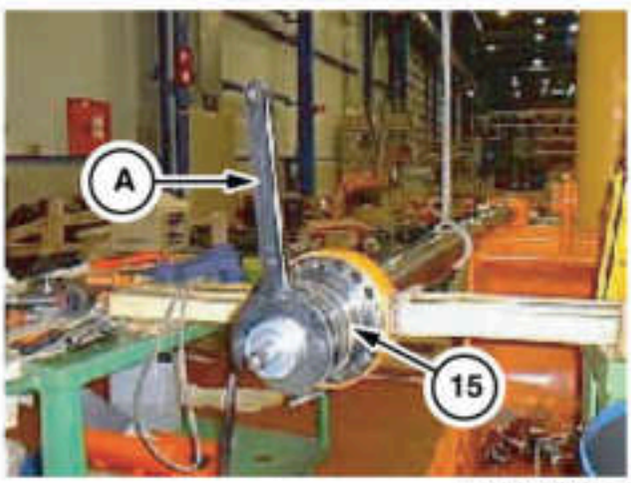
3. Pull out cylinder head **(7)** from cylinder tube **(12)** by tapping with a plastic hammer.
4. Remove set screw **(21)** and loosen nut **(20)**.

   ⌐ : **14 mm**



TURH12ECX2035AB 1

5. Loosen the piston **(15)** using the tool **(A)** then, remove the piston from cylinder rod.



TURH12ECX2036AB 2

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7. Disconnect hoses **(7)** and **(8)** of bucket cylinder and arm cylinder.

NOTE: *If the machine is equipped with the hammer/crusher, bucket rotation or anti-drop valves variants, disconnect the relevant hoses **(9)**, **(10)** and **(11)**.*

Bucket **(7)** and arm **(8)** cylinder hoses:

: **41 mm**

: **10 mm**

Hammer/crusher hoses **(9)**:

: **12 mm**

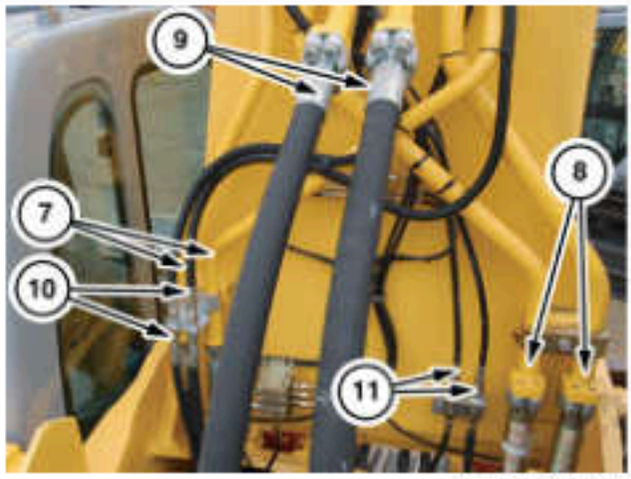
Bucket rotation hoses **(10)**:

: **36 mm**

Anti-drop valves hoses **(11)**:

: **22 mm**

Close all openings with plugs to keep clean.

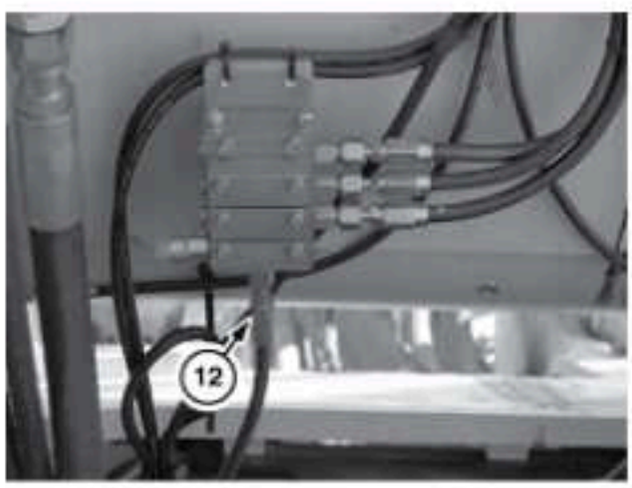


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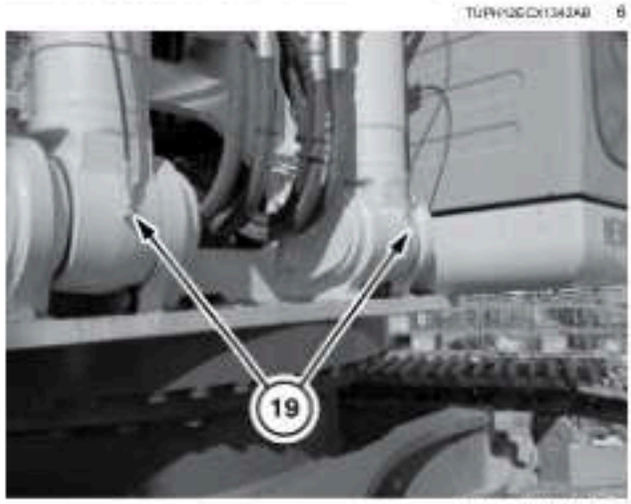
8. Disconnect lubrication pipes **(12)** from main distributor and lubrication pipe **(19)** from boom cylinder stem side.

: **12 mm**

: **19 mm**

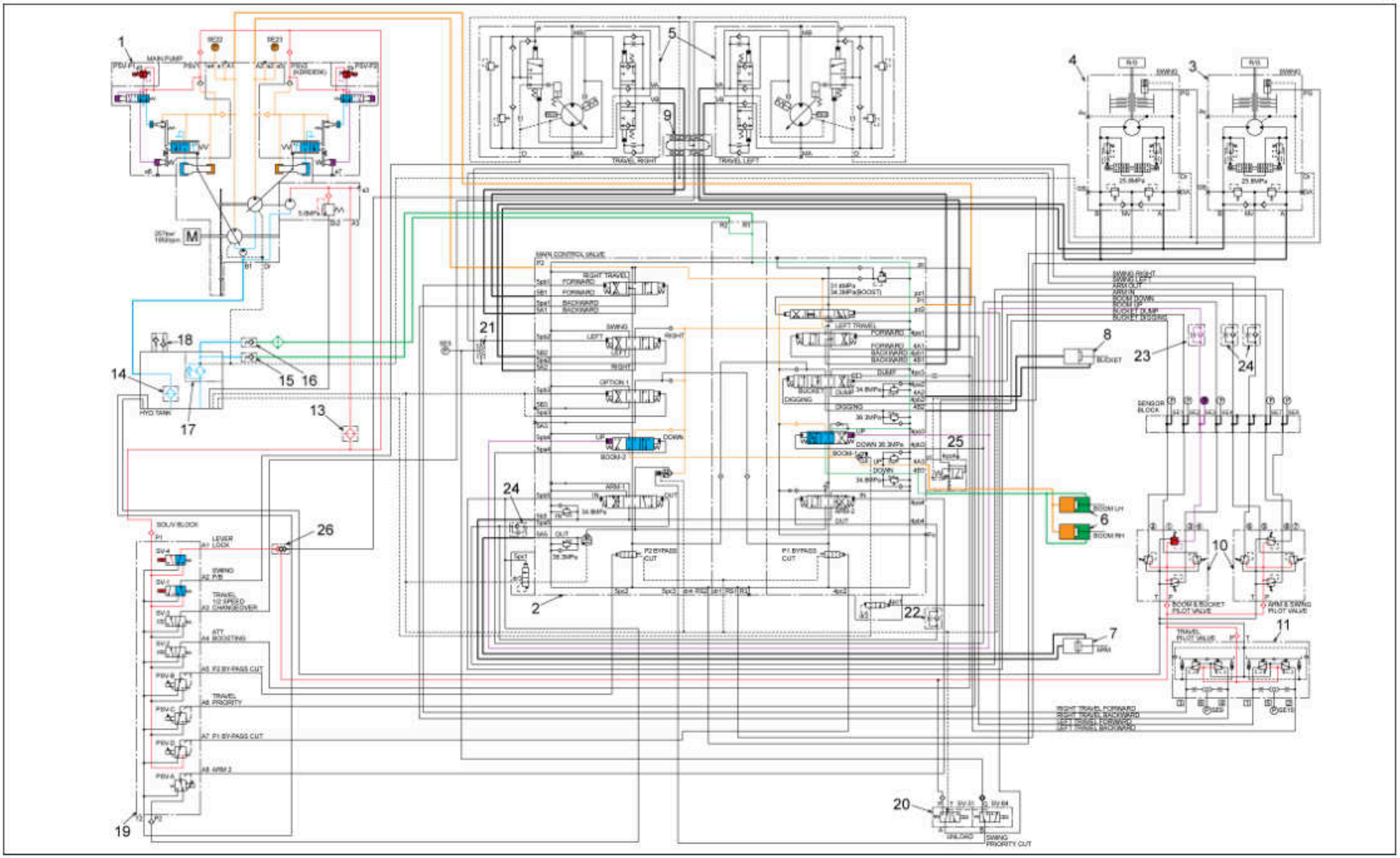


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TURH12ECX1344AB 7

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