CATERPILLAR®

Service Repair Manual

Models

314E LCR Excavator

✓ Product: EXCAVATOR

Model: 314E LCR EXCAVATOR ZJT

Configuration: 314E LCR Excavator ZJT00001-UP (MACHINE) POWERED BY C4.4 Engine

Disassembly and Assembly 314E Excavator Machine Systems

Media Number -KENR9852-02

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i05200463

Final Drive and Travel Motor - Assemble

SMCS - 4050-016; 4351-016

Specification

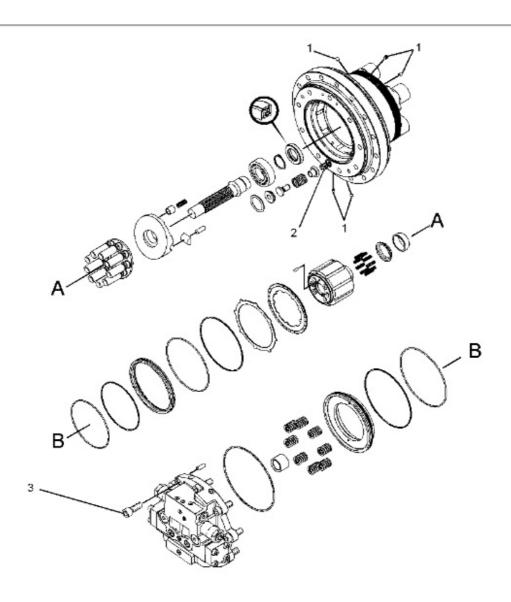


Illustration 1 g02791698

Table 1

Specifications for 357-1821 Piston Motor Gp							
Item	Qty	Part	Specification Description				
Lightly	Lightly lubricate the sliding surfaces with clean hydraulic oil.						
1	7	094-1882 Plug	Apply, Loctite high flex GM to the threads. Torque to $13 \pm 2 \text{ N} \cdot \text{m}$ (115 ± 18 lb in).				
2	1	7Y-4224 Orifice	Torque to $13 \pm 2 \text{ N} \cdot \text{m} (115 \pm 18 \text{ lb in}).$				
3	9	8T-4944 Bolt	Torque to $294 \pm 20 \text{ N} \cdot \text{m}$ ($217 \pm 15 \text{ lb ft}$). If bolts cannot be assembled, loosen the relief valve group and then tighten the relief valve group to $177 \pm 18 \text{ N} \cdot \text{m}$ ($130 \pm 13 \text{ lb ft}$).				

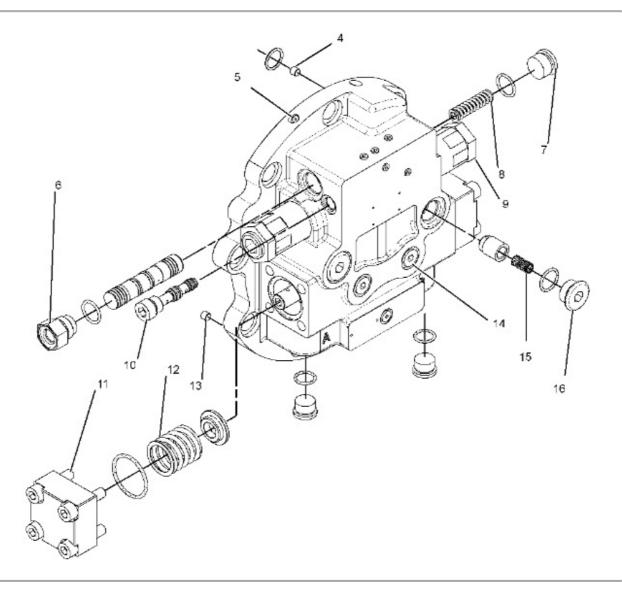


Illustration 2 g02791876

Table 2

Item	Qty	Part Specification Description			
4	2	7Y-4224 Orifice	Torque to $13 \pm 2 \text{ N} \cdot \text{m} (115 \pm 18 \text{ lb in})$		
5	1	094-1882 Plug	Torque to $13 \pm 2 \text{ N} \cdot \text{m} (115 \pm 18 \text{ lb in})$		
6	1	087-4786 Adapter	Torque to $78 \pm 8 \text{ N} \cdot \text{m} (58 \pm 6 \text{ lb ft})$		
7	1	9S-8006 O-Ring Plug Torque to $78 \pm 8 \text{ N} \cdot \text{m} (58 \pm 6 \text{ lb ft})$			
8	1	165-5850 Spring Free length is 50.7 mm (2.00 inch)			
9	2	304-3961 Relief Valve Gp Torque to 177 ± 18 N·m (130 ± 13 lb ft)			
10	1	4T-1860 Shuttle Valve Gp Torque to 32 ± 3 N·m (283 ± 27 lb in)			
11	8	8T-9515 Bolt Torque to $60 \pm 5 \text{ N} \cdot \text{m} (44 \pm 4 \text{ lb ft})$			
12	2	Length under test force is 37 mm (1.5 inch). Test force is 214.7 ± 21.5 N (48.3 ± 4.8 lb) Free length after test is 49.1 mm (1.93 inch)			
13	1	087-5631 Orifice Torque to $13 \pm 2 \text{ N} \cdot \text{m} (115 \pm 18 \text{ lb in})$			
14	3	9S-8004 O-Ring Plug	Torque to $31 \pm 3 \text{ N} \cdot \text{m} (274 \pm 27 \text{ lb in})$		
15	2	119-5362 Spring	Length under test force is 19 mm (0.74803 inch). Test force is 2.50 ± 0.29 N (0.56 ± 0.07 lb) Free length after test is 20 mm (0.8 inch)		
16	2	119-5364 Plug Torque to $78 \pm 8 \text{ N} \cdot \text{m} (58 \pm 6 \text{ lb ft})$			

Assembly Procedure

Table 3

Required Tools						
Tool	Part Number	Part Description	Qty			
A	138-7573	Link Bracket	3			
В	1P-2420	Transmission Repair Stand	1			
Е	1P-0510	Driver Gp	1			
F	8H-0663	Bearing Puller Gp	1			
G	1P-1863	Retaining Ring Pliers	1			
Н	9U-7346	Spanner Wrench As	1			
K	1U-7558	Mounting Adapter Gp ⁽¹⁾	1			
L	-	Loctite 271	-			
M	-	Loctite High Flex GM	-			
N	169-0503	Installation Kit	1			

P	1U-6434	Duo-Cone Seal Installer As	1
Q	4C-3761	C-Clamp	2
R	FT-2766	Rolling Torque Bar	1
S	-	Loctite 272	-

⁽¹⁾ The bent plates for the mounting adapter may be modified so that the mounting adapter can be assembled to the housing.

Assembly Procedure for the Travel Motor

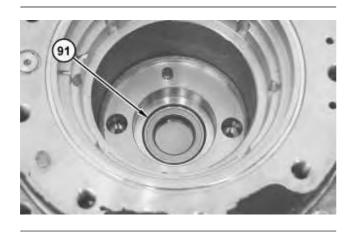


Illustration 3 g01407166

1. Use Tooling (E) to install lip seal (91) into the body assembly.

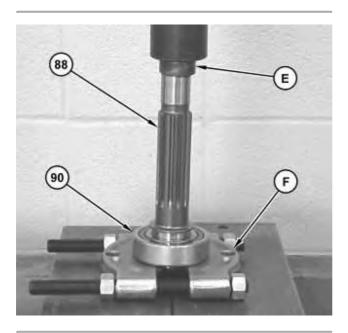


Illustration 4 g01407561

2. Use Tooling (E), Tooling (F), and a suitable press to install bearing assembly (90) onto shaft assembly (88).

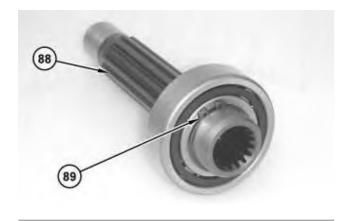


Illustration 5 g01407144

3. Use Tooling (G) to install retaining ring (89) on shaft assembly (88).

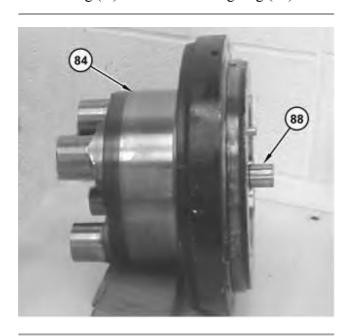


Illustration 6 g01407580

4. Use a suitable soft faced hammer to install shaft assembly (88) into body assembly (84).

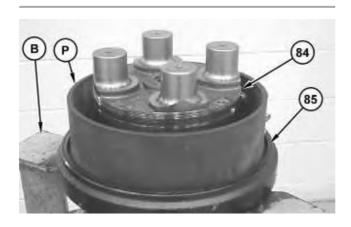


Illustration 7 g01407608

- 5. Use two persons to position body assembly (84) and the shaft assembly onto Tooling (B). The total weight of body assembly (84) is approximately 42 kg (93 lb).
- 6. Use Tooling (N) to clean Duo-cone seal (85) before installation. Use Tooling (P) to install Duo-cone seal (85) onto body assembly (84). Refer to Disassembly and Assembly, "Duo-Cone Conventional Seals Install".



Illustration 8 g01407089

7. Lower the temperature of both bearing cups (87) in order to install both bearing cups (87) into housing (83).

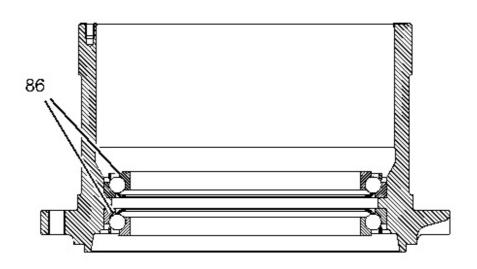


Illustration 9 g01407681

8. Use a suitable brass punch in order to install both bearings (86) in the housing assembly.

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