TOYOTA
INDUSTRIAL EQUIPMENT

Service Manual

7BPUE15

Serial Numbers
80,001 and up

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Table 3-2. Mast Specifications

Model	OACH[a]		Elevated Height[b] (Maximum)		Extended Height[c] (Maximum)		Full Free Lift		Truck Weight w/o Battery	
	IN	MM	IN	MM	IN	MM	IN	MM	LBS	KG
7BPUE15	88.5	2248	123	3124	208	5283			4650	2109
(2-Stage)	95	2413	137	3480	222	5639			4680	2123
	107	2718	161	4089	246	6248			4730	2146
	127	3226	201	5105	286	7264			4814	2186
	147	3734	241	6121	326	8280			4898	2224
7BPUE15	88.5	2248	183	4648	268	6807	3	76	5270	2390
(3-Stage)	95	2413	204	5182	289	7341	10	254	5300	2404
	107	2718	240	6096	325	8255	22	559	5350	2427

a. Overall Collapsed Height (OACH).Tolerances = ±.5 in. [±13 mm)
b. Tolerances = +.5 in. [±13 mm)
c. Tolerances = +2.5/-.5 in. [+67/-13 mm)

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Symptom Tables: Travel Functions

Slow or Sluggish Acceleration

Possible Cause	Action
Dragging brake	Adjust brake.
Worn wheel bearings	Replace wheel bearings.
Debris in wheel axle.	Remove debris.
Binding drive unit	Remove motor and check movement.
Bad drive motor (may test OK with no load, but fail under load).	Test for shorts to frame.
Low battery voltage.	Measure battery voltage during acceleration. If low, check cutout adjustment: 1. Allow battery to set unused for two hours. Check SG and compare to battery manufacturer's recommendations. 2. Adjust cutout in CONFIG until proper discharge is obtained.

Slow Travel; Lift/Lower OK; No Fault Codes

Possible Cause	Action
Incorrect configuration of speed in TPA	Check settings with a PMT
Dragging brake	Adjust brake
Worn wheel bearings	Replace wheel bearings
Debris in wheel axle	Remove debris
Binding drive unit	Remove motor and check movement
Bad drive motor (may test OK with no load, but fail under load)	Test for shorts to frame
Voltage from throttle pot to CM is not at the learned values	Test pot voltages. Run LEARN

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a. 3 lockwashers (P/N 00590-02851-71)
b. 3 washers (P/N 00590-03092-71)
c. 3 screws (P/N 00590-46033-71)

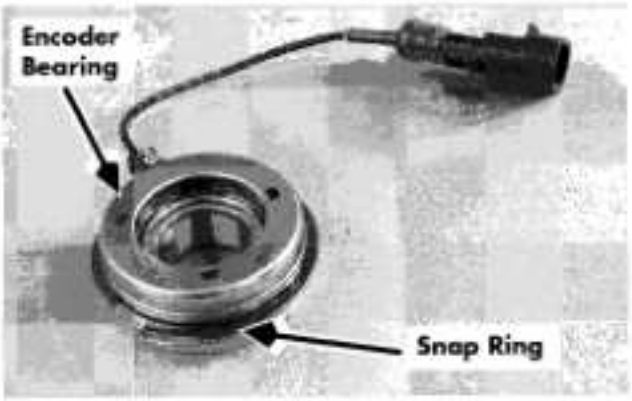


Figure 8-10. Encoder Bearing as Shipped in Kit

5. Install the bearing housing (P/N 00590-46054-71) on the mounting plate with four screws (P/N 00590-03113-71). See Figure 8-9.
6. Remove the snap ring from the encoder bearing (P/N 00590-46055-71). See Figure 8-10.

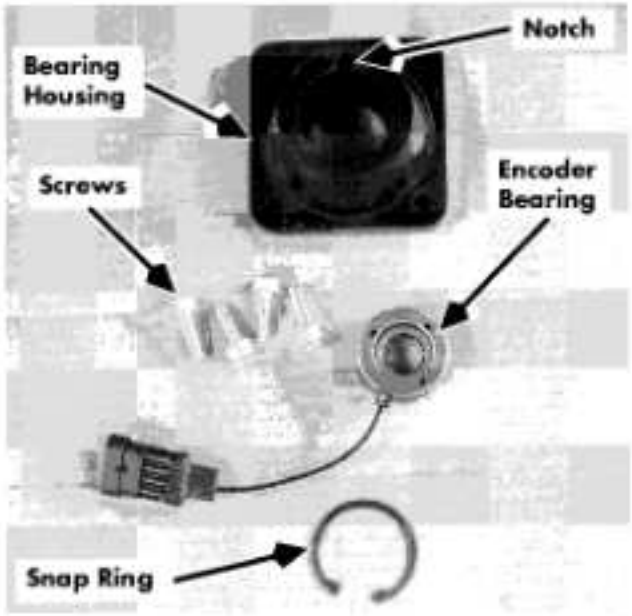


Figure 8-11. Kit Components for Steps 7-9

7. Install the bearing into the housing oriented so the harness is on the top end. Feed the harness through the notch in the housing. See Figure 8-11.
8. Install the snap ring (P/N 00590-46047-71) on top of the bearing in the housing. See Figure 8-11.
9. Use gasket flange sealant (Loctite Ultra Black 598) and fill the notch in the housing. See Figure 8-11.
10. Connect PH6 of cable assembly (P/N 00590-45863-71) to the encoder harness connector JH6, then route the harness wires along the drive motor cables. Use cable ties as necessary, but do not overtighten.
11. Route the wires through the clamps on the top deck then back over and down the wiring channel to PS1 on the steer controller card. Use cable ties as necessary.

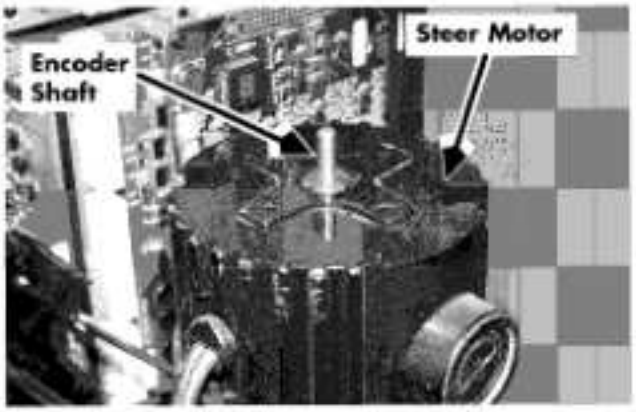


Figure 8-12. Top of Steer Motor

Steer Encoder

Removal

1. Turn the drive unit counter clockwise to the steering mechanical stops.
2. Remove the two mounting screws securing the encoder cover to the top of the steer motor.
3. Thread a 10-32 machine screw (1.5 in. long) into the tapped hole in the top of the encoder. Tighten the screw against the encoder shaft and continue to tighten until the encoder is lifted from the shaft.

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