Daifuku America Corporation
30100 Cabot Drive
Novi, Michigan 48377

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Subject: General Installation of *Unibilt* 750 Lb. Drive Conversion/Upgrade Kit

Unibilt 750 lb. conversion kits require special instructions & potential modification based on the conversion type. This bulletin covers the typical conversion types: converting a standard 600 lb. drive or new 300 lb. gearmotor drive. Note: These kits do not address converting between overhead and inverted applications.

***Unibilt* 600 Lb. Drive** **or**

New *Unibilt* 300 Lb. Drive **→**

***Unibilt* 750 Lb. Drive**

Converting a *Unibilt* 600 Lb. Drive to a 750 Lb. Drive:

1. **REMOVE** from existing 600 lb drive: reducer, motor, motor base, sheaves, belt, belt-guard, old torque arm, old pillow blocks, old drive shaft with sprocket, & limit switch. **SAVE** bolt at torque arm base, but discard nut.
2. Use figure 1 on page 2 for modification to an existing 600 lb. frame along with the list of items on page 4 with an assembly figure (2, 3, &/or 4) on the following pages.
3. DRILL new holes in existing frame for new pillow blocks where shown (figure 1) if not there already.
4. OPTIONAL: drill holes for torque arm mounting bracket, item 19, where shown (figure 1) only if opposite hand assembly is desired and if holes are not there already. Fasten optional torque arm bracket, item 19, with fasteners, items 14, 15, & 20.
5. Slide new pillow blocks, item 7, on to new shaft, item 11, and loosely mount pillow blocks to frame with shims, item 10, underneath. Use fasteners, items 12, 13, 14, & 15, and tighten only after checking shaft for square alignment with caterpillar chain also checked for alignment during a few manual rotations.
6. Readjust take-up sprocket if needed and double check all around squareness of both sprockets.
7. **WELD** keys, item 9, to frame on both sides to permanently hold pillow blocks in place and prevent creep over time. Existing keys may require removal if interfering, but not likely.
8. Fasten bracket, item 3, with M8 screws & lock washers, items 4 & 5, to gearmotor as shown.
9. Attach torque arm, item 16, to bracket on gearmotor: remove one flat washer & nut (preassembled,) slide long internal bolt through hole on bracket, use wrench/socket to turn bolt-end (not head) until reading on torque arm label is 1100 lbs (or as directed otherwise,) add washer & nut back to lock against bracket. See figure 5 on page 3 based on sensor type.
10. Slide new spacer, item 2, on to shaft, item 11.
11. Slide gearmotor on to shaft and fasten special machined socket head screw to threaded hole on shaft-end.
12. Attach torque arm to frame (or torque arm bracket, item 19) with existing bolt and washers, extra new washers, item 18, and new (non-reusable) center lock nut, item 17. Torque arm must be free to rotate around bolt – do not over tighten.

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13. Add overload sensor with included fasteners. The proximity sensor must gently touch bracket, item 3. Do not over tighten. If a top-push limit switch is used, then it must be engaged (touching & clicked in – see figure 5 on page 3.) Use loctite on all nuts.

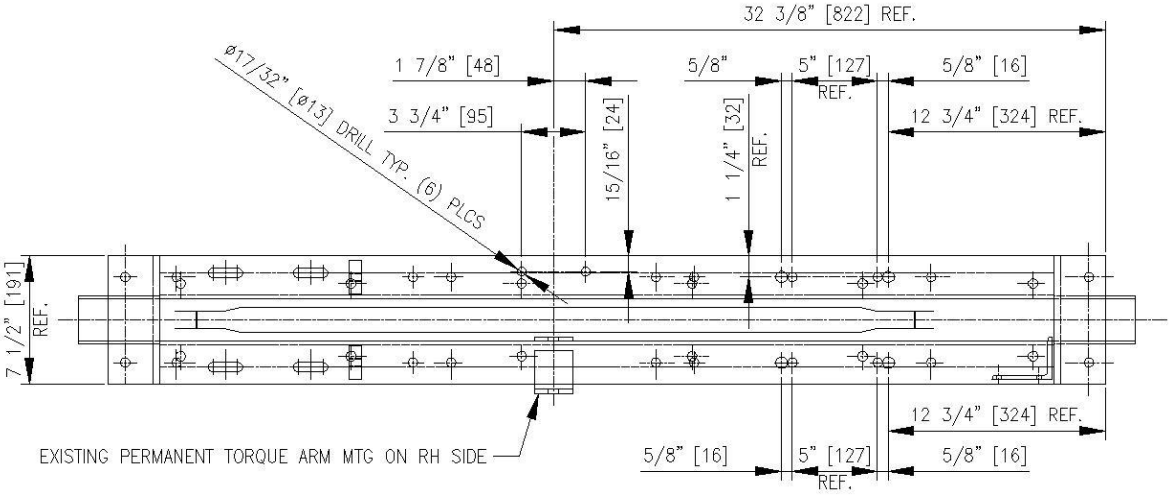

FIGURE 1: Modification to Existing Unibilt 600 Lb. Drive Frame (DAC P/N 20246 Ref.)

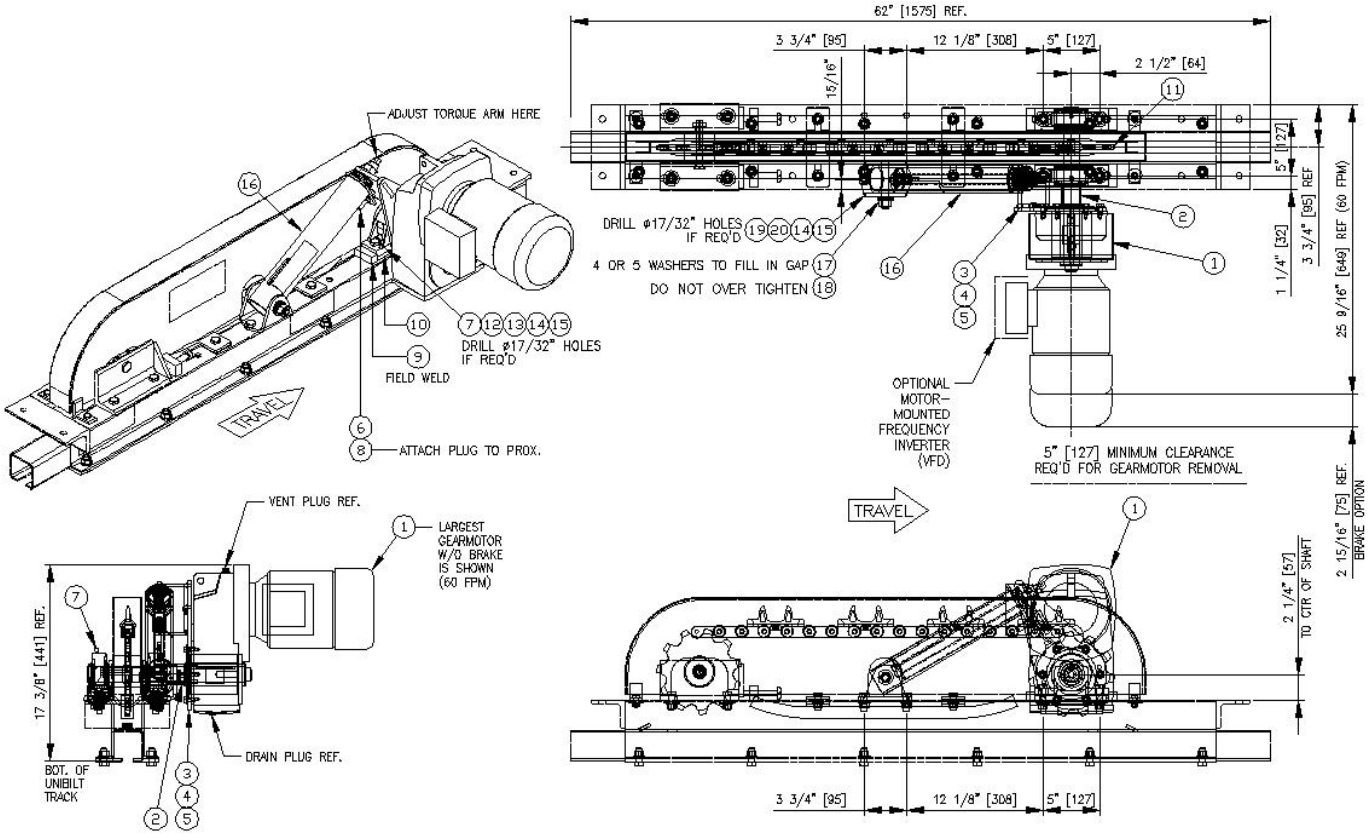

FIGURE 2: Assembly for Converting 600 Lb. Drive to 750 Lb. (Right-Hand Overhead)

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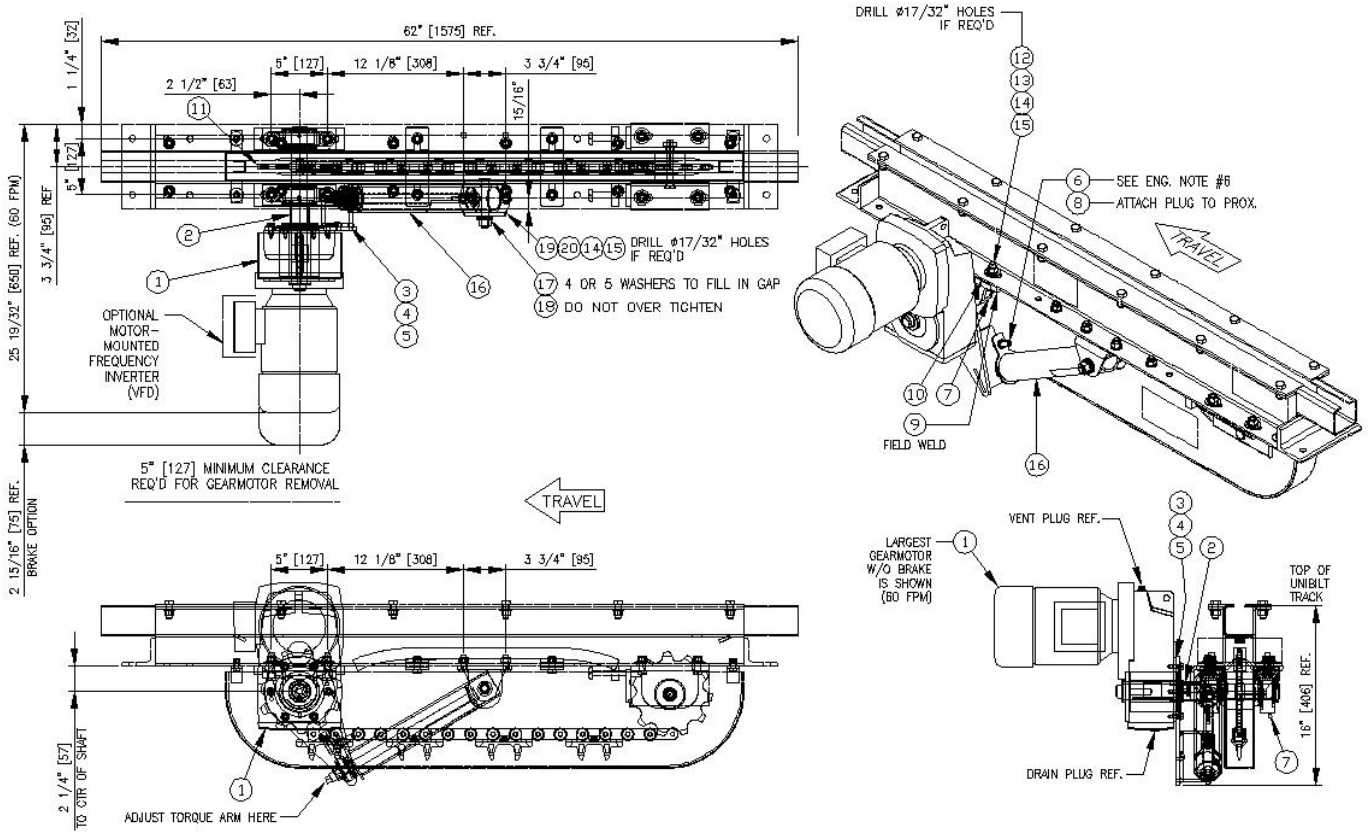

FIGURE 3: Assembly for Converting 600 Lb. Drive to 750 Lb. (Left-Hand Inverted)

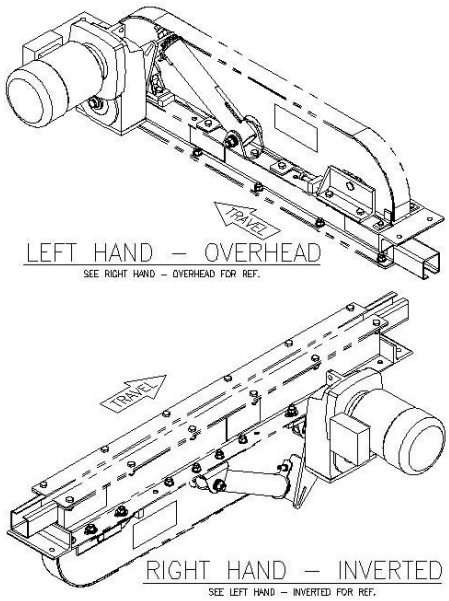

FIGURE 4: Alternate Assemblies

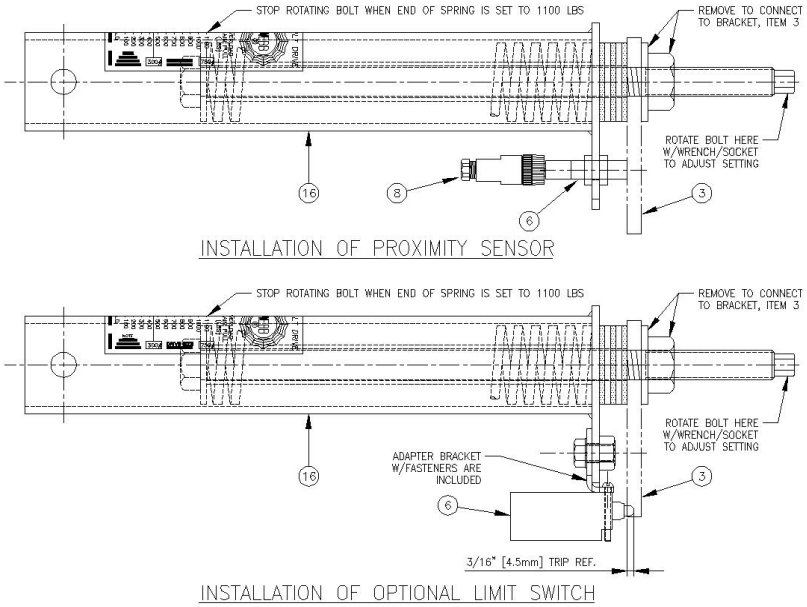

FIGURE 5: Torque Arm & Sensor Set-Up

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Item No.	Qty	Part No.	Description	Kit Type	
1	1	750Nxxx	Unibilt Gearmotor (varies w/options)	300 lb Upgrade	600 lb Conversion
2	1	115005	Spacer for 750# Gearmotor		
3	1	115011	Bracket Between 750# Gearmotor & Torque Arm		
4	6	57578	Socket Head Cap Screws, M8-1.25 x 20mm		
5	6	57323	Helical Spring Washers, M8		
6	1	115040 115041 or 115042	Proximity Sensor (24 VDC) Proximity Sensor (20-250 VAC/20-300 VDC) Top-Push Limit Switch w/Adapter Pl.		
7	2	19013	Pillow Block for 1 7/16" Dia. Shaft		
8	1	115048 or 115049	Quick Disconnect Plug (Field-Wire) for Proximity Sensor Option Only		
9	4	23907	¾" Square Key Stocks x 2" Long		
10	2	115003	Shims for Pillow Block		
11	1	115010	Drive Shaft with Sprocket		
12	4	56306	Hex Head Cap Screws, ½-13 UNC x 2 ¼" Long		
13	4	56591	Hex Nuts, ½-13 UNC		
14	10	57026	Flat Narrow Washers, ½"		
15	6	57056	Helical Spring Washers, ½"		
16	1	115020	Torque Arm (Adjustable)		
17	1	56496	Center Lock Jam Nut, 5/8-11 UNC		
18	3	57028	Flat Narrow Washers, 5/8"		
19	1	115027	Mounting Bracket for Torque Arm		
20	2	57230	Hex Head Cap Screws, ½-13 UNC x 1 1/2" Long		

Upgrading a (New Style) 300 Lb. (Gearmotor) Drive to a 750 Lb. Drive (Kit Part No. Ends with "K"):

1. **REMOVE** from existing 300 lb drive: gearmotor, existing bracket w/fasteners between gearmotor & torque arm, existing spacer on drive shaft, & overload sensor. **SAVE** overload sensor.
2. Use only the first five items listed above with one of the assembly options below in figure 6. Use figures 2 or 3 on the previous pages for reference.
3. Slide new spacer, item 2, on to shaft, item 11.
4. Slide gearmotor on to shaft and fasten special machined socket head screw to threaded hole on shaft-end.
5. Reattach existing torque arm to new bracket on new gearmotor: slide long internal bolt through hole on bracket, use wrench/socket to turn bolt-end (not head) until reading on torque arm label is 1100 lbs (or as directed otherwise,) add washer & nut back to lock against bracket. See figure 5 on page 3 based on sensor type.
6. Reattach overload sensor with included fasteners to new bracket. The proximity sensor must gently touch bracket, item 3. Do not over tighten. If a top-push limit switch is used, then it must be engaged (touching & clicked in – see figure 5 on page 3.) Use loctite on all nuts.

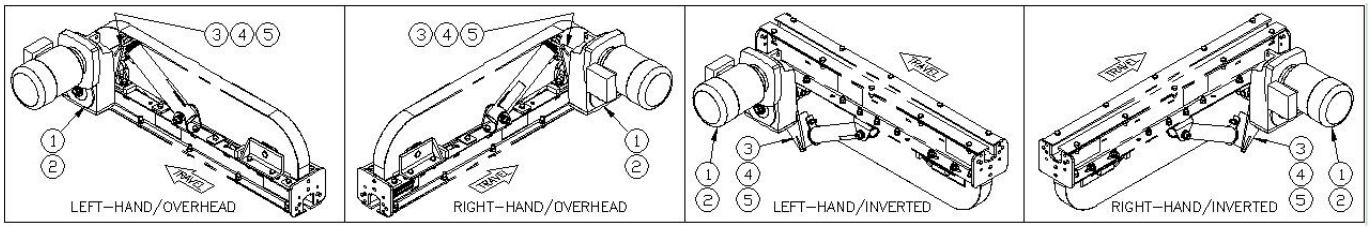

FIGURE 6: Assembly Options for Upgrading 300 Lb. Drive to 750 Lb

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