Hollister-Whitney

A VANTAGE Company

Bulletin #1187
GT-Series Geared Traction Machine Installation Manual

*Rope Gripper® not included

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WARNING

This installation manual is intended for the use of qualified and authorized elevator personnel ONLY. For your safety and the safety of others, do not attempt ANY procedure that you are not qualified and authorized to perform. Recommended procedures must be done in accordance with the applicable rules of the latest edition of the National Electrical Code; the latest edition of ASME A17.1; and all governing local codes. Every attempt has been made to ensure that this guide is accurate and up to date. Hollister-Whitney Elevator Co. LLC assumes no liability for consequences resulting from any error or omission. Please notify Hollister-Whitney Elevator Co. LLC regarding any difficulties with this manual.

Contents

Section

1

1 Introduction

1.1 Description

Thank you for choosing the Hollister-Whitney Elevator Company's (HWEC), GT-Series Geared Traction Machine.

The GT-series machines are worm and gear type machines which are designed for use in machine room configurations with VVVF controls.

The GT-series braking is supplied by a spring activated drum brake which is deactivated by a brake solenoid assembly.

1.2 Warranty Information

All parts and equipment manufactured by HWEC are guaranteed against defects in material and workmanship for a period of one (1) year from the date of shipment.

Warranty covers only the repair or replacement of parts, F.O.B. our factory, upon determination by inspection at our factory that warranty is applicable.

Equipment and components not of our manufacture are warranted only to the extent of the original manufacturer's warranty.

Our warranty specifically does not include any other incidental liability or expense such as transportation, labor, and unauthorized repairs.

1.3 Codes and Standards

The GT-series machines are designed to comply with ASME A17.1/CSA B44 code.

The motors are designed with class F insulation minimum and have been approved by and carry a CSA approved label.

The brake solenoids have been approved by and carry a CSA approved label.

The brake switches have been approved by and carry a CSA approved label.

1.4 General Specifications

1.4.1 Application Range and Mechanical Specifications

Model →	GT11OH / GT11BS / GT11OD						GT31OH / GT31BS / GT31OD			
Drive Sheave Diameter (in.)	22”		26”		30”		26”		30”	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1:1 – Speed (fpm)	100	500	100	500	100	500	100	500	100	500
1:1 – Capacity (lbs.)	1,000	3,000	1,000	3,000	1,000	3,000	2,000	6,000	2,000	4,500
2:1 – Speed (fpm)	50	250	50	250	50	250	50	250	50	250
2:1 – Capacity (lbs.)	1,000	6,000	1,000	6,000	1,000	6,000	4,000	12,000	4,000	9,000
Number of Ropes (up to)	Qty.	Size	Qty.	Size	Qty.	Size	Qty.	Size	Qty.	Size
	9	3/8”	9	3/8”	9	3/8”	9	3/8”	9	3/8”
	7	1/2”	7	1/2”	7	1/2”	7	1/2”	7	1/2”
	-	-	6	5/8”	6	5/8”	6	5/8”	6	5/8”
Approximate Machine Weight (lbs.) (does not include motor)	OH = 1,650 BS = 1,975 OD = 2,750		OH = 1,700 BS = 2,025 OD = 2,800		OH = 1,800 BS = 2,125 OD = 2,900		OH = 2,100 BS = 2,435 OD = 3,151		OH = 2,200 BS = 2,535 OD = 3,251	
Approx. Motor Weight by Frame (lbs.)	284TC: 350	286TC: 400	324TC: 450	326TC: 610	365TC: 690					
Max. Drive Sheave Shaft Load (lbs.)	17,000						25,000			
Factory Brake Torque Setting (ft*lbs.)	160 to 176						212 to 220			
Approx. Gear Case Oil Capacity (gal)	2						2.5			
Oil Grade	Mobil SHC 636 is recommended									
Operating Environment	Machine Room Ambient Temperature: 35°F to 104°F (1.7°C to 40°C) Max. Relative Humidity: 85% at 20°C (68°F) Non-Condensing Storage Temperature: -20°C to +60°C (-4°F to +140°F) Altitude: Sea Level to 2000m (6561 ft) Above Sea Level									

Table 1-1

1.4.2 Brake System Electrical Specifications

Model →	All
Brake Solenoid Electrical Data	Version A: Pick: 190Vdc, ≤ 2.5A, Hold: 80Vdc, ≤ 1A, Resistance: 98±5%Ω (20°F) Version B: Pick: 110Vdc, ≤ 3.6A, Hold: 60Vdc, ≤ 2A, Resistance: 39±5%Ω (20°F) Starts Per Hour: 180 Duty Cycle: 60%
Brake Switch Electrical Data	AC Rating: 125V/15A, 250V/15A, 480V/15A DC Rating: 125V/0.5A, 250V/0.25A

Table 1-2

1.4.3 Estimated Motor and Gear Box Heat Loss

Model→	All						
Motor HP ↓	*Estimated Motor BTU/HR ↓	*Estimated Gear Box BTU/HR					
		GT11 Gear Ratios			GT31 Gear Ratios		
		49:1	49:2	49:3	71:1	71:2	71:3
5	998	855	489	366	-	-	-
7.5	1113	1282	733	550	-	-	-
10	1336	1710	977	733	1873	896	651
12.5	1740	2137	1221	916	2341	1120	814
15	1868	2565	1466	1099	2809	1343	977
20	2722	3420	1954	1466	3745	1791	1303
25	3089	4275	2443	1832	4682	2239	1628
30	3387	5130	2931	2198	5618	2687	1954
35	3650	5984	3420	2565	6554	3135	2280
40	3867	-	-	-	7491	3583	2605
45	4289	-	-	-	8427	4030	2931
50	5275	-	-	-	9364	4478	3257
*Estimate Assumptions: 40% Counterweight; 60% Duty Cycle, HW Internal Loading Spectrum Total Estimated Machine BTU/HR = Estimated Motor BTU/HR + Estimated Gear Box BTU/HR							

Table 1-3

Section

2

2 Safety Precautions

Read this section before any work is performed on elevator equipment.

✱ IMPORTANT –**The procedures contained in this manual are intended for the use of qualified elevator personnel. In the interest of your personal safety and the safety of others, do NOT attempt ANY procedure that you are NOT qualified to perform.**

All procedures must be done in accordance with the applicable rules in the latest edition of the National Electrical Code; the latest edition of ASME A17.1; and any governing local codes.

2.1 Terms in This Manual

CAUTION: Caution Statements identify conditions that could result in damage to the equipment or other property if improper procedures are followed!

WARNING: Warning Statements identify conditions that could result in personal injury if improper procedures are followed!

2.2 General Safety

Specific warnings and cautions are found where they apply, and DO NOT appear in this summary.

2.3 Electrical Safety

All wiring must be in accordance with the National Electrical Code and must be consistent with all state and local codes.

2.4 Electrical Hazards

Electric shocks can cause personal injury or loss of life. Circuit breakers, switches and fuses may NOT disconnect all power to the equipment. Always refer to the wiring diagrams. Whether the A/C supply is grounded or not, high voltage will be present at many points.

2.5 Mainline Disconnect

Unless otherwise suggested, always turn OFF. Lock and Tag out the mainline disconnect to remove power from the equipment.

2.6 Test Equipment Safety

Always refer to manufactures' instruction book for proper test equipment operation and adjustments.

Megger testing, or buzzer type continuity testers, can damage electronic components. Connection of devices such as voltmeters on certain low-level analog circuits may degrade electronic system performance. Always use a voltmeter with a minimum impedance of 1M Ohm/Volt. A digital voltmeter is recommended.

2.7 When Power Is On

Dangerous voltages exist at several points in some products. To avoid personal injury, do NOT touch exposed electrical connections or components while power is On.

2.8 Product Specific Warnings

WARNING

GT-series machines MUST be balanced during hoisting. See paragraph 3.3 for proper lifting configurations.

WARNING

Hang the elevator car before removing ANY bolts. Failure to do so may result in severe injury and equipment damage.

Section

3

3 Arrival of the Equipment

3.1 Receiving

Immediately upon arrival of the machine, visually inspect the entire machine for any external damage. If any damage incurred in transit is found, make notice of the claim in the presence of the carrier and notify HWEC. If necessary, do not put these machines into operation without first consulting HWEC.

If the machine has gotten wet during transportation, make notice of the claim in the presence of the carrier and notify HWEC.

3.1.1 Inspect Machine Data Tag

Check the Machine Data tag to ensure the machine conforms to the order documentation. The machine data tag is located on the of of the brake housing as shown in Figure 3-1.

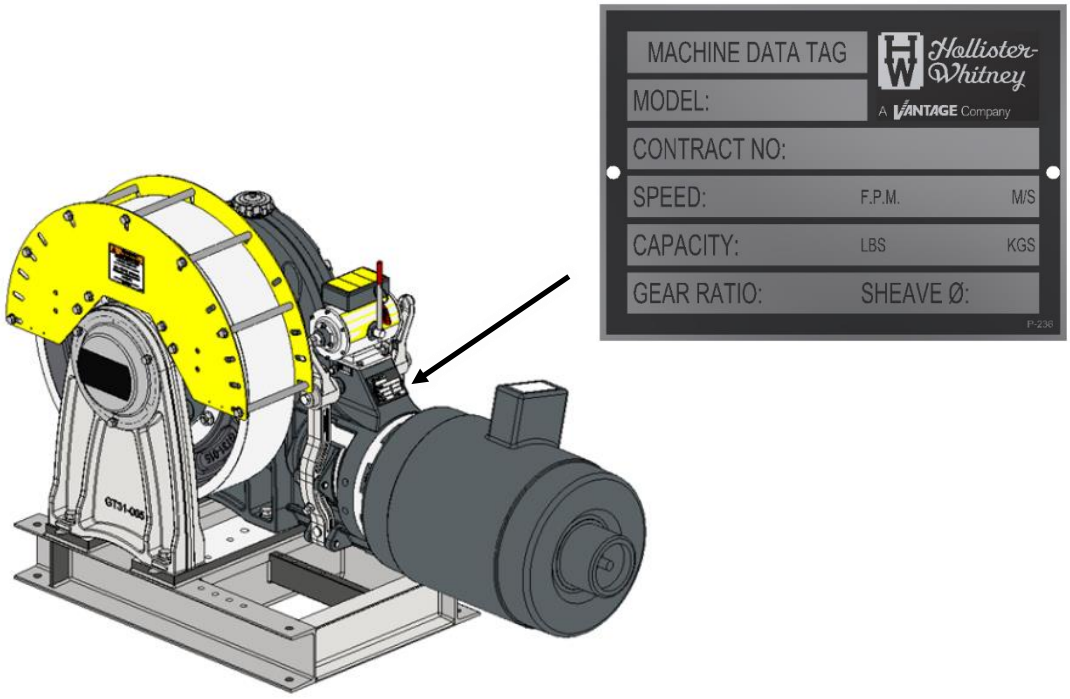


Figure 3-1: Machine Data Tag

3.1.2 Inspect Motor Data Tag

Check the Motor Data Tag to ensure the motor conforms to the order documentation and matches the requirements of the controller. See Figure 3-2. The Contract Number on the Machine Data Tag and the Motor Data Tag should agree. The motor data tag is located near the motor supplier Data Tag on the motor housing. The Hollister-Whitney Motor Data Tag contains the electrical data related to that specific contract/installation.

3.1.3 Inspect Traction Wheel Groove Size and Groove Quantity

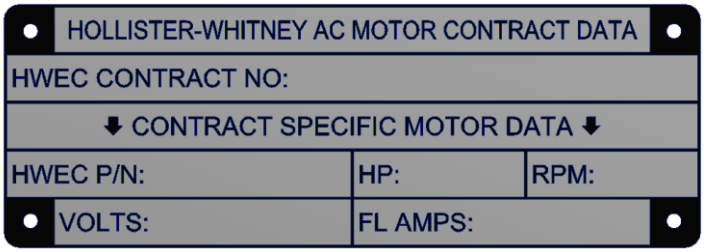


Figure 3-2: Motor Data Tag

Check the traction wheel to ensure that the groove size and groove quantity conform to the order documentation.

3.2 Handling

The machine will be delivered on a wooden pallet. It can be left on the pallet and moved with a standard fork truck or pallet jack.

3.3 Hoisting

The machine can weigh as much as 3950 lbs. (1792 kg). When the machine is removed from the pallet, it must be lifted by using the hoisting eyebolt holes in the base.

When lifting the machine, pull straight up on the hoisting eyebolts using a spreader beam or other suitable rigging apparatus to prevent damage to or failure of the eyebolts, which could result in dropping the machine.

WARNING

Use only the hoisting method shown when lifting the machine! Do not use any other machine component to lift the machine! Lifting the machine by any other component will result in damage to the machine or possible failure of the component resulting in the machine falling from the hoisting system!

Follow all the necessary precautions to avoid damage to the machine or risk to personnel when moving or hoisting the machine.

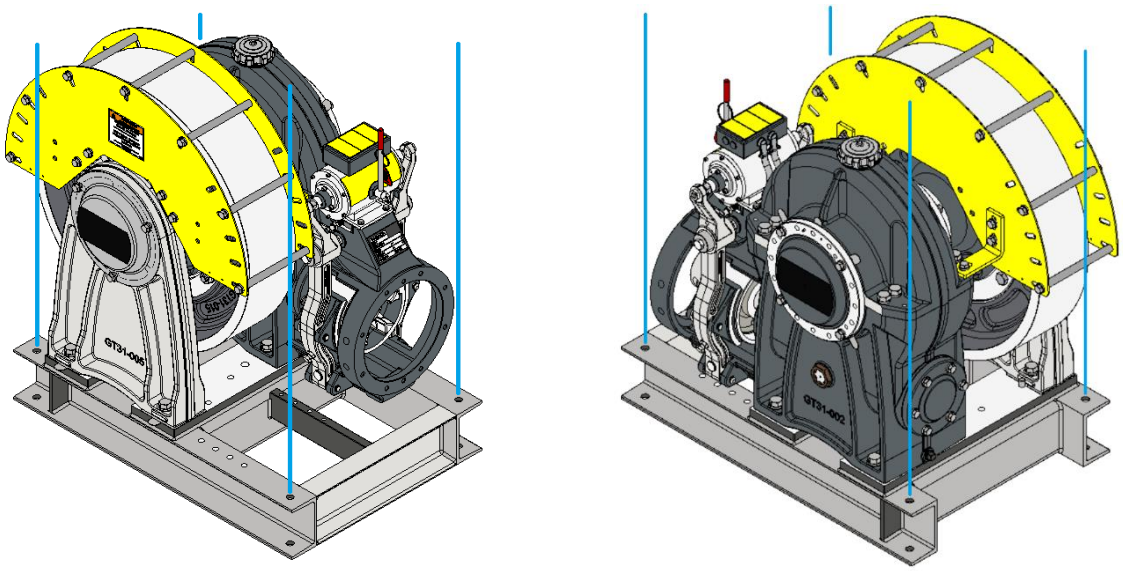


Figure 1-3: Proper Hoisting Illustration

The motor must be removed to allow access to the holes provided for the eyebolt.

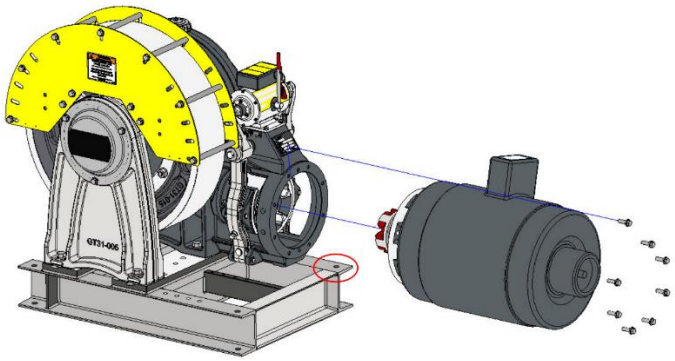


Figure 3-4: Motor Removal Illustration

For a video on disassembly and reassembly of the motor, please go to the Hollister-Whitney Channel on YouTube. Scan the following QR code for direct access to the video:

3.4 Storage

During storage in a warehouse or on the elevator job site, precautions must be taken to protect the machine from dust, dirt, moisture, metal shavings and temperature extremes.

For short term storage, place the machine in a warm, dry and clean environment.

Protect the machine from harsh weather conditions and temperature variations that can lead to condensation.

Protect from dust and metal shavings.

For longer term storage, follow the recommendations above plus; place the machine in a sealed, waterproof enclosure. Add a dehydrating packet that is sized for the enclosure's volume and humidity level.

3.5 Moisture, Condensation

Before installing the machine, and before any voltage is applied, check the machine for condensation, or any evidence of moisture or water. If any evidence of wetness is found, contact HWEC for drying instructions.

After the machine has been dried per factory instructions, it will be necessary to verify the insulation between each coil phase and earth ground. Using an insulation tester (or megohm-meter) check the insulation resistance at 500VDC.The resistance should be *NO LESS* than100 Mohm.

Section

4

4 Installation

4.1 Overview

The GT-series machine is a worm and gear driven traction machine.

The machine braking is provided by a drum type brake system actuated (set) mechanically by springs and deactivated (picked) with a brake solenoid assembly.

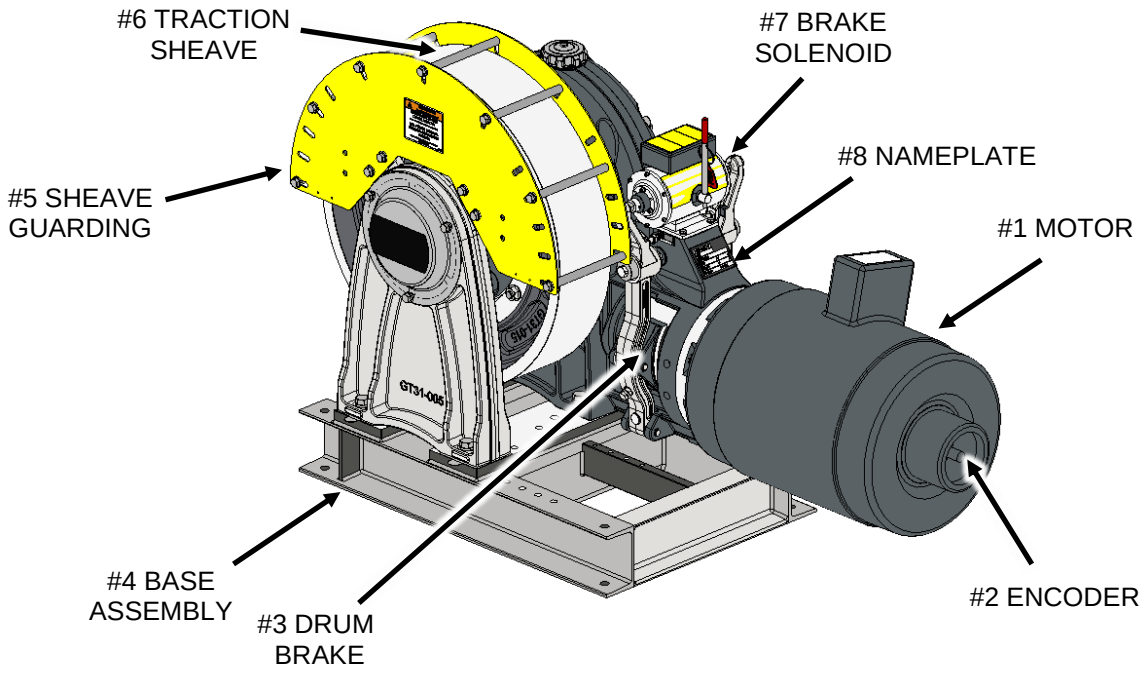


Figure 2-1: Machine Components

The following is a list of major components of the GT-series machines. Along with a brief description of their functions, there is an overview of some of the critical adjustments and maintenance information. See the Installation and Maintenance sections for more detail.

1. **Motor** - The motor connects to the machine via flexible motor coupler, which in turn, rotates the worm gear of the machine.

2. **Encoder** – (Behind Cover) This device is directly coupled to the shaft of the motor and thereby the machine. It is provided to give the absolute speed feedback of the machine to the inverter drive system and to the elevator controller.
3. **Drum Brake** – This assembly is used to prevent the elevator from moving when the car is at rest. Springs provide force to engage the brake shoes on the drum.
4. **Base Assembly** – Supports the machine and mounts the machine to the structure.
5. **Sheave Guard/Rope Retainer** – Provides rope retention to the traction sheave and prevents contact with moving hoist ropes after rope installation.
6. **Traction Sheave** – Provides tractive effort to the hoist ropes to move the car and counterweight. The grooves in the traction sheave provide traction between the sheave and the hoist ropes
7. **Brake Solenoid** - Power applied to the solenoid holds the brake open to allow movement.
8. **Nameplate** – Displays the machine rated data and factory serial number.

4.2 Machine Mounting

Before hoisting the machine into place, verify all the hoisting equipment is rated for the weight of the machine. See Section 1.4.1 to determine the machine weight with and without motor.

Provide a level, structurally supported (rated for the load on the machine) machine space with proper clearance around the machine for maintenance and adjustments.

This machine is primarily intended to be mounted in traditional overhead applications with down-pull forces on the traction sheave.

4.2.1 Overhead Mounting

Anchor the machine to the structural support surface using the (4) mounting hole locations in the base. The hardware required to anchor the machine to the support surface should be at least 3/4” diameter, grade #5 minimum, with standard washers. Hardware adhering to ASME A325 is also suitable.

Note - Due to the varying mounting surface thicknesses, no mounting hardware is shipped with the machine.

Figure 4-2: Overhead Machine

4.2.2 Basement Set Mounting

When used in a basement application, the machine must be mounted to a specially designed tie-down foundation (designed and supplied by others) that will withstand the up-pull forces generated.

Refer to all applicable building codes and ASME A17.1 when selecting hardware to anchor the machine to the structural supports in an up-pull application.

Use the more stringent criteria between the building codes, ASME-A17.1 and the minimum hardware grades identified above.

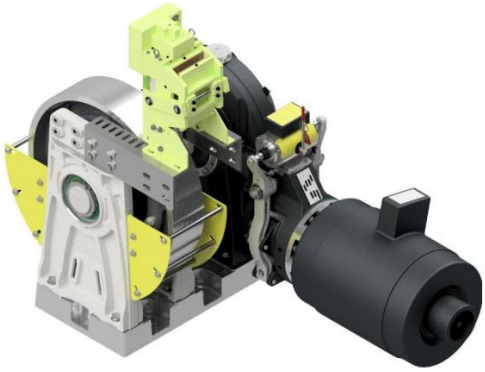


Figure 4-3: Basement Set Machine

4.2.3 Overhead Deflected Mounting

When used in an overhead deflected application, the machine must rest on suitable support such as structural framing, or a specially designed tie-down foundation (designed and supplied by others) and withstand the up-pull forces generated.

Refer to all applicable building codes and ASME A17.1 when selecting hardware to anchor the machine to the structural supports in such an application.

Use the more stringent criteria between the building codes, ASME-A17.1 and the minimum hardware grades identified above.

Figure 4-4: Overhead Deflected Machine

4.3 Electrical Connections

WARNING

Before performing any electrical connections, make sure that power supply is turned off. Only then proceed with connecting electrical leads to power supply. Never work in the machine electrical enclosure while power supply is on!

Direct connection to the three-phase power is forbidden as it may destroy the motor.

4.3.1 Brake Switch and Brake Solenoid

The brake switch system has been designed to wire the switches in either the normally open or normally closed position depending on the installers/controller preference. Please see the following electrical circuit diagram for the wiring of the brake switch and brake solenoid.

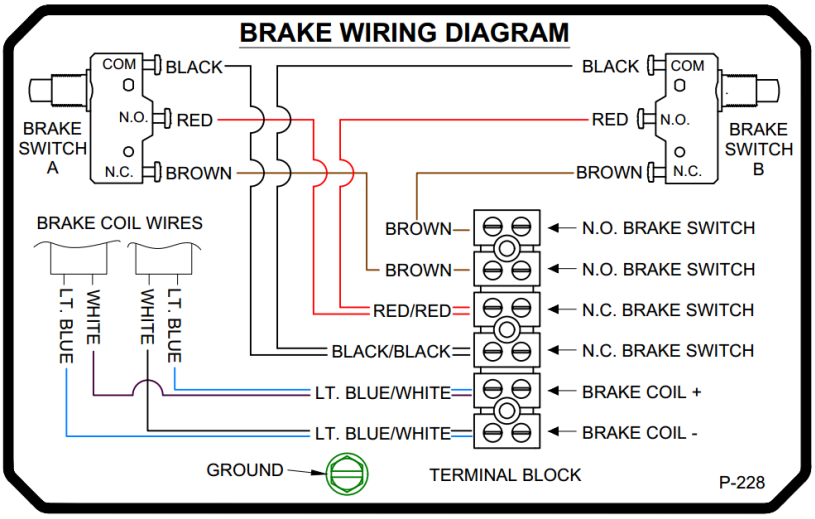


Figure 4-5: Brake Switch and Brake Solenoid Electrical Schematic

4.3.2 Machine To Power Source Wiring

Please refer to the motor manufacturer and controller manufacturer documentation for recommended wiring.

4.3.3 Encoder Connection

The encoder is located behind the protective cover located on the end on the motor. Connect the encoder per the suppliers' instructions which are located in the appendix of this manual.

4.4 Startup

4.4.1 General Machine Cleanliness / Examination

Inspect the overall cleanliness of the machine and perform an overall general examination of the machine looking for any damaged components. Pay particular attention to brake arms and brake arm pins to ensure that all of the hardware is present.

4.4.2 Brake Drum Cleanliness

WARNING

The cleanliness of the brake drum is critical to the proper functioning of the brake system. The brake drum surface should be examined and clean thoroughly.

4.4.3 Brake Burnishing

As the brake torque is factory set, brake burnishing is generally not required on initial start-up. Burnishing may only be required in some instances.

4.4.4 Manual Brake Release

WARNING

The unimpeded functioning of the brake arm and brake solenoid is critical to the proper functioning of the brake system.

To ensure there are no issues with the proper functioning of the brake arms. Use the manual brake release handle to disengage the brake shoe from the brake drum. The handle should be rotated clockwise and counterclockwise several times to ensure complete range of motion.

The manual brake release handle must be removed from the brake assembly prior to normal elevator operation.

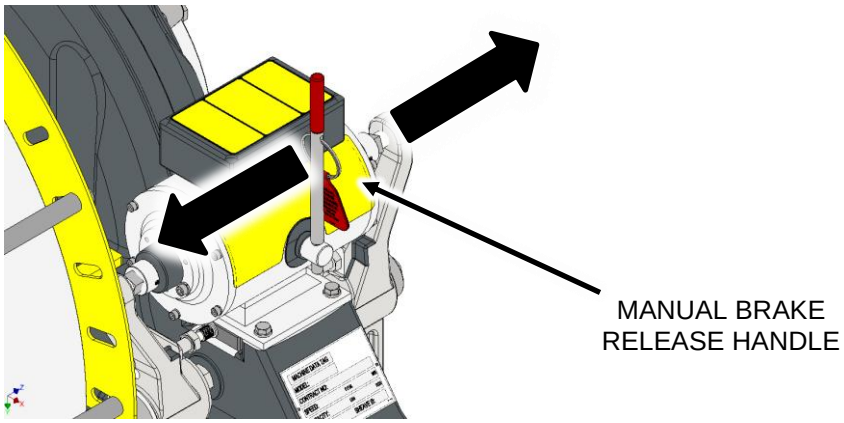


Figure 4-6: Manual Brake Release

4.4.5 Verify Brake Intact Seals

Verify that brake tamper resistant paint has not been disturbed on the brake seals.

4.4.6 Motor Related Controller Settings

Verify all the motor related settings in the elevator controller match the information on the machine data tag. There is a “drive learn” tag attached to the motor. This data may be useful when setting up the motor and controller. See Figure 4-7 below.

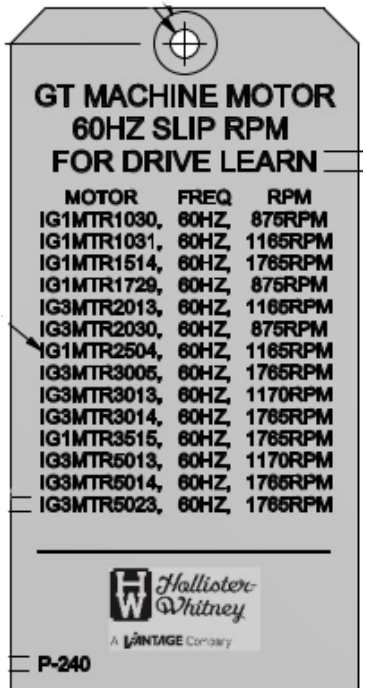


Figure 4-7: Drive Learn Tag

4.4.7 Other

Follow standard elevator industry and governing safety requirements as well as your company’s safety policies and procedures when going through startup procedures.

4.5 Rope Retainer Installation

- Rope retainers are to be installed AFTER installing suspension ropes.
- Ropes are NOT SHOWN in some illustrations in this installation manual but are assumed to be present. Ropes are to be installed before rope retainers.

BEFORE ANY WORK IS DONE:

- Verify Machine
  - Verify the machine is ready for retainer installation.
  - Observe all applicable safety precautions for taking the car out of service and preventing the machine from running during installation of the retainer.
- Verify Retainer Assembly
  - Verify all components are present and the rope retainer can be assembled depending on machine configuration.

4.5.1 Overhead Machine Rope Retainer Installation

4.5.1.1 GT11

- Attach the retainer brackets to the machine housing using the housing guard mounting studs present on the machine housing and the assembly hex nuts.
- Attach the outer retainer plate to the outboard stand using the mounting holes shown in Figure 4-8.
- Attach the inner retainer plate to the retainer brackets as shown in Figure 4-9. Confirm both plates align so that the retainer rods can be assembled. Securely tighten the mounting hardware.
- The plates have been provided with slots cut at 10° intervals from 180° to 140°, along with the outboard stand having a 90° slot and two 20° slots, to accommodate the retainer rods. This configuration allows for a 140°, 150°, 160°, 170°, and 180° of wrap standard.
- It is recognized that the angle of wrap may fall between these standard positions, and A17/B44 code (8.4.3.1.4 (b)) states that "… a restraint is located at each end of the arc of contact."
- As necessary, drill a 9/16" (0.5625") hole at the end of the arc of contact. make sure the hole position allows running clearance between the rope and retaining rod.

NOTE -

RUNNING CLEARANCE RULE OF THUMB: ROPE TO RETAINING ROD CLEARANCE SHOULD NEVER BE GREATER ½ (50%) OF ROPE DIAMETER.

- Attach the retaining rods to the retainer plate using the provided bolts take care to maintain the parallelism (squareness) of the plates with each other.
- When all rods are in place use a convenient shim material to set rope to retaining rod clearance per the ***NOTE*** above.
- Confirm all hardware is tight. All hardware is Grade 5 and should be tightened to Grade 5 Specifications.

- Confirm all work-related material (shims, packaging, tools, etc) is clear of the machine.
- Observe all applicable safety precautions for returning the car to service after installation of the rope retainer.
- See Figure 4-9 for an illustration of a finished assembly.

4.5.1.2 GT31

- Attach the retainer brackets to the machine housing using the tapped holes present on the machine housing.
- Attach the outer retainer plate to the outboard stand using the mounting holes shown in Figure 4-8.
- Attach the inner retainer plate to the retainer brackets as shown in Figure 4-10. Confirm both plates align so that the retainer rods can be assembled. Securely tighten the mounting hardware.
- The plates have been provided with slots cut at 10° intervals from 180° to 140°, along with the outboard stand having a 90° slot and two 20° slots, to accommodate the retainer rods. This configuration allows for a 140°, 150°, 160°, 170°, and 180° of wrap standard.
- It is recognized that the angle of wrap may fall between these standard positions, and A17/B44 code (8.4.3.1.4 (b)) states that "… a restraint is located at each end of the arc of contact."
- As necessary, drill a 9/16" (0.5625") hole at the end of the arc of contact. make sure the hole position allows running clearance between the rope and retaining rod.

NOTE -

RUNNING CLEARANCE RULE OF THUMB: ROPE TO RETAINING ROD CLEARANCE SHOULD NEVER BE GREATER ½ (50%) OF ROPE DIAMETER.

- Attach the retaining rods to the retainer plate using the provided bolts take care to maintain the parallelism (squareness) of the plates with each other.
- When all rods are in place use a convenient shim material to set rope to retaining rod clearance per the ***NOTE*** above.
- Confirm all hardware is tight. All hardware is Grade 5 and should be tightened to Grade 5 Specifications.
- Confirm all work-related material (shims, packaging, tools, etc) is clear of the machine.
- Observe all applicable safety precautions for returning the car to service after installation of the rope retainer.
- See Figure 4-10 for an illustration of a finished assembly.

Figure 4-8: Mounting Holes on GT11 (left) and GT31 (right) Outboard Stands

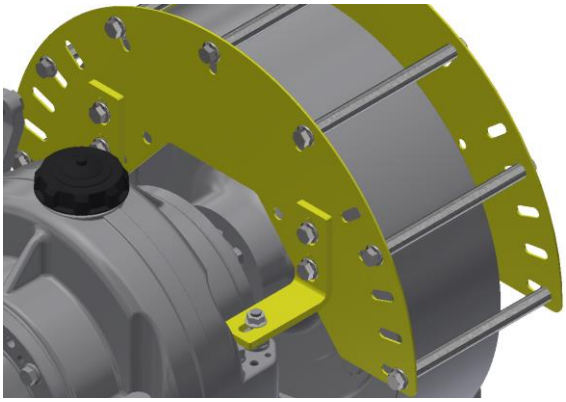


Figure 4-9: GT11 Bracket Mounting Illustration

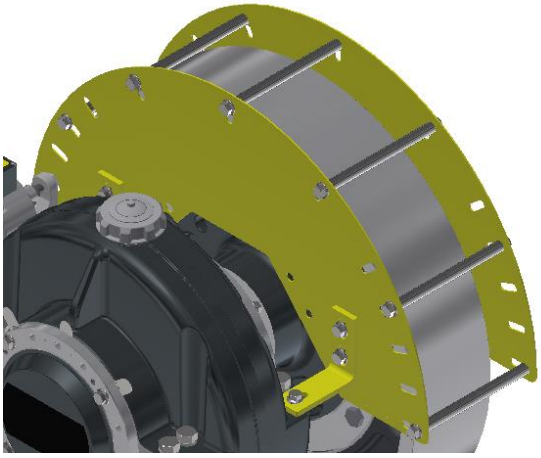


Figure 4-10: GT31 Bracket Mounting Illustration

4.5.2 Basement Set Machine Rope Retainer Installation

4.5.2.1 GT11BS

- Attach the BS rope retainer plates to the outboard stands using the provided bolts and the holes shown in Figure 4-11. Confirm the outer edges of the retainer plates align so that the retainer rods can be inserted through both plates. Securely tighten the bolts.
- The plates have been provided with slots cut at 20° intervals, along with the outboard stand having a 90° slot and two 20° slots, to accommodate the retainer rods. This configuration allows for a 140°, 160°, and 180° of wrap standard.
- It is recognized that the angle of wrap may fall between these standard positions, and A17/B44 code (8.4.3.1.4 (b)) states that "… a restraint is located at each end of the arc of contact."
- As necessary, drill a 9/16" (0.5625") hole at the end of the arc of contact. Make sure the hole position allows running clearance between the rope and retaining rod.

NOTE -

RUNNING CLEARANCE RULE OF THUMB: ROPE TO RETAINING ROD CLEARANCE SHOULD NEVER BE GREATER ½ (50%) OF ROPE DIAMETER.

- Attach the retaining rods to the retainer plate using the provided bolts. in addition, attach three rods to the outboard stand slots illustrated in Figure 4-11. Take care to maintain the parallelism (squareness) of the plates with each other.
- When all rods are in place use a convenient shim material to set rope to retaining rod clearance per the ***NOTE*** above.
- Confirm all hardware is tight. All hardware is Grade 5 and should be tightened to Grade 5 Specifications.
- Confirm all work-related material (shims, packaging, tools, etc) is clear of the machine.
- Observe all applicable safety precautions for returning the car to service after installation of the rope retainer.
- See Figure 4-12 for an illustration of a finished assembly.

4.5.2.2 GT31BS

- Attach the BS rope retainer plates to the outboard stands using the provided bolts and the holes shown in Figure 4-11. Confirm the outer edges of the retainer plates align so that the retainer rods can be inserted through both plates. Securely tighten the bolts.
- The plates have been provided with slots cut at 20° intervals, along with the outboard stand two 20° slots, to accommodate the retainer rods. This configuration allows for a 140°, 160°, and 180° of wrap standard.
- It is recognized that the angle of wrap may fall between these standard positions, and A17/B44 code (8.4.3.1.4 (b)) states that "… a restraint is located at each end of the arc of contact."

- As necessary, drill a 9/16” (0.5625”) hole at the end of the arc of contact. Make sure the hole position allows running clearance between the rope and retaining rod.

NOTE -

RUNNING CLEARANCE RULE OF THUMB: ROPE TO RETAINING ROD CLEARANCE SHOULD NEVER BE GREATER ½ (50%) OF ROPE DIAMETER.

- Attach the retaining rods to the retainer plate using the provided bolts. In addition, attach two rods to the outboard stand slots illustrated in Figure 4-11. Take care to maintain the parallelism (squareness) of the plates with each other.
- When all rods are in place use a convenient shim material to set rope to retaining rod clearance per the ***NOTE*** above.
- Confirm all Hardware is tight. All Hardware is Grade 5 and should be tightened to Grade 5 Specifications.
- Confirm all work-related material (shims, packaging, tools, etc) is clear of the machine
- Observe all applicable safety precautions for returning the car to service after installation of the guarding.
- See Figure 4-13 for an illustration of a finished assembly.

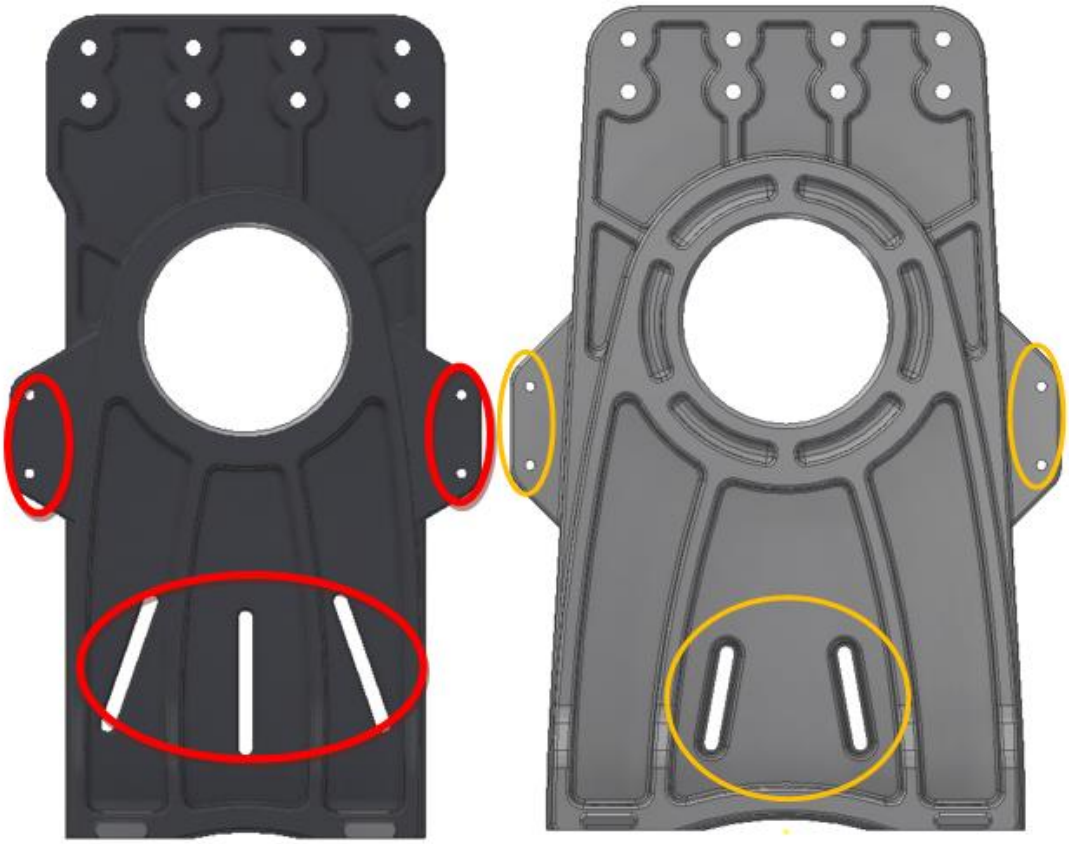


Figure 4-11: Outboard Stand Mounting Locations GT11 (left) and GT31 (right)

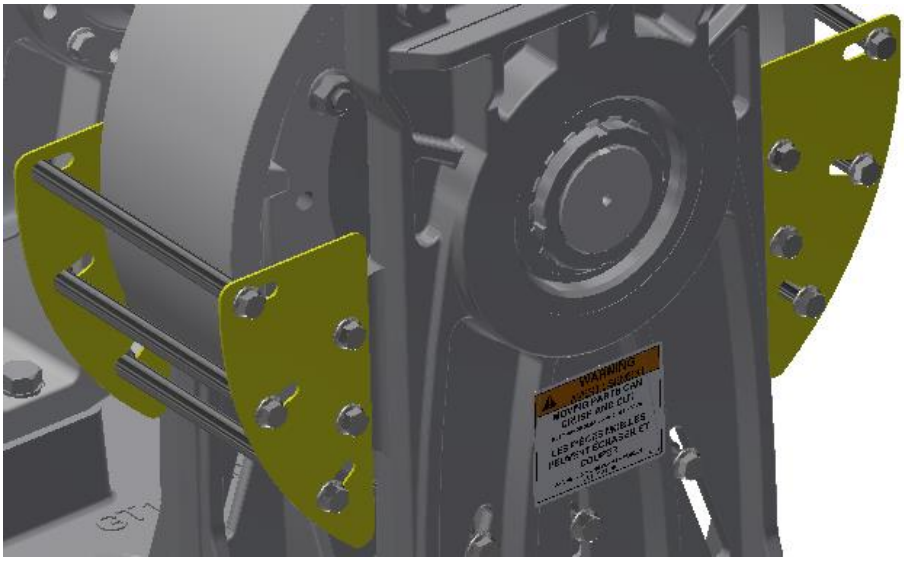


Figure 4-12: GT11 BS Machine Finished Assembly

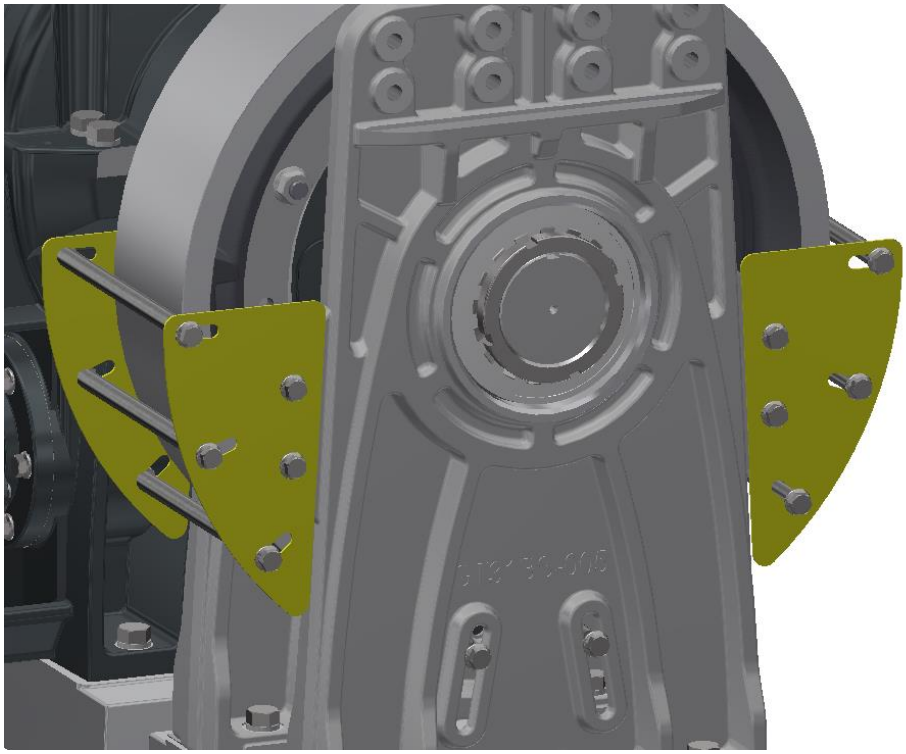


Figure 4-13: GT31 BS Machine Finished Assembly

4.5.3 Overhead Deflector Rope Retainer

4.5.3.1 GT11OD

- Attach the BS rope retainer plates to the outboard stands using the provided bolts and the holes shown in Figure 4-14. Confirm the outer edges of the retainer plates align so that the retainer rods can be inserted through both plates. Securely tighten the bolts.
- Attach the OD rope retainer brackets to the deflector pillow blocks as shown in Figure 4-15 using the provided hardware.
- Attach the OD rope retainer plates to the rope retainer brackets. Confirm the outer edges of the retainer plates align so that the retainer rods can be inserted through both plates. Securely tighten the bolts.
- The BS plates have been provided with slots cut at 20° intervals, along with the outboard stand having a 90° slot and two 20° slots, to accommodate the retainer rods. This configuration allows for a 140°, 160°, and 180° of wrap standard. The OD plates have been provided with slots cut at 15 degree intervals from 90° to 60° and 0° to 30° to accommodate retainer rods. This allows for 90°, 75°, or 60° of wrap standard.
- It is recognized that the angle of wrap may fall between these standard positions, and A17/B44 code (8.4.3.1.4 (b)) states that "… a restraint is located at each end of the arc of contact."
- As necessary, drill a 9/16" (0.5625") hole at the end of the arc of contact. Make sure the hole position allows running clearance between the rope and retaining rod.

NOTE -

RUNNING CLEARANCE RULE OF THUMB: ROPE TO RETAINING ROD CLEARANCE SHOULD NEVER BE GREATER ½ (50%) OF ROPE DIAMETER.

- Attach the retaining rods to the retainer plate using the provided bolts. In addition, attach three rods to the Outboard Stand slots illustrated in Figure 4-14. Take care to maintain the parallelism (squareness) of the plates with each other.
- When all rods are in place use a convenient shim material to set rope to retaining rod clearance per the ***NOTE*** above.
- Confirm all Hardware is tight. All Hardware is Grade 5 and should be tightened to Grade 5 Specifications.
- Confirm all work-related material (shims, packaging, tools, etc) is clear of the machine
- Observe all applicable safety precautions for returning the car to service after installation of the guarding.
- See Figure 4-16 for an illustration of the finished assembly.

4.5.3.2 GT31OD

- Attach the BS rope retainer plates to the outboard stands using the provided bolts and the holes shown in Figure 4-14. Confirm the outer edges of the retainer plates align so that the retainer rods can be inserted through both plates. Securely tighten the bolts.
- Attach the OD rope retainer brackets to the deflector pillow blocks as shown in Figure 4-15 using the provided hardware.
- Attach the OD rope retainer plates to the rope retainer brackets. Confirm the outer edges of the retainer plates align so that the retainer rods can be inserted through both plates. Securely tighten the bolts.
- The BS plates have been provided with slots cut at 20° intervals, along with the outboard stand having two 20° slots, to accommodate the retainer rods. This configuration allows for a 140°, 160°, and 180° of wrap standard. The OD plates have been provided with slots cut at 15-degree intervals from 90° to 60° and 0° to 30° to accommodate retainer rods. This allows for 90°, 75°, or 60° of wrap standard.
- It is recognized that the Angle of Wrap may fall between these standard positions, and A17/B44 code (8.4.3.1.4 (b)) states that "… a restraint is located at each end of the arc of contact."
- As necessary, drill a 9/16" (0.5625") hole at the end of the arc of contact. Make sure the hole position allows running clearance between the rope and retaining rod.

NOTE -

RUNNING CLEARANCE RULE OF THUMB: ROPE TO RETAINING ROD CLEARANCE SHOULD NEVER BE GREATER ½ (50%) OF ROPE DIAMETER.

- Attach the retaining rods to the retainer plate using the provided bolts. In addition, attach two rods to the outboard stand slots illustrated in Figure 4-14. Take care to maintain the parallelism (squareness) of the plates with each other.
- When all rods are in place use a convenient shim material to set rope to retaining rod clearance per the ***NOTE*** above.
- Confirm all Hardware is tight. All Hardware is Grade 5 and should be tightened to Grade 5 Specifications.
- Confirm all work-related material (shims, packaging, tools, etc) is clear of the machine.
- Observe all applicable safety precautions for returning the car to service after installation of the guarding.
- See Figure 4-17 for an illustration of the finished assembly.

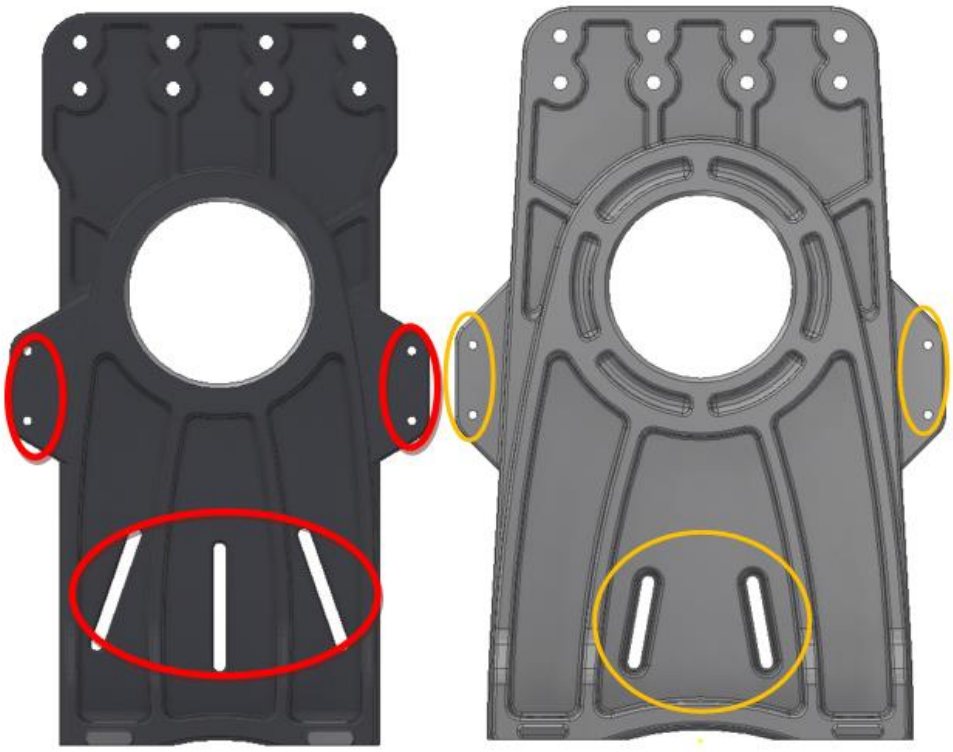


Figure 4-14: Outboard Stand Mounting Locations GT11 (left) and GT31 (right)

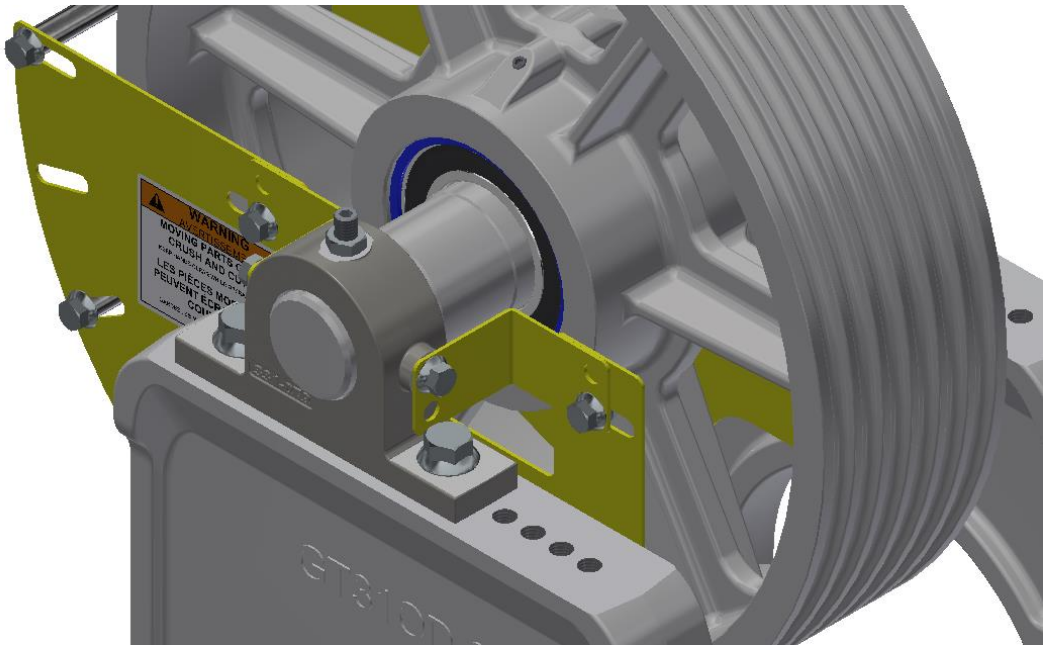


Figure 4-15: Pillow Block Mounting Locations

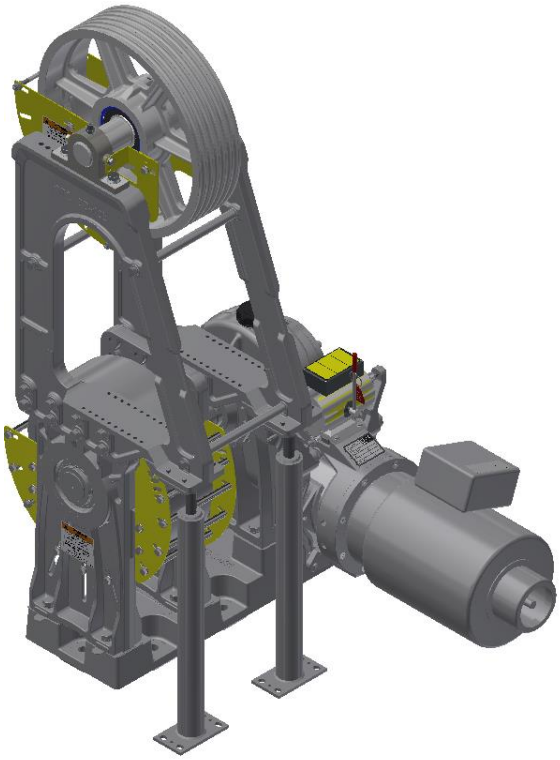


Figure 4-16: Finished GT11 Assembly

Figure 4-17: Finished GT31 Assembly

4.6 Rope Gripper Mounting

Before installation of the ope gripper do the following:

- Wear proper PPE (Personal Protective Equipment).
- Inspect tools to ensure they are in good condition and proper working order.
- Read and understand all instructions prior to proceeding.
- Follow standard elevator industry and governing safety requirements.
- Verify Machine
    - Verify the machine is ready for rope gripper installation.
    - Observe all applicable safety precautions for taking the car out of service and preventing the machine from running during installation of the rope gripper.
- Verify rope gripper assembly.
    - Verify all components are present and the rope gripper can be assembled depending on machine configuration.
    - Confirm that the rope gripper assembly is correct for the machine application and configuration.
    - Verify any non-standard rope gripper mounting angles and/or brackets are available as applicable. See Figure 4-18.
    - Verify the proper rope gripper manual is available to reference.
- Determine the rope drop location (matching the existing drop or refer to applicable job layouts) by using plum lines or laser means.
- Confirm that the assembly will have adequate clearance when positioned in line with the required rope drop.
- Prior to the installation of the assembly, plan and prepare for the electrical and/or conduit routing.
- Ensure that electrical routing will not interfere with the operation, maintenance, or removal of the assembly.
- See section 7.4 for prints of gripper mounting angles.

Machine	Machine Type	Gripper Type	Required Gripper Mounting Angles	Required Gripper Bracket
GT11	OH	620L	620L-041	N/A
		622L	622L-041	N/A
		620H	620H-041	N/A
		622H	622H-041	N/A
	OD	620L	620L-OD-041	N/A
		622L	622L-OD-041	N/A
		620H	620L-OD-041	N/A
		622H	622L-OD-041	N/A
	BS	620L	N/A	GT11BS-205
		622L	N/A	GT11BS-205
		620H	N/A	GT11BS-205
		622H	N/A	GT11BS-205
GT31	OH	620L	620L-041	N/A
		622L	622L-041	N/A
		620H	620H-041	N/A
		622H	622H-041	N/A
		624H/626H	Standard	N/A
	OD	620L	620L-OD-041	N/A
		622L	622L-OD-041	N/A
		620H	620L-OD-041	N/A
		622H	622L-OD-041	N/A
		624H/626H	624-OD-041-1-L, 624-OD-041-1-R	N/A
	BS	620L	N/A	GT11BS-205
		622L	N/A	GT11BS-205
		620H	N/A	GT11BS-205
		622H	N/A	GT11BS-205
		624H/626H	N/A	GT31BS-205

Figure 4-18: Rope Gripper® - Machine duty table

4.6.1 Overhead Machine Rope Gripper Mounting

NOTE -

CONSULT THE PROPER ROPE GRIPPER INSTALLATION MANUAL FOR INSTALLATION OF THE ROPE GRIPPER.

- Remove the standard mounting feet that come with the rope gripper.
- Attach the non-standard specified in Figure 4-18 to the rope gripper with the required hardware and properly torque.
- Verify the assembly will not interfere with elevator equipment (machine frame, traction or deflector sheave, machine beams, etc.) or any other obstructions.
- Follow the rope gripper manual installation procedure and when appropriate attach the mounting angles to the machine base.
- See Figure 4-19 for an illustration of a finished installation.

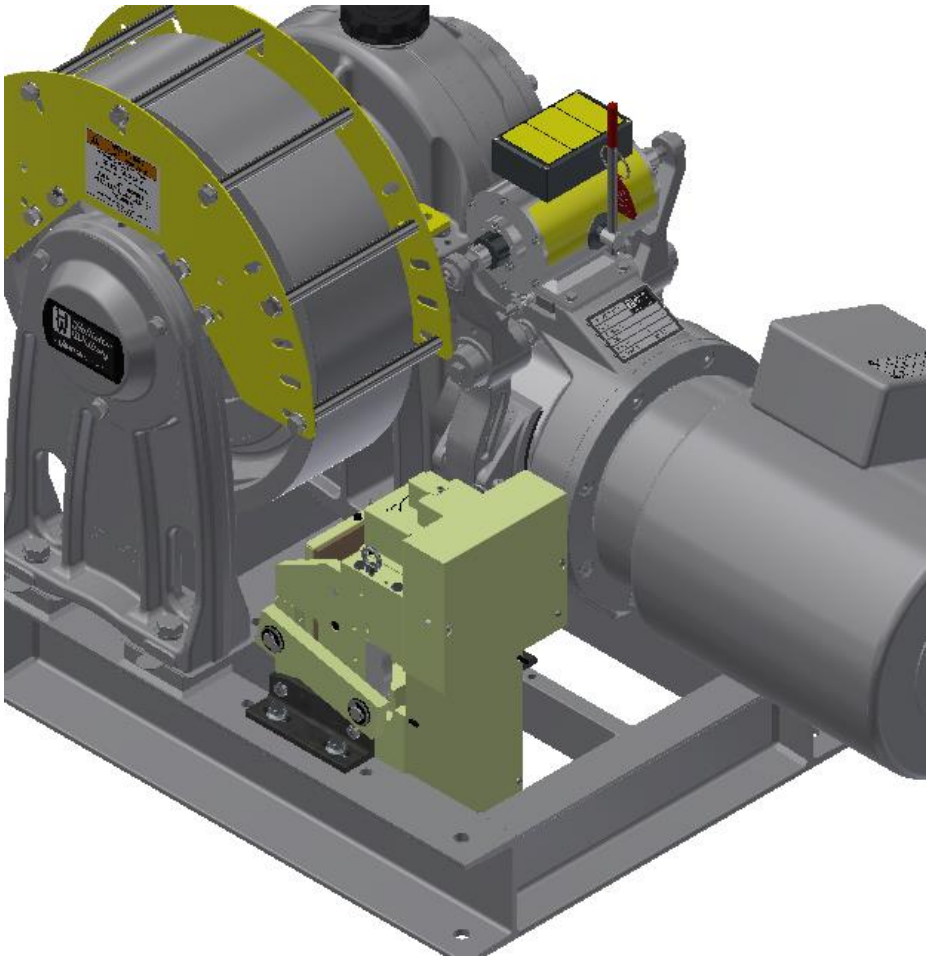


Figure 4-19: OH machine with gripper

4.6.2 Basement Set Machine Rope Gripper Mounting

NOTE -

CONSULT THE PROPER ROPE GRIPPER INSTALLATION MANUAL FOR INSTALLATION OF THE ROPE GRIPPER.

- If not already completed attach the rope gripper brackets specified in Figure 4-18 to the machine stands with the required hardware and properly torque.
- Verify the assembly will not interfere with elevator equipment (machine frame, traction or deflector sheave, machine beams, etc.) or any other obstructions.
- Follow the rope gripper manual installation procedure and when appropriate attach the mounting angles to the mounting brackets.
- See Figure 4-20 for an illustration of a finished installation.

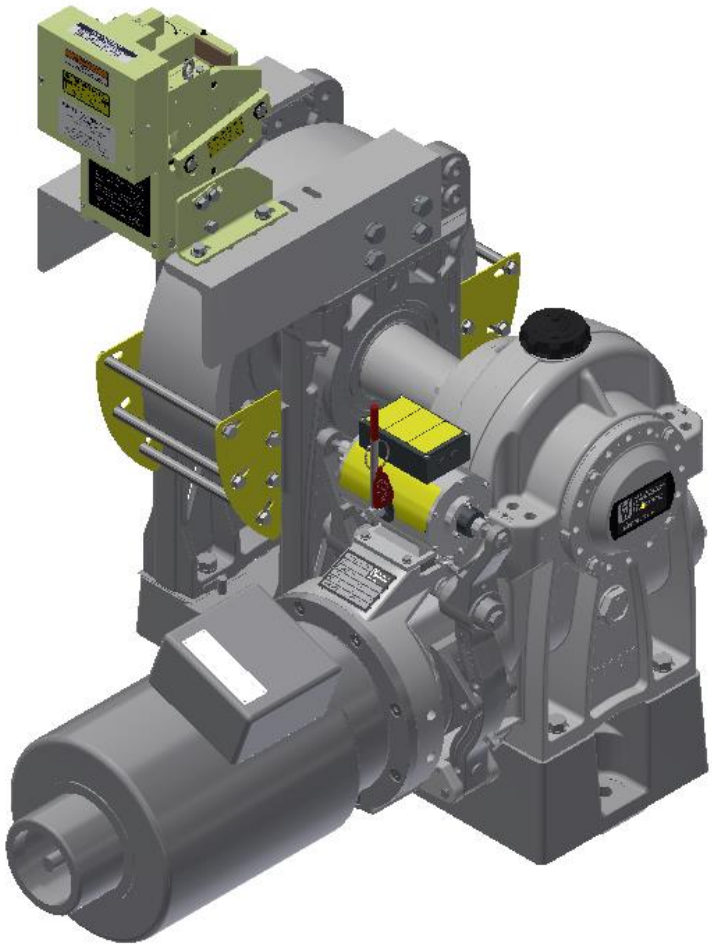


Figure 4-20: BS Machine with mounted gripper

4.6.3 Overhead Deflector Machine Rope Gripper Mounting

NOTE -

CONSULT THE PROPER ROPE GRIPPER INSTALLATION MANUAL FOR INSTALLATION OF THE ROPE GRIPPER.

- Remove the standard mounting feet that come with the rope gripper.
- Attach the non-standard specified in Figure 4-18 to the rope gripper with the required hardware and properly torque.
- Verify the assembly will not interfere with elevator equipment (machine frame, traction or deflector sheave, machine beams, etc.) or any other obstructions.
- Follow the rope gripper manual installation procedure and when appropriate attach the mounting angles to the machine up-stand.
- See Figure 4-21 for an illustration of a finished installation.

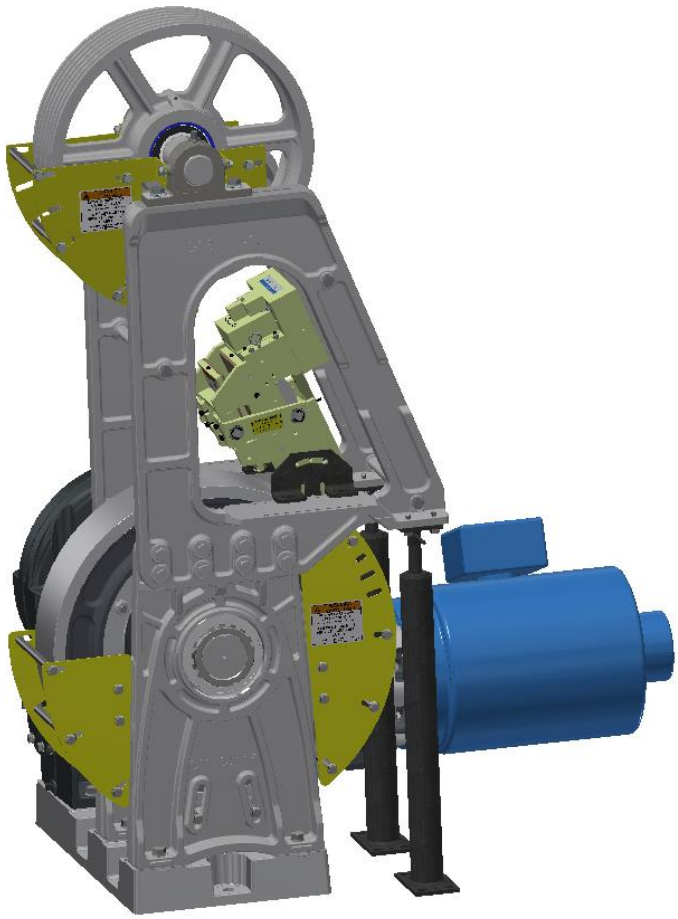


Figure 4-21: OD Machine with Mounted Gripper

Section

5

5 Adjustments

WARNING

Always wear the proper PPE when working on any equipment. Please follow your organizations PPE policy when working on Hollister-Whitney equipment.

5.1 Brake Torque Adjustment

The brake torque is set at the factory. No adjustment should be required unless service or maintenance is required on the brake.

5.1.1 Required Tools

Please see Bulletin #1187-1 for tool requirements

5.1.2 Brake Torque Adjustment Procedure

See Bulletin 1187-1 (Service Manual) Section 3.2 for Instruction

5.2 Brake Shoe Gap Adjustment

The brake shoe gap is set at the factory. No adjustment should be required unless service or maintenance is required on the brake.

5.2.1 Required Tools

Please see Bulletin #1187-1 for tool requirements

5.2.2 Brake Shoe Gap Adjustment Procedure

See Bulletin 1187-1 (Service Manual) Section 3.3 for Instruction

5.3 Brake Switch Adjustment

The brake switch actuation is set at the factory. No adjustment should be required unless service or maintenance is required on the brake.

5.3.1 Required Tools

5/8” Open Ended Wrench, 1” Open Ended Wrench, Tamper Resistant Paint

5.3.2 Brake Switch Adjustment Procedure

With the solenoid de-energized and the brakes fully engaged, adjust the adjustment bolt until the switch makes an audible “click” and then rotate the bolt one flat further. Tighten the jam nut once adjusted and apply tamper resistant paint across the nut and adjustment bolt threads.

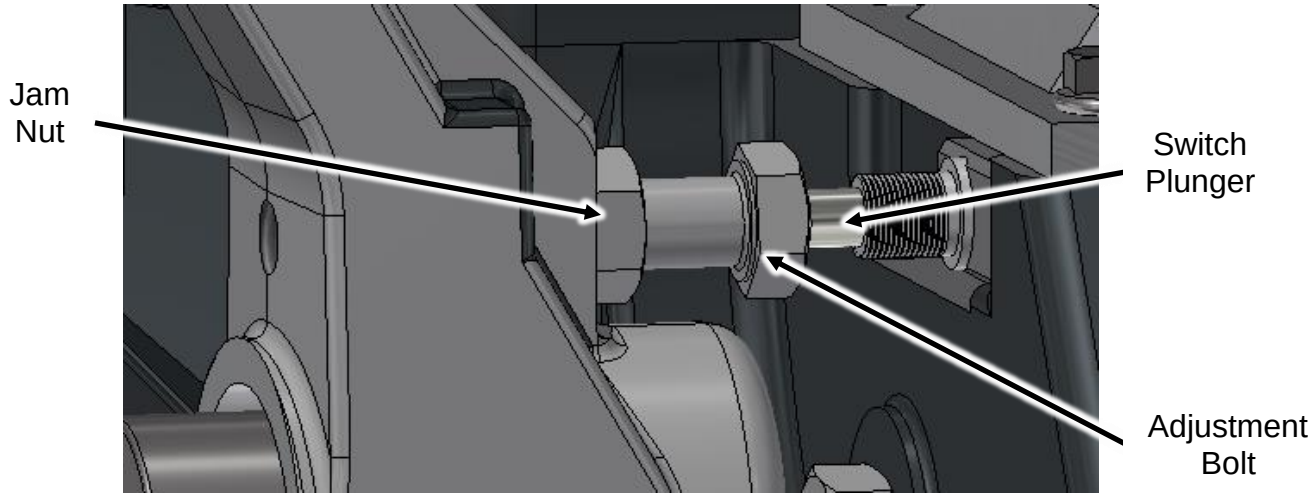


Figure 5-1: Brake Switch/Adjustment Bolt

5.4 Brake Solenoid Plunger/Adjustment Bolt Gap Adjustment

The brake solenoid plunger/adjustment bolt gap is set at the factory. No adjustment should be required unless service or maintenance is required on the brake.

5.4.1 Required Tools

5/8” Open Ended Wrench, 1” Open Ended Wrench, Tamper Resistant Paint, Measuring Device

5.4.2 Adjustment Procedure

With the solenoid de-energized and the brakes fully engaged, adjust the adjustment bolt until there is axial “free play” of 0.02” minimum between the adjustment bolt and the solenoid plunger. Tighten the jam nut once adjusted and apply tamper resistant paint across the nut and the adjustment bolt threads.

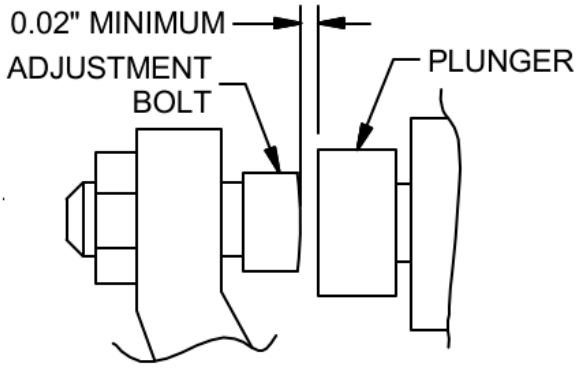


Figure 5-2: Adjustment Bolt/Plunger Gap

5.5 Worm/Gear Backlash Adjustment

The worm/gear backlash is set at the factory. No adjustment should be required unless service or maintenance is required on the worm or gear.

5.5.1 Worm/Gear Backlash End Play

If worm/gear end play adjustment is necessary, then the recommended endplay setting is 0.000” to 0.001”.

5.5.2 Required Tools

Please see Bulletin #1187-1 for tool requirements

5.5.3 Worm/Gear Backlash Adjustment Procedure

The worm/gear backlash adjustment procedure can be found in Bulletin #1187-1 (Service Manual) Section 5.5. Due to the complexity of adjusting the backlash, please go to the Hollister-Whitney Channel on YouTube for instructions. Scan the following QR code for direct access to the video:

5.6 Worm/Gear Pattern Adjustment

The worm/gear pattern is set at the factory. No adjustment should be required unless service or maintenance is required on the worm or gear.

5.6.1 Required Tools

Please see Bulletin #1187-1 for tool requirements

5.6.2 Worm/Gear Recommended Pattern

If the worm/gear pattern adjustment is necessary, then the recommended pattern for a GT-series machine is a centered pattern. The centered pattern should be on both flanks and should look similar to Figure 5-3 when adjusted per the recommendation:

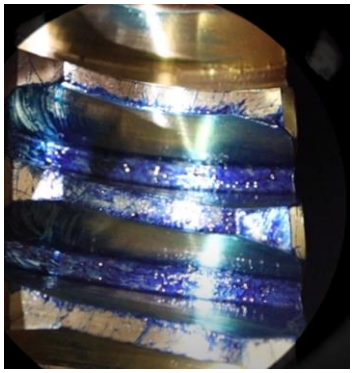


Figure 5-3: Centered Worm/Gear Pattern

5.6.3 Worm/Gear Pattern Adjustment Procedure

The worm/gear pattern adjustment procedure can be found in Bulletin #1187-1 (Service Manual). However, due to the complexity of adjusting the worm/gear pattern, please go to the Hollister-Whitney Channel on YouTube for instructions. Scan the following QR code for direct access to the video:

Section

6

6 Maintenance

WARNING

Before performing any maintenance checks on equipment, take all the necessary safety precautions to immobilize the car and counterweight to prevent any unintended movement during the maintenance period that may result in injury or death!

6.1 General

To keep equipment functioning efficiently, good maintenance practices must be established, observed, and maintained. Systematic inspections of the equipment should be scheduled, and records kept of these inspections. Monitoring these records will indicate any sign of a potential issue.

Each installation has its own special considerations, as a result it is difficult for Hollister-Whitney to outline specific plans for periodic inspections and maintenance. However, Section 6.3 provides a general recommendation inspection and maintenance table. However, the maintenance contractor will need to make the final determination.

All ASME A17.1 code required inspections, maintenance, and periodic tests shall be followed.

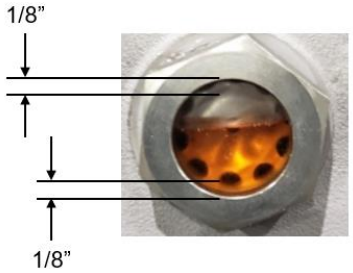
6.2 Cleaning

Dirt, dust, excess lubrication, and moisture are the greatest enemies of electrical equipment and of maintenance teams in general. Dirt and dust layers on a machine can prevent heat dissipation, which can lead to overheating. Dust and dirt can draw moisture to unpainted surfaces such as brake components causing oxidation that can cause brake faults. Excess lubrication can draw dust and dirt as well.

Dust and dirt can be removed from surfaces with a dry, lint-free cloth, or with suction. With suction, however, care must be taken to not build up or discharge static electricity while cleaning. Dry, compressed air (at less than 50psi) may also be used to remove dirt and dust, however, this must be closely monitored as the compressed air will re-suspend the dust and dirt in the machine room atmosphere.

6.3 Recommended Inspection / Maintenance

6.3.1 Lubrication System

Type	Item	Interval	Requirement
Maintenance	Oil Change	Initial Interval: 400 hrs after installation Ongoing Interval: Every 2,500 hrs of machine runtime	Use Mobil SHC 636 gear box oil See Bulletin #1187-1 (Service Manual) for oil change instructions
Inspection	Oil Level	Monthly	Oil level must be between 1/8” of top and 1/8” of bottom of oil sight glass window after not running for 15 minutes 
Inspection	Oil Leaks	Monthly	No leaks
Inspection	Oil Quality	Quarterly	1. The oil should have a consistent viscosity with no coagulation 2. The oil should not have a “burnt” or foul odor

6.3.2 Drive System

Type	Item	Interval	Requirement
Inspection	Bronze Gear Tooth Wear	Yearly	Any “grooving” in the bronze gear in the area where the bronze gear meshes with the worm should not exceed a step depth of 1/32”
Inspection	Rope Groove Wear	Quarterly	1. Rope height across all ropes must be within 1/32” of an inch relative to each other. See 6.4.1. for additional information. 2. No evidence of metal “filings” accumulating around the traction wheel

6.3.3 Guarding/Rope Retention

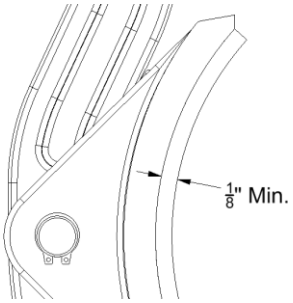
Type	Item	Interval	Requirement

Inspection	Guarding	Monthly	Guarding and rope retainers should have enough clearance to prevent any rubbing

6.3.4 Brake System

WARNING

If the brake pad wears too much, the brake will be not function properly.

Type	Item	Interval	Requirement
Inspection	Brake Pad to Brake Drum Clearance When Pads Disengaged from Drum	Monthly	Gap must be .002” to .007”  If out of adjustment, follow adjustment procedure detailed in Section 5
Inspection	Brake Pad Thickness	Quarterly	Minimum of .125” (1/8”) pad thickness  If less than 1/8” material is present, replace the brake shoe
Inspection	Brake Adjustment Seal	Monthly	Tamper evident paint seal must not be cracked

6.4 Other Items / Comments

6.4.1 Traction Wheels

Traction wheels are the most likely item to wear. Periodic measurements of rope depth and the evenness of wear for all ropes (groove depth should wear evenly) should be monitored. Cable should not be more than 0.125 inch (1/8”) below the outer rim of the traction wheel. If cables, are below 0.125 inch, or if wear is uneven, replace the traction wheel and cables.

DO NOT re-groove sheaves.

6.4.2 Bearings

Bearings have been sized for the maximum speeds, loads and capacities found in this manual. Bearings are sealed and require no maintainable lubrication.

Section

7

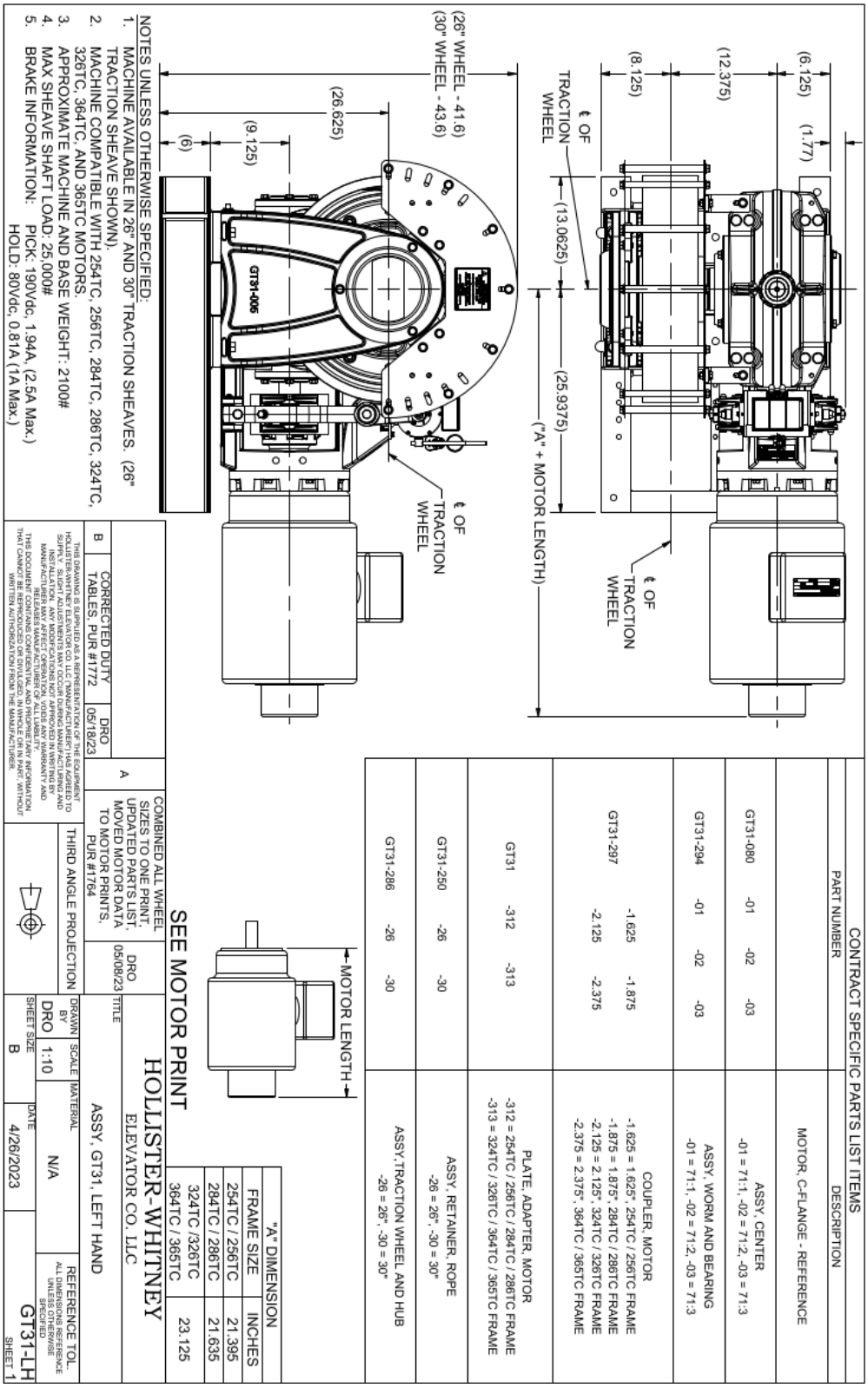
7 Service / Replacement

For service and replacement instructions please refer to Bulletin #1187-1 (Service Manual)

Please go to the Hollister-Whitney YouTube Channel for video instructions on many service procedures detailed in the service manual. Scan the following QR code for direct access to the video:

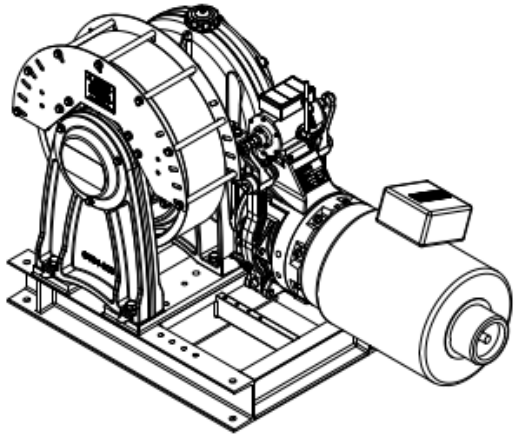
7.1 General Assembly Drawings

7.1.1 GT31OH

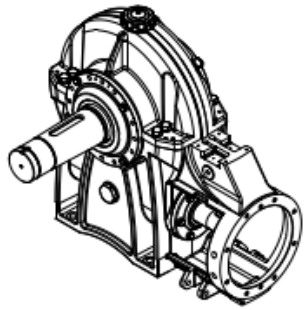


ENGINEERING MASTER PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	GT31-273-01	ASSY, GEAR BOX, SINGLE LEAD, 71:1
		GT31-273-02	ASSY, GEAR BOX, DOUBLE LEAD, 71:2
		GT31-273-03	ASSY, GEAR BOX, TRIPLE LEAD, 71:3
2	1	GT31-OH-1	ASSY, BASE, FINISHED
3	1	GT31-005	STAND, OUTBOARD
4	AS REQ'D	GT31-062-05	SHIM, STAND, OUTBOARD, 0.0050" THICK
		GT31-062-10	SHIM, STAND, OUTBOARD, 0.0100" THICK
		GT31-062-31	SHIM, STAND, OUTBOARD, 0.0310" THICK
5	1	GT31-093	BEARING, ROLLER, SPHERICAL
6	1	GT31-250-26	ASSY, RETAINER, ROPE, 26"
		GT31-250-30	ASSY, RETAINER, ROPE, 30"
7	1	GT31-281	COVER, STAND, OUTBOARD
8	1	GT31-282	NUT, LOCK, SHAFT
9	1	GT31-283	WASHER, LOCK, SHAFT
10	1	GT31-286-26	ASSY, TRACTION WHEEL AND HUB, 26"
		GT31-286-30	ASSY, TRACTION WHEEL AND HUB, 30"
11	2	GT31-290	CONDUIT, METAL, FLEXIBLE, 3/8"
12	2	GT31-291	ADAPTER, FMC, 90 DEG ELBOW, 3/8"
13	2	GT31-293	ADAPTER, STRAIGHT, FMC, 3/8"
14	1	GT31-297-1.625	COUPLER, MOTOR, 1.625", 254TC / 256TC FRAME
		GT31-297-1.875	COUPLER, MOTOR, 1.875", 284TC / 286TC FRAME
		GT31-297-2.125	COUPLER, MOTOR, 2.125", 324TC / 326TC FRAME
		GT31-297-2.375	COUPLER, MOTOR, 2.375", 364TC / 365TC FRAME
15	1	GT31-298	ELEMENT, COUPLING
16	2	GT31-299	BUSHING, ANTI-SHORT, FEMALE, FMC, 3/8"
17	1	GT31-300	KEY, SHAFT, WHEEL
18	1	GT31-310	NUT, LOCK, SHAFT
19	1	GT31-311	WASHER, LOCK, SHAFT
20	1	GT31-312	PLATE, ADAPTER, MOTOR, 254TC / 256TC / 284TC / 286TC FRAME
		GT31-313	PLATE, ADAPTER, MOTOR, 324TC / 326TC / 364TC / 365TC FRAME
21	1	GT31-314	ASSY, SOLENOID, BRAKE
22	2	GT31-315	ASSY, ARM, BRAKE
23	2	GT31-321	PIN, PIVOT
24	1	GT31-322	DRUM, BRAKE
25	1	GT31-326	PLATE, RETENTION, BEARING, STAND
26	2	GT31-327	ASSY, SWITCH, BRAKE
27	1	GT31-358	ASSY, BLOCK, TERMINAL
28	1	P-208	MANUAL BRAKE RELEASE TAG
29	2	P-223-R	CUSTOMER NAMEPLATE
30	1	P-226	LABEL, DATA, ELECTRICAL, BRAKE
31	1	P-227	LABEL, INSTRUCTION, BRAKE
32	1	P-228	LABEL, WIRING, BRAKE
33	1	P-231	TAG, DATA, MOTOR, CONTRACT
34	1	P-236	MACHINE DATA TAG
35	4	#6-32 UNC X 7/8"	SCREW, HEX HEAD
36	4	5/16"-18 UNC X 3/4"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
37	1	7/16"-14 UNC X 2-1/4"	SCREW, HEX, CAP, SOCKET HEAD, BLACK OXIDE FINISH
38	AS REQ'D	1/2"-13 UNC X 1-1/2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
39	AS REQ'D	1/2"-13 UNC X 1-1/2"	SCREW, HEX, CAP, FLAT SOCKET HEAD, BLACK OXIDE FINISH
40	4	5/8" - MS 16624	RING, RETAINING, EXTERNAL, SERIES 3100
41	4	5/8" X 1-1/2"	PIN, DOWEL, GROUND, HARDENED
42	AS REQ'D	5/8" - 11 UNC x 1-1/2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
43	8	3/4"-10 UNC X 2-1/2"	BOLT, HEX, GRADE 5, BLACK OXIDE FINISH
44	8	3/4"	WASHER, LOCK, HELICAL
45	2.5 gal	MOBIL SHC 636	OIL, GEAR, HIGH PRESSURE

GT31-273 PARTS LIST					
ITEM	QTY GT31-273-01	QTY GT31-273-02	QTY GT31-273-03	PART NUMBER	DESCRIPTION
2.1	1	0	0	GT31-080-01	ASSY, CENTER, SINGLE LEAD
2.1	0	1	0	GT31-080-02	ASSY, CENTER, DOUBLE LEAD
2.1	0	0	1	GT31-080-03	ASSY, CENTER, TRIPLE LEAD
2.2	1	1	1	GT31-284	ASSY, UPPER AND LOWER HOUSING, MACHINED
2.3	1	0	0	GT31-294-01	ASSY, WORM SHAFT AND BEARING, 7/8" SINGLE
2.3	0	1	0	GT31-294-02	ASSY, WORM SHAFT AND BEARING, 7/8" DOUBLE
2.3	0	0	1	GT31-294-03	ASSY, WORM SHAFT AND BEARING, 7/8" TRIPLE
2.4	1	1	1	GT31-083	CAP, FILL, OIL
2.5	1	1	1	GT31-085	CAP, BEARING, REAR END
2.6	1	1	1	GT31-085-FE	CAP, BEARING, FORWARD END
2.7	7	1	1	GT31-087	SHIM, CAP, BEARING
2.8	1	1	1	GT31-276	GLASS, SIGHT, OIL
2.9	1	1	1	GT31-277	PLUG, DRAIN, OIL
2.10	1	1	1	GT31-278	PLUG, OIL
2.11	1	1	1	GT31-279	O-RING, PLUG, OIL
2.12	1	1	1	GT31-287	SEAL, SHAFT, RADIAL
2.13	1	1	1	GT31-287-1	SEAL, SHAFT, RADIAL
2.14	4	4	4	GT31-295	SHIM, ECCENTRIC, EDGE BONDED
2.15	1	1	1	GT31-301	KEY, SHAFT, WORM
2.16	20	20	20	1/2"-13 UNC X 1.5	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED

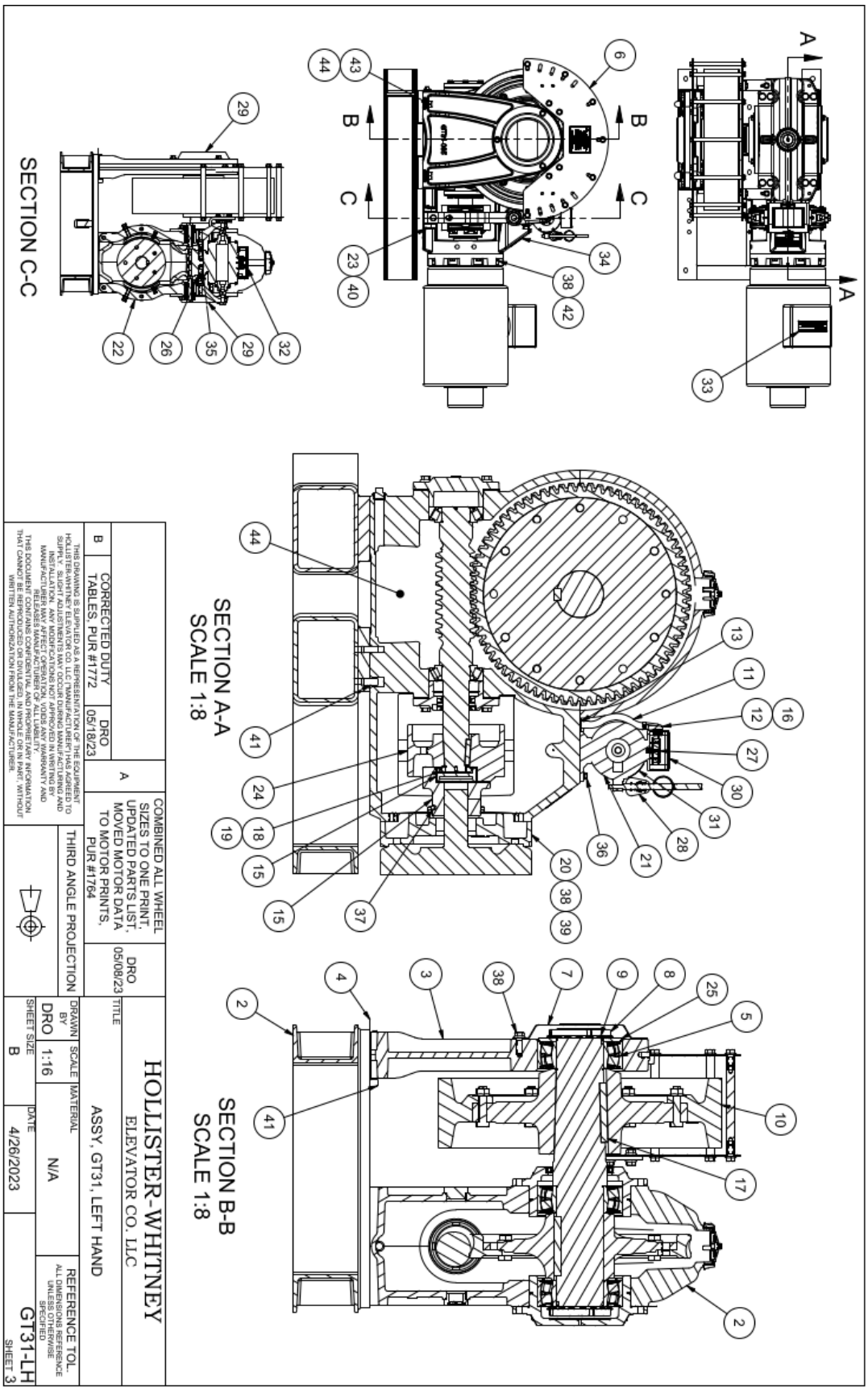


GT31-LH



GT31-273

		A	COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS, PUR #1764	DRO 05/08/23	HOLLISTER-WHITNEY ELEVATOR CO. LLC
B	CORRECTED DUTY TABLES, PUR #1772	DRO 05/18/23			TITLE: ASSY, GT31, LEFT HAND
THIS DRAWING IS SUPPLIED AS A REPRESENTATION OF THE EQUIPMENT HOLLISTER-WHITNEY ELEVATOR CO. LLC ("MANUFACTURER") HAS AGREED TO SUPPLY. SLIGHT ADJUSTMENTS MAY OCCUR DURING MANUFACTURING AND INSTALLATION. ANY MODIFICATIONS NOT APPROVED IN WRITING BY MANUFACTURER MAY AFFECT OPERATION, VOIDS ANY WARRANTY AND RELEASES MANUFACTURER OF ALL LIABILITY. THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION THAT CANNOT BE REPRODUCED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT WRITTEN AUTHORIZATION FROM THE MANUFACTURER.			THIRD ANGLE PROJECTION		DRAWN BY: DRO; SCALE: 1:10; MATERIAL: N/A; REFERENCE TOL: ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED; SHEET SIZE: C; DATE: 4/26/2023; GT31-LH; SHEET 2	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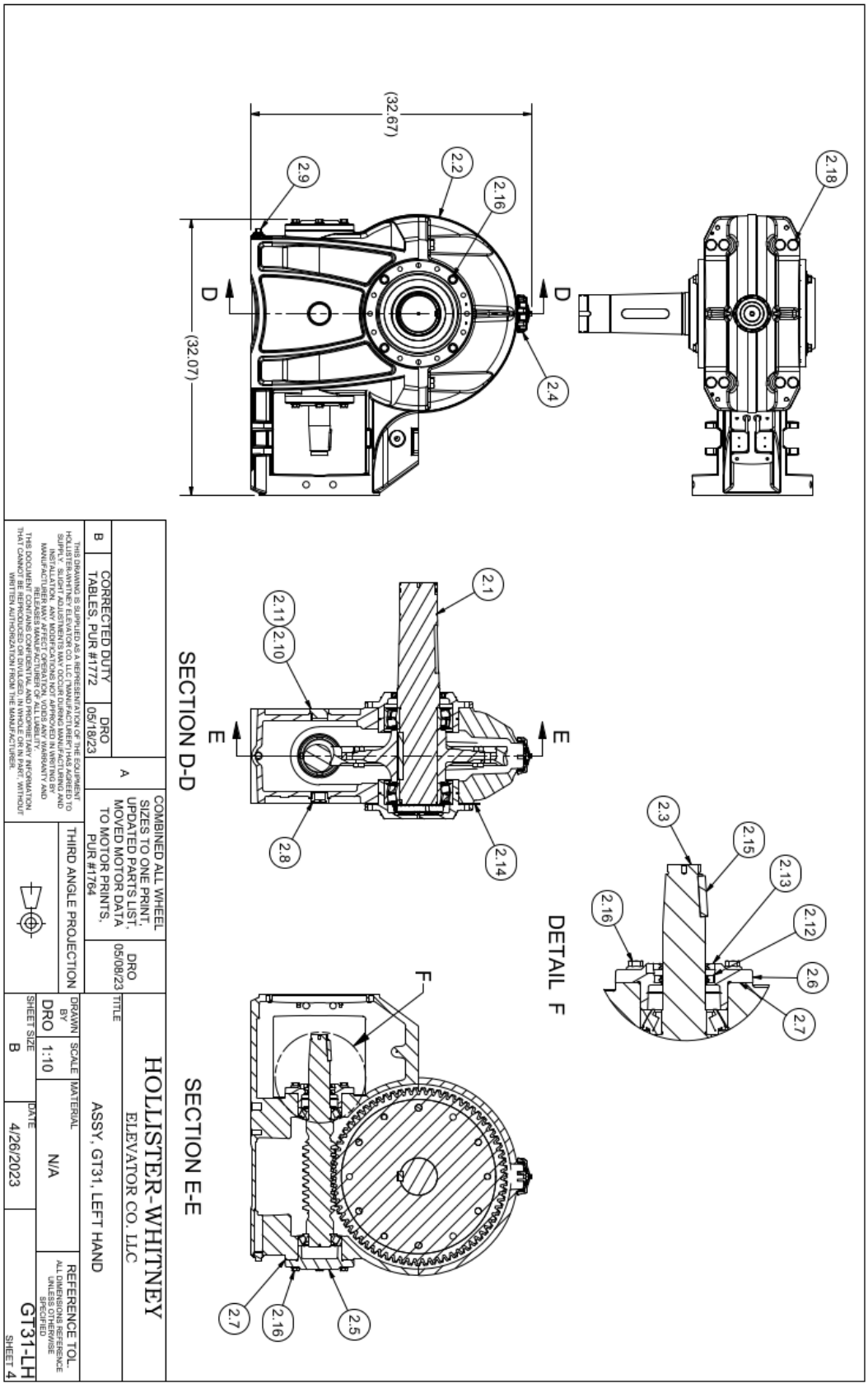
SECTION A-A
SCALE 1:8
SECTION B-B
SCALE 1:8
HOLLISTER-WHITNEY
ELEVATOR CO. LLC
ASSY, GT31, LEFT HAND
GT31-LH
SHEET 3
REFERENCE TOL
ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED
N/A
4/26/2023
1:16
DRO
B
THIRD ANGLE PROJECTION
COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS, PUR #1764
CORRECTED DUTY TABLES, PUR #1772
05/18/23
05/08/23
THIS DRAWING IS SUPPLIED AS A REPRESENTATION OF THE EQUIPMENT FURNISHED. ALL DIMENSIONS ARE SUBJECT TO SUPPLY. SLIGHT ADJUSTMENTS MAY OCCUR DURING MANUFACTURING AND INSTALLATION. ANY MODIFICATIONS NOT APPROVED IN WRITING BY MANUFACTURER MAKES MANUFACTURER'S WARRANTY AND LIABILITY VOID.
THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION THAT CANNOT BE REPRODUCED OR DIVULGED, IN WHOLE OR IN PART, WITHOUT WRITTEN AUTHORIZATION FROM THE MANUFACTURER.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2.16
2.7
DETAIL F
F
2.7
2.16
2.5
SECTION E-E
B
CORRECTED DUTY TABLES, PUR #1772
DRO
05/18/23
A
COMBINED ALL WHEEL SIZES TO ONE PRINT. UPDATED PARTS LIST. MOVED MOTOR DATA TO MOTOR PRINTS. PUR #1764
DRO
05/08/23
THIRD ANGLE PROJECTION
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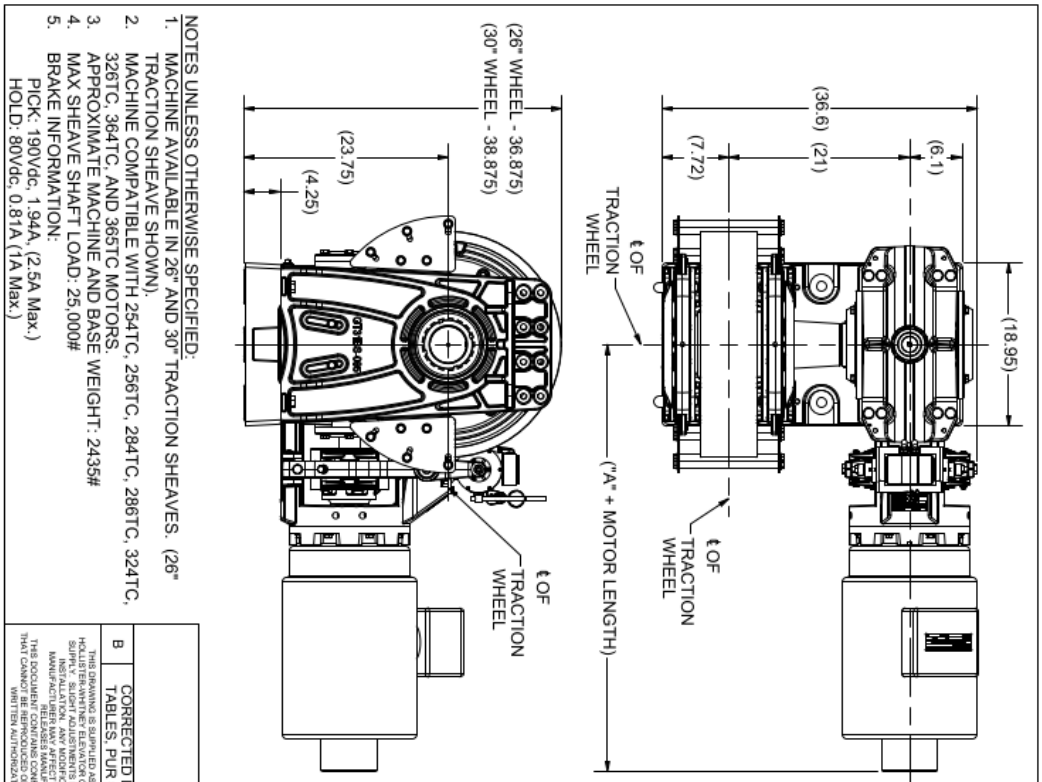
THIS DOCUMENT AND THE INFORMATION CONTAINED IN IT INCLUDES PROPRIETARY INFORMATION THAT CANNOT BE REPRODUCED OR DIVULGED, IN WHOLE OR IN PART, WITHOUT WRITTEN AUTHORIZATION FROM THE MANUFACTURER.
HOLLISTER-WHITNEY
ELEVATOR CO. LLC
TITLE
ASSY, GT31, LEFT HAND
DRAWN BY
DRO
SCALE
1:10
MATERIAL
N/A
REFERENCE TOL.
ALL DIMENSIONS REFERENCE NOMINAL SIZE UNLESS OTHERWISE SPECIFIED
SHEET SIZE
B
DATE
4/26/2023
GT31-LH
SHEET 4

7.1.2 GT31BS



CONTRACT SPECIFIC PARTS LIST ITEMS

PART NUMBER				DESCRIPTION
				MOTOR, C-FLANGE - REFERENCE
GT31-080	-01	-02	-03	ASSY, CENTER -01 = 71:1, -02 = 71:2, -03 = 71:3
GT31-294	-01	-02	-03	ASSY, WORM AND BEARING -01 = 71:1, -02 = 71:2, -03 = 71:3
GT31-297	-1.625	-1.875		COUPLER, MOTOR -1.625 = 1.625", 254TC / 256TC FRAME -1.875 = 1.875", 284TC / 286TC FRAME
	-2.125	-2.375		-2.125 = 2.125", 324TC / 326TC FRAME -2.375 = 2.375", 364TC / 365TC FRAME
GT31	-312	-313		PLATE, ADAPTER, MOTOR -312 = 254TC / 256TC / 284TC / 286TC FRAME -313 = 324TC / 326TC / 364TC / 365TC FRAME
GT31-250	-26	-30		ASSY, RETAINER, ROPE -26 = 26", -30 = 30"
GT31-286	-26	-30		ASSY, TRACTION WHEEL AND HUB -26 = 26", -30 = 30"

"A" DIMENSION	
FRAME SIZE	INCHES
254TC / 256TC	21.395
284TC / 286TC	21.635
324TC /326TC 364TC / 365TC	23.125

NOTES UNLESS OTHERWISE SPECIFIED:
1. MACHINE AVAILABLE IN 26" AND 30" TRACTION SHEAVES. (26" TRACTION SHEAVE SHOWN).
2. MACHINE COMPATIBLE WITH 254TC, 256TC, 284TC, 286TC, 324TC, 326TC, 364TC, AND 365TC MOTORS.
3. APPROXIMATE MACHINE AND BASE WEIGHT: 2435#
4. MAX SHEAVE SHAFT LOAD: 25,000#
5. BRAKE INFORMATION:
   PICK: 190Vdc, 1.94A, (2.5A Max.)
   HOLD: 80Vdc, 0.81A (1A Max.)

REV	DESCRIPTION	DATE	APPROVED
B	CORRECTED DUTY TABLES, PUR #1772	DRO 05/18/23	
A	COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS. PUR #1764	DRO 05/08/23	

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THIRD ANGLE PROJECTION

SEE MOTOR PRINT

HOLLISTER-WHITNEY
ELEVATOR CO. LLC

TITLE: ASSY, GT31, LEFT HAND, BS

DRAWN BY	SCALE	MATERIAL	REFERENCE TOL.
DRO	1:12	N/A	ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED

SHEET SIZE	DATE	
B	5/8/2023	GT31BS-LH

SHEET 1

ENGINEERING MASTER PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	GT31BS-273-01	ASSY, GEAR BOX, SINGLE LEAD, 71:1
		GT31BS-273-02	ASSY, GEAR BOX, DOUBLE LEAD, 71:2
		GT31BS-273-03	ASSY, GEAR BOX, TRIPLE LEAD, 71:3
2	1	GT31BS-001	BASE, BS/OD
3	2	GT31BS-005	STAND, OUTBOARD, BS
4	AS REQ'D	GT31-062-05	SHIM, STAND, OUTBOARD, 0.005" THICK
		GT31-062-01	SHIM, STAND, OUTBOARD, 0.010" THICK
		GT31-062-31	SHIM, STAND, OUTBOARD, 0.031" THICK
5	1	GT31-093	BEARING, ROLLER, SPHERICAL
6	1	GT31-094	BEARING, ROLLER, SPHERICAL
7	1	GT31BS-250-26	ASSY, RETAINER, ROPE, BS, 26"
		GT31BS-250-30	ASSY, RETAINER, ROPE, BS, 30"
8	1	GT31-282	NUT, LOCK, SHAFT
9	1	GT31-283	WASHER, LOCK, SHAFT
10	1	GT31-286-26	ASSY, TRACTION WHEEL AND HUB, 26"
		GT31-286-30	ASSY, TRACTION WHEEL AND HUB, 30"
11	2	GT31-290	CONDUIT, METAL, FLEXIBLE, 3/8"
12	2	GT31-291	ADAPTER, FMC, 90 DEG ELBOW, 3/8"
13	2	GT31-293	ADAPTER, STRAIGHT, FMC, 3/8"
14	1	GT31-297-1.625	COUPLER, MOTOR, 1.625", 254TC / 256TC FRAME
		GT31-297-1.875	COUPLER, MOTOR, 1.875", 284TC / 286TC FRAME
		GT31-297-2.125	COUPLER, MOTOR, 2.125", 324TC / 326TC FRAME
		GT31-297-2.375	COUPLER, MOTOR, 2.375", 364TC / 365TC FRAME
15	1	GT31-298	ELEMENT, COUPLING
16	2	GT31-299	BUSHING, ANTI-SHORT, FEMALE, FMC, 3/8"
17	1	GT31-300	KEY, SHAFT, WHEEL
18	1	GT31-310	NUT, LOCK, SHAFT
19	1	GT31-311	WASHER, LOCK, SHAFT
20	1	GT31-312	PLATE, ADAPTER, MOTOR, 254TC / 256TC / 284TC / 286TC FRAME
		GT31-313	PLATE, ADAPTER, MOTOR, 324TC / 326TC / 364TC / 365TC FRAME
21	1	GT31-314	ASSY, SOLENOID, BRAKE
22	2	GT31-315	ASSY, ARM, BRAKE
23	2	GT31-321	PIN, PIVOT
24	1	GT31-322	DRUM, BRAKE
25	1	GT31-326	PLATE, RETENTION, BEARING, STAND
26	2	GT31-327	ASSY, SWITCH, BRAKE
27	1	GT31-358	ASSY, BLOCK, TERMINAL
28	1	GT31BS-368	RETAINING RING, SPIRAL, MEDIUM DUTY
29	1	P-208	MANUAL BRAKE RELEASE TAG
30	1	P-223-R	CUSTOMER NAMEPLATE
31	1	P-226	LABEL, DATA, ELECTRICAL, BRAKE
32	1	P-227	LABEL, INSTRUCTION, BRAKE
33	1	P-228	LABEL, WIRING, BRAKE
34	1	P-231	TAG, DATA, MOTOR, CONTRACT
35	1	P-236	MACHINE DATA TAG
36	4	#6-32 UNC X 7/8"	SCREW, HEX HEAD
37	4	5/16"-18 UNC X 3/4"	BOLT, HEX SERRATED FLANGE, GRADE 5, ZINC-PLATED
38	1	7/16" - 14 UNC X 2-1/4"	SCREW, HEX, CAP, SOCKET HEAD, BLACK OXIDE FINISH
39	AS REQ'D	1/2"-13 UNC X 1-1/2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
40	AS REQ'D	1/2"-13 UNC X 1-1/2"	SCREW, HEX, CAP, FLAT SOCKET HEAD, BLACK OXIDE FINISH
41	4	5/8" - IMS 18624	RING, RETAINING, EXTERNAL, SERIES 3100
42	6	5/8" X 1-1/2"	PIN, DOWEL, GROUND, HARDENED
43	AS REQ'D	5/8" - 11 UNC x 1-1/2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
44	12	3/4"-10 UNC X 2-1/2"	BOLT, HEX, GRADE 5, BLACK OXIDE FINISH
45	12	3/4"	WASHER, LOCK
46	2.5 gal	MOBIL SHC 636	OIL, GEAR, HIGH PRESSURE

GT31BS-273 PARTS LIST

ITEM	QTY GT31BS-273-01	QTY GT31BS-273-02	QTY GT31BS-273-03	PART NUMBER	DESCRIPTION
2.1	1	0	0	GT31BS-080-01	ASSY, CENTER, SINGLE LEAD
2.1	0	1	0	GT31BS-080-02	ASSY, CENTER, DOUBLE LEAD
2.1	0	0	1	GT31BS-080-03	ASSY, CENTER, TRIPLE LEAD
2.2	1	1	1	GT31-264	ASSY, UPPER AND LOWER HOUSING, MACHINED
2.3	1	0	0	GT31-294-01	ASSY, WORM SHAFT AND BEARING, 7/8" SINGLE
2.3	0	1	0	GT31-294-02	ASSY, WORM SHAFT AND BEARING, 7/8" DOUBLE
2.3	0	0	1	GT31-294-03	ASSY, WORM SHAFT AND BEARING, 7/8" TRIPLE
2.4	1	1	1	GT31-063	CAP, FILL, OIL
2.5	1	1	1	GT31-085	CAP, BEARING, REAR END
2.6	1	1	1	GT31-085-FE	CAP, BEARING, FORWARD END
2.7	AS REQ'D	AS REQ'D	AS REQ'D	GT31-087	SHIM, CAP, BEARING
2.8	1	1	1	GT31-276	GLASS, SIGHT, OIL
2.9	1	1	1	GT31-277	PLUG, DRAIN, OIL
2.10	1	1	1	GT31-278	PLUG, OIL
2.11	1	1	1	GT31-279	O-RING, PLUG, OIL
2.12	1	1	1	GT31-287	SEAL, SHAFT, RADIAL
2.13	1	1	1	GT31-287-1	SEAL, SHAFT, RADIAL
2.14	4	4	4	GT31-295	SHIM, ECCENTRIC, EDGE BONDED
2.15	1	1	1	GT31-301	KEY, SHAFT, WORM
2.16	20	20	20	1/2"-13 UNC X 1-1/2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED

REV	DESCRIPTION	DRD
A	COMBINED ALL WHEEL SIZES TO ONE PRINT. UPDATED PARTS LIST. MOVED MOTOR DATA TO MOTOR PRINTS. PUR #1764	05/08/23
B	CORRECTED DUTY TABLES. PUR #1772	05/18/23

THIRD ANGLE PROJECTION

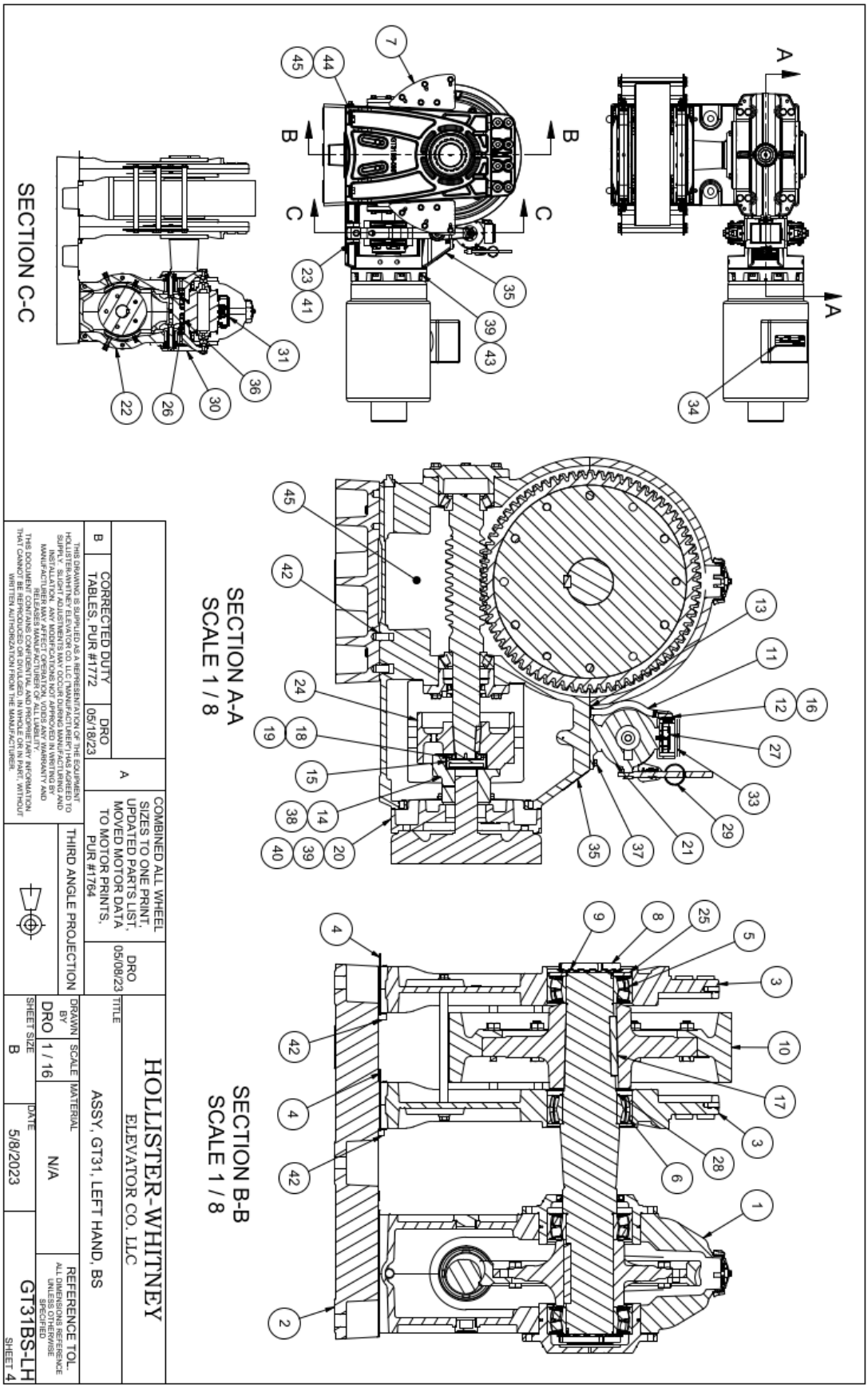
HOLLISTER-WHITNEY
ELEVATOR CO. LLC

TITLE: ASSY, GT31, LEFT HAND, BS

DRAWN BY: DRO | SCALE: 1:8 | MATERIAL: N/A | DATE: 5/8/2023 | SHEET SIZE: C

REFERENCE TOL ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED

GT31BS-LH SHEET 3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SECTION A-A
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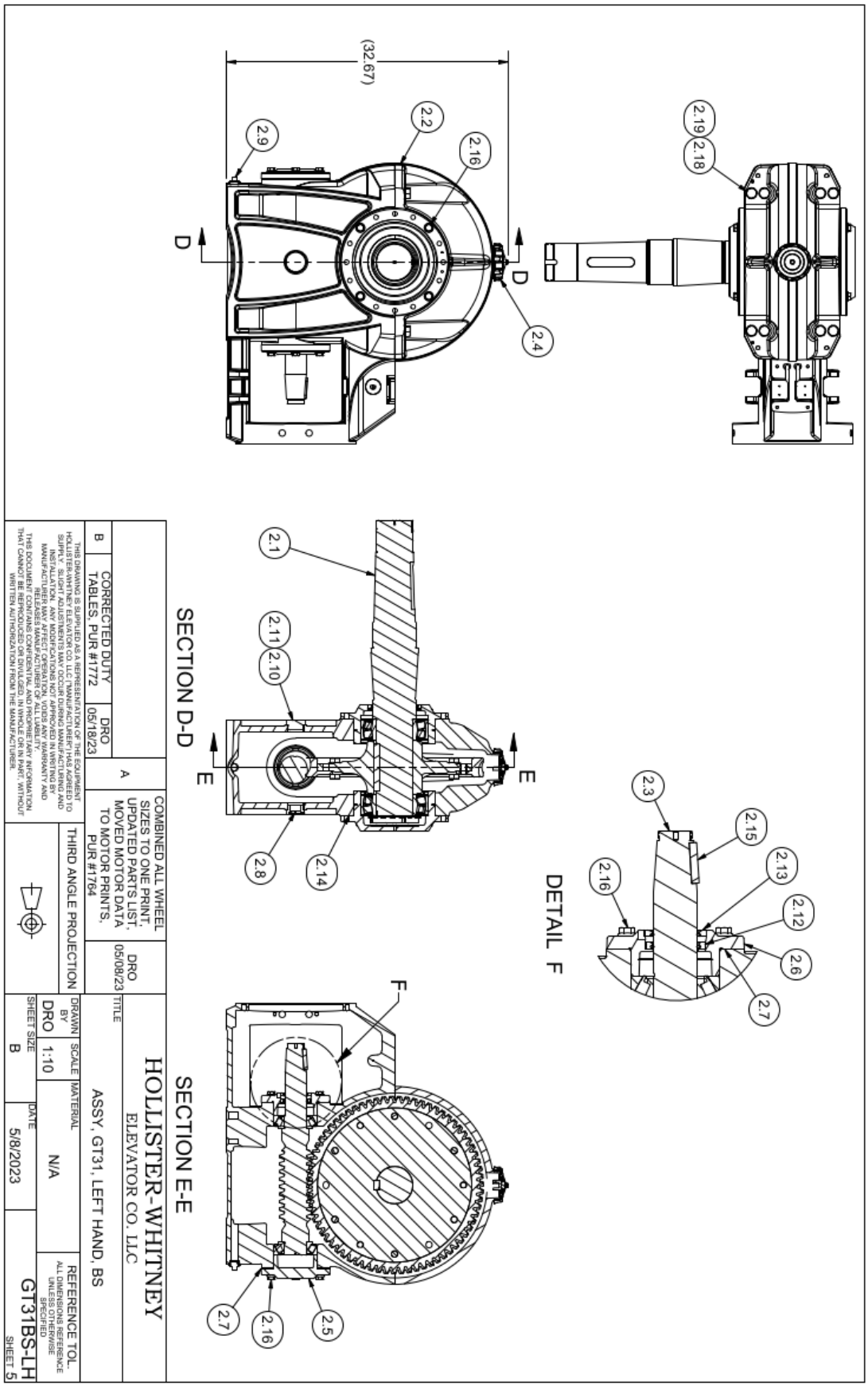
HOLLISTER-WHITNEY
ELEVATOR CO. LLC
ASSY, GT31, LEFT HAND, BS
GT31BS-LH
SHEET 4
CORRECTED DUTY TABLES, PUR #1772
COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS. PUR #1764
THIRD ANGLE PROJECTION
SCALE 1 / 16
SHEET SIZE B
DRAWN BY DRO
DATE 5/8/2023
MATERIAL N/A
REFERENCE TOL. ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED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DETAIL F
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SECTION E-E
B
CORRECTED DUTY TABLES, PUR #1772
DRO
05/18/23
A
COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS, PUR #1764
DRO
05/08/23
THIRD ANGLE PROJECTION
HOLLISTER-WHITNEY
ELEVATOR CO. LLC
TITLE
ASSY, GT31, LEFT HAND, BS
DRAWN BY
DRO
SCALE
1:10
MATERIAL
N/A
REFERENCE TOL.
ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED
SHEET SIZE
B
DATE
5/8/2023
GT31BS-LH
SHEET 5
THIS DRAWING IS SUPPLIED AS A REPRESENTATION OF THE EQUIPMENT HOLLISTER-WHITNEY ELEVATOR CO. LLC ("MANUFACTURER") HAS AGREED TO SUPPLY. SLIGHT ADJUSTMENTS MAY OCCUR DURING MANUFACTURING AND INSTALLATION. ANY MODIFICATIONS MADE IN THE FIELD BY ANYONE OTHER THAN MANUFACTURER MAY AFFECT OPERATION, VOIDS ANY WARRANTY AND RELEASES MANUFACTURER OF ALL LIABILITY.
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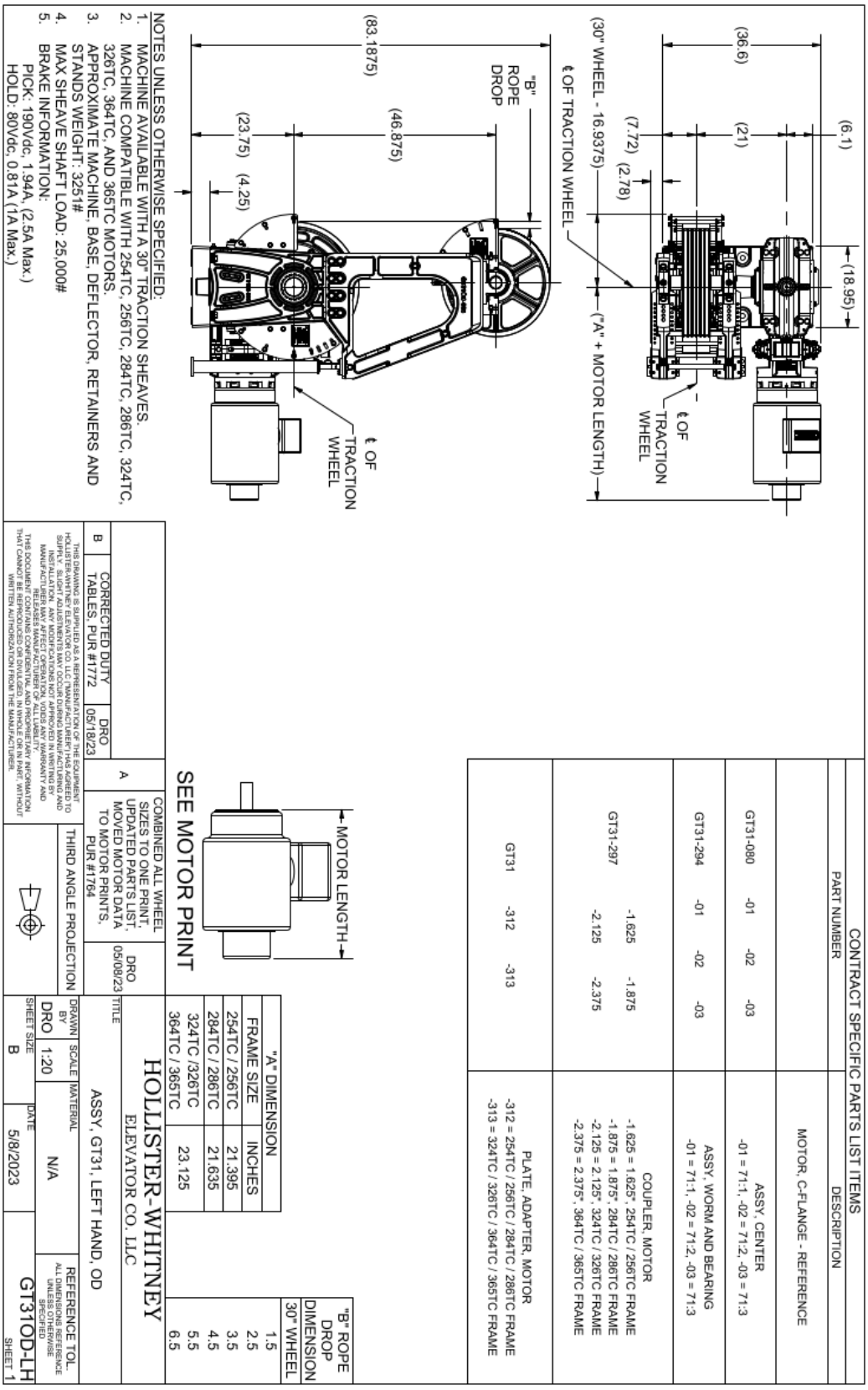
7.1.3 GT31OD



NOTES UNLESS OTHERWISE SPECIFIED:
1. MACHINE AVAILABLE WITH A 30" TRACTION SHEAVES.
2. MACHINE COMPATIBLE WITH 254TC, 256TC, 284TC, 286TC, 324TC, 326TC, 364TC, AND 365TC MOTORS.
3. APPROXIMATE MACHINE, BASE, DEFLECTOR, RETAINERS AND STANDS WEIGHT: 3251#
4. MAX SHEAVE SHAFT LOAD: 25,000#
5. BRAKE INFORMATION:
   PICK: 190Vdc, 1.94A, (2.5A Max.)
   HOLD: 80Vdc, 0.81A (1A Max.)

CONTRACT SPECIFIC PARTS LIST ITEMS

PART NUMBER				DESCRIPTION
				MOTOR, C-FLANGE - REFERENCE
GT31-080	-01	-02	-03	ASSY, CENTER -01 = 71:1, -02 = 71:2, -03 = 71:3
GT31-294	-01	-02	-03	ASSY, WORM AND BEARING -01 = 71:1, -02 = 71:2, -03 = 71:3
GT31-297		-1.625	-1.875	COUPLER, MOTOR -1.625 = 1.625", 254TC / 256TC FRAME -1.875 = 1.875", 284TC / 286TC FRAME
		-2.125	-2.375	-2.125 = 2.125", 324TC / 326TC FRAME -2.375 = 2.375", 364TC / 365TC FRAME
GT31	-312	-313		PLATE, ADAPTER, MOTOR -312 = 254TC / 256TC / 284TC / 286TC FRAME -313 = 324TC / 326TC / 364TC / 365TC FRAME

"A" DIMENSION	
FRAME SIZE	INCHES
254TC / 256TC	21.395
284TC / 286TC	21.635
324TC /326TC 364TC / 365TC	23.125

"B" ROPE DROP DIMENSION	
30" WHEEL	
1.5	2.5
2.5	3.5
3.5	4.5
4.5	5.5
5.5	6.5

REV	DESCRIPTION	DRO
B	CORRECTED DUTY TABLES, PUR #1772	05/18/23
A	COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS. PUR #1764	DRO 05/08/23

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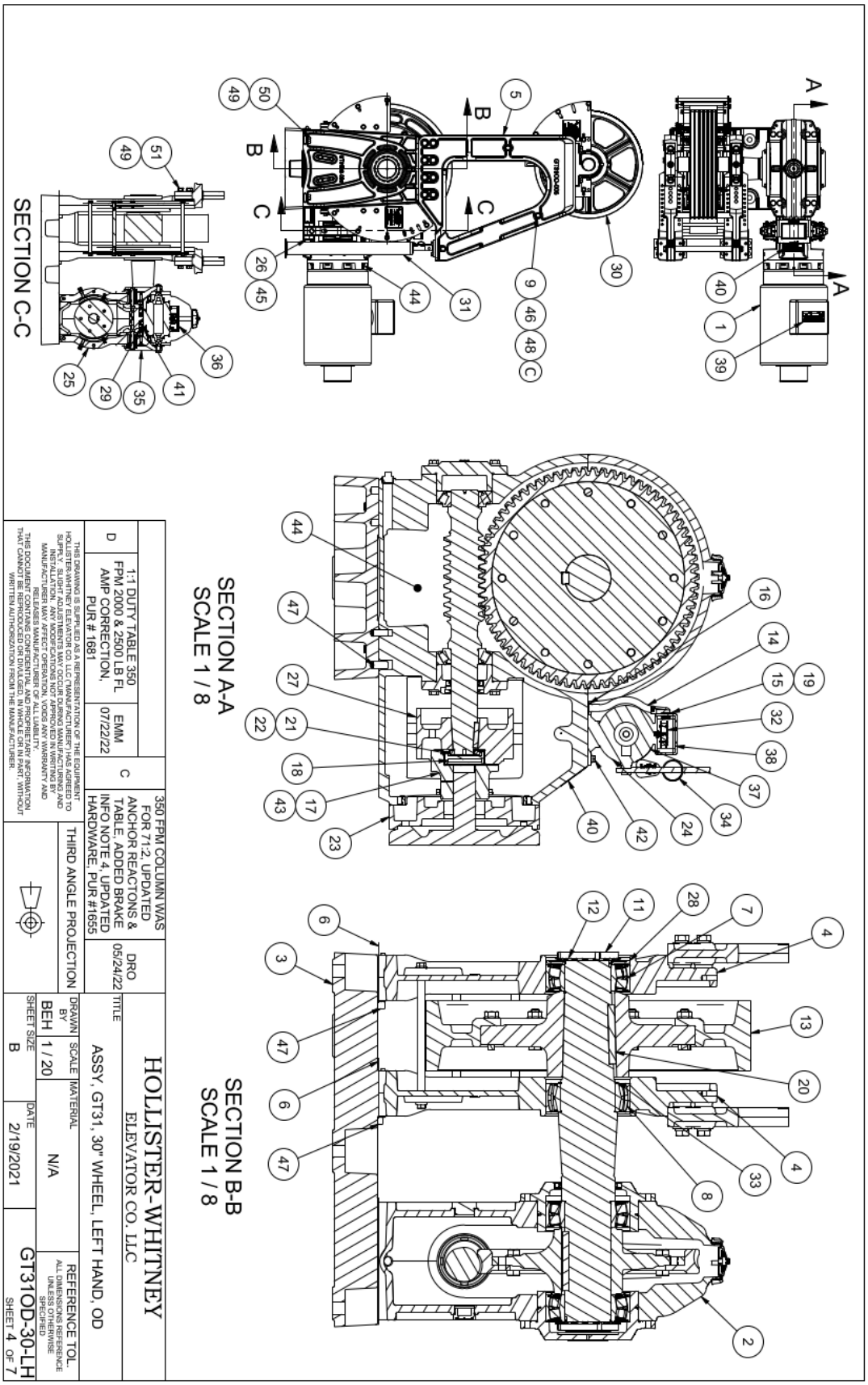
THIRD ANGLE PROJECTION

HOLLISTER-WHITNEY
ELEVATOR CO., LLC

TITLE: ASSY, GT31, LEFT HAND, OD

DRAWN BY	SCALE	MATERIAL	REFERENCE TOL. ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED
DRO	1:20	N/A	
SHEET SIZE: B		DATE: 5/8/2023	GT31OD-LH SHEET 1


SECTION C-C
SECTION A-A
SCALE 1 / 8
SECTION B-B
SCALE 1 / 8
D
1:1 DUTY TABLE 350 FPM 2000 & 2500 LB FL AMP CORRECTION, PUR # 1681
EMM 07/22/22
C
350 FPM COLUMN WAS FOR 71:2, UPDATED ANCHOR REACTONS & TABLE, ADDED BRAKE INFO NOTE 4, UPDATED HARDWARE, PUR #1655
DRO 05/24/22
THIRD ANGLE PROJECTION
HOLLISTER-WHITNEY ELEVATOR CO. LLC
ASSY, GT31, 30" WHEEL, LEFT HAND, OD
DRAWN BY BEH
SCALE 1 / 20
MATERIAL N/A
DATE 2/19/2021
SHEET SIZE B
GT31OD-30-LH
SHEET 4 OF 7
REFERENCE TOL
ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED
THIS DRAWING IS SUPPLIED AS A REPRESENTATION OF THE EQUIPMENT HOLLISTER-WHITNEY ELEVATOR CO. LLC HAS SUPPLIED TO SUPPLY. SLIGHT ADJUSTMENTS MAY OCCUR DURING MANUFACTURING AND INSTALLATION. ANY MODIFICATIONS NOT APPROVED IN WRITING BY MANUFACTURER MAY AFFECT OPERATION, VOIDS ANY WARRANTY AND RELEASES MANUFACTURER FROM ANY LIABILITY.
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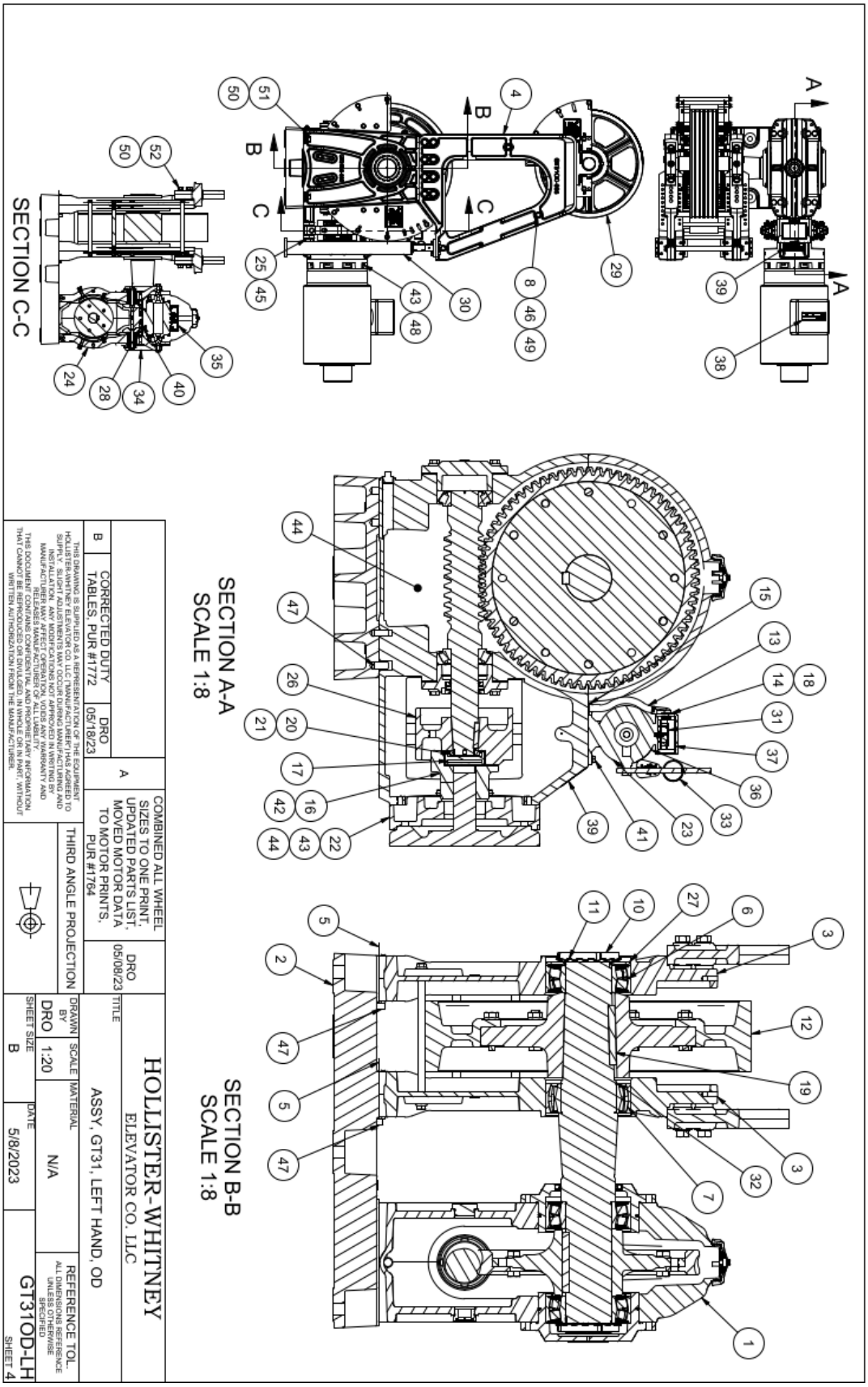
SECTION C-C
SECTION A-A
SCALE 1:8
SECTION B-B
SCALE 1:8
A
B
C
HOLLISTER-WHITNEY
ELEVATOR CO., LLC
ASSY, GT31, LEFT HAND, OD
GT31OD-LH
SHEET 4
COMBINED ALL WHEEL SIZES TO ONE PRINT. UPDATED PARTS LIST. MOVED MOTOR DATA TO MOTOR PRINTS. PUR #1764
CORRECTED DUTY TABLES. PUR #1772
THIRD ANGLE PROJECTION
DRO
05/08/23
05/18/23
1:20
N/A
5/8/2023
B
REFERENCE TOL. ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED
THIS DRAWING IS SUPPLIED AS A REPRESENTATION OF THE EQUIPMENT SUPPLY. SLIGHT ADJUSTMENTS MAY OCCUR DURING MANUFACTURING AND INSTALLATION. ANY MODIFICATIONS NOT APPROVED IN WRITING BY MANUFACTURER WILL RELEASE MANUFACTURER OF ALL LIABILITY.
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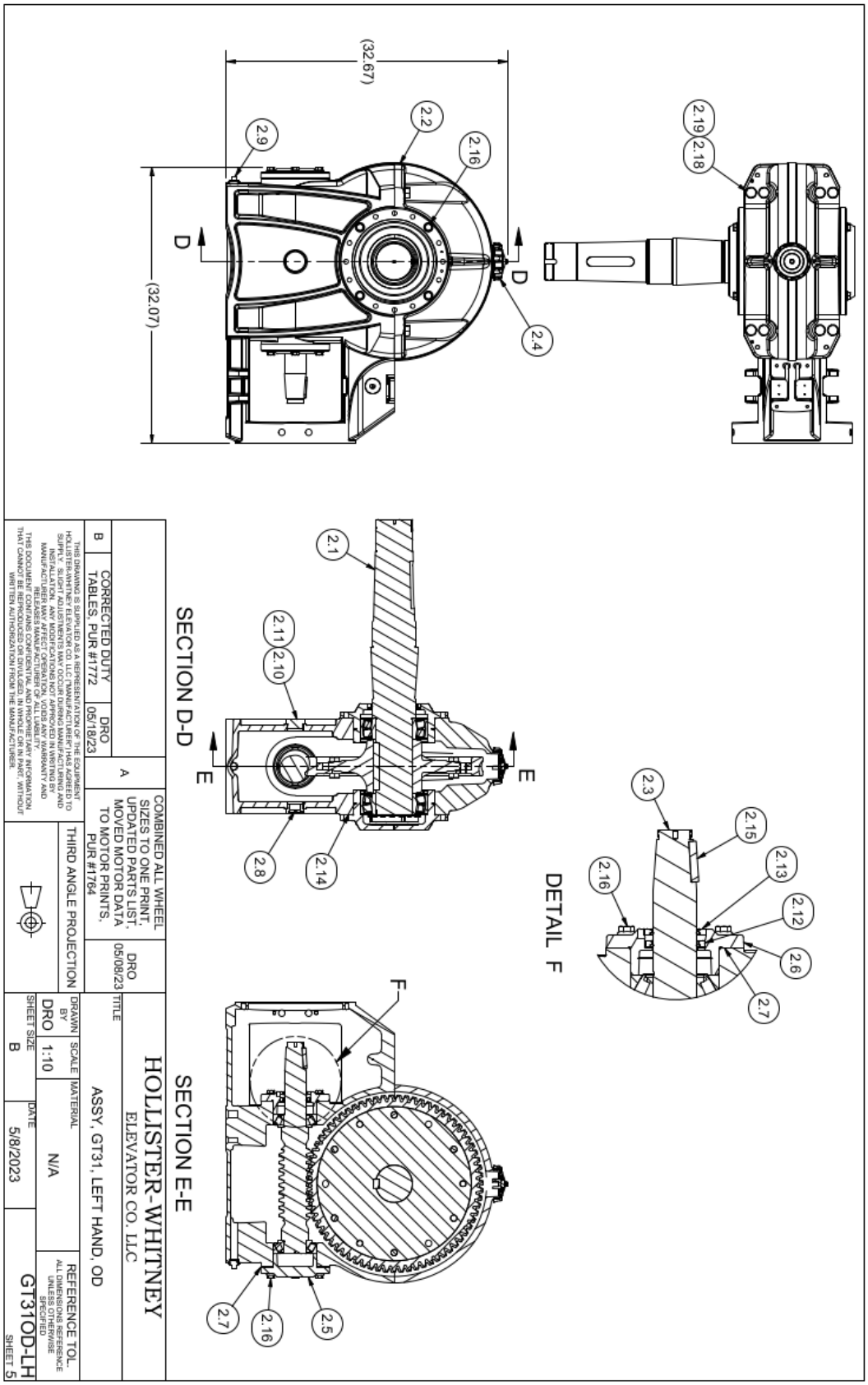
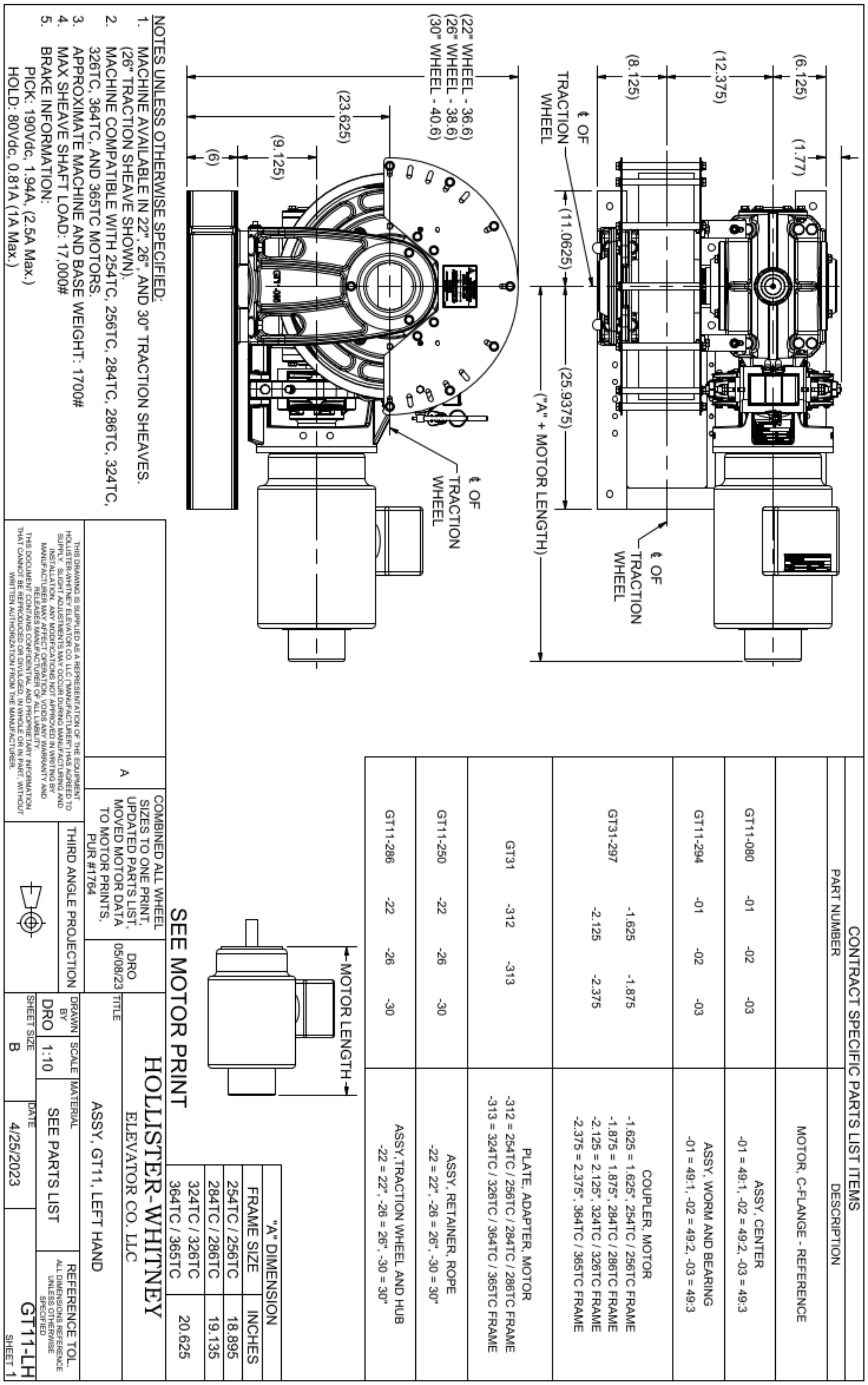
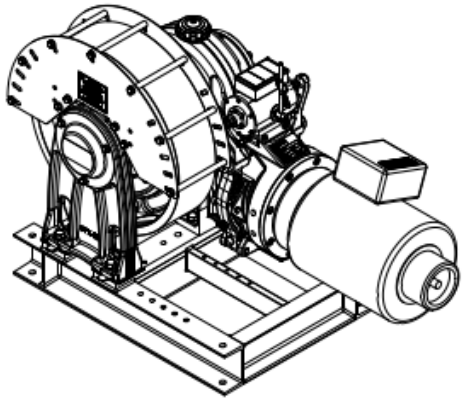

(32.67)
(32.07)
2.19
2.18
2.2
2.16
2.9
2.4
D
D
2.1
2.11
2.10
2.8
2.14
E
E
SECTION D-D
DETAIL F
2.3
2.15
2.13
2.12
2.16
2.6
2.7
F
F
2.7
2.16
2.5
SECTION E-E
B
CORRECTED DUTY TABLES, PUR #1772
DRO
05/18/23
A
COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS, PUR #1764
DRO
05/08/23
THIRD ANGLE PROJECTION
HOLLISTER-WHITNEY
ELEVATOR CO. LLC
TITLE
ASSY, GT31, LEFT HAND, OD
DRAWN BY
DRO
SCALE
1:10
MATERIAL
N/A
DATE
5/8/2023
REFERENCE TOL.
ALL DIMENSIONS REFERENCE UNLESS TOLERANCE SPECIFIED
SHEET SIZE
B
GT31OD-LH
SHEET 5
THIS DRAWING IS SUPPLIED AS A REPRESENTATION OF THE EQUIPMENT HOLLISTER-WHITNEY ELEVATOR CO. LLC ("MANUFACTURER") HAS AGREED TO SUPPLY TO PURCHASER. ALL DIMENSIONS ARE APPROXIMATE AND INSTALLATION, ANY MODIFICATIONS NOT APPROVED IN WRITING BY MANUFACTURER MAY AFFECT OPERATION, VOIDS ANY WARRANTY AND RELEASES MANUFACTURER OF ALL LIABILITY.
THIS DOCUMENT AND THE PROPRIETARY INFORMATION THAT CANNOT BE REPRODUCED OR DIVULGED, IN WHOLE OR IN PART, WITHOUT WRITTEN AUTHORIZATION FROM THE MANUFACTURER.

7.1.4 GT11OH

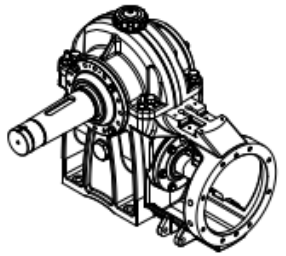

NOTES UNLESS OTHERWISE SPECIFIED:
1. MACHINE AVAILABLE IN 22", 26", AND 30" TRACTION SHEAVES. (26" TRACTION SHEAVE SHOWN).
2. MACHINE COMPATIBLE WITH 254TC, 256TC, 284TC, 286TC, 324TC, 326TC, 364TC, AND 365TC MOTORS.
3. APPROXIMATE MACHINE AND BASE WEIGHT: 1700#
4. MAX SHEAVE SHAFT LOAD: 17,000#
5. BRAKE INFORMATION:
PICK: 190Vdc, 1.94A, (2.5A Max.)
HOLD: 80Vdc, 0.81A (1A Max.)
(22" WHEEL - 36.6)
(26" WHEEL - 38.6)
(30" WHEEL - 40.6)
(23.625)
(9.125)
(6)
(6.125)
(12.375)
(8.125)
(1.77)
(11.0625)
(25.9375)
("A" + MOTOR LENGTH)
℄ OF TRACTION WHEEL
SEE MOTOR PRINT
MOTOR LENGTH
CONTRACT SPECIFIC PARTS LIST ITEMS
PART NUMBER
DESCRIPTION
MOTOR, C-FLANGE - REFERENCE
GT11-080 -01 -02 -03
ASSY, CENTER -01 = 49:1, -02 = 49:2, -03 = 49:3
GT11-294 -01 -02 -03
ASSY, WORM AND BEARING -01 = 49:1, -02 = 49:2, -03 = 49:3
GT31-297 -1.625 -1.875 -2.125 -2.375
COUPLER, MOTOR -1.625 = 1.625", 254TC / 256TC FRAME -1.875 = 1.875", 284TC / 286TC FRAME -2.125 = 2.125", 324TC / 326TC FRAME -2.375 = 2.375", 364TC / 365TC FRAME
GT31 -312 -313
PLATE, ADAPTER, MOTOR -312 = 254TC / 256TC / 284TC / 286TC FRAME -313 = 324TC / 326TC / 364TC / 365TC FRAME
GT11-250 -22 -26 -30
ASSY, RETAINER, ROPE -22 = 22", -26 = 26", -30 = 30"
GT11-286 -22 -26 -30
ASSY, TRACTION WHEEL AND HUB -22 = 22", -26 = 26", -30 = 30"
"A" DIMENSION
FRAME SIZE INCHES
254TC / 256TC 18.895
284TC / 286TC 19.135
324TC / 326TC
364TC / 365TC 20.625
A
COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS, PUR #1764
DRO 05/08/23
HOLLISTER-WHITNEY ELEVATOR CO. LLC
TITLE ASSY, GT11, LEFT HAND
THIRD ANGLE PROJECTION
DRAWN BY DRO
SCALE 1:10
MATERIAL SEE PARTS LIST
REFERENCE TOL. ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED
SHEET SIZE B
DATE 4/25/2023
GT11-LH
SHEET 1

ENGINEERING MASTER PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	GT11-273-01	ASSY, GEAR BOX, SINGLE LEAD, 49:1
		GT11-273-02	ASSY, GEAR BOX, DOUBLE LEAD, 49:2
		GT11-273-03	ASSY, GEAR BOX, TRIPLE LEAD, 49:3
2	1	GT11-001	ASSY, BASE, FINISHED
3	1	GT11-005	STAND, OUTBOARD
4	1	GT11-093	BEARING, ROLLER, SPHERICAL
5	1	GT11-250-22	ASSY, RETAINER, ROPE, 22"
		GT11-250-26	ASSY, RETAINER, ROPE, 26"
		GT11-250-30	ASSY, RETAINER, ROPE, 30"
6	1	GT11-281	COVER, STAND, OUTBOARD
7	1	GT11-282	NUT, LOCK, SHAFT
8	1	GT11-283	WASHER, LOCK, SHAFT
9	1	GT11-286-22	ASSY,TRACTION WHEEL AND HUB, 22"
		GT11-286-26	ASSY,TRACTION WHEEL AND HUB, 26"
		GT11-286-30	ASSY,TRACTION WHEEL AND HUB, 30"
10	2	GT11-315	ASSY, ARM, BRAKE
11	1	GT11-326	PLATE, RETENTION, BEARING, STAND
12	AS REQ'D	GT31-062-05	SHIM, STAND, OUTBOARD, 0.0050" THK
		GT31-062-10	SHIM, STAND, OUTBOARD, 0.0100" THK
		GT31-062-31	SHIM, STAND, OUTBOARD, 0.0310" THK
13	2	GT31-290	CONDUIT, METAL, FLEXIBLE, 3/8"
14	2	GT31-291	ADAPTER, FMC, 90 DEG ELBOW, 3/8"
15	2	GT31-293	ADAPTER, STRAIGHT, FMC, 3/8"
16	1	GT31-297-1.625	COUPLER, MOTOR, 1.625", 254TC / 256TC FRAME
		GT31-297-1.875	COUPLER, MOTOR, 1.875", 284TC / 286TC FRAME
		GT31-297-2.125	COUPLER, MOTOR, 2.125", 324TC / 326TC FRAME
		GT31-297-2.375	COUPLER, MOTOR, 2.125", 364TC / 365TC FRAME
17	1	GT31-298	ELEMENT, COUPLING
18	2	GT31-299	BUSHING, ANTI-SHORT, FEMALE, FMC, 3/8"
19	1	GT11-300	KEY, SHAFT, WHEEL
20	1	GT31-310	NUT, LOCK, SHAFT
21	1	GT31-311	WASHER, LOCK, SHAFT
22	1	GT31-312	PLATE, ADAPTER, MOTOR, 254TC / 256TC / 284TC / 286TC FRAME
		GT31-313	PLATE, ADAPTER, MOTOR, 324TC / 326TC / 364TC / 365TC FRAME
23	1	GT31-314	ASSY, SOLENOID, BRAKE
24	2	GT31-321	PIN, PIVOT
25	1	GT31-322	DRUM, BRAKE
26	2	GT31-327	ASSY, SWITCH, BRAKE
27	1	GT31-358	ASSY, BLOCK, TERMINAL
28	1	P-208	MANUAL BRAKE RELEASE TAG
29	1	P-226	LABEL, DATA, ELECTRICAL, BRAKE
30	1	P-227	LABEL, INSTRUCTION, BRAKE
31	1	P-228	LABEL, WIRING, BRAKE
32	2	P-230	NAMEPLATE, SMALL, HOLLISTER-WHITNEY
33	1	P-231	TAG, DATA, MOTOR, CONTRACT
34	1	P-236	MACHINE DATA TAG
35	4	#6 - 32 UNC x 7/8"	SCREW, HEX HEAD
36	4	5/16" - 18 UNC x 3/4"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
37	1	7/16" - 14 UNC x 2-1/4"	SCREW, HEX, CAP, SOCKET HEAD, BLACK OXIDE FINISH
38	AS REQ'D	1/2" - 13 UNC x 1-1/2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
39	AS REQ'D	1/2" - 13 UNC x 1-1/2"	SCREW, HEX, CAP, FLAT SOCKET HEAD, BLACK OXIDE FINISH
40	4	5/8" - MS 16624	RING, RETAINING, EXTERNAL, SERIES 3100
41	4	5/8" x 1-1/2"	PIN, DOWEL, GROUND, HARDENED
42	AS REQ'D	5/8" - 11 UNC x 1-1/2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
43	8	3/4"	LOCK WASHER, HELICAL SPRING, REGULAR
44	8	3/4" - 10 UNC x 2-1/2"	HEX CAP SCREW, GRADE 5, BLACK OXIDE FINISH
45	1.75 gal	MOBIL SHC 636	OIL, GEAR, HIGH PRESSURE

GT11-273 PARTS LIST					
ITEM	QTY GT11-273-01	QTY GT11-273-02	QTY GT11-273-03	PART NUMBER	DESCRIPTION
2.1	1	0	0	GT11-080-01	ASSY, CENTER, SINGLE LEAD
2.1	0	1	0	GT11-080-02	ASSY, CENTER, DOUBLE LEAD
2.1	0	0	1	GT11-080-03	ASSY, CENTER, TRIPLE LEAD
2.2	1	1	1	GT11-284	ASSY, UPPER AND LOWER HOUSING, MACHINED
2.3	1	0	0	GT11-294-01	ASSY, WORM SHAFT AND BEARING, 7/8" SINGLE
2.3	0	1	0	GT11-294-02	ASSY, WORM SHAFT AND BEARING, 7/8" DOUBLE
2.3	0	0	1	GT11-294-03	ASSY, WORM SHAFT AND BEARING, 7/8" TRIPLE
2.4	2	2	2	GT11-367	BOLT, HOUSING, GUARD MOUNTING
2.5	1	1	1	GT31-063	CAP, FILL, OIL
2.6	1	1	1	GT31-085	CAP, BEARING, REAR END
2.7	1	1	1	GT31-085-FE	CAP, BEARING, FORWARD END
2.8	AS REQ'D	AS REQ'D	AS REQ'D	GT31-087	SHIM, CAP, BEARING
2.9	1	1	1	GT31-276	GLASS, SIGHT, OIL
2.10	1	1	1	GT31-277	PLUG, DRAIN, OIL
2.11	1	1	1	GT31-278	PLUG, OIL
2.12	1	1	1	GT31-279	O-RING, PLUG, OIL
2.13	1	1	1	GT31-287	SEAL, SHAFT, RADIAL
2.14	1	1	1	GT31-287-1	SEAL, SHAFT, RADIAL
2.15	4	4	4	GT31-295	SHIM, ECCENTRIC, EDGE BONDED
2.16	1	1	1	GT31-301	KEY, SHAFT, WORM
2.17	20	20	20	1/2"-13 UNC X 1.5"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED



GT11-LH
SCALE 1:10



GT11-273
SCALE 1:10

	A	COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS, PUR #1764	DRO 05/08/23	HOLLISTER-WHITNEY ELEVATOR CO. LLC

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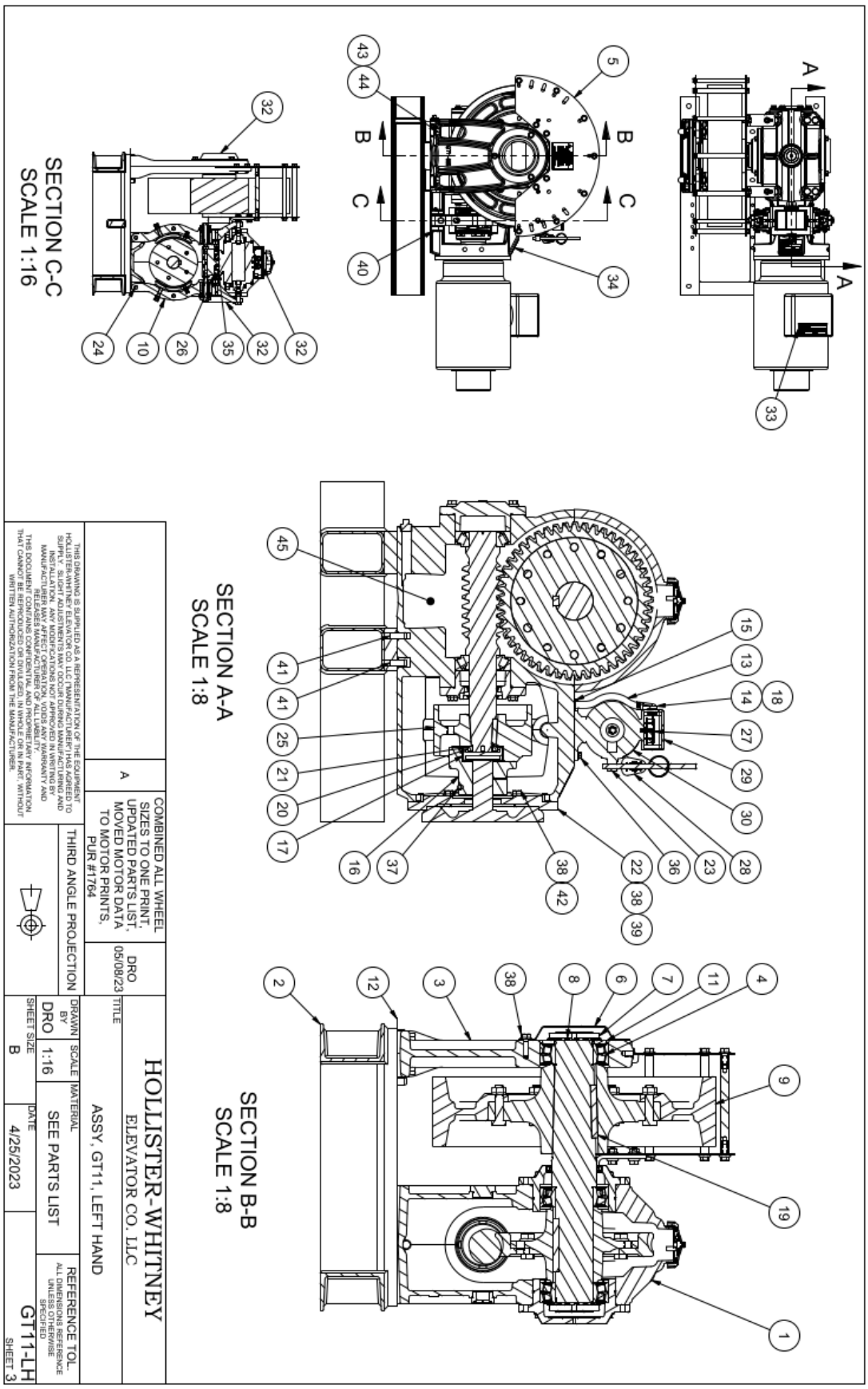
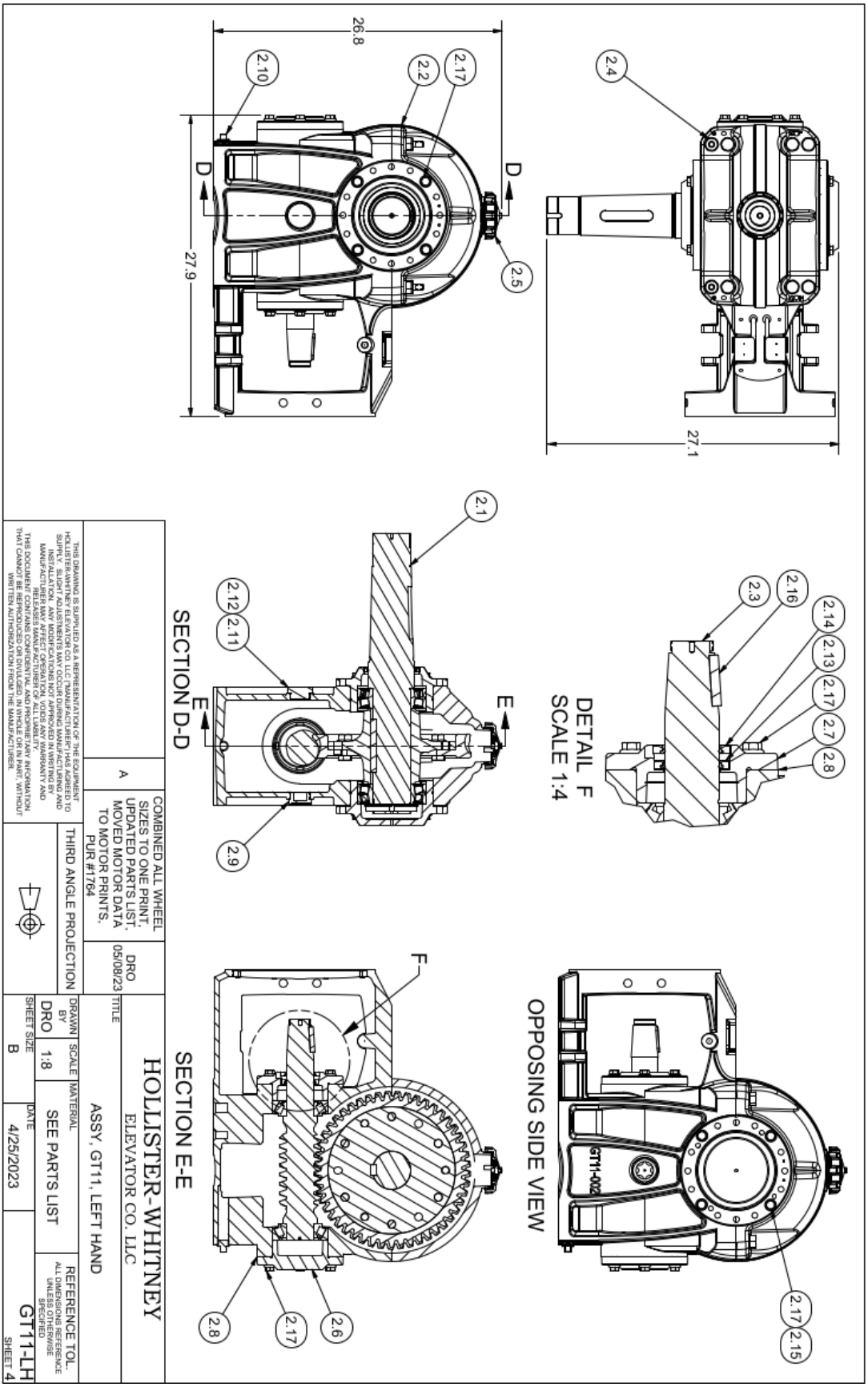
THIRD ANGLE PROJECTION

TITLE			
ASSY, GT11, LEFT HAND			
DRAWN BY: DRO	SCALE: 1:10	MATERIAL: SEE PARTS LIST	REFERENCE TOL. ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED
SHEET SIZE: C	DATE: 4/25/2023	GT11-LH SHEET 2	


SECTION C-C
SCALE 1:16
SECTION A-A
SCALE 1:8
SECTION B-B
SCALE 1:8
HOLLISTER-WHITNEY
ELEVATOR CO. LLC
ASSY, GT11, LEFT HAND
GT11-LH
SHEET 3
THIRD ANGLE PROJECTION
COMBINED ALL WHEEL SIZES TO ONE PRINT. UPDATED PARTS LIST. MOVED MOTOR DATA TO MOTOR PRINTS. PUR #1764
DRO 05/08/23
SEE PARTS LIST
4/25/2023
DRO
1:16
B


26.8
27.9
27.1
2.4
2.10
2.2
2.17
2.5
D
D
DETAIL F
SCALE 1:4
2.14
2.13
2.17
2.7
2.8
2.16
2.3
SECTION D-D
2.1
2.12
2.11
2.9
E
E
SECTION E-E
F
2.8
2.17
2.6
OPPOSING SIDE VIEW
GT11-002
2.17
2.15
COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS. PUR #1764
A
DRO 05/08/23
THIRD ANGLE PROJECTION
HOLLISTER-WHITNEY ELEVATOR CO. LLC
ELEVATOR CO. LLC
TITLE
ASSY, GT11, LEFT HAND
DRAWN BY
DRO
SCALE
1:8
MATERIAL
SEE PARTS LIST
REFERENCE TOL.
ALL DIMENSIONS ARE REFERENCE UNLESS OTHERWISE SPECIFIED
SHEET SIZE
B
DATE
4/25/2023
GT11-LH
SHEET 4
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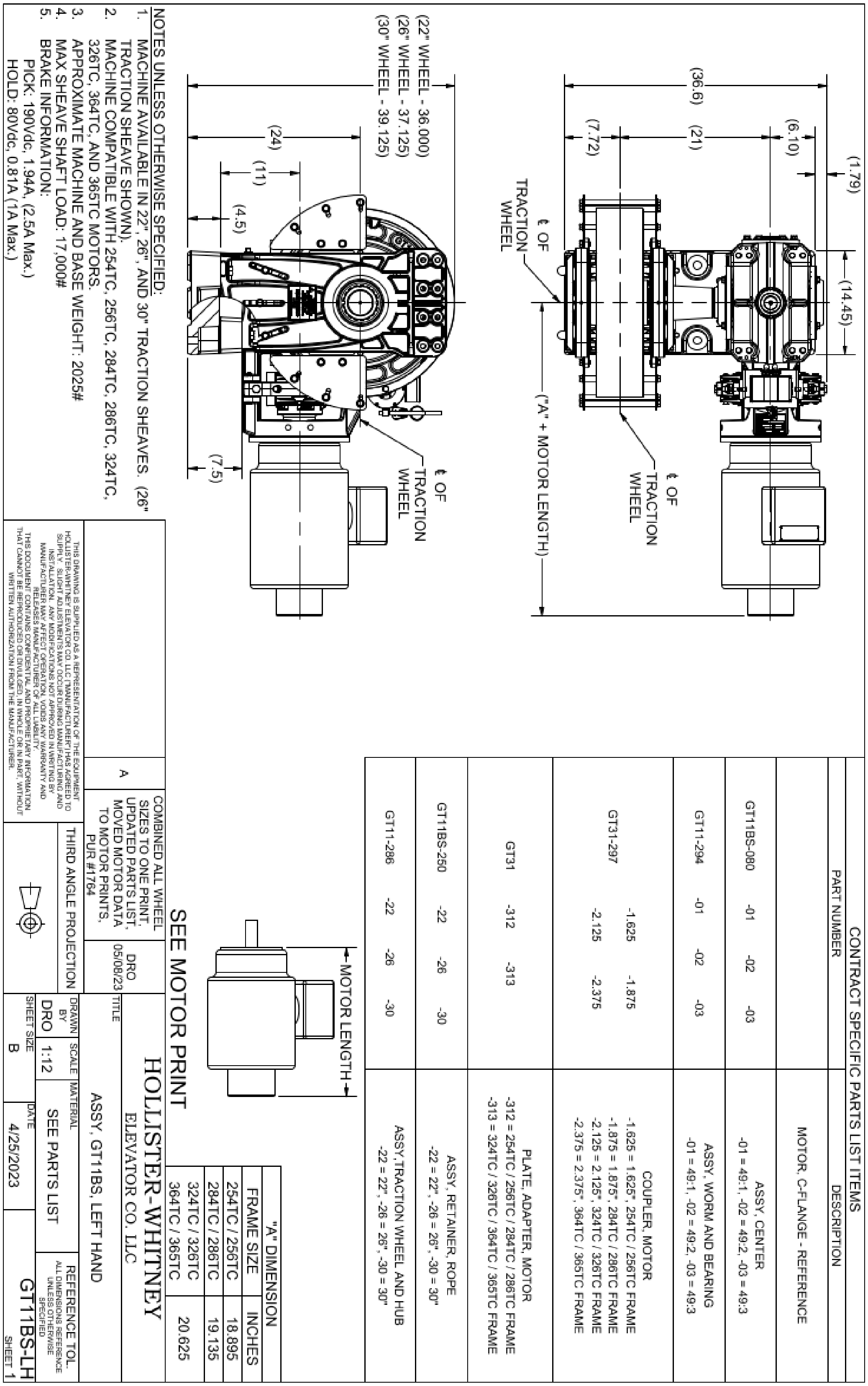
7.1.5 GT11BS


(1.79)
(14.45)
(6.10)
(36.6)
(21)
(7.72)
℄ OF TRACTION WHEEL
℄ OF TRACTION WHEEL
("A" + MOTOR LENGTH)
(22" WHEEL - 36.000)
(26" WHEEL - 37.125)
(30" WHEEL - 39.125)
(24)
(11)
(4.5)
(7.5)
℄ OF TRACTION WHEEL
MOTOR LENGTH
SEE MOTOR PRINT
NOTES UNLESS OTHERWISE SPECIFIED:
1. MACHINE AVAILABLE IN 22", 26", AND 30" TRACTION SHEAVES. (26" TRACTION SHEAVE SHOWN).
2. MACHINE COMPATIBLE WITH 254TC, 256TC, 284TC, 286TC, 324TC, 326TC, 364TC, AND 365TC MOTORS.
3. APPROXIMATE MACHINE AND BASE WEIGHT: 2025#
4. MAX SHEAVE SHAFT LOAD: 17,000#
5. BRAKE INFORMATION:
PICK: 190Vdc, 1.94A, (2.5A Max.)
HOLD: 80Vdc, 0.81A (1A Max.)
A
COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS, PUR #1764
DRO 05/08/23
HOLLISTER-WHITNEY
ELEVATOR CO. LLC
TITLE
ASSY, GT11BS, LEFT HAND
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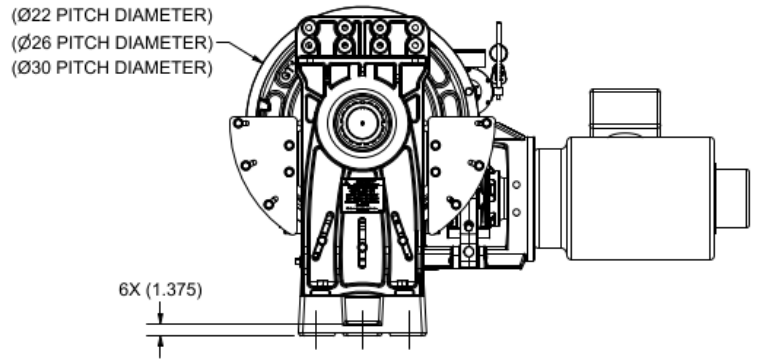
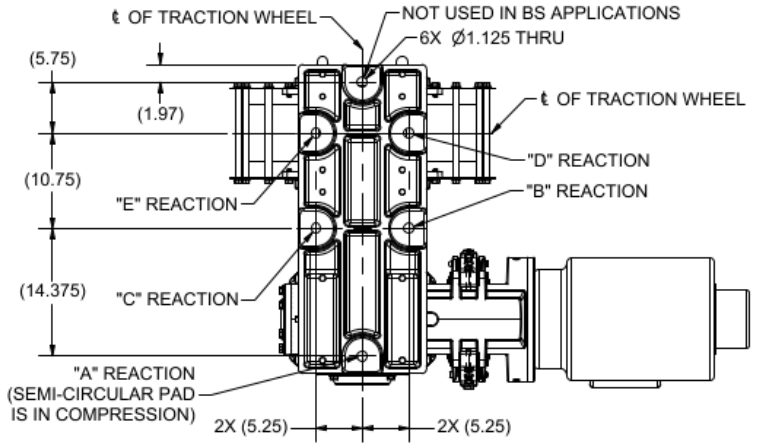
THIRD ANGLE PROJECTION
DRAWN BY DRO
SCALE 1:12
MATERIAL SEE PARTS LIST
REFERENCE TOL. ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED
SHEET SIZE B
DATE 4/25/2023
GT11BS-LH
SHEET 1

CONTRACT SPECIFIC PARTS LIST ITEMS

PART NUMBER	DESCRIPTION
	MOTOR, C-FLANGE - REFERENCE
GT11BS-080 -01 -02 -03	ASSY, CENTER -01 = 49:1, -02 = 49:2, -03 = 49:3
GT11-294 -01 -02 -03	ASSY, WORM AND BEARING -01 = 49:1, -02 = 49:2, -03 = 49:3
GT31-297 -1.625 -1.875 -2.125 -2.375	COUPLER, MOTOR -1.625 = 1.625", 254TC / 256TC FRAME -1.875 = 1.875", 284TC / 286TC FRAME -2.125 = 2.125", 324TC / 326TC FRAME -2.375 = 2.375", 364TC / 365TC FRAME
GT31 -312 -313	PLATE, ADAPTER, MOTOR -312 = 254TC / 256TC / 284TC / 286TC FRAME -313 = 324TC / 326TC / 364TC / 365TC FRAME
GT11BS-250 -22 -26 -30	ASSY, RETAINER, ROPE -22 = 22", -26 = 26", -30 = 30"
GT11-286 -22 -26 -30	ASSY,TRACTION WHEEL AND HUB -22 = 22", -26 = 26", -30 = 30"

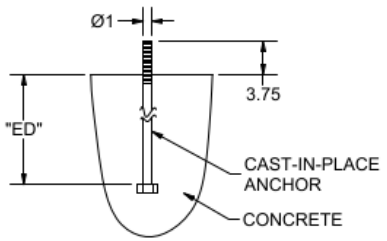
"A" DIMENSION	
FRAME SIZE	INCHES
254TC / 256TC	18.895
284TC / 286TC	19.135
324TC / 326TC 364TC / 365TC	20.625





FOUNDATION BOLT REACTION FORCES			
LOCATION	REACTION TYPE	TO DETERMINE THE LOCATION REACTION FORCE MULTIPLY THE SHEAVE SHAFT LOAD BY THE FOLLOWING % (- SIGN INDICATES FORCE DIRECTION)	TO DETERMINE PSI OF COMPRESSIVE LOAD DIVIDE THE COMPRESSIVE FORCE BY THE FOLLOWING
"A"	COMPRESSION	-10.6%	12.6 in²
"B"	TENSION	12.7%	N/A
"C"	TENSION	12.7%	N/A
"D"	TENSION	42.6%	N/A
"E"	TENSION	42.6%	N/A

CONCRETE GRADE, CAST-IN-PLACE ANCHOR TYPE, AND EMBEDMENT DEPTH ("ED" DIMENSION) TO BE DETERMINED BY THE STRUCTURAL ENGINEER OF RECORD



ANCHOR REACTIONS ASSUMPTIONS:

1. ALL ANCHOR LOADS ARE APPROXIMATE AND SHOULD BE REVIEWED BY THE BUILDING STRUCTURAL ENGINEER OF RECORD.
2. APPROXIMATE ANCHOR LOADS DO NOT INCLUDE ANY LOADING DUE TO A ROPE GRIPPER.
3. APPROXIMATE ANCHOR LOADS ASSUME PLUM VERTICAL DROPS WITH 180 DEGREES OF ROPE CONTACT ON TRACTION SHEAVE.
4. ONLY THE VERTICAL REACTION COMPONENT IS GIVEN AS AN APPROXIMATE ANCHOR LOAD.
5. APPROXIMATE ANCHOR LOADS NEGLECT THE WEIGHT OF THE MACHINE.
6. APPROXIMATE ANCHOR LOADS ARE BASED ONLY ON THE TRACTION SHEAVE SHAFT LOAD AND ARE NOT DOUBLED FOR IMPACT OR OTHER SYSTEM CONDITIONS.
7. APPROXIMATE ANCHOR LOADS DO NOT ASSUME ANY SEISMIC LOADING CONDITIONS.

NOTES UNLESS OTHERWISE SPECIFIED:

1. FOUNDATION/ANCHORING SHALL BE DESIGNED BY OTHERS ON THE ABOVE SPECIFICATIONS. HOLLISTER-WHITNEY ASSUMES NO RESPONSIBILITY FOR THE DESIGN OF THE FOUNDATION.

	A	COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS, PUR #1764	DRO 05/08/23

THIRD ANGLE PROJECTION

HOLLISTER-WHITNEY
ELEVATOR CO. LLC

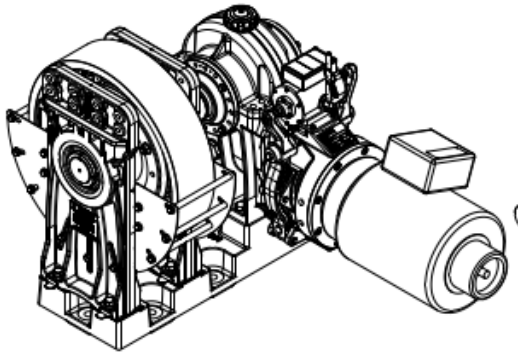
TITLE: ASSY, GT11BS, LEFT HAND

DRAWN BY	SCALE	MATERIAL	REFERENCE TOL.
DRO	1:12	SEE PARTS LIST	ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED

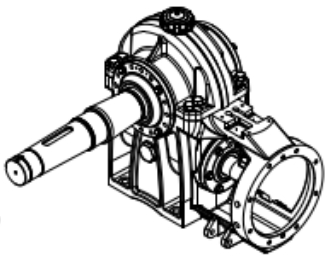
SHEET SIZE	DATE	
B	4/25/2023	GT11BS-LH SHEET 2

ENGINEERING MASTER PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	GT11BS-273-01	ASSY, GEAR BOX, SINGLE LEAD, 49:1
		GT11BS-273-02	ASSY, GEAR BOX, DOUBLE LEAD, 49:2
		GT11BS-273-03	ASSY, GEAR BOX, TRIPLE LEAD, 49:3
2	1	GT11BS-001	BASE, BS/OD
3	1	GT11BS-005	STAND, OUTBOARD, BS
4	1	GT11BS-006	STAND, INBOARD, BS
5	1	GT11-093	BEARING, ROLLER, SPHERICAL
6	0	GT11BS-250-22	ASSY, RETAINER, ROPE, BS, 22"
		GT11BS-250-26	ASSY, RETAINER, ROPE, BS, 26"
		GT11BS-250-30	ASSY, RETAINER, ROPE, BS, 30"
7	1	GT11-282	NUT, LOCK, SHAFT
8	1	GT11-283	WASHER, LOCK, SHAFT
9	0	GT11-286-22	ASSY,TRACTION WHEEL AND HUB, 22"
		GT11-286-26	ASSY,TRACTION WHEEL AND HUB, 26"
		GT11-286-30	ASSY,TRACTION WHEEL AND HUB, 30"
10	2	GT11-315	ASSY, ARM, BRAKE
11	1	GT11-326	PLATE, RETENTION, BEARING, STAND
12	1	GT11BS-368	RETAINING RING, SPIRAL, MEDIUM DUTY
13	AS REQ'D	GT31-062-05	SHIM, STAND, OUTBOARD, 0.0050" THK
		GT31-062-10	SHIM, STAND, OUTBOARD, 0.0100" THK
		GT31-062-31	SHIM, STAND, OUTBOARD, 0.0310" THK
14	1	GT31-093	BEARING, ROLLER, SPHERICAL
15	2	GT31-290	CONDUIT, METAL, FLEXIBLE, 3/8"
16	2	GT31-291	ADAPTER, FMC, 90 DEG ELBOW, 3/8"
17	2	GT31-293	ADAPTER, STRAIGHT, FMC, 3/8"
18	1	GT31-297-1.625	COUPLER, MOTOR, 1.625", 254TC / 256TC FRAME
		GT31-297-1.875	COUPLER, MOTOR, 1.875", 284TC / 286TC FRAME
		GT31-297-2.125	COUPLER, MOTOR, 2.125", 324TC / 326TC FRAME
		GT31-297-2.375	COUPLER, MOTOR, 2.125", 364TC / 365TC FRAME
19	1	GT31-298	ELEMENT, COUPLING
20	2	GT31-299	BUSHING, ANTI-SHORT, FEMALE, FMC, 3/8"
21	1	GT11-300	KEY, SHAFT, WHEEL
22	1	GT31-310	NUT, LOCK, SHAFT
23	1	GT31-311	WASHER, LOCK, SHAFT
24	1	GT31-312	PLATE, ADAPTER, MOTOR, 254TC / 256TC / 284TC / 286TC FRAME
		GT31-313	PLATE, ADAPTER, MOTOR, 324TC / 326TC / 364TC / 365TC FRAME
25	1	GT31-314	ASSY, SOLENOID, BRAKE
26	2	GT31-321	PIN, PIVOT
27	1	GT31-322	DRUM, BRAKE
28	2	GT31-327	ASSY, SWITCH, BRAKE
29	1	GT31-358	ASSY, BLOCK, TERMINAL
30	1	P-208	MANUAL BRAKE RELEASE TAG
31	1	P-226	LABEL, DATA, ELECTRICAL, BRAKE
32	1	P-227	LABEL, INSTRUCTION, BRAKE
33	1	P-228	LABEL, WIRING, BRAKE
34	1	P-230	NAMEPLATE, SMALL, HOLLISTER-WHITNEY
35	1	P-231	TAG, DATA, MOTOR, CONTRACT
36	1	P-236	MACHINE DATA TAG
37	4	#6 - 32 UNC x 7/8"	SCREW, HEX HEAD
38	4	5/16" - 18 UNC x 3/4"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
39	1	7/16" - 14 UNC x 2-1/4"	SCREW, HEX, CAP, SOCKET HEAD, BLACK OXIDE FINISH
40	AS REQ'D	1/2" - 13 UNC x 1-1/2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
41	AS REQ'D	1/2" - 13 UNC x 1-1/2"	SCREW, HEX, CAP, FLAT SOCKET HEAD, BLACK OXIDE FINISH
42	4	5/8" - MS 16624	RING, RETAINING, EXTERNAL, SERIES 3100
43	6	5/8" x 1-1/2"	PIN, DOWEL, GROUND, HARDENED
44	AS REQ'D	5/8" - 11 UNC x 1-1/2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
45	12	3/4"	LOCK WASHER, HELICAL SPRING, REGULAR
46	12	3/4" - 10 UNC x 2-1/2"	HEX CAP SCREW, GRADE 5, BLACK OXIDE FINISH
47	1.75 gal	MOBIL SHC 636	OIL, GEAR, HIGH PRESSURE

GT11-273 PARTS LIST					
ITEM	QTY GT11BS-273-01	QTY GT11BS-273-02	QTY GT11BS-273-03	PART NUMBER	DESCRIPTION
2.1	1	0	0	GT11BS-080-01	ASSY, CENTER, BS/OD, SINGLE LEAD
2.1	0	1	0	GT11BS-080-02	ASSY, CENTER, BS/OD, DOUBLE LEAD
2.1	0	0	1	GT11BS-080-03	ASSY, CENTER, BS/OD, TRIPLE LEAD
2.2	1	1	1	GT11-284	ASSY, UPPER AND LOWER HOUSING, MACHINED
2.3	1	0	0	GT11-294-01	ASSY, WORM SHAFT AND BEARING, 7/8" SINGLE
2.3	0	1	0	GT11-294-02	ASSY, WORM SHAFT AND BEARING, 7/8" DOUBLE
2.3	0	0	1	GT11-294-03	ASSY, WORM SHAFT AND BEARING, 7/8" TRIPLE
2.4	1	1	1	GT31-063	CAP, FILL, OIL
2.5	1	1	1	GT31-085	CAP, BEARING, REAR END
2.6	1	1	1	GT31-085-FE	CAP, BEARING, FORWARD END
2.7	AS REQ'D	AS REQ'D	AS REQ'D	GT31-087	SHIM, CAP, BEARING
2.8	1	1	1	GT31-276	GLASS, SIGHT, OIL
2.9	1	1	1	GT31-277	PLUG, DRAIN, OIL
2.10	1	1	1	GT31-278	PLUG, OIL
2.11	1	1	1	GT31-279	O-RING, PLUG, OIL
2.12	1	1	1	GT31-287	SEAL, SHAFT, RADIAL
2.13	1	1	1	GT31-287-1	SEAL, SHAFT, RADIAL
2.14	4	4	4	GT31-295	SHIM, ECCENTRIC, EDGE BONDED
2.15	1	1	1	GT31-301	KEY, SHAFT, WORM
2.16	20	20	20	1/2"-13 UNC X 1.5"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED

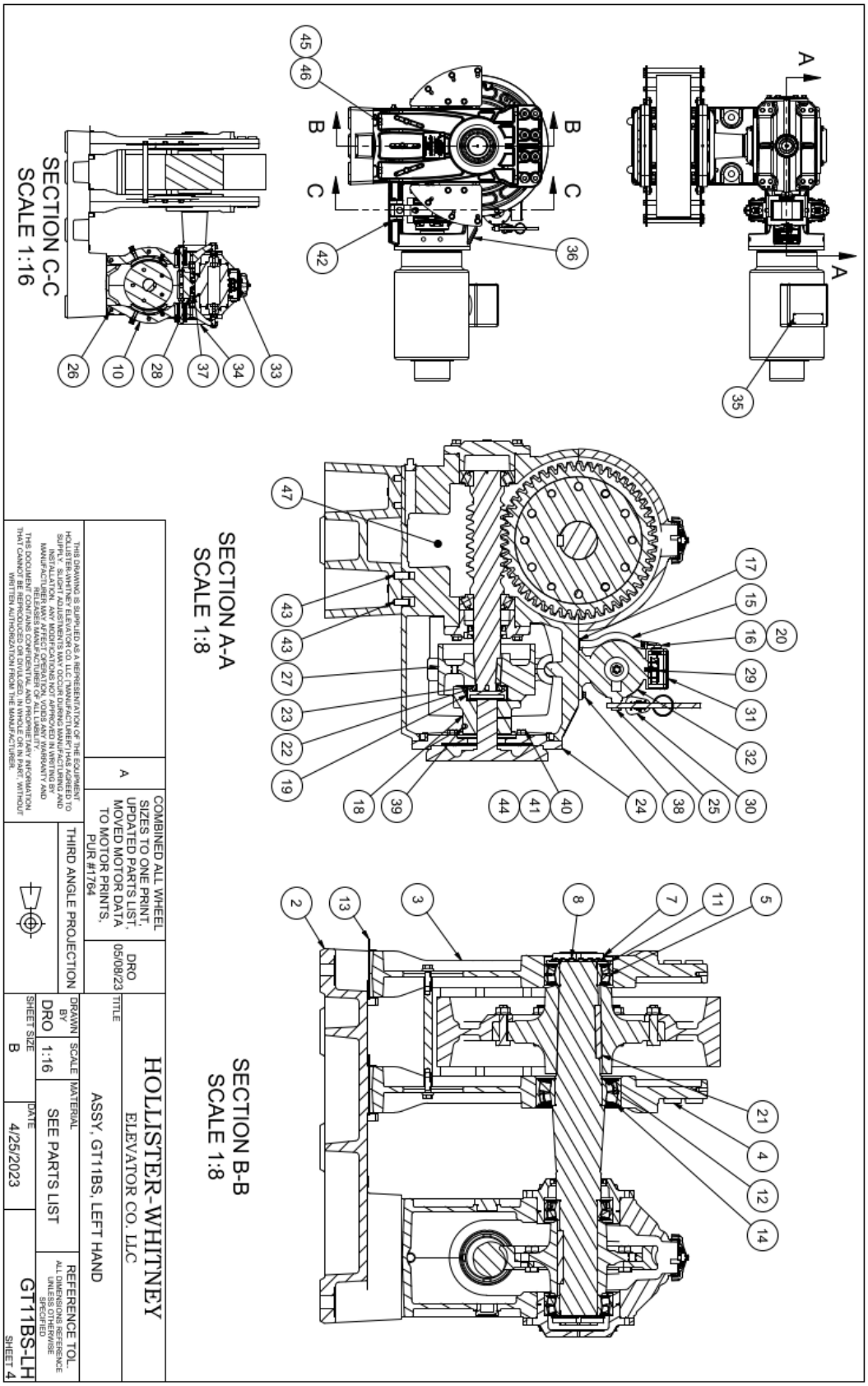


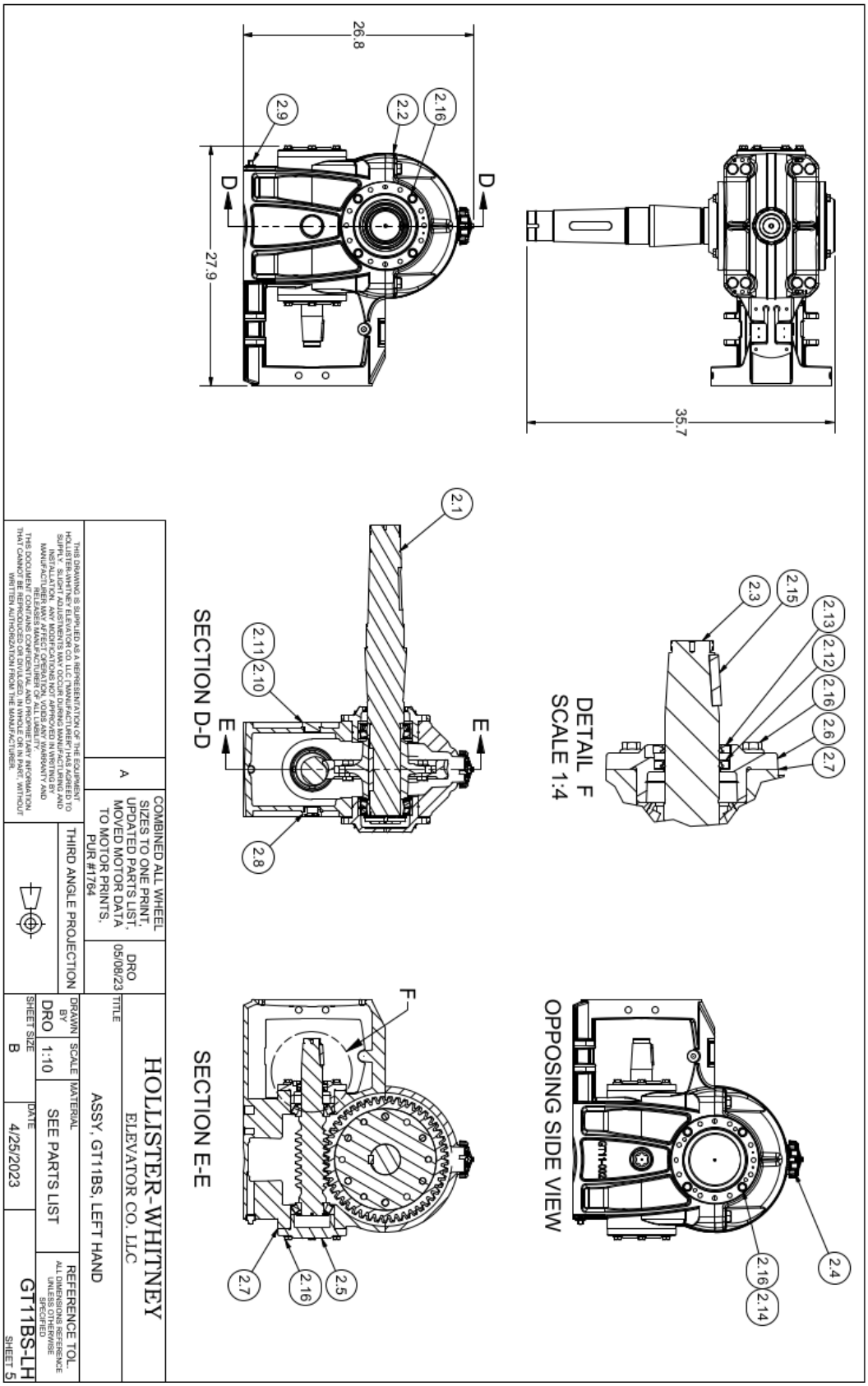
GT11BS-LH
SCALE 1:10



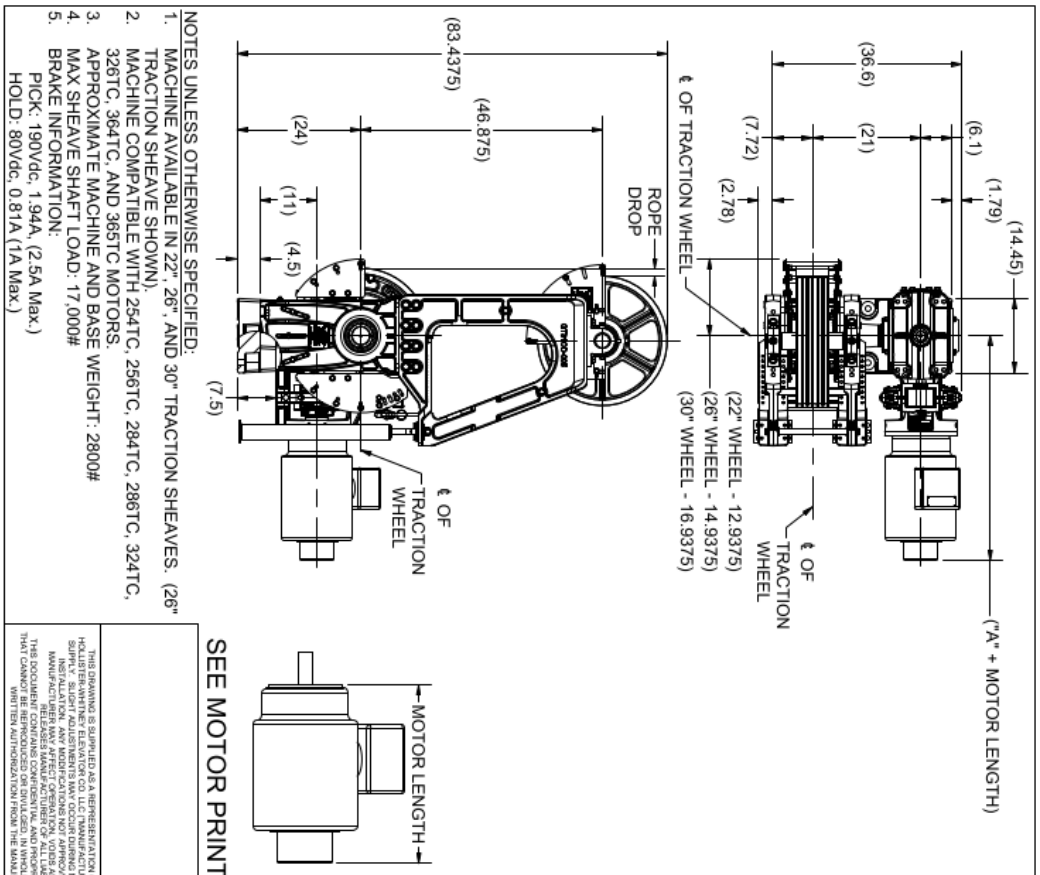
GT11BS-273
SCALE 1:10

	A	COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS, PUR #1764	DRO 05/08/23	HOLLISTER-WHITNEY ELEVATOR CO. LLC
				TITLE: ASSY, GT11BS, LEFT HAND
THIS DRAWING IS SUPPLIED AS A REPRESENTATION OF THE EQUIPMENT HOLLISTER-WHITNEY ELEVATOR CO. LLC ("MANUFACTURER") HAS AGREED TO SUPPLY. SLIGHT ADJUSTMENTS MAY OCCUR DURING MANUFACTURING AND INSTALLATION. ANY MODIFICATIONS NOT APPROVED IN WRITING BY MANUFACTURER MAY AFFECT OPERATION, VOIDS ANY WARRANTY AND RELEASES MANUFACTURER OF ALL LIABILITY. THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION THAT CANNOT BE REPRODUCED OR DISCLOSED, IN WHOLE OR IN PART, WITHOUT WRITTEN AUTHORIZATION FROM THE MANUFACTURER.		THIRD ANGLE PROJECTION	DRAWN BY: DRO	SCALE: 1:10	MATERIAL: SEE PARTS LIST	REFERENCE TOL. ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED
			SHEET SIZE: C	DATE: 4/25/2023	GT11BS-LH SHEET 3


SECTION C-C
SCALE 1:16
SECTION A-A
SCALE 1:8
SECTION B-B
SCALE 1:8
HOLLISTER-WHITNEY
ELEVATOR CO. LLC
ASSY, GT11BS, LEFT HAND
SEE PARTS LIST
4/25/2023
GT11BS-LH
SHEET 4
COMBINED ALL WHEEL SIZES TO ONE PRINT. UPDATED PARTS LIST. MOVED MOTOR DATA TO MOTOR PRINTS. PUR #1764
DRO 05/08/23
THIRD ANGLE PROJECTION
DRO
1:16
B


26.8
27.9
35.7
2.9
2.2
2.16
D
D
2.15
2.3
2.13
2.12
2.16
2.6
2.7
DETAIL F
SCALE 1:4
2.1
2.11
2.10
2.8
E
E
SECTION D-D
F
2.7
2.16
2.5
SECTION E-E
2.4
2.16
2.14
OPPOSING SIDE VIEW
A
COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS, PUR #1764
DRO 05/08/23
THIRD ANGLE PROJECTION
HOLLISTER-WHITNEY ELEVATOR CO. LLC ("MANUFACTURER") HAS AGREED TO SUPPLY SLIGHT ADJUSTMENTS MAY OCCUR DURING MANUFACTURING AND ASSEMBLY. ANY SUCH CHANGES MAY AFFECT OPERATION. VOIDS ANY WARRANTY AND MANUFACTURER MAY AFFECT OPERATION. VOIDS ANY WARRANTY AND RELEASES MANUFACTURER OF ALL LIABILITY.
THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION THAT CANNOT BE REPRODUCED OR DIVULGED, IN WHOLE OR IN PART, WITHOUT WRITTEN AUTHORIZATION FROM THE MANUFACTURER.
HOLLISTER-WHITNEY
ELEVATOR CO. LLC
TITLE
ASSY, GT11BS, LEFT HAND
DRAWN BY DRO
SCALE 1:10
MATERIAL SEE PARTS LIST
REFERENCE TOL. ALL DIMENSIONS REFERENCE NOMINAL UNLESS OTHERWISE SPECIFIED
SHEET SIZE B
DATE 4/25/2023
GT11BS-LH
SHEET 5

7.1.6 GT11OD



NOTES UNLESS OTHERWISE SPECIFIED:

1. MACHINE AVAILABLE IN 22", 26", AND 30" TRACTION SHEAVES. (26" TRACTION SHEAVE SHOWN).
2. MACHINE COMPATIBLE WITH 254TC, 256TC, 284TC, 286TC, 324TC, 326TC, 364TC, AND 365TC MOTORS.
3. APPROXIMATE MACHINE AND BASE WEIGHT: 2800#
4. MAX SHEAVE SHAFT LOAD: 17,000#
5. BRAKE INFORMATION:
   PICK: 190Vdc, 1.94A, (2.5A Max.)
   HOLD: 80Vdc, 0.81A (1A Max.)

CONTRACT SPECIFIC PARTS LIST ITEMS

PART NUMBER				DESCRIPTION
				MOTOR, C-FLANGE - REFERENCE
GT11BS-080	-01	-02	-03	ASSY, CENTER -01 = 49-1, -02 = 49-2, -03 = 49-3
GT11-294	-01	-02	-03	ASSY, WORM AND BEARING -01 = 49-1, -02 = 49-2, -03 = 49-3
GT31-297	-1.625	-1.875		COUPLER, MOTOR -1.625 = 1.625", 254TC / 256TC FRAME -1.875 = 1.875", 284TC / 286TC FRAME -2.125 = 2.125", 324TC / 326TC FRAME -2.375 = 2.375", 364TC / 365TC FRAME
	-2.125	-2.375		
GT31	-312	-313		PLATE, ADAPTER, MOTOR -312 = 254TC / 256TC / 284TC / 286TC FRAME -313 = 324TC / 326TC / 364TC / 365TC FRAME
GT11OD-250	-22	-26	-30	ASSY, RETAINER, ROPE -22 = 22", -26 = 26", -30 = 30"
GT11-286	-22	-26	-30	ASSY,TRACTION WHEEL AND HUB -22 = 22", -26 = 26", -30 = 30"

"A" DIMENSION	
FRAME SIZE	INCHES
254TC / 256TC	18.895
284TC / 286TC	19.135
324TC / 326TC 364TC / 365TC	20.625

ROPE DROP DIMENSION		
22" WHEEL	26" WHEEL	30" WHEEL
1.5	1.5	1.5
2.5	2.5	2.5
1.5	3.5	3.5
2.5	4.5	4.5
	4.5	5.5
		6.5

REV	DESCRIPTION	DRO
A	COMBINED ALL WHEEL SIZES TO ONE PRINT. UPDATED PARTS LIST. MOVED MOTOR DATA TO MOTOR PRINTS. PUR #1764	05/08/23

THIRD ANGLE PROJECTION

HOLLISTER-WHITNEY
ELEVATOR CO. LLC

TITLE: ASSY, GT11OD, LEFT HAND

DRAWN BY	SCALE	MATERIAL	REFERENCE TOL.
DRO	1:20	SEE PARTS LIST	ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED
SHEET SIZE	DATE	GT11OD-LH	
B	4/25/2023	SHEET 1	

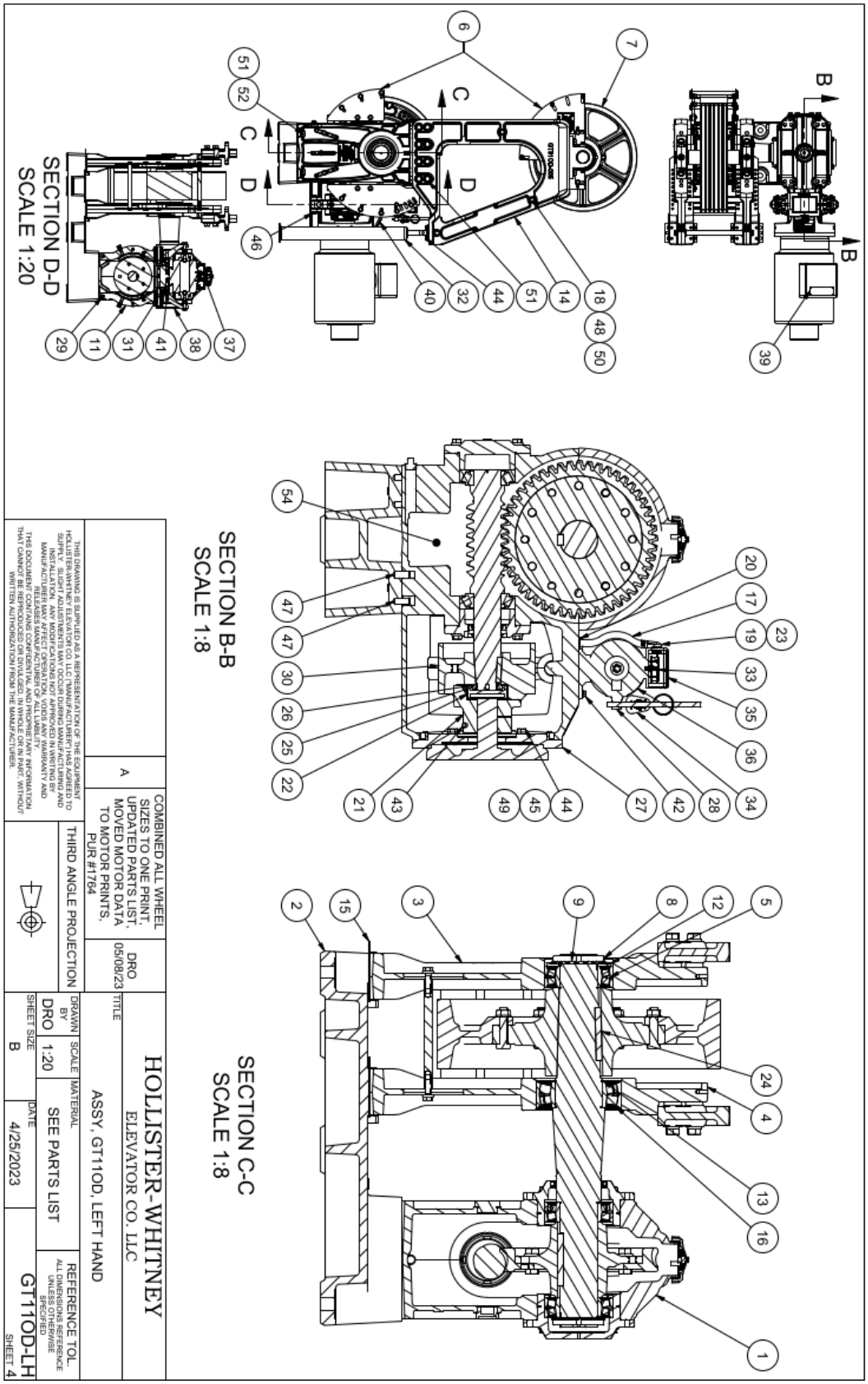
ENGINEERING MASTER PARTS LIST

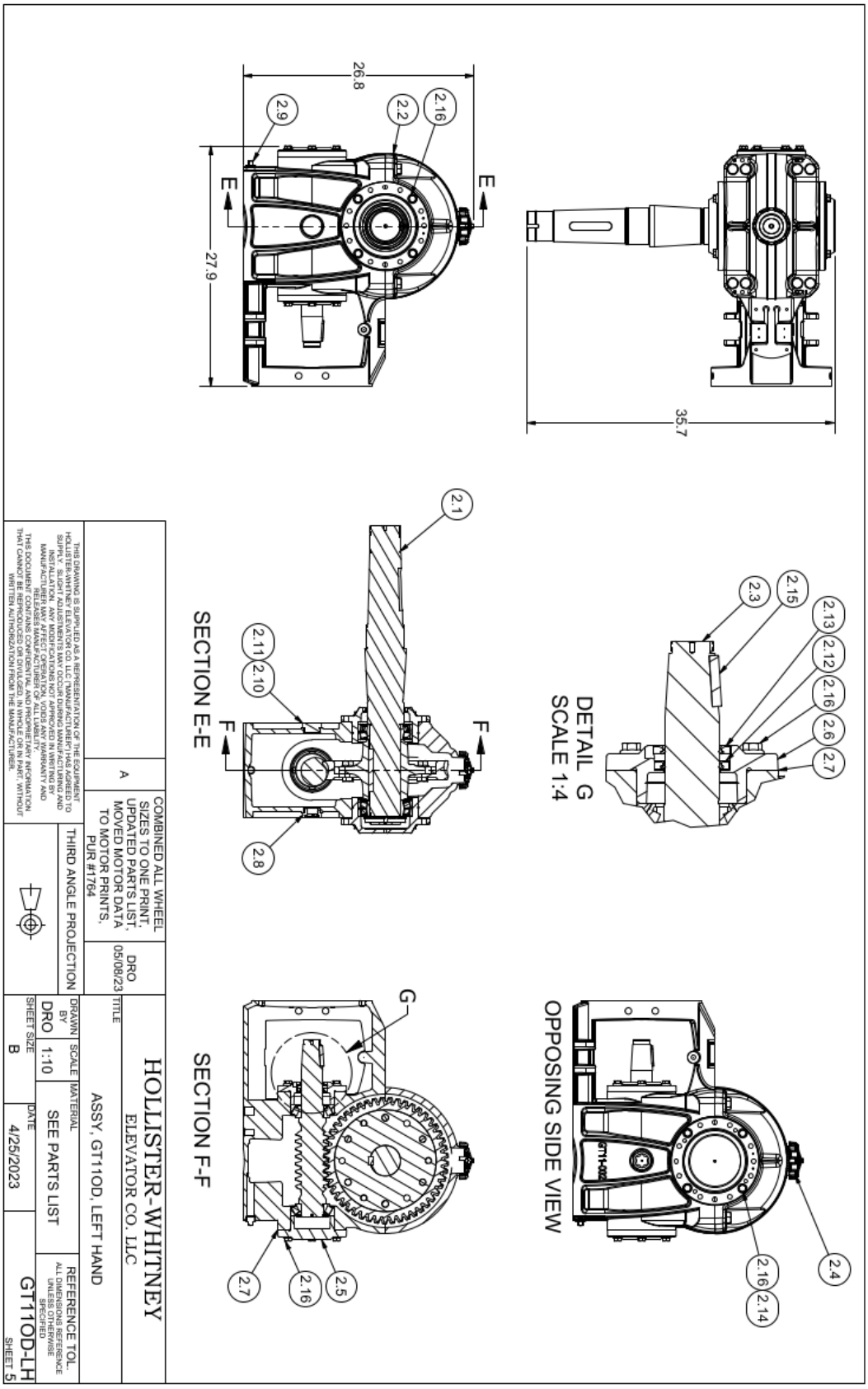
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	GT11BS-273-01	ASSY, GEAR BOX, SINGLE LEAD, 49:1
		GT11BS-273-02	ASSY, GEAR BOX, DOUBLE LEAD, 49:2
		GT11BS-273-03	ASSY, GEAR BOX, TRIPLE LEAD, 49:3
2	1	GT11BS-001	BASE, BS/OD
3	1	GT11BS-005	STAND, OUTBOARD, BS
4	1	GT11BS-006	STAND, INBOARD, BS
5	1	GT11-093	BEARING, ROLLER, SPHERICAL
6	1	GT11OD-250-22	ASSY, RETAINER, ROPE, OD, 22"
		GT11OD-250-26	ASSY, RETAINER, ROPE, OD, 26"
		GT11OD-250-30	ASSY, RETAINER, ROPE, OD, 30"
7	1	GT11OD-331-0278	ASSY, SHEAVE, BALL BEARING, SEALED
		GT11OD-331-0279R	ASSY, SHEAVE, SPHERICAL ROLLER BEARING, SEALED
8	1	GT11-282	NUT, LOCK, SHAFT
9	1	GT11-283	WASHER, LOCK, SHAFT
10	1	GT11-286-22	ASSY, TRACTION WHEEL AND HUB, 22"
		GT11-286-28	ASSY, TRACTION WHEEL AND HUB, 28"
		GT11-286-30	ASSY, TRACTION WHEEL AND HUB, 30"
11	2	GT11-315	ASSY, ARM, BRAKE
12	1	GT11-326	PLATE, RETENTION, BEARING, STAND
13	1	GT11BS-368	RETAINING RING, SPIRAL, MEDIUM DUTY
14	2	GT31OD-005	STAND, OUTBOARD, OD
15	AS REQ'D	GT31-062-05	SHIM, STAND, OUTBOARD, 0.0050" THK
		GT31-062-10	SHIM, STAND, OUTBOARD, 0.0100" THK
		GT31-062-31	SHIM, STAND, OUTBOARD, 0.0310" THK
16	1	GT31-093	BEARING, ROLLER, SPHERICAL
17	2	GT31-290	CONDUIT, METAL, FLEXIBLE, 3/8"
18	3	GT31OD-144	SPACER, STAND, OD
19	2	GT31-291	ADAPTER, FMC, 90 DEG ELBOW, 3/8"
20	2	GT31-293	ADAPTER, STRAIGHT, FMC, 3/8"
21	1	GT31-297-1.625	COUPLER, MOTOR, 1.625", 254TC / 256TC FRAME
		GT31-297-1.875	COUPLER, MOTOR, 1.875", 284TC / 286TC FRAME
		GT31-297-2.125	COUPLER, MOTOR, 2.125", 324TC / 326TC FRAME
		GT31-297-2.375	COUPLER, MOTOR, 2.125", 364TC / 365TC FRAME
22	1	GT31-298	ELEMENT, COUPLING
23	2	GT31-299	BUSHING, ANTI-SHORT, FEMALE, FMC, 3/8"
24	1	GT11-300	KEY, SHAFT, WHEEL
25	1	GT31-310	NUT, LOCK, SHAFT
26	1	GT31-311	WASHER, LOCK, SHAFT
27	1	GT31-312	PLATE, ADAPTER, MOTOR, 254TC / 256TC / 284TC / 286TC FRAME
		GT31-313	PLATE, ADAPTER, MOTOR, 324TC / 326TC / 364TC / 365TC FRAME
28	1	GT31-314	ASSY, SOLENOID, BRAKE
29	2	GT31-321	PIN, PIVOT
30	1	GT31-322	DRUM, BRAKE
31	2	GT31-327	ASSY, SWITCH, BRAKE
32	2	GT31OD-335	COLUMN, SUPPORT, ADJUSTABLE
33	1	GT31-358	ASSY, BLOCK, TERMINAL
34	1	P-208	MANUAL BRAKE RELEASE TAG
35	1	P-226	LABEL, DATA, ELECTRICAL, BRAKE
36	1	P-227	LABEL, INSTRUCTION, BRAKE
37	1	P-228	LABEL, WIRING, BRAKE
38	1	P-230	NAMEPLATE, SMALL, HOLLISTER-WHITNEY
39	1	P-231	TAG, DATA, MOTOR, CONTRACT
40	1	P-236	MACHINE DATA TAG
41	4	#6 - 32 UNC x 7/8"	SCREW, HEX HEAD
42	4	5/16" - 18 UNC x 3/4"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
43	1	7/16" - 14 UNC x 2-1/4"	SCREW, HEX, CAP, SOCKET HEAD, BLACK OXIDE FINISH
44	AS REQ'D	1/2" - 13 UNC x 1-1/2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
45	AS REQ'D	1/2" - 13 UNC x 1-1/2"	SCREW, HEX, CAP, FLAT SOCKET HEAD, BLACK OXIDE FINISH
46	4	5/8" - MS 16624	RING, RETAINING, EXTERNAL, SERIES 3100
47	6	5/8" x 1-1/2"	PIN, DOWEL, GROUND, HARDENED
48	6	5/8"	LOCK WASHER, HELICAL SPRING, REGULAR
49	AS REQ'D	5/8" - 11 UNC x 1-1/2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
50	6	5/8" - 11 UNC x 3"	HEX CAP SCREW
51	28	3/4"	LOCK WASHER, HELICAL SPRING, REGULAR
52	12	3/4" - 10 UNC x 2-1/2"	HEX CAP SCREW, GRADE 5, BLACK OXIDE FINISH
53	16	3/4" - 10 UNC x 3"	HEX CAP SCREW, GRADE 5, BLACK OXIDE FINISH
54	1.75 gal	MOBIL SHC 636	OIL, GEAR, HIGH PRESSURE

GT11-273 PARTS LIST

ITEM	QTY GT11BS-273-01	QTY GT11BS-273-02	QTY GT11BS-273-03	PART NUMBER	DESCRIPTION
2.1	1	0	0	GT11BS-080-01	ASSY, CENTER, BS/OD, SINGLE LEAD
2.1	0	1	0	GT11BS-080-02	ASSY, CENTER, BS/OD, DOUBLE LEAD
2.1	0	0	1	GT11BS-080-03	ASSY, CENTER, BS/OD, TRIPLE LEAD
2.2	1	1	1	GT11-284	ASSY, UPPER AND LOWER HOUSING, MACHINED
2.3	1	0	0	GT11-294-01	ASSY, WORM SHAFT AND BEARING, 7/8" SINGLE
2.3	0	1	0	GT11-294-02	ASSY, WORM SHAFT AND BEARING, 7/8" DOUBLE
2.3	0	0	1	GT11-294-03	ASSY, WORM SHAFT AND BEARING, 7/8" TRIPLE
2.4	1	1	1	GT31-063	CAP, FILL, OIL
2.5	1	1	1	GT31-085	CAP, BEARING, REAR END
2.6	1	1	1	GT31-085-FE	CAP, BEARING, FORWARD END
2.7	AS REQ'D	AS REQ'D	AS REQ'D	GT31-087	SHIM, CAP, BEARING
2.8	1	1	1	GT31-276	GLASS, SIGHT, OIL
2.9	1	1	1	GT31-277	PLUG, DRAIN, OIL
2.10	1	1	1	GT31-278	PLUG, OIL
2.11	1	1	1	GT31-279	O-RING, PLUG, OIL
2.12	1	1	1	GT31-287	SEAL, SHAFT, RADIAL
2.13	1	1	1	GT31-287-1	SEAL, SHAFT, RADIAL
2.14	4	4	4	GT31-295	SHIM, ECCENTRIC, EDGE BONDED
2.15	1	1	1	GT31-301	KEY, SHAFT, WORM
2.16	20	20	20	1/2"-13 UNC X 1.5"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED

	A	COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS.	DRO 05/08/23	HOLLISTER-WHITNEY ELEVATOR CO. LLC	
		THIRD ANGLE PROJECTION	DRAWN BY DRO	SCALE 1:12	MATERIAL SEE PARTS LIST
			SHEET SIZE C	DATE 4/25/2023	GT11OD-LH


SECTION D-D
SCALE 1:20
SECTION B-B
SCALE 1:8
SECTION C-C
SCALE 1:8
HOLLISTER-WHITNEY
ELEVATOR CO. LLC
ASSY, GT110D, LEFT HAND
SEE PARTS LIST
GT110D-LH
4/25/2023
DRO
1:20
B
THIRD ANGLE PROJECTION
COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS, PUR #1764
DRO 05/08/23
A


26.8
2.16
2.2
2.9
E
E
27.9
35.7
DETAIL G
SCALE 1:4
2.15
2.3
2.13
2.12
2.16
2.6
2.7
SECTION E-E
2.1
2.11
2.10
F
F
2.8
OPPOSING SIDE VIEW
2.4
2.16
2.14
SECTION F-F
G
2.7
2.16
2.5
A
COMBINED ALL WHEEL SIZES TO ONE PRINT, UPDATED PARTS LIST, MOVED MOTOR DATA TO MOTOR PRINTS, PUR #1764
DRO 05/08/23
THIRD ANGLE PROJECTION
HOLLISTER-WHITNEY ELEVATOR CO. LLC
ELEVATOR CO. LLC
TITLE
ASSY, GT11OD, LEFT HAND
DRAWN BY DRO
SCALE 1:10
MATERIAL SEE PARTS LIST
REFERENCE TOL. ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED
SHEET SIZE B
DATE 4/25/2023
GT11OD-LH
SHEET 5
THIS DRAWING IS SUPPLIED AS A REPRESENTATION OF THE EQUIPMENT HOLLISTER-WHITNEY ELEVATOR CO. LLC ("MANUFACTURER") HAS AGREED TO SUPPLY. MANUFACTURER MAKES NO WARRANTY REGARDING INSTALLATION. ANY MODIFICATIONS NOT APPROVED IN WRITING BY MANUFACTURER MAY AFFECT OPERATION, VOIDS ANY WARRANTY AND RELIEVES MANUFACTURER OF ALL LIABILITY.
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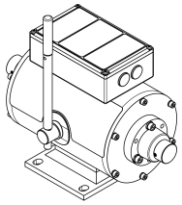
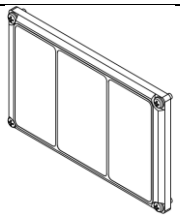
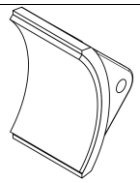
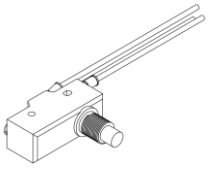
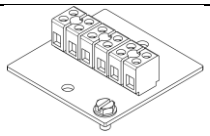
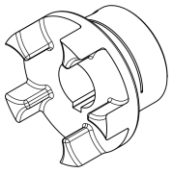
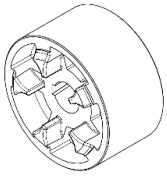
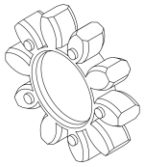
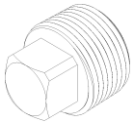
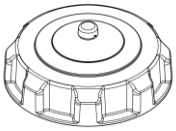
7.2 Assembly Replacement Kits

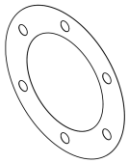
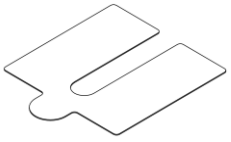
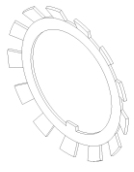
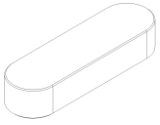
KIT NUMBER	DESCRIPTION
GT31-188	BEARING & SEAL ASSEMBLY - COMPLETE MACHINE
GT31-188-1	BEARING & SEAL ASSEMBLY - COMPLETE MACHINE: INCLUDES BEARINGS & GEAR HUB PRE-ASSEMBLED TO MAIN SHAFT
GT31-189	BEARING & SEAL ASSEMBLY - MAIN SHAFT
GT31-189-1	BEARING & SEAL ASSEMBLY - MAIN SHAFT: INCLUDES BEARINGS & GEAR HUB PRE-ASSEMBLED TO MAIN SHAFT
GT31-190	SEAL & GASKET ASSEMBLY - COMPLETE MACHINE
GT31-202	BEARING & SEAL ASSEMBLY - WORM SHAFT
GT31-WG	BEARING & SEAL ASSEMBLY - WORM SHAFT: INCLUDES WORM & GEAR REPLACEMENT SET
GT11-188	BEARING & SEAL ASSEMBLY - COMPLETE MACHINE
GT11-188-1	BEARING & SEAL ASSEMBLY - COMPLETE MACHINE: INCLUDES BEARINGS & GEAR HUB PRE-ASSEMBLED TO MAIN SHAFT
GT11-189	BEARING & SEAL ASSEMBLY - MAIN SHAFT
GT11-189-1	BEARING & SEAL ASSEMBLY - MAIN SHAFT: INCLUDES BEARINGS & GEAR HUB PRE-ASSEMBLED TO MAIN SHAFT
GT11-190	SEAL & GASKET ASSEMBLY - COMPLETE MACHINE
GT11-202	BEARING & SEAL ASSEMBLY - WORM SHAFT
GT11-WG	BEARING & SEAL ASSEMBLY - WORM SHAFT: INCLUDES WORM & GEAR REPLACEMENT SET

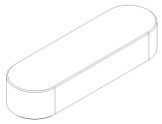
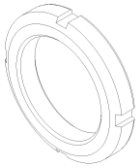
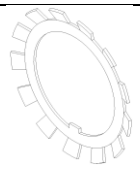
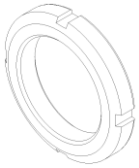
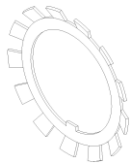
*Contact Hollister-Whitney sales for guidance on the appropriate assembly replacement kit

7.3 Individual Component Replacement Parts

Machine Model	Part Number	QTY Per Machine	Description	Image
All	GT31-314 (190V version) GT31-314-1 (110V version)	1	Solenoid, Brake	
All	GT31-314-002A	1	Assy, Replacement, Handle, Brake	
All	GT31-314-003A	1	Assy, Replacement, Cover, Solenoid	
All	GT31-316	2	Assy, Shoe and Pad, Brake	
All	GT31-324	2	Spring, Brake	
All	GT31-327	2	Assy, Switch, Brake	

Machine Model	Part Number	QTY Per Machine	Description	Image
All	GT31-358	1	Assy, Block, Terminal	
All	GT31-297-1.625 GT31-297-1.875 GT31-297-2.125 GT31-297-2.375	1	Coupler, Motor (based on motor shaft dia.)	
All	GT31-322	1	Drum, Brake	
All	GT31-298	1	Element, Coupling	
All	GT31-276	1	Glass, Sight, Oil	
All	GT31-277	1	Plug, Drain, Oil	
All	GT31-278	1	Plug, Oil	
All	GT31-063	1	Cap, Fill, Oil	

Machine Model	Part Number	QTY Per Machine	Description	Image
All	GT31-287	1	Seal, Shaft, Radial, Inner	
All	GT31-287-1	1	Seal, Shaft, Radial, Outer	
All	GT31-087	Varies	Shim/Seal, Cap, Bearing	
All	GT31-090	2	Bearing, Roller, Tapered (used on all worms)	
All	GT31-062-05 GT31-062-10 GT31-062-31	Varies	Shim, Stand, Outboard (thicknesses = 0.005”, 0.010”, and 0.031”)	
All	GT31-310	1	Nut, Lock, Shaft (KM10 - used on all worms)	
All	GT31-311	1	Washer, Lock, Shaft (MB10 - used on all worms)	
All	GT31-300	2	Key, Shaft, Shaft, Drive	

Machine Model	Part Number	QTY Per Machine	Description	Image
All	GT31-301	1	Key, Shaft, Worm	
GT31OH GT31BS GT31OD	GT31-093	3	Bearing, Roller, Spherical (used on drive shaft)	
GT31BS GT31OD	GT31-094	1	Bearing, Roller, Spherical (used on drive shaft)	
GT31OH GT31BS GT31OD	GT31-282	2	Washer, Lock, Shaft (KM22 - used on drive shaft)	
GT31OH GT31BS GT31OD	GT31-283	2	Washer, Lock, Shaft (MB22 - used on drive shaft)	
GT11OH GT11BS GT11OD	GT11-093	3	Bearing, Roller, Spherical (used on drive shaft)	
GT11OH GT11BS GT11OD	GT11-282	2	Washer, Lock, Shaft (KM18 - used on drive shaft)	
GT11OH GT11BS GT11OD	GT11-283	2	Washer, Lock, Shaft (MB18 - used on drive shaft)	

Machine Model	Part Number	QTY Per Machine	Description	Image
GT31OH GT31BS GT31OD	GT31-092	1	Seal, Grease (used on drive shaft)	

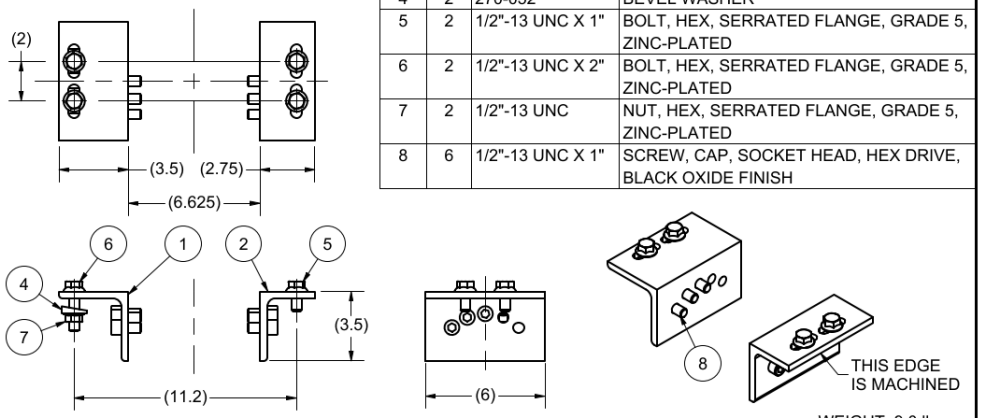
7.4 Gripper Mounting Equipment Assembly Drawings

7.4.1 620H-041

NOTES UNLESS OTHERWISE SPECIFIED:
1. APPLY LOCTITE (ITEM 3) TO ITEM 8 WHEN INSTALLING BRACKETS TO ROPE GRIPPER SIDE PLATES
2. FOR USE WITH GT11 AND GT31 MACHINES IN BOTH LH AND RH CONFIGURATIONS

PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	620H-041-1	BRACKET, MOUNTING, 620H
2	1	620H-041-2	BRACKET, MOUNTING, 620H
3	1	620-408G	LOCTITE 243 0.017oz P/N 1330255
4	2	270-052	BEVEL WASHER
5	2	1/2"-13 UNC X 1"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
6	2	1/2"-13 UNC X 2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
7	2	1/2"-13 UNC	NUT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
8	6	1/2"-13 UNC X 1"	SCREW, CAP, SOCKET HEAD, HEX DRIVE, BLACK OXIDE FINISH



WEIGHT: 9.0 lbmass

HOLLISTER-WHITNEY ELEVATOR CO. LLC

A	PRODUCTION RELEASE PUR #1594	BEH 06Dec21

TITLE: GT GRIPPER MOUNTING, 620H

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THIRD ANGLE PROJECTION

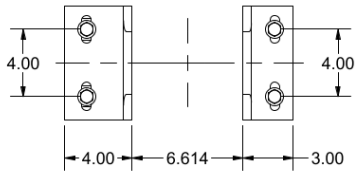
DRAWN BY	SCALE	MATERIAL	REFERENCE TOL.
BEH	1:5	SEE PARTS LIST	ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED

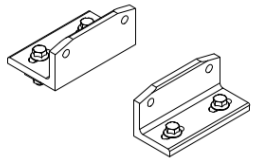
SHEET SIZE	DATE	
A	12/6/2021	620H-041 SHEET 1 OF 1

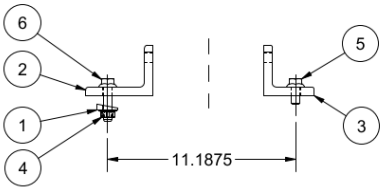
7.4.2 620L-041

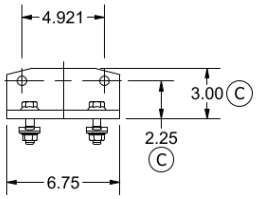
NOTES UNLESS OTHERWISE SPECIFIED:
1. REUSE MOUNTING HARDWARE FROM STOCK BRACKETS TO MOUNT TO ROPE GRIPPER.

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	270-052	BEVEL WASHER
2	1	620L-041-1	BRACKET, MOUNTING, 620L
3	1	620L-041-2	BRACKET, MOUNTING, 620L
4	2	1/2" - 13 UNC	SERRATED FLANGE LOCKNUT
5	2	1/2" - 13 UNC x 1"	SERRATED FLANGE HEAD CAP SCREW
6	2	1/2" - 13 UNC x 2"	SERRATED FLANGE HEAD CAP SCREW









WEIGHT: 11.7 lbmass

REV	DESCRIPTION	BY	DATE
C	UPDATED FOR GT11 30" WHEEL, PUR #1453	DRO	02/12/21
B	1/2" - 13 UNC x 1" QTY WAS 6, PUR #1443	DRO	01/22/21
D	ADDED NOTE, PUR #1457	DRO	02/16/21
A	PRODUCTION RELEASE, PUR #1301	DRO	03/20/20

HOLLISTER-WHITNEY ELEVATOR CO. LLC

TITLE: GT GRIPPER MOUNTING, 620L

THIRD ANGLE PROJECTION

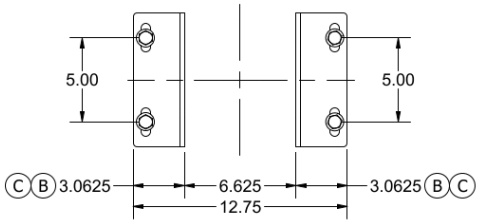
DRAWN BY	SCALE	MATERIAL	REFERENCE TOL.
DRO	1:6	SEE PARTS LIST	ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED

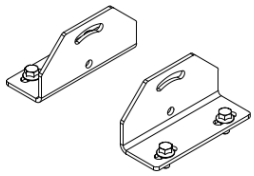
SHEET SIZE	DATE	
A	3/20/2020	620L-041 SHEET 1 OF 1

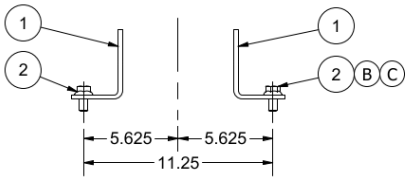
7.4.3 620L-OD-041

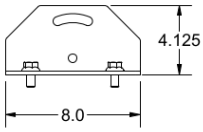
NOTES UNLESS OTHERWISE SPECIFIED:
1. USE ON ALL GT11OD AND GT31OD COMBINATIONS FOR 620 SERIES ROPE GRIPPERS.
2. REUSE MOUNTING HARDWARE FROM STOCK BRACKETS TO MOUNT TO ROPE GRIPPER.

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	620L-OD-041-1	BRACKET, MOUNTING, 620L, GT11OD/GT31OD
2	4	1/2" - 13 UNC x 1"	SERRATED FLANGE HEAD CAP SCREW









WEIGHT: 7.2 lbmass

REV	DESCRIPTION	BY	DATE
C	MOUTING BOLTS WERE 5/8 - 11 UNC, PUR #1441	DRO	01/19/21
B	MOUTING BOLTS WERE 1/2 - 13 UNC, PUR #1418	DRO	12/11/20
A	PRODUCTION RELEASE, PUR #1417	DRO	12/10/20

HOLLISTER-WHITNEY ELEVATOR CO. LLC

TITLE: GRIPPER MOUNTING, 620L, GT11OD & GT31OD

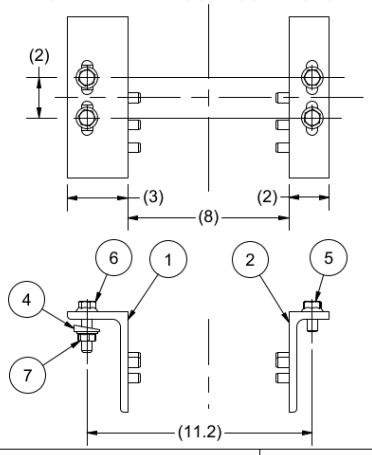
THIRD ANGLE PROJECTION

DRAWN BY	SCALE	MATERIAL	REFERENCE TOL.
DRO	1:6	SEE PARTS LIST	ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED

SHEET SIZE	DATE	
A	12/8/2020	620L-OD-041 SHEET 1 OF 1

7.4.4 622H-041

NOTES UNLESS OTHERWISE SPECIFIED:
1. APPLY LOCTITE (ITEM 3) TO ITEM 8 WHEN INSTALLING BRACKETS TO ROPE GRIPPER SIDE PLATES
2. FOR USE WITH GT11 AND GT31 MACHINES IN BOTH LH AND RH CONFIGURATIONS



PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	622H-041-1	BRACKET, MOUNTING, 622H
2	1	622H-041-2	BRACKET, MOUNTING, 622H
3	1	620-408G	LOCTITE 242 0.017oz P/N 1330255
4	2	270-052	BEVEL WASHER
5	2	1/2"-13 UNC X 1"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
6	2	1/2"-13 UNC X 2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
7	2	1/2"-13 UNC	NUT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
8	6	1/2"-13 UNC X 1"	SCREW, HEX DRIVE, COUNTERSUNK, FLAT HEAD, BLACK OXIDE FINISH

WEIGHT: 12.8 lbmass

B	UPDATED BRACKETS, PUR #1724	DR0	11/21/22
A	PRODUCTION RELEASE PUR #1594	BEH	06Dec21

HOLLISTER-WHITNEY ELEVATOR CO. LLC

TITLE: GT GRIPPER MOUNTING, 622H

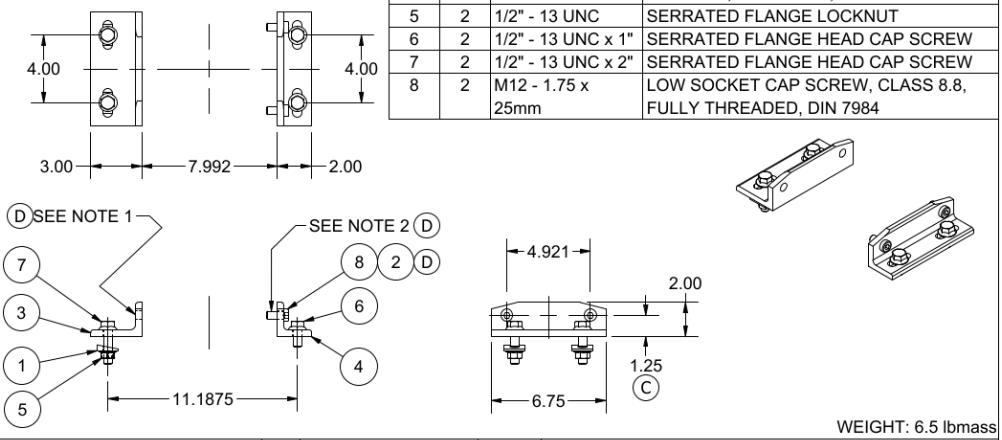
THIRD ANGLE PROJECTION

DRAWN BY	SCALE	MATERIAL	REFERENCE TOL.
BEH	1:5	SEE PARTS LIST	ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED

SHEET SIZE	DATE	
A	12/6/2021	622H-041 SHEET 1 OF 1

7.4.5 622L-041

NOTES UNLESS OTHERWISE SPECIFIED:
1. REUSE MOUNTING HARDWARE FROM STOCK BRACKETS TO MOUNT TO ROPE GRIPPER HERE.
2. APPLY LOCTITE WHEN INSTALLING.



PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	270-052	BEVEL WASHER
2	1	620-408G	LOCTITE 243 0.017oz (0.5 ML) P/N 1330255
3	1	622L-041-1	BRACKET, MOUNTING, 622L
4	1	622L-041-2	BRACKET, MOUNTING, 622L
5	2	1/2" - 13 UNC	SERRATED FLANGE LOCKNUT
6	2	1/2" - 13 UNC x 1"	SERRATED FLANGE HEAD CAP SCREW
7	2	1/2" - 13 UNC x 2"	SERRATED FLANGE HEAD CAP SCREW
8	2	M12 - 1.75 x 25mm	LOW SOCKET CAP SCREW, CLASS 8.8, FULLY THREADED, DIN 7984

WEIGHT: 6.5 lbmass

C	UPDATED FOR GT11 30" WHEEL, PUR #1453	DRO	02/12/21
B	1/2" - 13 UNC x 1" QTY WAS 6, PUR #1443	DRO	01/22/21
A	PRODUCTION RELEASE, PUR #1301	DRO	03/20/20
D	ADDED NOTES, LOCTITE, AND M12 HARDWARE, PUR #1457	DRO	02/17/21

HOLLISTER-WHITNEY ELEVATOR CO. LLC

TITLE: GT GRIPPER MOUNTING, 622L

THIRD ANGLE PROJECTION

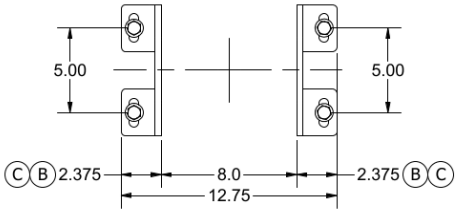
DRAWN BY	SCALE	MATERIAL	REFERENCE TOL.
DRO	1:6	SEE PARTS LIST	ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED

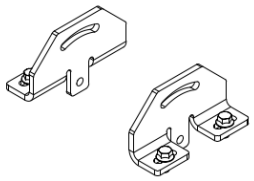
SHEET SIZE	DATE	
A	3/20/2020	622L-041 SHEET 1 OF 1

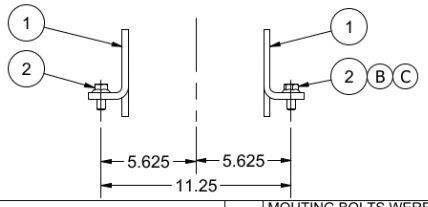
7.4.6 622L-OD-041

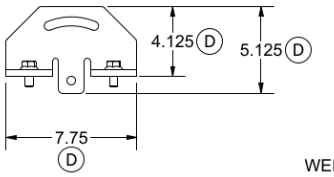
NOTES UNLESS OTHERWISE SPECIFIED:
1. USE ON ALL GT11OD AND GT31OD COMBINATIONS FOR 622 SERIES ROPE GRIPPERS.
2. REUSE MOUNTING HARDWARE FROM STOCK BRACKETS TO MOUNT TO ROPE GRIPPER.

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	622L-OD-041-1	BRACKET, MOUNTING, 622L, GT11OD/GT31OD
2	4	1/2" - 13 UNC x 1"	SERRATED FLANGE HEAD CAP SCREW









WEIGHT: 7.9 lbmass

	C	MOUTING BOLTS WERE 5/8 - 11 UNC, PUR #1441	DRO 01/19/21	HOLLISTER-WHITNEY ELEVATOR CO. LLC	
	B	MOUTING BOLTS WERE 1/2 - 13 UNC, PUR #1418	DRO 12/11/20	TITLE: GRIPPER MOUNTING, 622L, GT11OD & GT31OD	
D	UPDATED BRACKET DESIGN, PUR #1555	DRO 09/17/21	A	PRODUCTION RELEASE, PUR #1417	DRO 12/10/20

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THIRD ANGLE PROJECTION

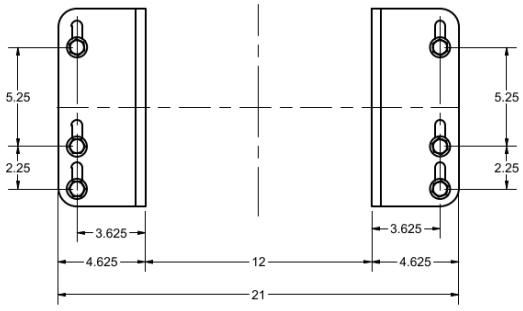
DRAWN BY	SCALE	MATERIAL	REFERENCE TOL.
DRO	1:6	SEE PARTS LIST	ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED

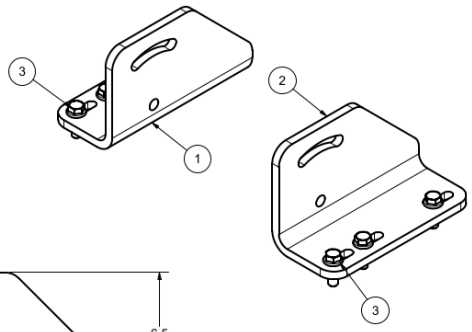
SHEET SIZE	DATE	
A	12/8/2020	622L-OD-041 SHEET 1 OF 1

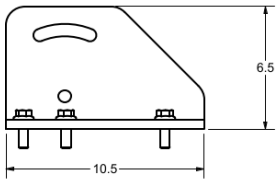
7.4.7 624-OD-041

NOTES UNLESS OTHERWISE SPECIFIED:
1. USE ON ALL GT31OD COMBINATIONS FOR 624 AND 626 ROPE GRIPPERS.
2. REUSE MOUNTING HARDWARE FROM STOCK BRACKETS TO MOUNT TO GRIPPER.

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	624-OD-041-1-L	BRACKET, MOUNTING, LH, 624/626, GT31OD
2	1	624-OD-041-1-R	BRACKET, MOUNTING, RH, 624/626, GT31OD
3	6	1/2"-13 UNC x 1-1/2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED







WEIGHT: 27.0 lbmass

	A	PRODUCTION RELEASE PUR #1500	BEH 16Jun21	HOLLISTER-WHITNEY ELEVATOR CO. LLC
				TITLE: GRIPPER MOUNTING, 624/626, GT31OD

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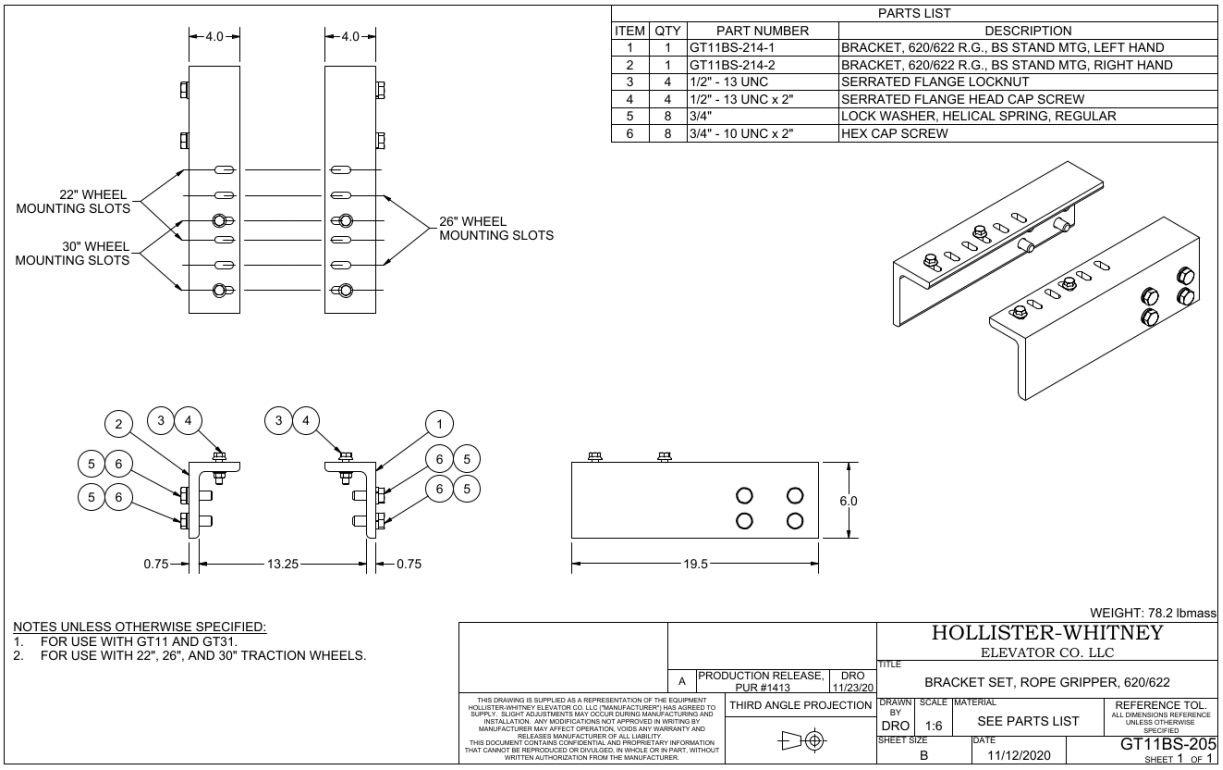
THIRD ANGLE PROJECTION

DRAWN BY	SCALE	MATERIAL	REFERENCE TOL.
BEH	1:4	SEE PARTS LIST	ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED

SHEET SIZE	DATE	
B	6/16/2021	624-OD-041 SHEET 1 OF 1

7.4.8 GT11BS-205



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	GT11BS-214-1	BRACKET, 620/622 R.G., BS STAND MTG, LEFT HAND
2	1	GT11BS-214-2	BRACKET, 620/622 R.G., BS STAND MTG, RIGHT HAND
3	4	1/2" - 13 UNC	SERRATED FLANGE LOCKNUT
4	4	1/2" - 13 UNC x 2"	SERRATED FLANGE HEAD CAP SCREW
5	8	3/4"	LOCK WASHER, HELICAL SPRING, REGULAR
6	8	3/4" - 10 UNC x 2"	HEX CAP SCREW

WEIGHT: 78.2 lbmass

NOTES UNLESS OTHERWISE SPECIFIED:
1. FOR USE WITH GT11 AND GT31.
2. FOR USE WITH 22", 26", AND 30" TRACTION WHEELS.

A	PRODUCTION RELEASE, PUR #1413	DRO 11/23/20

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THIRD ANGLE PROJECTION

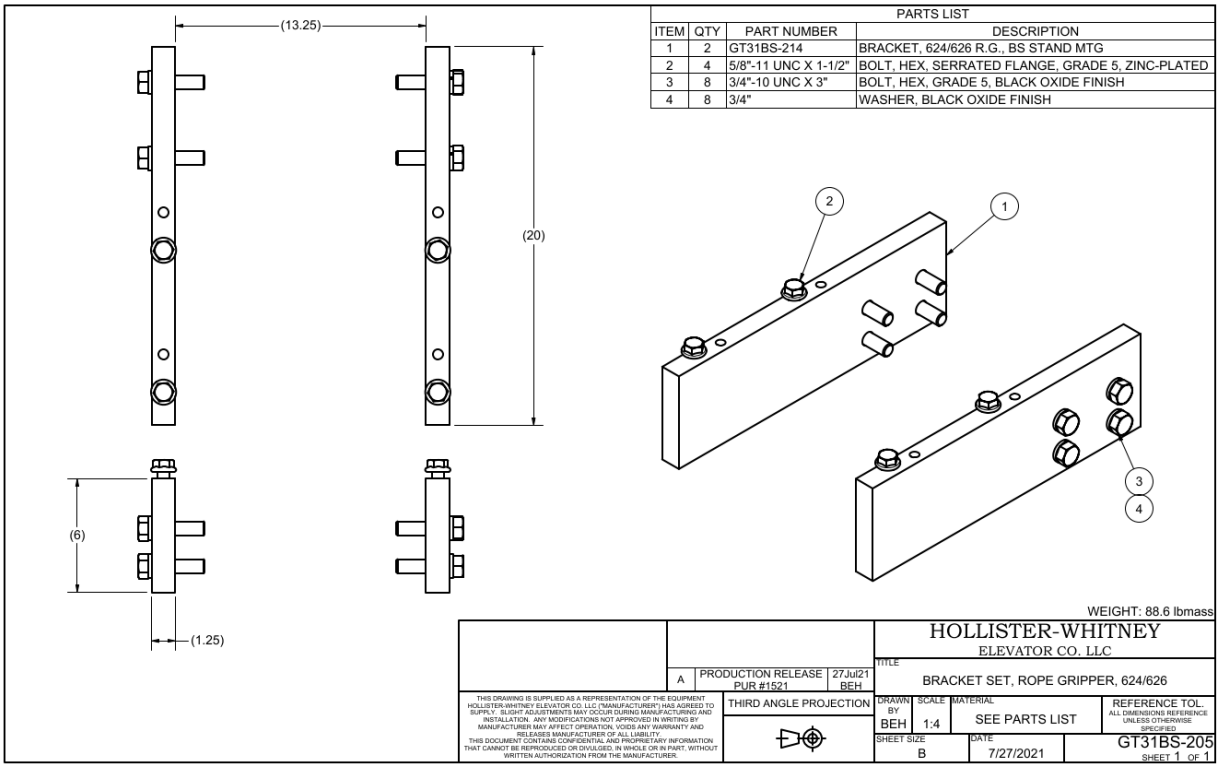
HOLLISTER-WHITNEY
ELEVATOR CO. LLC

TITLE: BRACKET SET, ROPE GRIPPER, 620/622

DRAWN BY	SCALE	MATERIAL	REFERENCE TOL.
DRO	1:6	SEE PARTS LIST	ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED

SHEET SIZE	DATE	
B	11/12/2020	GT11BS-205 SHEET 1 OF 1

7.4.9 GT31BS-205



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	GT31BS-214	BRACKET, 624/626 R.G., BS STAND MTG
2	4	5/8"-11 UNC X 1-1/2"	BOLT, HEX, SERRATED FLANGE, GRADE 5, ZINC-PLATED
3	8	3/4"-10 UNC X 3"	BOLT, HEX, GRADE 5, BLACK OXIDE FINISH
4	8	3/4"	WASHER, BLACK OXIDE FINISH

WEIGHT: 88.6 lbmass

A	PRODUCTION RELEASE PUR #1521	27Jul21 BEH

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THIRD ANGLE PROJECTION

HOLLISTER-WHITNEY
ELEVATOR CO. LLC

TITLE: BRACKET SET, ROPE GRIPPER, 624/626

DRAWN BY	SCALE	MATERIAL	REFERENCE TOL.
BEH	1:4	SEE PARTS LIST	ALL DIMENSIONS REFERENCE UNLESS OTHERWISE SPECIFIED

SHEET SIZE	DATE	
B	7/27/2021	GT31BS-205 SHEET 1 OF 1

Section

8

8 Appendix

8.1 Encoder Supplier Data

Kübler

English:

(Original version)

User´s Manual

For UL compliance:

⚠ CAUTION

Sensitive products.
The device could be damaged or be destroyed.
► Do not use a hammer for adjusting the device.

⚠ CAUTION

Electrostatic sensitive devices.
The device could be damaged or be destroyed.
► Observe precautions for handling.

Français:

(La version anglaise constitue la version originale.)

Instructions d'utilisation

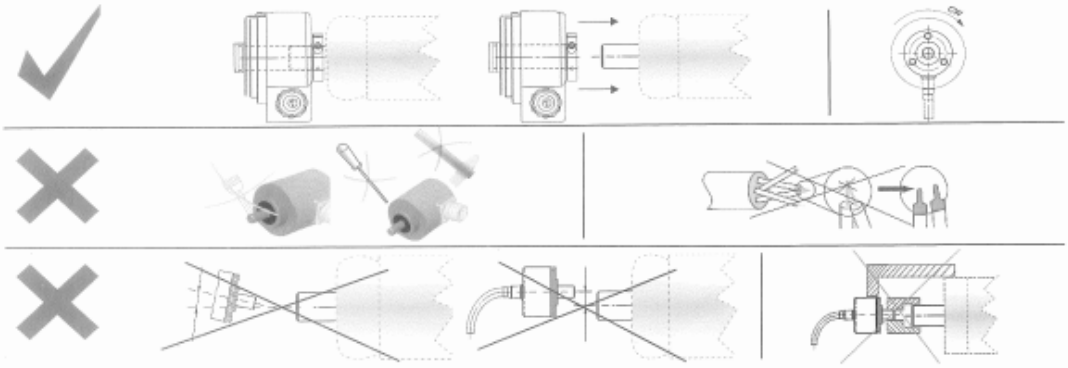
Pour le respect de la conformité UL:

⚠ ATTENTION

Produits fragiles.
Risque de dommages ou de destruction de l'appareil.
► Ne pas utiliser de marteau pour le régler.

⚠ ATTENTION

Appareil sensible aux décharges électrostatiques.
Risque de dommages ou de destruction de l'appareil.
► Prendre les précautions nécessaires pour la manipulation.



Technical data:

- This device is intended for determine absolute or differential rotation positions. It is also possible to measure rotation speeds.
- Altitude up to 2000 m [2187.2 yds].
- Overvoltage category I.
- Electrical power input: minimum 5 V DC - maximum 30 V DC ⎓ as marked, depends on type, fluctuations not exceed ±10% of nominal voltage, class 2.
  Please see datasheet on **www.kuebler.com** or labels on the product for details.
- Signal inputs and outputs: class 2.
- Max relative humidity 93% at 40°C [104°F].
- Pollution degree 2.
- No ventillation required.
- Indoor use, outdoor use possible, not intended for direct exposure to UV-radiation.
- Temperature range minimum -20°C [-4°F] up to +70°C [158°F] (depends on type). Range could be extended.
  Please see datasheet on **www.kuebler.com** for details.
- Cleaning only with water.
- Electrical connections and ratings: see labels on product or in the datasheets on **www.kuebler.com**.
- Valid accessories you can find in catalogue on **www.kuebler.com**.
- This device is maintenance-free and need no consumable material.

Données techniques:

- Cet appareil est destiné à la détermination de positions en rotation absolues ou différentielles. Il permet également la mesure de vitesses de rotation.
- Altitude jusqu'à 2000 m [2187.2 yds].
- Catégorie de surtension I.
- Alimentation électrique : minimum 5 V DC - maximum 30 V DC ⎓ selon indication, en fonction du type, fluctuations maximales ±10% de la tension nominale, classe 2.
  Se reporter à la fiche technique à l'adresse Internet **www.kuebler.com** ou aux étiquettes du produit pour des détails.
- Entrées et sorties de signal : classe 2.
- Humidité relative max. 93% à 40°C [104°F].
- Degré de pollution 2.
- Ne nécessite aucune ventilation.
- Pour utilisation à l'intérieur, utilisation à l'extérieur possible, n'est pas prévu pour une exposition directe au rayonnement UV.
- Plage de températures minimale -20°C [-4°F] à +70°C [158°F] (selon le type). Cette plage pourrait s'élargir.
  Se reporter à la fiche technique à l'adresse Internet **www.kuebler.com** pour des détails.
- Nettoyage à l'eau uniquement.
- Raccordements et valeurs électriques: voir les étiquettes apposées sur le produit ou les fiches techniques à l'adresse Internet **www.kuebler.com**.
- Vous trouverez les accessoires pour cet appareil dans notre catalogue l'adresse Internet **www.kuebler.com**.
- Cet appareil est sans maintenance et ne nécessite aucun consommable.

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R600066.0009 - Index 3

R600.039.001

Deutsch

Installationsanleitung Drehgeber

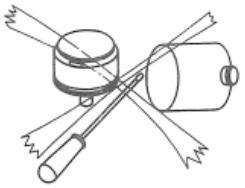
Wichtig!

Vor Inbetriebnahme des Gebers unbedingt lesen.

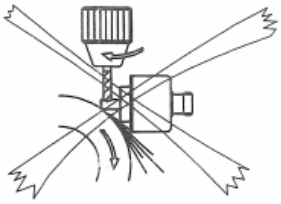
Mit diesem Geber haben Sie ein Präzisionsmessgerät erworben. Beachten Sie stets die Angaben und Hinweise des Datenblattes, um eine problemlose Funktion des Gebers zu gewährleisten und um die Garantieleistung aufrecht zu erhalten. Falls im Datenblatt nichts anderes angegeben ist, bitte folgendes unbedingt beachten:

Mechanisch:

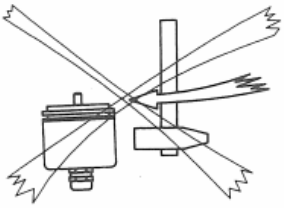
- Der Drehgeber darf weder teilweise noch ganz zerlegt oder modifiziert werden.



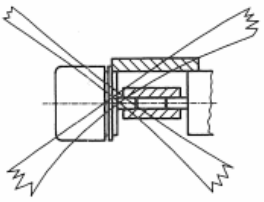
- Die Welle nicht nachträglich bearbeiten (schleifen, sägen, bohren, usw.). Die Genauigkeit des Gebers und die Zuverlässigkeit von Lager und Dichtung nehmen sonst Schaden. Wir sind gerne bereit, auf Ihre Kundenwünsche einzugehen.



- Das Gerät niemals mit dem Hammer ausrichten.
- Schlagbelastungen unbedingt vermeiden.
- Drehgeberwelle nicht über die im Datenblatt angegebenen Werte belasten (weder axial noch radial).



- Drehgeber und Antriebsgerät nicht an Wellen und Flanschen starr miteinander verbinden. Benutzen Sie grundsätzlich eine Kupplung (zwischen Antriebswelle und Geberwelle, bzw. zwischen Hohlwellen-Geber-Flansch und Antriebsflansch).



Für die Gebermontage empfehlen wir Ihnen den Einsatz unserer Montagehilfen und Kupplungen (siehe Zubehör-Datenblätter).

Bitte beachten Sie die umseitig stehenden Montagehinweise!

English

Installing instructions for rotary encoders

Important!

It is imperarive to read these instructions before setting the encoder in operation.

This encoder is a precision measuring instrument.
Always observe the information and instructions of the data sheet to ensure trouble-free function and to maintain warranty claims. Unless otherwise stated in the data sheet, the following has to be absolutely observed:

Mechanical:

- It is not permissible to dismantle the encoder entirely or in part or to modify it.
- Do not alter the shaft (by grinding, sawing, drilling, etc.), otherwise the accuracy of the encoder and the dependability of bearing and gasket will suffer. We are prepared to discuss special designs.
- Never align the instrument with a hammer.
- It is imperative to avoid impact loads.
- Radial and axial load capacity as stated in the data sheet have to be observed under any circumstances.
- Do not connect encoder and drive rigidly to one another at shafts and flanges. Always use a coupling (between drive shaft and encoder shaft, or between hollow-shaft encoder flange and drive flange).

We recommend that you use our assembly aids and couplings to install the encoder (see accessory data sheets).

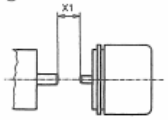
Please observe the installation instructions on the back page, too.

– Änderungen vorbehalten –
– Subject to changes without prior notice. –

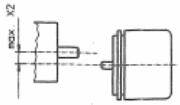
Deutsch

Montagehinweis für Geber mit Welle:

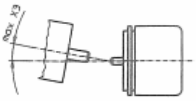
① Wellen auf Versatz überprüfen.



Axialversatz/*Axial offset*



Radialversatz/*Radial offset*

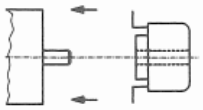


Winkelfehler/*Angle error*

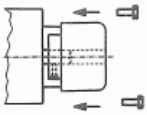
Entnehmen Sie die Werte X1, X2 und X3 dem Datenblatt der Kupplung.

② Kupplung während der Montage vor zu starker Biegung sowie Beschädigung schützen.
③ Kupplung auf den Wellen ausrichten.
④ Spann- oder Klemmschrauben vorsichtig anziehen.

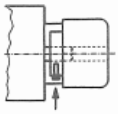
Montagehinweise für Hohlwellengeber mit Kupplung:



Geber mit Kupplung auf Welle montieren. *Mount encoder with coupling on shaft.*



Kupplung mit Antriebflansch verschrauben *Bolt coupling to drive flange.*



Klemmnabe vorsichtig anziehen *Carefully tighten clamping hub*

Elektrisch:

1. Geltende Sicherheitsnormen
- Vor Inbetriebnahme sind alle benötigten Kabeladern laut Datenblatt anzuschließen! Isolieren Sie alle nicht benötigten Enden sauber, um Kurzschlüsse zu vermeiden.
- Bei der Konfektionierung des Gegensteckers ist eine, evtl. dem Stecker beigelegte, Anleitung zu beachten.
- An Leistungslängen empfehlen wir:
• bei asymmetrischer Übertragung, d.h. invertierte Signale werden nicht verwendet, max. 10 m Leitungslänge.
• bei symmetrischer Übertragung (z.B. nach RS 422) max. 50 m Leitungslänge (Leitungslänge mit verdrillten Aderpaaren)
- Gegenstecken am Geber nur im spannungslosen Zustand ziehen oder stecken.
- Die richtige Betriebsspannung und den maximal zulässigen Ausgangsstrom berücksichtigen (siebe Datenblatt)!
- Ein- bzw. Ausschalten der Betriebsspannung für den Geber und das Folgegerät muss gemeinsam erfolgen.

2. Um CE-Konformität zu erreichen, ist eine EMV-gerechte Installation Voraussetzung:
- Als Steuerleitungen sind durchgehend geschirmte Kabel zu verwenden. Bei symmetrischer Übertragung (z.B. RS 422) muss ein Kabel mit verdrillten Aderpaaren verwendet werden.
Der Kabelschirm wird idealerweise rundum (360°) über schirmbare Stecker oder kabeldurchführungen an den Geber und die Auswertung angelegt.
- Die Schutzerde (PE) ist bevorzugt beidseitig, am Geber und an der Auswertung, impedanzarm aufzulegen.
- Bei Problemen durch Erdschleifen ist die Schutzerde (PE) auf der Geberseite aufzutrennen. Der Geber sollte hierhei gegenüber dem Antrieb elektrisch isoliert angebaut werden.
- Die Geberleitungen sind getrennt von Leitungen mit hohem Störpegel zu verlegen.
- An der Spannungsversorgung des Gebers sollten keine Verbraucher mit hohem Störpegel, wie z.B. Frequenzumrichter, Magnetventile, Schütze etc. angeschlossen werden. Andernfalls ist für eine geeignete Spannungsfilterung zu sorgen.

Sicherheitshinweise:

1. Wenn anzunehmen ist, dass ein gefahrloser Betrieb nicht mehr gewährleistet ist, muss das Gerät außer Betrieb gesetzt und gegen unbeabsichtigtes Einschalten gesichert werden.
2. Wenn durch den Ausfall oder eine Fehlfunktion des Gebers eine Gefährdung von Menschen oder eine Beschädigung von Betriebseinrichtungen nicht auszuschließen ist, so muss dies durch geeignete Sicherheitsmaßnahmen wie Schutzvorrichtungen oder Endschalter usw. verhindert werden.

Bei Missachtung der obigen Richtlinien können wir keine Garantie gewähren.
Wir bitten um Verständnis.

English

Installation instructions for encoders with shaft:

① Check shafts for offset.

Refer to the coupling data sheet for the values X1, X2, and X3.

② During assembly, protect coupling against excessive bending or damage.
③ Align coupling on the shafts.
④ Carefully tighten pulling or clamping bolts.

Installation instructions for hollow-shaft encoders with coupling:

Electrical:

1. The existing safety devices for electrical installations have to be observed.
- Before setting in operation, connect all required strands as per data sheet. To prevent short-circuits, neatly insulate the ends of all strands which are not required
- When preassembling the mating connector, comply with any instructions accompanying the connector.
- Our recommendations regarding cable lengths:
• in case of asymmetrical transmission, i.e. inverted signals are not used, cable length max. 10 m.
• in case of symmetrical transmission (e.g. to RS 422), cable length max. 50 m (cable with twisted pairs of wires).
- Plug in or pull out mating connector at the encoder only when encoder is de-energized.
- Make certain that the operating voltage is correct and the max. permissible output current is not exceeded (see data sheet).
- The operating voltage for encoder and succeeding device must be turned on and off together.

2. In order to obtain CE-Conformity, EMC installation conformity should be observed.
Shielded cables should be used or control lines.
In case of symmetrical transmission (e.g. Rh 422) a cable with twisted pairs of wire has to be used.
The cable shield should it possible be connected fully enclosed (360°) by shielded connectors or cable bushings. This has to be done at the encoder and transmision end.
- The protection earth should be put with low impedance on both face and back of the encoder and the transmission end.
- In case of earth loop problems, the protection earth of the encoder side has to be removed. On this occasion, the encoder should be placed electrically isolated opposite the actuation.
- The encoder lines should run separately to cables with high noise levels.
- Consumer with high disturbance level, e.g. frequency converters, solenoid valves, contactors etc. should not be connected to the same voltage supply. Otherwise, a suitable voltage filtering has to be installed.

Safety precautions:

1. If operation without danger can no longer be assured of some point, the unit must be shut down and secured against accidental activation.
2. If personal injury or damage to equipment is possible should the encoder fail or malfunction, this must be prevented by suitable safety precautions such as protective devices or limit switches, etc.

We can assume no warranty it the above directives are disregarded.
We ask for your understanding.

8.2 Brake Solenoid CSA Certification

CSA GROUP

Certificate of Compliance

Certificate: 80009860 **Master Contract:** 155941

Project: 80009860 **Date Issued:** 2019-12-11

Issued To: **Hollister-Whitney Elevator Co., LLC**
2603 North 24th St
Quincy, Illinois, 62305
United States

Attention: Brent Henderson

Issued by: Kevin Chieu
Kevin Chieu

C US

CSA B44.1/ASME A17.5

PRODUCTS
CLASS - C241101 - ELEVATOR EQUIPMENT-Open and Enclosed Elevator Electrical Equipment
CLASS - C241181 - ELEVATOR EQUIPMENT - Open and Enclosed Elevator Electrical Equipment - Certified to US Standards
Elevator Brake solenoid GT31-314

Ratings: Pick 190Vdc, 2.5A max
Hold 80Vdc, 1A max
60% duty cycle, 180 starts/hr

Note: Open type equipment is investigated for use only as a component of electrical equipment where the acceptability of the final assembly is determined by CSA.

APPLICABLE REQUIREMENTS

CSA B44.1/ASME A17.5 - Elevator and Escalator Electrical Equipment

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CSA GROUP

Supplement to Certificate of Compliance

Certificate: 80009860 **Master Contract:** 155941

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
80009860	2019-12-11	Original certification of GT31-314 elevator brake solenoid

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