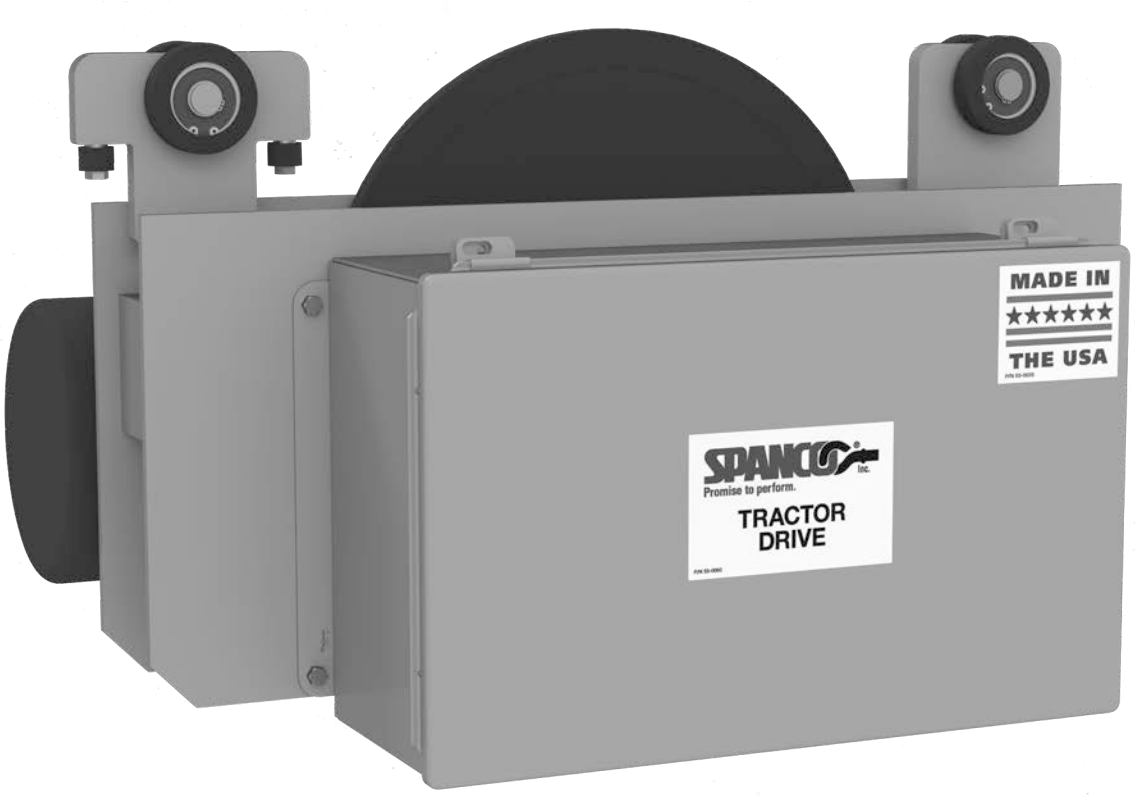
SPANCO® Inc.
Promise to perform.

600, 700, AND 900-SERIES ENCLOSED TRACK TRACTOR DRIVE

Operator's Instruction Manual



ISO 9001:2015 Registered

Manual 103-0077

Effective June 2020

WARNING

SPANCO CONDITIONS OF USE AND WARNING STATEMENT

1. Read, understand, and follow the manual, assembly drawings, and warnings provided with your system **before** beginning installation. Follow all instructions carefully.
2. This manual must be used in conjunction with manual 103-0010 (Ceiling-Mounted Monorail Manual) or manual 103-0011 (Freestanding Workstation Bridge Crane Manual).
3. This manual, and any other instructions, must be provided to the users of this equipment. The user must understand the equipment's proper use and limitations.
4. For this tractor drive, this crane is engineered to accommodate a standard hoist and a standard hoist weight. The standard hoist weight is calculated at 15 percent of the crane's rated capacity. Please inform Spanco, Inc. if hoist weight exceeds 15 percent of the crane's rated capacity, or if the lifting speed exceeds 50 F.P.M.
5. *Soft starts* and instantaneous *contactor* controls aren't supplied on Spanco systems and are not recommended or acceptable for use on Spanco systems.
6. Each component and system must be employed and maintained according to all OSHA, ANSI, CMAA, and MMA standards.
7. Per OSHA, ANSI, CMAA, and MMA requirements, designate a competent person who can fulfill obligations of all regulations.
8. The rated capacity is displayed on a label on the system. Exceeding the capacities displayed on this label can result in serious injury or death.
9. Never use this system as fall protection or for lifting, hoisting, or carrying personnel.
10. Although Spanco, Inc. may provide components that are intended for service in a specific environment, it is the customer's responsibility to confirm that the provided Spanco system and components will work in and are acceptable for their specific application and environment.
11. **Before each use**, inspect the system for bent, broken, cracked, or missing components, oil leaks, corrosion, properly secured hardware, and any unusual wear or sounds. If any damage is discovered, immediately remove the crane from service until all issues have been resolved and inspected by a qualified person.
12. Thoroughly inspect the system **annually** per OSHA law.
13. There should never be any type of loading past the end stops for any reason.
14. When connecting track sections on runway systems, track splice and truss splice plates are required. For trussed track, splice joint centers must be within maximum 48 inches of the hanger support centers unless otherwise specified. For plain track, splice track centers must be within maximum 18 inches of the hanger support centers unless otherwise specified.
15. Systems with flush clamp hangers do not require sway bracing. However, all systems mounted to the ceiling must be laterally and longitudinally braced with bracing provided by others.
16. For foundation-mounted systems, bracing is not required for non-seismic applications. However, if any sway is perceived as undesirable, lateral bracing can be installed to the system by others. To achieve desired rigidity for a specific application, Spanco, Inc. recommends consulting a professional engineer in your area to satisfy all codes and ordinances.
17. Engineering of any attachment points must be done by others.
18. Component appearances and dimensions shown are approximate and subject to change without notice. All brochure dimensions are developed using standard components for the spans and capacities. Substitution of optional trolleys or other components will affect certain dimensions.
19. Spanco cranes are designed to lift loads straight up and down. Never load the track at an angle.
20. Never deviate from the above unless you have written permission and authorization from Spanco, Inc.

WARNING

ALL FIELD INSTALLATIONS AND CONNECTIONS MUST BE PERFORMED BY A CERTIFIED ELECTRICIAN

TROUBLESHOOTING MUST BE PERFORMED BY A CERTIFIED CRANE TECHNICIAN

SYSTEM APPLICATIONS

The Spanco System is used for material handling applications. This material handling system is labeled with a maximum rated capacity and is designated for Class C service as defined by the CMAA; follow all limitations as noted on system labels.

STANDARDS AND COMPLIANCE

Please refer to local, state, and federal (OSHA) requirements governing occupational safety for additional information regarding material handling. The Spanco System meets or exceeds the requirements set forth in OSHA 1910.179, ANSI B30.11, and MMA MH27.2 and CMAA 70.

REQUIRED TRAINING

This system is intended to be used by people who are trained in its correct application and use. It is the responsibility of the users and the users' management to assure that they are familiar with OSHA law and these instructions, and that they are trained in the correct use and care of this equipment. Authorized users must also be aware of the operating characteristics, application limits, and the consequences of improper use, which can result in serious injury or death.

Every material handling application must be part of a comprehensive managed lift plan. Each program must include, but is not limited to:

- Hazard analysis
- Operator certification training
- Operator evaluation program
- Hand signal protocols
- Lock-out/Tag-out training

The above list is not a comprehensive list. Specific applications may need to include additional items, such as administrative controls or engineered controls. A Qualified Engineer or OSHA Qualified Person should review the comprehensive managed lift plan to ensure that it is adequate for your specific application. CMAA 79 Crane Operator's Manual must be read and followed in its entirety to help ensure worker safety and to create a comprehensive lift plan within your facility.

TABLE OF CONTENTS

ASSEMBLY INSTRUCTIONS

1. Equipment That May Be Needed for Assembly

a) This manual

b) The inverter manual

c) Applicable safety equipment for workers' use during assembly, such as hard hats, safety shoes, etc.

d) Telescoping fork truck or crane (minimum lifting height: determined by installed system height; minimum capacity: 4,000 pounds)

e) Man lift/cherry picker (minimum height: determined by installed system height)

f) Measuring tape

g) Torque wrench

h) Lifting straps

i) Two six-inch by six-inch (or larger) wood blocks

j) Long carpenter's level or laser level

k) Wrench/Sockets sizes: 3/4 inch, 15/16 inch, and 1-1/8 inch

l) A spacious, level area for assembly

m) A way to mark hanger locations, such as a permanent marker

2. Inventory

a) Open all bundles and confirm that all components are accounted for: see your order specific layout drawing. Note that the quantity of components in an assembly are multiplied by the number of the assemblies.

b) Check for damage to components that may have occurred during shipping.

INSTALLATION

NOTE: All field adjustments and connections must be performed by a certified industrial electrician.

Carefully remove the end stop(s) from the end of the bridge or runway track. Insert the tractor drive into the end of the track making sure that the end of the tractor drive that connects to the hoist trolley (if bridge tractor drive) or the bridge end trucks (if runway tractor drive) goes in first and is facing the mating end of the hoist trolley or bridge end trucks. After the tractor drive is in the track, reinstall the end stop(s).

At the opposite end of the tractor drive is a spring-loaded trolley. Release the compression on the spring to disengage the drive wheel from the track so that the tractor drive can be moved by hand for connecting with the hoist trolley or the bridge end trucks.

After connecting to the hoist trolley or the bridge end trucks and before engaging the drive wheel with the track via the spring-loaded trolley, electrically connect the tractor drive (via the control panel, if applicable). Make sure that the power is turned off when connecting or disconnecting power leads. After the connections are made, check for correct drive wheel rotation. Correct if necessary. The standard speed is 25/50 F.P.M. The inverter can be adjusted to provide speeds up to 100 F.P.M. Refer to the inverter manual for more information.

After the drive wheel rotation is correct, engage the drive wheel to the track by compressing the spring on the spring-loaded trolley with the nut and locking with the jam nut. For a trolley drive (without load), tighten the nut for the spring just enough so that the tractor can no longer be moved forward or backward by hand inside the track, then tighten as per the below instructions up to a maximum additional 2-1/2 complete revolutions to achieve the correct spring pressure. Generally, this procedure should provide the correct amount of friction to move properly when under load. Also, refer to the **Tractor Drive Adjustment Procedure** below as an alternative procedure.

NOTE: Never exceed more than 2-1/2 complete revolutions of the nuts when compressing the spring or permanent damage to the drive wheel could result.

MAINTENANCE:

Refer to the attachments for maintenance of the gearbox. Slippage of the drive wheel can be corrected by adjusting the compression of the spring on the spring-loaded trolley. Replace the drive wheel when all the adjustment is taken up on the spring-loaded trolley, or if section(s) of the tread are missing or loose.

TRACTOR DRIVE ADJUSTMENT PROCEDURE

1) Adjust the double hex nuts under the spring on the guide trolley assembly so that the drive wheel is not in contact with the track.

2) Tighten the first nut until the drive wheel contacts the track.

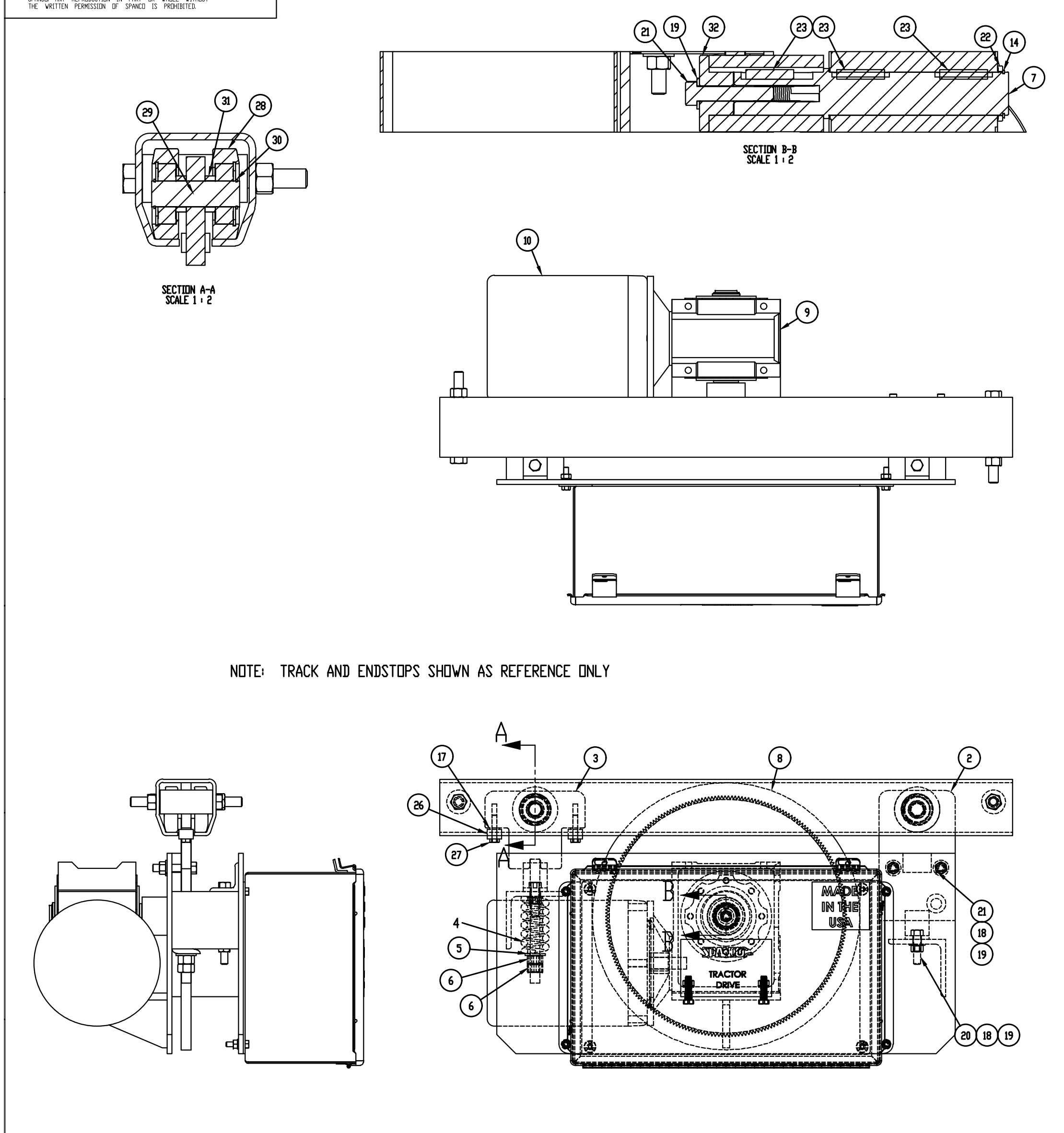
3) Give the first nut an additional 1/2 turn and tighten the second nut against it.

4) When the tractor drive is ready to test, note the amount of slip that occurs at start-up. The drive wheel can slip for a maximum of approximately 1/2 to one second while the bridge comes to full speed. Excessive slip is not acceptable.

5) Adjust the double hex nuts under the spring on the guide trolley assembly again if required to achieve proper engagement.

NOTE: Never exceed more than 2-1/2 complete revolutions of the nuts when compressing the spring or permanent damage to the drive wheel could result.

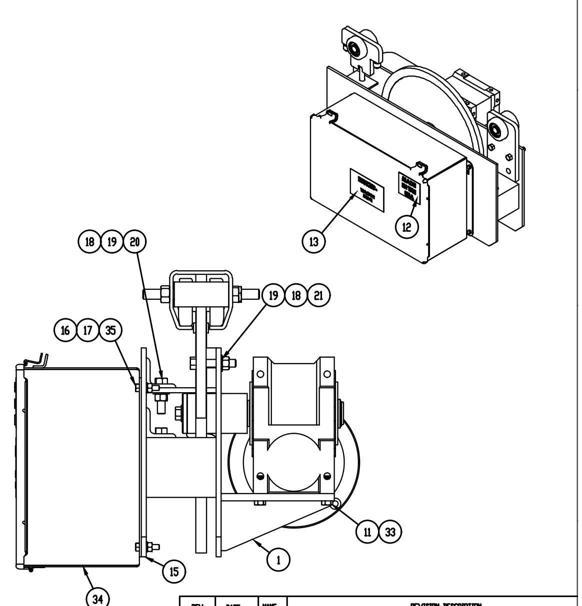
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SPANCO. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF SPANCO IS PROHIBITED.



ITEM NO.	QTY	PART NO.	DESCRIPTION
1	1	09-0836	WELDMENT,MAIN FRAME,EC TRAC DRIVE,600
2	1	09-0828	PLATE,GDE TRLY NO SPRNG,EC TRAC DRV,600
3	1	09-0832	WELDMENT,600 GDE TRLEY,EC TRAC DRV
4	1	62-0005	SPRING 8.8 #/FT X 0.75" DIA X 0.75" FREE LENGTH
5	1	15-0003	FLAT WASHER, 1/2"
6	2	11-0030	NUT, HEX 1/2" -13NC
7	1	09-0826	SHAFT,DRIVE,EC TRAC DRV
8	1	09-0841	WHEEL,DRIVE WHEEL,EC TRAC DRV
9	1	43-0068	REDUCER,IBLC-063-60:1-R-56C
10	1	48-0001	LEESON MOTOR C56 1725RPM 1/3HP
11	4	10-7007	BOLT,HEX 5/16 X 18NC X 1 1/4" GR5
12	1	53-0023	DECAL MADE IN USA
13	1	53-0060	LABEL, TRACTOR DRIVE
14	1	20-0026	EXT SNAP RING TRUARC #5100-112
15	1	09-0837	WELDMENT,SIDE W/ENCLOSURE,EC TRAC DRIVE,600
16	4	11-0010	1/4"-20NC HEX NUT
17	6	14-0001	1/4" LOCK WASHER
18	4	11-0020	NUT, HEX 3/8-16
19	5	14-0002	3/8" LOCKWASHER
20	2	10-0104	3/8"-16UNC X 1 1/2" HEX HEAD BOLT
21	3	10-0122	BOLT,3/8-16 X 2 GR5 FULL THREAD
22	1	09-0827	SPACER,DRIVE SHAFT,EC TRAC DRV
23	3	47-0001-00.10	KEY 1/4" X 1/4" X 1 1/4"
26	2	42-0007	3/4" O.D. CAM ROLLER
27	2	10-0016	BOLT, HEX 1/4-20 NC X 1 1/4" LONG
28	4	306111	6" ALUTRACK WHEEL ASSEMBLY
29	2	300102	6" ALUTRACK AXLE
30	4	20-0019	EXTERNAL SNAP RING
31	4	9-1225	600 SERIES SPACER
32	1	09-0842	SPACER,SHAFT END,DRIVE,EC TRAC DRV
33	4	11-0133	5/16"-18, KEPS NUT (K-LOCK NUT)
34	1	73-0110	ENCLOSURE, 16" X 10" X 6" NEMA 12
35	4	10-0013	HEX HEAD BOLT, 1/4"-20 NC X 1"

NOTE: THE FOLLOWING COMPONENTS ARE INCLUDED WITH 43-0068 (ALL QTY=1): 09-0826, 09-0827, 14-0002, 20-0026, & 47-0001-00.10 (QTY=3).

NOTE: 73-0110 IS INCLUDED WITH 95-***-.3-ETM-**



"600" WITH CONTROL PANEL

REV.	DATE	NAME	REVISION DESCRIPTION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ±1/16" DECIMALS .XX ±.060 .XXX ±.030 .XXXX ±.015 ANGLES ±1°

MATERIAL

FINISH

STATUS

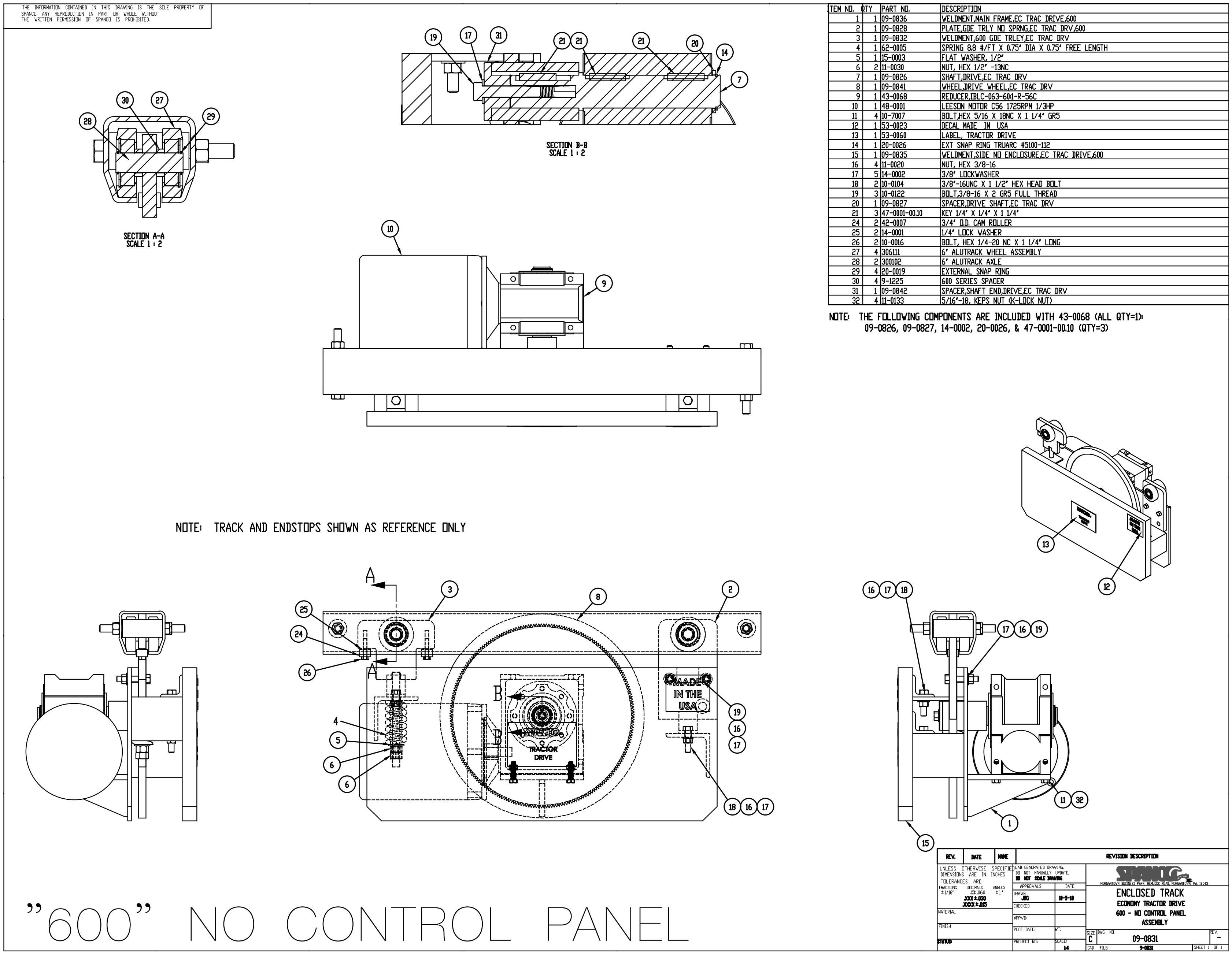
CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE, DO NOT SCALE DRAWING

APPROVALS	DATE
DRAWN JRG	10-5-10
CHECKED	
APPVD:	
PLOT DATE:	WT.
PROJECT NO.:	SCALE: 1:4

SPANCO INC. MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543

ENCLOSED TRACK
ECONOMY TRACTOR DRIVE
600 - WITH CONTROL PANEL
ASSEMBLY

SIZE C | DWG. NO. 09-0830 | REV. -
CAD FILE: 9-0830 | SHEET 1 OF 1



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2	1	09-0828	PLATE,GDE TRLY NO SPRNG,EC TRAC DRV,600
3	1	09-0832	WELDMENT,600 GDE TRLEY,EC TRAC DRV
4	1	62-0005	SPRING 8.8 #/FT X 0.75" DIA X 0.75" FREE LENGTH
5	1	15-0003	FLAT WASHER, 1/2"
6	2	11-0030	NUT, HEX 1/2" -13NC
7	1	09-0826	SHAFT,DRIVE,EC TRAC DRV
8	1	09-0841	WHEEL,DRIVE WHEEL,EC TRAC DRV
9	1	43-0068	REDUCER,IBLC-063-60I-R-56C
10	1	48-0001	LEESON MOTOR C56 1725RPM 1/3HP
11	4	10-7007	BOLT,HEX 5/16 X 18NC X 1 1/4" GR5
12	1	53-0023	DECAL MADE IN USA
13	1	53-0060	LABEL, TRACTOR DRIVE
14	1	20-0026	EXT SNAP RING TRUARC #5100-112
15	1	09-0835	WELDMENT,SIDE NO ENCLOSURE,EC TRAC DRIVE,600
16	4	11-0020	NUT, HEX 3/8-16
17	5	14-0002	3/8" LOCKWASHER
18	2	10-0104	3/8"-16UNC X 1 1/2" HEX HEAD BOLT
19	3	10-0122	BOLT,3/8-16 X 2 GR5 FULL THREAD
20	1	09-0827	SPACER,DRIVE SHAFT,EC TRAC DRV
21	3	47-0001-00.10	KEY 1/4" X 1/4" X 1 1/4"
24	2	42-0007	3/4" O.D. CAM ROLLER
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30	4	9-1225	600 SERIES SPACER
31	1	09-0842	SPACER,SHAFT END,DRIVE,EC TRAC DRV
32	4	11-0133	5/16"-18, KEPS NUT (K-LOCK NUT)

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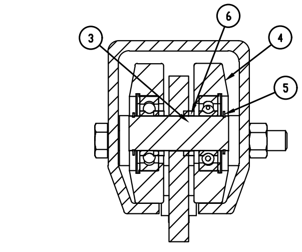

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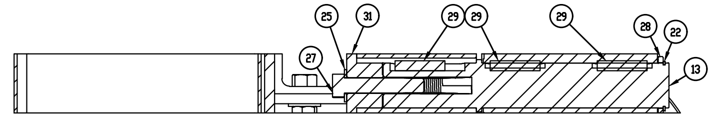

SECTION B-B
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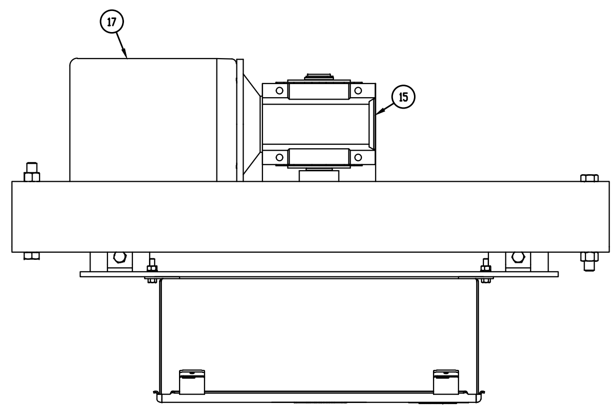

ITEM NO.	QTY	PART NO.	DESCRIPTION
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2	1	09-0809	PLATE,GDE TRLY NO SPRNG,EC TRAC DRV,700
3	2	09-0705	700 SERIES AXLE
4	4	308111	PLASTIC WHEEL ASSEMBLY
5	4	20-0010	SNAP RING, TRU-ARC 5100-87 (OR EQUAL)
6	4	09-0706	SPACER, 700 SERIES AXLE
7	1	09-0816	WELDMENT,600 GDE TRLEY,EC TRAC DRV
8	2	42-0003	7/8" O.D. CAM ROLLER
9	2	10-0022	BOLT, HEX HEAD 1/4-20NC X 1-3/4 GR5
10	1	62-0005	SPRING 8.8 #/FT X 0.75" DIA X 0.75" FREE LENGTH
11	1	15-0003	FLAT WASHER, 1/2"
12	2	11-0030	NUT, HEX 1/2" -13NC
13	1	09-0826	SHAFT,DRIVE,EC TRAC DRV
14	1	09-0841	WHEEL,DRIVE WHEEL,EC TRAC DRV
15	1	43-0068	REDUCER,IBLC-063-60:1-R-56C
17	1	48-0001	LEESON MOTOR C56 1725RPM 1/3HP
18	4	10-7007	BOLT,HEX 5/16 X 18NC X 1 1/4" GR5
19	1	53-0023	DECAL MADE IN USA
20	1	53-0060	LABEL, TRACTOR DRIVE
22	1	20-0026	EXT SNAP RING TRUARC #5100-112
23	1	09-0824	WELDMENT,SIDE W/ENCLOSURE,EC TRAC DRIVE,700
24	4	11-0020	NUT, HEX 3/8-16
25	5	14-0002	3/8" LOCKWASHER
26	2	10-0104	3/8"-16UNC X 1 1/2" HEX HEAD BOLT
27	3	10-0122	BOLT,3/8-16 X 2 GR5 FULL THREAD
28	1	09-0827	SPACER,DRIVE SHAFT,EC TRAC DRV
29	3	47-0001-00.10	KEY 1/4" X 1/4" X 1 1/4"
30	6	14-0001	1/4" LOCK WASHER
31	1	09-0842	SPACER,SHAFT END,DRIVE,EC TRAC DRV
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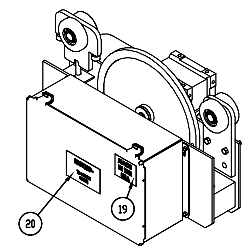
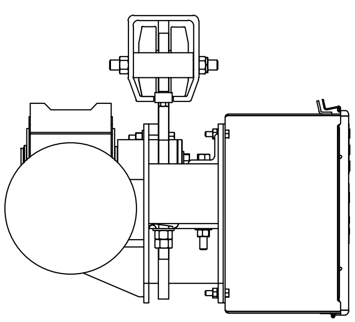
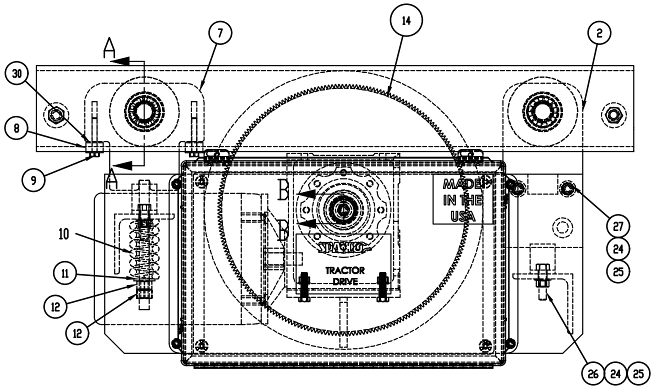
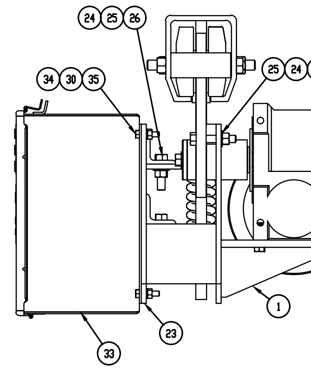


NOTE: TRACK AND ENDSTOPS SHOWN AS REFERENCE ONLY







"700" WITH CONTROL PANEL

REV.	DATE	NAME	REVISION DESCRIPTION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ±1/16" DECIMALS .XX ±.060 .XXX ±.030 .XXXX ±.015 ANGLES ±1°

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE, DO NOT SCALE DRAWING

APPROVALS: DRAWN JRG 09-27-10; CHECKED; APPVD

MATERIAL; FINISH; STATUS; PLOT DATE; PROJECT NO.

SPANCO — MORGANTOWN BUSINESS PARK, 604 HEMLOCK ROAD, MORGANTOWN, PA 19543

ENCLOSED TRACK
ECONOMY TRACTOR DRIVE
700 - WITH CONTROL PANEL
ASSEMBLY

SIZE C; DWG. NO. 09-0810; REV. -; SCALE 3/4; SHEET 1 OF 1

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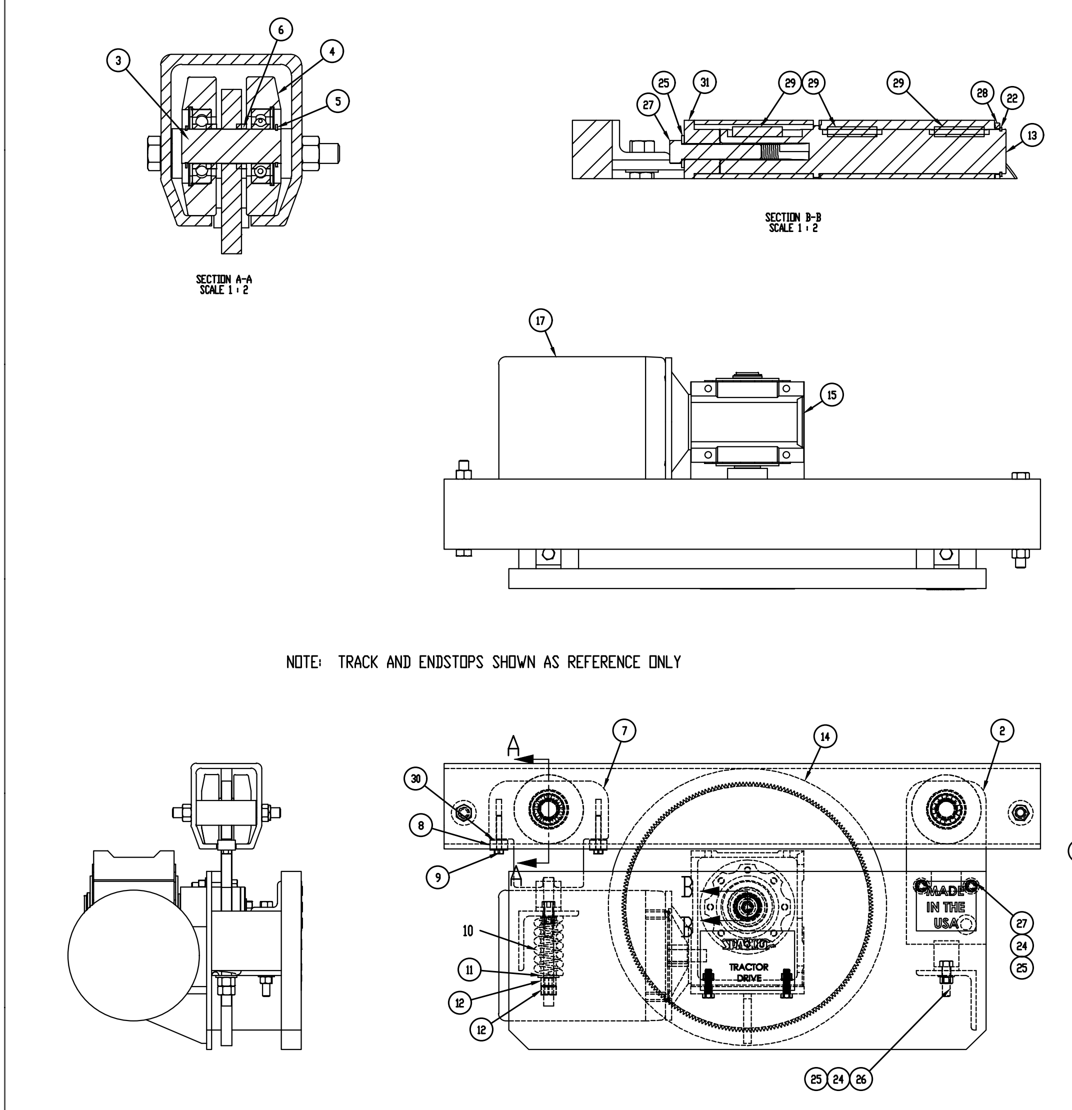
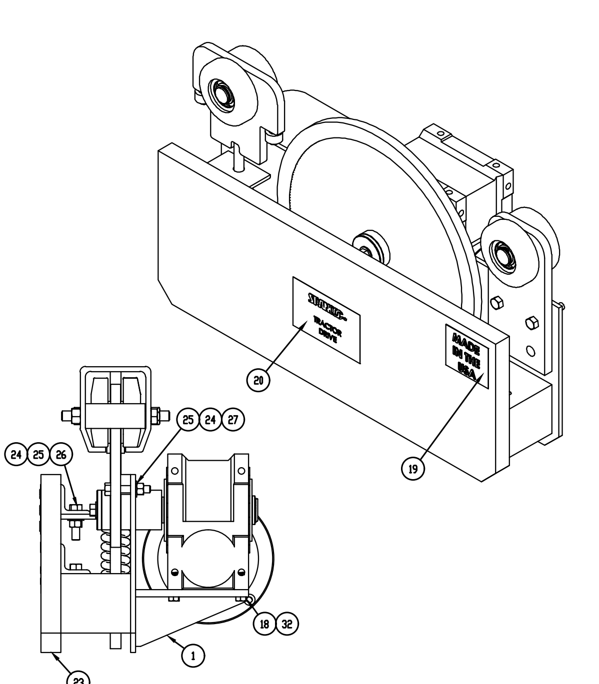
20	1	53-0060	LABEL, TRACTOR DRIVE
22	1	20-0026	EXT SNAP RING TRUARC #5100-112
23	1	09-0823	WELDMENT,SIDE NO ENCLOSURE,EC TRAC DRIVE,700
24	4	11-0020	NUT, HEX 3/8-16
25	5	14-0002	3/8" LOCKWASHER
26	2	10-0104	3/8"-16UNC X 1 1/2" HEX HEAD BOLT
27	3	10-0122	BOLT,3/8-16 X 2 GR5 FULL THREAD
28	1	09-0827	SPACER,DRIVE SHAFT,EC TRAC DRV
29	3	47-0001-00.10	KEY 1/4" X 1/4" X 1 1/4"
30	2	14-0001	1/4" LOCK WASHER
31	1	09-0842	SPACER,SHAFT END,DRIVE,EC TRAC DRV
32	4	11-0133	5/16"-18, KEPS NUT (K-LOCK NUT)

NOTE: THE FOLLOWING COMPONENTS ARE INCLUDED WITH 43-0068 (ALL QTY=1): 09-0826, 09-0827, 14-0002, 20-0026, & 47-0001-00.10 (QTY=3).



NOTE: TRACK AND ENDSTOPS SHOWN AS REFERENCE ONLY



REV.	DATE	NAME	REVISION DESCRIPTION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ±1/16" DECIMALS .XX ±.060 .XXX ±.030 .XXXX ±.015 ANGLES ±1°

MATERIAL

FINISH

STATUS

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE, DO NOT SCALE DRAWING

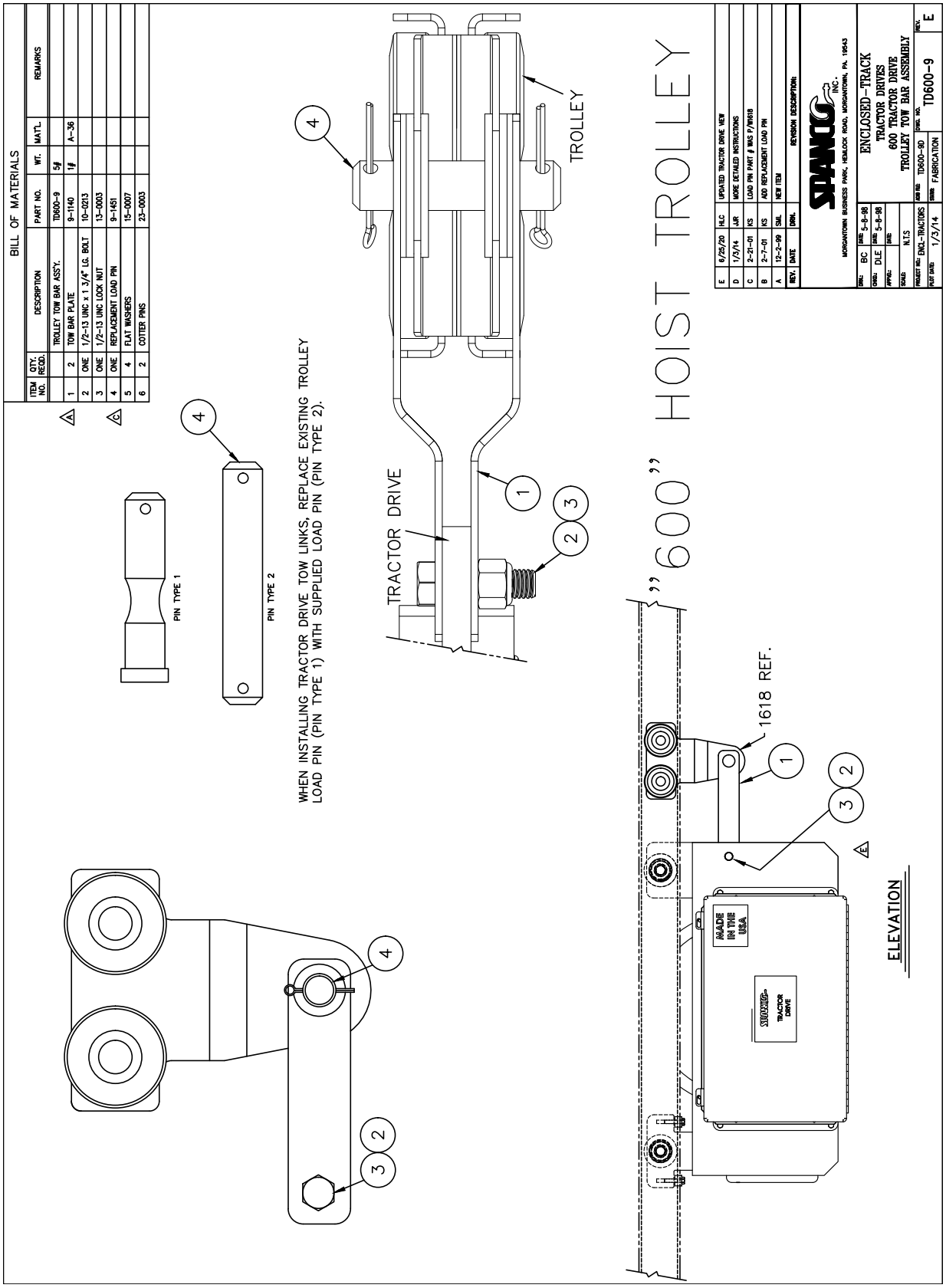
APPROVALS	DATE
DRAWN JRG	09-27-18
CHECKED	
APPVD:	
PLOT DATE:	WT. -
PROJECT NO.:	SCALE: 1:4

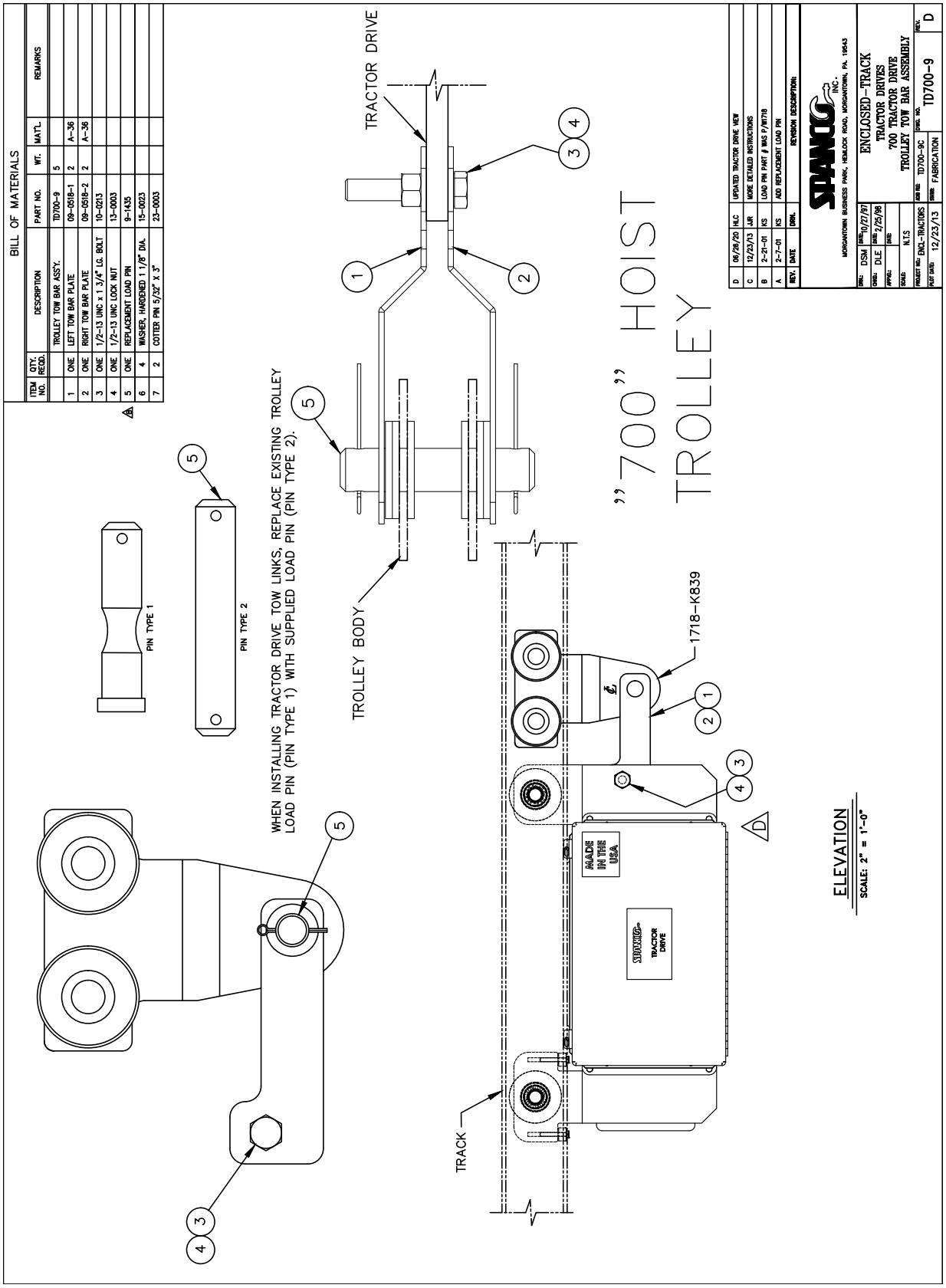
SPANCO INC. MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543

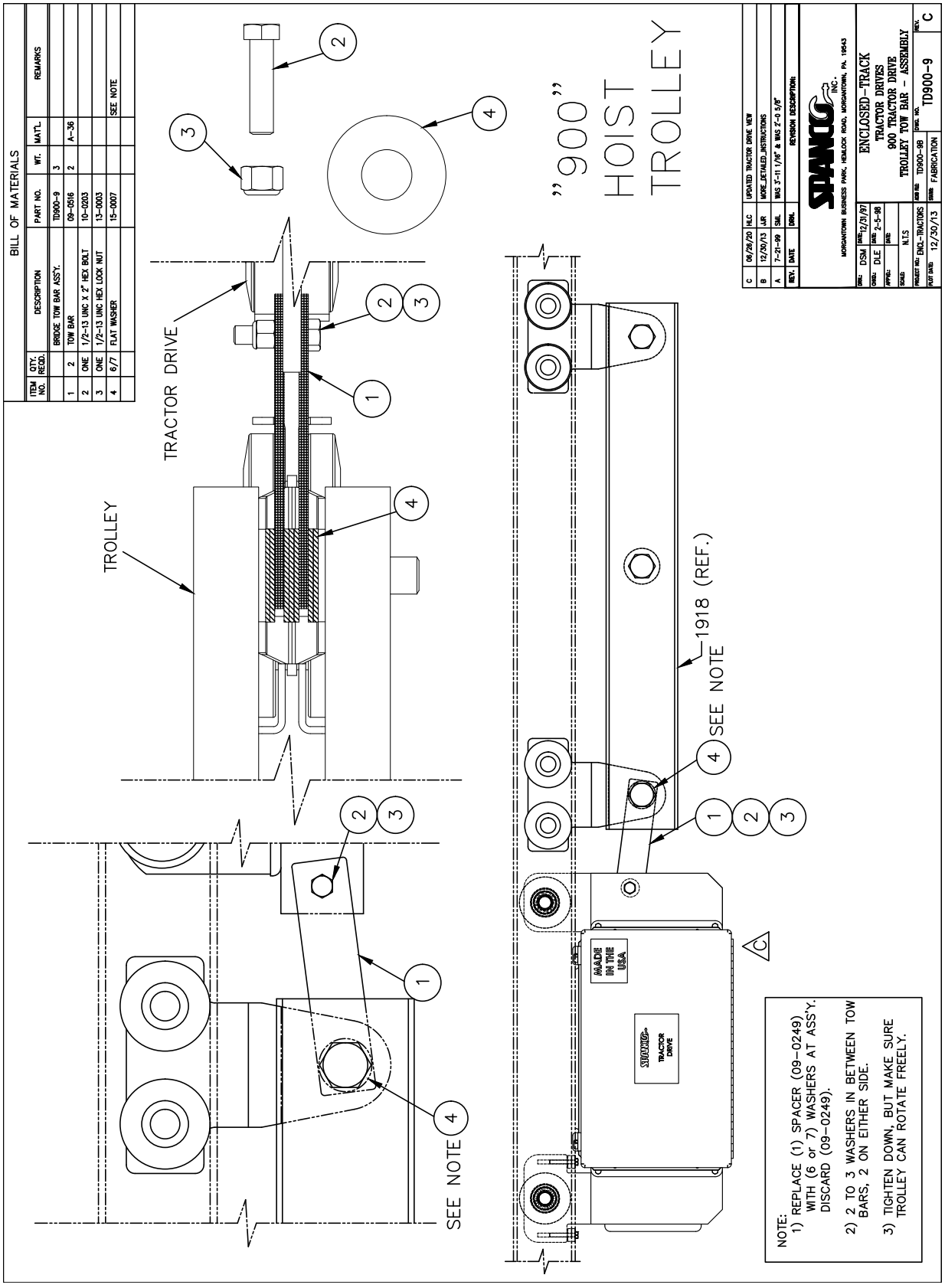
ENCLOSED TRACK
ECONOMY TRACTOR DRIVE
700 - NO CONTROL PANEL
ASSEMBLY

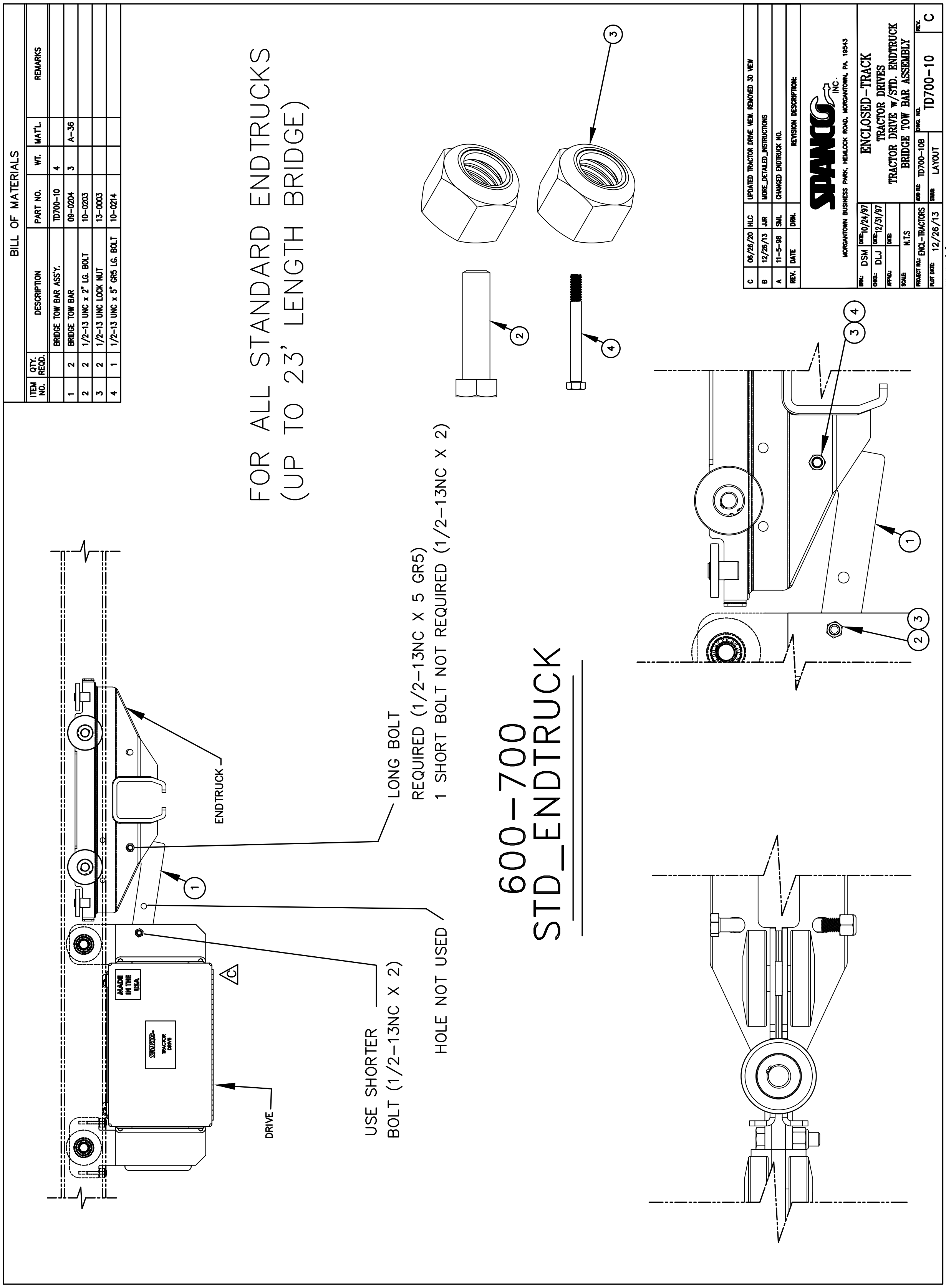
SIZE C | DWG. NO. 09-0821 | REV. -
CAD FILE: 9-0821 | SHEET 1 OF 1

"700" NO CONTROL PANEL


BILL OF MATERIALS
ITEM NO. | QTY. REQD. | DESCRIPTION | PART NO. | WT. | MATL. | REMARKS
1 | 2 | TROLLEY TOW BAR ASSY. | TD600-9 | 5# | |
2 | ONE | TOW BAR PLATE | 9-1140 | 1# | A-36 |
3 | ONE | 1/2-13 UNC x 1 3/4" LG. BOLT | 10-0213 | | |
4 | ONE | 1/2-13 UNC LOCK NUT | 13-0003 | | |
5 | 4 | REPLACEMENT LOAD PIN | 9-1451 | | |
6 | 2 | FLAT WASHERS | 15-0007 | | |
| | COTTER PINS | 23-0003 | | |
WHEN INSTALLING TRACTOR DRIVE TOW LINKS, REPLACE EXISTING TROLLEY LOAD PIN (PIN TYPE 1) WITH SUPPLIED LOAD PIN (PIN TYPE 2).
PIN TYPE 1
PIN TYPE 2
TRACTOR DRIVE
TROLLEY
"600" HOIST TROLLEY
1618 REF.
ELEVATION
MADE IN THE USA
TRACTOR DRIVE
E 6/25/20 HLC UPDATED TRACTOR DRIVE VIEW
D 1/3/14 JJR MORE DETAILED INSTRUCTIONS
C 2-21-01 KS LOAD PIN PART # WAS P/N9618
B 2-7-01 KS ADD REPLACEMENT LOAD PIN
A 12-2-99 SML NEW ITEM
REV. | DATE | DSNR. | REVISION DESCRIPTION
SPANCO INC.
MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543
DRN: BC DATE 5-8-98
CHKD: DLE DATE 5-8-98
APPRD: DATE
SCALE: N.T.S
PROJECT NO.: ENCL-TRACTORS
NEXT ASSY: 1/3/14
ENCLOSED-TRACK
TRACTOR DRIVES
600 TRACTOR DRIVE
TROLLEY TOW BAR ASSEMBLY
ASSY NO. TD600-9D
DWG. NO. TD600-9
REV. E
MATL FABRICATION


BILL OF MATERIALS
ITEM NO. | QTY. REQD. | DESCRIPTION | PART NO. | WT. | MAT'L. | REMARKS
TROLLEY TOW BAR ASSY. | TD700-9 | 5
1 | ONE | LEFT TOW BAR PLATE | 09-0518-1 | 2 | A-36
2 | ONE | RIGHT TOW BAR PLATE | 09-0518-2 | 2 | A-36
3 | ONE | 1/2-13 UNC x 1 3/4" LG. BOLT | 10-0213
4 | ONE | 1/2-13 UNC LOCK NUT | 13-0003
5 | ONE | REPLACEMENT LOAD PIN | 9-1435
6 | 4 | WASHER, HARDENED 1 1/8" DIA. | 15-0023
7 | 2 | COTTER PIN 5/32" X 3" | 23-0003
D | 08/28/20 | HLC | UPDATED TRACTOR DRIVE VIEW
C | 12/23/13 | JJR | MORE DETAILED INSTRUCTIONS
B | 2-21-01 | KS | LOAD PIN PART # WAS P/N1718
A | 2-7-01 | KS | ADD REPLACEMENT LOAD PIN
REV. | DATE | DSNL | REVISION DESCRIPTION
SPANCO INC.
MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543
DRG: DSM 10/27/97
CHKD: DLE 2/25/98
APPVD: DATE
SCALE: N.T.S
PROJECT NO.: ENCL-TRACTORS
RLSE DATE: 12/23/13
ENCLOSED-TRACK
TRACTOR DRIVES
700 TRACTOR DRIVE
TROLLEY TOW BAR ASSEMBLY
MDB NO. TD700-9C
DWG. NO. TD700-9
REV. D
STATUS FABRICATION
TRACTOR DRIVE
TROLLEY BODY
TRACK
1718-K839
WHEN INSTALLING TRACTOR DRIVE TOW LINKS, REPLACE EXISTING TROLLEY LOAD PIN (PIN TYPE 1) WITH SUPPLIED LOAD PIN (PIN TYPE 2).
PIN TYPE 1
PIN TYPE 2
"700" HOIST
TROLLEY
ELEVATION
SCALE: 2" = 1'-0"
MADE IN THE USA
SPANCO TRACTOR DRIVE

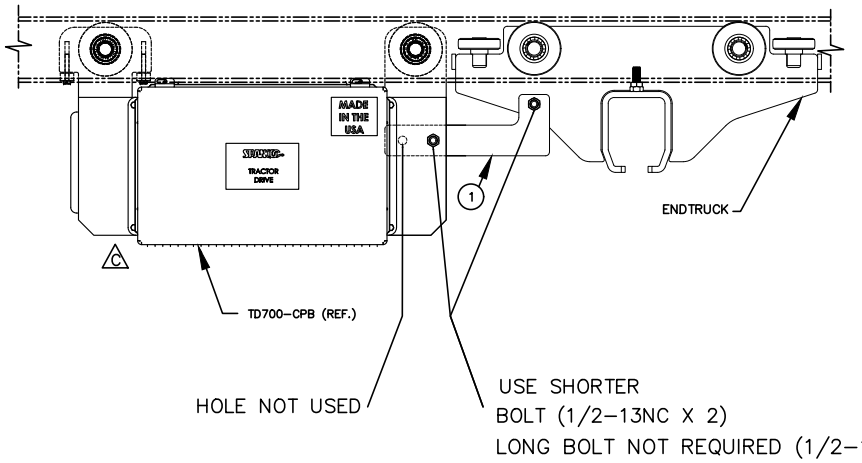

BILL OF MATERIALS
ITEM NO. | QTY. REQD. | DESCRIPTION | PART NO. | WT. | MAT'L. | REMARKS
BRIDGE TOW BAR ASS'Y. | TD900-9 | 3
1 | 2 | TOW BAR | 09-0516 | 2 | A-36
2 | ONE | 1/2-13 UNC X 2" HEX BOLT | 10-0203
3 | ONE | 1/2-13 UNC HEX LOCK NUT | 13-0003
4 | 6/7 | FLAT WASHER | 15-0007 | | SEE NOTE
TRACTOR DRIVE
TROLLEY
SEE NOTE
"900" HOIST TROLLEY
1918 (REF.)
SEE NOTE
MADE IN THE USA
TRACTOR DRIVE
C
NOTE:
1) REPLACE (1) SPACER (09-0249) WITH (6 or 7) WASHERS AT ASS'Y. DISCARD (09-0249).
2) 2 TO 3 WASHERS IN BETWEEN TOW BARS, 2 ON EITHER SIDE.
3) TIGHTEN DOWN, BUT MAKE SURE TROLLEY CAN ROTATE FREELY.
C | 06/26/20 | HLC | UPDATED TRACTOR DRIVE VIEW
B | 12/30/13 | JJR | MORE_DETAILED_INSTRUCTIONS
A | 7-21-99 | SML | WAS 3'-11 1/16" & WAS 2'-0 5/8"
REV. | DATE | DSNL | REVISION DESCRIPTION
SPANCO INC.
MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543
DRG: DSM 12/31/97
CHKD: DLE 2-5-98
APPRD: DATE
SCALE: N.T.S
PROJECT NO.: ENCL-TRACTORS
NEXT ASSY: 12/30/13
ENCLOSED-TRACK
TRACTOR DRIVES
900 TRACTOR DRIVE
TROLLEY TOW BAR - ASSEMBLY
ASSY NO. TD900-9B
DWG. NO. TD900-9
REV. C
SHOP FABRICATION

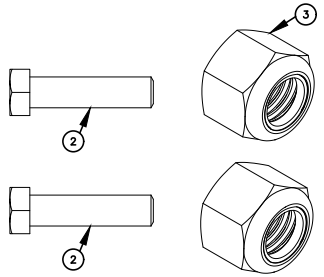


BILL OF MATERIALS

ITEM NO.	QTY. REQD.	DESCRIPTION	PART NO.	WT.	MAT'L.	REMARKS
		BRIDGE TOW BAR ASS'Y.	TD700-10	4		
1	2	BRIDGE TOW BAR	09-0204	3	A-36	
2	2	1/2-13 UNC x 2" LG. BOLT	10-0203			
3	2	1/2-13 UNC LOCK NUT	13-0003			
4	1	1/2-13 UNC x 5" GR5 LG. BOLT	10-0214			

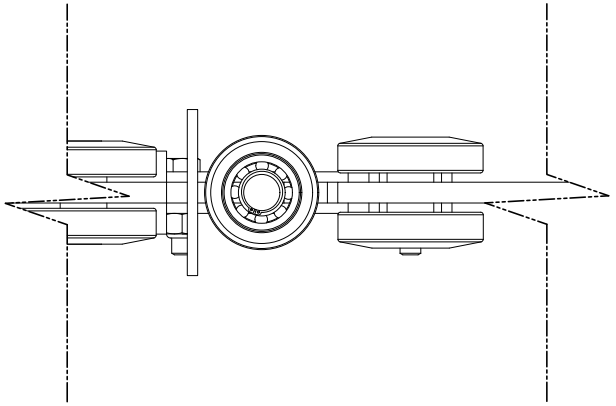
BILL OF MATERIALS						
ITEM NO.	QTY. REQD.	DESCRIPTION	PART NO.	WT.	MAT'L.	REMARKS
		BRIDGE TOW BAR ASS'Y.	TD700-10	4		
1	2	BRIDGE TOW BAR	09-0204	3	A-36	
2	2	1/2-13 UNC x 2" LG. BOLT	10-0203			
3	2	1/2-13 UNC LOCK NUT	13-0003			

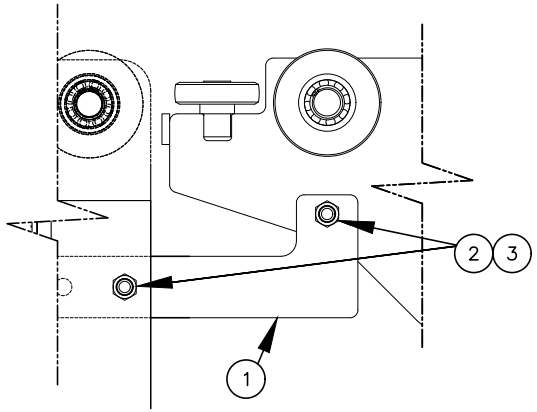




FOR ENDTRUCK WITH A
SOLID FLAT CENTER PLATE

FLAT_PLATE
&
HYBRID_ENDTRUCK
&
DOUBLE_GIRDER_TROLLEYS



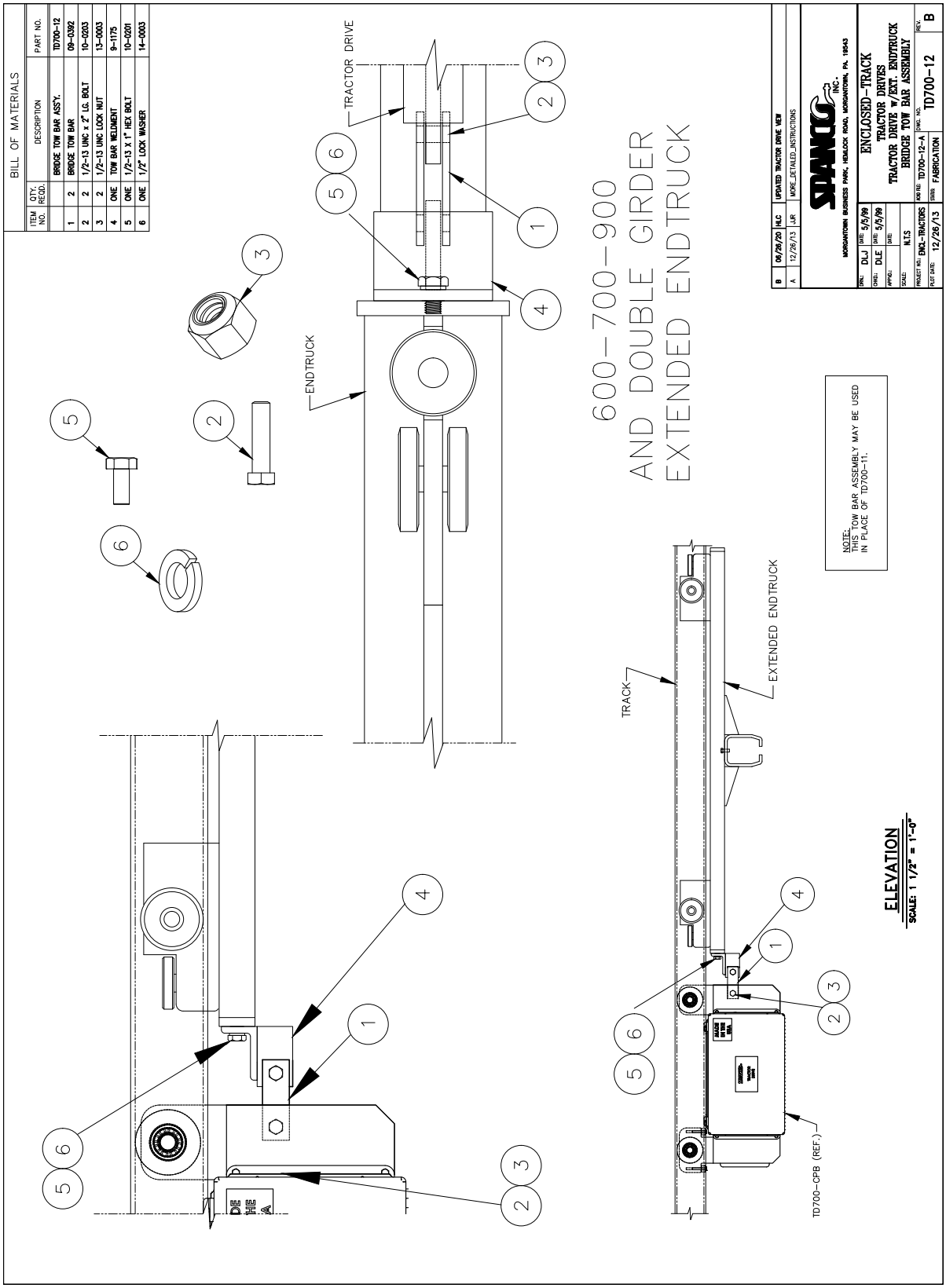


REV.	DATE	DRN.	REVISION DESCRIPTION:
C	06/26/20	HLC	UPDATED TRACTOR DRIVE VIEW. REMOVED 3D VIEW
B	12/26/13	JJR	MORE_DETAILED_INSTRUCTIONS
A	11-5-98	SML	CHANGED ENDTRUCK NO.

SPANCO INC.
MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543

DRN.: DSM	DATE: 10/24/97	ENCLOSED-TRACK	
CHKD.: DLJ	DATE: 12/31/97	TRACTOR DRIVES	
APPVD.:	DATE:	TRACTOR DRIVE w/STD. ENDTRUCK	
SCALE: N.T.S		BRIDGE TOW BAR ASSEMBLY	
PROJECT NO.: ENCL-TRACTORS	ASSO REF. TD700-108-3	DWG. NO. TD700-10	REV. C
PLOT DATE: 12/26/13	STATUS: LAYOUT		
PLOT SCALE: 1=6	SHEET 2 OF 2		

Spanco Inc.
Promise to perform.


BILL OF MATERIALS
ITEM NO. | QTY. REQD. | DESCRIPTION | PART NO.
1 | 2 | BRIDGE TOW BAR ASS'Y. | TD700-12
2 | 2 | BRIDGE TOW BAR | 09-0392
2 | 2 | 1/2-13 UNC x 2" LG. BOLT | 10-0203
3 | 2 | 1/2-13 UNC LOCK NUT | 13-0003
4 | ONE | TOW BAR WELDMENT | 9-1175
5 | ONE | 1/2-13 X 1" HEX BOLT | 10-0201
6 | ONE | 1/2" LOCK WASHER | 14-0003
TRACTOR DRIVE
ENDTRUCK
600-700-900
AND DOUBLE GIRDER
EXTENDED ENDTRUCK
NOTE:
THIS TOW BAR ASSEMBLY MAY BE USED IN PLACE OF TD700-11.
TRACK
EXTENDED ENDTRUCK
TD700-CPB (REF.)
ELEVATION
SCALE: 1 1/2" = 1'-0"
B 06/26/20 MLC UPDATED TRACTOR DRIVE VIEW
A 12/26/13 JJR MORE_DETAILED_INSTRUCTIONS
SPANCO INC.
MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543
DRN: DLJ DATE 5/5/99
CHKD: DLE DATE 5/5/99
APPD: DATE
SCALE: N.T.S
PROJECT NO.: ENCL-TRACTORS
PLOT DATE: 12/26/13
ENCLOSED-TRACK
TRACTOR DRIVES
TRACTOR DRIVE w/EXT. ENDTRUCK
BRIDGE TOW BAR ASSEMBLY
ASSY NO.: TD700-12-A
DWG. NO.: TD700-12
REV.: B
STATUS: FABRICATION

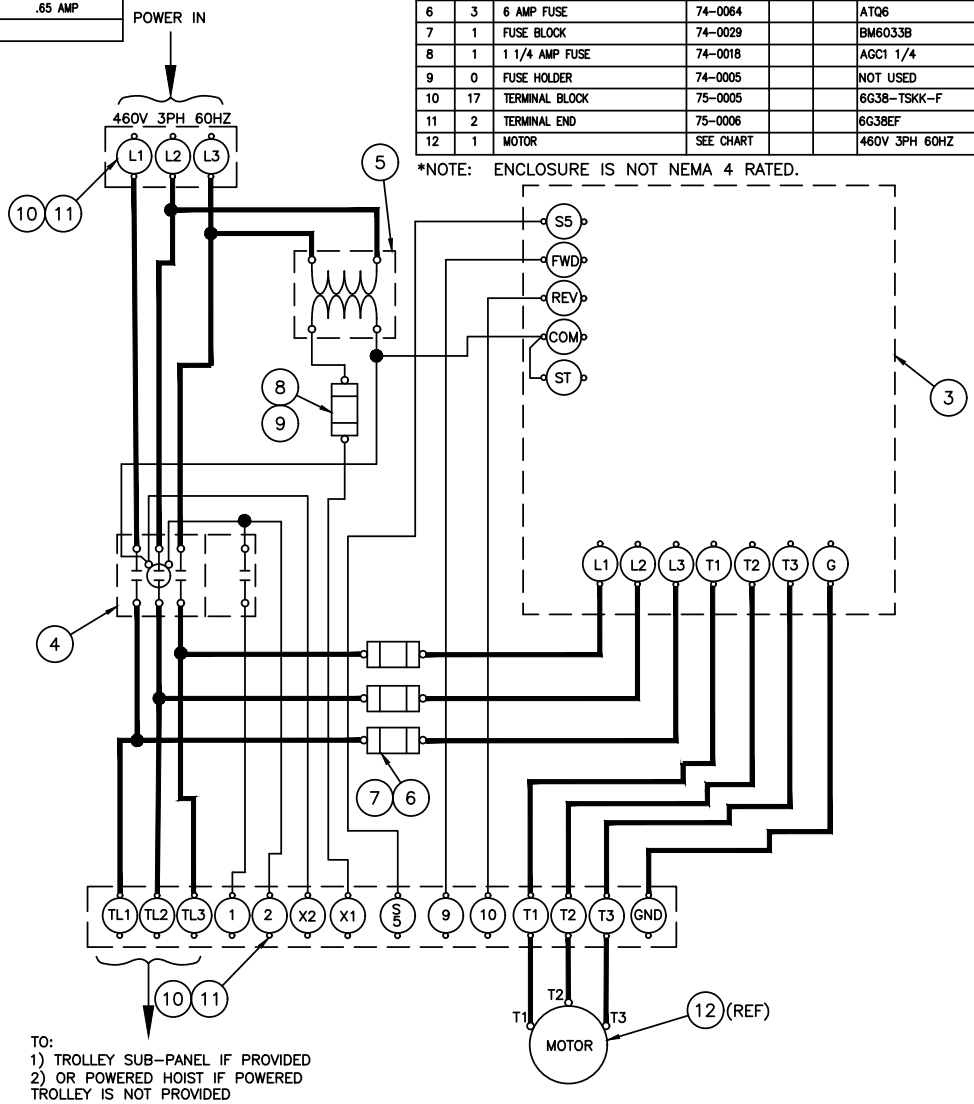
SELECT MOTOR (NON-WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48-0001	.65 AMP

SELECT MOTOR (WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48-0012SS	.65 AMP

BILL OF MATERIALS

ITEM NO.	QTY. REQD.	DESCRIPTION	PART NO.	WT.	MAT'L.	REMARKS
1	1	*ENCLOSURE 16X10X6 NEMA 12	73-0110			A-1610CH (NOT SHOWN)
2	1	PANEL	73-0111			A-16P10 (NOT SHOWN)
3	1	INVERTER	80-0041			MSM1AR
4	1	MAIN LINE CONTACTOR	75-0002			100-C23D10
5	1	TRANSFORMER 100VA	75-0073			TB100A008C
6	3	6 AMP FUSE	74-0064			ATQ6
7	1	FUSE BLOCK	74-0029			BM6033B
8	1	1 1/4 AMP FUSE	74-0018			AGC1 1/4
9	0	FUSE HOLDER	74-0005			NOT USED
10	17	TERMINAL BLOCK	75-0005			6G38-TSKK-F
11	2	TERMINAL END	75-0006			6G38EF
12	1	MOTOR	SEE CHART			460V 3PH 60HZ

*NOTE: ENCLOSURE IS NOT NEMA 4 RATED.



MAIN PANEL, TRACK BOSS- 1MTR MONORAIL, BRIDGE, OR TROLLEY-ONLY DRIVE

REVISION DESCRIPTION:

DRN.: JRG	DATE: 10/3/18	SPANCO INC. MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543	
CHKD.: ATG	DATE: 10/3/18	MAIN PANEL 2 SP.W/INVERTER 460/3/60 MONORAIL, BRIDGE, OR TROLLEY-ONLY, 1/3HP MTR NEMA 12 ONLY	
APPVD.:	DATE:		
SCALE: NTS			
PROJECT NO.: ELECT		PLOT DATE:	DWG. NO. 95-460-.3-ETM-1M-ECON
ACAD FILE:		STATUS: FAB	REV. —

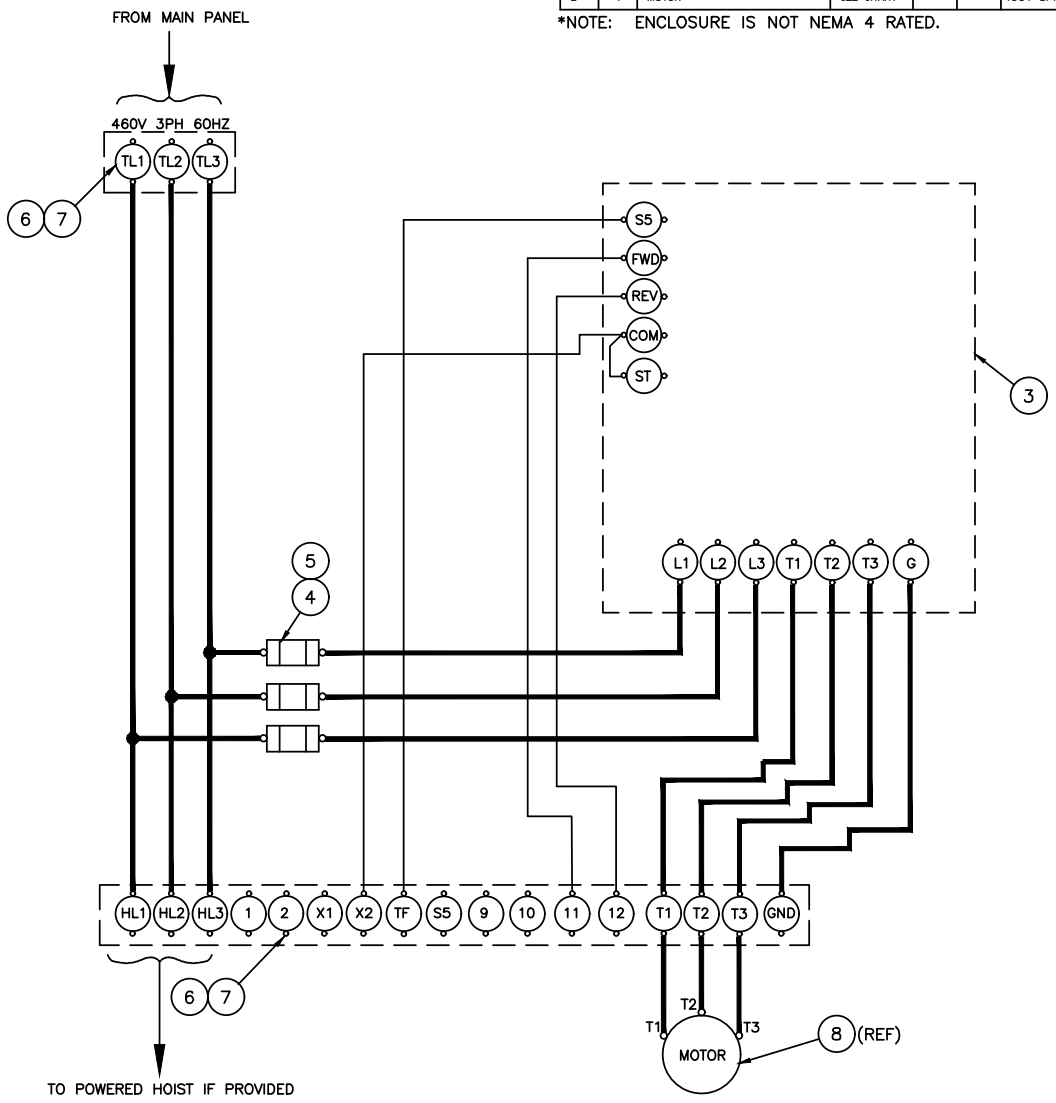
SELECT MOTOR (NON-WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48-0001	.65 AMP

SELECT MOTOR (WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48-0012SS	.65 AMP

BILL OF MATERIALS

ITEM NO.	QTY. REQD.	DESCRIPTION	PART NO.	WT.	MAT'L.	REMARKS
1	1	*ENCLOSURE 16X10X6 NEMA 12	73-0110			A-1610CH (NOT SHOWN)
2	1	PANEL	73-0111			A-16P10 (NOT SHOWN)
3	1	INVERTER	80-0041			MSM1AR
4	3	6 AMP FUSE	74-0064			ATQ6
5	1	FUSE BLOCK	74-0029			BM6033B
6	20	TERMINAL BLOCK	75-0005			6G38-TSKK-F
7	2	TERMINAL END	75-0006			6G38EF
8	1	MOTOR	SEE CHART			460V 3PH 60HZ

*NOTE: ENCLOSURE IS NOT NEMA 4 RATED.



SUB PANEL FOR ADDING A TROLLEY DRIVE TO MAIN PANEL, ENCLOSED TRACK

DRN.: JRG	DATE: 10/3/18	SPANCO INC. MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543	
CHKD.: ATG	DATE: 10/3/18		
APPVD.:	DATE:	SUB-PANEL 2 SP. W/INVERTER 460/3/60 FOR ENCLOSED TRACK 1/3 HP MOTOR NEMA 12 ONLY	
SCALE: NTS			
PROJECT NO.: ELECT	PLOT DATE:	DWG. NO. 95-460-.3-ETS-1M-ECON	REV. —
ACAD FILE:	STATUS: FAB		

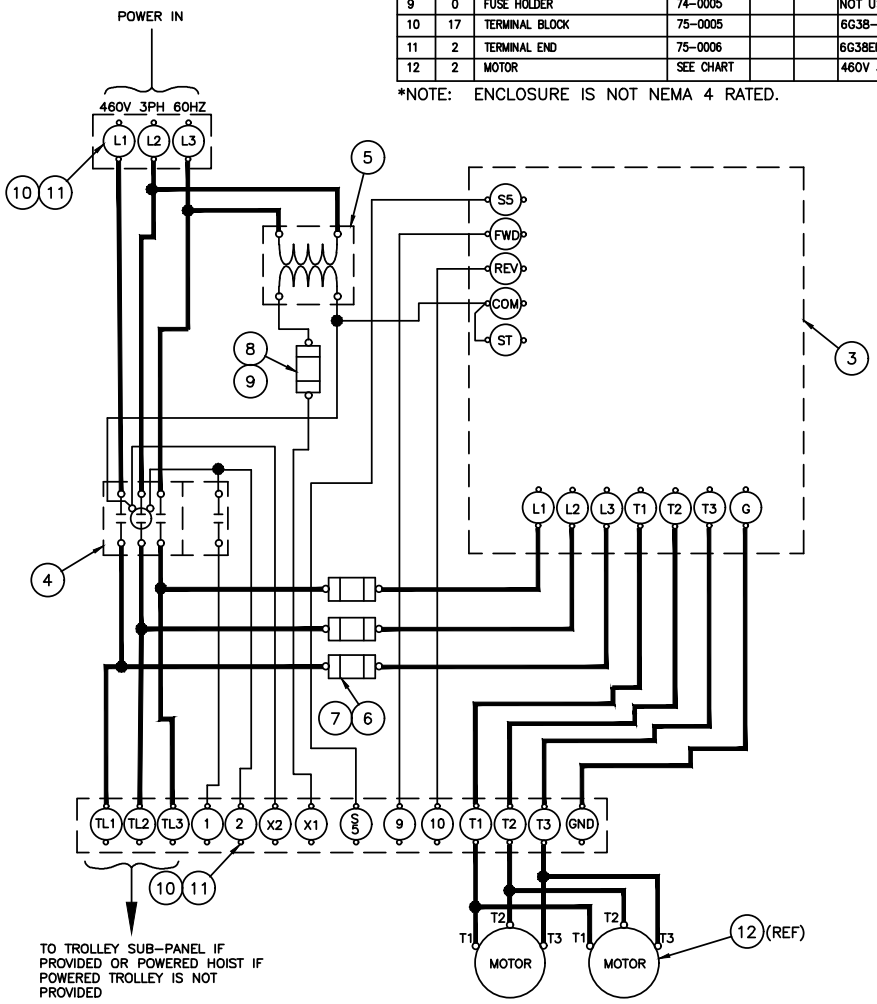
SELECT MOTOR (NON-WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48-0001	1.3 AMP (.65 EA. MOTOR)

SELECT MOTOR (WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48-0012SS	1.3 AMP (.65 EA. MOTOR)

BILL OF MATERIALS

ITEM NO.	QTY. REQD.	DESCRIPTION	PART NO.	WT.	MAT'L.	REMARKS
1	1	*ENCLOSURE 16X10X6 NEMA 12	73-0110			A-1610CH (NOT SHOWN)
2	1	PANEL	73-0111			A-16P10 (NOT SHOWN)
3	1	INVERTER	80-0040			MSM2AR
4	1	MAIN LINE CONTACTOR	75-0002			100-C23D10
5	1	TRANSFORMER 100VA	75-0073			TB100A008C
6	3	6 AMP FUSE	74-0064			ATQ6
7	1	FUSE BLOCK	74-0029			BM6033B
8	1	1 1/4 AMP FUSE	74-0018			AGC1 1/4
9	0	FUSE HOLDER	74-0005			NOT USED
10	17	TERMINAL BLOCK	75-0005			6G38-TSKK-F
11	2	TERMINAL END	75-0006			6G38EF
12	2	MOTOR	SEE CHART			460V 3PH 60HZ

*NOTE: ENCLOSURE IS NOT NEMA 4 RATED.



MAIN PANEL, TRACK BOSS FOR 2 MOTOR BRIDGE, ENCLOSED TRACK

REVISION DESCRIPTION:

DRN.: JRG	DATE: 10/2/18	SPANCO INC. MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543	
CHKD.: ATG	DATE: 10/2/18		
APPVD.:	DATE:	MAIN PANEL 2 SP.W/INVERTER 460/3/60 FOR 2MTR BRIDGE, (2) 1/3HP MOTOR NEMA 12 ONLY	
SCALE: NTS			
PROJECT NO.: ELECT		PLOT DATE:	DWG. NO. 95-460-.3-ETM-2M-ECON
ACAD FILE:		STATUS: FAB	REV. —

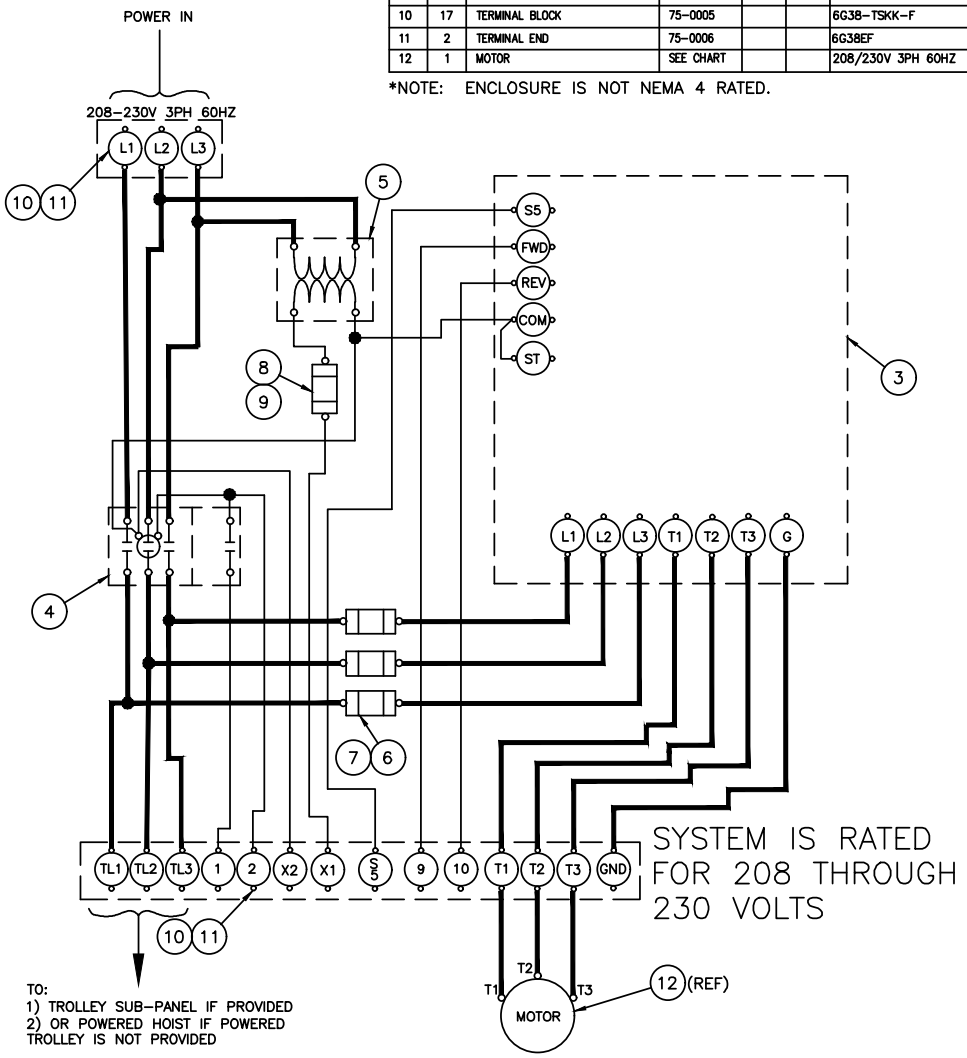
208–230V SELECT MOTOR (NON–WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48–0001	1.3 AMP

208–230V SELECT MOTOR (WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48–0012SS	1.3 AMP

BILL OF MATERIALS

ITEM NO.	QTY. REQD.	DESCRIPTION	PART NO.	WT.	MAT'L.	REMARKS
1	1	*ENCLOSURE 16X10X6 NEMA 12	73–0110			A–1610CH (NOT SHOWN)
2	1	PANEL	73–0111			A–16P10 (NOT SHOWN)
3	1	INVERTER	80–0045			MSM2A23R
4	1	MAIN LINE CONTACTOR	75–0002			100–C23D10
5	1	TRANSFORMER 100VA	75–0073			TB100A008C
6	3	6 AMP FUSE	74–0064			ATQ6
7	1	FUSE BLOCK	74–0029			BM6033B
8	1	1 1/4 AMP FUSE	74–0018			AGC1 1/4
9	0	FUSE HOLDER	74–0005			NOT USED
10	17	TERMINAL BLOCK	75–0005			6G38–TSKK–F
11	2	TERMINAL END	75–0006			6G38EF
12	1	MOTOR	SEE CHART			208/230V 3PH 60HZ

*NOTE: ENCLOSURE IS NOT NEMA 4 RATED.



MAIN PANEL, TRACK BOSS– 1MTR MONORAIL, BRIDGE, OR TROLLEY–ONLY DRIVE

DRN.: JRG	DATE: 7/18/19	SPANCO INC. MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543	
CHKD.:	DATE:		
APPVD.:	DATE:	MAIN PANEL 2 SP.W/INVERTER 208–230/3/60	
SCALE: NTS		MONORAIL, BRIDGE, OR TROLLEY–ONLY, 1/3 HP MTR NEMA 12 ONLY	
PROJECT NO.: ELECT		PLOT DATE:	DWG. NO. 95–230–.3–ETM–1M–ECON
ACAD FILE:		STATUS: FAB	REV. —

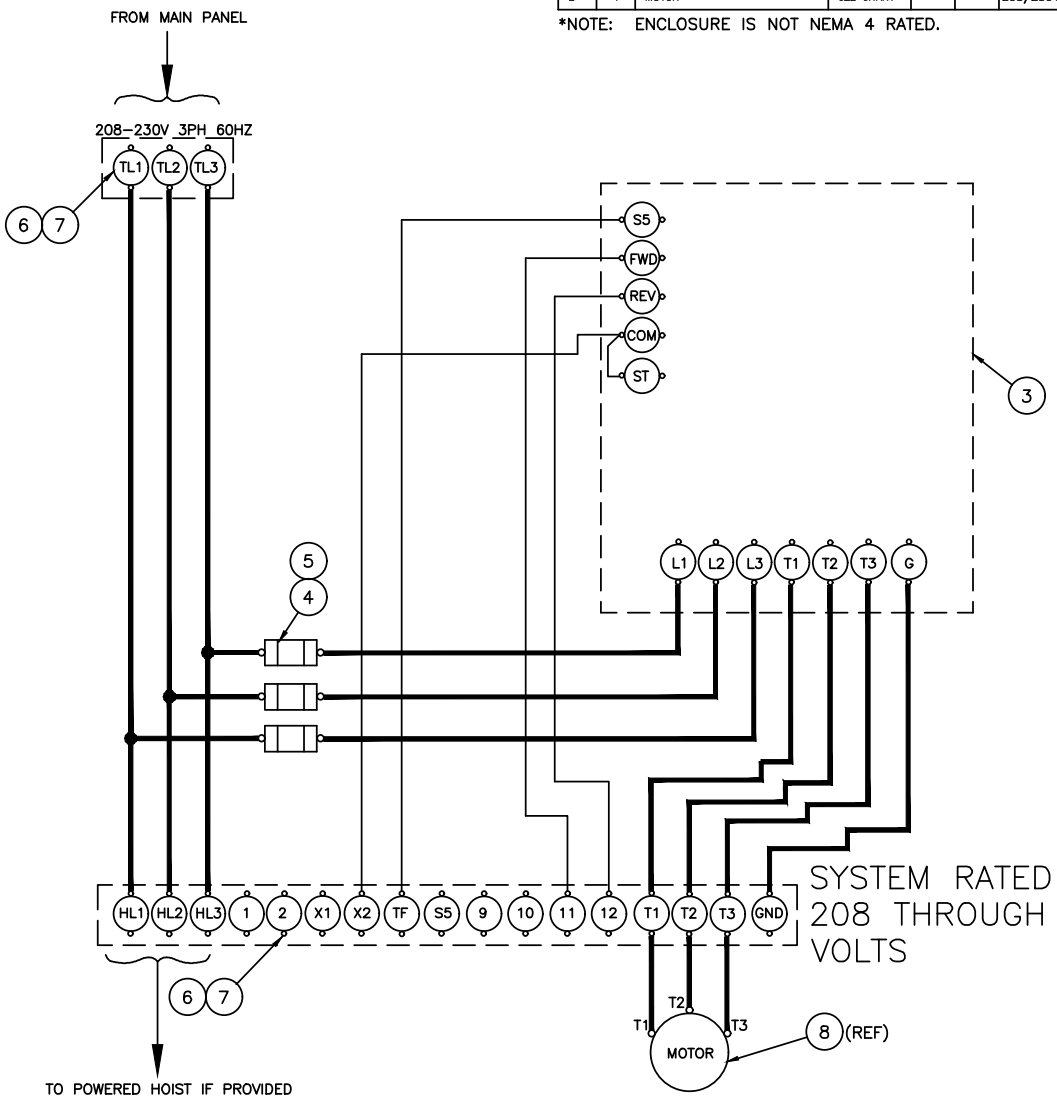
208–230V SELECT MOTOR (NON–WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48–0001	1.3 AMP

208–230V SELECT MOTOR (WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48–0012SS	1.3 AMP

BILL OF MATERIALS

ITEM NO.	QTY. REQD.	DESCRIPTION	PART NO.	WT.	MAT'L.	REMARKS
1	1	*ENCLOSURE 16X10X6 NEMA 12	73–0110			A–1610CH (NOT SHOWN)
2	1	PANEL	73–0111			A–16P10 (NOT SHOWN)
3	1	INVERTER	80–0040			MSM2AR
6	3	6 AMP FUSE	74–0064			ATQ6
5	1	FUSE BLOCK	74–0029			BM6033B
6	20	TERMINAL BLOCK	75–0005			6G38–TSKK–F
7	2	TERMINAL END	75–0006			6G38EF
8	1	MOTOR	SEE CHART			208/230V 3PH 60HZ

*NOTE: ENCLOSURE IS NOT NEMA 4 RATED.



SUB PANEL FOR ADDING A TROLLEY DRIVE TO MAIN PANEL, ENCLOSED TRACK

DRN.: JRG	DATE: 7/18/19	SPANCO INC. MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543	
CHKD.:	DATE:		
APPVD.:	DATE:	SUB–PANEL 2 SP. W/INVERTER 208–230/3/60 FOR ENCLOSED TRACK 1/3HP MOTOR NEMA 12 ONLY	
SCALE: NTS			
PROJECT NO.: ELECT	PLOT DATE:	DWG. NO. 95–230–.3–ETS–1M–ECON	REV. —
ACAD FILE: 12/31/13	STATUS: FAB		

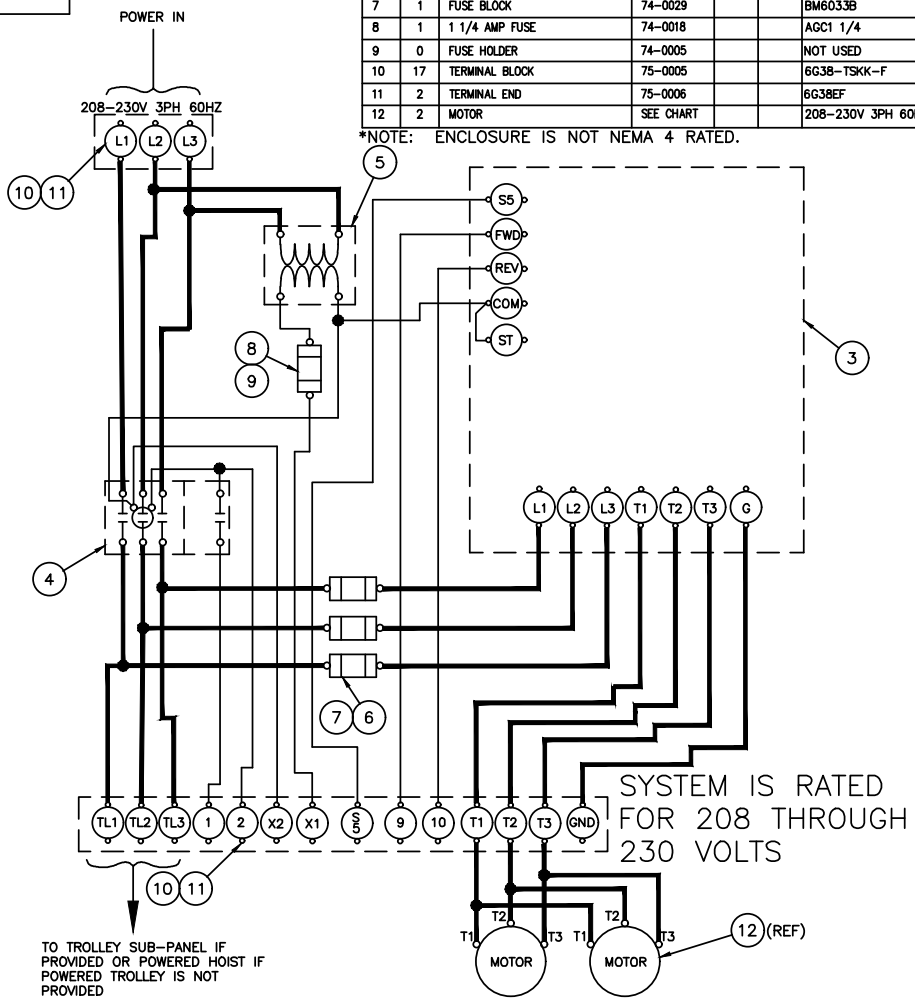
208–230V SELECT MOTOR (NON–WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48–0001	2.6 AMP

208–230V SELECT MOTOR (WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48–0012SS	2.6 AMP

BILL OF MATERIALS

ITEM NO.	QTY. REQD.	DESCRIPTION	PART NO.	WT.	MAT'L.	REMARKS
1	1	*ENCLOSURE 16X10X6 NEMA 12	73–0110			A–1610CH (NOT SHOWN)
2	1	PANEL	73–0111			A–16P10 (NOT SHOWN)
3	1	INVERTER	80–0039			MSM4AR
4	1	MAIN LINE CONTACTOR	75–0002			100–C23D10
5	1	TRANSFORMER 100VA	75–0073			TB100A008C
6	3	12 AMP FUSE	74–0041			FNQ–R–12
7	1	FUSE BLOCK	74–0029			BM6033B
8	1	1 1/4 AMP FUSE	74–0018			AGC1 1/4
9	0	FUSE HOLDER	74–0005			NOT USED
10	17	TERMINAL BLOCK	75–0005			6G38–TSKK–F
11	2	TERMINAL END	75–0006			6G38EF
12	2	MOTOR	SEE CHART			208–230V 3PH 60HZ

*NOTE: ENCLOSURE IS NOT NEMA 4 RATED.



MAIN PANEL, TRACK BOSS FOR 2 MOTOR BRIDGE, ENCLOSED TRACK

DRN.: JRG	DATE: 7/18/19	SPANCO INC. MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543	
CHKD.:	DATE:		
APPVD.:	DATE:	MAIN PANEL 2 SP.W/INVERTER 208–230/3/60 FOR 2MTR BRIDGE, (2) 1/3HP MOTOR NEMA 12 ONLY	
SCALE: NTS			
PROJECT NO.: ELECT	PLOT DATE:	DWG. NO. 95–230–.3–ETM–2M–ECON	REV. —
ACAD FILE:	STATUS: FAB		

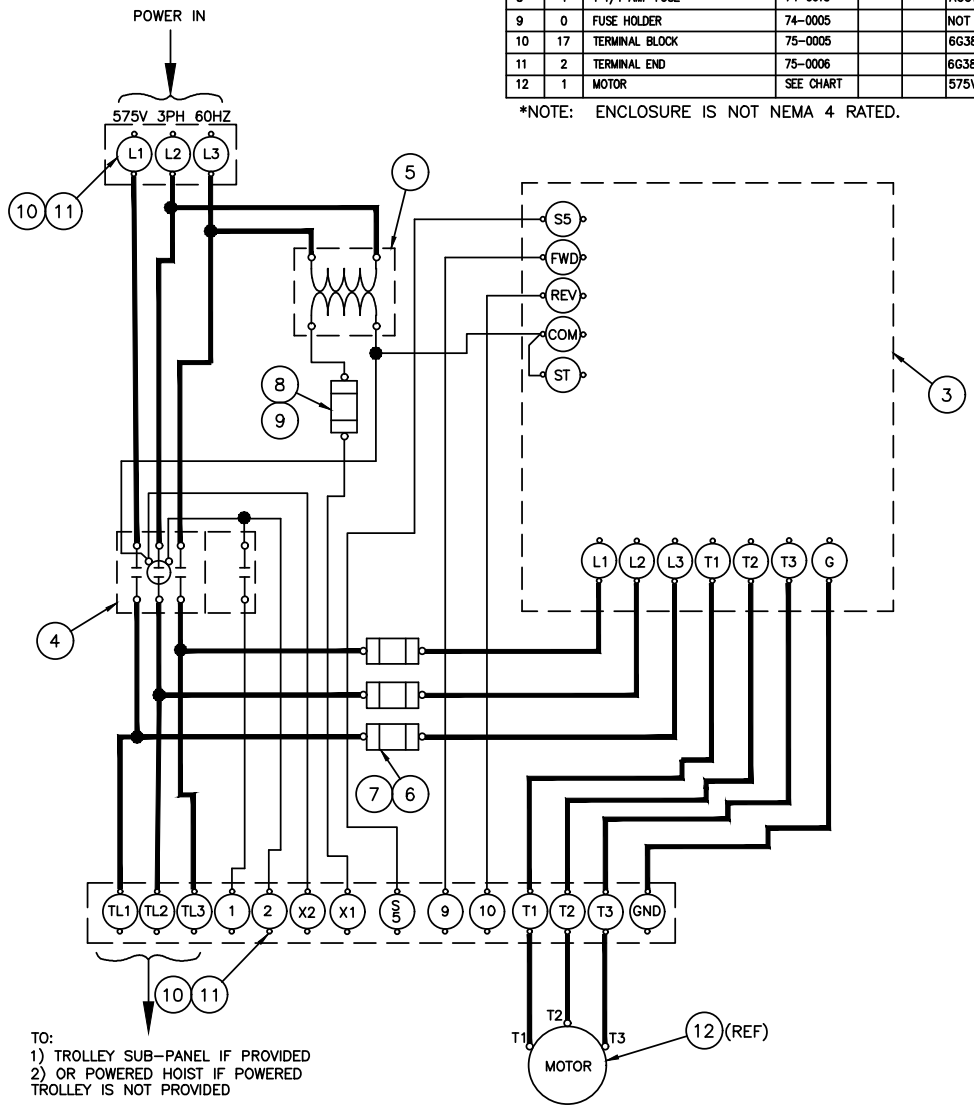
SELECT MOTOR (NON-WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48-0054	.45 AMP

SELECT MOTOR (WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48-0054SS	.45 AMP

BILL OF MATERIALS

ITEM NO.	QTY. REQD.	DESCRIPTION	PART NO.	WT.	MAT'L.	REMARKS
1	1	*ENCLOSURE 16X10X6 NEMA 12	73-0110			A-1610CH (NOT SHOWN)
2	1	PANEL	73-0111			A-16P10 (NOT SHOWN)
3	1	INVERTER	80-0044			MSM1A57R
4	1	MAIN LINE CONTACTOR	75-0002			100-C23D10
5	1	TRANSFORMER 100VA	75-0034			TB81001
6	3	6 AMP FUSE	74-0064			ATQ6
7	1	FUSE BLOCK	74-0029			BM6033B
8	1	1 1/4 AMP FUSE	74-0018			AGC1 1/4
9	0	FUSE HOLDER	74-0005			NOT USED
10	17	TERMINAL BLOCK	75-0005			6G38-TSKK-F
11	2	TERMINAL END	75-0006			6G38EF
12	1	MOTOR	SEE CHART			575V 3PH 60HZ

*NOTE: ENCLOSURE IS NOT NEMA 4 RATED.



MAIN PANEL, TRACK BOSS- 1MTR MONORAIL, BRIDGE, OR TROLLEY-ONLY DRIVE

DRN.: JRG	DATE: 7/18/19	SPANCO INC. MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543	
CHKD.:	DATE:		
APPVD.:	DATE:	MAIN PANEL 2 SP.W/INVERTER 575/3/60	
SCALE: NTS		MONORAIL, BRIDGE, OR TROLLEY-ONLY, 1/3HP MTR NEMA 12 ONLY	
PROJECT NO.: ELECT		PLOT DATE:	DWG. NO. 95-575-.3-ETM-1M-ECON
ACAD FILE:		STATUS: FAB	REV. —

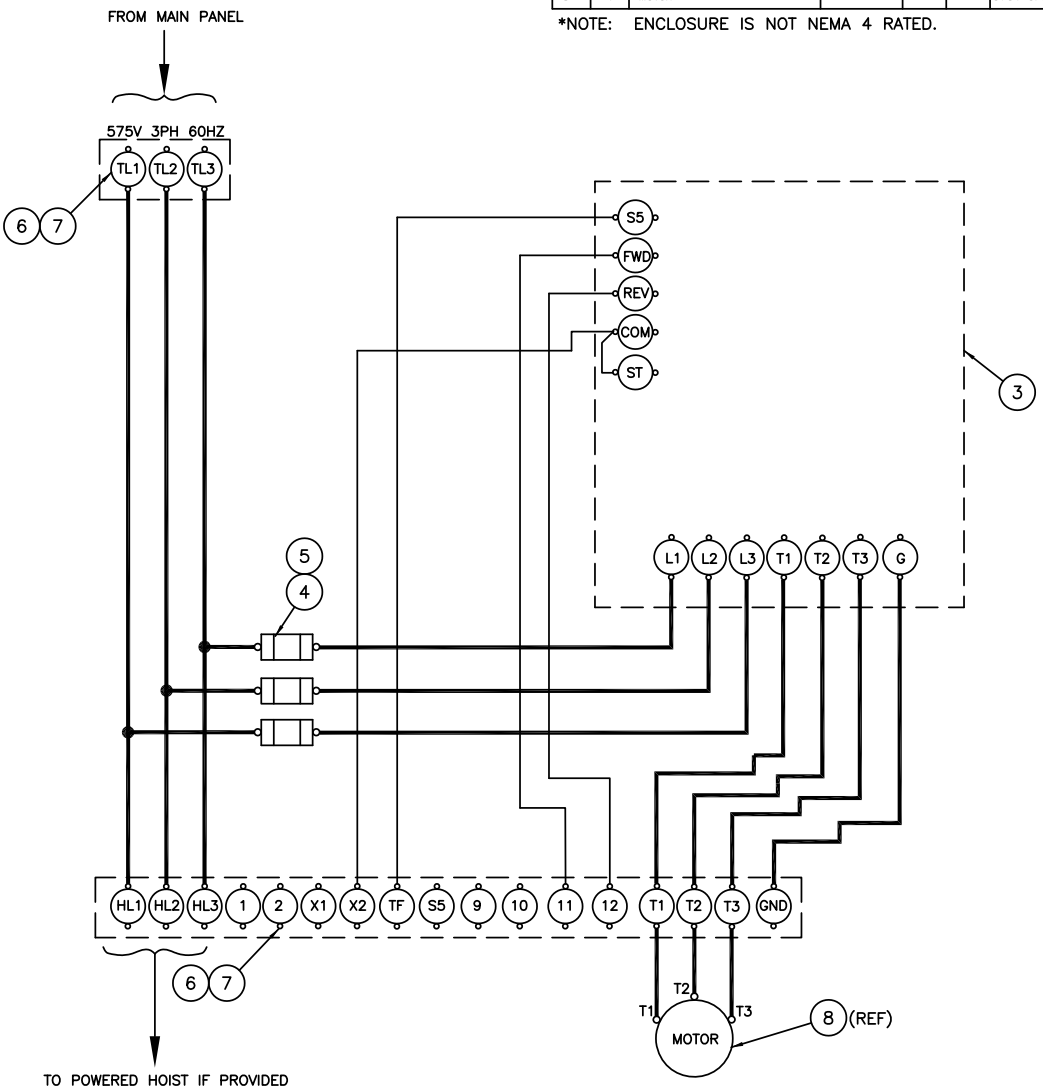
SELECT MOTOR (NON-WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48-0054	.45 AMP

SELECT MOTOR (WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48-0054SS	.45 AMP

BILL OF MATERIALS

ITEM NO.	QTY. REQD.	DESCRIPTION	PART NO.	WT.	MAT'L.	REMARKS
1	1	*ENCLOSURE 16X10X6 NEMA 12	73-0110			A-1610CH (NOT SHOWN)
2	1	PANEL	73-0111			A-16P10 (NOT SHOWN)
3	1	INVERTER	80-0044			MSM1A57R
6	3	6 AMP FUSE	74-0064			ATQ6
5	1	FUSE BLOCK	74-0029			BM6033B
6	20	TERMINAL BLOCK	75-0005			6G38-TSKK-F
7	2	TERMINAL END	75-0006			6G38EF
8	1	MOTOR	SEE CHART			575V 3PH 60HZ

*NOTE: ENCLOSURE IS NOT NEMA 4 RATED.



SUB PANEL FOR ADDING A TROLLEY DRIVE TO MAIN PANEL, ENCLOSED TRACK

DRN.: JRG	DATE: 7/18/19	SPANCO INC. MORGANTOWN BUSINESS PARK MORGANTOWN, PA 19543	
CHKD.:	DATE:		
APPVD.:	DATE:	SUB-PANEL 2 SP. W/INVERTER 575/3/60 FOR ENCLOSED TRACK 1/3HP MOTOR NEMA 12 ONLY	
SCALE: NTS			
PROJECT NO.: ELECT	PLOT DATE:	DWG. NO. 95-575-.3-ETS-1M-ECON	REV. —
ACAD FILE:	STATUS: FAB		

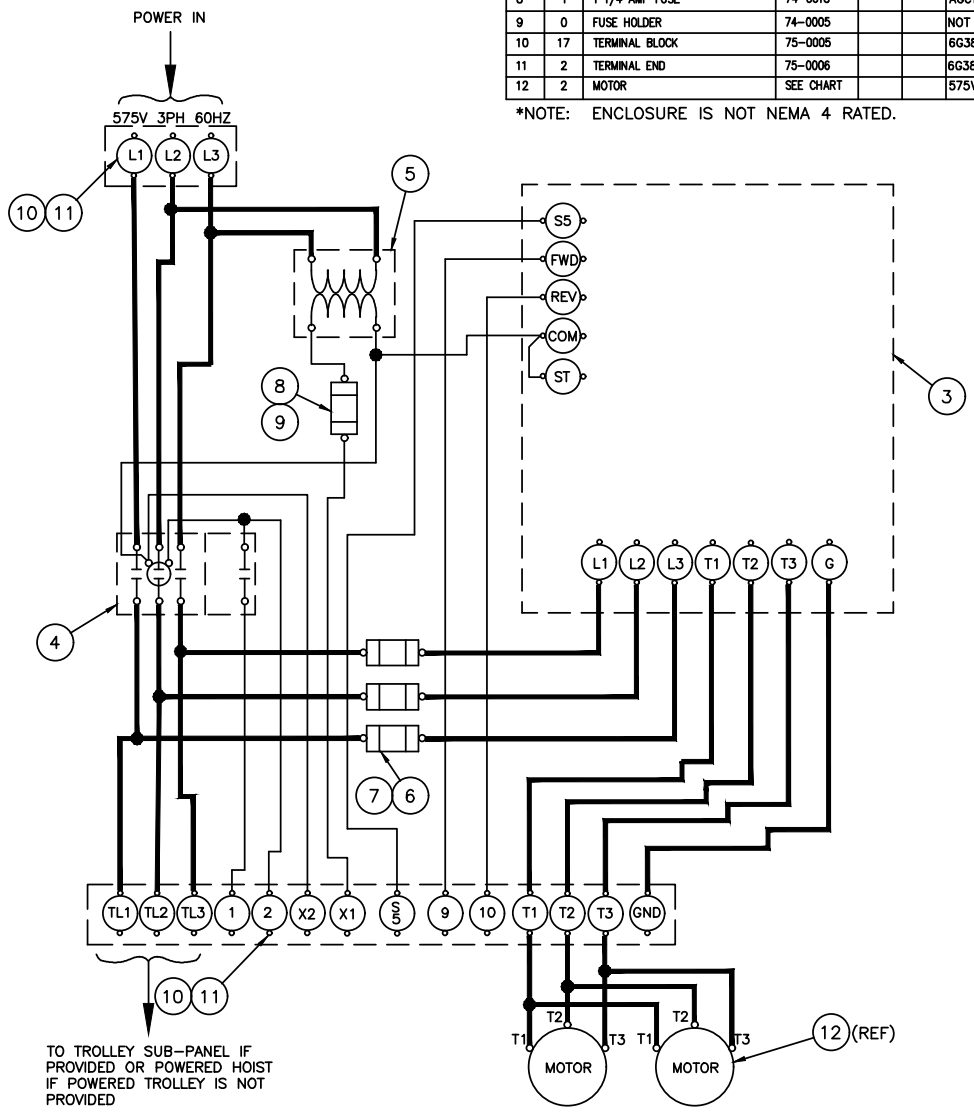
SELECT MOTOR (NON–WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48–0054	.90 AMP

SELECT MOTOR (WASHDOWN)		
MOTOR	PART No.	SET INVERTER / U22
1/3 HP	48–0054SS	.90 AMP

BILL OF MATERIALS

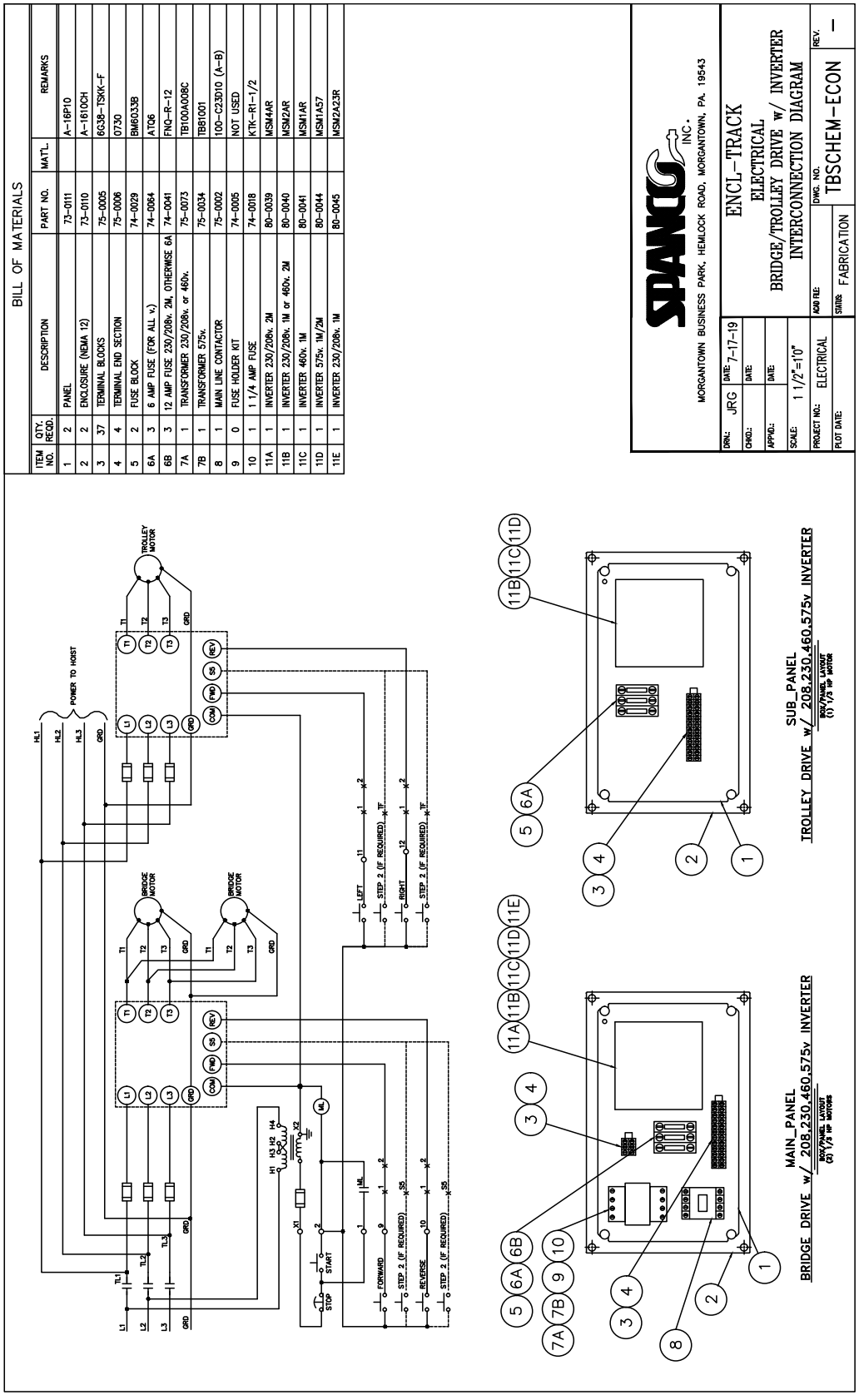
ITEM NO.	QTY. REQD.	DESCRIPTION	PART NO.	WT.	MAT'L.	REMARKS
1	1	*ENCLOSURE 16X10X6 NEMA 12	73–0110			A–1610CH (NOT SHOWN)
2	1	PANEL	73–0111			A–16P10 (NOT SHOWN)
3	1	INVERTER	80–0044			MSM1A57R
4	1	MAIN LINE CONTACTOR	75–0002			100–C23D10
5	1	TRANSFORMER 100VA	75–0034			TB81001
6	3	6 AMP FUSE	74–0064			ATQ6
7	1	FUSE BLOCK	74–0029			BM6033B
8	1	1 1/4 AMP FUSE	74–0018			AGC1 1/4
9	0	FUSE HOLDER	74–0005			NOT USED
10	17	TERMINAL BLOCK	75–0005			6G38–TSKK–F
11	2	TERMINAL END	75–0006			6G38EF
12	2	MOTOR	SEE CHART			575V 3PH 60HZ

*NOTE: ENCLOSURE IS NOT NEMA 4 RATED.

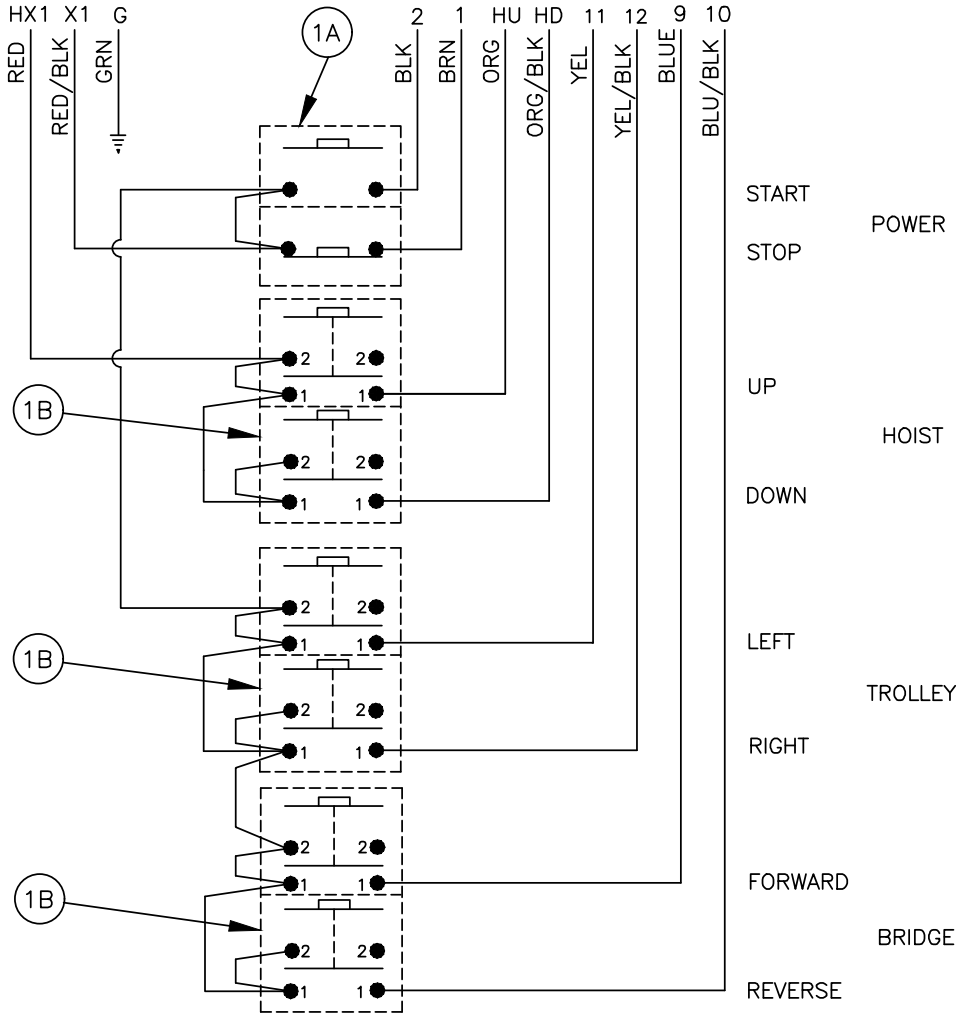


MAIN PANEL, TRACK BOSS FOR 2 MOTOR BRIDGE, ENCLOSED TRACK

DRN.: JRG	DATE: 7/18/19	SPANCO INC. MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543	
CHKD.:	DATE:		
APPVD.:	DATE:	MAIN PANEL 2 SP.W/INVERTER 575/3/60 FOR 2MTR BRIDGE, (2) 1/3 HP MOTOR NEMA 12 ONLY	
SCALE: NTS			
PROJECT NO.: ELECT	PLOT DATE:	DWG. NO. 95-575-.3-ETM-2M-ECON	REV. —
ACAD FILE:	STATUS: FAB		


BILL OF MATERIALS
ITEM NO. | QTY. REQD. | DESCRIPTION | PART NO. | MATL. | REMARKS
1 | 2 | PANEL | 73-0111 | | A-16P10
2 | 2 | ENCLOSURE (NEMA 12) | 73-0110 | | A-1610CH
3 | 37 | TERMINAL BLOCKS | 75-0005 | | 6038-TSKK-F
4 | 4 | TERMINAL END SECTION | 75-0006 | | 0730
5 | 2 | FUSE BLOCK | 74-0029 | | BM6033B
6A | 3 | 6 AMP FUSE (FOR ALL v.) | 74-0064 | | AT06
6B | 3 | 12 AMP FUSE 230/208v. 2M, OTHERWISE 6A | 74-0041 | | FNQ-R-12
7A | 1 | TRANSFORMER 230/208v. or 460v. | 75-0073 | | TB100A008C
7B | 1 | TRANSFORMER 575v. | 75-0034 | | TB81001
8 | 1 | MAIN LINE CONTACTOR | 75-0002 | | 100-C23D10 (A-B)
9 | 0 | FUSE HOLDER KIT | 74-0005 | | NOT USED
10 | 1 | 1 1/4 AMP FUSE | 74-0018 | | KTK-R1-1/2
11A | 1 | INVERTER 230/208v. 2M | 80-0039 | | MSM4AR
11B | 1 | INVERTER 230/208v. 1M or 460v. 2M | 80-0040 | | MSM2AR
11C | 1 | INVERTER 460v. 1M | 80-0041 | | MSM1AR
11D | 1 | INVERTER 575v. 1M/2M | 80-0044 | | MSM1A57
11E | 1 | INVERTER 230/208v. 1M | 80-0045 | | MSM2A23R
SPANCO INC.
MORGANTOWN BUSINESS PARK, HEMLOCK ROAD, MORGANTOWN, PA. 19543
DRN: JRG DATE: 7-17-19
CHKD: DATE:
APPVD: DATE:
SCALE: 1 1/2"=1'0"
PROJECT NO: ELECTRICAL
PLOT DATE:
ENCL-TRACK
ELECTRICAL
BRIDGE/TROLLEY DRIVE w/ INVERTER
INTERCONNECTION DIAGRAM
ACAD FILE:
DWG. NO. TBSCHEM-ECON
REV. -
STATUS: FABRICATION
POWER TO HOST
TROLLEY MOTOR
BRIDGE MOTOR
BRIDGE MOTOR
FORWARD
REVERSE
STEP 2 (IF REQUIRED)
STEP 2 (IF REQUIRED)
LEFT
RIGHT
STEP 2 (IF REQUIRED)
START
STOP
MAIN_PANEL
BRIDGE DRIVE w/ 208.230.460.575v INVERTER
SUB_PANEL
TROLLEY DRIVE w/ 208.230.460.575v INVERTER

BILL OF MATERIALS						
ITEM NO.	QTY. REQD.	DESCRIPTION	PART NO.	WT.	MAT'L.	REMARKS
1	1	8 BUTTON PENDANT STATION ASSY	79-0024			
1A	1	MOMENTARY START/STOP SP-A	79-0077			
1B	3	TWO SPEED INSERT	79-0009			

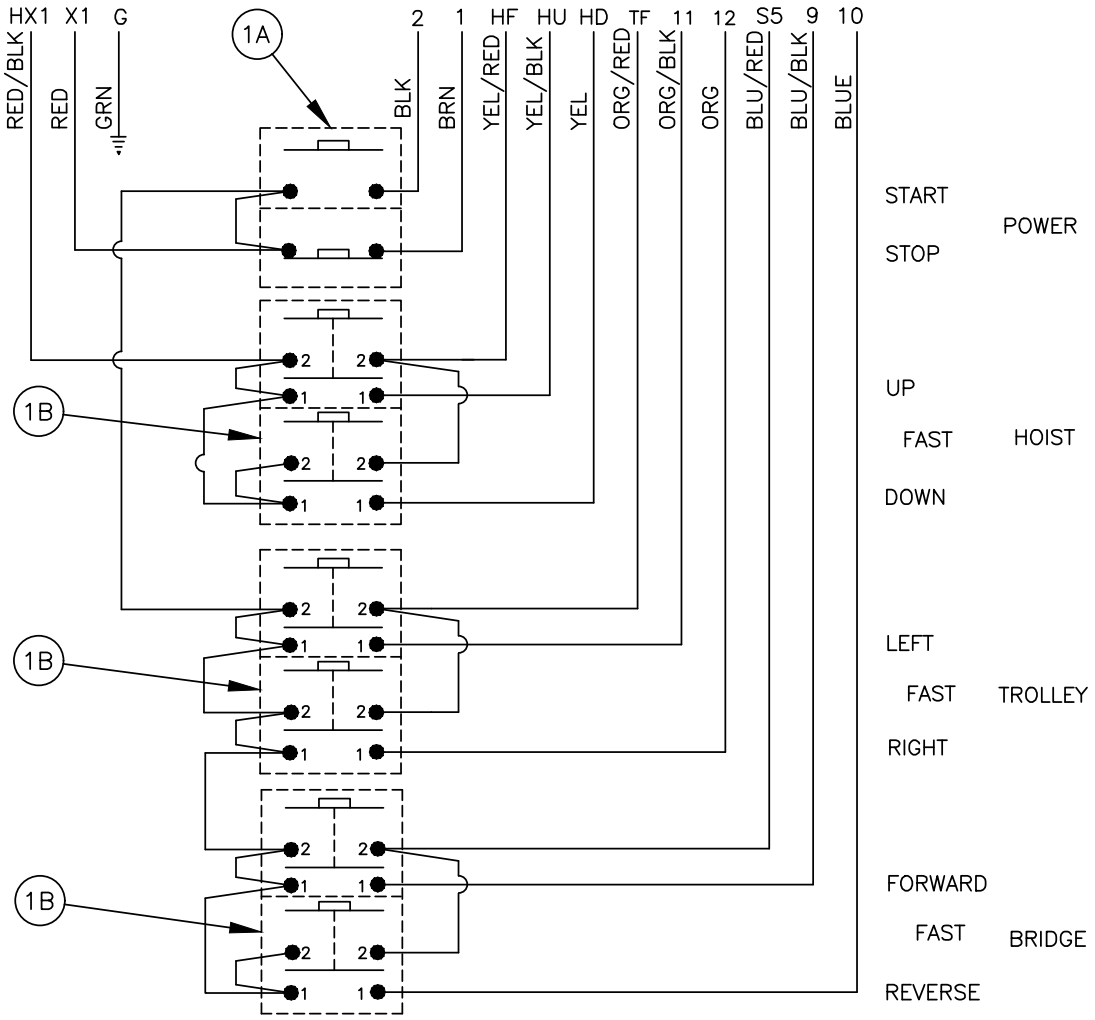


B	07/06/15	JJB	11 WAS TL AND 12 WAS TR
A	10/7/13	NND	PART WAS NAMED 79-0024-H-MET

DRN. CWG	DATE: 10/18/06	PROJECT NO.: –	PLOT DATE: 11/17/06	DWG. NO. 79-0024-SS-ET	REV. B
CHKD. –	DATE: –	ACAD FILE: –	STATUS: –		

BILL OF MATERIALS

ITEM NO.	QTY. REQD.	DESCRIPTION	PART NO.	WT.	MAT'L.	REMARKS
1	1	8 BUTTON PENDANT STATION ASSY	79-0024			
1A	1	MOMENTARY START/STOP SP-A	79-0077			
1B	3	TWO SPEED INSERT	79-0009			



B	7/10/14	JJR	ADDED NOTES
A	10/7/13	NND	PART WAS NAMED 79-0024-A-MET

DRN.	DATE:	PROJECT NO.:	PLOT DATE:	DWG. NO.	REV.
JJB	02/08/13	–	02/08/13	79-0024-A-ET	B
CHKD. –	DATE: –	ACAD FILE: –	STATUS: –		

TROUBLESHOOTING

Most troubleshooting issues are very simple to fix and can be directly traced back to inexact installation or not following the provided instructions. Ensure that instructions A, B, and C below are followed before troubleshooting. **If you have carefully followed the troubleshooting instructions below and are still experiencing issues, please contact your local Spanco dealer.**

A. READ THE ENTIRE MANUAL CAREFULLY BEFORE INSTALLING, SERVICING, OR TROUBLESHOOTING CRANES. It is critically important that systems are installed exactly per the installation instructions. Before troubleshooting, all technicians should read the installation and operation manual carefully to understand 100 percent of its contents.

B. Only trained crane service technicians should work on cranes. Your crane dealer will have access to local certified crane technicians and service staff. If you do not have a local dealer, consult your local Yellow Pages or perform an internet search for local certified crane technicians or inspectors. It is critically important the crane be installed by crane technicians EXACTLY as defined in this manual.

C. For electrical connections, startup, and troubleshooting, only certified electricians are allowed to perform electrical maintenance. All Spanco electrical systems are tested for proper operations and are verified before final shipment; any work performed by non-certified electricians will void the factory warranty.

1. MOTORS DO NOT TURN OR APPEAR TO NOT BE GETTING POWER

a) Ensure that the main AC contactor coil is pulling in and staying in when the *ON* button is pushed. If the main contactor is not pulling in, the fuse may be blown. In this case, check the fuse.

b) Ensure that the motor connection leads are secure and receiving power.

c) Ensure that the inverter doesn't have an error code. If there is an error code, refer to the inverter manual.

2. OVERLOAD TRIPPED

a) Ensure that the inverter doesn't have an error code. If there is an error code, refer to the inverter manual.

b) Adjust the *torque* setting to a lower value.

c) Adjust the acceleration time to a higher value.

d) Adjust the current value until the desired current is found.

3. WHEELS TURN BUT DRIVE DOES NOT MOVE (See Number 4 below)

4. DRIVE GETS STUCK AT ONE OR MORE POINTS ALONG THE TRACK

a) Ensure that the spring pressure on the drive wheel is adjusted properly. See page 3 for more information.

b) Ensure that the runways are properly aligned and level, especially at all track splice locations, per the system installation instructions.

c) Ensure that the inverter (Variable Frequency Drive [VFD]) is adjusted properly to accelerate the load. Refer to the inverter manual for more information. If more assistance is needed, please contact the inverter manufacturer.

5. SYSTEM LATERAL DEFLECTION OR SWAYING

NOTE: Spanco systems are designed to be fully compliant with and meet or exceed all applicable strength requirements of OSHA, CMAA, ANSI, AISC, and MMA. All steel structures will deflect when acted upon by a force. Vertical deflection should only be measured at 100 percent of the capacity, never at 125 percent capacity.

a) Ensure that the crane isn't being *plugged*, which is caused by repeatedly pressing a motor control button.

b) Ensure that the movable components aren't powered directly into the end stops at full speed. Per ANSI B30.17, contact with end stops should be made with caution. If contact with the end stops is unavoidable, then deceleration zones for powered devices can be employed to prevent impact on the end stops.

c) If sudden accelerating or decelerating causes the deflection or swaying, adjust the inverter for longer accelerations and decelerations per the inverter manual..

d) If a Freestanding Workstation Bridge Crane support structure exhibits sway that is deemed undesired, brace the support structure to the building. Spanco is not responsible for structures or foundations provided by others.

REDUCER IPTS, INC. BLUE LINE OPERATING INSTRUCTIONS

LUBRICATION

IPTS gear reducers are pre-filled with lubricant unless specified otherwise at the time of purchase. In applications where a breather is preferred by the customer, breather must be installed on the uppermost surface of the gear reducer housing prior to operating.

IPTS recommends the oil fill be checked prior to operating the reducer. The proper level is to the center of the oil level plug or 60% inside the housing. Each IPTS Blue Line reducer is filled with Petrocanada Synduro 460 1/55 for 5° F to 225° F extreme temperatures.

Higher than normal operating temperatures may develop during an initial break-in period of 250 hours of operation. The surface temperature may reach 225° F or higher. For maximum life expectancy do not allow reducer to operate continuously over 225° F after the initial break-in period.

OIL CAPACITY (Fluid Ounces)

#030 = 2 oz.	#110: worm over = 100 oz., worm under = 75 oz.
#040 = 3 oz.	#110: output vertical = 85 oz., input vertical = 100 oz.
#050 = 5 oz.	#130: worm over = 155 oz., worm under = 115 oz.
#063 = 10 oz.	#130: output vertical = 120 oz., input vertical = 155 oz.
#075 = 20 oz.	#150: worm over = 237 oz., worm under = 173 oz.
#090 = 35 oz.	#150: output vertical = 183 oz., input vertical = 211 oz.

GENERAL INSTRUCTIONS

1) IPTS gear reducers are rated for 1750 rpm input, 1.0 service factor. Please consult our catalog for selection guidelines.
2) Care must be taken to ensure proper alignment of reducer in conjunction with other equipment at the time of installation to prevent damage to reducer components during operation.
3) Auxiliary drive components (including sprockets and pulleys) should be mounted as close as possible to the gear reducer housing (without making actual contact) to reduce the effects of overhung loads.
4) Auxiliary drive components should not be force fitted to reducer to avoid damage to gears and/or bearings.

WARNINGS

1) Overall operational system safety must be considered at all times.
2) While ratios over 15:1 are generally self-locking, reducers should not be relied upon to act as brakes.
3) For safe operation of any gear drive, all rotating shafts and auxiliary components must be shielded to conform with applicable safety standards.
4) Mounting of reducers in overhead position may be hazardous. Use of external guides or supports is strongly recommended for overhead mounting.

For more information, please contact IPTS, Inc. at 800-428-4431.

PRODUCT WARRANTY COVERAGE

Spanco, Inc. warrants its products to be free from defects in material and workmanship as follows:

- Manual Systems and Equipment: Ten Years
- Motorized Systems and Equipment and Paint and Finishes for Non-Aluminum Components: Two Years

Ten-Year Warranty Coverage:

- Defects in equipment material and workmanship of manual systems and equipment
- Only applies to the wearable wheels on workstation bridge crane end trucks and hoist trolleys

Spanco, Inc. warrants its manual workstation bridge crane, jib crane, and gantry crane products to be free from defects in material and workmanship for a period of ten (10) years or 20,000 hours, commencing on the date of shipment to the first retail purchaser. This warranty extends only to parts that are not subject to normal wear and tear from use (nonwearable), with the exception that it does apply to the wearable wheels supplied on manually operated workstation end trucks and hoist trolleys.

Two-Year Warranty Coverage:

- Defects in equipment material and workmanship of motorized systems and equipment
- Paint coatings and finishes for non-aluminum components

Spanco, Inc. warrants motorized equipment to be free from defects in material and workmanship for a period of two (2) years or 4,000 hours, commencing on the date of shipment to the first retail purchaser. Spanco, Inc. warrants its paint and finishes for a period of two (2) years. Warranty claims related to coatings must be accompanied by documentation of the product's application and environmental conditions from time of delivery to time of claim.

WARRANTY TERMS & CONDITIONS

All warranty claims must be approved by Spanco before any work is performed. Spanco's obligation under this warranty is limited to the replacement or repair of Spanco products at the factory or separate location approved by Spanco. **Other than the above mentioned warranty, Spanco will not honor any other warranties—whether expressed, implied, or statutory—and disclaims any warranties of merchantability or fitness for a particular purpose.** Spanco has the right to reject any warranty claim due to harsh and/or inappropriate environmental conditions.

Spanco Is Not Liable for:

- Indirect, incidental, or consequential damages including lost profits, operating costs, loss of production, or travel expenses
- Components or accessories not manufactured by Spanco
- Defective equipment or system failure caused by misuse, negligence, and improper installation or maintenance
- Equipment that has been used in excess of its rated capacity or beyond its service factors
- Rework and modification of any equipment that has been altered without Spanco's written authorization
- Freight charges and damage incurred by freight carriers
- Any loss, injury, or damage to persons or property resulting from failure or defective operation of material or equipment

Reimbursement Disclaimer:

- Written notice of any claimed system defect must be given to Spanco within ninety (90) days of shipment.
- All requests for reimbursement must be accompanied by proper documentation.
- Reimbursement is provided in the form of a credit unless otherwise approved by Spanco management.
- Reimbursement for labor will be provided at a maximum rate of $75 per hour.
- All reimbursement is subject to approval by Spanco management.

ABOUT SPANCO®

Our Commitment

Spanco professionals are dedicated to designing and manufacturing a variety of material handling solutions that meet all applicable CMAA, ANSI, OSHA, and MMA guidelines and standards. Our team of engineers and industry experts combine many years of experience in the material handling industry to manufacture material handling solutions that are backed by the best warranty in the industry.

Spanco production facilities are certified under the ISO 9001:2015 Quality Management System to provide superior quality products. And every welder at Spanco is certified to handle steel (D1.1) and aluminum (D1.2) in accordance with the rigorous requirements and lab testing established by the American Welders Society (AWS).

Spanco professionals welcome challenging projects that require custom crane engineering. Spanco also offers hundreds of pre-engineered lifting solutions, including Workstation Bridge Cranes, Jib Cranes, Gantry Cranes, Monorails, and Tractor Drives.

Our Production:

All of our systems are designed and manufactured in the United States of America. We have production facilities in Las Vegas, Nevada, and at our headquarters in Morgantown, Pennsylvania.

Promise to perform.

Morgantown, PA | Las Vegas, NV
Toll Free: (800) 869-2080 | Local: (610) 286-7200 | Outside US: 1-610-286-7200 | Fax: (610) 286-0085
Spanco.com | info@Spanco.com