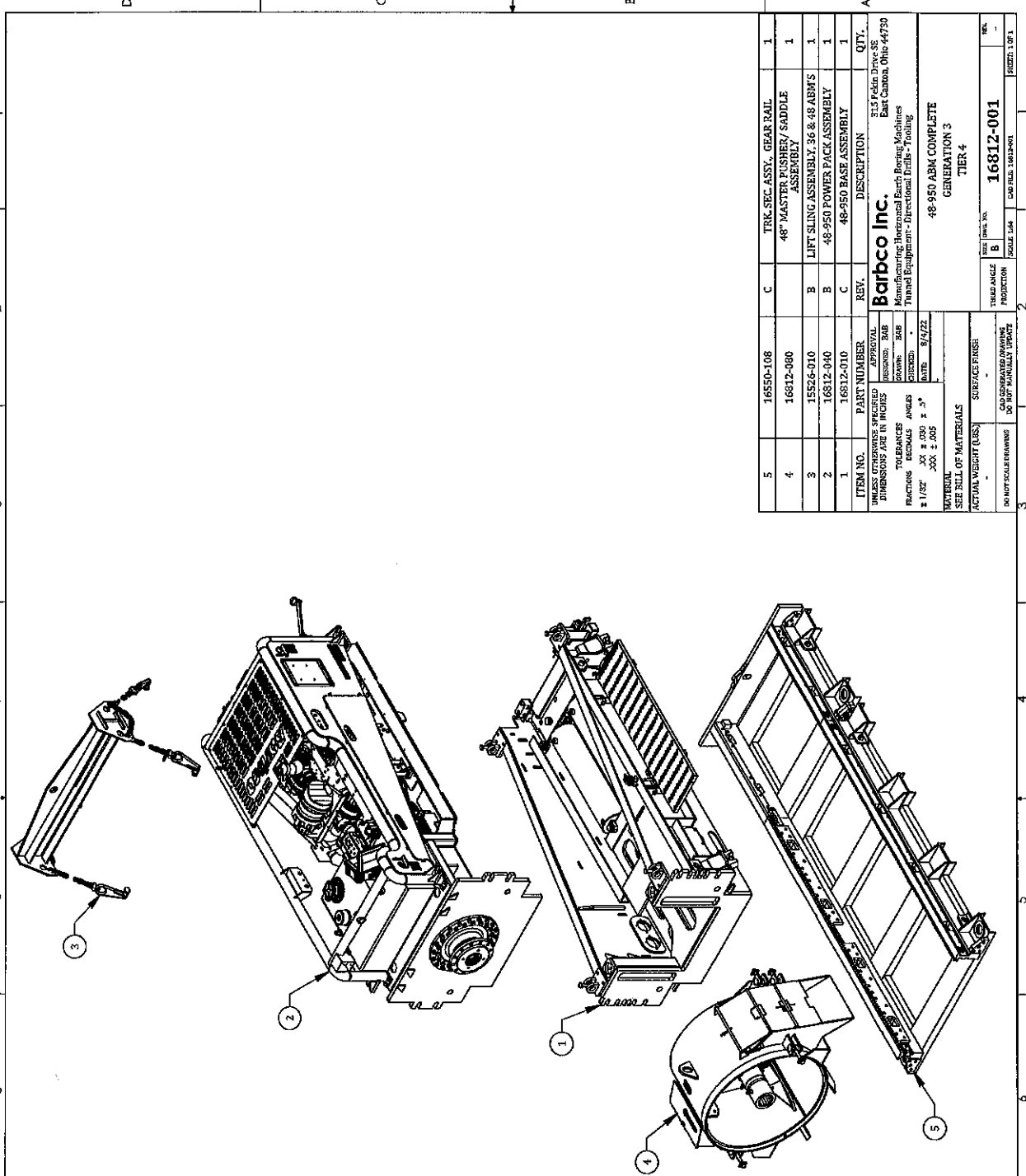


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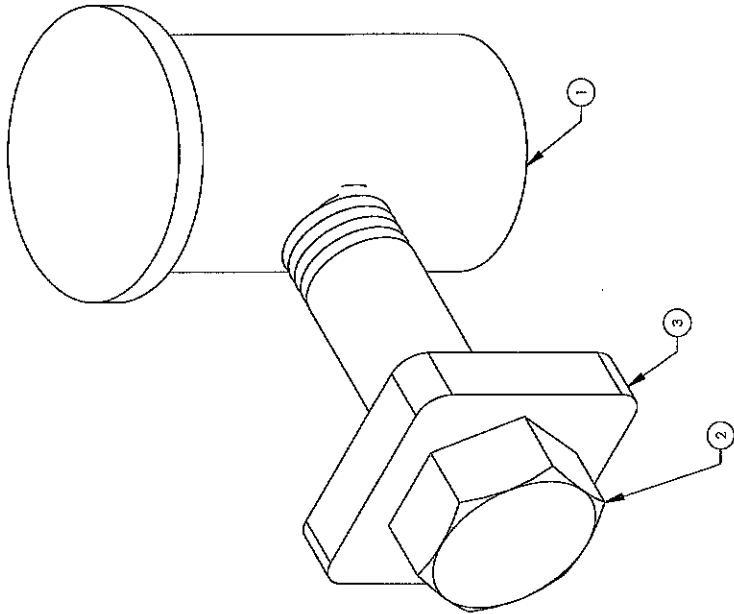


ITEM NO.	PART NUMBER	REV.	DESCRIPTION	QTY.
5	16850-108	C	TRK. SEC. ASSY. GEAR RAIL	1
4	16812-080		48" MASTER FISHER / SADDLE ASSEMBLY	1
3	15526-010	B	LIFT SLING ASSEMBLY 36 & 48 ABMS	1
2	16812-040	B	48-950 POWER PACK ASSEMBLY	1
1	16812-010	C	48-950 BASE ASSEMBLY	1

UNLESS OTHERWISE SPECIFIED	APPROVAL	315 P-kin Drive SE
DIMENSIONS ARE IN INCHES	DESIGNED BY	East Canton, Ohio 44730
FRACTIONS DECIMALS ANGLES	DRAWN BY	Manufacturing-Horizontal Bore Bearing Machines
$\frac{1}{16}$ " .001" $\frac{1}{2}$ "	CHECKED BY	Tunnel Equipment-Directional Drills-Tooling
$\times .0005$ $\pm .005$	DATE	8/7/22

MATERIAL		48-950 ABM COMPLETE	
SEE BILL OF MATERIALS		GENERATION 3	
ACTUAL WEIGHT (LBS)		TIER 4	
NO PORTABLE DRAWING	SURFACE FINISH	TRUCK ANGLE	REV.
CAD GENERATED DRAWING		PRODUCTION	B
DO NOT MANUALLY EDIT		SCALE 1:64	16812-001
			SHEET 1 OF 1

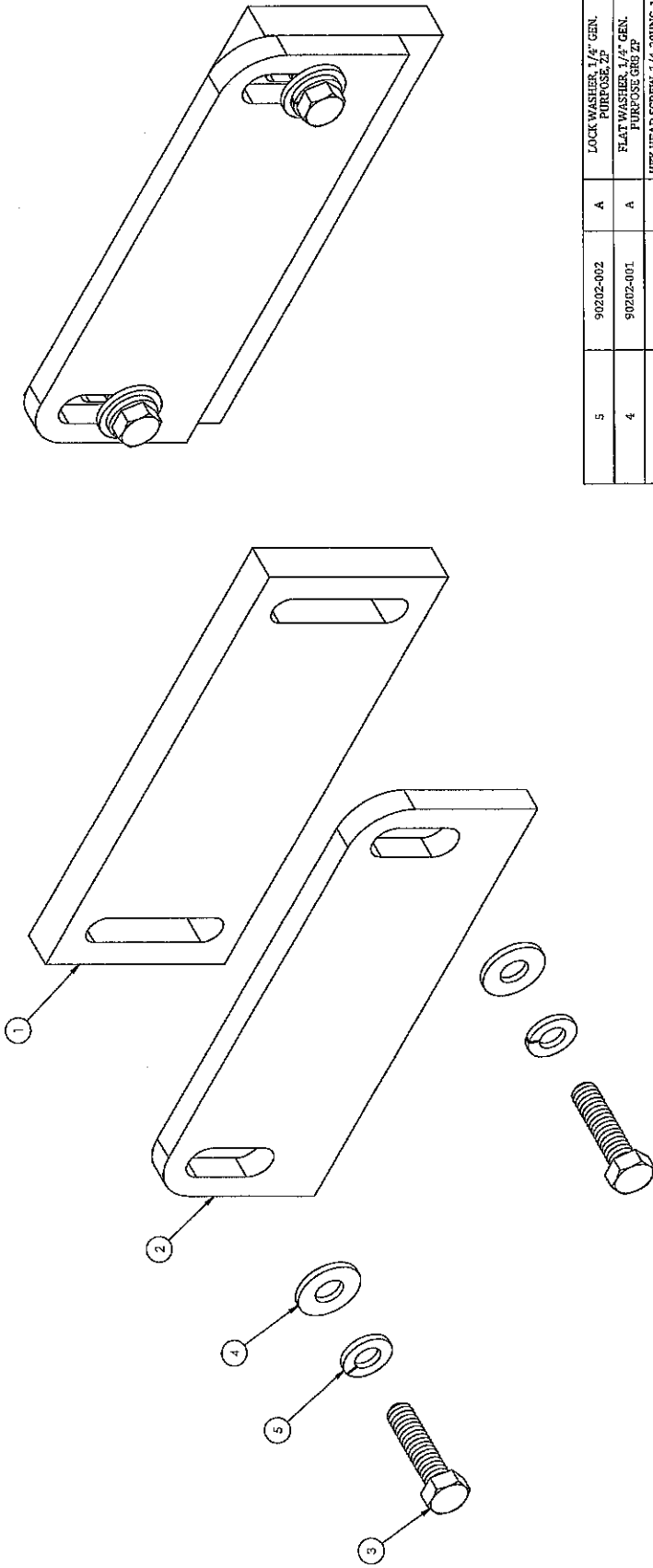
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3	20050108	-	HOLD DOWN WASHER	1
2	90380-008	A	HEX HEAD SCREW, 1-SUNC, 5" LG, GR8	1
1	15529-451	A	BARREL BOLT, 2" X 3 1/2" LONG	1
ITEM NO.	PART NUMBER	REV.	DESCRIPTION	QTY.
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES				
TOLERANCES				
FRACTIONS DECIMALS ANGLES				
± 1/32" .005 ± .000 ± .5°				
DATE: 1/70/22				
MATERIAL: SEE BILL OF MATERIALS				
SURFACE FINISH: GEN 3, ABMS, T4				
ACTUAL WEIGHT (LBS): 5.04				
UNFINISHED DRAWING TO BE USED FOR PRODUCTION				
SCALE: 1:1				
DRAWN BY: 16811-061				
CHECKED BY: [Blank]				
DATE: [Blank]				
SHEET: 1 OF 1				

Barco Inc.
 315 Main Drive SE
 Manufacturing/Horizontal Earth Boring Machines
 East Canton, Ohio 44720
 Tinned Equipment - Directional Driller - Tooling

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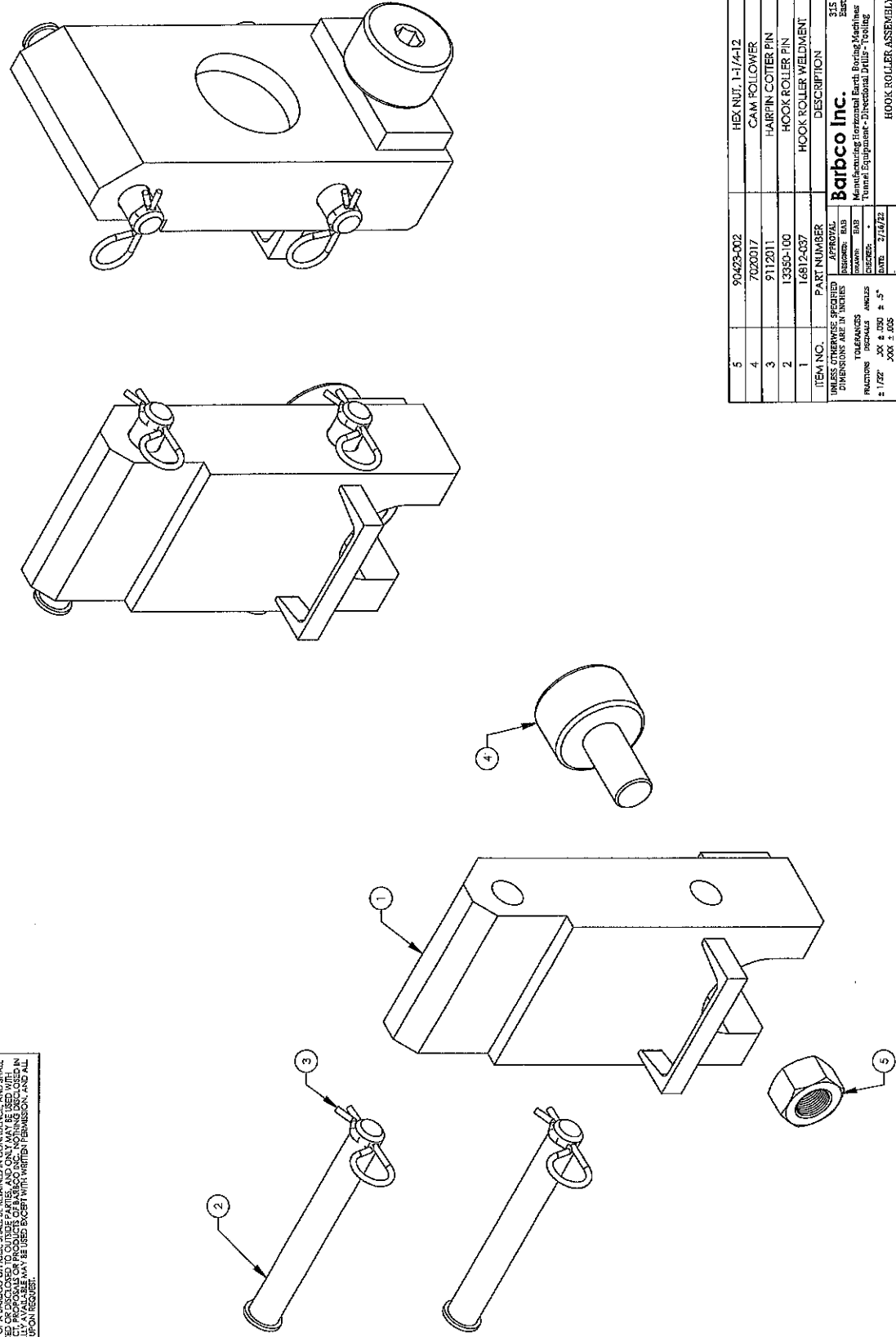
ITEM NO.	DESCRIPTION	REV.	QTY.
5	LOCK WASHER, 1/4" GENL PURPOSE ZP	A	2
4	FLAT WASHER, 1/4" GENL PURPOSE GR8 ZP	A	2
3	HEX HEAD SCREW, 1/4-20UNC, 1" LG. GR8	-	2
2	WIPER COVER PLATE	-	1
1	TRACK WIPER	-	1

ITEM NO.	DESCRIPTION	REV.	QTY.
1	WIPER ASSY	-	1

Barco Inc. Manufacturing Mechanical Earth Boring Machines Tinned Equipment - Directional Drills - Tooling	
315 Bldg. Dr. S.E. East Canton, Ohio 44730	DATE: 5-1-13 DRAWN BY: S-1-13

MATERIAL: SEE BILL OF MATERIAL ACTUAL WEIGHT (LBS.): 0.779 SURFACE FINISH:	TISSOT MODEL: 106-0071 PRODUCTION:
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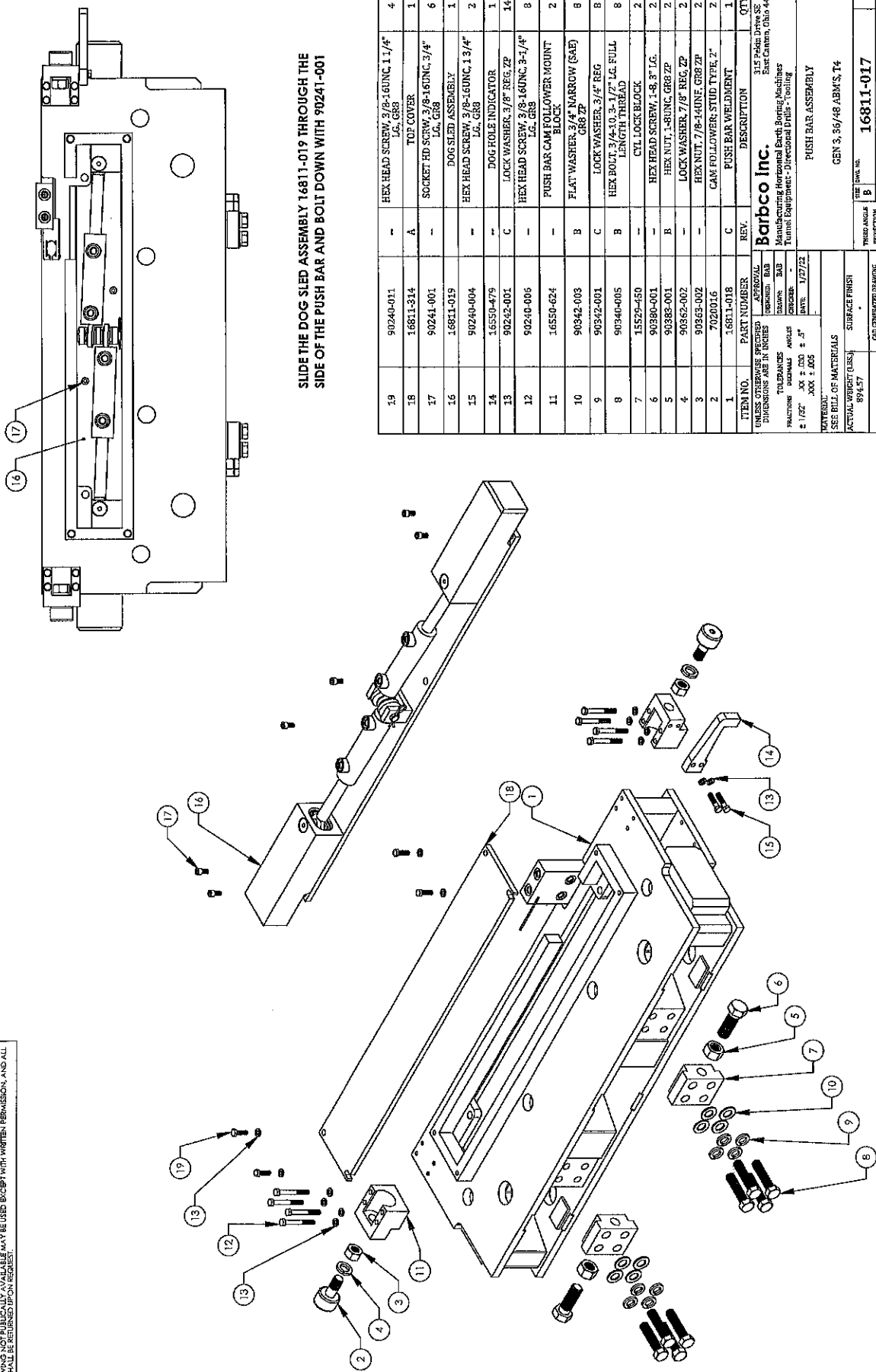
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5	90423-002	HEX NUT, 1-1/4-12	1
4	7020017	CAM FOLLOWER	1
3	9112011	HAIRPIN COTTER PIN	2
2	13350-100	HOOK ROLLER PIN	2
1	14917-037	HOOK ROLLER WELDMENT	1
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
Barco Inc. 815 Peled Drive 36 24 24 Manufacturing International Earth Boring Machine Tunnel Equipment-Directional Drills-Tooling			
HOOK ROLLER ASSEMBLY 48-950 BASE ASSEMBLY GEN 3, 48-950 ABM, T4			
MATERIAL		SEE BILL OF MATERIALS	
ACTUAL WEIGHT (LBS.)		61.36	
SURFACE FINISH			
COLD CHROMIATED DRAWING		NO NOT MANUALLY UPDATE	
SCALE		1:1	
DATE		2/16/22	
DESIGNED BY			
CHECKED BY			
APPROVED BY			
DATE		2/16/22	
TOLERANCES UNLESS OTHERWISE SPECIFIED			
FRACTIONS DECIMALS ANGLES			
.XX ± .000 ± .5°			
.XXX ± .005			
SURFACE FINISH			
MATERIAL			
SEE BILL OF MATERIALS			
ACTUAL WEIGHT (LBS.)		61.36	
SURFACE FINISH			
COLD CHROMIATED DRAWING		NO NOT MANUALLY UPDATE	
SCALE		1:1	
DATE		2/16/22	
DESIGNED BY			
CHECKED BY			
APPROVED BY			
DATE		2/16/22	

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SLIDE THE DOG SLED ASSEMBLY 16811-019 THROUGH THE SIDE OF THE PUSH BAR AND BOLT DOWN WITH 90241-001

ITEM NO.	PART NUMBER	REV.	DESCRIPTION	QTY.
19	90240-011	-	HEX HEAD SCREW, 3/8-16UNC, 1 1/4" LG, GR8	4
18	16811-314	A	TOP COVER	1
17	90241-001	-	SOCKET HD SCREW, 3/8-16UNC, 3/4" LG, GR8	6
16	16811-019	-	DOG SLED ASSEMBLY	1
15	90240-004	-	HEX HEAD SCREW, 3/8-16UNC, 1 3/4" LG, GR8	2
14	16550-479	-	DOG HOLE INDICATOR	1
13	90242-001	C	LOCK WASHER, 3/8" REG. ZP	14
12	90240-006	-	HEX HEAD SCREW, 3/8-16UNC, 3-1/4" LG, GR8	8
11	16550-624	-	PUSH BAR CAM FOLLOWER MOUNT BLOCK	2
10	90342-003	B	FLAT WASHER, 3/4" NARROW (SAE) GR8 ZP	8
9	90342-001	C	LOCK WASHER, 3/4" REG GR8 ZP	8
8	90340-005	B	HEX BOLT, 3/4-10, 3-1/2" LG, FULL LENGTH THREAD	8
7	15520-450	-	CTL LOCK BLOCK	2
6	90360-001	-	HEX HEAD SCREW, 1-8, 3" LG	2
5	90382-001	B	HEX NUT, 1-8UNC, GR8 ZP	2
4	90362-002	-	LOCK WASHER, 7/8" REG. ZP	2
3	90363-002	-	HEX NUT, 7/8-24UNE, GR8 ZP	2
2	70200-16	-	CAM FOLLOWER STUD TYPE 2"	2
1	16811-018	C	PUSH BAR WELDMENT	1

Barbarco Inc.
 3115 Main Drive SE
 East Canton, Ohio 44730
 Manufacturing Horizontal Bore, Boring Machines
 Tunnel Equipment - Directional Drills - Tooling

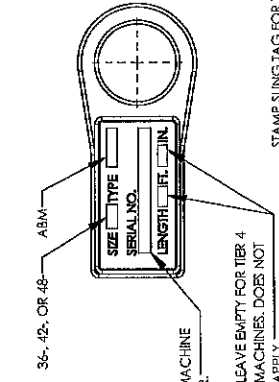
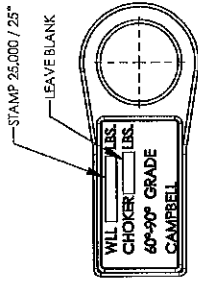
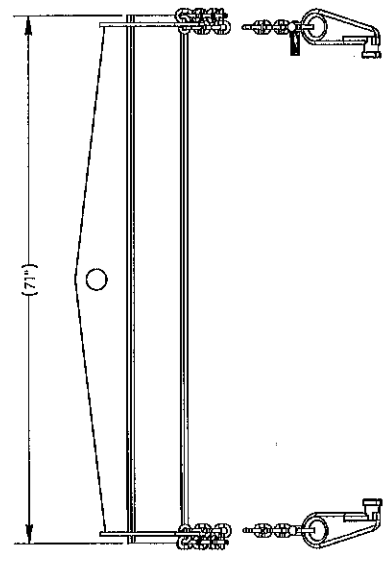
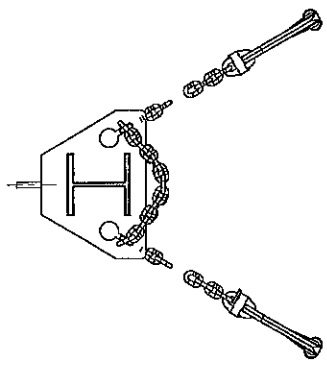
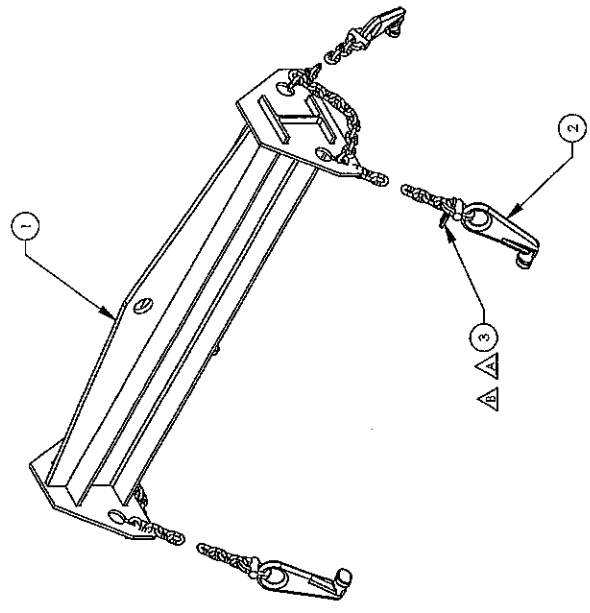
UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES UNLESS OTHERWISE SPECIFIED:
 FRACTIONS .0005 ± .0005
 DECIMALS .0005 ± .0005
 ANGLES ± 1/32°
 HOLE DIA ± .0005
 DATE: 1/27/22

REVISIONS:
 SEE BILL OF MATERIALS
 SURFACE FINISH: 89.457
 DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE TO CENTER UNLESS NOTED OTHERWISE

PROJECTION: FIRST ANGLE
 SHEET: 1 OF 1

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REV.	DESCRIPTION	DATE	APPROVED
A	ADDED 15526-117 TO ASSEMBLY	3/15/2019	DWN
B	REPLACED 15526-117 WITH 15526-118, UPDATED MACHINES LIST	8/19/2021	MRH
B	LIFT SLING ASSEMBLY		



STAMP SERIAL NUMBER OF MACHINE BEING MANUFACTURED FOR.
 LEAVE BLANK FOR TIER 4 MACHINES. DOES NOT APPLY.

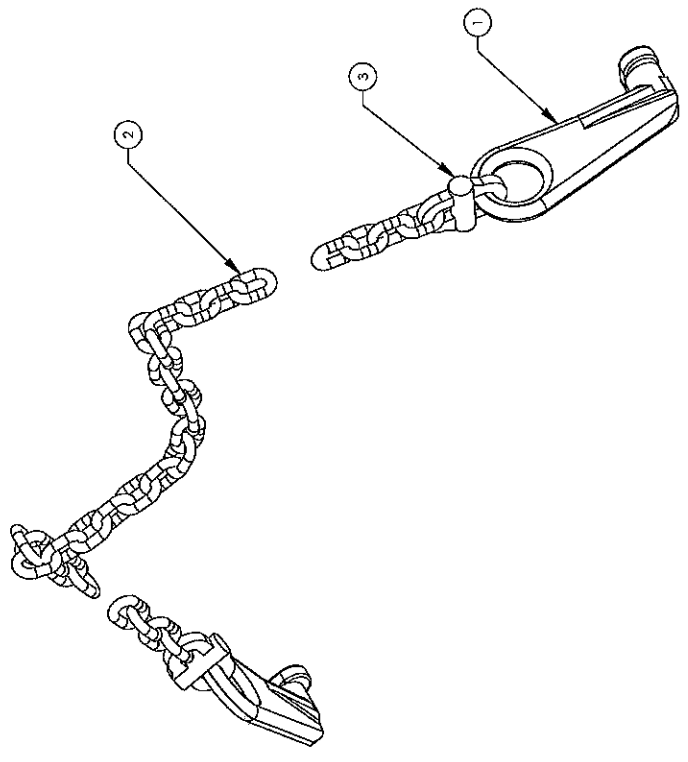
STAMP SLING TAG FOR TIER 4 36-500, 36-650, 42-650, & 48-950 ABM AS SHOWN

REV. NO.	PART NUMBER	DESCRIPTION	QTY.
3	15526-118	LIFT SLING TAG	1
2	15526-012	LIFT SLING CHAIN ASSEMBLY, 36 & 48 ABMS	2
1	15526-011	LIFT SLING WELDMENT, 36 & 48 ABMS	1

Barco Inc.
 Manufacturing Horizontal Excavating Machines
 Tunnel Equipment - Directional Drills - Tooling
 315 Basin Drive SE
 East Canton, Ohio 44730

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVAL
TOLERANCES UNLESS OTHERWISE SPECIFIED	DESIGNED BY
FRACTIONS: XX ± .030 ± .5"	CHECKED BY
± 1/32" .XXX ± .005	DATE: 03/29/2018
MATERIAL: SEE BOB	SURFACE FINISH
ACTUAL WEIGHT (LBS.) 407.07	TRIM ANGLE
DO NOT SCALE DRAWING	PROJECTION
	SCALE 3/4" = 1"
	CON. FILE: 15526-012
	REV. NO. 15526-010
	REV. DATE
	DRAWN BY
	CHECKED BY
	DATE

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Barbarco Inc. 315 Balin Drive SE East Canton, Ohio 44730 Manufacturing Horizontal Earth Boring Machines Tunnel Equipment - Directional Drills - Tooling		APPROVAL DRAWN: KSW CHECKED: - DATE: 03/28/2018
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES FRACTIONS DECIMALS ANGLES $\pm 1/32"$ $.XX \pm .003$ $\pm 5'$ $\pm .005$ $.XXX \pm .005$		TITLE: LIFT SLING CHAIN ASSEMBLY, 36 & 48 ABMS SHEET NO. 1 TOTAL SHEETS 1
MATERIAL: SUBSURFACE FINISH SEE BOM: 37.11 ACTUAL WEIGHT (LBS): MANUFACTURING DO NOT MANUALLY SORT		SCALE: 1:1 DATE: 03/28/2018 PROJECT: 15526-012 SHEET: 1 OF 1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	15526-109	CONTAINER LIFTING HOOK	2
2	15526-113	CHAIN, 14' LONG, 36 & 48 ABMS, 1/2-GR100	1
3	15526-116	CHAIN COUPLING, 1/2" CHAIN, GRADE 100	2