



Instruction Manual

HS14

14" High Speed Non-Ferrous Saw

www.kalamazooind.com

Kalamazoo Industries, Inc.
6856 E K Ave
Kalamazoo, Michigan
Phone 269-382-2050

1. Introduction

Thank you for choosing the Kalamazoo Industries HS14 14-Inch Heavy Duty High Speed Non-Ferrous Saw. This powerful industrial machine is designed to deliver exceptional cutting performance for aluminum, brass, copper, and other non-ferrous materials.

The HS14 features a robust 5HP motor operating at 3450 RPM, delivering a spindle speed of 4400 RPM for clean, efficient cuts. Built with cast iron construction throughout, this machine is engineered for durability and precision in demanding industrial environments.

Please read this manual thoroughly before operating the equipment. Proper understanding of the machine's features, safety requirements, and maintenance procedures will ensure optimal performance and longevity.

1.1 Intended Use

The HS14 is specifically designed for cutting non-ferrous metals and materials including:

- Aluminum (solid and extruded shapes)
- Brass
- Copper
- PVC and plastic materials

2. Safety Information

⚠ WARNING

WARNING: TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN, LIQUID, OR MOISTURE.

Read and all safety instructions before operating this equipment. Failure to follow safety guidelines may result in serious injury or death.

2.1 General Safety Precautions

1. Always wear appropriate personal protective equipment (PPE) including safety glasses, hearing protection, and work gloves.
2. Keep the work area clean and well-lit. Cluttered or dark areas invite accidents.
3. Do not operate the saw under the influence of drugs, alcohol, or medication that may impair judgment.
4. Keep bystanders at a safe distance from the operating machine.
5. Never leave the machine running unattended.
6. Ensure the blade guard is properly positioned before each cut.
7. Never attempt to cut ferrous metals (steel, iron) with this machine.
8. Disconnect power before changing blades or performing maintenance.

2.2 Electrical Safety

- Ensure proper grounding of the machine before operation.
- Verify voltage requirements match your facility's electrical supply (3PH 230V or 3PH 460V).
- Use only qualified electricians for electrical connections and repairs.
- Do not operate in wet or damp conditions.

2.3 Blade Safety

- Use only high-speed blades rated for non-ferrous cutting applications.
- Inspect blades for cracks, damage, or excessive wear before each use.
- Replace damaged or worn blades immediately.
- Allow the blade to reach full speed before beginning a cut.
- Consult a blade specialist for proper blade selection for your specific material.

3. Technical Specifications

3.1 Motor and Performance

Specification	Value
Motor Power	5 HP
Motor Speed	3450 RPM
Spindle Speed	4400 RPM
Spindle Arbor	1 inch
Phase/Voltage Options	3PH 230V or 3PH 460V

3.2 Cutting Capacity

Material Type	Maximum Capacity
Solid Materials	3 inches
Shaped Materials	4 inches
Vise Opening	5 inches

3.3 Construction

Component	Material/Type
Base	Cast Iron
Trunnion	Cast Iron
Arm	Cast Iron
Bearings	Sealed Ball Bearings
Blade Guard	Retractable Steel Clamshell (OSHA Compliant)
Switch	Magnetic On/Off
Vise System	Dual Screw Vises

3.4 Dimensions and Weight

Dimension	Measurement
Shipping Length	40 inches
Shipping Width	40 inches
Shipping Height	42 inches
Shipping Weight	300 lbs

4. Features and Components

4.1 Key Features

The HS14 incorporates several features designed for industrial performance and operator safety:

Cast Iron Construction

The base, trunnion, and arm are all constructed from heavy-duty cast iron, providing exceptional stability, vibration dampening, and long-term durability.

OSHA-Compliant Blade Guard

The retractable steel clamshell guard provides comprehensive blade protection while allowing clear visibility of the cutting operation. The guard automatically retracts during cutting and returns to the protective position when the saw arm is raised.

Dual Screw Vise System

The dual vise system provides secure material clamping with 5-inch opening capacity. Adjustable threaded front and back stops enable precise positioning for repetitive cuts.

Magnetic Safety Switch

The magnetic on/off switch prevents automatic restart after power interruption, providing an important safety feature in industrial environments.

Sealed Ball Bearings

High-quality sealed ball bearings ensure smooth operation and extended service life with minimal maintenance requirements.

4.2 Available Options

- Steel Stand (Model 12-L): Provides a stable, ergonomic working height. Contact Kalamazoo Industries for pricing.
- KW1 – 1" spindle wrench
- 051-035 14" saw belt tension tool.

5. Installation and Setup

5.1 Unpacking and Inspection

1. Carefully remove all packing materials and inspect the machine for shipping damage.
2. Verify all components are present according to the packing list.
3. Report any damage or missing items to Kalamazoo Industries immediately.
4. Remove any protective coatings from machined surfaces.

5.2 Location Requirements

- Place the machine on a level, stable surface capable of supporting the machine weight.
- Ensure adequate clearance around all sides for operation and maintenance.
- Provide adequate lighting and ventilation.
- Consider chip collection requirements when positioning the machine.

5.3 Electrical Connection

CAUTION: Electrical connections must be performed by a qualified electrician in accordance with local electrical codes.

1. Verify the voltage requirements match your facility's power supply (3PH 230V or 3PH 460V).
2. Connect to an appropriately rated circuit with proper overcurrent protection.
3. Ensure proper grounding according to electrical code requirements.
4. Check motor rotation direction before operating. The blade should rotate down and toward the part.
5. Refer to the electrical schematic provided with the machine for wiring details.

5.4 Blade Installation

1. Disconnect power from the machine.
2. Remove the blade guard to access the spindle.
3. Install the blade on the 1-inch spindle arbor with the teeth pointing down at the front of the cut.
4. Secure with the flange and arbor nut, tightening firmly.
5. Replace the blade guard.
6. Reconnect power and verify proper blade rotation.

6. Operation Instructions

6.1 Pre-Operation Checklist

- Inspect the blade for damage, cracks, or excessive wear
- Verify the blade guard operates correctly
- Check that all guards and safety devices are in place
- Ensure the work area is clean and free of obstructions
- Put on required personal protective equipment

6.2 Cutting Procedure

5. Position the material in the vise, ensuring it is square to the blade.
6. Adjust the front and back stops for desired cut length if making repetitive cuts.
7. Tighten the vise screws to securely clamp the material.
8. Turn on the machine using the magnetic switch.
9. Allow the blade to reach full operating speed (4400 RPM).
10. Lower the saw arm smoothly and steadily, applying consistent pressure.
11. Complete the cut and raise the saw arm to the full up position.
12. Turn off the machine and wait for the blade to stop completely.
13. Release the vise and remove the workpiece.

6.3 Cutting Tips for Best Results

- Use consistent, moderate feed pressure; let the blade do the work.
- Select the appropriate blade tooth configuration for your material (consult your blade supplier).
- Support long materials adequately to prevent movement during cutting.
- Allow the blade to clear chips naturally; do not force cuts.

7. Maintenance

7.1 Daily Maintenance

- Clean chips and debris from the machine after each use
- Inspect the blade for damage or wear
- Verify blade guard operation
- Check vise operation and tighten if necessary

7.2 Weekly Maintenance

- Inspect V-belts for wear, cracks, or proper tension
- Check all fasteners for tightness

7.3 Monthly Maintenance

- Inspect bearings for noise or rough operation
- Clean and inspect electrical connections
- Verify motor mounting hardware is secure
- Inspect trunnion pin for wear

7.4 Blade Replacement

Replace blades when they show signs of dullness (increased cutting time, rough cuts, excessive heat), visible damage, or missing teeth. Follow the blade installation procedure in Section 5.4.

8. Troubleshooting

Problem	Possible Cause	Solution
Motor will not start	Power disconnected	Check power supply and connections
	Magnetic switch tripped	Reset switch; check for overload
	Faulty switch	Replace magnetic switch
Excessive vibration	Loose blade	Check arbor nut tightness
	Damaged blade	Replace blade
	Worn bearings	Replace spindle bearings
Poor cut quality	Dull blade	Replace blade
	Wrong blade for material	Consult blade specialist
	Feed rate too fast	Reduce feed pressure
Blade overheating	Excessive feed pressure	Reduce feed rate
	Dull blade	Replace blade
	Improper blade selection	Consult blade specialist
Material slipping	Vise not tight	Increase vise pressure
	Worn vise jaws	Replace vise jaws
Belt slippage	Belt worn	Replace V-belts
	Improper tension	Adjust belt tension

9. Replacement Parts

Genuine Kalamazoo Industries replacement parts are kept in stock and shipped from Kalamazoo, Michigan. Using genuine parts ensures optimal machine performance and maintains warranty coverage.

9.1 Recommended Spare Parts

We recommend keeping the following parts on hand to minimize downtime:

Part Number	Description	Quantity
701-002HS	High-Speed Spindle with Tight Flange	1
044-001	Spindle Bearings	2
051-006	V-Belts	2

9.2 Ordering Parts

To order replacement parts, contact Kalamazoo Industries directly or visit the online parts store at www.kalamazooind.com. Have your machine model number (HS14) ready when ordering.

10. Warranty Information

10.1 Warranty Coverage

Parts warranty is guaranteed for one year from the original date of purchase by the original purchaser, covering defects in material or workmanship under normal use. This warranty covers the replacement of defective parts. Some exclusions may apply.

10.2 Warranty Exclusions

This warranty does not cover:

- Normal wear items including blades, belts, and bearings
- Damage resulting from misuse, abuse, or improper maintenance
- Damage from cutting inappropriate materials
- Modifications or alterations to the machine
- Damage from improper electrical connection

10.3 Return Authorization

Obtain written authorization before returning any merchandise by contacting Customer Service at (269) 382-2050. Unauthorized returns may not be accepted.

11. Contact Information

KALAMAZOO INDUSTRIES, INC.

Kalamazoo, Michigan

Toll-Free: 1-800-592-2050

Local: (269) 382-2050

Website: www.kalamazooind.com

Office Hours: Monday – Friday, 8:00 AM – 4:30 PM EST

Online Resources

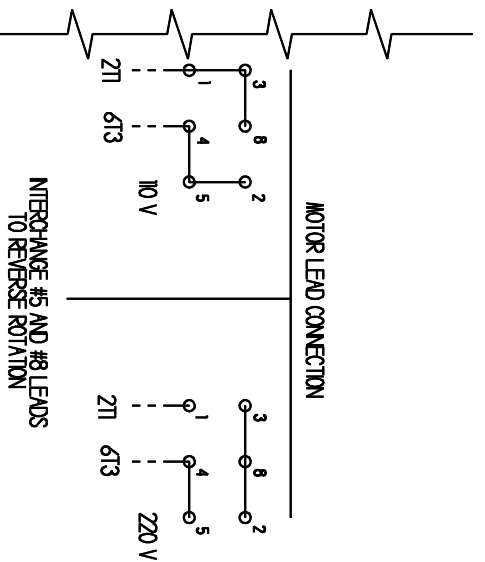
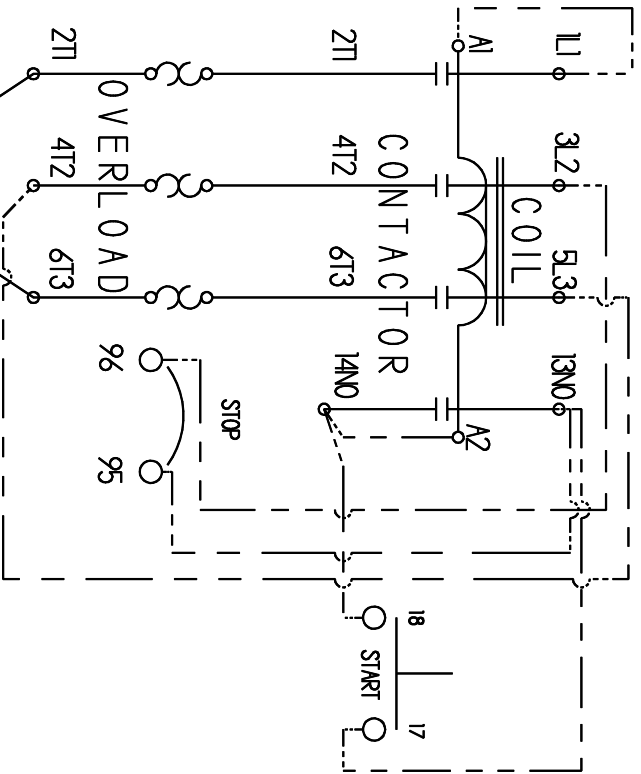
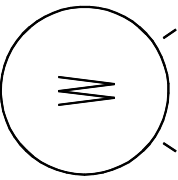
- Product Registration: www.kalamazooind.com/product-registration
- Parts Orders: www.kalamazooind.com/parts-by-category
- Technical Videos: www.kalamazooind.com/videos
- Contact Form: www.kalamazooind.com/contact-us

Thank you for choosing Kalamazoo Industries!

Made in the USA

INCOMING LINE VOLTAGE
CONNECTS TO L1 AND 3L2

SINGLE PHASE MOTOR



KALAMAZOO INDUSTRIES INC.

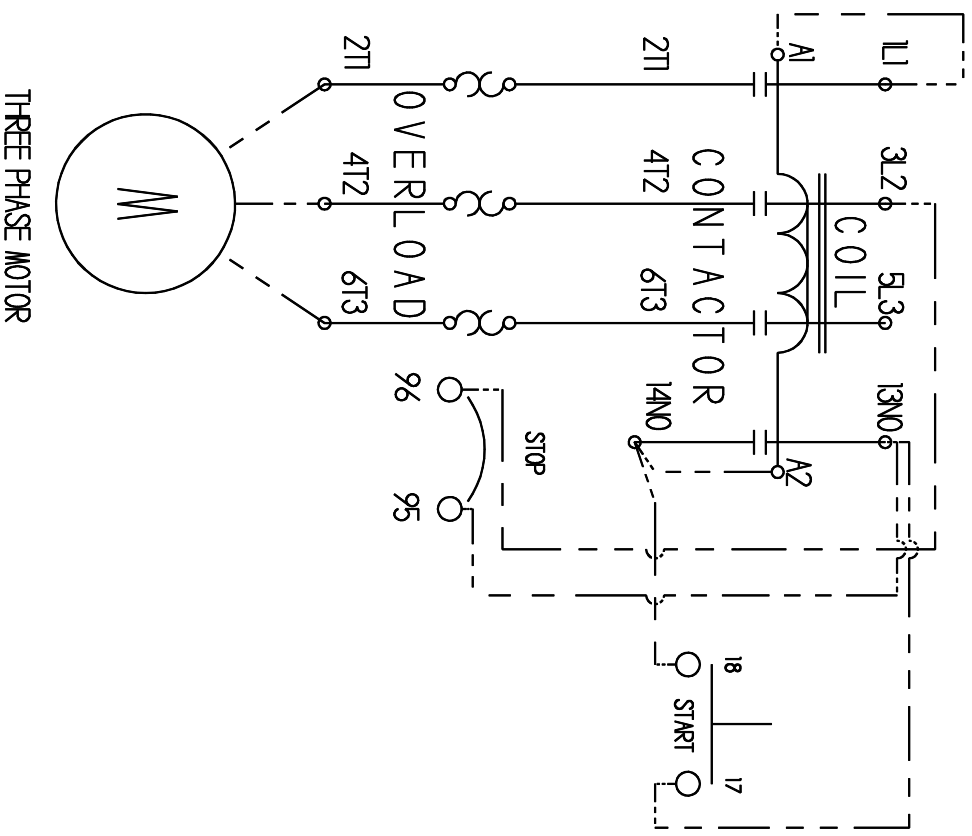
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ASHLEY 9/19/12 1 PH SCHEMATIC

REVISED BY: _____ DATE: _____ PART # _____

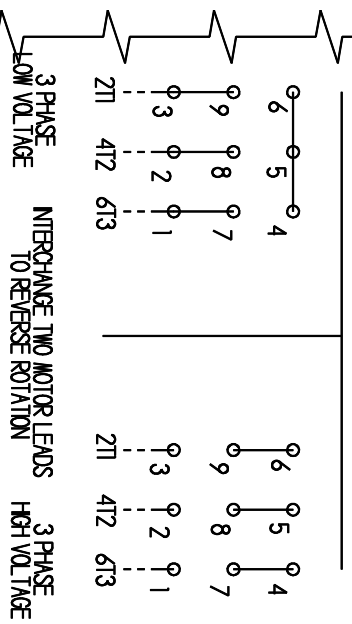
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INCOMING LINE VOLTAGE
CONNECTS TO L1, 3L2 AND 5L3



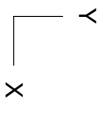
THREE PHASE MOTOR

MOTOR LEAD CONNECTION



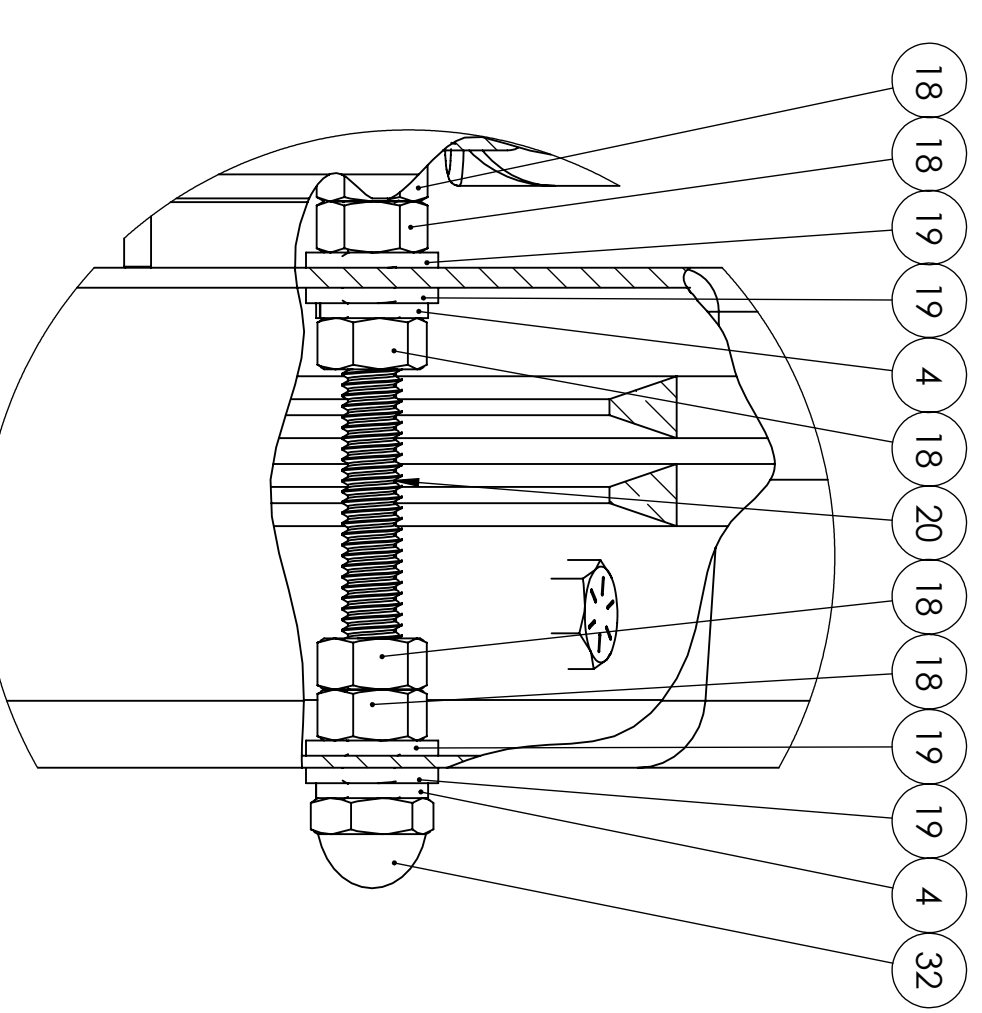
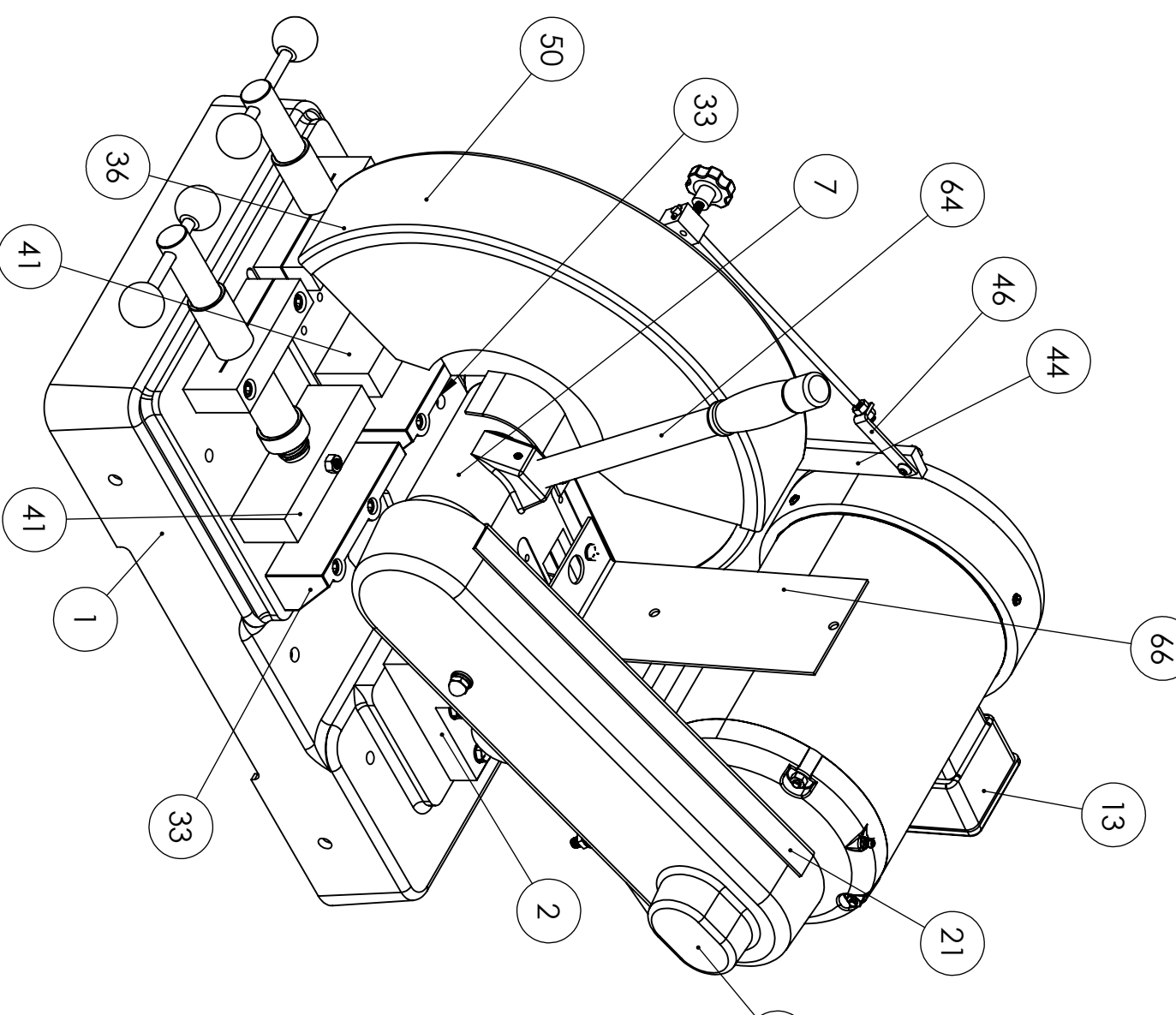
KALAMAZOO INDUSTRIES INC.

DRAWN BY	DATE	DESCRIPTION
ASHLEY	9/19/12	3 PH SCHEMATIC
REVISED BY	DATE	PART #
MATERIAL		

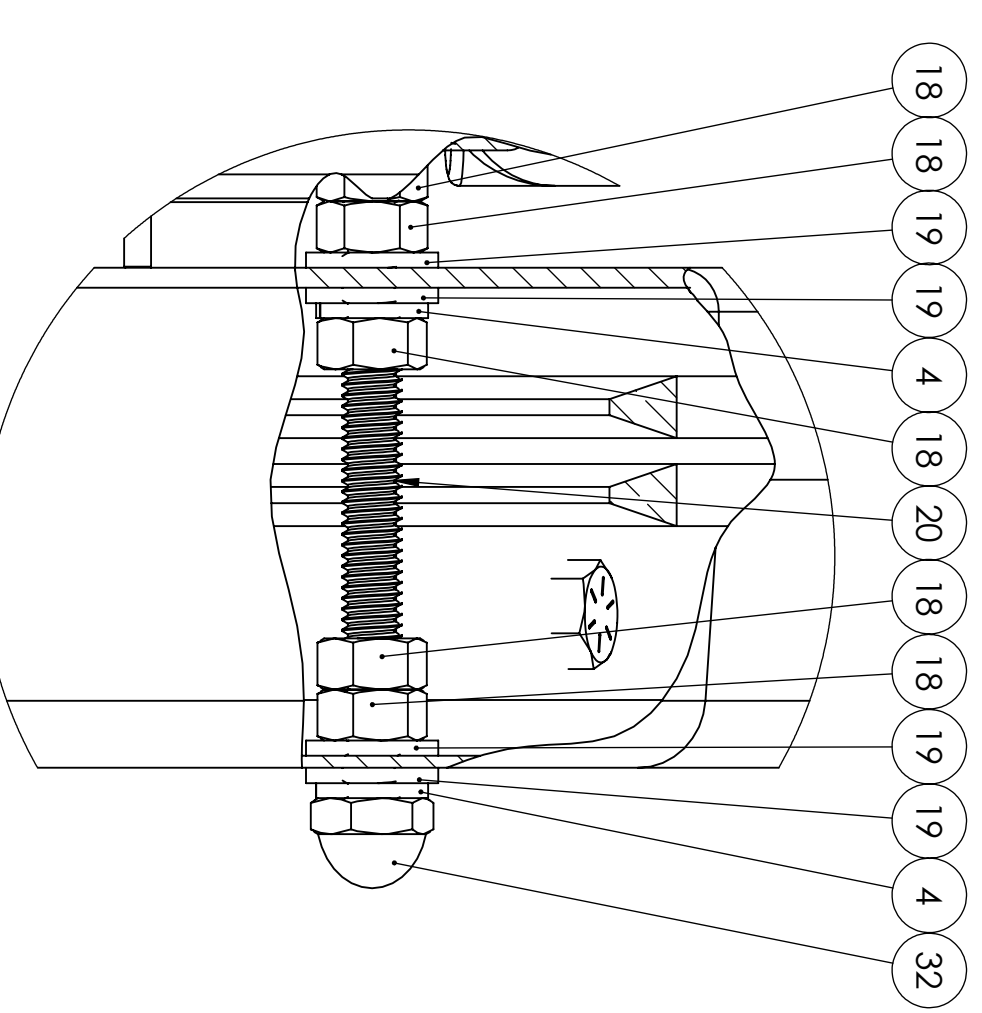


ZONE	REV.	DESCRIPTION	DATE	APPROVED
C2	1	SPINDLE LENGTH CHANGED FROM 9' LONG TO 5'7/8' LONG	1/15/2025	

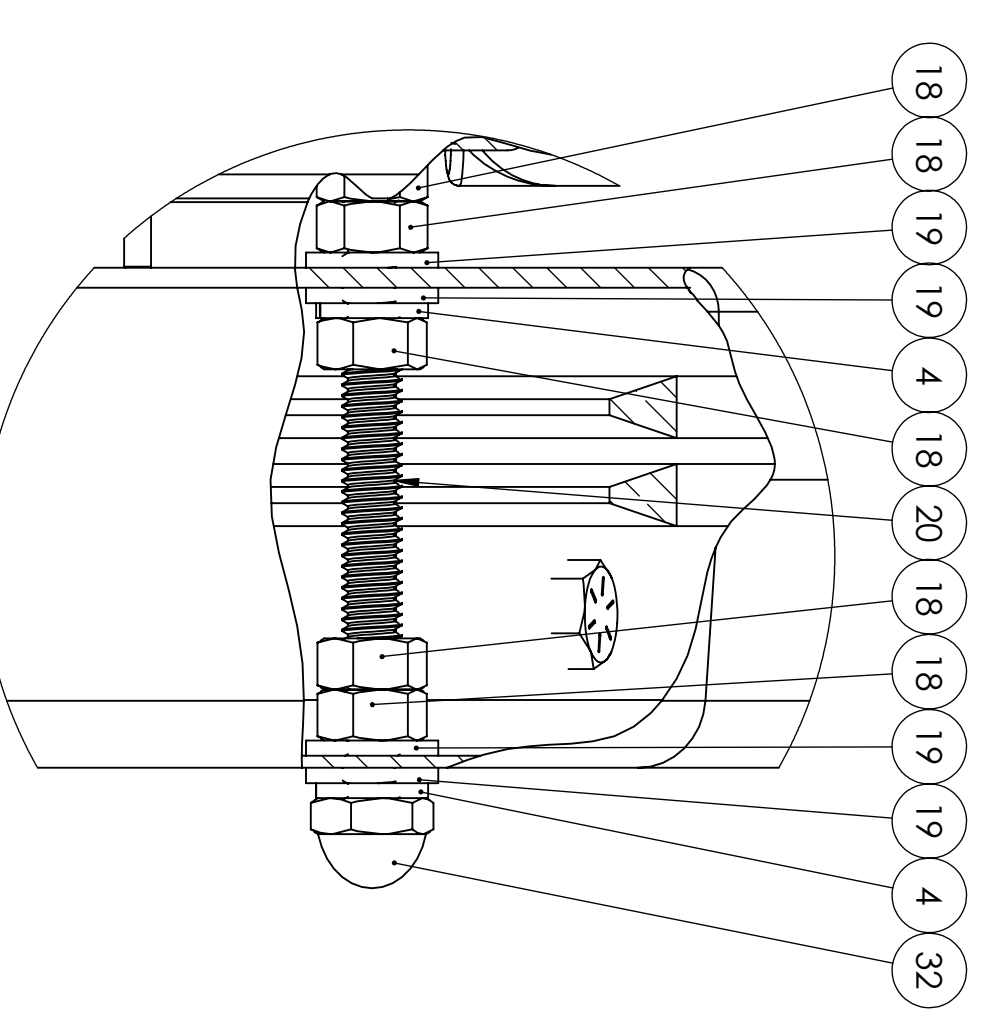
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	050-002	K12-14 SAW BASE	1
2	891-022	TENSION ASSEMBLY FOR HSM14	1
3	HHC03031024	HS14 K12-14MS	4
4	SLW2031	5/16-18 X 1-1/2 HHC'S GR5 Z	10
5	ZERK012000	1/8-27 X 11/16 STRI TUBE FITTING	1
6	562-034	FIN. TENSION FOR HS14 AND K12-14MS W/PH (SHORT)	1
7	002-002	K12-14 SAW ARM	1
8	SSKAO31006	5/16-18 X 3/8 SOC SET NUT/RT. K12 BEARING	2
9	044-001	SPINDLE W/TIGHT FLANGE (STEEL) FOR K14HS, K14SC, HSM14, HS14	1
10	701-002HS	FOR K14HS, K14SC, HSM14, HS14	1
11	292-020	LOOSE FLANGE (STEEL) FOR HSM14	1
12	357-026	L.H. SPINDLE NUT 1"14 FOR K14	1
13	484-001	5 HP MOTOR FOR K12, K14, KM14, K14HS & 5MS-9HP	1
14	HHC03037020	3/8-16 X 1-1/4 HHC'S GR5 Z	4
15	UFW2037	3/8 9/16 F/W Z	4
16	UFW2037	3/8-16 F/W Z	4
17	HMS2037	5/16-18 F/W Z	4
18	HMS2031	5/16-18 F/W Z	8
19	UFW2031	5/16 USS F/W Z	7
20	RHD-031-18HSDX4	4 INCHES OF 3/16-18 THREADED	1
21	342-068	K12-14 INNER BELT GUARD FOR SPACER COIL AND INNER V-BELT	1
22	342-068PACER	K12-14 INNER BELT GUARD BRACKET	1
23	342-068BRKT	5/16-18 X 1/4 HHC'S GR 5 Z	2
24	HHC03031020	5/16-18 X 1/4 HHC'S GR 5 Z	2
25	049-120	SPACER RUSHING FOR K20 SERIES 20HP SPINDLE	1
26	560-001	K12-14 SPINDLE PULLEY	1
27	SSKAO25004	1/4-20 X 1/4 SOC SET NUT/RT. FT. MOTOR PULLEY RUSHING FOR K12, K14 AND KM14	3
28	049-022	MOTOR PULLEY SINEW FOR K12, K14 AND KM14	1
29	560-002	1/4-20 X 1/4 SOC SET NUT/RT. FT. 3V X 3/75 V-BELT FOR K12, K14, KM14 (SAMS REQUIRES 2 BELTS)	1
30	051-006	K12-14 OUTER BELT GUARD/PLASTIC	2
31	342-004	5/16-18 CAP NUT NICKEL	1
32	CPN2031	K10-14 REAR VISE JAW	2
33	431-002	5/16-18 X 3/8CS	4
34	SHCA031048	K10-14 BRACE NUT	1
35	537-014	BLOCK SCREW VISE FOR HS14	2
36	053-032	5/16-18 X 2 SHCS	4
37	SHCA031032	TUBE SCREW VISE FOR HS14	2
38	832-020	NUT. SCREW VISE COLLAR FOR HS14	2
39	357-020	HS14 VISE SCREW	2
40	699-026	SCREW VISE LAW FOR HS14	2
41	431-020	SPACER LEVER FOR HSM14	2
42	SSDA031016	LEVER ASSEMBLY W/ WHEEL GUARD	2
43	699-032	TENSION BRACKET FOR HSM14	1
44	455-007	5/16-18 X 2 HHC'S GR5 Z	2
45	HHC03031032	WHEEL GUARD ASSEMBLY FOR HSM14 AND HS14	1
46	455-007BRACKET	1/4-20 X 3/4 BSHC'S	1
47	85CA025012	1/4 9/16 F/W Z	5
48	SLW2025	1/4-20 F/W Z	3
49	HMS2025	WHEEL GUARD ASSEMBLY FOR HSM14 AND HS14	1
50	342-072	1/4-20 X 1/2 HHC'S GR5 Z	3
51	HHC0202008	5/8 X 2-3/4 SOC SHOULDER BOLT	1
52	SSBA020044	GUIDE ROD FOR K10 AND K14 SERIES CLAMSHELL WHEEL GUARD	1
53	455-007ROD	BLOCK WHEEL GUARD FOR K10 AND K14 SERIES CLAMSHELL WHEEL GUARD	1
54	053-047	1/4-20 X 1 SHCS	1
55	SHCA025016	907B-2500-1 1005 1/4 THUMBSCREW	1
56	441-015	1/8 X 1/2 F/W Z F/W Z	1
57	ROA012008	3/916 INCHES ROD 907B THREADED	1
58	HMS2042	5/8-11 F/W Z	1
59	HMS2042	DOWN STOP BRACKET ASSEMBLY FOR HS14	1
60	041-118	1/4-20 X 3/4 HHC'S GR5 Z	2
61	HHC0202012	4 1/2 INCHES OF 5/8-11 THREADED FANZ02	1
62	RHD-0625-CODX4.5	5/8-11 F/W Z	1
63	FANZ02	HANDLE W GRIP FOR K12,14 SAWS	1
64	381-020	HS14 VISE HANDLE	2
65	381-020	SWITCH BRACKET FOR K12, K14	1
66	041-057		1



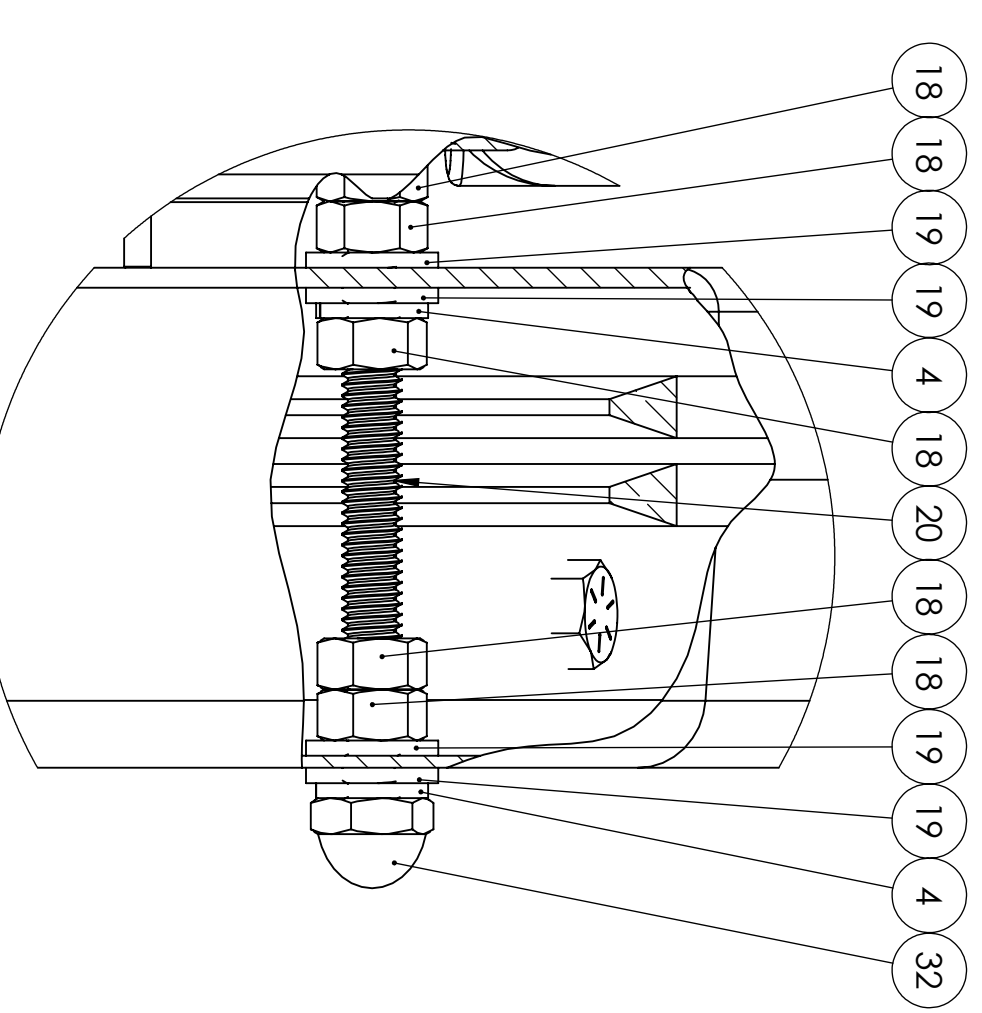
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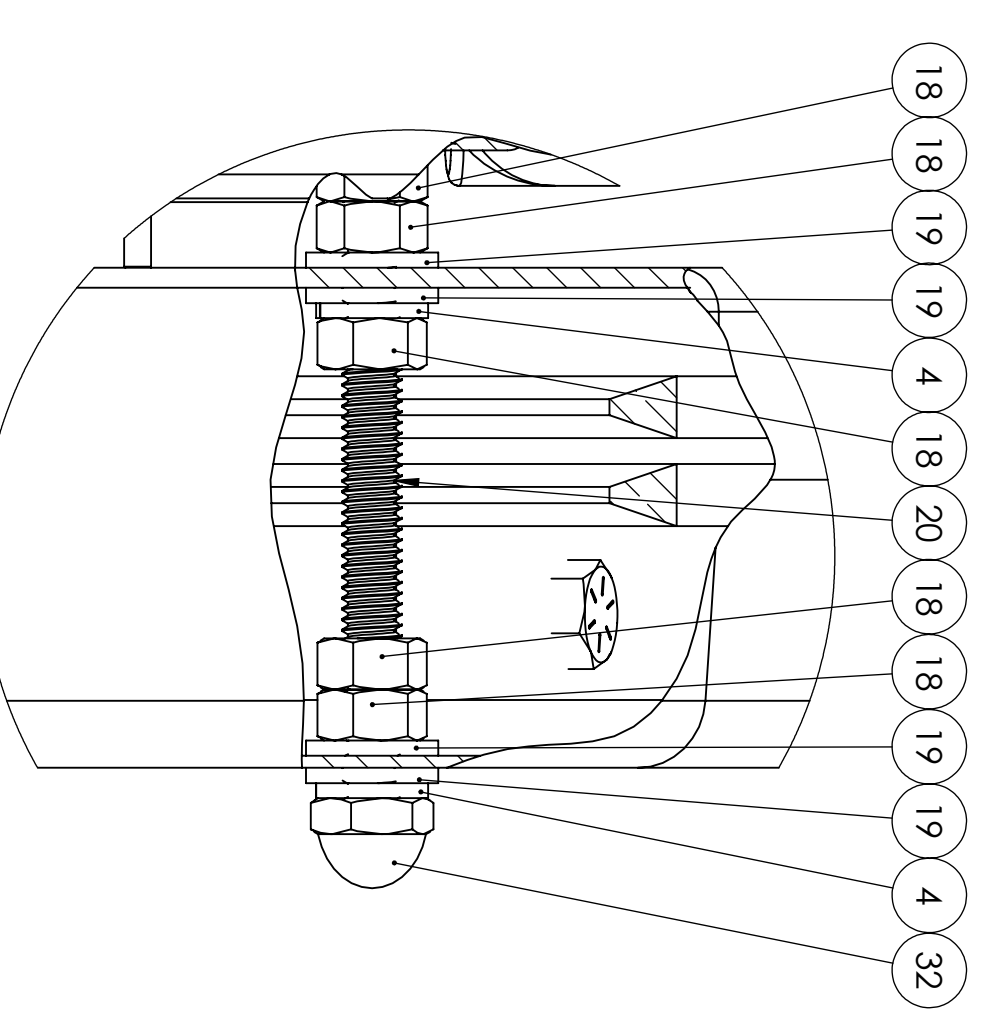
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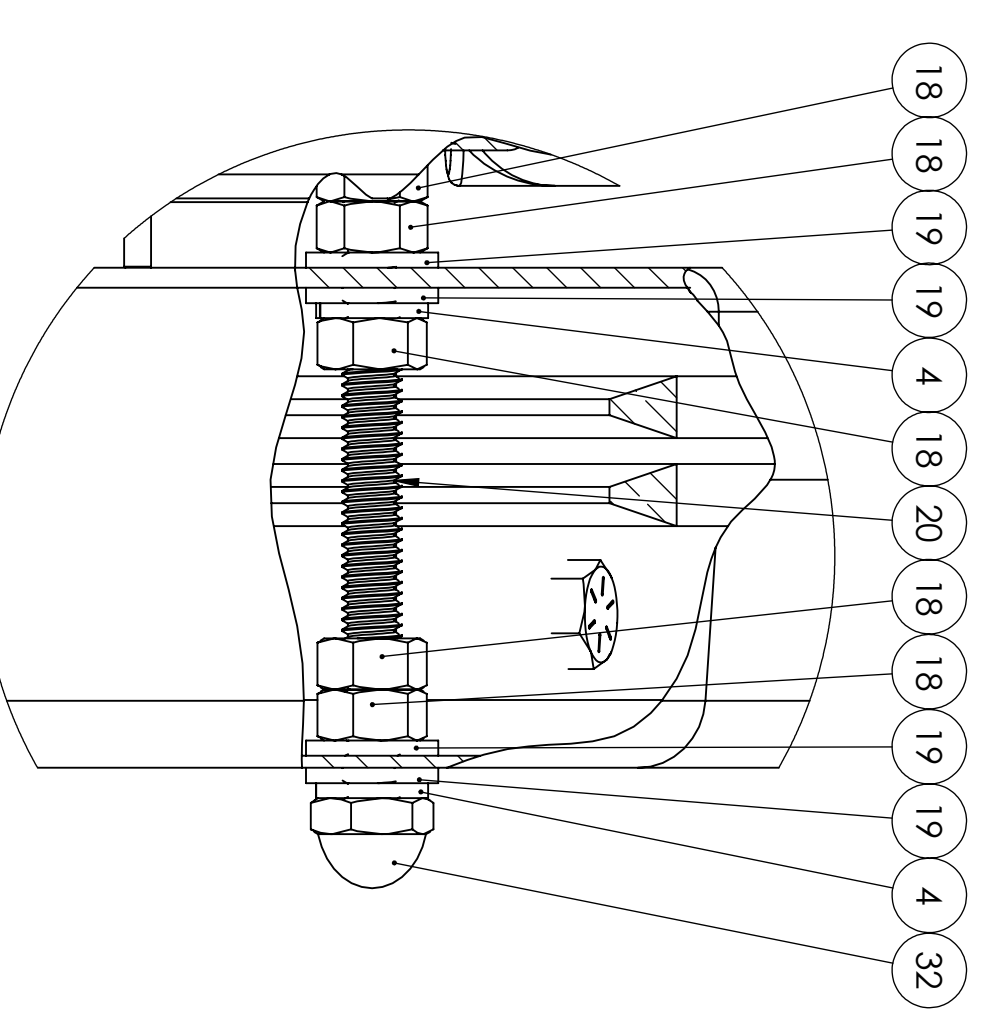
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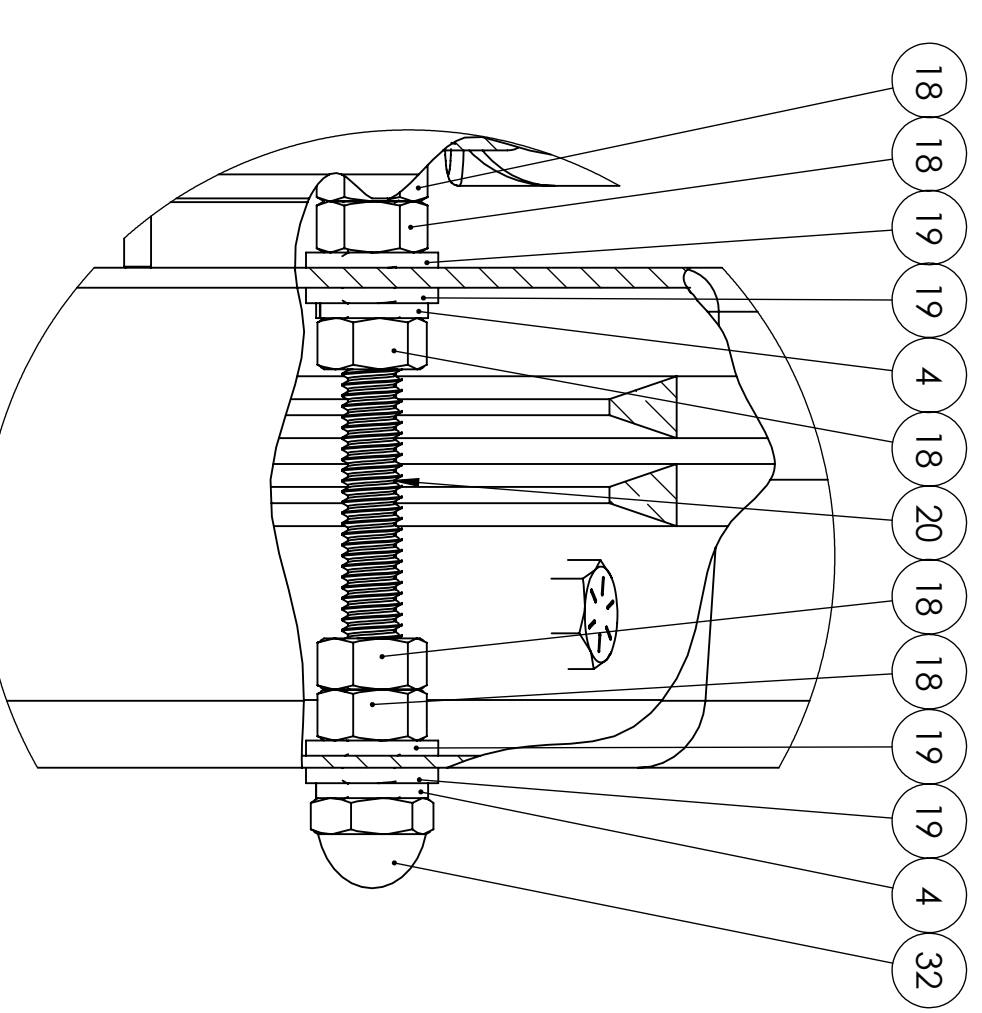
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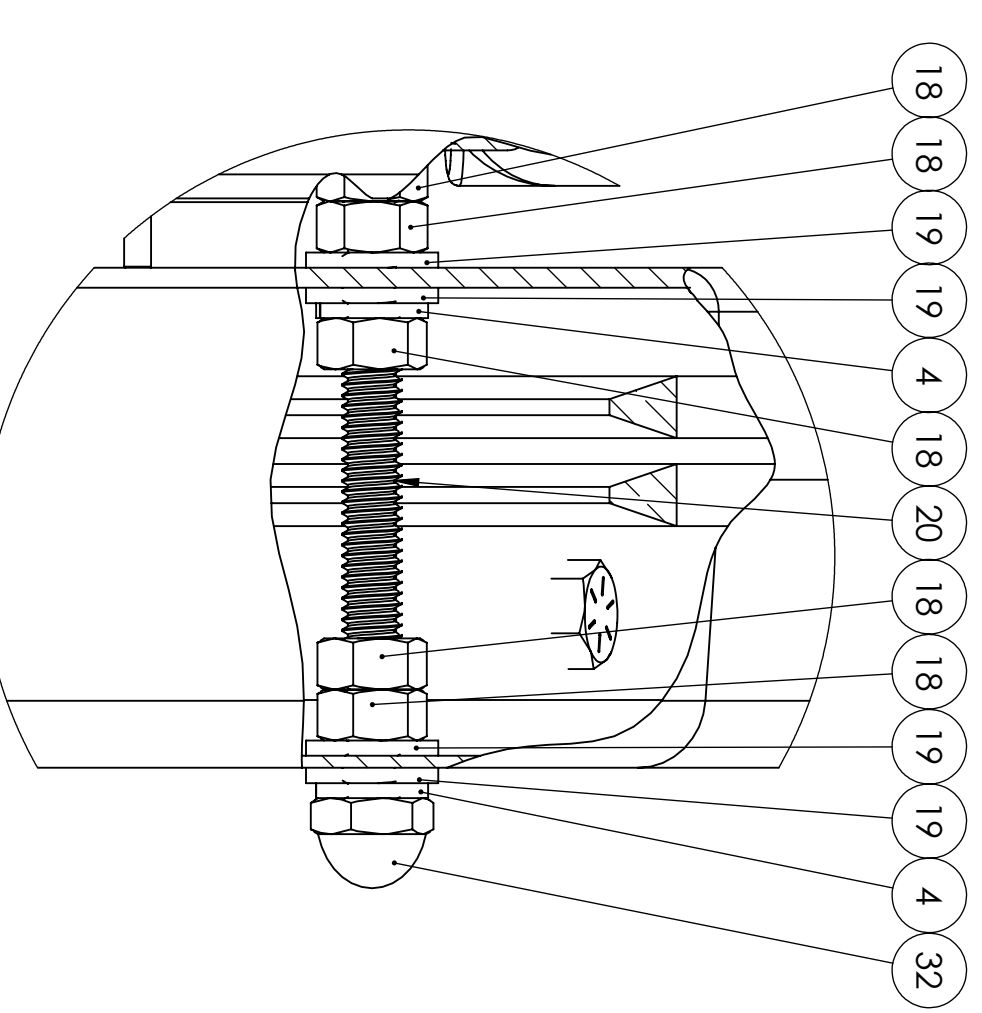
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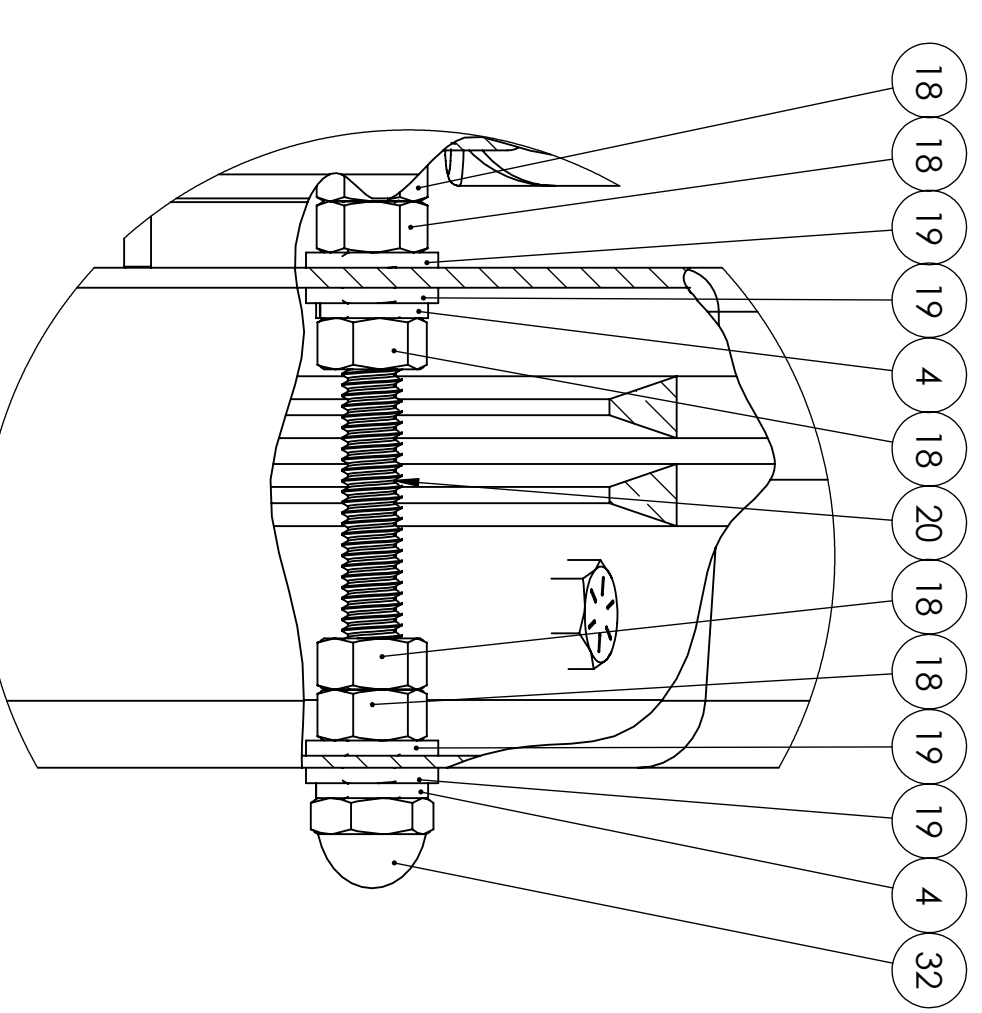
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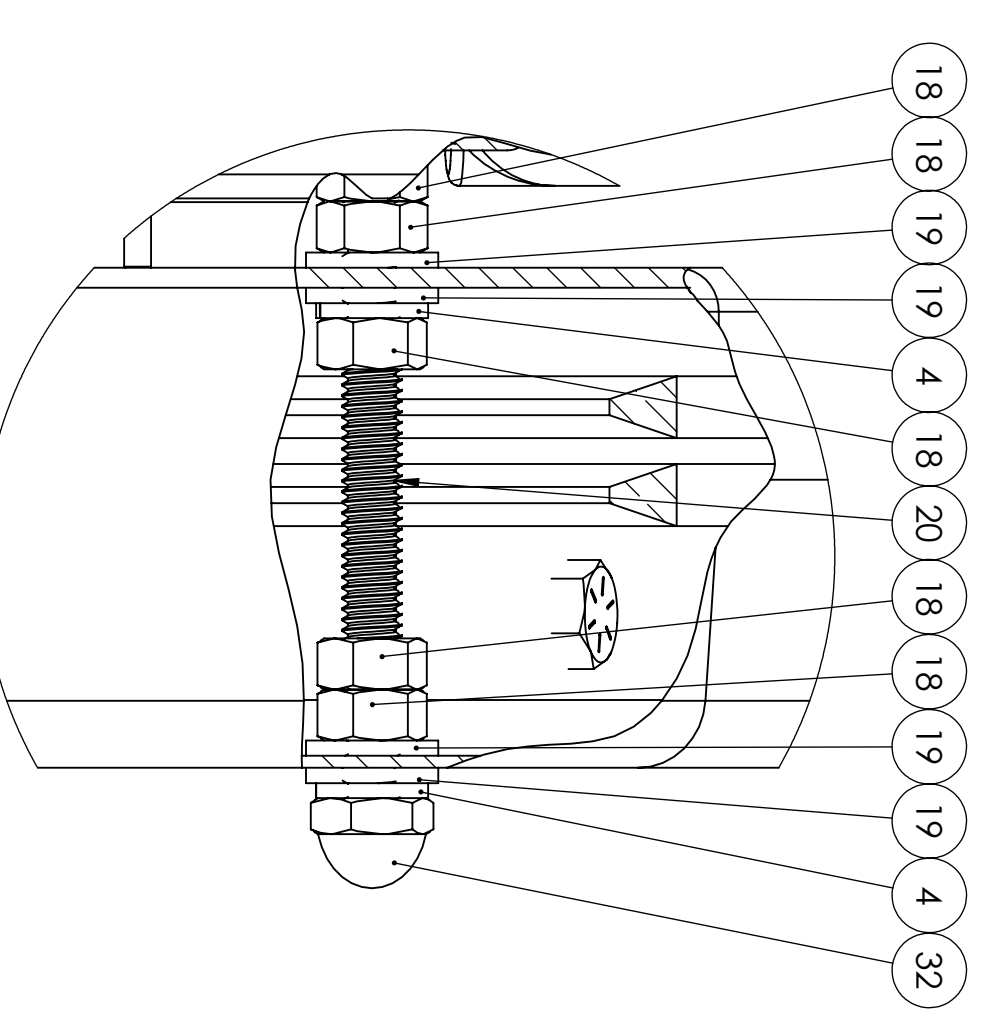
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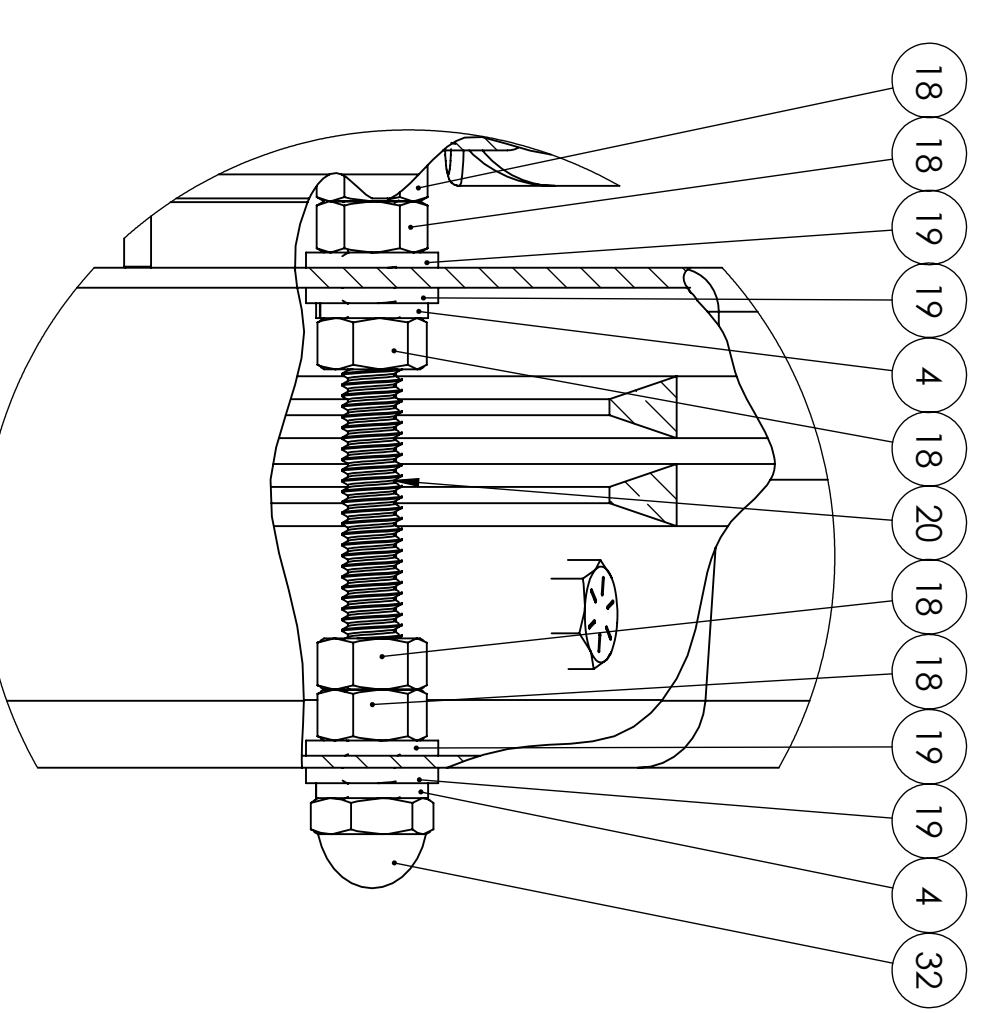
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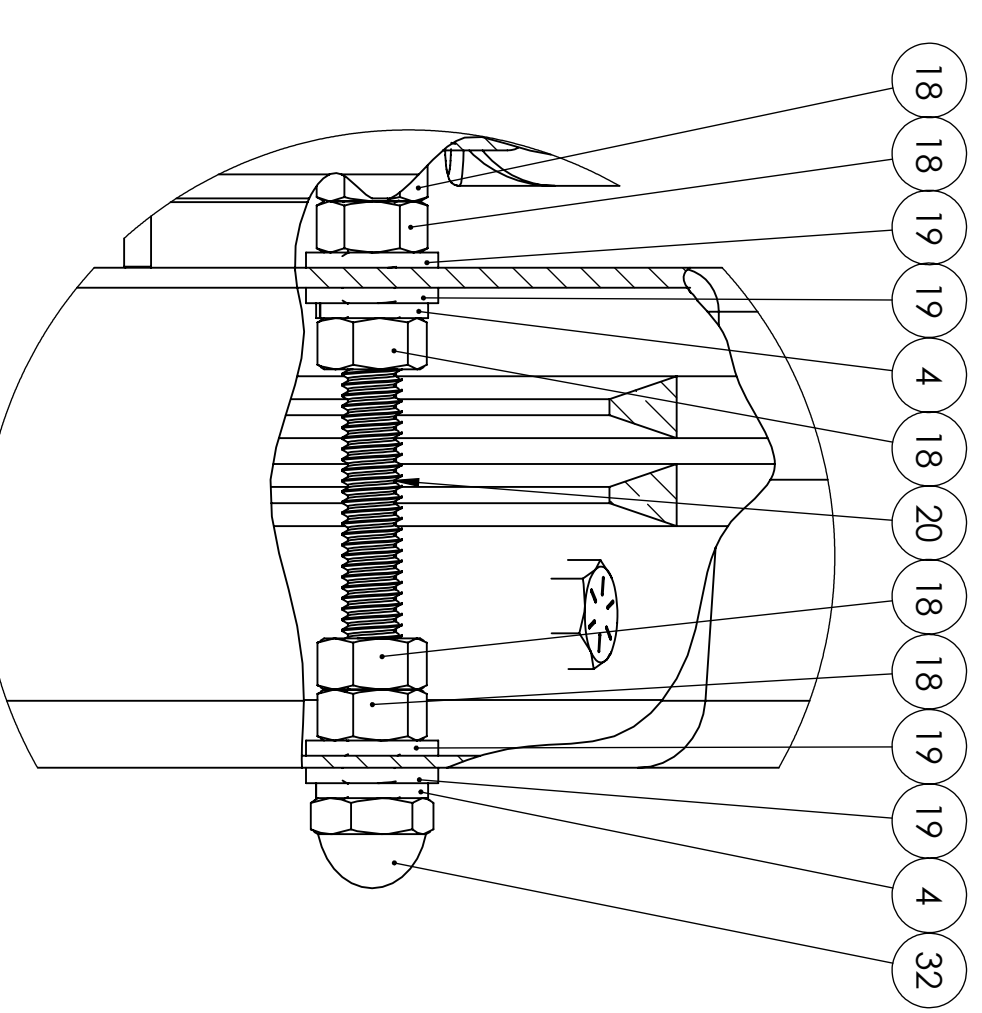
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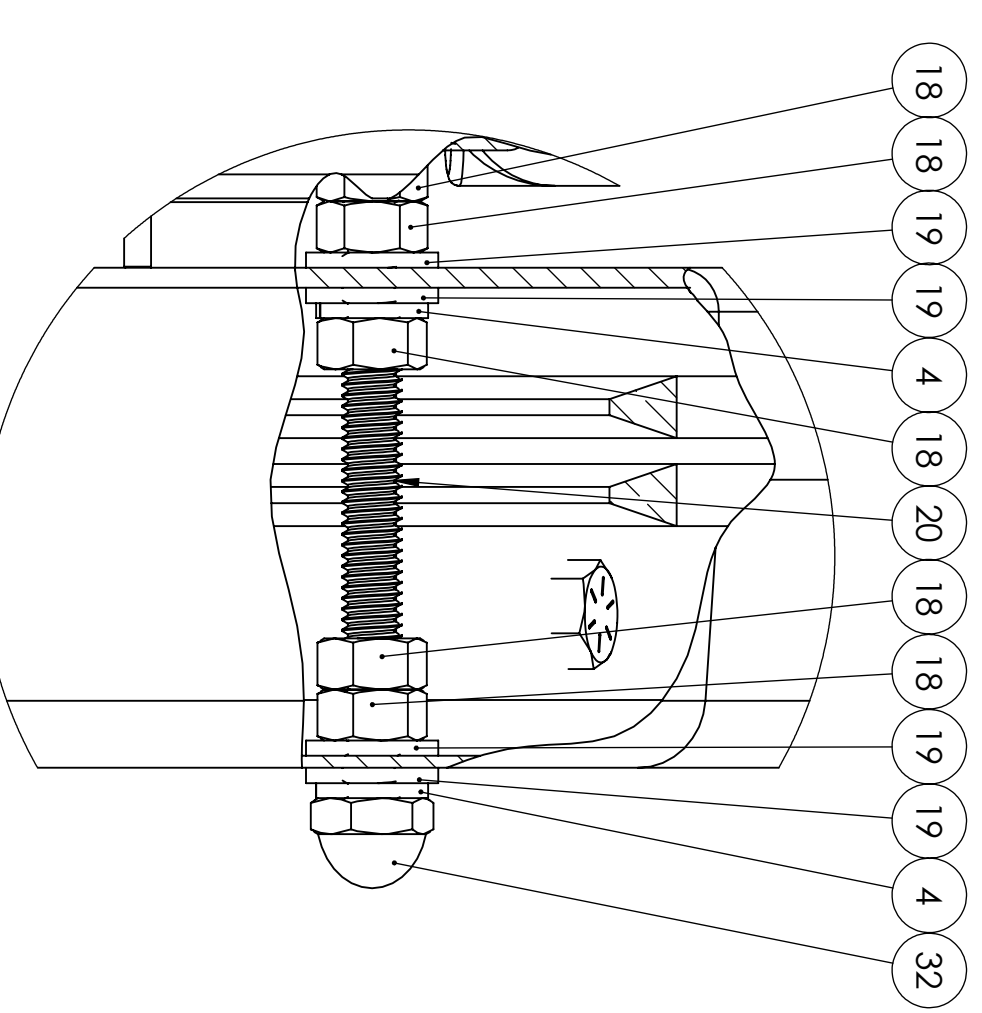
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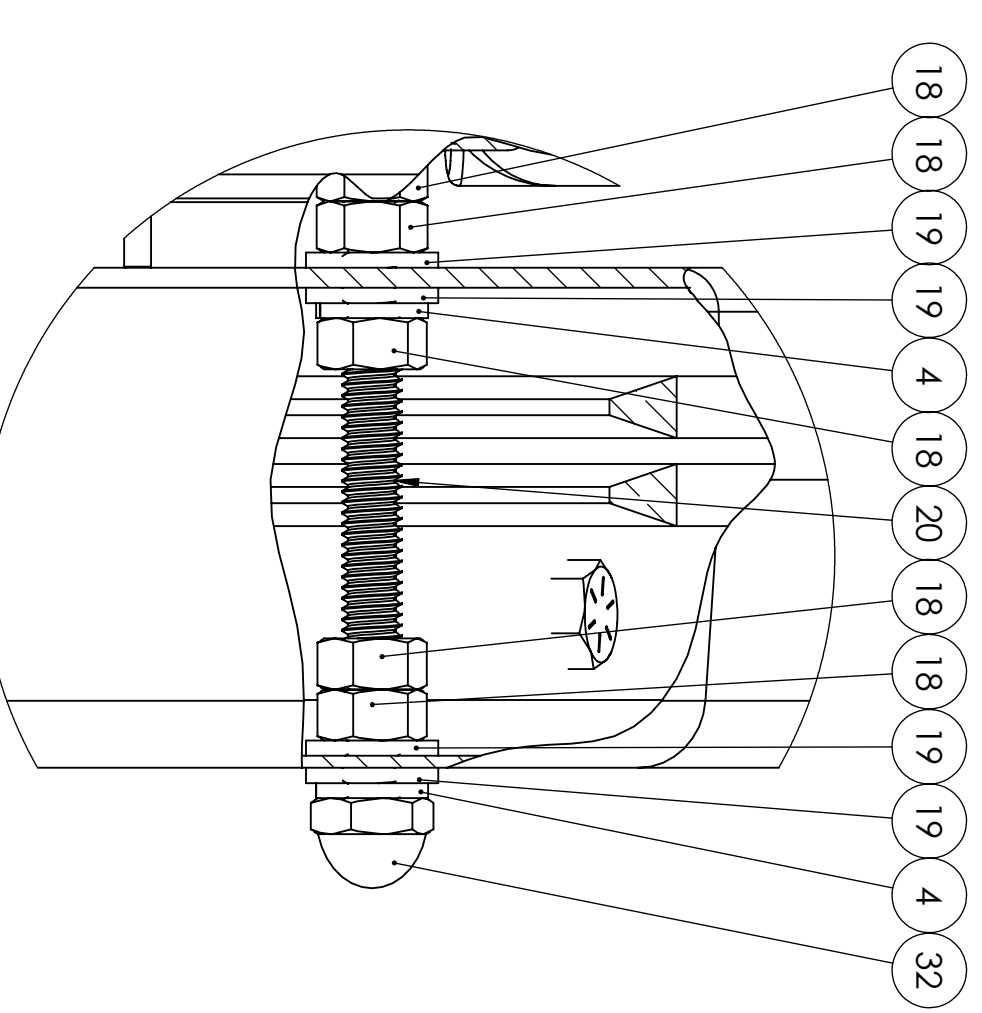
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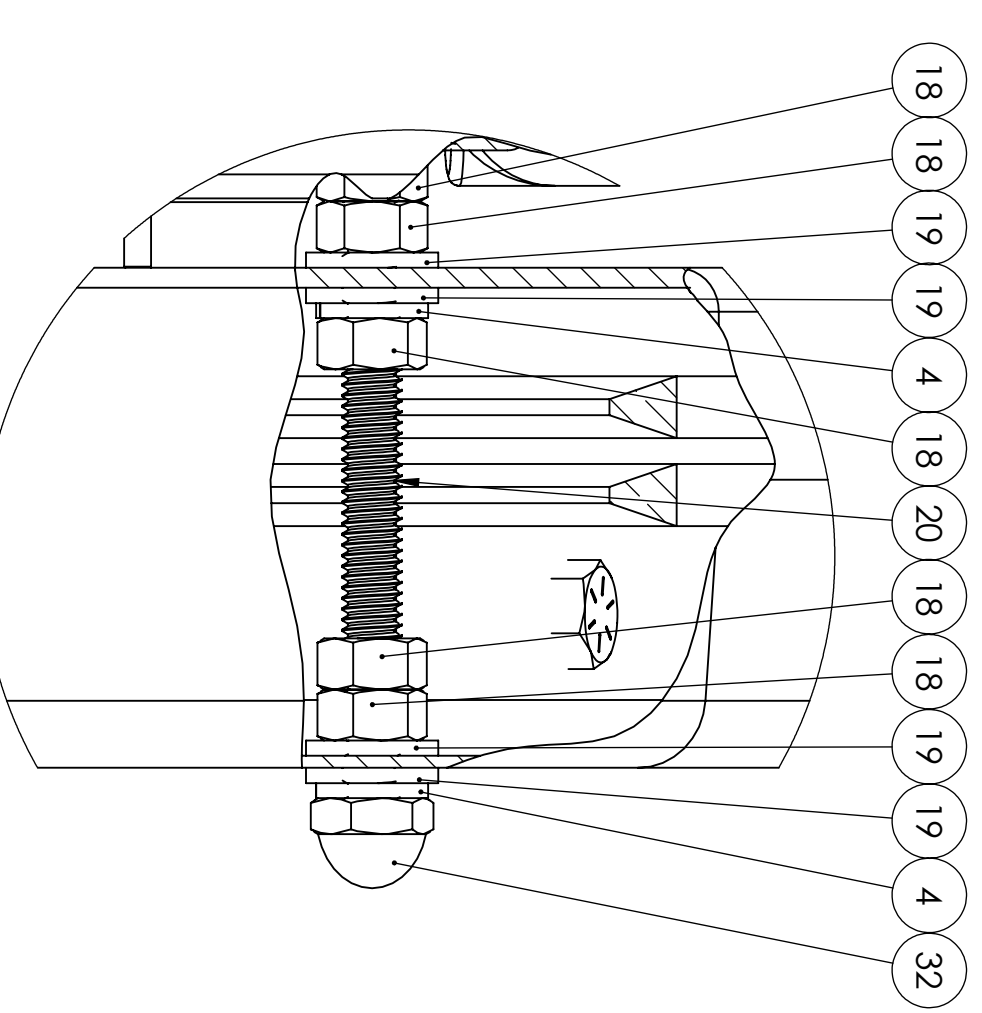
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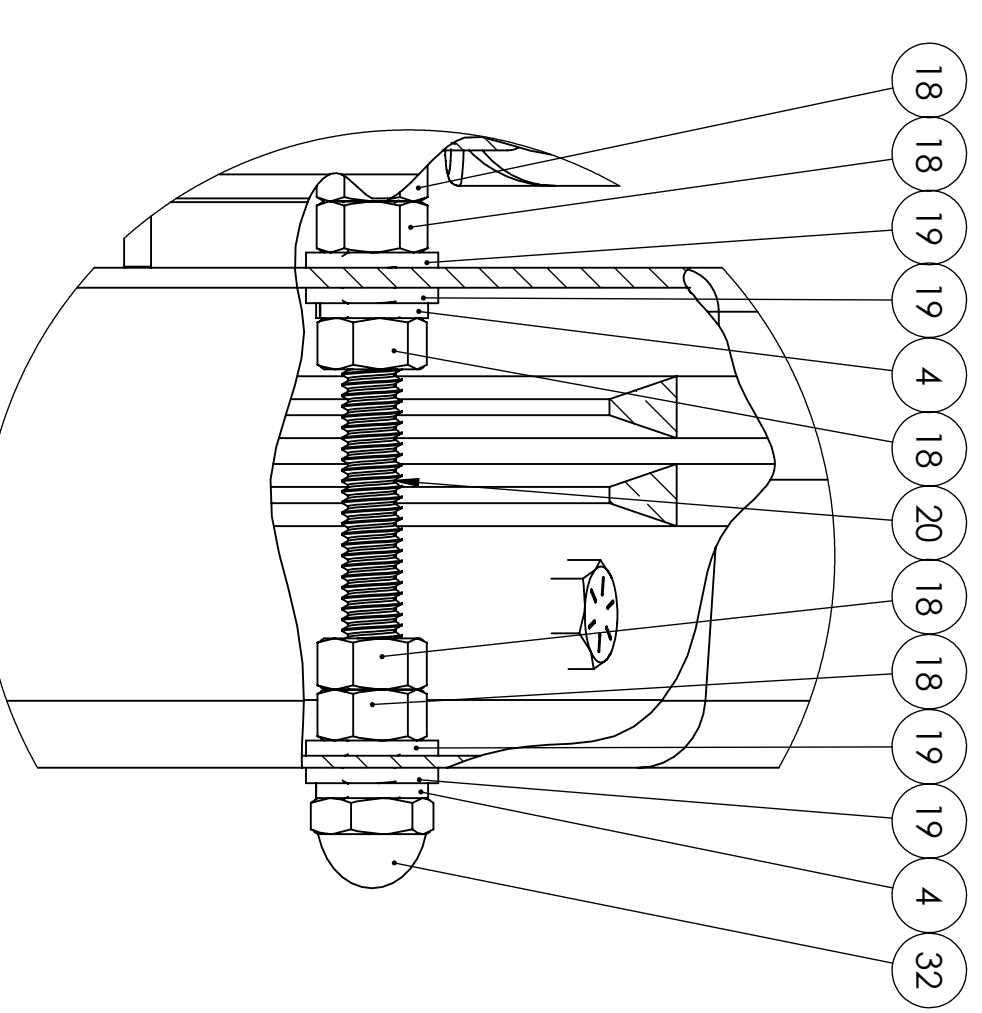
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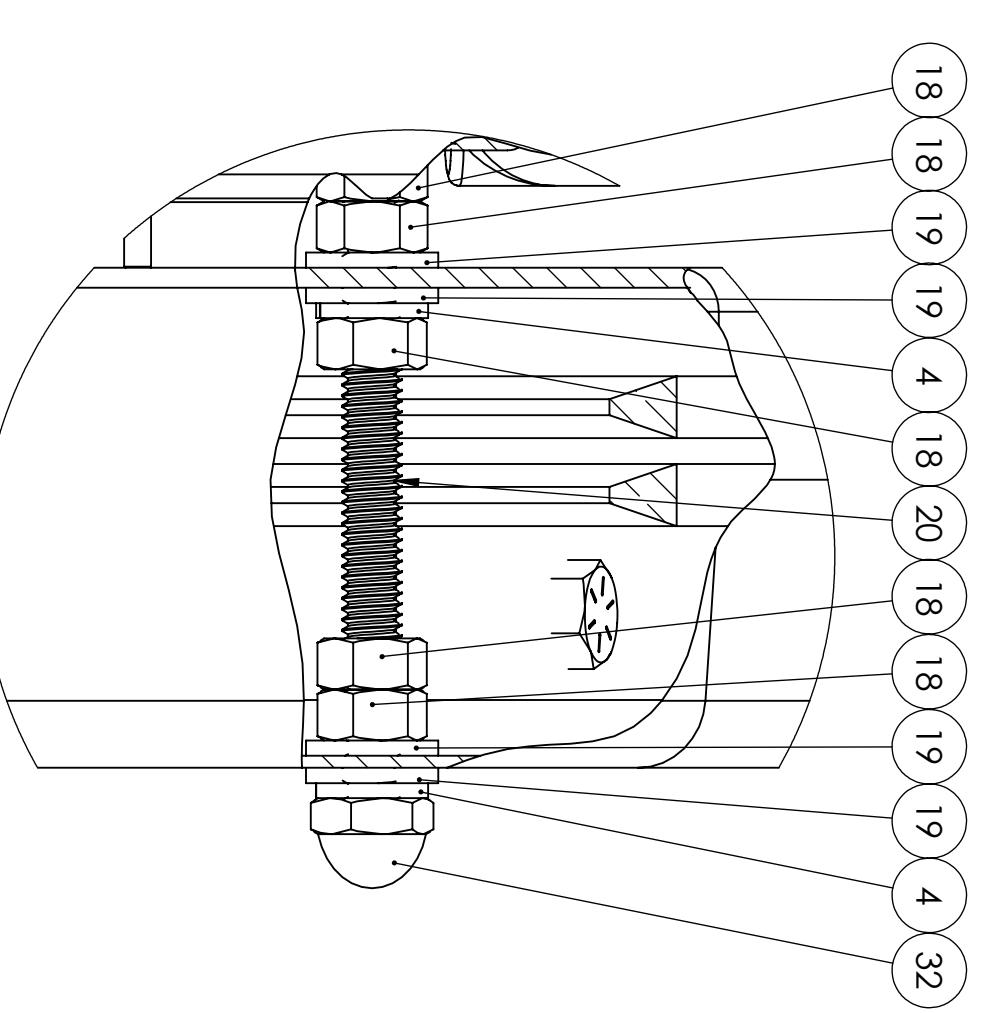
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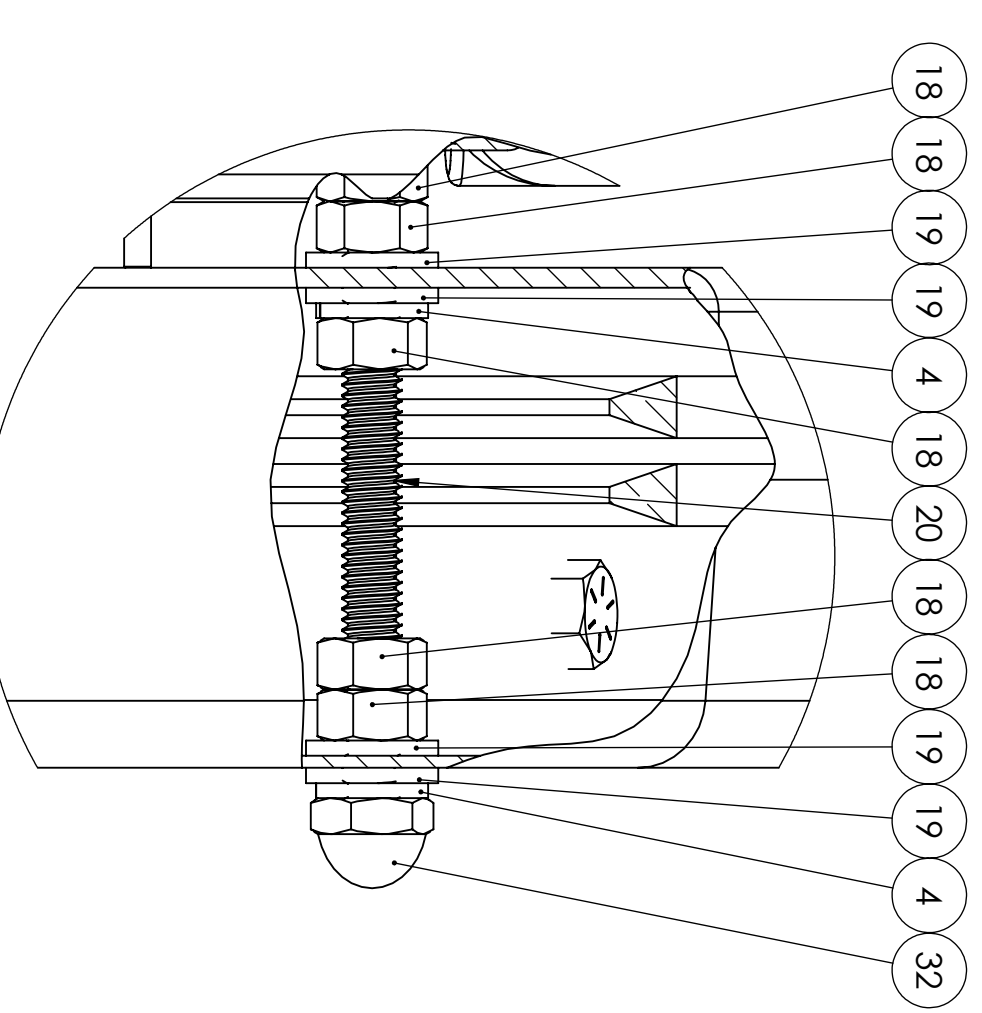
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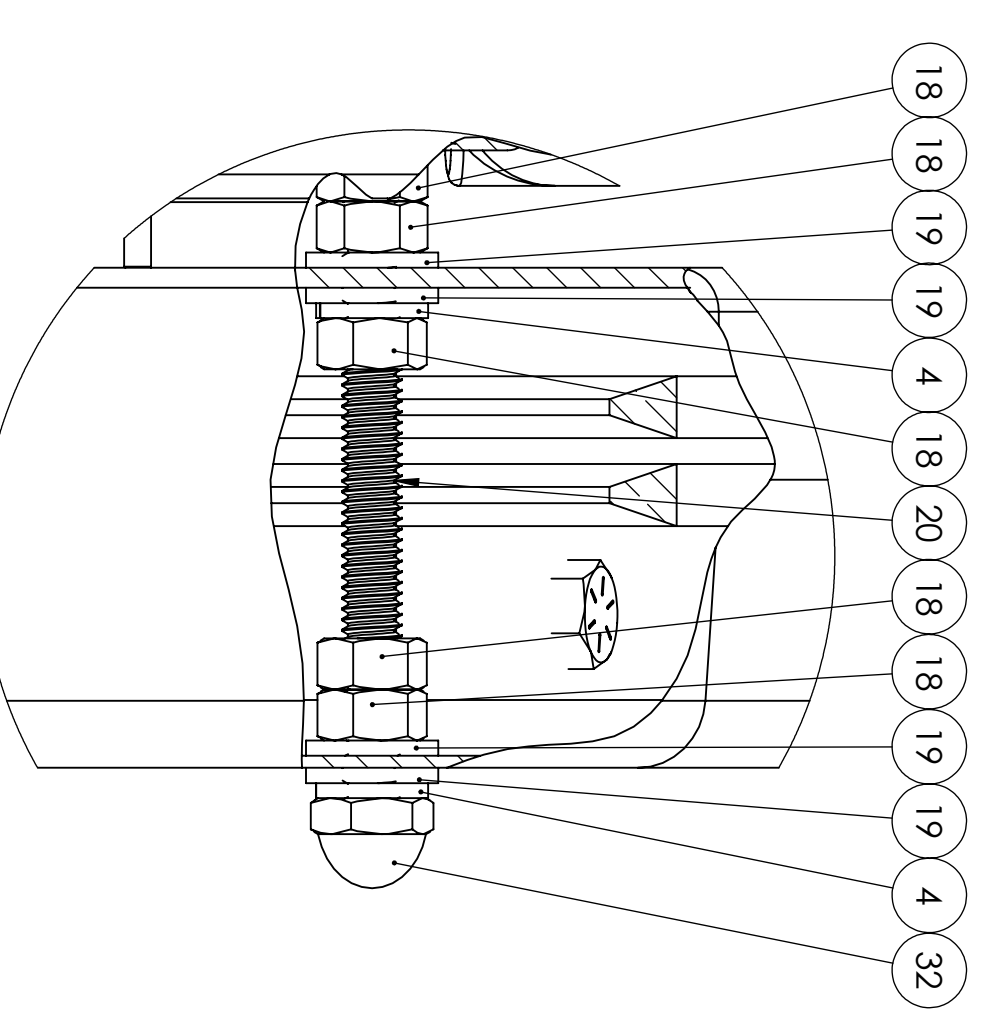
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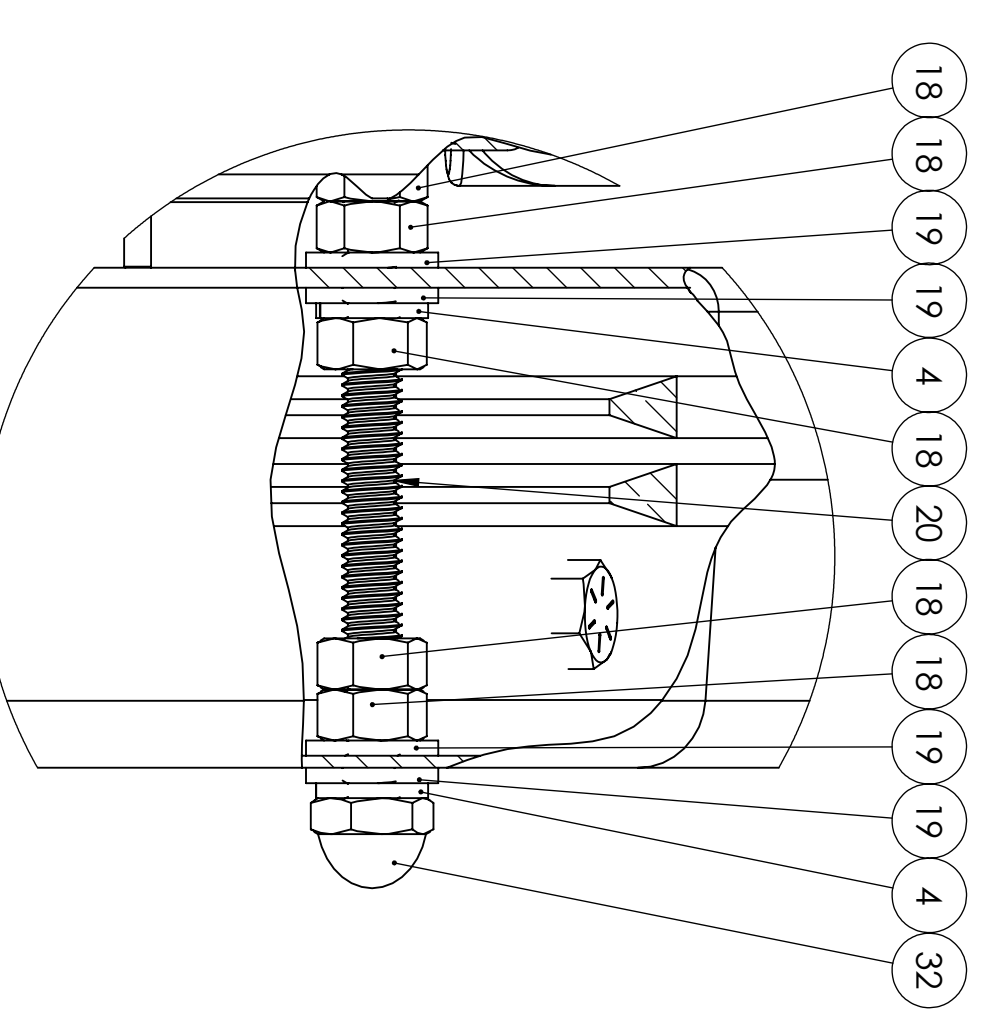
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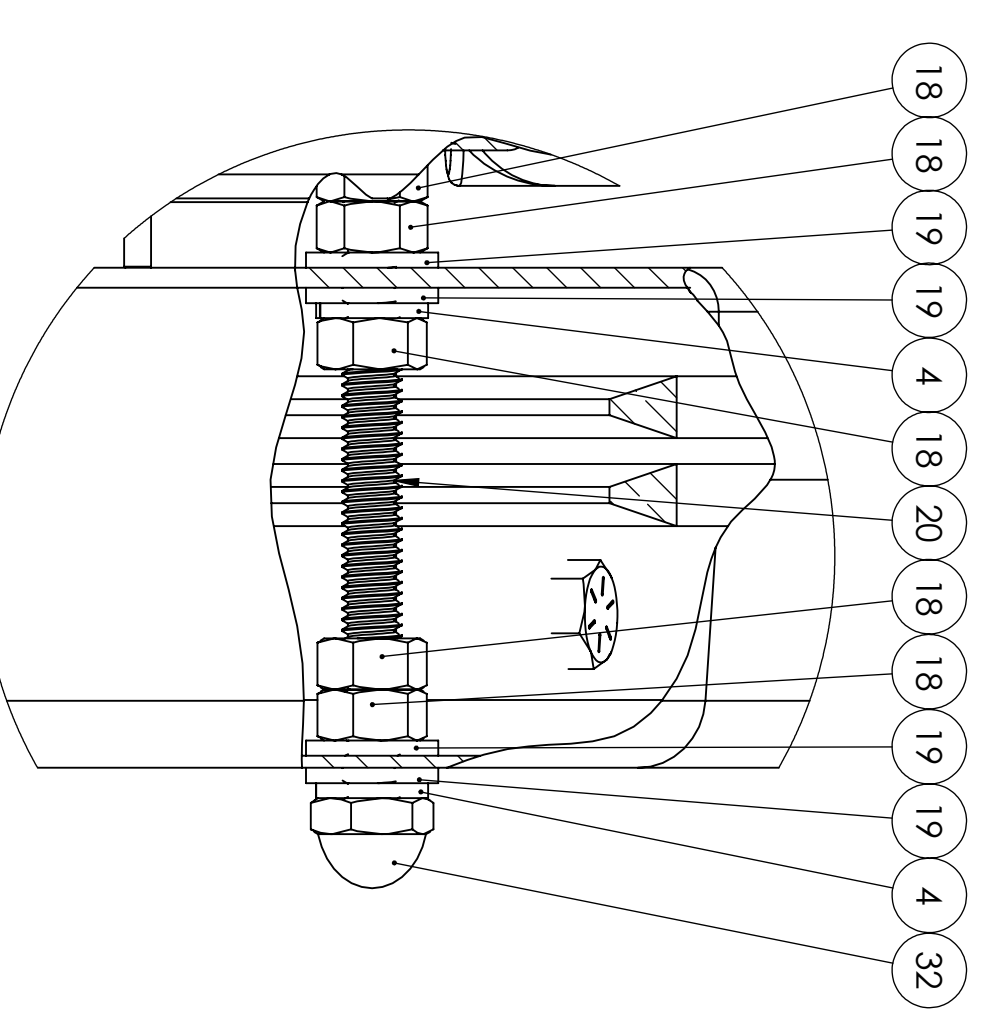
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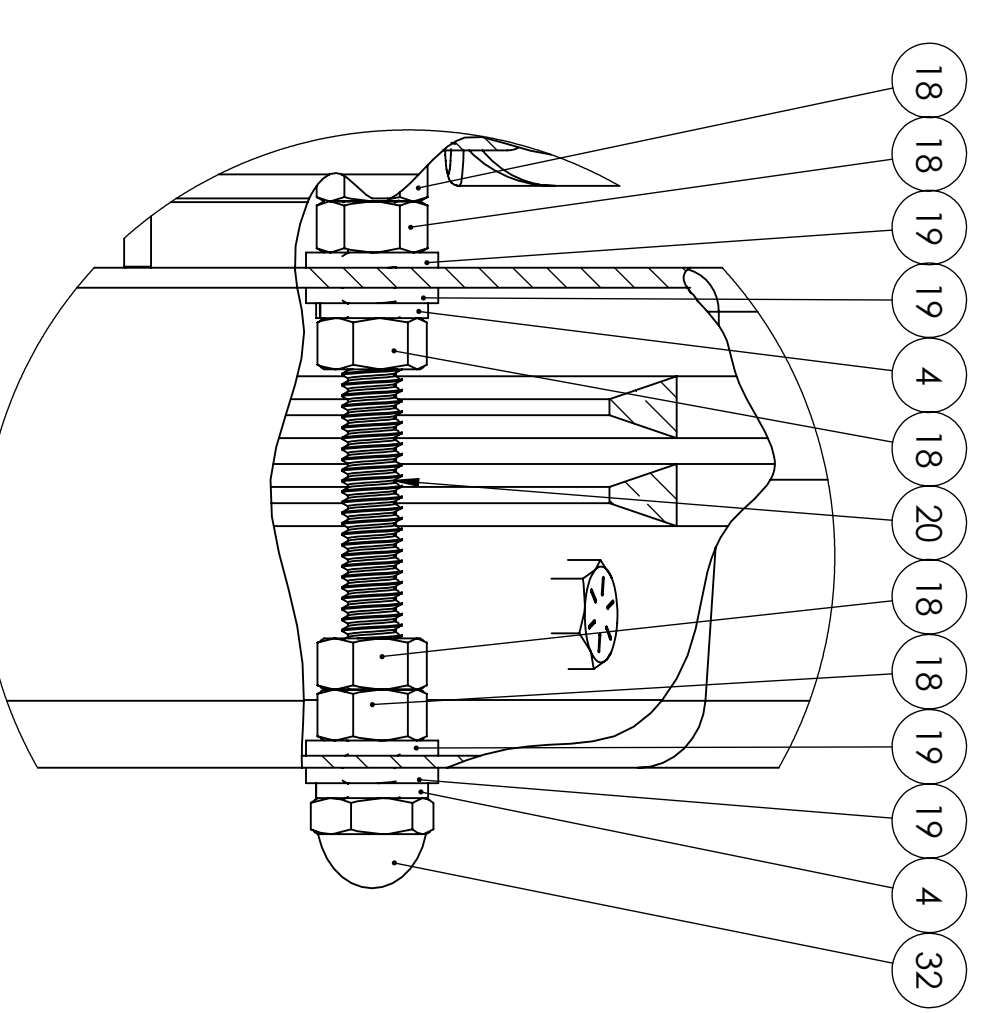
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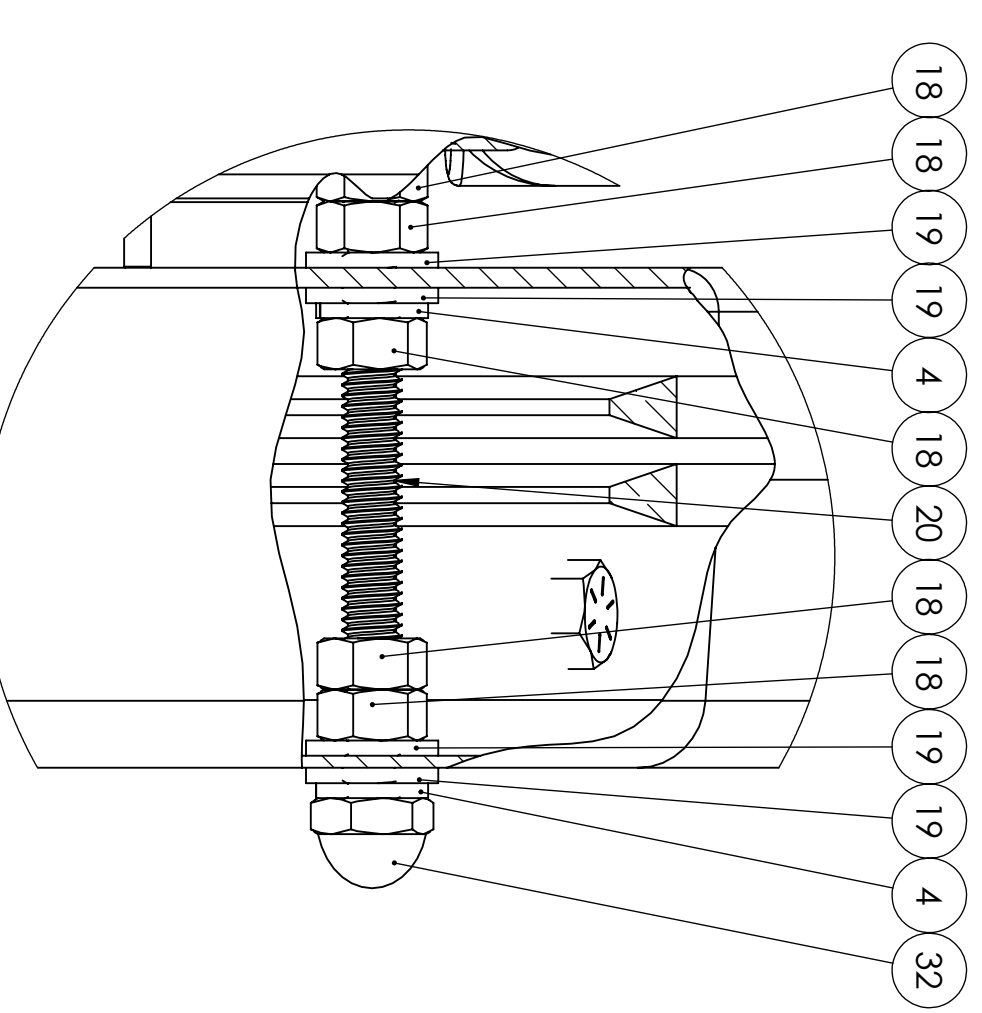
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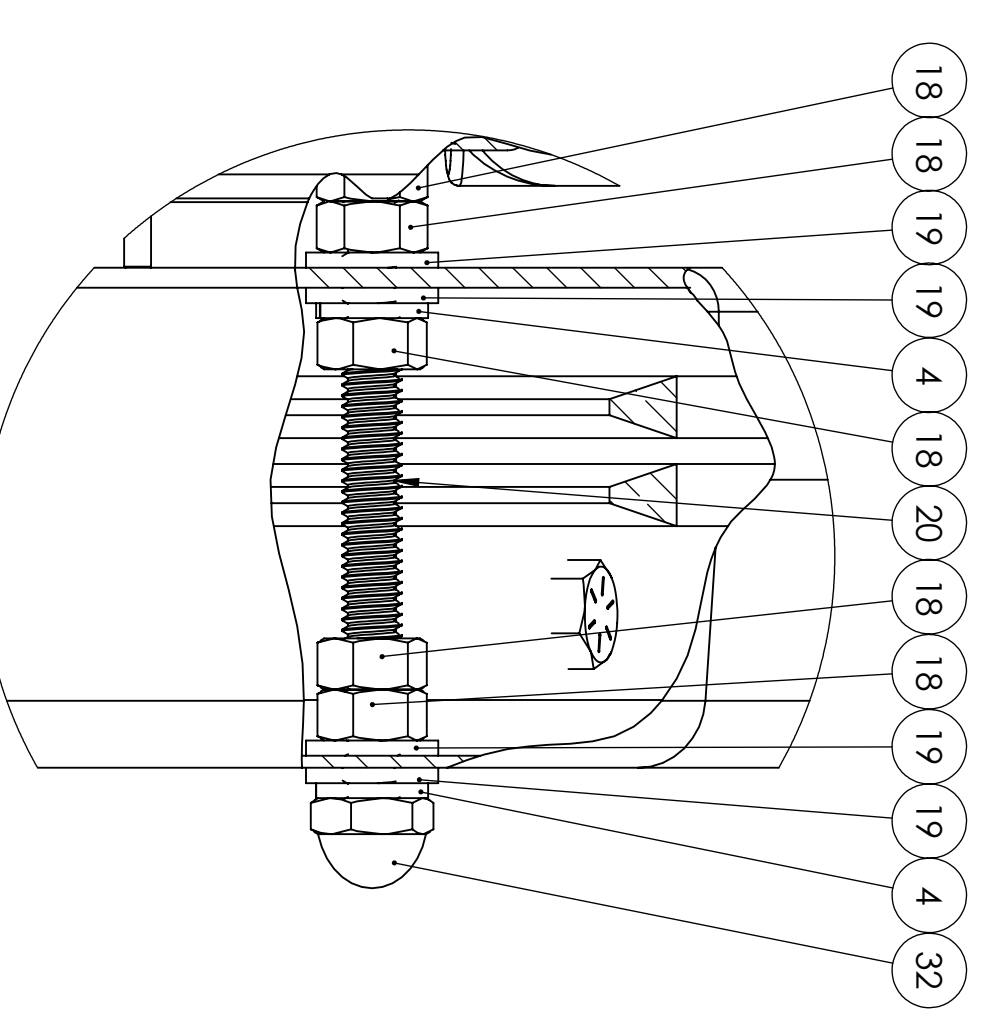
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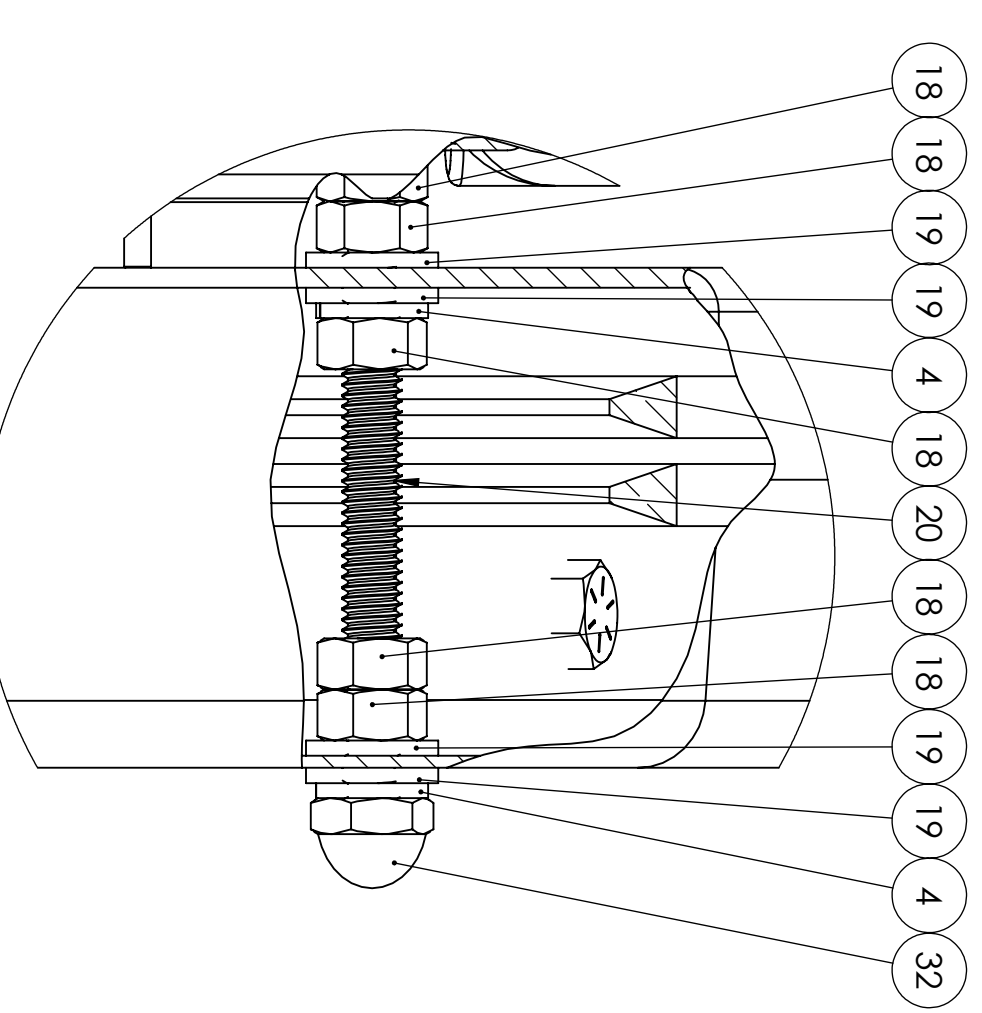
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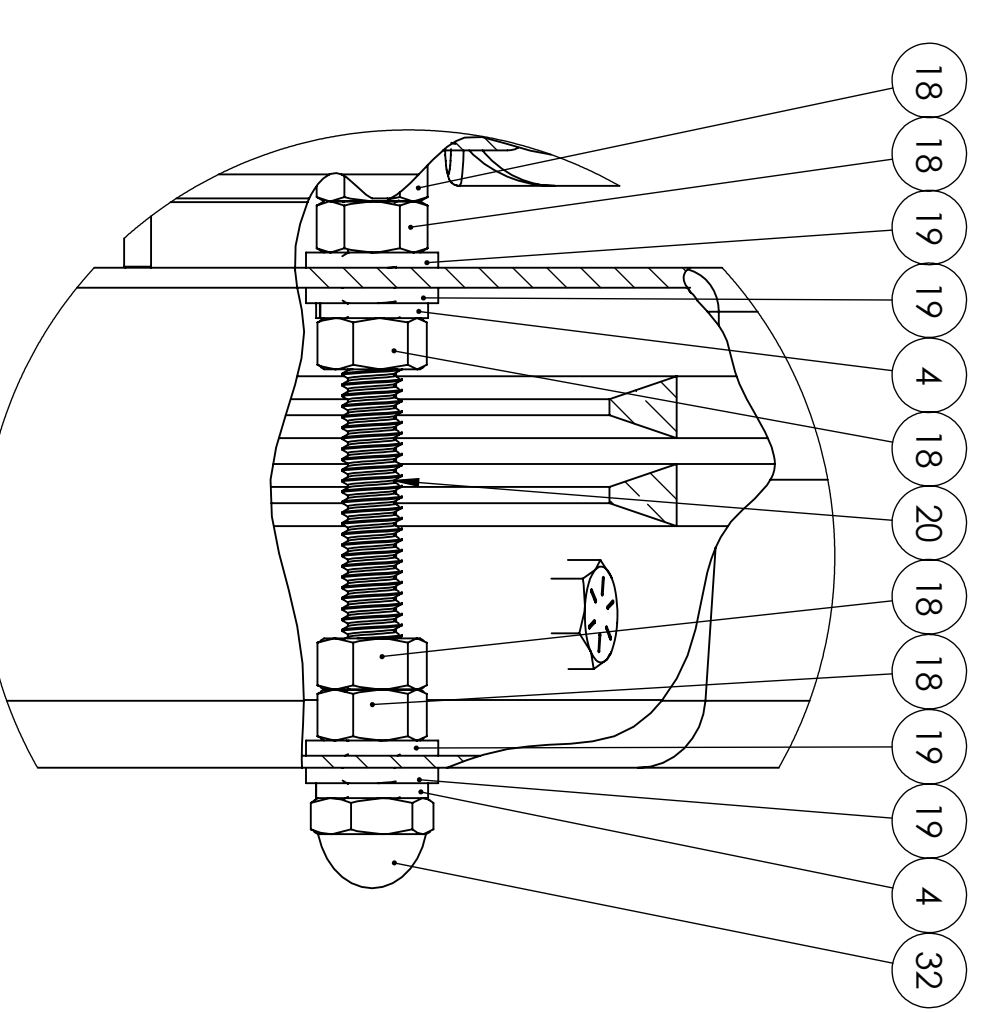
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SWITCH BRACKET DETAILS
SCALE 1 : 2



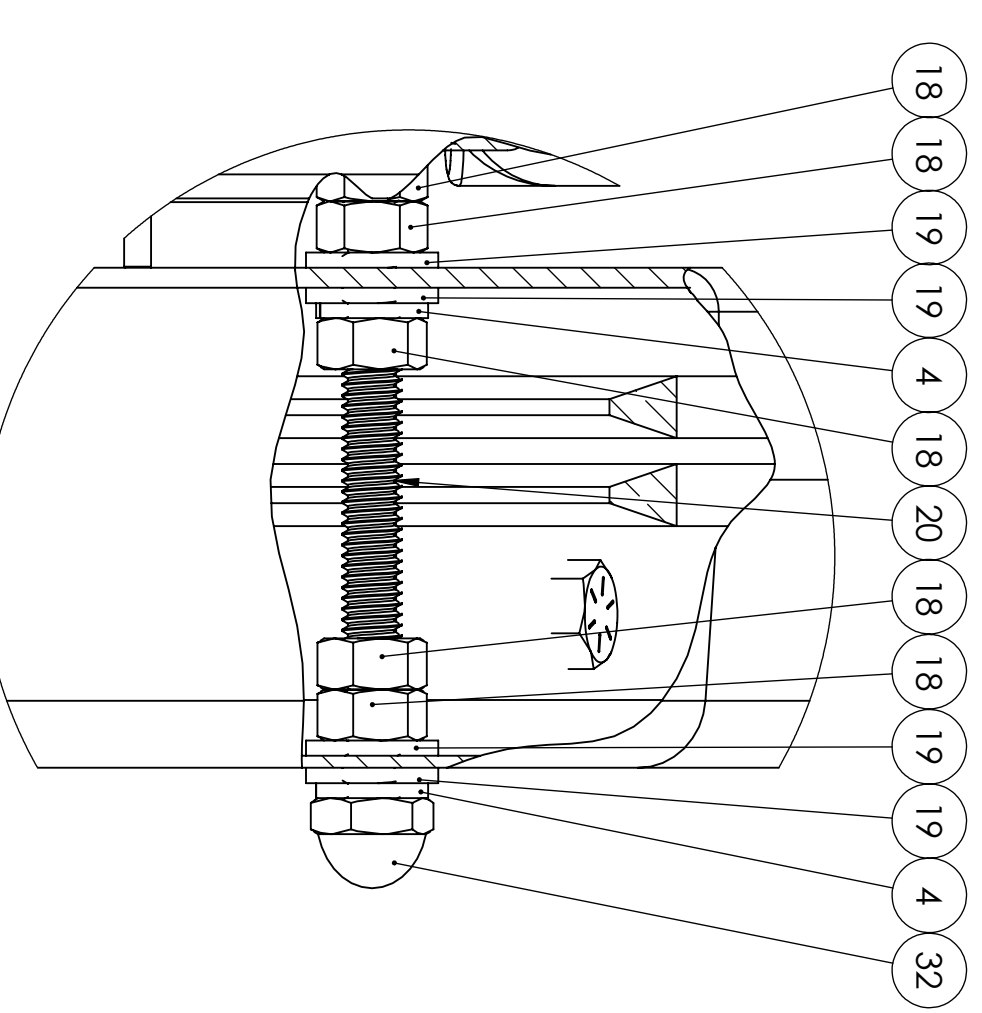
SECTION A-A
INTERNAL SPINDLE VIEW
SCALE 1 : 2



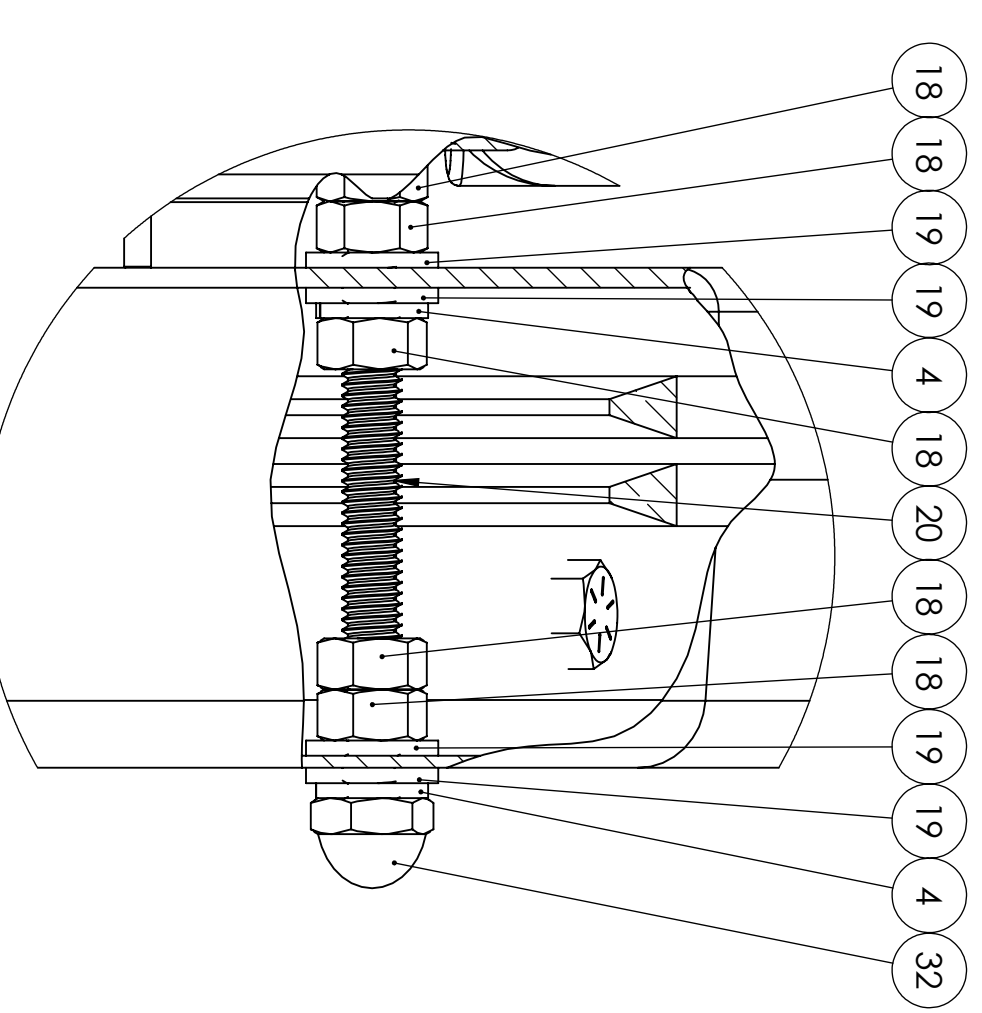
SECTION B-B
SWITCH BRACKET DETAILS
SCALE 1 : 2



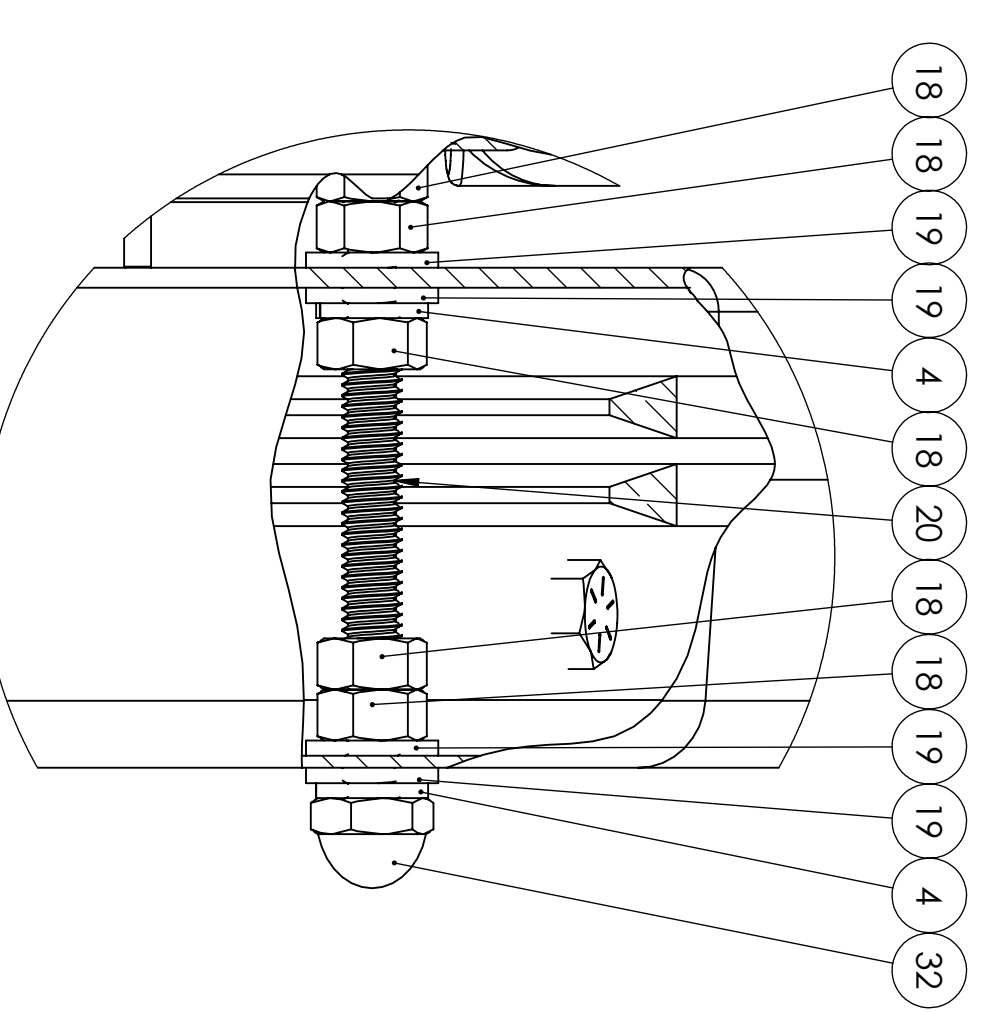
SECTION A-A
INTERNAL SPINDLE VIEW
SCALE 1 : 2



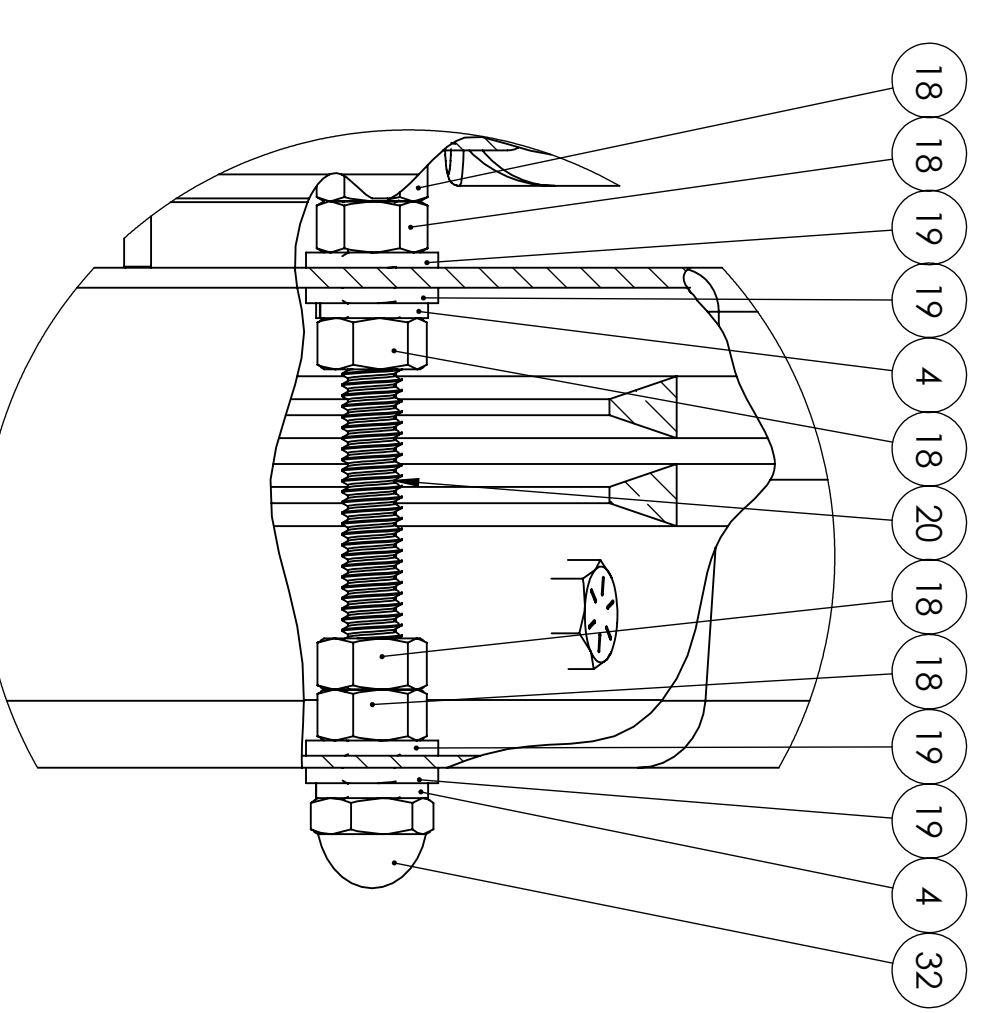
SECTION B-B
SWITCH BRACKET DETAILS
SCALE 1 : 2



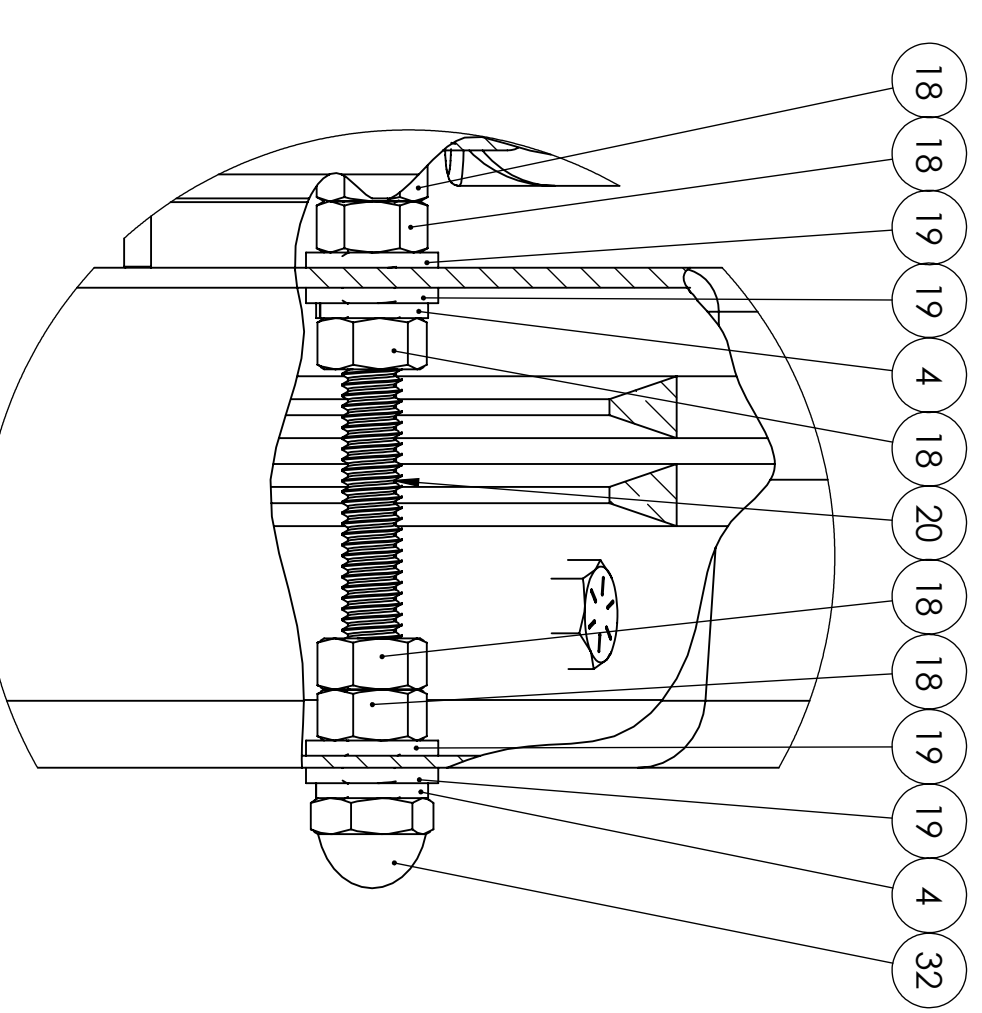
SECTION A-A
INTERNAL SPINDLE VIEW
SCALE 1 : 2



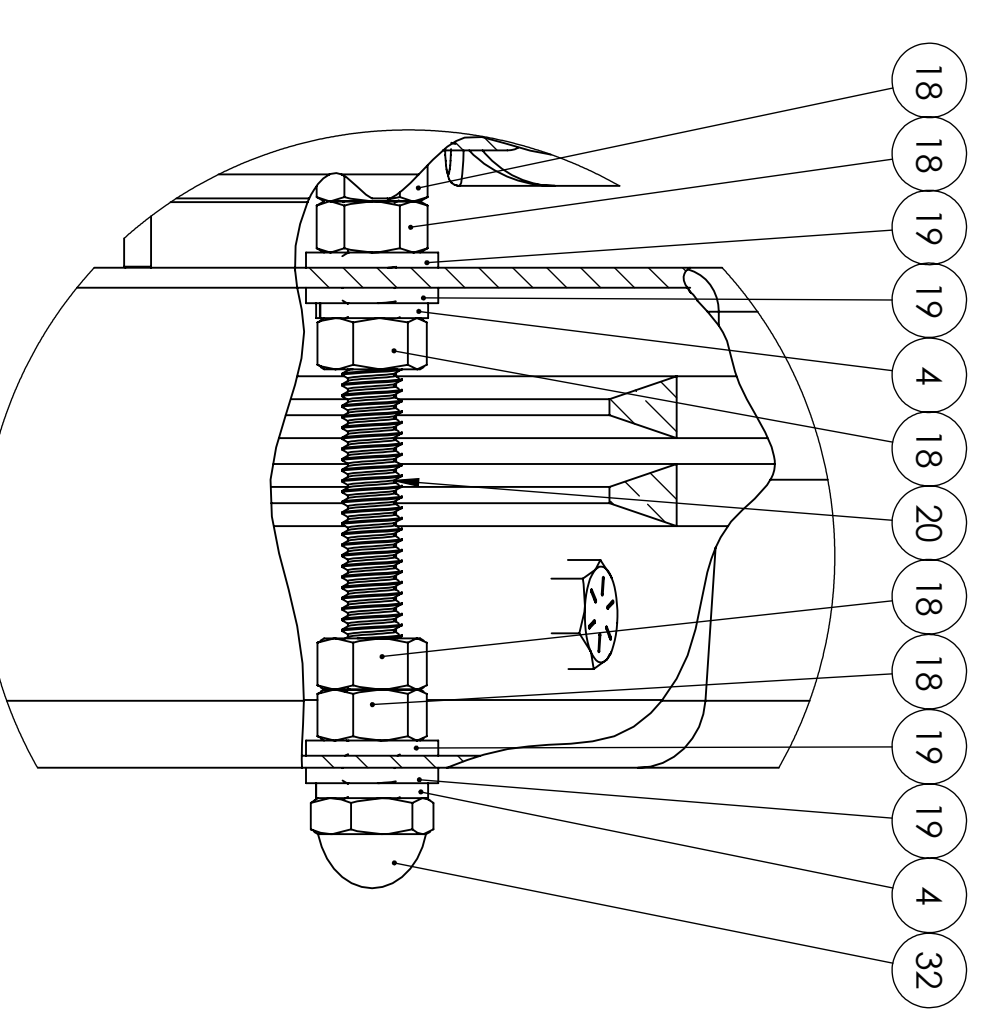
SECTION B-B
SWITCH BRACKET DETAILS
SCALE 1 : 2



SECTION A-A
INTERNAL SPINDLE VIEW
SCALE 1 : 2



SECTION B-B
SWITCH BRACKET DETAILS
SCALE 1 : 2



SECTION A-A
INTERNAL SPINDLE VIEW
SCALE 1 : 2