

CUSTOM[®] CRIMP



The SM 300 Hose Skiver can be either bench mounted or mounted on its own SM300 Mobile Cart.



**SM 300 / SM 300M
HOSE SKIVING TOOL MANUAL**



SAFETY PRECAUTIONS



READ INSTRUCTIONS AND IDENTIFY ALL COMPONENT PARTS BEFORE USING THE SM300 HOSE SKIVER.

KEEP HANDS AND LOOSE CLOTHING AWAY FROM CUTTING INSERTS.

SAFETY GUARD SHOULD ALWAYS BE USED WHEN SKIVING A HOSE.

SAFETY GUARD SHOULD NEVER BE REMOVED.

CONSULT HOSE AND FITTING MANUFACTURER’S SPECIFICATIONS FOR CORRECT SKIVE MEASUREMENTS.

ALWAYS WEAR EYE PROTECTION AND APPROPRIATE PROTECTIVE GEAR.

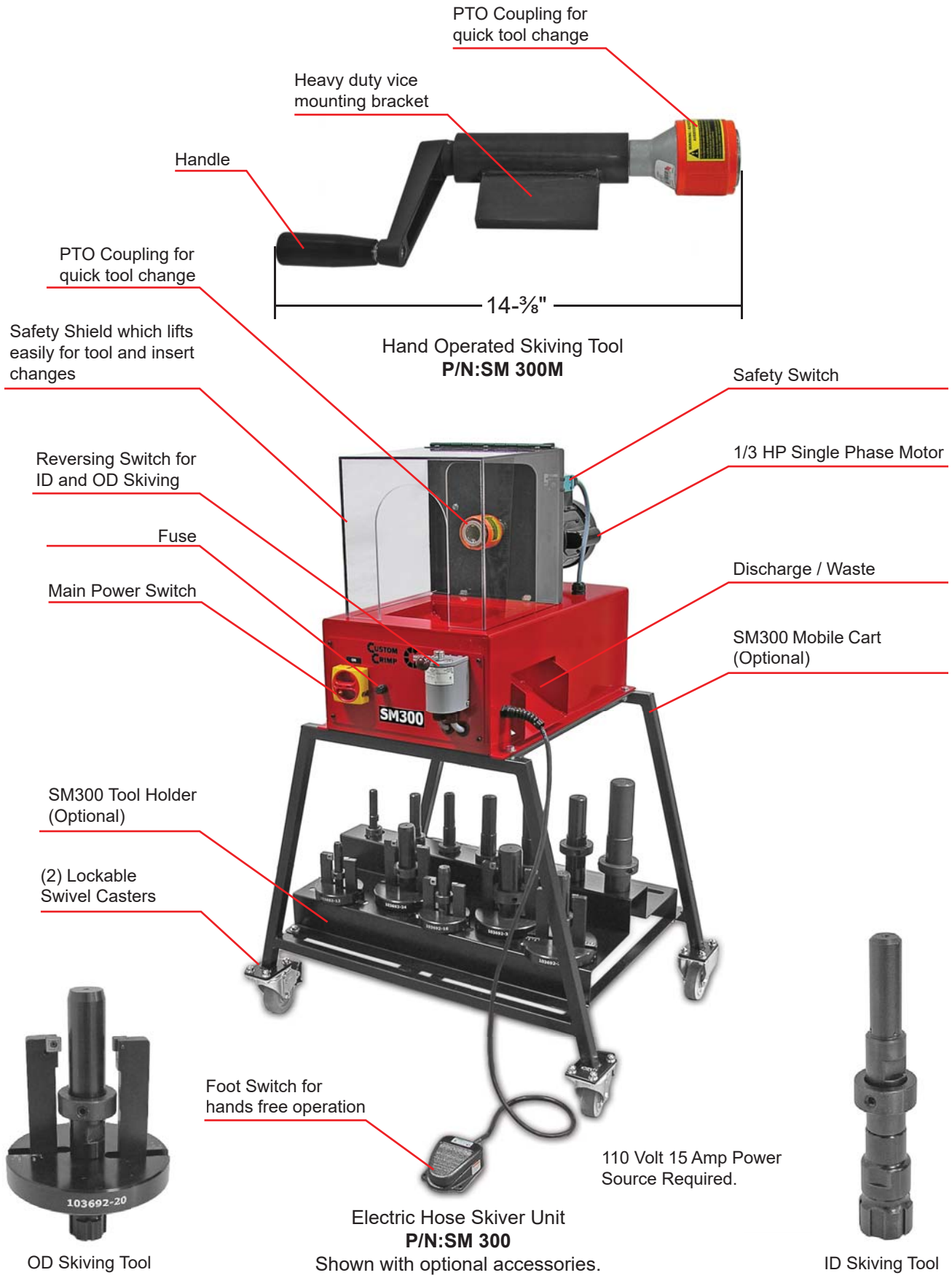
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NOTE

The instructions for working with OD Tooling and ID Tooling can be used when using the SM 300M (Hand Operated Skiving Tool).

SM 300M / SM 300 HOSE SKIVER COMPONENT PART IDENTIFICATION



AVAILABLE ACCESSORIES

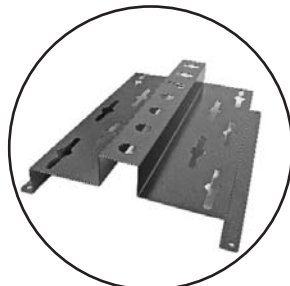


Hose Size	OD Skiving Tool Assembly P/N:
04	103692-04
06	103692-06
08	103692-08
10	103692-10
12	103692-12
16	103692-16
20	103692-20
24	103692-24
32	103692-32
40	103692-40
48	103692-48

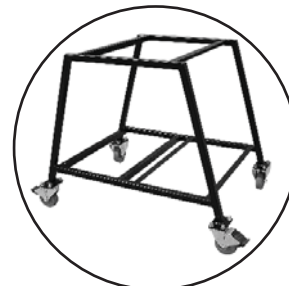
Hose Size	ID Skiving Tool Assembly P/N:
04	104028-04
06	104028-06
08	104028-08
10	104028-10
12	104028-12
16	104028-16
20	104028-20
24	104028-24
32	104028-32
40	104028-40
48	104028-48



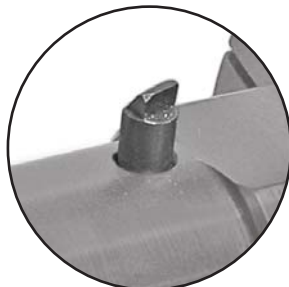
Hand Operated Hose Skiver Tool
P/N:SM 300M



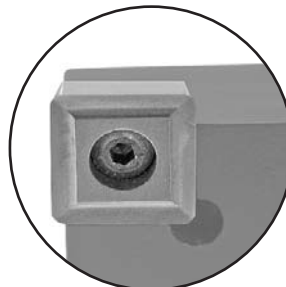
SM300 Tool Holder
P/N:104247



SM300 Mobile Cart
P/N:101956



ID Skiving Steel Blade
P/N:104141



OD Carbide Skiving Insert P/N:103993
OD Skiving Insert Screw
P/N:103994

SM 300M / SM 300 HOSE SKIVER SPECIFICATIONS

SM 300M SPECIFICATIONS:

HOSE CAPACITY -----1/2 INCH TO 3 INCH ID AND OD (-04 THRU -48)

SKIVER SIZE -----14-3/8" LONG

WEIGHT -----10 LBS

SM 300 SPECIFICATIONS:

POWER REQUIREMENTS-----110 V 15 AMP 60 HZ SERVICE

HOSE CAPACITY -----1/2 INCH TO 3 INCH ID AND OD (-04 THRU -48)

SKIVER SIZE W/O OPTIONAL MOBILE CART -----L:29" X W:25" X H:21"

SKIVER SIZE W/ OPTIONAL MOBILE CART -----L:30" X W:29" X H:49"

WEIGHT -----150 LBS W/O OPTIONAL CART

-----175 LBS W/ OPTIONAL CART

GEAR MOTOR SPECIFICATIONS -----1/3 HP, 59 RPM, 330 IN LB TORQUE

SM 300 INITIAL SETUP

If you received the bench top model, make certain that it is securely bolted to the bench top and/or stand as considerable torque is generated when skiving some of the larger hoses.

If you using the SM300 Mobile Cart make certain that the wheel lock's are securely locked in place while you are skiving.

SM300 Tool Holder shown below, is available separately to keep skiving tools organized and readily available. It can be mounted below the skiver on the SM300 Mobile Cart as shown or bench mounted in a location of your choice.



SM 300 HOSE SKIVER OD TOOLING FEATURES

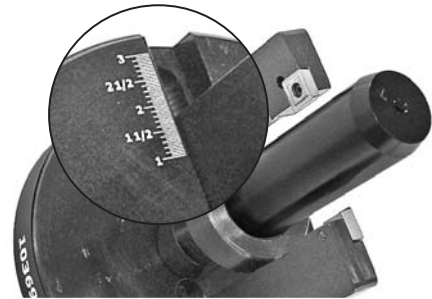
The SM 300 Hose Skiver has the capacity and available tooling to skive 2, 4, and 6 wire hoses from 1/2 inch thru 3 inches.

OD tools use readily available carbide cutting inserts. Carbide inserts not only wear longer than conventional steel cutting tools, but they never need sharpening. If an insert becomes dull, simply rotate it to another cutting surface or install a new insert.

Note: No readjustment of the cutting tool is required.

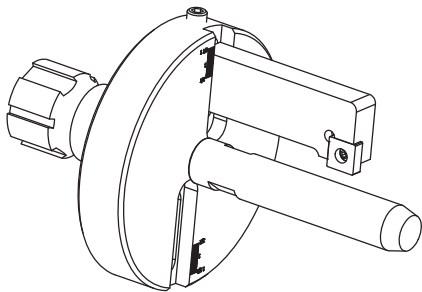
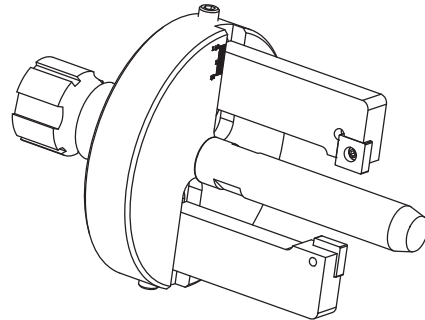
The OD Skiving Tool is designed with two cutting arms. Both can be adjusted to skive a single hose, but the real advantage of the two arms is that one arm can be adjusted to skive different wire hose. For example: To switch from 2 wire skiving to 4 wire skiving, simply remove the insert from the arm adjusted for 2 wire. The set up options are shown in the panel below.

Tip: While the guide lines etched on the face of the OD Skiving Tool will be very close to the correct setting, fine adjustment can be made by leaving the hex bolt on the back face of the tool slightly loose and adjusting the set screw on the edge of the tool before finally tightening the hex bolt on the back face of the tool.



OPTION #1

Both Insert Arms can be set to the same diameter on the etched scale and both arms will work together.



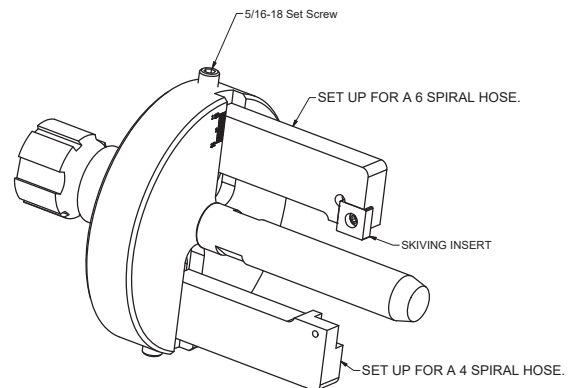
OPTION #2

Only one Insert Arm may be installed and dialed to the correct diameter on the etched scale.

OPTION #3

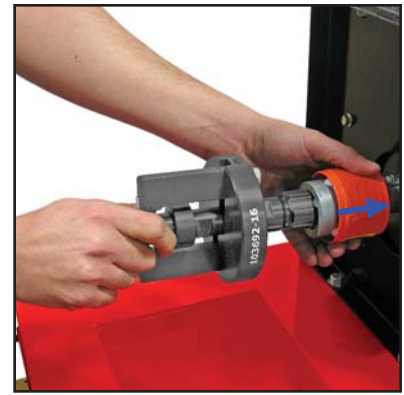
One Insert Arm can be dialed to skive a 4 spiral hose and the other Insert Arm can be dialed to a 6 spiral hose of the same size.

If a 4 spiral hose is being skived, remove the 6 spiral Skiving Insert. If a 6 spiral hose is being skived, remove the 4 spiral Skiving Insert.



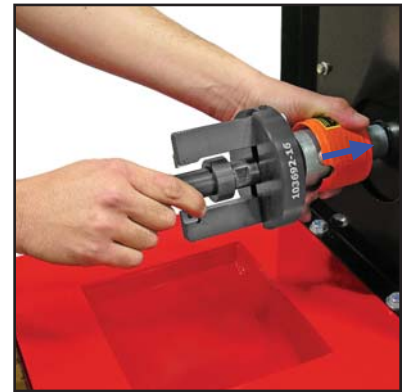
HOW TO LOAD THE OD TOOLING

1. Lift the safety guard out of the way.
2. Select the proper OD tool and verify that adjustment arms are set to proper depth.
3. Push the PTO quick coupling (as shown) back, align grooves on OD tool and insert until PTO snaps into place.
4. Put safety guard back into position.



HOW TO REMOVE THE OD TOOLING

1. Lift the safety guard out of the way.
2. Slide the PTO quick coupling back to release it.
3. Place the OD tool back into holder.



HOW TO ADJUST THE OD TOOLING SKIVE LENGTH

1. Verify the skive depth in the hose and fitting manufacturer's literature.
2. Loosen the depth collar screw (as shown).



3. Lock the calipers to the desired OD skive length.
4. Place the calipers (as shown) to hit the front edge of skiving insert and the depth collar at the same time.
5. Tighten the depth collar screw.
6. Skive hose and verify that the depth matches the hose and fitting manufacturer's specifications.

Skive length



HOW TO ADJUST SKIVING DEPTHS ON OD TOOL

1. Place the hose on to mandrel and slide the hose up to the cutting inserts.
2. Loosen the 3/8-16 hex head bolt with a 9/16" wrench.
3. Slide the adjustment bars to a position just above hose wires (as shown).
4. Tighten the 3/8-16 hex head bolt with a 9/16" wrench.
5. Skive the OD of a hose to check how close to the wire you are.



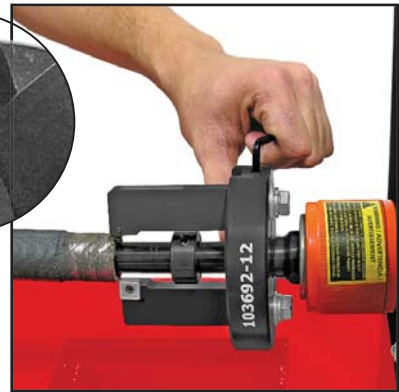
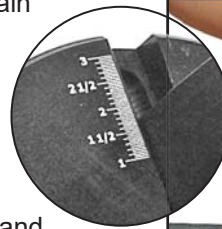
6. To make a small adjustment loosen the hex head bolt again and use the set screw (as shown) for minor adjustments.

Note: The scale can be used for reference.

Note: Moving the set screw in will remove more rubber.

Note: Moving the set screw out will remove less rubber.

7. Continue to make adjustment until skive meets the hose and fitting manufacturer's requirements.
8. Make sure that all set screws and hex head bolts are tight.

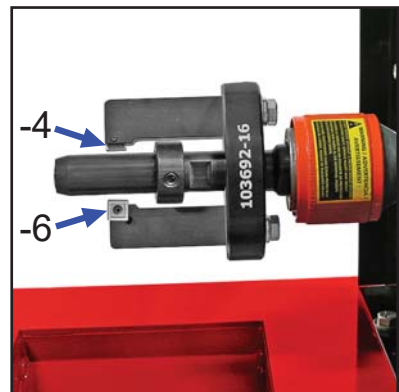


HOW TO SETUP MULTIPLE SKIVING DEPTH ON OD TOOL

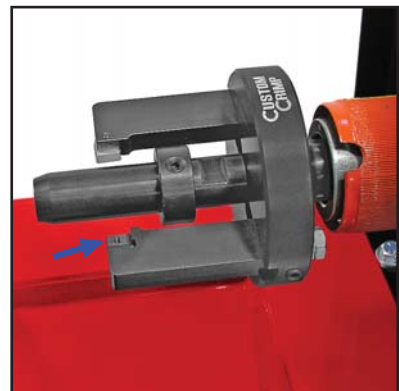
Note: This is if the same tool will be used to skive different wire hoses on the same size hose.

1. Follow the initial OD skiving tool setup to set up each adjustment arm.

For example: -4 wire hose, and the other adjustment arm for -6 wire hose (as shown).

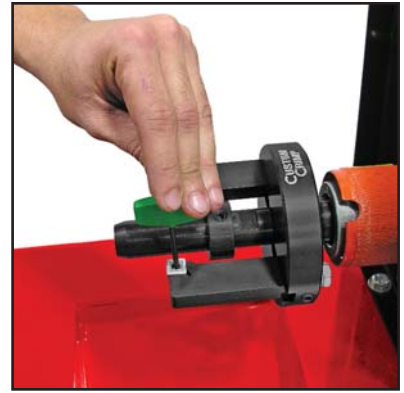


2. When skiving the larger wire hose remove the smaller wire cutting insert (as shown).
3. Place the smaller OD insert in when needed.

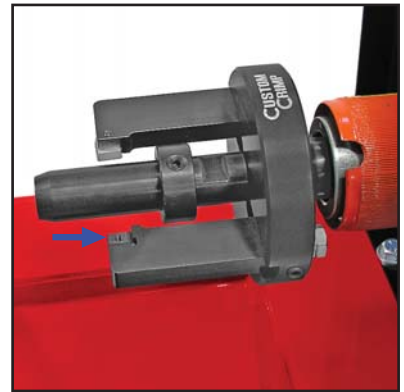


HOW TO CHANGE THE OD SKIVING INSERT

1. Use the insert removable tool that was provided to loosen the screw.



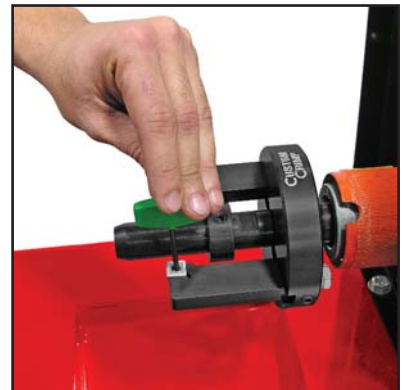
2. Remove the cutting insert.



3. Rotate the cutting insert 90° and lock screw into place.

Note: OD skiving inserts should be replaced when a chip or other damage occurs or as need.

- Each insert can be used 4 times (4 sides).



HOW TO LOAD THE ID TOOLING

1. Lift the safety guard out of the way.
2. Select the proper ID tool.
3. Push the PTO quick coupling (as shown) back, align grooves on ID tool and insert until PTO snaps into place.
4. Put safety guard back into position.



HOW TO REMOVE THE ID TOOLING

1. Lift the safety guard out of the way.
2. Slide the PTO quick coupling back to release it.
3. Place the ID tool back into holder.



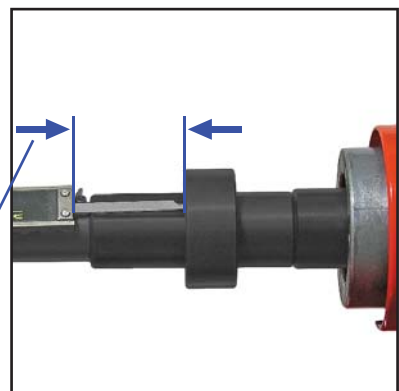
HOW TO ADJUST THE ID TOOLING SKIVE LENGTH

1. Verify the skive depth in the hose and fitting manufacturer's literature.
2. Loosen the depth collar screw (as shown in picture).



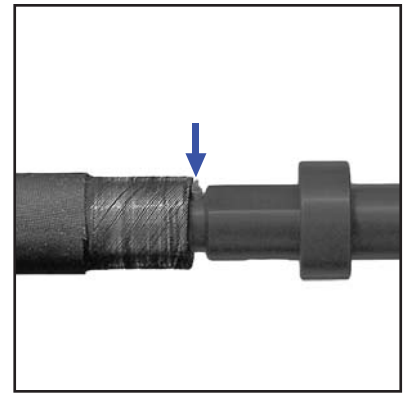
3. Lock the calipers to the desired ID skive length.
4. Place the calipers (as shown) to hit the front edge of skiving insert and the depth collar at the same time.
5. Tighten the depth collar screw.
6. Skive hose and verify that the depth matches the hose and fitting manufacturer's specifications.

Skive length

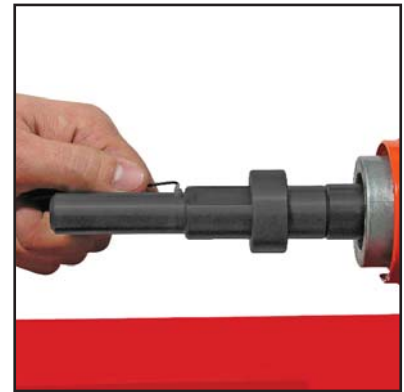


HOW TO ADJUST SKIVING DEPTHS ON ID TOOL

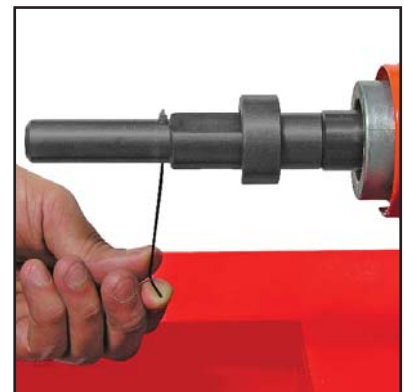
1. Place the hose on to mandrel and slide the hose up to the cutting insert.



2. Loosen the set screw that locks insert into place (as shown).

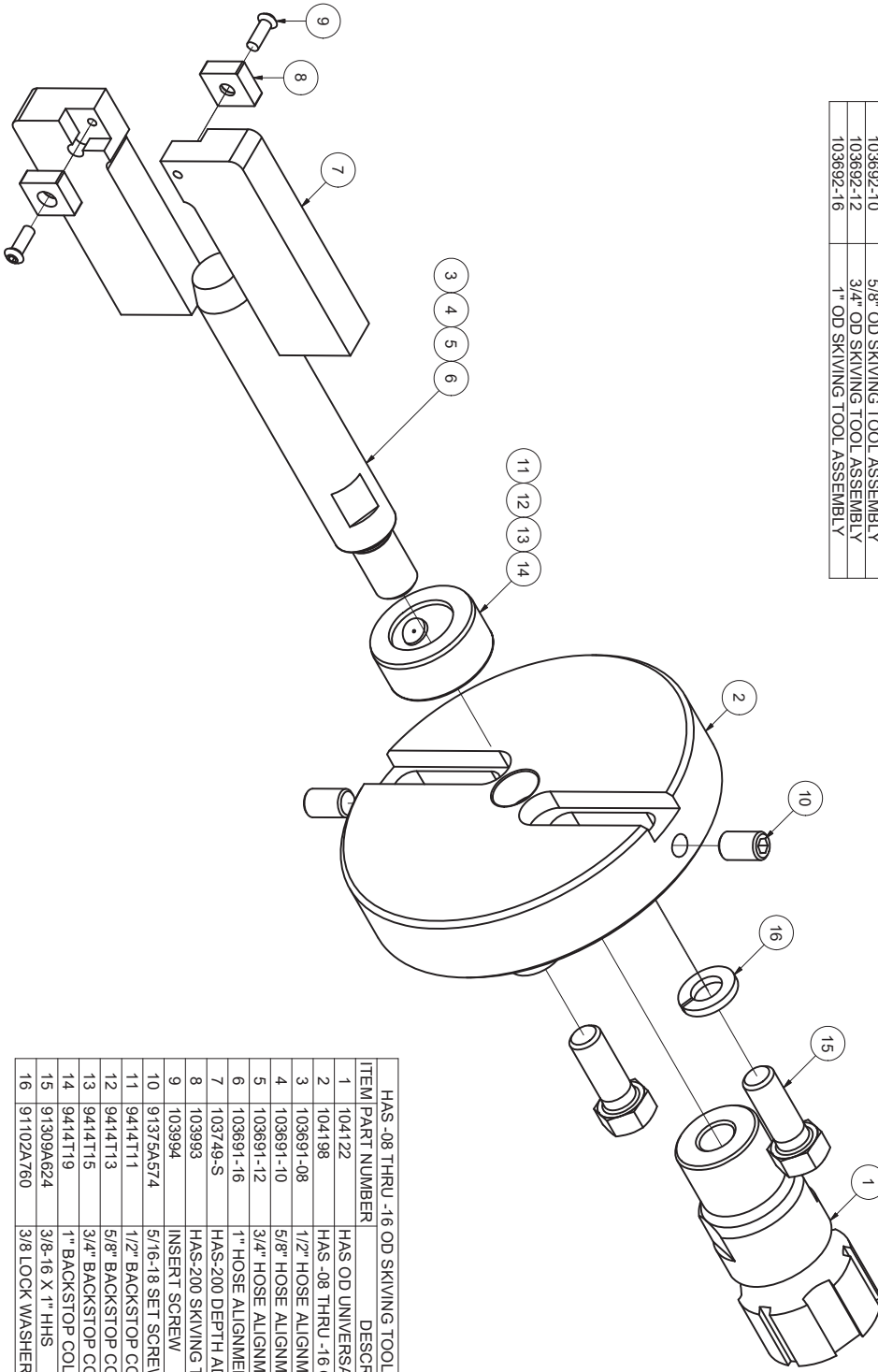


3. Adjust the depth set screw to inner diameter wire.
4. Skive the ID of a hose to check how close to the wire you are.
5. To make a small adjustment continue to adjust the depth of insert to hose and fitting manufacturer's requirements.
6. Make sure that all set screws are tight.



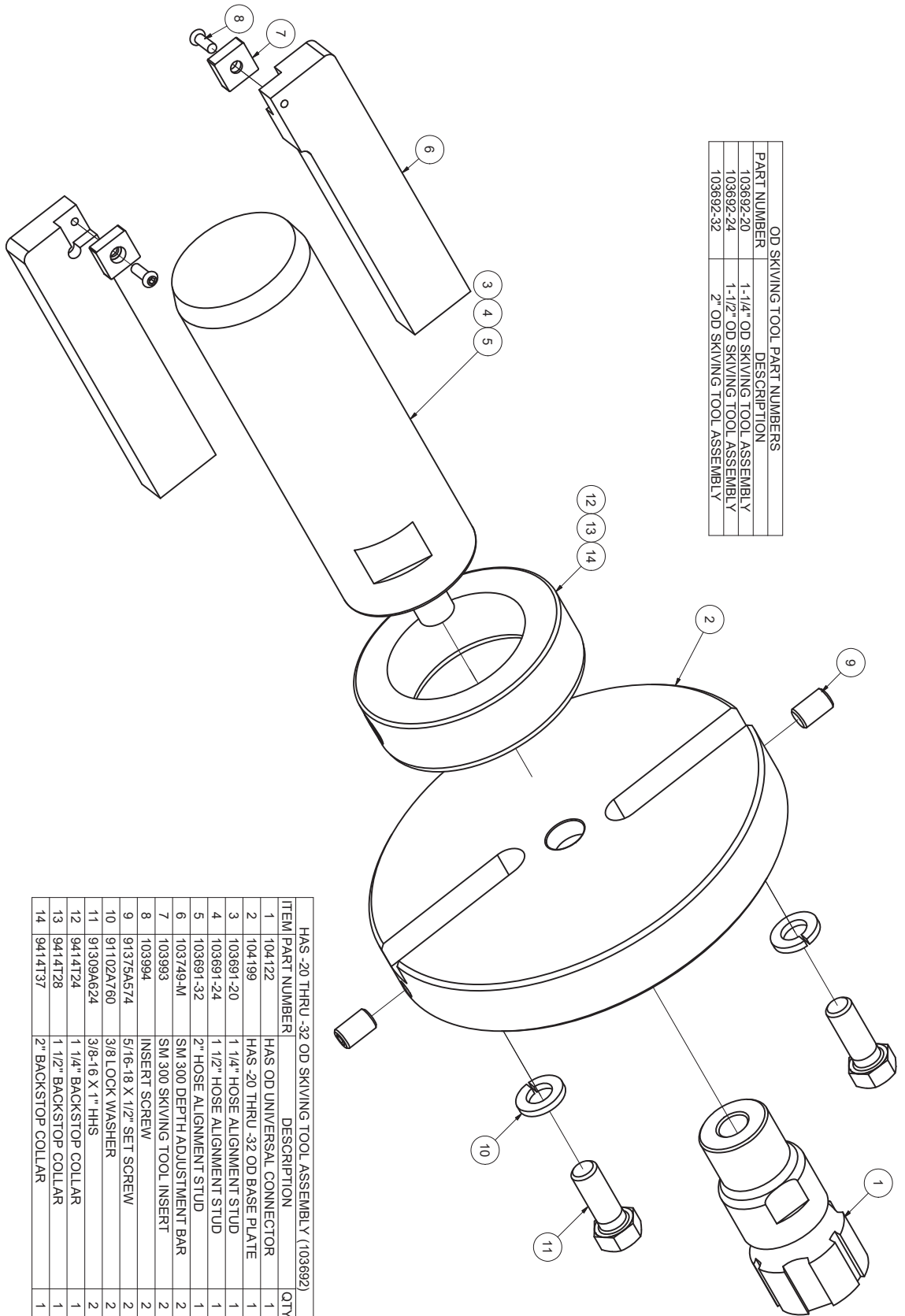
EXPLODED PARTS VIEW

PART NUMBER	DESCRIPTION	OD SKIVING TOOL PART NUMBERS
103692-08	1/2" OD SKIVING TOOL ASSEMBLY	
103692-10	5/8" OD SKIVING TOOL ASSEMBLY	
103692-12	3/4" OD SKIVING TOOL ASSEMBLY	
103692-16	1" OD SKIVING TOOL ASSEMBLY	



ITEM/PART NUMBER	DESCRIPTION	QTY
1	HAS -08 THRU -16 OD SKIVING TOOL ASSEMBLY (104123)	1
104122	HAS OD UNIVERSAL CONNECTOR	1
104198	HAS -08 THRU -16 OD BASE PLATE	1
103691-08	1/2" HOSE ALIGNMENT STUD	1
103691-10	5/8" HOSE ALIGNMENT STUD	1
103691-12	3/4" HOSE ALIGNMENT STUD	1
103691-16	1" HOSE ALIGNMENT STUD	1
103749-S	HAS-200 DEPTH ADJUSTMENT BAR	2
103993	HAS-200 SKIVING TOOL INSERT	2
103994	INSERT SCREW	2
91375A574	5/16-18 SET SCREW	2
9414T11	1/2" BACKSTOP COLLAR	1
9414T13	5/8" BACKSTOP COLLAR	1
9414T15	3/4" BACKSTOP COLLAR	1
9414T19	1" BACKSTOP COLLAR	1
91309A624	3/8-16 X 1" HHS	2
91102A760	3/8 LOCK WASHER	2

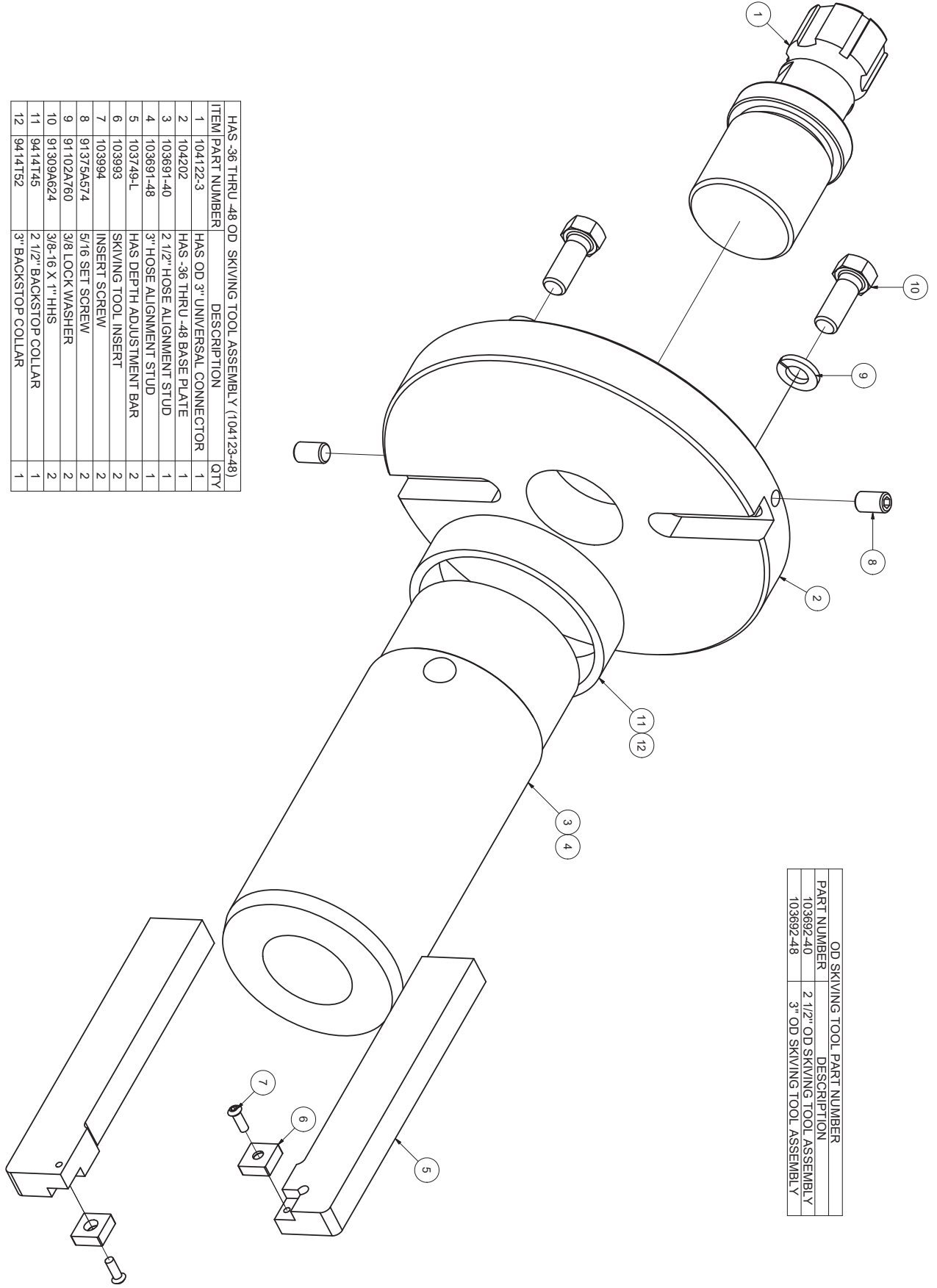
EXPLODED PARTS VIEW



PART NUMBER	OD SKIVING TOOL PART NUMBERS	DESCRIPTION
103692-20	1-1/4" OD SKIVING TOOL ASSEMBLY	
103692-24	1-1/2" OD SKIVING TOOL ASSEMBLY	
103692-32	2" OD SKIVING TOOL ASSEMBLY	

ITEM	PART NUMBER	DESCRIPTION	QTY
HAS -20 THRU -.32 OD SKIVING TOOL ASSEMBLY (103692)			
1	104122	HAS OD UNIVERSAL CONNECTOR	1
2	104199	HAS -20 THRU .32 OD BASE PLATE	1
3	103691-20	1 1/4" HOSE ALIGNMENT STUD	1
4	103691-24	1 1/2" HOSE ALIGNMENT STUD	1
5	103691-32	2" HOSE ALIGNMENT STUD	1
6	103749-M	SM 300 DEPTH ADJUSTMENT BAR	2
7	103993	SM 300 SKIVING TOOL INSERT	2
8	103994	INSERT SCREW	2
9	91375A574	5/16-18 X 1/2" SET SCREW	2
10	91102A760	3/8 LOCK WASHER	2
11	91309A624	3/8-16 X 1" HHS	2
12	9414T24	1 1/4" BACKSTOP COLLAR	1
13	9414T28	1 1/2" BACKSTOP COLLAR	1
14	9414T37	2" BACKSTOP COLLAR	1

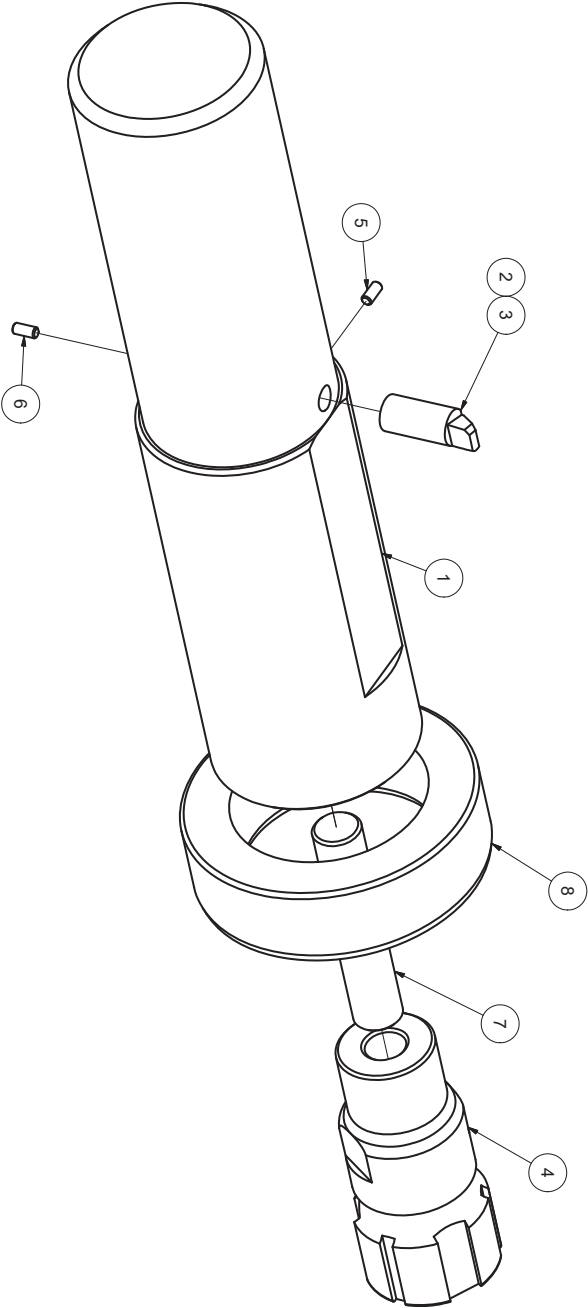
EXPLODED PARTS VIEW



PART NUMBER	OD SKIVING TOOL PART NUMBER	DESCRIPTION
103692-40	2 1/2" OD SKIVING TOOL ASSEMBLY	
103692-48	3" OD SKIVING TOOL ASSEMBLY	

ITEM/PART NUMBER	DESCRIPTION	QTY
HAS -36 THRU -48 OD SKIVING TOOL ASSEMBLY (104123-48)		
1	104122-3 HAS OD 3" UNIVERSAL CONNECTOR	1
2	104202 HAS -36 THRU -48 BASE PLATE	1
3	103691-40 2 1/2" HOSE ALIGNMENT STUD	1
4	103691-48 3" HOSE ALIGNMENT STUD	1
5	103749-L HAS DEPTH ADJUSTMENT BAR	2
6	103993 SKIVING TOOL INSERT	2
7	103994 INSERT SCREW	2
8	91375A574 5/16 SET SCREW	2
9	91102A760 3/8 LOCK WASHER	2
10	91309A624 3/8-16 X 1" HHS	2
11	9414145 2 1/2" BACKSTOP COLLAR	1
12	9414152 3" BACKSTOP COLLAR	1

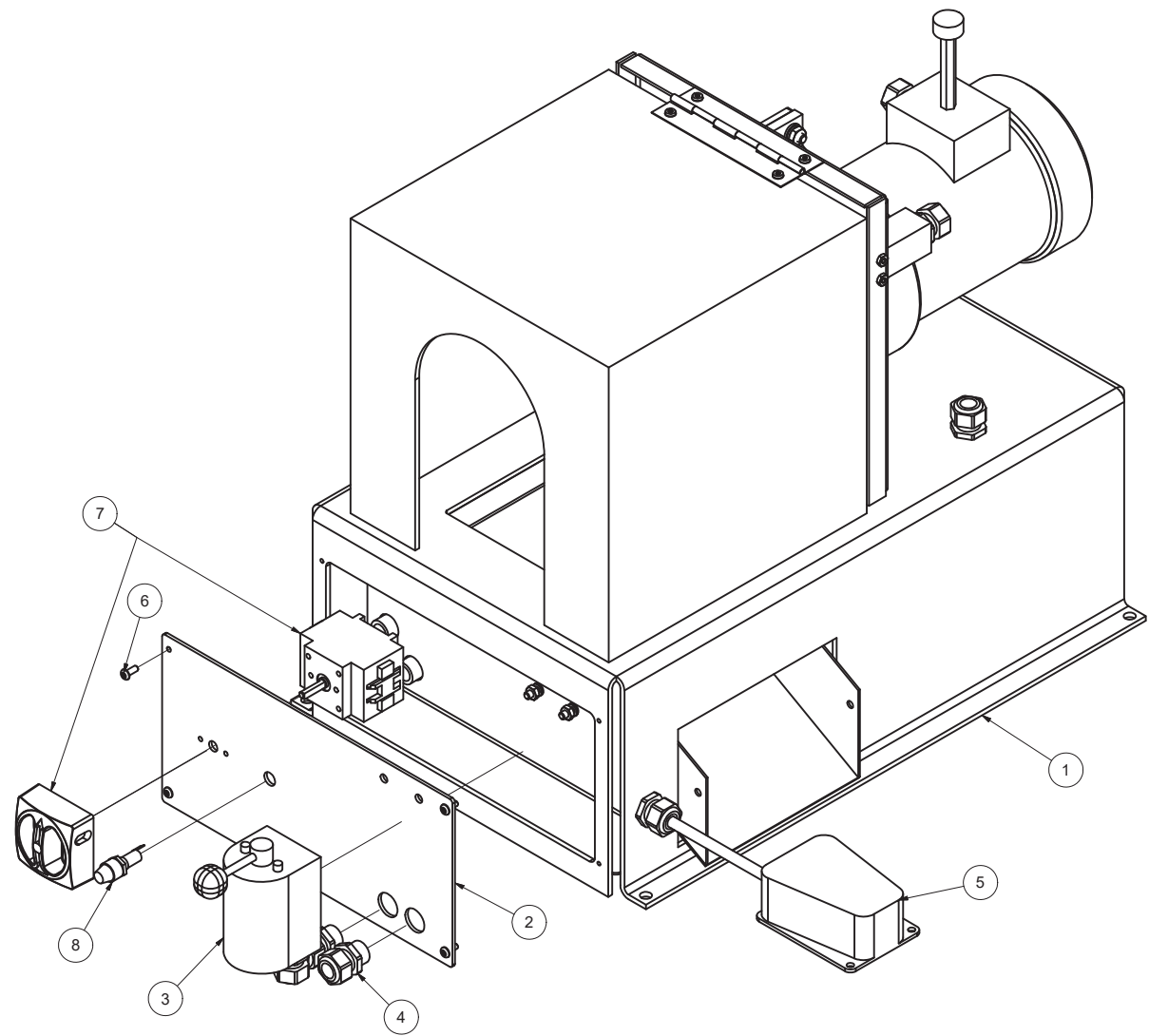
EXPLODED PARTS VIEW



SM 300 ID SKIVE TOOL ASSEMBLY (104028-MAN)			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	104028-HOSE SIZE	ID SKIVING TOOL BODY	1
2	104517	-16 TO -.32 ID SKIVING BIT	1
3	104518	-08 TO -.12 ID SKIVING BIT	1
4	104216	HAS ID UNIVERSAL CONNECTOR	1
5	91375A105	4.40 X .187 SET SCREW	2
6	91375A	4.40 X VARYING LENGTH SET SCREW	1
7	95625A306	1/2-.13 LEFT HAND THREAD SET SCREW	1
8	6436K	ADJUSTABLE BACKSTOP	1

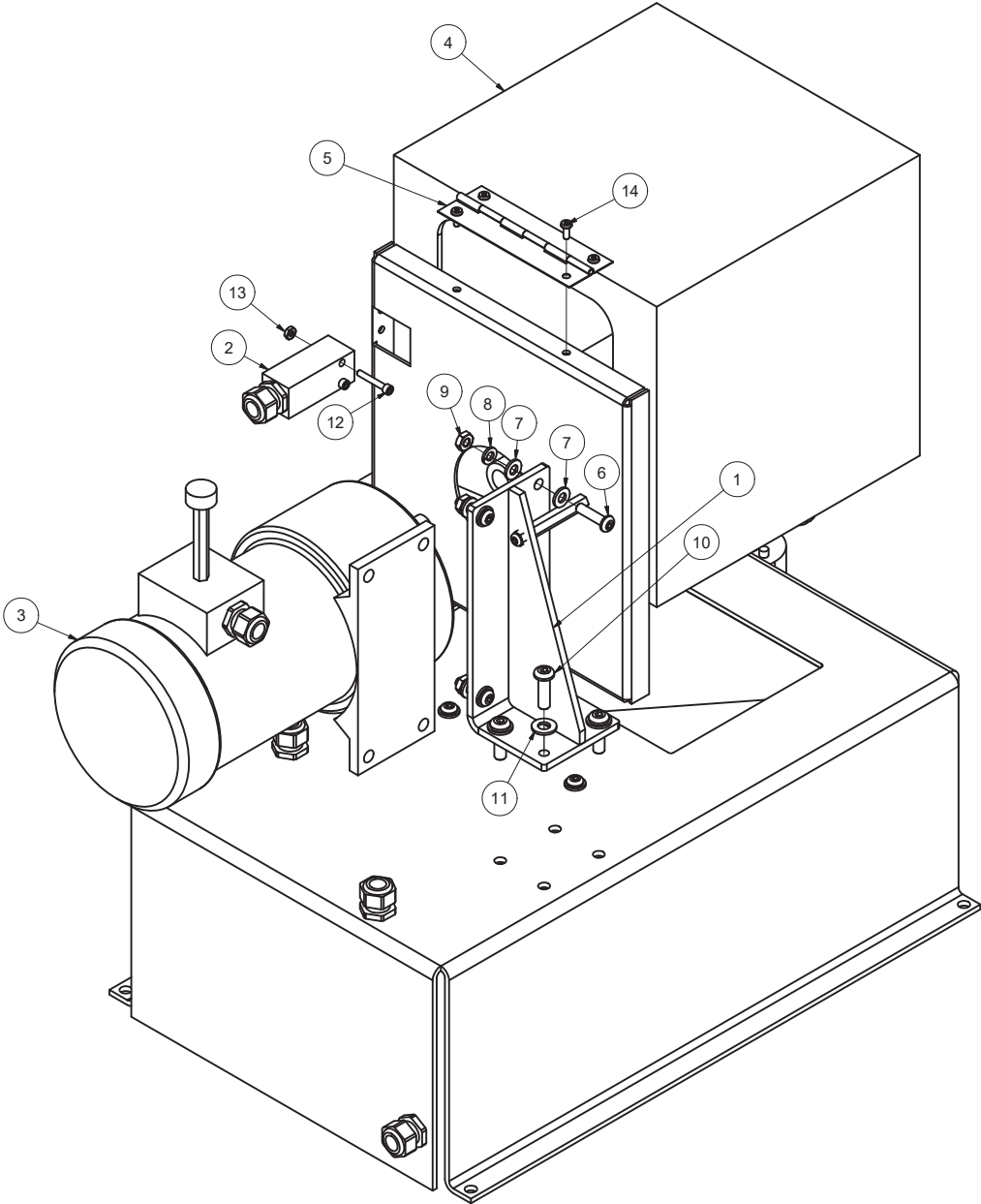
EXPLODED PARTS VIEW

SM 300 ELECTRICAL ASSEMBLY (104057-MAN-1)			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	103620	BASE ASSEMBLY	1
2	103628	ELECTRICAL ACCESS PANEL	1
3	104043	MOTOR DRUM SWITCH	1
4	103800	1/2 NPT DOME CORD GRIP	13
5	104046	110V FOOT PEDAL	1
6	91255A242	10-24 X 1/2 BHCS	4
7	104045	DISCONNECT SWITCH	1
8	342838	FUSEHOLDER	1



EXPLODED PARTS VIEW

SM 300 MOTOR ASSEMBLY (104057-MAN-2)			
ITEM	PART NUMBER	DESCRIPTION	QTY
1	103622	HAS-200 MOTOR MOUNT ASSEMBLY	1
2	104053	HAS-200 300V SAFETY LIMIT SWITCH	1
3	104044	HAS-200 FHP AC GEARMOTOR	1
4	103873	POLYCARBONATE DOOR	1
5	104056	HAS-200 SAFETY DOOR HINGE	1
6	91255A585	5/16-18 X 1 1/4" BHCS	4
7	98023A030	5/16 FLAT WASHER	12
8	91102A755	5/16 LOCK WASHER	6
9	94895A030	5/16-18 JAM NUT	4
10	91255A626	3/8-16 X 1 1/4" BHCS	4
11	98023A031	3/8 FLAT WASHER	8
12	90044A114	10-24 X 1 1/4 SHCS	2
13	90480A011	10-24 MACHINE NUT	6
14	91251A242	10-24 X 1/2 SHCS	4



SM 300 ELECTRIC HOSE SKIVER UNIT WARRANTY



CustomCrimp “No-Nonsense” Warranty Statement

All CustomCrimp Products are warranted to be free of defects in workmanship and materials for one year from the date of installation. This warranty ends when the product becomes unusable for reasons other than defects in workmanship or material.

Any CustomCrimp Product proven to be defective in workmanship or material will be repaired or replaced at no charge. To obtain benefits of this warranty, first, contact Warranty Repair Department at Custom Machining Services at **(219) 462-6128** and then deliver via prepaid transportation the complete hydraulic product to:

**ATTN: WARRANTY REPAIR DEPT.
Custom Machining Services, Inc.
326 North Co. Rd 400 East
Valparaiso IN 46383**

If any product or part manufactured by CustomCrimp is found to be defective by CustomCrimp, at its option, CustomCrimp will either repair or replace the defective part or product and return via ground transportation, freight prepaid. **Custom Crimp will not cover any incoming or outgoing freight charges for machines sold outside The United States.**

This warranty does not cover any product or part which is worn out, abused, altered, used for a purpose other than for which it was intended, or used in a manner which was inconsistent with any instructions regarding its use.

Electric motors are separately warranted by their manufacturer under the conditions stated in their separate warranty.

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