



Tool Code: ADAPTER
Document: MN-ADAPTER-C
General Adapter Manual

Adapter Manual

Various Types & Sizes

Operational & Maintenance Manual

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0 ABOUT THIS MANUAL

0.1 MANUAL HISTORY

Date	Issue	Description	Auth	Chk	App
02/08/05	A	First Issue	FV	SA	IH
06/09/05	B	AGS008 & AGS009 added. Chapter 0 updated.	FV	NB	NB
16/08/06	C	ASS008 & ASS009 added. ASS Drawing reference changed to accomodate lockable adaptor.	FV	FV	FV

0.2 UPDATES TO BE USED WITH THIS MANUAL

Consult the CD Directory for the appropriate Manual Updates to be used with this Manual.

0.3 TECHNICAL HELP

For further technical help contact Sondex as follows:

Address: Unit 1, Saxony Way,
Blackbushe Business Park,
Yateley, Hampshire,
GU46 6AB
United Kingdom

Telephone: +44(0)118 932 6755
Fax: +44(0)118 932 6704
Email: support@sondex.com

0.4 FEEDBACK

Please help us improve future issues of this manual by sending your comments or corrections to Documentation-UK@sondex.com, referencing the document number.

Thank you.

Photographs and sketches are for illustration purposes only. Depending on the tool model that you have, certain features or dimensions may differ from those shown.

1 DESCRIPTION

This manual describes the maintenance of the Adapters, supplied by Sondex. The Adapters can be used to link tools together that have different connectors or diameters.

1.1 ADAPTERS COVERED IN THIS MANUAL

Note: When an (F) is added to the the Connector Type, it means it is a Female Joint. When (M) is added, it means it is a Male Joint.

Tool Code	From		To		Refer to:
	Type	Diameter	Type	Diameter	
AGG001	GO	1 ¹¹ / ₁₆ "	GO	1 ¹¹ / ₁₆ "	Section 4.1
AGS001	GO	1 ¹¹ / ₁₆ "	SX	1 ¹¹ / ₁₆ "	Section 4.2
AGS004	GO	1 ³ / ₈ "	SX	1 ³ / ₈ "	Section 4.2
AGS006	GO	1 ¹¹ / ₁₆ "	SX	1 ¹¹ / ₁₆ "	Section 4.2
AGS007	GO	1 ⁷ / ₁₆ "	SX	1 ¹¹ / ₁₆ "	Section 4.2
AGS008	GO	2 ¹ / ₈ "	SX	1 ¹¹ / ₁₆ "	Section 4.2
AGS009	GO	2 ¹ / ₈ "	SX	1 ³ / ₈ "	Section 4.2
ASB001	SX	1 ¹¹ / ₁₆ "	Reeves	1 ¹¹ / ₁₆ "	Section 4.3
ASB002	SX	1 ¹¹ / ₁₆ "	Fishneck	1 ⁵ / ₁₆ -11UN	Section 4.3
ASB003	SX	1 ³ / ₈ "	Fishneck	5/ ₈ -11UN	Section 4.3
ASB005	SX (F)	1 ¹¹ / ₁₆ "	Fishneck (F)	1 ¹ / ₂ "	Section 4.3
ASB006	SX (M)	1 ¹ / ₂ "	Fishneck (M)	1 ¹¹ / ₁₆ "	Section 4.3
ASG001	SX	1 ¹¹ / ₁₆ "	GO	1 ¹¹ / ₁₆ "	Section 4.4
ASG003	SX	1 ¹ / ₂ "	Gearhart	1 ¹ / ₂ "	Section 4.5
ASG004	SX	1 ³ / ₈ "	GO	1 ³ / ₈ "	Section 4.4
ASS001	SX	1 ¹¹ / ₁₆ "	SX	1 ¹¹ / ₁₆ "	Section 4.6
ASS002	SCT (F)	1 ¹ / ₂ "	SX	1 ¹ / ₂ "	Section 4.7
ASS003	SCT (M)	1 ¹ / ₂ "	SX	1 ¹ / ₂ "	Section 4.7
ASS004	SCT (F)	1 ³ / ₈ "	SX	1 ³ / ₈ "	Section 4.7
ASS005	SCT (M)	1 ³ / ₈ "	SX	1 ³ / ₈ "	Section 4.7
ASS006	SX	1 ³ / ₈ "	SX	1 ¹¹ / ₁₆ "	Section 4.6
ASS007	SX	1 ¹¹ / ₁₆ "	SX	1 ³ / ₈ "	Section 4.6
ASS008	SX	1 ¹¹ / ₁₆ "	SX	2 ¹ / ₈ "	Section 4.6
ASS009	SX	2 ¹ / ₈ "	SX	1 ¹¹ / ₁₆ "	Section 4.6

Note: ASB004 is not covered in this manual. Refer to *MN-ASB* for this specific tool.

2 SAFETY



Warning!

HOT WORK! Sondex equipment may, under certain circumstances or failure modes, become a potential source of ignition. Using it must therefore be considered "**HOT WORK**" and appropriate precautionary procedures should be followed when testing at surface in areas where there is a risk of gas leaks or other potentially explosive atmospheres.



Liquid O-ring

LOR101 is used for lubricating the tool during maintenance. Contact with skin or eyes can be harmful. For more details see the [*Material Safety Data Sheet for Liquid O-ring*](#).

3 OPERATING PRINCIPLE

3.1 PRE-LOGGING CHECKS

Ref.:	GO/GO Adapter	11508
	GO/SX Adapter	11501
	SX/GO Adapter	11509
	SX/Gearhart Adapter	09069
	SX/SX Adapter	09636

3.1.1 MECHANICAL

- Check the O-rings (item 12) , located on the Adapter, and replace if necessary.

Note: Not applicable for the SCT/SX and SX/Fishneck type.

- Check the connectors are tight.
- Ensure that upper and lower electrical connectors are clean, dry and undamaged.

3.1.2 ELECTRICAL

- Using a Megohm Meter (set to 250V), check the insulation (between housing & pins).
The reading should be $>100M\Omega$:
- Using a Multimeter, check the through resistance (between upper and lower pins).
The reading should be $< 0.5\Omega$

3.2 CONNECTING TO TOOLSTRING

Upper and lower tool joint O-rings and seal surfaces should be clean, undamaged and lightly greased.

Ensure the voltage rating of the tools match, but do not exceed, the tool rating of the Adapters.

3.3 POST LOGGING DISASSEMBLY

Ensure the tools are stored with the thread protectors fitted.

4 MECHANICAL DESCRIPTION

Note: ASB004 is not included in this manual. Refer to [MN-ASB](#) for ASB004.

Note: Ensure all parts are clean, dry and undamaged before reassembly. Clean and grease all O-ring grooves before fitting new O-rings.

4.1 ADAPTER GO/GO (AGG)

Ref.: GO/GO Adapter [11508](#)

4.1.1 DISASSEMBLY

Note: The 2 O-rings (item 12) can be removed from Adapter (item 1) at any stage.

- 1 Unscrew Banana Pin (item 5) from bottom of Adapter (item 1).
- 2 Remove O-ring/Insulator assembly (item 4 & 11) and Washer (item 9).
- 3 Extract Connector Pin (item 2) from top of Adapter (item 1).
- 4 Remove O-ring (item 11), Insulator (item 3), Washer (item 8) and O-ring (item 10).

4.1.2 REASSEMBLY

- 1 Check O-rings (item 12) on Adapter (item 1) and replace if required.
- 2 Refit O-ring (item 10) onto Insulator (item 3).
- 3 Refit O-ring (item 10) onto Connector Pin (item 2) and refit Washer (item 8), Insulator (item 3) and O-ring (item 11).

Note: Check O-rings (item 10 & 11) and replace if required.

- 4 Refit Connector Pin (item 2) into top of Adapter (item 1). Take care not to damage the O-rings.
- 5 Refit O-ring (item 11) onto Insulator (item 4).

Note: Check O-ring (item 11) and replace if required.

- 6 Fit assembly and Washer (item 9) onto Connector Pin (item 2).
- 7 Screw Banana Pin (item 5) onto Connector Pin (item 2) and tighten securely.

4.2 ADAPTER GO/SX (AGS)

Ref.: GO/SX Adapter 11501

4.2.1 DISASSEMBLY

Note: The 2 O-rings (item 12) can be removed from Adapter (item 1) at any stage.

- 1 Unscrew Hex Socket (item 5) from bottom of Adapter (item 1).
- 2 Remove Washer (item 9) and O-ring/Insulator assembly (items 4 & 11).
- 3 Extract Connector Pin (item 2) from top of Adapter (item 1).
- 4 Remove O-ring (item 11), Insulator (item 3), Washer (item 8) and O-ring (item 10).

4.2.2 REASSEMBLY

- 1 Check O-rings (item 12) on Adapter (item 1) and replace if required.
- 2 Refit O-ring (item 10) onto Connector Pin (item 2).

Note: Check O-ring (item 10) and replace if required.

- 3 Refit Washer (item 8), Insulator (item 3) and O-ring (item 11).

Note: Check O-ring (item 11) and replace if required.

- 4 Refit Connector Pin (item 2) into top of Adapter (item 1). Take care not damage the O-rings.
- 5 Refit O-ring (item 11) onto Insulator (item 4).

Note: Check O-ring (item 11) and replace if required.

- 6 Fit O-ring/Insulator assembly and Washer (item 9) onto Connector Pin (item 2).
- 7 Screw Hex Socket (item 5) onto Connector Pin (item 2) and tighten securely.

4.3 ADAPTER SX/FISHNECK (ASB)

Ref.: SX/Fishneck Adapter 09211

4.3.1 DISASSEMBLY

- 1 Unscrew Banana Pin (item 1) and Half Nut (item 2) from top of Adapter (item 5).
- 2 Remove Insulator (item 4) and Washer (item 3).
- 3 Extract Connector Pin (item 9) from top of Adapter (item 5) and remove O-ring (item 8).
- 4 Remove Insulator (item 7) and O-ring (item 6).

4.3.2 REASSEMBLY

- 5 Refit O-ring (item 6) on Insulator (item 7) and fit in Adapter (item 5). Ensure O-ring is not damaged during reassembly.

Note: Check O-ring (item 6) and replace if required.

- 6 Refit O-ring (item 8) onto Connector Pin (item 9) and fit into bottom of Adapter (item 5). Take care not damage O-ring.

Note: Check O-ring (item 8) and replace if required.

- 7 Refit Insulator (item 4), Washer (item 3) into top of Adapter (item 5).
- 8 Screw Half Nut (item 2) and Banana Pin (item 1) onto Connector Pin (item 9) via top of Adapter. **Ensure they are tightened securely.**

4.4 ADAPTER SX/GO (ASG)

Ref.: SX/GO Adapter 11509

4.4.1 DISASSEMBLY

Note: 2 O-rings (item 12) can be removed from Adapter (item 1) at any stage.

- 1 Unscrew Banana Pin (item 5) and Half Nut (item 13) from bottom of Adapter (item 1).
- 2 Remove O-ring/Insulator assembly (item 3 & 11) and Washer (item 9).
- 3 Extract Connector Pin/Banana Pin assembly (item 2 & 5) from top of Adapter (item 1).
- 4 Remove O-ring/Insulator assembly (item 4, 10 & 11) and Washer (item 8).
- 5 Unscrew Banana Pin (item 5) from Connector Pin (item 2).

4.4.2 REASSEMBLY

- 1 Check O-rings (item 12) on Adapter (item 1) and replace if required.
- 2 Screw Banana Pin (item 5) onto Connector Pin (item 2).
- 3 Refit O-ring (item 10) onto Connector Pin (item 2) and an O-ring (item 11) onto Insulator (item 4).

Note: Check O-rings (item 10 & 11) and replace if required.

- 4 Refit Insulator assembly and Washer (item 8) onto Connector Pin (item 2). Take care not damage O-rings.
- 5 Refit Connector Pin (item 2) into top of Adapter (item 1). Take care not damage the O-rings.
- 6 Refit O-ring (item 11) onto Insulator (item 4).

Note: Check O-ring (item 11) and replace if required.

- 7 Refit O-ring/Insulator assembly and Washer (item 9) onto Connector Pin (item 2).
- 8 Screw Half Nut (item 13) and Banana Pin (item 5) onto Connector Pin (item 2) and tighten securely.

4.5 ADAPTER SX/GEARHART (ASG)

Ref.: SX/Gearhart Adapter 09069

4.5.1 DISASSEMBLY

Note: 2 O-rings (item 12) can be removed from Adapter (item 1) at any stage.

- 1 Unscrew Banana Pin (item 10) and Half Nut (item 14) from top of Adapter (item 1).
- 2 Remove O-ring/Insulator assembly (item 5 & 11) and Washer (item 13).
- 3 Extract Connector Pin/Banana Pin assembly (item 4 & 10) from bottom of Adapter (item 1).
- 4 Remove O-ring/Insulator assembly (item 6 & 11) and Washer (item 13).
- 5 Unscrew Banana Pin (item 10) from Connector Pin (item 4) and remove O-ring (item 16).

4.5.2 REASSEMBLY

- 1 Check O-rings (item 12) on Adapter (item 1) and replace if required.
- 2 Screw Banana Pin (item 10) onto Connector Pin (item 4).
- 3 Refit an O-ring (item 16) onto Connector Pin (item 4).

Note: Check O-ring (item 16) and replace if required.

- 4 Refit O-ring (item 11) onto Insulator (item 6).

Note: Check O-ring (item 11) and replace if required.

- 5 Refit Insulator/O-ring assembly and Washer (item 13) onto Connector Pin (item 4). Take care not damage the O-rings.
- 6 Refit Connector Pin (item 4) into bottom of Adapter (item 1). Take care not damage the O-rings.
- 7 Refit O-ring (item 11) onto Connector Pin (item 4).

Note: Check O-ring (item 11) and replace if required.

- 8 Refit Insulator (item 5) and Washer (item 13) onto Connector Pin (item 4).
- 9 Screw Half Nut (item 14) and Banana Pin (item 10) onto Connector Pin (item 4).

4.6 ADAPTER SX/SX (ASS)

Ref.: SX/SX Adapter 09636

Note: ASS008 & ASS009 are lockable and have an extra Locking Ring (item 14), which does not require removing. This Locking Ring is not fitted on the other adapters.

4.6.1 DISASSEMBLY

Note: 2 O-rings (item 12) can be removed from Adapter (item 1) at any stage.

- 1 Unscrew Banana Pin (item 5) and Half Nut (item 13) from top of Adapter (item 1).
- 2 Remove Insulator/O-ring assembly (item 3 & 11) and Washer (item 9).
- 3 Extract Connector Pin (item 2) from bottom of Adapter (item 1).
- 4 Remove Insulator/O-ring assembly (item 4 & 11) and Washer (item 8).

4.6.2 REASSEMBLY

- 1 Check O-rings (item 12) on Adapter (item 1) and replace if required.
- 2 Refit O-ring (item 10) onto Connector Pin (item 2).

Note: Check O-ring (item 10) and replace if required.

- 3 Refit O-ring (item 11) onto Insulator (item 4).

Note: Check O-ring (item 11) and replace if required.

- 4 Refit Insulator/O-ring assembly and Washer (item 8) onto Connector Pin (item 2). Take care not damage the O-rings.
- 5 Refit Connector Pin (item 2) into bottom of Adapter (item 1). Take care not damage the O-rings.
- 6 Refit O-ring (item 11) onto Insulator (item 3).

Note: Check O-ring (item 11) and replace if required.

- 7 Refit O-ring/Insulator assembly and Washer (item 9) onto Connector Pin (item 2).
- 8 Screw Half Nut (item 13) and Banana Pin (item 5) onto Connector Pin (item 2).

4.7 ADAPTER SCT/SX (ASS)

Ref.: SCT/SX Adapter 07084

4.7.1 DISASSEMBLY

- 1 Unscrew Banana Pin (item 1) and Half Nut (item 8) from top of Adapter (item 3).
- 2 Remove Insulator/O-ring assembly (item 2 & 12) and Washer (item 9).
- 3 Extract Connector Pin (item 5) from bottom of Adapter (item 3).
- 4 Remove Insulator/O-ring assembly (item 4, & 12) and Washer (item 9).

4.7.2 REASSEMBLY

- 1 Refit O-ring (item 13) onto Connector Pin (item 5).

Note: Check O-ring (item 13) and replace if required.

- 2 Refit Insulator (item 4), O-ring (item 12) and Washer (item 9) onto Connector Pin (item 5). Take care not damage the O-rings.

Note: Check O-ring (item 12) and replace if required.

- 3 Refit Connector Pin (item 5) into bottom of Adapter (item 3). Take care not damage the O-rings.

4 Refit O-ring (item 12) onto Insulator (item 2).

Note: Check O-ring (item 12) and replace if required.

5 Refit O-ring/Insulator assembly and Washer (item 9) onto Connector Pin (item 5).

6 Screw Half Nut (item 8) and Banana Pin (item 1) onto Connector Pin (item 5).

5 EXTENDED CHECKS

5.1 PREVENTATIVE MAINTENANCE

5.1.1 GREASE & LUBRICANTS

Sondex recommends the use of “Liquid O-ring type 101” (p/n LOR101) on threads and O-rings, see [APPENDIX A](#).

All O-rings and housing threads are assumed to be and must be lightly greased unless specifically indicated differently.

Correct use of grease and lubricants is essential to the maintenance of all Sondex downhole equipment.

Note that some threads are internal, i.e. grease can get inside the Adapter. Do not use excessive quantities.

Sondex does not recommend Copper loaded greases since some types can cause electrical leaks. Some types are also not suitable for use on O-rings. Silicone grease may be used on O-rings, but must be kept clear of threads especially stainless threads fitting into stainless steel threads.



Warning! The use of certain greases, such as some types of Lubriplate, can cause electrical failure if they have any volatile content. This can burn off, producing corrosive gasses inside the tool.

5.1.2 MECHANICAL

- 1 Remove dirt and old grease from threads and O-rings and replace with fresh.
- 2 Inspect O-rings for damage or ageing/hardening and replace where required.
- 3 Check for:
 - Damaged components.
 - Heat or chemical damage (discoloured components).
 - Incorrect thread grease or excessive quantity, see [Section 5.1.1](#).
 - Cleanliness of connectors before replacing.

5.1.3 ELECTRICAL

- Using a Megohm Meter (set to 250V), check the insulation (between housing & pins). The reading should be $>100M\Omega$:
- Using a Multimeter, check the through resistance (between upper and lower pins). The reading should be $< 0.5\Omega$

5.2 EXTRAORDINARY MAINTENANCE

Ref.:	GO/GO Adapter	11508
	GO/SX Adapter	11501
	SX/GO Adapter	11509
	SX/Gearhart Adapter	09069
	SX/SX Adapter	09636

Replace O-rings (item 12) , located on the Adapter, before every run.

Note: Not applicable for the SCT/SX and SX/Fishneck type.

All other O-rings need to be replaced every 5 runs or every 3 months, whichever comes first.

When the tool experiences contact with H₂S, replace all O-rings.

APPENDIX A EQUIPMENT & RECOMMENDED SPARES

Item	Part No	Description	Qty	Remarks
1	-	Adapter	1	See Section 1.1 for p/n

A.1 ANCILLARY EQUIPMENT

Item	Part No	Description	Qty	Remarks
None				

A.2 MAINTENANCE EQUIPMENT

Item	Part No	Description	Qty	Remarks
1	10038	Spanner Box 3/8 x 5/16 Modified	2	
2	10037	Bar Tommy	2	
3	LOR101	Grease for O-rings & threads	1	5oz. pot
4	LOR101L	Grease for O-rings & threads	AR	12oz. pot

A.3 RECOMMENDED SPARES

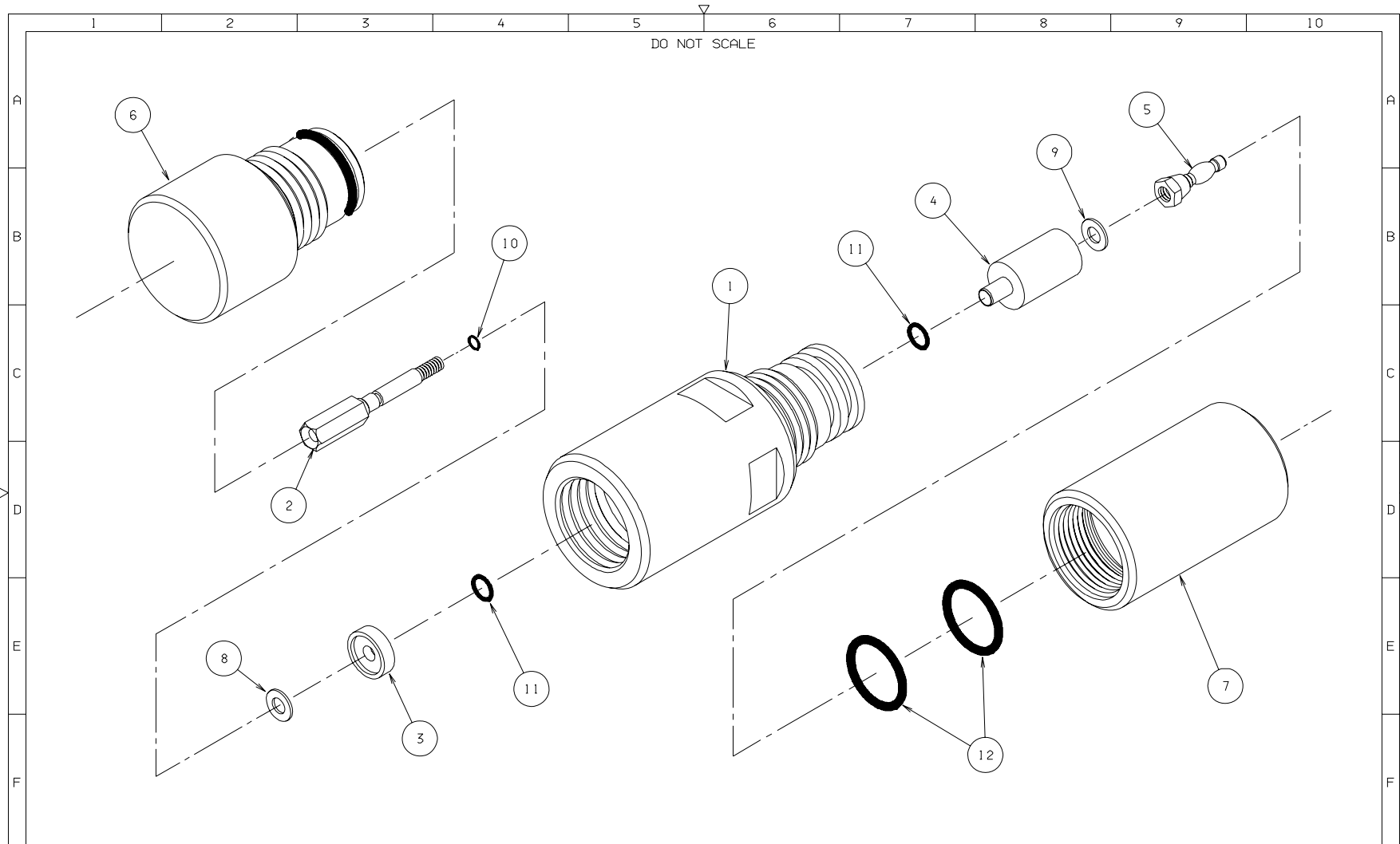
Item	Part No	Description	Qty	Remarks
1	99211	O-ring Viton 90 Type 211	50	Not for Fishneck
2	99009	O-ring Viton 90 Type 009	10	Not for Fishneck
3	99900	O-ring 3mm x 1mm Viton 75	5	Not for Fishneck
4	01629	Pin, Connector GO/GO	1	GO/GO Adapter only
5	01630	Pin, Connector Sondex/GO	1	Not for GO/GO Adapter
6	01028	Assy Banana Pin	2	
7	99017	O-ring Viton 90 Type 017	5	Fishneck only
8	99010	O-ring Viton 90 Type 010	5	Fishneck only
9	10310	Pin, Conductor, Sondex to Reeves Adapter	1	Fishneck only

Note: The Recommended Spares are sufficient for all types of Adapters. However, not all parts will be used in some cases. The quantities, stated above, are sufficient for 25 runs. Contact Sondex for additional spares.

APPENDIX B DRAWINGS

B.1 MECHANICAL DRAWINGS

Description	Drawing
GO/GO Adapter	11508-A
GO/SX Adapter	11501-A
SX/Fishneck Adapter	09211-A
SX/GO Adapter	11509-A
SX/Gearhart Adapter	09069-A
SX/SX Adapter	09636-PT1
SCT/SX Adapter	07084-PT1



DO NOT SCALE

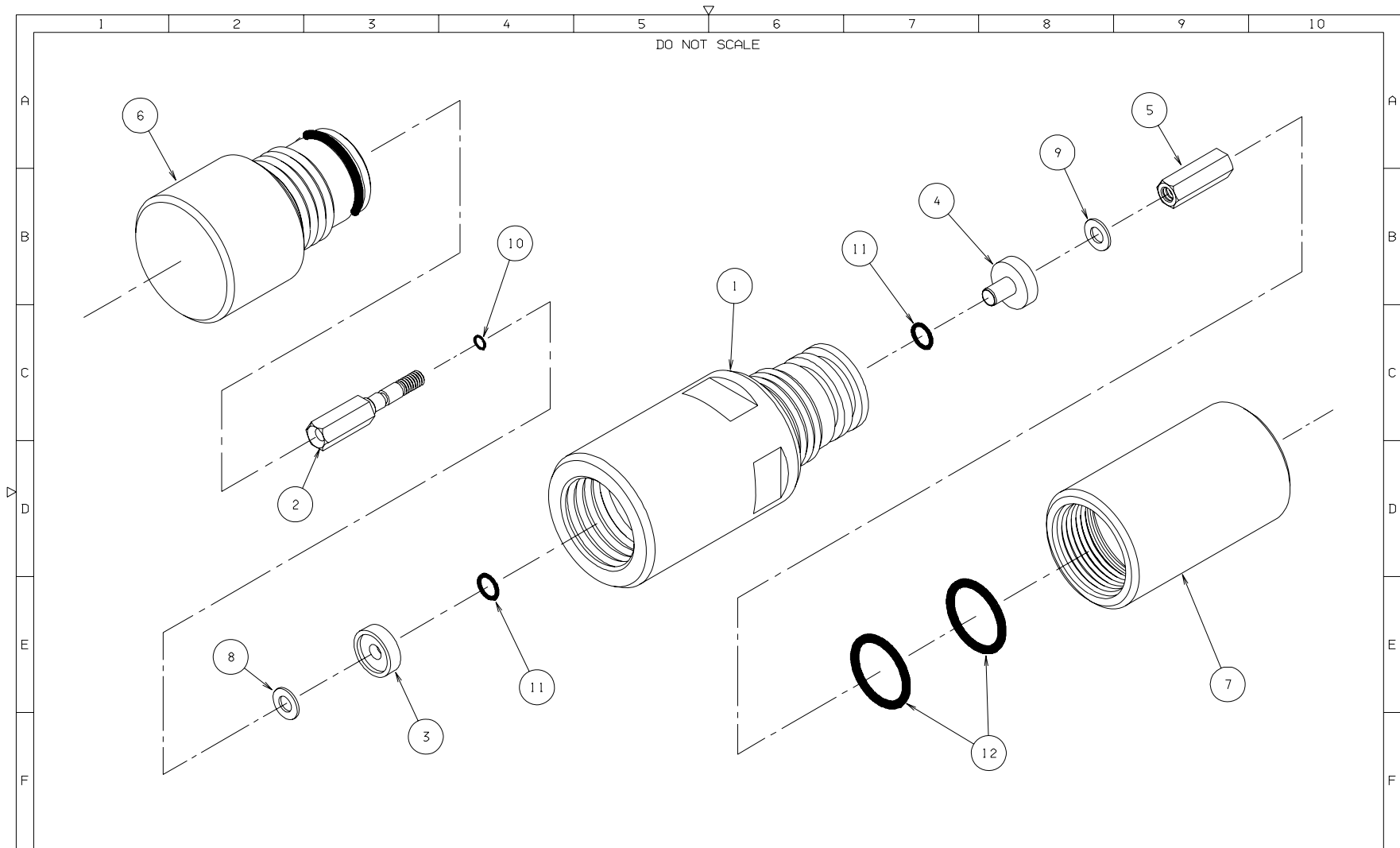
DRAWN NGH	CHECKED IH	APPROVED AJB	ISS A	DESCRIPTION INITIAL RELEASE	APPD AJB	DATE 27/03/00	Sondex GEOPHYSICAL EQUIPMENT Tel. 0118 932 6755 THIS DRAWING IS THE PROPERTY OF Sondex AND SHALL NOT BE COPIED OR USED WITHOUT PRIOR PERMISSION		USED ON AGG01	TITLE ASSY ADAPTOR DIA 1 11/16" GO UPPER/GO LOWER		
DATE 03/03/00	DATE 08/03/00	DATE 27/03/00					MACHINE FINISH 63/		GEN TOL 0. X ±0.020" 0. XX ±0.010" 0. XXX ±0.005" ANGLE ±0.5°	SHEET 1/1	DRAWING No. 11508	ISSUE A
DIM IN INCHES	MATL: SEE PARTS LIST						THIRD ANGLE PROJECTION					

SONDEX FM No: F0023

General Adapter Manual

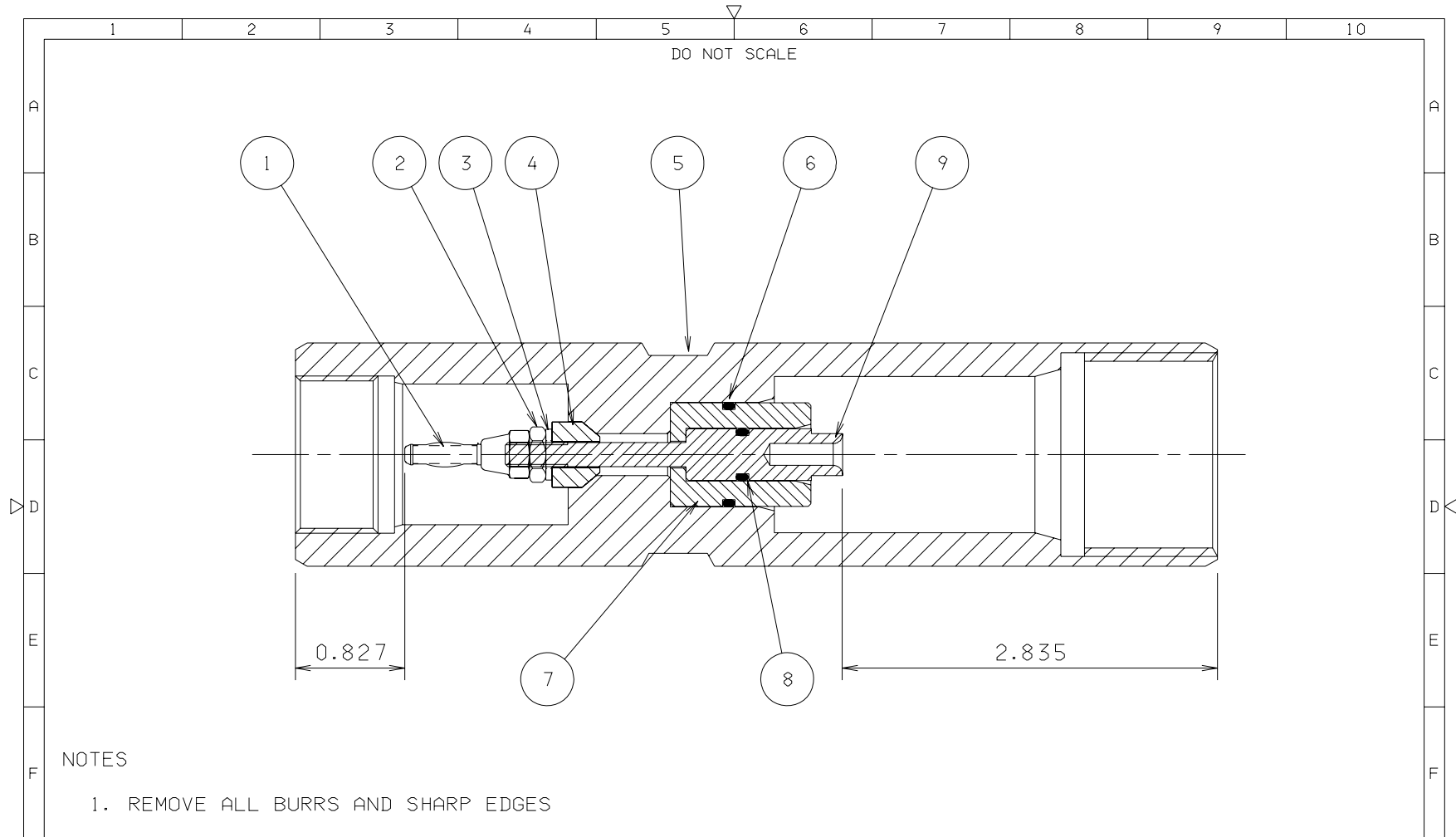
ADAPTER

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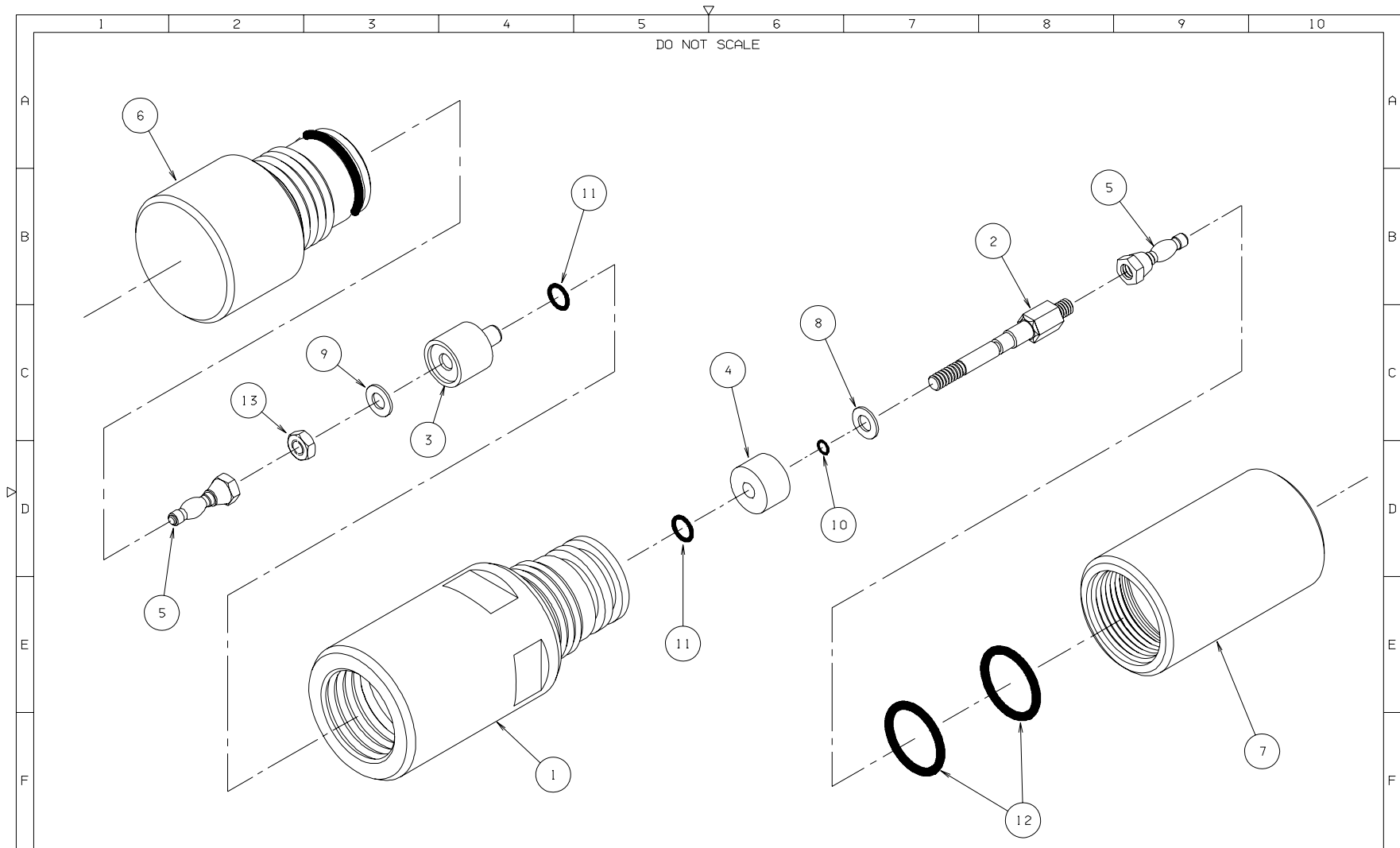


DRAWN NGH	CHECKED IH	APPROVED AJB	ISS A	DESCRIPTION INITIAL RELEASE	APPD AJB	DATE 27/03/00	Sondex GEOPHYSICAL EQUIPMENT Tel. 0118 932 6755		USED ON AGS04	TITLE ASSY ADAPTOR DIA 1 3/8" GO UPPER/SONDEX LOWER			
DATE 02/03/00	DATE 08/03/00	DATE 27/03/00					THIS DRAWING IS THE PROPERTY OF Sondex AND SHALL NOT BE COPIED OR USED WITHOUT PRIOR PERMISSION		MACHINE FINISH 63/	GEN TOL 0. X ±0.020" 0. XX ±0.010" 0. XXX ±0.005" ANGLE ±0.5°	SHEET 1/1	DRAWING No. 11501	ISSUE A
DIM IN INCHES	MATL: SEE PARTS LIST						THIRD ANGLE PROJECTION						

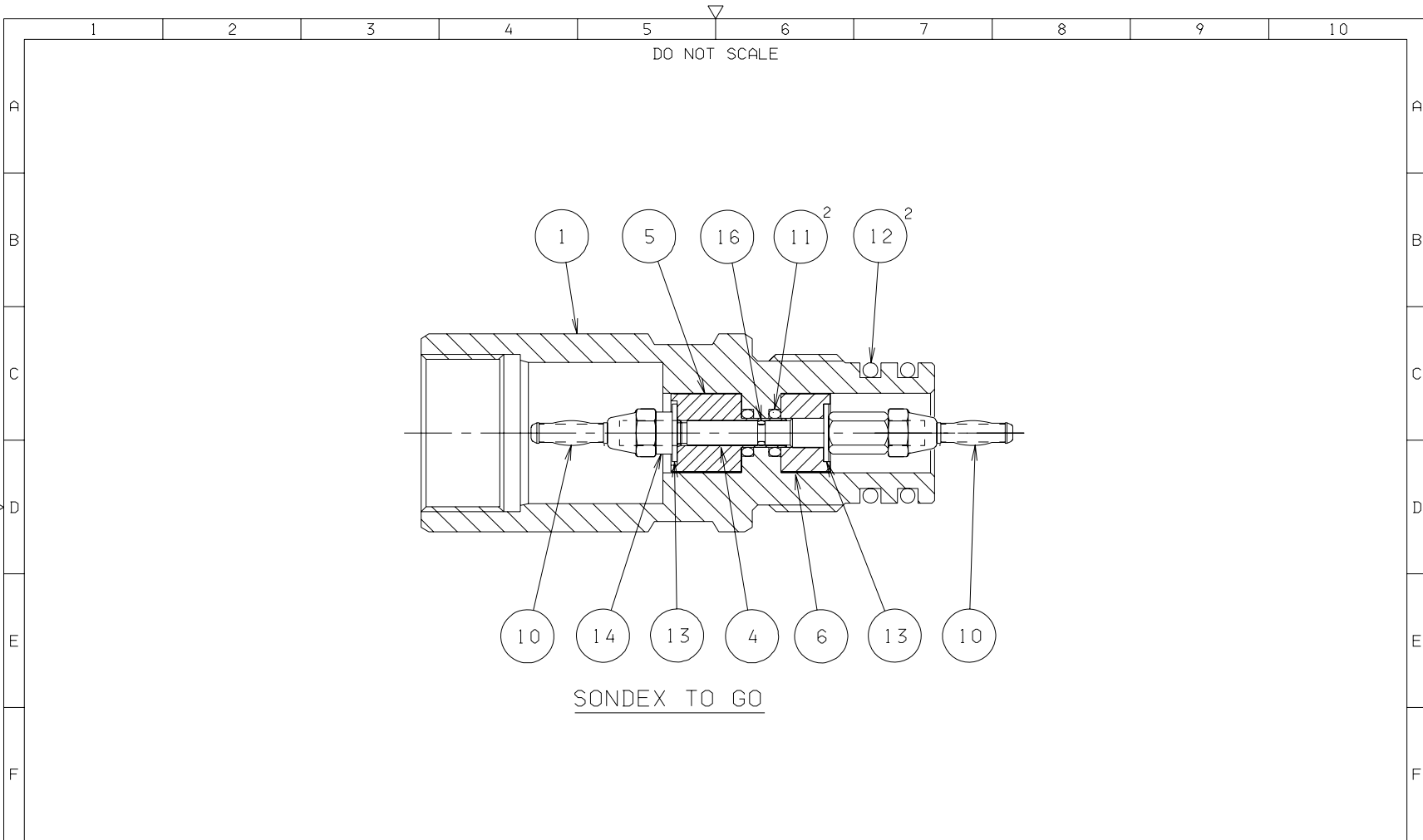
SONDEX FM No: F0023



ISS	DESCRIPTION	APPD	DATE	Sondex Tel. 0118 932 6755 THIS DRAWING IS THE PROPERTY OF Sondex AND SHALL NOT BE COPIED OR USED WITHOUT PRIOR PERMISSION THIRD ANGLE PROJECTION	MACHINE FINISH 63/ ✓	USED ON ASB001	TITLE ASSY. ADAPTOR. 1 11/16 SONDEX TO REEVES (BPB)
A	INITIAL RELEASE	AJB	04/07/01				
DATE	DATE	DATE		GEN TOL 0. X ±0.020" 0. XX ±0.010" 0. XXX ±0.005" ANGLE ±0.5°	SHEET 1/1	DRAWING No. 09211	ISSUE A
03/07/01	04/07/01	04/07/01					
DIM IN INCHES	MATL :						
SCALE 1 : 1	SEE PARTS LIST						

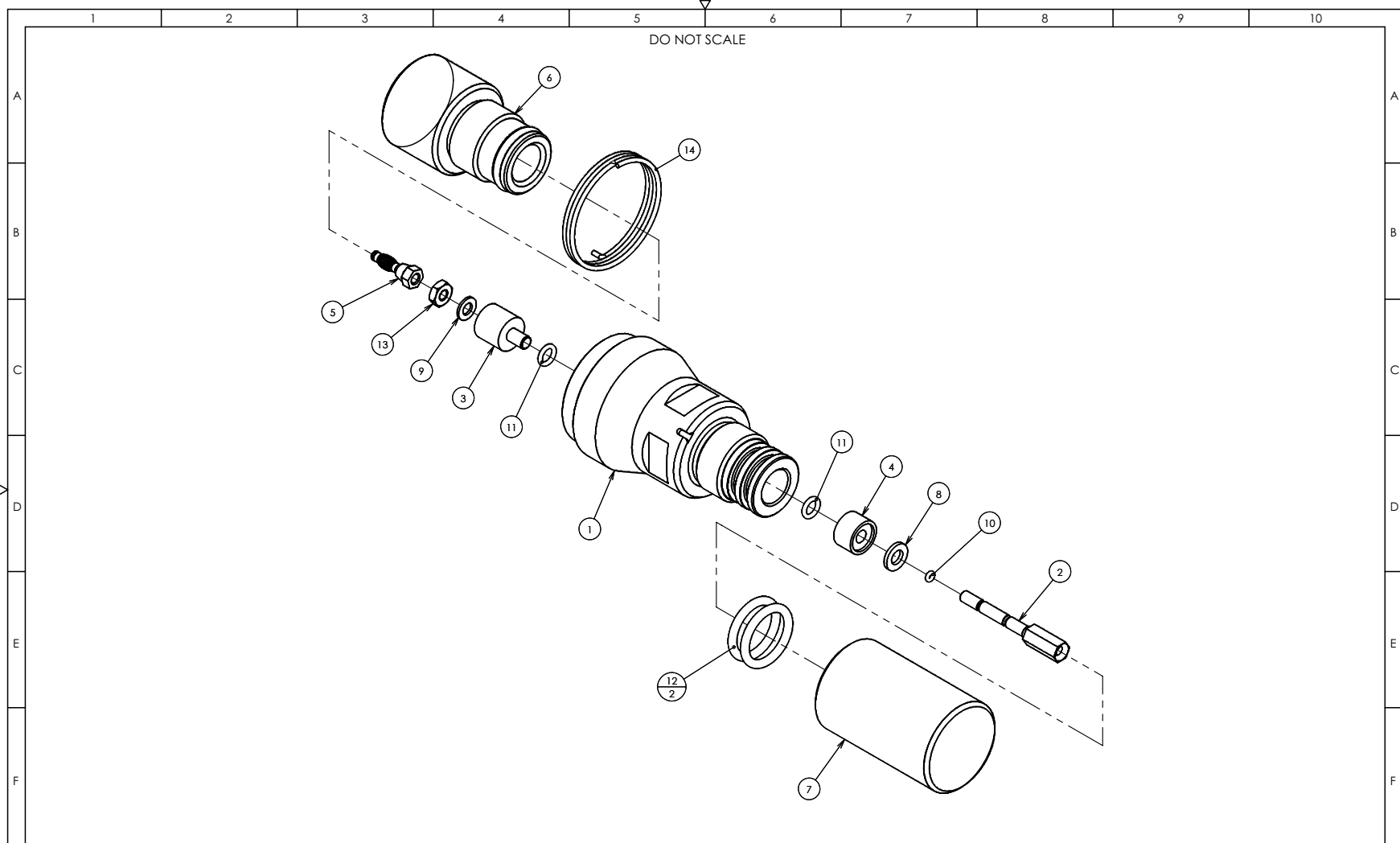


DRAWN	CHECKED	APPROVED	ISS	DESCRIPTION	APPD	DATE	USED ON	TITLE
NGH	IH	AJB	A	INITIAL RELEASE	AJB	27/03/00	ASG01	ASSY ADAPTOR DIA 1 11/16" SONDEX UPPER/GO LOWER
DATE	DATE	DATE						
03/03/00	08/03/00	27/03/00						
DIM IN	MATL:							
INCHES	SEE PARTS LIST							
SCALE								
NTS	A	3						
SONDEX FM No: F0023							<p style="text-align: center;">Sondex GEOPHYSICAL EQUIPMENT Tel. 0118 932 6755</p> <p>THIS DRAWING IS THE PROPERTY OF Sondex AND SHALL NOT BE COPIED OR USED WITHOUT PRIOR PERMISSION</p> <p>THIRD ANGLE PROJECTION </p>	
						<p>MACHINE FINISH 63/ ✓</p> <p>GEN TOL 0. X ±0.020" 0. XX ±0.010" 0. XXX ±0.005" ANGLE ±0.5°</p>		<p>SHEET 1/1</p> <p>DRAWING No. 11509</p> <p>ISSUE A</p>



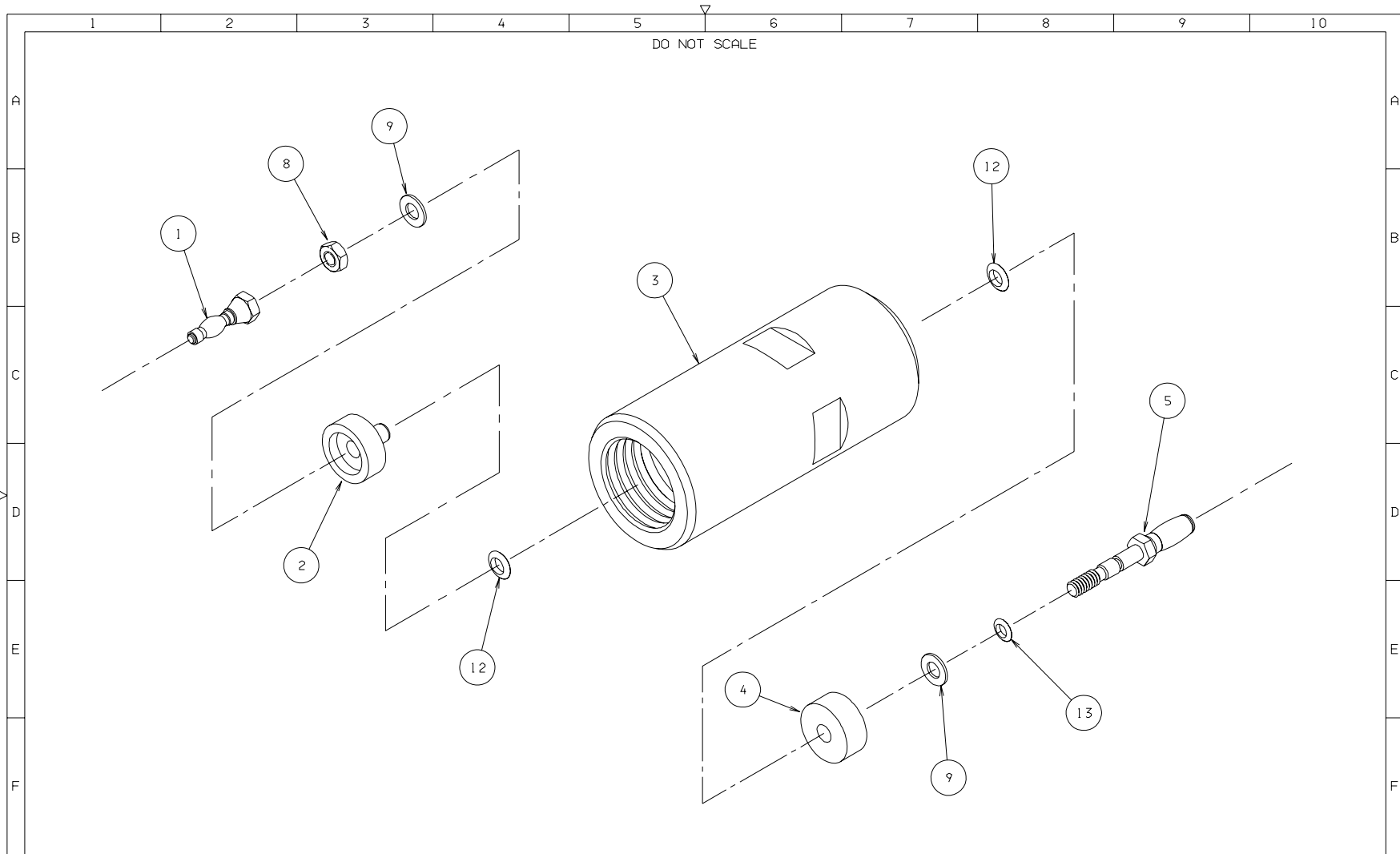
DRAWN ATS/GR	CHECKED AJB	APPROVED DJF	ISS A	DESCRIPTION INITIAL ISSUE	APPD DJF	DATE 19/03/98	Sondex Tel. 0118 932 6755 THIS DRAWING IS THE PROPERTY OF Sondex AND SHALL NOT BE COPIED OR USED WITHOUT PRIOR PERMISSION	MACHINE FINISH 63/	USED ON ASG03	TITLE ADAPTOR SONDEX TO GEARHART DIA 1 11/16"
DATE 25/02/98	DATE 10/03/98	DATE 19/03/98						GEN TOL 0.X ±0.020" 0.XX ±0.010" 0.XXX ±0.005" ANGLE ±0.5°	SHEET 1/1	DRAWING No. 09069
DIM IN INCHES		MATL : SEE DETAIL DRAWINGS		THIRD ANGLE PROJECTION						

SONDEX FM No: F0024



DRAWN: NGH	CHECKED: PML	APPD: TG	ISS	DESCRIPTION	APPD	DATE	Sondex Tel. 0118 932 6755 THIS DRAWING IS THE PROPERTY OF Sondex AND SHALL NOT BE COPIED OR USED WITHOUT PRIOR PERMISSION THIRD ANGLE PROJECTION	MACHINE FINISH	USED ON ASS009	TITLE	ASSY ADAPTOR Ø2-1/8" TO Ø1-11/16" (LOCKABLE)		
DATE: 29/09/03	DATE: 07/04/04	DATE: 07/04/04	PT1	FRAME UPDATED	TG	08/04/04		1.6/µm					
DIM IN mm	MATERIAL: SEE DETAIL DRAWINGS							GEN TOL		SHEET	DRAWING No.	ISSUE	S W
SCALE 1:1	HEAT TREATMENT/CONDITION: NOT APPLICABLE							0 ±0.5mm 0.X ±0.25mm 0.XX ±0.10mm ANGLE ±0.5°		1/1	AD 09636	PT1	

SONDEX FM No: F0022



DRAWN NGH	CHECKED DJF	APPROVED PNJ	ISS	DESCRIPTION	APPD	DATE	Sondex GEOPHYSICAL EQUIPMENT Tel. 0118 932 6755 THIS DRAWING IS THE PROPERTY OF Sondex AND SHALL NOT BE COPIED OR USED WITHOUT PRIOR PERMISSION		USED ON ASS02	TITLE ASSY Ø1 11/16" ADAPTOR (SCT TO SONDEX)		
DATE 08/09/98	DATE 10/09/98	DATE 10/09/98					MACHINE FINISH 63/		GEN TOL 0. X ±0.020" 0. XX ±0.010" 0. XXX ±0.005" ANGLE ±0.5°	SHEET 1/1	DRAWING No. 07084	ISSUE .PT1
DIM IN INCHES		MATL: SEE DETAIL DRAWINGS		THIRD ANGLE PROJECTION								