

**VERTICAL MACHINING CENTER**

# **CADET - MATE**

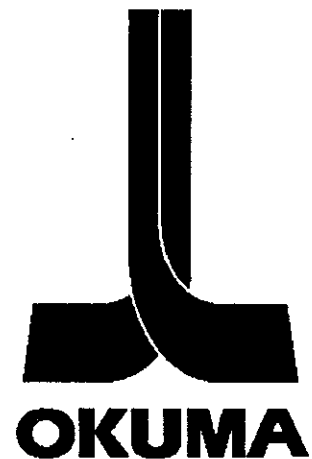
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**OSP 700 M CNC**

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PARTS BOOK

**Publication No. : 0014 (February 1998)**



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## **PARTS BOOK**

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This Parts Book has been prepared to assist you in ordering replacement and servicing parts for the OKUMA Cadet - Mate Vertical Machining Center.

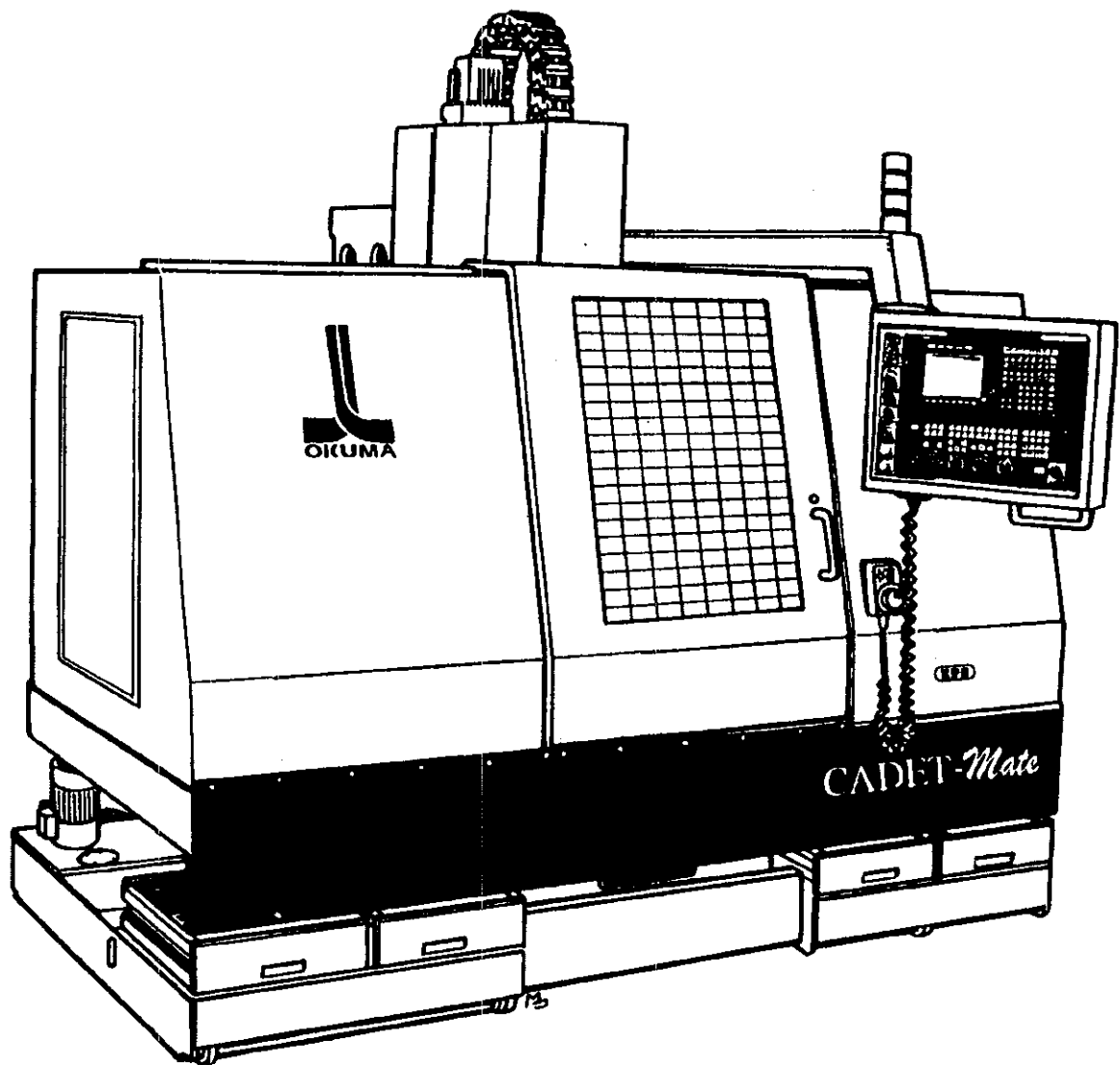
Due to constant improvements in design, you may slight variations from the machine delivered to you. This merely indicates that equipment improvements have been made to better meet your requirements.

### **ORDERING REPAIR PARTS**

In order to obtain smooth and rapid service when ordering repair parts, please give careful attention to the following five instructions.

These FIVE requirements are essential:

1. GIVE COMPLETE SIZE, TYPE OF MACHINE AND CNC SYSTEM.  
EX. CADET - MATE with OSM 700CNC
2. GIVE COMPLETE SERIAL NUMBER OF MACHINE.  
This serial number will be found stamped on the manufacturer's name plate attached to the machine.
3. GIVE PARTS BOOK PUBLICATION NO., SHEET NO., INDEX NO., PART NO., AND PART NAME (DESCRIPTION).
4. FOR ELECTRICALS, SPECIFY POWER VOLTAGE, FREQUENCY, RATING, BRAND NAME AND OTHER INFORMATION FOUND ON THE PART.
5. STATE QUANTITY WANTED.



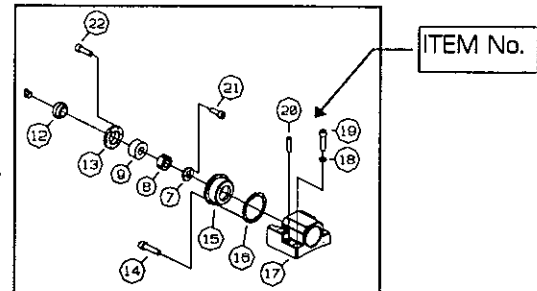
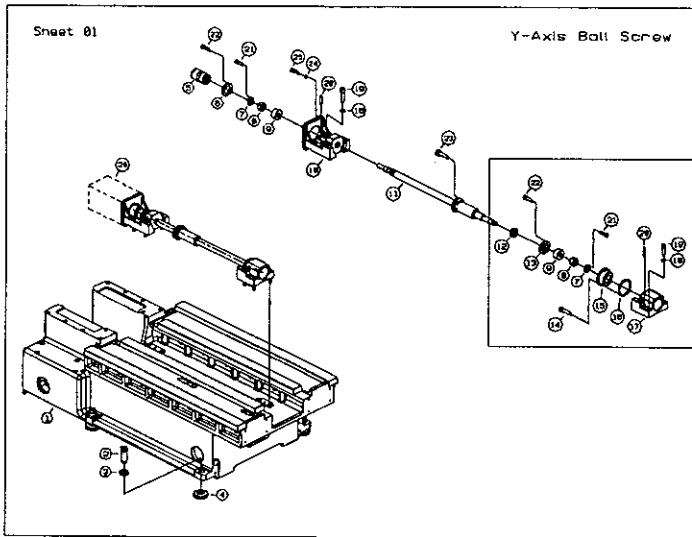
**Okuma CADET - MATE with OSP 700 M CNC**

Reference to the parts book  
(When the part No. is not given)

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1. After searching the CONTENTS in which the required part belongs, turn to the sheet No. page.

2. After searching the required part in the drawing, remember the item No.



3. Search the data of the corresponding part in the list by the found item No. in order to obtain the desired information.

PN	ZPS ORDER #	NAME	DIMENSION	STANDARD	Qty
1-1	R220041-R1A1	BASE			1
1-2	R220041-21E4	ADJUSTING SCREW			6
1-3	R220041-22E1	NUT			6
1-4	R220041-24E4	FOOT			6
1-5	R220041-R16, 1P1	FEED COUPLING	35*24		1
1-6	R220251-66E1	RING			1
1-7	R220241-261M2	RING			2
1-8	R220241-2817E1	SLOTTED NUT			2
1-9	3240010020	BEARING	2KLN3062-2RS	INA	2
1-10	R220041-601B2	MOTOR FLANGE			1
1-11	R220041-551B1	BALL SCREW LENGTH 1000			1
1-12	R220241-2822E3	LABYRINTH RING			1
1-13	R220291-57E1	FLANGE 64X10			1
1-14	3095850065	SHCS	M6X25 ZN	DIN 912-12.9	8
1-15	R220041-595D1	BEARING HOUSING			1
1-16	R220041-596E1	MATCHING SHIM			1
1-17	R220041-571B2	HOUSING CASTING			1
1-18	R220041-LA21	PLATE			1
1-19	3095850330	SHCS	M16X50 ZN	DIN 912-12.9	4
1-20	3115161840	TAPER PIN	10X40	DIN EN 28736	4
1-21	3095850065	SHCS	M6X16 ZN	DIN 912-12.9	6
1-22	3095850062	SHCS	M6X20 ZN	DIN 912-12.9	12
1-23	3095850126	SHCS	M8X30 ZN	DIN 912-12.9	8
1-24	3112140420	LOCK WASHER	18 ZN	DIN 7940	4
1-25	3095431620	SHCS	M12X35 ZN	DIN 912-8.8	4

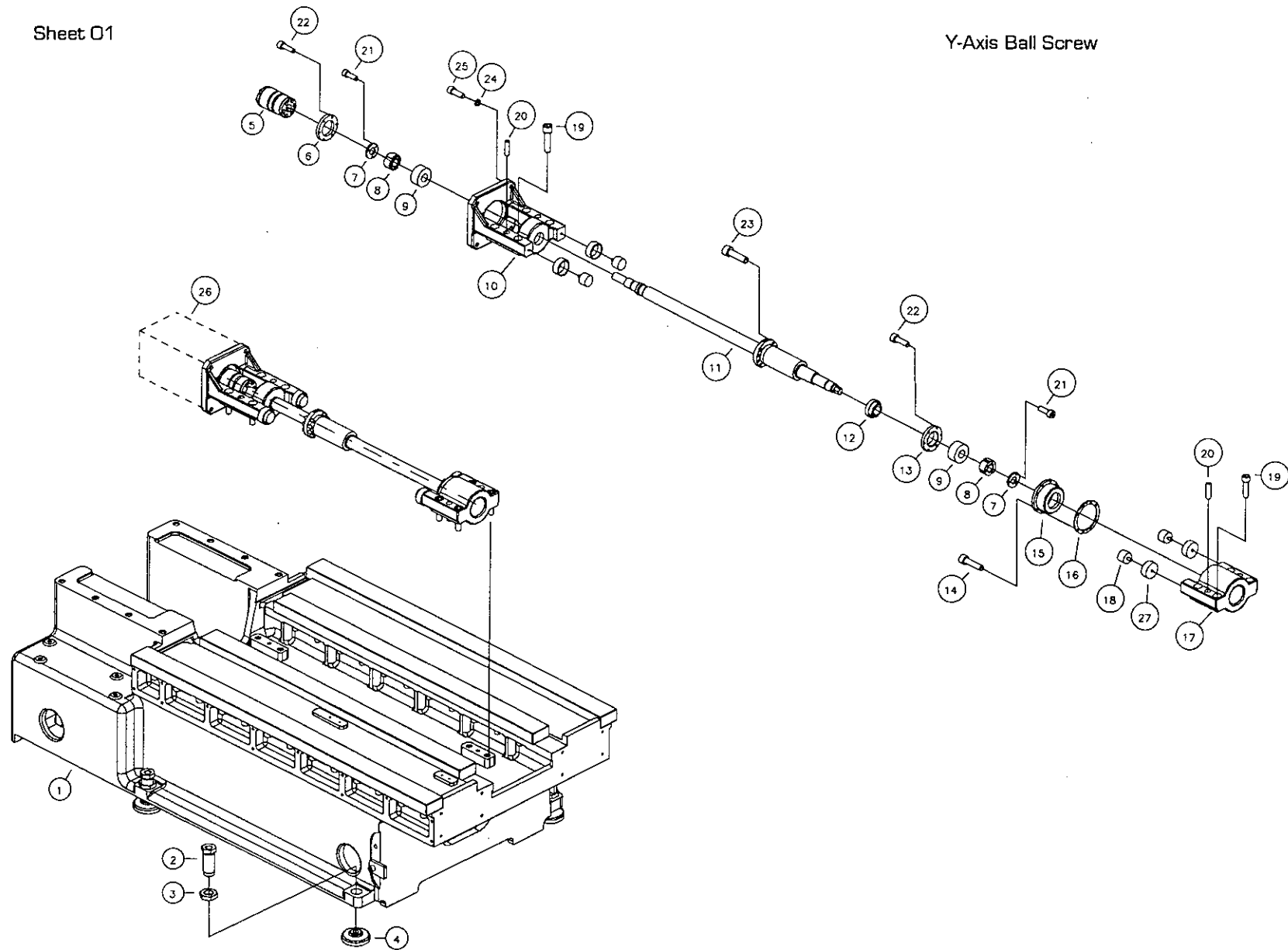
1-19	3095850330	SHCS	M16X50-12.9	DIN 912-8.8	4
ZPS ORDER #	NAME	DIMENSION	STANDARD	Qty	

INDEX NO.

SHEET NO. - ITEM NO.

Sheet 01

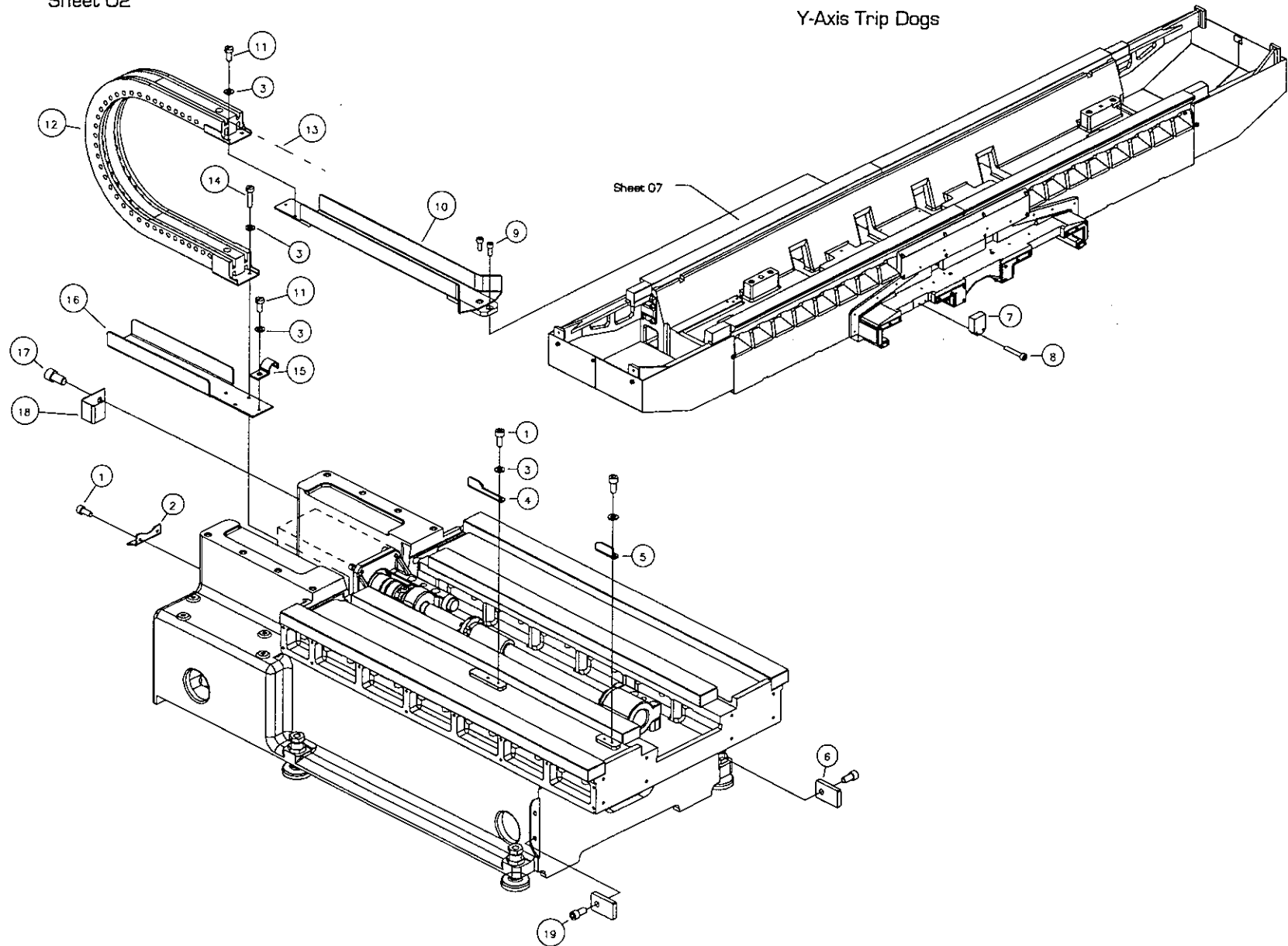
Y-Axis Ball Screw





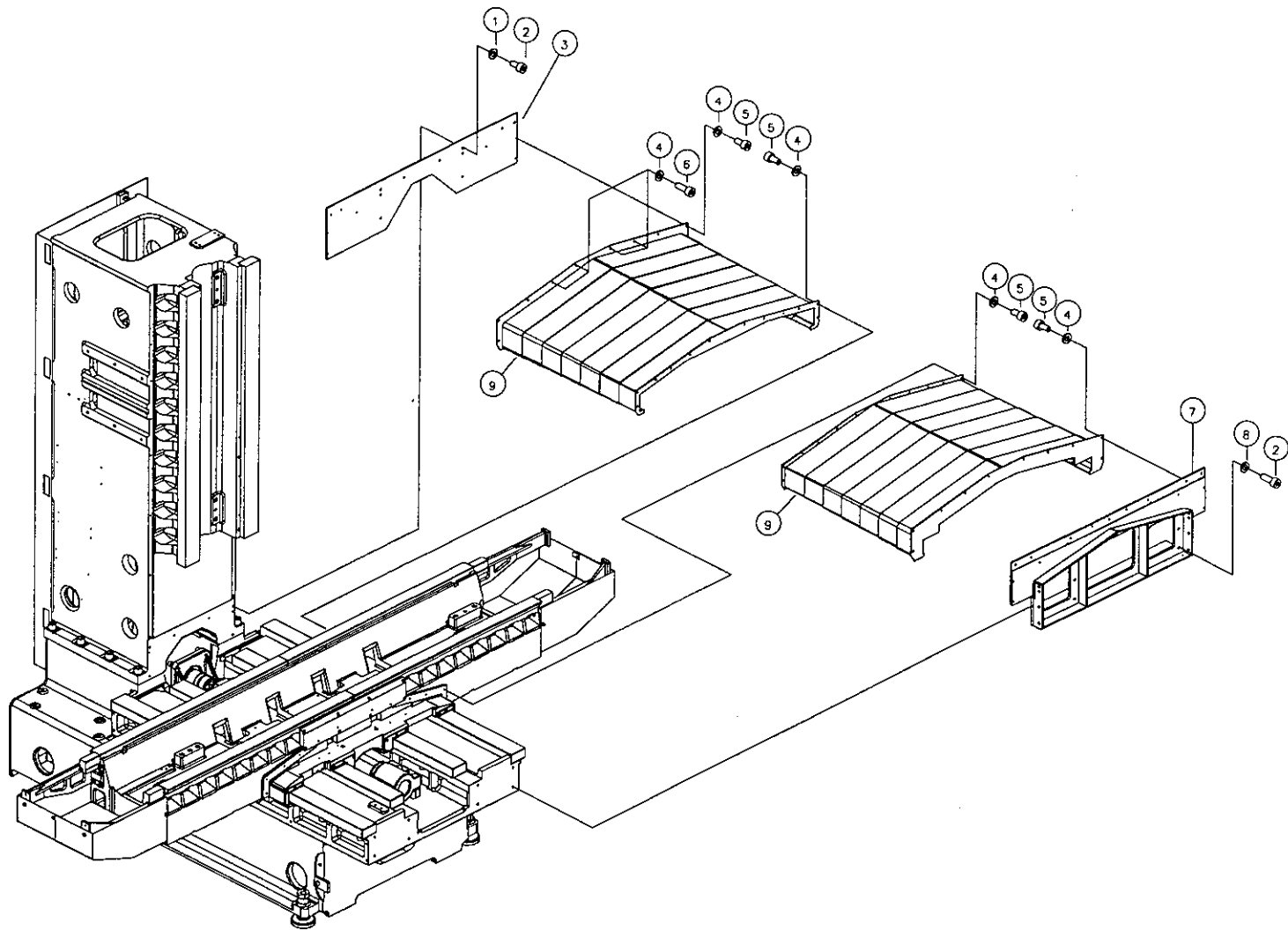
Sheet 02

Y-Axis Trip Dogs





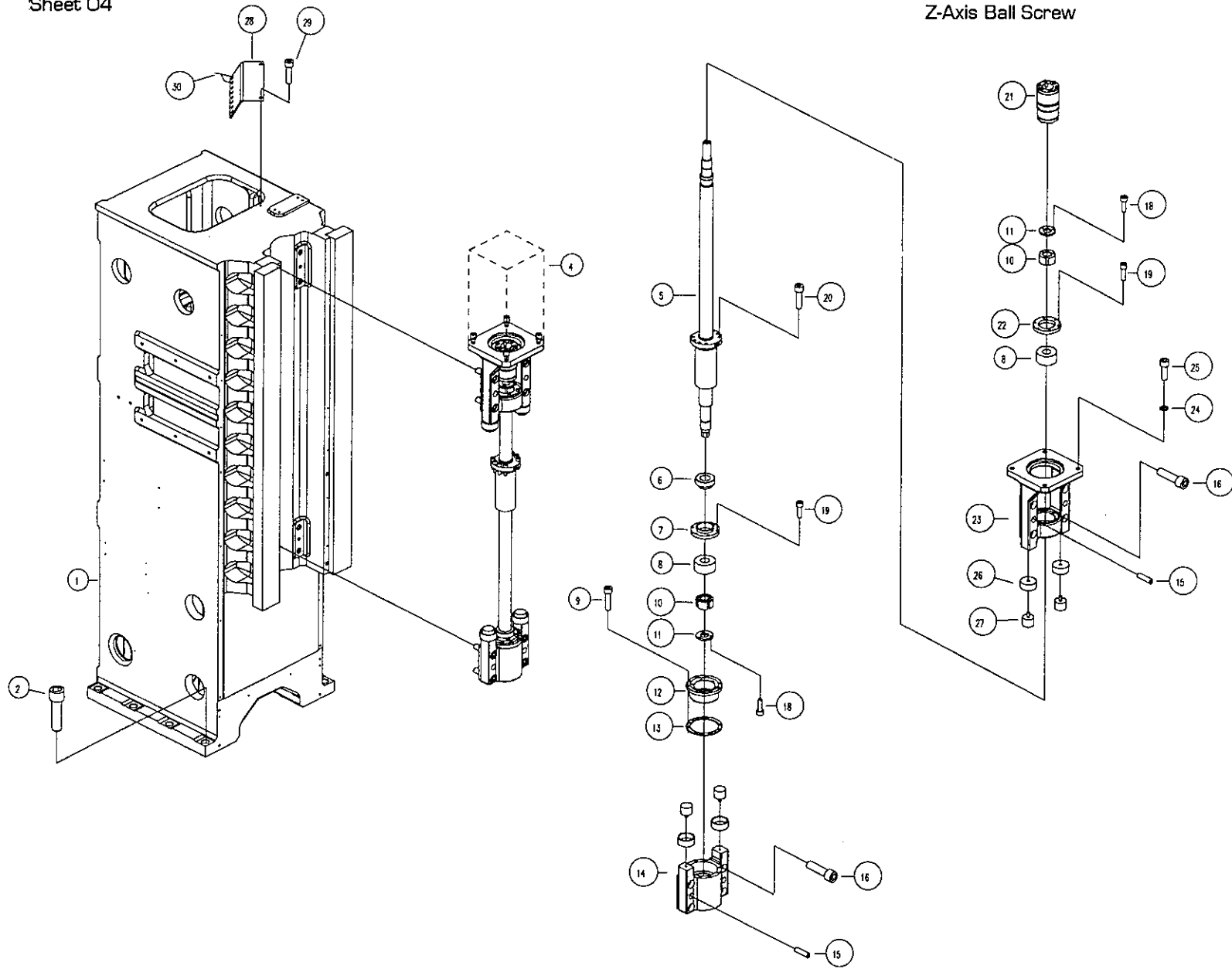






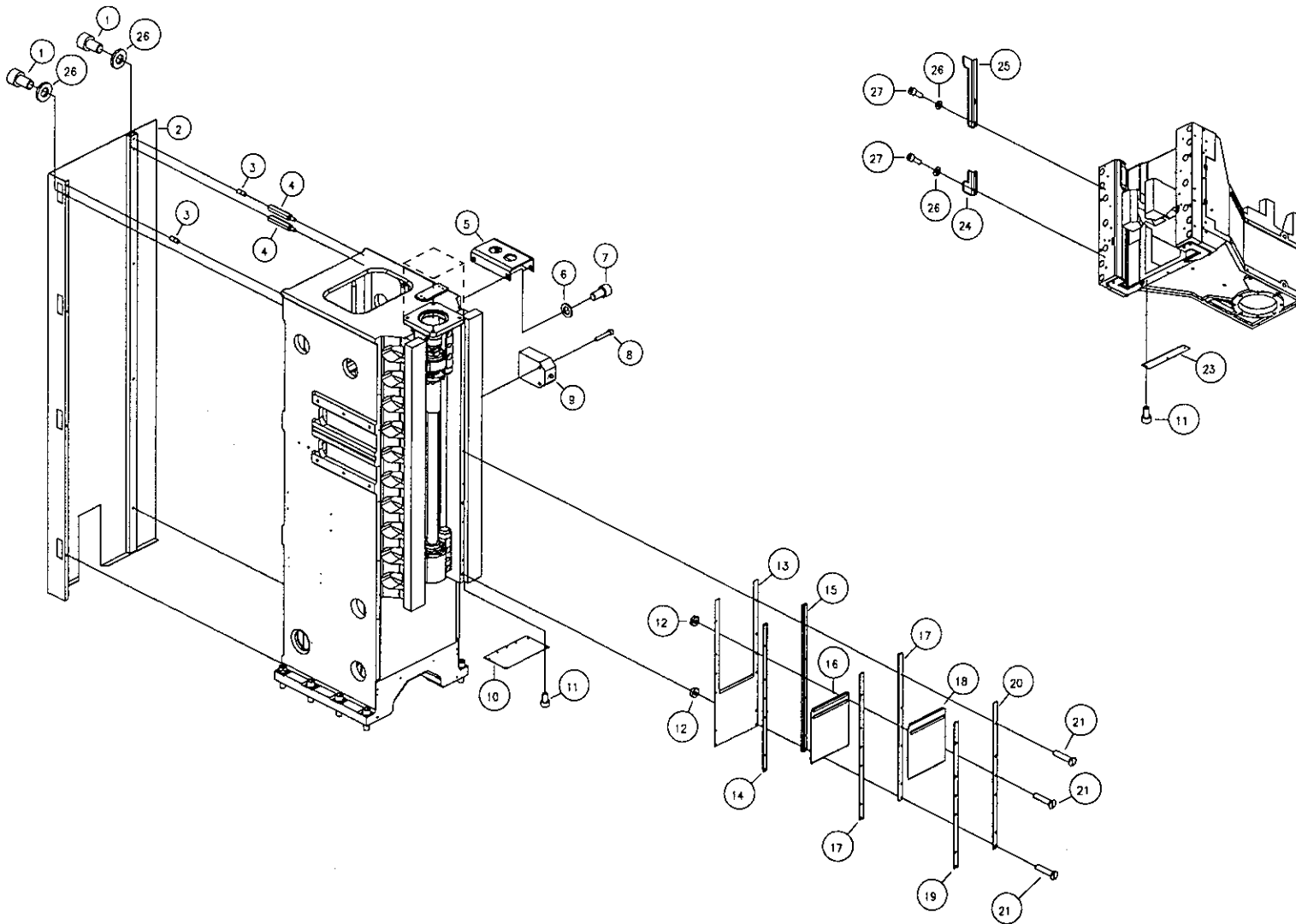
Sheet 04

Z-Axis Ball Screw





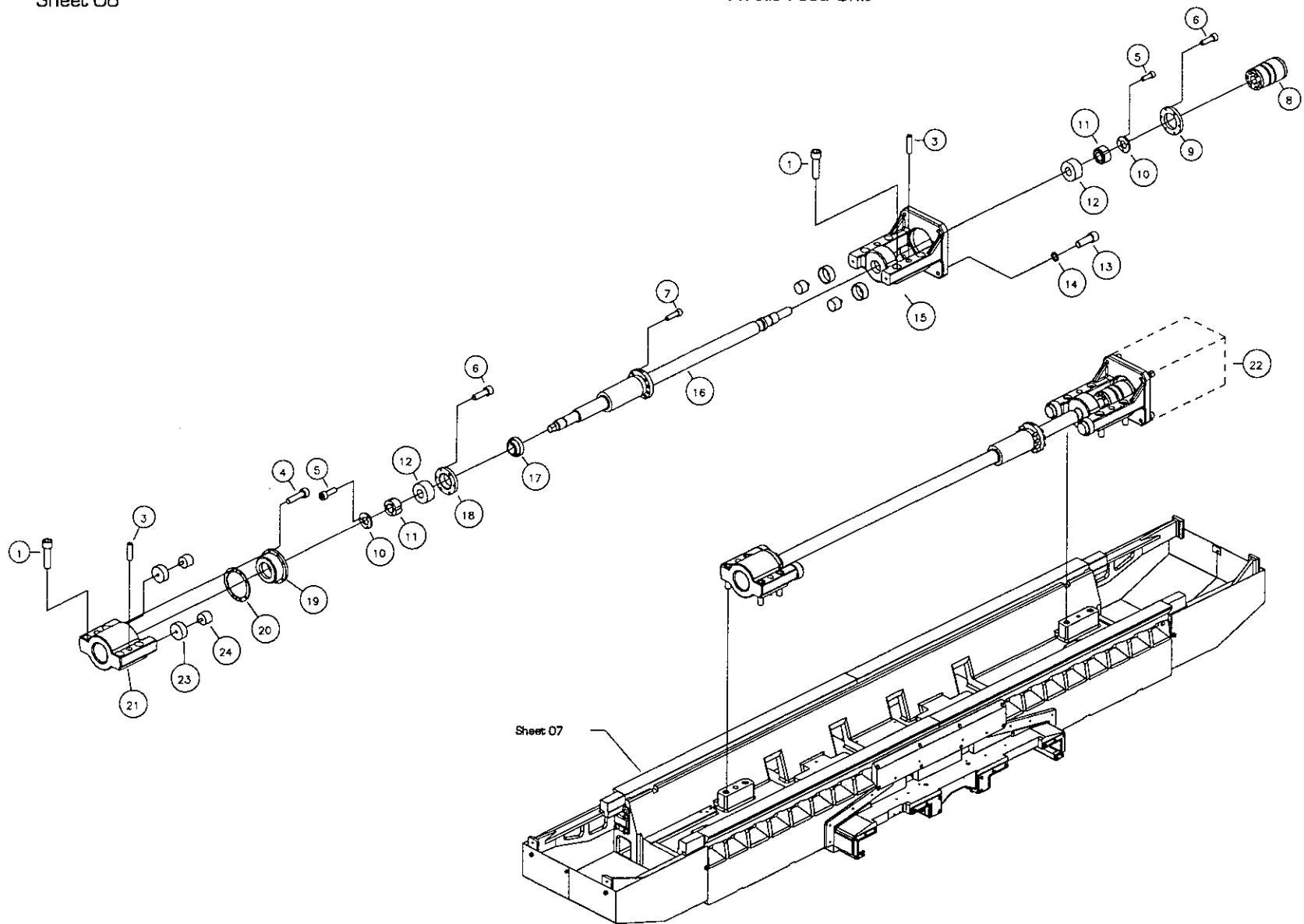
Sheet 05

Column - Z-Axis Trip Dogs  
Z-Axis Telescopic Covers



Sheet 06

## X-Axis Feed Unit



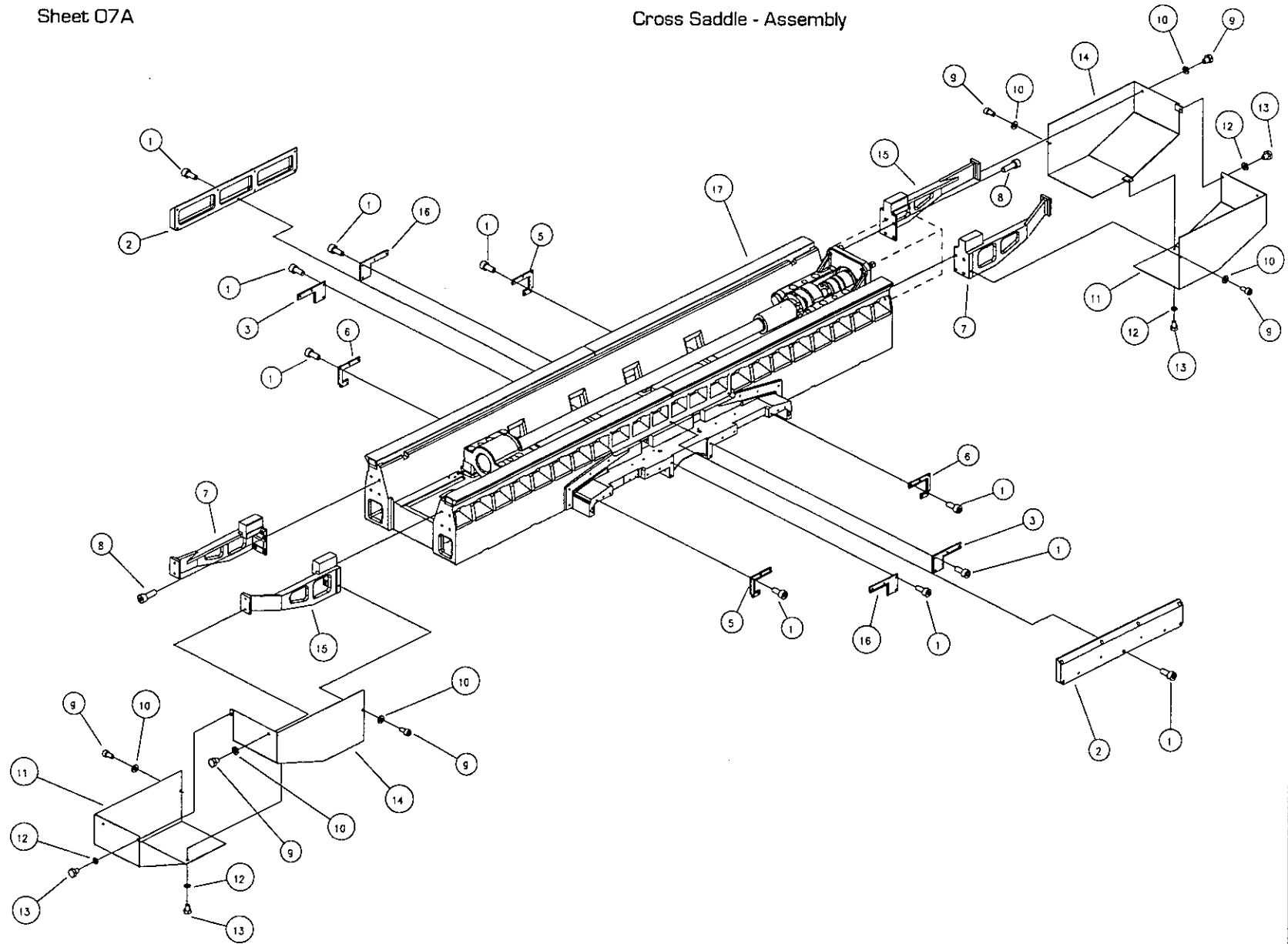
Sheet 07





Sheet 07A

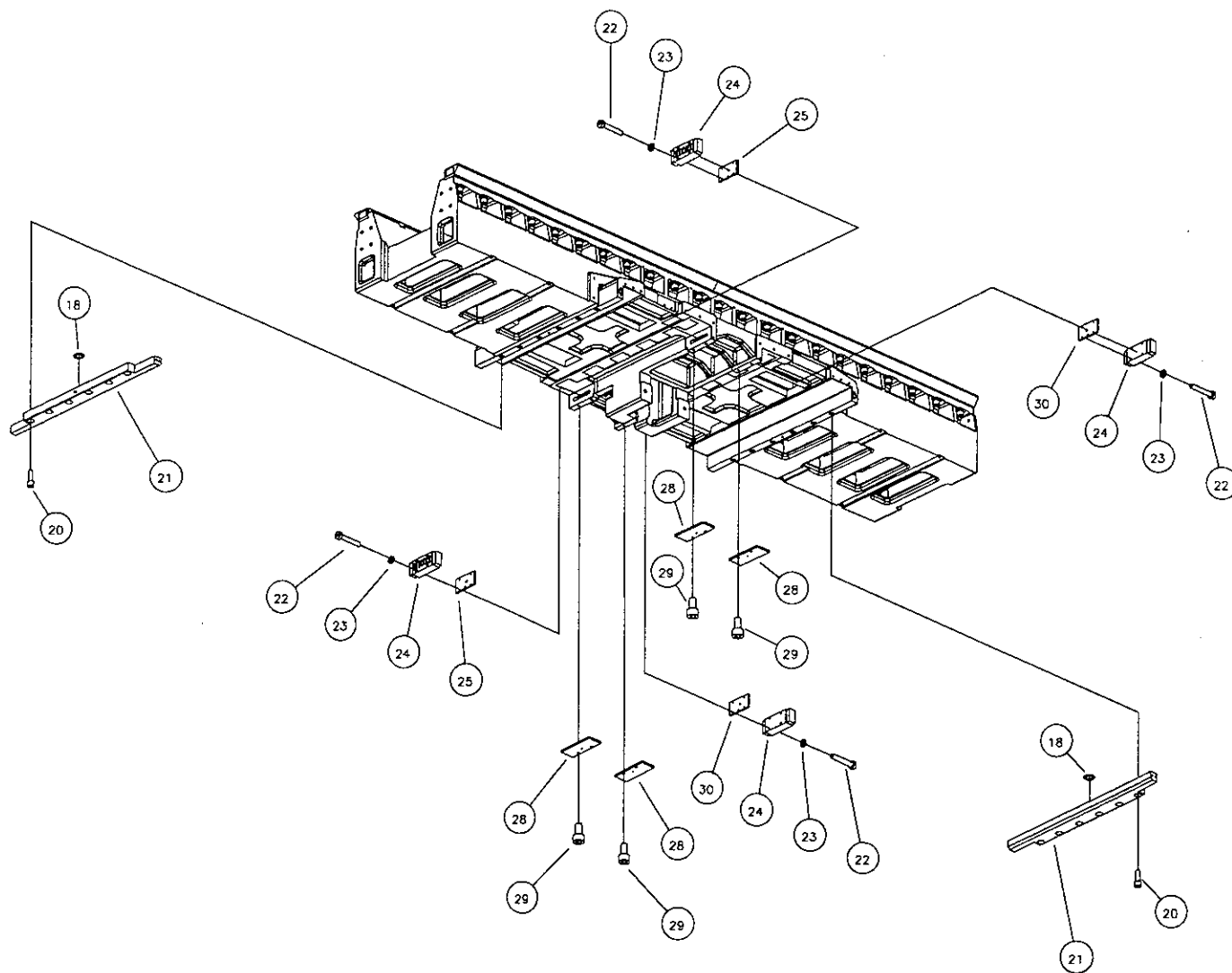
## Cross Saddle - Assembly



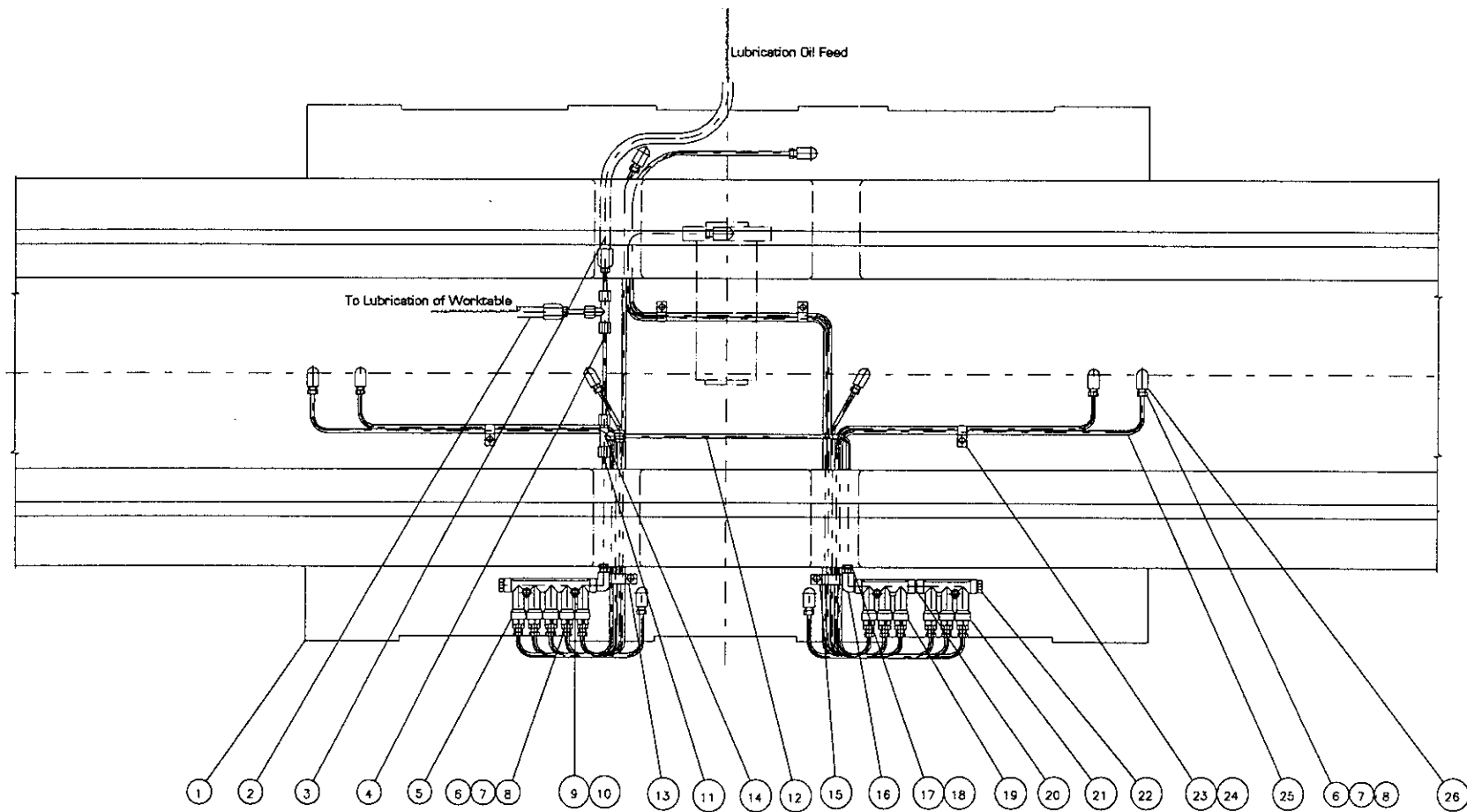


Sheet 07B

Cross Saddle - Assembly



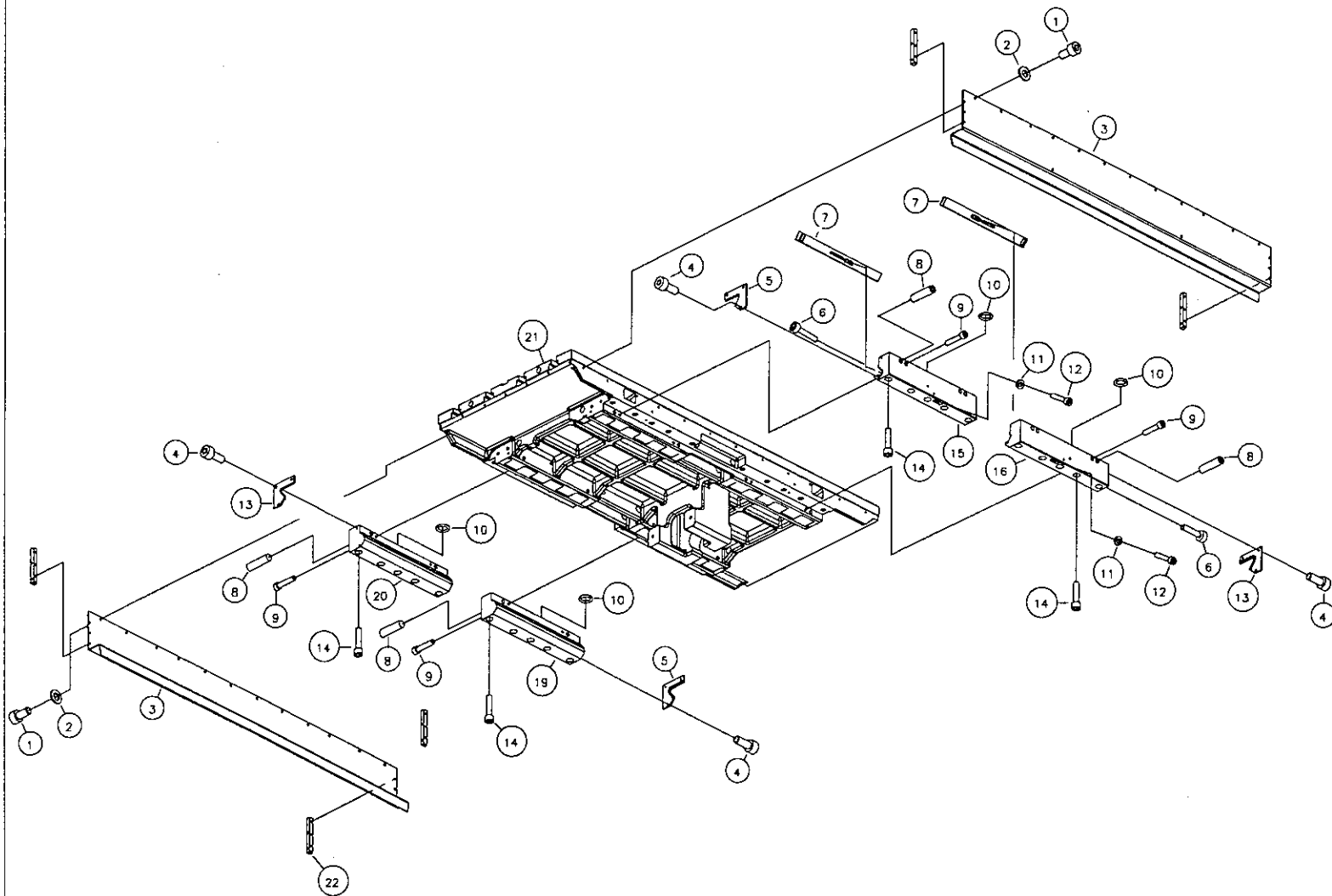






Sheet 09

Table - Assembly

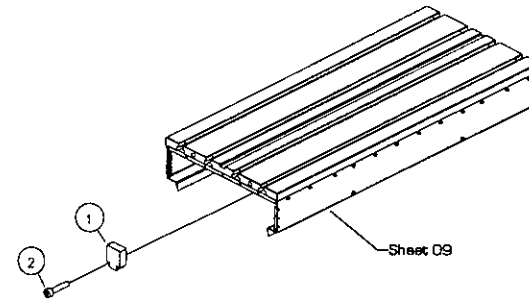
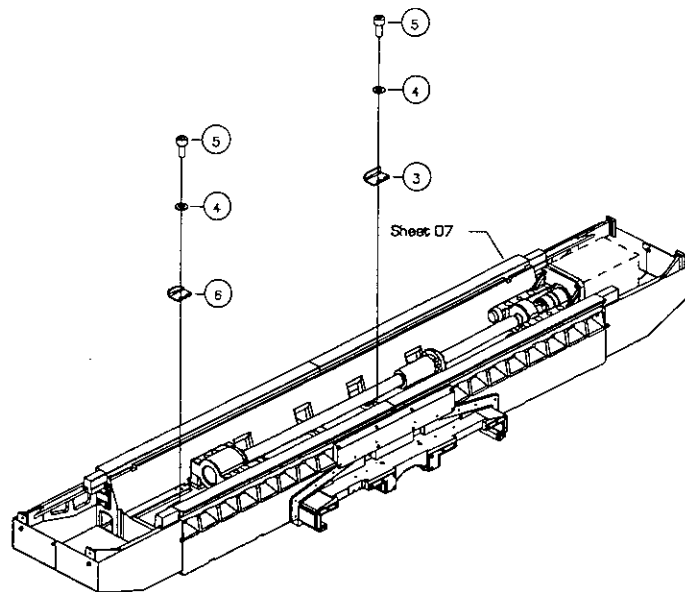




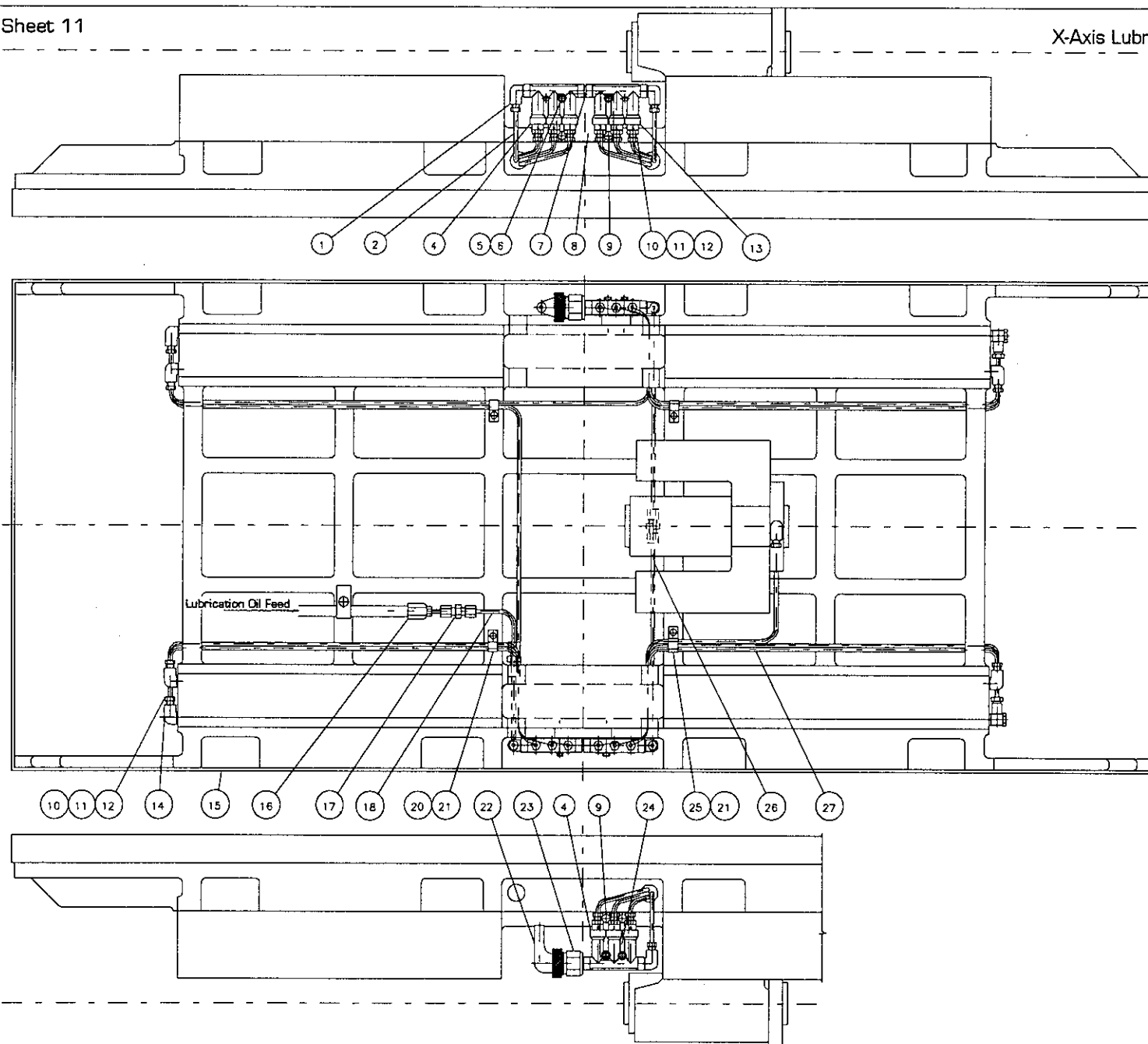


Sheet 10

X-Axis Trip Dogs



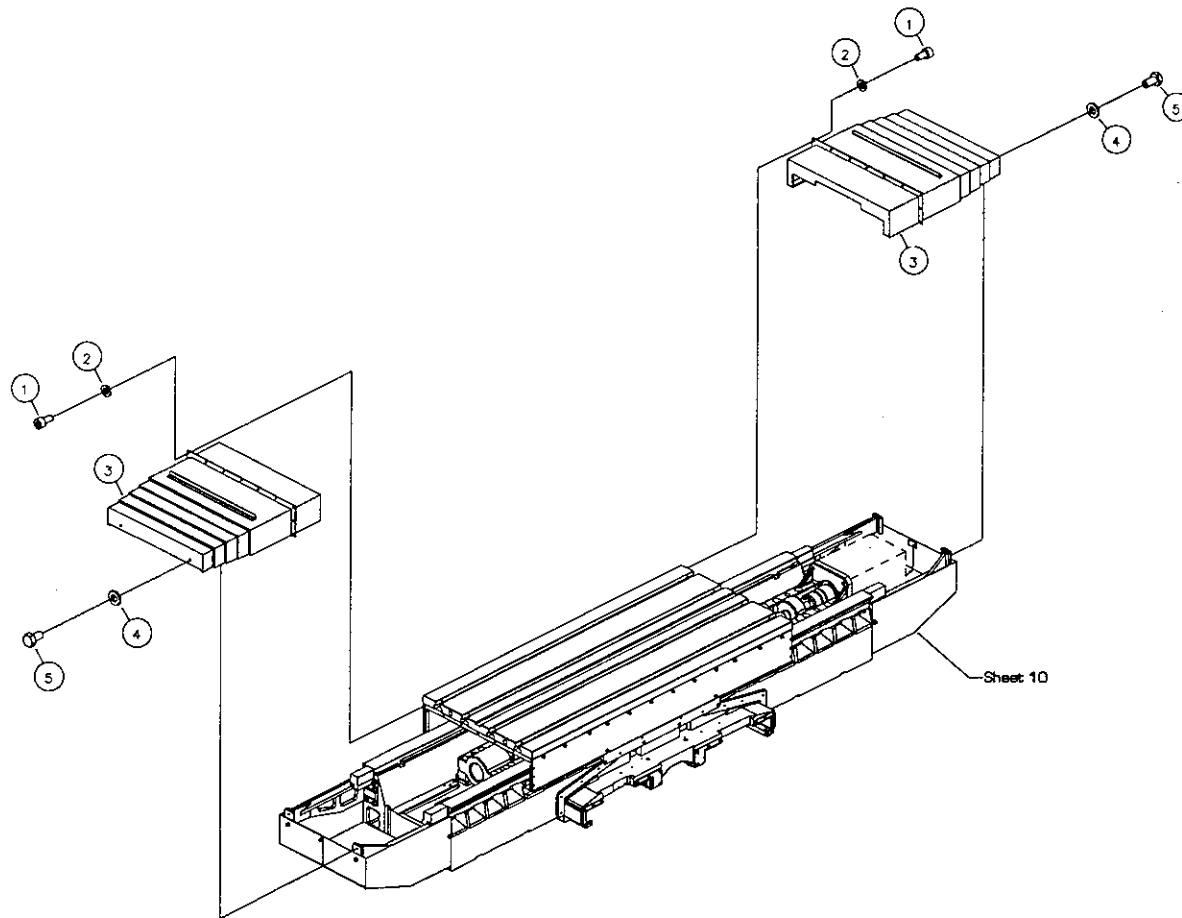






Sheet 12

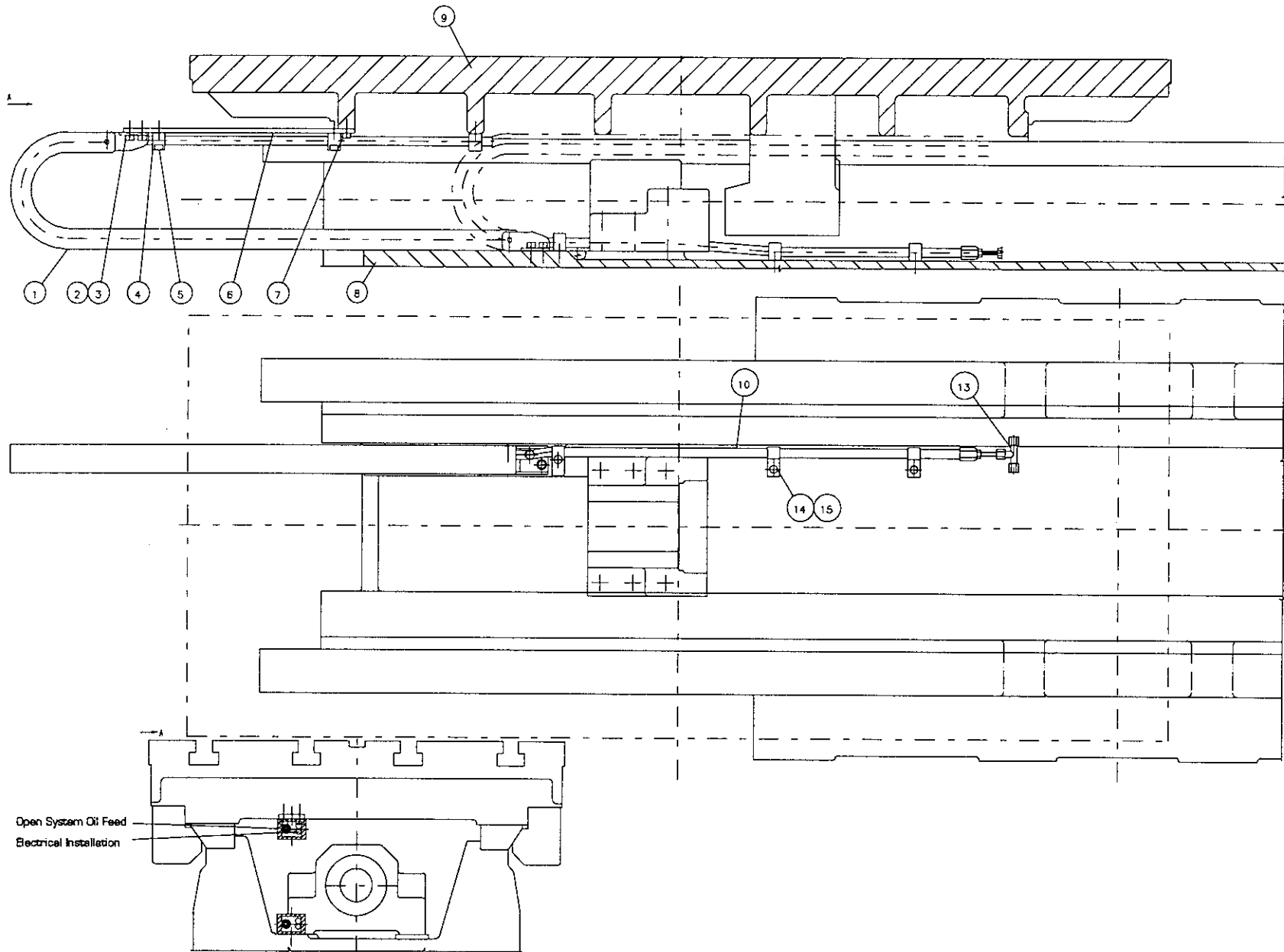
## X-Axis Telescopic Covers





Sheet 13

X-Axis Power Feed

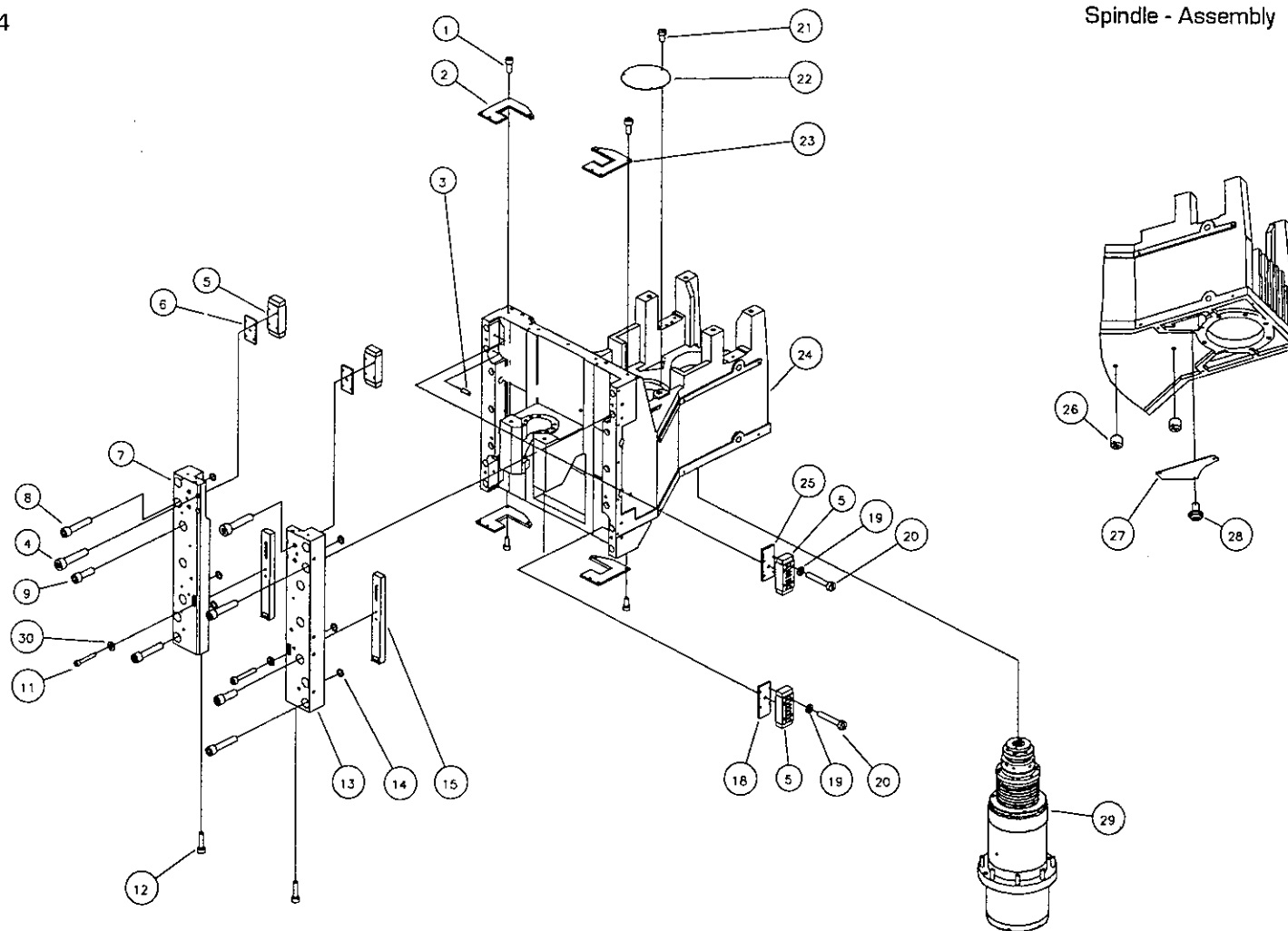






Sheet 14

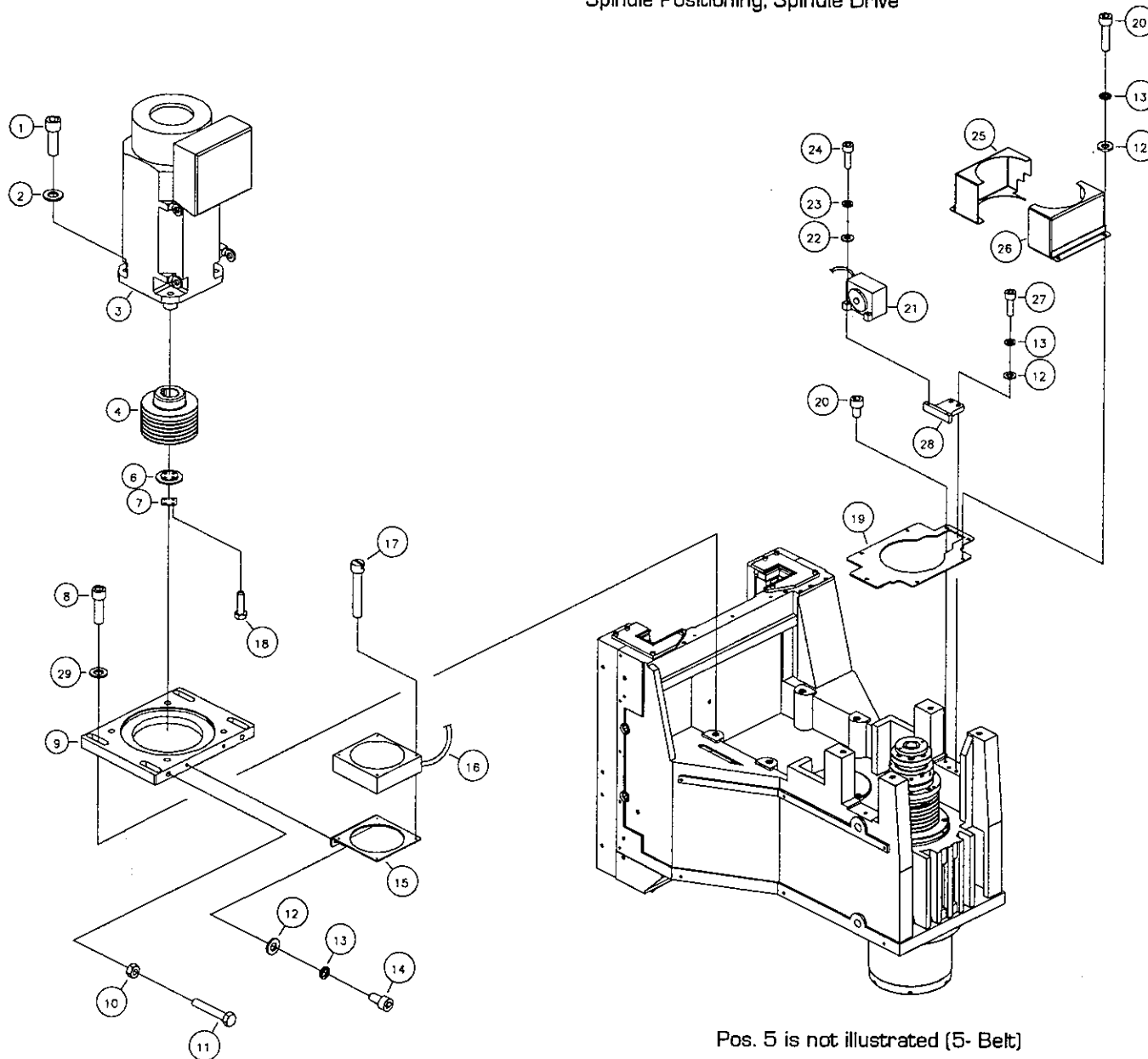
## Spindle - Assembly



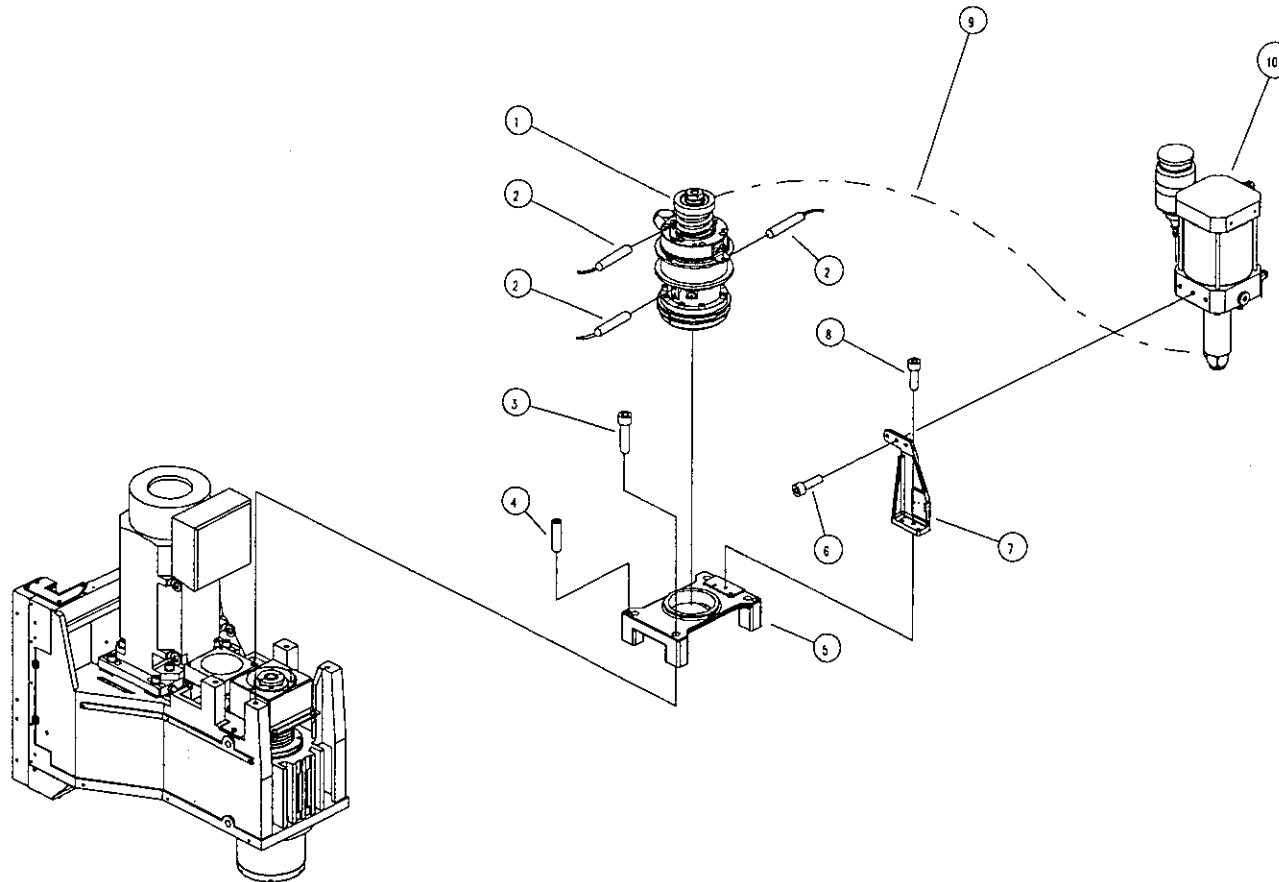


Sheet 15

## Spindle Positioning, Spindle Drive



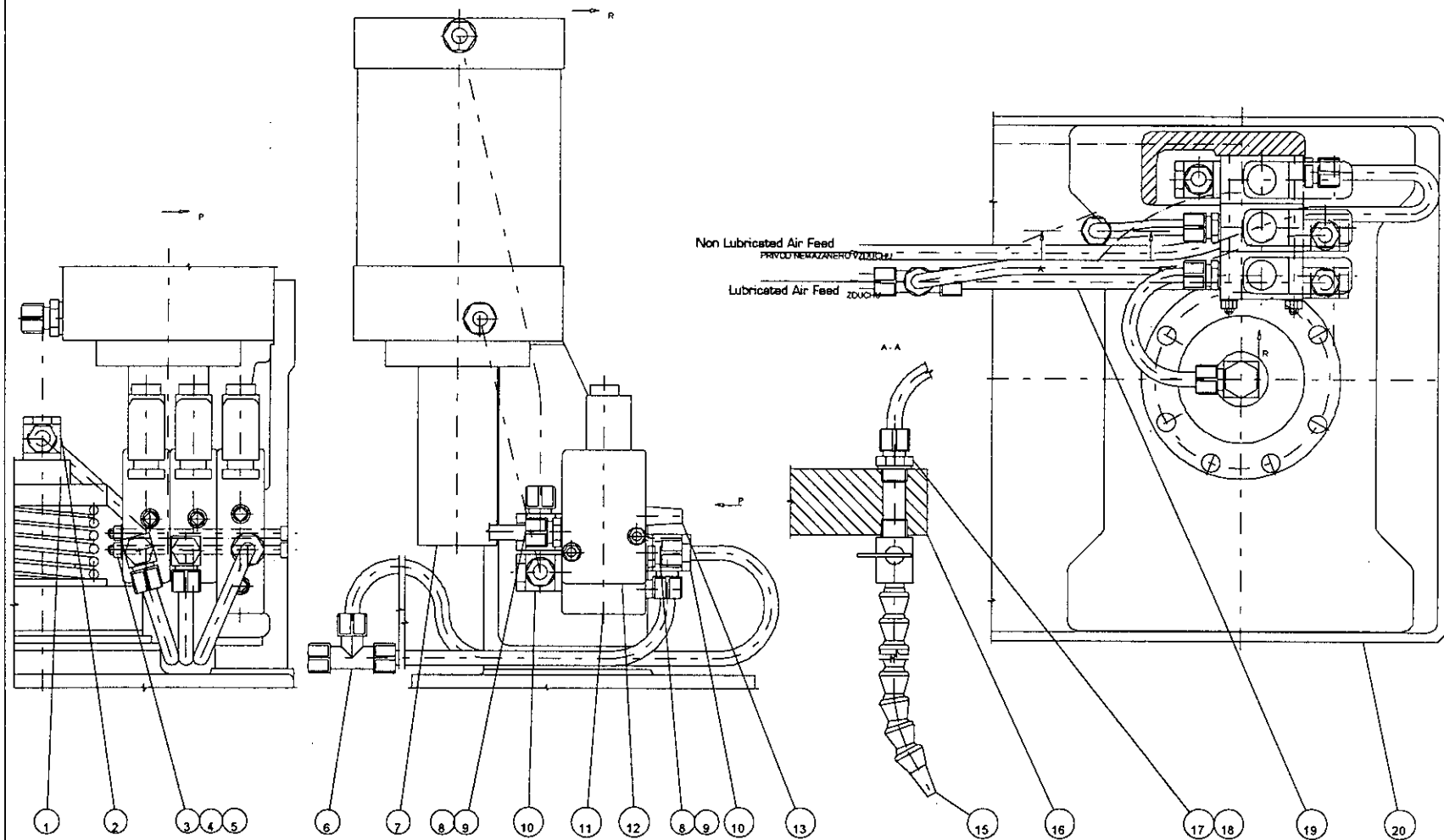






Sheet 17

## Spindle Head Pneumatics

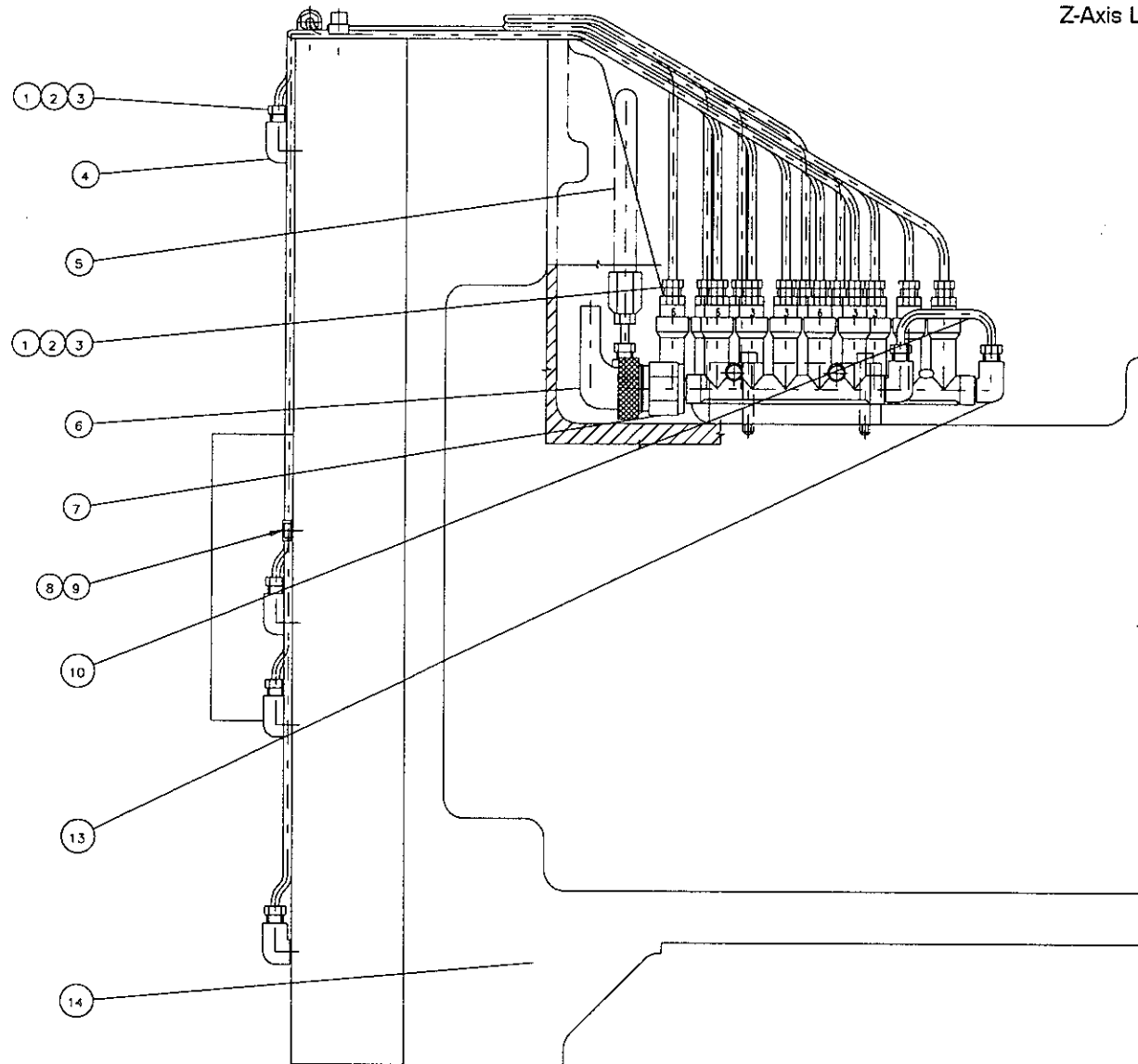






Sheet 18A

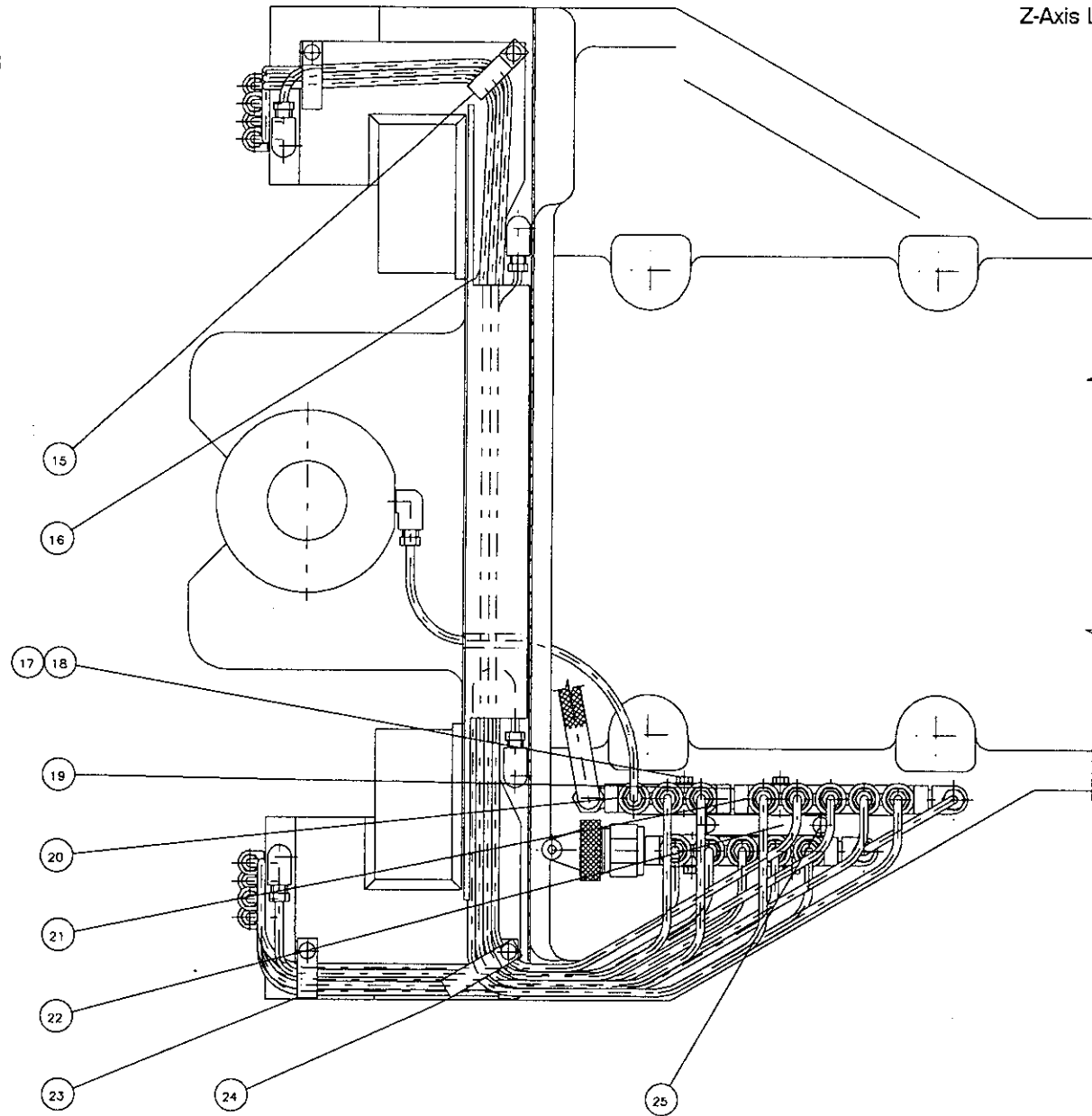
Z-Axis Lubrication



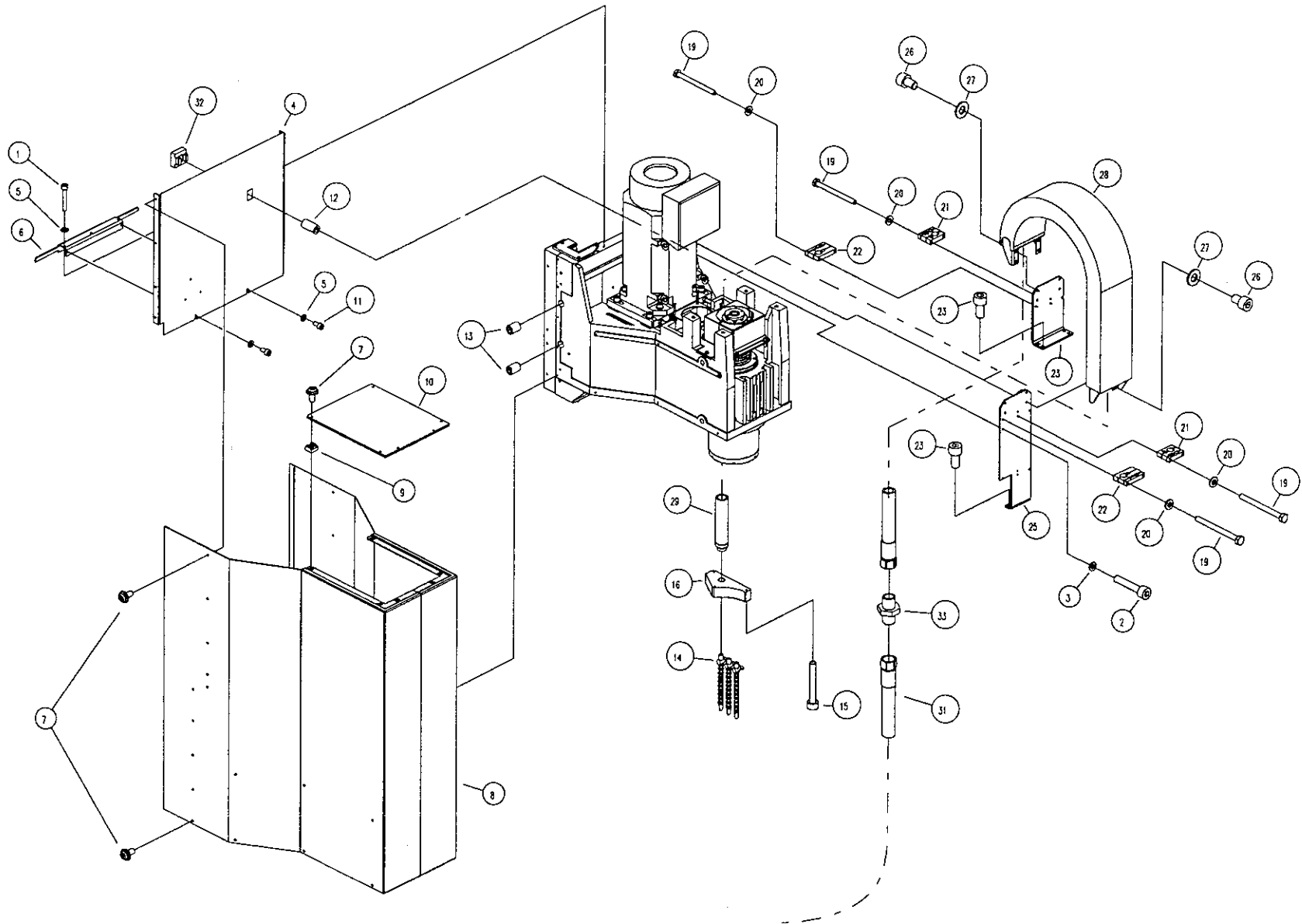


Sheet 18B

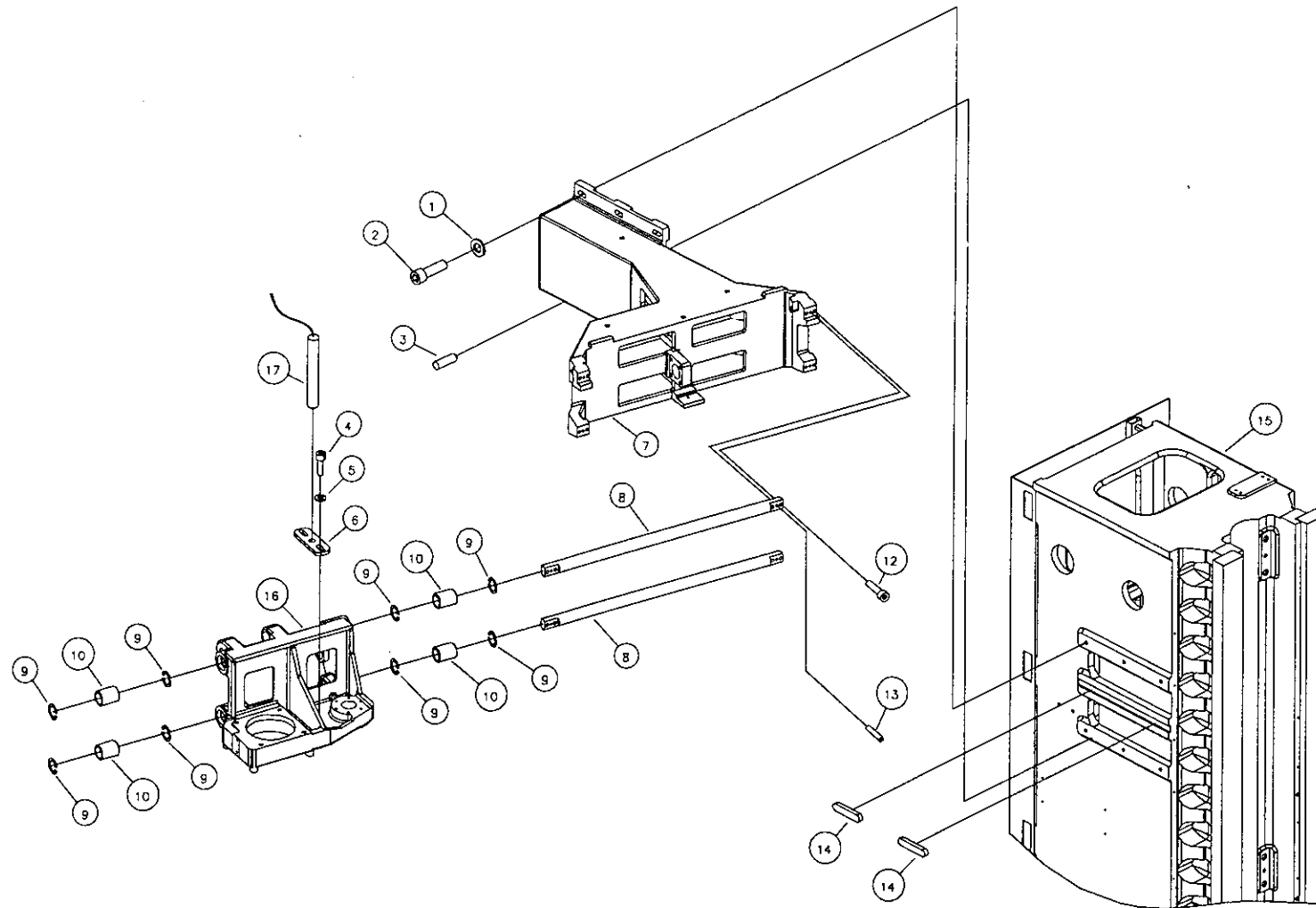
Z-Axis Lubrication









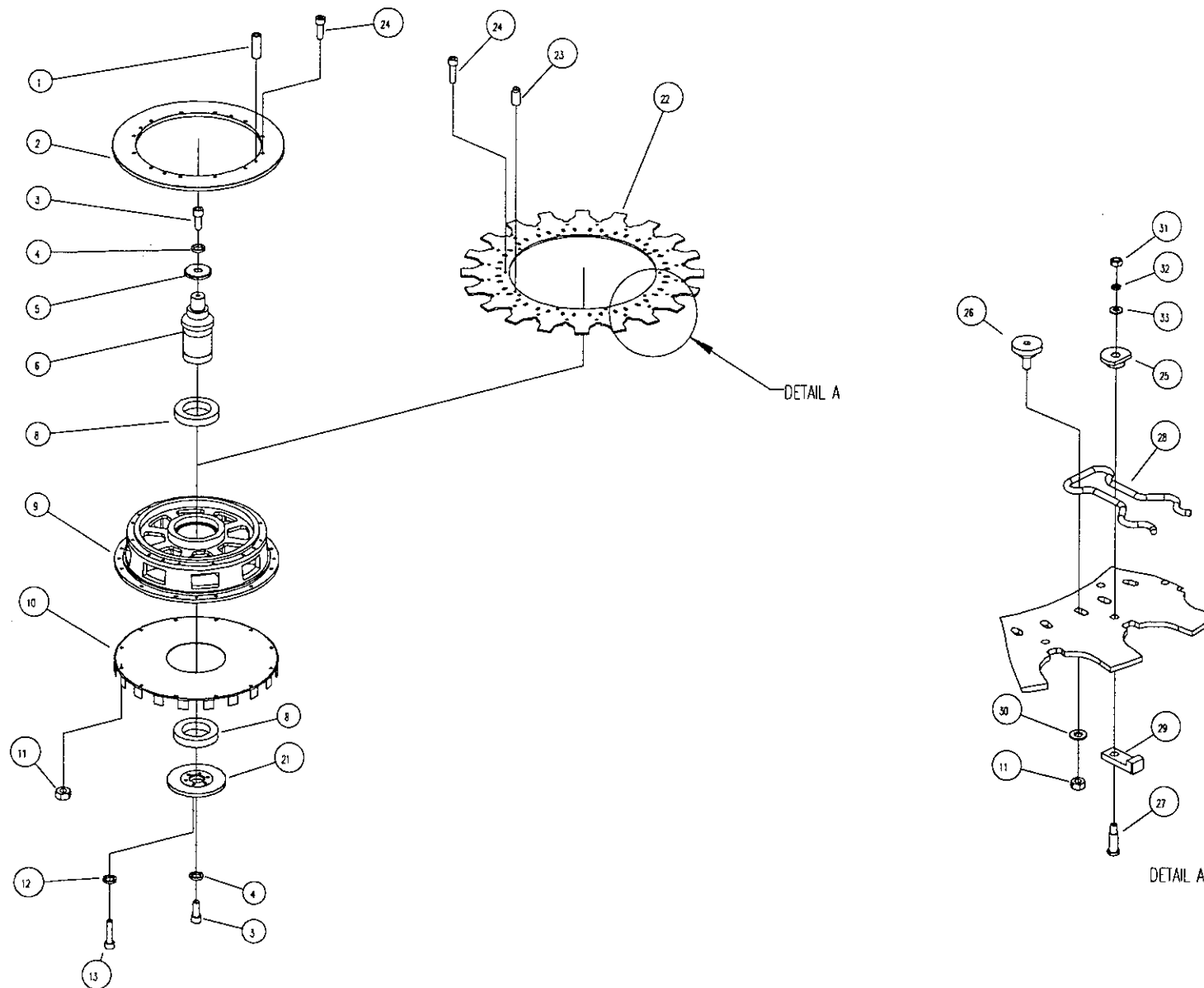






Sheet 21A

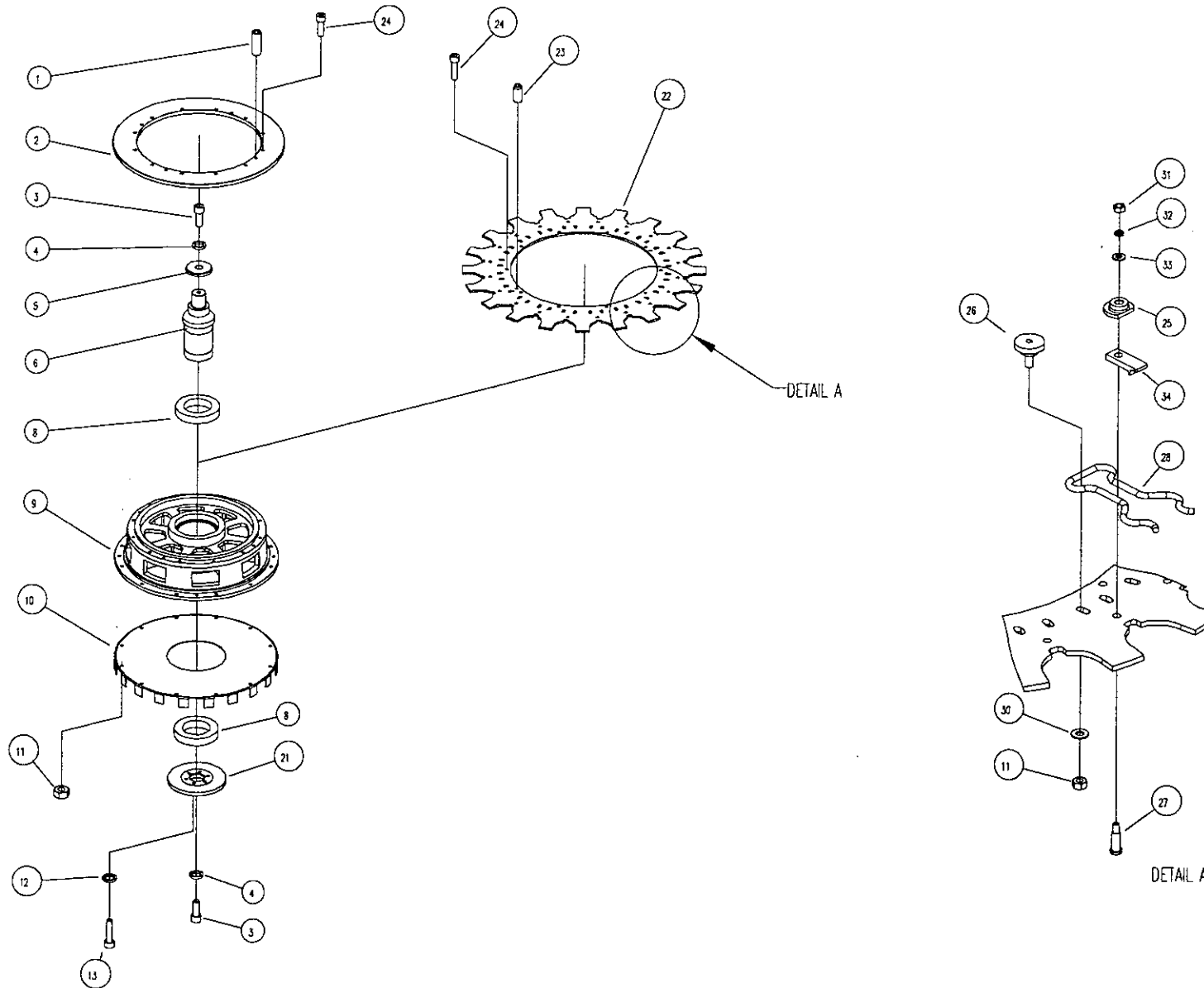
Tool Magazine - Tool Carrier CAT 40





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Tool Magazine - Tool Carrier BT 40

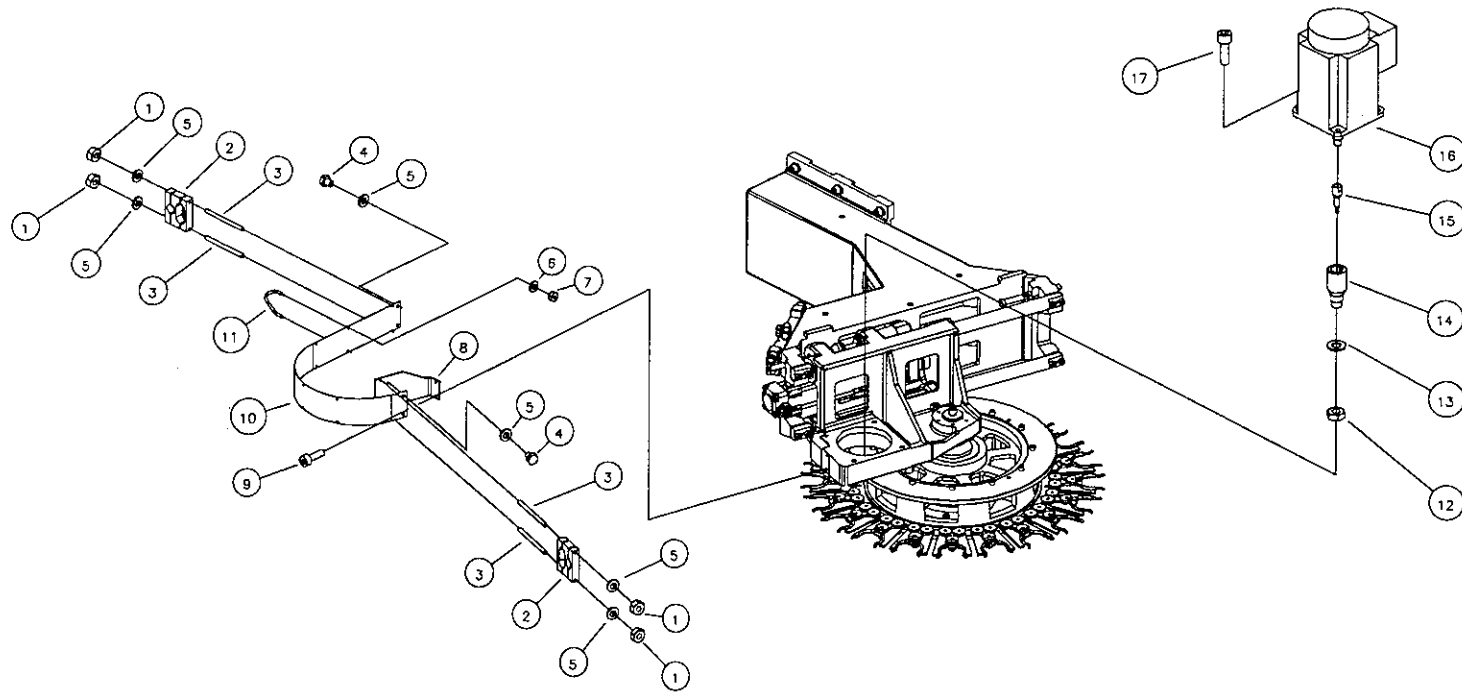




Sheet 22

Tool Magazine

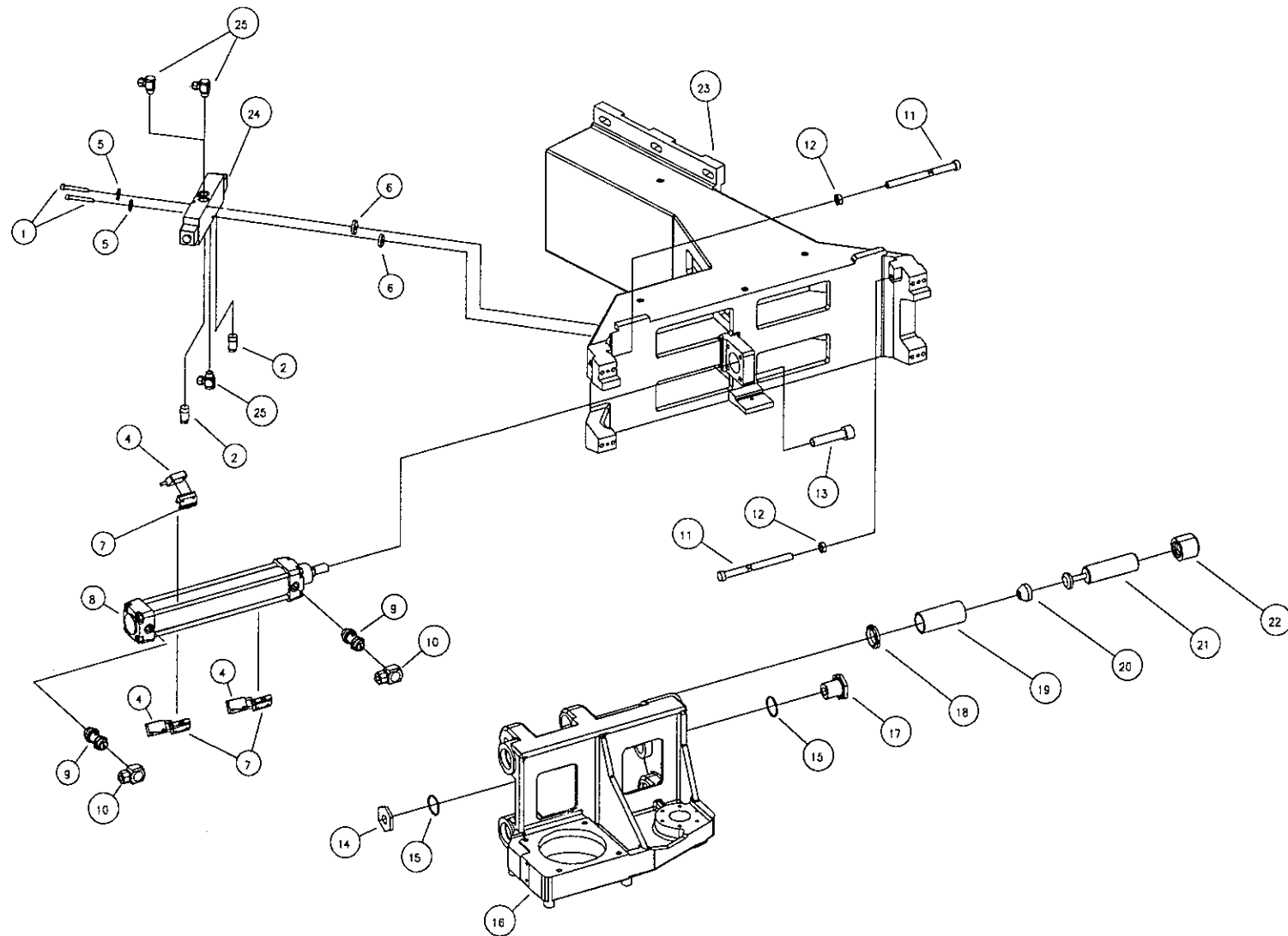
Motor Connection, Power Supply Lines





Sheet 23

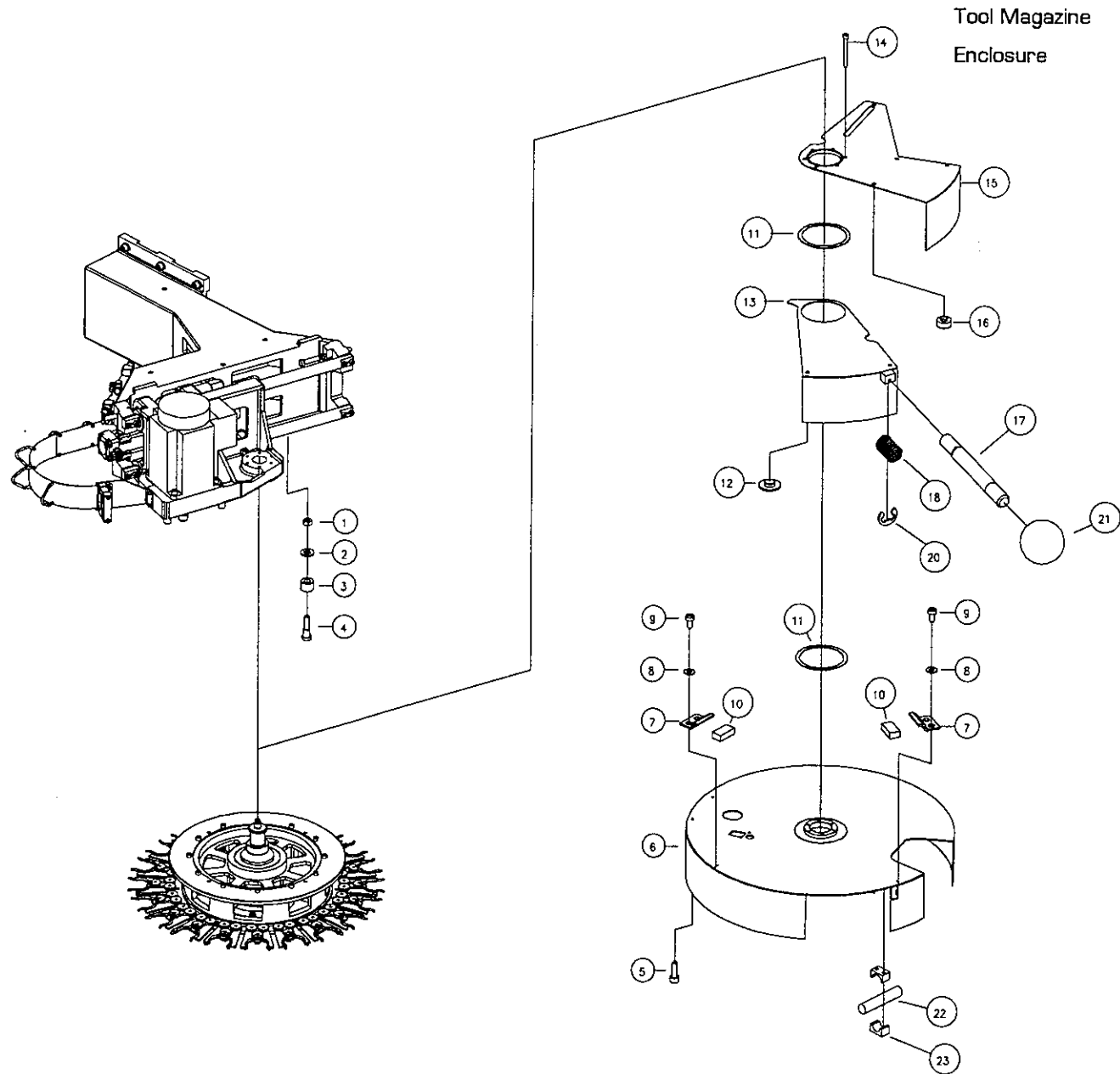
Tool Magazine - Slide Out





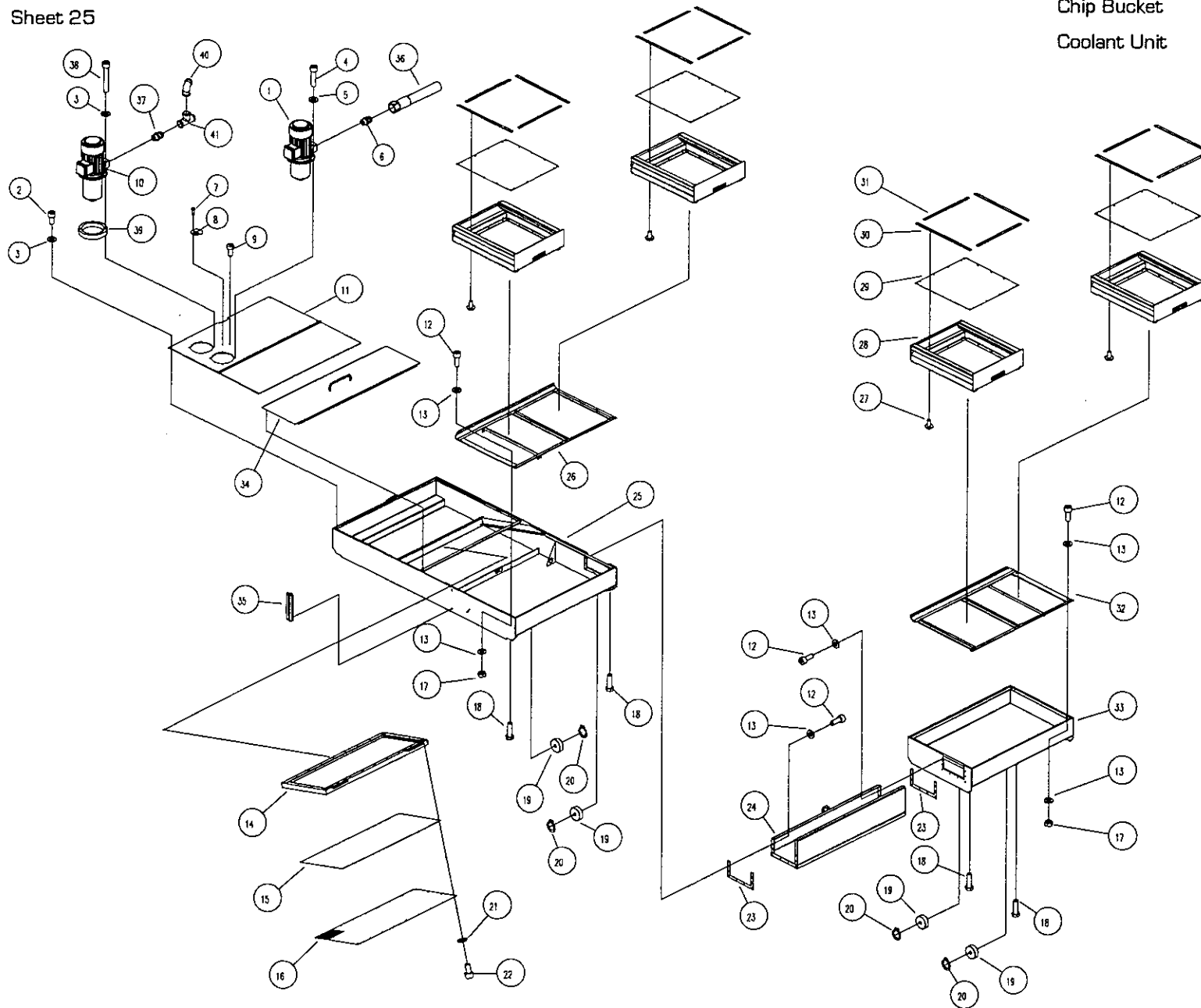


Sheet 24

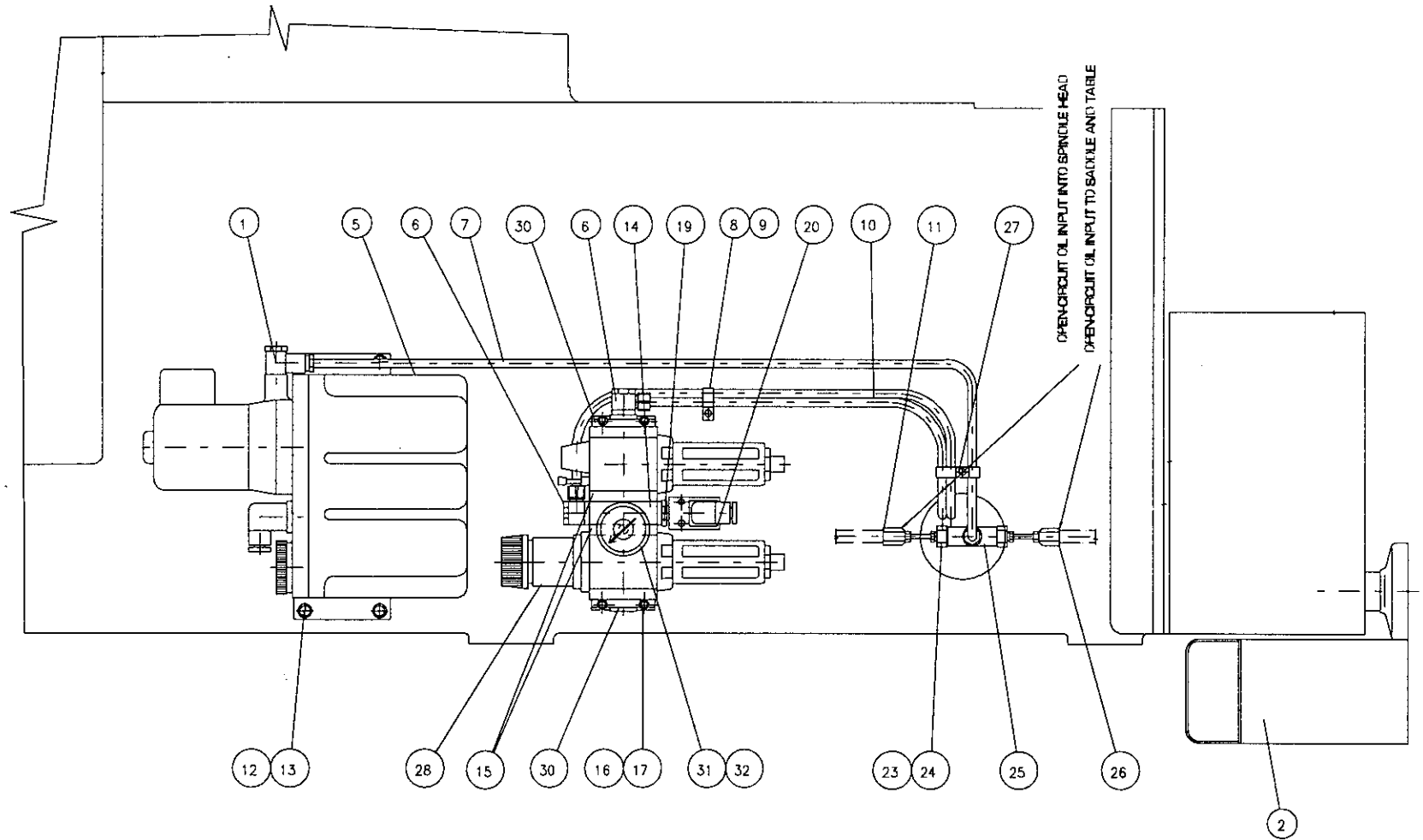




Sheet 25

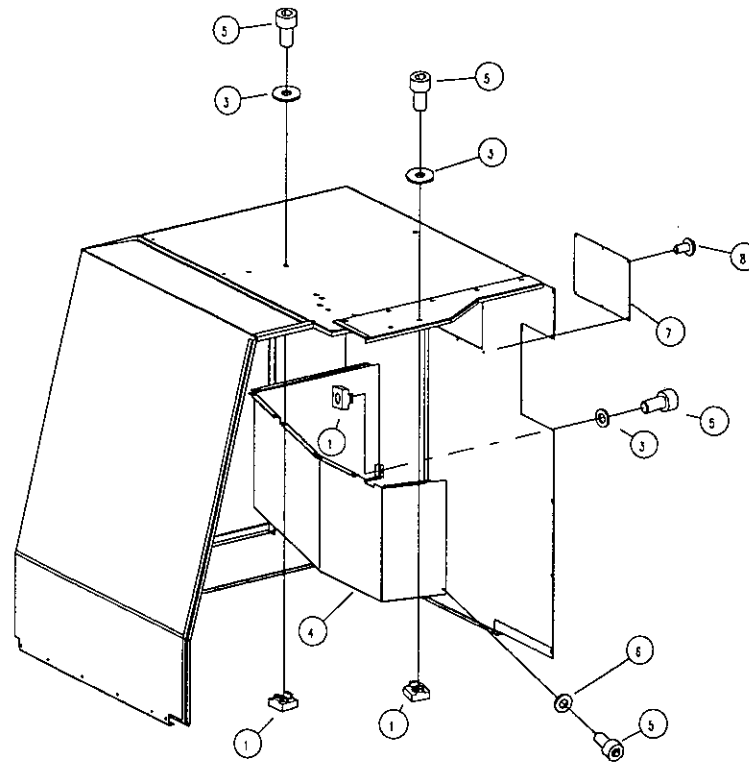
Chip Bucket  
Coolant Unit







## Tool Magazine Enclosure

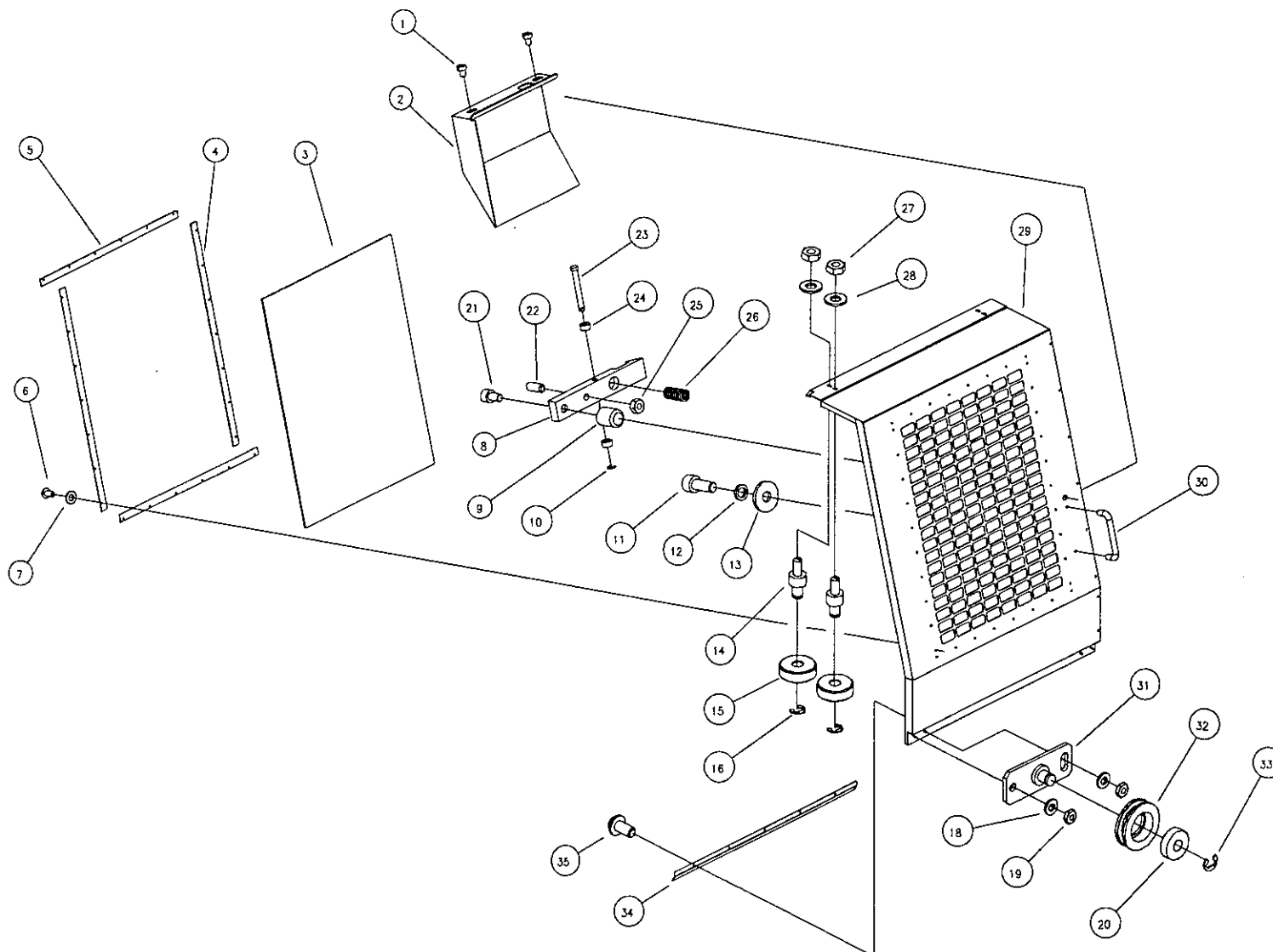




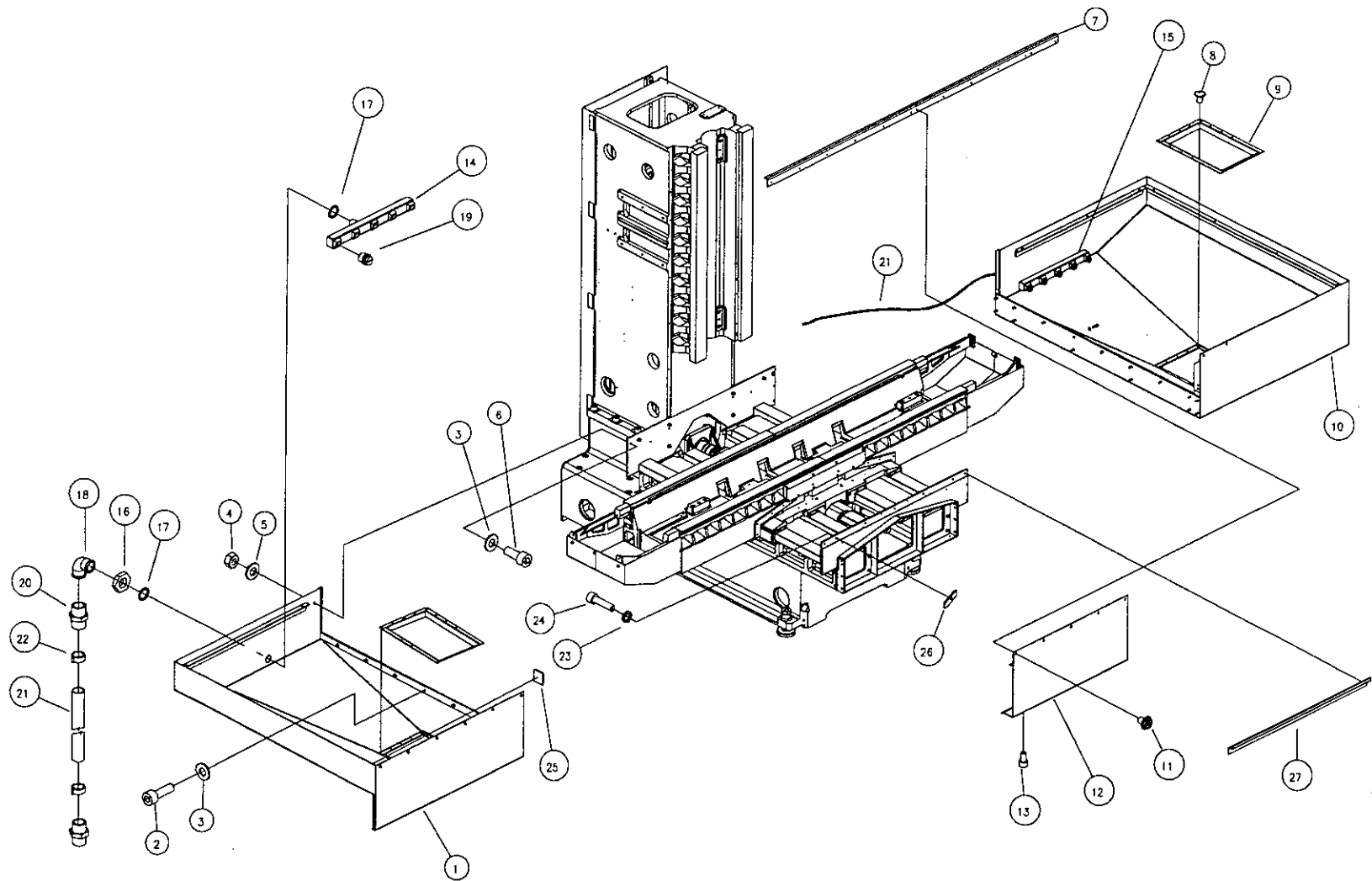


Sheet 28

Sliding Door



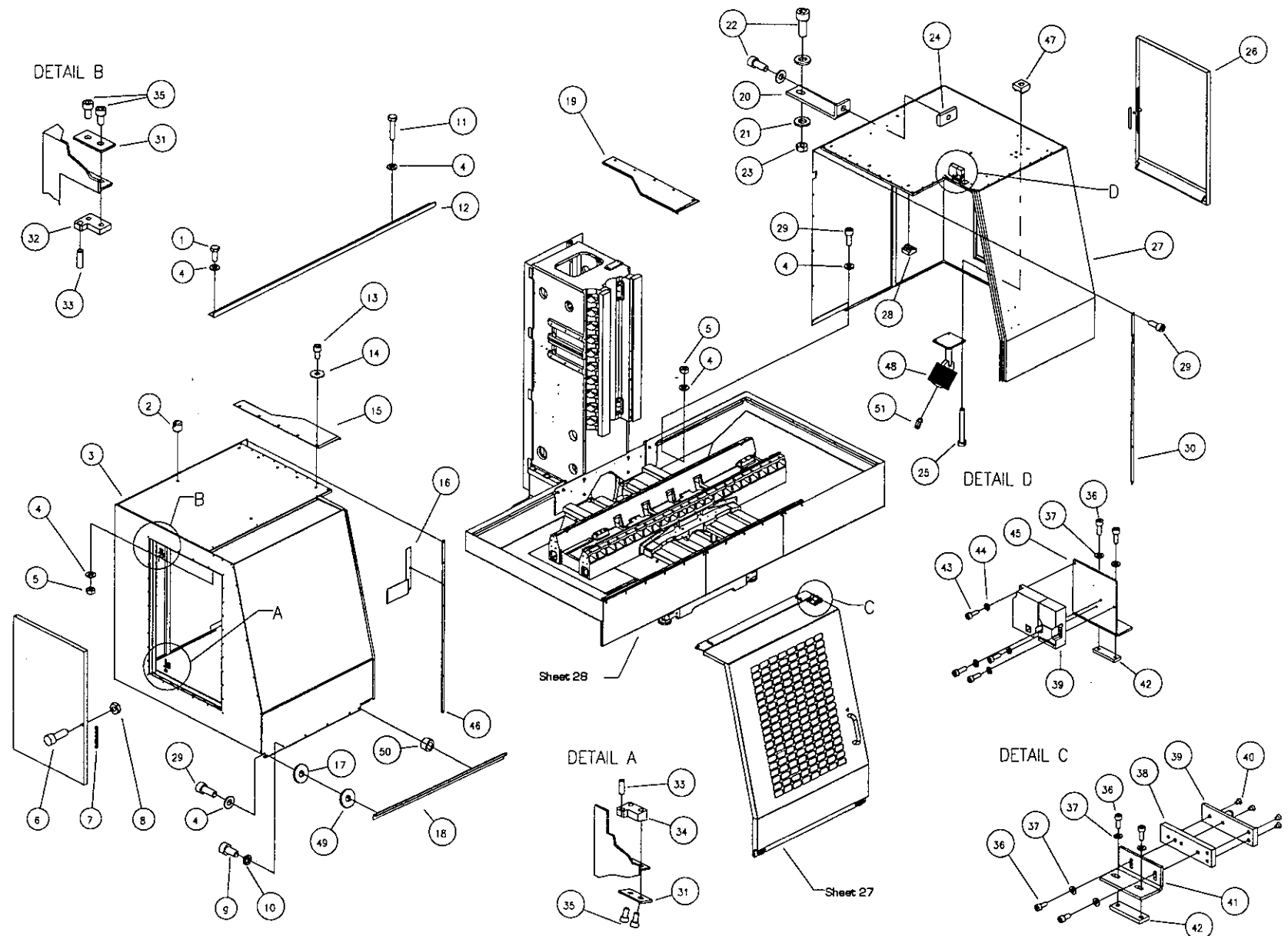






Sheet 30

Workspace Enclosure



P/N	ZPS ORDER #	NAME	DIMENSION	STANDARD	Qty
30-1	3092030730	HHS	M6x16 ZN DLZAV	ISO 4017	1
30-2	3092811160	ADJUSTING SCREW	M12x12 ZN		4
30-3	R220041-6101A5	L.H.COVER			1
30-4	3112100180	WASHER	*6.4 ZN	ISO 7089	44
30-5	3111200380	HH NUT	M6 ZN	DIN EN 24032	22
30-6	R220281-6128E1	SCREW			2
30-7	2723120050	OIL RUBBER HOSE	*10/2	ON 635330.07	0.6 M
30-8	3111200470	HH NUT	M8 ZN	DIN EN 24035	2
30-9	3095430290	SHCS	M6x12 ZN	DIN 912-8.8	16
30-10	3112140240	SPRING WASHER	*6 ZN	DIN 7980	10
30-11	3092030850	HH SCREW	M6x30 ZN DLZAV	ISO 4017	4
30-12	R220041-6117D1	GUIDEWAY			1
30-13	3095430290	SHCS	M6x12 ZN	DIN 912-8.8	10
30-14	R220241-7019E15	WASHER			10
30-15	R220041-6211B1B	L. H. SHIM			1
30-16	R220041-6204D2	COVER			1
30-17	R220041-6110E1	MATCHING PLATE			2
30-18	R220041-6311C4	GUIDE STRIP, LEFT			1
30-19	R220041-6212B1A	R. H. SHIM			1
30-20	R220041-6261E1C	HOLDER			1
30-21	3112100210	WASHER UNDER HH	*8.4 ZN	ISO 7089	3
30-22	3095430660	SHCS	M8x16 ZN	DIN 912-8.8	2
30-23	3111200470	NUT	M8 ZN	DIN EN 24032	1
30-24	R220041-6262E1	SHIM			1
30-25	3092311580	CHEESE HEAD SCREW	M5x40 ZN		4
30-26	R220041-6131A5	SIDE DOOR, LEFT			2
30-27	R220041-6102A5	R.H.COVER			1
30-28	4411520060	NUT CAGE	M6	ASSOTRA	10
30-29	3095430350	SHCS	M6x16 ZN	DIN 912-8.8	39
30-30	R220041-6104D2B	STRIP			1
30-31	R220041-6138E2	PLATE			4
30-32	R220241-7021E1	SHIM			2
30-33	3115150910	CYLINDRICAL PIN	*6x20	ISO 2338-A	4
30-34	R220241-7022E1	SHIM			2
30-35	3095430290	SHCS	M6x12 ZN	DIN 912-8.8	8
30-36	3095430350	SHCS	M6x16 ZN	DIN 912-8.8	4
30-37	3112100180	WASHER UNDER HH	*6.4 ZN	ISO 7089	6
30-38	R220041-6292E2A	INSERT			1
30-39	4050001920	LOCK AND KEY FOR DOOR			1
30-40	3092510970	FHCS (FLAT HEAD CAP-SCREW)	M5x12 ZN		4
30-41	R220041-6288E2	CONTACT BRACKET			1
30-42	R220041-6283E2	SHIM			2
30-43	3095430090	SHCS	M5x16 ZN	DIN 912-8.8	4
30-44	3112100150	WASHER UNDER HH	*5.3	ISO 7089	4
30-45	R220041-6280E2	LOCK BRACKET			1
30-46	R220041-6114D2	STRIP			1
30-47	4411520050	NUT CAGE	M5	ASSOTRA	4
30-48	3480000020	LIGHTING	WALDMANN MHWK 60/24V		1
30-49	R220041-6310E4	PLATE			5
30-50	R220041-6312E4	SPACER			7
30-51	3471000010	BULB	WALDMANN 24/70W H3		1