

**USAGE DIRECTION OF
350/500/750 TON ELEVATORS/SPIDER
(VERSION OF 2017-06)**

- OUR CORPORATION HAS PASSED ATTESTAION OF API Spec 8C
- OUR CORPORATION HAS PASSED ATTESTAION OF
ISO9001-2015 QUALITY SYSTEM



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I 、 General

A. Introduction

The 350 and 500 Ton Casing Elevator/Spider Units are pneumatically operated power tools, capable of handling casing sizes from 4.1/2 to 24.1/2 inches, with string loads of 3150kN for the 350 ton unit, 4500kN for the 500 ton unit, 6672kN for the 750 ton unit..

These units have been refined and incorporate such engineering features as air powered operation with safety latch, and 4pcs slip segments(14" and below) or 6pcs slip segments(over 14"), as standard equipment.

The main bodies can be dressed as a casing elevator or spider. The elevator consists of an upper unit using a bell guide and bottom guide. The lower unit is dressed as a Spider with a top guide that centers the Spider over the master bushing.

The elevator is attached to the derrick traveling block and hook with 350 or 500 ton or 750 ton standard API links. The Spider locates directly on the pin drive master bushing (27.1/2 MSPC, 37.1/2 and 49.1/2 MPCH), and square drive master bushing (27.1/2 MSS), and will accommodate any other master bushing when used with an Adapter Plate of RT Company.

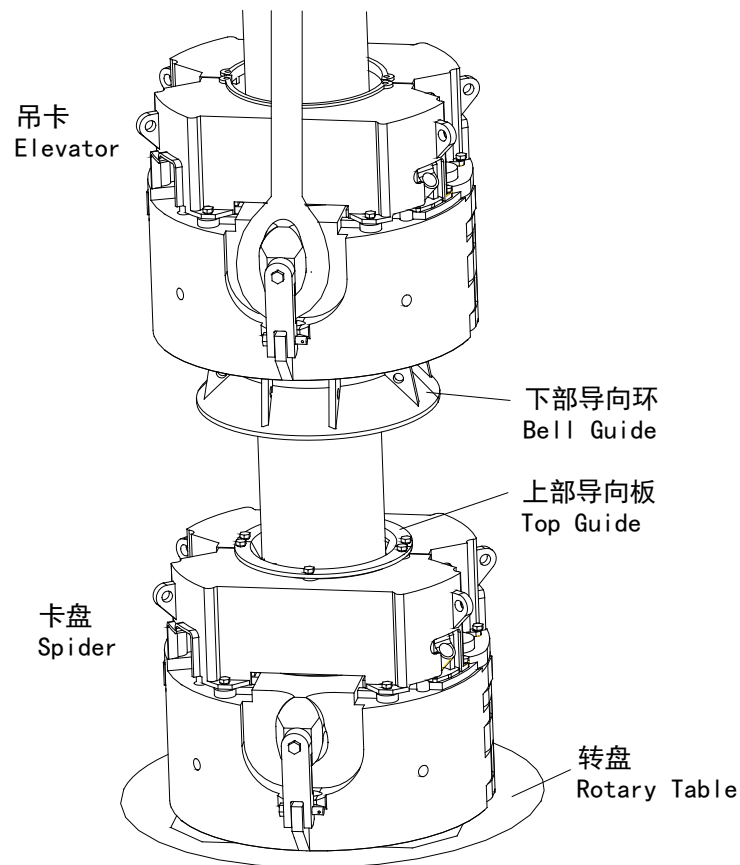


Figure 1-1

The elevator is attached to the derrick traveling block and hook with 350 or 500 ton or 750 ton standard API links. The Spider locates directly on the pin drive master bushing (27.1/2 MSPC, 37.1/2 and 49.1/2 MPCH), and square drive master bushing (27.1/2 MSS), and will accommodate any other master bushing when used with an Adapter Plate of RT Company.

B. Operation

The Elevator/Spider operates from a single, 2 position control lever that raises and lowers the slips. The slips are suspended on two inter-locking leveling beams that are driven by four air cylinders. This feature allows the slips to operate in synchronization in both the set and raised positions, while permitting the cylinders to work together so no one cylinder overrides any other,

causing misalignment and binding. A manual override system is also provided in the event of a temporary loss of rig air pressure.

The pneumatic system incorporates a filter-regulator-oil sprayer, which regulates and filters the rig air and reduces the pressure to the requirements of the Elevator /Spider system. The air is sent to the control valve that operates the leveling beams. As directed by the control lever, the air cylinder will raise or lower the slips attached to the leveling beam.

The direct air lift and lock mechanism enables instant actuation of the slips. In offshore or land operations this allows the derrick man or the men on the floor to raise and lock the slips, or lower the slips in the elevator or spider instantly.

II 、 Main Technical Parameters

Table 1

Spec Item	750	500		350	
style	14	14	24.1/2	14	20
Casing Size-range (in)	6.5/8 ~ 14	4.1/2 ~ 14	$\frac{16}{\sim 24.1/2}$	4.1/2 ~ 14	16 ~ 20
Normal Operating Pressure	0.6 ~ 0.8MPa				
Maximum Pressure	1 MPa				

Table 2

Unit Height (kg)	750	500		350	
	$\frac{6.5/8}{\sim 14}$	$\frac{4.1/2}{\sim 14}$	$\frac{4.1/2}{\sim 24.1/2}$	$\frac{4.1/2}{\sim 14}$	$\frac{16}{\sim 20}$
Elevator with Bell Guide (Less Guide and Slip Assy.)	2950	1,950	4,150	1,634	2,200
Spider (Less Guide and Slip Assy.)	2850	1,850	3,900	1,543	2,000

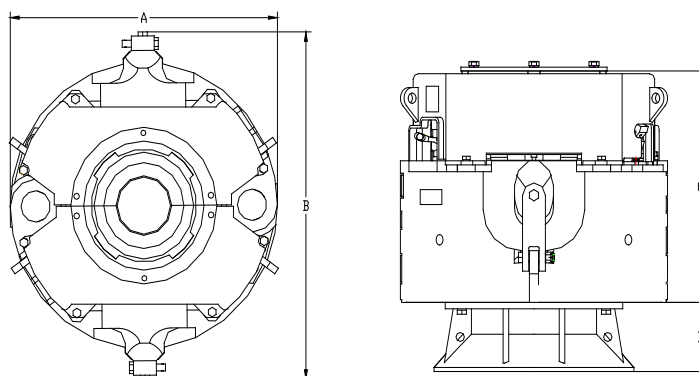


Figure 2-1
Table 3

	Metric (cm)				
	750	500		350	
	14	14	24.1/2	14	20
A	112	105.5	132.5	105.5	120.5
B	134	130	160	108	123.5
C	105.5	85.5	99	73	73.5
D	16	25.4	16	25.4	25.4

III、Installation

The 350、500 and 750 Ton Elevator/Spider Units are shipped as Illustrated in Figure 1-1. A specified set of slip segments and guide rings are shipped installed.

A. Installing Elevator/Spider

A typical installation is shown in Figures 1-1 and 3-1.

1. If replacing slips and or guides refer to paragraph III---C and III---D.

Note

Slip segments and guide rings must be the same size or damage to pipe and slips will result.

2. If opening of rotary table is less than 20.1/2 " I.D., (with bushing removed).

Install the adaptor plate on the top of rotary table.

3. Place spider in position on master bushing and secure in place with chain back-up.

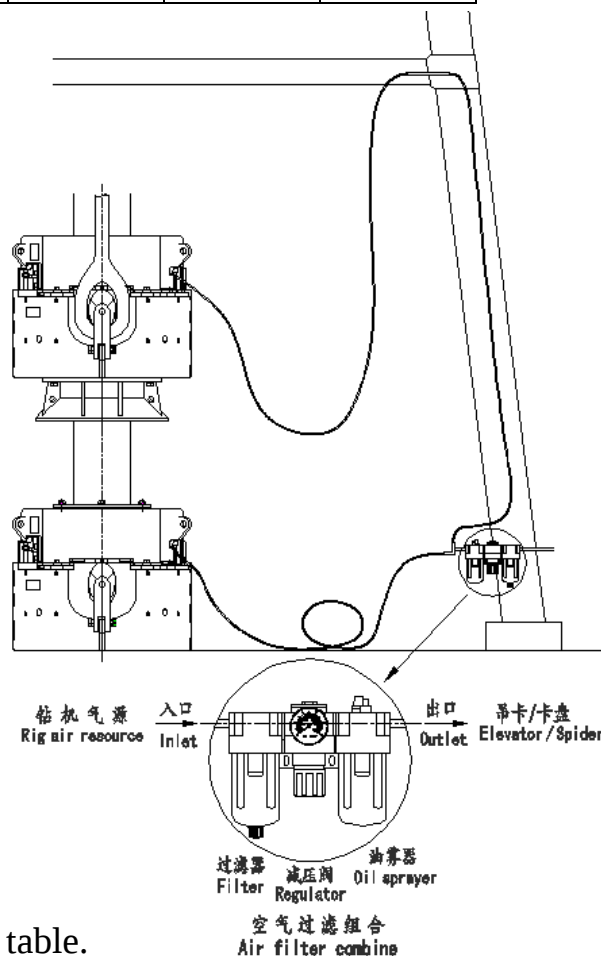


Figure 3-1

4. Attach links to Elevator as indicated in Figure 1-1, placing link eyes on Elevator hook ears and secure in place.
5. Lubricate Elevator/Spider as indicated in Table 5.
6. Proceed to connect air lines.

B. Connecting Air Lines

1. Refer to Figure 3-1 for typical installation.
2. Mount regulator-filter at a location on derrick which will provide adequate length for air line hook-up.
3. Attach a 50 foot, 1/2" air line between Elevator and the Stand Pipe located 45 feet above the rig floor, near the derrick stabbing board. Both ends of air lines are quick disconnecting type.
4. Attach a 25 foot 1/2" air line between Spider and regulator-filter.
5. Attach rig air lines to regulator-filter and adjust regulator to 0.6 to 0.8 MPa.
6. Check operation of Elevator/Spider, as indicated in Section IV.

Note

If tools will not remain permanently with rig, use two 50 foot air lines. Tie one 50 foot section of hose 45 feet above floor near casing stabber. Attach second section of hose to first hose with the other end to Elevator.

C. Removing and Replacing Slip Segments

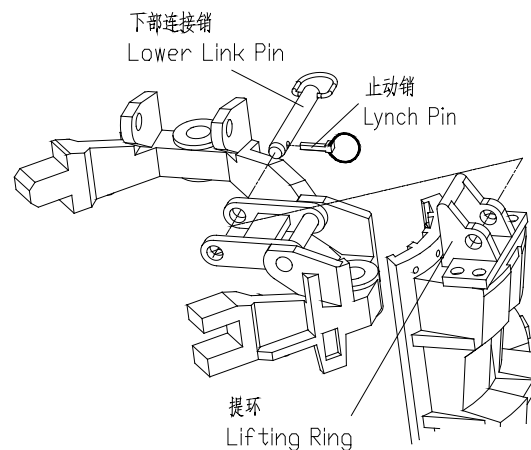


Figure 3-2

1. Removing Slip Segments-Figure 3-2
 - a. Power the slip segments to the up position.
 - b. Connect an overhead lift hook into slip segment lifting ring. With the weight off the remove lynch pin.
 - c. Remove link pin.

- d. Remove a single slip segment.
 - e. Repeat steps b through c and remove other slip segments.
2. Installing Replacement Slip Segment
 - a. Apply liberal amount of multi-purpose grease to back of replacement slip segment and mating bowl surfaces.

Note

Back of segment and inside of Spider must be clean before applying grease and slip segments.

- b. Using the hoist, lower the required slip segment in place, aligning link with mating hole on slip segment.
 - c. Install lower pin in place and insert lynch pin in lower pin.
 - d. Repeat steps a through c to install other slip segment.

D. Removing and Installing Guides

1. Removing Guides-Figure 3-3
 - a. Remove removable hinge pin with lift.
 - b. Spread hinged body to provide access to guides.
 - c. Remove bolt and keeper from each side of guide ring.
 - d. With an overhead lift, raise the Spider body off the floor and block-up at about 4 inches.
 - e. Slide guide ring out of slot in bowl body.
2. Installing Guides
 - a. Insert new guides into slot of bowl and secure in place with keeper and hex head bolt.
 - b. Lift and close Elevator/Spider body and replace hinge pin.
 - c. Operate slip segments to determine proper operation, as indicated in Section IV.

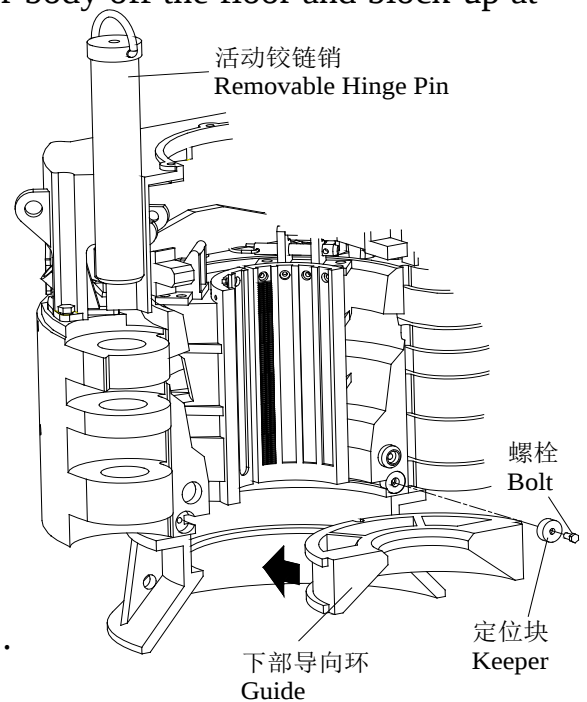


Figure 3-3

IV、Operation

The Elevator and Spider operation is controlled by a lever operated, control valve located on the body of each unit.

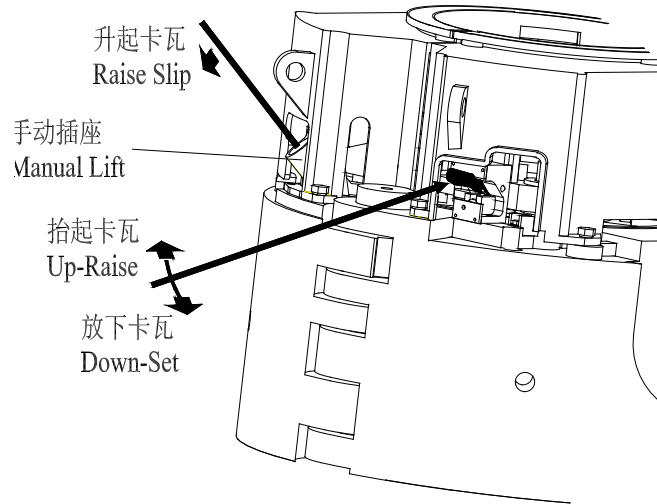


Figure 4-1

1. Moving the lever to the up position raises the slips.
2. Moving the lever to fully down position sets the slips.

If an air pressure failure should happen, the slip segments can be operated manually, as follows:

1. Place a 5 foot pry bar into manual lift lever.
2. Push down on pry bar and move the control lever handle to the up position. This moves the latch plate under the leveling beam to hold slips in the up position.
3. To set slips (lower slips) push control lever handle down.

Key points for operation of elevator/spider

1. Elevator/spider must be operated after the pipe column is stably stopped; otherwise it may be seized;
2. During the release of casing, the reverse pliers must be adopted. Elevator/spider can't bear any reactive torque, otherwise it will cause the damage of equipment;

3. During the operation, adopt the anchor chain to fix the spider and make the spider center aligned to the well center;
4. During the lowering of casing, its lowering speed should be slow when the casing coupling passes inside the elevator/spider, thus it can avoid knocking at the slip body, because it may cause the damage of equipment;
5. Apply the grease (mobile oil) once every 50 casings removed; if the slip is stuck to the body, apply the flowing grease (capable of removing the impurities at the contacts of slip and body) between the slip and body immediately.
6. When using the elevator /spider please check whether every connection part such as nuts on cylinder is firmly fastened in time. In case of any problem, handle it immediately. The elevator /chuck can not be put into service until all connection parts have been confirmed firmly;
7. In case of mud emitting or before clamping pipe column for a long time, the internal of the elevator / spider shall be washed immediately in order to ensure that there is no mud inside. And add lubrication oil at the slips and the contact area of the main body;
8. The interlocking of the leveling beam inside the elevator / spider shall be checked after opening (following closing) the main body of the elevator / spider. Non-interlocking of the leveling beam may cause abnormal operation of the equipment;
9. The driller should be synchronous and coordinated with the operation staff, he should neither lift the slips when the traveling and hoisting system of a drilling rig does not elevate the tubular column nor descend the slips when the tubular column does not stop, thus the slips are prevented from unnecessary impact to damage any part.

V、 Lubrication

Table 5

Ref. Ill	Item	Number of Lube Point	Application	Lube Cycle
1	Bowl/Slip Surfaces	16	Multi-Purpose Waterless Grease	See Note Below
2	Hinge Pins	2	Multi-Purpose Waterless Grease	Before Each Job
3	Flow Control Valve	2	Multi-purpose Waterless Grease	Weekly
4	Link Pins	8	SAE 10 oil	Weekly

Note

Lubricate after every 50 joint casing run and more frequently if necessary to prevent slips from sticking in the Elevator or Spider Body. To lubricate properly the slips should be in the set position without any casing load on unit.

Maintenance

1. Drain accumulated water as required.
2. Clean filter element with kerosene or diesel fuel every 3 mouths or more often if required.
3. Clean filter with clean warm water or kerosene only.

Caution

The plastic bowl used on this device can be damaged and possibly fail if exposed to certain solvents, strong alkaline substances, or compressor oils containing aromatic hydrocarbons (fire retardant oils). Fumes of these substances in contact with the bowl can cause damage to the bowl.

VI、 Maintenance

A. Preventive Maintenance

DO'S

1. Lubricate are required in Table 5.
2. Check hinge pin and Elevator hook ears for wear.
3. Avoid unnecessary shock loading of slip segments.

DON'TS

1. Never paint over moving parts or grease fittings.

2. Avoid contamination of air lines.
3. Never restrict air flow.
4. Never use equipment that is not opening properly.

B. Wear Limit

See Table 6-1

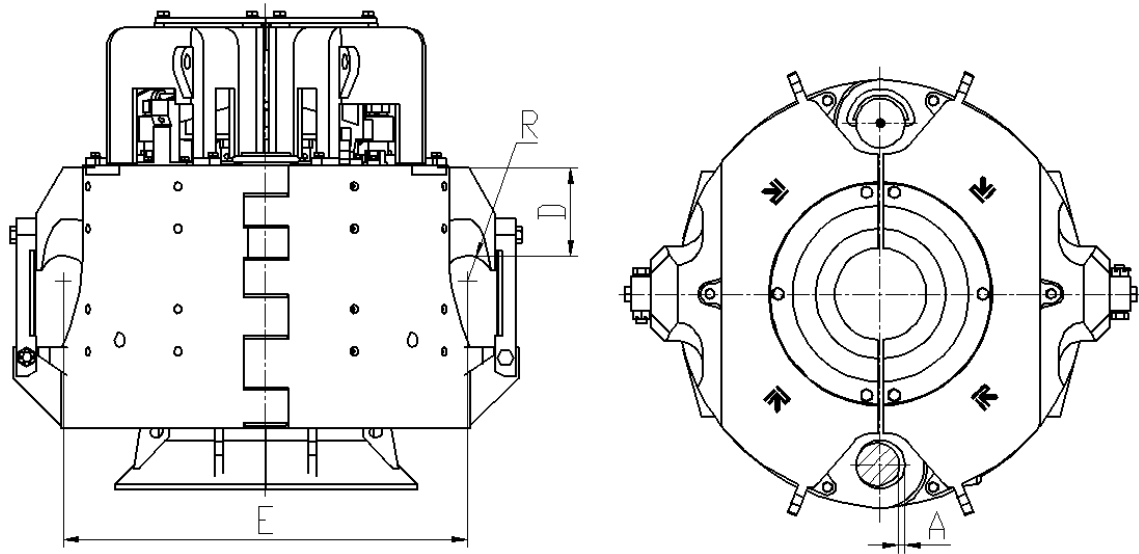


Figure 6-1

Table 6-1

Wear Area		SE350		SE500		SE750
		4.1/2-14	16-20	4.1/2-14	16-24.1/2	6.5/8-14
Body Hinge pin and body pin hole	Max. Clearance A	1.2	1.2	1.2	1.2	1.38
	Max. Worn Hinge Pin Hole Dia.	102.25	102.25	102.25	102.25	117.57
Body Lifting Eye	Min. Size D	180	180	184	184	221
	Center distance E	850	1004	1030	1316	1080
	Arc Radius R	50.8	50.8	65	65	76

C. Troubleshooting

See Table 6-2

Table 6-2

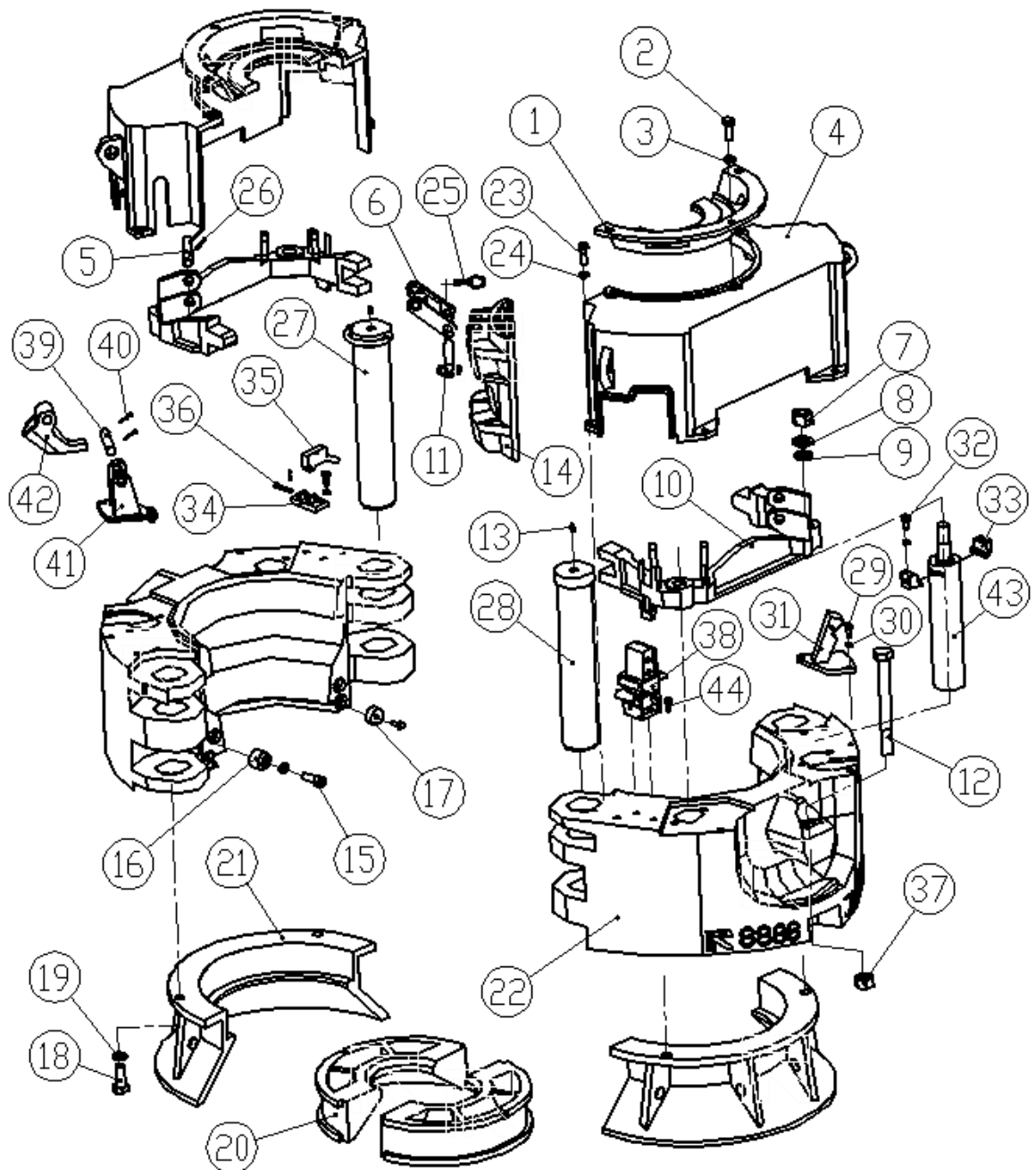
Symptom	Possible Cause
1. Slip Segments do not operate or operate slowly in both directions	a .Check air pressure at regulator is approximately 70 to 80 psig. b .Check if air lines are pinched or kinked leaks which could decrease air pressure. c .Check lubricator oil level. This unit supplies oil to lubricate the internal operation of the drive cylinder and must be kept full. d .Check control valve operates freely. See operation of this manual. e .Check if wiper on cylinders are clean. Wipers keep cylinder rods clean and will restrict cylinder action if worn.
2. Pipe Slips	a. Check slip size(one or two incorrect slip segments mixed with 2 or 3 correct size slip segments.) b. Check for incorrect, worn or resharpened inserts. c. Check for worn slip segments. Back size of segment is worn allowing the slip to set lower in the double step bowl and segment toe hits bottom guide, thereby preventing insert from gripping pipe.
3. Damaged Pipe	a. Check correct slip body size or incorrect slip segment in slip segment group. b. Check for incorrect, worn or resharpened inserts.

D. Transportation and Storage

1. Crash is forbidden when in transportation of the elevator. It must be prevented from rain.
2. The products must be stored in the dry and well-ventilated place and prevented from in the sun or in the rain. It is forbidden to let the products contact acids, alkalis、 salts and some other corrosion substance.

VII、 Parts List

TYPE SE 350 TON CASING ELEVATOR/SPIDER



SE 4.1/2-14 350 PART LIST

No.	PART No.	DESCRIPTION	Num
1		TOP GUIDE	各 2
2	130701190	BOLT, Hex Head	6
3	130701893	LOCKWASHER	8
4	010807010	Cover	2
5	010807008	LINK PIN, Upper	4
6	010807009	LINK, Slip Hanger	4
7		NUT, Hex,	4
8		LOCKWASHER	4
9		FLATWASHER	4
10	010807007	LEVELING BEAM	2
11	010807131	LINK PIN, Lower	4
12	010808005	SCREW, Link retainer	2
13	130305131	GREASE FITTING	10
14		SLIP SEGMENT	各 1
15	130701548	BOLT, Socket Head	2
16	010807065	BUTTON, Register	2
17	010807066	GUIDE, KEPPEP	4
18	130701185	BOLT, Hex Head	4
19	130701889	LOCKWASHER	4
20		GUIDE RING	各 2
21	010807011	BELL GUIDE	2
22	010808001	BODY	2
23	130701186	BOLT, Hex Head	8
24	130701895	LOCKWASHER	8
25	010807071	LYNCH PIN	4
26	130701956	COTTER PIN	8
27	010808071	HINGE PIN, Removable	1
28	010808006	HINGE PIN, Stationary	1
29	130701180	BOLT, Hex Head	8
30	130701894	LOCKWASHER	18
31	010807074	LUBRICATOR MOUNTING BRACKET	1
32	130701181	BOLT, Hex Head	8
33	010807075	RETAINER CYLINDER	8
34	010808003	BRACKET, Latch	2
35	010808002	LATCH, Retainer	2
36	010808004	PIN	2
37	010808072	NUT	2
38	010807076	CONTROL VALVE and LATCH ASSEMBLY	4
39	010807068	PIN, PIVOT	1
40	130701938002	COTTER PIN	3
41	010807069	MANUAL CONTROL BRACKET	1
42	010807070	SOCKET, MANUAL LIFT	1
43	130305069	CYLINDER	4
44	130701550	BOLT, Socket Head	2

350T GUIDES, SLIP ASSEMBLIES AND INSERT NUMBERS

Casing Size (Inches)	Elevator Bottom Guide No.	Spider Top Guide No.	Slip With Inserts Set P/N	Insert		Slip Body Size(in.)
				No.	Num	
4	010807025	010807012	010808063	001605243 001605244	24 16	5.1/2
4.1/2	010807025	010807012	010808008	001605009-(2168) 001605010-(2168B)	24 16	5.1/2
5	010807026	010807013	010808009	001605011-(2169) 001605012-(2169B)	24 16	5.1/2
5.1/2	010807027	010807014	010808010	001605013-(2170)	40	5.1/2
5.3/4	010807027	010807014	010808077	001605170	40	5.1/2
6.5/8	010807028	010807015	010808011	001605014-(2632) 001605015-(2632B)	36 24	7.5/8
7	010807028	010807015	010808012	001605016-(2623) 001605017-(2623B)	36 24	7.5/8
7.5/8	010807029	010807016	010808013	001605018-(2633)	60	7.5/8
7.3/4	010807029	010807016	010808014	001605023-(2649)	60	7.5/8
8	010807128	010807127	010808064	001605265 001605266	48 32	9.5/8
8.1/8	010807128	010807127	010808065	001605338 001605339	48 32	9.5/8
8.5/8	010807030	010807017	010808015	001605019-(2640) 001605020-(2640B)	48 32	9.5/8
8.3/4	010807030	010807017	010808016	001605021-(2650) 001605022-(2650B)	48 32	9.5/8
9.5/8	010807031	010807018	010808017	001605018-(2633)	80	9.5/8
9.3/4	010807032	010807019	010808018	001605023-(2649)	80	9.5/8
9.7/8	010807032	010807019	010808019	001605023-(2649)	80	9.5/8
10.3/4	010807033	010807020	010808020	001605019-(2640) 001605020-(2640B)	60 40	11.3/4
10.7/8	010807033	010807020	010808021	001605021-(2650) 001605022-(2650B)	60 40	11.3/4
11.3/4	010807034	010807021	010808022	001605024-(2637)	100	11.3/4
11.7/8	010807034	010807021	010808023	001605025-(2651)	100	11.3/4
12.3/4	010807130	010807129	010808066	001605340 001605341	60 40	14
13.3/8	010807035	010807022	010808024	001605026-(2636) 001605027-(2636B)	60 40	14
13.1/2	010807036	010807023	010808025	001605028-(2652) 001605029-(2652B)	60 40	14
13.5/8	010807036	010807023	010808026	001605030-(2653) 001605031-(2653B)	60 40	14
13.3/4	010807036	010807023	010808027	001605032-(2655) 001605033-(2655B)	60 40	14
14	010807037	010807024	010808011	001605034-(2635)	100	14

Note: The letter "B" indicate beveled inserts

TYPE SE 16- 20 ELEVATOR/SPIDER PART LIST

No.	PART No.	DESCRIPTION	Num
1		TOP GUIDE	各 2
2	130701190	BOLT, Hex Head	6
3	130701893	LOCKWASHER	8
4	010812010	Cover	2
5	010807008	LINK PIN, Upper	4
6	010807009	LINK, Slip Hanger	4
7		NUT, Hex	4
8		LOCKWASHER	4
9		FLATWASHER	4
10	010812011	LEVELING BEAM	2
11	010807131	LINK PIN, Lower	4
12	010808005	SCREW, Link retainer	2
13	130305131	GREASE FITTING	2
14		SLIP SEGMENT	各 1
15	130701548	BOLT, Socket Head	2
16	010807065	BUTTON, Register	2
17	010807066	GUIDE, KEPPER	4
18	130701185	BOLT, Hex Head	4
19	130701889	LOCKWASHER 1	4
20		GUIDE RING	各 2
21	010812012	BELL GUIDE	2
22	010812009	BODY	2
23	130701186	BOLT, Hex Head	8
24	130701895	LOCKWASHER	8
25	010807071	LYNCH PIN	4
26	130701956	COTTER PIN	8
27	010808071	HINGE PIN, Removable	1
28	010808006	HINGE PIN, Stationary	1
29	130701180	BOLT, Hex Head	8
30	130701894	LOCKWASHER	18
31	010807074	LUBRICATOR MOUNTING BRACKET	1
32	130701181	BOLT, Hex Head	8
33	010807075	RETAINER CYLINDER	8
34	010808003	BRACKET, Latch	2
35	010808002	LATCH, Retainer	2
36	010808004	PIN	2
37	010808072	NUT	2
38	010807076	CONTROL VALVE and LATCH ASSEMBLY	4
39	010807068	PIN, PIVOT	1
40	130701938002	COTTER PIN	3
41	010807069	MANUAL CONTROL BRACKET	1
42	010807070	SOCKET, MANUAL LIFT	1
43	130305069	CYLINDER	4
44	130701550	BOLT, Socket Head	2

SE 16-20 /350T GUIDES, SLIPASSEMBLIES AND INSERT NUMBERS

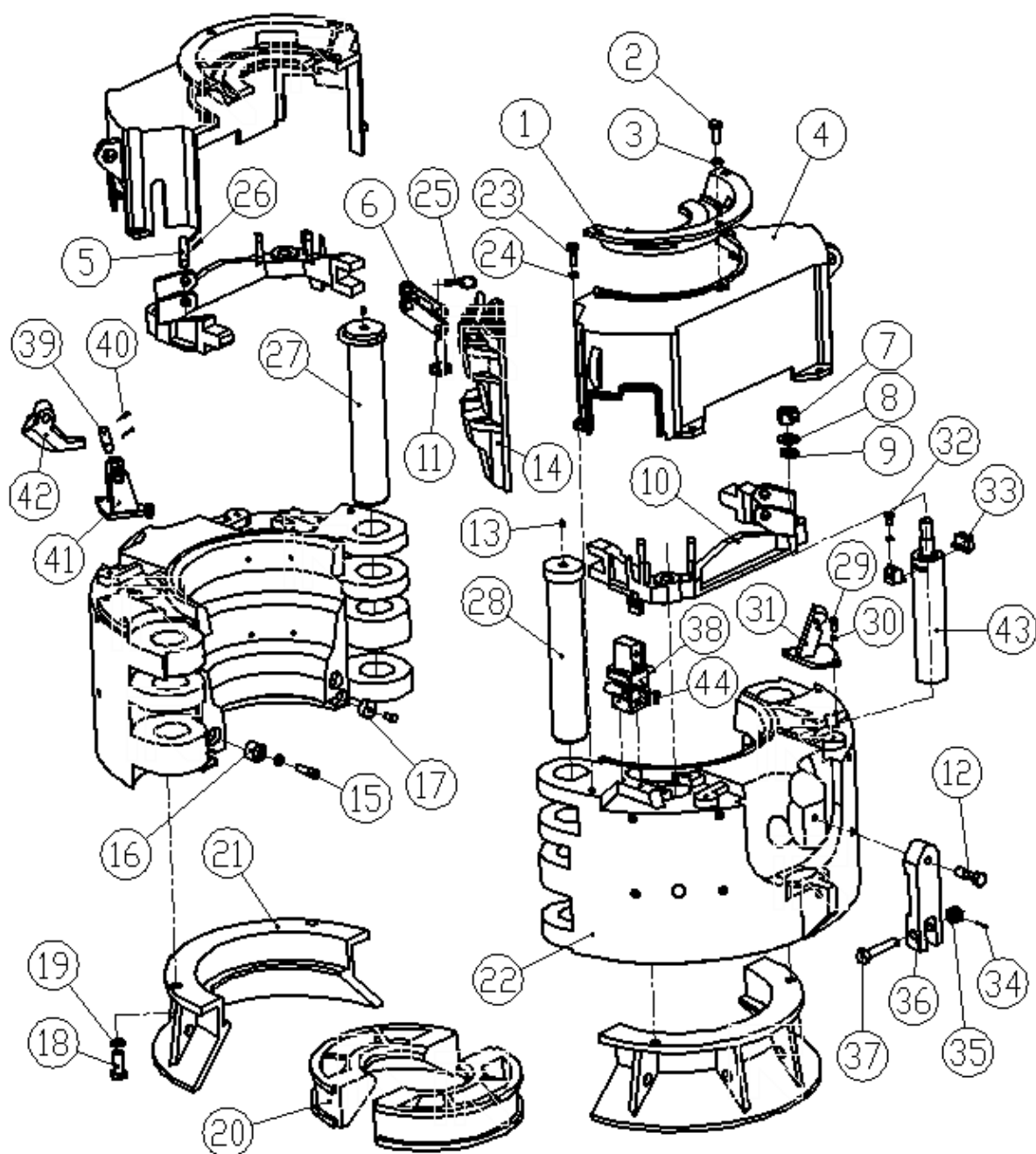
Casing Size (Inches)	Elevator Bottom Guide No.	Spider Top Guide No.	Slip With Inserts Set P/N	Insert		Slip Body Size(in.)
				No.	Num	
16	010812022	010812005	010812001	00160535	120	16
18	010812023	010812006	010812004	00160534 00160536 00160537	84 28(B I) 28(B II)	18.5/8
18.5/8	010812024	010812007	010812002	00160535	140	18.5/8
20	010812025	010812008	010812003	00160535	140	20

Note: The letter “B” indicate beveled inserts,

There is two type of indicate beveled inserts,

top indicate beveled inserts and bottom indicate beveled inserts.

TYPE SE 500、750 TON CASING ELEVATOR/SPIDER



SE 4.1/2-14 /500 PART LIST

No.	PART No.	DESCRIPTION	Num
1		TOP GUIDE	各 2
2	130701190	BOLT, Hex Head	6
3	130701893	LOCKWASHER	8
4	010807010	Cover	2
5	010807008	LINK PIN, Upper	4
6	010807009	LINK, Slip Hanger	4
7		NUT, Hex,	4
8		LOCKWASHER	4
9		FLATWASHER	4
10	010807007	LEVELING BEAM	2
11	010807131	LINK PIN, Lower	4
12	010807004	CAPSCREW, Modified	2
13	130305131	GREASE FITTING	2
14		SLIP SEGMENT	各 1
15	130701548	BOLT, Socket Head	2
16	010807065	BUTTON, Register	2
17	010807066	GUIDE, KEPER	4
18	130701185	BOLT, Hex Head	4
19	130701889	LOCKWASHER	4
20		GUIDE RING	各 2
21	010807011	BELL GUIDE	2
22	010807001	BODY	2
23	130701186	BOLT, Hex Head	8
24	130701895	LOCKWASHER	8
25	010807071	LYNCH PIN	4
26	130701956	COTTER PIN	8
27	010807135	HINGE PIN, Removable	1
28	010807003	HINGE PIN, Stationary	1
29	130701180	BOLT, Hex Head	8
30	130701894	LOCKWASHER	18
31	010807074	LUBRICATOR MOUNTING BRACKET	1
32	130701181	BOLT, Hex Head	8
33	010807075	RETAINER CYLINDER	8
34	130701972	COTTER PIN	2
35	010407042	NUT, Hex slotted	2
36	010807005	CATCH, LINK	2
37	010807006	BOLT	2
38	010807076	CONTROL VALVE and LATCH ASSEMBLY	4
39	010807068	PIN, PIVOT	1
40	130701938002	COTTER PIN	2
41	010807069	MANUAL CONTROL BRACKET	1
42	010807070	SOCKET,MANUAL LIFT	1
43	130305069	CYLINDER	4
44	130701550	BOLT, Socket Head	2

500T GUIDES, SLIP ASSEMBLIES AND INSERT NUMBERS

Casing Size (Inches)	Elevator Bottom Guide No.	Spider Top Guide No.	Slip With Inserts Set P/N	Insert		Slip Body Size(in.)
				No.	Num	
4	010807025	010807012	010807112	001605243 001605244	32 16	
4.1/2	010807025	010807012	010807038	001605009-(2168) 001605010-(2168B)	32 16	5.1/2
5	010807026	010807013	010807039	001605011-(2169) 001605012-(2169B)	32 16	5.1/2
5.1/2	010807027	010807014	010807040	001605013-(2170)	48	5.1/2
5.3/4	010807027	010807014	010807132	001605753	48	5.7/8
5.7/8	010807027	010807014	010807144	001605752	48	5.7/8
6.5/8	010807028	010807015	010807041	001605014-(2632) 001605015-(2632B)	48 24	7.5/8
7	010807028	010807015	010807042	001605016-(2623) 001605017-(2623B)	48 24	7.5/8
7.5/8	010807029	010807016	010807043	001605018-(2633)	72	7.5/8
7.3/4	010807029	010807016	010807044	001605023-(2649)	72	7.5/8
8	010807128	010807127	010807113	001605265 001605266	64 32	9.5/8
8.1/8	010807128	010807127	010807114	001605338 001605339	64 32	9.5/8
8.5/8	010807030	010807017	010807045	001605019-(2640) 001605020-(2640B)	64 32	9.5/8
8.3/4	010807030	010807017	010807046	001605021-(2650) 001605022-(2650B)	64 32	9.5/8
9.5/8	010807031	010807018	010807047	001605018-(2633)	96	9.5/8
9.3/4	010807032	010807019	010807048	001605023-(2649)	96	9.5/8
9.7/8	010807032	010807019	010807049	001605023-(2649)	96	9.5/8
10.3/4	010807033	010807020	010807050	001605019-(2640) 001605020-(2640B)	80 40	11.3/4
10.7/8	010807033	010807020	010807051	001605021-(2650) 001605022-(2650B)	80 40	11.3/4
11.3/4	010807034	010807021	010807052	001605024-(2637)	120	11.3/4
11.7/8	010807034	010807021	010807053	001605025-(2651)	120	11.3/4
12.3/4	010807130	010807129	010807115	001605340 001605341	80 40	14
13.3/8	010807035	010807022	010807054	001605026-(2636) 001605027-(2636B)	80 40	14
13.1/2	010807036	010807023	010807055	001605028-(2652) 001605029-(2652B)	80 40	14
13.5/8	010807036	010807023	010807056	001605030-(2653) 001605031-(2653B)	80 40	14
13.3/4	010807036	010807023	010807057	001605032-(2655) 001605033-(2655B)	80 40	14
14	010807037	010807024	010807050	001605034-(2635)	120	14

Note: The letter "B" indicate beveled inserts

SE 6.5/8-14 /750 PART LIST

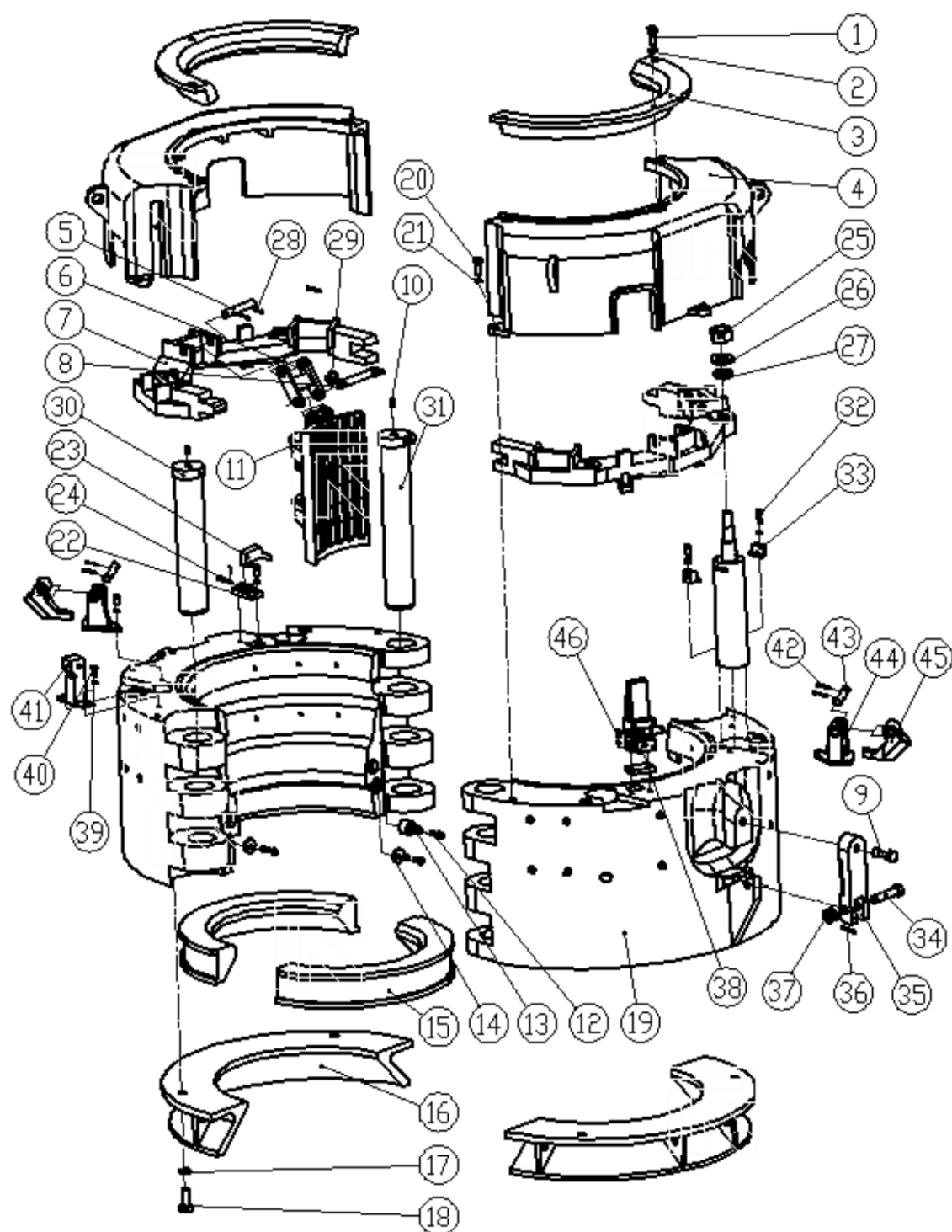
No.	PART No.	DESCRIPTION	Num
1		TOP GUIDE	各 2
2	130701190	BOLT, Hex Head	6
3	130701893	LOCKWASHER	8
4	010814002	Cover	2
5	010807008	LINK PIN, Upper	4
6	010807009	LINK, Slip Hanger	4
7		NUT, Hex,	4
8		LOCKWASHER	4
9		FLATWASHER	4
10	010814003	LEVELING BEAM	2
11	010807131	LINK PIN, Lower	4
12	010807004	CAPSCREW, Modified	2
13	130305131	GREASE FITTING	2
14		SLIP SEGMENT	各 1
15	130701548	BOLT, Socket Head	2
16	010807065	BUTTON, Register	2
17	010807066	GUIDE, KEPPER	4
18	130701185	BOLT, Hex Head	4
19	130701889	LOCKWASHER	4
20		GUIDE RING	各 2
21	010814004	BELL GUIDE	2
22	010814001	BODY	2
23	130701186	BOLT, Hex Head	8
24	130701895	LOCKWASHER	8
25	010807071	LYNCH PIN	4
26	130701956	COTTER PIN	8
27	010814006	HINGE PIN, Removable	1
28	010814005	HINGE PIN, Stationary	1
29	130701180	BOLT, Hex Head	8
30	130701894	LOCKWASHER	18
31	010807074	LUBRICATOR MOUNTING BRACKET	1
32	130701181	BOLT, Hex Head	8
33	010807075	RETAINER CYLINDER	8
34	130701972	COTTER PIN	2
35	010407042	NUT, Hex slotted	2
36	010814007	CATCH, LINK	2
37	010807006	BOLT	2
38	010807076	CONTROL VALVE and LATCH ASSEMBLY	4
39	010807068	PIN, PIVOT	1
40	130701938002	COTTER PIN	2
41	010807069	MANUAL CONTROL BRACKET	1
42	010807070	SOCKET, MANUAL LIFT	1
43	130305086	CYLINDER	4
44	130701550	BOLT, Socket Head	2

750T GUIDES, SLIP ASSEMBLIES AND INSERT NUMBERS

Casing Size (Inches)	Elevator Bottom Guide No.	Spider Top Guide No.	Slip With Inserts Set P/N	Insert		Slip Body Size(in.)
				No.	Num	
6.5/8	010807028	010807015	010814009	001605014-(2632) 001605015-(2632B)	60 24	7.5/8
7	010807028	010807015	010814010	001605016-(2623) 001605017-(2623B)	60 24	7.5/8
7.5/8	010807029	010807016	010814011	001605018-(2633)	84	7.5/8
7.3/4	010807029	010807016	010814012	001605023-(2649)	84	7.5/8
8	010807128	010807127	010814013	001605265 001605266	80 32	9.5/8
8.1/8	010807128	010807127	010814014	001605338 001605339	80 32	9.5/8
8.5/8	010807030	010807017	010814015	001605019-(2640) 001605020-(2640B)	80 32	9.5/8
8.3/4	010807030	010807017	010814016	001605021-(2650) 001605022-(2650B)	80 32	9.5/8
9.5/8	010807031	010807018	010814017	001605018-(2633)	112	9.5/8
9.3/4	010807032	010807019	010814018	001605023-(2649)	112	9.5/8
9.7/8	010807032	010807019	010814019	001605023-(2649)	112	9.5/8
10.3/4	010807033	010807020	010814020	001605019-(2640) 001605020-(2640B)	100 40	11.3/4
10.7/8	010807033	010807020	010814021	001605021-(2650) 001605022-(2650B)	100 40	11.3/4
11.1/4	010807034	010807021	010814022	001605371 001605372	100 40	11.3/4
11.3/4	010807034	010807021	010814023	001605024-(2637)	140	11.3/4
11.7/8	010807034	010807021	010814024	001605025-(2651)	140	11.3/4
12.3/4	010807130	010807129	010814025	001605340 001605341	100 40	14
13.3/8	010807035	010807022	010814026	001605026-(2636) 001605027-(2636B)	100 40	14
13.1/2	010807036	010807023	010814027	001605028-(2652) 001605029-(2652B)	100 40	14
13.5/8	010807036	010807023	010814028	001605030-(2653) 001605031-(2653B)	100 40	14
13.3/4	010807036	010807023	010814029	001605032-(2655) 001605033-(2655B)	100 40	14
14	010807037	010807024	010814030	001605034-(2635)	140	14

Note: The letter “B” indicate beveled inserts

TYPE SE 16- 24.1/2 /500 ELEVATOR/SPIDER



SE 16-24.1/2 /500 PART LIST

No.	PART No.	DESCRIPTION	Num
1	130701190	BOLT, Hex Head	6
2	130701893	LOCKWASHER	8
3		TOP GUIDE	各 2
4	010813004	Cover	2
5	010807008	LINK PIN, Upper	6
6	010807009	LINK, Slip Hanger	6
7	010813003	LEVELING BEAM	2
8	010807131	LINK PIN, Lower	6
9	010807004	CAPSCREW, Modified	2
10	130305131	GREASE FITTING	26
11		SLIP SEGMENT	各 1
12	130701548	BOLT, Socket Head	2
13	010807065	BUTTON, Register	2
14	010807066	GUIDE, KEPER	4
15		GUIDE RING	各 2
16	010813005	BELL GUIDE	2
17	130701889	LOCKWASHER	4
18	130701185	BOLT, Hex Head	4
19	010813001	BODY	2
20	130701186	BOLT, Hex Head	6
21	130701895	LOCKWASHER	6
22	010808003	BRACKET, Latch	2
23	010808002	LATCH, Retainer	2
24	010808004	PIN	2
25		NUT, Hex,	4
26		LOCKWASHER	4
27		FLATWASHER	4
28	130701956	COTTER PIN	12
29	010807071	LYNCH PIN	6
30	010813002	HINGE PIN, Stationary	1
31	010813035	HINGE PIN, Removable	1
32	130701181	BOLT, Hex Head	8
33	010807075	RETAINER CYLINDER	8
34	010807006	BOLT	2
35	010807005	CATCH, LINK	2
36	130701972	COTTER PIN	2
37	010407042	NUT, Hex slotted	2
38	010807076	CONTROL VALVE and LATCH ASSEMBLY	4
39	130701180	BOLT, Hex Head	8
40	130701894	LOCKWASHER	18
41	010813033	BRACKET -gas	1
42	130701938002	COTTER PIN	2
43	010807068	PIN, PIVOT	1
44	010807086	MANUAL CONTROL BRACKET	1
45	010807070	SOCKET, MANUAL LIFT	1
46	130701550	BOLT, Socket Head	2

SE 16-24.1/2 /500T GUIDES, SLIPASSEMBLIES AND INSERT NUMBERS

Casing Size (Inches)	Elevator Bottom Guide No.	Spider Top Guide No.	Slip With Inserts Set P/N	Insert		Slip Body Size(in.)
				No.	Num	
16	010813013	010813006	010813020	001605335	144	16
18	010813014	010813007	010813021	001605334 001605336 001605337	120 30(B I) 30(B II)	18.5/8
18.5/8	010813015	010813008	010813022	001605335	180	18.5/8
20	010813016	010813009	010813023	001605335	180	20
22	010813017	010813010	010813024	001605335	216	22
24	010813018	010813011	010813025	001605335	216	24
24.1/2	010813019	010813012	010813026	001605335	216	24.1/2

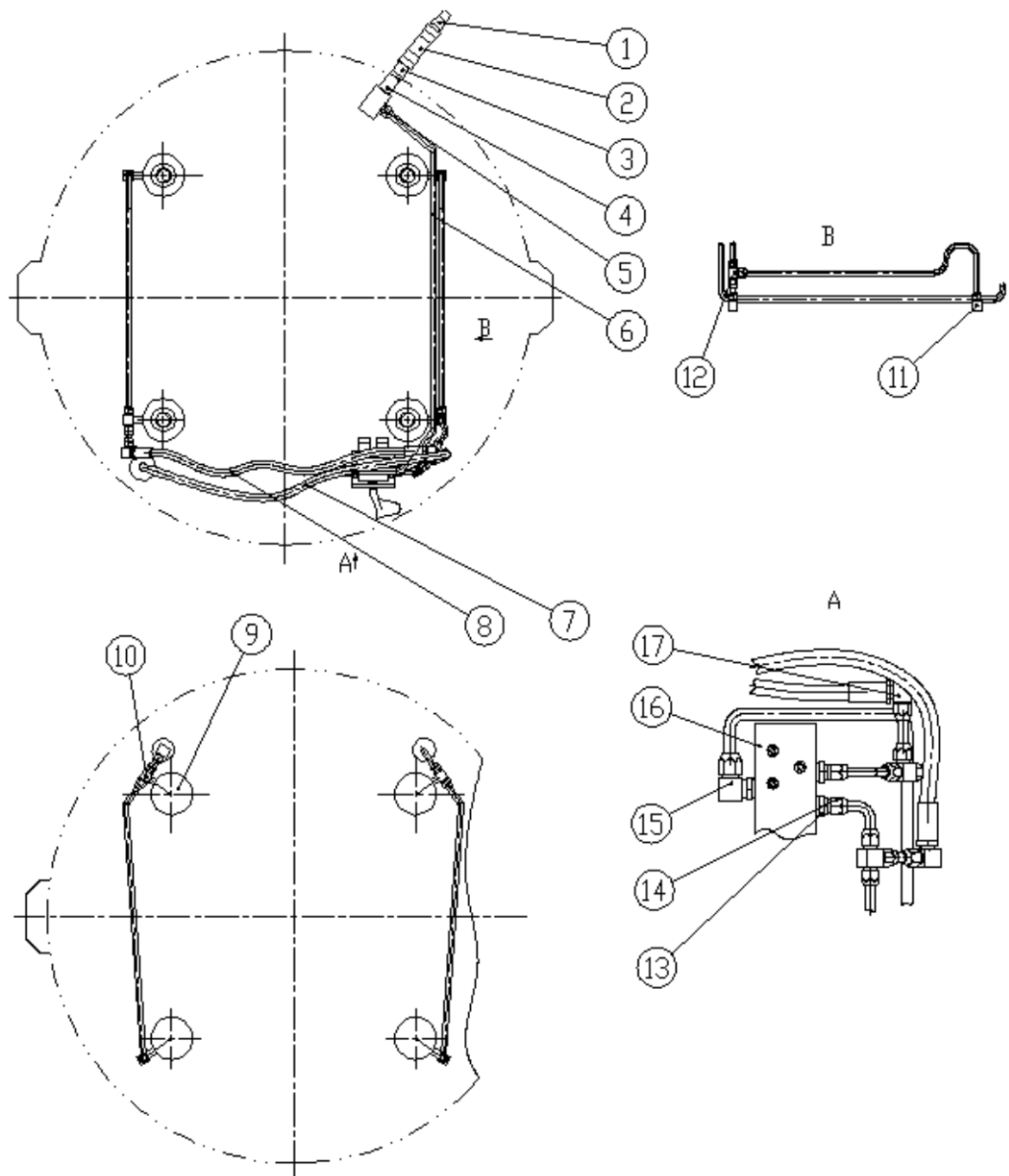
Note: The letter “B” indicate beveled inserts,

There is two type of indicate beveled inserts,

top indicate beveled inserts and bottom indicate beveled inserts.

SE350, SE500 ELEVATOR/SPIDER

Pipeline structure diagram

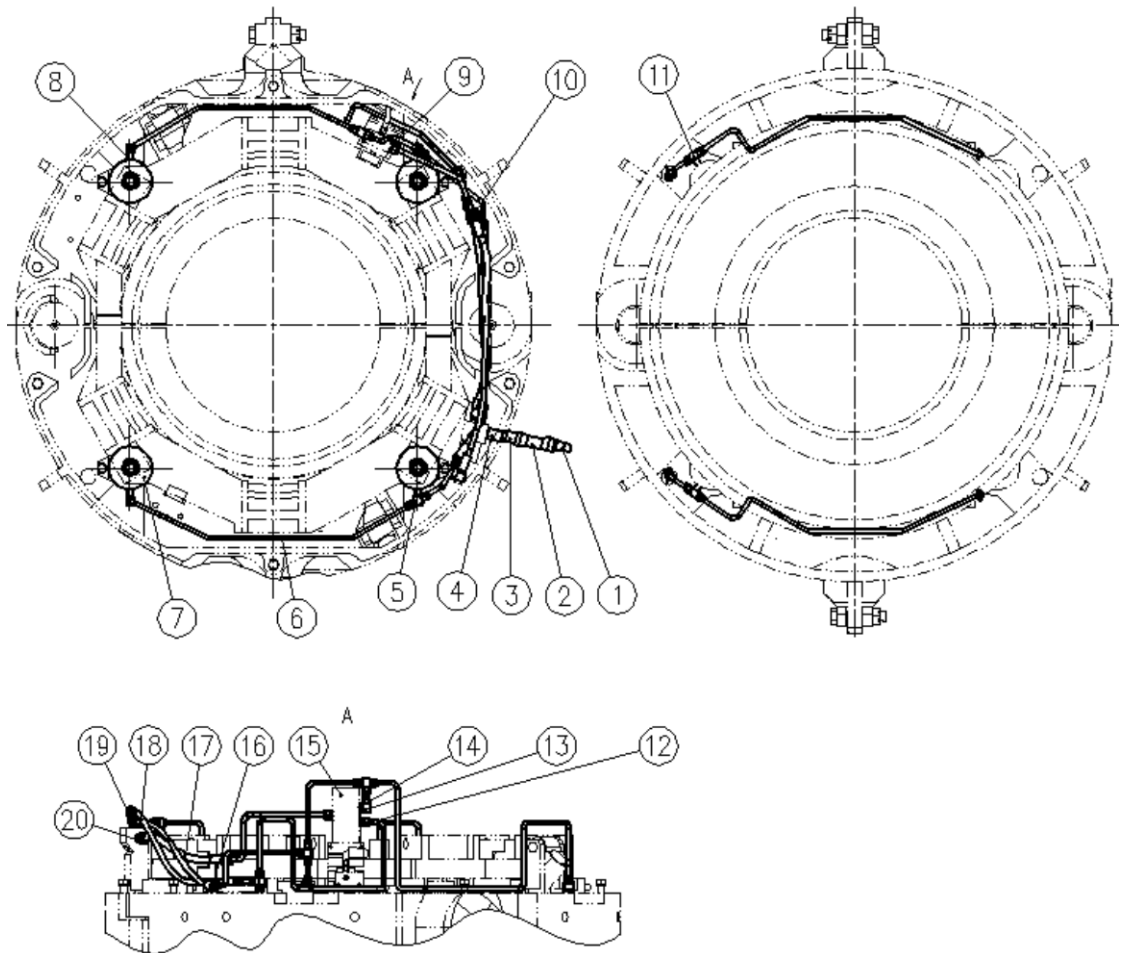


SE350, SE500 ELEVATOR/SPIDER
PIPELINE LIST

ITEM	P/N	DESCRIPTION	QTY
1	130305056	quickly connector pm 40	1
2	130502201	wire hose12.5x1x0.2 A	1
3	130305057	quickly connector sm 40	1
4	130305053	quickly connectorpm 30	1
5	130305001	Bulkhead fittings 12-3/8	1
6	010808075	stainless steel tube (SE4.1/2-14-350)	1
	010812026	stainless steel tube (SE16-20-350)	1
	010807139	stainless steel tube (SE4.1/2-14-500)	1
7	130502204	wire hose10x1x1.4A	1
8	130502202	wire hose10x1x0.7A	1
9	130305069	cylinder	4
10	130305023	The three extension pipe joint 10-1/4	2
11	130305004	Right angle extension tube joint 10-1/4"	6
12	130305005	tee coupling 10	4
13	130305008	1/2 male-1/4 female connector	2
14	130305006	Bulkhead fittings 10-1/4"	2
15	130305020	Right angle extension tube joint 12-1/2	1
16	130305100	Two position five way pilot valve	1
17	130305019	Right angle extension tube joint 10-3/8	4

SE16-24.1/2 ELEVATOR/SPIDER

Pipeline structure diagram



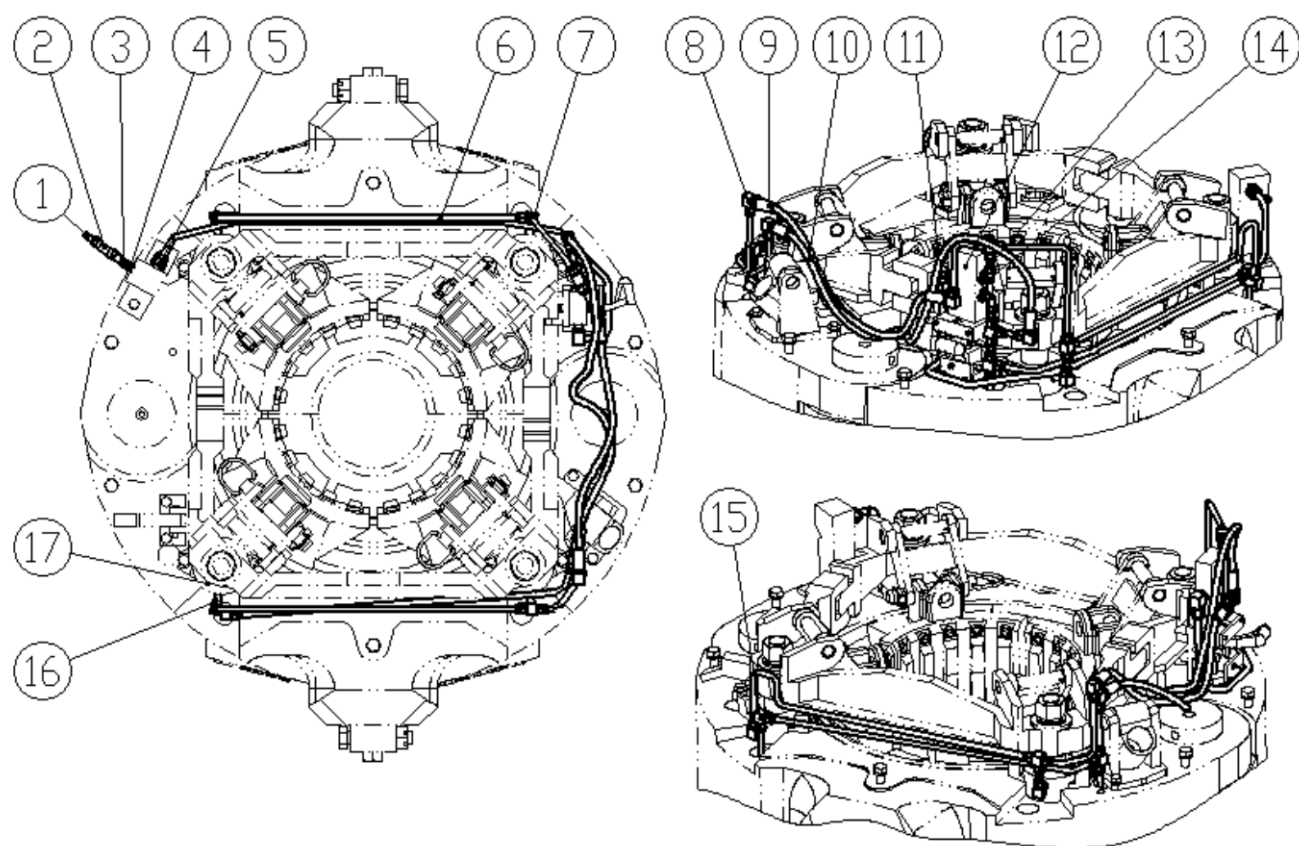
SE16-24.1/2 500 ELEVATOR/SPIDER

PIPELINE LIST

ITEM	P/N	DESCRIPTION	QTY
1	130305056	quickly connector pm 40	1
2	130502201	wire hose12.5x1x0.2 A	1
3	130305057	quickly connector sm 40	1
4	130305053	quickly connector pm 30	1
5	130305005	The three pipe joint 10	4
6	010813037	stainless steel tube	1
7	130305086	cylinder	4
8	130305004	Right angle extension tube joint10-1/4	6
9	130305021	1/2 female-3/8male connector	1
10	130305001	Bulkhead fittings 12-3/8	2
11	130305023	The three extension pipe joint 10-1/4	2
12	130305006	Bulkhead fittings 10-1/4	1
13	130305011	Right angle extension tube joint10-1/4	1
14	130305008	1/2 male-1/4 female connector	2
15	130305100	Two position five way pilot valve	1
16	130305002	Bulkhead fittings 10-3/8	3
17	130502202	wire hose10x1x0.7 A	2
18	130502401	wire hose10x1x0.6 A	1
19	130305019	Right angle extension tube joint10-3/8	1
20	130305013	female connector 3/8	1

SE6.5/8-14 ELEVATOR/SPIDER

Pipeline structure diagram



SE16-24.1/2 750 ELEVATOR/SPIDER

PIPELINE LIST

ITEM	P/N	DESCRIPTION	QTY
1	130305056	quickly connector pm 40	1
2	130502201	wire hose12.5x1x0.2 A	1
3	130305057	quickly connector sm 40	1
4	130305053	quickly connector pm 30	1
5	130305001	Bulkhead fittings 12-3/8	1
6	010814031	stainless steel tube	1
7	130305005	The three pipe joint10	6
8	130305019	Right angle extension tube joint10-3/8	4
9	130502401	wire hose10x1x0.6A	1
10	130502204	wire hose10x1x1.4A	1
11	130305020	Right angle tube joint12-1/2	1
12	130305100	Two position five way pilot valve	1
13	130305008	1/2 male-1/4 female connector	2
14	130305011	Right angle tube joint 10-1/4	6
15	130305006002	Right angle tube joint 10	2
16	130305023	The three extension pipe joint10-1/4	4
17	130305086	cylinder	4