



Maintenance guide

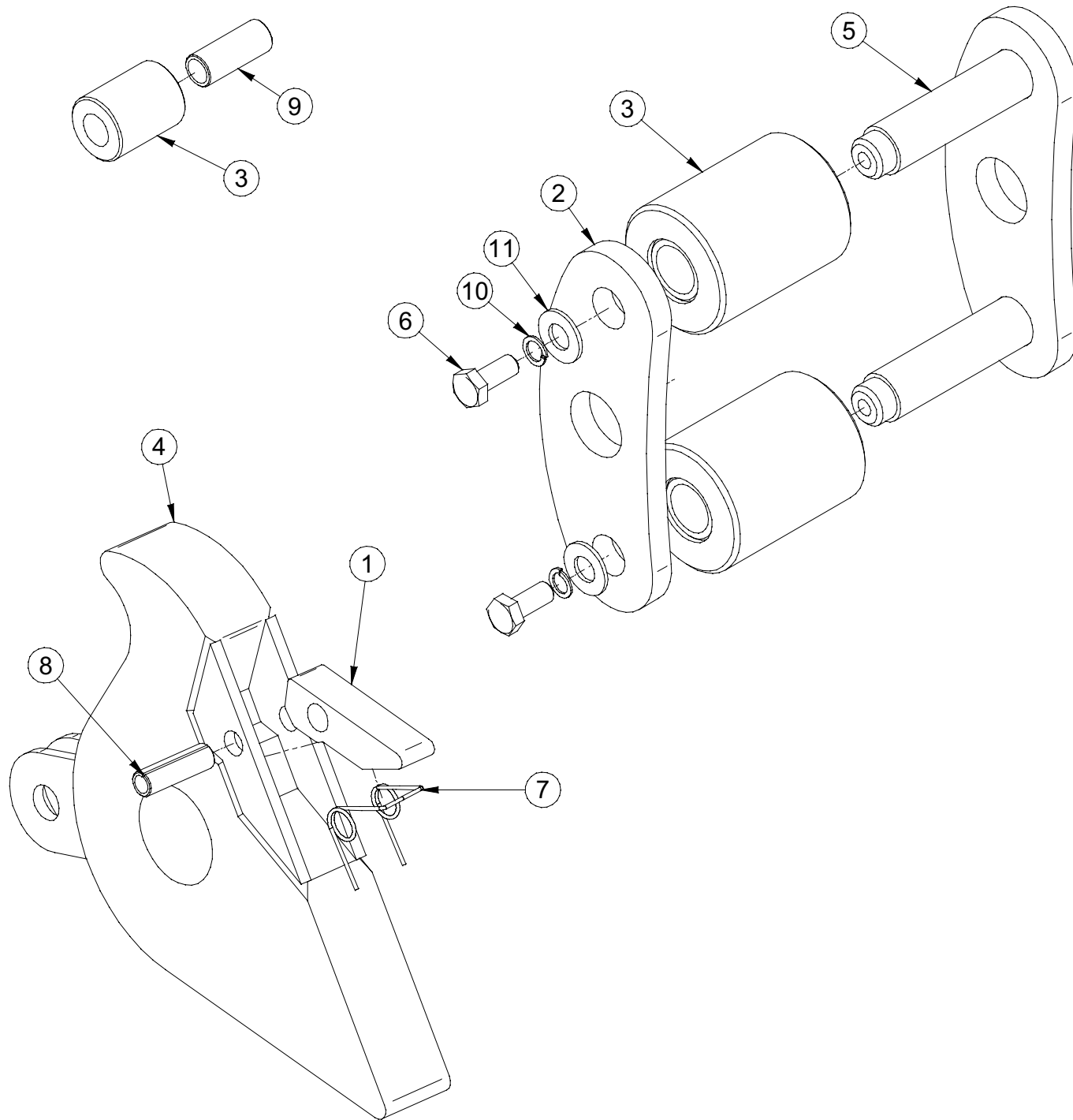
FRACO

**Everything you need to know
about maintenance on FRACO
hydraulic platform**

ACT-8 Electrical Unit

Starting at serial number 77060027

Guide Wheels, Tandems & Safety Latches Sub-Assembly



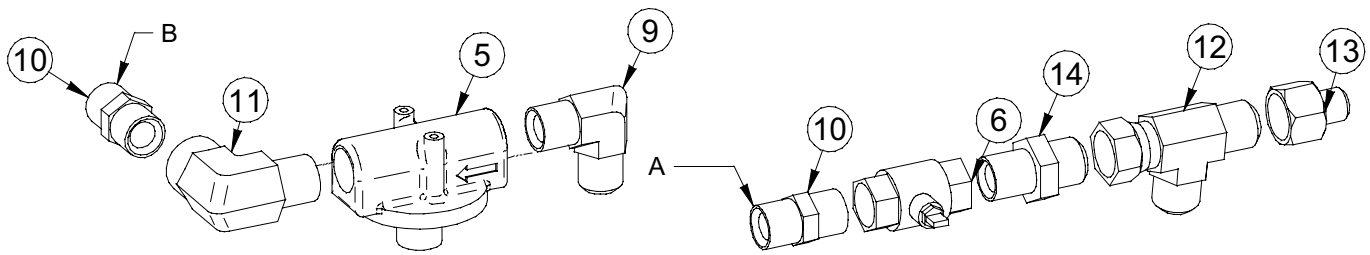
#	Qté	Code	Description	#	Qté	Code	Description
1	3	28011406	Safety activator	6	16	BOZ-7045	Bolt 5/16"-18unc x 3/4" gr5 zinc
2	8	28011901	Flat bar 3/8" x 2-1/4" H.R grade 44W	7	3	FOR-5020	Spring 0.054" SS302 ASTM A313
3	24	28020080	Forged rod (dia. 2.000" x 2.600") (Guide wheel)	8	3	GOU-4330	Spring Pin 3/8" x 1-1/4"
4	3	28491093	Safety latch ACT	9	24	HYE-3134	Sleeve bearing 3/4" x 1" x 2-1/2"
5	8	28491127	Tandem Shaft	10	16	LOZ-5015	Lock washer 5/16" zinc
				11	16	WAZ-7021	Flat Washer 3/8" SAE zinc

ACT-8 Electrical Unit
S/N: Starting at 77060027

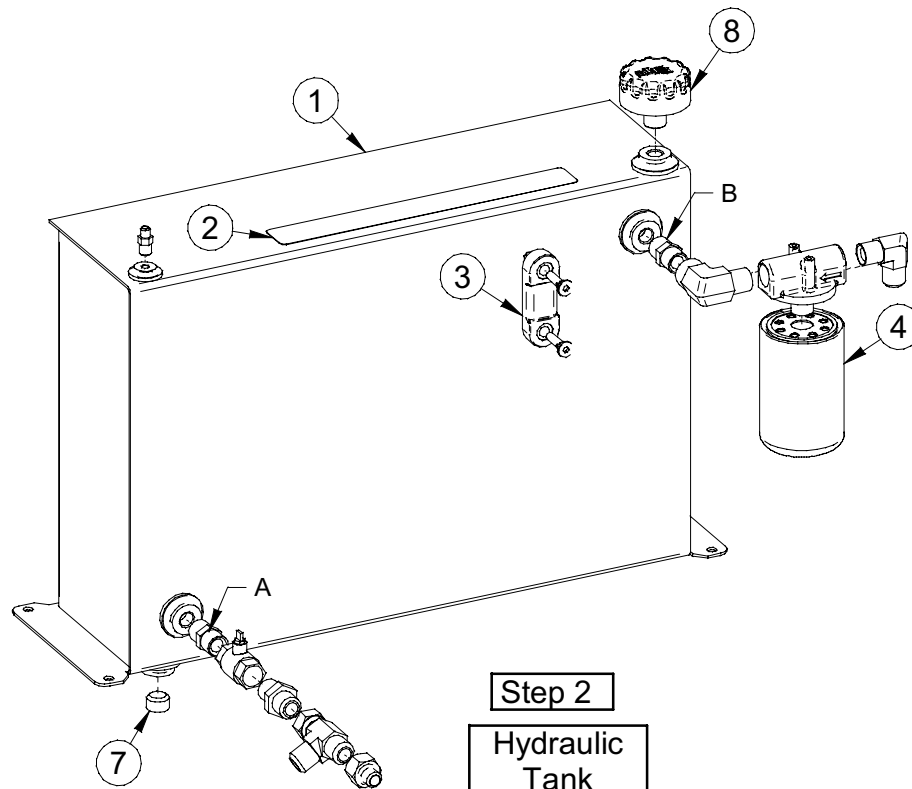
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S-1

Hydraulic Oil Tank Sub-Assembly



Step 1

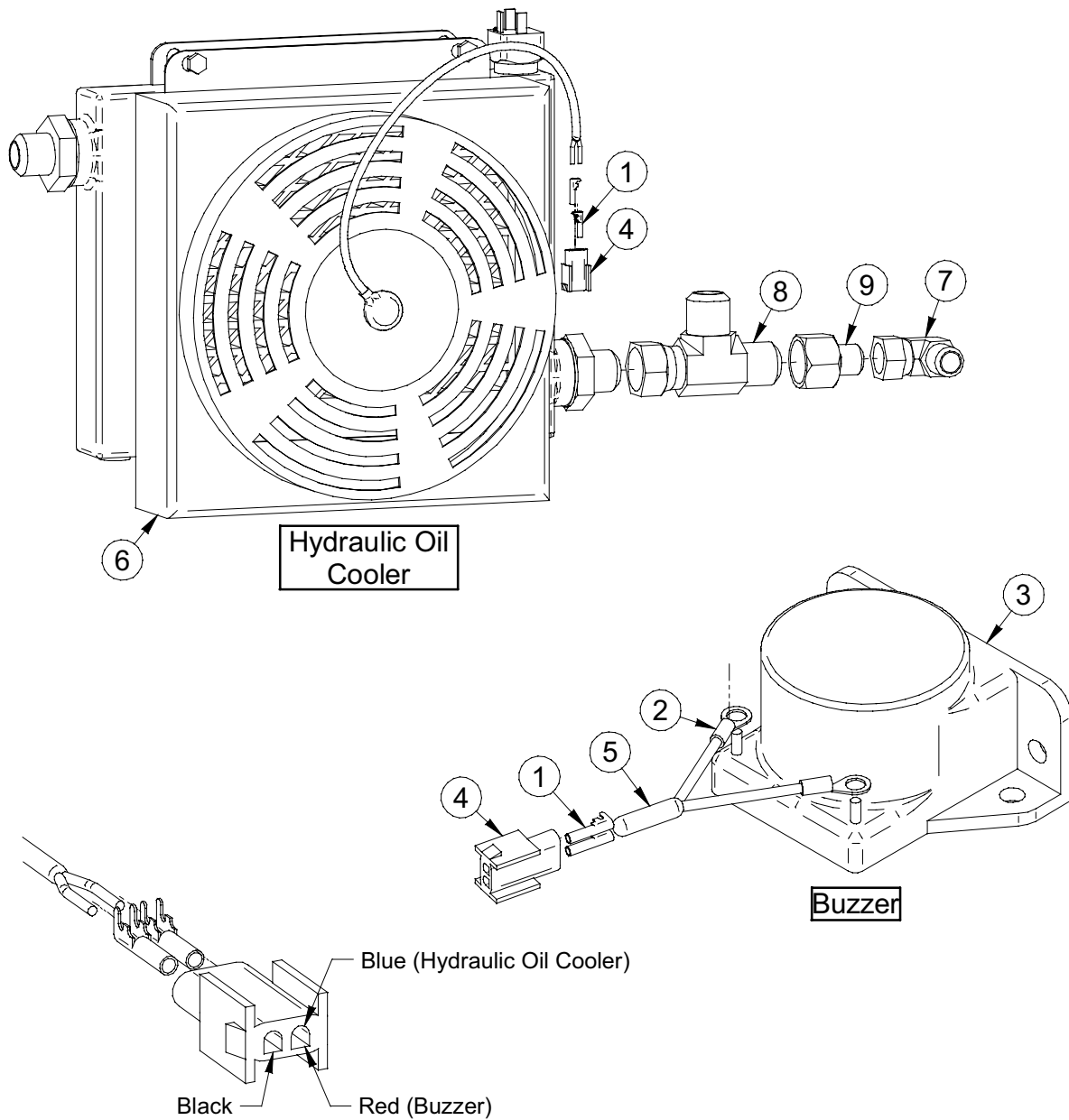


Step 2

Hydraulic
Tank

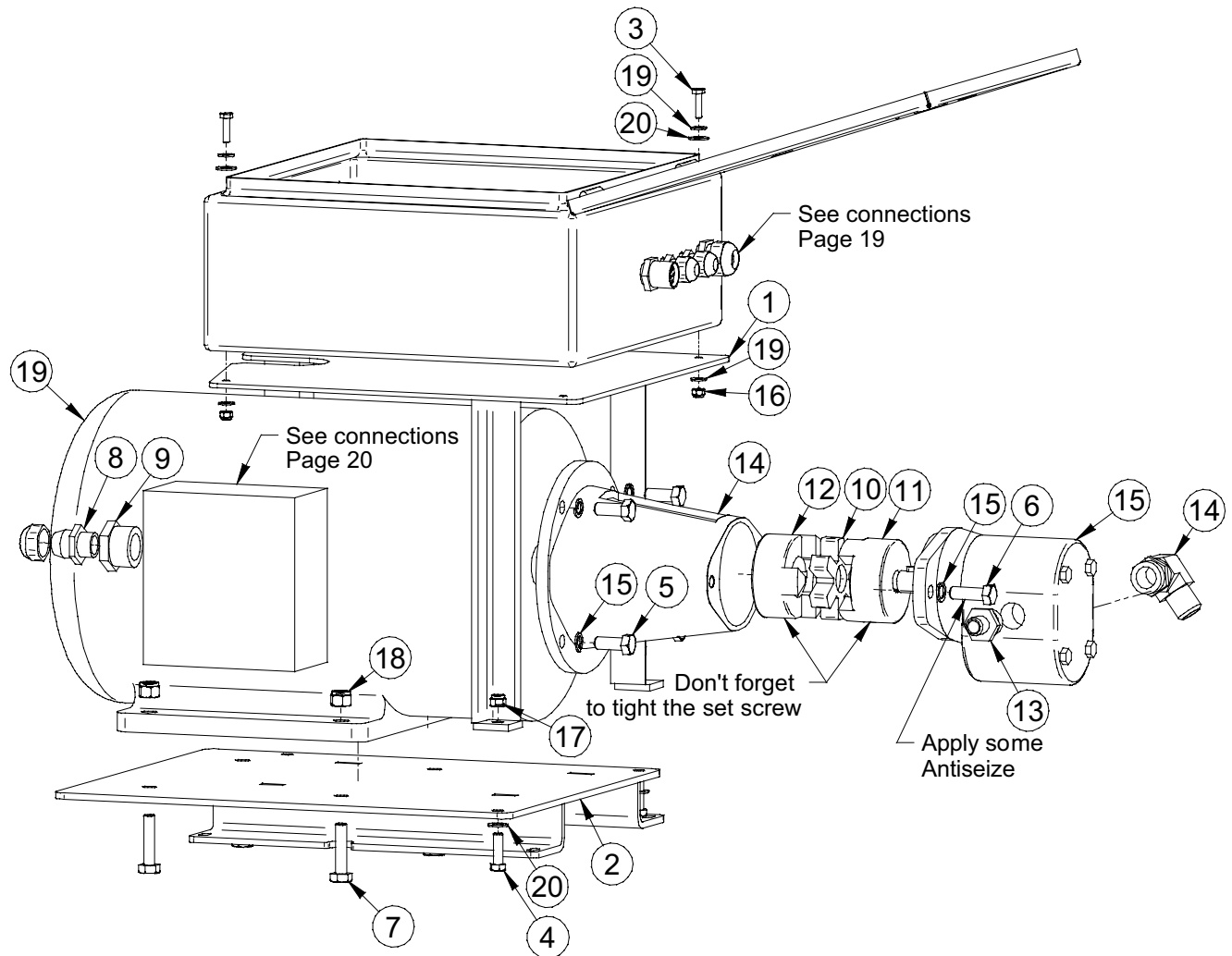
#	Qté	Code	Description	#	Qté	Code	Description
1	1	28491037	Hydraulic oil tank ACT	8	1	HYE-3335	Pressurized cap
2	1	30040074	"Hydraulic oil only" sticker eng./french/spa.	9	1	HYR-5105	Hyd. fitting JIC-3/4-M / NPT-3/4-M / 90
3	1	HYE-3045	Oil level and temperature gauge 3"	10	2	HYR-5120	Hyd. fitting NPT-3/4-M / NPT-3/4-M
4	1	HYE-3061	Oil filter 10 microns	11	1	HYR-5123	Hyd. fitting NPT-3/4-F / NPT-3/4-M / 90
5	1	HYE-3125	Oil filter head	12	1	HYR-5240	Hyd. fitting JIC-3/4-F / JIC-3/4-M / T (F-M-M)
6	1	HYE-3171	Ball Valve 3/4 NPT	13	1	HYR-5260	Hyd. fitting JIC-1/2-M / JIC-3/4-F
7	1	HYE-3315	Magnetic plug NPT-3/4-M	14	1	HYR-5310	Hyd. fitting JIC-3/4-M / NPT-3/4-M

Hydraulic Oil Cooler & Buzzer Sub-Assembly



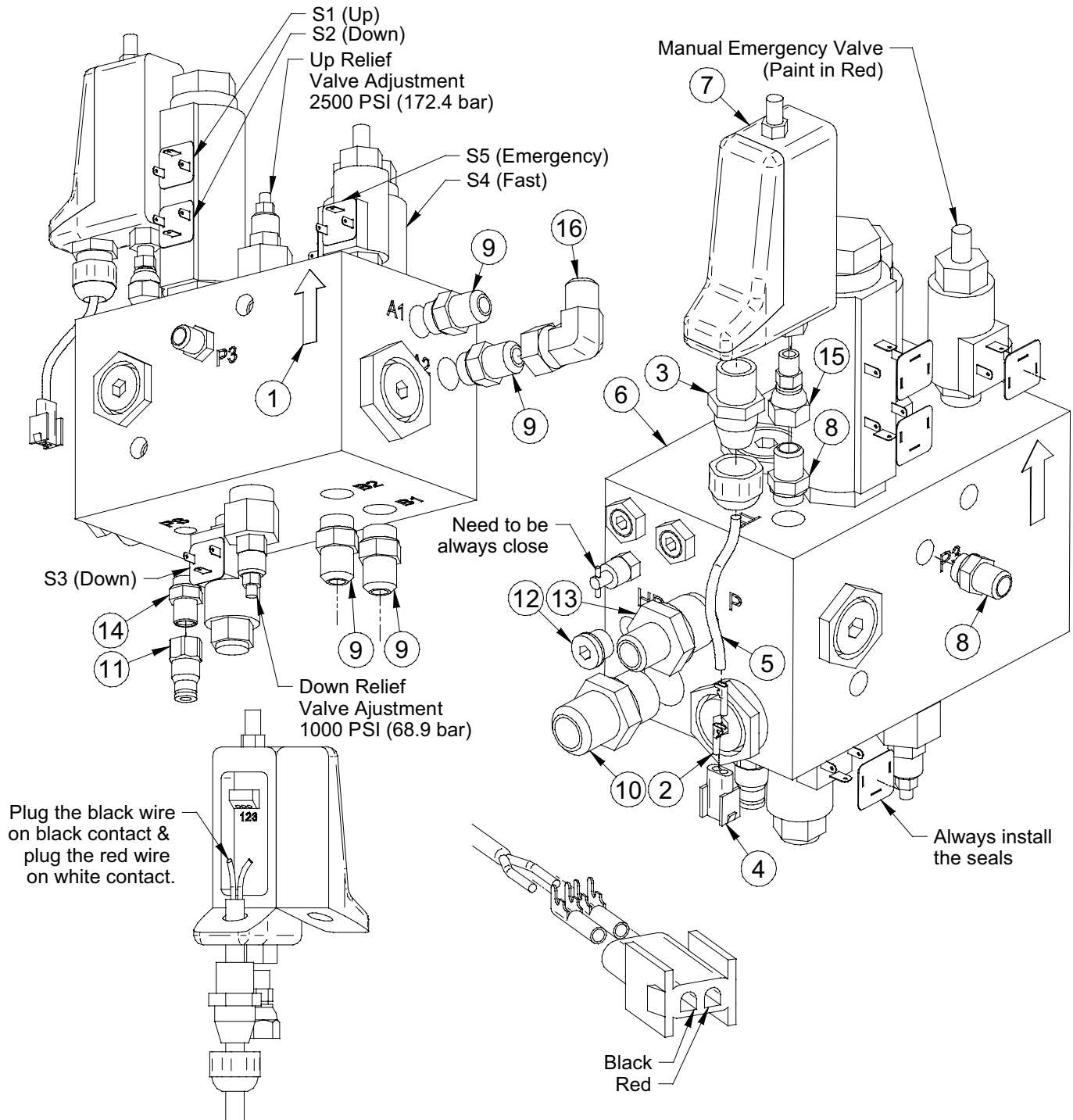
#	Qté	Code	Description	#	Qté	Code	Description
1	4	ELE-1040	Pin F for connector	6	1	HYE-3234	Hydraulic oil cooler
2	2	ELE-1065	Terminal ring 1/4" #14-#16	7	1	HYR-5226	Hyd. fitting JIC-1/2-F / JIC-1/2-M / 90
3	1	ELE-1115	Buzzer 12-48V	8	1	HYR-5240	Hyd. fitting JIC-3/4-F / JIC-3/4-M / T (F-M-M)
4	2	ELE-1445	Connector 2 poles F	9	1	HYR-5260	Hyd. fitting JIC-1/2-M / JIC-3/4-F
5	8	ELF-5405	Cable 2 wires 18AWG				

Power Unit Sub-Assembly



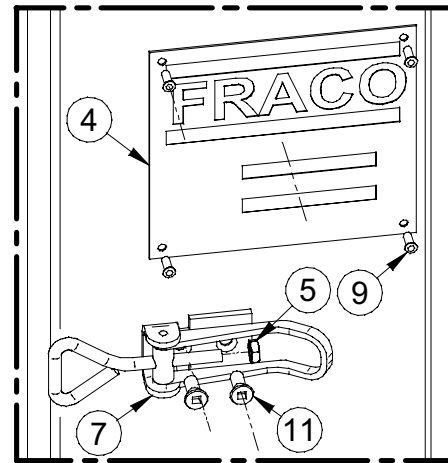
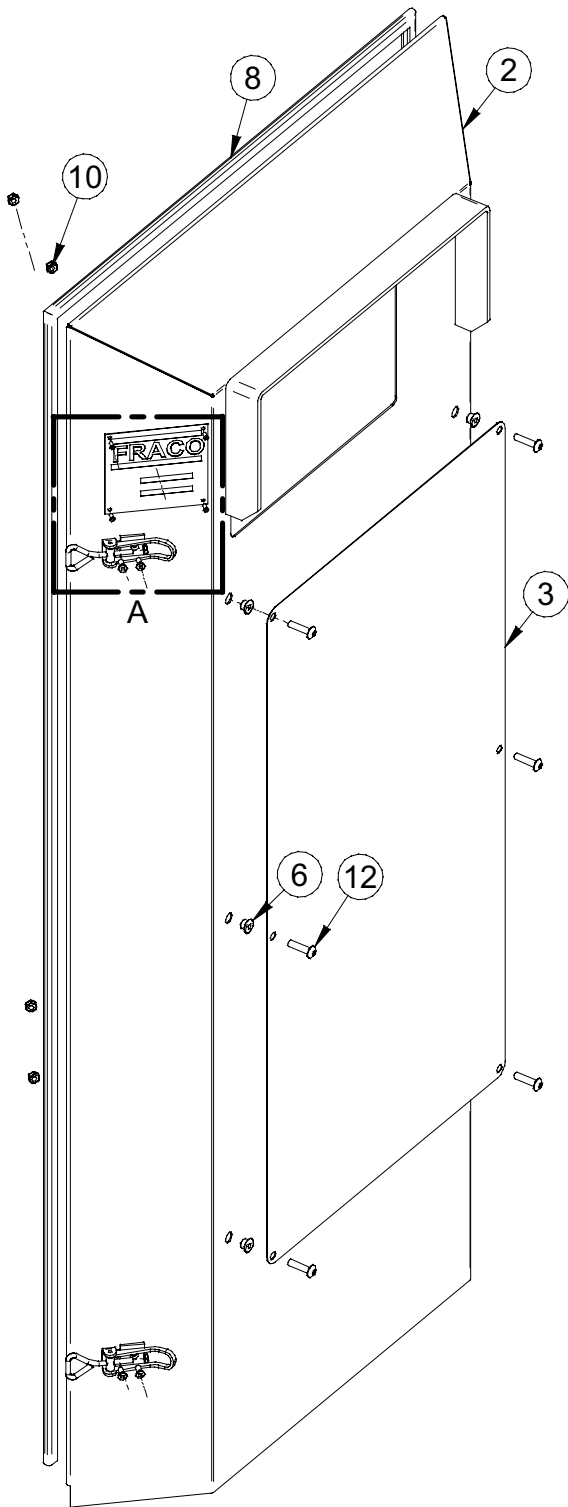
#	Qté	Code	Description	#	Qté	Code	Description
1	1	28494489	Electrical panel support	11	1	HYE-3036	Half coupling 7/8" serie R110
2	1	28494490	Electrical motor base plate	12	1	HYE-3044	Half coupling 1-5/8" serie R110
3	2	BOZ-7015	Bolt 1/4"-20unc x 1" gr5 zinc	13	1	HYR-5191	Hyd. fitting JIC-1/2-M / ORB-3/4-M
4	3	BOZ-7115	Bolt 3/8"-16unc x 1-1/4" gr5 zinc	14	1	HYR-5338	Hyd. fitting JIC-3/4-M / ORB-1-M / 90
5	4	BOZ-7153	Bolt 1/2"-13unc x 1-1/4" gr5 zinc	15	6	LOZ-5030	Lock washer 1/2" zinc
6	2	BOZ-7155	Bolt 1/2"-13unc x 1-1/2" gr5 zinc	16	2	NYL-2010	Nylon Bolt 1/4"-20unc
7	4	BOZ-7160	Bolt 1/2"-13unc x 2" gr5 zinc	17	3	NYL-2020	Nylon Bolt 3/8"-16unc
8	1	ELE-1257	Connector 3/4" black plastic	18	4	NYL-2030	Nylon Nut 1/2"-13unc
9	1	ELE-1259	Reducing bushing NPT 1-1/4 for connector NPT 3/4	19	4	WAZ-7011	Flat Washer 1/4" SAE zinc
10	1	HYE-3021	Insert urethane serie N110	20	5	WAZ-7021	Flat Washer 3/8" SAE zinc

Hydraulic Block Manifold Sub-Assembly

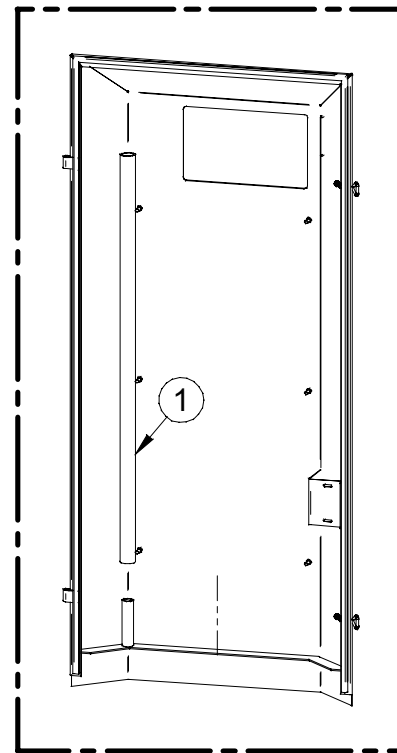


#	Qté	Code	Description	#	Qté	Code	Description
1	1	30050132	"Emergency descent" ACT sticker	9	4	HYR-5026	Hyd. fitting JIC-1/2-M / ORB-1/2-M
2	2	ELE-1040	Pin F for connector	10	1	HYR-5131	Hyd. fitting JIC-3/4-M / ORB-3/4-M
3	1	ELE-1255	Connector 1/2" black plastic	11	1	HYR-5142	Quick connect NPT-1/4-M
4	1	ELE-1445	Connector 2 poles F	12	1	HYR-5190	Plug ORB-3/8-M
5	12	ELF-5405	Cable 2 wires 18AWG	13	1	HYR-5191	Hyd. fitting JIC-1/2-M / ORB-3/4-M
6	1	HYE-3200	Hydraulic manifold	14	1	HYR-5192	Hyd. fitting NPT-1/4-M / ORB-3/8-M
7	1	HYE-3203	Pressure switch	15	1	HYR-5215	Hyd. fitting JIC-3/8-F / NPT-1/4-M
8	2	HYR-5025	Hyd. fitting JIC-3/8-M / ORB-3/8-M	16	1	HYR-5226	Hyd. fitting JIC-1/2-F / JIC-1/2-M / 90

Main Control Door Sub-Assembly



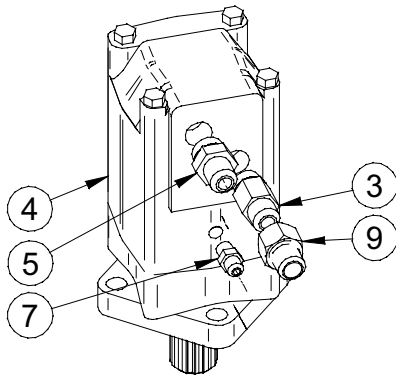
View A



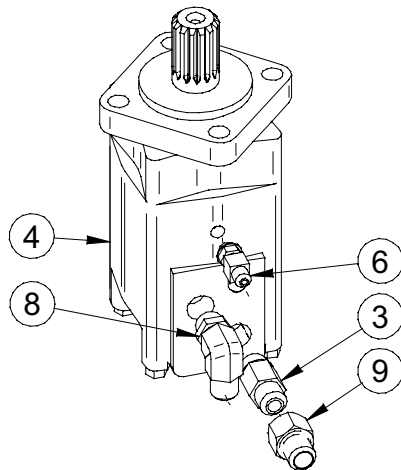
Inside View

#	Qté	Code	Description	#	Qté	Code	Description
1	1	28050038	Manual pump lever - ACT	8	135	FOD-5125	Weather Proof Gasket
2	1	28494108	Control door ACT	9	4	FOD-5130	Pop Rivet Dia.1/8" Aluminium C.R. 5/16
3	1	30020027	ACT "load distribution and warning" sticker -eng./spa.	10	4	NYL-2075	Nylon Nut #10-24unc
4	1	30030017	ACT serial number plate	11	4	VIS-5005	Flat Head 10-24unc x 1/2"
5	2	ECZ-7100	Nut Gr5 Zinc M6	12	6	VIS-8818	Truss philips head machine screw 1/4-20unc x 1"
6	6	FOD-1275	Lug Nut 1/4-20unc x .015/.187				
7	2	FOD-5100	FOD-5100				

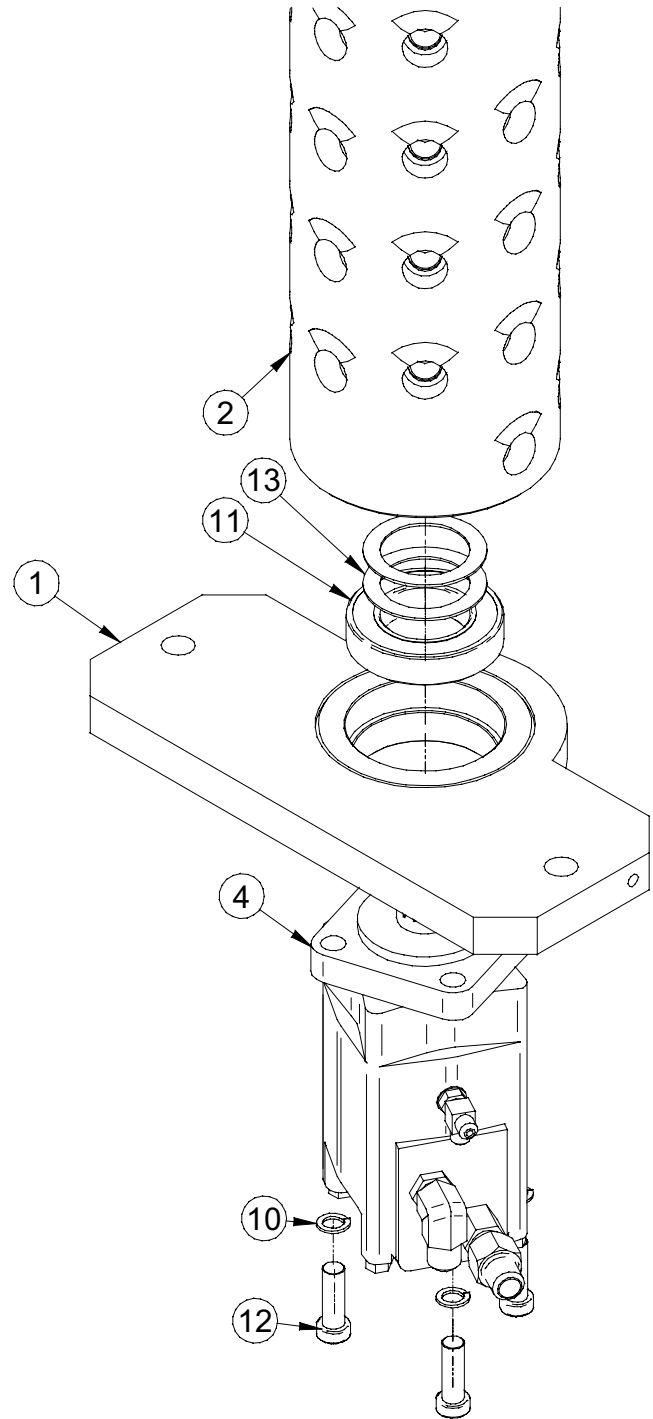
Worm Screw Sub-Assembly



Up Motor

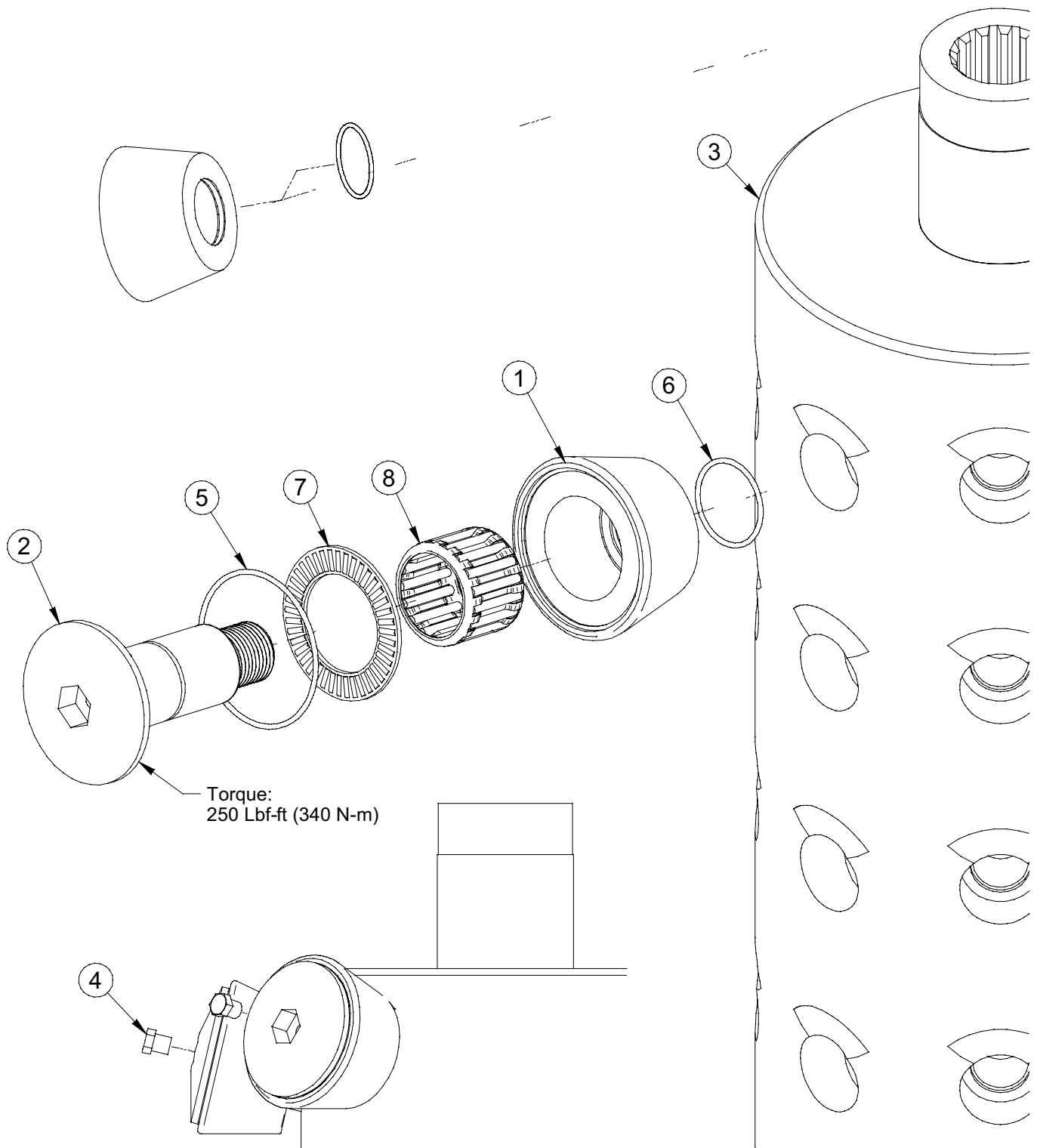


Bottom Motor



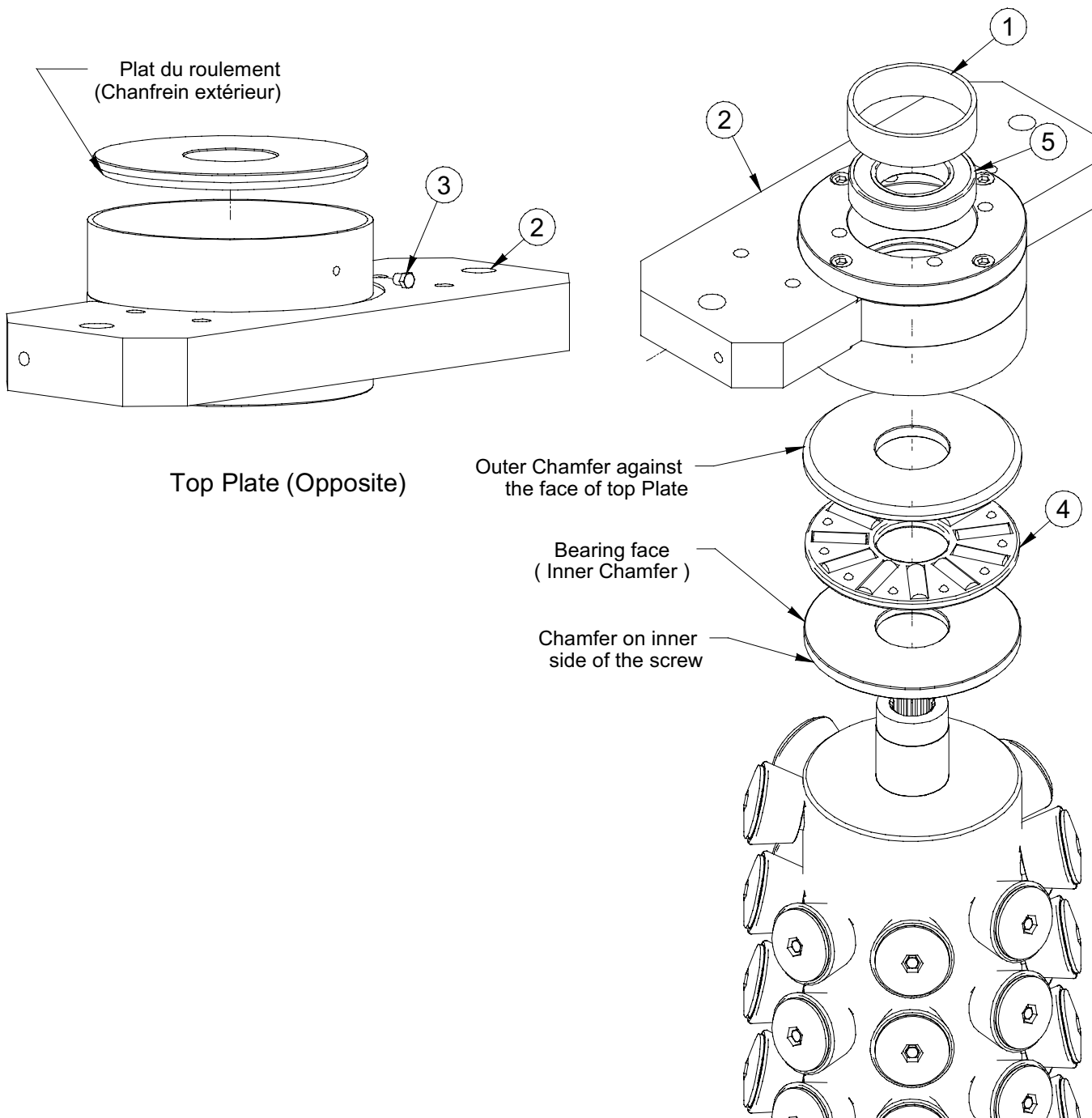
#	Qté	Code	Description	#	Qté	Code	Description
1	1	28490081	Bottom plate	7	1	HYR-5193	Hyd. fitting JIC-1/4-M / ORB-1/4-M
2	1	28490968	Worm screw	8	1	HYR-5235	Hyd. fitting JIC-1/2-M / ORB-5/8-M / 90
3	2	HYE-3172	Velocity fuse	9	2	HYR-5259	Hyd. fitting JIC-1/2-M / JIC-5/8-F
4	2	HYE-3210	Hydraulic motor	10	4	LOZ-5030	Lock washer 1/2" zinc
5	1	HYR-5027	Hyd. fitting JIC-1/2-M / ORB-5/8-M	11	1	ROB-1035	Ball Bearing 6210 DU
6	1	HYR-5183	Hyd. fitting JIC-1/4-M(2) / ORB-1/4-M / T	12	4	VIS-1436	Socket Head 1/2"-13unc x 1-1/2"
				13	1	WAS-9025	Washer 2" x 2-3/4" x 1/16" (shim)

Worm Screw Sub-Assembly Part #2



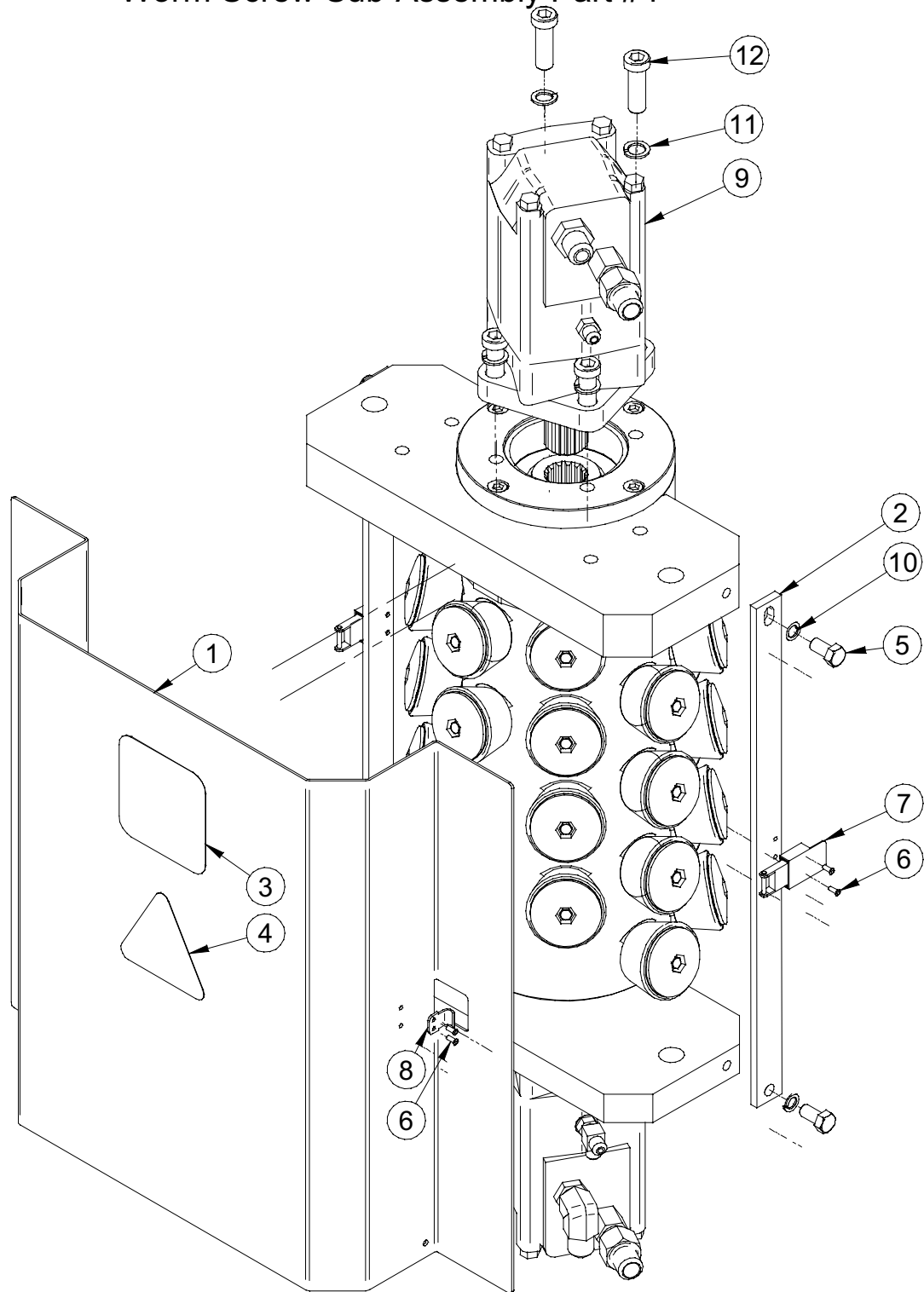
#	Qté	Code	Description	#	Qté	Code	Description
1	32	28020091	Conical roller	5	32	FOD-5160	O-Ring
2	32	28070119	Conical roller axle	6	32	FOD-5364	O-Ring
3	1	28490968	Worm screw	7	32	ROB-1025	Thrust Bearing
4	32	FOD-1155	Grease fitting	8	32	ROB-1030	Needle Bearing

Worm Screw Sub-Assembly Part #3



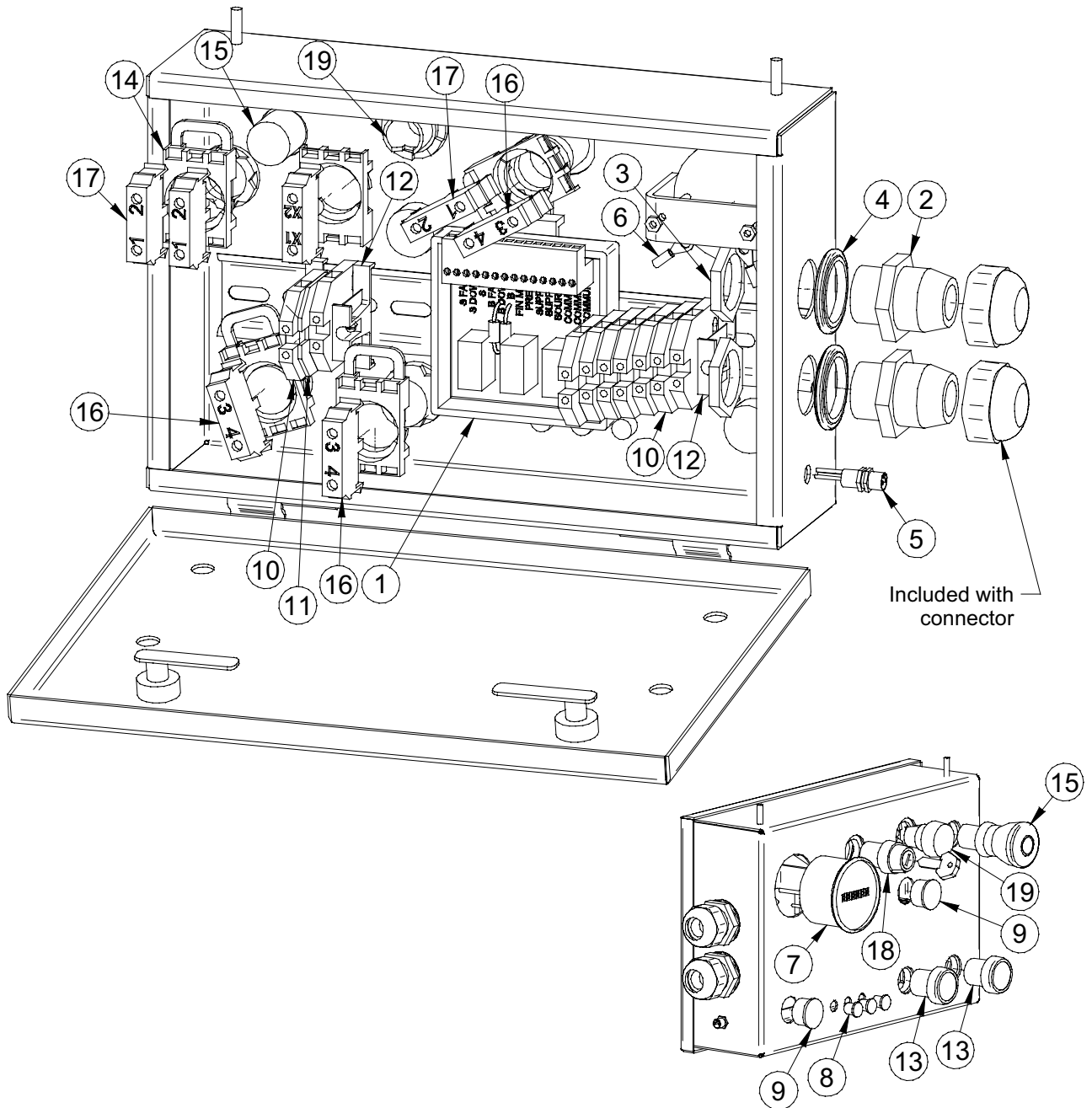
#	Qté	Code	Description	#	Qté	Code	Description
1	1	28020103	Shim 3-1/4" x 3-35/64" x 1"	4	1	ROB-1020	Load bearing
2	1	28491363	Top plate	5	1	ROB-1035	Ball Bearing 6210 DU
3	1	FOD-1155	Grease fitting				

Worm Screw Sub-Assembly Part #4



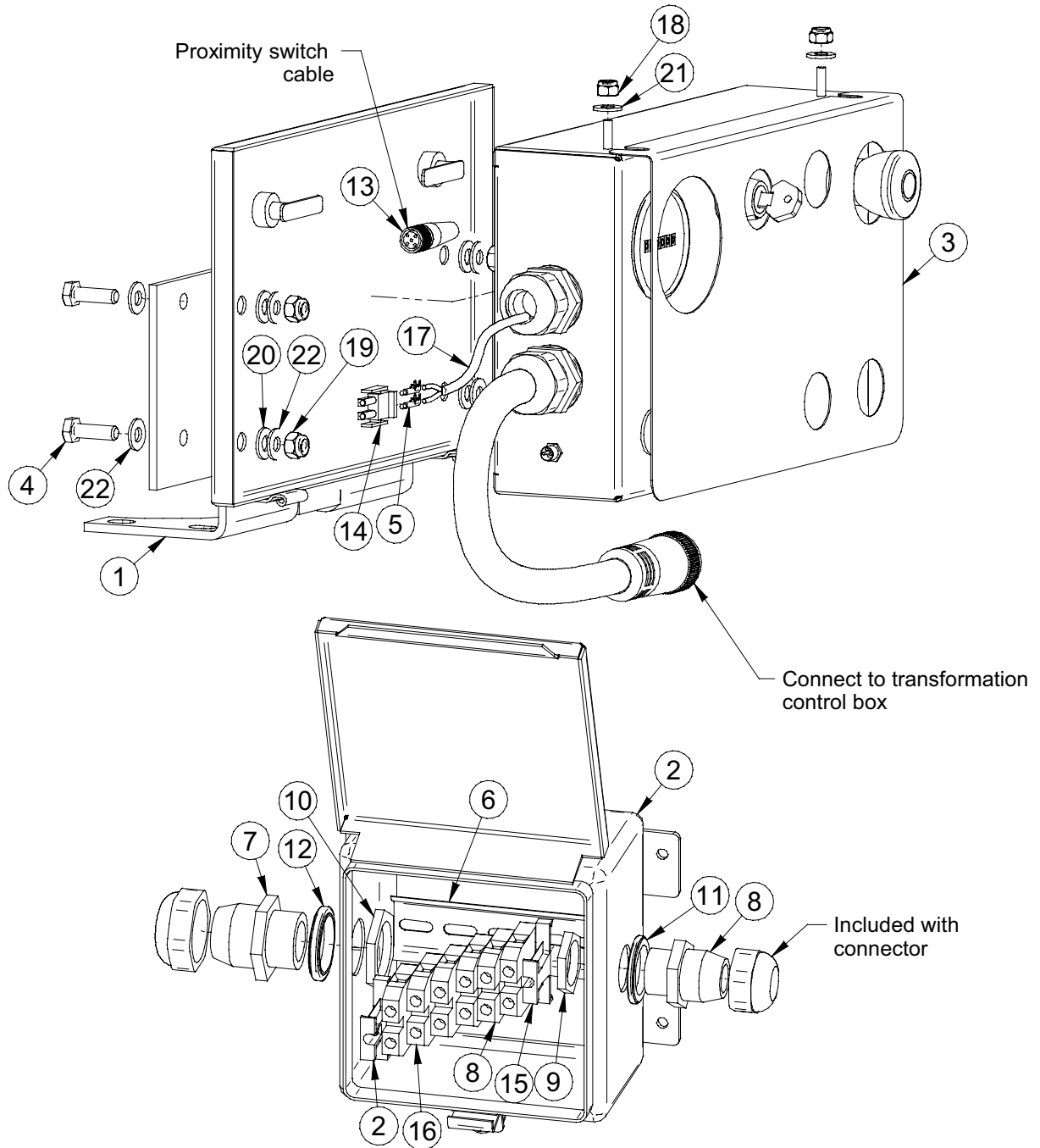
#	Qté	Code	Description	#	Qté	Code	Description
1	1	28011563	Screw cover	7	2	FOD-9075	Lever latch
2	2	28014858	Flat bar for plates	8	2	FOD-9080	Latch
3	1	30010015	ACT "lubrication" sticker - french / eng.	9	1	HYE-3210	Hydraulic motor
4	1	30490051	"Wheelwork warning" sticker	10	4	LOZ-5020	Lock washer 3/8" zinc
5	4	BOZ-7105	Bolt 3/8"-16unc x 3/4" gr5 zinc	11	4	LOZ-5030	Lock washer 1/2" zinc
6	8	FOD-5130	Pop Rivet Dia. 1/8" Aluminium C.R. 5/16	12	4	VIS-1436	Socket Head 1/2"-13unc x 1-1/2"

Control Box Assembly



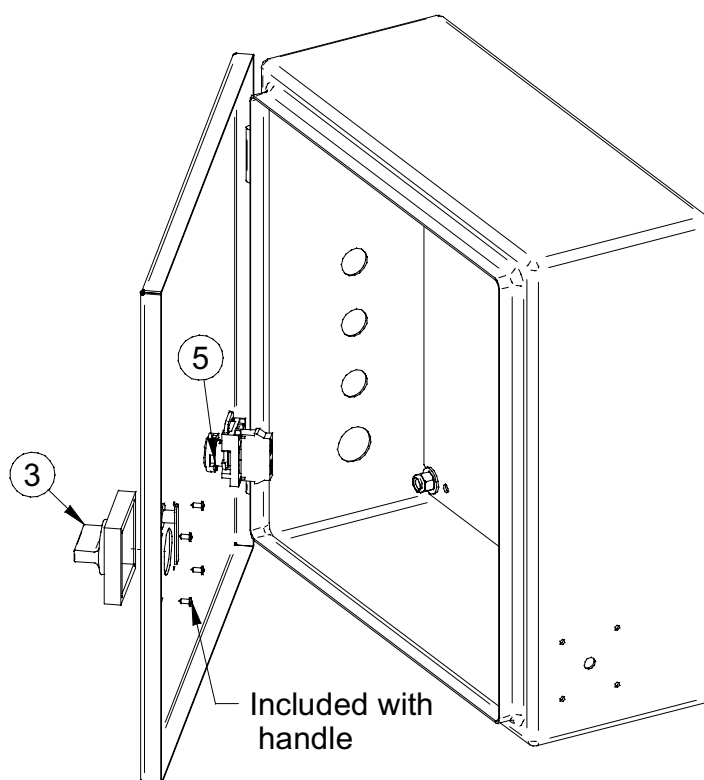
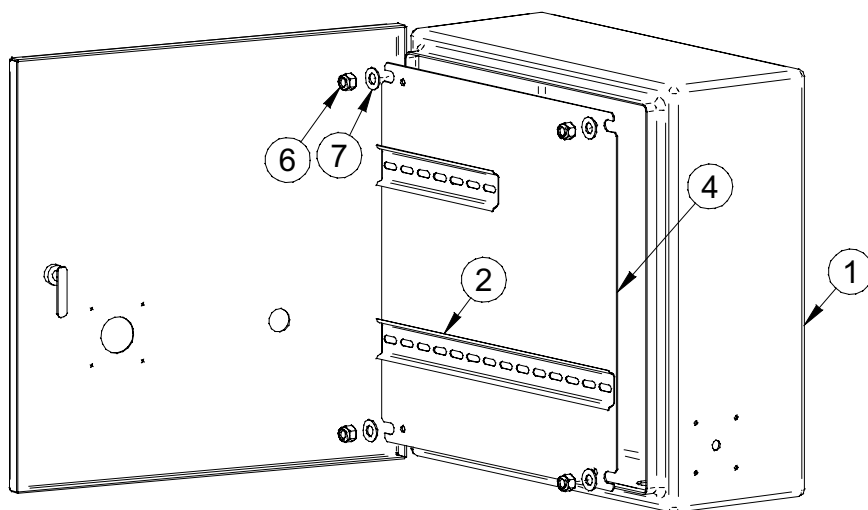
#	Qté	Code	Description	#	Qté	Code	Description
1	1	32190016	Circuit board ACT gas (2nd generation)	12	2	ELE-4210	Support pour Ts35 (AB)
2	2	ELE-1257	Connector 3/4" black plastic	13	2	ELE-4226	Black push button 22mm (AB)
3	2	ELE-1261	Lock nut 3/4" plastic	14	3	ELE-4227	Latch for push button and key switch 22mm
4	2	ELE-1270	Sealing ring 3/4"	15	1	ELE-4235	Emergency stop push button 22 MM (AB)
5	1	ELE-1290	Receptacle M 3 poles 2' 24AWG	16	3	ELE-4240	Normally open contact (AB)
6	2	ELE-1380	Terminal ring insulated #8, 14-18	17	2	ELE-4245	Normally closed contact (AB)
7	1	ELE-1458	Hourmeter 2-1/16"	18	1	ELE-4331	Key switch 2 positions remain (AB)
8	3	ELE-1563	Hole plug black binder head 3/8"	19	1	ELE-4923	Green pilot light
9	2	ELE-1565	Hole plug black binder head 7/8"				
10	8	ELE-4200	Contact block wk/4 6mm (AB)				
11	1	ELE-4205	End plate wk/4 (AB)				

Control Box & Junction Box Assembly



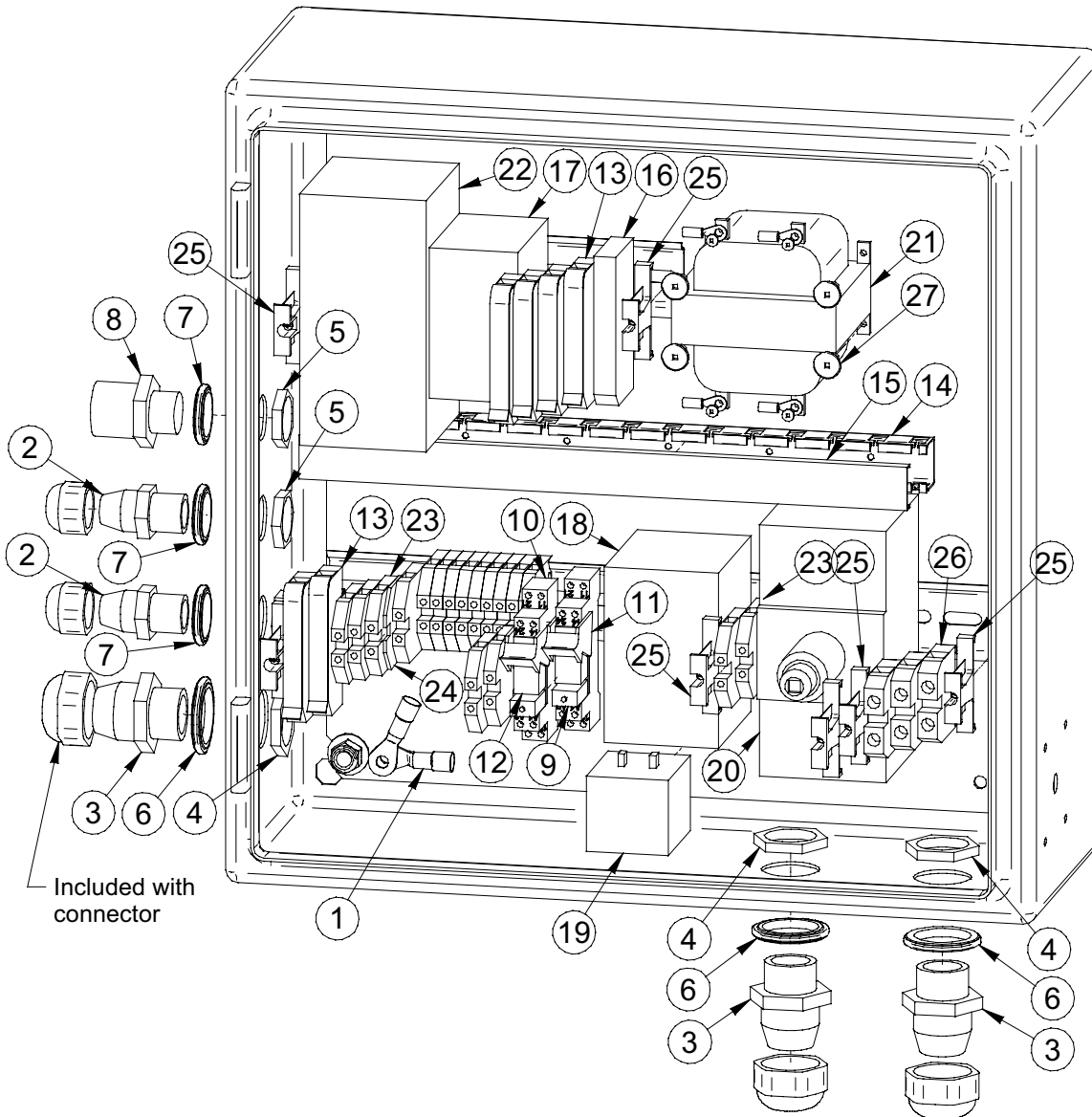
#	Qté	Code	Description	#	Qté	Code	Description
1	1	28017626	Control box bracket	13	1	ELE-1296	Single ended cordset F 3 poles straight 6'
2	1	28494634	Junction Box	14	1	ELE-1440	Connector 2 poles M
3	1	30020117	Control box Sticker	15	1	ELE-4210	Support pour Ts35 (AB)
4	4	BOZ-7060	Bolt 5/16"-18unc x 1" gr5 zinc	16	4	ELE-4710	Contact block wk/10
5	1	ELE-1035	Pin M for connector	17	50	ELF-5405	Cable 2 wires 18AWG
6	1	ELE-1110	Holder rail 2M TS35 (4-1/2")	18	2	NYL-2010	Nylon Bolt 1/4"-20unc
7	1	ELE-1254	Connector 1" black plastic	19	4	NYL-2015	Nylon Nut 5/16"-18unc
8	1	ELE-1257	Connector 3/4" black plastic	20	4	WAC-1030	Neoprene washer 5/16"
9	1	ELE-1261	Lock nut 3/4" plastic	21	2	WAZ-7011	Flat Washer 1/4" SAE zinc
10	1	ELE-1264	Lock nut 1" plastic	22	8	WAZ-7017	Washer Grade #5 Zinc 5/16 SAE
11	1	ELE-1270	Sealing ring 3/4"				
12	1	ELE-1274	Sealing ring 1"				

Transformer Control Box



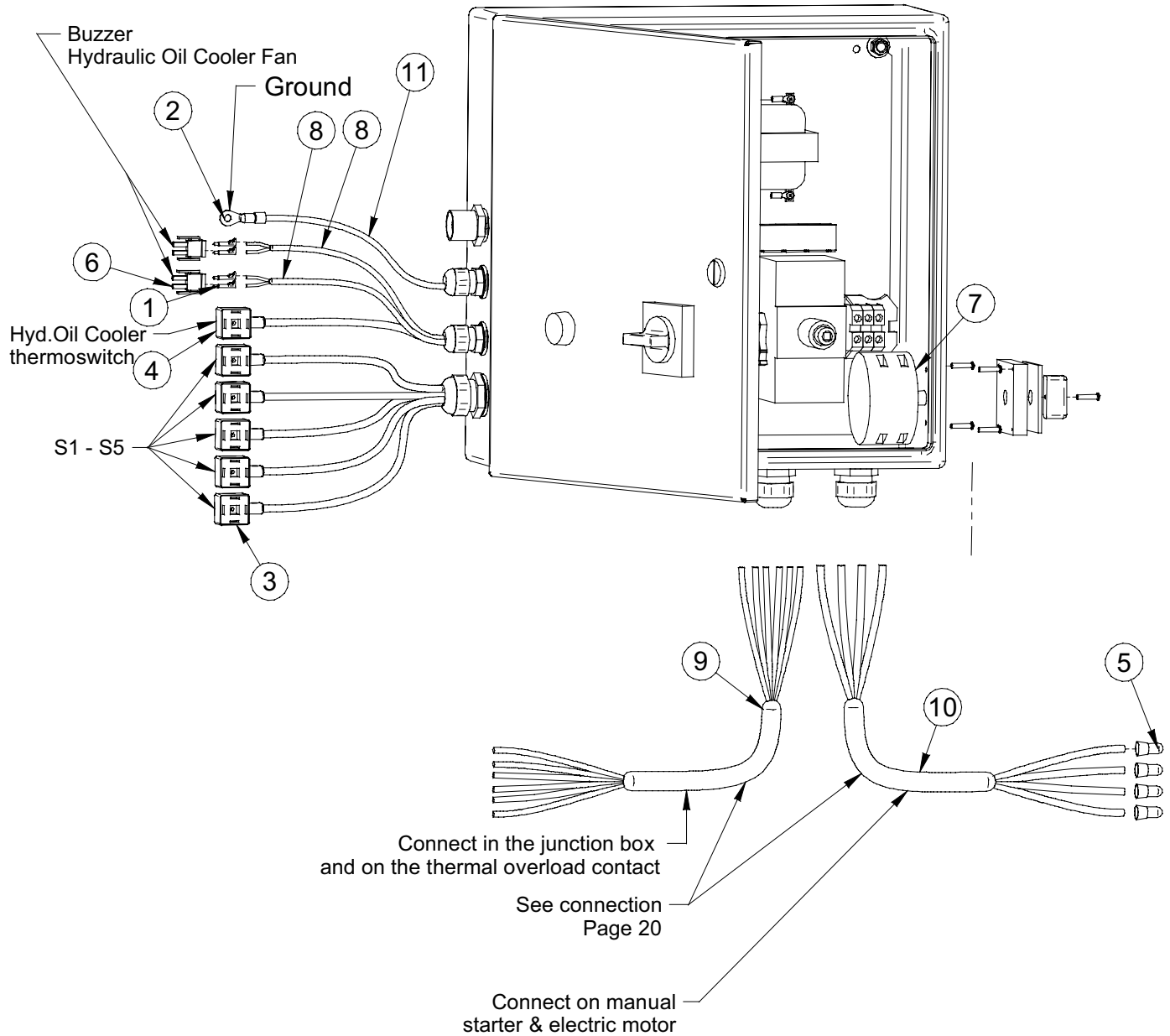
#	Qté	Code	Description	#	Qté	Code	Description
1	1	28494502	Command box for electrical ACT (7" x 16" x 16")	4	1	ELE-2121	Back plate
2	24	ELE-1110	Holder rail 2M TS35	5	1	ELE-4920	Red pilot light
3	1	ELE-2098	Black handle DBH	6	4	NYL-2020	Nylon Bolt 3/8"-16unc
				7	4	WAZ-7021	Flat Washer 3/8" SAE zinc

Transformer Control Box part 2



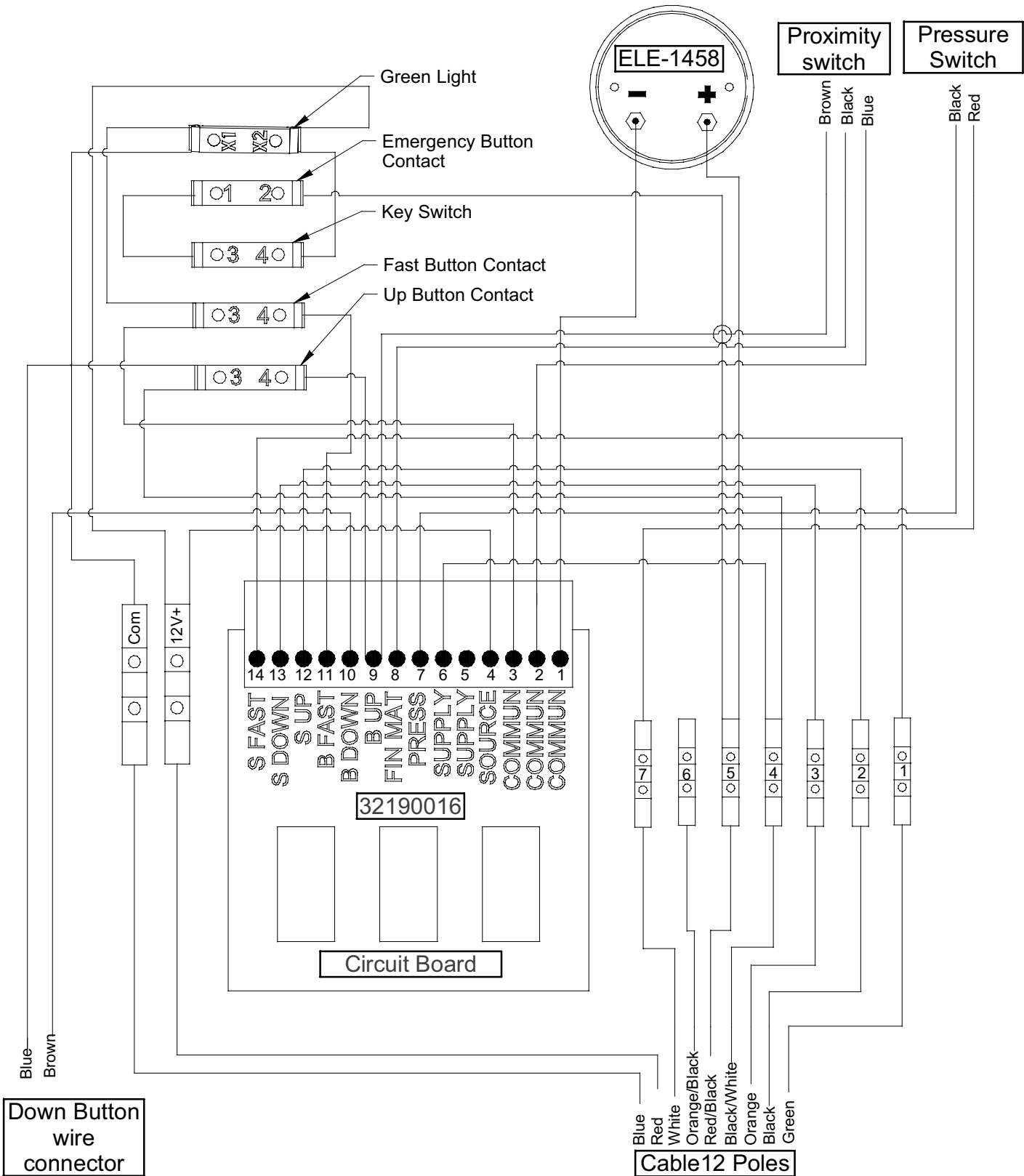
#	Qté	Code	Description	#	Qté	Code	Description
1	3	ELE-1185	Terminal ring 1/4" #12-#10 ultralink	15	30	ELE-1760	Wire duct cover
2	2	ELE-1255	Connector 1/2" black plastic	16	1	ELE-1855	Circuit breaker 20 amps
3	3	ELE-1257	Connector 3/4" black plastic	17	1	ELE-2082	Phase monitor 480Vac / 60HZ
4	3	ELE-1261	Lock nut 3/4" plastic	18	1	ELE-2086	Contacteur 20HP / 480Vac
5	3	ELE-1266	Lock nut 1/2" plastic	19	1	ELE-2090	Overload 18A - 25A
6	3	ELE-1270	Sealing ring 3/4"	20	1	ELE-2092	Manual starter 23 - 32A
7	3	ELE-1275	Sealing ring 1/2"	21	1	ELE-2102	Transformer 150VA 480V / 120V
8	1	ELE-1317	Receptacle 12 poles F 12" 16 AWG	22	1	ELE-2104	Power supply 12Vdc/ 10A
9	2	ELE-1500	Diode with led	23	17	ELE-4200	Contact block wk/4 6mm (AB)
10	2	ELE-1505	Relay base	24	1	ELE-4205	End plate wk/4 (AB)
11	2	ELE-1510	Relay holder for base	25	7	ELE-4210	Support pour Ts35 (AB)
12	2	ELE-1530	Relay 2 x 8 ampères	26	3	ELE-4710	Contact block wk/10
13	6	ELE-1535	Fuse holder	27	8	VIS-8800	Square socket wafer head self-drilling screw
14	30	ELE-1755	Wire duct				

Transformer Control Box Assembly Part 3

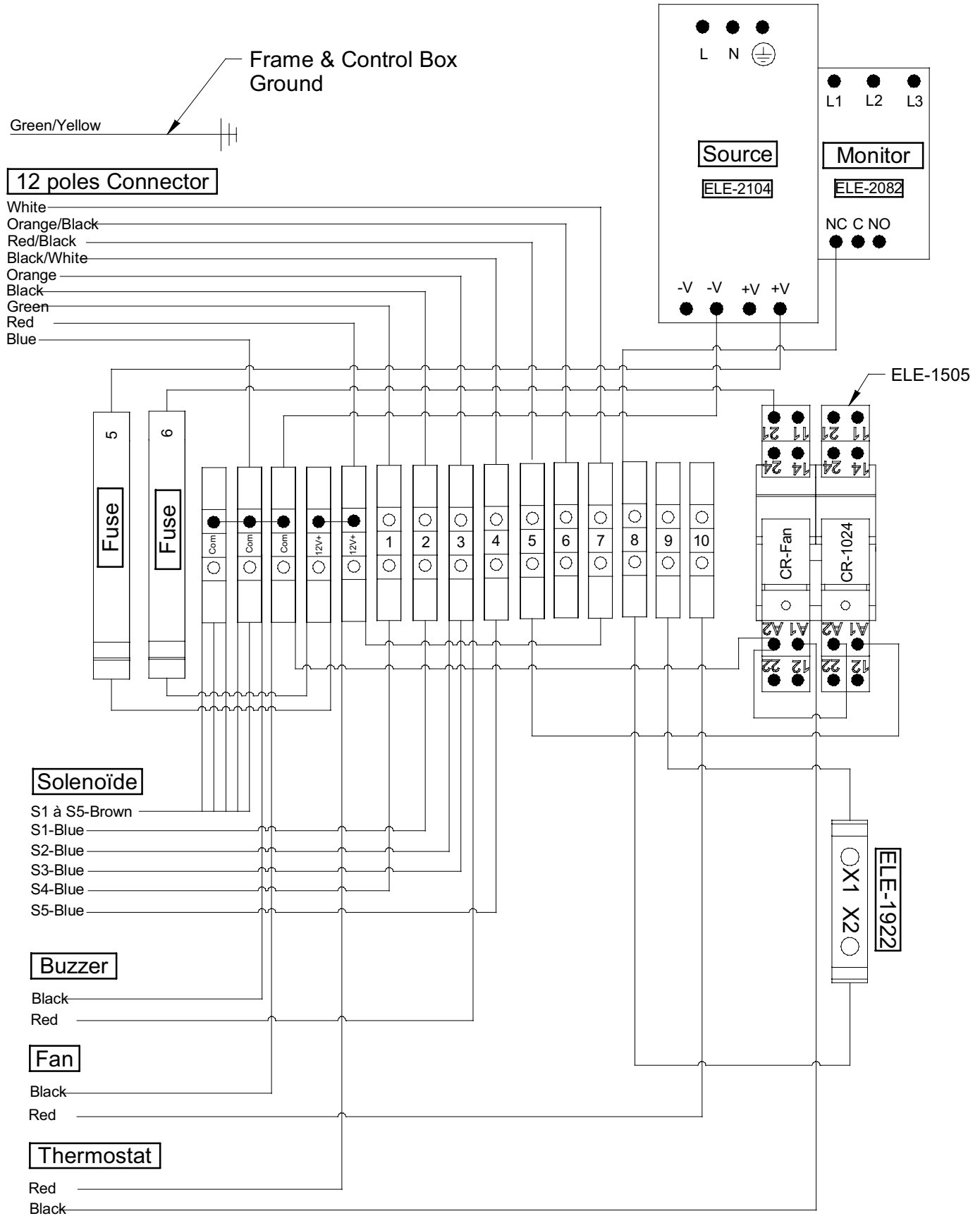


#	Qté	Code	Description	#	Qté	Code	Description
1	4	ELE-1035	Pin M for connector	7	1	ELE-2106	Change over
2	1	ELE-1185	Terminal ring 1/4" #12-#10 ultralink	8	50	ELF-5405	Cable 2 wires 18AWG
3	5	ELE-1370	Cable Din 3 wires with led connector	9	72	ELF-5419	Cable 6 wires 14AWG
4	1	ELE-1371	Din connector 3 wires 18mm, feild wired	10	72	ELF-5429	Cable 4 wires 12AWG
5	4	ELE-1436	Wire joint 4#12	11	48	ELF-5605	Wire Tew 14AWG green/yellow
6	1	ELE-1440	Connector 2 poles M				

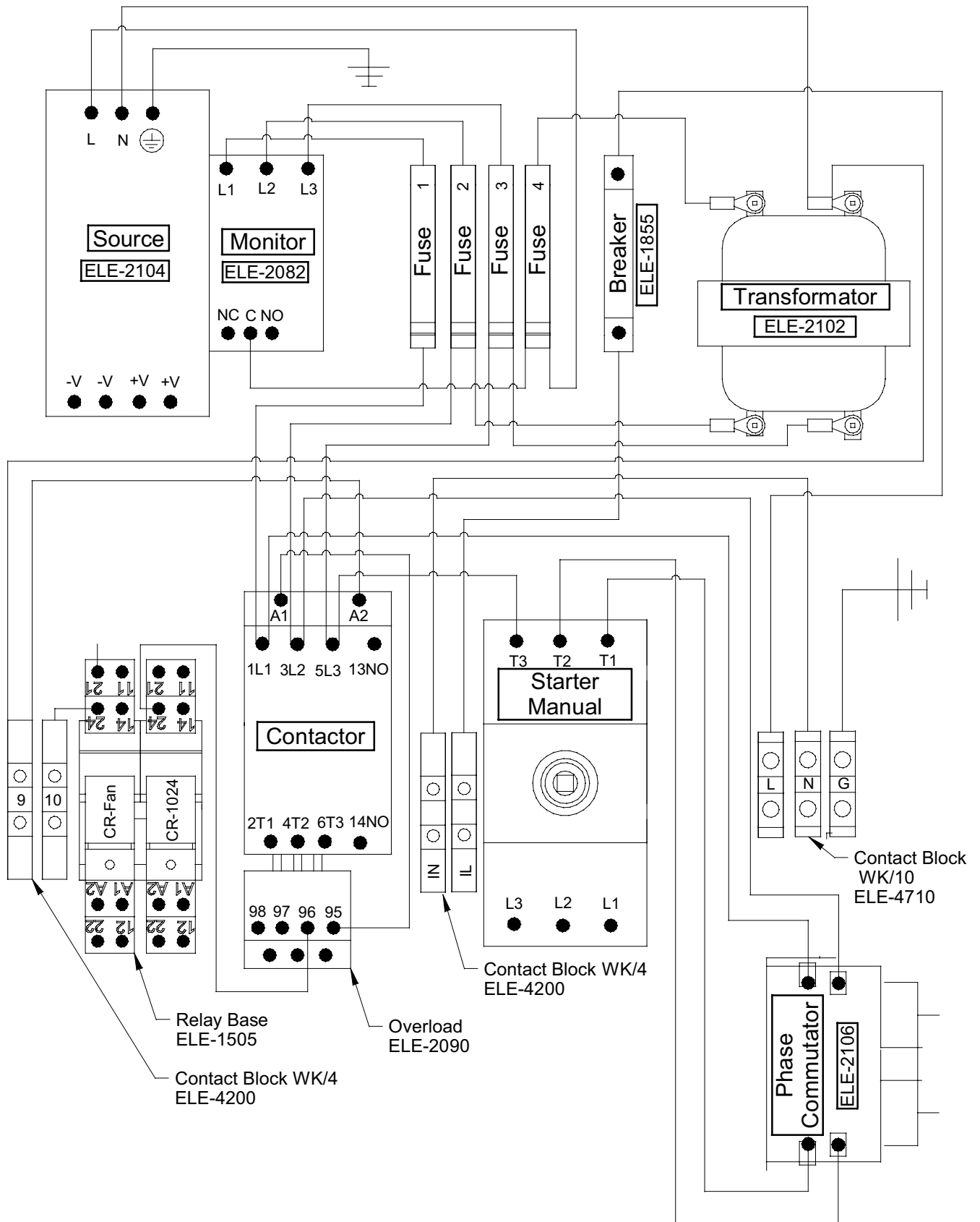
Control Box Electrical Layout



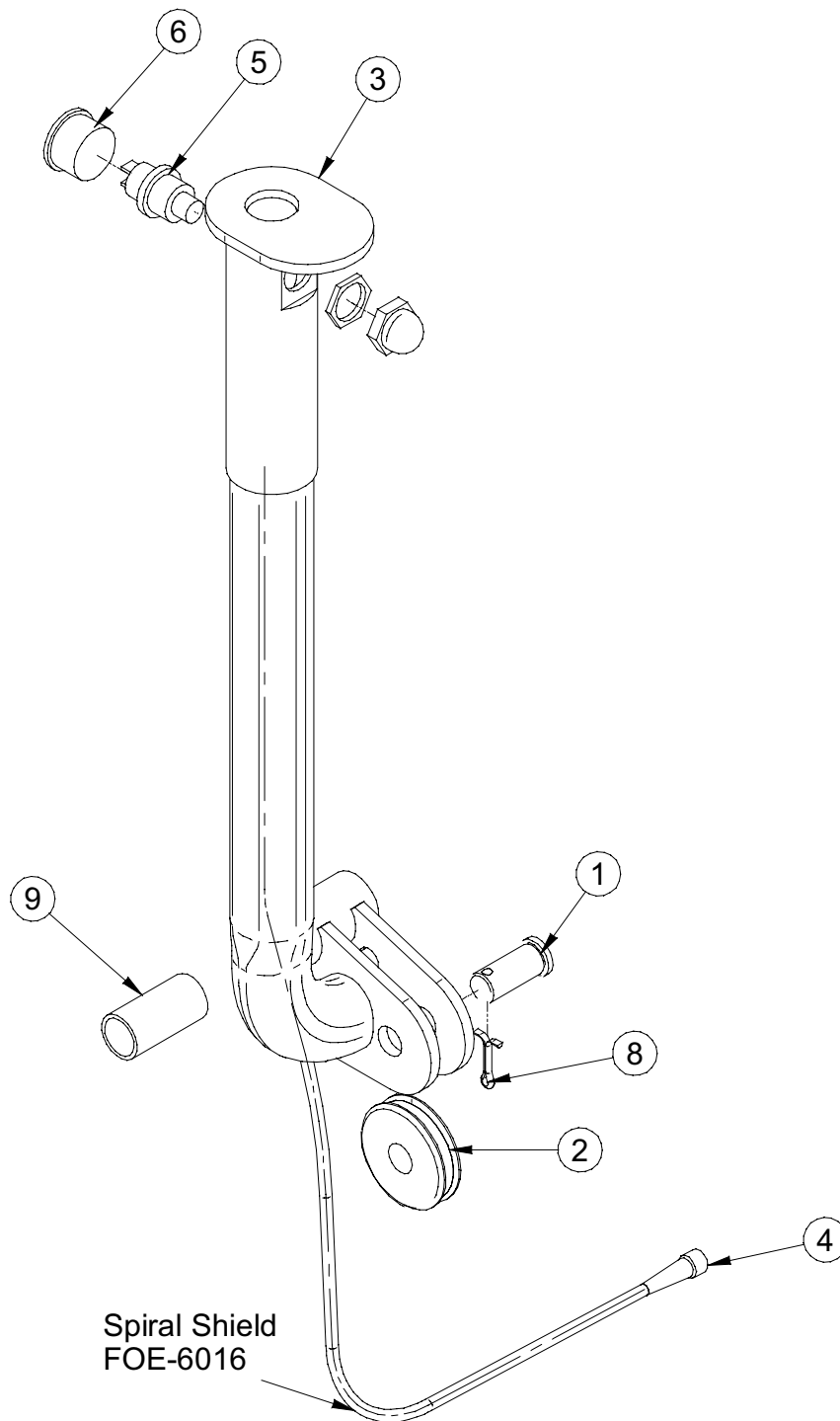
Transformer Box Electrical Layout Part 1



Transformer Box Electrical Layout Part 2

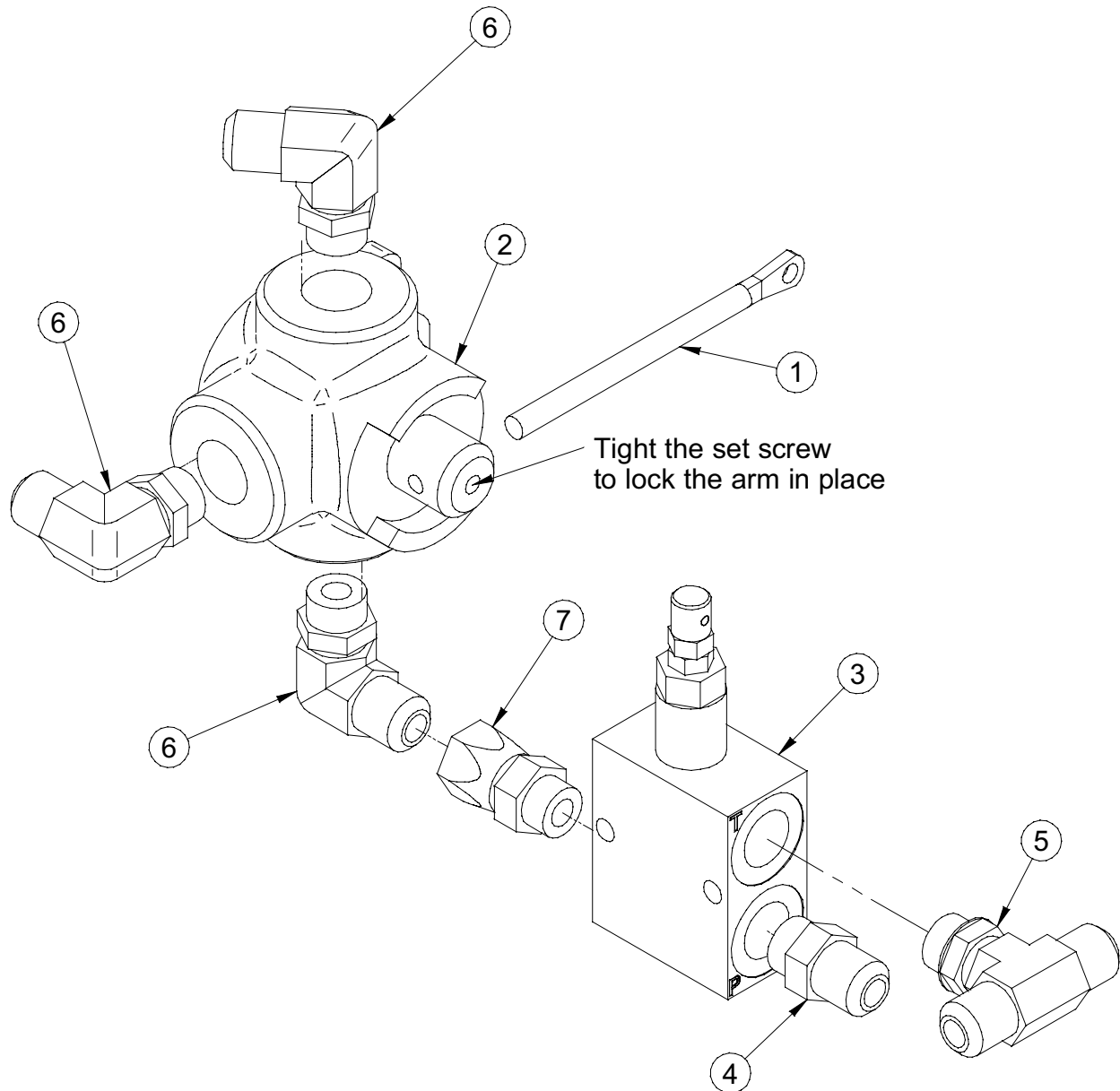


Down Arm Sub-Assembly



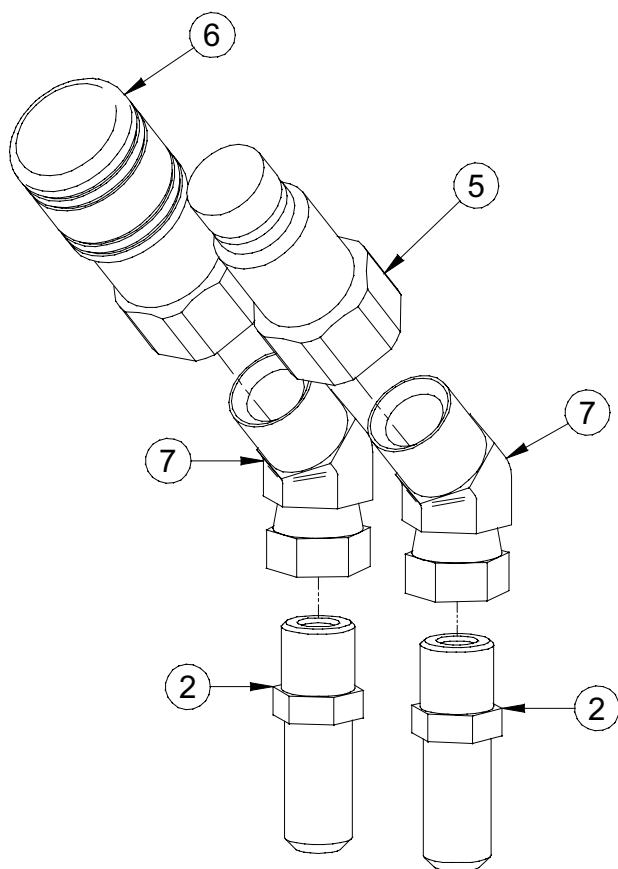
#	Qté	Code	Description	#	Qté	Code	Description
1	1	25490156	Pin dia. 5/8" H.R. grade 44W	6	1	ELE-1565	Hole plug black binder head 7/8"
2	1	28070535	Pulley 1-3/4" x 1/2"	7	6	FOE-6016	Spiral Shield 1/2 T & B SRPE-500-9-C
3	1	28492443	Control arm #3	8	1	GOU-1115	Cutter Pin 1/8" x 3/4"
4	1	ELE-1320	Single ended cordset F 10' 24AWG	9	1	HYE-3370	Sleeve bearing 5/8" x 3/4" x 1-1/2"
5	1	ELE-1485	Down push button				

Selector Valve Sub-Assembly

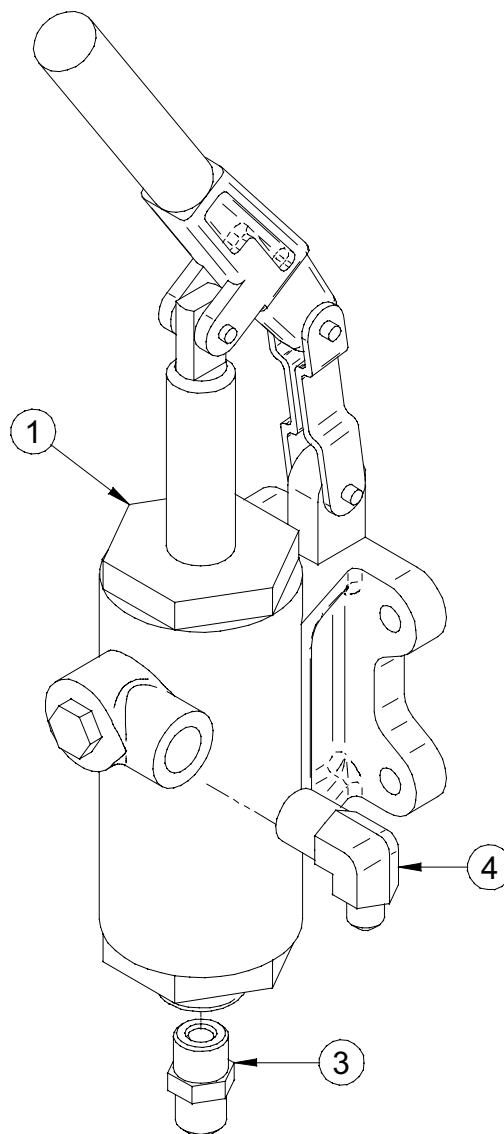


#	Qté	Code	Description	#	Qté	Code	Description
1	1	28071165	Link Bar	5	1	HYR-5205	Hyd. fitting JIC-1/2-M(2) / ORB-1/2-M / T
2	1	HYE-3005	Selector 3 ways ORB-5/8-F	6	3	HYR-5235	Hyd. fitting JIC-1/2-M / ORB-5/8-M / 90
3	1	HYE-3086	Safety valve aluminium	7	1	HYR-5355	Hyd. fitting JIC-1/2-F / ORB-1/2-M
4	1	HYR-5026	Hyd. fitting JIC-1/2-M / ORB-1/2-M				

Manual Pump & Quick Connect Sub-Assembly



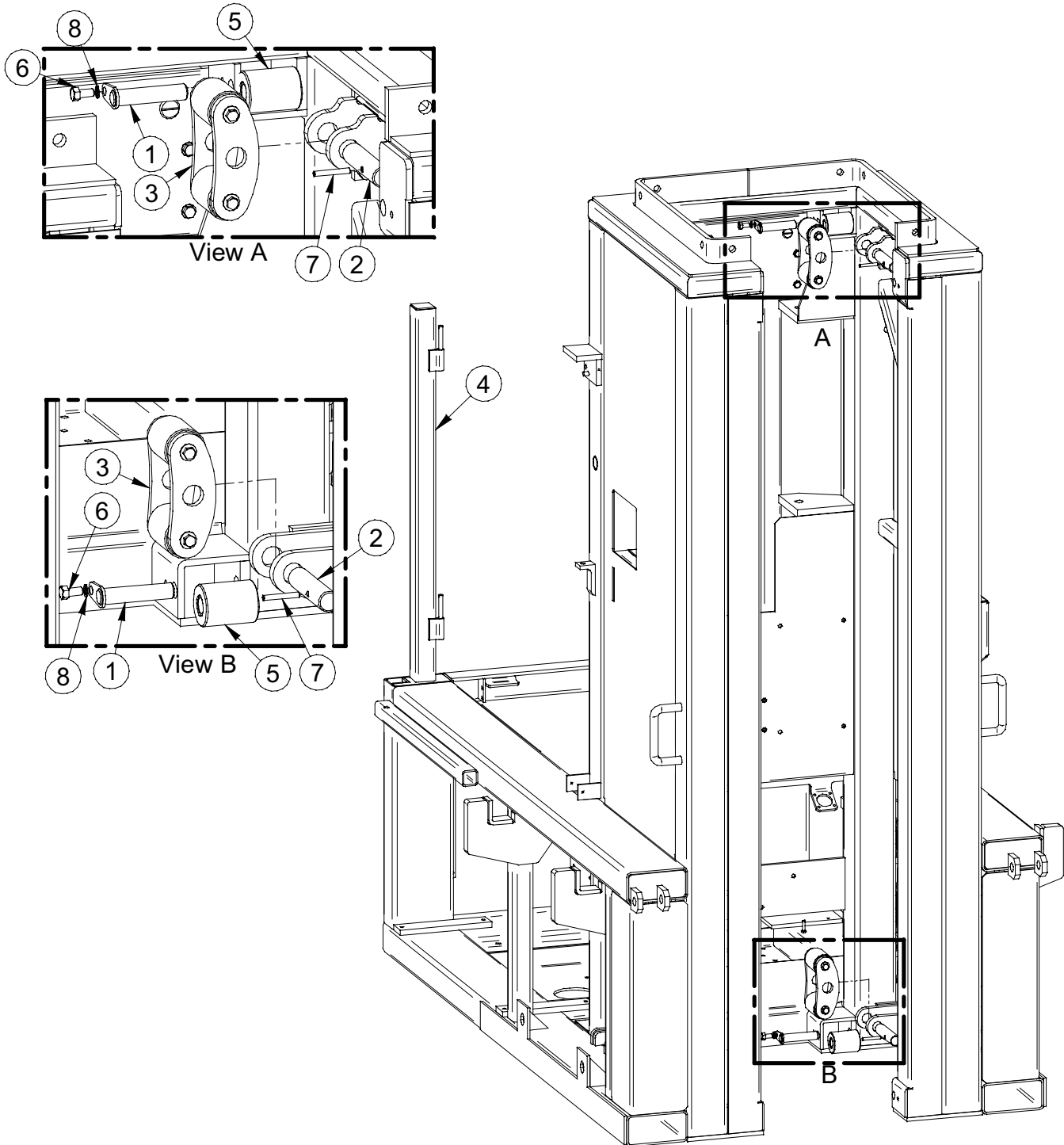
Quick Connect



Manual Pump

#	Qté	Code	Description	#	Qté	Code	Description
1	1	HYE-3320	Manual Pump GL40 double stroke	5	1	HYR-5146	Quick connect NPT-3/4-M
2	2	HYR-5049	Hyd. fitting JIC-1/2-M / NPT-1/2-M / bulkhead	6	1	HYR-5147	Quick connect NPT-3/4-F
3	1	HYR-5050	Hyd. fitting JIC-1/2-M / NPT-1/2-M	7	2	HYR-5252	Hyd. fitting NPT-1/2-F / NPT-3/4-M / 45
4	1	HYR-5061	Hyd. Fitting JIC-3/8-M / NPT-1/2-M / 90 Deg				

Tandems & Guide Wheels Assembly

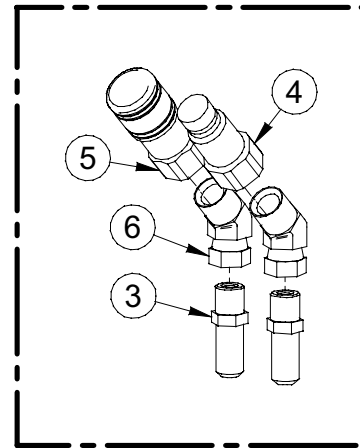
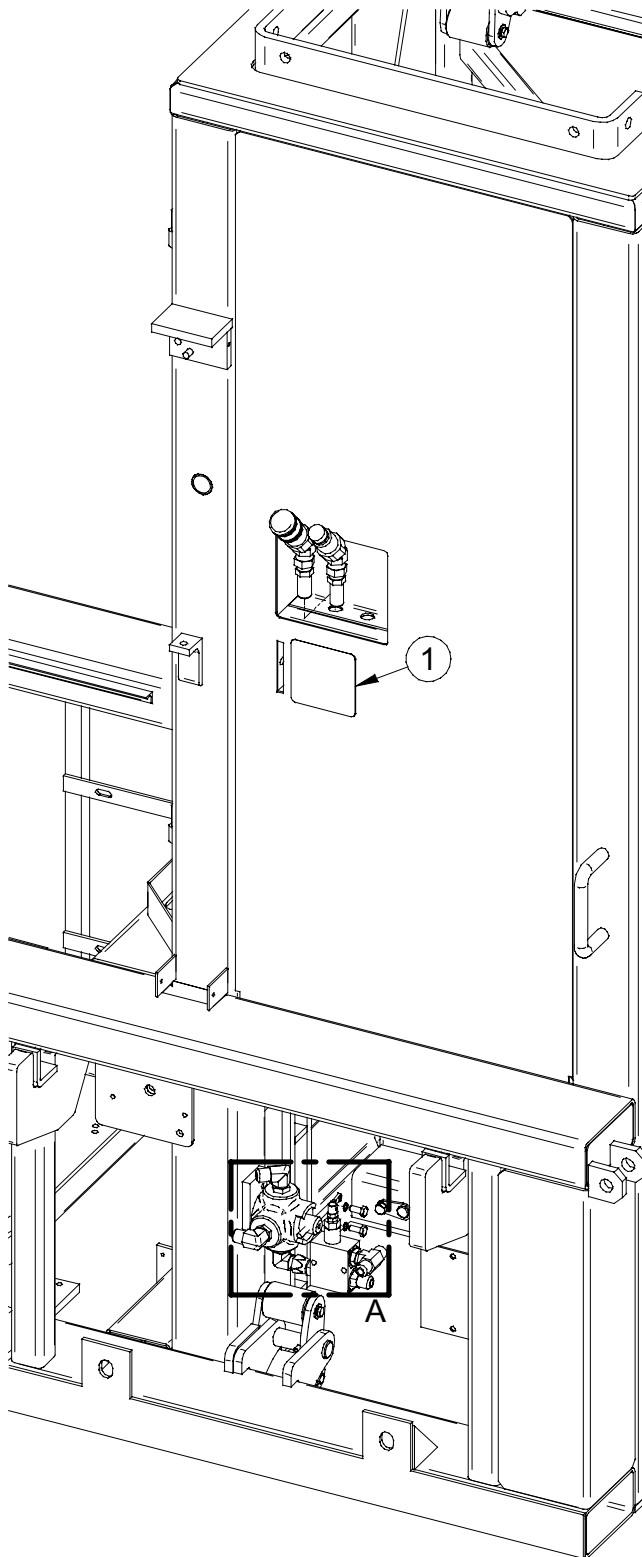


NOTE:

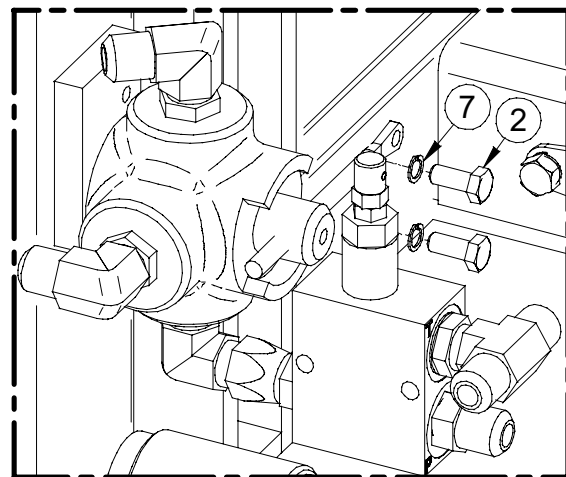
1- Assemble always the tandems first , and then the guide wheels.

#	Qté	Code	Description	#	Qté	Code	Description
1	8	25490145	Pin	5	8	32030019	Guide wheel assembly (ACT-20K)
2	8	28070131	Tandem axle	6	8	BOZ-7105	Bolt 3/8"-16unc x 3/4" gr5 zinc
3	8	28491127	Tandem Shaft	7	8	GOU-3240	Spring Pin 1/4" x 1-3/4"
4	1	28492421	Tower Guard ACT	8	8	LOZ-5020	Lock washer 3/8" zinc

Hydraulic Selector & Quick Connect Assembly



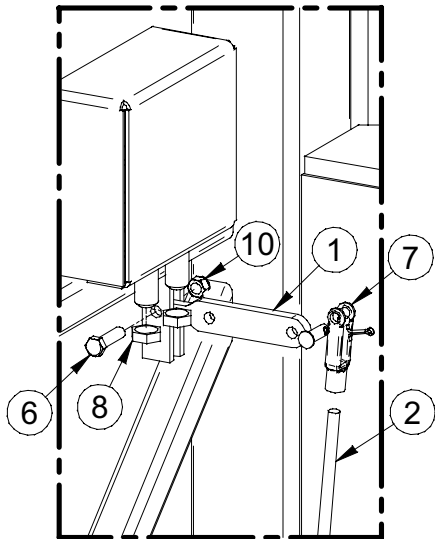
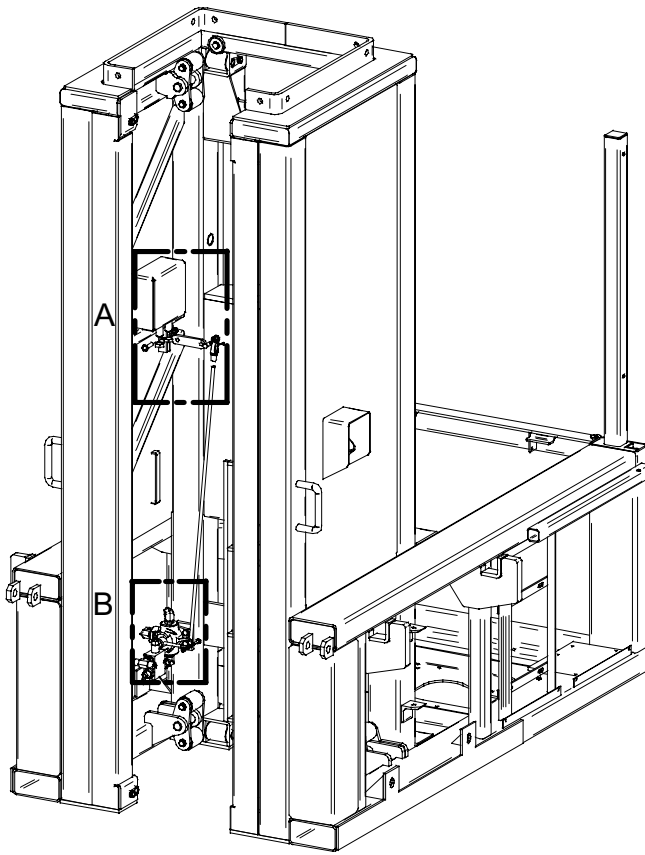
Quick Connect



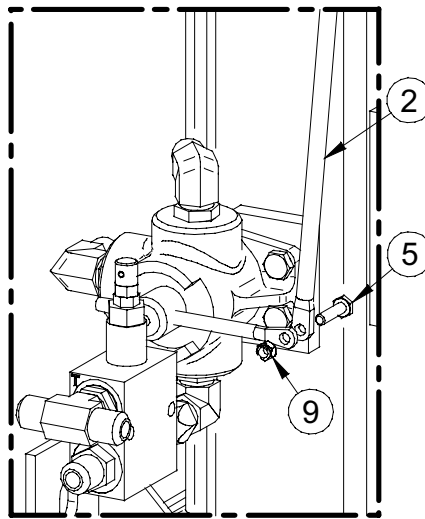
View A

#	Qté	Code	Description	#	Qté	Code	Description
1	1	30050154	"Selector" ACT sticker - eng./french/spa.	4	1	HYR-5146	Quick connect NPT-3/4-M
2	2	BOZ-7045	Bolt 5/16"-18unc x 3/4" gr5 zinc	5	1	HYR-5147	Quick connect NPT-3/4-F
3	2	HYR-5049	Hyd. fitting JIC-1/2-M / NPT-1/2-M / bulkhead	6	2	HYR-5252	Hyd. fitting NPT-1/2-F / NPT-3/4-M / 45
				7	2	LOZ-5015	Lock washer 5/16" zinc

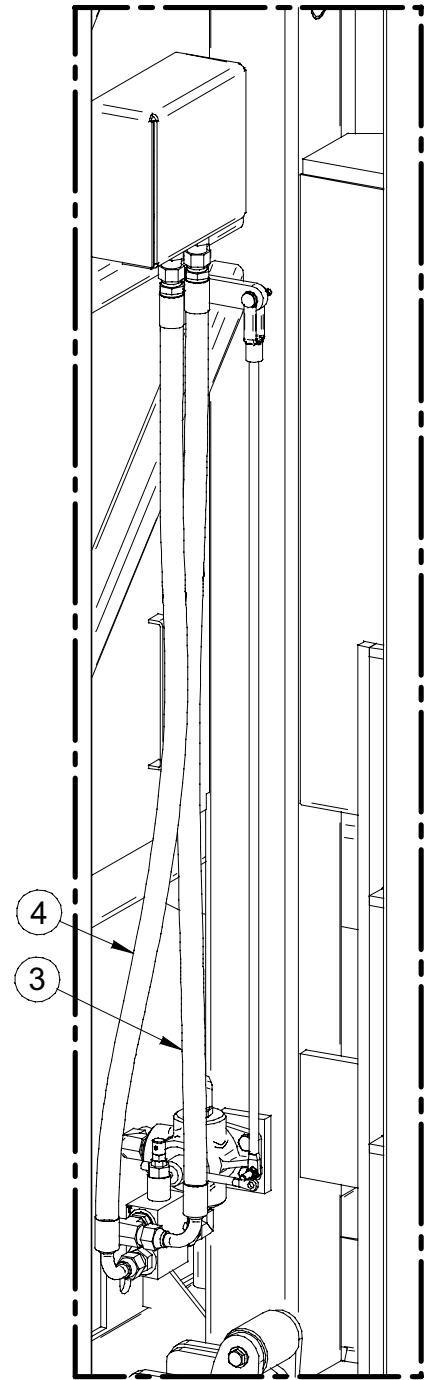
Hydraulic Selector Control Rod Assembly



View A



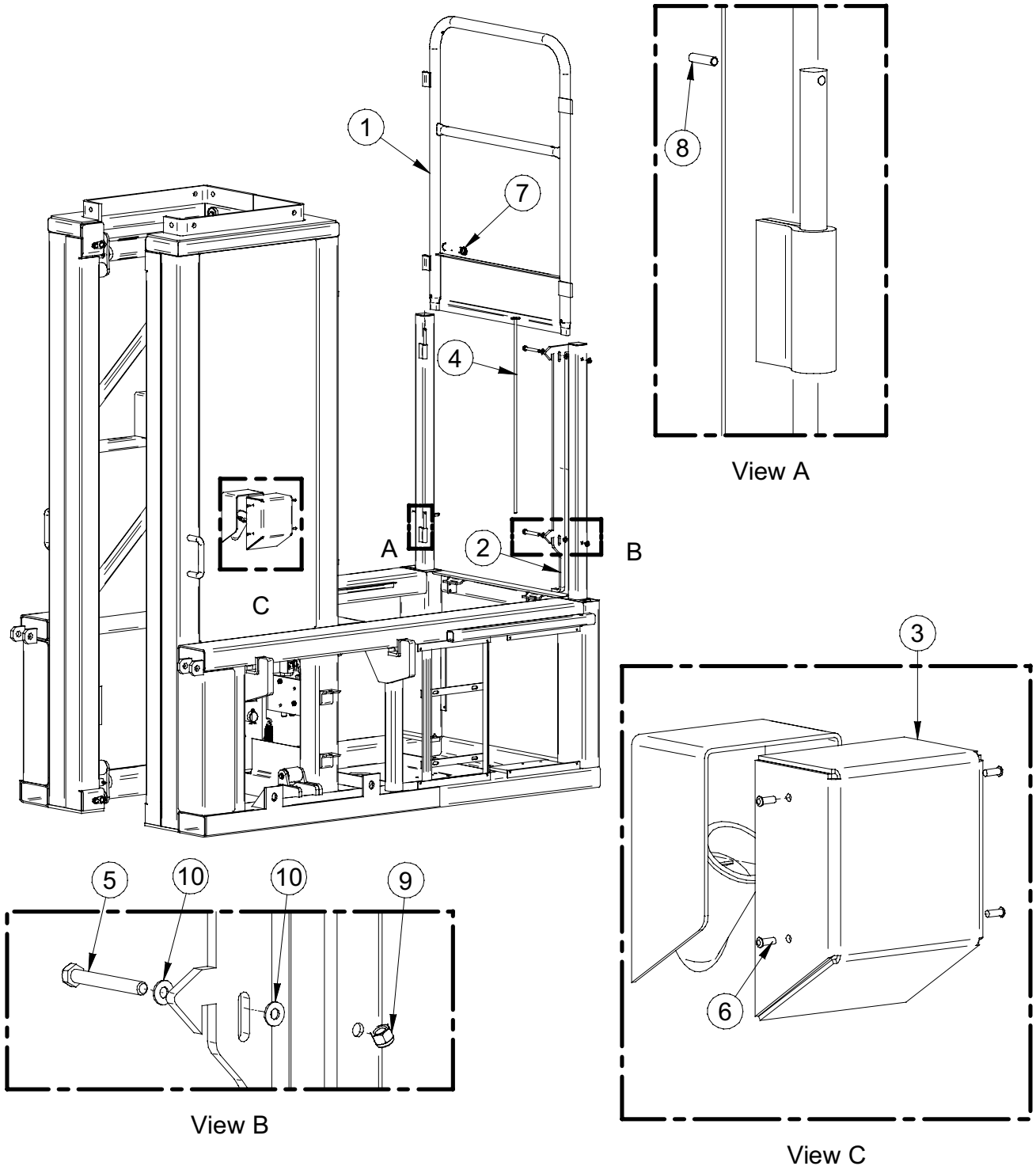
View B



Hoses
Installation

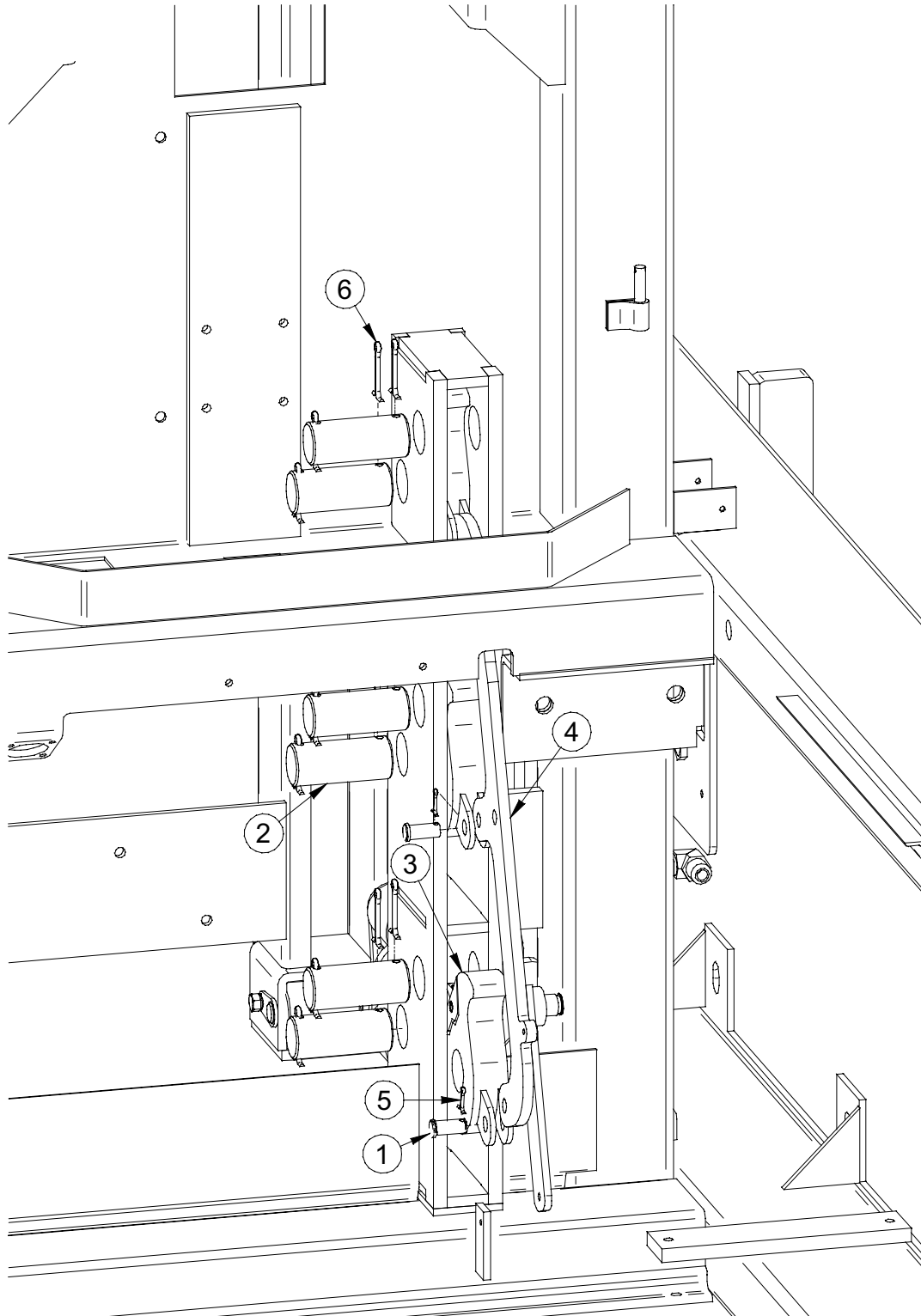
#	Qté	Code	Description	#	Qté	Code	Description
1	1	28017435	Hydraulic Hoist Selector Handle	7	1	FOD-5095	Clevis yoke 3/8"-24unf
2	1	28071198	Selector rod 3/8" x 33-1/2"	8	2	HYR-4005	Bulkhead nut 1/2
3	1	29491083	Hose 1/2" x 40" JIC-1/2-F / 90-JIC-1/2-F	9	1	NYL-2010	Nylon Bolt 1/4"-20unc
4	1	29491195	Hose 1/2" x 41" JIC-1/2-F / 90-JIC-1/2-F	10	1	NYL-2020	Nylon Bolt 3/8"-16unc
5	1	BOZ-7015	Bolt 1/4"-20unc x 1" gr5 zinc				
6	1	BOZ-7120	Bolt 3/8"-16unc x 1-1/2" gr5 zinc				

Guard Rails Assembly



#	Qté	Code	Description	#	Qté	Code	Description
1	1	17490089	Guard Rails 2' 7" x 3' 6"	7	1	FOR-5005	Spring
2	1	28011990	Guard-rail latch	8	1	GOU-3005	Spring Pin 1/8" x 1/2"
3	1	28019123	Fuel tank shutter cap	9	2	NYL-2020	Nylon Bolt 3/8"-16unc
4	1	28491385	Guard-rail release mechanism	10	4	WAZ-7017	Washer Grade #5 Zinc 5/16 SAE
5	2	BOZ-7135	Bolt 3/8"-16unc x 3" gr5 zinc				
6	3	FOD-5133	Rivet 3/16" x 3/8"				

Safety Latches Assembly

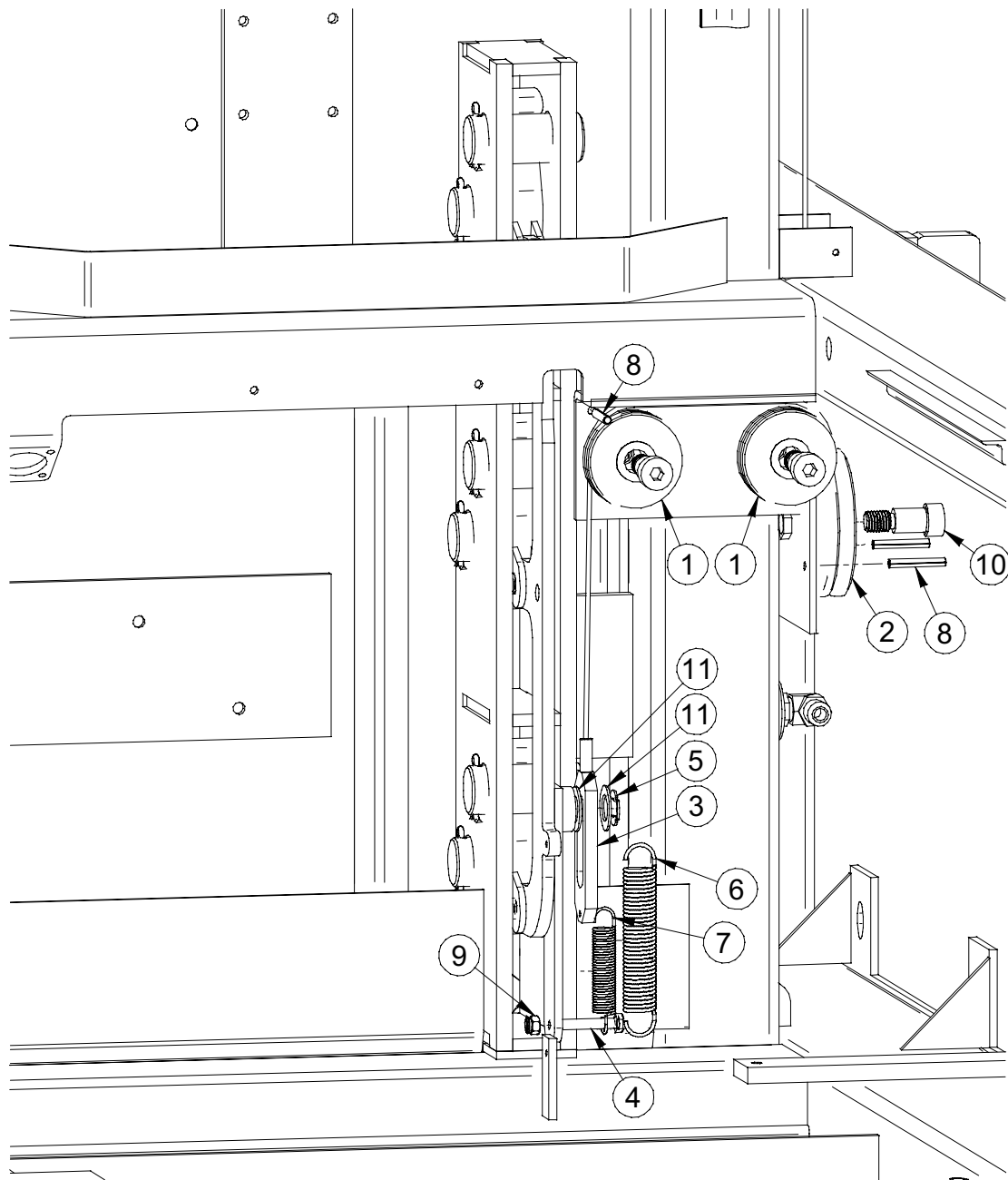


NOTE:

1- Install the up safety latches first, then the others.

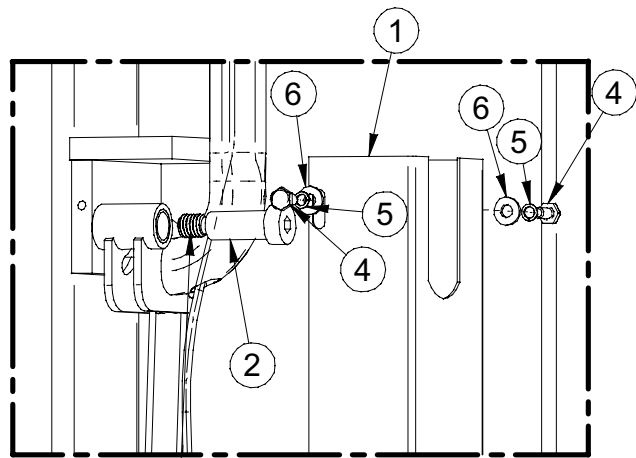
#	Qté	Code	Description	#	Qté	Code	Description
1	3	25490156	Pin dia. 5/8" H.R. grade 44W	4	1	28492432	Synchronizer for safety latch 24"
2	6	28070120	Pin dia. 1-1/2" C.R. grade C-1018	5	3	GOU-1115	Cutter Pin 1/8" x 3/4"
3	3	28491093	Safety latch ACT	6	12	GOU-1125	Cutter Pin 3/16" X 2"

Safety Latches Cable Assembly



#	Qté	Code	Description	#	Qté	Code	Description
1	2	28070513	Wheel dia. 3" grade Nyloil	7	1	FOR-5027	Down system return spring
2	1	28070524	Pulley 4-1/2" x 15/16"	8	3	GOU-3240	Spring Pin 1/4" x 1-3/4"
3	1	28492465	Safety cable assembled	9	2	NYL-2015	Nylon Nut 5/16"-18unc
4	1	BOZ-7080	Bolt 5/16"-18unc x 1-3/4" gr5 zinc	10	3	VIS-3625	Socket head cap screw 3/4" x 1" x 5/8"-11unc
5	1	FOD-5336	Klipring external 3/4"	11	2	WAB-2010	Washer 3/4" x 1/16" brass
6	1	FOR-5005	Spring				

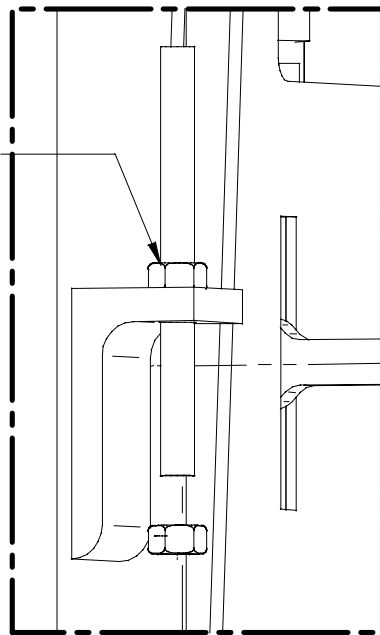
Down Arm Assembly



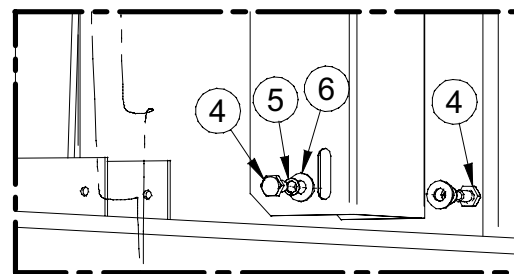
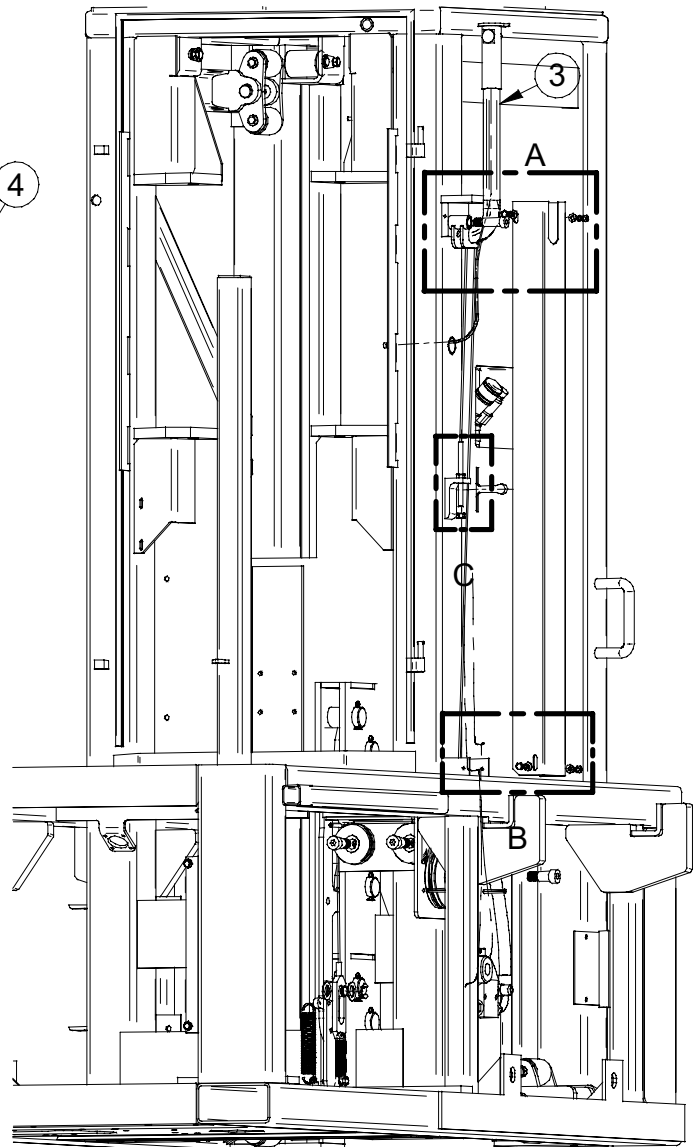
View A

Apply antiseize compound

Use the jam nut to change the cable tension



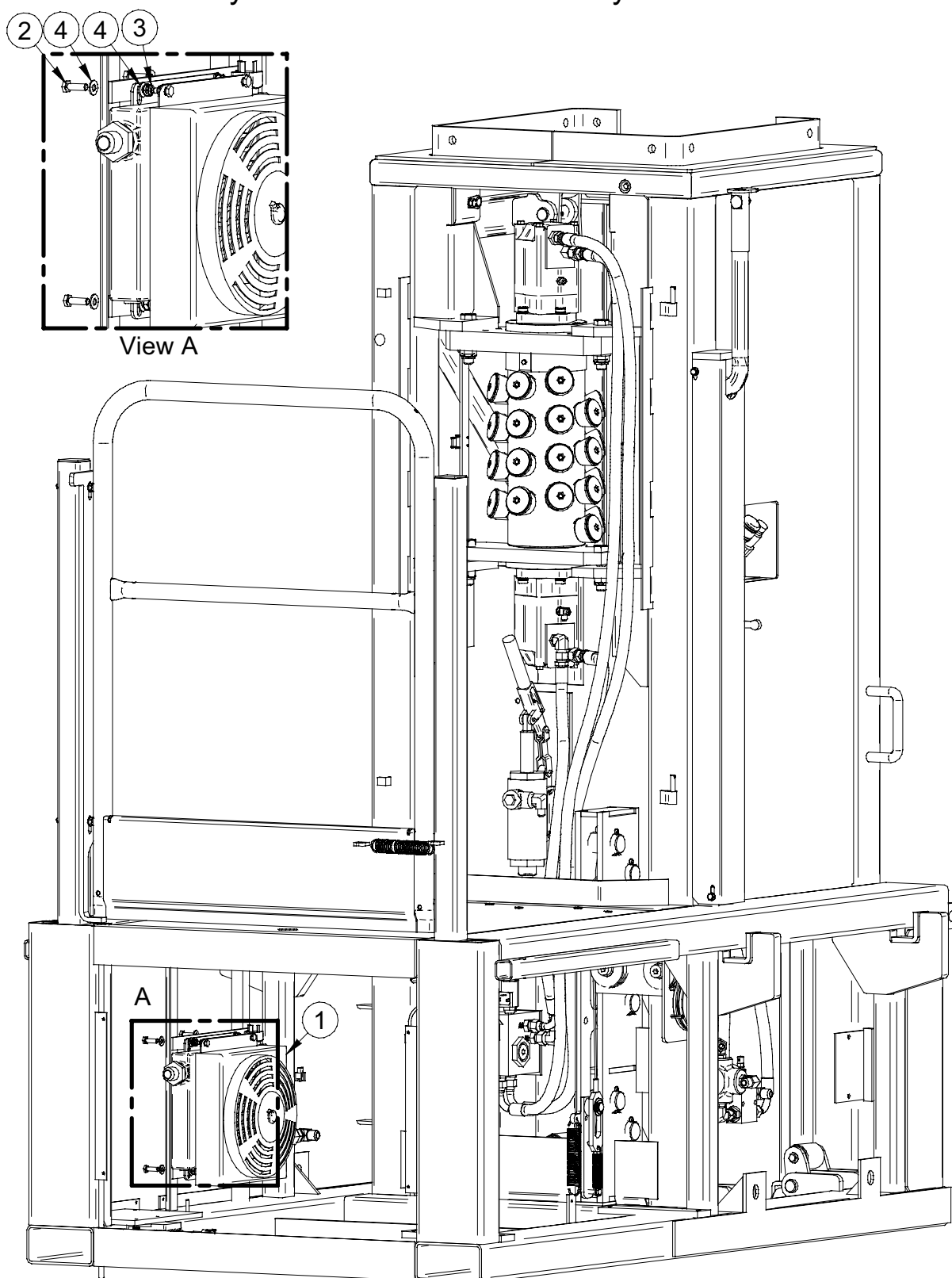
View C



View B

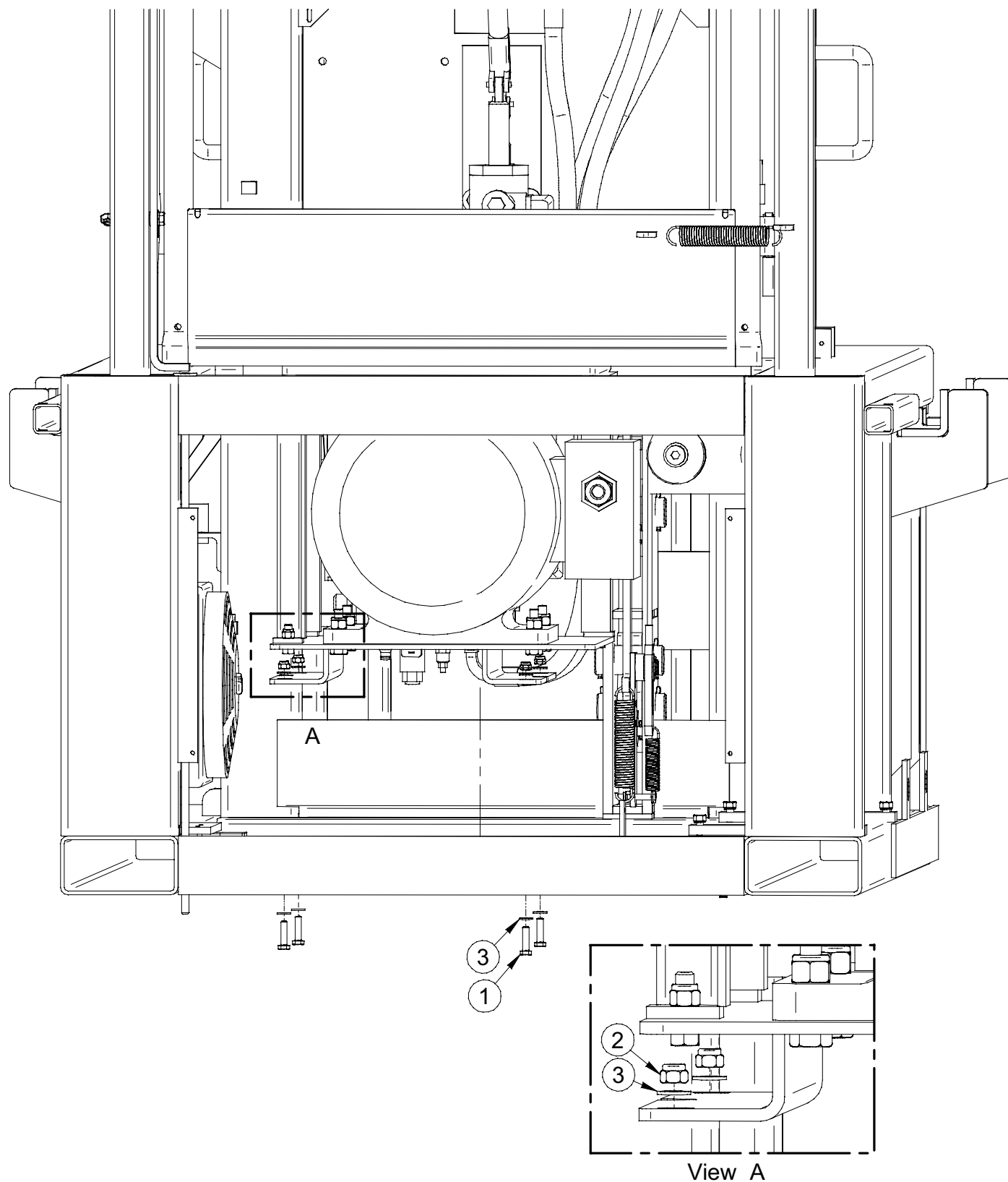
#	Qté	Code	Description	#	Qté	Code	Description
1	1	28011439	Control arm protector	4	4	BOZ-7008	Bolt 1/4"-20unc x 1/2" gr5 zinc
2	1	28070771	Hex. socket shoulder screw for control arm #3	5	3	LOZ-5010	Lock washer 1/4" zinc
3	1	28492443	Control arm #3	6	3	WAZ-7011	Flat Washer 1/4" SAE zinc

Hydraulic Oil Cooler Assembly



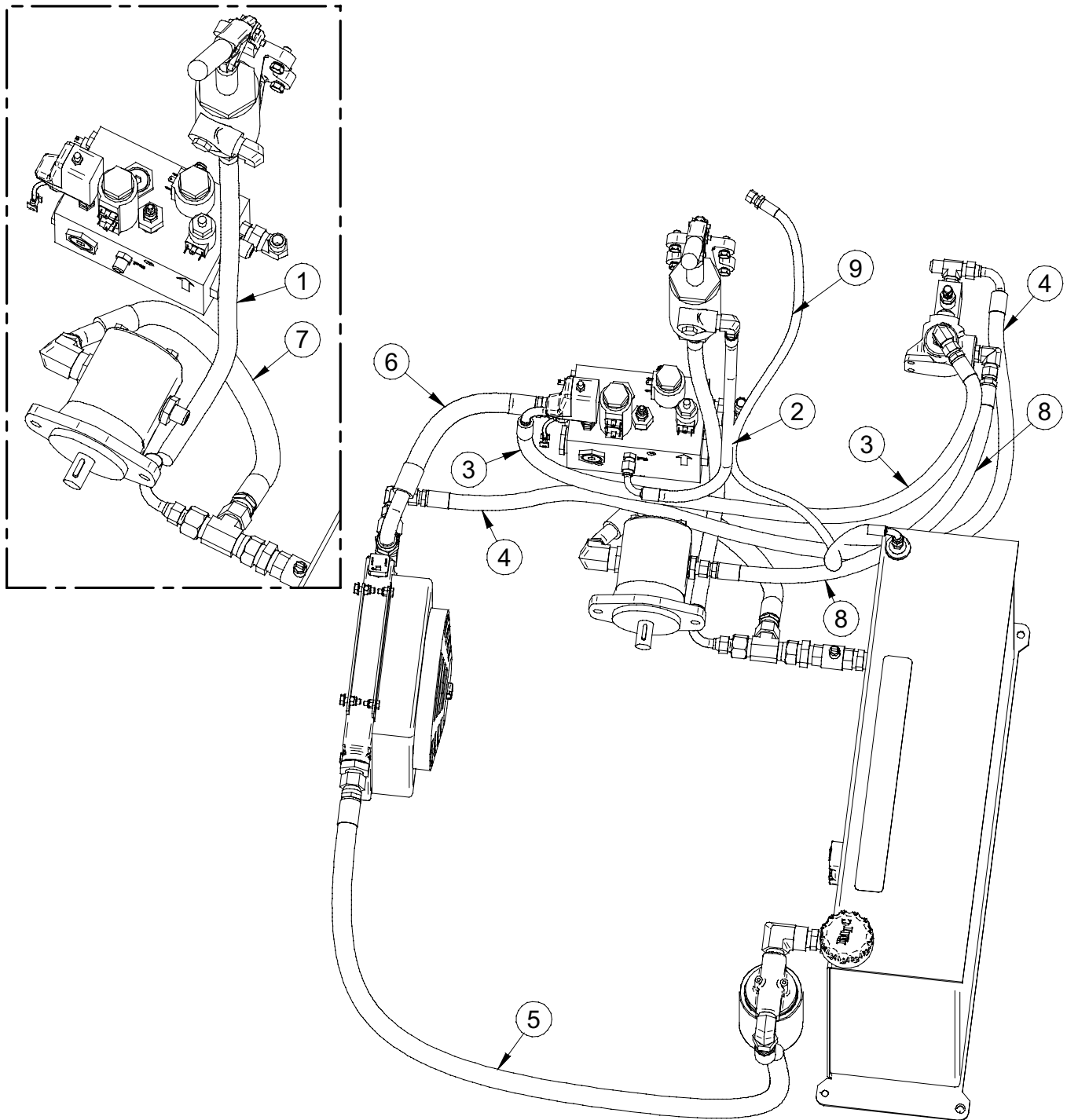
#	Qté	Code	Description	#	Qté	Code	Description
1	1	32030132	Hydraulic Oil Cooler	3	4	NYL-2015	Nylon Nut 5/16"-18unc
2	4	BOZ-7060	Bolt 5/16"-18unc x 1" gr5 zinc	4	8	WAZ-7017	Washer Grade #5 Zinc 5/16 SAE

Power Unit Fixation Assembly



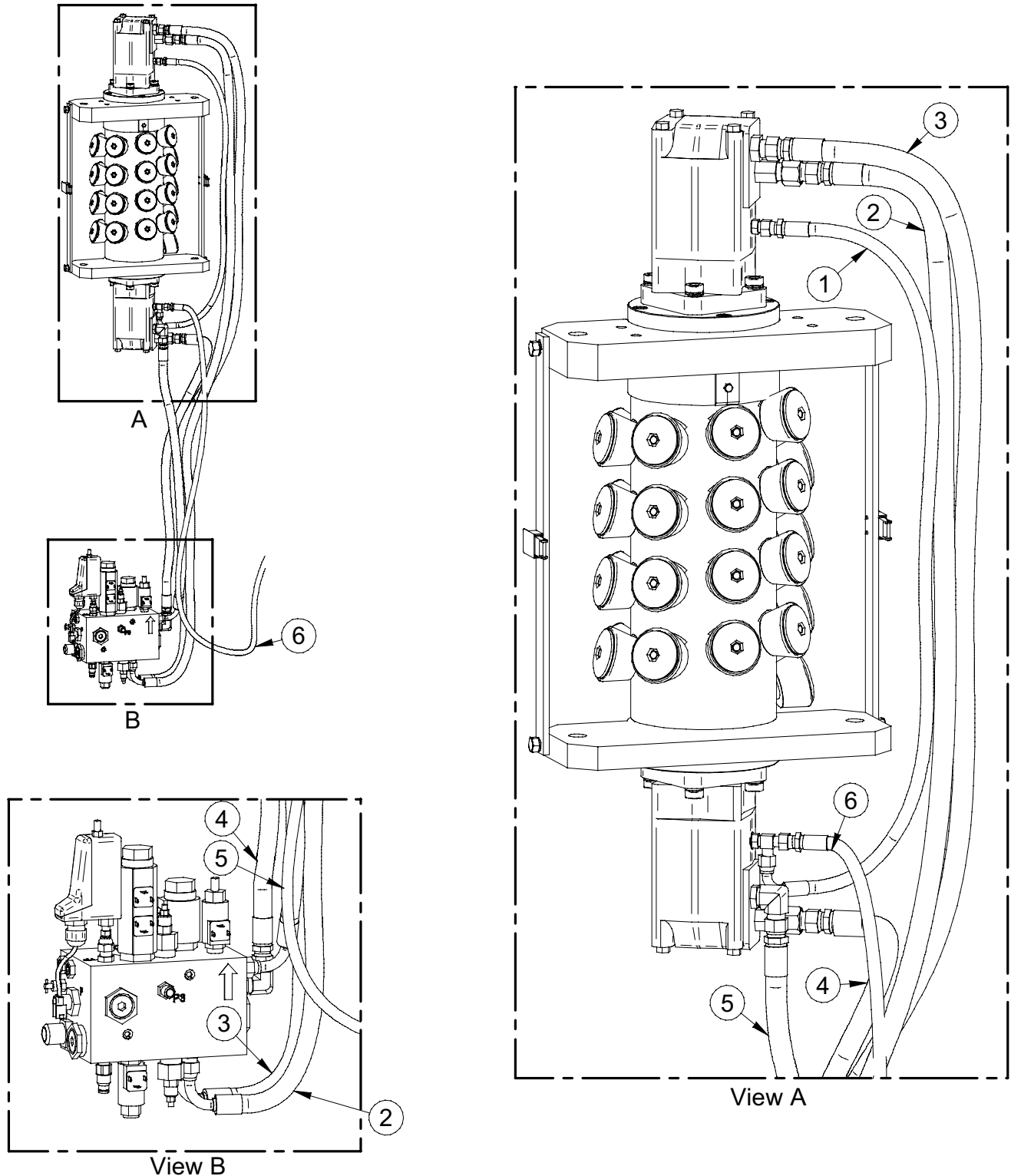
#	Qté	Code	Description	#	Qté	Code	Description
1	4	BOZ-7075	Bolt 5/16"-18unc x 1-1/4" gr5 zinc	3	8	WAZ-7017	Washer Grade #5 Zinc 5/16 SAE
2	4	NYL-2015	Nylon Nut 5/16"-18unc				

Hydraulic Hoses Installation Part #1



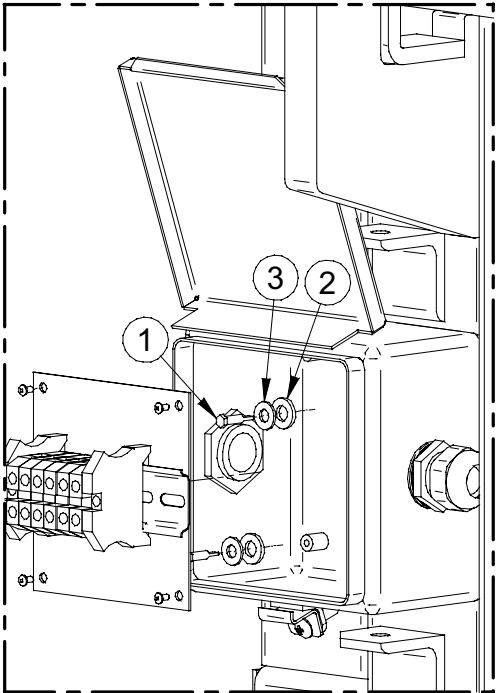
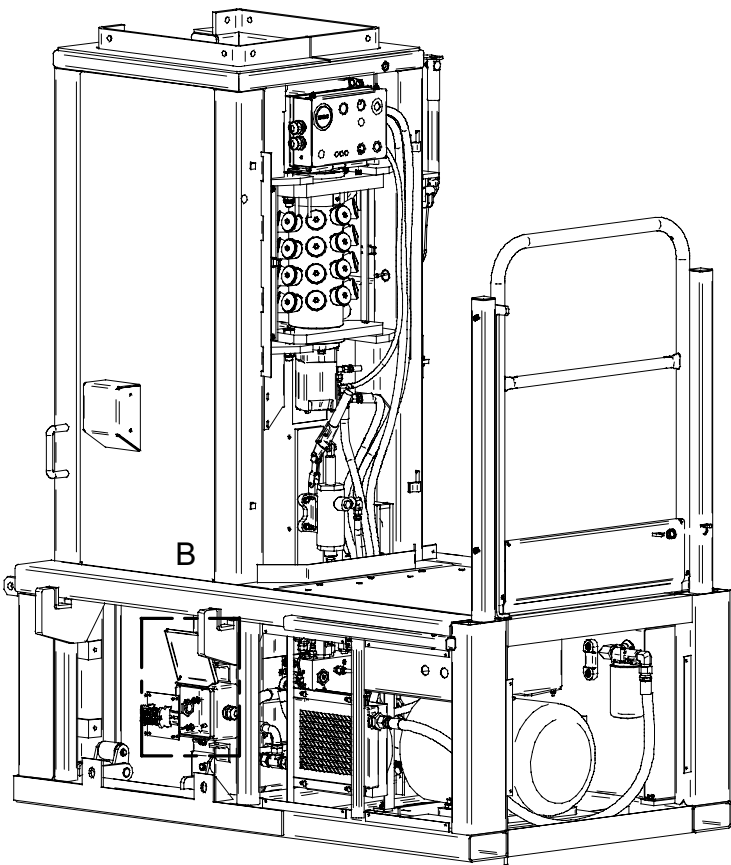
#	Qté	Code	Description	#	Qté	Code	Description
1	1	29490059	Hose 1/2" x 28-1/2" JIC-1/2-F / 90-JIC-1/2-F	6	1	29491140	Hose 3/4" x 15" JIC-3/4-F / 90-JIC-3/4-F
2	1	29490431	Hose 3/8" x 22-1/2" JIC-3/8-F / 90-JIC-3/8-F	7	1	29491252	Hose 3/4" x 19" JIC-3/4-F / 45-JIC-3/4-F
3	1	29490868	Hose 1/2" x 50" JIC-1/2-F / 90-JIC-1/2-F	8	1	29491296	Hose 1/2" x 26" JIC-1/2-F / JIC-1/2-F
4	1	29490868	Hose 1/2" x 50" JIC-1/2-F / 90-JIC-1/2-F	9	1	29491364	Hose 1/4" x 59" JIC-1/4-F / 90-JIC-1/4-F
5	1	29491128	Hose 3/4" x 52" JIC-3/4-F / JIC-3/4-F				

Hydraulic Hoses Installation Part #2



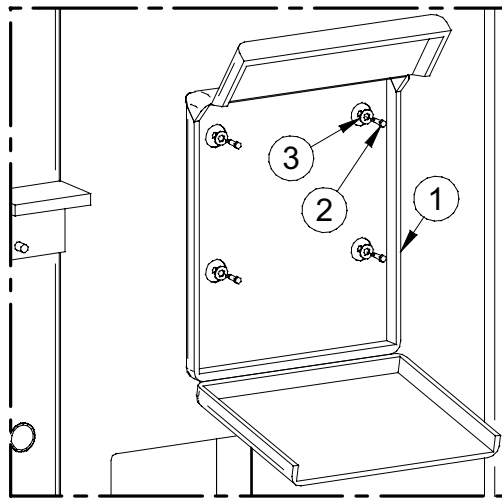
#	Qté	Code	Description	#	Qté	Code	Description
1	1	29490374	Hose 1/4" x 41" JIC-1/4-F / 90-JIC-1/4-F	5	1	29491229	Hose 1/2" x 29-1/2" JIC-1/2-F / 90-JIC-1/2-F
2	1	29490576	Hose 1/2" x 79" JIC-1/2-F / 90-JIC-1/2-F	6	1	29491364	Hose 1/4" x 59" JIC-1/4-F / 90-JIC-1/4-F
3	1	29490611	Hose 1/2" x 81" JIC-1/2-F / 90-JIC-1/2-F				
4	1	29491229	Hose 1/2" x 29-1/2" JIC-1/2-F / 90-JIC-1/2-F				

Junction Box Assembly

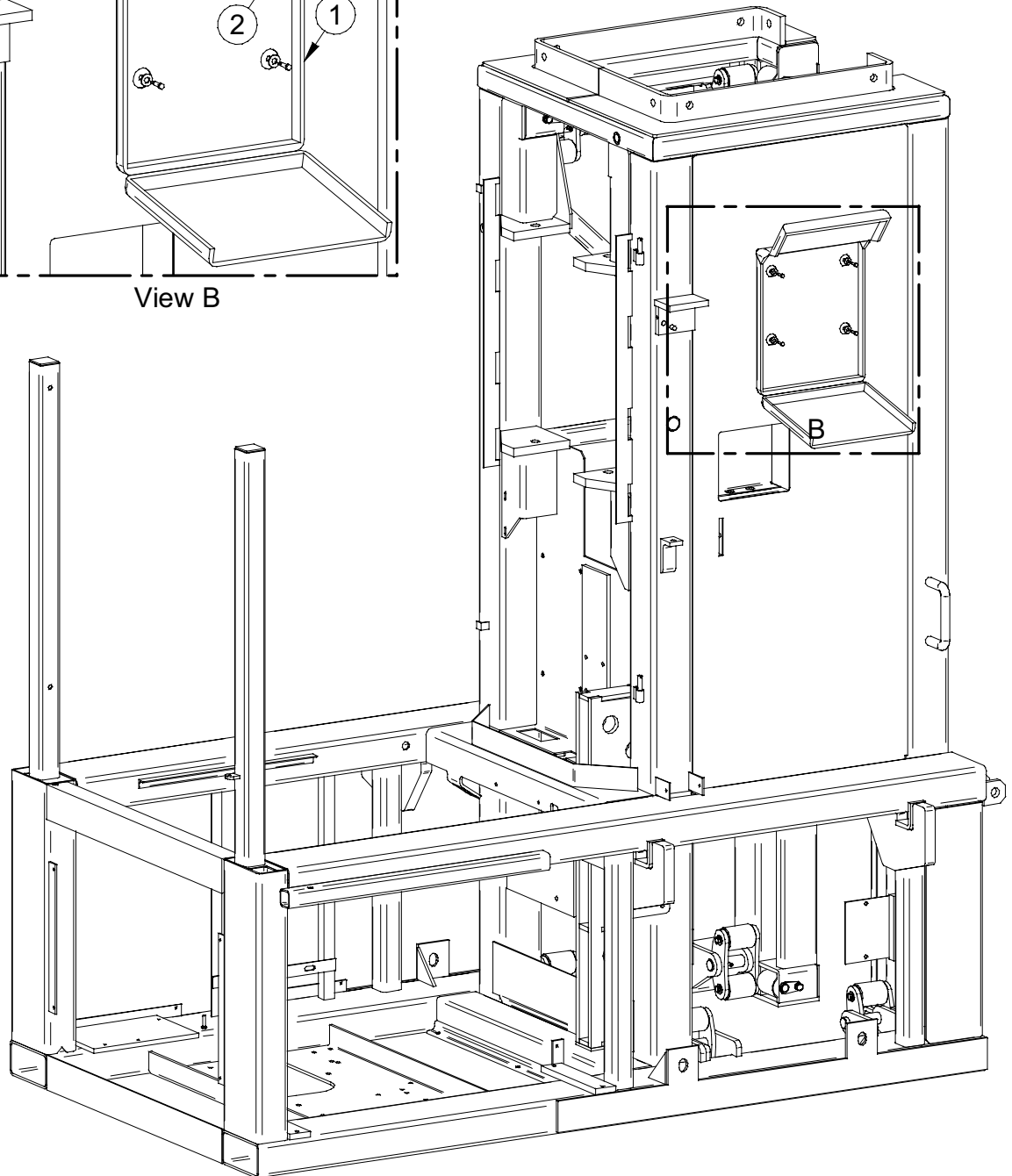


#	Qté	Code	Description
1	2	VIS-8814	Self drilling screw #12 x 1"
2	2	WAC-5017	Silicone washer 5/16"
3	2	WAZ-7011	Flat Washer 1/4" SAE zinc

Document Holder Assembly

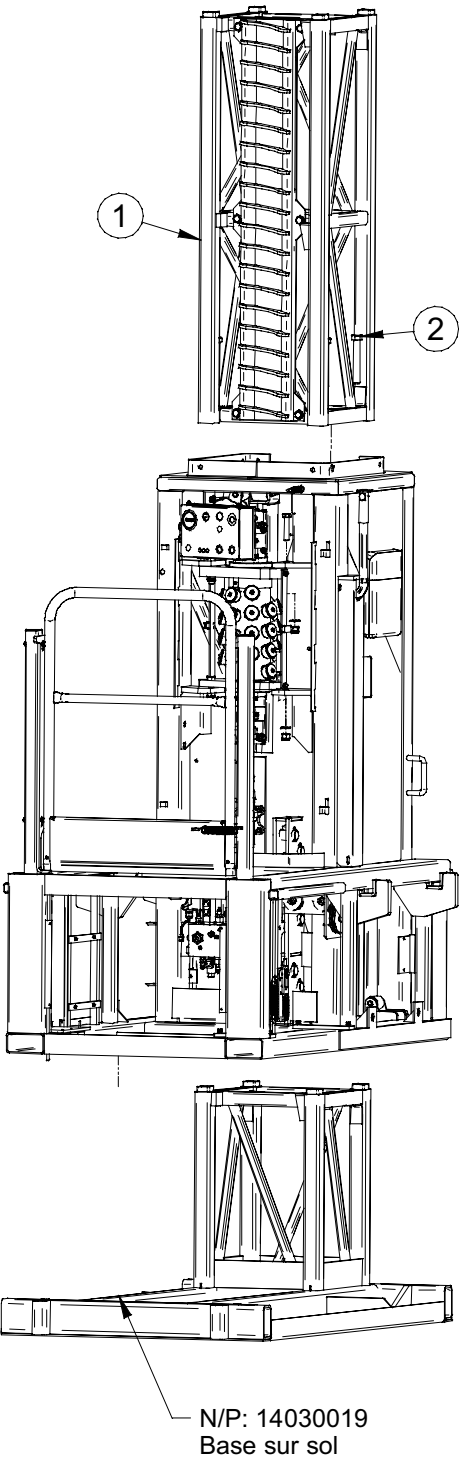


View B



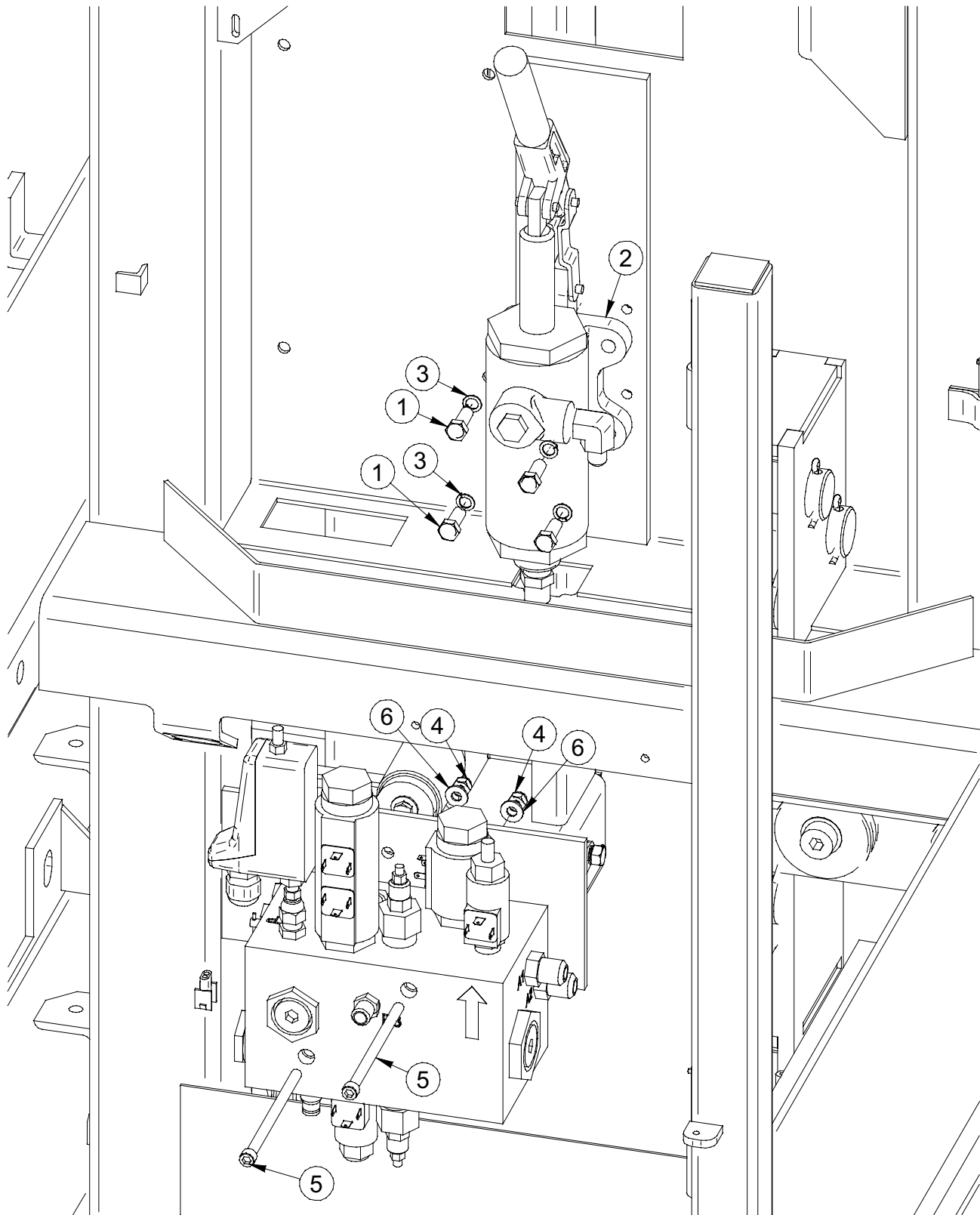
#	Qté	Code	Description
1	1	FOD-5252	Porte-documents avec fermeture
2	4	VIS-8814	Vis hex. auto-perçante #12 x 1"
3	4	WAZ-7011	Rondelle 1/4" SAE zinc

Mast Section Assembly



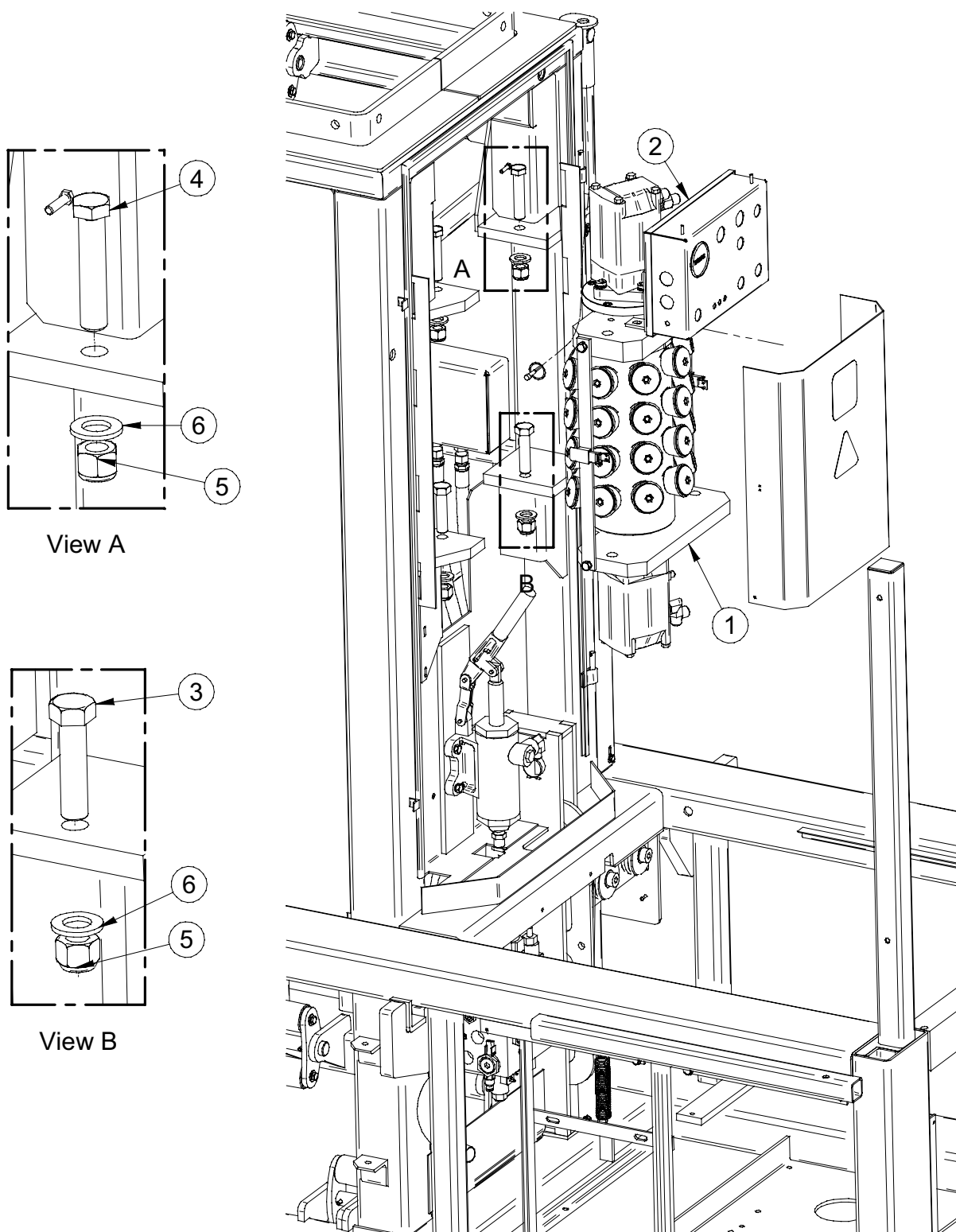
#	Qté	Code	Description	#	Qté	Code	Description
1	1	13030018	Mast section (20" x 20" x 5' 0")	2	3	BOA-2080	Bolt 1"-8unc x 6-1/2" A325 galv. assembled

Hydraulic Block Manifold & Manual Pump Assembly



#	Qté	Code	Description	#	Qté	Code	Description
1	4	BOZ-7114	Bolt 3/8"-16unc x 1" gr5 zinc	5	2	VIS-1280	Socket Head Cap Screw 5/16"-18unc x 5"
2	1	HYE-3320	Manual Pump GL40 double stroke	6	2	WAZ-7017	Washer Grade #5 Zinc 5/16 SAE
3	4	LOZ-5020	Lock washer 3/8" zinc				
4	2	NYL-2015	Nylon Nut 5/16"-18unc				

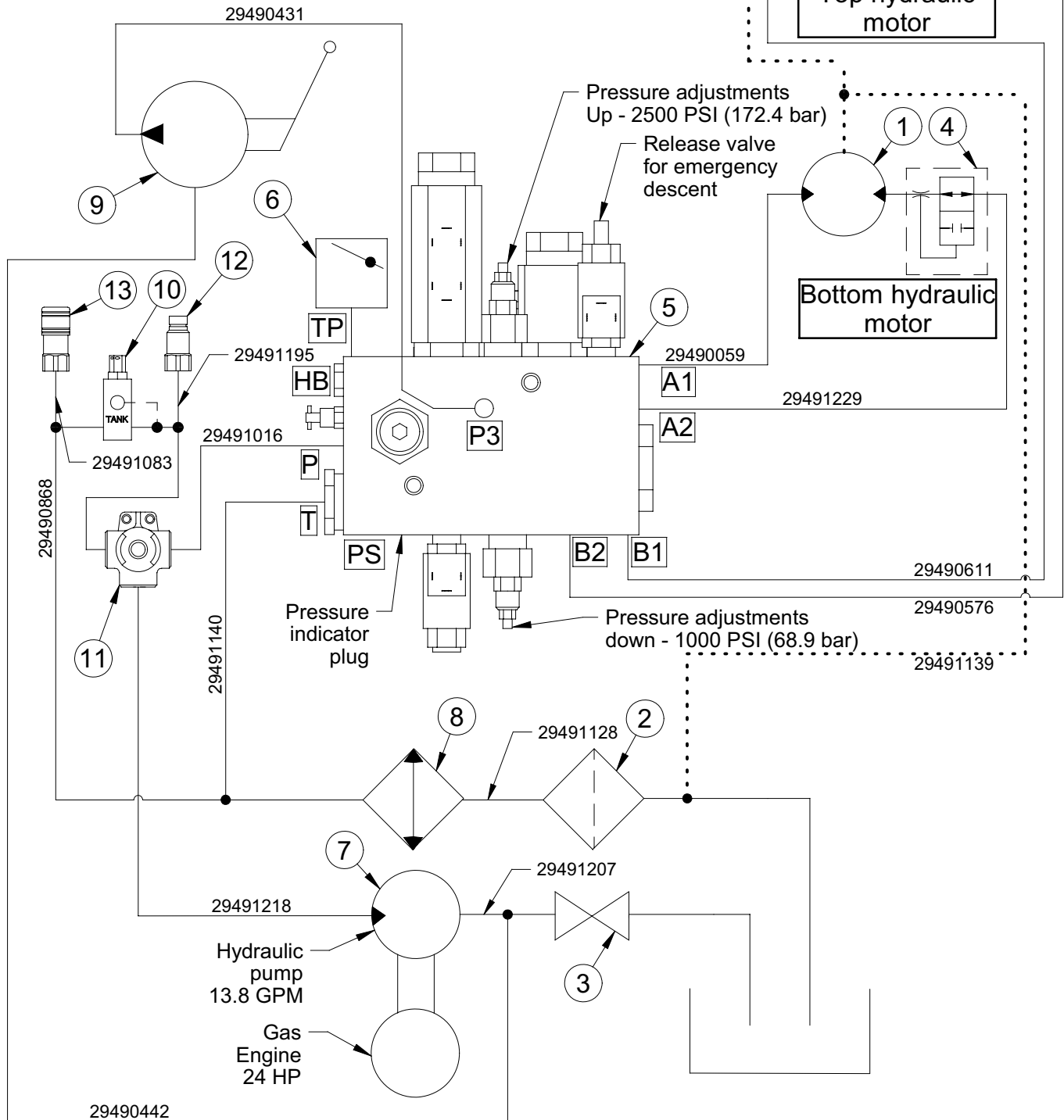
Worm Screw Assembly



#	Qté	Code	Description	#	Qté	Code	Description
1	1	32030031	Worm Screw Assembly	4	2	BOZ-7235	Bolt gr5 zinc 3/4"-10unc x 3-1/2"
2	1	32125025	Control box (ACT-CE with KUBOTA)	5	4	NYL-2050	Nylon Nut 3/4"-10unc
3	2	BOZ-7230	Bolt 3/4"-10unc x 3" gr5 zinc	6	4	WAZ-7051	Washer 3/4" SAE zinc

Hydraulic Layout ACT

#	Qté	Description	#	Qté	Description
1	2	Hydraulic motor	8	1	Hydraulic oil cooler
2	1	Oil filter	9	1	Manual pump
3	1	Ball valve 3/4	10	1	Safety valve
4	2	Velocity fuse	11	1	Selector
5	1	Hydraulic manifold	12	1	Quick connect 3/4-M
6	1	Pressure switch	13	1	Quick connect 3/4-F
7	1	Hydraulic pump			



 F-243A (03)- Inspection Electrical ACT-8		Serial number:		
		Branch Number:		
		Date: YYYY / MM / DD		
<i>Complete with abbreviation (N/A) when an inspection point is not applicable.</i>		Hour meter:		
Maintenance points		Expired	Verify	Corrected
1- Technical Information				
1,1- Verify all the service bulletins associated to unit,before any service inspection.		Maintenance		
2- Motor				
2,10- Verify engine mounts installation & condition.		50 hours / 90 days		
2,16- Pump & engine couplers are tight and in good condition.		200 hrs / 1Year		
3- Hydraulic				
3,1- Verify installation & condition of protection plugs. See Note 5		Daily		
3,2- Verify the quantity and the quality of hydraulic oil.(use SAE10 or ISO 32).		Daily		
3,21- Verify if the hydraulic ball valve is open on the hydraulic tank.		Daily		
3,3- Verify the hydraulic motors for leaks.		50 hours / 90 days		
3,4- Verify the hydraulic cylinders condition or other (leaks).		50 hours / 90 days		
3,5- Quick connect couplers are working and are not leaking.		50 hours / 90 days		
3,6- Clean the hydraulic tank breather.		50 hours / 90 days		
3,7- Verify the hydraulic oil filter assembly.		50 hours / 90 days		
3,8- Hydraulic hoses are not damaged.		50 hours / 90 days		
3,9- Hydraulic hoses are tightened properly.		100 hrs /180 days		
3,19- Verify if all the solenoids are tight & have a seals.		100 hrs /180 days		
3,20- Inspect & cleaned the hydraulic cooler.		100 hrs /180 days		
3,10- Replace the hydraulic oil filter and write the machine hours on it.(use paint pencil).		200 hrs /1 yrs		
3,11- Replace the hydraulic oil (use SAE10 or ISO 32).		400 hrs /2 yrs		
3,12- Hydraulic tank is fixed properly the four bolts are in place and tight.		400 hrs /2 yrs		
4- Electrical				
4,18- Verify if the inclinometer devices are well installed (Keys & watertight).		If Apply		
4,20A- Adjust the thermostat to 40 Fharenheit in the control panel. (4 Celcius)		If Apply		
4,1- Push buttons, sensors and switches are working properly.		Daily		
4,2- Emergency stop button shut off the engine and all controls.		Daily		
4,3- The down buzzer is working properly.		Daily		
4,16- The main key switch is working properly and not damaged.		Daily		
4,4- Verify Electric wires & connectors condition (Dielectric grease).		50 hours / 90 days		
4,10- All electrical boxes are sealed .		50 hours / 90 days		
4,14- Verify the condition and installation of the hourmeter. See Note 2		50 hours / 90 days		
4,19- Check if a wire mesh grip is in the junction box.		50 hours / 90 days		
4,23- All the DIN connectors are cleaned & fixed properly (Weather seal installed)		50 hours / 90 day		
4,24- Insert spare fuses in each fuse holder.		50 hours / 90 days		
4,25- Verify the overload relay adjustment (34A) 25 HP Model.		50 hours / 90 days		
4,25A- Verify the overload relay adjustment (29A) 20 HP Model.		50 hours / 90 days		
4,25B- Verify the overload relay adjustment (23A) 15 HP Model.		50 hours / 90 days		
4,26- Verify three phases monitor adjustment. - See Note 6 & 7		50 hours / 90 days		
4,11- Test the thermoswitch sensor & electrical circuit of hydraulic cooler.		100 hrs /180 days		
4,12- Verify rotation of the fan (it must suck air in).		100 hrs /180 days		
4,13- Tigthen all electrical connections & ground.		100 hrs /180 days		
4,21- Verify the drain at the bottom of the control panel, make sure it is clean.		200 hours / 1 yrs		
5- Mechanical				
5,1- Verify the door (guard rail).Check the spring & locking mechanism.		Daily		

F-243A (03)- Inspection Electrical ACT-8		Serial number:		
Maintenance points	Expired	Verify	Corrected	
5,2- Visual inspection of the ground base structure and mast.	Daily			
5,3- Verify the safety latches and springs.	50 hours / 90 days			
5,4- Verify cutter pins & bolts make sure they are all in good condition(Safety&Down Arm)	50 hours / 90 days			
5,4B- Verify the safety latches pin bolts are tightened @ 25 Ft/lb & Apply Red Loctite 262	50 hours / 90 days			
5,5- Verify the functioning of down system.Lubricate pivot or cable.	50 hours / 90 days			
5,6- Grease the thrust bearing (State Lt Grease or equivalent).	50 hours / 90 days			
5,7- Verify all stud rollers and grease them (State Lt Grease or equivalent).	50 hours / 90 days			
5,8- Verify the stud rollers torque & functioning (250 lbf-ft / 340 Nm).	50 hours / 90 days			
5,20- Verify motor hood condition & functioning.	50 hours / 90 days			
5,21- Verify if pins,bolts, cutter pins and clips are in place.	50 hours / 90 days			
5,25- Verify protection panels installation & functioning.	50 hours / 90 days			
5,9- Verify the mast rollers, do they turn, are they worn out .	200 hrs /1 yrs			
5,10- Verify the four bolts of the mast/base (Impact 5 seconds).See note 8	200 hrs /1 yrs			
5,11- Install an inspected mast section on the base (ISO procedure PT 6-12A).	200 hrs /1 yrs			
5,12- Remove the worm screw and check the thrust bearing condition. See Note 9	400 hrs /2 yrs			
6- Operation Test				
6,28- Sit the unit on the safety latches or on the base.	Maintenance			
6,1- Verify the machine for liquid leaks.	Daily			
6,2- Mast sensor (proxy switch) is 1/4"+0-1/8" from the mast and it stop the up function.	50 hours / 90 days			
6,4- Perform emergency descent procedure. See Note 10	50 hours / 90 days			
6,21- Verify inclinometer systems functions.See Note 13	50 hours / 90 day			
6,33- Verify functioning & adjustment of emergency up & down switch.	50 hours / 90 days			
6,34- Verify functioning & adjustment of maximum down position switch.	50 hours / 90 days			
6,35- Verify functioning & adjustment of maximum up position switch.	50 hours / 90 days			
6,5- Verify relief valve adjustment for hoist 2000 psi.	100 hrs /180 days			
6,6- Pressure switch is adjust to 250psi +0-75 1 block.	100 hrs /180 days			
6,6A- Adjust second speed pressure switch 1750 psi -0 +50.	100 hrs /180 days			
6,8- Maximum down pressure 1000 psi+0 -50 (1pieces block).	100 hrs /180 days			
6,9A- Maximum up pressure 2500psi +50 -0.	100 hrs /180 days			
6,10- Performance test (1800 psi) in second speed without load.	200 hrs /1 yrs			
7- General				
7,1- Punch the four sequential numbers on the structure.	If Apply			
7,2- Put a visible inspection tag on the unit.	If Apply			
7,3- Clean machine <u>Don't wash the bearings & electrical panel with a pressure washer</u>	If Apply			
7,4A- Install all stickers according to the client linguistic request.	If Apply			
7,11- Apply paint touch up.	If Apply			
7,12- Apply a rust protection if the unit is ship overseas.	FRACO			
7,4- Verify installation & condition of all stickers and replace them if you can't read them.	Daily			
7,6- Remove rubbish on the unit.	Daily			
7,7- Visual Inspection of the machine frame & weld.	50 hours / 90 days			
7,8- The serial plate is not damaged.	50 hours / 90 days			
7,9- Make sure a lead cable is installed on relief valve (If Apply).	100 hrs /180 days			
8- Documentation				
8,1- Insert the hydraulic & electrical layout in the electrical control box.	Daily			
8,2- Insert the User's guide, a main key & fuses in the document holder.	Daily			
8,3- Insert a maintenance guide of the machine <u>if the machine is sold.</u>	Daily			
8,4- Insert a copy of the inspection sheet in the document holder.	Daily			

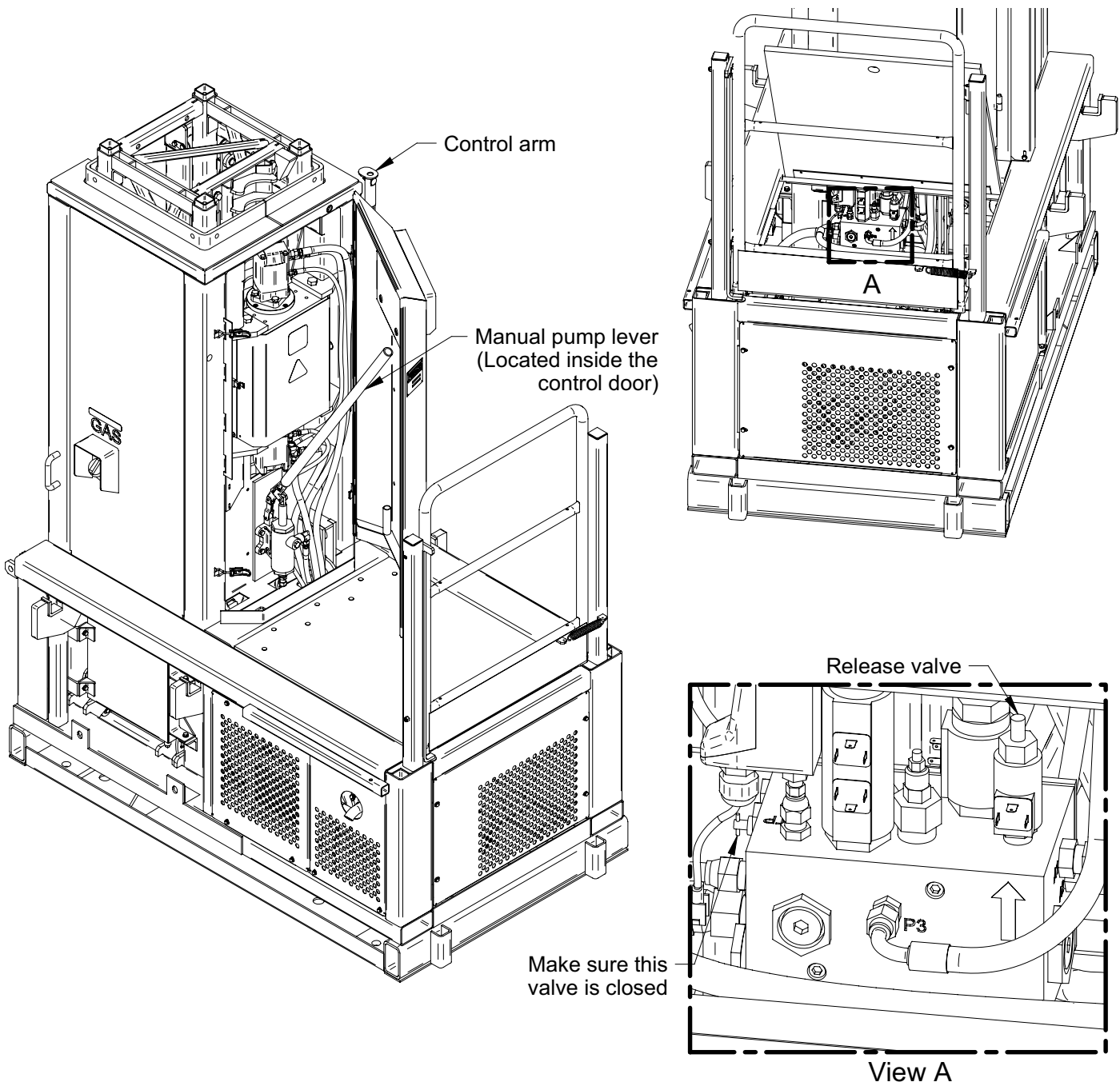
Serial number:

Note # 13 :To complete the inspection point, connect the inclinometer ELE-1812 on the inclinometer output plugs.

Emergency Descent

If there's a malfunction and you have to use the emergency descent, follow these steps:

- 1- Install the manual pump lever, located inside the control door
- 2- Move the lever up and down until the unit raises enough such that it clears the safety latches
- 3- Pull the control arm toward you
- 4- A second person needs to unscrew the release valve on the hydraulic manifold
- 5- If this installation contains more than a single unit, both units must be synchronized during the entire descent. If the installation becomes unlevelled during the descent, just release the control arm then the units will stop on the safety latches
- 6- When the descent is done, contact your FRACO representative for an overhaul



Unit Specifications

Enclosure: TEFC

Frame: 254T

HP: 15

Phase: 3 Volts: 230/460

Service Factor: 1.15

DE Bearing: 6308

Motor Weight: 322

Isolation Class: G

F.L. Amps: 34.4/17.7

Support: RIGID

Speed (RPM): 1750

Frequence (HZ): 60

Function: CONTINUE

OPE Bearing: 6208

Max. Ambient: 40 C°

KVA Code: G

Hydraulic:

Filter Type: 10 microns,
Oil Type: HVI36, ISO32, SAE10
Oil Quantity: 15,85 US gal. (60 Litre)

Lubrication:

Place to lubricate:

The 32 studs rollers on the worm screw (1 shot / 1,5 ml)

The big thrust bearing on the top of the worm screw (2 to 5 shots /3 to 7,5 ml)

Périod:

After each 25 hours of work or every month for the thrust bearing.

After each 50 hours of work or every 3 months for the 32 studs rollers.

Lubrificant Type :

High pressure grease. (State LT Grease)

Tips:

Grease the two bearings at each end of the electric motor once a year.
