

14.0 Hydraulic Systems

14.1 On/Off FCV balancing

Under the toolbox at the front of all trailed machines is a flow control valve tap which controls the flow to the main lift rams and also the seeding shut-off ram. The shut-off ram has a magnet attached to one end that starts and stops seed dispensing based on its proximity to the parent sensor. Correct balancing of this system is essential to maintaining a responsive system.



Less flow means the shut off responds quicker but lift will be fractionally slower. More open, will result in a quicker lift but will mean the shut off ram becomes lazy and could result in over-seeding at the end of each run and delays, therefore under-seeding at the start of each run.

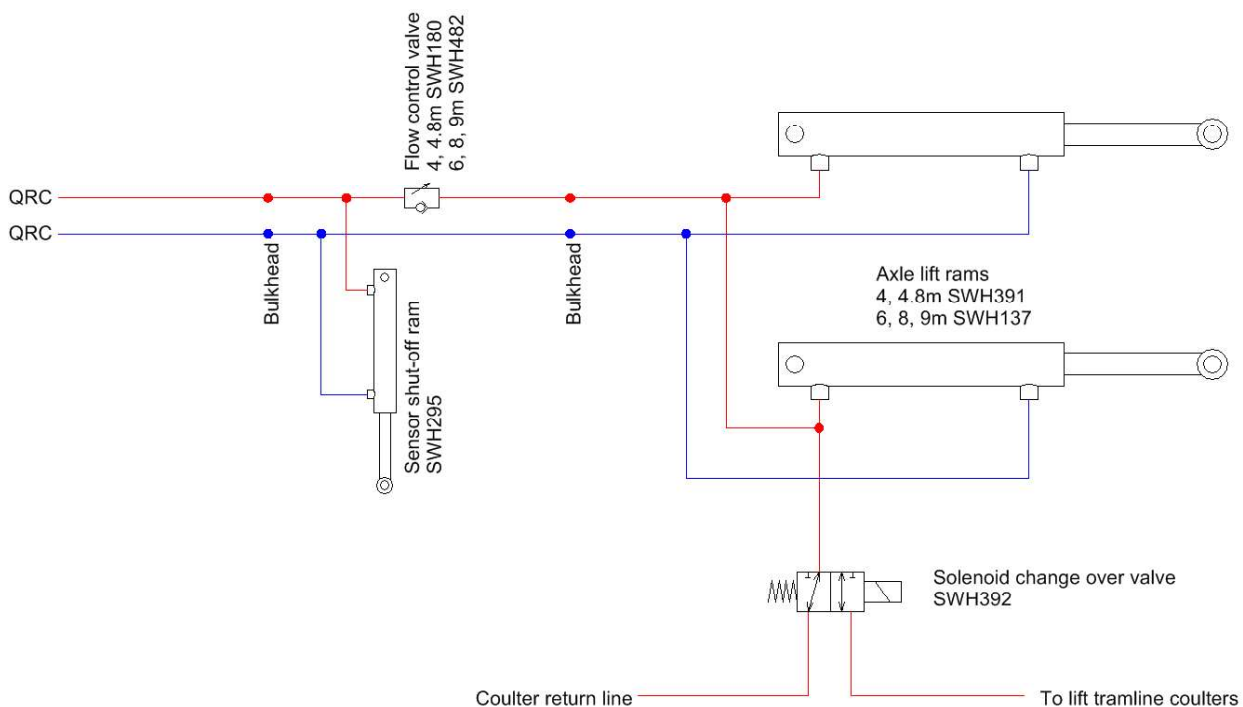
14.2 Fan Return Pressure

When connecting to a tractor for the first time, ensure the fan return pressure is below 15bar (the lower, the better). Exceeding this will result in damage to elements of the drills hydraulic system.

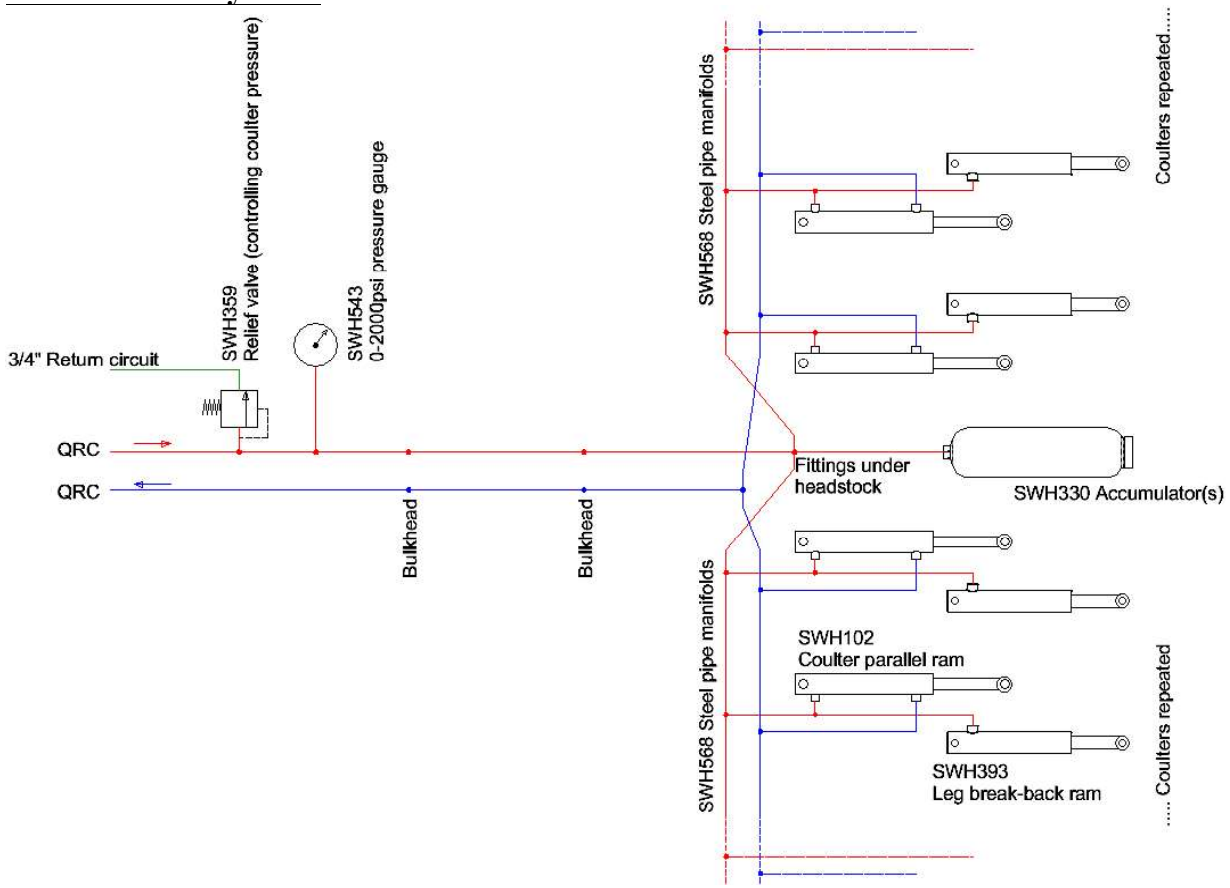
14.3 Coulters

The contour-following ability of coulters as well as the break-back leg system operates on a constant oil flow design whereby a low flow rate is constantly replenishing oil displaced from the coulters rams by undulations and obstructions. The downward force from these coulters is governed by an adjustable relief valve which maintains the correct pressure in the circuit. Additional capacity and a guarantee of rapid response is provided in the way of accumulators.

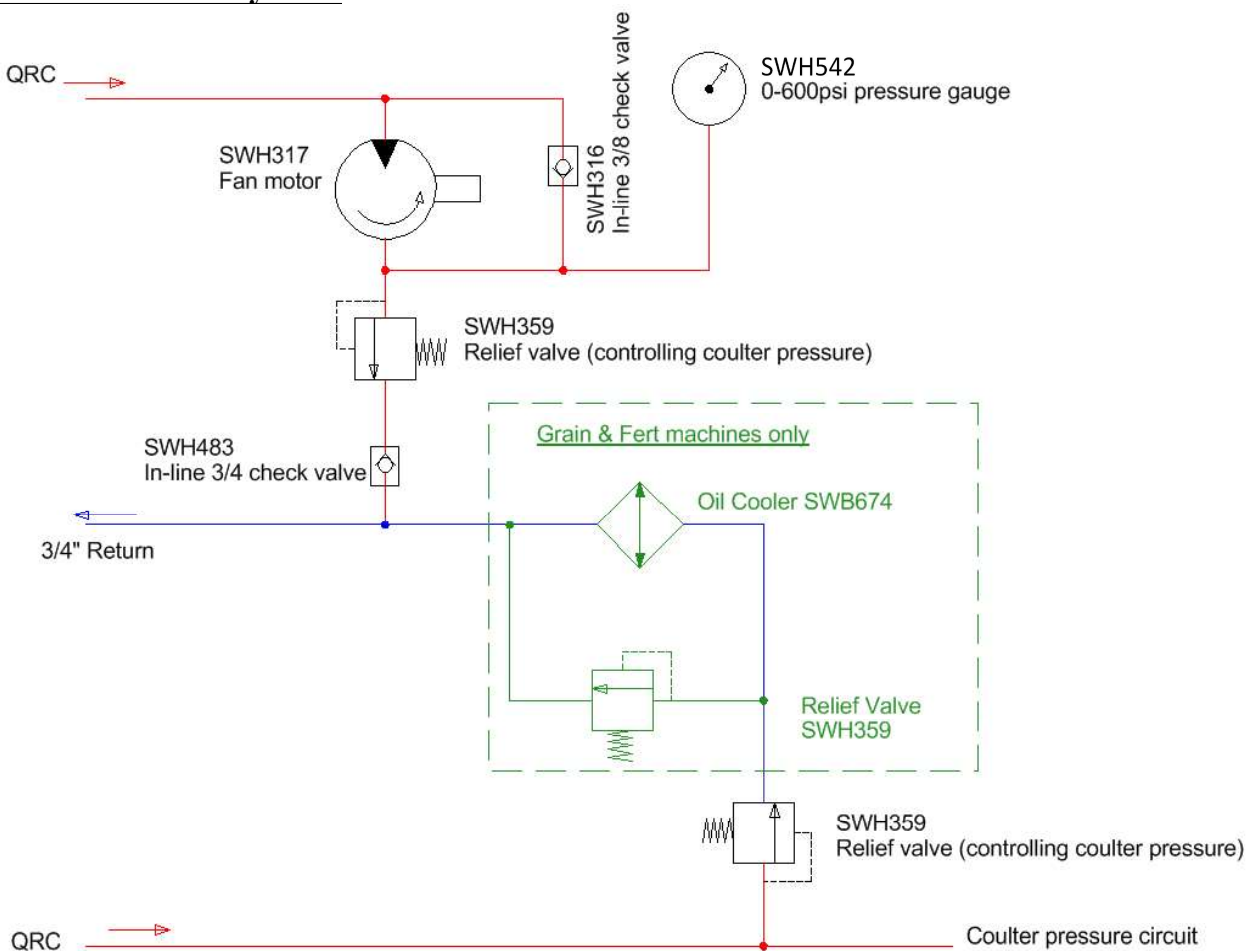
14.4 Axle Lift/Shut-off System



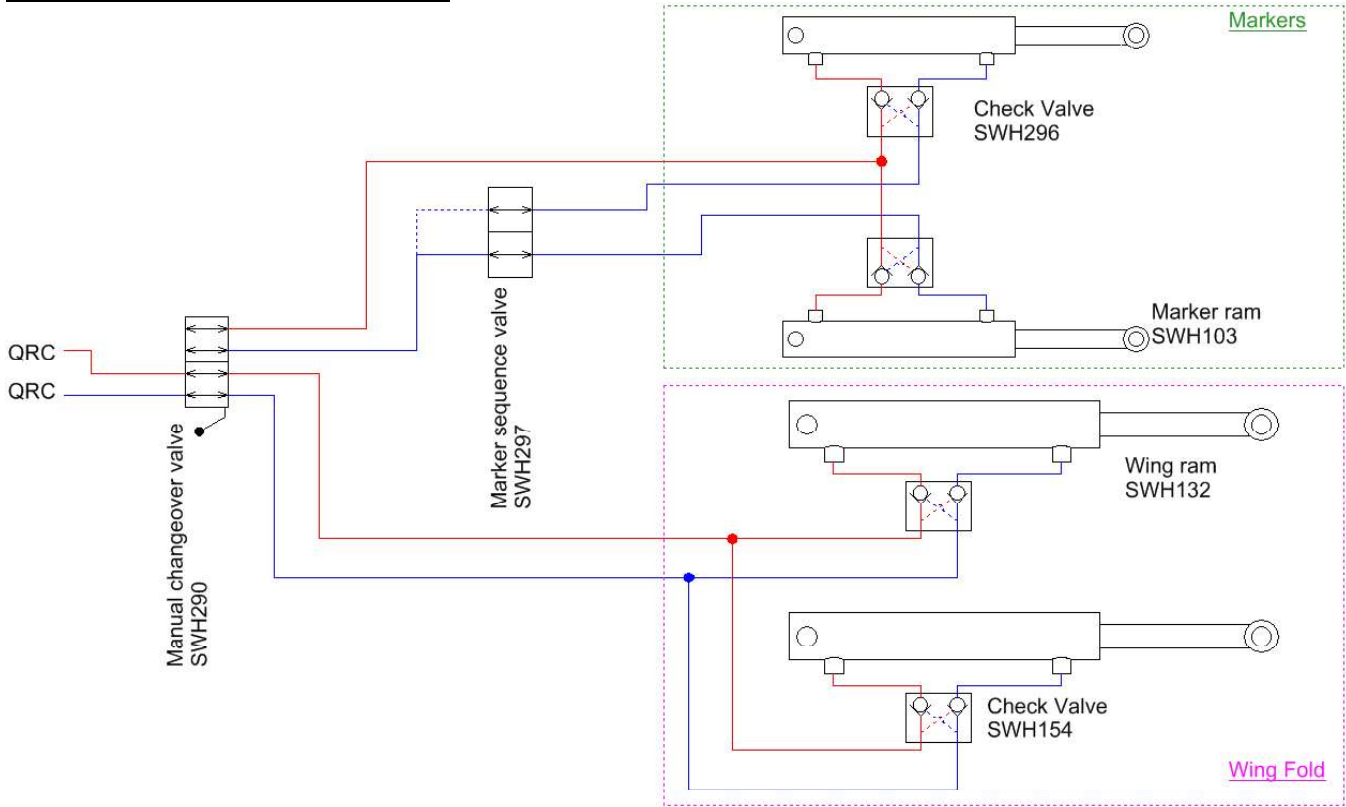
14.5 Coulters system



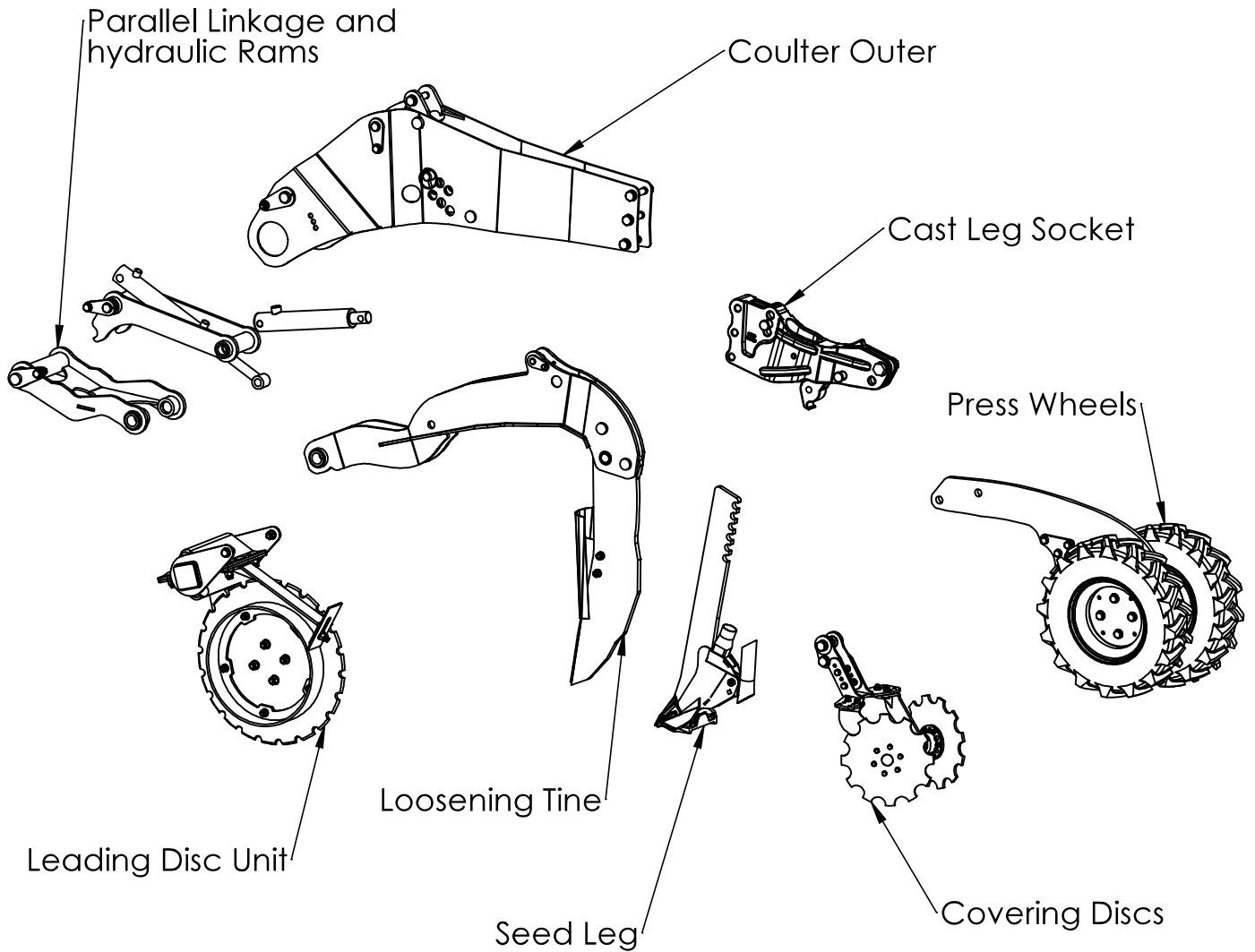
14.6 Fan Motor system




14.7 Wings/Markers system

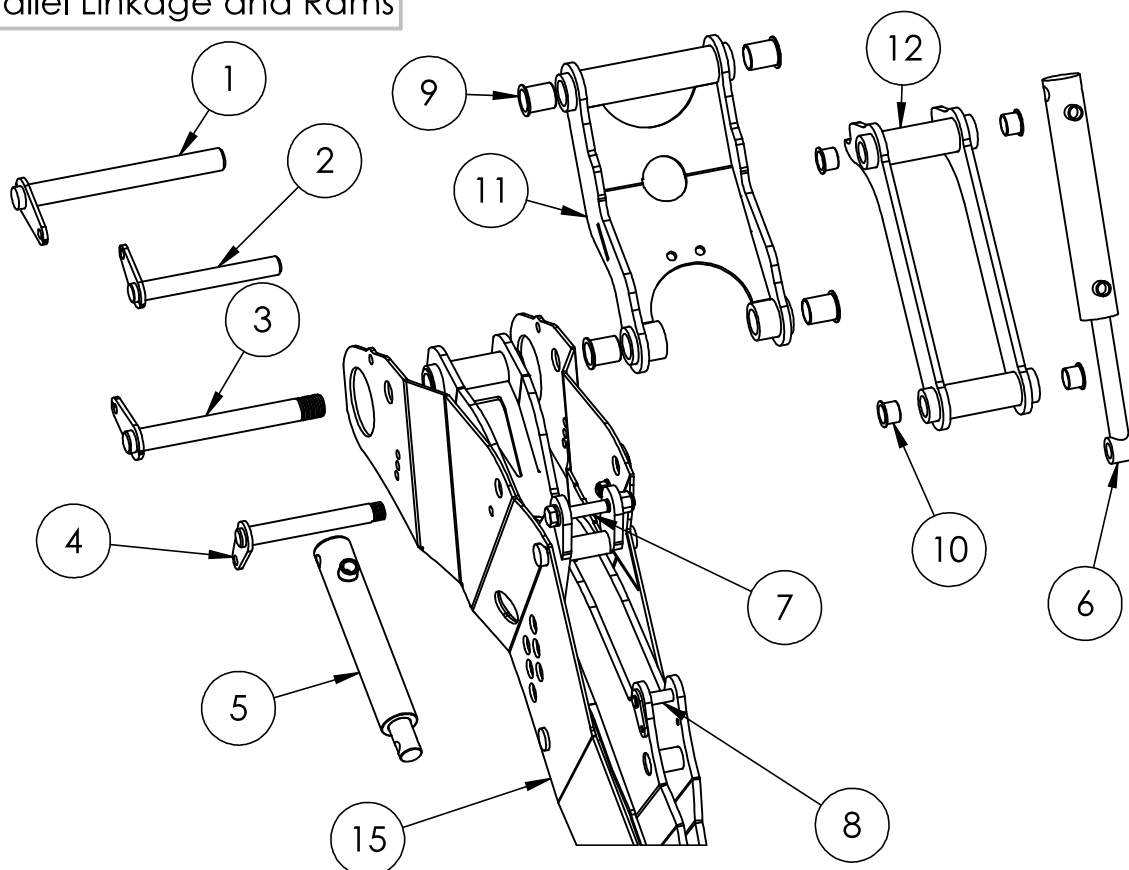


15.0 Coulter Overview



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MACHINE/COMPONENT:	DTS Coulter
TITLE:	Coulter Overview
	
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15.1 Parallel Linkage and Rams



ITEM NO.	PART NO.	DESCRIPTION
1	SW1240	30 x 274 Tabbed Pin
2	SW1241	25 x 195 Tabbed Pin
3	SW1242	30 x 257 Tabbed Threaded Pin
4	SW1243	25 x 180 Tabbed Threaded Pin
5	SWH393	A/R 630-1 Ram
6	SWH102	A/R 701-2 Ram
7	SWM16110	M16 x 110 Bolt
8	SW1244	16 x 55 Tabbed Pin
9	SWB197	Large Plastic Bush
10	SWB492	Small Plastic Bush
11	SW1245	Top Parallel Arm
12	SW1246	Bottom Parallel Arm
13	SWM30005	M30 Half Nut (not shown)
14	SWM24005	M24 Half Nut (not shown)
15	SW1308	Coulter Side Frame
16	SW1401	Top Parallel Arm (3m Only)

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MACHINE/COMPONENT:

DTS Coulter

TITLE:

Parallel Linkage and
Rams



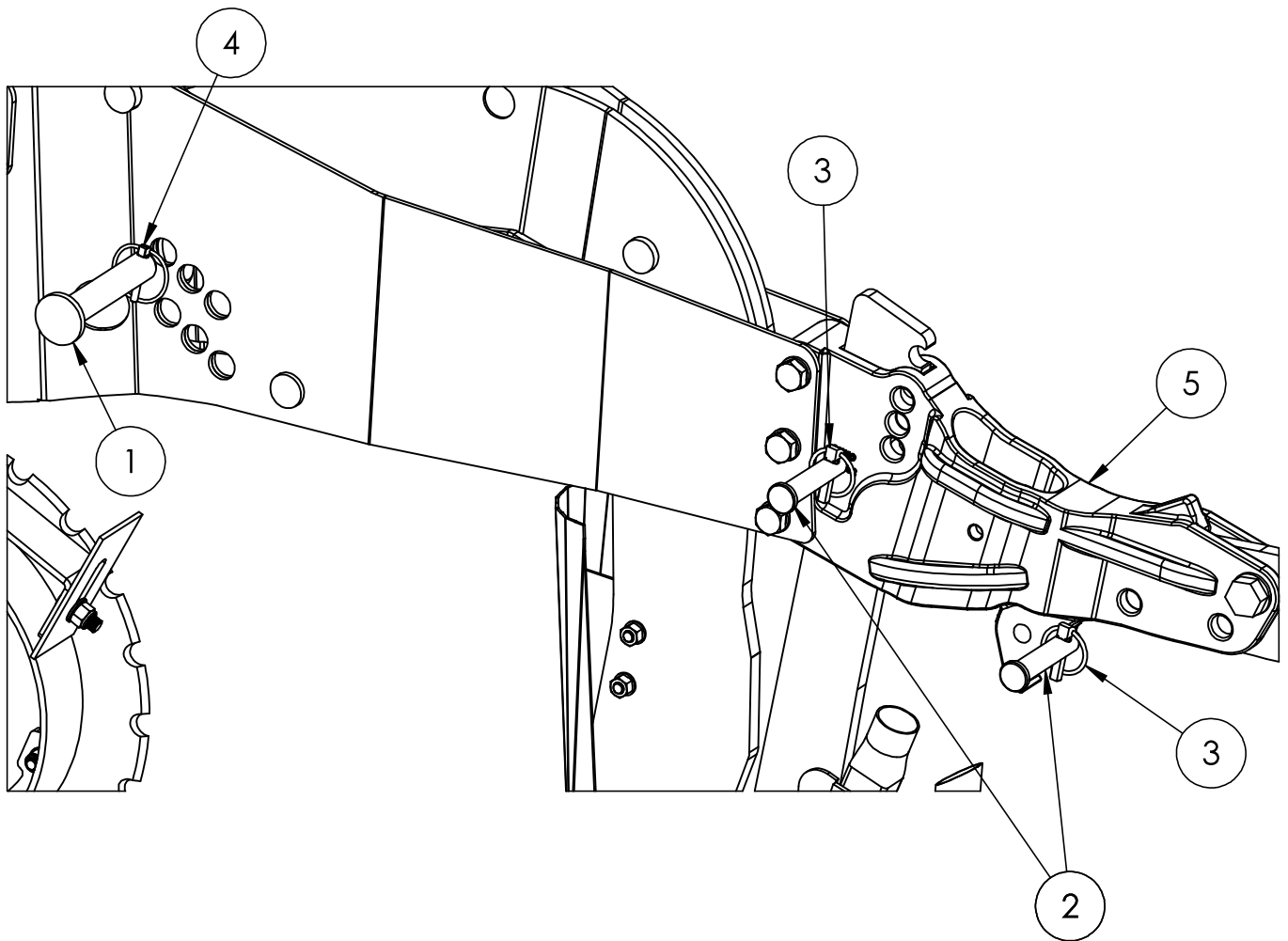
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15.2 Depth Pins




ITEM NO.	PART NO.	DESCRIPTION
1	SW1255	Loosening Tine Depth Pin
2	SW1256	Seed Leg Depth Pin and Press Wheel Arm Pin
3	SWB105	Lynch Pin
4	SWB691	6mm Lynch Pin
5	SWB532	Cast Socket

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MACHINE/COMPONENT: **DTS Coulter**

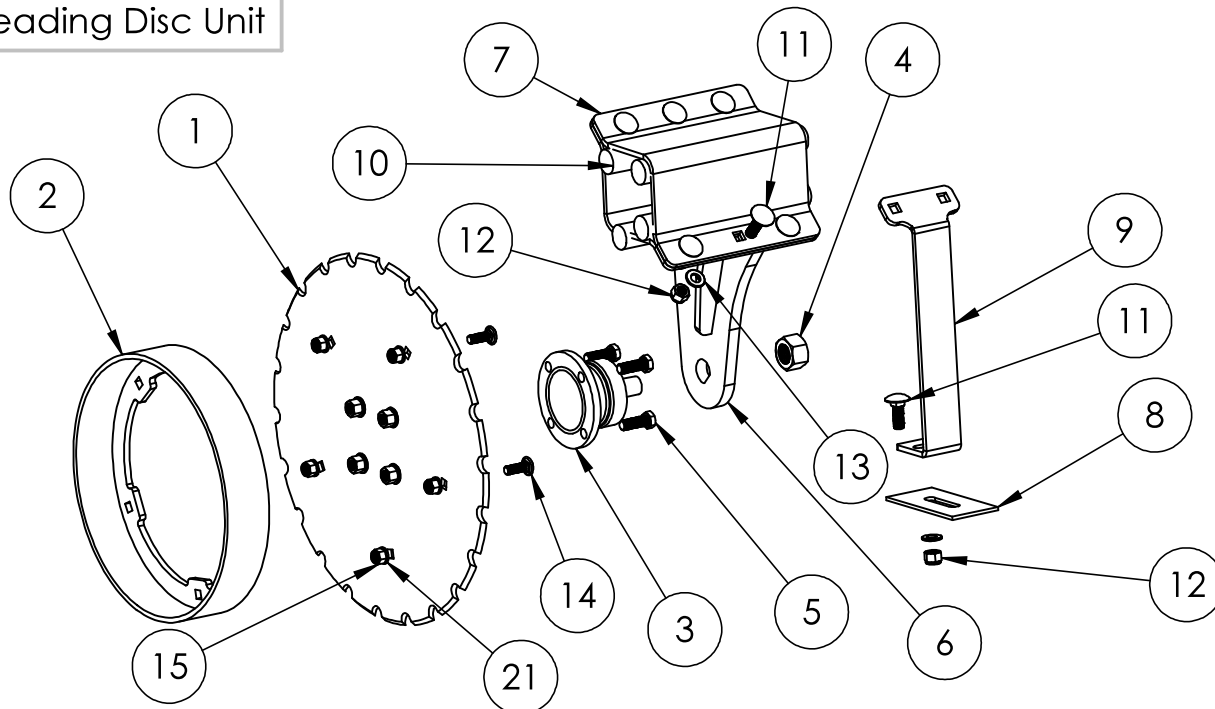
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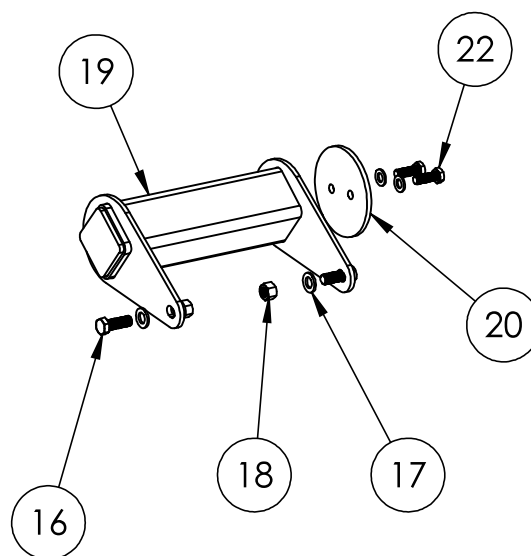
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15.3 Leading Disc Unit



ITEM NO.	PART NO.	DESCRIPTION
1	SWB442	450mm Leading Straight Disc
2	SW1226	Bolt on Disc Ring
3	SWB399	Bearing
4	SWM22004	M22 x 1.5 Nylock Nut
5	SWM1220fine	M12 x 1.25 x 20 Bolt
6	SW1227R & SW1227L	Leading Disc Arm R/H (L/H not shown)
7	SW1800	Clamp Plate
8	SW1228	Front Disc Scraper
9	SW1229	Front Disc Scraper Hanger
10	SWB493	Front Disc Rubber
11	SWM1235CHSQ	M12 x 35 Cup Head Square
12	SWM12003	M12 Plain Nut
13	SWM12001	M12 Flat Washer
14	SWM1030CHSQ	M10 x 30 Cup Head Square
15	SWM1004	M10 Nylock Nut
16	SWM1230	M12 x 30 Bolt
17	SWM12001	M12 Flat Washer
18	SWM12004	M12 Nylock Nut
19	SW1269	Front Disc Adjuster Box
20	SW1270	Front Disc Adjuster Box End Plate
21	SWM10001	M10 Plain Washer
22	SWM1030	M10 x 30 Bolt



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MACHINE/COMPONENT:

DTS Coulter

TITLE:

Leading Disc Unit

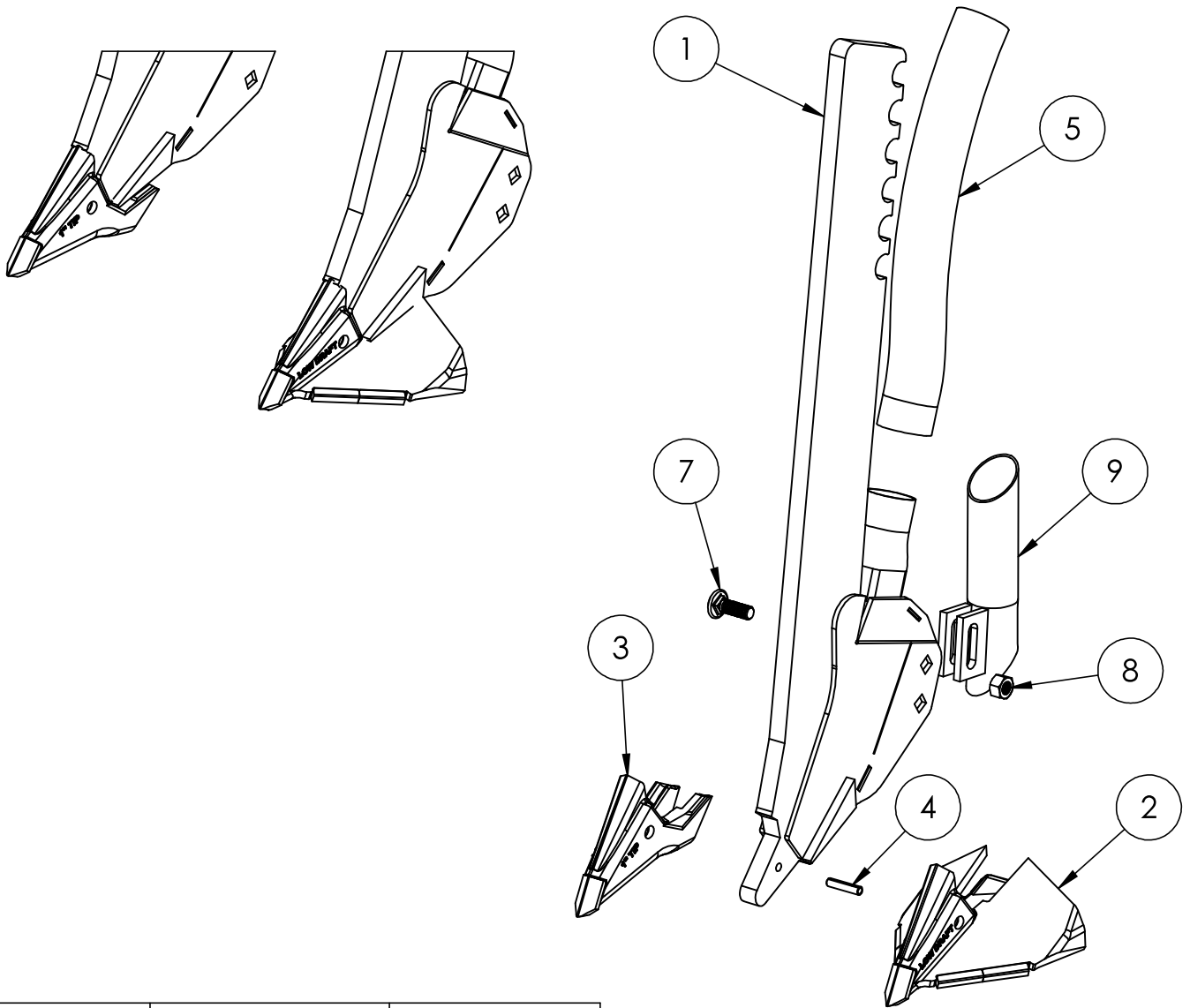


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15.4 Seed Leg Assembly



ITEM NO.	PART NO.	DESCRIPTION
1	SW1225	Seed Leg
2	SWB443	5" Seed Boot
3	SWB444	1" Seed Boot
4	SWB275	1/4" x 1" Roll Pin
5	SWB470	38mm Seed Hose (per metre)
6	SWB343	38mm Hose Clip
7	SWM1040CHSQ	M10 x 40 Cup Head Square
8	SWM10004	M10 Nylock Nut
9	SW2307	Fertiliser Outlet (optional extra)

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MACHINE/COMPONENT:

DTS Coulter

TITLE:

Seed Leg

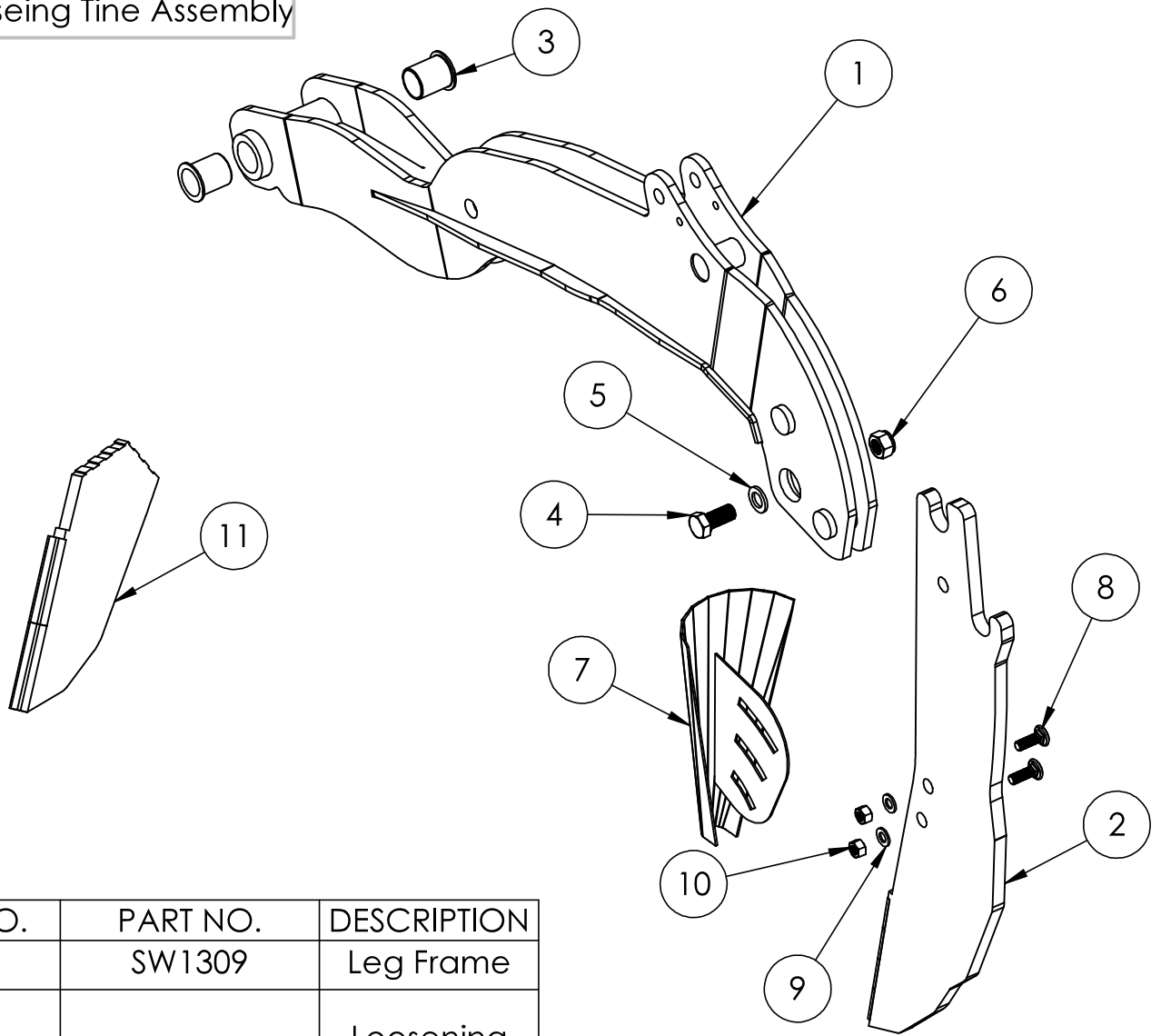


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15.5 Loosening Tine Assembly




ITEM NO.	PART NO.	DESCRIPTION
1	SW1309	Leg Frame
2	SW1224	Loosening Tine with 180mm Carbide
3	SWB197	Plastic Bush
4	SWM1640	M16 x 40 Bolt
5	SWM16001	M16 Flat Washer
6	SWM16004	M16 Nylock Nut
7	SW1658	Trash Deflector
8	SWM1030CHSQ	M10 x 30 Cup Head Square
9	SWM10001	M10 Flat Washer
10	SWM10004	M10 Nylock Nut
11	SW1496	Weld on Bottom

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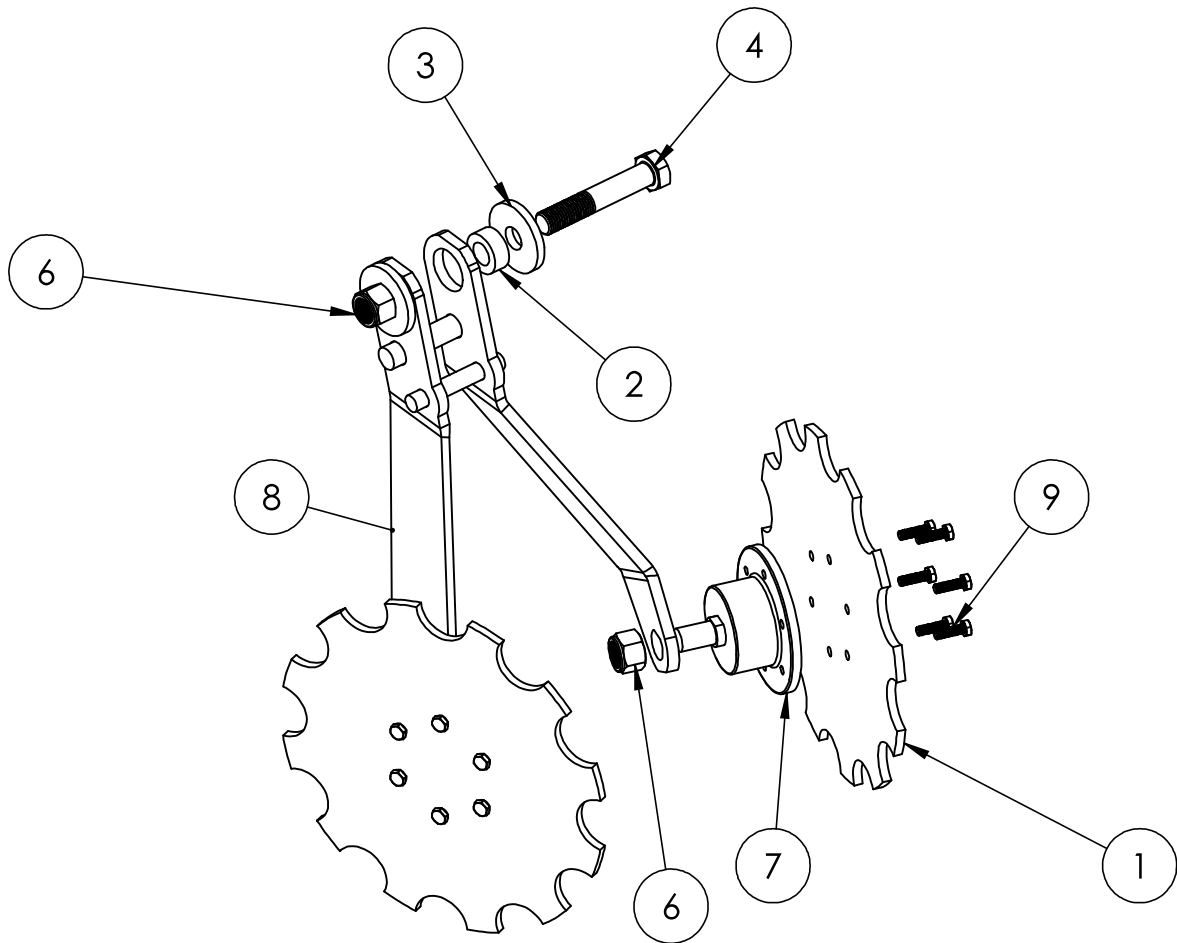
MACHINE/COMPONENT: DTS Coultter

TITLE: Loosening Tine



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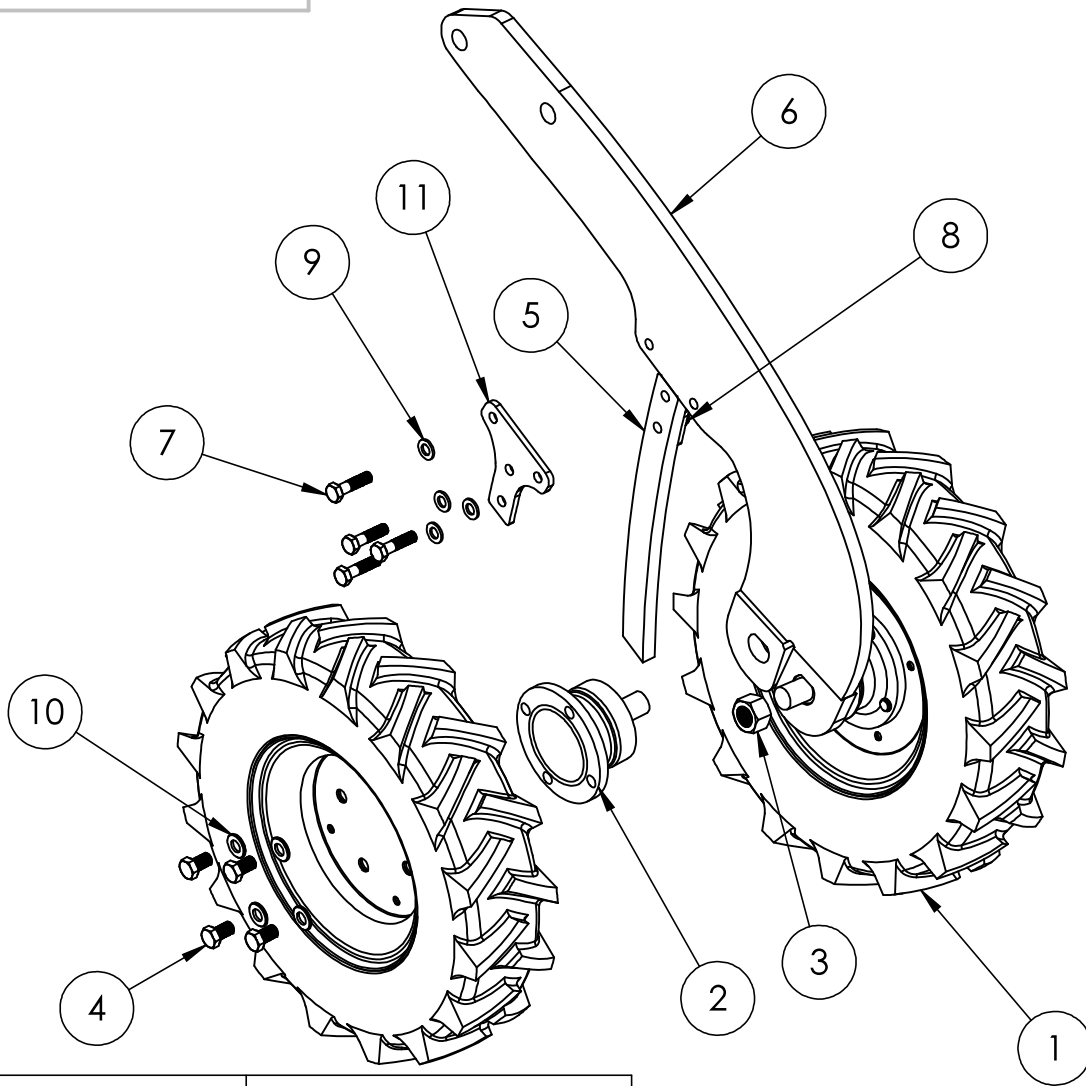
15.6 Covering discs



ITEM NO.	PART NUMBER	DESCRIPTION
1	SW1268S	DTS Scalloped Covering Disc
2	SW3199	29od x 16.5id x 12mm Spacer washer
3	SW1259	50OD x 16.5ID x 6mm
5	SWM1690	M16x90 bolt
6	SWM16004	M16 nyloc nut
7	SWB952	DTS covering disc bearing
8	SW3772	Covering disc frame
9	SWM620FP	M6x20 fine thread bolt

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MACHINE/COMPONENT:		DTS Coulter	
TITLE:		Covering Discs	
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15.7 Press Wheels



ITEM NO.	PART NO.	DESCRIPTION
1	SWB452L & SW452R	Depth Wheel
2	SWB399	Bearing
3	SWM22004	M22 x 1.5 Nylock Nut
4	SWM1220fine	M12 x 1.25 x 20 Bolt
5	SW1230	Middle Wheel Deflector
6	SW1210	DTS Press Wheel Arm
7	SWM10040	M10 x 40 Bolt
8	SWM10004	M10 Nylock Nut
9	SWM10001	M10 Flat Washer
10	SWM12001	M12 Flat Washer
11	SW1402	Middle Press Wheel Deflector Mounting Plate E3

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MACHINE/COMPONENT:

DTS Coulter

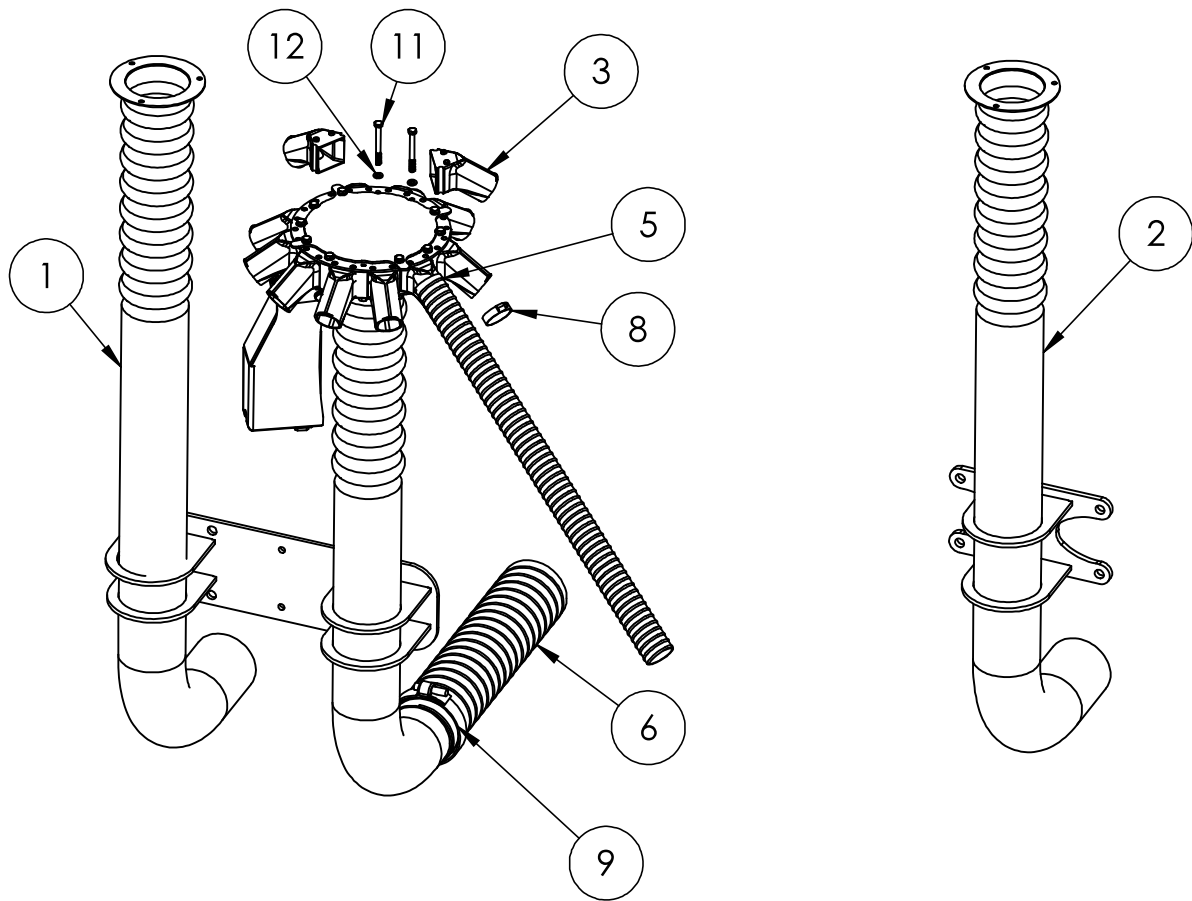
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Press Wheels

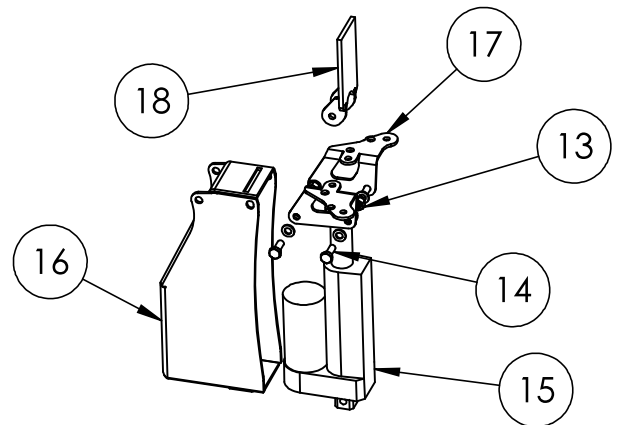


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15.8 Distribution System



ITEM NO.	PART NO.	DESCRIPTION
1	SW1816	4m G&F Upstack
	SW2462	4.8m G&F Upstack
	SW2206 & SW2207	6m G&F Upstack
		8m G&F Upstack
2	SW1817	4m Grain Only Upstack
	SW2461	4.8m Grain Only Upstack
	SW1874 & SW1875	6m Grain Only Upstack
	SW1880 & SW1881	8m Grain Only Upstack
	SWB694	3m Grain Only Upstack
3	SWB667	Removable Distribution Outlet
4	SWB658	Removable Distribution Blank
5	SWB470	38mm Hose (per metre)
6	SWB458	89mm Hose (per metre)
7	SWB354	127mm Hose (per meter, not shown)
8	SWB469	38mm Jubilee Clip
9	SWB497	89mm Jubilee Clip
10	SWB498	127mm Jubilee Clip
11	SWM660	M6 x 60 Bolt
12	SWM6001	M6 Washer
13	SWM6004	M6 Nylock Nut
14	SWM1620	M6 x 20 Bolt
15	SWB508	Tramline Actuator
16	SW1836	Actuator Cover
17	SW1885	Cover Brackets
18	SW1837	Shut off Slide



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MACHINE/COMPONENT:

DTS

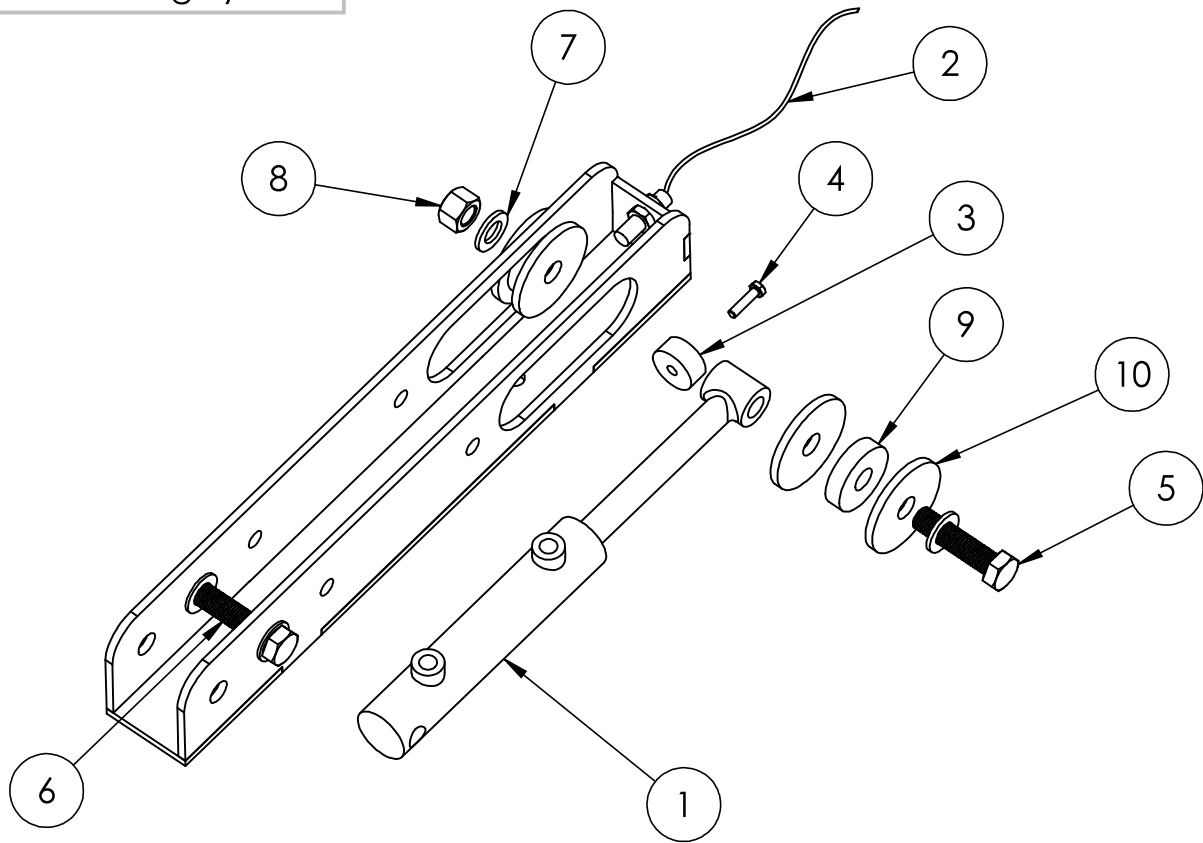
TITLE:

Distribution System



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15.9 Drill Switching System



ITEM NO.	PART NO.	DESCRIPTION
1	SWH295	Area Cut Out Ram
2	SWB299	Area Cut Out Sensor
3	SWB302	Blue Magnet
4	SWM625	M6 x 25 Bolt
5	SWM16110	M16 x 110 Bolt
6	SWM16100	M16 x 100 Bolt
7	SWM16001	M16 Flat Washer
8	SWM16004	M16 Nylock Nut
9	SW1247	50od x 16id x 12 Washer
10	SW2460	70od x 16id x 6 Washer

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MACHINE/COMPONENT:

DTS

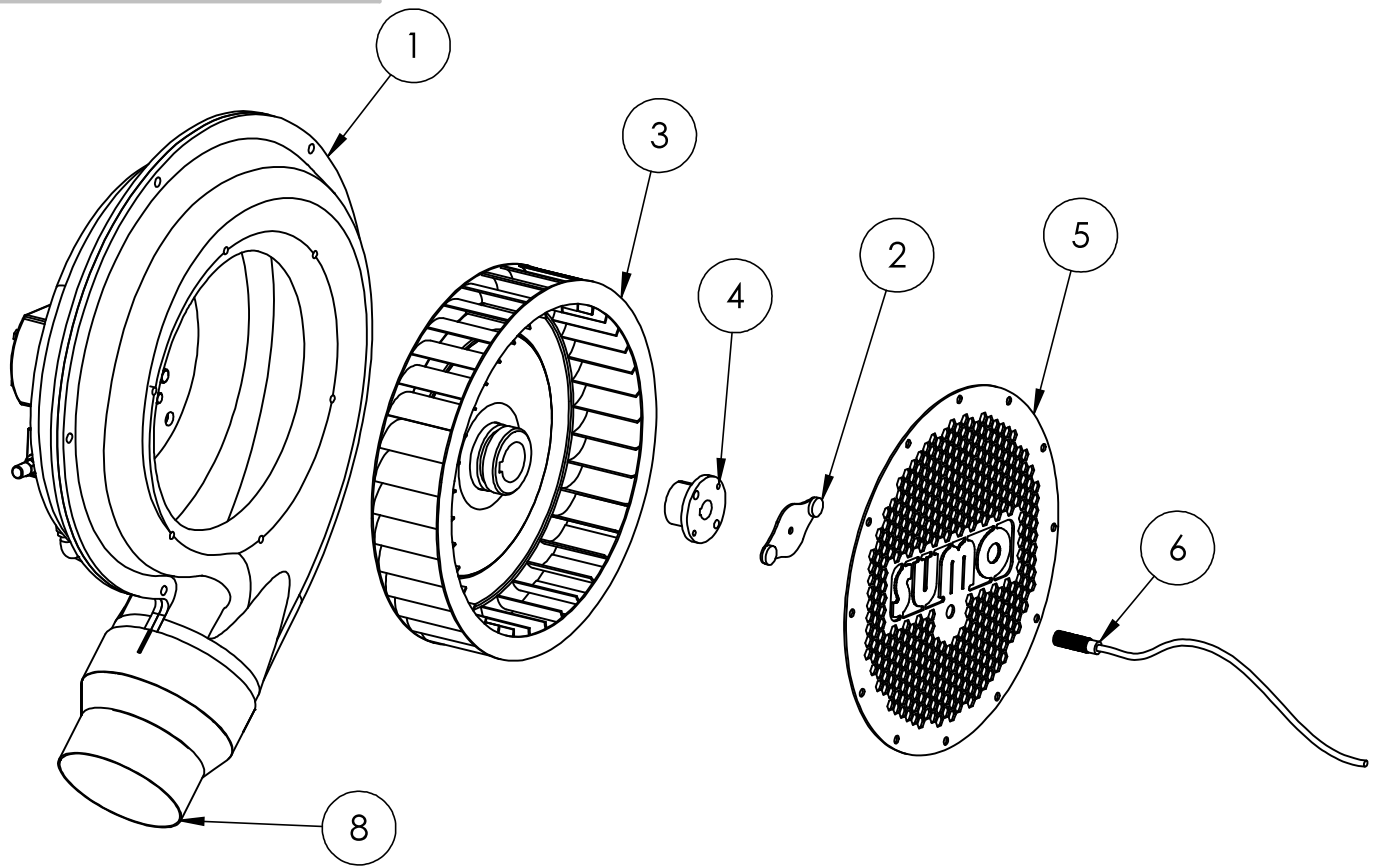
TITLE:

Drill Switching System



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15.11 Fan Assembly



ITEM NO.	PART NO.	DESCRIPTION
1	SWB770	Fan Housing
2	SWB303	Fan Magnet
3	SWB769	Propeller
4	SWB768	Taper Lock Bush
5	SW977	Fan Cover
6	SWB299	Fan Speed Sensor
7	SW1868	Fan Mounting Bracket
8	SW2254	Single Fan Outlet
9	SW2251	Dual Fan Outlet (G&F Only)
10	SWB674	Oil Cooler (G&F Only)

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MACHINE/COMPONENT:

DTS

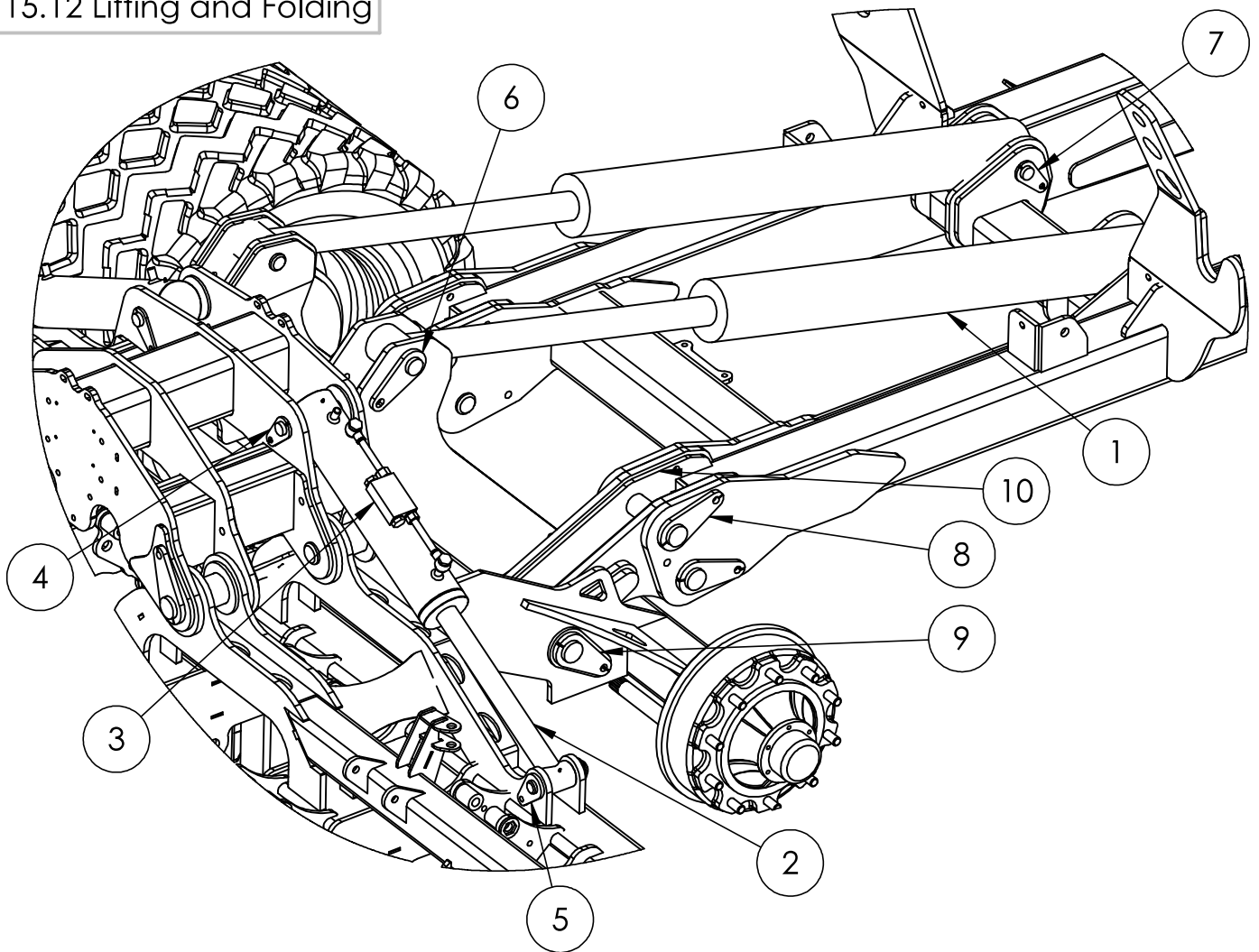
TITLE:

Fan Assembly



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15.12 Lifting and Folding



ITEM NO.	PART NO.	DESCRIPTION
1	SWH391	706-9 Ram (4m)
	SWH355	706 Seal Kit
	SWH137	707-10 (6m - 8m)
	SWH292	707 Seal Kit
2	SWH132	706-4 Ram
	SWH355	706 Seal Kit
3	SWH154	Pilot Operated Check Valve
4	SWP30x175	30 x 175 Tabbed Pin
5	SWP30x130	30 x 130 Tabbed Pin
6	SWP30 x 140	30 x 140 Tabbed Pin (4m)
	SWP40x150	40 x 150 Tabbed Pin (6m)
	SWP40x160	40 x 160 Tabbed Pin (8m)
7	SWP30x195	30 x 195 Tabbed Pin (4m)
	SWP40x215	40 x 215 Tabbed Pin (6m)
	SWP40x225	40 x 225 Tabbed Pin (8m)
8	SWP50x200	50 x 200 Tabbed Pin
9	SWP50x280	50 x 280 Tabbed Pin
10	SW1254	Detachable Axle Pivot

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MACHINE/COMPONENT:

DTS

TITLE:

Lifting and Folding



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