

TABLE OF CONTENTS

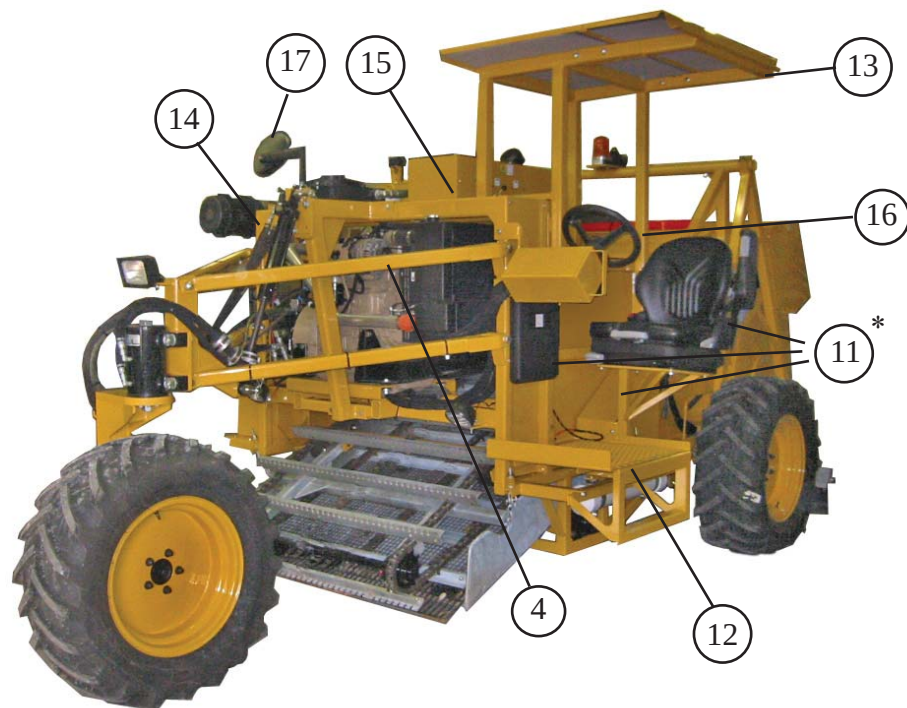
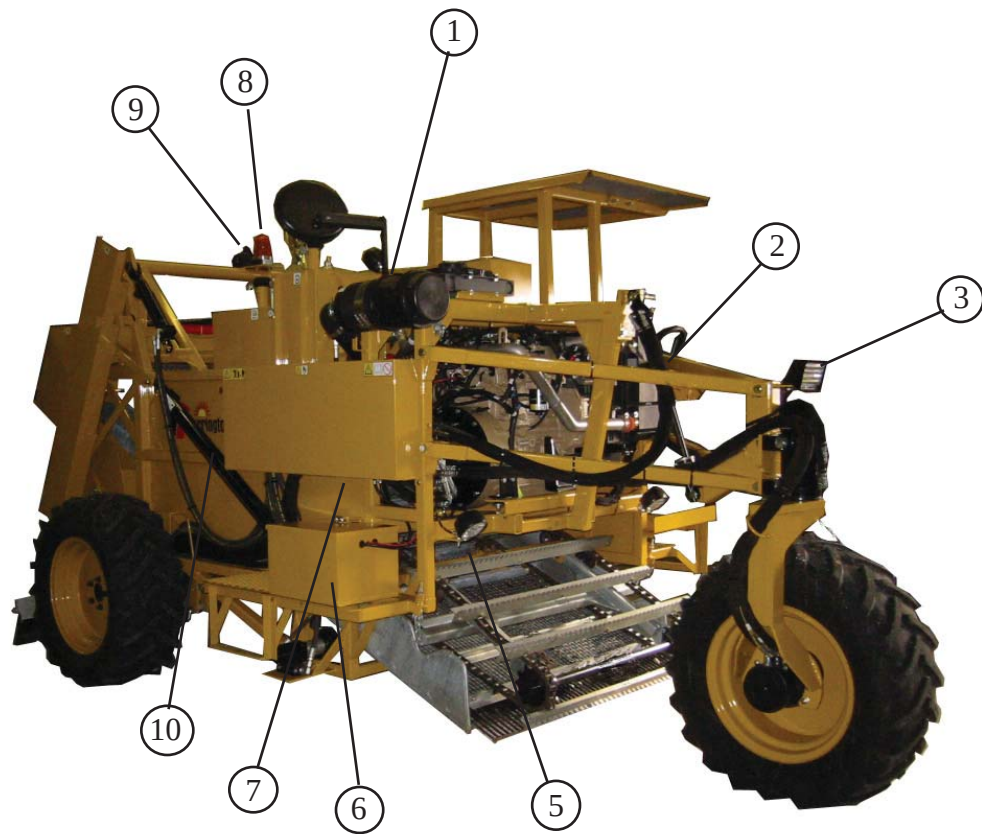
Table of Contents	1
Overall Machine Legend.....	2-5
Engine/Pump/Radiator (PE4024HF295)	6-7
Transmission/Drive Coupling Assy	8
Air Cleaner.....	9
Fuel System.....	10
Transmission Linkage	11
Right Wheel Assy.....	12
Left Wheel Assy.....	13
Front Wheel Assy.....	14
Screen System.....	15
Oscillator Mechanism	16
Flight System	17
Conveyor Support Assy.....	18
Conveyor Shaft Assy.: Front & Rear	19
Conveyor Drive Mechanism.....	20
Power Steering Components.....	21
Controls and Gauges	22
Oil Tank Assy.	23
Hopper and Rollover Components.....	24-25
Emergency Tow Jack	26
Groomer Assy.....	27
Wiring Diagram	28
Hydraulic Return/Cooler Circuit.....	29
Hopper Lift Circuit	30
Hopper Rollover Circuit	31
Digger/Groomer Circuit.....	32
Conveyor/Oscillator Circuit.....	33
Hydrostatic Drive Circuit.....	34
Power Steering Circuit.....	35
Wheel Motor Case Drain Circuit	36

OVERALL MACHINE LEGEND

REF NO.	PART NO.	DESCRIPTION	QTY
1	500126	HYDRAULIC TANK ASSEMBLY	1
2	P259305	CYLINDER, 2B X 10S w/CAV	1
	005248	PIN: CYL/JACK	2
	P294250	VALVE: PILOT CHECK CARTRIDGE	1
	P781000	STROKE CONTROL SET	1
	003076	STOP, DIGGER CYL, SAFETY	1
	P123005	LOCK PIN: 5/16"	1
	P259306	SEAL KIT: RKT2-0096	1
	500287	FRONT LIFT BRACKET	1
3	P312100	LIGHT: HEAD	1
4	000587W	STABILIZER ARM WLD	4
	000622M	SPACER, STABILIZER 2-9/16	4
	P620600	GREASE FITTING: 1/4"-28 TAPER X 35/64	4
5	P312700	LIGHT: WORKING	3
6	004971	BATTERY BOX, 5000	1
	000730W	COVER, BATTERY BOX	1
7	P292700	JUNCTION MANIFOLD	1
8	P312600	LIGHT: STROBE	1
9	P001720	ALARM: BACK-UP, PRECO 45AA	1
10	P259335	CYLINDER: 2B X 42S W/CAV & 1" PIN BOSS	2
	P294250	VALVE: PILOT CHECK CARTRIDGE	2
	P259316	SEAL KIT: RKT2-0087	1
11 *	P600350	SEAT: UNI PRO 136 GRAMMER	1
	500021	SEAT POST WLD	1
	P999000	BOX: OWNERS MANUAL	1
12	005350	PLATFORM, FOOT	1
13	500167	CANOPY	1
14	P298150	SWITCH: MASTER	1
	P296950	FACE PLATE: MASTER SWITCH	1
15	005036	SHIELD, RADIATOR COVER	1
16	004988	GUARD, CONV.	1
17	500037	MIRROR ASM	1
	500038	CLAMP, MIRROR OFFSET	1
	500039	CLAMP. MIRROR FLAT	1

* 71.P600352 SEAT SAFETY SWITCH (NOT SHOWN)

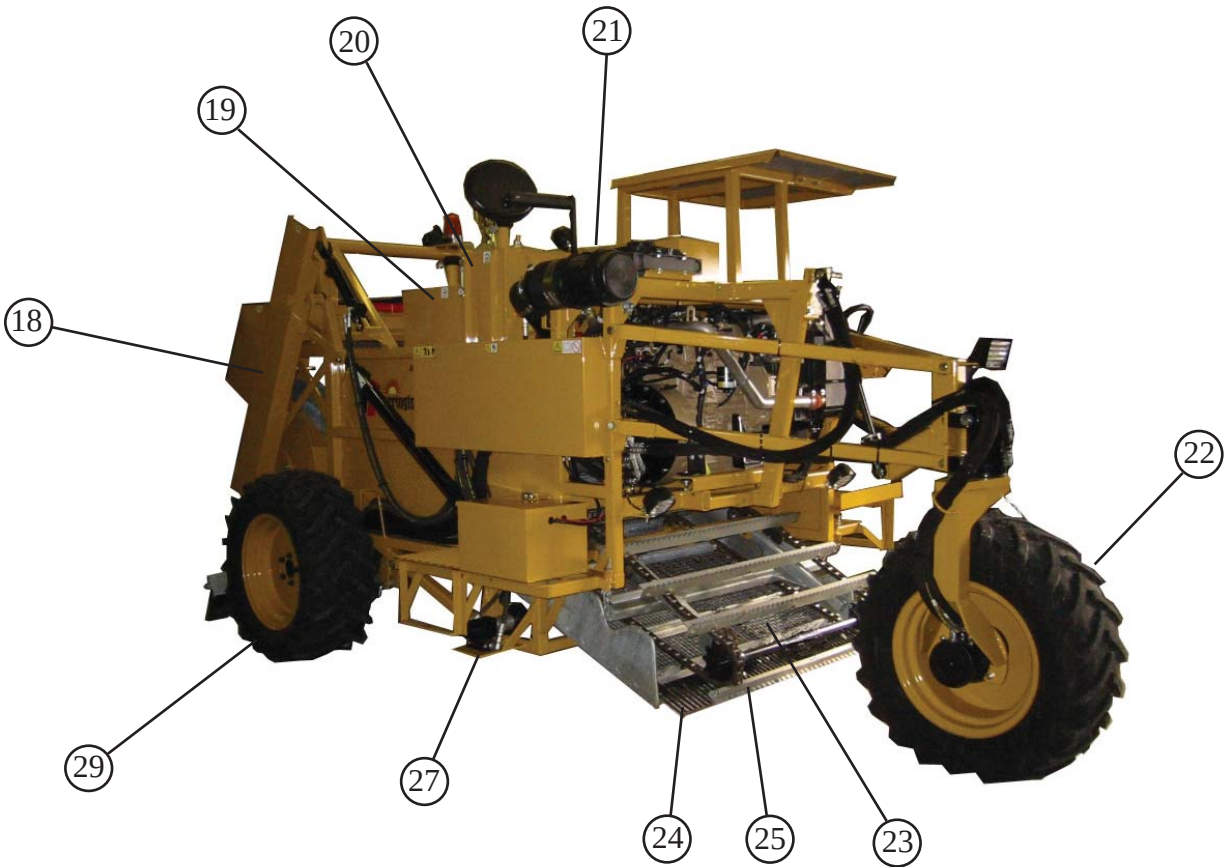
OVERALL MACHINE LEGEND



OVERALL MACHINE LEGEND

REF NO.	SEE PAGE	DESCRIPTION
18	24-25	HOPPER AND ROLLOVER COMPONENTS
19	10	FUEL SYSTEM
20	23	OIL TANK
21	9	AIR CLEANER
22	14	WHEEL ASSEMBLY (FRONT)
23	17	FLIGHT SYSTEM
24	15	SCREEN AND DIGGER POINT SYSTEM
25	19	FRONT CONVEYOR SHAFT
26	18	FRONT CONV. SUPPORT ASSY
27	16	OSCILLATOR MECHANISM
28	26	EMERGENCY TOWING
29	12	WHEEL ASSEMBLY (RIGHT)
30	21	POWER STEERING COMPONENTS
31	11	TRANSMISSION LINKAGE
32	22	CONTROLS AND GAUGES
33	24-25	HOPPER SYSTEM
34	20	CONVEYOR DRIVE MECHANISM
35	13	WHEEL ASSEMBLY (LEFT)

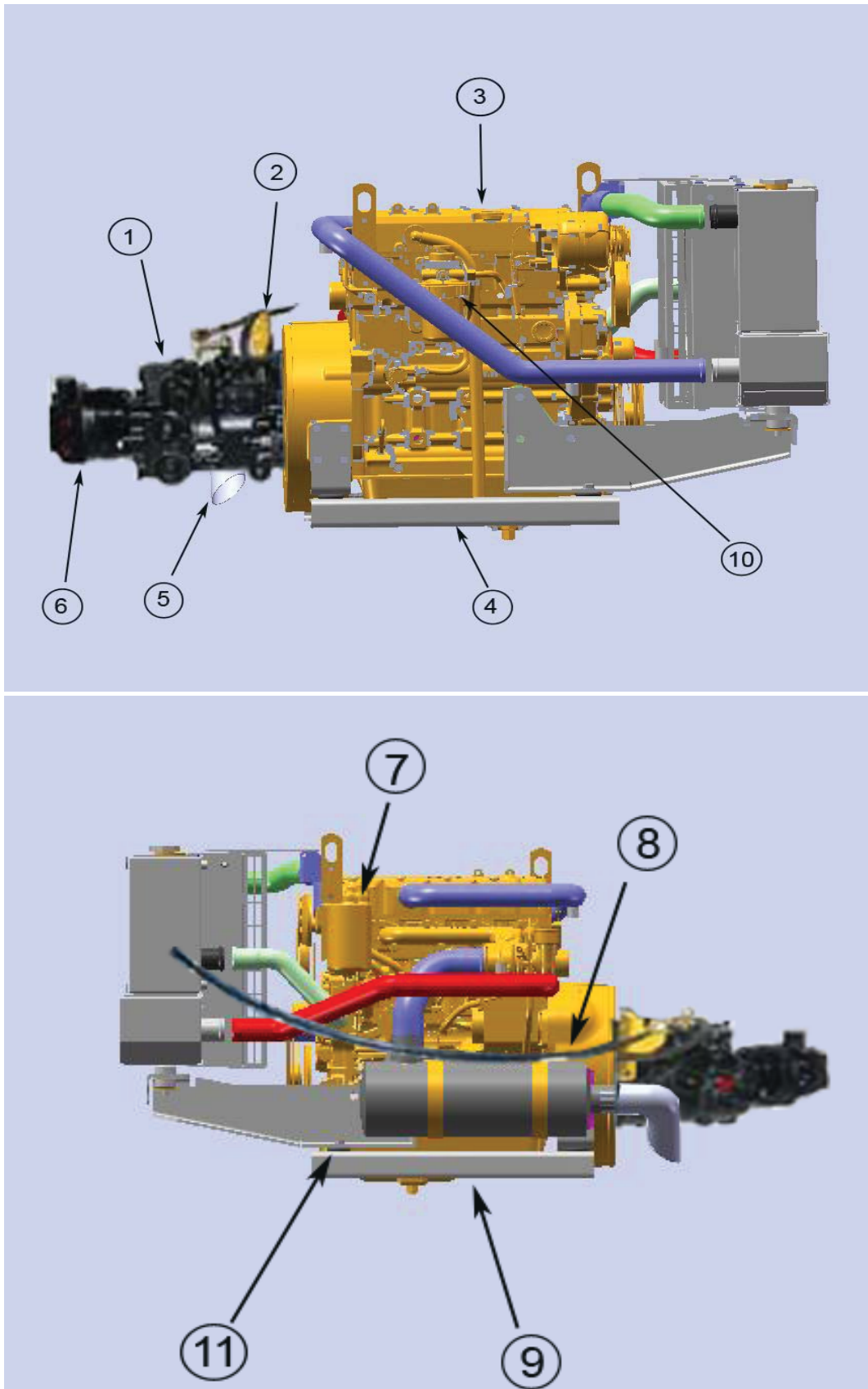
OVERALL MACHINE LEGEND



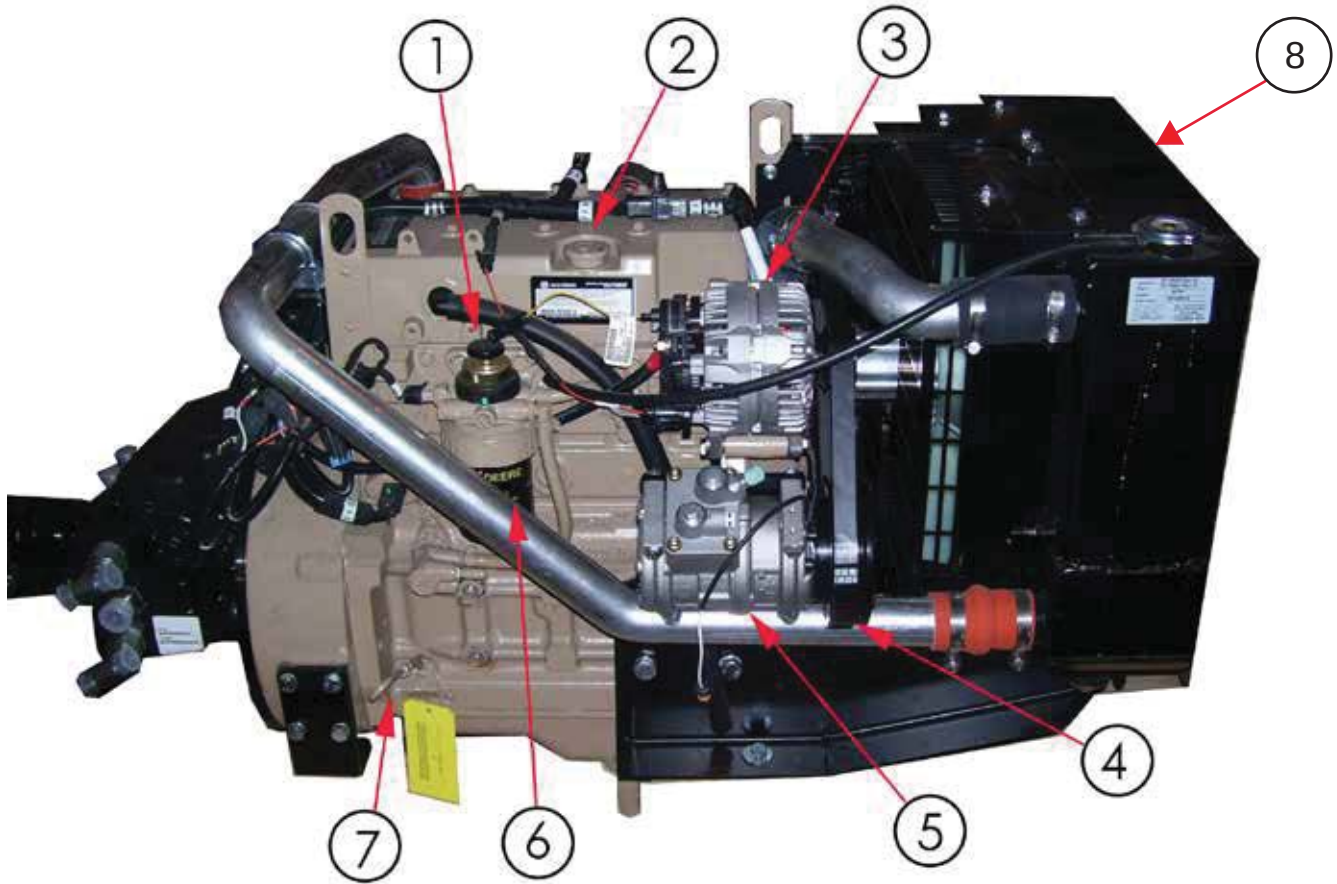
ENGINE/PUMP/RADIATOR (PE4024)

REF NO.	PART NO.	DESCRIPTION	QTY
1	SEE PAGE 8	TRANSMISSION	1
2	005262	BRKT, TRANS CONTROL CABLE	1
3	P370450	ENGINE, PE4024HF295	1
4	500045	BRKT, ENG MT RIGHT	1
5	500130	TAILSPOUT	1
6	SEE PAGE 8	GEAR PUMP	1
7	P371570	FILTER, ENGINE OIL PE4024	1
8	P115852	CABLE ASM, PUSH -PULL 52" X 2"	1
9	500046	BRKT, ENG MT LEFT	1
10	P371622	FILTER: ENG FUEL PE4024	1
11	P133072	MT, ISOLATOR CB -1121-2	4
*	P370453	OVERFLOW BOTTLE (NOT SHOWN)	1

ENGINE/PUMP/RADIATOR (PE4024)



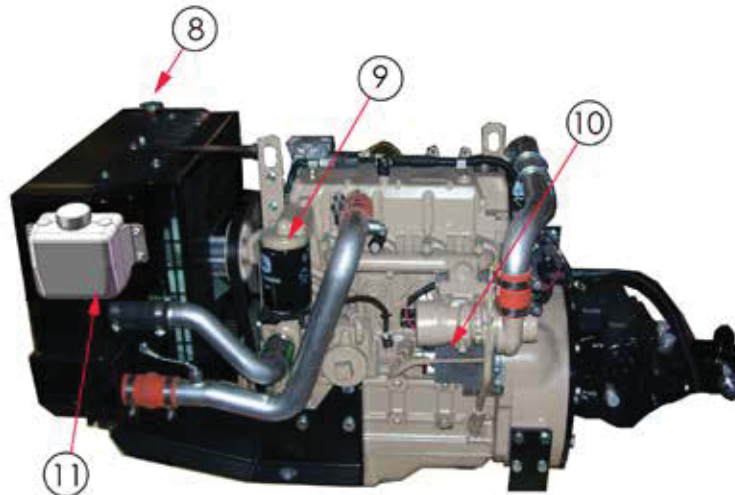
ENGINE SERVICE



FRONT ENGINE VIEW

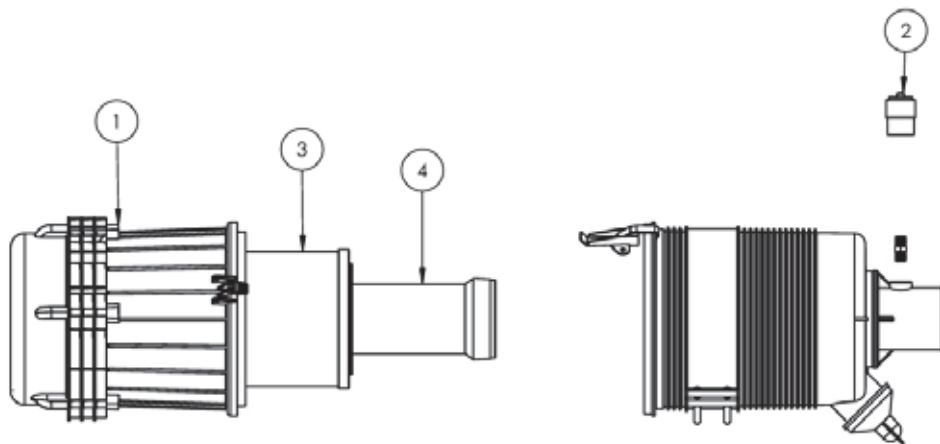
<u>ITEM</u>	<u>QTY</u>	<u>PART #</u>	<u>DESCRIPTION</u>
1	1	P370466	FUEL PRIMING PUMP
2		N/A	ENGINE OIL FILL CAP
3	1	P370452	ALTERNATOR
4	1	P066202	SERPENTINE BELT WITH A/C
*	1	P063020	* SERPENTINE BELT WITHOUT A/C*
5	1	P117120	AIR COND COMPRESSOR
6	1	P371622	FUEL FILTER
7	1	P370461	ENGINE OIL DIPSTICK
8	1	P370445	RADIATOR / INTERCOOLER

ENGINE SERVICE



REAR ENGINE VIEW

<u>ITEM</u>	<u>QTY</u>	<u>PART #</u>	<u>DESCRIPTION</u>
8	1	P370448	RADIATOR FILL CAP
9	1	P371570	ENGINE OIL FILTER
10	1	P370351	STARTER MOTOR
11	1	P370453	OVER FLOW BOTTLE

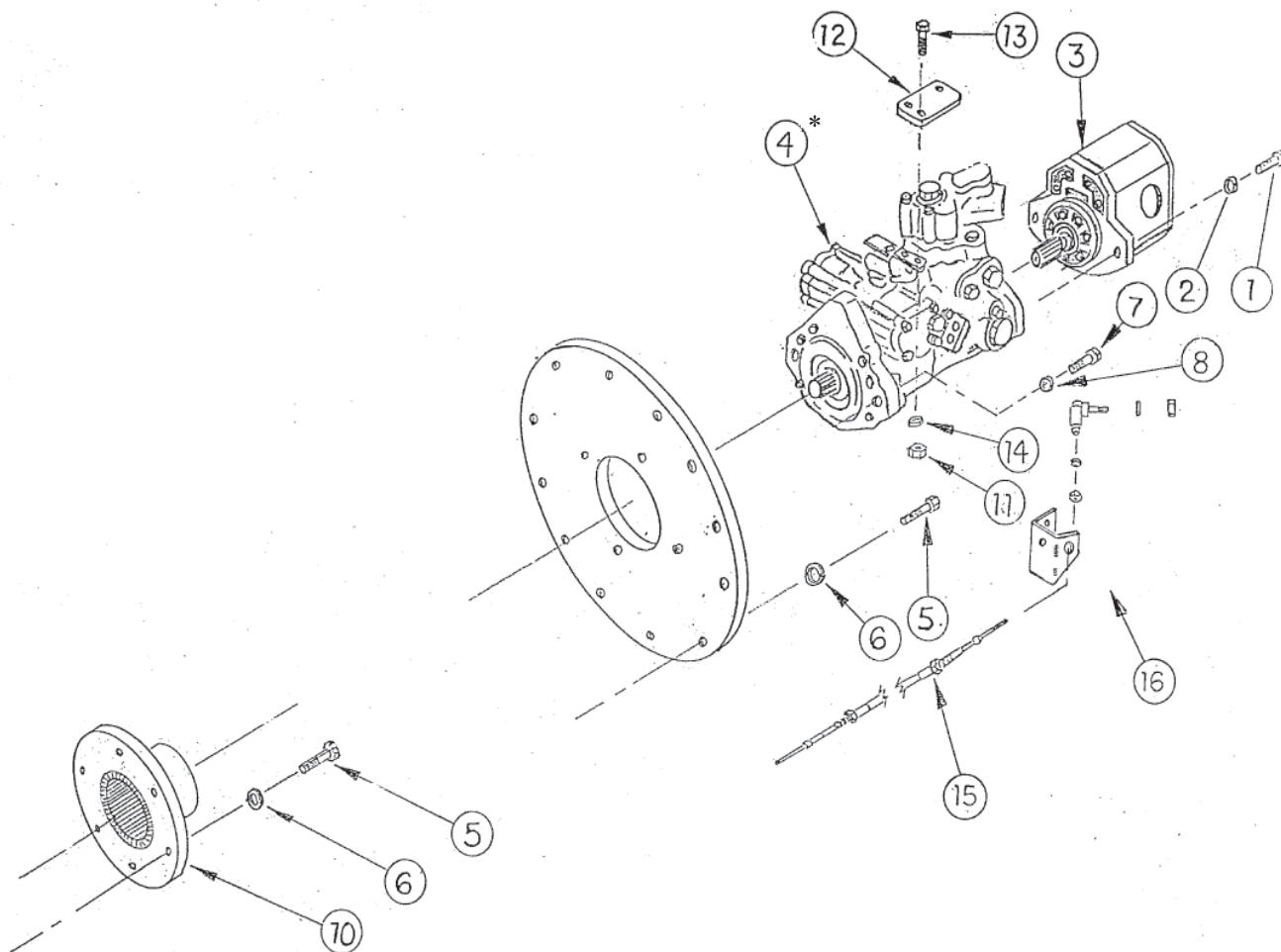


<u>ITEM</u>	<u>QTY.</u>	<u>PART #</u>	<u>DESCRIPTION</u>
1	1	P001650	AIR CLNR: ENG 2.5#7VLR-E2-ST
2	1	P297160	GAUGE: IND A/C DON #RAX002351
3	1	P371366	FILTER: AIR ELE PRIME 3-E1 ENG
4	1	P371376	FILTER: AIR ELE SAFETY 3-E2 ENG

TRANSMISSION/DRIVE COUPLING ASSEMBLY

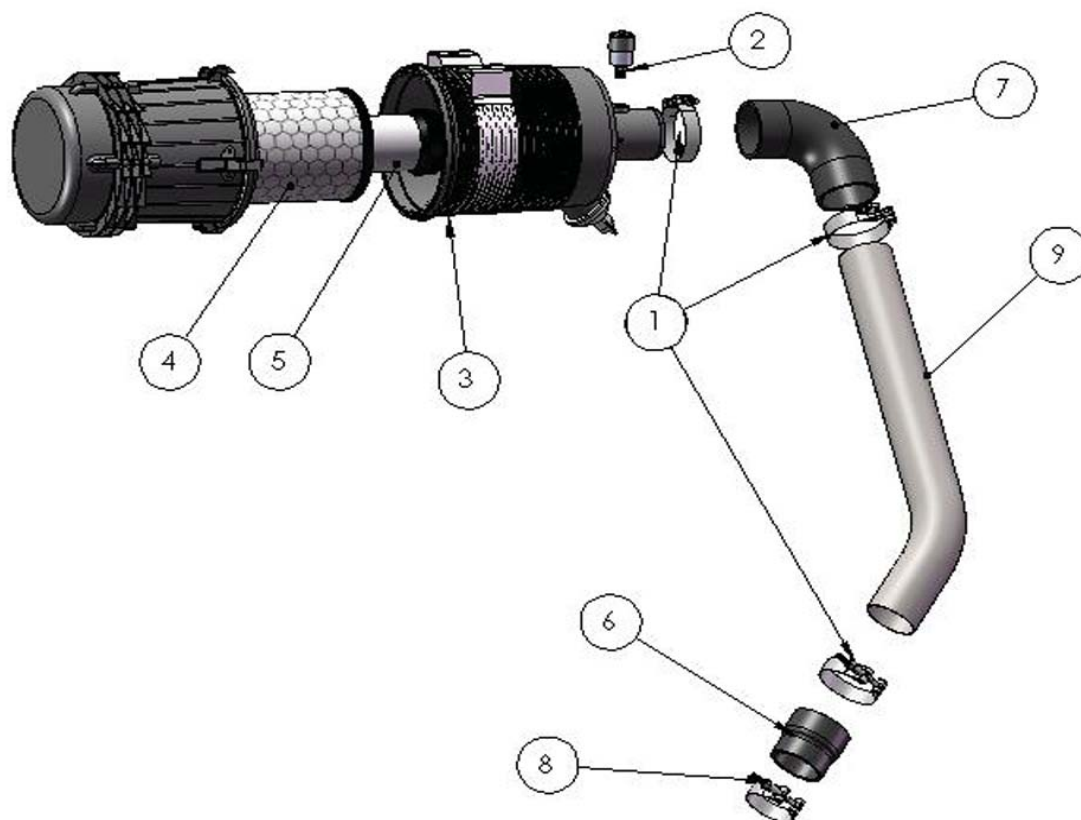
REF NO.	PART NO.	DESCRIPTION	QTY
1	P100605	BOLT: 3/8-16 NC X 1-1/4"	2
2	P851106	WASHER: LOCK 3/8"	2
3	P555120	PUMP: LS GEAR 26307-RAD	1
4 *	P556560	PUMP: TRAN M46 W/NS & FILTER PLATE	1
5	P100605	BOLT: HEX, 3/8"NC X 1 1/4"GR5 ZN	18
6	P851106	WASHER: LOCK 3/8"	18
7	P100807	BOLT: 1/2 NC X 1 3/4"	2
8	P850108	WASHER: LOCK 1/2"	2
10	P3700075	HAYES DRIVE CPLG .	1
11	P155450	NUT: 3/8" TOP LOCK	2
12	003656	TAB, TRANS. CONTROL EXT.	1
13	P100603	BOLT: 3/8-16 NC X 3/4"	2
14	P851106	WASHER: LOCK, 3/8"	2
15	P115852	CABLE: PUSH-PULL 52"	1
16	005262	BRKT, M46 CABLE	1

* 71.P298161 NEUTRAL SAFETY SWITCH M46 (NOT SHOWN)



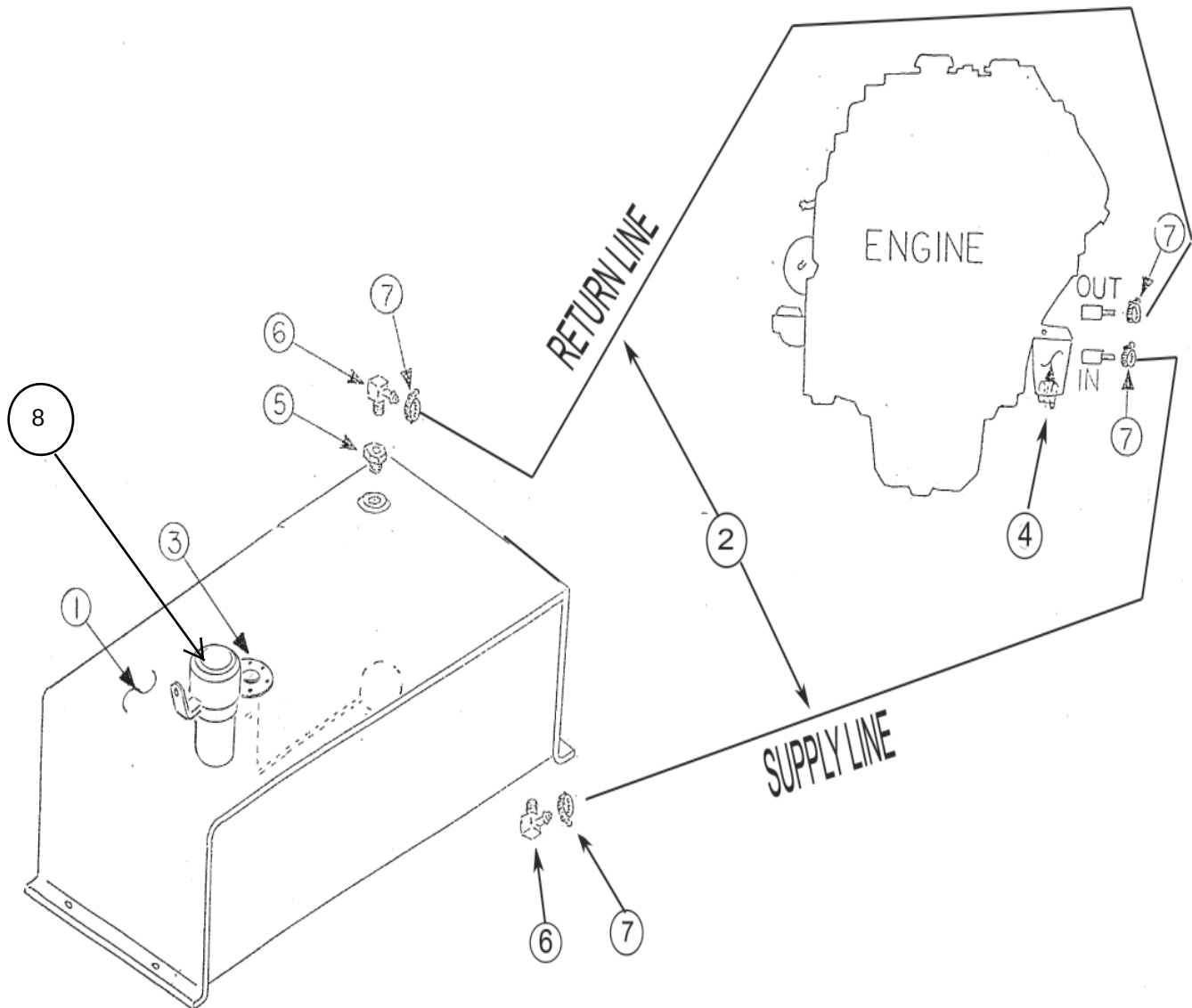
AIR CLEANER

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	P128860	CLAMP: HOSE, 2-1/2" ID T-BOLT	3
2	P297160	GAUGE: IND A/C	1
3	P001650	AIR CLNR: ENG 2.5#7VLR-E2-ST	1
4	P371366	FILTER: AIR ELE PRIME 3-E1 ENG	1
5	P371376	FILTER: AIR ELE SAFETY 3-E2 ENG	1
6	P269205	HOSE: A/C REDUCER 2.5" X 2.25"	1
7	P269006	HOSE: A/C ELBOW 2.5" ID	1
8	P128855	CLAMP: HOSE, 2-1/4" ID T-BOLT	1
9	500053	TUBE, A/C INTAKE PE4024	1



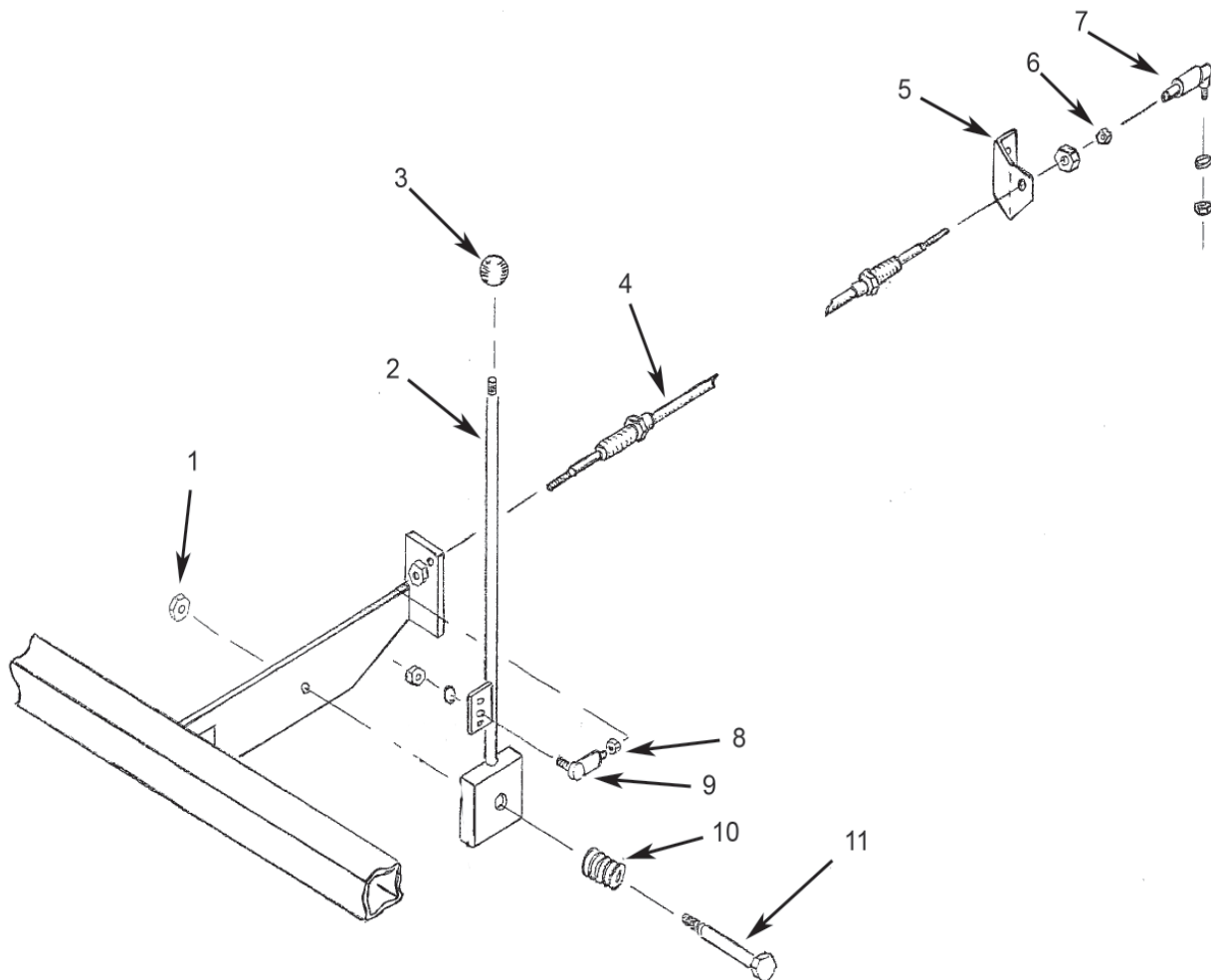
FUEL SYSTEM

REF NO.	PART NO.	DESCRIPTION	QTY
1	500147	TANK , FUEL, ASSY (18 GAL)	1
2	R99000703	HOSE: FUEL LINE, 5/16" ID (SPECIFY LENGTH DESIRED)	2
3*	002096	SENDER ASM, FUEL LEVEL UPDATED P/N: 71.500533	1
4	P371622	FILTER: FUEL/WATER JD HF4024	1
5	P267320	FITTING: 6MP 4FP REDUCER	1
6	P267140	FITTING: 4MP 5FP BRASS	2
7	P128702	ADAPTER CLAMP, HOSE SIZE 02	4
8	71.P610000	FUEL CAP	
*NOT SHOWN	71.P371650	FILTER: FUEL INLINE	



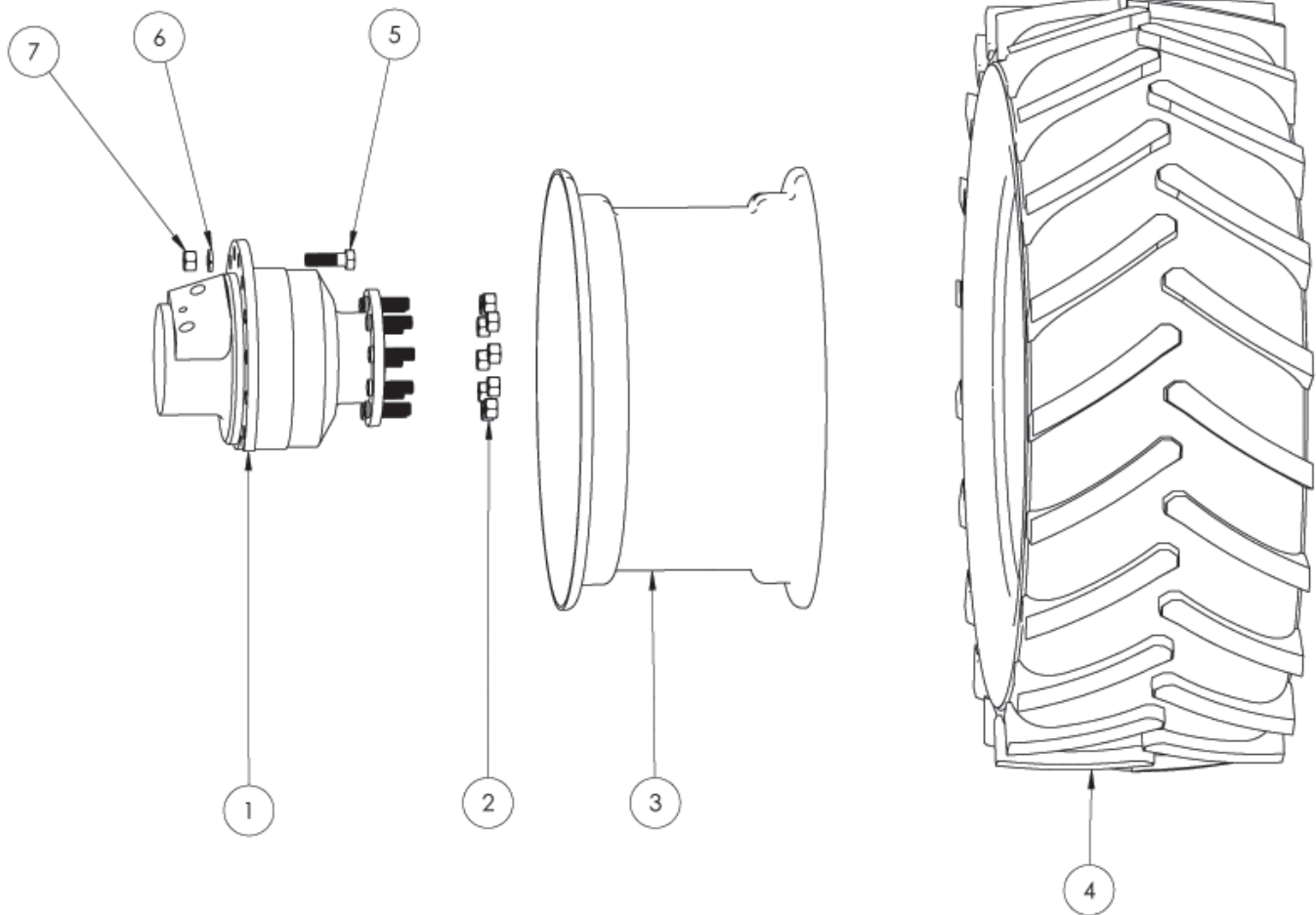
TRANSMISSION LINKAGE

REF NO.	PART NO.	DESCRIPTION	QTY
1	P157500	NUT: 5/8-11 TOP-LOCK	1
2	005263	LEVER, TRANSMISSION	1
3	P308100	KNOB, 1/2 X 13	1
4	P115852	CABLE, PUSH-PULL 52"	1
5	005262	BRKT, M46 CABLE	1
6	P158021	NUT, 10-32	1
7	P126330	BALL JOINT, 10-32F X 5/16M	1
8	P158021	NUT, 10-32	1
9	P126330	BALL JOINT, 10-32F X 5/16M	1
10	002145	SPRING, CONTROL LEVER	1
11	P101015	BOLT: HEX, 5/8-11 NC X 3-3/4 G8	1



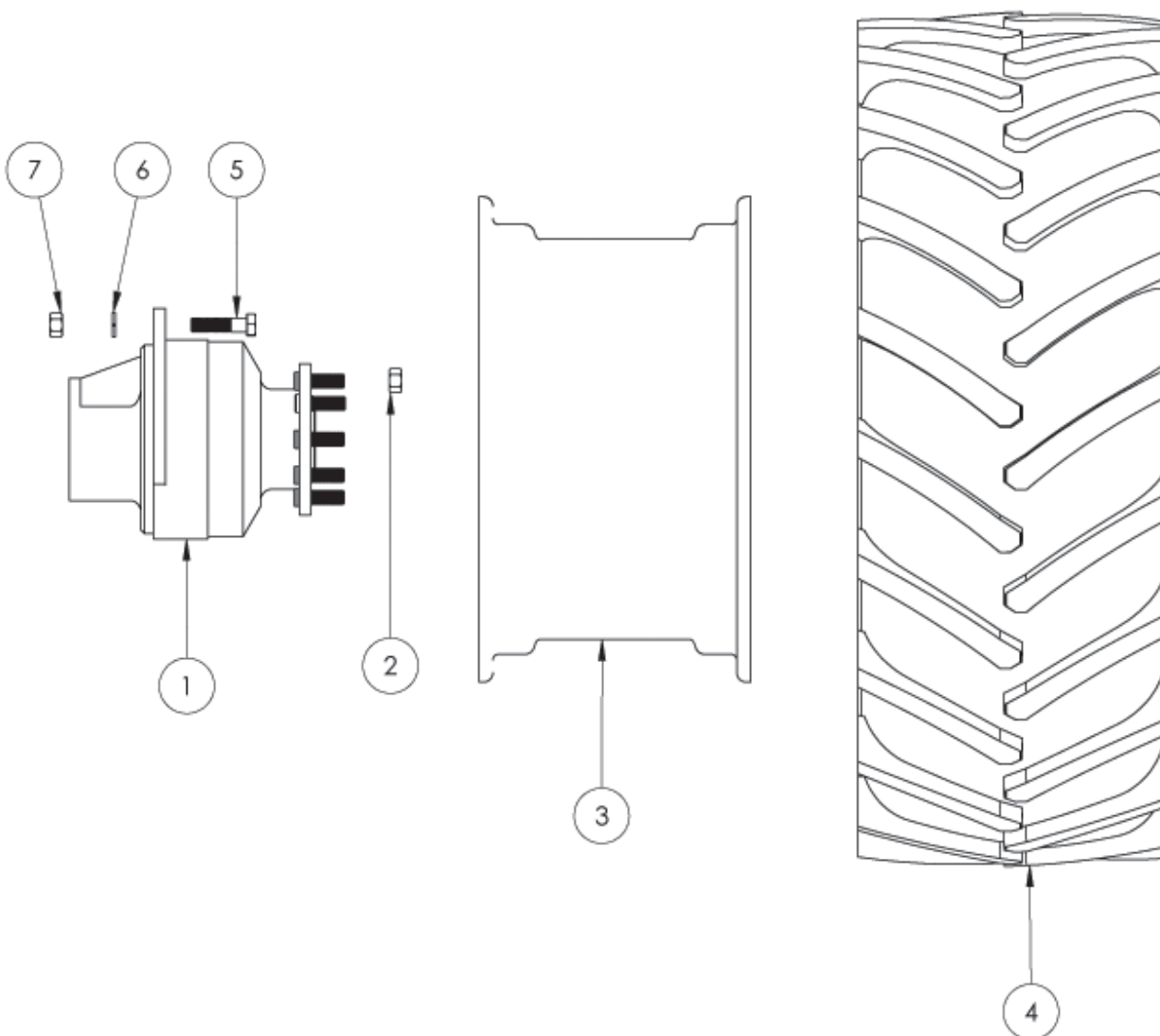
RIGHT WHEEL ASSY

REF NO.	PART NO.	DESCRIPTION	QTY
1	P355410	MOTOR: WHL, POCLAIN MS05-1-13	1
2		WHEEL NUT , M14	10
3	500094	RIM: MS05-20 X W11	1
4	P763800	TIRE: 38 X 14.00	1
	500127	ASSY: WHEEL,MS05 RH (INCLUDES 3 &4)	1
5	P101008	BOLT: HEX, 5/8-11 NC X 2	10
6	P851110	WASHER: LOCK 5/8"	10
7	P157500	NUT: HEX, 5/8"-11 TOP-LOCK	10



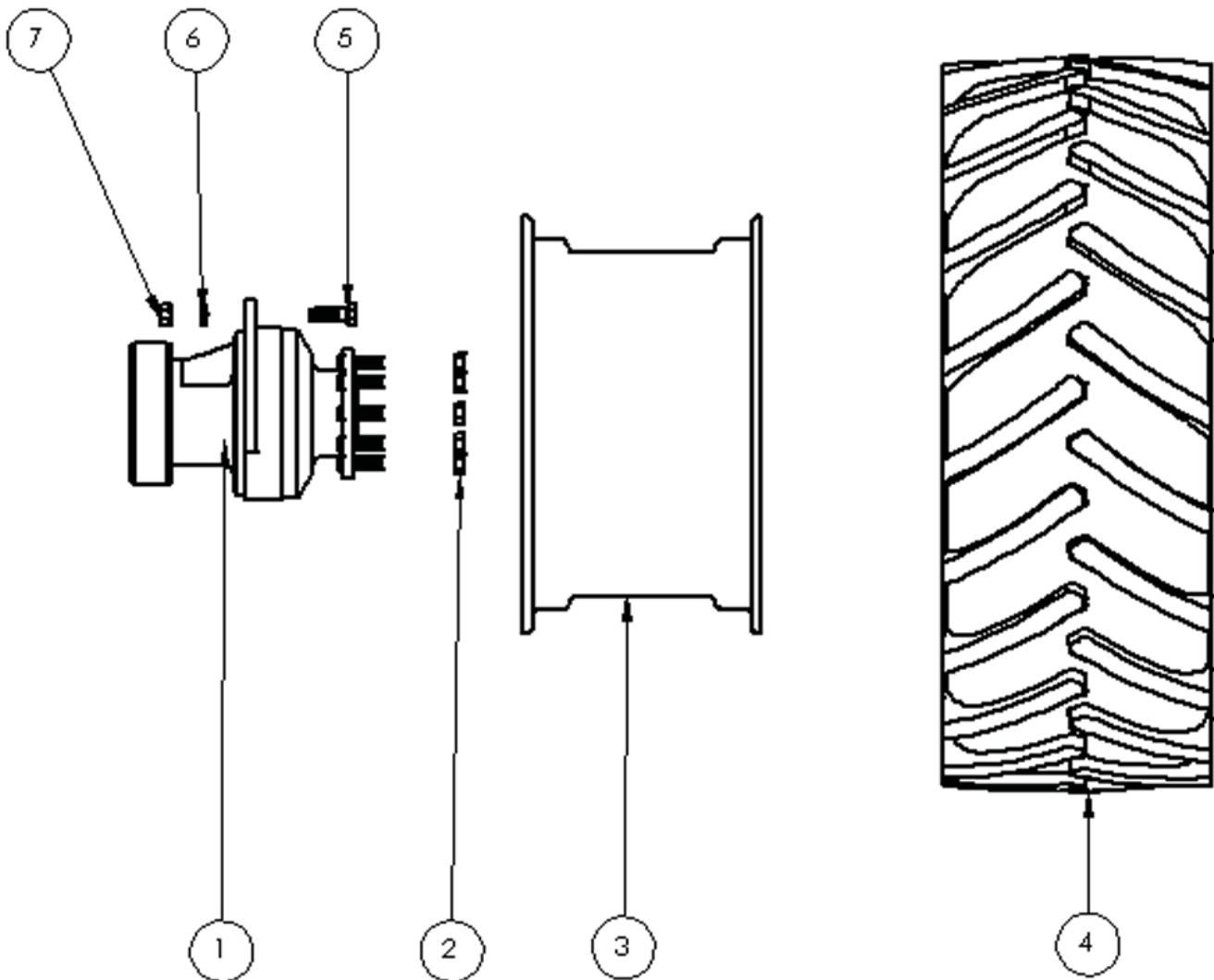
LEFT WHEEL ASSY

REF NO.	PART NO.	DESCRIPTION	QTY
1	P355410	MOTOR: WHL, POCLAIN MS05-1-13	1
2		WHEEL NUT , M14	10
3	500094	RIM: MS05-20 X W11	1
4	P763800	TIRE: 38 X 14.00	1
	500128	ASSY: WHEEL,MS05 LH (INCLUDES 3 & 4)	1
5	P101008	BOLT: HEX, 5/8-11 NC X 2	10
6	P851110	WASHER: LOCK 5/8"	10
7	P157500	NUT: HEX, 5/8"-11 TOP-LOCK	10



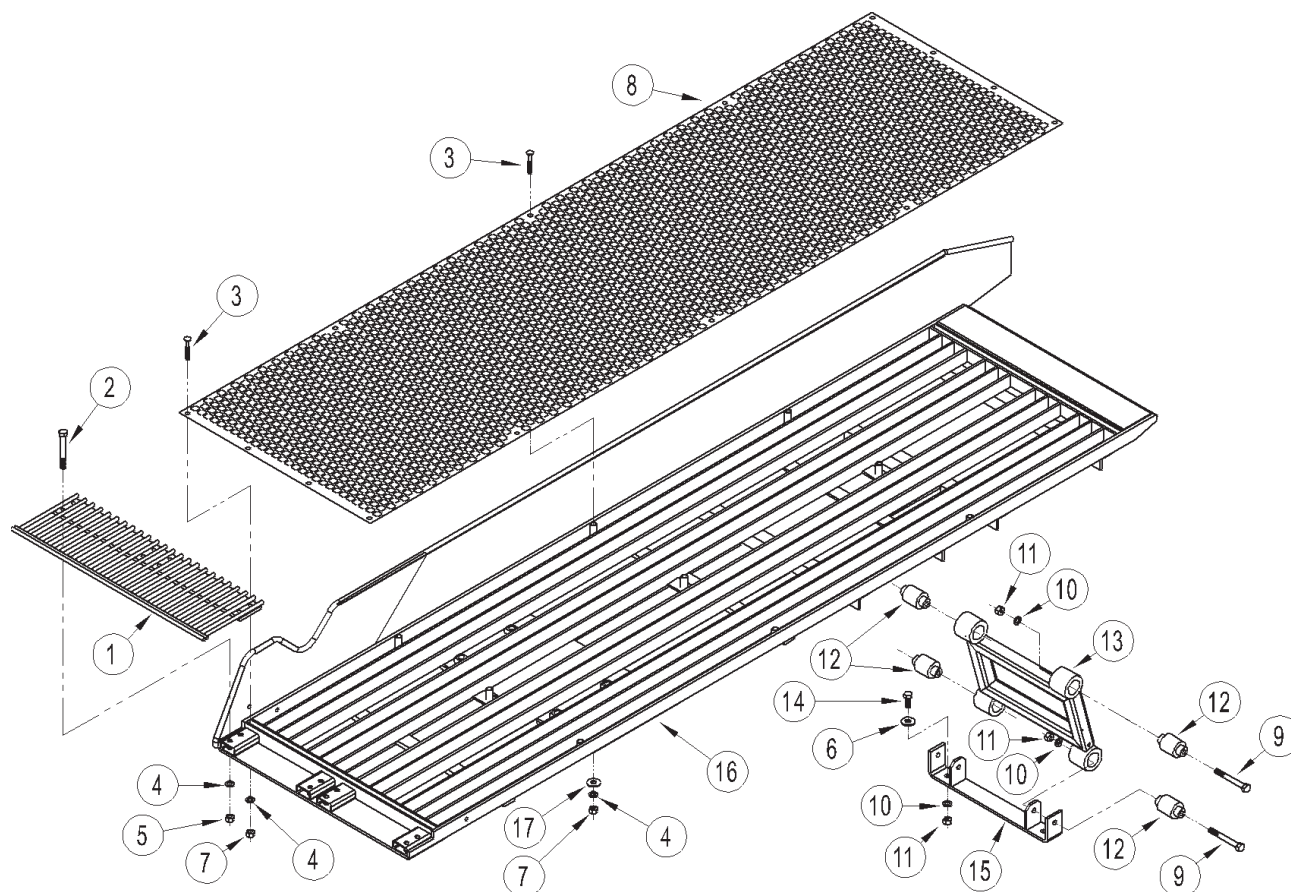
FRONT WHEEL ASSEMBLY

REF NO.	PART NO.	DESCRIPTION	QTY
1	P355415	MOTOR: WHL/BRK, POCLAIN MS05-1-13	1
2		WHEEL NUT, M14	10
3	500094	RIM: MS05-20 X W11	1
4	P763800	TIRE: 38 X 14.00 - 5000	1
	500127	ASSY: WHEEL, MS05 RH (INCLUDES 3 & 4)	
5	P101008	BOLT: HEX, 5/8-11 NC X 2	10
6	P851110	WASHER: LOCK 5/8"	10
7	P157500	NUT: HEX, 5/8"-11 TOP-LOCK	10



SCREEN SYSTEM

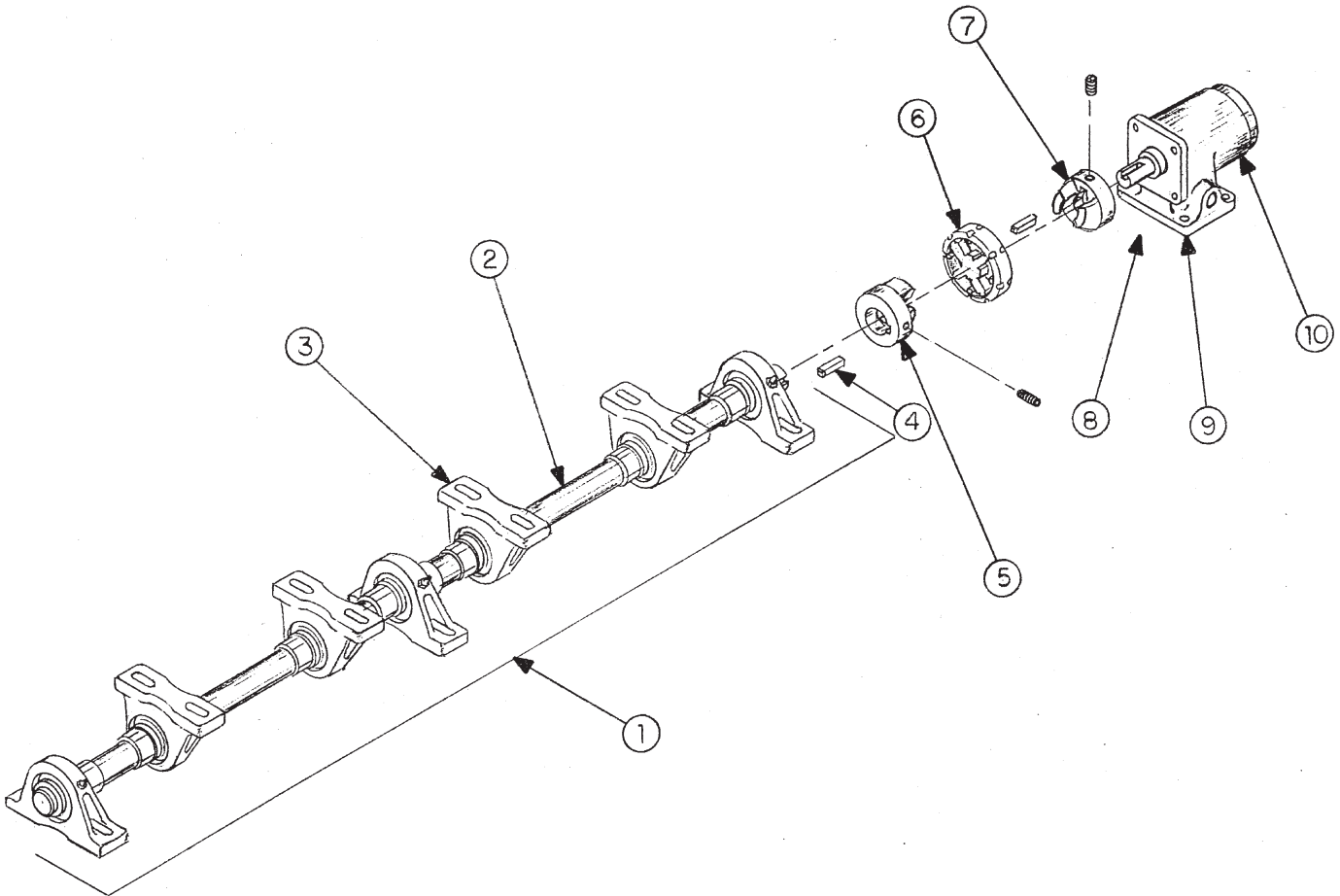
REF NO.	PART NO.	DESCRIPTION	QTY
1*	000304W	DIGGER POINT WELD, STANDARD	2
2	P100609	BOLT: 3/8-16 NC X 2-1/4"	16
3	P114610	PLOW BOLT: 3/8-16 X 2-1/2"	28
4	P851106	WASHER: LOCK 3/8"	44
5	P155450	NUT: 3/8" TOP-LOCK	16
6	P850108	WASHER: FLAT ZINC 1/2"	4
7	P150601	HEX NUT: 3/8" GR.8 PLATED	28
8A	005232	SCREEN WLD, 3/4" WOVEN (STANDARD)	2
8B	005236	SCREENWLD, 1/2" WOVEN (OPTIONAL)	2
9	P100816	BOLT: 1/2-13 NC X 4"	8
10	P851108	WASHER: LOCK 1/2"	12
11	P155850	NUT: 1/2" TOP-LOCK	12
12	P126820	BUSHING: RUBBER	8
13	002051	RISER, REAR SCREEN	2
14	P114806	PLOW BOLT: 1/2" X 1-1/2"	4
15	500163	BRKT: LOWER SCREEN RISER	2
16A	004374	SCREEN FRAME, RIGHT	1
16B	004375	SCREEN FRAME, LEFT	1
17	P850806	WASHER: FLAT SAE GR8 3/8"	20



*OPTIONAL SOLID DIGGER POINT P/N 71.000330W QTY 2 REQD

OSCILLATOR MECHANISM

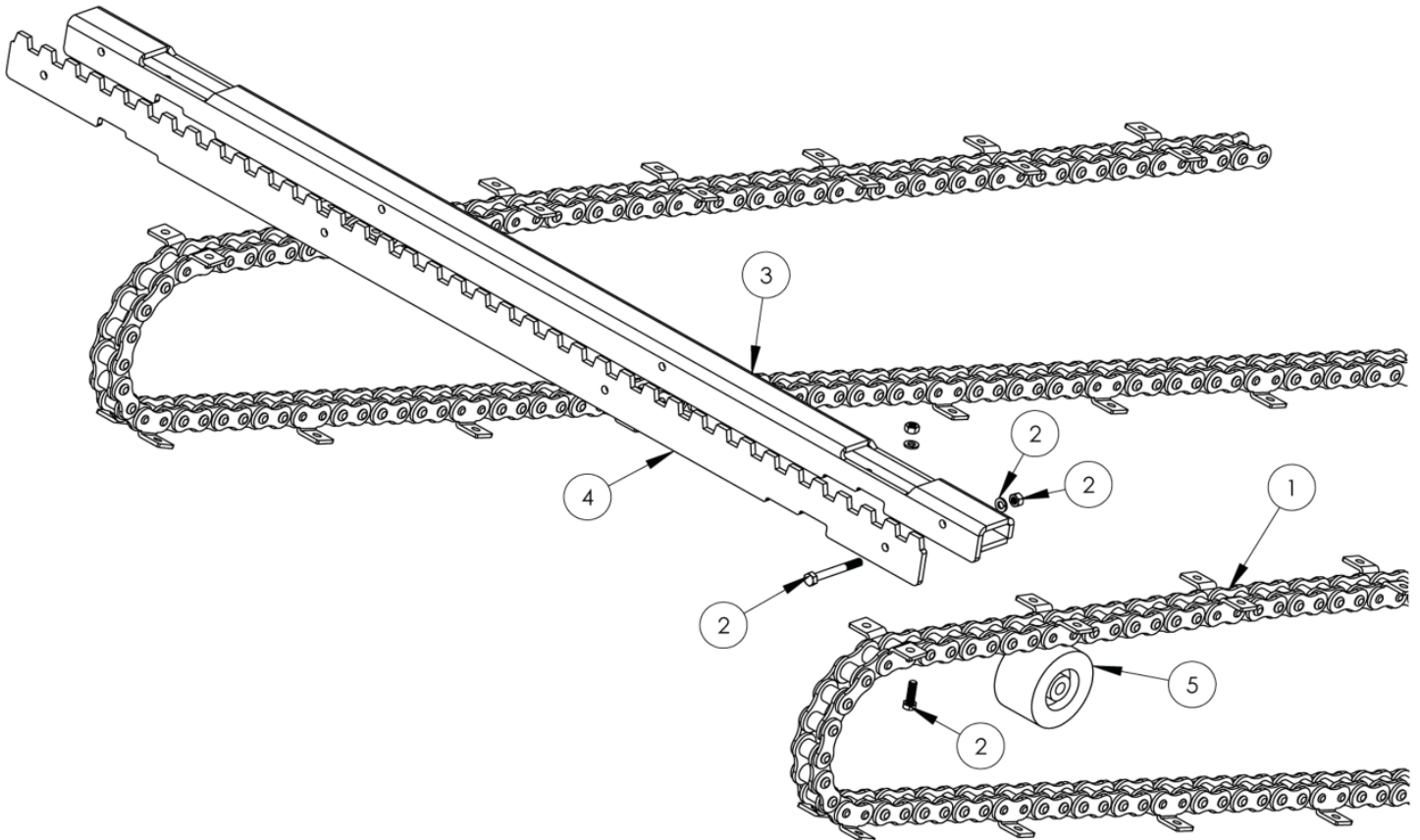
REF NO.	PART NO.	DESCRIPTION	QTY
1	002065A	SHAFT ASSEMBLY, OSCILLATOR (INCLUDES 2&3)	1
2	002065SA	SHAFT ASSY, OSC SUB	1
3	000691M	BEARING, OSC, 2"	7
4	000067M	KEY, OSCILLATOR COUPLING	1
	P272900	COUPLING ASSEMBLY (INCLUDES 5, 6, & 7)	
5	P272960	COUPLING HALF: 1-1/2" BORE FLEX	1
6	P272990	CPLG INSERT: 90 DURO SPIDER	1
7	P272930	COUPLING HALF: 1" BORE FLEX	1
8	003457	MOTOR ASSY, OSC (1017) (INCLUDES 9 & 10)	1
9	P356000	BASE BLOCK: C/L 123-1008	1
10	P351100	MTR: C/L #101-1017	1
		INCLUDES: P307300 KEY: WOODRUFF 1/4 X 1 NO.15	1
		P350900: SEAL KIT FOR MTR: C/L #101-1017	



FLIGHT SYSTEM

<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	P632110	CHAIN: #100 CONV 25 CLT ** SEE NOTE BELOW	2
	<u>Repair Parts for Ref. No. 1</u>		
	P630101	CHAIN LINK: #100 OFFSET	
	P630100	CHAIN LINK: #100 CONNECTOR	
2	500295	KIT: FLIGHT MOUNTING	1
	<u>Kit Parts:</u>		
	P100504	BOLT: 5/16"-18 NC X 1"	100
	P100511	BOLT: 5/16"-18 NC X 2-3/4"	100
	P851105	WASHER: LOCK 5/16"	200
	P155350	NUT: TOP-LOCK 5/16"	200
3	500283	FLIGHT BACK UP MT	25
4	500279	FLIGHT BLADE 5000-100	25
5	P761100	SNUGULATOR: 2500BD1X	6

****REPLACE CHAIN WITH UPDATED P/N 71.P632144**

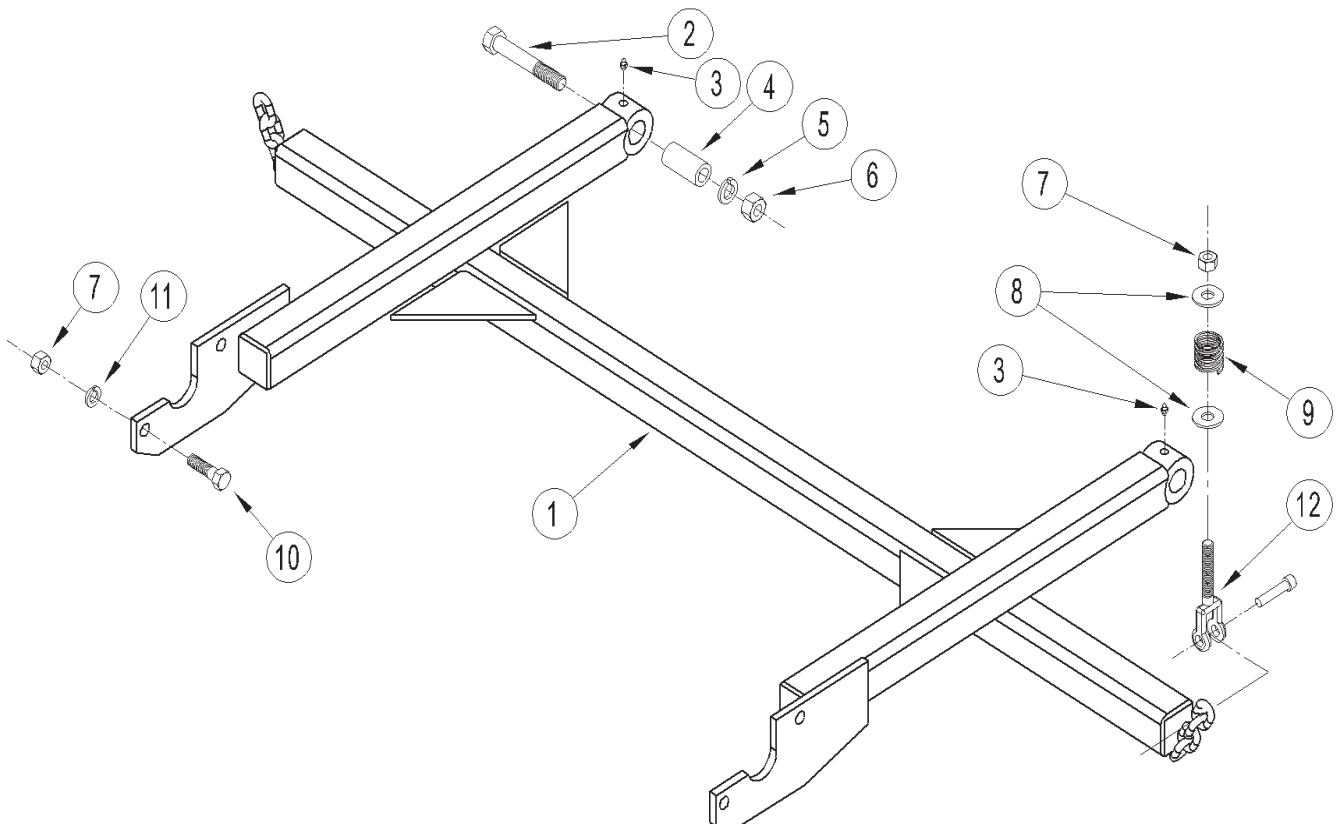


CHAIN REPAIR ITEMS:

- 71.P632143 #100 K1 ATTACHMENT LINK
- 71.P632142 MASTER CONNECTING LINK
- 71.P632141 1/2 LINK (OFFSET)

CONVEYOR SUPPORT ASSEMBLY

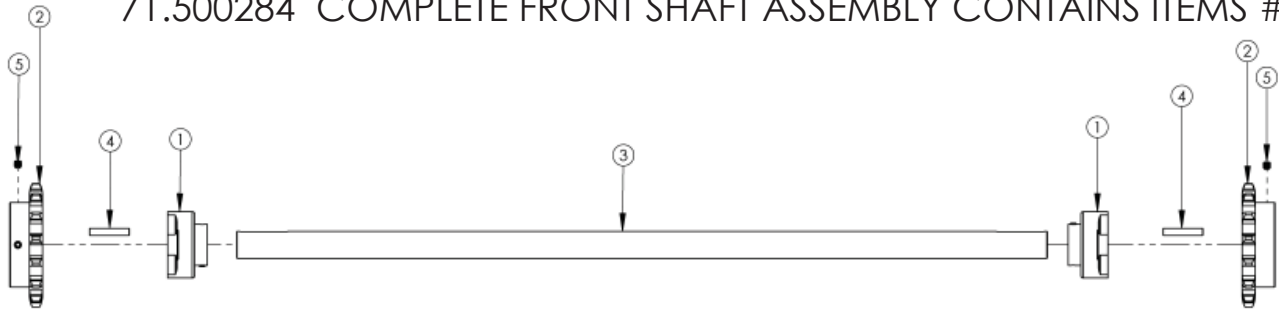
REF NO.	PART NO.	DESCRIPTION	QTY
1	005249	CONVEYOR SUPPORT	1
2	P101016	BOLT: 5/8-11 NC X 4" GRD 8	2
3	P620200	GREASE FITTING: 1/4" STRAIGHT	2
4	000026M	SPACER, STABILIZER (2-1/16")	2
5	P851110	WASHER: LOCK 5/8"	2
6	P157500	NUT: 5/8-11 TOP-LOCK	2
7	P155850	NUT: 1/2" TOP-LOCK	6
8	P850108	WASHER: FLAT ZINC 1/2"	4
9	002122	SPRING, FRONT CONVEYOR SUPPORT	2
10	P100807	HEX BOLT: 1/2" X 1-3/4"	4
11	P851108	WASHER: LOCK 1/2"	4
12	P135165	JAW END: 1/2"-13 X 6"	2



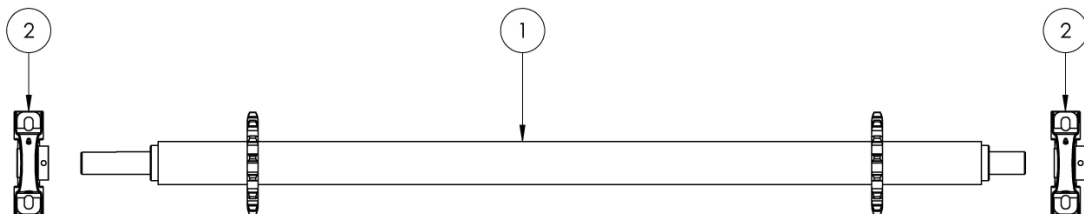
CONVEYOR SHAFT ASSEMBLY: FRONT & REAR

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	2	P015110	BEARING: 1-7/16 2 BOLT FLANGE
2	2	P691015	SPROCKET: H100B15 X 1.438" B KW/2S
3	1	500285	SHAFT: CONV FRONT
4	2	000534M	KEY: 3/8 X 2-1/8
5	4	P108606	SET SCREW, 3/8-16 X 3/8

71.500284 COMPLETE FRONT SHAFT ASSEMBLY CONTAINS ITEMS #1-#5

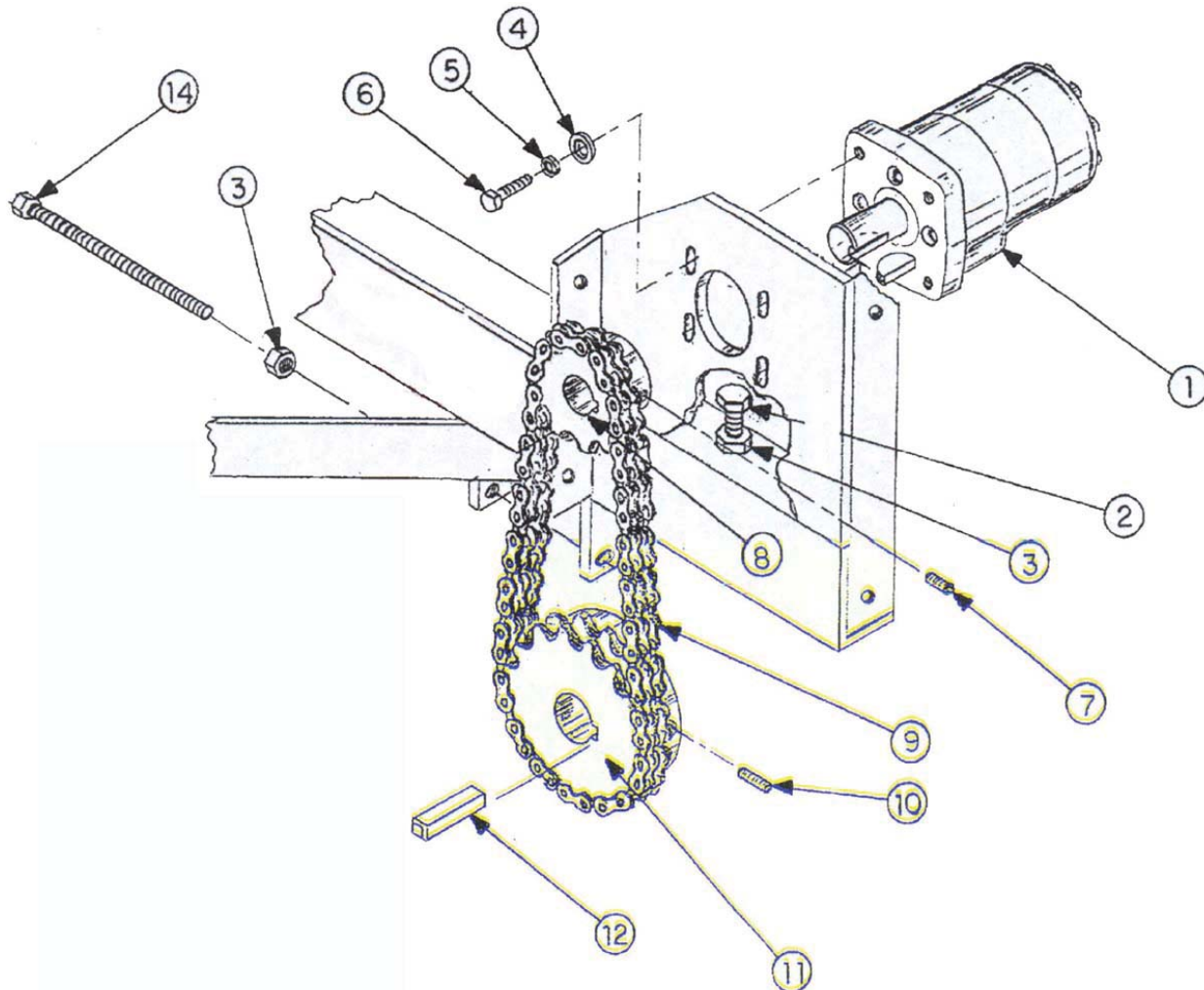


REF NO.	PART NO.	DESCRIPTION	QTY
1	500280	WLD: SHAFT REAR CONV 5000-100	1
2	500169	BEARING: 1-7/16" PB SPOT FACED	2



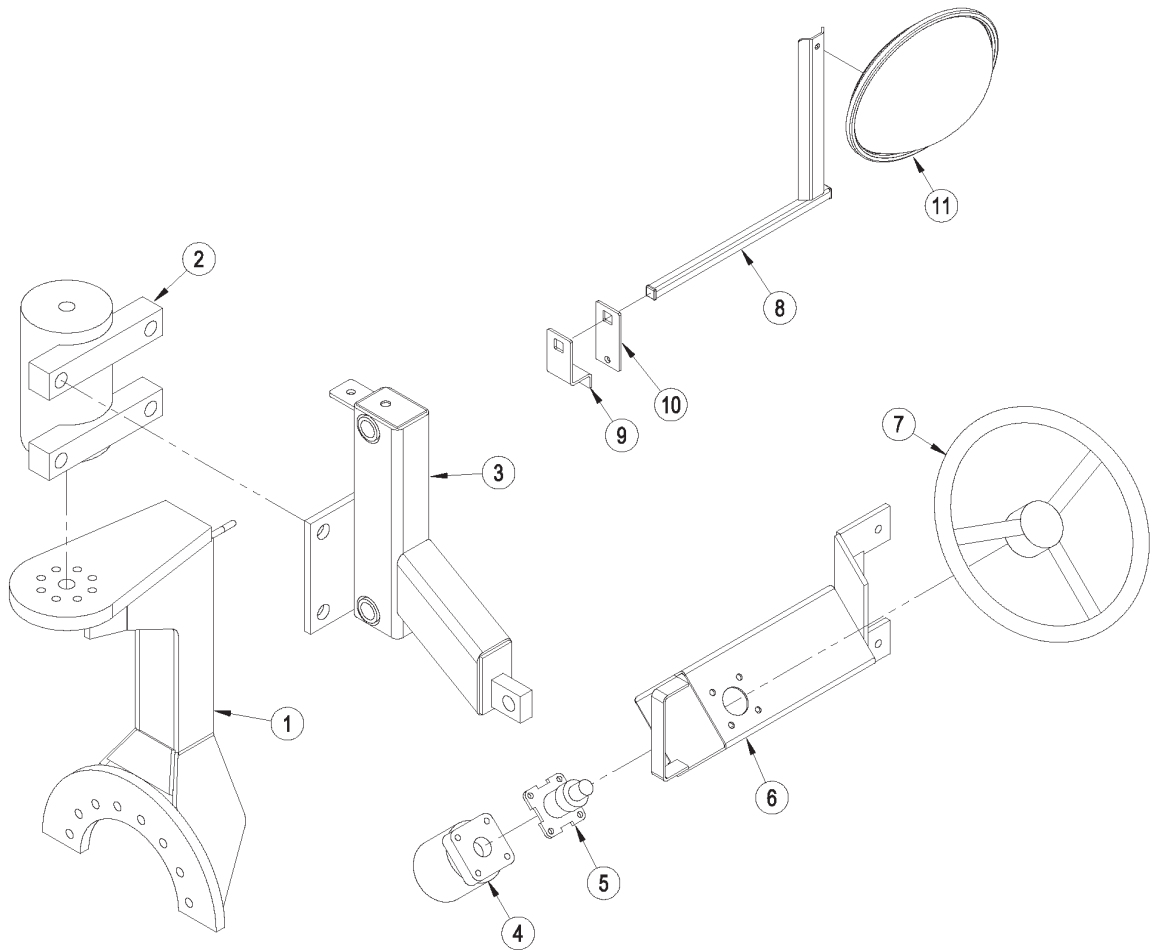
CONVEYOR DRIVE MECHANISM

REF NO.	PART NO.	DESCRIPTION	QTY
1	P352450	MOTOR: C/L 158-1571 8.0 CID "T" SERIES	1
P307300	KEY: WOODRUFF 1/4" X 1 NO. 15		1
2	P100808	HEX BOLT: 1/2" X 2"	1
3	P150800	HEX NUT 1/2" PLATED	3
4	P850106	WASHER: FLAT ZINC 3/8"	4
5	P851106	WASHER: LOCK 3/8"	4
6	P100604	BOLT: 3/8-16 NC X 1"	4
7	P108606	SET SCREW: 3/8" NC X 3/8"	1
8	P652101	SPROCKET: D50B13HT 1" BORE	1
9	002175	CHAIN, #50 DOUBLE (INCLUDES:)	1
	P630203	CONNECTING LINK : #50-2	1
10	P108612	SET SCREW: 3/8-16 NC X 3/4"	1
11	P652230	SPROCKET: D50B23HT 1-7/16" BORE	1
12	000534M	KEY, CONVEYOR SPROCKET – DRIVEN	1
14	000374W	BOLT, REAR SHAFT ADJUSTMENT	2



POWER STEERING COMPONENTS

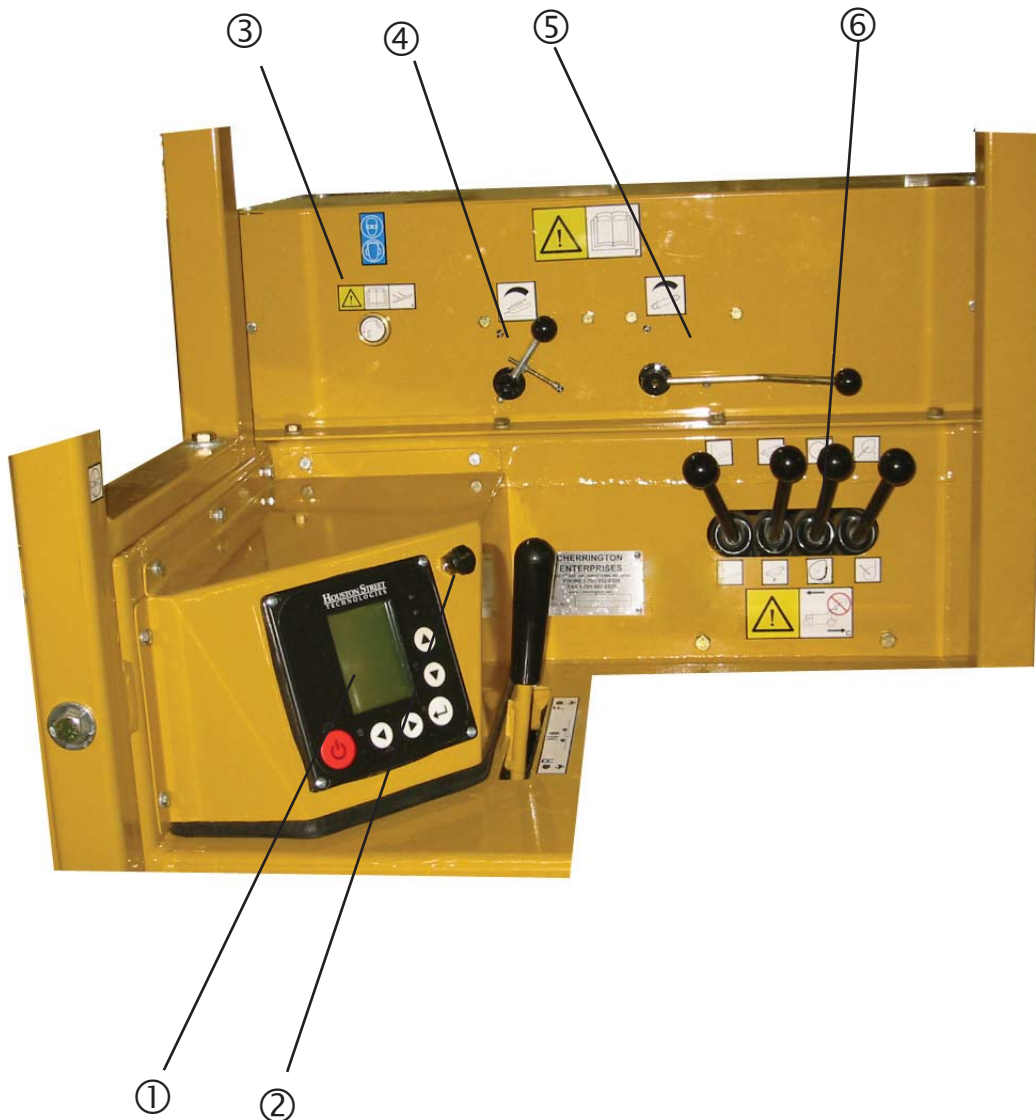
REF NO.	PART NO.	DESCRIPTION	QTY
1	500074	FORK: MS05/HELAC	1
2	P352530	ACTUATOR: HELAC STEERING L30-25	1
3	500070	BRKT: HELAC MOUNT	1
4	P352205	MOTOR: PS, C/L 213-4046-002	1
5	P768510	STEERING COLUMN: C/L 204-1002	1
6	005346	STEERING BOX	1
	005349	STEERING BOX COVER	1
7	P768500	STEERING WHEEL	1
8	500037	MIRROR MOUNT ASSEMBLY	1
9	500038	CLAMP: MIRROR OFFSET	1
10	500039	CLAMP: MIRROR FLAT	1
11	P313000	MIRROR: SOLAR ECLIPSE LITE TINT UNHEATED	1



CONTROLS AND GAUGES

REF NO.	PART NO.	DESCRIPTION	QTY
1	P296820 *	CONTROLLER, HST - H30, V1	1
2	P295001	SWITCH: LIGHT	1
3	P294300	VALVE: NEEDLE NVG	1
4	P294200	VALVE: PRI HC-V-BE-08	1
5	P294200	VALVE: PRI HC-V-BE-08	1
6	005149	VALVE BANK ASM, HUSCO	1

*NOTE: P296820 H30 DISPLAY IS UNAVAILABLE WILL REQUIRE CONTROL SYSTEM UPDATE - P/N: 71.P296825
SEE ADDITIONAL PAGE FOR CONVERSION ITEMS



71.P296825

COMPLETE CONTROL PACKAGE KIT 5000: DANFOSS

REPLACES H30 CONTROL SYSTEM
P/N 71.P296820 – UNAVAILABLE



ORDER LIST FOR CONVERSION:

QTY 1 71.P296825 CONTROL PACKAGE
QTY 1 71.500313 CONTROL PANEL MOUNT DANFOSS
QTY 1 71.P298140 KEY SWITCH
QTY 2 71.P100410 HEX BOLT: 1/4-20 UNC X 2-1/2"
QTY 2 71.P155250 TOP LOCK NUT: 1/4-20 UNC
QTY 2 71.P850104 FLAT WASHER: 1/4"
QTY 2 71.P851104 LOCK WASHER: 1/4"

REQUIRED ITEMS TO COMPLETE INSTALLATION NOT INCLUDED IN 71.P296825

71.500313 CONTROL PANEL MOUNT DANFOSS



71.P298140 KEY SWITCH

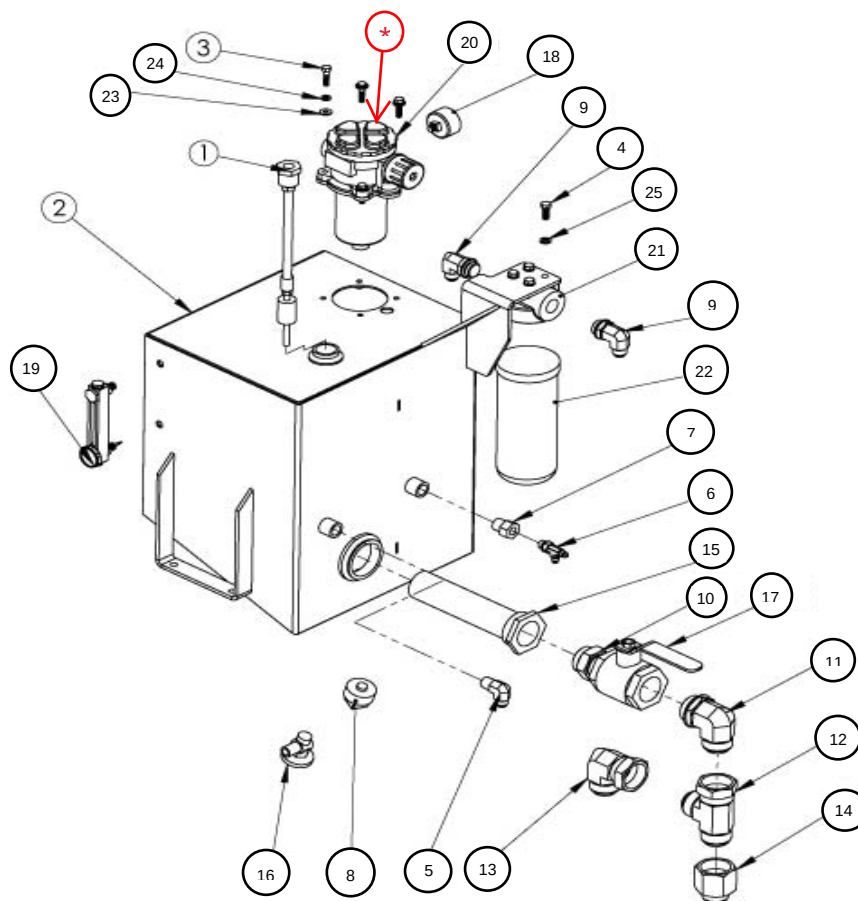


71.P296825 CONTROL PACKAGE CONTAINS:

- 1) 71.P296826 PROGRAMMED DANFOSS DP250 DISPLAY
- 2) 71.P296829 PROGRAMMED DANFOSS MC24 CONTROLLER
- 3) 71.P296827 ADAPTER WIRING HARNESS



OIL TANK ASSEMBLY

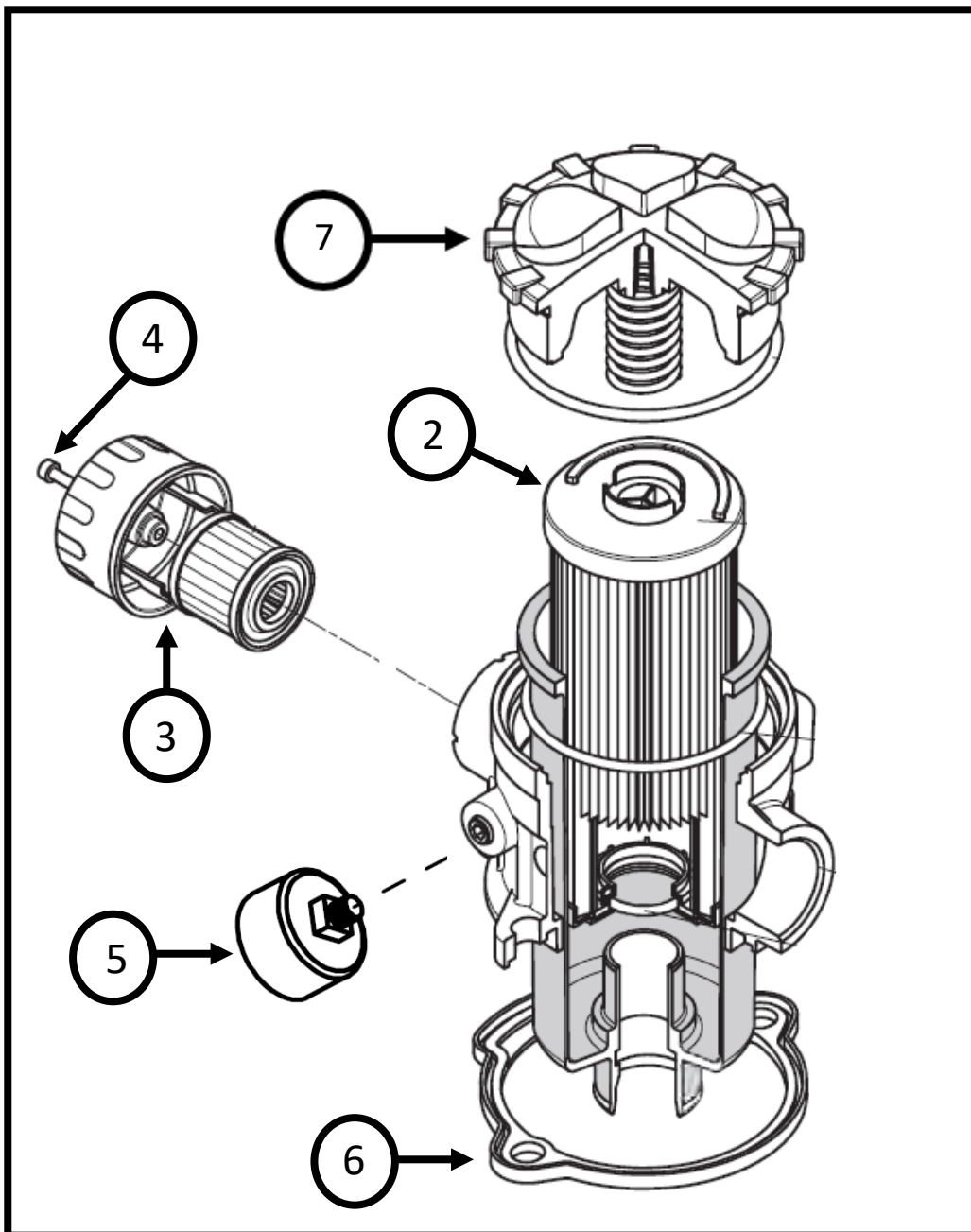


ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	500286	ASSY: SENDER, HYD LEV/TEMP
2	1	500101	TANK, HYD RESERVOIR 5000
3	4	P100505	5/16-18 X 1-1/4" HEX BOLT
4	4	P100604	BOLT: HEX, 3/8" NC X 1" GR5
5	1	P126050	FITTING; 8MJ - 8 MP 90 ELBOW
6	1	P265425	FITTING: 6MB 4MJ 4MJ TEE
7	1	P267568	FITTING: 6MB 8MP ADAPTER
8	1	P270360	PLUG: MAGNETIC 1.5 MPT
9	2	P276505	FITTING: 10MJ 12MB 90 ELBOW
10	1	P277195	FITTING; 24MB 24MB ADAPTER
11	1	P278100	FITTING; 24MJ 24MB 90 ELBOW
12	1	P278110	FITTING; 24MJ 24FJX 24 MJ DROP TEE
13	1	P278112	FITTING, 24 MJ - 24 FJX 90
14	1	P278130	FITTING; 16MJ 24FJX SWIVEL REDUCER
15	1	P278250	STRAINER, HYD 30 GPM
16	1	P294010	VALVE: DRAIN TANK
17	1	P294610	BALL VALVE, -24
18	1	P297170	GAUGE, IND LP C1-20
19	1	P297220	GAUGE: OIL SIGHT
20	1	P371840	FILTER: MPT1042CAG8A10HBT HOUSING ASSY
21	1	P371930	FILTER HEAD, CHARGE PUMP
22	1	P371935	FILTER, CHARGE PUMP CARTRIDGE
23	4	P850104	1/4" FLAT WASHER
24	4	P851105	WASHER: LOCK 5/16"
25	4	P851106	3/8" LOCK WASHER

***NOT SHOWN 71.P371841 REPLACEMENT HYDRAULIC FILTER ONLY**

HYDRAULIC FILTER HOUSING

- 1) 71.P371840 Complete filter housing: includes base gasket and 10-micron filter element
- 2) 71.P371841 Filter element 10-micron
- 3) 71.P371842 Breather filter element / housing
- 4) 71.P110160 Mounting screw M4 - .7 X 25 mm socket head cap screw
- 5) 71.P297170 Filter indicator gauge
- 6) 71.P371839 Base gasket
- 7) 71.P371844 Cover with spring



HOPPER AND ROLLOVER COMPONENTS

REF NO.	PART NO.	DESCRIPTION	QTY
1	005278	HOPPER WELDMENT, HD	1
2	500151	BOOM WELDMENT CLEVIS TYPE	1
3	000124W	HOOD WELDMENT	1
4	005283	ROLLOVER CHAIN GUARD	1
5	005271	WLD: SPUD PLATE, LEFT (NOT SHOWN)	1
6	005272	WLD: SPUD PLATE, RIGHT	1
7	003032	CRANK, HOPPER	1
8	000267W	SPROCKET, HOPPER-DRIVEN 16T	1
9	005095	CHAIN, HOPPER ROLLOVER (INCLUDES ITEM 10)	2
10	000284P	CHAIN LINK, #80 CONNECTOR	4
11	P259330	CYLINDER, 2B X 8S W/CAV	1
	P294250	VALVE, PILOT CHECK CARTRIDGE	
	P259306	SEAL KIT, RKT2-0096	
12	000243W	BOOM SWIVEL WELDMENT, LH	1
13	000292M	BOOM SWIVEL, RH	1
14	000358M	STOP, RUBBER	2
15	000268A	TURN BUCKLE ASSEMBLY	2
16	00274M	COLLAR, RETAINING, HOPPER CRANK	1
17	P104806	CARRIAGE BOLT, 1/2-13 X 1-1/2"	12
18	P122608	3/8" X 2" ROLL PIN	1
19	P852020	WASHER, FENDER 1/2"	2
20	000550W	PIN, ROLLOVER CYLINDER	1
21	480087	PIN: 1 X 3 CYLINDER	2
22	P120850	PIN, CLEVIS 1"	1
23	P118010	CLIP, CLEVIS PIN	2
24	P620200	GREASE FITTING: 1/4" STRAIGHT	4
25	000069M	KEY, HOPPER SPROCKET	1
26	P108604	SET SCREW, 3/8-16 NC X 1/4"	1
27	P850104	WASHER, FLAT, 1/4"	20
28	P851104	WASHER, LOCK, 1/4"	20
29	P851106	WASHER, LOCK, 3/8"	2
30	P851108	WASHER, LOCK, 1/2"	14
31	P100606	BOLT, HEX, 3/8-16 NC X 1 1/2"	2
32	P155450	NUT, TOP LOCK, 3/8"	2
33	P155850	NUT, TOP LOCK, 1/2"	14
34	P155450	NUT, TOP LOCK, 3/8"	2
35	P100403	BOLT, HEX, 1/4-20 NC X 3/4"	20
36	P100812	BOLT HEX 1/2-13 NC X 3"	2
37	P100805	BOLT, HEX, 1/2-13 X 1-1/4"	2

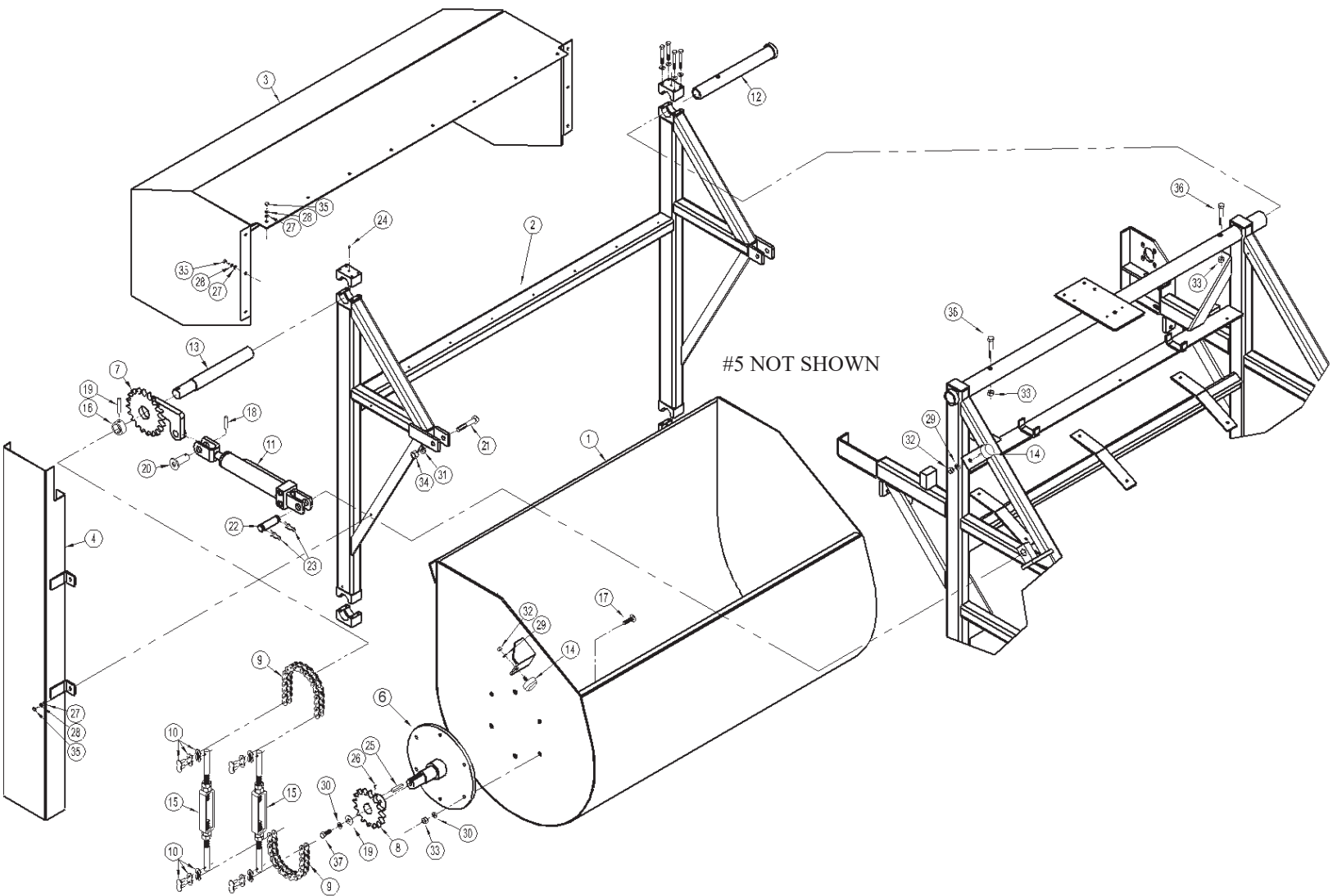
***NOT SHOWN:**

71.P259335 CYLINDER: BOOM LIFT / LOWER 1" PIN BOSS

71.P259316 SEAL KIT

71.P294250 VALVE: LOAD CHECK

HOPPER AND ROLLOVER COMPONENTS



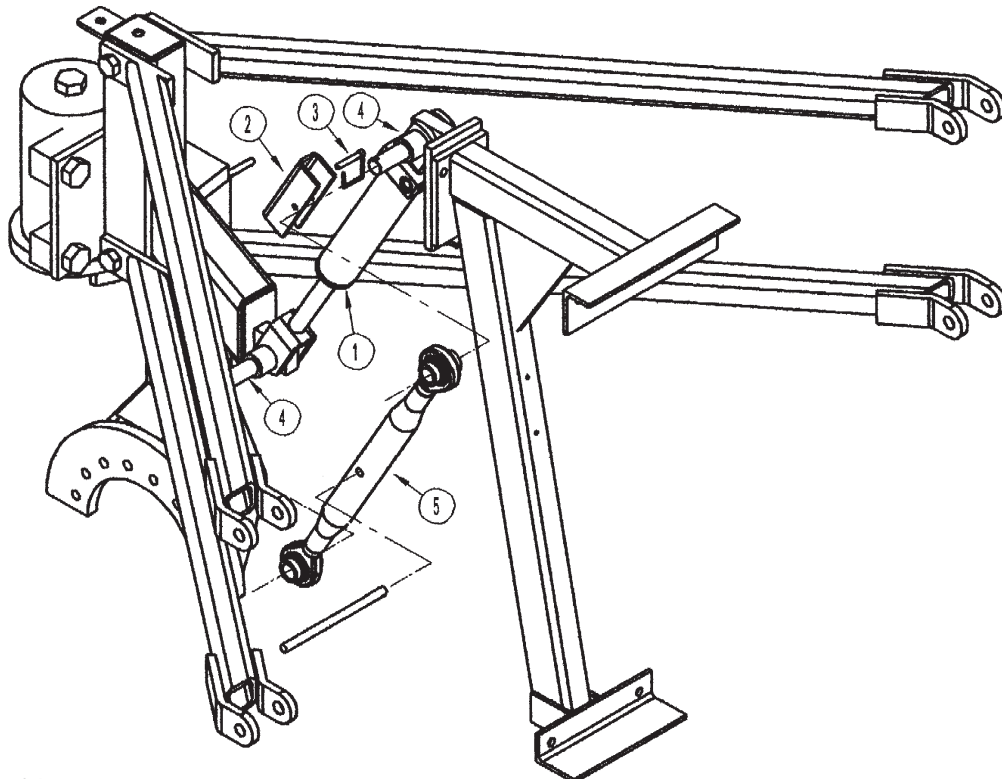
EMERGENCY TOW JACK

INSTRUCTIONS: IN CASE OF POWER OR DIGGER CYLINDER FAILURE, USE THE SCREW JACK (LOCATED IN TUBE BELOW OPERATORS PLATFORM) TO RAISE DIGGER POINTS TO ALLOW FOR TOWING.

FOLLOW THESE STEPS:

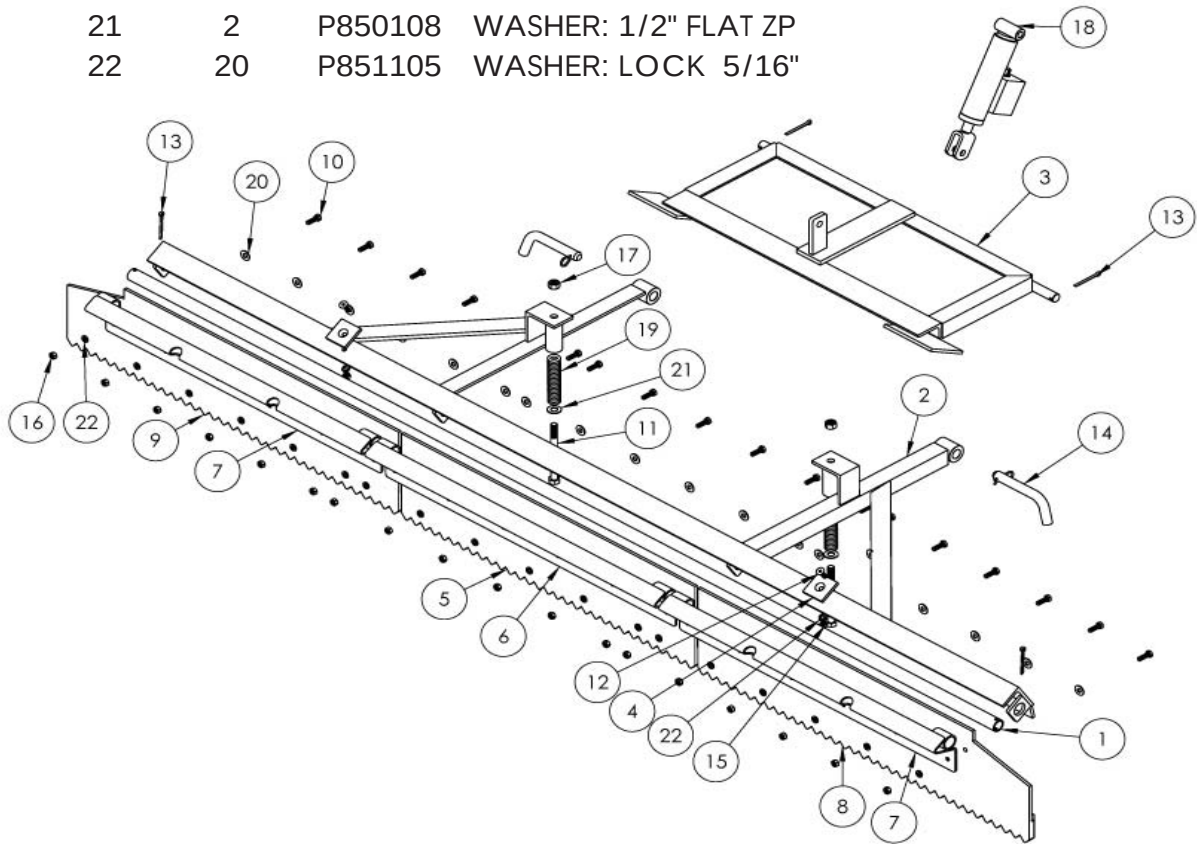
1. REMOVE SCREW HOLDING END CAP ONTO TUBE. AFTER REMOVING CAP, REMOVE THE SCREW JACK AND JACK HANDLE FROM INSIDE THE TUBE.
2. ATTACH SCREW JACK ONTO PINS ATTACHING DIGGER CYLINDER TO MACHINE.
3. USE THE SUPPLIED JACK HANDLE TO TURN JACK, WHILE PERIODICALLY RELEASING LINE PRESSURE BY OPERATING 'DIGGER' VALVE HANDLE.
4. FOR ADDED SAFETY, INSTALL SAFETY STOP AND STROKE CONTROL SET ON THE DIGGER CYLINDER.

REF NO.	PART NO.	DESCRIPTION	QTY
1	P259305	CYLINDER, 2B X 10S w/CAV	1
2	003076	STOP, DIGGER CYLINDER, SAFETY	1
3	P123005	LOCK PIN: 5/16"	1
4	005248	PIN: CYL/JACK	2
5	P301400	JACK: SCREW TL174	1



GROOMER ASSY

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	004229	PIPE, SPRING MT, BC
2	1	004862	GROOMER BAR 5000
3	1	004864	BRACKET, LIFT, 5000 GROOMER
4	2	004883	WEAR PAD, 5000 GROOMER
5	1	005337	GROOMER COMB CENTER
6	1	005339	GROOMER COMB BRKT, CENTER
7	2	005340	GROOMER COMB BRACKET, OUTSIDE
8	1	500131	GROOMER COMB RIGHT
9	1	500132	GROOMER COMB LEFT
10	18	P100504	BOLT: HEX, 5/16" NC X 1" GR5
11	2	P100822	1/2-13 X 5-1/2 HEX BOLT
12	2	P103504	SCK HD CAP SC FLAT: 5/16" x 1
13	4	P116308	3/16" X 2" COTTER PIN
14	2	P121200	BENT HITCH PIN 3/4" X 3-1/2"
15	2	P150500	HEX NUT: 5/16" PLATED
16	18	P155350	NUT: HEX, 5/16 TOP-LOCK
17	2	P155850	NUT: HEX, 1/2" TOP-LOCK
18	1	P259160	CYLINDER: 1-1/2B X 4S W/CAV CH
19	2	P605700	SPRING, DIE 5"
20	18	P850105	WASHER: FLAT 5/16" ZP
21	2	P850108	WASHER: 1/2" FLAT ZP
22	20	P851105	WASHER: LOCK 5/16"

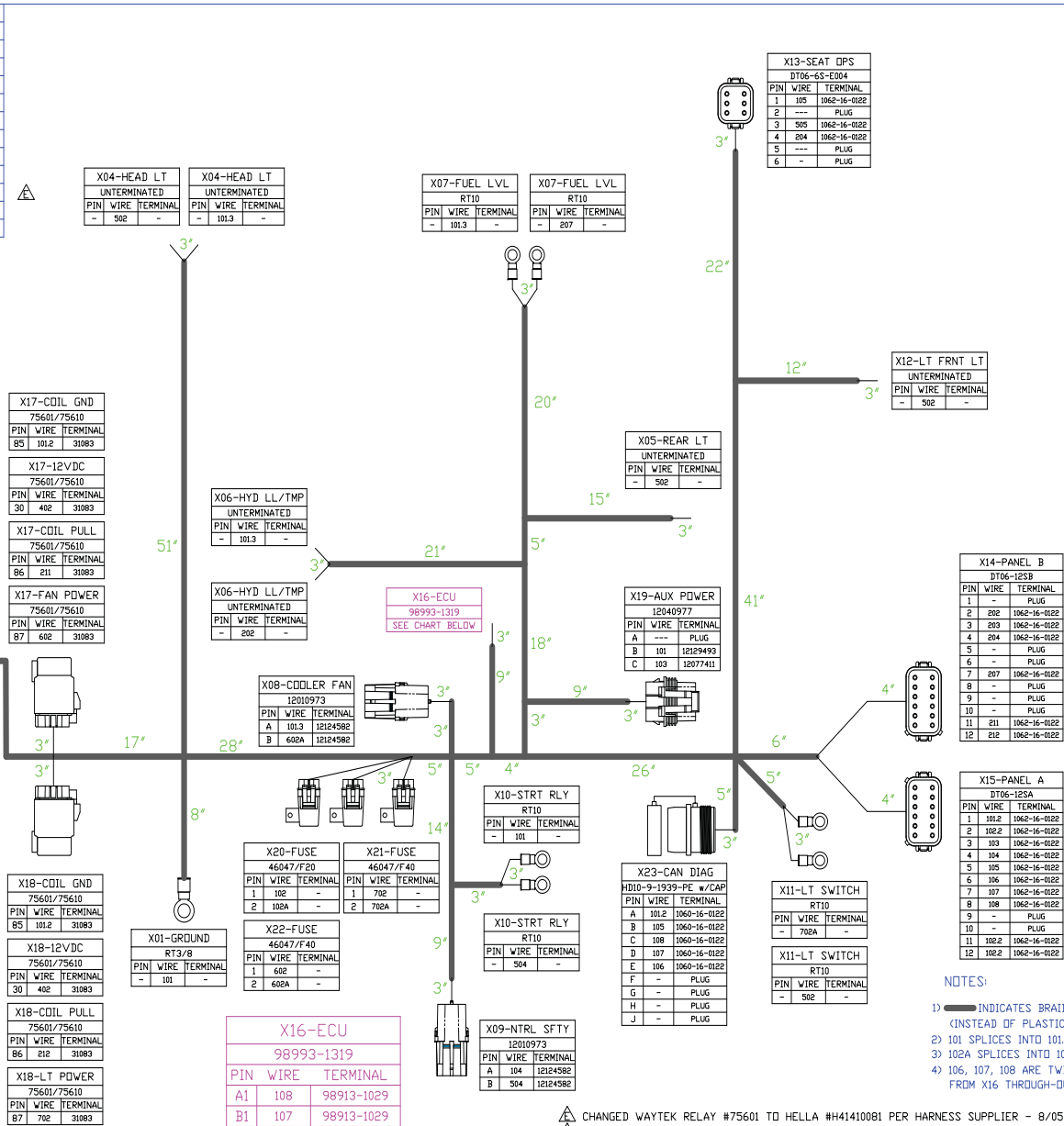


71.500089 COMPLETE GROOMER ASSEMBLY
CONTAINS ITEM# 1, 2, 4-12, 15, 16, 19-22 FULLY ASSEMBLED

WIRING DIAGRAM

PART #	DESCRIPTION	QTY
DT06-12SA	DEUTSCH CONNECTOR, 12 PIN, 'A'	1
DT06-12SB	DEUTSCH CONNECTOR, 12 PIN, 'B'	1
RT3/8	RING TERMINAL, 3/8", 12-10GA	2
12010973	DELPHI WEATHER PACK CONNECTOR, w/SEALS	2
98993-1319	MOLEX CONNECTOR, LH CAM LOCK, BROWN	1
RT10	RING TERMINAL, #10, 16-14GA	6
DT06-6S-E004	DEUTSCH CONNECTOR, DT06 SERIES	1
HD10-9-1939-PE	DEUTSCH CONNECTOR, HD10 SERIES w/CAP	1
46047/F20	PACKARD FUSE HOLDER, w/20A FUSE (WAYTEK #)	1
H41410081	SEALED HELLA RELAY, 40A	2
12040977	METRIPACK 280 SERIES CONNECTOR, w/SEALS	1
46047/F40	PACKARD FUSE HOLDER, w/40A FUSE (WAYTEK #)	2

CIRC. #	GA	COLOR	DESCRIPTION
101	16	BLACK	MAIN GROUND
101.1	16	BLACK	ECU GROUND
101.2	16	BLACK	H30/CAN DIAGNOSTICS GROUND
101.3	14	BLACK	LIGHTS/FAN GROUND
102	12	RED	MAIN POWER SUPPLY
102A	12	RED	FUSED MAIN POWER SUPPLY, 20A
102.1	16	RED	ECU POWER
102.2	16	RED	H30 POWER SUPPLY
103	18	VIOLET	ALTERNATOR EXCITE
104	16	WHITE	START RELAY COIL PULL SIGNAL
105	16	RED	H30-SWITCHED ECU POWER
106	20	BLACK	CAN SHIELD
107	20	GREEN	CAN LOW
108	20	YELLOW	CAN HIGH
202	18	RED	HYDRAULIC LEVEL/TEMP SWITCH
203	18	BLUE	COLD START AID ACTIVE
204	18	ORANGE	SEAT OPS SWITCH - CAN MESSAGE
207	18	VIOLET	FUEL LEVEL SENDER
211	16	BROWN	COOLING FAN RELAY PULL SIGNAL
212	16	YELLOW	LIGHT POWER RELAY PULL SIGNAL
402	12	RED	AUXILIARY POWER SUPPLY
502	14	RED	SWITCHED LIGHT POWER SUPPLY
504	16	WHITE	NEUTRAL SAFETY-SWITCHED START SIGNAL
505	20	RED	SEAT OPS-SWITCHED ECU POWER SUPPLY
602	14	RED	RELAYED COOLING FAN POWER
602A	14	RED	FUSED COOLING FAN POWER, 40A
702	14	RED	RELAYED LIGHT POWER
702A	14	RED	FUSED LIGHT POWER, 40A



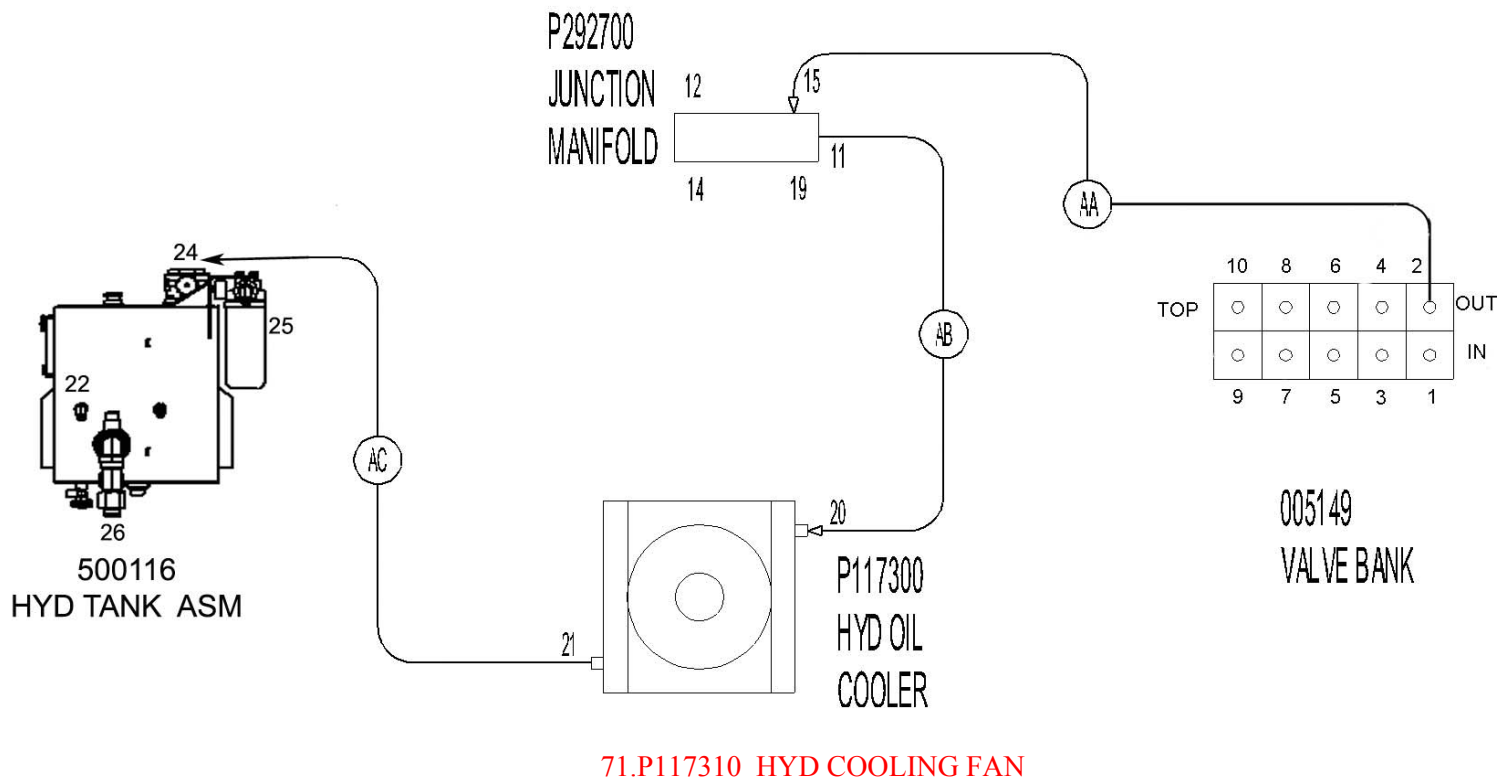
NOTES:

- 1) — INDICATES BRAIDED NYLON WEAVE (INSTEAD OF PLASTIC SPLIT LOOM).
- 2) 101 SPLICES INTO 101.1, 101.2 & 101.3
- 3) 102A SPLICES INTO 102.1 & 102.2
- 4) 106, 107, 108 ARE TWISTED/SHIELDED PAIR FROM X16 THROUGH-OUT ALL CONNECTIONS.

- △ CHANGED WAYTEK RELAY #75601 TO HELLA #H41410081 PER HARNESS SUPPLIER - 8/05/10 BDM
- △ CHANGED X19 AUX. POWER CONNECTOR FROM 15300003 TO 12040977 PER CUSTOMER - 4/12/10 BDM
- △ CHANGES FROM INITIAL TIMBERLINE PROTOTYPE TEST FIT, ADDED #204 & CORRECTED X16 P/N - 3/08/10 BDM
- △ CORRECTED SEVERAL TERMS/CDNN, WIRE SIZES & ADDED #203 - 2/15/10 BDM
- △ INITIAL RELEASE FROM HOUSTON STREET - 7/22/08

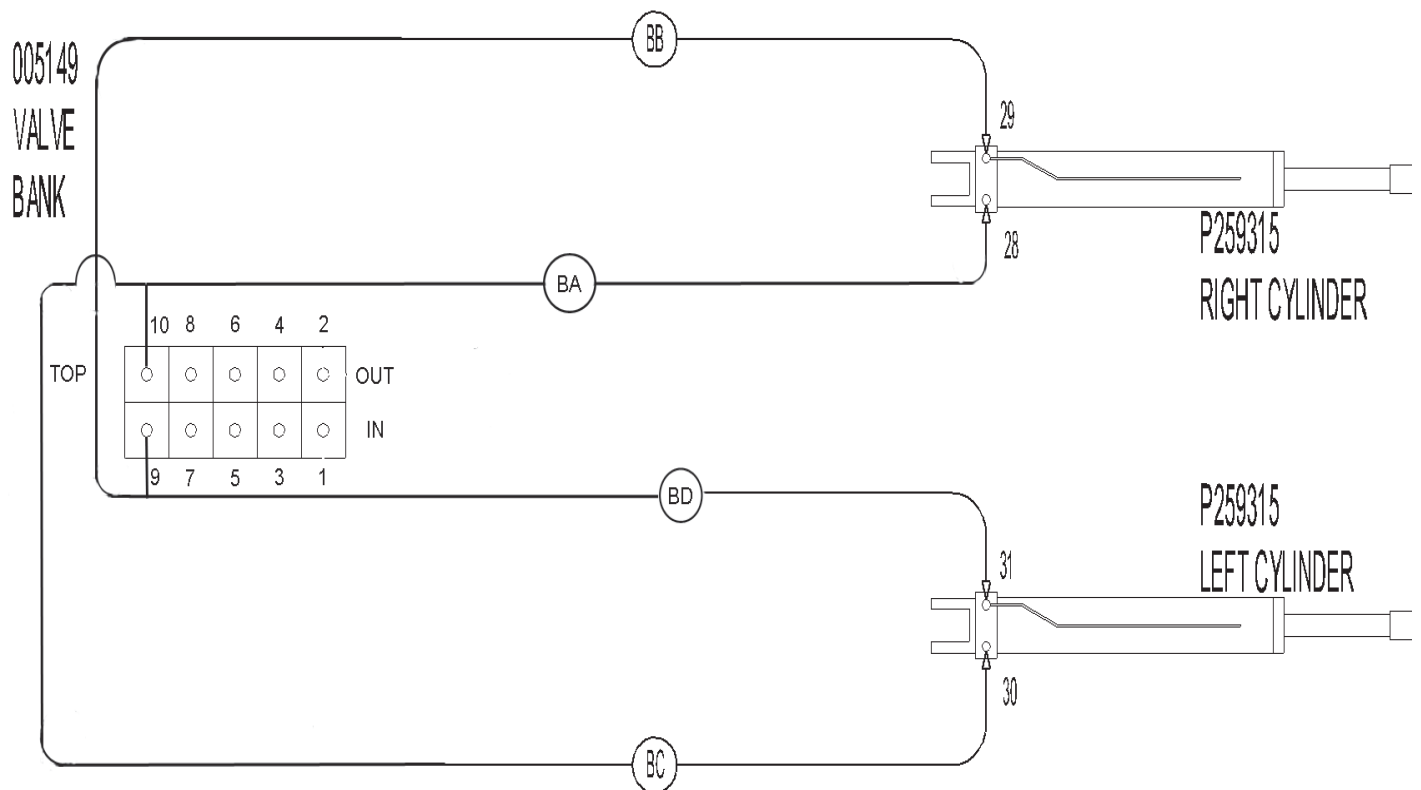
Northstar Power Co. Ankeny, IA (515) 964-6100		TITLE HARNESS, CHERRINGTON, DEERE ECU ENGINE		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE NOTED	
CONFIDENTIALITY NOTICE: ALL RIGHTS TO MANUFACTURE, COPY, REPRODUCE, OR DISPERSE THIS DRAWING OR THE INFORMATION CONTAINED HEREIN ARE RESERVED UNLESS OTHERWISE SPECIFIED IN WRITING BY NORTHSTAR POWER CO.		DRAWING NO. 5-0038		FRACTIONS	±1/32
		DRAWN	DATE	REV.	DECIMALS
		MT	07/22/08	E	.0 = ±.060 .00 = ±.030 .000 = ±.010
					ANGLES
					±1°

HYDRAULIC RETURN/COOLER CIRCUIT



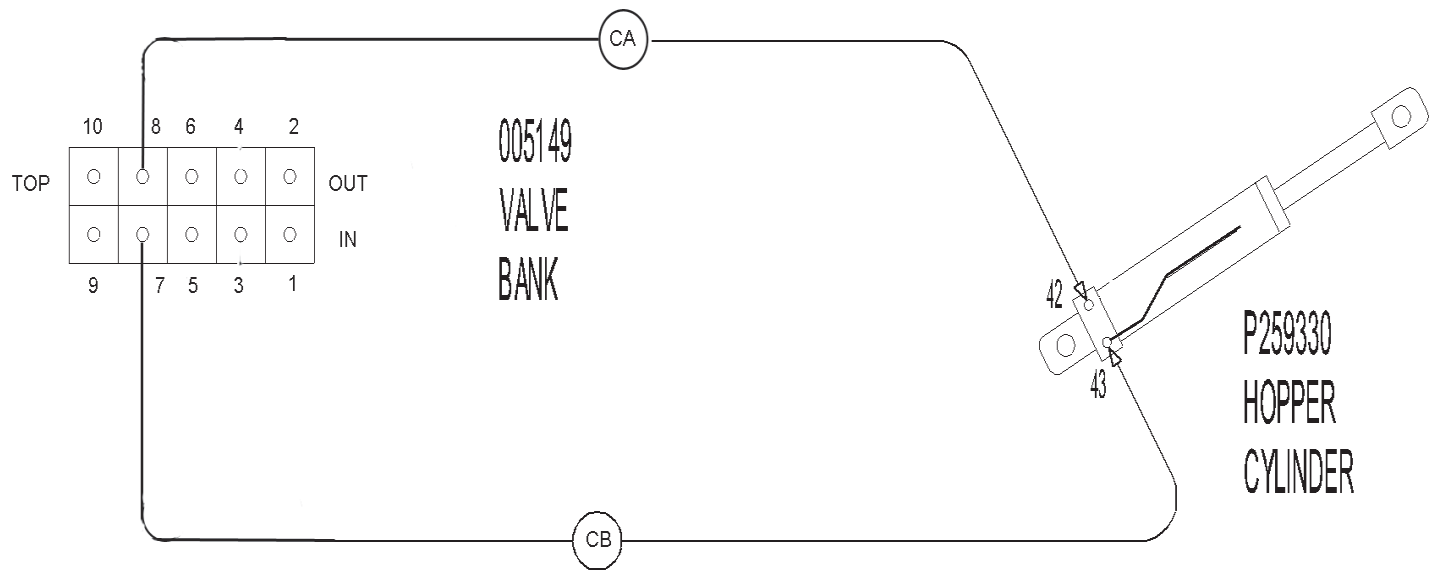
- AA. 12MJ-10MB, Hose P286052, 12MJ-10MB90
- AB. 16MJ-16MB90, Hose P288045, 16MJ-16MB90
- AC. 16MJ-16MB90, Hose P287039, 16MJ-16MB90

HOPPER LIFT CIRCUIT



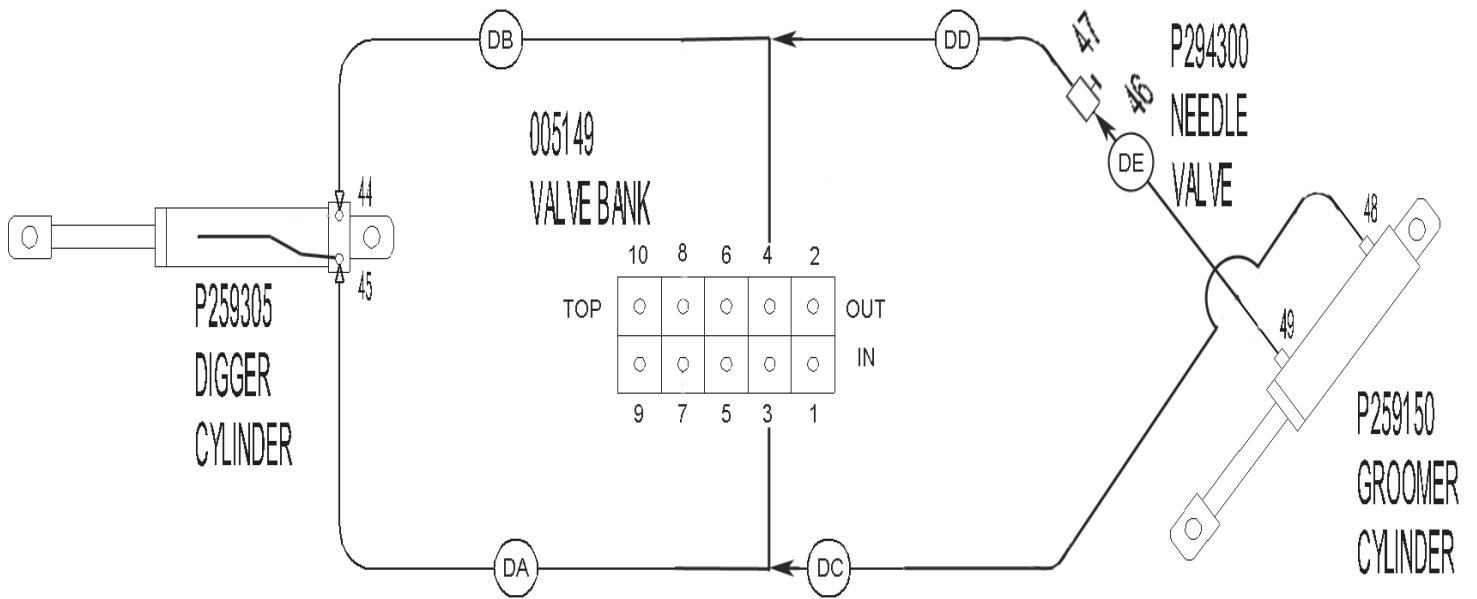
- BA. 6MJ-8MB .115R, 6MJ-6FJX-6MJ, Hose P283059, 6MJ-6MB90
- BB. 6MJ-8MB, 6MJ-6FJX-6MJ, Hose P283059, 6MJ-6MB90
- BC. Hose P283197, 6MJ-6MB90
- BD. Hose P283197, 6MJ-6MB90

HOPPER ROLLOVER CIRCUIT



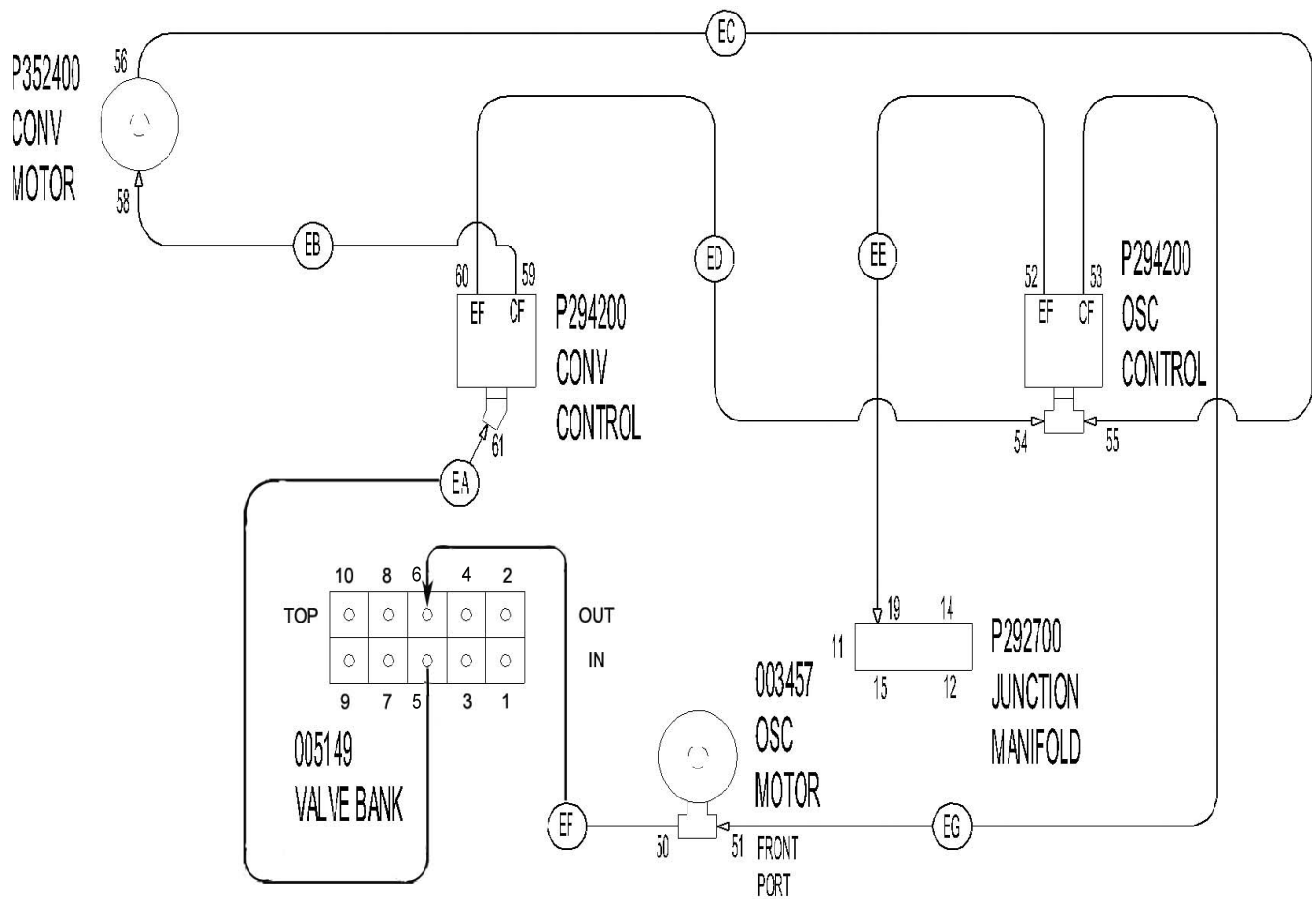
CA. GP-8MJ-8MB-4FP, Hose P283811, 6MJ-6MB90
 CB. 6MJ-8MB .035R, Hose P283112, 6MJ-6MB90

DIGGER/GROOMER CIRCUIT



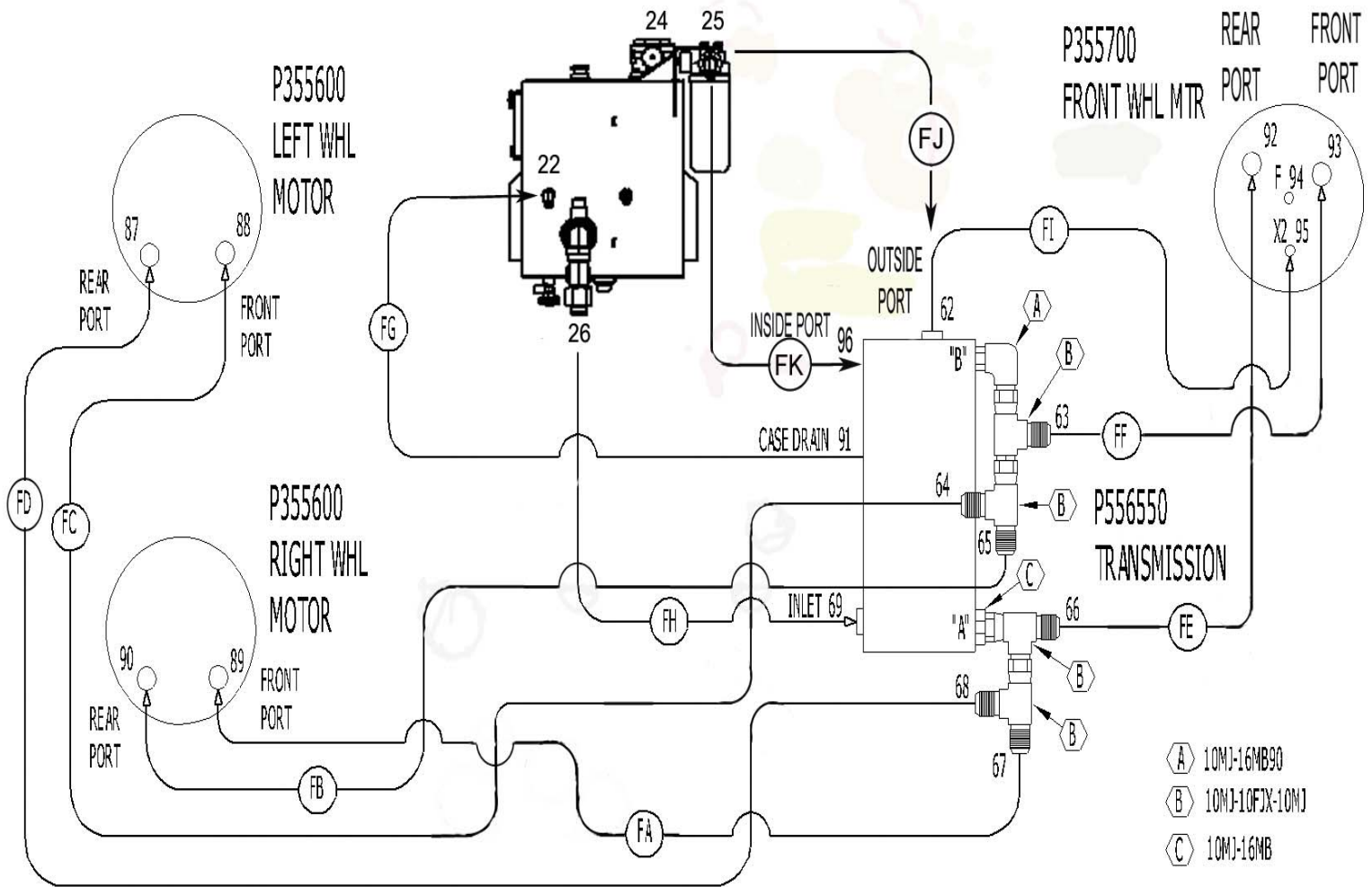
- DA. 6MJ-8MB, 6MJ-6FJX-6MJ, Hose P283124, 6MJ-6MB90
- DB. 6MJ-8MB .065R, 6MJ-6FJX-6MJ, Hose P283124, 6MJ-6MB90
- DC. 4MJ-4MB90, Hose P282126
- DD. 4MJ-4MP90, Hose P282024
- DE. 4MJ-4MB90, Hose P282150, 4MJ-4MP90

CONVEYOR/OSCILLATOR CIRCUIT



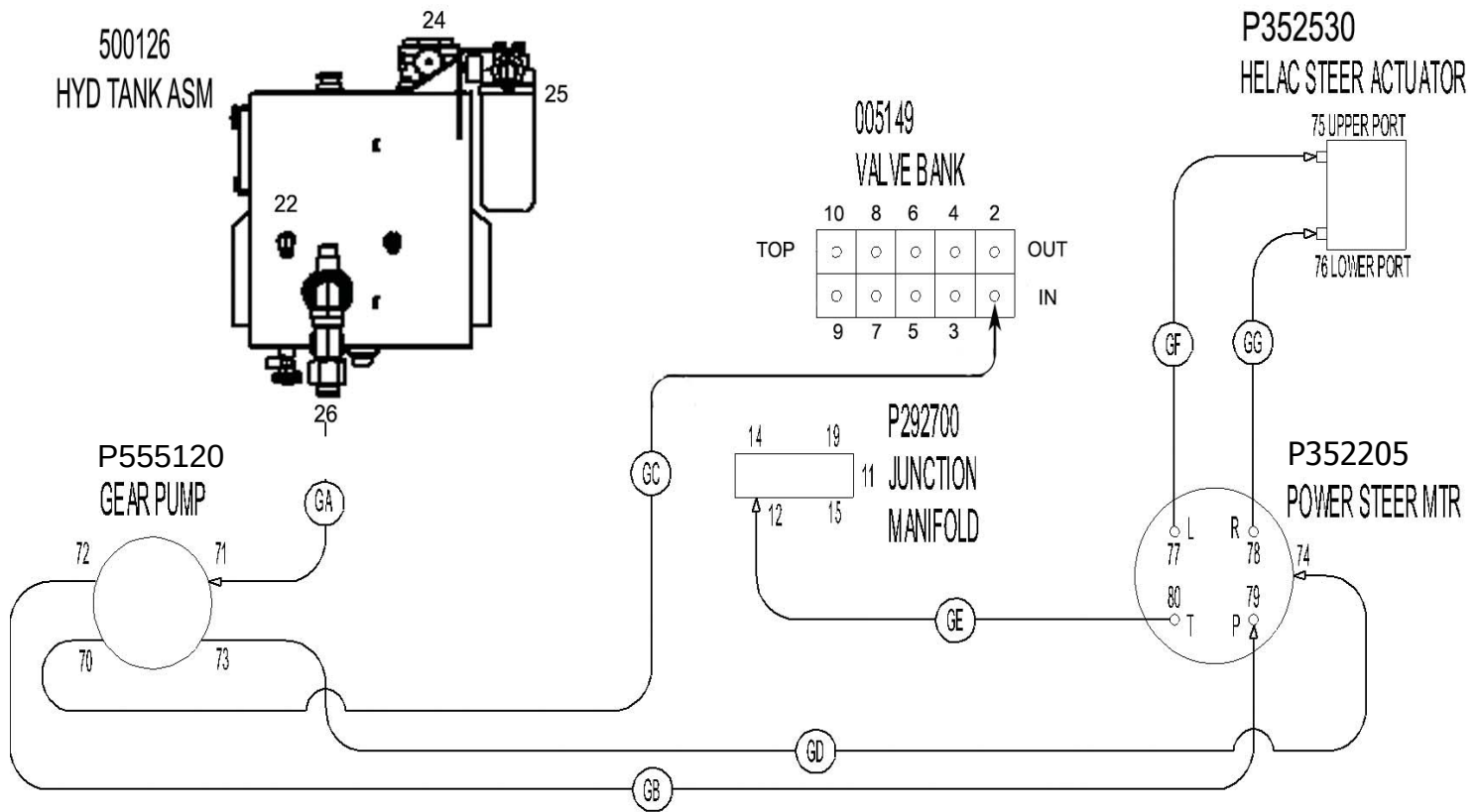
- EA. 8MJ-8MB, Hose P284024, 8MJ-12MB45
- EB. 8MJ-12MB90, Hose P284902, 8MJ-10MB45
- EC. 8MJ-10MB45, Hose P284196, 8MJ-8MJ-8FJX, 8MJ-12MB
- ED. 8MJ-12MB90, Hose P284025
- EE. 8MJ-12MB90, Hose P284065, 8MJ-10MB90
- EF. 8MJ-10MB90, Hose P284081, 8MJ-8MB
- EG. 8MJ-12MB90, Hose P284095, 8MJ-10MB90

HYDROSTATIC DRIVE CIRCUIT



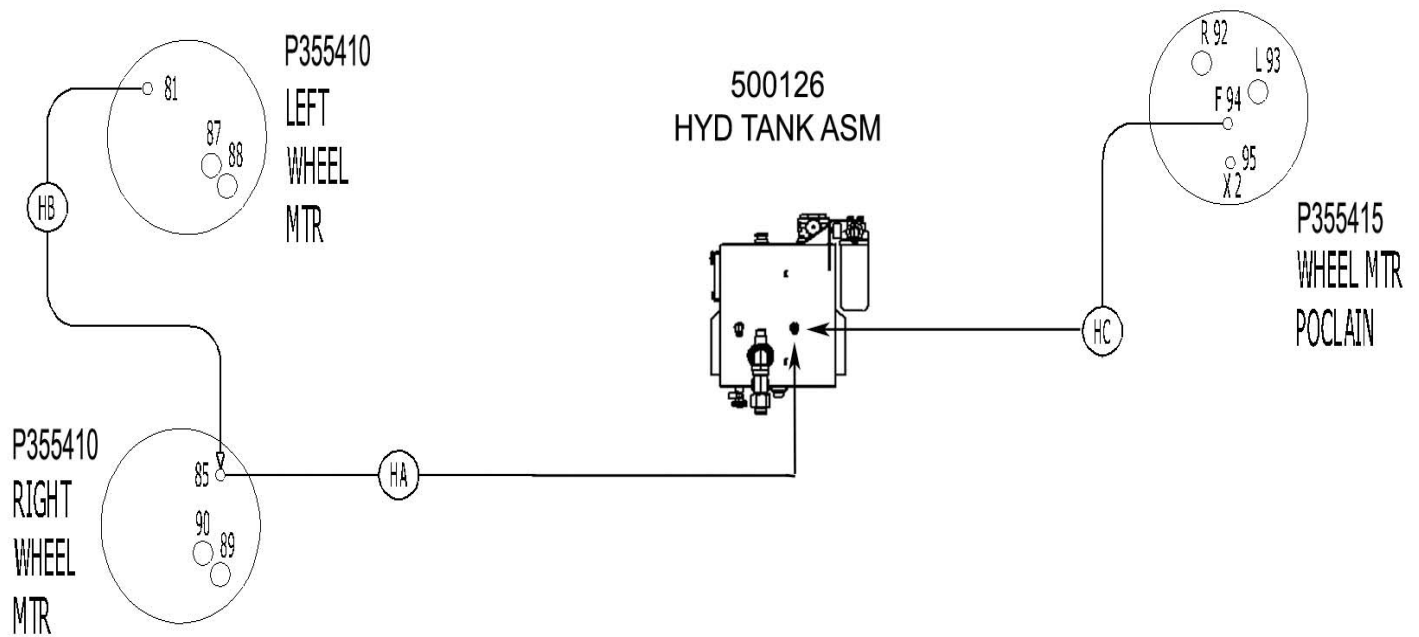
- FA. Hose P284108, 8MJ-8FJX90, 8MJ-12MB
- FB. Hose P284108, 8MJ-8FJX90, 8MJ-12MB
- FC. Hose P284446, 8MJ-12MB
- FD. Hose P284446, 8MJ-12MB
- FE. Hose P284496, 8MJ-12MB
- FF. Hose P284496, 8MJ-12MB
- FG. 8MJ-12MB Hose P284031
- FH. Hose P288038, 16MJ-16MB
- FI. 10MB-10MJ-10MJ, 10FJ-4MJ, Hose P282400, 4MJ-6MB
- FJ. P284048
- FK. P284048, 10MJ-10MB

POWER STEERING CIRCUIT



- GA. 24FJ-20MJ, Hose P289026, 20MJ-16MB
- GB. 6MJ-8MB90, Hose P283923, 6MJ-8MB
- GC. 12MJ-10MB45, Hose P286075, 12MJ-10MB
- GD. 4MJ-4MB, Hose P282118, 4MJ-4MB90
- GE. 6MJ-8MB, Hose P283110, 6MJ-6MB90
- GF. 6MJ-8MB, Hose P283084, 6MJ-6FJX90, 6MJ-4MB
- GG. 6MJ-8MB, Hose P283084, 6MJ-6FJX90, 6MJ-4MB

WHEEL MOTOR CASE DRAIN CIRCUIT



- HA. 4MJ-8MB, 4MJ-4FJX-4MJ, Hose P282994, 6MB-4MJ-4MJ, 8MP-6FB
- HB. 4MJ-8MB, 4MJ-4FJX90, Hose P282062
- HC. 4MJ-8MB, Hose P282445, 4MJ-4FJ90