

# TUBE•LINE™

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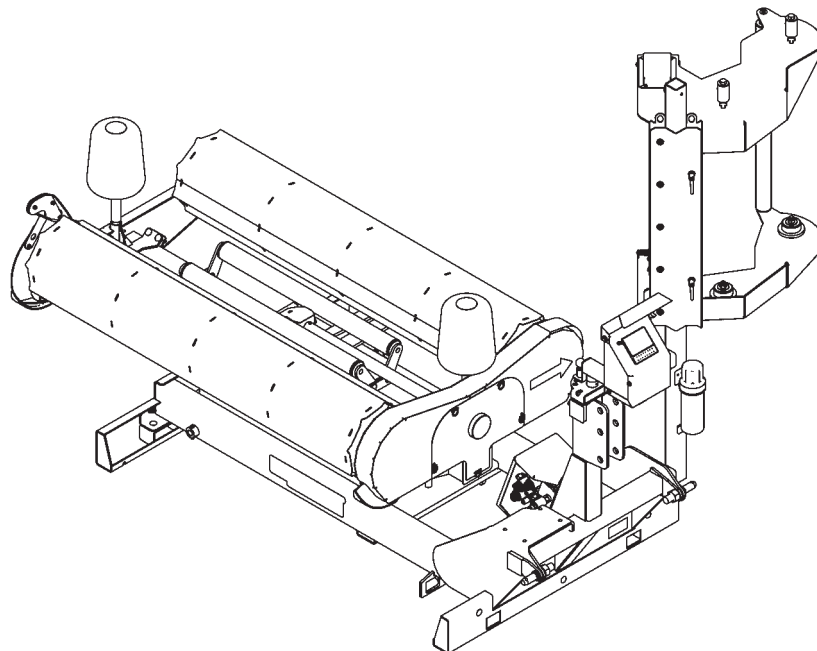
# Parts Manual

Keep this manual with the machine at all times.

# TL1100R

Balewrapper

# TL1100R-A



# Parts Manual

Thank you for choosing the Tubeline TL1100R Individual Bale Wrapper. Our hope is that it will give you many years of productive service. This machine is designed to wrap single round bales in a film of plastic to protect the material and preserve the moisture content.

## Parts Manual Usage

This parts manual is used to order replacement parts by means of part breakdowns and their corresponding part lists. Each page contains a different range of integrated parts. Each illustration visually represents machine components. The part lists contain information needed to order replacement parts. Part lists include the following columns:

**ITEM** - Number matching parts breakdown balloons.

**QTY** - Quantity of components included in this breakdown, not entire machine.

**PART NUMBER** - The number to be used when placing an order.

**DESCRIPTION** - Term used to confirm its matching part number.

**NOTE** - Column may be added to part lists when a serial break or additional information is required.

Remember to always have your machine model and serial number on hand when ordering parts.

## Part Orders

Part orders are taken by your local Tubeline dealer and fulfilled through a regional distributor. For quick service please record your dealer name and contact information in the [Serial Number](#) section.

## Manuals

Parts manuals are printed and shipped with machines as they leave the manufacturer. Your machine may include parts or features not yet included in the initially shipped manual. The latest manual version can be found at [www.tubeline.ca/support](http://www.tubeline.ca/support). Tubeline reserves the right to update and change manuals as seen fit. Dealers are informed of any pressing changes/ modifications. They can help you with any questions regarding replacement parts.

## Serial Number

The implement serial number is located on the front right corner of the frame. (See below) This number helps us to track changes and improvements and must be mentioned when ordering parts or requesting service. For your convenience, a space has been provided inside the front cover of this manual to record the serial number, model number, purchase date, and dealer name.

Model No: \_\_\_\_\_ TL1100R-A(P) \_\_\_\_\_

Serial No: \_\_\_\_\_

Date Purchased: \_\_\_\_\_

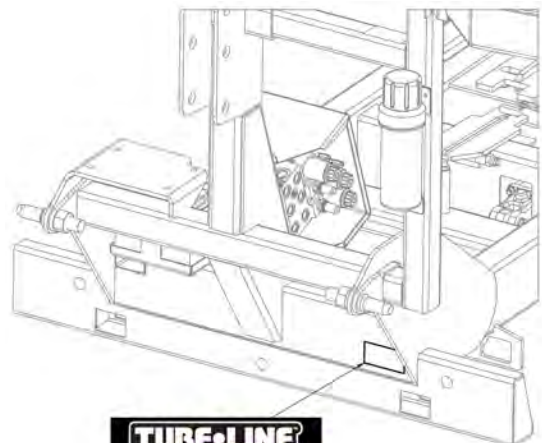
Dealer Name: \_\_\_\_\_

Dealer Contact: \_\_\_\_\_

TL1100R-AP Model Only:

Engine Model No: \_\_\_\_\_

Engine Serial No: \_\_\_\_\_

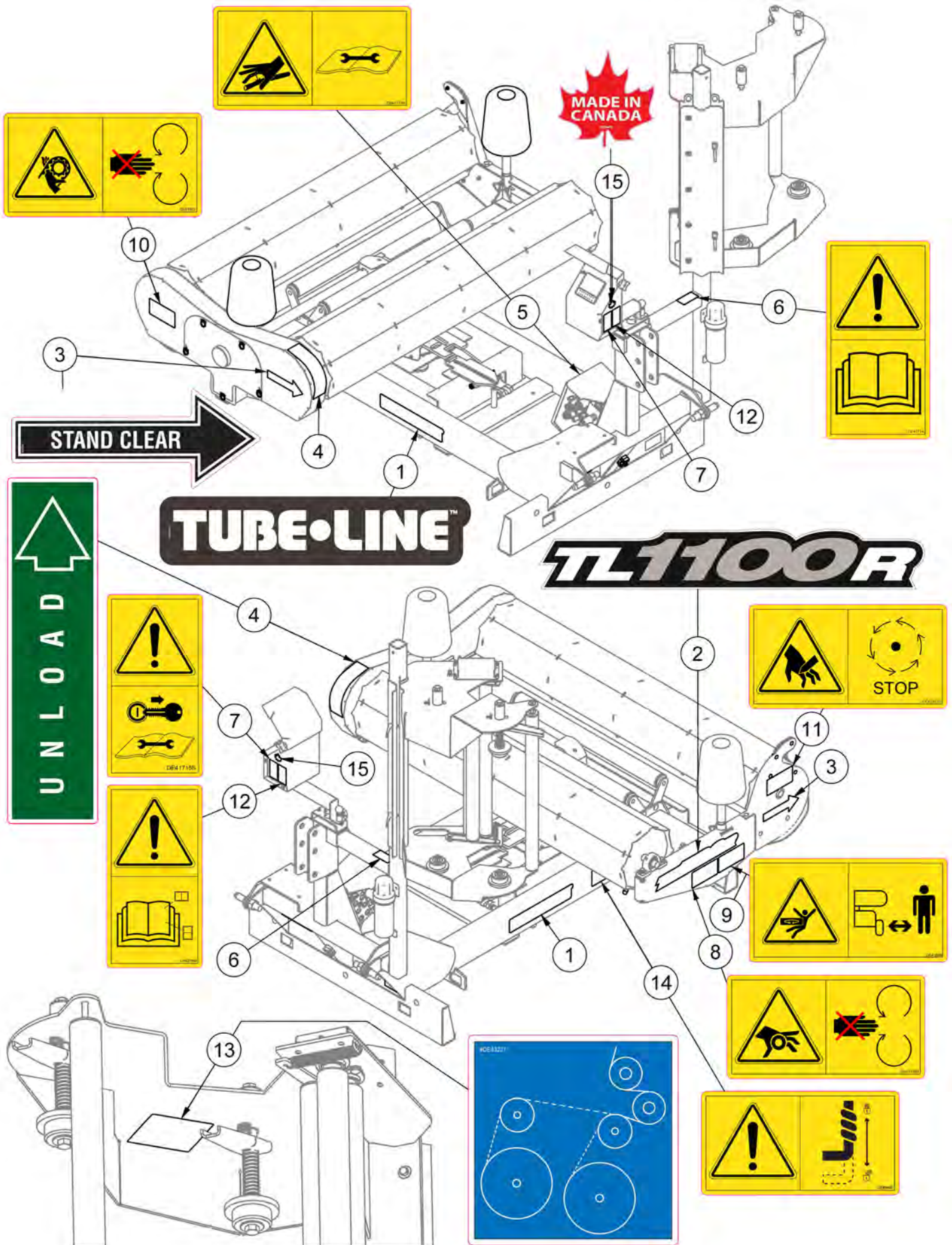


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# Section 1: Parts Lists & Breakdowns

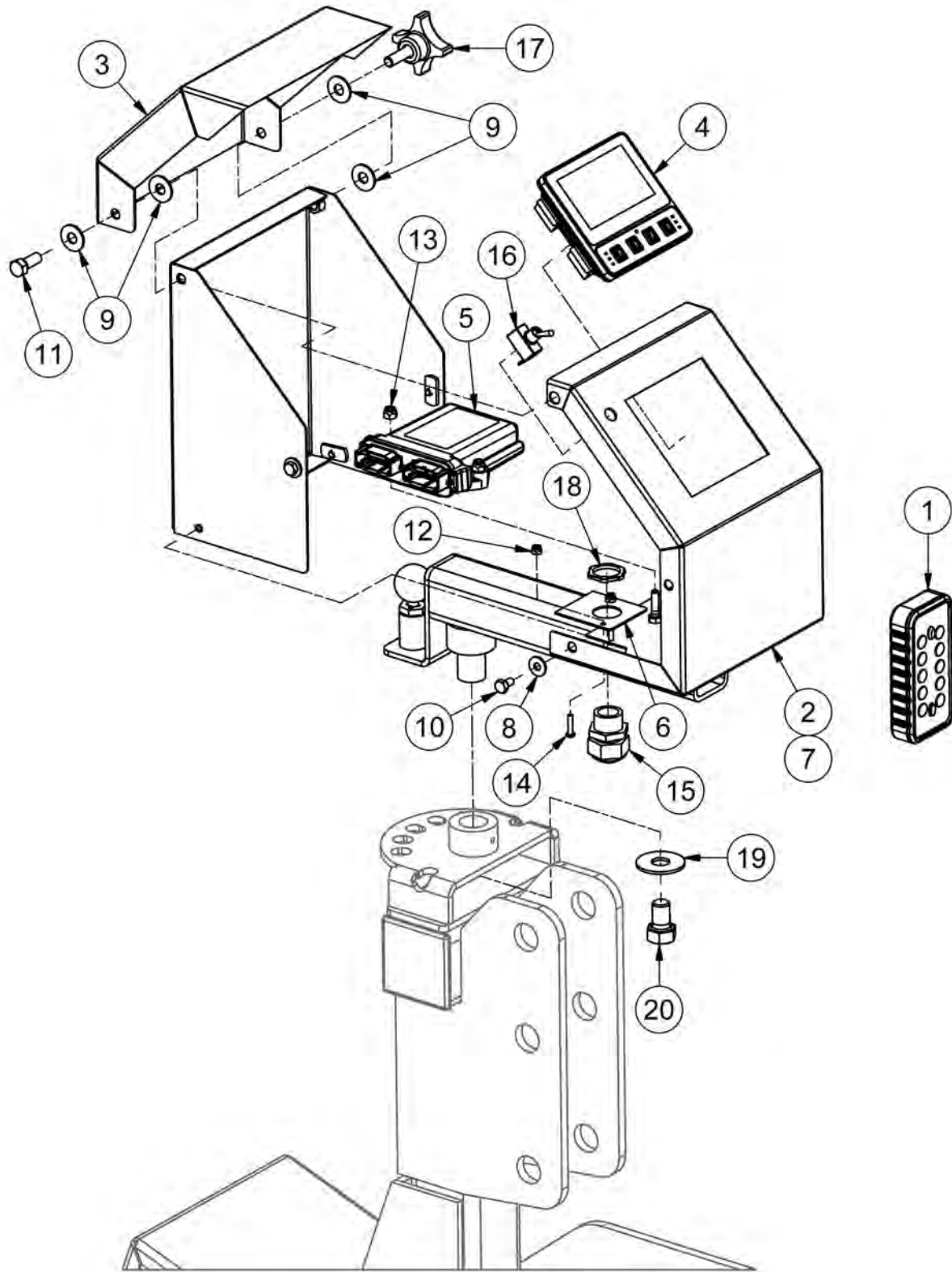
# Decal Locations



## Decal Locations

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	2	DE28146	Tubeline Decal 4" x 16"	
2	1	DE48523	TL1100R Decal	
	1	DE48489	TL1100R-A Safety Decal Kit	Items 3-14
3	2	DE36075	Decal for TL1000R - Stand Clear RH	
4	1	DE36080	Decal for TL1000R - Unload	
5	1	DE41713H	ISO Decal - High Pressure Fluid Horizontal	
6	1	DE41714S	ISO Decal - Read Operator's Manual (50mm X 96mm)	
7	1	DE41715S	ISO Decal - Remove Key Before Repair (50mm X 96mm)	
8	1	DE41716H	ISO Decal - Shaft Entanglement Horizontal	
9	1	DE41899	ISO Decal - Stand Clear of Indi Wrapper	
10	1	DE41902	ISO Decal - Chain Entanglement	
11	1	DE41913H	ISO Decal - Stop Moving Parts Before Handling	
12	1	DE42784S	ISO Decal - Read OM Decal Section (50mm x 96mm)	
13	1	DE43227	TL1000R Tensioner Wrap Decal	
14	1	DE49488	ISO Decal - Vertical Lock	
15	1	DECANADA	Decal Made In Canada	

# Control Panel

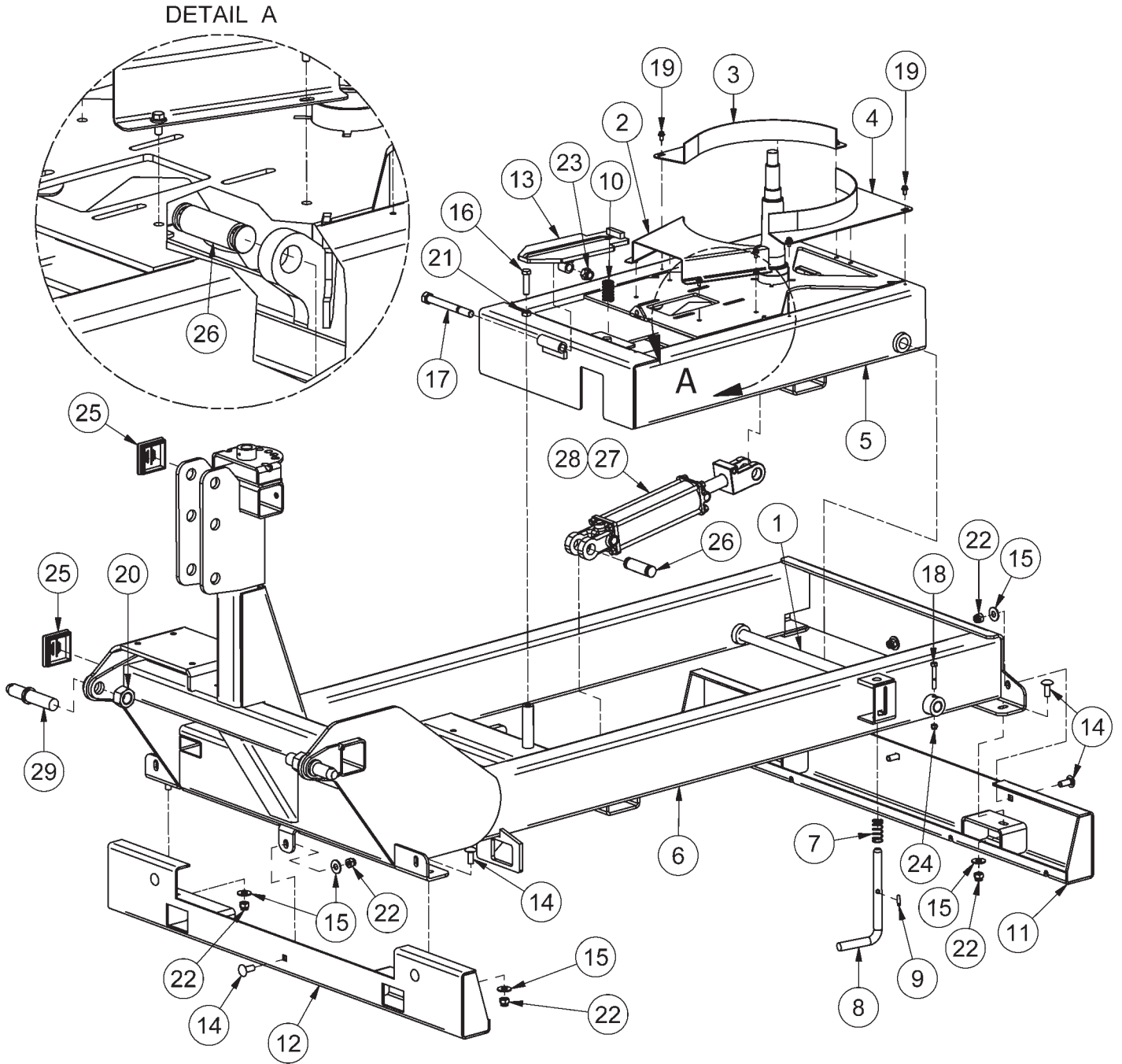


## Control Panel

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	1	46146	10 Button Handheld Remote	
2	1	48307	Control Arm W/ Components	Incl. Items 3-20
3	1	45614	Top Cover	
4	1	46147	TL1700 Display	
5	1	46149	TL1700 Base Unit	
6	1	48250	Bolt In Plate for Electrical Connector	
7	1	48308	TL1100A Arm Base	
8	4	FW 1/4	Flatwasher - 1/4" Zinc Plated USS	
9	4	FW 3/8	Flatwasher - 3/8" Zinc Plated USS	
10	4	HB 1/4-20X0.5 Z5	Hex Bolt 1/4-20x1/2 Grade 5 Zinc Plated Hex Cap Screw	
11	1	HB 3/8-16X1 Z5	Hex Bolt 3/8-16x1 Grade 5 Zinc Plated Hex Cap Screw	
12	2	LN #8 N	LN 3/16-32 Zinc Plated Nylon Insert Lock Nut	
13	2	LN 1/4 N	LN 1/4-20 Zinc Plated Nylon Insert Lock Nut	
14	2	MS #8X32X0.75	Machine Screw - (Inch)	
15	1	TL182-175	Cable Strain Relief	
16	1	TL550-200-235	Toggle Switch (ON-OFF)	
17	1	TL5X2-100-104	Switch Adjuster Screw	
18	1	TLGLN075	Pipe Locknut, 3/4	
19	1	FW 5/8	Flatwasher - 5/8" Zinc Plated USS	
20	1	HB5/8-11X1Z5	Hex Bolt 5/8-11x1 Grade 5 Zinc Plated Hex Cap Screw	



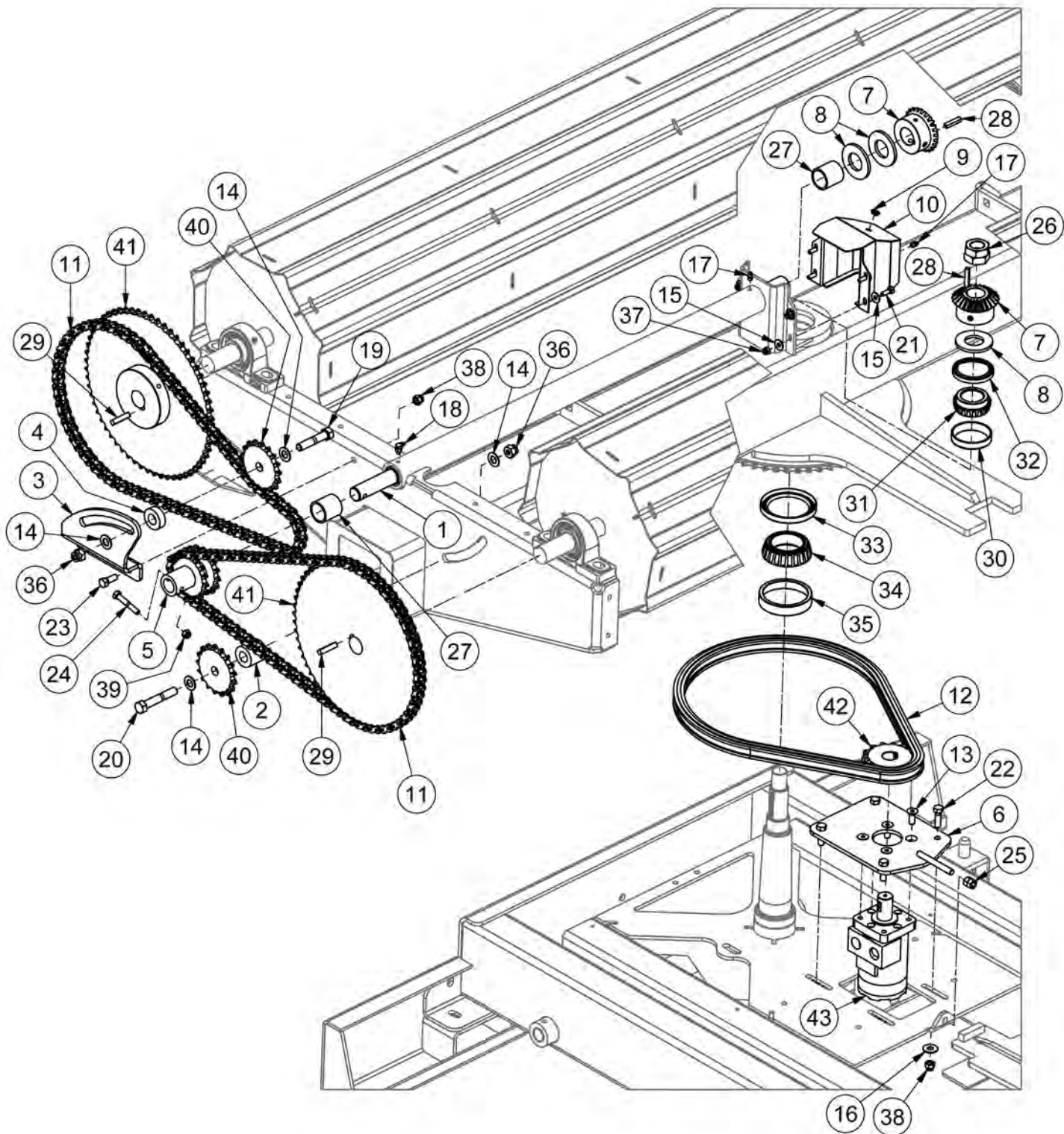
# Frame



## Frame

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	35035	Frame Pivot Shaft
2	1	35046	Turntable Drive Chian Cover
3	1	35084	Sprocket Shield
4	1	35084M	Sprocket Shield
5	1	48266	Folding Main Frame
6	1	48277	Main Frame
7	1	27566	Spring Compression for Wrappers .97 OD x 2.0 Long
8	1	41708	Transport Lock Pin
9	1	RP 1/4 x 2 1/2	Pin - Roll Pin 1/4 x 2 1/2
10	1	41882	Compression Spring .120" Wire X 1" OD X 1.75" Long
11	1	48297	TL1100R Rear Base
12	1	48312	TL1100R Front Base
13	1	49327	Tilt Plate
14	10	CB1/2-13X1.25CZ5	Carriage Bolt - 1/2-13 x 1 1/4" Grade 5 Zinc
15	10	FW 1/2	Flatwasher - 1/2" Zinc Plated USS
16	1	HB1/2-13X2YZ8	Hex Bolt 1/2-13x2 Grade 8 Zinc Hex Cap Screw
17	1	HB5/8-11X6Z5	Hex Bolt 5/8-11x6 Grade 5 Zinc Plated Hex Cap Screw
18	2	HB5/16-18X2.25Z5	Hex Bolt 5/16-18x2 1/4 Grade 5 Zinc Plated Hex Cap Screw
19	10	HBC1/4X0.5	Hex Bolt Cerrated 1/4-20 x 1/2 Zinc Flange Bolt
20	2	HN1 1/8-7CZ5	Hex Nut 1 1/8"-7 Grade 5 Zinc Plated Finished
21	1	HNJ1/2-13	Hex Nut - 1/2-13 Zinc Plated Hex Jam Nut
22	10	LN1/2-13NCZ5	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut
23	1	LN5/8-11NCZ5	LN 5/8-11 Zinc Plated Nylon Insert Lock Nut
24	2	LN5/16-18NCZ5	LN 5/16-18 Zinc Plated Nylon Insert Lock Nut
25	2	PEC3018S	Plastic End Cap Square-3.0 " OD with .18 Wall Thickness
26	2	TL5X2-500-116	Cylinder Pin
27	1	TL500-100-082	Hydraulic Cylinder 2.5" Bore x 8" Stroke
28	1	SK AGU251125-10	Seal Kit for 25 Series Cylinder
29	2	TL386012	Lift Arm Pins Cat. 1.12 X 6.25

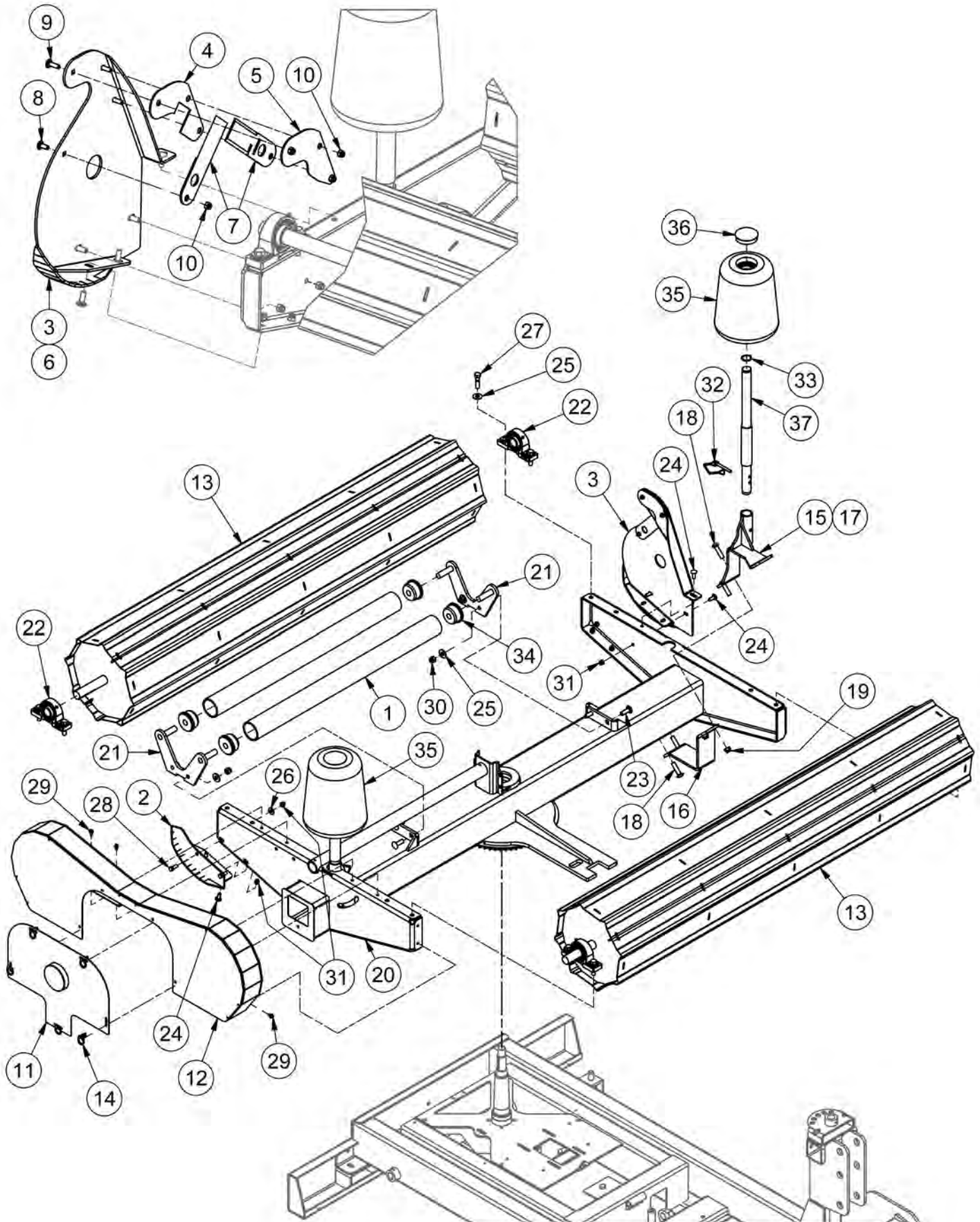
# Driveline



## Driveline

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	35036	Turntable Cross Shaft
2	1	35050	Idler Spacer Long
3	1	35051	Idler Mount
4	1	35052	Idler Spacer Short
5	1	35086	Large Sprocket Set
6	1	35095	Chain Tightener
7	2	35714	Tapered Gear- 24 Tooth - 8 Pitch
8	3	35785	Miter Gear Spacer
9	1	38613	Plastic Plug
10	1	42851	Grease Cover
11	10ft	CHAIN 50 ROLLER	Chain - #50 Roller (Heavy Duty)
12	5ft	CHAIN 60 H ROLLER	Chain - #60 Heavy Duty Roller Chain
13	4	FHSCS3/8-16X1	Hex Bolt - 3/8"-16 x 1" Flat Socket Cap Screw
14	4	FW 1/2	Flatwasher - 1/2" Zinc Plated USS
15	8	FW 1/4	Flatwasher - 1/4" Zinc Plated USS
16	4	FW 3/8	Flatwasher - 3/8" Zinc Plated USS
17	2	GR 1/4 X 28	Grease Fitting 1/4-28 Straight Standard Zerk
18	1	GR 1/4X28X90	Grease Fitting 1/4X28X90 Degree
19	1	HB1/2-13X2.5Z5	Hex Bolt 1/2-13x2 1/2 Grade 5 Zinc Plated Hex Cap Screw
20	1	HB1/2-13X3Z5	Hex Bolt 1/2-13x3 Grade 5 Zinc Plated Hex Cap Screw
21	4	HB1/4-20X0.75Z5	Hex Bolt 1/4-20x3/4 Grade 5 Zinc Plated Hex Cap Screw
22	4	HB3/8-16X1.25Z5	Hex Bolt 3/8-16x1 1/4 Grade 5 Zinc Plated Hex Cap Screw
23	2	HB3/8-16X1Z5	Hex Bolt 3/8-16x1 Grade 5 Zinc Plated Hex Cap Screw
24	1	HB5/16-18X2Z5	Hex Bolt 5/16-18x2 Grade 5 Zinc Plated Hex Cap Screw
25	2	HN3/8-16CZ5	Hex Nut 3/8"-16 Grade 5 Zinc Plated Finished
26	2	HNJ1-12	Hex Nut - 1-12 Zinc Plated Hex Jam Nut
27	2	INS150125150B	Insert Bushing 1.50 OD X 1.25 ID X 1.50 Long (Bronze)
28	2	KS40258	Keystock .250 X 1.375
29	2	KS48073	Keystock .313 X 1.500
30	1	LA-11-1009	Cup (13620)
31	1	LA-11-1010	Cone (13686)
32	1	LA-11-1011	Seal (CR20952)
33	1	LA-11-1124	Seal (CR27361)
34	1	LA-11-1125	Cone (JLM506849)
35	1	LA-11-1126	Cup (JLM506810)
36	2	LN1/2-13NCZ5	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut
37	4	LN1/4-20NCZ5	LN 1/4-20 Zinc Plated Nylon Insert Lock Nut
38	6	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut
39	1	LN5/16-18NCZ5	LN 5/16-18 Zinc Plated Nylon Insert Lock Nut
40	2	SPR50A17	.625 Bore, 17 Tooth
41	2	SPR50B60-1.25	Sprocket - #50 60 Teeth 1.25 Bore 1/4 Key
42	1	SPR60B14-1	60B14 Sprocket w/1 Bore 1/4 Kwy. 2 1/4 SS
43	1	TL5X2-200-050	Hydraulic Motor M+S

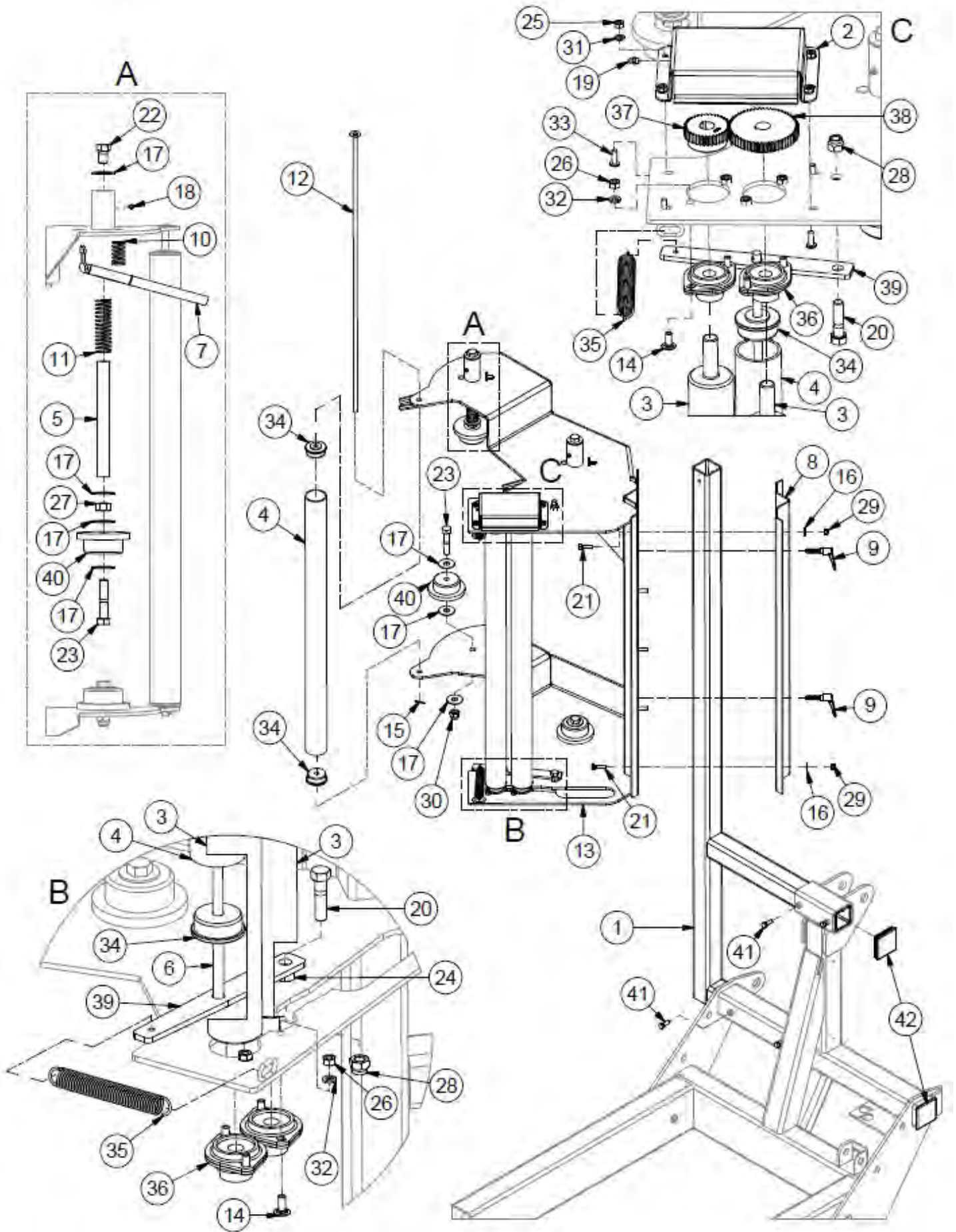
# Turntable



## Turntable

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	2	31384	HST .188 X 2.88	
2	1	35082	Skid Shoe	
3	1	35085	Knife Kit	Inc. Items 4-10
4	1	35069	Knife Spacer A	
5	1	35070	Knife Spacer B	
6	1	35083	Knife Holder	
7	2	BS200058	Chopper Blade	
8	1	CB5/16-18X0.75CZ5	Carriage Bolt - 5/16-18 x 3/4" Grade 5 Zinc	
9	3	CB5/16-18X1CZ5	Carriage Bolt - 5/16-18 x 1" Grade 5 Zinc	
10	4	LN5/16-18NCZ5	LN 5/16-18 Zinc Plated Nylon Insert Lock Nut	
11	1	35088	Chain Cover	
12	1	35090	Chain Guard	
13	2	35094	Bale Rotater Drum	
14	5	36268	Cam Lock	
15	2	37986	Adjustable Bobbin Holder Kit	
16	1	37977	Guide Roller Bottom Bracket	
17	1	37984	Guide Roller Top Bracket	
18	4	CB1/2-13X2CZ5	Carriage Bolt - 1/2-13 x 2" Grade 5 Zinc	
19	4	LN1/2-13NCZ5	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut	
20	1	48311	TL1100R Turntable	
21	2	48313	Top Center Roller Assembly	
22	4	BEA UCP207-20NTL	Bearing 1.25 Pillow Block Bearing	
23	4	CB1/2-13X1.5CZ5	Carriage Bolt - 1/2-13 x 1 1/2" Grade 5 Zinc	
24	7	CB3/8-16X1CZ5	Carriage Bolt - 3/8-16 x 1" Grade 5 Zinc	
25	12	FW 1/2	Flatwasher - 1/2" Zinc Plated USS	
26	2	FW 3/8	Flatwasher - 3/8" Zinc Plated USS	
27	8	HB1/2-13X2Z5	Hex Bolt 1/2-13x2 Grade 5 Zinc Plated Hex Cap Screw	
28	2	HB3/8-16X1Z5	Hex Bolt 3/8-16x1 Grade 5 Zinc Plated Hex Cap Screw	
29	8	HBC1/4X0.5	Hex Bolt Cerrated 1/4-20 x 1/2 Zinc Flange Bolt	
30	4	LN1/2-13NCZ5	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut	
31	9	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut	
32	2	LP B1997	Pin - Lock Pin 5/16 X 2 1/2	
33	2	RR 1.25	Retaining Ring-1 1/4- External	
34	4	T650RL04	Small Roller Bearing	
35	2	TL550-301-238	Roller c/w Bearings & End Cap	
36	2	TL245-057	Nylon Plug 3"	
37	2	TL550-301-239	Guide Roller Shaft	

# Offset Film Tensioner



## Offset Film Tensioner

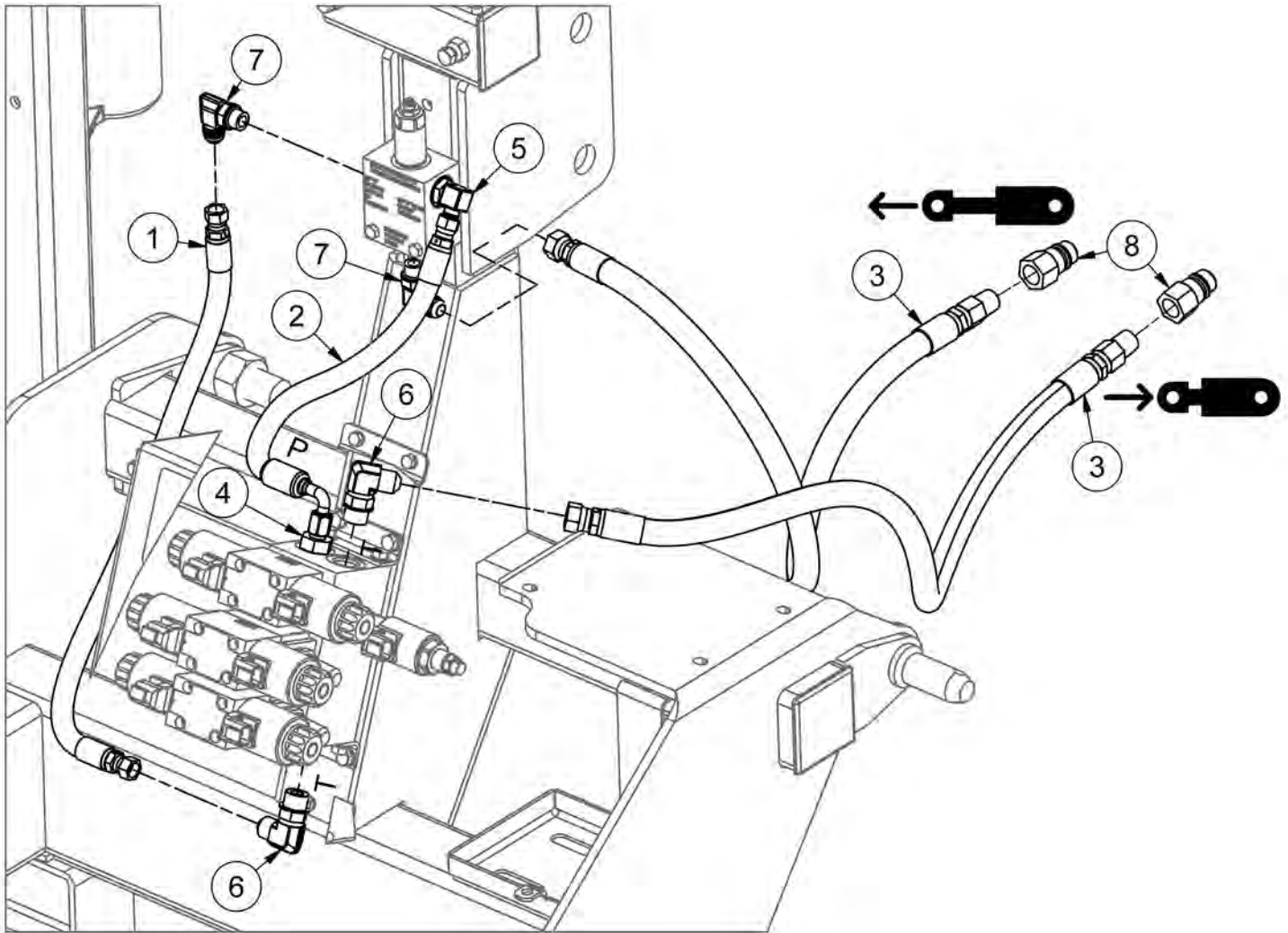
Part no. 42443 - TL1100R DBL Tensioner Assembly includes Items 2 - 40.

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	35099	Tensioner Mounting Frame
2	1	36682	Grease Box
3	2	39916	Extended Tensioner Roller
4	2	39917	Extended Plastic Roller
5	2	41584	Top Wrap Holder Pin
6	1	41624	Plastic Roller Pin
7	2	41829	Rod Spool Clamp Holder
8	1	41843	Tensioner Back Plate
9	2	41844	Adjustable Handle
10	2	41882	Compression Spring .120" Wire X 1" OD X 1.75" Long
11	2	41883	Compression Spring .090" Wire X 1.22" OD X 7" Long
12	1	42020	Second Roller Pin
13	1	42436	Double Tensioner Frame
14	8	CB 5/16-18 X0.75 Z5	Carriage Bolt - 5/16-18 x 3/4" Grade 5 Zinc
15	1	CP 3/16 X 1.0	Pin, Cotter 3/16 x 1
16	12	FW 3/8	Flatwasher - 3/8" Zinc Plated USS
17	14	FW 5/8	Flatwasher - 5/8" Zinc Plated USS
18	2	GR 3/16D	3/16 Drive Straight Grease Fitting (King Fisher Brand)
19	1	GR 1/4 X 28	Grease Fitting 1/4-28 Strght-Standr Zerk
20	2	HB 1/2-13X2 Z5	Hex Bolt 1/2-13x2 Grade 5 Zinc Plated Hex Cap Screw
21	5	HB 3/8-16X1.25 Z5	Hex Bolt 3/8-16x1 1/4 Grade 5 Zinc Plated Hex Cap Screw
22	2	HB 5/8-11X1 Z5	Hex Bolt 5/8-11x1 Grade 5 Zinc Plated Hex Cap Screw
23	4	HB 5/8-11X3 Z5	Hex Bolt 5/8-11x3 Grade 5 Zinc Plated Hex Cap Screw
24	2	HN 1/2	Hex Nut 1/2"-13 Grade 5 Zinc Plated Finished
25	4	HN 1/4	Hex Nut 1/4"-20 Grade 5 Zinc Plated Finished
26	8	HN 5/16	Hex Nut 5/16"-18 Grade 5 Zinc Plated Finished
27	2	HN 5/8	Hex Nut 5/8"-11 Grade 5 Zinc Plated Finished
28	2	LN 1/2 N	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut
29	5	LN 3/8 F	Center Locknuts (3/8-24) 2-Way Fine Thread
30	2	LN 5/8 N	LN 5/8-11 Zinc Plated Nylon Insert Lock Nut
31	4	LW 1/4	LW - 1/4" Zinc Plated Medium Split
32	8	LW 5/16	LW - 5/16" Zinc Plated Medium Split
33	4	MS 1/4X20X0.75	Machine Screw - (Inch)
34	4	TL500-100-021	Plastic Roller Cap
35	2	TL500-100-135	Spring - Tensioner
36	4	TL550-100-007	Rear Wheel 4"
37	1	TL550-100-008	Small Gear
38	1	TL550-100-009	Large Gear
39	2	TL550-100-016	Plastic Roller Mount
40	4	TL550-200-012	Plastic Wrap Spool
41	4	HB 3/8-16X1 Z5	Hex Bolt 3/8-16x1 Grade 5 Zinc Plated Hex Cap Screw
42	2	PEC2518S	3' Plastic End Cap



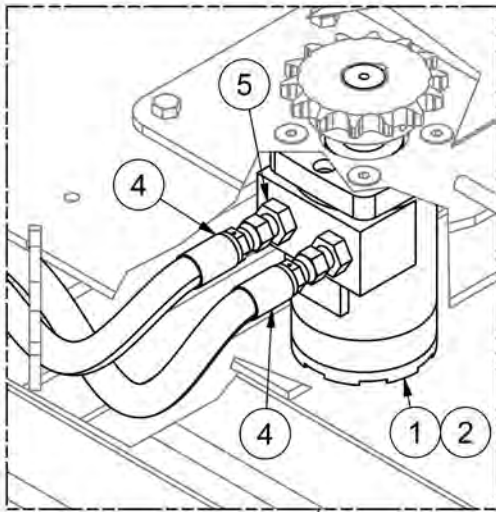
## Section 2: Hydraulics

### Tractor Circuit

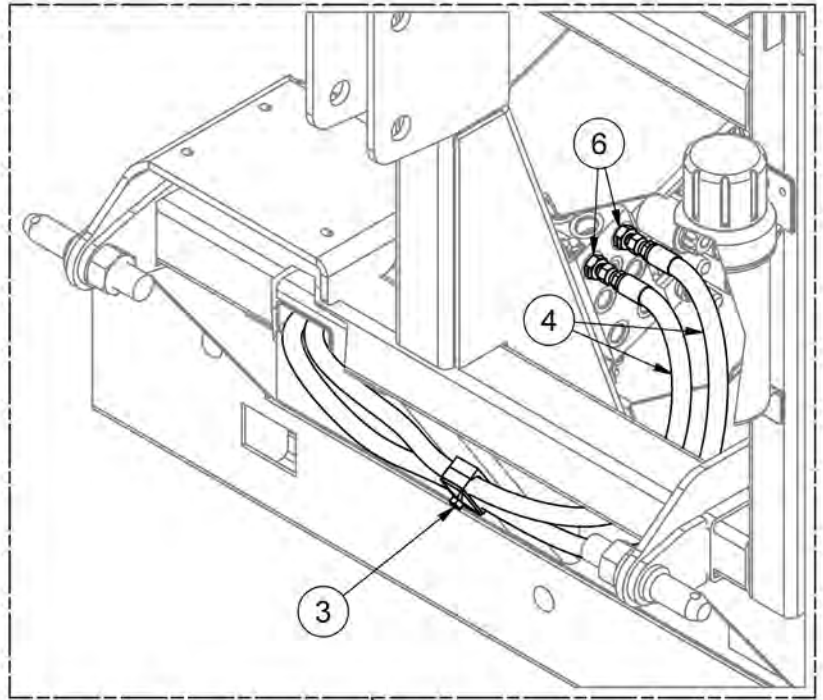


ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	23558	Hose - HH26 - 6AT1(8FJXH,8FJXH) HCL 26"
2	1	49297	Hose - HH19 - 6AT1(6FJX,6FJX90) HCL 19"
3	2	49946	Hose - HH66 - 6AT1(8MP,8FJXH) HCL 66"
4	1	HF 6400-6-10	Hydraulic Fitting - Male JIC - Male ORB
5	1	HF 6801-6-8	Hyd Fitting - Male JIC - Male ORB 90°
6	2	HF 6801-8-10	Hyd. Fitting - 1/2" JIC - 5/8" 90° Elbow
7	2	HF 6801-8-8	Hyd. Fitting- 1/2" JIC- 1/2" SAE 90 Deg Elbow
8	2	HF 8010-4	Quickcoupler 1/2" Male Tip

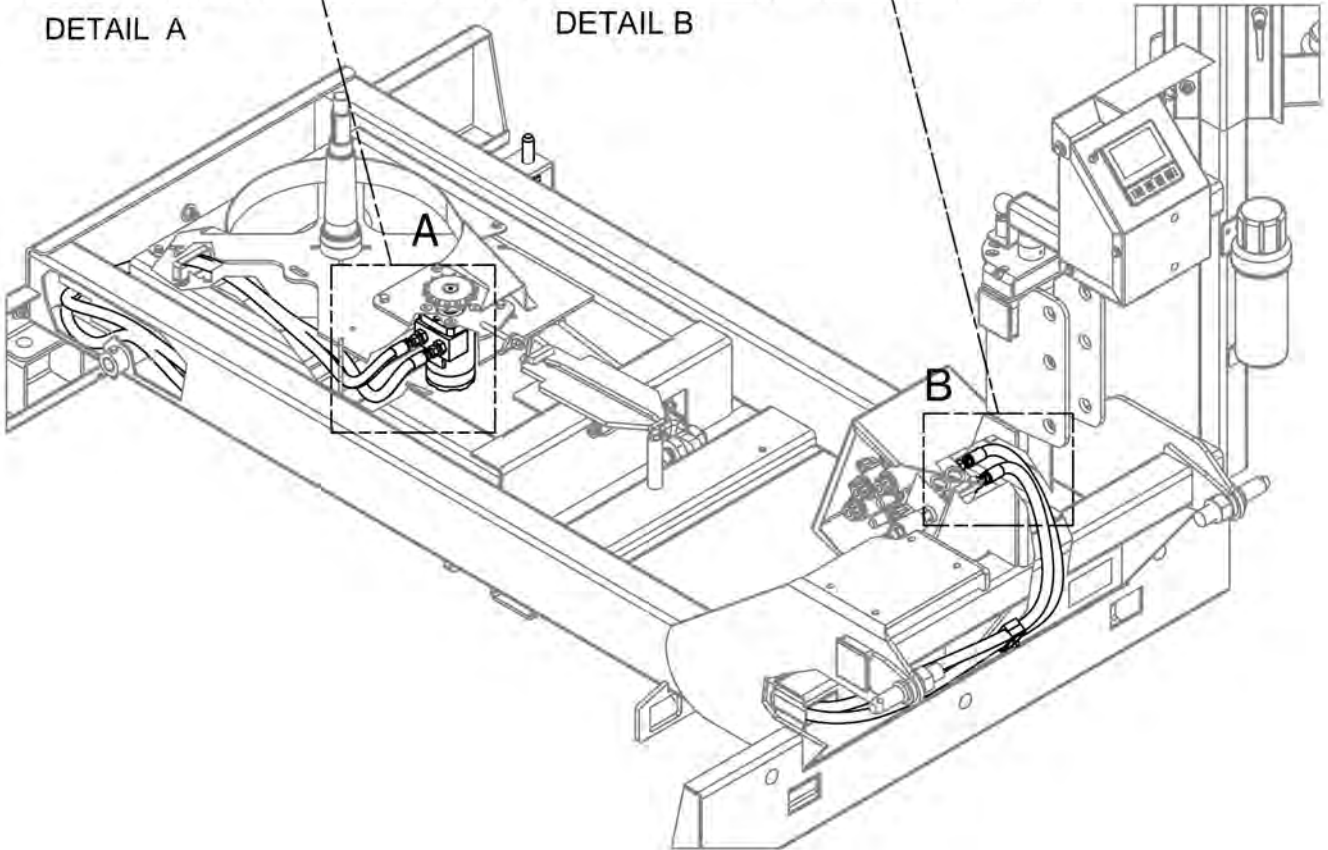
## Turntable Circuit



DETAIL A

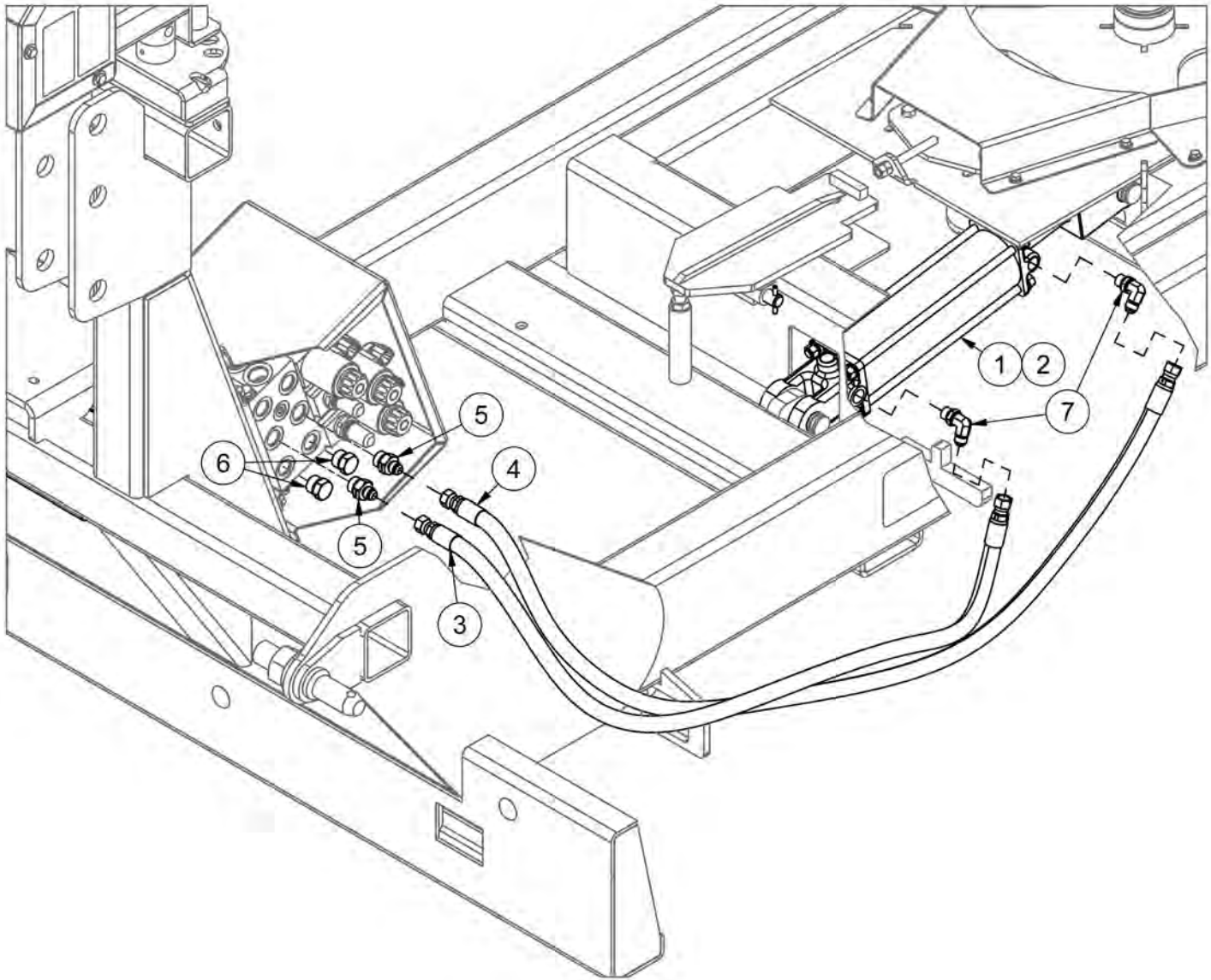


DETAIL B



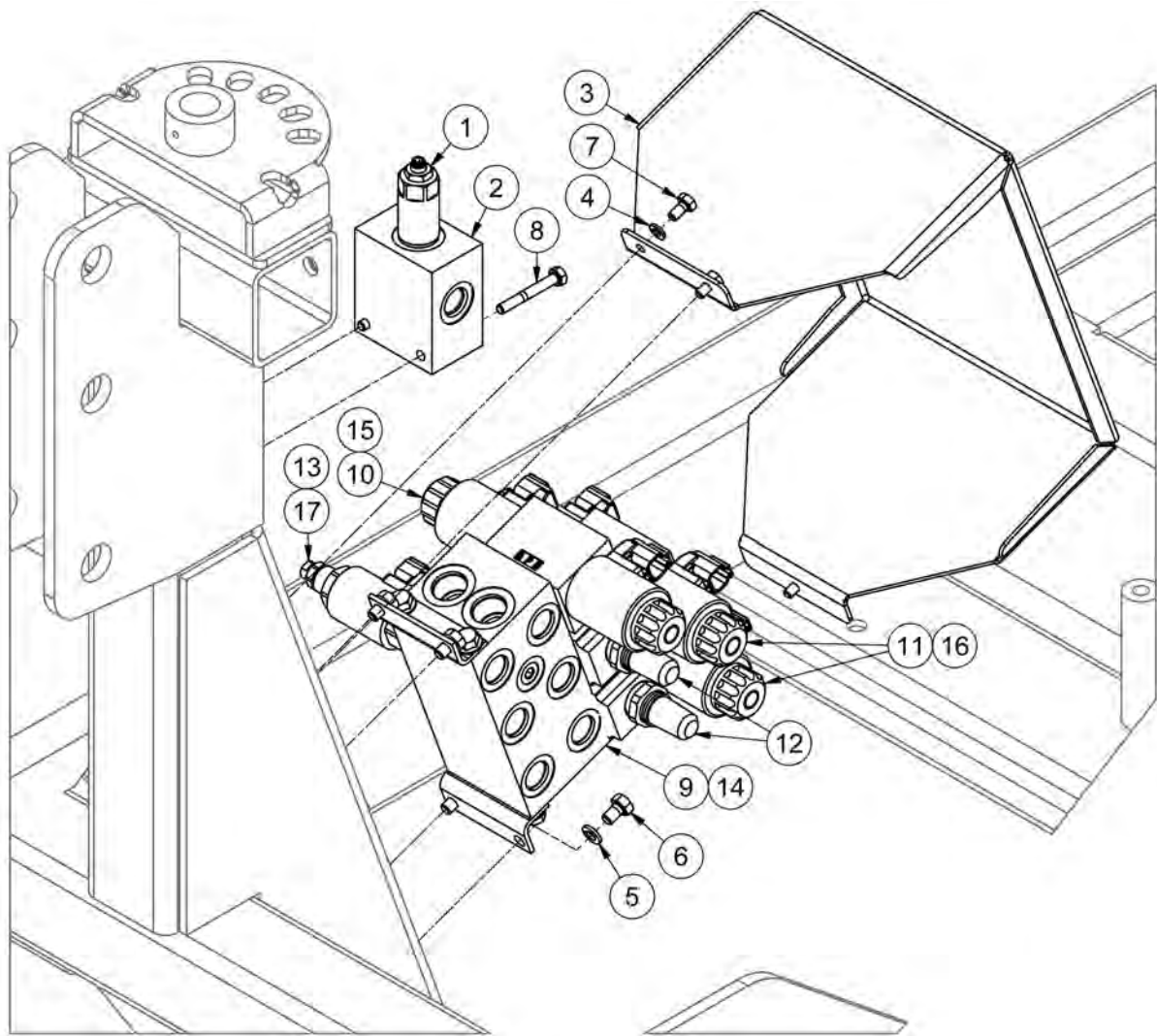
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	TL5X2-200-050	Hydraulic Motor M+S
2	1	SKMLHPQUDE	Seal Kit for 200 & 400 Series Motors (for MLHPQ-U/D)
3	1	LA-HOSE CLAMP	Hose Clamps for 3/8 Hose
4	2	31718	Hose - HH140- 6AT1(6FJX-6FJX) HCL 140"
5	2	HF 2404-6-8	Hyd. Fitting - Male JIC - Male Pipe
6	2	HF 6400-6-8	Hyd Fitting -Male JIC - Male ORB

## Cylinder Circuit



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	TL500-100-082	Hydraulic Cylinder 2.5" Bore x 8" Stroke
2	1	SK AGU251125-10	Seal Kit for 25 Series Cylinder
3	1	30658	Hose - HH95- 6AT1(6FJXH-6FJXH)HCL 95"
4	1	35710	Hose - HH66 - 6AT1(6FJX,6FJX) HCL 66"
5	2	HF 6400-6-8	Hyd Fitting -Male JIC - Male ORB
6	2	HF 6408-8	Hex Plug #8 O-Ring Boss Plug
7	2	HF 6801-6-6	Hydraulic Fitting - 90 Degree JIC to O-Ring

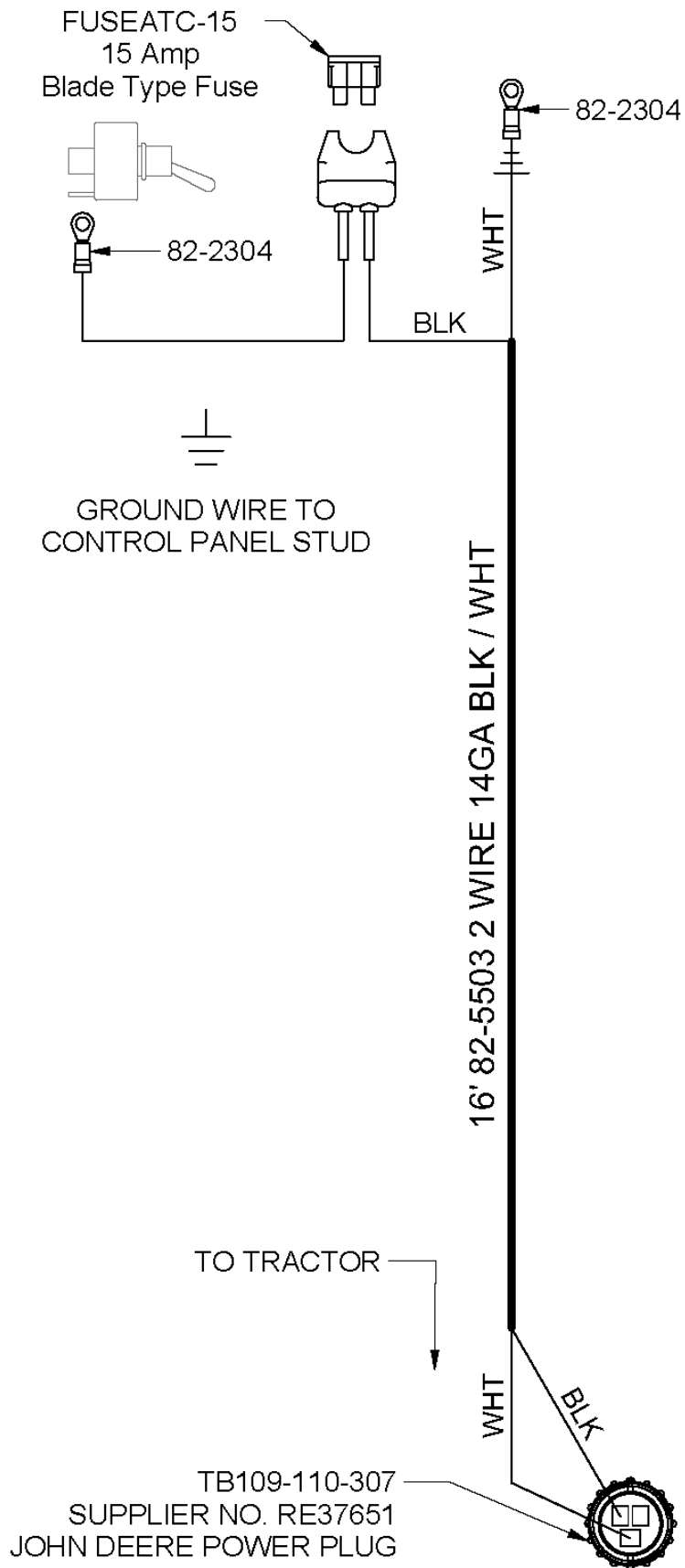
## Manifold Breakdown



ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	2	46151	Pressure-Compensated Flow Control	
2	2	46161	Valve Line Body	
3	1	48316	TL1000 Auto Manifold Cover	
4	3	LW 1/4	LW - 1/4" Zinc Plated Medium Split	
5	4	LW 5/16	LW - 5/16" Zinc Plated Medium Split	
6	4	HB5/16-18X0.5Z5	Hex Bolt 5/16-18x1/2 Grade 5 Zinc Plated Hex Cap Screw	
7	3	HB1/4-20X0.5Z5	Hex Bolt 1/4-20x1/2 Grade 5 Zinc Plated Hex Cap Screw	
8	2	HB1/4-20X2Z5	Hex Bolt 1/4-20x2 Grade 5 Zinc Plated Hex Cap Screw	
9	1	46148	TL1700 Auto Manifold Assembly	Incl. Items 10-17
10	1	46156	Proportional Valve	
11	2	46157	Directional Control Valve	
12	2	46158	Flow Control Valve	
13	1	46159	Unloading/Relief Valve	
14	1	46160	Aluminum Bar Manifold	
15	2	46162	Proportional Valve Coil	
16	4	46163	Directional Control Valve Coil	
17	1	46164	Unload/Relief Valve Coil	

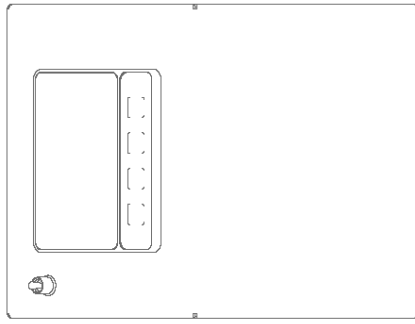
# Section 3: Electrical

## TL1100R-A Electrical Layout - Tractor Harness



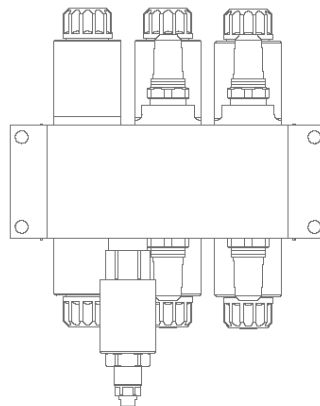
# Electrical Layout - Manifold Ground Cable

83-2304

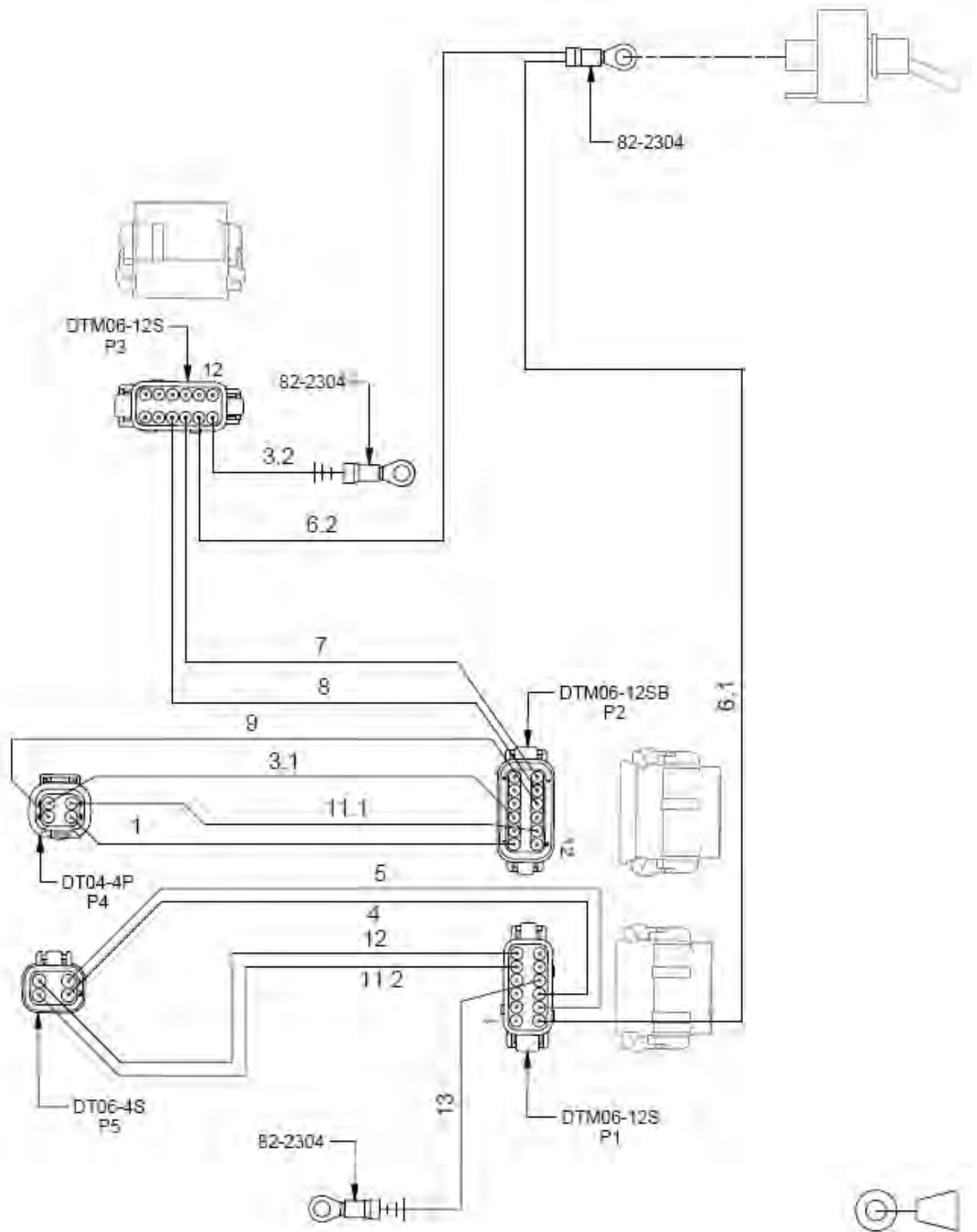


14 GA BLK 60"

83-2457



# Electrical Layout - Control Panel Harness



 GROUND TERMINALS TO CONTROL PANEL STUD

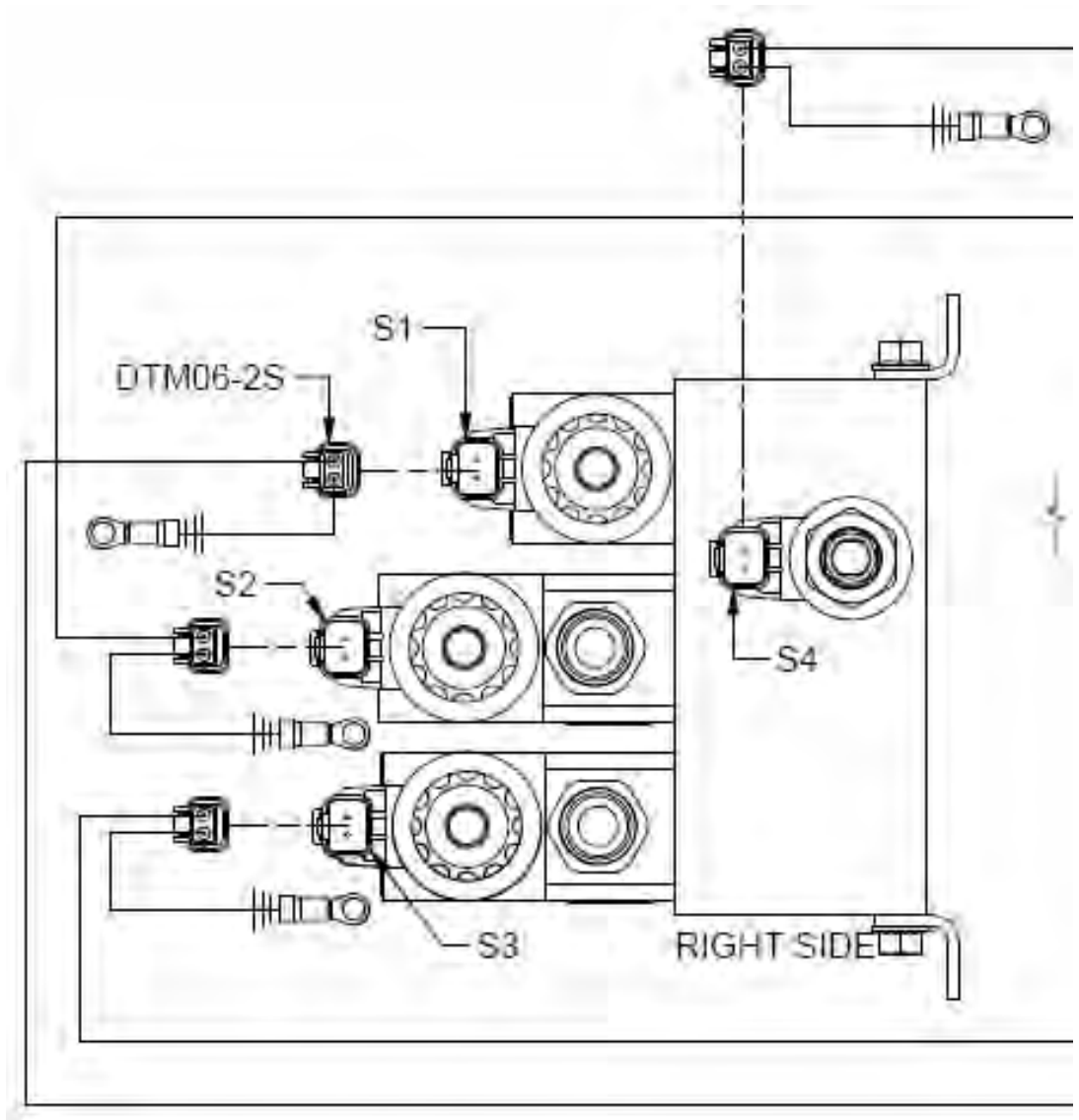
## Electrical Layout - Control Panel Harness

<b>WIRES &amp; CONNECTIONS</b>							
<b>WIRE NO.</b>	<b>WIRE COLOR</b>	<b>WIRE GA</b>	<b>LENGTH</b>	<b>CON 1</b>	<b>CON 1 PIN NO.</b>	<b>CON 2</b>	<b>CON 2 PIN NO.</b>
1	BLK	14	7.5"	P2	1	P4	3
3.1	BLK	14	7.5"	P2	3	P4	1
3.2	BLK	14	12"	P3	1	-	-
4	BLK	14	6.5"	P1	4	P5	2
5	BLK	14	6.5"	P1	5	P5	1
6.1	BLK	14	8.5"	P1	6	-	-
6.2	BLK	14	8.5"	P3	2	-	-
7	BLK	14	14"	P2	7	P3	3
8	BLK	14	14"	P2	8	P3	4
9	BLK	14	7.5"	P2	9	P4	2
11.1	BLK	14	7.5"	P2	11	P4	4
11.2	BLK	14	6.5"	P1	11	P5	3
12	BLK	14	6.5"	P1	12	P5	4
13	YEL/GRN	14	11"	P1	3	-	-

<b>CONNECTORS</b>	
<b>SUPPLIER PN</b>	<b>CON</b>
DTM06-12S	P1, P3
DTM06-12SB	P2
DT06-4S	P5
DT04-4P	P4
83-2304	-



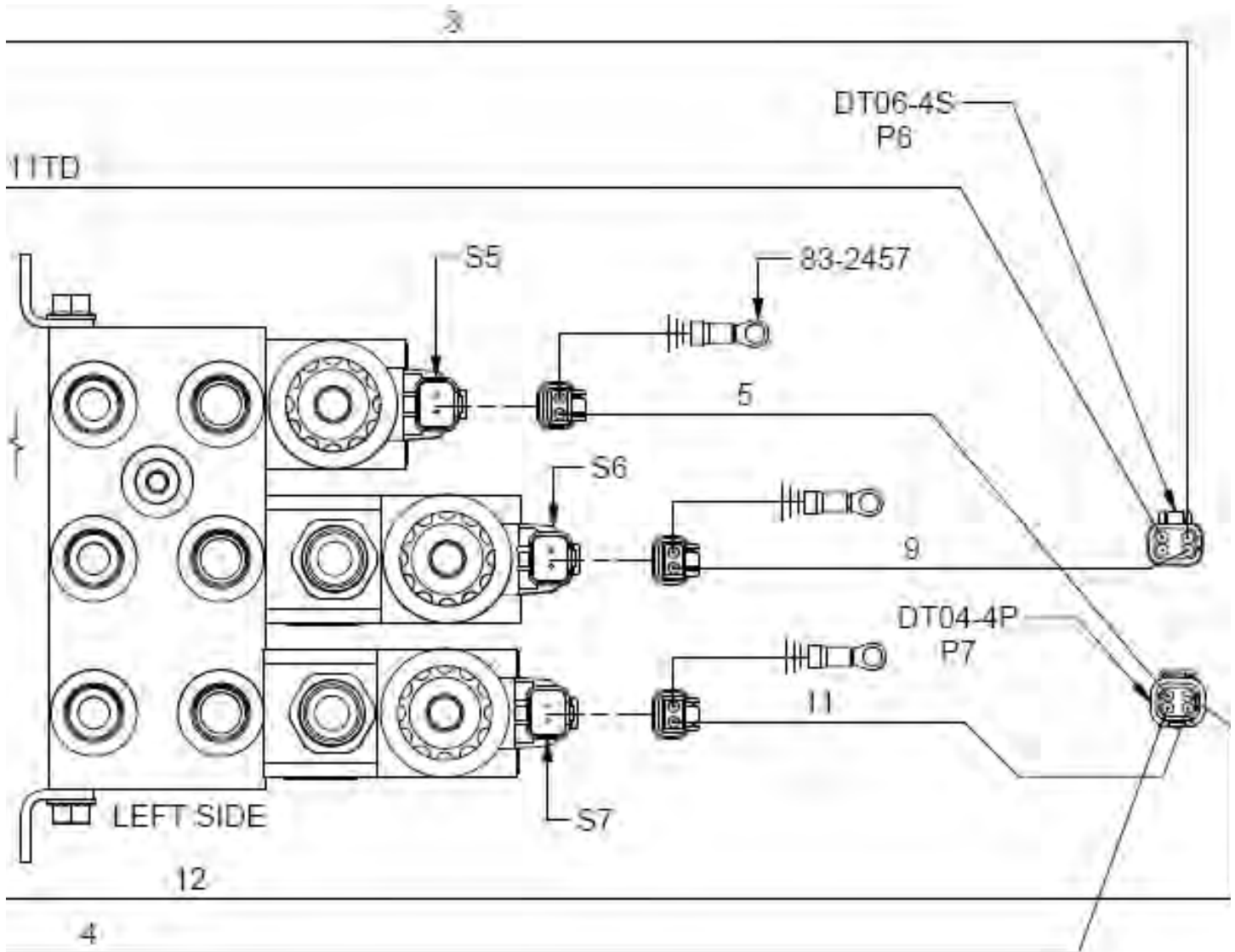
## Electrical Layout - Manifold Harness



All 7 ground wires are BLK 14GA 12" long and connected to frame ground stud and pin 2 of DTM06-2S

WIRES & CONNECTIONS							
WIRE NO.	WIRE COLOR	WIRE GA	LENGTH	CON 1	CON 1 PIN NO.	CON 2	CON 2 PIN NO.
3	BLK	14	60"	P6	4	S4	1
4	BLK	14	60"	P7	2	S1	1
5	BLK	14	60"	P7	1	S5	1
9	BLK	14	60"	P6	2	S6	1
11	BLK	14	60"	P7	3	S7	1
11TD	BLK	14	60"	P6	3	S2	1
12	BLK	14	60"	P7	4	S3	1

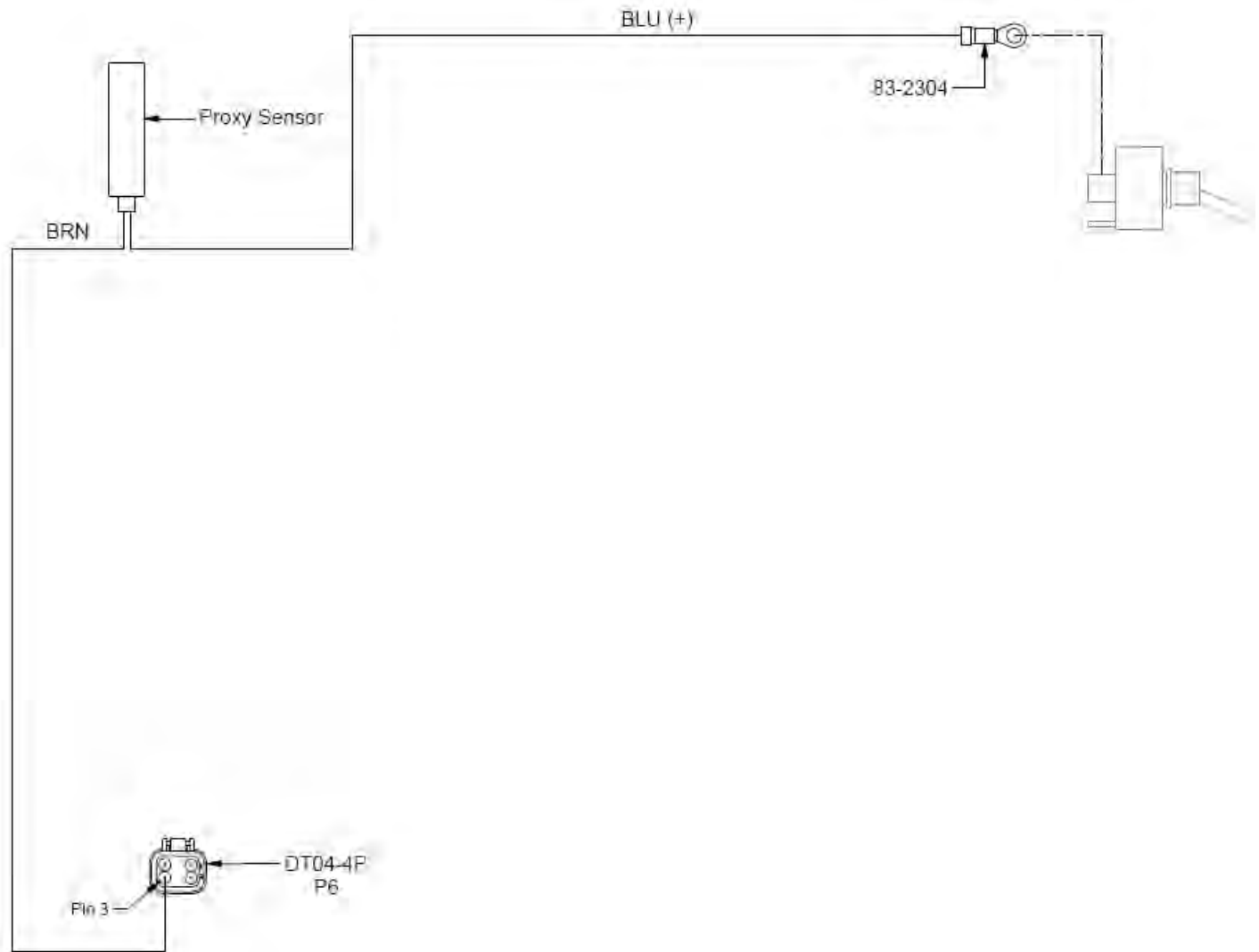
## Electrical Layout - Manifold Harness



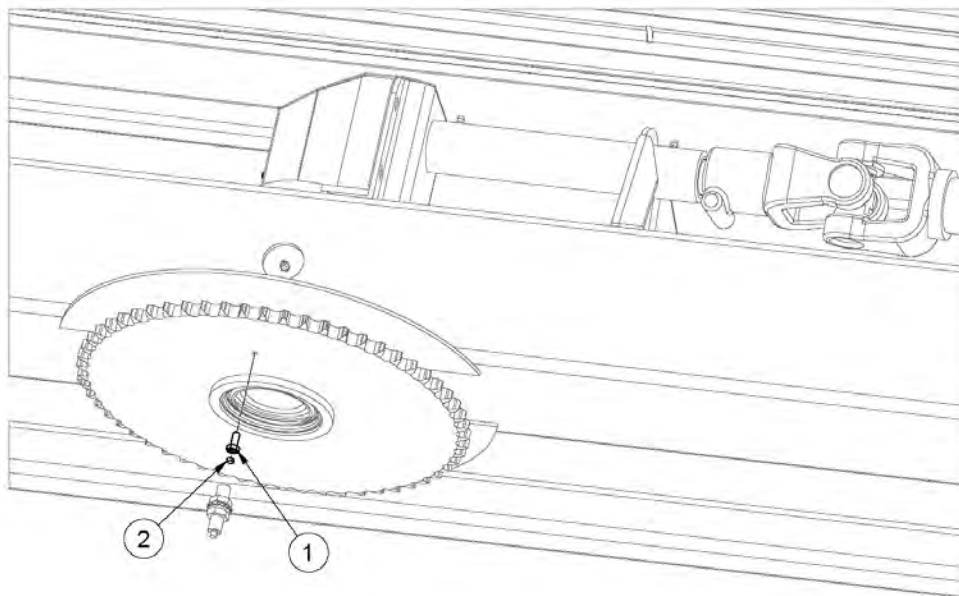
All 7 ground wires are BLK 14GA 12" long and connected to frame ground stud and pin 2 of DTM06-2S

SOLENOIDS		CONNECTORS	
SOLENOID NO.	FUNCTION	SUPPLIER PN	CON
S1	REVERSE ROTATION	DTM06-2S	S1- S7
S2	TIP DOWN	DT06-4S	P6
S3	CUT + HOLD ON	DT04-4P	P7
S4	UNLOAD	83-2457	ALL GROUNDS
S5	FORWARD ROTATION		
S6	TIP UP		
S7	CUT + HOLD OFF		

## Electrical Layout - Turntable Proxy Sensor



## Turntable Proxy Sensor Magnet

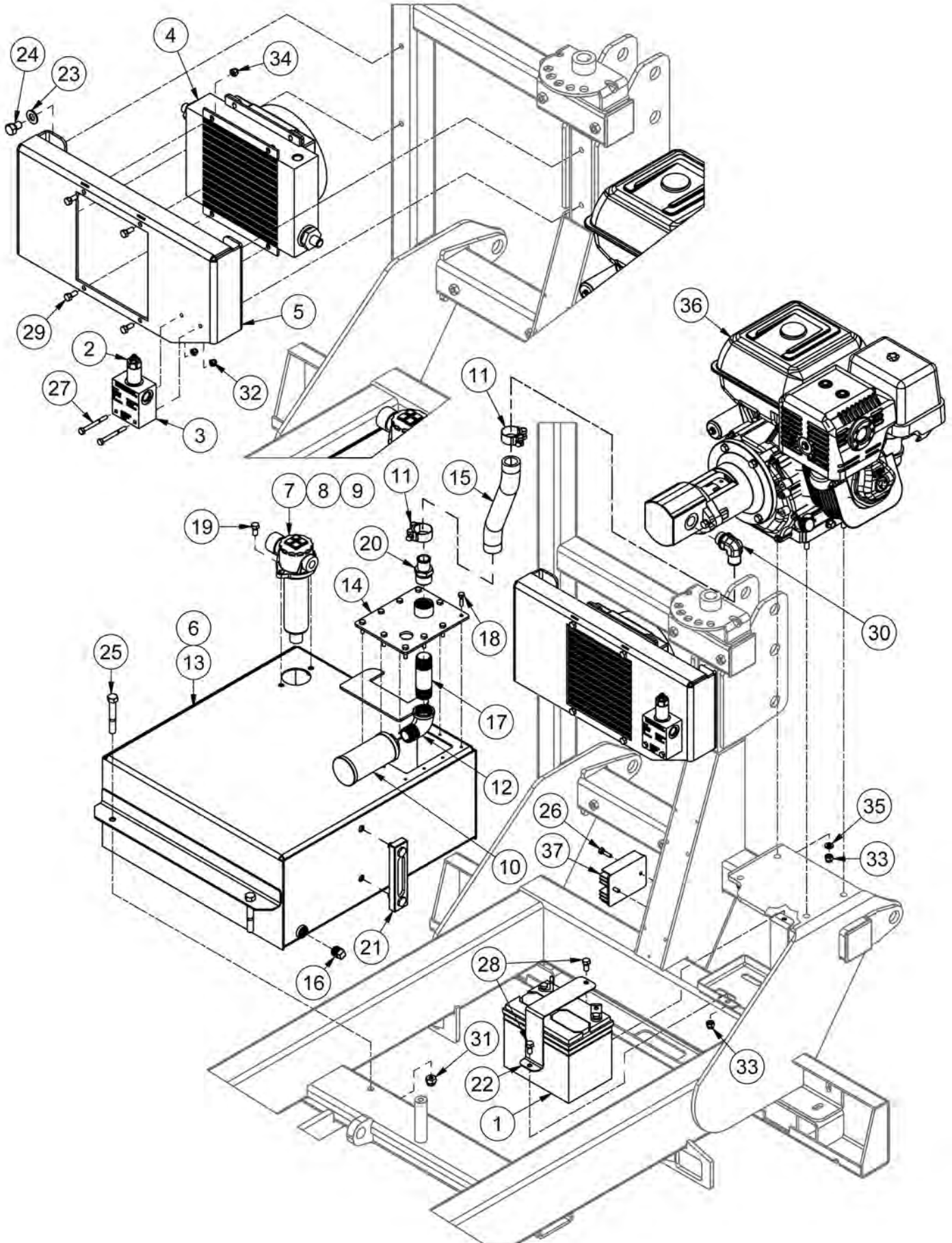


ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	46226	Machined Bolt
2	1	46227	1700 Auto Proxy Magnet

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# Section 4: Power Pack Option

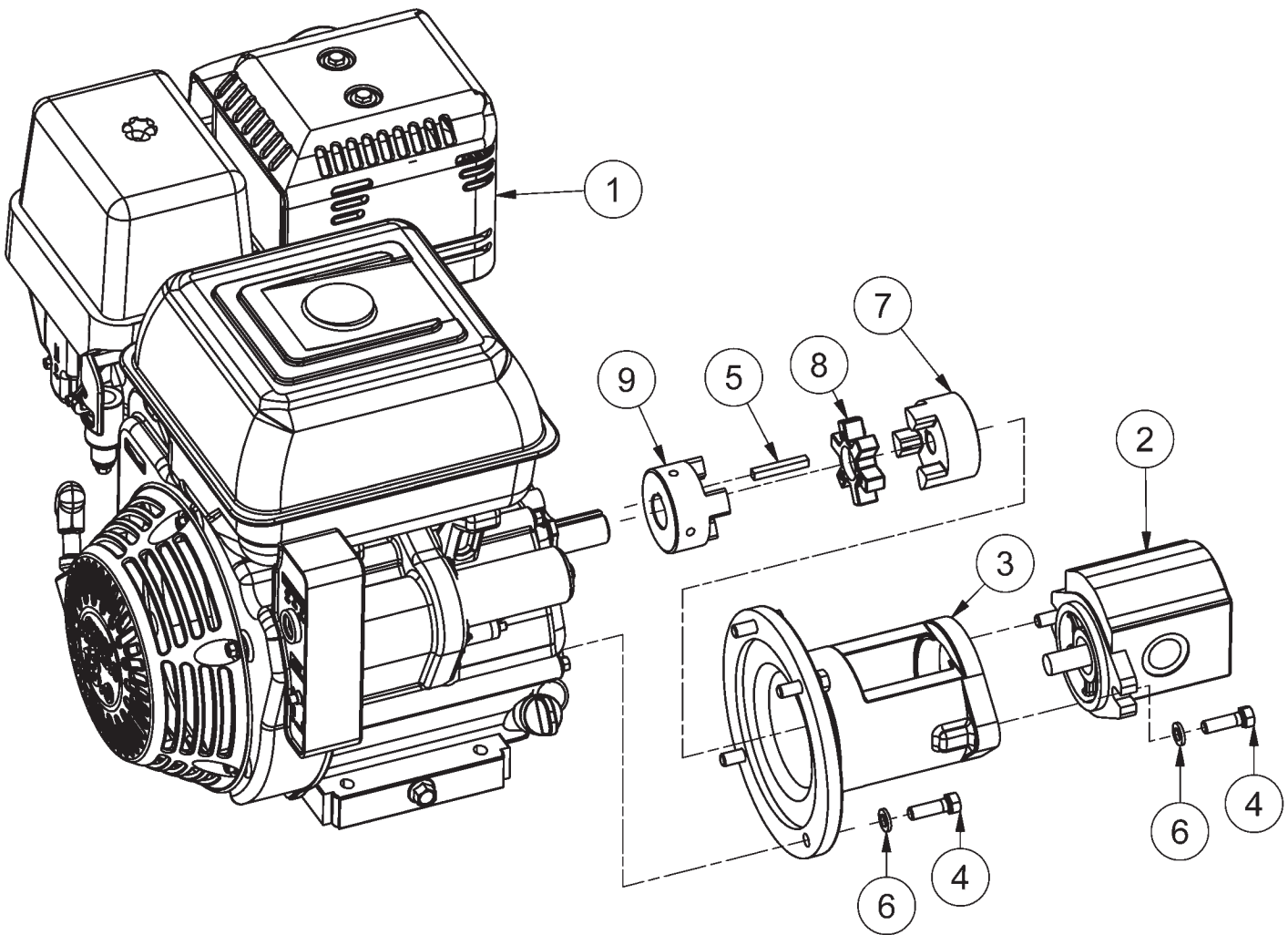
## Power Pack



## Power Pack

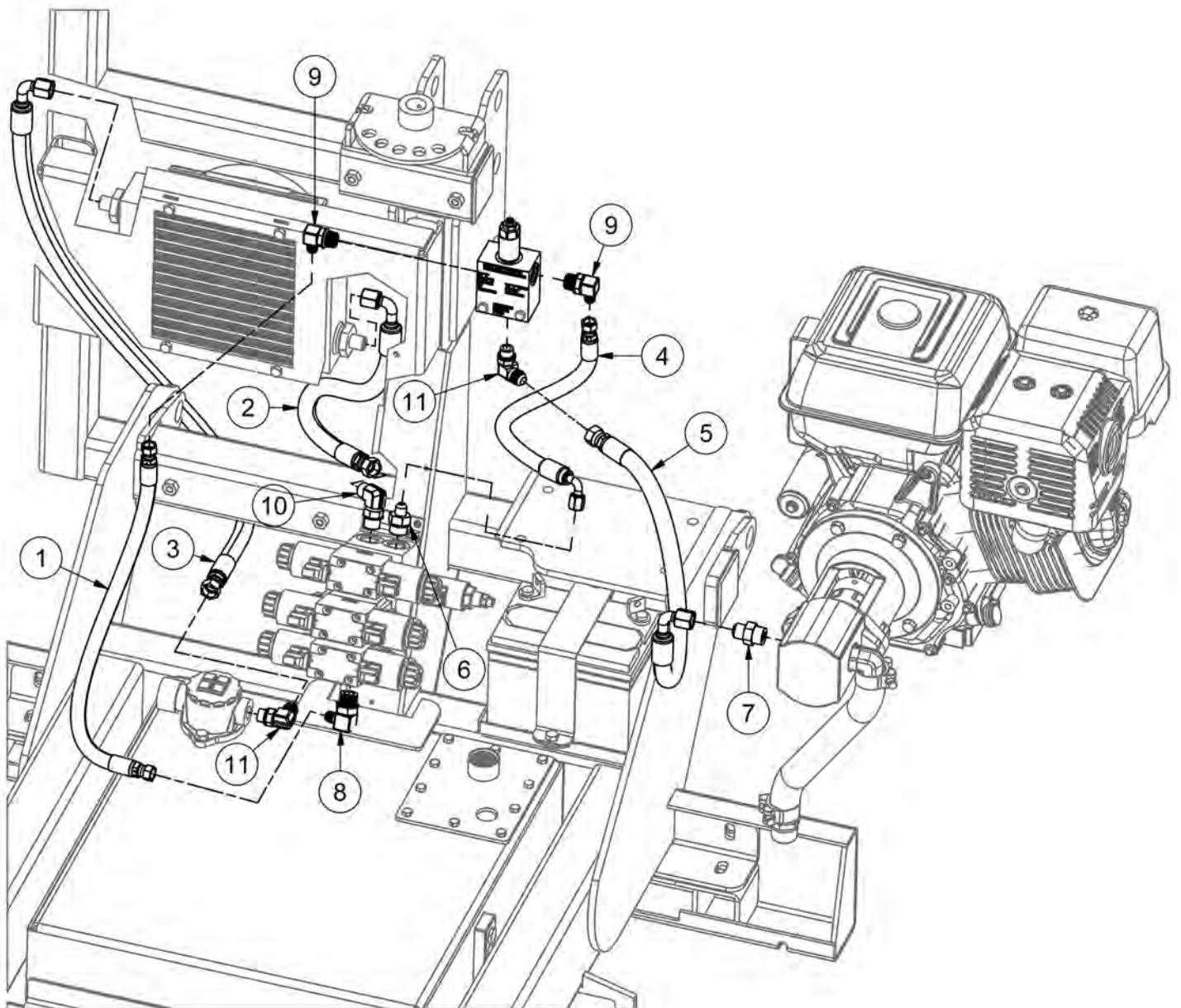
ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	1	45924	SP-40 Battery	
2	1	46151	Pressure-Compensated Flow Control	
3	1	46161	Valve Line Body	
4	1	47494	Hydraulic Cooler	
5	1	48310	Cooler Bracket	
6	1	48437	TL1000R Auto Hyd. Tank (Complete)	Inc. Items 7-21
7	1	46260	Complete Return Filter	Inc. Items 8,9
8	1	46258	Return Filter / Breather	
9	1	46259	10 micron Filter for SLF1 Top Tank Filter Head	
10	1	46262	IFP-13 Suction Strainer	
11	2	46263	MKL-039-SP Suction Hose Clamp	
12	1	46265	90° Elbow Adapter, 1 NPT Female x Male	
13	1	48301	TL1100R Auto Hyd. Tank	
14	1	48324	TL1100R Tank Lid	
15	1	48432	3.875" TLB 100 Suction Hose	
16	1	48433	1/2" NPT Plug	
17	1	48435	1" x 4" Nipple Black Pipe	
18	10	HB1/4-20X1Z5	Hex Bolt 1/4-20x1 Grade 5 Zinc Plated Hex Cap Screw	
19	2	HB3/8-16X0.75Z5	Hex Bolt 3/8-16x3/4 Grade 5 Zinc Plated Hex Cap Screw	
20	1	HF 4404-16-16	Hyd. Fitting - 1" Barb - 1" Pipe	
21	1	TL500-100-171	Sight Gauge	
22	1	49506	TL1100R Battery Hold Down	
23	4	FW 1/2	Flatwasher - 1/2" Zinc Plated USS	
24	4	HB1/2-13X0.75Z5	Hex Bolt 1/2-13x3/4 Grade 5 Zinc Plated Hex Cap Screw	
25	2	HB1/2-13X3.25Z5	Hex Bolt 1/2-13x3 1/4 Grade 5 Zinc Plated Hex Cap Screw	
26	2	HB1/4-20X1Z5	Hex Bolt 1/4-20x1 Grade 5 Zinc Plated Hex Cap Screw	
27	2	HB1/4-20X2.5Z5	Hex Bolt 1/4-20x2 1/2 Grade 5 Zinc Plated Hex Cap Screw	
28	2	HB3/8-16X0.75Z5	Hex Bolt 3/8-16x3/4 Grade 5 Zinc Plated Hex Cap Screw	
29	4	HB5/16-18X0.75Z5	Hex Bolt 5/16-18x3/4 Grade 5 Zinc Plated Hex Cap Screw	
30	1	HF 4601-16-12	90° Adapter - 1" Hose Barb - 1.063" ORB	
31	2	LN1/2-13NCZ5	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut	
32	2	LN1/4-20NCZ5	LN 1/4-20 Zinc Plated Nylon Insert Lock Nut	
33	6	LN3/8-16NCZ5	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut	
34	4	LN5/16-18NCZ5	LN 5/16-18 Zinc Plated Nylon Insert Lock Nut	
35	4	LW 3/8	LW - 3/8" Zinc Plated Medium Split	
36	1	TL13HP	13 HP Honda Engine	Brkdwn Pg.4-3
37	1	TL31750-Z2E-803	Rectifier Honda, GX630 20HP	

## 13HP Honda Engine



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	TL5X2-100-200	13 HP Honda 18 Amp. Engine
2	1	45971	1700 Gear Pump (6GPM)
3	1	46256	13HP Engine to 6GPM Pump
4	6	HB 3/8-16X1.25 Z5	Hex Bolt 3/8-16x1 1/4 Grade 5 Zinc Plated Hex Cap Screw
5	1	KS40960	Key .25 x 1.75
6	6	LW 3/8	LW - 3/8" Zinc Plated Medium Split
7	1	TL500-100-183	Lovejoy Coupling Pump Side
8	1	TL500-100-184	Coupling Spacer
9	1	TL500-100-185	Love Joy Coupling Engine Side

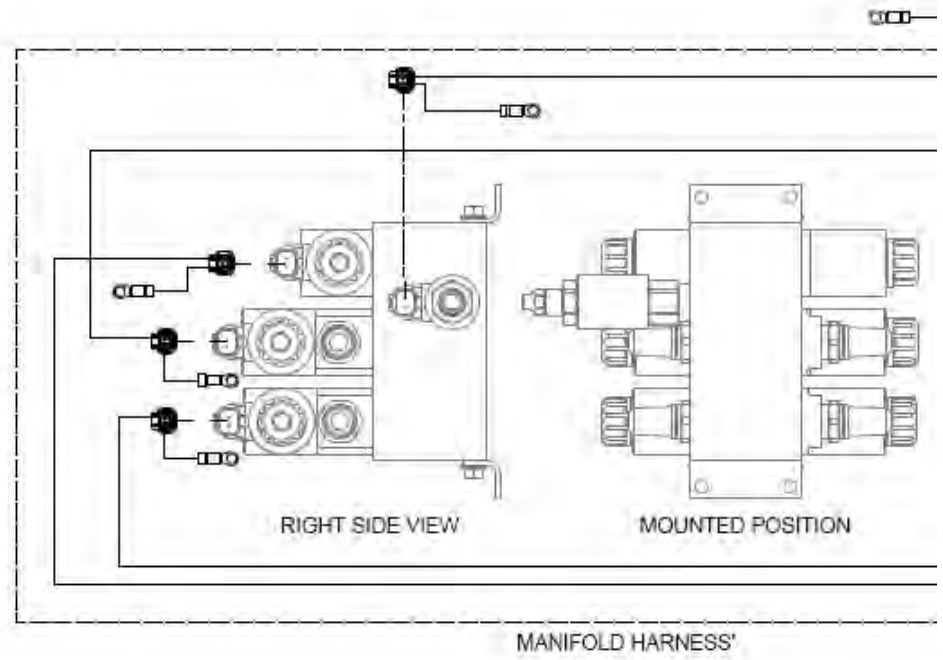
## Power Pack Circuit



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	23558	Hose - HH26 - 6AT1(6FJXH,6FJX90°) HCL 26"
2	1	26218	Hose - HH18 - 8AT1(8FJXH,8FJX90°) HCL 18"
3	1	49296	Hose - HH35 - 8AT1(8FJXH,8FJX90°) HCL 35"
4	1	49297	Hose - HH19 - 6AT1(6FJXH,6FJX90°) HCL 19"
5	1	49298	Hose - HH12 - 8AT1(8FJXH,8FJX90°) HCL 12"
6	1	HF 6400-6-10	Hydraulic Fitting - Male JIC - Male ORB
7	1	HF 6400-8-10	Hyd Fitting - Male JIC - Male ORB
8	1	HF 6801-6-10	Hydraulic Fitting - 90° JIC to O-Ring
9	2	HF 6801-6-8	Hyd Fitting - Male JIC - Male ORB 90°
10	1	HF 6801-8-10	Hyd. Fitting - 1/2" JIC - 5/8" 90° Elbow
11	2	HF 6801-8-8	Hyd. Fitting- 1/2" JIC- 1/2" SAE 90 Deg Elbow

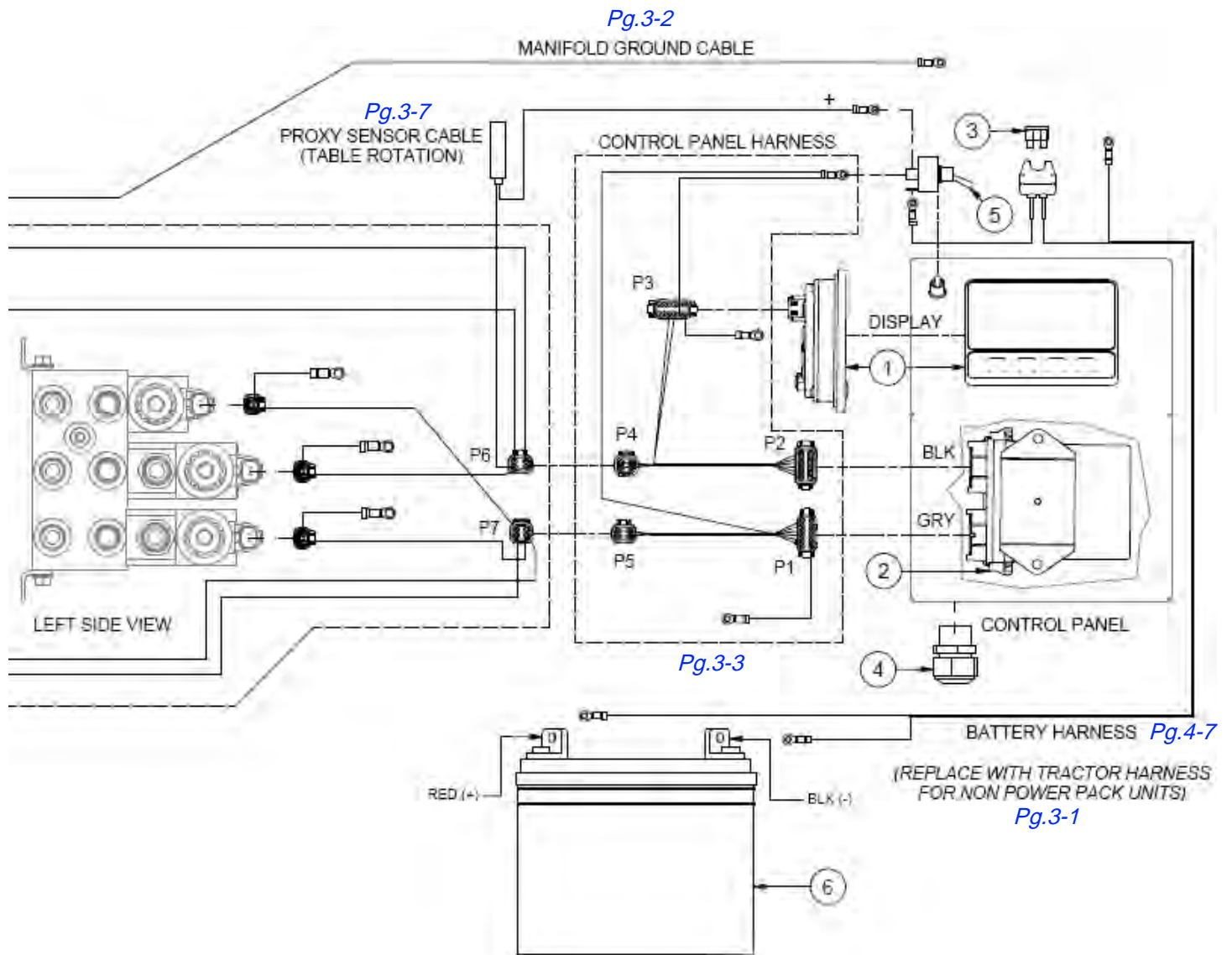


# Electrical Layout - Overview



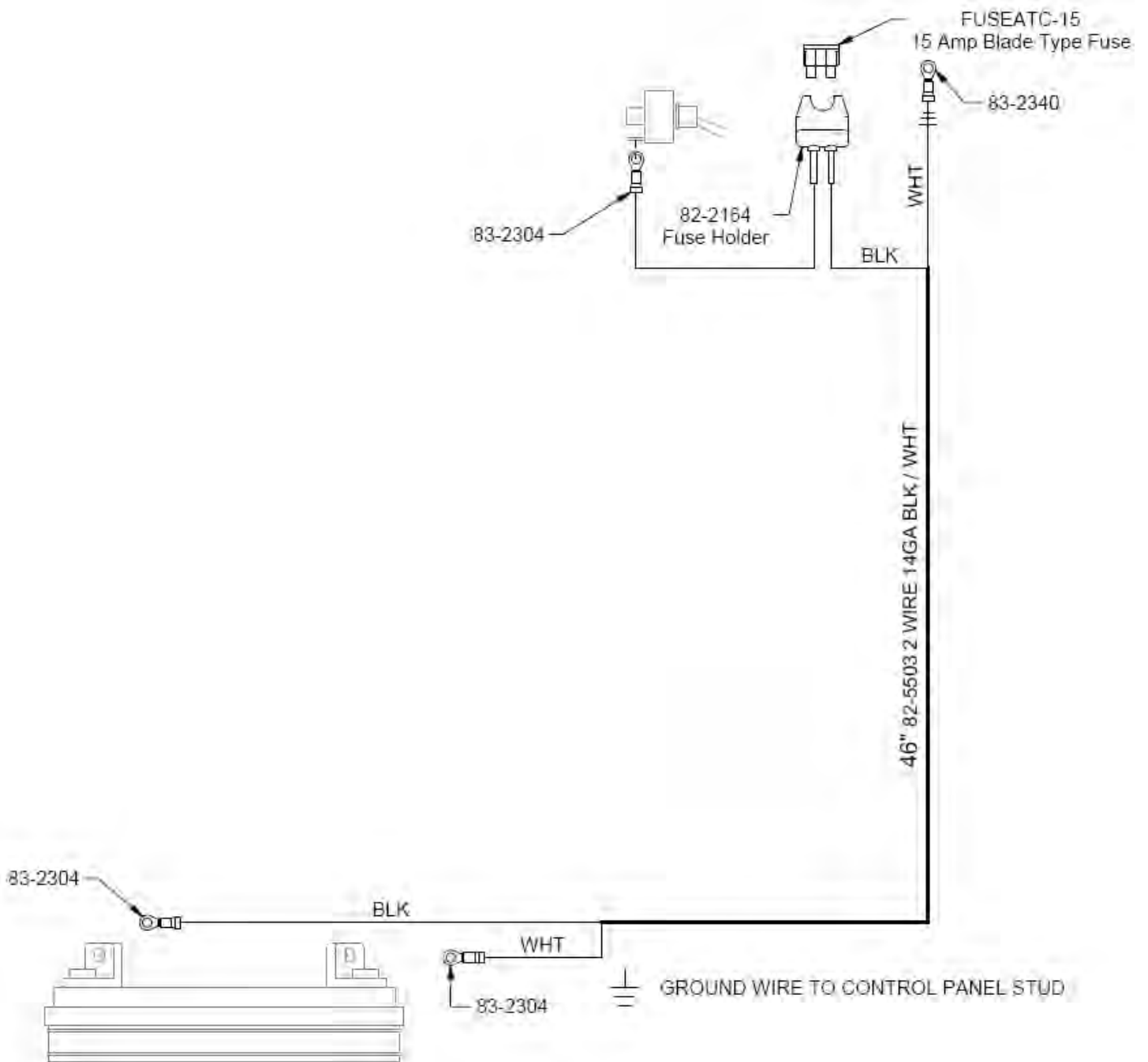
*Pg.3-5*

# Electrical Layout - Overview











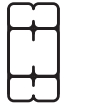

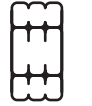
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	46147	1700 Display
2	1	46149	TL1700 Base Unit
3	1	FUSEATC-15	15 AMP Blade Fuse
4	1	TL182-175	Cable Strain Relief
5	1	TL550-200-235	Toggle Switch (ON-OFF)
6	1	45924	SP-40 Battery

# TL1100R-AP Electrical Battery Layout



*Intentionally Left Blank*

# Torque Values - Imperial

SAE Grade and Head Markings	NO MARK	1 or 2 <sup>b</sup>	5	5.1	5.2	8	8.2
							
SAE Grade and Nut Markings	NO MARK	2	5		8		
							

Size	Grade 1				Grade 2 <sup>b</sup>				Grade 5, 5.1, or 5.2				Grade 8 or 8.2			
	Lubricated <sup>a</sup>		Dry <sup>a</sup>		Lubricated <sup>a</sup>		Dry <sup>a</sup>		Lubricated <sup>a</sup>		Dry <sup>a</sup>		Lubricated <sup>a</sup>		Dry <sup>a</sup>	
	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft
1/4	3.7	2.8	4.7	3.5	6	4.5	7.5	5.5	9.5	7	12	9	13.5	10	17	12.5
5/16	7.7	5.5	10	7	12	9	15	11	20	15	25	18	28	21	35	26
3/8	14	10	17	13	22	16	27	20	35	26	44	33	50	36	63	46
7/16	22	16	28	20	35	26	44	32	55	41	70	52	80	58	100	75
1/2	33	25	42	31	53	39	67	50	85	63	110	80	120	90	150	115
9/16	48	36	60	45	75	56	95	70	125	90	155	115	175	130	225	160
5/8	67	50	85	62	105	78	135	100	170	125	215	160	240	175	300	225
3/4	120	87	150	110	190	140	240	175	300	225	375	280	425	310	550	400
7/8	190	140	240	175	190	140	240	175	490	360	625	450	700	500	875	650
1	290	210	360	270	290	210	360	270	725	540	925	675	1050	750	1300	975
1-1/8	400	300	510	375	400	300	510	375	900	675	1150	850	1450	1075	1850	1350
1-1/4	570	425	725	530	570	425	725	530	1300	950	1650	1200	2050	1500	2600	1950
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2150	1550	2700	2000	3400	2550
1-1/2	1000	725	1250	925	990	725	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

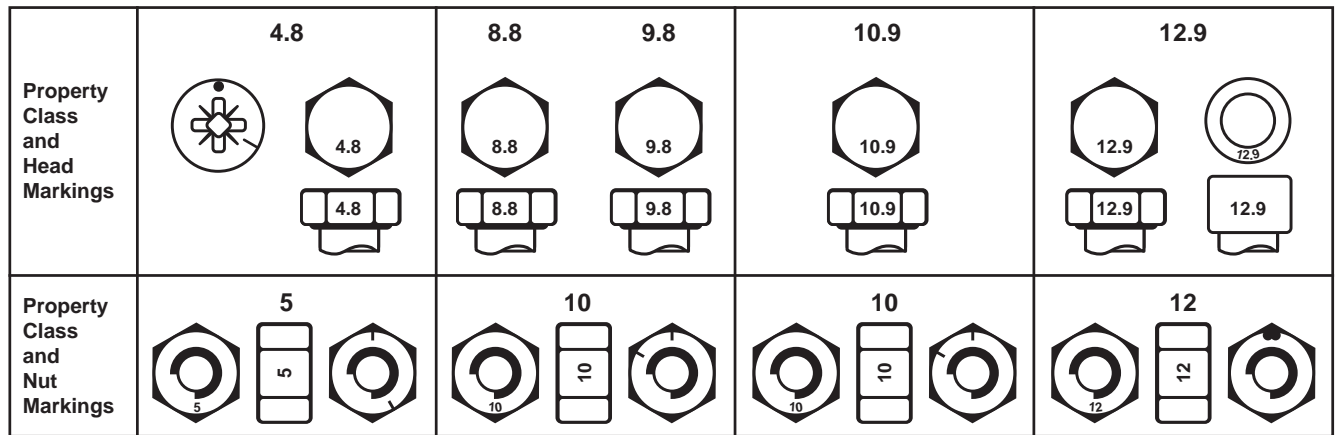
Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

<sup>a</sup> "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated without any lubrication.

<sup>b</sup> Grade 2 applies for hex cap screws (not hex bolts) up to 152 mm (6-in.) long. Grade 1 applies for hex cap screws over 152 mm (6-in.) long, and for all other types of bolts and screws of any length.

# Torque Values - Metric



Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated <sup>a</sup>		Dry <sup>a</sup>		Lubricated <sup>a</sup>		Dry <sup>a</sup>		Lubricated <sup>a</sup>		Dry <sup>a</sup>		Lubricated <sup>a</sup>		Dry <sup>a</sup>	
	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft
M6	4.8	3.5	6	4.5	9	6.5	11	8.5	13	9.5	17	12	15	11.5	19	14.5
M8	12	8.5	15	11	22	16	28	20	32	24	40	30	37	28	47	35
M10	23	17	29	21	43	32	55	40	63	47	80	60	75	55	95	70
M12	40	29	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	47	80	60	120	88	150	110	175	130	225	165	205	150	260	190
M16	100	73	125	92	190	140	240	175	275	200	350	255	320	240	400	300
M18	135	100	175	125	260	195	330	250	375	275	475	350	440	325	560	410
M20	190	140	240	180	375	275	475	350	530	400	675	500	625	460	800	580
M22	260	190	330	250	510	375	650	475	725	540	925	675	850	625	1075	800
M24	330	250	425	310	650	475	825	600	925	675	1150	850	1075	800	1350	1000
M27	490	360	625	450	950	700	1200	875	1350	1000	1700	1250	1600	1150	2000	1500
M30	675	490	850	625	1300	950	1650	1200	1850	1350	2300	1700	2150	1600	2700	2000
M33	900	675	1150	850	1750	1300	2200	1650	2500	1850	3150	2350	2900	2150	3700	2750
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2750	4750	3500

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class.

Fasteners should be replaced with the same or higher property class. If higher property class fasteners are used, these should only be tightened to the strength of the original.

Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

<sup>a</sup> "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated without any lubrication.

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**CALIFORNIA**

**Proposition 65 Warning**

Battery posts, terminals, and similar parts may contain lead which are known to the State of California to cause cancer and reproductive harm. Wear gloves and wash hands after handling.



**WARNING**

The engine exhaust from this product contains chemicals known in the state of California to cause cancer, birth defects, or other reproductive harm.

**TUBE•LINE™**