

TUCKERBILT®

T-644

6-Yard Concrete
Transport Vehicle



PARTS MANUAL

Revised: February 1, 2022

Contents

- Air System Components 1
 - Air System Schematic 1
 - Air System Schematic BOM 2
 - Governor Assembly Hardware 3
 - Air Dryer Assembly Hardware 4
 - Air Tank Assembly Hardware..... 5
 - Air Valve Assembly Hardware..... 6
 - Air Valve CAN Bus Splitter Assembly Hardware..... 7
 - Foot Brake Valve Hardware Assembly..... 8
- Bumper..... 9
 - Bumper, Front 9
 - Bumper, Rear 10
 - Bumper Inserts 11
- Cab 12
 - Cab Assembly Components 12
 - Cab Assembly Components BOM 13
 - Cab Components, Driver Door 14
 - Cab Components, Seat 15
 - Cab Glass 16
 - Cab AC/Heater..... 17
 - Cab Components, Cab Duct Assembly Hardware 18
 - Cab Filter Tube Assemblies..... 19
 - Cab Pierce Plate Assembly..... 20
 - Cab Upper Instrument Panel 21
 - Cab Upper Instrument Panel Electrical..... 22
 - Cab Electrical Panel Assembly 23
 - Cab Electrical Panel Subplate 24
 - Cab Panel Fuses-Relays 25
 - Cab Electrical Schematic..... 26
 - Cab Electrical BOM 27
- CAN Bus..... 28
 - CAN Bus Schematic..... 28
 - CAN Bus BOM 29
- Chute..... 30
 - Chute Cover Doors 30
 - Chute Replacement Kit..... 31

Auger – 23 Ft	32
Auger Front Drive Assembly Hardware	33
Auger Front Drive Assembly BOM	34
Sprocket Bushing Installation Instructions	35
Installing Sprocket Bushings:	35
Removing Sprocket Bushings:	35
Auger Sprocket Installation	36
Front Drive Rear Bearing Housing	37
Slide Gate	38
Engine.....	39
Engine Electrical Panel Assembly	39
Engine Electrical Panel Subplate.....	40
Engine Panel Fuses	41
Engine Electrical Panel Tier 4 Final Schematic 1.....	42
Engine Electrical Panel Tier 4 Final Schematic 2.....	43
Engine Electrical Panel Tier 4 Final, 5 Volt Schematic 3.....	44
Engine Electrical Panel BOM Tier 4 Final	45
Fuel Manifold	46
JCB Tier 4 Pump to Engine Drive Plate	47
JCB Tier 4 Pumps Hardware	48
Auger Valve Bracket Assembly Hardware.....	49
Engine Base	50
Engine Base Components.....	50
Engine Base Assembly Hardware	51
Engine Base Assembly BOM	52
Engine Base Back Door Hardware	53
Engine Base Right Door	54
Engine Base Left Door	55
Engine Base Roof Hardware	56
Engine Base Back Wall & Exhaust Tier 4Final Only	57
Engine Bay Door Power Unit	58
Engine Bay Door Power Unit BOM	59
Filter List.....	60
Frame	61
Lower Frame Assembly Components.....	61
Wheel Assemblies	62
Pro-Trac Construction Tires.....	63
Front Frame.....	64

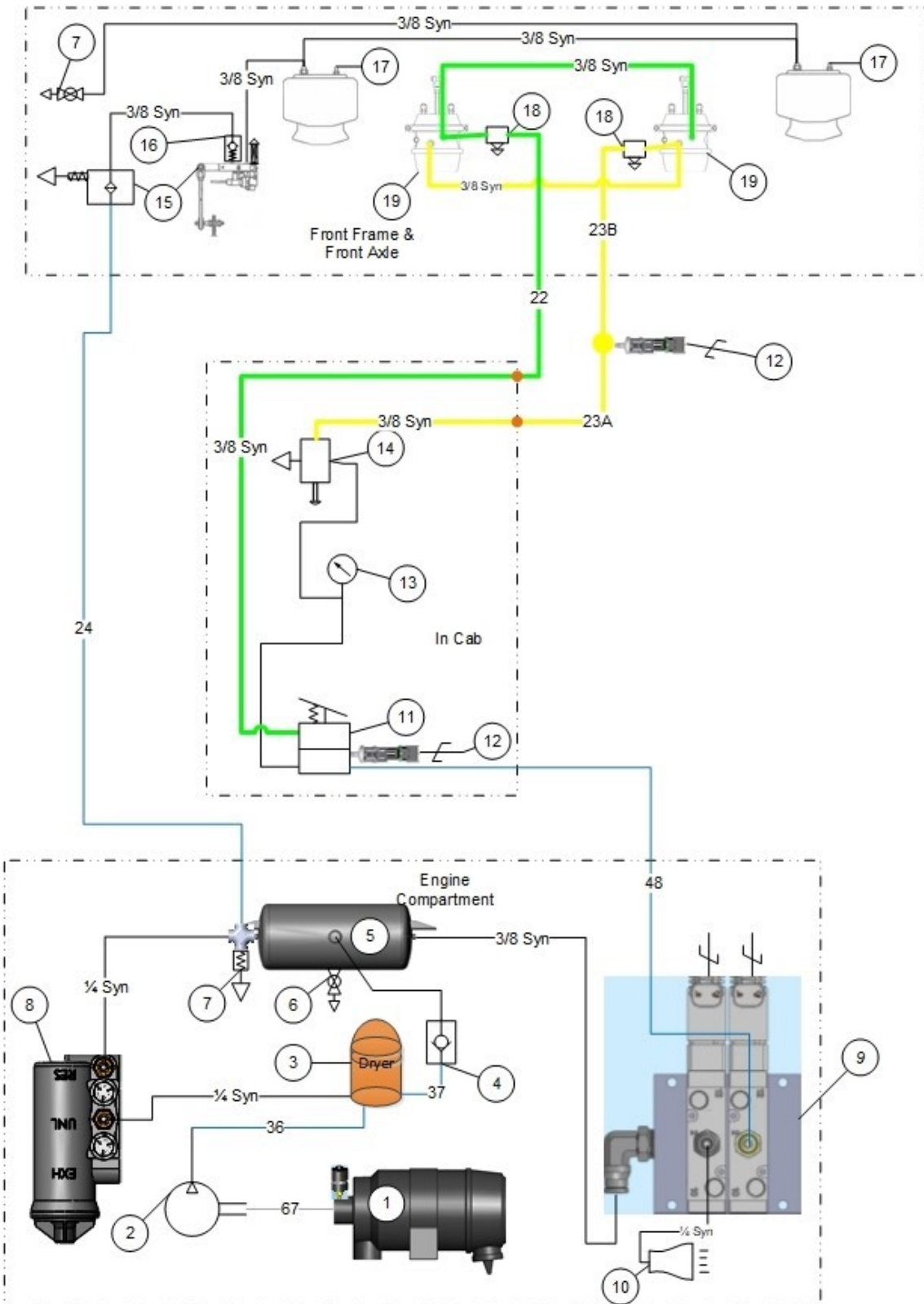
Front Frame Assembly Components.....	64
Rear Frame	65
Rear Frame Components	65
Rear Frame Park Brake Switch Bracket Assembly	66
Top Articulate Pin Repair Kit	67
Bottom Articulate Pin Repair Kit	68
Encoder Calibration.....	69
Frame Hose Clamp Kit.....	70
Oil Cooler Assembly	71
Fuel Tank.....	72
Hose Tray	73
Frame Electrical Panel Assembly	74
Frame Electrical Panel Subplate.....	75
Frame Panel Fuses-Relays.....	76
Frame Electrical Panel.....	77
Frame Electrical Panel BOM.....	78
Hopper	79
Hopper Assembly Hardware.....	79
Hopper Assembly Hardware BOM.....	80
Handle List.....	81
Hydraulics.....	82
Propel.....	82
Propel Drive Schematic.....	82
Propel Drive Schematic BOM	83
Propel Drive Pump Tee Block BOM.....	84
Wheel Motor Assembly	85
Gearbox – Motor Installation.....	86
Auxiliary.....	87
Auxiliary Circuit Schematic.....	87
Auxiliary Circuit BOM	88
Auxiliary Pump Tee Block BOM.....	89
Auxiliary Return Filter & Engine Door Pump Assembly	90
Hoses.....	91
T-644 Hose List 1-34.....	91
T-644 Hose List 35-69.....	92
T-644 Hose List 70-72.....	93
Valves	94

PVG32 Valve Kit.....	94
PVG100 Valve Kit.....	95
Cylinders.....	96
Lift Cylinder BOM.....	96
Lift Cylinder Assembly Hardware.....	97
Smart Steering Cylinder BOM.....	98
Smart Steering Cylinder Magnet Safety.....	99
Smart Steering Cylinder, 1.....	100
Smart Steering Cylinder, 2.....	101
Smart Steering Cylinder Clamp Assembly.....	102
Back Door Cylinder Assembly Hardware.....	103
Hydraulic Oil Tank.....	104
Hydraulic Oil Tank Assembly Hardware.....	104
Hydraulic Oil Tank Clean-Out Lid.....	105
Hydraulic Oil Tank DEF Mount Kit.....	106
Hydraulic Oil Tank Return Block.....	107
O-Ring Chart.....	107
Hydraulic Oil Tank Switch Bracket.....	108
Hydraulic Oil Tank Fuse Assembly.....	109
Hydraulic Tank Electrical.....	110
Hydraulic Tank Electrical BOM.....	111
Transducer Manifold Kit.....	112
Paint.....	113
White, Blue, Yellow.....	113
Red, Black, Gray.....	114
Pin list.....	115
Turntable.....	116
Upper Turntable.....	116
Upper Turntable BOM.....	117
Appendix:.....	118
Fastener Information.....	118
Bolt Torque.....	118
Torque Conversion to Metric.....	119
Pin Schedules.....	120
Pin Schedule DP720.....	120
Pin Schedule MC24 Cab.....	120
Pin Schedule MC50 Engine.....	121

Pin Schedule MC50 Chassis.....	122
Wire Schedule	123
Wiring 101-126.....	123
Wiring 127-156.....	124
Wiring 157-507.....	125
Wiring 508-551.....	126
Wiring 552-577.....	127
Wiring 578-603.....	128
Wiring 604-629.....	129
Wiring 630-655.....	130
Wiring 656-679.....	131
Wiring 801-820.....	132
Wiring 821-847.....	133
Wiring 848-867.....	134
Wiring 868-902.....	135
Wiring 903-905.....	136
Fault Schedule	137
Fault List - 1-65.....	137
Fault List – 66-128.....	138
Camera Monitor Settings	139
Camera Monitor Settings page 1	139
Camera Monitor Settings page 2	140
Camera Monitor Settings page 3	141
Camera Monitor Settings page 4	142
Camera Monitor Settings page 5	143
Kendall Hyken® 052 Farm Tractor Lubricant	144
Kendall Hyken® 052 Farm Tractor Lubricant Properties.....	145

Air System Components

Air System Schematic

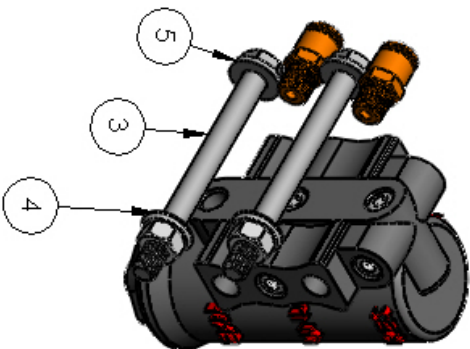
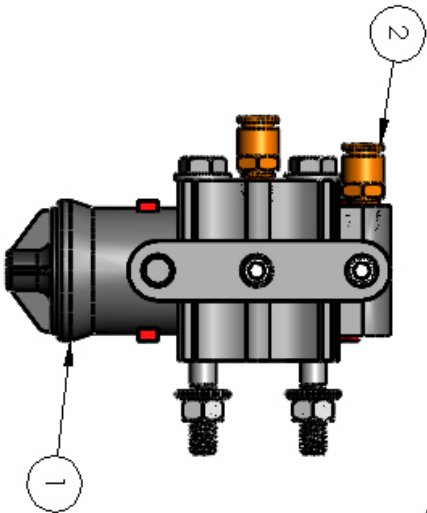
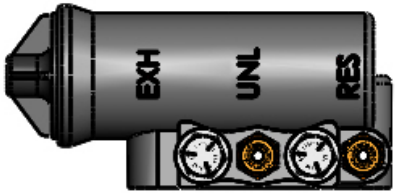


Air System Schematic BOM

T-644 Air Schematic 2020				
Key	Description	Mfg #	Tucker #	Qty
1	Air Cleaner Assy, Tier 4 Air Compressor	Donaldson - G057511	TB64575-24	1
	Air Compressor Filter Mount Band	Donaldson - P777730	TB64575-24-3	1
	Filter, Inner, Tier 4 Air Compressor	Donaldson - P822858	TB64575-24-I	1
	Filter, Outer, Tier 4 Air Compressor	Donaldson - P821575	TB64575-24-O	1
	Sign Service Indicator	Donaldson - X002352	TB80575-16	1
	Rubber Elbow 2"	Donaldson - P105529	TB64575-24-2	1
	JCB Air Compressor Adaptor		TM60510-06	1
2	JCB 229cc Water Cooled Compressor Only	KIT-TA2874-JCBWC	TB65975-3	1
	Adapter, JIC to Metric: 7400-08-22	Tompkins - 7400-08-22	HA-7400-08-22	2
3	AD-9 Air Dryer for JCB	Bendix - 065499	TB80619-1	1
	Wire Harness AD-9 Air Dryer for JCB	Bendix - 109871N	TB80619-3	1
	AD-9 Air Dryer Muffler Silencer Kit	Bendix - 5004224N	TB80619-7	1
	Purge Valve, AD-9 Air Dryer for JCB	Bendix - 800405P, Spare Parts	TB80619-4	1
	AD-9 Air Dryer Hard Seat Purge Valve Maint. Kit	Bendix - 5005037, Spare Parts	TB80619-5	1
	AD-9 Air Dryer Desiccant Cartridge Kit	Bendix - 107794, Spare Parts	TB80619-6	1
4	Check Valve Air Tank BW800372	800372	TB80612	1
5	Tank Air		TB80610	1
6	BW Draincock 278351	Bendix - 278351	BW-278351	2
7	BW Safety Valve 150	MSC - 32150948	BW-284142	1
8	Governor Compressor BW275491	BW 275491	TB80609	1
9	Viking Extreme Air Solenoid Valve	Parker - P2LBX392ESH DAT46	TB64623	2
	2 St IEM Manifold NPT Viking Extreme	Parker - P2LBXGAXN02NP	TB64624	1
10	Horn, Air	Grover - CTX 1601	TB80608-2	1
11	Valve Brake Assembly w/Treadle	BW 279364	TB80605	1
12	Switch N/O - 500 Series w-MetriPack	Honeywell - 77030-00000050-01	TB80604-1	2
13	Gauge Air (225635)	BW 225635	TB80607	1
14	Valve Park Brake. W/knob Nut Pin	BW 275176	TB80600	1
15	Air Ride Height Control Valve Kit	Midland - 42110051	TB65571	1
		90554107 Comes in Leveling Kit - Replace Kit		
16	Air Ride Check Valve	Midland - 90554078	TB65571-1	1
17	Air Suspension Bag	704671-02	TB80603	2
18	Valve Brake Quick Release - 229813	BW 229813	TB80611	2
19	Chamber Brake	OB3030SB	TB80320-01	2
	BW = Bendix Westinghouse			
	Syn = Synflex or Nylon Pneumatic Tubing			

Governor Assembly Hardware

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB80609	Governor Compressor	1
2	DOT-MC-0.25X0.125	DOT Male Connector PP68C 1/4 X 1/8	2
3	CS-HH-0.3125-18X3.5	Screw Cap Hex: 5/16-18 X 3 1/2	2
4	NF-0.3125-18	Nut Flanged Lock : 5/16-18	2
5	WFF-0.3125	Washer Flat 5/16 (Sae)	2



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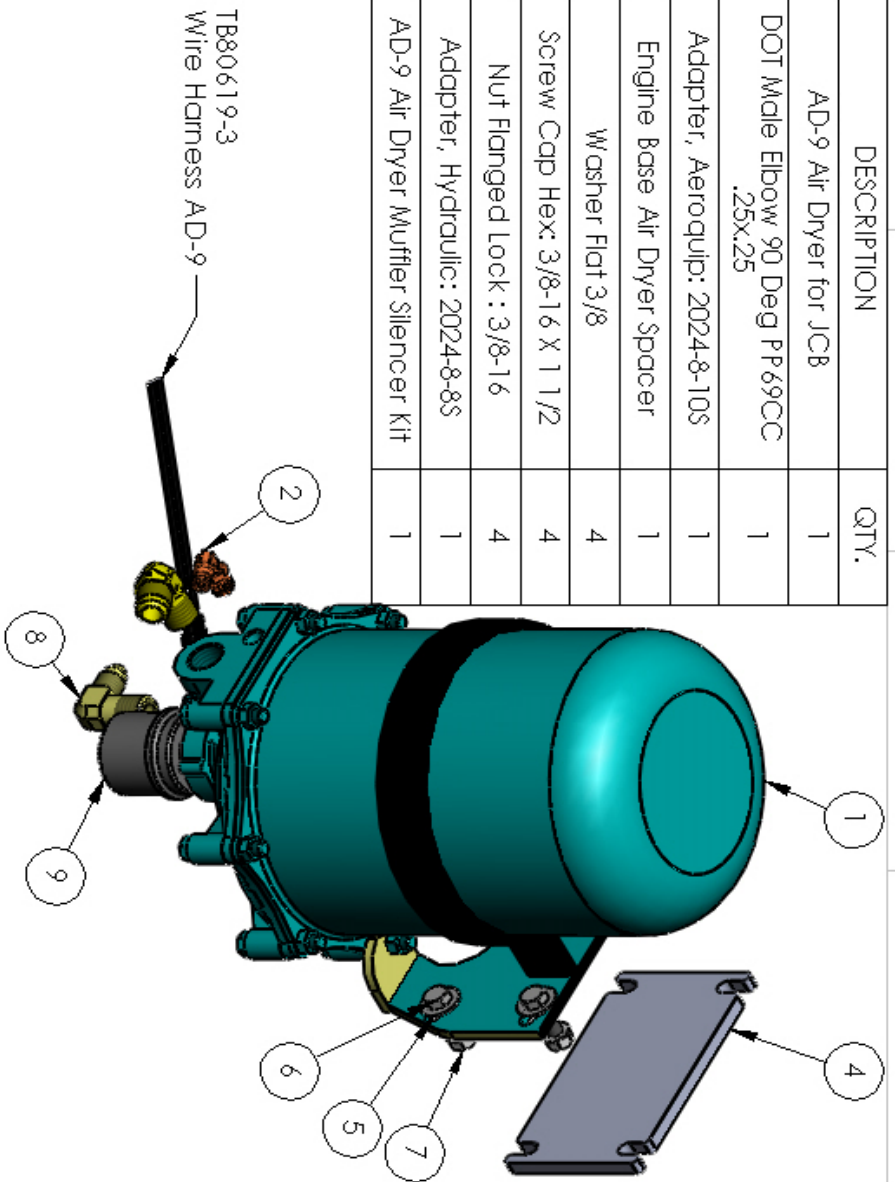
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SERVICE INC.
P.O. BOX 492810 LEESSBURG, FLA. 34749-2810

Governor Assembly Hardware

DR. BY dlg
DATE 9/30/2020
SHOP #
TA-80609

Air Dryer Assembly Hardware

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB80619-1	AD-9 Air Dryer for JCB	1
2	DOT-MEL90-0.25X0.25	DOT Male Elbow 90 Deg PP69CC .25x.25	1
3	2024-8-10S	Adapter, Aeroquip: 2024-8-10S	1
4	TM60500-18	Engine Base Air Dryer Spacer	1
5	WF-0.375	Washer Flat 3/8	4
6	CS-HH-0.375-16X1.5	Screw Cap Hex: 3/8-16 X 1 1/2	4
7	NF-0.375-16	Nut Flanged Lock : 3/8-16	4
8	2024-8-8S	Adapter, Hydraulic: 2024-8-8S	1
9	TB80619-7	AD-9 Air Dryer Muffler Silencer Kit	1



Tucker #	Bendix/Haldex #	Description	Qty.
TB80619-4	800405P	Purge Valve, AD-9 Air Dryer for JCB	1
TB80619-5	5005037	AD-9 Air Dryer Hard Seat Purge Valve Maint. Kit	1
TB80619-6	107794	AD-9 Air Dryer Desiccant Cartridge Kit	1

Maintenance Items

DR. BY **dlig**

DATE **10/1/2020**

T-644

SHOP #

DOVER

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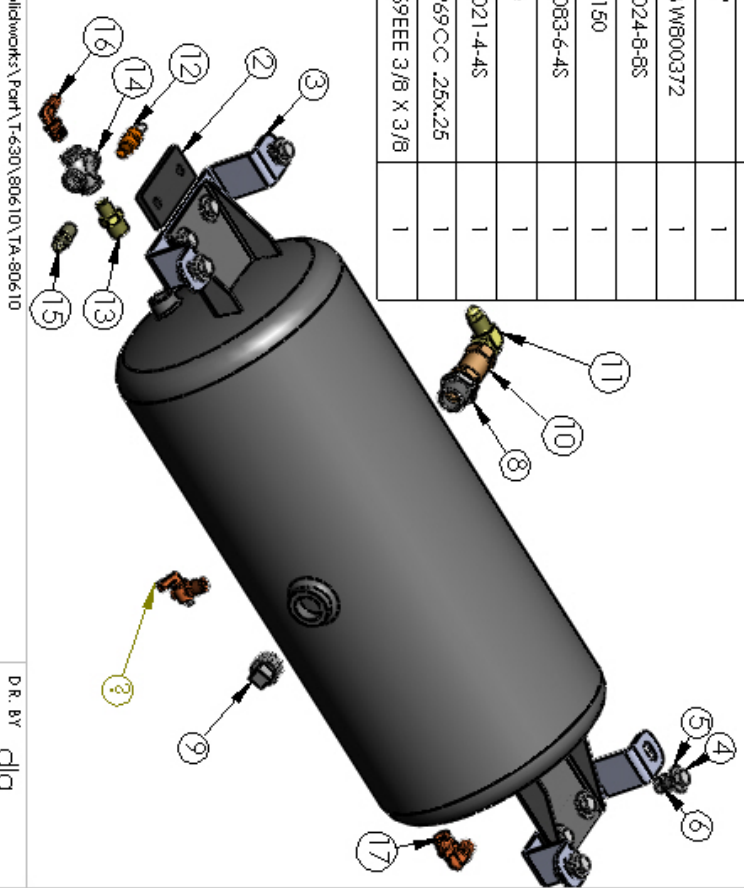
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Air Dryer Assembly Hardware

TA-80619-1

Air Tank Assembly Hardware

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB80610	Tank Air	1
2	TB81111	Pad Air Tank	2
3	TM60500-11	Air Tank Strap	2
4	CS-HH0.375-16X1	Screw Cap Hex: 3/8-16 X 1	8
5	WF-0.375	Washer Flat 3/8	8
6	NF-0.375-16	Nut Flanged Lock : 3/8-16	8
7	BW-278351	BW Draincock 278351	1
8	GP-34-128	Bushing 3/4 X 1/2 Glv. rd.	1
9	GP-34P	Plug G.dlv. 3/4"	1
10	TB80612	Check Valve Air Tank BW800372	1
11	2024-8-8S	Adapter, Hydraulic: 2024-8-8S	1
12	BW-284142	BW Safety Valve 150	1
13	2083-6-4S	Adapter, Hydraulic: 2083-6-4S	1
14	TB80563	Cross 1/4" Pipe	1
15	2021-4-4S	Adaptor, Aeroquip: 2021-4-4S	1
16	DOT-MEL90-0.25X0.25	DOT Male Elbow 90 Deg PP59CC .25x.25	1
17	DOT-MEL90-0.375X0.375	DOT Male Elbow 90 Deg PP69EEEE 3/8 X 3/8	1



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Air Tank Hardware

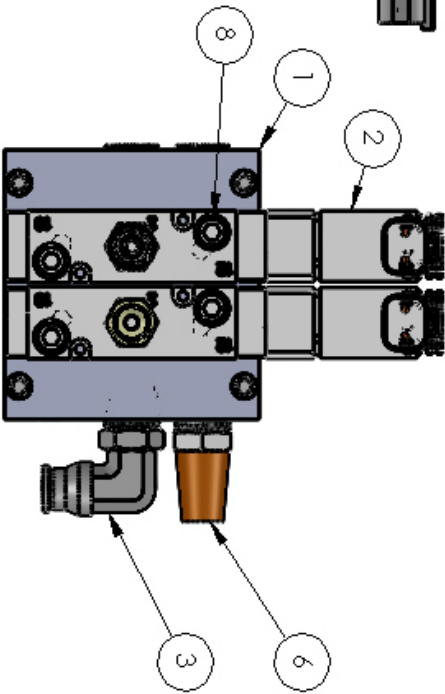
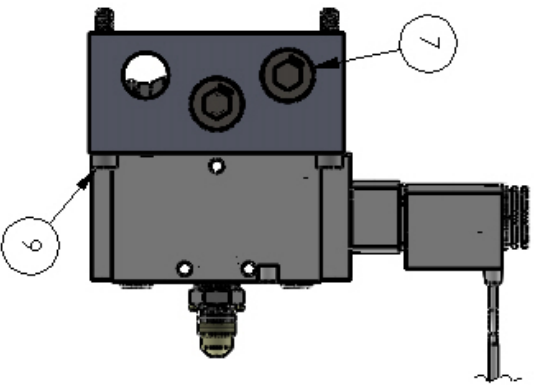
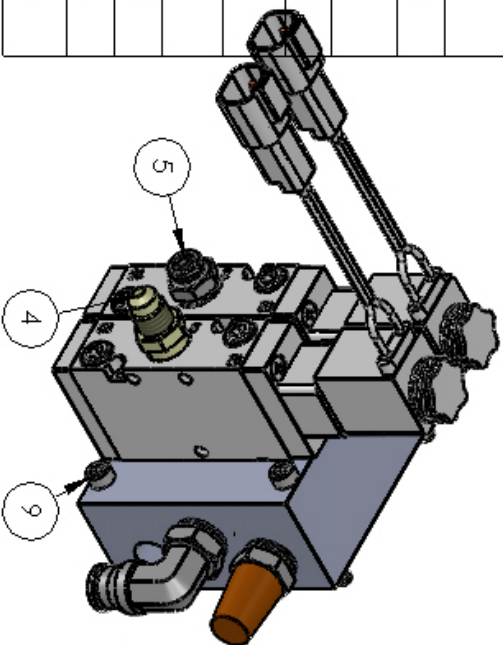
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DATE 10/5/2020

SHOP # TA-80610

Air Valve Assembly Hardware

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB64624	2 St IEM Manifold NPT Viking Extreme	1
2	TB64623	Viking Extreme Air Solenoid Valve	2
3	DOT-MEL90-0.375X0.375	DOT Male Elbow 90 Deg PP69EEE 3/8 X 3/8	1
4	2021-44S	Adaptor, Aeroquip: 2021-45S	1
5	DOT-MC-0.25X0.25	DOT Male Connector PP68CC 1/4 X 1/4	1
6	TB64625	Muffler, 3/8 NPT Male, Steel, 23 scfm @ 100 PSI	1
7	HA-2222-6S	Adapter, Hydraulic: 2222-6S	2
8	HA-2222-2S	Adapter, Hydraulic: 2222-2S	4
9	SSCS-SH-10-24X1.75	Cap Screw-Stainless-Socket Head-#10-24 X 1 3/4"	4



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T-644



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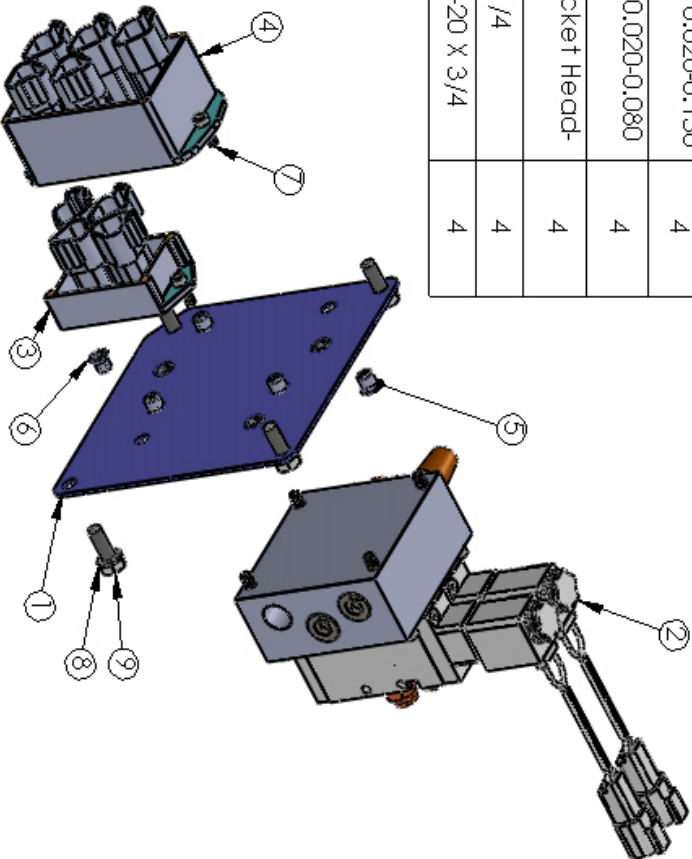
Viking Extreme Air Solenoid Valve Assembly

DR. BY MCT
DATE 7/1/2020
SHOP #

TA-64623

Air Valve CAN Bus Splitter Assembly Hardware

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60510-02	JCB T4F Valve Bracket Sub Plate	1
2	TA-64623	Viking Extreme Air Solenoid Valve Assembly	1
3	TB801 40	Can Data Link Module (4 Total Connectors)	1
4	TB801 41	Can Data Link Module (5 Total Connectors)	1
5	NR-10-24-PL,0.020-0.130	Rivet Nut 10-24 (Plated) 0.020-0.130 Thickness	4
6	NR-8-32-PL,0.020-0.080	Rivet Nut 8-32 (Plated) 0.020-0.080 Thickness	4
7	SSCS-3H-8-32X0.50	Cap Screw-Stainless-Socket Head-#8-32 X 1/2"	4
8	WL-0.25	Washer Lock 1/4	4
9	CS-HH-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	4



\\dserver\cadd\solidworks\Part\T-644\60.500 Engine Base Parts\60.510 Engine Accessory Parts\TA-60.510.02

T-644

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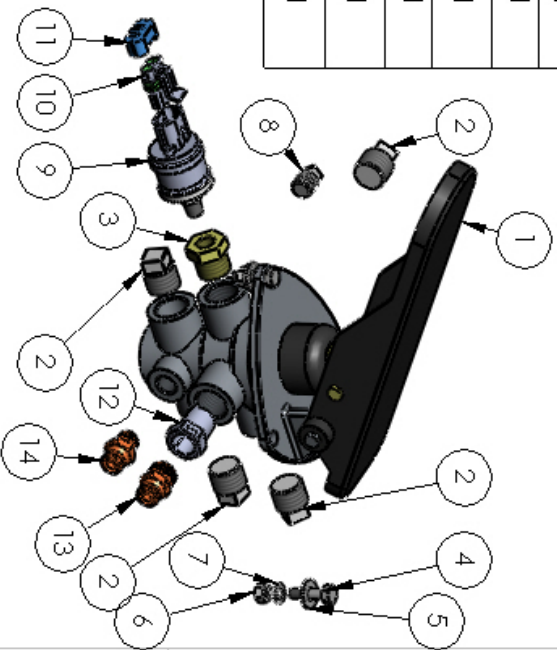
Viking Air Valve-CAN Bus Splitter Assembly

SHOP #
TA-60510-02



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ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB80605	Valve Brake Assy.	1
2	GP-12P	Plug Galv. 1/2"	4
3	2081-8-4S	Adapter, Hydraulic: 2081-8-4S	1
4	CS-HH-0.25-20X1	Screw Cap Hex: 1/4-20 X 1	3
5	WF-0.25	Washer Flat 1/4	3
6	NU-0.25-20-PL	Nut Pl Uss :25	3
7	WL-0.25	Washer Lock 1/4	3
8	GP-14P	Plug Galv. 1/4"	1
9	TB80604-1	Switch N/O - 500 Series w-MetricPack	1
10	TB80604-1-MPB	MetricPack Female Body 15300027	1
11	TB80604-1-TPA	MetricPack TPA 15300014 2 Contact Blue	1
12	2081-8-6S	Adapter, Hydraulic: 2081-8-6S	1
13	DOT-MC-0.375X0.375	DOT Mdlle Connector PP68EEE 3/8 X 3/8	1
14	DOT-MC-0.375X0.25	DOT Mdlle Connector PP68EEE 3/8 X 1/4	1



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DR. BY dlig
DATE 12/3/2020

Foot Brake Valve Hardware Assembly

SHOP #
TA-80605



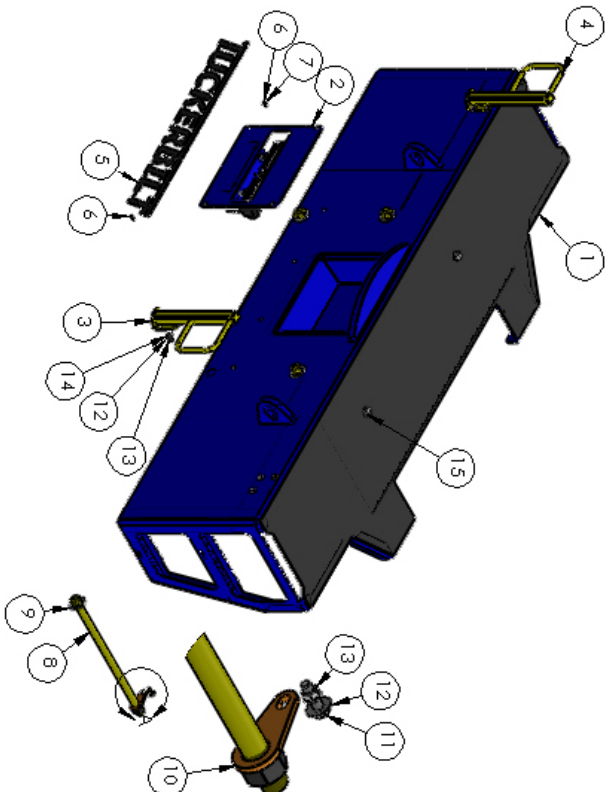
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P.O. BOX 492810 LEESSBURG, FLA. 34749-2810

Foot Brake Valve Hardware Assembly

Bumper

Bumper, Front

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60050-00-F	Bumper Assembly, Front	1
2	TA-60050-11-FA	Bumper Insert Plate, Front Bolted Assy	1
3	TM60070-00L	Front Bumper Handle Post Left	1
4	TM60070-00R	Front Bumper Handle Post Right	1
5	TM60025-01	Tuckerbilt Bumper Logo	1
6	CS-HH-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	8
7	WF-0.25	Washer Flat 1/4	4
8	TM60050-16	Bumper Bolt Assembly	4
9	WF-1	Washer Flat 1"	4
10	TM60050-17	Bumper Bolt Nut Clip Assembly	4
11	CS-HH-0.375-16X1.25	Screw Cap Hex: 3/8-16 X 1 1/4	4
12	WF-0.375	Washer Flat 3/8	12
13	NF-0.375-16	Nut Flanged Lock : 3/8-16	12
14	CS-HH-0.375-16X1	Screw Cap Hex: 3/8-16 X 1	8
15	CS-HH-0.75-10X1.5	Screw Cap Hex: 3/4-10 X 1 1/2	2



\\server\oad\Solidworks\Part\T-644\60050 Bumper Parts\Bumper Assemblies



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SERVICE INC.
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T-644

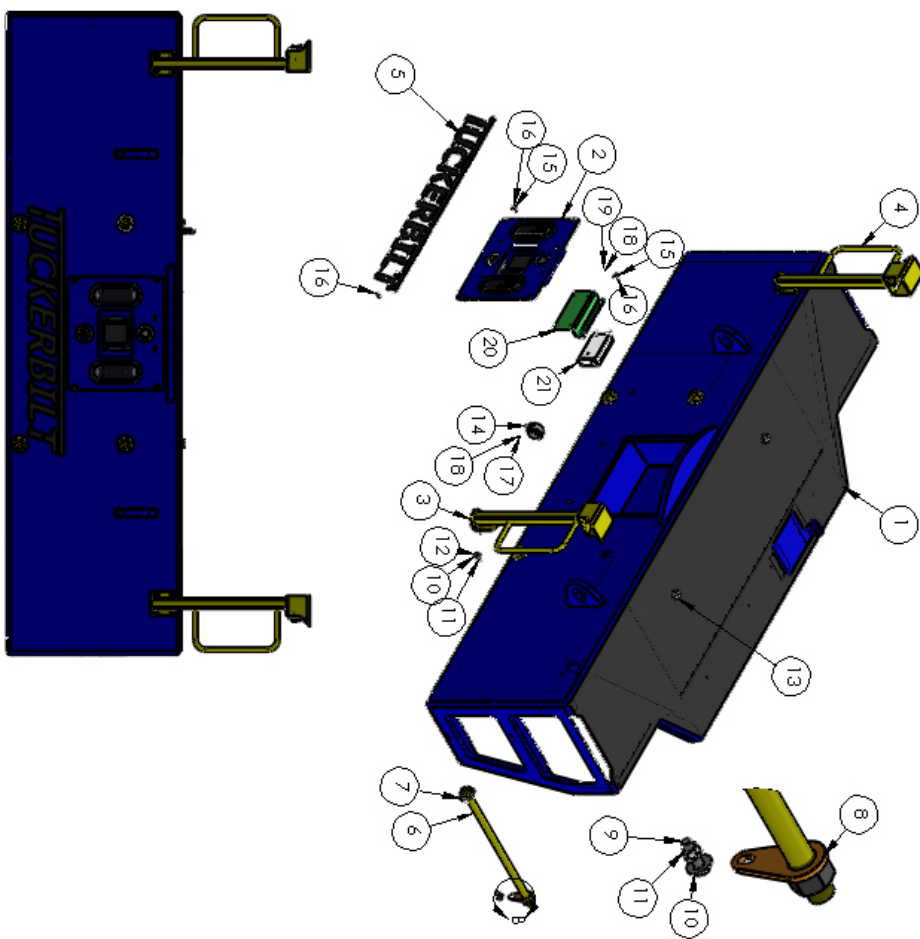
Bumper Assembly Components, Front

SHOP #
DATE 9/16/2020

DR BY MCT
TA-60,050,00,F

Bumper, Rear

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60050-00-R	Bumper Assembly, Rear	1
2	TA-60050-11-01-RA	Bumper/Inert Plate, Rear Bolted Assy	1
3	TM60050-00R	Camera Post Assembly Right	1
4	TM60050-00L	Camera Post Assembly Left	1
5	TM60025-01	Tuckerbilt Bumper Logo	1
6	TM60050-16	Bumper Bolt Assembly	4
7	WF-1	Washer Flat 1"	4
8	TM60050-17	Bumper Bolt Nut Clip Assembly	4
9	CS-HH-0,375-16X1,25	Screw Cap Hex: 3/8-16 X 1 1/4	4
10	WF-0,375	Washer Flat 3/8	12
11	NF-0,375-16	Nut Flanged Lock : 3/8-16	12
12	CS-HH-0,375-16X1	Screw Cap Hex: 3/8-16 X 1	8
13	CS-HH-0,75-10X1,5	Screw Cap Hex: 3/4-10 X 1 1/2	2
14	TB66130-01	Camera, Famos 129 Deg w/24" Cable Optico	2
15	WF-0,25	Washer Flat 1/4	6
16	CS-HH-0,25-20X0,75	Screw Cap Hex: 1/4-20 X 3/4	10
17	WFSS-10	Washer Flat - Stainless - #10 (218 X 437)	4
18	SSNSL-10-24	Nut Self Lock - Stainless : 10-24	8
19	SSCS-SH-10-24X,50	Cap Screw - Stainless - Socket Head - #10-24 X 1/2"	4
20	TM60050-20	Bumper Multiview Box Sub Plate	1
21	TB66130-02-SPL	Multiview Box Screen Splitter	1



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 LEBUS, FLA. 32420-2810

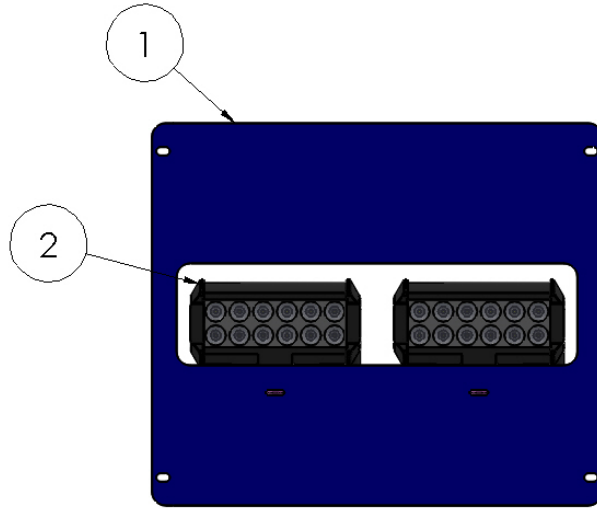
Bumper Assemblies
 T-644

Bumper Assembly Components, Rear

SHOP #
 DATE 9/16/2020
 DR BY MCT
 TA-60,050,00,R

Bumper Inserts

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60050-11-FA	Bumper Insert Plate, Front Assembly	1
2	TB66130-40-36W	Headlight, LED 7" 36 Watt	2



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DR. BY dlj

T-644

DATE 1/2/2019



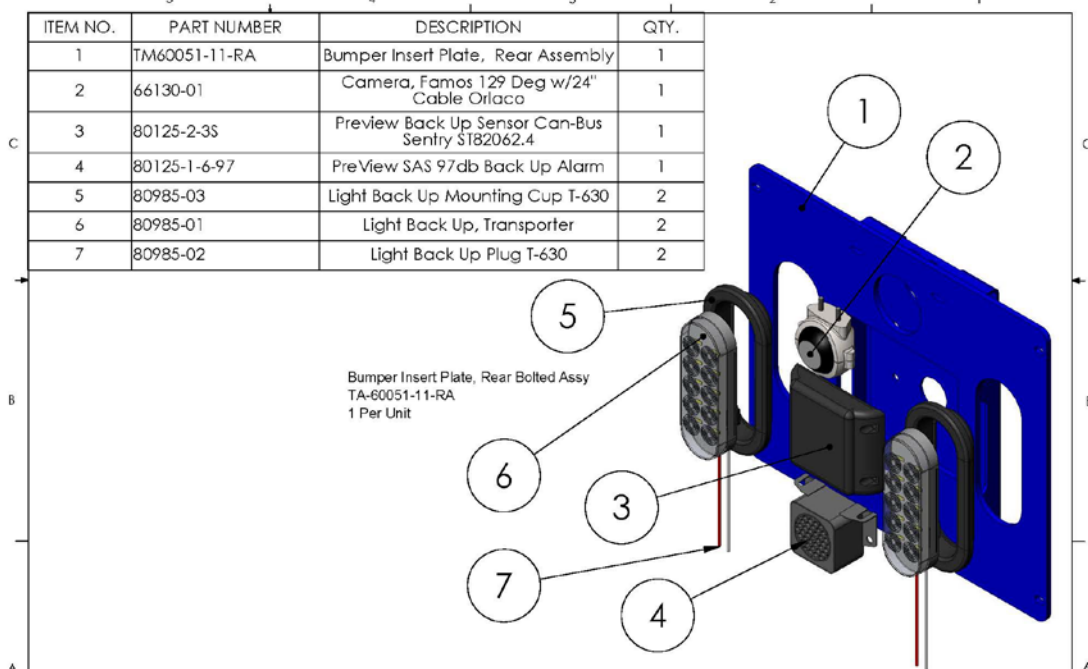
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SERVICE INC.
P.O. BOX 492810 LEEESBURG, FLA. 34749-2810

Bumper Insert Plate, Front Bolted Assy

SHOP #

TA-60050-11-FA

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TM60051-11-RA	Bumper Insert Plate, Rear Assembly	1
2	66130-01	Camera, Famos 129 Deg w/24" Cable Orifice	1
3	80125-2-3S	Preview Back Up Sensor Can-Bus Sentry S182062.4	1
4	80125-1-6-97	PreView SAS 97db Back Up Alarm	1
5	80985-03	Light Back Up Mounting Cup T-630	2
6	80985-01	Light Back Up, Transporter	2
7	80985-02	Light Back Up Plug T-630	2



Bumper Insert Plate, Rear Bolted Assy
TA-60051-11-RA
1 Per Unit

I:\Solidworks\Part\T-644\60,050 Bumper Parts\60,050,00

DR. BY MCT

T-644

DATE 04/15/2021



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Bumper Insert Plate, Rear Bolted Assy

SHOP #

TA-60051-11-RA

Cab

Cab Assembly Components



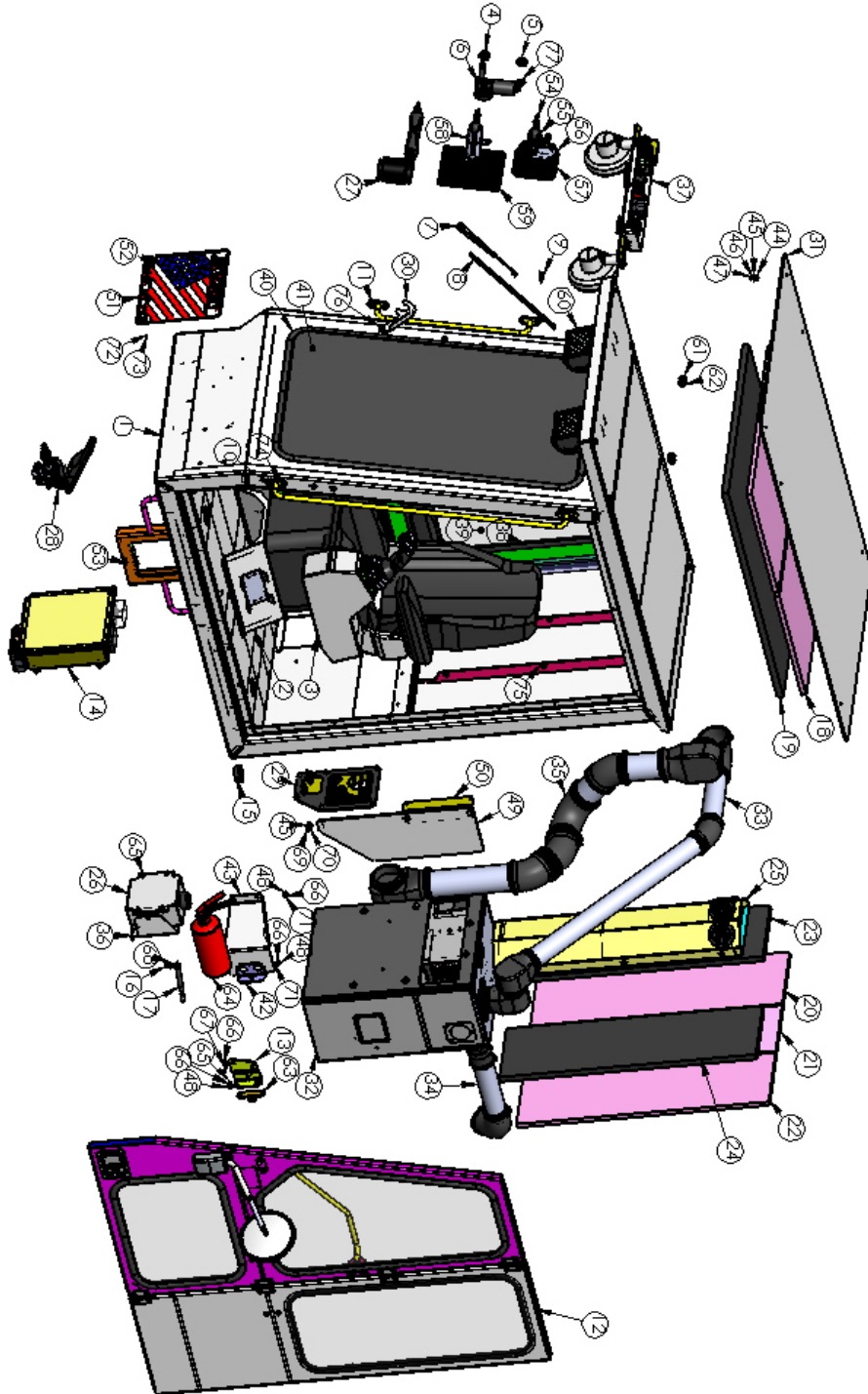
MACHINE & STEEL
SERVICE INC.
P.O. BOX 402810
LEESBURG, VA 22640-2810

T-644

Cab Assembly Components

SHOP #
DATE 11/30/2020
DR. BY dlig
TA-60800-00

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Cab Assembly Components BOM



MACHINE & STEEL SERVICES INC.
 12101 49TH AVE S.W. STEELERS VILLAGE
 11111 49TH AVE S.W. STEELERS VILLAGE

T-644

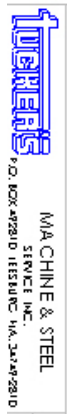
Cab Assembly Components BOM

DATE 11/30/2020 DE BY dlj
 TA-60800-00

ITEM NO.	ORDERNO	DESCRIPTION	QTY.
1	TM60800-00	Welded Cab Assembly	1
2	TM60808-01A	Cab Seat Stand Base Assembly	1
3	TA-60350-00	Suspension Seat Assembly Hardware	1
4	TM66800-01	Nylon Spacer 1/2" x 3/4" ID x 1-1/2" O.D	1
5	TM66800-01	Spacer 75ID x 1.5 O.D x .5 Thick	1
6	TM81195-06	Motor Wiper T-630	1
7	TM81995-02	Arm Wiper T-630	1
8	TM81995-07	Wiper Blade T-630	1
9	TM80813-31	Windshield Washer Nozzle	1
10	TM60080-00-1	Handle Assembly Long	1
11	TM60080-00-2	Handle Assembly Short	1
12	TA-60807-00	Cab Door Assembly Hardware	1
13	TM60815-00	Cab Door Latch Tab Assembly	1
14	TA-60090-00-1	Electrical Junction Box Assembly Cab	1
15	TM66800-02	Locking Plug for Panels, for 2-1/2" ID	5
16	TM66159	Gas Spring Stud Bolt	1
17	TM60001-A53Y	Gas Spring for T-644 Cab w/Ends	1
18	TM60816-01	Cab Roof Insulation	2
19	TM60817-01	Cab Headliner Foam, Roof	1
20	TM60816-02	Cab Wall Left Insulation	1
21	TM60816-03	Cab Wall Center Insulation	1
22	TM60816-04	Cab Wall Right Insulation	1
23	TM60817-02	Cab Headliner Foam Wall, Left	1
24	TM60817-03	Cab Headliner Foam Wall, Right	1
25	TA-60805-00	Cab Duct Assembly Hardware	1
26	TM60813-30	Windshield Washer Tank 3	1
27	TM66800-10	Cup Holder w/Upfit Mount	1
28	TA-80405	Foot Brake Valve Hardware Assembly	1
29	TA-60801-05A	Cab Floor Plate Bolted Assembly	1
30	TM60809-01	Cab Chute Door Catch	1
31	TM60860-00	Cab HPE Cover	1
32	TA-80609	T-644 AC-Heater Assembly Hardware	1
33	TA-60818-10	Cab Filter Pressure Tube Assembly Kit	1
34	TA-60840-03	Air Conditioner Respa Connector Tube Kit	1
35	TA-60818-09	Cab Filter Inlet Tube Assembly	1
36	TM60810-06	Cab Floor Washer Bottle Guard	1
37	TA-60803-00	Cab Upper Dash Bolted Assembly	1
38	TM80991	Cab Side Glass Rubber, Right - 142"	1
39	TM60813-32	Cab Side Glass, Right	1

ITEM NO.	ORDERNO	DESCRIPTION	QTY.
40	TM80991	Cab Windshield Glass Rubber - 142"	1
41	TM60813-23	Cab Windshield Glass	1
42	TM60820-06	Armrest Cable Adapter Plate Wall Bulkhead	1
43	TM60801-08	Cab Skin Rear, Wire Guard	1
44	C8-0-375-16X1	Bolt Camlock 3/8-16 X 1	6
45	WF-0-375	Washer Flat 3/8	19
46	WL-0-375	Washer Lock 3/8	6
47	NLU0-375-16-F-L	Nut 3/8-16 (Plated)	6
48	WF-0-25	Washer Flat 1/4	10
49	TM60801-09	Cab Skin Rear, Shock Fin	1
50	TM60801-10	Cab Skin Rear, Shock Fin Bracket	1
51	TM60025-04-01	Flag Logo Strips Coated Red, Cab	1
52	TM60025-04-02	Logo Strips Coated Blue, Cab	1
53	TM60080-04	Handle Step, Cab	1
54	TM66800-09	Pipe Mount Clamp, 1/2"-1" on Base, 1-1/2" Ball	2
55	TM66800-08-3-5	3-1/2" Connector for Ball-Cup Arm 1-1/2" Ball	1
56	TM66800-07	Flat Panel Monitor Mounting Plate End 1-1/2" Ball	1
57	TM66130-12-750	DP 750 Display	1
58	TM66800-08-5-625	5-5/8" Connector for Ball-Cup Arm 1-1/2" Ball	1
59	TM66130-02-MO-N-12	Monitor 12" LED Serial & Display Output 0411130	1
60	TM66130-40-75W	Work Light, LED 7" 72 WATT	2
61	EW5-RN12-2035	Dome Nut 1/2" NPT - ID 20-.35	2
62	EW5-RN12	Lock Nut 1/2" for Dome Nut	2
63	TM64109	Striker, Cab Door Latch Part of TM64109	1
64	TM80317	Fire Extinguisher SB	1
65	C5-HH-0-25-20X1	Screw Cap Hex: 1/4-20 X 1	6
66	NP-0-25-20	Nut Flanged Lock : 1/4-20	16
67	C5-HH-0-25-20X2.5	Screw Cap Hex: 1/4-20 X 2 1/2	2
68	NP-0-5-13	Nut Flanged Lock : 1/2-13	1
69	C5-HH-0-375-16X1	Screw Cap Hex: 3/8-16 X 1	17
70	NP-0-375-16	Nut Flanged Lock : 3/8-16	22
71	C5-HH-0-25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	7
72	C5-C5-H-10-24X .50	Cup Screws 5/16x10-24x.50 - #10-24 X 1/2"	8
73	C5-NSL-10-24	Nut Self Lock - 5/16x10-24	8
74	C5-HH-0-375-16X2.5	Nut Self Lock Hex: 3/8-16 X 2 1/2	4
75	NC O B-0-25-20-0-531	Nut Clip-On Barrel: 1/4-20 205-.15 .531 Hole	4
76	C5-HH-0-375-16X0.75	Screw Cap Hex: 3/8-16 X 3/4	1
77	C5-HH-0-25-20X1.25	Screw Cap Hex: 1/4-20 X 1 1/4	1

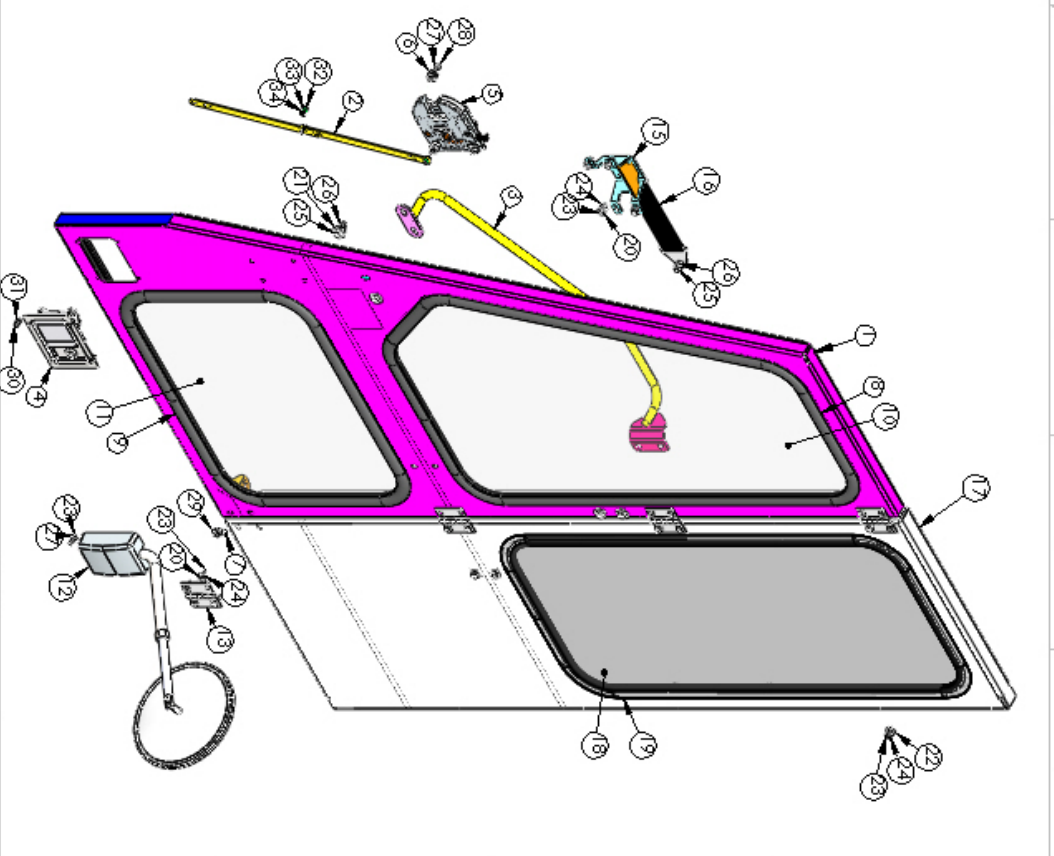
Cab Components, Driver Door



MACHINE & STEEL SERVICE, INC.
P.O. BOX 492810 | ESTABLISHED IN 1979

T-644

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM6080-7-00	Cab Entry Door Assembly	1
2	TM6080-7-09	Cab Entry Door Pull Rod	2
3	TM6080-00-2	Cab Entry Door Handrail Assembly T-644	1
4	TB64110	Cab Outside Door Opener	1
5	TB64109	Cab Inside Door Latch	1
6	NCDB-0-25-20-0-331	NUT Clip-On Barrel: 1/4-20 .025-.15 .331 Hole	3
7	TB80002	.39 Dia Ball Stud with 5/16-18 Thread	1
8	TB80091	Cab Door Glass Rubber, Top - 99"	1
9	TB80091	Cab Door Glass Rubber, bottom - 69"	1
10	TB60813-24	Cab Door Glass, Top	1
11	TB60813-25	Cab Door Glass, bottom	1
12	TB80589-CSMA	Mirror, Convex Spot Mirror Assembly	1
13	TM60870-00	Stainless Hinge for Cab-Engine Doors	4
14	TB66800-04	Cab Door Rubber Seal - 164"	1
15	TM60807-06A	Cab Entry Door Strip Bracket	2
16	TB66800-12	Poly Performance Quard W/rippled Ultra Strip	1
17	TM60814-00	Door Filler Panel Assembly Weldment	1
18	TB60813-21	Cab Side Glass, Left	1
19	TB80091	Cab Side Glass Rubber, Left - 96"	1
20	WFF-0-25	Washer Rod 1/4 (SAE)	20
21	WFF-0-375	Washer Rod 3/8	4
22	WFF-0-25	Washer Rod 1/4	13
23	CS-HH0-25-20X0-75	Screw Cap Hex: 1/4-20 X 3/4	37
24	NF-0-25-20	Nut Ranged Lock : 1/4-20	33
25	CS-HH0-375-16X1	Screw Cap Hex: 3/8-16 X 1	6
26	NF-0-375-16	Nut Ranged Lock : 3/8-16	6
27	WFL-0-25	Washer Lock 1/4	7
28	CS-HH0-25-20X1-5	Screw Cap Hex: 1/4-20 X 1 1/2	3
29	NF-0-3125-18	Nut Ranged Lock : 5/16-18	1
30	SSCS-SH8-32X0-50	Cap Screw-Stainless-Socket Head #8-32 X 1/2"	4
31	SSNSL-8-32	NUT Self Lock - Stainless : 8-32	4
32	SSCS-SH10-24X-50	Cap Screw-Stainless-Socket Head #10-24 X 1/2"	3
33	WFFS-10	Washer Rod - Stainless - #10 (218 X .487)	3
34	SSNSL-10-24	NUT Self Lock - Stainless : 10-24	3



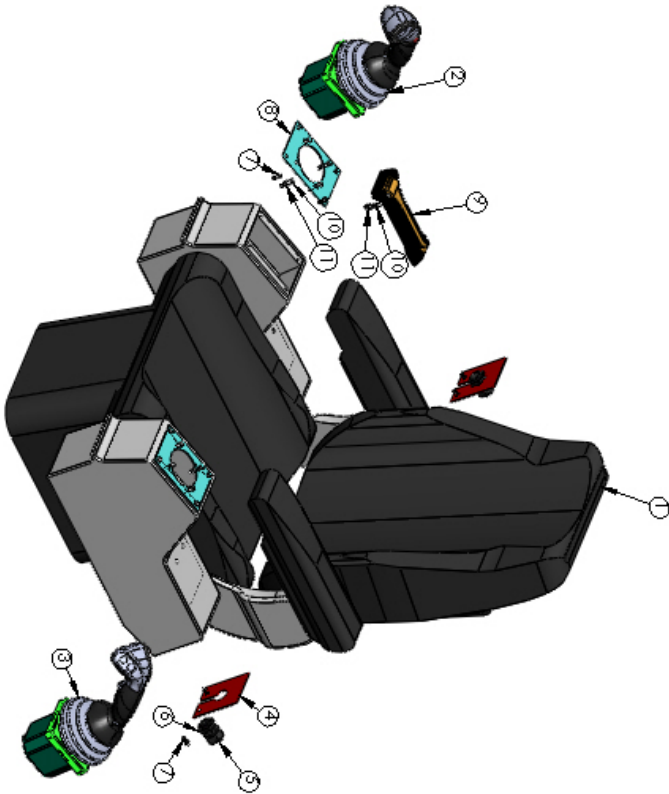
Cab Door Assembly Hardware

SHOP #
DATE: 11/17/2020
DR BY: dlj
TA-60807-00

Cab Components, Seat

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TK81590-SUSP	Suspension Seat w/Switch, Seat Belt, Pouch	1
2	TB66130-80-CR	Tucker Right JS 7000	1
3	TB66130-80-CL	Tucker Left JS 7000	1
4	TM60820-05	Armrest Cable Adapter Plate	2
5	EW5RDN34-S171	Dome Nut 3/4" NPT - ID .51-.71	2
6	EW5RNLN34	Lock Nut 3/4" for Dome Nut	2
7	SSCS-SH-10-24X.50	Cap Screw- Stainless- Socket Head- #10-24 X 1/2"	12
8	TM60820-01-2	Joystick Adaptor Pkts JS1	2
9	TB80317-SH	Safety Hammer, Glass Break, Seat Belt Cutter	1
10	SSCS-SH-10-24X1	Cap Screw- Stainless- Socket Head- #10-24 X 1"	10
11	SSNSL-10-24	Nut Self Lock - Stainless : 10-24	10

OrderNo	DESCRIPTION	QTY.
TK80590-4-2	Seat HFC100 07-891 Cushion, Back Vinyl Achimo	1
TK80590-4-3	Seat HFC100 07-888 Cushion, Seat Vinyl Achimo	1
TK80590-5	Switch Kit, Operator Present, OPS	1
TK80590-6	Seat Belt, Lqip, Stator 2 w/ Hardware	1



MACHINE & STEEL
SERVICE INC.
112 BOX 475010 TRESBRO, VA 229825010

TA-60590-00
T-6414

Suspension Seat Assembly Hardware

DATE 12/1/2020
REV d1g
TA-60590-00

Cab Glass



MACHINE & STEEL
SERVICE INC.
P.O. BOX 492810 LEBLOND, FLA. 32749-2810

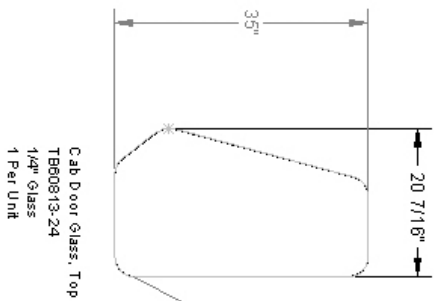
60,800.00
T-644

T-644 Cab Glass

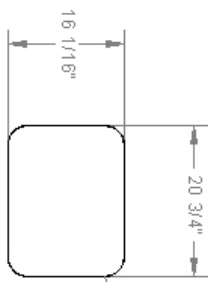
SHOP #

DATE 1/30/2018

DR. BY dig
TB60813-21

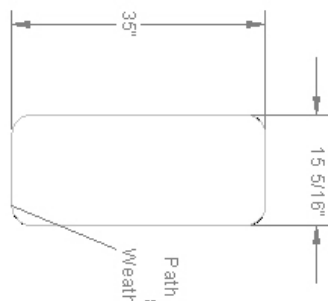


Path Length 98 1/16"
80991
Weather Stripping

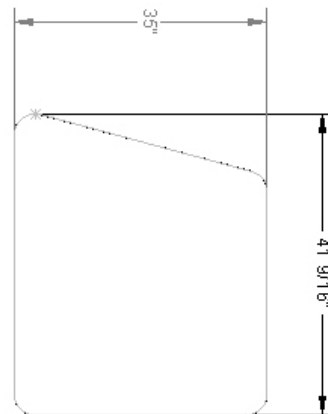


Path Length 69"
80991
Weather Stripping

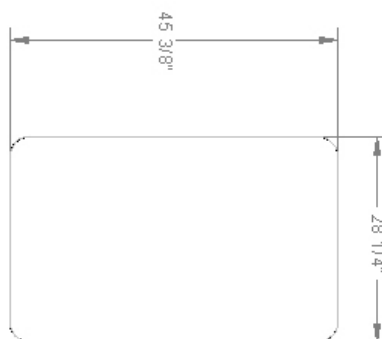
Glass	Weather Strippings
TB60813-21	96.0000
TB60813-22	141.3750
TB60813-23	142.6250
TB60813-24	98.0625
TB60813-25	69.0000
Total Inches	547.0625
Total Feet, Approx.	45.58854167



Path Length 96"
80991
Weather Stripping



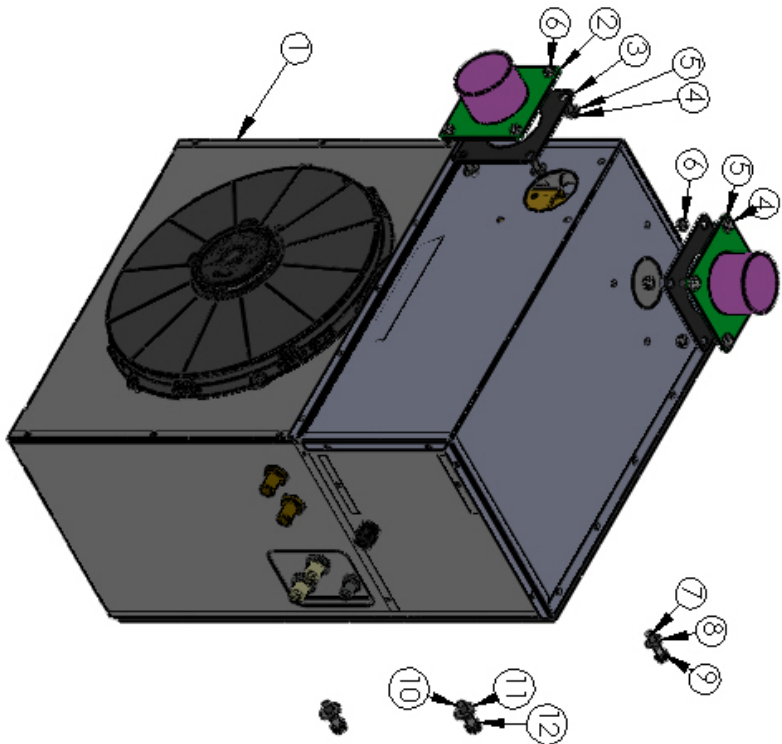
Path Length 141 3/8"
80991
Weather Stripping



Path Length 142 5/8"
80991
Weather Stripping

Cab AC/Heater

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	7110	Tucker 7110DD A/C & Heat, 12v w/RESPA System	1
2	TM60840-00	Air Conditioner Respa Flange Assembly	2
3	TB60840-05	Air Conditioner Respa Flange Gasket	2
4	CS-HH-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	8
5	WF-0.25	Washer Flat 1/4	8
6	NF-0.25-20	Nut Flanged Lock : 1/4-20	8
7	CS-HH-0.3125-18X1.5	Screw Cap Hex: 5/16-18 X 1 1/2	2
8	WF-0.3125	Washer Flat 5/16	2
9	WL-0.3125	Washer Lock 5/16	2
10	CS-HH-0.375-16X1.5	Screw Cap Hex: 3/8-16 X 1 1/2	4
11	WF-0.375	Washer Flat 3/8	4
12	WL-0.375	Washer Lock 3/8	4



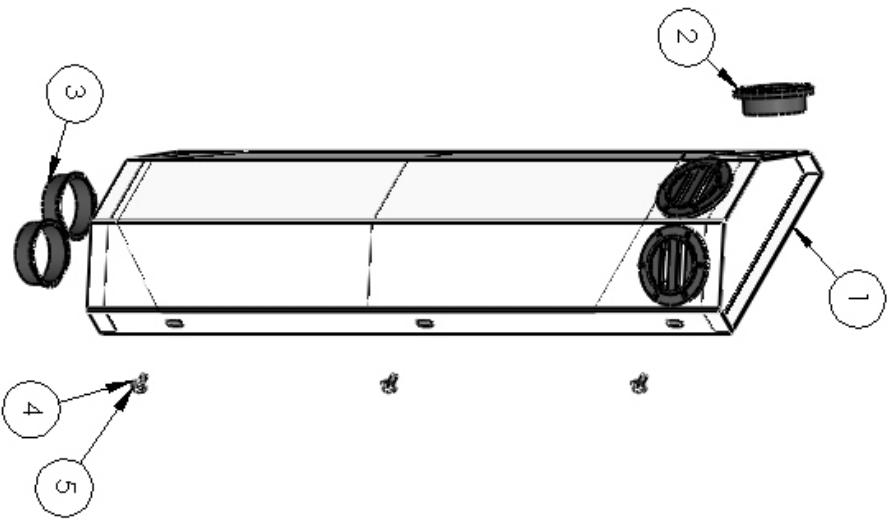
MACHINE & STEEL SERVICE INC. P.O. BOX 492810 LEESBURG, FLA. 34749-2810

\\davenet\carrl_solidworks\Part\T-644\60.800 Cab Parts\Bolted On Items\TA-80669
 T-644
 DD, ACH, 12V, AC & Heat System

DR. BY MCT
 DATE
 SHOP # TA-80669

Cab Components, Cab Duct Assembly Hardware

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM80605-00	Cab Duct Assembly	1
2	TB80665	Louver w/Retainer Ring 4" Round	3
3	TB80666	Adapter, Hose, 3" Snap-In	2
4	WF-0.25	Washer Flat 1/4	6
5	CS-HH-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	6



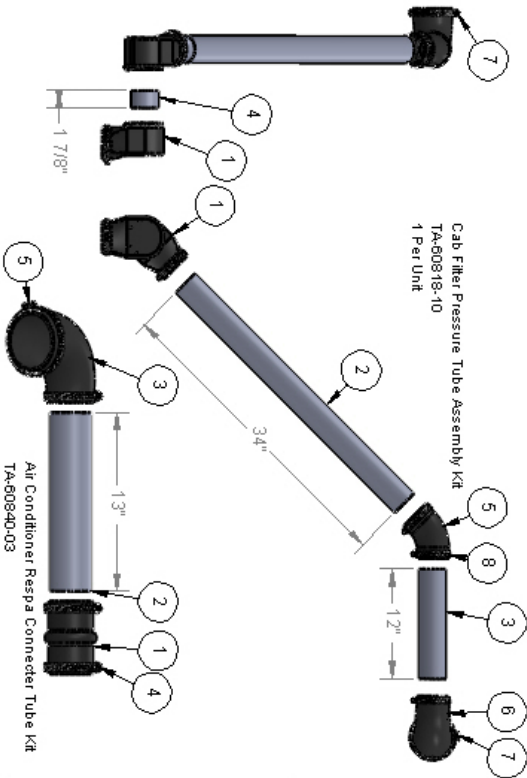
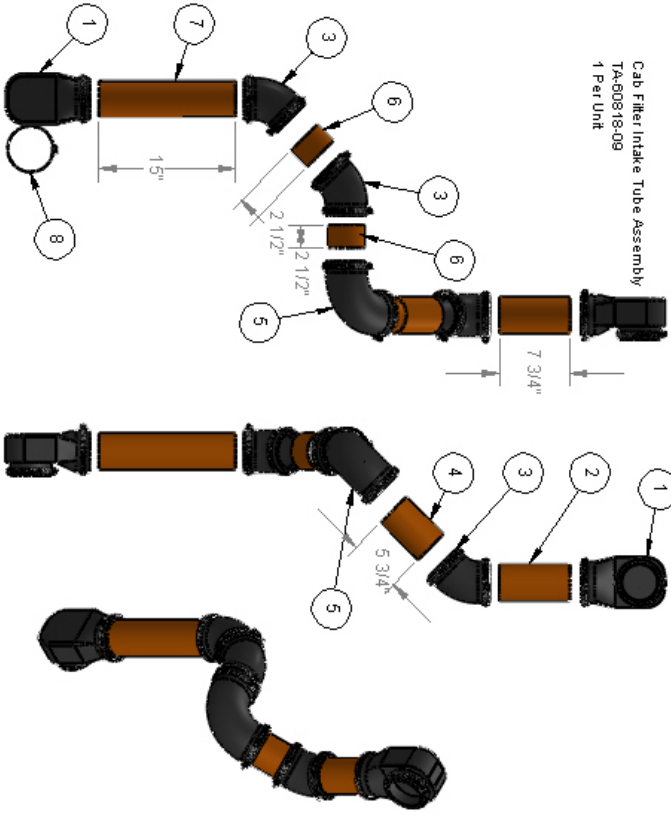
LOGGERS
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 SERVICE INC.
 P.O. BOX 492810 LEESSBURG, FLA. 34749-2810

\\denver\cadd\solidworks\Part\T-644\60,800 Cab Parts\60,805,00\60,805,00
 T-644
Cab Duct Assembly Hardware
 DR BY djq
 DATE 11/20/2020
 SHOP # TA-60805-00

Cab Filter Tube Assemblies

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB80731	Elbow, Donaldson Cobra 4" - 90 Deg	2
2	TM60818-06	Cab Filter Top Suction Tube 4"	1
3	TB80575-45-4.00	Rubber Elbow Donaldson, 4" x 45 Deg.	3
4	TM60818-05	Cab Filter Mid Suction Tube 4"	1
5	TB80575-25	Rubber Elbow Donaldson, 4" x 90 Deg.	1
6	TM60818-08	Cab Filter Connector Tube 4"	2
7	TM60818-04	Cab Filter Lower Suction Pipe 4"	1
8	CL-HO-72H	Clamp Hose 03256 #72	12

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB80731-3	Elbow, Donaldson Cobra 3" - 90 Deg	2
2	TM60818-12	Cab Filter Blanted 3EFS Tube	1
3	TM60818-13	Cab Filter Top 3EFS Tube	1
4	TM60818-11	Cab Filter Connector 3EFS Short Coupler	1
5	TB80575-45	Rubber Elbow 3" x 45 Deg.	1
6	TB80575-25-4-3	Rubber Elbow Donaldson, 4" x 3" x 90 Deg.	1
7	CL-HO-72H	Clamp Hose 03256 #72	1
8	CL-HO-52H	Clamp Hose 03253 #52	7



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TORRETT'S
MACHINERY & STEEL
SERVICE INC.
P.O. BOX #2300 LEEBURG, FLA. 34220-2300

T-6444

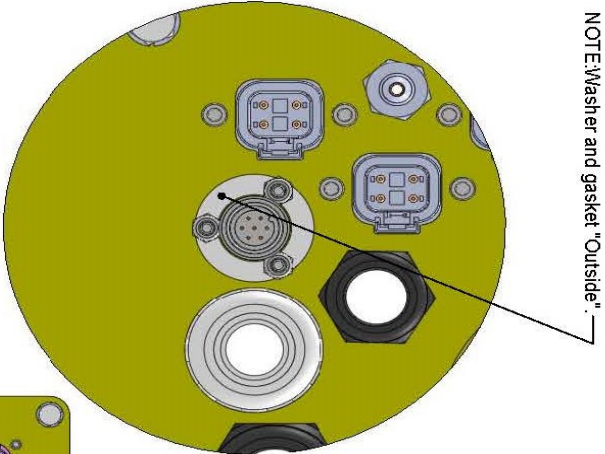
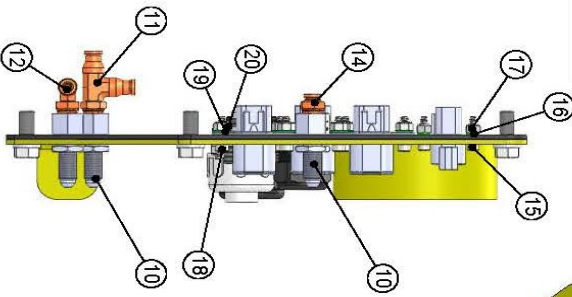
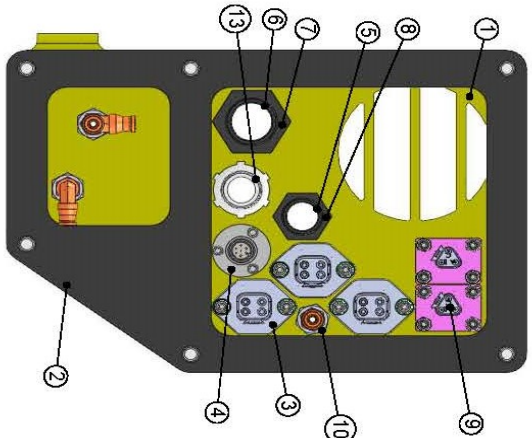
Cab Filter Tube Assemblies

ITEM NO.	OrderNo	DESCRIPTION	Default QTY.
1	TB80575-47-3	Rubber Hump, Straight Donaldson, 3"	1
2	TM60840-03	Air Conditioner Respa Connector Tube 3"	1
3	TB80575-25-4-3	Rubber Elbow Donaldson, 4" x 3" x 90 Deg.	1
4	CL-HO-52H	Clamp Hose 03253 #52	3
5	CL-HO-72H	Clamp Hose 03256 #72	1

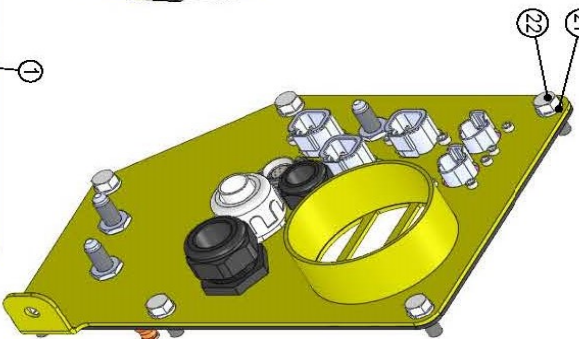
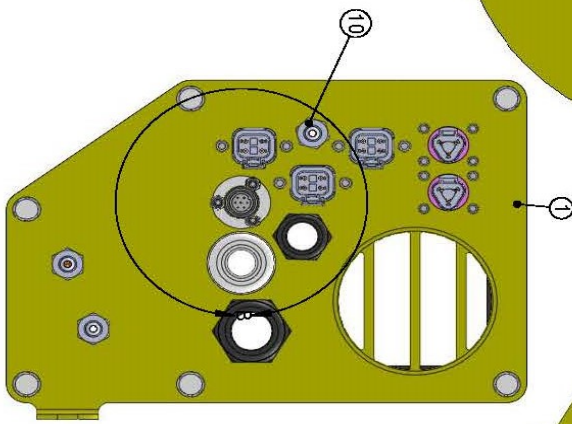
*Shop #
DATE 1/3/2018
D.R. BY dlig
60,818,09

Cab Pierce Plate Assembly

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	801801.05A	Cab Skin Rear Pierce Plate Assembly	1
2	801801.07	Cab Skin Rear Pierce Plate Gasket	1
3	801300.83P-U12	Deutsch DTFD4-4P-U12 Female Receptacle	3
4	861300.93C	Bulkhead Connector 7P, Diacon 0257090	1
5	EMVSR0N24.5171	Dome Nut 3/4" NPT - ID 51-.71	1
6	EMVSR0N1.7198	Dome Nut 1" NPT - ID 71-.98	1
7	EMVSR1N1	Lock Nut 1" for Dome Nut	1
8	EMVSR1N4	Lock Nut 3/4" for Dome Nut	1
9	801300.74	Deutsch DT04-3P-U12 Female Bulkhead Recept	2
10	HA-2705-UN4-04	Adapter, JIC Pipe Bulkhead w/UN-2705-UN4-04	3
11	DOT-TE4-25X0.25-TTP	DOT Fitting 25 Tube Tube Pipe	1
12	DOT-ME190-0.25X0.25	DOT Male Elbow 90 Deg PP89CC .25x.25	1
13	86090-UTC-0.75	Liquid Tight Connector Straight 3/4"	1
14	DOT-MC-0.25X0.25	DOT Male Connector PP89CC 1/4 X 1/4	1
15	SSCS-SH-8-32X0.75	Cap Screw-Stainless-Socket Head #8-32 X 3/4"	8
16	SSWF-8	Washer Flat - Stainless - #8 (1.74 x 3/75)	8
17	SSNSL-8-32	Nut Self Lock - Stainless - 8-32	8
18	SSCS-SH-10-24X.75	Cap Screw-Stainless-Socket Head #10-24 X 3/4"	6
19	SSWF-10	Washer Flat - Stainless - #10 (2.18 X .437)	6
20	SSNSL-10-24	Nut Self Lock - Stainless - 10-24	6
21	WLC-0.375	Washer Lock 3/8	6
22	36-10S	Screw Cap Hex. 3/8-16 X 1	6



DETAIL B
SCALE 1 : 1.5



LEEBURGS
MACHINE & STEEL
SERVICE, INC.
P.O. BOX 492810, LEEBURGS, FLA. 34749-2810

Pierce Plate WHardware

CUSTOMER: T-644

SHOP # -
SALES # -
DR. BY MCT
DATE 5/13/21

DWG. NO. TA-60,801,05A

Cab Upper Instrument Panel

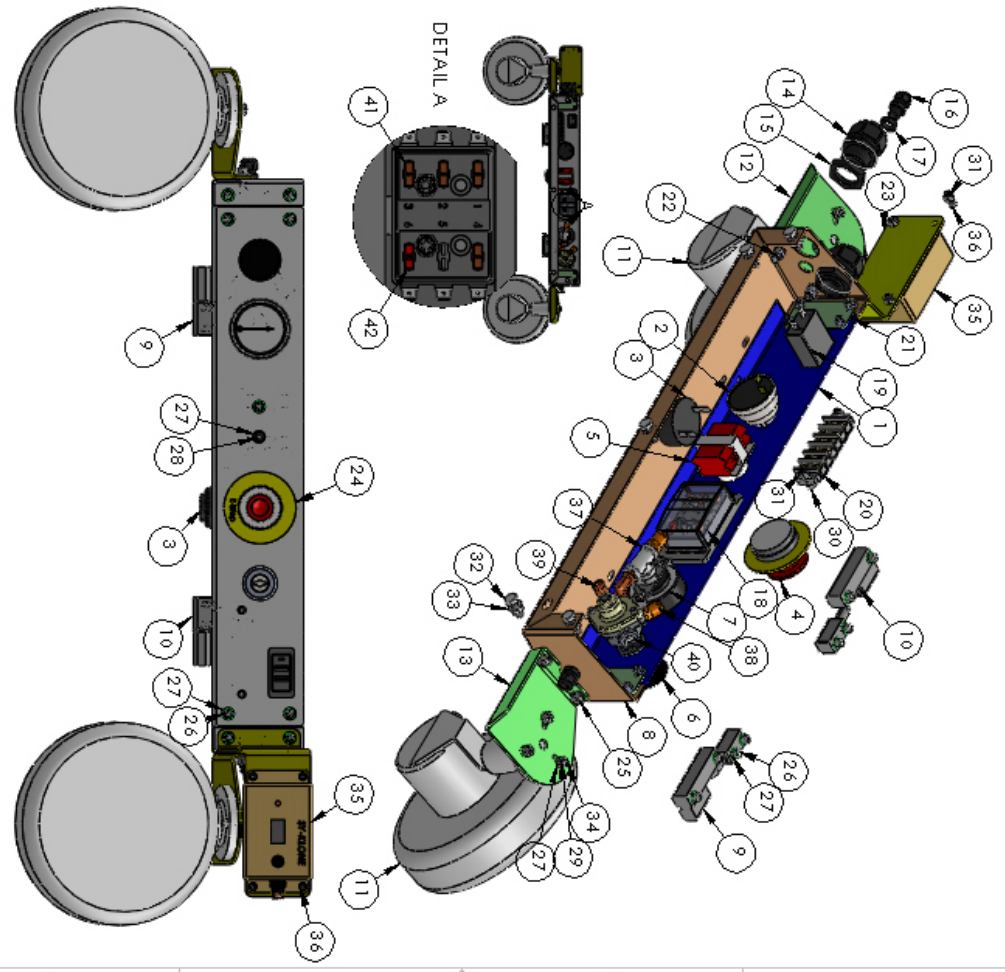
ITEM NO.	ORDERNO	DESCRIPTION	QTY.
1	TM060803-01	Cab Upper Dash Panel	1
2	TR80130-3-6-1	Key Switch, Standby On-Off US&A	1
3	TR80125-2-4	Preview buzzer	1
4	TR80375-111-300MM	E3top Mushroom Head & Base 300MM	1
5	TR80375-112-NC-300MM	Contact Block Normally Closed - 30 0MM	1
6	TR80400	Valve Pd. W/Knob Nut Pin	1
7	TR80607	Gauge Air	1
8	TM060803-02	Cab Upper Dash Hinge Bracket	1
9	TR646038	Hinge, Right Side Door Mount, 2.5" X 1.25"	1
10	TR646031	Hinge, Left Side Door Mount, 2.5" X 1.25"	1
11	TR64133	Cab Fan	2
12	TM060803-04L	Cab Upper Dash Fan Plate, Left	1
13	TM060803-04R	Cab Upper Dash Fan Plate, Right	1
14	EMS DMS4-S171	Dome Nut 3/4" NPT - ID .51-.71	2
15	EMS FLN34	Lock Nut 3/4" for Dome Nut	2
16	EMS DDM14-1185	Dome Nut 1/4" NPT - ID .11-.25	2
17	EMS FLN14	Lock Nut 1/4" for Dome Nut	2
18	TR64146-6	Mini Fuse Block, 6 Position w/Cover	1
19	TR64130-23	Dual USB Power Charger, 2 Port 2.4A-2.4A, 5V	1
20	TR80375-109-04	Terminal Strip, 6 Lug 20A #6-32	1
21	TM060803-03	Cab Upper Dash Backstop Assembly	2
22	NR-0-25-20-P L10.027-0.165	Rivet Nut 1/4-20 (Plated) 0.027-0.165 thickness	4
23	TM060803-05	Cab Upper Dash Filter Monitor Bracket	1
24	TR80183	Label, E3top Ring	1
25	CS-HMS-0-25-20X10.75	Screw Cap Hex: 1/4-20 X 3/4 Remanded Flange Bolt	4
26	CS-CS-5H-10-24X.50	Cap Screw/Stainless-Socket Head- #10-24 X 1/2	16
27	WFS5-10	Washer Flat - Stainless - #10 [218 X .437]	24
28	CS-CS-5H-10-24X1.25	Cap Screw/Stainless-Socket Head- #10-24 X 1 1/4"	2
29	SS NLI-10-24	Nut Self Lock - Stainless : 10-24	8
30	SS CS-5H-8-32X10.75	Cap Screw/Stainless-Socket Head- #8-32 X 3/4"	2
31	SS NLI-8-32	Nut Self Lock - Stainless : 8-32	6
32	CS-HH-0-25-20X10.75	Screw Cap Hex: 1/4-20 X 3/4	5
33	NF-0-25-20	Nut Flanged Lock : 1/4-20	5
34	SS CS-5H-10-24X.75	Cap Screw/Stainless-Socket Head- #10-24 X 3/4"	6
35	TR80643	Electronic Cab Pressure Sensor Monometer	1
36	SS CS-5H-8-32X10.50	Cap Screw/Stainless-Socket Head- #8-32 X 1 1/2"	4
37	GF-181	Tea Gally, 1/8"	1
38	DOT-MWC-0-25X10.125	DOT Mole Connector P/88C 1/4 X 1/8	2
39	DOT-MELP0-0-25X10.125	DOT Mole Elbow 90 Deg P/89C 1/4 X 1/8	2
40	HA-2222-25	Adapter, Hydraulic: 2222-25	1
41	TR64145-5A	Fuse, 5A Led Mini ATM Tan 12V	4
42	TR64145-10A	Fuse, 10A Led Mini ATM Red 12V	1

TRUMER
MACHINE & STEEL
STRUCT INC
10000 W. 114th Ave. S. #100
Broomfield, CO 80020

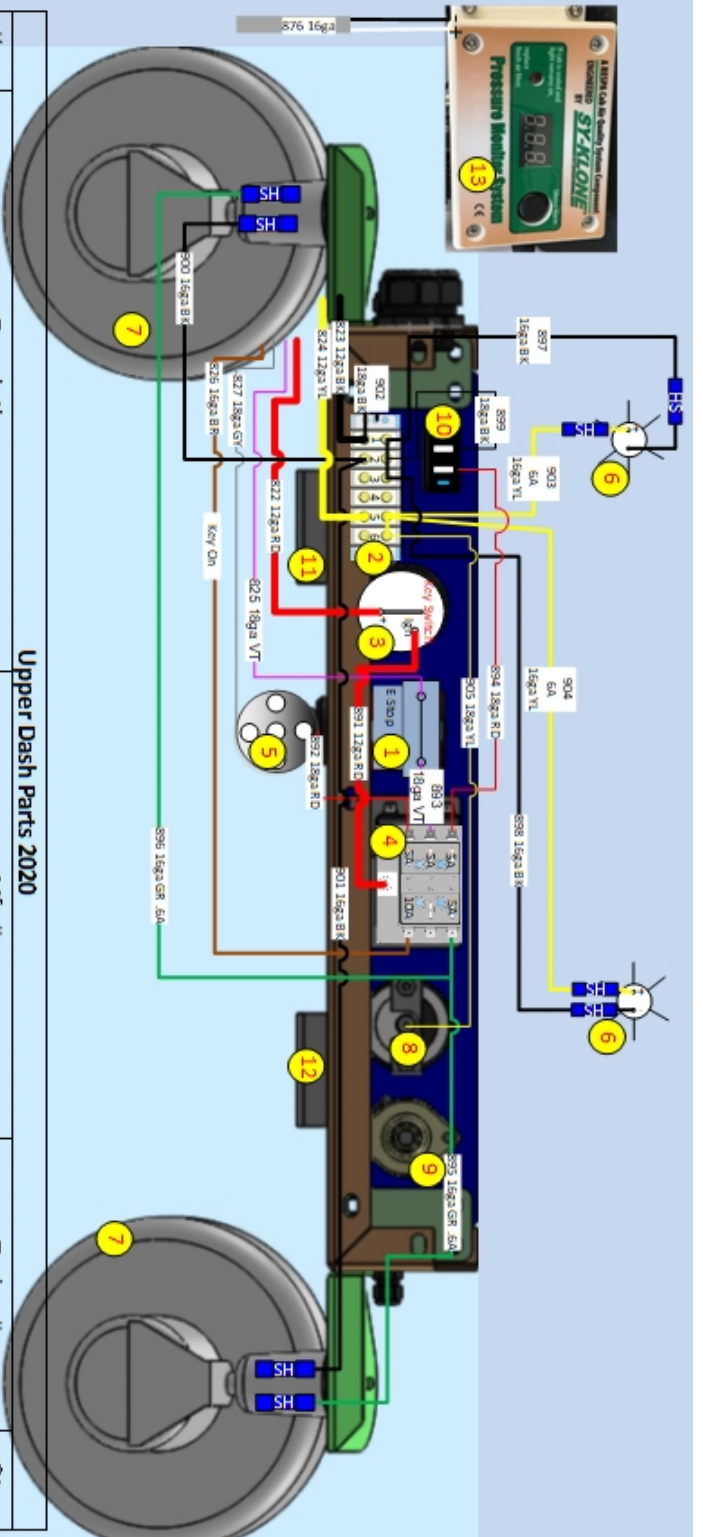
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Cab Upper Dash Bolted Assembly

3-0-0 P P
DATE 9/17/2017
DR. BY dlg
TA-60803-00



Cab Upper Instrument Panel Electrical

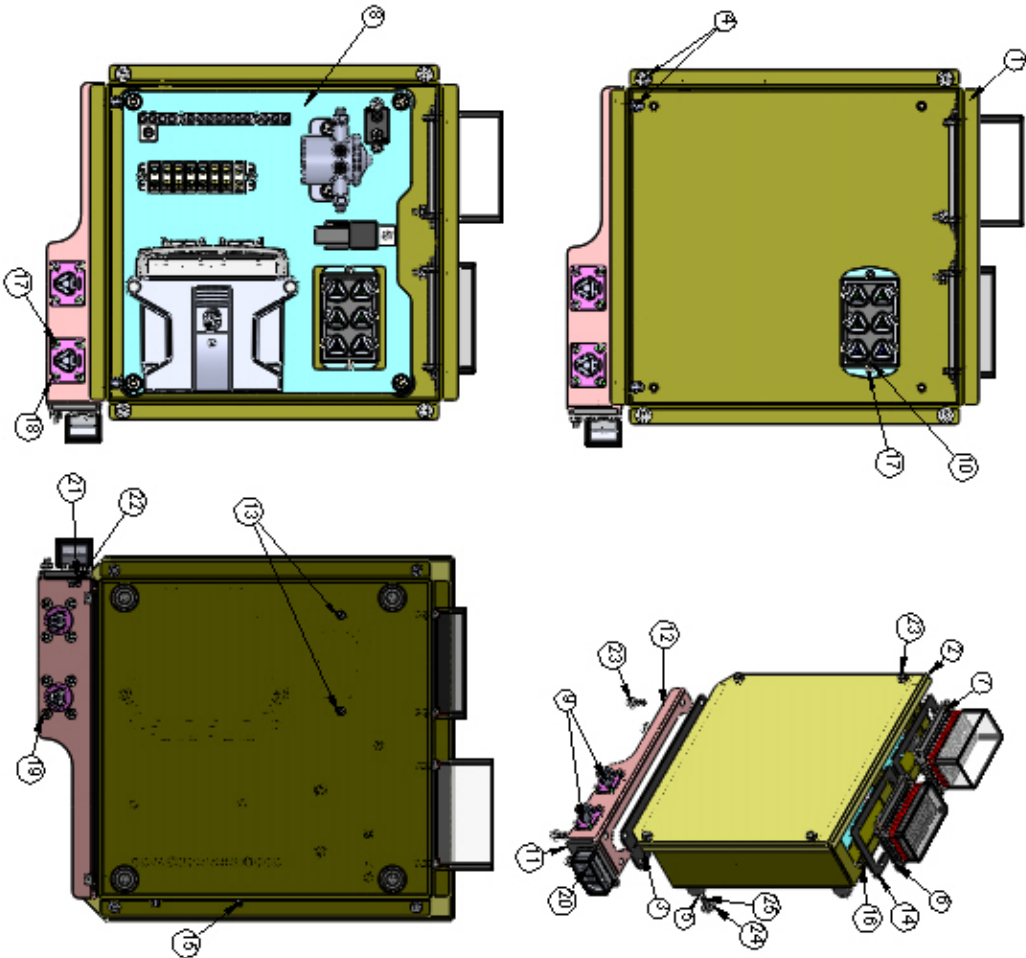


Upper Dash Parts 2020

Key	Description	Mfg #	Tucker #	Qty
1	E-Stop Mushroom Head & Base 30MM	Grainger - 2EN49	TB80575-111-30MM	1
2	Contact Block Normally Closed - 30 MM	Grainger - 5B535	TB80575-112-NC-30MM	1
3	Terminal Strip 6 Lug 20A #6-32	Waytek - 47306	TB80575-109-06	1
4	Terminal Strip Jumper 20A	Waytek - 37212	TB80575-109-JUMPER	3
5	Key Switch, Standard On/Off US64	Wholesale - SDUS64	TB80130-36-1	1
6	Mini Fuse Block, 6 Position	Waytek - 45606	TB66146-6	1
7	Fuse, 5A Led Mini ATM Tan 12V	Waytek - 46261	TB66145-5A	4
8	Fuse, 10A Led Mini ATM Red 12V	Waytek - 46263	TB66145-10A	1
9	Preview Buzzer	Preco - FPV410B	TB80125-2-4	1
10	Work Light, LED 7" 72 Watt	Wholesale - TUKOHREE	TB66130-40-72W	2
11	Cab Fan	Wholesale - TPDF12V	TB66133	2
12	Gauge Air (225635)	Wholesale - SW82329	TB80607	1
13	Valve Park Brake. W/knob Nut Pin	Wholesale - TU275176	TB80600	1
14	Dual USB Power Charger, 2 Port 2.4A-2.4A, 5V	Waytek - 11019	TB66130-23	1
15	Hinge, Left Side Door Mount, 2.5" x 1.25"	McMaster - 11955A77	TB66803L	1
16	Hinge, Right Side Door Mount, 2.5" x 1.25"	McMaster - 11955A76	TB66803R	1
17	Electronic Cab Pressure Sensor	Visionaire - 616-KT EK1-ENG	TB80663	1

Cab Electrical Panel Assembly

ITEM NO.	ORDERNO	DESCRIPTION	QTY.
1	TM60090-01	Electrical Junction Box	1
2	TM60090-02	Electrical Junction Box Lid	1
3	TB60090-04	Electrical Junction Box Gasket	1
4	NR-0-25-20-PL,0.027-0.165	Rivet Nut 1/4-20 (Plated) 0.027-0.165 Thickness	8
5	TB60455	Rubber Dampening Sandwich w/F 1/4-20	4
6	TB6145-01	Fuse Assembly Base w/ Cover	1
7	TB6145-02	Relay Assembly Base w/ Cover	1
8	TA60090-05K	Electrical Junction Box Sub Plate, Cab Kit	1
9	TB60130-74	Deutsch DT04-3P-1012 Female Bulkhead Recept	2
10	TB60142	Can Data Link Module (6 Total Connectors)	1
11	TB61144	Mini Fuse Block, 4 Position w/ Cover	1
12	TM60090-03-2	Electrical Junction Box Gasket Plate, Cab	1
13	NR-8-32-F, L,0.020-0.080	Rivet Nut 8-32 (Plated) 0.020-0.080 Thickness	2
14	TB60090-09	Electrical Junction Box Top Gasket	2
15	NR-10-24-PL,0.020-0.130	Rivet Nut 10-24 (Plated) 0.020-0.130 Thickness	2
16	C5-HH5-10-32X0.625	Screw Cap Hex: 10-32 X 5/8 Serrated Flange Bolt	8
17	SSCS-SH-8-32X0.50	Cap Screw- Stainless- Socket Head- #8-32 X 1/2"	10
18	WAF5-8	Washer Flat - Stainless - #8 [1.74 X .375]	8
19	SSNSL-8-32	Nut Self Lock - Stainless : 8-32	8
20	S5-C5-SH-10-24X1	Cap Screw- Stainless- Socket Head- #10-24 X 1"	2
21	WAF5-10	Washer Flat - Stainless - #10 [2.18 X .437]	2
22	SSNSL-10-24	Nut Self Lock - Stainless : 10-24	2
23	C5-HH5-0-25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4 Serrated Flange Bolt	8
24	WUF-0-25	Washer Flat 1/4	4
25	C5-HH-0-25-20X1	Screw Cap Hex: 1/4-20 X 1	4



Tomatis
MACHINE & STEEL
SHEET METAL
CORPORATION

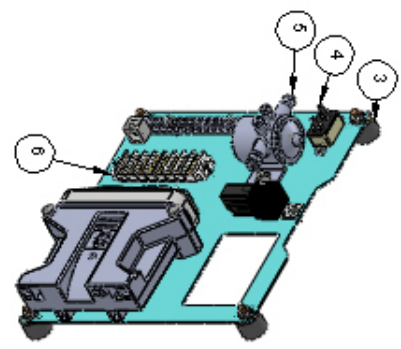
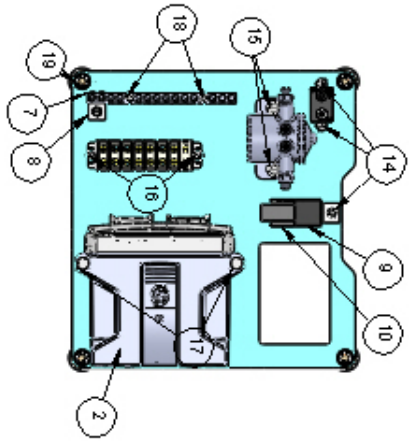
Waterbury, CT 06706
T-644

Electrical Junction Box Assembly Cab

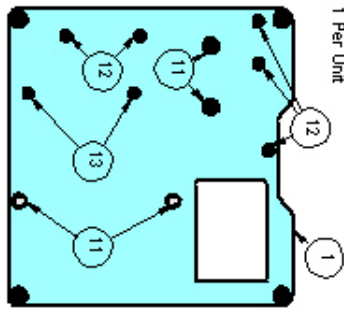
DATE 9/12/17
DESIGN MCT
TA60090-00-1

Cab Electrical Panel Subplate

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60090-05	Electrical Junction Box Sub Plate, Cab	1
2	TB66130-10	MC0924-010 Controller	1
3	TB800655	Rubber Dampening sandwich w/F 1/4-20	4
4	E6530	Circuit breaker 6530 H.d.	1
5	TB80587-1	Relay Solenoid	1
6	TB80575-109-08	Terminal Strip 8 Lug 20& #8-32	1
7	TB80130-45	Ground Bar	1
8	TB80130-45-01	Ground Bar Collar Strap	1
9	TB80130-12	NTE Electronics Relay # 02H 7598 70 Amp	1
10	TB80130-13	Typec Relay Socket VCF7-1000	1
11	NR-0-25-20- P.L.0.027-0.165	Rivet Nut 1/4-20 (Plated) 0.027-0.165 Thickness	4
12	NR-10-24-P.L.0.020- 0.130	Rivet Nut 10-24 (Plated) 0.020-0.130 Thickness	5
13	NR-8-32-P.L.0.020- 0.080	Rivet Nut 8-32 (Plated) 0.020-0.080 Thickness	2
14	SS CS-S-H-10-24X .50	Cap Screw-Stainless-Socket Head- #10-24 X 1/2"	3
15	CS-HH3-0-25- 20X0.75	Screw Cap Hex: 1/4-20 X 3/4 Serrated Flange Bolt	2
16	SS CS-S-H-8-32X0.75	Cap Screw-Stainless-Socket Head- #8-32 X 3/4"	2
17	CS-HH-0-25-20X2.5	Screw Cap Hex: 1/4-20 X 2 1/2"	2
18	SS CS-S-H-10-24X 1"	Cap Screw-Stainless-Socket Head- #10-24 X 1"	2
19	NFS-0-25-20	Nut Serrated Flanged Lock : 1/4-20	4



Electrical Junction Box Sub Plate, Cab Kit
T A 60090-05K
1 Per Unit



MACHINE & STEEL
TOWER, INC.
P.O. BOX 57800
IRVING, TEXAS 75017-0580

WARRANTY
T-844

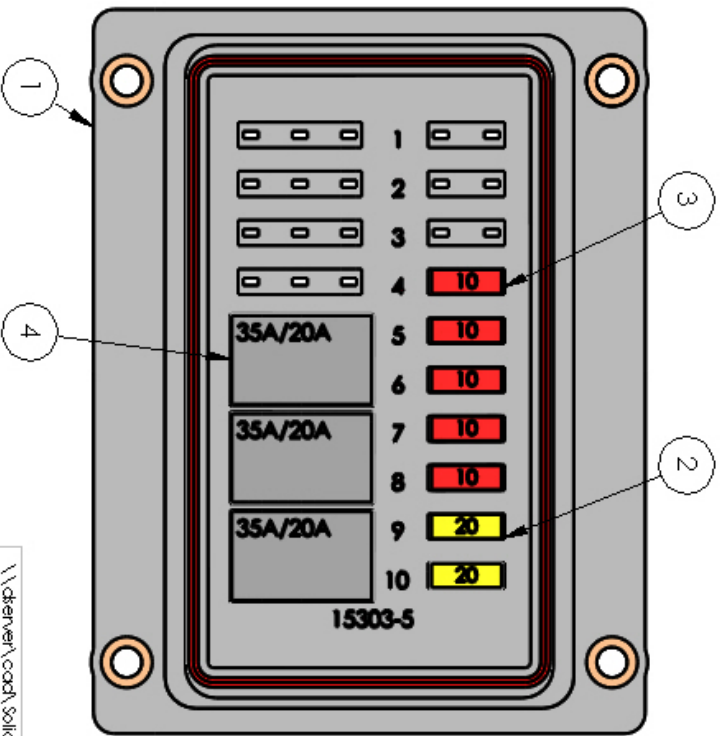
Electrical Junction Box Sub Plate, Cab Kit

DATE 9/1/2017

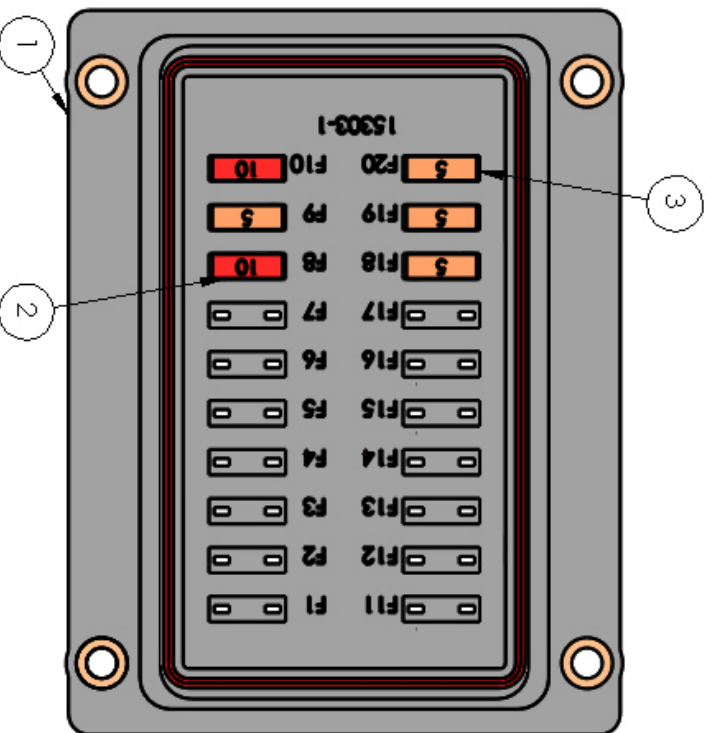
DR. T.M.C.T
T A 60090 D5K

Cab Panel Fuses-Relays

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB66145-02	Mini Fuse Panel, 3 Relays, 10 Fuses 15303-5	1
2	TB66145-20A	Fuse, 20A Led Mini ATM Yellow 12V	2
3	TB66145-10A	Fuse, 10A Led Mini ATM Red 12V	5
4	TB66145-04	Micro Relay, ISO 280 SPDT 35A, 12V	3



ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB66145-01	Mini Fuse Panel, 20 Position Busman 15303-1	1
2	TB66145-10A	Fuse, 10A Led Mini ATM Red 12V	2
3	TB66145-5A	Fuse, 5A Led Mini ATM Tan 12V	4



MACHINE & STEEL
SERVICE INC.
P.O. BOX 492810 LEEBURG, FLA. 34749-2810

Fuses-Relays for Cab

T-644

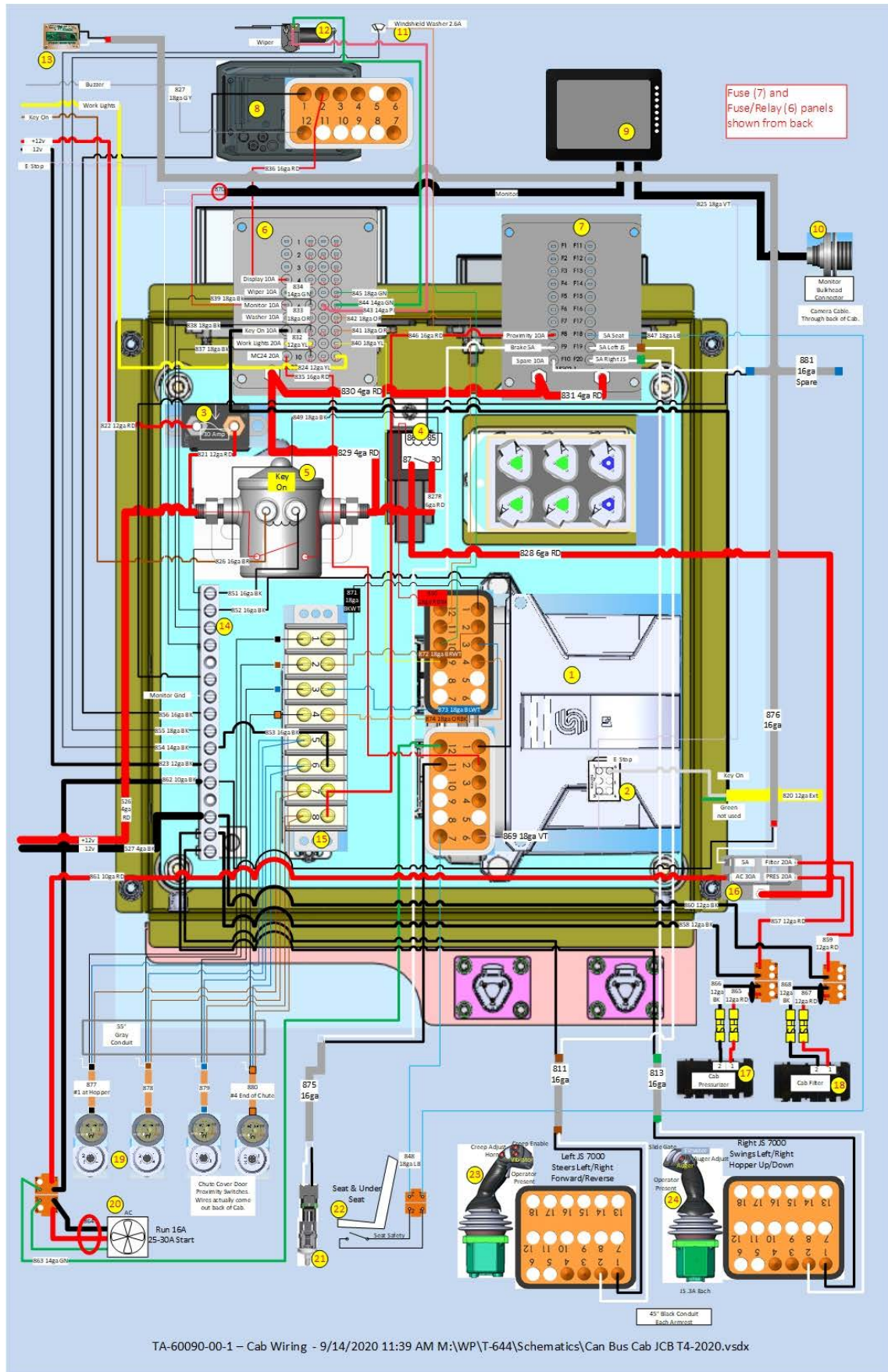
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DR. BY dlg

DATE 9/14/2020

SHOP #

Cab Electrical Schematic

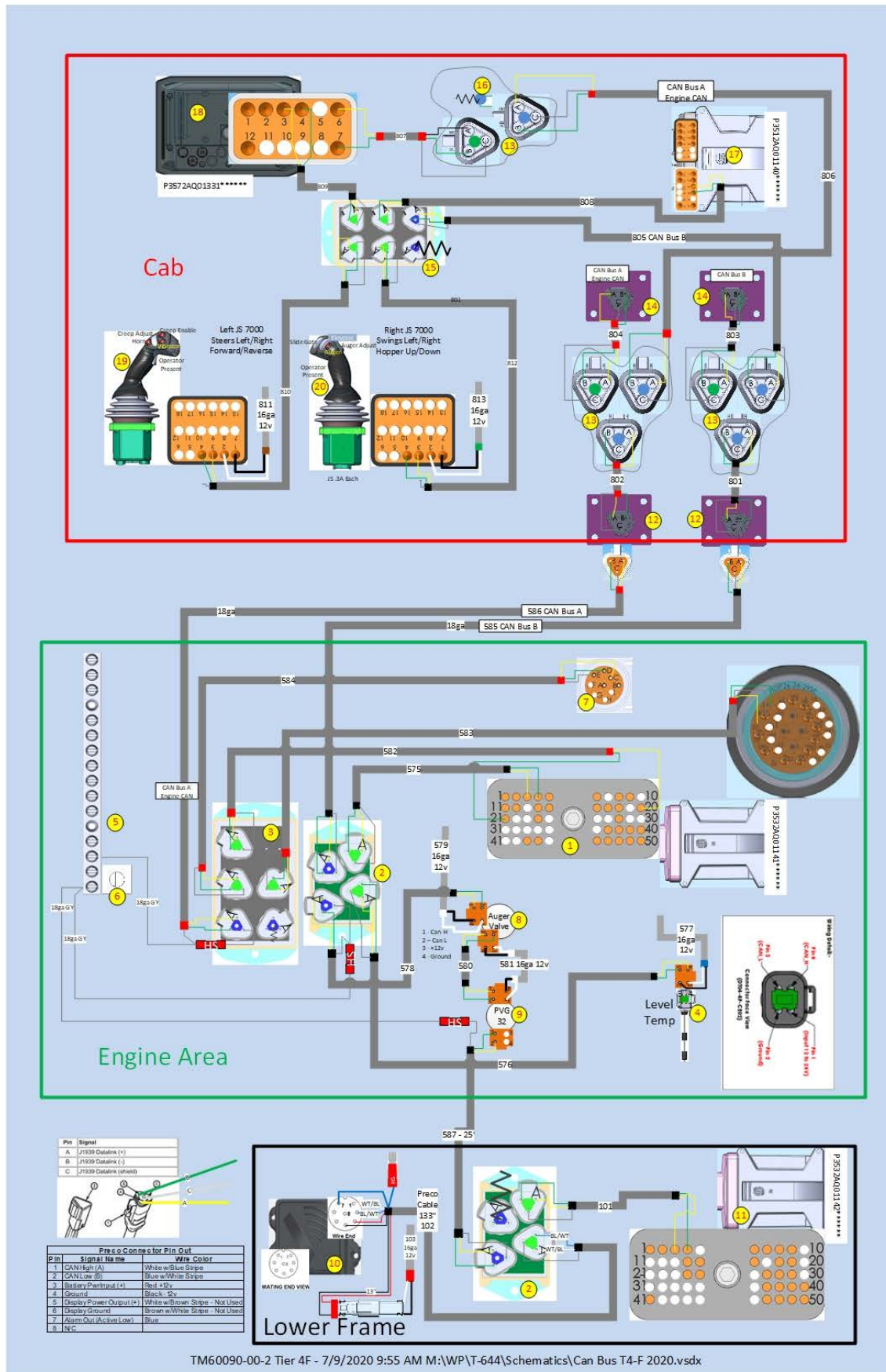


Cab Electrical BOM

Cab Box Parts				
Key	Description	Mfg #	Tucker #	Qty
1	MC024-010 Controller w/prog loaded	Berendsen - 11138528	TB66130-10	1
	Deutsch DTM06-12SA Male Plug	Deutsch - DTM06-12SA	TB80130-60-A	1
	Deutsch DTM06-12SB Male Plug	Deutsch - DTM06-12SB	TB80130-60-B	1
	Plug, Deutsch Sealing Size 20	Deutsch - 0413-204-2005	TB80130-64	8
2	Deutsch DT04-6P-P021 1-6 Pin Buss Receptacle	Deutsch - DT04-6P-P021	TB80130-113	1
3	Circuit Breaker 6530 H.d.	Wholesale - HE3005530	E6530	1
4	NTE Electronics Relay # 02H7398 70 Amp	Newark - 02H7398	TB80130-12	1
	Relay Socket VCF7-1000	Newark - 17M3159	TB80130-13	1
5	Solenoid/Relay, 200 Amp Continous, JCB	Wholesale - HE24213	TB80587-1	1
6	Mini Fuse Panel, 5 Relays, 10 Fuses 15303-5	Waytek - 46345	TB66145-02	1
	Fuse, 10A Led Mini ATM Red 12V	Waytek - 46263	TB66145-10A	5
	Fuse, 20A Led Mini ATM Yellow 12V	Waytek - 46265	TB66145-20A	2
	Micro Relay, ISO 280 SPDT 35A, 12V	Waytek - 75659	TB66145-04	3
7	Mini Fuse Panel, 20 Position Bussman 15303-1	Waytek - 46077	TB66145-01	1
	Fuse, 5A Led Mini ATM Tan 12V	Waytek - 46261	TB66145-5A	4
	Fuse, 10A Led Mini ATM Red 12V	Waytek - 46263	TB66145-10A	2
8	DP720 Display w/prog loaded	Berendsen - 11151915	TB66130-12-720	1
	Deutsch DTM06-12SA Male Plug	Deutsch - DTM06-12SA	TB80130-60-A	1
	Plug, Deutsch Sealing Size 20	Deutsch - 0413-204-2005	TB80130-64	5
9	Monitor 12" RLED Serial R6 Display Orlaco 0411130	Berendsen - 411130	TB66130-02-MON-12	1
	Cable, Camera 17M 7P Dynamic 46 Ft Orlaco 0304590	Berendsen - 304590	TB66130-03-17M	1
10	Bulkhead Connector 7P, Orlaco 0357051	Berendsen - 0357051	TB66130-03-BC	1
11	Windshield Washer Tank 3	Wholesale - TU14140	TB60813-30	1
	Windshield Washer Nozzle	Wholesale - TU14153	TB60813-31	1
12	Motor Wiper - Transporter	Wholesale - TU4R2.12.R110D	TB81995-06	1
	Arm Wiper, Stainless	Wholesale - AN4402	TB81995-02	1
	Blade Wiper Heavy Duty Stainless Steel	Wholesale - AN5120	TB81995-07	1
13	Electronic Cab Pressure Sensor	Visionaire - 616-KT EK1-ENG	TB80663	1
14	Ground Bar Kit 14 Position	Besco - ECGB14	TB80130-45	1
	Ground Bar Collar Strap	Besco - ECCS1	TB80130-45-01	1
15	Terminal Strip 8 Lug 20A #6-32	Waytek - 47308	TB80575-109-08	1
	Terminal Strip Jumper 20A	Waytek - 37212	TB80575-109-JUMPER	2
16	Mini Fuse Block, 4 Position	Waytek - 45605	TB66146	
	Fuse, 5A Led Mini ATM Tan 12V	Waytek - 46261	TB66145-5A	1
	Fuse, 20A Led Mini ATM Yellow 12V	Waytek - 46265	TB66145-20A	2
	Fuse, 30A Led Mini ATM Green 12V	Waytek - 46267	TB66145-30A	1
17	Vortex Hyper Flow Cab Pressurizing Filter System	Visionaire - 616-RCF2001	TB80661	1
	Respa CF Replacement Filter	Visionaire - 616-FFFF008	TB80661-01	
18	Sy-Klone RESPA-CFX 12v Recirculation Merv 16+ Filt	Visionaire - 616-REV0002	TB80662	1
	Respa CFX Replacement Filter	Visionaire - 616-FFFF011	TB80662-01	
19	Sensor, N/O PNP Turck Proximity	Turck - Bi15-EM30-AP45XLD-H1141	TB66130-08-TU	4
20	Tucker 7110DD A/C & Heat, 12v w/RESPA System	Visionaire - 550-02-00-00	TB80660-T644	1
21	Switch N/O - 500 Series w-MetriPack	Wholesale - TU77030-00000050-01	TB80604-1	1
22	Seat HFC100, Vinyl, Mech Susp, Consoles	JR Merrit - 07.964	TB80590-4	1
	Switch Kit, Operator Present, OPS	JR Merrit - 70.268	TB80590-5	1
	Seat Belt, Lap, Statci 2 w/Hardware	JR Merrit - 12.020	TB80590-6	1
	Pouch, Document, Actimo 142259	JR Merrit - 07.938	TB80590-7	1
23	JS7000,Dual Axis,3 Button,1Roller,Trigger, Left	Berendsen - 83046229	TB66130-80-CL	1
	Deutsch DT16-18SB-K004 Male Plug	Deutsch - DT16-18SB-K004	TB80130-112-B	1
	Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	14
24	JS7000,Dual Axis,1 Button,3 Roller,Trigger, Right	Berendsen - 83040196	TB66130-80-CR	1
	Deutsch DT16-18SB-K004 Male Plug	Deutsch - DT16-18SB-K004	TB80130-112-B	1
	Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	14

CAN Bus

CAN Bus Schematic



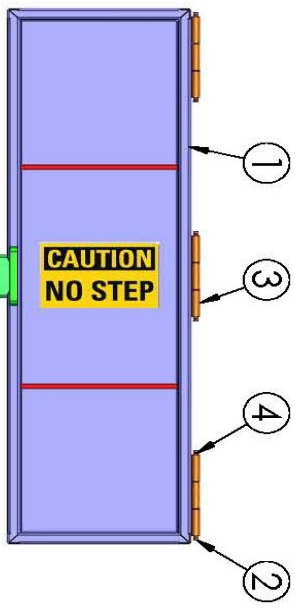
CAN Bus BOM

CAN Bus Parts 2020				
Key	Description	Mfg #	Tucker #	Qty
1	MC050-010 Controller w/prog loaded-Eng Area	Berendsen - 11138530	TB66130-11-EA	1
	Deutsch DRC26-50S01 Male Plug	Deutsch - DRC26-50S01	TB80130-93	1
	Plug, Deutsch Sealing Size 20	Deutsch - 0413-204-2005	TB80130-64	20
2	Can Data Link Module (4 Total Connectors)	Waytek - 80604	TB80140	2
	Deutsch DT06-3S-PP01 Male Plug Black 120 Ohm	Deutsch - DT06-3S-PP01	TB80130-77	1
3	Can Data Link Module (5 Total Connectors)	Waytek - 80610	TB80141	1
	Deutsch DT06-3S-PP01 Male Plug Black 120 Ohm	Deutsch - DT06-3S-PP01	TB80130-77	1
4	Rota Tank Level/Temp Sensor	Rota - TL5207	TB66213-ROTA-TLT	1
5	Ground Bar Kit 14 Position	Besco - ECGB14	TB80130-45	1
6	Ground Bar Collar Strap	Besco - ECCS1	TB80130-45-01	1
7	Deutsch HD10-9-1939 Flanged Receptacle	Deutsch - HD10-9-1939P	TB80575-129-1	1
	Deutsch HD10-9-GKT Gasket for Flanged Receptacle	Deutsch - HD10-9-GKT	TB80575-129-2	1
	Deutsch HDC16-9-L47N Cover for Flanged Receptacle	Deutsch - HDC16-9-L47N	TB80575-129-3	1
8	PVG100, 1 sec, 65, Motor, w/LX, Auger Valve	Berendsen - 161F5083	TB66130-13	1
9	PVG32, 6 sec, No LX	Berendsen - 159B2797	TB66130-14	1
10	Preview Back Up Sensor Can-Bus Sentry ST82062.4	Preco - ST82062.4	TB80125-2-3S	1
11	MC050-010 Controller w/prog loaded-Lower Frame	Berendsen - 11138530	TB66130-11-LF	1
	Deutsch DRC26-50S01 Male Plug	Deutsch - DRC26-50S01	TB80130-93	1
	Plug, Deutsch Sealing Size 20	Deutsch - 0413-204-2005	TB80130-64	23
12	Deutsch DT04-3P-L012 Female Bulkhead Recept	Deutsch - DT04-3P-L012	TB80130-74	2
	Deutsch W3P-1939 Wedge for Receptacle, Blue	Deutsch - W3P-1939	TB80130-92-1939	2
13	Deutsch DT04-3P-P007 Receptacle "Y" Connector	Deutsch - DT04-3P-P007	TB80130-76	3
14	Deutsch DT04-3P-L012 Female Bulkhead Recept	Deutsch - DT04-3P-L012	TB80130-74	2
	Deutsch W3P Wedge for Receptacle, Green	Deutsch - W3P	TB80130-92	2
15	Can Data Link Module (6 Total Connectors)	Waytek - 80602	TB80142	1
	Deutsch DT06-3S-PP01 Male Plug Black 120 Ohm	Deutsch - DT06-3S-PP01	TB80130-77	1
16	Deutsch DT06-3S-PP01 Male Plug Black 120 Ohm	Deutsch - DT06-3S-PP01	TB80130-77	1
17	MC024-010 Controller w/prog loaded	Berendsen - 11138528	TB66130-10	1
	Deutsch DTM06-12SA Male Plug	Deutsch - DTM06-12SA	TB80130-60-A	1
	Deutsch DTM06-12SB Male Plug	Deutsch - DTM06-12SB	TB80130-60-B	1
	Plug, Deutsch Sealing Size 20	Deutsch - 0413-204-2005	TB80130-64	8
18	DP720 Display w/prog loaded	Berendsen - 11151915	TB66130-12-720	1
	Deutsch DTM06-12SA Male Plug	Deutsch - DTM06-12SA	TB80130-60-A	1
	Plug, Deutsch Sealing Size 20	Deutsch - 0413-204-2005	TB80130-64	5
19	JS7000,Dual Axis,3 Button,1Roller,Trigger, Left	Berendsen - 83046229	TB66130-80-CL	1
	Deutsch DT16-18SB-K004 Male Plug	Deutsch - DT16-18SB-K004	TB80130-112-B	1
	Plug, Deutsch Sealing Size 20	Deutsch - 0413-204-2005	TB80130-64	14
20	JS7000,Dual Axis,1 Button,3 Roller,Trigger, Right	Berendsen - 83040196	TB66130-80-CR	1
	Deutsch DT16-18SB-K004 Male Plug	Deutsch - DT16-18SB-K004	TB80130-112-B	1
	Plug, Deutsch Sealing Size 20	Deutsch - 0413-204-2005	TB80130-64	14

Chute

Chute Cover Doors

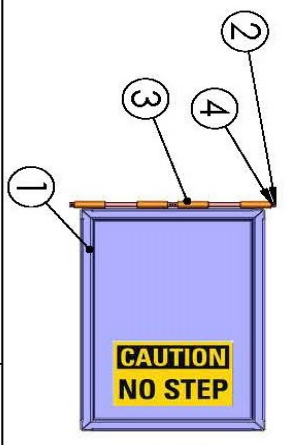
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1	60.907.11	Chute Door Assembly, Long	1
2	60.907.05	Chute Door Hinge Pin	3
3	60.907.04	Chute Door Hinge Tube	6
4	532-34TP	Pin Tension 5/32 X 3/4	6
5	80177	Vinyl Label Decal, Caution No Step 5"X7"	1



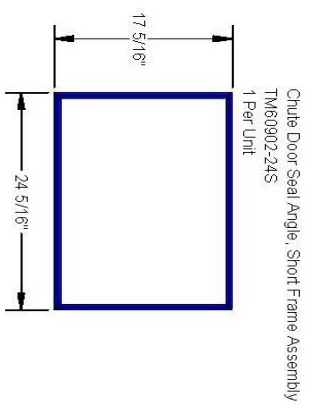
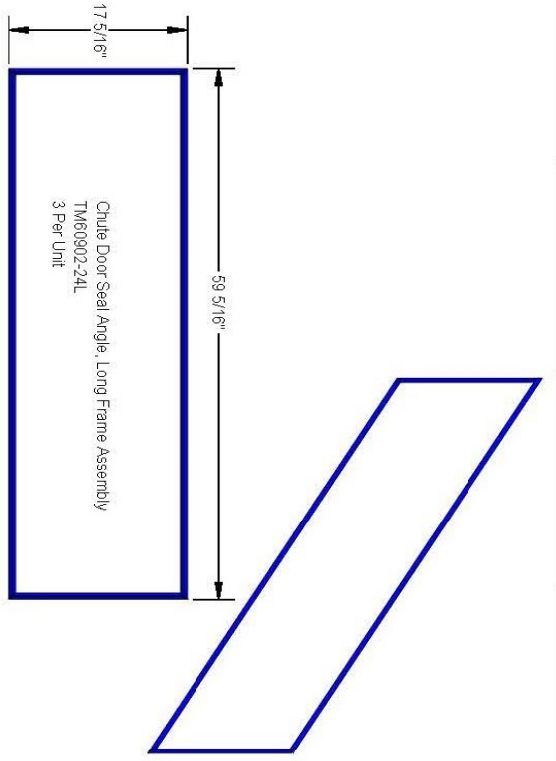
Chute Door Assembly, Long, Replacement
 TM60907-11R
 3 Per Unit

Complete Chute Door Kit
 Order: TM60907-CDK =
 3 - TM60907-11R
 1 - TM60907-10R

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	60.907.10	Chute Door Assembly, Short	1
2	60.907.05	Chute Door Hinge Pin	2
3	60.907.04	Chute Door Hinge Tube	4
4	532-34TP	Pin Tension 5/32 X 3/4	4
5	80177	Vinyl Label Decal, Caution No Step 5"X7"	1



Chute Door Assembly, Short, Replacement
 TM60907-10R
 1 Per Unit



TOUGHER MACHINE & STEEL SERVICE, INC.
 P.O. BOX 492810 LEBRON, VA 24749-2810

1388Wards Part T-644 (6/30/00) Hopper Parts (6/30/00) Chute Door Part (6/30/00)
 T-644

Chute Cover Door Replacements

SHOP #	DR. BY
DATE: 1/30/2018	QIG See Above

Chute Replacement Kit



MACHINE & STEEL
SERVICES, INC.
P.O. BOX 49250 TULSA, OK 74149-2510

Used in conjunction with the 60,902,011 Hopper for replacement of chute for replacement
T-644

Chute Kit, 23'

DATE 1/30/2018

REV. dig
TM60902-01M

DETAIL V
SCALE 1 : 8

60,902,01,01
1/4" Rod 14 1/4" long.
Squeeze chute in with
bar clamp and tack before
installing chute.

Flanges bolt to each end
of hopper.

Measure between new flanges
and trim each end as necessary
to length.
Slide full chute in between flanges
and start bolts/rope, then clip rods
out. Weld to each end.
Fit Chute Spout Assembly, weld, then
cut out for spout.

1
2
3
4

Tack in rods
Weld seams
As Shipped on Pallet

13/16"
48 13/16"
93 13/16"
138 13/16"
183 13/16"
228 13/16"
273 13/16"
276 15/16"
14 1/4" 15"

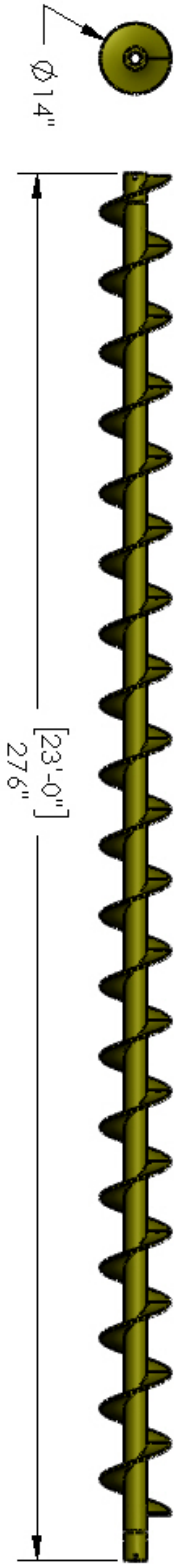
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	60,902,01	Chute Skin	3
2	60,902,22	Chute Spout Assembly	1
3	60,902,07	Chute Skin Flange	2
4	60,902,01,01	Chute Fcd Rods	7
5	CB-0-5-13X1.5	bolt Carriage 1/2-13 X 1 1/2	61
6	NU-0-5-13-PL	Nut 1/2-13 (Plated)	72
7	WL-0-5	Washer Lock 1/2	72
8	CS-HH-0-5-13X1.5	Screw Cap Hex: 1/2-13 X 1 1/2	11
9	TB80154	Label Auger-Danger 8701 SL	3
10	TB80218	Sedant Chute Liner	1

Chute Kit, 23'
TM60902-01M
Items below
included. 5-10
not shown.

Auger – 23 Ft



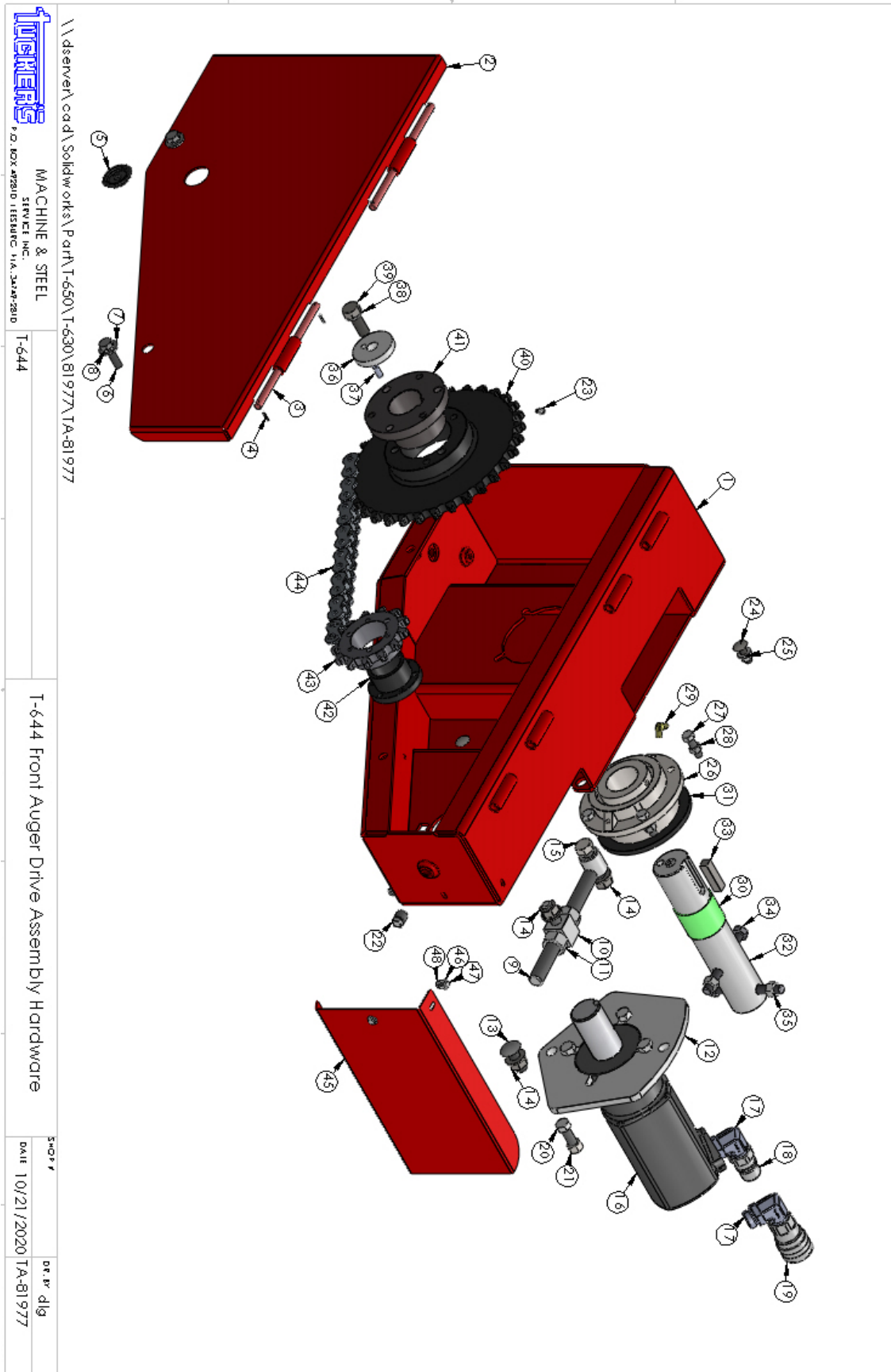
MACHINE & STEEL
SERVICE INC.
P.O. BOX 492810 LEESBURG, FLA. 34749-2810



TM60020-23
Auger, 23' w-AR Flights Welded
1 Per Unit
544.19 Lbs

\\dsevern\cadd\Solidworks\Part\T-644\60.020 Auger Part\60.020.23		DR. BY	FEW
T-644		DATE	
Auger, 23' w-AR Flights Welded		SHOP #	TM60020-23

Auger Front Drive Assembly Hardware



Auger Front Drive Assembly BOM

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM81977-1	Front Auger Drive Housing Assy	1
2	TM81977-2	Front Auger Drive Cover Assy	1
3	TM60907-05	Chute Door Hinge Pin	2
4	MM-TP-01.5625X0.75	Pin Tension 5/32 X 3/4	4
5	TB80216	Plug, Chain Inspection	1
6	FTB-0.5X2	Fast Thread Bolt .5 X 2	2
7	WF-0.5	Washer Flat 1/2	2
8	WL-0.5	Washer Lock 1/2	2
9	TM81977-6	Front Drive Motor Adjustment Bolt Assembly	1
10	TM81977-7	Front Auger Drive Motor Adj Block	1
11	NLU1-8-PL	Nut 1-8 (Plated)	2
12	TM81459	Plate Auger Motor Mount	1
13	CB-0.75-10X2	Bolt Carriage 3/4-10 X 2	1
14	NF-0.75-10	Nut Flanged Lock : 0.75-10	3
15	CS-HH-0.75-10X3.5	Screw Cap Hex: 3/4-10 X 3 1/2	1
16	TB80102	Motor Auger	1
17	HA-6806-16-16	Adapter, O-Ring to Pipe Elbow 90° : 6806-16-16	2
18	HNV-16M-16FP	Disconnect Mole, Hydraulic: HNV-16M-16FP	1
19	HNV-16F-16FP	Disconnect Female, Hydraulic: HNV-16F-16FP	1
20	CS-HH-0.625-11 X2.25	Screw Cap Hex: 5/8-11 X 2 1/4	4
21	NSL-0.625-11-GR5	Nut Self Lock : 5/8-11 - Grade 5	4
22	GP-12P	Plug Gdn. 1/2"	1
23	MM-GF-0.125-ST	Grease Fitting 1/8" Sht.	1
24	CB-0.5-13X1.5	Bolt Carriage 1/2-13 X 1 1/2	11
25	NF-0.5-13	Nut Flanged Lock : 1/2-13	11

ITEM NO.	OrderNo	DESCRIPTION	QTY.
26	TB80305-11	Bearing Auger, Timken	1
27	CS-HH-0.5-13X1.75	Screw Cap Hex: 1/2-13 X 1 3/4	4
28	NSL-0.5-13	Nut Self Lock : 1/2-13	4
29	2024-2-4S	Adapter, Aeroquip: 2024-2-4S	1
30	TM60020-02-02	Auger Front Drive Shaft Spacer, Front Motor	1
31	TB80137-2	Auger Drive Bearing Shield 2.7/8" X	1
32	TM81977-3	Front Drive Auger Drive Shaft	1
33	TM81977-3KEY	Front Drive - Shaft Key	1
34	TB58-512C38	Bolt Auger, 5/8" x 5-1/2" Gr. 8	2
35	NSL-0.625-11 - G-R8	Nut Self Lock : 0.625-11 - Grade 8	2
36	TM81029	Washer Idler Shaft	1
37	MM-TP-0.375X1.0	Pin Tension 3/8 X 1	1
38	WL-0.75	Washer Lock 3/4	1
39	CS-HH-0.75-10X2	Screw Cap Hex: 3/4-10 X 2	1
40	TB80405A	Sprocket Auger Shaft	1
41	TB80405B	Bushing Auger Shaft Spr.	1
42	TB80404B	Bushing Auger Mtr. Spr.	1
43	TB80404A	Sprocket Auger Motor	1
44	TM81807	Chain Kit Auger (26 Links #100)	1
45	TM8197791	Front Auger Drive Heat Shield	1
46	WF-0.25	Washer Flat 1/4	3
47	CS-HH-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	3
48	NF-0.25-20	Nut Flanged Lock : 1/4-20	3

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MACHINE & STEEL
SERVICE INC.
1001 E 23rd St
Tomball, TX 77375-3910

T-644

T-644 Front Auger Drive BOM

SHOP #
DATE 10/21/2020
DR. BY dly
TA-81977

Sprocket Bushing Installation Instructions

IMPORTANT: DO NOT USE LUBRICANTS IN THIS INSTALLATION

Installing Sprocket Bushings:

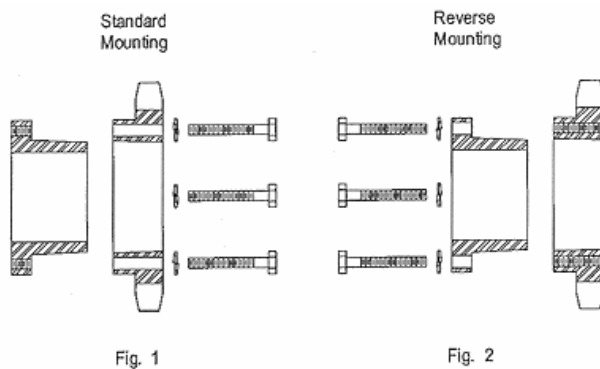
1. Remove all paint, oil, grease, etc. from tapered surface of bushing and bore of mating parts.
2. If bushing has a keyway, install shaft key. (If a rectangular key is required, one will be furnished with the bushing.)
3. Select **Standard** or **Reverse** mounting assembly. See Figures 1 and 2.

Note: If bushing does not slide on shaft freely, wedge a screwdriver blade into the saw cut at the Flange OD to open the bore of the bushing. Caution: Excessive wedging will split the bushing.

4. **Standard Mount** – Slide bushing on shaft, flange first. If using the setscrew, gently snug it against the key. **DO NOT TIGHTEN SET SCREW TIGHT YET, Excessive Torque will cause mating part to be eccentric.** Position mating part in place on bushing Aligning drilled holes in mating part with tapped holes in bushing flange. Using lockwashers, install capscrews thru the mating hub and into the bushing flange. (**Note:** M thru S bushings can only be Standard Mounted. Be sure the two tapped holes in the mating hub **do not** align near the bushing saw cut. If they Do, rotate the bushing 90 degrees).
5. **Reverse Mount** – Place mating part over and onto shaft as far as possible with large bore end of taper outward. Slide bushing onto shaft so tapered end will engage into the mating part. If using the setscrew, gently snug it against the key. **DO NOT TIGHTEN SET SCREW TIGHT YET, Excessive Torque will cause mating part to be eccentric.** Align drilled holes in bushing flange with tapped holes in mating part. Using lockwashers, install the capscrews thru the bushing flange and into the mating hub.
6. **Use a Torque Wrench.** Tighten all capscrews evenly and progressively in rotation to the torque value listed in the table. **Excessive wrench torque, closing the gap between the bushing flange and mating hub, or the use of lubricants will break the mating hub.**

Removing Sprocket Bushings:

1. Loosen and remove all capscrews.
2. For **Standard Mount**, thread capscrews into tapped holes in mating part to jack against bushing flange. For **Reverse Mount**, thread capscrews into tapped holes in bushing flange to jack against mating hub. Tighten bolts evenly and progressively in rotation to separate the two components.
3. Loosen setscrew to slide bushing from shaft.

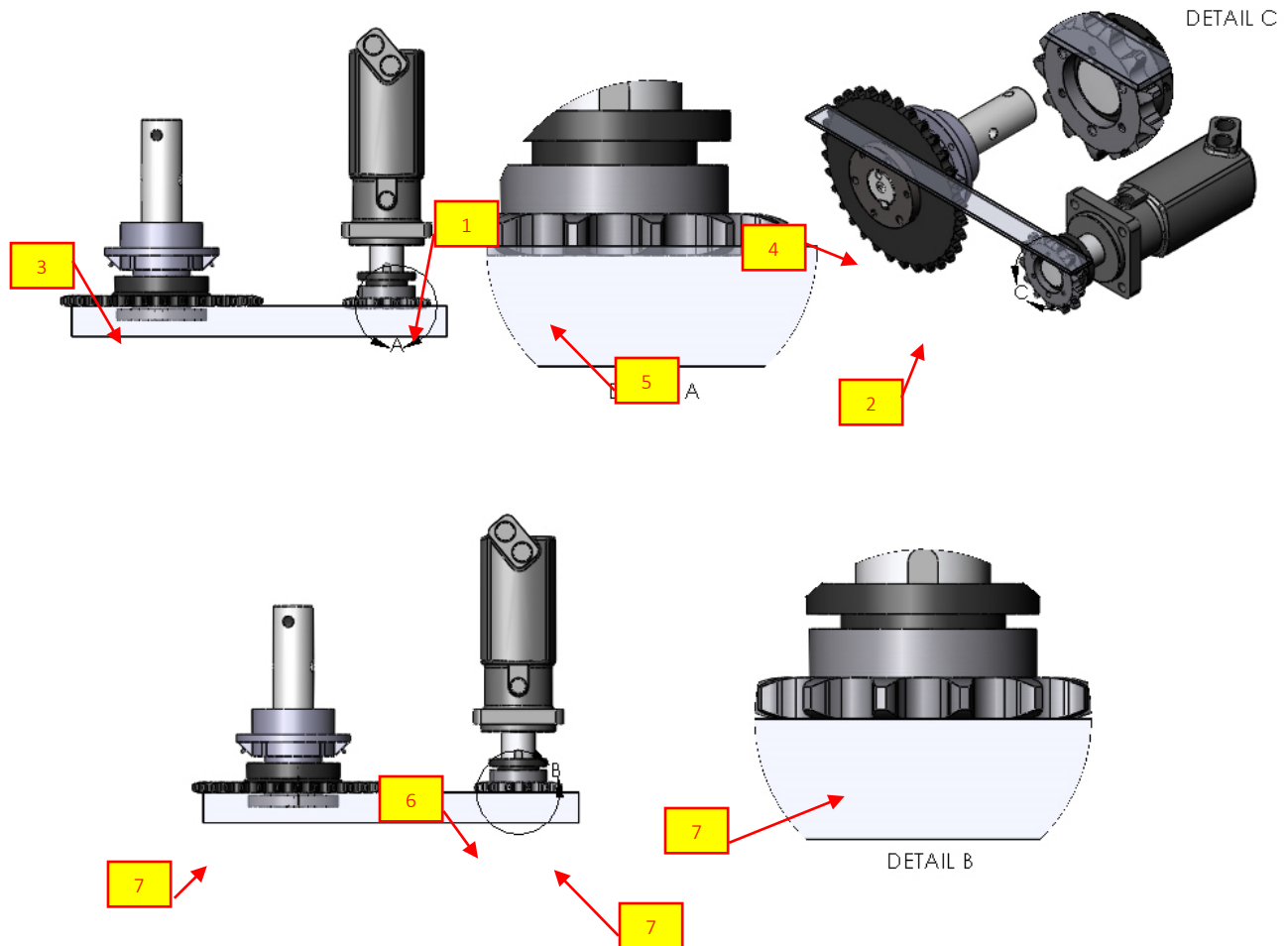


Screw Tightening Information		
Tapered Bushing	Size & Thread of Capscrew	Ft-Lbs to apply with Torque Wrench
SK	5/16-18	15 (180 in)
E	½-13	60

Auger Sprocket Installation

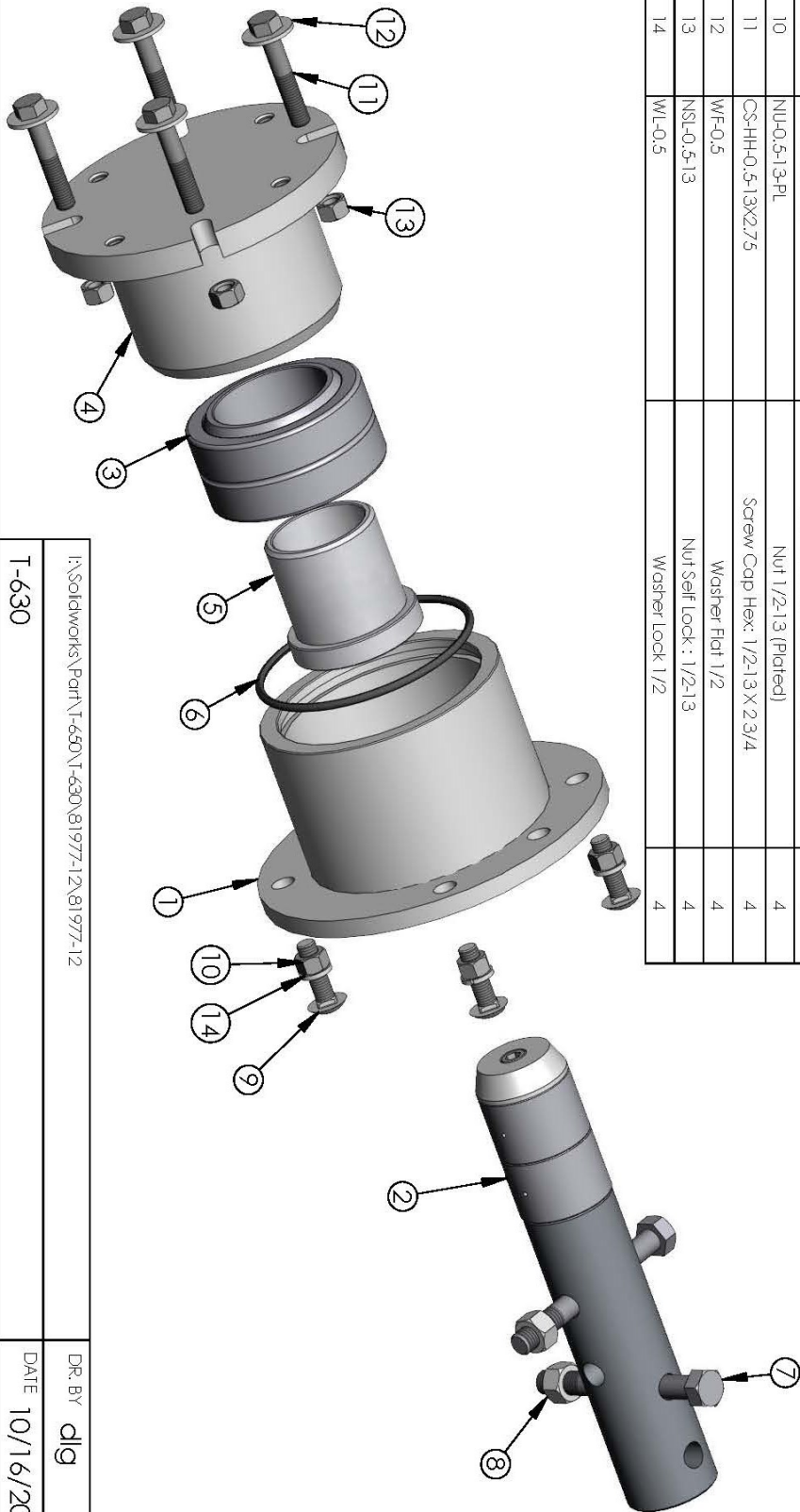
Refer to Installing Sprocket Bushings:, before starting installation.

1. Bushing on Motor, then sprocket.
2. Sprocket on Auger Shaft first, then bushing.
3. Auger shaft bushing touches bearing.
4. Tighten Auger Shaft Sprocket first. Start with 20 Ft-Lbs each bolt and work up. Gradually tighten to 60 Ft-Lbs Torque.
5. With your straight edge across the Auger Shaft Sprocket, adjust the Motor Bushing and Sprocket so the tip of the tooth is aligned with straight edge. Sprocket should be hand snug to bushing.
6. Tighten Auger Motor bushing gradually to 15 Ft-Lbs (180 In-Lbs). It is best to use an Inch Pound torque wrench. It is critical to work each bolt gradually up. Do NOT guess on the torque. Use a Torque Wrench.
7. When all bolts are tight, the faces of both sprockets should be in line with the straight edge. If not, loosen the Auger Motor bolts and start again on 5.

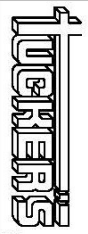


Front Drive Rear Bearing Housing

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM81977-8	Front Drive - Rear O-Ring Housing	1
2	TM81977-9	Front Drive - Rear Idler Shaft	1
3	TB80312	Rear Auger Seal - Bearing	1
4	TM81977-11	Front Drive - Rear Bearing Housing	1
5	TB80313	Rear Auger Seal - Composite Big	1
6	OR-568-357	O-Ring 5 1/2 x 5 7/8 x 3/16	1
7	TB58-512C38	Bolt Auger, 5/8" x 5-1/2" Gr. 8	2
8	NSL-0.625-11-GR8	Nut Self Lock : 0.625-11 - Grade 8	2
9	CB-0.5-13X1.75	Bolt Carriage 1/2-13 X 1 3/4	4
10	NU-0.5-13-PL	Nut 1/2-13 (Plated)	4
11	CS-HH-0.5-13X2.75	Screw Cap Hex: 1/2-13 X 2 3/4	4
12	WF-0.5	Washer Flat 1/2	4
13	NSL-0.5-13	Nut Self Lock : 1/2-13	4
14	WL-0.5	Washer Lock 1/2	4



TM81977-12
 FD - Rear Bearing Housing Kit
 All items this page



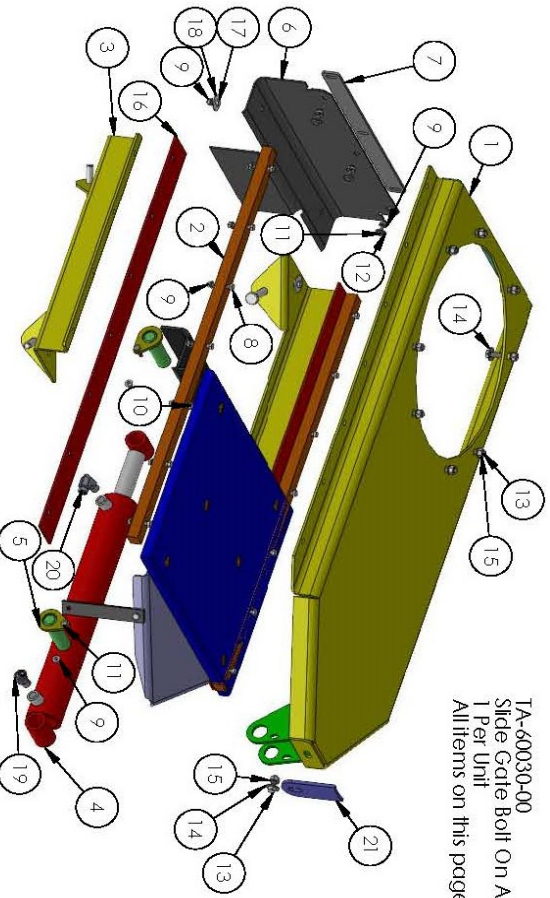
MACHINE & STEEL
 SERVICE INC.
 P.O. BOX 492810 LEESBURG, FLA. 34749-2810

I:\Solidworks\Part\T-650\T-630\81977-12\81977-12		DR. BY	dlig
T-630		DATE	10/16/2020
FD - Rear Bearing Housing Kit		SHOP #	81977-12

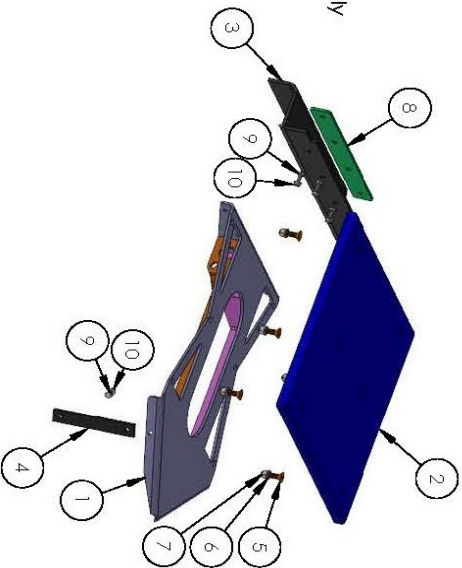
Slide Gate

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60030-01	Slide Gate Frame Weldment	1
2	TM60030-05	Slide Gate Door Shim	2
3	TM60030-06	Slide Gate Funnel Flange Weldment	2
4	TB80701-1	16" Cylinder Chute Spout Gate- Engine Hood	1
5	TM60013-00	Engine Door Fin Assembly T-444	2
6	TB60030-07	Slide Gate Mud Flap 1/8" Thick	1
7	TM60030-08	Slide Gate Mud Flap Washer	1
8	CS-HH-0.25-20X1.75	Screw Cap Hex: 1/4-20 X 1 3/4	8
9	NF-0.25-20	Nut Flanged Lock : 1/4-20	21
10	CS-HH-0.25-20X1.5	Screw Cap Hex: 1/4-20 X 1 1/2	6
11	CS-HH-0.25-20X1	Screw Cap Hex: 1/4-20 X 1	5
12	WF-0.25	Washer Flt 1/4	3
13	CS-HH-0.375-16X1	Screw Cap Hex: 3/8-16 X 1	9
14	WF-0.375	Washer Flt 3/8	9
15	NF-0.375-16	Nut Flanged Lock : 3/8-16	9
16	TM60030-05-1	Slide Gate Door Keeper Plate	2
17	CS-HH-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	2
18	WF-0.25X1.25	Washer Fender 1/4 X 1 1/4	2
19	FP2503-06-06	Adaptor, ORFS to Pipe Elbow 45°: FP2503-06-06	1
20	FP2501-06-06	Adaptor, ORFS to Pipe Elbow 90°: FP2501-06-06	1
21	TM60902-23	Chute Gate Bolt Tab	1

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60030-02	Slide Gate Door Weldment	1
2	TM60030-03	Slide Gate Composite Valve - 15-7/8" X 19-7/8"	1
3	TB60030-04	Slide Gate Door Seal 1/4" Thick	1
4	TM65157	Grill Assy Rubber Bolt Burner	1
5	CS-HH8-0.375-16X1.5	Screw Cap: FH SKT: Brass 3/8-16 X 1-1/2	6
6	WL-0.375	Washer Lock 3/8	6
7	NL-0.375-16-PL	Nut 3/8-16 (Plated)	6
8	TM60030-09	Slide Gate Push Plate Seal Washer	1
9	CS-HH-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	5
10	NF-0.25-20	Nut Flanged Lock : 1/4-20	5



TA-60030-00
Slide Gate Bolt On Assembly
1 Per Unit
All items on this page



TUGHERS
MACHINE & STEEL
SERVICE INC.
P.O. BOX 492810 LEBBURG, FLA. 34749-2810

©Solidworks Part V-544 V-60.030 Slide Gate V-60.030.010

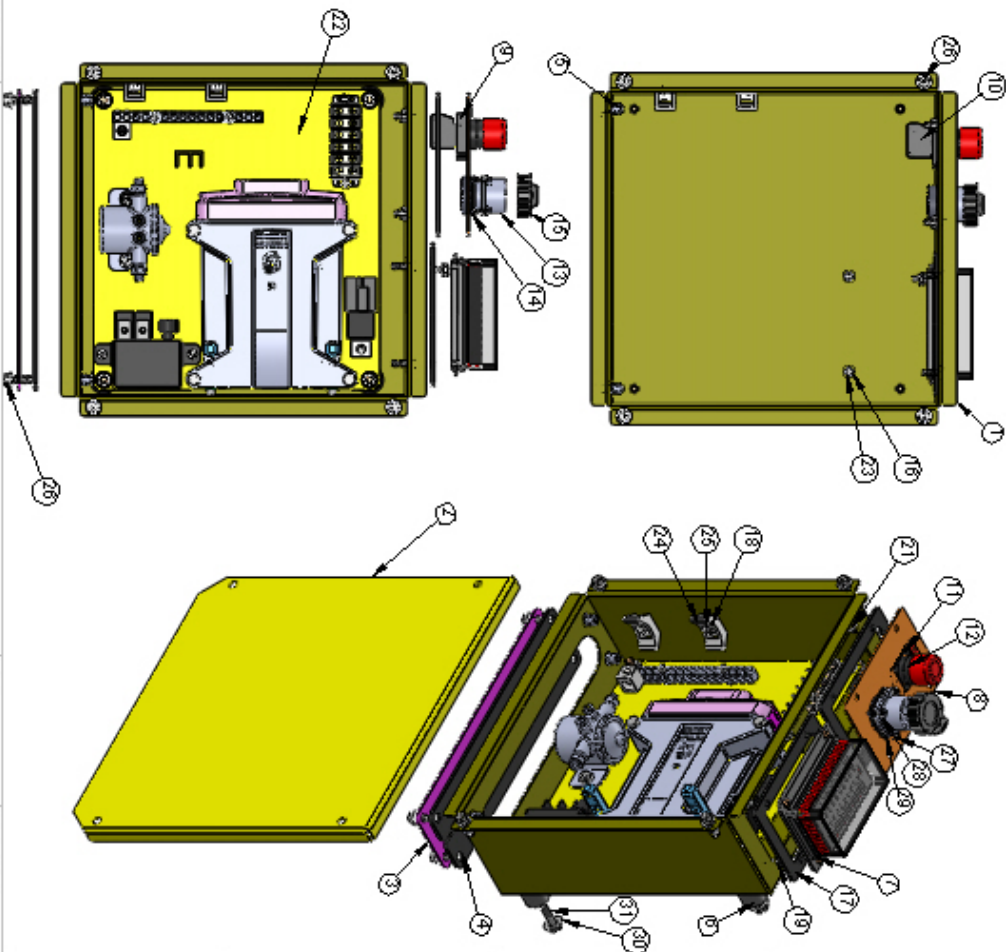
Slide Gate Bolt On Assembly

SHOP #
DATE 9/20/2018
DR. BY MCT
60.030.00

Engine

Engine Electrical Panel Assembly

ITEM NO.	QTY	DESCRIPTION	UNIT
1	1	Electrical Junction Box	1
2	1	Electrical Junction Box 110	1
3	1	Electrical Junction Box Carter Flange	1
4	1	Electrical Junction Box Carter Flange	1
5	8	Nut 1/2-20 Flange D127-D165	8
6	4	Rubber Dampening Sonowich M7/1/2-20	4
7	1	Huge Assembly Base w-Cover	1
8	1	Electrical Junction Box E-Stop Flange	1
9	1	Covered Block w-Base 1-1/4" NC	1
10	1	Covered Block Normally Closed	1
11	1	E-Stop Name Plate	1
12	1	E-Stop Mushroom Head	1
13	1	Deurschen M01D-1129 Hinged Receiver	1
14	1	Deurschen M01D-1129 Hinged Receiver	1
15	1	Deurschen M0C16714141 Cover for Hinged Receiver	1
16	2	Rivet Nut 8-32 Flanged D120-D180	2
17	2	Electrical Junction Box Ion Carter	2
18	2	Rivet Nut 10-24 (Flanged) D120-D130	2
19	4	Screw Cap Hex: 10-32 X 5/8 Serrated Flange Bolt	4
20	4	Nut Serrated Flange Bolt: 10-24	4
21	4	Cap Screw-Flange-Socket Head - 10-24 X 3/4"	4
22	1	Electric Junction Box Sun Flange Engine 141	1
23	2	Cap Screw-Flange-Socket Head - 7/8-32 X 1/2"	2
24	2	Hex Nuts 10-24	2
25	2	Cap Screw-Flange-Socket Head - 10-24 X 1/2"	2
26	8	Screw Cap Hex: 1/4-20 X 3/4 Serrated Flange Bolt	8
27	4	Cap Screw-Flange-Socket Head - 1/4-40 X 1/2"	4
28	3	Washer Hex - Stainless - 1/4-11/32 X 3/16"	3
29	4	Nut Self Lock - Stainless - 1/4-40	4
30	4	Washer Hex 1/4"	4
31	4	Screw Cap Hex: 1/4-20 X 1"	4



MACHINE & STEEL
3100 W. 100th St.
Minnetonka, MN 55345

T-844

WELDER/CATERPILLAR/DAVID BULL/BECKHOFF BOXES/VALVE/DRUM

Electrical Junction Box Assembly Engine T4F

DATE: 9/1/2017

DESIGN: MCT
TA-6009000-2

Engine Electrical Panel Subplate

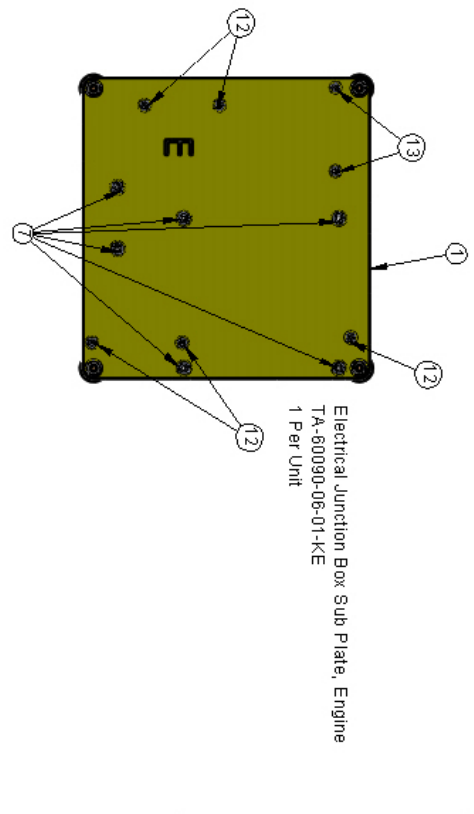
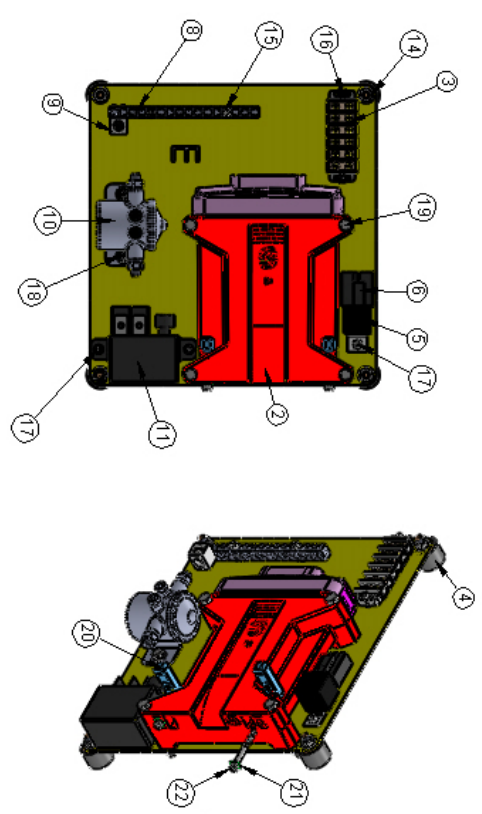
ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60090-06-01	Electrical Junction Box Sub Plate, Engine	1
2	TB66130-11-EA	M/C050-010 Controller w/ prog loaded-Eng Area	1
3	TB80575-109-06	Terminal Strip 6 Lug 20A #6-32	1
4	TB80655	Rubber Dampening Sandwich M/F 1/4-20	4
5	TB80130-12	NTE Electronics Relay # 02H7395 70 Amp	1
6	TB80130-13	Tyco Relay Socket VCF7-1000	1
7	NR-025-20-PL0.027-0165	Rivet Nut 1/4-20 (Plated) 0.027-0.165 Thickness	6
8	TB80130-45	Ground Bar	1
9	TB80130-45-01	Ground Bar Collar Strap	1
10	TB80587-1	Relay Solenoid	1
11	TB80587-2	Grid Heater Relay, JCB	1
12	NR-10-24-PL0.020-0130	Rivet Nut 10-24 (Plated) 0.020-0.130 Thickness	5
13	NR-8-32-PL0.020-0080	Rivet Nut 8-32 (Plated) 0.020-0.080 Thickness	2
14	NFS-025-20	Nut Serrated Flanged Lock : 1/4-20	4
15	SSCS-SH-10-24X1	Cap Screw-Stainless-Socket Head-#10-24 X 1"	2
16	SSCS-SH-8-32X0.75	Cap Screw-Stainless-Socket Head-#8-32 X 3/4"	2
17	SSCS-SH-10-24X.50	Cap Screw-Stainless-Socket Head-#10-24 X 1/2"	3
18	C-SHHS-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4 Serrated Flange Bolt	2
19	C-SHH-0.25-20X2.5	Screw Cap Hex: 1/4-20 X 2 1/2	4
20	TM60090-10A	Electrical Junction Box Tie Lug Assembly	2
21	WFS8-10	Washer Flat - Stainless - #10 (218 X .437)	2
22	SSCS-SH-10-24X1.75	Cap Screw-Stainless-Socket Head-#10-24 X 1 3/4"	2

LONGER'S
 MACHINE & STEEL SERVICE INC.
 15500 E. 1st Ave., Ft. Lauderdale, FL 33322-2810
 P.O. BOX 472010 LAS VEGAS, NV 89147-2010

WalsenRoadSolidworksPartT-64480.D00 Electrical Boxes:60.D00.D00
 T-644

Electric Junction Box Sub Plate, Engine T4F

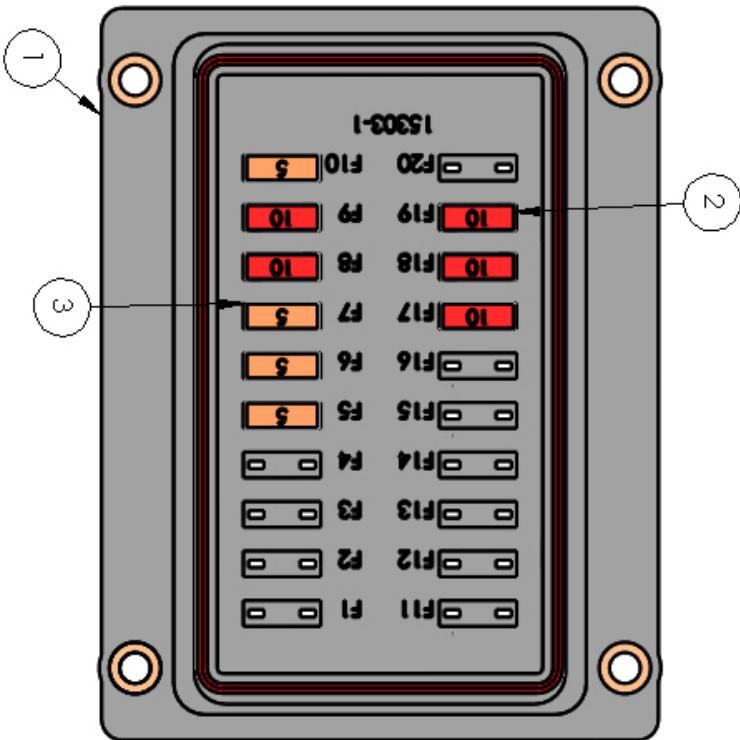
SHOP #
 DATE 9/14/2020
 DR BY MCT
 T-A-60090-06-01-KE



Electrical Junction Box Sub Plate, Engine
 TA-60090-06-01-KE
 1 Per Unit

Engine Panel Fuses

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB66145-01	Mini Fuse Panel, 20 Position Busman 15303-1	1
2	TB66145-10A	Fuse, 10A Led Mini ATM Red 12V	5
3	TB66145-5A	Fuse, 5A Led Mini ATM Tan 12V	4

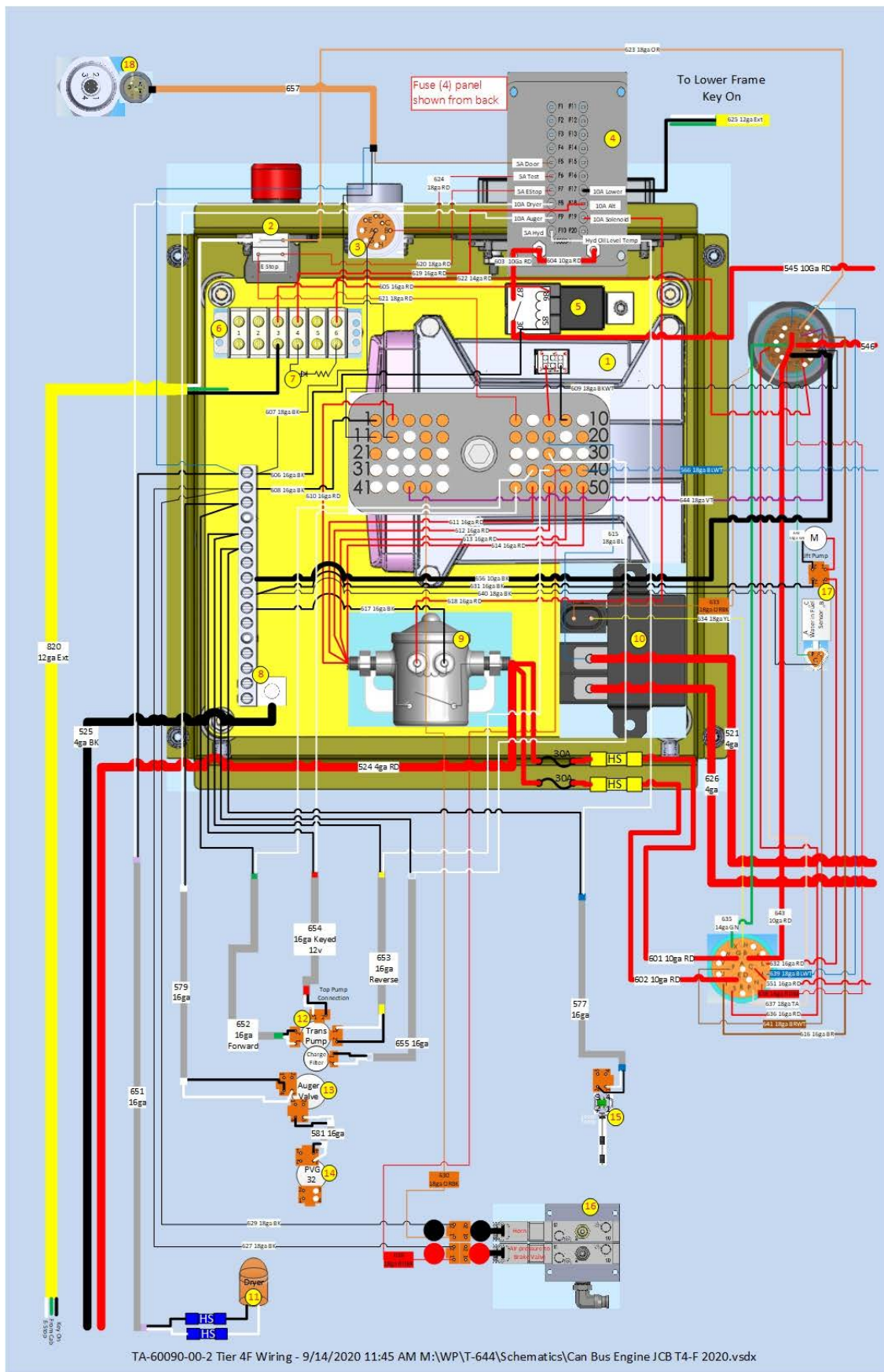


MACHINE & STEEL SERVICE INC.
 P.O. BOX 492810 | LEESSBURG, FLA. 34749-2810

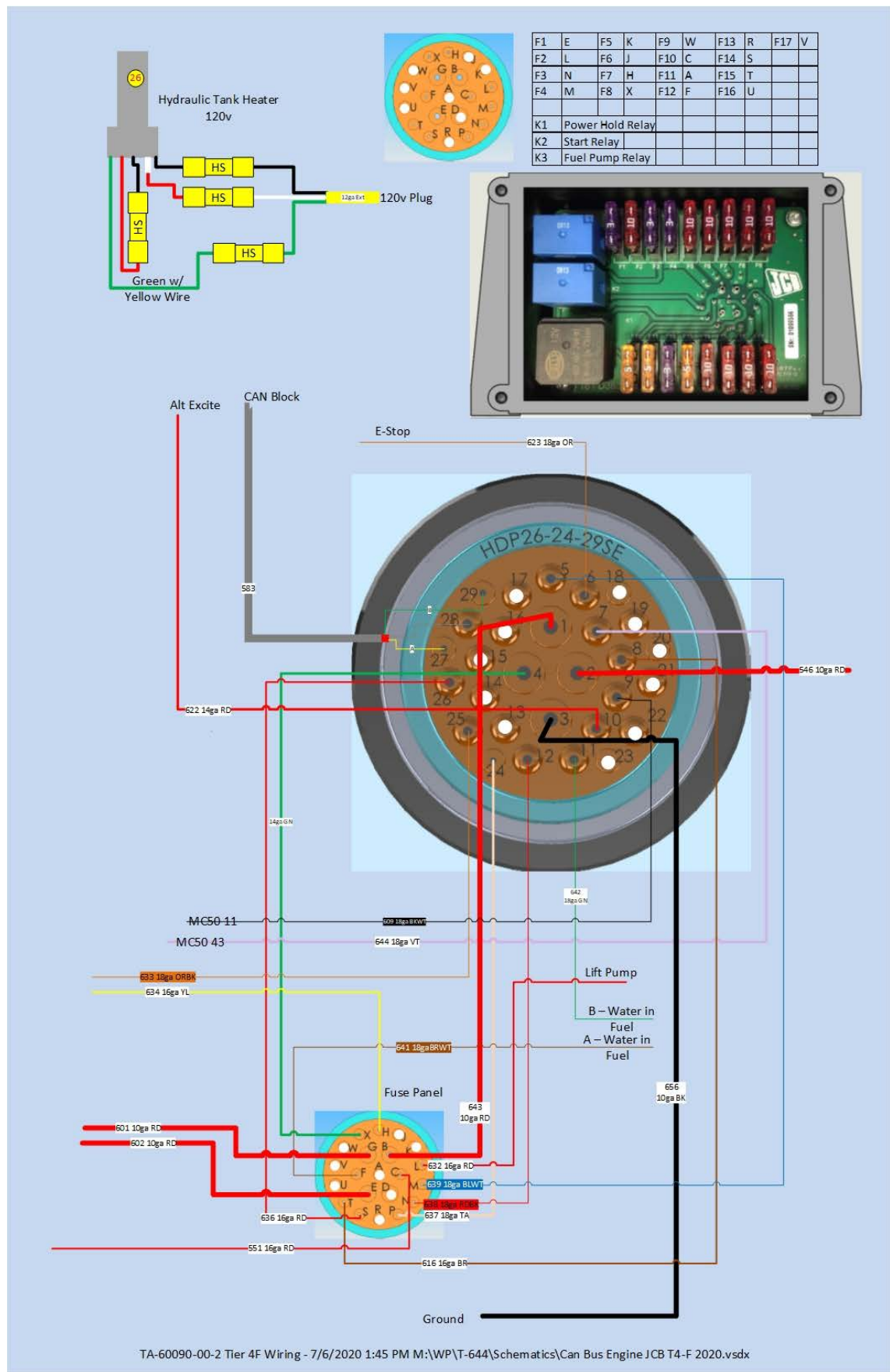
\\server\cadd\Solidworks\Part\T-644\60,090 Bechtold Boxes\Fuse-Relay Modules
 T-644
Fuse Assembly - Engine

DR. BY **dlg**
 DATE **9/14/2020**
 SHOP #

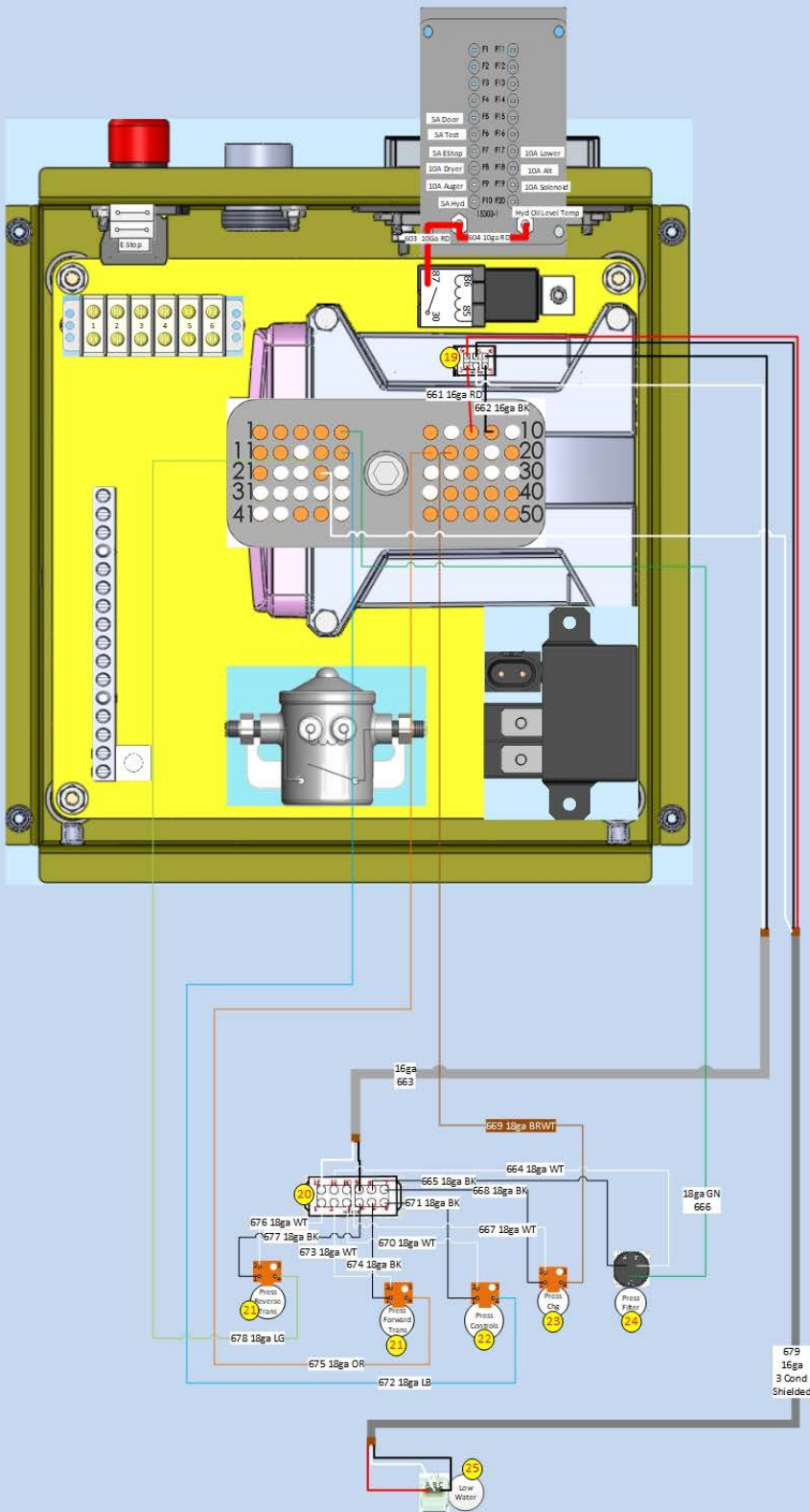
Engine Electrical Panel Tier 4 Final Schematic 1



Engine Electrical Panel Tier 4 Final Schematic 2



Engine Electrical Panel Tier 4 Final, 5 Volt Schematic 3



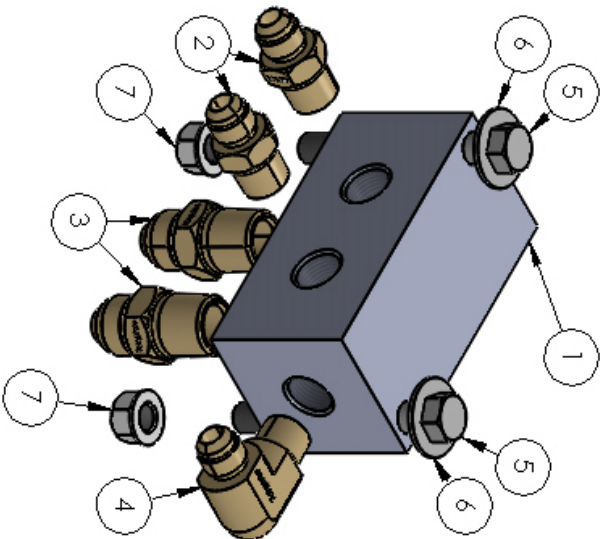
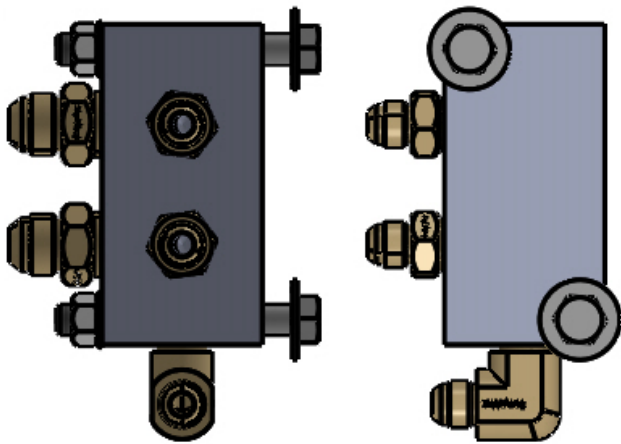
TA-60090-00-2 Tier 4F Wiring - 7/6/2020 1:45 PM M:\WP\T-644\Schematics\Can Bus Engine JCB T4-F 2020.vsd

Engine Electrical Panel BOM Tier 4 Final

Engine Panel Electrical Parts				
Key	Description	Mfg #	Tucker #	Qty
1	MC050-010 Controller w/prog loaded-Eng Area	Berendsen - 11138530	TB66130-11-EA	1
	Deutsch DRC26-50S01 Male Plug	Deutsch - DRC26-50S01	TB80130-93	1
	Plug, Deutsch Sealing Size 20	Deutsch - 0413-204-2005	TB80130-64	20
2	E-Stop Mushroom Head 22Mm	Grainger - 33HP43	TB80575-111	1
	Contact Block w-Base - 1-NC	Grainger - 6HX29	TB80575-112B-NC	1
	Contact Block Normally Closed	Grainger - 6HZ09	TB80575-112-NC	1
	E-Stop Name Plate	Grainger - 6JC63	TB80575-113	1
3	Deutsch HD10-9-1939 Flanged Receptacle	Deutsch - HD10-9-1939P	TB80575-129-1	1
4	Mini Fuse Panel, 20 Position Bussman 15303-1	Waytek - 46077	TB66145-01	1
	Fuse, 5A Led Mini ATM Tan 12V	Waytek - 46261	TB66145-5A	4
	Fuse, 10A Led Mini ATM Red 12V	Waytek - 46263	TB66145-10A	4
5	NTE Electronics Relay # 02H7398 70 Amp	Newark - 02H7398	TB80130-12	1
	Relay Socket VCF7-1000	Newark - 17M3159	TB80130-13	1
6	Terminal Strip 12 Lug 20A #6-32	Waytek - 47312	TB80575-109-6	1
7	JCB Alternator Diode Assembly	Tucker - TM81974-3	TM81974-3	1
8	Ground Bar Kit 14 Position	Besco - ECGB14	TB80130-45	1
	Ground Bar Collar Strap	Besco - ECCS1	TB80130-45-01	1
9	Solenoid/Relay, 200 Amp Continuous, JCB	Wholesale - HE24213	TB80587-1	1
10	Grid Heater Relay, JCB	Allied - 70971558	TB80587-2	1
11	AD-9 Air Dryer for JCB	Wholesale - TU065499	TB80619-1	1
	Wire Harness AD-9 Air Dryer for JCB	Wholesale - TP109871N	TB80619-3	1
	AD-9 Air Dryer Muffler Silencer Kit	Wholesale - TU5004224N	TB80619-7	1
	AD-9 Air Dryer Hard Seat Purge Valve Maint. Kit	Wholesale - TP5005037	TB80619-5	1
	AD-9 Air Dryer Desiccant Cartridge Kit	Wholesale - TP107794	TB80619-6	1
12	Pump Transmission (Danfoss) H1, 115cc	Berendsen - 83060627	TB66203	1
13	PVG100, 1 sec, 65, Motor, w/LX, Auger Valve	Berendsen - 161F5083	TB66130-13	1
14	PVG32, 6 sec, No LX	Berendsen - 159B2797	TB66130-14	1
15	Rota Tank Level/Temp Sensor	Rota - TL5207	TB66213-ROTA-TLT	1
16	Viking Extreme Air Solenoid Valve	Grainger - P2LBX392ESH DAT46	TB64623	2
	2 St IEM Manifold NPT Viking Extreme	Grainger - P2LBXGAXN02NP	TB64624	1
17	Fuel Lift Pump - JCB Tier 4	Deutsch - 320/A7087	TB65975-15-T4	1
18	Sensor, N/O PNP Turck Proximity	Turck - Bi15-EM30-AP45XLD-H1141	TB66130-08-TU	1
19	Deutsch DT04-6P-EP14 2-3 Pin Buss Receptacle	Deutsch - DT04-6P-EP14	TB80130-113-EP14	1
20	Deutsch DT04-12PA-P026 2-6 Pin Buss Receptacle	Deutsch - DT04-12PA-P026	TB80130-114	1
21	Sensor, psi, 0-5800, Ratiometric, (400 Bar)	Berendsen - 11044542	TB66130-07	2
22	Sensor, psi, 0-3626, Ratiometric, (250 Bar)	Berendsen - 11044501	TB66130-06	1
23	Sensor, psi, 0-580, Ratiometric, (40 Bar)	Berendsen - 11044499	TB66130-05	1
24	Pressure Transducer TDH30KG010003B004, 0-100 PSI	Tranducers Direct - TD4526	TB66130-30	1
25	Casco Water Level Switch	Waytek - 76330	TB64575-57-1	1
26	3/4" MNPT 120 VAC In-Tank Oil Heater	Wholesale - TUET3-1001	TB64105	1

Fuel Manifold

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60510-30	JCB Tier 4 Fuel Manifold	1
2	2404-06-06	Adapter, SS 3/8" Pipe x -6 JIC St	2
3	2404-08-08	Adapter, SS 1/2" Pipe x -8 JIC St	2
4	2501-06-06	Adapter, SS 3/8" Pipe x -6 JIC 90	1
5	CS-HH-0.375-1.6X3	Screw Cap Hex: 3/8-1.6 X 3	2
6	WF-0.375	Washer Flat 3/8	2
7	NF-0.375-1.6	Nut Flanged Lock : 3/8-1.6	2

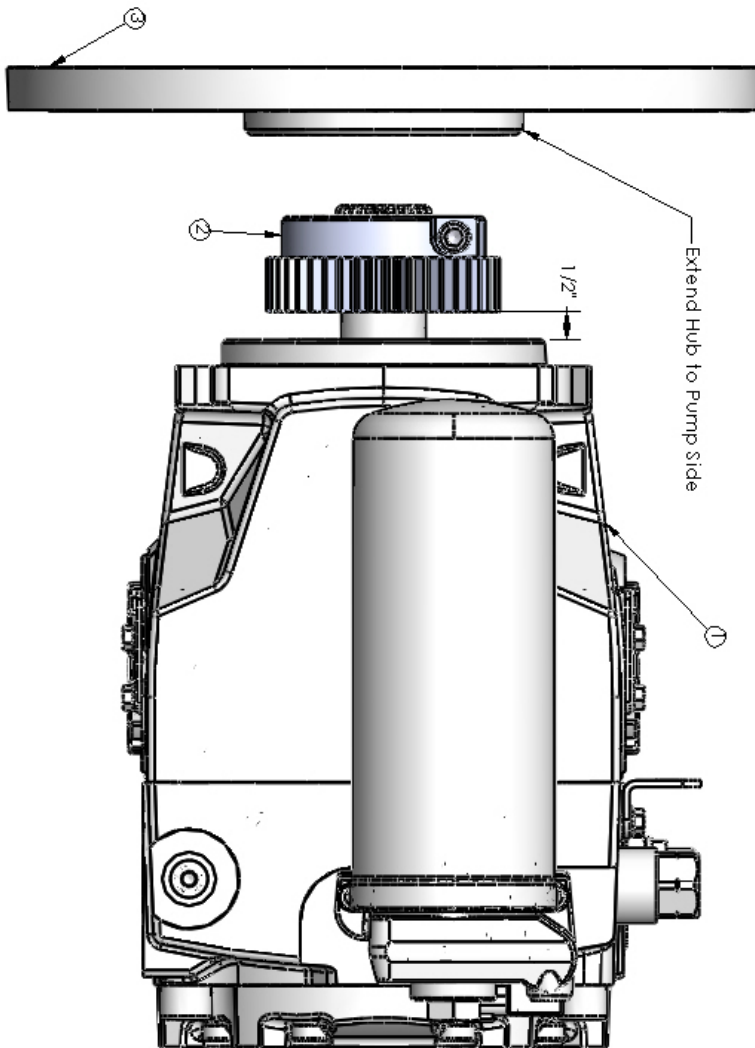


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 MACHINE & STEEL
 SERVICE, INC.
 P.O. BOX 492810 LEESSBURG, FLA. 34749-2810

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 T-644
 DATE 3/14/2018
 SHOP #
 JCB Tier 4 Fuel Manifold Kit
 TA-60510-30

JCB Tier 4 Pump to Engine Drive Plate

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB66203	Pump Transmission (Dantross) HI, 115cc	1
2	TB80580-5-07	Engine To Pump Hub JCB Tier 4 Engine	1
3	TB80580-4-08	Drive Plate JCB Tier 3 & Tier 4 Engine	1



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MACHINE & STEEL SERVICE INC.
P.O. BOX 402810 LEBENSTON, FLA. 32426-2810

TA-60500-00-01
T-644

Transmission Pump with Gear

SHOT #
DATE 5/17/2018

DR. BY MCT

JCB Tier 4 Pumps Hardware



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P.O. BOX 492810 ESTERLINE, IA 52449-2810

T-644

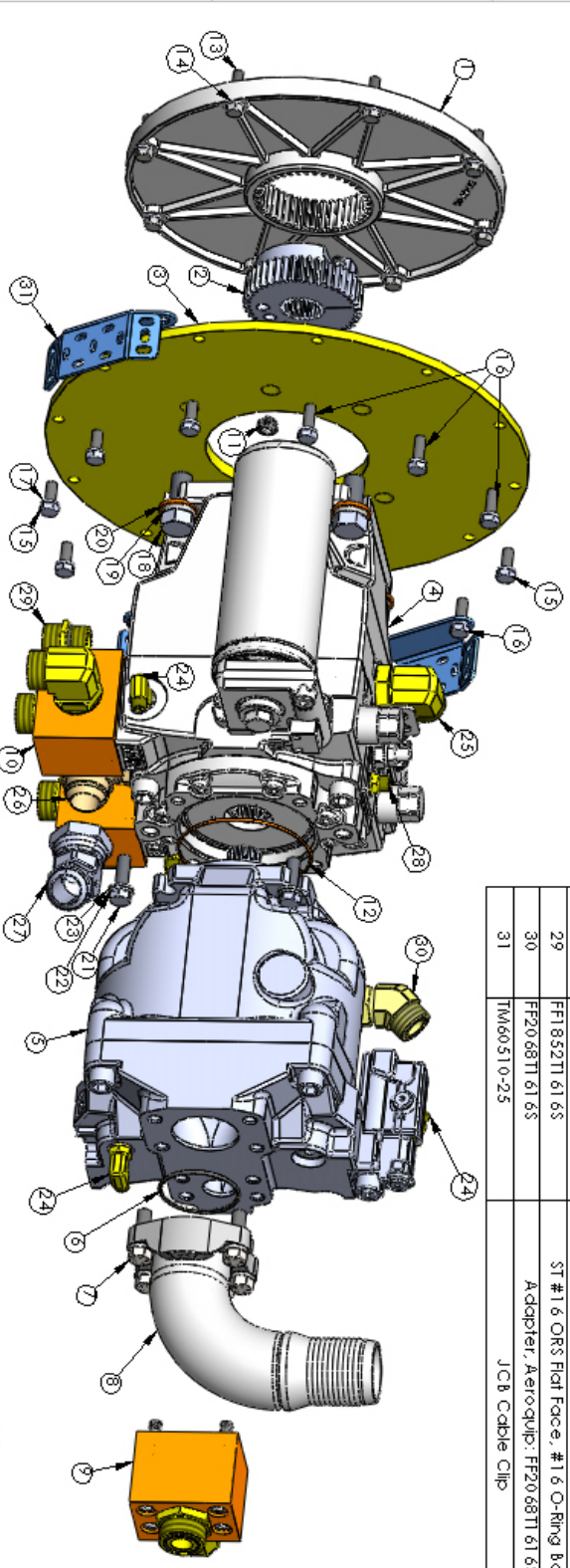
Valve/Control/Solenoid/Port/1-644/200 Engine Base Port/A Ports Unit/16-6620/20

JCB Tier 4 to Pumps Hardware

5/07/18

DATE 5/17/2018

DR. IV. dlj
1A-60500-00-01

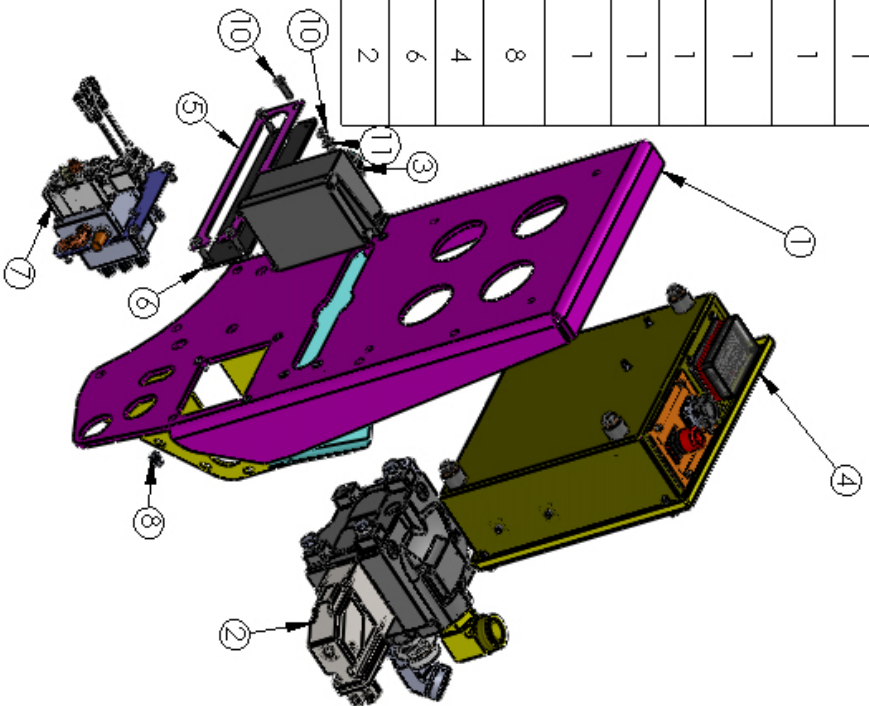


ITEM NO.	OrderNo	DESCRIPTION	Rear Control Ports/QTY.
1	TB80580-4-08	Drive Pictle JCB Tier 3 & Tier 4 Engine	1
2	TB80580-5-07	Engine to Pump Hdp JCB Tier 4 Engine	1
3	TB80580-5-09	Drive Bell Housing Pictle SAE #3 281FC - JCB Tier 4	1
4	TB66203	Pump Transmission (Dantoss) HI, 115cc	1
5	TB66204	Pump Controls, Dantoss Ser. 45, 130cc	1
6	OR-568-232	O-Ring 2 3/4 X 3 X 1/8	1
7	HA-SFK-40	Adapter, Hydraulic Code 61 Split Flange Kit -40	1
8	TB80430-2	-40 Code 61 to 2-1/2" HB Sweep 90 deg	1
9	TA-65138-4F	Dantoss 45 Pump Tee Block Assembly T4F	1
10	TA-65138-3	Dantoss Drive Pump Tee Block Assembly	2
11	SS-0.75-1.6X0.5	Screw Set: 3/4-1.6 X 1/2	2
12	OR-568-158	O-Ring, Viton 4 3/4 X 4 1/5 1.6 X 3/32	1
13	CS-HH-0.375-1.6X1.5	Screw Cap Hex: 3/8-1.6 X 1 1/2	8
14	WL-0.375	Washer Lock 3/8	8

ITEM NO.	OrderNo	DESCRIPTION	Rear Control Ports/QTY.
15	CS-HH-10-1.5X25MM	Screw Cap Hex: 10-1.5 X 25 mm	7
16	CS-HH-10-1.5X30MM/10.9	Screw Cap Hex: 10-1.5-30mm 10.9	5
17	WF-10M	Washer Flat 10 mm	12
18	CS-HH-0.75-10X1.75	Screw Cap Hex: 3/4-10 X 1 3/4	4
19	WL-0.75	Washer Lock 3/4	4
20	WFE-0.75	Washer Flat 3/4 (Soe)	4
21	CS-HH-12-1.75X25MM	Screw Cap Hex: 12-1.75X 25 mm	4
22	WL-12M	Washer Lock 12 mm	4
23	WF-12M	Washer Flat 12 mm	4
24	FF1868TT0406S	Bl #4 ORS Flat Face, #6 O-Ring Boss	4
25	FF1868TT1616S	Bl #16 ORS Flat Face, #16 O-Ring Boss	1
26	2062-20-20S	Adapter, Hydraulic: 2062-20-20S	1
27	2070-20-20S	Adapter, Hydraulic: 2070-20-20S	1
28	FF1852TT0406S	ST #4 ORS Flat Face, #6 O-Ring Boss	1
29	FF1852TT1616S	ST #16 ORS Flat Face, #16 O-Ring Boss	1
30	FF2068TT1616S	Adapter, Aeroquip: FF2068TT1616S	1
31	TM60510-25	JCB Cable Clip	3

Auger Valve Bracket Assembly Hardware

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60510-00	JCB Valve Bracket Assembly T4F	1
2	TA-60510-13	PVG100 Auger Valve Kit	1
3	JCB Supplied	Tier 4 Power Hold Box w-Connector	1
4	TA-60090-00-2	Electrical Junction Box Assembly Engine	1
5	TM60090-03-1	Electrical Junction Box Gasket Plate	1
6	TB60090-04	Electrical Junction Box Gasket	1
7	TA-60510-02	Viking Air Valve-CAN Bus Splitter Assembly	1
8	NR-0,25-20-PL,0,165-0,260	Rivet Nut 1/4-20 (Plated) 0,165-0,260 Thickness	8
9	WL-0,25	Washer Lock 1/4	4
10	CS-HH-0,25-20X1	Screw Cap Hex: 1/4-20 X 1	6
11	NF-0,25-20	Nut Flanged Lock : 1/4-20	2



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T-644

DR. BY MCT

DATE 10/7/2020

SHOP #

TA-60510-00



MACHINE & STEEL
SERVICE INC.
P.O. BOX 492810 LEESBURG, FLA. 34749-2810

Auger Valve Bracket Assembly Hardware

Engine Base

Engine Base Components

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TA-60500-00 B	Engine Base Assembly Hardware	1
2	TA-60520-00	Engine base Root Assembly	1
3	TA-60540-00L	Engine base Side Door Bolted Assembly Left	1
4	TM60550-00	Engine base Cowl Assembly	1
5	TA-60540-00R	Engine base Side Door Bolted Assembly Right	1
6	TA-60560-00	Engine base Back Wall Assembly Hardware	1
7	TA-60540-10A	Engine base Corner Strut Assembly	2
8	TB60570-01	Engine base Wall Gasket	1
9	TM60570-02	Engine base Wall Gasket Washer, Side	4
10	TM60570-03	Engine base Wall Gasket Washer, Back	2
11	TA-60531-00	Engine base Back Door Assembly Hardware	1
12	WF-0.375	Washer Flat 3/8	3
13	CS-HH-0.375-1.6X1.25	Screw Cap Hex: 3/8-1.6 X 1 1/4	3
14	NF-0.375-1.6	Nut Flanged Lock : 3/8-1.6	27
15	CS-HH-0.375-1.6X1	Screw Cap Hex: 3/8-1.6 X 1	24

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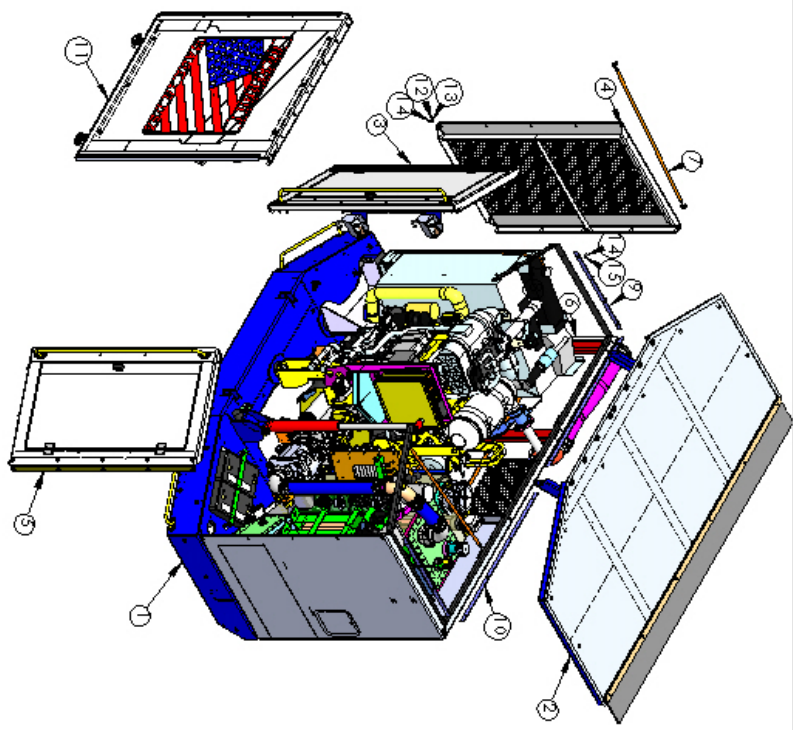
TA-60500-00 T-644



ITEM NO.	OrderNo	DESCRIPTION	Bolted/QTY.
30	TM60540-10	Engine Base Corner Strut	1
31	RETRE6	Rod End TREL6 Mide 3/8"-24	1
32	NJ-0.375-24	Nut Jam : 3/8-24	1
33	RETRELH6	Rod End TRELH6 Mide 0.375-24, Left Hand	1
34	NJLH-0.375-24	Nut Jam : 3/8-24 Left Hand	1
35	WF-0.375	Washer Flat 3/8	2
36	CS-HH-0.375-1.6X1.25	Screw Cap Hex: 3/8-1.6 X 1 1/4	2
37	NF-0.375-1.6	Nut Flanged Lock : 3/8-1.6	2

Engine Base Corner Strut Assembly

DATE: _____
 BY: _____
 TA-60540-10A



Engine Base Assembly Hardware



MACHINE & STEEL
SERVICE, INC.
P.O. BOX 492810 LEESBURG, FLA. 34779-2810

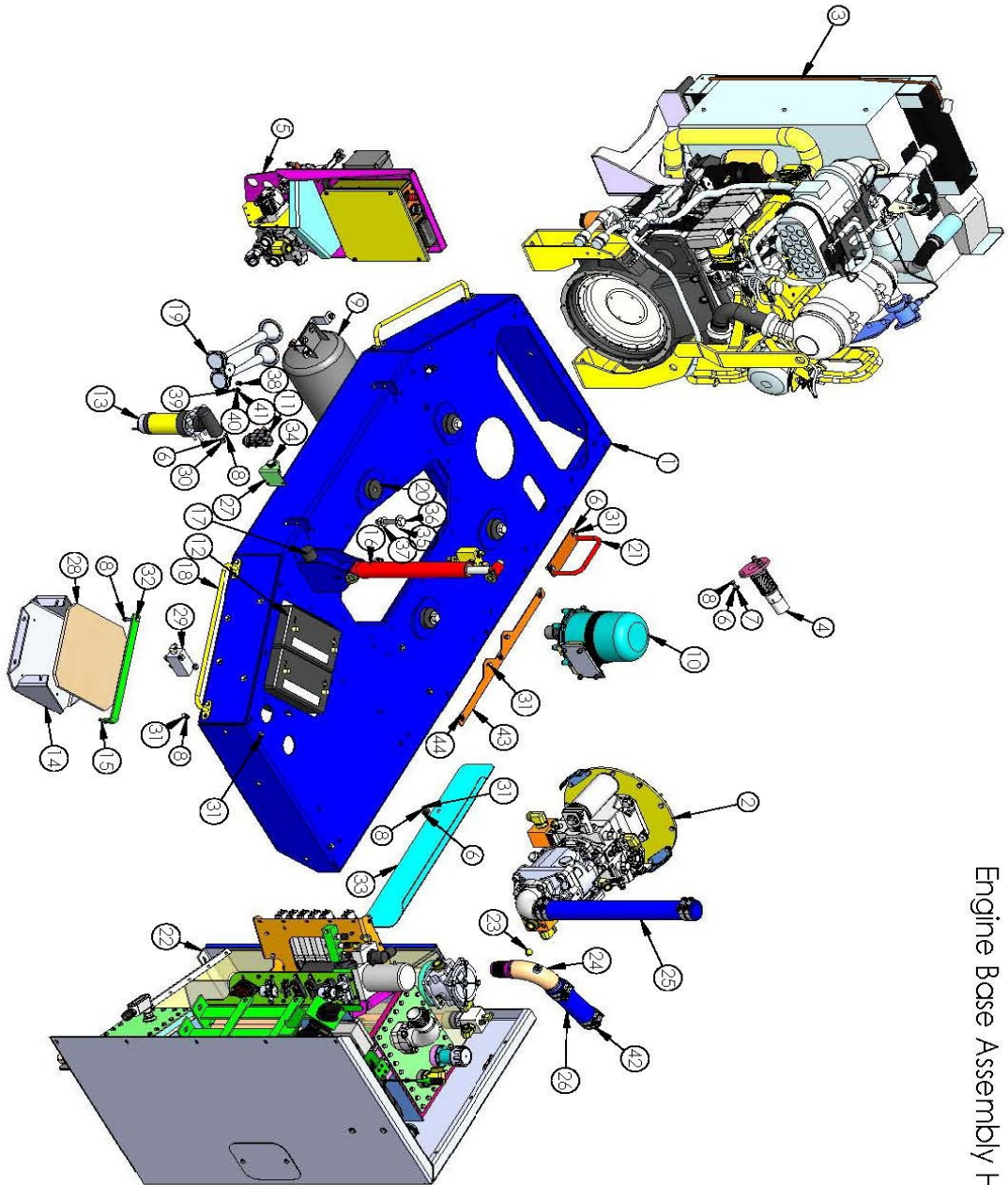
T-644

SHOP #

DATE 10/16/2020

DR. BY dfg

TA-60500-008



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Engine Base Assembly Hardware

Engine Base Assembly BOM

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60500-00	Engine Base Assembly	1
2	TA-60500-00-01	JCB Tier 4 to Pumps Hardware	1
3	TB65975JCB-TIER4F	JCB 145HP @ 2200 RPM TIER 4 Final	1
4	TM60510-14	JCB Tier 4F Exhaust Stack Assembly	1
5	TA-60510-00	Auger Valve Bracket Assembly Hardware	1
6	WF-0.375	Washer Rd 3/8	17
7	CS-HH-0.375-1.6X1.25	Screw Cap Hex: 3/8-1.6 X 1 1/4	3
8	NF-0.375-1.6	Nut Ranged Lock : 3/8-1.6	30
9	TA-80610	Air Tank Hardware	1
10	TA-80619-1	Air Dyer Assembly Hardware	1
11	TA-80609	Governor Assembly Hardware	1
12	TB80586-1	Battery - 9A31, T-644	2
13	TB65975-1.5-14	Fuel Lift Pump - JCB Tier 4	1
14	TM60500-08	Battery Tray	1
15	TM60500-07	Battery Strap	1
16	TA-60500-710	Back Door Cylinder Assembly Hardware	1
17	TB60500-01	Rubber Bumper 30mm OD x 12mm High, MBX1.25	1
18	TM60080-00-2	Handle Assembly Short	2
19	TB80608-2	Horn, Air	1
20	TB64106	Lord Vibration Mount - Engine	4
21	TM60560-04	Engine Base Back Wall Hose Guard Assembly	1
22	TA-60710-00	Hydraulic Oil Tank Assembly Hardware	1
23	900598-8S	Adapter, Hydraulic: 900598-8S	1
24	TM60700-16	Auxiliary Pump Suction/Fitme Blow	1
25	TM66901-44	Auxiliary Pump Suction, Long	1
26	TM66901-43	Auxiliary Pump Suction, Short	1

ITEM NO.	OrderNo	DESCRIPTION	QTY.
27	TM60500-15	Engine Base Door Sensor Bracket	1
28	TM60500-17	Engine Base Battery Tray Plywood	1
29	TA-60510-30	JCB Tier 4 Fuel Manifold Kit	1
30	CS-HH-0.375-1.6X1.5	Screw Cap Hex: 3/8-1.6 X 1 1/2	2
31	CS-HH-0.375-1.6X1	Screw Cap Hex: 3/8-1.6 X 1	24
32	CS-HH-0.375-1.6X2.25	Screw Cap Hex: 3/8-1.6 X 2 1/4	1
33	TM60500-09	Engine Base Oil Tank Cover	1
34	TB66130-08-TU	Sensor, N/O PNP E57G Proximity	1
35	WF-0.75	Washer Rd 3/4	4
36	CS-HH-0.75-10X4	Screw Cap Hex: 3/4-10 X 4	4
37	NF-0.75-10	Nut Ranged Lock : 0.75-10	4
38	DOT-MC-0.25X0.25	DOT Male Connector PTFE/CCT 1/4 X 1/4	1
39	CS-HH-0.25-20X1	Screw Cap Hex: 1/4-20 X 1	3
40	WF-0.25	Washer Rd 1/4	3
41	NF-0.25-20	Nut Ranged Lock : 1/4-20	3
42	TB80431-1	2-1/2" Suction Hose SS T-Bolt Clamps	8
43	TM60500-14	Engine Base Back Wall Bolt Clip	1
44	NCOB-0.375-1.6	Nut Clip-On Barrel: 3/8-1.6 .05"-Z, .750 Hole	3

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MACHINE & STEEL
SERVICE INC.
P.O. BOX 472810 HEISLER, IA, 50472810

T-644

Engine Base Assembly Hardware

DATE 10/8/2020

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TA-60500-008

Engine Base Back Door Hardware

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TW60531-00	Engine Base Back Door Weldment Assembly	1
2	TW60531-08	Engine Base Back Door Deck Weldment	1
3	TW60530-10	Engine Base Back Door Seal Lip	2
4	TW60530-06	Engine Base Back Door Seal	2
5	TW60530-13	Engine Base Back Door Ladder Weldment	1
6	TW60025-03-01	Flag Logo Stripes	1
7	TW60025-03-02	Flag Logo Stars	1
8	TB661 30-08-TU	Sensor, N/O PNP Turck Proximity	1
9	RE-TR12LF	Rod End TR12 Female 3/4"-16 Lube Free	2
10	CS-HH-0.75-10X3	Screw Cap Hex: 3/4-10 X 3	2
11	WFF-0.75	Washer Flat 3/4 (Sae)	4
12	NF-0.75-10	Nut Flanged Lock : 0.75-10	2
13	CS-HH-0.75-16X3.5	Screw Cap Hex: 0.75-16 X 3.5	2
14	WL-0.75	Washer Lock 3/4	2
15	TW65157	G Mill Assy Rubber Bolt Bumper	1
16	WFF-0.375	Washer Flat 3/8	6
17	CS-HH-0.375-16X1	Screw Cap Hex: 3/8-16 X 1	8
18	NF-0.375-16	Nut Flanged Lock : 3/8-16	8
19	CS-HH-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	23
20	NF-0.25-20	Nut Flanged Lock : 1/4-20	12
21	CS-FHS-0.25-20X0.75	Screw Cap. FH SKT 1/4-20 X 3/4	2

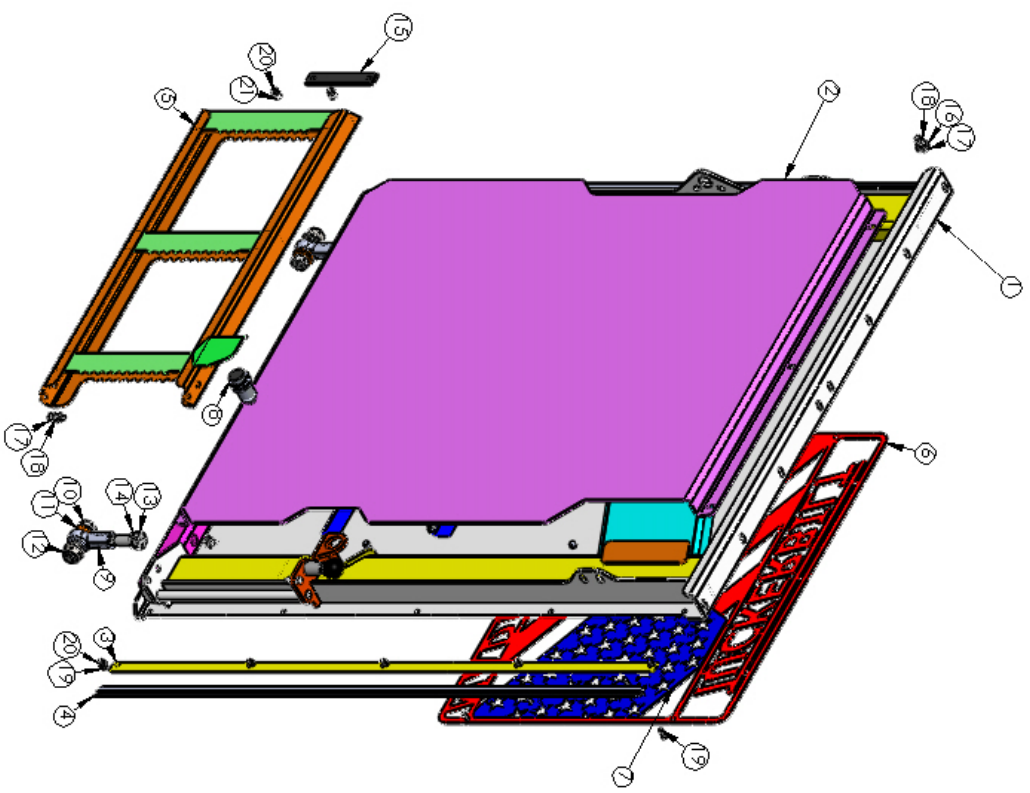
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TORRES
MACHINE & STEEL
SERVICE INC.
P.O. BOX #2810 ETSBURG, PA 17320-2810

T-644

Engine Base Back Door Assembly Hardware

SHOP #
DATE 10/12/2020
PART MCT
TA-60531-00



Engine Base Right Door

ITEM NO.	OrderNo	DESCRIPTION	Default/ QTY.
1	TM60540-02R	Engine Base Side Door Frame Weldment Right	1
2	TM60540-01A	Engine Base Side Door Assy.	1
3	TB60540-07	T-Handle Cam Latch, Door Handle	1
4	TM60080-00-1	Handle Assembly Long	1
5	TM60540-11R	Engine Base Corner Strut Bracket, Rear Right	1
6	TB60540-06	Adjustable Metal Core Bumper	2
7	TM60540-13	Engine Base Side Door Frame Bolt Plate	1
8	TM60870-00	Stainless Hinge for Cabs-Engine Doors	2
9	CS-HH-0.375-1.6X2.5	Screw Cap Hex: 3/8-1.6 X 2 1/2	6
10	NF-0.375-1.6	Nut Flanged Lock : 3/8-1.6	21
11	WF-0.375	Washer Flat 3/8	13
12	CS-HH-0.375-1.6X1	Screw Cap Hex: 3/8-1.6 X 1	12
13	CS-HH-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	8
14	NF-0.25-20	Nut Flanged Lock : 1/4-20	8
15	CS-HH-0.375-1.6X1.25	Screw Cap Hex: 3/8-1.6 X 1 1/4	3
16	TB66572	Cargo Buckle FT8800 G3 Retractable Ratchet	2

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SERVICE, INC.
P.O. BOX 472810 HESSEL NC 27534-972810

TA-60500-00
T-644

Engine Base Side Door Bolted Assembly Right

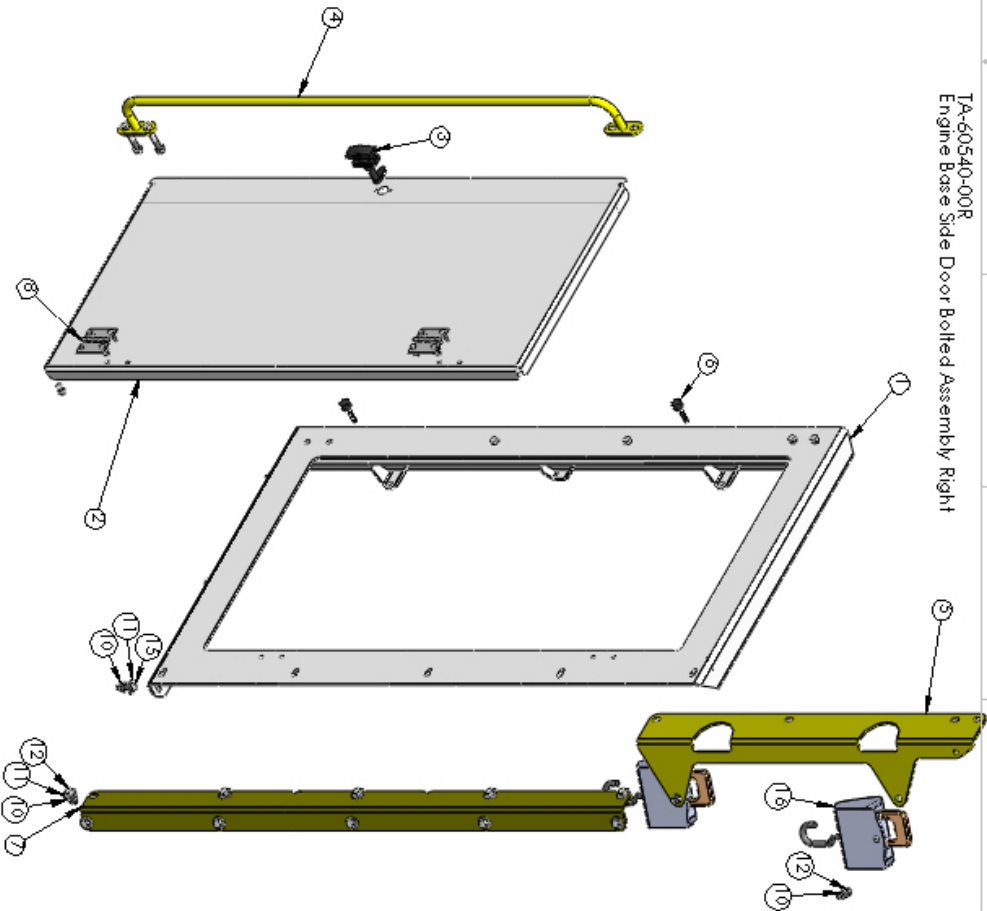
SHOP #

DATE 10/9/2020

DR. P/ MCT

TA-60540-00R

Page: 9



Engine Base Left Door

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60540-02L	Engine Base Side Door Frame Weldment Left	1
2	TM60540-01A	Engine Base Side Door Assy.	1
3	TB60540-07	T-Handle Cam Latch, Door Handle	1
4	TM60080-00-1	Handle Assembly Long	1
5	TM60540-11L	Engine Base Corner Strut Bracket, Rear Left	1
6	TB60540-06	Adjustable Metal Core Bumper	2
7	TM60540-13	Engine Base Side Door Frame Bolt Plate	1
8	TM60870-00	Stainless Hinge for Cab-Engine Doors	2
9	WF-0.375	Washer Flat 3/8	13
10	CS-HH-0.375-1.6X1	Screw Cap Hex: 3/8-1.6 X 1	12
11	NF-0.375-1.6	Nut Flanged Lock : 3/8-1.6	21
12	CS-HH-0.375-1.6X2.5	Screw Cap Hex: 3/8-1.6 X 2 1/2	6
13	CS-HH-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	8
14	NF-0.25-20	Nut Flanged Lock : 1/4-20	8
15	CS-HH-0.375-1.6X1.25	Screw Cap Hex: 3/8-1.6 X 1 1/4	3
16	TB66572	CargoBuckle FT8800 G3 Retractable Ratchet	2

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TORRES
P.O. BOX 492811 LEBLON, FLA. 33409-2811

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SERVICE INC.

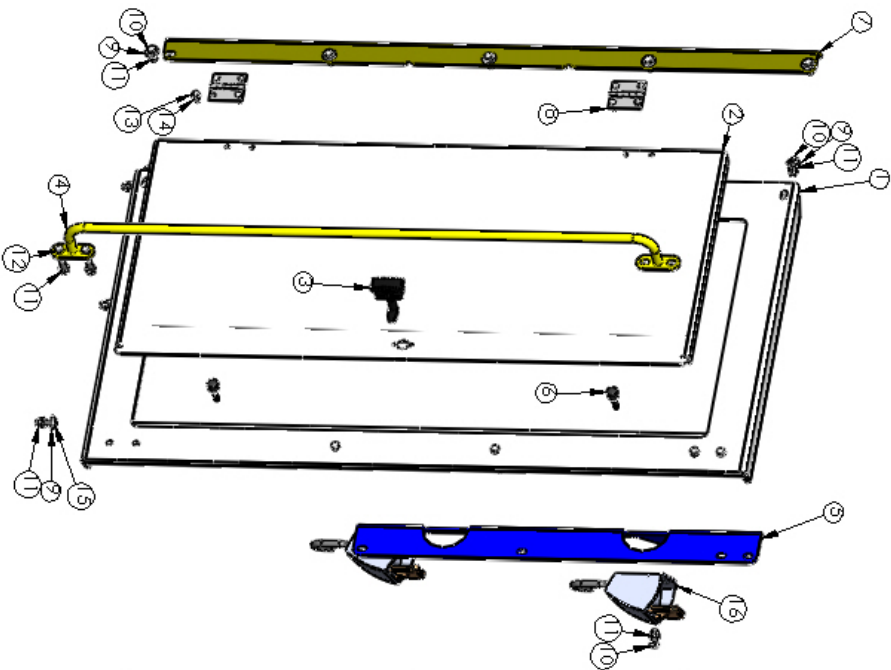
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Engine Base Side Door Bolted Assembly Left

SHP #
DATE 10/8/2020

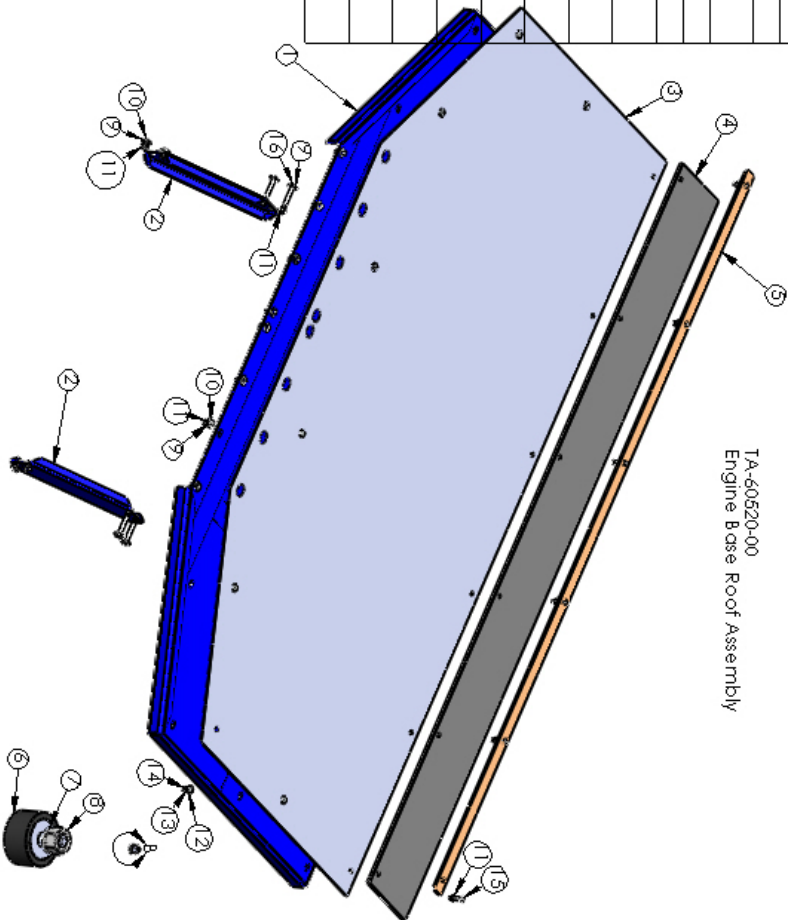
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TA-60540-00L
Engine Base Side Door Bolted Assembly Left



Engine Base Roof Hardware

ITEM NO.	OrderNo	DESCRIPTION	Boled/QTY.
1	TM60520-00	Engine Base Roof Weldment	1
2	TM60520-12	Engine Base Roof Strut, 531 Door	2
3	TM60520-06	Engine Base Roof HDPE Cover	1
4	TM60520-11	Engine Base Roof Flapper - 3/8" Conveyor Belt	1
5	TM60520-10	Engine Base Roof Shield Bar Washer	1
6	TB66500-02	Rubber Bumper 1" OD x 1/2" High	4
7	WL-0.375	Washer Lock 1/4	4
8	NU-0.25-20-PL	Nut Plus 25	4
9	WF-0.375	Washer Flat 3/8	16
10	CS-HH-0.375-16X1	Screw Cap Hex: 3/8-16 X 1	12
11	NF-0.375-16	Nut Flanged Lock: 3/8-16	22
12	CB-0.375-16X1	Bolt Carriage 3/8-16 X 1	8
13	WL-0.375	Washer Lock 3/8	8
14	NU-0.375-16-PL	Nut 3/8-16 (Plate)	8
15	CS-HH-0.375-16X1.5	Screw Cap Hex: 3/8-16 X 1 1/2	6
16	CS-HH-0.375-16X3.5	Screw Cap Hex: 3/8-16 X 3 1/2	4



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TOBER'S
 MACHINE & STEEL
 SERVICE INC.
 P.O. BOX 42311 LEBLON, FLA. 32420-2311

TA-60500-00
 T-644

Engine Base Roof Assembly

SHOP #
 DATE 10/13/2020
 DR. BY MCT
 TA-60520-00

DETAIL B
 SCALE 1:2

Engine Base Back Wall & Exhaust Tier 4 Final Only

ITEM NO.	OrderNo	DESCRIPTION	T4F/QTY.
1	TM60560-00	Engine Base Back Wall Assembly	1
2	TM60560-07	Engine Base Back Wall Exhaust Elbow Assembly	1
3	TB66729-2	Engine Base Back Wall Exhaust Tailpipe	1
4	TM60903-40	Hopper Side Exhaust Tip Assembly	1
5	TB80651-SB C4	Muffler Step Band Clamp 4"	2
6	WF-0.25	Washer Flat 1/4	8
7	CS-HH-0.25-20X1	Screw Cap Hex 1/4-20 X 1	8
8	NF-0.25-20	Nut Flanged Lock : 1/4-20	8
9	WF-0.375	Washer Flat 3/8	14
10	CS-HH-0.375-1.6X1.25	Screw Cap Hex 3/8-1.6 X 1 1/4	5
11	NF-0.375-1.6	Nut Flanged Lock : 3/8-1.6	12
12	NCOB-0.375-1.6	Nut Clip-On Barrel: 3/8-1.6 .05-.2 .750 Hole	1
13	CS-HH-0.375-1.6X1	Screw Cap Hex 3/8-1.6 X 1	11
18	TM60540-08	Engine Base Corner Strut Bracket Front	1

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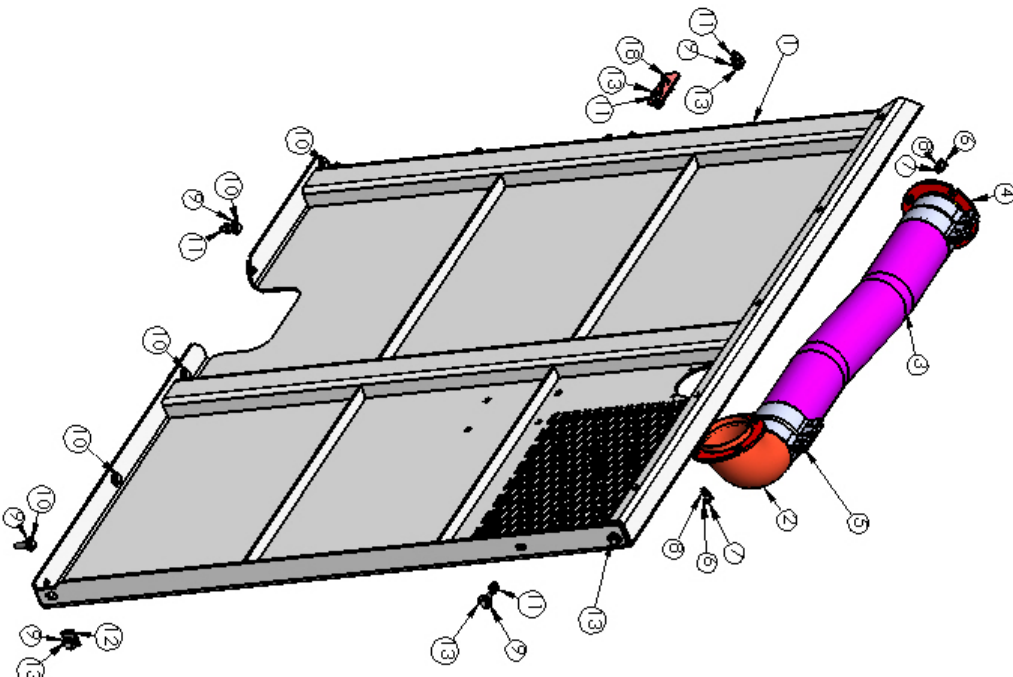


TOWER SERVICE INC.
MACHINE & STEEL
P.O. BOX 402810 LEBANON, TN 37030-2810

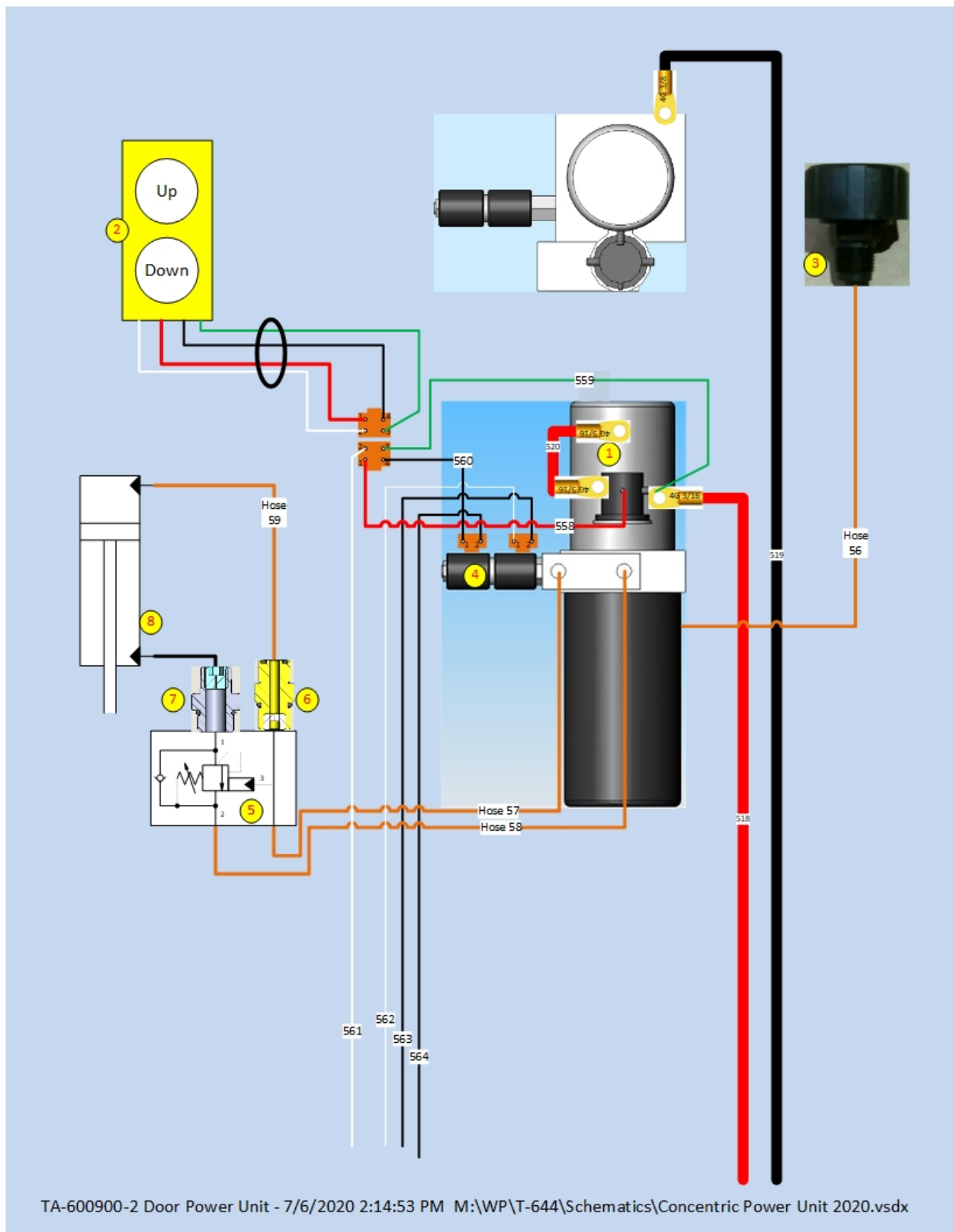
TA-60500-00
T-644

Engine Base Back Wall Assembly Hardware

SHOT #
DATE 10/1/2020
PR. BY MCT
60.560.00



Engine Bay Door Power Unit



Engine Bay Door Power Unit BOM

T-644 Concentric Power Unit 2020				
Key	Description	Mfg #	Tucker #	Qty
1	Engine Door Hydraulic Power Unit	TB-Hoodlift-SPX	TB66130-33	1
2	Stone Hand Controller Up/Down	SPX-Stone - KG13	TB66130-34	1
3	Hydraulic Power Unit Breather	SPX-Stone - 1214-AA	TB66130-33-1	1
4	Solenoid Cartridge, Vickers - Double	Vickers - 02-199325 (SV9-10-A-0-00)	TB66130-35	1
	Solenoid, Vickers 12v Deustch Connector	Vickers - 300AA00101A	TB66130-36	2
5	Valve Body Lift Cyl. Saftey (Vickers)	Vickers - 35415A CBV	TB80215B	1
	Valve Cartridge Lift Cyl. Saftey (Vickers)	Vickers - CBV110C0A30	TB80215C	1
6	Engine Base Cylinder Orifice, Pin End		TM60510-12	1
7	Engine Base Cylinder Orifice, Rod End		TM60510-11	1
8	16" Cylinder Chute Spout Gate - Engine Hood	Aero Hardware - 6431 CYL	TB80701-1	1

Filter List

T-644 Filters, JCB Tier 4 Interim and Final							
	Tucker #	Donaldson	Wix	Napa	JCB	Other	Service Hours
Respa CF Cab Pressurizing Replacement Filter	TB80661-01	NC	NC	NC		Visionaire - 616-FEFF008	1000
Respa CFX Recirculation Replacement Filter	TB80662-01	NC	NC	NC		Visionaire - 616-FEFF011	1000
Strainer for Danfoss Propel Pump Suction	TB66216	NC	NC	NC		Stauff - SUS-A-088-N24-226-125-A-O	Yearly
Strainer for Auxillary Pump	TB80100-1	NC	NC	NC		Michigan Fluid Power - SU75SF40	Yearly
Danfoss Propel Charge Pressure Filter	TB66203-01	NC	NC	NC		Danfoss - 11004919	After first 50, then every 500
Filter for Auxillary Return	2 - TB64101-01	NC	57756	NC		Stauff - 1020013910	After first 50, then every 500
Compressor Inner Filter	TB64575-24-I	P822858	42985	2985			500
Compressor Outer Filter	TB64575-24-O	P821575	46438	6438			500
Engine Primary Air Filter	TB64575-24-T4IP	NC	NC	NC	320/05763		500
Engine Safety Air Filter	TB64575-24-T4IS	NC	NC	NC	320/05764		500
Engine Fuel	TB65975-4-T4I	NC	NC	NC	320/07382		After first 50, then every 500
Engine Oil	TB65975-5	P502465	57233	NC	320/04133		After first 50, then every 500
Engine Lift Pump/Fuel Water Seperator	TB65975-6	P551433	33609	NC	32/925950		After first 50, then every 500
Engine CCV Filter	TB65975-6-CCV	NC	NC	NC	320/07735		1500
DEF Pump Filter and Tool, Tier 4 Final Only	TB65975-6-DEF	NC	NC	NC	334/D7569		1000 Or Yearly
NC = No Cross Reference Known at this time							
Wheel Gearbox	Change Lubricant after first 50 hours, then yearly. Uses HD 85W-140 Gear Lubricant						

Frame

Lower Frame Assembly Components

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TA-60100-00	Rear Frame Assembly Components	1
2	TA-60200-00	Front Frame Assembly Components	1
3	TA-60011-00-8RK	Articulate Pivot Pin bottom Repair Kit	1
4	TA-60011-00-TRK	Articulate Pivot Pin Top Repair Kit	1
5	TA-60050-00-F	Bumper Assembly Components, Front	1
6	TA-60050-00-R	Bumper Assembly Components, Rear	1
7	TM60106-01	Rear Frame Encoder bracket	1
8	TM60106-02	Rear Frame Encoder Base	1
9	CS-HHS-0-25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4 Serrated Flange Bolt	6
10	NF-0-25-20	Nut Flanged Lock : 1/4-20	6
11	NCO8-0-25-20-0-781	Nut Clip-On Barrel: 1/4-20 .025-1.5, .781 Hole	12
12	TB66130-37-61	Jorol PB30 Extended Thread Encoder Assembly	1
13	TM60106-03	Rear Frame Encoder Shield	1
14	TA-60400-00	Upper Turntable Hardware Assembly Kit	1
16	CS-HH-0-25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	4
17	WF-0-25	Washer Flat 1/4	12
18	CS-HH-0-25-20 X1	Screw Cap Hex: 1/4-20 X 1	8
19	TM60101-05	Wheel Box Cover Plate	4
20	TM60101-06	Wheel Box Cover Plate Clamp	4
21	TM60107-00	Rear Frame Cover Assembly	1
22	TM60107-04	Rear Frame Cover Clamp Assembly	2
23	WF-0-375	Washer Flat 3/8	13
24	CS-HH-0-375-1.6X1.75	Screw Cap Hex: 3/8-1.6 X 1 3/4	10
25	CS-HH-0-375-1.6X1	Screw Cap Hex: 3/8-1.6 X 1	3
26	NF-0-375-1.6	Nut Flanged Lock : 3/8-1.6	3
27	TM60200-14	Front Frame Cover Assembly	1
28	TM60200-15	Front Frame Cover Clamp Assembly	2
29	TB80343	Nuts Right Hand Wheel	44

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MACHINE & STEEL SERVICE INC.
P.O. BOX 492810 KANSAS CITY, MO 64149-2810

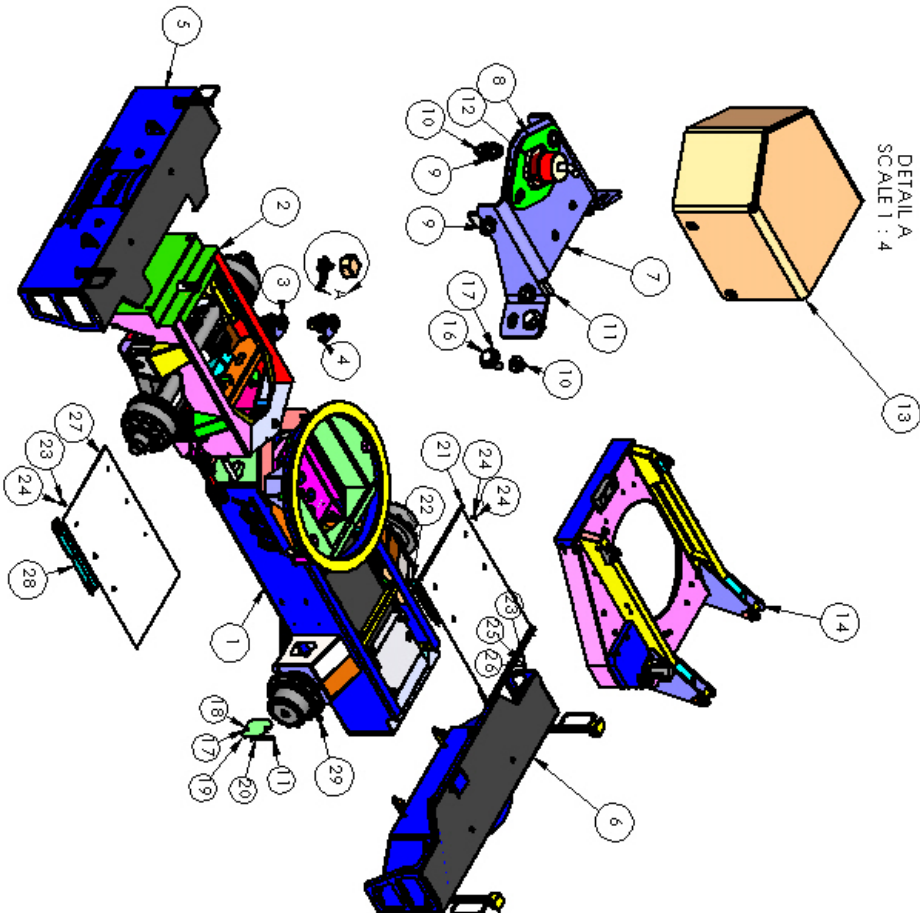
T-644

T-644 Lower Frame Assembly

Sheet

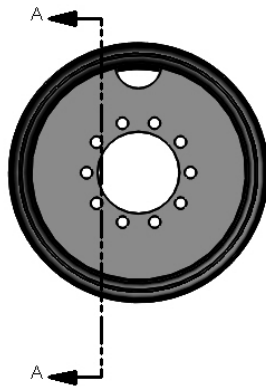
DATE 9/17/2020

DR. BY MCT
TA-60000-10

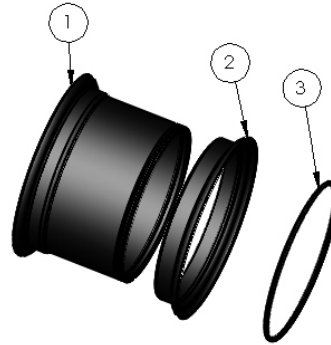


Wheel Assemblies

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM81001	Front Wheel Assembly Welded & Painted	1
2	TB80221	Wheel Side Ring	1
3	TB80222	Wheel Lock Ring	1



TM81001-WA
2 Per Unit



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DR. BY dlj

T-630

DATE 6/27/2013



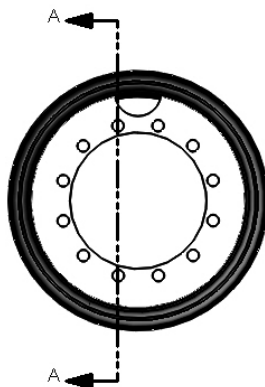
MACHINE & STEEL
SERVICE INC.
P.O. BOX 492810 LEESBURG, FLA. 34749-2810

Front Wheel Assy w-Side Ring, Lock Ring

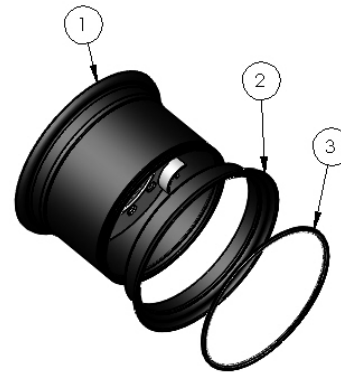
SHOP #

81001-WA

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM81000	Rear Wheel Assembly Welded & Painted	1
2	TB80221	Wheel Side Ring	1
3	TB80222	Wheel Lock Ring	1



TM81000-WA
2 Per Unit



\\denver\cad\Solidworks\Part\T-630\81000\81000-WA DR. BY dlj

T-630

DATE 6/27/2013



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SERVICE INC.
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Rear Wheel Assy w-Side Ring & Lock Ring

SHOP #

81000-WA

Pro-Trac Construction Tires



INDUSTRIAL LOADER L2 - (5 MPH MAX SPEED)									
TIRE CODE	SIZE	PLY	WGT	O.D.	C.S.	TREAD DEPTH 32NDS	MAX LOAD	MAX PSI	RIM WIDTH
BSL-8000-PT	15.5-25 L2	12	168	50.3	15.5	29	12,300	58	12.00
BSL-8001-PT	17.5-25 L2	12	183	53.1	17.5	31	13,600	51	14.00
BSL-8002-PT	17.5-25 L2	16	184	53.1	17.5	31	16,100	69	14.00
BSL-8003-PT	20.5-25 L2	12	243	58.8	20.5	35	14,800	36	17.00
BSL-8042-PT	20.5-25 L2	16	263	58.8	20.5	35	18,200	51	17.00
BSL-8008-PT	23.5-25 L2	16	504	63.7	23.5	40	20,900	44	19.50

<http://www.pro-tractire.com/construction.php>

Tuckerbilt ®

T-644 Tire Pressure: 65 PSI

Front Frame

Front Frame Assembly Components

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60200-00	Front Frame Assembly	1
2	TM81762	Front Axle Assembly	1
3	TM60010-00	Cylinder Pin Assembly T-644	2
4	C3HH-0.5-13X1.5	Screw Cap Hex: 1/2-13 X 1 1/2	2
5	WFF-0.5	Washer Flat 1/2 (Sae)	2
6	NF-0.5-13	Nut Flanged Lock: 1/2-13	2
7	MG-F-0.25-SF	Grease Fitting 1/4" Sirt.	2
8	TB5572-01	Air Ride Nylon Endless Safety Sling	2
9	TB80570-41	Shock, Air Ride Suspension	2
10	C3HH-0.75-10X4	Screw Cap Hex: 3/4-10 X 4	2
11	NF-0.75-10	Nut Flanged Lock: 0.75-10	2
12	TB80611	Valve Brake Quick Release	2
13	2083-6-4S	Adapter, Hydraulic: 2083-6-4S	2
14	DOT-MEL90-0.375X0.25	DOT Male Elbow 90 Deg PP69EE 3/8 X 1/4	2
15	DOT-MEL45-0.375X0.375	DOT Male Elbow 45 Deg PP78EEE 3/8 X 3/8	2
16	HA-2024-6-4S	Adapter, Hydraulic: 2024-6-4S	2
17	2021-4-4S	Adapter, Aeroquip: 2021-4-4S	1
18	DOT-TEE-0.375X0.25-1PT	DOT Male Tee PP72SEE-DOT Tube-Pipe-Tube	2
19	DOT-MC-0.375X0.375	DOT Male Connector PP68EEE 3/8 X 3/8	1
20	DOT-MC-0.375X0.25	DOT Male Connector PP68EE 3/8 X 1/4	1
21	BW-278351	BW Draincock 278351	1
22	HA-2083-4-4S	Adapter, Aeroquip: 2083-4-4S	1
23	TB80603	Air Bag T-650	2
24	TB55571-1	Air Ride Check Valve	1
25	TB55571-2	Air Ride Leveler Filter	1

\\server\cad\Solidworks\Part\T-644\60.200 Front Frame Part\TA-60200-00



MACHINE & STEEL SERVICE INC.
P.O. BOX 40300 LEBANON, TN 37038-0300

T-644

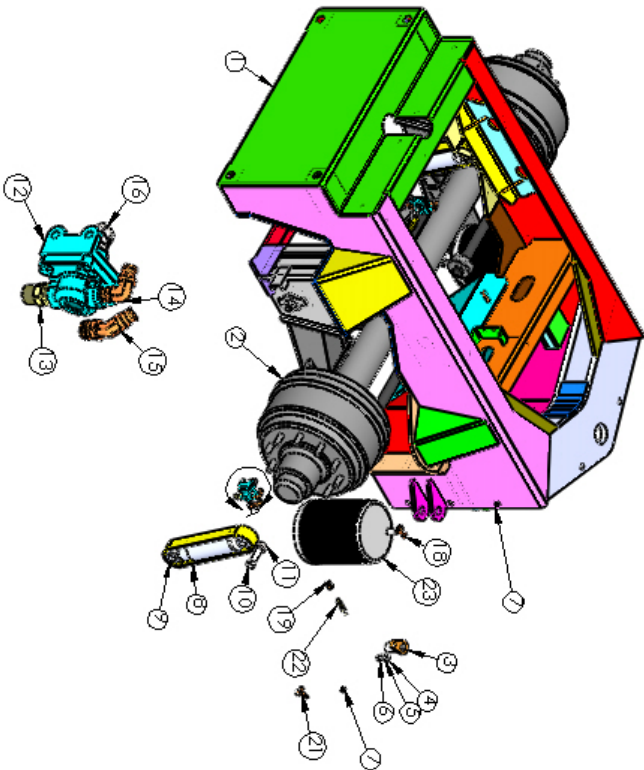
Front Frame Assembly Components

SHOP #

DATE 9/25/2020

PK BY dlj

TA-60200-00

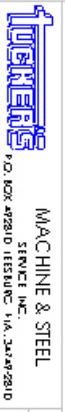


Rear Frame

Rear Frame Components

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60100-00	Rear Frame Assembly	1
2	TR80200-ALB-URN	Gearbox Wheel - Auburn "C" Mount	2
3	TM60025-02	T-644 Logo	2
4	TM60109-01A	Rear Frame Lock Bar	1
5	TM60040-00	T-644 Smart Steer Cylinder	2
6	TA-60105-02	Rear Frame Hose Tray Kit	1
7	TA-65850-1	T-644 Aluminum Fuel Tank	1
8	TM60010-00	Cylinder Pin Assembly T-644	2
9	CS-HH-1-8X4	Screw Cap Hex: 1-8 X 4	1
10	NSL-1-8	Nut Self Lock : 1-8	1
11	TA-66201-1	T-644 Wheel Motor Assembly Kit	2
12	CS-HH-0-375-16X1.25	Screw Cap Hex: 3/8-16 X 1 1/4	6
13	NF-0-375-16	Nut Flanged Lock : 3/8-16	6
14	TA-60100-HC	T-644 Frame Hose Clamp Kit	1
15	TA-60110-01	Rear Frame Park Brake Switch Bracket Assembly	1
16	TA-60090-00-3	Bechtel Junction Box Assembly Lower Frame	1
17	CS-HH-0-75-16X2.25XGR8	Screw Cap Hex: 3/4-16 X 2 1/4 GR8	24
18	WL-0-75-GR8	Washer Lock 3/4 GRADE 8	24
19	TA-66207-01	Oil Cooler Assembly MAR 248	1
20	CS-HH-0-5-13X1.5	Screw Cap Hex: 1/2-13 X 1 1/2	2
21	WFF-0-5	Washer Flat 1/2 (Sae)	2
22	NF-0-5-13	Nut Flanged Lock : 1/2-13	2

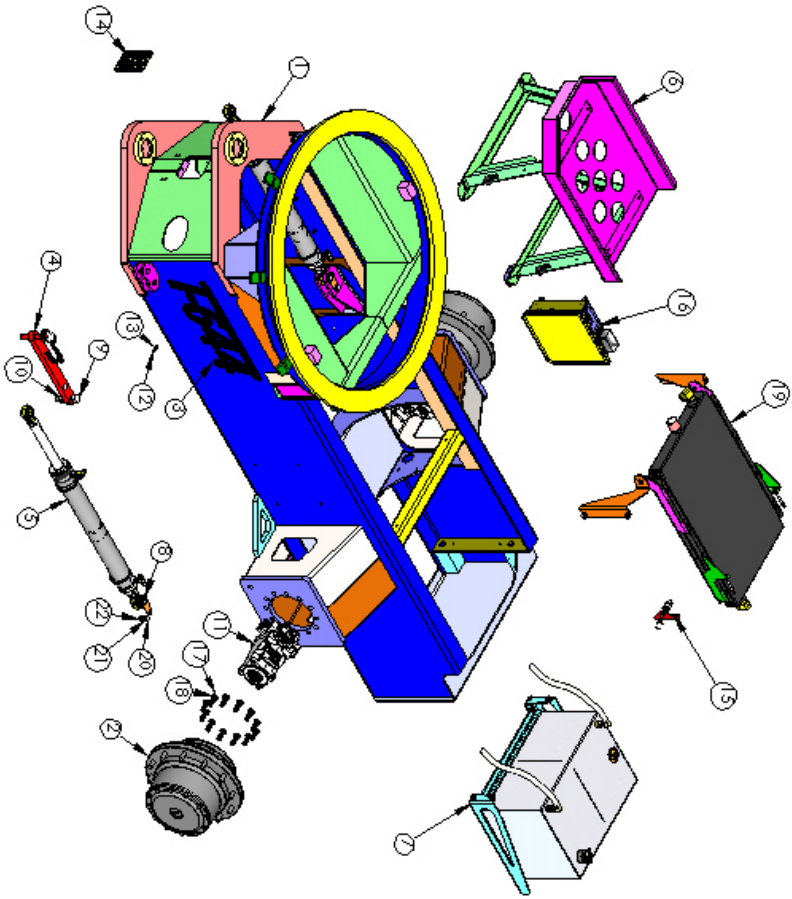
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T-644

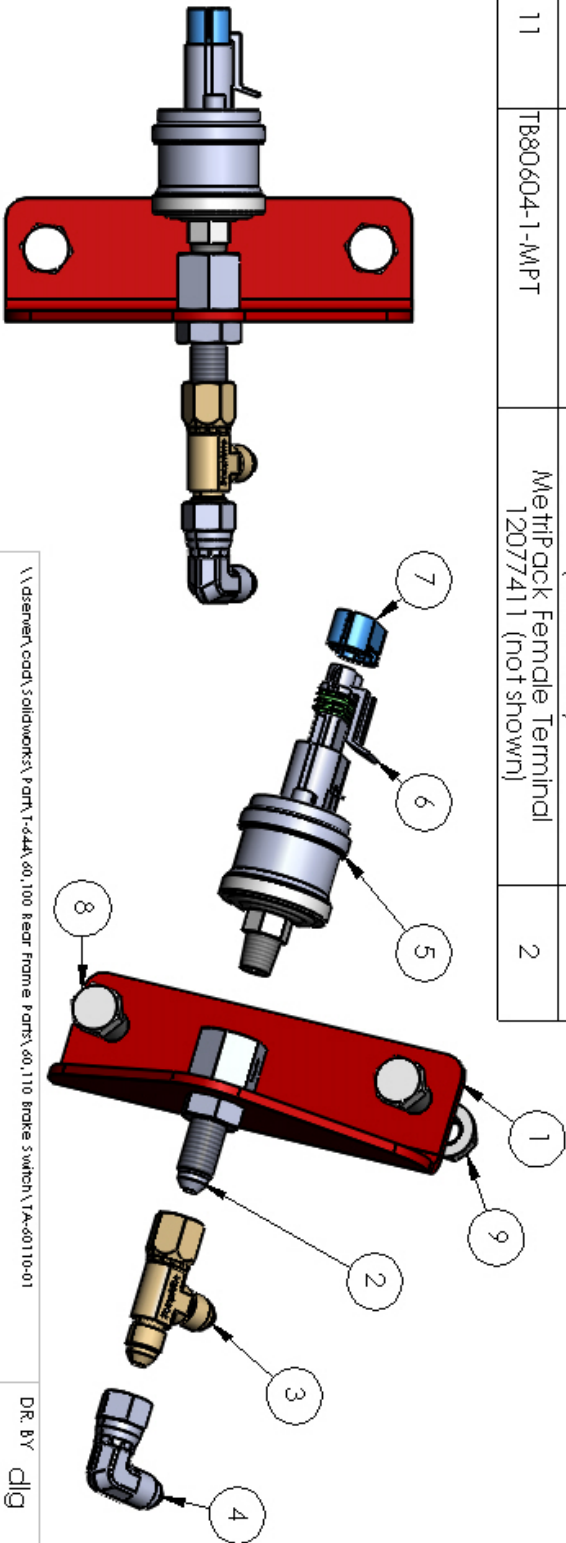
Rear Frame Assembly Components

DATE 9/17/2020
 DESIGNED BY MCT
 TA-60100-00



Rear Frame Park Brake Switch Bracket Assembly

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60110-01	Rear Frame Park Brake Switch Bracket	1
2	2705-LN-04-02	Adapter, JIC-Pipe Bulkhead w/LN: 2705-LN-04-02	1
3	6602-04-04-04	Adapter, Hydraulic: 6602-04-04-04	1
4	6500-04-04	Adapter, Hydraulic: 2071-4-4S	1
5	TB80604-1	Switch N/O - 500 Series w-MertrPack	1
6	TB80604-1-MPB	MertrPack Female Body 15300027	1
7	TB80604-1-TPA	MertrPack TPA 15300014 2 Contact Blue	1
8	CS-HH-0.375-16X1	Screw Cap Hex: 3/8-16 X 1	2
9	NF-0.375-16	Nut Flanged Lock : 3/8-16	2
10	TB80604-1-CS	MertrPack Cable Seal 12015323 (not shown)	2
11	TB80604-1-MPT	MertrPack Female Terminal 12077411 (not shown)	2



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T-644

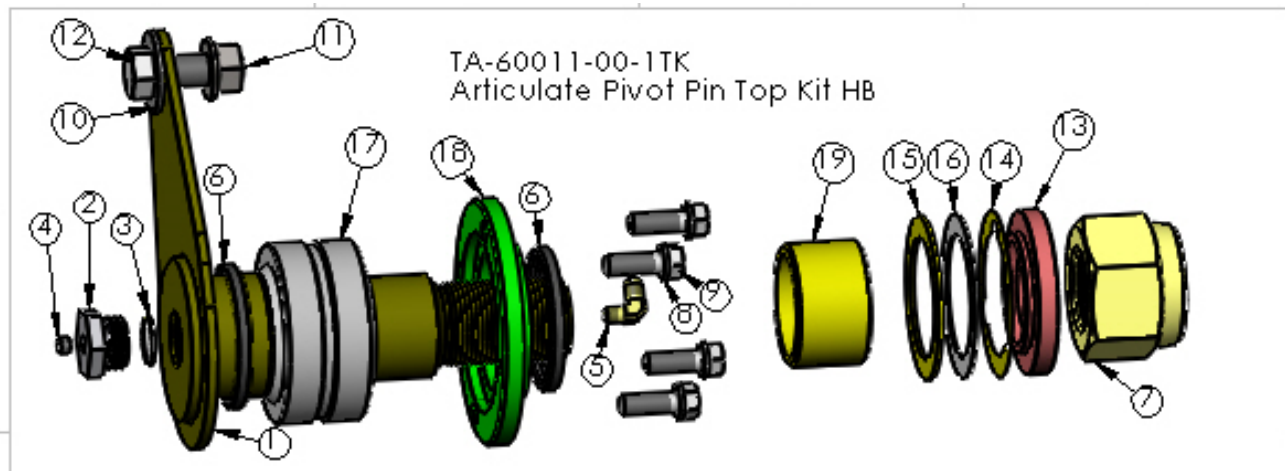
Rear Frame Park Brake Switch Bracket Assembly



MACHINE & STEEL
SERVICE INC.
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DR. BY: *clig*
DATE: 9/17/2018
SHOP #: 60,110,01

Top Articulate Pin Repair Kit



ITEM NO.	OrderNo	DESCRIPTION	TA-60011-00-01 Top/ QTY.
1	TM60011-00-01	Articulate Pivot Pin Assembly HB, T-644 Plated	1
2	TM81070-10	Articulate Shaft Thread Plug	1
3	OR-568-024	O-Ring 1 1/8 x 1 1/4 x 1/16	1
4	2222-2S	Adapter, Hydraulic: 2222-2S	1
5	2024-2-4S	Adapter, Aeroquip: 2024-2-4S	1
6	TB80505	Seal Articulate Pin	2
7	TM60011-03	Articulate Pin Nut Plated	1
8	WL-0.5	Washer Lock 1/2	4
9	CS-HH-0.5-13X1.5	Screw Cap Hex: 1/2-13 X 1 1/2	4
10	WF-0.75	Washer Flat 3/4	1
11	NF-0.75-10	Nut Ranged Lock : 0.75-10	1
12	CS-HH-0.75-10X2.25	Screw Cap Hex: 3/4-10 X 2 1/4	1
13	TM60011-08	Articulate Pin Step Washer	1
14	TB66305-020	Cone Shim .020 Timken Bearing	1
15	TM60011-04-03	Articulate Pin Step Washer Spacer, .1046	1
16	TM60011-04-01	Articulate Pin Step Washer Spacer, .0598	1
17	TB80304-HB	Bearing Articulate, HB	1
18	TM60011-06	Articulate Bearing Retainer, Machined	1
19	TM60011-07	Articulate Pin Collar HB	1

TM60011-04-03, TM60011-04-01, and TB66305-20 are used as needed. Use a feeler guage to confirm.

Not Shown: TM60011-04-02 Articulate Pin Step Washer Spacer, .0747, TB66305-005 Cone Shim .005 Timken Bearing, and TB66305-007 Cone Shim .007 Timken Bearing may be required depending on gap.



P O Box 492810
Leesburg, FL 34749-2810
Phone: (852) 787-3157
Fax: (852) 365-1732

\\dserver\cad\solid works\Part\T-644\0,010 Pins\0,011 Articulate Pin\TA-0011-00

Customer: T-644

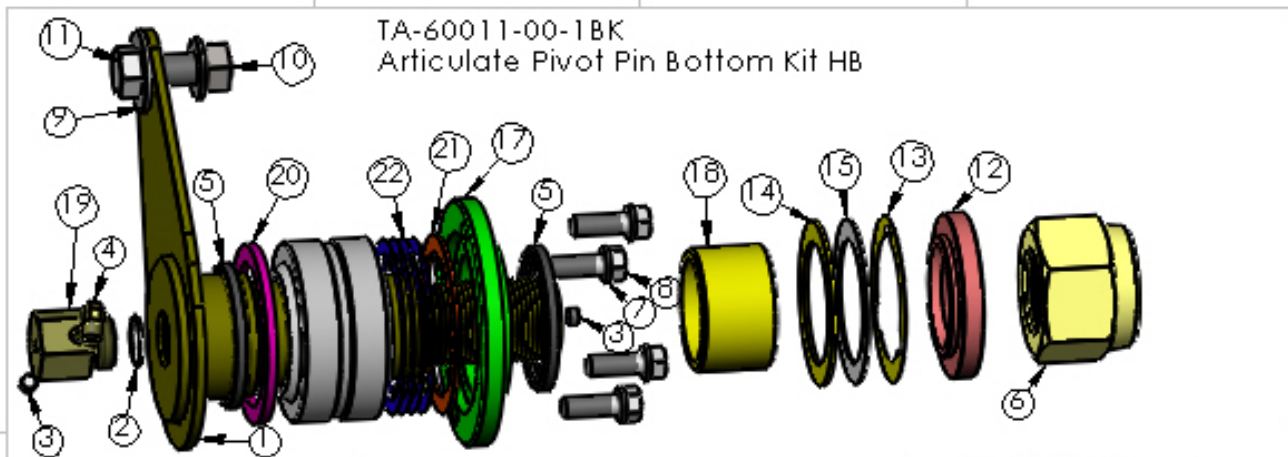
Articulate Pivot Pin Top Kit HB

DR. BY dlj

DATE 5/8/2019

TA-60011-00-1TK

Bottom Articulate Pin Repair Kit



ITEM NO.	OrderNo	DESCRIPTION	TA-60011-00-01 Bottom/ QTY.
1	TM60011-00-01	Articulate Pivot Pin Assembly HB, T-644 Plated	1
2	OR-568-024	O-Ring 1 1/8 x 1 1/4 x 1/16	1
3	2222-2S	Adapter, Hydraulic: 2222-2S	2
4	2024-2-4S	Adapter, Aeroquip: 2024-2-4S	1
5	TB80505	Seal Articulate Pin	2
6	TM60011-03	Articulate Pin Nut Plated	1
7	WL-0.5	Washer Lock 1/2	4
8	CS-HH-0.5-13X1.5	Screw Cap Hex: 1/2-13 X 1 1/2	4
9	WF-0.75	Washer Flat 3/4	1
10	NF-0.75-10	Nut Ranged Lock : 0.75-10	1
11	CS-HH-0.75-10X2.25	Screw Cap Hex: 3/4-10 X 2 1/4	1
12	TM60011-08	Articulate Pin Step Washer	1
13	TB66305-020	Cone Shim .020 Timken Bearing	1
14	TM60011-04-03	Articulate Pin Step Washer Spacer, .1046	1
15	TM60011-04-01	Articulate Pin Step Washer Spacer, .0598	1
16	TB80304-HB	Bearing Articulate, HB	1
17	TM60011-06	Articulate Bearing Retainer, Machined	1
18	TM60011-07	Articulate Pin Collar HB	1
19	TM81070-10E	Articulate Shaft Thread Plug for Encoder	1
20	TM60011-05	Spacer Articulating Bearing HB	1
21	TM60011-10	Articulate Bearing Retainer Filler	1
22	TB66306-005	Shim .005 Timken K21405	4

TM60011-04-03, TM60011-04-01, and TB66305-20 are used as needed. Use a feeler guage to confirm.

Not Shown: TM60011-04-02 Articulate Pin Step Washer Spacer, .0747, TB66305-005 Cone Shim .005 Timken Bearing, and TB66305-007 Cone Shim .007 Timken Bearing may be required depending on gap.



P.O. Box 492810
Leesburg, FL 34749-2810
Phone: (852) 787-2157
Fax: (852) 265-1792

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Customer: T-644

Articulate Pivot Pin Bottom Kit HB

DR. BY dlg

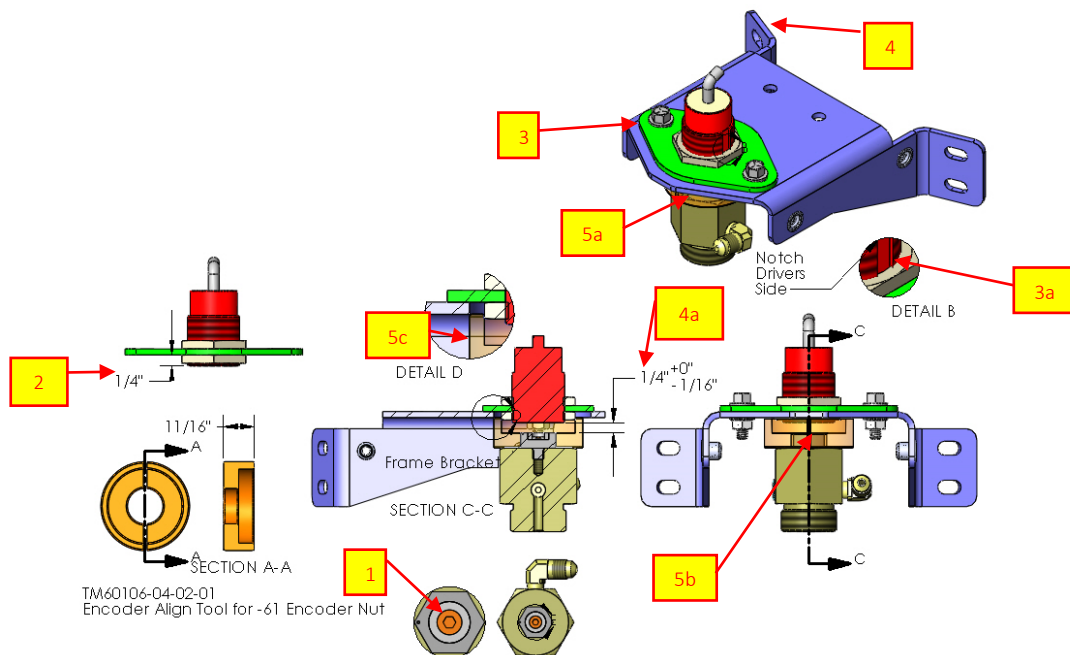
DATE 5/8/2019

TA-60011-00-1BK

Encoder Calibration

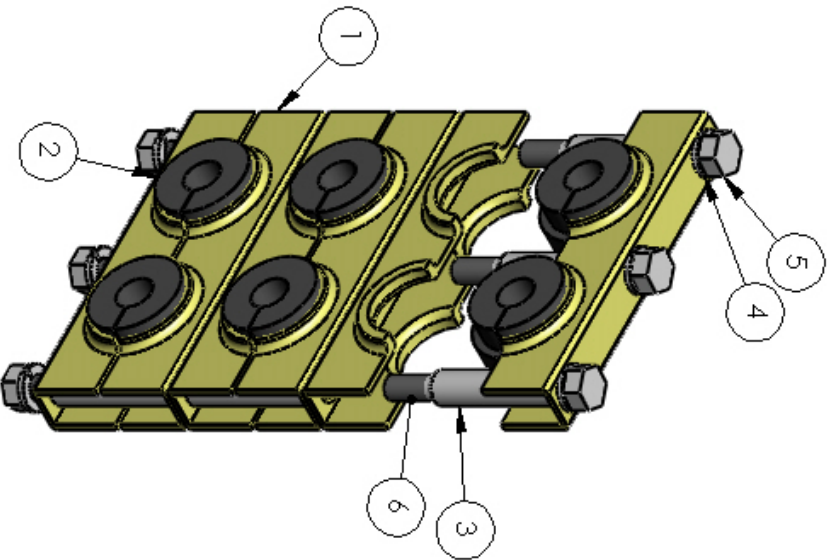
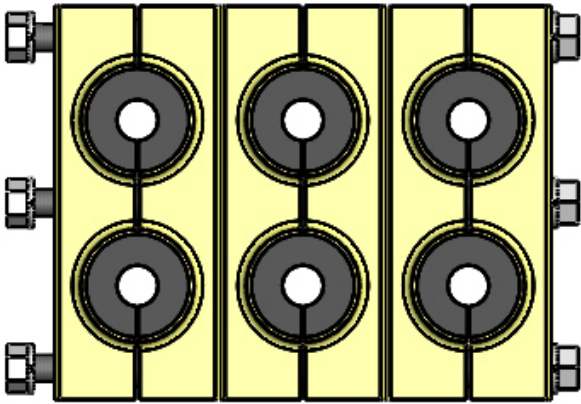
Install the **Error! Reference source not found.** (page **Error! Bookmark not defined.**) to keep Front end and Rear End aligned.

1. "Snug" Encoder Magnet Allen screw. Must be able to turn magnet with wrench still.
2. Install Encoder in mount with 3/16" to 1/4" extrusion. The important distance is step 4-4a.
3. Bolt Encoder & Mount to Frame Bracket snug, but still able to move it. (3a) Be sure Notch in Encoder is on the Driver's side of the machine.
4. Mount Frame Bracket to rear frame, (4a) 1/4" max gap, 3/16" min gap from encoder to top of nut.
5. Place 2 halves of Encoder Align Tool around Magnet and Encoder Nut.
 - a. Tie Wrap or rubber band around Encoder Align Tool to hold the two halves in place.
 - b. Slide Encoder and Mount so bottom Encoder Magnet centers in Align tool. Encoder Align Tool should now have the Magnet and Encoder Nut Centered.
 - c. Be sure the Frame Bracket is just above the Encoder Align Tool.
6. Cut the tie wrap or work out of rubber band and remove Encoder Align Tool.
7. Have a helper turn the key on (do not start the engine) and navigate to **Error! Reference source not found.**, page **Error! Bookmark not defined.**
8. Have the helper watch the "Center Snsr", "Raw Signal" while you rotate the Encoder Magnet with a wrench. Small movements. Adjust the Magnet until the Raw Signal is 50% +/- 3%.
9. Remove Encoder and mount. (3)
10. Hold the Encoder Magnet with a wrench and tighten the Allen screw.
11. Reinstall the Encoder and mount, loose.
12. Reinstall the Encoder Align tool and tie wrap or rubber band the halves and tighten to realign Encoder and Magnet. Have your helper watch the "Raw Signal" as some movement of the mount will probably still be needed to get close to 50%.
13. Tighten Encoder and Mount.
14. Cut Tie Wrap or remover from rubber band and remove Encoder Align Tool.
15. Re-check "Raw Signal" to 50% +/- 3%. Repeat starting at 8 if necessary.
16. Encoder alignment complete.



Frame Hose Clamp Kit

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB80680	Hose Clamping Unit	6
2	TB80681	Hose Split Bushing 4p	6
3	TB80684	Hose Clamp Stacking Nut	9
4	WL-0,3125	Washer Lock 5/16	6
5	CS-HH-0,3125-18X1	Screw Cap Hex: 5/16-18 X 1	6
6	TB80685	Hose Clamp Thrd. Adapter	6



TOCHERS
 MACHINE & STEEL
 SERVICE INC.
 P.O. BOX 492810 LEESBURG, FLA. 34749-2810

\\dservr\cadd\Solidworks\Part\T-644\60,100 Rear Frame Parts\60,100 Rear Frame Assembly\TA-60100.HC dlg
 T-644
 DATE 9/17/2020
 SHOP #
 TA-60100-HC
T-644 Frame Hose Clamp Kit

Oil Cooler Assembly

4/16/2021, 9:11 AM



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SERVICE, INC.
P.O. BOX 492810 LEESBURG, FLA. 34749-2810

Oil Cooler Assembly MAR 248

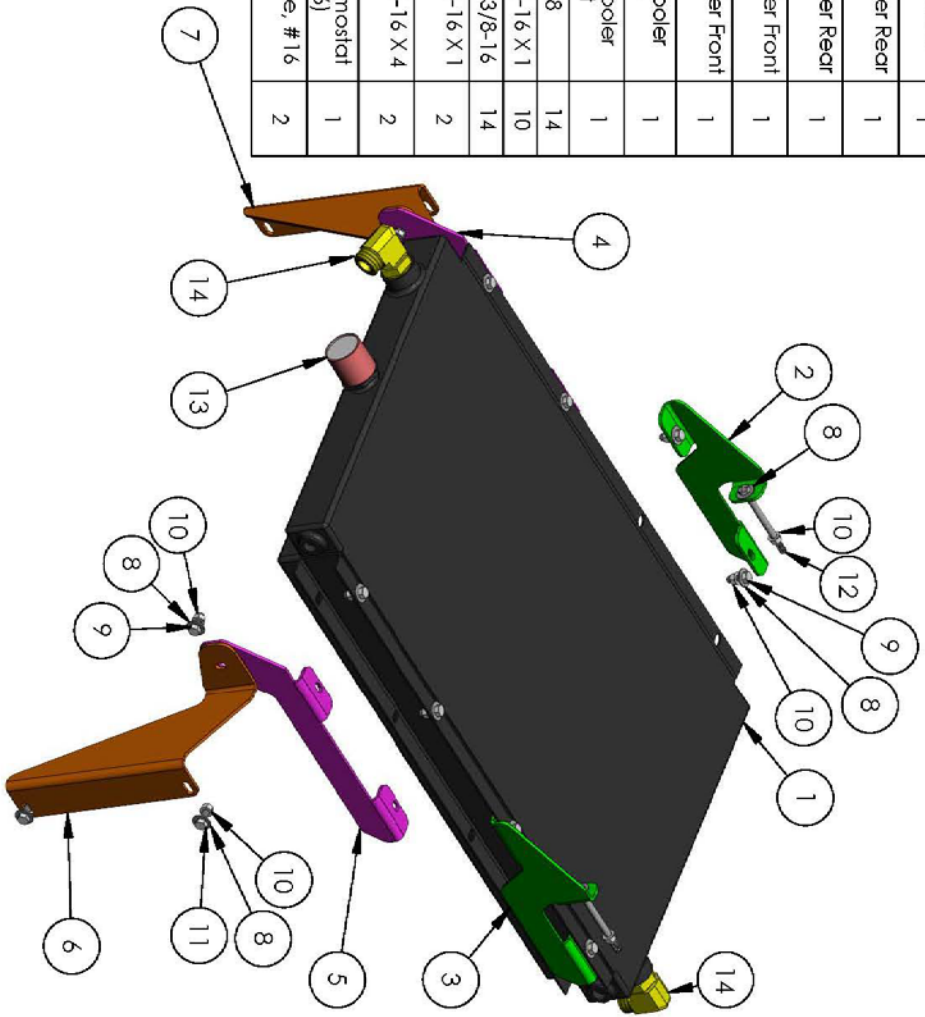
DR. BY dlig
DATE 9/22/2020
SHOP # TA-66207-01

T-644

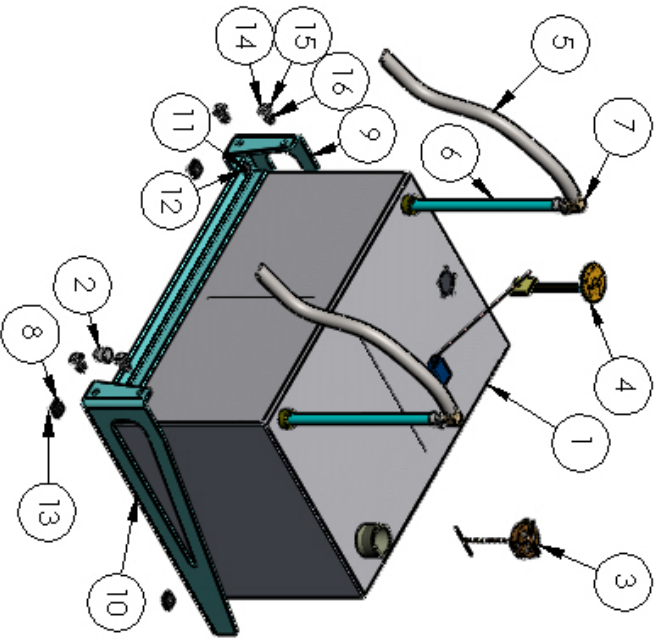
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1 Page: 1

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB66207-01	Oil Cooler, 12v (Thermal MAR 248)	1
2	TM60115-03R	Rear Frame Oil Cooler Rear Clip, Right	1
3	TM60115-03L	Rear Frame Oil Cooler Rear Clip, Left	1
4	TM60115-02R	Rear Frame Oil Cooler Front Clip, Right	1
5	TM60115-02L	Rear Frame Oil Cooler Front Clip, Left	1
6	TM60115-01L	Rear Frame Oil Cooler Bracket, Left	1
7	TM60115-01R	Rear Frame Oil Cooler Bracket, Right	1
8	WF-0.375	Washer Flat 3/8	14
9	CS-HH-0.375-16X1	Screw Cap Hex: 3/8-16 X 1	10
10	NF-0.375-16	Nut Flanged Lock : 3/8-16	14
11	CS-HH-0.375-16X1.25	Screw Cap Hex: 3/8-16 X 1 1/4	2
12	CS-HH-0.375-16X4.5	Screw Cap Hex: 3/8-16 X 4 1/2	2
13	TB66207-02	Oil Cooler Fan Thermostat (Thermal 57566)	1
14	FF1868T1616S	Eil # 16 ORS Flat Face, # 16 O-Ring Boss	2



ITEM NO.	OrderNo	DESCRIPTION	T-644 Aluminum Fuel Tank/QTY.
1	TB65850-1	T-644 Aluminum Fuel Tank Assembly	1
2	TB80630	Aluminum Plug 0.75 NPT	1
3	TB80620	Gas Cap Fuel Tank 2"	1
4	TB66130-20	Fuel Tank Sending Unit Assembly	1
5	TM66901-17 & 18	Fuel Hose	2
6	TM81034-1	Fuel Tank 3/4" Stainless Drop Assembly	2
7	HA-2501-08-08	Adapter, SS 1/2" Pipe x-8 JIC 90	2
8	TB65157-2	Fuel Tank Rubber Mount Pad	4
9	TM60108-01L	Fuel Tank Bracket, Left	1
10	TM60108-01R	Fuel Tank Bracket, Right	1
11	CS-HH-0.25-20X1.25	Screw Cap Hex: 1/4-20 X 1 1/4	4
12	WF-F-0.25	Washer Flat 1/4	4
13	NF-0.25-20	Nut Flanged Lock : 1/4-20	4
14	CS-HH-0.375-1.6X1.25	Screw Cap Hex: 3/8-1.6 X 1 1/4	4
15	WF-F-0.375	Washer Flat 3/8	4
16	NF-0.375-1.6	Nut Flanged Lock : 3/8-1.6	4



TOWER'S
 MACHINE & STEEL
 SERVICE, INC.
 P. O. BOX 492810 LEESBURG, FLA. 34749-2810

T-644 Aluminum Fuel Tank

DR. BY **dlig**
 DATE **6/1/2018**
 SHOP #
TA-65850-1

T-644

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Hose Tray

921 AMR/16/2021

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60105-02	Rear Frame Hose Tray Assembly	1
2	TM60105-01	Rear Frame Hose Tray Frame Assembly	2
3	CLC-C-0.75X1.5	Loop Clamp, Vinyl, 3/4" W X 1-1/2" ID	2
4	TM60105-03	Rear Frame Hose Tray Frame Clip	2
5	TM60105-04	Rear Frame Hose Tray Frame Spacer	2
6	CB-0.25-20X1	Bolt Carriage 1/4-20 X 1	4
7	CS-HH-0.25-20X1	Screw Cap Hex: 1/4-20 X 1	6
8	CS-HH-0.25-20X1.75	Screw Cap Hex: 1/4-20 X 1.75	4
9	WF-0.25	Washer Flat 1/4	14
10	WL-0.25	Washer Lock 1/4	4
11	NUU-0.25-20-PL	NUT FL USS .25	4
12	NF-0.25-20	NUT Flanged Lock : 1/4-20	10

MACHINE & STEEL SERVICE INC.
 P.O. BOX 492010 LEEBURG, FLA. 34749-2010

1\Solidworks\Part\T-644\601.100 Rear Frame Parts\601.105 Hose Tray\601.105.00
T-644

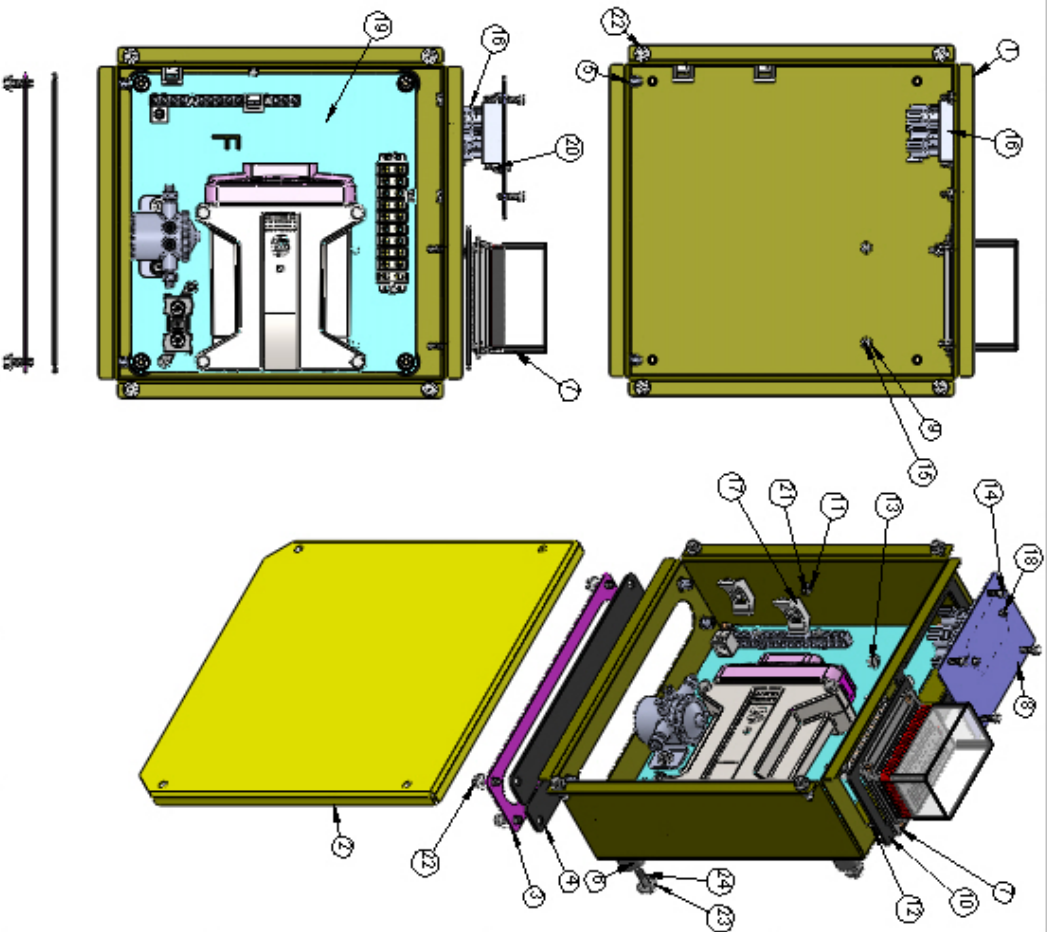
Rear Frame Hose Tray Kit


SHOP #
 DATE 12/13/2017
 DR. BY dfg
 TA-60105-02

1 Page: 3

Frame Electrical Panel Assembly

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	60.090.01	Electrical Junction Box	1
2	60.090.02	Electrical Junction Box Lid	1
3	60.090.03-1	Electrical Junction Box Gasket Plate	1
4	60.090.04	Electrical Junction Box Gasket	1
5	NR-0.25-20-F L.O.027-0.165	Rivet Nut 1/4-20 (Plated) 0.027-0.165 Thickness	8
6	80655	Rubber Dampening Sandwich m/f 1/4-20	4
7	66145-02	Relay Assembly base w/cover	1
8	60.090.07	Electrical Junction box Frame Plate	1
9	NR-8-32-P L.O.020-0.080	Rivet Nut 8-32 (Plated) 0.020-0.080 Thickness	2
10	60.090.09	Electrical Junction box Top Gasket	2
11	NR-10-24-F L.O.020-0.130	Rivet Nut 10-24 (Plated) 0.020-0.130 Thickness	2
12	CS-HH5-10-32X0.625	Screw Cap Hex: 10-32 X 5/8 serrated flange bolt	4
13	NFS-10-24	NUT serrated Flanged Lock : 10-24	4
14	SS CS-5-H-10-24K .75	Cap screws stainless-socket Head- #10-24 X 3/4"	4
15	SS CS-5-H-8-32X0.50	Cap screws stainless-socket Head- #8-32 X 1/2"	2
16	80140	Can Data Link Module (4 Total Connections)	1
17	T B66500-07	Fastener-Mount Cable Tie Holder	2
18	SS CS-5-H-8-32X0.75	Cap screws stainless-socket Head- #8-32 X 3/4"	2
19	TA-60.090.06.02KF	Electric Junction box sub plate, frame	1
20	SS NS L8-32	Nut self lock - stainless : 8-32	2
21	SS CS-5-H-10-24K .60	Cap Screw- Stainless-socket Head- #10-24 X 1/2"	2
22	CS-HHS-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4 serrated Flange Bolt	8
23	W/F-0.25	Washer Flat 1/4	4
24	CS-HH-0.25-20X1	Screw Cap Hex: 1/4-20 X 1	4



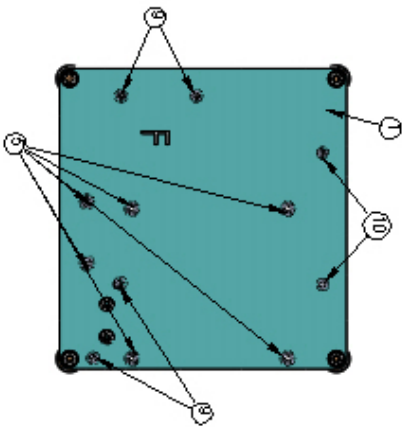
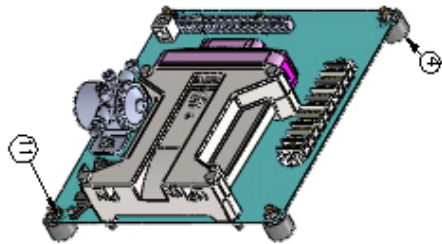
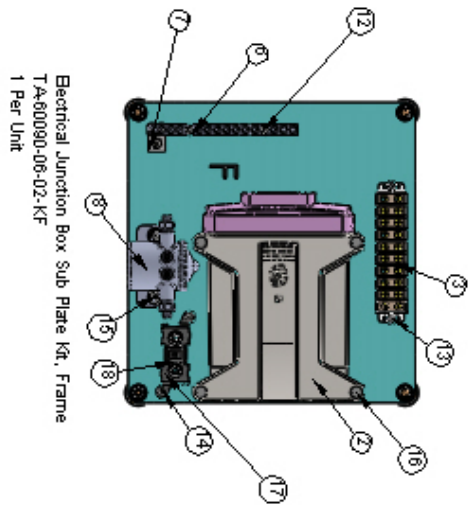

JWA CHINE & STEEL
 215 WEST 14TH
 ST. LOUIS, MISSOURI 63103

WASHINGTON, MISSOURI 63103
T-844

Electrical Junction Box Assembly Lower Frame
 Part #
 Date 9/1/2017
 Dr. V. MCT
 TA60090.00-3

Frame Electrical Panel Subplate

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	60.090.06.02	Electrical Junction Box Sub Plate, Frame	1
2	80130-11-LF	MC060-010 Controller w/40mg loaded- Lower Frame	1
3	80575-109-10	Terminal Strip 10 lug 20A #6-32	1
4	80655	Rubber Dampening Sandwich W/F 1/4-20	4
5	NR-0-25-20-P L.O.027-0.165	Rivet Nut 1/4-20 (Pitched) 0.027-0.165 Thickness	6
6	80130-45	Ground Bar	1
7	80130-45-01	Ground Bar Collar Stop	1
8	T880587-1	Relay Solenoid	1
9	NR-10-24-P L.O.020-0.130	Rivet Nut 10-24 (Pitched) 0.020-0.130 Thickness	4
10	NR-8-32-P L.O.020-0.080	Rivet Nut 8-32 (Pitched) 0.020-0.080 Thickness	2
11	NFS-0-25-20	NUT serrated Flanged Lock : 1/4-20	4
12	55-C5-S-H-10-24X1	Cap Screw 5 To Inless Socket Head- #10-24 X 1"	2
13	55-C5-S-H-8-32X0.75	Cap Screw 5 To Inless Socket Head- #8-32 X 3/4"	2
14	55-C5-S-H-10-24X.50	Cap Screw 5 To Inless Socket Head- #10-24 X 1/2"	2
15	C5-HH5-0-25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4 serrated Flange Bolt	2
16	C5-HH-0-25-20X2.5	Screw Cap Hex: 1/4-20 X 2 1/2	4
17	80130-100-03	Midl High Amp Fuse Block Fuse Module	1
18	80130-100-04-70A	Midl High Amp Fuse 70A	1
19	NFS-10-24	Nut Serrated Flanged Lock : 10-24	2



MA CHINE & STEEL
31001 H.C.
170, LOW STREET, TRUSTECH, #4, 3449230

Manufactured in Taiwan
T-644

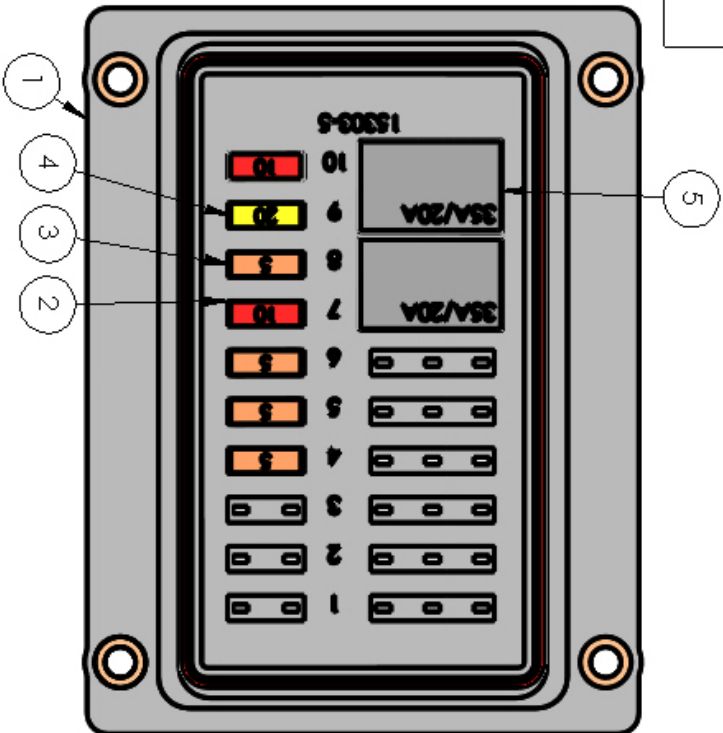
Electric Junction Box Sub Plate, Frame

DATE 9/17/2020

DR. P.MCT
TA60.090.06.02KF

Frame Panel Fuses-Relays

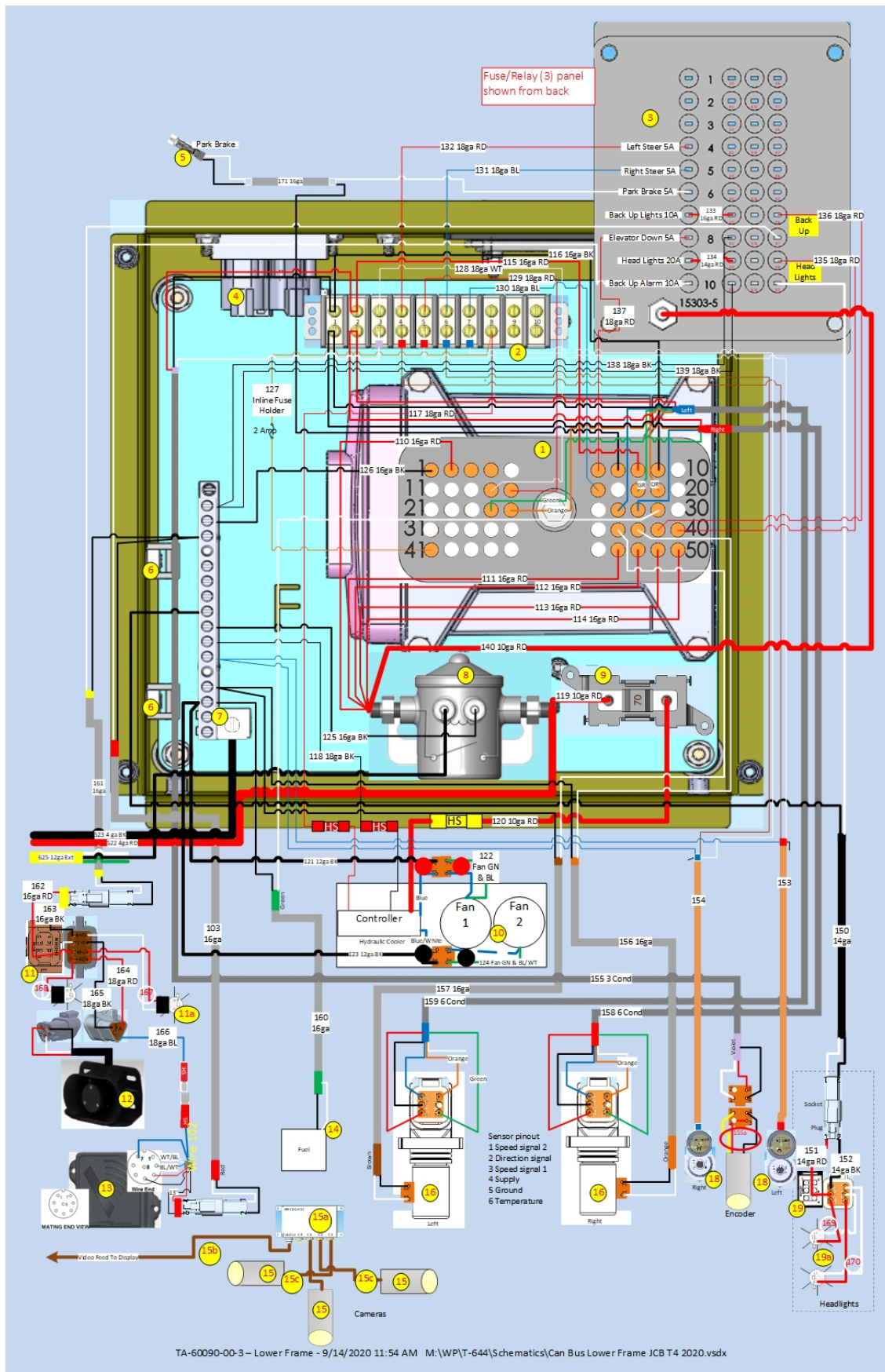
ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB66145-02	Mini Fuse Panel, 3 Relays, 10 Fuses 15303-5	1
2	TB66145-10A	Fuse, 10A Led Mini ATM Red 12V	2
3	TB66145-5A	Fuse, 5A Led Mini ATM Tan 12V	4
4	TB66145-20A	Fuse, 20A Led Mini ATM Yellow 12V	1
5	TB66145-04	Micro Relay, ISO 280 SPDT 35A, 12V	2



MACHINE & STEEL SERVICE INC.
 P.O. BOX 492810 LEESBURG, FLA. 34749-2810

\\denver\cadd\solidworks\Part\T-644\60,090 Bechtold boxes\Fuse-Relay Modules		DR. BY	djg
T-644		DATE	9/14/2020
Relay Assembly Frame		SHOP #	

Frame Electrical Panel

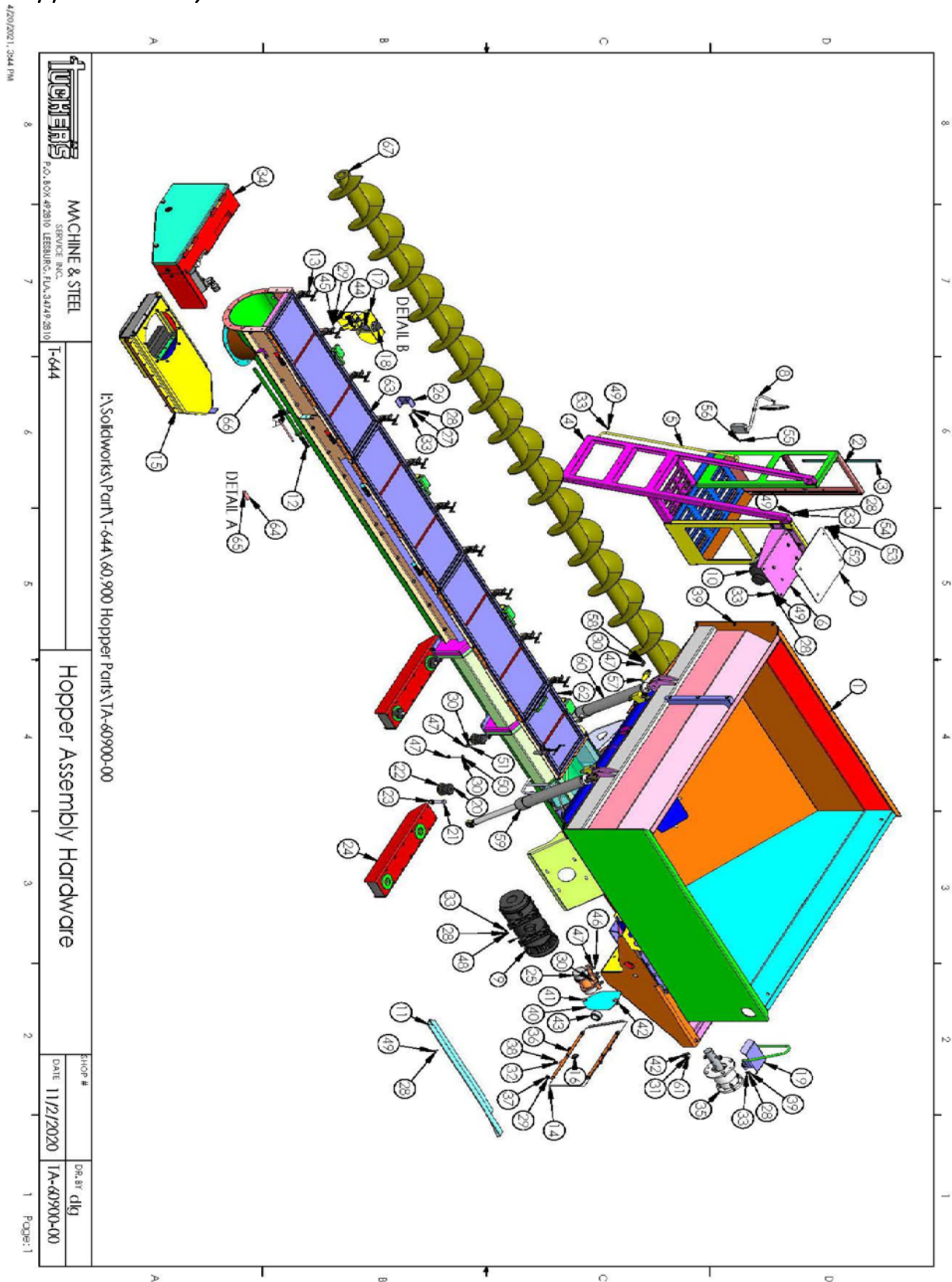


Frame Electrical Panel BOM

Frame Electrical Box Parts				
Key	Description	Mfg #	Tucker #	Qty
1	MC050-010 Controller w/prog loaded-Lower Frame	Berendsen - 11138530	TB66130-11-LF	1
	Deutsch DRC26-50S01 Male Plug	Deutsch - DRC26-50S01	TB80130-93	1
	Plug, Deutsch Sealing Size 20	Deutsch - 0413-204-2005	TB80130-64	23
2	Terminal Strip 10 Lug 20A #6-32	Waytek - 47310	TB80575-109-10	1
3	Mini Fuse Panel, 5 Relays, 10 Fuses 15303-5	Waytek - 46345	TB66145-02	1
	Micro Relay, ISO 280 SPDT 35A, 12V	Waytek - 75659	TB66145-04	2
	Fuse, 5A Led Mini ATM Tan 12V	Waytek - 46261	TB66145-5A	4
	Fuse, 10A Led Mini ATM Red 12V	Waytek - 46263	TB66145-10A	2
	Fuse, 20A Led Mini ATM Yellow 12V	Waytek - 46265	TB66145-20A	1
4	Can Data Link Module (4 Total Connectors)	Waytek - 80604	TB80140	1
5	Switch N/O - 500 Series w-MetriPack	Wholesale - TU77030-00000050-01	TB80604-1	1
6	Fastener-Mount Cable Tie Holder	McMaster - 7582K82	TB66500-07	2
7	Ground Bar Kit 14 Position	Besco - ECGB14	TB80130-45	1
	Ground Bar Collar Strap	Besco - ECCS1	TB80130-45-01	1
8	Solenoid/Relay, 200 Amp Continous, JCB	Wholesale - HE24213	TB80587-1	1
9	Midi High Amp Fuse Block Fuse Module	Waytek - 46390	TB80130-100-03	1
	Midi High Amp Fuse 70A	Waytek - 46384	TB80130-100-04-70A	1
10	Oil Cooler, 12v (Thermal MAR 248)	Berendsen - MAR-248-2-4A-30	TB66207-01	1
	Oil Cooler Fan Thermostat (Thermal 57566)	Berendsen - 57566	TB66207-02	1
11	Deutsch DT04-08PA-P026 (2) 4 Pin Buss Receptacle	Deutsch - DT04-08PA-P026	TB80130-51-P026	1
11a	Light Back Up, Transporter	Wholesale - TPLED60W	TB80985-01	2
12	PreView SAS Back Up Alarm	Preco - SAS ALARM	TB80125-1-6	1
13	Preview Back Up Sensor Can-Bus Sentry ST82062.4	Preco - ST82062.4	TB80125-2-3S	1
14	Fuel Level Sending Unit SN35 33-240 OHM	Boyd Welding - 33002	TB66130-20	1
15	Camera, Famos 129 Deg w/24" Cable Orlaco 0171100	Berendsen - 171100	TB66130-01	3
15a	Multiview Box Screen Splitter Orlaco 0405100	Berendsen - 0405100	TB66130-02-SPL	1
15b	Cable, Camera 17M 7P Dynamic 46 Ft Orlaco 0304590	Berendsen - 304590	TB66130-03-17M	1
15c	Cable, Camera 3M 4P Dynamic 9.8 Ft Orlaco 0301890	Berendsen - 301890	TB66130-03-3M	2
16	Motor Wheel, Danfoss H1 Vari, 0-80cc	Berendsen - 83060628	TB66201-1	2
17	Joral PE30-V1-0-180-0.5-4.5-CW-DE4-61 Abs	Berendsen - PE30V101800.54.5CWDE461	TB66130-37-61	1
18	Rota EL series transducer, 10mm OD aluminum	Rota - ELCA 0610 0.5 G J C0762 C064 R	TB66130-38	2
19	Deutsch DT04-6P-EP14 2-3 Pin Buss Receptacle	Deutsch - DT04-6P-EP14	TB80130-113-EP14	1
19a	Headlight, LED 7" 36 Watt	Wholesale - TUYITAMOTOR	TB66130-40-36W	2

Hopper

Hopper Assembly Hardware



Hopper Assembly Hardware BOM

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60900-00	Hopper Assembly	1
2	TM60904-00	Catwalk Assembly	1
3	TM60904-08	Catwalk Handrail Shim	1
4	TM60905-00	Catwalk Ladder Assembly	1
5	TM60080-00-1	Handle Assembly Long	1
6	TM60904-10	Catwalk Cab Filter Bracket	1
7	TM60904-11	Cab Filter Cover	1
8	TB80589-CSMA	Mirror, Convex Spot Mirror Assembly	1
9	TB80661	Vortex Hyper Flow Cab Pressurizing Filter	1
10	TB80662	Sy-Klone RESPA-CFX 12V Rectriculution Merv 1 6r Filter	1
11	TM60903-25	Hopper Side Hose Cover	1
12	TB80349	Grip Black Rubber	5
13	TB80582	Clamp (pipe) Auger Cover	11
14	TM60901-09	Auger Drive Box Cover	1
15	TA-60030-00	Slide Gate Bolt On Assembly	1
16	TB80216	Plug, Chain Inspection	1
17	TM60902-27	Chute Sensor Cover Assembly	4
18	TB66130-08-TU	Sensor, N/O PNP Turck Proximity	4
19	TM60901-14	Auger Drive Box Hose Guard Assembly	1
20	TB64107	Lord Vibration Mount - Cab	4
21	CS-HH-0.875-9X5	Screw Cap Hex: 7/8-9 X 5	4
22	TB64108	Lord Vibration Mount - Washer for Cab	4
23	NSL-0.875-9	Nut Self Lock : 7/8-9	4
24	TM60902-31	Chute To Cab Perch Assembly	2
25	TB66444	Vibrator, Hopper, 12V3000 RPM Oil	2
26	TM60902-35	Chute Auger Hose Clip	6
27	CS-HH-0.375-1.6X2.5	Screw Cap Hex: 3/8-1.6 X 2 1/2	12
28	WF-0.375	Washer Flat 3/8	45
29	WF-0.25	Washer Flat 1/4	22
30	WF-0.5	Washer Flat 1/2 (SA E)	18
31	WF-0.75	Washer Flat 3/4	4
32	WF-0.25	Washer Flat 1/4 (SA E)	4
33	NF-0.375-1.6	Nut Flanged Lock : 3/8-1.6	44

\\dserven\cad\Solidworks\Part\T-644\60,900 Hopper Part\TA-60900-00



MACHINE & STEEL SERVICE INC.
PO BOX 49280 ITCSTARFC VA 24244-2810

T-644

Hopper Assembly Hardware BOM



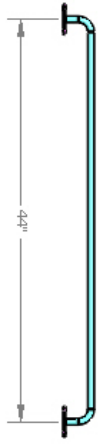
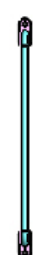

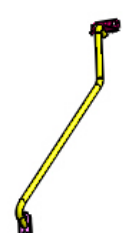
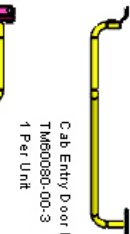
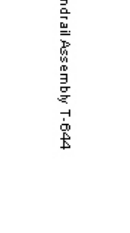
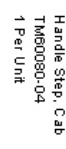
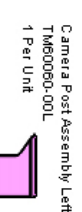

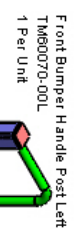

ITEM NO.	OrderNo	DESCRIPTION	QTY.
34	TA-81977	T-644 Front Auger Drive Assembly Hardware	1
35	TM81977-12	FD - Rear Bearing Housing Kit	1
36	TM60901-10	Auger Drive Box Cover Clip	2
37	NCOB-0.25-20-0.581	Nut Clip-On Barrel: 1/4-20 .025-.15, .531 Hole	10
38	CS-HH-0.25-20X1.25	Screw Cap Hex: 1/4-20 X 1 1/4	10
39	CS-HH-0.375-1.6X1.25	Screw Cap Hex: 3/8-1.6 X 1 1/4	5
40	TM60901-12-1	Auger Drive Motor Blockoff	1
41	CS-HH-0.75-10X1.5	Screw Cap Hex: 3/4-10 X 1 1/2	2
42	NF-0.75-10	Nut Flanged Lock : 0.75-10	6
43	TB80306	Bearing Hopper Pivot	2
44	NCOB-0.25-20-0.781	Nut Clip-On Barrel: 1/4-20 .025-.15, .781 Hole	16
45	CS-HH-0.25-20X1	Screw Cap Hex: 1/4-20 X 1	16
46	CS-HH-0.5-13X2.5	Screw Cap .5 X 2.5	8
47	NF-0.5-13	Nut Flanged Lock : 1/2-13	18
48	CS-HH-0.375-1.6X1.5	Screw Cap Hex: 3/8-1.6 X 1 1/2	4
49	CS-HH-0.375-1.6X1	Screw Cap Hex: 3/8-1.6 X 1	29
50	CS-HH-0.5-13X3.5	Screw Cap Hex: 1/2-13 X 3 1/2	4
51	CS-HH-0.5-13X1.75	Screw Cap Hex: 1/2-13 X 1 3/4	4
52	CB-0.375-1.6X1	Bolt Carriage 3/8-1.6 X 1	4
53	WL-0.375	Washer Lock 3/8	4
54	NU-0.375-1.6-PL	Nut 3/8-1.6 (Plated)	4
55	WL-0.25	Washer Lock 1/4	4
56	CS-HH-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	4
57	TM60010-00	Cylinder Pin Assembly T-644	2
58	CS-HH-0.5-13X1.5	Screw Cap Hex: 1/2-13 X 1 1/2	2
59	TA-66050L	Lift Cylinder Assembly Hardware, Left	1
60	TA-66050R	Lift Cylinder Assembly Hardware, Right	1
61	CS-HH-0.75-10X2	Screw Cap Hex: 3/4-10 X 2	4
62	TM60907-10	Chute Door Assembly, Short	1
63	TM60907-11	Chute Door Assembly, Long	3
64	TM60907-05	Chute Door Hinge Pin	11
65	MI-TR-0.15625X0.75	Pin Tension 5/32 X 3/4	22
66	TM60902-30	Chute Door Opener Assembly	1
67	TM60020-28	Auger, 28" w-A-R Flights Welded	1

Sheet

DATE 11/21/2020

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TA-60900-00

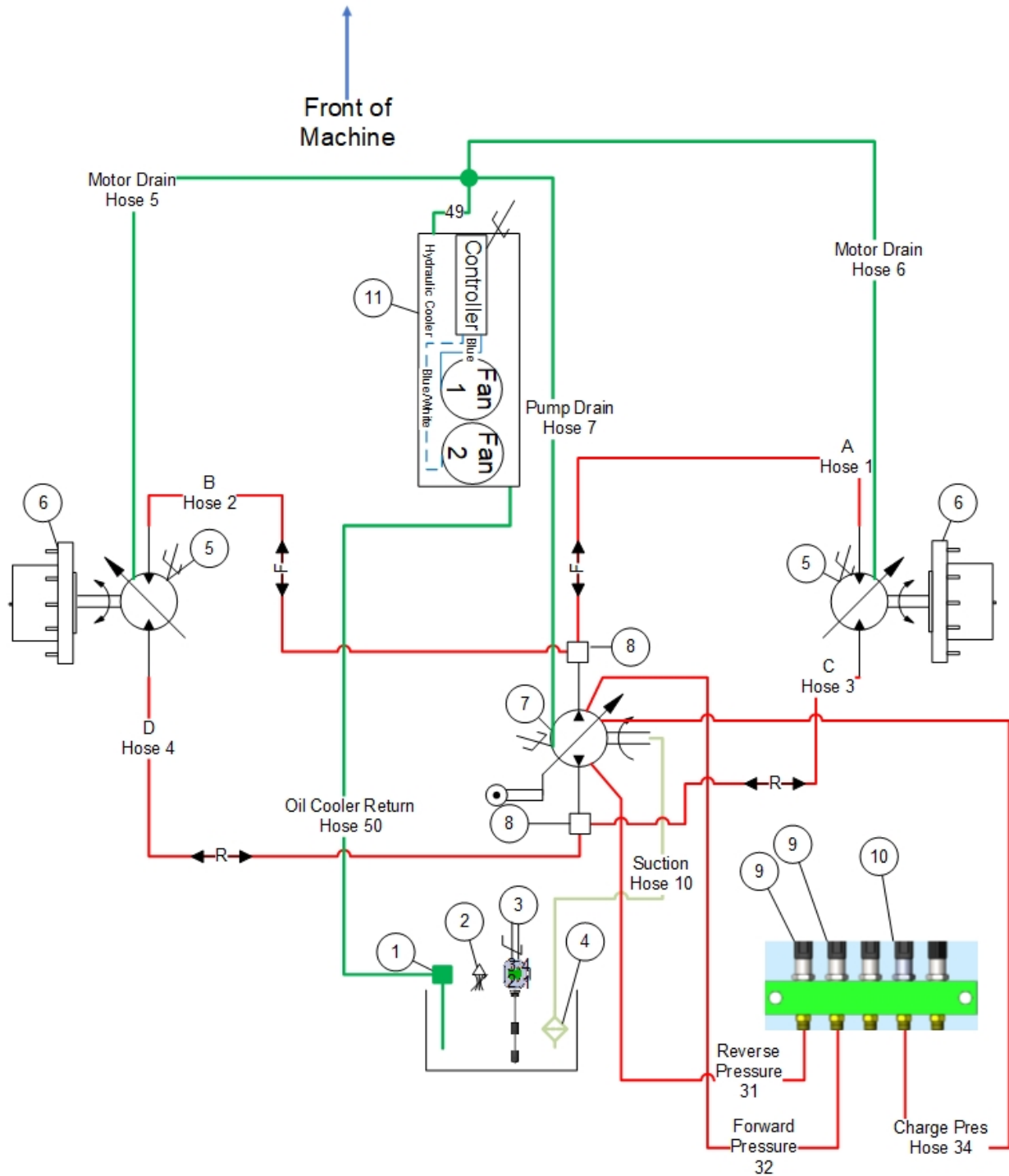
Handle List

 <p>MACHINE & STEEL SERVICE INC. P.O. BOX 492810 LEBANON, TN 37039-2810</p>	<p>\\Solidworks\Part\T-644\444.000.080 Handles\444.000.080.00 T-644</p>	<h2>Handles</h2>	<p>Shop: DATE: 1/30/2018 DR. BY: MCT See Above</p>
<div data-bbox="1136 231 1234 672">  <p>Handle Assembly Long TM60080-00-1 4 Per Unit</p> </div> <div data-bbox="1023 231 1120 672">  <p>42"</p> </div> <div data-bbox="860 273 893 525">  </div> <div data-bbox="795 525 860 714"> <p>Handle Assembly Short TM60080-00-2 4 Per Unit</p> </div> <div data-bbox="698 273 779 525">  <p>23"</p> </div> <div data-bbox="406 231 535 462">  </div> <div data-bbox="406 504 535 735">  </div> <div data-bbox="406 756 535 987">  </div> <p>Cab Entry Door Handrail Assembly T-644 TM60080-00-3 1 Per Unit</p>	<div data-bbox="1169 903 1234 1050">  <p>Handle Step, Cab TM60080-04 1 Per Unit</p> </div> <div data-bbox="1218 1302 1299 1512">  <p>Camera Post Assembly Left TM60080-00L 1 Per Unit</p> </div> <div data-bbox="1201 1554 1299 1764">  <p>Camera Post Assembly Right TM60080-00R 1 Per Unit 8.16 Lbs.</p> </div> <div data-bbox="568 1323 649 1554">  <p>Front Bumper Handle Post Left TM60070-00L 1 Per Unit</p> </div> <div data-bbox="568 1596 649 1827">  <p>Front Bumper Handle Post Right TM60070-00R 1 Per Unit</p> </div>		

Hydraulics

Propel

Propel Drive Schematic



Propel Drive Schematic BOM

T-644 Drive Hydraulic Circuit - Starting Serial 160002				
Key	Description	Mfg #	Tucker #	Qty
1	Hydraulic Oil Tank Return Block (T-644)		TM60710-24	1
2	Anti-Splash 5 PSI Breather	Stauff - SMBB-80E-S-O-40-B0.35-B-S095P-D0	TB66212	1
	Stauff Bayonet Extender	Stauff - EBF-2	TB66214	1
3	Rota Tank Level/Temp Sensor	Rota - TL5207	TB66213-ROTA-TLT	1
4	Strainer, Suction - Propel T-644	Stauff - SUS-A-088-N24-226-125-A-O	TB66216	1
5	Motor Wheel, Danfoss H1 Vari, 0-80cc	Danfoss - H1-B-080-AA-L1-BA-N-A-PB-VS-AS-S-A-10-NN-000-N-00-NNN	TB66201-1	2
	O-ring 568-248	O-ring 568-248	OR-568-248	2
6	Gearbox Wheel - Auburn "C" Mount 5" Pilot	Auburn Gear - OW3C143611Z	TB80200-AUBURN	2
7	Pump Transmission (Danfoss) H1, 115cc	Danfoss - H1-P-115-R-B-A-E7-C2-N-D3-G-G2-H6-L-28-L-28-L-M-20-PN-NNN-NNN	TB66203	1
	Danfoss Charge Pump Filter Element	Danfoss - 11004919	TB66203-01	1
8	Danfoss Drive Pump Tee Block		TM65138-3	2
9	Sensor, psi, 0-5800, Ratiometric, (400 Bar)	Danfoss - 11044542	TB66130-07	2
10	Sensor, psi, 0-580, Ratiometric, (40 Bar)	Danfoss - 11044499	TB66130-05	1
11	Oil Cooler, 12v (Thermal MAR 248)	Thermal Transfer - MAR-248-2-4A-30	TB66207-01	1
	Oil Cooler Fan Thermostat (Thermal 57566)	Thermal Transfer - 57566	TB66207-02	1

Wheel Motor Viscosity

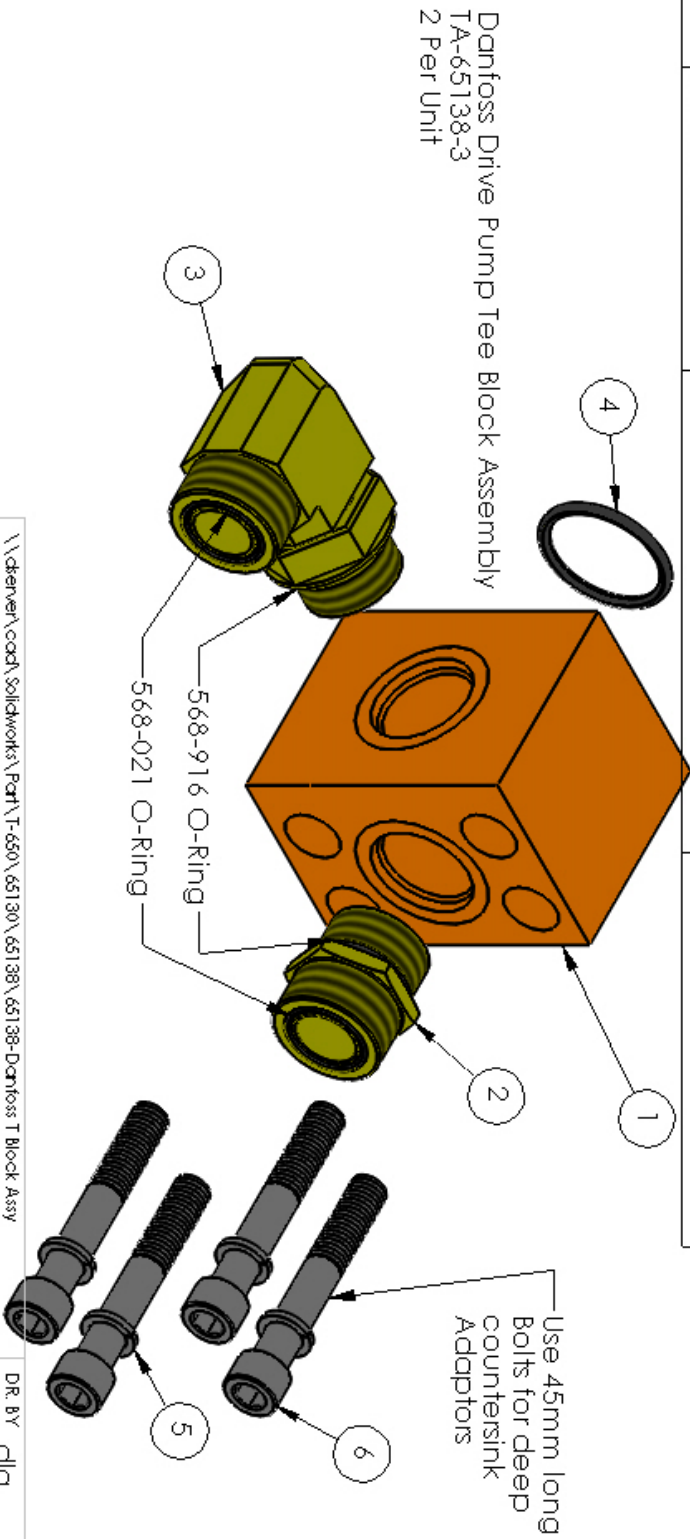
Viscosity	Minimum	mm ² /s [SUS]	7 [49]
	Recommended range		12-80 [66-370]
	Maximum		1600 [7500]

Max Motor Temps

Temperature range ¹⁾	Minimum	°C (°F)	-40 [-40]
	Rated		104 [220]
	Maximum intermittent		115 [240]

Propel Drive Pump Tee Block BOM

ITEM NO.	OrderNo	DESCRIPTION	Danfoss Drive Pump Tee Block Assembly/QTY.
1	TM65138-3	Danfoss Drive Pump Tee Block	1
2	FF1852T1 61 6S	ST #16 ORS Flat Face, #16 O-Ring Boss	1
3	FF1866T1 61 6S	ElI #16 ORS Flat Face, #16 O-Ring Boss	1
4	OR-568-2222	O-Ring 1 1/2 x 1 3/4 x 1/8	1
5	WL-HC-12M	Washer Lock - High Collar - 12 mm	4
6	CS-HH-12-1.75X80MM12.9	Screw Cap Hex: 12-1.75-80mm 12.9	4



MACHINE & STEEL
SERVICE INC.
P.O. BOX 492810 LEEBURG, FLA. 34749-2810

Danfoss Drive Pump Tee Block Assembly

TA-65138-3

DR. BY dlig
DATE 9/1/2015
SHOP #

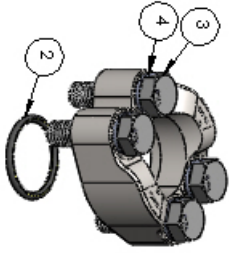
T-644

\\dnenver\cadd\Solidworks\Part\T-650\65130\65138\65138-Danfoss T Block Assy

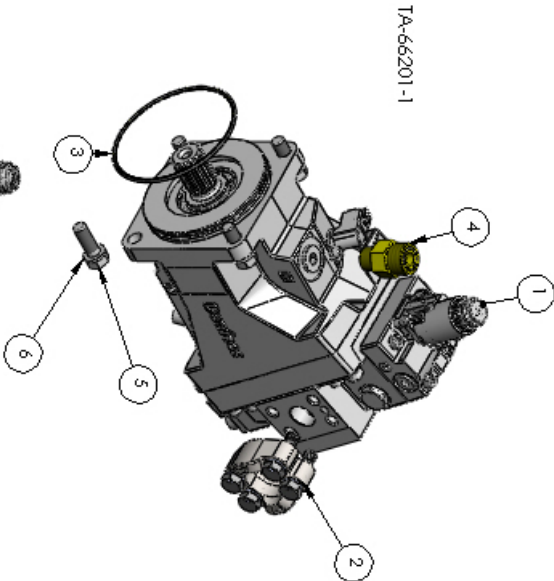
Wheel Motor Assembly

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB66201-1	Motor Wheel, Donfoss H1 Vcml, 0-80cc	1
2	16SFXO-M12	Adapter -1.6, Hyd Code 62 Split Range Kit Metric	2
3	OR-568-248	O-Ring 4.3/4 x 5 x 1/8	1
4	FF1852T1210S	ST #12 ORS Hat Face, #10 O-Ring Boss	1
5	CS-HH-0.5-13X1.5	Screw Cap Hex: 1/2-13 X 1 1/2	4
6	WL-0.5	Washer Lock 1/2	4

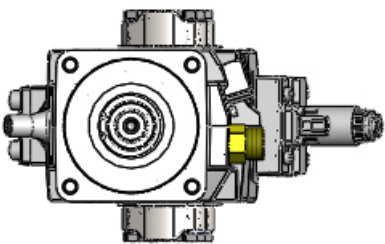
ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	HA-16SFXO-M12	HA-1 6SFXO-M12 Half	2
2	OR-568-219	O-Ring 1.5/1.6 x 1.9/1.6 x 1/8	1
3	CS-HH-12-1.75X45MM10.9	Screw Cap Hex: 12-1.75-45mm 10.9	4
4	WL-12M	Washer Lock 12 mm	4



16SFXO-M12



TA-66201-1



TOUGHERS
MACHINE & STEEL SERVICE, INC.
P.O. BOX 492910 HEISLER, VA, 24149-2910

VAserver\cad\Solidworks\Part\T-644\66201\TA-66201-1
T-644

T-644 Wheel Motor Assembly Kit

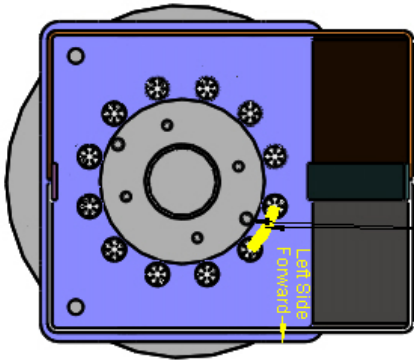
3-0004
DATE 4/3/2019
DR BY dlg
TA-66201-1

Gearbox – Motor Installation

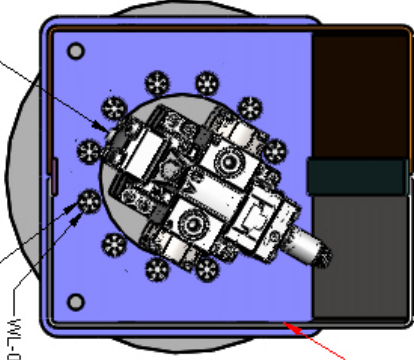
TB80200-2-04-1
 14-00-139-026 Auburn Retaining Ring W/10C
 to Motor Side
 TB80200-2-04
 608910 Auburn Coupling W/10C

Drivers Side from inside frame (Left Side)

Gearbox installation alignment
 critical for motor to install correctly.
 Make sure this hole is between the two
 bolts as shown.



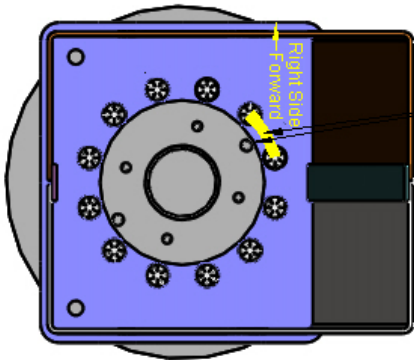
Install motor as shown



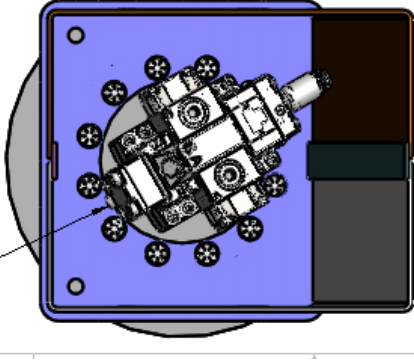
- W/L-0.75-GR8
Washer Lock 3/4 GRADE 8
- C/S-HH-0.75-18X2.25XGR8
Screw Cap Hex: 3/4-18 X 2 1/4 Gr8
Use Grade 8 only. Lubricate with
Never seize or similar and Torque
to: 320 FtLbs

Opposite Drivers Side from inside frame (Right Side)

Gearbox installation alignment
 critical for motor to install correctly.
 Make sure this hole is between the two
 bolts as shown.



Install motor as shown



Wdserver/cad/Solidworks/PartT-644160,100 Rear Frame Part160,101,Wheel Box Part160,101,00

TORMECS
 M.A.CHINE & STEEL
 SERVICE INC.
 P.O. BOX 40230 LEBENSA, FLA. 34404-2310

T-644

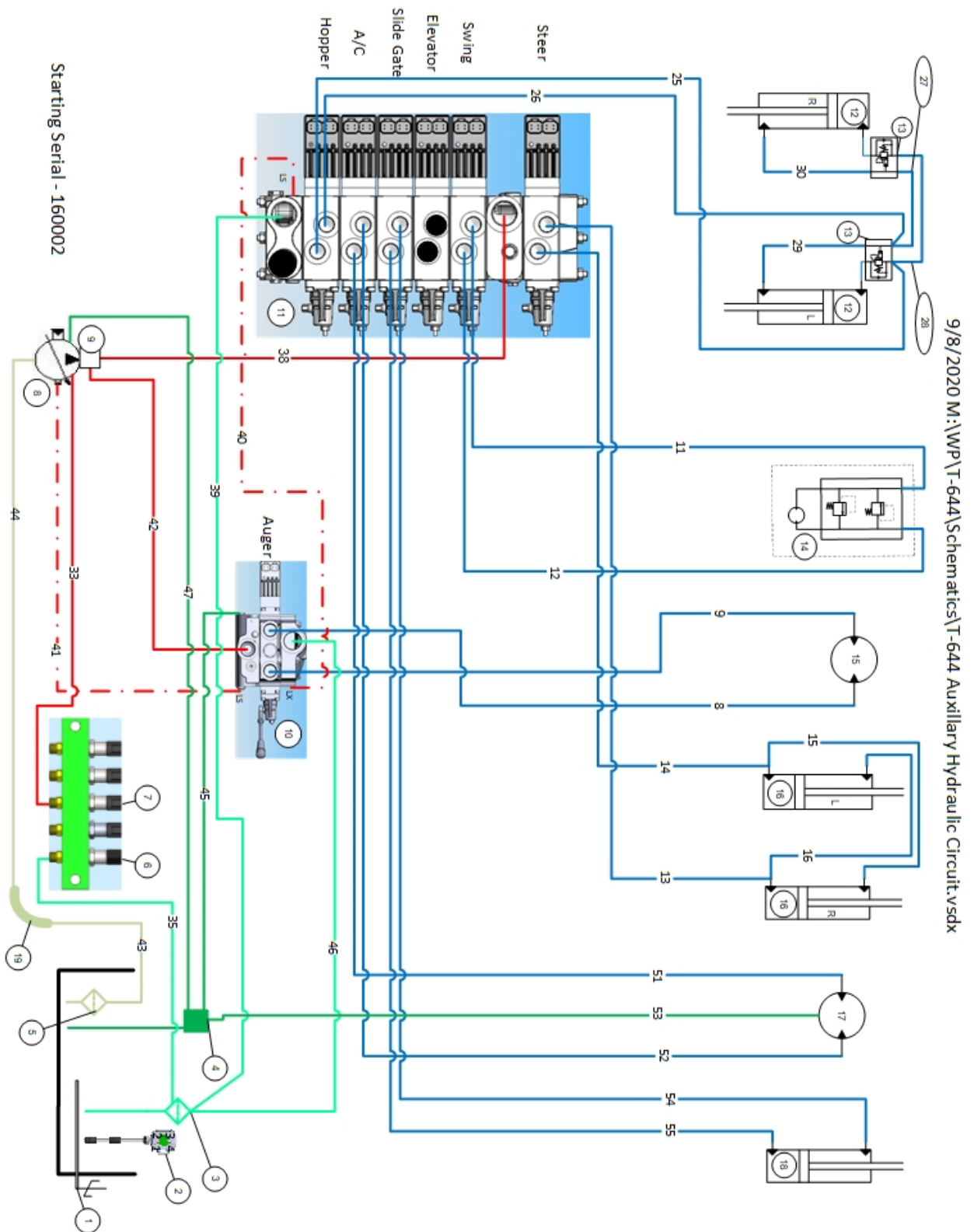
Gearbox - Motor Installation

SHOP #
 DATE 9/23/2020

D.R. BY dfg

Auxiliary

Auxiliary Circuit Schematic

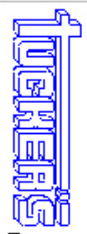
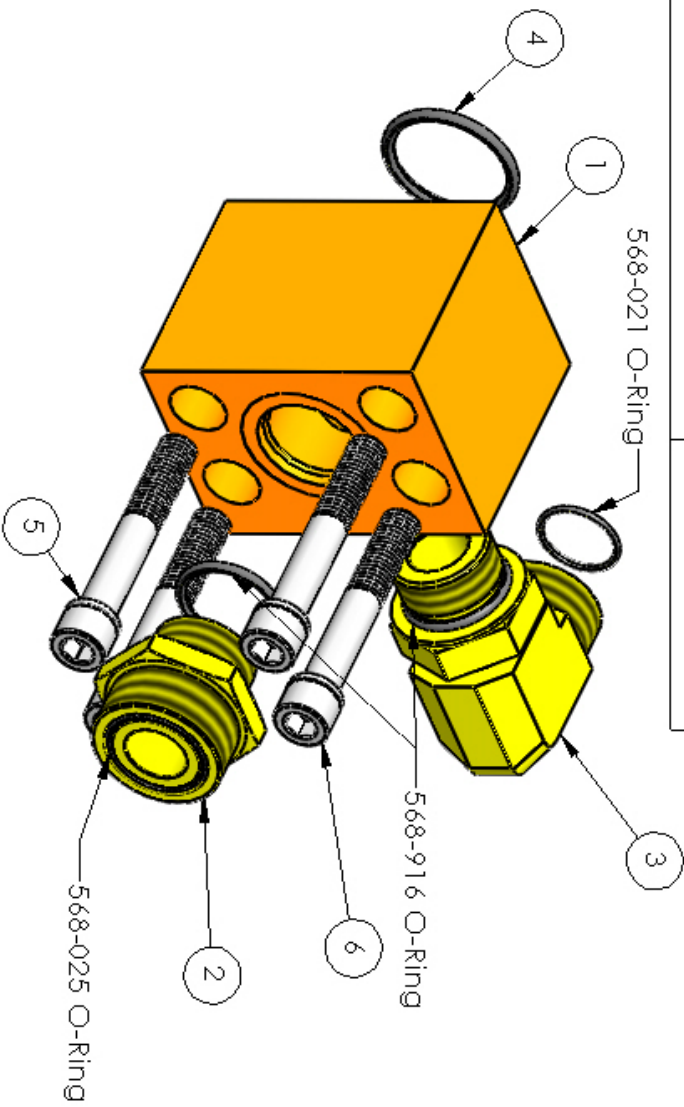


Auxiliary Circuit BOM

T-644 Auxillary Hydraulic Circuit 2020				
Key	Description	Mfg #	Tucker #	Qty
1	3/4" MNPT 120 VAC In-Tank Oil Heater	ET3-1001	TB64105	1
2	Rota Tank Level/Temp Sensor	Rota - TL5207	TB66213-ROTA-TLT	1
3	Filter Assembly, Tank Return T-644 Stauff	Stauff - STNA47386	TB64101	1
	Filter Element, Tank Return T-644 Stauff	Stauff - 1020013910	TB64101-01	2
	Hydraulic Oil Tank Charge Pump Nipple		TM60710-19	1
	Stauff 1-1/2" diffuser	Stauff - STNA43280	TB64101-03	1
4	Hydraulic Oil Tank Return Block (T-644)		TM60710-24	1
5	Strainer, In Tank - 2-1/2"	MFP - SU75SF40	TB80100-1	1
6	Pressure Transducer TDH30KG010003B004, 0-100	Transducers Direct - TD4526	TB66130-30	1
7	Sensor, psi, 0-3626, Ratiometric, (250 Bar)	Danfoss - 11044501	TB66130-06	1
	Deutsch W4S Wedge for Plug	Deutsch - W4S	TB80130-86	2
8	Pump Controls, Danfoss Ser. 45, 130cc	Danfoss - ER-R-130B-LS-25-20-NN-N-3-S1NL-A1N-NNN-NNN	TB66204	1
	O-ring 568-158V Viton	O-ring 568-158V Viton	OR-568-158V	1
	Hose, Hydraulic FC619-40 Suction	Aeroquip - FC619-40	HH-FC619-40	36
	2-1/2" Suction Hose SS T-Bolt Clamps	TBC312	TB80431-1	8
9	Danfoss Drive Pump Tee Block		TM65138-3	1
10	PVG100, 1 sec, 65, Motor, w/LX, Auger Valve	Berendsen - 161F5083	TB66130-13	1
11	PVG32, 6 sec, No LX	Berendsen - 159-3706	TB66130-14	1
12	Transporter Hyd Cyl 2014+ (Sell TK Retrofits)		TM66050	2
13	Valve Body Lift Cyl. Saftey (Vickers)	Vickers -31451A	TB80215B	1
	Valve Cartridge Lift Cyl. Saftey (Vickers)	Vickers - 1CEV30F20S	TB80215C	1
14	Motor, Swing w/Cross Relief	Charlynn - 104-4071	TB80103-1	1
15	Motor Auger	Charlynn - 1191030	TB80102	1
16	T-644 Smart Linear Cylinder		TM60040-00	2
17	Tucker 7110DD A/C & Heat, 12v w/RESPA System	Visionaire - 550-02-00-00	TB80660-T644	1
18	16" Cylinder Chute Spout Gate - Engine Hood	Bailey Int. - 320-327	TB80701-1	1
19	Auxillary Pump Suction/Prime Elbow Assembly		TM60700-16	1

Auxiliary Pump Tee Block BOM

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM65138-3	Danfoss Pumps Tee Block	1
2	FF6400-20-16	ST #20 ORS Flat Face, #16 O-Ring Boss	1
3	FF1868T1 61 6S	EII #16 ORS Flat Face, #16 O-Ring Boss	1
4	OR-568-2222	O-Ring 1 1/2 x 1 3/4 x 1/8	1
5	WL-HC-12M	Washer Lock - High Collar - 12 mm	4
6	CS-HH-12-1.75X80MM12.9	Screw Cap Hex: 12-1.75-80mm 12.9	4



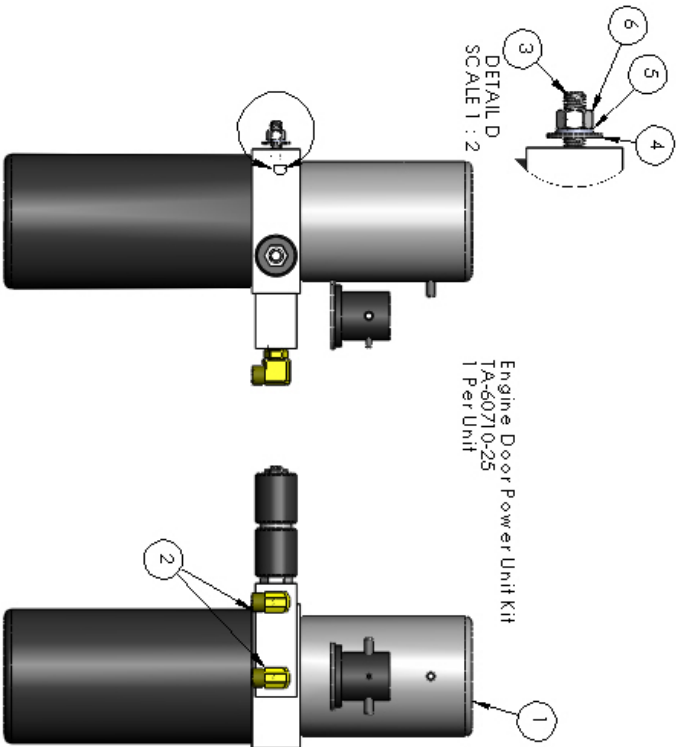
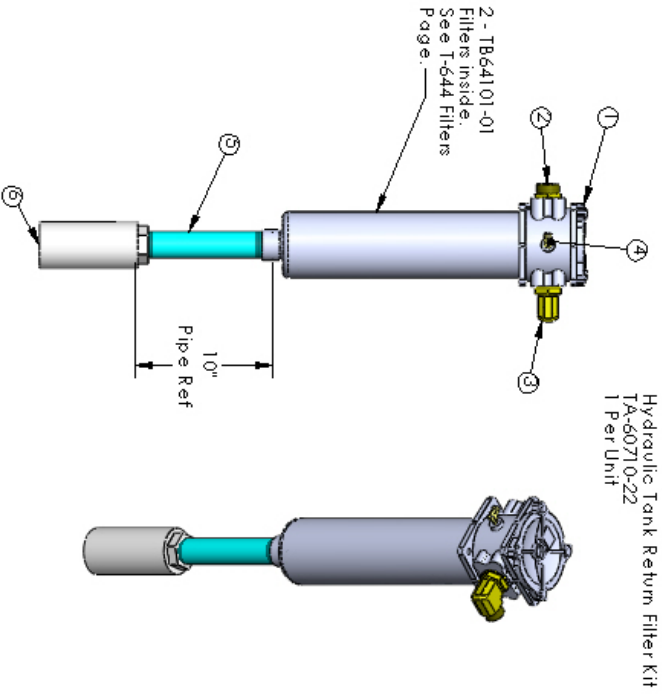
MACHINE & STEEL
SERVICE INC.
P.O. BOX 492810 LEESBURG, FLA. 34749-2810

\\dswmerv\cadd\Solidworks\Part\T-650\65130\65138\65138-Danfoss T Block Assy		DR. BY	dlg
T-644		DATE	7/9/2020
Danfoss 45 Pump Tee Block Assembly T4F		SHOP #	TA-65138-4F

Auxiliary Return Filter & Engine Door Pump Assembly

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB641 01	Filter Assembly, Tank Return T-644 Stauff	1
2	FF1 85212020S	ST #20 ORS FlatFace, #20 O-Ring Boss	1
3	FF1 8681201 6S	EII #16 ORS FlatFace, #20 O-Ring Boss	1
4	FF203210402S	Adapter, Hydraulic-FF203210402S	1
5	TM60710-20	Hydraulic Oiltank Diffuser Nipple	1
6	TB64101-03	Stauff 1-1/2" diffuser	1

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB661 30-33	Engine Door Hydraulic Power Unit	1
2	FF1 86810606S	EII #6 ORS Flat Face, #6 O-Ring Boss	2
3	TB661 30-33-STUD	Stud 3/8-16 x 1-1/2 Zinc Yellow-Chromate Plated	2
4	WF-0-375	Washer Flat 3/8	2
5	WL-0-375	Washer Lock 3/8	2
6	NU-0-375-16-PL	Nut 3/8-16 (Plated)	2



MACHINE & STEEL SERVICE INC.
P.O. BOX 402818 LEEBURG, FLA. 34746-2818

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T-644

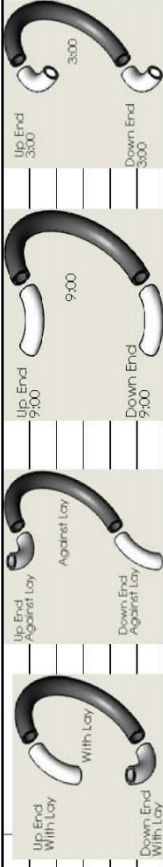
Hydraulic Tank Return Filter Kit

\$HOT #
DATE 11/6/2017
DES BY MCT
TA-60,710,22

Hoses

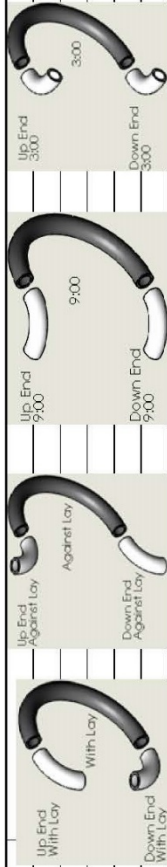
T-644 Hose List 1-34

Number	Routing	Hose	Length	End 1	End 2
1	A-Pump Inside 90° to Right Motor Front, Against Lay	HH-GH493-16	199	HF-1BA16FR16	HF-1B16FHB16
2	B-Pump Inside St to Left Motor Front, With Lay	HH-GH493-16	246	HF-1BA16FR16	HF-1B16FHB16
3	C-Pump Outside St to Right Motor Rear, With Lay	HH-GH493-16	208	HF-1BA16FR16	HF-1B16FHB16
4	D-Pump Outside 90° to Left Motor Rear, Against Lay	HH-GH493-16	252	HF-1BA16FR16	HF-1B16FHB16
5	Wheel Motor Drain Left, Clock Up 9:00	HH-GH781-12	26	HF-1AA16FR12	HF-1AA12FRB12
6	Wheel Motor Drain Right, Clock Up 3:00	HH-GH781-12	26	HF-1AA16FR12	HF-1AA12FRB12
7	Wheel Motor Drain, Lower Frame Tee to Propel Drain	HH-GH781-16	227	HF-1AA16FR16	HF-1AA16FR16
8	Auger Motor Rear w/Male Quick, Rear Valve Port, Clock Up 3:00	HH-GH493-20	338	HF-4SA20FRB20	HF-4SA20FR20
9	Auger Motor Front w/Female Quick, Front Valve Port, Clock Up 3:00	HH-GH493-20	334	HF-4SA20FR20	HF-4SA20FR20
10	Propel Suction, Clock Up 9:00	HH-FC619-20	60	HF-1AV20FR20	HF-1AV20FC20
11	Swing Motor Front, Valve Front Port, Clock Up 9:00	HH-GH781-8	92	HF-1AA8FR8	HF-1AA8FRB8
12	Swing Motor Rear, Valve Rear Port, Clock Up 9:00	HH-GH781-8	92	HF-1AA8FR8	HF-1AA8FRB8
13	Left Steer, Valve Front Port to Rear Right Cylinder, Clock Up 9:00	HH-GH781-8	240	HF-1AA8FR8	HF-1AA8FRB8
14	Right Steer, Valve Rear Port to Rear Left Cylinder, Clock Up 9:00	HH-GH781-8	240	HF-1AA8FR8	HF-1AA8FRB8
15	Left Steer, Rear to Right Steer Front, Clock Up 3:00	HH-GH781-8	57	HF-1AA8FR8	HF-1AA8FRB8
16	Right Steer, Rear to Left Steer Front, Clock Up 9:00	HH-GH781-8	57	HF-1AA8FR8	HF-1AA8FRB8
17	Fuel Supply to Engine Frame	HH-FC332-08	192	HF-FBM1513	HF-FBM1513
18	Fuel Return From Engine Frame	HH-FC332-08	192	HF-FBM1513	HF-FBM1513
19	Fuel Supply Engine Frame to Fuel Pump	HH-FC332-06	34	HF-FBM1512	TB80623
20	Fuel Return From Fuel Pump to Engine Frame	HH-FC332-06	34	HF-FBM1512	TB80623
21	Fuel Return From Engine to Engine Frame	HH-FC332-06	91	HF-FBM1512	TB80623
22	Service Brake	HH-GH781-4	432	HF-1AA4FJ4	HF-1AA4FJ4
23A	Park Brake at Cab to Park Brake Switch	HH-GH781-4	385	HF-1AA4FJ4	HF-1AA4FJ4
23B	Park Brake Switch to Axle	HH-GH781-4	182	HF-1AA4FJ4	HF-1AA4FJ4
24	Air Tank to Air Bags, Clock Up 3:00	HH-GH781-4	365	HF-1AA4FJ4	HF-1AA4FJB4
25	Lift Cylinder Front, Valve Rear Port	HH-GH781-8	172	HF-1AA8FR8	HF-1AA8FR8
26	Lift Cylinder Rear, Valve Front Port	HH-GH781-8	172	HF-1AA8FR8	HF-1AA8FR8
27	Lift Cylinder Cross Over, Left Rear to Right Front	HH-GH781-8	31.5	HF-1AA8FR8	HF-1AA8FR8
28	Lift Cylinder Cross Over, Left Front to Right Rear	HH-GH781-8	31.5	HF-1AA8FR8	HF-1AA8FR8
29	Lift Cylinder Top to Bottom, Left, Clock With Lay	HH-GH781-8	27	HF-1AA8FR8	HF-1AA8FRB8
30	Lift Cylinder Top to Bottom, Right	HH-GH781-8	27	HF-1AA8FR8	HF-1AA8FRB8
31	Transducer 1 - Reverse Propel Pressure	HH-GH781-4	26	HF-1AA4FR4	HF-1AA4FR4
32	Transducer 2 - Forward Propel Pressure	HH-GH781-4	24	HF-1AA4FR4	HF-1AA4FR4
33	Transducer 3 - Auxillary Pump Pressure	HH-GH781-4	29	HF-1AA4FR4	HF-1AA4FR4
34	Transducer 4 - Charge Pressure, Clock Against Lay	HH-GH781-4	20	HF-1AA4FR4	HF-1AA4FRB4



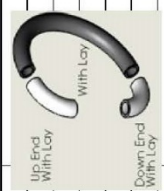
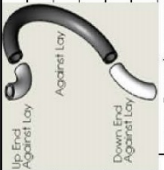
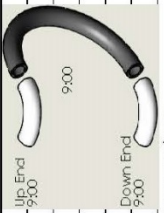
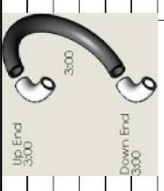
T-644 Hose List 35-69

Number	Routing	Hose	Length	End 1	End 2
35	Transducer 5 - Return Filter Pressure	HH-GH781-4	37	HF-1AA4FR4	HF-1AA4FR4
36	Air Compressor to Dryer	HH-2807-10	120	HF-63-190600-10	HF-63-190600-10
37	Air Dryer to Tank	HH-GH781-8	25	HF-1AA8FJ8	HF-1AA8FJ8
38	Auxiliary Pump to PVG32 Pressure, With Lay	HH-GH781-16	30	HF-1AA16FR16	HF-1AA16FRB16
39	PVG32 Return to Filter, With Lay	HH-GH781-16	40	HF-1AA16FR16	HF-1AA16FR16
40	LS (PVG32) to LX (PVG100), Clock With Lay	HH-GH781-4	15	HF-1AA4FR4	HF-1AA4FRB4
41	LS (PVG100) to Auxiliary Pump Control	HH-GH781-4	20	HF-1AA4FR4	HF-1AA4FR4
42	Auxiliary Pump to PVG100 Pressure	HH-GH493-20	34	HF-4SA20FR20	HF-4SA20FR20
43	Auxiliary Pump Suction, Short	HH-FC619-40	11		
44	Auxiliary Pump Suction, Long	HH-FC619-40			
45	PVG100 Drain to Tank Block, Clock Both W/Lay	HH-GH781-4	74	HF-1AA4FRB4	HF-1AA4FR4
46	PVG100 Return to Tank Filter	HH-GH493-20	28	HF-4SA20FR20	HF-4SA20FR20
47	Auxiliary Pump Case Drain to Tank Block	HH-GH781-12	47.5	HF-1AA12FR12	HF-1AA12FR12
48	Air Valve Supply to Cab, Clock Against Lay	HH-GH781-4	189	HF-1AA4FJ4	HF-1AA4FJ4
49	Lower Frame Cross to Hydraulic Cooler	HH-GH781-16	66	HF-1AA16FR16	HF-1AA16FR16
50	Oil Cooler Return to Tank Block, Clock Against Lay	HH-GH781-16	242	HF-1AA16FR16	HF-1AA16FR16
51	A/C Pressure, Valve Rear Port, Clock Up 9:00	HH-GH781-8	172	HF-1AA8FR8	HF-1AA8FJ8
52	A/C Return, Clock Up 9:00	HH-GH781-8	172	HF-1AA8FR8	HF-1AA8FJ8
53	A/C Case Drain to Tank Block, Clock Up 9:00	HH-GH781-6	172	HF-1AA6FR6	HF-1AA6FJ6
54	Slide Gate Front, Valve Front Port	HH-GH781-4	341	HF-1AA6FR4	HF-1AA6FR4
55	Slide Gate Rear, Valve Rear Port	HH-GH781-4	329	HF-1AA6FR4	HF-1AA6FR4
56	Engine Hood Pump Breather Hose	HH-2556-6	24	HF-4738-6-6B	HF-4738-6-6B
57	Engine Hood Pump to Lock Valve	HH-GH781-4	66	HF-1AA4FR4	HF-1AA4FRB4
58	Engine Hood Pump to Lock Valve	HH-GH781-4	66	HF-1AA4FR4	HF-1AA4FRB4
59	Engine Hood Cylinder Lock Valve to Cylinder End	HH-GH781-4	16	HF-1AA4FR4	HF-1AA4FRB4
60	TT Bearing Grease Line 1	HH-GH781-4	15	HF-1AA4FJ4	HF-1AA2MP4
61	TT Bearing Grease Line 2	HH-GH781-4	18	HF-1AA4FJ4	HF-1AA2MP4
62	TT Bearing Grease Line 3	HH-GH781-4	28.5	HF-1AA4FJ4	HF-1AA2MP4
63	TT Top Grease Line Front	HH-GH781-4	25	HF-1AA4FJ4	HF-1AA4FJ4
64	TT Top Grease Line Back	HH-GH781-4	25	HF-1AA4FJ4	HF-1AA4FJ4
65	Articulate Pin Grease Line Top	HH-GH781-4	16	HF-1AA4FJ4	HF-1AA4MP4
66	Articulate Pin Grease Line Bottom	HH-GH781-4	16	HF-1AA4FJ4	HF-1AA4MP4
67	Air Compressor Suction	HH-2556-12	57	HF-4738-12-12B	HF-4738-12-12B
68	Heater Hose Pressure Line	MI-HO-HEAT-SIL-0.625	150		
69	Heater Hose Return Line	MI-HO-HEAT-SIL-0.625	150		



Hose & Ends Aeroquip Part Numbers

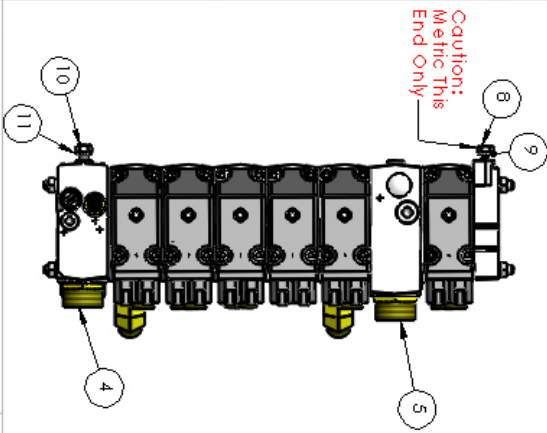
T-644 Hose List 70-72

Number	Hose	End 1	End 2
70	12 HH-GH781-4	HF-1AA4FJ4	HF-1AA2MP4
71	24 HH-2556-10		
72			
 <p>Up End With Lay Down End With Lay</p>			
 <p>Up End Against Lay Down End Against Lay</p>			
 <p>Up End 9:00 Down End 9:00</p>			
 <p>Up End 3:00 Down End 3:00</p>			
Hose & Ends Aeroquip Part Numbers			
Routing			
Front Auger Grease Line			
***** Not Used			
Motor Oil Drain Hose			

Valves

PVG32 Valve Kit

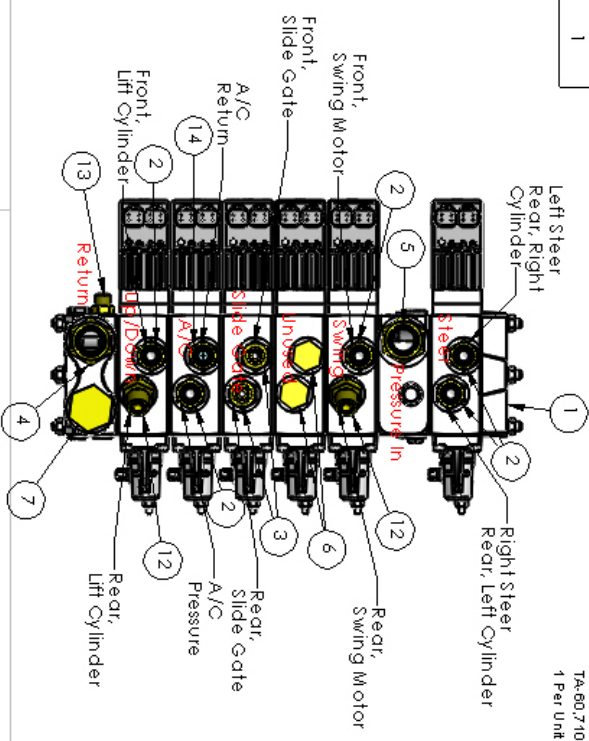
ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB64130-14	PVG32, 6 sec, No LX	1
2	FFI85210810S	ST #8 ORS Flat Face, #10 O-Ring Boss	5
3	FF6400-6-10	ST #6 ORS Flat Face, #10 O-Ring Boss	2
4	FFI85211616S	ST #16 ORS Flat Face, #16 O-Ring Boss	1
5	FF3800-16-16	ST #16 ORS Flat Face, #16 BSPP	1
6	900598-10S	Adapter, Hydraulic: 900598-10S	2
7	900598-16S	Adapter, Hydraulic: 900598-16S	1
8	C-SHH-8-1.25X20MM	Screw Cap Hex: 8-1.25 X 20 mm	2
9	WL-8M	Washer Lock 8 mm	2
10	C-SHH-0.3125-18X0.75	Screw Cap Hex: 5/16-18 X 3/4	2
11	WL-0.3125	Washer Lock 5/16	2
12	FF6802-08-10	Adapter, Hydraulic: FF6802-08-10	2
13	FFI85210406S	ST #4 ORS Flat Face, #6 O-Ring Boss	1
14	TM60710-23-01	PVG 32 Valve A/C Return Orifice	1



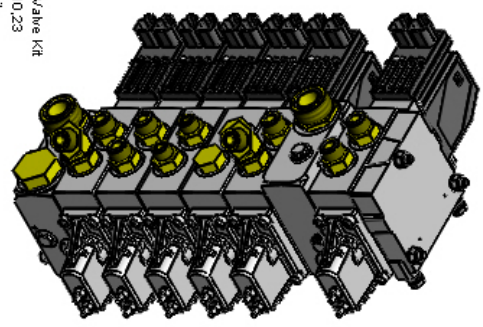
TOCMEAS
 M/A CHINE & STEEL
 SERVICE INC.
 P.O. BOX 42328 MI
 LEBOKES, FLA. 34149-2838

Valves/Lead/Weldwork/PortV-444/0.700 Hydraulic oil tank ports/0.710/0.95
 T-644

PVG 32 Valve Kit



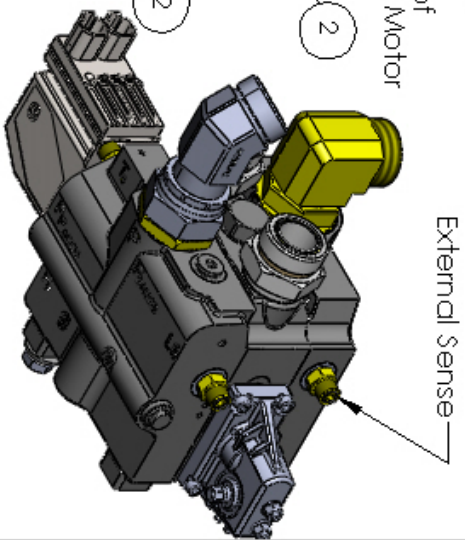
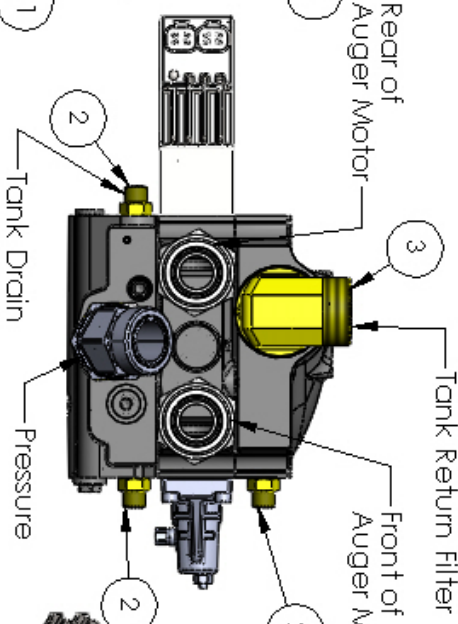
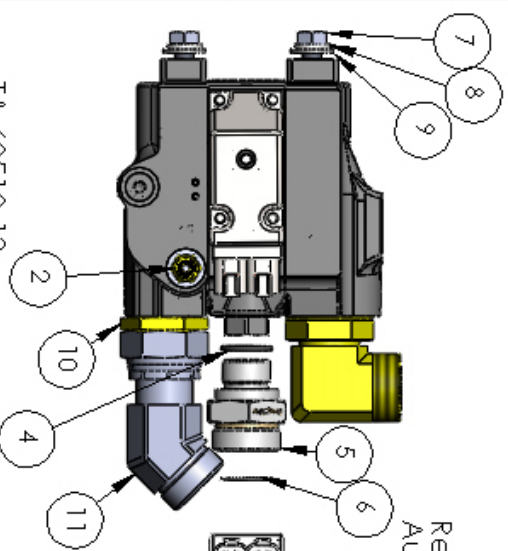
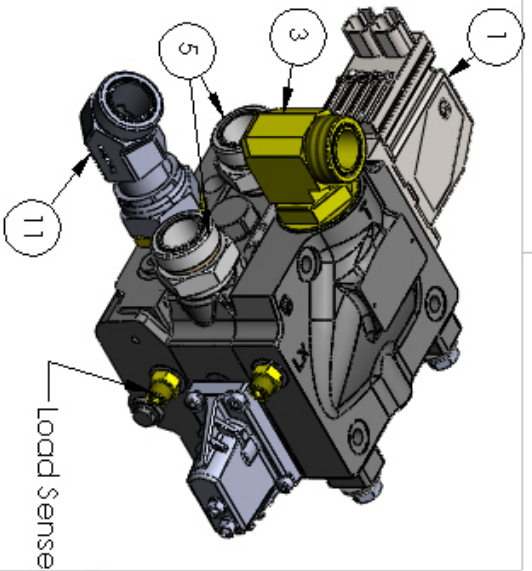
PVG 32 Valve Kit
 TA-60.710.23
 1 Per Unit



SHOP #
 DATE 11/7/2017
 D.R. BY dlig
 TA-60.710.23

PVG100 Valve Kit

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB66130-13	PVG100, 1 sec, 65, Motor, w/LX, Auger Valve	1
2	FF185210406S	ST #4 ORS Flat Face, #6 O-Ring Boss	3
3	FF1866812020S	EII #20 ORS Flat Face, #20 O-Ring Boss	1
4	OR-568-914	O-Ring 914 - Tube Size 7/8 OD	2
5	TM60510-10	PVG100 -14 to -20 Adaptor	2
6	OR-568-025	O-Ring 1 3/16 x 1 5/16 x 1/16	2
7	CS-HH-12-1.75X25MM	Screw Cap Hex: 12-1.75X 25 mm	3
8	WL-12M	Washer Lock 12mm	3
9	WFF-0.5	Washer Flat 1/2 (SAE)	3
10	FF6400-20-16	ST #20 ORS Flat Face, #16 O-Ring Boss	1
11	FF6502-20-20	Adapter, Hydraulic: FF6502-20-20	1



TA-60510-13
PVG100 Auger Valve Kit
1 Per Unit



MACHINE & STEEL
SERVICE, INC.
P.O. BOX 492810, LEESBURG, FLA. 34749-2810

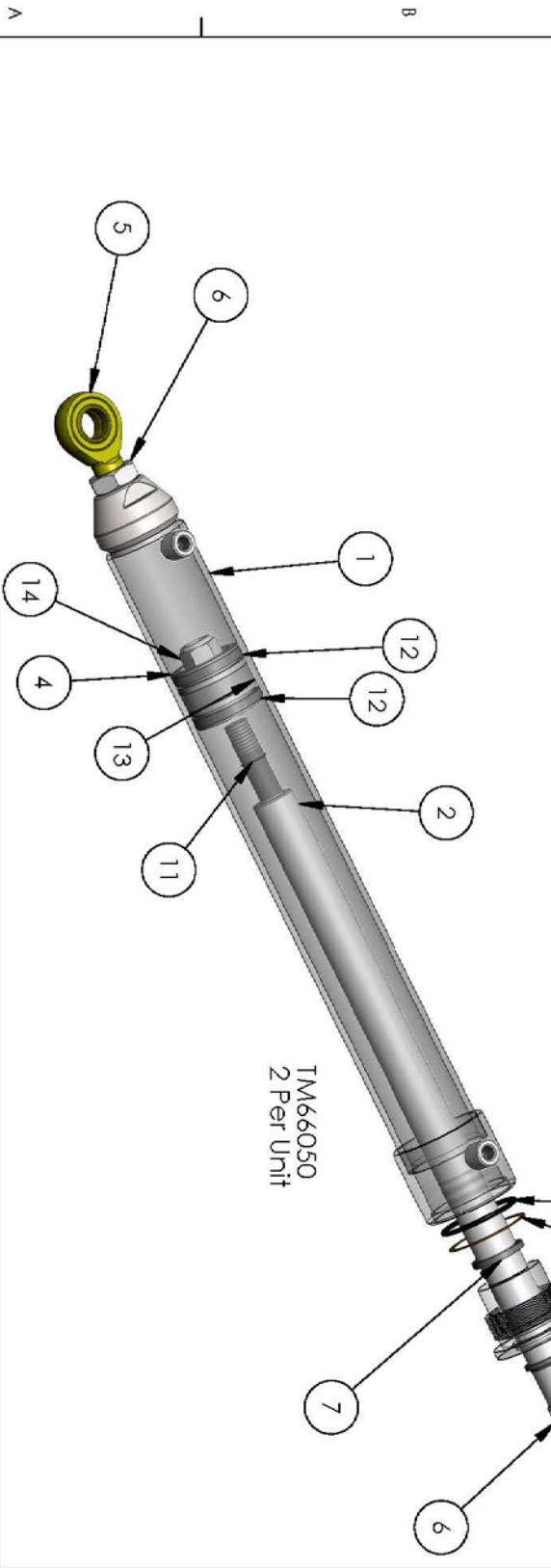
\\dservnet\oad\solidworks\Part\T-644\60,800 engine base Parts\60,810 engine Accessory Parts\60,81000 Acb Body
T-644
PVG100 Auger Valve Kit


DATE 11/13/2017
SHOP #
TA-60510-13

Cylinders

Lift Cylinder BOM

ITEM NO.	OrderNo	DESCRIPTION	T-630 Hydraulic Cylinder 2014/2014 T-630 Hydraulic Cylinder/CITY.
1	TM6605424	Transporter Hydraulic Cylinder, Welded 24"	1
2	TM6605324	Transporter Cylinder Rod 24" 2014+	1
3	TM66051	Transporter Cylinder Head 2014+	1
4	TM66052	Transporter Hydraulic Cylinder Piston 2014+	1
5	RE-TRE20	Rod End TRE20 Male 1-1/4"	2
6	NJ-1.25-12	Nut Jam : 1.25-12	2
7	ML-U25-1.75X2.25	U-packer 1-3/4 X 2-1/4	1
8	OR-568-337	O-ring 568-337	1
9	OR-575-337	Back-up Ring 575-337	1
10	ML-S1175	Wiper Rod S1175	1
11	OR-568-022	O-ring 568-022	1
12	ML-U25-2.5X3X0.375	U-packer 2-1/2 X 3 X 3/8	2
13	OR-612-300-075	Wear Ring Nylon 612-300-075	1
14	NSL-1-14	Nut Self Lock 1-14	1



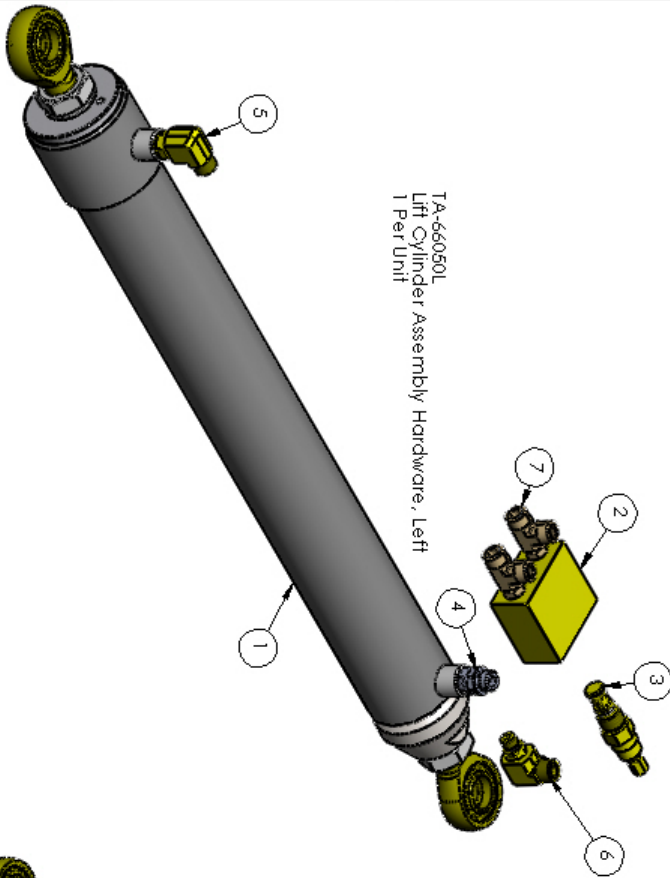
		MACHINE & STEEL SERVICE, INC. P.O. BOX 492810 LEESBURG, FLA. 34749-2810	
T-630		i:\Solidworks\Part\T-630\66050\66050	
DR. BY dlig		DATE 1/8/2014	
SHOP # 66050			
Transporter Hydraulic Cylinder 2014+			

Lift Cylinder Assembly Hardware

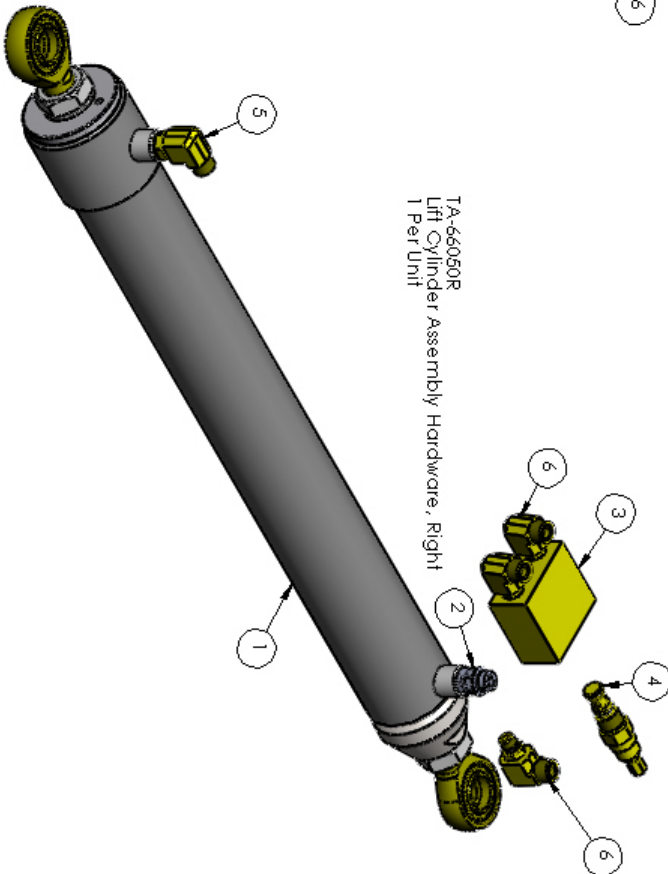
ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM66050	2014 T-630 Hydraulic Cylinder	1
2	TR60215B	Valve Body Lift Cyl Safety	1
3	TR60215C	Valve Cartridge Lift Cyl Safety	1
4	6403-NWO-08-08	Adapter, O-Ring Boss SH Hydraulic: 6403-NWO-8	1
5	FI186810808S	EI1 #8 ORS Flat Face, #8 O-Ring Boss	1
6	FI186810806S	EI1 #8 ORS Flat Face, #6 O-Ring Boss	1
7	FF6804-08-06-08	Adapter, Hydraulic: FF6804-08-06-08	2

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	66050	2014 T-630 Hydraulic Cylinder	1
2	HA-6403-NWO-8	Adapter, O-Ring Boss SH Hydraulic: 6403-NWO-8	1
3	BO215B	Valve Body Lift Cyl Safety	1
4	BO215C	Valve Cartridge Lift Cyl Safety	1
5	HA-FF186810808S	EI1 #8 ORS Flat Face, #8 O-Ring Boss	1
6	HA-FF186810806S	EI1 #8 ORS Flat Face, #6 O-Ring Boss	3

TA-66050L
Lift Cylinder Assembly Hardware, Left
1 Per Unit



TA-66050R
Lift Cylinder Assembly Hardware, Right
1 Per Unit



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MACHINE & STEEL
SERVICE INC.
P.O. Box 40230
LEESBURG, FL 34426-2810

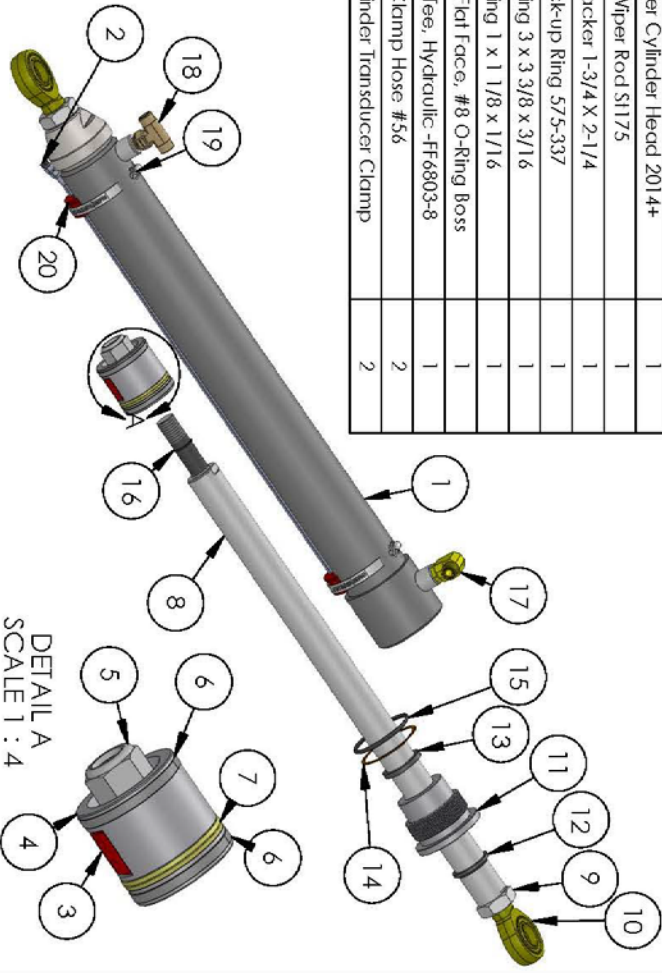
T-644

Lift Cylinder Assembly Hardware

\$REV #
DATE 10/23/2020
PR. BY dlig
TA-66050

Smart Steering Cylinder BOM

ITEM NO.	OrderNo	DESCRIPTION	
1	TM6605424	Transporter Hydraulic Cylinder, Welded 24" 2014+	1
2	1B66130-38	Rota EI series Transducer, 10mm OD aluminum	1
3	1B66130-38-1	Rota EI series Transducer magnet	1
4	TM60040-01	T-644 Cylinder Piston for Encoder	1
5	NSL-1-14	Nut Self Lock 1-14	1
6	OR-612-300-025	Wear Ring Nylon 612-300-025	2
7	OR-PSM-334	Piston Seal PSM Urethane 3"X2.625"X.25"	1
8	TM60040-02	Smart Cylinder Rod	1
9	NJ-1.25-12	Nut Jam : 1.25-12	2
10	RE-IRE20	Rod End IRE20 Male 1-1/4"-12 PTFE	2
11	TM66051	Transporter Cylinder Head 2014+	1
12	ML-ST175	Wiper Rod S1175	1
13	MH-U25-1.75X2.25	U-packer 1-3/4 X 2-1/4	1
14	OR-57-5-337	Back-up Ring 57-5-337	1
15	OR-568-337	O-Ring 3 x 3 3/8 x 3/16	1
16	OR-568-022	O-Ring 1 x 1 1/8 x 1/16	1
17	FF1868T0808S	EII #8 ORS Flat Face, #8 O-Ring Boss	1
18	HA-FF6803-8	Adapter Tee, Hydraulic-FF6803-8	1
19	CL-HO-56H	Clamp Hose #56	2
20	TM60040-04	Smart Cylinder Transducer Clamp	2



TM60040-00
T-644 Smart Steer Cylinder
2 Per Unit

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T-644

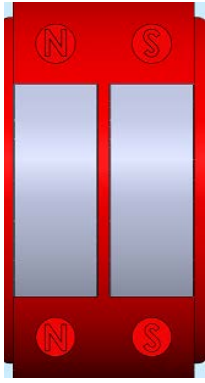
T-644 Smart Steer Cylinder



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SERVICE INC.
P.O. BOX 492810 | LEESBURG, FLA. 34749-2810

T-644

DR. BY	MCT
DATE	12/1/2019
SHOP #	60,040,00



Safety – Handling

The Steering Cylinder magnets are Neodymium magnets, the strongest permanent magnets on Earth. They require handling with extreme care to prevent accidents.

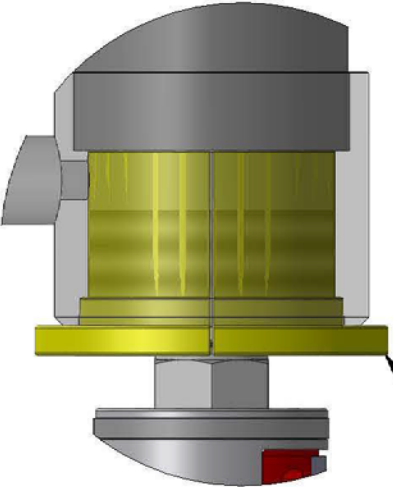
Here are some safety guidelines to follow when working with Neodymium magnets.

- Take care to protect your hands and fingers. Two attracting magnets can severely pinch your fingers if they come between the magnets. The feeling would be no less than having your fingers being pressed between a pair of pliers.
- Free floating Neodymium magnets can slam together with great force. As they are brittle in nature they can often peel, crack or shatter and send shards of magnets flying. Hence it is essential to wear eye protection.
- Neodymium magnets have strong magnetic fields. Thus, if left near magnetic media like computers, floppy disks, hard drives, credit cards, magnetic I.D. cards, cassette tapes and video tapes these magnets are likely to cause damage. Neodymium magnets should also never be left near electronic devices. Watches should be removed before handling Neodymium magnets.
- Neodymium magnets should also not be allowed near a person who uses medical aids like a pacemaker. The magnet can cause the medical aid to malfunction.
- Neodymium magnets should never be heated above 120°C as they will lose their magnetic properties. In addition, they may catch fire and burn and produce toxic fumes.
- Neodymium magnets should not be handled in potentially explosive atmospheres.

Smart Steering Cylinder, 1

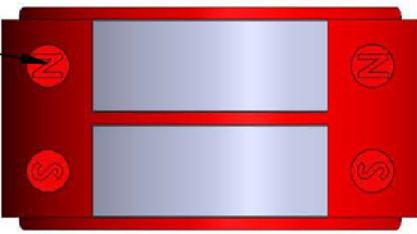
4/16/2021, 10:11 AM

TM60040-91
Smart Cylinder Assembly Tool, Sleeves
Orient 2 halves as shown



DETAIL G
SCALE 1 : 2

"N" toward the nut



TM60040-91
Smart Cylinder Assembly Tool, Sleeve
2 Required

- Do not remove the magnet assembly from its container until you are ready to install it in the piston
- Inform receiving to not remove the magnet assembly from the container; small metal particles will be attracted to it and will be hard to remove
- When you are ready to install the magnet in the piston, do it in a clean environment as small metal particles will be attracted to it and will be hard to remove
- Do not let anyone with a pace maker work with this magnet
- Do not place a smart phone or laptop near the magnet

T-644
Smart Cylinder Rod Install

DR. BY MCT
DATE 12/1/2019
SHOP # 60,040,00

TOURBERG
MACHINE & STEEL
SERVICE INC.
P.O. BOX 492810 LEESBURG, FLA. 34749-2810

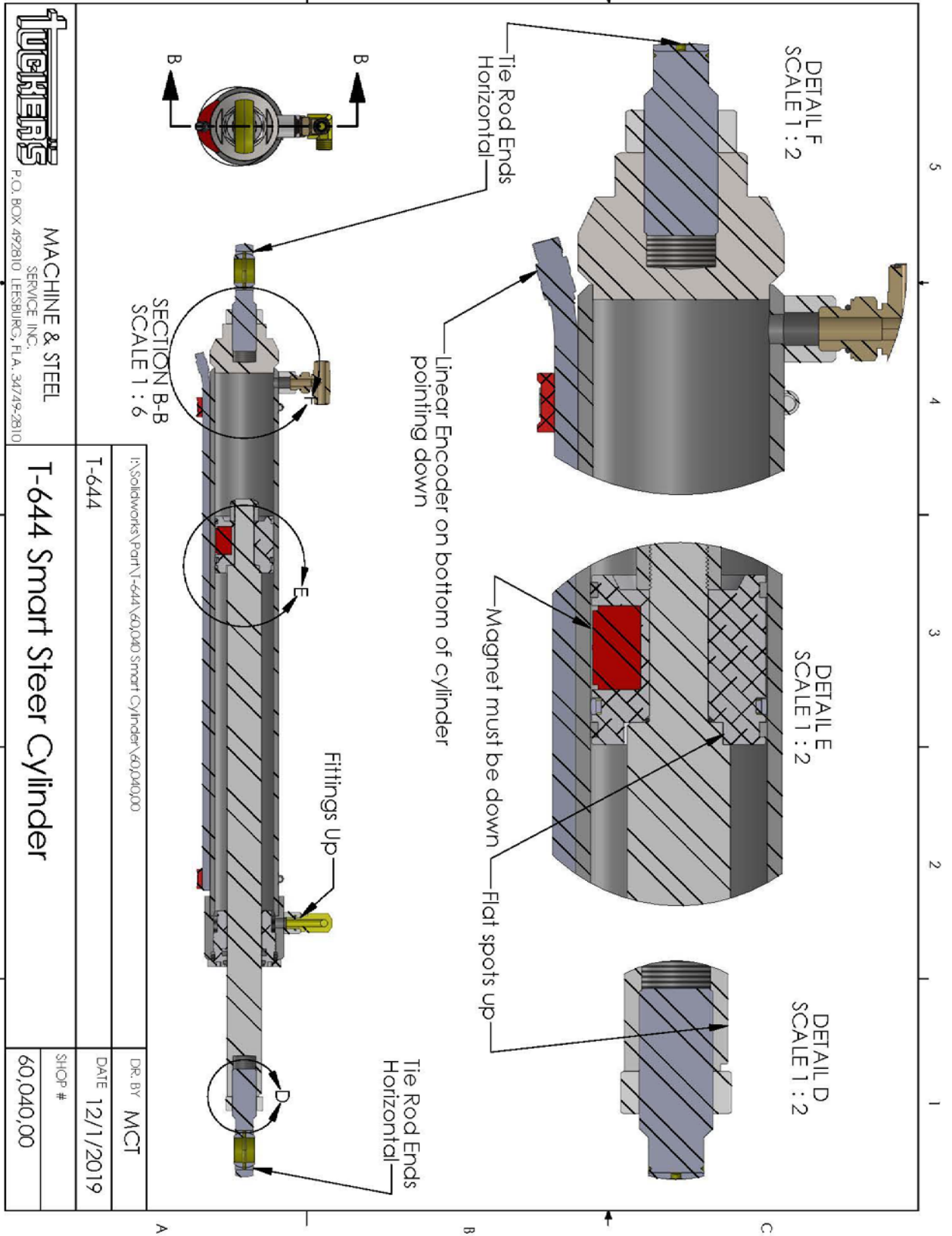
T-644 Smart Cylinder Rod Install

1 Page: 2

1

Smart Steering Cylinder, 2

4/16/2021, 10:12 AM



TURNER'S
MACHINE & STEEL
SERVICE, INC.
P.O. BOX 492810, LEESBURG, FLA. 34749-2810

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T-644	
T-644 Smart Steer Cylinder	
DR. BY	MCT
DATE	12/1/2019
SHOP #	
60,040,00	

Smart Steering Cylinder Clamp Assembly

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60040-04	Smart Cylinder Transducer Clamp Half	2
2	SSCS-SH-10-24X1	Cap Screw-Stainless-Socket Head- #10-24 X 1"	2
3	CL-HO-56H	Clamp Hose #56	1

TM60040-04A
Smart Cylinder Transducer Clamp Assembly
2 Per Unit

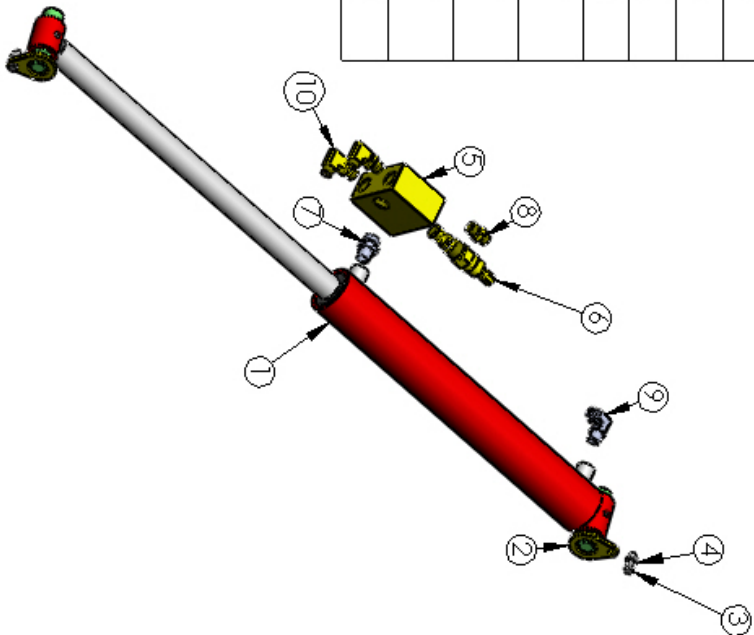


MACHINE & STEEL
SERVICE INC.
P.O. BOX 492810 LEESBURG, FLA. 34749-2810

\\dservr\cadd\solidworks\Part\T-644\60,040 Smart Cylinder\60,040.00		DR. BY
T-644		DATE
Smart Cylinder Transducer Clamp Assembly		SHOP #
		60,040,04A

Back Door Cylinder Assembly Hardware

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB80701-1	16" Cylinder Chute Spout Gate - Engine Hood	1
2	TM60013-00	Engine Door Pin Assembly T-644	2
3	CS-HH-0.25-20X1	Screw Cap Hex: 1/4-20 X 1	2
4	NF-0.25-20	Nut Flanged Lock : 1/4-20	2
5	TB80215B	Valve Body Lift Cyl. Safety	1
6	TB80215C	Valve Cartridge Lift Cyl. Safety	1
7	TM60510-11	Engine Base Cylinder Orifice, Rod End	1
8	TM60510-12	Engine Base Cylinder Orifice, Pin End	1
9	FF2501-04-06	Adaptor, ORFS to Pipe Elbow 90°: FF2501-04-06	1
10	FF1868T0406S	Eil #4 ORS Flat Face, #6 O-Ring Boss	2



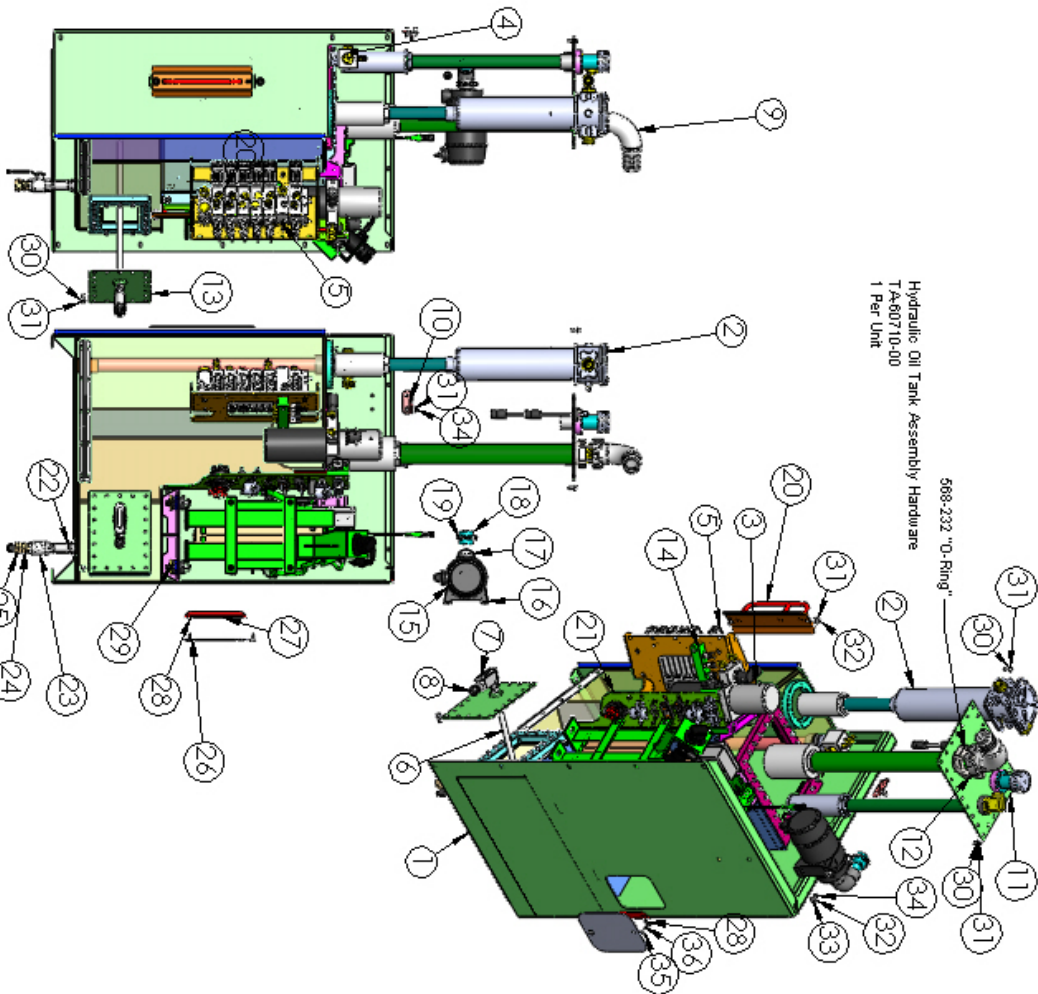
MACHINE & STEEL
SERVICE INC.
P.O. BOX 492810 LEESBURG, FLA. 34749-2810


\\skenen\cork\Solidworks\Part\T-644\60500 Engine Base Part\TA-60500-710		DR. BY	dlg
T-644		DATE	10/7/2020
Back Door Cylinder Assembly Hardware		SHOP #	
			TA-60500-710

Hydraulic Oil Tank

Hydraulic Oil Tank Assembly Hardware

ITEM NO.	OrderNo	DESCRIPTION	Default Qty.
1	TM60710-00	Hydraulic Oil Tank Weldment-DefTank	1
2	TA-60710-22	Hydraulic Tank Return Filter Kit	1
3	TA-60710-25	Engine Door Power Unit Kit	1
4	TA-60710-24	Hydraulic Oil Tank Return Block Kit	1
5	TA-60710-23	PVG 32 Valve Kit	1
6	TD4105	3/4" MNPT 120 VAC In-Tank Oil Heater	1
7	TD80134	3/4 Elec. LB Body	1
8	EW5 RDN34-S171	Dome Nut 3/4" NPT - ID - .51-.71	1
9	TD80430-2	-40 Code 61 to 2-1/2" Ht Sweep 90 deg	1
10	TM60540-08	Engine base corner 5nut bracket, front	1
11	TA-60710-06	Hydraulic Oil Tank Top Cleanout Lid Kit	1
12	HA-5 RK-40	Adaptor, Hydraulic Code 61 Split range kit -40	1
13	TM60710-07	Hydraulic Oil Tank Bottom Cleanout Lid Assembly	1
14	TA-60510-08	Transducer Wairfield Kit	1
15	TD4575-24	Air Cleaner Assy, Tier 4 Air Compressor	1
16	TD4575-24-3	Air Compressor Filter Mount Band	1
17	TD4575-24-2	Rubber Elbow#2	1
18	TM60510-06	JCB Air Compressor Inake Adaptor	1
19	CL-HO-32H	Clamp Hose 03248 #32	2
20	TM60710-17	Hydraulic Oil Tank Hose Loop Assembly	1
21	TA-60710-04	Hydraulic Oil Tank Switch Bracket Kit	1
22	TM60710-26	Plated T"x4" EXH Pipe Hipple	1
23	TD66711	Brass On/Off Ball Valve T" NPT Remote	1
24	2021-16-165	Adaptor, Hydraulic: 2021-16-165	1
25	210292-165	Adaptor, Hydraulic: 210292-165	1
26	TM60710-28	Hydraulic Oil Tank DEF Service Cover	1
27	TM60101-06	Wahrel Box Cover Plate Clamp	1
28	NCOB-0-25-20-0-.781	NUT clip-on barrel: 1/4-20 .025-.15, .781 Hole	2
29	TA-60710-14	DEF Tank Vibration Mount Assembly	4
30	MLD-375	Washer Lock 3/8	52
31	CS-HH-0-375-16X1	Screw Cap Hex 3/8-16 X 1	56
32	WFO-375	Washer Flat 3/8	4
33	CS-HH-0-375-16X1.25	Screw Cap Hex 3/8-16 X 1 1/4	2
34	NFO-375-16	NUT Ranged Lock : 3/8-16	4
35	WFO-25	Washer Flat 1/4	2
36	CS-HH-0-25-20X1	Screw Cap Hex 1/4-20 X 1	2





MA CHINE & STEEL
SERVICE INC.
P.O. BOX 472810 HESBROOK, VA 24447-2810

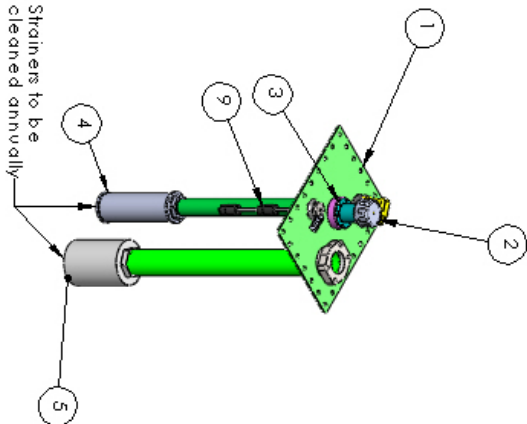
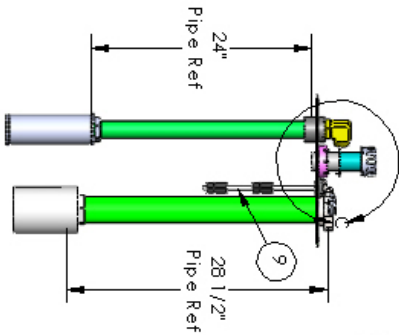
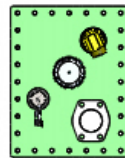
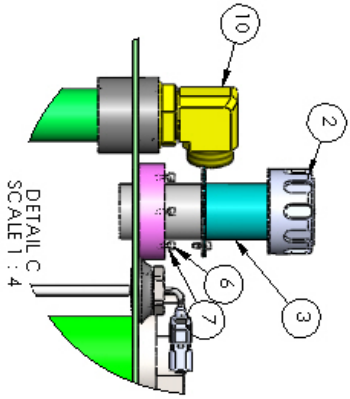
Hydraulic Oil Tank Assembly Hardware

5007 F
DATE 10/15/2020

DR. P. M.C.T.
TA-60710-00

Hydraulic Oil Tank Clean-Out Lid

ITEM NO.	OrderNo	DESCRIPTION	60-710-06 Bolted/OTI.
1	TM60710-06	Hydraulic Oil Tank Top Cleanout Lid	1
2	TB66212	Anti-Splash 5 PSI Breather	1
3	TB66214	Stauff Bayonet Extender	1
4	TB66216	Strainer, Suction - Proppel T-644	1
5	TB80100-1	2.5" Suction Strainer	1
6	SSCS-SH-B-32X0.50	Cap Screw-Stainless-Socket Head- #8-32 X 1/2"	6
7	WL-8	Washer Lock #8	6
8	TF-1.0-SAE-16-O-RING	Flange Tank 1" Blk. SAE-16 O-Ring	1
9	TB66213-ROTA-TLT	Rotatank Level/Temp Sensor	1
10	FFI B6812024S	EI #20 ORS Flat Face, #24 O-Ring Boss	1



Hydraulic Oil Tank Top Cleanout Lid Kit
TA-60-710-06
1 Per Unit



MACHINE & STEEL
SERVICE, INC.
P.O. BOX #2388
LEESBURG, FLA. 34424-2388

T-644

\\server\card\vol\work\Part\Y-644\00_710-06 Hydraulic Oil Tank Part\00_710-06

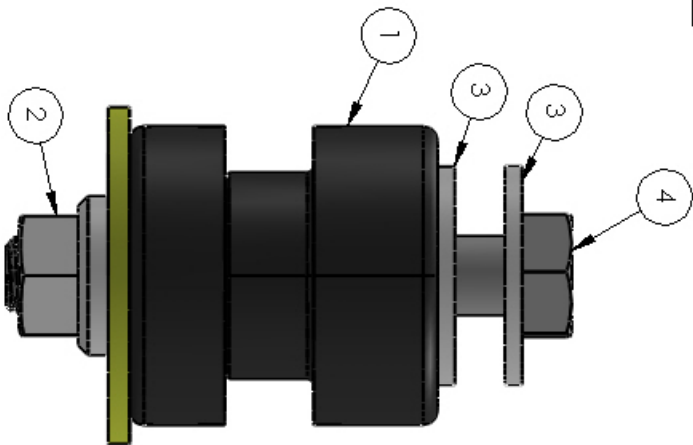
Hydraulic Oil Tank Top Cleanout Lid Kit

SHOP #
DATE 11/6/2017

DR. BY MCT
TA-60-710-06

Hydraulic Oil Tank DEF Mount Kit

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TB66500-05	Vibration Dampening Mount for DEF Tank	1
2	NF-0.5-13	Nut Flanged Lock : 1/2-13	1
3	WF-0.5	Washer Flat 1/2	2
4	CS-HH-0.5-13X3.25	Screw Cap Hex: 1/2-13 X 3 1/4	1



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**MACHINE & STEEL
SERVICE INC.**
P.O. BOX 492810 LEESBURG, FLA. 34749-2810

DEF Tank Vibration Mount Assembly

SHOP #

TA-60710-14

DATE

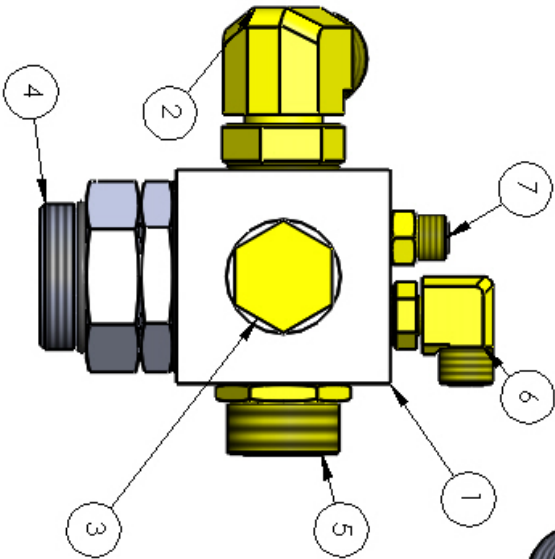
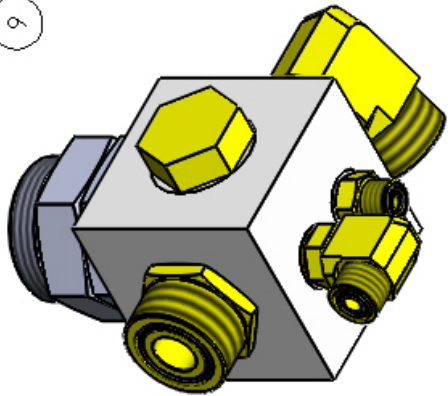
DR. BY MCT

Hydraulic Oil Tank Return Block

O-Ring Chart

ITEM NO.	OrderNo	DESCRIPTION	QTY.
1	TM60710-24	Hydraulic Oil Tank Return Block Kit	1
2	FF1868T1212S	Eil #12 ORS Flat Face, #12 O-Ring Boss	1
3	900598-12S	Adapter, Hydraulic: 900598-12S	1
4	6403-NWO-24	Adapter, O-Ring Boss Adj. Union: 6403-NWO-24	1
5	FF1852T1612S	ST #16 ORS Flat Face, #12 O-Ring Boss	1
6	FF1868T0606S	Eil #6 ORS Flat Face, #6 O-Ring Boss	1
7	FF1852T0406S	ST #4 ORS Flat Face, #6 O-Ring Boss	1

O-Rings			
Hose Size	SAE Boss O-Ring	Flat Face O-Ring	Split Flange O-Ring
2	568-902		
3	568-903		
4	568-904	568-011	
5	568-905		
6	568-906	568-012	
7	568-907		
8	568-908	568-014	568-210
10	568-910	568-016	
12	568-912	568-018	568-214
14	568-914		
16	568-916	568-021	568-219
20	568-920	568-025	568-222
24	568-924	568-029	568-225
32			568-228
40			568-232
48			568-237



MACHINE & STEEL
SERVICE INC.
P. O. BOX 492810 LEESBURG, FLA. 34749-2810

\\dservr\cand\solidworks\Part\T-644\60,700 Hydraulic Oil Tank Parts\60,710,00\60,710,00 Asc
T-644

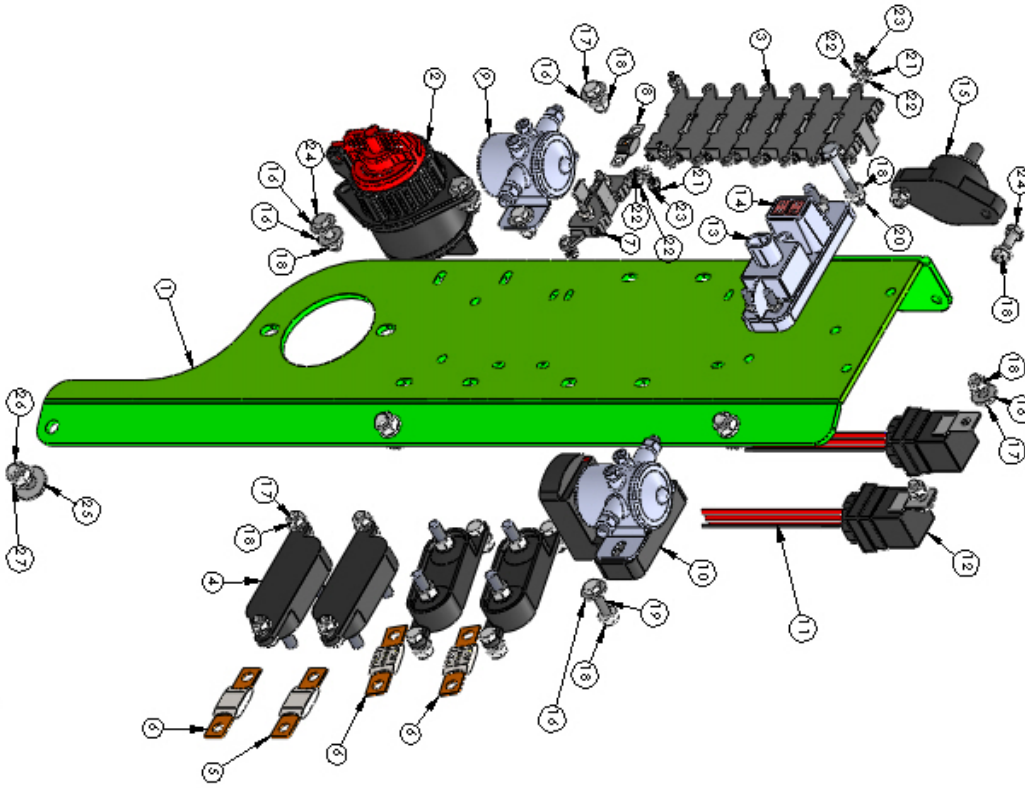
Hydraulic Oil Tank Return Block Kit

D.R. BY dljg
DATE

SHOP #
TA-60710-24

Hydraulic Oil Tank Switch Bracket

ITEM NO.	ORDERNO	DESCRIPTION	QTY.
1	TM60710-04	Hydraulic Oil Tank Switch Bracket	1
2	T880586-02	Battery Disconnect - Gigavac HED31	1
3	TA-60710-04-01	Hydraulic Oil Tank Mini Fuse Block Kit	1
4	T880130-87	Fuse Holder Busbar on 150 Amp-300 Amp	4
5	T880130-88-150	Fuse Busbar on 150 Amp	1
6	T880130-88-300	Fuse Busbar on 300 Amp	3
7	T880130-100-03	Mid High Amp Fuse Block Fuse Module	1
8	T880130-100-04-70A	Mid High Amp Fuse 70A	1
9	T880587-1	Relay Solenoid	1
10	T880586-3	Solenoid, 48530 Smart Battery Isolator, 200A	1
11	T866147	50 Mini Weatherproof Relay Connector w/12" Leads	2
12	T866148	Skinned Mini Relay, 20/40A, 12V, SPD	2
13	T866149	Power Relay Module, 70A, 2 Fuse, 37702-1AN0022	1
14	T866150-50	Little Fuse JCASE Fuse, 50A, Red	2
15	T866130-39	Power Distribution Post 8 Point 3/8" Stud Block	1
16	WF-F-0.25	Washer Flat 1/4	10
17	C5-HH-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	12
18	NF-F-0.25-20	Nut Flanged Lock: 1/4-20	19
19	C5-HH-0.25-20X1.25	Screw Cap Hex: 1/4-20 X 1 1/4	2
20	C5-HH-0.25-20X2	Screw Cap Hex: 1/4-20 X 2	1
21	S5-C5-SH-6-32X0.75	Cap Screw-Stainless-Socket Head-#6-32 X 3/4	4
22	WFSS-6	Washer Flat - Stainless - #6 (1.56 X .312)	12
23	S5NSL-6-32	Nut Self Lock - Stainless: 6-32	6
24	C5-HH-0.25-20X1	Screw Cap Hex: 1/4-20 X 1	4
25	WF-F-0.375	Washer Flat 3/8	3
26	C5-HH-0.375-16X1	Screw Cap Hex: 3/8-16 X 1	3
27	NF-F-0.375-16	Nut Flanged Lock: 3/8-16	3



MACHINE & STEEL
SERVICE, INC.
102, BOX #2920 D. TESSAUCO, VA. 24149-2920

T-644

Visit our website at www.towersteel.com for more information.

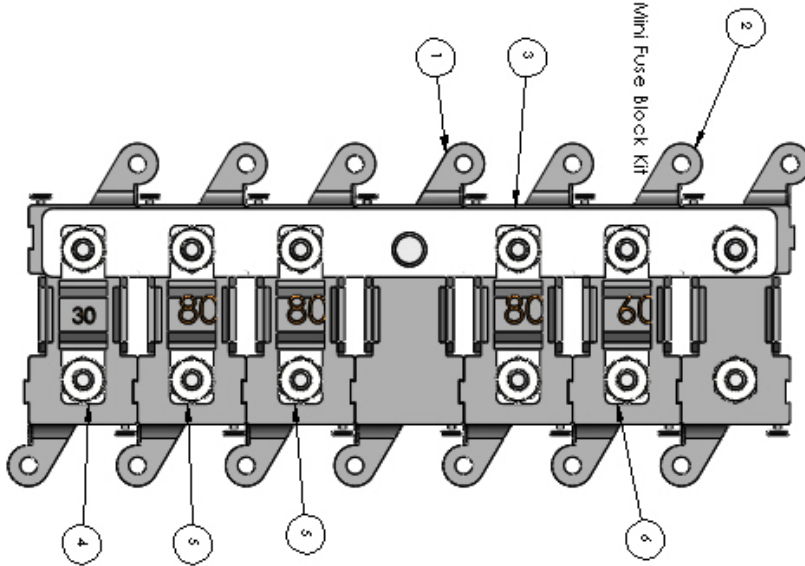
Hydraulic Oil Tank Switch Bracket Kit

DATE 10/14/2020
DR. BY dly
TA-60710-04

Hydraulic Oil Tank Fuse Assembly

ITEM NO.	Order No	DESCRIPTION	QTY.
1	TB80130-100-02	Mini High Amp Fuse Block Input Module	1
2	TB80130-100-03	Mini High Amp Fuse Block Fuse Module	6
3	TB80130-100-01	Mini High Amp Bus Bar 7 Position	1
4	TB80130-100-04-30A	Mini High Amp Fuse 30A	1
5	TB80130-100-04-80A	Mini High Amp Fuse 80A	3
6	TB80130-100-04-60A	Mini High Amp Fuse 60A	1

Hydraulic Oil Tank Mini Fuse Block Kit
TA-60710-04-01
1 Per Unit



MACHINE & STEEL
SERVICE INC.
P.O. BOX 422810 RICHMOND VA 23242-2810

T-644

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Hydraulic Oil Tank Mini Fuse Block Kit

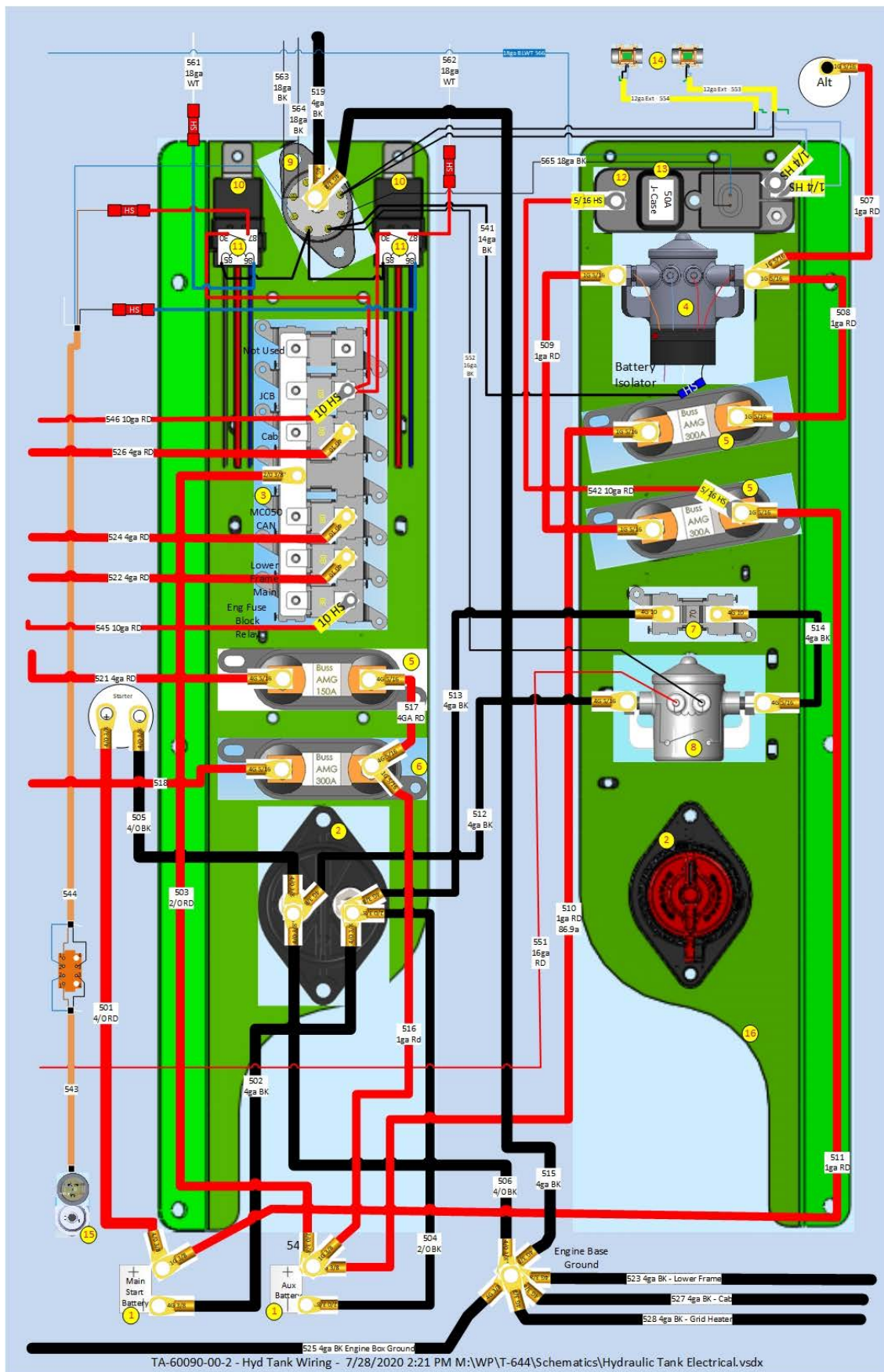
DATE

12/11/2013

DR:R dly

TA-60710-04-01

Hydraulic Tank Electrical

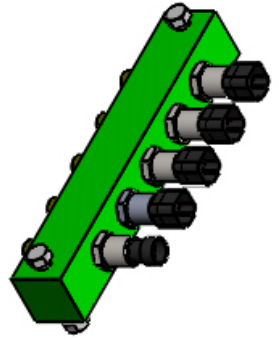


Hydraulic Tank Electrical BOM

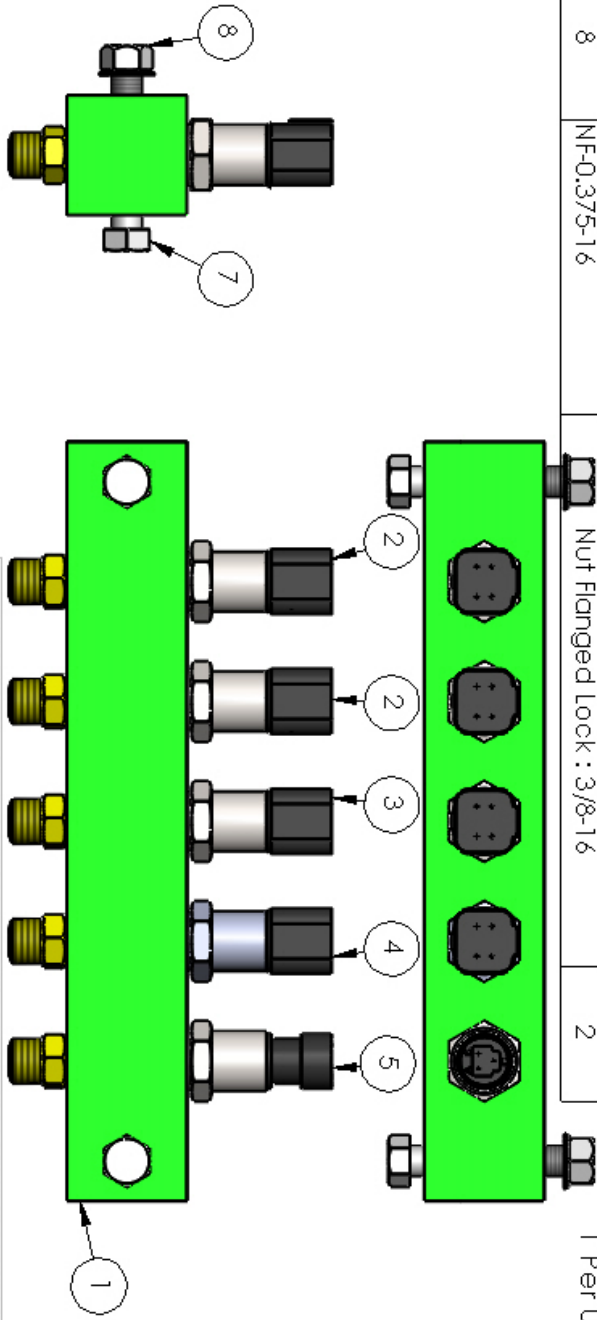
Hydraulic Tank Fin Wiring Parts				
Key	Description	Mfg #	Tucker #	Qty
1	Battery - 9A31, T-644	Wholesale - EX9A31	TB80586-1	2
2	Battery Disconnect - Gigavac	Waytek - 77080	TB80586-02	1
3	Midi High Amp Bus Bar 7 Position	Waytek - 46397	TB80130-100-01	1
	Midi High Amp Fuse Block Input Module	Waytek - 46391	TB80130-100-02	1
	Midi High Amp Fuse Block Fuse Module	Waytek - 46390	TB80130-100-03	6
	Midi High Amp Fuse 30A	Waytek - 46380	TB80130-100-04-30A	2
	Midi High Amp Fuse 80A	Waytek - 46385	TB80130-100-04-80A	3
4	Isolator, 48530 Smart Battery Isolator, 200A	Waytek - 77051	TB80586-3	
5	Fuse Holder Bussman 150 Amp-300 Amp	Waytek - 46039	TB80130-87	3
	Fuse Bussman 300 Amp	Waytek - 46279	TB80130-88-300	3
6	Fuse Holder Bussman 150 Amp-300 Amp	Waytek - 46039	TB80130-87	3
	Fuse Bussman 150 Amp	Waytek - 46272	TB80130-88-150	3
7	Midi High Amp Fuse Block Fuse Module	Waytek - 46390	TB80130-100-03	1
	Midi High Amp Fuse 70A	Waytek - 46384	TB80130-100-04-70A	1
8	Solenoid/Relay, 200 Amp Continuous, JCB	Wholesale - HE24213	TB80587-1	3
9	Power Distribution Post 8 Point 3/8" Stud Black	Waytek - 47225	TB66130-39	1
10	ISO Mini Weatherproof Relay Connector w/12" Lead	Waytek - 75610	TB66147	2
11	Skirted Mini Relay, 20/40A, 12V, SPDT	Waytek - 75605	TB66148	2
12	Power Relay Module, 70A, 2 Fuse, 37702-1AN0022	Waytek - 46095	TB66149	1
13	Littlefuse JCASE Fuse, 50A, Red	Waytek - 46593	TB66150-50	2
14	Vibrator, Hopper, 12v 3000 RPM Oli	Oli Vibrator - MVE 202 DC 12	TB66444	2
15	Sensor, N/O PNP Turck Proximity	Turck - Bi15-EM30-AP45XLD-H1141	TB66130-08-TU	1
16	Hydraulic Oil Tank Switch Bracket	Tucker - TM60710-04	TM60710-04	1

Transducer Manifold Kit

ITEM NO.	OrderNo	DESCRIPTION	Transducer Manifold Assembly Kit/QTY.
1	TM60510-08	JCB Transducer Manifold	1
2	TB66130-07	Sensor, psi, 0-5800, (400 Bar) SAE 4 DT04-4P	2
3	TB66130-06	Sensor, psi, 0-3626, (250 Bar) SAE 4 DT04-4P	1
4	TB66130-05	Sensor, psi, 0-580, (40 Bar) SAE 4 DT04-4P	1
5	TB66130-30	Filter Pressure Transducer TDH30K(G010003)B004, 0-100 PSI	1
6	FF1852T0404S	ST #4 ORS Flat Face, #4 O-Ring Boss	5
7	CS-HH-0.375-16X2.25	Screw Cap Hex: 3/8-16 X 2 1/4	2
8	NF-0.375-16	Nut Flanged Lock : 3/8-16	2



Transducer Manifold Kit
TA-60,510,08
1 Per Unit



TURNER'S
MACHINE & STEEL
SERVICE INC.
P.O. BOX 492810 LEESBURG, FLA. 34749-2810

\\denver\cadd\solidworks\Part\T-644\60,700 Hydraulic Oil Tank Parts\60,710,00\60,710,00 Acc
T-644
DR. BY: **clg**
DATE: **9/8/2015**
SHOP #
TA-60,510,08

Transducer Manifold Kit

Paint

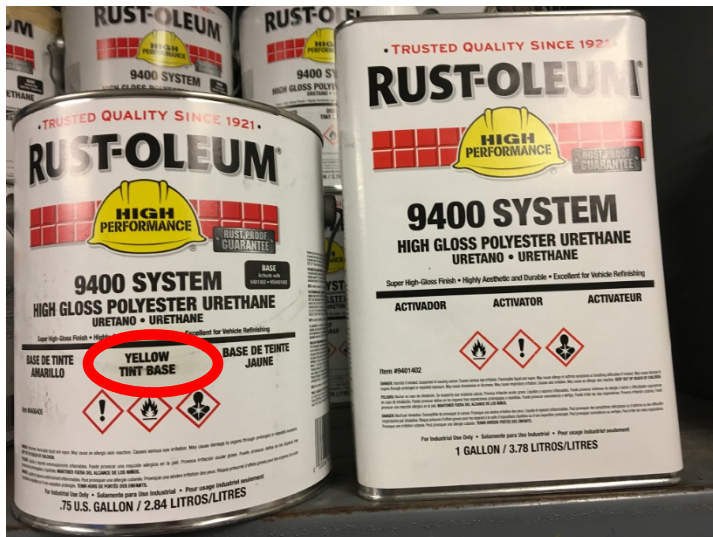
White, Blue, Yellow



White



Safety Blue



Safety Yellow

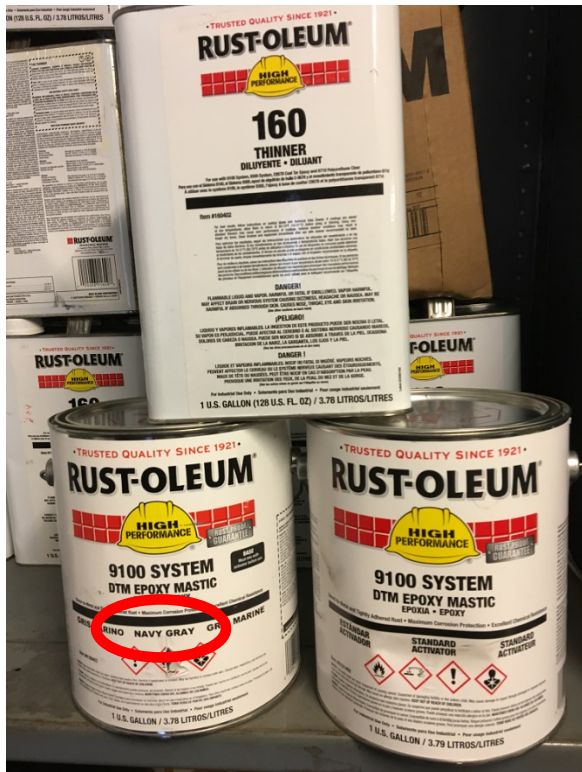
Red, Black, Gray



Safety Red

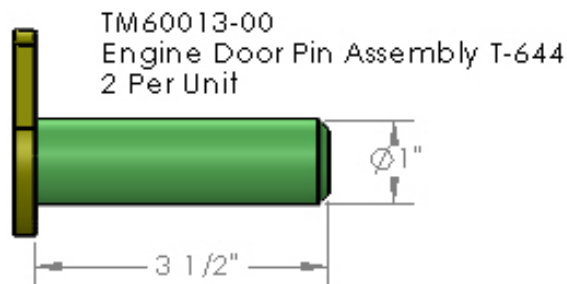
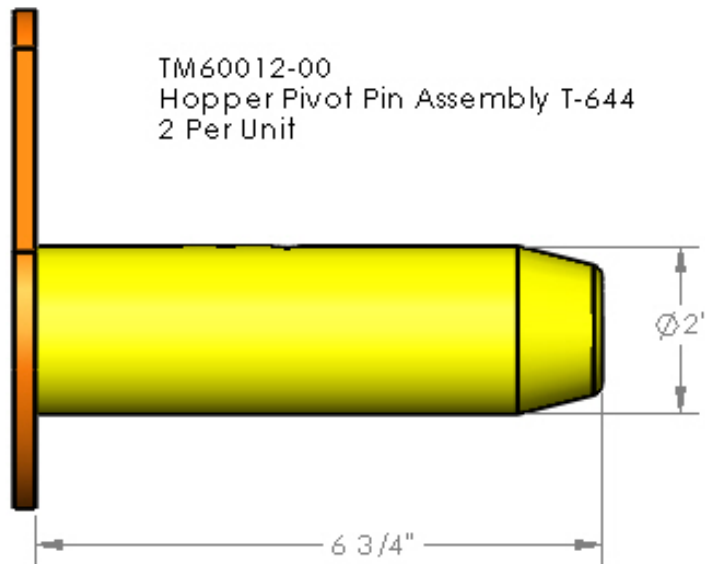
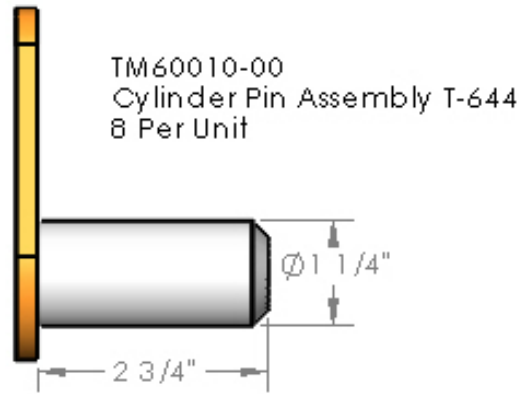


Black



Navy Gray

Pin list



P.O. Box 492810
Leesburg, FL 34749-2810
Phone: (352) 787-3157
Fax: (352) 366-1782

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Customer: T-644

Replacement Pins

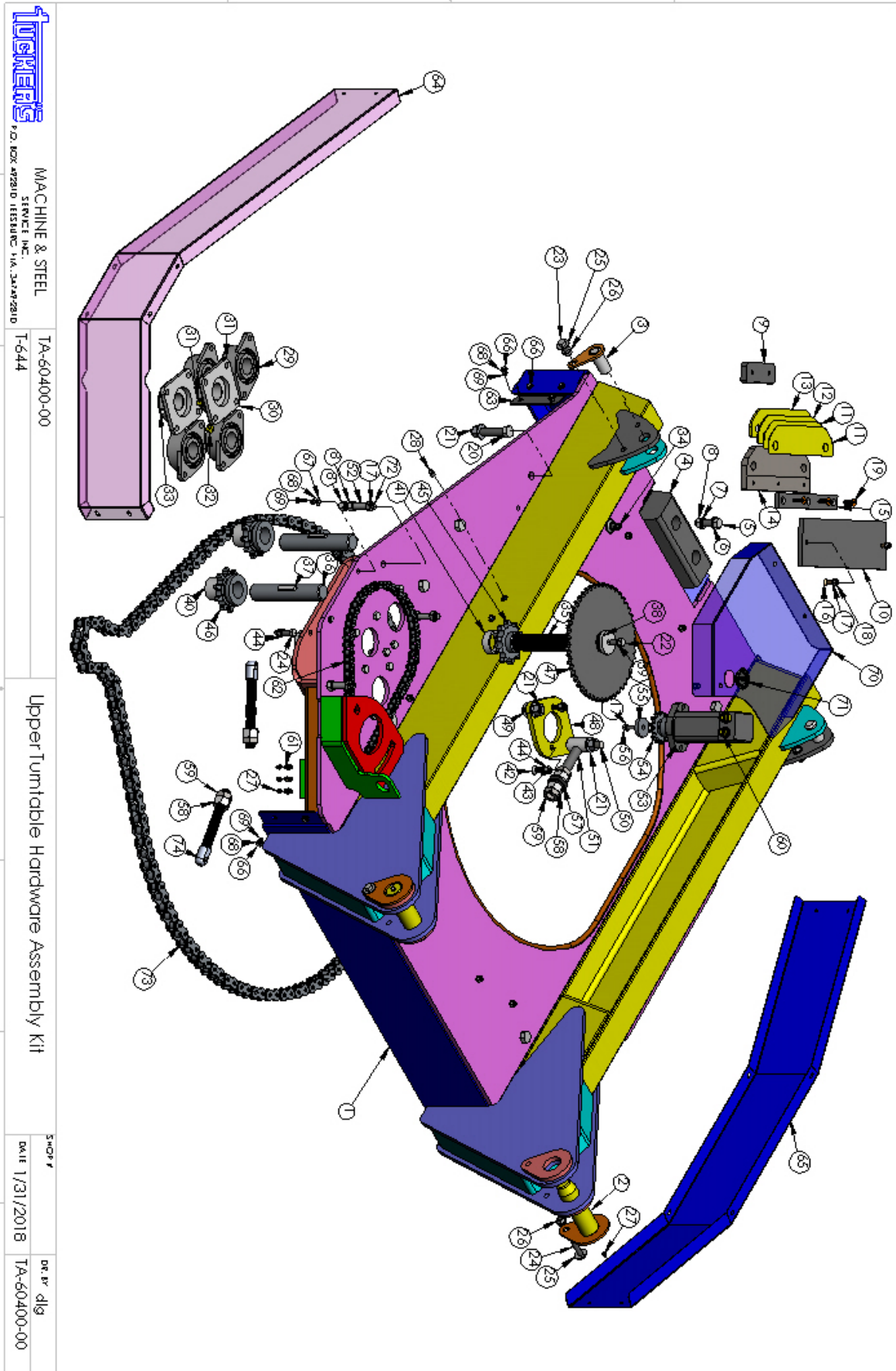
DR. BY MCT

DATE 2/5/2018

See Above

Turntable

Upper Turntable



Upper Turntable BOM

ITEM NO.	ORDERNO	DESCRIPTION	QTY.
1	TM60400-00	Upper Turntable Weldment	1
2	TM60012-00	Hopper Pivot Pin Assembly T-644	2
3	TM60010-00	Cylinder Pin Assembly T-644	2
4	TM60400-01	Dock Bumper - Turntable to Hopper	1
5	CS-HH-0.685-11 X2.5	Screw Cap Hex: 0.685-11 X 2.500	2
6	W/F-0.625	Washer Flat 5/8	2
7	W/L-0.625	Washer Lock 5/8	2
8	NU-0.625-11-PL	NUT: 5/8-11	8
9	TM60400-15	Upper Turntable Thrust Nylonton	5
10	TM60400-16	Upper Turntable Slide Pad Nylonton	6
11	TM60400-18-3	Upper Turntable Hook Slide Shim 14 Ga.	10
12	TM60400-18-2	Upper Turntable Hook Slide Shim 10 Ga.	5
13	TM60400-18-1	Upper Turntable Hook Slide Shim 1/4"	5
14	TM60400-17	Upper Turntable Hook Slide Base Plate	5
15	TM60400-19	Upper Turntable Hook Slide Nylonton	5
16	TM80546	Boss Bolt, Wear Pad, 3/8-24 X 1-1/2	12
17	W/L-0.375	Washer Lock 3/8	16
18	NU-0.375-24-PL	NUT 3/8-24 (Plated)	12
19	CS-FHSB-0.375-16X1.25	Screw Cap: FH SRT. Boss 3/8-16 X 1-1/4	15
20	CS-HH-0.75-10X4.25	Screw Cap Hex: 3/4-10 X 4-1/4	10
21	NF-0.75-10	NUT Flanged Lock: 3/4-10	12
22	CS-HH-0.5-13X1.25	Screw Cap Hex: 1/2-13 X 1 1/4	2
23	CS-HH-0.5-13X1.5	Screw Cap Hex: 1/2-13 X 1 1/2	2
24	CS-HH-0.5-13X2	Screw Cap Hex: 1/2-13 X 2	18
25	W/F-0.5	Washer Flat 1/2 (Soe)	4
26	NF-0.5-13	NUT Flanged Lock: 1/2-13	4
27	MHGF-0.125-5T	Grease Fitting 1/8" SMT.	5
28	MHGF-0.25-5T	Grease Fitting 1/4" SMT.	2
29	TM80501	Bearing Swing Assy. - 2 Bolt	4
30	TM80502	Bearing Swing Assy. Center - 4 Bolt	2
31	TM-3350X2	Fitting W/7/45 Deg. 1/8 W/F - 1/8 FP	2
32	TM-3400X2	Fitting W/7/90 Deg. 1/8 W/F - 1/8 FP	1
33	MHGF-0.125-90	90 Deg 1/8 Grease Fitting	3
34	2024-4-45	Adaptor, Aeroquip	4
35	TM81305	Shaft 1-3/4 8/16 DP 13 Tooth	1
36	TM81295	Shaft Idler Sprocket, Turntable	2
37	TM812951	Keystock Turntable Idler Shaft	2
38	TM81285	Retainer Swing Shaft Sprocket	2
39	W/L-0.5	Washer Lock 1/2	2
40	TM81274	Spacer Turntable Drive 1-5/8"	2

ITEM NO.	ORDERNO	DESCRIPTION	QTY.
41	TM81303	Spacer .8125 Turntable Drive	1
42	CS-FHS-0.5-13X2.25	Screw Cap: FH SRT. 1/2-13 X 2-1/4	2
43	W/LH-0.5	Washer Lock Hi-Collar 1/2	2
44	N5L-0.5-13	NUT Self Lock: 1/2-13	18
45	TM80408-01	Sprocket Splined Lower Swing	1
46	TM81304-01	Sprocket 100 Outerlower Swing	2
47	TM80407-01	Sprocket Splined 5 Swing Drive, Upper	1
48	TM60400-09	Upper Turntable 5 Swing Motor Plate	1
49	CS-0.75-10X2	Bolt Camage 3/4-10 X 2	1
50	CS-0.75-10X5P	Bolt Camage 3/4-10 X 5 Gr. 5 Plated	1
51	TM60400-12	TT Motor Chain Adjustment Bolt T-644	1
52	TM60400-30	Upper Turntable Swing Chain Cover Mount Stud	3
53	TM80103-1	Motor, Swing w/ Cross Relief	1
54	TM80406	Sprocket Splined 5 Swing Motor	1
55	TM81284	Retainer Swing Motor Sprocket	1
56	CS-HH-0.375-16X1.25	Screw Cap Hex: 3/8-16 X 1 1/4	1
57	W/F-1	Washer Flat 1	2
58	NU-1-8-PL	NUT 1-8 (Plated)	4
59	NA-1-8	NUT Jam: 1-8	4
60	FM852108105	ST #8 O-RS Flat Face, #10 O-Ring Boss	2
61	2021-2-45	Adaptor, Hydraulic: 2021-2-45	3
62	TA-605-C	#60 Turntable Swing Chain Kit	1
63	TM60400-53	Upper Turntable Side Cover Top Plate	3
64	TM60400-28	Upper Turntable Side Cover Left	1
65	TM60400-29	Upper Turntable Side Cover Right	1
66	CS-HH-0.25-20X0.75	Screw Cap Hex: 1/4-20 X 3/4	14
67	CS-HH-0.25-20X1	Screw Cap Hex: 1/4-20 X 1	4
68	W/F-0.25	Washer Flat 1/4	18
69	NF-0.25-20	NUT Flanged Lock: 1/4-20	18
70	TM60400-27	Upper Turntable Swing Chain Cover Assembly	1
71	TM80215	Plug, Chain Inspection	1
72	CS-HH-0.375-16X0.75	Screw Cap Hex: 3/8-16 X 3/4	3
73	TM81292-01	Chain Kit TH(#100)	1
74	TM81291-01	Bolt, Turntable, 100 Chain Adjuster	2

Appendix:

Fastener Information

Bolt Torque

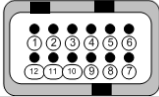
Bolt Tightening Torque						
All values ft-lb unless otherwise noted						
To convert ft-lb to in-lb: $lb \times 12 = in-lb$						
Example: $9 \text{ ft-lb} \times 12 = 108 \text{ in-lb}$						
Example: $75 \text{ in-lb} / 12 = 6.25 \text{ ft-lb}$						
Multiply by 1.3558 to get N-m						
U.S Bolt Threads						
Thread Size	Grade 5	Grade 8		Thread Size	Grade 5	Grade 8
Coarse thread				Fine thread		
1/4-20 (.250)	76 in-lb	9		1/14-28 (.250)	87 in-lb	10
5/16-18 (.3125)	13	18		5/16-24 (.250)	14	20
3/8-16 (.375)	23	33		3/8-24 (.375)	26	37
7/16-14 (.4375)	37	52		7/16-20 (.4375)	41	58
1/2-13 (.500)	57	80		1/2-20 (.500)	64	90
9/16-12 (.5625)	82	115		9/16-18 (.5625)	91	129
5/8-11 (.625)	112	159		5/8-18 (.5625)	128	180
3/4-10 (.750)	200	282		3/4-16 (.750)	223	315
7/8-9 (.875)	322	454		7/8-14 (.875)	355	501
1-8 (1.000)	483	454		1-12 (1.000)	529	746
1 1/8-7 (1.125)	596	966		1-14 (1.000)	541	764
1 1/4-7 (1.250)	840	1363		1 1/8-12 (1.125)	668	1083
1 3/8-6 (1.375)	1102	1787		1 1/4-12 (1.250)	930	1509
1 1/2-6 (1.500)	1462	2371		1 3/8-12 (1.375)	1254	2034
				1 1/2-12 (1.500)	1645	2668
Metric Bolt Threads						
Thread Size	Grade 8.8	Grade 10.9				
M4 x .70	2.30					
M5 x .80	4.58	7.00				
M6 x 1.00	7.80	11.63				
M8 x 1.25	18.75	27.75				
M8 x 1.00	20.25					
M10 x 1.50	38.25	56.25				
M10 x 1.00	42.75					
M10 x 1.25	40.50					
M12 x 1.75	65.25	97.50				
M12 x 1.25	72.00					
M12 x 1.50	69.00					
M14 x 2.00	105.00	153.75				
M14 x 1.50	112.50					
M16 x 2.00	161.25	232.50				
M18 x 2.50	225.00					
M20 x 2.50	322.50					
M22 x 2.50	435.00					
M24 x 3.00	555.00					

Torque Conversion to Metric

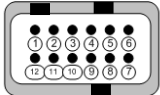
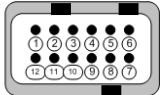
Torque Conversion Chart English to Metric									
Foot Pounds (ft. lbs.)	Newton Meters (N-m)	Foot Pounds (ft. lbs.)	Newton Meters (N-m)	Foot Pounds (ft. lbs.)	Newton Meters (N-m)	Foot Pounds (ft. lbs.)	Newton Meters (N-m)	Foot Pounds (ft. lbs.)	Newton Meters (N-m)
1 =	1.3	32 =	43.4	63 =	85.4	94 =	127.4	125 =	169.5
2 =	2.7	33 =	44.7	64 =	86.8	95 =	128.8	126 =	170.8
3 =	4.1	34 =	46.1	65 =	88.1	96 =	130.2	127 =	172.2
4 =	5.4	35 =	47.4	66 =	89.5	97 =	131.5	128 =	173.5
5 =	6.8	36 =	48.8	67 =	90.8	98 =	132.9	129 =	174.9
6 =	8.1	37 =	50.7	68 =	92.2	99 =	134.2	130 =	176.2
7 =	9.5	38 =	51.5	69 =	93.6	100 =	135.6	131 =	177.6
8 =	10.8	39 =	52.9	70 =	94.9	101 =	136.9	132 =	179
9 =	12.2	40 =	54.2	71 =	96.3	102 =	138.3	133 =	180.3
10 =	13.6	41 =	55.6	72 =	97.6	103 =	139.6	134 =	181.7
11 =	14.9	42 =	56.9	73 =	99	104 =	141	135 =	183
12 =	16.3	43 =	58.3	74 =	100.3	105 =	142.4	136 =	184.4
13 =	17.6	44 =	59.7	75 =	101.7	106 =	143.7	137 =	185.7
14 =	18.9	45 =	61	76 =	103	107 =	145.1	138 =	187.1
15 =	20.3	46 =	62.4	77 =	104.4	108 =	146.4	139 =	188.5
16 =	21.7	47 =	63.7	78 =	105.8	109 =	147.8	140 =	189.8
17 =	23	48 =	65.1	79 =	107.1	110 =	149.1	141 =	191.2
18 =	24.4	49 =	66.4	80 =	108.5	111 =	150.5	142 =	192.5
19 =	25.8	50 =	67.8	81 =	109.8	112 =	151.8	143 =	193.9
20 =	27.1	51 =	69.2	82 =	111.2	113 =	153.2	144 =	195.2
21 =	28.5	52 =	70.5	83 =	112.5	114 =	154.6	145 =	196.6
22 =	29.8	53 =	71.9	84 =	113.9	115 =	155.9	146 =	198
23 =	31.2	54 =	73.2	85 =	115.2	116 =	157.3	147 =	199.3
24 =	32.5	55 =	74.6	86 =	116.6	117 =	158.6	148 =	200.7
25 =	33.9	56 =	75.9	87 =	118	118 =	160	149 =	202
26 =	35.2	57 =	77.3	88 =	119.3	119 =	161.3	150 =	203.4
27 =	36.6	58 =	78.6	89 =	120.7	120 =	162.7	151 =	204.7
28 =	38	59 =	80	90 =	122	121 =	164	152 =	206.1
29 =	39.3	60 =	81.4	91 =	123.4	122 =	165.4	153 =	207.4
30 =	40.7	61 =	82.7	92 =	124.7	123 =	166.8	154 =	208.8
31 =	42	62 =	84.1	93 =	126.1	124 =	168.1	155 =	210.2

Pin Schedules

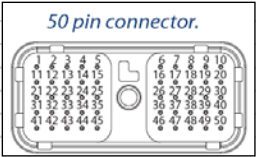
Pin Schedule DP720

Customer:	Tucker's		Deutsch 12-pin connectors	C2 Connector - Black				
Project:	T-644 Transporter		Plug: DTM06-12SA (Grey)					
Date:	9/30/2019							
	in Cab		Wedgeloock: WM12S					
Node:	2		Socket: 0462-201-20141 (qty 12 ea)					
DP720	#111151915		Blank: 0413-204-2005 (AR)					
			P357CO2AQ1331RxDxx					
Pin #	Pin Type	P	R	M	Description	Wire #	Gauge	Wire Color
C1-P1	Power Ground -				to Battery "NEG"	856	16	Black
C1-P2	Power Supply +				to Battery "POS"	836	16	Red
C1-P3	CAN0 +				CAN Hi (Bus B)	809	18	Yellow
C1-P4	CAN0 -				CAN Lo (Bus B)	809	18	Green
C1-P5	CAN Shield/AIN							
C1-P6	CAN1 +/AIN/DIN				CAN Hi (Bus A)	807	18	Yellow
C1-P7	CAN1 -/AIN/DIN				CAN Lo (Bus A)	807	18	Green
C1-P8	Snsr Pwr +/AIN/DIN							
C1-P9	Snsr Gnd -							
C1-P10	DIN/mV/mA/ohm/Freq							
C1-P11	DIN/mV/mA/ohm/Freq							
C1-P12	DOut				Buzzer, +12V = Buzzer On	827	18	Gray

Pin Schedule MC24 Cab

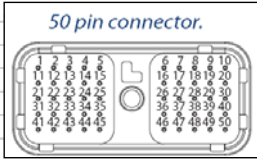
Customer:	Tucker's		Deutsch 12-pin connectors	C2 Connector - Black	C1 Connector - Gray			
Project:	T-644 Transporter		Plug: DTM06-12SA (Grey)					
Date:	9/30/2019		Plug: DTM06-12SB (Black)					
	in Cab		Wedgeloock: WM12S					
Node:	3		Socket: 0462-201-20141 (qty 12 ea)					
MC24-110	#111138528		Blank: 0413-204-2005 (AR)					
			P351CO2AQ1140RxDxx					
Pin #	Pin Type	P	R	M	Description	Wire #	Gauge	Wire Color
C1-P1	Power Ground -				to Battery "NEG"	852	16	Black
C1-P2	Power Supply +				to Battery "POS"	835	16	Red
C1-P3	CAN +				CAN Hi (Bus B)	808	18	Yellow
C1-P4	CAN -				CAN Lo (Bus B)	808	18	Green
C1-P5	AIN/CAN Shield			3				
C1-P6	DIN			7	E-Stop in Cab, N.C., +12V = OK	825	18	Violet
C1-P7	DIN			7	Seat Switch, +12V = Seat Switch Enabled	848	18	Light Blue
C1-P8	5 Vdc Sensor Power+				300mA Max			
C1-P9	Sensor Ground -							
C1-P10	DIN			7				
C1-P11	DIN			7	Brake Valve Pressure Sw, N.O., +12V = brakes activated	875	16	Black
C1-P12	DIN			7	A/C Turned On Sw, N.O., +12V = A/C selected	863	14	Green
C2-P1	DIN			7	Chute Door #1 Sensor Starting from Hopper, +12V = Door Closed	871	18	Black/White
C2-P2	DIN/AIN/freqIN			1 7	Chute Door #2 Sensor Starting from Hopper, +12V = Door Closed	872	18	Brown/White
C2-P3	DIN/AIN/freqIN			1 7	Chute Door #3 Sensor Starting from Hopper, +12V = Door Closed	873	18	Blue/White
C2-P4	DIN/AIN/freqIN			1 7	Chute Door #4 Sensor Starting from Hopper, +12V = Door Closed	874	18	Orange/Black
C2-P5	DIN/AIN/freqIN			1 7				
C2-P6	DIN/AIN/freqIN			1 7				
C2-P7	AIN/Temp/Rheo			3 7				
C2-P8	AIN/Temp/Rheo			3 7				
C2-P9	PWMOUT/DOUT/PVGOUT			2 4	Work Lights, relay, +12V = relay activated	840	18	Yellow
C2-P10	PWMOUT/DOUT/PVGOUT			2 4	Windshield Wipers, relay, +12V = relay activated	845	18	Green
C2-P11	PWMOUT/DOUT/PVGOUT			2 5	Windshield Washer, relay, +12V = relay activated	842	18	Orange
C2-P12	PWMOUT/DOUT/PVGOUT			2 5	A/C relay, +12V = relay activated, Engine is on and running	850	18	Red/Black
					Pairing			
					1 Adjacent pins support Quadrature Encoders			
					2 Adjacent pins support Bi-Directional Coils			
					Range			
					3 0 to 5.25 V only input range			
					4 40-4000 Hz (same freq applies to 4 adjacent pins)			
					5 40-4000 Hz (same freq applies to 4 adjacent pins)			
					Multiplexing			
					6 Multiplexed input refreshes at 20.48 ms			
					7 Standard input refreshes at 2.56 ms			

Pin Schedule MC50 Engine

Customer:	Tucker's		Socket:	0462-201-20141 (qty 50 ea)				
Project:	T-644 Transporter		Blank:	0413-204-2005 (AR)				
Date:	9/30/2019							
Engine Area								
Node:	4							
MC50-110 #11138530			P353CQ2AQ1141RxDxx					
								
Pin #	Pin Type	P	R	M	Description	Wire #	Gauge	Wire Color
C1-P1	Power Ground -				to Battery "NEG"	608	16	Black
C1-P2	Power Supply +			8	to Battery "POS"	610	16	Red
C1-P3	CAN0 +				CAN Hi (Bus B)	575	18	Yellow
C1-P4	CAN0 -				CAN Lo (Bus B)	575	18	Green
C1-P5	AIN/CAN0 shield	3	7		Filter Pressure (0 to 5 V)	666	18	Green
C1-P6	DIN				E-Stop in Engine Area, N.C., +12V = OK	621	18	Red
C1-P7	DIN				Coolant Level Snsr, N.O., Gnd = Low - Not Used			
C1-P8	5 Vdc Sensor Power+			7	to Pressure Snrs, * Max 450mA	661	16	Red
C1-P9	Sensor Ground -				to Pressure Snrs, * Max 450mA	662	16	Black
C1-P10	DIN				Hyd Level Snsr, N.O., +12V = OK - Not Used			
C1-P11	DIN				"Engine Air Filter Needs Service" Indicator Light	609	18	Black/White
C1-P12	DIN				Engine Cover Sensor, +12V = Engine Bay Door Closed	657	22	Black
C1-P13	DIN							
C1-P14	DIN/AIN			7	Pressure Snsr, B-Port (Reverse), 10-90% ratiometric, 400 Bar	678	18	Light Green
C1-P15	DIN/AIN			7	Pressure Snsr, Aux Pump, 10-90% ratiometric, 250 Bar	672	18	Light Blue
C1-P16	DIN/AIN			7	Pressure Snsr, A-Port (Forward), 10-90% ratiometric, 400 Bar	675	18	Orange
C1-P17	DIN/AIN			7	Pressure Snsr, Charge Pump, 10-90% ratiometric, 40 Bar	669	18	Brown/White
C1-P18	DIN/AIN/freqIN	1		7	Crank Battery Voltage	615	18	Blue
C1-P19	DIN/AIN/freqIN	1		7				
C1-P20	CAN1 +				CAN Hi (Bus A)	582	18	Yellow
C1-P21	CAN1 -				CAN Lo (Bus A)	582	18	Green
C1-P22	AIN/CAN1 shield	3	7					
C1-P23	DIN/AIN/freqIN			7	Flow Meter, 8-75 GPM, 1-5 VDC - Not Used			
C1-P24	DIN/AIN/freqIN	1		7	Coolant Level Snsr, Analog, 0.95-1.45 VDC In Fluid. 3.75-4.25 VDC In Air	679	16	White
C1-P25	DIN/AIN/freqIN	1		7				
C1-P26	DIN/AIN/freqIN			7				
C1-P27	AIN/Temp/Rheo	3	7		Hyd Temp Snsr, 2-wire resistive snsr (Ω) - Not Used			
C1-P28	AIN/Temp/Rheo	3	7		Charge Pump Filter Bypass Sensor, ground input to controller	655	16	White
C1-P29	AIN/Temp/Rheo	3	7					
C1-P30	AIN/Temp/Rheo	3	7					
C1-P31	DOut							
C1-P32	DOut							
C1-P33	DOut							
C1-P34	DOut/PVG Pwr 1			7				
C1-P35	DOut/PVG Pwr 2			7				
C1-P36	DOUT/PVG Pwr 3			7				
C1-P37	PWM/D/PVG Out 1	2	4		EDC, Forward, H1 Pump (800 to 1600mA), coil	652	16	White
C1-P38	PWM/D/PVG Out 1	2	4		EDC, Reverse, H1 Pump (800 to 1600mA), coil	653	16	White
C1-P39	PWM/D/PVG Out 1		4		Air Supply valve, coil	628	18	Red/Black
C1-P40	PWM/D/PVG Out 1		4		Vibrator Motor, relay, +12V = relay activated	566	18	Blue/White
C1-P41	PWM/DOut		6		Engine is on and running Output, +12V, available			
C1-P42	PWM/D/PVG Out 2	2	5					
C1-P43	PWM/D/PVG Out 2	2	5		Starter Engine signal, +12V = signal to engine ECU	644	18	Violet
C1-P44	PWM/D/PVG Out 2		5		Horn, relay, +12V = relay activated	630	18	Orange/Black
C1-P45	PWM/D/PVG Out 3		5					
C1-P46	PWM/DOut		6		CCO/ "Propel enable" coil, +12V = Enabled	654	16	White
C1-P47	Power Supply +				to Battery "POS"	611	16	Red
C1-P48	Power Supply +				to Battery "POS"	612	16	Red
C1-P49	Power Supply +				to Battery "POS"	613	16	Red
C1-P50	Power Supply +				to Battery "POS"	614	16	Red
Pairing								
1 Adjacent pins support Quadrature Encoders								
2 Adjacent pins support Bi-Directional Coils								
Range								
3 0 to 5.25 V only input range								
4 40-4000 Hz (same freq applies to 4 adjacent pins)								
5 40-4000 Hz (same freq applies to 4 adjacent pins)								
6 1144 Hz fixed freq								
Multiplexing								
7 Multiplexed input refreshes at 20.48 ms								
8 Standard input refreshes at 2.56 ms								

Pin Schedule MC50 Chassis

Customer:	Tucker's				
Project:	T-644 Transporter			Socket:	0462-201-20141 (qty 50 ea)
Date:	9/30/2019			Blank:	0413-204-2005 (AR)
Chassis					
Node:	5				
MC50-110 #11138530				P353CO2AQ1142RxDxx	



Pin #	Pin Type	P	R	M	Description	Wire #	Gauge	Wire Color
C1-P1	Power Ground -				to Battery "NEG"	126	16	Black
C1-P2	Power Supply +			8	to Battery "POS"	110	16	Red
C1-P3	CAN0 +				CAN Hi (Bus B)	101	18	Yellow
C1-P4	CAN0 -				CAN Lo (Bus B)	101	18	Green
C1-P5	AIN/CAN0 shield	3	7					
C1-P6	DIN				Limit Sw, Elevator, N.O., +12V = Elevator down	137	18	Red
C1-P7	DIN				Parking Brake Sensor, +12V = Brake released	171	16	Black
C1-P8	5 Vdc Sensor Power+			7	to Motor Sensors * Max 450mA	115	16	Red
C1-P9	Sensor Ground -				to Motor Sensors * Max 450mA	116	16	Black
C1-P10	DIN							
C1-P11	DIN							
C1-P12	DIN							
C1-P13	DIN							
C1-P14	DIN/AIN			7	Steer Angle Sensor, 180 deg, 10-90% Ratio	128	18	White
C1-P15	DIN/AIN			7	Left steer linear positon sensor (0.5-4.5v)	129	18	Red
C1-P16	DIN/AIN			7	Right steer linear positon sensor (0.5-4.5v)	130	18	Blue
C1-P17	DIN/AIN			7				
C1-P18	DIN/AIN/freqIN	1		7	Left Motor, Speed, Square Pulse, Quadrature A (78 PPR)	159	22	Green
C1-P19	DIN/AIN/freqIN	1		7	Left Motor, Speed, Square Pulse, Quadrature B	159	22	Orange
C1-P20	CAN1 +							
C1-P21	CAN1 -							
C1-P22	AIN/CAN1 shield	3	7					
C1-P23	DIN/AIN/freqIN			7				
C1-P24	DIN/AIN/freqIN	1		7	Right Motor, Speed, Square Pulse, Quadrature A (78 PPR)	158	22	Green
C1-P25	DIN/AIN/freqIN	1		7	Right Motor, Speed, Square Pulse, Quadrature B	158	22	Orange
C1-P26	DIN/AIN/freqIN			7				
C1-P27	AIN/Temp/Rheo	3	7		Left Motor, Bearing Temp, -40C=2203mV → 104C=734mV	159	22	Blue
C1-P28	AIN/Temp/Rheo	3	7		Right Motor, Bearing Temp, -40C=2203mV → 104C=734mV	158	22	Blue
C1-P29	AIN/Temp/Rheo	3	7		Fuel Level Snsr, ohms			
C1-P30	AIN/Temp/Rheo	3	7					
C1-P31	DOut							
C1-P32	DOut							
C1-P33	DOut							
C1-P34	DOut/PVG Pwr 1			7				
C1-P35	DOut/PVG Pwr 2			7				
C1-P36	DOUT/PVG Pwr 3			7				
C1-P37	PWM/D/PVG Out 1	2	4		EDC, Left Wheel, H1B Motor (500 to 1600mA), coil	157	16	White
C1-P38	PWM/D/PVG Out 1	2	4		EDC, Right Wheel, H1B Motor (500 to 1600mA), coil	156	16	White
C1-P39	PWM/D/PVG Out 1		4		Back-Up Lights & Alarm, relay, +12V = relay activated	136	18	Red
C1-P40	PWM/D/PVG Out 1		4		Head Lights, relay, +12V = relay activated	135	18	Red
C1-P41	PWM/DOut		6		Hydraulic Oil Cooler relay, +12V = relay activated. Engine is on and running.	127	14	Inline Fuse
C1-P42	PWM/D/PVG Out 2	2	5					
C1-P43	PWM/D/PVG Out 2	2	5					
C1-P44	PWM/D/PVG Out 2		5					
C1-P45	PWM/D/PVG Out 3		5					
C1-P46	PWM/DOut		6					
C1-P47	Power Supply +				to Battery "POS"	111	16	Red
C1-P48	Power Supply +				to Battery "POS"	112	16	Red
C1-P49	Power Supply +				to Battery "POS"	113	16	Red
C1-P50	Power Supply +				to Battery "POS"	114	16	Red

Pairing

- 1 Adjacent pins support Quadrature Encoders
- 2 Adjacent pins support Bi-Directional Coils

Range

- 3 0 to 5.25 V only input range
- 4 40-4000 Hz (same freq applies to 4 adjacent pins)
- 5 40-4000 Hz (same freq applies to 4 adjacent pins)
- 6 1144 Hz fixed freq

Multiplexing

- 7 Multiplexed input refreshes at 20.48 ms
- 8 Standard input refreshes at 2.56 ms

Wire Schedule

Wiring 101-126

T-644 Wiring 2020					
Key	Wire Routing	Description	Mfg #	Tucker #	Qty
101	CAN "B" Data Link 4 Module Top Right Green port to MC50 Male Plug Pins 3 & 4	Deutsch DT06-35-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-35-EP11	TB80130-89-EP11	1
		Deutsch W35-P012 Wedge for Plug, Green	Deutsch - W35-P012	TB80130-90-P012	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	3
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	2
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2
		J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065	TB80130-101-18-2S	1
102	CAN "B" Data Link 4 Module Bottom Right Green port to MC50 Deutsch Receptacle for Radar	Deutsch DT06-35-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-35-EP11	TB80130-89-EP11	1
		Deutsch W35-P012 Wedge for Plug, Green	Deutsch - W35-P012	TB80130-90-P012	1
		Deutsch DT06-25-EP11 Male Plug	Deutsch - DT06-25-EP11	TB80130-25-EP11	1
		Deutsch W25-P012 Wedge for Plug	Deutsch - W25-P012	TB80130-26-P012	1
		Quick Disconnect Female 22-18 HS Red (1/4 spade)	Waytek - 30982	ECQDFHS2218RD14	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	5
		Heat Shrink Tubing Red	Cable Ties - HS359-S100-RD	ECHS-0.25-RD	1
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2
		Cable, Interconnect, WB Preview 25'	Preco - HRPV410T	TB80125-2-1	1
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
103	12v Ground Bar and Fuse F10 to Radar Unit	Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNV1614BL	1
		Deutsch DT04-2P-E008 Female Receptacle	Deutsch - DT04-2P-E008	TB80130-69-E008	1
		Deutsch W2P Wedge for Receptacle	Deutsch - W2P	TB80130-70	1
		Deutsch Male Solid Pin 16, 16-20 Wire	Deutsch - 0460-202-16141	TB80130-203P	2
		Heat Shrink Tubing Red	Cable Ties - HS359-S100-RD	ECHS-0.25-RD	2
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	140
		Ring Terminal (5/16-st) 14-16 - Heat Shrink	Waytek - 31905	ECRTHS1614BL516	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 16ga - Red TXL	Waytek - WM16-2	EW16RD	12.5
		Ring Terminal (5/16 stud) 10-12 - Heat Shrink	Waytek - 32804	ECRTHS1210YL516	1
111	MC50 "47" to Main Lower Frame Panel Relay Output Side	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 16ga - Red TXL	Waytek - WM16-2	EW16RD	11.5
112	MC50 "48" to Main Lower Frame Panel Relay Output Side	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 16ga - Red TXL	Waytek - WM16-2	EW16RD	11.5
113	MC50 "49" to Main Lower Frame Panel Relay Output Side	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 16ga - Red TXL	Waytek - WM16-2	EW16RD	11.5
114	MC50 "50" to Main Lower Frame Panel Relay Output Side	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 16ga - Red TXL	Waytek - WM16-2	EW16RD	11.5
115	MC50 "8" to Terminal Strip "2"	Spade Terminal (8st) 14-16 Vinyl Blue	Waytek - 31524	ECSTVI1614BL08	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 16ga - Red TXL	Waytek - WM16-2	EW16RD	13
116	MC50 "9" to Terminal Strip "1"	Spade Terminal (8st) 14-16 Vinyl Blue	Waytek - 31524	ECSTVI1614BL08	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	13
117	Terminal Strip "8" to Oil Cooler Fan Controller Red Signal Wire	Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTVI2218RD06	1
		Butt Connector (8-st) 18-22 - Heat Shrink	Waytek - 30971	ECBCHS2218RD	1
		Wire 18ga - Red TXL	Waytek - WM18-2	EW18RD	47.5
118	Ground Bar to Oil Cooler Fan Controller Black Signal Ground Wire	Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNV2218RD	1
		Butt Connector (8-st) 18-22 - Heat Shrink	Waytek - 30971	ECBCHS2218RD	1
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	35.5
119	Main Relay, Input side to 70 Amp Fan Fuse	Ring Terminal (5/16 stud) 10-12 - Heat Shrink	Waytek - 32804	ECRTHS1210YL516	1
		Ring Terminal (10stud) 10-12 - Heat Shrink	Waytek - 32802	ECRTHS1210YL10	1
		Wire 10ga - Red GXL	Waytek - WL10-2	EW10RD	4
120	70 Amp Fan Fuse to Fan Controller 10ga Red Power Wire	Ring Terminal (10stud) 10-12 - Heat Shrink	Waytek - 32802	ECRTHS1210YL10	1
		Butt Connector 10-12 - Heat Shrink	Waytek - 32980	ECBCHS1210YL10	1
		Wire 10ga - Red GXL	Waytek - WL10-2	EW10RD	34
121	Black wire from Ground Bar to Fan 1 Controller Socket "2" joining Fan 1 Controller Blue Wire into Socket "1"	Pin Terminal 10-12 - Nylon	Waytek - 32785	ECPTNV1210YL	1
		Deutsch Male Solid Pin 12, 12-14 Wire	Deutsch - 0460-204-12141	TB80130-204P	2
		Deutsch WP-25 Wedge for Plug	Deutsch - WP-25	TB80130-86P-2	1
		Deutsch DTP04-2P-EE01 Female Receptacle, Shrink	Deutsch - DTP04-2P-EE01	TB80130-83P-2-EE01	1
		Heat Shrink Tubing Red - 3/4" (2/0 & 4/0 Wire)	Waytek - 22462C	ECHS-0.75-RD	1
		Wire 12ga - Black TXL	Waytek - WM12-0	EW12BK	60
122	Fan 1 Green Wire to Fan 1 Plug "2" and Blue Wire to Fan 1 Plug "1"	Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-204S	2
		Deutsch WP-25 Wedge for Plug	Deutsch - WP-25	TB80130-86P-2	1
		Deutsch DTP06-2S-EE01 Male Plug, Shrink Boot	Deutsch - DTP06-2S-EE01	TB80130-85P-2-EE01	1
		Heat Shrink Tubing Red - 3/4" (2/0 & 4/0 Wire)	Waytek - 22462C	ECHS-0.75-RD	1
123	Black wire from Ground Bar to Fan 2 Controller Socket "2" joining Fan 2 Controller Blue/White Wire into Socket "1"	Pin Terminal 10-12 - Nylon	Waytek - 32785	ECPTNV1210YL	1
		Deutsch Male Solid Pin 12, 12-14 Wire	Deutsch - 0460-204-12141	TB80130-204P	2
		Deutsch WP-25 Wedge for Plug	Deutsch - WP-25	TB80130-86P-2	1
		Deutsch DTP04-2P-EE01 Female Receptacle, Shrink	Deutsch - DTP04-2P-EE01	TB80130-83P-2-EE01	1
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	1
		Wire 12ga - Black TXL	Waytek - WM12-0	EW12BK	74.5
124	Fan 2 Green Wire to Fan 2 Plug "2" and Blue/White Wire to Fan 2 Plug "1"	Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-204S	2
		Deutsch WP-25 Wedge for Plug	Deutsch - WP-25	TB80130-86P-2	1
		Deutsch DTP06-2S-EE01 Male Plug, Shrink Boot	Deutsch - DTP06-2S-EE01	TB80130-85P-2-EE01	1
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	1
125	Ground Bar to Main Relay Right side of Coil	Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNV1614BL	1
		Ring Terminal (10 Stud) 14-16 - Vinyl	Waytek - 31588	ECRTV1614BL10	1
		Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	12
126	Ground Bar to MC50 "1"	Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNV1614BL	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	6

Wiring 127-156

T-644 Wiring 2020					
Key	Wire Routing	Description	Mfg #	Tucker #	Qty
127	MC50 "41" to Terminal Strip "8"	Spade Terminal (8st) 14-16 Vinyl Blue	Waytek - 31524	ECSTV1614BL08	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB801.30-202S	1
		Sealed Fuse Holder 6" 14 Ga ATM/MINI	Waytek - 46277	TB801.30-31-ATM	1
		Fuse, 2A Mini ATM Gray 12V	Waytek - 47425	TB66145-2A	1
128	MC50 "14" to Terminal Strip "3"	Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB801.30-202S	1
		Wire 18ga - White TXL	Waytek - WM18-9	EW18WT	12.5
129	MC50 "15" to Terminal Strip "5"	Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB801.30-202S	1
		Wire 18ga - Red TXL	Waytek - WM18-2	EW18RD	14
130	MC50 "16" to Terminal Strip "7"	Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB801.30-202S	1
		Wire 18ga - Blue TXL	Waytek - WM18-6	EW18BL	14
131	Fuse Panel "5" to Terminal Strip "6"	Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	1
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Wire 18ga - Blue TXL	Waytek - WM18-6	EW18BL	7
132	Fuse Panel "4" to Terminal Strip "4"	Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	1
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Wire 18ga - Red TXL	Waytek - WM18-2	EW18RD	8
133	Fuse Panel "7" to Fuse Panel "7-30", Back Up	Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	2
		Wire 16ga - Red TXL	Waytek - WM16-2	EW16RD	2.5
134	Fuse Panel "9" to Fuse Panel "9-30", Head Lights	Delphi 12110845 Metri-Pack 280 Series, 14-12 GA	Waytek - 31069R	TB66145-14-12	2
		Wire 14ga - Red TXL	Waytek - WM14-2	EW14RD	2.5
135	MC50 "40" to Fuse Panel "9-86", Head Lights	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB801.30-202S	1
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Wire 18ga - Red TXL	Waytek - WM18-2	EW18RD	17
136	MC50 "39" to Fuse Panel "7-86", Back Up	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB801.30-202S	1
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Wire 18ga - Red TXL	Waytek - WM18-2	EW18RD	18
137	MC50 "6" to Fuse Panel "8", Elevator Down	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB801.30-202S	1
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Wire 18ga - Red TXL	Waytek - WM18-2	EW18RD	17
138	Ground Bar to Fuse Panel "8-85", Back Up	Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	19.5
139	Ground Bar to Fuse Panel "10-85", Head Lights	Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	19.5
140	Main Relay, Output side to Fuse Panel Input	Ring Terminal (5/16 stud) 10-12 - Heat Shrink	Waytek - 32804	ECRTHS1210VL516	1
		Ring Terminal (1.0stud) 10-12 - Heat Shrink	Waytek - 32802	ECRTHS1210VL10	1
		Wire 10ga - Red GXL	Waytek - WL10-2	EW10RD	24
150	Ground Bar and Fuse Panel "10-87" to Headlights Socket	Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Delphi 12110845 Metri-Pack 280 Series, 14-12 GA	Waytek - 31069R	TB66145-14-12	1
		Deutsch Male Solid Pin 16, 16-20 Wire	Deutsch - 0460-202-16141	TB801.30-203P	2
		Deutsch W2P Wedge for Receptacle	Deutsch - W2P	TB801.30-70	1
		Deutsch DT04-2P-E008 Female Receptacle	Deutsch - DT04-2P-E008	TB801.30-69-E008	1
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	1
		SJOOW Service Cord 14 Ga. 2 Conductor	Waytek - SJ14-2	TB801.30-101-14-2	284
151	Headlight Plug "1" to 6 Pin Plug "5"	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB801.30-203S	2
		Deutsch W65-P012 Wedge for Plug	Deutsch - W65-P012	TB80575-124-P012	1
		Deutsch DT06-6S-EP11 Male Plug	Deutsch - DT06-6S-EP11	TB80575-123-EP11	1
		Wire 14ga - Red TXL	Waytek - WM14-2	EW14RD	20
152	Headlight Plug "2" to 6 Pin Plug "6"	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB801.30-203S	2
		Wire 14ga - Red TXL	Waytek - WM14-2	EW14RD	20
153	Left Steer Cylinder Transducer to Blue - Ground Bar, Brown - Terminal Strip "4", White - Terminal Strip "5"	Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	2
		Heat Shrink Tubing Red	Cable Ties - HS359-S100-RD	ECHS-0.25-RD	2
		Female Cordset 4 Socket M12 x 10 Meter Straight	IFM - EVC003	TB66213-M12F-4-10M-ST	1
154	Right Steer Cylinder Transducer to Blue - Ground Bar, Brown - Terminal Strip "6", White - Terminal Strip "7"	Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	2
		Heat Shrink Tubing Blue	Cable Ties - HS359-S100-BL	ECHS-0.25-BL	2
		Female Cordset 4 Socket M12 x 5 Meter Straight	IFM - EVC002	TB66213-M12F-4-5M-ST	1
155	Steering Encoder Plug White wire "1", Red Wire "3", Black Wire "4" to White - Terminal Strip "3", Red - Terminal Strip "2", Black Terminal Strip "1"	Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	3
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB801.30-203S	3
		Deutsch W45-P012 Wedge for Plug	Deutsch - W45-P012	TB801.30-86-P012	1
		Deutsch DT06-4S-EP11 Male Plug, Black, Seal, Ret Plug, Deutsch Sealing Size 12-16	Deutsch - DT06-4S-EP11	TB801.30-85-EP11	1
		Heat Shrink Tubing Violet	Deutsch - 114017	TB80575-104	1
		Wire 16 Ga 3 Cond Shielded	Cable Ties - HS359-S100-VT	ECHS-0.25-VT	2
155a	Encoder Receptacle, Wedge, and Sealing Plug	Plug, Deutsch Sealing Size 12-16	Newark - 86K7190	TB801.30-3-16S	163
		Deutsch W4P Wedge for Receptacle	Deutsch - 114017	TB80575-104	1
		Deutsch DT04-4P-E008 Female Receptacle Shrink	Deutsch - W4P	TB801.30-84	1
		Deutsch DT04-4P-E008 Female Receptacle Shrink	Deutsch - DT04-4P-E008	TB801.30-83-E008	1
156	Right Wheel Motor 12v to Black - Ground Bar, White - MC50 "38"	Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB801.30-202S	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB801.30-203S	2
		Deutsch W25-P012 Wedge for Plug	Deutsch - W25-P012	TB801.30-26-P012	1
		Deutsch DT06-2S-EP11 Male Plug	Deutsch - DT06-2S-EP11	TB801.30-25-EP11	1
		Heat Shrink Tubing Orange	Cable Ties - HS359-S100-OR	ECHS-0.25-OR	2
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB801.30-2	60

Wiring 157-507

T-644 Wiring 2020					
Key	Wire Routing	Description	Mfg #	Tucker #	Qty
157	Left Wheel Motor 12v to Black - Ground Bar, White MC50 "37"	Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Deutsch W25-P012 Wedge for Plug	Deutsch - W25-P012	TB80130-26-P012	1
		Deutsch DT06-25-EP11 Male Plug	Deutsch - DT06-25-EP11	TB80130-25-EP11	1
		Heat Shrink Tubing Brown	Cable Ties - HS359-S100-BR	ECHS-0.25-BR	2
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	163
158	Right Wheel Motor Control Plug to Red - Terminal Strip "2", Black Terminal Strip "1", Green - MC50 "24", Orange - MC50 "25", Blue - MC50 "28"	Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	2
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	8
		Deutsch WM-6S Wedge for Plug	Deutsch - WM-6S	TB80130-72	1
		Deutsch DTM06-6S-EE03 Male Plug Shrink Boot	Deutsch - DTM06-6S-EE03	TB80130-71-EE03	1
		Heat Shrink Tubing Red	Cable Ties - HS359-S100-RD	ECHS-0.25-RD	2
		Plug, Deutsch Sealing Size 20	Deutsch - 0413-204-2005	TB80130-64	1
		Wire 22 Ga 6 Cond Shielded Alpha Wire	Newark - 88K1337	TB80130-6-22S	52
159	Left Wheel Motor Control Plug to Red - Terminal Strip "2", Black Terminal Strip "1", Green - MC50 "18", Orange - MC50 "19", Blue - MC50 "27"	Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	2
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	8
		Deutsch WM-6S Wedge for Plug	Deutsch - WM-6S	TB80130-72	1
		Deutsch DTM06-6S-EE03 Male Plug Shrink Boot	Deutsch - DTM06-6S-EE03	TB80130-71-EE03	1
		Heat Shrink Tubing Blue	Cable Ties - HS359-S100-BL	ECHS-0.25-BL	2
		Plug, Deutsch Sealing Size 20	Deutsch - 0413-204-2005	TB80130-64	1
		Wire 22 Ga 6 Cond Shielded Alpha Wire	Newark - 88K1337	TB80130-6-22S	178
160	Fuel Tank Indicator to Black - Ground Bar, White - MC50 "29"	Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Ring Terminal (10-st) 14-16 - Heat Shrink	Waytek - 31802	ECRTHS1614BL10	2
		Heat Shrink Tubing Green	Cable Ties - HS359-S100-GR	ECHS-0.25-GR	2
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	69
		Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
161	Backup Alarm and Lights Socket, White "1", Black, "2" to Black - Ground Bar, White - Fuse Panel "8-87"	Deutsch Male Solid Pin 16, 16-20 Wire	Deutsch - 0460-202-16141	TB80130-203P	2
		Deutsch W2P Wedge for Receptacle	Deutsch - W2P	TB80130-70	1
		Deutsch DT04-2P-E008 Female Receptacle	Deutsch - DT04-2P-E008	TB80130-69-E008	1
		Heat Shrink Tubing Yellow	Cable Ties - HS359-S100-YL	ECHS-0.25-YL	2
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	131
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Deutsch W8S Wedge for Plug	Deutsch - W8S	TB80130-54	1
162	Backup Alarm and Lights Plug "1" to 8 Pin Buss Connector "2"	Deutsch DT06-08SA-E008 Male Plug	Deutsch - DT06-08SA-E008	TB80130-53-E008	1
		Heat Shrink Tubing Yellow	Cable Ties - HS359-S100-YL	ECHS-0.25-YL	2
		Wire 16ga - Red TXL	Waytek - WM16-2	EW16RD	16
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
163	Backup Alarm and Lights Plug "2" to 8 Pin Buss Connector "4"	Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	16
164	8 Pin Buss "8" to Backup Power Socket "A"	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Deutsch W35-P012 Wedge for Plug, Green	Deutsch - W35-P012	TB80130-90-P012	1
		Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11	TB80130-89-EP11	1
		Wire 18ga - Red TXL	Waytek - WM18-2	EW18RD	12
165	8 Pin Buss "6" to Backup Power Socket "B"	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	12
166	Backup Power Socket "C" to Radar Spade Connector	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
		Quick Disconnect Male 22-18 HS Red (1/4 spade)	Waytek - 30918	ECCQDMHS2218RD14	1
167	8 Pin Buss "7" - Red Wire, "5" - White wire from Right Backup Light Plug	Wire 18ga - Blue TXL	Waytek - WM18-6	EW18BL	6
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
168	8 Pin Buss "1" - Red Wire, "3" - White wire from Left Backup Light Plug	Light Back Up Plug T-630	Wholesale - TPLT1408	TB80985-02	1
169	6 Pin Buss "4" - Red Wire, "2" - White wire from Right Drive Light Plug	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Headlight, LED 7" 36 Watt	Wholesale - TUYITAMOTOR	TB66130-40-36W	1
170	6 Pin Buss "3" - Red Wire, "1" - White wire from Left Drive Light Plug	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Headlight, LED 7" 36 Watt	Wholesale - TUYITAMOTOR	TB66130-40-36W	1
171	White Wire - Fuse "6" and Black Wire - MC50 "7" to Park Brake Plug	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		MetriPack 280 Female Terminal 12077411	Waytek - 30037	TB80604-1-MPT	2
		Metri-Pack 280 Series Cable Seal, Green	Waytek - 39000	TB66145-CSGR	2
		MetriPack TPA 280 Series 15300014 2 Contact Blue	Waytek - 38035	TB80604-1-TPA	1
		MetriPack 280 Female Body 15300027	Waytek - 38063	TB80604-1-MPB	1
		Heat Shrink Tubing Clear	Cable Ties - HS359-S100-CL	ECHS-0.25-CL	2
Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	39		
501	Main Start Battery "+" to Starter "+"	Lug Copper 4/0 Ga. (3/8" stud)	Waytek - 36452	ECCLN14/0-0.375	2
		4/0 Battery Cable, Red	Wholesale - TPBC4/0	TB80653-1-4R	55
502	Main Start Battery "-" to Disconnect	Lug Copper 4/0 Ga. (3/8" stud)	Waytek - 36452	ECCLN14/0-0.375	2
		4/0 Battery Cable, Black	Wholesale - TPBC4/0	TB80653-1-4B	30
503	Aux Battery "+" to Fuse Group	Lug Copper 2/0 Ga. (3/8" stud)	Waytek - 36359	ECCLN12/0-0.375	2
		2/0 Battery Cable, Red	Wholesale - TPBC2/0	TB80653-1R	48
504	Aux Battery "-" to Disconnect	Lug Copper 2/0 Ga. (3/8" stud)	Waytek - 36359	ECCLN12/0-0.375	2
		2/0 Battery Cable, Black	Wholesale - TPBC2/0	TB80653-1	31
505	Switched side of Disconnect to Starter "-"	Lug Copper 4/0 Ga. (3/8" stud)	Waytek - 36452	ECCLN14/0-0.375	2
		4/0 Battery Cable, Black	Wholesale - TPBC4/0	TB80653-1-4B	70
506	Switched side of Disconnect to Engine Base Ground	Lug Copper 4/0 Ga. (3/8" stud)	Waytek - 36452	ECCLN14/0-0.375	2
		4/0 Battery Cable, Black	Wholesale - TPBC4/0	TB80653-1-4B	31
507	Alternator to "+" side of Battery Isolator	Lug Copper 1ga. 5/16 Stud	Waytek - 36011	ECCLN101-516	2
		Wire 1ga - Red Battery Cable	Waytek - WZ1-2	EW1RD	108

Wiring 508-551

T-644 Wiring 2020					
Key	Wire Routing	Description	Mfg #	Tucker #	Qty
508	"+" Battery Isolator to upper 300A Fuse	Lug Copper 1ga. 5/16 Stud	Waytek - 36011	ECCLN101-516	2
		Wire 1ga - Red Battery Cable	Waytek - WZ1-2	EW1RD	10
509	Battery Isolator to lower 300A Fuse	Lug Copper 1ga. 5/16 Stud	Waytek - 36011	ECCLN101-516	2
		Wire 1ga - Red Battery Cable	Waytek - WZ1-2	EW1RD	10
510	Upper 300A Fuse to Aux Battery "+"	Lug Copper 1ga. 5/16 Stud	Waytek - 36011	ECCLN101-516	1
		Lug Copper 1ga. 3/8 Stud	Waytek - 36012	ECCLN101-38	1
		Wire 1ga - Red Battery Cable	Waytek - WZ1-2	EW1RD	50
511	Lower 300A Fuse to Start Battery "+"	Lug Copper 1ga. 5/16 Stud	Waytek - 36011	ECCLN101-516	1
		Lug Copper 1ga. 3/8 Stud	Waytek - 36012	ECCLN101-38	1
512	Switched side of Disconnect to Power Hold Relay	Wire 1ga - Red Battery Cable	Waytek - WZ1-2	EW1RD	50
		Lug Copper 4ga. 5/16 Stud	Waytek - 36127	ECCLN104-516	1
513	70A Fuse to Disconnect	Lug Copper 4ga. 3/8 Stud	Waytek - 36063	ECCLN104-38	1
		Wire 4ga - Black Battery Cable	Waytek - WB4-0	EW4BK	
		Lug Copper 4 Ga. (10 stud)	Waytek - 35005	ECCLN104-10	1
514	Power Hold Relay to 70A Fuse	Lug Copper 4ga. 3/8 Stud	Waytek - 36063	ECCLN104-38	1
		Wire 4ga - Black Battery Cable	Waytek - WB4-0	EW4BK	
		Lug Copper 4 Ga. (10 stud)	Waytek - 35005	ECCLN104-10	1
515	Frame Ground "-" to Ground Distribution	Lug Copper 4ga. 5/16 Stud	Waytek - 36127	ECCLN104-516	1
		Lug Copper 4ga. 3/8 Stud	Waytek - 36063	ECCLN104-38	2
		Wire 4ga - Black Battery Cable	Waytek - WB4-0	EW4BK	
516	Start Battery "+" to Lower 300A Fuse above Disconnect	Lug Copper 1ga. 5/16 Stud	Waytek - 36011	ECCLN101-516	1
		Lug Copper 1ga. 3/8 Stud	Waytek - 36012	ECCLN101-38	1
		Wire 1ga - Red Battery Cable	Waytek - WZ1-2	EW1RD	
517	300A to 150A Fuse above Disconnect	Lug Copper 4ga. 5/16 Stud	Waytek - 36127	ECCLN104-516	2
		Wire 4ga - Red Battery Cable	Waytek - WB4-2	EW4RD	
		Lug Copper 4ga. 5/16 Stud	Waytek - 36127	ECCLN104-516	2
519	Ground Distribution to Engine Door Pump Ground	Wire 4ga - Red Battery Cable	Waytek - WB4-2	EW4RD	
		Lug Copper 4ga. 3/8 Stud	Waytek - 36063	ECCLN104-38	2
		Wire 4ga - Black Battery Cable	Waytek - WB4-0	EW4BK	
520	Engine Door Pump Solenoid Power Wire	Lug Copper 4ga. 5/16 Stud	Waytek - 36127	ECCLN104-516	1
		Wire 4ga - Red Battery Cable	Waytek - WB4-2	EW4RD	
521	150A Fuse to Grid Heater Relay	Lug Copper 4 Ga. (1/4 stud)	Wholesale - NO924B	ECCLN104-14	1
		Lug Copper 4ga. 5/16 Stud	Waytek - 36127	ECCLN104-516	1
		Wire 4ga - Red Battery Cable	Waytek - WB4-2	EW4RD	
522	Midi Fuse 80A to Lower Main Frame, Red	Lug Copper 4 Ga. (10 stud)	Waytek - 35005	ECCLN104-10	1
		Lug Copper 4ga. 5/16 Stud	Waytek - 36127	ECCLN104-516	1
523	Engine Base Ground to Lower Main Frame Ground, Black	Battery Cable 4 Ga. 2 Conductor-Blk w/Red Stripe	Waytek - WF4-2	TB80130-101-4-2	300
		Lug Copper 4ga. 3/8 Stud	Waytek - 36063	ECCLN104-38	1
524	Midi Fuse 80A to Engine Box Solenoid, Red	Battery Cable 4 Ga. 2 Conductor-Blk w/Red Stripe	Waytek - WF4-2	TB80130-101-4-2	
		Lug Copper 4 Ga. (10 stud)	Waytek - 35005	ECCLN104-10	1
		Lug Copper 4ga. 5/16 Stud	Waytek - 36127	ECCLN104-516	1
525	Engine Base Ground to Engine Box Ground, Black	Wire 4ga - Red Battery Cable	Waytek - WB4-2	EW4RD	
		Lug Copper 4ga. 3/8 Stud	Waytek - 36063	ECCLN104-38	1
526	Midi Fuse 80A to Cab, Red	Wire 4ga - Black Battery Cable	Waytek - WB4-0	EW4BK	
		Lug Copper 4 Ga. (10 stud)	Waytek - 35005	ECCLN104-10	1
		Lug Copper 4ga. 5/16 Stud	Waytek - 36127	ECCLN104-516	1
527	Engine Base Ground to Cab Ground, Black	Battery Cable 4 Ga. 2 Conductor-Blk w/Red Stripe	Waytek - WF4-2	TB80130-101-4-2	300
		Lug Copper 4ga. 3/8 Stud	Waytek - 36063	ECCLN104-38	1
528	Engine Base Ground to Grid Heater Ground, Black	Battery Cable 4 Ga. 2 Conductor-Blk w/Red Stripe	Waytek - WF4-2	TB80130-101-4-2	
		Lug Copper 4 Ga. (1/4 stud)	Wholesale - NO924B	ECCLN104-14	1
		Lug Copper 4ga. 3/8 Stud	Waytek - 36063	ECCLN104-38	1
541	Battery Isolator "-" to Ground Distribution	Wire 4ga - Black Battery Cable	Waytek - WB4-0	EW4BK	
		Spade Terminal (8st) 14-16 Heat Shrink	Waytek - 31924	ECSTHS1614BL08	1
		Butt Connector 14-16 - Heat Shrink Blue	Waytek - 31070	ECBCHS1614BL	1
542	300A Start Battery Fuse to Vibrator Relay	Wire 14ga - Black TXL	Waytek - WM14-0	EW14BK	
		Ring Terminal (5/16 stud) 10-12 - Heat Shrink	Waytek - 32804	ECRTHS1210YL516	2
543	Ladder side Sensor Wire with Plug. Brown wire "1", Blue Wire "2", Black Wire "3"	Wire 10ga - Red GXL	Waytek - WL10-2	EW10RD	
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	3
		Deutsch W4S-P012 Wedge for Plug	Deutsch - W4S-P012	TB80130-86-P012	1
		Deutsch DT06-4S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-4S-EP11	TB80130-85-EP11	1
		Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	1
544	Ladder Sensor Socket, Brown wire "1", Blue Wire "2", Black wire "3" Side to Hydraulic Tank, Brown wire - Butt Connector for left Relay "87", Blue wire - to Ground Distribution, Black wire to Butt Connector for Right Relay "86"	Female Cordset 4 Socket M12 x 2 Meter 90Deg	IFM - EVC004	TB66213-M12F-4-2M	1
		Spade Terminal (8-st) 18-22 Heat Shrink	Waytek - 30924	ECSTHS2218RD08	1
		Butt Connector (8-st) 18-22 - Heat Shrink	Waytek - 30971	ECBCHS2218RD	2
		Deutsch Male Solid Pin 16, 16-20 Wire	Deutsch - 0460-202-16141	TB80130-203P	3
		Deutsch W4P Wedge for Receptade	Deutsch - W4P	TB80130-84	1
545	Bottom Midi 30A Fuse to Engine Electrical Box Relay for Fuse Block	Deutsch DT04-4P-E008 Female Receptacle Shrink Plug, Deutsch Sealing Size 12-16	Deutsch - DT04-4P-E008	TB80130-83-E008	1
		Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	1
		Tyco Terminal 280756-4 (AWG 12-10) .375 Spade	Newark - 95C1520	TB80130-15	1
546	Midi 60A Fuse to JCB Connector "2"	Ring Terminal (10stud) 10-12 - Heat Shrink	Waytek - 32802	ECRTHS1210YL10	1
		Wire 10ga - Red GXL	Waytek - WL10-2	EW10RD	
		Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-204S	1
551	Power Hold Relay Coil to "C" JCB Power Hold Relay/Fuse Connector	Ring Terminal (10-st) 14-16 - Heat Shrink	Waytek - 31802	ECRTHS1614BL10	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	1
		Wire 16ga - Red TXL	Waytek - WM16-2	EW16RD	

Wiring 552-577

T-644 Wiring 2020					
Key	Wire Routing	Description	Mfg #	Tucker #	Qty
552	Ground Distribution to Power Hold Relay Coil	Spade Terminal (8st) 14-16 Heat Shrink	Waytek - 31924	ECSTHS1614BL08	1
		Ring Terminal (10-st) 14-16 - Heat Shrink	Waytek - 31802	ECRTHS1614BL10	1
		Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	
553	Vibrator Relay to Right Vibrator	Ring Terminal (1/4 stud) 10-12 - Heat Shrink	Waytek - 32803	ECRTHS1210YL14	1
		Spade Terminal (8-st) 10-12 Heat Shrink	Waytek - 32924	ECSTHS1210VL08	1
		Ring Terminal (10stud) 10-12 - Vinyl	Waytek - 32502	ECRTV1210YL10	2
		Cord Extension 12/3 - 50 ft Roll	Amazon - 74050	EW12-3YL	
554	Vibrator Relay to Left Vibrator	Ring Terminal (1/4 stud) 10-12 - Heat Shrink	Waytek - 32803	ECRTHS1210YL14	1
		Spade Terminal (8-st) 10-12 Heat Shrink	Waytek - 32924	ECSTHS1210VL084	1
		Ring Terminal (10stud) 10-12 - Vinyl	Waytek - 32502	ECRTV1210YL10	2
		Cord Extension 12/3 - 50 ft Roll	Amazon - 74050	EW12-3YL	
Pendant Plug	Door Pump Pendant Plug	Deutsch DT06-4S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-4S-EP11	TB80130-85-EP11	1
		Deutsch W45-P012 Wedge for Plug	Deutsch - W45-P012	TB80130-86-P012	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	1
Door Pump	Door Pump Receptacle	Deutsch DT04-4P-E008 Female Receptacle Shrink	Deutsch - DT04-4P-E008	TB80130-83-E008	1
		Deutsch W4P Wedge for Receptacle	Deutsch - W4P	TB80130-84	1
558	Pin 1 to Door Pump Solenoid Energize	Deutsch Male Solid Pin 16, 16-20 Wire	Deutsch - 0460-202-16141	TB80130-203P	1
		Ring Terminal (10-st) 18-22 - Heat Shrink	Waytek - 30802	ECRTHS2218RD10	1
559	Pin 3 to Door Pump Input Power	Wire 18ga - Red TXL	Waytek - WM18-2	EW18RD	
		Deutsch Male Solid Pin 16, 16-20 Wire	Deutsch - 0460-202-16141	TB80130-203P	1
560	Pin 4 to Left Coil Pin 1	Ring Terminal (5/16-st) 22-18 - Heat Shrink	Waytek - 30905	ECRTHS2218RD516	1
		Wire 18ga - Green TXL	Waytek - WM18-5	EW18GR	
561	Left Relay #86 to Door Pump Receptacle Pin 2	Deutsch Male Solid Pin 16, 16-20 Wire	Deutsch - 0460-202-16141	TB80130-203P	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	1
Pump Relays	Black Wires #85, to Ground Distribution Red Wires #30, to Midi 60A	Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	
		Butt Connector (8-st) 18-22 - Heat Shrink	Waytek - 30971	ECBCHS2218RD	1
562	Right Pump Relay to Right Pump Coil Pin 1	Deutsch Male Solid Pin 16, 16-20 Wire	Deutsch - 0460-202-16141	TB80130-203P	1
		Wire 18ga - White TXL	Waytek - WM18-9	EW18WT	
		Deutsch DT06-2S-EP11 Male Plug	Deutsch - DT06-2S-EP11	TB80130-25-EP11	1
		Deutsch W25-P012 Wedge for Plug	Deutsch - W25-P012	TB80130-26-P012	1
563	Ground Distribution to Right Engine Door Pump Coil Pin 2	Wire 18ga - White TXL	Waytek - WM18-9	EW18WT	
		Spade Terminal (8-st) 18-22 Heat Shrink	Waytek - 30924	ECSTHS2218RD08	1
564	Ground Distribution to Left Engine Door Pump Coil Pin 2	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	1
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	
		Spade Terminal (8-st) 18-22 Heat Shrink	Waytek - 30924	ECSTHS2218RD08	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	1
565	Ground Distribution to Vibrator Relay	Deutsch DT06-2S-EP11 Male Plug	Deutsch - DT06-2S-EP11	TB80130-25-EP11	1
		Deutsch W25-P012 Wedge for Plug	Deutsch - W25-P012	TB80130-26-P012	1
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	
		Spade Terminal (8st) 14-16 Heat Shrink	Waytek - 31924	ECSTHS1614BL08	1
566	Vibrator Relay to Engine MC50 Pin 40	Female Terminal Delphi 12048074 Metri-Pack 150	Waytek - 31077	TB64575-57-5	1
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	1
		Connector 2, Female Delphi 12052641 Metri-Pack 150	Waytek - 38201	TB64575-57-6	1
		Female Terminal Delphi 12048074 Metri-Pack 150	Waytek - 31077	TB64575-57-5	1
575	CAN "B" Data Link 4 Module Top Right Green port to MC50 Male Plug Pins 3 & 4	Cable Seal Delphi 15324973 Metri-Pack 150	Waytek - 39008	TB64575-57-4	2
		TPA Delphi 12052634 Metri-Pack 150 2 Contacts	Waytek - 38202	TB64575-57-7	1
		Wire 18ga - Blue w/White Stripe TXL	TieWraps.Com - STW-18 BLWT	EW18BLWT	
		Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11	TB80130-89-EP11	1
		Deutsch W3S-P012 Wedge for Plug, Green	Deutsch - W3S-P012	TB80130-90-P012	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	3
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-202S	2
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2
		J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065	TB80130-101-18-2S	
		576	CAN "B" Data Link 4 Module Bottom Right Green port to Hydraulic Tank Level & Temp Sensor	Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11
Deutsch W3S-P012 Wedge for Plug, Green	Deutsch - W3S-P012			TB80130-90-P012	1
Deutsch DT06-4S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-4S-EP11			TB80130-85-EP11	1
Deutsch W4S-P012 Wedge for Plug	Deutsch - W4S-P012			TB80130-86-P012	1
Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141			TB80130-203S	5
Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C			ECHS-0.75-BK	2
577	12v Ground Bar and Fuse F10 to Hydraulic Tank Level & Temp Sensor	J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065	TB80130-101-18-2S	
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	2
		Heat Shrink Tubing Blue	Cable Ties - HS359-S100-BL	ECHS-0.25-BL	2
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	

Wiring 578-603

T-644 Wiring 2020							
Key	Wire Routing	Description	Mfg #	Tucker #	Qty		
578	CAN "B" Data Link 4 Module Bottom Left Blue to PVG 100 Auger Valve	Deutsch DT06-35-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-35-EP11	TB80130-89-EP11	1		
		Deutsch W3S-1939-P012 Wedge for Plug, Blue	Deutsch - W3S-1939-P012	TB80130-90-1939-P012	1		
		Deutsch DT06-45-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-45-EP11	TB80130-85-EP11	1		
		Deutsch W4S-P012 Wedge for Plug	Deutsch - W4S-P012	TB80130-86-P012	1		
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	5		
		Butt Connector (8-st) 18-22 - Heat Shrink	Waytek - 30971	ECBCHS2218RD	1		
		Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1		
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	1		
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2		
		Type CR, 18/2 Canbus Wire	Northwire - FJ1939182-002	TB80130-101-18-2			
579	12v Ground Bar and Fuse F9 to PVG 100 Auger Valve	Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1		
		Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1		
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2		
		Heat Shrink Tubing White	Cable Ties - HS359-S100-WT	ECHS-0.25-WT	2		
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2			
		Type CR, 18/2 Canbus Wire	Northwire - FJ1939182-002	TB80130-101-18-2			
580	PVG 100 Auger Valve to PVG 32 Valve	Deutsch DT06-45-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-45-EP11	TB80130-85-EP11	2		
		Deutsch W4S-P012 Wedge for Plug	Deutsch - W4S-P012	TB80130-86-P012	2		
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	4		
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2		
581	PVG 100 Auger Valve to PVG 32 Valve	Type CR, 18/2 Canbus Wire	Northwire - FJ1939182-002	TB80130-101-18-2			
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	4		
582	CAN "A" Data Link 5 Module Top Left Green port to MC50 Male Plug Pins20 & 21	Heat Shrink Tubing White	Cable Ties - HS359-S100-WT	ECHS-0.25-WT	2		
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2			
		Deutsch DT06-35-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-35-EP11	TB80130-89-EP11	1		
		Deutsch W3S-P012 Wedge for Plug, Green	Deutsch - W3S-P012	TB80130-90-P012	1		
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	3		
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	2		
		Heat Shrink Tubing Red - 3/4" (2/0 & 4/0 Wire)	Waytek - 22462C	ECHS-0.75-RD	2		
		J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065	TB80130-101-18-25			
		Type CR, 18/2 Canbus Wire	Northwire - FJ1939182-002	TB80130-101-18-2			
		583	CAN "A" Data Link 5 Module Middle Right Green port to JCB HDP26-24-29SE Pins 27, 28, & 29	Deutsch DT06-35-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-35-EP11	TB80130-89-EP11	1
Deutsch W3S-P012 Wedge for Plug, Green	Deutsch - W3S-P012			TB80130-90-P012	1		
Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141			TB80130-2035	4		
Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141			TB80130-2025	2		
Heat Shrink Tubing Red - 3/4" (2/0 & 4/0 Wire)	Waytek - 22462C			ECHS-0.75-RD	2		
J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065			TB80130-101-18-25			
Type CR, 18/2 Canbus Wire	Northwire - FJ1939182-002			TB80130-101-18-2			
584	CAN "A" Data Link 5 Module Middle Left Green port to JCB Test Port C, D, & E			Deutsch DT06-35-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-35-EP11	TB80130-89-EP11	1
				Deutsch W3S-P012 Wedge for Plug, Green	Deutsch - W3S-P012	TB80130-90-P012	1
				Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	4
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	2		
		Heat Shrink Tubing Red - 3/4" (2/0 & 4/0 Wire)	Waytek - 22462C	ECHS-0.75-RD	2		
		J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065	TB80130-101-18-25			
		Type CR, 18/2 Canbus Wire	Northwire - FJ1939182-002	TB80130-101-18-2			
		585	CAN "B" Data Link 5 Module Top Left Blue port to "B" Bulkhead adaptor at Cab	Deutsch DT06-35-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-35-EP11	TB80130-89-EP11	1
				Deutsch W3S-1939-P012 Wedge for Plug, Blue	Deutsch - W3S-1939-P012	TB80130-90-1939-P012	2
				Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	6
Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C			ECHS-0.75-BK	2		
Type CR, 18/2 Canbus Wire	Northwire - FJ1939182-002			TB80130-101-18-2			
Deutsch DT06-35-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-35-EP11			TB80130-89-EP11	2		
Deutsch W3S-1939-P012 Wedge for Plug, Blue	Deutsch - W3S-1939-P012			TB80130-90-1939-P012	2		
Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141			TB80130-2035	6		
Butt Connector (8-st) 18-22 - Heat Shrink	Waytek - 30971			ECBCHS2218RD	1		
Pin Terminal 22-18 - Nylon	Waytek - 30785			ECPTNY2218RD	1		
586	CAN "A" Data Link 5 Module Bottom Left Blue port to "A" Bulkhead adaptor at Cab	Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	1		
		Heat Shrink Tubing Red - 3/4" (2/0 & 4/0 Wire)	Waytek - 22462C	ECHS-0.75-RD	2		
		Type CR, 18/2 Canbus Wire	Northwire - FJ1939182-002	TB80130-101-18-2			
		Deutsch DT06-35-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-35-EP11	TB80130-89-EP11	1		
		Deutsch W3S-1939-P012 Wedge for Plug, Blue	Deutsch - W3S-1939-P012	TB80130-90-1939-P012	2		
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	6		
		Butt Connector (8-st) 18-22 - Heat Shrink	Waytek - 30971	ECBCHS2218RD	1		
		Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1		
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	1		
		Heat Shrink Tubing Red - 3/4" (2/0 & 4/0 Wire)	Waytek - 22462C	ECHS-0.75-RD	2		
587	PVG 100 Auger Valve to CAN "B" Data Link 4 Module Bottom Left Blue	Type CR, 18/2 Canbus Wire	Northwire - FJ1939182-002	TB80130-101-18-2			
		Deutsch DT06-35-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-35-EP11	TB80130-89-EP11	1		
		Deutsch W3S-1939-P012 Wedge for Plug, Blue	Deutsch - W3S-1939-P012	TB80130-90-1939-P012	1		
		Deutsch DT06-45-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-45-EP11	TB80130-85-EP11	1		
		Deutsch W4S-P012 Wedge for Plug	Deutsch - W4S-P012	TB80130-86-P012	1		
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	5		
		Butt Connector (8-st) 18-22 - Heat Shrink	Waytek - 30971	ECBCHS2218RD	1		
		Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1		
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	1		
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2		
601	Engine Panel Controller Power Relay, Input side to JCB Power Hold Connector "G"	Type CR, 18/2 Canbus Wire	Northwire - FJ1939182-002	TB80130-101-18-2			
		Sealed Fuse Holder 12" 10 Ga ATC/ATO	Waytek - 46238	TB80130-31-10GA	1		
		Fuse LED ATC 30 Amp-Green	Waytek - 46287	TB80652-11	1		
		Ring Terminal (5/16 stud) 10-12 - Heat Shrink	Waytek - 32804	ECRTHS1210YL516	1		
		Butt Connector 10-12 - Heat Shrink	Waytek - 32980	ECBCHS1210	1		
		Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-2045	1		
		Wire 10ga - Red GXL	Waytek - WL10-2	EW10RD	1		
		Sealed Fuse Holder 12" 10 Ga ATC/ATO	Waytek - 46238	TB80130-31-10GA	1		
		Fuse LED ATC 30 Amp-Green	Waytek - 46287	TB80652-11	1		
		Ring Terminal (5/16 stud) 10-12 - Heat Shrink	Waytek - 32804	ECRTHS1210YL516	1		
602	Engine Panel Controller Power Relay, Input side to JCB Power Hold Connector "E"	Butt Connector 10-12 - Heat Shrink	Waytek - 32980	ECBCHS1210	1		
		Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-2045	1		
		Wire 10ga - Red GXL	Waytek - WL10-2	EW10RD	1		
		Ring Terminal (10stud) 10-12 - Heat Shrink	Waytek - 32802	ECRTHS1210YL10	1		
		Tyco Terminal 280756-4 (AWG 12-10) .375 Spade	Newark - 95C1520	TB80130-15	1		
		Wire 10ga - Red GXL	Waytek - WL10-2	EW10RD	1		

Wiring 604-629

T-644 Wiring 2020					
Key	Wire Routing	Description	Mfg #	Tucker #	Qty
604	Engine Panel, Fuse Panel Jumper to second Stud	Ring Terminal (10stud) 10-12 - Heat Shrink Wire 10ga - Red GXL	Waytek - 32802 Waytek - WL10-2	ECRTHS1210YL10 EW10RD	2 1
605	Engine Panel Terminal Strip "3" to Fuse Panel Relay "86"	Spade Terminal (8st) 14-16 Vinyl Blue Tyco Terminal 42281-1 (AWG 18-14) ,250 Spade Wire 16ga - Red TXL	Waytek - 31524 Newark - 33B9009 Waytek - WM16-2	ECSTV11614BL08 TB80130-14 EW16RD	1 1 1
606	Engine Panel Ground to Fuse Panel Relay "85"	Pin Terminal 16-14 - Nylon Tyco Terminal 42281-1 (AWG 18-14) ,250 Spade Wire 16ga - Black TXL	Waytek - 31785 Newark - 33B9009 Waytek - WM16-0	ECPTNY1614BL TB80130-14 EW16BK	1 1 1
607	Engine Panel Ground to JCB Test Port "A"	Pin Terminal 22-18 - Nylon Deutsch Male Solid Pin 16, 16-20 Wire Wire 18ga - Black TXL	Waytek - 30785 Deutsch - 0460-202-16141 Waytek - WM18-0	ECPTNY2218RD TB80130-203P EW18BK	1 1 1
608	Engine Panel Ground to MC50 "1"	Pin Terminal 16-14 - Nylon Deutsch Female Solid Socket 20, 16-18 Wire Wire 16ga - Black TXL	Waytek - 31785 Deutsch - 0462-005-20141 Waytek - WM16-0	ECPTNY1614BL TB80130-202S EW16BK	1 1 1
609	Engine Panel MC50 "11" to Engine Connector "9"	Deutsch Female Solid Socket 20, 16-18 Wire Deutsch Female Solid Socket 16, 16-20 Wire Wire 18ga - Black w/White Stripe TXL	Deutsch - 0462-005-20141 Deutsch - 0462-201-16141 TieWraps.Com - STW-18 BKWT	TB80130-202S TB80130-203S EW18BKWT	1 1 1
610	Engine Panel MC50 "2" to Main Engine Panel Relay Output Side	Ring Terminal (5/16-st) 14-16 - Heat Shrink Deutsch Female Solid Socket 20, 16-18 Wire Wire 16ga - Red TXL	Waytek - 31905 Deutsch - 0462-005-20141 Waytek - WM16-2	ECRTHS1614BL516 TB80130-202S EW16RD	1 1 1
611	Engine Panel MC50 "47" to Main Engine Panel Relay Output Side	Ring Terminal (5/16 stud) 10-12 - Heat Shrink Deutsch Female Solid Socket 20, 16-18 Wire Wire 16ga - Red TXL	Waytek - 32804 Deutsch - 0462-005-20141 Waytek - WM16-2	ECRTHS1210YL516 TB80130-202S EW16RD	1 1 1
612	Engine Panel MC50 "48" to Main Engine Panel Relay Output Side	Deutsch Female Solid Socket 20, 16-18 Wire Wire 16ga - Red TXL	Deutsch - 0462-005-20141 Waytek - WM16-2	TB80130-202S EW16RD	1 1
613	Engine Panel MC50 "49" to Main Engine Panel Relay Output Side	Deutsch Female Solid Socket 20, 16-18 Wire Wire 16ga - Red TXL	Deutsch - 0462-005-20141 Waytek - WM16-2	TB80130-202S EW16RD	1 1
614	Engine Panel MC50 "50" to Main Engine Panel Relay Output Side	Deutsch Female Solid Socket 20, 16-18 Wire Wire 16ga - Red TXL	Deutsch - 0462-005-20141 Waytek - WM16-2	TB80130-202S EW16RD	1 1
615	Engine Panel MC50 "18" to Main Engine Panel Grid Heater Relay Input Side (Wire 521)	Ring Terminal (1/4-st) 14-16 - Heat Shrink Deutsch Female Solid Socket 20, 16-18 Wire Wire 18ga - Blue TXL	Waytek - 31803 Deutsch - 0462-005-20141 Waytek - WM18-6	ECRTHS1614BL14 TB80130-202S EW18BL	1 1 1
616	Power Hold Relay Connector "T" to Engine Connector "8"	Deutsch Female Solid Socket 16, 16-20 Wire Wire 16ga - Brown TXL	Deutsch - 0462-201-16141 Waytek - WM16-1	TB80130-203S EW16BR	2 1
617	Engine Panel Ground to Main Engine Panel Relay Coil	Pin Terminal 16-14 - Nylon Ring Terminal (10-st) 14-16 - Heat Shrink Wire 16ga - Black TXL	Waytek - 31785 Waytek - 31802 Waytek - WM16-0	ECPTNY1614BL ECRTHS1614BL10 EW16BK	1 1 1
618	Engine Panel Relay Coil to Fuse Panel "F19"	Ring Terminal (10-st) 14-16 - Heat Shrink Delphi 12110847 Metri-Pack 280 Series, 18-16 GA Wire 16ga - Red TXL	Waytek - 31802 Waytek - 30069R Waytek - WM16-2	ECRTHS1614BL10 TB66145-18-16 EW16RD	1 1 1
619	Engine Panel Terminal Strip "4" to Fuse Panel "F18"	Spade Terminal (8st) 14-16 Vinyl Blue Delphi 12110847 Metri-Pack 280 Series, 18-16 GA Wire 16ga - Red TXL	Waytek - 31524 Waytek - 30069R Waytek - WM16-2	ECSTV11614BL08 TB66145-18-16 EW16RD	1 1 1
620	Engine Panel E-Stop to Fuse Panel "F7"	Spade Terminal (8-st) 22-18 Vinyl Red Delphi 12110847 Metri-Pack 280 Series, 18-16 GA Wire 18ga - Red TXL	Waytek - 30524 Waytek - 30069R Waytek - WM18-2	ECSTV12218RD08 TB66145-18-16 EW18RD	1 1 1
621	Engine Panel E-Stop to MC50 "6"	Spade Terminal (8-st) 22-18 Vinyl Red Deutsch Female Solid Socket 20, 16-18 Wire Wire 18ga - Red TXL	Waytek - 30524 Deutsch - 0462-005-20141 Waytek - WM18-2	ECSTV12218RD08 TB80130-202S EW18RD	1 1 1
622	Engine Panel Terminal Strip "6" to Engine Plug "10"	Spade Terminal (8st) 14-16 Vinyl Blue Deutsch Female Solid Socket 16, 16-20 Wire Wire 14ga - Red TXL	Waytek - 31524 Deutsch - 0462-201-16141 Waytek - WM14-2	ECSTV11614BL08 TB80130-203S EW14RD	1 1 1
623	Engine Panel E-Stop to Engine Plug "6"	Spade Terminal (8-st) 22-18 Vinyl Red Deutsch Female Solid Socket 16, 16-20 Wire Wire 18ga - Orange TXL	Waytek - 30524 Deutsch - 0462-201-16141 Waytek - WM18-3	ECSTV12218RD08 TB80130-203S EW18OR	1 1 1
624	Engine Panel JCB Test Port Fuse Panel "F6"	Deutsch Male Solid Pin 16, 16-20 Wire Delphi 12110847 Metri-Pack 280 Series, 18-16 GA Wire 18ga - Red TXL	Deutsch - 0460-202-16141 Waytek - 30069R Waytek - WM18-2	TB80130-203P TB66145-18-16 EW18RD	1 1 1
625	Engine Panel Fuse Panel "F17" Black Wire to Lower Frame Main Relay Coil Left Side	Ring Terminal (10stud) 10-12 - Heat Shrink Delphi 12110845 Metri-Pack 280 Series, 14-12 GA Cord Extension 12/3 - 50 ft Roll	Waytek - 32802 Waytek - 31069R Amazon - 74050	ECRTHS1210YL10 TB66145-14-12 EW12-3YL	1 1 1
626	Engine Panel Grid Heater Relay to Grid Heater "+"	Lug Copper 4 Ga. (1/4 stud) Lug Copper 4 Ga. (10 stud) Wire 4ga - Red Battery Cable	Wholesale - NO924B Waytek - 35005 Waytek - WB4-2	ECCLNIO4-14 ECCLNIO4-10 EW4RD	1 1 1
627	Engine Panel Ground to Air Valve "2" Air Pressure to Brake Valve	Pin Terminal 16-14 - Nylon Deutsch Female Solid Socket 16, 16-20 Wire Deutsch W25-P012 Wedge for Plug Deutsch DT06-25-EP11 Male Plug Wire 18ga - Black TXL	Waytek - 31785 Deutsch - 0462-201-16141 Deutsch - W25-P012 Deutsch - DT06-25-EP11 Waytek - WM18-0	ECPTNY1614BL TB80130-203S TB80130-26-P012 TB80130-25-EP11 EW18BK	1 1 1 1 1
628	Engine Panel MC50 "39" to Air Valve "1" Air Pressure to Brake Valve	Deutsch Female Solid Socket 20, 16-18 Wire Deutsch Female Solid Socket 16, 16-20 Wire Heat Shrink Tubing Red - 3/4" (2/0 & 4/0 Wire) Wire 18ga - Red w/Black Stripe TXL	Deutsch - 0462-005-20141 Deutsch - 0462-201-16141 Waytek - 22462C TieWraps.Com - STW-18 RDBK	TB80130-202S TB80130-203S ECHS-0.75-RD EW18RDBK	1 1 2 1
629	Engine Panel Ground to Air Valve "2" Horn	Pin Terminal 16-14 - Nylon Deutsch Female Solid Socket 16, 16-20 Wire Deutsch W25-P012 Wedge for Plug Deutsch DT06-25-EP11 Male Plug Wire 18ga - Black TXL	Waytek - 31785 Deutsch - 0462-201-16141 Deutsch - W25-P012 Deutsch - DT06-25-EP11 Waytek - WM18-0	ECPTNY1614BL TB80130-203S TB80130-26-P012 TB80130-25-EP11 EW18BK	1 1 1 1 1

Wiring 630-655

T-644 Wiring 2020					
Key	Wire Routing	Description	Mfg #	Tucker #	Qty
630	Engine Panel MC50 "44" to Air Valve "1" Horn	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2
		Wire 18ga - Orange w/Black Stripe TXL	TieWraps.Com - STW-18 ORBK	EW18ORBK	1
631	Engine Panel Ground to Lift Pump "2"	Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
		Deutsch W25-P012 Wedge for Plug	Deutsch - W25-P012	TB80130-26-P012	1
		Deutsch DT06-25-EP11 Male Plug	Deutsch - DT06-25-EP11	TB80130-25-EP11	1
632	Power Hold Relay Connector "L" to Lift Pump "1"	Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
633	Engine Panel Grid Heater Relay Coil "2" to Engine Plug "25"	Connector, Cable Seal (Amp 281934-2)	Waytek - 38277	TB66251	1
		Connector, Female Terminal (Amp 282110-1)	Waytek - 38271	TB66252	1
		Connector, Female Body (Amp 282080-1)	Waytek - 38280	TB66250	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
634	Engine Panel Grid Heater Relay Coil "1" to Power Hold Relay "H"	Wire 18ga - Orange w/Black Stripe TXL	TieWraps.Com - STW-18 ORBK	EW18ORBK	1
		Connector, Cable Seal (Amp 281934-2)	Waytek - 38277	TB66251	1
		Connector, Female Terminal (Amp 282110-1)	Waytek - 38271	TB66252	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
635	Power Hold Relay Connector "X" to Engine Connector "4"	Wire 18ga - Yellow TXL	Waytek - WM18-4	EW18YL	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
636	Power Hold Relay Connector "5" to Engine Connector "26"	Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-2045	1
		Wire 14ga - Green TXL	Waytek - WM14-5	EW14GR	1
637	Power Hold Relay Connector "P" to Engine Connector "24"	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	2
638	Power Hold Relay Connector "N" to Engine Connector "12"	Wire 18ga - Tan TXL	Waytek - WM18-11	EW18TA	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
639	Power Hold Relay Connector "M" to Engine Connector "5"	Wire 18ga - Red w/Black Stripe TXL	TieWraps.Com - STW-18 RDBK	EW18RDBK	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
640	Engine Panel Ground to JCB Water In Fuel Sensor "C"	Wire 18ga - Blue w/White Stripe TXL	TieWraps.Com - STW-18 BLWT	EW18BLWT	1
		Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
		Deutsch W3S-P012 Wedge for Plug, Green	Deutsch - W3S-P012	TB80130-90-P012	1
641	Power Hold Relay Connector "F" to JCB Water In Fuel Sensor "A"	Deutsch DT06-35-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-35-EP11	TB80130-89-EP11	1
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	1
642	JCB Water In Fuel Sensor "B" to Engine Connector "11"	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Wire 18ga - Brown w/White Stripe TXL	TieWraps.Com - STW-18 BRWT	EW18BRWT	1
643	Power Hold Relay Connector "B" to Engine Connector "1"	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Wire 18ga - Green TXL	Waytek - WM18-5	EW18GN	1
644	Engine Panel MC50 "43" to Engine Connector "7"	Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-2045	2
		Wire 10ga - Red GXL	Waytek - WL10-2	EW10RD	1
651	12v Ground Bar and Fuse F8 to Air Dryer	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Butt Connector 14-16 - Heat Shrink Blue	Waytek - 31070	ECBCHS1614BL	2
		Heat Shrink Tubing Violet	Cable Ties - HS359-S100-VT	ECHS-0.25-VT	2
652	12v Ground Bar and Connector Pin "37" to Transmission Pump Left Side	Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
653	12v Ground Bar and Connector Pin "38" to Transmission Pump Right Side	Deutsch DT06-25-EP11 Male Plug	Deutsch - DT06-25-EP11	TB80130-25-EP11	1
		Deutsch W25-P012 Wedge for Plug	Deutsch - W25-P012	TB80130-26-P012	1
		Heat Shrink Tubing Green	Cable Ties - HS359-S100-GR	ECHS-0.25-GR	2
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	1
654	12v Ground Bar and Connector Pin "46" to Transmission Pump Center	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Deutsch DT06-25-EP11 Male Plug	Deutsch - DT06-25	TB80130-25	1
655	12v Ground Bar and Connector Pin "28" to Transmission Pump Charge Filter	Deutsch W25C Keyed Wedge for Plug	Deutsch - W25C	TB80130-26C	1
		Heat Shrink Tubing Red	Cable Ties - HS359-S100-RD	ECHS-0.25-RD	2
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	3
655	12v Ground Bar and Connector Pin "28" to Transmission Pump Charge Filter	Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Deutsch DTM06-25-E007 Male Plug, Shrink	Deutsch - DTM06-25-E007	TB80130-67-E007	1
		Deutsch WM-2S Wedge for Plug	Deutsch - WM-2S	TB80130-68	1
		Heat Shrink Tubing Clear	Cable Ties - HS359-S100-CL	ECHS-0.25-CL	2
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	1

Wiring 656-679

T-644 Wiring 2020					
Key	Wire Routing	Description	Mfg #	Tucker #	Qty
656	Ground Bar to Engine Connector "3"	Pin Terminal 10-12 - Nylon	Waytek - 32785	ECPYNY1210YL	1
		Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-2045	1
		Wire 10ga - Black GXL	Waytek - WL10-0	EW10BK	
657	Engine Door Sensor Socket. Engine Panel - Blue wire to Ground Bar, Brown Wire to Fuse Panel "F5", Black Wire to MC50 "12", Socket end - Blue wire to "3"	Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPYNY2218RD	1
		Female Cordset 4 Socket M12 x 2 Meter 90Deg	IFM - EVC004	TB66213-M12F-4-2M	1
661	MC50 Connector Pin "8" to Deutsch 6 Pin Buss Connector "1"	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
		Deutsch DT06-6S-EP11 Male Plug	Deutsch - DT06-6S-EP11	TB80575-123-EP11	1
		Deutsch W6S-P012 Wedge for Plug	Deutsch - W6S-P012	TB80575-124-P012	1
		Wire 16ga - Red TXL	Waytek - WM16-2	EW16RD	
662	MC50 Connector Pin "9" to Deutsch 6 Pin Buss Connector "3"	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
663	Deutsch 6 Pin Buss Connector "2" - White Wire to Deutsch 12 Pin Buss Connector "12". 6 Pin Connector "4, Black Wire" to 12 Pin "9"	Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	4
		Deutsch DT06-12SA Male Plug	Deutsch - DT06-12SA	TB80130-115	1
		Deutsch W12S Wedge for Plug	Deutsch - W12S	TB80130-116	1
664	Deutsch 12 Pin Buss Connector "11" to Filter Pressure Transducer "B"	Heat Shrink Tubing Brown	Cable Ties - HS359-S100-BR	ECHS-0-25-BR	2
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
665	Deutsch 12 Pin Buss Connector "8" to Filter Pressure Transducer "A"	Packard Connector Female 12103881	Waytek - 31091	TB80130-41-3S	1
		3 Contact Packard Connector 12065287	McMaster - 829-12065287	TB80130-41-3	1
666	Filter Pressure Transducer "C" to MC50 Connector "5"	Wire 18ga - White TXL	Waytek - WM18-9	EW18WT	
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
667	Deutsch 12 Pin Buss Connector "10" to Charge Pressure Transducer "2"	Packard Connector Female 12103881	Waytek - 31091	TB80130-41-3S	1
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	
668	Deutsch 12 Pin Buss Connector "7" to Charge Pressure Transducer "1"	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Deutsch DT06-4S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-4S-EP11	TB80130-85-EP11	1
		Deutsch W4S-P012 Wedge for Plug	Deutsch - W4S-P012	TB80130-86-P012	1
		Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	1
669	Charge Pressure Transducer "4" to MC50 Connector "17"	Wire 18ga - White TXL	Waytek - WM18-9	EW18WT	
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
670	Deutsch 12 Pin Buss Connector "3" to Aux Pressure Transducer "2"	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
		Wire 18ga - Brown w/White Stripe TXL	TieWraps.Com - STW-18 BRWT	EW18BRWT	
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Deutsch DT06-4S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-4S-EP11	TB80130-85-EP11	1
671	Deutsch 12 Pin Buss Connector "6" to Aux Pressure Transducer "1"	Deutsch W4S-P012 Wedge for Plug	Deutsch - W4S-P012	TB80130-86-P012	1
		Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	1
672	Aux Pressure Transducer "4" to MC50 Connector "15"	Wire 18ga - White TXL	Waytek - WM18-9	EW18WT	
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
673	Deutsch 12 Pin Buss Connector "2" to Transmission Forward Pressure Transducer "2"	Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
		Wire 18ga - Light Blue TXL	Waytek - WM18-16	EW18LB	
674	Deutsch 12 Pin Buss Connector "5" to Transmission Forward Pressure Transducer "1"	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Deutsch DT06-4S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-4S-EP11	TB80130-85-EP11	1
		Deutsch W4S-P012 Wedge for Plug	Deutsch - W4S-P012	TB80130-86-P012	1
		Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	1
675	Transmission Forward Pressure Transducer "4" to MC50 Connector "16"	Wire 18ga - White TXL	Waytek - WM18-9	EW18WT	
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
676	Deutsch 12 Pin Buss Connector "1" to Transmission Reverse Pressure Transducer "2"	Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
677	Deutsch 12 Pin Buss Connector "4" to Transmission Reverse Pressure Transducer "1"	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
		Wire 18ga - Orange TXL	Waytek - WM18-3	EW18OR	
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Deutsch DT06-4S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-4S-EP11	TB80130-85-EP11	1
678	Transmission Reverse Pressure Transducer "4" to MC50 Connector "14"	Deutsch W4S-P012 Wedge for Plug	Deutsch - W4S-P012	TB80130-86-P012	1
		Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	1
679	Low Water Level Connector, Red Wire "A", White Wire "B", Black Wire "C" to Engine Panel. Red Wire to Buss 6 Pin Connector "6", Black Wire to Buss 6 Pin Connector "5", and White Wire to MC50 Connector "24"	Wire 18ga - White TXL	Waytek - WM18-9	EW18WT	
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Heat Shrink Tubing Brown	Cable Ties - HS359-S100-BR	ECHS-0-25-BR	2
		Wire 16 Ga 3 Cond Shielded	Newark - 86K7190	TB80130-3-16S	
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	2
		Connector 3, Female Delphi 12110293 Metri-Pack 150	Waytek - 38204	TB64575-57-2	1
		TPA Delphi 12052845 Metri-Pack 150 3 Contacts	Waytek - 38205	TB64575-57-3	1
679	Cable Seal Delphi 15324973 Metri-Pack 150	Waytek - 31077	TB64575-57-5	3	
		Waytek - 39008	TB64575-57-4	3	

Wiring 801-820

T-644 Wiring 2020					
Key	Wire Routing	Description	Mfg #	Tucker #	Qty
801	CAN "B" Bulkhead Connector to CAN "B" "Y" Connector Single End	Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11	TB80130-89-EP11	1
		Deutsch W3S-1939-P012 Wedge for Plug, Blue	Deutsch - W3S-1939-P012	TB80130-90-1939-P012	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	3
		Deutsch Male Solid Pin 16, 16-20 Wire	Deutsch - 0460-202-16141	TB80130-203P	3
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2
		J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065	TB80130-101-18-2S	1
802	CAN "A" Bulkhead Connector to CAN "A" "Y" Connector Single End	Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11	TB80130-89-EP11	1
		Deutsch W3S-1939-P012 Wedge for Plug, Blue	Deutsch - W3S-1939-P012	TB80130-90-1939-P012	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	3
		Deutsch Male Solid Pin 16, 16-20 Wire	Deutsch - 0460-202-16141	TB80130-203P	3
		Heat Shrink Tubing Red - 3/4" (2/0 & 4/0 Wire)	Waytek - 22462C	ECHS-0.75-RD	2
		J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065	TB80130-101-18-2S	1
803	CAN "B" "Y" Connector "Y" End Green to Wiring Box Bulkhead "B" Connector	Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11	TB80130-89-EP11	1
		Deutsch W3S-P012 Wedge for Plug, Green	Deutsch - W3S-P012	TB80130-90-P012	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	3
		Deutsch Male Solid Pin 16, 16-20 Wire	Deutsch - 0460-202-16141	TB80130-203P	3
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2
		J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065	TB80130-101-18-2S	12
804	CAN "A" "Y" Connector "Y" End Green to Wiring Box Bulkhead "A" Connector	Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11	TB80130-89-EP11	1
		Deutsch W3S-P012 Wedge for Plug, Green	Deutsch - W3S-P012	TB80130-90-P012	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	3
		Deutsch Male Solid Pin 16, 16-20 Wire	Deutsch - 0460-202-16141	TB80130-203P	3
		Heat Shrink Tubing Red - 3/4" (2/0 & 4/0 Wire)	Waytek - 22462C	ECHS-0.75-RD	2
		J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065	TB80130-101-18-2S	12
805	CAN "B" "Y" Connector "Y" End Blue to CAN Datalink Module Top Right Blue	Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11	TB80130-89-EP11	2
		Deutsch W3S-1939-P012 Wedge for Plug, Blue	Deutsch - W3S-1939-P012	TB80130-90-1939-P012	2
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	6
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2
				J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065
806	CAN "A" "Y" Connector "Y" End Blue to CAN "A" "Y" Connector at Display Single End Blue	Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11	TB80130-89-EP11	2
		Deutsch W3S-1939-P012 Wedge for Plug, Blue	Deutsch - W3S-1939-P012	TB80130-90-1939-P012	2
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	6
		Heat Shrink Tubing Red - 3/4" (2/0 & 4/0 Wire)	Waytek - 22462C	ECHS-0.75-RD	2
				J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065
807	CAN "A" "Y" Connector at Display "Y" End Green to 6 & 7 on Display	Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11	TB80130-89-EP11	1
		Deutsch W3S-P012 Wedge for Plug, Green	Deutsch - W3S-P012	TB80130-90-P012	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-202S	2
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	3
		Heat Shrink Tubing Red - 3/4" (2/0 & 4/0 Wire)	Waytek - 22462C	ECHS-0.75-RD	2
		J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065	TB80130-101-18-2S	12
808	CAN "B" Datalink Module Top Center Green to MC24 Pins 3 & 4	Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11	TB80130-89-EP11	1
		Deutsch W3S-P012 Wedge for Plug, Green	Deutsch - W3S-P012	TB80130-90-P012	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-202S	2
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	3
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2
		J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065	TB80130-101-18-2S	12
809	CAN "B" Datalink Module Top Left Green to Display Pins 3 & 4	Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11	TB80130-89-EP11	1
		Deutsch W3S-P012 Wedge for Plug, Green	Deutsch - W3S-P012	TB80130-90-P012	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-202S	2
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	3
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2
		J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065	TB80130-101-18-2S	12
810	CAN "B" Datalink Module Bottom Left Green to Left Joystick Pins 3 & 4	Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11	TB80130-89-EP11	1
		Deutsch W3S-P012 Wedge for Plug, Green	Deutsch - W3S-P012	TB80130-90-P012	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	5
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2
				J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065
811	Black - 12v Ground Bar, White Fuse - "F19" to Left Joystick Black - "1", White - "2"	Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	2
		Heat Shrink Tubing Brown	Cable Ties - H3359-S100-BR	ECHS-0.25-BR	2
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	1
812	CAN "B" Datalink Module Bottom Center Green to Right Joystick Pins 3 & 4	Deutsch DT06-3S-EP11 Male Plug, Black, Seal, Ret	Deutsch - DT06-3S-EP11	TB80130-89-EP11	1
		Deutsch W3S-P012 Wedge for Plug, Green	Deutsch - W3S-P012	TB80130-90-P012	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	5
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	2
				J1939/11 18/2 Canbus Cable Shielded No Filler	Waytek - CB23-00065
813	Black - 12v Ground Bar, White Fuse - "F20" to Left Joystick Black - "1", White - "2"	Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	2
		Heat Shrink Tubing Green	Cable Ties - H3359-S100-GR	ECHS-0.25-GR	2
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	1
820	Black Wire in 12ga Extension, Cab Panel Fuse/Relay Panel "8" to Engine Panel Terminal Strip "3". White Wire Cab Panel Deutsch Buss "6" to Engine Panel E-Stop	Spade Terminal (8-st) 10-12 Heat Shrink	Waytek - 32924	ECSTHS1210VL08	2
		Delphi 12110845 Metri-Pack 280 Series, 14-12 GA	Waytek - 31069R	TB66145-14-12	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-203S	1
		Deutsch W6S-P012 Wedge for Plug	Deutsch - W6S-P012	TB80575-124-P012	1
		Deutsch DT06-6S-EP11 Male Plug	Deutsch - DT06-6S-EP11	TB80575-123-EP11	1
		Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	3
		Cord Extension 12/3 - 50 ft Roll	Amazon - 74050	EW12-3YL	1

Wiring 821-847

T-644 Wiring 2020					
Key	Wire Routing	Description	Mfg #	Tucker #	Qty
821	Main Relay Input side to Battery side of Circuit Breaker	Ring Terminal (10stud) 10-12 - Vinyl	Waytek - 32502	ECRTV1210VL10	1
		Ring Terminal (5/16s) 10-12 - Vinyl	Waytek - 32504	ECRTV1210VL516	1
		Wire 12ga - Red TXL	Waytek - WM12-2	EW12RD	
822	Aux side of Circuit Breaker to Upper Instrument Panel Key Switch "+"	Ring Terminal (10stud) 10-12 - Vinyl	Waytek - 32502	ECRTV1210VL10	2
		Wire 12ga - Red TXL	Waytek - WM12-2	EW12RD	140
823	Ground Bar to Upper Instrument Panel Terminal Strip "1"	Pin Terminal 10-12 - Nylon	Waytek - 32785	ECPTNY1210YL	1
		Spade Terminal (8-st) 10-12 Vinyl Yellow	Waytek - 32524	ECSTV1210VL08	1
		Wire 12ga - Black TXL	Waytek - WM12-0	EW12BK	120
824	Fuse/Relay Panel "10-87" to Upper Instrument Panel Terminal Strip "5", Work Lights	Delphi 12110845 Metri-Pack 280 Series, 14-12 GA	Waytek - 31069R	TB66145-14-12	1
		Spade Terminal (8-st) 10-12 Vinyl Yellow	Waytek - 32524	ECSTV1210VL08	1
		Wire 12ga - Yellow TXL	Waytek - WM12-4	EW12YL	140
825	6 Pin Deutsch Buss Connector "1" to Upper Instrument Panel E-Stop	Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	1
		Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
		Wire 18ga - Violet TXL	Waytek - WM18-7	EW18VT	130
826	Mail Relay Coil to Upper Instrument Panel Fuse "6"	Ring Terminal (10 Stud) 14-16 - Vinyl	Waytek - 31588	ECRTV11614BL10	1
		Quick Disconnect Female 14-16 Vinyl (1/4 spade)	Waytek - 31511	ECQDFV11614BL14	1
		Wire 16ga - Brown TXL	Waytek - WM16-1	EW16BR	
827	DP720 Display Pin "12" to Upper Instrument Panel Buzzer	Quick Disconnect Female 22-18 Vinyl (1/4 spade)	Waytek - 30511	ECQDFV12218RD14	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 18ga - Gray TXL	Waytek - WM18-8	EW18GY	120
827	Main Relay Output Side to A/C Relay "30"	Lug Copper 6 Ga. (5/16 stud)	Waytek - 36072	ECCLNI06-516	1
		Tyco Terminal 280755-4 (AWG 10-7) .375 Spade	Newark - 07H2888	TB80130-15-1	1
		Wire 6ga - Red Battery Cable	Waytek - WZ6-2	EW6RD	
828	AC Relay "87" to A/C Fuse Module Input	Tyco Terminal 280755-4 (AWG 10-7) .375 Spade	Newark - 07H2888	TB80130-15-1	1
		Lug Copper 6 Ga. (10 stud)	Waytek - 34000	ECCLNI06-10	1
		Wire 6ga - Red Battery Cable	Waytek - WZ6-2	EW6RD	
829	Main Relay Output side to Fuse/Relay Panel Input Stud	Lug Copper 4 Ga. (10 stud)	Waytek - 35005	ECCLNI04-10	1
		Lug Copper 4ga. 5/16 Stud	Waytek - 36127	ECCLNI04-516	1
		Wire 4ga - Red Battery Cable	Waytek - WB4-2	EW4RD	
830	Fuse/Relay Panel Input Stud to Fuse Panel Input Stud	Lug Copper 4 Ga. (10 stud)	Waytek - 35005	ECCLNI04-10	2
		Wire 4ga - Red Battery Cable	Waytek - WB4-2	EW4RD	
		Lug Copper 4 Ga. (10 stud)	Waytek - 35005	ECCLNI04-10	2
831	Fuse Panel Input Stud Jumper	Wire 4ga - Red Battery Cable	Waytek - WB4-2	EW4RD	
		Delphi 12110845 Metri-Pack 280 Series, 14-12 GA	Waytek - 31069R	TB66145-14-12	2
		Wire 12ga - Yellow TXL	Waytek - WM12-4	EW12YL	
833	Fuse/Relay Panel "9" to Fuse/Relay Panel "9-30", Work Lights	Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	2
		Wire 18ga - Orange TXL	Waytek - WM18-3	EW18OR	
		Delphi 12110845 Metri-Pack 280 Series, 14-12 GA	Waytek - 31069R	TB66145-14-12	2
834	Fuse/Relay Panel "5" to Fuse/Relay Panel "5-30", Wiper	Wire 14ga - Green TXL	Waytek - WM14-5	EW14GN	
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
835	Fuse/Relay Panel "10" to MC24 Gray Plug "2"	Wire 18ga - Red TXL	Waytek - WM18-2	EW18RD	
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
836	Fuse/Relay Panel "4" to DP720 "2"	Wire 16ga - Red TXL	Waytek - WM16-2	EW16RD	
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
837	Ground Bar to Fuse/Relay Panel "10-85"	Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
838	Ground Bar to Fuse/Relay Panel "8-85"	Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
839	Ground Bar to Fuse/Relay Panel "6-85"	Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
840	Fuse/Relay Panel "9-86" to MC24 Black Plug "9"	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 18ga - Yellow TXL	Waytek - WM18-4	EW18YL	
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
841	Fuse/Relay Panel "8-87" to Windshield Washer	Quick Disconnect Female 22-18 HS Red (1/4 spade)	Waytek - 30982	ECQDFH12218RD14	1
		Wire 18ga - Orange TXL	Waytek - WM18-3	EW18OR	115
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
842	Fuse/Relay Panel "7-86" to MC24 Black Plug "11"	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 18ga - Orange TXL	Waytek - WM18-3	EW18OR	
		Delphi 12110845 Metri-Pack 280 Series, 14-12 GA	Waytek - 31069R	TB66145-14-12	1
843	Fuse/Relay Panel "6-87a" to Windshield Wiper	Quick Disconnect Female 14-16 HS (1/4 spade)	Waytek - 31773	ECQDFH11614BL14	1
		Wire 14ga - Pink TXL	Waytek - WM14-12	EW14PI	110
		Delphi 12110845 Metri-Pack 280 Series, 14-12 GA	Waytek - 31069R	TB66145-14-12	1
844	Fuse/Relay Panel "6-87" to Windshield Wiper	Quick Disconnect Female 14-16 HS (1/4 spade)	Waytek - 31773	ECQDFH11614BL14	1
		Wire 14ga - Green TXL	Waytek - WM14-5	EW14GN	110
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
845	Fuse/Relay Panel "5-86" to MC24 Black Plug "10"	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 18ga - Green TXL	Waytek - WM18-5	EW18GN	
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
846	Fuse Panel "F8" to Terminal Strip "7"	Spade Terminal (8st) 14-16 Vinyl Blue	Waytek - 31524	ECSTV11614BL08	1
		Wire 16ga - Red TXL	Waytek - WM16-2	EW16RD	
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
847	Fuse Panel "F18" to Seat Socket "1"	Deutsch Male Solid Pin 20, 16-18 Wire	Deutsch - 0460-010-20141	TB80130-202P	1
		Deutsch WM-2P Wedge for Receptacle	Deutsch - WM-2P	TB80130-66	1
		Deutsch DTM04-2P-E007 Female Receptacle, Shrink	Deutsch - DTM04-2P-E007	TB80130-65-E007	1
		Wire 18ga - Light Blue TXL	Waytek - WM18-16	EW18LB	
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1

Wiring 848-867

T-644 Wiring 2020					
Key	Wire Routing	Description	Mfg #	Tucker #	Qty
848	Seat Socket "2" to MC24 Gray Plug "7"	Deutsch Male Solid Pin 20, 16-18 Wire	Deutsch - 0460-010-20141	TB80130-202P	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-202S	1
		Wire 18ga - Light Blue TXL	Waytek - WM18-16	EW18LB	
849	Ground Bar to A/C Relay "85"	Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
		Tyco Terminal 42281-1 (AWG 18-14), 250 Spade	Newark - 3389009	TB80130-14	1
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	
850	A/C Relay "86" to MC24 Black Plug "12"	Tyco Terminal 42281-1 (AWG 18-14), 250 Spade	Newark - 3389009	TB80130-14	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-202S	1
		Wire 18ga - Red w/Black Stripe TXL	TieWraps.Com - STW-18 RDBK	EW18RDBK	
851	Ground Bar to Main Relay Coil	Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Ring Terminal (10 Stud) 14-16 - Vinyl	Waytek - 31588	ECRTV1614BL10	
		Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	
852	Ground Bar to MC24 Gray Plug "1"	Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-202S	1
		Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	
853	Ground Bar to Terminal Strip "5"	Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Spade Terminal (8st) 14-16 Vinyl Blue	Waytek - 31524	ECSTV1614BL08	1
		Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	
854	Ground Bar to Wiper Bolt	Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Ring Terminal (1/4-st) 14-16 - Heat Shrink	Waytek - 31803	ECRTHS1614BL14	1
		Wire 14ga - Black TXL	Waytek - WM14-0	EW14BK	
855	Ground Bar to Windshield Washer	Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
		Quick Disconnect Female 22-18 HS Red (1/4 spade)	Waytek - 30982	ECQDFH52218RD14	1
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	
856	Ground Bar to DP720 Plug "1"	Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-202S	1
		Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	
857	A/C Fuse Block 20A to Cab Pressurizer Bulkhead Connector "1"	Quick Disconnect Female 12-10 HS (1/4 spade)	Waytek - 32919	ECQDFH51210YL14	1
		Deutsch Male Solid Pin 12, 12-14 Wire	Deutsch - 0460-204-12141	TB80130-204P	1
		Deutsch WP-4P Wedge for Receptacle	Deutsch - WP-4P	TB80130-84P	1
		Deutsch DTP04-4P-L012 Female Receptacle	Deutsch - DTP04-4P-L012	TB80130-83P-L012	1
		Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	2
		Wire 12ga - Red TXL	Waytek - WM12-2	EW12RD	
858	Ground Bar to Cab Pressurizer Bulkhead Connector "2"	Pin Terminal 10-12 - Nylon	Waytek - 32785	ECPTNY1210YL	1
		Deutsch Male Solid Pin 12, 12-14 Wire	Deutsch - 0460-204-12141	TB80130-204P	1
		Wire 12ga - Black TXL	Waytek - WM12-0	EW12BK	
859	A/C Fuse Block 20A to Cab Filter Bulkhead Connector "1"	Quick Disconnect Female 12-10 HS (1/4 spade)	Waytek - 32919	ECQDFH51210YL14	1
		Deutsch Male Solid Pin 12, 12-14 Wire	Deutsch - 0460-204-12141	TB80130-204P	1
		Deutsch WP-4P Wedge for Receptacle	Deutsch - WP-4P	TB80130-84P	1
		Deutsch DTP04-4P-L012 Female Receptacle	Deutsch - DTP04-4P-L012	TB80130-83P-L012	1
		Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	2
		Wire 12ga - Red TXL	Waytek - WM12-2	EW12RD	
860	Ground Bar to Cab Filter Bulkhead Connector "2"	Pin Terminal 10-12 - Nylon	Waytek - 32785	ECPTNY1210YL	1
		Deutsch Male Solid Pin 12, 12-14 Wire	Deutsch - 0460-204-12141	TB80130-204P	1
		Wire 12ga - Black TXL	Waytek - WM12-0	EW12BK	
861	A/C Fuse Block 30A to A/C Bulkhead Connector "1"	Quick Disconnect Female 12-10 HS (1/4 spade)	Waytek - 32919	ECQDFH51210YL14	1
		Deutsch Male Solid Pin 12, 12-14 Wire	Deutsch - 0460-204-12141	TB80130-204P	1
		Deutsch WP-4P Wedge for Receptacle	Deutsch - WP-4P	TB80130-84P	1
		Deutsch DTP04-4P-L012 Female Receptacle	Deutsch - DTP04-4P-L012	TB80130-83P-L012	1
		Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	1
		Wire 10ga - Red GXL	Waytek - WL10-2	EW10RD	
862	Ground Bar to A/C Bulkhead Connector "2"	Pin Terminal 10-12 - Nylon	Waytek - 32785	ECPTNY1210YL	1
		Deutsch Male Solid Pin 12, 12-14 Wire	Deutsch - 0460-204-12141	TB80130-204P	1
		Wire 10ga - Black GXL	Waytek - WL10-0	EW10BK	
863	MC24 Gray Connector "12" to A/C Bulkhead Connector "3"	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-202S	1
		Deutsch Male Solid Pin 12, 12-14 Wire	Deutsch - 0460-204-12141	TB80130-204P	1
		Wire 14ga - Green TXL	Waytek - WM14-5	EW14GN	
864	A/C Plug to A/C Bulkhead Connector	Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-204S	3
		Deutsch WP-4S Wedge for Plug	Deutsch - WP-4S	TB80130-86P	1
		Deutsch DTP06-4S-EE01 Male Plug, Shrink	Deutsch - DTP06-4S-EE01	TB80130-85P-EE01	1
		Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	1
		Heat Shrink Tubing Red - 3/4" (2/0 & 4/0 Wire)	Waytek - 22462C	ECHS-0.75-RD	1
865	Cab Pressurizer Extension Wire Plug "1" to Butt Connector	Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-204S	1
		Butt Connector 10-12 - Heat Shrink	Waytek - 32980	ECBCHS1210YL	1
		Deutsch WP-4S Wedge for Plug	Deutsch - WP-4S	TB80130-86P	1
		Deutsch DTP06-4S-EE01 Male Plug, Shrink	Deutsch - DTP06-4S-EE01	TB80130-85P-EE01	1
		Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	2
		Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	1
866	Cab Pressurizer Extension Wire Plug "2" to Butt Connector	Wire 12ga - Red TXL	Waytek - WM12-2	EW12RD	
		Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-204S	1
		Butt Connector 10-12 - Heat Shrink	Waytek - 32980	ECBCHS1210YL	1
867	Cab Filter Extension Wire Plug "1" to Butt Connector	Wire 12ga - Black TXL	Waytek - WM12-0	EW12BK	
		Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-204S	1
		Butt Connector 10-12 - Heat Shrink	Waytek - 32980	ECBCHS1210YL	1
		Deutsch WP-4S Wedge for Plug	Deutsch - WP-4S	TB80130-86P	1
		Deutsch DTP06-4S-EE01 Male Plug, Shrink	Deutsch - DTP06-4S-EE01	TB80130-85P-EE01	1
		Plug, Deutsch Sealing Size 12-16	Deutsch - 114017	TB80575-104	2
867	Cab Filter Extension Wire Plug "1" to Butt Connector	Heat Shrink Tubing Black - 3/4" (2/0 & 4/0 Wire)	Waytek - 22212C	ECHS-0.75-BK	1
		Wire 12ga - Red TXL	Waytek - WM12-2	EW12RD	
		Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-204S	1

Wiring 868-902

T-644 Wiring 2020					
Key	Wire Routing	Description	Mfg #	Tucker #	Qty
868	Cab Filter Extension Wire Plug "2" to Butt Connector	Deutsch Female Solid Socket 12, 12-14 Wire	Deutsch - 0462-203-12141	TB80130-2045	1
		Butt Connector 10-12 - Heat Shrink	Waytek - 32980	ECBCHS1210YL	1
		Wire 12ga - Black TXL	Waytek - WM12-0	EW12BK	
869	6 Pin Deutsch Buss Connector "3" to MC24 Gray Connector "6"	Deutsch Female Solid Socket 16, 16-20 Wire	Deutsch - 0462-201-16141	TB80130-2035	1
		Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 18ga - Violet TXL	Waytek - WM18-7	EW18VT	
870	Camera Monitor Power & Ground	Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Pin Terminal 22-18 - Nylon	Waytek - 30785	ECPTNY2218RD	1
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	1
871	Terminal Strip "1" to MC24 Black Connector "1"	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 18ga - Black w/White Stripe TXL	TieWraps.Com - STW-18 BKWT	EW18BKWT	
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	1
872	Terminal Strip "2" to MC24 Black Connector "2"	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 18ga - Brown w/White Stripe TXL	TieWraps.Com - STW-18 BRWT	EW18BRWT	
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	1
873	Terminal Strip "3" to MC24 Black Connector "3"	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 18ga - Blue w/White Stripe TXL	TieWraps.Com - STW-18 BLWT	EW18BLWT	
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	1
874	Terminal Strip "4" to MC24 Black Connector "4"	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		Wire 18ga - Orange w/Black Stripe TXL	TieWraps.Com - STW-18 ORBK	EW18ORBK	
		Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
875	White - Fuse Panel "F9", Black MC24 Gray Connector "11" to Brake Sensor Plug	Deutsch Female Solid Socket 20, 16-18 Wire	Deutsch - 0462-005-20141	TB80130-2025	1
		MetriPack 280 Female Terminal 12077411	Waytek - 30037	TB80604-1-MPT	2
		Metri-Pack 280 Series Cable Seal, Green	Waytek - 39000	TB66145-CSGR	2
		MetriPack TPA 280 Series 15300014 2 Contact Blue	Waytek - 38035	TB80604-1-TPA	1
		MetriPack 280 Female Body 15300027	Waytek - 38063	TB80604-1-MPB	1
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	
		Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
876	White - A/C Fuse Panel 5A, Black - Ground Bar to Pressure Monitor	Quick Disconnect Female 14-16 HS (1/4 spade)	Waytek - 31773	ECQDFH51614BL14	1
		Butt Connector 14-16 - Heat Shrink Blue	Waytek - 31070	ECBCHS1614BL	2
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	3
877	Chute Cover Door 1. Cab Panel - Blue wire to Terminal Strip "5", Brown Wire to Terminal Strip "7", Black Wire to Terminal Strip "1"	Heat Shrink Tubing Black	Cable Ties - HS359-S100-BK	ECHS-0-25-BK	2
		Female Cordset 4 Socket M12 x 10 Meter 90Deg	IFM - EVC006	TB66213-M12F-4-10M	1
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	3
878	Chute Cover Door 2. Cab Panel - Blue wire to Terminal Strip "5", Brown Wire to Terminal Strip "7", Black Wire to Terminal Strip "2"	Heat Shrink Tubing Brown	Cable Ties - HS359-S100-BR	ECHS-0-25-BR	2
		Female Cordset 4 Socket M12 x 10 Meter 90Deg	IFM - EVC006	TB66213-M12F-4-10M	1
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	3
879	Chute Cover Door 3. Cab Panel - Blue wire to Terminal Strip "6", Brown Wire to Terminal Strip "8", Black Wire to Terminal Strip "3"	Heat Shrink Tubing Blue	Cable Ties - HS359-S100-BL	ECHS-0-25-BL	2
		Female Cordset 4 Socket M12 x 10 Meter 90Deg	IFM - EVC006	TB66213-M12F-4-10M	1
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	3
880	Chute Cover Door 4. Cab Panel - Blue wire to Terminal Strip "6", Brown Wire to Terminal Strip "8", Black Wire to Terminal Strip "4"	Heat Shrink Tubing Black	Cable Ties - HS359-S100-BK	ECHS-0-25-BK	2
		Female Cordset 4 Socket M12 x 10 Meter 90Deg	IFM - EVC006	TB66213-M12F-4-10M	1
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	3
881	White Wire - Fuse Panel "F10", Black Wire - Ground Bar to outside of Cab Box as a spare for customer additions	Delphi 12110847 Metri-Pack 280 Series, 18-16 GA	Waytek - 30069R	TB66145-18-16	1
		Pin Terminal 16-14 - Nylon	Waytek - 31785	ECPTNY1614BL	1
		Heat Shrink Tubing Blue	Cable Ties - HS359-S100-BL	ECHS-0-25-BL	1
		Wire WD16-2 Jacketed Plastic Primary	Waytek - WD16-2	TB80130-2	
891	Key Switch Ignition Post to Fuse Panel Input Stud	Ring Terminal (10stud) 10-12 - Vinyl	Waytek - 32502	ECRTV11210YL10	2
		Wire 12ga - Red TXL	Waytek - WM12-2	EW12RD	
892	Fuse Panel 5A to Buzzer	Quick Disconnect Female 22-18 Vinyl (1/4 spade)	Waytek - 30511	ECQDFV12218RD14	2
		Wire 18ga - Red TXL	Waytek - WM18-2	EW18RD	
893	Fuse Panel 5A to E-Stop	Quick Disconnect Female 22-18 Vinyl (1/4 spade)	Waytek - 30511	ECQDFV12218RD14	1
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	1
		Wire 18ga - Violet TXL	Waytek - WM18-7	EW18VT	
894	Fuse Panel 5A to USB Charger	Quick Disconnect Female 22-18 Vinyl (1/4 spade)	Waytek - 30511	ECQDFV12218RD14	2
		Wire 18ga - Red TXL	Waytek - WM18-2	EW18RD	
895	Fuse Panel 5A to Left Cab Fan	Quick Disconnect Female 14-16 Vinyl (1/4 spade)	Waytek - 31511	ECQDFV11614BL14	1
		Butt Connector 14-16 - Heat Shrink Blue	Waytek - 31070	ECBCHS1614BL	1
		Wire 16ga - Green TXL	Waytek - WM16-5	EW16GN	
896	Fuse Panel 5A to Right Cab Fan	Quick Disconnect Female 14-16 Vinyl (1/4 spade)	Waytek - 31511	ECQDFV11614BL14	1
		Butt Connector 14-16 - Heat Shrink Blue	Waytek - 31070	ECBCHS1614BL	1
		Wire 16ga - Green TXL	Waytek - WM16-5	EW16GN	
897	Terminal "1" to Left Work light Ground	Spade Terminal (8st) 14-16 Vinyl Blue	Waytek - 31524	ECSTV11614BL08	1
		Butt Connector 14-16 - Heat Shrink Blue	Waytek - 31070	ECBCHS1614BL	1
		Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	
898	Terminal "3" to Right Work light Ground	Spade Terminal (8st) 14-16 Vinyl Blue	Waytek - 31524	ECSTV11614BL08	1
		Butt Connector 14-16 - Heat Shrink Blue	Waytek - 31070	ECBCHS1614BL	1
		Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	
899	Terminal "2" to USB Charger Ground	Quick Disconnect Female 22-18 Vinyl (1/4 spade)	Waytek - 30511	ECQDFV12218RD14	1
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	1
900	Terminal "2" to Right Cab Fan Ground	Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	
		Spade Terminal (8st) 14-16 Vinyl Blue	Waytek - 31524	ECSTV11614BL08	1
		Butt Connector 14-16 - Heat Shrink Blue	Waytek - 31070	ECBCHS1614BL	1
901	Terminal "2" to Left Cab Fan Ground	Wire 16ga - Black TXL	Waytek - WM16-0	EW16BK	
		Spade Terminal (8st) 14-16 Vinyl Blue	Waytek - 31524	ECSTV11614BL08	1
		Butt Connector 14-16 - Heat Shrink Blue	Waytek - 31070	ECBCHS1614BL	1
902	Terminal "1" to Terminal Mount Screw to Ground Instrument Panel	Wire 16ga - Green TXL	Waytek - WM16-5	EW16GN	
		Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTV12218RD06	1
		Ring Terminal (10 Stud) 22-18 - Vinyl	Waytek - 30503	ECRTV12218RD10	1
		Wire 18ga - Black TXL	Waytek - WM18-0	EW18BK	

Wiring 903-905

T-644 Wiring 2020					
Key	Wire Routing	Description	Mfg #	Tucker #	Qty
903	Terminal "5" to Left Work Right "+"	Spade Terminal (8st) 14-16 Vinyl Blue	Waytek - 31524	ECSTVI1614BL08	1
		Butt Connector 14-16 - Heat Shrink Blue	Waytek - 31070	ECBCHS1614BL	1
		Wire 16ga - Yellow	Waytek - WM16-4	EW16YL	
904	Terminal "5" to Right Work Right "+"	Spade Terminal (8st) 14-16 Vinyl Blue	Waytek - 31524	ECSTVI1614BL08	1
		Butt Connector 14-16 - Heat Shrink Blue	Waytek - 31070	ECBCHS1614BL	1
		Wire 16ga - Yellow	Waytek - WM16-4	EW16YL	
905	Terminal "6" to Air Gauge "+"	Spade Terminal (6-st) 18-22 Vinyl Red	Waytek - 30523	ECSTVI2218RD06	1
		Butt Connector (8-st) 18-22 - Heat Shrink	Waytek - 30971	ECBCHS2218RD	1
		Wire 18ga - Yellow TXL	Waytek - WM18-4	EW18YL	

Fault Schedule

Fault List - 1-65

#	Component	System	Fault
1	MC50-Engine Area	CAN A (Port 1)	No Rx by DP720
2	"	CAN B (Port 0)	No Rx by DP720
3	MC50-Lower Frame	CAN B (Port 0)	No Rx by DP720
4	MC24-Cab	CAN B (Port 0)	No Rx by DP720
5	Engine	CAN A (Port 1)	No Rx by DP720
6	Joystick, Left	CAN B (Port 0)	No Rx by DP720
7	Joystick, Right	CAN B (Port 0)	No Rx by DP720
8	Preco Radar	CAN B (Port 0)	No Rx by DP720
9	PVED-CC Coil, Elevator	CAN B (Port 0)	No Rx by DP720
10	PVED-CC Coil, Auger	CAN B (Port 0)	No Rx by DP720
11	PVED-CC Coil, Swing	CAN B (Port 0)	No Rx by DP720
12	PVED-CC Coil, Steering	CAN B (Port 0)	No Rx by DP720
13	PVED-CC Coil, Slide Gate	CAN B (Port 0)	No Rx by DP720
14	PVED-CC Coil, Hopper	CAN B (Port 0)	No Rx by DP720
15	PVED-CC Coil, AC	CAN B (Port 0)	No Rx by DP720
16	MC50-Engine Area	CAN A (Port 1)	Bus Off
17	"	CAN B (Port 0)	Bus Off
18	MC50-Lower Frame	CAN B (Port 0)	Bus Off
19	MC24-Cab	CAN B (Port 0)	Bus Off
20	DP720	CAN A (Port 1)	Bus Off
21	"	CAN B (Port 0)	Bus Off
22	MC24-Cab	Sensor Power, C1P08	Volts > 5.15
23	"	"	Volts < 4.85
24	"	System Power, C1P02	Volts < 9.00
25	MC50-Engine Area	"	Volts > 5.15
26	"	"	Volts < 4.85
27	"	System Power, C1P02	Volts < 9.00
28	MC50-Lower Frame	"	Volts > 5.15
29	"	"	Volts < 4.85
30	"	System Power, C1P02	Volts < 9.00
31	MC24-Cab	Work Lights Relay, C2P09	Open Circuit
32	"	"	Over Current
33	"	Windshield Wiper Relay, C2P10	Open Circuit
34	"	"	Over Current
35	MC50-Engine Area	PSI Snsr, "Forward", C1P16	Volts too Hi
36	"	"	Volts too Lo
37	"	PSI Snsr, "Reverse", C1P14	Volts too Hi
38	"	"	Volts too Lo
39	"	PSI Snsr, "Charge", C1P17	Volts too Hi
40	"	"	Volts too Lo
41	"	PSI Snsr, "Aux", C1P15	Volts too Hi
42	"	"	Volts too Lo
43	"	Hyd Temp Snsr, C1P27	Snsr Not Detected (65535 err)
44	Reserved		
45	Reserved		
46	"	Flow Meter, C1P23	Volts too Hi
47	"	"	Volts too Lo
48	"	EDC Coil, "Forward", C1P37	Open Circuit
49	"	"	Short Circuit
50	"	"	Current Mismatch
51	"	EDC Coil, "Reverse", C1P38	Open Circuit
52	"	"	Short Circuit
53	"	"	Current Mismatch
54	"	Motor Starter Relay, C1P43	Open Circuit
55	"	"	Over Current
56	"	Vibrator Coil, C1P40	Open Circuit
57	"	"	Over Current
58	MC24-Cab	Windshield Washer, C2P11	Open Circuit
59	"	"	Over Current
60	MC50-Engine Area	Air Supply Valve Coil, C1P39	Open Circuit
61	"	"	Over Current
62	"	Horn Relay, C1P44	Open Circuit
63	"	"	Over Current
64	"	Coolant Level Snsr, C1P24	< 100mV
65	"	Coolant Level Snsr Power Supply, C1P42	Over Current (Old Sensor)

Fault List – 66-128

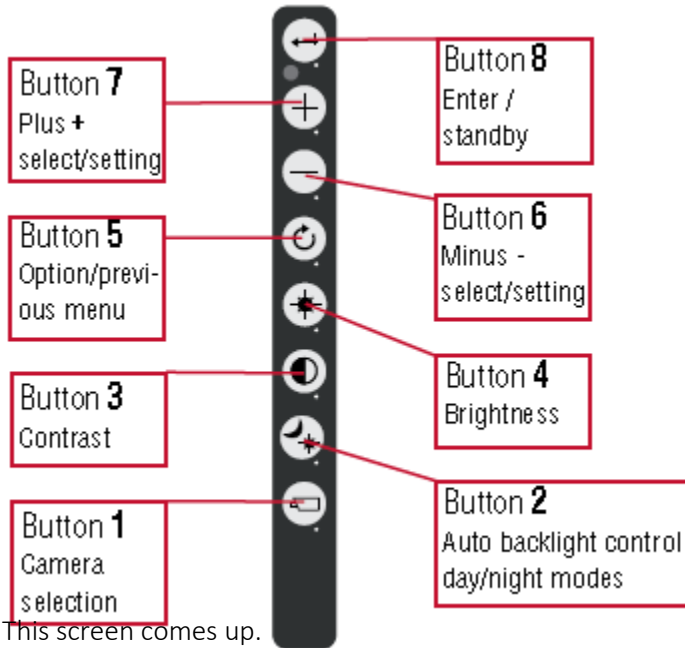
#	Component	System	Fault
66	MC50-Lower Frame	Speed Snsr, Left Motor,	Temp Volts too Hi
67	"	(C1P18, C1P19, C1P27)	Temp Volts too Lo
68	"	"	Zero Hz on CH. A
69	"	"	Zero Hz on CH. B
70	"	"	Ch. A Hz ≠ Ch. B Hz
71	"	"	A-B Phase Out of Spec
72	"	"	Ch. A % Duty Out of Spec
73	"	"	Ch. B % Duty Out of Spec
74	"	"	Ch. A Signal Short to Pwr
75	"	"	Ch. A Signal Short to Ground
76	"	"	Ch. A Signal Open
77	"	"	Snsr Open Ground
78	"	"	Snsr Open Pwr
79	"	"	Ch. B Signal Short to Pwr
80	"	"	Ch. B Signal Short to Ground
81	"	"	Ch. B Signal Open
82	"	Speed Snsr, Right Motor,	Temp Volts too Hi
83	"	(C1P23, C1P24, C1P28)	Temp Volts too Lo
84	"	"	Zero Hz on CH. A
85	"	"	Zero Hz on CH. B
86	"	"	Ch. A Hz ≠ Ch. B Hz
87	"	"	A-B Phase Out of Spec
88	"	"	Ch. A % Duty Out of Spec
89	"	"	Ch. B % Duty Out of Spec
90	"	"	Ch. A Signal Short to Pwr
91	"	"	Ch. A Signal Short to Ground
92	"	"	Ch. A Signal Open
93	"	"	Snsr Open Ground
94	"	"	Snsr Open Pwr
95	"	"	Ch. B Signal Short to Pwr
96	"	"	Ch. B Signal Short to Ground
97	"	"	Ch. B Signal Open
98	"	Fuel Level Snsr, C1P29	ohms too Hi
99	"	"	ohms too Lo
100	"	"	Snsr Not Detected (65535 err)
101	"	EDC Coil, "Left Wheel", C1P37	Open Circuit
102	"	"	Short Circuit
103	"	"	Current Mismatch
104	"	EDC Coil, "Right Wheel", C1P38	Open Circuit
105	"	"	Short Circuit
106	"	"	Current Mismatch
107	"	Back-Up Alarm Relay, C1P39	Open Circuit
108	"	"	Over Current
109	"	Head Lights, Relay, C1P40	Open Circuit
110	"	"	Over Current
111	Joystick, Left	CAN Device	Component, Sys, Setup, Cal Flt
112	Joystick, Right	"	"
113	Preco Radar	"	"
114	PVED-CC Coil, Elevator	"	"
115	PVED-CC Coil, Auger	"	"
116	PVED-CC Coil, Swing	"	"
117	PVED-CC Coil, Steering	"	"
118	PVED-CC Coil, Slide Gate	"	"
119	PVED-CC Coil, Hopper	"	"
120	PVED-CC Coil, AC	"	"
125	Steer sensor position fault		
126	Pressure filter fault	Engine Area	C1P05
127	Charge pump filter fault	Engine Area	C1P28
128			

Camera Monitor Settings

Camera Monitor Settings page 1

To set or adjust camera settings:

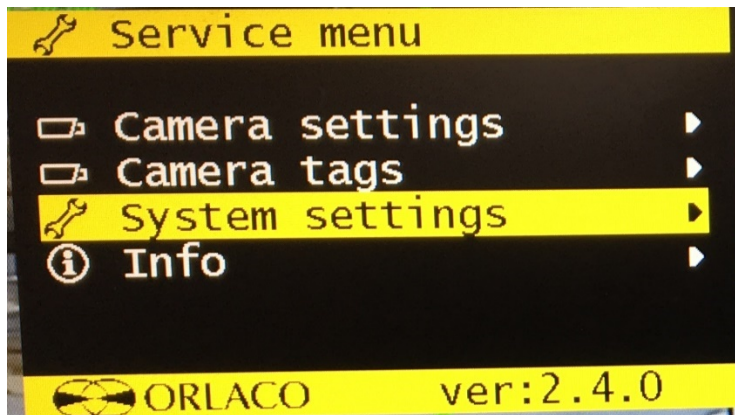
Press buttons 1, 6, & 7 at the same time.



This screen comes up.



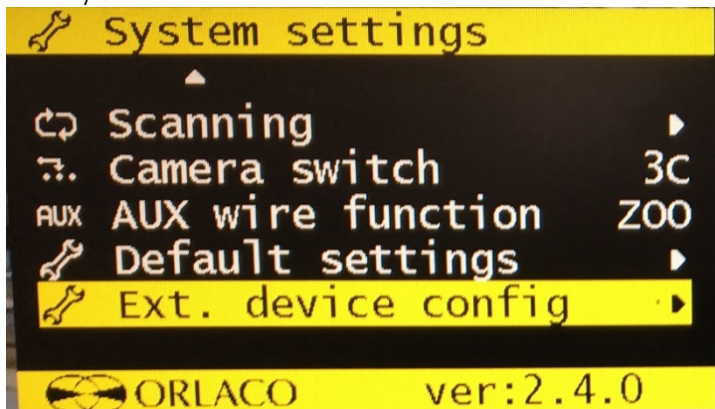
"-" Button 6 to System Settings



Press "Enter" button 8 on system settings

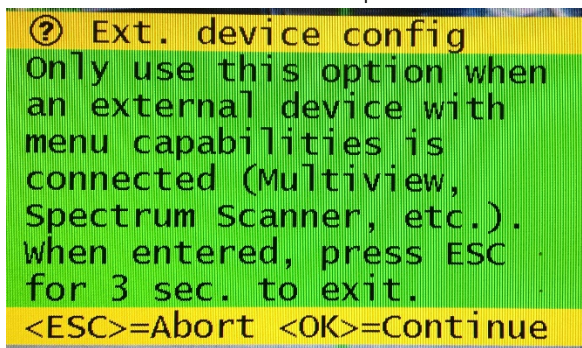
Camera Monitor Settings page 2

“+” Key 7 to:

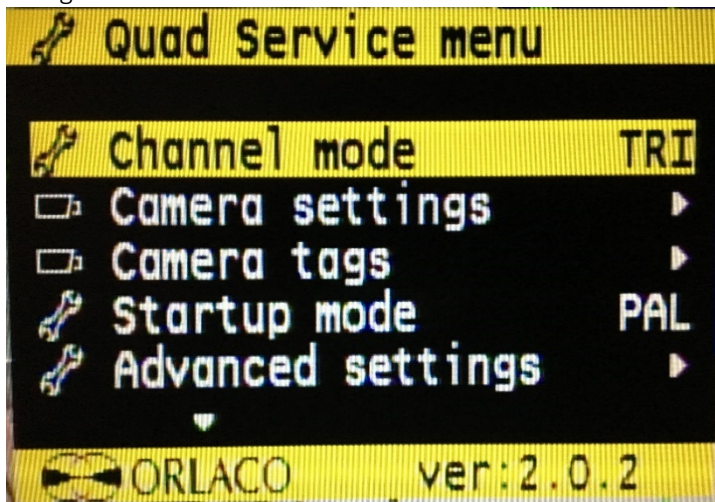


Press “Enter” button 8 on
Ext. device config

Press “Enter” button 8 to accept



Press “Enter” button 8 on Channel mode. Then “+” or “-” until “TRI” is selected then press “Enter” button 8 to get back to this screen.



Camera Monitor Settings page 3

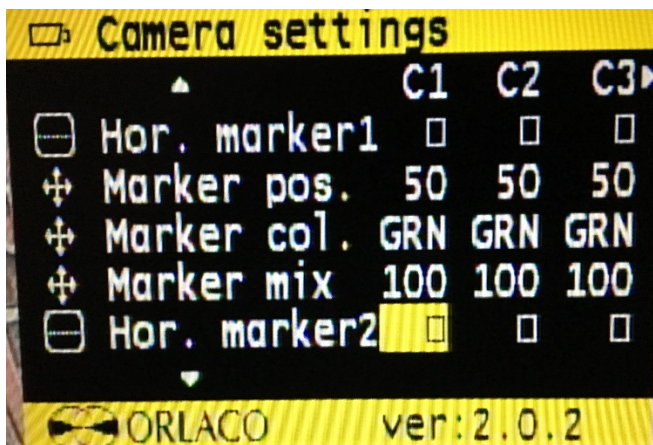
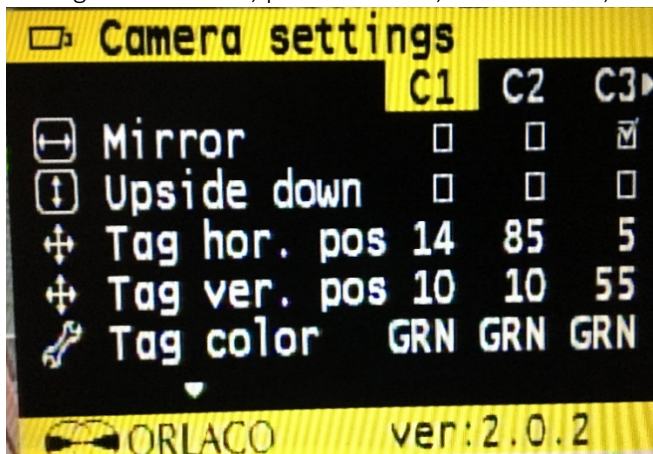
“-” Button 6 to Camera Settings

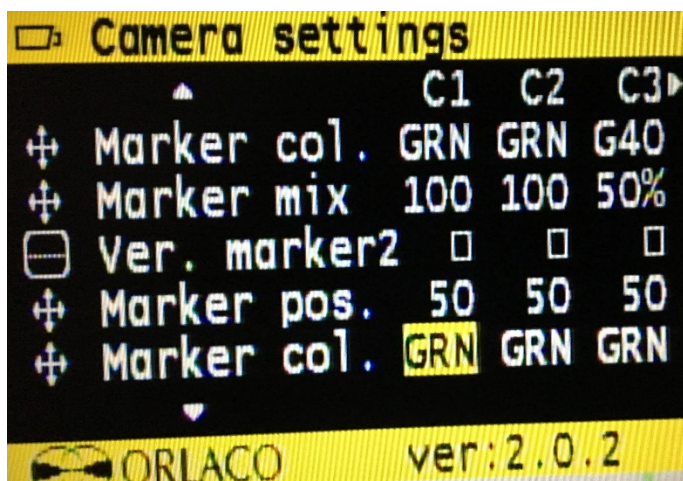
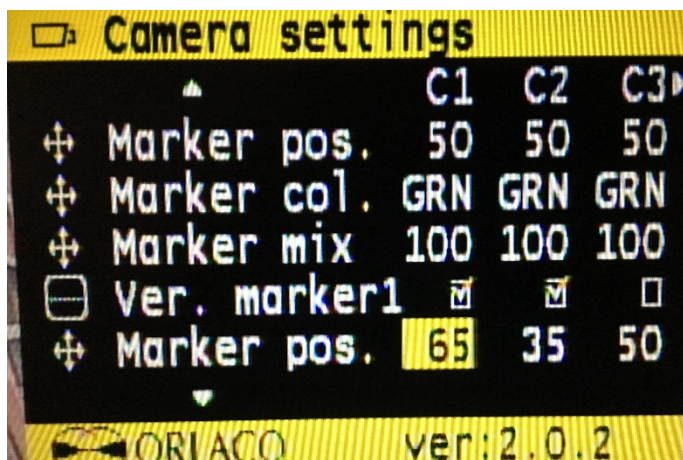


Press “Enter” button 8 on Camera settings

The next 4 pictures need to be set for C1, C2 & C3

Start by pressing “Enter” button 8 while on C1. Then use the “-” to go down the list or “+” to go up the list. Once on the setting needing changing, press “Enter” button 8. Then “-” or “+” to change. When all setting for C1 are set, press button 5, the “+” to C2, then “Enter” button 8. Repeat for C3.





Press button 5 to return to the menu, then “-“ to Camera Tags, press “Enter” button 8.



Camera Monitor Settings page 5

Press "Enter" button 8 to select 1. Use the "+" & "-" to move to the letter required, the "Enter" button 8. Repeat until spelled, then press "Enter" button 8 to complete number 1. "-" to number 2, then enter and repeat.



Press button 5 to return to the menu. Press and hold button 5 for 3 seconds to back up to the original menu, then press and hold button 5 again for 3 seconds to exit configuration.

Kendall Hyken•052 Farm Tractor Lubricant

Kendall® Hyken 052 is a multifunctional fluid specially formulated for use in farm tractors and other off-highway equipment requiring one lubricant for the transmission, final drive, wet brakes and hydraulic systems. It meets the performance requirements of all major brands of farm tractors and other farm equipment that utilize a common fluid reservoir.

Hyken 052 is formulated to provide excellent oxidation resistance, excellent wear protection, protection against rust and corrosion, and resistance to foaming. It has carefully balanced frictional properties to ensure proper operation of wet brakes and transmission clutches.

Applications

Hyken 052 is recommended for use where the equipment manufacturer specifies:

- AGCO (Deutz-Allis) Power Fluid 821XL
- AGCO (White Farm) Q-1826, Q-1802 (Type 55 Fluid), Q-1766B
- Case IH MS1210, MS1209, MS1207, MS1206
- Case New Holland (CNH) MAT3525 (134-D Fluid), MAT3509, MAT3506, MAT3505
- Caterpillar TO-2 (obsolete)
- Denison Hydraulics HF-0, HF-1, HF-2
- Ford ESN-M2C134-D, ESN-M2C86-C, ESN-M2C86-B, ESN-M2C41-B
- Ford-New Holland FNHA-2-C-201.00
- John Deere JDM J20C, J14C (Type 303 Fluid)
- Kubota UDT Fluid
- Landini Tractor II Hydraulic Fluid
- Massey Ferguson CMS M1145, M1143, M1141, M1135, M1129A
- Sundstrand Hydrostatic Transmission Fluid
- Vickers (Eaton) M-2950-S, I-286-S
- Volvo VME WB 101 (VCE 1273.03)
- ZF TE-ML 03E, 05F, 06E, 06K, 17E

Hyken 052 also meets API GL-4 performance requirements.

Features/Benefits

- Excellent oxidation resistance and thermal stability
- Excellent wear protection for clutches, gears and hydraulic pumps
- Prevents brake chatter and grabbing
- Protects against rust and corrosion
- Excellent seal compatibility
- Good foam resistance
- Suitable for year-round use in most climates

Kendall Hyken® 052 Farm Tractor Lubricant Properties

Typical Properties

Specific Gravity @ 60°F	0.872
Density, lbs/gal @ 60°F	7.26
Color, ASTM D1500	305
Flash Point (COC), °C (°F)	210 (410)
Pour Point, °C (°F)	-43 (-45)
Viscosity, Brookfield cP @ -20°C (Brookfield) cP @ -35°C (Brookfield)	2,800 26,700
Viscosity, Kinematic cSt @ 40°C cSt @ 100°C	61.0 9.3
Viscosity Index	146
Ash, Sulfated, ASTM D874, wt %	1.41
Total Base Number (TBN), ASTM D2896	9.6
Zinc, wt %	0.149

Health and Safety Information

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via <http://w3.conocophillips.com/NetMSDS>.