

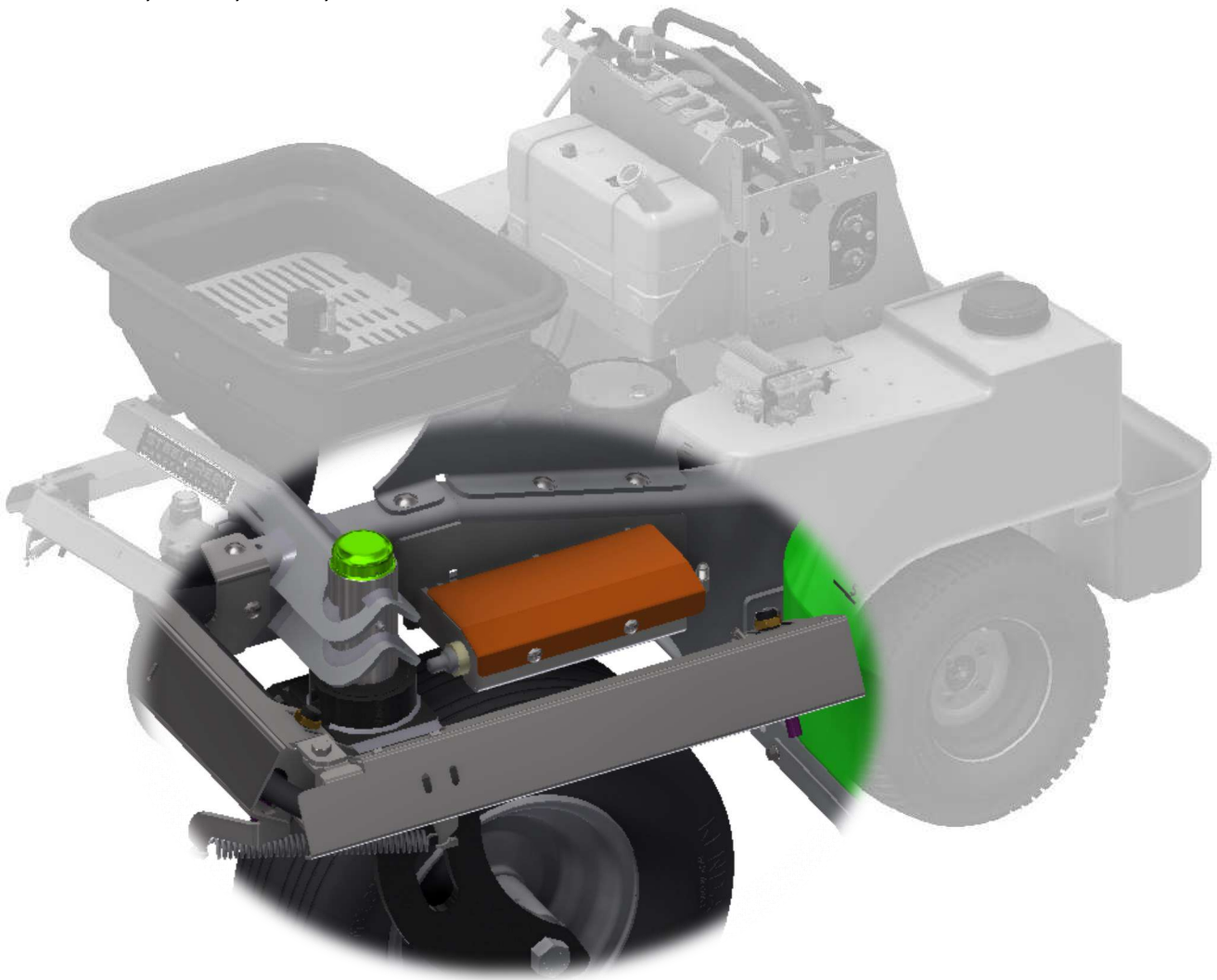
STEELGREENTM

MANUFACTURING

INSTRUCTION MANUAL

HILL SIDE ASSIST ATTACHMENT

Models: SG36, SG42, SG46, & SG52



HILL SIDE ASSIST INSTALLATION

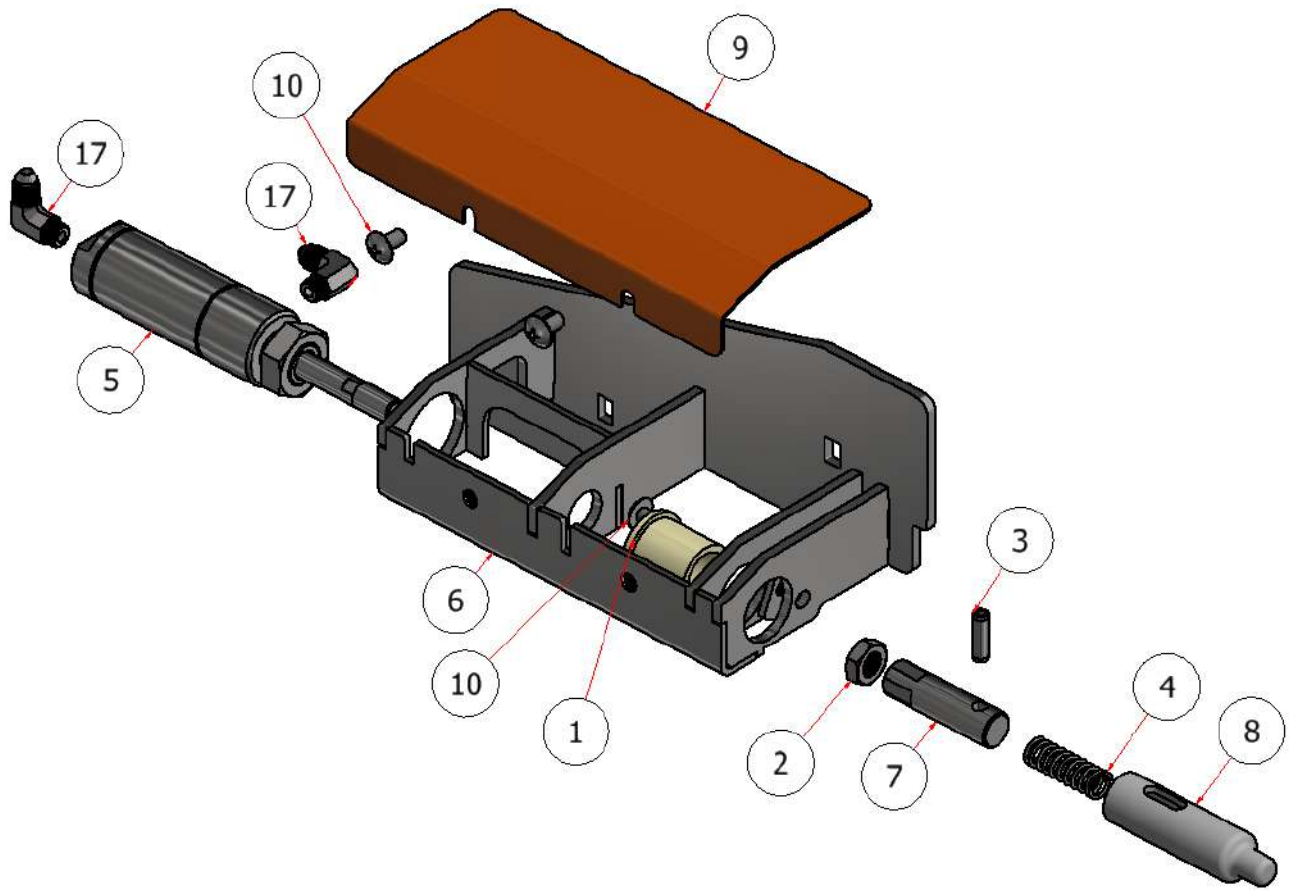
HILL SIDE ASSIST KIT A10040 SG 46/52			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	6389K557	7/8" NYLON SLEEVE, BEARING, STRAIGHT STEER
2	2	91847A515	7/16-20 JAM NUT, STRAIGHT STEER
3	2	92373A367	1/4" X 7/8" SS ROLL PIN, STRAIGHT STEER
4	2	965K352	1.5" X .50D COMPRESSION SPRING, STRAIGHT STEER
5	2	H80601	CYLINDER, CASTER LOCK
6	1	W22-141-R	BRACKET, MOUNTING, HILL SIDE ASSIST, RIGHT
	1	W22-141-L	BRACKET, MOUNTING, HILL SIDE ASSIST, LEFT
7	2	R31029	PLUNGER, HILL SIDE ASSIST
8	2	R31027	PLUNGER, FORWARD, HILL SIDE ASSIST
9	1	R22-146	SHIELD, SAFETY, HILL SIDE ASSIST, RIGHT
	1	R22-146-L	SHIELD, SAFETY, HILL SIDE ASSIST, LEFT
10	3	TRPC-141S	SCREW, PHILLIPS, SS-1/4-20 X 1
11	10	HFNCS-516S	HEX NUT, 5/16 SS
12	4	CB-51634	CARRIAGE BOLT, SS-5/16-18 X 3/4
13	2	HFSSC-142	HEX BOLT, 1/4 X 2
14	2	HFNCS-14S	HEX NUT, 1/4-20
15	2	FWSS-14	WASHER 1/4
16	6	CB-37515	CARRIAGE BOLT, SS-3/8 X 1-1/2
17	4	50715K181	TYPE 316 SS 37 DEGREE FLARED TUBE FITTING
18	1	H80600	SOLENOID VALVE, CASTER LOCK
19	2	H84003	1/4 MALE JIC X 3/8 ORB STR
20	2	H84000	1/4 MALE JIC X 3/8 ORB ELB
21	1	E40202	SWITCH, PUMP, ROCKER
22	1	SG-7G1	WIRE SET, 7 GALLON TANK
23	2	W22-144	CASTER STOP ASSEMBLY, HILL ASSIST
24	1	K10003	KIT, HOSE, HILL SIDE ASSIST
25	4	H84031	FITTING, TEE, 1/4 HOSE X 1/4 FEMALE JIC SWIVEL
26	6	HFNCS-375S	HEX NUT, 3/8

HILL SIDE ASSIST INSTALLATION

HILL SIDE ASSIST KIT A10040 SG 36/42			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	6389K557	7/8" NYLON SLEEVE, BEARING, STRAIGHT STEER
2	2	91847A515	7/16-20 JAM NUT, STRAIGHT STEER
3	2	92373A367	1/4" X 7/8" SS ROLL PIN, STRAIGHT STEER
4	2	965K352	1.5" X .50D COMPRESSION SPRING, STRAIGHT STEER
5	2	H80601	CYLINDER, CASTER LOCK
6	1	W22-154-R	BRACKET, MOUNTING, HILL SIDE ASSIST, RIGHT
	1	W22-154-L	BRACKET, MOUNTING, HILL SIDE ASSIST, LEFT
7	2	R31029	PLUNGER, HILL SIDE ASSIST
8	2	R31027	PLUNGER, FORWARD, HILL SIDE ASSIST
9	1	R22-146	SHIELD, SAFETY, HILL SIDE ASSIST, RIGHT
	1	R22-146-L	SHIELD, SAFETY, HILL SIDE ASSIST, LEFT
10	3	TRPC-141S	SCREW, PHILLIPS, SS-1/4-20 X 1
11	10	HFNCS-516S	HEX NUT, 5/16 SS
12	4	CB-51634	CARRIAGE BOLT, SS-5/16-18 X 3/4
13	2	HFSSC-142	HEX BOLT, 1/4 X 2
14	2	HFNCS-14SS	HEX NUT, 1/4-20 SS
15	2	FWSS-14	WASHER 1/4
16	6	CB-37515	CARRIAGE BOLT, 3/8 X 1-1/2
17	4	50715K181	TYPE 316 SS 37 DEGREE FLARED TUBE FITTING
18	1	H80600	SOLENOID VALVE, CASTER LOCK
19	2	H84003	1/4 MALE JIC X 3/8 ORB STR
20	2	H84000	1/4 MALE JIC X 3/8 ORB ELB
21	1	E40202	SWITCH, PUMP, ROCKER
22	1	SG-7G1	WIRE SET, 7 GALLON TANK
23	2	W22-144	CASTER STOP ASSEMBLY, HILL ASSIST
24	1	K10003	KIT, HOSE, HILL SIDE ASSIST
25	4	H84031	FITTING, TEE, 1/4 HOSE X 1/4 FEMALE JIC SWIVEL
26	6	HFNCS-375S	HEX NUT, 3/8
27	2	H84008	1/4 MALE JIC x 1/4 FEMALE SWIVEL NUT ELB

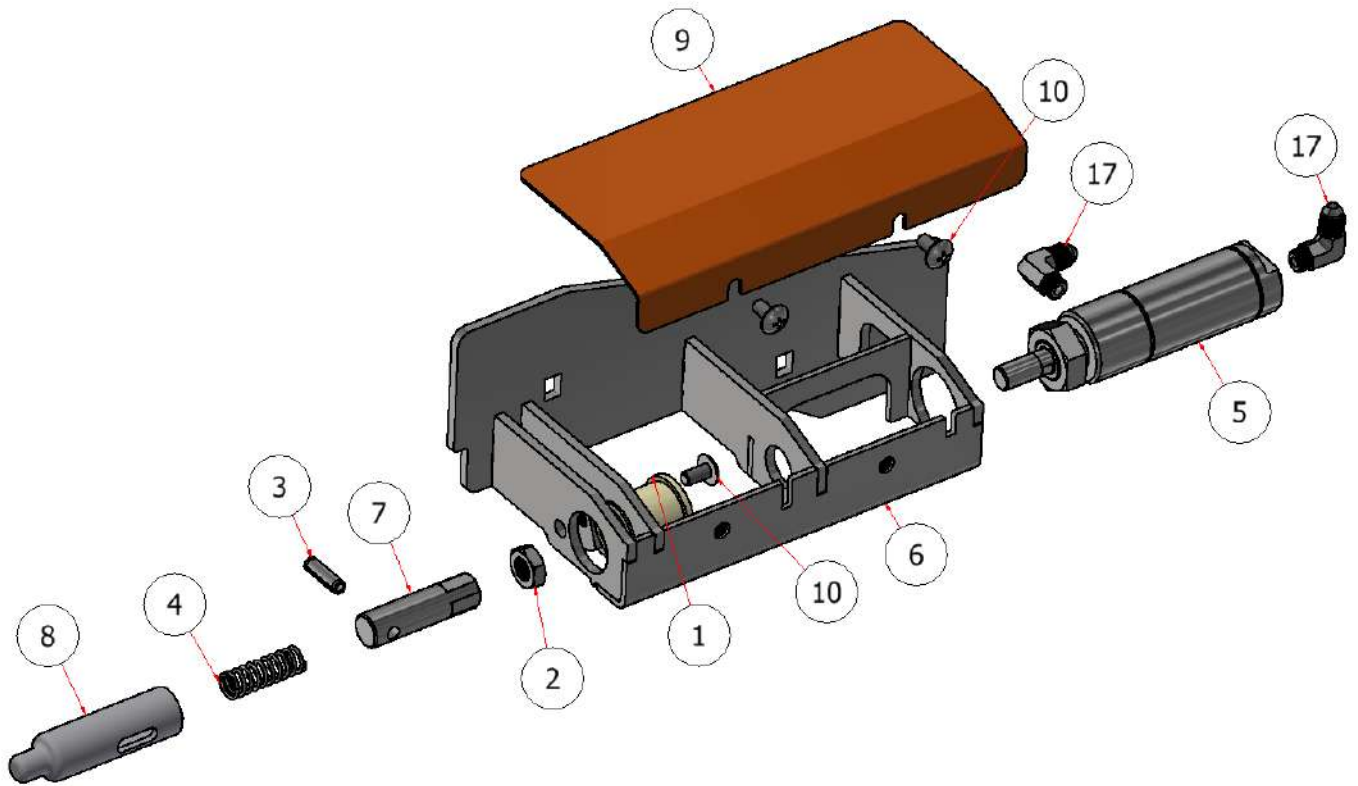
HILL SIDE ASSIST INSTALLATION

RIGHT SIDE

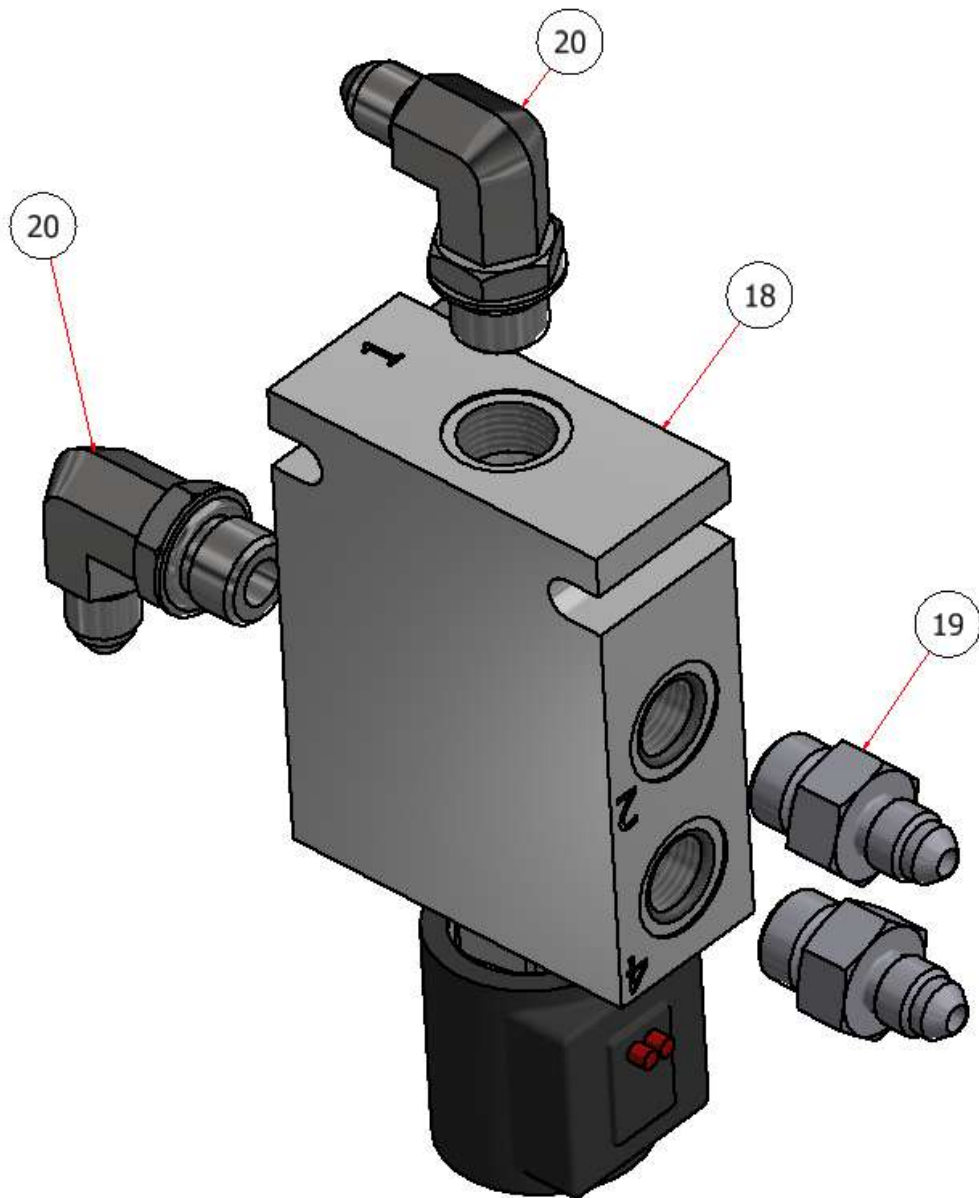


HILL SIDE ASSIST INSTALLATION

LEFT SIDE



HILL SIDE ASSIST INSTALLATION



HILL SIDE ASSIST INSTALLATION

STEP 1: Disconnect the battery, *ground* first and then *power* wire.



GROUND

POWER

NOTE: Instructions are the same for both the right and left side, STEPS 2– 3

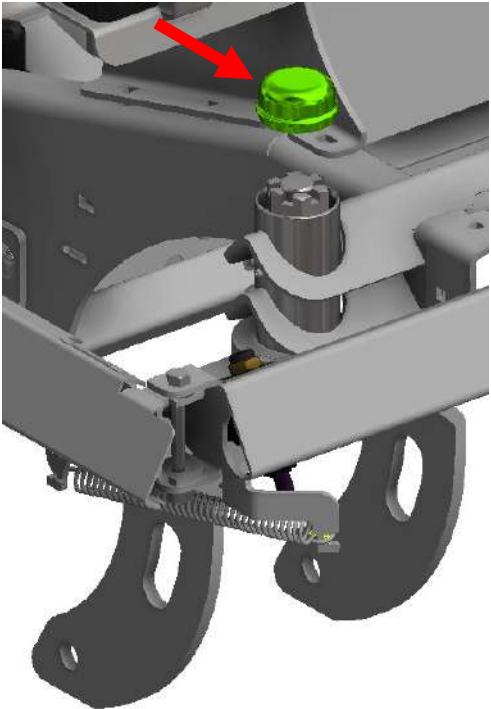
STEP 2:

- Remove the bolt and front tire.

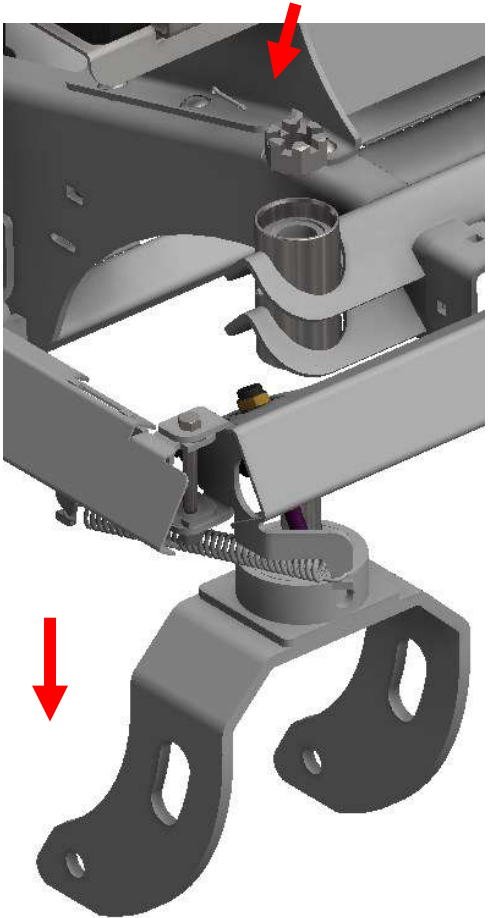


HILL SIDE ASSIST INSTALLATION

- Remove the dust cover.



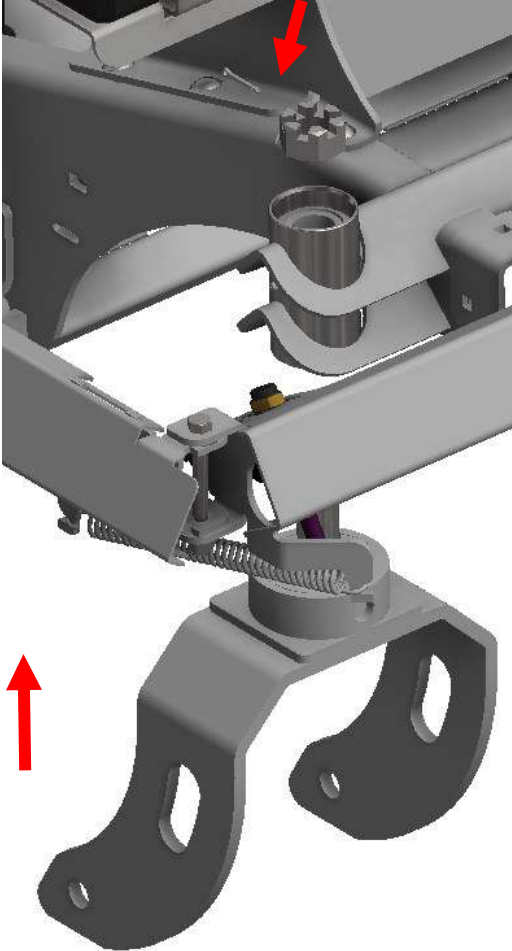
- Remove the cotter pin and nut which will release the yoke through the bottom.



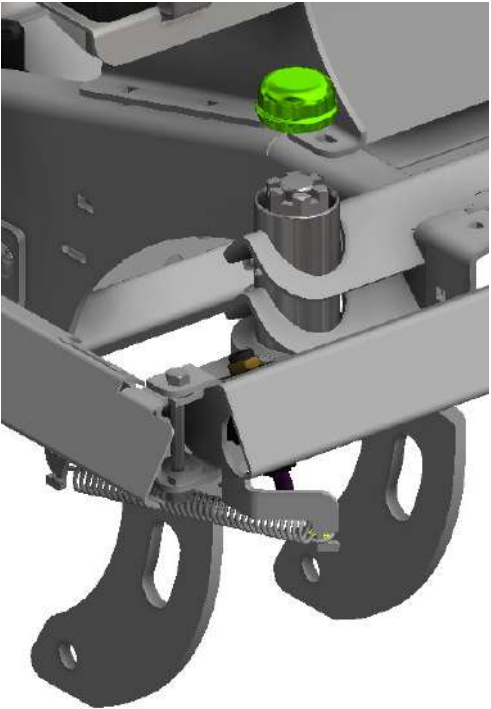
HILL SIDE ASSIST INSTALLATION

STEP 3:

- Install the yokes W22-144 provided with the kit.
- Secure the yoke with the nut and carter pin.



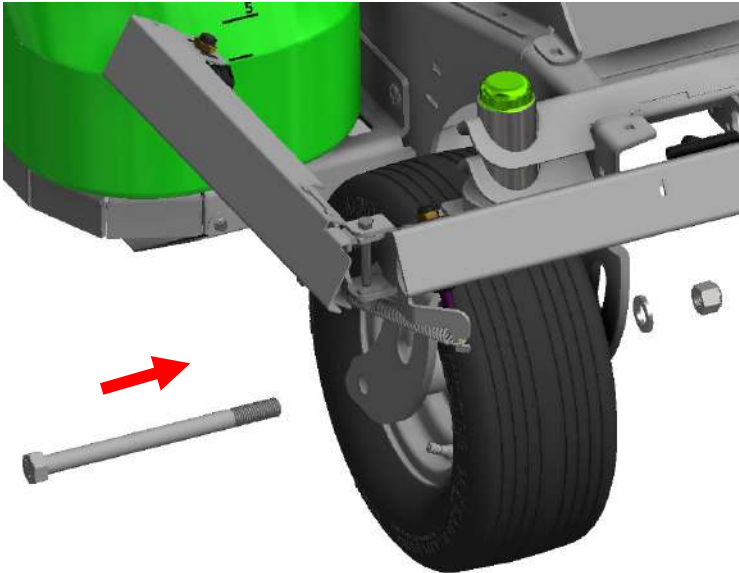
- Re-install the dust cover.



HILL SIDE ASSIST INSTALLATION

- Re-install the front tire.

NOTE: Regrease the bearings and housing.



STEP 4:

NOTE: If your machine is older than mid October 2021: You will need to either

- Drill mounting holes in BOTH SIDES of the chassis using the dimensions in (Fig 1) or attach the cylinder assembly to the top of the chassis (STEPS 4&5) and use the bracket as a templet.
- Or weld the side of the cylinder assemblies to the chassis.

The cylinder assembly MUST be properly secured from the side or warranty could be

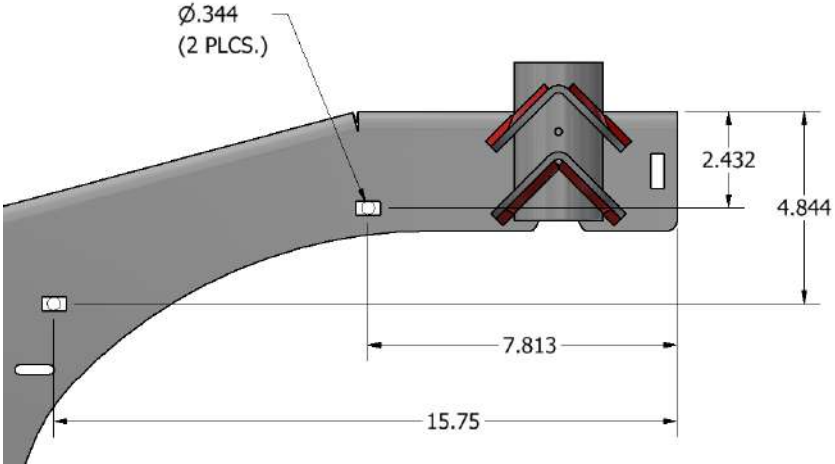
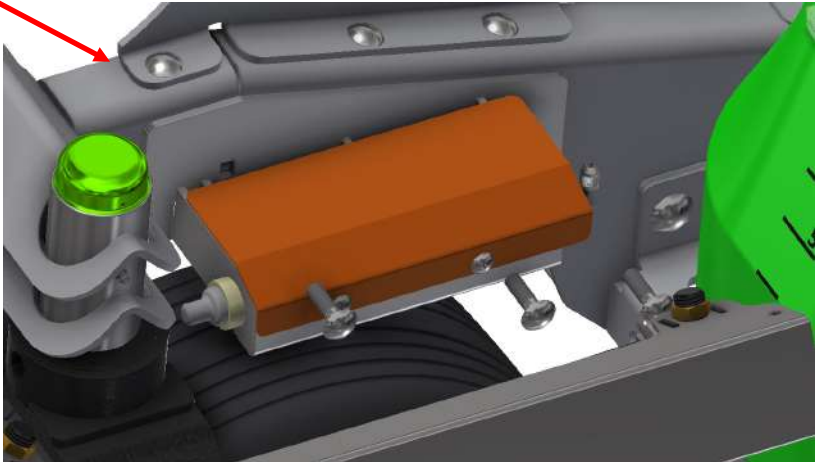


Fig 1

NOTE: If you have a previous cylinder design, You will need to loosen the hopper and attach the cylinder under the hopper frame.

Use the 5/16 x 1 carriage bolts and 3/8 nuts provided with the kit and attach the cylinder assemblies to the side of the chassis.

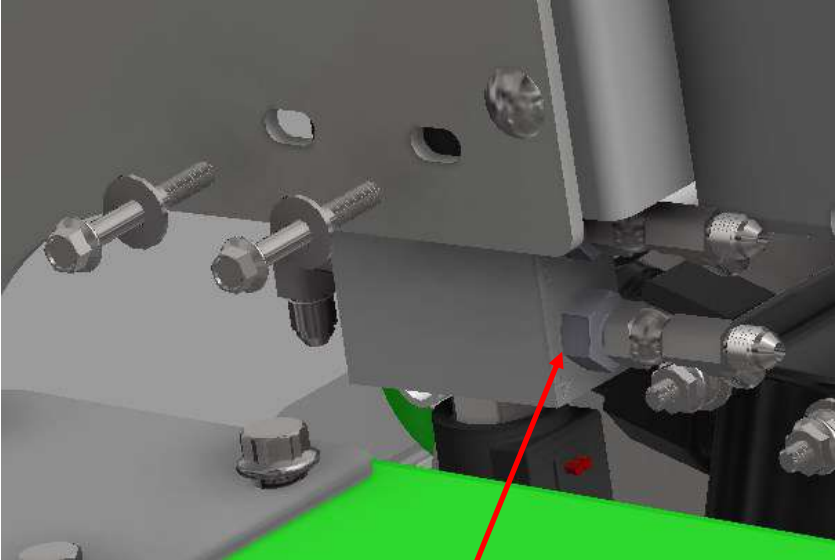


HILL SIDE ASSIST INSTALLATION

STEP 5: Attach the solenoid valve assembly (provided with the kit) to the upright on the **RIGHT SIDE**. Using the 1/4 x 2 hex bolts, washers, and nuts provided with the kit.

NOTE:

- Some parts not shown for clarity.
- The orientation of the “tee fittings” depending on the machine. (Fig 1) SG 46/52, (Fig 2) SG 36/42.
- The orientation of the valve, ports 2 & 4 face forward.



PORTS 2&4

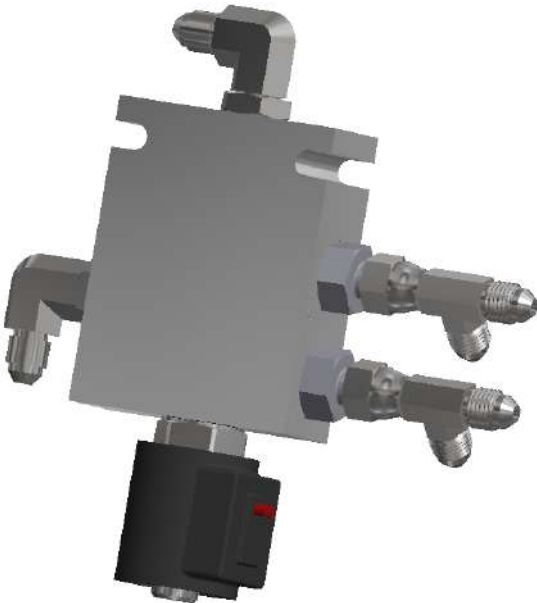


Fig 1 SG 46/52 Valve Assembly

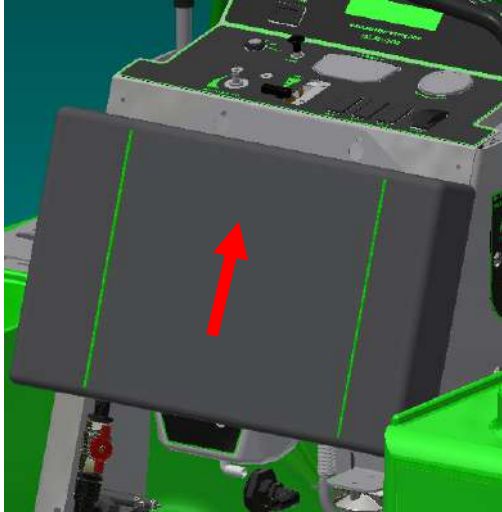


Fig 2 SG 36/42 Valve Assembly

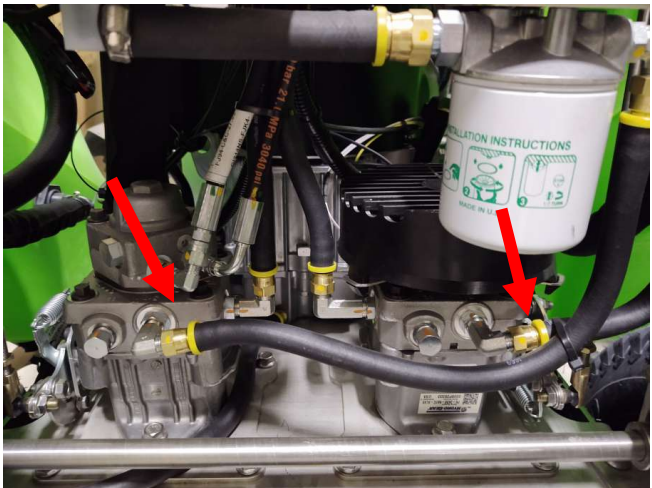
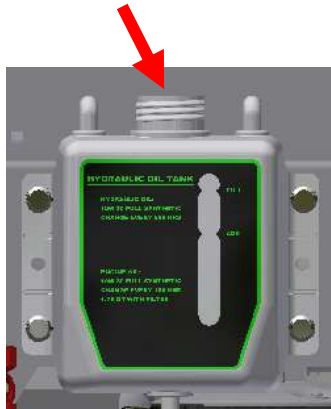
HILL SIDE ASSIST INSTALLATION

STEP 6:

- Remove the knee pad to access the hydraulic oil reservoir.



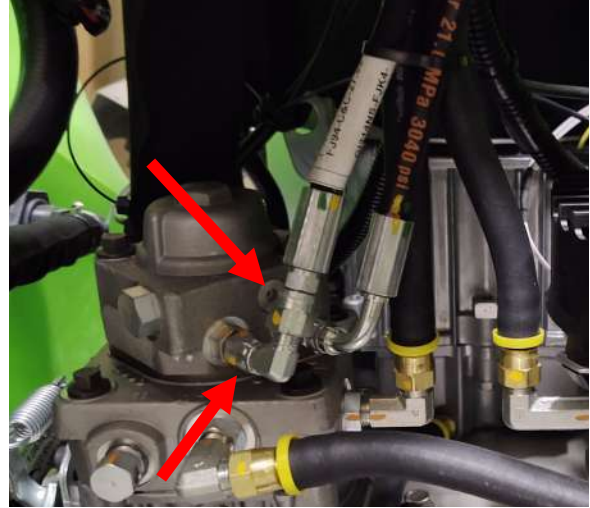
- Loosen and remove the cap from the hydraulic oil reservoir.
- Disconnect the rear hoses from the hydraulic pumps, place the hoses over a proper container draining the hydraulic oil.
- Once the oil has been drained, reconnect the hoses to the pumps.



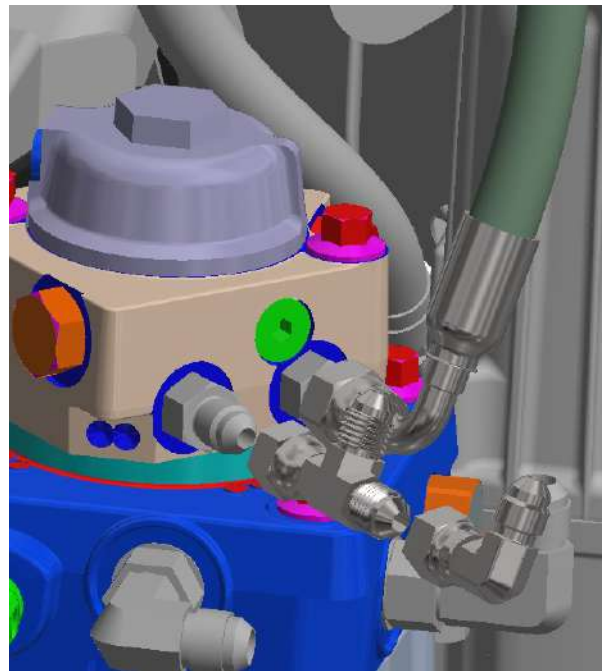
HILL SIDE ASSIST INSTALLATION

STEP 7:

- Disconnect the return hose and fitting from the pump.

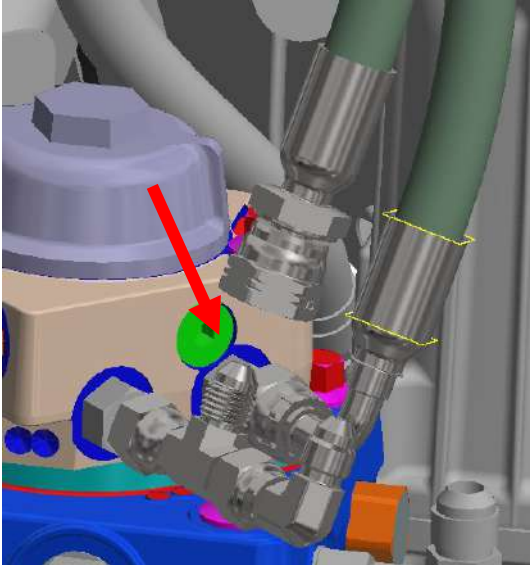


- Connect 1 H84031 “swivel tee fitting” (provided with the kit) to the return port.
- Reconnect the “swivel elbow fitting to the end of the “swivel tee fitting”.



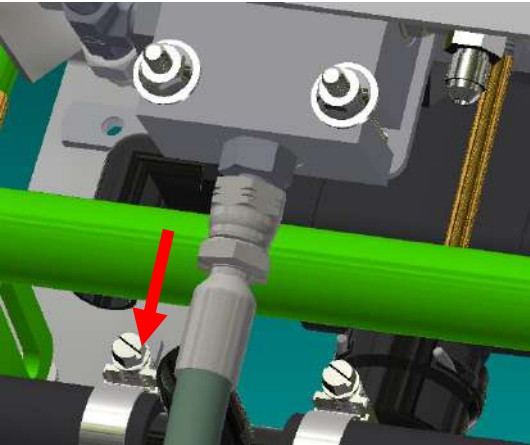
HILL SIDE ASSIST INSTALLATION

- Reconnect the return hose to “swivel tee fitting”.

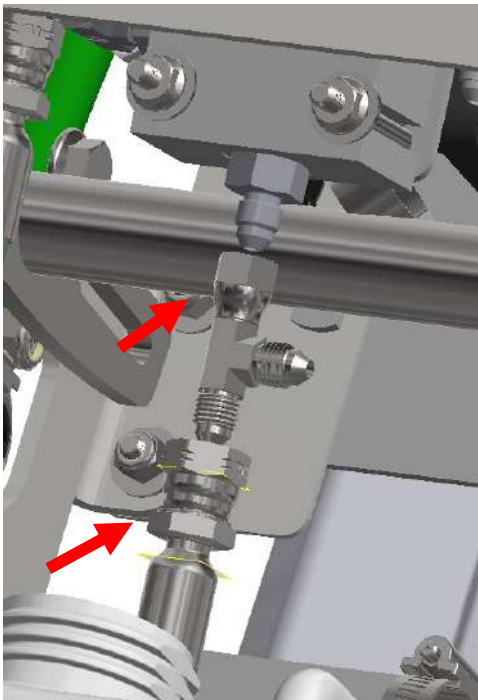


STEP 8:

- Disconnect the supply hose.



- Connect 1 (H84031) “swivel tee fitting”, (provided with the kit) to the control valve .
- Reconnect the supply hose.

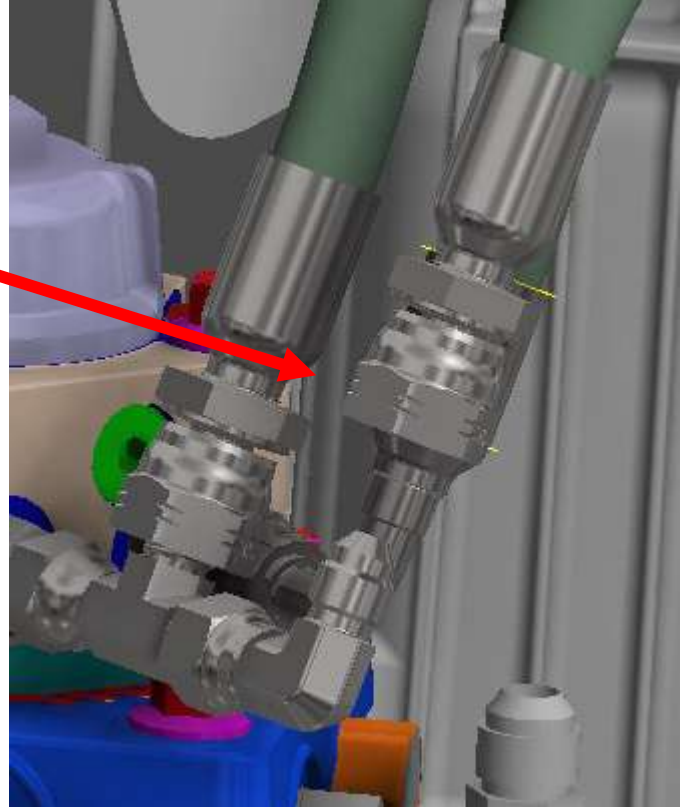


HILL SIDE ASSIST INSTALLATION

STEP 9: Hose Routing

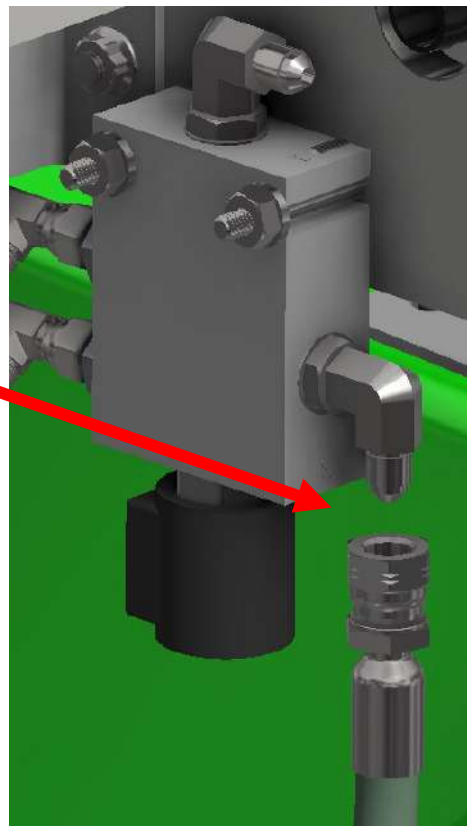
- Connect one end of hose with “orange wrap” to the elbow fitting on the hydro pump.

ORANGE



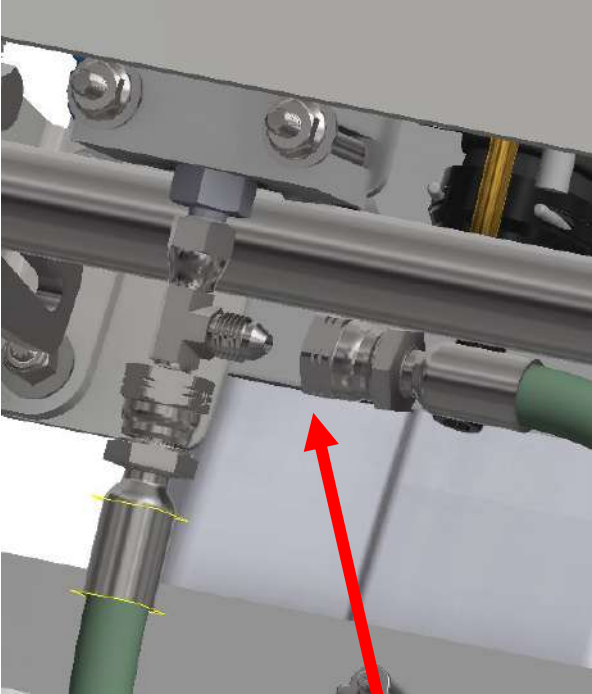
- Connect the other end of hose with “orange wrap” to port 3 of the solenoid valve.

ORANGE



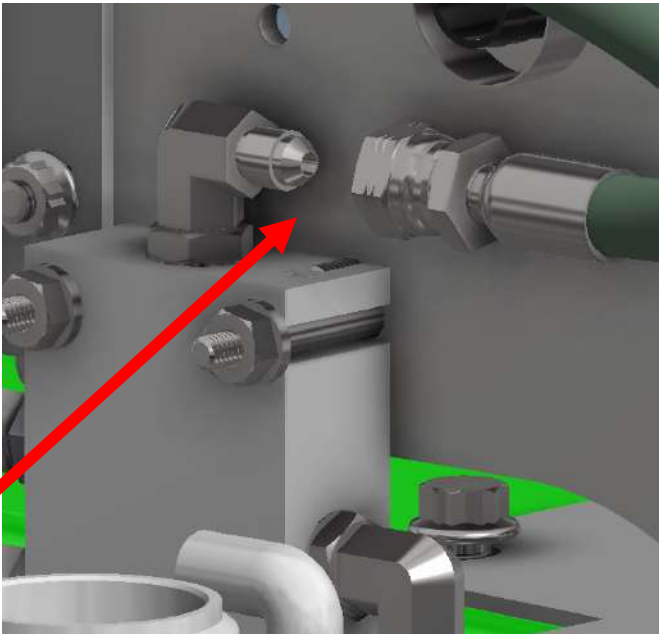
HILL SIDE ASSIST INSTALLATION

- Connect one end of hose with "red wrap" to the swivel tee fitting on the hydraulic control valve.



RED

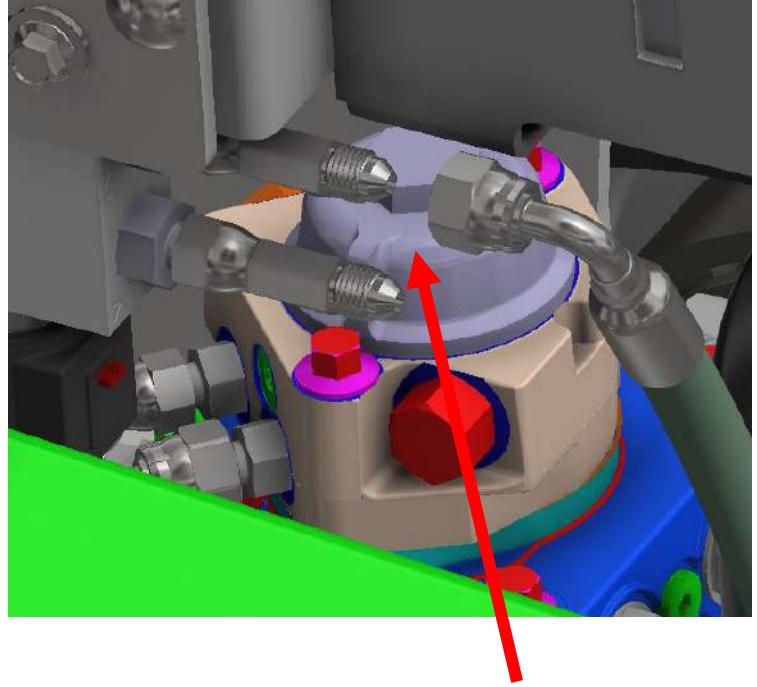
- Connect the other end of hose with "red wrap" to port "1" on the solenoid valve.



RED

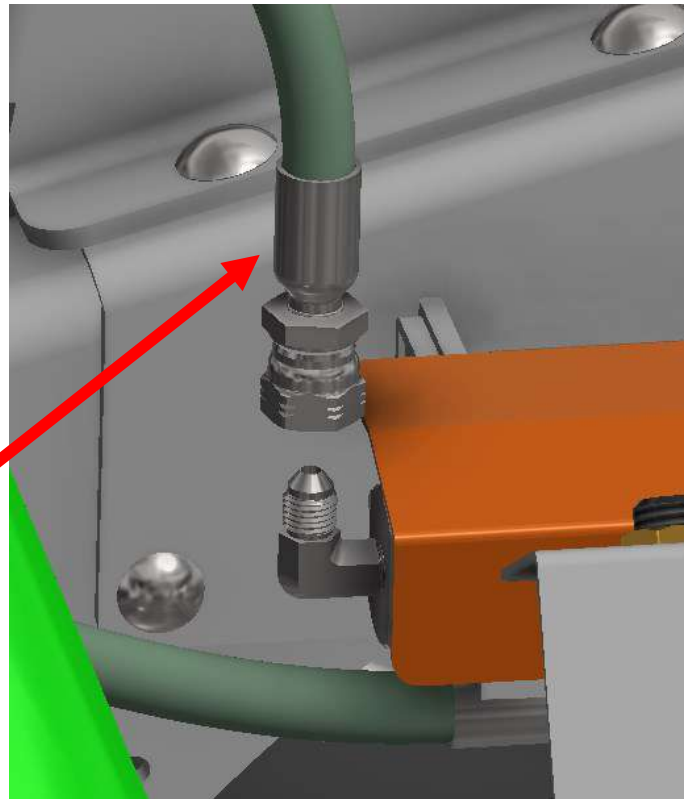
HILL SIDE ASSIST INSTALLATION

- Connect the elbow end of hose with “blue wrap” to port 2 on the solenoid valve.



BLUE

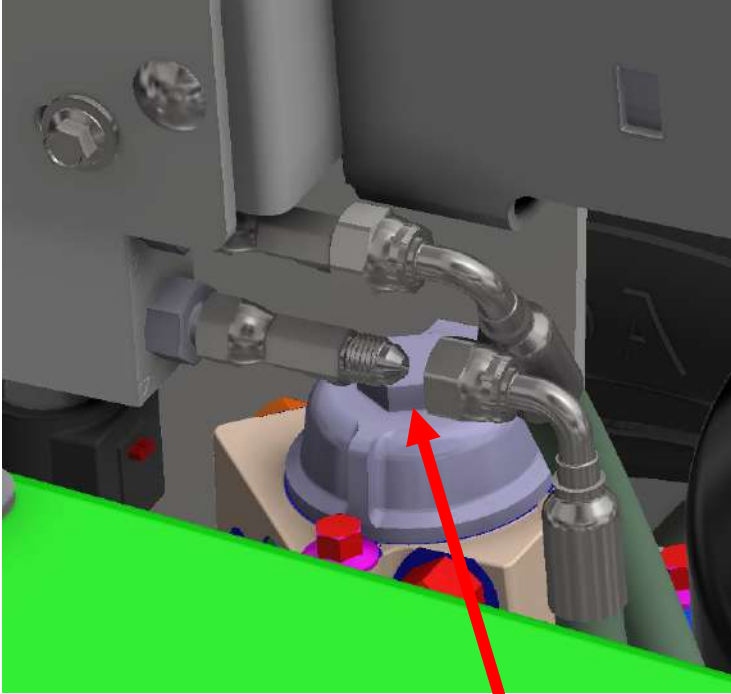
- Connect the straight end of hose with “blue wrap” to the elbow fitting on the end of the cylinder (RIGHT SIDE OF THE MACHINE).



BLUE

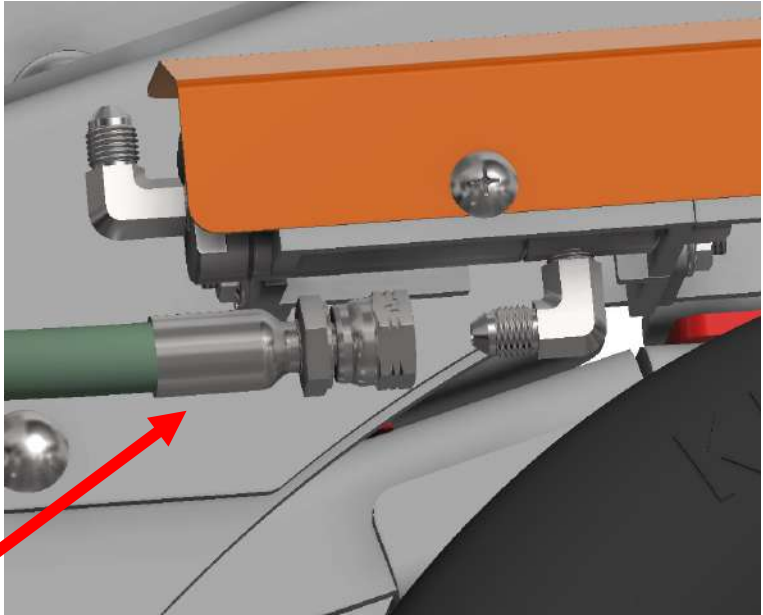
HILL SIDE ASSIST INSTALLATION

- Connect the elbow end of hose with “green wrap” to port 4 on the solenoid valve.



GREEN

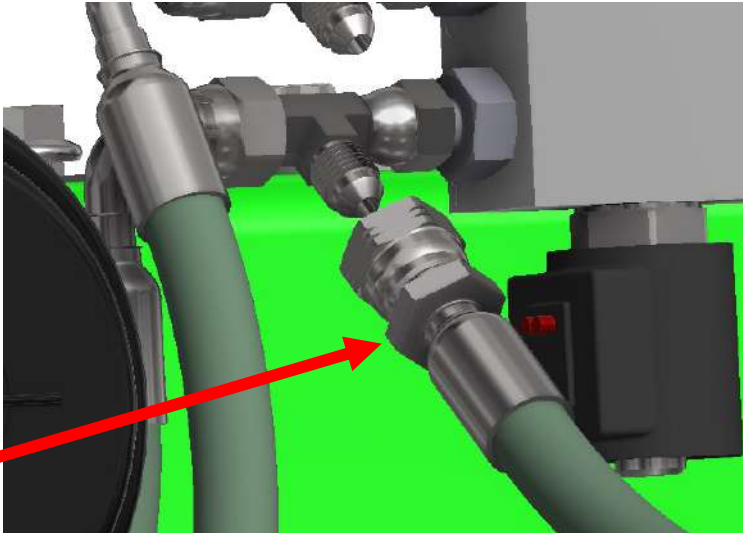
- Connect the straight end of hose with “green wrap” to the elbow fitting on the bottom of the cylinder (RIGHT SIDE OF THE MACHINE).



GREEN

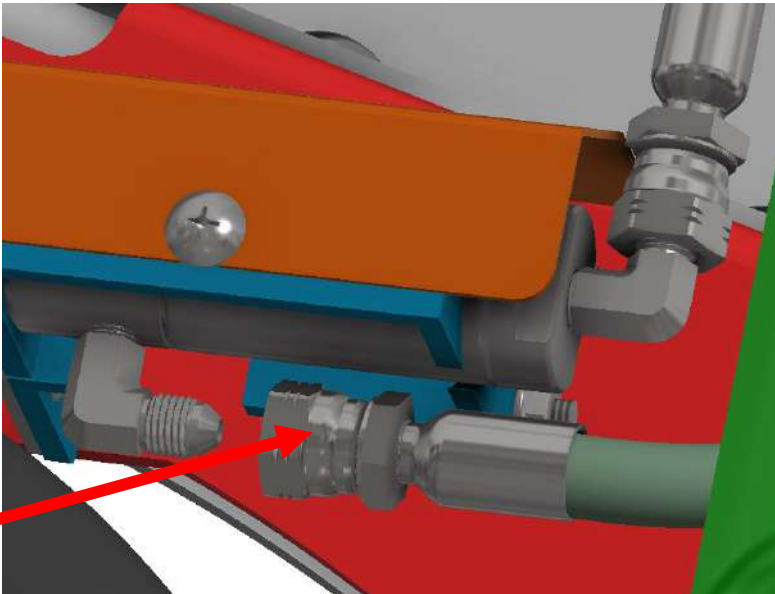
HILL SIDE ASSIST INSTALLATION

- Connect the end of hose with “black wrap” to the swivel tee fitting (PORT 4).



BLACK

- Route the hose behind and around the engine and connect the other end of hose with “black wrap” to the elbow fitting on the bottom of the cylinder (LEFT SIDE OF THE MACHINE).

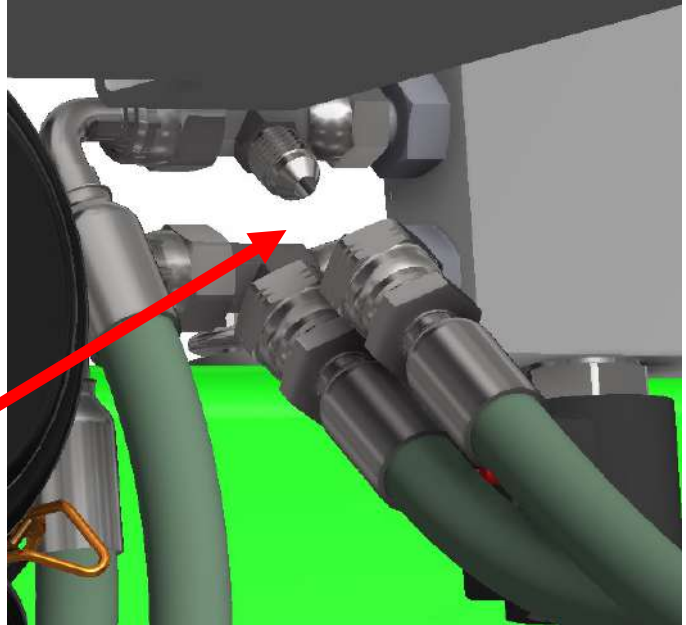


BLACK

HILL SIDE ASSIST INSTALLATION

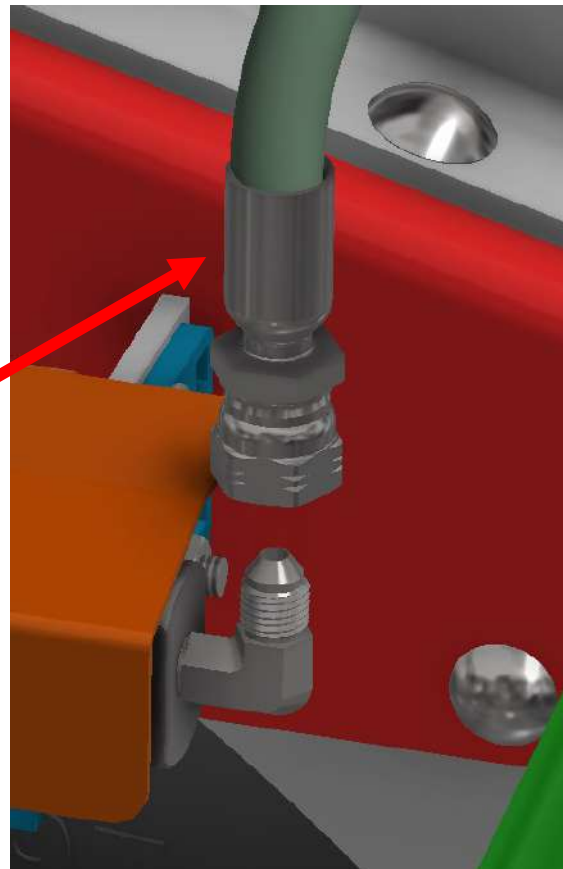
- Connect one end of hose with “white wrap” to the swivel tee fitting (PORT 2).

WHITE



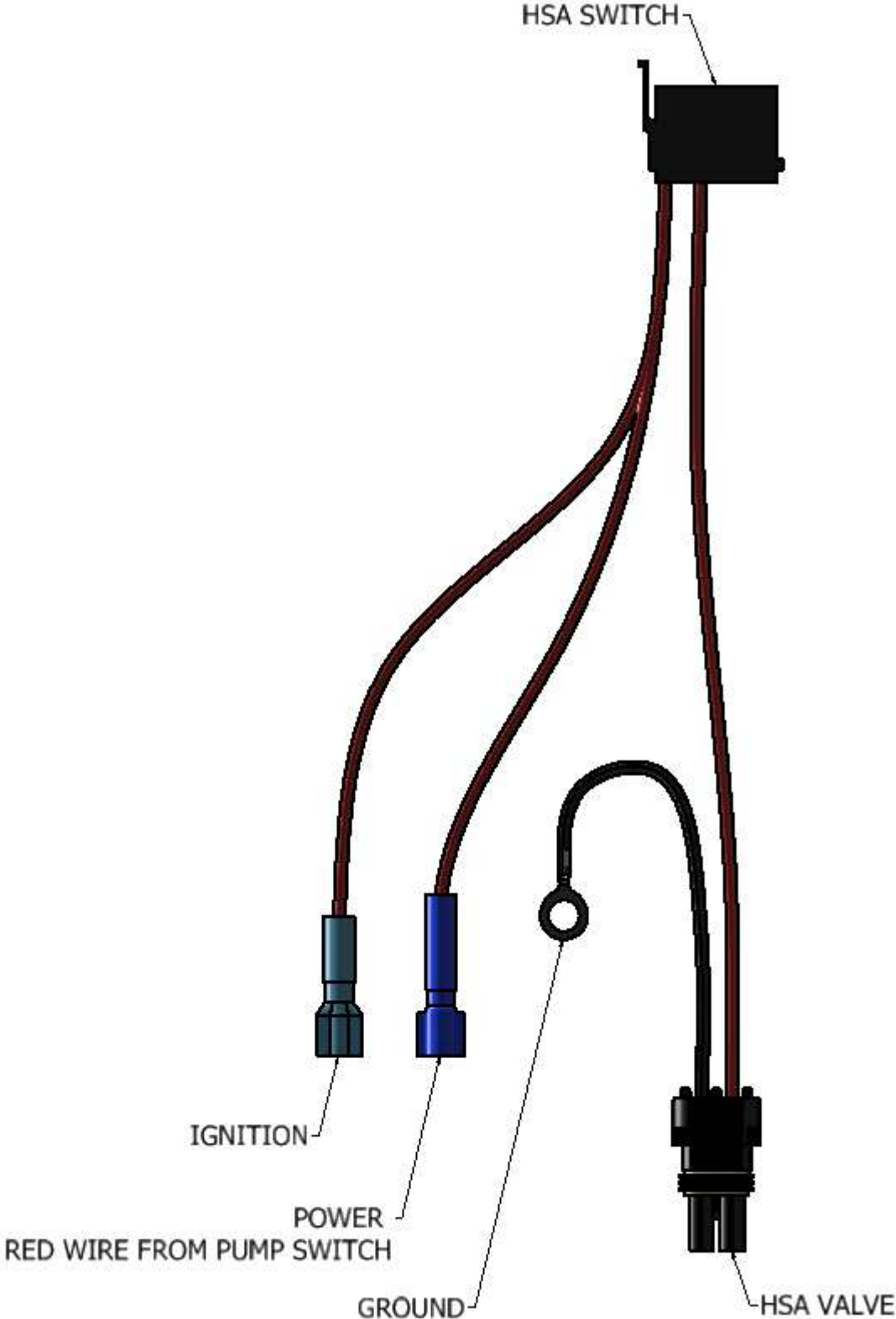
- Route the hose behind and around the engine and connect the other end of hose with “white wrap” to the elbow fitting on the end of the cylinder (LEFT SIDE OF THE MACHINE).

WHITE



HILL SIDE ASSIST INSTALLATION

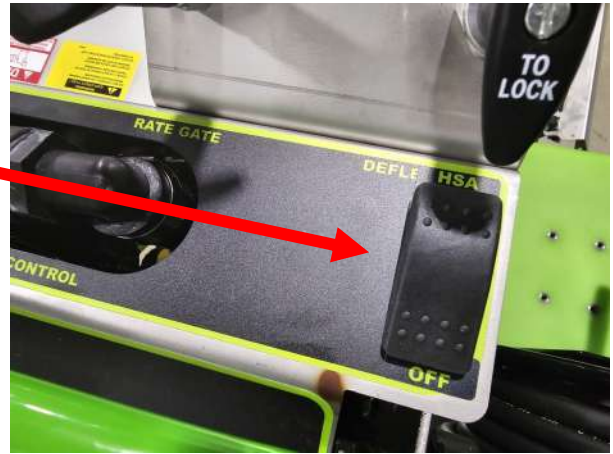
SG-HSA



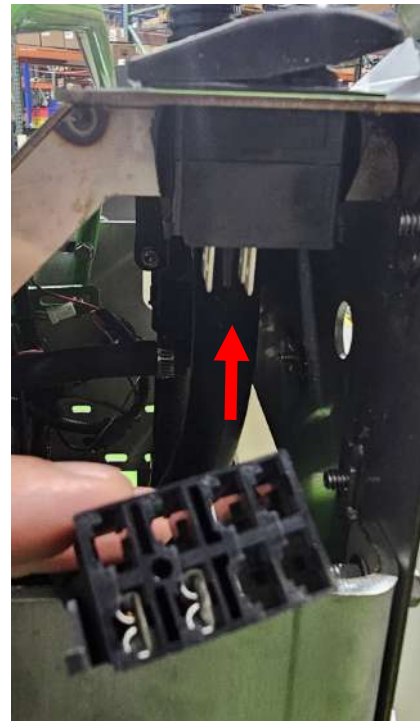
HILL SIDE ASSIST INSTALLATION

STEP 10:

- Using a utility or exacto knife, cut out the right side switch opening on top of the dash.
- Attach the rocker switch in the opening with the long side of the switch facing down.



- Connect the end of the wire harness to the bottom of the rocker switch.



HILL SIDE ASSIST INSTALLATION

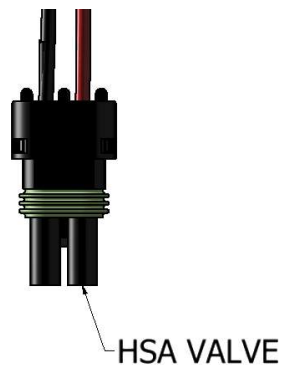
- Connect the ground wire from the harness to the ground nut on the cross member.



- Route the harness down the bundle with the other wire harnesses and neatly zip tie them together.

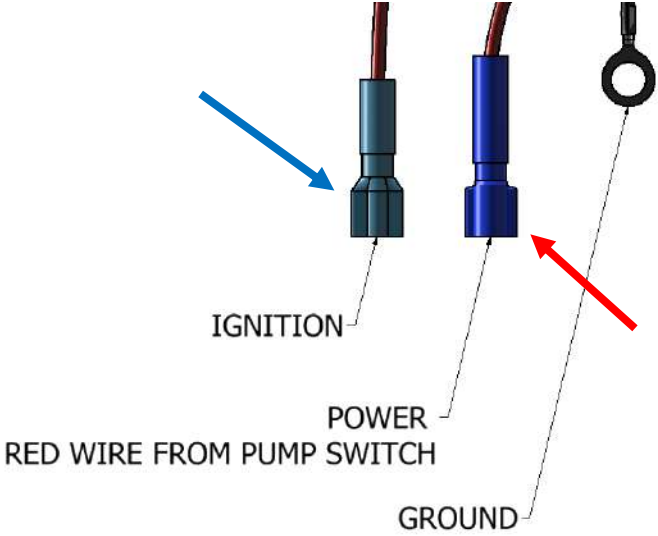


- Connect the plug from wire harness to the hsa valve.



HILL SIDE ASSIST INSTALLATION

- Connect the power wire from the harness to the power wire from the pump switch.



- Connect the ignition wire from the harness to the spade connector on the ignition switch.



- Reconnect the battery, *ground* first and then *power* wire.



GROUND

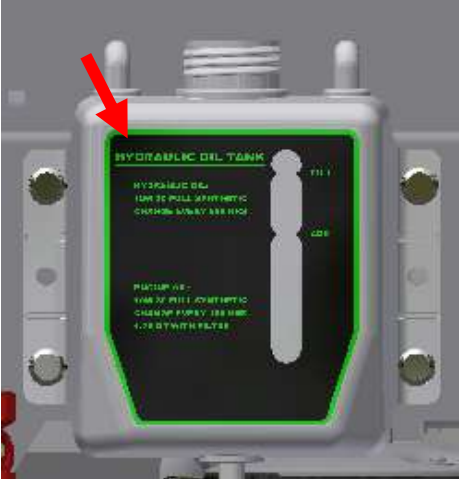
POWER

HILL SIDE ASSIST INSTALLATION

STEP 11:

NOTE: Check that all hose connections are tight.

- Refill the hydraulic oil to the proper level.
- Start the machine and activate the hill side assist a couple times or until the oil is through the system and the cylinders are functioning.
- Turn the machine off and refill the oil to the proper level.



STEP 12:

- Loosen the adjustment nut (11/16") on both cylinders. *Fig. 1*
- The cylinder is to be set at 1/2" inch from the end of the plunger to the edge of the yoke. *Fig. 2*

TIP Turn the tire so the hole is facing away from the cylinder shaft and use a 1/2" rod or bolt between the yoke and cylinder shaft.

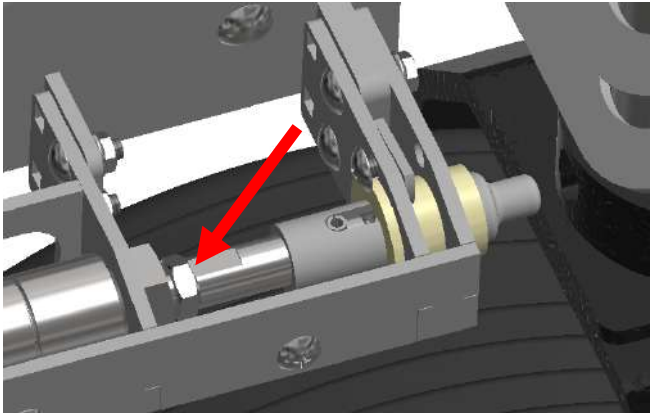


Fig. 1

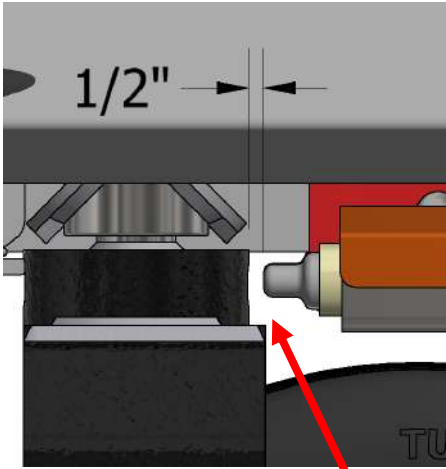


Fig. 2

HILL SIDE ASSIST INSTALLATION

NOTES:

HILL SIDE ASSIST INSTALLATION

NOTES:



Steel Green Mfg.
 824 S State Road 39
 Lebanon, IN 46052
Steelgreenmfg.com
 (765)-481-2890

MANUAL PART NO.	MANUAL REV.	DESCRIPTION	KIT PART NO.
SGM-023	E	SG HILL SIDE ASSIST	A10040 A10040-36