



Operator's Manual

S/N 03A01-04A20



6/28/06

HARPER INDUSTRIES, INC. WARRANTY POLICY

STATEMENT OF WARRANTY

Harper Industries, Inc. warrants to each purchaser of new DewEze equipment from an authorized dealer or representative, that such equipment be free from manufacturing defects in normal service for a period of ONE YEAR, commencing with delivery to the original user.

The obligation of Harper Industries, Inc. under this warranty is expressly limited to our option, to replacement or repair at a service facility designated by DewEze or at the manufacturing plant in Harper, Kansas, of such part or parts, as inspection shall disclose to have been defective. This warranty does not apply to defects caused by damage or unreasonable use (including failure to provide reasonable and necessary maintenance), or to tires, belts, blades, lights, or other normal maintenance items while in the possession of the consumer.

DewEze Manufacturing makes no warranty with respect to trade accessories. They are subject to the warranties of their respective manufacturers.

The engine is subject to the manufacturer's warranty as outlined in the OWNER'S MANUAL and must be serviced by an authorized engine service facility.

ANY IMPLIED OR STATUTORY WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. DewEze Manufacturing makes no other express warranty, nor is anyone authorized to make any on behalf of Harper Industries, Inc..

For information on warranty procedures please contact your nearest dealer.

FOR YOUR RECORDS

Date of Purchase ____/____/____

Dealer's Name _____

Dealer's Phone _____

Serial Number - Machine _____

Serial Number - Engine _____

This manual is for machines with Serial No. 03A01 and above Revised 03/29/04

INTRODUCTION

TO THE DEWEZE ATM 72LC (ALL TERRAIN MOWER) OWNER OR OPERATOR:

It is important that you take the time to read this manual carefully before operating the machine. You should be familiar with all safety precautions along with the operating and service procedures. Operator knowledge and familiarity will make a difference in how the machine will perform.

This OWNER'S MANUAL was written to help you realize the full benefits of the machine and to help you maintain it so it will give you long and productive service.

The objective of Harper Industries, Inc. in the design of the **ATM 72LC** was to create a mowing machine that can function safely and comfortably on slopes and inclines. The result is a mowing machine that will automatically adjust itself to keep the operator in a vertical position on all slopes up to 34 degrees.

If you have any questions that are not covered in this manual, please feel free to contact your nearest dealer.

REGARDING PRODUCT CHANGES:

Following publication of this manual certain changes in standard equipment and options may have occurred which would not be included in these pages. Your DewEze dealer is the best source for up to date information.

Harper Industries, Inc. reserves the right to change product specifications at any time without incurring obligation to provide such updates to previously manufactured units.

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm

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Harper, KS 67058

Phone: 620-896-7381
Fax: 620-896-7129

Section 1

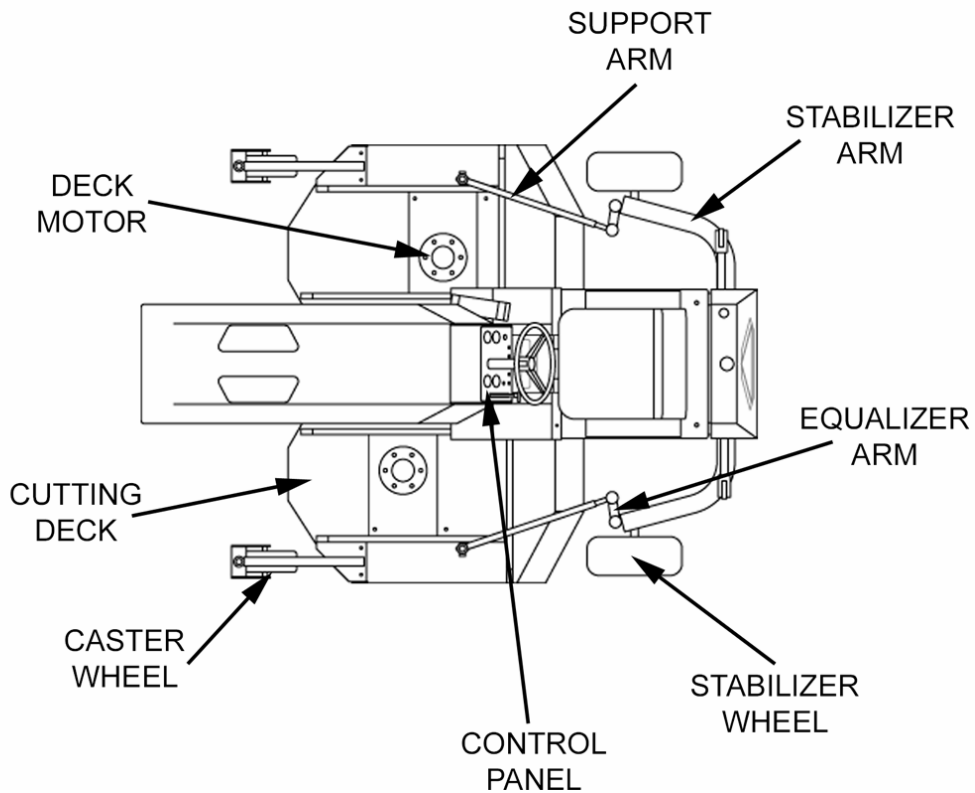
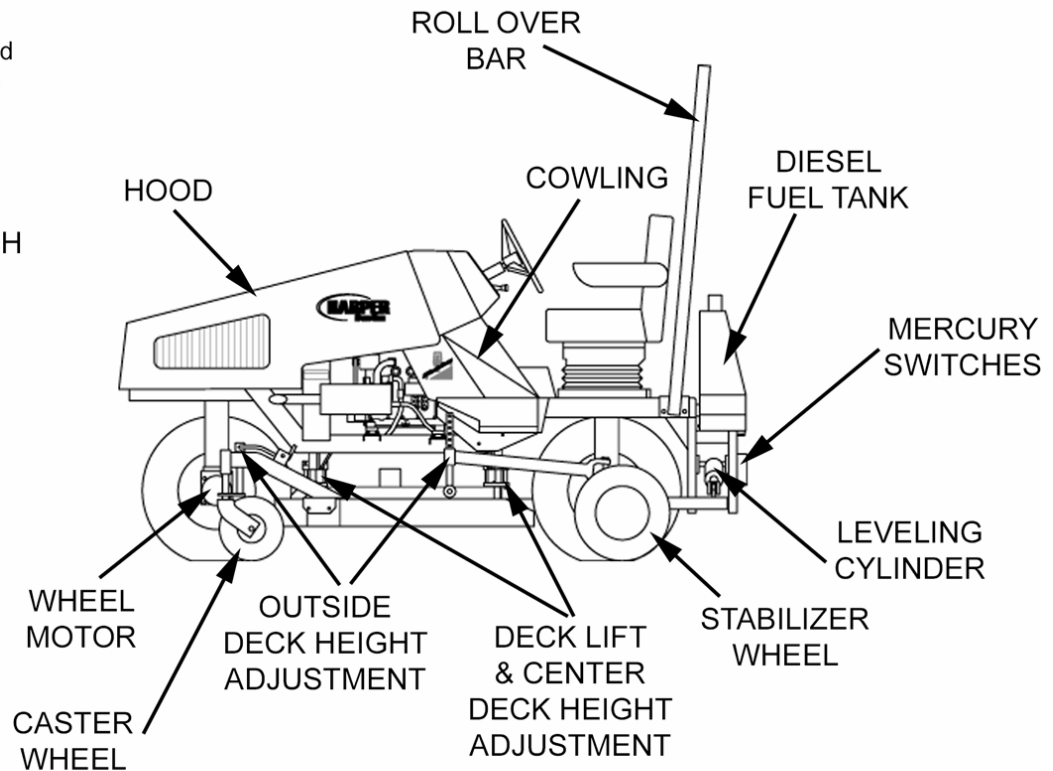
Safety & Operation



CONTROL IDENTIFICATION

HYDRAULIC
RESERVOIR
(located under hood
at front of mower)

TOW VALVE
& NEUTRAL
SAFETY SWITCH
(located behind
cowling and above
propulsion pump)



PRE-START INSTRUCTIONS

BEFORE STARTING: Be sure the engine is properly filled with oil and fuel.

CRANKCASE OIL: Fill the crankcase with an oil that meets the API (American Petroleum Institute) service designation CE/SF. Do not mix brands or grades of motor oil. Recommended oil viscosity for expected temperatures are listed in the service schedule on page 3.1.



SAFETY WARNING! Do not remove the dipstick while the engine is running. Oil may blow out the fill tube causing injury.

HYDRAULIC OIL: Make sure that the hydraulic oil in the reservoir is at the proper level on the dipstick. If not, fill with HD15-40 or HD10-40 motor oil. (HD 15-40 supplied from factory)

RECOMMENDED FUEL: Use clean, fresh, #2 diesel. Refer to the engine manufacturer's manual for further information on fuel.



SAFETY WARNING! Avoid potential explosions! Never fill the fuel tank while the engine is running!

INSPECTION: Inspect the engine visually before starting. Check for loose or missing parts and any damage that may have occurred in shipment.

IMPORTANT: Check for loose belts, bolts and hoses after one hour of use and daily thereafter.

TIRE PRESSURE: There should be 10-12 psi in the drive tires. Higher pressure will decrease traction on slopes. Lower pressure may allow tire to pop off of rim.

DRIVING THE DEWEZE ATM72LC

Driving the DEWEZE ATM72LC with the automatic leveling device will be a new and different experience. After several minutes of driving, the smooth control and sturdy feel will become comfortable to you. The security of always sitting upright, and the feel of powerful, positive traction will give you confidence and comfort in most mowing situations. We urge EXTREME CAUTION lest your confidence in these features get you in trouble. REMEMBER: The features of the machine cannot replace

WARNING!

Auto level will not work if steering wheel is held against stop during extreme left or right turns!

GUIDELINES:

1. Take some time to get used to the handling characteristics of the machine.
2. Always look before backing up.
3. SLOW DOWN over rough terrain.
4. DO NOT make sharp turns at high speeds.
5. Always keep your feet on the footrests while operating the machine.
6. Never attempt to operate the machine when it is malfunctioning.
7. Use extra caution when mowing slopes greater than 34 degrees. (see DewEze ATM Slope Capability on next page)
8. Turn up hill when maneuvering on a hill.
9. If it is necessary to park the mower on a hill, be sure to USE THE PARKING BRAKE AND CHOCK THE WHEELS!
10. Wear appropriate, protective clothing while operating the mower.
11. NEVER ALLOW PEOPLE IN THE AREA YOU ARE MOWING!
12. Always avoid mowing over debris that could be projected from the mower discharge or do damage to the machine or anything in the area.
13. FOR BEST RESULTS OPERATE THE MOWER ENGINE AT FULL THROTTLE. This will allow the blades to turn at optimum speed, and the leveling device to be the most responsive. Forward speed is easily controlled with the foot control pedal.
14. Slow down when turning on a hill. Fast turns may not allow the leveling system to function properly.
15. Before dismounting, turn off the blades. Place foot control in neutral position and set parking brake. Stop engine and remove ignition key.

(continued next page)

DRIVING THE DEWEZE ATM72LC (continued)

OPERATING TIPS:

1. Read Safety Decals
2. Always check engine oil and hydraulic oil levels before starting.
3. Make sure you have plenty of fuel.
4. Visually check the tires.
5. Adjust seat to comfortable position.
6. Always use good judgement when using this machine.
7. Always wear safety belts.

DewEze ATM Mower Leveling Capabilities/Specifications

The degree of slope that a DewEze ATM mower can safely operate is dependent on a number of conditions, machine capabilities, environmental conditions, and operator skill.

DewEze ATM mowers are manufactured with the ability to maintain operator and engine verticalness up to a 34 degree slope. The degree of verticalness correlates with operator comfort.

PARAMETERS FOR GRASS CUTTING WITH THE ATM 72LC:

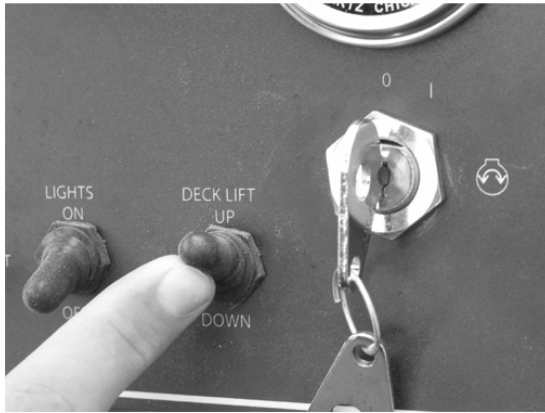
The principal objective when mowing is to achieve the highest quality cut with the greatest efficiency. However, there are many environmental conditions that work to diminish the capacity of the machine to achieve this goal. The variables include: type, density, length and moisture content of the vegetation. When determining the proper way to cut grass, each of these variables must be given serious consideration.

The operator is able to make adjustments that will increase the cutting efficiency of the machine. These adjustments include: deck height, ground speed and blade sharpness. Blades should be sharpened on a regular basis to improve cut and reduce resistance. Deck height and ground speed should be determined based on environmental conditions.

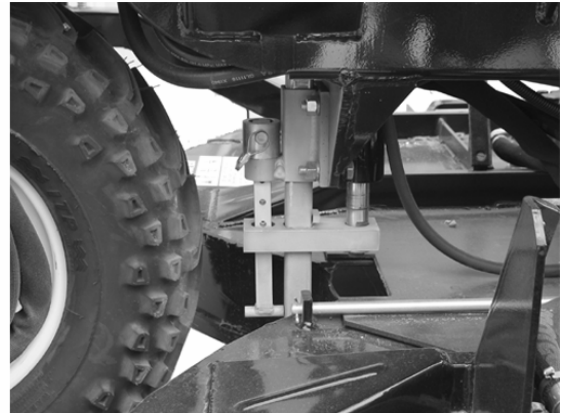
The highest quality of cut can usually be achieved by removing only 1/3 of the plant when the initial length is 9" or less. Mowing taller or extremely dense grass while using a low deck height setting will cause material to build up under the deck faster than it can be ejected. This build up can create enough resistance to slow the tip speed of the blade, causing a drastic reduction in cut quality. The configuration of the hydraulic system that powers the deck motors will exhibit stress in the left deck motor first. Deck height or mower speed should be adjusted when the right deck begins to out perform the left deck. This may occur without noticeable change in engine speed.

Certain situations may require two cuts with different deck heights and or a slower ground speed to achieve the desired cut quality. When a better looking finish cut is desired, making two passes in tall grass can dramatically improve the quality of the cut. The deck should be raised on the first cut to near maximum height to allow grass to escape freely. The deck should then be lowered to the desired height to make the final cut.

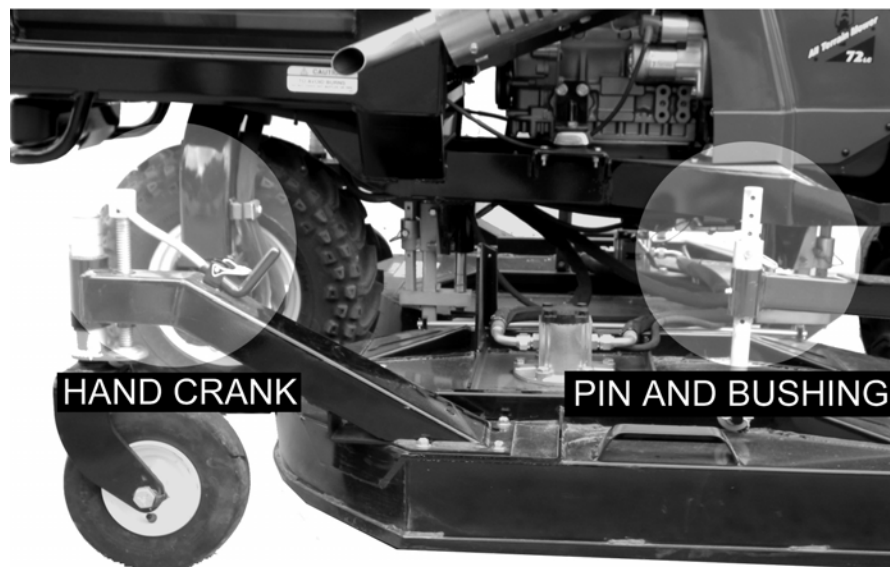
DECK LIFT ADJUSTMENT



STEP 1: With motor running use the deck lift switch to obtain the desired center height.



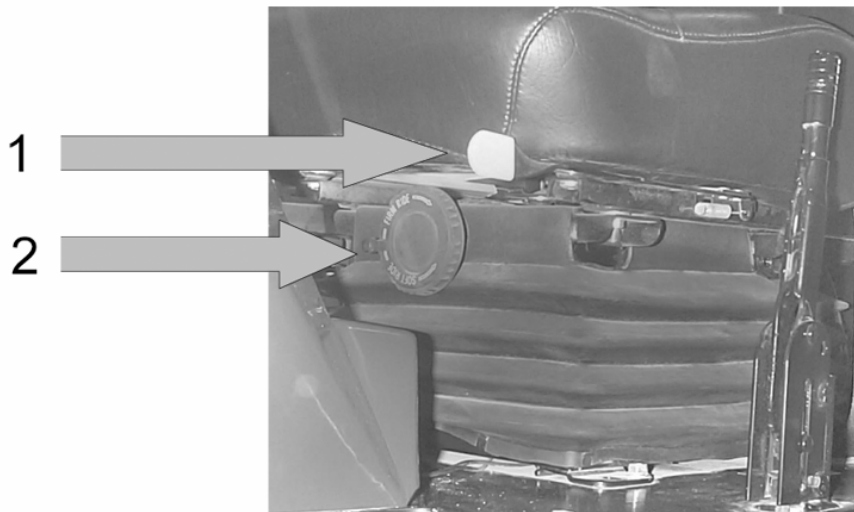
STEP 2: When the deck is at the desired center height, set the pin and bushing in the closest hole and let the deck down so that it rests on the stops.



STEP 3: Set the outside deck height using the pin and bushing and the hand crank. Set the pin and bushing to the correct height and then turn down the hand crank so that it will carry some of the load.

IMPORTANT: WHEN DONE CHANGING DECK HEIGHT ALWAYS REPLACE HAND CRANK PIN AND ALL BUSHING PINS.

SEAT ADJUSTMENT



1. The lever with the yellow handle controls the chair's horizontal movement.
2. The round knob adjusts the ride quality. Turn the knob clock-wise for a firmer ride, and counter-clock-wise for a softer ride.



Adjust screw to change the angle of the arm rests.



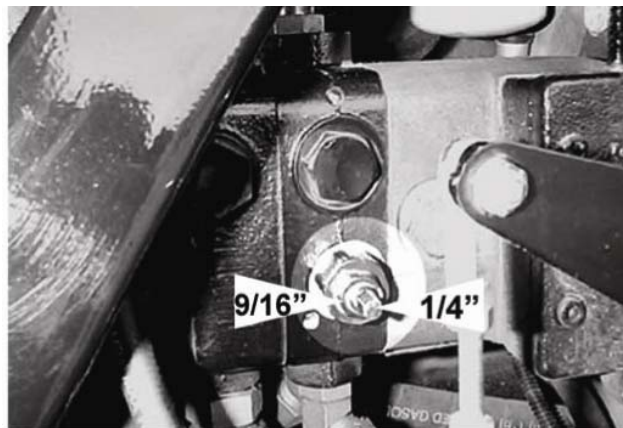
Adjust safety tether to allow proper seat travel and maintaining adequate safety.

TOW VALVE

IMPORTANT! THE TOW VALVE MUST BE OPENED BEFORE THE UNIT IS TOWED TO AVOID DAMAGE TO THE HYDRAULIC PUMPS.



TOW VALVE LOCATION: The Tow Valve is located behind the right front cowling. The Tow Valve is accessible for adjustment through a small hole located in the cowling for this purpose.



TO OPEN TOW VALVE: 1. Loosen the 9/16" locking nut.
2. Turn the 1/4" hex counter-clockwise a minimum of 2 full turns to ensure complete hydraulic system bypass.

IMPORTANT: TOWING OR PUSHING MOWER AT MORE THAN ONE MPH, WITH TOW VALVE CLOSED, FOR MORE THAN 50 YARDS MAY CAUSE SERIOUS DAMAGE TO THE HYDRAULIC PUMPS AND MOTORS.

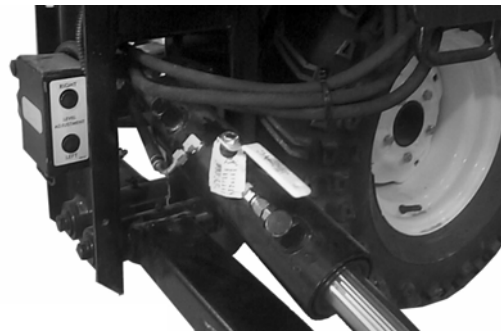
NOTE: Always close the TOW VALVE before normal operation! If tow valve is left open the mower will operate but have little propulsion power.

LEVEL ADJUSTMENT

The **manual over-ride** switch located on the instrument panel is used to lean the mower from side to side as labeled.



The box at the rear of the mower encloses the mercury switches that keep the machine level when the **automatic leveling** switch is on.



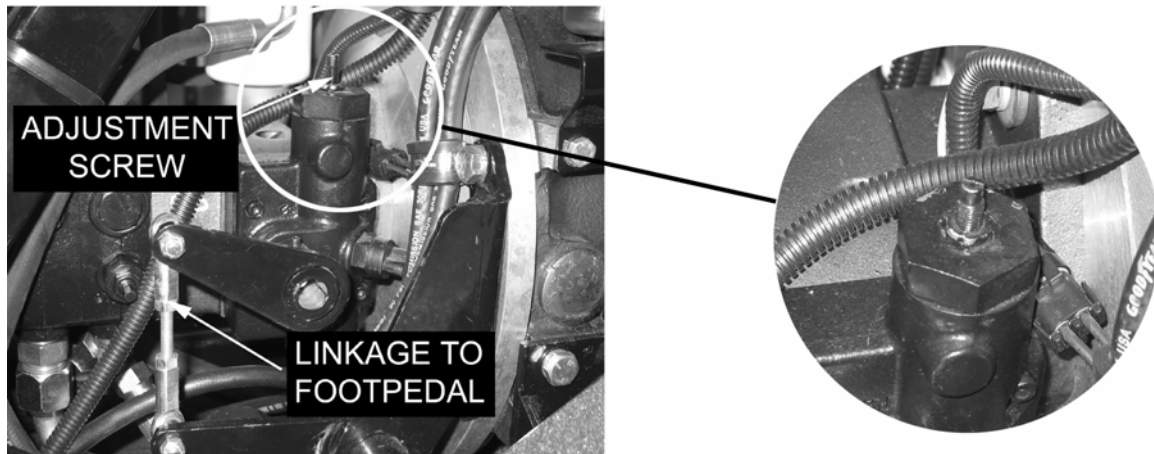
TO ADJUST MERCURY SWITCHES: Mower should be on level ground with the **parking brake set, auto-level switch on, and engine at idle**. Remove the two plastic covers from the mercury switch box.

1. Use manual over-ride switch to lean the mower to the right; release the switch and let the mower level itself.
 - a. If the mower does not reach a vertical position, and is still leaning some to the right, turn the RIGHT adjusting screw counter-clockwise and repeat No. 1 procedure. Continue this adjustment until mower returns to vertical position.
 - b. If mower passes vertical position, leaning some to the left, turn the RIGHT adjusting screw clockwise slightly and repeat No. 1 procedure. Continue this adjustment until mower returns to vertical position.
2. Use manual over-ride switch to lean the mower to the left; release the switch and let the mower level itself.
 - a. If mower does not reach vertical position, and is still leaning some to the left, turn the LEFT adjusting screw counter-clockwise slightly and repeat No. 2 procedure. Continue this adjustment until mower returns to vertical position.
 - b. If mower passes vertical position, leaning some to the right, turn the LEFT adjusting screw clockwise slightly and repeat No. 2 procedure. Continue this adjustment until mower returns to vertical position.



NEUTRAL ADJUSTMENT

If the machine creeps forward or backwards when pedal is in neutral position, the neutral adjustment must be made.



TO ADJUST:

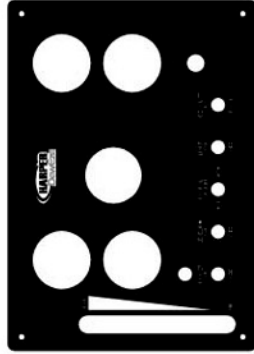
1. Remove the right side cowling. (The neutral adjustment is located behind the cowling and above the propulsion pump)
2. Position the screw on top of the neutral adjustment to the place where the mower does not creep forward or backward while in neutral.

72LC Decals

S/N 03A01-04A40



800153
BOTH SIDES

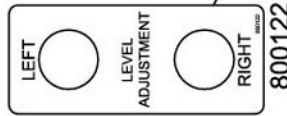


802009

CONTAINS MERCURY SWITCHES.
DO NOT PUT IN TRASH.
RECYCLE OR DISPOSE
AS HAZARDOUS WASTE.

800121

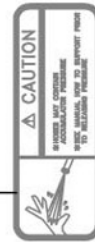
800121



800122



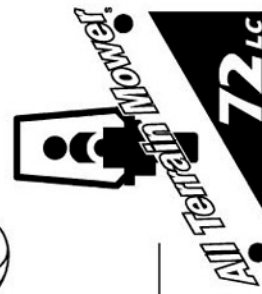
500256



800180



802027



800151
BOTH SIDES

72LC Decals

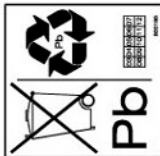
S/N 03A01-04A40

HYDRAULIC SYSTEM OIL
Use Engine Oil's Per
S.A.E. J183 ONLY
15W40 or 10W40
500211

500255
ON RESERVOIR
UNDER HOOD

CAUTION
TO AVOID BURNS
DO NOT TOUCH HOT MUFFLER OR PIPE

500257



500255

ON BULKHEAD
UNDER HOOD

WARNING

TO AVOID
SERIOUS INJURY OR EXPLOSION
* PROTECT EYES AND AVOID SKIN CONTACT
WITH BATTERY ACID.
* DO NOT ALLOW OPEN FLAME NEAR
CHARGING BATTERY.
* ALWAYS DISCONNECT NEGATIVE CABLE FROM
CHARGING SOURCE BEFORE DISCONNECTING
BATTERY BEING CHARGED.

WARNING

TO AVOID SERIOUS INJURY OR DEATH,
OPERATOR MUST FOLLOW ALL PRECAUTIONS.
(CONTACT DEALER FOR MANUALS.)
* READ OPERATOR'S MANUAL BEFORE
OPERATING & FOLLOW ALL PRECAUTIONS.
* SECURELY SUPPORT MOWER & REMOVE
KEY BEFORE WORKING UNDERNEATH.
* ALLOW MOWER TO STOP COMPLETELY
BEFORE ATTEMPTING TO SERVICE.
* NO CHILDREN OR UNQUALIFIED
PERSONS SHOULD OPERATE MOWER.
* BE CAREFUL ON UNEVEN TERRAIN.
* DECREASE SPEED WHEN TURNING.
* DO NOT OPERATE MOWER IN SERVICE
MODE.
500253

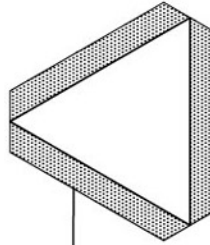
CAUTION

* WHEN OPERATING ON SLOPES
TURN MACHINE UP HILL.
* SLOW DOWN DURING THE
TURNING PROCESS.
* USE SLOWER SPEEDS ON
ROUGH TERRAIN.

800186

**DIESEL
FUEL ONLY**

800088



500079

WARNING

TO AVOID INJURY OR DEATH
FROM FIRE OR POISONOUS FUMES
* DO NOT RUN ENGINE IN ENCLOSED AREAS.
* SHUT OFF ENGINE BEFORE REFUELING.
* NEVER FUEL WHEN ENGINE IS HOT.
* DO NOT SMOKE WHILE REFUELING.
* KEEP ENGINE CLEAN OF GRASS
AND OTHER DEBRIS.

500254

DEWEZE
HARPER, KANSAS

100205

DANGER



KEEP AWAY—ROTATING BLADES
SERIOUS INJURY OR DEATH CAN RESULT
FROM THROWN OBJECTS OR BLADE CONTACT.
* DO NOT STAND ON OR NEAR MACHINE WHEN IN OPERATION.
* DO NOT OPERATE WITH DEFLECTORS OR GUARDS REMOVED.
500252

BOTH SIDES

WARNING: ☐
REPLACE ALL ☐
DAMAGED OR ☐
MISSING DECALS

Section 2

Maintenance



SERVICE PARTS

ATM 72LC

FILTERS

Engine Air Filter _____ Deweze # 840027

Engine Oil Filter _____ Deweze # 820220

Engine Fuel Filter _____ Deweze # 820221

Engine Fuel/Water _____ Deweze # 820222

Hydraulic Return Filter _____ Deweze # 822002

Propulsion Pump Filter _____ Deweze # 822031

Hydraulic Tank Vent Filter _____ Deweze # 822018

SERVICE PARTS

ATM 72LC

BELTS

Fan/Alt. Belt _____ Deweze # 840038

BLADES

Blade Set (Right) Swinging _____ Deweze # 500269

Blade Set (Left) Swinging _____ Deweze # 500268

Bolt Kit (Swinging) 1 Deck _____ Deweze # 500319

Blade Set (Right) Shear bolt _____ Deweze # 500270

Blade Set (Left) Shear bolt _____ Deweze # 500271

Bolt Kit (Shear Bolt) 1 Deck _____ Deweze # 500320

TIRES AND WHEELS

Stabilizer Wheel Assy. _____ Deweze # 800057

Caster Wheel Assy. _____ Deweze # 800093

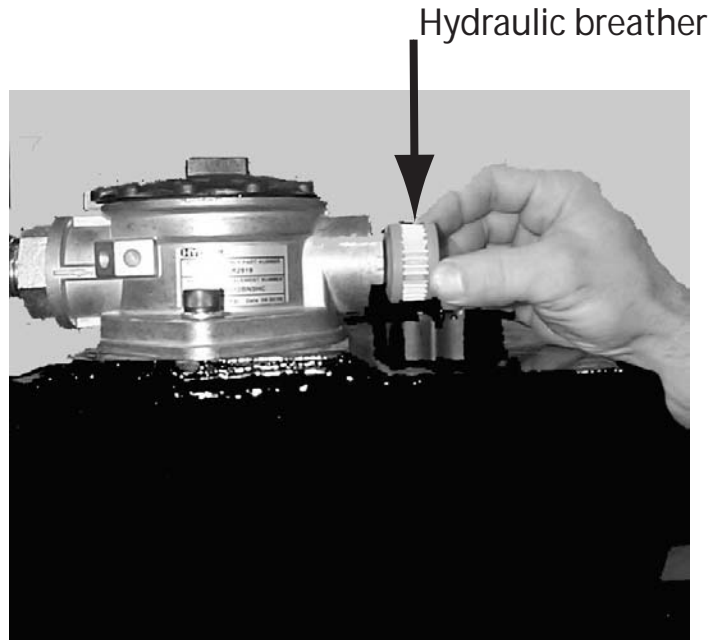
Drive Tire _____ Deweze # 800114

Drive Wheel (Rim) _____ Deweze # 500181

Drive Tire and Wheel Assy. _____ Deweze # 800126

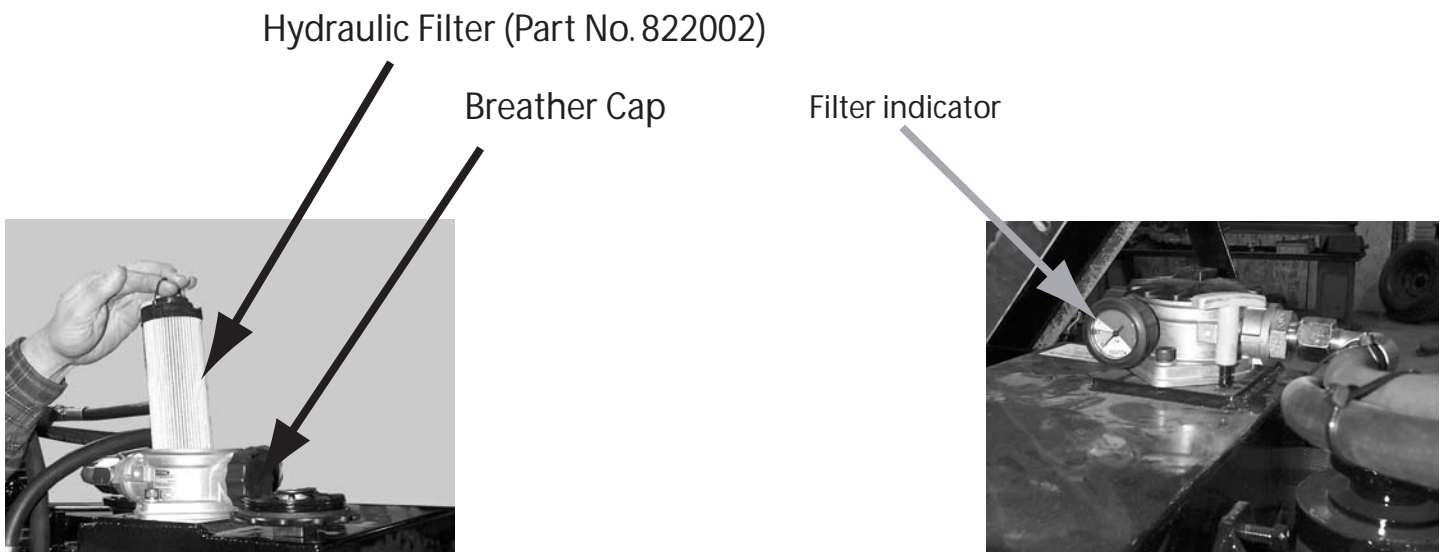
Hydraulic Breather

1. Change breather whenever hydraulic filter is serviced
Breather part number: 822018



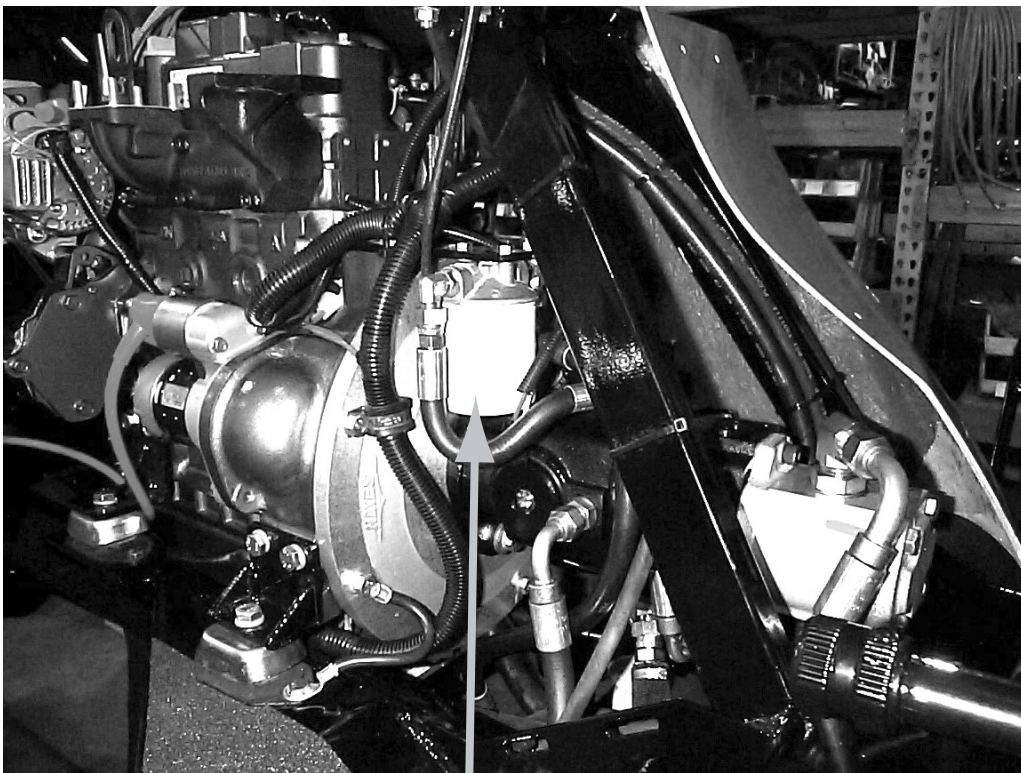
Hydraulic Filter

1. Change hydraulic filter whenever filter indicator needle runs in the red area.
NOTE: Check gauge when oil is at operating temperature.



SERVICE POINTS - PROPULSION PUMP

1. For access to propulsion pump filter the left hand cowling must be removed.



Propulsion Pump Filter

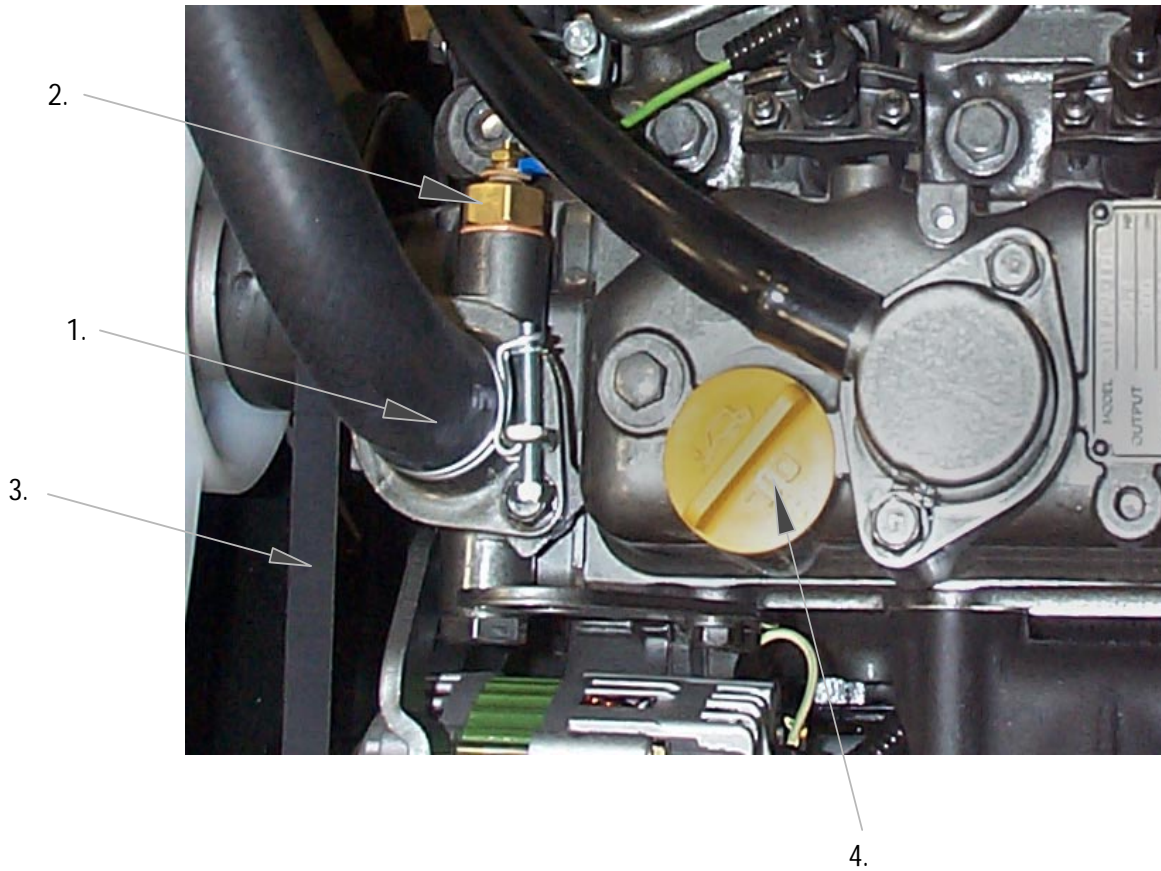
SERVICE POINTS - YANMAR ENGINE - RIGHT SIDE
S/N 03A01-04A20



1. FUEL FILTER- CLEAN FUEL FILTER ELEMENT AFTER 200 HOURS OF USE
DewEze PART # 820221 - YANMAR PART # 119810-55650
2. FUEL/WATER SEPARATOR- DRAIN EVERY 200 HOURS AND WIPE OUT MOISTURE.
DewEze PART # 820222 - YANMAR PART # 129335-55700
3. OIL PRESSURE SENDING UNIT
4. ENGINE OIL DIP STICK- CHECK DAILY, FILL TO UPPER LINE ON DIP STICK.
FULL CAPACITY - 3.8 QUARTS (3.6 LITERS)
5. ENGINE OIL FILTER- CHANGE ENGINE OIL AND FILTER AFTER 100 HOURS OF USE.
DewEze PART # 820220 - YANMAR PART # 129150-35151
6. AIR FILTER- CLEAN OR CHANGE AIR FILTER EVERY 50 HOURS.
DewEze PART # 840027 - YANMAR PART # 129087-12510
7. RADIATOR FLUID OVERFLOW RESERVOIR- KEEP BETWEEN LOW AND
FULL MARKS. 50% ethylene glycol/ 50% water mixture
DewEze PART # 840042
8. ENGINE OIL FILL LOCATION- USE HD 15-40 FOR NORMAL CONDITIONS,
USE HD 10-40 FOR AMBIENT TEMPERATURES BELOW 40 F (19 C)

SERVICE POINTS - YANMAR ENGINE - TOP SIDE

S/N 03A01-04A20



- 1. THERMOSTAT
- 2. TEMPERATURE SENDING UNIT
- 3. FAN BELT
- 4. OIL FILL CAP

DewEze Part # - 840038

SEE YANMAR DEALER FOR ENGINE PARTS

72LC Service Schedule

Disclaimer-On engine applications YANMAR Diesel Engine Co. recommends the following:

Daily

- Check Engine oil level.....Use HD 15-40, *HD 10-40 if below 40°F (19°C)*
- Check Hydraulic oil level.....Use HD 15-40 or HD 10-40 motor oil
(HD 15-40 SUPPLIED FROM FACTORY)
- Check fuel level.....Use Clean #2 Diesel
- Visually inspectFan Belt, bolts, fittings, and hoses (for signs of leaks or looseness)
- Check Coolant Level.....Between Low and Full, 50% Ethylene glycol
- Grease.....refer to page 3.2

50 Hour Service- These and all previous items

- Air FilterClean or replace Yanmar 129087-12510
- Check Tire Pressure10-16 PSI (6.9KPa-11Kpa) Drive tires
- Change Engine Oil.....3.8 quarts/ (3.6 liters)
- Change Engine Oil FilterYanmar 129150-35151

100 Hour Service-These and all previous items

- Change Engine Oil.....3.8 quarts/ (3.6 liters)
- Change Engine Oil FilterYanmar 129150-35151
- Check Serviceability of Battery

200 Hour Service-These and all previous items

- Clean Fuel Filter according to Yanmar manual
- Drain Fuel / Water Separator
- Adjust Fan Belt Tension to Yanmar Manual

250 Hour Service

- Change propulsion pump filterDeweze 822031

HYDRAULIC FILTER IS NOT AN HOURLY SERVICE..... Refer to page 2.3
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400 Hour Service-These and all Previous items

- Replace the Fuel Filter.....Yanmar 119810-55650
- *Check Fuel Injection Condition* to Yanmar manual
- *Check Fuel Injection Timing* to Yanmar manual
- *Adjust the intake and Exhaust valve clearances* to Yanmar manual

1000 Hour Service or Annual Service-These and all previous items

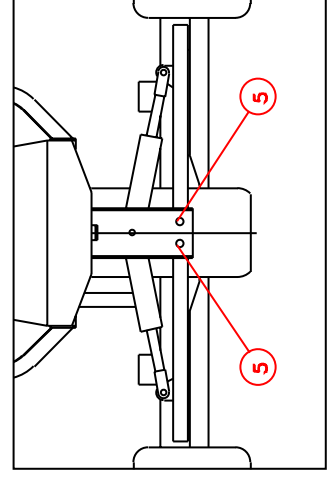
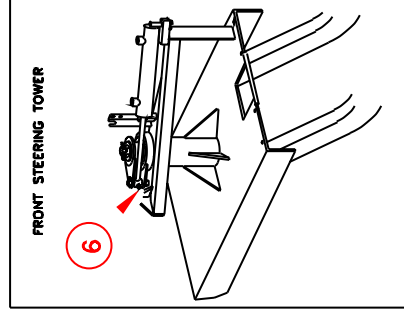
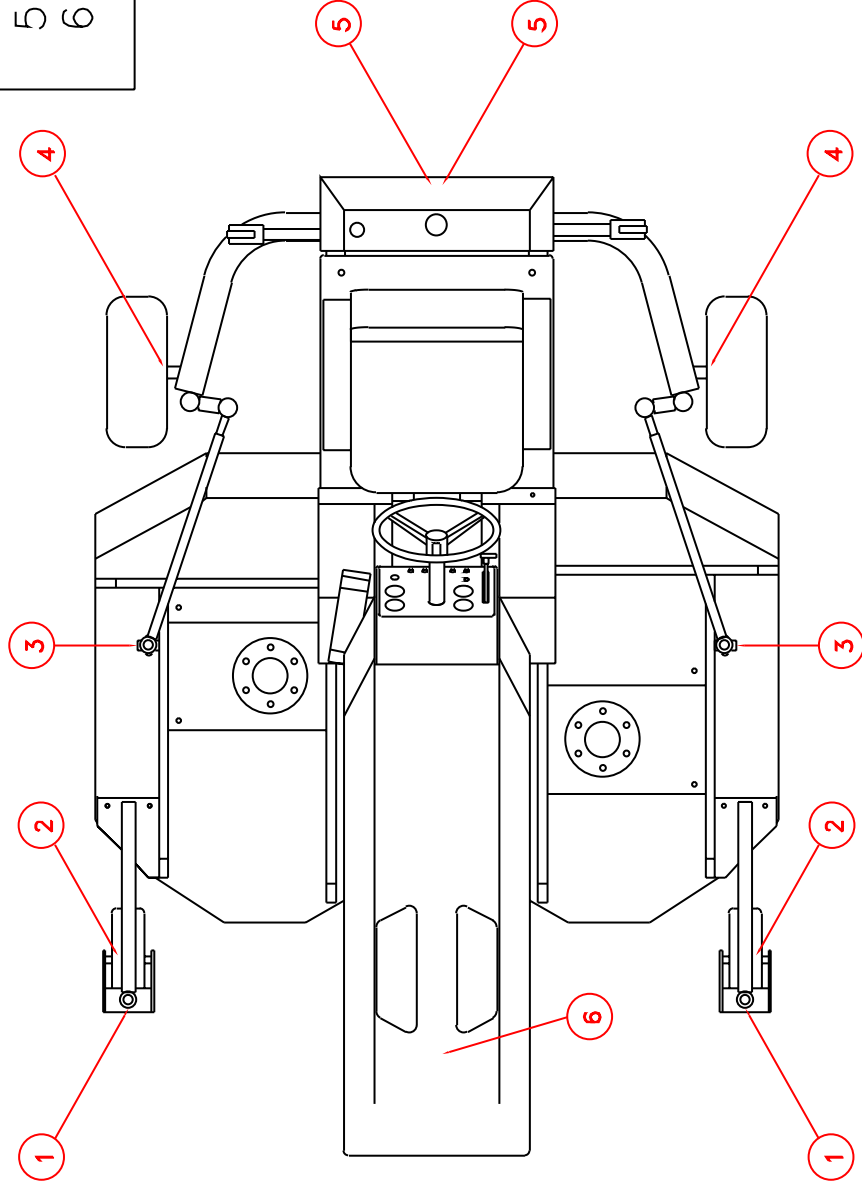
- Change Hydraulic Oil8 gallon/ (30.28 liters)
- Change Engine Coolant1.5 gallon/ (5.7 liters)
- Repack stabilizer wheels.....Use a high quality bearing grease
- *Check the Fuel Injection Pump* to Yanmar manual

Parts with asterisk mark “” should be serviced by an authorized YANMAR Dealer, unless the owner has proficient mechanical ability and the proper tools*

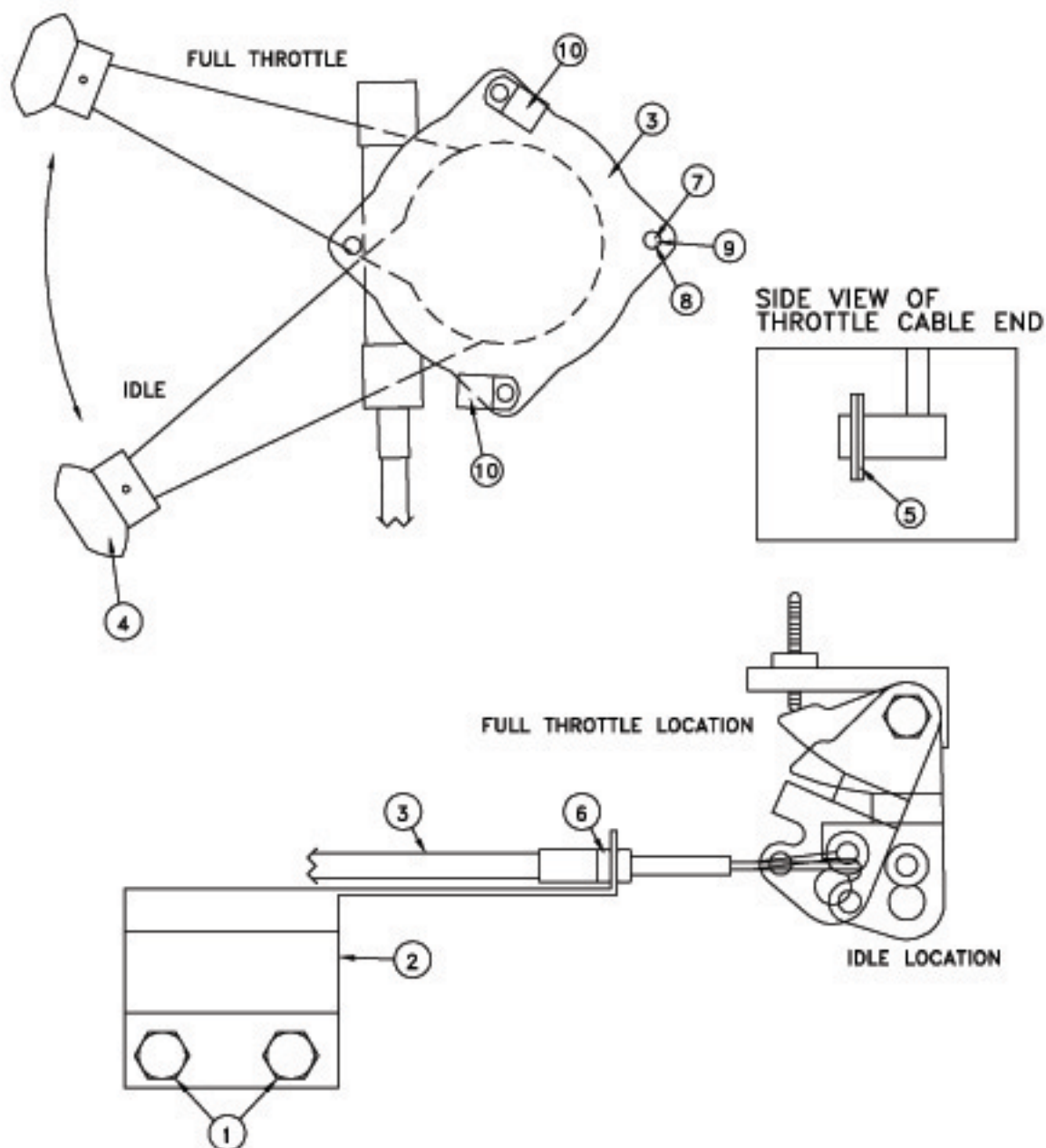
GREASE ZERK LOCATIONS

ITEM
1
2
3
4
5
6

DESCRIPTION
CASTER ARM
FT. WHEEL HUB
VERTICAL ADJ. SHAFT
REAR WHEEL HUB
STABILIZER ARM
STEERING CYLINDER



THROTTLE CONTROL



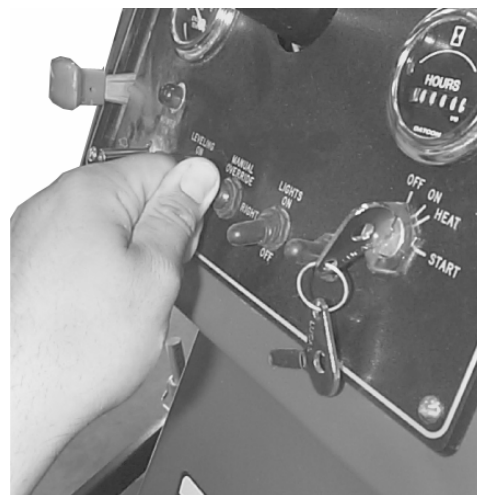
ITEM	QUAN	PART #	NAME
1	2	540086	8mm x 1.25 x 20
2	1	810486	THROTTLE CABLE MOUNT BRACKET
3	1	800043	THROTTLE CABLE
4	1	800086	HANDLE
5	2	110273	E-CLIP
6	1	510478	1/4-28 NUT
7	2	510335	5/16 LOCK WASHER
8	3	510094	SCREW, 10-24 RND
9	3	540078	10-24 LOCK NUT
10	2	830021	ADEL CLAMP

DECK LIFT PROCEDURE

STEP 1: Set the parking brake and set engine to half throttle. Set **automatic leveling** switch to OFF.



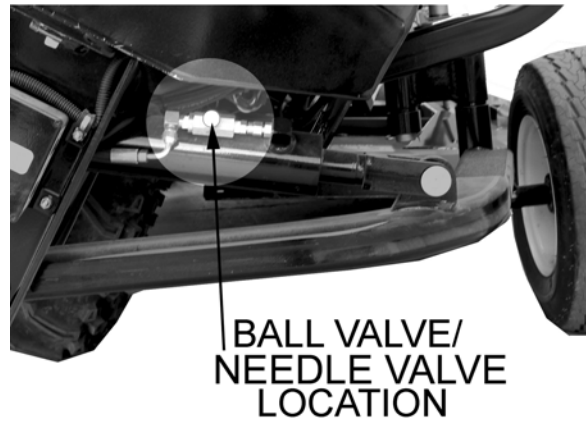
STEP 2: Get off machine and lean mower right using the **manual override** switch as shown.



STEP 3: Mower should be leaned all the way to the right at this time.



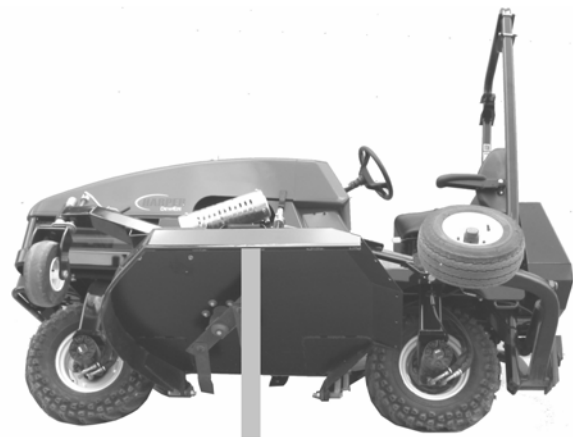
STEP 4: Close the leveling cylinder valve. Turn the knob or lever clockwise until completely closed.



STEP 5: Push and hold the **manual over-ride** switch to the left until the left deck is raised far enough to access the blades.



STEP 6: FOR YOUR SAFETY place a jack stand or comparable support under the deck as shown.



STEP 7: Remove the support from under the deck. Push **manual over-ride** switch to the right to set the deck back down on the ground.



STEP 8: Completely open the valve on the right leveling cylinder. Turn the knob or lever counter-clockwise until it is completely open.



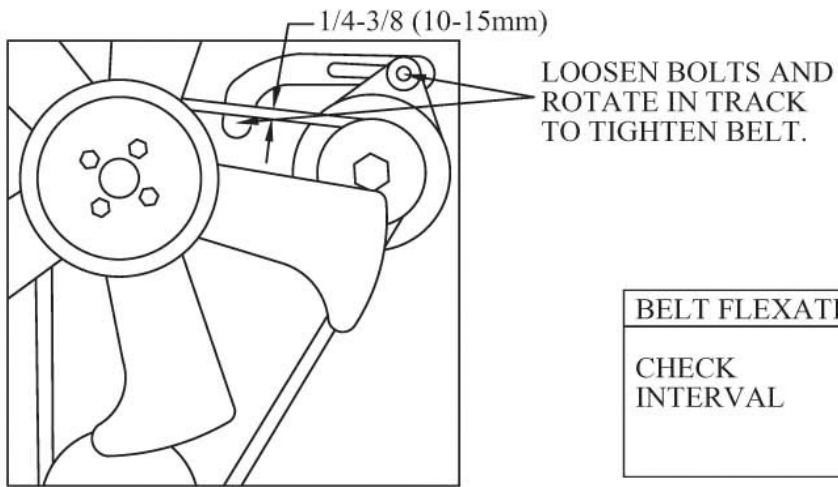
STEP 9: Push **manual over-ride** switch to the left until the mower is upright.

TO RAISE THE RIGHT DECK:

Follow steps 1-9 substituting RIGHT for LEFT and LEFT for RIGHT in all steps.

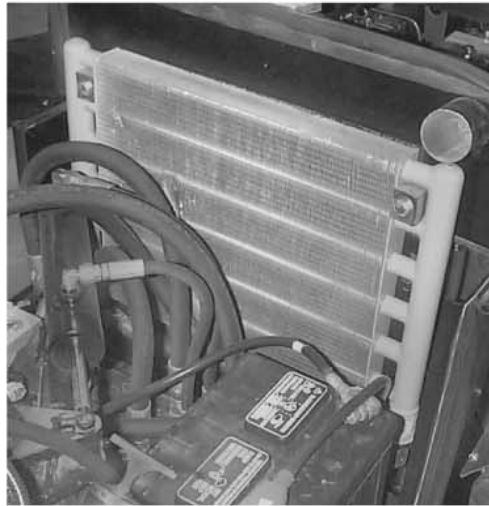


BELT TENSIONING



BELT FLEXATION	1/4-3/8 (10-15mm)
CHECK INTERVAL	1st TIME 50 HRS. 2nd TIME AND THEREAFTER EVERY 100 HRS.

RADIATOR AIR FLOW SERVICE



WIPE HOOD SCREENS OFF BEFORE RUNNING MOWER TO ENSURE PROPER MOWER FUNCTION.

IF MOWER BEGINS TO RUN HOTTER THAN NORMAL IT MAY BE BECAUSE THE RADIATOR NEEDS TO BE BLOWN OUT. DO THIS BY BLOWING COMPRESSED AIR THROUGH THE RADIATOR AND HEAT EXCHANGER FROM BOTH SIDES.

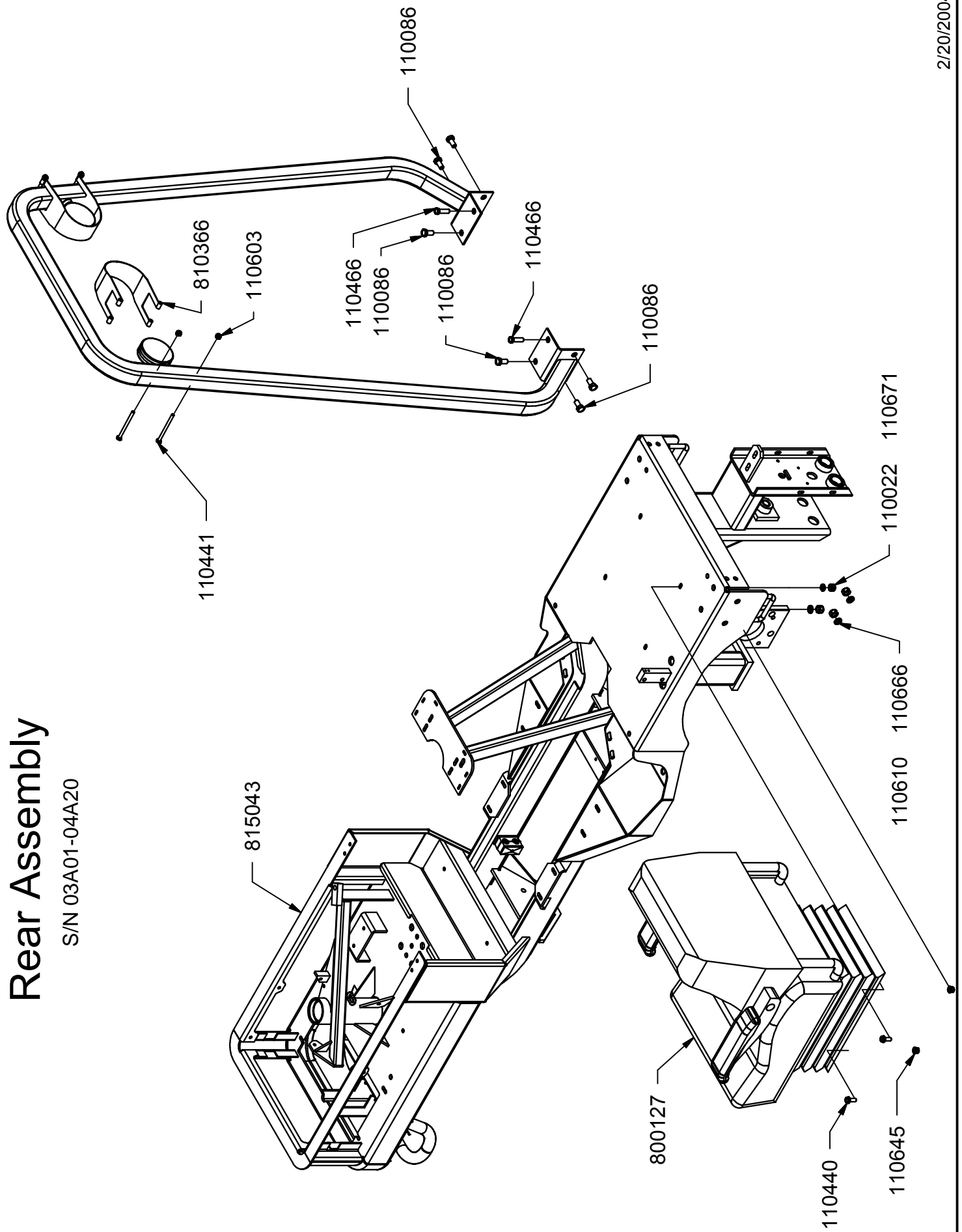
Section 3

Frame & Assemblies



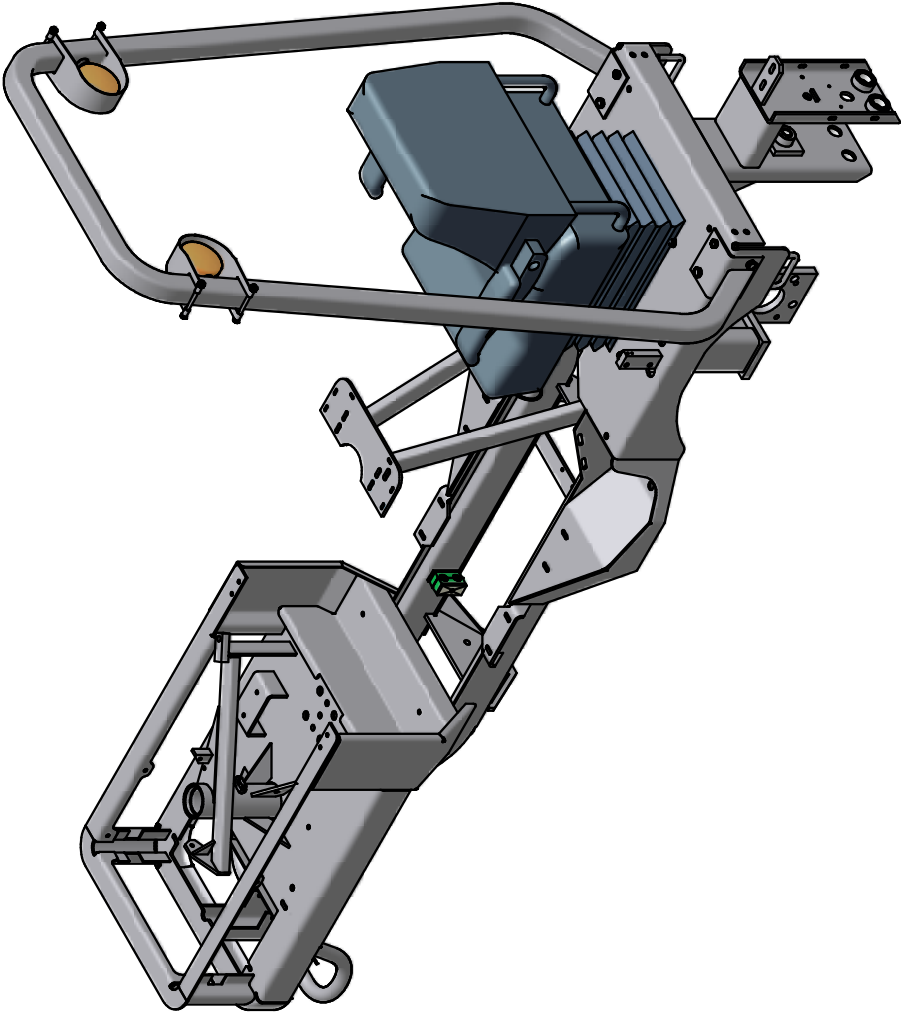
Rear Assembly

S/N 03A01-04A20



Rear Assembly

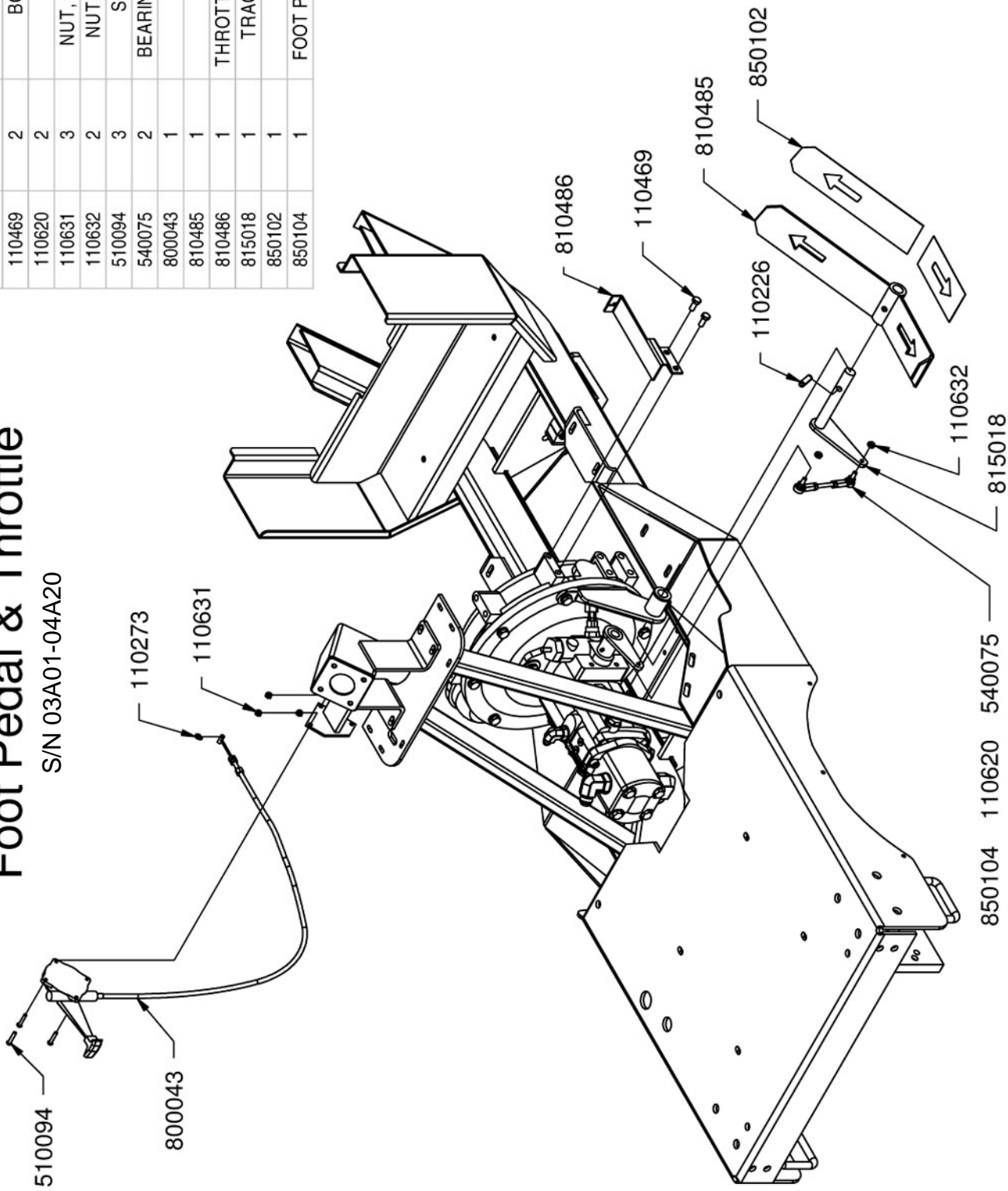
S/N 03A01-04A20



PART #	QUANTITY	DESCRIPTION
110022	2	NUT, 7/16-20
110086	6	BOLT, 1/2-13 X 1.0
110440	4	BOLT, 3/8-16 X 1, WIZ FLANGE
110441	4	BOLT, 5/16-18 X 4.0
110466	2	BOLT, 7/16-20 X 1.5
110603	4	NUT, 5/16-18 LOCK (NYLON)
110610	6	NUT, 1/2-13
110645	4	NUT, 3/8-16 WIZ FLANGE
110666	6	WASHER, 1/2" LOCK
110671	2	WASHER, 7/16" LOCK
800127	1	SEAT, COMPLETE
	800156	1 SHOCK ABSORBER
	800157	1 SUSPENSION COVER
	800158	1 ICP BRACKET ASSY
	800159	1 TETHER KIT
	800160	1 4" TRACK SET
	800161	1 LPS HD MECH W/O BOOT
	800162	1 SET, FRONT ADJ ARMS
	800163	1 TRIMLINE BACK COVER
	800164	1 TRIMLINE CUSHION COVER
	800165	1 SEAT BELT
	800166	1 WEIGHT ADJ KNOB
	800188	1 SWITCH, EVC ULB TRIMLINE-FXD
	830055	1 SEAT SAFETY SWITCH
810366	2	LIGHT BRACKET
815043	1	FRAME WELDMENT, 72LC

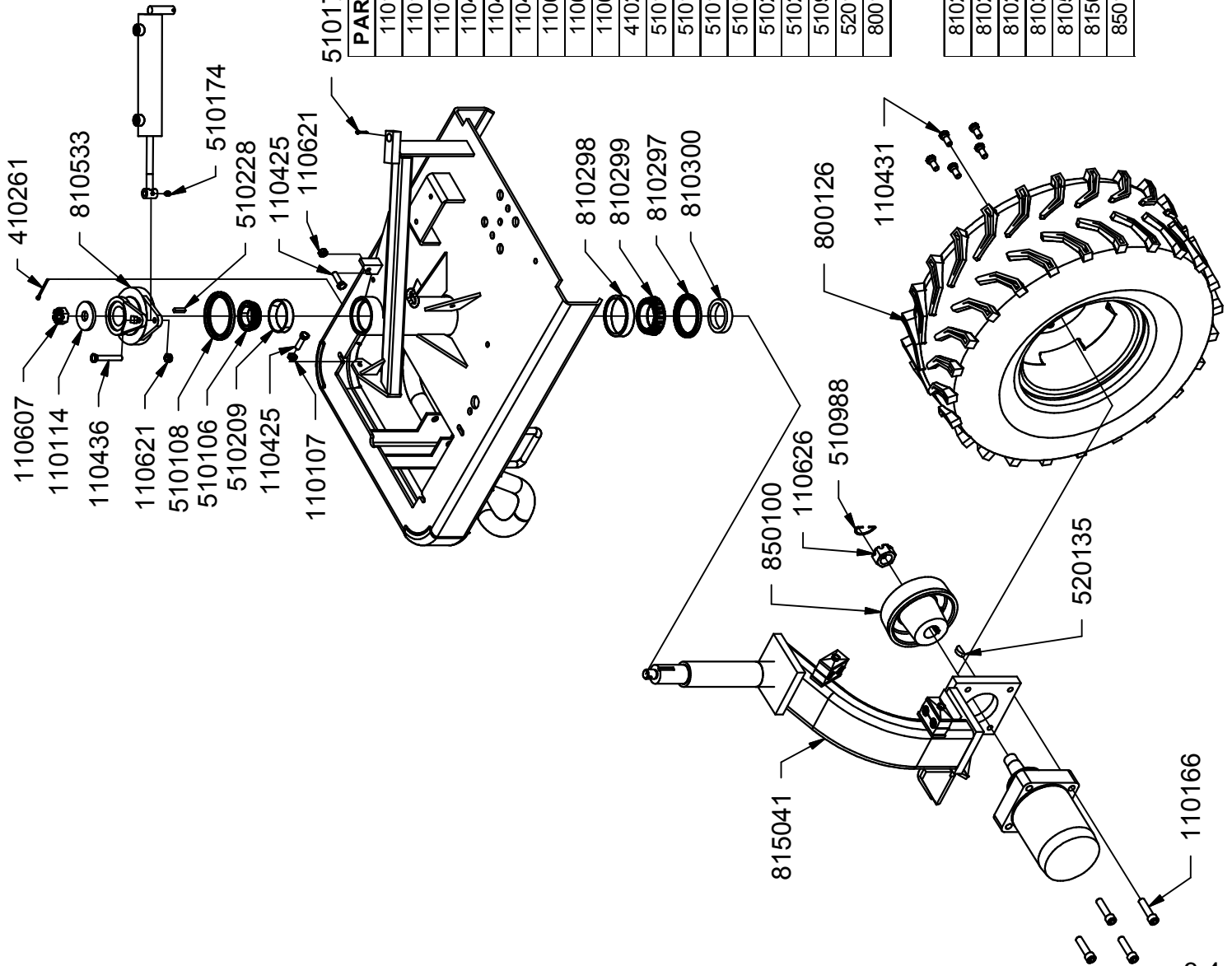
Foot Pedal & Throttle

S/N 03A01-04A20



PART #	QUANTITY	DESCRIPTION
110226	1	ROLL PIN, 3/8 X 1.25
110273	1	CLIP, E-Ring E-25
110469	2	BOLT, M8x1.25 x 20 Gr 10.9
110620	2	NUT, 1/4-28
110631	3	NUT, 10-24 LOCK NYLON INSERT
110632	2	NUT, 1/4-28, UNITORQUE LOCK
510094	3	SCREW, 10-24 X 1, RHMS
540075	2	BEARING, ROD END 1/4-28 W/STUD
800043	1	THROTTLE CABLE
810485	1	FOOT PEDAL ASSY.
810486	1	THROTTLE CABLE MOUNT BRACKET
815018	1	TRACTION LEVER WELDMENT
850102	1	TRACTION PAD
850104	1	FOOT PEDAL LINKAGE, ALLTHREAD

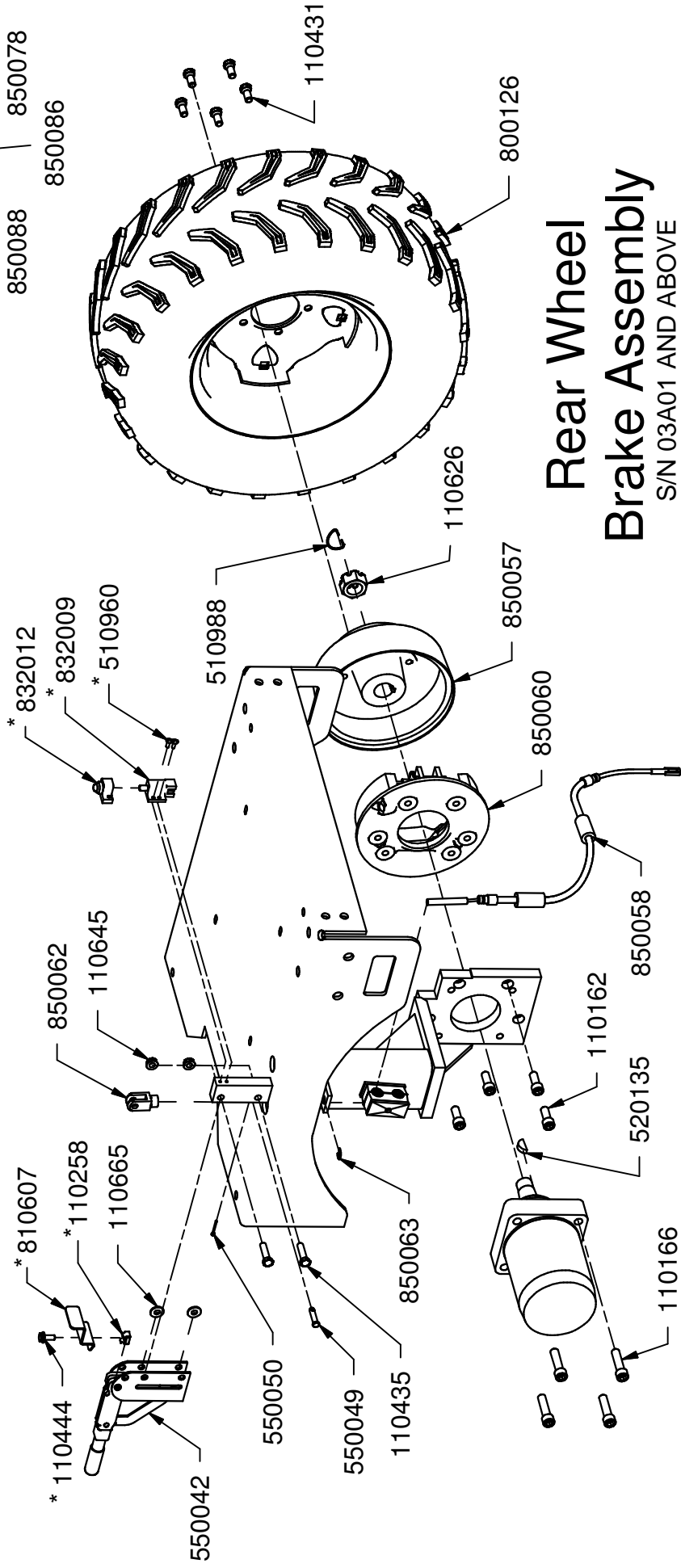
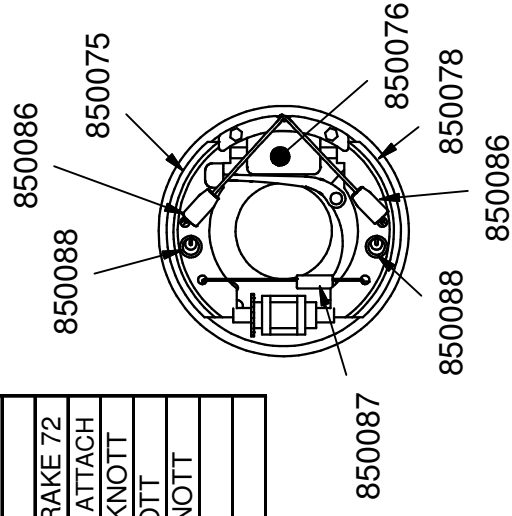
Front Steering Assembly



PART #	QUANTITY	DESCRIPTION
110107	1	NUT, 3/8-16 HEX JAM GR 2
110114	1	WASHER, 2.25 x .75 x .25T
110166	4	BOLT, 1/2-13 X 2.0 SHCS
110425	2	BOLT, 3/8-16 X 1.25
110431	5	BOLT, WHEEL, 7/16-20
110436	1	BOLT, 3/8-16 X 2.5
110607	1	NUT, 3/4-10, SLOTTED
110621	2	NUT, 3/8-16, UNITORQUE LOCK
110626	1	NUT, 1-20, SLOTTED
410261	1	COTTER PIN, 1/8 X 1.75
510106	1	BEARING
510108	1	SEAL
510174	1	GREASE ZERK, 1/4-28 ST
510176	1	COTTER PIN, 1/8 X 1
510209	1	RACE
510228	1	KEY, 1/4 X 1/4 X 1.0 in
510988	1	WIRE CLIP
520135	1	KEY, 5/16 X 1 WOODRUFF
800126	1	WHEEL ASSEMBLY
	500181	1 WHEEL
	800114	1 TIRE
810297	1	BOTTOM SEAL
810298	1	BEARING CUP
810299	1	BEARING LOWER
810300	1	SPACER, STEERING TOWER
810533	1	STEERING ARM ASSY
815041	1	SPINDLE / WHEEL MOUNT ASSY W/JACK BLOCK
850100	1	FRONT WHEEL HUB

PART #	QTY	DESCRIPTION	PART #	QTY	DESCRIPTION
110162	4	BOLT, M12x1.75 x 30 SHCS	* 810607	1	SAFETY SWITCH STOP
110166	4	BOLT, 1/2-13 X 2.0 SHCS	* 832009	1	SWITCH, BRAKE NO-NC
* 110258	1	NUT, 5/16-18, CAGE TINNERMAN	* 832012	1	BOOT FOR 832009
110431	5	BOLT, WHEEL, 7/16-20	850057	1	BRAKE DRUM
110435	2	BOLT, 3/8-16 X 1.5	850058	1	CABLE, HAND BRAKE
* 110444	1	BOLT, 5/16-18 X 0.75, WIZ FLANGE	850060	1	BRAKE ASSY, REAR
110626	1	NUT, 1-20, SLOTTED	850075	1	BRAKE SHOE
110645	2	NUT, 3/8-16 WIZ FLANGE	850076	1	CYLINDER, WHEEL FOOT BRAKE 72
* 110665	2	WASHER, 5/16" FLAT STANDARD	850078	1	BRAKE SHOE, W/HAND BRAKE ATTACH
* 510960	2	SCREW, 10-24 X 0.5, RHMS	850086	2	SPRING, BRAKE RETURN, KNOTT
510988	1	WIRE CLIP	850087	1	SPRING, HOLDING, KNOTT
520135	1	KEY, 5/16 X 1 WOODRUFF	850088	2	SPRING, HOLD DOWN, KNOTT
550042	1	HAND BRAKE	850062	1	CLEVIS, YOKE
550049	1	CLEVIS PIN, 5/16" DIA. x 1 3/8" LENGTH	850063	1	CLIP, E-Ring E-43
550050	1	COTTER PIN, 3/32 X 1			
800126	1	WHEEL ASSEMBLY			
	500181	1			
	800114	1			
		WHEEL			
		TIRE			

* Used on serial number 04A41 and above



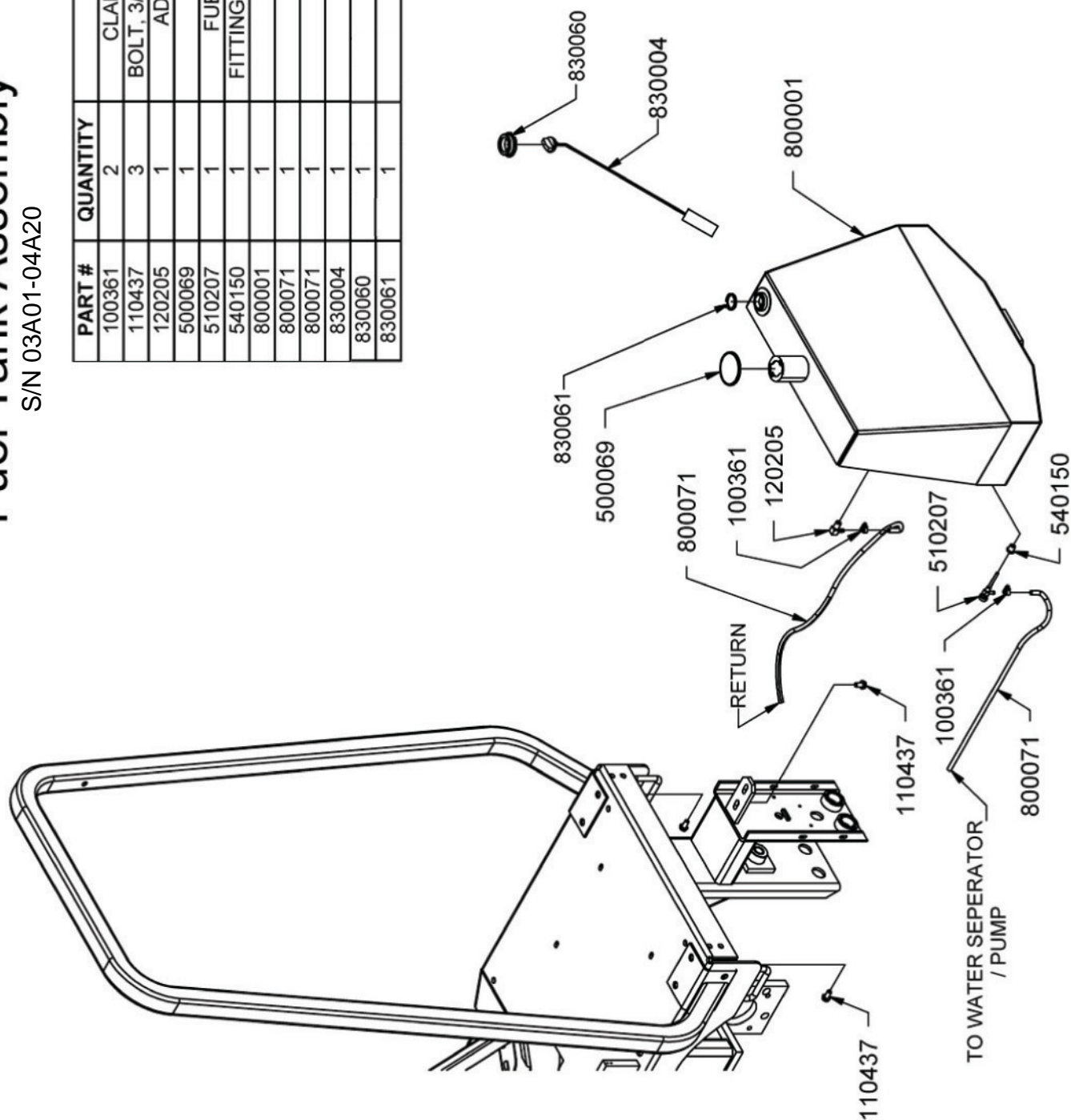
Rear Wheel Brake Assembly

S/N 03A01 AND ABOVE

Fuel Tank Assembly

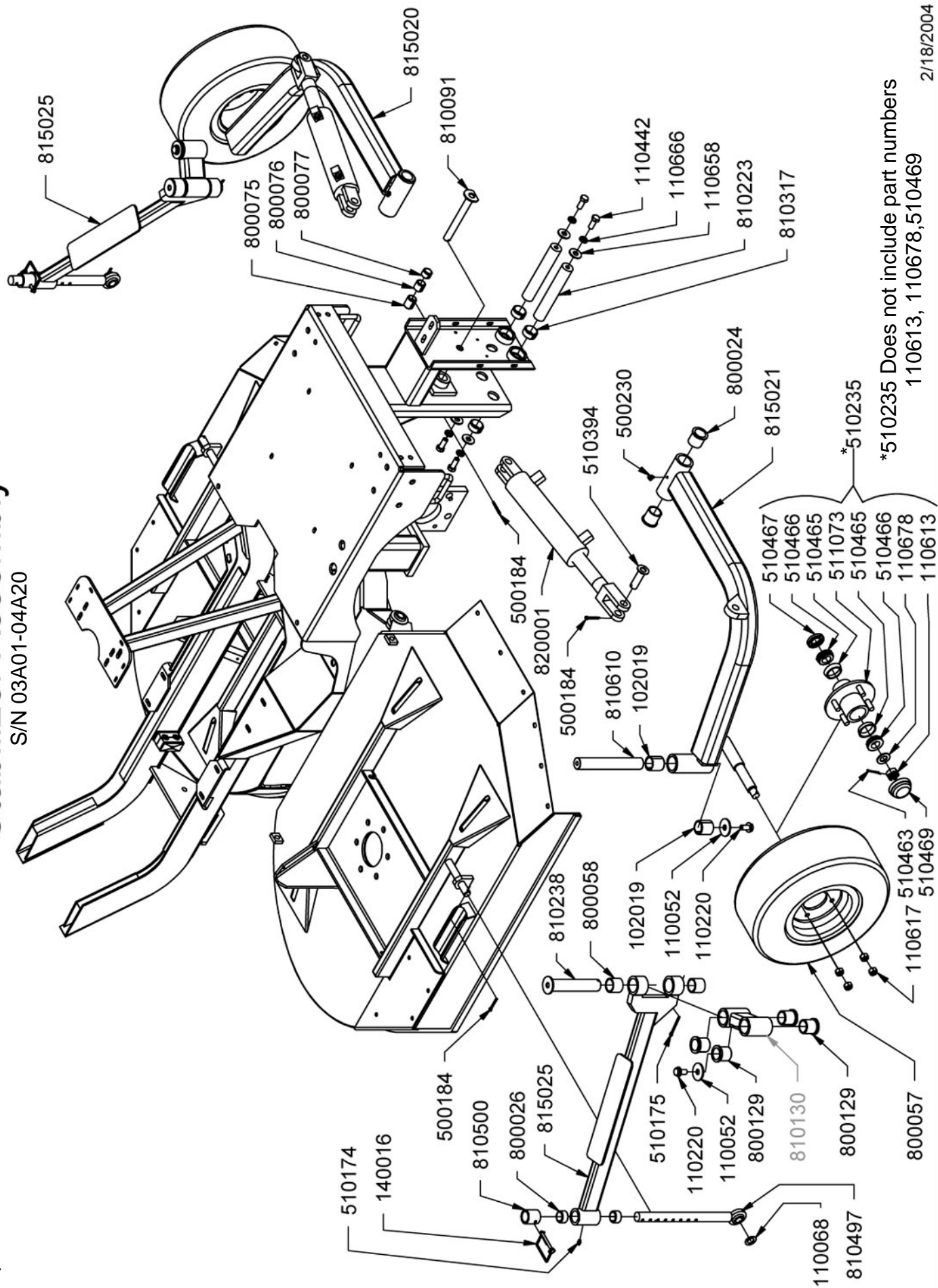
S/N 03A01-04A20

PART #	QUANTITY	DESCRIPTION
100361	2	CLAMP, HOSE #4 .25 MINI
110437	3	BOLT, 3/8-16 X 0.75, WIZ FLANGE
120205	1	ADAPTER, 4BH-4MP90
500069	1	FUEL CAP
510207	1	FUEL SHUT OFF VALVE
540150	1	FITTING, REDUCER 1/4 X 1/8 NPT
800001	1	FUEL TANK
800071	1	FUEL HOSE
800071	1	FUEL HOSE
830004	1	GAUGE, FUEL
830060	1	NUT
830061	1	GASKET



Stabilizer Assembly

S/N 03A01-04A20



*510235 Does not include part numbers
110613, 110678, 510469

2/18/2004

Stabilizer Assembly

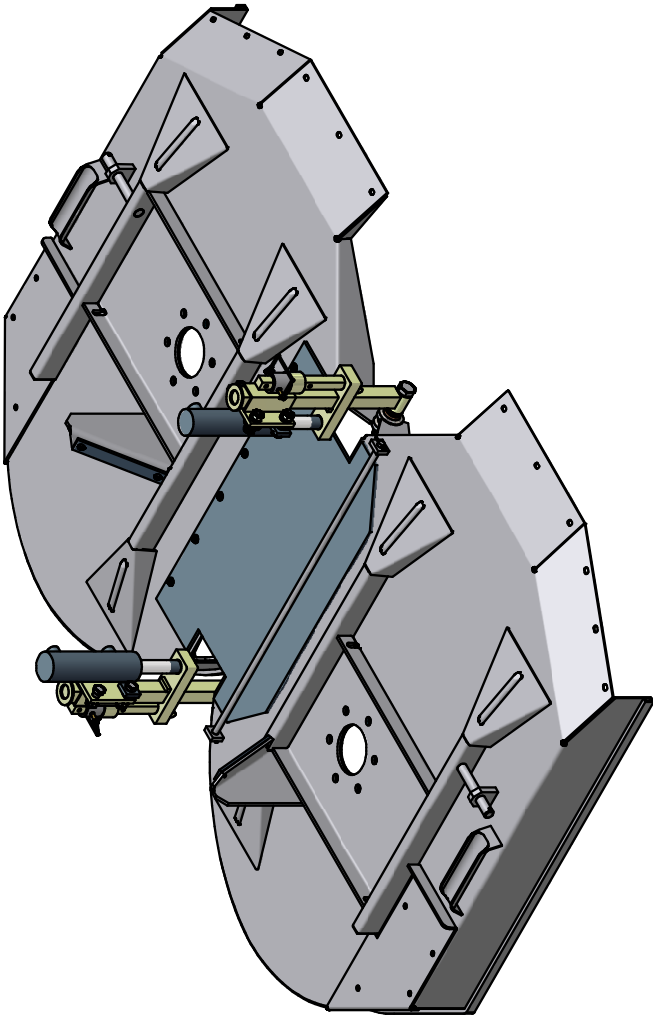
S/N 03A01-04A20

PART #	QUANTITY	DESCRIPTION	PART #	QUANTITY	DESCRIPTION
102019	4	BUSHING, 1-1/2 X 1-1/4 X 1-1/2 MSI-2024-24	510394	2	LEVELING CYLINDER PIN
110052	4	WASHER, 1.875 X .563 X .125, FLAT SPECIAL	800024	4	BRASS BUSHING, EQUALIZER ARM
110068	2	WASHER, 1.25 OD X .75 ID X .075	800026	4	BUSHING, 1.25 X 1.0 X .75 SPLIT STEEL
110220	4	BOLT, 1/2-13 X 1, WIZ FLANGE	800057	2	FILLED STABILIZER TIRE ASSEMBLY
110442	4	BOLT, 1/2-13 X 1.25	800058	4	BRASS BUSHING, OUTER DECK ARM
110658	4	WASHER, 1/2" FLAT STANDARD	800075	1	BUSHING, 1.0 X .75 X 1.25 SPLIT STEEL
110666	4	WASHER, 1/2" LOCK	800076	1	BUSHING, 1.0 X .75 X 1.00 SPLIT STEEL
140016	2	PIN, LOCK, 1/4 X 2-1/4, SQ WIRE	800077	1	BUSHING, 1.0 X .75 X .75 SPLIT STEEL
500184	5	COTTER PIN, 3/16 X 1.25	800129	8	BUSHING, IGUS MFI-2024-24
500230	2	GREASE ZERK, 1/4-28 90deg	810091	1	PIN, LEVELING CYLINDER BASE
510174	2	GREASE ZERK, 1/4-28 ST	810130	2	EQUALIZER ARM ASSY
510175	2	COTTER PIN, 3/16 X 2	810223	2	PIN, STABILIZER PIVOT
510235	2	HUB ASSEMBLY	810238	2	PIN ASSY, EQUALIZER ARM MOUNT
110613	1	NUT, CASTLE 3/4-16	810317	4	BUSHING, SPLIT RING TENSION
110617	4	NUT, 1/2-20 LUG	810497	2	SLIDE ASSY, OUTER DECK ADJ
110678	1	WASHER, 3/4 FLAT SAE	810500	2	GUIDE BUSHING, DECK LIFT
510463	1	COTTER PIN, 1/8 X 1.25	810610	2	VERTICAL SHAFT
510465	2	BEARING CUP, 1.98 X .42	815020	1	STABILIZER ARM WELDMENT, RIGHT
510466	2	BEARING CONE, TAPER 1.0 X .58	815021	1	STABILIZER ARM WELDMENT, LEFT
510467	1	SEAL, CR 12407	815025	2	OUTER DECK ARM WELDMENT, W/ FLAT STEP
510469	1	DUST CAP	820001	2	LEVELING CYLINDER
511073	1	HUB			

* Part Numbers 110613, 510463, 110678 are not included with part number 510235

Deck Lift

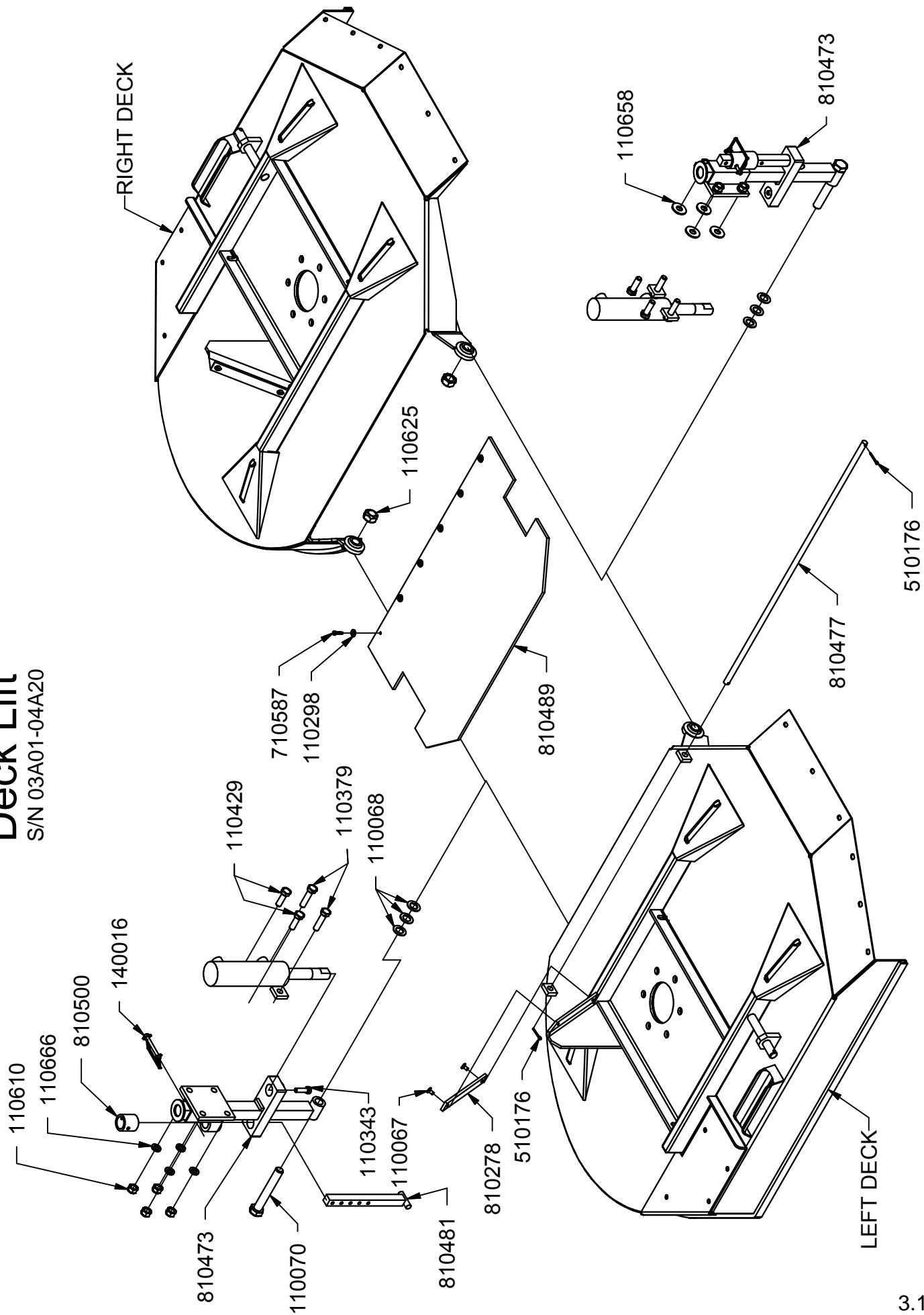
S/N 03A01-04A20



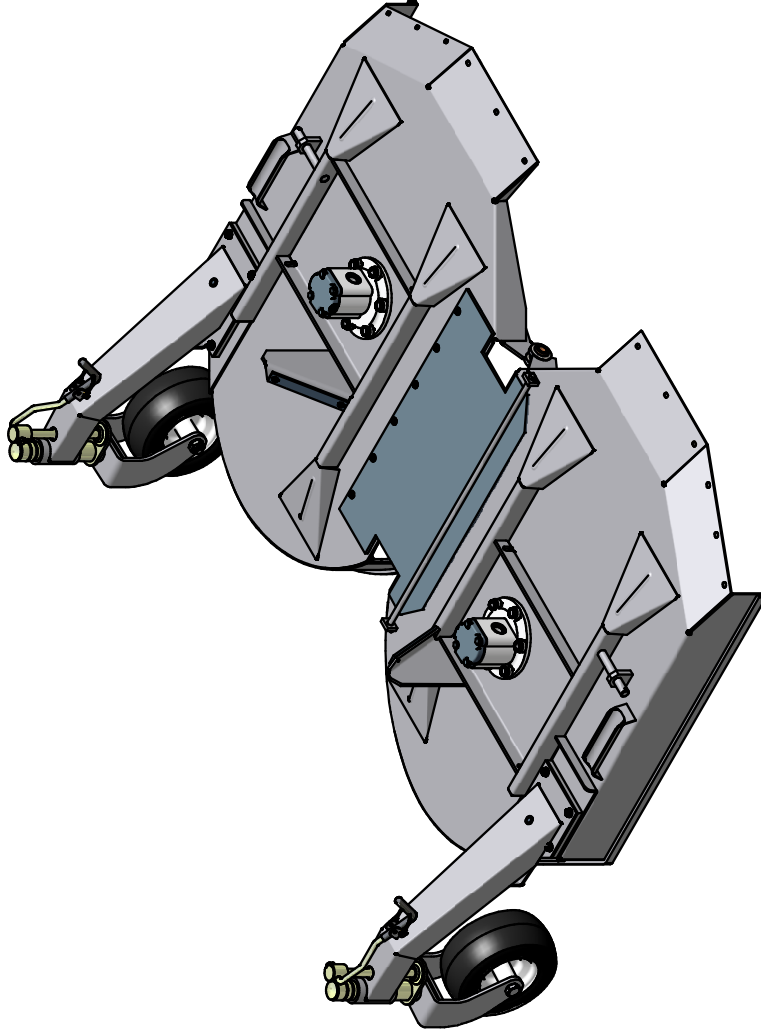
PART #	QUANTITY	DESCRIPTION
110067	4	SCREW, 1/4-20 X .50 SLOT FLAT-HD
110068	6	WASHER, 1.25 OD X .75 ID X .075
110070	2	BOLT, 3/4-10 X 5.0
110298	6	WASHER, 1/4" FLAT SAE
110379	4	BOLT, 1/2-13 X 2.0
110343	2	Bolt, 1/2 X 3/8 , Shoulder
110429	4	BOLT, 1/2-13 X 1.5
110610	8	NUT, 1/2-13
110625	2	NUT, 3/4-10, UNITORQUE LOCK
110658	4	WASHER, 1/2" FLAT STANDARD
110666	8	WASHER, 1/2" LOCK
140016	2	PIN, LOCK, 1/4 X 2-1/4, SQ WIRE
510176	2	COTTER PIN, 1/8 X 1
710587	6	SCREW, 3/16 X .75 TEK SELF-TAP
810278	2	PLASTIC BUMPER, MOTOR GUARD
810473	2	DECK LIFT WELDMENT
810477	1	HOLD DOWN ROD, CENTER DECK COVER
810481	2	DECK ADJUSTER WELDMENT
810489	1	PLASTIC DECK COVER
810500	2	GUIDE BUSHING, DECK LIFT

Deck Lift

S/N 03A01-04A20

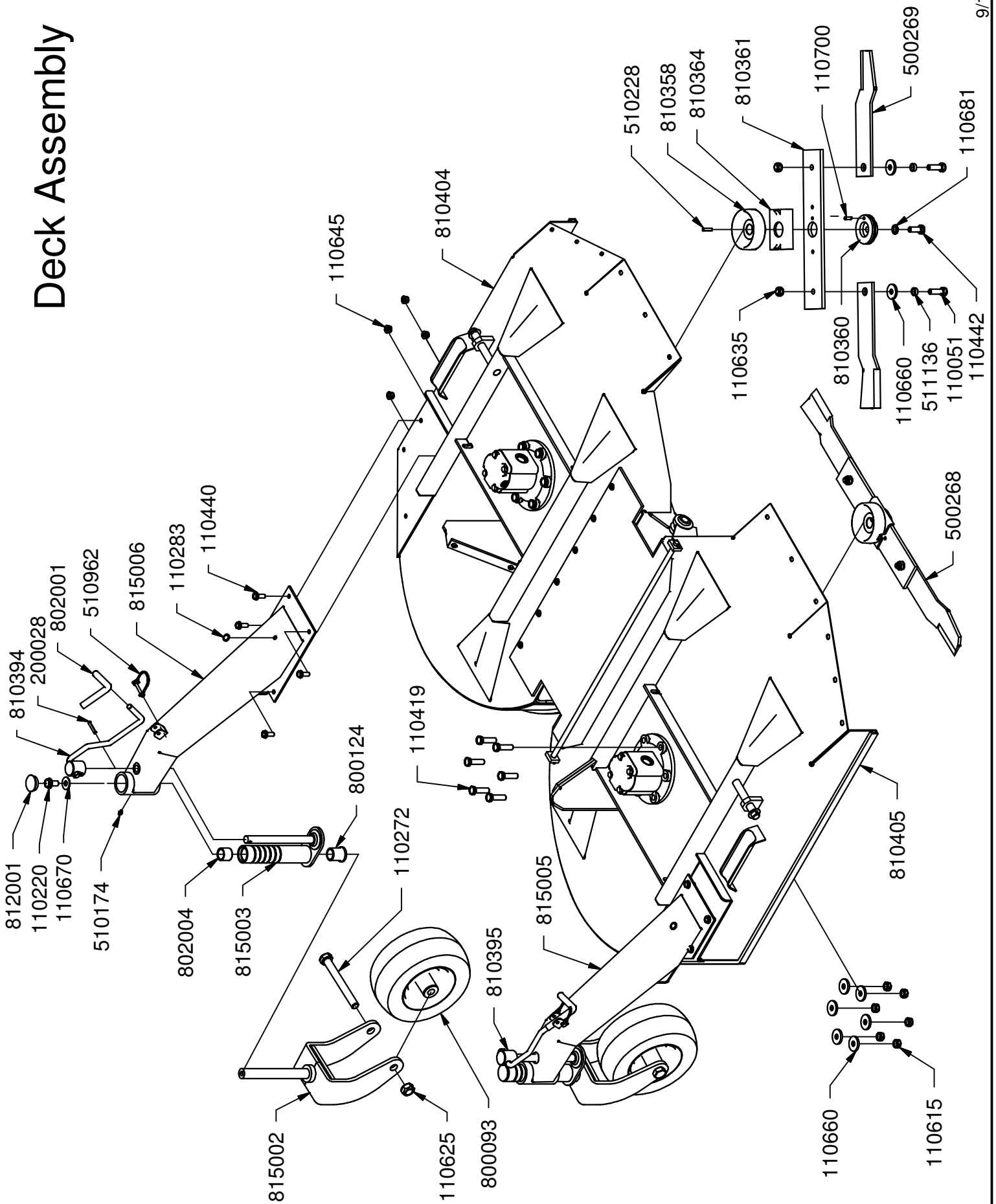


Deck Assembly

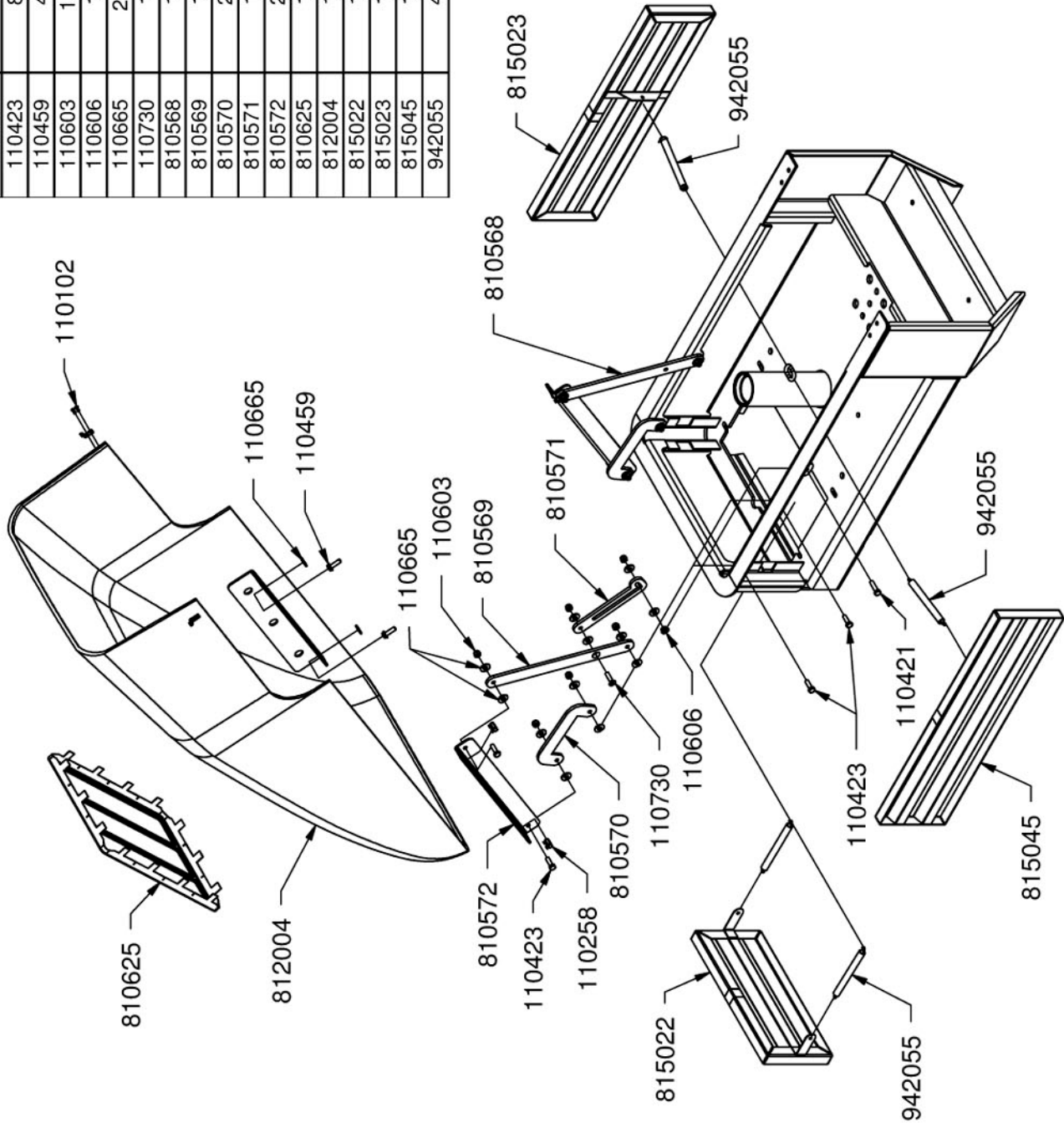


PART #	QUANTITY	DESCRIPTION
110220	2	BOLT, 1/2-13 X 1, WIZ FLANGE
110272	2	BOLT, 3/4-10 X 6.75
110283	2	PLUG, 7/16", NYLON, SNAP LOCK
110419	12	BOLT, 1/2-13 X 1.75
110440	8	BOLT, 3/8-16 X 1, WIZ FLANGE
110442	2	BOLT, 1/2-13 X 1.25
110615	12	NUT, 1/2-13, UNITORQUE LOCK
110625	2	NUT, 3/4-10, UNITORQUE LOCK
110645	8	NUT, 3/8-16 WIZ FLANGE
110660	12	WASHER, 1/2 FLAT SPECIAL 1.5 OD
110670	2	WASHER, 7/16" FLAT STANDARD
110681	2	WASHER, 1/2 EXT. TOOTH LOCK
110700	2	ROLL PIN, 1/4 X 0.75
200028	2	ROLL PIN, 1/4 X 1.5
500268	1	BLADE KIT, LEFT
500269	1	BLADE KIT, RIGHT
500319	2	BOLT KIT
	110051	2 BOLT, 1/2-20 X 1.5, GR8
	110635	2 NUT, 1/2-20, UNITORQUE LOCK
	110660	2 WASHER, 1/2 FLAT SPECIAL 1.5 OD
	511136	2 BUSHING, BLADE MOUNT
510174	2	GREASE ZERK, 1/4-28 ST
510228	2	KEY, 1/4 X 1/4 X 1.0 in
510962	2	PIN, WIRE LOCK
800093	2	CASTER WHEEL ASSY
800124	2	BUSHING, MFI-1620-24
802001	2	COVER, VINYL, 1/2 RND X 6.0
802004	2	BUSHING, MSI-1620-16
810358	2	HUB, BLADE MOUNT
810360	2	WASHER, BLADE MOUNT
810361	2	BLADE MOUNT
810364	2	BLADE SADDLE
810394	1	CRANK ASSY, RIGHT
810395	1	CRANK ASSY, LEFT
810404	1	DECK WELDMENT, RIGHT
810405	1	DECK WELDMENT, LEFT
812001	2	DUST CAP
815002	2	CASTER YOKE WELD ASSY, W/SHORT SHAFT
815003	2	ADJUSTMENT SCREW WELD ASSY, W/C'BORE
815005	1	CASTER ARM WELD ASSY, RIGHT
815006	1	CASTER ARM WELD ASSY, LEFT

Deck Assembly



HOOD & SCREENS

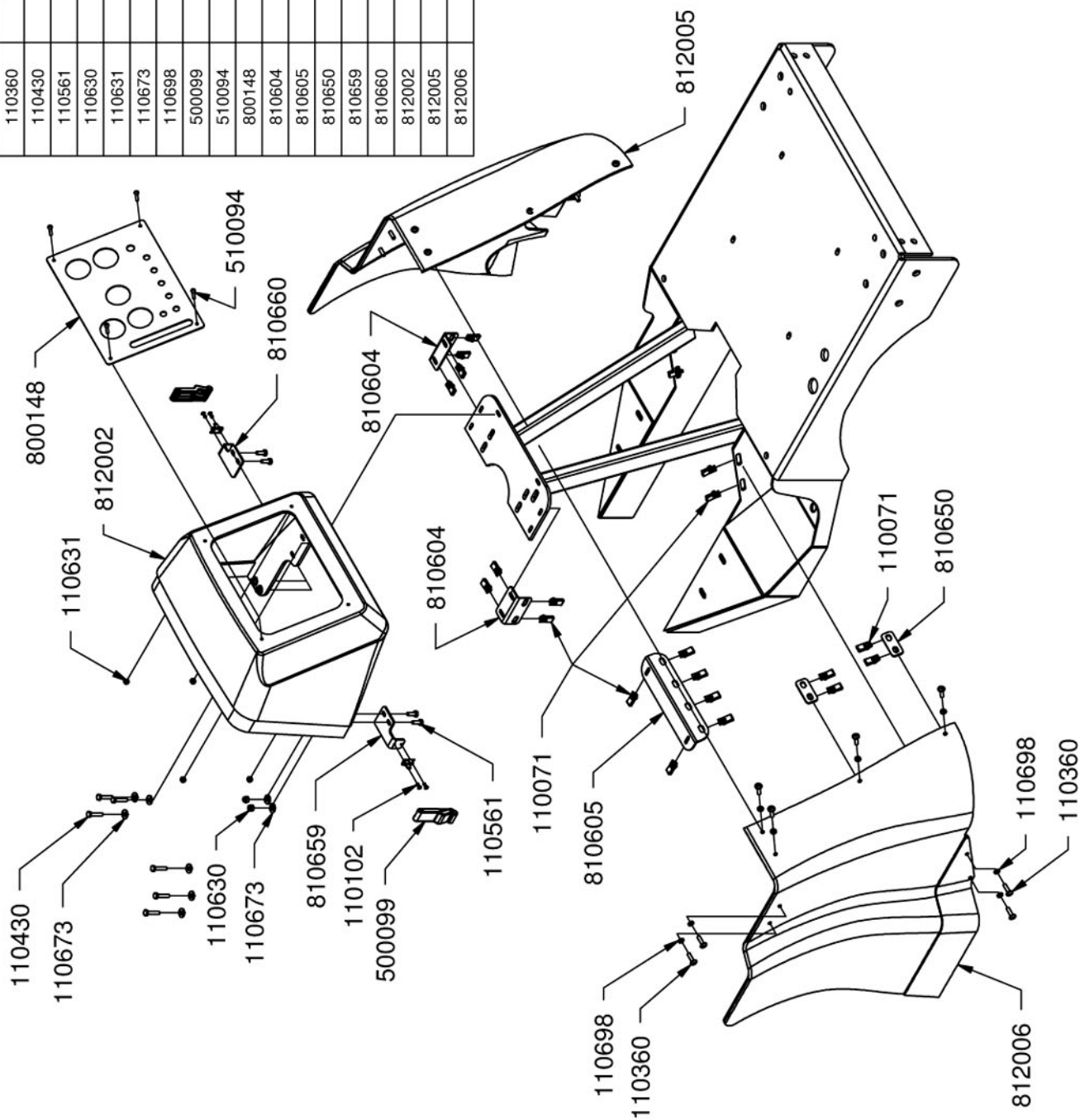


PART #	QUANTITY	DESCRIPTION
110102	4	RIVET, POP, 5/32 X .378
110258	4	NUT, 5/16-18, CAGE TINNEMAN
110421	1	BOLT, 5/16-18 X 1-1/4
110423	8	BOLT, 5/16-18 X 1.0
110459	4	BOLT, 5/16-18 X 1, WIZ FLANGE
110603	10	NUT, 5/16-18 LOCK (NYLON)
110606	1	NUT, 5/16-18 WIZ FLANGE
110665	24	WASHER, 5/16" FLAT STANDARD
110730	1	BOLT, 5/16-18 X 1.25 82° FLATHEAD
810568	1	HOOD LIFT ARM, REAR
810569	1	HOOD LIFT ARM, REAR LEFT
810570	2	HOOD LIFT ARM, FRONT
810571	1	SAFETY CATCH
810572	2	HOOD LIFT BRACKET
810625	1	TOP SCREEN
812004	1	HOOD, DEWEZE RED
815022	1	GRILL, FRONT
815023	1	GRILL, SIDE RIGHT
815045	1	GRILL, SIDE LEFT
942055	4	SPRING

Parts List

S/N 03A01-04A40

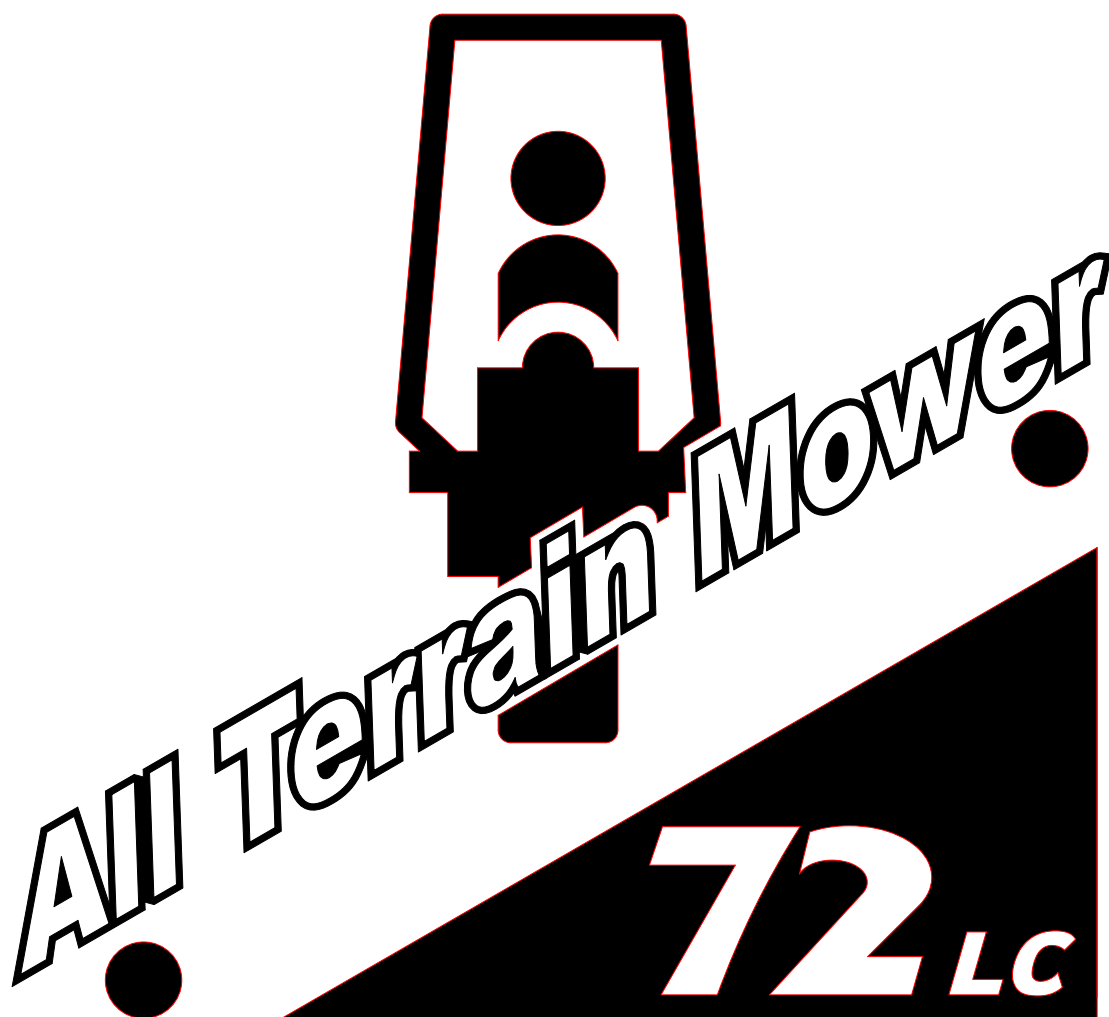
PART #	QUANTITY	DESCRIPTION
110071	22	1/4-20 U-TYPE TAPPED HOLE
110102	4	RIVET, POP, 5/32 X .378
110360	16	BOLT, 1/4-20 X 1.0, SHCS FLANGE
110430	6	BOLT, 1/4-20 X 1-1/4
110561	4	BOLT, 1/4-20 X .75
110630	4	NUT, 1/4-20 LOCK (NYLON INSERT)
110631	4	NUT, 10-24 LOCK NYLON INSERT
110673	10	WASHER, 1/4" FLAT STANDARD
110698	16	WASHER, 1/4 NYLON
500099	2	LATCH
510094	4	SCREW, 10-24 X 1, RHMS
800148	1	INSTRUMENT PANEL
810604	2	COWLING BRACKET, SIDE
810605	1	COWLING BRACKET, TOP
810650	2	COWLING BRACKET
810659	1	HOOD LATCH MOUNT, LEFT
810660	1	HOOD LATCH MOUNT, RIGHT
812002	1	COWLING DASH
812005	1	COWLING, RIGHT
812006	1	COWLING, LEFT



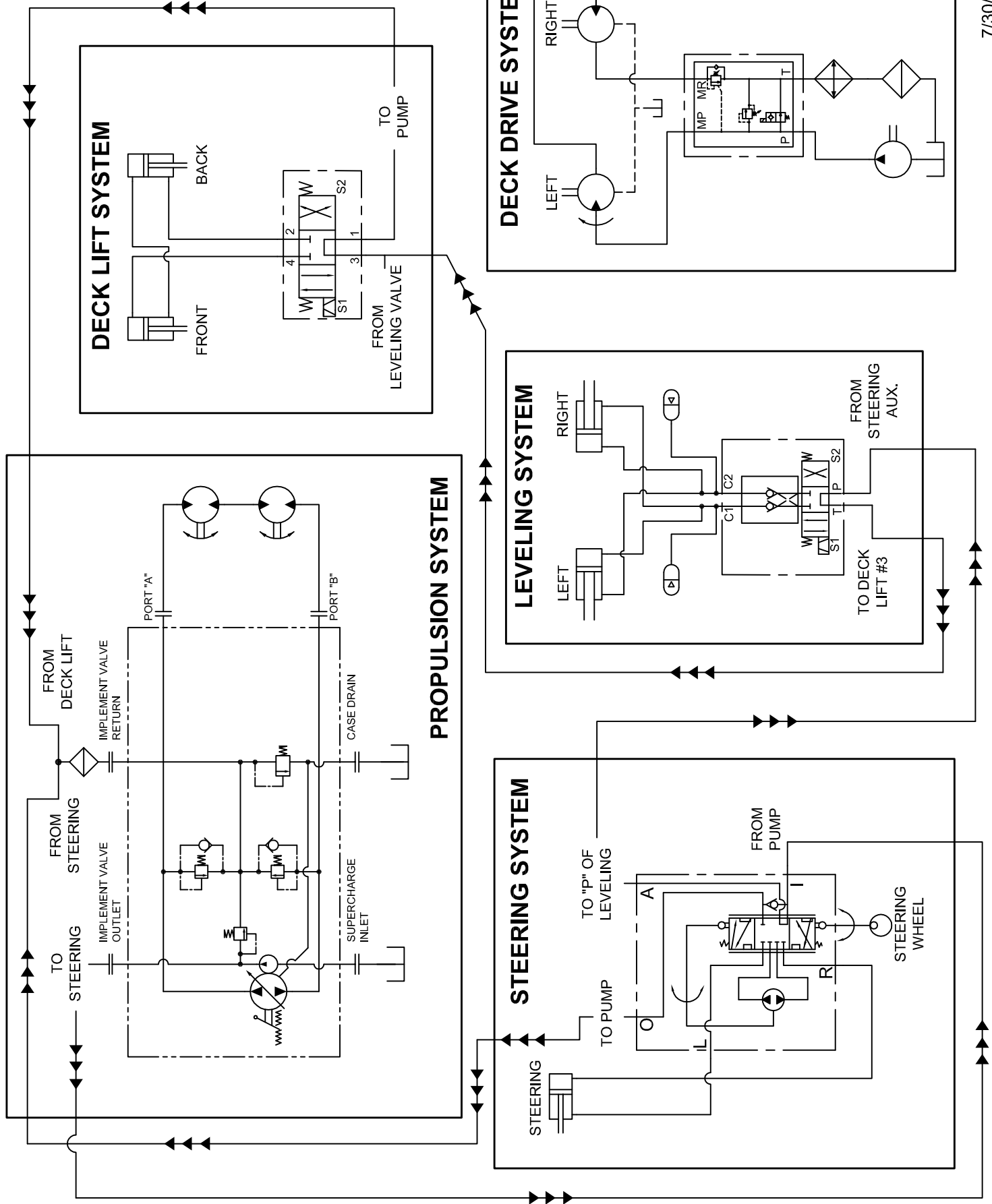
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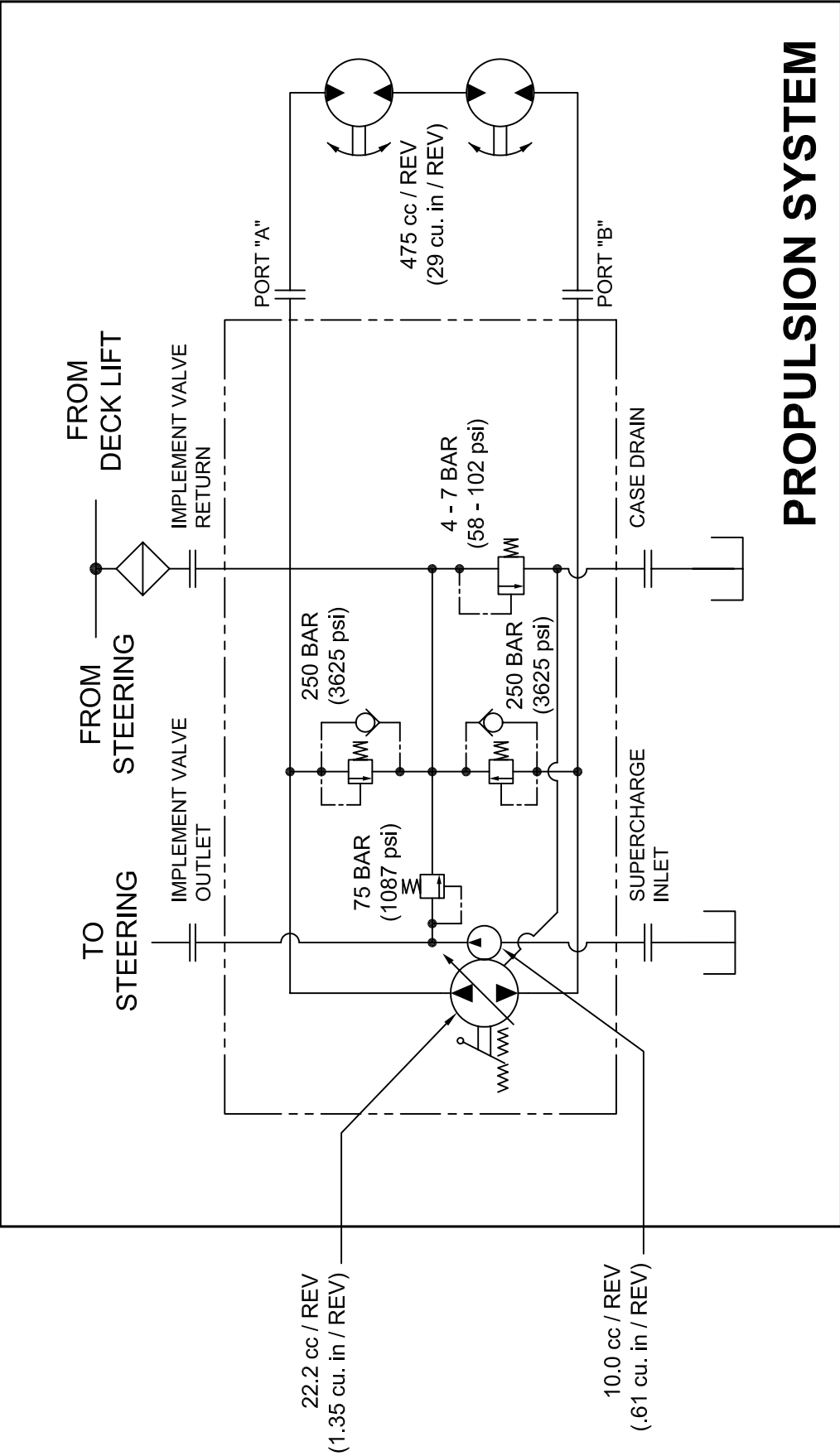
Section 4

Hydraulic Systems



Hydraulic Schematic



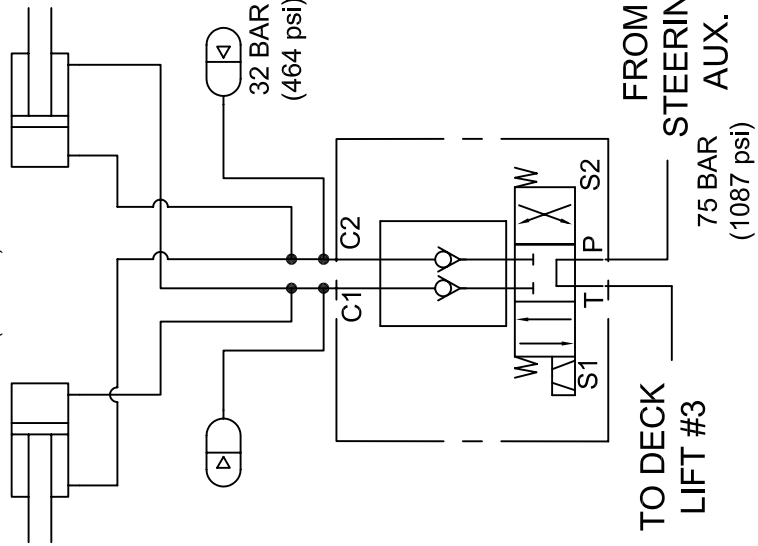


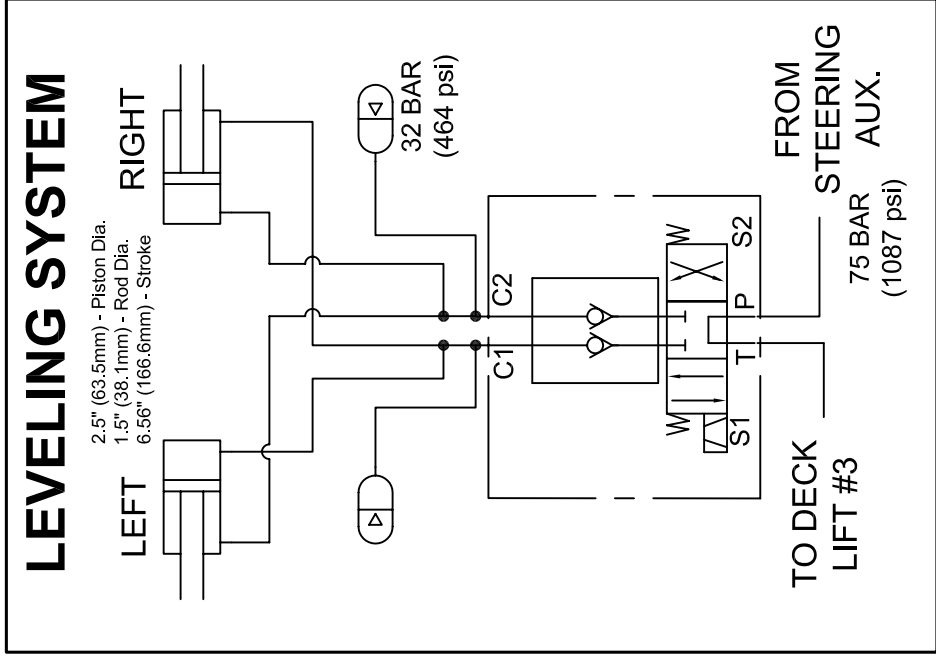
PROPULSION SYSTEM

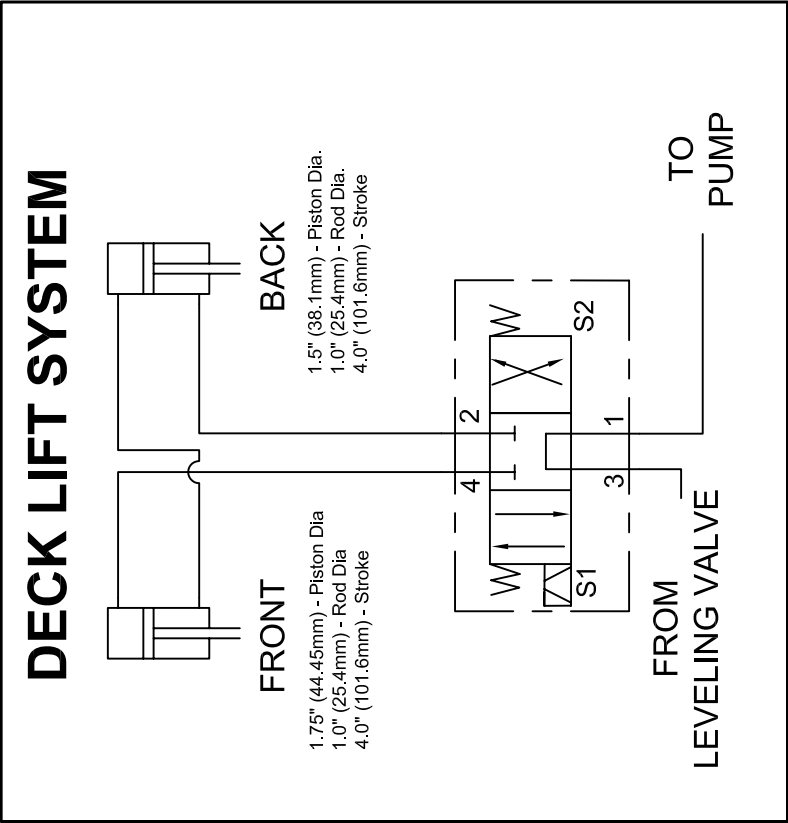
LEVELING SYSTEM

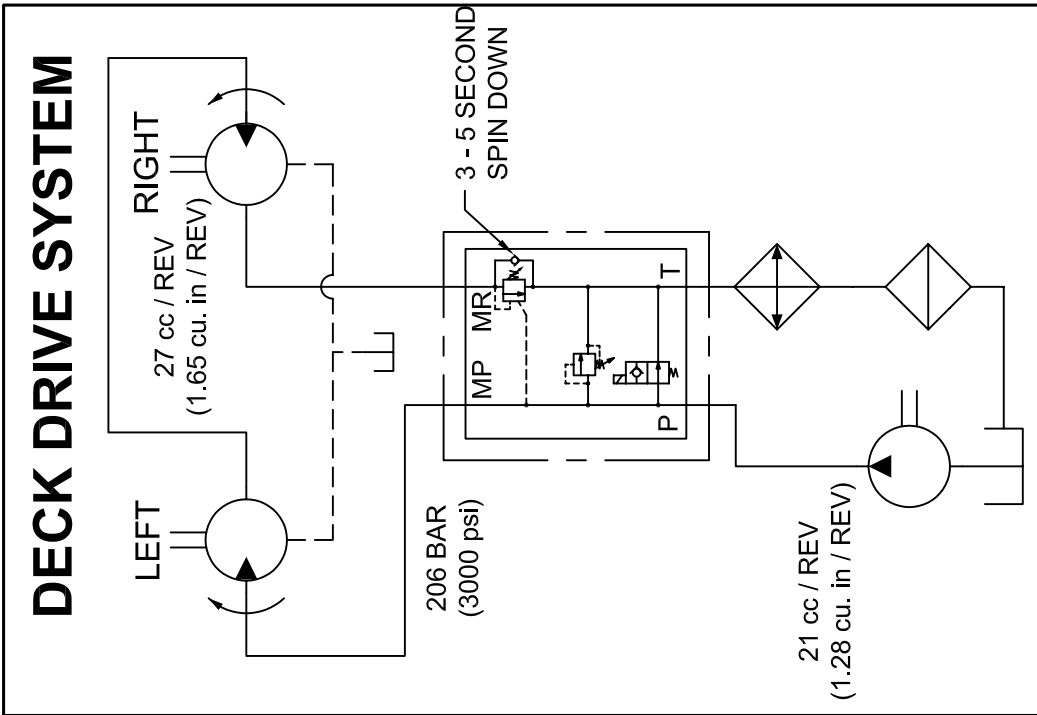
2.5" (63.5mm) - Piston Dia.
1.5" (38.1mm) - Rod Dia.
6.56" (166.6mm) - Stroke

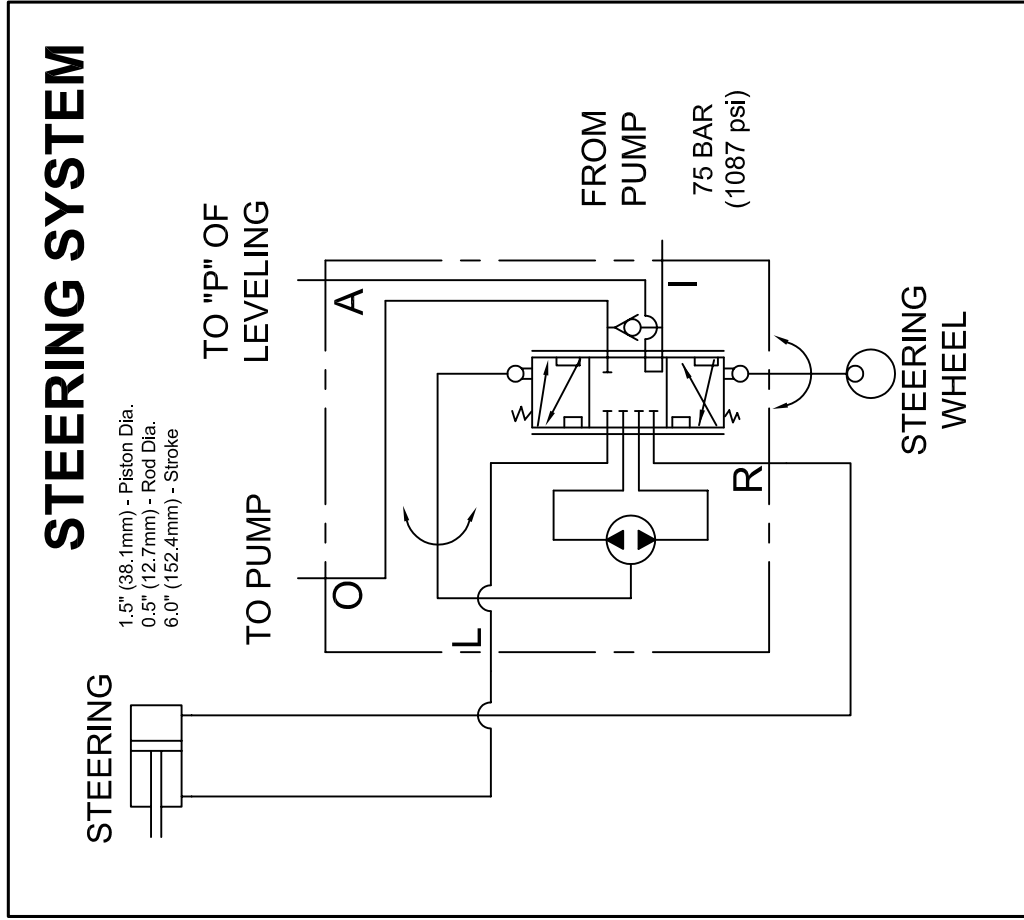
LEFT RIGHT



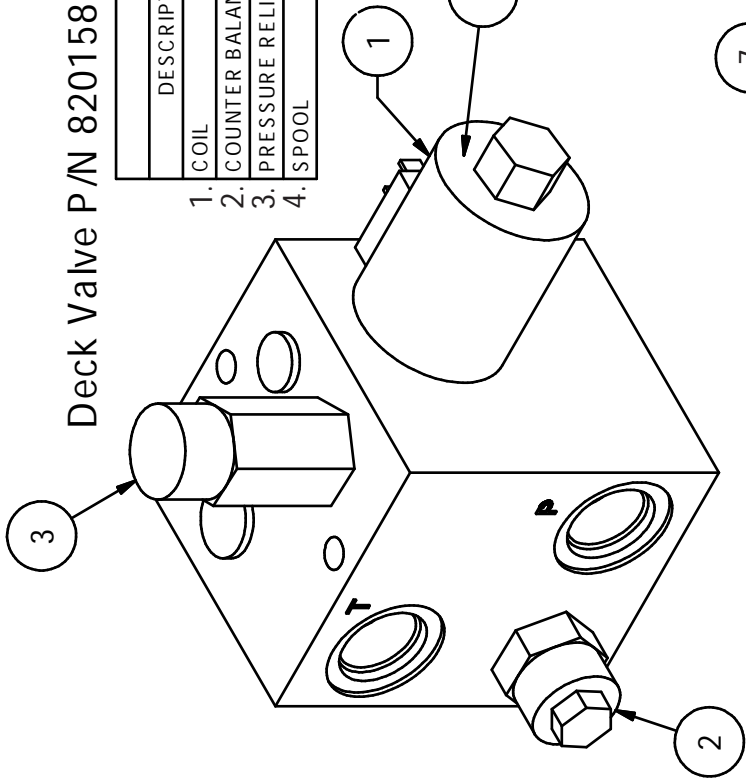






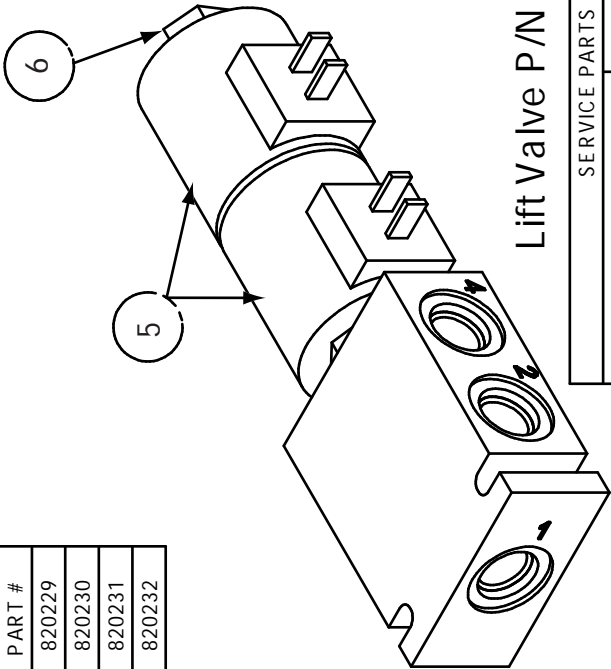


Hydraulic Valve Service Parts



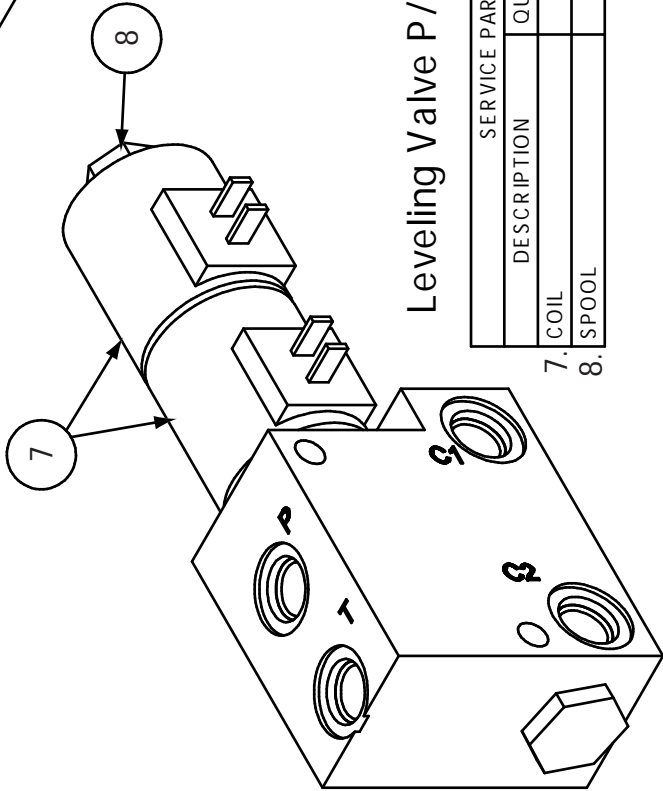
Deck Valve P/N 820158

SERVICE PARTS			
DESCRIPTION	QUANTITY	PART #	
1. COIL	1	820229	
2. COUNTER BALANCE	1	820230	
3. PRESSURE RELIEF VALVE	1	820231	
4. SPOOL	1	820232	



Lift Valve P/N 820159

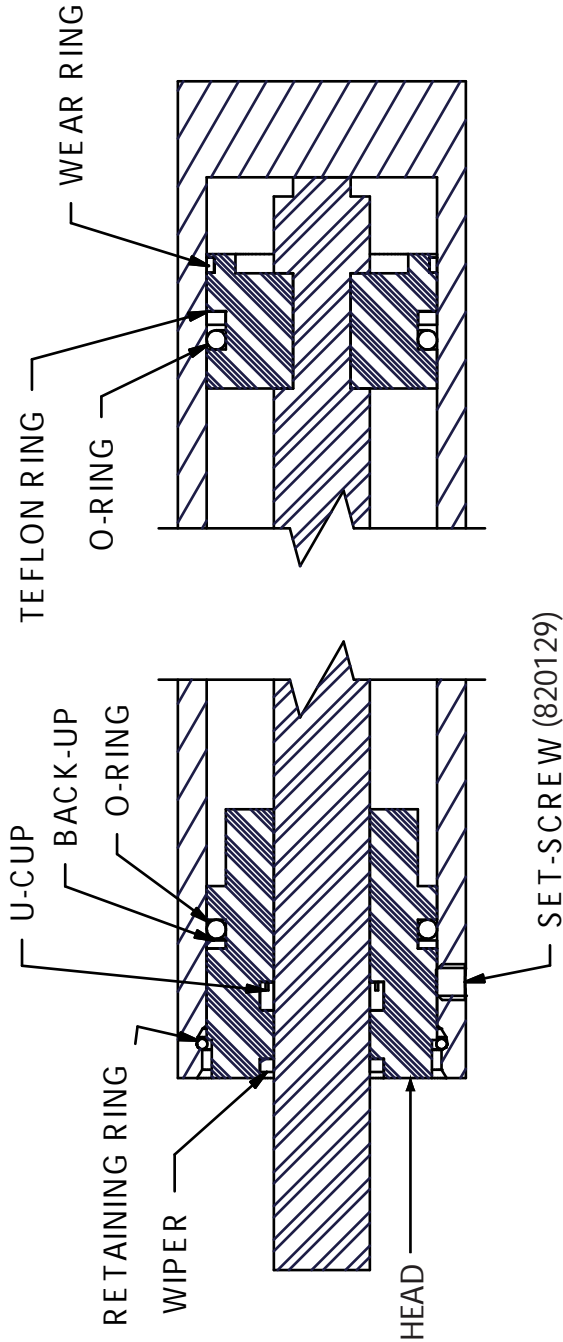
SERVICE PARTS			
DESCRIPTION	QUANTITY	PART #	
5. COIL	2	820229	
6. SPOOL	1	822006	



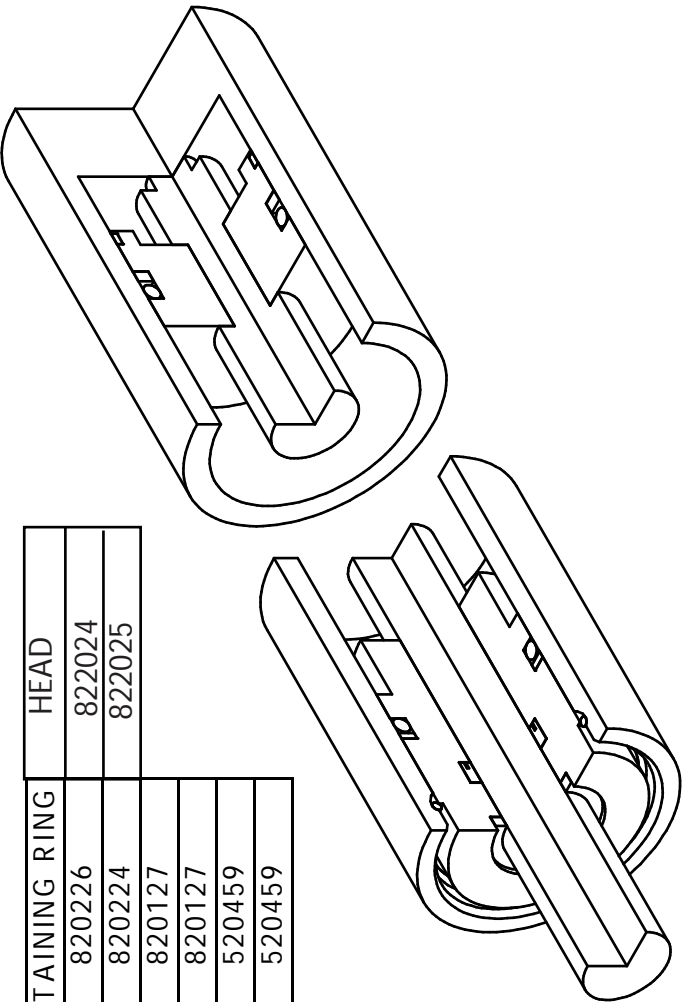
Leveling Valve P/N 820157

SERVICE PARTS			
DESCRIPTION	QUANTITY	PART #	
7. COIL	2	820229	
8. SPOOL	1	820234	

Hydraulic Cylinder Service Parts



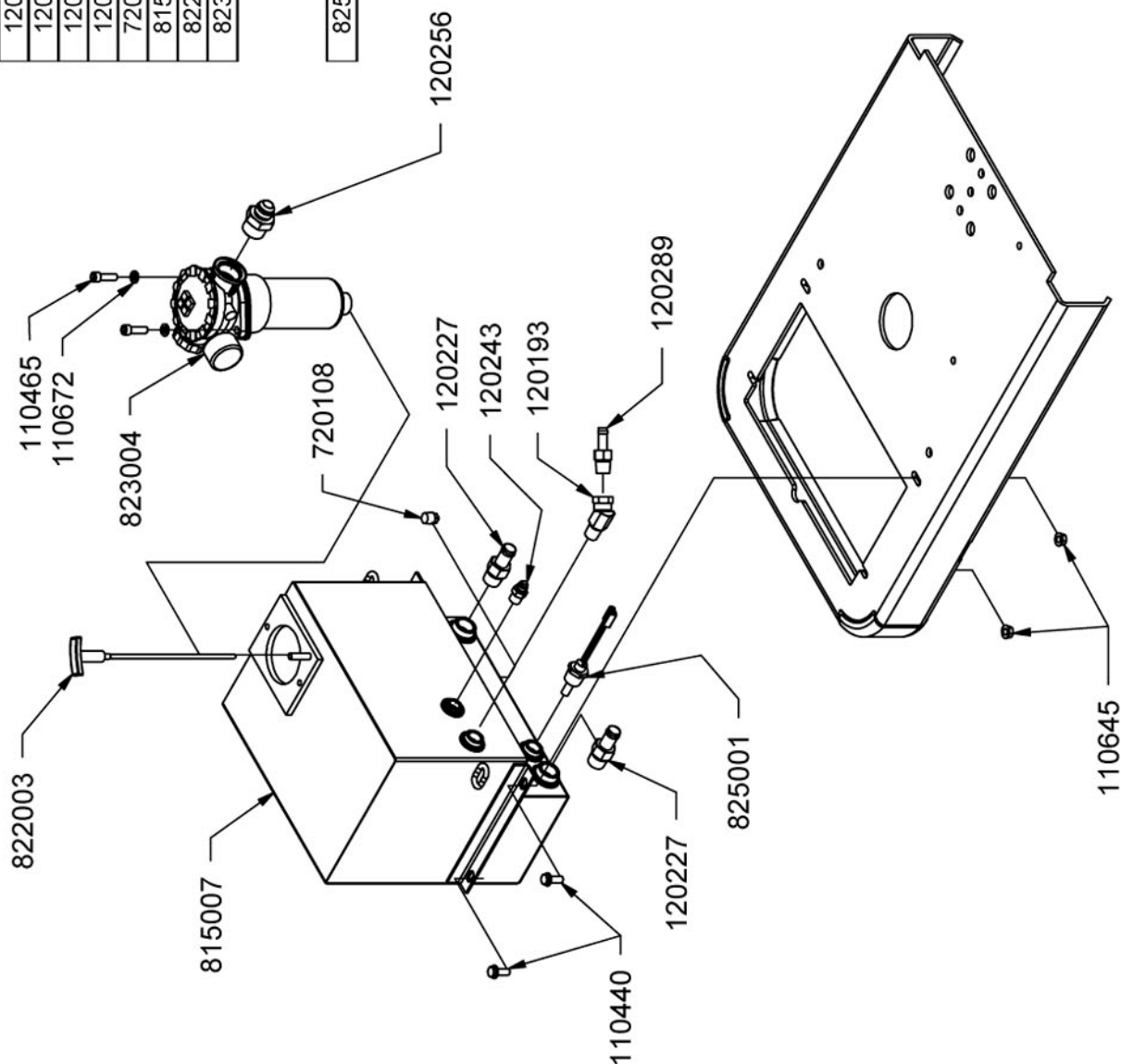
CYLINDER / PART NUMBER	SEAL KIT	RETAINING RING	HEAD
FRONT DECK LIFT	820154	820227	822024
REAR DECK LIFT	820155	820225	822025
LEVELING	820001	820030	820127
	823011*	820030	820127
STEERING	520001	520139	520459
	823015**	520139	520459



* 72LC AFTER S/N 04A21
** 72LC AFTER S/N 04A41

RESERVOIR & FILTER ASSEMBLY

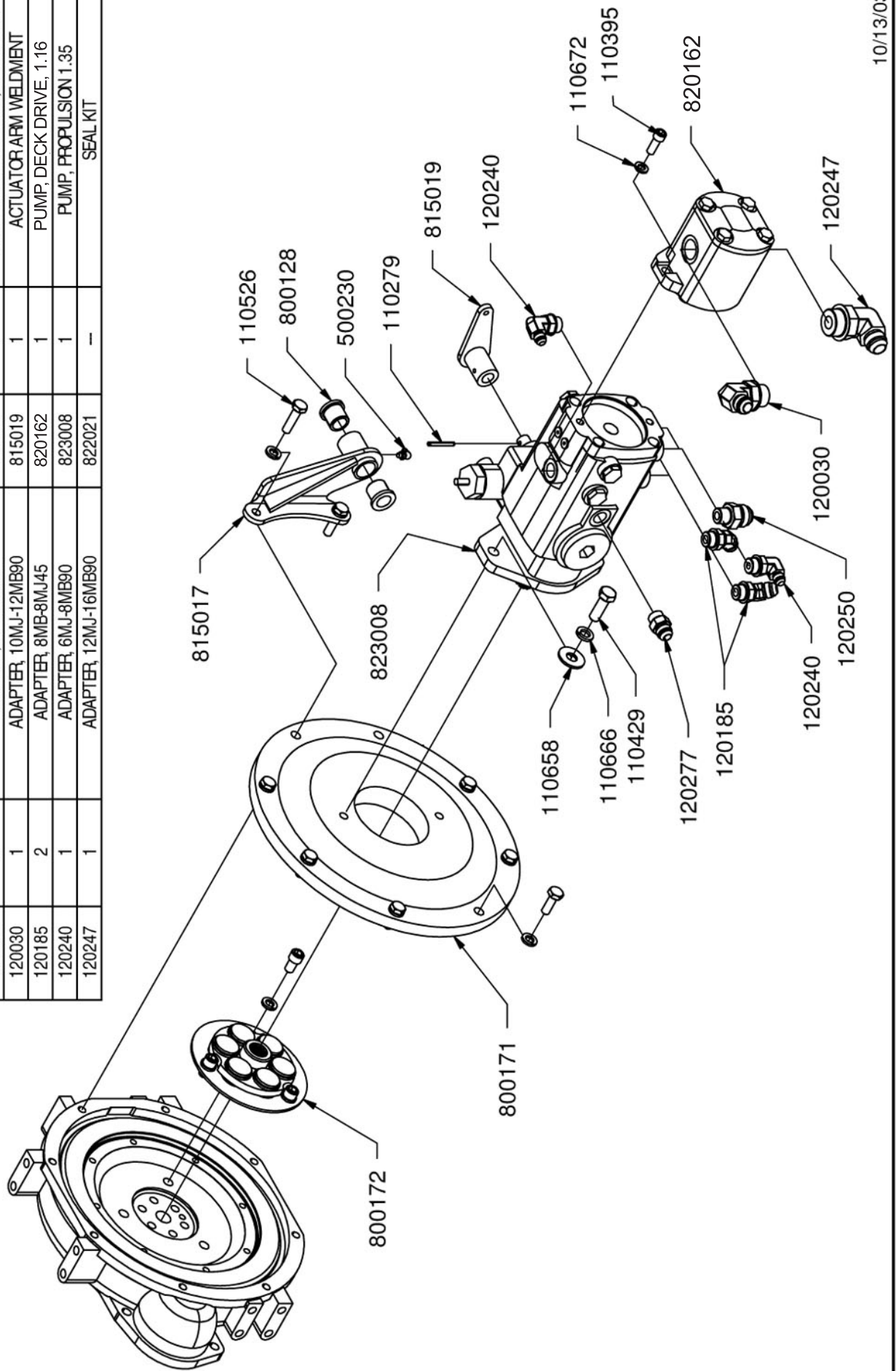
S/N 03A01-04A40



PART #	QUANTITY	DESCRIPTION
110440	4	BOLT, 3/8-16 X 1, WIZ FLANGE
110465	2	BOLT, 3/8-16 X 1.25 SHCS
110645	4	NUT, 3/8-16 WIZ FLANGE
110672	2	WASHER, 3/8" LOCK
120193	1	ADAPTER, 8MP-8FPX45
120227	2	ADAPTER, 12BH-12MP
120243	1	ADAPTER, 6MJ-6MP
120256	1	ADAPTER, 12MJ-16MB
120289	1	ADAPTER, 8BH-8MP
720108	1	FITTING, PLUG 3/8" PIPE
815007	1	7.5 GAL OIL RESERVOIR WELDMENT
822003	1	DIP STICK
823004	1	FILTER ASSY W/ELEMENT
	822002	1
	822017	1
	822018	1
825001	1	HIGH OIL TEMP SWITCH ASSY

PROPULSION PUMP ASSEMBLY S/N 03A01-04A20

PART #	QUANTITY	DESCRIPTION	PART #	QUANTITY	DESCRIPTION
110279	1	ROLL PIN, 3/16 X 1.5	120250	1	ADAPTER, 12MJ-8MB
110395	2	BOLT, 3/8-16 X 1.0 SHCS	120277	1	ADAPTER, 8MJ-8MB
110429	2	BOLT, 1/2-13 X 1.5	500230	1	GREASE ZERK, 1/4-28 90deg
110526	2	BOLT, M10x1.5 x 40, Gr 10.9	800128	2	BUSHING, IGUS, FOOT PEDAL
110658	2	WASHER, 1/2" FLAT STANDARD	800171	1	BELL HOUSING
110666	2	WASHER, 1/2" LOCK	800172	1	PUMP DRIVE COUPLING
110672	2	WASHER, 3/8" LOCK	815017	1	FOOT PEDAL BRACKET, WELDMENT
120030	1	ADAPTER, 10MJ-12MB90	815019	1	ACTUATOR ARM WELDMENT
120185	2	ADAPTER, 8MB-8MJ45	820162	1	PUMP, DECK DRIVE, 1.16
120240	1	ADAPTER, 6MJ-8MB90	823008	1	PUMP, PROPULSION 1.35
120247	1	ADAPTER, 12MJ-16MB90	822021	—	SEAL KIT



4.12

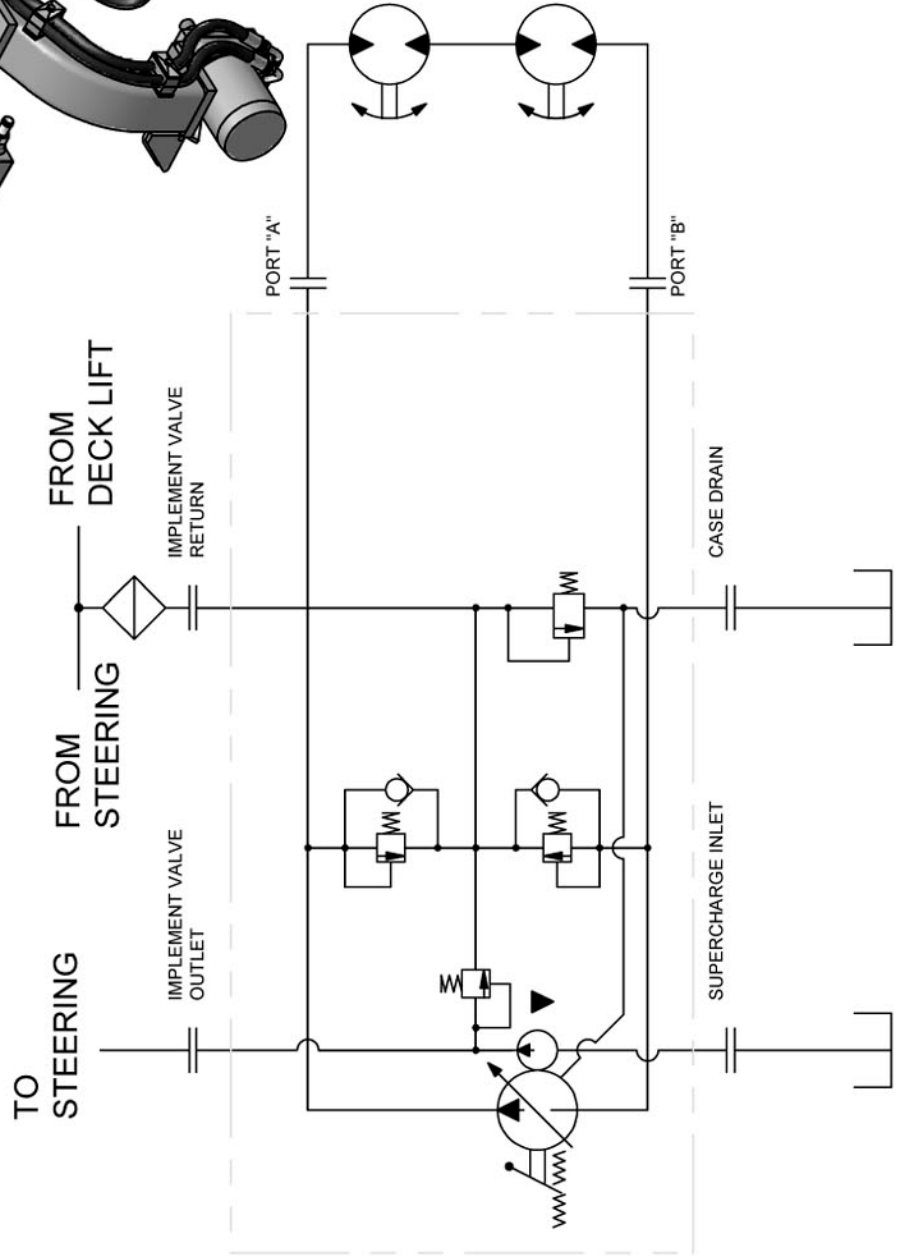
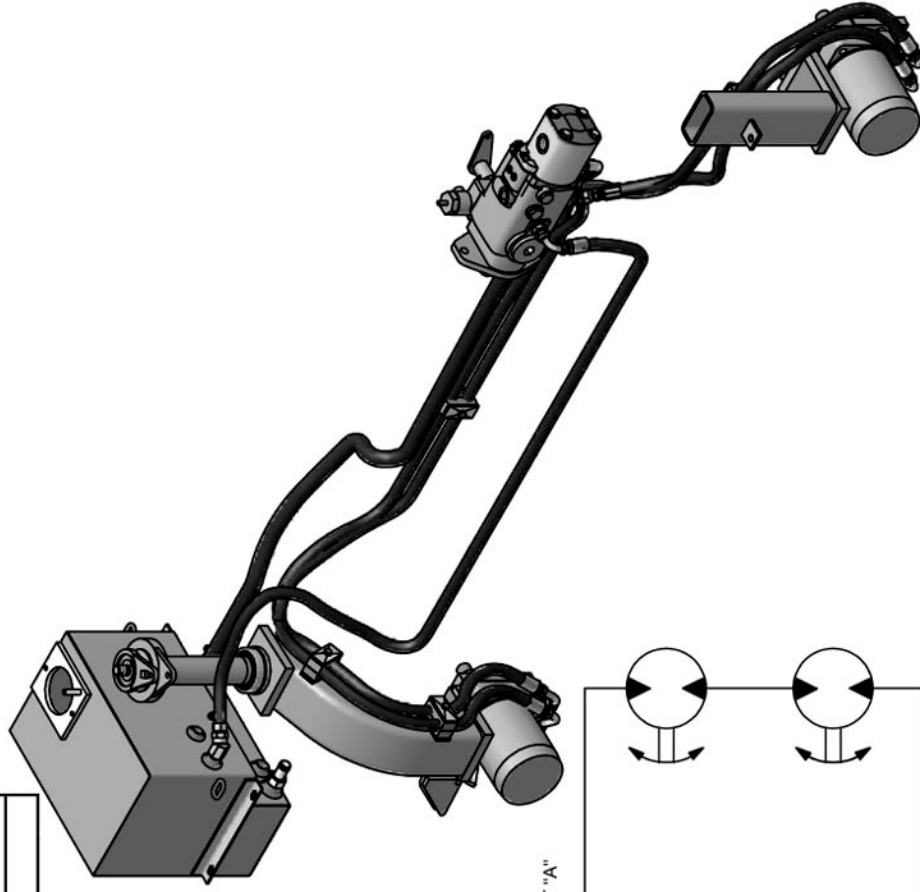
4.12



PART #	QUANTITY	DESCRIPTION
110378	4	BOLT, 5/16-18 X 2.0
120224	4	ADAPTER, 10MJ-10MB90
520099	2	CLAMP, HOSE #12 .75"
820015	2	MOTOR, WHEEL
820027	4	HOSE CLAMP ASSY
820213	1	HOSE, PROPULSION PUMP TO FRONT WHEEL MOTOR
820214	1	HOSE ASSY, FRONT WHEEL MOTOR TO REAR WHEEL MOTOR
820215	1	HOSE, PROPULSION PUMP TO REAR WHEEL MOTOR
822008	1	HOSE ASSY, SUCTION PROPULSION
822011	1	HOSE ASSY, CASE DRAIN PROPULSION

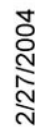
Propulsion Hydraulics Assembly

S/N 03A01-04A20



4.14

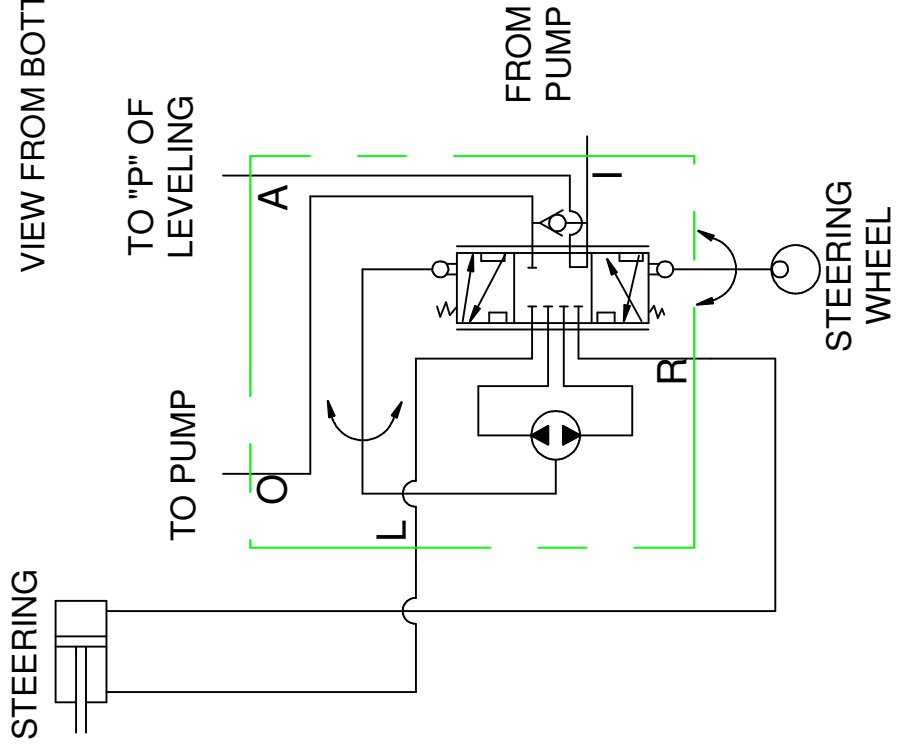
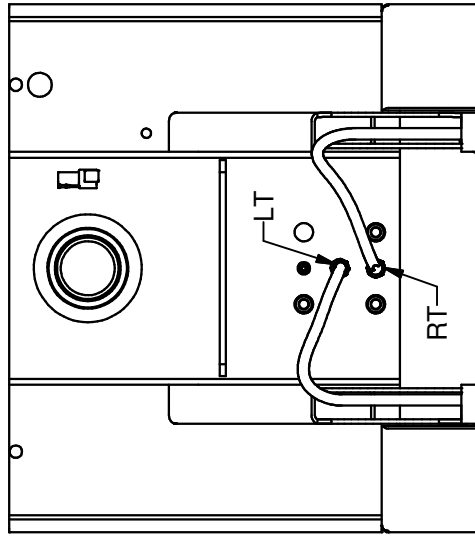
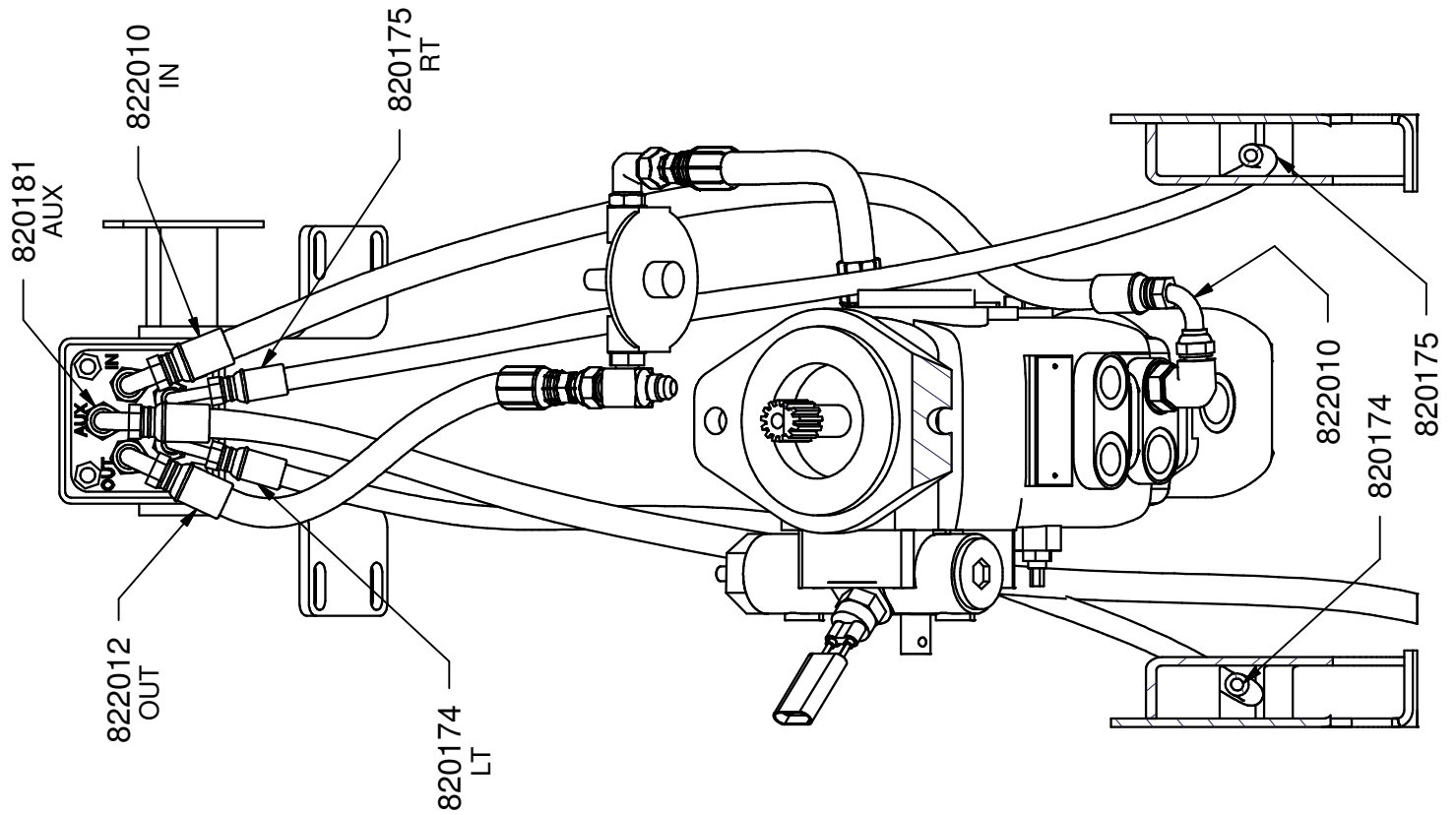
S/N 03A01-04A40



PART #	QUANTITY	DESCRIPTION
110282	2	BOLT, M10x1.5 x 20 Gr 10.9
110440	4	BOLT, 3/8-16 X 1, WIZ FLANGE
110515	2	BOLT, 1/4-20 X .50
110623	4	NUT, 5/16-24
110645	4	NUT, 3/8-16 WIZ FLANGE
110671	2	WASHER, 7/16" LOCK
120092	1	ADAPTER, 6MJ-6MJ-6MB
120126	2	ADAPTER, BULKHEAD, 4MJ-4MJ
120222	1	ADAPTER, 6MJ-6MB90
120235	2	ADAPTER, 4MJ-4MB90
822031	1	FILTER ELEMENT
520001	1	STEERING CYLINDER
520162	1	STEERING COLUMN
520163	1	STEERING PUMP
550004	1	STEERING WHEEL

PART #	QUANTITY	DESCRIPTION
810623	1	OIL FILTER BRACKET
815013	1	STEERING PUMP MOUNT
820174	1	HOSE, RT STEERING VALVE TO BULKHEAD
820175	1	HOSE, LT STEERING VALVE TO BULKHEAD
820176	1	HOSE, ROD END TO LT BULKHEAD
820177	1	HOSE, BARREL END TO RT BULKHEAD
820181	1	HOSE, AUX OF STEERING TO "P" OF LEVELING
822010	1	PRESSURE SIDE OF PROP TO IN SIDE OF STEERING
822012	1	HOSE,STEERING OUT TO FILTER
822013	1	HOSE, FILTER TO PUMP
822020	1	FILTER HEAD, SPIN ON, 6 FB PORTS

Steering System



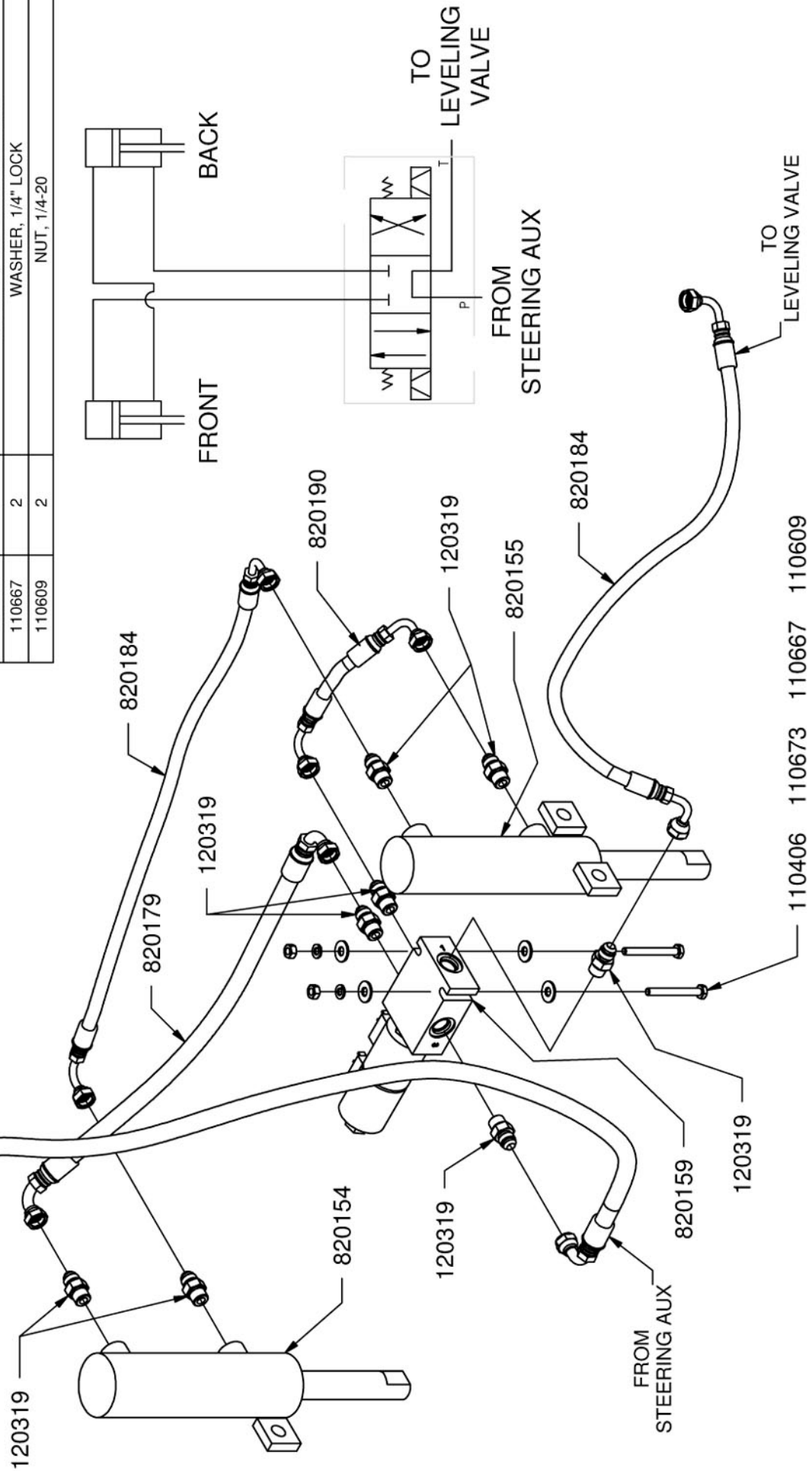
DECK LIFT HYDRAULIC ASSEMBLY

S/N 03A01 - 03A20

4.16

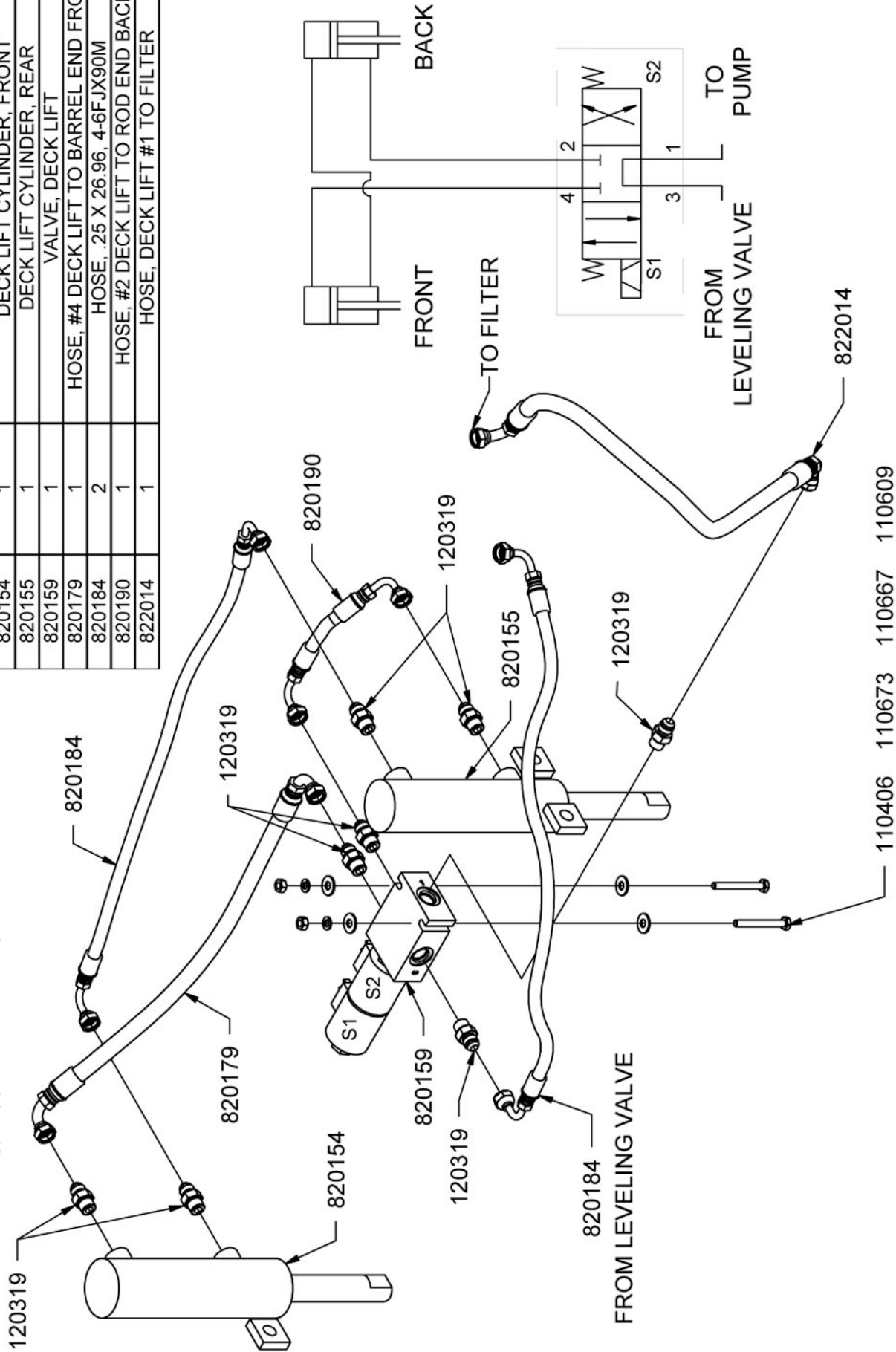
Parts List

PART #	QUANTITY	DESCRIPTION
820154	1	DECK LIFT CYLINDER, FRONT
820155	1	DECK LIFT CYLINDER, REAR
820159	1	VALVE, DECK LIFT
820179	1	HOSE, #4 DECK LIFT TO BARREL END FRONT
820184	2	HOSE, .25 X 26.96, 4-6FJX90M
820190	1	HOSE, #2 DECK LIFT TO ROD END BACK
120319	8	ADAPTER, 6MJ-6MB
110406	2	BOLT, 1/4-20 X 2.25
110673	4	WASHER, 1/4" FLAT STANDARD
110667	2	WASHER, 1/4" LOCK
110609	2	NUT, 1/4-20



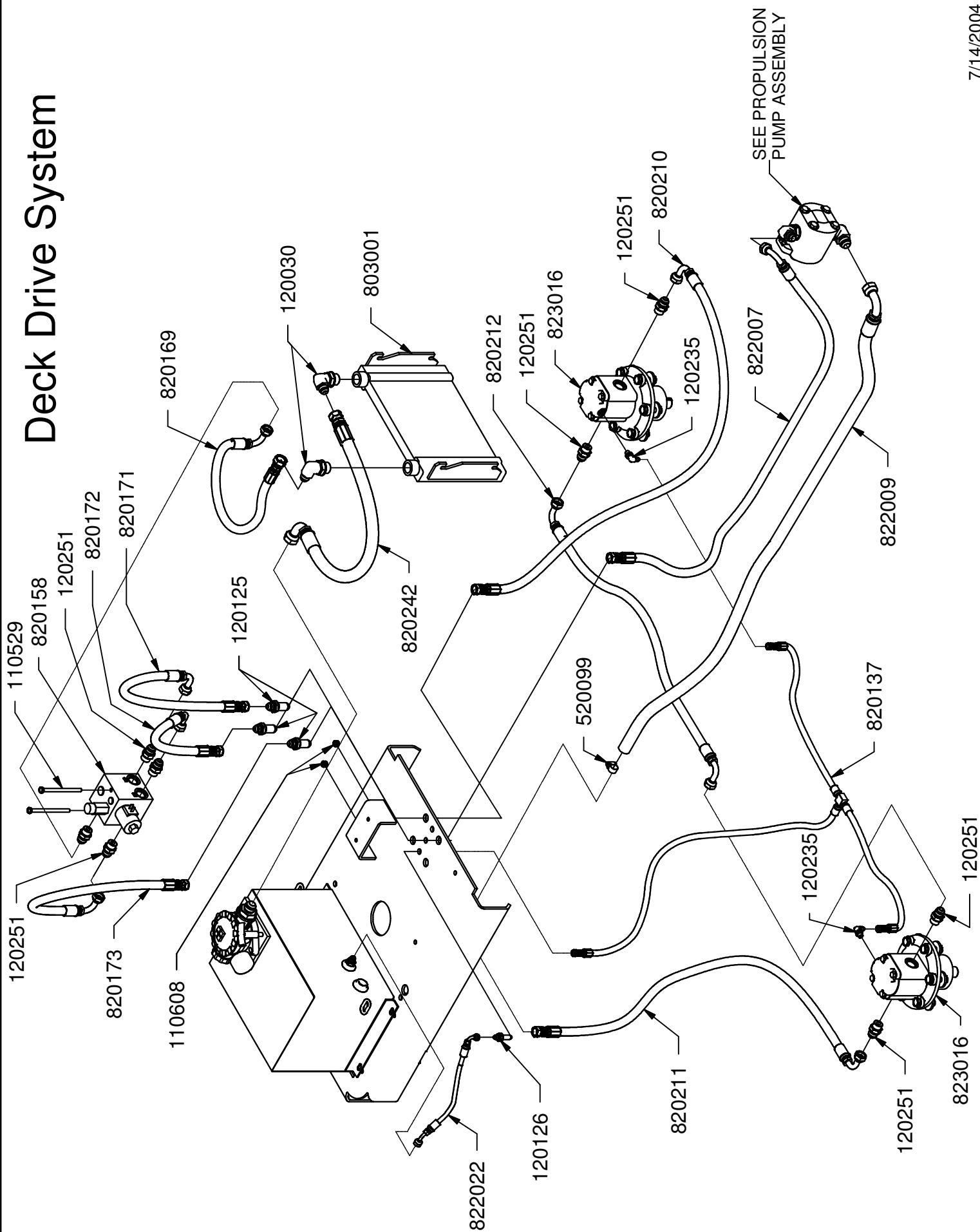
Deck Lift Hydraulic Assembly

S/N 03A21 AND ABOVE

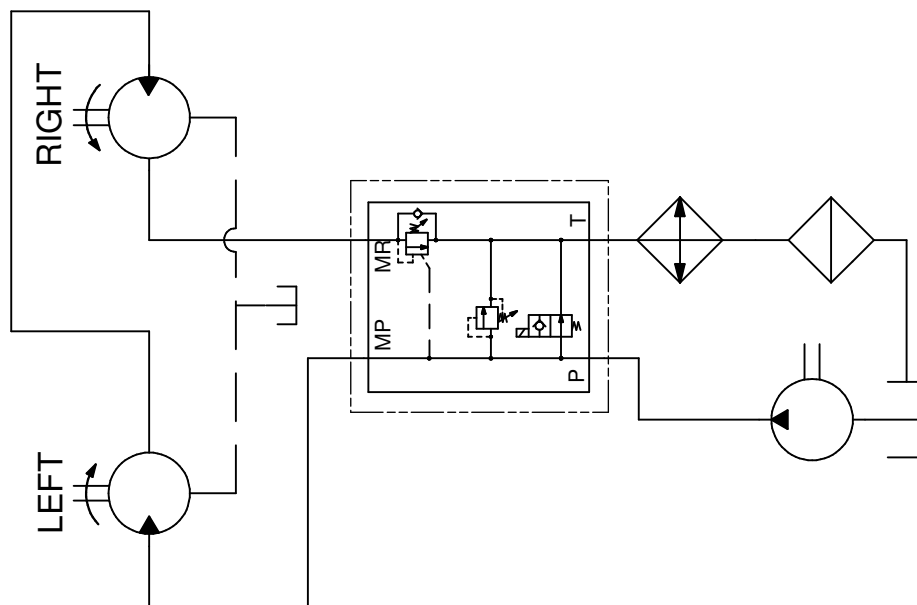


PART #	QUANTITY	DESCRIPTION
110406	2	BOLT, 1/4-20 X 2.25
110609	2	NUT, 1/4-20
110667	2	WASHER, 1/4" LOCK
110673	4	WASHER, 1/4" FLAT STANDARD
120319	8	ADAPTER, 6MJ-6MB
820154	1	DECK LIFT CYLINDER, FRONT
820155	1	DECK LIFT CYLINDER, REAR
820159	1	VALVE, DECK LIFT
820179	1	HOSE, #4 DECK LIFT TO BARREL END FRONT
820184	2	HOSE, .25 X 26.96, 4-6FJX90M
820190	1	HOSE, #2 DECK LIFT TO ROD END BACK
822014	1	HOSE, DECK LIFT #1 TO FILTER

Deck Drive System



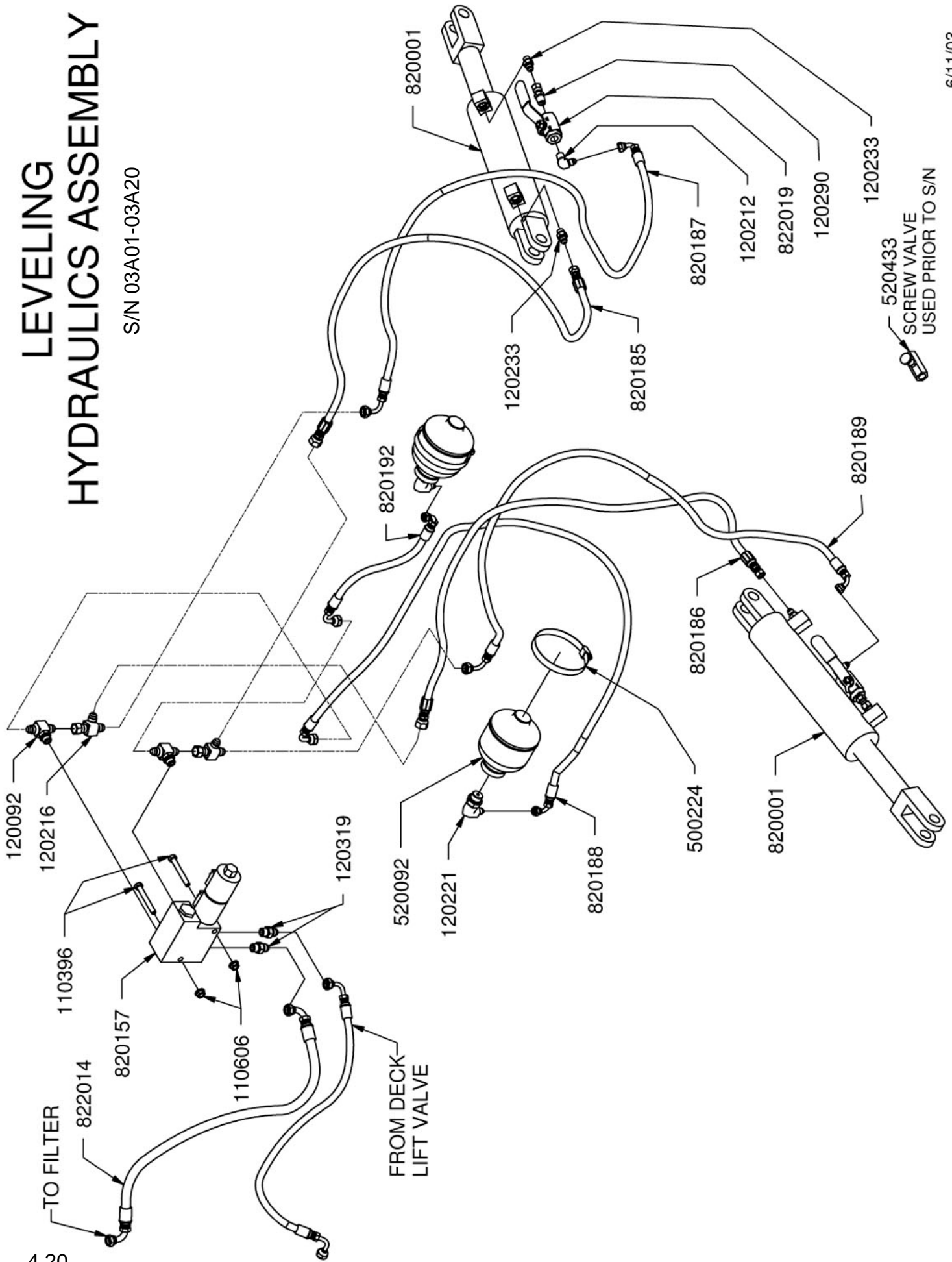
Deck Drive System



PART #	QUANTITY	DESCRIPTION
110529	2	BOLT, 5/16-18 X 4.5
110608	2	NUT, 5/16-18
120030	2	ADAPTER, 10MJ-12MB90
120125	3	ADAPTER, BULKHEAD, 8MJ-8MJ
120126	1	ADAPTER, BULKHEAD, 4MJ-4MJ
120235	2	ADAPTER, 4MJ-4MB90
120251	8	ADAPTER, 10MJ-10MB
520099	1	CLAMP, HOSE #12 .75"
802003	1	OIL COOLER
820137	1	HOSE, CASE DRAIN
820158	1	DECK VALVE
820169	1	HOSE, "T" SIDE OF VALVE TO OIL COOLER
820171	1	HOSE, "MR" SIDE OF VALVE TO BACK RIGHT BULKHEAD
820172	1	HOSE, "MP" SIDE OF VALVE TO FRONT RIGHT BULKHEAD
820173	1	HOSE, "P" SIDE OF VALVE TO BACK LEFT BULKHEAD
820210	1	HOSE, RIGHT DECK MOTOR TO BACK RIGHT BULKHEAD
820211	1	HOSE, FRONT RIGHT BULKHEAD TO LEFT DECK MOTOR
820212	1	HOSE, LEFT DECK MOTOR TO RIGHT DECK MOTOR
820242	1	HOSE, OIL COOLER TO INTANK FILTER
822007	1	HOSE, CHARGE PUMP TO BACK LEFT BULKHEAD
822009	1	HOSE, RESERVOIR TO CHARGE PUMP SUCTION
822022	1	HOSE, CASE DRAIN BULKHEAD TO RESEVOIR
823016	1	MOTOR, DECK LEFT, ULTRA 1.65
823016	1	MOTOR, DECK RIGHT, ULTRA 1.65

LEVELING HYDRAULICS ASSEMBLY

S/N 03A01-03A20



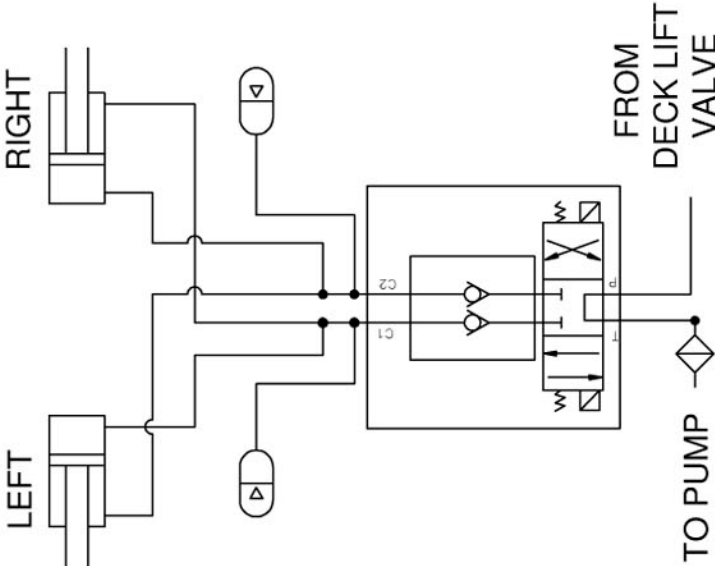
LEVELING HYDRAULICS ASSEMBLY

S/N 03A01 - 03A20



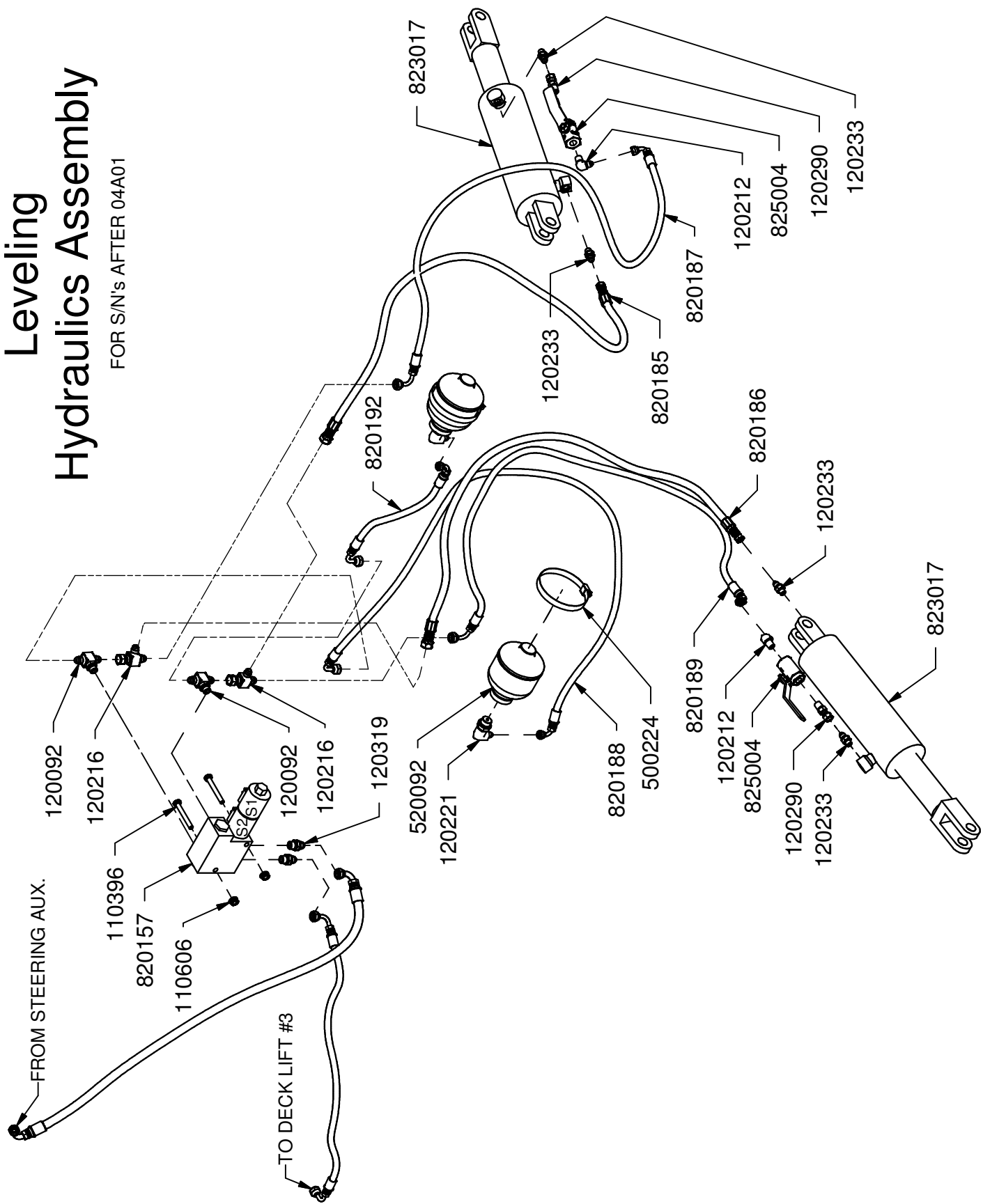
Parts List

PART #	QUANTITY	DESCRIPTION
520092	2	HYDRO PNEUMATIC ACCUMULATOR
820001	2	LEVELING CYLINDER
820157	1	VALVE, LEVELING
820185	1	HOSE, C1 OF LEVELING TO BARREL OF RIGHT
820186	1	HOSE, C2 OF LEVELING TO BARREL END OF LEFT
820187	1	HOSE, C2 OF LEVELING TO ROD END RIGHT
820188	1	HOSE, C2 OF LEVELING TO LEFT ACCUMULATOR
820189	1	HOSE, C1 OF LEVELING TO ROD END LEFT
820192	1	HOSE, C1 OF LEVELING TO RIGHT ACCUMULATOR
822014	1	HOSE, LEVELING VALVE "T" TO FILTER
110396	2	BOLT, 5/16-18 X 2.5
110606	2	NUT, 5/16-18 WIZ FLANGE
500224	2	CLAMP, HOSE #56 4.00"
120092	2	ADAPTER, 6MJ-6MJ-6MB
120212	2	ADAPTER, 4MJ-4MP90
120216	2	ADAPTER, 6MJ-6FJX-6MJ
120221	2	ADAPTER, 4MJ-8MB90
120233	4	ADAPTER, 4MJ-4MB
120290	2	ADAPTER, 4FJX-4MP
120319	2	ADAPTER, 6MJ-6MB
822019	2	VALVE, BALL 1/4"



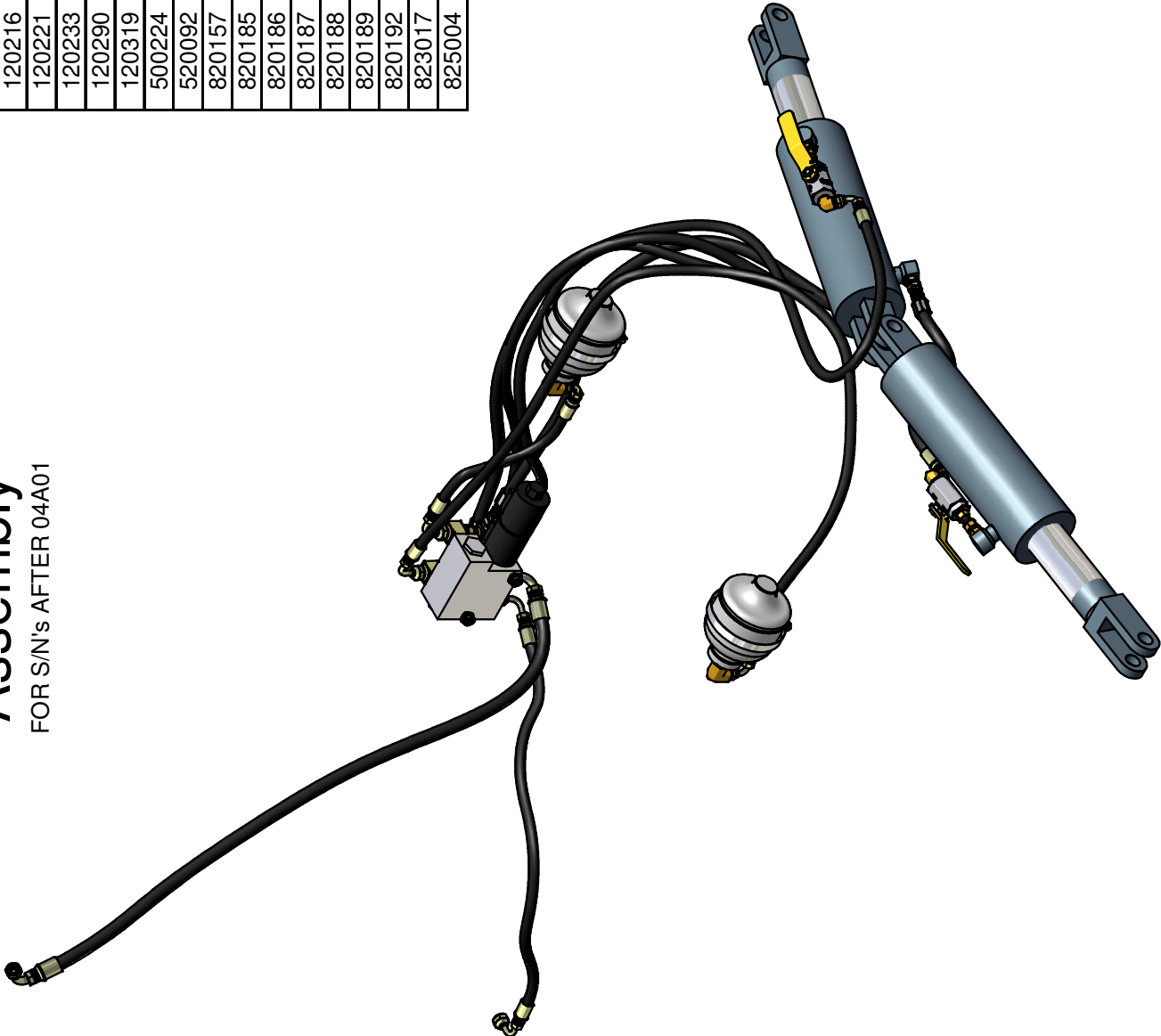
Leveling Hydraulics Assembly

FOR S/N's AFTER 04A01

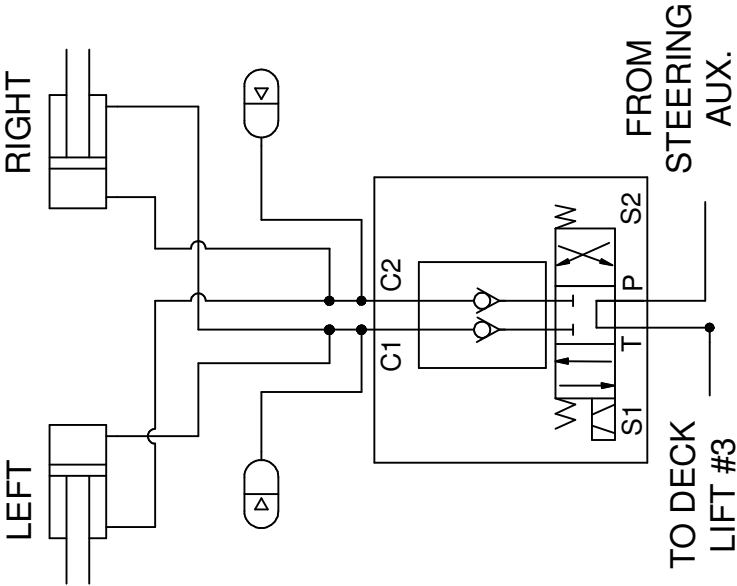


Leveling Hydraulics Assembly

FOR S/N's AFTER 04A01

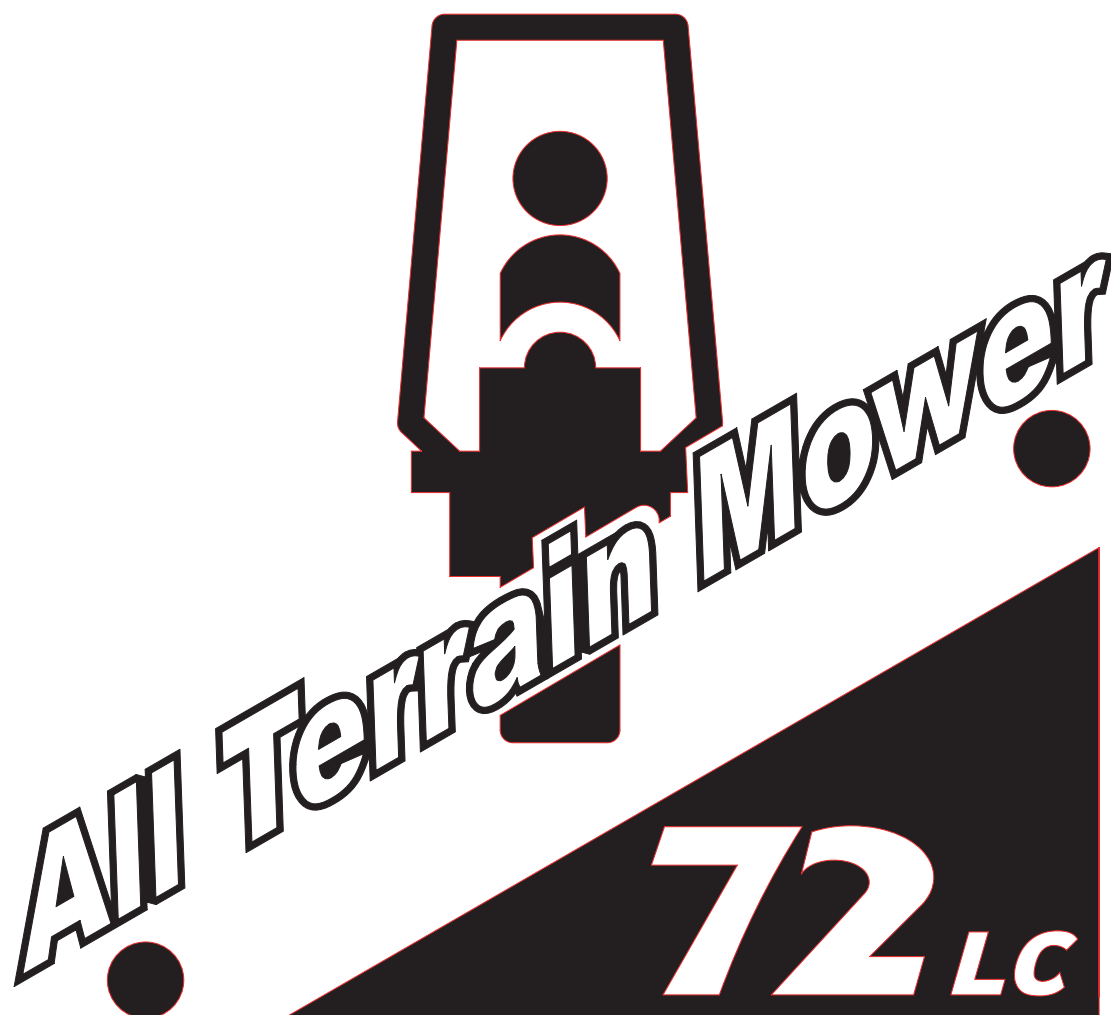


PART #	QTY	DESCRIPTION
110396	2	BOLT, 5/16-18 X 2.5
110606	2	NUT, 5/16-18 W/IZ FLANGE
120092	2	ADAPTER, 6MJ-6MJ-6MB
120212	2	ADAPTER, 4MJ-4MP90
120216	2	ADAPTER, 6MJ-6FJX-6MJ
120221	2	ADAPTER, 4MJ-8MB90
120233	4	ADAPTER, 4MJ-4MB
120290	2	ADAPTER, 4FJX-4MP
120319	4	ADAPTER, 6MJ-6MB
500224	2	CLAMP, HOSE #56 4.00"
520092	2	HYDRO PNEUMATIC ACCUMULATOR
820157	1	VALVE, LEVELING
820185	1	HOSE, C1 OF LEVELING TO BARREL OF RIGHT
820186	1	HOSE, C2 OF LEVELING TO BARREL END OF LEFT
820187	1	HOSE, C2 OF LEVELING TO ROD END RIGHT
820188	1	HOSE, C2 OF LEVELING TO LEFT ACCUMULATOR
820189	1	HOSE, C1 OF LEVELING TO ROD END LEFT
820192	1	HOSE, C1 OF LEVELING TO RIGHT ACCUMULATOR
823017	2	CYLINDER, 3.0" X 6.54" X 2.0", LEVELING
825004	2	BALL VALVE W/HANDLE RIGHT



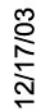
Section 5

Electrical System



N.O. = NORMALLY OPEN
N.C. = NORMALLY CLOSED

S/N 03A01-04A40

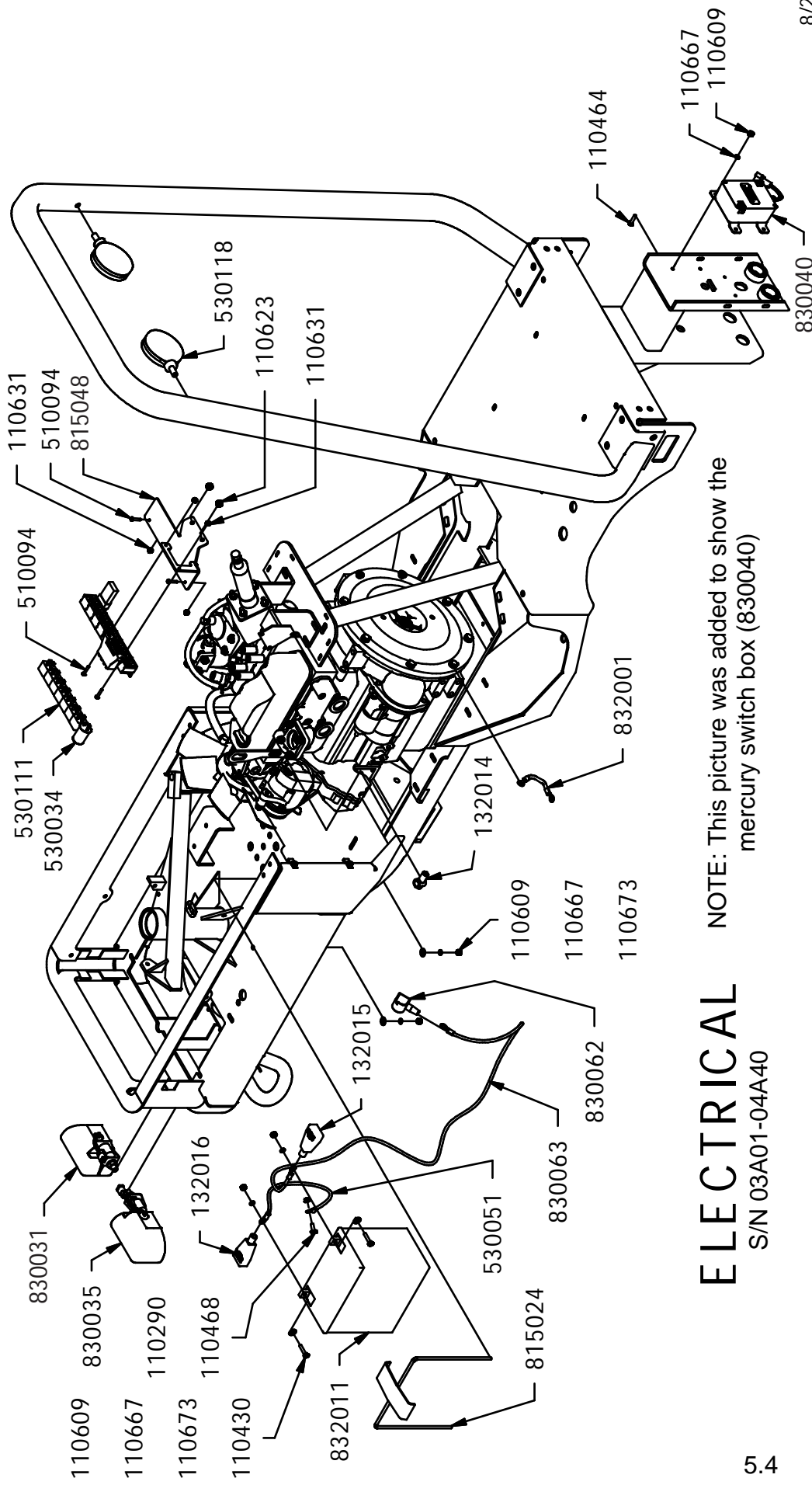


Electrical Harness Diagrams

S/N 03A01-04A40

<p>RELAY FUSE PANEL HRNS 830043</p> <p>A: TO INSTRUMENT PANEL HRNS B: TO LEVELING SEAT HRNS C: TO DECK LIFT HRNS D: LIGHTS, DECK LIFT E: MANUAL LEVELING, TEMP GAUGE F: FUEL SOL. G: MOWER, AUTOLEVEL</p> <p>RELAY 530111 FLASHER 530034</p>	<p>LEVELING, SEAT HRNS 830045</p> <p>A: TO RELAY HRNS B: FROM (4) & (12) TO SEAT C: FROM (1) TO LIGHTS OIL HRNS D: FROM (3) TO INSTRUMENT PANEL HRNS E: FROM (5) & (9) TO LEVELING F: FROM (8) TO ROPS G: FROM (6) & (7) TO MERCURY SWITCHES</p> <p>MERCURY SWITCH BOX 830050 RELAY 530111 TIME DELAY 830027</p>	<p>INSTRUMENT PANEL HRNS 830047</p> <p>A: TO RELAY, FUSE PANEL HRNS B: TO LEVELING, SEAT HRNS C: TO ALTERNATOR HRNS D: TO FRONT LIGHTS, OIL SHUTDOWN HRNS E: TO DECK LIFT HRNS F: GROUND TO FRAME</p>
<p>DECK LIFT, FUEL, OIL HRNS 830044</p> <p>A: TO RELAY, FUSE PANEL HRNS B: FROM (C) TO INSTRUMENT PANEL HRNS C: FROM (B) TO DECK LIFT D: FROM (1) TO FUEL SOL. E: FROM (A) TO OIL SENDER</p> <p>OIL PRESSURE SENDER 530068 FUEL STOP SOL. 850118</p>	<p>FRONT LIGHTS, OIL SHUT DOWN HRNS 830046</p> <p>A: TO INSTRUMENT PANEL HRNS B: FROM (E) TO LEVELING, SEAT HRNS C: FROM (1) TO OIL PRESSURE SENDER D: FROM (2) TO WATER TEMP SENDER E: FROM (B) TO DECK SOL. F: FROM (3) TO FRONT LIGHTS</p> <p>COOLANT TEMP SENDER 840034 OIL PRESSURE SENDER 530068</p>	<p>ALTERNATOR HRNS 830042</p> <p>A: TO INSTRUMENT PANEL HRNS B: FROM (2) TO STARTER SOL. C: FROM (F) TO STARTER SOL. D: FROM (G) TO STARTER SOL. E: FROM (1) TO ALT. F: FROM (C) TO ALT. G: FROM (D) & (3) TO NEUTRAL SAFTEY SWITCH</p>

PART #	QUANTITY	DESCRIPTION	PART #	QUANTITY	DESCRIPTION
110290	1	NUT, 1/4-20 WIZ FLANGE	530034	1	FLASHER
110430	2	BOLT, 1/4-20 X 1-1/4	530051	1	GROUND CABLE
110464	4	BOLT, 1/4-20 X 1.0	530111	5	RELAY
110468	1	BOLT, 1/4-20 X 0.75, WIZ FLANGE	530118	2	HAZARD LIGHT
110609	8	NUT, 1/4-20	815024	1	BATTERY HOLD DOWN WELDMENT
110623	2	NUT, 5/16-24	815048	1	RELAY & FUSE BLOCK MOUNT WELDMENT
110631	4	NUT, 10-24 LOCK NYLON INSERT	830062	1	STARTER TERMINAL COVER
110667	8	WASHER, 1/4" LOCK	830063	1	POSITIVE BATTERY CABLE
110673	4	WASHER, 1/4" FLAT STANDARD	832001	1	STARTER GROUND
132014	1	INSULATOR CAP, (ALTERNATOR)	832011	1	BATTERY
132015	1	BATTERY BOOT, RED	830040	1	MERCURY SWITCH ENCLOSURE
132016	1	BATTERY BOOT, BLACK	830035	1	HEADLIGHT LEFT
510094	4	SCREW, 10-24 X 1, RHMS	830031	1	HEADLIGHT RIGHT



NOTE: This picture was added to show the mercury switch box (830040)

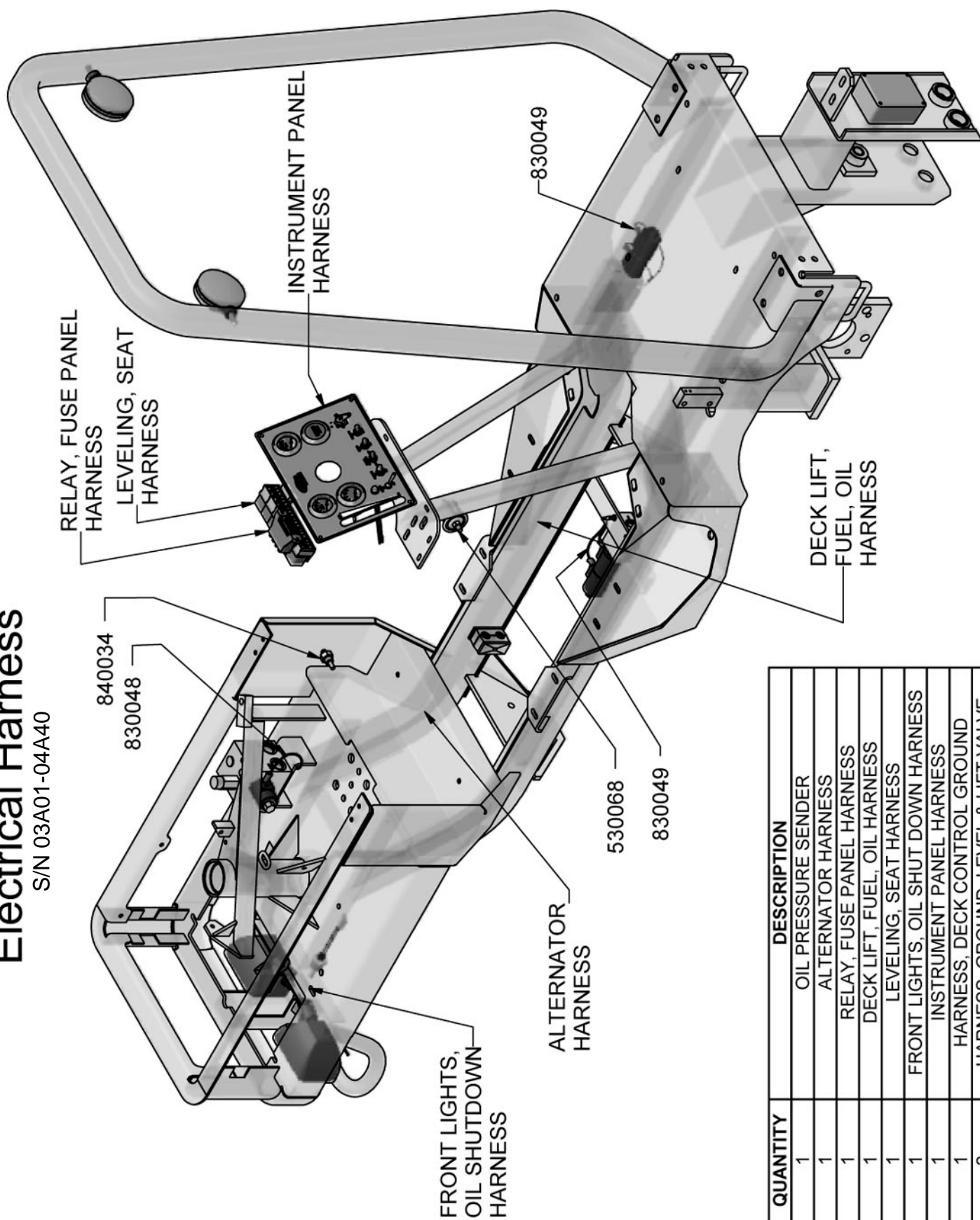
ELECTRICAL

S/N 03A01-04A40

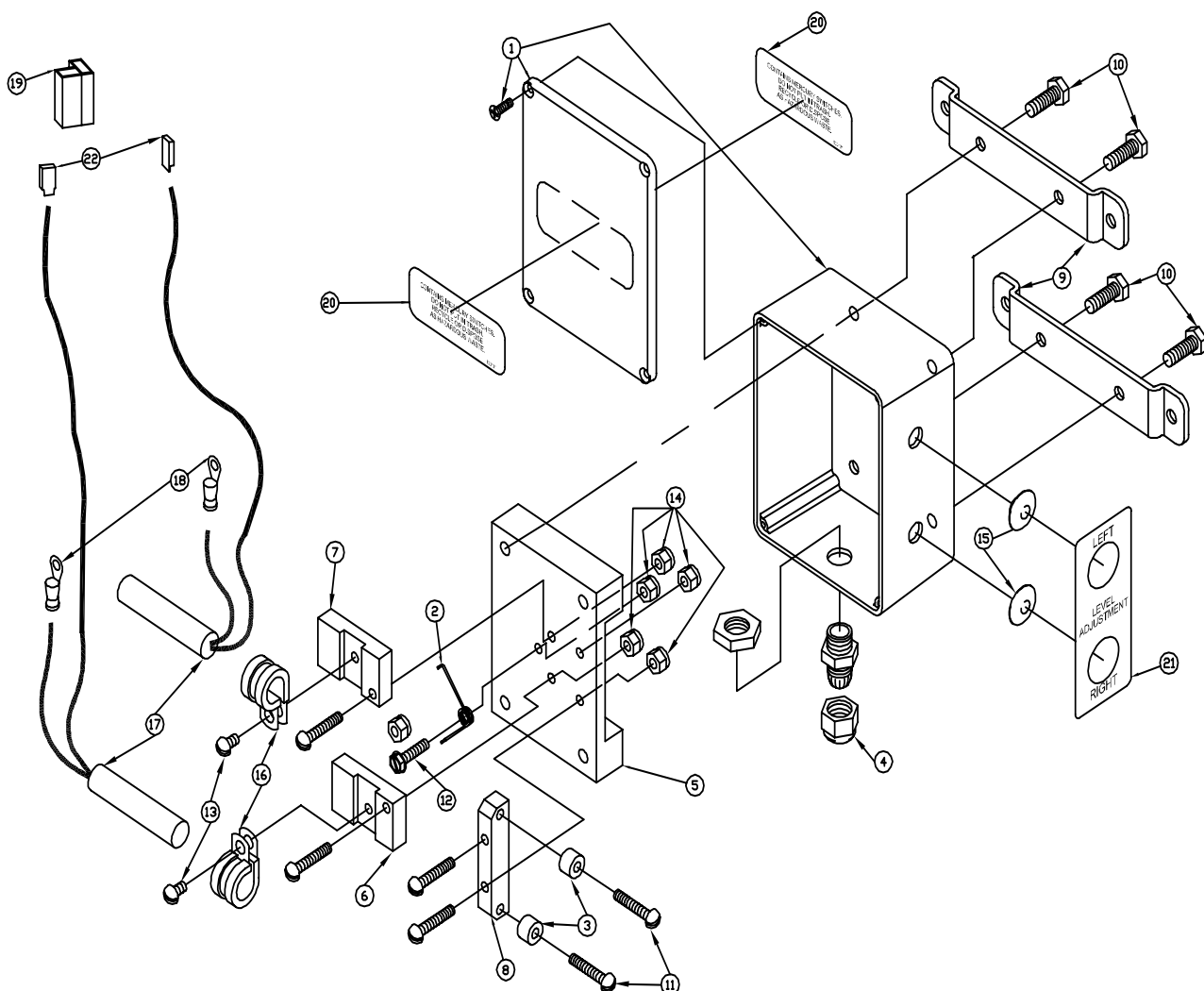
Electrical Harness

S/N 03A01-04A40

5.5



PART #	QUANTITY	DESCRIPTION
530068	1	OIL PRESSURE SENDER
830042	1	ALTERNATOR HARNESS
830043	1	RELAY, FUSE PANEL HARNESS
830044	1	DECK LIFT, FUEL, OIL HARNESS
830045	1	LEVELING, SEAT HARNESS
830046	1	FRONT LIGHTS, OIL SHUT DOWN HARNESS
830047	1	INSTRUMENT PANEL HARNESS
830048	1	HARNESS, DECK CONTROL GROUND
830049	2	HARNESS, GROUND, LEVEL & LIFT VALVE
840034	1	COOLANT TEMP SENDER

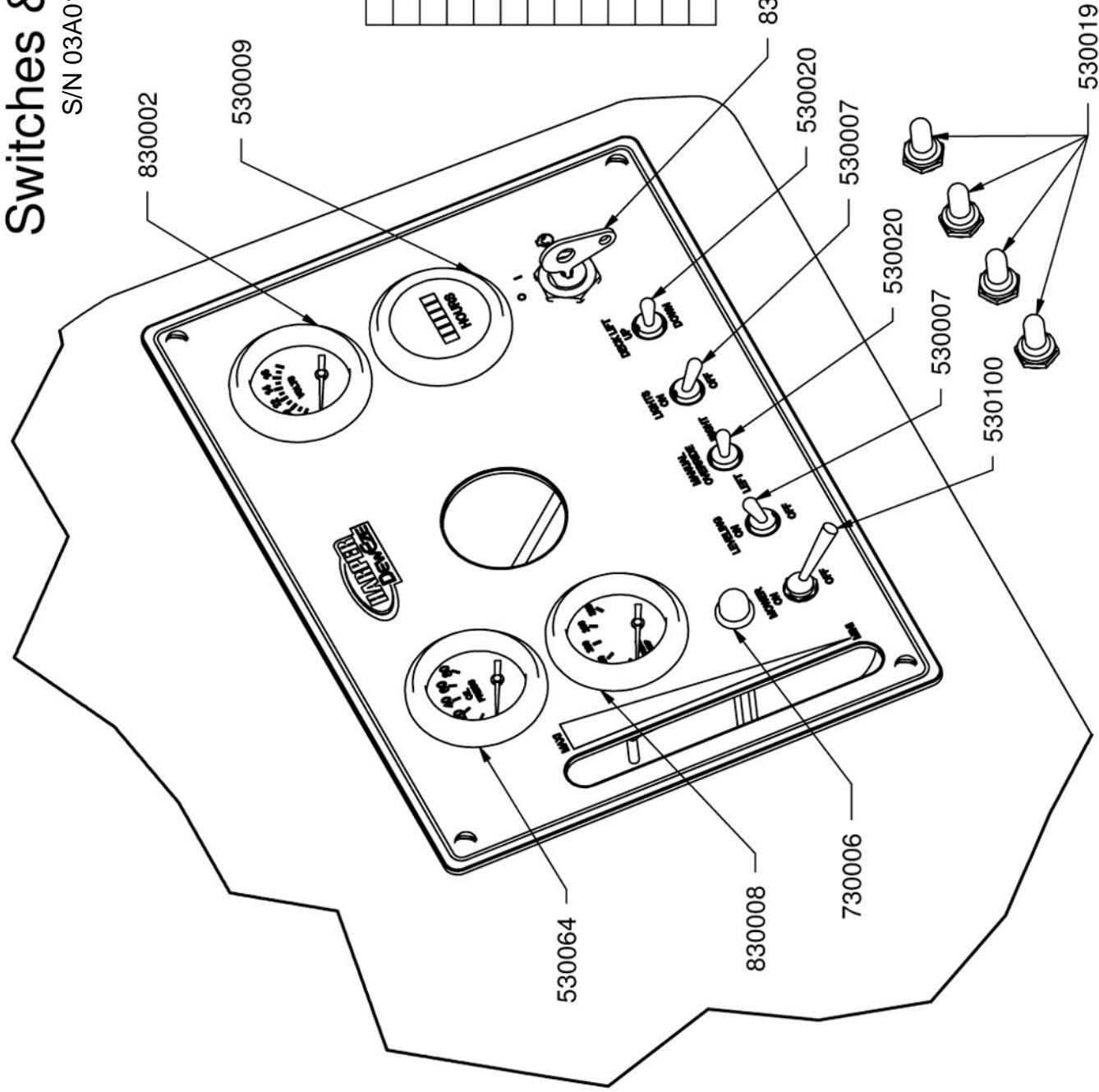


		830040	MERCURY SWITCH ENCLOSURE ASSY
1	1	800117	ENCLOSURE
2	1	800118	SPRING
3	2	800119	SPRING/ANTI-ROTATION
4	1	800120	LIQUID TIGHT FITTING
5	1	810371	BASE PLATE
6	1	810372	PIVOT/SWITCH MOUNT-BOTTOM
7	1	810373	PIVOT/SWITCH MOUNT-TOP
8	1	810374	LIMIT SCREW MOUNT
9	2	810375	MOUNTING BRACKET
10	4	710611	1/4-20 X .75 BOLT
11	6	510094	10-24 X 1 RD HEAD SCREW
12	1	110082	10-24 X .75 WASHER HD SCREW
13	2	110267	10-24 X .313 RD HEAD SCREW
14	5	540078	10-24 LOCK NUT
15	2	200192	PLUG
16	2	830021	ADEL CLAMP
17	2	830020	MERCURY SWITCH
18	2	730010	WIRE END FERB10
19	1	530083	CONNECTOR
20	2	800121	DECAL/CONTAINS MERCURY
21	1	800122	DECAL/ADJUST SCREWS
22	1	530084	TERMINAL END

830050

Switches & Gauges

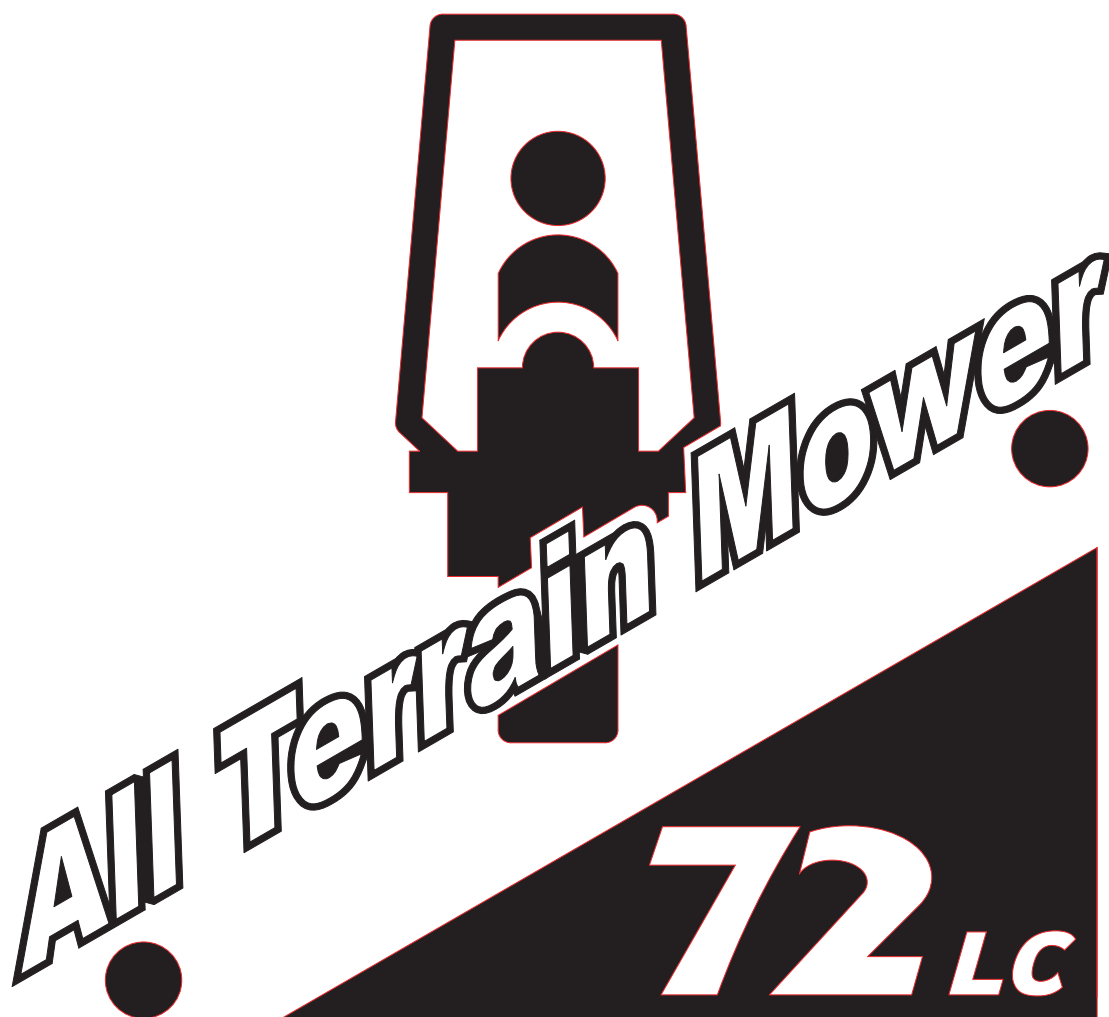
S/N 03A01-04A40



Parts List		
PART #	QTY	DESCRIPTION
530007	2	TOGGLE SWITCH
530009	1	HOUR METER
530019	4	SWITCH BOOT
530020	2	TOGGLE SWITCH
530064	1	OIL PRESSURE GAUGE
530100	1	MOWER SWITCH
730006	1	INDICATOR LIGHT
830002	1	VOLT METER
830008	1	TEMPERATURE GAUGE
830018	1	IGNITION SWITCH
830023	--	KEY

Section 6

Engine and Cooling



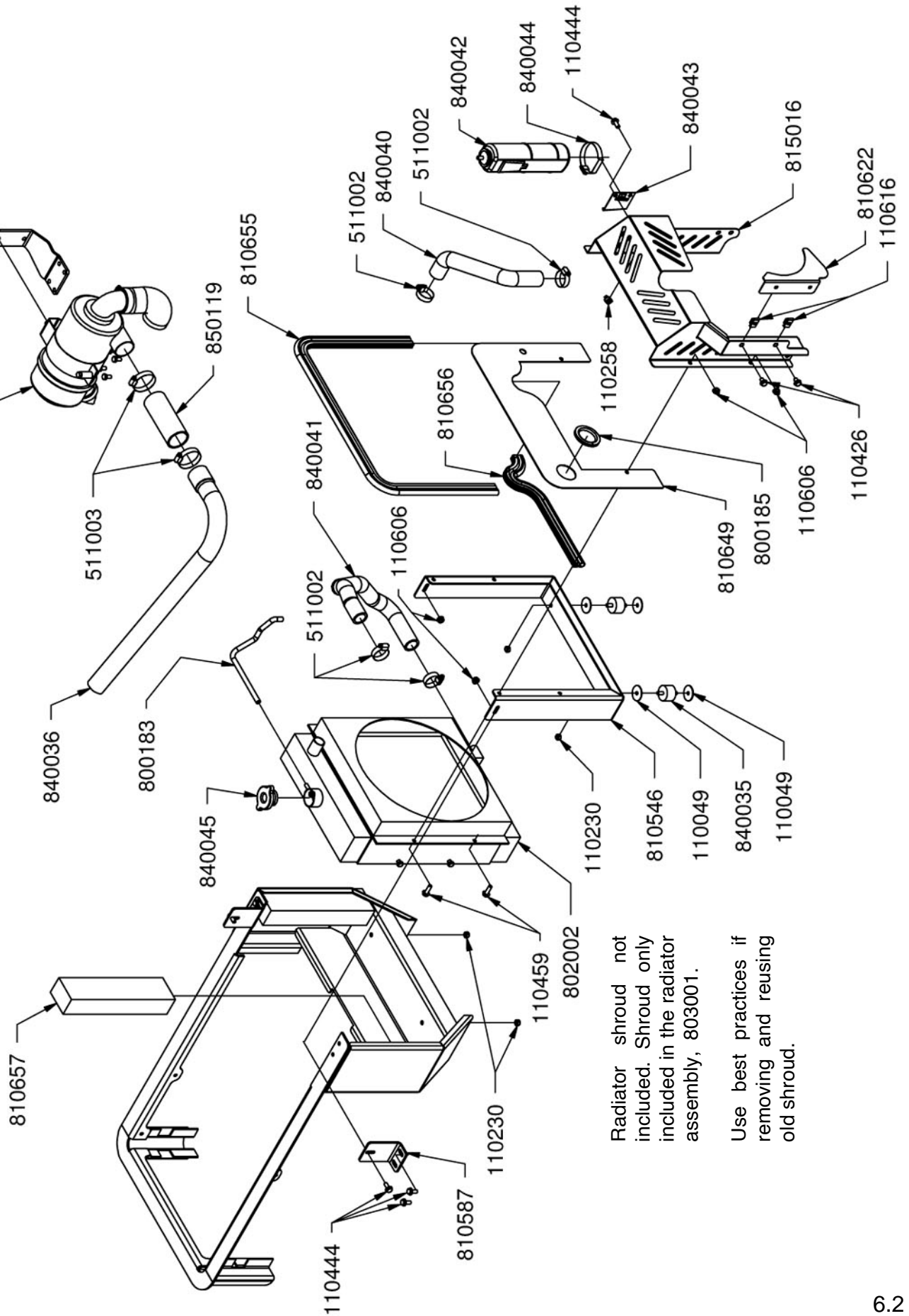
S/N 03A01-04A20

6.1



RADIATOR ASSEMBLY

S/N 03A01-04A20



Radiator shroud not included. Shroud only included in the radiator assembly, 803001.

Use best practices if removing and reusing old shroud.

RADIATOR ASSEMBLY

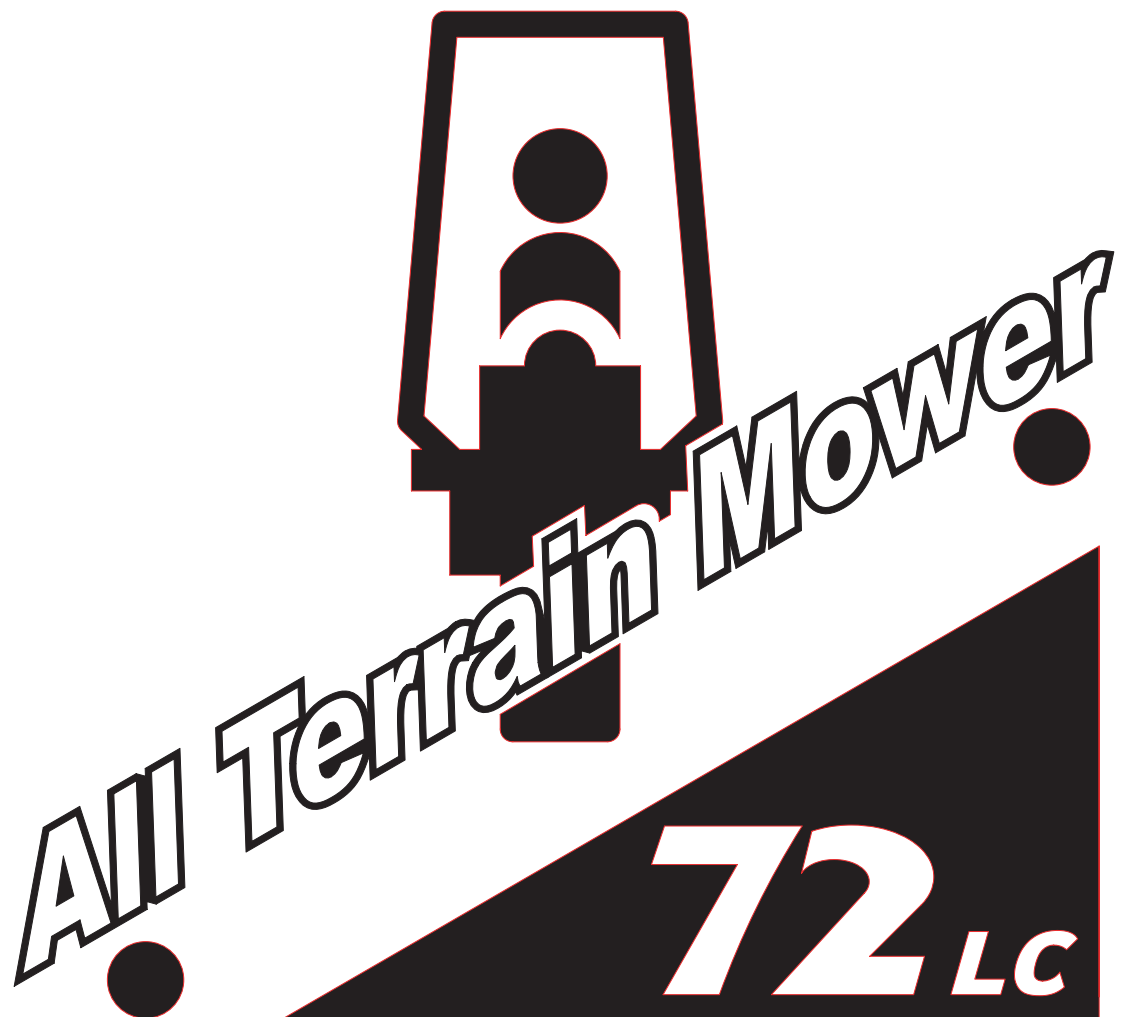
S/N 03A01-04A20

PART #	QUANTITY	DESCRIPTION	PART #	QUANTITY	DESCRIPTION
110049	4	WASHER, 5/16 X 1.50 FENDER	810646	1	AIR CLEANER BRACKET
110230	4	NUT, M8 X 1.25, LOCK NYLON	810649	1	HOOD BAFFLE
110258	1	NUT, 5/16-18, CAGE TINNERMAN	810655	1	BAFFLE SEAL, UPPER
110426	2	BOLT, 5/16-18 X 0.5, WIZ FLANGE	810656	1	BAFFLE SEAL, LOWER
110444	7	BOLT, 5/16-18 X 0.75, WIZ FLANGE	810657	2	FOAM SEAL
110459	4	BOLT, 5/16-18 X 1, WIZ FLANGE	815016	1	FAN SHIELD WELDMENT
110606	6	NUT, 5/16-18 WIZ FLANGE	840035	2	ANTI-VIBRATION MOUNT
110616	2	NUT, 5/16", J-TYPE, CAGE, .5C	840036	1	AIR INLET TUBE
511002	4	CLAMP, HOSE #24 1.50"	840040	1	RADIATOR HOSE, TOP
511003	2	CLAMP, HOSE #36 2.25"	840041	1	RADIATOR HOSE, BOTTOM
800183	1	5/16 ID HOSE	840042	1	SUBTANK, RESERVOIR
800185	1	INLET TUBE LINER	840043	1	SUBTANK BRACKET
802002	1	RADIATOR	840044	1	CLAMP, SUBTANK
810546	1	RADIATOR MOUNT	840045	1	RADIATOR CAP
810587	2	RADIATOR MOUNT BRACKET	842008	1	AIR FILTER ASSY, DONALDSON
810622	1	BELT SHIELD	840027	-	AIR FILTER ELEMENT
			850119	1	AIR FILTER INLET HOSE



Section 7

Technical Specifications



72LC Specifications

EngineYanmar 3TNV82A

Number of Cylinders.....	3
Bore x Stroke in (mm).....	3.23 x 3.31 (82 x 84)
Displacement cu.in /(cc).....	81.22 / (1331)
Compression Ratio.....	18.0:1
Lubricating System.....	Forced / Trochoid pump
Cooling / Capacity	Radiator / 1.5 gal. (5.7 liters)
Firing Order	1-2-3
Engine Rotation	Counterclockwise (when looking at flywheel)
Output net hp / (kW).....	29.4 / (21.9)
Output gross hp / (kW).....	30.2 / (22.5)
Torque.....	85 lb. Ft (115 Nm) @ 1600 rpm
Starter.....	12V HITACHI
Alternator.....	12V / 40A
Idle Speed.....	700 RPM
Max. Speed	3000 RPM, (EPA Rating)

Fuel.....#2 Diesel

Capacity gallons/ (liters).....	13.8 / (52.3)
Injection.....	Direct
Flow Rate.....	1.47 in ³ /stroke, (24.1mm ³ stroke)
Filter, Primary.....	Yanmar # 119802-55800

Oil..... 15W-40, API Classification CE/SF

10W-40 Below 40° F (19°C)

Capacity qts. / (liter).....	3.8 / (3.6)
Oil Pressure, Hot.....	3.6 PSI (248.22 kPa) at 3000
Oil Pressure, Idle.....	14.5 PSI (99.97 kPa)
Pressure Relief Valve	37.7 – 46.4 PSI (259.94 – 319.92 kPa)
Filter / Interval	Yanmar # 129150-35151 / 100 hrs.

Hydraulic System

Capacity	8 gal. / (30.28 liters)
Propulsion Pump	Oil gear 1.35
Wheel Drive	Ross ME29
Steering	Ross /TRW/HFG
Deck Drive MTR	Parker gear pump
Blade Tip Speed	18,613 ft. per min.
Deck Drive Pump	Barnes gear pump
Charge Pump	Oil gear .61
Motor Oil	10W- 40 – (S.A.E. J183)
Hoses	12,000 PSI (82,740kPa) bursting pressure
Hot Oil Shut Down	238°F (114°C)

Hydraulic Filters

Return (10 Micron) DewEze 822002
Propulsion Pump FilterDewEze 220559

System Pressures

Deck 3000 PSI (20,685 kPa)
Propulsion 3750 PSI (25,856 kPa)
Leveling/ Steering 1200 PSI (8,274 kPa)
Accumulators ½ pt @475 PSI Charge
(.473 liters@3275@kPa)

Tires

Drive Bear Claw 25x12.5 –12
Inflate to 10-16 PSI (68.95 – 110.32 kPa)
Filled with 60oz. Tire Sealant

Stabilizer Carlisle 16.5 x 8.5 – 8
*Note: This tire must be filled with foam for proper
operation of leveling system.*

Deck Caster Carlisle 11x 4-5 (foam filled)

Weight 2225 lbs. / (1000926 kg.)

Tested Against ANSI/OPEI Standards B71.4-1990

Notes

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