



# Parts & Maintenance Manual

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## Tri King<sup>®</sup> Triplex Mower

67042 – 1800G Briggs Vanguard Engine

67043 – 1900D Kubota D662-EB Engine



*WARNING: If incorrectly used this machine can cause severe injury. Those who use and maintain this machine should be trained in its proper use, warned of its dangers and should read the entire manual before attempting to set up, operate, adjust or service the machine.*

# To Order Parts

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1. Write your **full** name and **complete** address on the order.
2. Explain where and how to make shipment.
3. Give product number, name and serial number that is stamped on the name plate or serial plate of your product.
4. Order by the quantity desired, the part number, paint code, and description of the part as given in the parts list.
5. Send or bring the order to an authorized Jacobsen Dealer.
6. Inspect all shipments on receipt. If any parts are damaged or missing, file a claim with the carrier before accepting.
7. Do not return material without a letter of explanation, listing the parts being returned. Transportation charges must be prepaid.

**Use of other than authorized parts will void the warranty.**

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**This manual is designed for the Maintenance and Adjustment of this equipment.**

Use the maintenance and adjustment instructions included in this manual and the operating instructions included in the **Safety and Operation Manual** to service the machine.

The **Safety and Operation Manual** must be kept in the pouch on the back of the seat at all times for reference by the operator.

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# Suggested Stocking Guide

To Keep your Equipment fully operational and productive, Jacobsen suggests you maintain a stock of the more commonly used maintenance items. We have included part numbers for additional support materials and training aids.

To order any of the following material:

1. Write your full name and complete address on your order form.

2. Explain where and how to make shipment:

UPS

Regular Mail

Overnight

2nd Day

3. Order by the quantity desired, the part number, and the description of the part.

4. Send or bring the order to your authorized Jacobsen Dealer.

## Service Parts

Qty.	Part No.	Description	Qty.	Part No.	Description
	5000436	Fuel Filter, Gas Engine		549579	Hydraulic Oil Filter (2 Req'd)
	5000441	Air Filter, Gas Engine		3001950	Pump Drive Belt
	5000440	Oil Filter, Gas Engine		1001958	Ignition Key Switch
	550489	Fuel Filter, Diesel Engine			
	5000913	Air Filter, Diesel Engine			
	502644	Oil Filter, Diesel Engine			

## Service Support Material

Qty.	Part No.	Description
	2810631	Safety & Operation Manual
	2810632	Parts & Maintenance
	3004386	Engine Parts Catalog
	2810628	Video, Operator Training

Qty.	Description
	Service Manual

## How To Use This Manual

### Abbreviations

**N/S** - Not serviced separately, can only be obtained by ordering main component or kit.

**AR** -Variable quantity or measurement is required to obtain correct adjustment.

**Symbols** such as ▲, next to the item number, indicate that a note exists which contain additional information important in ordering that part.

### Indented Items

Bulleted items indicate component parts that are included as part of an assembly or another component. These parts can be ordered separately or as part of the main component.

Item	Part No.	Qty	Description	Serial Numbers/Notes
▲ 1	123456	1	Mount, Valve	<i>Indicates a piece part</i>
2	789012	1	Valve, Lift	<i>Includes Items 2 and 3</i>
3	345678	1	• Handle	<i>Serviced part included with Item 2</i>
4	N/S	1	• Seal Kit	<i>Non serviced part included with Item 2</i>
5	901234	1	Screw, 1/4-20 x 2" Hex Head	

# 1 SAFETY

## 1.1 OPERATING SAFETY



### WARNING

#### **EQUIPMENT OPERATED IMPROPERLY OR BY UNTRAINED PERSONNEL CAN BE DANGEROUS.**

Familiarize yourself with the location and proper use of all controls. Inexperienced operator's should receive instruction from someone familiar with the equipment before being allowed to operate the machine.

1. Safety is dependent upon the awareness, concern and prudence of those who operate or service the equipment. Never allow minors to operate any equipment.
2. It is your responsibility to read this manual and all publications associated with this equipment (Safety and operation manual, engine manual, accessories and attachments). If the operator can not read English it is the owner's responsibility to explain the material contained in this manual to them.
3. Learn the proper use of the machine, the location and purpose of all the controls and gauges before you operate the equipment. Working with unfamiliar equipment can lead to accidents.
4. Never allow anyone to operate or service the machine or its attachments without proper training and instructions; or while under the influence of alcohol or drugs.
5. Wear all the necessary protective clothing and personal safety devices to protect your head, eyes, ears hands and feet. Operate the machine only in daylight or in good artificial light.
6. Evaluate the terrain to determine what accessories and attachments are needed to properly and safely perform the job. Only use accessories and attachments approved by Jacobsen.
7. Stay alert for holes in the terrain and other hidden hazards.
8. Inspect the area where the equipment will be used. Pick up all the debris you can find before operating. Beware of overhead obstructions (low tree limbs, electrical wires, etc.) and also underground obstacles (sprinklers, pipes, tree roots, etc.) Enter a new area cautiously. Stay alert for hidden hazards.
9. Never direct discharge of material toward bystanders, nor allow anyone near the machine while in operation. The owner/operator can prevent and is responsible for injuries inflicted to themselves, to bystanders and damage to property.
10. Do not carry passengers. Keep bystanders and pets a safe distance away.
11. Never operate equipment that is not in perfect working order or is without decals, guards, shields, discharge deflectors or other protective devices securely fastened in place.
12. Never disconnect or bypass any switch.
13. Do not change the engine governor setting or overspeed the engine
14. Carbon monoxide in the exhaust fumes can be fatal when inhaled. Never operate the engine without proper ventilation or in an enclosed area.
15. Fuel is highly flammable, handle with care.
16. Keep the engine clean. Allow the engine to cool before storing and always remove the ignition key.
17. Disengage all drives and engage parking brake before starting the engine (motor). Start the engine only when sitting in operator's seat, never while standing beside the unit.
18. Equipment must comply with the latest federal, state, and local requirements when driven or transported on public roads. Watch out for traffic when crossing or operating on or near roads.
19. Local regulations may restrict the age of the operator.
20. Never use your hands to search for oil leaks. Hydraulic fluid under pressure can penetrate the skin and cause serious injury.
21. Operate the machine up and down the face of the slopes (vertically), not across the face (horizontally).
22. To prevent tipping or loss of control, do not start or stop suddenly on slopes. Reduce speed when making sharp turns. Use caution when changing directions.
23. Always use the seat belt when operating tractors equipped with a ROPS.  
*Never use a seat belt when operating tractors without a ROPS.*
24. Keep legs, arms and body inside the seating compartment while the vehicle is in motion.

***This machine is to be operated and maintained as specified in this manual and is intended for the professional maintenance of specialized turf grasses. It is not intended for use on rough terrain or long grasses.***

## 1.2 IMPORTANT SAFETY NOTES



This safety alert symbol is used to alert you to potential hazards.

**DANGER** - Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

**WARNING** - Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

**CAUTION** - Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury and property damage. It may also be used to alert against unsafe practices.

*For pictorial clarity, some illustrations in this manual may show shields, guards or plates open or removed. Under no circumstances should this equipment be operated without these devices securely fastened in place*



### WARNING

The operator back-up system on this tractor prevents the tractor from starting unless the brake lever is engaged, mower switch is off and traction pedal is in neutral. The system will stop the engine if the operator leaves the seat without engaging the parking brake or setting the mower switch off.

NEVER operate tractor unless the operator back-up system is working.



### WARNING

1. Before leaving the operator's position for any reason:
  - a. Return traction pedal to neutral.
  - b. Disengage all drives.
  - c. Lower all implements to the ground.
  - d. Engage parking brake.
  - e. Stop engine and remove the ignition key.
2. Keep hands, feet, and clothing away from moving parts. Wait for all movement to stop before you clean, adjust or service the machine.
3. Keep the area of operation clear of all bystanders and pets.
4. Never carry passengers, unless a seat is provided for them.
5. Never operate mowing equipment without the discharge deflector securely fastened in place.

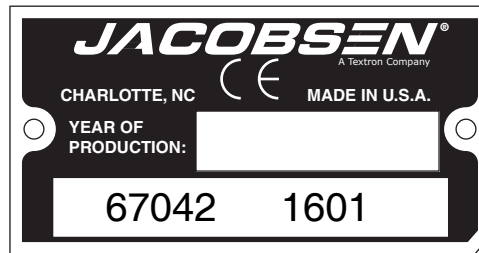
By following all instructions in this manual, you will prolong the life of your machine and maintain its maximum efficiency. Adjustments and maintenance should always be performed by a qualified technician.

If additional information or service is needed, contact your Authorized Jacobsen Dealer who is kept informed of the latest methods to service this equipment and can provide prompt and efficient service. **Use of other than original or authorized Jacobsen parts and Accessories will void the warranty.**

## 2 SPECIFICATIONS

### 2.1 PRODUCT IDENTIFICATION

- 67042..... Tri-King 1800G Tractor, 3-WD,  
18 hp gasoline engine. Without  
front lift arms, mowers or battery.
- 67043..... Tri-King 1900D Tractor, 3-WD,  
18.5 hp diesel engine. Without  
front lift arms, mowers or battery.
- Serial Number ..... An identification plate, like the one  
shown, listing the serial number, is  
attached to the frame of the  
tractor and is located to the  
operator's left just behind the front  
wheel motor. Always provide the  
serial number of the unit when  
ordering replacement parts or  
requesting service information.



Product	EEC Sound Power	Sound Pressure Level Operator Ear	Vibration M/S <sup>2</sup>	
			Arms	Body
67042	99.4 dba	83.7 dba	1.4	1.61
67043	101 dba	87 dba	1.4	<0.08

### 2.2 ENGINE

#### 1800G Gasoline Engine

- Make ..... Briggs & Stratton  
Model ..... Vanguard V-Twin OHV  
Horsepower ..... 18 hp (13.5 kW) @3600 rpm  
Note: *Actual sustained horsepower will likely be lower than listed in specifications due to operating limitations and environmental factor*

- Displacement ..... 34.8 cu. in. (570 cc)  
Torque ..... 26 ft. lbs. (35 Nm) @ 2600 rpm  
Fuel:  
Type ..... Unleaded Gasoline  
Rating ..... Min. 85 Octane  
Capacity ..... 6.5 U.S. Gal. (24.6 liters)  
Governor ..... Flyweight Mechanical  
Lubrication:  
Capacity ..... 3.5 pints (1.6 liters)  
Type ..... SAE 30W  
API Classification ..... SF, SG, SH  
Air Filter ..... Replacable Dual Element.  
Alternator ..... 16 amp

#### 1900D Diesel Engine

- Make ..... Kubota  
Model ..... D662-E  
Horsepower ..... 18.5 hp (13.9 kW) @3600 rpm  
Note: *Actual sustained horsepower will likely be lower than listed in specifications due to operating limitations and environmental factors*

- Displacement ..... 40.03 cu. in. (656 cc)  
Torque ..... 26 ft. lbs. (35 Nm) @ 2600 rpm  
Fuel:  
Type ..... No. 2 Diesel  
Rating ..... Min. Cetane rating 45  
Capacity ..... 6.5 U.S. Gal. (24.6 liters)  
Governor ..... Ball Type Governor  
Low Idle ..... 1100 RPM  
High Idle ..... 3400 RPM  
Lubrication:  
Capacity ..... 3.4 quarts (3.2 liter) with filter  
Type ..... SAE 20W, SAE 30W  
API Classification ..... CD, CE  
Air Filter ..... Dry type with evacuator valve and service indicator.  
Alternator ..... 40 amp

### 2.3 CUTTING UNITS:

- Reel ..... 3 Reels, 26 in. (660 mm) wide or,  
3 Reels, 30 in. (762 mm) wide.  
Reel Diameter ..... 7 in. (178 mm)  
Bearings ..... Self adjusting tapered roller  
bearings  
Blade Options ..... 7 blades  
Cutting Width:

- 26 in. Reels ..... 72 in. (1828 mm)  
30 in. Reels ..... 84 in. (2134 mm)  
Overall Width:  
26 in. Reels ..... 78.5 in. (1994 mm)  
30 in. Reels ..... 90.5 in. (2298 mm)  
Cutting Frequency:  
7 Blade ..... 0.151 in./mph (3.8 mm/kph)



# 3 ADJUSTMENTS

## 3.1 GENERAL

### WARNING

To prevent injury, lower implements to the ground, disengage all drives, engage parking brake, stop engine and remove key from ignition switch before making any adjustments or performing maintenance.

Make sure the tractor is parked on a solid and level surface. Never work on a tractor that is supported only by the jack. Always use jack stands.

If only the front or rear of the tractor is raised, place chocks in front of and behind the wheels that are not raised.

1. Adjustments and maintenance should always be performed by a qualified technician. If proper

adjustment cannot be made, contact an authorized Jacobsen Dealer.

2. Replace, do not adjust, worn or damaged components.
3. Long hair, jewelry or loose fitting clothing may get tangled in moving parts.

### CAUTION

Be careful to prevent entrapment of the hands and fingers between moving and fixed components of the machine.

4. Do not change governor settings or overspeed the engine.

## 3.2 FAN BELT (DIESEL ENGINES)

Inspect and adjust new belt after first ten hours of operation. Adjust every 100 hours thereafter.

1. Adjust alternator pulley so belt (B) deflects 9/32 to 11/32 in. (7 to 9 mm) with a 22 lb. (10 kgf) push at midspan between pulleys.
2. If tension is incorrect, loosen alternator mounting bolts (A) and adjust alternator until proper belt tension is achieved. Tighten hardware (A)

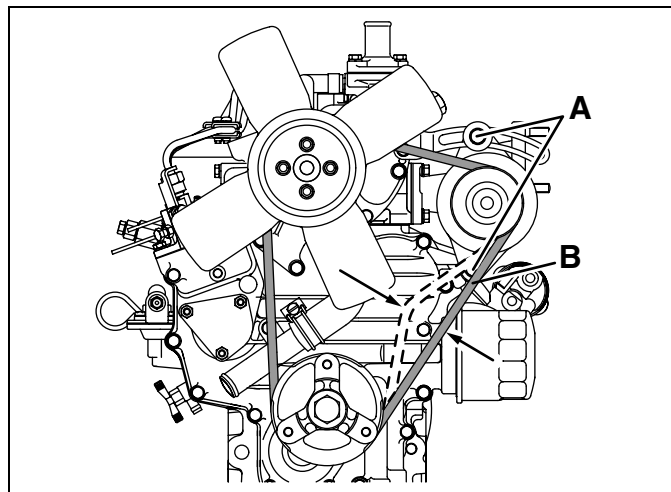


Figure 3A

## 3.3 PUMP DRIVE BELT

Adjust reel pump belt (C) to deflect 1/4 in. (6 mm) with a force of 5-7 lb. (2-3 kgf) applied at midspan.

1. Loosen hardware (D and E).
2. Move pump/clutch assembly down to increase tension on belt (C) then tighten hardware (D and E).
3. Torque hardware (D and E) to 27 - 33 ft-lb. (37-45 Nm).

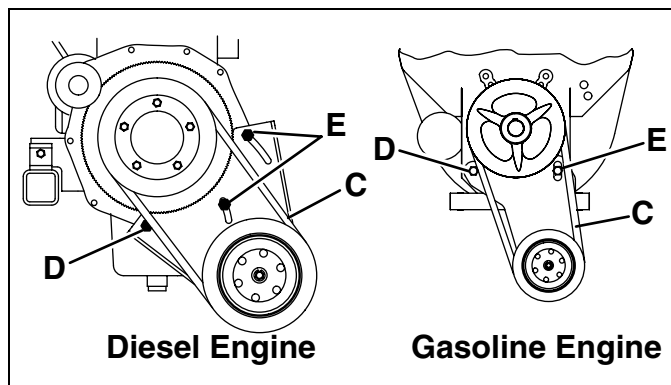


Figure 3B



## 3.4 NEUTRAL AND 3WD SWITCHES

1. Check traction pedal adjustment.
2. Use a volt/ohm meter to determine when switch opens or closes.
  - a. Adjust switch **(G)** so “finger” of actuating arm **(F)** is centered over sensing portion of switch. Switch contacts should be closed with traction pedal in neutral and open with minimal pedal travel in forward or reverse direction.
  - b. Adjust 3WD switch **(H)** so contacts are open with traction pedal in neutral, and contacts close with minimal pedal travel in forward direction.

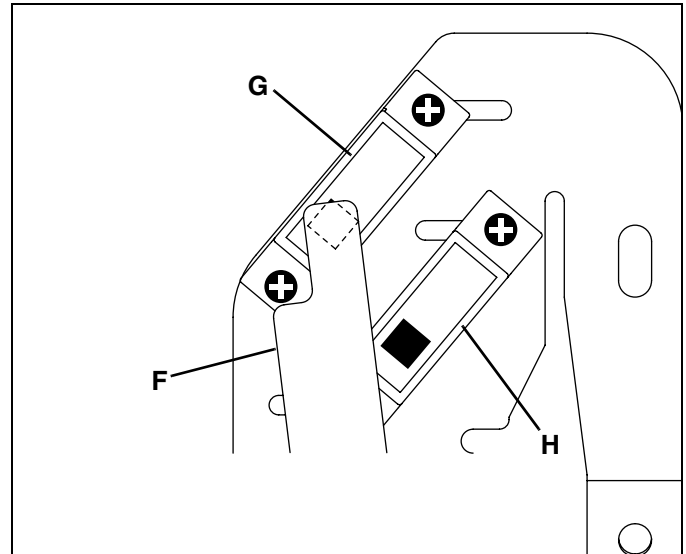


Figure 3C

## 3.5 PARKING BRAKE SWITCHES

Loosen screws **(K)** and adjust both switches so contacts just close as the brake lever is moved to the engaged position then tighten screws.

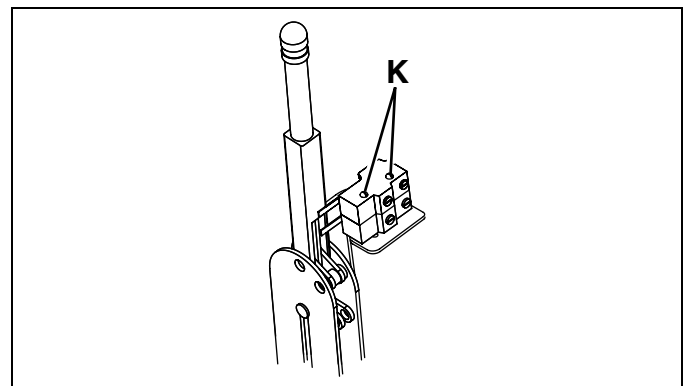


Figure 3D

## 3.6 LIFT LIMIT SWITCH

The lift limit switch must be adjusted so the reels stop turning before the cutting plane between the reel and ground reach 15-3/4 in. (400 mm). To adjust, loosen screw **(L)** and adjust arm **(M)**.

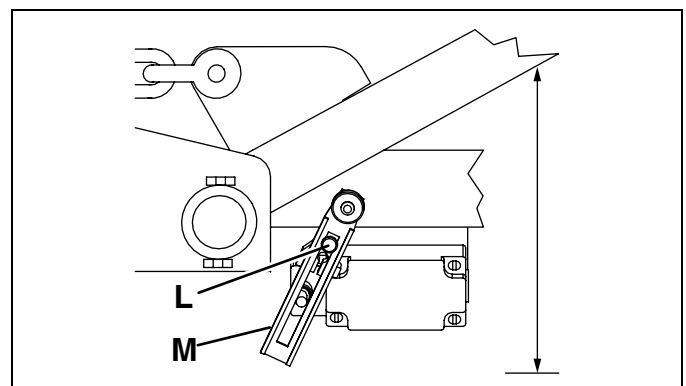


Figure 3E

## 3 ADJUSTMENTS

### 3.7 TRACTION PEDAL NEUTRAL

1. If the tractor “creeps” in either direction when the engine is running but the traction pedal is not depressed, adjust spring tension so that the pedal always returns to neutral when released.

**Note:** The tractor may “creep” when the hydraulic oil is cold. Operate the tractor for 15 minutes before determining if adjustment is required.

2. Use extreme caution when making this adjustment as the wheels will be off the ground and the engine will be running.
3. Engage parking brake, stop the engine, open hoods then lubricate all linkage pivot points.
4. Chock the rear wheel, and place the front of the tractor on jackstands.
5. Loosen all nuts (**N**) and adjust rear spring to position traction arm in neutral.

- a. Lock rear nuts and adjust front nuts (**N**) to maintain 3/8 in. (9 mm) of extension in spring (**O**).
- b. Start the engine and check for “creep” then repeat the process if necessary.

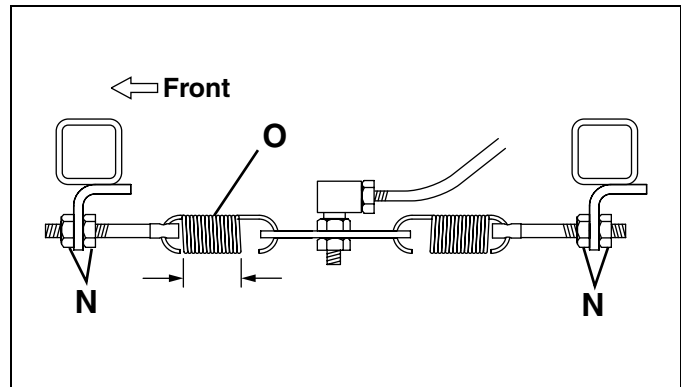


Figure 3F

### 3.8 TRACTION PEDAL FORWARD STOP

Loosen nuts (**P**) move the traction pedal to its maximum forward position. Adjust screw (**Q**) until the head just touches the traction pedal arm. Return traction pedal to neutral and turn screw (**Q**) out one full turn. Tighten nuts (**P**).

**Important:** Screw (**Q**) must stop traction pedal before the internal stops in the hydrostatic transmission are contacted.

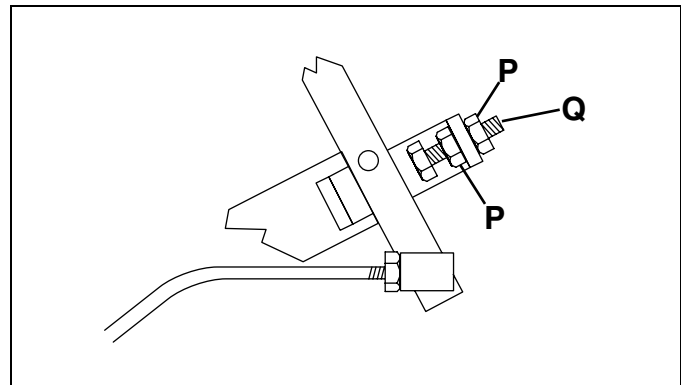


Figure 3G

### 3.9 LIFT / LOWER PEDAL STOP

Adjust bolts (**R** and **S**) to stop spool valve from hitting the internal stops, while maintaining the full stroke of the spool.

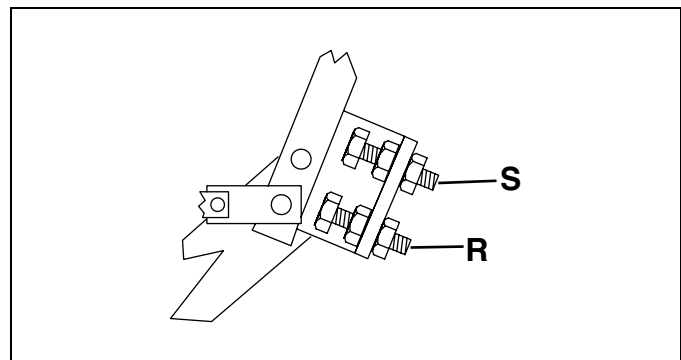


Figure 3H

## 3.10 PARKING BRAKE

1. Check linkage cables and pivots to ensure they are operating smoothly.
2. Park the tractor on a 30% slope (16.7°) near the bottom of the hill, with the front of the tractor facing downhill. Engage the parking brake and stop the engine.
  - a. The tractor should stay on the hill without creeping.
  - b. If the brakes do not hold, start the engine, disengage the brake and drive to the bottom of the hill.



### CAUTION

**DO NOT** disengage the brakes with the engine off.

3. With parking brake disengaged, turn adjusting knob in a clockwise direction, applying and releasing brake every quarter turn until a definite “snap over center” action is achieved.

4. Repeat the test on the hill if required.

**Note:** Over adjustment causes hard lever action, but does not increase brake efficiency.

## 3.11 REAR LIFT ARM

1. Rear lift arm position is properly adjusted when the rear mower bumpers are putting slight pressure against the underside of the foot rests.
2. Disconnect lift chain (T) from crank and adjust ball joint (U) as required.

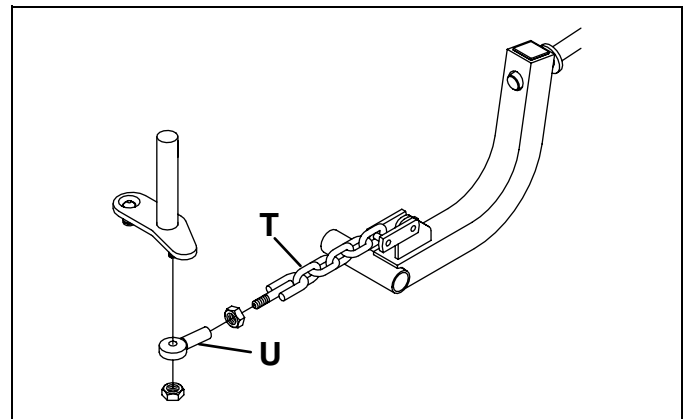


Figure 3I

## 3.12 DOWN PRESSURE

1. Place mowers in the “fixed” mode (Section 3.18) and lower the mowers onto a scale, capable of weighing 250 lb. (113 kg). The rear roller of the mower must rest on the scale.
2. To adjust pressure on rear mower loosen nuts (V) and adjust to obtain the desired pressure.
3. To adjust pressure on front mowers, loosen nut (W) and adjust bolt (X). Minimum thread engagement should be 1/2 in. (13 mm).
4. To maintain a consistent height of cut, the down pressure should be adjusted evenly on all three mowers.
5. Jacobsen, recommends the mower weight for “Floating” mode at 60 lb. (27 kg), and for “Fixed” mode at 90 lb. (41 kg).

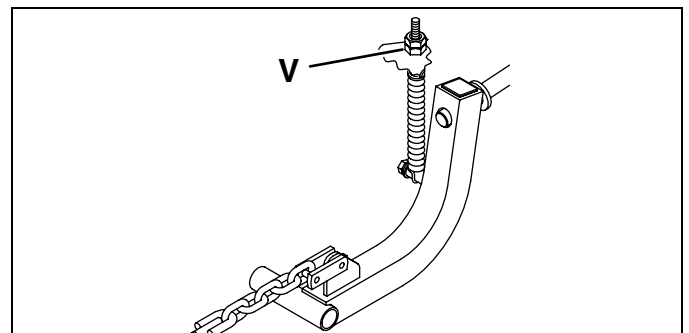


Figure 3J

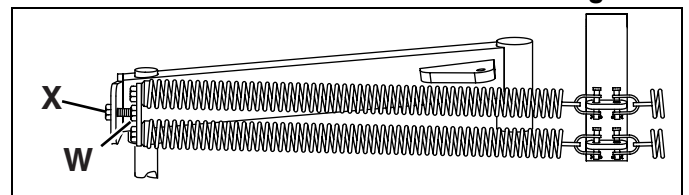


Figure 3K

# 3 ADJUSTMENTS

## 3.13 REEL TO BEDKNIFE

### (Pre-adjustment Check)

1. Check the reel bearings for end play or radial play. If there is any abnormal movement of the reel, up and down or side to side, adjust or replace components as needed.

### CAUTION

To prevent personal injury and damage to the cutting edges, handle the reel with extreme care.

2. Inspect the reel blades and bedknife to insure good sharp edges without bends or nicks.
  - a. The cutting edges of the reel blades and bedknife must be sharp, free of burrs and show no signs of rounding off.
  - b. The bedknife and bedknife backing must be securely tightened. The bedknife must be straight and sharp.
  - c. A flat surface of 5/32 in. (4 mm) minimum must be maintained on the front face of the bedknife. Use a standard flat file to dress the bedknife.
3. If wear or damage is beyond the point where the reel or bedknife can be corrected by the lapping process, they must be reground.
4. Proper reel-to-bedknife adjustment is critical. A gap of 0.001 to 0.003" (0.025 to 0.076 mm) must be

maintained across the entire length of the reel and bedknife.

5. The reel must be parallel to the bedknife. An improperly adjusted reel will lose its sharp edges prematurely and may result in serious damage to the reel and bedknife.
6. Grass conditions will also affect the adjustment.
  - a. Dry, sparse conditions will require a wider gap to prevent heat buildup and damage to the reel and bedknife.
  - b. High quality grass with a good moisture content requires a closer gap (near zero).

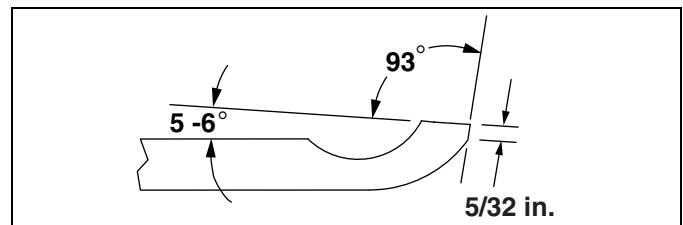
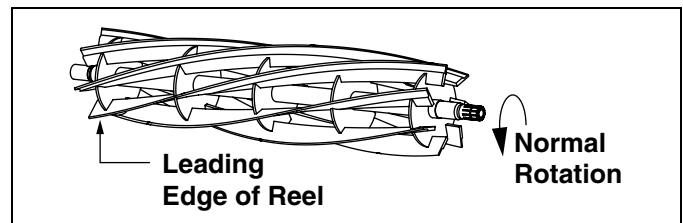


Figure 3L



## 3.14 REEL TO BEDKNIFE ADJUSTMENT

1. Read Section 3.13 before making the adjustment.
2. Start adjustment at the leading edge of the reel, followed by the trailing end. *The leading end of the blade is the end that passes over the bedknife first during normal rotation.*
3. Loosen nut (C) 1/4 turn on both ends of the cutting unit.
  - a. Turn adjuster (A) in 1/16 to 1/8 turn increments.
  - b. Slide a feeler gauge or shim stock .001 in. (.025 mm) between the reel blade and the bedknife. Do not turn reel.
  - c. Adjust the trailing end of the reel in the same manner then recheck the adjustment at the leading end.
  - d. Tighten all hardware and recheck the adjustment

- e. When properly adjusted, the reel will spin freely and you should be able to cut a piece of newspaper, along the full length of the reel, when the paper is held at 90°.

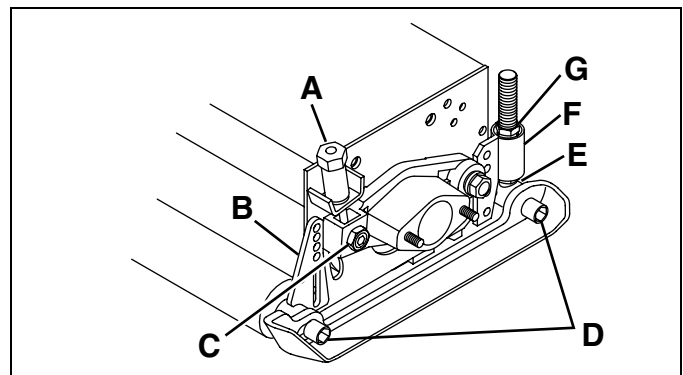


Figure 3N

## 3.15 CUTTING MODES

1. The mower may be operated in the **fixed** mode or the **floating** mode.
2. **Fixed** mode is generally used for cutting heights greater than 1 in. (25 mm) and the mower does not require a front roller unless the terrain is rough and uneven.

If a front roller is required, the roller should be raised 1/4 in. (6 mm) higher than the rear roller and used for anti-scalp purposes only.

3. **Floating** mode is generally used for cutting heights less than one inch (25 mm) and a front roller is required.

If a 2-1/2 in. (63 mm) solid front roller is used, the cutting height will range from 3/8 to 2-1/8 in. (9 to 54 mm).

If a 3 in. (76 mm) grooved front roller is used, the cutting height will range from 3/8 to 2-1/4 in. (9 to 57 mm).

4. To convert the mower from **fixed** to **floating** mode, remove hardware (H) from each side of the three mower frames.

Install a front roller and store hardware (H) for future conversion to fixed mode.

5. To convert the mower from **floating** to **fixed** mode, assemble hardware (H) as shown and remove the front roller or raise the roller.

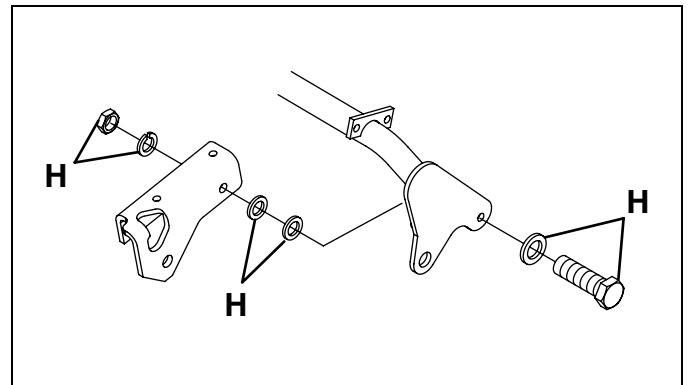


Figure 30

## 3.16 CUTTING HEIGHT ADJUSTMENT

1. Raise and lock the lift arms in transport mode.
2. For easier access to the height adjusters on the motor end of the front reels, Jacobsen recommends raising the front end of the tractor just a few inches off the ground then, being careful not to damage the hydraulic hoses, tilt the front mowers 90 degrees and tether the mowers together.
3. On the rear mower (center) remove the pin and collar on the shaft and slide the mower backwards.
4. Always make the reel-to bedknife adjustment (Sections 3.13 and 3.14) **before** making the cutting height adjustment.
5. Select **fixed** or **floating** mode and convert the mower accordingly.
6. Loosen skid mounting hardware (D - Figure 3N) then adjust the cutting height. (A special tool is provided with the mowers. A 5/8 in. socket and ratchet are required).

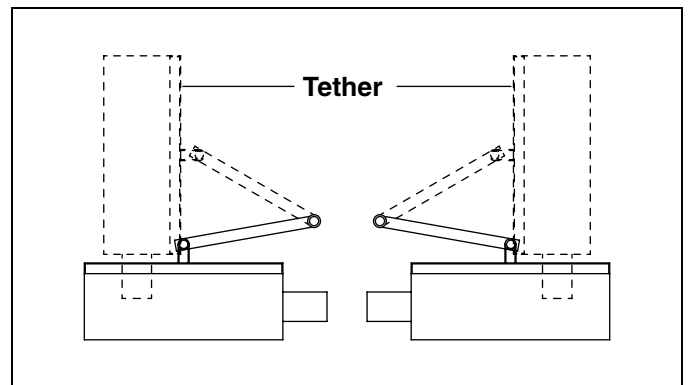


Figure 3P

## 3 ADJUSTMENTS

### 3.17 REMOVING THE CUTTING UNIT

1. To prevent contamination of the hydraulic system, as well as loss of oil, do not disconnect the hoses from the motor.



#### CAUTION

Disconnect lift springs before removing mowers.

2. Raise and lock the lift arms in transport mode (Section 3.4) and disconnect the down pressure springs.
3. Remove transport pin then lower the lift arms to the ground.
4. Remove hardware securing motor to drive housing and carefully pull the motor away.
5. Place motor in a clean plastic bag and cover the opening in the gear box.
6. Remove pin and collar from center (rear) lift arm and pull the center cutting unit away from the tractor.
7. Remove the hardware securing the front lift arms to the cutting units, and slide the mowers out of the way.

### 3.18 CUTTING HEIGHT - FIXED MODE

Follow the procedures outlined in Section 3.16.

1. Reposition the rear roller adjuster.
  - a. For cutting heights from 3/8 to 1-3/4 in. (9 to 44 mm) use holes (M) on the mower frame and two holes (shown in black) of the height adjuster (F) as shown.
  - b. For cutting heights greater than 1-3/4 inches (44 mm) disassemble adjuster (F) and turn the mounting bracket upside down; then use holes (N) of the frame and the two holes (shown in black) of the adjuster (F).
2. Remove the tether, and lower the cutting units to the ground.
3. Place spacers of the desired height (J) under each end of the reel, adjacent to the front edge of the bedknife.
4. Loosen nut (G) and lower rear roller to the ground. Tighten nut (E) against the adjuster then recheck the setting on both side of the reel. Readjust if necessary.
5. Assemble the front roller adjuster (B) (if a roller is required) to holes number 2 and 4 only of the mower frame. Do not use holes number 1 and 3. Set roller to 1/4 in. (6 mm) above rear roller.

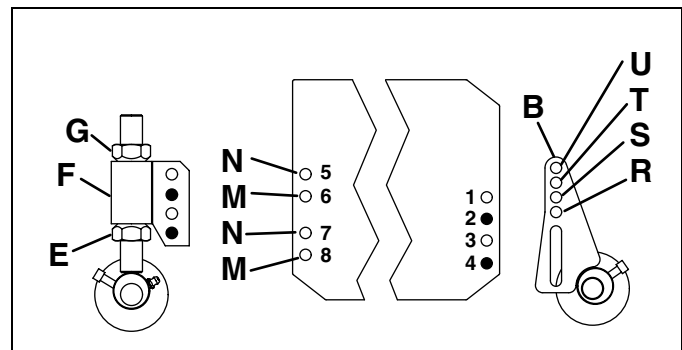


Figure 3Q

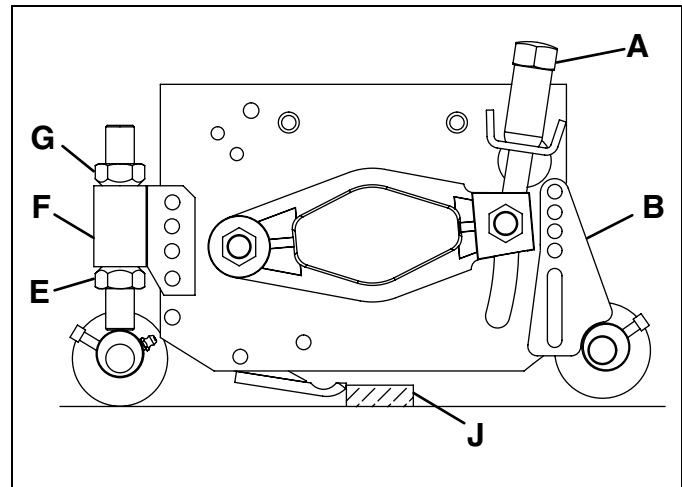


Figure 3R

## 3.19 CUTTING HEIGHT - FLOATING MODE

Follow the procedures outlined in Section 3.16.

1. Assemble the front roller adjuster (B) to holes number 2 and 4 only of the mower frame. Do not use hole numbers 1 and 3. Refer to the chart below for correct hole of front roller adjuster to use.
2. Reposition the rear roller adjusters (F).
  - a. For cutting heights from 3/8 to 1-3/4 in. (9 to 44 mm) use holes (M) on the mower frame and two holes (shown in black) of adjuster (F) as shown.
  - b. For cutting heights greater than 1-3/4 in. (44 mm), disassemble adjuster (F) and turn the mounting bracket upside down; then use holes (N) of the frame and the two holes (shown in black) of adjuster (F).
3. Loosen nut (L) and adjust screw (K) to obtain desired cutting height (X) then lock nut (L) against gauge (P).
4. Place one end of the gauge under the front roller at either end of the reel, and slide the head of screw (K) over the bedknife.
  - a. Adjust nut (G) to lower the rear roller to the gauge, then tighten nut (E) against the adjuster.
  - b. Move the gauge to the other end of the reel and repeat Steps 4a and 4b.

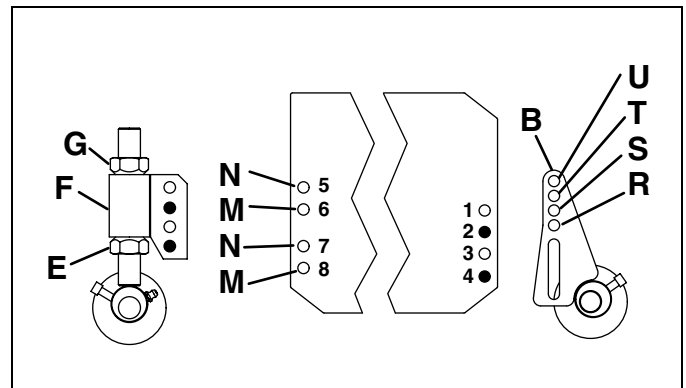


Figure 3S

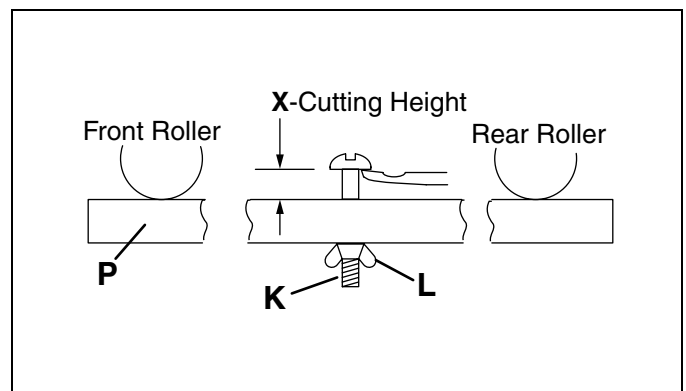


Figure 3T

Range of Cut					
Grooved Roller		Solid Roller		Front	Rear
Inches	Millimeters	Inches	Millimeters		
3/8 - 3/4	10 - 19	3/8 - 5/8	10 - 16	R	M
3/4 - 1-1/4	19 - 32	5/8 - 1-1/8	16 - 29	S	M
1-1/4 - 1-3/4	32 - 44	1-1/8 - 1-5/8	29 - 41	T	M
1-3/4 - 2-1/4	44 - 57	1-5/8 - 2-1/8	41 - 54	U	N

# 3 ADJUSTMENTS





## 3.20 TORQUE SPECIFICATION

### CAUTION





All torque values included in these charts are approximate and are for reference only. Use of these torque values is at your sole risk. Jacobsen is not responsible for any loss, claim, or damage arising from the use of these charts. **Extreme caution should always be used when using any torque value.**

Jacobsen uses Grade 5 Plated bolts as standard, unless otherwise noted. For tightening plated bolts, use the value given for lubricated.

#### AMERICAN NATIONAL STANDARD FASTENERS

SIZE	UNITS					SIZE	UNITS				
		GRADE 5		GRADE 8				GRADE 5		GRADE 8	
		Lubricated	Dry	Lubricated	Dry			Lubricated	Dry	Lubricated	Dry
#6-32	in-lb (Nm)	-	20 (2.3)	-	-	7/16-14	ft-lb (Nm)	37 (50.1)	50 (67.8)	53 (71.8)	70 (94.9)
#8-32	in-lb (Nm)	-	24 (2.7)	-	30 (3.4)	7/16-20	ft-lb (Nm)	42 (56.9)	55 (74.6)	59 (80.0)	78 (105)
#10-24	in-lb (Nm)	-	35 (4.0)	-	45 (5.1)	1/2-13	ft-lb (Nm)	57 (77.2)	75 (101)	80 (108)	107 (145)
#10-32	in-lb (Nm)	-	40 (4.5)	-	50 (5.7)	1/2-20	ft-lb (Nm)	64 (86.7)	85 (115)	90 (122)	120 (162)
#12-24	in-lb (Nm)	-	50 (5.7)	-	65 (7.3)	9/16-12	ft-lb (Nm)	82 (111)	109 (148)	115 (156)	154 (209)
1/4-20	in-lb (Nm)	75 (8.4)	100 (11.3)	107 (12.1)	143 (16.1)	9/16-18	ft-lb (Nm)	92 (124)	122 (165)	129 (174)	172 (233)
1/4-28	in-lb (Nm)	85 (9.6)	115 (13.0)	120 (13.5)	163 (18.4)	5/8-11	ft-lb (Nm)	113 (153)	151 (204)	159 (215)	211 (286)
5/16-18	in-lb (Nm)	157 (17.7)	210 (23.7)	220 (24.8)	305 (34.4)	5/8-18	ft-lb (Nm)	128 (173)	170 (230)	180 (244)	240 (325)
5/16-24	in-lb (Nm)	173 (19.5)	230 (26.0)	245 (27.6)	325 (36.7)	3/4-10	ft-lb (Nm)	200 (271)	266 (360)	282 (382)	376 (509)
3/8-16	ft-lb (Nm)	23 (31.1)	31 (42.0)	32 (43.3)	44 (59.6)	3/4-16	ft-lb (Nm)	223 (302)	298 404	315 (427)	420 (569)
3/8-24	ft-lb (Nm)	26 (35.2)	35 (47.4)	37 (50.1)	50 (67.8)	7/8-14	ft-lb (Nm)	355 (481)	473 (641)	500 (678)	668 (905)

#### METRIC FASTENERS

SIZE	UNITS									Non Critical Fasteners into Aluminum
		4.6		8.8		10.9		12.9		
		Lubricated	Dry	Lubricated	Dry	Lubricated	Dry	Lubricated	Dry	
M4	Nm (in-lb)	-	-	-	-	-	-	3.83 (34)	5.11 (45)	2.0 (18)
M5	Nm (in-lb)	1.80 (16)	2.40 (21)	4.63 (41)	6.18 (54)	6.63 (59)	8.84 (78)	7.75 (68)	10.3 (910)	4.0 (35)
M6	Nm (in-lb)	3.05 (27)	4.07 (36)	7.87 (69)	10.5 (93)	11.3 (102)	15.0 (133)	13.2 (117)	17.6 (156)	6.8 (60)
M8	Nm (in-lb)	7.41 (65)	9.98 (88)	19.1 (69)	25.5 (226)	27.3 (241)	36.5 (323)	32.0 (283)	42.6 (377)	17.0 (150)
M10	Nm (ft-lb)	14.7 (11)	19.6 (14)	37.8 (29)	50.5 (37)	54.1 (40)	72.2 (53)	63.3 (46)	84.4 (62)	33.9 (25)
M12	Nm (ft-lb)	25.6 (19)	34.1 (25)	66.0 (48)	88.0 (65)	94.5 (70)	125 (92)	110 (81)	147 (108)	61.0 (45)
M14	Nm (ft-lb)	40.8 (30)	54.3 (40)	105 (77)	140 (103)	150 (110)	200 (147)	175 (129)	234 (172)	94.9 (70)

## 3.21 SPECIFIC TORQUE

1. Tie rod ball joints: (2) 30 - 35 ft. lb. (41 - 47 Nm).
2. Engine drain plugs: 22 ft. lb. (30 Nm).
3. Steering ball joints: 50 - 55 ft. lb. (68 - 75 Nm).
4. Steering wheel nut 30-40 ft-lb (41 - 51 Nm)
5. Wheel hardware: 65 - 85 ft. lb. (88 - 116 Nm).



## 4.1 GENERAL

### WARNING

Before you clean, adjust, or repair this equipment, disengage all drives, lower implements to the ground, engage parking brake, stop engine and remove key from ignition switch to prevent injuries

Make sure the tractor is parked on a solid and level surface. Never work on a tractor that is supported only by the jack. Always use jack stands.

1. Adjustment and maintenance should always be performed by a qualified technician. If proper adjustments cannot be made, contact an Authorized Jacobsen Dealer.
2. Inspect the equipment on a regular basis, establish a maintenance schedule and keep detailed records.
  - a. Keep the equipment clean.

- b. Keep all moving parts properly adjusted and lubricated.
  - c. Replace worn or damaged parts before operating the machine.
  - d. Keep all fluids at their proper levels.
  - e. Keep shields in place and all hardware securely fastened.
  - f. Keep tires properly inflated.
3. Long hair, jewelry or loose fitting clothing may get tangled in moving parts.
  4. Use the illustrations in the Parts Catalog as reference for the disassembly and reassembly of components.
  5. Recycle or dispose of all hazardous materials (batteries, fuel, lubricants, anti-freeze, etc.) according to local, state or federal regulations.

## 4.2 ENGINE

**IMPORTANT: A separate Engine Manual, prepared by the engine manufacturer, is supplied with this tractor. Read the engine manual carefully until you are familiar with the operation and maintenance of the engine. Proper attention to the engine manufacturer's directions will assure maximum service life of the engine. To order replacement engine manuals contact the engine manufacturer.**

The proper break-in of a new engine can make a considerable difference to the performance and life of the engine.

**Note:** *The tractor is designed to operate and cut most efficiently at the preset governor setting. Do not change the engine governor settings or overspeed the engine.*

During the break-in period, Jacobsen recommends the following:

### **Diesel Engine:**

1. During the first 50 hours of operation, a new engine should be allowed to reach an operating temperature of at least 140°F (60°C) prior to operation at full load.
2. Check the engine oil level twice daily during the first 50 hours of operation. Higher than normal oil consumption is not uncommon during the initial break-in period.
3. Change engine oil and oil filter element after first 50 hours of operation.
4. Check and adjust fan and alternator belts.

5. Refer to Section 6.3 and Engine Manual for specific maintenance intervals.

If the injection pump, injectors or the fuel system require service, contact an authorized Jacobsen Dealer.

### **Gasoline Engine:**

1. Drive modestly for the first 25 hours at reduced engine speed.
2. Avoid full throttle starts and rapid acceleration.
3. Allow the engine to reach operating temperature before operating at full load.
4. Change the oil and filter after the first 8 hours of operation.
5. Refer to Section 6.3 and Engine Manual for specific maintenance intervals.

## 4 MAINTENANCE

### 4.3 ENGINE OIL

Check the engine oil at the start of each day, before starting the engine. If the oil level is low, remove oil filler cap and add oil as required.

#### Diesel Engine:

Perform initial oil change after first 50 hours of operation and every 100 hours thereafter. See Engine Manual.

Use only engine oils with API classification CD/CE.

Above 77°F (25°C)	SAE 30W or SAE10W30/10W40
32 to 77°F (0 to 25°C)	SAE 20W or SAE 10W30/10W40
Below 32° (0°C)	SAE10W or SAE 10W30/10W40

#### Gas Engine:

Perform initial oil change after the first 8 hours of operation. Change oil every 50 hours thereafter.

**See the engine manufacturer's Owners's Manual for detailed service information.**

After adding or changing oil, start and run engine at idle with all drives disengaged for 30 seconds. Shut engine off. Wait 30 seconds and check oil level. Add oil to bring up to FULL mark on dipstick.

Use only engine oils with API classification SF, SG,SH.

Above 40° F (5° C)	SAE 30W
0 to 40° F (-18 to 5° C)	SAE 5W30 or SAE 10W30

### 4.4 GAS ENGINE AIR FILTER

1. Remove and service the foam pre-cleaner (A) every 25 hours. Replace if dirty or damaged.

To service pre-cleaner, wash in a liquid detergent and water. Squeeze dry in a clean cloth. Saturate in clean engine oil and squeeze out excess oil in a clean, absorbent cloth.

2. Replace the air cleaner cartridge (B) every 100 hours, more often when operating in dusty conditions.

**Note:** Do not use petroleum solvents such as kerosene to clean cartridge. Do not use pressurized air to clean cartridge.

**See the engine manufacturer's Owners's Manual for detailed service information.**

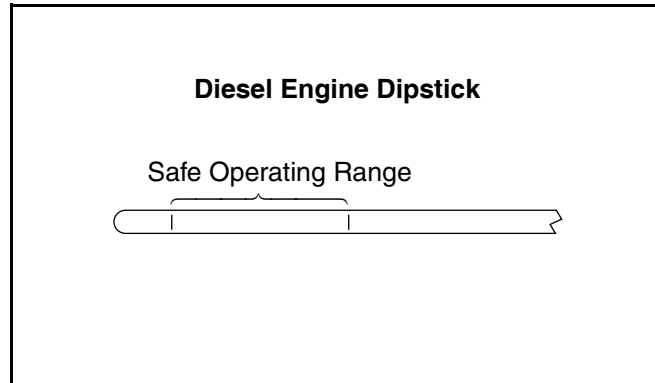


Figure 4A

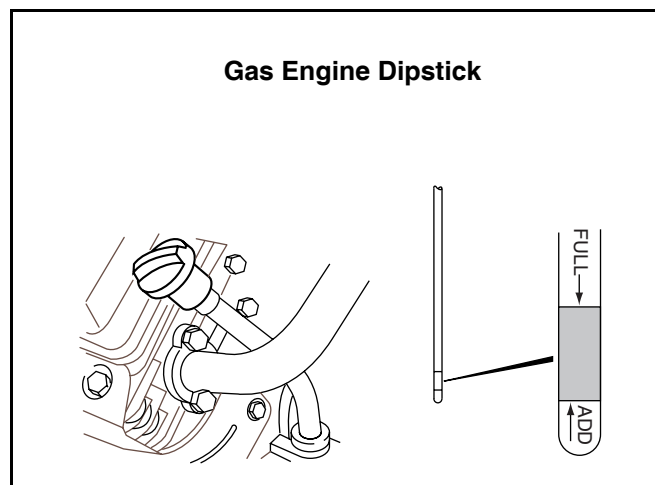


Figure 4B

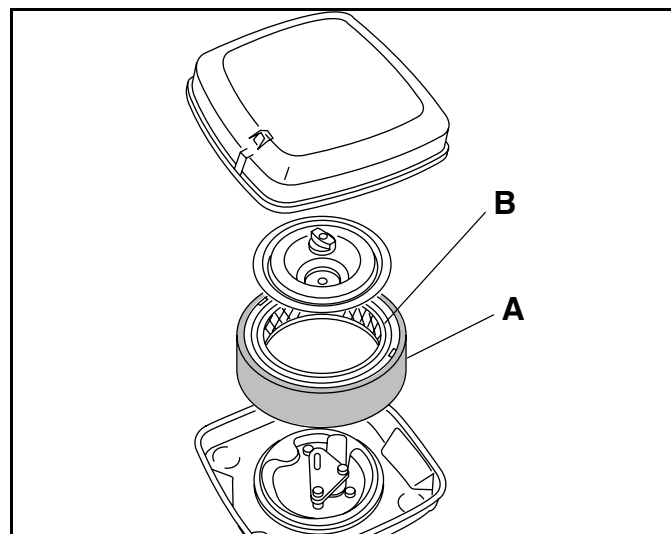


Figure 4C

## 4.5 DIESEL AIR FILTER

Check the service indicator daily. If red band appears in the window (C) replace the element.

**Do not remove the element for inspection or cleaning.** Unnecessary removal of the filter increases the risk of injecting dust and other impurities into the engine.

When service is required, first clean the outside of the filter housing; then remove the old element as gently as possible and discard.

1. Carefully clean the inside of the filter housing without allowing dust into the air intake.
2. Inspect the new element. Do not use a damaged element and never use an incorrect element.
3. Assemble the new element and make sure it seats properly. Reset the indicator by depressing button (D).

4. Reassemble cap making sure it seals completely around the filter housing. Dust evacuator (E) must be facing down.
5. Check all hoses and air ducts. Tighten hose clamps.

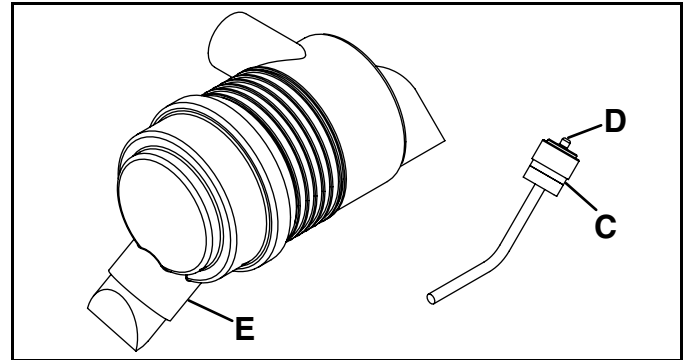


Figure 4D

## 4.6 FUEL

**Handle fuel with care - it is highly flammable.** Use an approved container, the spout must fit inside the fuel filler neck. Avoid using cans and funnels to transfer fuel.

### WARNING

Never remove the fuel cap from the fuel tank, or add fuel, when the engine is running or while the engine is hot.

Do not smoke when handling fuel. Never fill or drain the fuel tank indoors.

Do not spill fuel and clean spilled fuel immediately.

Never handle or store fuel containers near an open flame or any device that may create sparks and ignite the fuel or fuel vapors.

Be sure to reinstall and tighten fuel cap securely.

- Fill the fuel tank to within 1 in. (25 mm) of the bottom of the filler neck.

- Store fuel according to local, state or federal ordinances and recommendations from your fuel supplier.
- Never overfill or allow the tank to become empty.
- Check fuel lines and clamps every 50 hours. Replace fuel lines and clamps at the first sign of damage.

### Diesel Engine:

- Use clean, fresh, #2 Diesel fuel. Minimum Cetane rating 45. Refer to Engine Manual for additional information.

### Gas Engine:

- Use clean, fresh, regular grade, unleaded gasoline minimum 85 Octane.
- Do not use hi-test gasoline or an oil-gasoline mixture. When using blended fuel, do not use a blend with more than 10% ethanol. Under no circumstances should you use a blend with methanol.

## 4.7 FUEL SYSTEM

Refer to Section 6.3 for specific maintenance intervals.

Before replacing any filter, thoroughly clean the filter housing and the area around the filter. Dirt must not be allowed to enter into fuel system.

For diesel engines, bleed the fuel system after the fuel filter and lines have been removed, or the fuel tank has become empty. See Engine Manual.

## 4 MAINTENANCE

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### 4.8 BATTERY

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Make absolutely certain the ignition switch is “Off” and the key has been removed before servicing the battery.

#### CAUTION

Always use insulated tools, wear protective glasses or goggles and protective clothing when working with batteries. You must read and obey all battery manufacturer’s instructions.

Tighten cables securely to battery terminals and apply a light coat of silicone dielectric grease to terminals and cable ends to prevent corrosion. Keep vent caps and terminal covers in place

Check the electrolyte level every 100 hours. Keep the cable ends, battery and battery posts clean.

Verify battery polarity before connecting or disconnecting the battery cables.

1. When installing the battery, always assemble the RED, positive (+) battery cable first and the ground, BLACK, negative (-) cable last.
2. When removing the battery, always remove the ground, BLACK, negative (-) cable first and the RED, positive (+) cable last.
3. Make sure battery is properly installed and secured to the battery tray.

#### WARNING

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash your hands after handling.**

### 4.9 JUMP STARTING

---

Before attempting to “jump start” the tractor, check the condition of the discharged battery. Section 4.8

#### WARNING

Batteries generate explosive hydrogen gas. To reduce the chance of an explosion, avoid creating sparks near battery. Always connect the negative jumper cable to the frame of the tractor with the discharged battery, away from the battery.

#### When connecting jumper cables:

1. Stop the engine on the vehicle with a good battery.
2. Connect RED jumper cable to the positive (+) terminal on the good battery and to the positive (+) terminal on the “discharged” battery.
3. Connect the BLACK jumper cable from the negative (-) terminal on the good battery to the frame of the tractor with the discharged battery.

After cables have been connected, start the engine on the vehicle with the good battery then start the tractor.

### 4.10 CHARGING BATTERY

---

#### WARNING

Charge battery in a well ventilated area. Batteries generate explosive gases. To prevent an explosion, keep any device that may create sparks or flames away from the battery.

To prevent injury, stand away from battery when the charger is turned on. A damaged battery could explode.

2. Whenever possible, remove the battery from the tractor before charging. If battery is not sealed, check that the electrolyte covers the plates in all the cells.
3. Make sure the charger is “Off”. Then connect the charger to the battery terminals as specified in the charger’s manual.
4. Always turn the charger “Off” before disconnecting charger from the battery terminals.

1. Refer to Section 4.8. Read the Battery and Charger’s manual for specific instructions.

## 4.11 HYDRAULIC HOSES

### WARNING

To prevent serious injury from hot, high pressure oil, never use your hands to check for oil leaks, use paper or cardboard.

Hydraulic fluid escaping under pressure can have sufficient force to penetrate skin. If fluid is injected into the skin it must be surgically removed within a few hours by a doctor familiar with this form of injury or gangrene may result.

1. Always lower implements to ground, disengage all drives, engage parking brake, stop engine and remove key before inspecting or disconnecting hydraulic lines or hoses.
2. Check visible hoses and tubes daily. Look for wet hoses or oil spots. Replace worn or damaged hoses and tubes before operating the machine.
3. The replacement tube or hoses must be routed in the same path as the existing hose, do not move clamps, brackets and ties to a new location.
4. Thoroughly inspect all tubes, hoses and connections every 250 hours.

**IMPORTANT:** The hydraulic system can be permanently damaged if the oil becomes contaminated. Before disconnecting any hydraulic component, clean the area around the fittings and the hose ends to keep impurities out of the system.

- a. Before disconnecting any hydraulic component, tag or mark the location of each hose then clean the area around the fittings.
- b. As you disconnect the component, be prepared to assemble plugs or caps to the hose ends and open ports. This will keep impurities out of the hydraulic system and also prevent oil spills.
- c. Make sure "O" rings are clean and hose fittings are properly seated before tightening.
- d. Keep the hose from twisting. Twisted hoses can cause couplers to loosen as the hose flexes during operation resulting in oil leaks.
- e. Kinked or twisted hoses can restrict the oil flow causing the system to malfunction and the oil to overheat and also lead to hose failure.

## 4.12 HYDRAULIC OIL

Refer to Section 6.3 for specific maintenance intervals.

The hydraulic reservoir on this machine is filled with Jacobsen Greens Care 68 Biodegradable fluid.

Drain and replace the hydraulic oil after a major component failure, or if you notice the presence of water or foam in the oil, or a rancid odor (indicating excessive heat).

Always replace the hydraulic filter when changing oil.

### To change hydraulic oil:

1. Clean the area around the oil cap to prevent impurities from entering and contaminating the system.
  - a. Oil temperature should be at 60° to 90°F (16° - 32°C). Do not check oil level when oil is hot.
  - b. The hydraulic oil level should never fall below the lower line on the dipstick or be above the top line on dipstick.
2. Remove drain plug from bottom of tank and loosen or remove breather cap on top of tank. Check and clean the breather cap, replace as necessary.

3. After oil has drained install drain plug and fill with Jacobsen GreensCare 68 Biodegradable Fluid.
4. Purge air from system.
  - a. Operate all tractor functions for about 5 minutes to purge air out of the system and stabilize the oil level.
  - b. Once the level has stabilized and the air is purged, fill the tank to the full mark on dipstick.

## 4 MAINTENANCE

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### 4.13 HYDRAULIC OIL FILTERS

---

The hydraulic system is protected by two 10 micron filters.

#### To replace hydraulic oil filter:

1. Remove the old filters.
2. Fill new filter with oil then install new filter. Hand tighten only.

3. Operate engine at idle speed with hydraulic system in neutral for five minutes.
4. Check hydraulic oil level in reservoir and fill to full mark on dipstick.

### 4.14 ELECTRICAL SYSTEM

---

#### CAUTION

Always turn the ignition switch off and remove the negative battery cable (Black) before inspecting or working on the electrical system.

General precautions that can be taken to reduce electrical problems are listed below.

1. Make certain all terminals and connections are clean and properly secured.
2. Check the operator backup system, fuses and circuit breakers regularly.

If the operator backup does not function properly and the problem cannot be corrected, contact an authorized Jacobsen Dealer.

3. Keep the wire harness and all individual wires away from moving parts to prevent damage.
4. Make sure the seat switch harness is connected to the main wire harness.
5. Check the battery and battery charging circuit.
6. Do not wash or pressure spray around electrical connections and components.

### 4.15 MUFFLER AND EXHAUST

---

#### WARNING

Exhaust fumes contain carbon monoxide that is toxic and can be fatal when inhaled.

**NEVER** operate an engine without proper ventilation.

To protect from carbon monoxide poisoning, inspect the complete exhaust system regularly and always replace a defective muffler.

If you notice a change in the color or sound of the exhaust, stop the engine immediately. Identify the problem and have the system repaired.

Torque all exhaust manifold hardware evenly. Tighten or replace exhaust clamps.

### 4.16 TIRES

---

1. Keep tires properly inflated to prolong tire life. Check inflation pressure while the tires are cool. Inspect tread wear.
6. Check the pressure with an accurate, low pressure tire gauge.

7. Keep tires inflated to:

Front - 10-12 psi - (69-83 kPa)

Rear - 8-10 psi (55-69 kPa)

#### CAUTION

Unless you have the proper training, tools and experience, **DO NOT** attempt to mount a tire on a rim. Improper mounting can produce an explosion which may result in serious injury.

## 4.17 WHEEL MOUNTING PROCEDURE

### WARNING

Make sure the tractor is parked on a solid and level surface. Never work on a tractor that is supported only by the jack. Always use jack stands.

If only the front or rear of the tractor is raised, place chocks in front of and behind the wheels that are not raised.

1. Remove dirt, grease and oil from stud thread. Do not lubricate threads.
2. Position wheel on hub and inspect to insure full contact between mounting surface of wheel and hub or brake drum.
3. Finger tighten all hardware then torque hardware in criss-cross order; always tighten nuts in the top position.
4. Check and retorque daily until torque is maintained, 85-95 ft.lbs. (115-128 Nm)

## 4.18 CARE AND CLEANING

Wash the tractor and implements after each use. Keep the equipment clean.

**Note:** Do not wash any portion of the equipment while it is hot. Do not use high pressure spray or steam. Use cold water and automotive cleaners.

1. Use compressed air to clean engine and radiator fins. A special blow gun is available through Jacobsen Dealer.
2. Use only fresh water for cleaning your equipment.

**Note:** Use of salt water or affluent water has been known to encourage rust and corrosion of metal parts resulting in premature deterioration or failure. Damage of this nature is not covered by the factory warranty.

3. Do not spray water directly at the instrument panel, ignition switch, controller or any other electrical components, or at bearing housings and seals.

4. Clean all plastic or rubber trim with a mild soap solution or use commercially available vinyl/rubber cleaners.

Repair damaged metal surfaces and use Jacobsen touch-up paint. Wax the equipment for maximum paint protection.

### CAUTION

Clean grass and debris from cutting units, drives, muffler and engine to prevent fires.

### WARNING

**NEVER** use your hands to clean cutting units. Use a brush to remove grass clippings from blades. Blades are extremely sharp and can cause serious injuries.

## 4.19 RADIATOR

### WARNING

To prevent serious bodily injury from hot coolant or steam blow-out, never attempt to remove the radiator cap while the engine is running. Stop the engine and wait until it is cool. Even then, use extreme care when removing the cap.

### CAUTION

Do not pour cold water into a hot radiator. Do not operate engine without a proper coolant mixture. Install cap and tighten securely.

Check coolant level daily. Radiator should be full and recovery bottle should be up to the **cold** mark.

Drain and refill annually. Remove the radiator cap, open the engine block drain and the radiator drain. Empty and clean the recovery bottle.

Mix clean water with ethylene glycol based anti-freeze for the coldest ambient temperature. Read and follow the instructions on the anti-freeze container and engine manual.

Keep radiator air passages clean. Use compressed air (30 psi maximum) to clean the fins.

Check and tighten the fan belt. Replace clamps and hoses every two years.

If you have to add coolant more than once a month, or add more than one quart at a time, have a authorized Jacobsen Dealer check the cooling system.

## 4 MAINTENANCE

### 4.20 BACKLAPPING

#### WARNING

To prevent injury, keep hands, feet and clothing away from rotating reels.

When the backlap switch is in the BACKLAP position, the reels will turn without the operator in the seat.

Carbon Monoxide in exhaust fumes can be fatal when inhaled, never operate an engine without proper ventilation.

Check the reel and bedknife to determine if backlapping or grinding will restore the cutting edge.

If wear or damage is beyond the point where the lapping process, they must be reground.

#### To Backlap:

1. Adjust reel to bedknife as described in Sections 3.13 and 3.14.
2. Obtain and engage the mechanics (backlap) key.
  - a. Make absolutely certain your feet and clothing are far away from the reel.
  - b. Make sure the parking brake is "ENGAGED", reel switch is "OFF", backlap switch is "OFF" and the traction pedal is in neutral.
  - c. Start the engine, turn the mechanics key to "BACKLAP" then engage the reel switch. If any of the reels turn, adjust nut (A) to stop the reel.

3. Turn nut (A) on the reel to be backlapped so the reel turns in reverse. Adjust the reel speed to 100-150 RPM.
  - a. Apply lapping compound with a long handle brush to high spots first then along entire length of the reel.
  - b. Continue lapping and at the same time make a slight adjustment on the reel until there is a uniform clearance along the full length of the cutting edges.
  - c. When the blades have been evenly honed, turn adjusting nut (A) to neutral. Carefully and thoroughly remove all lapping compound from reels and bedknife before running the reel in forward direction.
  - d. Disengage reel switch and turn backlap switch to "OFF".
4. Reset reel motors to forward rotation. If reel speeds vary, check nut (A) to insure it is turned completely to full forward rotation.
5. Remove and store the backlap key.

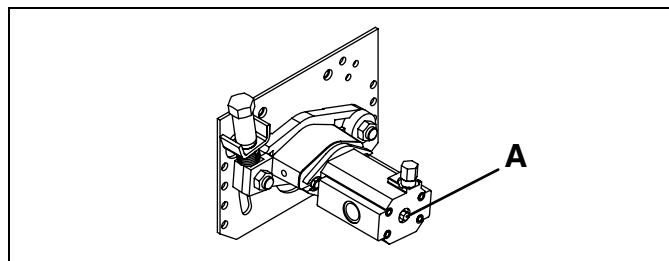


Figure 4E



## 4.21 STORAGE

### General

1. Wash the tractor thoroughly and lubricate. Repair and paint damaged or exposed metal.
2. Inspect the tractor, tighten all hardware, replace worn or damaged components.
3. Drain and refill radiator.
4. Clean the tires thoroughly and store the tractor so the load is off the tires. If tractor is not on jack stands, check tires at regular intervals and reinflate as necessary.
5. Keep the machine and all its accessories clean, dry and protected from the elements during storage. Never store equipment near an open flame or spark which could ignite fuel or fuel vapors.

### Battery

1. Remove, clean and store battery in upright position in a cool, dry place.
2. Check and recharge battery every 60 to 90 days while in storage.
3. Store batteries in a cool, dry place. To reduce the self discharge rate, room temperature should not be above 80°F (27°C) or fall below 20°F (-7°C) to prevent electrolyte from freezing.

### Engine (General)

1. While the engine is warm, remove the drain plug, drain the oil from the crankcase and change oil filter. Install drain plug and refill with fresh oil. Let engine cool before starting.
2. Clean exterior of engine. Paint exposed metal, or apply a light coat of rust preventative oil.

**Diesel Engine** - Add a fuel conditioner or biocide to prevent gelling or bacterial growth in fuel. See your local fuel supplier.

**Gas Engine** - For engine protection Jacobsen recommends the use of a fuel additive such as STABIL®. Mix additive following instructions on container. Run engine for a short time to circulate additive through carburetor.

Remove spark plugs and pour 1 oz. (30 ml) of engine oil into each cylinder. Replace spark plugs and crank slowly (do not start) to distribute oil in cylinder.

If storing indoors, drain fuel from tank.

**Note:** Do not use fuel with ethanol during storage.

### Cutting Units

1. Wash the cutting units thoroughly, then repair and paint any damaged or exposed metal.
2. Lubricate all fittings and friction points.
3. Backlap the reels then back the reel away from the bedknife. Apply a light coat of rust preventative oil to the sharpened edges of the reel and bedknife.



### CAUTION

To prevent personal injury and damage to the cutting edges, handle the reel with extreme care

### After Storage

1. Check and reinstall battery
2. Check or service fuel filter and air cleaner.
3. Check the radiator coolant level.
4. Check oil level in the engine crankcase and hydraulic system.
5. Fill the fuel tank with fresh fuel. Bleed the fuel system.
6. Make certain that the tires are properly inflated.
7. Remove all oil from the reels and bedknife. Adjust bedknife and cutting height.
8. Start and operate the engine at 1/2 throttle. Allow enough time for the engine to become properly warmed and lubricated.



### WARNING

Never operate the engine without proper ventilation; exhaust fumes can be fatal when inhaled.

# 5 TROUBLESHOOTING

## 5.1 GENERAL

The troubleshooting chart below lists basic problems that may occur during start-up and operation. For more detailed information regarding the hydraulic and electrical systems contact your area Jacobsen Dealer.

Symptoms	Possible Causes	Action
Engine will not start.	<ol style="list-style-type: none"> <li>1. Parking brake disengaged, traction pedal not in neutral or reel/3WD switch on.</li> <li>2. Battery low on charge or defective.</li> <li>3. Fuel tank empty or dirty.</li> <li>4. Fuse blown.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check operator back-up system and start-up procedure.</li> <li>2. Inspect condition of battery and battery connections.</li> <li>3. Fill with fresh fuel. Change fuel filter. Bleed fuel lines.</li> <li>4. Replace fuse.</li> </ol>
Engine hard to start or runs poorly.	<ol style="list-style-type: none"> <li>1. Fuel level low, fuel or fuel filter dirty.</li> <li>2. Air cleaner dirty.</li> <li>3. Injectors, fuel pump</li> <li>4. Engine problem.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill with fresh fuel. Change fuel filter. Bleed fuel lines.</li> <li>2. Inspect and replace air filter.</li> <li>3. Consult engine manual.</li> <li>4. Consult engine manual</li> </ol>
Engine stops.	<ol style="list-style-type: none"> <li>1. Fuel tank empty.</li> <li>2. Interlocks not set before leaving operator's seat.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill with fresh fuel and bleed fuel lines.</li> <li>2. Engage parking brake, move traction lever to "N" and set reel control to OFF.</li> </ol>
Engine overheating	<ol style="list-style-type: none"> <li>1. Coolant level low.(Diesel)</li> <li>2. Air intake restricted.</li> <li>3. Water pump belt broken or loose.(Diesel)</li> <li>4. Engine overload</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect and add coolant.</li> <li>2. Clean cooling air intake.</li> <li>3. Tighten or replace belt.</li> <li>4. Reduce forward speed</li> </ol>
Battery not holding charge.	<ol style="list-style-type: none"> <li>1. Loose or corroded battery terminals.</li> <li>2. Low electrolyte.</li> <li>3. Alternator belt loose or broken.</li> <li>4. Charging system defective.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect and clean terminals</li> <li>2. Refill to correct level.</li> <li>3. Tighten or replace belt</li> <li>4. See engine manual</li> </ol>
Reels cut unevenly	<ol style="list-style-type: none"> <li>1. Bedknife-to-reel not adjusted correctly.</li> <li>2. Engine speed too low.</li> <li>3. Low hydraulic oil</li> </ol>	<p>Inspect bedknife-to-reel adjustment.</p> <p>Check engine speed. Run engine at full throttle.</p> <p>Check reservoir level and fill if needed.</p>
Tractor does not react to traction pedal	<ol style="list-style-type: none"> <li>1. Parking brake engaged</li> <li>2. Tow Valve Open</li> <li>3. Low hydraulic oil</li> </ol>	<p>Disengage parking brake.</p> <p>Close Tow Valve</p> <p>Check reservoir level and fill if needed</p>
Implement does not raise or lower	<ol style="list-style-type: none"> <li>1. Low hydraulic oil</li> </ol>	<p>Check reservoir level and fill as needed</p>
Gauges/Indicator not operating	<ol style="list-style-type: none"> <li>1. Circuit Breaker</li> <li>2. Loose wiring</li> </ol>	<p>Reset circuit breaker, check bulb</p> <p>Check electrical connections.</p>

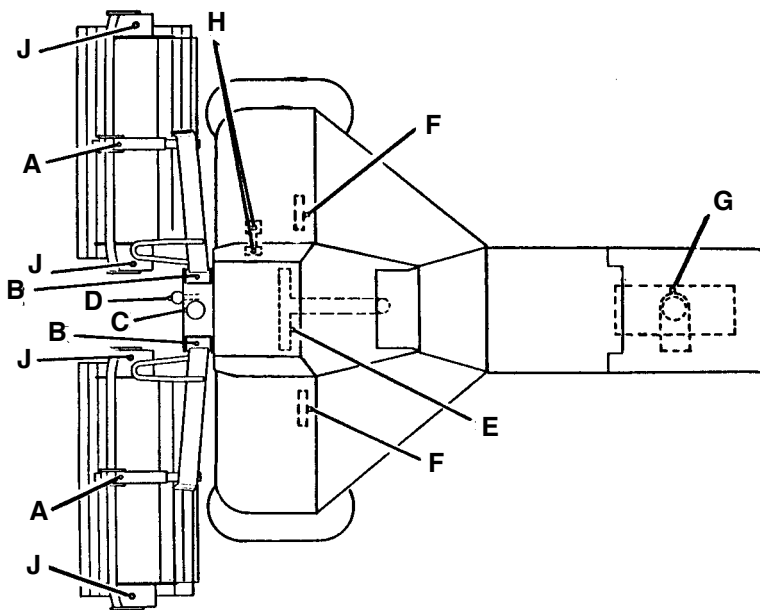
## 6.1 GENERAL

### ⚠ WARNING

Before you clean, adjust, or repair this equipment, disengage all drives, lower implements to the ground, engage parking brake, stop engine and remove key from ignition switch to prevent injuries

1. Always clean the grease fitting before and after lubricating.
2. Lubricate with grease that meets or exceeds NLGI Grade 2 LB specifications. Apply grease with a manual grease gun and fill slowly until grease begins to seep out. Do not use compressed air guns.
3. Periodically apply a small amount of lithium based grease to the seat runners.
4. For smooth operation of all levers, pivot points and other friction points that are not shown on the lubrication chart apply several drops of SAE 30 oil every 40 hours or as required.
5. Grease fittings (A - F) every 50 hours and fittings (G - K) every 100 hours.

## 6.2 LUBRICATION CHART



- |                                 |                                      |
|---------------------------------|--------------------------------------|
| A. Mower Pivot (3 Fittings)     | F. Control Pedal Pivot (2 Fittings)  |
| B. Front Lift Arms (2 Fittings) | G. Steering Yoke                     |
| C. Crank Hub                    | H. Drive Shaft Bearings (2 Fittings) |
| D. Hydraulic Cylinder           | J. Reel Bearings (6 Fittings)        |
| E. Center Lift Arm              | K. Rollers (As Required)             |

# 6 MAINTENANCE & LUBRICATION CHARTS

## 6.3 MAINTENANCE CHARTS

Recommended Service and Lubrication Intervals

	Every 8-10 Hours	Every 50 Hours	Every 100 Hours	Every 250 Hours	Every 400 Hours	Every 500 Hours	Every 1000 Hours	Yearly	See Section	Lubricant Type
Air Filter (Diesel)	I		AR					R	4.5	
Air Filter (Gas)	I	C	R					R	4.4	
Battery Charge			I						4.8	
Belts	I-A*		I-A			R			3.2, 3.3	
Brake		I-A*		A					3.10	
Cooling System (Diesel)	I-C-A							R	4.19	IV
Electrical System		I*		I					4.14	
Engine Oil (Diesel)	I	R*	R						4.3	II
Engine Oil (Gas)	I-R*	R							4.3	II
Engine Oil Filter		R*	R							
Fuel System		I							4.7	
Fuel Filter						R			4.7	
Grease Fittings - All	L	L	L			L			6.2	I
Hydraulic Hoses and Tubes	I***			I					4.11	
Hydraulic Oil	I-A			R**				R**	4.12	III
Hydraulic Oil Filter	I	R*		R					4.13	
Muffler and Exhaust	I			I					4.15	
Radiator Screens	I-C/AR								4.19	
Tires		I-A							4.16	

**A - Add or Adjust    C - Clean    I - Inspect    L - Lubricate    R - Replace    AR - As Required**

\* Indicates initial service for new machines.

\*\* Every 250 hours, or yearly whichever comes first.

\*\*\* Inspect visible hoses and tubes for leaks or oil marks.

I - Manual grease gun with NLGI Grade 2 (Service Class LB).

II - Engine Oil - See Section 4.3

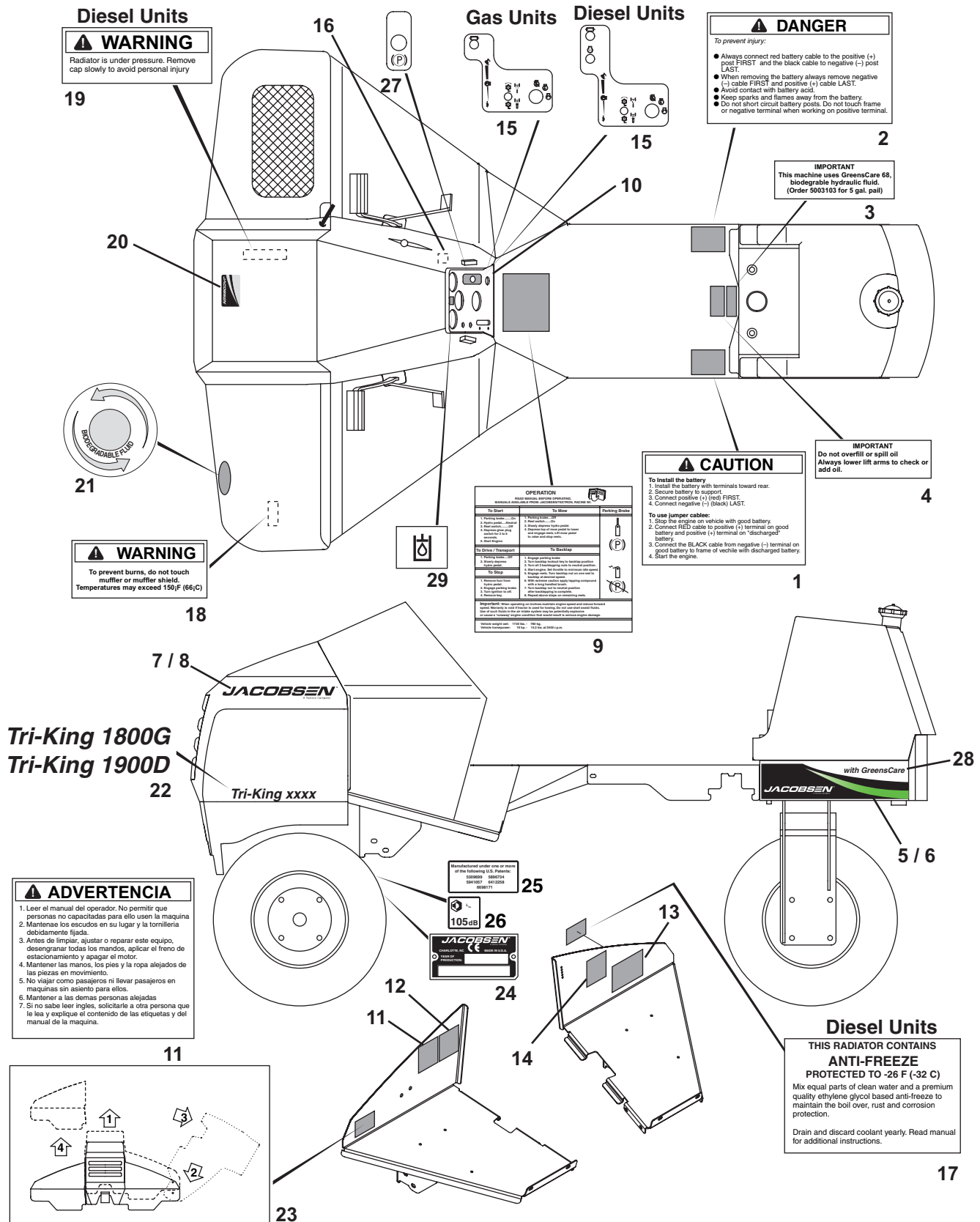
III - Use Jacobsen GreensCare 68 Biodegradable fluid: Capacity: 5 gallons (19 Liters). Order Part No. 5003103 containing 5 gal. (19 l), pail or Part No. 5003102, 55 gal. (208 l) Drum.

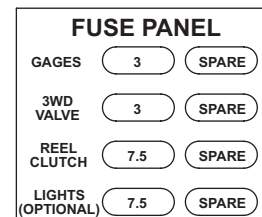
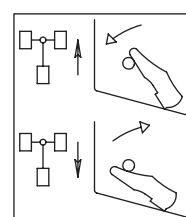
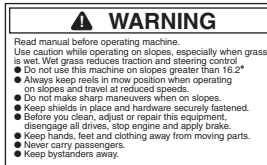
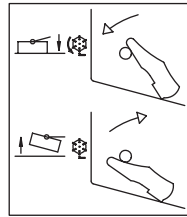
IV - Capacity: 3qt. (2.8 l) 50/50 water ethylene glycol mix

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## 1.1 Decals

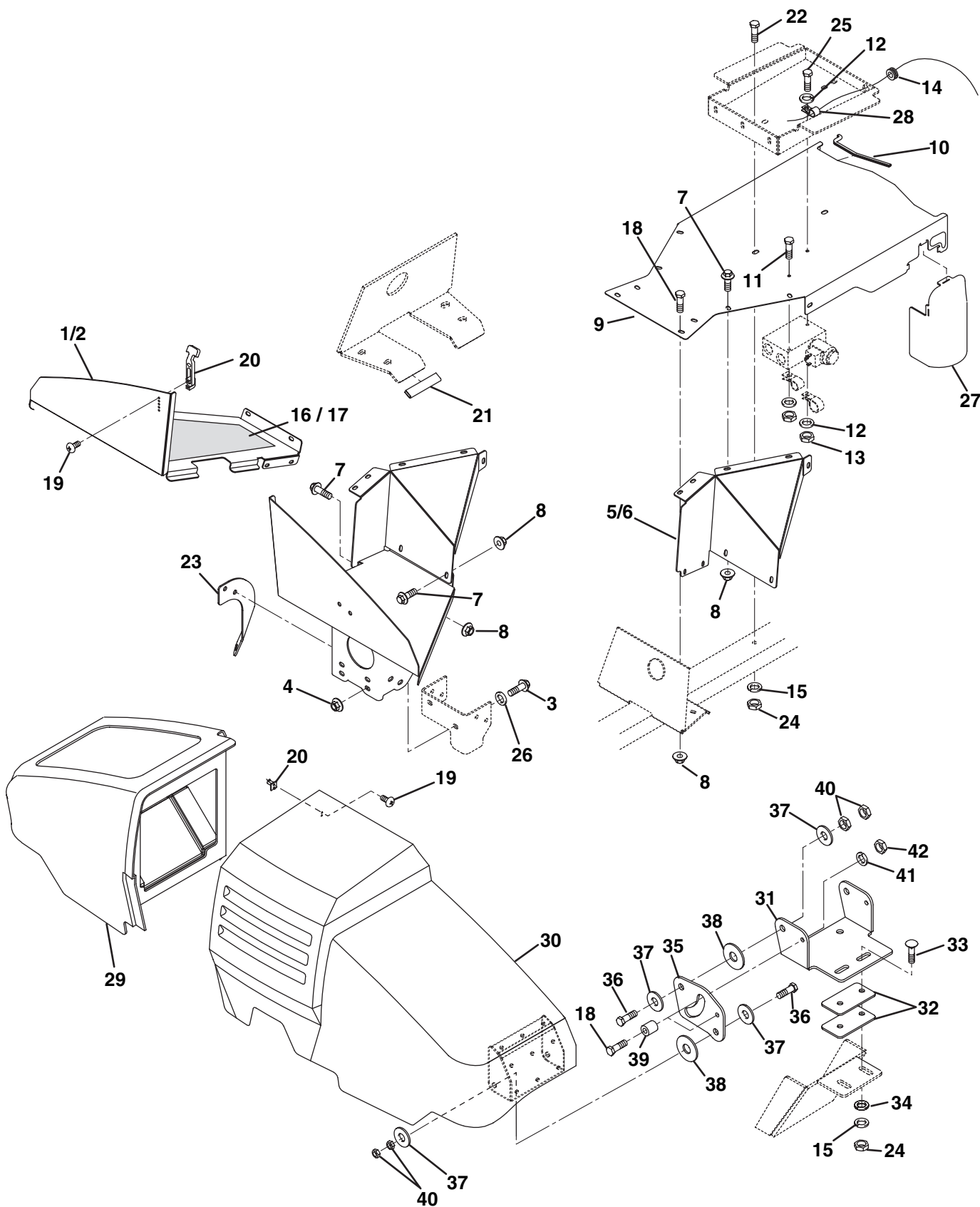




Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	367160	1	Decal, Battery Caution	
2	367159	1	Decal, Battery Danger	
3	2812032	1	Decal, Hydraulic Fluids	
4	361615	1	Decal, Oil Overfill	
5	4124358	1	Decal, Right Side Stripe	
6	4124357	1	Decal, Left Side Stripe	
7	4124790	1	Decal, Jacobsen 12"	
8	4125789	1	Decal, Jacobsen 10"	
9	3004653	1	Decal, Operating Instructions	Gas
9	3003590	1	Decal, Operating Instructions	Diesel
10	3002053	1	Decal, Backlap Switch	
11	340623	1	Decal, Spanish Caution	
12	3003349	1	Decal, Lift/Lower	
13	3003594	1	Decal, Caution	
14	3003348	1	Decal, Forward/Reverse	
15	3004983	1	Decal, Dash Overlay	Gas
15	3003350	1	Decal, Dash Overlay	Diesel
16	3003606	1	Decal, Fuse Panel	
17	363995	1	Decal, Antifreeze	Diesel
18	339237	1	Decal, Heat Warning	Located on Hood Pivot
19	365956	1	Decal, Radiator Warning	Diesel - Located on Radiator
20	4124759	1	Decal, Jacobsen Emblem	
21	4111408	1	Decal, Biodegradable Fluids	
22	4124690	2	Decal, Tri-King 1800G	Gas
22	4124691	2	Decal, Tri-King 1900D	Diesel
23	3004207	1	Decal, Opening Hood	
24	REF	1	Serial Plate	On Left Front Wheel Motor Mount
25	4125772	1	Decal, Patent	
26	4117468	1	Decal, Noise 105 dB	
27	2811597	1	Decal, Parking Brake Light	
28	4124721	1	Decal, GreensCare	
> 29	4141266	1	Decal, Oil	

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## 2.1 Hood and Cowlings





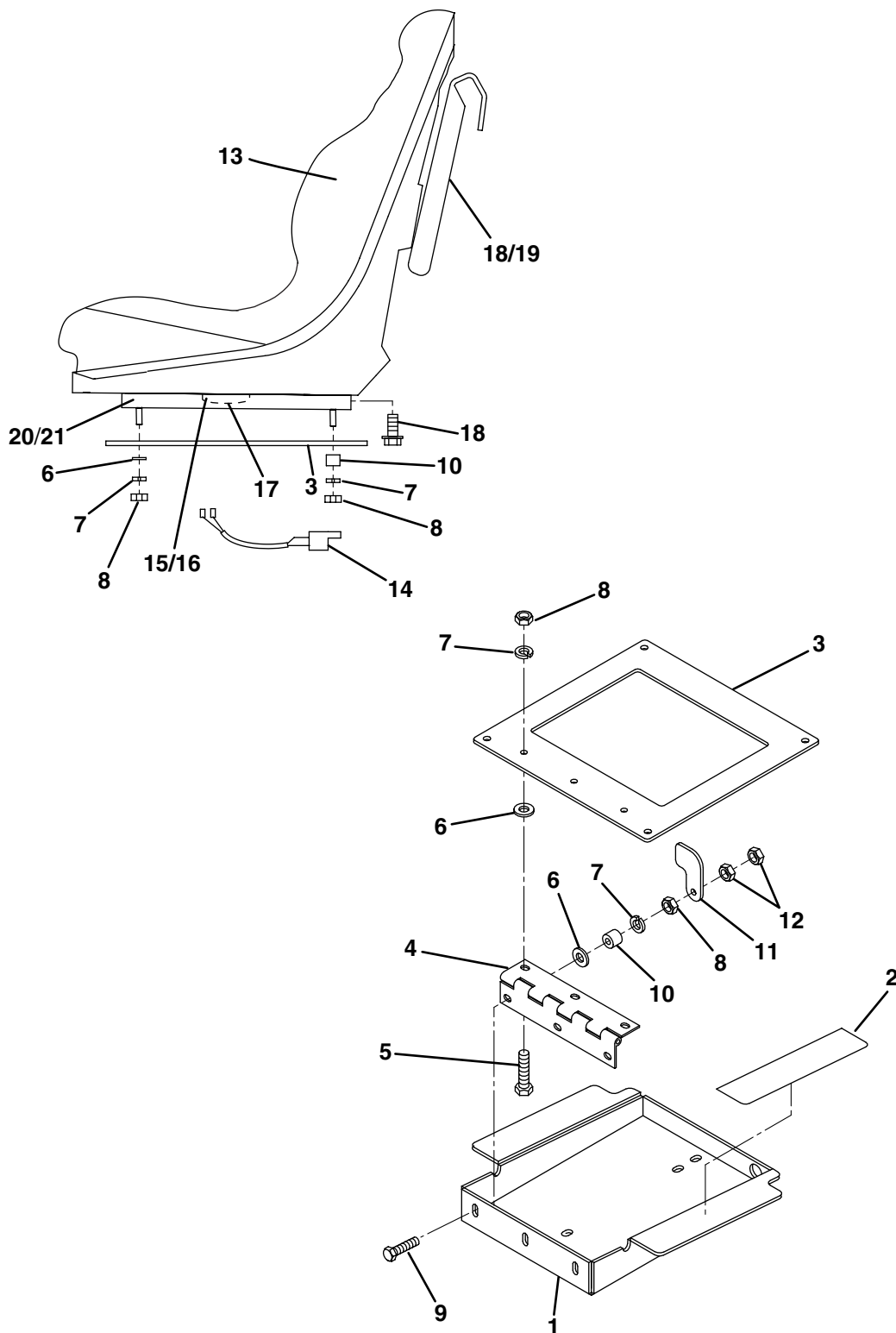
Item	Part No.	Qty.	Description	Serial Numbers/Notes	
1	2810411	1	Left Foot Rest		
2	2810412	1	Right Foot Rest	Gas	
2	2810413	1	Right Foot Rest	Diesel	
3	400260	12	Screw, 3/8-16 x 7/8" Hex Head		
4	445796	12	Nut, 3/8-16 Spiralock Flange		
5	3002803	1	Left Hand Transition		
6	3002804	1	Right Hand Transition		
7	403770	14	Screw, 5/16-18 x 3/4" Flanged Head		
8	445795	18	Nut, 5/16-18 Spiralock Flange		
9	5002647	1	Seat Pan	Gas	
9	5001665	1	Seat Pan	Diesel	
10	3003749	2	Edging		
11	400124	1	Screw, 1/4-20 x 2-1/2" Hex Head		
12	452004	4	Flat Washer, 1/4		
13	444708	2	Locknut, 1/4-20 Center		
14	303567	1	Grommet		
>	15	446142	4	Lockwasher, 3/8 Hvy	
>	16	2810061	1	Right Footrest Pad	
>	17	2810062	1	Left Footrest Pad	
>	18	400188	7	Screw, 5/16-18 x 1" Hex Head	
>	19	403910	3	Screw, #10-24 x 1/2" Truss Head	
>	20	1001758	1	Rubber Latch	
	21	3003748	2	Edging	
	22	440134	2	Carriage Bolt, 3/8-16 x 3"	
>	23	3010139	1	Bracket, Gas Engine Remote Drain	Gas
	24	443110	10	Nut, 3/8-16 Hex	
	25	400126	1	Screw, 1/4-20 Hex Head	
	26	452008	12	Flat Washer, 3/8	
	27	3003968	1	Filter Cover	
	28	360343	1	Hose Clamp	
>	29	2810021	1	Right Hood	Gas
>	29	2810029	1	Right Hood	Diesel
>	30	2810018	1	Left Hood	Gas
>	30	2810018	1	Left Hood	Diesel
>	31	2810064	1	Pivot Bracket	
>	32	2811139	2	Shim	
>	33	441676	2	Carriage Bolt, 3/8-16 x 1-1/4"	
>	34	453011	2	Flat Washer, 3/8	
	35	2811495	2	Pivot Link	
	36	400408	4	Screw, 1/2-13 x 1-1/2" Hex Head	
>	37	452012	8	Flat Washer, 1/2	
>	38	3000576	4	Washer	
>	39	3004410	3	Spacer	
>	40	443818	8	Nut, 1/2-13 Hex Jam	
>	41	446136	3	Lockwasher, 5/16 Hvy	
	42	443106	3	Nut, 5/16-18 Hex	

> Change from previous revision

## 3.1 Seat and Base

Serial No. 67042-1601~1891

Serial No. 67043-1601~4743

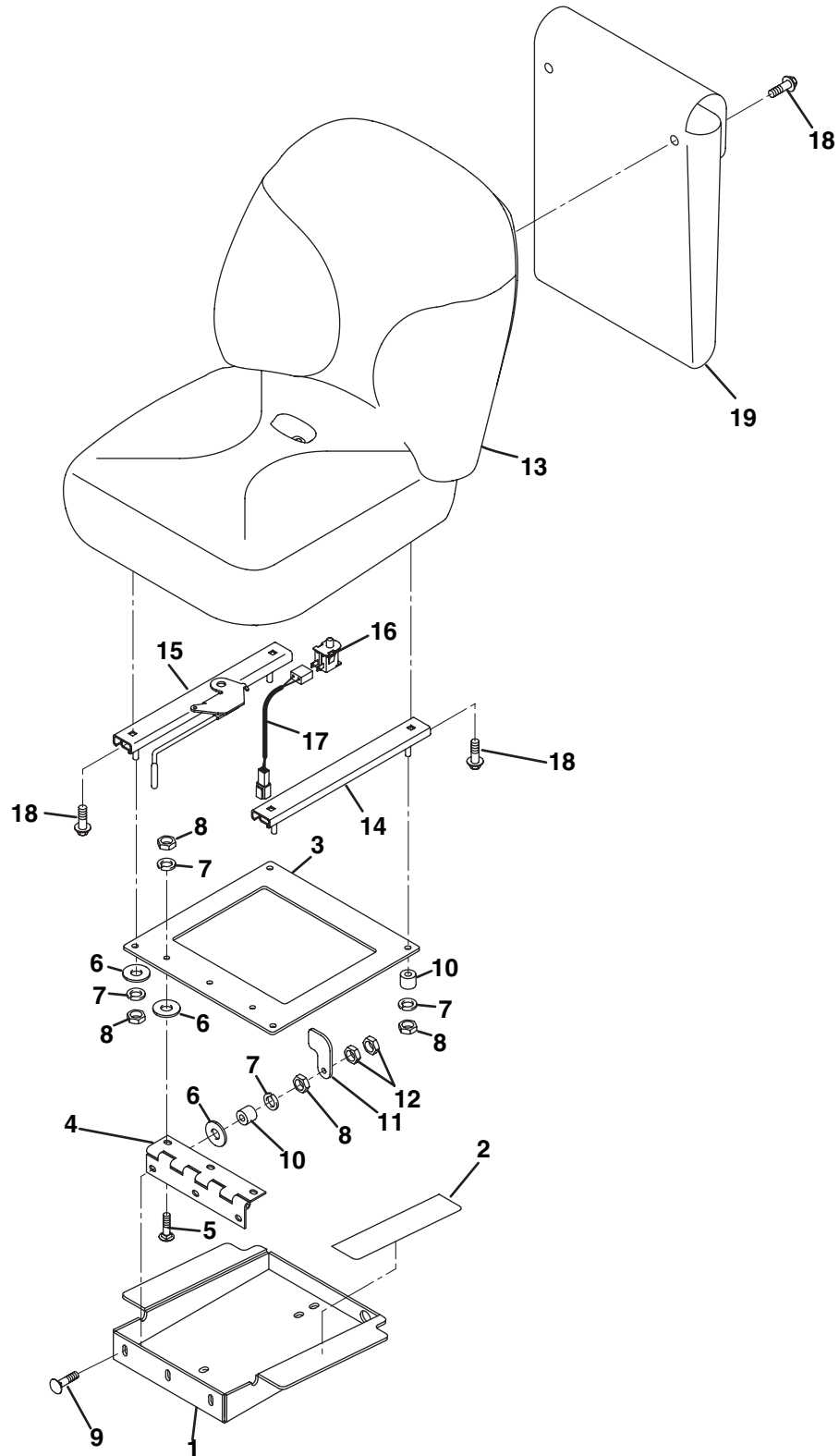


Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	3003301	1	Seat Base	
2	558012	2	Pad	
3	3003368	1	Plate	
4	3003299	1	Hinge	
5	440078	5	Carriage Bolt, 5/16-18 x 3/4"	
6	452006	10	Flat Washer, 5/16	
7	446136	10	Lockwasher, 5/16 Hvy	
8	443106	10	Nut, 5/16 Hex	
9	440088	1	Carriage Bolt, 5/16-18 x 1-3/4"	
10	3004410	2	Spacer	
11	3003402	1	Seat Latch	
12	443806	2	Nut, 5/16-18 Hex Jam	
13	66172	1	Seat	
14	163583	1	• Seat Switch Wire Harness	
15	434011	2	• Screw, 1/4-20 x 5/8" Soc. Hd.	
16	446130	2	• Lockwasher, 1/4	
17	554390	1	• Switch, Seat	Reference <b>SW6</b>
18	3001328	6	Screw, 5/16-18 x 5/8" Wsh Head	
19	3003928	1	Literature Pouch	
20	3006988	1	Seat Adjuster	
21	3006991	1	Seat Adjuster with Handle	

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## 3.2 Seat and Base

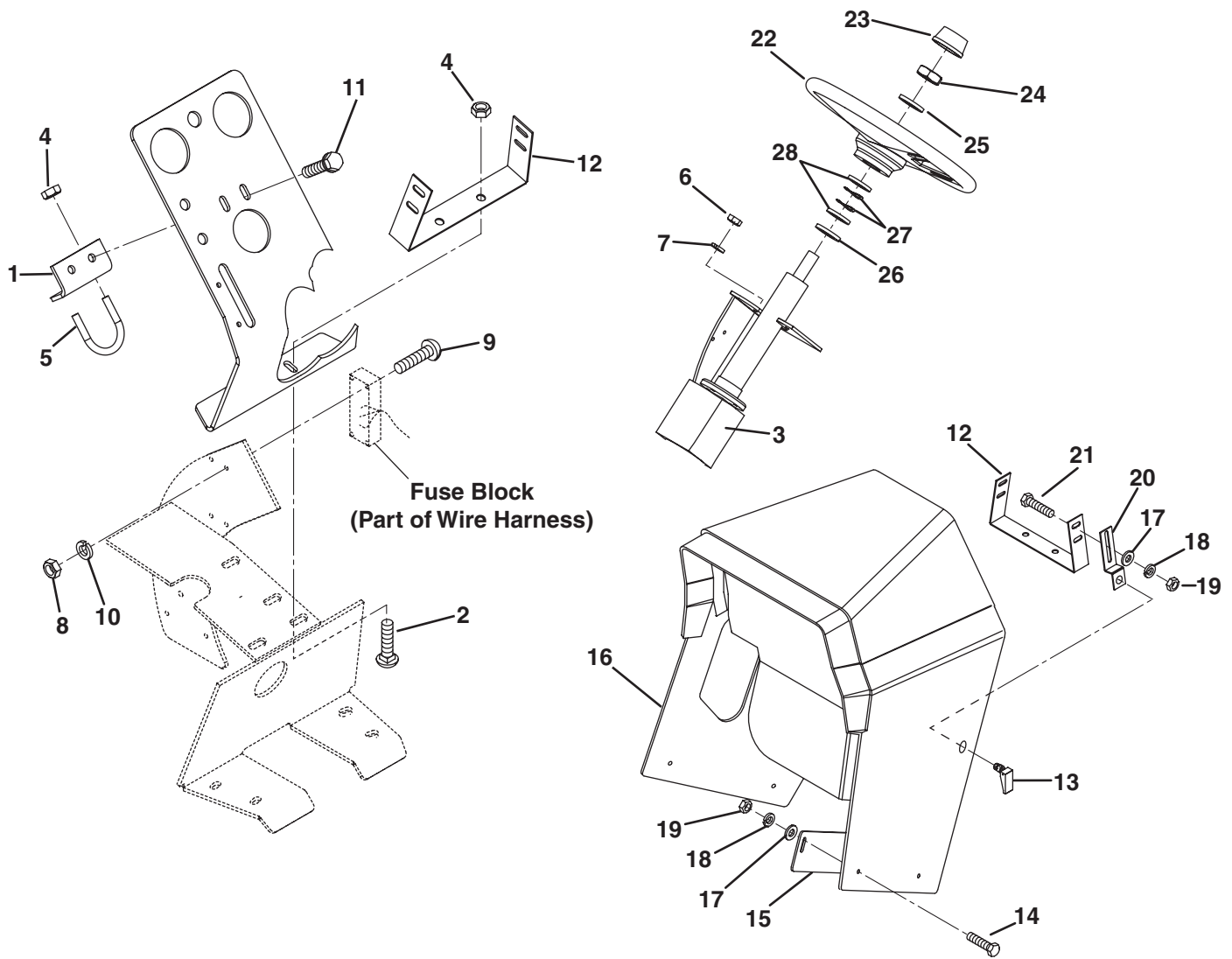
Serial No. 67042-1892 and Up  
Serial No. 67043-4744 and Up



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	3003301	1	Seat Base	Reference <b>SW6</b>
2	558012	2	Pad	
3	3003368	1	Plate	
4	3003299	1	Hinge	
5	440078	5	Carriage Bolt, 5/16-18 x 3/4"	
6	452006	10	Flat Washer, 5/16	
7	446136	10	Lockwasher, 5/16 Hvy	
8	443106	10	Nut, 5/16 Hex	
9	440088	1	Carriage Bolt, 5/16-18 x 1-3/4"	
10	3004410	2	Spacer	
11	3003402	1	Seat Latch	
12	443806	2	Nut, 5/16-18 Hex Jam	
13	4139430	1	Seat	
14	523357	1	• Seat Adjuster	
15	523356	1	• Seat Adjuster with Handle	
16	4139450	1	• Switch, Seat	
17	5003769	1	Harness, Seat	
18	3001328	6	Screw, 5/16-18 x 5/8" Wsh Head	
19	3003928	1	Literature Pouch	

> Change from previous revision

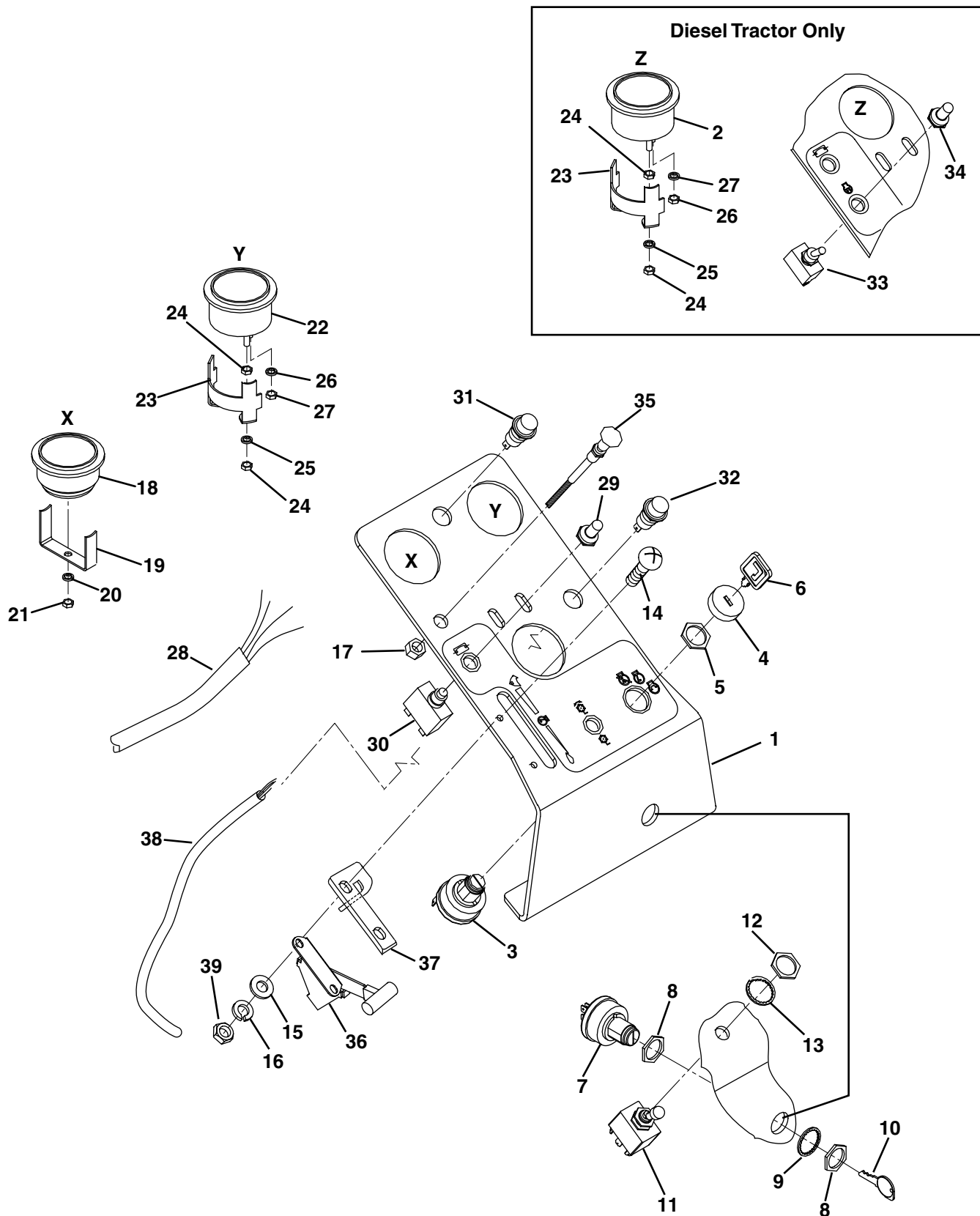
## 4.1 Dash Installation



Item	Part No.	Qty.	Description	Serial Numbers/Notes	
1	1002264.7	1	Angle Bracket		
2	441602	4	Carriage Bolt, 5/16-18 x 3/4"		
3	1002898	1	Steering Valve		
	557738	1	• Seal Kit		
	502924	1	• Spring Kit		
4	444718	4	Locknut, 5/16-18 Center		
5	362469	1	U-Bolt Clamp		
6	444754	4	Nut, 5/16-24 Hex Lock		
7	453009	2	Washer, 5/16 Flat		
8	444310	4	Nut, #10-24 Hex		
9	403914	4	Screw, #10-24 x 3/4" Truss Head		
10	446116	4	Lockwasher, #10		
11	403770	2	Screw, 5/16-18 x 3/4 Hex Flange		
12	3003540.7	1	Mounting Bracket		
13	3002098	2	Latch		
14	404016	4	Screw, 1/4-20 x 5/8" Truss Head		
15	3003468	2	Plastic Plate		
16	2810209	1	Console Cover		
17	452004	8	Flat Washer, 1/4		
18	446130	8	Lockwasher, 1/4 Hvy		
19	443102	8	Nut, 1/4-20 Hex		
20	3003541	2	Latch Bracket		
21	441664	4	Screw, 1/4-20 x 5/8" Round Head		
22	2811364	1	Steering Wheel		
23	2811365	1	• Steering Wheel Cap		
24	3002861	1	Nut, M16-1.5 Hex Jam		
>	25	447224	1	Lockwasher, 5/8 Internal Tooth	
>	26	2811547	1	Washer	
>	27	454001	2	Wave Washer, 3/4	
>	28	455048	2	Flat Washer, 3/4	

> Change from previous revision

## 5.1 Instrument Panel



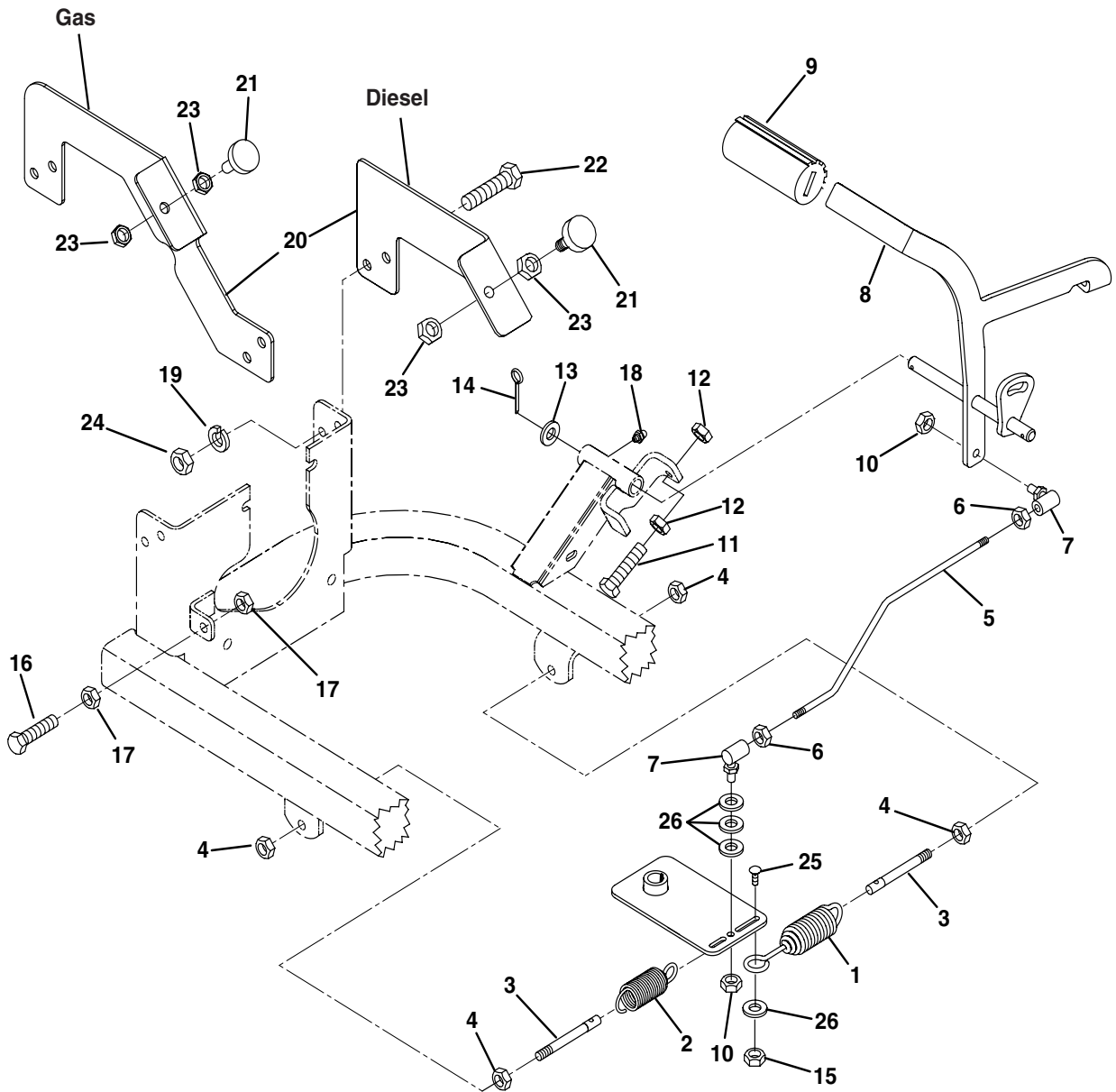


Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	2811436	1	Dash Panel	Gas
1	2811437	1	Dash Panel	Diesel
2	162720	1	Water Gauge	Diesel, Reference <b>U4</b>
3	1001958	1	Ignition Switch	Reference <b>SW9</b>
4	5002101	1	• Bezel	
5	5002102	1	• Nut	
6	5000039	1	• Ignition Key	
7	1001010	1	Backlap Switch	Reference <b>SW10</b>
8	558036	2	• Nut	
9	N/S	1	• Lockwasher	
10	5001428	1	• Mechanics Key	
11	3001780	1	PTO Switch	Reference <b>SW2</b>
12	361862	2	• Nut	
13	447220	2	• Lockwasher	
14	403912	2	Screw, #10-24 x 5/8" Tr. Hd.	
15	452002	2	Washer, #10 Flat	
16	446118	2	Lockwasher, #10	
17	443112	1	Nut, 3/8-24 Hex	Gas
18	162723	1	Hour Meter	Reference <b>U3</b>
19	N/S	1	• Bracket	
20	447006	1	• Lockwasher	
21	444310	1	• Nut, #10-24 Hex	
22	162721	1	Volt Meter	Reference <b>U2</b>
23	N/S	1	• Bracket	
24	444306	4	• Nut, #8-32 Hex	
25	447206	2	• Lockwasher, #8	
26	447002	2	• Lockwasher, #6	
27	444304	2	• Nut, #6	
● 28	1004796	1	Wire Harness	Gas, See Note ●
● 28	1004795	1	Wire Harness	Diesel, See Note ●
29	364774	1	Circuit Breaker Boot	
30	338601	1	10 Amp Circuit Breaker	Reference <b>CB2</b>
31	164194	1	Oil Pressure Light	Reference <b>L3</b>
32	366751	1	Light, Parking Brake	Reference <b>L4</b>
33	363961	1	Toggle Switch	Diesel, Reference <b>SW1</b>
34	363962	1	Toggle Boot	Diesel
35	1002272	1	Choke Cable	Gas
36	1004339	1	Throttle Cable	Gas
36	1004340	1	Throttle Cable	Diesel
37	3008433	1	Plate, Stop	
38	2811632	1	Harness, Brake Light	
39	444310	2	Nut, #10-24 Hex	

● Serial Number 67042-1601~1891 and 67043-1601~4743  
 Seat Harness 5003769 will be required when replacing main wire harness.

> Change from previous revision

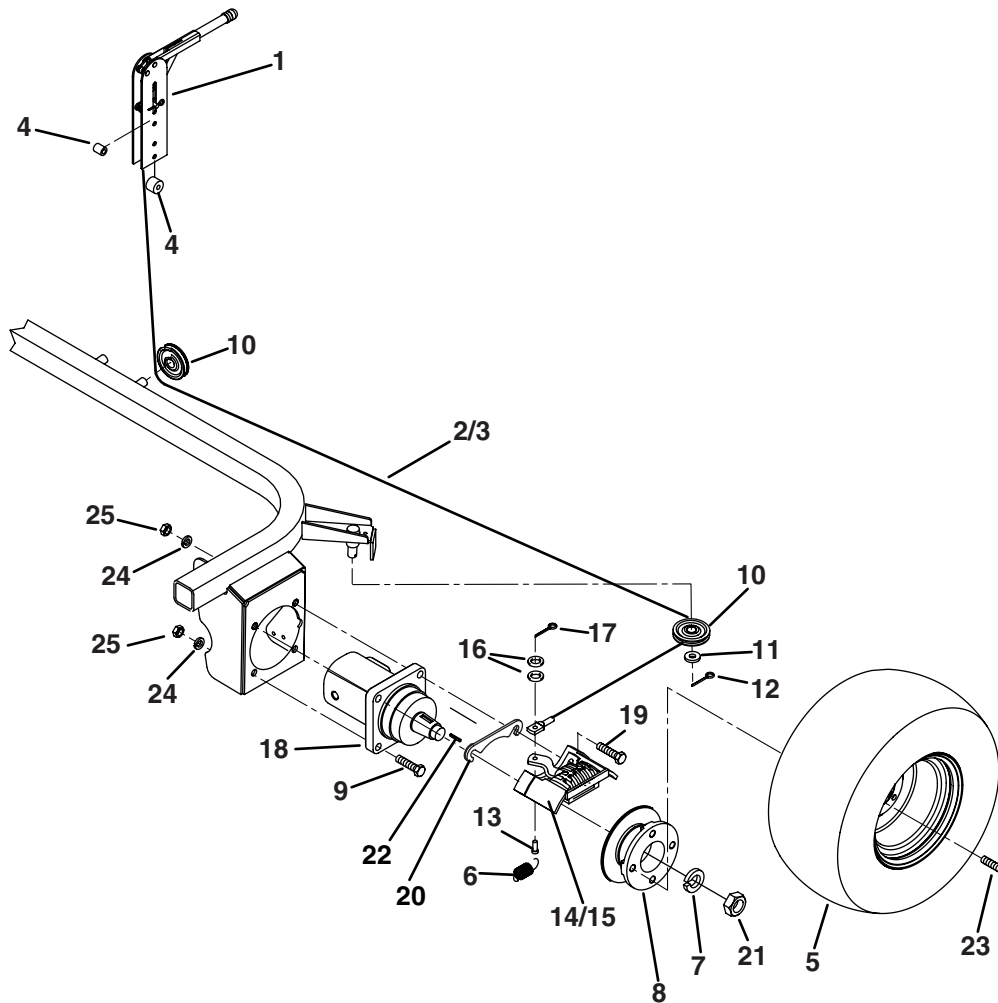
## 6.1 Hydro Control Linkage



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	3006746	1	Extension Spring	
2	3006745	1	Extension Spring	
3	3002372	2	Spring Bolt	
4	443110	2	Nut, 3/8-16 Hex	
5	3002399	1	Traction Rod	
6	443108	4	Nut, 5/16-24 Hex	
7	343398	2	Ball Joint	
8	2811387	1	Traction Pedal	
9	3003475	1	Pedal Grip	
10	444754	2	Locknut, 5/16-24 Center	
11	400192	1	Screw, 5/16-18 x 1-1/2" Hex Head	
12	443106	2	Nut, 5/16-18 Hex	
13	453017	1	Flat Washer, 1/2	
14	460028	1	Cotter Pin, 1/8 x 1"	
15	444708	1	Locknut, 1/4-20 Center	
16	400264	1	Screw, 3/8-16 x 1-1/4" Hex Head	
17	443810	2	Nut, 3/8-16 Hex Jam	
18	471214	1	Grease Fitting	
19	446142	4	Lockwasher, 3/8 Hvy	
20	3004881.7	2	Bracket	Gas
20	3002673.7	2	Bracket	Diesel
21	354989	2	Rubber Stop	
22	400260	4	Screw, 3/8-16 x 7/8 Hex Hd	
23	443812	4	Nut, 3/8-24 Jam	
24	443110	4	Nut, 3/8-16 Hex	
25	441606	1	Carriage Bolt, 1/4-20 x 3/4"	
26	452006	4	Flat Washer, 1/4	

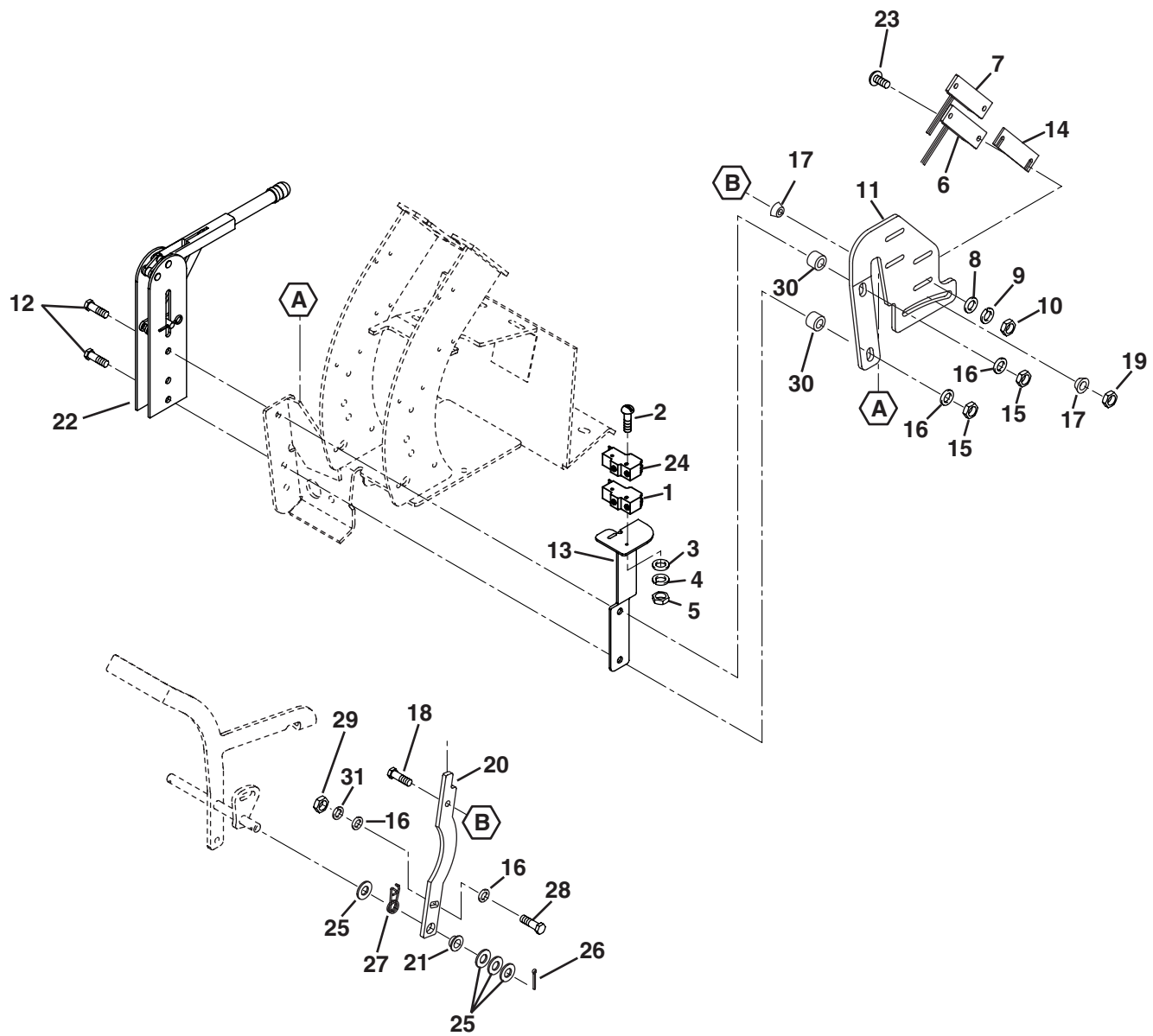
> Change from previous revision

## 7.1 Front Motors and Brakes



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	2500127	1	Brake Lever	
2	3002628	1	R.H. Brake Cable	
3	3002627	1	L.H. Brake Cable	
4	545237	2	Spacer	
5	–	2	Tire and Wheel Assembly	
	5001348	1	• Tire, 20 x 10 x 10	
	5002906	1	• Rim	
	360111	1	• Valve Stem	
6	352204	2	Spring	
7	447030	2	Lockwasher, 1 External Tooth	
8	395388	2	Wheel Hub	
9	400410	4	Screw, 1/2-13 x 1-3/4" Hex Head	
10	338383	4	Pulley	
11	453020	4	Washer, 5/8	
12	460028	4	Cotter Pin, 1/8 x 1"	
13	346771	2	Pin, 5/16	
14	1001634	1	L.H. Caliper	See 40.1 for Service Parts
15	1001635	1	R.H. Caliper	See 40.1 for Service Parts
16	453009	2	Flat Washer, 5/16	
17	460008	2	Cotter Pin, 5/64 x 3/4" Plated	
18	5003218	2	Wheel Motor, Front	Gas Units
18	5003218	1	Wheel Motor, Left Front	Diesel Units
18	2810623	1	Wheel Motor, Right Front	Diesel Units
	5003385	1	• Seal Kit	
19	400414	4	• Screw, 1/2-13 x 2-1/4" Hex Head	
20	3008482	2	• Spacer	
21	554779	2	• Nut	
22	554780	2	• Key	
23	353914	8	Wheel Bolt	
24	446154	8	Lockwasher, 1/2 Hvy	
25	443118	8	Nut, 1/2-13 Hex	

> Change from previous revision

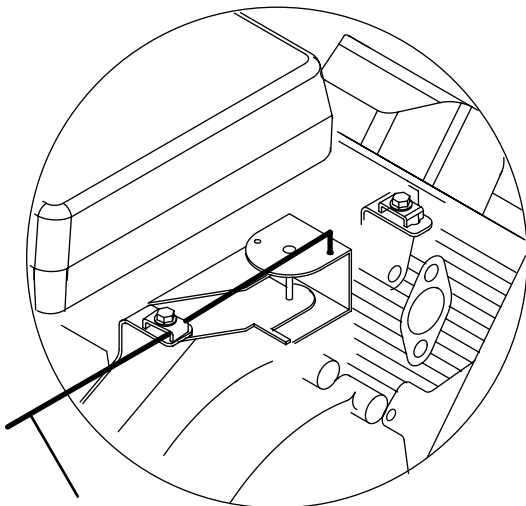
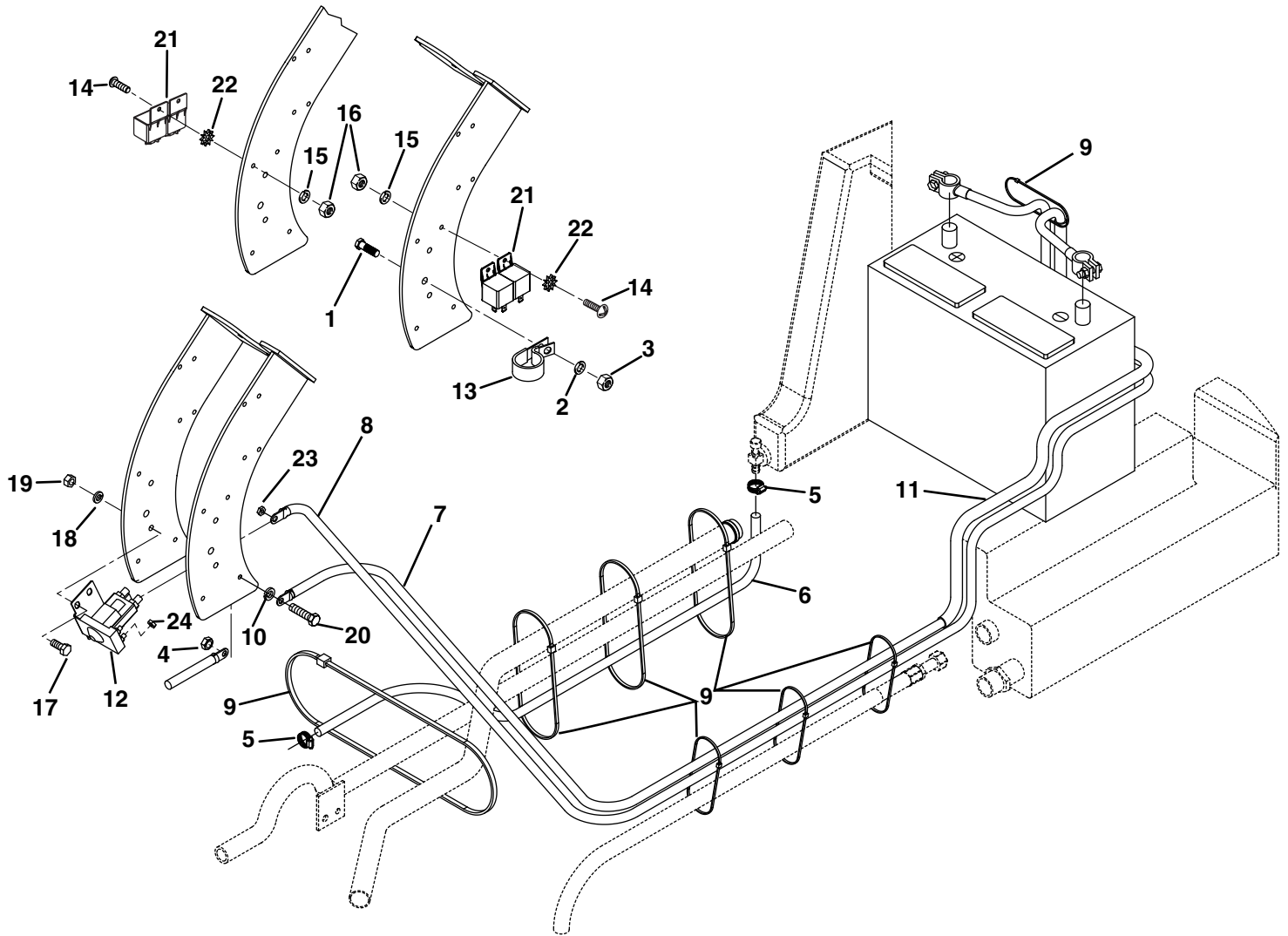


Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	3002056	1	Switch, Parking Brake	Reference <b>SW8</b>
2	402022	2	Screw, #6-32 x 2" Round Head	
3	453005	2	Flat Washer, #6	
4	447204	2	Lockwasher, #6 Internal Tooth	
5	444304	2	Nut, #6-32 Hex	
6	4140149	1	Switch, Proximity	Reference <b>SW5</b>
7	4140149	1	Switch, Proximity	Reference <b>SW7</b>
8	453004	4	Flat Washer, #8	
9	446110	4	Lockwasher, #8	
10	444306	4	Nut, #8-32 Hex	
> 11	2812215	1	Plate, Switch Mounting	
12	400216	2	Screw, 5/16-18 x 2-3/4" Hex Head	
13	3002788	1	Bracket, Parking Brake Switch	
14	3009193	AR	Shim, Proximity Switch	
15	444718	2	Locknut, 5/16-18 Center	
16	453009	4	Flat Washer, 5/16	
17	2811659	1	Spacer, Nylon	
18	400118	1	Screw, 1/4-20 x 1-3/4" Hex Head	
19	444708	1	Locknut, 1/4-20 Center	
20	2811654	1	Arm, Switch Actuating	
21	352936	1	• Bushing	
22	REF	1	Parking Brake	See 7.1
23	403860	4	Screw, #8-32 x 5/8" Truss Head	
24	3002056	1	Switch, Parking Brake Light	Reference <b>SW12</b>
25	453017	4	Flat Washer, 1/2	
26	460028	2	Cotter Pin, 1/8 x 1"	
27	2811390	1	Spring, Torsion	
28	400190	1	Screw, 5/16-18 x 1-1/4" Hex Head	
29	443806	1	Nut, 5/16-18 Hex Jam	
30	3004410	2	Spacer	
31	446136	1	Lockwasher, 5/16 Heavy	

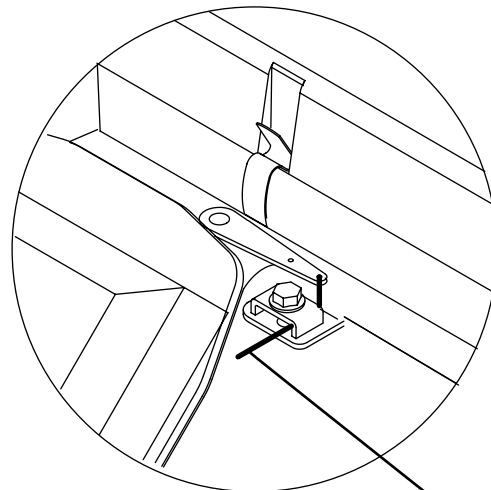
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## 9.1 Fuel Control

### Gas Engine



Throttle Cable



Choke Cable

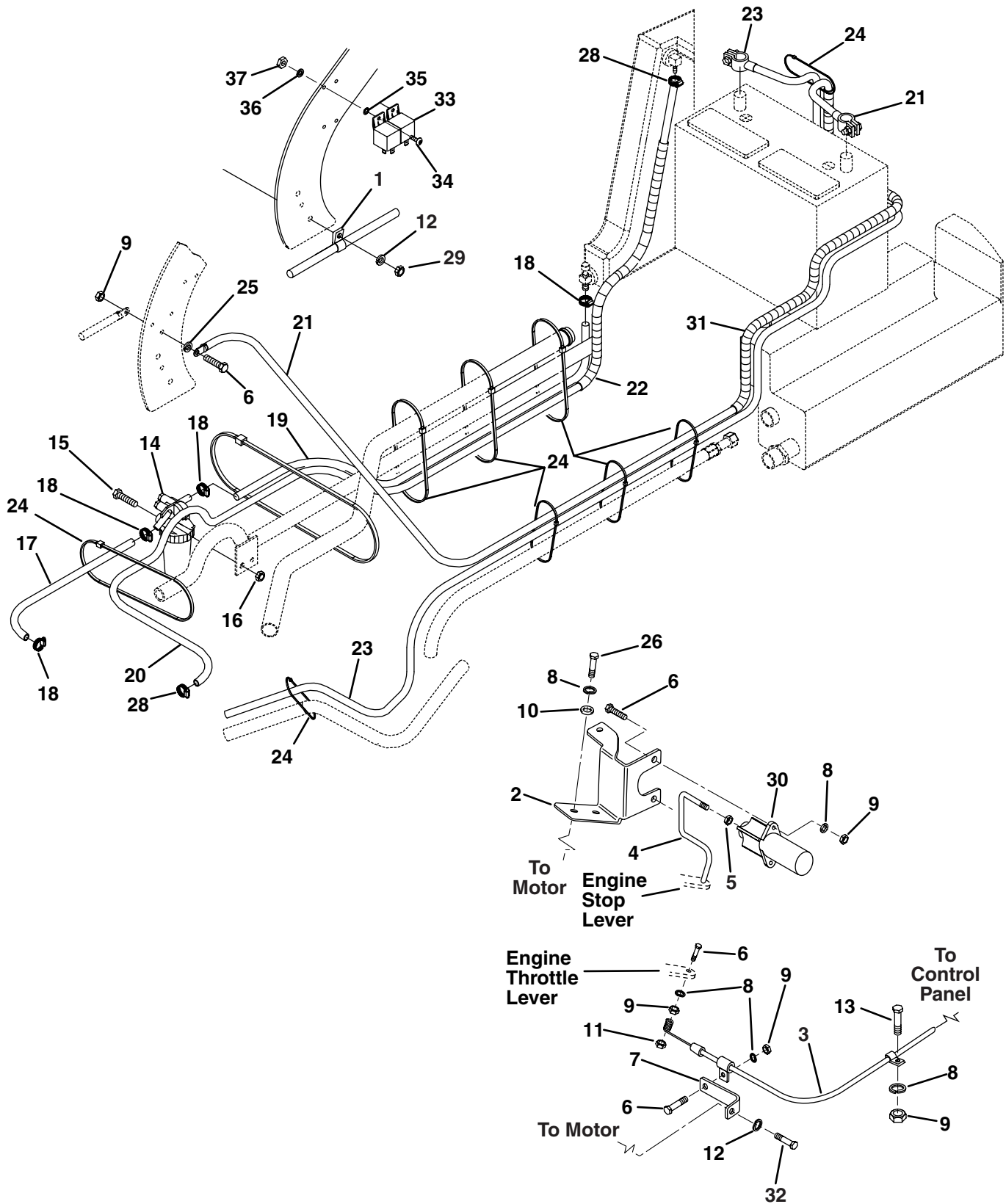


Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	400186	1	Screw, 5-16 x 7/8" Hex Head	
2	446136	1	Lockwasher, 5/16 Hvy	
3	443106	1	Nut, 5/16-18 Hex	
4	443102	1	Nut, 1/4-20 Hex	
5	366526	2	Hose Clamp	
6	554748	1	Fuel Line	Cut to 76"
7	3003523	1	Negative Battery Cable	
8	3004965	1	Positive Battery Cable	
9	473142	14	Nylon Tie	
10	447010	1	Star Washer, 1/4	
11	3004539	1	Conduit	
12	131905	1	Starter Solenoid	Reference <b>K2</b>
13	361064	1	Hose Clamp	
14	403912	2	Screw, #10-24 x 5/8" Truss Head	
15	446118	2	Lockwasher, #10 Hvy	
16	444310	2	Nut, #10-24 Hex	
17	400108	2	Screw, 1/4-20 x 3/4" Hex	
18	446130	2	Lockwasher, 1/4 Hvy	
19	443102	2	Nut, 1/4-20 Hex	
20	400112	1	Screw, 1/4-20 x 1" Hex Head	
21	3001307	4	Relay	Reference <b>K3, K4, K7 and K8</b>
22	447006	2	Lockwasher, #10 External Tooth	
23	443108	2	Nut, 5/16-24 Hex	
24	444312	2	Nut, #10-32 Hex	
25				

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## 10.1 Fuel Control

### Diesel Engine

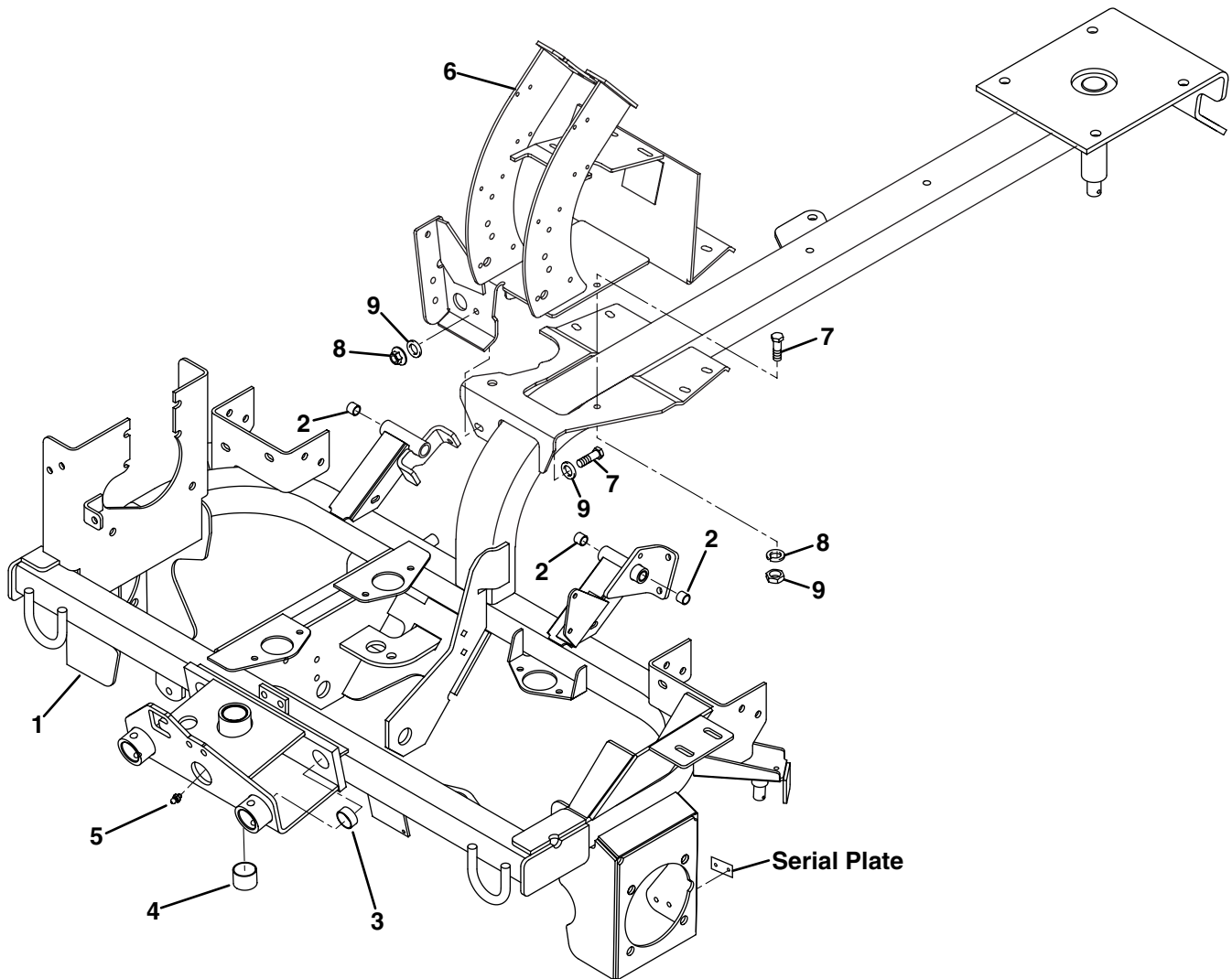


Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	345671	1	Clamp	
2	2810088	1	Bracket, Solenoid	
3	REF	1	Throttle Cable	See 5.1
4	2810546	1	Rod, Solenoid	
5	443104	1	Nut, 1/4-28, Hex	
6	400112	5	Screw, 1/4-20 x 1" Hex Head	
7	2810134	1	Throttle Cable Bracket	
8	446130	8	Lockwasher, 1/4 Hvy	
9	443102	7	Nut, 1/4-20 Hex	
10	453023	2	Flat Washer, 1/4	
11	444708	1	Locknut, 1/4-20 Center	
12	446136	2	Lockwasher, 5/16 Hvy	
13	400108	1	Screw, 1/4-20 x 3/4" Hex Head	
14	550553	1	Fuel Filter	
	550489	1	• Fuel Filter Element	
15	400200	1	Screw, 5/16-18 x 2-1/2" Hex Head	
16	444718	1	Locknut, 5/16-18 Center	
17	554748	1	Fuel Line Hose	Cut to 13"
18	366526	4	Hose Clamp	
19	554748	1	Fuel Line Hose	Cut to 37"
20	554752	1	Fuel Line Hose	Cut to 88"
21	3003523	1	Negative Battery Cable	
22	3003764	1	Convuluted Conduit	
23	2810624	1	Positive Battery Cable	
24	473142	15	Nylon Tie	
25	447010	1	Washer, 1/4 Star	
26	362535	2	Screw	
27	3004410	2	Spacer	
28	366526	2	Hose Clamp	
29	443106	1	Nut, 5/16-18 Hex	
30	338289	1	Fuel Solenoid	Reference <b>K1</b>
31	3004539	1	Convuluted Circuit	
32	361898	1	Screw, M8-1.25 x 16MM Hex	
33	3001307	2	Relay	Reference <b>K7</b> and <b>K8</b>
34	403912	1	Screw, #10-24 x 5/8" Truss Head	
35	447006	1	Lockwasher, #10 External Tooth	
36	446118	1	Lockwasher, #10 Heavy	
37	444310	1	Nut, #10-24 Hex	

> Change from previous revision

## 11.1 Frame

### Gas Engine

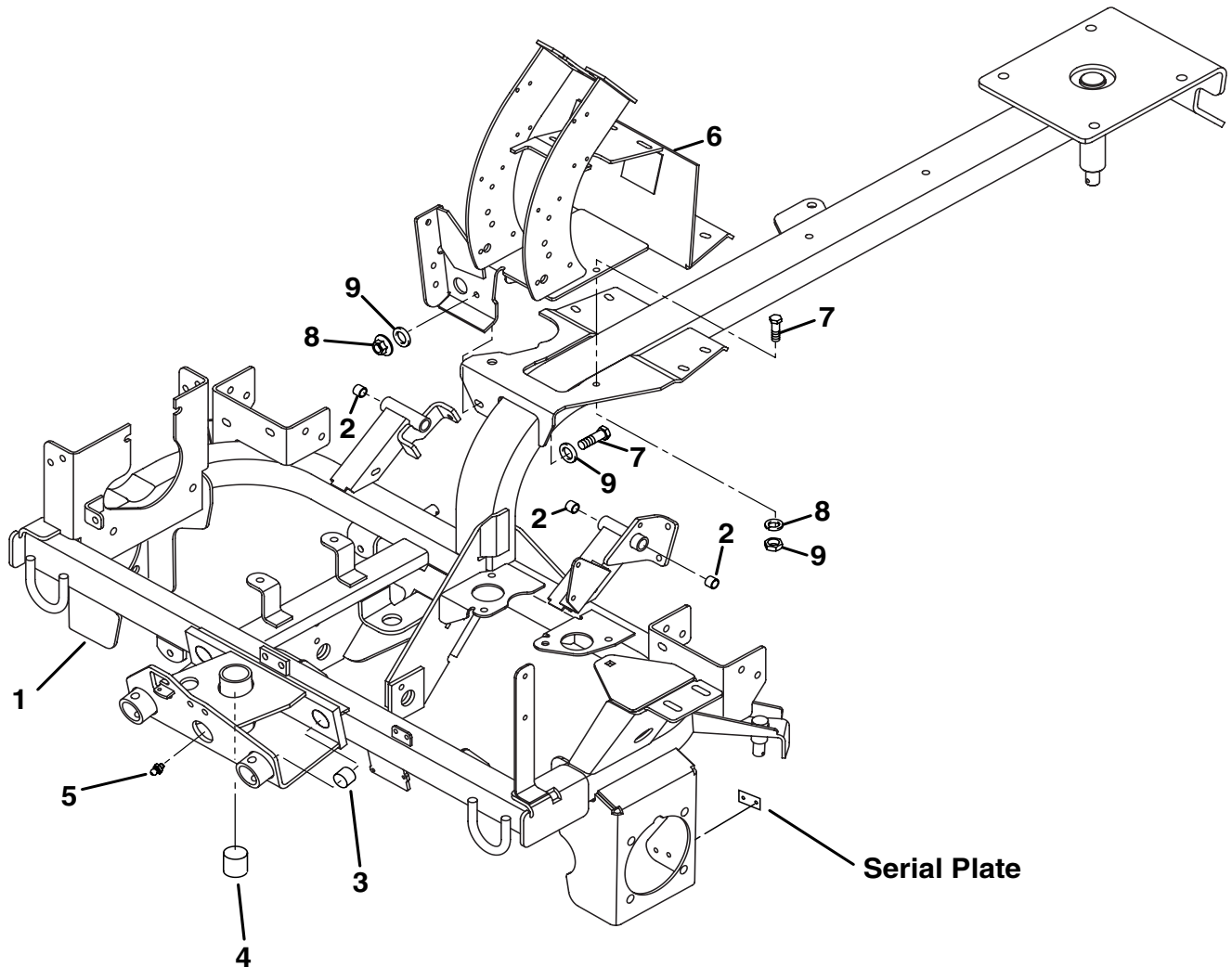


Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	2811396	1	Frame	
2	328133	4	• Bushing	
3	3002170	4	• Bushing	
4	365106	2	• Bushing	
5	471216	1	• Grease Fitting	
6	2811393	1	Column Assembly	
7	400188	2	Screw. 5/16-18 x 1" Hex Head	
8	445781	2	Nut, 5/16-18 Whizlock Flange	
9	452006	2	Flat Washer, 5/16	

> Change from previous revision

**12.1 Frame**

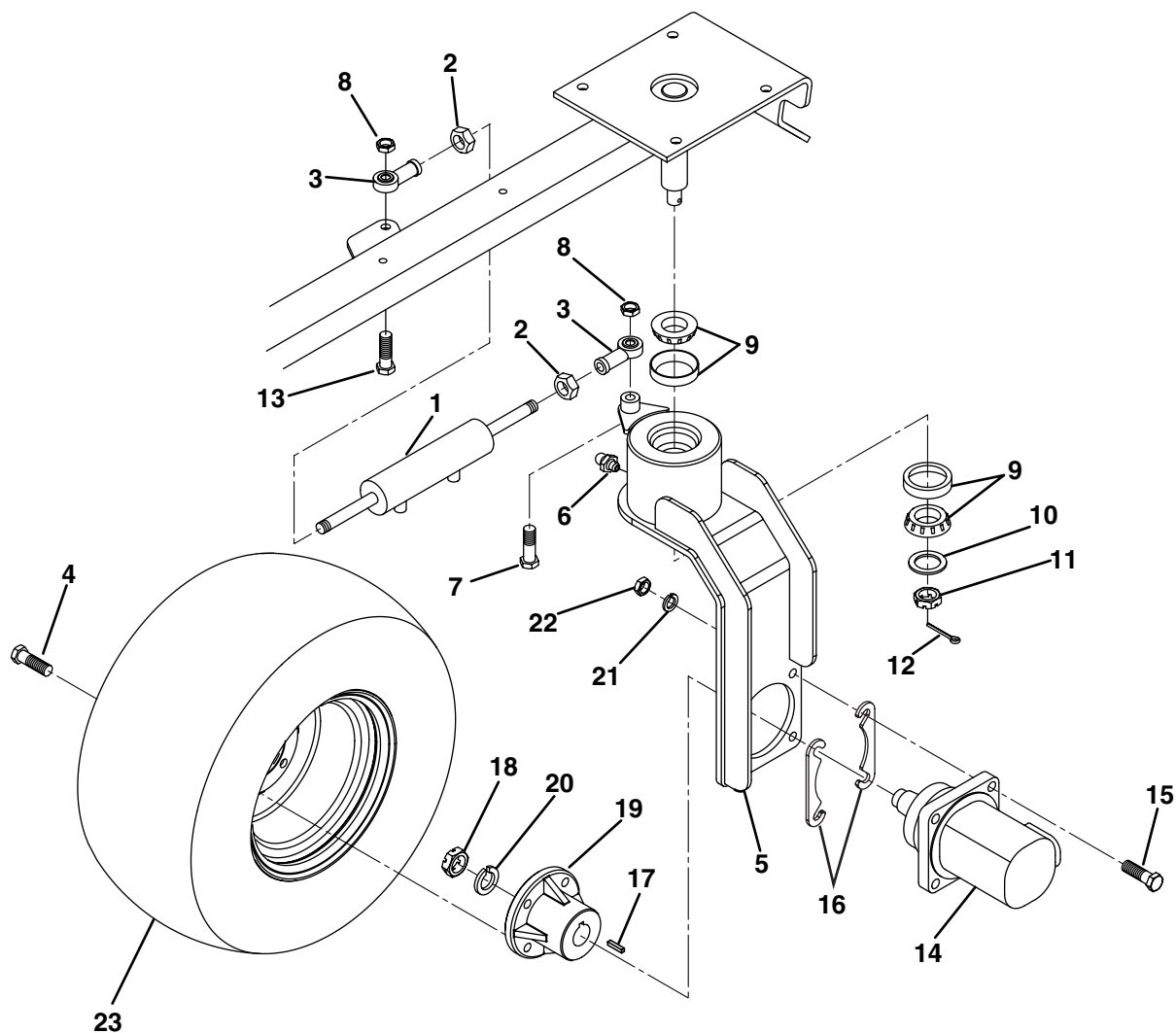
**Diesel Engine**



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4130752	1	Frame	
2	328133	4	• Bushing	
3	3002170	4	• Bushing	
4	365106	2	• Bushing	
5	471216	1	• Grease Fitting	
6	2811393	1	Column Assembly	
7	400188	2	Screw, 5/16-18 x 1" Hex Head	
8	445781	2	Nut, 5/16-18 Whizlock Flange	
9	452006	2	Flat Washer, 5/16	

> Change from previous revision

## 13.1 Rear Steering

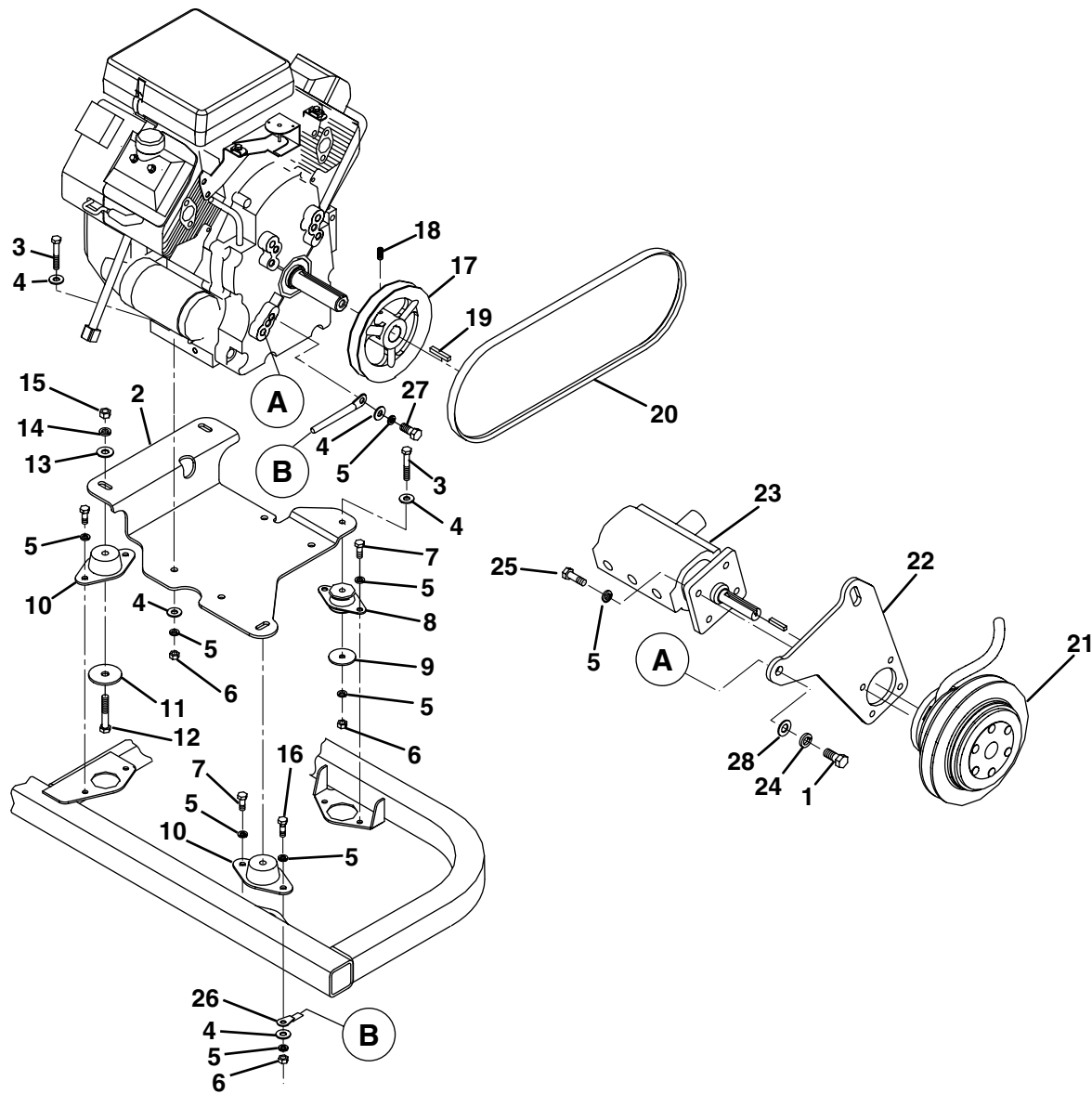


Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4138501	1	Steering Cylinder (Includes 1A)	
	4137139	1	• Seal Kit	
2	443820	2	Nut, 1/2-20 Hex	
3	3010485	2	Ball Joint	
4	353914	4	Wheel Bolt	
5	1001129.7	1	Steering Fork	
6	471231	1	Grease Fitting	
7	400414	1	Screw, 1/2-13 x 2-1/4" Hex Head	
8	444758	2	Locknut, 1/2-13 Center	
9	5002916	2	Bearing, Cup and Cone with Seal	
10	452018	1	Flat Washer, 3/4	
11	445676	1	Nut, 3/4-16 Slotted	
12	460054	1	Cotter Pin, 3/16 x 1-3/4"	
13	400408	1	Screw, 1/2-13 x 1-1/2" Hex Head	
14	5003218	1	Wheel Motor	
	5003385	1	• Seal Kit	
15	400414	4	• Screw, 1/2-13 x 2-1/4" Hex Head	
16	3008482	2	• Spacer	
17	554780	1	• Key	
18	554779	1	• Nut	
19	220290.7	1	Rear Wheel Hub	
20	447030	1	Lockwasher, 1 External Tooth	
21	446154	4	Lockwasher, 1/2 Hvy	
22	443118	4	Nut, 1/2-13 Hex	
23	-	1	Tire and Wheel Assembly	
	366790	1	• Tire, 20 x 10 x 8	
	1003638	1	• Rim	
	360111	1	• Valve Stem	

> Change from previous revision

## 14.1 Engine and Pump

### Gas Engine

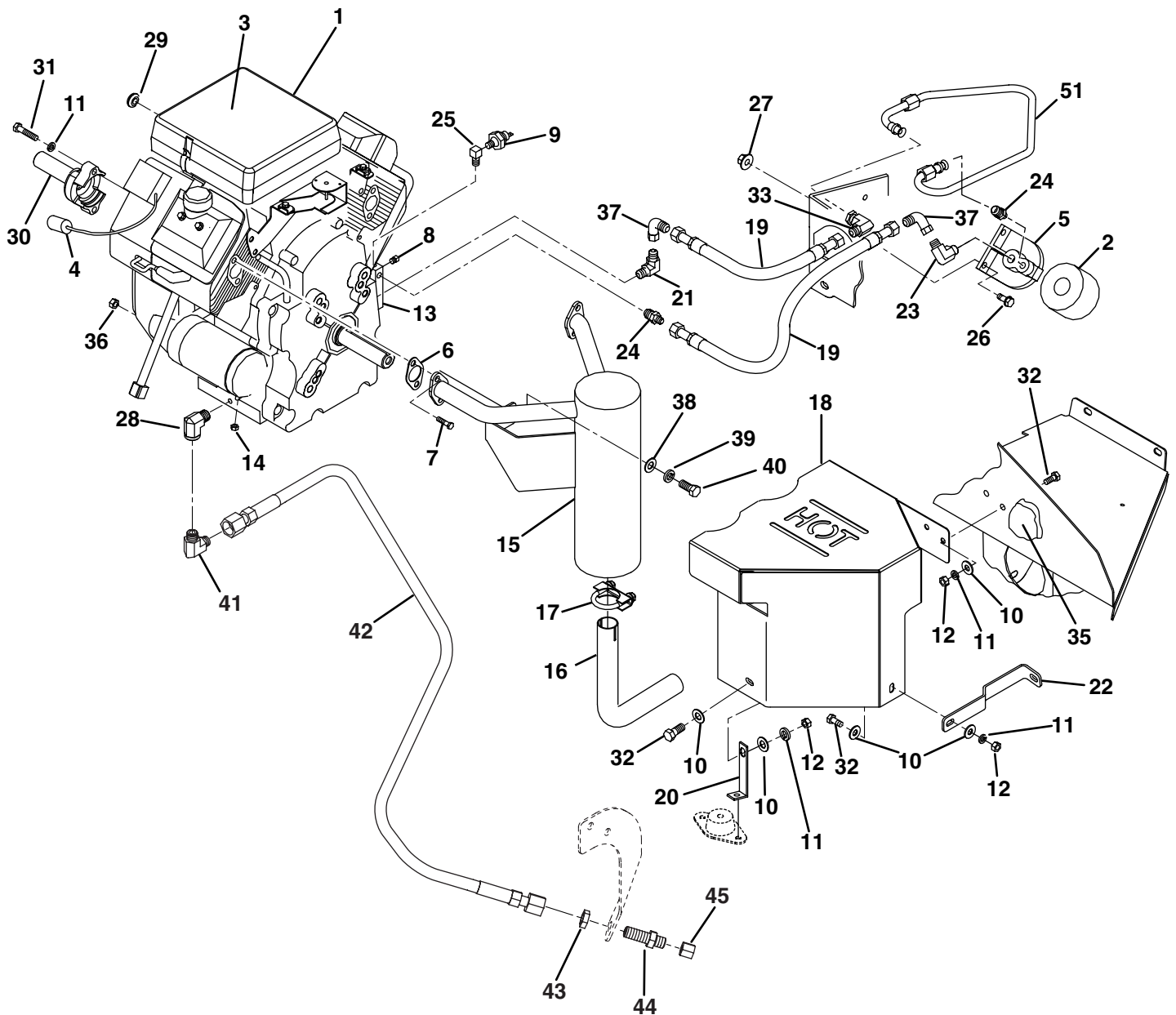




Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	400334	2	Screw, 7/16-14 x 1" Hex Head	
2	3004560.7	1	Plate	
3	400196	5	Screw, 5/16-18 Hex	
4	452006	11	Flat Washer, 5/16	
5	446136	21	Lockwasher, 5/16 Hvy	
6	443106	6	Nut, 5/16-18 Hex	
7	400186	7	Screw, 5/16-18 x 7/8" Hex Head	
8	367558	1	Iso-Mount	
9	367559	1	Washer	
10	3004523	3	Iso-Mount	
11	3004526	3	Washer	
12	400272	3	Screw, 3/8-16 x 2-1/4" Hex Head	
13	452008	3	Flat Washer, 3/8	
14	446142	3	Lockwasher, 3/8 Hvy	
15	443110	3	Lockwasher, 3/8 Hvy	
16	400190	1	Screw, 5/16-18 x 1-1/4" Hex Head	
17	340654	1	Pulley	
18	415527	2	Set Screw	
19	362320	1	Key, 1/4 Sq. x 1-1/2	
20	3001950	1	V-Belt	
21	2809727	1	Clutch Assembly	
22	2810394.7	1	Bracket	
23	1000970	1	Reel Pump	See 36.1 for Service Parts
24	446148	2	Lockwasher, 7/16 Hvy	
25	400226	4	Screw, 5/16-24 x 1" Hex Head	
26	346006	1	Engine Ground Cable	
27	400224	1	Screw, 5/16-24 x 7/8" Hex Head	
28	453013	2	Flat Washer, 7/16	

> Change from previous revision

## 15.1 Engine and Exhaust Gas Engine

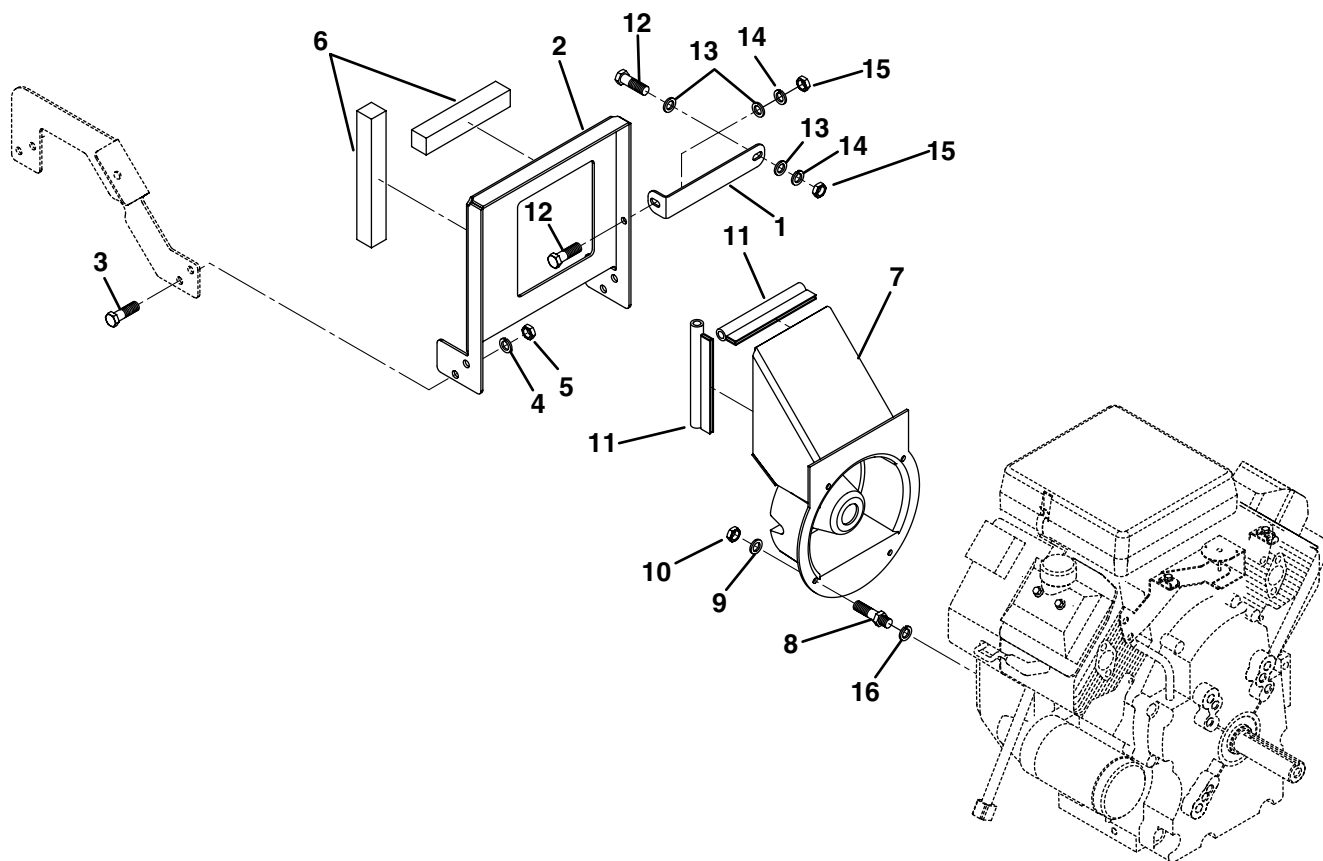


Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	1002804	1	Engine	Reference <b>SW3</b>
2	5000440	1	• Oil Filter	
3	5000441	1	• Air Filter	
4	5000436	1	• Fuel Filter	
5	N/S	1	• Adapter, Remote	
6	N/S	2	• Gasket	
7	N/S	4	• Screw	
8	N/S	1	• Plug	
9	3008600	1	Oil Pressure Sender	
10	452006	10	Flat Washer, 5/16	
11	446136	6	Lockwasher, 5/16 Hvy	
12	443106	4	Nut, 5/16-18 Hex	
13	3005472	1	Adapter, Remote Base	
14	443102	1	Nut, 1/4-20 Hex	
15	1002692	1	Muffler	
16	3005920	1	Exhaust Pipe	
17	1002033	1	Clamp	
18	1003994.7	1	Heat Shield	
19	1004022	2	Engine Oil Filter Hose	
20	3005513.7	1	Bracket	
21	358949	1	Adapter, 90°	
22	3005172.7	1	Bracket	
23	358949	1	Adapter, 90°	
24	366418	2	Adapter, Straight	
25	3004933	1	Fitting, 90°	
26	403770	2	Screw, 5/16-18 x 3/4" Hex Flange	
27	445795	2	Nut, 5/16-18 Spiralock Flange	
28	361028	1	Fitting, 90° Street	
29	3004427	1	Grommet	
30	2000116	1	Stub Shaft	
31	400192	2	Screw, 5/16-18 x 1-1/2" Hex Head	
32	400188	4	Screw, 5/16-18 x 1" Hex Head	
33	3005509	1	Adapter, 90° Bulkhead	
34	1002671	1	Tube, Engine Oil Filter	
35	2811340	1	Shield, Heat Reflect	
36	444306	1	Nut, #8-32 Hex	
37	353008	2	Fitting	
38	453013	1	Washer, 7/16 Flat	
39	446148	1	Lockwasher, 7/16 Hvy	
40	400334	1	Screw, 7/16-14 x 1 Hex	
41	355064	1	Adapter, 90°	
42	1004687	1	Hose, Remote Oil Drain	
43	339960	1	Locknut, Bulkhead	
44	362078	1	Adapter, Straight Bulkhead	
45	354077	1	Cap, 37° Flare	

> Change from previous revision

## 16.1 Air Intake

### Gas Engine

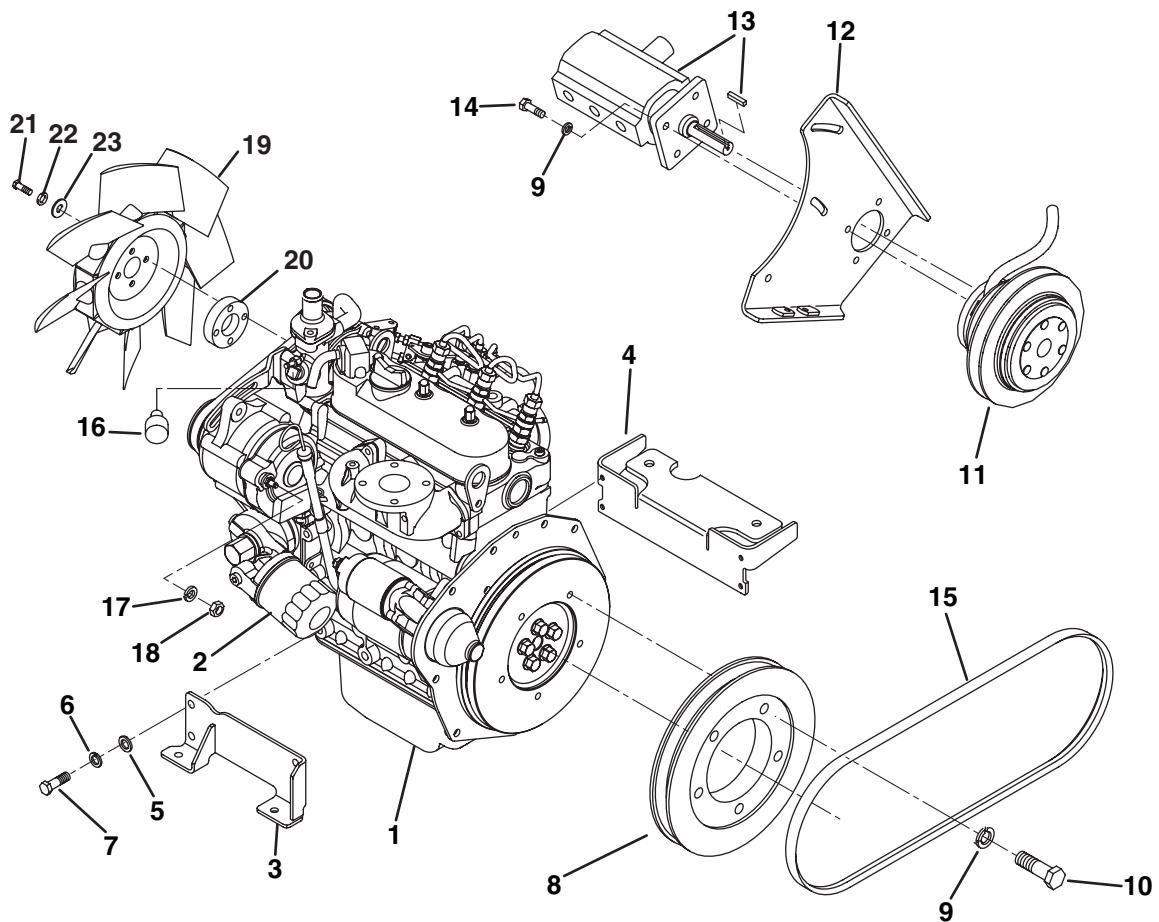


Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	3004995.7	1	Bracket	Cut to Length
2	3004927.7	1	Bracket	
3	400260	4	Screw, 3/8-16 x 7/8" Hex Head	
4	446142	4	Lockwasher, 3/8 Hvy	
5	443110	4	Nut, 3/8-16 Hex	
6	3004187	1	Weather Strip	
7	1002241	1	Air Intake Shield	
8	3005852	4	Stud, Special	
9	452002	4	Flat Washer, 1/4	
10	445770	4	Nut, 1/4-20 Nylock	
11	3004962	1	Trim Seal	
12	400184	1	Screw, 5/16-18 x 3/4" Hex Head	
13	452006	2	Flat Washer, 5/16	
14	446136	2	Lockwasher, 5/16 Hvy	
15	443106	2	Nut, 5/16-18 Hex	
16	446130	4	Lockwasher, 1/4 Heavy	

> Change from previous revision

## 17.1 Engine and Pump

### Diesel Engine



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	1001889	1	Diesel Engine (Kubota D662)	67043-1601~4995
1	4143350	1	Diesel Engine (Kubota D662)	67043-4996 and Up
2	5002644	1	• Oil Filter Cartridge	
3	4127309.7	1	Engine Front Bracket	
4	2811637.7	1	Engine Rear Bracket	
5	452008	8	Flat Washer, 3/8	
6	363485	8	Lockwasher, M10	
7	362263	8	Bolt M10-1.25 x 25mm	
8	2810499.7	1	Engine Pulley	
9	446136	8	Lockwasher, 5/16 Hvy	
10	2810545	5	Screw, SKT Button Cap	
11	2809727	1	Clutch	
12	4130754.7	1	Pump Mount Bracket	
13	1000970	1	Hydraulic Pump, Reel	See 36.1 for Service Parts
14	400226	4	Screw, 5/16-24 x 1" Hex Head	
15	3001950	1	V-Belt	
16	364501	1	Temperature Sender	Reference <b>U5</b>
17	446128	1	Lockwasher, 1/4	
18	361001	1	Nut, M6-1	
19	4141024	1	Fan, Engine Cooling	67043-4996 and Up
20	4125492	1	Spacer, Fan	67043-4996 and Up
21	363448	4	Screw, M6-1 x 35 mm Hex Head	67043-4996 and Up
22	446130	4	Lockwasher, 1/4 Heavy	67043-4996 and Up
23	452004	4	Flat Washer, 1/4	67043-4996 and Up
<p>● 67043-1601~3969 units updated with 4123033 Muffler Kit and 4124824 Stay Bar Kit</p>				

> Change from previous revision



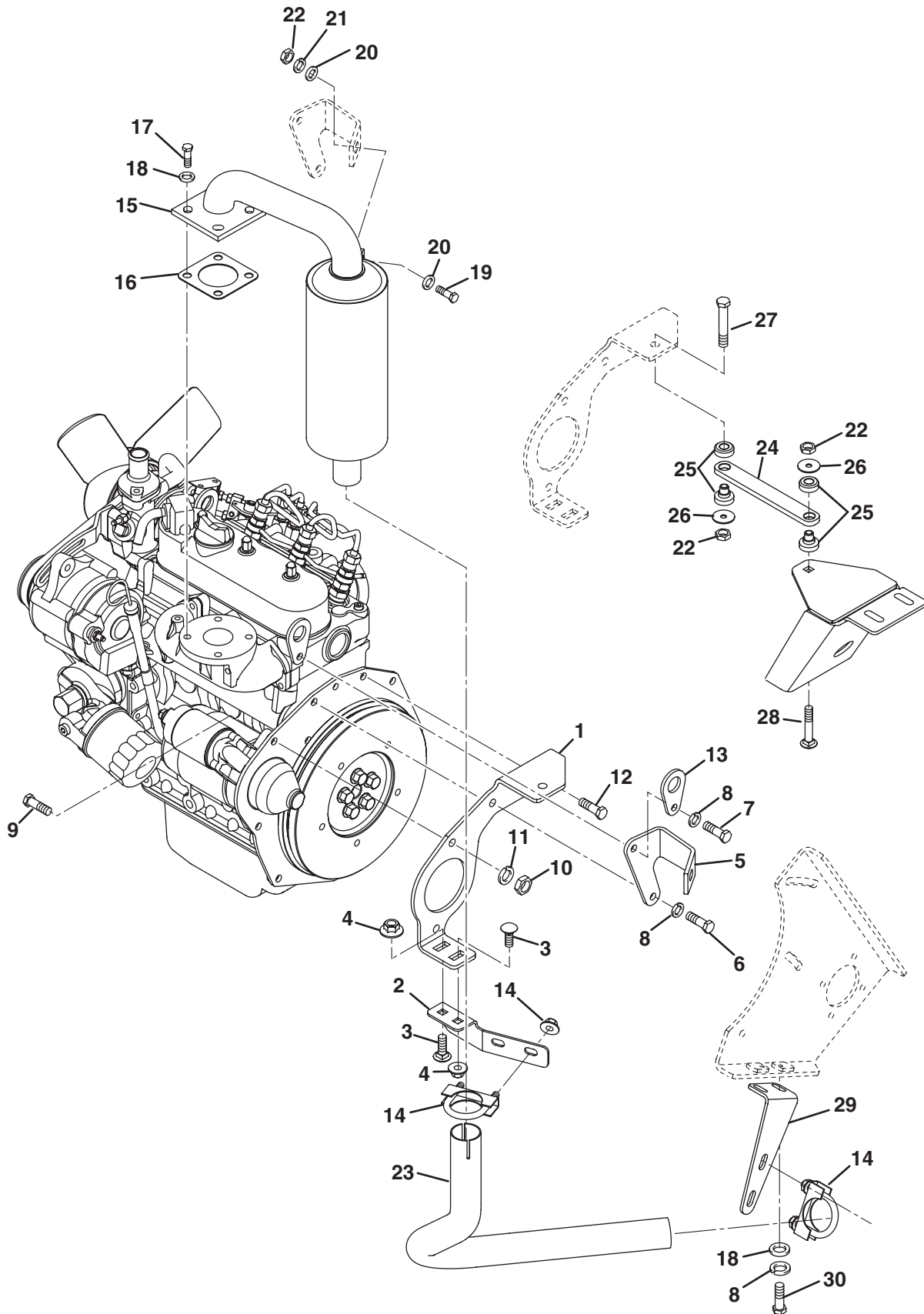


Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	346006	1	Cable, Grounding	
2	400190	2	Screw, 5/16-18 x 1-1/4" Hex Head	
3	400272	4	Screw, 3/8-16 x 2-1/4" Hex Head	
4	3004523	4	Mount, Isolation	
5	3004526	4	Washer, Mount Isolator	
6	4121872.7	1	Bracket, Heat Shield	
7	4121856.7	1	Muffler Shield	
8	446142	4	Lockwasher, 3/8 Hvy	
9	452004	4	Flat Washer, 1/4	
10	443110	4	Nut, 3/8-16 Hex	
11	444718	2	Locknut, 5/16-18 Center	
12	361005	3	Bolt, M8-1.25 x 25mm	
13	446136	13	Lockwasher, 5/16 Hvy	
14	400108	2	Screw, 1/4-20 x 3/4" Hex Head	
15	446130	6	Lockwasher, 1/4 Heavy	
16	443102	2	Nut, 1/4-20 Hex	
17	400106	4	Screw, 5/16-18 x 5/8" Hex Head	
18	443106	1	Nut, 5/16 Hex	
19	452006	5	Flat Washer, 5/16	
20	457016	6	Washer, 5/16 x 1/16"	
21	400186	8	Screw, 5/16-18 x 3/4" Hex Head	
<p>● 67043-1601~3969 units updated with 4123033 Muffler Kit and 4124824 Stay Bar Kit</p>				

> Change from previous revision

## 19.1 Diesel Engine Exhaust

Diesel Engine

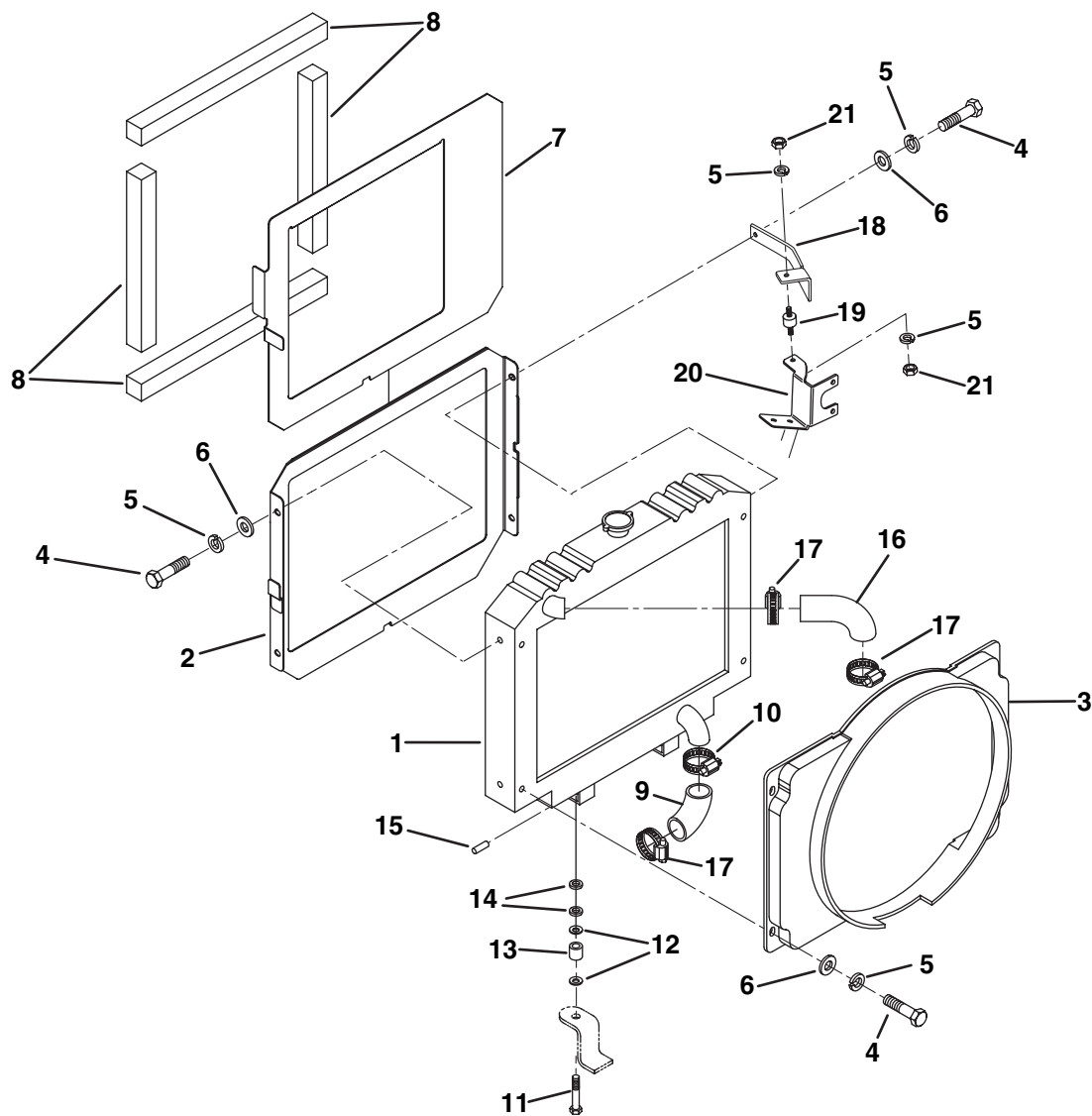


Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4130755	1	Bracket, Muffler	
2	4130753	1	Bracket, Muffler	
3	441602	2	Carriage Bolt, 5/16-18 x 3/4"	
4	445795	2	Nut, 5/16-18 Spirallock Flange	
5	4121007.7	1	Bracket, Muffler	
6	361005	1	Screw, M8-1.25 x 25 mm Hex Head	
7	363586	1	Screw, M8-1.25 x 20 mm Hex Head	
8	446136	10	Lockwasher, 5/16 Heavy	
9	550383	2	Bolt, Starter	Included with Engine
10	550398	2	Nut	Included with Engine
11	550409	2	Washer, Spring	Included with Engine
12	550376	1	Bolt	Included with Engine
13	553934	1	Hook, Engine	Included with Engine
14	1002033	2	Exhaust Clamp	
15	4121920	1	Muffler	
16	553020	1	Gasket, Exhaust	Included with Engine
17	594331	4	Bolt, Muffler	Included with Engine
18	452006	6	Flat Washer, 5/16	
19	400264	1	Screw, 3/8-16 x 1-1/4" Hex Head	
20	452008	2	Flat Washer, 3/8	
21	446142	1	Lockwasher, 3/8 Heavy	
22	444762	3	Locknut, 3/8-16 Center	
23	4123003	1	Pipe, Exhaust	
24	4130756	1	Stay Bar, Engine	
25	4124806	2	Mount, Bonded Tube Isolator	
26	319755	2	Washer	
27	400270	1	Screw, 3/8-16 x 2" Hex Head	
28	441630	1	Carriage Bolt, 3/8-16 x 2"	
29	4130757	1	Bracket, Tailpipe	
30	400186	2	Screw, 5/16-18 x 7/8" Hex Head	
<p>● 67043-1601~3969 units updated with 4123033 Muffler Kit and 4124824 Stay Bar Kit</p>				

> Change from previous revision

## 20.1 Radiator Installation

Diesel Engine



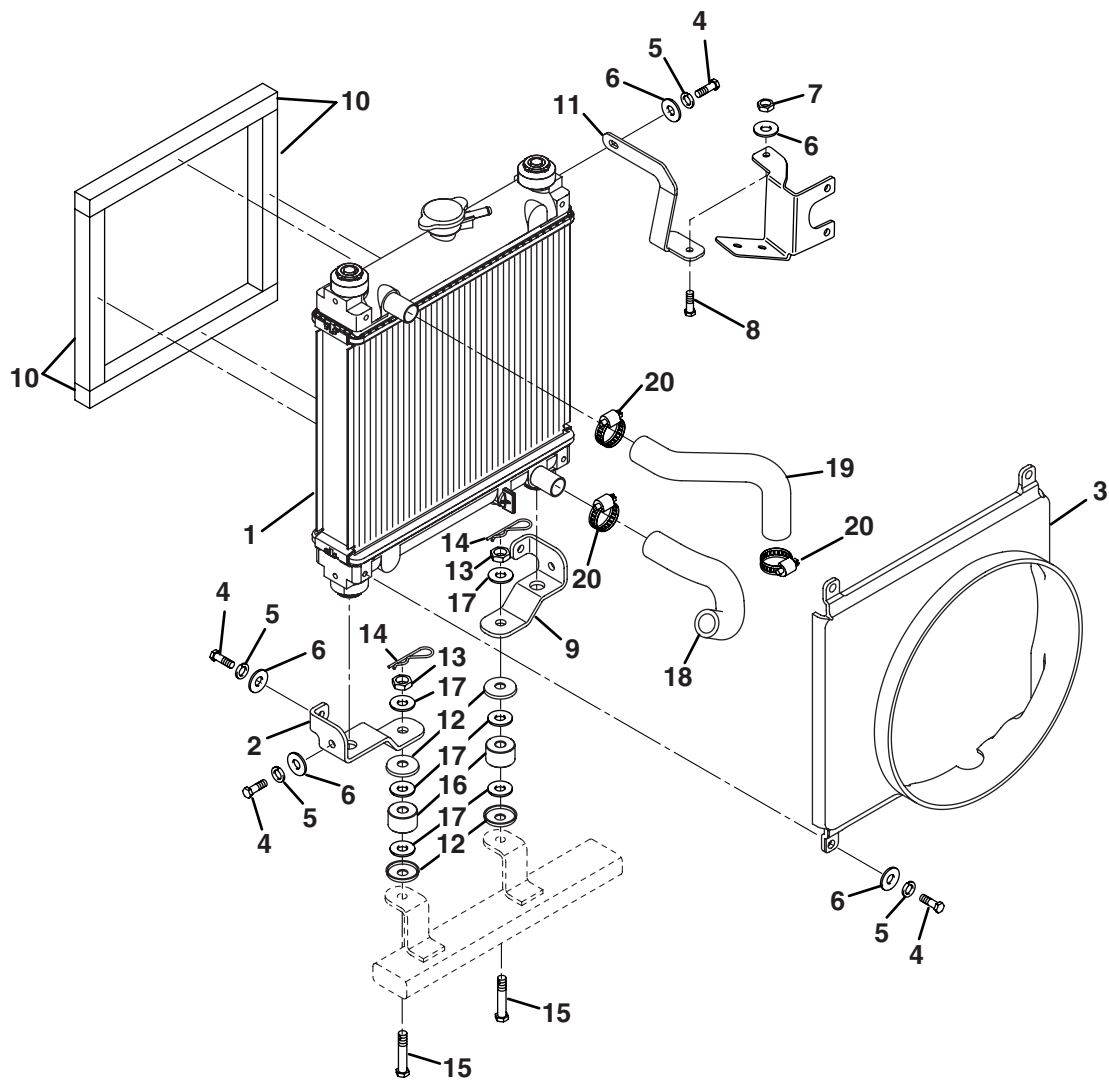
Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	554896	1	Radiator	
2	1002101.7	1	Front Shroud	
3	5001666	1	Rear Shroud	
4	355174	8	Bolt, M6-1 x 12mm	
5	446130	10	Lockwasher, 1/4 Hvy	
6	452004	8	Flat Washer, 1/4	
7	1001964.7	7	Front Slide Shroud	
8	3004187	AR	Weather Strip	
9	557578	1	Lower Hose	
10	557563	1	Hose Clamp	
11	554244	2	Bolt	
12	553887	4	Cup Washer	
13	553886	2	Cushion	
14	452008	AR	Flat Washer, 3/8	
15	553859	2	Snap Pin	
16	554241	1	Upper Hose	
17	554083	3	Hose Clamp	
18	2810662	1	Radiator Support	
19	3006127	1	Iso-Mount, Radiator	
20	REF	1	Bracket, Solenoid	See 10.1
21	443102	2	Nut, 1/4-20 Hex	

> Change from previous revision

## 20.2 Radiator Installation

Diesel Engine

Serial No. 67043-4996 and Up

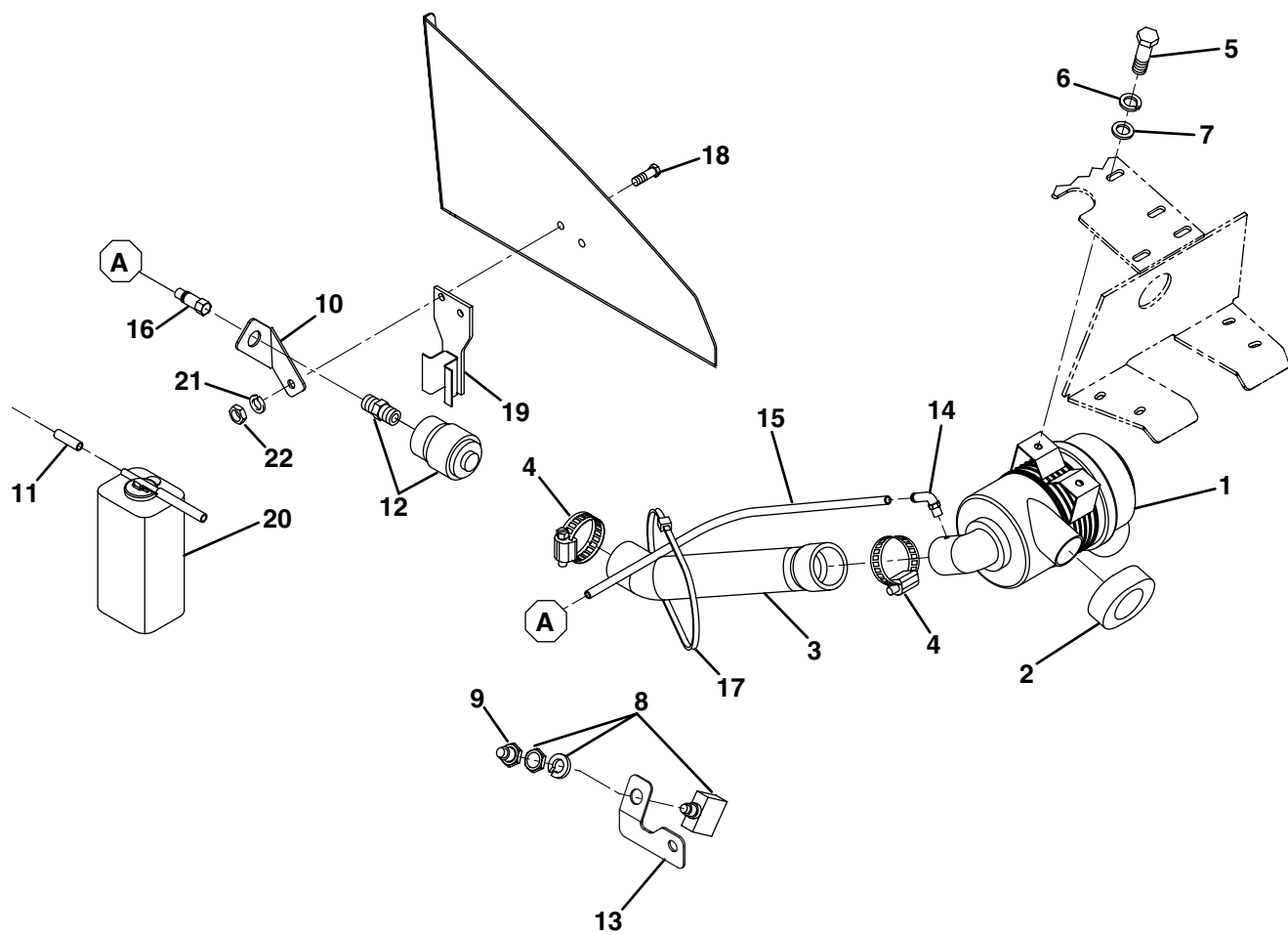


Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4141036	1	Radiator	
2	4150417	1	Bracket, Radiator Mount	
3	4140846	1	Fan Shroud	
4	362535	9	Bolt, M6-1 x 16mm	
5	446130	9	Lockwasher, 1/4 Hvy	
6	452004	10	Flat Washer, 1/4	
7	444708	1	Locknut, 1/4-20 Hex Center	
8	400108	1	Screw, 1/4-20 x 3/4" Hex Head	
9	4150418	1	Bracket, Radiator Mount	
10	4149217	AR	Weather Strip	
11	4140788	1	Bracket, Upper Radiator Mount	
12	553887	4	Washer, Cup	
13	443810	2	Nut, 3/8-16 Hex Jam	
14	460312	2	Hain Pin	
15	4150598	2	Screw, 3/8-16 x 2" Hex Head	Hole in end for hairpin
16	553886	2	Cushion, Radiator	
17	452008	6	Flat Washer, 3/8	
	4141392	1	Radiator Hose Kit	
18	N/S	1	• Lower Hose	
19	N/S	1	• Upper Hose	
20	319914	4	• Hose Clamp	

> Change from previous revision

## 21.1 Air Filter and Circuit Breaker

Diesel Engine

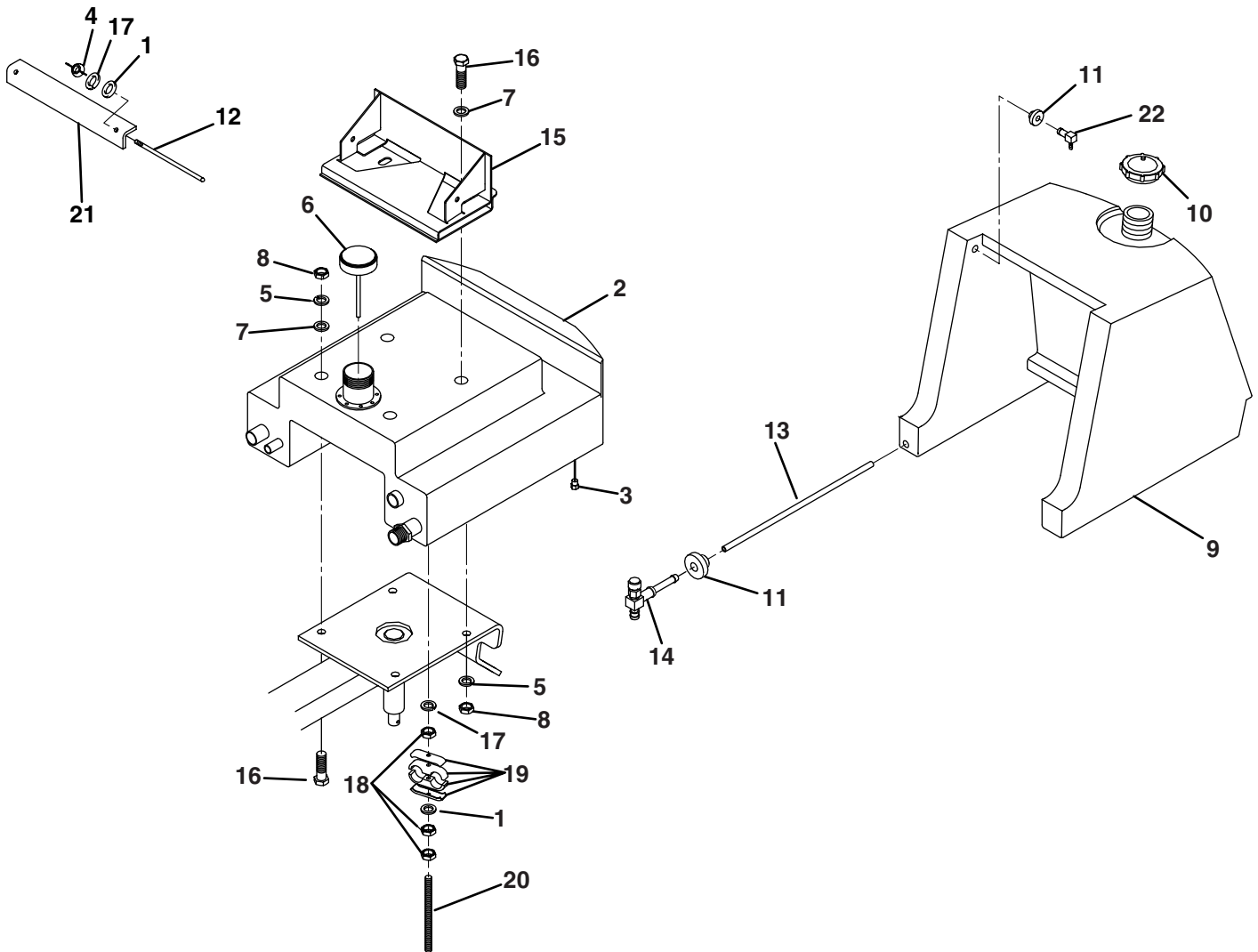




Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	1001354	1	Air Cleaner	
	5000913	1	• Air Cleaner Element	
	5000912	1	• Cover	
	5000914	1	• Valve	
2	3002862	1	Foam Ring	
3	3002863	1	Air Intake Hose	
4	326112	2	Hose Clamp	
5	361005	2	Bolt, M8-1.25 x 25mm	
6	446136	2	Lockwasher, 5/16 Hvy	
7	452006	2	Flat Washer, 5/16	
8	3000359	1	Circuit Breaker, 50 Amp	Reference <b>CB1</b>
9	364774	1	Protector Boot	
10	3004256	1	Bracket	
11	364703	1	Over Flow Hose, 30" Long	
12	1001752	1	Air Cleaner Indicator/Adapter	
13	REF	1	Bracket, Circuit Breaker	See 18.1
14	3004253	1	Male Elbow	
15	5002126	1	Tube	
16	3004333	1	Bulkhead Fitting	
17	473142	1	Nylon Tie	
18	400260	2	Screw, 3/8-16 x 7/8" Hex Head	
19	557580	1	Tank Support	
20	553926	1	Reserve Tank	
21	446142	2	Lockwasher, 3/8 Hvy	
22	443110	2	Nut, 3/8-16 Hex	

> Change from previous revision

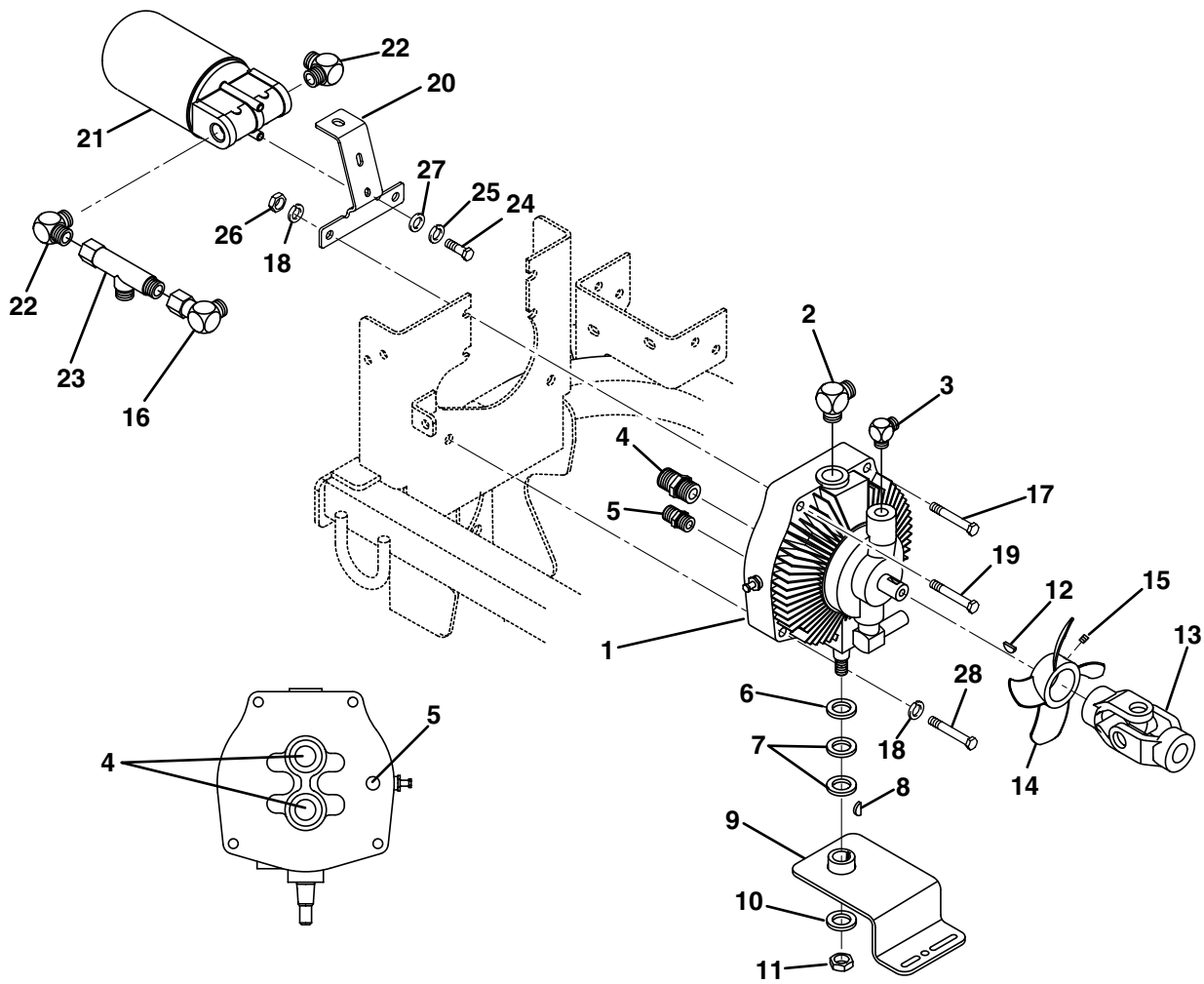
## 22.1 Tanks



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	452004	3	Flat Washer, 1/4	
2	1002019.6	1	Hydraulic Oil Tank	
3	3002397	1	Magnetic Plug	
4	445612	2	Nut, 1/4-20 Wing	
5	446154	4	Lockwasher, 1/2 Hvy	
6	2809688	1	Fill Breather Cap	
	5003624	1	• Gasket	
7	344132	4	Flat Washer	
8	443118	4	Nut, 1/2-13 Hex	
9	1002127	1	Fuel Tank	Gas
9	1001134	1	Fuel Tank	Diesel
>	10	1003477	Fuel Cap	Gas
>	10	4106900	Fuel Cap	Diesel
	11	361117	Fuel Tank Bushing	Gas
	11	361117	Fuel Tank Bushing	Diesel
	12	346361	Battery Hold Down	
	13	325822	Fuel Line, 14" x 1/4" I.D.	
	14	1001311	Fuel Shut Off Valve	
	15	1000973	Battery Bracket	
	16	400424	Screw, 1/2-13 x 4-1/2" Hex Head	
	17	446130	Lockwasher, 1/4 Hvy	
	18	443102	Nut, 1/4-20 Hex	
	19	3003473	Hose Clamp	
	20	3003665	Stud, 1/4-20 x 2-3/4"	
	21	3003444	Battery Retainer	
	22	361748	Valve Overflow	Diesel

> Change from previous revision

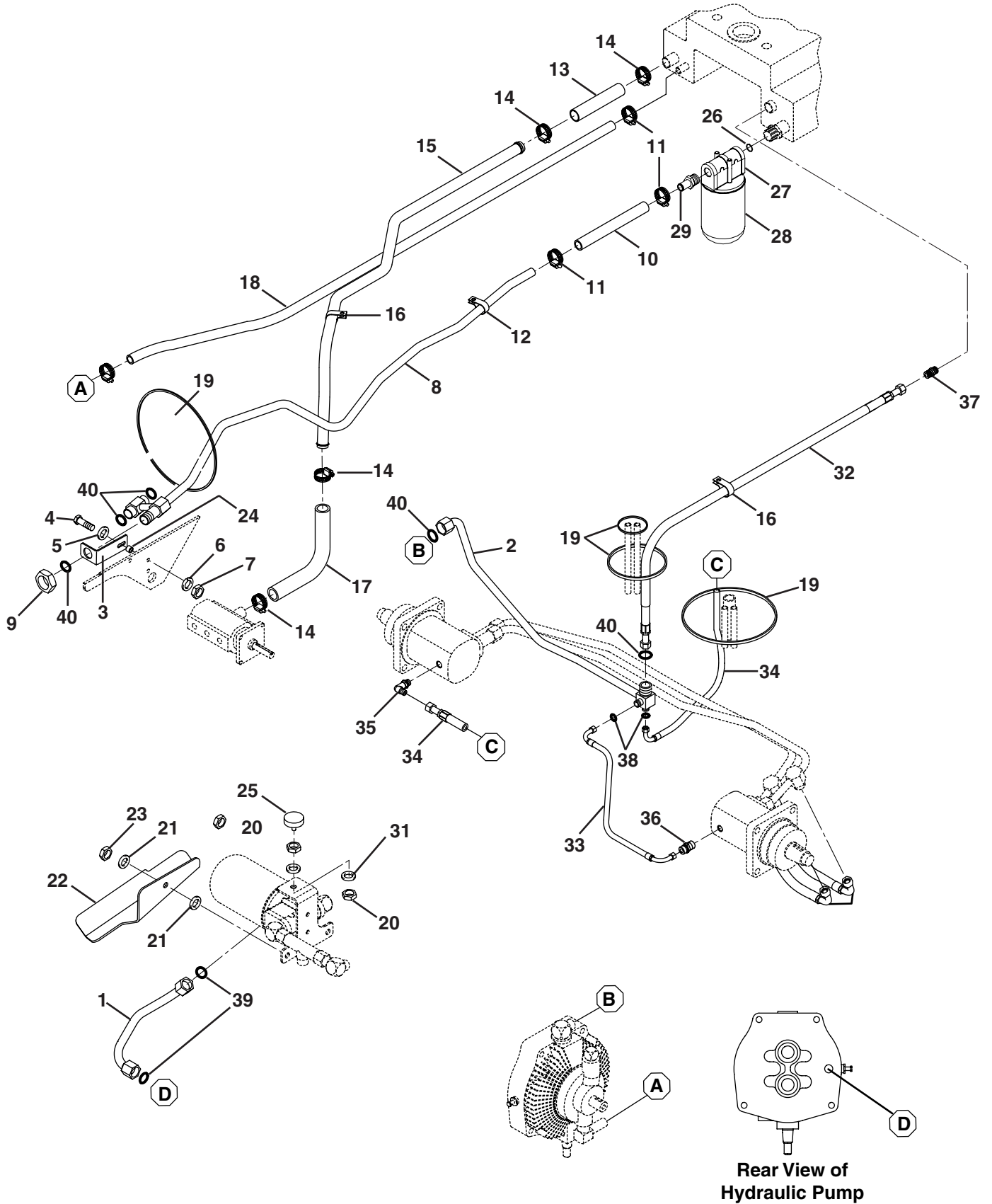
## 23.1 Hydro Pump and Charge Filter



Item	Part No.	Qty.	Description	Serial Numbers/Notes	
>	1	4120764	1	Hydraulic Pump	Gas, SN 67042 All, See 38.1
>	1	4120764	1	Hydraulic Pump	Diesel, SN 67043-1601 ~ 4250, See 38.1
>	1	4129590	1	Hydraulic Pump	Diesel, SN 67043 4251 and Up, See 38.1
	2	340070	1	Adapter, 90°	
	3	340061	1	Adapter, 90°	
	4	339989	2	Adapter, Straight	
	5	339983	1	Adapter, Straight	
	6	307374	1	Washer	
	7	454001	2	Spring Washer	
	8	463005	1	Key, 1/8 x 5/8" Woodruff	
	9	1004901	1	Traction Arm	Gas
>	9	1004900	1	Traction Arm	Diesel
	10	453017	1	Flat Washer, 1/2	
	11	444758	1	Locknut, 1/2-13 Center	
	12	463109	1	Key, 3/16 x 5/8" Morton	Gas, 67042 All
>	12	463109	1	Key, 3/16 x 5/8" Morton	Diesel, 67043-1601 ~ 4250
	12	463113	1	Key, 3/16 x 3/4" Morton	Diesel, 67043 4251 and Up
	13	1002050	1	Universal Joint	Gas, 67042 All
	13	1001630	1	Universal Joint	Diesel, 67043-1601 ~ 4250
	13	4129589	1	Universal Joint	Diesel, 67043 4251 and Up
		554663	1	• Cross and Bearing Kit	
	14	4129588	1	Fan	
	15	412020	2	Screw, 5/16-18 x 1" Set	
	16	340376	1	Adapter, 90°	Gas
	17	400274	1	Screw, 3/8-16 x 2-1/2" Hex Head	
	18	446142	4	Lockwasher, 3/8 Hvy	
	19	400276	1	Screw, 3/8-16 x 3" Hex Head	
>	20	2810439	1	Bracket	
	21	1001148	1	Filter Assembly	
		549597	1	• Filter Cartridge	
	22	340068	2	Adapter, 90°	
	23	340120	1	Adapter, Tee	
	24	400108	2	Screw, 1/4-20 x 3/4" Hex Head	
	25	446130	2	Lockwasher, 1/4 Hvy	
	26	443110	2	Nut, 3/8-16 Hex	
	27	452004	2	Flat Washer, 1/4	
	28	400272	2	Screw, 3/8-16 x 2-1/4" Hex Head	

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**24.1 Pump Suction and Return Hydraulics**  
Gas Engine



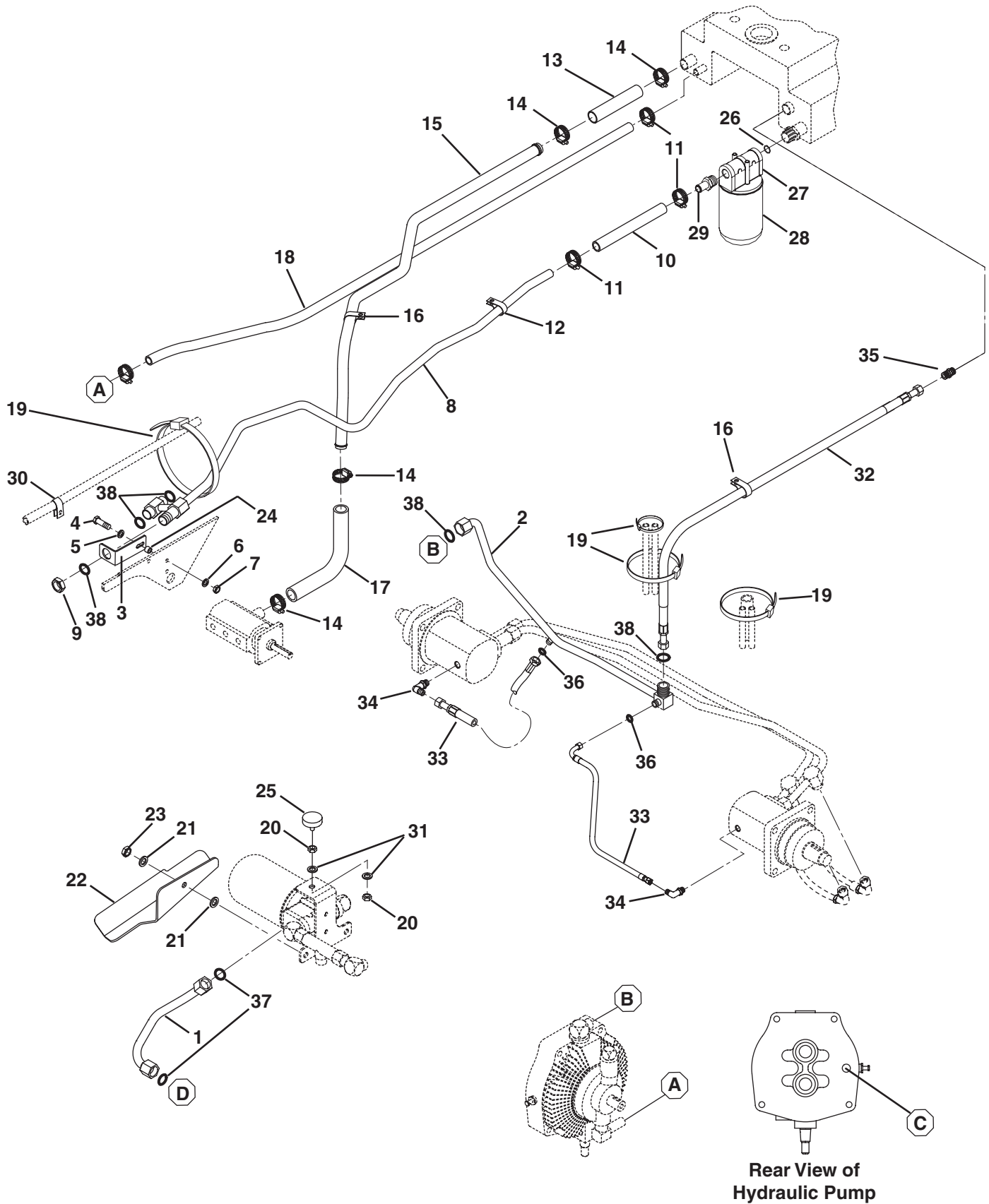
**Rear View of Hydraulic Pump**

Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	1001372	1	Tube, Filter to Pump	
2	1002047	1	Tube, Pump Return	
3	3004182.7	1	Angle	
4	400190	1	Screw, 5/16-18 x 1-1/4" Hex	
5	452006	2	Flat Washer, 5/16	
6	446136	2	Lockwasher, 5/16 Hvy	
7	443106	2	Nut, 5/16-18 Hex	
8	1001147	1	Tube, Reel Motor Return	
9	339963	1	ORS Bulkhead Locknut	
10	3003218	1	Hose	
11	108094-02	4	Clamp	
12	345671	1	Hose Clamp	
13	3003113	1	Hose	
14	367458	4	Hose Clamp	
15	3003115	1	Tube, Suction	
16	354080	3	Hose Clamp	
17	3004655	1	Formed Hose	
18	3003219	1	Hose, Suction	
19	473142	4	Nylon Tie	
20	443810	2	Nut, 3/8-16 Hex Jam	
21	452008	2	Flat Washer, 3/8	
22	3003223	1	Drain Shield	
23	444762	1	Locknut, 3/8-16 Center	
24	3004410	1	Spacer	
25	361723	1	Rubber Stop	
26	339900	1	O-Ring	
27	1001148	1	Filter	
28	549597	1	• Filter Element	
29	3003256	1	Adapter, Beaded Tube	
30				
31	453011	2	Washer, 3/8 Flat	
32	1001503	1	Hydro Return Hose	
33	1002263	1	L. Traction Motor Drain Hose	
34	1001487	1	R. Traction Motor Drain Hose	
35	340055	3	Adapter, 90°	
36	339972	1	Adapter Straight	
37	339989	1	Adapter, Straight	
38	339908	2	O-Ring, #4 ORFS	
39	339910	2	O-Ring, #8 ORFS	
40	339912	5	O-Ring, #10 ORFS	

> Change from previous revision

## 25.1 Pump Suction and Return Hydraulics

Diesel Engine





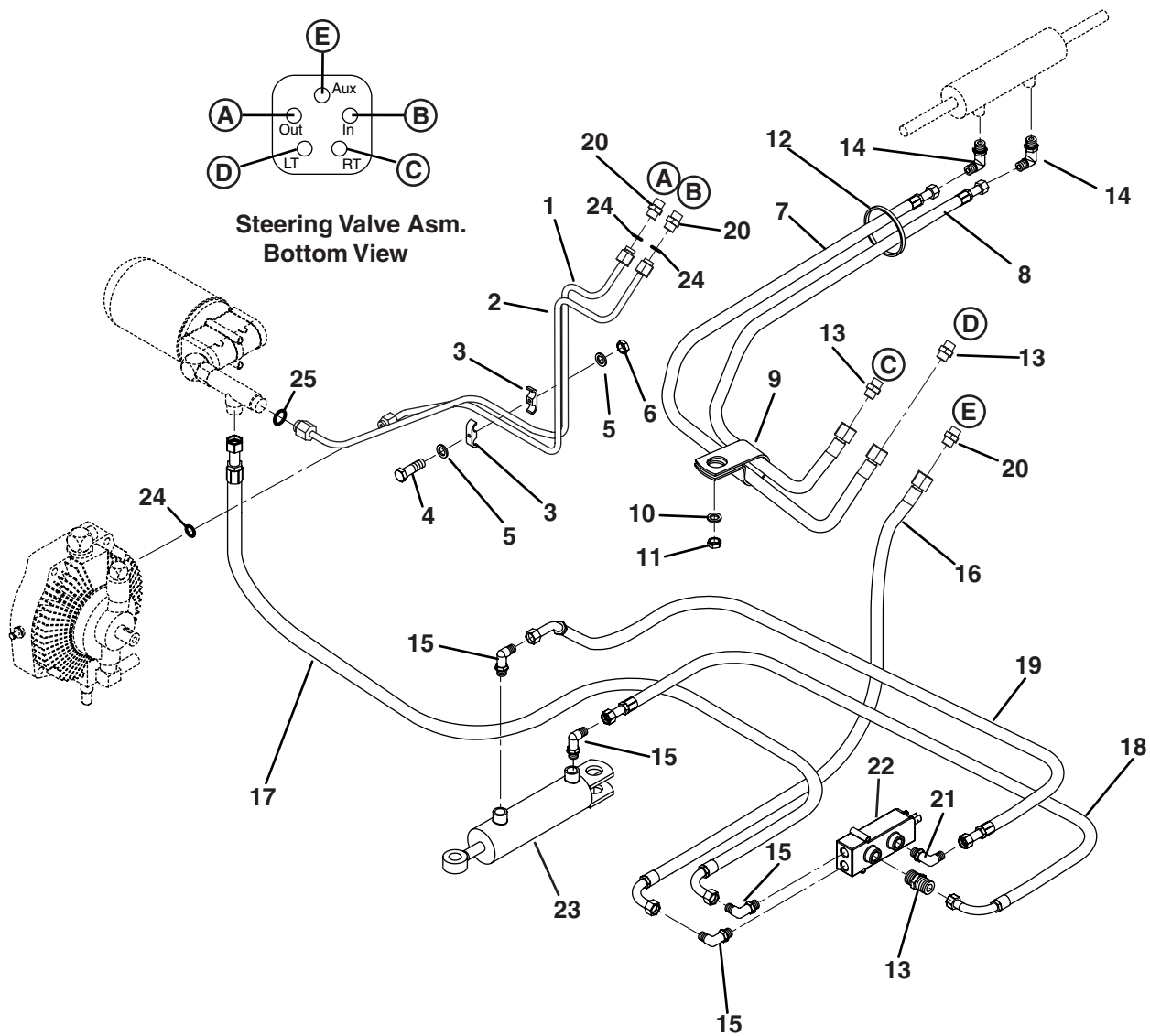
Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	1001372	1	Tube, Filter to Pump	
2	2809725	1	Tube, Pump Return	
3	3004182	1	Angle	
4	400188	2	Screw, 5/16-18 x 1" Hex Head	
5	452006	2	Flat Washer, 5/16	
6	446136	2	Lockwasher, 5/16 Hvy	
7	443106	2	Nut, 5/16-18 Hex	
8	1001147	1	Tube, Reel Motor Return	
9	339963	1	ORS Bulkhead Locknut	
10	3003218	1	Hose	
> 11	108094-02	4	Clamp	
12	345671	1	Hose Clamp	
13	3003113	1	Hose	
14	367458	4	Hose Clamp	
15	3003115	1	Tube, Suction	
16	354080	3	Hose Clamp	
17	3003114	1	Formed Hose	
18	3003219	1	Hose, Suction	
19	473142	4	Nylon Tie	
20	443810	2	Nut, 3/8-16 Hex Jam	
21	452008	2	Flat Washer, 3/8	
22	3003223	1	Drain Shield	
23	444762	1	Locknut, 3/8-16 Center	
24	3004410	1	Spacer	
25	361723	1	Rubber Stop	
26	339900	1	O-Ring	
27	1001148	1	Filter	
28	549597	1	• Filter Element	
29	3003256	1	Adapter, Beaded Tube	
30	361064	1	Clamp Hose	
31	453011	2	Washer, 3/8 Flat	
32	1001503	1	Hydro Return Hose	
33	1001488	2	Traction Motor Drain Hose	
34	340055	4	Adaptor, 90°	
35	339989	1	Adaptor, Straight	
36	339908	2	O-Ring, #4 ORFS	
37	339910	2	O-Ring, #8 ORFS	
38	339912	5	O-Ring, #10 ORFS	

> Change from previous revision



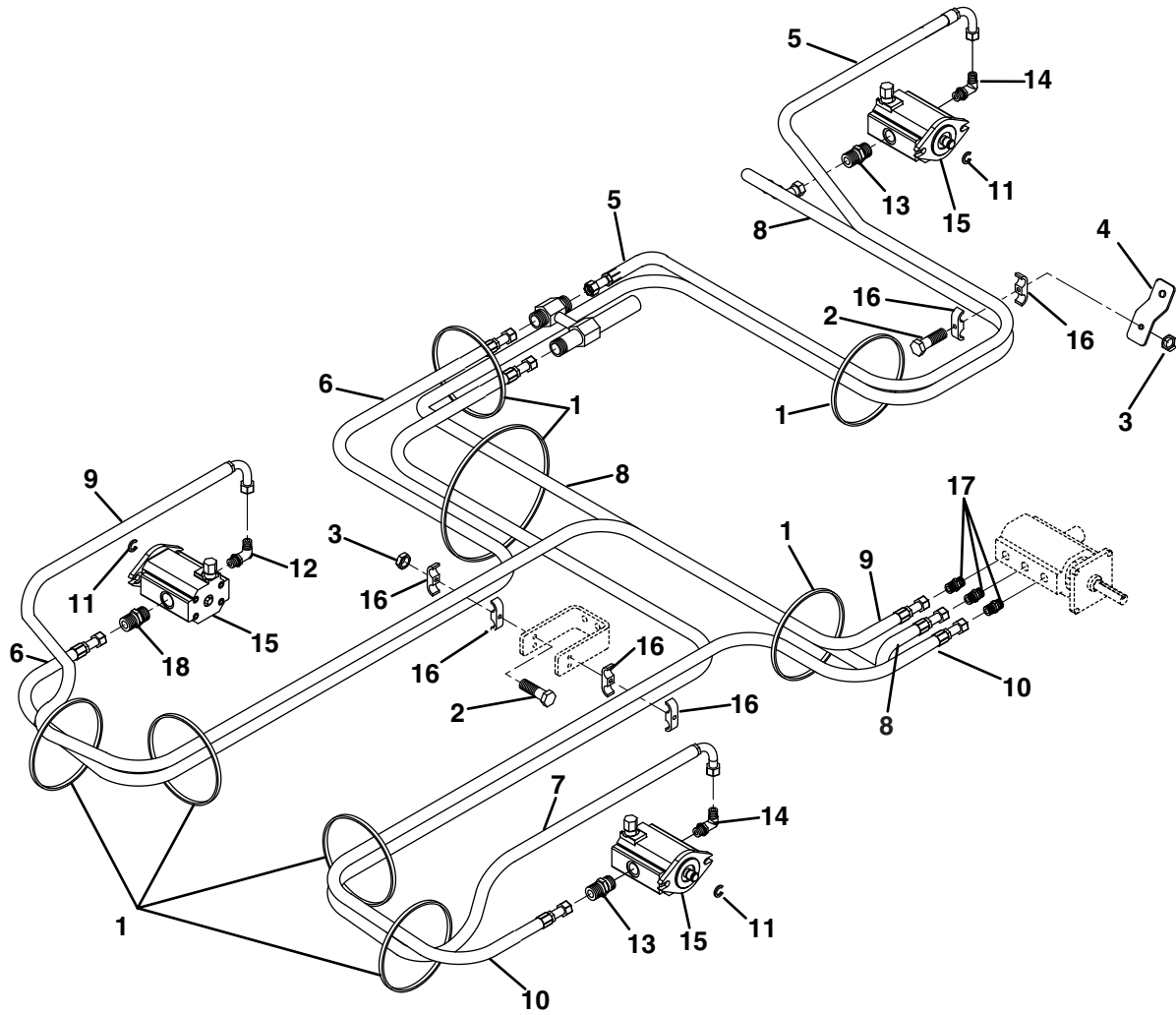
Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	1002045	1	Tube, Pump to Motor	Gas
1	2810603	1	Tube, Pump to Motor	Diesel
2	1002046	1	Tube, Pump to Motor	Gas
2	2810604	1	Tube, Pump to Motor	Diesel
3	1001370		Tube, R. Motor to L. Motor	Gas
3	2810602	1	Tube, R. Motor to L. Motor	Diesel
4	1001369		Tube, R. Motor to L. Motor	Gas
4	2810601	1	Tube, R. Motor to L. Motor	Diesel
5	3004531.7	1	Bracket	Gas
5	3003242.7	1	Bracket	Diesel
6	441668	2	Carriage Bolt, 1/4-20 x 1-1/4"	
7	452004	6	Flat Washer, 1/4	
8	444708	4	Locknut, 1/4-20 Center	
9	3003110	2	Clamp	
10	3004410	1	Spacer	
11	339989	11	Adapter, Straight	
12	340121	1	Fitting Tee	
13	340265	1	Adapter, Tee	
14	4111942	1	3WD Valve	See 39.1 for Service Parts
15	1001496	2	Rear Motor Hose	
16	1001495	2	Traction Hose	
17	473142	4	Nylon Tie	
18	400116	2	Screw, 1/4-20 x 1-1/2" Hex Head	
19	339911	10	O-Ring, #10 ORFS	

> Change from previous revision



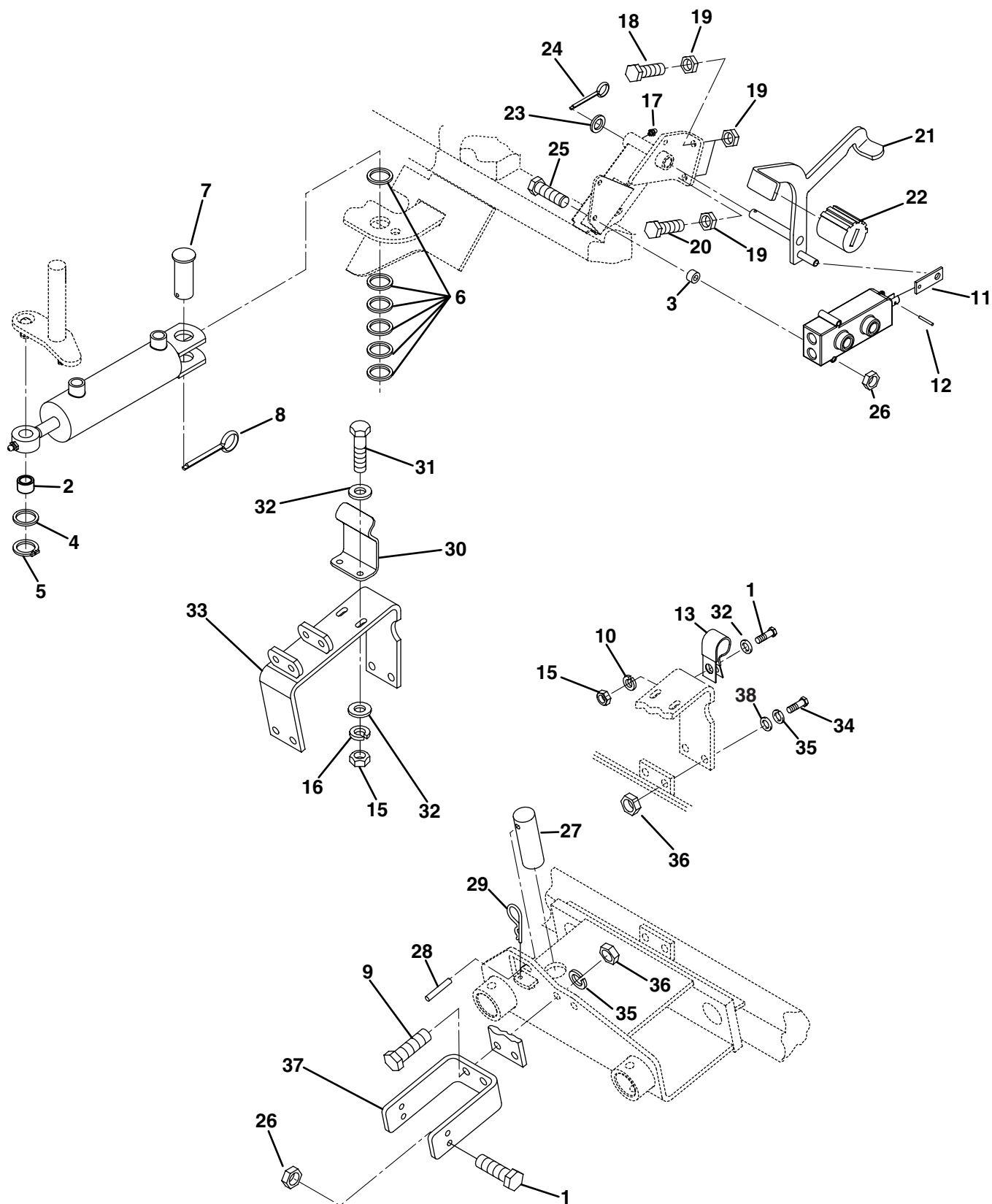
Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	1002939	2	Tube, Steering Valve to Filter	Gas
1	1002944	1	Tube, Steering Valve to Filter	Diesel
2	1002938	1	Tube, Steering Valve to Pump	Gas
2	2811063	1	Tube, Steering Valve to Pump	Diesel
3	364221	1	Clamp	
4	400114	1	Screw, 1/4-20 x 1-1/4" Hex Head	
5	452004	2	Flat Washer, 1/4	
6	444708	1	Locknut, 1/4-20 Center	
7	1002942	1	Left Steering Hose	
8	1002941	1	Right Steering Hose	
9	354080	2	Hose Clamp	
10	446136	1	Lockwasher, 5/16 Hvy	
11	443106	1	Nut, 5/16-18 Hex	
12	473142	4	Nylon Tie	
13	339974	3	Adapter Straight	
14	340057	2	Adapter, 90°	
15	340061	4	Adapter, 90°	
16	1002943	1	Lift Cylinder Hose	Gas
16	1002940	1	Lift Cylinder Hose	Diesel
17	1001500	1	Lift Cylinder Hose	
18	1001502	1	Lift Valve Hose	
19	1001501	1	Lift Valve Hose	
20	339979	3	Adapter Straight	
21	340088	1	Adapter, 90°	
22	1001356	1	Lift Valve	
	5001419	1	• Seal Kit	
23	122759	1	Hydraulic Cylinder	
	554331	1	• Seal Kit	
24	339909	3	O-Ring, #6 ORFS	
25	339910	1	O-Ring, #10 ORFS	

> Change from previous revision



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	473142	8	Nylon Tie	
2	400120	3	Screw, 1/4-20 x 2" Hex Hd	
3	444708	3	Locknut, 1/4-20 Center	
4	3003323.7	1	Bracket	
5	1001491	1	Center Reel Motor Return Hose	
6	1001490	1	Right Reel Motor Return Hose	
7	1001489	1	Left Reel Motor Return Hose	
8	1001493	1	Center Reel Motor Pressure Hose	
9	1001494	1	Right Reel Motor Pressure Hose	
10	1001492	1	Left Reel Motor Pressure Hose	
11	2810171	3	Snap Ring	
12	340062	1	Adapter, 90°	
13	339980	2	Adapter, Straight	
14	340070	2	Adapter, 90°	
15	1002603	3	Reel Motor	See 37.1 for Service Parts
16	3003473	3	Clamp	
17	339979	3	Adapter Straight	
18	339989	1	Adapter, Straight	

> Change from previous revision

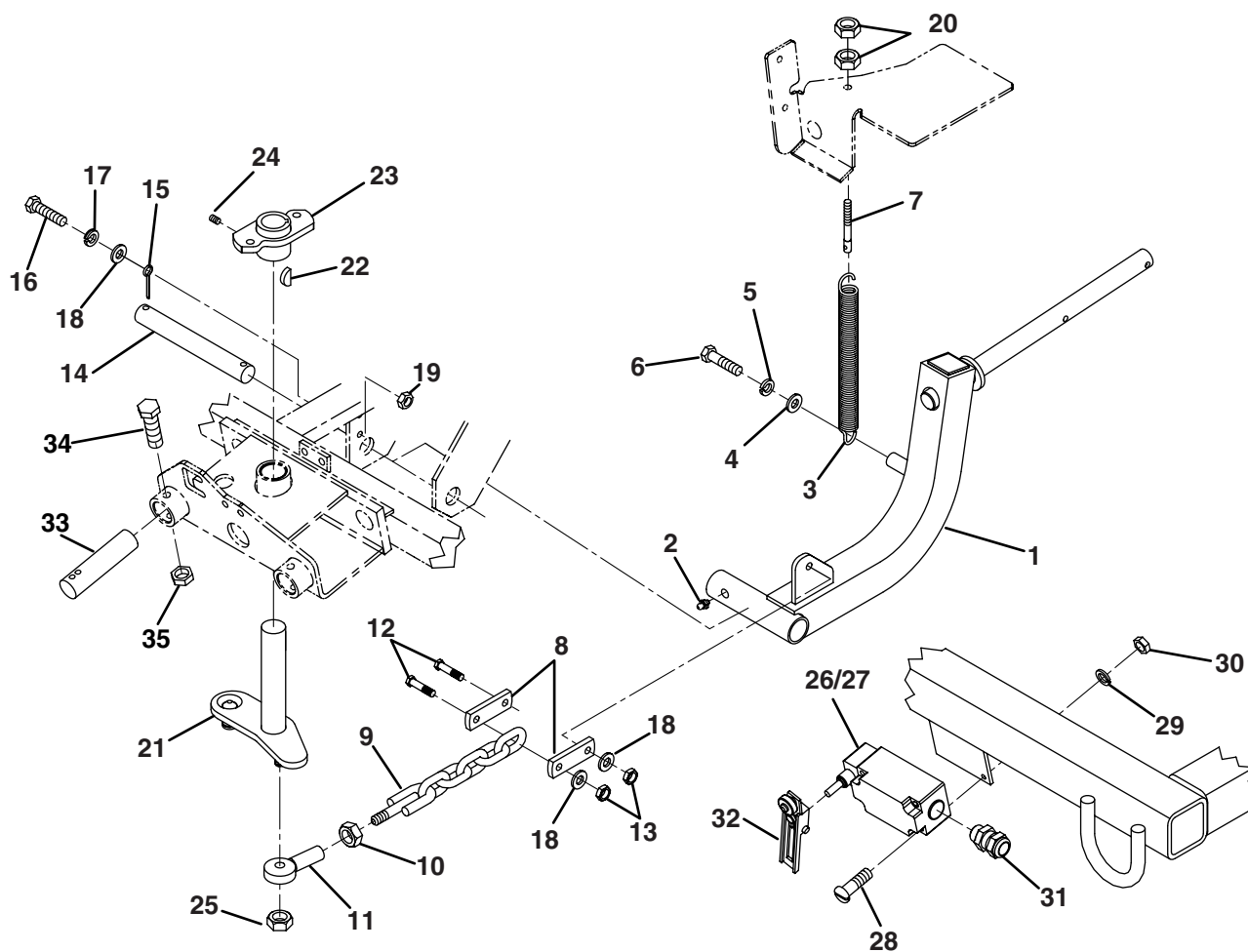




Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	400108	3	Screw, 1/4-20 x 3/4" Hex Head	Included with cylinder Gas
2	554330	1	Bronze Bushing	
3	3004410	2	Spacer	
4	307374	1	Washer	
5	458038	1	Retaining Ring	
6	345700	6	Washer	
7	364238	1	Cylinder Pin	
8	460052	1	Cotter Pin, 3/16 x 1-1/2"	
9	400264	2	Screw, 3/8-16 x 1-1/4" Hex Head	
10	446128	1	Lockwasher, 1/4	
11	3002234.7	1	Plate	
12	461379	1	Roll Pin, 3/16 x 1/2"	Not Shown
13	345671	1	Hose Clamp	
14	473142	11	Nylon Tie	
15	443102	5	Nut, 1/4-20 Hex	
16	446130	2	Lockwasher, 1/4 Hvy	
17	471214	2	Grease Fitting	
18	400192	1	Screw, 5/16-18 x 1-1/2" Hex Head	
19	443106	4	Nut, 5/16-18 Hex	
20	400190	1	Screw, 5/16-18 x 1-1/4" Hex Head	
21	1002606.7	1	Lift Pedal	
22	3003474	1	Pedal Grip	
23	453017	1	Flat Washer, 1/2	
24	460028	1	Cotter Pin, 1/8 x 1"	
25	400120	2	Screw, 1/4-20 x 2" Hex Head	
25	400118	2	Screw, 1/4-20 x 1-3/4" Hex Head	
26	444708	4	Locknut, 1/4-20 Center	
27	3003035	1	Pin	
28	461418	1	Roll Pin, 1/4-20 x 3-1/2"	
29	460335	1	Spring Clip Pin, 1/8	
30	3004679	2	Hood Centering Bracket	
31	400112	2	Screw, 1/4-20 x 1" Hex Head	
32	452004	5	Flat Washer, 1/4	Gas Diesel
33	1001176.7	1	Tab Spring Mount	
34	400264	2	Screw, 3/8-16 x 1-1/4" Hex Head	
35	446142	4	Lockwasher, 3/8 Hvy	
36	443110	4	Nut, 3/8-16 Hex	
37	3002630.7	1	Hose Bracket	
38	452006	2	Flat Washer, 3/8	

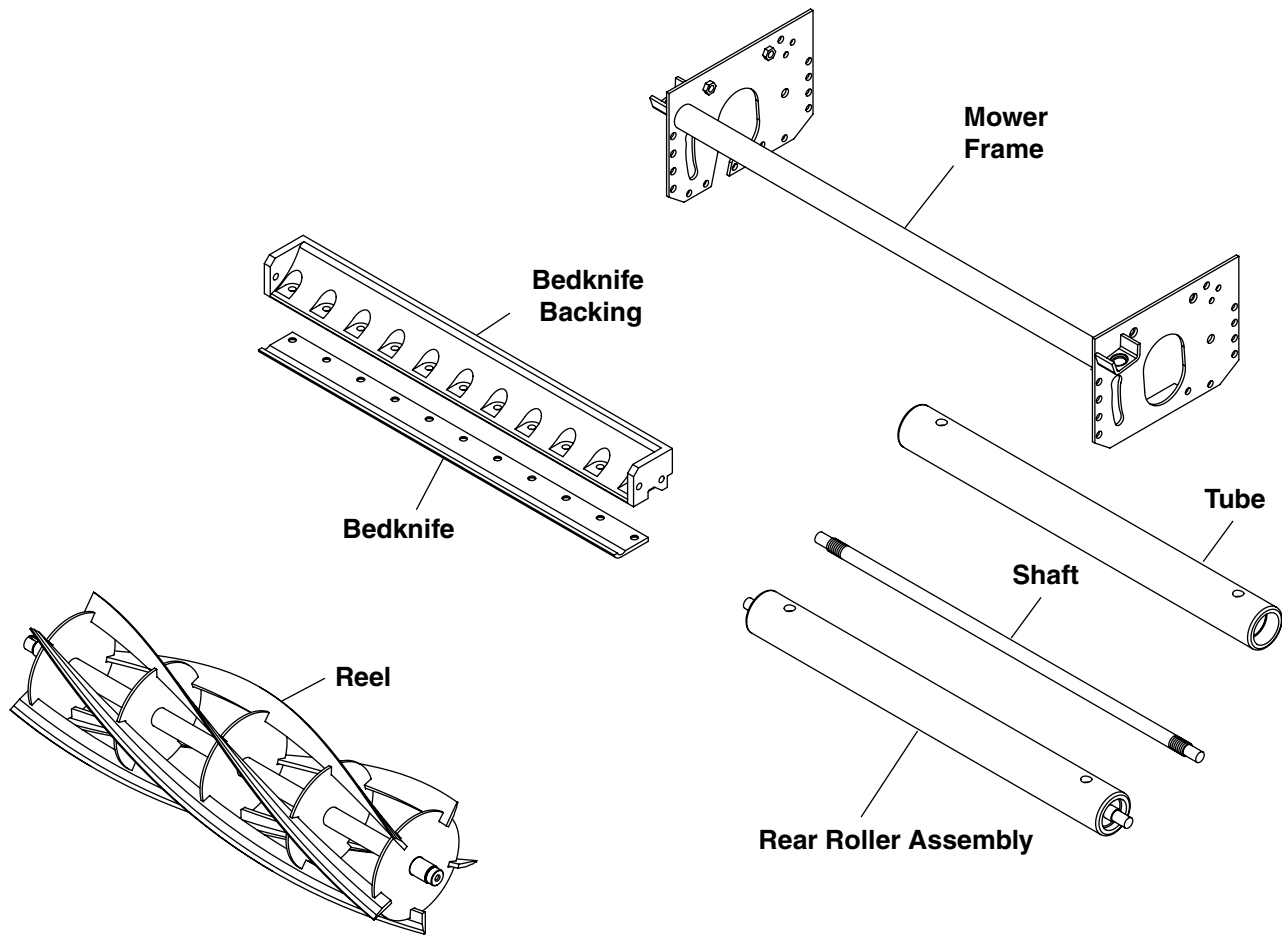
> Change from previous revision

## 29.1 Rear Lift Arm



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	1001271.7	1	Rear Lift Arm	
2	471216	1	Grease Fitting	
3	364149.7	1	Extension Spring	
4	452008	1	Flat Washer, 3/8	
5	446142	1	Lockwasher, 3/8 Hvy	
6	400262	1	Screw, 3/8-16 x 1" Hex Head	
7	3003754	1	J Bolt	
8	3001905.7	2	Plate	
9	1000956.7	1	Chain	
10	443820	1	Nut, 1/2-20 Jam	
11	364234	1	Rod End	
12	3006409	2	Bolt, 3/8-16 x 1-1/2" Grade 8	
13	445799	2	Locknut, 3/8-16 Center	
14	2809741	1	Pivot Pin	
15	460096	1	Cotter Pin, 5/16 x 1-3/4"	
16	400188	1	Screw, 5/16-18 x 1" Hex Head	
17	446136	1	Lockwasher, 5/16 Hvy	
18	452006	3	Flat Washer, 5/16	
19	443106	1	Nut, 5/16-18 Hex	
20	443110	2	Nut, 3/8-16 Hex	
21	1001258.7	1	Crank Bottom	
22	463040	1	Key, 1/4 x 1-1/4" Woodruff	
23	1001259.7	1	Lift Top Crank	
24	415519	1	Screw, 5/16-18 x 3/8" Set	
25	444780	1	Locknut, 1/2-20	
26	5000183	1	Limit Switch	Reference <b>SW4</b>
27	5000184	1	Operator Head	
28	402132	2	Screw, #10-24 x 1-3/4" Round Head	
29	446118	2	Lockwasher, #10 Hvy	
30	444310	2	Nut, #10-24 Hex	
31	364694	1	Cable Connector	
32	3001078	1	Actuator Head	
33	3002430	2	Pin	
34	400272	2	Screw, 3/8-16 x 2-1/4" Hex Head	
35	444762	2	Locknut, 3/8-16 Center	

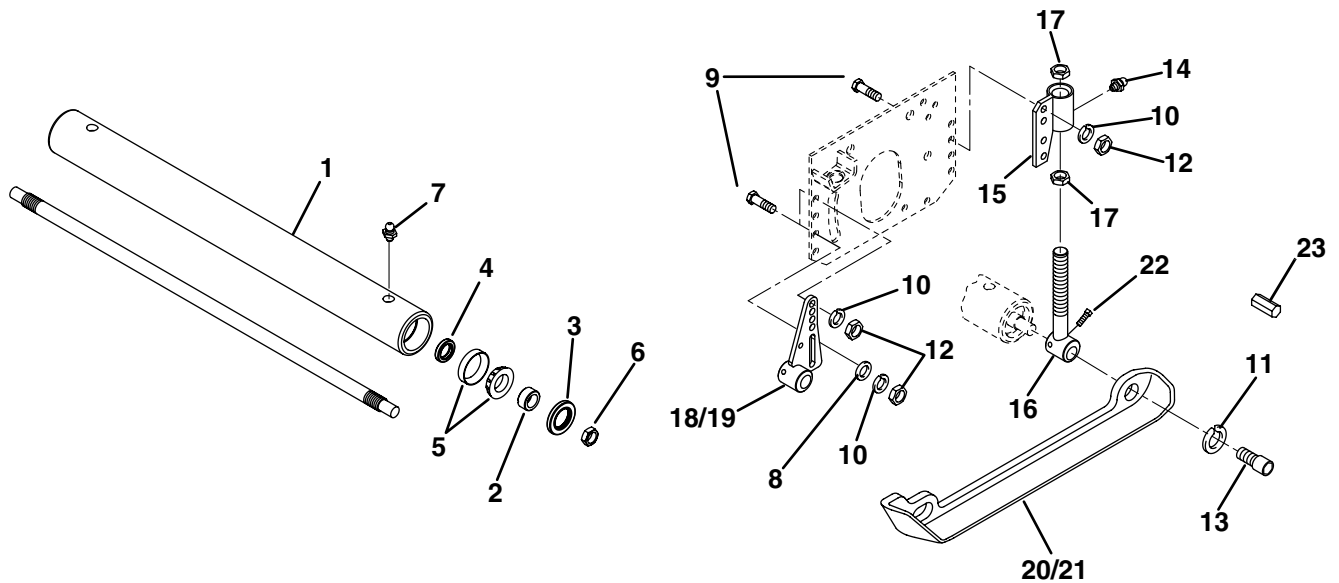
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Product Number	Size In Inches	No. of Blades	Bedknife	Bedknife Backing	Rear Roller			Location			Reel Part No.	Mower Frame
					Complete	Tube	Shaft	Left	Center	Right		
> 67114	26"	7	554284	5000616	132639	5002831	3003415	✓			5002087	1001643
> 67115										✓	5002088	1001643
> 67116									✓		5002087	1001643
> 67123	30"	7	503550	5000617	132640	5002832	3003414	✓			5002089	1001642
> 67124										✓	5002090	1001642
> 67125									✓		5002089	1001642

> Change from previous revision

**31.1 Roller Brackets and Skids**



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	REF	1	Rear Roller	
2	3005156	2	• Wear Sleeve	
3	3004882	2	• Oil Seal	
4	338647	2	• Oil Seal	
5	500534	2	• Bearing, Cup and Cone	
6	367029	2	• Nut	
7	471214	2	• Grease Fitting	
8	366653	2	Washer	
9	400264	8	Screw, 3/8-16 x 1-1/4" Hex Head	
10	446142	8	Lockwasher, 3/8 Hvy	
11	446174	4	Lockwasher, 3/4 Light	
12	443110	8	Nut, 3/8-16 Hex	
13	434002	4	Screw, 3/4-16 x 1-1/4" Socket Head	
14	471214	2	Grease Fitting	
15	3007673	2	Housing	
16	132680	2	Rear Roller Adjuster	
17	3000313	4	Adjusting Nut	
18	3008359	1	L.H. Front Roller Bracket	
19	3008360	1	R.H. Front Roller Bracket	
20	207473	1	R.H. Skid	
21	207474	1	L.H. Skid	
22	412015	2	Set Screw, 5/16-18 x 5/8"	
23	554723	1	Skid Shoe Wrench	

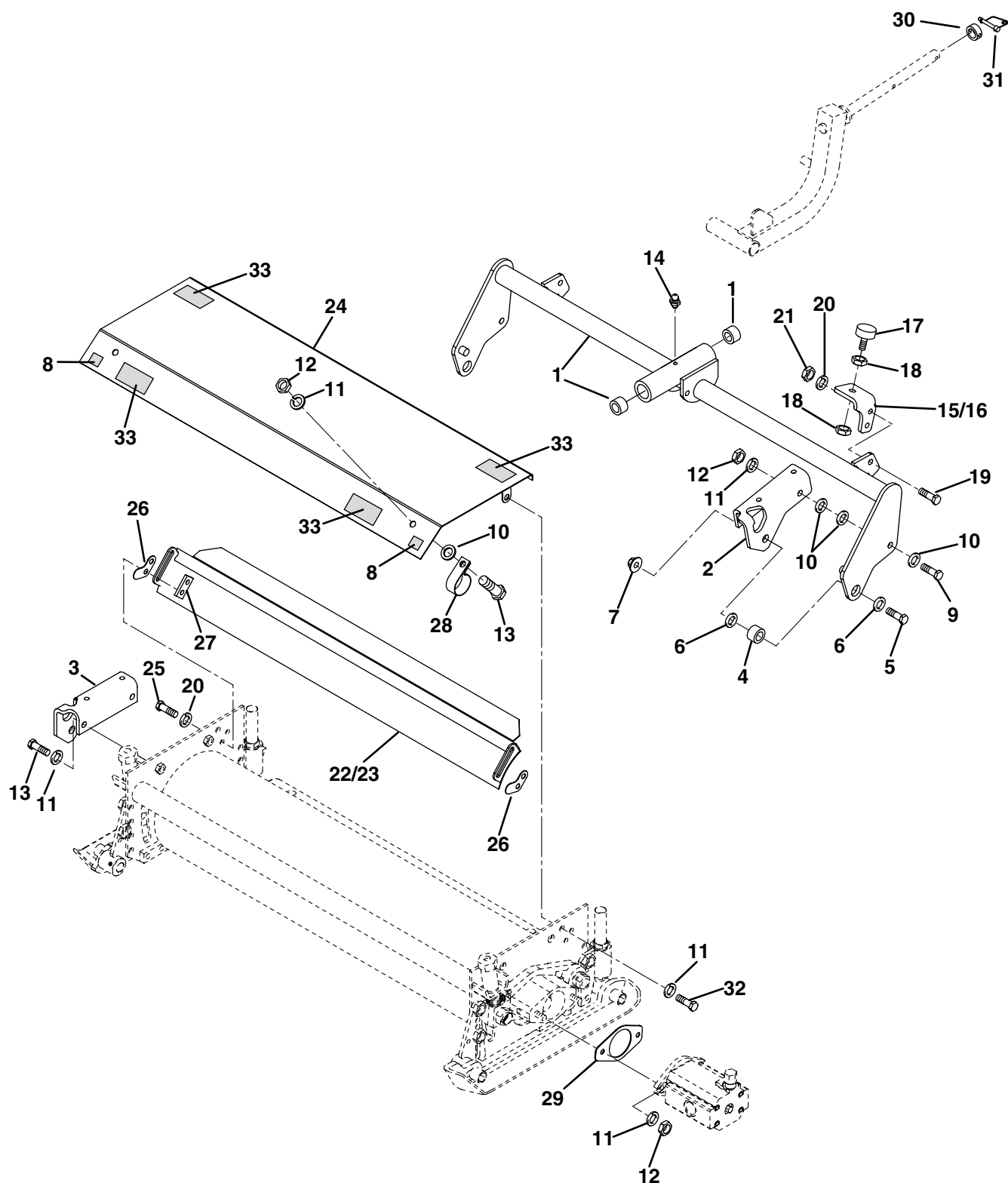
> Change from previous revision



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	5001606	1	Housing	(Includes 2 ~ 5, 8 and 9)
2	500596	2	• Bearing, Cup and Cone	
3	3000983	1	• Oil Seal	
4	3001152	1	• Washer	
5	471242	1	• Relief Fitting	
6	4128725	1	• Grease Fitting	
7	5001607	1	Housing	
8	3003086	2	• Stud	
9	471214	1	• Grease Fitting	
10	364283	1	Tube, Spacer	
11	364259	1	Washer, Bearing Retainer	
12	400264	2	Screw, 3/8-16 x 1-1/4" Hex Head	
13	446142	6	Lockwasher, 3/8 Hvy	
14	364147	1	Gasket, Cover	
15	338585	1	Cover	
16	446116	4	Lockwasher, #10	
17	434038	4	Screw, #10-24 x 1/2"	
18	3003611	2	Adjusting Nut	
19	365995	2	Washer	
20	3004189	2	Adjusting Screw	
21	3003517	2	Shoulder Bolt	
22	3004370	2	Locknut, 3/4-16 Thin Security	
23	434031	2	Screw, 1/4-20 x 3/4" Socket Head	
24	364151	2	Wave Washer	
25	472519	2	Plug	
26	445718	2	Nut, 5/8-18 Hex Stover Lock	
27	400258	4	Screw, 3/8-16 x 3/4" Hex Head	
28	364282	1	Support Plate	
29	306828	2	Washer	
30	3003389	2	Housing, Pivot Bushing	
31	400446	2	Screw, 1/2-20 x 2" Hex Head	
32	445789	2	Nut, 1/2-20 Spiralock	
33	458039	1	External Snap Ring	
34	503684	1	Motor Coupler	
35	3005890	4	Wheel Bolt	
36	445684	AR	Locknut	
37	3007308	AR	Screw	
38	364148	1	Compression Spring	

> Change from previous revision

## 33.1 Shields and Center Pivot Arm

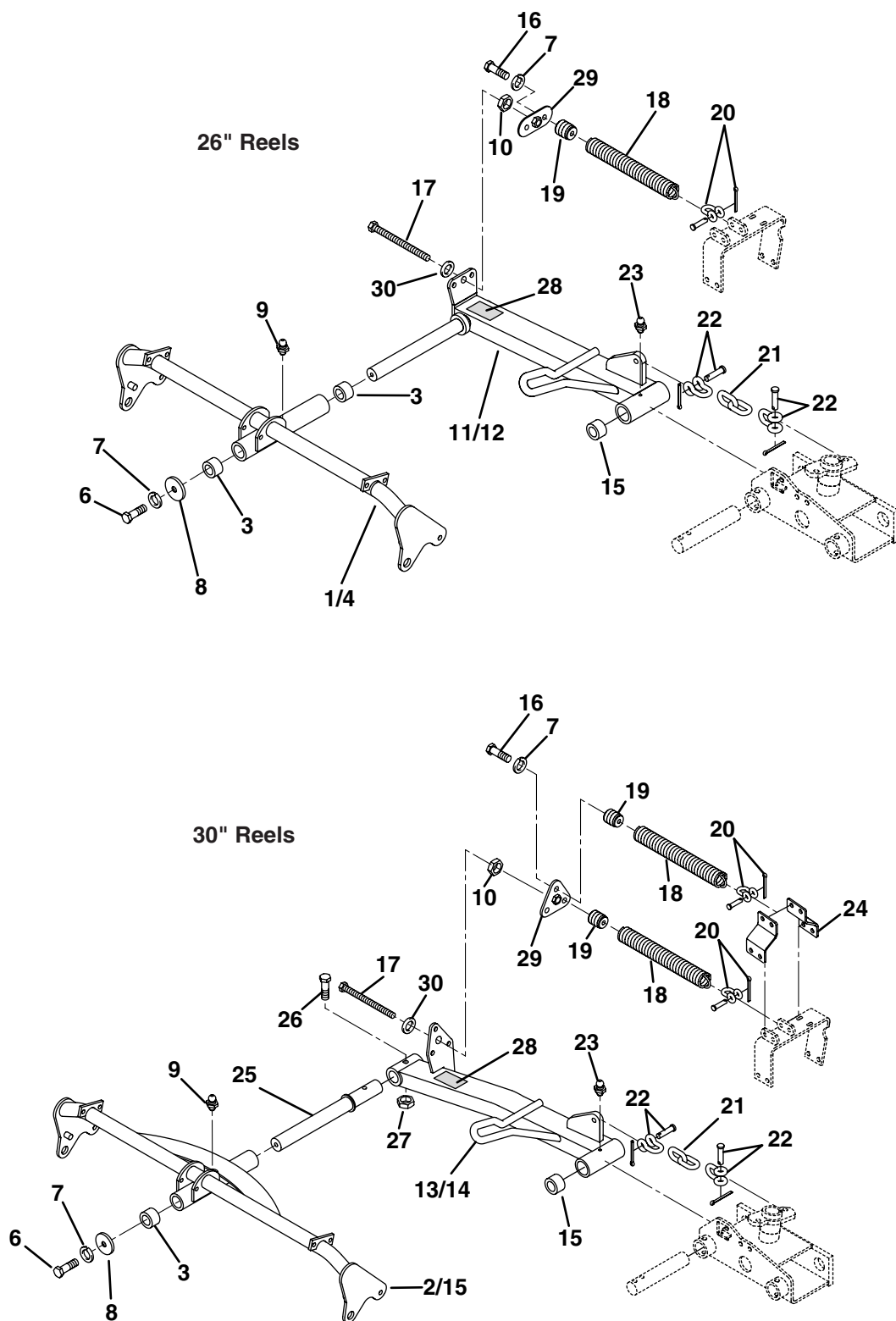




Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4113759	1	Center Pivot Arm	67116 Only
1	4113756	1	Center Pivot Arm	67125 Only
	364140	2	• Bushing	
2	338561	1	Reel Pivot Bracket	
3	338562	1	Reel Pivot Bracket	
4	366827	2	Pivot Spacer	
5	400442	2	Screw, 1/2-20 x 1-1/2" Hex Head	
6	452012	4	Flat Washer, 1/2	
7	445789	2	Nut, 1/2-20 Spiralock Flange	
8	3002379	2	Decal, Tight	
9	400264	2	Screw, 3/8-16 x 1-1/4" Hex Head	
10	453011	AR	Washer, 3/8	
11	446142	12	Lockwasher, Hvy	
12	443110	6	Nut, 3/8-16 Hex	
13	400260	6	Screw, 3/8-16 x 7/8" Hex Head	
14	471214	1	Grease Fitting	
15	3002813	1	Reel Bumper Bracket	67116 & 67125 Only
16	3002814	1	Reel Bumper Bracket	67116 & 67125 Only
17	361723	2	Rubber Bumper	67116 & 67125 Only
18	443810	4	Nut, 3/8-16 Jam	67116 & 67125 Only
19	400190	4	Screw, 5/16-18 x 1-1/4" Hex Head	67116 & 67125 Only
20	446136	AR	Lockwasher, 5/16 Hvy	
21	443106	4	Nut, 5/16-18 Hex	67116 & 67125 Only
22	122875.6	1	Rear Shield	67114 & 67115 Only
22	122769.6	1	Rear Shield	67123 & 67124 Only
23	1003056.6	1	Rear Shield	67116 Only
23	1003057.6	1	Rear Shield	67125 Only
24	5003650	1	Shield	26 Inch Reels (Includes Decals)
24	5003648	1	Shield	30 Inch Reels (Includes Decals)
25	400186	4	Screw, 5/16-18 x 7/8" Hex Head	
26	3000718	2	Shield Shim	
27	364281	2	Backup Nut	
28	364150	2	Clamp	
29	364777	1	Gasket	
30	3002718	1	Collar	67116 & 67125 Only
31	3005435	1	Spring Lock Pin	67116 & 67125 Only
32	400258	2	Screw, 3/8-16 x 3/4" Hex Head	
33	361877	1	Decal, Danger	2 Used on 67116 & 67125

> Change from previous revision

## 34.1 Side Pivot and Lift Arms

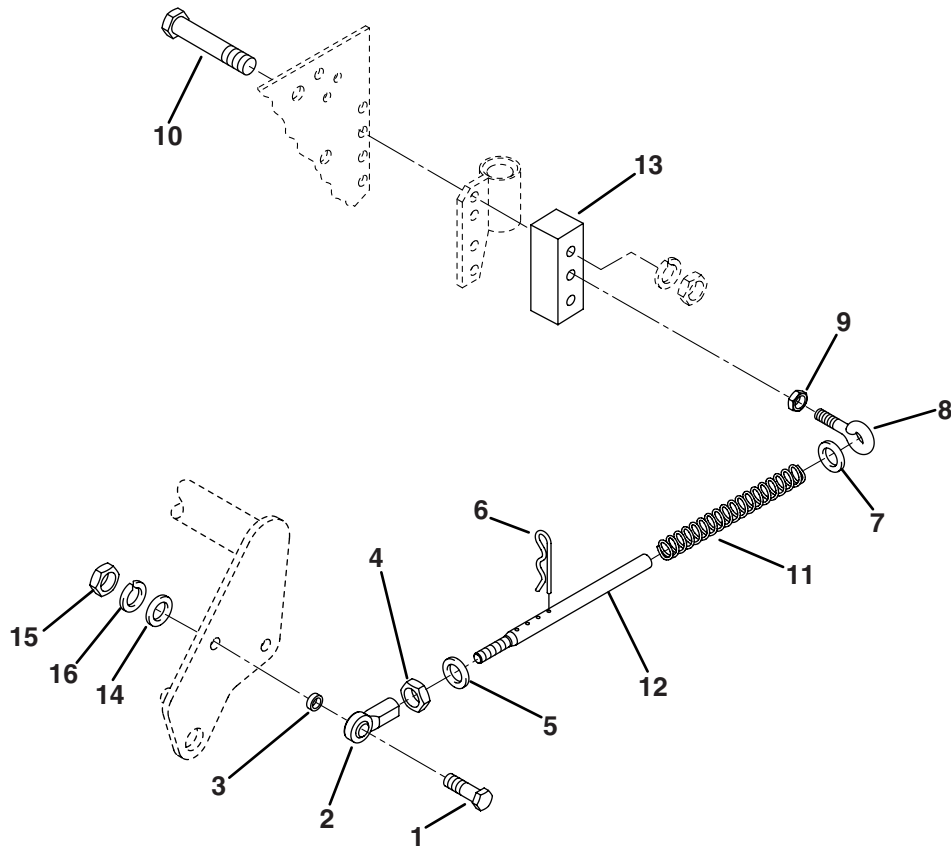


Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4113757	1	Right Pivot Arm	67115 Only
2	4113754	1	Right Pivot Arm	67124 Only
3	364156	2	• Bushing	
4	4113758	1	Left Pivot Arm	67114 Only
5	4113755	1	Left Pivot Arm	67123 Only
6	400260	2	Screw, 3/8-16 x 7/8" Hex Head	
7	446142	AR	Lockwasher, 3/8 Hvy	
8	364781	2	Retainer Washer	
9	471214	2	Grease Fitting	
10	443118	AR	Nut, 1/2-13 Hex	
11	2811280	1	R.H. Lift Arm	(Includes 15 & 28) - 67115
12	2811281	1	L.H. Lift Arm	(Includes 15 & 28) - 67114
13	2811278	1	R.H. Lift Arm	(Includes 15 & 25 ~ 28) - 67124
14	2811279	1	L.H. Lift Arm	(Includes 15 & 25 ~ 28) - 67123
15	3007694	2	• Bushing	
16	400262	AR	Screw, 3/8-16 x 1" Hex Head	
17	441904	2	Screw, 1/2-13 x 10" Full Thread Hex	
18	364157	AR	Spring	
19	3007908	AR	Plug	
20	364160	AR	Shackle	
21	3004065	2	Lift Chain	
22	1001854	4	Shackle	
23	471214	2	Grease Fitting	
24	3005219	2	Bracket	67123, 67124 & 67125 Only
25	3003041	2	Shaft	67123, 67124 & 67125 Only
26	400272	2	Screw, 3/6-16 x 2-1/4" Hex Hd	67123, 67124 & 67125 Only
27	444762	2	Locknut, 3/8-16	67123, 67124 & 67125 Only
28	361947	2	Decal, Mower Removal	
29	2811128	1	Plate, Spring Mounting	67114, 67115 & 67116 Only
29	2811127	1	Plate, Spring Mounting	67123, 67124 & 67125 Only
30	452012	2	Washer, 1/2	

> Change from previous revision

## 35.1 Down Pressure Kit

Optional Kit

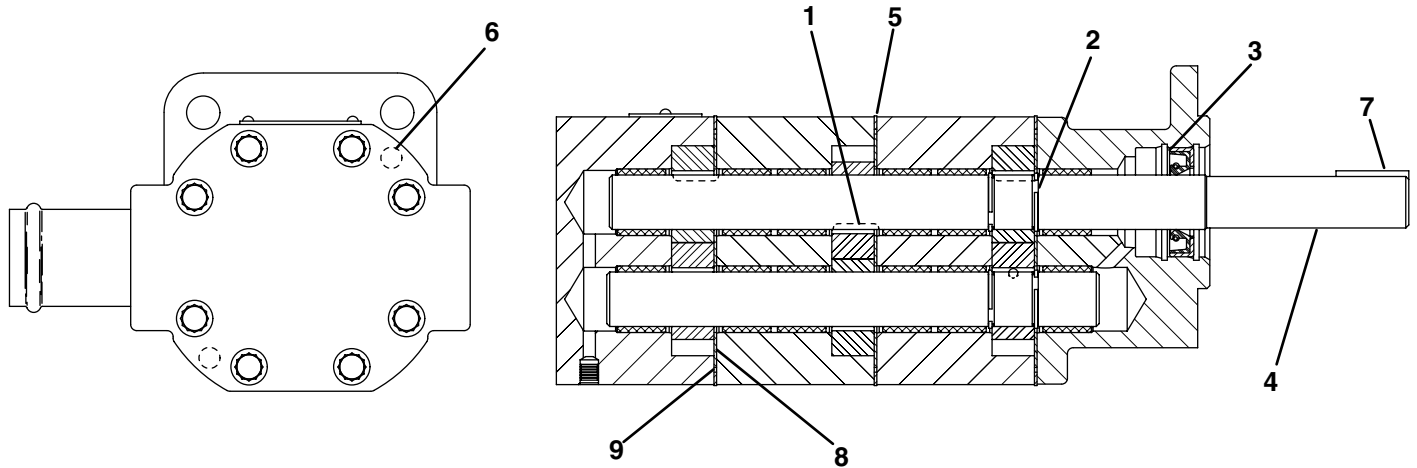


Item	Part No.	Qty.	Description	Serial Numbers/Notes
	1002588	1	Down Pressure Kit	
1	400268	2	• Screw, 3/8-16 x 1-3/4"	
2	366974	2	• Rod End	
3	364328	2	• Spacer	
4	443812	2	• Nut, 3/8-24	
5	347935	2	• Washer - Special	
6	460312	2	• Hairpin	
7	453017	2	• Washer	
8	366978	2	• Eye Bolt	
9	443810	2	• Nut, 3/8-16 Jam	
10	400272	4	• Screw, 3/8-16 x 2-1/4	
11	366976	2	• Spring	
12	366975	2	• Tube-Down Pressure	
13	3005136	2	• Block	
14	453011	2	• Washer, 3/8	
15	443110	2	• Nut, 3/8-16	
16	446142	2	• Lockwasher, 3/8	

> Change from previous revision

**36.1 Reel Pump**

Part No. 1000970



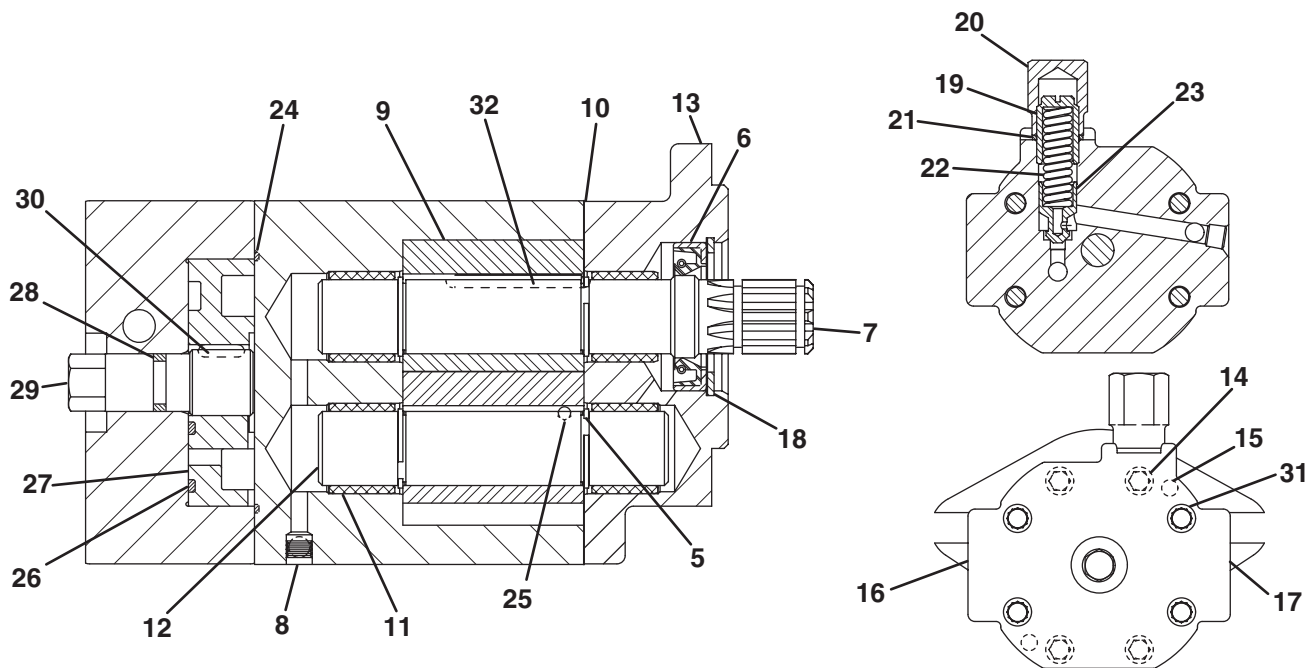
Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	N/S	3	Shear Pin	(Included in A)
2	N/S	4	Snap Ring	(Included in A)
3	N/S	1	Oil Seal	(Included in A)
4	5001435	1	Driveshaft	
5	N/S	3	Seal Plate	(Included in A)
6	590286	6	Alignment Pin	
7	5001437	1	Drive Key	
8	N/S	3	Wear Plate	(Included in A)
9	N/S	3	Diamond O-Ring	(Included in A)
A	5001436	1	Repair Kit	Includes 1~3, 5, 8 & 9

> Change from previous revision

## 37.1 Reel Motor

Part No. 1002603

Serial No. All

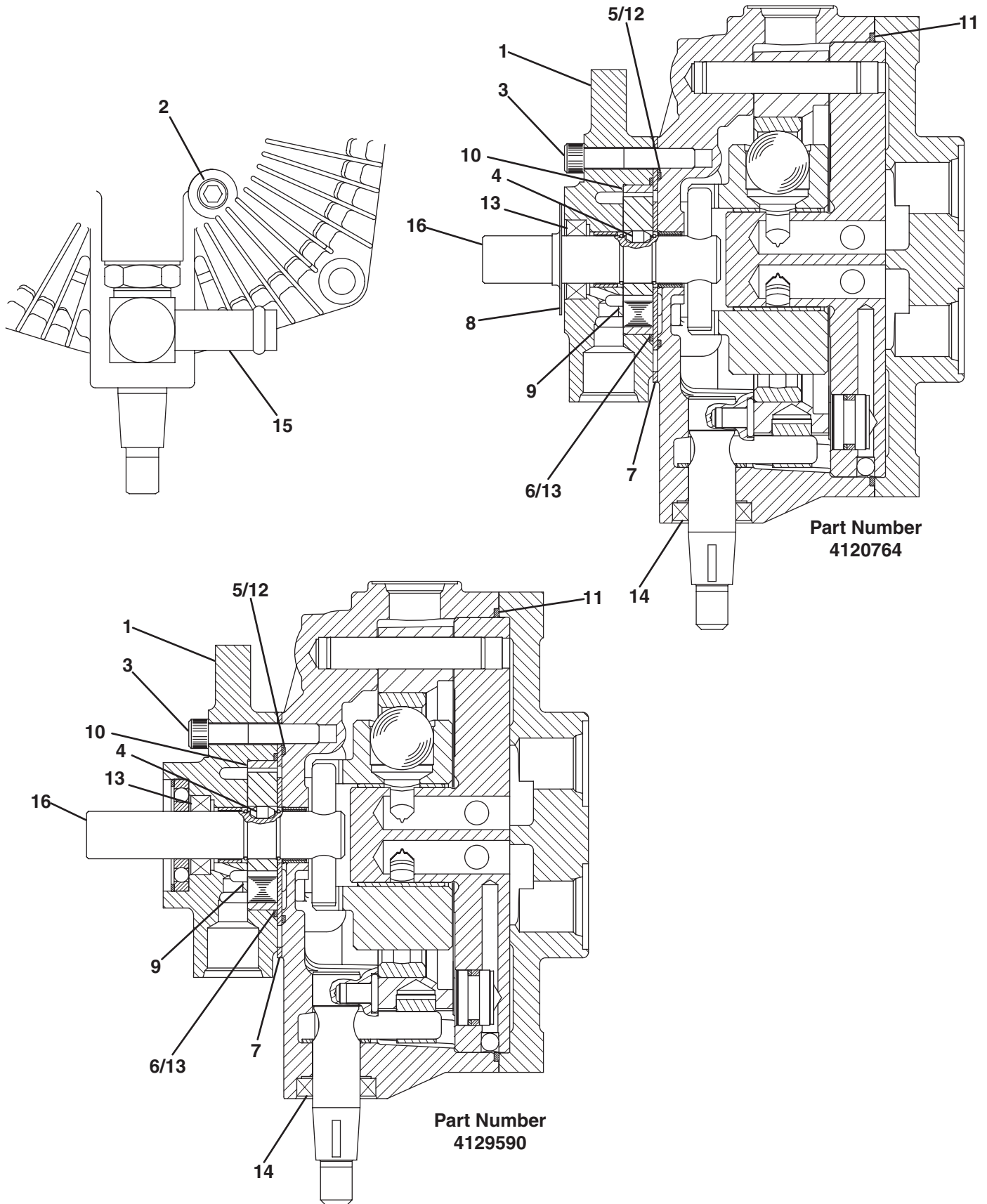


Item	Part No.	Qty.	Description	Serial Numbers/Notes
A	5002657	1	Seal Kit	Includes 6, 10, 18, 21, 24, 26 & 28
B	503502	1	Relief Cap Kit	Includes 20 & 21
C	503503	1	Relief Valve Kit	Includes 19 ~ 23
D	503504	1	Valve Stem Kit	Includes 28 ~ 30
5	5001442	4	Snap Ring	
6	555822	1	O-Ring	(Included in A)
7	5001443	1	Driveshaft	
8	5001444	1	Lee Plug	
9	5001445	2	Gear, 1-3/8" Wide	
10	N/S	1	.00050 (Silver) Gasket	(Included in A)
10	N/S	1	.00100 (Amber) Gasket	(Included in A)
10	N/S	1	.00075 (Gold) Gasket	(Included in A)
11	5001446	4	Sleeve Bearing	
12	5001447	1	Idler Shaft	
13	5001448	1	Stator	
14	555828	4	Screw, 1/4-20	
15	5001449	2	Alignment Pin	
16	5001450	1	Shipping Plug	
17	5001451	1	Shipping Plug	
18	555830	1	Snap Ring	(Included in A)
19	N/S	1	Adjustment Screw	(Included in C)
20	N/S	1	Cap	(Included in B and C)
21	N/S	1	Copper Gasket	(Included in A, B and C)
22	N/S	1	Spring	(Included in C)
23	N/S	2	Poppet	(Included in C)
24	5002141	1	O-Ring	(Included in A)
25	N/S	1	Steel Ball	
26	555836	1	O-Ring	(Included in A)
> 27	2501165	1	Valve Plate	
28	555833	2	O-Ring	(Included in A and D)
29	N/S	1	Valve Stem	(Included in D)
30	N/S	1	Shear Pin	(Included in D)
31	N/S	4	Screw, 1/4-20	
32	5001441	1	Shear Pin	

> Change from previous revision

## 38.1 Traction Pump

Part No. 4120764 and 4129590





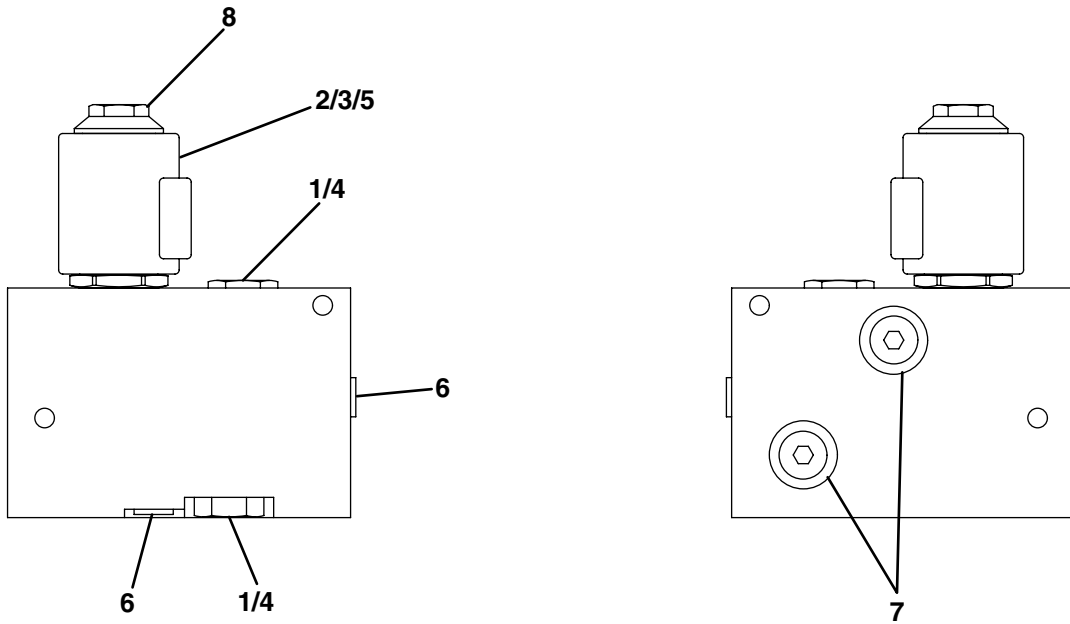
	<b>Item</b>	<b>Part No.</b>	<b>Qty.</b>	<b>Description</b>	<b>Serial Numbers/Notes</b>
>	A	502664	1	Charge Pump Kit	Part Number 4120764
	A	4132078	1	Charge Pump Kit	Part Number 4129590
>	1	N/S	1	• Charge Pump	
>	2	N/S	4	• Screw, Socket Head	
>	3	N/S	1	• Screw, Socket Head	
>	4	4120217	1	• Drive Pin	
>	5	N/S	1	• Square Cut Seal	Also included in B
>	6	N/S	1	• Square Cut Seal	Also included in B
>	7	N/S	1	• Pump Plate	
>	8	546416	1	• Grass Shield	Part Number 4120764 Only
>	9	N/S	2	• Snap Ring	
	10	4120216	1	• Carrier	
>	B	2500620	1	Oil Seal Kit	(Included in B)
>	11	N/S	1	• Square Cut Seal	(Included in B)
>	12	N/S	1	• Square Cut Seal	(Included in B)
>	13	N/S	1	• Square Cut Seal	(Included in B)
>	14	N/S	2	• Oil Seal	Includes 11 ~ 14
>	15	361631	1	Fitting, 90° Barb	
>	16	4112141	1	Input Shaft	Part Number 4120764
	16	N/S	1	Input Shaft	Part Number 4129590

> Change from previous revision

## 39.1 3WD Valve

Serial No. All

Part No. 4111942



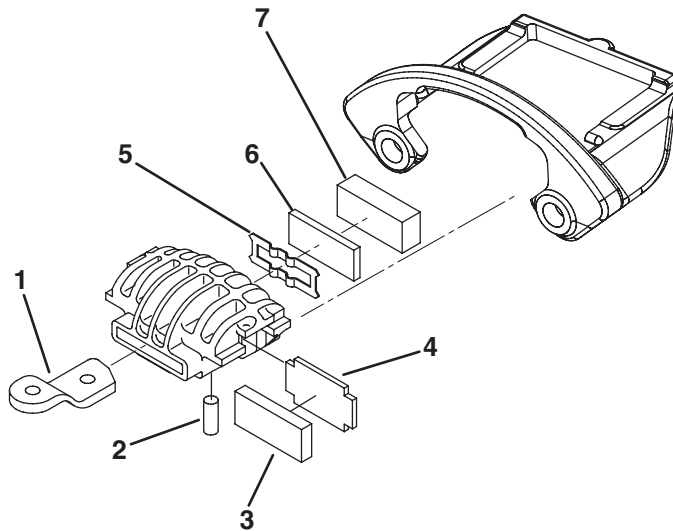
Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	4113025	2	Check Valve	Reference <b>K6</b>
2	4113026	1	Spool Valve	
3	4113027	1	Solenoid Coil	
4	5003578	2	Seal Kit, Check Valve	
5	5003579	1	Seal Kit, Spool Valve	
6	5002157	2	Port Plug	
7	5001065	2	Port Plug	
8	4113028	1	Nut, Coil	

> Change from previous revision

**40.1 Brake Calipers**

Part No. 1001634 L.H.

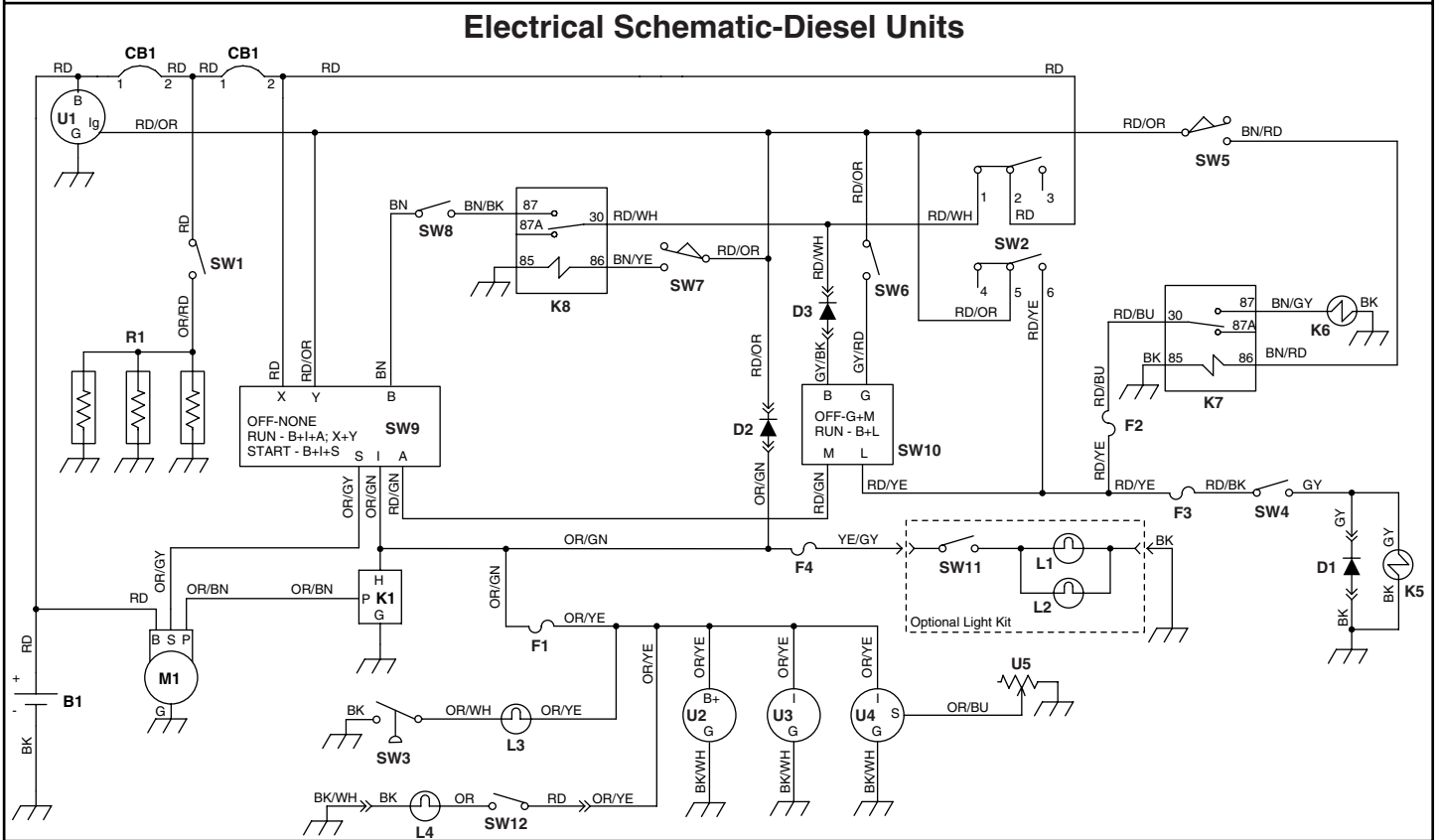
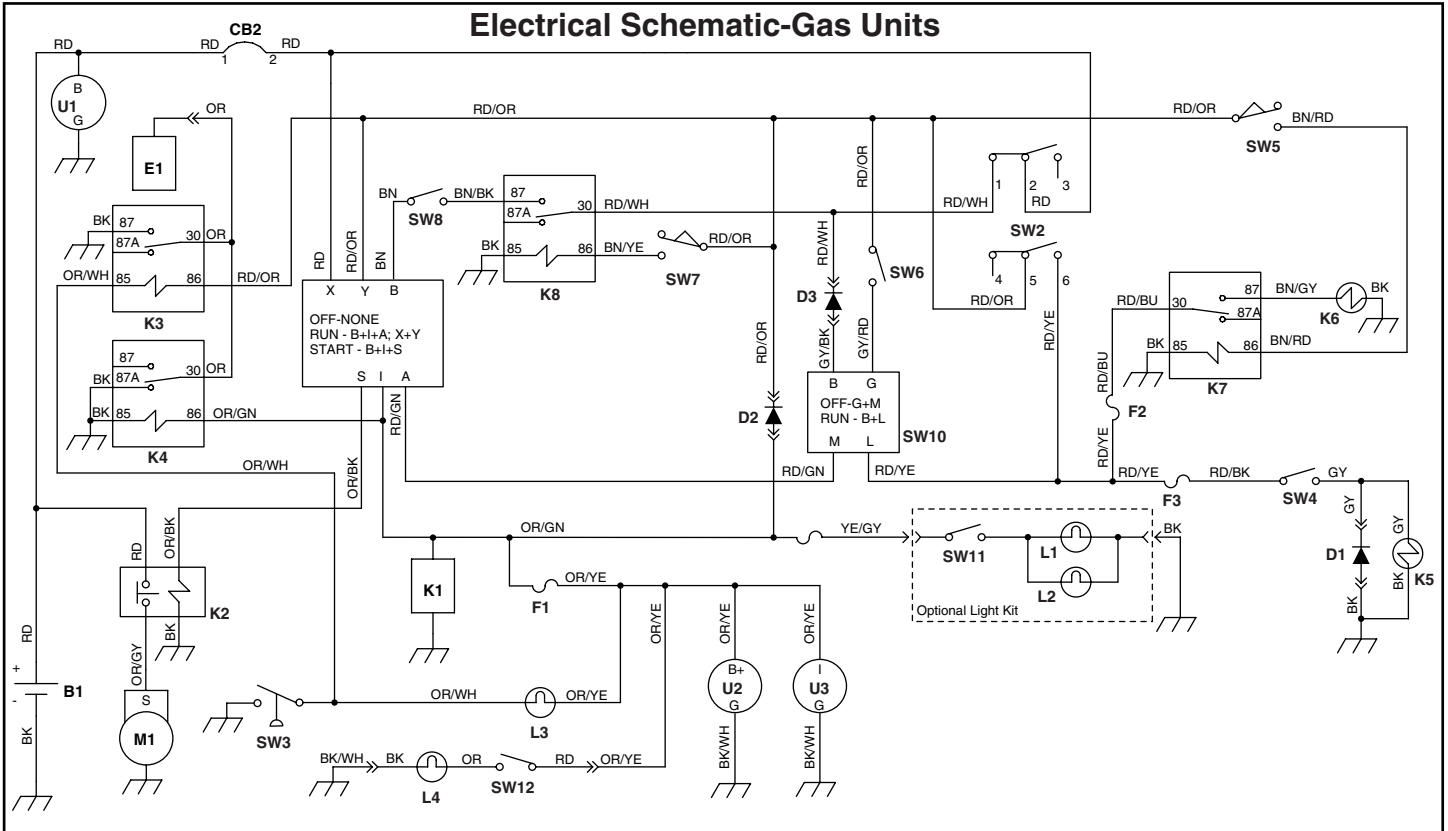
Part No. 1001635 R.H.



Item	Part No.	Qty.	Description	Serial Numbers/Notes
1	N/S	1	Cam	R.H.
1	N/S	1	Cam	L.H.
2	557823	1	Pivot Pin	
3	503660	1	Carrier Side Pad	
4	557824	1	Pad Support	
5	557825	1	Lever Retainer Spring	
6	557826	1	Pad Support	
7	503660	1	Cam Side Pad	

> Change from previous revision

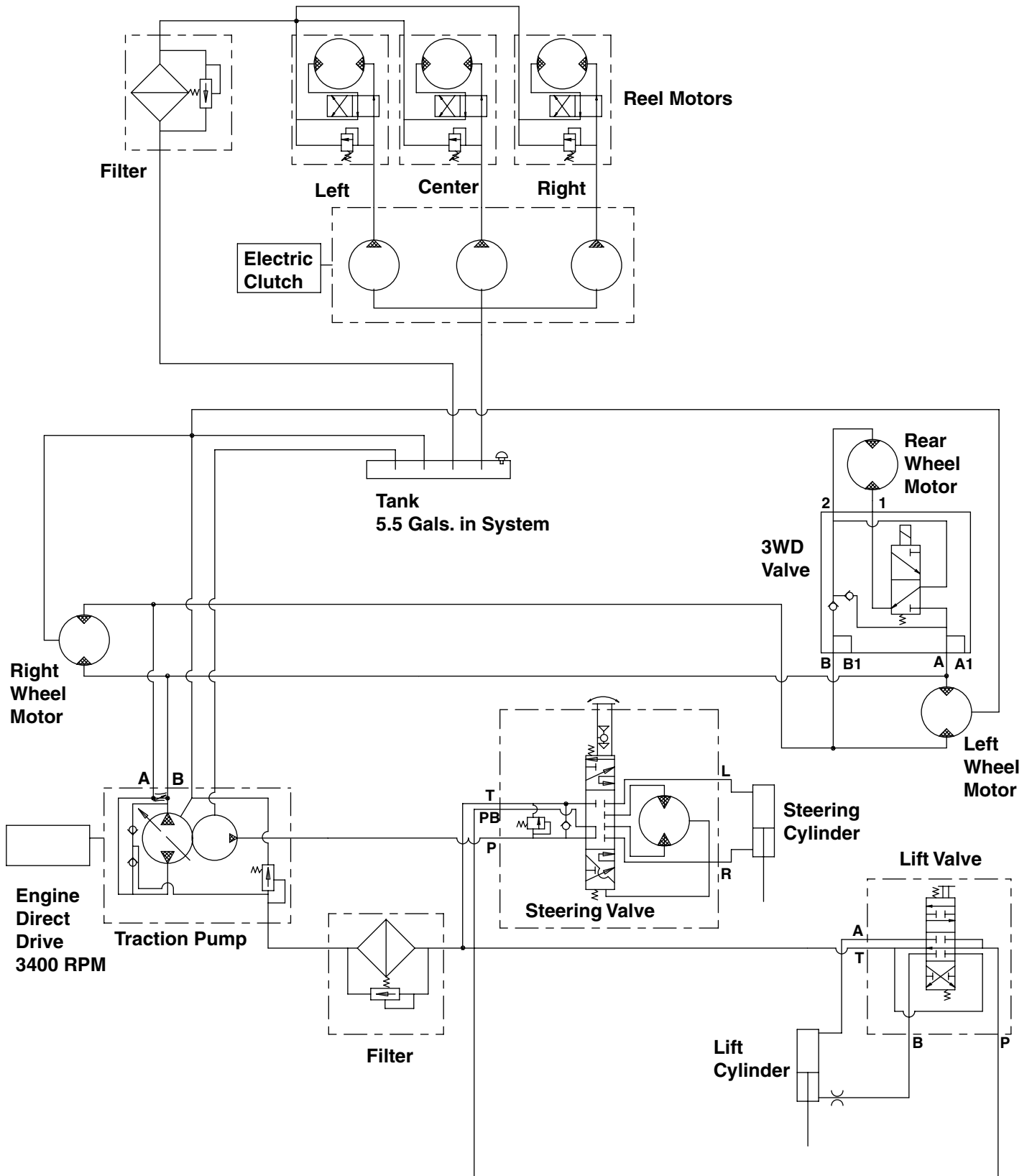
41.1 Electrical Schematics





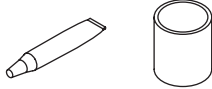
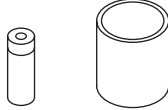

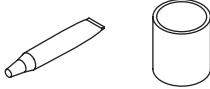

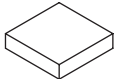
<b>Item</b>	<b>Reference Illustration</b>	<b>Part Number</b>	<b>Description</b>	<b>Serial Numbers/Notes</b>
<b>B1</b>		NS	Battery	
<b>CB1</b>	See 21.1	3000359	50 Amp Circuit Breaker	Diesel Units Only
<b>CB2</b>	See 5.1	338601	10 Amp Circuit Breaker	
<b>D1</b>	Not Shown	555846	Clutch Diode	Included in Wire Harness
<b>D2</b>	Not Shown	555846	Seat Switch Diode	Included in Wire Harness
<b>D3</b>	Not Shown	555846	Backlap Diode	Included in Wire Harness
<b>E1</b>	Not Shown	NS	Engine Shut Down Terminal	Gas Units Only, Included in Engine
<b>F1</b>	See 4.1	5003276	Gauge Circuit, 3 Amp Fuse	Installed in Fuse Block
<b>F2</b>	See 4.1	5003276	3WD Circuit, 3 Amp Fuse	Installed in Fuse Block
<b>F3</b>	See 4.1	5003279	Clutch Circuit, 7.5 Amp Fuse	Installed in Fuse Block
<b>F4</b>	See 4.1	5003279	Light Circuit, 7.5 Amp Fuse	Optional, Installed in Fuse Block
<b>K1</b>	Not Shown	NS	Fuel Solenoid	Gas Units Included In Engine
<b>K1</b>	See 10.1	338289	Fuel Solenoid	Diesel Units
<b>K2</b>	See 9.1	131905	Starter Solenoid	Gas Units Only
<b>K3</b>	See 9.1	3001307	Oil Pressure Shutdown Relay	Gas Units Only
<b>K4</b>	See 9.1	3001307	Engine Shutdown Relay	Gas Units Only
<b>K5</b>	Not Shown	NS	Clutch Solenoid	Included in Part No. 2809727
<b>K6</b>	See 39.1	5001354	3WD Solenoid	
<b>K7</b>	See 9.1, 10.1	3001307	3WD Relay	
<b>K8</b>	See 9.1, 10.1	3001307	Neutral Relay	
<b>L1</b>	Not Shown	NS	Optional Light	Included in Product 69149
<b>L2</b>	Not Shown	NS	Optional Light	Included in Product 69149
<b>L3</b>	See 5.1	164194	Oil Pressure Warning Light	
<b>L4</b>	See 5.1	366751	Parking Brake Light	
<b>M1</b>	Not Shown	NS	Starter Motor	Included in Engine
<b>R1</b>	Not Shown	NS	Glow Plugs	Diesel Units Only, Included in Engine
<b>SW1</b>	See 5.1	363961	Glow Plug Switch	Diesel Units Only
<b>SW2</b>	See 5.1	3001780	Reel Control/3WD Switch	
<b>SW3</b>	See 15.1	3008600	Engine Oil Pressure Switch	Gas Units
<b>SW3</b>	Not Shown	554018	Engine Oil Pressure Switch	Diesel Units
<b>SW4</b>	See 29.1	5000183	Reel Limit Switch	
<b>SW5</b>	See 8.1	3007392	3WD Proximity Switch	
<b>SW6</b>	See 3.1	554390	Seat Switch	67042-1601~1891, 67043-1601~4743
<b>SW6</b>	See 3.2	4139450	Seat Switch	67042-1892 & Up, 67043-4744 & Up
<b>SW7</b>	See 8.1	3007392	Neutral Proximity Switch	
<b>SW8</b>	See 8.1	3002056	Parking Brake Switch	
<b>SW9</b>	See 5.1	1001958	Ignition Switch	
<b>SW10</b>	See 5.1	1001010	Backlap Switch	
<b>SW11</b>	Not Shown	NS	Optional Light Switch	Included in Product 69149
<b>SW12</b>	See 8.1	3002056	Parking Brake Light Switch	
<b>U1</b>	Not Shown	NS	Alternator	Included in Enigne
<b>U2</b>	See 5.1	162721	Volt Meter	
<b>U3</b>	See 5.1	162723	Hour Meter	
<b>U4</b>	See 5.1	162720	Temperature Gauge	Diesel Units Only
<b>U5</b>	See 17.1	364901	Termpérature Sender	Diesel Units Only

> Change from previous revision

**42.1 Hydraulic Schematic**


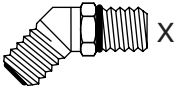
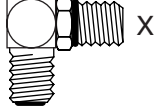
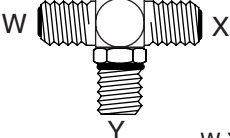
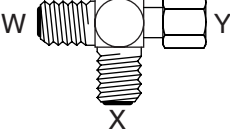
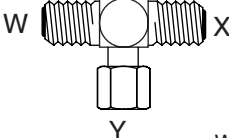
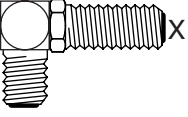
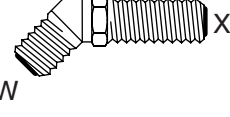
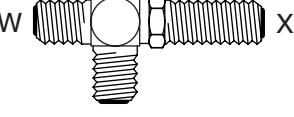

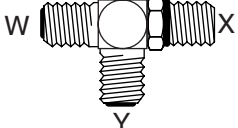

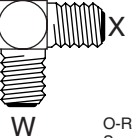
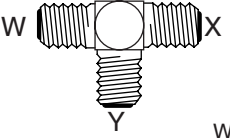
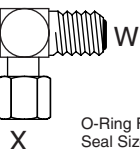
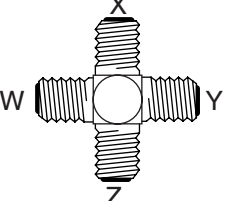



# Fluids and Compounds

<b>Hydraulic Fluid*</b>		
5001405	Two 2-1/2 Gallon Container of ISO VG68 Oil	
5001404	One 5 Gallon Pail of ISO VG68 Oil	
2500548	Two 2-1/2 Gallon Container of 10W30 Oil	
2500546	One 5 Gallon Pail of 10W30 Oil	
503409	Two 2-1/2 Gallon Container of ATF Fluid	
503407	One 5 Gallon Pail of ATF Fluid	
<b>2-Cycle Oil</b>		
554600	Twenty Four 16 Ounce Plastic Container	
554599	Twenty Four 8 Ounce Plastic Container	
<b>Grease</b>		
5000067	One 5 Gallon Pail OO-Grease	
5000068	Twenty Four 8 Ounce Tube OO-Grease	
<b>Paint</b>		
5003469	16 Ounce Gray Aerosol	
554598	Six 12 Ounce Orange Aerosol	
2500789	Twelve 1 Quart Can Orange	
546409	Two 1 Gallon Can Orange	
<b>Lapping Compound</b>		
5002488	One 10 Pound Pail of 80 Grit	
5002490	One 25 Pound Pail of 80 Grit	
5002489	One 10 Pound Pail of 120 Grit	
5002491	One 25 Pound Pail of 120 Grit	
<b>Specialty Compound</b>		
365422	5.3 Ounce Tube of Electrical Insulating Gel	
5001581	14 Ounce Can of Lubriplate Multi Lube A	
<b>Biodegradable Hydraulic Fluid*</b>		
5003102	One 55 Gallon Drum Jacobsen GreensCare 68	
5003103	One 5 Gallon Pail Jacobsen GreensCare 68	
5003105	One 55 Gallon Drum Jacobsen GreensCare 46	
5003104	One 5 Gallon Pail Jacobsen GreensCare 46	
4115976	One 55 Gallon Drum Jacobsen GreensCare 32	
4115977	One 5 Gallon Pail Jacobsen Greens Care 32	
5003106	Twenty Four 14 Ounce Tube Greens Care Grease	
<b>O-Ring Kit</b>		
5002452	SAE O-Ring Boss (3/32 ~ 2" Tube O.D.)	
5002453	Common O-Ring Kit	
5002454	O-Ring Face Seal ORFS (-4 ~ -24 ORS Tube Size)	
<b>Right Start Kit for New Machines</b>		
See your local Jacobsen Dealer		
<b>On-Time Maintenance Kit</b>		
See your local Jacobsen Dealer		

\* Refer to the Operator's manual or the Parts & Maintenance Manual for the correct hydraulic oil requirements for your machine. Jacobsen offers a High Usage Parts Catalog illustrating commonly used Parts through easy to read line Drawings. See your local Jacobsen Dealer for a copy.

## 43.1 O-Ring Chart

 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad}^{W-X}</math> — O-Ring Boss Dash Size</p>	 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad}^{W-X}</math> — O-Ring Boss Dash Size</p>	 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad}^{W-X}</math> — O-Ring Boss Dash Size</p>
 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad\quad}^{W-X-Y}</math> — O-Ring Boss Dash Size</p>	 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad\quad}^{W-X-Y}</math> — O-Ring Not Needed</p>	 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad\quad}^{W-X-Y}</math> — O-Ring Not Needed</p>
 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad}^{W-X}</math> — O-Ring Face Seal Size</p>	 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad}^{W-X}</math> — O-Ring Face Seal Size</p>	 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad\quad}^{W-X-Y}</math> — O-Ring Face Seal Size</p>
 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad}^{W-X}</math> — O-Ring Face Seal Size</p>	 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad\quad}^{W-X-Y}</math> — O-Ring Boss Dash Size</p>	 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad}^{W-X}</math> — O-Ring Face Seal Size</p>
 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad}^{W-X}</math> — O-Ring Face Seal Size</p>	 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad\quad}^{W-X-Y}</math> — O-Ring Face Seal Size</p>	 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad}^{W-X}</math> — O-Ring Not Needed</p>
 <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad\quad\quad}^{W-X-Y-Z}</math> — O-Ring Face Seal Size</p> <p>O-Ring Face Seal Size — <math>\overbrace{\quad\quad\quad\quad}^{W-X-Y-Z}</math> — O-Ring Face Seal Size</p>		



Adapter Part Number.	Dash Size	Adapter Type	(W) O-Ring	(X) O-Ring	(Y) O-Ring	(Z) O-Ring
339972	4-4	Straight Adapter	339908	339896		
339974	4-6	Straight Adapter	339908	339897		
339979	6-6	Straight Adapter	339909	339897		
339980	6-8	Straight Adapter	339909	339898		
339983	8-6	Straight Adapter	339910	339897		
339989	10-10	Straight Adapter	339911	339899		
340055	4-4	90° Adapter	339908	339896		
340057	4-6	90° Adapter	339908	339897		
340061	6-6	90° Adapter	339909	339897		
340062	6-8	90° Adapter	339909	339898		
340068	8-12	90° Adapter	339910	339900		
340070	10-10	90° Adapter	339911	339899		
340088	4-6	90° Adapter	339908	339897		
340120	4-4-4	Swivel Run Tee	339908	339908		
340121	6-6-6	Swivel Run Tee	339909	339909		
340265	10-10-10	Straight Thread Run Tee	339911	339899	339911	
340376	8-8	90° Swivel Adapter	339910			

SAE Boss O-Rings			ORS Face Seal O-Rings		
Dash Size	Thread Size	O-Ring	Dash Size	Thread Size	O-Ring
4	7/16-20	339896	4	9/16-18	339908
6	9/16-18	339897	6	11/16-16	339909
8	3/4-16	339898	8	13/16-16	339910
10	7/8-14	339899	10	1-14	339911
12	1 1/16-12	339900	12	1 3/16-12	339912
16	1 5/16-12	339901	16	1 7/16-12	339913
20	1 5/8-12	339902	20	1 11/16-12	339914
24	1 7/8-12	339903	24	2-12	339915
32	2 1/2-12	339904			

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