

OPERATION AND PARTS MANUAL



***WHITEMAN* SERIES** **MODEL JTO** **RIDE-ON TROWEL** **(B & S VANGUARD/HONDA ENGINES)**

Revision #6 (09/26/14)

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publication, visit our website at:
www.multiquip.com.



THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

P/N 11280

 **WARNING** 

CALIFORNIA — Proposition 65 Warning

Engine exhaust and some of its constituents, and some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks.
- Cement and other masonry products.
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: **ALWAYS** work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

WARNING



SILICOSIS WARNING

Grinding/cutting/drilling of masonry, concrete, metal and other materials with silica in their composition may give off dust or mists containing crystalline silica. Silica is a basic component of sand, quartz, brick clay, granite and numerous other minerals and rocks. Repeated and/or substantial inhalation of airborne crystalline silica can cause serious or fatal respiratory diseases, including silicosis. In addition, some authorities have listed respirable crystalline silica as a substance known to cause cancer. When cutting such materials, always follow the respiratory precautions mentioned above.

WARNING



RESPIRATORY HAZARDS

Grinding/cutting/drilling of masonry, concrete, metal and other materials can generate dust, mists and fumes containing chemicals known to cause serious or fatal injury or illness, such as respiratory disease, cancer, birth defects or other reproductive harm. If you are unfamiliar with the risks associated with the particular process and/or material being cut or the composition of the tool being used, review the material safety data sheet and/or consult your employer, the material manufacturer/supplier, responsible governmental agencies and other sources on hazardous materials. Some authorities have published lists of substances known to cause cancer, reproductive toxicity, or other harmful effects.

Control dust, mist and fumes at the source where possible. In this regard use good work practices and follow the recommendations of the manufacturers or suppliers, and occupational and trade associations. Water should be used for dust suppression when wet cutting is feasible. When the hazards from inhalation of dust, mists and fumes cannot be eliminated, the operator and any bystanders should always wear approved respirators for the materials being used.

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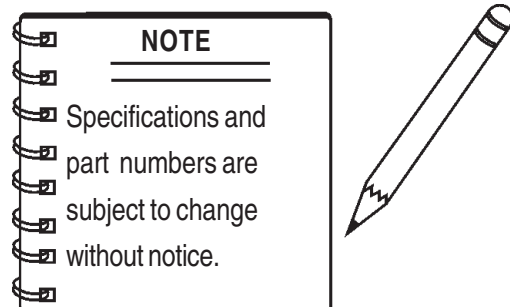
MQ WHITEMAN JTO RIDE-ON POWER TROWEL

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JTO RIDE ON TROWEL — TRAINING CHECKLIST

TRAINING CHECKLIST

This checklist will lists some of the minimum requirements for machine maintenance and operation. Please feel free to detach it and make copies. Use this checklist whenever a new operator is to be trained or it can be used as a review for more experienced operators.

TRAINING CHECKLIST			
NO.	DESCRIPTION	OK?	DATE
1	Read Operator's Manual completely.		
2	Machine layout, location of components, checking of engine and hydraulic oil levels.		
3	Fuel system, refueling procedure.		
4	Operation of spray and lights (if equipped).		
5	Operation of controls (machine not running).		
6	Safety controls, seat "kill switch" operation.		
7	Emergency stop procedures.		
8	Startup of machine.		
9	Maintaining a hover.		
10	Maneuvering.		
11	Pitching.		
12	Matching blade pitch between towers Twin Pitch™, disengaging the linkage.		
13	Concrete finishing techniques.		
14	Shutdown of machine.		
15	Lifting of machine (lift loops).		
16	Machine transport and storage.		

Operator _____ Trainee _____

COMMENTS:

JTO RIDE ON TROWEL — DAILY PRE-OPERATION CHECKLIST

DAILY PRE-OPERATION CHECKLIST

DAILY PRE-OPERATION CHECKLIST	
1	Engine oil level.
2	Gearbox oil level.
3	Radiator coolant level.
4	Condition of blades.
5	Blade pitch operation.
6	"Kill switch" (seat) operation.
7	Steering control operation.
8	Condition of belts.

COMMENTS:

JTO RIDE-ON POWER TROWEL— PARTS ORDERING PROCEDURES

www.multiquip.com

Ordering parts has never been easier! Choose from three easy options:

Effective:
January 1st, 2006



Order via Internet (Dealers Only):

Order parts on-line using Multiquip's SmartEquip website!

- View Parts Diagrams
- Order Parts
- Print Specification Information



If you have an MQ Account, to obtain a Username and Password, E-mail us at: parts@multiquip.com.

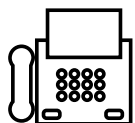
To obtain an MQ Account, contact your District Sales Manager for more information.

Goto www.multiquip.com and click on

Order Parts to log in and save!

Use the **internet** and qualify for a **5% Discount** on *Standard orders* for all orders which include complete part numbers.*

Note: Discounts Are Subject To Change



Order via Fax (Dealers Only):

All customers are welcome to order parts via Fax.

Domestic (US) Customers dial:

1-800-6-PARTS-7 (800-672-7877)

Fax your order in and qualify for a **2% Discount** on *Standard orders* for all orders which include complete part numbers.*

Note: Discounts Are Subject To Change



Order via Phone: Domestic (US) Dealers Call:

1-800-427-1244

Non-Dealer Customers:

Contact your local Multiquip Dealer for parts or call 800-427-1244 for help in locating a dealer near you.



International Customers should contact their local Multiquip Representatives for Parts Ordering information.

When ordering parts, please supply:

- | | |
|---|--|
| <input type="checkbox"/> Dealer Account Number | <input type="checkbox"/> Specify Preferred Method of Shipment: |
| <input type="checkbox"/> Dealer Name and Address | <input checked="" type="checkbox"/> UPS/Fed Ex <input checked="" type="checkbox"/> DHL |
| <input type="checkbox"/> Shipping Address (if different than billing address) | <input type="checkbox"/> Priority One <input checked="" type="checkbox"/> Truck |
| <input type="checkbox"/> Return Fax Number | <input type="checkbox"/> Ground |
| <input type="checkbox"/> Applicable Model Number | <input type="checkbox"/> Next Day |
| <input type="checkbox"/> Quantity, Part Number and Description of Each Part | <input type="checkbox"/> Second/Third Day |

NOTICE

All orders are treated as *Standard Orders* and will ship the same day if received prior to 3PM PST.

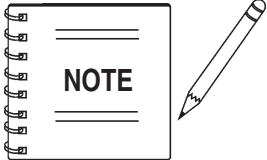
WE ACCEPT ALL MAJOR CREDIT CARDS!



JTO RIDE ON TROWEL — SAFETY MESSAGE ALERT SYMBOLS

FOR YOUR SAFETY AND THE SAFETY OF OTHERS!

Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the Safety Messages and Operating Instructions could result in injury to yourself and others.



This Owner's Manual has been developed to provide complete instructions for the safe and efficient operation of the MQ Whiteman **JTO Ride-On Trowel**. Before using this trowel, ensure that the operating individual has read and understands all instructions in this manual.

SAFETY MESSAGE ALERT SYMBOLS

The three (3) Safety Messages shown below will inform you about potential hazards that could injure you or others. The Safety Messages specifically address the level of exposure to the operator, and are preceded by one of three words: **DANGER**, **WARNING**, or **CAUTION**.



DANGER: You **WILL** be **KILLED** or **SERIOUSLY** injured if you **DO NOT** follow directions.



WARNING: You **CAN** be **KILLED** or **SERIOUSLY** injured if you **DO NOT** follow directions.



CAUTION: You **CAN** be injured if you **DO NOT** follow directions.

Potential hazards associated with the JTO ride-on trowel operation will be referenced with Hazard Symbols which appear throughout this manual, and will be referenced in conjunction with Safety Message Alert Symbols.

HAZARD SYMBOLS

Rotating Parts



NEVER operate equipment with covers, or guards removed. Keep fingers, hands, hair and clothing away from all moving parts to prevent injury.

Accidental Starting



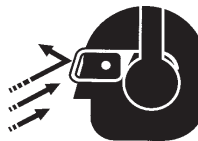
ALWAYS place the engine **ON/OFF** switch in the **OFF** position, when the trowel is not in use.

Over-Speed Conditions



NEVER tamper with the factory settings of the engine governor settings. Personal injury and damage to the engine or equipment can result if operating speed ranges above maximum allowable.

Sight and Hearing Hazard



ALWAYS wear approved **eye** and **hearing** protection when required.

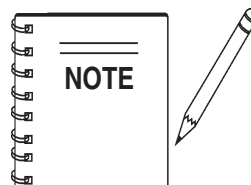
Respiratory Hazard



ALWAYS wear approved **respiratory** protection when required.

Equipment Damage Messages

Other important messages are provided throughout this manual to help prevent damage to your trowel, other property, or the surrounding environment.



This trowel, other property, or the surrounding environment could be damaged if you **DO NOT** follow instructions.

JTO RIDE ON TROWEL— RULES FOR SAFE OPERATION

CAUTION:



Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

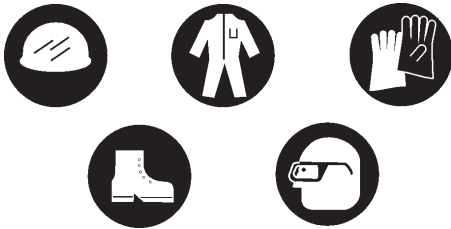
The following safety guidelines should always be used when operating the *JTO Ride-On Trowel*.

SAFETY

- **DO NOT** operate or service this equipment before reading this entire manual.



- This equipment should not be operated by persons under 18 years of age.
- **NEVER** operate the trowel without proper protective clothing, shatterproof glasses, steel-toed boots and other protective devices required by the job.



- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.



- **NEVER** operate the trowel under the influence of drugs or alcohol.



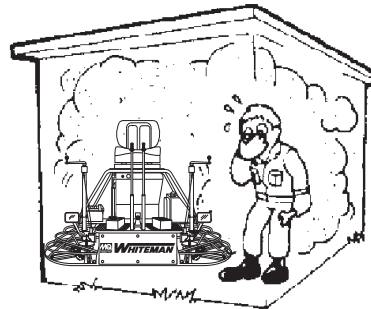
- **NEVER** use accessories or attachments, which are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.
- Manufacturer does not assume responsibility for any accident due to equipment modifications.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.
- **ALWAYS** check the trowel for loosened threads or bolts before starting.

- **NEVER** touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing the trowel.



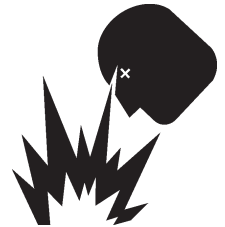
- **High Temperatures** – Allow the engine to cool before adding fuel or performing service and maintenance functions. Contact with *hot!* components can cause serious burns.

- The engine of this trowel requires an adequate free flow of cooling air. **NEVER** operate the trowel (except electric models) in any enclosed or narrow area where free flow of the air is restricted. If the air flow is restricted it will cause serious damage to the trowel's engine and may cause injury to people. Remember the trowel's engine gives off **DEADLY** carbon monoxide gas.



- **ALWAYS** refuel in a well-ventilated area, away from sparks and open flames.

- **ALWAYS** use extreme caution when working with **flammable** liquids. When refueling, **stop the engine** and allow it to cool.



- **NEVER smoke** around or near the machine. Fire or explosion could result from **fuel vapors**, or if fuel is spilled on a **hot!** engine.



- **NEVER** operate the trowel in an explosive atmosphere or near combustible materials. An explosion or fire could result causing severe **bodily harm or even death**.

- Topping-off to filler port is dangerous, as it tends to spill fuel.

JTO RIDE-ON TROWEL — RULES FOR SAFE OPERATION

The following safety guidelines should always be used when operating the JTO ride-on trowel:

General Safety

- **DO NOT** operate or service this equipment before reading this entire manual.
- This equipment should not be operated by persons under 18 years of age.
- **DO NOT** operate this trowel unless all guards and safety devices are attached and in place.
- **ALWAYS** check to make sure that the operating area is clear before starting the engine.
- **ALWAYS** test the **safety kill switch** before operating the trowel .
- **NEVER** place your feet inside the guard rings while starting or operating this trowel.
- **ALWAYS** keep clear of rotating or moving parts while operating this trowel.
- **NEVER** leave the trowel **unattended** while running.
- **NEVER** modify the safety kill switch. It is design for operator safety.
- **ALWAYS** refuel in a well-ventilated area, away from sparks and open flames.
- **ALWAYS** use extreme caution when working with **flammable** liquids. When refueling, **stop** the engine and allow it to cool. **DO NOT smoke** around or near the machine. Fire or explosion could result from flames or sparks, or if fuel is spilled on a hot engine.
- **Moving Parts** - Shut down the engine and disconnect battery before performing service or maintenance functions. Contact with moving parts can cause serious injury.
- When lifting of the trowel is required, a chain can be attached to the lift loops, allowing a forklift or crane to lift the ride-on trowel up onto a slab of concrete. The strap or chain should have a minimum 2,000 pounds (1000-kg) lifting capacity and the lifting gear must be capable of lifting at least this amount.
- **NEVER** stand underneath the trowel when it is being lifted.
- This ride-on trowel is very **heavy** and awkward to move around. Use proper heavy lifting procedures and **DO NOT** attempt to lift the ride-on trowel by the **guard rings**.

- **NEVER** run engine without air filter. Severe engine damage may occur.
- **ALWAYS** service air filter frequently to prevent engine malfunction.
- **ALWAYS** be sure the operator is familiar with proper safety precautions when operating the trowel.
- **ALWAYS** store trowel properly when not in use.
- **DO NOT** leave the trowel running unattended.
- **DO NOT** allow unauthorized people to operate this trowel.
- **ALWAYS** read, understand, and follow procedures in Operator's Manual before attempting to operate equipment.
- Refer to the **Briggs and Stratton or Honda Engine Owner's Manual** for engine technical questions or information.

Transporting

- **ALWAYS** shutdown engine before transporting.
- Tighten fuel tank cap securely.
- If the trowel is being transported via a trailer, make sure trailer complies with all local and state safety transportation laws. See "**Towing Safety Precautions**" for basic towing techniques in this manual.

JTO RIDE-ON TROWEL— RULES FOR SAFE OPERATION

Maintenance Safety

- Disconnect the battery and spark plug wires before attempting any type of service.
- Securely support any trowel components that must be raised.
- **NEVER** lubricate components or attempt service on a running machine.
- **ALWAYS** allow the trowel a proper amount of time to cool before servicing.
- Keep the trowel in proper running condition.
- Make sure that there is no buildup of concrete, grease, oil or debris on the trowel.
- Fix damage to the trowel immediately and always replace broken parts.
- Dispose of hazardous waste properly. Examples of potentially hazardous waste are used motor oil, fuel and fuel filters.
- **DO NOT** use plastic food containers to dispose of hazardous waste.
- **DO NOT** pour waste, oil or fuel directly onto the ground, down a drain or into any water source.
- **NEVER** store trowel with fuel in the tank for any extended period of time. Always clean up spilled fuel immediately.

DANGER:

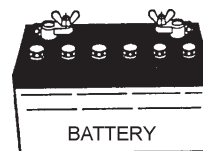


Pay close attention to ventilation when operating the trowel inside tunnels and caves. The engine exhaust contains noxious elements. Engine exhaust must be routed to a ventilated area.

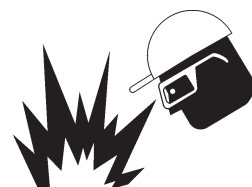


Battery

The battery contains acids that can cause injury to the eyes and skin. To avoid eye irritation, **always** wear safety glasses. Use well insulated gloves when picking up the battery. Use the following guidelines when handling the battery:



- **DO NOT** drop the battery. There is the possibility of risk that the battery may explode.
- **DO NOT** expose the battery to open flames, sparks, cigarettes etc. The battery contains combustible gases and liquids. If these gases and liquids come in contact with a flame or spark, an explosion could occur.
- **ALWAYS** keep the battery charged. If the battery is not charged a buildup of combustible gas will occur.
- **ALWAYS** keep battery charging and cables in good working condition. Repair or replace all worn cables.
- **ALWAYS** disconnect the **negative** battery terminal before performing service on the trowel.
- **ALWAYS** recharge the battery in an vented air environment, to avoid risk of a dangerous concentration of combustible gases.
- In case the battery liquid (dilute sulfuric acid) comes in contact with **clothing or skin**, rinse skin or clothing immediately with plenty of water.
- In case the battery liquid (dilute sulfuric acid) comes in contact with your **eyes**, rinse eyes immediately with plenty of water, then contact the nearest doctor or hospital, and seek medical attention.



JTO RIDE-ON TROWEL — RULES FOR SAFE OPERATION

Towing Safety Precautions

CAUTION:



Conform to **Department of Transportation (DOT) Safety Towing Regulations** before towing generator.

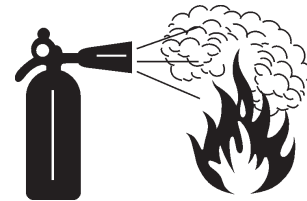
To reduce the possibility of an accident while transporting the trowel on public roads, always make sure the trailer that supports the trowel and the towing vehicle are in good operating condition and both units are mechanically sound.

The following list of suggestions should be used when towing your generator:

- Make sure the hitch and coupling of the towing vehicle are rated equal to, or greater than the trailer "gross vehicle weight rating" (GVWR) of 6,000 lbs.
 - **ALWAYS** inspect the hitch and coupling for wear. **NEVER** tow a trailer with defective hitches, couplings, chains etc.
 - Check the tire air pressure on both towing vehicle and trailer. **Trailer tires should be inflated to 50 psi cold.** Also check the tire tread wear on both vehicles.
 - **ALWAYS** make sure the trailer is equipped with a "Safety Chain".
 - **ALWAYS** attach trailer's safety chains to towing vehicle properly.
 - **ALWAYS** make sure the vehicle and trailer directional, backup, brake, and trailer lights are connected and working properly.
 - The maximum speed for highway towing is **45 MPH** unless posted otherwise. Recommended off-road towing is not to exceed **10 MPH** or less depending on type of terrain.
 - Place **chock blocks** underneath each wheel to prevent **rolling**, while parked.
 - Use the trailer's swivel jack to adjust the trailer height to a level position while parked.
 - Avoid sudden stops and starts. This can cause skidding, or jack-knifing. Smooth, gradual starts and stops will improve towing.
- Avoid sharp turns.
 - Trailer should be adjusted to a level position at all times when towing.
 - Raise and lock trailer wheel stand in up position when transporting.
 - DOT Requirements include the following:
 - Connect and test electric brake operation.
 - Secure portable power cables in cable tray with tie wraps.

Emergencies

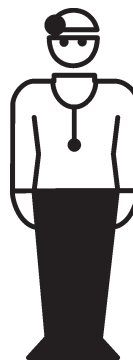
- **ALWAYS** know the location of the nearest **fire extinguisher**.



- **ALWAYS** know the location of the nearest **first aid kit**.



- In emergencies **always** know the location of the nearest phone or **keep a phone on the job site**. Also know the phone numbers of the nearest **ambulance, doctor** and **fire department**. This information will be invaluable in the case of an emergency.



JTO RIDE-ON TROWEL— RULES FOR SAFE OPERATION

Machine Safety Decals

The JTO-Series Ride-On Trowel is equipped with a number of safety decals. These decals are provided for operator safety and maintenance information. Figure 1 below illustrates these decals as they appear on the machine. Should any of these decals become unreadable, replacements can be obtained from your dealer.








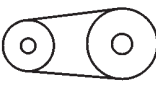
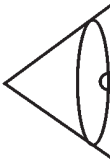
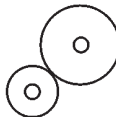
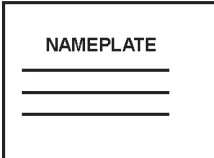



JTO Ride-On Power Trowel Safety & Operating Decals			
	Symbol for CAUTION . When this symbol is displayed in the manual or on the machine be aware that there is a potential for personal injury or damage to the equipment. Always follow instructions for safe operation and use.		Lift point symbol. Symbol indicates where machine should be lifted. P/N 11246 (Part of decal kit 12620)
	Symbol indicates that it is mandatory to wear safety glasses, safety helmet and ear protection. P/N 11247 (Part of decal kit 12620)		Lubrication symbol. Know that wherever you see this symbol on the machine, a lubrication point will be called out. P/N 11246 (Part of decal kit 12620)
	Symbol indicates that it is mandatory to wear gloves. P/N 11247 (Part of decal kit 12620)		Symbol indicates that it is mandatory to wear safety shoes, with extra protection (steel toe). P/N 11247 (Part of decal kit 12620)
	Radiating heat symbol. Symbol indicates equipment is hot. P/N 11246 (Part of decal kit 12620)		This is the symbol for belt drive. P/N 11246 (Part of decal kit 12620)
	Symbol for examining or checking of the machine. Mostly used for maintenance. P/N 11246 (Part of decal kit 12620)		This is the symbol for gear drive. P/N 11246 (Part of decal kit 12620)
	CONTACT MULTIQUIP SERVICE DEPT.	 P/N 2634	 P/N 13118
		 WHITEMAN	P/N 10818 (WHITE/PANEL)

Figure 1. Operation and Safety Decals

JTO RIDE-ON TROWEL — SPECIFICATIONS (TROWEL)

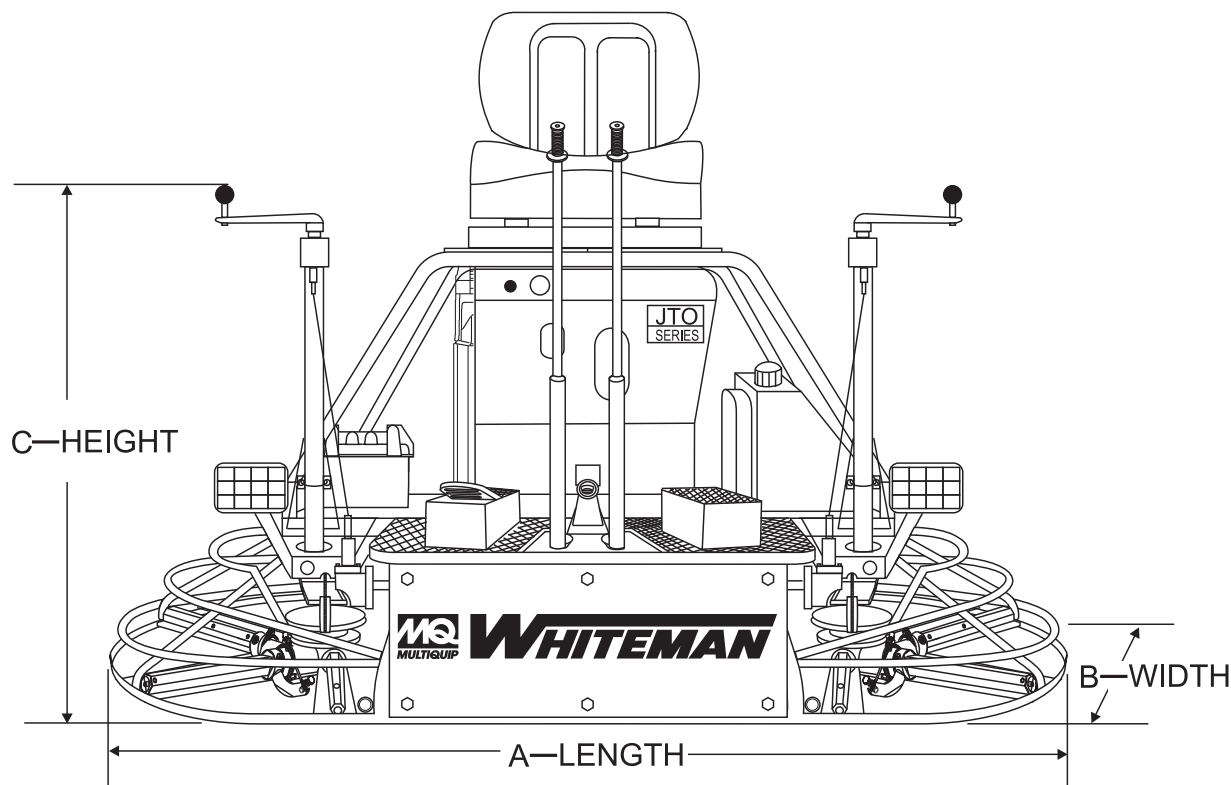


Figure 2. Trowel Dimensions

Table 1. Specifications (Trowel)	
A-Length	71.0 in. (180 cm.)
B-Width	39.0 in. (99 cm.)
C-Height ¹	46.0 in. (117 cm.)
Weight – lbs. (kgs.) Operating	440 lbs. (200 kgs.)
Fuel Tank Capacity	2.2 gal. (8 liters)
Run Time	1.59 gal./hr.
Rotor Speed	138 RPM
Blades/Rotor	4
Path Width	69 in. (175 cm.)
Gearbox Lubrication Oil Capacity	27 oz. (.798 liters)

NOTE:

1. This value does not include seat height. To obtain total height (seat) add 4 inches (10.2 cm.).

JTO RIDE-ON TROWEL — SPECIFICATIONS (ENGINE)

Table 2. Specifications (Engine)

Engine Manufacture	Vanguard (Briggs & Stratton)	Honda
Engine Specification/Type	350447008601 Twin cylinder, overhead valve, air cooled	GX620K1QXB1 4-stroke, overhead valve, 2 cylinders (90° V-Twin)
Bore X Stroke	2.82 x 2.75 in. (71.88 x 69.85 mm.)	3.03 x 2.60 in. (77.0 x 66.0 mm.)
Displacement	570 cc	614 cc
Maximum Power	18.0 hp (3,600 rpm)	20.0 hp (3,600 rpm)
Maximum Torque	31.70 ft-lbs. (2,800 rpm) 14.37 kgf-m (2,800 rpm)	32.5 ft-lbs. (2,500 rpm) 4.50 kgf-m (2,500 rpm)
Idle Speed	1,400 ± rpm	1,400 ± 150 rpm
Maximum No Load RPM	3600 ± 100 rpm	3600 ± 100 rpm
Specific Fuel Consumption	1.64 gals./hr. (6.05/liters/hr.)	1.54 gals./hr. (5.82/liters/hr.)
Fuel Tank Capacity	2.20 gallons (8.32 liters)	2.20 gallons (8.32 liters)
Crankcase Oil Capacity	3.52 pints (1.66 liters)	3.18 pints (1.50 liters)
Starting System	Recoil/Electric	Recoil/Electric
Spark Plug Gap	0.028 -0.030 in. (0.70 - 0.76 mm.)	0.028 -0.031 in. (0.70 - 0.78 mm.)
Air Cleaner	Dual Element	Dual Element
Dry Weight	74.0 lbs. (33.56 kg.)	92.6 lbs. (42.0 kg.)
Dimensions L X W X H	17.40 x 10.60 x 18.14 in. 442 x 269 x 461 mm.	15.30 x 18.0 x 17.8 in. 388 x 457 x 452 mm.

JTO RIDE-ON TROWEL— ENGINE COMPONENTS (HONDA)

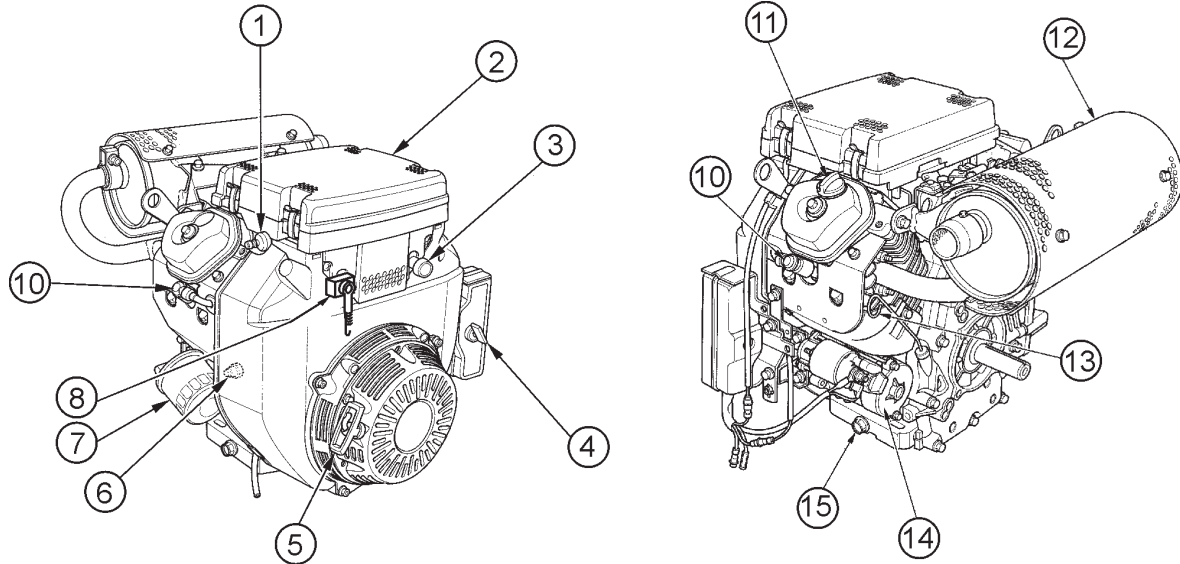


Figure 3. Engine Controls and Components (Honda)

INITIAL SERVICING

The engine (Figure 3) must be checked for proper lubrication and filled with fuel prior to operation. Refer to the manufacturer's engine manual for instructions & details of operation and servicing. The engine shown above is a **HONDA** engine. Operation for other types of engines may vary somewhat.

1. **Fuel Filter** – Filters fuel for contaminants.
2. **Air Filter** – Prevents dirt and other debris from entering the fuel system. Unsnap air filter cover to gain access to filter element.
3. **Choke Knob** – Used in the starting of a cold engine or in cold weather conditions. The choke enriches the fuel mixture.
4. **Engine ON/OFF Switch** – "ON" position permits engine starting, "OFF" position stops engine operations.
5. **Recoil Starter (pull rope)** – Manual-starting method. Pull the starter grip until resistance is felt, then pull briskly and smoothly.
6. **Oil Sensor Switch** – This switch monitors the oil level in the engine crankcase. In the event of low oil, the engine will be shut down.
7. **Oil Filter** – Spin-on type, filters oil for contaminants.
8. **Throttle Lever** – Controlled by accelerator pedal, increases or decreases engine RPM.

10. **Spark Plug** – Provides spark to the ignition system. Set spark plug gap to 0.71 - 0.78 mm (0.028 - 0.031 inch) Clean spark plug once a week.
11. **Oil Filler Cap** – Remove cap to refill or replace oil with recommended type as listed in Table 3. Make sure cap is tightened securely. **DO NOT** over fill.
12. **Muffler** –Used to reduce noise and emissions. **NEVER** touch the muffler while it is hot! Serious burns can result. **NEVER** operate the engine with the muffler removed.



WARNING

Engine components can generate extreme heat. To prevent burns, **DO NOT** touch these areas while the engine is running or immediately after operating. **NEVER** operate the engine with the muffler removed.

13. **Oil Dip Stick** – Remove to check amount and condition of oil in crankcase.
14. **Starter** – Starts engine when ignition key is rotated to the "ON" position.
15. **Oil Drain Plug** – Remove to drain crankcase oil.

JTO RIDE-ON TROWEL — ENGINE COMPONENTS (VANGUARD)

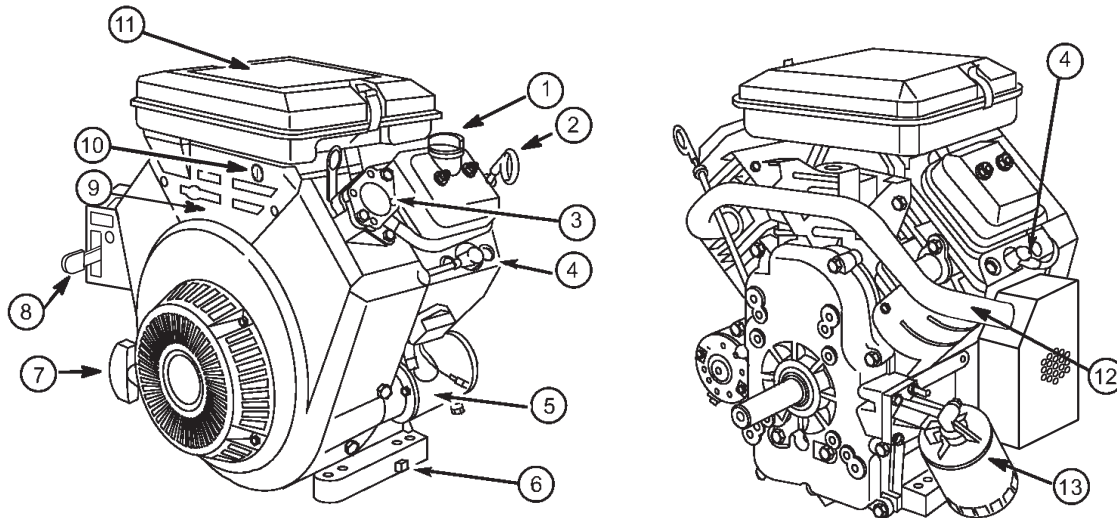


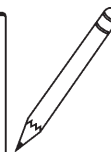
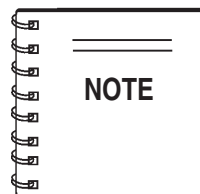
Figure 4. Engine Controls and Components (Vanguard)

INITIAL SERVICING

The engine (Figure 4) must be checked for proper lubrication and filled with fuel prior to operation. Refer to the manufacturers Engine manual for instructions & details of operation and servicing.

1. **Oil Fill Cap** – Remove cap to refill or replace oil with recommended type as listed in Table 3. Make sure cap is tightened securely. **DO NOT** over fill.
2. **Oil Dipstick** – Remove to check amount and condition of oil in crankcase.
3. **Fuel Pump** – Pumps fuel from the fuel tank into the carburetor.
4. **Spark Plugs** – Provides spark to the ignition system. Set spark plug gap to 0.71 - 0.76 mm (0.028 - 0.030 inch) Clean spark plug once a week.
5. **Electric Starter** – Starts engine when ignition key is rotated to the “ON” position.
6. **Oil Drain Plug** – Remove to drain crankcase oil.
7. **Recoil Starter (pull rope)** – Manual-starting method. Pull the starter grip until resistance is felt, then pull briskly and smoothly.
8. **Throttle Lever** – Used to adjust engine RPM speed (lever advanced forward **SLOW**, lever back toward operator **FAST**).
9. **Choke Lever** – Used in the starting of a cold engine, or in cold weather conditions. The choke enriches the fuel mixture.

10. **Ignition Switch** – Insert the ignition key here to start the engine. Turn the key clockwise to the **ON** position, then continue turning clockwise to the **START** position and release. To stop the engine turn the key fully counter-clockwise to the **STOP** position.



Operating the engine without an air filter, with a damaged air filter, or a filter in need of replacement will allow dirt to enter the engine, causing rapid engine wear.

11. **Air Filter** – Prevents dirt and other debris from entering the fuel system. Release the latches on the sides of the air filter cover to gain access to filter element.



WARNING

Engine components can generate extreme heat. To prevent burns, **DO NOT** touch these areas while the engine is running or immediately after operating. **NEVER** operate the engine with the muffler removed.

12. **Muffler** – Used to reduce noise and emissions. **NEVER** touch the muffler while it is hot! Serious burns can result. **NEVER** operate the engine with the muffler removed.
13. **Oil Filter** – Prevents dirt and other debris from entering the engine. Service the oil filter as recommended in the maintenance section of this manual.

JTO RIDE-ON TROWEL — GENERAL INFORMATION

JTO RIDE-ON TROWEL FAMILIARIZATION

The JTO ride-on trowel is designed for the floating and finishing of concrete slabs. This ride-on trowel is a overlapping trowel.

Take a walk around the trowel. Take notice of all the major components (see Figures 5 and 6) like the engine, blades, air cleaner, fuel system, fuel shut-off valve, ignition switch etc. Check that there is always oil in the engine, and gear oil in the gear box assembly.

Read all the safety instructions carefully. Safety instructions will be found throughout this manual and on the machine. Keep all safety information in good, readable condition. Operators should be well trained on the operation and maintenance of the trowel.

Look at the operator control levers. Grab the control levers and move them around a bit. Look to see how moving the control levers causes the gearboxes and frame to move.

Notice the foot pedal which controls the engine speed. Also take a look at the main driveline of the trowel. Take note and reference how the belts look, this is the way the belts should look when adjusted properly.

Before using your ride-on trowel, test it on a flat watered down section of finished concrete. This trial test run will increase your confidence in using the trowel and at the same time it will familiarize you with the trowel's controls and indicators. In addition you will understand how the trowel will handle under actual conditions.

Engine

This trowel is equipped with either a air-cooled 18 HP Vanguard (Briggs and Stratton) gasoline engine or a 20 HP air-cooled Honda gasoline engine (GX620). Refer to the engine owner's manual for specific instructions regarding engine operation. This manual is included with the ride-on trowel at the time of shipping from Whiteman. Please contact your nearest Multiquip Dealer for a replacement should the original manual disappear.

Blades

The blades of the trowel finish the concrete as they are rotated around the surface. Blades are classified as **combination** (8 inches wide), **float** (10 or 8 inches wide), and **finish** (6 inches wide). This trowel comes equipped with four **blades** per rotor equally spaced in a radial pattern and attached to vertical rotating shaft by means of a **spider assembly**.

Gearboxes

The JTO ride-on trowel consist of two separate gearbox assemblies that are enclosed in rugged cast aluminum gear cases. The main gear is a high quality bronze and steel composite. The worm gear is composed of hardened steel.

Cooling fins and fans are integrated into the gearbox to provide maximum cooling for the gearbox oil. The gearbox casing holds 50% more oil capacity than competitors, which allows more lubrication to be provided to critical points.

Steering Assist

Dual control levers located in front of the operator's seat are provided for steering the trowel. The control levers are linked to two spring loaded cylinders. Push the left control lever forward and pull the right control lever backward and the trowel will rotate clockwise on approximately a center axis. Pull the left control lever backward and push the right control lever forward and the trowel will rotate counterclockwise. See Table 4 for a complete description on the control levers directional positioning.

Constant Velocity Joints (CV-Joints)

Constant velocity joints insure the efficient transfer of power to the drive shaft and maintains the timing of the gearboxes without any chance of slippage.

Training

For proper training, please use the "TRAINING CHECKLIST" located in the front of this manual. This checklist will provide an outline for an experienced operator to provide training to a new operator.

JTO RIDE-ON TROWEL — CONTROLS AND INDICATORS

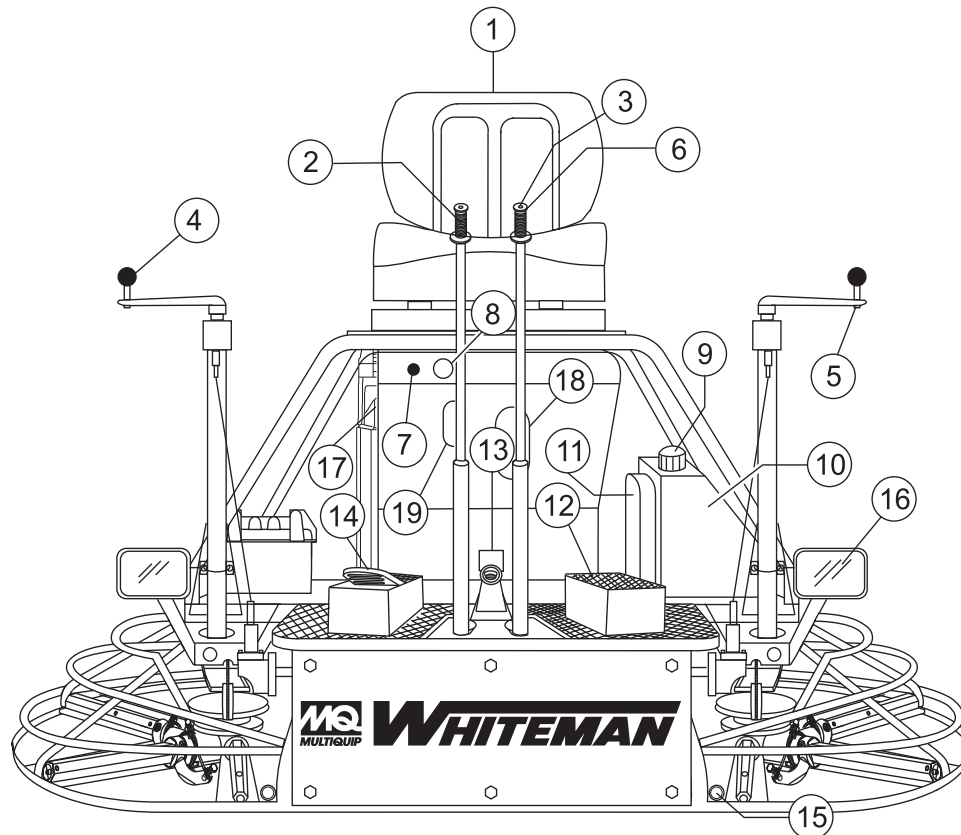


Figure 5. JTO Controls and Indicators (Front)

1. **Seat** – Place for operator to sit. Engine will not start unless operator is seated. Seat is adjustable, fore and aft for operator comfort.
2. **Steering Control Lever (right-side)** -Allows the unit to move in either a forward, reverse left or right direction.
3. **Retardant Spray Control Button** – When pressed allows retardant spray to flow through the spray nozzle located at the front of the machine.
4. **Twin Pitch Control** – Adjusts the blade pitch for right side of the trowel. Turn the crank as marked on its top surface to increase or decrease blade pitch.
5. **Twin Pitch Control** – Adjusts the blade pitch for left side of the trowel. Turn the crank as marked on its top surface to increase or decrease blade pitch.
6. **Steering Control Lever (left-side)** -Allows the unit to move in either a forward, reverse left or right direction.
7. **Light Switch** – When activated, turns on four halogen lights. Lights offer better visibility when working indoors.
8. **Ignition Switch** – With key inserted turn clockwise to start engine.
9. **Fuel Gauge/Filler Cap** - Indicates the amount of fuel in the fuel tank. Remove this cap to add fuel.
10. **Fuel Tank** - Holds 2.2 gallons of unleaded gasoline.
11. **Spare Belt Carrier** - Contains 2 spare belts. Belts are used on the drive pulley.
12. **Left Foot Riser** – Operator foot rest pedal.
13. **Spray Nozzle** – Spray nozzle for retardant.
14. **Right Foot Pedal** – Controls blade speed. Slow blade speed is accomplished by slightly depressing the foot pedal. Maximum blade speed is accomplished by fully depressing the foot pedal.
15. **EZ-Mover Boss** – Front -side insertion point for EZ Mover. Used when the transporting of the trowel is required.
16. **Lights** – Four 12 volt halogen lights are provided with this unit.
17. **Hour Meter** - Indicates number of hours machine has been in use or hours engine was run.
18. **Dip Stick**- Access hole provided to check engine oil through this cutout.
19. **Spark Plug**- Access the spark plug through this cutout.

JTO RIDE-ON TROWEL — CONTROLS AND INDICATORS

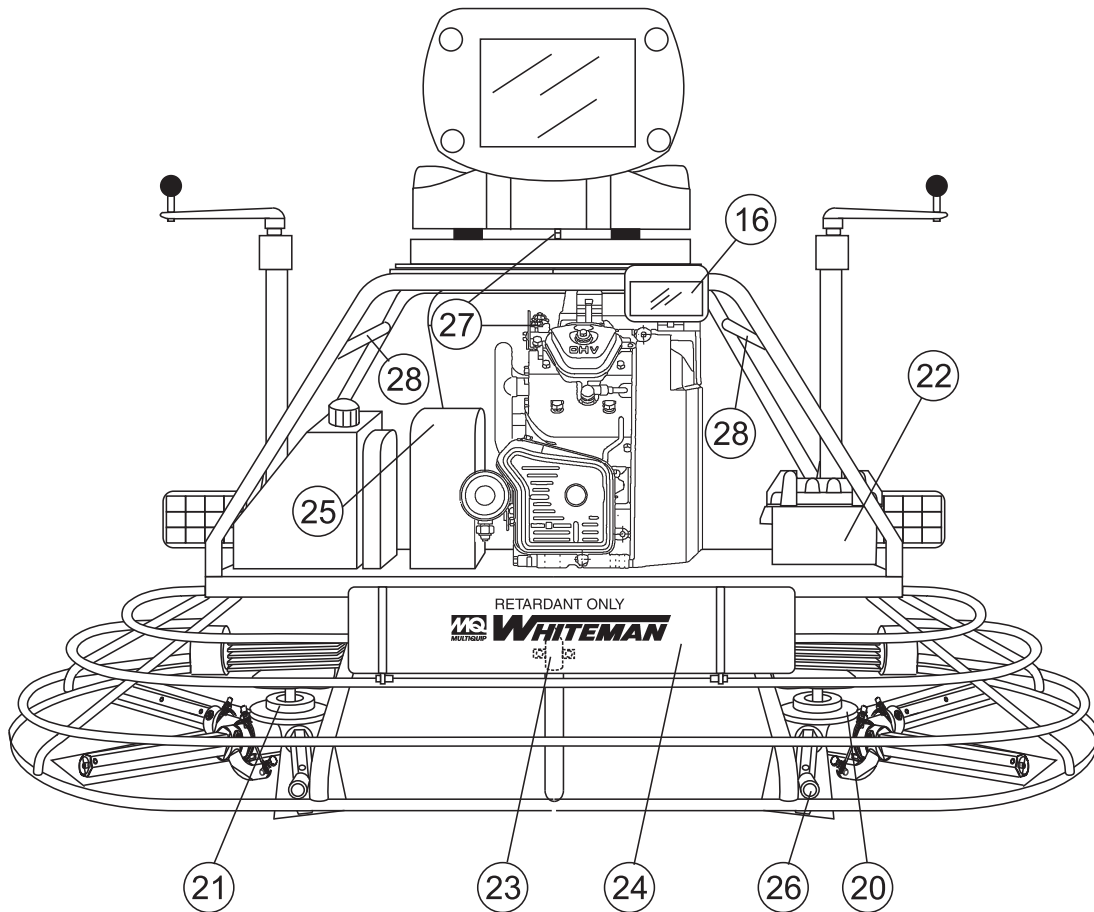


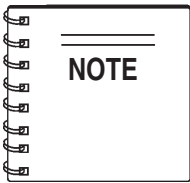
Figure 6. JTO Controls and Indicators (Rear)

- 20. **Right-Side Spider** – Consists (basic) of trowel arms, blades, wear plate, and thrust collar etc.
- 21. **Left-Side Spider** – Consists (basic) of trowel arms, blades, wear plate, and thrust collar etc.
- 22. **Battery** – Provides +12V DC power to the electrical system
- 23. **Retardant Spray Motor** – Used in conjunction with the left spray control button.
- 24. **Retardant Spray Tank** – Holds 5 gallons of retardant.
- 25. **Belt Guard** – Encloses V-belts used in conjunction with clutch.
- 26. **EZ-Mover Boss** – Back- side insertion point for EZ Mover. Used when the transporting of the trowel is required.
- 27. **Safety Kill Switch** – Shuts down engine when operator is **not** sitting in seat.
- 28. **Lift Loops** – Located on both the left and right sides of the main frame. Used when the trowel must be lifted onto a concrete slab.

JTO RIDE-ON TROWEL— NEW MACHINE SETUP INSTRUCTIONS

Trowel Pre-Set-Up Instructions

The purpose of this section is to assist the user in the setting up of a **NEW** trowel. If your trowel is already assembled (seats, handles, knobs and battery, then this section can be skipped.

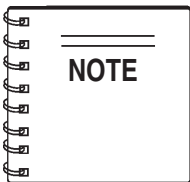


The new ride-on trowel cannot be put into service until the pre-setup installation instructions are completed. These pre-setup instructions only need to be performed at the time of unpacking a **NEW** trowel.

Before packaging and shipping this Whiteman Ride-On Power Trowel was run and tested at the factory. If there are problems, please let us know.

Control Handle Setup

1. Remove the bolts from the plastic bag tied to the control towers.
2. Remove all protective wrapping and straps from the control handles.
3. Slip the top (loose) piece into the base of the corresponding handle, making sure to line up the holes.
4. Install the bolt through the lined up holes and tighten the



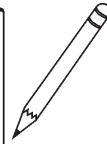
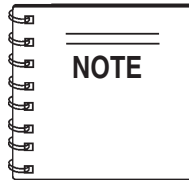
Some models are equipped with adjustable height handles. Adjust the height by placing the bolt through the set of holes that corresponds to the most comfortable height.

5. Pay close attention to any wires that may be inside the control handles. **DO NOT** pinch or cut any wires during installation.
6. Inside the plastic bag of parts are two knobs for the pitch control tower cranks. Install these two knobs onto the tower crank levers.

Seat Assembly

The seat is not installed on the trowel for shipping purposes. To attach the seat perform the following:

1. Remove the seat from the protective wrapping.
2. Remove the bolts on the bottom of the seat, and place seat on the seat mounting plate, then insert the bolts through the holes or slots on the seat mounting plate and tighten.



There are two types of seats, depending on what type of trowel you have. J and H series trowels have slots on the seat mounting plate that allow **fore** and **aft** adjustment of the seat. H-series trowels have a seat that is mounted

on tracks, similar to an automobile seat. This seat can be adjusted fore and aft via the control lever under the front of the seat.

Battery Setup

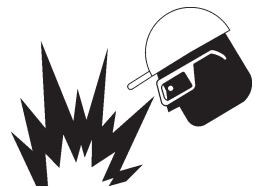
This trowel was shipped with a wet charged battery. This battery may need to be charged for a brief period of time as per the manufacturer instructions.

When charging the battery, always wear **eye** protection and **rubber gloves**. Use the following rules when charging the battery:

CAUTION:



■ **DO NOT** expose the battery to open flames, sparks, cigarettes etc. The battery contains combustible gases and liquids. If these gases and liquids come in contact with a flame or spark, an explosion could occur.



■ **ALWAYS** keep the battery charged. If the battery is not charged a buildup of combustible gas will occur.

■ **ALWAYS** keep battery charging and cables in good working condition. Repair or replace all worn cables.

■ **ALWAYS** recharge the battery in a vented air environment, to avoid risk of a dangerous concentration of combustible gases.

JTO RIDE-ON TROWEL — INITIAL START-UP

This section is intended to assist the operator with the initial start-up of the JTO ride-on trowel. It is extremely important that this section be read carefully before attempting to use the trowel in the field.



DO NOT use your ride-on power trowel until this section is thoroughly understood.

CAUTION:



Failure to understand the operation of the JTO Ride-On Trowel could result in severe damage to the trowels or personal injury.

See Figures 5 and 6 for the location of any control or indicator referenced in this manual.

Engine Oil Level



- To check the engine oil level, place the trowel on secure level ground with the engine stopped.
- Remove the dipstick from its holder as shown in Figure 7 and wipe clean.
- Insert and remove the dipstick into the holder. Check the oil level shown on the dipstick.
- If the oil level is low (Figure 7), fill to the correct operating level with the recommended oil type as listed in Table 3. See Table 2 for engine oil capacity.

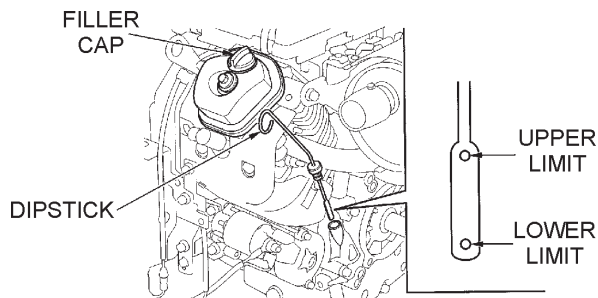


Figure 7. Engine Oil Dipstick

Table 3. Oil Type

Season	Temperature	Oil Type
Summer	25°C or Higher	SAE 10W-30
Spring/Fall	25°C~10°C	SAE 10W-30/20
Winter	0°C or Lower	SAE 10W-10

Gearbox Oil Level

- Check the gearbox oil level in both gearboxes by removing the plug located on the side of the gearbox. See Figure 8.
- The level of oil in the gearbox should just reach the bottom of the fill plug hole. The fill hole plug is located approximately half way up the side of the gearbox. If needed, refill with specially formulated Whiteman gearbox lubricant P/N 10139 or ISO 680 oil. Gearbox oil capacity is 27 oz. (.798 liters).

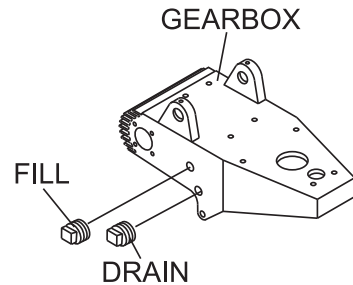
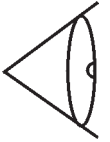


Figure 8. Gearbox Oil Plugs

CAUTION:



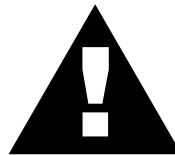
Use caution when removing plugs on the gearbox, there are two of them. Removal of the bottom most plug (**drain plug**) will drain the oil in the gearbox.

Fuel

- Determine if the engine fuel is low. If fuel level is low, remove the fuel filler cap and fill with unleaded gasoline. Handle fuel safely. Motor fuels are highly flammable and can be dangerous if mishandled. **DO NOT** smoke while refueling. **DO NOT** attempt to refuel the ride-on trowel if the engine is hot or running.



DANGER:



Fuel spillage on a **hot!** engine can cause a **fire or explosion**. If fuel spillage occurs, wipe up the spilled fuel completely to prevent fire hazards. **NEVER!** smoke around or near the generator.



ALWAYS fill the fuel tank with clean and fresh unleaded **gasoline**. **DO NOT** over fill fuel tank. Leave room for expansion.

The fuel tank cap must be closed tightly after filling. Handle fuel in a safety container. If the container does not have a spout, use a funnel. Wipe up any spilled fuel immediately.

JTO RIDE-ON TROWEL — INITIAL START-UP

Starting the Engine (Honda)

1. With one foot on the ground and the other foot placed on the trowel's platform, grab hold of any part of the frame and lift yourself onto the trowel. Then sit down in the operator's seat.
2. The MQ Whiteman JTO ride-on trowel is equipped with a safety **kill switch**. This switch is located beneath the seat assembly. Remember the engine will not start unless an operator is sitting in the operator's seat. The weight of an operator depresses an electrical switch, which will allow the engine to start.

CAUTION:



NEVER disable or disconnect the kill switch. It is provided for the **operator's safety** and injury may result if it is disabled, disconnected or improperly maintained.

3. It is recommended that the **kill switch** be used to stop the engine after every use. Doing this will verify that the switch is working properly and presents no danger to the operator. Remember to turn the key to the "**OFF**" position after stopping the trowel. Not doing so may drain your units' battery.
4. The right foot pedal (Figure 9) controls blade and engine speed. The position of the foot pedal determines the blade speed. Slow blade speed is obtained by slightly depressing the pedal. Maximum blade speed is obtained by fully depressing the pedal.

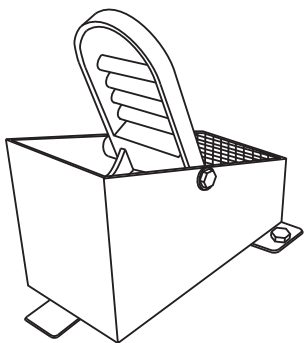


Figure 9. Blade Speed Control Foot Pedal

5. When starting a cold engine, pull the choke knob (Figure 10) out to the **close** position. In warm weather or when the engine is warm, the unit can be started with choke halfway or completely **open**.

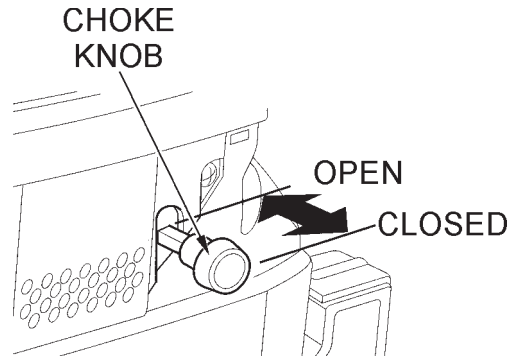


Figure 10. Choke Knob

6. Keep your foot **OFF** the gas pedal (right foot pedal). If the engine is cold, adjust the choke but in all circumstances, start the engine at idle (without touching the gas pedal).
7. Insert the **ignition key** into the ignition switch.
8. Turn the ignition key (Figure 11) clockwise and listen for the engine to start. Once the engine starts release ignition key.
9. If the engine fails to start in this manner, consult the engine owner's manual supplied with the trowel.
10. Test the safety "kill switch" by standing up briefly. The switch under the seat should cause the engine to stop. If the "kill switch" fails to shut down the engine. Turn off the engine with the key switch and fix the safety "kill switch". See Table 6 (Troubleshooting) for possible problems.
11. Repeat this section a few times to get fully acquainted with the engine starting procedure.

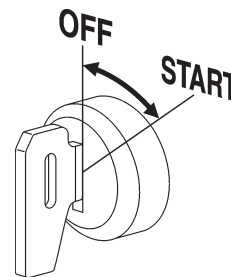
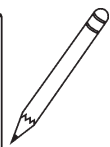
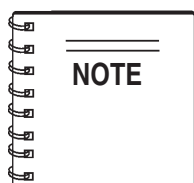


Figure 11. Ignition Switch/Key

JTO RIDE-ON TROWEL — INITIAL START-UP

Steering

Two control levers located in front of the operator's seat provide directional control for the trowel. Table 4 below illustrates the various directional positions of the control levers and their effect on the ride-on trowel.



All directional references with respect to the steering control levers are from the **operator's** seat position.

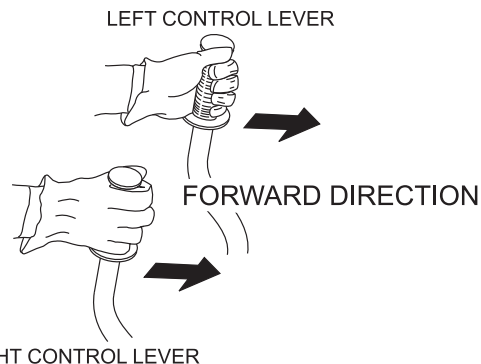
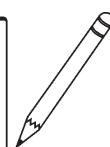
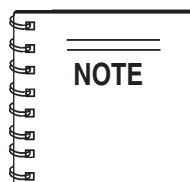


Figure 12. Left and Right Control Levers

1. Push both the left and right control levers forward. See Figure 12.
2. With your right foot quickly depress the right foot pedal halfway. Notice that the ride-on power trowel begins to move in a forward direction. Return both joystick controls to their neutral position to stop forward movement, then remove your right foot from the right foot pedal.
3. Practice holding the machine in one place as you increase blade speed. When about 75% of maximum blade speed has been reached, the blade will be moving at proper finishing speed. The machine may be difficult to keep in one place. Trying to keep the ride-on trowel stationary is a good practice for operation.
4. Practice maneuvering the ride-on trowel using the information listed in Table 4. Try to practice controlled motions as if you were finishing a slab of concrete. Practice edging and covering a large area.
5. Try adjusting the pitch of the blades. This can be done with the ride-on trowel stopped or while the trowel is moving, whatever feels comfortable. Test the operation of optional equipment like retardant spray and lights if equipped.
6. Push both the left and right joysticks backward and repeat steps 3 through 6 while substituting the word reverse for forward.



It is strongly suggested that all operators (experienced and novice) read "**Slabs on Grade**" published by the American Concrete Institute, Detroit Michigan.

Table 4. Control Lever Directional Positioning

CONTROL LEVER	DIRECTION	RESULTS
Left	Move Control Lever Forward	Causes the ride-on trowel to move forward and to the right.
Left	Move Control Lever Backward	Causes the ride-on trowel to move backward and to the left.
Right	Move Control Lever Forward	Causes the ride-on trowel to move forward and to the left.
Right	Move Control Lever Backward	Causes the ride-on trowel to move backward and to the right.
Left and Right	Move Both Control Levers Forward	Causes the ride-on trowel to move forward in a straight line.
Left and Right	Move Both Control Levers Backward	Causes the ride-on trowel to move backward in a straight line.
Left and Right	Move Both Control Levers to the Right	Causes the ride-on trowel to move to the right.
Left and Right	Move Both Control Levers to the Left	Causes the ride-on trowel to move to the left.

JTO RIDE-ON TROWEL— MAINTENANCE

Use Table 5 as a general guideline when servicing of the engine is required.

Table 5. Engine Maintenance Schedule							
DESCRIPTION (3)	OPERATION	BEFORE	FIRST MONTH OR 10 HRS.	EVERY 3 MONTHS OR 25 HRS.	EVERY 6 MONTHS OR 50 HRS.	EVERY YEAR OR 100 HRS.	EVERY 2 YEARS OR 200 HRS.
Engine Oil	CHECK	X					
	CHANGE		X				
Air Cleaner	CHECK	X					
	CHANGE			X (1)			
All Nuts & Bolts	Re-tighten If Necessary	X					
Spark Plug	CHECK-CLEAN				X		
	REPLACE						X
Cooling Fins	CHECK				X		
Spark Arrester	CLEAN					X	
Fuel Tank	CLEAN					X	
Fuel Filter	CHECK					X	
Idle Speed	CHECK-ADJUST					X (2)	
Valve Clearance	CHECK-ADJUST						X (2)
Fuel/Oil Lines	CHECK	Every 2 years (replace if necessary) (2)					

(1) Service more frequently when used in **DUSTY** areas.

(2) These items should be serviced by your service dealer, unless you have the proper tools and are mechanically proficient. Refer to the HONDA or Briggs and Stratton shop Manual for service procedures

(3) For commercial use, log hours of operation to determine proper maintenance intervals.

Spark Plug (100 Hours)

1. Inspect the spark plug every 100 hours, replace plug if the electrodes are worn, or if the insulator is cracked or chipped. Clean the spark plug with a wire brush, if plug is to be reused.

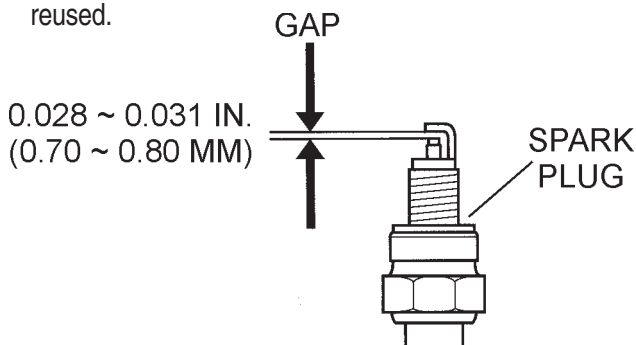


Figure 13. Spark Plug

2. For Honda engines adjust the spark gap (Figure 13) to 0.028~0.031 inch (0.70~0.78 mm). For Vanguard engines adjust spark gap to 0.030 inch (76 mm). Both engines have electronic ignition, which requires no adjustments. Replace spark plug every 300 hours.

Engine Maintenance Schedule (Daily)

Daily (8-10 Hours)

- Check the oil level in the engine crankcase and gear box, fill as necessary.
- Check V-belt.

Long Term Storage

- Drain fuel from fuel tank, fuel line and carburetor.
- Remove spark plug and pour a few drops of motor oil into cylinder. Crank engine 3 to 4 times so that oil reaches all internal parts.
- Clean exterior with a cloth soaked in clean oil.
- Store unit covered with plastic sheet in moisture free and dust free location out of direct sunlight.

CAUTION:



NEVER store the ride-on trowel with fuel in the tank for any extended period of time. **ALWAYS** clean up spilled fuel immediately.

JTO RIDE-ON TROWEL— MAINTENANCE

Maintenance

Perform the scheduled maintenance procedures as indicated:

DAILY

- Thoroughly remove dirt and oil from the engine and control area. Clean or replace the air cleaner elements as necessary. Check and retighten all fasteners as necessary.

Air Cleaner (Daily)

- Release the four latch tabs (Figure 14) from the air cleaner cover, and remove the cover.

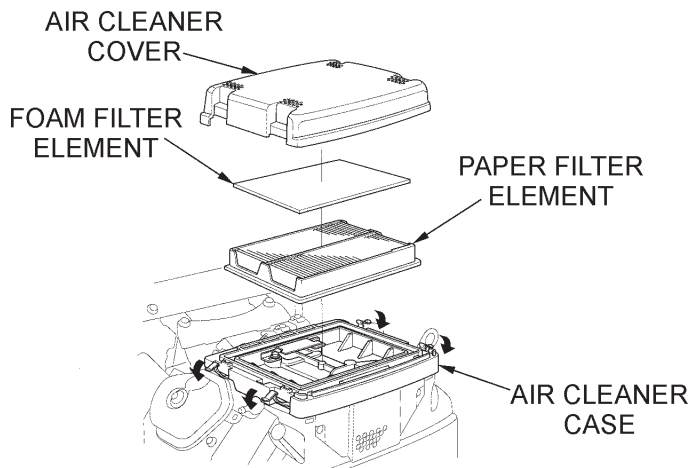


Figure 14. Air Cleaner

- Remove the foam filter from the cover.
- Remove the paper filter from the air cleaner case.
- Inspect both air filter elements, replace them if necessary.
- To clean the paper air filter, tap the filter element several times on a hard surface to remove dirt, or blow compressed air (not to exceed 30 psi (207 kPa, 2.1 kgf/cm²) through the filter element from the air cleaner case side.
- NEVER!** try to brush off dirt; brushing will force dirt into the fibers. If the paper element is excessively dirt, replace element.
- Clean the **foam air filter element** in warm soapy water, rinse and allow to dry thoroughly. Or clean with a nonflammable solvent and allow to dry. **DO NOT** pour any type of oil into the foam element.
- Wipe dirt from the inside of the air cleaner body and cover, using a moist cloth. Be careful not to let any dirt or debris enter the air chamber that leads to the carburetor.

- Reinstall the foam air filter element to the air cleaner cover, then reinstall the paper air filter element and cover to the air cleaner case. Securely latch the four hook tabs on the air cleaner cover

Changing Engine Oil (100 Hours)

- Change the engine oil after the first 20 hours of use, then change every 6 months or 100 hours.
- Remove the oil filler cap and fill engine crankcase with recommended type oil as listed in Table 3. Fill to the upper limit of dipstick.
- Fill crankcase with oil. Reference Table 2 for crankcase oil capacity.

Oil Filter (200 Hours)

- Replace the engine oil filter (Figure 15) every 200 hours.

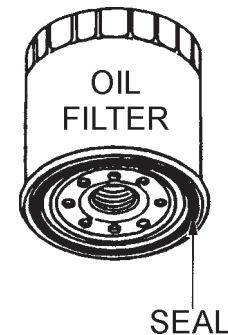


Figure 15. Oil Filter

- Be sure to coat the **seal** of the new oil filter with clean engine oil.

Fuel Filter (200 Hours)

- Replace the engine fuel filter (Figure 16) every 200 hours.

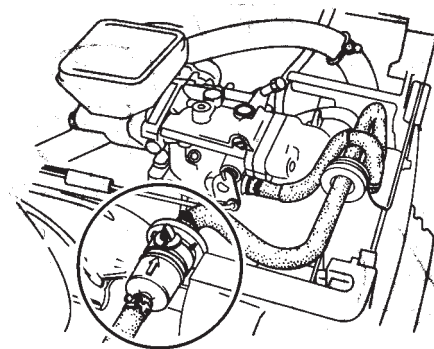


Figure 16. Fuel Filter

Belt Changing Procedure

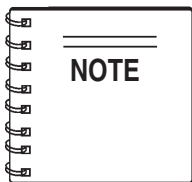
The belts need to be changed as soon as they show signs of wear. Remember that all belts should be changed at the same time. Do not reuse a belt under any circumstances. Indications of excessive belt wear are fraying, squealing when in use, belts that emit smoke or a burning rubber smell when in use.

Under normal operating conditions, a set of belts may last approximately six months. If your trowel is not reaching this kind of life span for belts, there are some things to check when you replace a set of belts.

Check to ensure that the belts are tensioned correctly. Next, check to make sure that the lower drive pulley (Figure 17) is aligned properly.

Your machine is equipped with a spare belt carrier (Figure 17). It is located opposite the clutch, mounted on the fuel tank. Make sure that there are belts in the carrier before the trowel is placed on a slab to finish concrete.

To install new belts from the spare belt carrier, first cut off the old belts. Next, remove the spare belt carrier by unscrewing the two bolts that attach it to the fuel tank.



Make sure that there are belts in the belt carrier before the trowel is placed on a slab to finish concrete.

The next step is to loosen the four engine mounting bolts and slide the engine toward the rear of the trowel. Slide the first belt over the clutch and place it on the upper drive pulley, then pull it down and place it on the lower drive pulley. Repeat this procedure for the second belt.

Realign the engine as described in the **Belt Tension Adjustment Procedure**, and replace the belts in the spare belt carrier.

Replacing Spare Belts

After the spare set of belts has been installed on the clutch pulley, it will be necessary to replace the spare set of belts that were in the spare belt carrier.

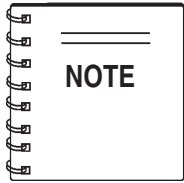
To replace a spare set of belts, be prepared to disassemble the **driveline**.

The driveline is located directly under the spare belt carrier. There are three bolts that need to be removed that will disconnect the CV-joint from the gearbox coupler. See Figure 17.

Once the CV-joint has been separated from the gearbox coupler, push the CV-joint inward so that a gap exist between the coupler and the CV-joint. Slide the replacement belts between this gap, and place them onto the spare belt carrier. Secure the spare belt carrier to the fuel tank.

Figure 17. Belt Changing Diagram

JTO RIDE-ON TROWEL — MAINTENANCE



See the engine manual supplied with your trowel for appropriate engine maintenance schedule and troubleshooting guide for problems.

At the front of this manual there is a “**Daily Pre-Operation Checklist**”. Make copies of this checklist and use it on a daily basis.

CAUTION!



ALWAYS allow the engine to cool before servicing. **NEVER** attempt any maintenance work on a **hot!** engine.



Trowel Maintenance Schedules

Weekly (50-60 Hours)

- Relube arms, thrust collar and clutch.
- Replace blades if necessary.

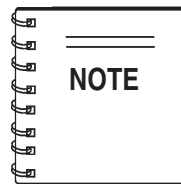
Monthly (200-300 Hours)

- Remove, clean, reinstall and relube the arms and thrust collar. Adjust the blade arms.
- Remove, clean, reinstall clutch.

Yearly (2000-2500 Hours)

- Check and replace if necessary the arm bushings, thrust collar bushings and shaft seals.
- Check pitch control cables for wear.
- Adjust blade speed.

Trowel Arm Adjustment Procedure



The following procedure should be followed to adjust trowel arms when it becomes apparent that the trowel is finishing poorly or in need of routine maintenance.

A **level**, clean area to test the trowel prior to and after is essential. Any uneven **spots** in the floor or debris under the trowel blades will give an incorrect perception of adjustment. Ideally, a 5 x 5" three-quarter inch thick **flat** steel plate should be used for testing.

To determine which blades need adjustment, place the trowel in the test area (three-quarter inch thick plate) and look for the following conditions:

- Pitch the blades as flat as possible and look at the **adjustment bolts**. They should all barely make contact with the **lower wear plate** on the spider. If you can see that one of them is not making contact, some adjustment will be necessary.
- Is the machine wearing out blades unevenly (i.e. one blade is completely worn out while the others look new)?

Figure 18 below illustrates a “**worn spider bushings or bent trowel arms**”. Check to see that adjustment bolt is barely touching (0.10" max. clearance) lower wear plate. All alignment bolts should be spaced the same distance from the lower wear plate.

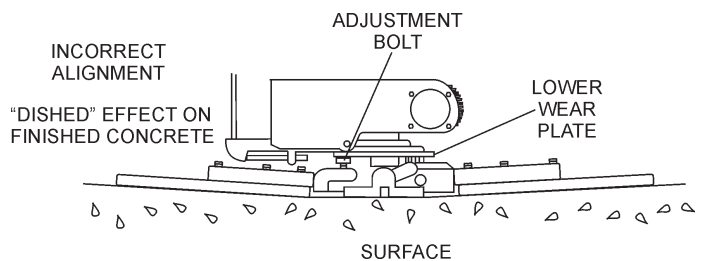


Figure 18. Worn Spider Plate

Figure 19 below illustrates the “**correct alignment**” for a spider plate (as shipped from the factory).

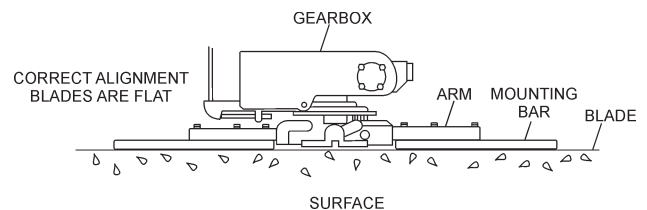


Figure 19. Correct Spider Plate Alignment

JTO RIDE-ON TROWEL — MAINTENANCE

2. Start engine, and bring trowel blades up to full speed and look for the following conditions:

- Does the trowel have a perceived rolling or bouncing motion when in use?
- Look at the trowel while it is running, does the guard ring “rock up and down” relative to the ground?

Spider Removal

1. Once it is determined that an adjustment is required, remove the spider assembly from the gearbox shaft as follows:

- a. Locate the cone point square head set screw (Figure 20) and attached jam nut found on the side of the spider assembly.

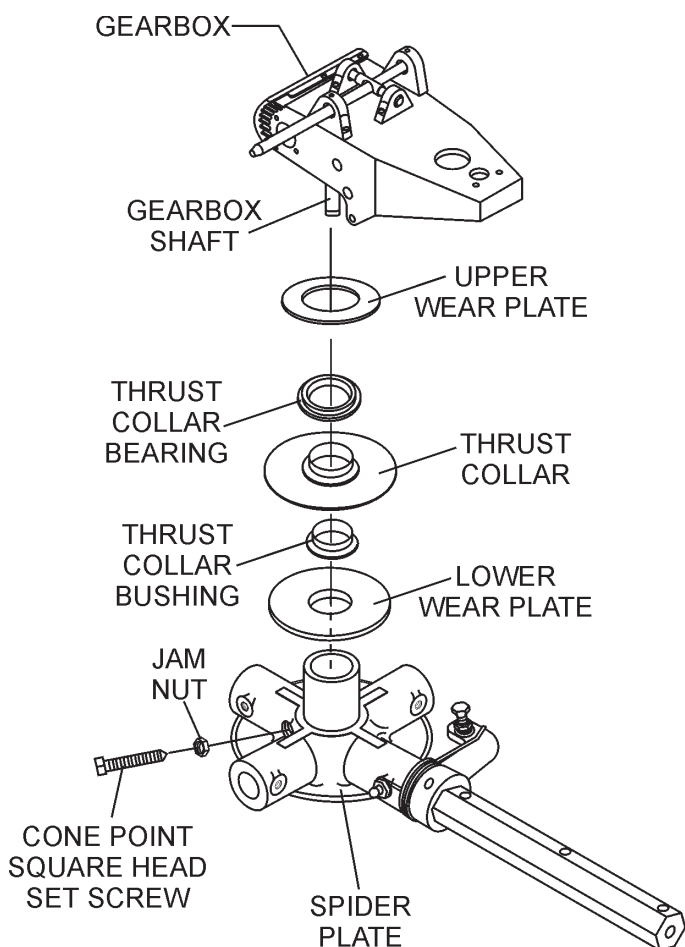


Figure 20. Spider/Gearbox Removal

b. Loosen the jam nut and cone point square head set screw, and carefully lift the **upper trowel assembly** off of the spider assembly. A slight tap with a rubber mallet may be necessary to dislodge the spider from the main shaft of the gearbox.

c. If the trowel is equipped with an outer stabilizer ring (Figure 21), remove the four bolts at the end of each spider arm.

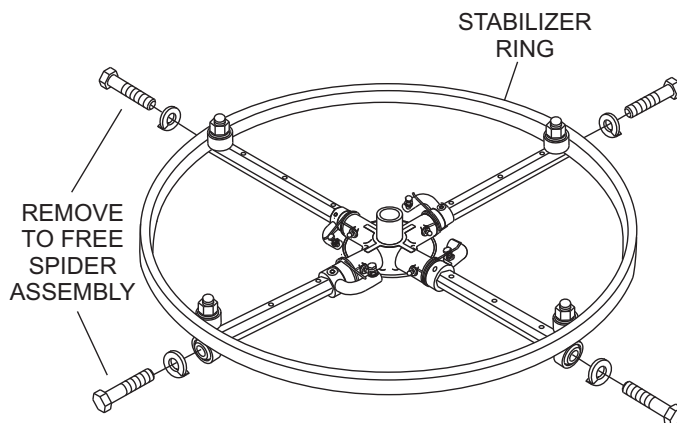


Figure 20. Stabilizer Ring

d. Examine stabilizer ring for out of round or bends. If ring is damaged, replace ring. If ring is found to be correct with no damage, set aside.

Trowel Arm Removal

1. Each trowel arm is held in place at the spider plate by a hex head bolt (zerk grease fitting) and a roll pin. Remove both the hex head bolt and the roll pin (Figure 22) from the spider plate.
2. Remove the trowel arm from the spider plate.

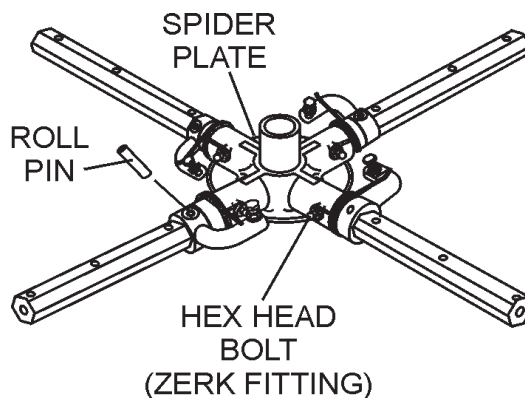


Figure 22. Removing Roll Pin and Zerk Grease Fitting

JTO RIDE-ON TROWEL — MAINTENANCE

- Should the trowel arm inserts (bronze bushing) come out with the trowel arm, remove the bushing from the trowel arm and set aside in a safe place. If the bushing is retained inside the spider plate, carefully remove the bushing.
- Examine the bronze trowel arm bushing insert (Figure 23), clean if necessary. Replace bushing if out-of-round or worn.

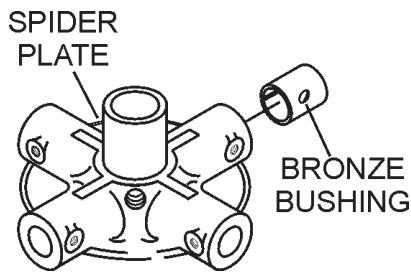


Figure 23. Bronze Bushings

Trowel Blade Removal

- Remove the trowel blades from the trowel arm by removing the three hex head bolts (Figure 24) from the trowel arm. Set blades aside.

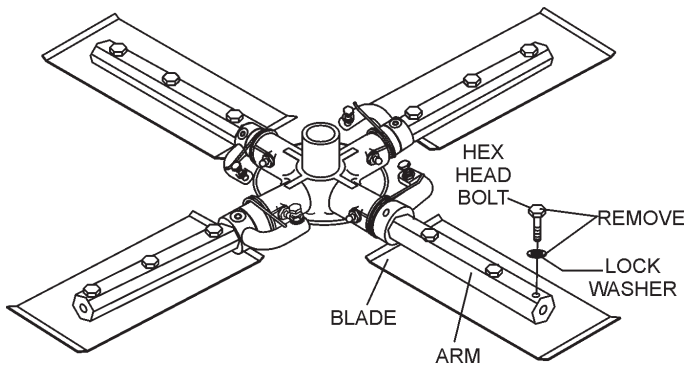


Figure 24. Trowel Blades

- Wire brush** any build-up of concrete from all six sides of the trowel arm. Repeat this for the remaining three arms.

Trowel Arm Flatness Test

- Using a piece of 3/4 inch thick steel plate or any surface which is **true** and **flat**, check all **six sides** of each trowel arm for flatness.
- Check each of the six sides of the trowel arm (hex section only) using a ten thousandths of an inch (max.) feeler gauge (Figure 25) between the flat of the trowel arm and an **extremely flat** test surface.

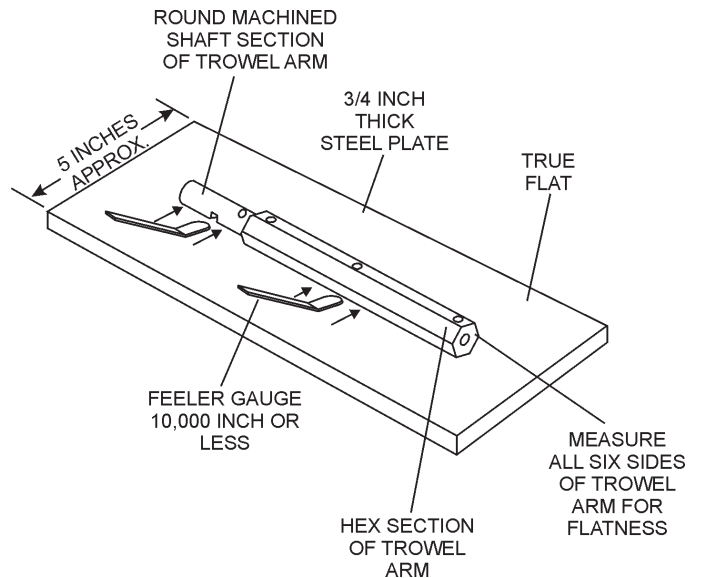
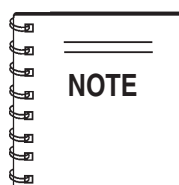


Figure 25. Trowel Arm Flatness Test

- If the trowel arm is found to be **uneven** or **bent**, replace the trowel arm. A bent trowel will not allow the trowel to operate in a smooth fluid rotation.
- Next, check each of the six sides of the round machined shaft section of the trowel arm. Each section should have the **same clearance** between the round of the trowel arm shaft and the test surface.



Trowel arms can be damaged by rough handling or by striking exposed plumbing or forms while in operation. **ALWAYS** look-out for objects which might cause damage to the trowel arms.

JTO RIDE-ON TROWEL — MAINTENANCE

Trowel Arm Adjustment

Shown in Figure 26 is the adjustment fixture with a trowel arm inserted. As each trowel arm is locked into the fixture, the arm bolt is adjusted to where it contacts a stop on the fixture. This will consistently adjust all of the trowel arms, keeping the finisher as flat and evenly pitched as possible.

1. Locate the trowel arm adjustment tool P/N 9177. Set the adjustment tool for a clock-wise blade rotation, meaning the fixture arm is in the "UP" position.

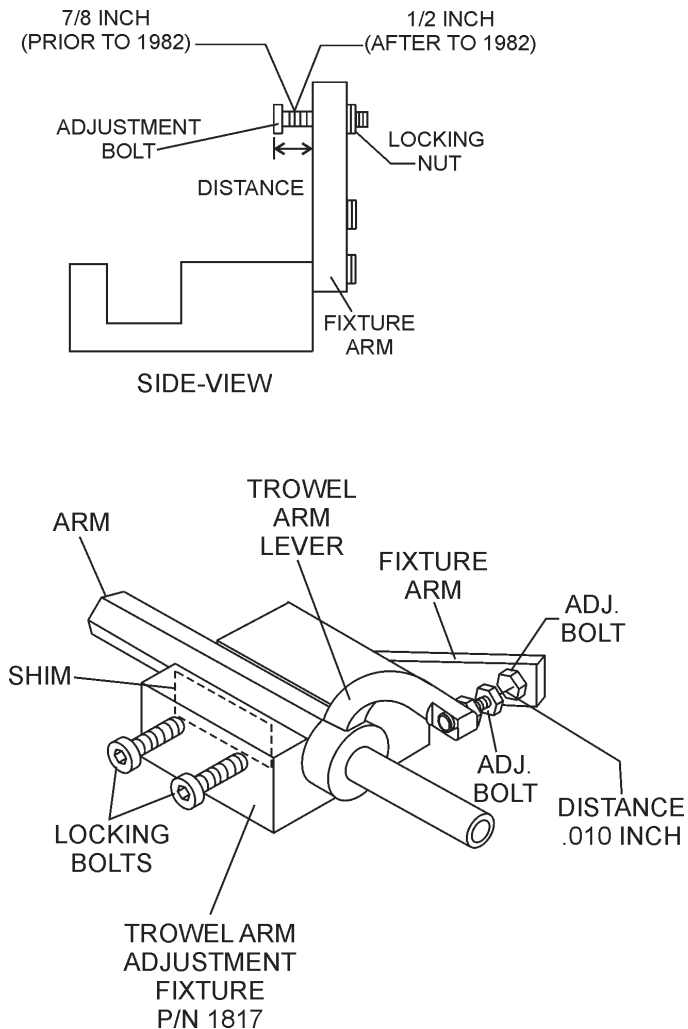


Figure 26. Trowel Arm Adjustment Tool

2. Trowels manufactured prior to June of 1982 require that the distance from the end of the adjusting bolt and the fixture arm must be 7/8" (Figure 26). Conversely, trowels manufactured after June of 1982 require that the distance from the end of the adjusting bolt and the fixture arm must be 1/2".

3. Un-screw the locking bolts on the adjustment tool, and place the trowel arm into the adjustment fixture channel as shown in Figure 34. A *thin shim* may be required to cover the blade holes on the trowel arm. Make sure to align the trowel adjustment bolt with the fixture adjustment bolt.
4. Using an allen wrench, tighten the locking bolts on the adjustment tool and securely lock the trowel arm in place.
5. Loosen the locking nut on the trowel arm lever, then turn the trowel arm adjusting bolt until it barely touches (.010") the adjusting bolt on the fixture.
6. After the correct adjustment has been made, tighten lock nut on trowel arm lever to lock in place.
7. Loosen locking bolts on adjustment fixture, and remove trowel arm from fixture.
8. Repeat steps 2-7 for the remaining trowel arms.

Re-Assembly

1. Clean and examine the upper/lower wear plates and thrust collar. Examine the entire spider assembly. Wire brush any concrete or rust build-up. If any of the spider components are found to be damaged or out of round, replace them.
2. Make sure that the bronze trowel arm bushing is not damage or out of round. Clean the bushing if necessary. If the bronze bushing is damage or worn, replace it.
3. Reinstall bronze bushing onto trowel arm.
4. Repeat steps 2 -3 for each trowel arm.
5. Make sure that the spring tensioner is in the correct position to exert tension on the trowel arm.
6. Insert all trowel arms with levers into spider plate (with bronze bushing already installed) using care to align grease hole on bronze bushing with grease hole fitting on spider plate.
7. Lock trowel arms in place by tightening the hex head zerk grease fitting and jam nut.
8. Re-install the blades back onto the trowel arms
8. Install stabilizer ring onto spider assembly.
9. Reinstall **lower wear plate**, **thrust collar** and **upper wear ring** in the **reverse order** that they were dis-assembled onto the spider shaft. Make sure that there is little or no lateral movement between the thrust collar and the spider shaft.

JTO RIDE-ON TROWEL — TROUBLESHOOTING (TROWEL)

TABLE 6. TROUBLESHOOTING (TROWEL)

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Engine running rough or not at all.	Kill switch malfunction?	Make sure that the kill switch is functioning when the operator is seated; replace switch if necessary.
	Fuel?	Look at the fuel system. Make sure there is fuel being supplied to the engine. Check to ensure that the fuel filter is not clogged.
	Ignition?	Check to ensure that the ignition switch has power and is functioning correctly.
Safety kill switch not functioning.	Other problems?	Consult engine manufacturer's manual.
	Loose wire connections?	Check wiring. Replace as necessary.
	Bad contacts?	Replace switch.
If trowel "bounces, rolls concrete, or makes uneven swirls in concrete".	Blades?	Make certain blades are in good condition, not excessively worn. Finish blades should measure no less than 2" (50mm) from the blade bar to the trailing edge, combo blades should measure no less than 3.5" (89mm). Trailing edge of blade should be straight and parallel to the blade bar.
	Spider?	Check that all blades are set at the same pitch angle as measured at the spider. A field adjustment tool is available for height adjustment of the trowel arms (see Optional Equipment).
	Bent trowel arms?	Check the spider assembly for bent trowel arms. If one of the arms is even slightly bent, replace it immediately.
	Trowel arm bushings?	Check the trowel arm bushings for tightness. This can be done by moving the trowel arms up and down. If there is more than 1/8" (3.2 mm) of travel at the tip of the arm, the bushings should be replaced. All bushings should be replaced at the same time.
	Thrust collar?	Check the flatness of the thrust collar by rotating it on the spider. If it varies by more than 0.02" (0.5 mm) replace the thrust collar.
	Thrust collar bushing?	Check the thrust collar by rocking it on the spider. If it can tilt more than 1/16" (1.6 mm) [as measured at the thrust collar O.D.], replace the bushing in the thrust collar.
	Thrust bearing worn?	Check the thrust bearing to see that it is spinning free. Replace if necessary.
	Blade pitch?	Check blades for consistent pitch. Adjust per Maintenance section instructions if necessary.
Machine has a perceptible rolling motion while running.	Main shaft?	The main output shaft of the gearbox assembly should be checked for straightness. The main shaft must run straight and cannot be more than 0.003" (0.08 mm) out of round at the spider attachment point.
	Yoke?	Check to make sure that both fingers of the yoke press evenly on the wear cap. Replace yoke as necessary.

JTO RIDE-ON TROWEL — TROUBLESHOOTING (TROWEL)

TABLE 6. TROUBLESHOOTING (CONTINUED TROWEL)

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Lights (optional) not working.	Wiring?	Check all electrical connections, including the master on/off switch and check to see if wiring is in good condition with no shorts. Replace as necessary.
	Lights?	Check to see if light bulbs are still good. Replace if broken.
Retardant spray (optional) not working.	Retardant?	Check the tank to make sure retardant is present. Fill tank as necessary.
	Wiring?	Check all electrical connections, including master on/off switch connections. Replace components and wiring as necessary.
	Bad switch?	Check the continuity of master on/off switch. Replace if broken.
	Bad spray pump?	If pump has a voltage present when the switch is turned on, but does not operate and electrical connections to the pump are good, replace the pump.
Steering is unresponsive.	Blade speed out of adjustment?	See section on blade speed adjustment.
	Worn components?	Check for wear of steering bearings and linkage components replace if necessary.
	Pivots?	Check to ensure free movement of hydraulic drive motors.
	Hydraulic pressure?	Check to ensure that hydraulic pressure is adequate. See section on checking hydraulic pressure.
Operating position is uncomfortable.	Seat adjust for operator?	Adjust seat with lever located on the front of the seat.
Power head on Electric Pitch (optional) not working.	Broken or loose parts?	If the motor runs and the pitch is not affected, parts inside the power head may be loose or broken. Return power head to dealer for service.
	Wiring?	Check all electrical connections and wiring. Check the continuity at the power head unit. Verify that there is voltage present at the power head switch with the key switch in the "on" position.
	Switch?	Check the continuity of the switch. If switch is malfunctioning, replace immediately.
Linkage on Twin Pitch (optional) not working.	Crank handles?	Make sure that both crank handles are pushed down as far as possible. Doing this ensures that the linkage is engaged.
	Broken part?	Replace all broken parts immediately.

JTO RIDE-ON TROWEL — TROUBLESHOOTING (ENGINE)

TABLE 7. ENGINE TROUBLESHOOTING

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Difficult to start		
Fuel is available but spark plug will not ignite. (Power available at high tension cable).	Ignition plug being bridge?	Check ignition system.
	Carbon deposit at ignition?	Clean or replace ignition.
	Short circuit due to defective insulators?	Replace insulators.
	Improper spark gap?	Set spark plug gap to the correct gap.
Fuel is available but spark plug will not ignite. (Power NOT available at high tension cable).	Short circuit at stop switch?	Check stop switch circuit. Replace stop switch if defective.
	Ignition coil defective?	Replace ignition coil.
Fuel is available and spark plug ignites (compression normal).	Muffler clogged with carbon deposits?	Clean or replace muffler.
	Mixed fuel quality is inadequate?	Check fuel to oil mixture.
	Fuel in use inadequate (water, dust)?	Flush fuel sytem and replace with fresh fuel.
	Air Cleaner clogged?	Clean or replace air cleaner.
Fuel is available and spark plug ignites (compression low).	Defective cylinder head gasket?	Tighten cylinder head bolts or replace head gasket.
	Cylinder worn?	Replace cylinder.
	Spark plug loose?	Tighen spark plug.
Operation not satisfactory		
Not enough power available (compression normal, no miss-firing).	Air cleaner clogged?	Clean or replace air cleaner.
	Air in fuel line?	Bleed (remove air) from fuel line.
	Fuel level in carbureator float chamber improper?	Adjust carbureator float
	Carbon deposits in cylinder?	Clean or replace cylinder
Not enough power available (compression normal, miss-firing).	Ignition coil defective?	Flush fuel sytem and replace with fresh fuel.
	Ignition plug often shorts?	Replace ignition wires, clean ignition.
	Fuel in use inadequate (water, dust)?	Flush fuel sytem and replace with fresh fuel.
Engine overheats.	Excessive carbon depostion in combustion chamber?	Clean or replace crankcase.
	Exhaust or muffler clogged with carbon.	Clean or replace muffler.
	Spark plug heat value incorrect?	Replace spark plug with correct type spark plug.

JTO RIDE-ON TROWEL — TROUBLESHOOTING (ENGINE)

TABLE 7. ENGINE TROUBLESHOOTING (Continued)

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Operation not satisfactory		
Rotational speed fluctuates.	Governor adjustment improper?	Adjust governor to correct lever.
	Governor spring defective?	Clean or replace ignition.
	Fuel flow erratic?	Check fuel line.
	Air taken in through suction line?	Check suction line.
Recoil starter not working properly.	Dust in rotating part?	Clean recoil starter assembly.
	Spring spring failure?	Replace sprial spring.

EXPLANATION OF CODE IN REMARKS COLUMN

The following section explains the different symbols and remarks used in the Parts section of this manual. Use the help numbers found on the back page of the manual if there are any questions.

The contents and part numbers listed in the parts section are subject to change **without notice**. Multiquip does not guarantee the availability of the parts listed.

Sample Parts List:

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	12345	BOLT	1	INCLUDES ITEMS W/*
2*		WASHER, 1/4 IN.		NOT SOLD SEPARATELY
2*	12347	WASHER, 3/8 IN. ...	1	MQ-45T ONLY
3	12348	HOSE	A/R	MAKE LOCALLY
4	12349	BEARING	1	S/N 2345B AND ABOVE

NO. Column

Unique Symbols - All items with same unique symbol (*, #, +, %, or >) in the number column belong to the same assembly or kit, which is indicated by a note in the "Remarks" column.

Duplicate Item Numbers - Duplicate numbers indicate multiple part numbers are in effect for the same general item, such as different size saw blade guards in use or a part that has been updated on newer versions of the same machine.



When ordering a part that has more than one item number listed, check the remarks column for help in determining the proper part to order.

PART NO. Column

Numbers Used - Part numbers can be indicated by a number, a blank entry, or TBD.

TBD (To Be Determined) is generally used to show a part that has not been assigned a formal part number at time of publication.

A blank entry generally indicates that the item is not sold separately or is not sold by Multiquip. Other entries will be clarified in the "Remarks" Column.

QTY. Column

Numbers Used - Item quantity can be indicated by a number, a blank entry, or A/R.

A/R (As Required) is generally used for hoses or other parts that are sold in bulk and cut to length.

A blank entry generally indicates that the item is not sold separately. Other entries will be clarified in the "Remarks" Column.

REMARKS Column

Some of the most common notes found in the "Remarks" Column are listed below. Other additional notes needed to describe the item can also be shown.

Assembly/Kit - All items on the parts list with the same unique symbol will be included when this item is purchased.

Indicated by:

"INCLUDES ITEMS W/(unique symbol)"

Serial Number Break - Used to list an effective serial number range where a particular part is used.

Indicated by:

"S/N XXXXX AND BELOW"

"S/N XXXX AND ABOVE"

"S/N XXXX TO S/N XXXX"

Specific Model Number Use - Indicates that the part is used only with the specific model number or model number variant listed. It can also be used to show a part is NOT used on a specific model or model number variant.

Indicated by:

"XXXXX ONLY"

"NOT USED ON XXXX"

"Make/Obtain Locally" - Indicates that the part can be purchased at any hardware shop or made out of available items. Examples include battery cables, shims, and certain washers and nuts.

"Not Sold Separately" - Indicates that an item cannot be purchased as a separate item and is either part of an assembly/kit that can be purchased, or is not available for sale through Multiquip.

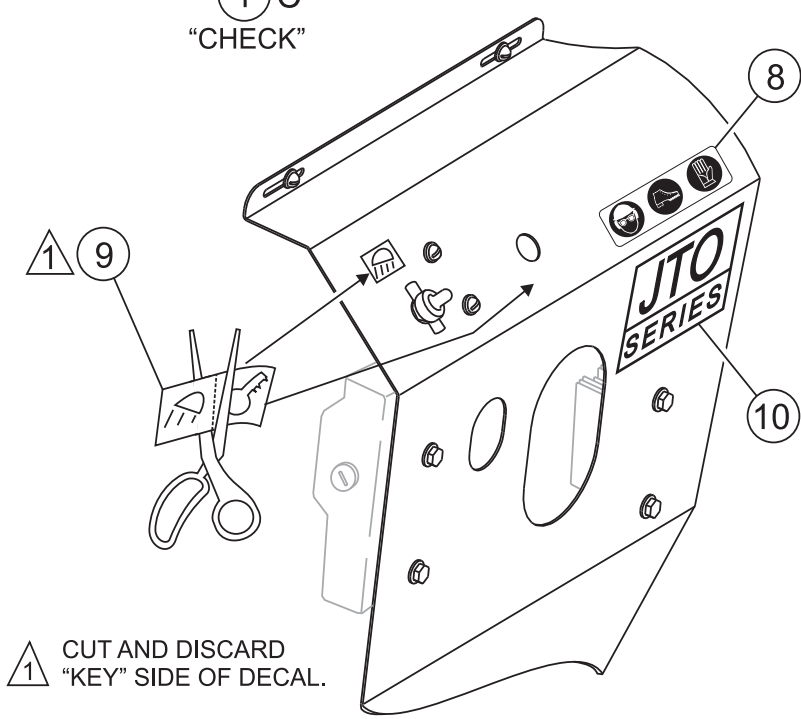
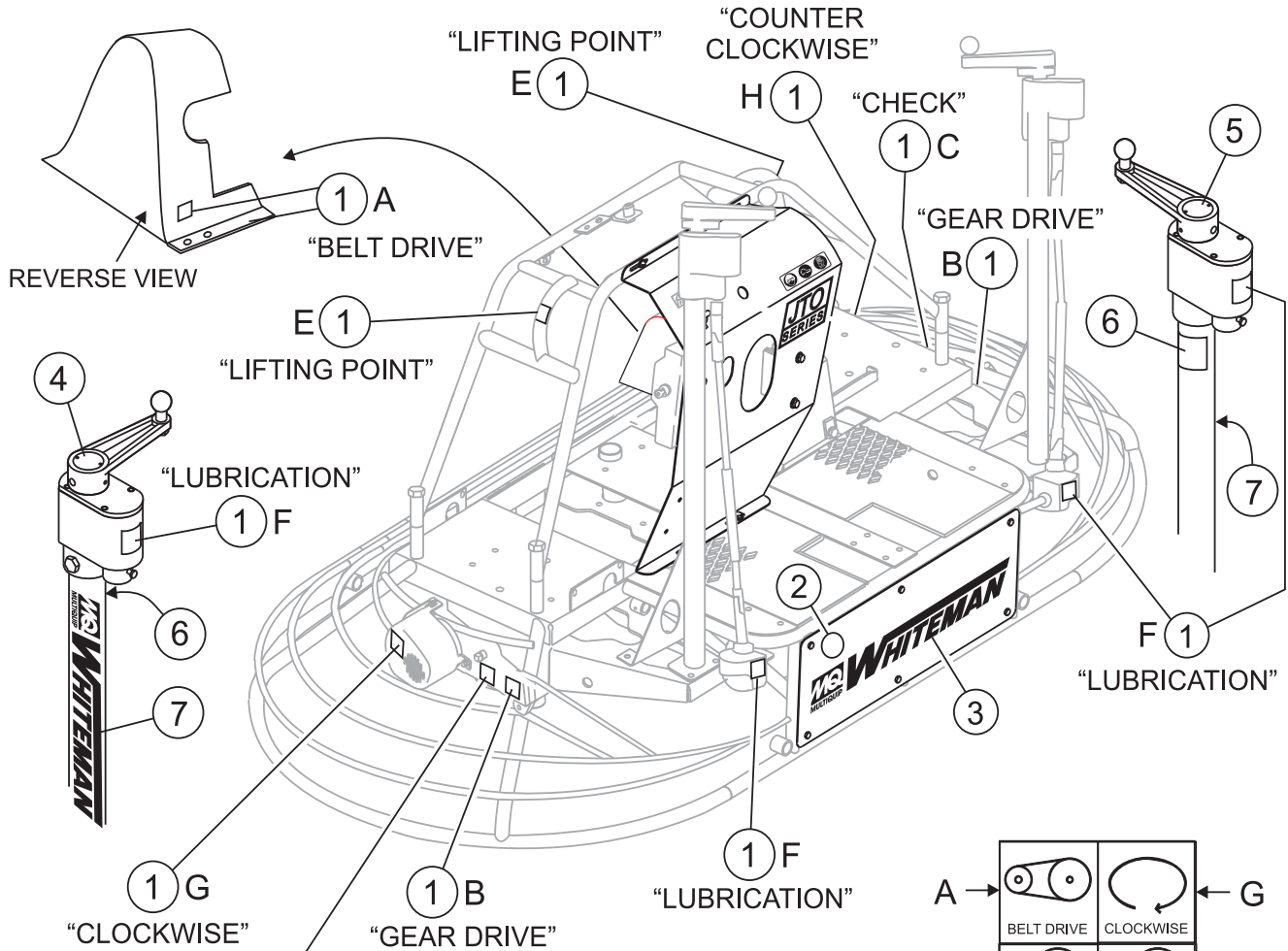
JTO RIDE-ON POWER TROWEL — SUGGESTED SPARE PARTS

JTO RIDE-ON POWER TROWEL (VANGUARD AND HONDA))

1 to 3 Units

Qty.	P/N	Description
4	0189	HANDLE GRIP
4	2267	HANDLE GRIP (RIGHT-SIDE)
2	2584	SWITCH
2	2008	CABLE PITCH
1	1617	LEVER ASSY. TROWEL ADJUSTMENT
2	2737	KNOB
1	2124	THROTTLE CABLE
4	2633	SEAL KIT S/N 44134 AND BELOW
4	11426	SEAL KIT S/N 44135 AND ABOVE
4	10518	BEARING KIT S/N 44134 AND BELOW
4	11427	BEARING KIT S/N 44135 AND ABOVE
2	10922	LEFT-SIDE FAN
2	10921	RIGHT-SIDE FAN
2	2249	RIGHT-SIDE WORM GEAR (BRONZE)
2	2250	LEFT-SIDE WORM GEAR (BRONZE)
2	2231	MAIN SHAFT (1-1/8")
2	1141	KEY 5/16 X 5/16 X 2-5/8
2	2229	KEY 5/16 X 5/16 X 1-7/16
2	10968	THRUST COLLAR KIT
2	10876	RIGHT-SIDE WORM GEAR (UP TO S/N 44134)
2	11231	RIGHT-SIDE WORM GEAR (FROM S/N 44135)
2	10877	LEFT-SIDE WORM GEAR (UP TO S/N 44134)
2	11232	LEFT-SIDE WORM GEAR (FROM S/N 44135)
4	2827	ARMS (16-1/2")
2	1555	RIGHT-SIDE TROWEL ARM LEVER
2	1163	LEFT-SIDE TROWEL ARM LEVER
20	0166 A	WASHER, LOCK 3/8" MED
20	1876	JAM NUT
20	0164 B	SCREW
10	1157 A	BUSHING
2	1316	LEFT-SIDE SPRING
2	1317	RIGHT-SIDE SPRING
20	1875	WASHER, INT. SHKP, 3/8"
20	1322	SCREW ASSEMBLY, RETAINING
2	12452	SPIDER UNIVERSAL
20	1162 A	GREASE CAP
20	1456	HEX NUT 3/8-16"
2	2712	FUEL CAP
5	11078	KEYS, IGNITION
2	10958	IGNITION SWITCH ASSY.
1	2655	HOUR METER
3	20111	GEARBOX LUBRICATING OIL (22 BOTTLE)

JTO RIDE-ON TROWEL — NAMEPLATE AND DECALS



▲ CUT AND DISCARD "KEY" SIDE OF DECAL.

A →			← G
B →			
C →			
D →			← H
E →			
F →			

DECAL SHEET
INTL STDS ISO
P/N 11246

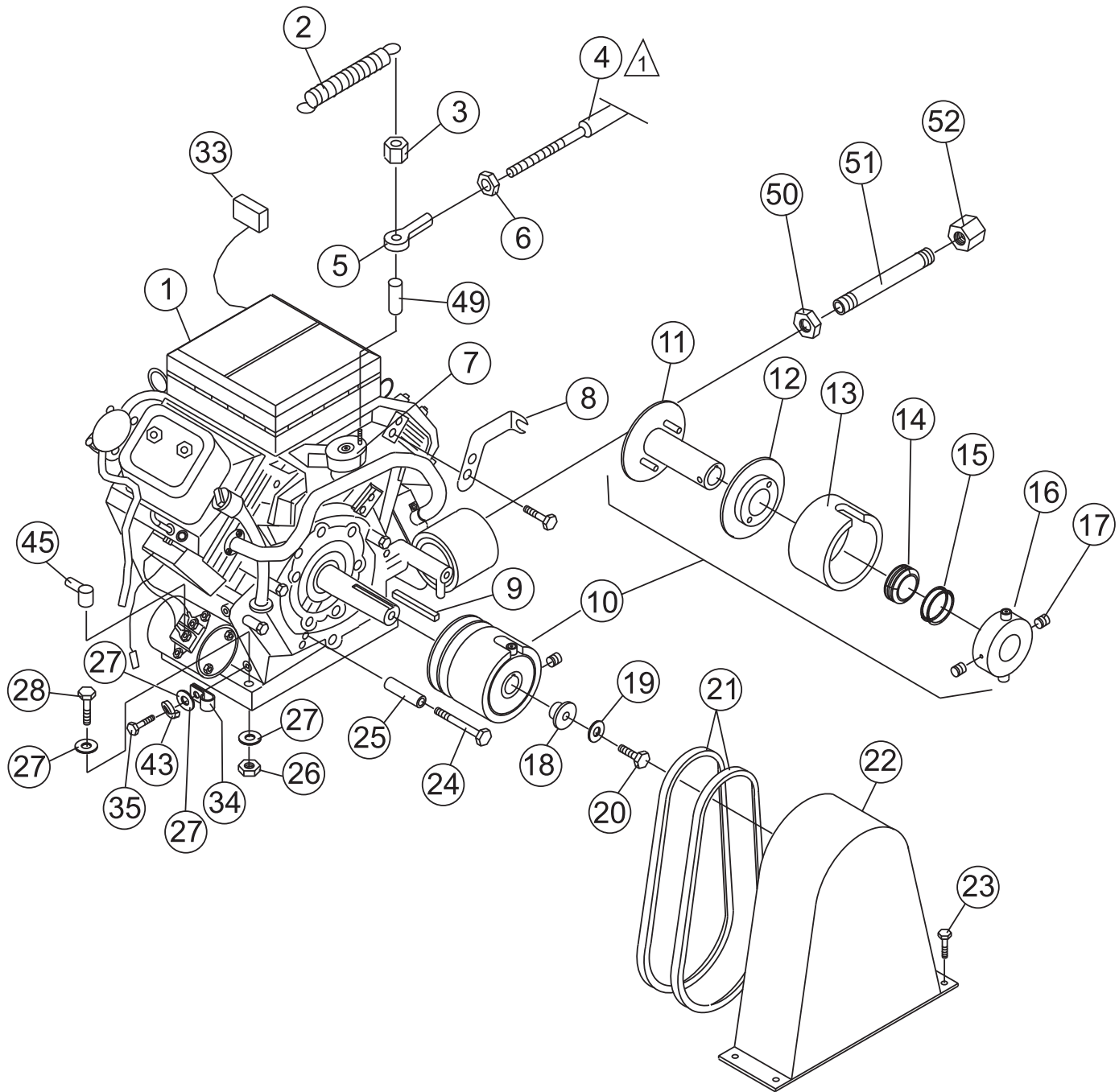
JTO RIDE-ON TROWEL — NAMEPLATE AND DECALS

NAMEPLATE AND DECALS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	11246	DECAL SET, INTERNATIONAL STDS	1	
2	13118	DECAL, POWDER COATED	1	
3	10818	DECAL, MQ-WHITEMAN 24 X 3	1	
4	2300	DECAL, AL PITCH RH	1	
5	2332	DECAL, AL PITCH LH	1	
6	2634	DECAL, SPRING SAFETY	2	
7	1499	DECAL, MQ-WHITEMAN RED/TOWER	2	
8	11247	DECAL, SAFETY CLOTHING	1	
9	2814	DECAL, CONTROL PANEL	1	
10	20925	DECAL, JTO SERIES	1	

JTO RIDE-ON POWER TROWEL—VANGUARD ENGINE & CLUTCH ASSY.

VANGUARD ENGINE AND CLUTCH ASSY.



NOTES:

- △ 1 FOR COMPLETE ASSEMBLY. SEE THROTTLE CABLE AND FOOT PEDAL ASSEMBLY.

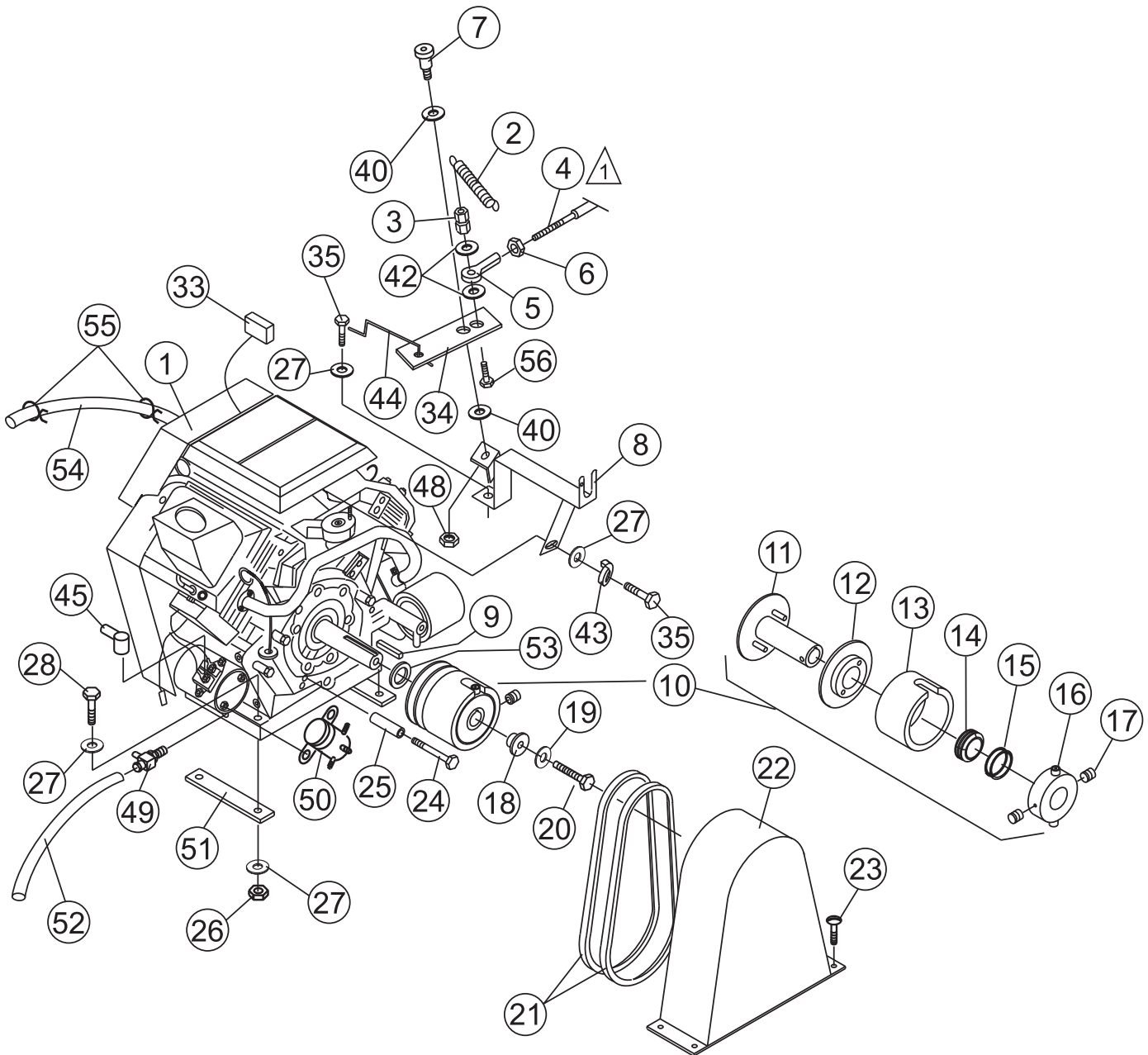
JTO RIDE-ON POWER TROWEL— VANGUARD ENGINE & CLUTCH ASSY.

VANGUARD ENGINE AND CLUTCH ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	2883	ENGINE, VANGUARD 18 HP	1	SPECIFICATION NO. 350447-0086-01
2	2192	THROTTLE SPRING	1	
3	2194	THROTTLE NUT	1	
4	2124	THROTTLE CABLE	1	
5	2153	SPHERICAL BEARING	1	
6	0937	HEX NUT 10-32	1	
7	2650	GOVERNOR ASSY.	1	
8	2162	THROTTLE CABLE MTK. BRKT.	1	
9	0310	CLUTCH KEY 1/4 X 1/4 X 1.1/2"	1	
10	2516	4" CLUTCH ASSY.. 1" BORE	1	
11	1882	CLUTCH SPINDLE	1	
12	1886	CLUTCH PULLEY	1	
13	2504	CLUTCH BOWL	1	
14	2451	CLUTCH WEIGHT	4	
15	2450	WEIGHT SPRING	2	
16	2506	CLUTCH PLATE (WITH ROLLERS)	1	
17	1893	SHSS 3/8- 24 X 5/8"	2	
18	9123	CLUTCH RETAINER	1	
19	0166 A	LOCK WASHER 3/8"	1	
20	0478	HHCS 3/8- 24 X 2.1/4"	1	
21	1619	DRIVE BELT A-39 (100 RPM, 7-9/16")	2	USED WITH PULLEY P/N 10500
21	2155	DRIVE BELT A-37 (120 RPM, 6-1/2")	2	USED WITH PULLEY P/N 2019
21	11064	DRIVE BELT A-36 (138 RPM, 5-5/8")	2	USED WITH PULLEY P/N 11047
22	2134	BELT GUARD	1	
23	1273	HHSTS 8- 32 X 3/8"	4	
24	0169	HHCS 3/8- 16 X 3"	1	
25	2257	BELT GUIDE	1	
26	5283	LOCK NUT 5/16- 18	4	
27	0300 B	FLAT WASHER 5/16"	9	
28	1207	HHCS 5/16- 18 X 1.3/4"	4	
33	2655	HOUR METER	1	
34	8126	HOSE CLAMP	1	
35	2299	HHCS 8MM- 1.25 X 15MM	1	
43	0161 C	LOCK WASHER 5/16"	1	
49	2190	SPACER	1	
50	10490	LOCK NUT 3/8 NPT	1	
51	12328	PIPE NIPPLE	1	
52	10491	PIPE CAP	1	

JTO RIDE-ON POWER TROWEL— HONDA ENGINE AND CLUTCH ASSY.

HONDA ENGINE AND CLUTCH ASSY.



NOTES:

- △ FOR COMPLETE ASSEMBLY. SEE THROTTLE CABLE AND FOOT PEDAL ASSEMBLY.

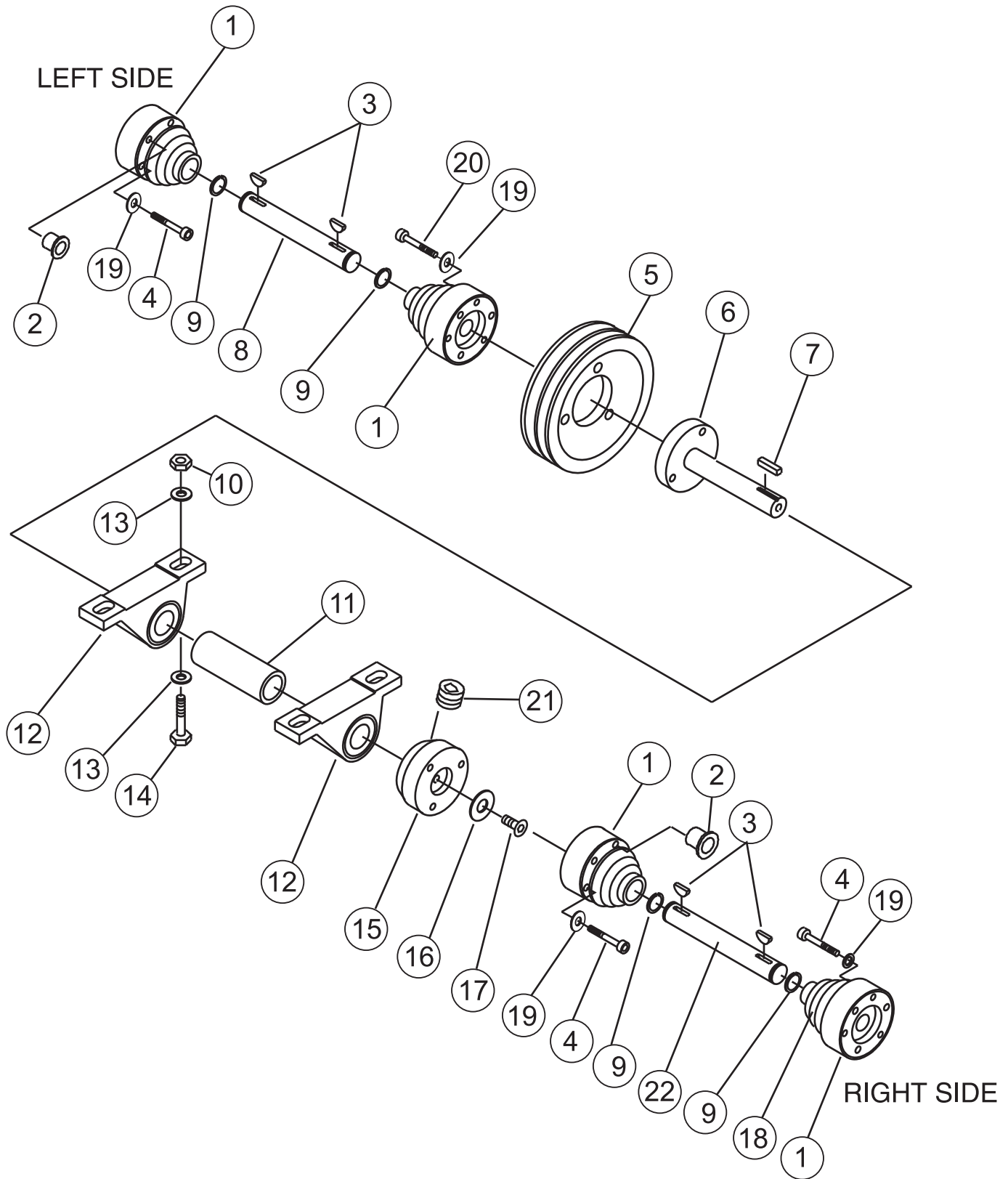
JTO RIDE-ON POWER TROWEL— HONDA ENGINE AND CLUTCH ASSY.

HONDA ENGINE AND CLUTCH ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	10931	ENGINE HONDA, GX620K1QXB120HP	1	
2	2192	THROTTLE SPRING	1	
3	2194	THROTTLE NUT	1	
4	10568	THROTTLE CABLE	1	
5	2153	SPHERICAL BEARING	1	
6	0937	HEX NUT 10- 32	1	
7	10990	SHOULDER BOLT	1	
8	10964	THROTTLE CABLE MTG. BRKT.	1	
9	0310	SQUARE KEY 1/4 X 1/4 X 1.1/2"	1	
10	2516	4" CLUTCH ASSY. 1" BORE	1	
11	1882	CLUTCH SPINDLE	1	
12	1886	CLUTCH PULLEY ASSY.	1	
13	2504	CLUTCH BOWL ASSY.	1	
14	2939	CLUTCH WEIGHT SET	1	
15	2450	WEIGHT SPRING	2	
16	2506	CLUTCH PLATE (WITH ROLLERS)	1	
17	1893	SHSS 3/8- 24 X 5/8"	2	
18	9123	CLUTCH RETAINER	1	
19	0166 A	LOCK WASHER 3/8"	1	
20	2667	HHCS 3/8- 24 X 2.1/2"	1	
21	1619	DRIVE BELT A-39 (100 RPM)	2	USED WITH PULLEY P/N 10500 (7-9/16")
21	2155	DRIVE BELT A-37 (120 RPM)	2	USED WITH PULLEY P/N 2019 (6-1/2")
21	11064	DRIVE BELT A-36 (138 RPM)	2	USED WITH PULLEY P/N 11047 (5-5/8")
22	11114	BELT GUARD	1	
23	1273	HHSTS 8- 32 X 3/8"	4	
24	0169	HHCS 3/8- 16 X 3"	1	
25	2257	BELT GUIDE	1	
26	5283	LOCK NUT 5/16- 18	4	
27	0300 B	FLAT WASHER 5/16"	10	
28	0669 A	HHCS 5/16- 18 X 2.1/4"	4	
33	2655	HOUR METER	1	
34	10954	THROTTLE LEVER	1	
35	2299	HHCS M8- 1.25 X 15MM	2	
40	0948	WASHER, FLAT 3/8"	2	
42	2203	FLAT WASHER #10	8	
43	0161 C	LOCK WASHER 5/16"	1	
44	10955	THROTTLE WIRE	1	
45	2762	TERMINAL BOOT	1	
48	1618	LOCK NUT 10-24	1	
49	10963	OIL DRAIN VALVE	1	
50	2207	SOLENOID	1	
51	10984	ENGINE SPACER	2	
52	10987	OIL DRAIN HOSE	1	
53	10948	SPACER	1	
54	10962	FUEL HOSE	1	
55	2138	HOSE CLAMP	2	
56	10018	SHCS 10- 32 X 1"	1	

JTO RIDE-ON POWER TROWEL— DRIVE ASSY.

DRIVE ASSY.



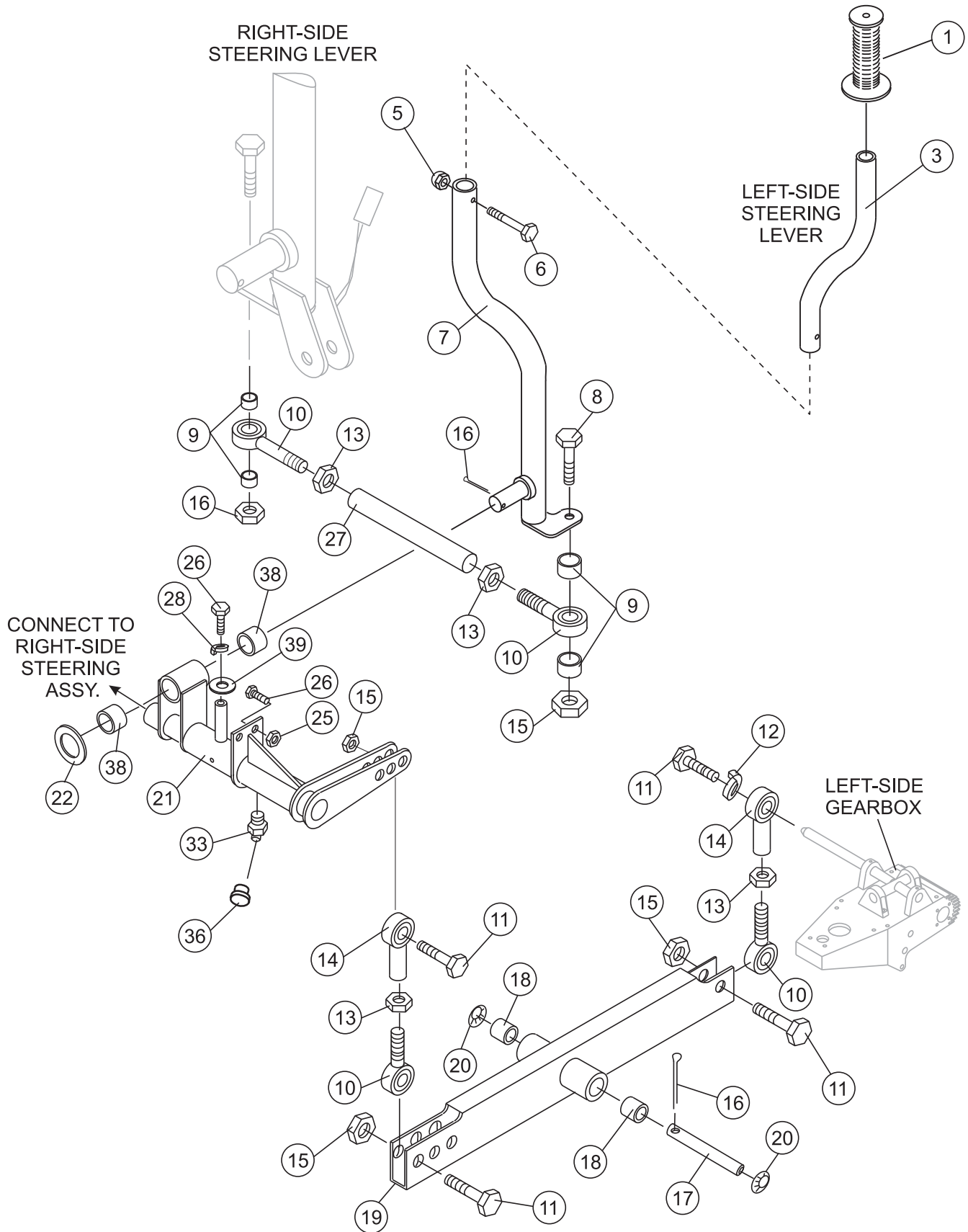
JTO RIDE-ON POWER TROWEL— DRIVE ASSY.

DRIVE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	2052	C.V. JOINT	4	
2	11602	PLUG	12	REPLACES 2218
3	0126	WOODRUFF KEY #9	4	
4	2186	SHCS 5/16- 18 X 2.1/4"	9	
5	2019	PULLEY (6-1/2", 120 RPM)	1	USE DRIVE BELT 2155 A-37,
5	10500	PULLEY (7-9/16", 100 RPM)	1	USE DRIVE BELT 1619 A-39
5	11047	PULLEY (5-5/8", 138 RPM)	1	USE DRIVE BELT 11064 A-36
6	2034	BEARING SHAFT	1	
7	10909	KEY 3/16 X 3/16 X 13/16"	1	REPLACES P/N 2126
8	2071	DRIVE SHAFT, LEFT-SIDE	2	
9	2090	SNAP RING	4	
10	10133	LOCK NUT 3/8"	4	
11	10513	SPACER	1	
12	10337	PILLOW BLOCK BEARING	2	
13	10136	FLAT WASHER 3/8"	8	
14	1284	HHCS 3/8- 16 X 1.1/2"	4	
15	2029	COUPLER 1" I.D.	1	
16	2037	RETAINING WASHER	1	
17	1146	FHSCS 5/16- 18 X 1"	1	
18	2259	C.V. JOINT BOOT (REPLACEMENT ONLY)	1	
19	0161 C	FLAT WASHER 5/16"	12	
20	2187	SHCS 5/16- 18 X 2.1/2"	3	
21	10138	SHSS 1/4- 20 X 1/2"	1	
22	2074	DRIVE SHAFT, RIGHT-SIDE	1	

JTO RIDE-ON POWER TROWEL— STEERING ASSY. (LEFT-SIDE)

STEERING ASSY. (LEFT-SIDE) S/N 43489 AND BELOW



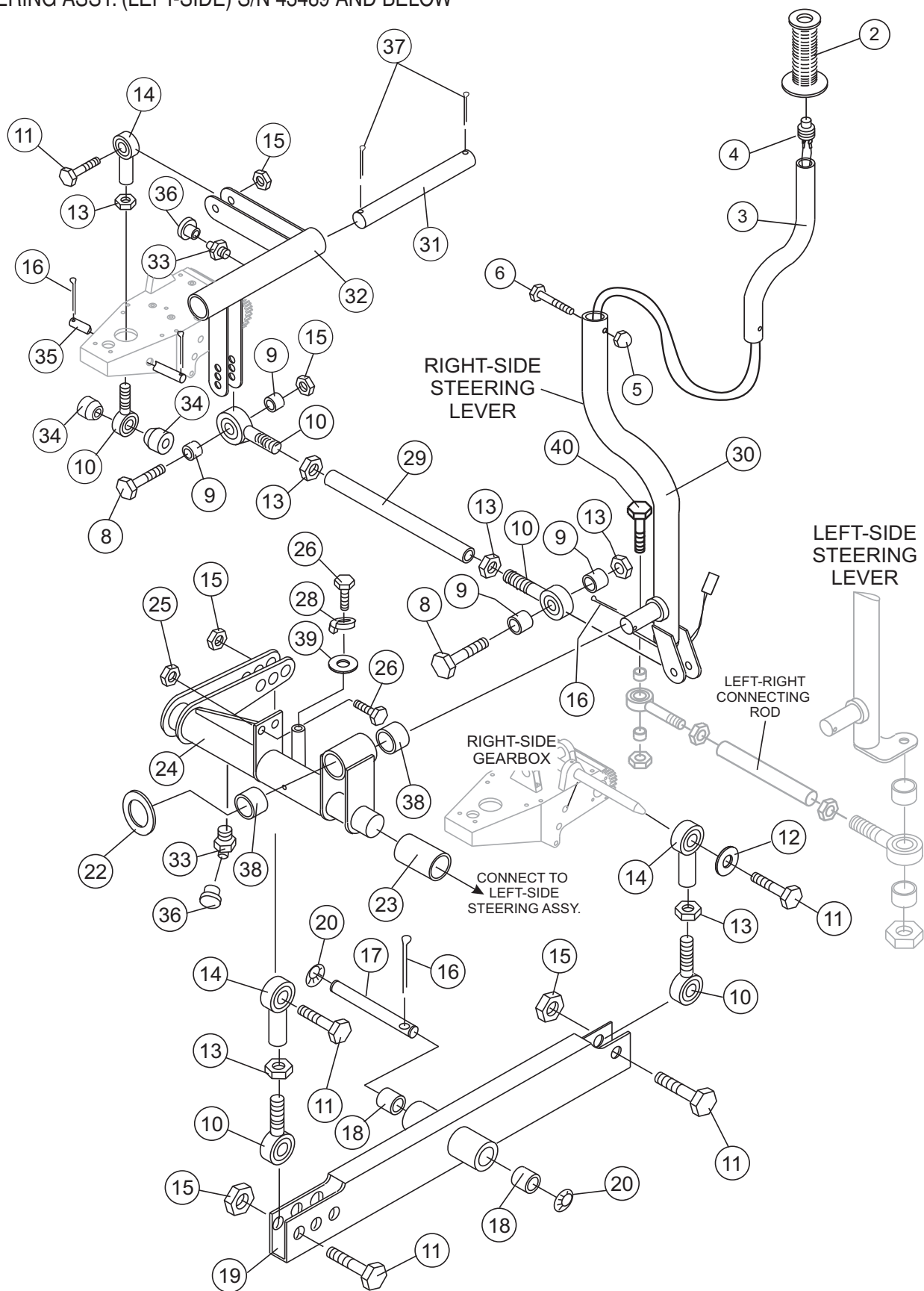
JTO RIDE-ON POWER TROWEL— STEERING ASSY. (LEFT-SIDE)

STEERING ASSY. (LEFT-SIDE) S/N 43489 AND BELOW

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0189	LEFT-SIDE HAND GRIP	1	
3	10130	HANDLE EXTENSION	1	
5	2197	ACORN NUT 1/4- 20	1	
6	0424	HHCS 1/4- 20 X 1.1/4"	1	
7	10131	LEFT HANDLE	1	
8	9154	HHCS 3/8- 16 X 1.3/4"	2	
9	2196	SPACER	4	
10	2063	SPHERICAL BEARING	4	RIGHT HAND MALE
11	11090	HHCS 3/8- 16 X 1.1/4"	4	
12	0166 A	LOCK WASHER 3/8"	1	
13	2199	JAM NUT 3/8- 24	4	
14	2064	SPHERICAL BEARING	2	RIGHT HAND FEMALE
15	10133	LOCK NUT 3/8- 16	4	
16	0164 B	COTTER PIN	2	
17	11275	CLEVIS PIN	1	
18	1484	BUSHING	2	
19	11085	STEERING CONTROL LEVER	1	REPLACES 2891
20	10136	FLAT WASHER 3/8"	1	
21	2356	LEFT-SIDE STEERING ASSY.	1	
22	8151	FLAT WASHER 3/4"	1	
25	5283	LOCK NUT 5/16- 18	4	
26	0655	HHCS 5/16- 18 X 3/4"	5	
27	2352	CONNECTOR ROD	1	
28	0161 C	LOCK WASHER 5/16"	1	
33	5228	GREASE FITTING	1	
36	1162 A	LUBRA- CAP	1	
38	12408	BUSHING	2	REPLACES 2168
39	0300 B	FLAT WASHER 5/16"	1	

JTO RIDE-ON POWER TROWEL— STEERING ASSY. (RIGHT-SIDE)

STEERING ASSY. (LEFT-SIDE) S/N 43489 AND BELOW



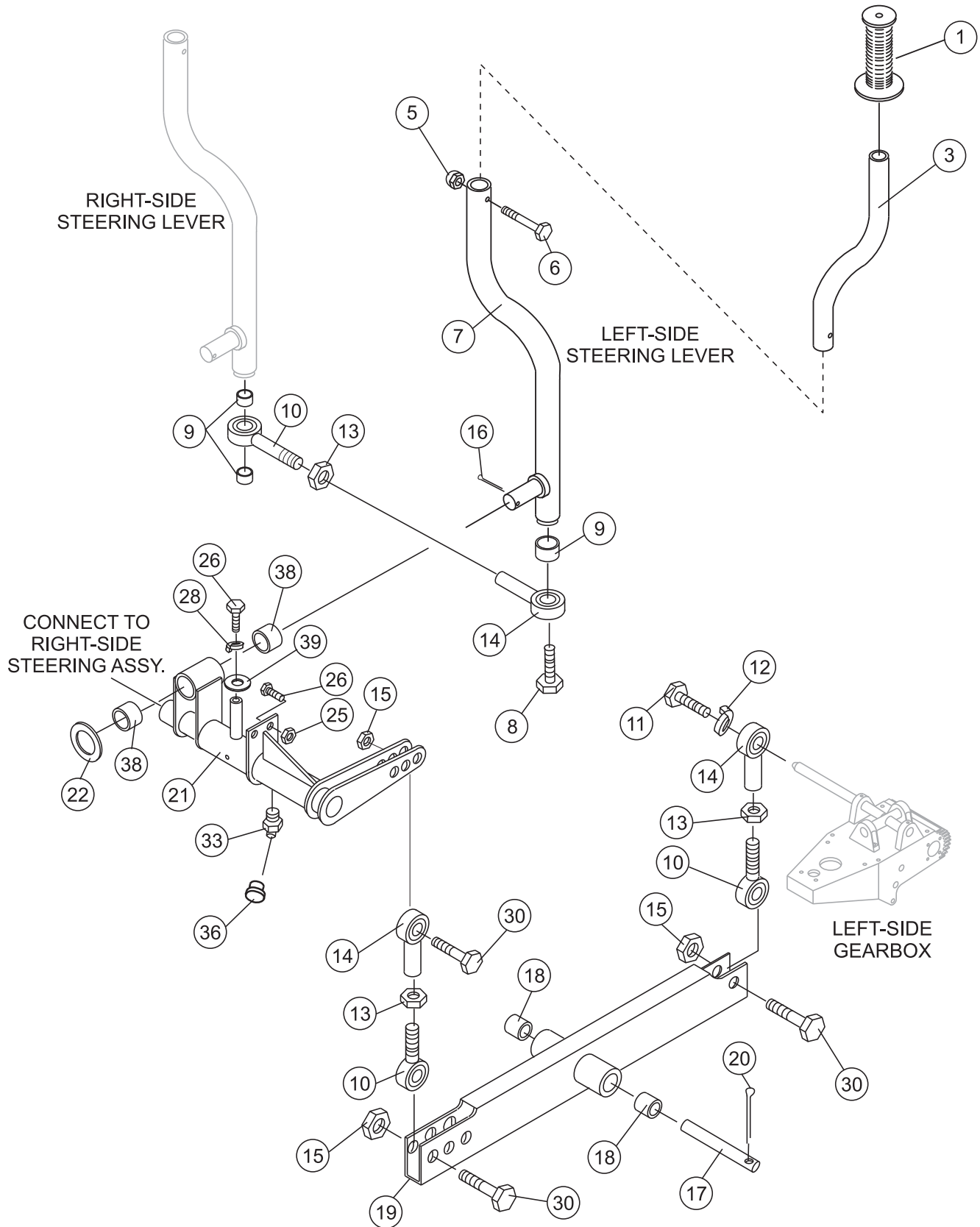
JTO RIDE-ON POWER TROWEL— STEERING ASSY. (RIGHT-SIDE)

STEERING ASSY. (LEFT-SIDE) S/N 43489 AND BELOW

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	2267	RIGHT-SIDE HAND GRIP	1	
3	10130	HANDLE EXTENSION	1	
4	2765	RETARDANT SPRAY SWITCH	1	
5	2197	ACORN NUT 1/4- 20	1	
6	0424	HHCS 1/4- 20 X 1.1/4"	1	
8	9154	HHCS 3/8- 16 X 1.3/4"	2	
9	2196	SPACER	4	
10	2063	SPHERICAL BEARING	5	RIGHT HAND MALE
11	11090	HHCS 3/8- 16 X 1.1/4"	5	
12	0166 A	LOCK WASHER 3/8"	1	
13	2199	JAM NUT 3/8- 24	5	
14	2064	SPHERICAL BEARING	3	RIGHT HAND FEMALE
15	10133	LOCK NUT 3/8- 16	5	
16	0164 B	COTTER PIN	3	
17	11275	CLEVIS PIN	1	
18	1484	BUSHING	2	
19	11085	STEERING CONTROL LEVER	1	REPLACES 2891
20	10136	FLAT WASHER 3/8"	1	
22	8151	FLAT WASHER 3/4"	1	
23	2123	CENTER SUPPORT	2	
24	2225	RIGHT-SIDE STEERING ASSY.	1	
25	5283	LOCK NUT 5/16- 18	4	
26	0655	HHCS 5/16- 18 X 3/4"	5	
28	0161 C	LOCK WASHER 5/16"	1	
29	2820	LINKAGE ROD	1	
30	10132	RIGHT HANDLE	1	
31	2080	RIGHT/LEFT MOTION SHAFT	1	
32	2036	RIGHT/LEFT MOTION ARM	1	
33	5228	GREASE FITTING	3	
34	2188	SPACER	2	
35	3550	ADAPTER PLATE PIN	1	
36	1162 A	LUBRA- CAP	3	
37	2219	COTTER PIN	2	
38	12408	BUSHING	2	REPLACES 2168
39	0300 B	FLAT WASHER 5/16"	1	

JTO RIDE-ON POWER TROWEL— STEERING ASSY. (LEFT-SIDE)

STEERING ASSY. (LEFT-SIDE) S/N 43490 TO 46645



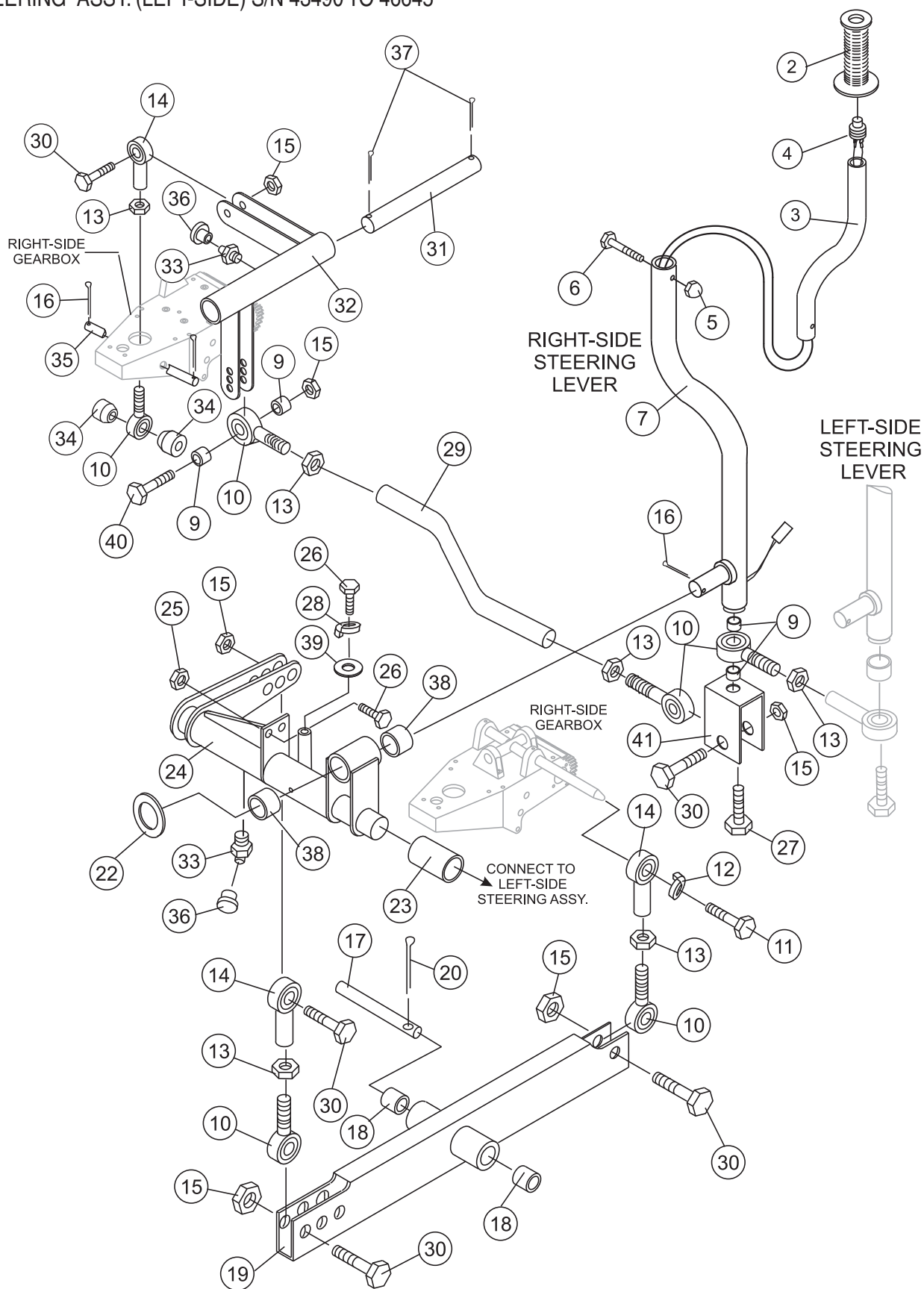
JTO RIDE-ON POWER TROWEL— STEERING ASSY. (LEFT-SIDE)

STEERING ASSY. (LEFT-SIDE) S/N 43490 TO 46645

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0189	LEFT-SIDE HAND GRIP	1	NO OPTIONS
1	2267	LEFT-SIDE HAND GRIP	1	RETARDANT SPRAY OPTIONS
3	10130	HANDLE EXTENSION	2	
5	2197	ACORN NUT 1/4- 20	1	
6	0424	HHCS 1/4- 20 X 1.1/4"	1	
7	11079	LOWER HANDLE	1	
8	11090	SHCS 3/8- 16 X 1.1/4"	1	
9	2196	SPACER	1	
10	2063	SPHERICAL BEARING	3	RIGHT HAND MALE
11	1023	HHCS 3/8- 16 X 1.1/4"	1	
12	0166 A	LOCK WASHER 3/8"	1	
13	2199	JAM NUT 3/8- 24	4	
14	2064	SPHERICAL BEARING	3	RIGHT HAND FEMALE
15	10133	LOCK NUT 3/8- 16	4	
16	0183	COTTER PIN 1/8" X 1.1/4"	1	
17	11275	PIN	1	
18	11072	BEARING	1	
19	11085	STEERING CONTROL LEVER	1	
20	3216	COTTER PIN 1/8 X 1"	1	
21	2356	LEFT SIDE STEERING ASSY.	1	
22	11265	FLAT WASHER	1	
25	5283	LOCK NUT 5/16- 18	4	
26	0655	HHCS 5/16- 18 X 3/4"	6	
28	0161 C	LOCK WASHER 5/16"	2	
30	1284	HHCS 3/8- 16 X 1.1/2"	8	
33	5228	GREASE FITTING	3	
36	1162 A	LUBRA- CAP	1	
38	2168	BUSHING	2	
39	0300 B	FLAT WASHER 5/16"	1	

JTO RIDE-ON POWER TROWEL— STEERING ASSY. (RIGHT-SIDE)

STEERING ASSY. (LEFT-SIDE) S/N 43490 TO 46645



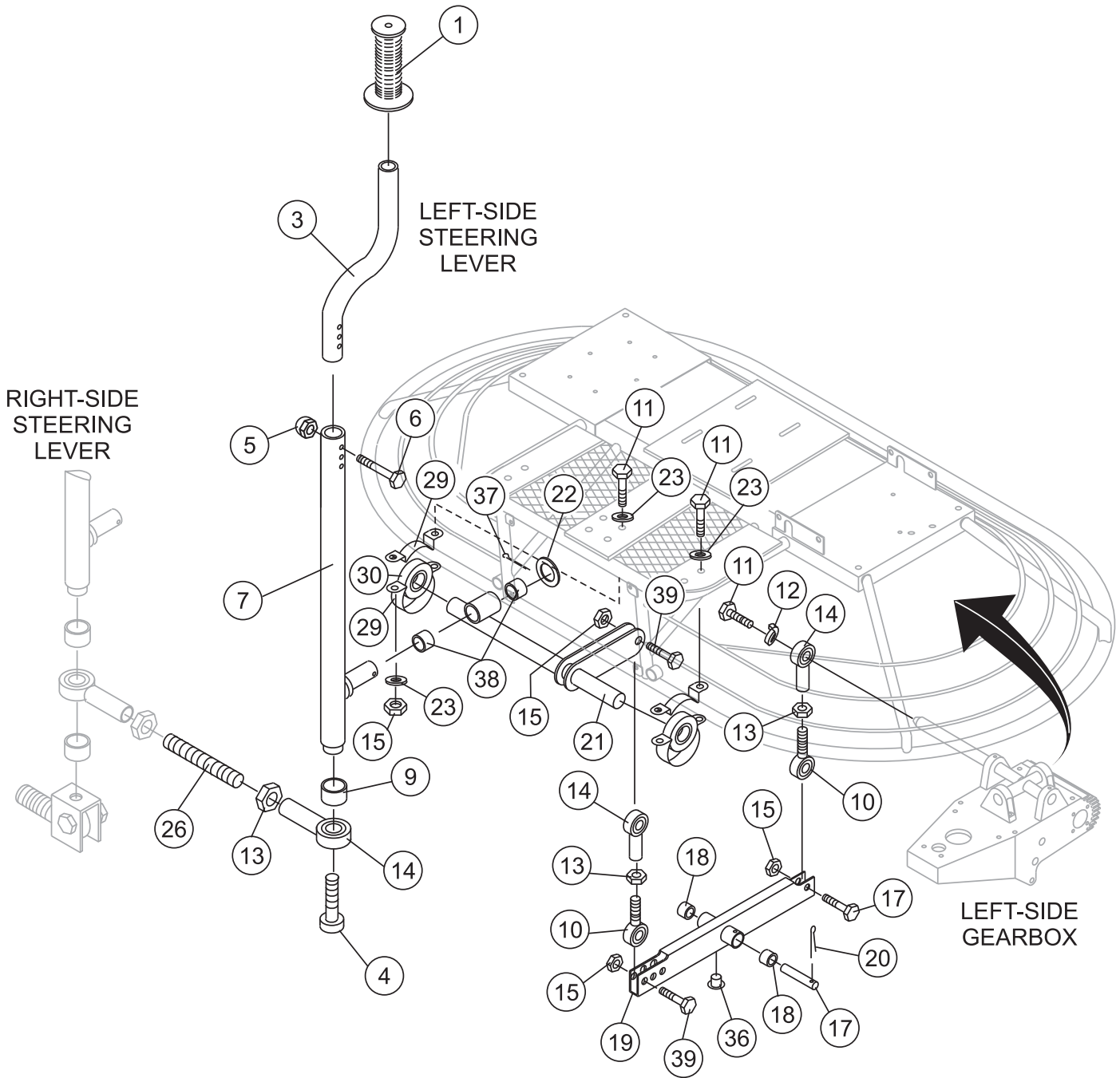
JTO RIDE-ON POWER TROWEL— STEERING ASSY. (RIGHT-SIDE)

STEERING ASSY. (LEFT-SIDE) S/N 43490 TO 46645

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	2267	RIGHT-SIDE HAND GRIP	1	
3	10130	HANDLE EXTENSION	1	
4	2765	RETARDANT SPRAY SWITCH	1	
5	2197	ACORN NUT 1/4- 20"	1	
6	0424	HHCS 1/4- 20 X 1.1/4"	1	
7	11079	LOWER HANDLE	1	
9	2196	SPACER	1	
10	2063	SPHERICAL BEARING	4	RIGHT HAND MALE
11	1023	HHCS 3/8- 16 X 1.1/4"	1	
12	0166 A	LOCK WASHER 3/8"	1	
13	2199	JAM NUT 3/8- 24	4	
14	2064	SPHERICAL BEARING	4	RIGHT HAND FEMALE
15	10133	LOCK NUT 3/8- 16	5	
16	0183	COTTER PIN 1/8" X 1.1/4"	3	
17	11275	PIN	1	
18	11072	BEARING	1	
19	11085	STEERING CONTROL LEVER	1	
20	3216	COTTER PIN 1/8 X 1"	1	
22	11265	FLAT WASHER	1	
23	2123	CENTER SPACER	1	
24	2225	RIGHT SIDE STEERING ASSY.	1	
25	5283	LOCK NUT 5/16- 18	4	
26	0655	HHCS 5/16- 18 X 3/4"	6	
27	11089	SHCS 3/8- 16 X 2"	1	
28	0161 C	LOCK WASHER 5/16"	2	
29	11300	LINKAGE ROD	1	UP TO S/N 43740
29	11304	LINKAGE ROD	1	S/N 43741~
30	1284	HHCS 3/8- 16 X 1.1/2"	8	
31	2080	RIGHT / LEFT MOTION SHAFT	1	
32	2036	RIGHT / LEFT MOTION ARM	1	
33	5228	GREASE FITTING	3	
34	2188	SPACER	2	
35	3550	ADAPTER PLATE PIN	1	
36	1162 A	LUBRA- CAP	2	
37	2219	COTTER PIN	2	
38	2168	BUSHING	2	
39	0300 B	FLAT WASHER 5/16"	2	
40	1665	HHCS 3/8- 16 X 2"	1	
41	11303	BRACKET	1	

JTO RIDE-ON POWER TROWEL— STEERING ASSY. (LEFT-SIDE)

STEERING ASSY. (LEFT-SIDE) S/N 46646~



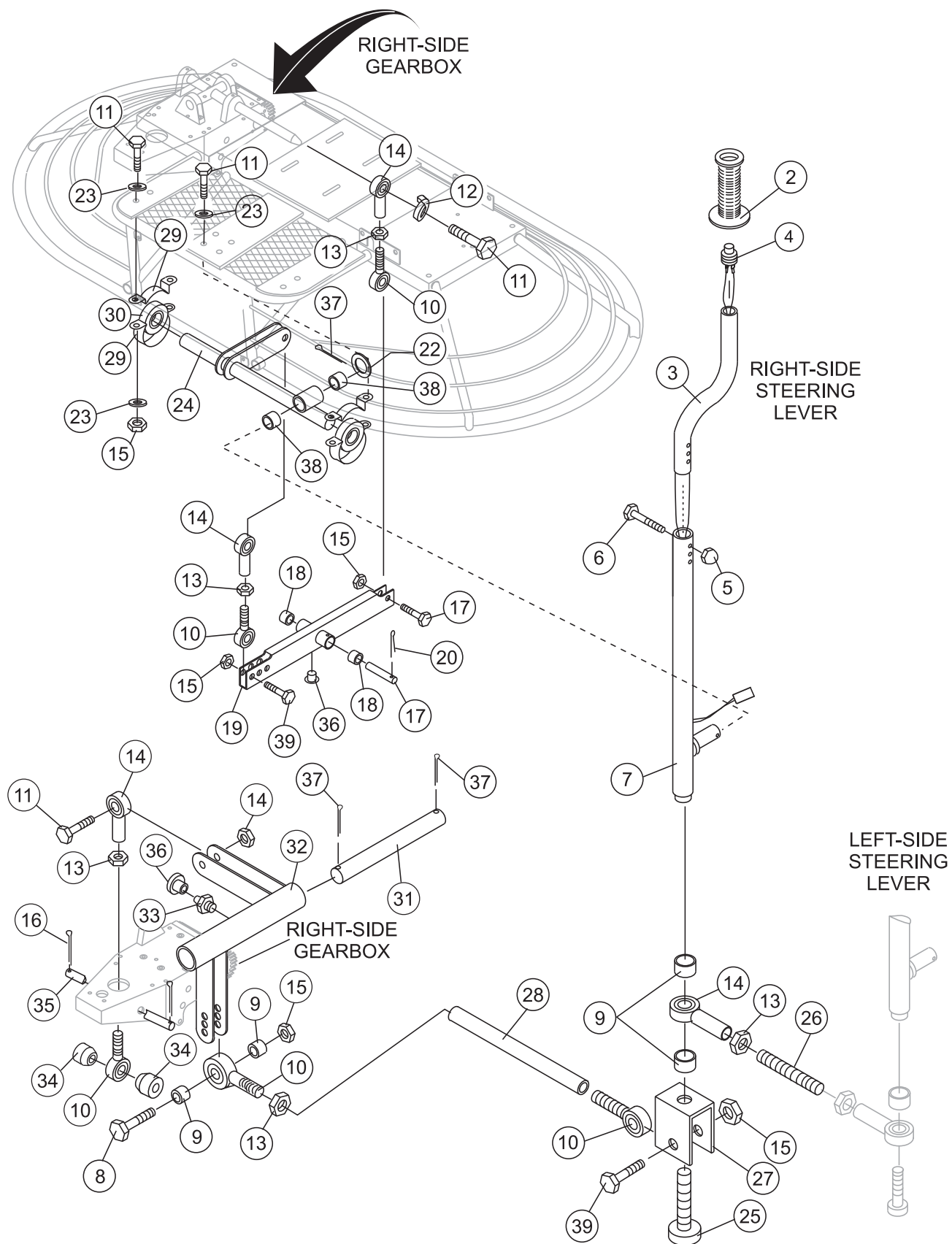
JTO RIDE-ON POWER TROWEL— STEERING ASSY. (LEFT-SIDE)

STEERING ASSY. (LEFT-SIDE) S/N 46646~

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0189	LEFT-SIDE HAND GRIP	1	NO OPTIONS
1	2267	LEFT-SIDE HAND GRIP	1	RETARDANT SPRAY OPTIONS
3	10130	HANDLE EXTENSION	1	
4	11090	SHCS 3/8- 16 X 1.1/4"	1	
5	2197	ACORN NUT 1/4- 20	1	
6	0424	HHCS 1/4- 20 X 1.1/4"	1	
7	11079	HANDLE, LOWER	1	
9	2196	SPACER	1	
10	2063	SPHERICAL BEARING	7	RIGHT HAND MALE
11	1023	HHCS 3/8- 16 X 1.1/4"	5	
12	0166 A	LOCK WASHER 3/8"	1	
13	2199	JAM NUT 3/8-24"	5	
14	2064	SPHERICAL BEARING	3	RIGHT HAND FEMALE
15	10133	LOCK NUT 3/8-16"	8	
17	11275	PIN	1	
18	11072	BEARING	2	
19	11071	STEERING CONTROL LEVER	1	
20	6014 B	COTTER PIN	1	
21	11510	LEFT-SIDE STEERING ASSY.	1	FROM S/N 46646 TO 61579
21	12865	LEFT-SIDE STEERING ASSY.	1	FROM S/N 61580 ~
22	11265	FLAT WASHER 3/4"	1	
23	10136	FLAT WASHER 3/8"	4	
26	11498	LINKAGE ROD	1	
29	11138	BEARING HOUSING	2	
30	11149	BEARING	2	
36	1162 A	LUBRA- CAP	1	
37	2219	COTTER PIN	1	
38	2168	BUSHING	2	
39	1284	HHCS 3/8- 16 X 1.1/2"	4	

JTO RIDE-ON POWER TROWEL— STEERING ASSY. (RIGHT-SIDE)

STEERING ASSY. (LEFT-SIDE) S/N 46646~



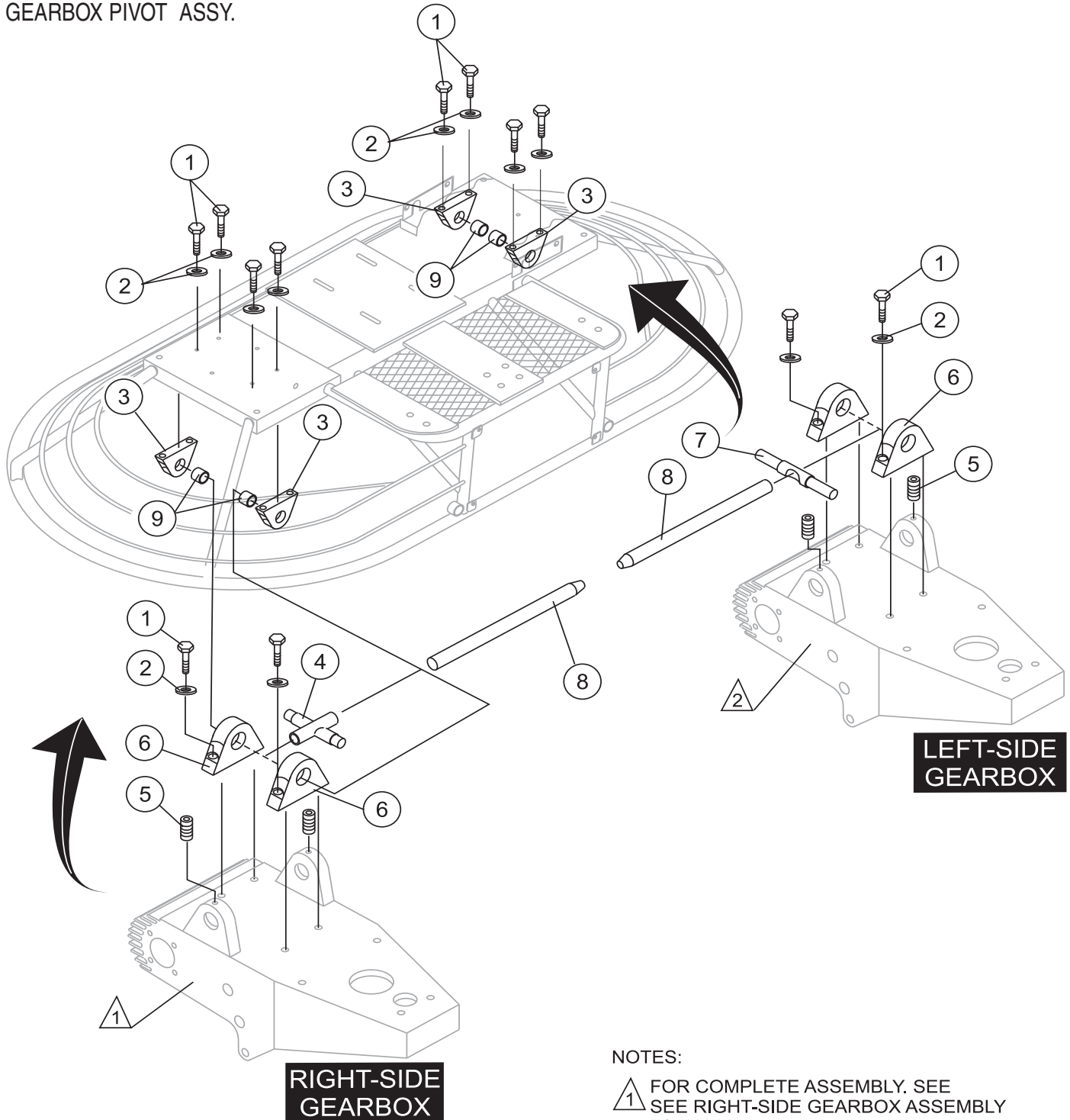
JTO RIDE-ON POWER TROWEL— STEERING ASSY. (RIGHT-SIDE)

STEERING ASSY. (LEFT-SIDE) S/N 46646~

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
2	2267	RIGHT-SIDE HAND GRIP	1	
3	10130	HANDLE EXTENSION	1	
4	2765	RETARDANT SPRAY SWITCH	1	
5	2197	ACORN NUT 1/4- 20	1	
6	0424	HHCS 1/4- 20 X 1.1/4"	1	
7	11079	HANDLE, LOWER	1	
8	1665	HHCS 3/8- 16 X 2"	1	
9	2196	SPACER	3	
10	2063	SPHERICAL BEARING	4	RIGHT HAND MALE
11	1023	HHCS 3/8- 16 X 1.1/4"	5	
12	0166 A	LOCK WASHER 3/8"	2	
13	2199	JAM NUT 3/8- 24	4	
14	2064	SPHERICAL BEARING	4	RIGHT HAND FEMALE
15	10133	LOCK NUT 3/8- 16	4	
16	0183	COTTER PIN	1	
17	11275	PIN	1	
18	11072	BEARING	2	
19	11071	STEERING CONTROL LEVER	1	
20	6014B	COTTER PIN	1	
22	11265	FLAT WASHER 3/4"	1	
23	10136	FLAT WASHER 3/8"	4	
24	11511	RIGHT-SIDE STEERING ASSY.	1	FROM S/N S/N 46646 TO 61579
24	12866	RIGHT-SIDE STEERING ASSY.	1	FROM S/N 61580~
25	11089	SHCS 3/8- 16 X 2"	1	
26	11498	LINKAGE ROD	1	
27	11303	BRACKET	1	
28	11538	LINKAGE ROD	1	
29	11138	BEARING HOUSING	2	
30	11149	BEARING	2	
31	11497	RIGHT / LEFT MOTION SHAFT	1	
32	11441	RIGHT / LEFT MOTION ARM	1	
33	5228	GREASE FITTING	1	
34	2188	SPACER	2	
35	3550	ADAPTER PLATE PIN	1	
36	1162 A	LUBRA- CAP	2	
37	2219	COTTER PIN	2	
38	2168	BUSHING	4	
39	1284	HHCS 3/8- 16 X 1.1/2"	4	

JTO RIDE-ON POWER TROWEL— GEARBOX PIVOT ASSY.

GEARBOX PIVOT ASSY.



NOTES:

1 FOR COMPLETE ASSEMBLY. SEE
SEE RIGHT-SIDE GEARBOX ASSEMBLY
P/N10966.

2 FOR COMPLETE ASSEMBLY. SEE
SEE LEFT-SIDE GEARBOX ASSEMBLY
P/N10967.

JTO RIDE-ON POWER TROWEL— GEARBOX PIVOT ASSY.

GEARBOX PIVOT ASSY.

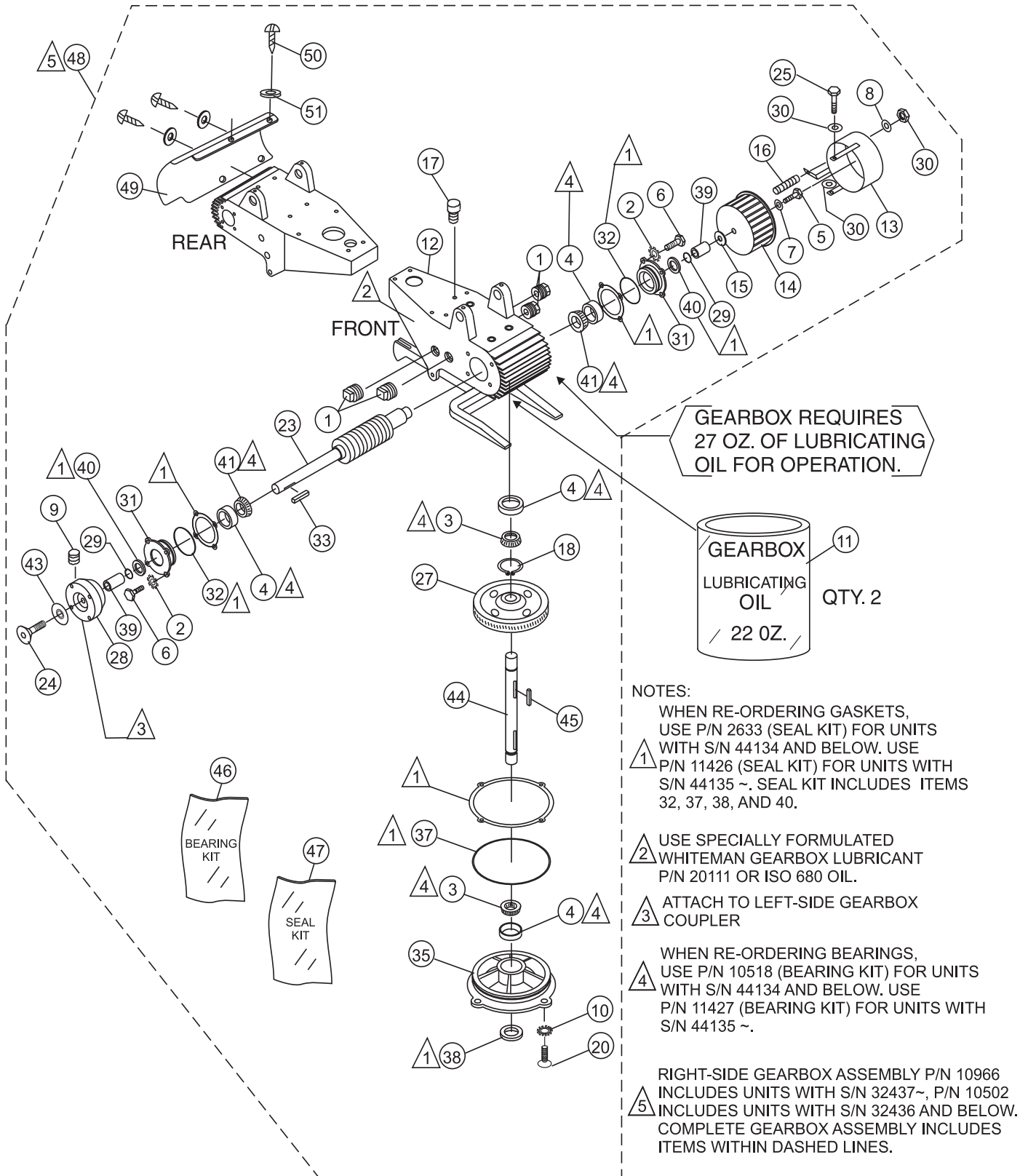
<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	1023	HHCS 3/8- 16 X 1.1/4"	12	
2	0166 A	LOCK WASHER 3/8"	12	
3	2079	ROCKER BLOCK ASSY.	4	
4	2044	PIVOT ARM ASSY.	1	
5	10138	SHSS 1/4- 20 X 1/2"	4	
6	10973	ROCKER BLOCK	4	
7	2076	PIVOT SHAFT	1	
8	2107	CONTROL PIVOT TUBE	2	
9	2088	BUSHING	4	

NOTE:

AFTER PRESSING BUSHING ITEM 9 INTO ROCKER BLOCK, REAM TO .752 INCHES \pm .001

JTO RIDE-ON POWER TROWEL— GEARBOX ASSY. (RIGHT-SIDE)

GEARBOX ASSY. (RIGHT-SIDE) WITH 1-1/8 DIA. SHAFT.



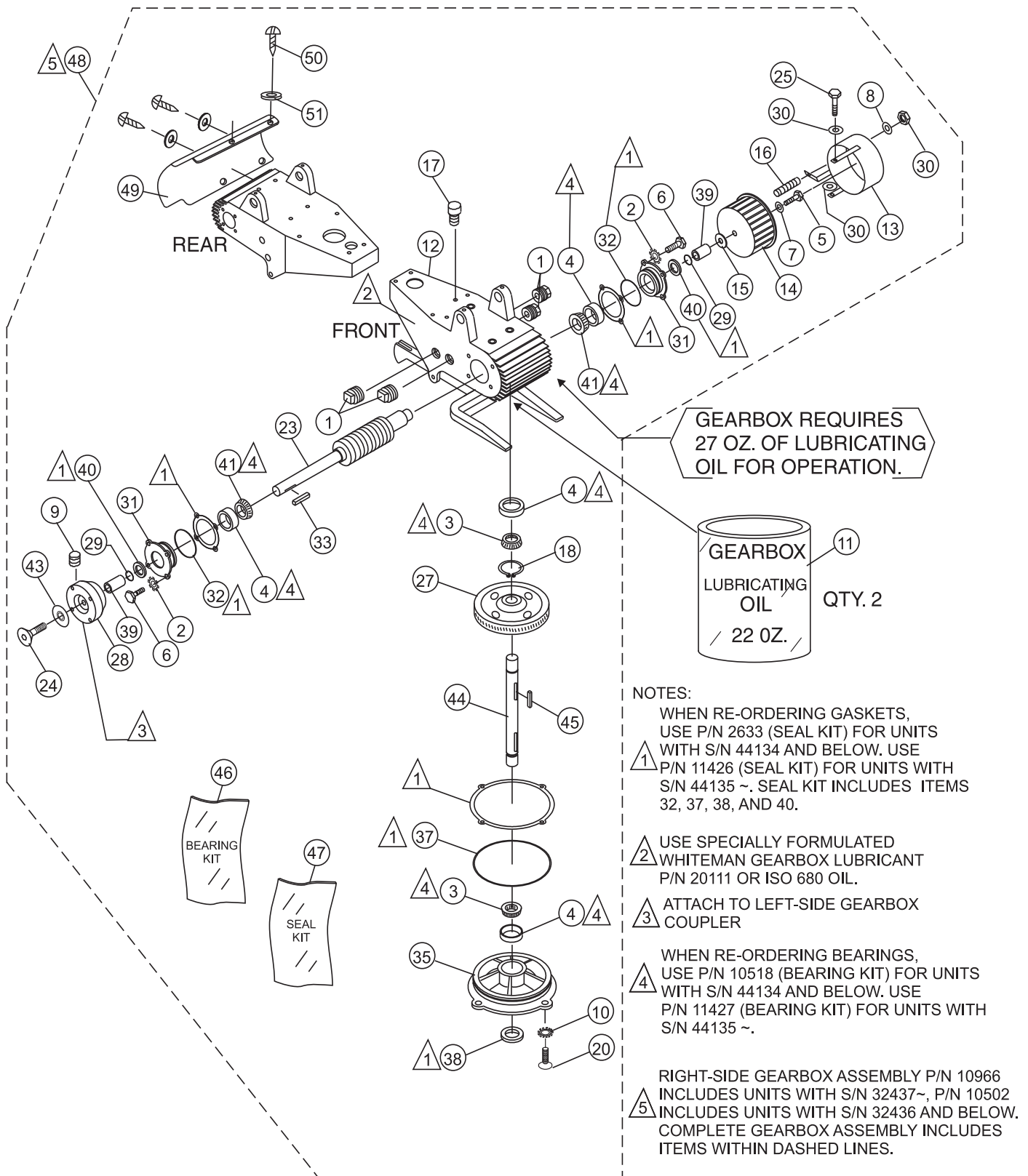
JTO RIDE-ON POWER TROWEL— GEARBOX ASSY. (RIGHT-SIDE)

GEARBOX ASSY. (RIGHT-SIDE) WITH 1-1/8 DIA. SHAFT.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1%@	0121 A	FITTING, PLUG 3/8MP SQ HEAD	3	
2%	10031	WASHER, COPPER 1/4"	8	
3*%\$@	0232	BEARING, CONE, TIMKEN #1985	2	
4*%\$@	0232 A	BEARING, CUP, TIMKEN #1932	4	
5@	0424	SCREW, HHC 1/4-20 X 1-1/4"	1	
6@	2295	SCREW, HHC 1/4-20 X 1"	8	UP TO S/N 32436
6@	0730	SCREW FHSCS, 5/16-18 X 1"	8	S/N 32437~
7%	10930	WASHER, FLAT, 1/4 SAE	1	
8%	10237	EXT. SHKP WASHER	1	
9%@	10138	SCREW, SHS 1/4-20 X 1/2", N.P.	1	
10%@	10235	WASHER, C/S EXT. SHKP, 5/16	4	
11%@	20111	GEARBOX LUBRICATING OIL (22.OZ. BOTTLE) ..	2	GEARBOX REQUIRES 27 OZ.
12%	10492	GEARBOX (CASE ONLY)	1	S/N 32436 AND BELOW
12%	10800	GEARBOX (CASE ONLY)	1	S/N 32437~
13%	10890	FAN COVER, RIGHT-SIDE	1	
14%	10921	FAN, AAI 3.5 X 1.5 CW ROTATION	1	
15%	10930	WASHER, FENDER, 1/4 X 1-1/4"	1	
16%	10989	STUD, 10-32 X 3/4"	1	
17%@	1132	VENT, AIR	1	
18%@	1138	RING, SNAP, TRUARC 5100-112	1	
20%@	20875	SCREW, FHSC 5/16-18 X 1", NYLOC, NP	4	
23@	10493	RS WORM AND C/SHAFT W/BEARING	1	S/N 39205 AND BELOW
23@	10876	RS WORM AND C/SHAFT W/BEARING	1	S/N 39206- TO 44134
23%	11231	RS WORM AND C/SHAFT W/BEARING	1	S/N 44135 ~
24%@	1146	SCREW, FHSC 3/8-24 X 3/4 PLAIN	1	
25%	19477	HEX SLOTTED WASHER HEAD 10-32 X 1/2"	2	
27%@	2249	GEAR, WORM GEAR, RH	1	
28%@	2030	COUPLER- 7/8" ID	1	
29%@	2115	O-RING, SIZE -022, BUNA-N	2	S/N 44134 AND BELOW
30%	2203	WASHER, FLAT, #10	3	

JTO RIDE-ON POWER TROWEL— GEARBOX ASSY. (RIGHT-SIDE)

GEARBOX ASSY. (RIGHT-SIDE) WITH 1-1/8 DIA. SHAFT.



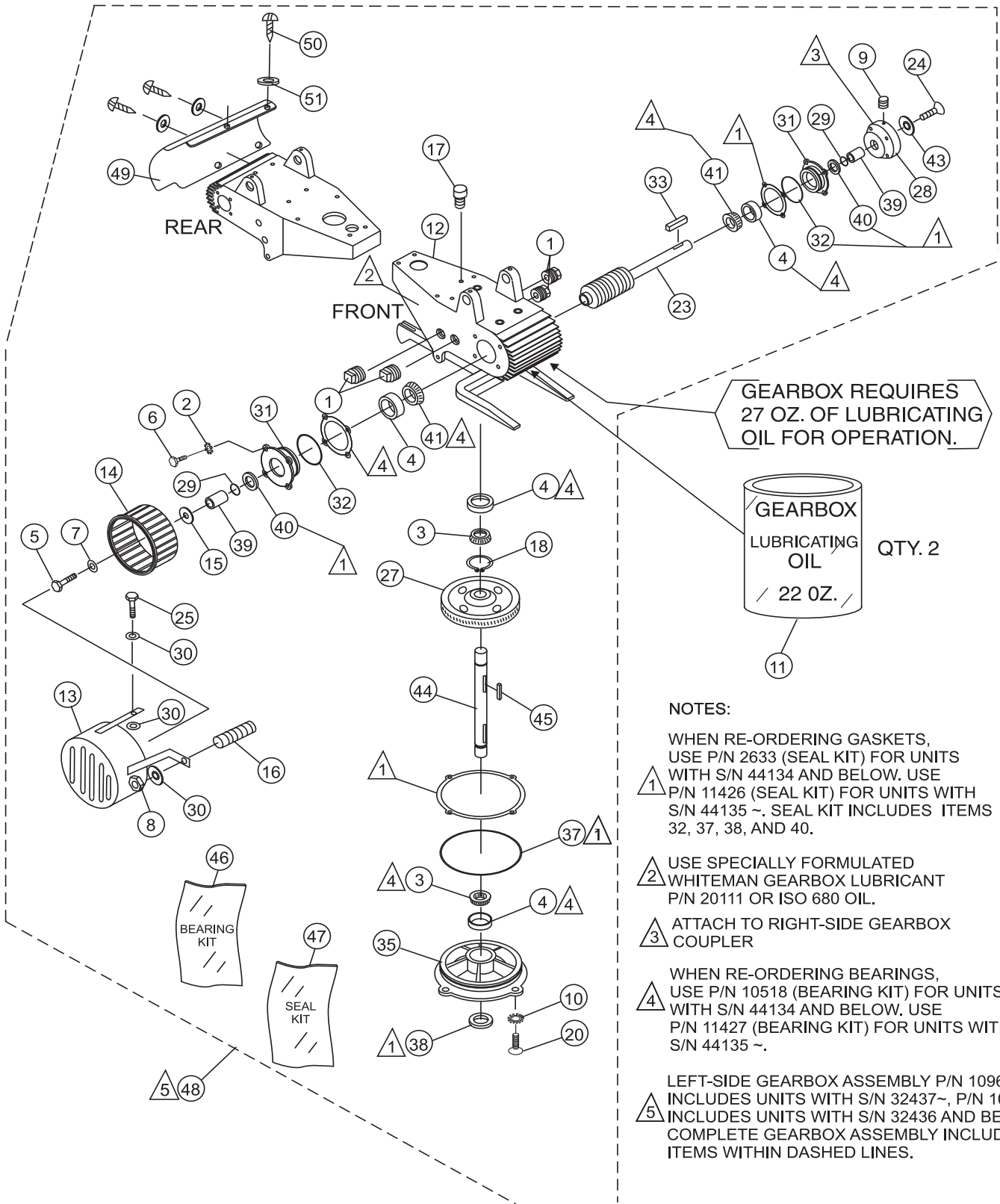
JTO RIDE-ON POWER TROWEL— GEARBOX ASSY. (RIGHT-SIDE)

GEARBOX ASSY. (RIGHT-SIDE) WITH 1-1/8 DIA. SHAFT.

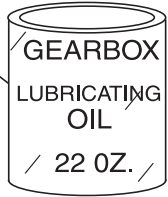
<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
31@	10499	END CAP	1	S/N 32436 AND BELOW
31%	10498	COUNTERSHAFT FLANGE	2	S/N 32437~
31@	10499	END CAP	1	S/N 32436 AND BELOW
32#%@	2308	O-RING, 2- 13/1"	2	
33%@	2126	KEY, 1/4 X 1/4 X 13/16"	1	
35%@	1145	PLATE, COVER	1	
37#%@	1143	O-RING, A-264	1	
38#%@	10461	SEAL, OIL, 471763	1	
39%	10497	SPACER, 1-1/4 X 1 X 1.375" L	2	S/N 44134 AND BELOW
40#@	10460	SEAL, OIL, NATIONAL #471413	2	S/N 32436 AND BELOW
40+%	11417	SEAL, OIL, TCM09142VTB-H24V	2	S/N 32437~
41*%@	19393-002	BEARING, #1986	2	S/N 44134 AND BELOW
41%\$	11318	BEARING, #7205	2	S/N 44135 AND ABOVE
43%@	2037	RETAINER, DRIVEN PULLEY	1	
44%@	2231	MAINSHAFT	1	
45%@	2229	KEY, 5/16 X 1-7/16" HRDND	1	
46@	10518	BEARING KIT (S/N 44134 AND BELOW)	1	INCLUDES ITEMS W/*
46%	11427	BEARING KIT (S/N 44135 AND ABOVE)	1	INCLUDES ITEMS W/\$
47@	2633	SEAL KIT (S/N 44134 AND BELOW)	1	INCLUDES ITEMS W/#
47%	11426	SEAL KIT (S/N 44135 AND ABOVE)	1	INCLUDES ITEMS W/+
48	10502	GEARBOX ASSY. (S/N 32436 AND BELOW)	1	INCLUDES ITEMS W/@
48	10966	GEARBOX ASSY. (S/N 32437 AND ABOVE)	1	INCLUDES ITEMS W/%
49%	12982	COVER, GEARBOX COOLING FINS	1	
50%	5031 A	SCREW 1/4-20 X 1/2"	4	
51%	0948	WASHER, FLAT 1/4"	4	

JTO RIDE-ON POWER TROWEL— GEARBOX ASSY. (LEFT-SIDE)

GEARBOX ASSY. (LEFT-SIDE 1-1/8 DIAMETER SHAFT)



GEARBOX REQUIRES
27 OZ. OF LUBRICATING
OIL FOR OPERATION.



QTY. 2

NOTES:

- 1 WHEN RE-ORDERING GASKETS, USE P/N 2633 (SEAL KIT) FOR UNITS WITH S/N 44134 AND BELOW. USE P/N 11426 (SEAL KIT) FOR UNITS WITH S/N 44135 ~. SEAL KIT INCLUDES ITEMS 32, 37, 38, AND 40.
- 2 USE SPECIALLY FORMULATED WHITEMAN GEARBOX LUBRICANT P/N 20111 OR ISO 680 OIL.
- 3 ATTACH TO RIGHT-SIDE GEARBOX COUPLER
- 4 WHEN RE-ORDERING BEARINGS, USE P/N 10518 (BEARING KIT) FOR UNITS WITH S/N 44134 AND BELOW. USE P/N 11427 (BEARING KIT) FOR UNITS WITH S/N 44135 ~.
- 5 LEFT-SIDE GEARBOX ASSEMBLY P/N 10967 INCLUDES UNITS WITH S/N 32437~, P/N 10503 INCLUDES UNITS WITH S/N 32436 AND BELOW. COMPLETE GEARBOX ASSEMBLY INCLUDES ITEMS WITHIN DASHED LINES.

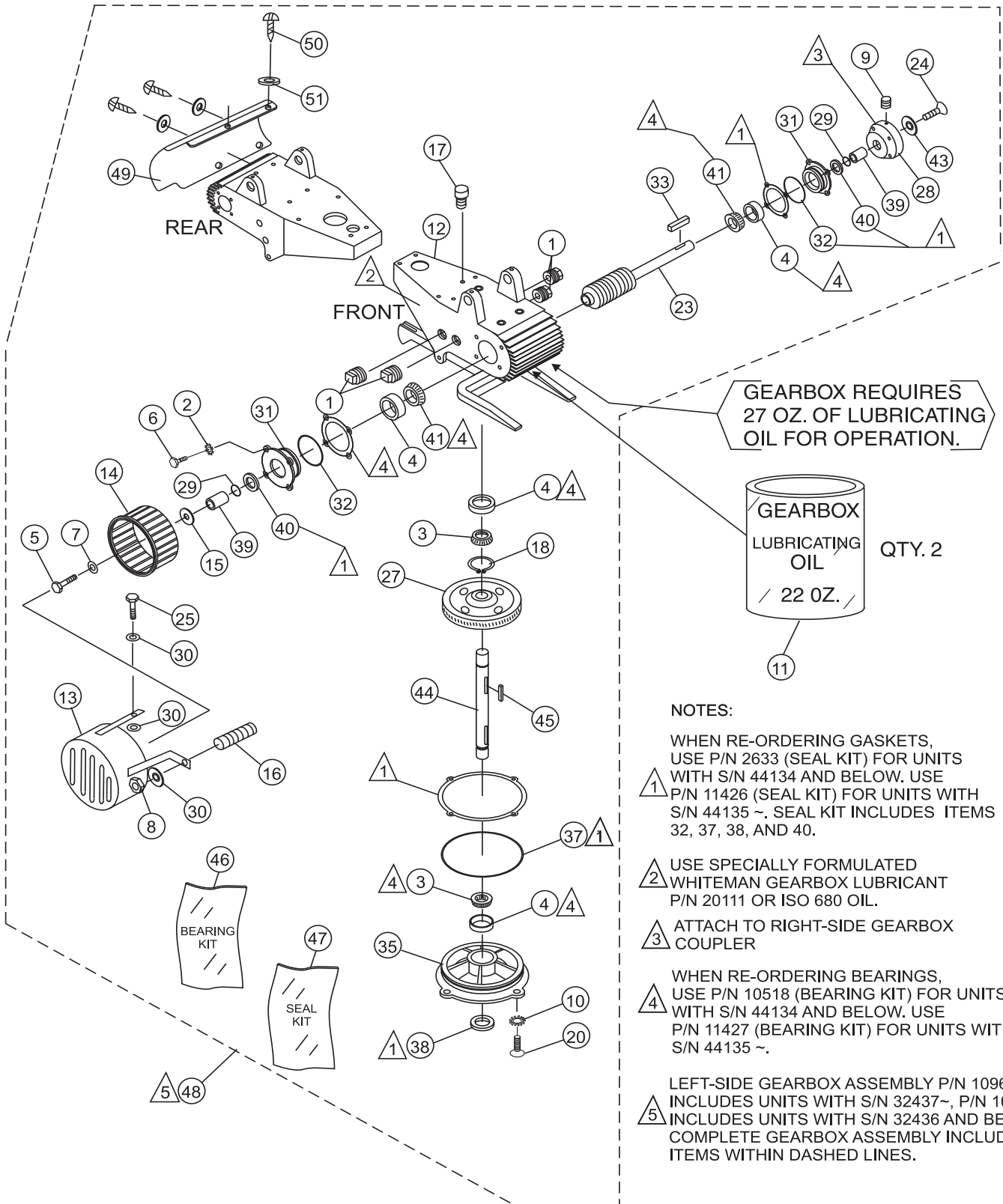
JTO RIDE-ON POWER TROWEL— GEARBOX ASSY. (LEFT-SIDE)

GEARBOX ASSY. (LEFT-SIDE) WITH 1-1/8 DIA. SHAFT.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1%@	0121 A	FITTING, PLUG 3/8MP SQ HEAD	3	
2%	10031	WASHER, COPPER 1/4"	8	
3*%\$@	0232	BEARING, CONE, TIMKEN #1985	2	
4*%\$@	0232 A	BEARING, CUP, TIMKEN #1932	4	
5@	0424	SCREW, HHC 1/4-20 X 1-1/4"	1	
6@	2295	SCREW, HHC 1/4-20 X 1"	8	UP TO S/N 32436
6@	0730	SCREW FHSCS, 5/16-18 X 1"	8	S/N 32437~
7%	10930	WASHER, FLAT, 1/4 SAE	1	
8%	10237	EXT. SHKP WASHER	1	
9%@	10138	SCREW, SHS 1/4-20 X 1/2", N.P.	1	
10%@	10235	WASHER, C/S EXT. SHKP, 5/16	4	
11%@	20111	GEARBOX LUBRICATING OIL (22.OZ. BOTTLE) ..	2	GEARBOX REQUIRES 27 OZ.
12%	10492	GEARBOX (CASE ONLY)	1	S/N 32436 AND BELOW
12%	10800	GEARBOX (CASE ONLY)	1	S/N 32437~
13%	10882	FAN COVER, LEFT-SIDE	1	
14%	10922	FAN, AAI 3.5 X 1.5 CCW ROT	1	
15%	10930	WASHER, FENDER, 1/4 X 1-1/4"	1	
16%	10989	STUD, 10-32 X 3/4"	1	
17%@	1132	VENT, AIR	1	
18%@	1138	RING, SNAP, TRUARC 5100-112	1	
20%@	20875	SCREW, FHSC 5/16-18 X 1", NYLOC, NP	4	
23@	10496	LS WORM AND C/SHAFT W/BEARING	1	S/N 39205 AND BELOW
23@	10877	LS WORM AND C/SHAFT W/BEARING	1	S/N 39206- TO 44134
23%	11232	LS WORM AND C/SHAFT W/BEARING	1	S/N 44135 ~
24%@	1146	SCREW, FHSC 3/8-24 X 3/4 PLAIN	1	
25%	19477	HEX SLOTTED WASHER HEAD 10-32 X 1/2"	2	
27%@	2250	GEAR, WORM GEAR, LH	1	
28%@	2030	COUPLER- 7/8" ID	1	
29%@	2115	O-RING, SIZE -022, BUNA-N	2	S/N 44134 AND BELOW
30%	2203	WASHER, FLAT, #10	3	

JTO RIDE-ON POWER TROWEL— GEARBOX ASSY. (LEFT-SIDE)

GEARBOX ASSY. (LEFT-SIDE) WITH 1-1/8 DIA. SHAFT.



JTO RIDE-ON POWER TROWEL— GEARBOX ASSY. (LEFT-SIDE)

GEARBOX ASSY. (LEFT-SIDE) WITH 1-1/8 DIA. SHAFT.

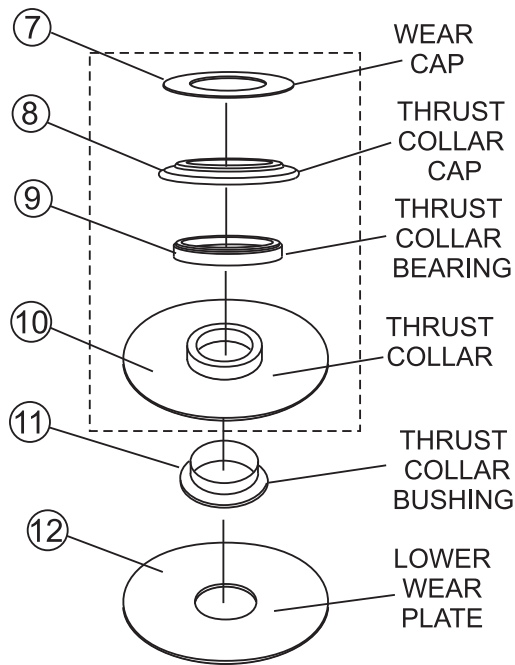
<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
31@	10499	END CAP	1	S/N 32436 AND BELOW
31%	10498	COUNTERSHAFT FLANGE	2	S/N 32437~
31@	10499	END CAP	1	S/N 32436 AND BELOW
32#%@+	2308	O-RING, 2- 13/1"	2	
33%@	2126	KEY, 1/4 X 1/4 X 13/16"	1	
35%@	1145	PLATE, COVER	1	
37#%@+	1143	O-RING, A-264	1	
38#%@+	10461	SEAL, OIL, 471763	1	
39%	10497	SPACER, 1-1/4 X 1 X 1.375" L	2	S/N 44134 AND BELOW
40#@	10460	SEAL, OIL, NATIONAL #471413	2	S/N 32436 AND BELOW
40+%	11417	SEAL, OIL, TCM09142VTB-H24V	2	S/N 32437~
41*%@	19393-002	BEARING, #1986	2	S/N 44134 AND BELOW
41%\$	11318	BEARING, #7205	2	S/N 44135 AND ABOVE
43%@	2037	RETAINER, DRIVEN PULLEY	1	
44%@	2231	MAINSHAFT	1	
45%@	2229	KEY, 5/16 X 1-7/16" HRDND	1	
46@	10518	BEARING KIT (S/N 44134 AND BELOW)	1	INCLUDES ITEMS W/*
46%	11427	BEARING KIT (S/N 44135 AND ABOVE)	1	INCLUDES ITEMS W/\$
47@	2633	SEAL KIT (S/N 44134 AND BELOW)	1	INCLUDES ITEMS W/#
47%	11426	SEAL KIT (S/N 44135 AND ABOVE)	1	INCLUDES ITEMS W/+
48	10503	GEARBOX ASSY. (S/N 32436 AND BELOW)	1	INCLUDES ITEMS W/@
48	10967	GEARBOX ASSY. (S/N 32437 AND ABOVE)	1	INCLUDES ITEMS W/%
49%	12982	COVER, GEARBOX COOLING FINS	1	
50%	5031 A	SCREW 1/4-20 X 1/2"	4	
51%	0948	WASHER, FLAT 1/4"	4	

JTO RIDE-ON POWER TROWEL—THRUST BEARING KIT ASSY.

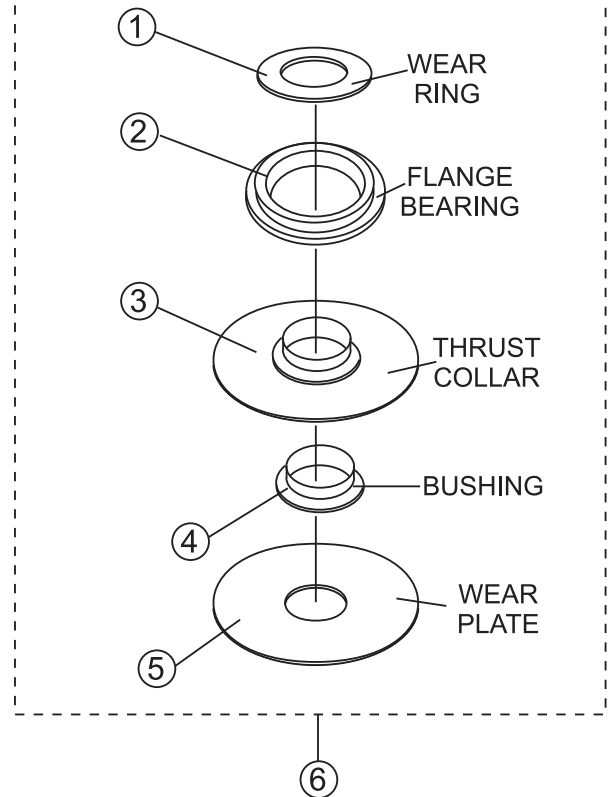
THRUST BEARING KIT ASSEMBLY.

THRUST BEARING KIT No. 10968

OLD STYLE THRUST BEARING NO LONGER USED



NEW STYLE THRUST BEARING



WHEN RE-ORDERING ***MUST*** USE
THRUST BEARING KIT P/N 10968.
OLD STYLE IS NOT AVAILABLE.

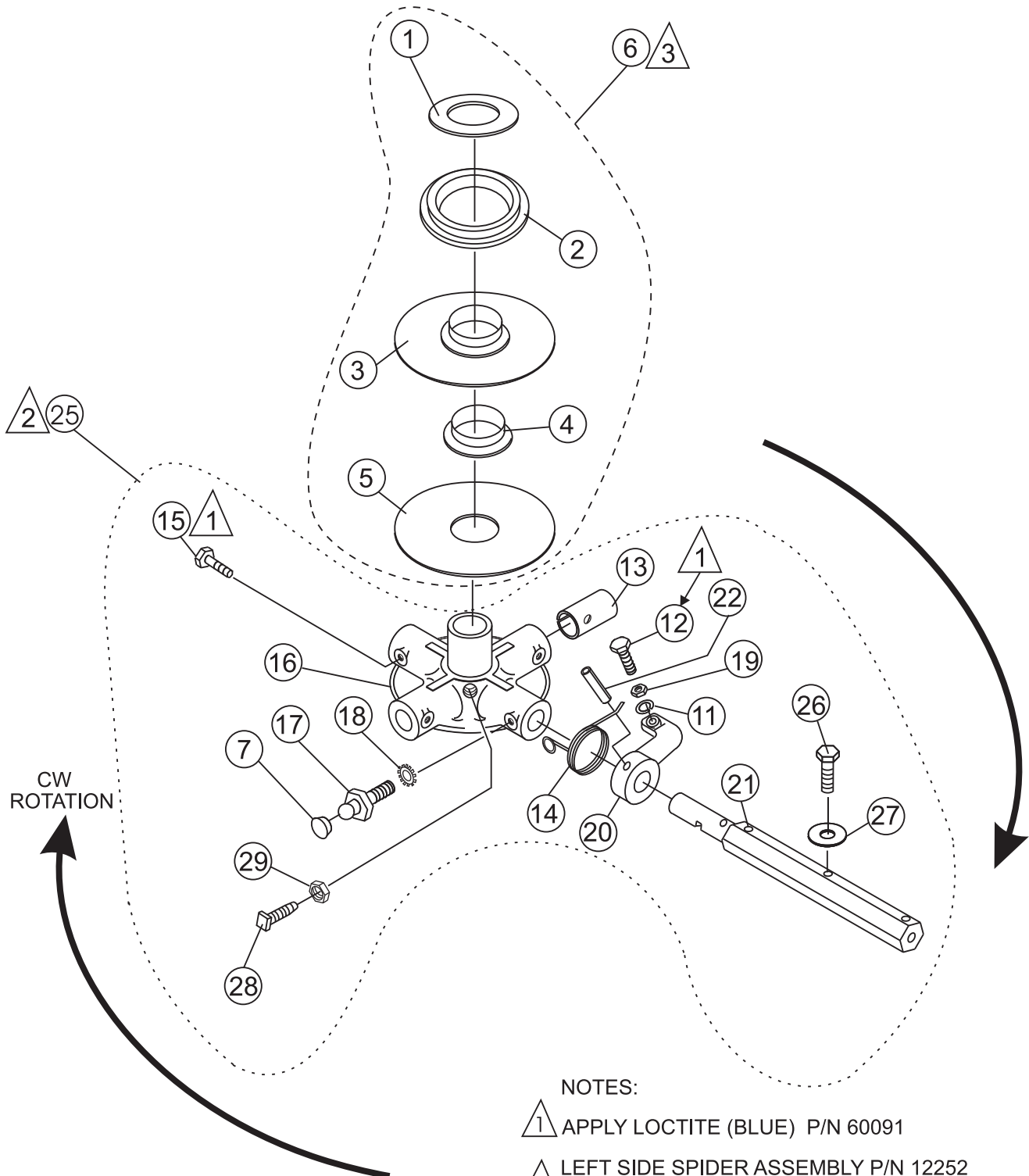
JTO RIDE-ON POWER TROWEL—THRUST BEARING KIT ASSY.

THRUST BEARING KIT ASSEMBLY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	12208	WEAR RING	1	NEW STYLE
2*	12778	FLANGE BEARING	1	NEW STYLE
3*	10793	THRUST COLLAR W/BUSHING	1	NEW STYLE
4*	1471	BUSHING	1	NEW STYLE
5*	1154 A	LOWER WEAR PLATE	1	NEW STYLE
6	10968	THRUST BEARING KIT	1	INCLUDES ITEMS W/*
7	1803	WEAR CAP	1	OLD STYLE
8	1152	THRUST COLLAR CAP	1	OLD STYLE
9	1153	THRUST COLLAR BEARING	1	OLD STYLE
10	1154	THRUST COLLAR	1	OLD STYLE
11	1471	THRUST COLLAR BUSHING	1	OLD STYLE
12	1154 A	LOWER WEAR PLATE	1	OLD STYLE

JTO RIDE-ON POWER TROWEL— SPIDER ASSY. (LEFT-SIDE)

LEFT SIDE SPIDER ASSEMBLY
(VIEW FROM DRIVERS SEAT)



NOTES:

- ① APPLY LOCTITE (BLUE) P/N 60091
- ② LEFT SIDE SPIDER ASSEMBLY P/N 12252
INCLUDES ALL ITEMS WITHIN OUTLINE.
- ③ THRUST BEARING KIT P/N 10968
INCLUDES ALL ITEMS WITHIN OUTLINE.

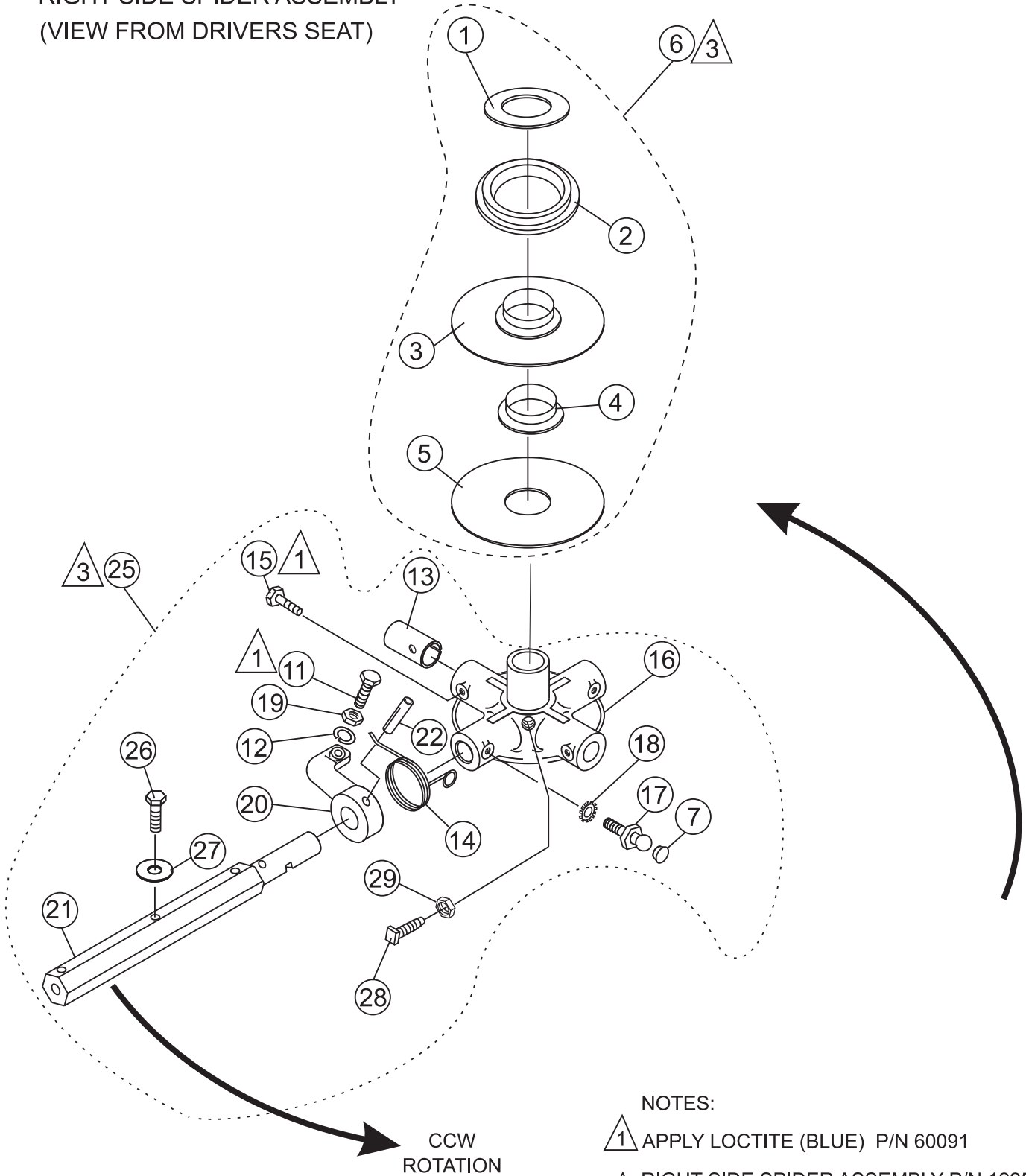
JTO RIDE-ON POWER TROWEL— SPIDER ASSY. (LEFT-SIDE)

4-BLADE SPIDER ASSY. (LEFT-SIDE)

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	12208	WEAR RING	1	
2*	12778	FLANGE BEARING	1	
3*	10793	THRUST COLLAR W/BUSHING	2	
4*	1471	BUSHING	1	
5*	1154 A	LOWER WEAR PLATE	1	
6	10968	THRUST BEARING KIT	1	INCLUDES ITEMS W/*
7#	1162 A	CAP, GREASE ZERK, #2 YELLOW	1	
11#	0164 B	WASHER, LOCK 3/8" MED	4	
12#	0166 A	HHC 3/8-16 X 1-1/4 FT.	4	
13#	1157 A	BUSHING	8	
14#	1316	SPRING, L.S. ARM RETURN	4	
15#	11602	SCREW, HHC 3/8-16 X 3/8	4	
16#	12452	PLATE, SPIDER	1	
17#	1322	SCREW, RETAINING	4	
18#	1875	WASHER, INT. SHKP, 3/8	4	
19#	1876	NUT, HEX JAM 3/8-16 CLASS 2B	4	
20#	1163	LEVER, TROWEL RH	4	
21#	2826	ARM, TROWEL EXTENDED 16-1/2"	4	
22#	4164	PIN, ROLL 5/16 X 2, N.P.	4	
25	12252	SPIDER ASSY, LEFT SIDE	1	INCLUDES ITEMS W/#
26#	0105	HHCS 5/16-18 X 1.1/2"	4	
27#	0161 C	LOCK WASHER 5/16"	8	
28	12097	SCREW, SQHS 3/8-16x1-3/4" CONE GD 8	1	
29	1456	NUT, HEX. 3/8-16	1	

JTO RIDE-ON POWER TROWEL— SPIDER ASSY. (RIGHT-SIDE)

RIGHT SIDE SPIDER ASSEMBLY
(VIEW FROM DRIVERS SEAT)



NOTES:

- ① APPLY LOCTITE (BLUE) P/N 60091
- ② RIGHT SIDE SPIDER ASSEMBLY P/N 12251
INCLUDES ALL ITEMS WITHIN OUTLINE.
- ③ THRUST BEARING KIT P/N 10968
INCLUDES ALL ITEMS WITHIN OUTLINE.

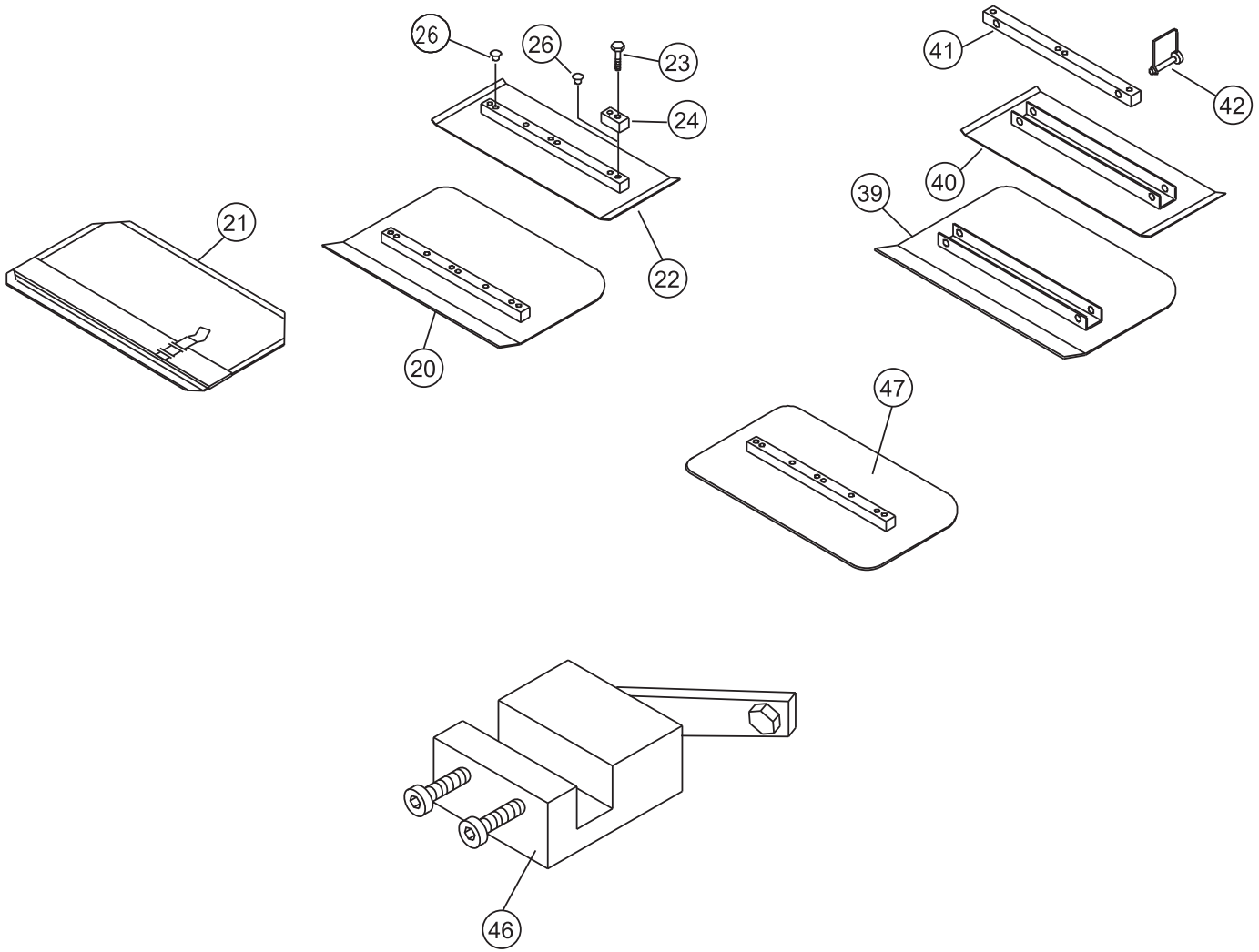
JTO RIDE-ON POWER TROWEL— SPIDER ASSY. (RIGHT-SIDE)

4-BLADE SPIDER ASSY. (RIGHT-SIDE)

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	12208	WEAR RING	1	
2*	12778	FLANGE BEARING	1	
3*	10793	THRUST COLLAR W/BUSHING	2	
4*	1471	BUSHING	1	
5*	1154 A	LOWER WEAR PLATE	1	
6	10968	THRUST BEARING KIT	1	INCLUDES ITEMS W/*
7#	1162 A	CAP, GREASE ZERK, #2 YELLOW	1	
11#	0164 B	SCREW, HHC 3/8-16 X 1 1/4 F.T.	4	
12#	0166 A	WASHER, LOCK, 3/8 MED.	4	
13#	1157 A	BUSHING	8	
14#	1317	SPRING, R.S. ARM RETURN	4	
15#	11602	SCREW, HHC 3/8-16 X 3/8	4	
16#	12452	PLATE, SPIDER	1	
17#	1322	SCREW, RETAINING	4	
18#	1875	WASHER, INT. SHKP, 3/8	4	
19#	1876	NUT, HEX JAM 3/8-16 CLASS 2B	4	
20#	1555	LEVER, TROWEL LH	4	
21#	2826	ARM, TROWEL EXTENDED 16-1/2"	4	
22#	4164	PIN, ROLL 5/16 X 2, N.P.	4	
25	12251	SPIDER ASSY, RIGHT SIDE	1	INCLUDES ITEMS W/#
26#	0105	HHCS 5/16-18 X 1.1/2"	4	
27#	0161 C	LOCK WASHER 5/16"	8	
28	12097	SCREW, SQHS 3/8-16x1-3/4" CONE GD 8	1	
29	1456	NUT, HEX. 3/8-16	1	

JTO RIDE-ON POWER TROWEL— BLADES AND ADJ. FIXTURE ASSY.

BLADES & ADJUSTMENT FIXTURE ASSY.



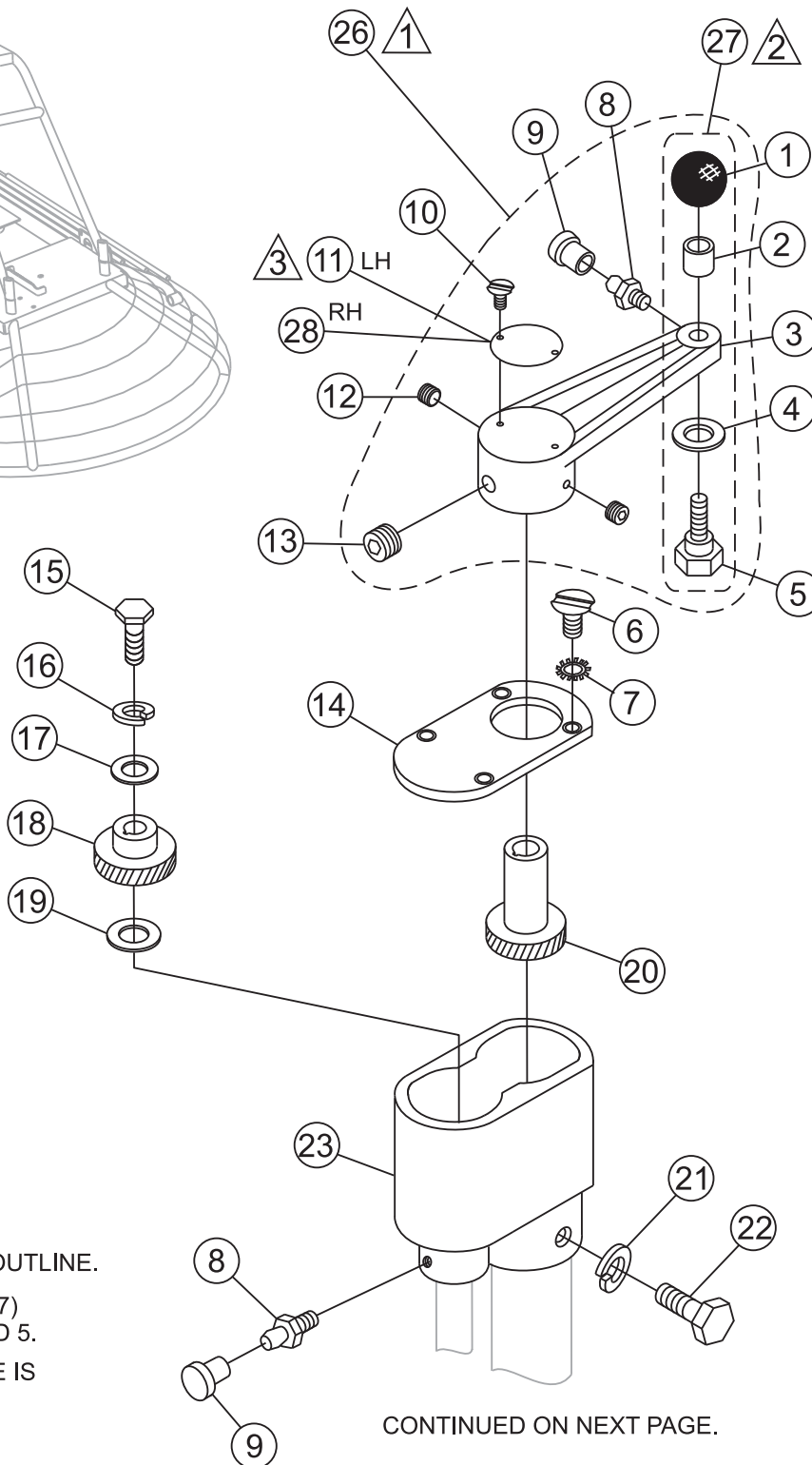
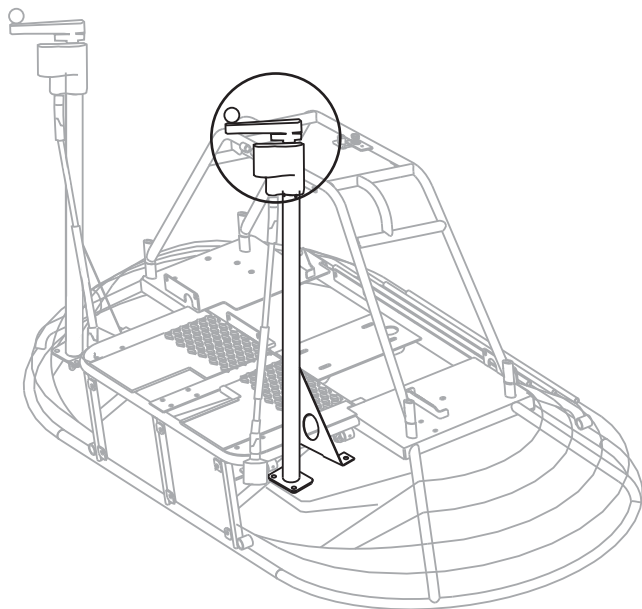
JTO RIDE-ON POWER TROWEL— BLADES AND ADJ. FIXTURE ASSY.

BLADES & ADJUSTMENT FIXTURE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
20		COMBO FLOAT & FINISH BLADE	4	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
20		ENDURO COMBO FLOAT &FINISH BLADE	4	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
21		FLOAT BLADE	4	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
22		FINISH BLADE	4	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
22		ENDURO FINISH BLADE W/ROTATING	4	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
23	0202	HHCS 5/16-18X1" RING	4	
24	0201	GUARD RING LUG RING	4	
26	1434	TROWEL LUG (FINISH BLADE ONLY)	4	
39		UNIVERSAL COMBO BLADE	4	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
39		ENDURO UNIVERSAL COMBO BLADE	4	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
40		UNIVERSAL FINISH BLADE	4	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
40		ENDURO UNIVERSAL FINISH BLADE	4	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
41		UNIVERSAL MOUNTING BAR	4	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
42		SNAP PIN 1/4"X1.3/4"	8	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
46		TROWEL ARM ADJ. FIXTURE ASSY	1	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
47		REVERSIBLE COMBO BLADE	4	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
49		FLOAT DISC	1	CONTACT UNIT SALES DEPT./ACCESSORY ITEM
50		FLOAT DISC LATCH PIN	4	CONTACT UNIT SALES DEPT./ACCESSORY ITEM

JTO RIDE-ON POWER TROWEL—TWIN PITCH HANDLE ASSY. (LT/RT)

TWIN PITCH CONTROL ASSY. (LEFT AND RIGHT)



▲ 1 LEVER ASSEMBLY, ITEM 26
INCLUDES ITEMS WITHIN OUTLINE.

▲ 2 KNOB KIT P/N 2737 (ITEM 27)
INCLUDES ITEMS 1, 2, 4, AND 5.

▲ 3 RIGHT SIDE PITCH HANDLE IS
IDENTICAL TO LEFT SIDE
PITCH HANDLE UNLESS
OTHERWISE NOTED.

CONTINUED ON NEXT PAGE.

JTO RIDE-ON POWER TROWEL—TWIN PITCH HANDLE ASSY. (LT/RT)

TWIN PITCH HANDLE ASSY. (LEFT AND RIGHT)

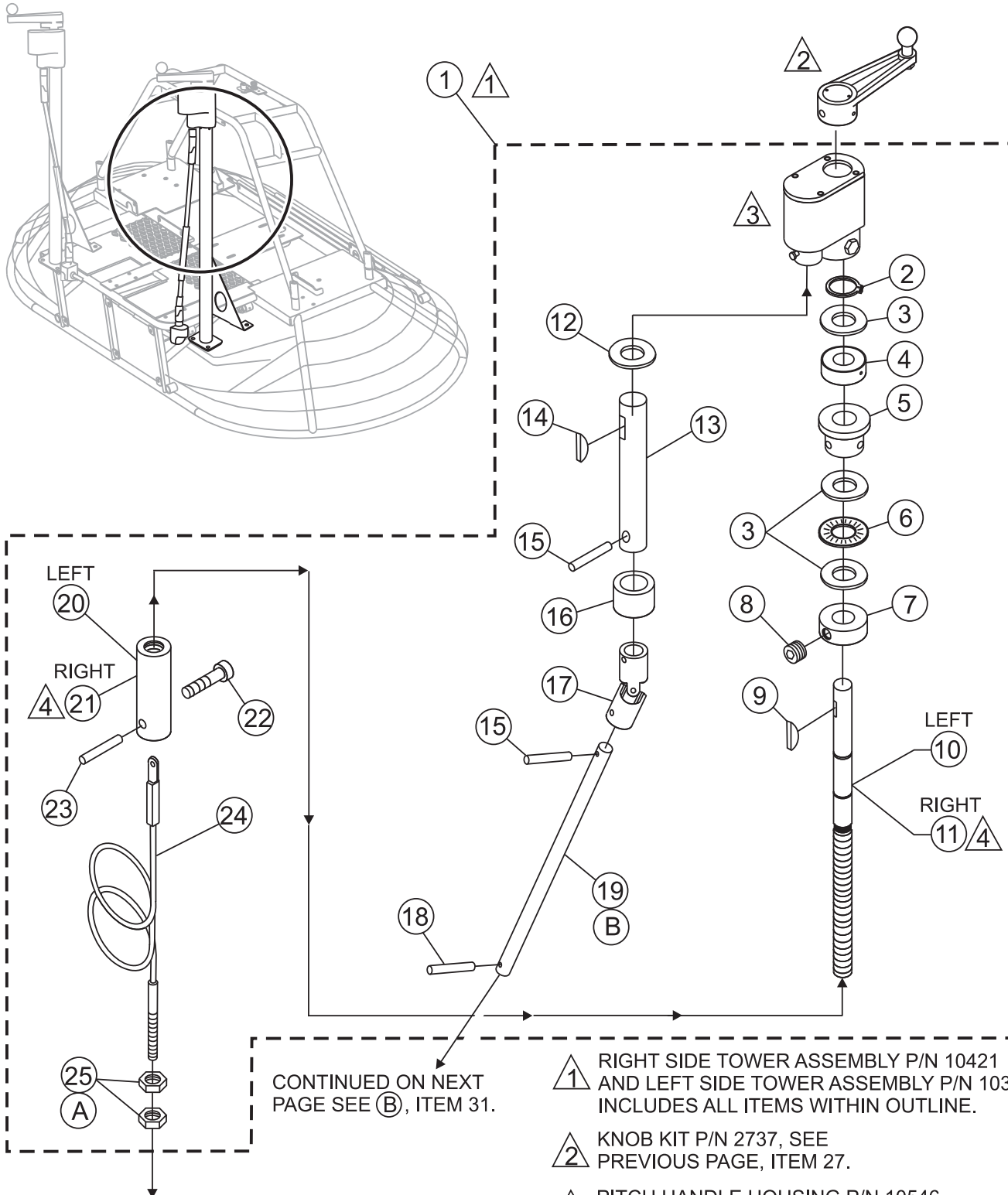
<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1 #	4403	CRANK KNOB	1	
2 #	3231	SPACER	1	
3 #	1615	CRANK LEVER	1	
4 #	1733	HARDENED WASHER	1	
5 #	1616	SHOULDER BOLT	1	
6 +%	2620	SCREW, BHC 10 – 24 X 5/8	4	
7	10114	WASHER, EXT. SHKP, #8	4	
8+%	2621	FITTING GREASE	4	
9+%	1162 A	CAP, GREASE ZERK	4	
10 #	4014	SCREW, 2-3/16 P-K TYPE U-DRIVE	2	
11	2300	DECAL, AL PITCH, RH	1	
12 #	1528	SCREW, SHSS 1/4 – 20 X 5/16"	2	
13 #	0185	SCREW, SHSS 3/8 – 16 X 3/8"	1	
14 +%	2649	COVER, PITCH CONT HOUSING	1	
15 +%	1579	SCREW, HHC 1/4 – 20 X 1/2	1	
16 +%	0181 B	WASHER, LOCK, 1/4 MED	4	
17 +%	0948	WASHER, FLAT, 1/4 SAE	1	
18 +%	1530	GEAR, SLAVE, TPC	1	
19 +%	1733	WASHER, 1/32 X 1/2 HARDENED	8	
20 +%	1529	GEAR, MASTER, TPC	1	
21 +%	0161 C	WASHER, LOCK 5/16 MED	1	
22 +%	0655	SCREW, HHC 5/16 – 18 X 3/4	1	
23 +%	10546	HOUSING, PITCH CONTROL, 1-3/4	1	
26	1617	LEVER ASSY. , TROWEL ADJUSTMENT ...	1	INCLUDES ITEMS W/#
27	2737	KNOB, KIT	1	INCLUDES ITEMS W/\$
28	2332	DECAL, AL PITCH, LH	1	

NOTE 1: ITEMS WITH + ARE PART OF TWIN PITCH ASSY. LEFT SIDE (P/N 10392)
 ITEMS WITH % ARE PART OF TWIN PITCH ASSY. RIGHT SIDE (P/N 10421)

NOTE 2: INDICATED QUANTITIES ARE FOR ONE PITCH TOWER.
 IF ORDERING FOR TWO PITCH TOWERS DOUBLE THE QUANTITY.

JTO RIDE-ON POWER TROWEL—TWIN PITCH TOWER ASSY. (LT/RT)

TWIN PITCH TOWER ASSY. (LEFT AND RIGHT)



CONTINUED ON NEXT PAGE SEE (B), ITEM 31.

- ① RIGHT SIDE TOWER ASSEMBLY P/N 10421 AND LEFT SIDE TOWER ASSEMBLY P/N 10392 INCLUDES ALL ITEMS WITHIN OUTLINE.
- ② KNOB KIT P/N 2737, SEE PREVIOUS PAGE, ITEM 27.
- ③ PITCH HANDLE HOUSING P/N 10546 COMPONENTS, SEE PAGE 40, ITEM 23
- ④ RIGHT SIDE TWIN PITCH ASSEMBLY IS IDENTICAL TO LEFT SIDE TWIN PITCH ASSEMBLY UNLESS OTHERWISE NOTED.

CONTINUED ON NEXT PAGE. SEE (A), ITEM 32.

JTO RIDE-ON POWER TROWEL—TWIN PITCH TOWER ASSY. (LT/RT)

TWIN PITCH TOWER ASSY. (LEFT AND RIGHT)

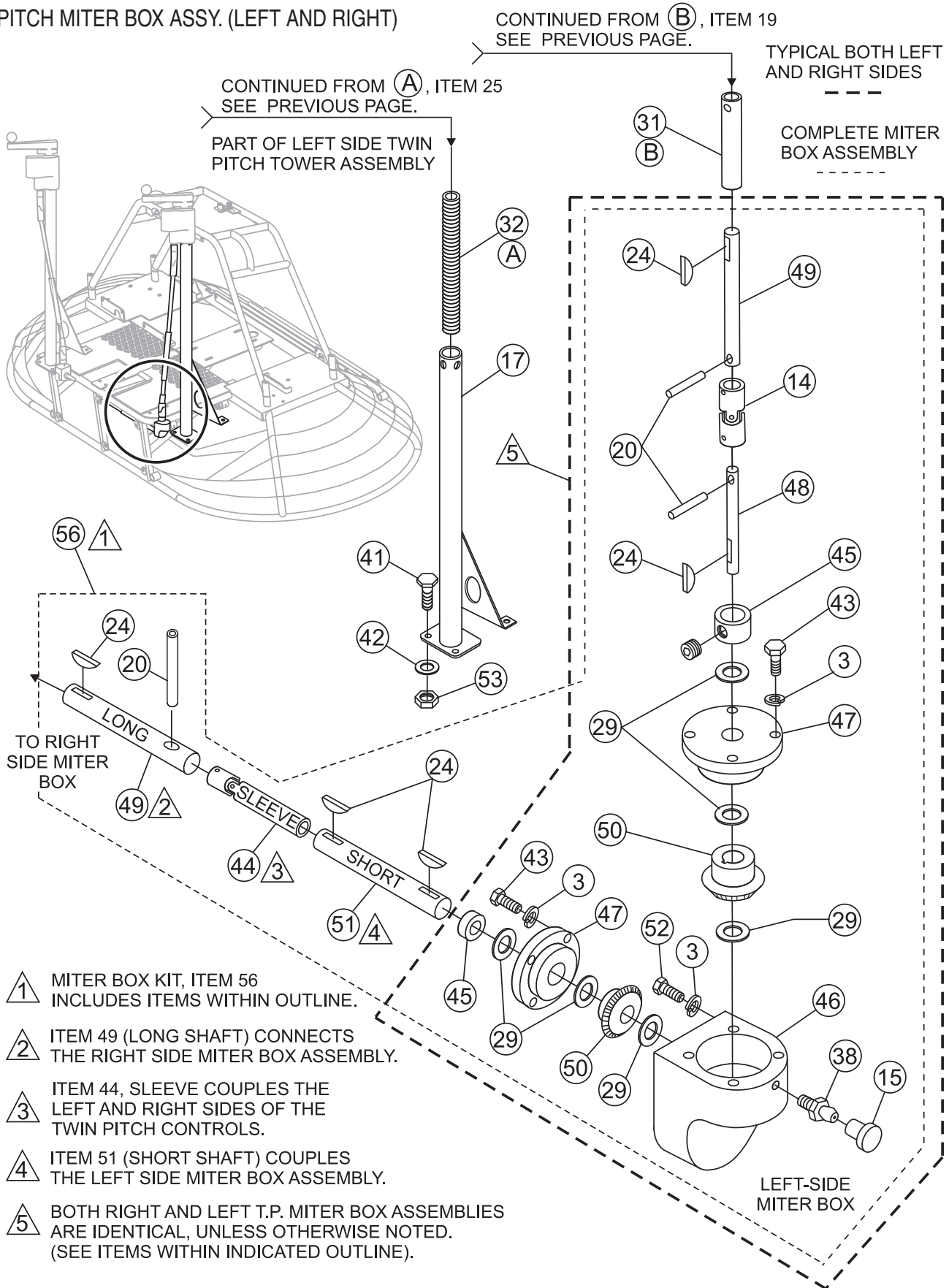
NO	PART NO	PART NAME	QTY.	REMARKS
1 (LT)	10392	TOWER ASSY. , LEFT TPC	1	.. INCLUDES ITEMS W/+
1 (RT)	10421	TOWER ASSY. , RIGHT TPC	1	.. INCLUDES ITEMS W/%
2 +%	10512	RING, SNAP, TRUARC 5160 – 75	1	
3 +%	2170	BEARING, RACE, TORR #TRA 1220	3	
4 +%	1604	BEARING, BALL	1	
5 +%	1612	BEARING, ALUM – PITCH CONTR	1	
6 +%	2169	BEARING, THRUST, TORR #NTA 1220	1	
7 +%	2367	SET COLLAR	1	.. INCLUDES ITEM 8
8 +%	0685	SCREW, SHS 5/16-18 X 5/16"	1	
9 +%	0126 B	KEY, WOODRUFF #9	1	
10 +	2010	SHAFT, PITCH CONTROL, LH TPC	1	.. LEFT SIDE ONLY REPLACES 10511
11 %	10510	SHAFT, PITCH CONTROL, RH TPC	1	.. RIGHT SIDE ONLY
12 +%	1733	WASHER, 1/32 X 1/2 HARDENED	8	
13 +%	2007	SHAFT	1	
14 +%	1578	KEY, WOODRUFF, #3	9	.. QTY. INCLUDES USAGE ON BOTH TWIN PITCH ASSEMBLIES, AND MITER BOX SHAFTS.
15 +%	11654	PIN, ROLL 1/8 X 1 PLATED	5	.. QTY. INCLUDES USAGE ON BOTH TWIN PITCH ASSEMBLIES, AND MITER BOX SHAFTS.
16 +%	2311	SPACER, 3/4 X 1/2 X 0.8L	1	
17 +%	1536	U-JOINT, PITCH CONTROL	1	
18 +%	1586	PIN, ROLL 1/8 X 3/4"	1	
19 +%	2023	SHAFT, PITCH CONTROL	1	
20 +	10722	SLIDE BLOCK, LH PITCH CONTROL	1	.. LEFT SIDE ONLY
21 %	10721	SLIDE BLOCK, RH PITCH CONTROL	1	.. RIGHT SIDE ONLY
22 +%	10382	BOLT, SHOULDER 3/8 X 3/8" LONG	1	
23 +%	10723	PIN, SPIROL 3/16 X 1 3/8" HD	1	
24 +%	2008	CABLE, PITCH ASSY.	1	
25 +%	1116	NUT, BRASS JAM 5/16 –18"	2	

NOTE 1: ITEMS WITH + ARE PART OF TWIN PITCH ASSY. LEFT-SIDE (P/N 10392)
ITEMS WITH % ARE PART OF TWIN PITCH ASSY. RIGHT-SIDE (P/N 10421)

NOTE 2: INDICATED QUANTITIES ARE FOR ONE PITCH TOWER.
IF ORDERING FOR TWO PITCH TOWERS DOUBLE THE QUANTITY.

JTO RIDE-ON POWER TROWEL—TWIN PITCH MITER BOX ASSY. (LT/RT)

TWIN PITCH MITER BOX ASSY. (LEFT AND RIGHT)



- 1 MITER BOX KIT, ITEM 56 INCLUDES ITEMS WITHIN OUTLINE.
- 2 ITEM 49 (LONG SHAFT) CONNECTS THE RIGHT SIDE MITER BOX ASSEMBLY.
- 3 ITEM 44, SLEEVE COUPLES THE LEFT AND RIGHT SIDES OF THE TWIN PITCH CONTROLS.
- 4 ITEM 51 (SHORT SHAFT) COUPLES THE LEFT SIDE MITER BOX ASSEMBLY.
- 5 BOTH RIGHT AND LEFT T.P. MITER BOX ASSEMBLIES ARE IDENTICAL, UNLESS OTHERWISE NOTED. (SEE ITEMS WITHIN INDICATED OUTLINE).

JTO RIDE-ON POWER TROWEL—TWIN PITCH MITER BOX ASSY. (LT/RT)

TWIN PITCH TOWER ASSY. (LEFT AND RIGHT)

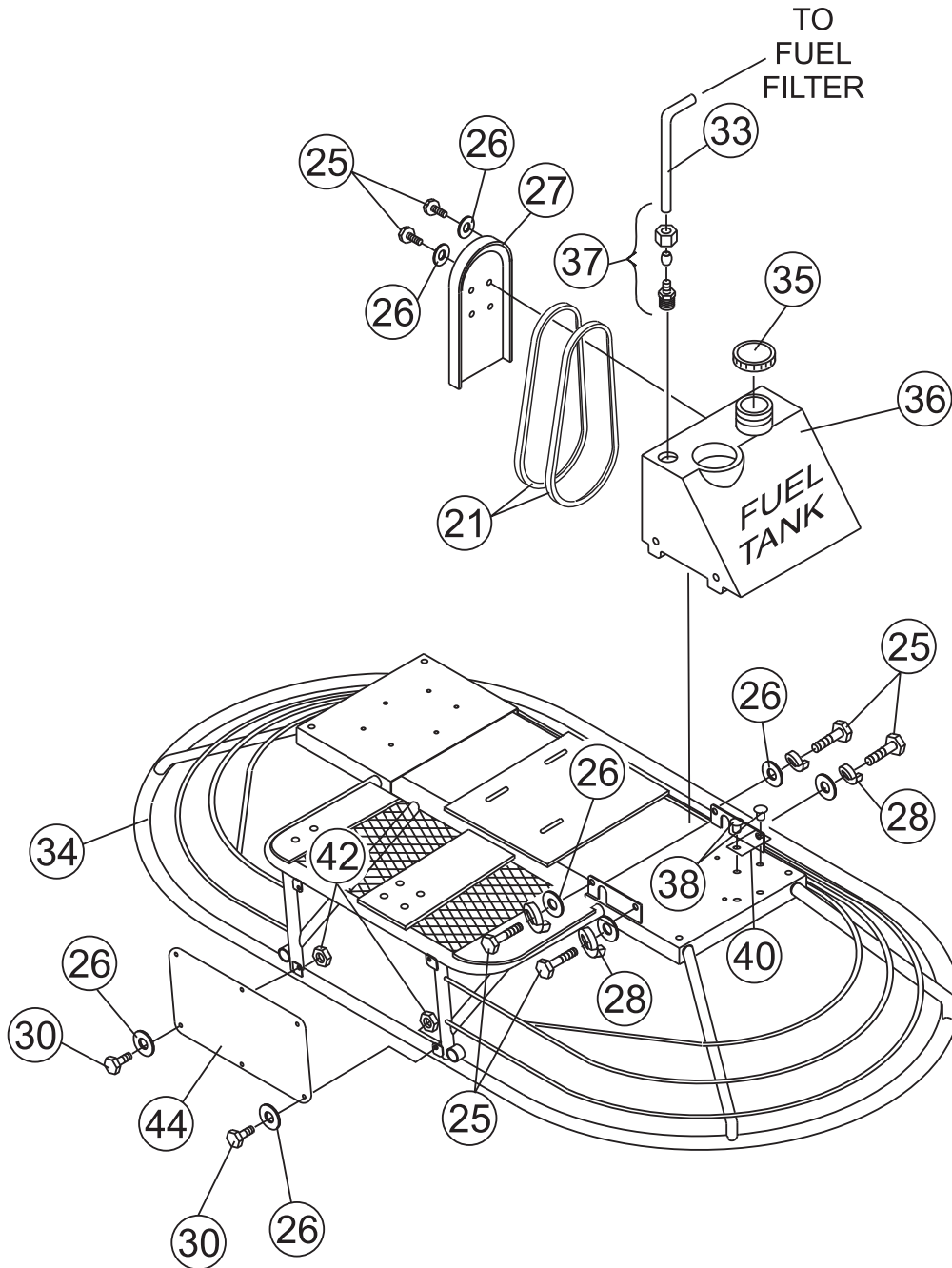
<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
3*+%	0181B	WASHER, LOCK 1/4" MED	20	
14*+%	1536	U-JOINT, PITCH CONTROL	2	
15*+%	1162 A	CAP, GREASE ZERK	2	
17	10548	TUBE, PITCH CONTROL	1	
20*+%	1586	PIN ROLL 1/8 x 3/4	11	QTY INCLUDES USAGE ON BOTH TWIN PITCH ASSEMBLIES, AND MITER BOX SHAFTS.
24*+%	1578	KEY, WOODRUFF, #3	9	QTY INCLUDES USAGE ON BOTH TWIN PITCH ASSEMBLIES, AND MITER BOX SHAFTS.
29*+%	1733	WASHER, 1/32 x 1/2 HARDEN	8	
31	2012	SLEEVE, ADJ.-LONG RIDER	1	
32	2156	SPRING, COIL	1	
38*+%	2621	ZERK, GREASE STR 1/4-28"	2	
41	0202	SCREW, HHC 5/16-18 x 1"	4	
42	0300 B	WASHER, FLAT 5/16" SAE	4	
43*	0730	SCREW, HHC 1/4-20 x 1"	8	
44*	2104	SLEEVE W/U JOINT	1	
45*	1577	SET COLLAR, 1/2"	2	
46*	1987	MITER BOX, PITCH CONTROL	1	
47*	1988	MITER BOX, BEARING CAP	2	
48*	2021	SHAFT, MITER VERTICAL	1	
49*	2022	SHAFT, MITER	3	QTY INCLUDES USAGE ON BOTH TWIN PITCH ASSEMBLIES, AND MITER BOX SHAFTS.
50*	2062	GEAR, MITER	2	
51*	2026	SHAFT, MITER BOX HORIZ.	1	
52*	4514	SCREW, HHC 1/4-20 x 5/8"	4	
53	5283	NUT, NYLOC 5/16-18"	4	
56	11655	MITER BOX ASSEMBLY	1	INCLUDES ITEMS W/*

NOTE 1: ITEMS WITH + ARE PART OF TWIN PITCH ASSY. LEFT-SIDE (P/N 10392)
 ITEMS WITH % ARE PART OF TWIN PITCH ASSY. RIGHT-SIDE (P/N 10421)

NOTE 2: INDICATED QUANTITIES ARE FOR ONE PITCH TOWER.
 IF ORDERING FOR TWO PITCH TOWERS DOUBLE THE QUANTITY.

JTO RIDE-ON POWER TROWEL— MAIN FRAME ASSY.

MAIN FRAME ASSY.



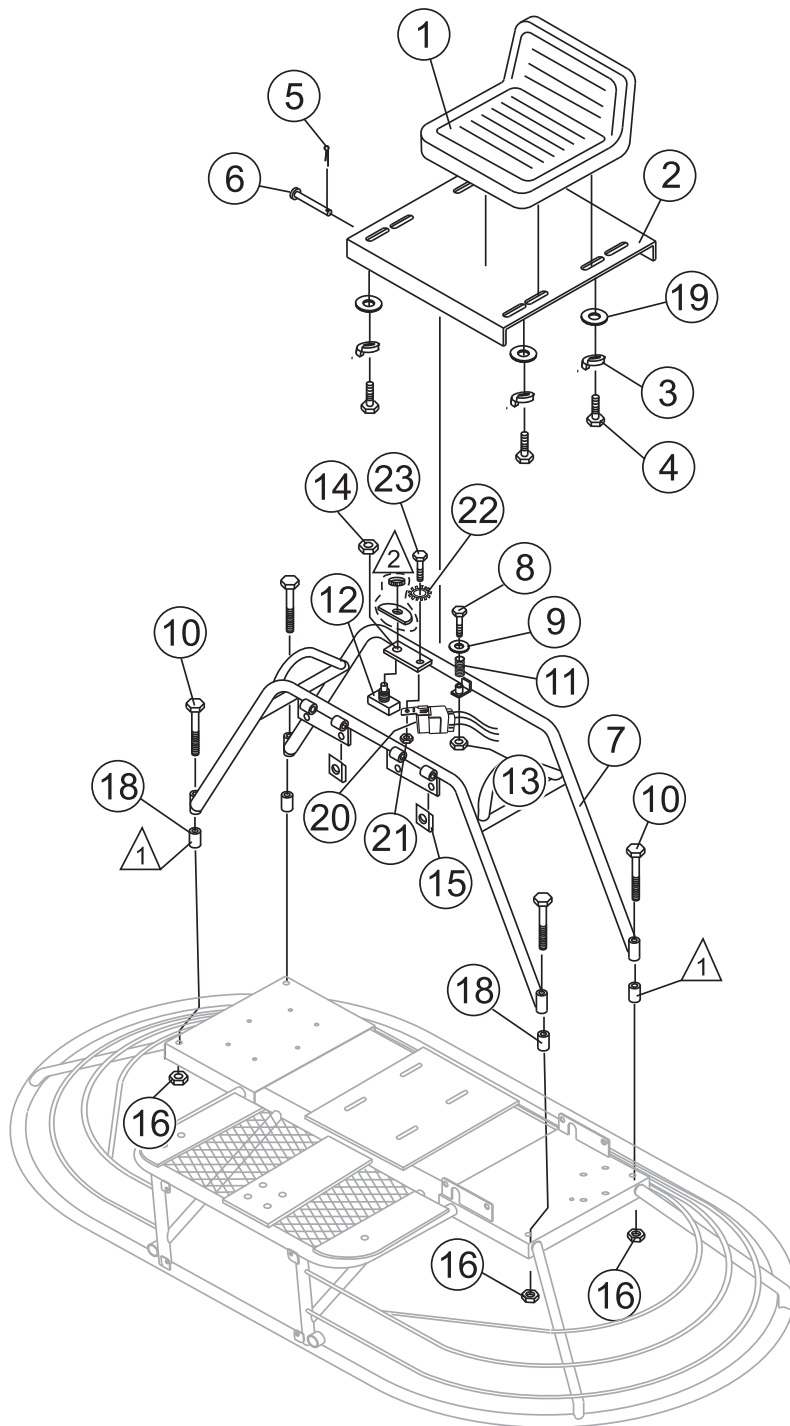
JTO RIDE-ON POWER TROWEL— MAIN FRAME ASSY.

MAIN FRAME ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
21	11064	SPARE BELT A-36 (138 RPM)	2	VANGUARD, AND HONDA
21	2155	SPARE BELT A-37 (120 RPM)	2	VANGUARD ONLY
21	1619	SPARE BELT A-39 (100 RPM)	2	VANGUARD, AND HONDA
25	4514	HHCS 1/4- 20 X 5/8"	6	
26	0948	FLAT WASHER 1/4"	10	
27	2429	SPARE BELT CARRIER	1	
28	0181 B	LOCK WASHER 1/4"	4	
30	0131 A	HHCS 1/4- 20 X 3/4"	6	
33	11016	FUEL PICK UP TUBE	1	
34	2347	MAIN FRAME	1	S/N 46645 AND BELOW
34	11503	MAIN FRAME	1	S/N 46646 ~
35	2712	FUEL CAP	1	
36	11003	FUEL TANK	1	
37	19088	FITTING (INCLUDES FERRUL & NUT)	1	
38	4014	U- DRIVE SCREW 2 X 3/16"	2	
40		SERIAL NUMBER PLATE	1	CONTACT MULTIQUIP PARTS DEPT.
44	2535	FRONT PANEL	1	

JTO RIDE-ON POWER TROWEL— SEAT FRAME ASSY.

SEAT FRAME ASSY.



NOTES:

- 1 SPACER P/N 2893, ITEM 18 IS USED ON KOHLER AND HONDA MODELS ONLY.
- 2 INCLUDED WITH ITEM 12, KILL SWITCH P/N 12005. PANEL NUT P/N 2906 IS REMOVED THIS APPLIES TO UNITS WITH S/N 52146 AND BELOW.

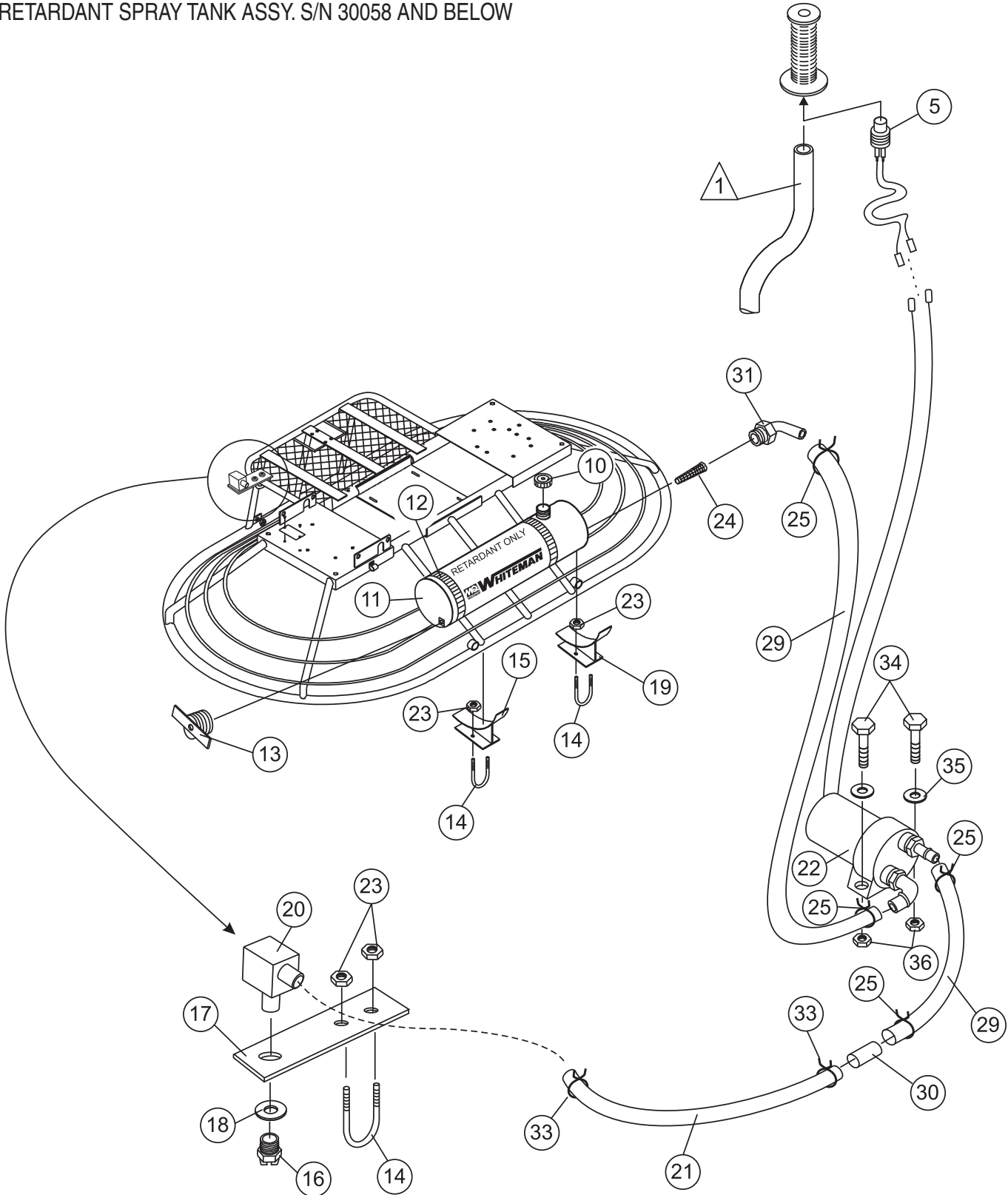
JTO RIDE-ON POWER TROWEL— SEAT FRAME ASSY.

SEAT FRAME ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	5045	SEAT	1	S/N 43940 AND BELOW
1	2351	SEAT	1	S/N 43941~
2	2424	SEAT MOUNTING PLATE	1	S/N 43940 AND BELOW
2	2421	SEAT MOUNTING PLATE	1	S/N 43941~
3	5054 A	LOCKWASHER 1/2"	4	
4	2691	HHCS 1/2-13 X 1"	4	
5	0183	COTTER PIN	2	
6	8081	CLEVIS PIN	2	
7	2661	SEAT FRAME	1	
7	10978	SEAT FRAME	1	HONDA
8	8156	HHCS 3/8- 16 X 2.1/2"	1	
9	4001	FLAT WASHER 3/8"	1	
10	2549	HHCS 1/2- 13 X 3"	4	VANGUARD
10	10306	HHCS 1/2- 13 X 4.1/2"	4	HONDA
11	2585	COIL SPRING	1	
12	2584	KILL SWITCH	1	S/N 52146 AND BELOW
12	12005	KILL SWITCH	1	S/N 52147~
13	10133	LOCK NUT 3/8- 16	1	
14	2906	NUT, PANEL 3/8 X 32"	1	S/N 52146 AND BELOW
15	10284	CLIP- ON NUT 10-32	2	
16	10176	LOCK NUT 1/2-13	4	
18	2893	SPACER	4	HONDA
19	0300 B	WASHER, FLAT 5/16"	1	
20	12017	RELAY	1	S/N 52147~
21	10019	NUT, NYLOC 10-32	1	
22	10237	WASHER, EXT. SHKP #10	1	
23	11644	SCREW, HHC 10-32 X 5/8"	1	

JTO RIDE-ON POWER TROWEL— RETARDANT SPRAY TANK ASSY.

RETARDANT SPRAY TANK ASSY. S/N 30058 AND BELOW



△ SEE RIGHT-SIDE STEERING ASSEMBLY PAGE 20, ITEM 3.

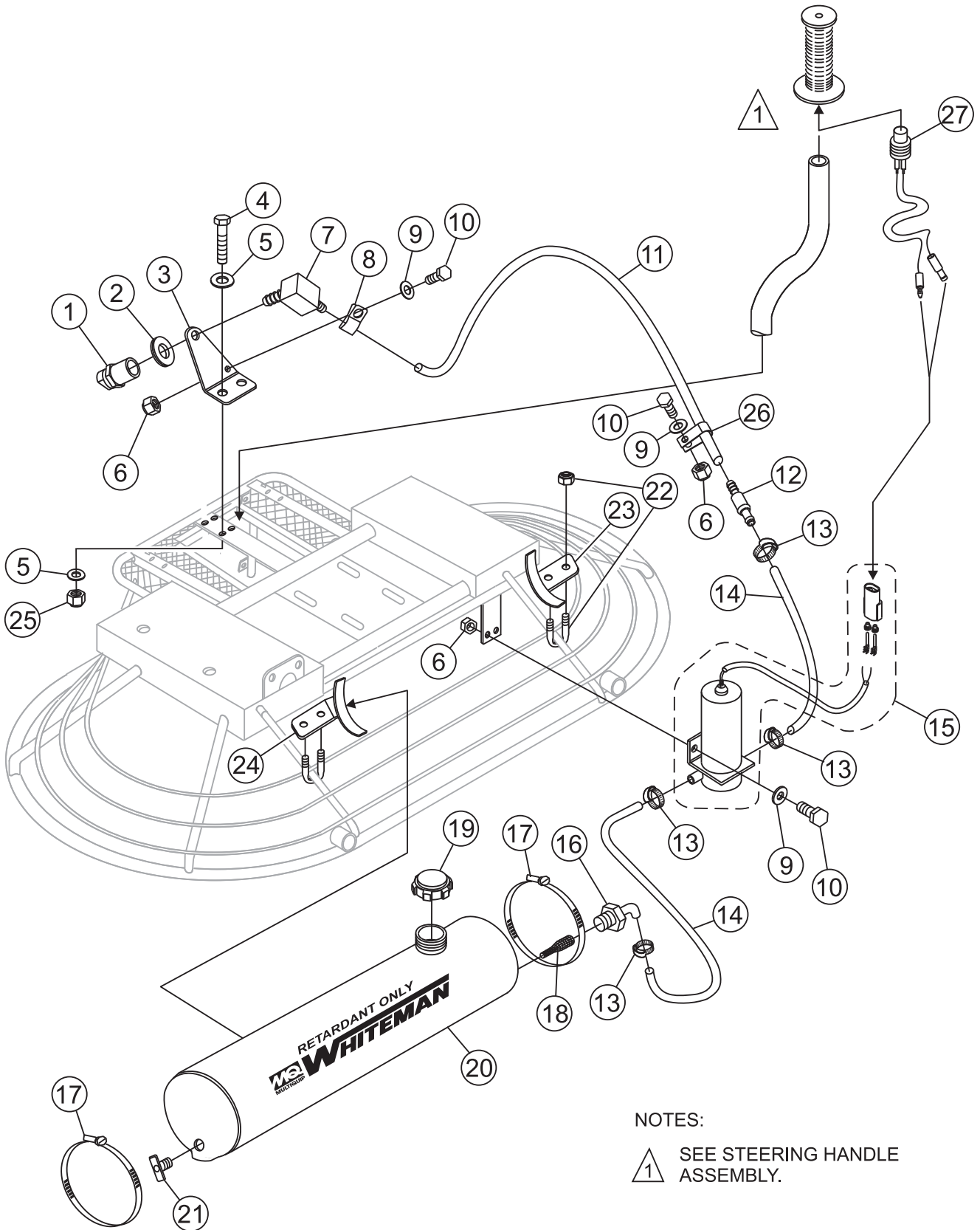
JTO RIDE-ON POWER TROWEL— RETARDANT SPRAY TANK ASSY.

RETARDANT SPRAY TANK ASSY. S/N 30058 AND BELOW

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
5	2765	SWITCH, RETARDANT SPRAY	1	
10	2108	TANK CAP	1	
11	2916	RETARDANT TANK	1	
12	2398	CLAMP	2	
13	2478	DRAIN COCK	1	
14	2399	U- BOLT	2	
15	2887	RIGHT MOUNTING BRACKET	1	
16	392292	SPRAY NOZZLE	1	
17	2873	MOUNTING BRACKET	1	
18	2898	RUBBER WASHER	1	
19	2886	LEFT MOUNTING BRACKET	1	
20	2912	90 DEGREE FITTING	1	
21	2914	HOSE	1	
22		PUMP ASSY.	1	MUST REPLACE WITH NEW STYLE PUMP P/N 12548
23	2656	LOCKNUT 5/16- 24	6	
24	2926	STRAINER	1	
25	2918	HOSE CLAMP	4	
29	2913	LOWER HOSE	1	
30	10022	REDUCER	1	
31	2925	90 DEGREE ELBOW	1	
33	2930	HOSE CLAMP	2	
34	0131A	HHCS 1/4- 20 X 3/4"	2	
35	0948	FLAT WASHER 1/4"	2	
36	10024	LOCK NUT 1/4-20	2	

JTO RIDE-ON POWER TROWEL— RETARDANT SPRAY TANK ASSY.

RETARDANT SPRAY TANK ASSY. S/N 30059~



NOTES:

- △ 1 SEE STEERING HANDLE ASSEMBLY.

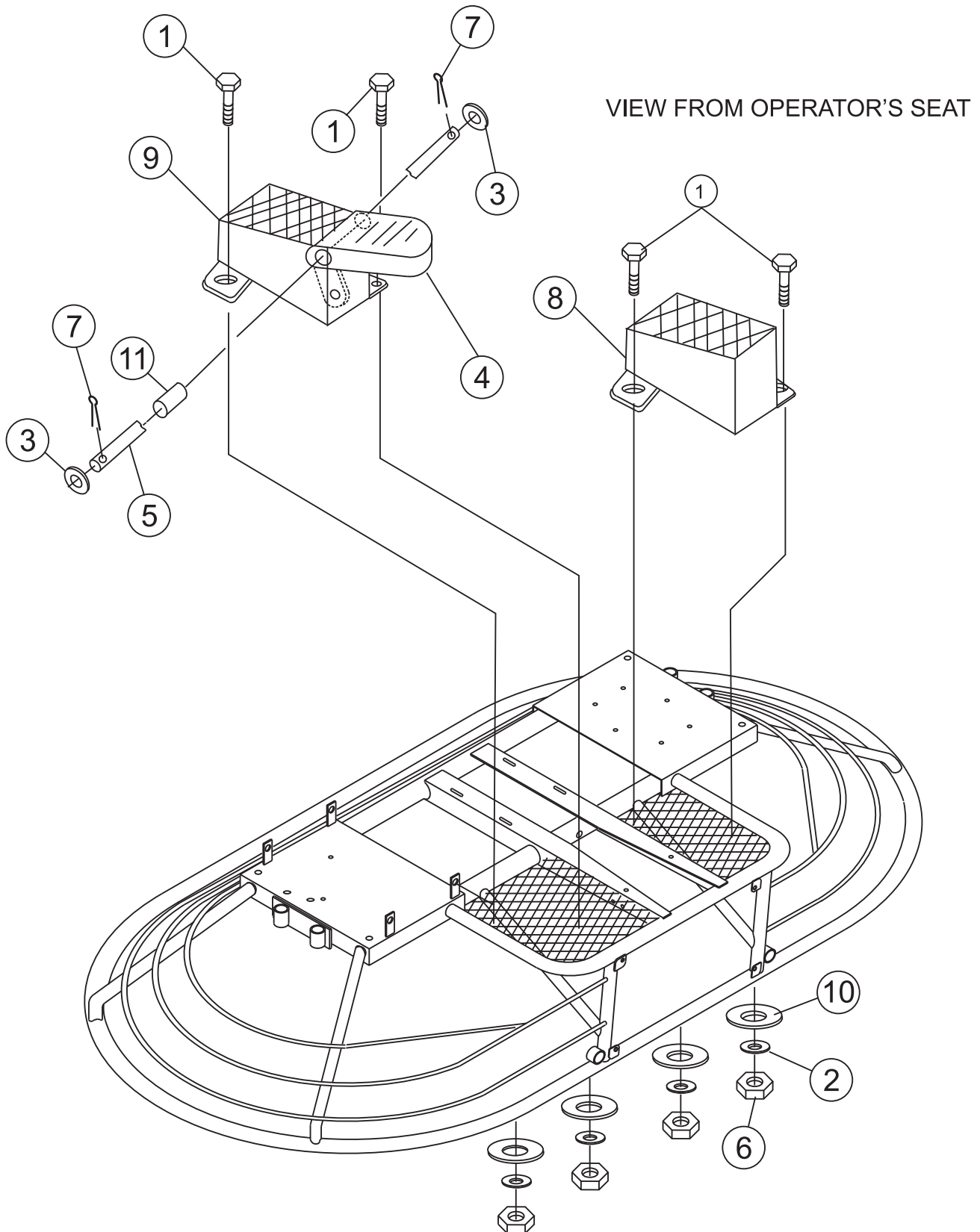
JTO RIDE-ON POWER TROWEL— RETARDANT SPRAY TANK ASSY.

RETARDANT SPRAY TANK ASSY. S/N 30059~

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	392292	NOZZLE, SPRAY	1	
2	2898	WASHER, BONDED NEOPRENE 1 X 1/2	1	
3	11222	MOUNT, SPRAY NOZZLE	1	
4	1023	SCREW, HHC 3/8-16 X 1 1/4	2	
5	10136	WASHER, FLAT 3/8 SAE	4	
6	10024	NUT, NYLOC 1/4-20	4	
7	2912	FITTING, 90 4BARB-1/4FP	1	
8	8128	CLAMP, HOSE SUPPORT 5/16	1	
9	0948	WASHER, FLAT 1/4 SAE	4	
10	0131A	SCREW, HHC 1/4-20 X 3/4	4	
11	2914	HOSE, 1/4 ID.....	1	SOLD IN FOOT LENGTHS
12	10022	FITTING, PLASTIC 6BARB-4BARB	1	
13	2918	CLAMP, HOSE .475 - .536 ID	4	
14	2913	HOSE, 3/8 ID.....	1	SOLD IN FOOT LENGTHS
15	12548	PUMP, SPRAY ASSY. SHURFLO 100-000-21	1	
16	2925	FITTING, PLASTIC 90 6BARB-3/8 MP	1	
17	2398	CLAMP, 6 1/2 HOSE SIZE 96	2	
18	2926	SCREEN, STRAINER	1	
19	2108	CAP, SPRAY TANK	1	
20	2916	TANK, WATER NPT BOSSES	1	
21	2478	DRAIN COCK	1	
22	2399	U-BOLT, 1 ID PLTD W/NUTS	2	
23	2887	MOUNT, TANK LEFT	1	
24	2886	MOUNT, TANK RIGHT	1	
25	10133	NUT, NYLOC 3/8-16	4	
26	8125	CLAMP, HOSE SUPPORT 5/8	1	
27	11430	SWITCH ASSY. , SPRAY	1	

JTO RIDE-ON POWER TROWEL— FOOT PEDAL ASSY.

FOOT PEDALS ASSY.



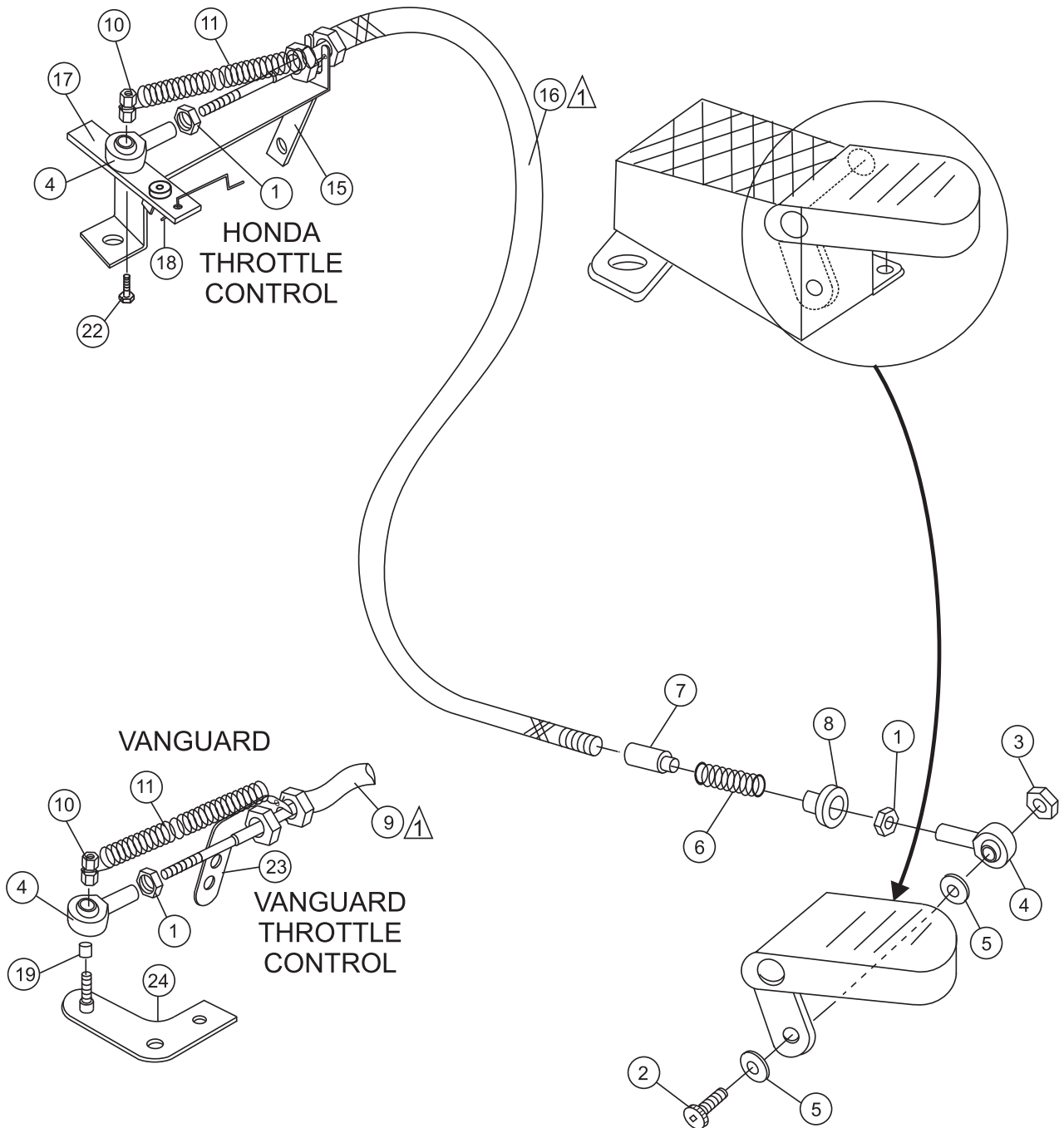
JTO RIDE-ON POWER TROWEL— FOOT PEDAL ASSY.

FOOT PEDALS ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0202	SCREW, HHC 5/16-18 X 1	4	
2	0300 B	WASHER, FLAT, 5/16" SAE	4	
3	10136	WASHER, FLAT, 3/8" SAE	2	
4	2086	PEDAL, ACCELERATOR	1	
5	2772	PIN, ACC MOUNT	1	
6	5283	NUT, NYLOC 5/16-18"	4	
7	0164 B	PIN, COTTER 3/32 X 1"	2	
8	2773	LEFT SIDE FOOT REST	1	
9	2774	RIGHT SIDE FOOT REST	1	
10	3233	WASHER, FENDER, 1.50.D. X 3/8" I.D.	4	
11	3083	SPACER	1	

JTO RIDE-ON POWER TROWEL—THROTTLE/FOOT PEDAL ASSY.

THROTTLE FOOT PEDAL ASSY.



NOTES:

- 1 SEE VANGUARD OR HONDA ENGINE AND CLUTCH ASSY., ITEM 4.

JTO RIDE-ON POWER TROWEL—THROTTLE/FOOT PEDAL ASSY.

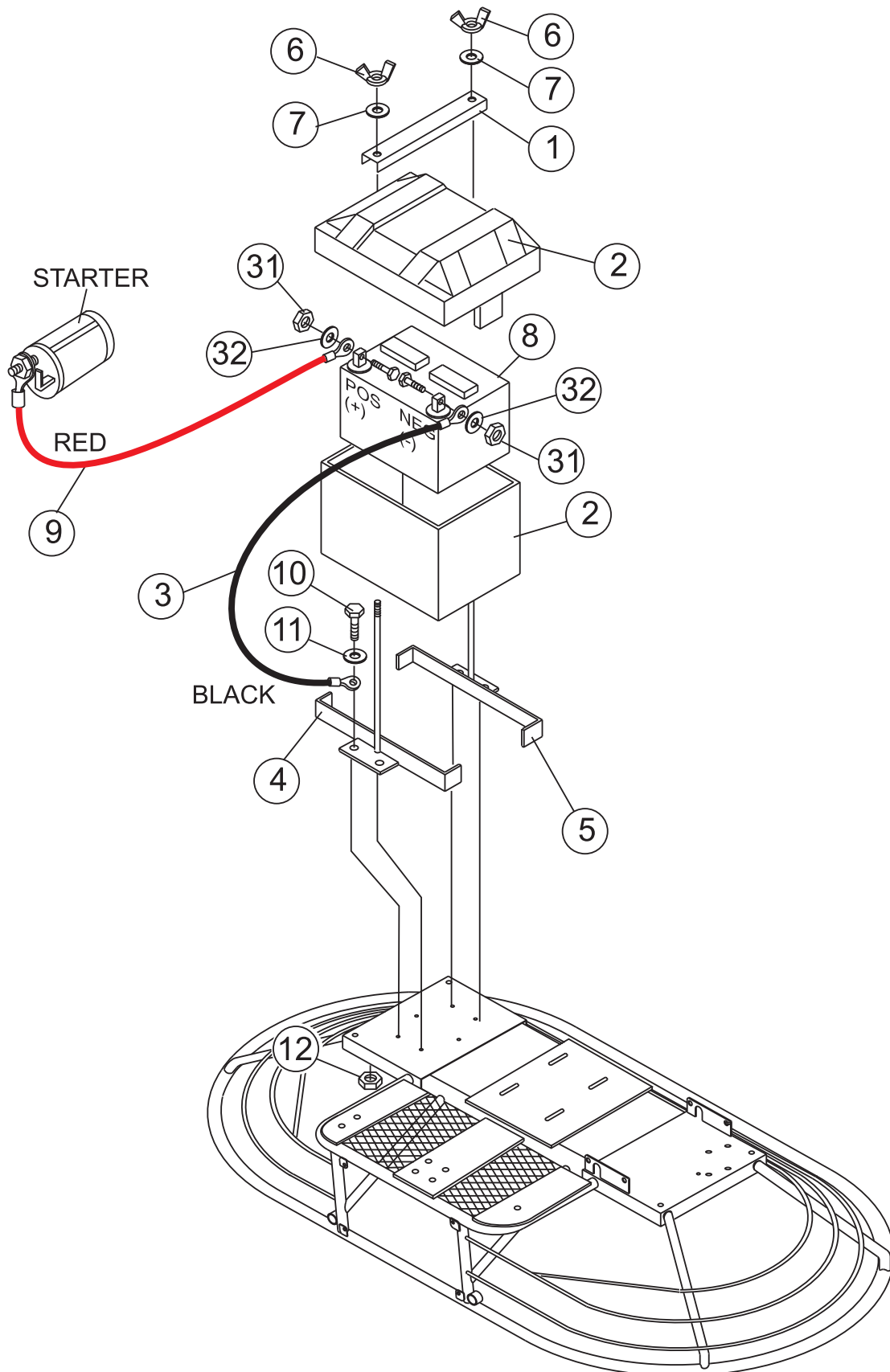
THROTTLE FOOT PEDAL ASSY.

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0937	NUT, HEX 10-32	2	VANGUARD AND HONDA
2	10018	SCREW, SHC 10-32X1 NO PLATE	1	VANGUARD AND HONDA
3	10019	NUT, NYLOC 10-32	1	VANGUARD AND HONDA
4	2153	ROD END, 10-32 FEMALE RH	2	VANGUARD AND HONDA
5	2203	WASHER, FLAT, #10	2	VANGUARD AND HONDA
6	2753	SPRING, THROTTLE RETURN, LOWER	1	VANGUARD AND HONDA
7	2754	ADAPTOR, THROTTLE RET. SPRING LG.	1	VANGUARD AND HONDA
8	2755	ADAPTOR, THROTTLE RET. SPRING SHORT	1	VANGUARD AND HONDA
9	2124	ENGINE THROTTLE CABLE	1	VANGUARD ONLY
10	2194	THROTTLE NUT	1	VANGUARD AND HONDA
11	2192	THROTTLE SPRING	1	VANGUARD AND HONDA
15	10964	THROTTLE CABLE MTNG. BRACKET	1	HONDA ONLY
16	10568	ENGINE THROTTLE CABLE	1	HONDA ONLY
17	10954	THROTTLE LEVER	1	HONDA ONLY
18	10955	THROTTLE WIRE	1	HONDA ONLY
19	2190	SPACER	1	VANGUARD
22	10018	SHCS 10-32X1"	1	HONDA
23	2162	THROTTLE CABLE MTNG. BRACKET	1	VANGUARD ONLY
24	691028	THROTTLE CONTROL ASSY.	1	VANGUARD ONLY

JTO RIDE-ON POWER TROWEL— BATTERY ASSY.

BATTERY ASSY.

VIEW FROM OPERATOR'S SEAT



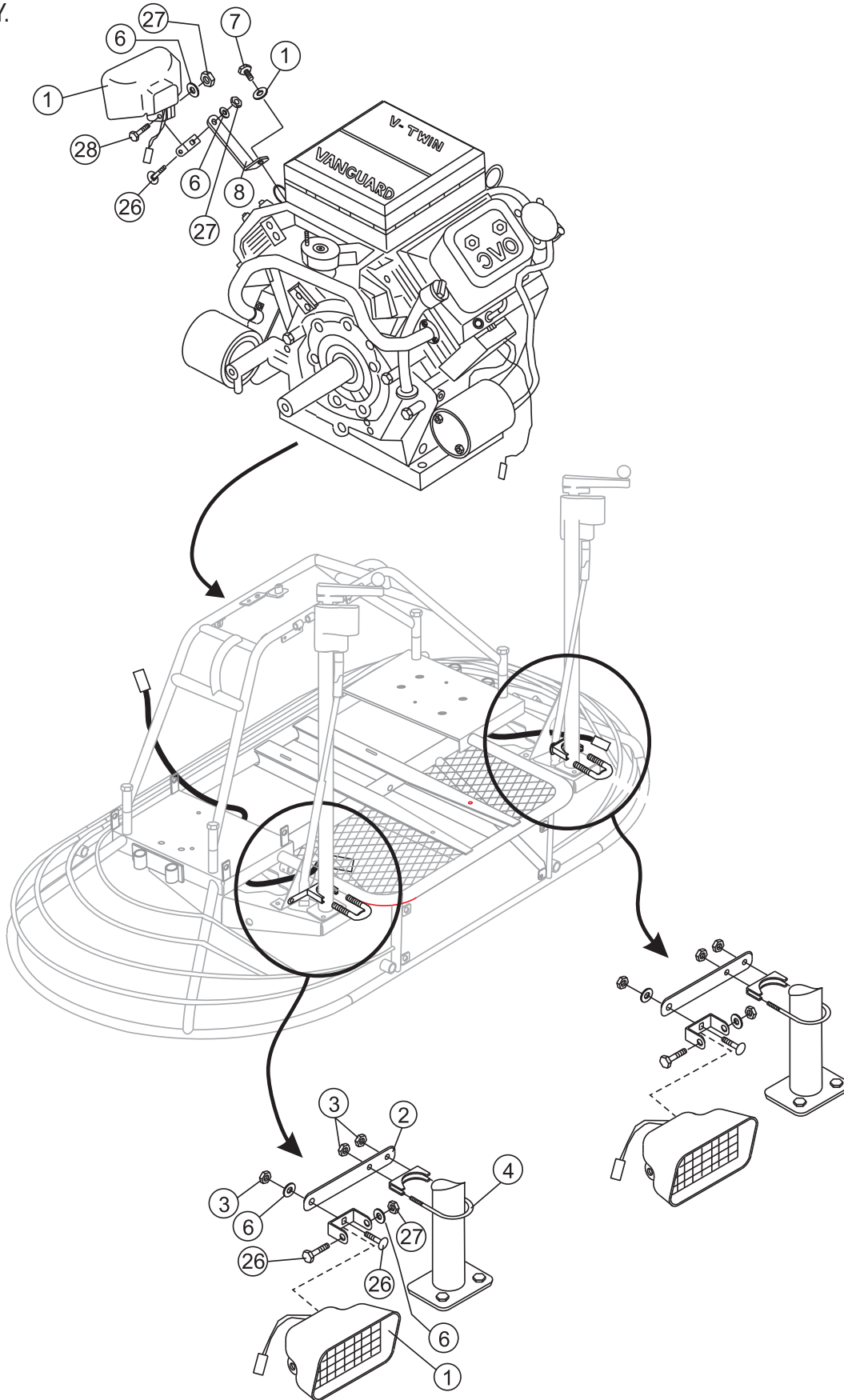
JTO RIDE-ON POWER TROWEL— BATTERY ASSY.

BATTERY ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	11105	BATTERY STRAP	1	WITH BATTERY BOX
2	2449	BATTERY BOX	1	
3	1597	NEGATIVE BATTERY CABLE	1	BLACK
4	2484	FRONT BATTERY BRACKET	1	WITH BATTERY BOX
5	2483	REAR BATTERY BRACKET	1	WITH BATTERY BOX
6	2509	WING NUT 1/4- 20	2	
7	10031	EXT. SHKP WASHER 1/4"	2	
8		BATTERY 12V (SHIPPED DRY)	1	GROUP U- 1 PURCHASE FROM LOCAL INTERSTATE DEALER
9	2542	POSITIVE BATTERY CABLE	1	RED
10	0655	HHCS 5/16-18 X 3/4"	4	
11	0300 B	FLAT WASHER 5/16"	4	
31	0949	HEX NUT 1/4-20	2	
32	0181 B	WASHER, LOCK	2	

JTO RIDE-ON POWER TROWEL— LIGHTS ASSY.

LIGHTS ASSY.



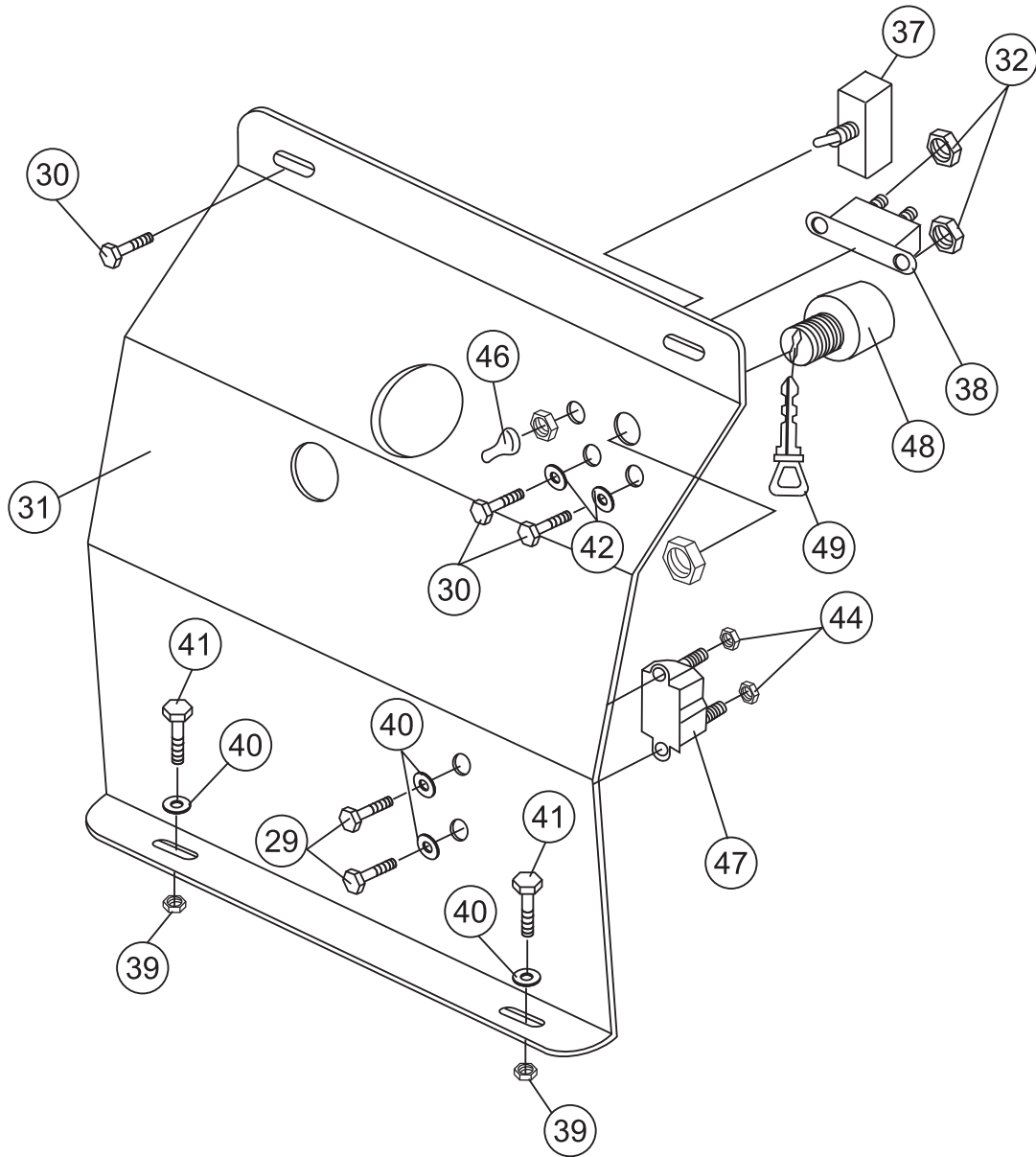
JTO RIDE-ON POWER TROWEL— LIGHTS ASSY.

LIGHTS ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	2896	LIGHT & MOUNTING HARDWARE	3	
2	2531	FRONT MOUNTING BRACKET	2	
3	5283	LOCK NUT 5/16- 18	8	
4	2534	CLAMP ASSY.	2	
6	0161 C	LOCK WASHER 5/16"	7	VANGUARD
7	2299	HHCSM 8- 1.25 X 15MM	1	VANGUARD
8	2430	REAR MOUNTING BRACKET	1	
26	0655	HHCS 5/16- 18 X 3/4"	3	
27	0161 D	HEX NUT5/16- 18	6	
28	0300 A	HHCS 5/16- 18 X 2"	3	

JTO RIDE-ON POWER TROWEL— FRONT PANEL ASSY. (VANGUARD)

FRONT PANEL ASSY. (VANGUARD)



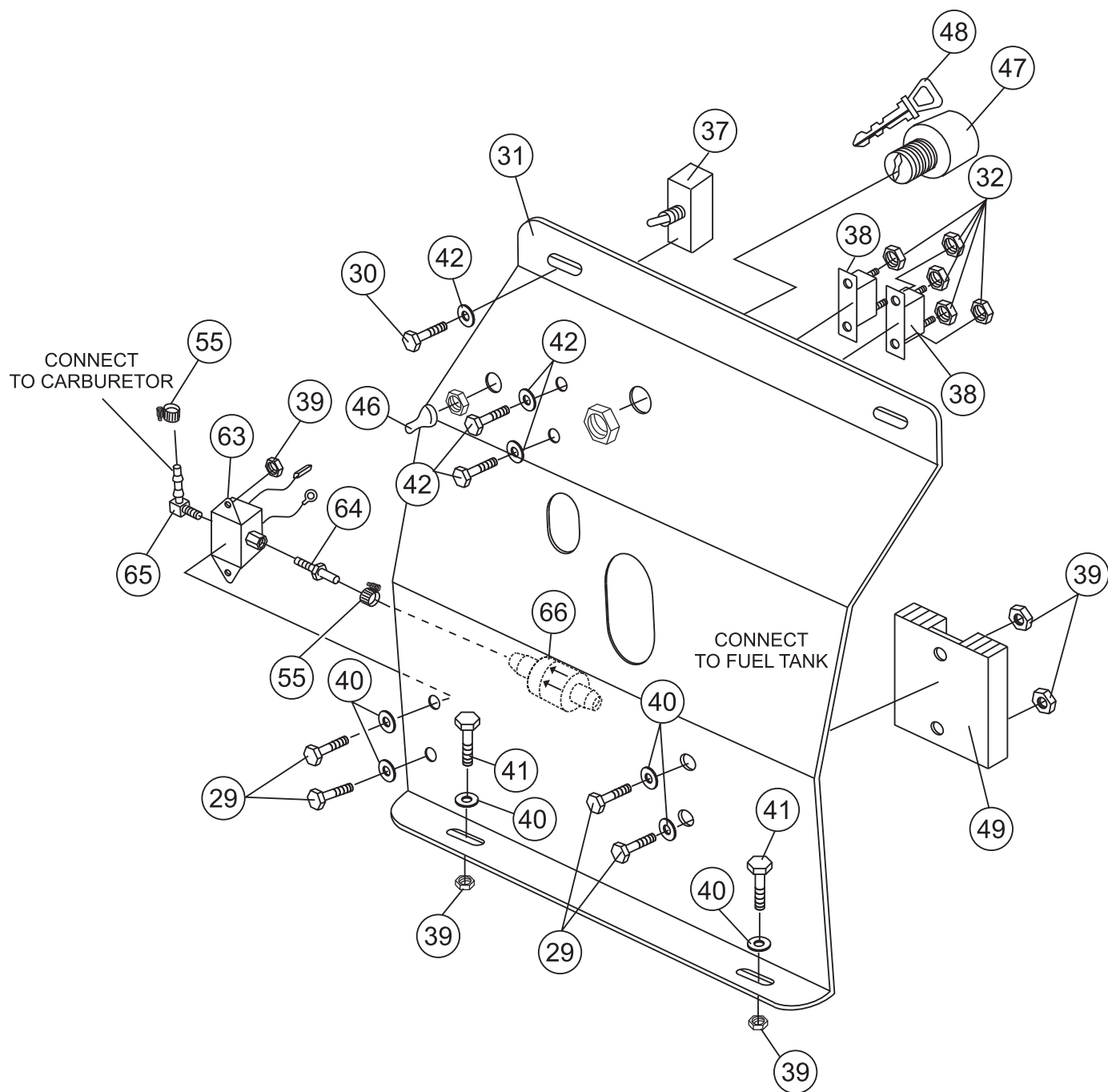
JTO RIDE-ON POWER TROWEL— FRONT PANEL ASSY. (VANGUARD)

FRONT PANEL ASSY. (VANGUARD)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
29	0131 A	HHCS 1/4- 20 X 3/4"	2	
30	5065 B	RHMS 10- 32 X 1/2"	4	
31	11957	CONTROL PANEL	1	REPLACES P/N 2590
32	10019	LOCK NUT 10- 32	4	
37	4682	TOGGLE SWITCH	1	OPTIONAL
38	2673	CIRCUIT BREAKER	1	
39	10024	LOCK NUT 1/4- 20	4	
40	0948	FLAT WASHER 1/4"	4	
41	4514	HHCS 1/4- 20 X 5/8"	2	
42	2203	FLAT WASHER #10	2	
44	0949	HEX NUT 1/4"	2	
46	8381	TOGGLE BOOT	1	
47	807829	VOLTAGE REGULATOR	1	
48	10958	IGNITION SWITCH	1	
49	11078	IGNITION KEY	1	

JTO RIDE-ON POWER TROWEL— FRONT PANEL ASSY. (HONDA)

FRONT PANEL ASSY. (HONDA)



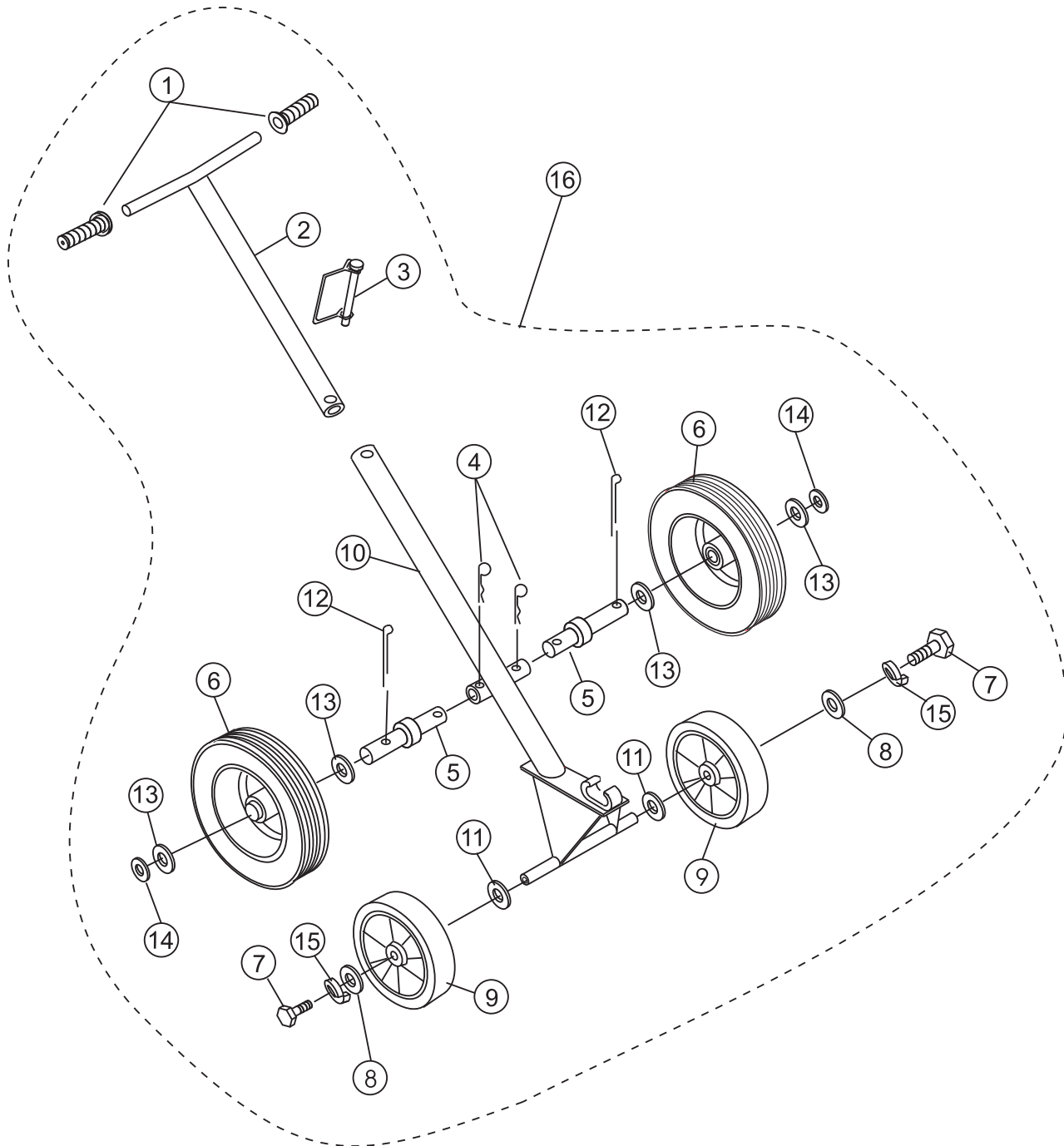
JTO RIDE-ON POWER TROWEL— FRONT PANEL ASSY. (HONDA)

FRONT PANEL ASSY. (HONDA)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
29	0730	HHCS 1/4-20 X1"	2	
30	5065 B	RHMS 10-32 X 1/2"	6	
31	20339	CONTROL PANEL	1	REPLACES P/N 10927
32	10019	LOCK NUT 10- 32	8	
37	4682	LIGHT SWITCH	1	OPTIONAL
38	2673	CIRCUIT BREAKER	2	
39	10024	LOCK NUT 1/4- 20	10	
40	0948	FLAT WASHER 1/4"	8	
41	4514	HHCS 1/4- 20 X 5/8"	2	
42	2203	FLAT WASHER #10	8	
46	8381	TOGGLE BOOT	1	
47	10958	IGNITION SWITCH	1	
48	11078	IGNITION KEY	1	
49	31620Z65003	RECTIFIER	1	
55	19473	HOSE CLAMP	4	
63	11099	FUEL PUMP	1	
64	11100	STRAIGHT FITTING	1	
65	11101	90 DEGREE FITTING	1	
66	2346	FUEL FILTER	1	

JTO RIDE-ON POWER TROWEL— E-Z MOVER & LIFT HANDLE ASSY.

E-Z MOVER (EMR2) AND LIFT HANDLE



JTO RIDE-ON POWER TROWEL— E-Z MOVER & LIFT HANDLE ASSY.

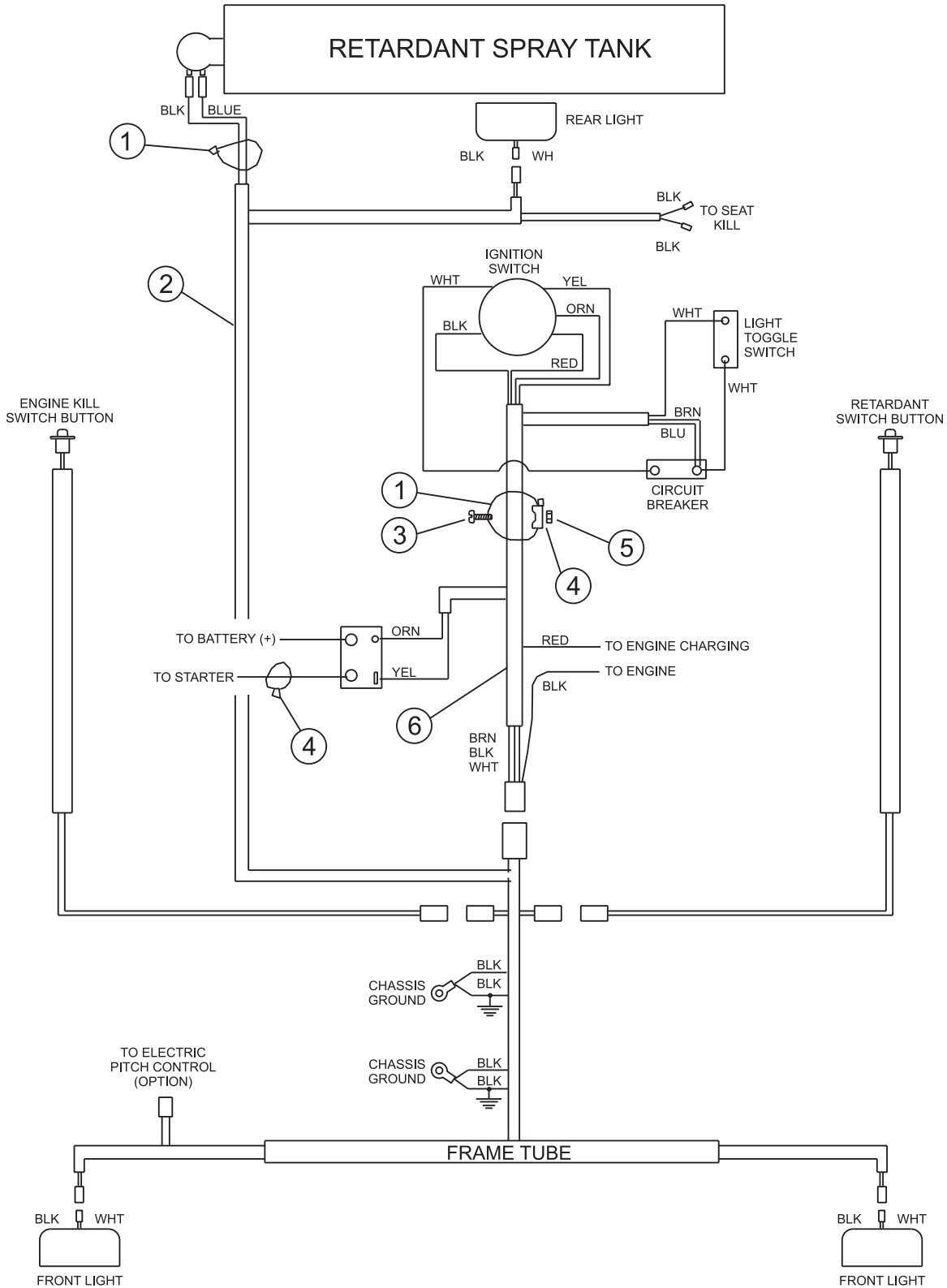
E-Z MOVER (EMR2) AND LIFT HANDLE

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	0189	HAND GRIP	2	
2	2336	UPPER HANDLE	1	
3	1869	SNAP PIN	1	
4	7170	CLIP	2	
5	11684	DOLLY AXLE	2	
6	10440	WHEEL & TIRE	2	
7	0655	SCREW, HHCS 5/16-18 x 3/4"	2	
8	0300 B	FLAT WASHER 5/16"	2	
9	2364	WHEEL	2	
10	10445	FRAME	1	
11	4684	FLAT WASHER 5/8"	2	
12	0183	COTTER PIN	4	
13	10446	FLAT WASHER 3/4"	8	
14	8151	FLAT WASHER 3/4" SAE	8	
15	0161 C	LOCK WASHER 5/16"	2	
16	EMR-1	EZ-MOVER ASSEMBLY	1	CONTACT UNIT SALES DEPT.

JTO RIDE-ON POWER TROWEL— WIRING DIAGRAM ASSY. (VANGUARD)

WIRING DIAGRAM ASSY.

VANGUARD



JTO RIDE-ON POWER TROWEL— WIRING DIAGRAM ASSY. (VANGUARD)

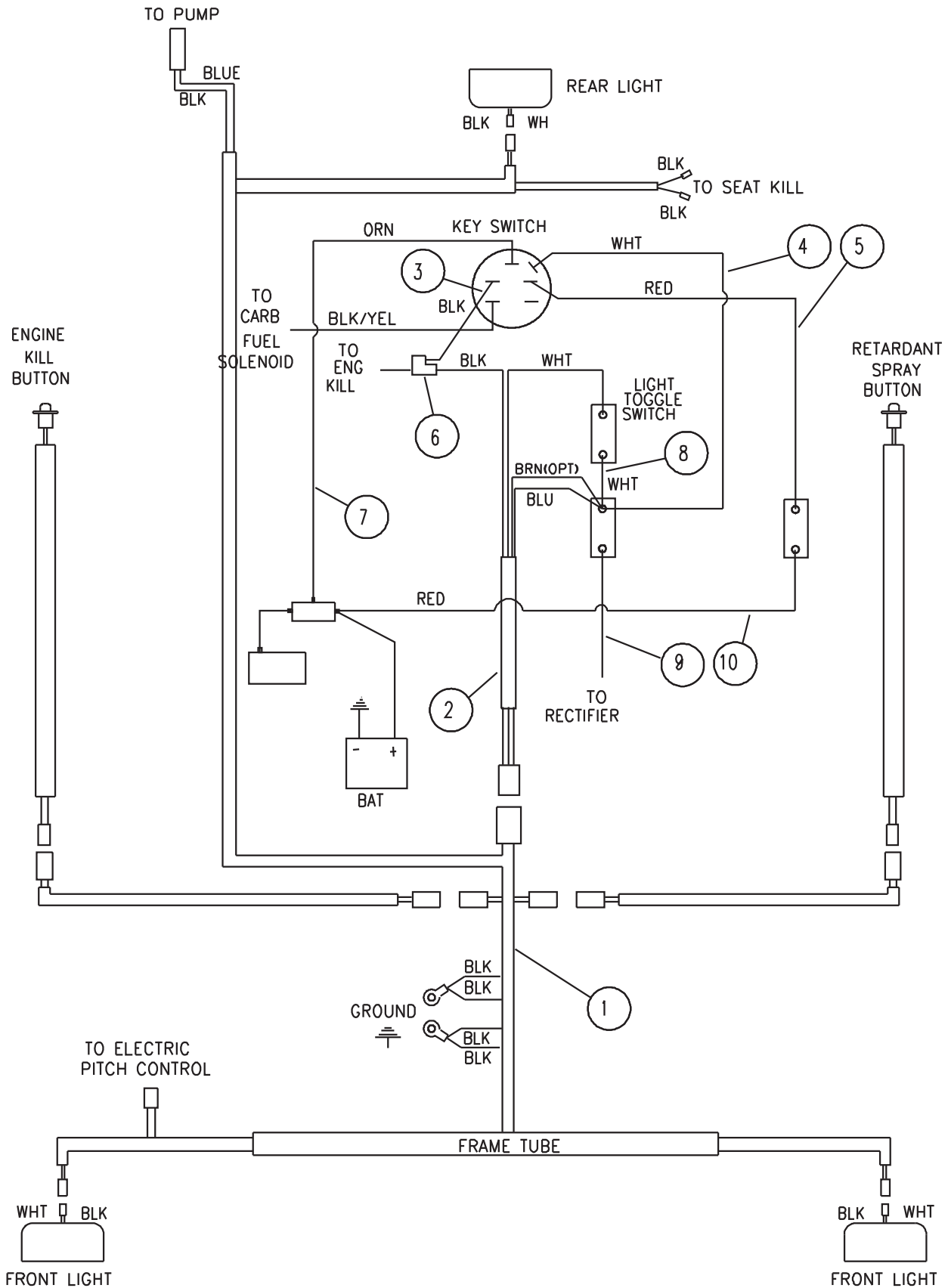
WIRING DIAGRAM ASSY.

VANGUARD

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	1662	WIRE TIES	14	
2	2566	WIRING HARNESS ASSY.	1	S/N 29574 AND BELOW
2	2775	WIRING HARNESS ASSY.	1	S/N 29575 ~
3	5065 B	RHMS 10- 32 X 1"	2	
4	2548	WIRE CLAMP	2	
5	10019	HEX NUT 10- 32	2	
6	2776	ENGINE HARNESS	1	VANGUARD

JTO RIDE-ON POWER TROWEL—WIRING DIAGRAM ASSY. (HONDA)

HONDA WIRING DIAGRAM ASSY.



JTO RIDE-ON POWER TROWEL—WIRING DIAGRAM ASSY. (HONDA)

HONDA WIRING DIAGRAM ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	2775	MAIN WIRING HARNESS ASSY.	1	
2	2945	ENGINE HARNESS	1	
3	10985	KILL WIRE	1	
4	10961	CHARGING JUMPER WIRE	1	
5	10982	BATTERY JUMPER WIRE	1	
6	1475	WIRE SPLICE	1	
7	10983	SOLENOID WIRE	1	
8	2796	LIGHT SWITCH WIRE	1	
9	10979	CHARGE WIRE	1	
10	10940	BATTERY HOT WIRE	1	

TERMS AND CONDITIONS OF SALE — PARTS

PAYMENT TERMS

Terms of payment for parts are net 30 days.

FREIGHT POLICY

All parts orders will be shipped collect or prepaid with the charges added to the invoice. All shipments are F.O.B. point of origin. Multiquip's responsibility ceases when a signed manifest has been obtained from the carrier, and any claim for shortage or damage must be settled between the consignee and the carrier.

MINIMUM ORDER

The minimum charge for orders from Multiquip is \$15.00 net. Customers will be asked for instructions regarding handling of orders not meeting this requirement.

RETURNED GOODS POLICY

Return shipments will be accepted and credit will be allowed, subject to the following provisions:

1. A Returned Material Authorization must be approved by Multiquip prior to shipment.
2. To obtain a Return Material Authorization, a list must be provided to Multiquip Parts Sales that defines item numbers, quantities, and descriptions of the items to be returned.
 - a. The parts numbers and descriptions must match the current parts price list.
 - b. The list must be typed or computer generated.
 - c. The list must state the reason(s) for the return.
 - d. The list must reference the sales order(s) or invoice(s) under which the items were originally purchased.
 - e. The list must include the name and phone number of the person requesting the RMA.
3. A copy of the Return Material Authorization must accompany the return shipment.
4. Freight is at the sender's expense. All parts must be returned freight prepaid to Multiquip's designated receiving point.

5. Parts must be in new and resalable condition, in the original Multiquip package (if any), and with Multiquip part numbers clearly marked.
6. The following items are not returnable:
 - a. Obsolete parts. (If an item is in the price book and shows as being replaced by another item, it is obsolete.)
 - b. Any parts with a limited shelf life (such as gaskets, seals, "O" rings, and other rubber parts) that were purchased more than six months prior to the return date.
 - c. Any line item with an extended dealer net price of less than \$5.00.
 - d. Special order items.
 - e. Electrical components.
 - f. Paint, chemicals, and lubricants.
 - g. Decals and paper products.
 - h. Items purchased in kits.
7. The sender will be notified of any material received that is not acceptable.
8. Such material will be held for five working days from notification, pending instructions. If a reply is not received within five days, the material will be returned to the sender at his expense.
9. Credit on returned parts will be issued at dealer net price at time of the original purchase, less a 15% restocking charge.
10. In cases where an item is accepted, for which the original purchase document can not be determined, the price will be based on the list price that was effective twelve months prior to the RMA date.
11. Credit issued will be applied to future purchases only.

PRICING AND REBATES

Prices are subject to change without prior notice. Price changes are effective on a specific date and all orders received on or after that date will be billed at the revised price. Rebates for price declines and added charges for price increases will not be made for stock on hand at the time of any price change.

Multiquip reserves the right to quote and sell direct to Government agencies, and to Original Equipment Manufacturer accounts who use our products as integral parts of their own products.

SPECIAL EXPEDITING SERVICE

A \$35.00 surcharge will be added to the invoice for special handling including bus shipments, insured parcel post or in cases where Multiquip must personally deliver the parts to the carrier.

LIMITATIONS OF SELLER'S LIABILITY

Multiquip shall not be liable hereunder for damages in excess of the purchase price of the item with respect to which damages are claimed, and in no event shall Multiquip be liable for loss of profit or good will or for any other special, consequential or incidental damages.

LIMITATION OF WARRANTIES

No warranties, express or implied, are made in connection with the sale of parts or trade accessories nor as to any engine not manufactured by Multiquip. Such warranties made in connection with the sale of new, complete units are made exclusively by a statement of warranty packaged with such units, and Multiquip neither assumes nor authorizes any person to assume for it any other obligation or liability whatever in connection with the sale of its products. Apart from such written statement of warranty, there are no warranties, express, implied or statutory, which extend beyond the description of the products on the face hereof.

Effective: February 22, 2006

OPERATION AND PARTS MANUAL

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL
NUMBER ON-HAND WHEN CALLING

UNITED STATES

Multiquip Corporate Office

18910 Wilmington Ave. Tel. (800) 421-1244
Carson, CA 90746 Fax (310) 537-3927
Contact: mq@multiquip.com

Service Department

800-421-1244 Fax: 310-537-4259
310-537-3700

Technical Assistance

800-478-1244 Fax: 310-943-2238

MQ Parts Department

800-427-1244 Fax: 800-672-7877
310-537-3700 Fax: 310-637-3284

Warranty Department

800-421-1244 Fax: 310-943-2249
310-537-3700

CANADA

Multiquip

4110 Industriel Boul. Tel: (450) 625-2244
Laval, Quebec, Canada H7L 6V3 Tel: (877) 963-4411
Contact: jmartin@multiquip.com Fax: (450) 625-8664

UNITED KINGDOM

Multiquip (UK) Limited Head Office

Unit 2, Northpoint Industrial Estate, Tel: 0161 339 2223
Globe Lane, Fax: 0161 339 3226
Dukinfield, Cheshire SK16 4UJ
Contact: sales@multiquip.co.uk

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This manual MUST accompany the equipment at all times. This manual is considered a permanent part of the equipment and should remain with the unit if resold.

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