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Operator's Manual

GR-1600 Patchman Vibratory Roller

Engine Specs

Standard

Honda GX-100

Four stroke, gasoline, air cooled

Overhead cam, slant cylinder

Dual element heavy-duty air cleaner

3.0 Horsepower / 2.2 Kilowatts

3800 RPM

Rewind starter

Low oil alert system

Transistorized magneto ignition

Specifications

| <u>Specification</u> | <u>English</u> | <u>Metric</u> |
|-----------------------------|------------------------|-----------------------------|
| Weight | 98 lbs | 45 kg |
| Centrifugal Force | 1000 lbs | 4.45 kN |
| Vibration Frequency | 6500 VPM | 87 hz |
| Compaction Depth | Up to 8" | Up to 20 cm |
| Overall Width | 17" | 43.1 cm |
| Overall Length | 41" (including handle) | 104.1 cm (including handle) |
| Overall Height | 31" (including handle) | 78.7 cm (including handle) |
| Water Tank Capacity | 5 Quarts | 4.7 Liters |

Introduction

The model GR-1600 Patchman is a gasoline operated vibratory roller with an 8" diameter, 12" long drum. It comes equipped with the standard Honda or optional Briggs and Stratton engine, and a complete sprinkler system. Vibco's GR-1600 is an inexpensive solution for patching potholes, repairing asphalt ruptures and adding asphalt around manholes, utility poles, drainage covers, etc. The "one man" vibratory Patchman rollers pack holes densely and tightly with a high psi compaction which eliminates costly repeat repairs and is to be used on high performance cold patch and hot patch.

Serial Number Location

Engine

When ordering replacement parts from the engine distributor, state the model, specification and serial number. Model and spec. numbers for both engines are located on the flywheel cover. Honda serial numbers are found just below the air cleaner, behind the engine governor and the Briggs and Stratton serial numbers are located on the pull start cover next to the cylinder head.

Compactor

The Vibco model and serial numbers are mounted on the top of the engine plate, below the water tank. Furnish both numbers when corresponding with your authorized dealer.

Maintenance

Keep your machine clean!

Every 10 hours or daily

1. Periodically check bolts and nuts for tightness, especially in the period following initial operation.
2. Check engine oil daily.
3. Clear air filter periodically

Every 50 hours or weekly

1. Check belt tension.
2. Check and tighten all nuts and bolts.
3. If water flow through the sprinkler pipe on asphalt units fails, clear pipe using carburetor cleaner.

Every 100 hours or 6 months

4. Change engine oil.
5. Check spark plug.

Operating Notes

- ◆ Clean out the hole. Remove loose stones and dust from the side of the hole. Hot or cold mix asphalt will adhere better to a clean surface, so good preparation is very important. Shovel the patch material into the hole until about 1" above the existing asphalt surface, this will allow for compaction.
- ◆ Before starting the machine, READ the engine-operating manual CAREFULLY.
- ◆ Remember to check the engine oil.
- ◆ Make sure the belt guard is securely bolted in place.
- ◆ Start the engine and allow ample time at idle.
- ◆ After warm-up, with the unit still at idle, approach the pothole with roughly ½ of the roller on the patching material and the other ½ (which should be the side with the engine) on the hard asphalt.
- ◆ With the engine still idle "pinch" the edges of the pothole.
- ◆ After the perimeter of the pothole is "pinched," increase the RPM slightly by pulling the lever toward you and begin to vibrate slowly.
- ◆ Passes should start around the perimeter of the pothole and move toward the center in an inward spiral. Compaction should be performed by making several passes, gradually increasing the speed of the engine
- ◆ ***Before*** making any adjustments, disconnect the spark plug cable to prevent unintentional starting.
- ◆ Make sure that the belt guard is securely bolted in place.
- ◆ REMEMBER a careful operator is always the best insurance against accidents.

Vibco, Inc. reserves the right to change and improve any parts or specifications without notice, and without incurring any obligation relating to such change.

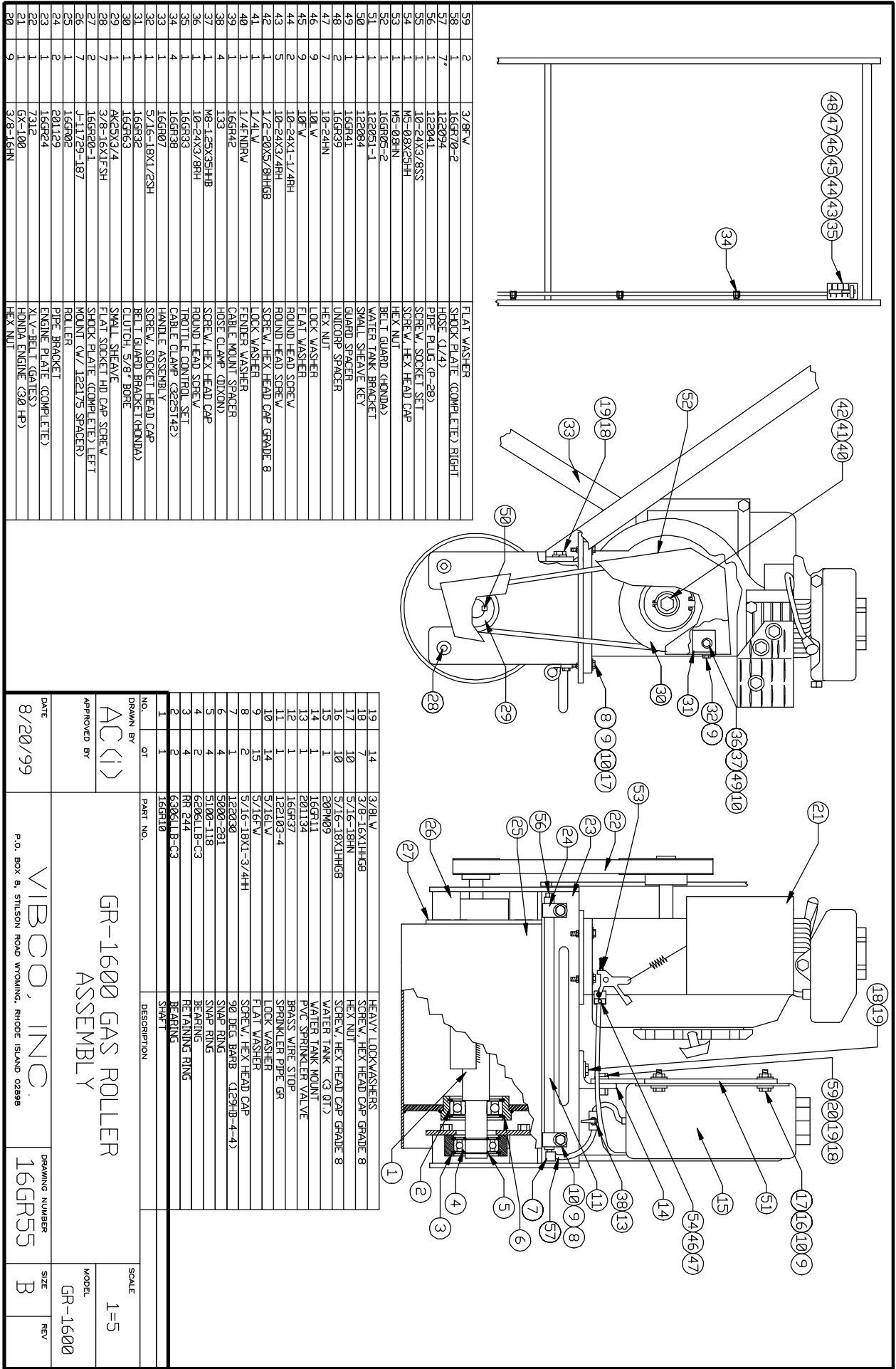
Service Instructions

Replacement of shock absorbers

The GR-1600 has 7 shock absorbers holding the drum to the frame. These shocks will eliminate 85-95% of the vibration from traveling to the handle or engine. In order to replace them; first remove the belt guard and v-belt. Then loosen and remove the bolts holding the frame to the shocks and remove the frame. Finally remove shocks by turning them counterclockwise.

Sprinkler system

The water sprinkler system consists of a galvanized sprinkler pipe. After long use the holes in this pipe may corrode or become plugged. Clean by blowing air through the sprinkler pipe (not the water tank) or use carburetor cleaner.



| | | | |
|----|---|----------------|-------------------------------|
| 59 | 2 | 3/8" V | FLAT WASHER |
| 58 | 1 | 16GR20-2 | SHOCK PLATE (COMPLETED) RIGHT |
| 57 | 7 | 122094 | HOSE (1/2") |
| 56 | 1 | 122041 | PIPE PLUG (P-28) |
| 55 | 1 | 10-24X3/8SS | SCREW, SOCKET SET |
| 54 | 1 | M5-08X25HH | SCREW, HEX HEAD CAP |
| 53 | 1 | M5-08HN | HEX NUT |
| 52 | 1 | 16GR05-2 | BELT GUARD (HONDA) |
| 51 | 1 | 122051-1 | WATER TANK BRACKET |
| 50 | 1 | 122084 | SMALL SHEAVE KEY |
| 49 | 1 | 16GR41 | GUARD SPACER |
| 48 | 2 | 16GR39 | UNICORP SPACER |
| 47 | 7 | 10-24HN | HEX NUT |
| 46 | 9 | 10 V | LOCK WASHER |
| 45 | 9 | 10S V | FLAT WASHER |
| 44 | 2 | 10-24X1-1/4RH | ROUND HEAD SCREW |
| 43 | 5 | 10-24X3/4RH | ROUND HEAD SCREW |
| 42 | 1 | 1/2-20X5/8HH68 | SCREW, HEX HEAD CAP GRADE 8 |
| 41 | 1 | 1/4" FN RV | LOCK WASHER |
| 40 | 1 | 16GR42 | FENDER WASHER |
| 39 | 1 | 133 | CABLE MOUNT SPACER |
| 38 | 4 | M8-1.25X35H4B | HOSE CLAMP (OXFORD) |
| 37 | 1 | M8-1.25X35H4B | SCREW, HEX HEAD CAP |
| 36 | 1 | 10-24X3/8RH | ROUND HEAD SCREW |
| 35 | 1 | 16GR33 | ROTTLE CONTROL SET |
| 34 | 4 | 16GR36 | CABLE CLAMP (G225142) |
| 33 | 1 | 16GR07 | HANDLE ASSEMBLY |
| 32 | 1 | S/15-18X1/2SH | SCREW, SOCKET HEAD CAP |
| 31 | 1 | 16GR32 | BELT GUARD BRACKET (HONDA) |
| 30 | 1 | 16GR63 | CLUTCH, 5/8" BORE |
| 29 | 2 | AK25X3/4 | SMALL SHEAVE |
| 28 | 7 | 3/8-16X1FSH | FLAT SOCKET HD CAP SCREW |
| 27 | 2 | 16GR20-1 | SHOCK PLATE (COMPLETED) LEFT |
| 26 | 7 | J-11729-187 | MOUNT (V/ 122175 SPACER) |
| 25 | 1 | 16GR02 | ROLLER |
| 24 | 2 | 201129 | PIPE BRACKET |
| 23 | 1 | 16GR24 | ENGINE PLATE (COMPLETED) |
| 22 | 1 | 7312 | X-V-BELT (GATES) |
| 21 | 1 | GX-100 | HONDA ENGINE (310 HP) |
| 20 | 9 | 3/8-16HN | HEX NUT |

| | | | |
|----|----|-----------------|-----------------------------|
| 19 | 14 | 3/8" V | HEAVY LOCKWASHERS |
| 18 | 7 | 3/8-16X1HH68 | SCREW, HEX HEAD CAP GRADE 8 |
| 17 | 10 | 5/16-18HN | HEX NUT |
| 16 | 10 | 5/16-18X1HH68 | SCREW, HEX HEAD CAP GRADE 8 |
| 15 | 1 | 20PM09 | WATER TANK MOUNT |
| 14 | 1 | 16GR11 | PVC SPRINKLER VALVE |
| 13 | 1 | 201134 | WATER TANK MOUNT |
| 12 | 1 | 16GR37 | BRASS WIRE STOP |
| 11 | 1 | 122103-4 | SPRINKLER PIPE GR |
| 10 | 14 | 5/16" V | LOCK WASHER |
| 9 | 15 | 5/16-18X1-3/4HH | FLAT WASHER |
| 8 | 2 | 122020 | SCREW, HEX HEAD CAP |
| 7 | 1 | 5900-281 | 90 DEG BARB (1294B-4-4) |
| 6 | 4 | S100-281 | SNAP RING |
| 5 | 4 | 2290-130 | SNAP RING |
| 4 | 4 | 2290-130-C3 | BEARING |
| 3 | 4 | RN 214 | BEARING |
| 2 | 2 | 630611B-C3 | BEARING RING |
| 1 | 1 | 15GR10 | SHAFT |

DRAWN BY: ACC(I)
 APPROVED BY: _____
 DATE: 8/20/99
 P.O. BOX 8, STILSON ROAD WYOMING, RHODE ISLAND 02898
VIBCO, INC.
 GR-1600 GAS ROLLER ASSEMBLY
 DRAWING NUMBER: 16GR55
 SCALE: 1=5
 MODEL: GR-1600
 SIZE: B
 REV:

VIBCO, Inc.
GR-1600
Pothole Packer

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Introduction

General

Model GR-1600 is a gasoline operated vibratory roller with an 8" diameter drum and 12" long. For low cost, a 2-1/2 HP Honda engine is standard. A 3-1/2 HP Briggs and Stratton engine is also available. The unit offers a compaction depth up to 8" with a compaction force of 1,600 lbs. at 6500 vibrations per minute. The sprinkler system with a water tank is standard. An "on-off" valve controls the water flow, of the system.

Simple operative handle instantly turns vibration on and off. *Weight 98 lbs.*

VIBCO's Vibratory Pot Hole Packers are an inexpensive solution for patching potholes, repairing asphalt ruptures, and adding asphalt around manholes, utility poles, drainage covers, etc. Vibratory Patch-It Rollers are one of the best, most innovative pothole repair tools to hit the industry in over a decade. It is to be used on high performance cold patch, as well as hot patch. The "one-man" Vibratory Patch-It rollers pack holes densely and tightly with a high PSI compaction which eliminates costly repeat repairs.

Using GR-1600™ Pothole Packer

The Installation of Hot or Cold patching material in concrete or bituminous concrete, using the VIBCO Model GR-1600 Pothole Packer.

POTHOLE REPAIR

Step 1 Clean out the hole.

Remove loose stones and dust from the side of the hole. Hot or cold mix asphalt, will adhere better to strong clean asphalt, so the better the preparation the better the result. Shovel patch material directly from the truck or bag directly into the hole, about 1" above the existing road surface. This will allow for compaction.

Step 2 Compaction.

Using the GR-1600 is quite simple.

- 1.) Start the engine and allow it to idle.
- 2.) With the GR-1600 engine at idle approach the pothole with about 1/2 of the roller on the patching material and the other half on the hard asphalt. The engine should be positioned so it is over the hard asphalt. Do not increase the rpm of the GR-1600.
- 3.) "Pinch" the edges of the pothole.
- 4.) After the perimeter of the patching in the pothole is pinched, increase the rpm of the engine slightly to engage the vibration element and begin to vibrate slightly.
- 5.) Passes should start around the perimeter of the pothole and move toward the center in an inward spiral. Compaction operation shall be performed by making several passes with the GR-1600. Gradually increase the speed of the engine as the patch is compacted. Full rpm should take place for final complete compaction.

Service Instructions of the GR-1600™ Pothole Packer

1. Adjustment Instructions for Belt Drive Tensioning System

Engagement of the vibrational drive system is controlled via the handle mounted cable lever controlling the centrifugal clutch. Clutch engages and disengages at about 1700 RPM.

2. Replacement of V-Belt 7312XL

Remove belt guard. Slide out belt. Reinstall new belt.

3. Replacement of Shock Absorbers

The GR-1600 has 7 shock absorbers holding the drum to the frame. The shocks will eliminate 85-95% of the vibration from traveling to the handle or the engine. To remove: Remove V-belt cover and V-belt, loosen bolts holding the frame to the shocks, lift off the frame and replace the shock.

4. The bearings in the drum holding the eccentric element are prelubricated for life. The pillow block bearings holding the frame to the drum are also prelubricated.

5. The water sprinkler system consists of a galvanized sprinkler pipe. After long use, the sprinkler pipe holes might corrode or be plugged. Clean by attaching an air pressure hose to the sprinkler hose (not to the container) or use a pin to clean and clear sprinkler holes.

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MODEL GR-1600

VIBCO's Model GR-1600 is a gasoline operated vibratory roller with a 8" diameter drum, 12" long. The gasoline engine can either be a 3-1/2 HP Briggs & Stratton, 32-3700 RPM or a Honda, 33-3600 RPM.

Compaction depth is up to 8" with a compaction force of 1600 lbs at 6500 RPM. The GR-1600 is equipped with a sprinkler system as standard with an off and on sprinkler valve. Operation weight is 98 lbs and shipping weight is 115 lbs. The GR-1600 is self-propelled in forward motion.

How to Operate:

Check oil in engine--start engine--follow the engine manufacturers starting instructions. Roll the unit up to the pothole or to the place you want to use the roller for compaction. Pull lever to engage clutch to start vibration. The vibratory action will start the drum spinning and self-propel the unit forward. By it's own forward vibratory motion, let the unit compact the asphalt (hot or cold) in the pothole. When the unit has passed over the pothole, push the lever and the vibration will stop. Usually one pass over the patch is all that is necessary.

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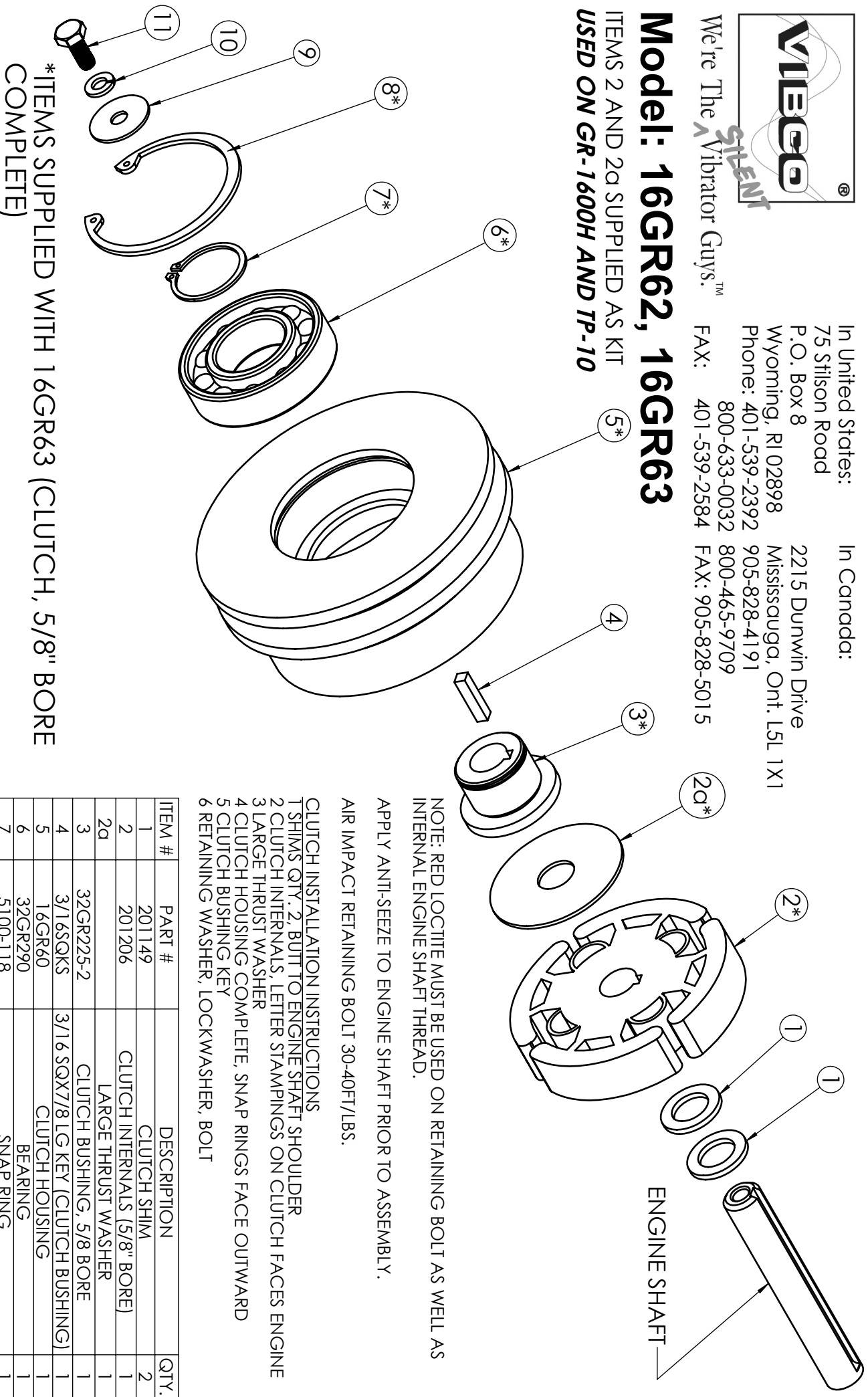
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Model: 16GR62, 16GR63

ITEMS 2 AND 2a SUPPLIED AS KIT
USED ON GR-1600H AND TP-10



*ITEMS SUPPLIED WITH 16GR63 (CLUTCH, 5/8" BORE COMPLETE)

*ITEMS SUPPLIED WITH 16GR62 (CLUTCH HOUSING ASSEMBLY) **MINUS 2 AND 2a**

NOTE: RED LOCTITE MUST BE USED ON RETAINING BOLT AS WELL AS INTERNAL ENGINE SHAFT THREAD.
APPLY ANTI-SEEZE TO ENGINE SHAFT PRIOR TO ASSEMBLY.
AIR IMPACT RETAINING BOLT 30-40FT/LBS.
CLUTCH INSTALLATION INSTRUCTIONS
T SHIMS QTY. 2, BUT TO ENGINE SHAFT SHOULDER
2 CLUTCH INTERNALS, LETTER STAMPINGS ON CLUTCH FACES ENGINE
3 LARGE THRUST WASHER
4 CLUTCH HOUSING COMPLETE, SNAP RINGS FACE OUTWARD
5 CLUTCH BUSHING KEY
6 RETAINING WASHER, LOCKWASHER, BOLT

| ITEM # | PART # | DESCRIPTION | QTY. |
|--------|----------------|-------------------------------------|------|
| 1 | 201149 | CLUTCH SHIM | 2 |
| 2 | 201206 | CLUTCH INTERNALS (5/8" BORE) | 1 |
| 2a | | LARGE THRUST WASHER | 1 |
| 3 | 32GR225-2 | CLUTCH BUSHING, 5/8 BORE | 1 |
| 4 | 3/16SQS | 3/16 SQX7/8 LG KEY (CLUTCH BUSHING) | 1 |
| 5 | 16GR60 | CLUTCH HOUSING | 1 |
| 6 | 32GR290 | BEARING | 1 |
| 7 | 5100-118 | SNAP RING | 1 |
| 8 | HO-237 | RETAINING RING | 1 |
| 9 | 1/4X1FNDRW | FENDER WASHER | 1 |
| 10 | 1/4LWG8 | LOCKWASHER GRADE 8 | 1 |
| 11 | 1/4-28X5/8HHG8 | SCREW, HEX HEAD GRADE 8 | 1 |