# G14 Engine

# Safety, Operation, Maintenance & Parts Manual

LT15

rev. A2.06

**Safety is our #1 concern!** Read and understand all safety information and instructions before operating, setting up or maintaining this machine.

Form #700

This is the original language for the manual.

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# SECTION 1 SAFETY & GENERAL INFORMATION

**IMPORTANT!** This manual is provided as a supplement to the equipment manufacturer's manuals. This manual takes into account the specific use of engines on the Wood-Mizer sawmill. Only safety, maintenance, and operating procedures that are not provided by the manufacturer are supplied in this manual. Refer to the manufacturer's manual before attempting to operate this equipment.

This symbol calls your attention to instructions concerning your personal safety. Be sure to observe and follow these instructions. This symbol accompanies a signal word. The word **DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. **WARNING** suggests a potentially hazardous situation which, if not avoided, could result in death or serious injury. **CAUTION** refers to potentially hazardous situations which, if not avoided, may result in minor or moderate injury to persons or equipment. Read all safety instructions before operating this equipment and observe all safety warnings!

### 1.1 Refueling



**WARNING!** Store gasoline away from sawdust and other flammable materials. Failure to do so may result in serious injury.

#### 1.2 Engine Operation

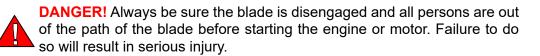


**DANGER!** Operate your engine/machine only in well ventilated areas. The exhaust gases of your engine can cause nausea, delirium and potentially death unless adequate ventilation is present.

**DANGER!** Never operate an engine with a fuel or oil leak. The leaking fuel or oil could potentially come in contact with hot surfaces and ignite into flames.

**DANGER!** Engine components can become very hot during operation. Avoid contact with any part of a hot engine. The exhaust components of your engine are especially hot during and following operation. Contact with hot engine components can cause serious burns. Therefore, never touch or perform service functions on a hot engine. Allow the engine to cool sufficiently before beginning any service function.

**DANGER!** Always be aware of and take proper protective measures against rotating shafts, pulleys, fans, etc. Always stay a safe distance from rotating members and make sure that loose clothing or long hair does not engage rotating members resulting in possible injury.



**WARNING!** Do not for any reason adjust the engine drive belts or belt support bracket with the engine running. Doing so may result in serious injury.

**WARNING!** Do not operate engine without proper and operational spark arrester/muffler. Sparks emitted from the engine exhaust could ignite surrounding materials, causing serious injury or death.

**WARNING!** Remove the blade before performing any engine service. Failure to do so may result in serious injury.

**WARNING!** Always wear proper and necessary safety equipment when performing service functions. Proper safety equipment includes eye protection, breathing protection, hand protection and foot protection.



**IMPORTANT!** Always dispose of coolant, oil, fuel, oil filters and fuel filters in a responsible manner and in comformance with local, state and federal regulations.



**WARNING!** Always disconnect the machine battery cables before performing service functions.



**DANGER!** Batteries expel explosive gases. Keep sparks, flames, burning cigarettes, or other ignition sources away at all times.



**IMPORTANT!** Carburetor icing:

NOTE: Running engine with cover positioned for cold weather operation in normal conditions can damage engine.

Carburetor icing can take place when certain combinations of temperature and humidity exist. Result of carburetor icing is rough running at idle or low speed as well as black or white smoke. To reduce likelihood of carburetor icing, air cleaner cover can be rotated to draw warmer air from muffler side. For cold weather operation, position air cleaner cover with snowflake decal out.

For normal operation, position air cleaner cover with sun decal out.<sup>1</sup>

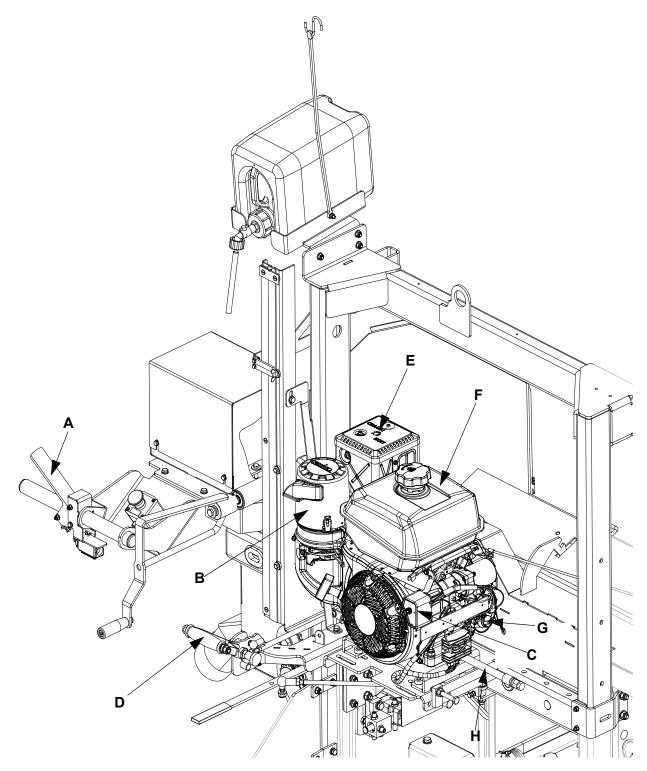
<sup>1.</sup>Retrieved from the equipment manufacturer's manual.



### **1.3 General Information**

**IMPORTANT!** Read the engine manual for instructions and safety precautions before operating the engine.

**See Figure 1-1.** The main components of the G14 engine are shown below.

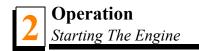




- A Safety Handle,
- B Air Filter,
- C Ignition Switch with Key,
- D Clutch/Brake Handle,
- E Muffler,
- F Fuel Tank,
- G Oil Level Stick,
- H Oil Drain Hose.

#### **1.4 Engine Specifications**

|  | G14 Kohler  |
|--|---|
| Туре   | Air cooled, 4-cycle, gasoline,<br>OHV, Aluminum Block |
| Number of cylinders                                | 1   |
| Bore and stroke mm                                 | 89 x 69   |
| Total displacement cm <sup>3</sup>                 | 429   |
| Power H.P.(SAEJ 1349) [HP/min <sup>-1</sup> (rpm)] | 14/3600   |
| Peak Torque (Nm)                                   | 22,7/3600   |
| Dry Weight kg [ lbs. ]                             | 35  |
| Oil Capacity (w/filter)                            | 1.3L  |



# **SECTION 2 OPERATION**

## 2.1 Starting The Engine

#### **Engine Start**



**WARNING!** Do not start the engine when the clutch/brake lever is in the ENGAGED (forward) position. Always be sure that the blade is disengaged and all persons are away from the sawmill before starting the engine.

1. Set the clutch/brake lever in the DISENGAGE (back) position.

#### See Figure 2-1.

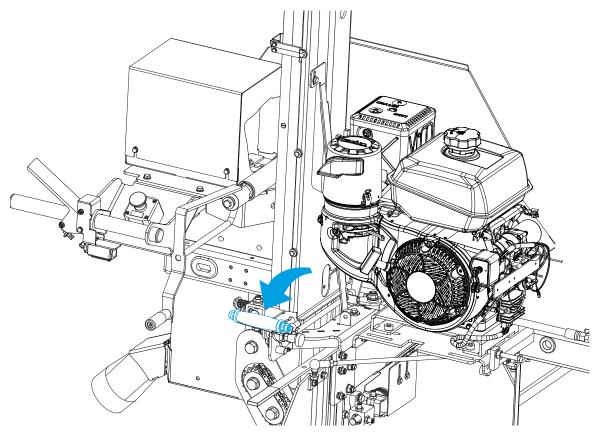


FIG. 2-1

2. Open the fuel supply valve and turn on the ignition by moving the ignition/fuel lever to the "ON" position.

#### See Figure 2-2.

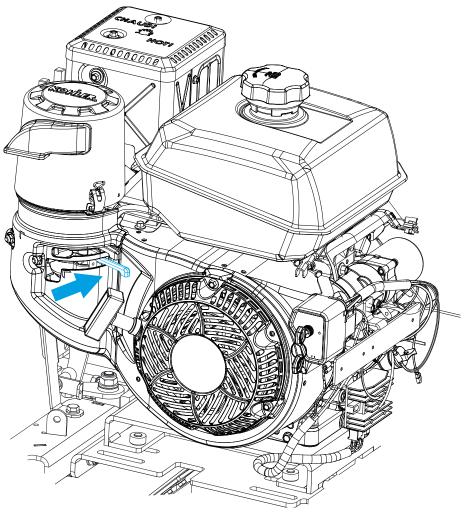


FIG. 2-2

**3.** Set the choke lever (A) and the throttle lever (B) as follows:

**Cold engine:** Close the engine choke by moving the choke lever to the "ON" position. Set the throttle lever midway between the SLOW and FAST positions.

**Warm engine:** Set the throttle lever midway between the SLOW and FAST positions. A warm engine does not usually require turning the choke on.



#### See Figure 2-3.

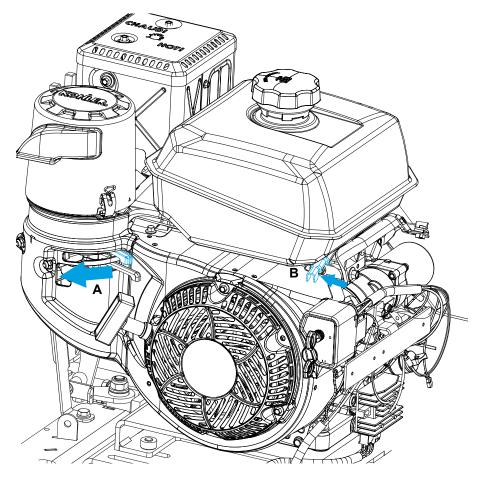


FIG. 2-3

**4.** Turn the key to the START position.

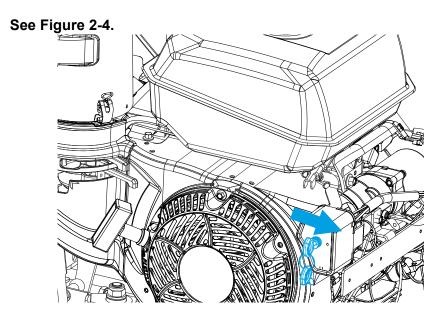


FIG. 2-4



5. When the engine starts, slowly open the choke all the way by moving the choke lever to the "OFF" position.

#### See Figure 2-5.

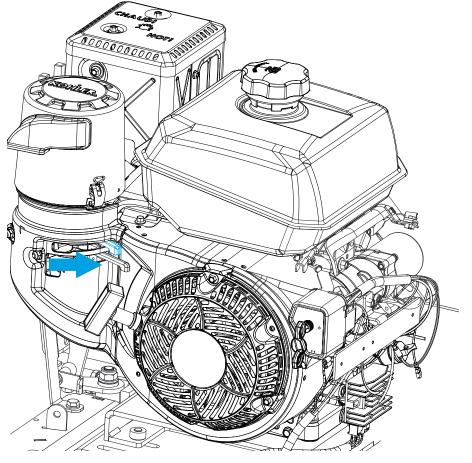


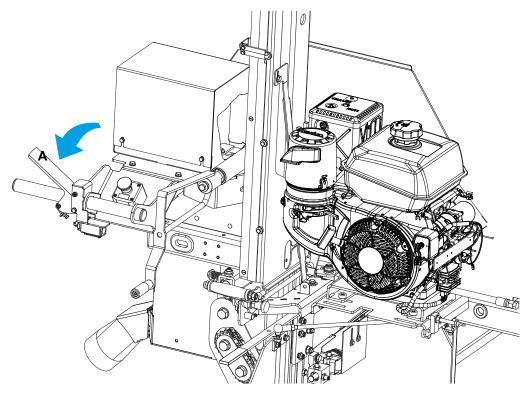
FIG. 2-5

6. To engage the blade, set the throttle lever to about 1/3 of its movement and push the clutch/brake lever forward to the ENGAGED (forward) position. Then set the throttle lever to the FAST position.

When the blade drive is engaged, press and hold the safety lever (A). Releasing the safety lever when the blade drive is engaged will result in the engine shutting down.



#### See Figure 2-6.



**CAUTION!** If the starter is on for too long, the battery may go flat. Always keep the key in the "ON" position while the engine is running.

Let the engine idle at low rpm for about 3 minutes to warm up before starting to cut.

#### **Engine Shutoff**

- **1.** Set the throttle lever to idling.
- 2. Set the clutch/brake lever in the DISENGAGE (back) position to stop the blade.
- **3.** Let the engine idle for 15 seconds without load and then stop the engine by moving the ignition lever to the "OFF" position.



**CAUTION!** Before stopping the engine, reduce the load slowly. Do not stop the engine suddenly as it may result in an excessive temperature rise.

# **SECTION 3 MAINTENANCE**

**IMPORTANT!** This manual only provides information about additional procedures or procedures to be performed at different time intervals than found in the engine manufacturer's manuals. Refer to the <u>manufacturer's</u> <u>manual</u> for complete maintenance instructions.



**WARNING!** Remove the blade before performing any engine service. Failure to do so may result in serious injury.

**This symbol** identifies the interval (hours of operation) at which each maintenance procedure should be performed. "AR" signifies maintenance procedures which should be performed as required.

#### 3.1 Air Filter & Pre-Cleaner



**WARNING!** Always wear proper and necessary safety equipment when performing service functions. Proper safety equipment includes eye protection, breathing protection, hand protection and foot protection.

Service the pre-cleaner every four hours of operation. Service by gently shaking excess sawdust and debris from the foam element. Do not let any impurities to fall into intake manifold.

Clean the pre-cleaner (foam element) every eight hours of operation. See the engine manual for further instructions. Replace if necessary.

Replace the air filter (paper element) every 200 hours of operation.

#### 3.2 Engine Oil & Filter

Check the oil level every 8 hours of operation. Add oil as necessary. See the engine manual for oil viscosity and grade recommendations.



**IMPORTANT!** During initial break-in, change the oil and the oil filter after the first 50 hours and every 150-200 hours thereafter. Continue to check oil level every 8 hours of operation and refill as necessary.

NOTE: Engine at factory is filled with 10W/40 Shell Helix HX7, semi-synthetic oil.

#### 3.3 Air Cooling System

Proper cooling is essential. Brush off or blow off sawdust and debris every 50 hours of operation. Clean
 the screens, cooling fins, cooling fan and other external surfaces of the engine. Remove any dust, dirt or oil. See engine manual for further instructions.



# Fuel Filter

#### **Fuel Filter** 3.4

Replace the fuel filter every 100 hours of operation. 100>

#### Miscellaneous Maintenance 3.5

Inspect the spark plugs every 100 hour of operation. Remove any deposits and adjust gap if necessary. <sup>100</sup> See the engine manual for further information.

#### 3.6 **Drive Belt Adjustment**



WARNING! Do not for any reason adjust the engine drive belts or belt support bracket with the engine running. Doing so may result in serious injury.



Check the drive belt tension after the first 20 hours, and every 50 hours thereafter.

The drive belt tension should be adjusted with the tensioner handle engaged (in the forward position), by moving the engine assembly on the engine mount plate. To make the adjustment, perform the following steps:

- **1.** Loosen the engine mounting bolts and the jam nuts.
- 2. Using the adjustment bolts, shown in the figure below, adjust the belt tension to approximately 11 mm deflection with 7.2 kG of deflection force.
- **3.** Tighten the jam nuts and the engine mounting bolts.

See Figure 3-1.

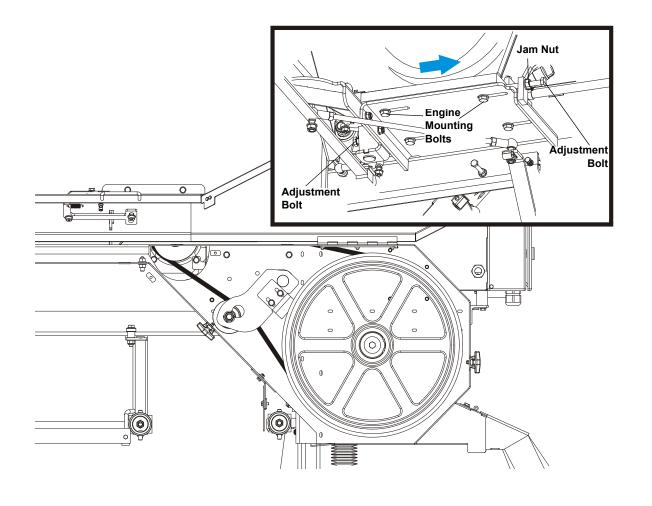


FIG. 3-1

Periodically check all belts for wear. Replace any damaged or worn belts as needed.

## 3.7 RPM Adjustments

The engine RPM is factory set and do not need to be adjusted. If any problems with engine RPM are being observed, contact Wood-Mizer Customer Service.

# SECTION 4 REPLACEMENT PARTS

### 4.1 How To Use The Parts List

- Use the table of contents or the index to locate the assembly that contains the part you need.
- Go to the appropriate section and locate the part in the illustration.
- Use the number pointing to the part to locate the correct part number and description in the table.
- Parts shown indented under another part are included with that part.
- Parts marked with a diamond (

   are only available in the assembly listed above the part.

See the sample table below. Sample Part #A01111 includes part F02222-2 and subassembly A03333. Subassembly A03333 includes part S04444-4 and subassembly K05555. The diamond ( $\diamond$ ) indicates that S04444-4 is not available except in subassembly A03333. Subassembly K05555 includes parts M06666 and F07777-77. The diamond ( $\diamond$ ) indicates M06666 is not available except in subassembly K05555.

| 4.2  | Sample Assembly  |           |     |   |
|------|--|-----------|-----|---|
| REF. | <b>DESCRIPTION</b> ( Indicates Parts Available In Assemblies Only) | PART #    | QTY |   |
|      | SAMPLE ASSEMBLY, COMPLETE (INCLUDES ALL INDENTED PARTS BELOW)      | A01111    | 1   |   |
| 1    | Sample Part  | F02222-22 | 1   |   |
|      | Sample Subassembly (Includes All Indented Parts Below)             | A03333    | 1   |   |
| 2    | Sample Part (♦ Indicates Part Is Only Available With A03333)       | S04444-41 | 1   | • |
|      | Sample Subassembly (Includes All Indented Parts Below)             | K05555    | 1   |   |
| 3    | Sample Part ( Indicates Part Is Only Available With K05555)        | M06666    | 2   | • |
| 4    | Sample Part  | F07777-77 | 1   |   |

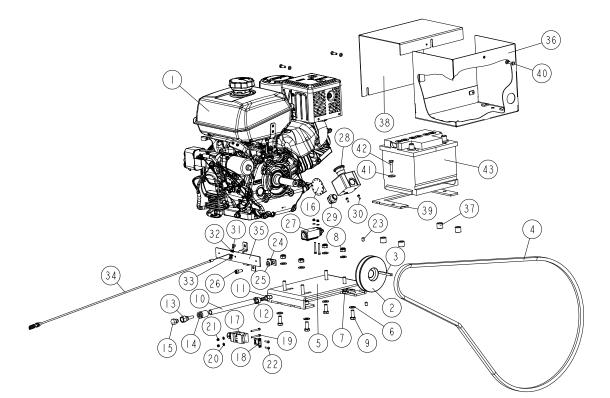
#### To Order Parts:

- From Europe call our European Headquarters and Manufacturing Facility in Kolo, Poland at +48-63-2626000. From the continental U.S., call 1-800-448-7881 to order parts. Have your customer number, vehicle identification number, and part numbers ready when you call.
- From other international locations, contact the Wood-Mizer distributor in your area for parts.

**REPLACEMENT PARTS** *G14 Engine Kit* 

# 4.3 G14 Engine Kit

580038\_001 580038\_MANUAL



| REF | DESCRIPTION (* indicates parts available in assemblies only) | PART #    | QTY |  |
|-----|--|-----------|-----|--|
| -   | G14S ENGINE KIT (CE VERSION) WITH ELECTRIC STARTER           | 580038    | 1   |  |
| -   | G14 ENGINE KIT (NON CE VERSION) WITH ELECTRIC STARTER        | 580038-3  | 1   |  |
| 1   | ENGINE, G14 PA-CH440-3275 CH440 E16                          | 580027    | 1   |  |
| 2   | PULLEY, D10,G13,G15 - ENGINE ZINC                            | 096447-1  | 1   |  |
| 3   | KEY, 6,35 X 6,35 X 63,5, PARALLEL ZINC                       | 095334    | 1   |  |
| 4   | V-BELT, 17BX2250 BX87 2210LI-GOOD-Y                          | 097448    | 1   |  |
| -   | PLATE, ENGINE MOUNT - COMPLETE                               | 520535    | 1   |  |
| 5   | PLATE WELDMENT, G14 ENGINE MOUNT                             | 520532-1  | 1   |  |
| 6   | WASHER 10,5 ZC DIN 126 ISO 7091                              | F81055-1  | 12  |  |
| 7   | BOLT, M10X50MM, HEX HEAD FULL THREAD ZINC                    | F81003-4  | 4   |  |
| 8   | NUT, M10-8-B HEX NYLON ZINC LOCK                             | F81033-1  | 4   |  |
| 9   | BOLT, M10X25 8.8 HEX HEAD FULL THREAD ZI                     | F81003-11 | 4   |  |
| -   | HOSE, G14 OIL DRAIN  | 524889    | 1   |  |
| 10  | HOSE, OIL DRAIN - COMPLETE                                   | 091756    | 1   |  |
| 11  | FITTING  | 524888    | 1   |  |
| 12  | CLAMP, 12-20   | F81080-3  | 1   |  |
| 13  | FITTING, JIC 9/16-18 HYDRAULIC                               | 085900    | 1   |  |
| 14  | CRIMPSOCKET 3/8" HYDRAULIC HOSE                              | 085901    | 1   |  |

REPLACEMENT PARTS



#### **REPLACEMENT PARTS**

G14 Engine Kit

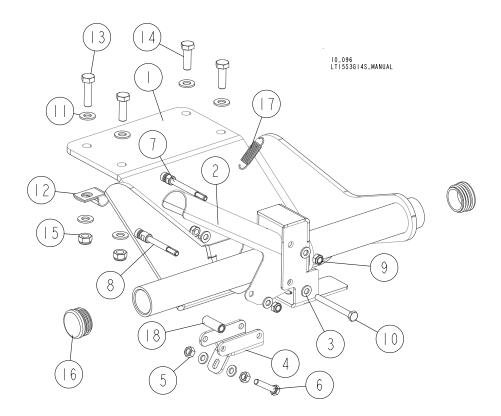
| REF | DESCRIPTION (* indicates parts available in assemblies only) | PART #     | QTY |  |
|-----|--|------------|-----|--|
| 15  | CAP, 9/16"   | 095491     | 1   |  |
| 16  | DEFLECTOR, KOHLER14HP EXHAUST                                | 110187     | 1   |  |
| 17  | SWITCH, AZ17-11ZRK SAFETY <sup>1</sup>                       | 094232     | 1   |  |
| 18  | KEY, AZ17/170-B5 SAFETY SWITCH <sup>2</sup>                  | 094422     | 1   |  |
| 19  | SCREW, M4X35 8.8 HEX SOCKET HEAD CAP ZIN <sup>3</sup>        | F81011-34  | 4   |  |
| 20  | WASHER, 4.3 FLAT ZINC <sup>4</sup>                           | F81051-2   | 4   |  |
| 21  | NUT, M4-8 HEX NYLON ZINC LOCK <sup>5</sup>                   | F81029-1   | 4   |  |
| 22  | SCREW, M4X16 5.8-B CROSS RECESSED PAN HEAD <sup>6</sup>      | F81011-42  | 2   |  |
| 23  | SCREW, M8X12-45H FE/ZN DIN914 HEX SOCKET                     | F81002-105 | 2   |  |
| 24  | CLAMP, 1/2" EMT COATED                                       | P07584     | 1   |  |
| 25  | WASHER, 8.4 FLAT ZINC  | F81054-1   | 1   |  |
| 26  | SCREW, M8X20-8.8 HEX SOCKET HEAD CAP ZINC                    | F81002-30  | 1   |  |
| 27  | LIMIT SWITCH GLCB01C - D25 <sup>7</sup>                      | 100910     | 1   |  |
| 28  | BUTTON, XALK 178 EMERGENCY STOP <sup>8</sup>                 | E22703-P   | 1   |  |
| 29  | GLAND, QVT20 M20 GREY SPLIT CABLE <sup>9</sup>               | F81096-20  | 1   |  |
| 30  | SCREW, M4X12 5,8-B CROSS RECESSED PAN HEAD <sup>10</sup>     | F81011-43  | 2   |  |
| 31  | BOLT, THROTTLE CABLE CLAMP ZINC-PLATED                       | 088120-1   | 1   |  |
| 32  | WASHER, 6.4 FLAT ZINC  | F81053-1   | 5   |  |
| 33  | NUT, M6-8-B NYLON HEX ZINC LOCK                              | F81031-2   | 1   |  |
| 34  | CABLE, G14 THROTTLE  | 550812     | 1   |  |
| 35  | BRACKET, WELDMENT  | 557184-1   | 1   |  |
| 36  | BOX WELDMENT, BATTERY  | 091377-1   | 1   |  |
| 37  | BUSHING, 11/20-17 ZINC-PLATED                                | 094255-1   | 4   |  |
| 38  | LID, BATTERY BOX PTD   | 091382-1   | 1   |  |
| 39  | BRACKET, BATTERY HOLD-DOWN PTD                               | 091381-1   | 1   |  |
| 40  | BOLT, M6X20 8.8 HEX HEAD FULL THREAD ZINC                    | F81001-2   | 3   |  |
| 41  | WASHER, 8.5 SPECIAL FLAT ZINC                                | F81054-11  | 2   |  |
| 42  | BOLT, M8X35-8.8 HEX HEAD FULL THREAD ZINC                    | F81002-13  | 2   |  |
| 43  | BATTERY, 36AH BANNER 53646                                   | 091775     | 1   |  |

<sup>1</sup> not included in 580038-3 <sup>2</sup> not included in 580038-3 <sup>3</sup> not included in 580038-3 <sup>4</sup> not included in 580038-3 <sup>5</sup> not included in 580038-3 <sup>6</sup> not included in 580038-3 <sup>7</sup> not included in 580038-3 <sup>8</sup> not included in 580038-3

<sup>8</sup> not included in 580038-3

<sup>9</sup> not included in 580038-3 <sup>10</sup> not included in 580038-3

# 4.4 Operator's Handle Assembly - CE Version



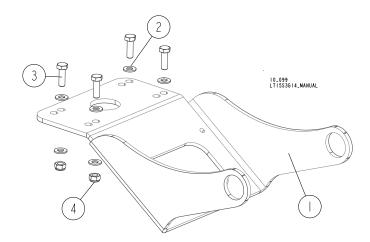
| REF. | <b>DESCRIPTION (</b> indicates parts available in assemblies only ) | PART #   | QTY |  |
|------|---|----------|-----|--|
| -    | HANDLE ASSEMBLY, OPERATOR   | 526510   | 1   |  |
| 1    | PLATE WELDMENT  | 526511-1 | 1   |  |
| 2    | HANDLE  | 526357-1 | 1   |  |
| 3    | WASHER, 6.4 FLAT ZINC   | F81053-1 | 6   |  |
| 4    | BRACKET   | 516201-1 | 1   |  |
| 5    | NUT, M6 8 HEX ZINC  | F81031-1 | 2   |  |
| 6    | BOLT, M6X30-8.8 HEX HEAD FULL THREAD ZINC                           | F81001-8 | 1   |  |
| 7    | ROD, UPPER  | 526508-1 | 1   |  |
| 8    | ROD, LOWER  | 526509-1 | 1   |  |
| 9    | NUT, M6-8-B HEX NYLON ZINC LOCK                                     | F81031-2 | 3   |  |
| 10   | BOLT, M6X60-8.8 HEX HEAD FULL THREAD ZINC                           | F81001-9 | 1   |  |
| 11   | WASHER, 8.4 FLAT ZINC   | F81054-1 | 8   |  |
| 12   | CLAMP, 1/2EMT COATED  | P07584   | 1   |  |
| 13   | BOLT, M8X30-5.8-B HEX HEAD FULL THREAD ZINC                         | F81002-2 | 1   |  |
| 14   | BOLT, M8X25-8.8-B HEX HEAD FULL THREAD ZINC                         | F81002-5 | 3   |  |
| 15   | NUT, M8-8-B HEX NYLON ZINC LOCK                                     | F81032-2 | 4   |  |
| 16   | CAP, SR1530 (HOLE 30) TUBE  | 517616   | 2   |  |
| 17   | SPRING, 1.6X12X38 EXTENSION   | 092208   | 1   |  |
| 18   | BUSHING, 6.2/10-28  | 526351-1 | 1   |  |

REPLACEMENT PARTS



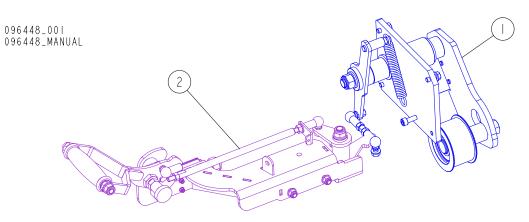
**REPLACEMENT PARTS** *Operator's Handle Assembly* 

# 4.5 Operator's Handle Assembly



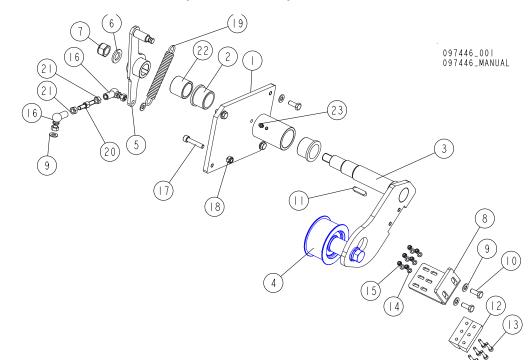
| REF. | <b>DESCRIPTION (</b> indicates parts available in assemblies only ) | PART #   | QTY |  |
|------|---|----------|-----|--|
| 1    | HANDLE WELDMENT, LT10   | 513302-1 | 1   |  |
| 2    | WASHER, 8.4 FLAT ZINC   | F81054-1 | 8   |  |
| 3    | BOLT, M8X25-8.8-B HEX HEAD FULL THREAD ZINC                         | F81002-5 | 4   |  |
| 4    | NUT, M8-8-B HEX NYLON ZINC LOCK                                     | F81032-2 | 4   |  |

# 4.6 Belt Tensioner/Brake Assembly



| REF | DESCRIPTION (u indicates parts available in assemblies only) | PART # | QTY |  |
|-----|--|--------|-----|--|
| -   | BELT TENSIONER & BRAKE ASSEMBLY                              | 096448 | 1   |  |
| 1   | TENSION ROLLER W/BRAKE, COMPLETE See Section 4.7             | 097446 | 1   |  |
| 2   | HANDLE, TENSIONER AND BRAKE - COMPLETE See Section 4.9       | 097436 | 1   |  |

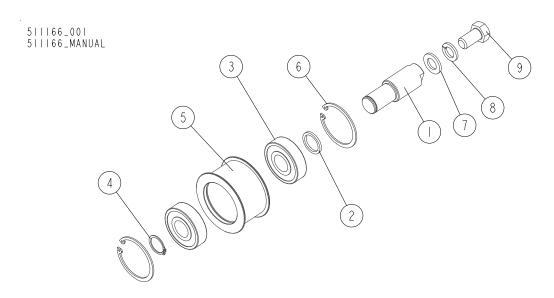
# 4.7 Tension Roller w/Brake (No. 097446)



| REF. | DESCRIPTION (* indicates parts available in assemblies only) | PART#     | QTY |  |
|------|--|-----------|-----|--|
| -    | ROLLER, TENSION W/BRAKE - COMPLETE                           | 097446    | 1   |  |
| 1    | MOUNT WELDMENT, TENSIONER SHAFT                              | 091112-1  | 1   |  |
| 2    | BUSHING, MFM-3240-30 (IGUS)                                  | 088461    | 2   |  |
| 3    | SHAFT WELDMENT, BELT TENSIONER                               | 096451-1  | 1   |  |
| 4    | ROLLER, COMPLETE TENSION See Section 4.8                     | 511166    | 1   |  |
| 5    | HANDLE, TENSIONER  | 096449-1  | 1   |  |
| 6    | WASHER, 17 SPLIT LOCK ZINC                                   | F81058-1  | 1   |  |
| 7    | NUT, M16-8-HEX NYLON ZINC LOCK                               | F81036-2  | 1   |  |
| 8    | BRACKET, BRAKE BLOCK MOUNT                                   | 091248-1  | 1   |  |
| 9    | WASHER, 8.4 FLAT ZINC  | F81054-1  | 7   |  |
| 10   | BOLT, M8X20 8.8 HEX HEAD FULL THREAD ZINC                    | F81002-4  | 5   |  |
| 11   | KEY, A8X7X32 PARALLEL  | 088564    | 1   |  |
| 12   | BLOCK, BRAKING   | 092111    | 2   |  |
| 13   | SCREW, M5X25 8.8 HEX SOCKET HEAD CAP ZINC                    | F81000-7  | 6   |  |
| 14   | WASHER, 5.3 FLAT ZINC  | F81052-1  | 6   |  |
| 15   | NUT, M5-8 DIN985 ZINC-PLATED                                 | F81030-2  | 6   |  |
| 16   | JOINT, 13-M8 (T17628- ULMER) BALL                            | 095285    | 2   |  |
| 17   | SCREW, M8X40-8.8 HEX SOCKET HEAD CAP ZINC                    | F81002-29 | 1   |  |
| 18   | NUT, M8-8-B HEX NYLON ZINC LOCK                              | F81032-2  | 1   |  |
| 19   | SPRING, N1.9XN14.2X104                                       | 091865    | 1   |  |
| 20   | PUSHER, SHORT ZINC-PLATED                                    | 097445-1  | 1   |  |
| 21   | NUT, M8-8-B HEX ZINC   | F81032-1  | 2   |  |
| 22   | BUSHING, TENSIONER ZINC-PLATED SPACER                        | 097447-1  | 1   |  |
| 23   | FITTING, M6 GREASE   | 086280    | 1   |  |

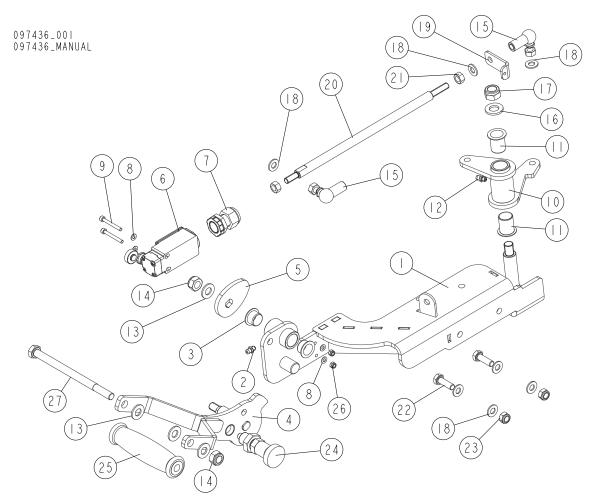
REPLACEMENT PARTS Tension Roller

# 4.8 Tension Roller



| REF. | <b>DESCRIPTION</b> ( Indicates parts available in assemblies only ) | PART #    | QTY |  |
|------|---|-----------|-----|--|
| -    | ROLLER, COMPLETE TENSION  | 511166    | 1   |  |
| 1    | SHAFT, TENSION ROLLER   | 509901-1  | 1   |  |
| 2    | WASHER, 25.1/32-3 ZINC-PLATED                                       | 500863-1  | 1   |  |
| 3    | BEARING, .9843X2.4409X.6693   | P08066    | 2   |  |
| 4    | RING, 25Z OUTSIDE RETAINING   | F81090-22 | 1   |  |
| 5    | ROLLER, LT15 TENSION  | 087671-1  | 1   |  |
| 6    | RING, 62W INSIDE RETAINING  | F81090-1  | 2   |  |
| 7    | WASHER, 17 SPLIT LOCK ZINC  | F81058-1  | 1   |  |
| 8    | WASHER, 16.3 SPLIT LOCK ZINC  | F81058-2  | 1   |  |
| 9    | BOLT, M16X30-8.8 HEX HEAD FULL THREAD ZINC                          | F81006-36 | 1   |  |

## 4.9 Tensioner and Brake Handle (No. 097436)



| REF. | DESCRIPTION (* indicates parts available in assemblies only) | PART #    | QTY |  |
|------|--|-----------|-----|--|
| -    | HANDLE, TENSIONER AND BRAKE - COMPLETE                       | 097436    | 1   |  |
| -    | PLATE, TENSIONER/BRAKE HANDLE MOUNT - COMPLETE               | 097437    | 1   |  |
| 1    | PLATE, TENSIONER/BRAKE HANDLE MOUNT                          | 097438-1  | 1   |  |
| 2    | FITTING, M6 GREASE   | 086280    | 1   |  |
| 3    | BUSHING, GFM-1618-12   | 091455    | 2   |  |
| 4    | HANDLE, TENSIONER/BRAKE                                      | 524091-1  | 1   |  |
| 5    | PLATE, LT15 LIMIT SWITCH ZINC-PL. ACTIVATOR                  | 096969-1  | 1   |  |
| 6    | SWITCH, FA138 Z11 LIMIT                                      | 100931    | 1   |  |
| 7    | GLAND, PG13.5 CABLE  | 086524    | 1   |  |
| 8    | WASHER, 4.3 FLAT ZINC  | F81051-2  | 4   |  |
| 9    | SCREW, M4X35 8.8 HEX SOCKET HEAD CAP ZINC                    | F81011-34 | 2   |  |
| -    | LEVER, ANGLE -COMPLETE                                       | 097432    | 1   |  |
| 10   | LEVER, ANGLE   | 097433-1  | 1   |  |
| 11   | BUSHING, GFM 1719-25 (IGUS)                                  | 094142    | 2   |  |
| 12   | FITTING, M6 GREASE   | 086280    | 1   |  |
| 13   | WASHER, 10.5 FLAT ZINC                                       | F81055-1  | 4   |  |
| 14   | NUT, M10-8-B HEX NYLON ZINC LOCK                             | F81033-1  | 2   |  |



Tensioner and Brake Handle (No. 097436)

| REF. | DESCRIPTION (* indicates parts available in assemblies only) | PART #     | QTY |  |
|------|--|------------|-----|--|
| 15   | PIVOT, FI 13-M8 ANGLE (T17628-ULMER)                         | 095285     | 2   |  |
| 16   | WASHER, 13 FLAT ZINC   | F81056-1   | 1   |  |
| 17   | NUT, M12 8 HEX NYLON ZINC LOCK                               | F81034-2   | 1   |  |
| 18   | WASHER, 8.4 FLAT ZINC  | F81054-1   | 7   |  |
| 19   | PLATE, TENSIONER   | 097442-1   | 1   |  |
| 20   | PUSHER, M8 ZINC-PLATED LONG                                  | 097444-1   | 1   |  |
| 21   | NUT, M8-8-B HEX ZINC   | F81032-1   | 2   |  |
| 22   | BOLT, M8X25-8.8-B HEX HEAD FULL THREAD ZINC                  | F81002-5   | 2   |  |
| 23   | NUT, M8-8-B HEX NYLON ZINC LOCK                              | F81032-2   | 2   |  |
| 24   | PIN, 45308DNW DETENT   | 089939     | 1   |  |
| 25   | GRIP, I.135/120-10 REVOLVING                                 | 524094     | 1   |  |
| 26   | NUT, M4-8 HEX NYLON ZINC LOCK                                | F81029-1   | 2   |  |
| 27   | BOLT, M10X150-8.8 HEX HEAD ZINC                              | F81003-124 | 1   |  |