



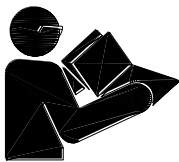
M191185C.7

ITEM NUMBER: 191185

SERIAL NUMBER:

Owner's Manual

Trencher/Edger: Cuts trenches in dirt.



⚠ WARNING

Read this manual.

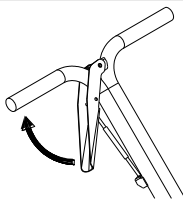
Serious injury or death can result if safety instructions are not followed.



⚠ CAUTION

Lifting hazard.

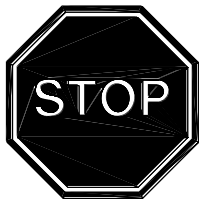
Single person lifting heavy objects could cause injury.
Get help when assembling post hole digger.



CAUTION

During operation.

- DO NOT run engine more than 2 minutes without engaging blade,
serious damage can occur to belts.



Engine is shipped without oil.

- Before starting engine, fill with SAE10W-30 motor oil.
- See engine owner's manual.

fig05136

Any Questions, Comments, Problems or Parts Orders
Call NorthStar Product Support 1-800-270-0810

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Hazard Signal Word Definitions






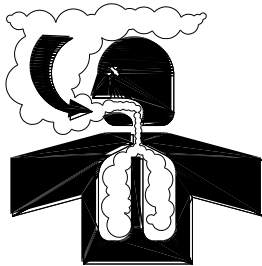
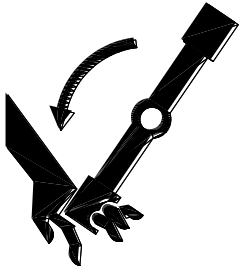
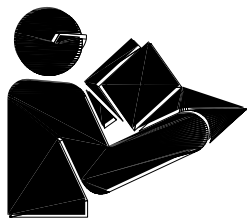
	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
	DANGER (red) indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
	WARNING (orange) indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	CAUTION (yellow) indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
	CAUTION (yellow) used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

fig01453

Important Safety Rules



DANGER

1.) Read safety manual completely.

Serious injury or death will result if safety instructions are not followed. Keep children away from the trencher.

2.) Rotating blade.

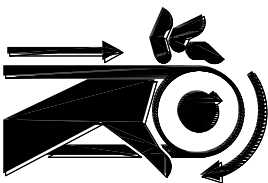
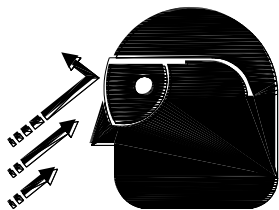
Blade will cut skin and crush bones. Keep hands clear. Follow lockout procedure before servicing. Do not operate with guards removed.

3.) Buried cables and pipes.

Call utilities before trenching. Blade will cut through buried electrical cables and gas pipes resulting in serious injury or death.

4.) Breathing hazard.

Poisonous fumes from engine will kill you. Do not operate the trencher in enclosed areas even if ventilated.



WARNING

1.) Flying objects.

Rock and dirt may fly out while trenching. Wear safety glasses. Keep bystanders 20ft away. Serious injury can occur.

- Pull trencher as you dig. Do not push.
- Do not affix control lever in acuated position.
- Make sure nuts and bolts are tight before operating.
- Do not trench mud, ice, concrete, or asphalt.

2.) Belt pinch point.

Moving belts can cut skin and bones. Do not operate with guards removed.

fig01471

Important Safety Rules



WARNING

3.) Fire hazard.

Gasoline is highly flammable and explosive.

You can be burned or seriously injured when handling fuel.

- Stop the engine and keep heat, sparks, and flame away.
- Handle fuel only outdoors. Wipe up spills immediately.

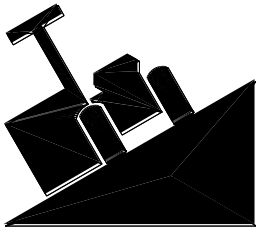


4.) Tripping hazard.

Make sure area is clear of obstacles before trenching.

Serious injury can result.

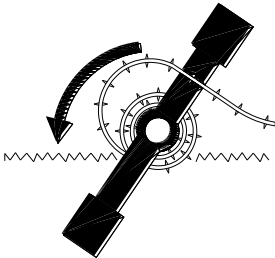
Do not trench on wet, slippery grass.



5.) Tip-over hazard.

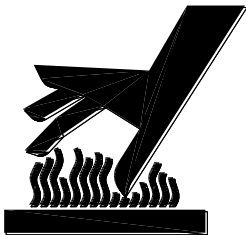
Do not trench on hills with a slope greater than 15°.

Trencher can tip over resulting in serious injury.



6.) Entanglement.

Rotating blade can get tangled in debris left on ground resulting in serious injury and damage to trencher. Before trenching, make sure area is clear of debris that may wind around blade during operation.

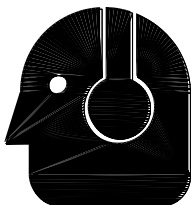


CAUTION

1.) Hot muffler.

You can be burned by muffler.

Do not touch.

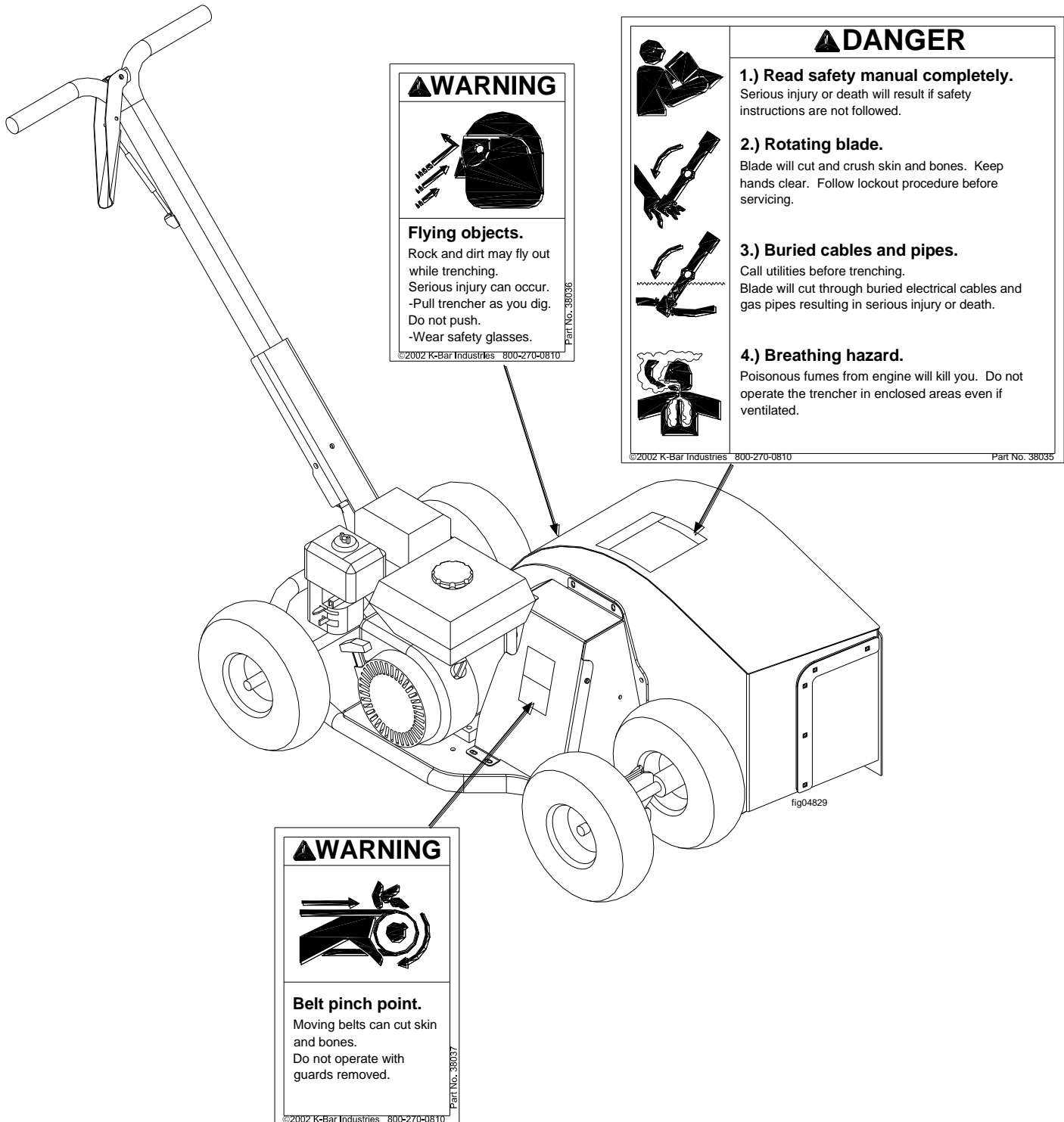


2.) Loud noise.

Exposure to loud engine noise can cause hearing loss.

Wear ear protection.

Warning Label Locations

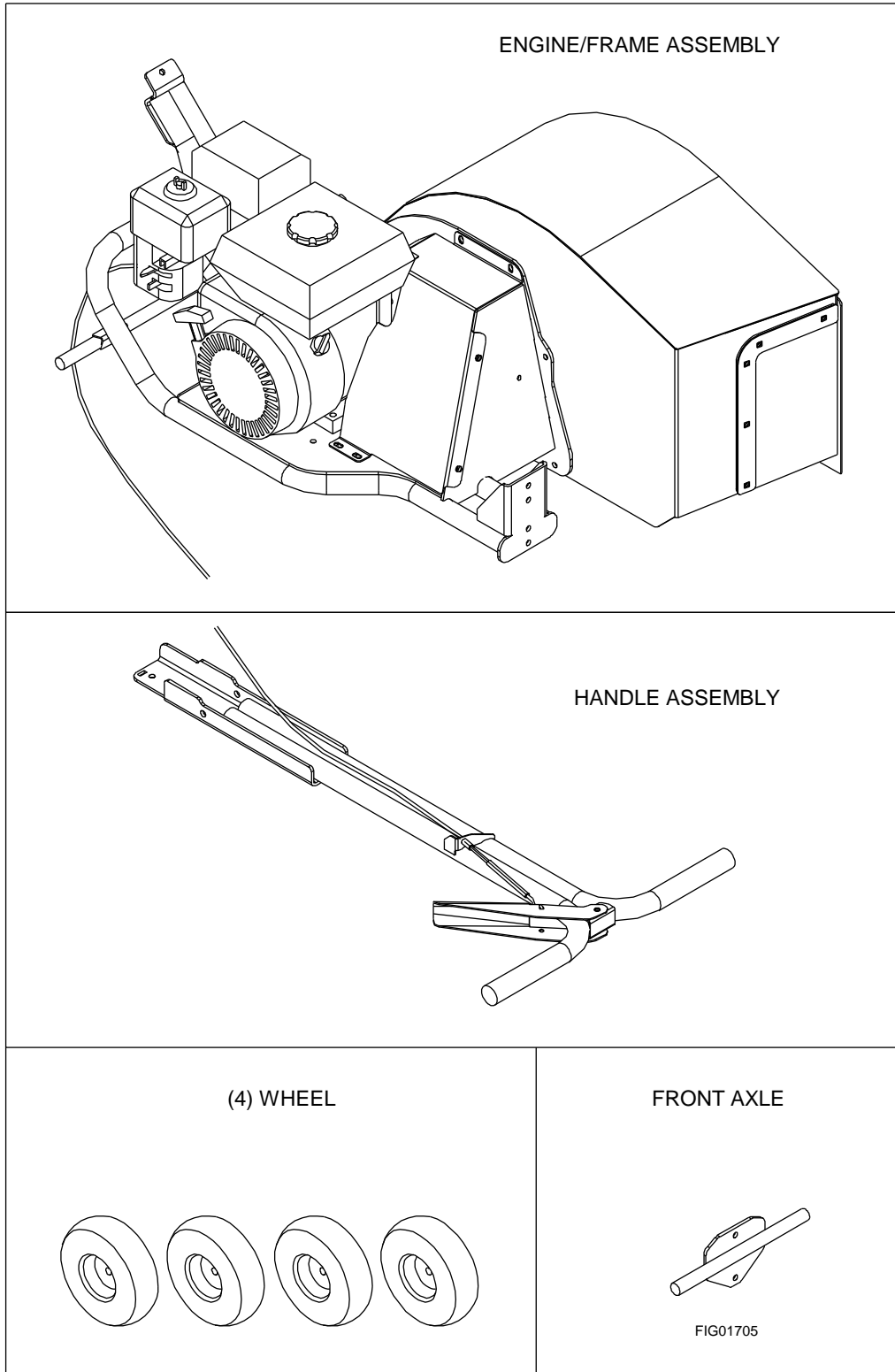


Any Questions, Comments, Problems or Parts Orders
Call NorthStar Product Support 1-800-270-0810

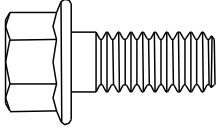
Unpacking

Closely inspect all contents in the shipping carton.

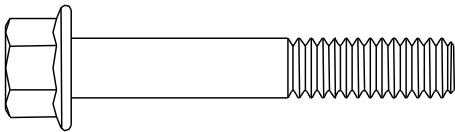
- If you have missing or damaged components: Contact Product Support at 1-800-270-0810.



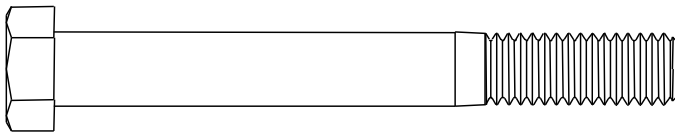
Fastener Identification



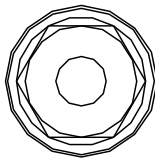
5/16" X 3/4" BOLT (3)



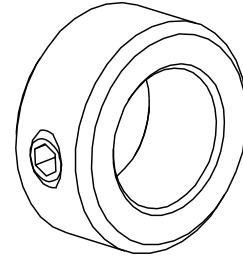
5/16" X 2" BOLT (1)



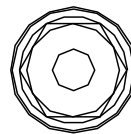
3/8" X 3 1/4" BOLT (1)



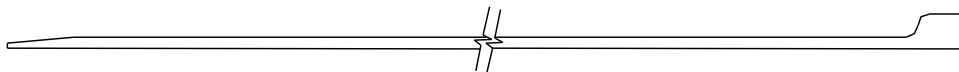
3/8" NUT (1)



WHEEL RETAINER (4)



5/16" NUT (4)

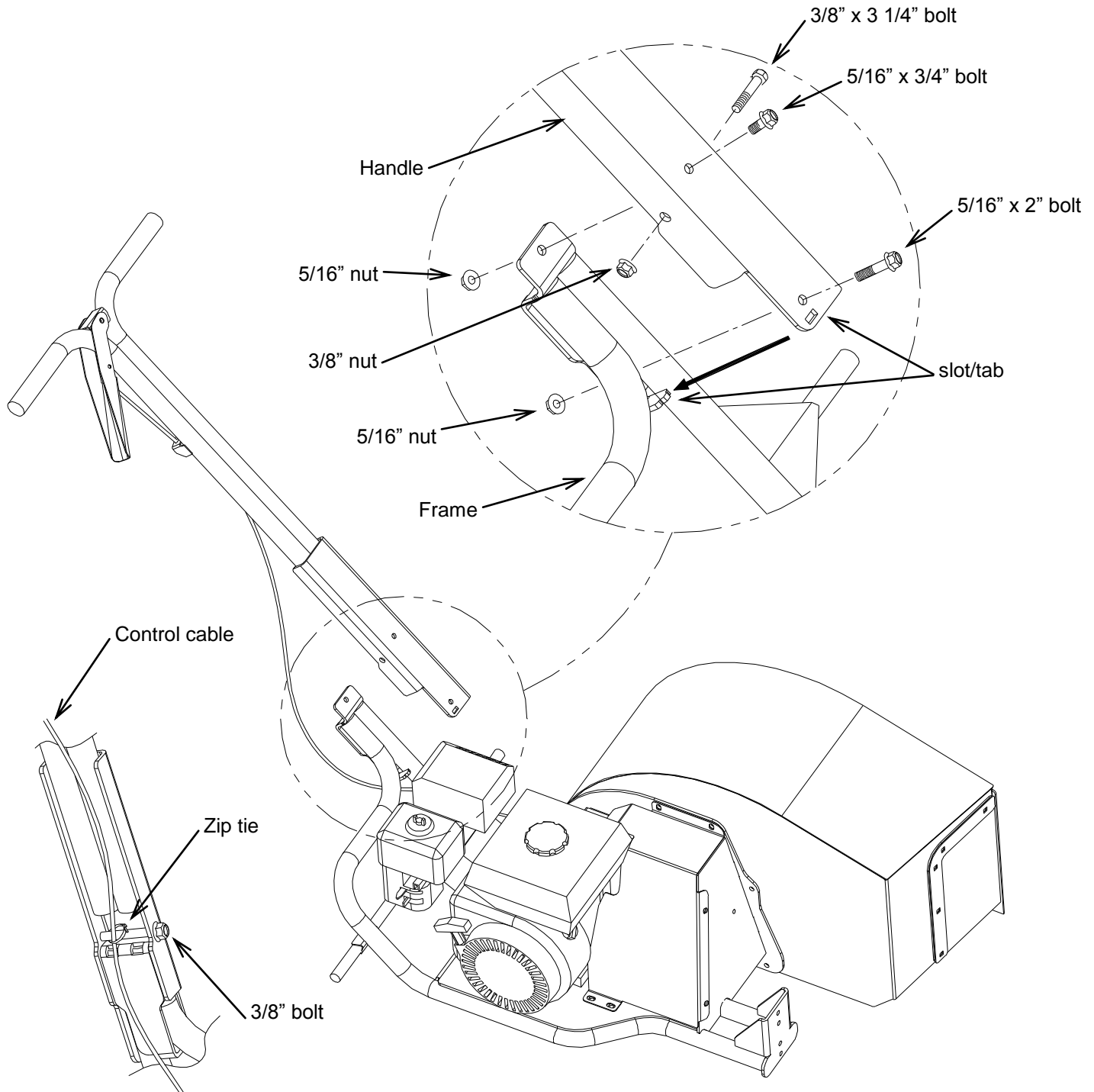


ZIP TIE (1)

Assembly Instructions

1.) Handle Assembly.

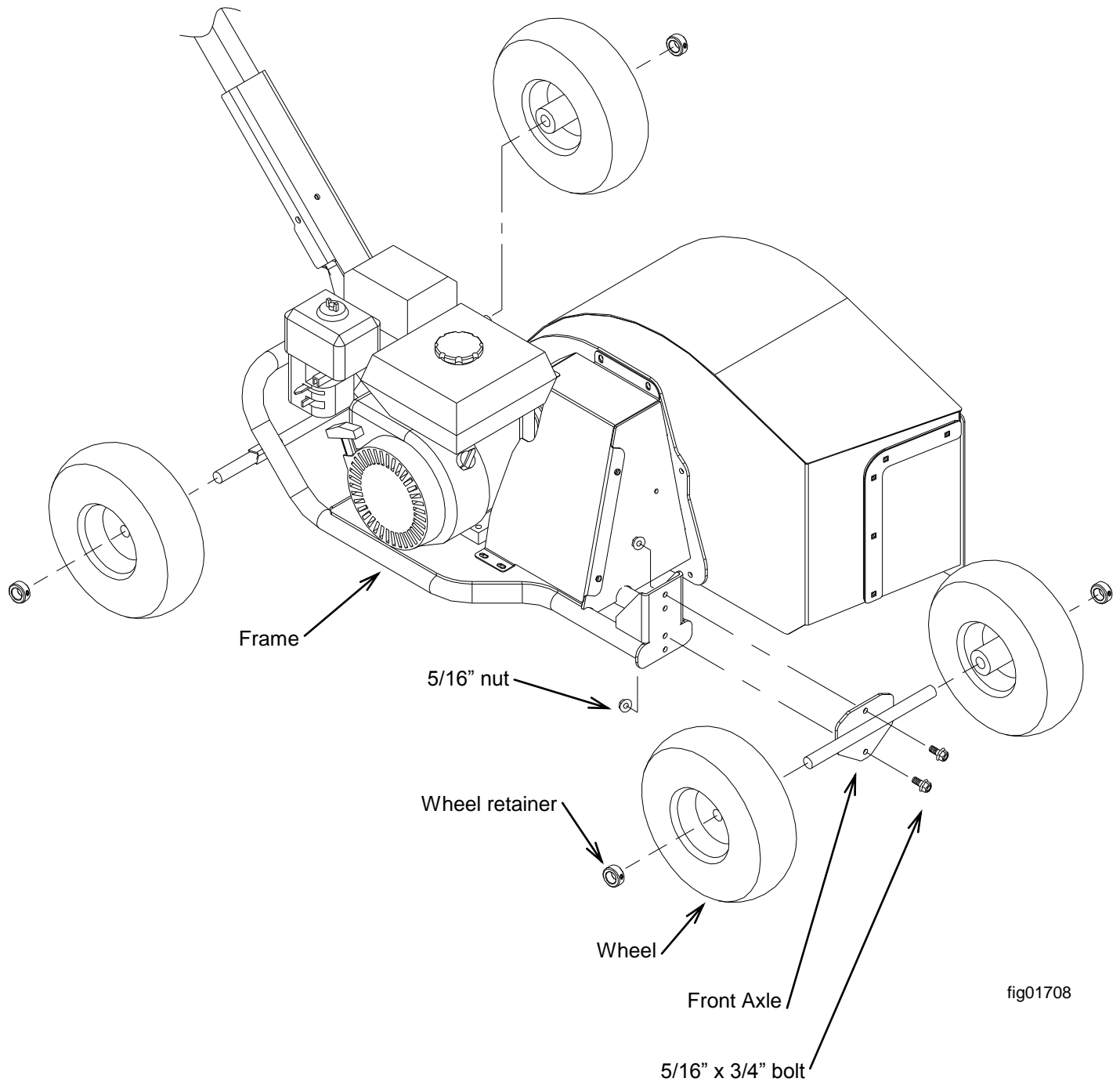
- Use (1) 5/16" x 3/4" bolt, (1) 5/16" x 2" bolt, & (2) 5/16" nuts to fasten the handle to the frame.
- Make sure the tab engages the slot.
- Install the 3/8" x 3 1/4" bolt and 3/8" nut.
- Loop the zip tie around the 3/8" bolt under the handle to loosely capture the control cable, make a loop approximately 1" diameter, trim off the excess zip tie. **Caution:** Tightening zip tie can result in abnormal wear to control cable jacket, assure control cable jacket does not contact frame.



Assembly Instructions

2.) Wheel Assembly

- Check tires for correct air pressure prior to assembly.
- Use a 5/32" hex wrench to attach (2) wheels to the front axle with (2) wheel retainers.
Use (2) 5/16 x 3/4" bolts to fasten the front axle to the frame.
- Fasten the (2) wheels to the frame with (2) wheel retainers.



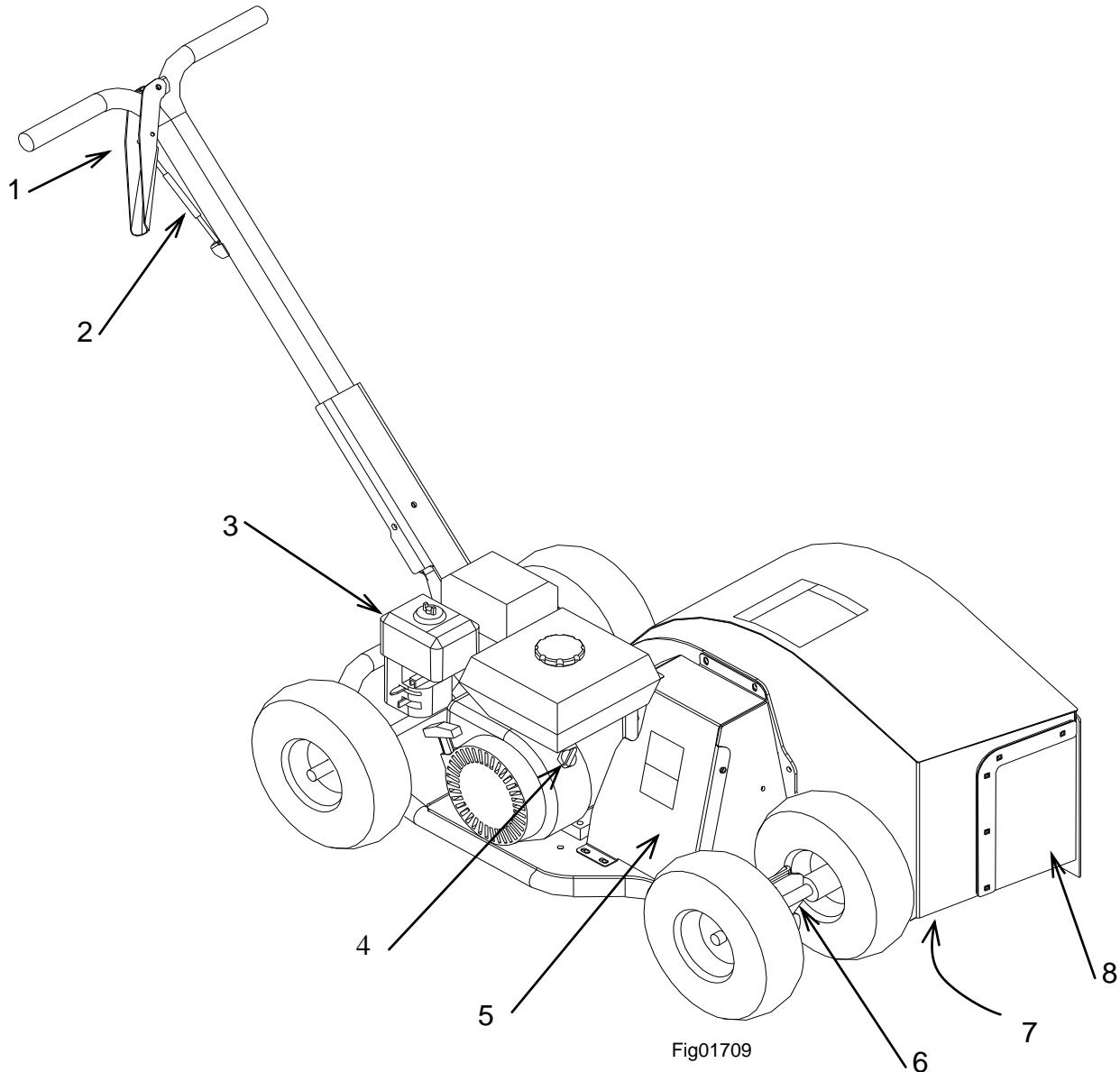
Machine Component Identification

- 1.) **Control Lever.** Used to start and stop cutting blade.
- 2.) **Turnbuckle.** Adjusts belt tension. As belts wear, retensioning may be required. See “Belt Tension” section of this manual.
- 3.) **Engine.** Air-cooled engine provides power for cutting blade.
- 4.) **Engine on/off switch.** Controls engine as indicated on switch.
- 5.) **Belt Guard.** Covers moving drive system of machine.

▲ CAUTION: NEVER operate machine without belt guards.

- 6.) **Front Axle.** Cutting depth is changed by moving axle to alternate hole locations.
- 7.) **Cutting Blade.** Creates trench in dirt. Check for missing teeth prior to digging trench.
- 8.) **Flexible Blade Guards.** Prevents accidental contact with blade and controls direction of flying dirt. Replace worn/torn guards as needed.

▲ CAUTION: NEVER operate machine without blade guards.



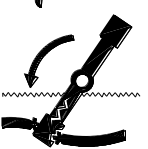



Operation Instructions

Work Site Preparation

The Trencher/Edger is operated by pulling the machine along a planned path. Mark your path before starting the trenching operation. Locate any aboveground obstacles in your path and plan a safe route to avoid them. Mark a well defined, easy to follow path. Move or cover objects that could be damaged by flying objects (windows, cars, siding, etc.). For safety reasons, plan your route to avoid pulling the trencher up any slopes. Do not trench on steep slopes (more than 15 degrees).

NOTE: Always consult state and local building codes to determine the proper size and depth of the trench required for the job. Building codes vary from state to state and county to county.

⚠ DANGER	
	1.) Read safety manual completely. Serious injury or death will result if safety instructions are not followed. Keep children away from the trencher.
	2.) Rotating blade. Blade will cut skin and crush bones. Keep hands clear. Follow lockout procedure before servicing. Do not operate with guards removed.
	3.) Buried cables and pipes. Call utilities before trenching. Blade will cut through buried electrical cables and gas pipes resulting in serious injury or death.
	4.) Breathing hazard. Poisonous fumes from engine will kill you. Do not operate the trencher in enclosed areas even if ventilated.

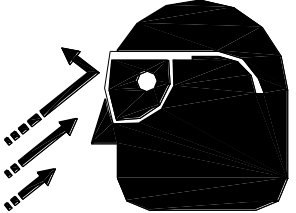
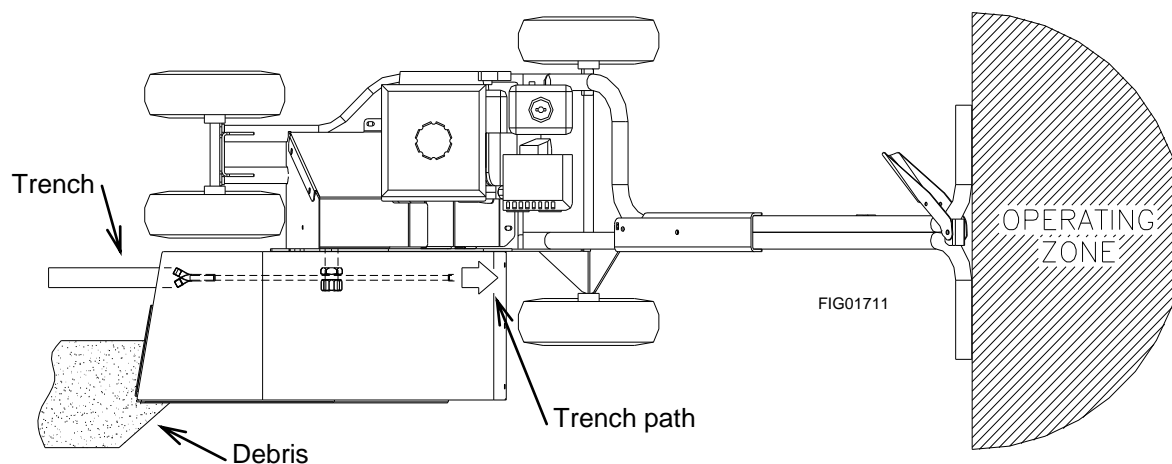
⚠ WARNING

Flying objects. Rock and dirt may fly out while trenching. Serious injury can occur. -Pull trencher as you dig. Do not push. -Wear safety glasses.

fig 01710

CO Poisoning: Exhaust from engine contains carbon monoxide, a poisonous gas that can cause carbon monoxide poisoning and possible death if inhaled. **ONLY** run trencher/edger **OUTDOORS** and at least 20 feet from the home, away from windows, vents and air intakes, to allow proper ventilation. If you start to feel sick, dizzy, or weak while using the trencher/edger, shut off the engine and get to fresh air **RIGHT AWAY**.

Operating Zones

Serious accidents can occur when people other than the operator are allowed into the operating zone, or when the machine is operated from areas other than the operating zone. Keep all bystanders 20 feet from the trencher/edger and never operate the machine from a position other than the defined operating zone.



Operation Instructions

Trenching



DANGER DO NOT PUSH MACHINE DURING OPERATION

Trencher is designed as a “PULL” type machine only. Pushing the machine will expose the operator to flying debris.

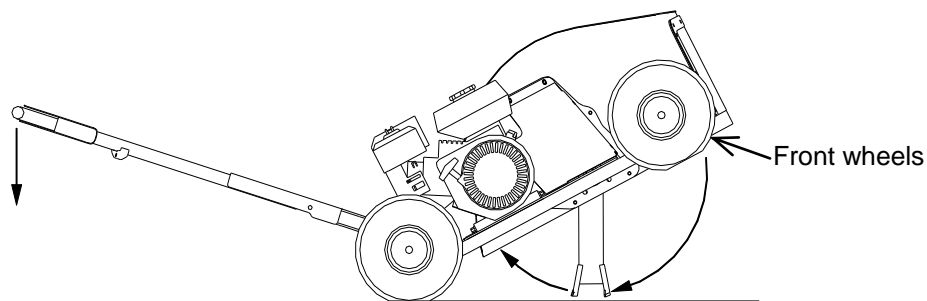
1.) Starting Engine:

Refer to Engine Owners' Manual for proper engine starting procedure. **DO NOT run engine more than 2 minutes without engaging blade, serious damage can occur to belts.**

2.) Starting a Trench:

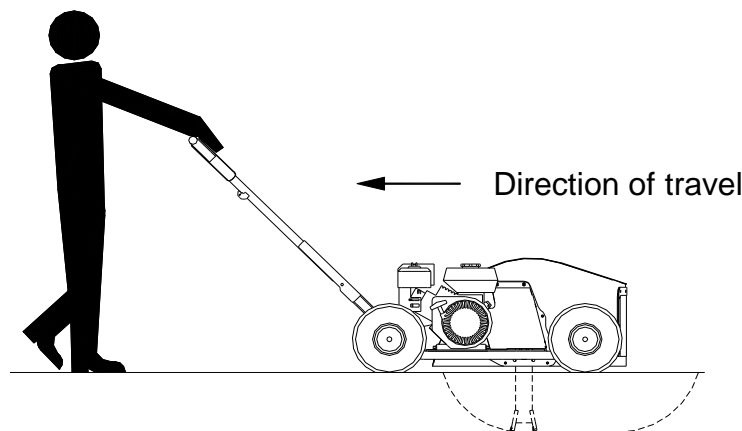
Tilt machine from the handle to achieve free rotation of blade.

3.) Engage Control Lever:



Squeeze the Control Lever. **SLOWLY** lower the blade into the ground until the front wheels rest on the ground. Soil conditions influence the time it takes for the front wheels to contact the ground. Lowering the machine too quickly can stop the engine, if this condition persists, see the “Trouble Shooting” section of this manual.

4.) Pull Machine:



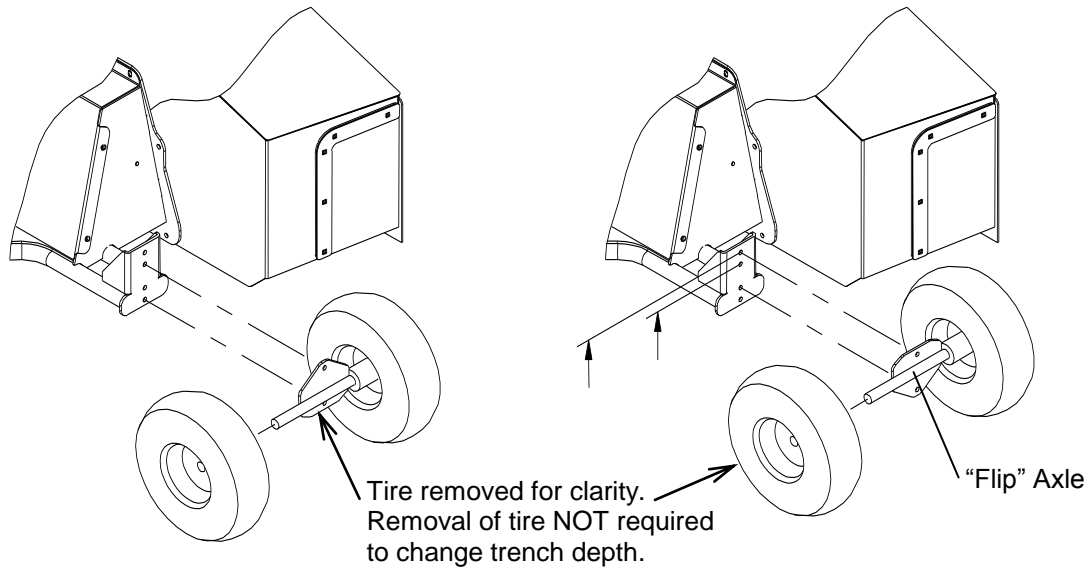
Pull machine along the designated path. Trench cutting speed is influenced by trench depth and soil conditions. Do not jerk machine backwards while blade is engaged, damage will occur to the blade and/or drive train. Do not attempt to cut an angled trench as this will expose flying debris to the operator. Altering the design of the machine voids all warranties and liabilities.

NOTE: Blade **DOES NOT** cut rock or concrete. If extreme resistance is felt and/or heard, stop lowering the Blade and try somewhere else. Excessive vibration/noise indicates an undesirable cutting condition.

Operation Instructions

Changing Trench Depth

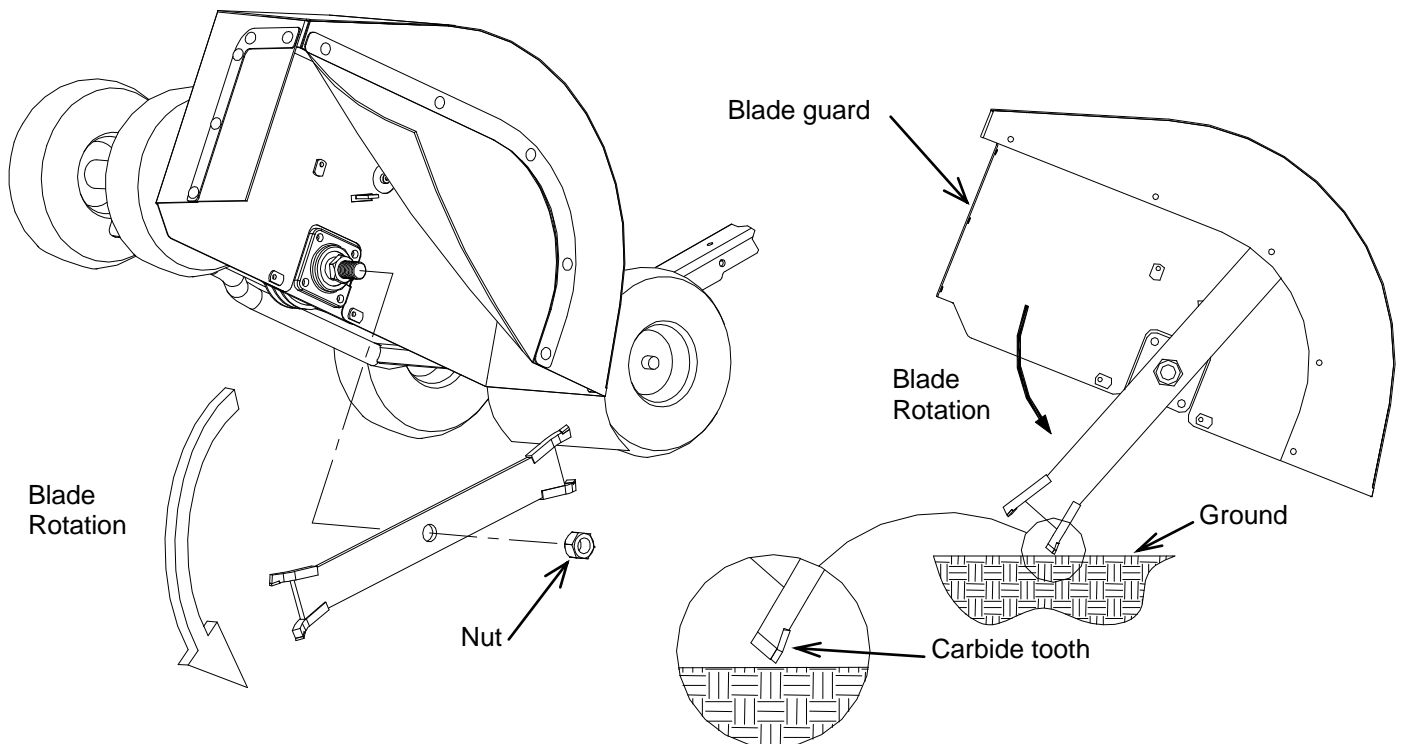
The Trencher/Edger can cut a 7,6 or 5" deep trench. Simply unbolt the axle assembly and move it to the next hole pattern, or "flip" the axle assembly to achieve the desired cutting depth.



Changing Blades

- Follow lockout procedure as outlined in the Maintenance and Storage section of this manual.
- Tilt machine enough to gain access to blade with wrench.
- Turn nut counterclockwise with 1 1/2" wrench to loosen.
- When installing blade, make sure carbide tooth contacts ground before any other part of the blade.

▲ CAUTION: Do not install blade backward.



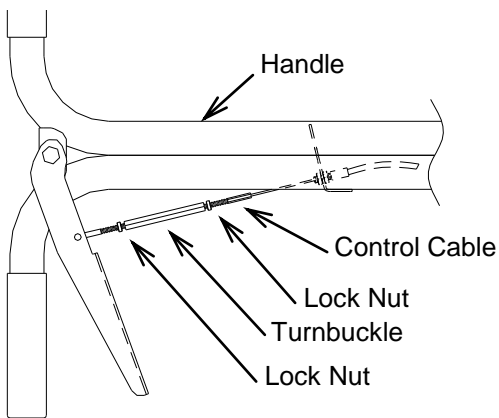
Maintenance and Storage

Lockout Procedure

- ⚠ Before performing maintenance, the trencher/edger must be placed in lockout mode.
- 1.) Turn off engine.
 - 2.) Disconnect engine spark plug wire.

Belt Tension

1. The ideal belt tension is the lowest tension at which the belts will not slip under peak load conditions.
 - Belts are too loose if a “squealing” noise is heard during operation.
 - Belt tension is too tight if engine cannot be started when all four wheels are resting on the ground.
2. Check belt tension after the first hour of operation. Recheck again after 20 hours of operation.



To adjust belt tension:

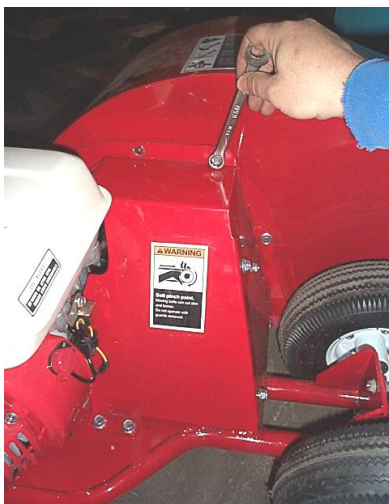
1. Loosen both Lock Nuts.
2. Hold Control Cable while turning turnbuckle.
3. Check belt tension by digging a trench.
4. Retighten Lock Nuts.

⚠ CAUTION

New belts require approximately 1 hour of use for proper break-in. DO NOT allow engine to run more than 2 minutes without engaging blade, serious damage can result to the belts.

Changing Belt

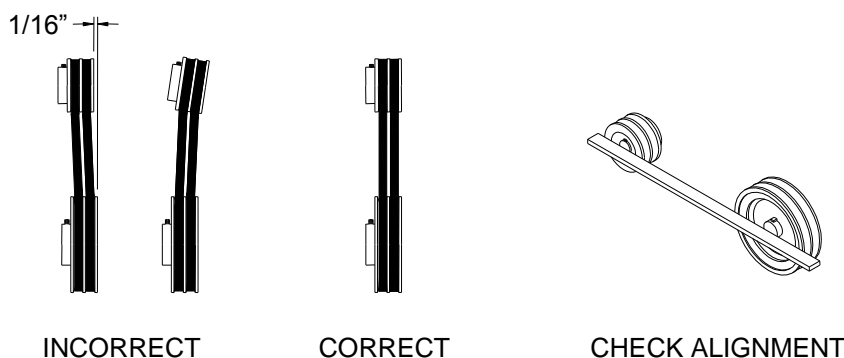
- Remove (4) 5/16" x 1/2" bolts and (2) 5/16" x 3/4" bolts with nuts that fasten the guard in place.
- Remove belts from pulleys by hand, no tools are required.
- Install new belts in reverse order of removal.
- Run machine and retention belts as required. Excessive belt tension will shorten belt life.
- Never mix old belts and new belts. Never mix belts from different manufacturers.
- Keep belts free of foreign material. Do not use belt dressing.



Maintenance and Storage

Sheave Alignment

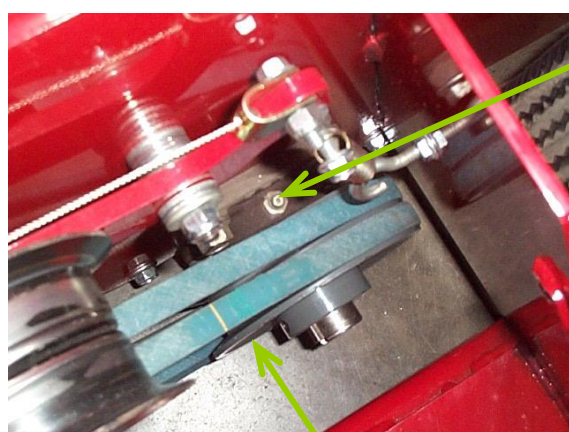
Eventually, sheave removal or replacement may become necessary. Inspect sheaves for cracks or a groove bottom that is shiny. Sheaves must be aligned to within 1/16" when reinstalled.



⚠ CAUTION: After performing maintenance, make sure all guards, shields, and safety features are put back in place. Failure to follow this warning can result in serious injury.

What	When	How
Blade	Before each use	Check for missing carbide teeth/ bent blade
Tires	Each use	Check pressure. The pressure rating is listed on the tire.
Nuts and Bolts	Each use	Check for loose bolts.
Moving Parts	Each use	Clear debris.
Bearings	Every 40 hours	Use grease gun with axle grease.

Refer to the engine owner's manual for engine maintenance.



Large pulley



Blade

ITEM #191185
PARTS EXPLOSION
TRENCHER/EDGER
REV. C.7

Storage

- 1.) Remove gasoline from engine or add fuel stabilizer to the gasoline to prevent gumming.
- 2.) Never store the trencher/edger where fumes might reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

Specifications

Engine..... 6.5 hp Honda
 Trench Depth (with standard blade).... 7"
 Trench Width (with standard blade).... 1 1/2"
 Overall Dimensions..... 65 1/2" L x 26" W x 36 1/2" H
 Dry Weight..... 137 lbs.
 Belt Size..... A30K (Kevlar™ Reinforced)
 Blade RPM..... 1850

The manufacturer reserves the right to make improvements in design and/or changes in specifications at any time without incurring any obligation to install them on units previously sold.

Troubleshooting

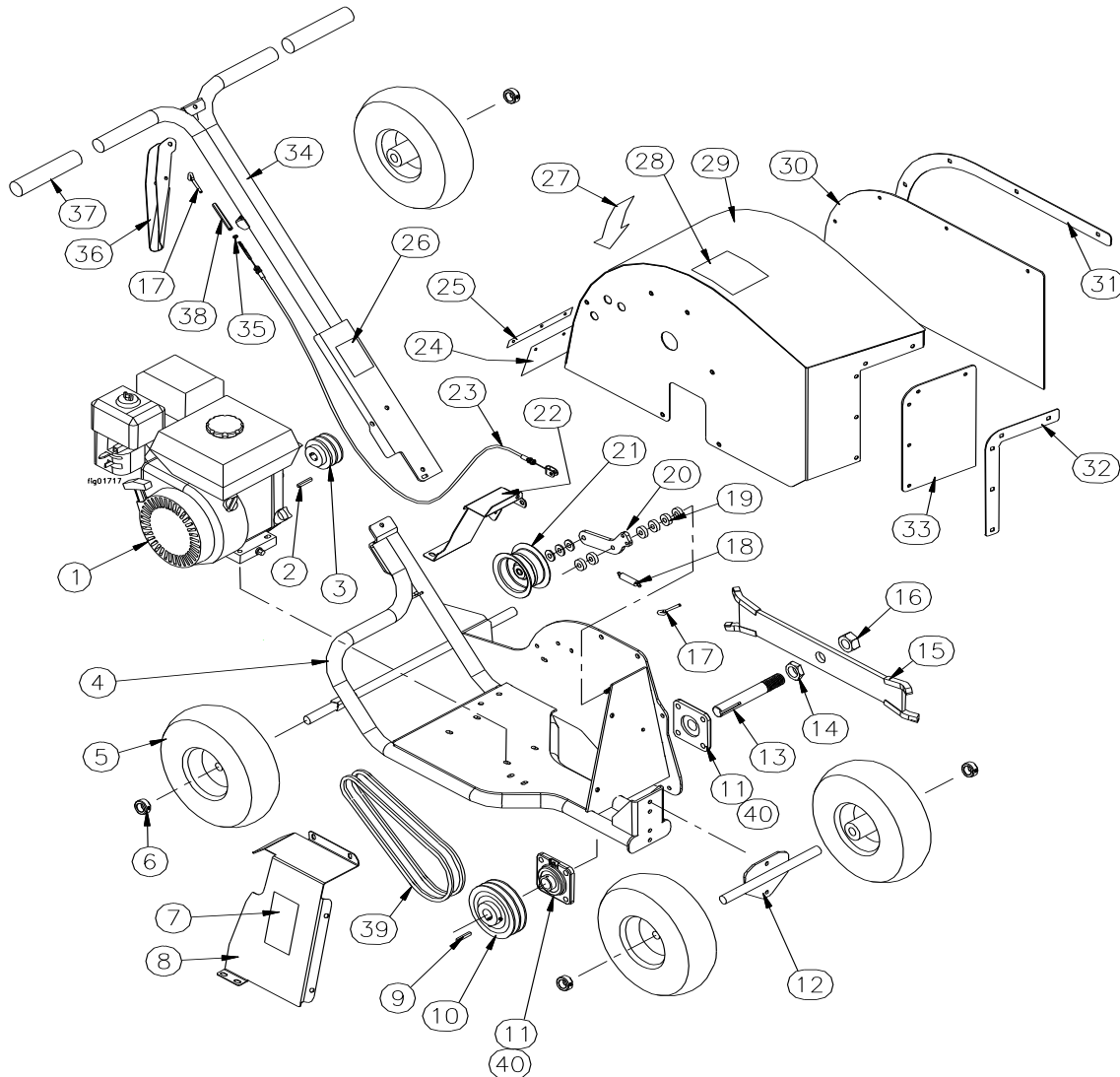
The following chart is intended for troubleshooting all aspects of the Trencher/Edger except the engine. Please refer to the engine owners' manual for troubleshooting the engine.

Problem	See Cause:
Blade does not turn.	A, B, J
Blade turns but does not cut ground.	C, D, K
Machine "squeals" during trenching.	C, D
Engine shuts down as machine is tilted.	E, F
Machine vibrates excessively during trenching.	G, H, I, J
Engine stalls when trenching	L
Engine stalls when idling/starting	C
Engine stalls when lowering starting a trench.	C, E, F, G, J, K, M

Cause	Solution
A - Loose/Broken belts	Tighten/Replace belts
B - Control Cable broken	Replace cable
C - Belt tension incorrect	Retention Belt
D - Belts are worn beyond acceptable limit	Purchase new belts
E - Engine oil low	Add oil per engine owners' manual.
F - Low level in gas tank	Add gasoline
G - Obstruction underground	Attempt to remove obstruction or start trenching further along path.
H - Loose bolts	Tighten bolts
I - Drive Shaft Bearings worn	Replace bearings
J - Blade bent/broken	Replace blade
K - Blade installed incorrectly	See "Changing Blade" section for proper blade installation.
L - Pulling to fast	Decrease rate of pull.
M - Lowering machine too fast	Decrease rate of drop.

Any Questions, Comments, Problems or Parts Orders
Call NorthStar Product Support 1-800-270-0810

Parts Explosion – Rev C.7



ITEM	PART#	DESCRIPTION	QTY
1	606512	6.5 Honda Engine	1
2	82142	3/16" x 2" Shaft Key	1
3	37978	2AK27-3/4" Sheave	1
4	37938	Trencher Frame	1
5	788813	Wheel	4
6	305200	Wheel Retainer	4
7	38037	Warning Label	1
8	37958	Belt Guard	1
9	82143	1/4" x 1 3/4" Key	1
10	37976	2AK51-1" Sheave	1
11	37972	1" Flange Bearing	2
12	37959	Front Axle	1
13	37973	Drive Shaft	1
14	82221	1"-8 Jam Nut	1
15	37995	1 1/2" x 7" Blade	1
16	82216	1"-8 Hex Nut	1
17	82077	1/4" x 2" Eye Bolt	2
18	37991	Idler Return Spring	1
19	82225	Spacer	6
20	37948	Idler Arm	1

ITEM	PART#	DESCRIPTION	QTY
21	37977	Idler Pulley	1
22	38068	Belt Guard	1
23	37968	Control Cable	1
24	37962	Protective Mat	1
25	37964	Guard Retainer	1
26	38036	Warning Label	1
27	38164	Trench Path Label	1
28	38035	Danger Label	1
29	37952	Blade Guard	1
30	37974	Protective Mat	1
31	37980	Guard Retainer	1
32	37982	Guard Retainer	1
33	37975	Protective Mat	1
34	37949	Handle	1
35	37986	1/4-20 Left Handed Nut	1
36	37970	Control Lever	1
37	30747	Hand Grip	2
38	38310	1/4" Turnbuckle	1
39	37979	A30K V-Belt	2
40	781903	1/4"- 28 x 1/4" Set Screw	4

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Limited Warranty

Dear Valued Customer:

The NorthStar Product you just purchased is built with the finest material and craftsmanship. Use this product properly and enjoy the benefits from its high performance. By purchasing a NorthStar product, you show a desire for quality and durability.

Like all mechanical equipment this unit requires a due amount of care. Treat this unit like the high quality piece of machinery it is. Neglect and improper handling may impair its performance. Please thoroughly read the instructions and understand the operation before using your product.

Limited Warranty

NorthStar shall warranty any piece of equipment manufactured, or parts of equipment manufactured, to be free from defects in material or workmanship for a period of 2 years from the date of purchase by user. This warranty applies to the original purchaser of the equipment and is non transferable. Verification of purchase is the responsibility of the buyer. Parts will be replaced or repaired at no charge, except when the equipment has failed due to lack of proper maintenance. Any misuse, abuse, alteration or improper installation or operations will void warranty. Determining whether a part is to be replaced or repaired is the sole decision of NorthStar.

NOTE: Some services performed by parties other than NorthStar may void warranty.

This warranty covers parts only. It will not provide for replacement of complete products due to defective parts. Components not manufactured by NorthStar such as engines are guaranteed by their manufacturer and can be serviced at factory-authorized locations near you. Any costs incurred due to replacement or repair of items outside of a NorthStar approved facility is the responsibility of the buyer and not covered under warranty. NorthStar can supply you with the service center location in your area.

This warranty specifically excludes the following; failure of parts due to damage caused by accident, fire, flood, windstorm, acts of God, applications not approved by NorthStar in writing, corrosion caused by chemicals, use of replacement parts which do not conform to manufacturer's specifications, and damage caused by vandalism. Additional exclusions: loss of running time, inconvenience, loss of income, or loss of use, including any implied warranty of merchantability of fitness for a specific use.

Warranty does not cover items subject to normal wear such as tires, receptacles or any part subject to direct physical contact by the public. This warranty does not cover any personal injury or damage to surrounding property caused by failure of any part.

This warranty is in lieu of any other warranty expressed or implied and NorthStar assumes no other responsibility or liability outside that expressed within this warranty.

Please fill in the following information and have it on hand when you call in a warranty claim.

Customer Number: _____

Date of Purchase: _____

NorthStar Serial Number: _____

Item Number: _____



Manufactured by
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