DYNA-DIGGR

OWNERS MANUAL

- **SAFETY**
- **ASSEMBLY**
- **OPERATION**
- **MAINTENANCE**
- **WARRANTY**
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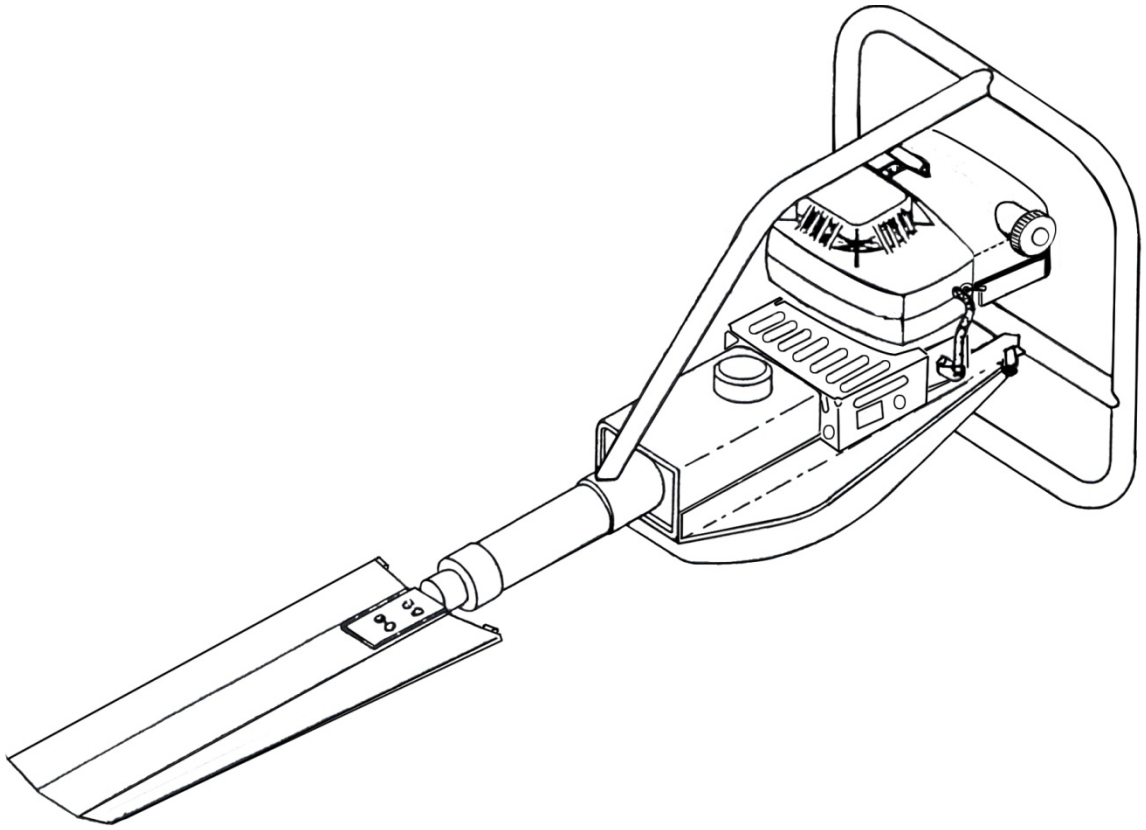


WARRANTY

Brisco inc. (the company) warrants new products sold by it to be free of defects in workmanship and material at the time of shipment from the company's factory. There are no warranties which extend beyond those specified herein.

No warranty of any kind, statutory, implied or otherwise, is made or shall be imposed upon the company with respect to (1) second-hand products, (2) new products which, which after shipment from the company's factory, have been subject to operation in excess of recommended capacities, negligence, misuse, or accident, or have been altered or repaired in any manner not authorized by the company, or (3) belt, clutch and engine except that the company agrees to make available to the first user whatever warranty benefits may be made available to the company by the manufacturer of any such belt, clutch or engine.

The company will repair or replace, without charge, any part which under normal use and service fails to conform to this warrant, provided that such part shall be returned to the company's factory or to the company's authorized dealer, transportation charges prepaid, as follows:

A. Within first thirty days (parts and labor).

B. Within next sixty days (parts at ½ the suggested list price at the time of replacement).

The company will replace any part purchased as a repair part from an authorized dealer, which under normal use fails within 90 days after purchase and which are returned to the company's factory or to the company's dealer from whom the part was purchased, transportation charges prepaid.

The company's liability whether in contract or in tort arising out of warranties, representation, instructions, or defects from any cause shall be limited exclusively to repair or replacing parts under conditions as aforesaid.

No representative has the authority to change the warranty and no attempt to repair or promise to repair or improve the product by any representative of the company shall change or extend this warranty.

ASSEMBLY PROCEDURE

The DYNA-DIGGR is a completely assembled unit and comes to you ready to operate except for fuel and shovel attachment.

When you first receive your DYNA-DIGGR make a thorough inspection of the assembly and attachment to insure that no damage was incurred during shipment. If shipping damage should be found it must be corrected before operating the equipment.

The complete assembly breakdown, as shown in **figure 1**, should be referred to for identification and location of individual components.

All screws should be installed with the appropriate torque given in **table 1** make sure that the attachment is orientated correctly with the working surface positioned away from the operator. Check the following items after installation of an attachment and prior to operation.

- Orientation of attachment's working surface
- Installation or correct screws and lock washers
- Screws are correctly torqued

After completing the above items, fuel tank may be filled with the proper fuel. The DYNA-DIGGR is now ready to operate.

OPERATION PROCEDURE

The DYNA-DIGGR has only four controls which require operator attention.

1. The ignition on/off switch is located on the engine cylinder head above the spark plug. this switch must be in the "on" position before engine and is placed in "off" position to stop.
2. A manual choke is located on the engine carburetor and is used only while starting the engine. for proper settings of the choke see engine manual.
3. A manual pull rope, is located on the engine, is used to start the engine. See engine manual for location and starting procedure.
4. A manual throttle is located on the handle. Pulling up on throttle lever increased engine speed. Releasing throttle lever (down position) reduces engine speed to idle.

The following items should be accomplished before operating the DYNA-DIGGR:

1. Attach the desired shovel in accordance with **ASSEMBLE PROCEDURE.**
2. Assure all guards are installed and closed.

Caution: Do not operate the DYNA-DIGGR when belt guard is not installed.

3. Assure all nuts, screws and bolts are correctly torqued, see **table 1.**
4. Assure scheduled lubrication has been performed, see **maintenance procedure.**
5. Fill fuel tank with the correct mixture of gasoline and oil. see engine manual for correct procedure. Replace fuel cap firmly.

Caution: Do not fill fuel tank while engine is running, when engine is hot, when smoking, when in a closed or unventilated area or where fumes can come in with sparks or open flame.

6. Assure that the spark plug lead is connected to spark plug.
7. Place DYNA-DIGGR in accordance with procedure described in engine manual
8. Start engine of DYNA-DIGGR in accordance with procedure described in engine manual

The DYNA-DIGGR has been designed to be used by a single operator or by dual operators.

Caution: Do permit contact between shovel and any person while shovel is operating. The shovel has a very small amount of travel; however, the frequency and force with which this occurs can cause severe injury if contact is made while shovel is in motion.

All components of the DYNA-DIGGR are designed to operate at the maximum governor controlled engine speed. Any manual throttle setting which can be selected does not interfere with normal governor control of engine speed. The maximum shovel efficiency and maximum engine cooling is obtained at maximum throttle.

Caution: Do not alter engine governor setting.

Care should be taken to keep shovel cutting edge off hard surfaces such as large rocks, metal, or concrete. Should a large rock be encountered during digging, the shovel should be

repositioned to prevent surface cutting contact. Small stones and rocks are rapidly moved away from the pulsating action of the shovel and should be of no concern.

In **figure 2** are shown some approximate cutting depths which will result from a given diameter and shovel entry angle. After only limited experience with the DYNA-DIGGR it will become very easy to obtain the desired “root ball” shape. As in conventional digging, it will be found that different soils, soil condition and root structure will influence the final shape and compactness of the “root ball”.

The DYNA-DIGGR must never be forced either vertically or horizontally by the operator. Any attempt to increase digging rate by operator force will only result in unpleasant operator fatigue and will not increase equipment performance. The DYNA-DIGGR should be guided into position by the operator using minimum effort during entry and exit of each shovel cut. Upon completion of the final shovel cut and after root system has been completely released, including tap root, the shovel may be used to lift the “root ball” from the hole. This is best accomplished by leaving the shovel engaged in the last cut and moving the handlebar away from being dug.

Caution: Lifting or prying force must never be used which deforms the shovel or other attachment.

If you are a first time user of the DYNA-DIGGR you may find that experimentation with different diameter cuts and shovel entry angles may be performed in an open area which has heavy grass roots. practice in this manner will sharpen your digging technique. remember; never try to force the DYNA-DIGGR. Unlike conventional hand shovel, adding force to the DYNA-DIGGR will not appreciably increase the digging rate.

MAINTENANCE PROCEDURE

To obtain the maximum service from this equipment it is best to perform maintenance on a schedule which is based upon hours of equipment use. see **figure 3** for general maintenance requirements. The following maintenance schedule may be used except when severe usage warrants additional service.

MAINTENANCE SCHEDULE

item	first 4 hrs.	daily/ as reqd.	each 25 hrs.
belt tension	x		
clean:			
engine air filter			x
engine cooling system			x
remove exhaust residue			
expelled oil / grease		x	
		x	
		x	
inspect:			
for loose bolts, nuts,			
screws, nuts,	x	x	
safety guards, etc.			
lubricate: (1/4 squirt)			
bearing housing, piston shaft			
and throttle cable.			x
			x
sharpen attachment cutting edge		x	

BELT TENSION: after the initial break-in period (4 hours) or at any time belt slippage is suspect, the belt tension should be adjusted. When the belt becomes frayed, cracked, or otherwise evidences advanced deterioration, it should be replaced. When adjusting belt tension the following steps should be taken: also see **figure4.**

1. Remove spark plug.
2. Open belt guard by loosen one screw at top of guard. Do not remove screw from cover.
3. Loosen 4 hexagon head cap screws using 7/16 socket wrench. Do not remove these 4 screws.
4. Slide engine and mounting plate toward handlebar. See figure 4 for tension measurement. Tension belt should permit approximately 1/4 inch deflection of belt with perpendicular load on belt of 3 pounds.

Caution! Excessive belt tension will cause rapid deterioration of belt and clutch bearing.

5. Torque 4 hexagon head cap screws which retain engine mounting plate while holding required tension on belt.
6. Close belt guard and fasten single clamping screws.

Caution! Do not operate engine with belt guard open.

7. Connect spark plug lead.

CLEAN: Maintaining this equipment in a clean condition will assure a longer and more enjoyable usage of your DYNA-DIGGR. After each day's use (more often in severe use) clean all foreign matter from the engine cooling system. Remove any oil or grease which may be expelled at the engine exhaust port and lower push rod bearing. Periodically clean area enclosed by belt guard.

The engine air filter should be cleaned each 25 hours of use. Gasoline may be used as a cleaning agent. Do not use any cleaner which may harm paint, belt, or engine parts. Follow directions recommended by supplier of cleaning material.

Caution! Perform cleaning operation in well ventilated area. Be sure all cleaning material has been removed from equipment before starting engine.

INSPECT: A periodic inspection of the DYNA-DIGGR will reveal any loose components. All components must be kept in place with fasteners correctly torqued to assure maximum life of the equipment. Any lost fasteners or damaged components must be replaced or repaired before next use of equipment.

LUBRICATE: Use a good grade of machine oil on throttle cable and multipurpose bearing grease in both grease fittings. See **figure 3** for location of lubrication points.

SHARPEN: To assure maximum efficiency of the DYNA-DIGGR, the attachment cutting edge must always be kept sharp, sharpening of the edge may be done with hand file, felt sander, power grinder or other metal cutting methods which are available, see **figure 5** for best sharpening angle, always sharpen cutting edge which is next to operator (opposite working surface). It is best to remove shovel from push rod when sharpening.
The shovel attachment screws must always be kept properly torqued to assure that no movement develops between shovel and push rod. See **ASSEMBLY PROCEDURE** for shovel installation procedure.

ENGINE SERVICE: The engine manual is to be followed for specific engine maintenance.

Storage: For long term storage of the DYNA-DIGGR (over 30 days) perform the following steps:

1. Clean DYNA-DIGGR and engine of all foreign material.
2. Prepare engine as described in engine manual.
3. Coat all unprotected metal surfaces of the shovel and push rod with a film of oil or other corrosive inhibitor. The handlebars of the DYNA-DIGGR are stainless steel and do not require any coating.
4. Store the DYNA-DIGGR in a dust and damp free area suspended from the handlebar.

Caution! Do not store the dyna-diggr near fertilizer, chemicals or spray substance which can produce a corrosive atmosphere.

REPAIR PARTS:

In **figure 1** is an exploded view showing all components of the Dyna-Diggr. The numbers identifying each part are to be used when ordering replacement components. Service involving bearing replacement should be performed by supplier from which you obtained DYNA-DIGGR. Bearing replacement requires special tooling and can best be performed using proper equipment. All other repairs require normal wear can easily be performed by the owner. When ordering replacement parts the following information is required.

4 b 3 2

Model number- _____| |_____-part number

You may place your order by mail or by telephone using the toll free number:

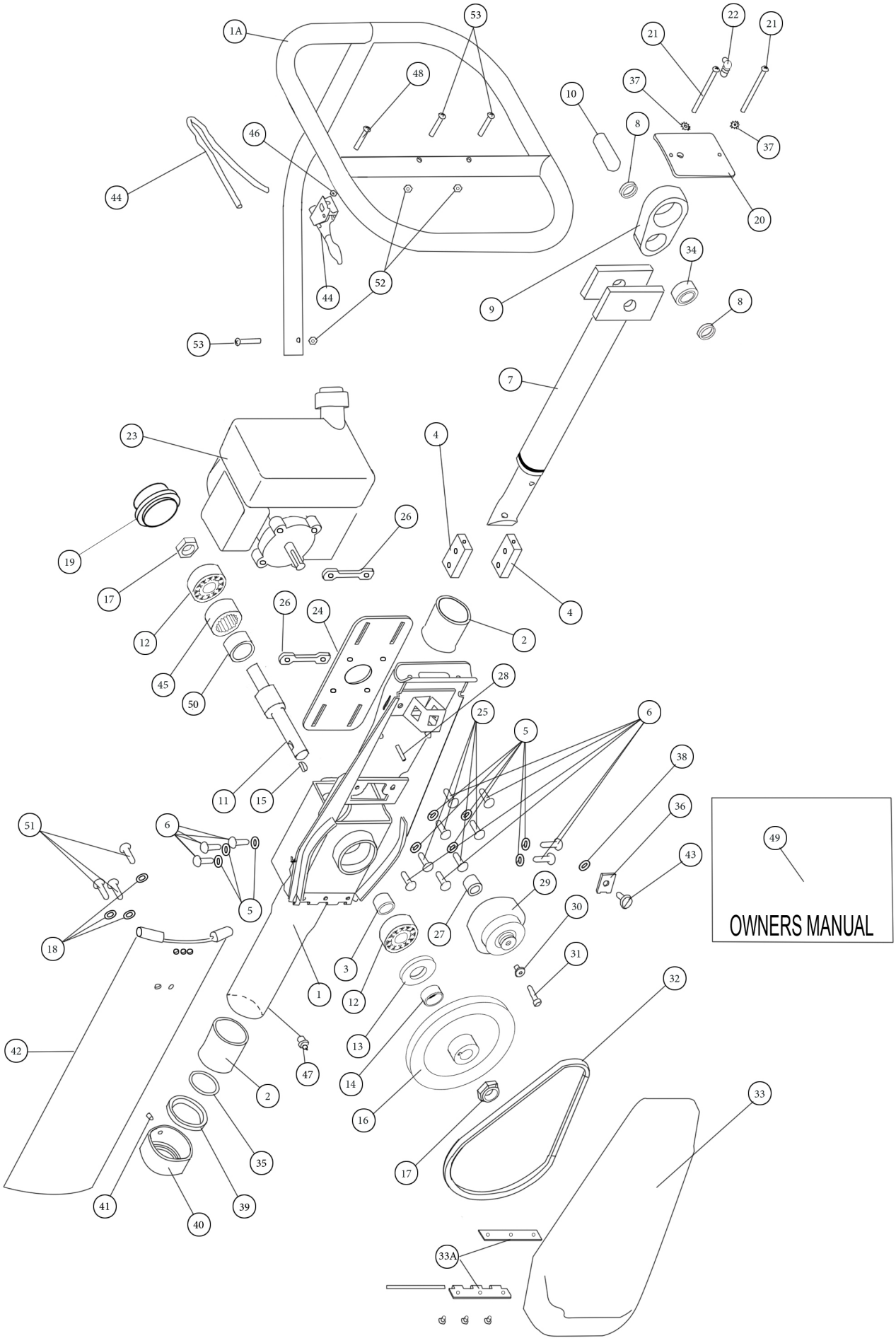
Continental U.S.A.	1-800-328-4356
or	1-800 if you dig

Brisco, inc. reserves the right to make changes or add improvements at any time without notice or obligation.

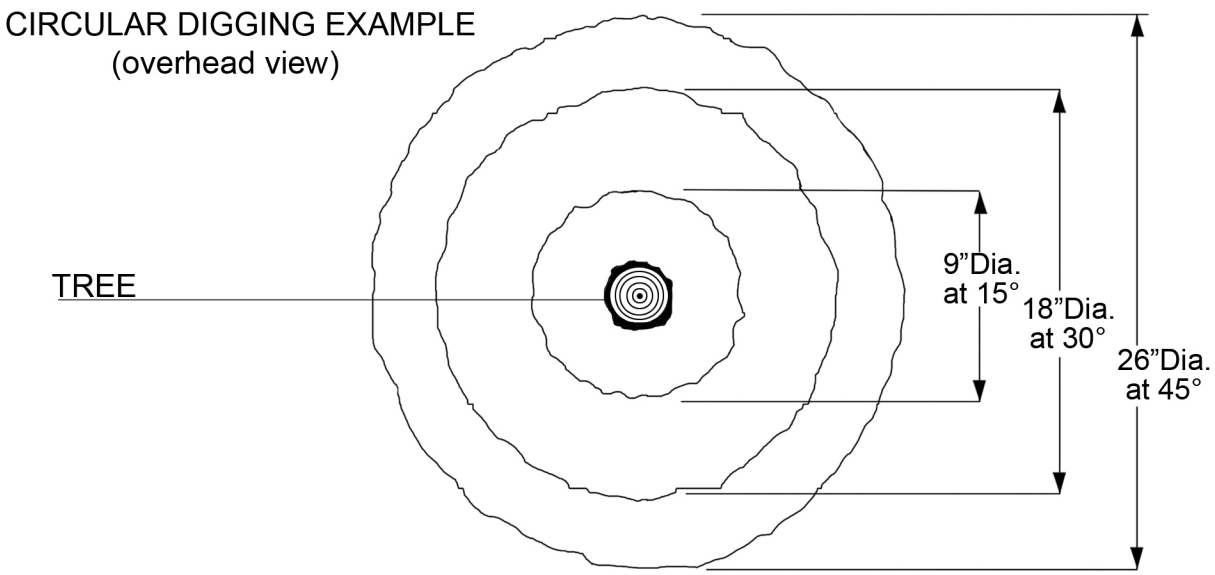
DYNA-DIGGR PARTS (ASSEMBLY)

CC	QTY	*PART NUMBER*	*DESCRIPTION*	*NOTES*
1A	1A	HANDLE		
1	1	MAIN BODY ASSEMBLY		
2	2	BUSHING	BRONZE BUSHING	
3	1	DDR000-I-LA	CAM SPACER	
4	2	DDR000-A-M	GUIDE BLOCK	
5	13	LOCK WASHER	1/4" LOCK WASHER	
6	8	HHCS	1/4-28 X 3/4"	
7	1	YOKE ASSEMBLY		
8	2	DDR000-J-LA	YOKE SPACER	
9	1	DDR880-A-M	CONNECTING ROD	
10	1	YOKE PIN	3/4 X 1-3/4" DOWL PIN	
11	1	DDR000-S-LT	CAM	
12	2	CONE BEARING	#09067 KOYO BEARING RACE	
13	1	SEAL	#10202 -TB TCM SEAL	
14	1	DDR000-T-LA	CAM BUSHING	
15	1	WOODRUFF KEY	3/16-/5/8	
16	1	PULLEY	SHEAVE	
17	2	CAM SHAFT NUT	3/4-16 LIGHT FLEX LOCK	
18	3	LOCK WASHER	5/16" LOCK WASHER	
19	1	CAP	DUST CAP	
20	1	DDR187-A-M	ALUMINUM COVER	
21	2	BHCS2	10-32 X 3 INCH	
22	1	90 DEGREE GREASE FITTING	1/8" NPT 90 DEG	
23	1	TECUMSEH ENGINE	TECUMSEH #TM049XA-36	
24	1	DDR135-A-LA	MOTOR MOUNT PLATE	
25	4	HHCS	1/4-20 X 3/4	
26	2	DDR250-A-LA	CLAMP BAR	
27	1	DDR000-P-LT	CLUTCH SPACER	
28	1	KEY	1/8" x 1/8" x 3/4" KEYSTOCK	
29	1	CLUTCH ASSEMBLY	CLUTCH #2056-P001	
30	1	CLUTCH CAP	CLUTCH CAP	
31	1	SHCS	1/4-20 X 1 1/4	
32	1	DRIVE BELT	A-24 DRIVE BELT	
33	1	GUARD	#DDR18720 PULLY COV	
33A	1	HINGE		
34	1	YOKE BEARING	7SF12 TORINGTON SP	
35	1	PISTON SEAL RING	O RING 1/8 X 1 3/4 I.D.	
36	1	RETAINER	#17-10017-11 SOUTHCO	
37	2	EXTERNAL TOOTH LOCK WASHER	#10 EXT TOOTH LOCK W	
38	1	RECEPTICALE	17-10014-12 SOUTHCO	
39	1	PISTON SEAL	SEAL	
40	1	DDR000-F-LT	SEAL RETAINER	
41	1	SET SCREW	10-32 X 1/8 SOCKET	
42	1	DDR125-J-LT-2	SHOVEL	
43	1	SCREW	#17-11-106-11 SOUTHCO	
44	1	TRIGGER ASSEMBLY		
45	1	CAM BEARING	BHA-2216-ZOH TORRINGTON	
46	1	HEX NUT	10-32 HEX NUT	
47	1	GREASE FITTING	1/8-27 NPT	
48	1	BHCS	10-32 X 1 1/2	
49	1	OWNERS MANUAL	PRINT 2 SIDES / BINDER	
50	1	BEARING SLEEVE	#182220 LRB BEARING	
51	3	HHCS	5/16-18 X 3/4"	
52	3	FLN	1/4-20 X LIGHT FLEX LO	
			1/4-20 X 1-1/2" BHCS	

FIG. 1 PARTS ASSEMBLY



DIGGING EXAMPLES



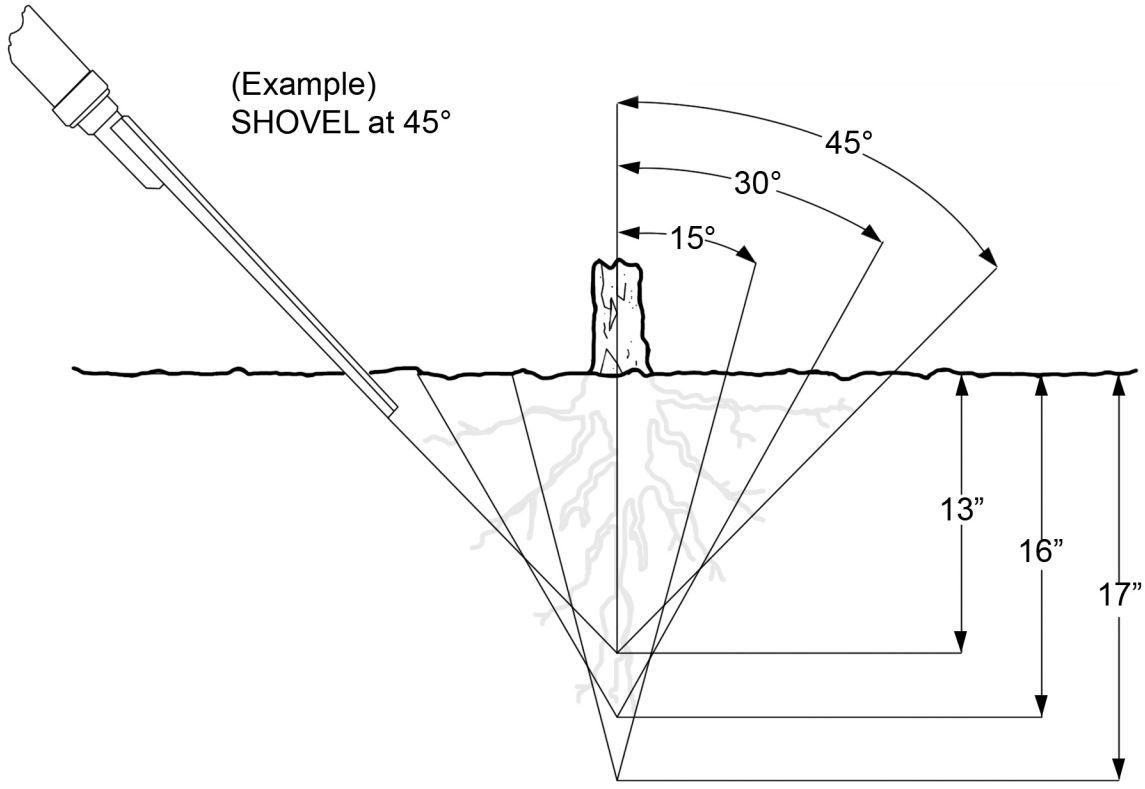


FIGURE 2

GENERAL MAINTENANCE

LUBRICATION POINT
OIL THROTTLE CABLE WITH MACHINE OIL.

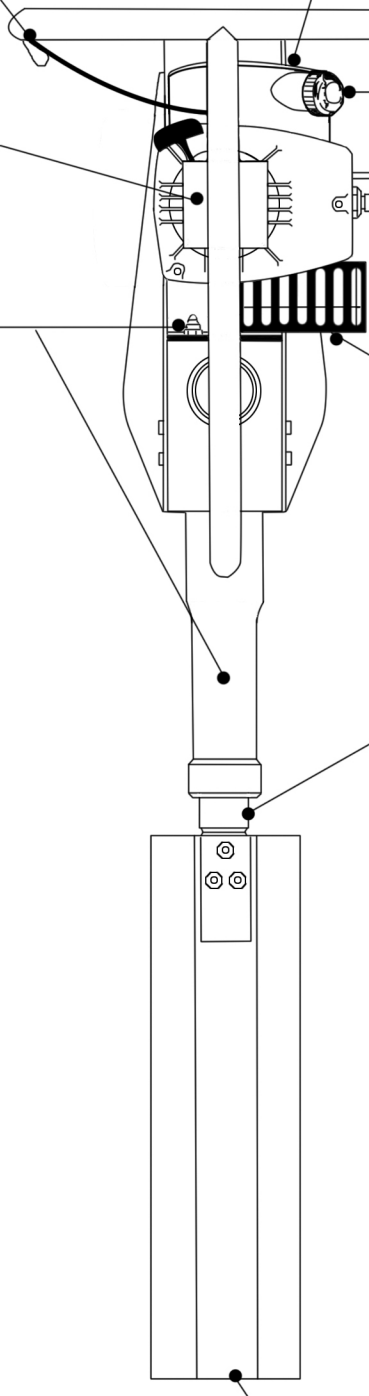
KEEP CLEAN
ENGINE AIR FILTER.

FUEL/OIL TANK
FILLER CAP

KEEP CLEAN
KEEP ALL ENGINE AIR PORTS OPEN AND FREE OF FOREIGN MATERIALS

⚠ REMOVE IGNITION LEAD FROM SPARK PLUG WHEN PERFORMING MAINTENANCE ON DYNA-DIGGR. RECONNECT BEFORE STARTING ENGINE.

LUBRICATION POINT
MULTI-PURPOSE BEARING GREASE EACH 25 HOURS OF OPERATION-(1/4 SQUIRT)



KEEP CLEAN
REMOVE ALL EXHAUST RESIDUE AFTER EACH USE

KEEP CLEAN
REMOVE ALL EXPELLED GREASE AFTER EACH USE.

KEEP SHARP
SHOVEL CUTTING EDGE

FIGURE 3

BELT TENSION

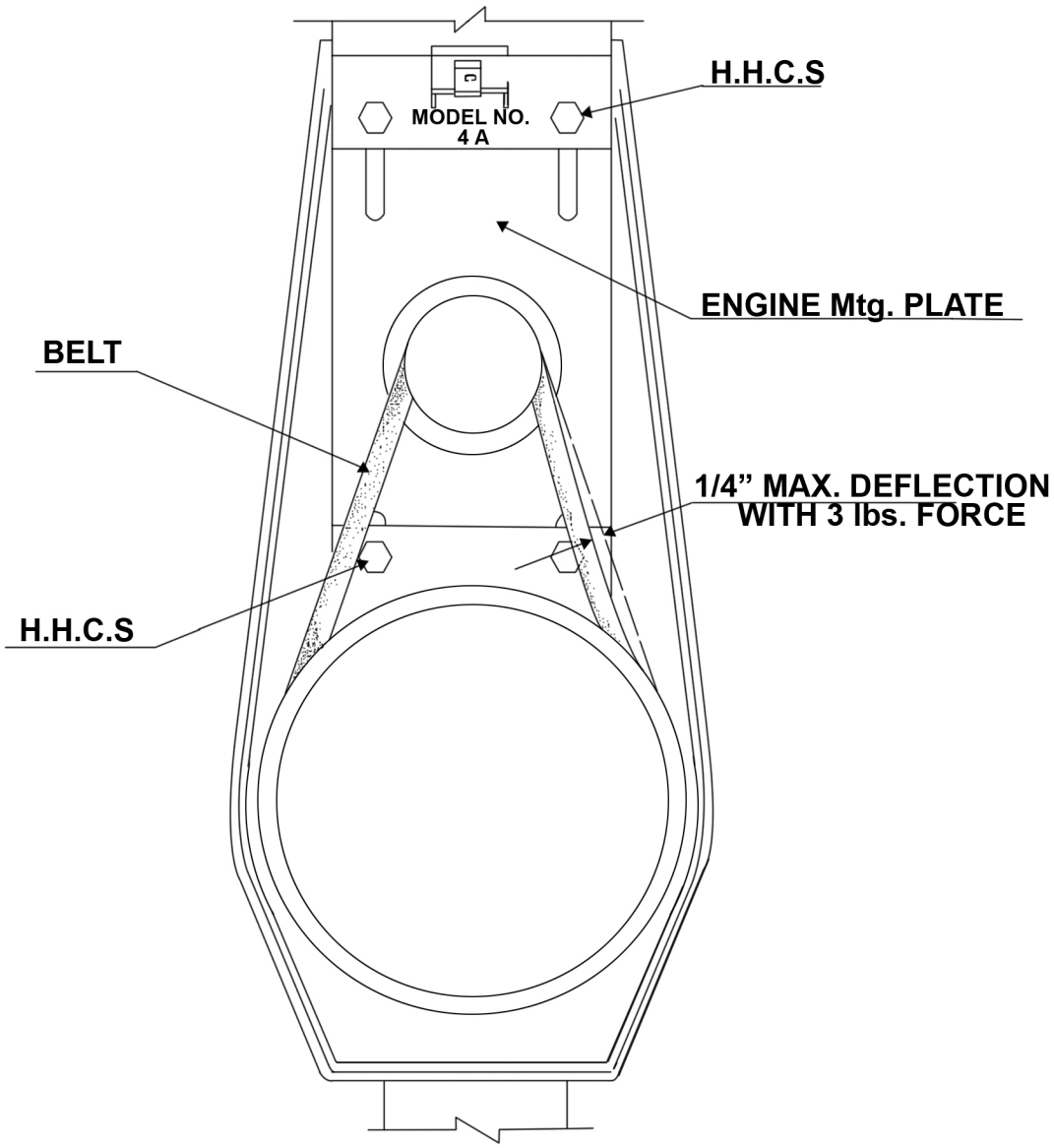


FIGURE 4

SHOVEL MAINTENANCE

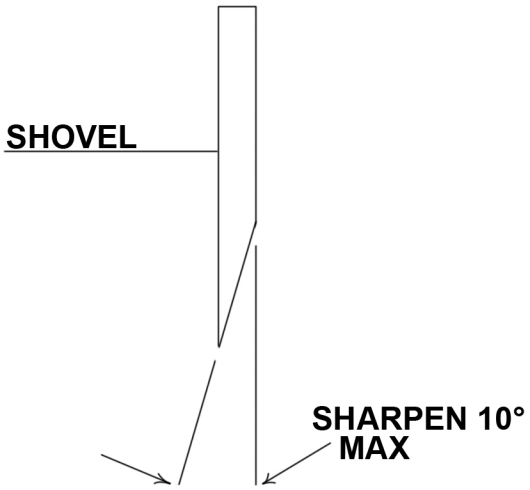
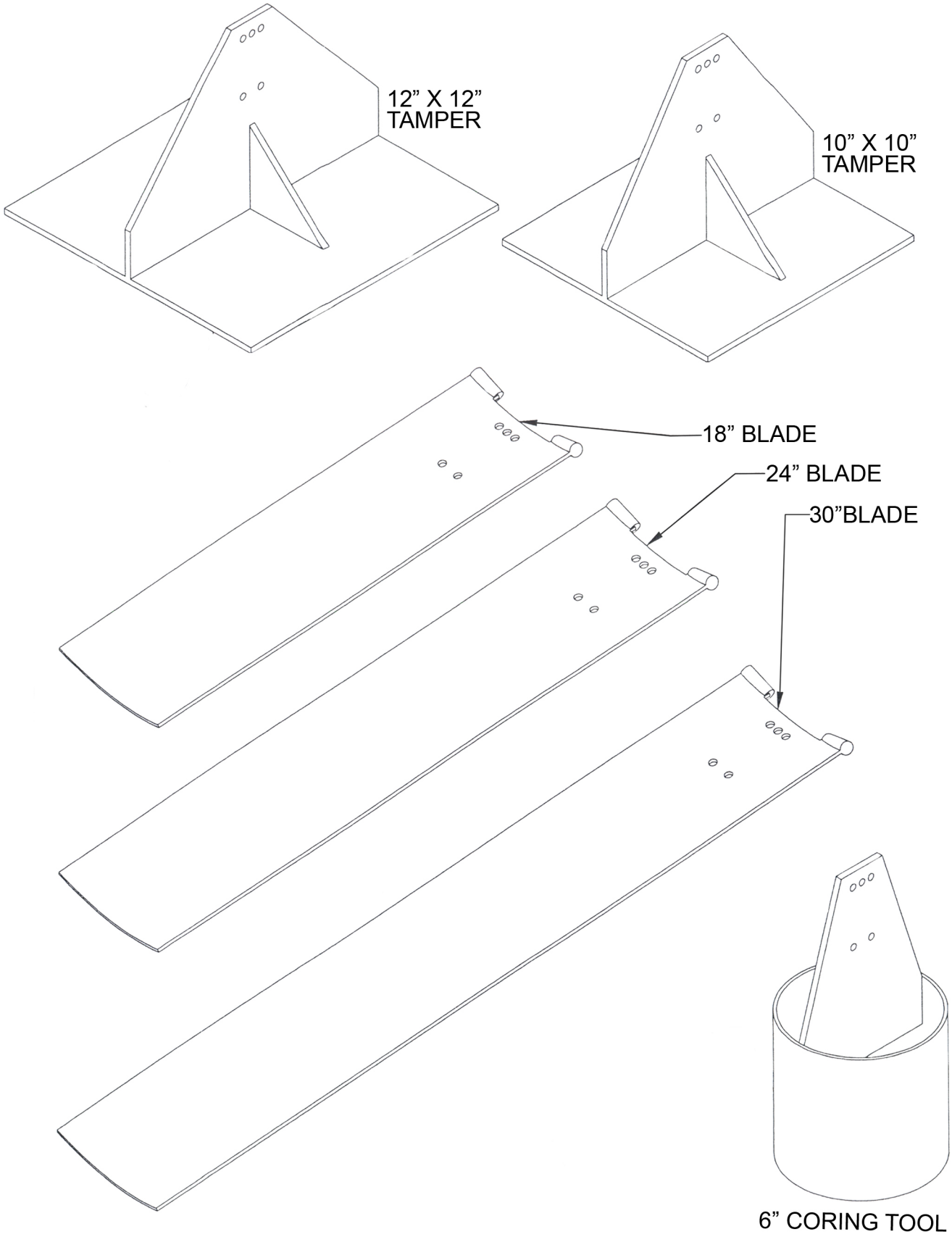


FIGURE 5

SCREW SIZE	MAX. TORQUE
NO. 8-32UNF	16 INCH POUNDS
NO. 10-32 UNF	30 INCH POUNDS
1/4 - 28UNF	80 INCH POUNDS
3/4 - 16UNF	100 INCH POUNDS

TABLE I

STANDARD DYNA DIGGR TOOLS



NOTE:
CUSTOM SHAPES , DIMENSIONS, AND TOOLS AVAILABLE UPON REQUEST. PLEASE CONTACT BRISCO, INC./ DYNA-DIGGR FOR DETAILS