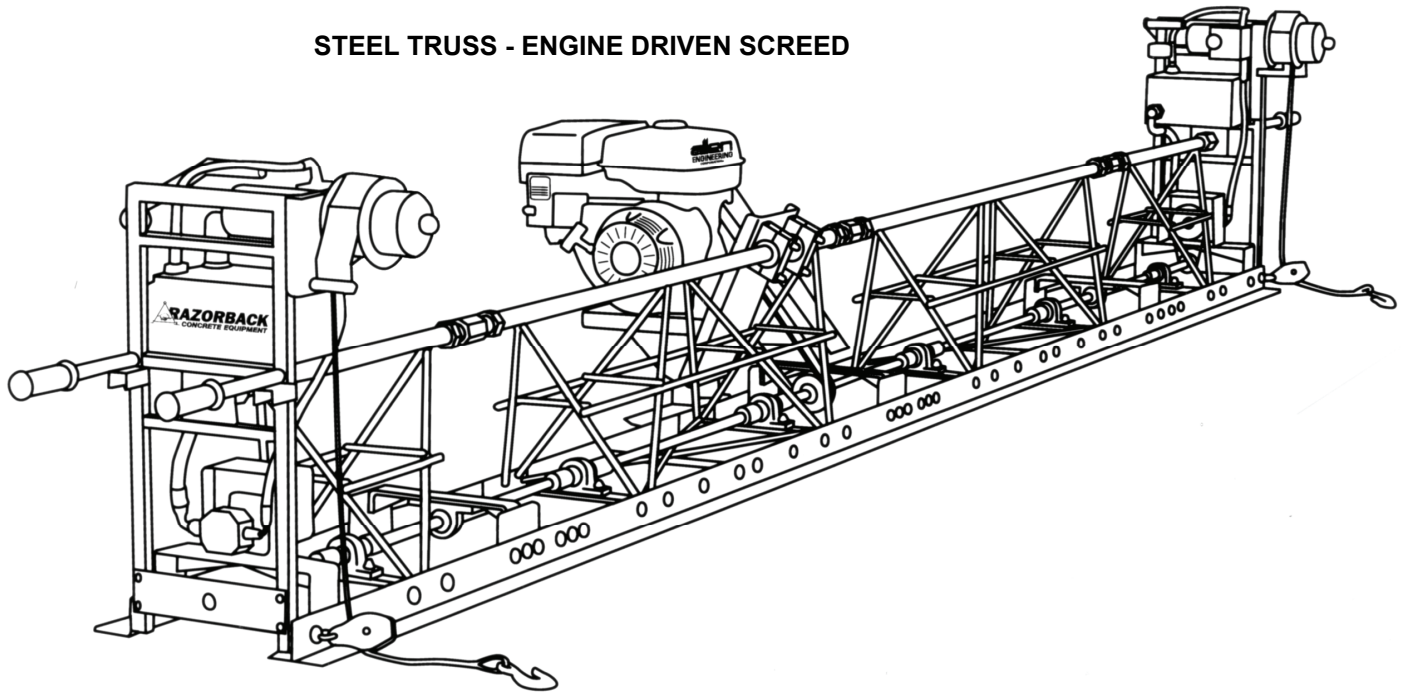




RAZORBACK

POWER SCREEDS

STEEL TRUSS - ENGINE DRIVEN SCREED



O P E R A T I O N S M A N U A L

MODELS

12ED

12HED

12SHED

allen
ENGINEERING
CORPORATION

LIMITED WARRANTY

Allen Engineering Corporation warrants its products to be free of defects in material or workmanship for the following periods:

A. All New Machines and Part	6 Months
B. All New Gear Boxes	2 Years
C. All Factory Reconditioned Gear Boxes	1 Year

Warranty period begins on first day of use by End User. This first day of use is established by a completed warranty card or a Bill of Sale to the end user. All warranty is based on the following limited warranty terms and conditions.

1. Allen Engineering Corporation's obligation and liability under this warranty is limited to repairing or replacing parts if, after Allen's inspection, it is determined to be a defect in material or workmanship. Allen Engineering Corporation reserves the choice to repair or replace.
2. If Allen Engineering Corporation chooses to replace the part, it will be at no cost to the customer and will be made available to the Distributor/Dealer from whom the customer purchased the product.
3. Replacement or repair parts, installed in the product, are warranted only for the remainder of warranty period of the product as though they were the original parts.
4. Allen Engineering Corporation's warranty applies only to the products that are manufactured by Allen Engineering and does not cover component parts such as engines and clutches. Allen Engineering Corporation **DOES NOT** warranty clutches. Engine warranty claims should be made directly to an authorized factory service center for the particular engine make.
5. Allen Engineering Corporation's warranty does not cover the normal maintenance of products or its components (such as engine tune-ups and oil changes). The warranty also does not cover normal wear and tear items (such as belts and consumables).
6. Allen Engineering Corporation's warranty will be void if it is determined that the defect resulted from operator abuse, failure to perform normal maintenance on the product, modification to product, alterations or repairs made to the product without the written approval of Allen Engineering Corporation. Allen Engineering Corporation also excludes from warranty any failure of clutches on any engine driven piece of equipment.
7. If a new gear box has a factory defect within the first year of use, Allen Engineering Corporation will either repair the gear box or replace it with a new gear box. If a new gear box has a factory defect in the second year of use, Allen Engineering Corporation will either repair it or replace it with a factory reconditioned gear box. Impact damage is **NOT** covered under the gear box warranty.
8. Allen engineering Corporation will pay shop labor repair on warranty at the Allen Engineering Shop Labor Rate in existence on the date of the warranty claim. An Allen Engineering Labor Chart will determine the time allowed to complete a repair and will govern the shop labor hours that will be allowed.
9. Allen Engineering Corporation will pay freight on warranty replacement parts at Worldwide standard ground rates. No warranty replacement parts will be shipped air freight at the expense of Allen Engineering Corporation. Allen Engineering only pays outbound freight charges when sending warranty replacement parts to the customer VIA ground service. Allen Engineering does not pay any inbound freight, however, if Allen Engineering determines this to be warranty defect only then will Allen Engineering reimburse the customer for inbound freight at standard ground rates.
10. Allen Engineering Corporation's warranty policy **WILL NOT COVER** the following; taxes, shop supplies, environmental surcharges, air freight, travel time, loss of rental revenue, or any other charges whatsoever or any liabilities for direct, incidental, or consequential damage or delay.
11. **Allen Engineering Corporation makes no other warranty, expressed or implied. This limited warranty is in lieu of the warranty of merchantability and fitness. There are no other warranties that extend beyond the description on this document.**
12. No Allen Engineering Corporation employee or representative is authorized to change this warranty in any way or grant any other warranty unless such change is made in writing and signed by an officer of Allen Engineering

STEEL TRUSS ENGINE DRIVEN SCREED

O P E R A T I O N S MANUAL

NOTE: THIS MANUAL IS BROKEN UP INTO THE FOLLOWING PARTS

**OPERATIONS
SECTION 1**

**PARTS
SECTION 2**

MODELS - 12ED 12HED 12SHED

**ALLEN RAZORBACK SCREEDS ARE COVERED BY ONE OR MORE OF THE FOLLOWING
PATENTS:**

U.S. PATENTS: 4,249,327; 4,316,715; 4,349,328; 4,363,618; 4,375,351; 4,412,803; 4,544,346; 4,630,964; 4,648,741; 4,685,826;

OPERATIONS

• TABLE OF CONTENTS •

OPERATIONS

SECTION 1

1. TABLE OF CONTENTS	S1-1
2. INFORMATION CONTAINED IN THIS MANUAL	S1-2
3. ORDERING INFORMATION	S1-2
4. SERIAL NUMBER LOCATION	S1-3
5. DISTRIBUTOR INFORMATION	S1-4
6. SAFETY NOTATIONS	S1-4
7. SPARK ARRESTERS	S1-4
8. OPERATING SAFETY	S1-5
9. SERVICE SAFETY	S1-6
10. DIMENSIONAL PICTORIALS	S1-7
11. TECHNICAL DATA	S1-8
12. BEFORE STARTING	S1-9
13. OPERATING	S1-9
14. PERIODIC MAINTENANCE SCHEDULE	S1-10
15. LIFTING PROCEDURES	S1-11
16. SECTION ASSEMBLY	S1-12
17. ATTACHING WINCHES TO STAKES	S1-13
18. DETERMINING LEFT & RIGHT OF SCREED	S1-13
19. STRINGLINING	S1-14
20. END HANDLE ASSEMBLY	S1-15

• INFORMATION CONTAINED IN THIS MANUAL •

OPERATIONS SECTION 1

The information contained in this manual provides important procedures to safely operate and maintain your engine driven screed. The steps that are illustrated in this manual must be followed otherwise the life of the machine could be greatly shortened due to operator neglect. Remember that a machine that is well taken care of will provide many years of trouble free operation.

For your own protection and safety, always adhere to the safety warnings and notes that are pointed out in this manual. Disregard to these instructions could lead to personal injury or possibly even death.

Refer to the your engine owners manual for warranty information and spare parts ordering. **Allen Engineering does not warrant the engine that came with your engine driven screed.**

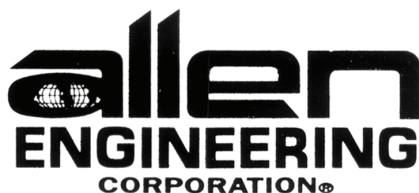
• ORDERING PARTS •

This manual contains an illustrated parts list to help you in ordering replacement parts for your engine driven screed. Follow the instructions below carefully when ordering parts to insure that you get the exact parts that you are wanting.

- All orders for service parts include a serial number. Shipment of your parts will be delayed if this information is not available when you call Allen Engineering Customer Service.
- Include the description and correct part number from Section 2, as well as, the quantity needed.
- For prompt and accurate shipments, specify exact shipping instructions, including preferred routing and complete destination address.
- DO NOT return parts to Allen Engineering without receiving written authorization from Allen Engineering Corporation. All authorized returns must be shipped pre-paid.

When placing an order, contact your nearest Allen Engineering Distributor or call Customer Service at 800-643-0095 or 870-236-7751.

**THIS MANUAL COVERS TRUSS SCREED STARTING WITH THE FOLLOWING SERIAL NUMBERS:
2' - HED820314, 2-1/2' - HED830333, 5' - HED850445, 7-1/2' - HED671065**



P.O. BOX 819
PARAGOULD, AR 72451-0819
USA

**WHEN ORDERING ADDITIONAL COPIES OF THIS MANUAL,
PLEASE SPECIFY THE PART NUMBER BELOW.**

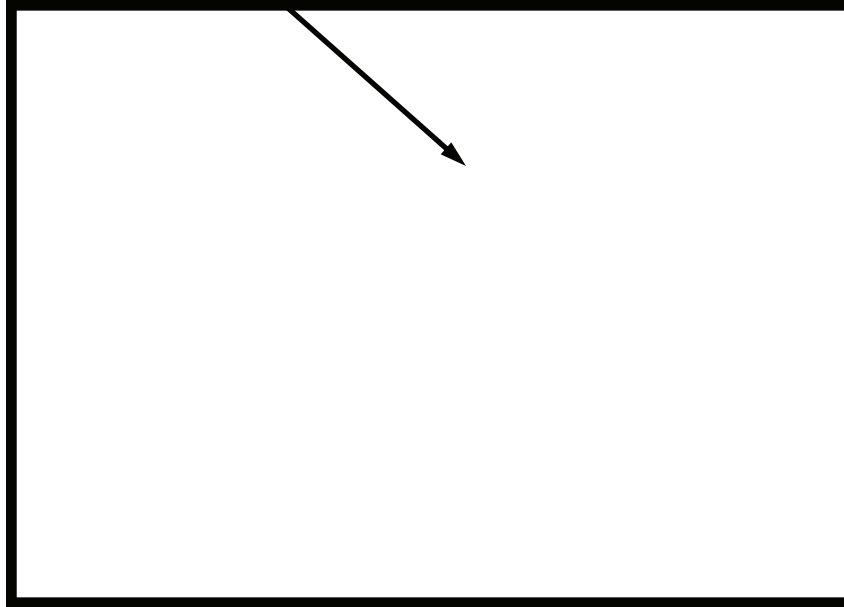
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CORPORATION ALL RIGHTS RESERVED -
CONTENTS SUBJECT TO CHANGE
WITHOUT PRIOR NOTICE.**

OPERATIONS SECTION 1

• SERIAL NUMBER LOCATION •

LOCATION OF SERIAL #



INFORMATION ON SERIAL NUMBER

SAMPLE # - ED82243

ED, HD, SHED = MODEL

8 = LAST DIGIT OF PRESENT YEAR

2, 25, 5, 7 = SIZE OF TRUSS ASSEMBLY

2 = MONTH OF PRESENT YEAR

43 = SEQUENCE NUMBER OF SECTION BUILT IN
PRESENT MONTH

NOTE: EVERY SECTION THAT LEAVES ALLEN ENGINEERING HAS A SERIAL NUMBER STAMPED ON THE RIGHT HAND SIDE OF THE TRUSS TOP PIPE. WHEN ORDERING PARTS, YOU WILL BE ASKED FOR THIS SERIAL NUMBER. MAKE NOTE OF ALL YOUR SECTION SERIAL NUMBERS FOR FUTURE REFERENCE.

FILL OUT SERIAL #'S HERE FOR FUTURE REFERENCE

• DISTRIBUTOR INFORMATION •

OPERATIONS SECTION 1

PLACE DISTRIBUTOR INFORMATION HERE FOR FUTURE REFERENCE

DISTRIBUTOR NAME: _____ PHONE #: _____
ADDRESS: _____
CITY: _____ STATE: _____ ZIP: _____ S
ALESMAN: _____
ADDITIONAL COMMENTS: _____

• SAFETY NOTATIONS •

NOTE: Throughout this manual, there are **NOTES**, **CAUTIONS**, and **WARNINGS** which must be followed to reduce the possibility of improper service damage to the equipment or personal injury.

- **NOTE** - Contains additional information important to a procedure.
- **CAUTION** - Provides information important to prevent errors which could damage the machine.

• LAWS PERTAINING TO SPARK ARRESTERS •

Some states require that spark arresters be used on internal combustion engines in some locations. A spark arrester is a device designed to prevent the discharge of sparks or flames from the engine exhaust. It is often required to have a spark arrester on an engine when operating equipment on forested areas to reduce the risk of fires. Consult the engine distributor or contact the local authorities to make sure that you comply with regulations concerning spark arresters.

OPERATIONS SECTION 1

• OPERATING SAFETY •

Familiarity and proper training are required for the safe operation of this equipment. Equipment operated improperly or by untrained personnel can damage equipment and could be dangerous. Read the operating instructions contained in both this manual and the engine manual to familiarize yourself with the location and proper use of all the controls.

DO NOT operate this machine until you have read the operating and safety instructions. Operate the machine in accordance with the manufacturer's instructions.

ALWAYS inspect your screed upon arrival for damage or tampering that can sometimes occur during shipping. If damage is found, file a claim with your carrier immediately!! Mark freight bill of lading as "damaged shipment".

NEVER allow untrained personnel to operate your engine driven screed. Individuals who operate this screed should have adequate training in operating procedures.

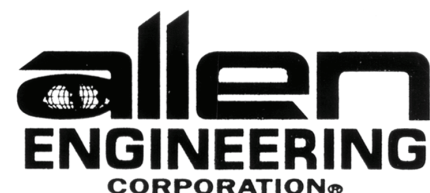
DO NOT attempt to fill fuel or hydraulic(winch) tanks while machine is running. Allow engine to cool for five minutes before refueling.

NEVER use over-the-counter hardware to replace manufacturers hardware. Contact your nearest Allen Engineering dealer or our Customer Service department.

HAZARD: When operating machines with gas engines in confined areas, the fumes must be ventilated. Improper ventilation could lead to serious health problems or even death.

ALWAYS be aware of *HOT* components on this machine, such as, engines, hydraulic components.

ALWAYS be aware of the rotating drive shaft on this engine driven screed. Failure to keep away from the shaft could lead to severe injury.



• SERVICE SAFETY •

OPERATIONS SECTION 1

DO NOT attempt to clean or service screed while machine is running. The rotating shaft could cause severe injury.

DO NOT attempt to start a flooded engine with the spark plug removed on gasoline powered engines. Fuel trapped in the cylinder will squirt out of the spark plug opening.

DO NOT test for spark on gasoline engines if engine is flooded or the smell of gasoline is present. A stray spark could ignite the fumes.

DO NOT use gasoline, other fuels, or any flammable solvent to clean parts, especially in enclosed areas. Fumes from fuels and solvents can cause serious health problems if you are exposed to them over an extended period of time.

ALWAYS keep area around muffler free of debris, such as, leaves, paper, cartons, etc. A hot muffler could ignite them starting a fire.

ALWAYS disconnect spark plug before servicing engine to prevent accidental start-up.

OPERATIONS SECTION 1

• DIMENSIONAL PICTORIALS •

The dimensions of the engine driven screed in this manual are illustrated on this page. The height and width are in Figure 1 and the lengths of the different screed sections available are illustrated in Figure 2.

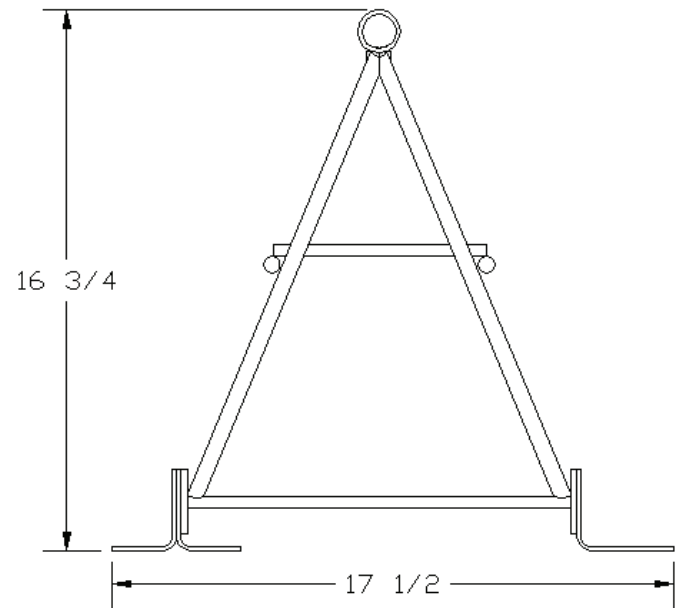


FIGURE 1

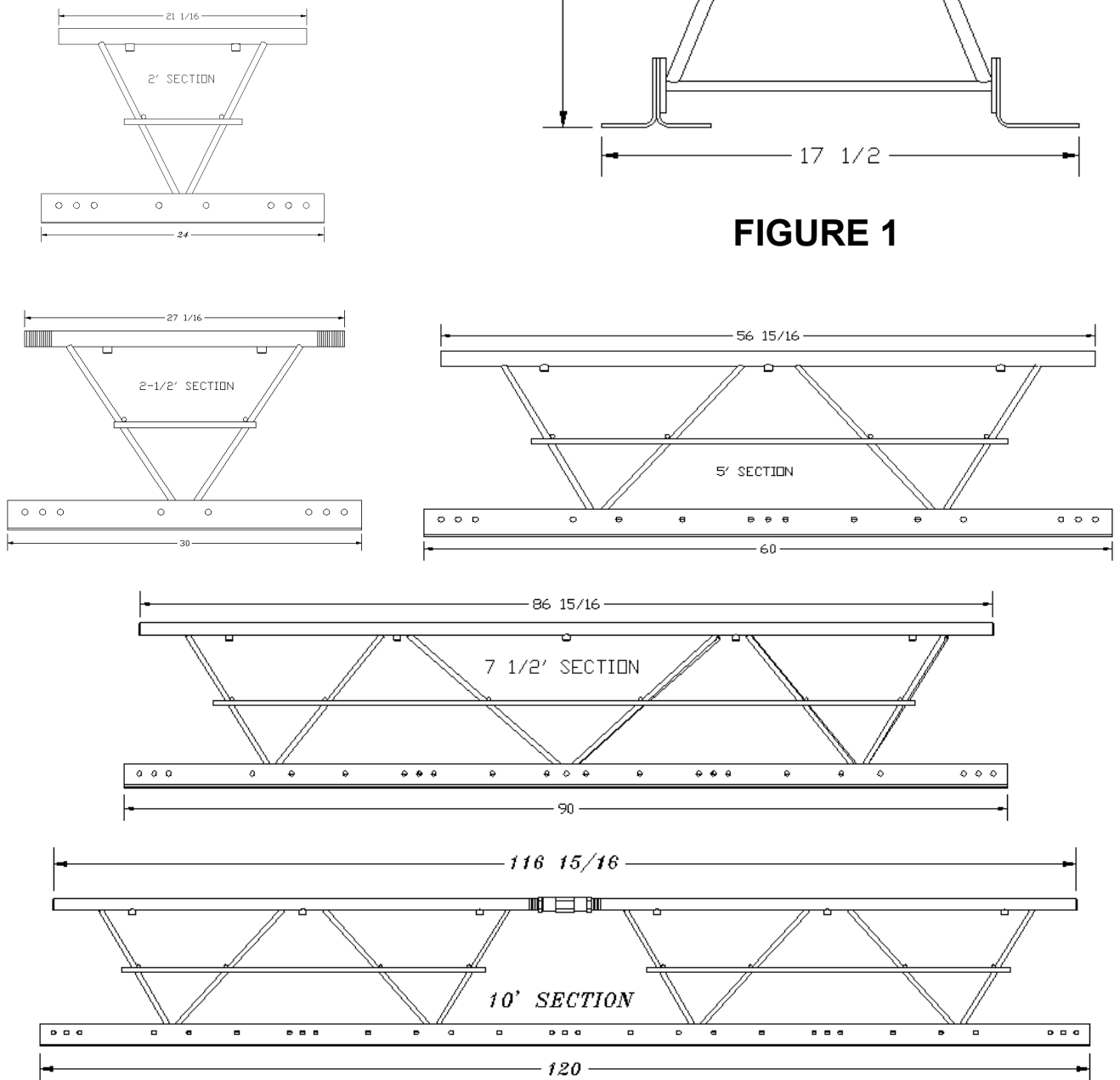


FIGURE 2

• TECHNICAL DATA •

OPERATIONS SECTION 1

SPECIFICATIONS ON THE STEEL TRUSS FRAME:

MODEL	TRUSS BLADES	10' lbs/kg	7 1/2' lbs/kg	5' lbs/kg	2 1/2' lbs/kg	2' lbs/kg	MAXIMUM WIDTHS
12ED	12 GA. GALV. STEEL	172/79	132/50	86/39	46/21	37/17	55'
12HED	10 GA. GALV. STEEL	180/82	135/64	90/41	50/23	36/16	65'
12SHED	10 GA. STAINLESS	188/85	141/64	94/43	53/24	50/23	75'

- Top Pipe - Coupling System - Fine Thread Adjustment 1 5/16-16tpi with Full Flow 1" Non-Restricting Air System with Dual Locking Jam Nuts.
- Vibration Proof Welds with Exclusive Vibration-Dampening System.
- Bolt-On Blades with Quick Connecting Splice Plates Front and Back at each Truss Section using 1/2-13 Nuts and Bolts Throughout.
- Balanced Design Truss Height to Overall Base Width Provides Equilateral Triangle Strength for Obtaining Precise Grade Control and Structure Integrity.
- Top Pipe Coupling System Provides for Crowned or Invert Slab Section without loosening Bottom Splice Blade Bolts. Special Crowns or Inverts are obtainable with Ball Joint Top Pipe Coupler or Crown Invert Bracket. Crowns greater than 1/8"/ft are considered special.
- NOTE: Select Screed Width to Allow Minimum Overhangs Past Forms; 6" Overhangs are Ideal,

SPECIFICATIONS ON THE ROTATING ECCENTRIC SHAFT (RES) VIBRATORY SCREED:

MODEL	ENGINE KITS			8" END	LOW PROFILE	DUAL
HONDA - CENTRIFUGAL	5.5 HP	8 HP	11 HP			
12ED	√	√	√	√	√	√
12HED		√	√	√	√	√
12SHED		√	√	√	√	√

- Rotating Eccentric Shaft (RES) Produces Over 8000 Vibration Cycles Per Min.
- 3/4" Diameter High Alloy Steel Plated Vibratory Shaft with 1 3/8" Diameter Dual Eccentric Vibrators Mounted on 30" Centers. Running in 3/4" Diameter Pillow Block Bearings with Shaft Locking Collars.
- ENGINE SPEED: up to 3600 RPM with throttle control.
- Vibrator Shaft with Synchronization Key Way and four each Square Head Set Screws Mounted with an Intermediate Bearing Support
- Eccentric Vibrators attached to shaft with 1/4" Bolt with Stover Lock Nut.
- Crowned Selections - Up Through 1/8"/ft use Flex Couplers, over 1/8"/ft Crown use U-Joint Kit. Screeds are Shipped Standard with Rigid Shaft Couplers for Running Flat without Crowns.

OPERATIONS SECTION 1

• BEFORE STARTING •

Before starting the engine driven screed, there are a few items that need to be looked over.

- Make sure that bolts are secure and will not vibrate loose.
- Check for loose set screws on all shaft couplers.
- Check jam nuts on top pipe to ensure that they are tight against the top pipe coupler.
- Check the oil and fuel levels in the engine.
- Check the hydraulic level in the tank for the hydraulic winches (if applicable).
- Check bearings for grease. NOTE: bearings are pre-greased from the manufacturer.
- Check winch cables to make sure that they will not loosen during the screed run.
- Look over the forms to check for unevenness so that the screed will not hang up.

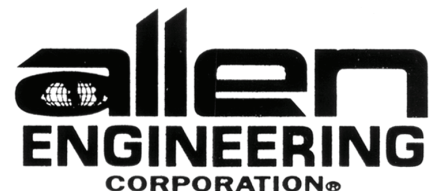
Ask yourselves these questions when preparing your screed for a job.

- What is the “exact” pour width?
- What is the slump?
- Is the slab flat, crowned, or inverted?
- What is the required surface tolerance?
- Choose screed type and size based on the above information.
- Are any accessories required?
- Do the winches work properly?
- Are the hydraulic pressure settings OK?
- Is the drive shaft aligned properly?

• OPERATING •

Operating your engine driven screed correctly will greatly produce the outcome of the pour. Follow the instructions below to operate your screed correctly and you will be very pleased with your equipment.

- Start the engine and slowly increase the throttle.
- Engage or turn winch handles simultaneously to keep the screed even.
- DO NOT adjust the throttle on the engine to slow down or speed up the hydraulic winches, use the flow controls instead.
- NEVER let the concrete build up on the front blade, this causes the screed to be stressed and is strenuous on the operators controlling the manual winches. The concrete should not go above the bolts attaching the blades. If this happens stop the screed and let the vibration do its job.
- If the concrete is not being added at the appropriate rate, slow the screed down to compensate.
- The speed that the screed should be operated at determines on the slump of the concrete. Pay close attention to the aggregates, slump, and concrete modifying agents so that you can compensate for them. REMINDER! - DO NOT OVER-VIBRATE THE CONCRETE
- Make sure that when you have completed the pour(s) that you clean the screed immediately to prevent concrete from curing on the drive shaft and bearings, etc. Using an Allen Engineering High Pressure



• PERIODIC MAINTENANCE SCHEDULE •

OPERATIONS SECTION 1

The following list contains information regarding the maintenance and operations procedures that must be adhered to improve the life of your machine. A well maintained piece of machinery will provide you years of satisfaction.

- Always make sure that the drive shaft is aligned properly. To make sure that you do this correctly you will need to utilize AEC tool part number 020255.
- When connecting drive shafts, assemble with all the weights on each section facing the bullfloat blade. If weights are mis-matched, the screed will not vibrate properly. Match the keyways on the drive shafts and the connectors.
- Do not overspeed, engine RPM must not exceed 3600 RPM. Shaft speed will not exceed design limits if engine speed maximum is adhered to.
- DO NOT crown or invert without universal joints or flex couplers on the shaft connectors.
- Maintain engine in accordance with the manufacturer's instructions.
- Use Loctite anti-seize MIL A 907D to lubricate the top pipe coupler threads before assembly.
- Grease screed bearings at 40 hr. operating intervals. Use one stroke of a hand grease gun. Use Shell Alvonia #21, Texaco L-15, Chevron SR1. Clean fittings before greasing. For low temperatures, use Dow Molykote BR-2. DO NOT OVER GREASE.
- Oil winch bushings at 10 hr. operation intervals. Use light lubricating oil.
- CAUTION! Change worn or frayed cables - cables under tension may snap and cause severe injury. Use proper methods illustrated in this manual to properly attach cables. Always connect cables properly - wrap cable under last form pin then connect cable hook to the next form pin towards the screed.
- DO NOT hook cables to a stake driven into the ground, the stake can tilt and allow cable under tension to snap back and cause severe injury.

OPERATIONS SECTION 1

• LIFTING PROCEDURES •

The following procedures describe proper lifting techniques for screed. There is no OSHA standard weight limit for manual lifting. Therefore, rather than stating a regulated limit, they ask that employers or contractors do the following:

- A) Identify each hazard to which a person at the work place (jobsite) is likely to be exposed to
- B) Assess the risk of injury or harm to a person resulting from each hazard
- C) Consider the means by which the risk may be reduced.

NOTE: Never lift more than what you personally feel that you can handle.

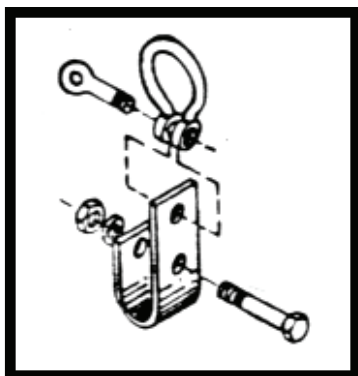
The lifting handles at each end of the screed are not intended to be used as the only source to lift the screed. It is quite obvious that two large men will not be able to lift 70 feet of screed. The following list of maximum screed lengths is very important so that the length of your screed will not be too long.

ED SCREED - MAXIMUM 55 FEET

HED SCREED - MAXIMUM 65 FEET

SHED SCREED - MAXIMUM 75 FEET

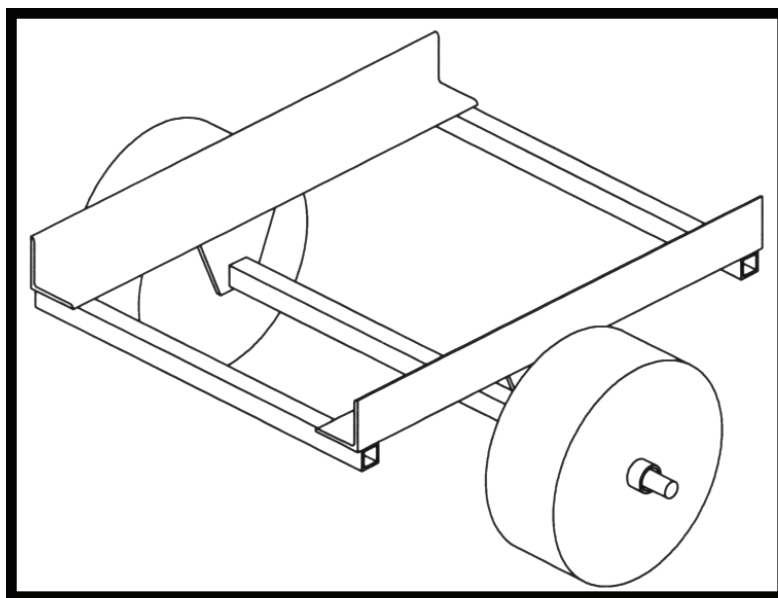
For proper lifting of an average screed (30 ft.), the screed lifting hook is an ideal item to use. This instrument should be placed at equal distances from each end. A special lifting bridle is then used by a forklift, crane, front-end loader, etc. to raise and transport the screed. Also available from Allen Engineering is the screed cart. This item is used to move the screed around on the job site only.



LIFTING HOOK PART #
532000

**STANDARD SCREED CART
MAXIMUM 500 lbs. - 543000**

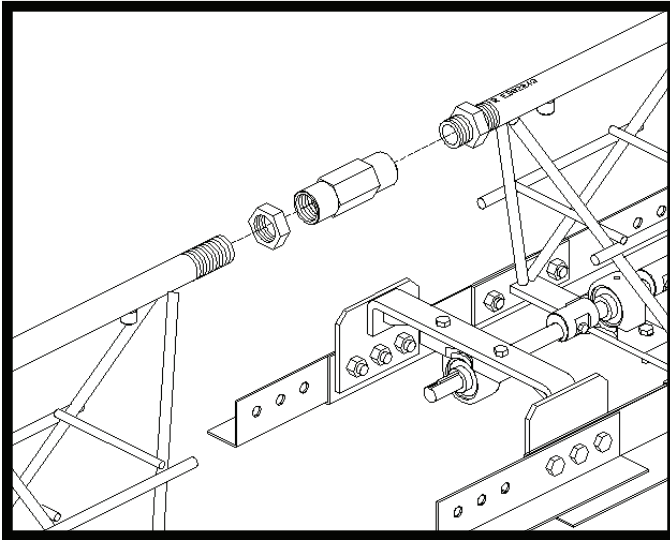
**HEAVY DUTY SCREED CART
MAXIMUM 1,000 lbs. - 543001**



• SECTION ASSEMBLY •

OPERATIONS SECTION 1

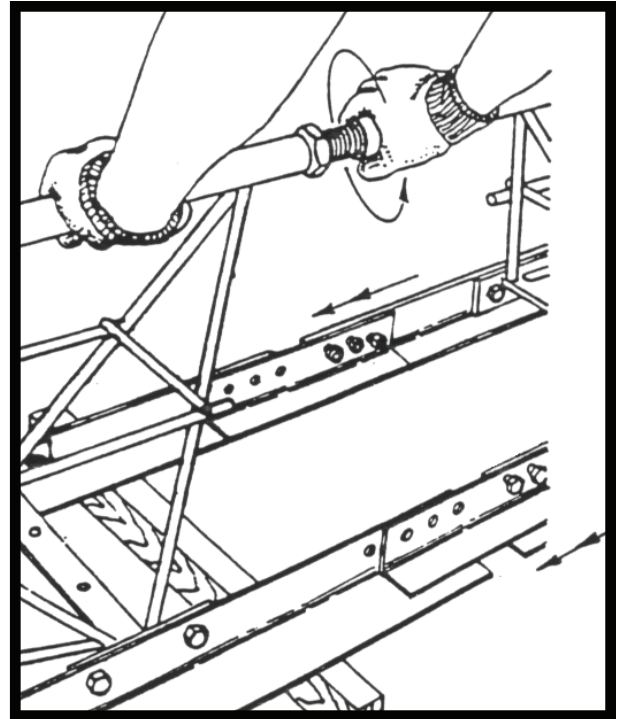
The following figures describe the proper instructions for correctly assembling engine driven screed. Make sure that you follow the instructions in order. If the assembling of your screed is not done in this order, there could be some problems in trying to maintain floor flatness because your screed is not level. Levelness of your screed is critical!



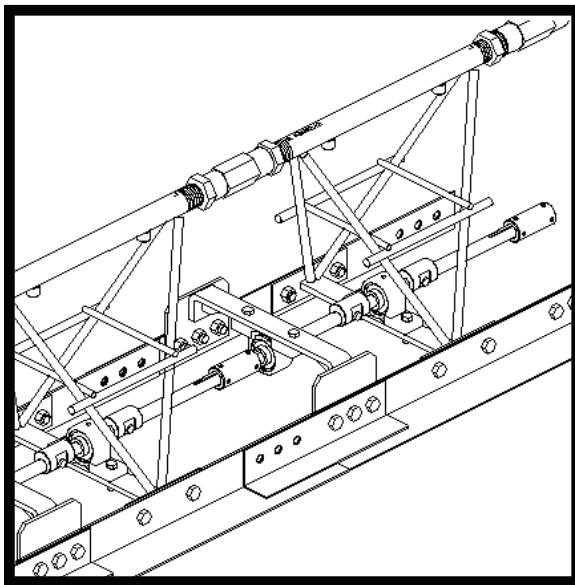
STEP 1: Screw jam nuts onto top pipe. Start the top pipe coupler onto the top pipe of the mating truss section. Only thread the coupler on about three turns.

NOTE: The right and left hand jam nuts will already be installed on the screed section.

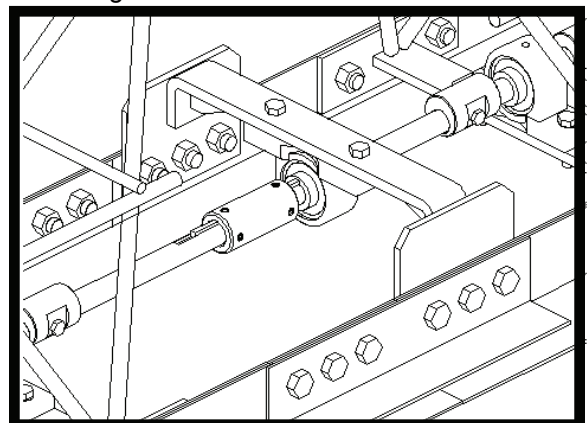
TIGHTEN JAM NUTS AFTER SCREED IS LEVEL



STEP 2: Slide screed sections together until top pipe threads on screed marked "R" line up with threads in coupler on the screed. Start coupler on adjoining threads by hand to prevent cross threading.



STEP 3: Bearing support bolts should be loose so that splice plate can move in clearance holes. With 15" adjustable wrench, turn top pipe coupler until screed and bull float blades contact, then back the coupler off slightly so that the blades touch without tension.

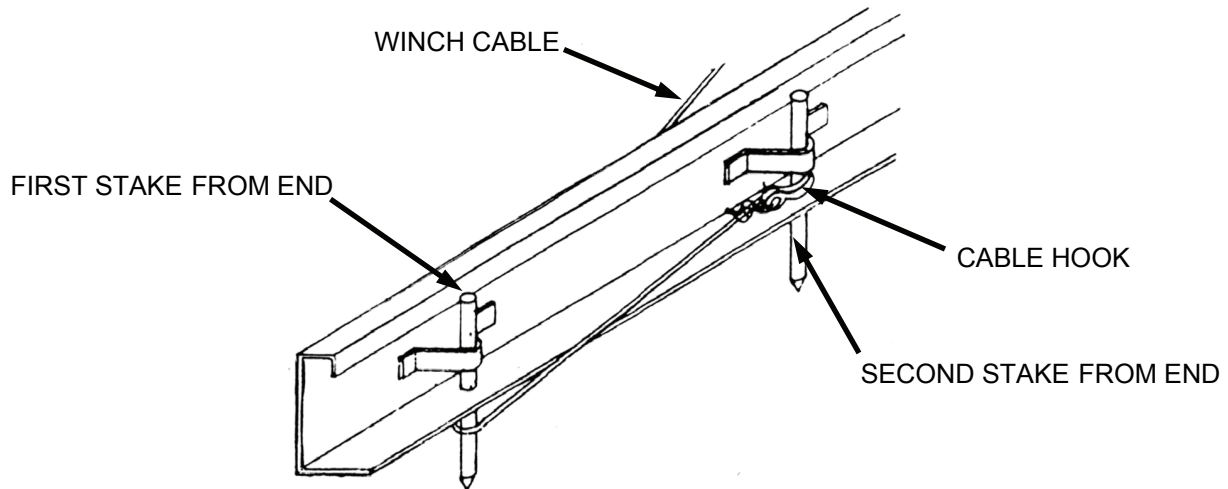


STEP 4: Tighten bolts on splice plates. Next slide the shaft coupler onto the adjoining section and tighten the set screws provided. Make sure that the 3/16 key is on the shaft before sliding sections together. Repeat these steps for attaching all engine driven screed sections.

OPERATIONS SECTION 1

• ATTACHING WINCHES TO FORM STAKES •

The figure below illustrates the proper way to attach the winch cables to the form stakes. This is the only way that the cables should be attached. If the cables are not attached properly, the cables could snap loose causing severe injury to finishing personnel surrounding the screed.



To attach the winch cables properly, adhere to the following instructions.

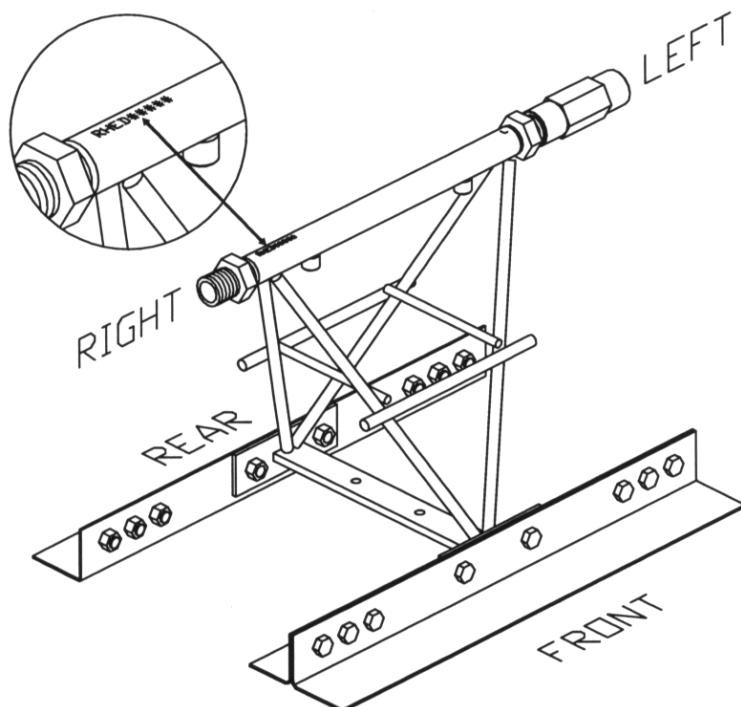
- Take the cable and go around the last form stake. Make sure that you go underneath the form.
- Attach the cable hook to the next form stake from the end.
- Always insure that

• DETERMINING LEFT AND RIGHT OF

The following illustration shows all the key information on how to determine the left and right and the front and rear of a screed section.

Note the circle with the serial number.

This is probably the easiest way to determine the left and right sides of the screed assembly. The right side has the model number and the a 5-digit serial number. The left hand side is only stamped with an "L". Also the front of the screed is determined by the two screed blades mounted back-to-back. The rear of the screed has only one bullfloat blade.



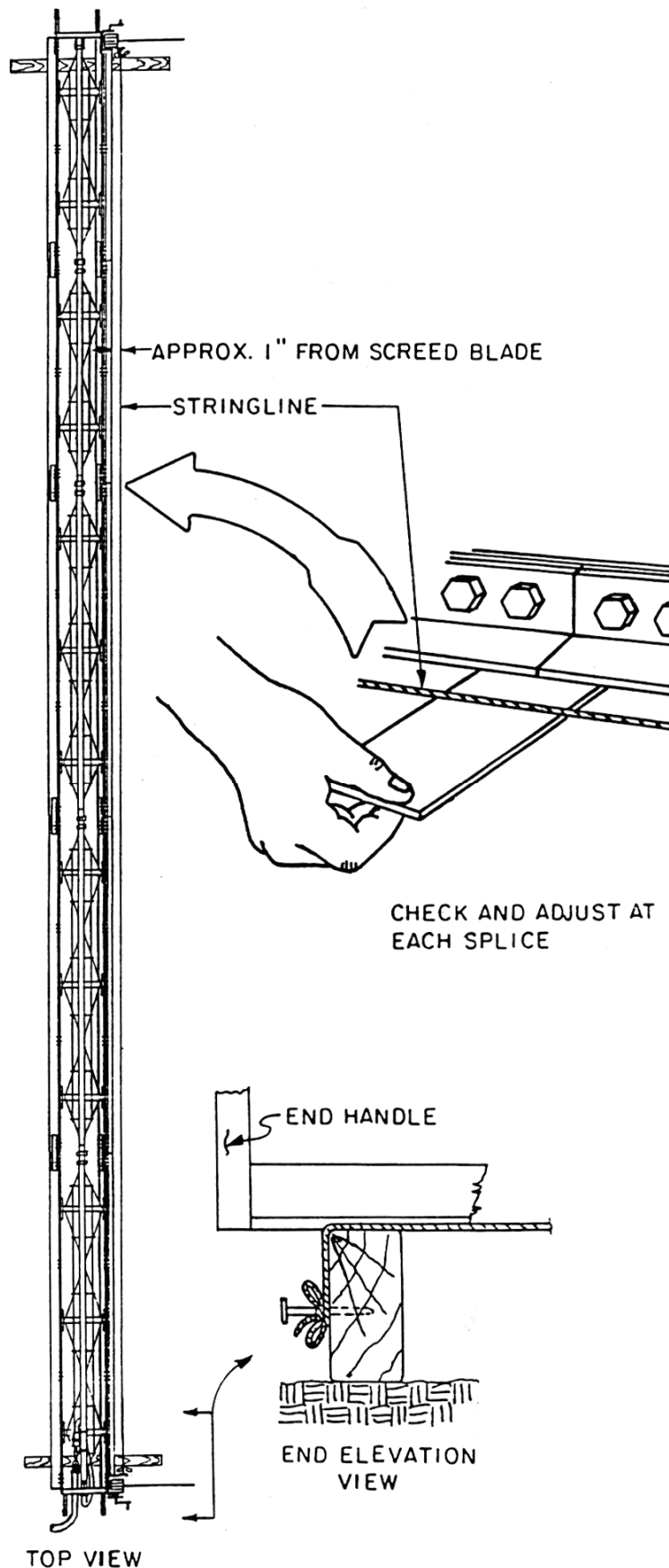
• STRING LINING •

OPERATIONS SECTION 1

To string line your screed, there are a few important steps that need to be followed.

- Place screed ends on a 2 x 6 or other wooden type support.
- At approximately 1" out from the leading edge of the screed blade, drive a nail into the wooden support. NOTE: Nail should be on the outside of the wooden support.
- Stretch a line as tight as possible from nail to nail. Make sure that the nail is contacting each support at the point of blade contact.
- NOTE: The supports do not have to be on the same level.
- Use a short, flat piece of metal or wood as a gauge block to compare the string to the bottom surface of the screed blade and bullfloat blade.
- The blades should be equal to each other at each splice. If they are not even, loosen jam nuts and tighten top pipe coupler as described on page S1-14.

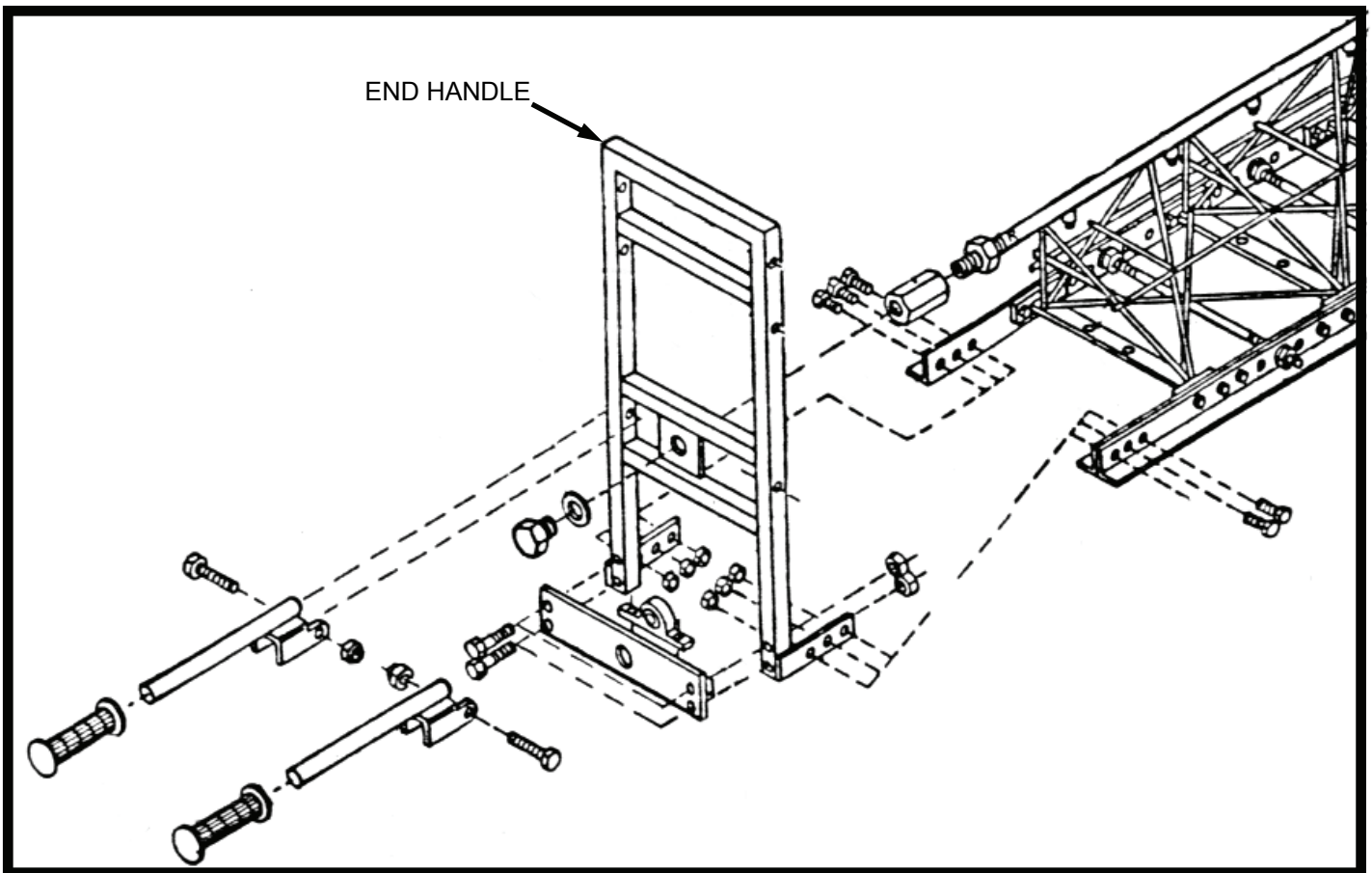
NOTE: Always string line your



OPERATIONS SECTION 1

• END HANDLE ASSEMBLY •

The following figure shows the proper way to mount a standard end handle to the screed section. Do not try to modify this mounting procedure, this is the only way to mount the end handles where they will work properly.



Follow the steps below to properly mount the end handles to your screed.

- Mount the bearing onto the bearing support bracket.
- Mount the handle grips onto the lifting handles.
- Mount the lifting handles onto the end handle using two 3/8 x 2 bolts and 3/8 nylon lock nuts.
- Mount the bearing support bracket to the end handle using four 1/4 x 1 1/2 bolts and 1/4 stover nuts.
- Mount the end handle to the screed using three 1/2 x 3/4 bolts, three 1/2 x 1 bolts and six 1/2 hex nuts. Screw the appropriate adaptor for the end you are working on onto the top pipe. Next, using

PARTS

• TABLE OF CONTENTS •

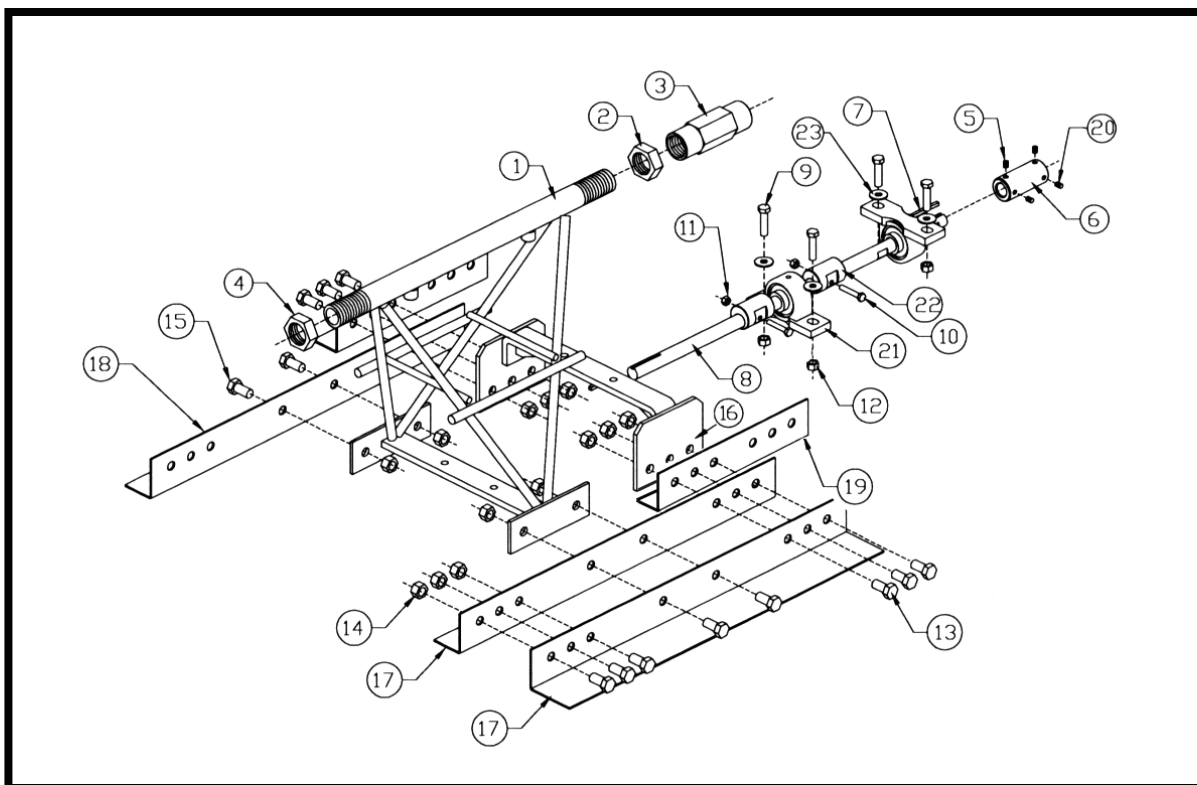
PARTS

SECTION 2

1. TABLE OF CONTENTS	S2-1
2. ASSEMBLY OF 2' ED SCREED SECTION	S2-2
3. ASSEMBLY of 2-1/2' ED SCREED SECTION	S2-3
4. ASSEMBLY of 5' ED SCREED SECTION.....	S2-4
5. ASSEMBLY of 7-1/2' ED SCREED SECTION	S2-5
6. ASSEMBLY of 10' ED SECTION	S2-6
7. END HANDLE ASSEMBLY	S2-7
8. WINCH ASSEMBLY	S2-8
9. HYDRAULIC WINCH ASSEMBLY	S2-9
10. LOW PROFILE MOTOR MOUNT KIT	S2-10
11. END MOUNT ASSEMBLY	S2-11
12. FLEX COUPLER ASSEMBLY	S2-12
13. U-JOINT ASSEMBLY	S2-13

• ASSEMBLY 2' SECTION •

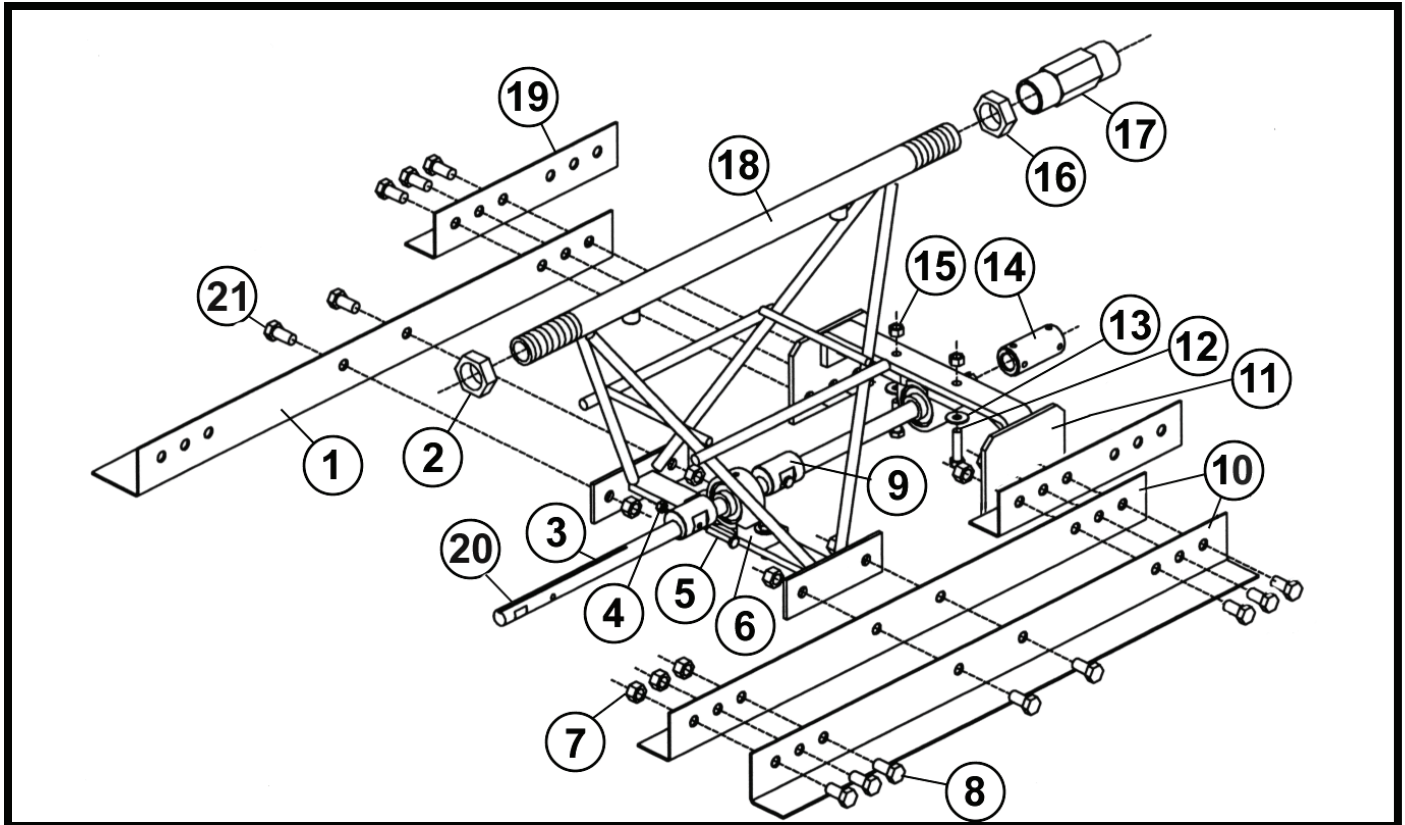
PARTS SECTION 2



PART #	DESCRIPTION	QTY.
1. 016564	2' TRUSS WELDMENT	1
2. 108001	NUT, LH JAM	1
3. 107000	TOP PIPE COUPLER	1
4. 108000	NUT, RH JAM	1
5. 013374	FSTN, SET SCREW 1/4-28 x 1/4	2
6. 020635	COUPLER, DRIVE SHAFT	1
7. 010273	KEY, 3/16 SQ. x 2" LONG	2
8. 020716	DRIVE SHAFT	1
9. 010038	FSTN, BOLT 3/8-16 x 1 1/2	4
10. 010005	FSTN, BOLT 1/4-20 x 1 1/2	2
11. 020542	FSTN, NUT STOVER LOCK 1/4-20	2
12. 020514	FSTN, NUT STOVER LOCK 3/8-16	4
13. 010067	FSTN, BOLT 1/2-13 x 1	11
14. 010106	FSTN, NUT HEX 1/2-13	16
15. 010066	FSTN, BOLT 1/2-13 x 3/4	5
16. 135000	BEARING SUPPORT	1
17. 152000	2' ED SCREED BLADE	2
010172	2' HED SCREED BLADE	2
022422	2' SHED SCREED BLADE	2
18. 153000	2' ED BULLFLOAT BLADE	1
010173	2' HED BULLFLOAT BLADE	1
022425	2' SHED BULLFLOAT BLADE	1
19. 106000	BLADE SPLICE - ED SCREED	2
106001	BLADE SPLICE - HED SCREED	2
022430	BLADE SPLICE - SHED SCREED	2
20. 018999	FSTN, SET SCREW 1/4-28 x 3/8	2
21. 020704	BEARING	2
22. 010276	ECCENTRIC WEIGHT	2

PARTS SECTION 2

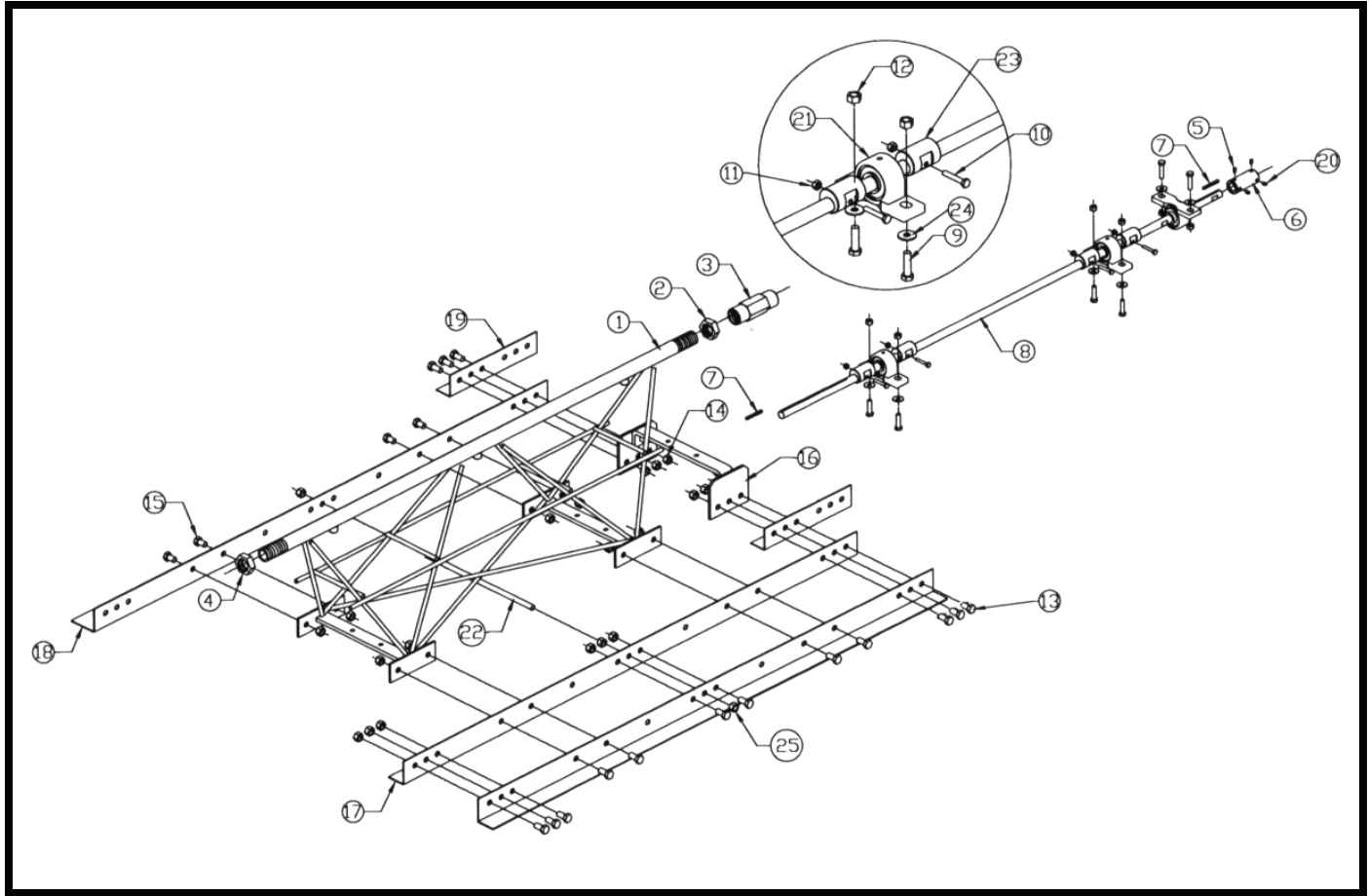
• ASSEMBLY 2-1/2' SECTION •



PART #	DESCRIPTION	QTY.
1. 028744	BLADE, BULLFLOAT ED	1
028702	BLADE, BULLFLOAT HED	1
028746	BLADE, BULLFLOAT SHED	1
2. 108000	NUT, TOP PIPE RH	1
3. 028626	SHAFT, DRIVE	1
4. 020542	FSTN, NUT STOVER 1/4-20	2
5. 010005	BOLT, 1/4-20 x 1 1/2	2
6. 020704	BEARING, 3/4" PILLOW BLOCK	2
7. 010106	FSTN, NUT HEX 1/2-13	16
8. 010067	BOLT, 1/2-13 x 1	11
9. 010276	WEIGHT, ECCENTRIC	2
10. 028743	BLADE, SCREED ED	2
028701	BLADE, SCREED HED	2
028745	BLADE, SCREED SHED	2
11. 135000	INTERMEDIATE BEARING SUPPORT	1
12. 010038	BOLT, 3/8-16 x 1-1/2	4
13. 017751	FSTN, HARDENED FLATWASHER 3/8	4
14. 020635	COUPLER, SHAFT	1
15. 020514	FSTN, NUT STOVER 3/8	4
16. 108001	NUT, TOP PIPE LH	1
17. 107000	COUPLER, TOP PIPE	1
18. 028700	TRUSS, 2-1/2' SECTION	1
19. 106000	PLATE, SPLICE ED	2
106001	PLATE, SPLICE HED	2
022430	PLATE, SPLICE SHED	2
20. 010273	KEY, 3/16 x 2	2

• ASSEMBLY 5' SECTION •

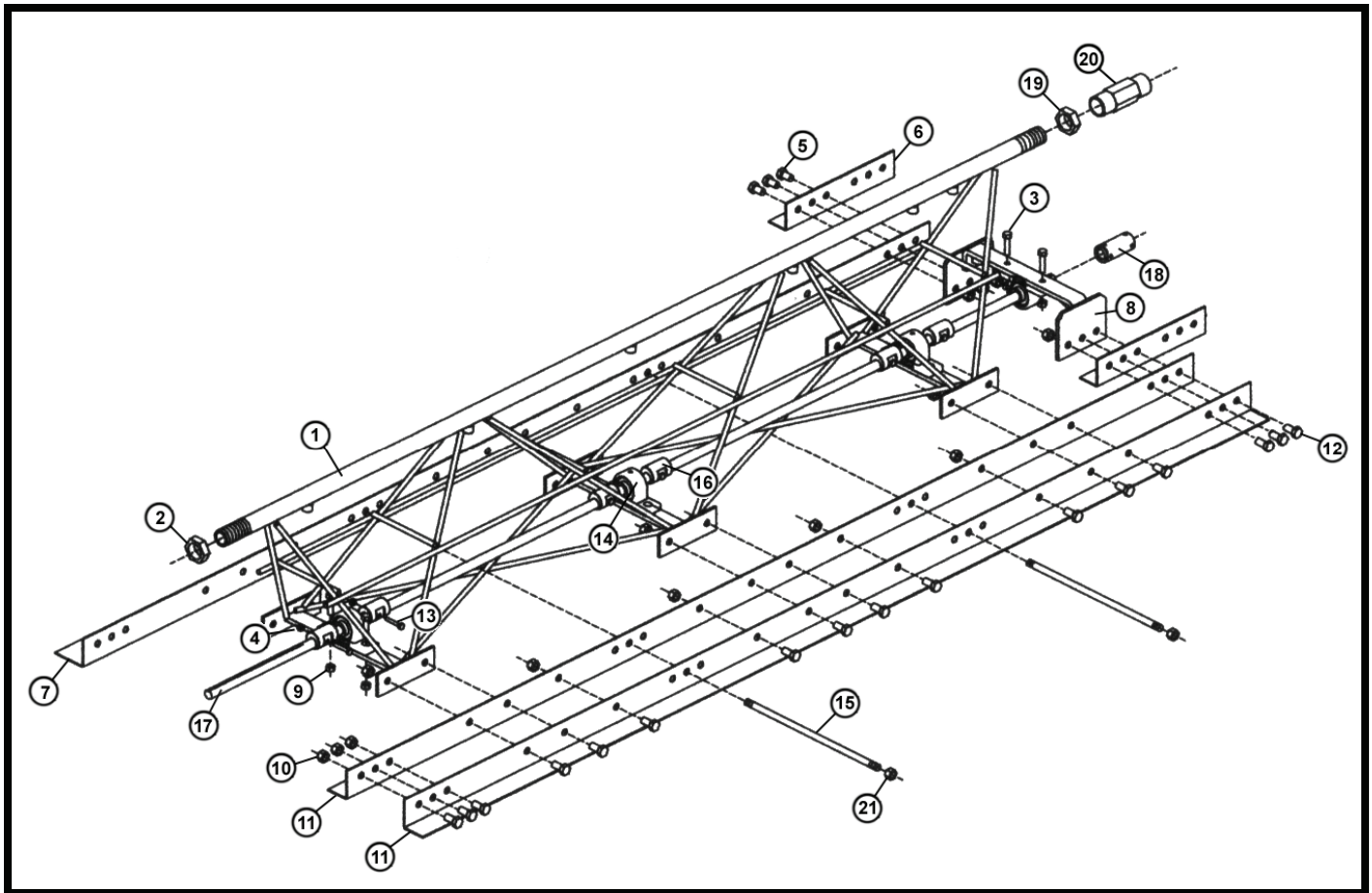
PARTS SECTION 2



PART #	DESCRIPTION	QTY.
1. 016565	5' TRUSS WELDMENT	1
2. 108001	NUT, LH JAM	1
3. 107000	TOP PIPE COUPLER	1
4. 108000	NUT, RH JAM	1
5. 013374	FSTN, SET SCREW 1/4-28 x 1/4	2
6. 020635	COUPLER, DRIVE SHAFT	1
7. 010273	KEY, 3/16 SQ. x 2" LONG	2
8. 032112	DRIVE SHAFT	1
9. 010038	FSTN, BOLT 3/8-16 x 1 1/2	4
10. 010005	FSTN, BOLT 1/4-20 x 1 1/2	4
11. 020542	FSTN, NUT STOVER LOCK 1/4-20	4
12. 020514	FSTN, NUT STOVER LOCK 3/8-16	4
13. 010067	FSTN, BOLT 1/2-13 x 1	13
14. 010106	FSTN, NUT HEX 1/2-13	24
15. 010066	FSTN, BOLT 1/2-13 x 3/4	9
16. 135000	BEARING SUPPORT	1
17. 103000	5' ED SCREED BLADE	2
103001	5' HED SCREED BLADE	2
022421	5' SHED SCREED BLADE	2
18. 105000	5' ED BULLFLOAT BLADE	1
105001	5' HED BULLFLOAT BLADE	1
022424	5' SHED BULLFLOAT BLADE	1
19. 106000	BLADE SPLICE - ED SCREED	2
106001	BLADE SPLICE - HED SCREED	2
022430	BLADE SPLICE - SHED SCREED	2
20. 018999	FSTN, SET SCREW 1/4-28 x 3/8	2
21. 020704	BEARING	3
22. 136000	STABILIZER ROD	1
23. 010276	ECCENTRIC WEIGHT	4
24. 017751	FSTN, FLATWASHER 3/8 HARDENED	6
25. 012979	FSTN, NUT FLANGE 1/2	2

PARTS SECTION 2

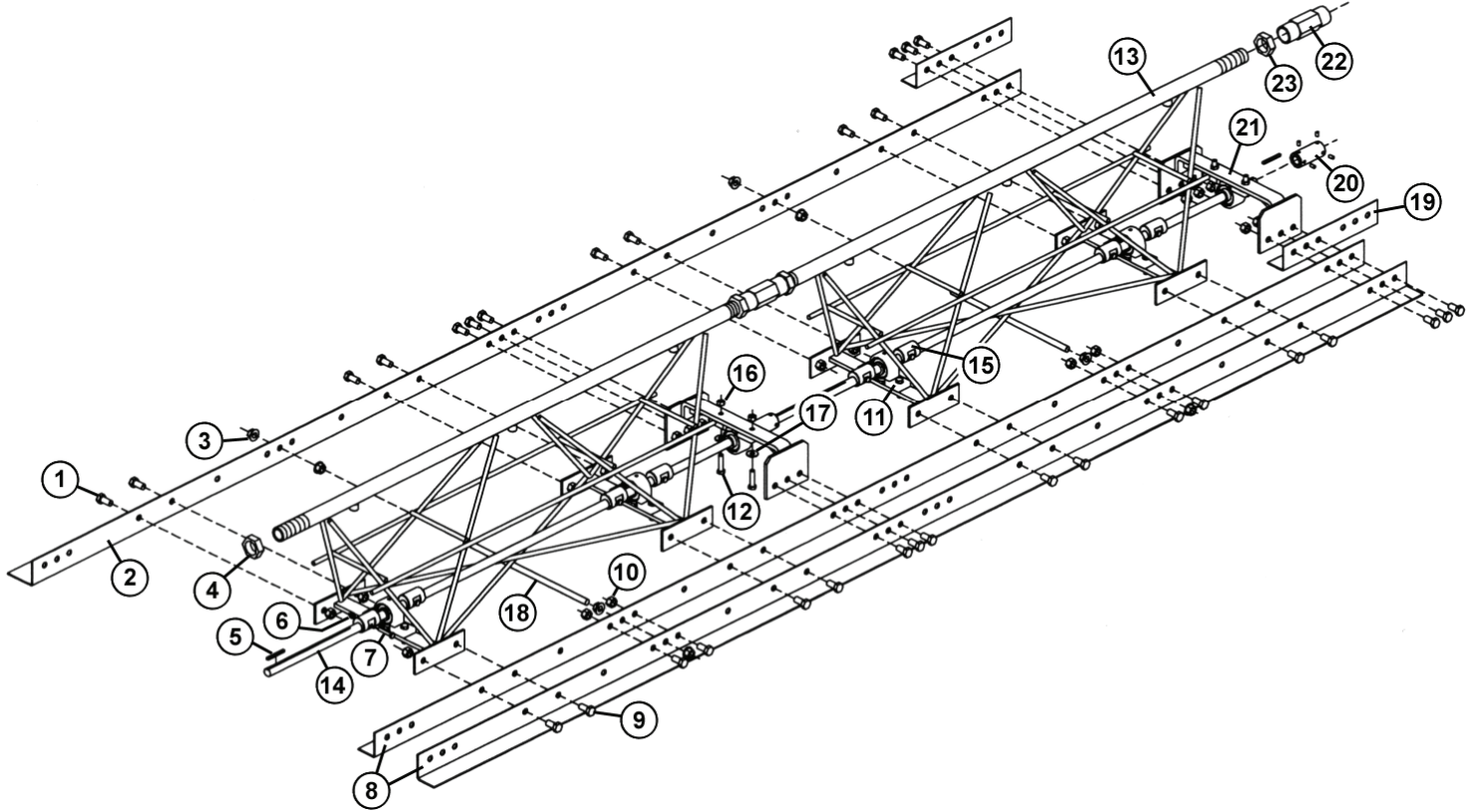
• ASSEMBLY 7-1/2' SECTION •



PART #	DESCRIPTION	QTY.
1. 016566	TRUSS F/ 7-1/2' SECTION	1
2. 108000	NUT, RIGHT HAND F/ TOP PIPE	1
3. 028402	FSTN, BOLT 3/8 x 1-1/2	8
4. 020542	FSTN, NUT 1/4 STOVER LOCK	6
5. 010066	FSTN, BOLT 1/2 x 3/4	17
6. 106000	BLADE, SPLICE - ED SCREED	2
106001	BLADE, SPLICE - HED SCREED	2
022430	BLADE, SPLICE - SHED SCREED	2
7. 104000	7-1/2' ED BULLFLOAT BLADE	1
104001	7-1/2' HED BULLFLOAT BLADE	1
8. 135000	INTERMEDIATE BEARING SUPPORT	1
9. 020514	FSTN, NUT 3/8 STOVER LOCK	8
10. 010106	FSTN, NUT 1/2 HEX	32
11. 102000	7-1/2' ED SCREED BLADE	2
102001	7-1/2' HED SCREED BLADE	2
022420	7-1/2' SHED SCREED BLADE	2
12. 010067	FSTN, BOLT 1/2 x 1	15
13. 010005	FSTN, BOLT 1/4 x 1-1/2	6
14. 020704	BEARING, 3/4" PILLOW BLOCK	4
15. 136000	STABILIZER ROD	2
16. 010276	ECCENTRIC WEIGHT	6
17. 029041	SHAFT F/ 7-1/2' SECTION	1
18. 020635	COUPLER, SHAFT	1
19. 108001	NUT, LEFT HAND F/ TOP PIPE	1
20. 107000	TOP PIPE COUPLER	1
21. 012979	FSTN, NUT FLANGE 1/2	4

• ASSEMBLY 10' SECTION •

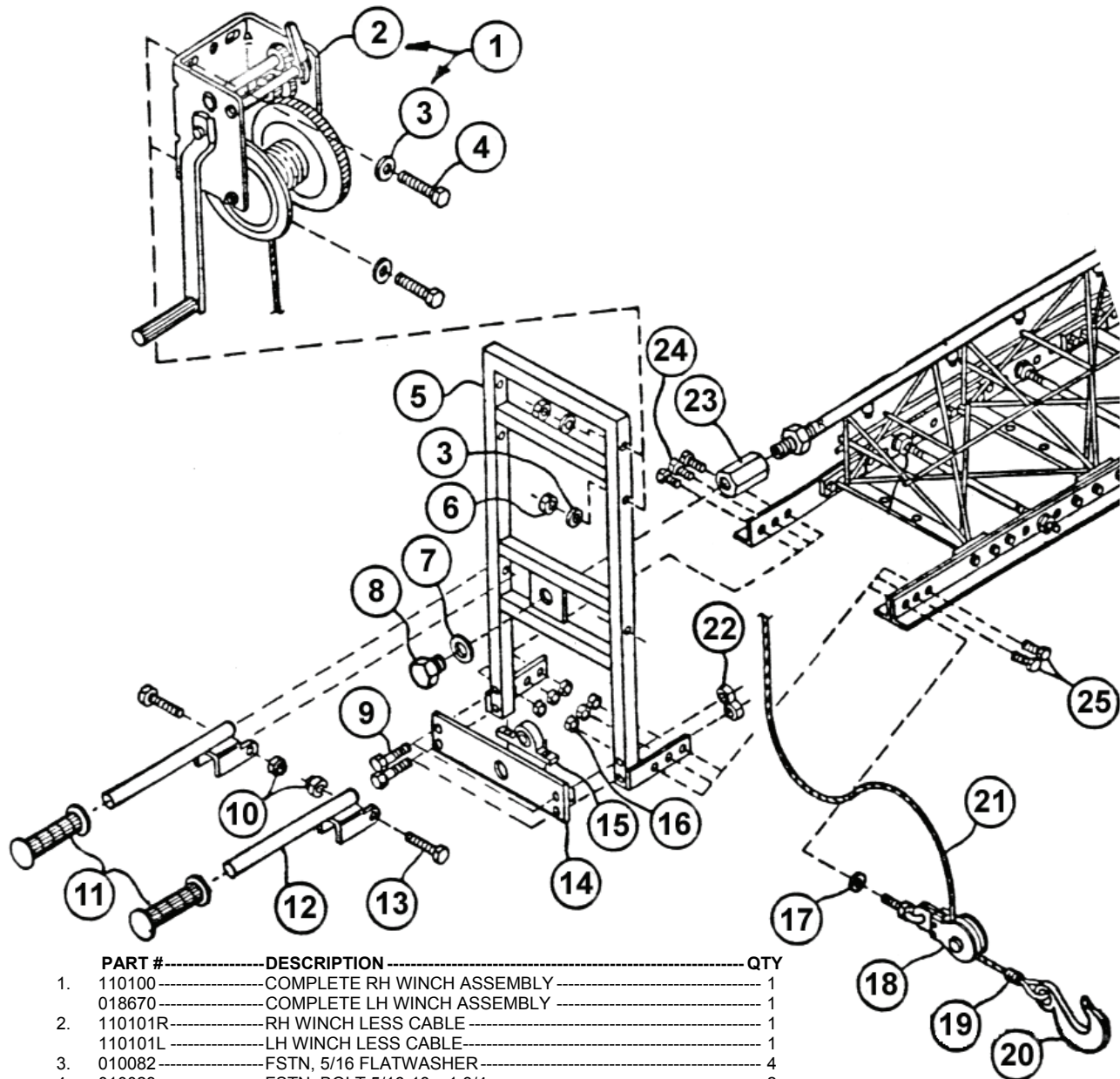
PARTS SECTION 2



PART #	DESCRIPTION	QTY.
1. 010066	BOLT, 1/2-13 x 3/4	22
2. 032141	BLADE, BULLFLOAT ED	1
032139	BLADE, BULLFLOAT HED	1
025994	BLADE, BULLFLOAT SHED	1
3. 012979	FSTN, NUT FLANGE 1/2-13	4
4. 108000	NUT, TOP PIPE RH	2
5. 010273	KEY, 3/16 x 2	4
6. 020542	FSTN, NUT STOVER 1/4-20	8
7. 010005	BOLT, 1/4-20 x 1 1/2	8
8. 032140	BLADE, SCREED ED	2
032138	BLADE, SCREED HED	2
025993	BLADE, SCREED SHED	2
9. 010067	BOLT, 1/2-13 x 1	26
10. 010106	FSTN, NUT 1/2-13	48
11. 020704	BEARING 3/4" PILLOW BLOCK	6
12. 010038	BOLT, 3/8-16 x 1 1/2	6
13. 016565	TRUSS, 5' WELDMENT	2
14. 032112	SHAFT, DRIVE 5' 10"	2
15. 010276	WEIGHT, ECCENTRIC	8
16. 020514	FSTN, NUT STOVER 3/8-16	12
17. 017751	FSTN, FLATWASHER 3/8 HARDENED	12
18. 136000	ROD, STABILIZER	2
19. 106000	PLATE, SPLICE	2
20. 020635	COUPLER, SHAFT	2
21. 135000	BEARING SUPPORT (INTERMEDIATE)	2
22. 107000	COUPLER, TOP PIPE	2
23. 108001	NUT, TOP PIPE LH	2

PARTS SECTION 2

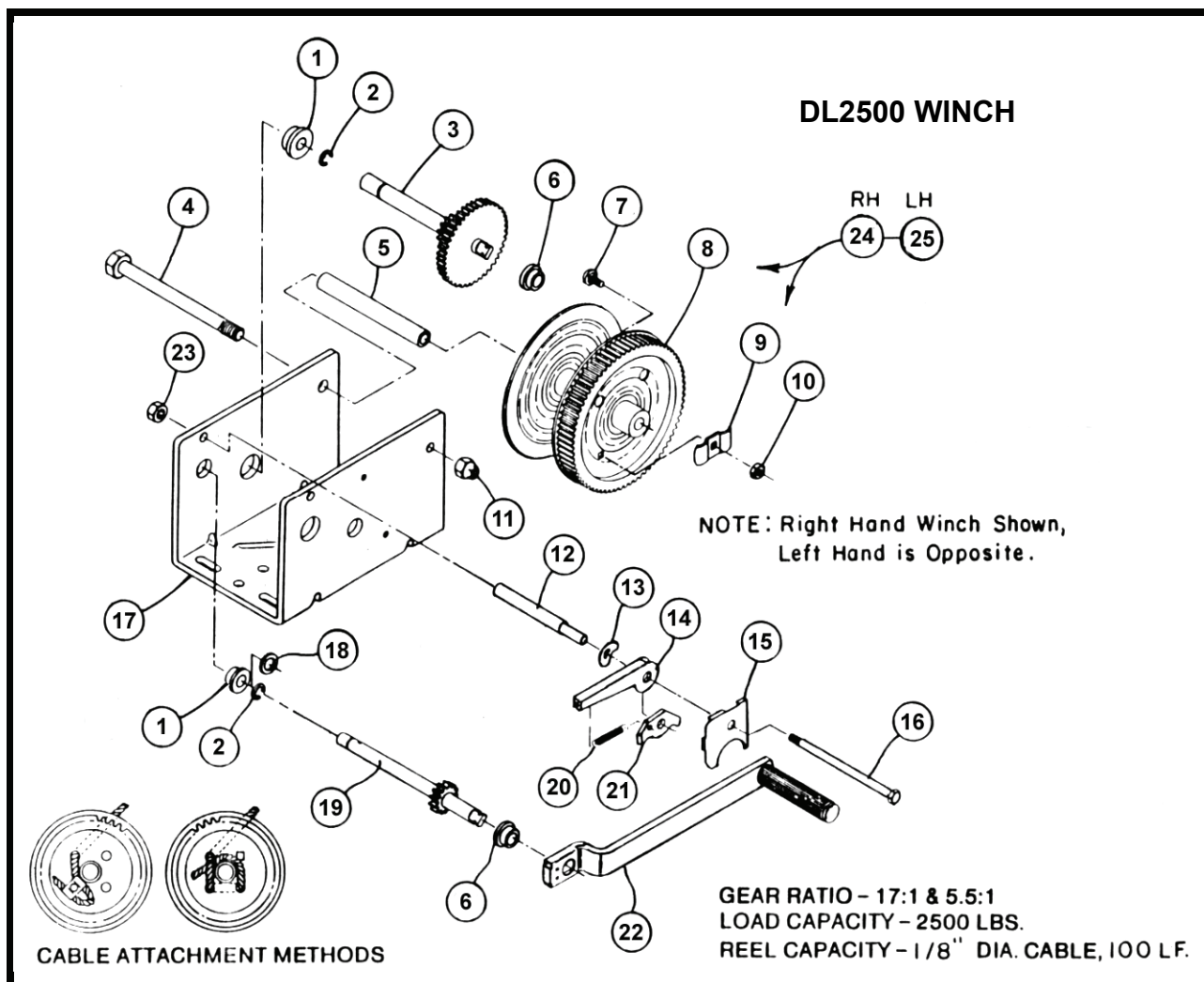
• END HANDLE ASSEMBLY •



PART #	DESCRIPTION	QTY
1. 110100	COMPLETE RH WINCH ASSEMBLY	1
018670	COMPLETE LH WINCH ASSEMBLY	1
2. 110101R	RH WINCH LESS CABLE	1
110101L	LH WINCH LESS CABLE	1
3. 010082	FSTN, 5/16 FLATWASHER	4
4. 010023	FSTN, BOLT 5/16-18 x 1 3/4	2
5. 109000	END HANDLE	1
6. 010100	FSTN, NUT 5/16	2
7. 010088	FSTN, 1" FLATWASHER	1
8. 113000	FSTN, NUT F/ END HANDLE	1
9. 010005	FSTN, BOLT 1/4-20 x 1 1/2	4
10. 010464	FSTN, NUT NYLON LOCK 3/8-16	2
11. 015767	HANDLE GRIP	2
12. 017066	LIFTING HANDLE	2
13. 010040	FSTN, BOLT 3/8-16 x 2	2
14. 112000	BEARING SUPPORT BRACKET	1
15. 020704	BEARING	1
16. 010106	FSTN, NUT HEX 1/2-13	6
17. 010085	FSTN, 1/2 FLATWASHER	1
18. 110005	PULLEY BLOCK W/ EYEBOLT	1
19. 012391	CABLE CLAMP	1
20. 110008	SLIP HOOK	1
21. 110103	CABLE F/ WINCH (1/8 AIRCRAFT)	100 ft.
22. 020542	FSTN, NUT STOVER LOCK 1/4-20	4
23. 114000	ADAPTOR, R.H. AIR END	1
115000	ADAPTOR, L.H. AIR END	1
24. 010066	FSTN, BOLT 1/2-13 x 3/4	3

• WINCH ASSEMBLY •

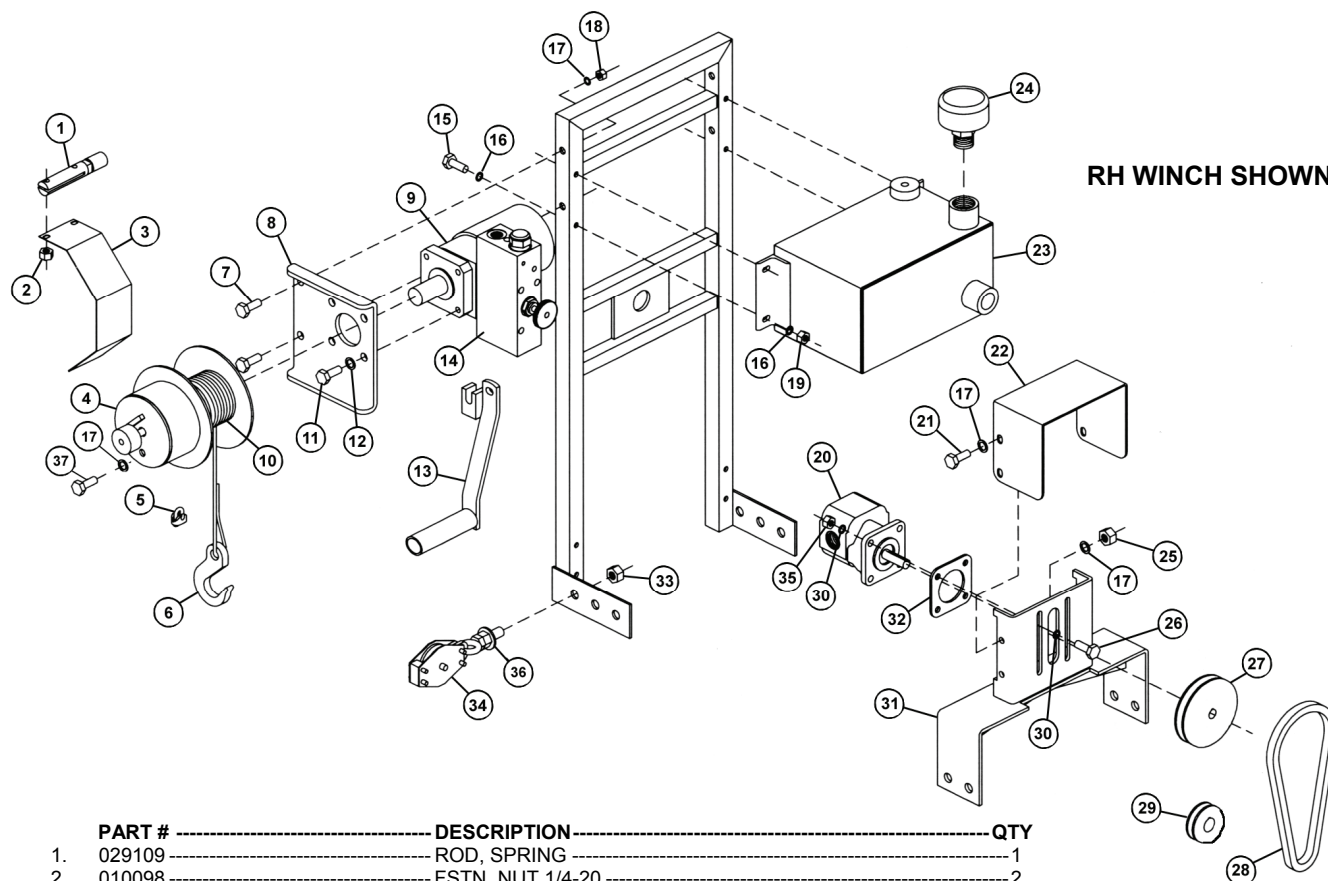
PARTS SECTION 2



PART #	DESCRIPTION	QTY
1. 250002	BUSHING	2
2. 250003	E-RING	2
3. 250022	INTERMEDIATE DRIVE SHAFT	1
4. 250014	SHAFT REEL	1
5. 012826	SPACER	1
6. 250024	BUSHING	2
7. 120013	FSTN, BOLT CARRAGE 1/4 x 3/4	1
8. 250017	WINCH REEL 2 1/2 DIA	1
9. 120012	CABLE CLAMP	1
10. 120011	FSTN, NUT HEX 1/4	1
11. 120015	FSTN, STOVER LOCK 3/8	1
12. 250009	SLEEVE RATCHET	1
13. 120017	COMPRESSION SPRING	1
14. 120018	LEVER RATCHET	1
15. 020471	PLATE, LATCH LH	1
250026	PLATE, LATCH RH	1
16. 250007	BOLT, RATCHET	1
17. 250001	BASE WINCH, 2500	1
18. 250025	SPACER	1
19. 250006	DRIVE SHAFT	1
20. 120021	SPRING EXTENSION	1
21. 120020	PAWL RATCHET	1
22. 110102	HANDLE	1
23. 120016	FSTN, NUT STOVER LOCK 1/4	1
24. 110101R	HD WINCH RH (WINCH ONLY)	1
25. 110101L	HD WINCH LH (WINCH ONLY)	1

PARTS SECTION 2

• **HYDRAULIC WINCH ASSEMBLY** •

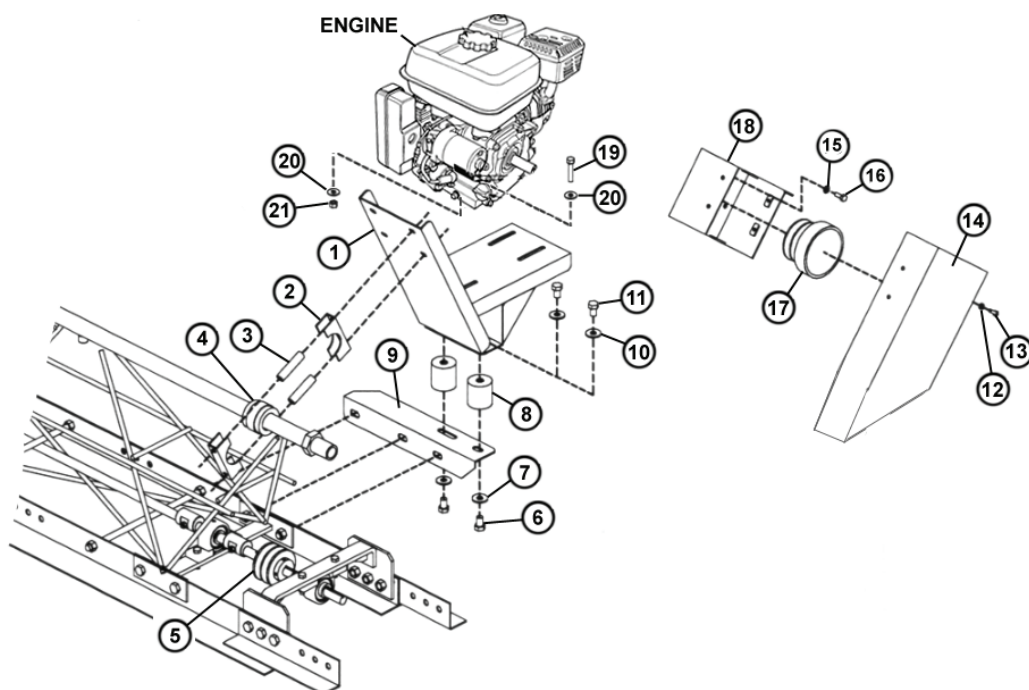


PART #	DESCRIPTION	QTY
1. 029109	ROD, SPRING	1
2. 010098	FSTN, NUT 1/4-20	2
3. 029108	SPRING, F/ HYD WINCH	1
4. 027898L & R	REEL ASSEMBLY	1
5. 022656	CABLE CLAMP	2
6. 110008	SLIP HOOK	1
7. 010039	FSTN, BOLT 3/8 x 1-3/4	2
8. 029112	REEL BRACKET	1
9. 034011	MOTOR, HYDRAULIC	1
10. 000751	CABLE 1/8" (AIRCRAFT STYLE)	100'
11. 010036	FSTN, BOLT 3/8-16 x 1	4
12. 017751	FSTN, 3/8 FLATWASHER HARDENED	4
13. 027906L & R	HANDLE, MANUAL WINCH	1
14. 013757	VALVE BLOCK	1
15. 010005	FSTN, BOLT 1/4-20 x 1 1/2	4
16. 010081	FSTN, 1/4 FLATWASHER	8
17. 017751	FSTN, 3/8 FLATWASHER HARDENED	4
18. 010464	FSTN, NUT NYLON 3/8	2
19. 020542	FSTN, NUT STOVER 1/4-20	4
20. 029105L & R	PUMP, HYDRAULIC	1
21. 010019	FSTN, BOLT 5/16-18 x 3/4	4
22. 027903	PUMP COVER	1
23. 029117	TANK, HYDRAULIC (RH)	1
029116	TANK, HYDRAULIC (LH)	1
24. 034013	CAP, FILLER BREATHER	1
25. 010109	FSTN, NUT NYLON 5/16-18	4
26. 010021	FSTN, BOLT 5/16 x 1 1/4	4
27. 010500	PULLEY 1/2"	1
28. 026486	V-BELT	1
29. 011896	PULLEY 3/4"	1
30. 010090	FSTN, HARD LOCKWASHER 5/16	8
31. 029114	PUMP BRACKET	1
32. 029111	PLATE	1
33. 010106	FSTN, NUT 1/2-13	1
34. 025992	PULLEY BLOCK HD W/ EYEBOLT	1
35. 010100	FSTN, NUT 5/16	4
36. 010085	FSTN, FLATWASHER 1/2	1
37. 010035	FSTN, BOLT 3/8 x 3/4	1

**RH WINCH
027847R**

**LH WINCH
027847L**

• LOW PROFILE ENGINE KIT •

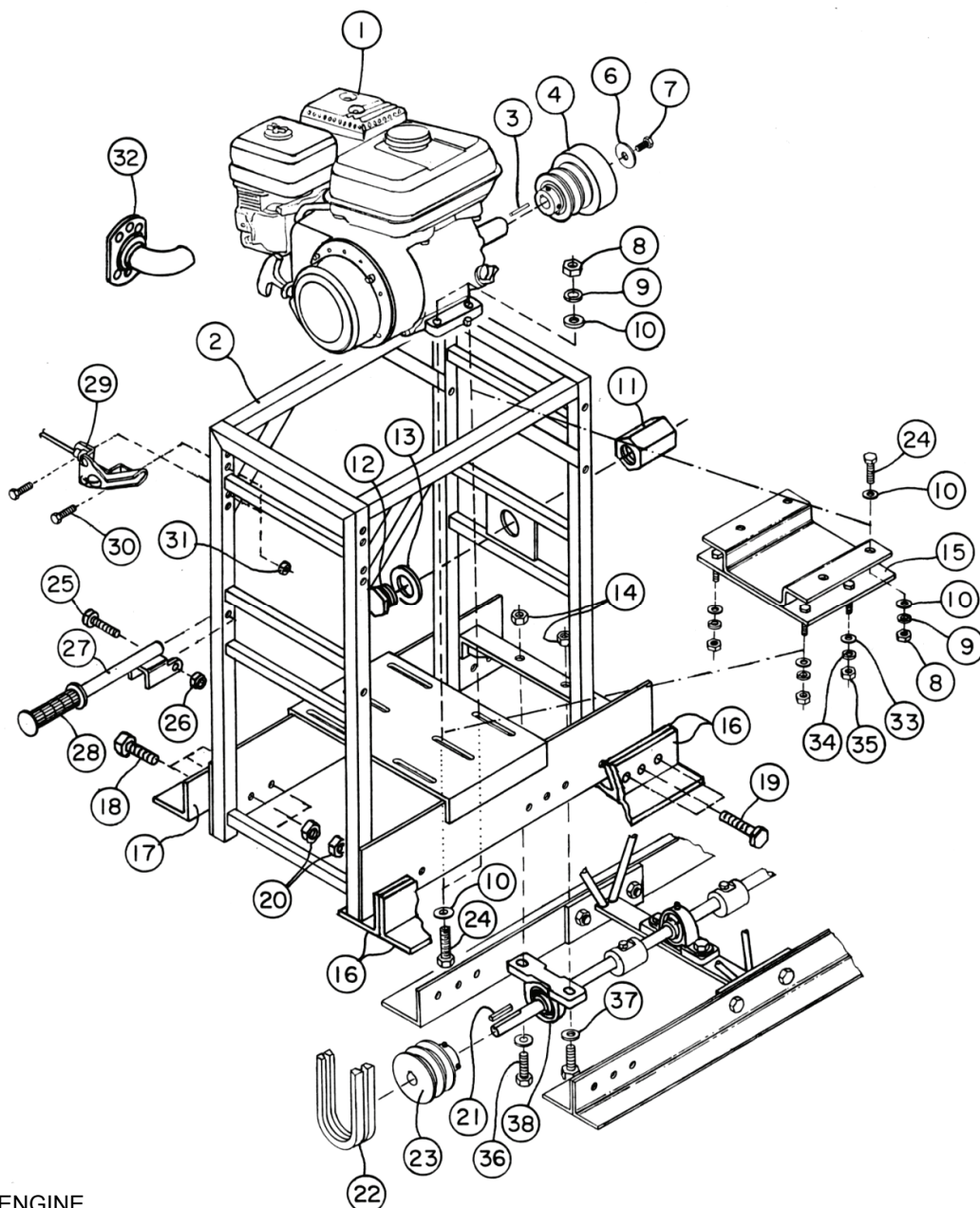


PART#	DESCRIPTION	QTY.
1. 027872	ENGINE MOUNT F/ 8 HP ENGINE	1
028101	ENGINE MOUNT F/ 5 HP ENGINE	1
2. 027884	CLAMP, LOPRO ENGINE MOUNT	4
3. 027885	SPACER, F/ CLAMP	4
4. 027883	BUSHING, RUBBER SPLIT	2
5. 020698	PULLEY, 2BK30 x 3/4"	1
6. 010066	BOLT, 1/2 x 3/4	2
7. 011490	FSTN, FLATWASHER 1/2"	2
8. 012725	RUBBER ISOLATOR	2
9. 027871	BRACKET, ANGLE	1
10. 011490	FSTN, FLATWASHER 1/2"	2
11. 010066	BOLT, 1/2 x 3/4	2
12. 010081	FSTN, FLATWASHER 1/4"	4
13. 010002	BOLT, 1/4 x 3/4	4
14. 027877	BELT GUARD F/ 8 HP ENGINE	1
028102	BELT GUARD F/ 5 HP ENGINE	1
15. 010090	FSTN, LOCKWASHER 5/16"	4
16. 012974	BOLT, 5/16 x 3/4	4
17. 126003	CLUTCH, 1" BORE 2 GRV. 1300 F/ 8 HP ENGINE	1
100620	CLUTCH, 3/4" BORE 2 GRV. 1075 F/ 5 HP ENGINE	1
18. 027878	BELT GUARD BRACKET	1
19. 027882	BOLT, 3/8 x 3-3/4	4
20. 017751	FSTN, FLATWASHER 3/8"	4
21. 010102	FSTN, NUT HEX 3/8	4
22. 028328	V-BELT, B39 F/ 5.3 & 5.5 HP ENGINE (NOT SHOWN)	2
027917	V-BELT, B40 F/ 8 & 9 HP ENGINES (NOT SHOWN)	2
028325	V-BELT, B42 F/ 11 HP ENGINE (NOT SHOWN)	2

PARTS SECTION 2

• END MOUNT ENGINE ASSEMBLY •

QTY	PART #	DESC.
1.	020203	ENGINE 5.5 HP-----1*
	020426	ENGINE 8 HP-----1
2.	126001	HANDLE-----1
3.	010273	KEY-----1
4.	100620	CLUTCH-----1*
	126003	CLUTCH-----1
5.	NOT USED	
6.	010082	WASHER FLAT-----1*
	010084	WASHER FLAT-----1
7.	020829	BOLT 5/16 x 1 3/4--1*
	017898	BOLT 7/16 x 1 1/2--1
8.	010100	NUT HEX 5/16-----4*
	010102	NUT HEX 3/8-----4
9.	010090	WASHER LOCK-----4*
	010091	WASHER LOCK-----4
10.	010082	WASHER FLAT-----8*
	010083	WASHER FLAT-----8
11.	114000	R.H. ADAPTOR-----1
12.	113000	NUT, END-----1
13.	010088	WASHER-----1
14.	020514	NUT STOVER 3/8--2
15.	027483	ENGINE MOUNT-----1*
16.	SEE BELOW	
17.	SEE BELOW	
18.	010066	BOLT 1/2 x 3/4-----6
19.	010067	BOLT 1/2 x 1-----6
20.	010106	NUT, HEX 1/2-----12
21.	010273	KEY-----1
22.	020720	V-BELT-----2
23.	020698	PULLEY-----1
24.	010023	BOLT 5/16 x 1 3/4--4*
	010039	BOLT 3/8 x 1 3/4--4
25.	010040	BOLT 3/8 x 2-----2
26.	010464	NUT, NYLON-----2
27.	017066	HANDLE-----2
28.	015767	GRIP, HANDLE-----2
29.	124000	THROTTLE ASS'Y-1
30.	010002	BOLT 1/4 x 3/4-----2
31.	020542	NUT, STOVER-----2
32.	020983	MUFFLER-----1
33.	010083	WASHER FLAT-----4
34.	010091	WASHER LOCK-----4
35.	010102	NUT, HEX-----4
36.	010038	BOLT 3/8 x 1 1/2--2

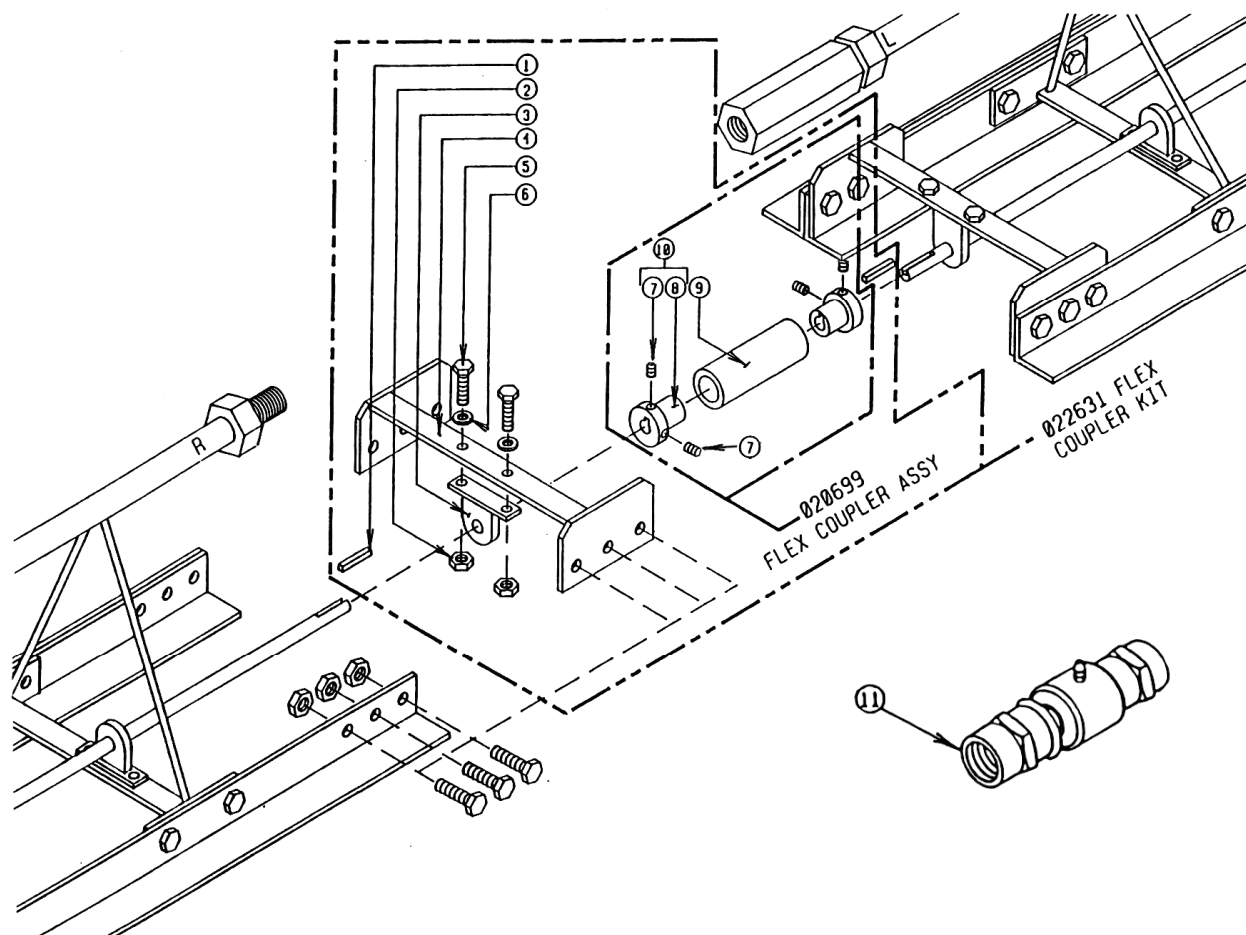


NOTE: * = ONLY USED ON 5.5 HP ENGINE

16.	102003	BLADE, SCREED 18" (12 GA.)-----2
	018655	BLADE, SCREED 18" (10 GA.)-----2
17.	104003	BLADE, BULLFLOAT 18" (12 GA.)-----1
	018656	BLADE, BULLFLOAT 18" (10 GA.)-----1

• FLEX COUPLER ASSEMBLY •

PARTS SECTION 2

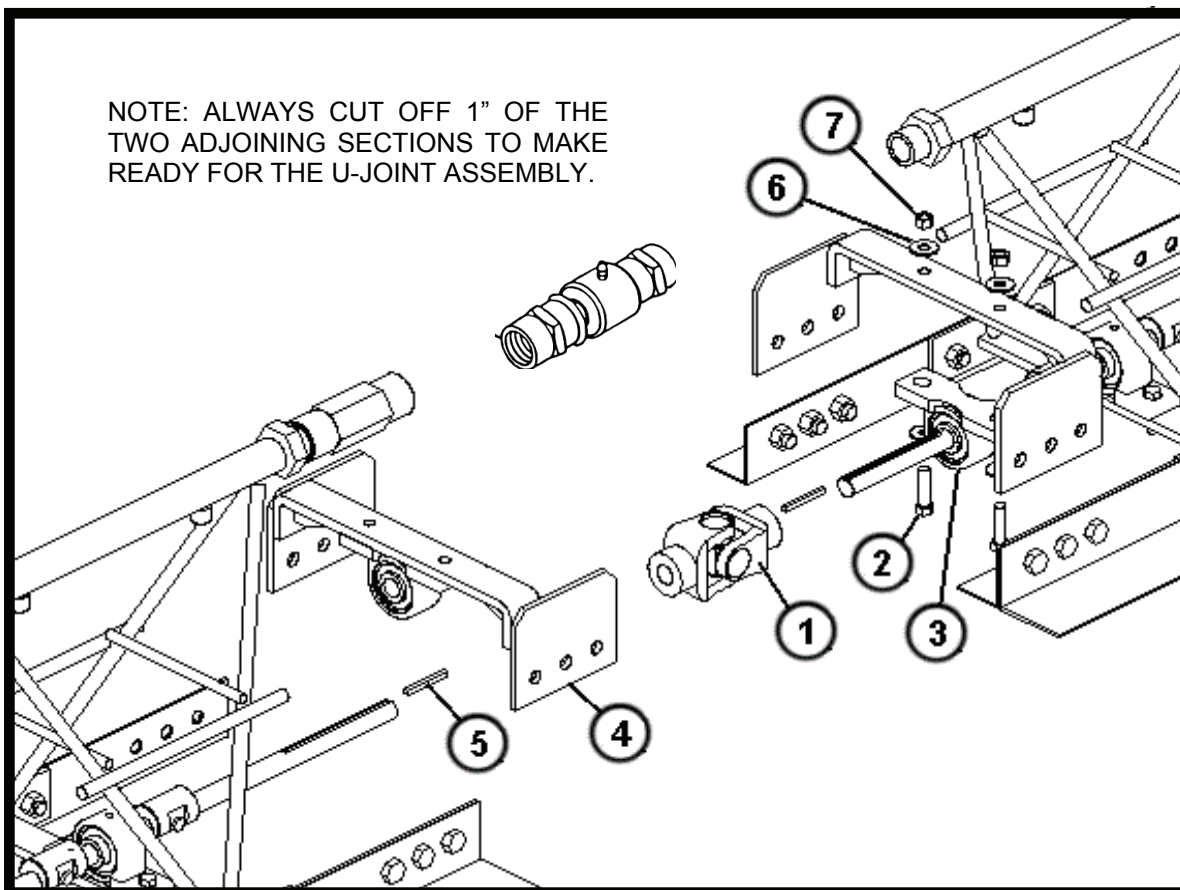


The above illustration is the flex coupler kit. This kit should be used for crowns up to 2% grade. DO NOT use this system for crowns over this amount. For crowns up to 1% grade, use items 1 thru 10 only. For crowns up to 2% grade, use item number 11 also.

PART #	DESCRIPTION	QTY.
1. 010273-----	KEY 3/16 x 2-----	2
2. 020514-----	FSTN, NUT STOVER 3/8-----	2
3. 020704-----	BEARING-----	1
4. 221155-----	OFFSET BEARING SUPPORT-----	1
5. 010038-----	FSTN, BOLT 3/8 x 1 1/2-----	2
6. 017751-----	FSTN, FLATWASHER 3/8-----	2
7. 010316-----	FSTN, SET SCREW 1/4-20 x 1/4-----	2
012869-----	FSTN, SET SCREW 1/4-20 x 3/8-----	2
8. 020870-----	BUSHING-----	2
9. 020867-----	COUPLER-----	1
10. 020868-----	END FLEX ASSEMBLY-----	2
11. 022599-----	TOP PIPE BALL JOINT COUPLER-----	1

PARTS SECTION 2

• U-JOINT ASSEMBLY •



PART#	DESCRIPTION	QTY.
1. 022635	U-JOINT ASSEMBLY	1
2. 028402	BOLT, 3/8 x 1 1/2	4
3. 020704	BEARING, 3/4"	2
4. 221155	OFFSET BEARING SUPPORT	2
5. 010273	KEY, 3/16 x 2	2
6. 017751	FSTN, FLATWASHER 3/8	4
7. 020514	FSTN, NUT STOVER 3/8	4

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