MANUAL P/N 24549

HARDEE BY EVH MFG CO

OPERATOR'S AND MAINTENANCE MANUAL

TIGER SS-60

HYDRAULIC SKID STEER ROTARY MOWER

Starting Serial # 009629

HARDEE BY EVH
4895 RED BLUFF ROAD,
LORIS SC 29569

phone: 843-756-2555
www.hardeebyevh.com

fax: 843-756-4436
evhmfg@hardeebyevh.com

Revised 5/22/13

MODEL NUMBER _____

SERIAL NUMBER _____

DATE OF PURCHASE _____

	Customer Pre-Operation Check List	Reference
☐	Read, understand and follow the general safety rules listed in this manual.	Pages 1-2
☐	Safety Decals	Page 3
☐	Skid Steer Requirements	Page 4
☐	Rotary Mower Hookup	Page 4
☐	Operation Instructions	Page 5
☐	Check all fluid levels, skid steer and mower	Page 5
☐	Operation Environment	Page 5
☐	Using your mower	Page 6

Service Notice

Please take extra care while servicing the hydraulic system by keeping all openings properly covered, thus preventing contamination of the hydraulic components. Contaminates in the oil WILL cause faulty operation or premature failure of components in the hydraulic control valve, pump, and motor.

Table of Contents

Section 1 Introduction 1
- To Our Customers 1
- Owner's Responsibility 1
- Purpose of this Manual 1
- Safety-Alert Symbol 1
- Signal Words 1
- Customer Assistance 1

Section 2 Safety Information 2
- General Safety Rules 2
- Safety Decals 3

Section 3 Requirements and Installation 4
- Skid Steer Requirements 4
- Skid Steer Hook-Up Procedures 4
- Hydraulic System Setup 4

Section 4 Operation 5
- Operation Instructions 5
  - During Operation 5
  - Daily Start-Up Checklist 5
- Operating Environment 5
  - Application Do's and Don'ts 5
- Using Your Mower 6
  - Getting Started 6
  - Cutting Grass and Small Brush 6
  - Cutting Larger Brush and Trees 6
  - Mulching Cut Debris 6
  - Unhook and Post Use Care 7
  - Unhooking the Tiger SS-Mower 7
  - Post Use Care 7

Section 5 Maintenance 7
- Maintenance and Service Schedule 7
  - Hydraulic Motor Housing Assembly 7
- Inspection and Replacement of Blades 7-8
  - Inspection and Replacement of Blade Holder 8
    - Inspection 8
    - Replacement 8
- Checking the Mower Head Relief Valve 8
- Routine Maintenance Checklist 9

Section 6 Troubleshooting 10
- Troubleshooting Guide 10

Section 7 Specifications 11
- Summary of Specifications 11

Section 8 Replacement Parts 12-15
- Parts Listing for the Tiger SS-60 Mower 12-13
- Blade Holder with Blades 12-13
- Hydraulic Schematic for the Tiger SS-60 Mower 14
- Hydraulic Motor Housing Assembly 15

Section 9 Reference 16
- Bolt Torque 16
- Checking Bolt Torque 16
- Torque Specifications 16

Section 10 Warranty 17

© Copyright 2011 All Rights Reserved

Hardee by EVH provides this publication "as is" without warranty of any kind, either expressed or implied. Every precaution has been taken in the design of this manual, however EVH assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein. EVH reserves the right to revise and improve this product at any time. The illustrations in this manual are not intended for the safe and proper assembly or disassembly of this product, but for parts ordering reference only.

To Our Customers

We at Hardee by EVH Manufacturing Company thank you for buying your new Tiger SS-60 Rotary Mower.

We have tried hard to build a mower to do the work you have in mind. Many hours of engineering, field-testing and improvement have gone into the design and fabrication of your mower. We will strive to continue this quality of manufacturing in the future, always keeping the customer's needs clearly in mind.

The best performance of your mower will depend on you. Proper lubrication, maintenance, hookup, adjustments and operation are essential for it to give you long and dependable service. However, as with any type of equipment, your mower is designed to perform specific functions.

In this manual, you will find instructions on mower features, maintenance and operation. If customer service or repair parts are required, contact your local Hardee dealer. Please specify model and serial number when ordering parts.

Owner's Responsibility

The manufacturer has no control over the ultimate use of the mower and therefore assumes no responsibility or liability for damage or injury resulting from the use of this machine.

The upkeep of the hydraulic mower is the responsibility of the user. This upkeep includes all shielding, guards, and safety decals (OSHA Regulation 1928.57). You can obtain replacement parts from any authorized Hardee dealer.

Read this Operator's Manual before operating the mower. Failure to do so could result in injury to the operator or to others. Remember that most accidents occur due to neglect or carelessness. The operator is responsible for inspecting and making repairs as may be necessary. Cleaning after each use and storage under a shelter will extend the life of the mower.

Purpose of this Manual

This manual provides information on safety, operation, adjustments, troubleshooting and maintenance of your new mower. Please read and follow all the recommendations to help ensure that you get many years of service from your new Hardee mower.

If you need additional copies of this manual, please contact your local Hardee dealer or download a copy from our website at www.hardeebyevh.com.

Safety-Alert Symbol

This symbol is the safety alert symbol. It appears throughout this manual to call your attention to instructions involving your personal safety and the safety of others. Failure to follow these instructions can result in injury or death.

Signal Words

Safety signal words are words that call attention to the safety sign and designate a degree or level of hazard seriousness. The signal words used throughout this manual are DANGER, WARNING and CAUTION. Please read and follow all safety messages that have these signal words shown for your protection.

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury

Customer Assistance

The Hardee sales team would like you to be satisfied with your new Skid Steer Mower. If for some reason you have any questions about the information in this manual or have a problem with your mower, please discuss the problem or question with the management of your local dealership. If further assistance is required, please contact:

Hardee By EVH Manufacturing Company, LLC
Sales Department
4895 Red Bluff Road
Loris, SC 29569
843-756-2555

General Safety Rules

This section of your manual will address the safe operation of your new mower. We at Hardee strive to produce a machine that is both a quality product and safe to operate. Please take the time to read, understand and follow the safety rules listed below and throughout this manual.

Your safety also depends on you becoming familiar with the basic operation of your new mower. You can find complete instructions for this mower in the Operation Instruction section of this manual. We believe that using your mower safely, in a safe environment will give you great results!

DANGER
This rotary mower is designed for use on a closed cab skid loader! Check with your skid loader manufacturer for proper door glass, guards and limit chains for this application. These operator protection equipment must also be used! The rotary mower must never be lifted higher than 24" off the ground. The skid loader MUST be equipped with operator protective equipment from thrown objects and Roll Over Protective Structure (ROPS) to operate this equipment safely.

DANGER
Rotary mowers have the inherent ability to throw debris considerable distances when the blades are allowed to strike foreign objects. The operator must use caution or serious injury may result. Be sure by-standers are at a safe distance at all times when the cutter is in use.

WARNING
Failure to keep the skid steer level may result in loss of traction, tipping, rollover, property damage, personal injury or death.

WARNING
Never stand, or allow others to stand on the rotary mower at any time. Never park the unit without placing the rotary mower squarely and firmly on the ground. Serious injury or death by crushing may occur in case of hydraulic failure.

DANGER
Do not look under the rotary mower or attempt to remove objects or branches from under the rotary mower while the skid steer is running. Serious injury, loss of limb or death may result.

DANGER
Do not reach under the rotary mower at any time. Cutting blades may cause serious injury, loss of limb or disfigurement.

WARNING
Never use the rotary mower for a crane or lifting device of any kind. It is not designed for this purpose. Serious damage to the unit may occur. Serious bodily injury may be incurred from this misuse.

WARNING
Never use the mower for a man-lift or personnel lift. It is not designed for this purpose. Serious damage to unit may occur. Serious bodily injury may be incurred from this misuse.

DANGER
Never operate the mower within 30 feet of overhead power lines or utility lines. Do not trim trees with power lines running through them. Serious injury or death by electrocution may occur.

WARNING
Never allow the mower to impact rock piles, piles of gravel, steel guardrails or concrete abutments. Contact with these objects could cause blade failure. Serious machine damage, property damage or bodily injury may occur. Check the area for these items before mowing.

DANGER
Never attempt to use the mower to remove brush or trees larger than 5 inches in diameter. Failure to use caution when cutting trees, may lead to the tree falling on the mower deck and tipping the skid steer over.

Safety Decals

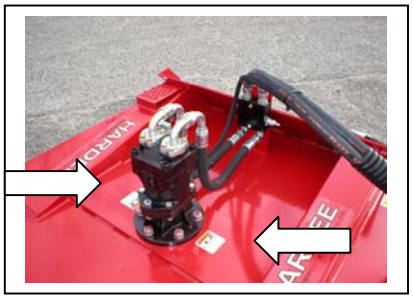
Your Hardee mower ships with all safety decals in place. They are located in areas on the mower that are potentially hazardous. Please locate, read and follow the information you find on these decals.
By law, you must replace any safety decals that are damaged or missing. You can order replacement decals from any local Hardee dealer. Just ask for part number SEE BELOW.

To apply the replacement decals:

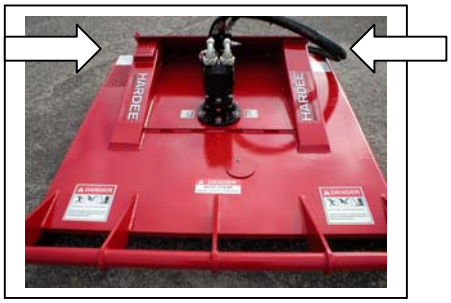
- Clean the surface to place the new decal.
- Peel the decal away from the paper backing.
- Press firmly onto the clean surface.
- Squeeze out any air pockets using a straight edge.

Danger – Thrown Object
Keep Away – Rotating Blades
(P/N 11001)

Danger – Keep Clear
When Cutter Is In Motion
(P/N 11002)



Warning –
High Pressure Fluid Hazard
(P/N 15845)



Caution
Read Operators Manual
(P/N 11004)

Skid Steer Loader Requirements

The Tiger SS-60 Rotary Mower you have purchased was designed for the use of the standard skid steer quick attachment system.

Your skid steer will be required to lift and maneuver over 1300 lbs. Check the skid steer specifications to ensure proper stability! The hydraulic flow requirements are 16 to 25 gpm for our "low-flow" model and 25 – 36 gpm for our "high-flow". The pressure should be a minimum of 2400 psi.

WARNING- DO NOT OPERATE THE "LOW-FLOW" TIGER SS-60 ON A 'HIGH-FLOW" SKID STEER. THE USAGE ON "HIGH-FLOW" SKID STEER WILL CAUSE MOTOR FAILURE INCURRED TO THE HYDRAULIC MOTOR DUE TO "HIGH-FLOW" USAGE ON A "LOW-FLOW" TIGER SS-60.

DANGER

This rotary mower was designed for use on a closed cab skid loader! Check with your skid loader manufacturer for proper door glass, guards and limit chains for this application. These operator protection equipment must also be used! The rear of the rotary mower must never be lifted higher than 24" off the ground. The skid loader MUST be equipped with operator protective equipment from thrown objects and Roll Over Protective Structure (ROPS) to operate this equipment safely.

Rotary Mower Hookup and Operation

Always inspect both the skid steer and rotary mower before hookup. Make sure all *operator protective equipment* is installed and up to manufactures' specification.

Hookup

Refer to Figure 1 for reference

1. Drive skid steer up to the rotary mower and rotate the hitch into the receiver of the rotary mower. Then lift slightly of the ground to ensure proper engagement.

FIGURE 1

2. Engage the lock down levers into the lock position.

FIGURE 1

3. Connec*t the lift limit chains . The rear of the rotary mower must never be lifted higher than 24" off the ground.*

4. Connect the hydraulic hoses. "Low-Flow" will have 2 hoses(pressure & return). "High-Flow" has 3 hoses (pressure, return & case drain). All hoses must be connected at all times during operation.

FIGURE 2

5. Check all fluid levels before starting or engaging in the mowing operation.

FIGURE 3

WARNING

Before leaving the skid steer seat, always engage the parking brake. Stop engine and remove key.
Always make sure that no one is between the skid steer and the mower when tractor is in motion.

Need picture

Figure 1

Need picture

Figure 2

Need picture

Figure 3

Operation Instructions

During Operation

WARNING
Ensure that all bystanders are clear of the mower before starting skid steer engine. Objects thrown by the mower blades can cause severe personal injury or death.

Before any operation of the mower, be familiar with the locations and functions of the unit's controls. Being familiar with the mower and its controls will increase efficiency and reduce the possibility of serious injury or damage to the unit.

The operator should work slowly and carefully until he feels comfortable with the mower. Speed and skill will be attained much more easily if the necessary time is spent to familiarize himself with the mower and its operation.

Get into the habit of completing a walkaround inspection before use. This procedure is a simple method of inspecting your unit's condition by walking around and looking at each component of the unit, including the skid steer. This procedure has been used by airline pilots for many years as a final inspection before flight and is also used by long distance ground transportation drivers on buses and trucks. During the walkaround, you will visually search your units tire/track condition, look for hydraulic leaks, fuel leaks, inspect hose condition and condition of hydraulic cylinders. Look for loose or worn components, see that all guards are in place, check blade condition, look for broken or inoperative lights and determine that it is or is not operable before use. We recommend that you follow this procedure before start up.

Daily Start-Up Checklist

	Check	Section
☐	Check All Fluid Levels, Skid Steer & Mower	Skid Steer Owner Manual 5 for Mower
☐	Grease Points – Skid Steer	Skid Steer Owner Manual
☐	Hydraulic Lines – Connections/Wear	3 & 5
☐	Blade Holder-Wear/Tightness	5
☐	Blades-Wear/Tightness	5

Operating Environment

Application Do's and Don'ts
There are obvious and hidden potential hazards in operating this mower. **REMEMBER!** This machine is often operated in rough terrain conditions that include gullies, holes, slopes and hidden obstructions. Serious injury or even death may occur unless care is taken to assure the safety of the operator and bystanders in the area.

Included here is a list of safety messages, which should be followed. Observing these messages and using common sense learned from experience help eliminate the hazards of operating this and other machinery.

DANGER
Read this manual and the manual for the skid loader carefully to acquaint yourself with both machines before operating. ***REMEMBER****, power-driven equipment should be operated only by those trained and familiar with the operation and instruction to do so. Working with unfamiliar equipment or in unfamiliar conditions can lead to accidents.*

WARNING
Before leaving the skid steer seat; always engage the parking brake. Stop engine and remove key.

DANGER
Never allow riders on skid steer or equipment. Falling off can cause serious injury or death.

WARNING
Worn or dull mower blades can cause excessive mower vibration resulting in damage to the gearbox and structural damage to the mower. You should replace or sharpen blades in pairs. Excessive vibration can cause rotating parts to break and fly off the mower, causing serious injury or death to the operator or bystanders.

DANGER
Do not modify or alter this machine or any of its components or any equipment function without consulting HARDEE BY EVH Manufacturing Company.

Using Your Mower

Getting Started
You will need to spend some time getting the "feel" of your new mower. Spend time reviewing the following steps before using your rotary mower for the first time. The time that you take will greatly enhance your ability to get the desired results when you begin mowing.

Danger
Before proceeding, make sure that no other persons are in close proximity to the mower! ***STAY BACK MINIMUM OF 150'***

- ✓ ***Operating Inspection***
  Inspect mower daily or every 10hrs of usage
  - Check torque of the blade bolt and blade holder
  - Inspect hydraulic hoses
  - No cracks in deck

- ✓ **Cutting Grass and Small Brush**
  Keep the mower blades horizontal to the ground. Raise the deck between 1" to 5" off the ground. Driving speed will depend on the type of vegetation.
  Figure 4

- ✓ ***Cutting larger Brush and Small Trees up to 5" in diameter.***
  Raise the deck between 5" to 18" off the ground. Tilt mower back ~ 10 deg (the front of mower deck higher than end close to the skid loader).***Note: The rotary mower must never be lifted higher than 24" off the ground.*** Drive forward bending the brush and trees away from the skid steer. When the brush/tree are cut, back up and lower deck to cut stump closer to ground.
  Figure 5

- ✓ ***Mulching Cut Debris***
  Mow in a forward movement over the cut debris, then raise the deck between 2" to 10" off the ground. Tilt mower forward ~ 10 deg (the front of mower deck lower than end close to the skid loader). ***Note: The rotary mower must never be lifted higher than 24" off the ground.*** Drive in a reverse movement mulching the debris.
  Figure 6

Danger
Before proceeding, make sure that no other persons are in close proximity to the mower! ***STAY BACK MINIMUM OF 150'***

Need picture

Figure 4

Need picture

Figure 5

Need picture

Figure 6

Unhook and Post Use Care

Before unhooking the skid steer from your mower, always clean the unit thoroughly to remove any grass, mud or debris. This mower should always be stored on a hard level surface

Unhooking the Tiger 60-SS Rotary Mower

- ✓ Set rotary mower flat on the ground.
- ✓ Stop engine.
- ✓ Disconnect hydraulic hoses and lift limit chains.
- ✓ Disengage the lock down levers.
- ✓ Start engine and rotate the receiver out while slowly backing out.

Maintenance and Service Schedule

This section is dedicated to the maintenance of the Tiger SS-60. As with any piece of equipment, the performance and life span depends on the proper operation and maintenance.

DANGER

Never attempt any checks, repairs or adjustments with engine running or the hydraulics engaged. Adjustment of rotating parts while the engine is running can result in serious personal injury or death if the hydraulics accidentally engages.

Hydraulic Motor Housing Assembly

With the rotary mower setting level on the ground. Locate fill plug on the side of motor housing. Refer to figure 7. Oil level should be to the bottom of the fill plug hole. If oil does not slightly run out with the plug removed, inject small amounts of 85W 140 gear oil until it is slightly running out. *Do not overfill!*

Figure 7

Inspection and Replacement of Blades

The mowing blades on the Hardee mower are designed and made to exact specifications and should be replaced with only original Hardee parts. Always replace blades in sets to retain balance on the blade holder. Never weld the blades, as this will change the temper of the steel. Never modify the blades. Check for cross sectional thickness (5/8") and deterioration of blades. Replace as necessary.

When the replacement of mower blade is required, a few rules should be followed:

- Replace blades in sets.
- Inspect bolt holes in blade holder. If bolt holes are elongated, replace blade holder.
- Cutting heavy brush causes excess stress on the blade bolts, because of this they will require inspection that is more frequent.
- When replacing blades always replace bolts and nuts. Never reuse blade bolts and nuts.
- Use heavy duty threadlocker on the threads of the blade bolts. (Loctite Threadlocker RED 271)

Blade Replacement

1. Chock rotary mower 4” off ground. Switch off skid steer, secure parking brake and remove key.

   DANGER *Chock to insure rotary mower cannot move or fall. Failure to comply could result in serious injury or death!*
2. Rotate access cover to open hole in deck.
3. Remove coil spring pin from blade bolt.
4. Align blade nut with access hole and remove blade nut.
5. If the blade does not fall out, tap the bolt through blade holder.
6. Repeat steps 1-5 until all the blades are removed.
7. Inspect the blade holder; pay particular attention to any small hairline cracks between spindle bolt hole and blade bolt holes. If cracks or elongated blade bolt holes are found, this indicates metal fatigue from severe abuse. The blade holder must be replaced.

Continued on page 8

Blade Replacement **Continued from page 7**

8. Apply heavy-duty threadlocker to threads on the blade bolts. (Loctite Threadlocker RED 271)
9. Reinstall blade bolt through blade aligning key on the blade bolt in blade holder and hand tighten nut to hold key in blade holder.
10. Torque blade nut to 800 ft-lbs.
11. Reinstall coil spring pin in the blade bolt. If the coil spring pin does not line up, align close slot in blade nut with hole in the blade bolt. Then install coil spring pin.
12. Repeat steps 8-11 until all the blades are reinstalled.
13. Close accesses cover and return rotary mower to service.

Inspection and Replacement of Blade Holder

Inspection of Blade Holder

1. First, rotate mower deck all the way up; rest deck on ground. Chock rotary mower. Switch off skid steer, secure parking brake and remove key.

   DANGER *Chock to insure rotary mower cannot move or fall. Failure to comply could result in serious injury or death!*

2. When inspecting, pay particular attention to any small hairline cracks between spindle bolt hole and blade bolt holes. This indicates metal fatigue from severe abuse and holder must be replaced.

3. Blade and spindle bolts and nuts should be checked daily. Torque to 800 ft-lbs.

Replacement Blade Holder

Hardee recommends the Blade Holder to only be replaced by an ***Authorized Dealer***! The Blade holder is very heavy.

DANGER *Failure to comply could result in serious injury or death*

Checking the Main Relief Valve

The Tiger SS-60 Rotary Mower is equipped with a mower relief valve that comes pre-set from the factory. This valve is mounted on the top of the mower deck. (see illustration on hydraulic circuit schematic). Before checking the pressure on the valve, make certain that a clean filter is installed and that the reservoir contains the correct amount of hydraulic oil.

The procedure to check the pressure on the rotary mower relief valve is as follows:

1. Start the skid steer and with the skid steer in park, place the rotary mower on the ground. Engage the hydraulics to power the rotary mower and increase engine speed until operating RPM is reached. Allow the mower to run at this speed for 3 to 5 minutes.
2. Disengage the hydraulics and stop engine.
3. Install a 3000 or 5000 psi pressure gauge in port A2 of the rotary mower relief valve (**SEE HYDRAULIC SCHEMATIC ON PAGE 14**). The gauge should block off the downstream flow causing the flow to go over the relief valve. Place loose hose in a clean container to catch any spillage.

Caution

Be sure all fittings are tight before proceeding!

4. Start the skid steer engine and increase engine speed to operating RPM. Engage the hydraulics to power the rotary mower and immediately observe the pressure reading and disengage hydraulics. (If pressure reads 2900 psi or less, you may proceed.)

The correct pressure setting is 2700 psi. If the reading is less than 2400 or more the 2900, contact your local Hardee dealer for assistance.

Caution

Never let the unit operate in the blocked-off pump outlet position for over 5 seconds. A reading can be obtained accurately in this amount of time.

5. Now you can remove the gauge, and re-install the line to port A2.

CAUTION

Never vary from the 2900-psi rotary mower pressure. Failure to comply with this specification will cause severe hydraulic heat, loss of power and damage to components.

DANGER

Exceeding 2900 psi will cause premature hose failure (rupture), and possible bodily injury or property damage.

Routine Maintenance Checklist

Interval	Item	Check	Lube	Change	Comments
Daily Or 10 Hours	Blades	•			Change If Worn out - Damaged
	Blade Bolts (Blade To Holder)	•			Torque should be 800 ft-lbs.
	Blade Holder Nut (Blade Holder to Spindle)	•			Torque should be 800 ft-lbs.
	Spindle Bolts (Spindle To Deck)	•			Torque should be 290 ft-lbs.
	Hitch And Mower Deck	•			Check for metal fatigue
	Grease Leak - under side of Deck	•			Check seal in Motor Housing Assy.
	Hydraulic Hoses	•			Check for cracks or leaks

NOTES

Troubleshooting Guide

Hydraulic System, Blade System, Motor, Fluid Lines

Problem	Possible Cause	Solution / Correction
Leaking Motor	Motor Seal Blown	Repair / Replace Seal And Check Filter For Blockage (Repair / Replace Filter)
Blades Lose Speed In Cutting	Improper Relief Valve Setting	Check Relief Valve Setting (Refer To Page 8)
		Repair / Replace Relief Valve
Motor Whines	Worn or Damaged Motor	Repair / Replace Motor
	Improper Oil In System	Replace Oil
		Requires Hardee Oil Part NO 10373 Or Comparable Oil With Proper Viscosity
	Pressure Setting On Relief Valve Too Low	Check Relief Valve Setting (Refer To Page 8)
Motor Seal Continually Blows Out	Internal Popit Valve Damaged	Replace Popit Valves
	Case Drain not connected (“High-Flow” only)	Reconnect Case Drain
Unit Vibrates Severely	Broken Blade	Replace Blades, Blade Bolts And Nuts (Refer To Page 7 and 8)
	Blade Holder Loose	Repair / Replace Blade Holder (Refer To Pages 7 and 8)
	Loose Output Shaft	Repair / Replace Shaft's Bearings In Cutter Head Housing (Refer To Page 15)
Mower Head Grinds And Roars When Operating	Worn Bearings Or Improper Lubrication In Mower Hydraulic Motor Housing	Repair / Replace Components (Bearing, Seals And Housing) As Required (Refer To Page 15)

NOTES

Summary of Specifications

MODEL

Tiger SS-60 "Low-Flow"		Tiger SS-60 "High-Flow"	
Approximate Weight (lbs.)	1300 - Ready To Mow	Approximate Weight (lbs.)	1300 - Ready To Mow
Blade Tip Speed (ft/min)	25 GPM – 12,000 ft/min	Blade Tip Speed (ft/min)	36 GPM – 19,000 ft/min
Motor	Hydraulic Gear Motor	Motor	Hydraulic Vane Motor
Hydraulic Flow	16 – 25 GPM	Hydraulic Flow	25 – 36 GPM
"Tri-Blade" - Blade Holder	Standard	"Tri-Blade" - Blade Holder	Standard
Blades	3 Blades - 5/8" thick	Blades	3 Blades - 5/8" thick
Mowing Capacity / Suggested Usage	Brush up to 5" dia.	Mowing Capacity / Suggested Usage	Brush up to 5" dia.
Mowing Width	60"	Mowing Width	60"
Width of Mower	67"	Width of Mower	67"
Deck Thickness	1/4"	Deck Thickness	1/4"
Wear Skids	Replaceable	Wear Skids	Replaceable
Driveline Protection	Hydraulic Relief Valve	Driveline Protection	Hydraulic Relief Valve
Quick Hitch	SAE J2513	Quick Hitch	SAE J2513

Item	Part Number	Qty.	Description
1	10035	2	Hex Bolt 3/8" x 3" gr.5 plated
2	10074	4	Hex Bolt 1/2 x 2-1/2 gr.5 plated
3	10093	2	Hex Bolt 5/8" x 2-1/2" gr.5 plated
4	10154	1	Lock Nut 5/16" Plated
5	10166	2	Lock Nut 5/8 plated
6	10168	6	3/4" Locknut (Gr.5 Plated)
7	10175	2	3/8" Locknut (Gr.5 Plated)
8	10176	14	1/2" Locknut (Gr.5 Plated)
9	10181	1	Lockwasher 5/16" plated
10	10184	4	Lockwasher 1/2 plated
11	10185	2	Lockwasher 5/8" Plated
12	10186	6	Lockwasher 3/4" Plated
13	10202	2	3/8" Flatwasher (Plated)
14	10260	10	Plow Bolt 1/2" x 1-1/2" Gr.5 Plated
15	10339	2	Rivet For Serial Number Plate
16	10388	1	O-Ring
17	10872	2	Pressure Flange SET
18	11001	2	Decal, Danger - Rotating Blades
19	11002	1	Decal, Danger - Keep Clear
20	11004	2	Decal, Caution - Operator's Manual
21	11131	4	Large Hardee Logo Decal
22	11505	1	8-M-ORB X 8-M-JIC 90 DEG.ELBOW
23	11727	1	Serial Number Plate
24	15481	1	Slotted Hex Nut 1-1/4" -18UNEF
25	15968	1	Cotter Pin 1/4" x 3"
26	16060	1	HYDRAULIC MOTOR
27	16078	2	45 Deg. Elbow - 1"
28	16191	2	16-M-JIC X 16-M-NPT 90 Deg. Elbow
29	16579	1	Hydraulic Motor Housing Assembly
30	16592	1	RELIEF-VALVE W/ANTI-CAITATION & CHECK
31	16632	2	Flange Adaptor 90 Deg.
32	16633	2	Hose, Valve-to-Motor, TIGER SS-60
33	16634	2	Hose, Machine-to-Valve, TIGER SS-60
34	16635	1	Hose, Case Drain, TIGER SS-60
35	16640	2	Decal, TIGER SS-60
36	20031	1	Access Cover
37	26110	1	DECK WELDMENT - TIGER SS-60
38	26111	2	SLIDE - REPLACEABLE - SKID STEER
39	26112	1	BLADE HOLDER WITH BLADES, TIGER SS-60

DWG. NO.	26101		REV. 1R	
REV	CHANGE	BY	DATE	ECN
1R	INITIAL RELEASE	C.K.N.	3/15/11	- - -

Parts for 26112
Blade Holder with Blades

Item	Part Number	Qty.	Description
A	15436	3	BLADE, 5/8" X 5"
B	15437	3	Blade Bolt for 5/8" Thick Blades
C	16515	3	HEX NUT, Slotted, 1-1/8"-12
D	16517	3	COILED SPRING PIN, STEEL 3/16 X 2", Plain
E	26113	1	Blade Holder Weldment, TIGER SS-60

"HIGH-FLOW"

All Dimensions in Inches Unless Otherwise Specified
Dimensions in [ ] are in Millimeters
Tolerance Unless Otherwise Specified
Fractional Dimensions ± 1/16" Angular Dimensions ± 1°
Decimal Dim. to Limits Shown All Holes to be +0 -1/32"

MODELED BY	C.K.N.	3/15/11
DRAWN BY	C.K.N.	3/15/11
MATERIAL	R.M.N. N/A	

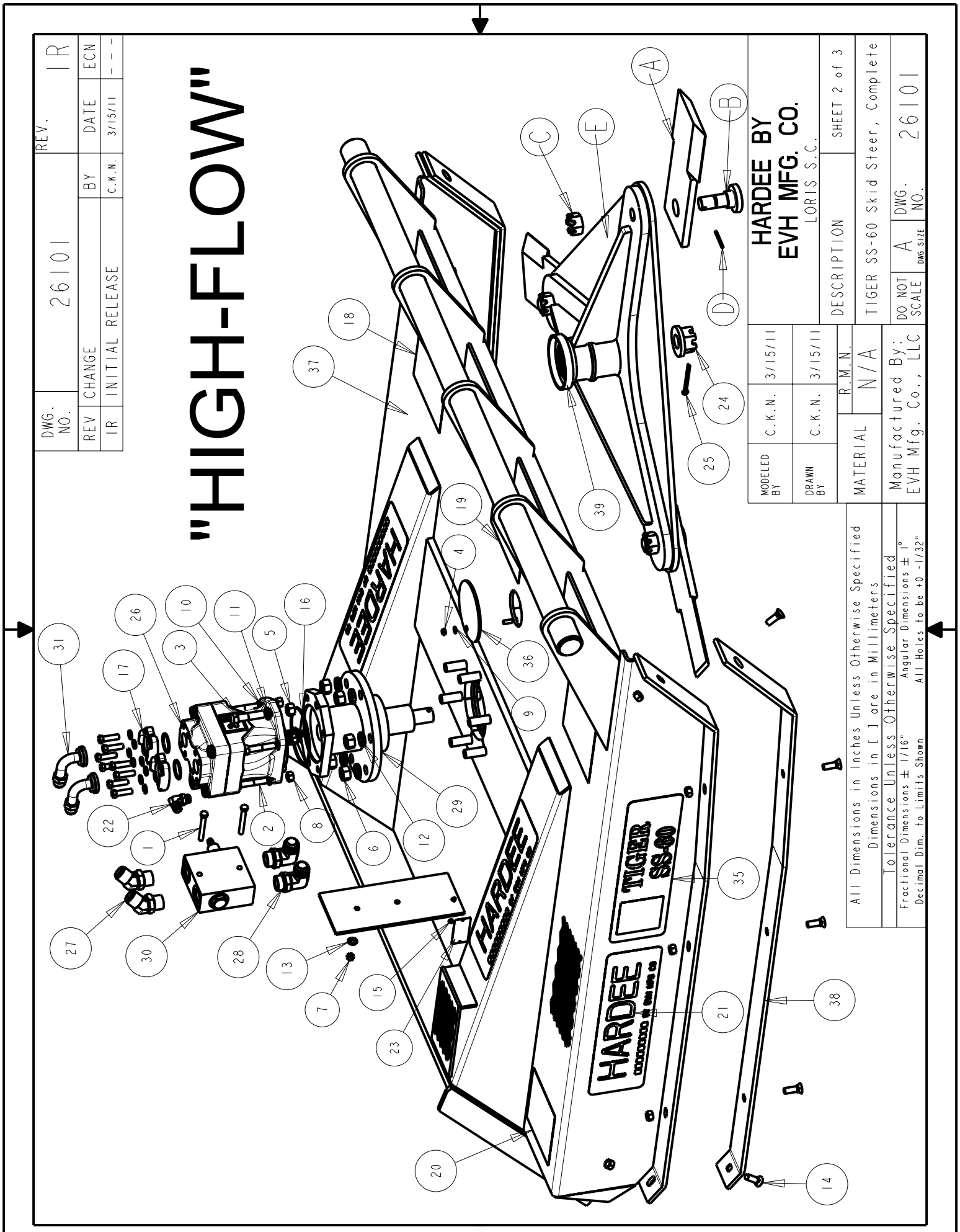
Manufactured By: EVH Mfg. Co., LLC

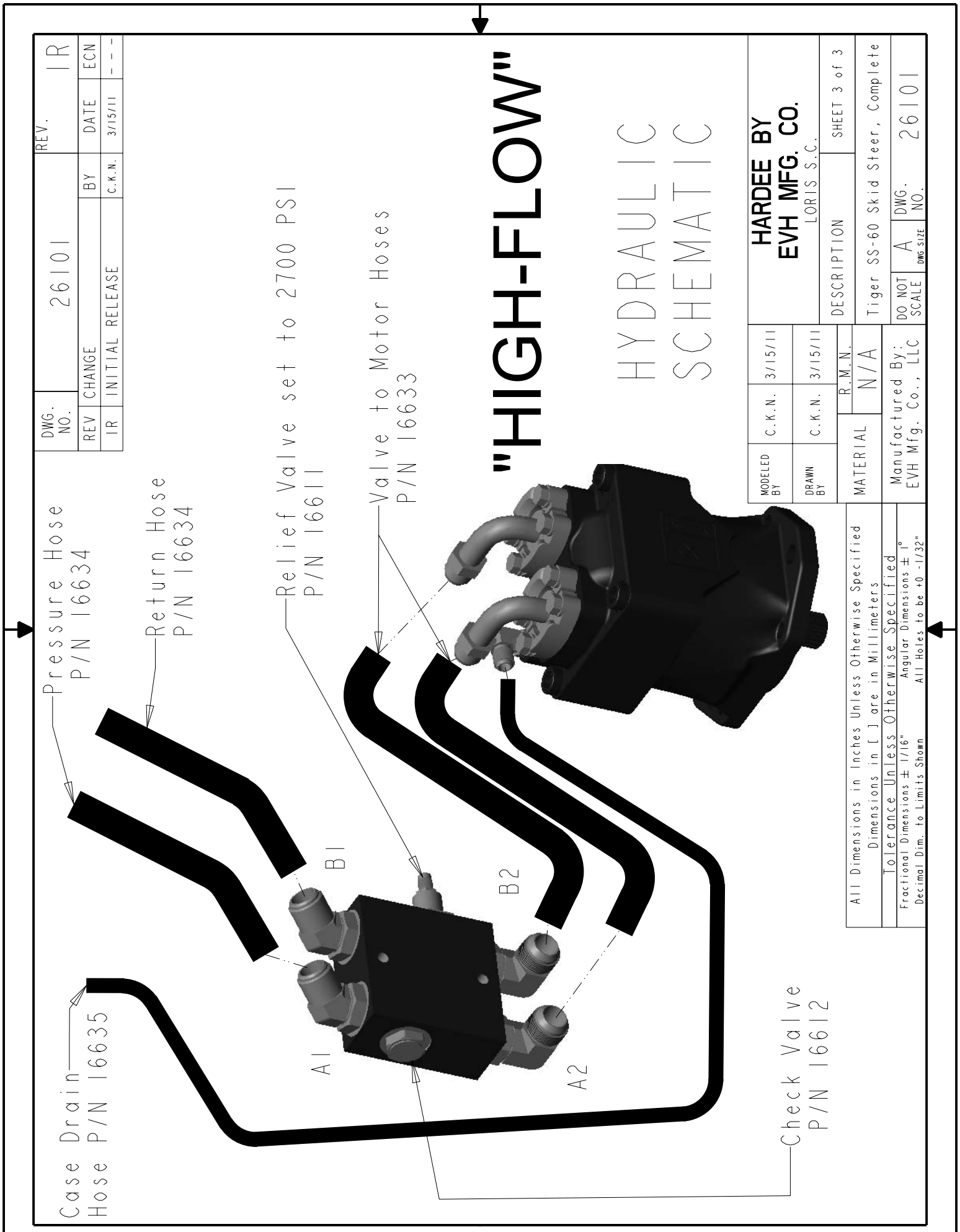
HARDEE BY EVH MFG. CO.
LORIS S.C.

DESCRIPTION: TIGER SS-60 Skid Steer, Complete

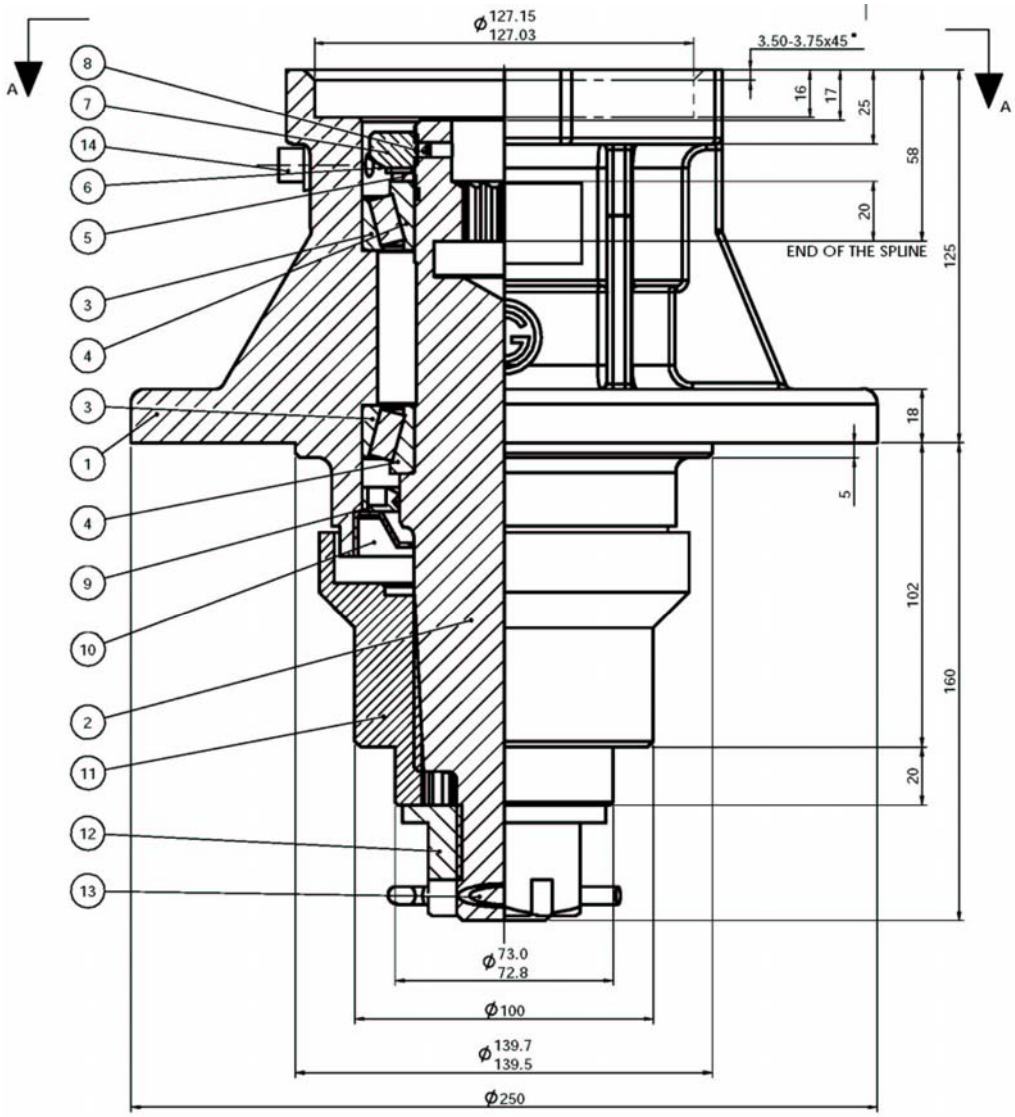
SHEET 1 of 3

DO NOT SCALE | A DWG SIZE | DWG. NO. 26101


"HIGH-FLOW"
DWG. NO. 26101
REV. IR
REV CHANGE BY DATE ECN
IR INITIAL RELEASE C.K.N. 3/15/11 - - -
HARDEE BY EVH MFG. CO.
LORIS S.C.
MODELED BY C.K.N. 3/15/11
DRAWN BY C.K.N. 3/15/11
MATERIAL R.M.N. N/A
Manufactured By: EVH Mfg. Co., LLC
DESCRIPTION
TIGER SS-60 Skid Steer, Complete
SHEET 2 of 3
DO NOT SCALE
A DWG SIZE
DWG. NO. 26101
All Dimensions in Inches Unless Otherwise Specified
Dimensions in [ ] are in Millimeters
Tolerance Unless Otherwise Specified
Fractional Dimensions ± 1/16"
Angular Dimensions ± 1°
Decimal Dim. to Limits Shown
All Holes to be +0 -1/32"
HARDEE
TIGER SS-60


"HIGH-FLOW"
HYDRAULIC SCHEMATIC
HARDEE BY EVH MFG. CO.
LORIS S.C.
DWG. NO. 26101
REV. IR
REV CHANGE BY DATE ECN
IR INITIAL RELEASE C.K.N. 3/15/11 - - -
MODELED BY C.K.N. 3/15/11
DRAWN BY C.K.N. 3/15/11
MATERIAL N/A
R.M.N.
DESCRIPTION
Tiger SS-60 Skid Steer, Complete
SHEET 3 of 3
DO NOT SCALE
A DWG SIZE
DWG. NO. 26101
Manufactured By: EVH Mfg. Co., LLC
All Dimensions in Inches Unless Otherwise Specified
Dimensions in [ ] are in Millimeters
Tolerance Unless Otherwise Specified
Fractional Dimensions ± 1/16"
Decimal Dim. to Limits Shown
Angular Dimensions ± 1°
All Holes to be +0 -1/32"
Pressure Hose P/N 16634
Return Hose P/N 16634
Relief Valve set to 2700 PSI P/N 16611
Valve to Motor Hoses P/N 16633
Case Drain Hose P/N 16635
Check Valve P/N 16612
A1
B1
B2
A2

Hydraulic Motor Housing
EVH P/N 16579



Key #	Part No.	Description	Key #	Part No.	Description
1	N/A	Housing	8	16480	Set Screw
2	N/A	Shaft	9	16491	Lip Seal-Output
3	15952	Cup	10	16488	Seal Protector
4	15953	Bearing	11	16580	Blade Hub
5	16492	Washer w/tang	12	15481	Nut, Hex Slotted
6	15965	Lockwasher	13	15968	Cotter Pin
7	15966	Locknut	14	15784	Plug, Pipe

Bolt Torque

Checking Bolt Torque

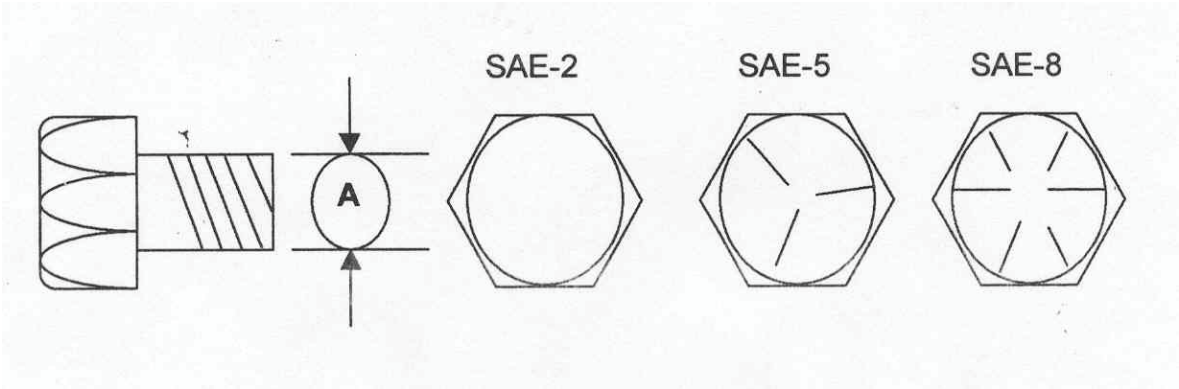
The table shown below gives correct torque values for various bolts and capscrews. Tighten all bolts to the torque specified in the chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt. Torque figures indicated are valid for non-greased or non-oiled threads and heads unless otherwise specified.

Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

Torque value for bolts and capscrews are identified by their head markings.

Torque Specifications

Diameter	Bolt Torque					
	SAE-2		SAE-5		SAE-8	
"A"	LB-FT	N.m	LB-FT	N.m	LB-FT	N.m
1/4"	6	8	9	12	12	17
5/16"	10	13	19	25	27	36
3/8"	20	27	33	45	45	63
7/16"	30	41	53	72	75	100
1/2"	45	61	80	110	115	155
9/16"	70	95	115	155	165	220
5/8"	95	128	160	215	220	305
3/4"	165	225	290	390	400	540
7/8"	170	230	420	570	650	880
1"	225	345	630	850	970	1320



Hardee by EVH Manufacturing Co., LLC Hydraulic Mower Limited Warranty

Hardee by EVH Manufacturing Co., LLC warrants its **Hydraulic Mowers** for one year or **350 hours** (whichever comes first) to the **original** non-commercial, non-governmental, or non-municipal purchaser. For the **original** commercial, industrial, or municipal purchaser, the goods are warranted for 90 days or **350 hours** (whichever comes first) to be free from defects in material or workmanship.

This limited warranty does not apply to any part of the goods which have been subjected to improper or abnormal use, negligence, alteration, modification, accident, or damage due to lack of maintenance, wrong oil or lubricants, or which has served its normal life.

Hardee by EVH Manufacturing Co., LLC **Hydraulic Mowers** include the following units: Miti Mike-35, Tiger SS, DB4048, DB4060, EV1442, MR1442, LR40142, LR40148, LR50148, LR50160, HR2360, and CM2160 Mowers.

The Warranty Card **must** be filled out and returned within **30 days** of purchase. **No** warranty will be allowed without a properly completed and returned warranty card.

"Our obligation under this warranty shall be limited to repair or replacement of any part or parts of this implement, which, in our judgement, shows evidence of such defect, and provided further, that said parts shall be removed and returned by the owner at the owner's expense to Hardee by EVH Manufacturing Co., LLC, Loris, SC, through an authorized dealer, transportation prepaid, free and clear of liens or encumbrances."

This warranty shall not include normal wear items.

Changes or alterations to the implement made without the **written** authorization of the manufacturer will render this warranty void. **Tampering with or removing the factory installed hour meter will void this warranty.**

This warranty does not obligate this company to bear any labor costs in replacement of defective parts.

Hardee by EVH Manufacturing Co., LLC reserves the right to make changes or improvements in its equipment at any time, with the express understanding that such changes or improvements do not impose any obligation of the company to install such changes or improvements on implements previously manufactured.

Hardee by EVH Manufacturing Co., LLC Hydraulic Mowers are designed as **Agricultural** machines. They are designed to be used intermittently in **farm** use, **not** constantly as in "Commercial" use. Our machines are designed with brains instead of brawn, to fit the maximum number of tractors. They are not designed nor priced as Commercial machines that operate 8 hours a day / 5 days a week.

The CM2160 is the exception to the above statement, having been designed as a Commercial machine.

IMPLIED WARRANTIES: You may have some implied warranties. For example, you may have an implied warranty of merchantability (that the hydraulic mower is reasonably fit for the general purpose for which it was sold) or an implied warranty of fitness for a particular purpose (that the hydraulic mower is suitable for your special purposes). Special purposes must be specifically disclosed to Hardee by EVH Manufacturing Co., LLC, and not merely to the dealer before your purchase. Hardee by EVH Manufacturing Co., LLC itself must approve, in writing, that the special purpose is warrantable.

These implied warranties do not apply at all if you use your hydraulic mower for business or commercial use.

Revised 12-16-15

NOTES:

HARDEE

BY EVH MFG CO

HARDEE BY EVH MFG. CO., LLC
4895 RED BLUFF ROAD LORIS, SC 29569
PHONE: 843-756-2555
www.hardeebyevh.com evhmfg@sccoast.net