



State of Alabama
Department of Finance
Division of Purchasing
Master Agreement

New

CONTRACT INFORMATION

MASTER AGREEMENT NUMBER: MA 999 18000000235

NOT TO EXCEED AMOUNT:

Begin Date: 05/08/2018

Procurement Folder: 552924

Expiration Date: 05/07/2019

Procurement Type: Master Agreement

Solicitation Number:

Replaces Award Document:

Award Date:

Replaced by Award Document:

Modification Date: 05/14/18

Version Number: 1

CONTACT INFORMATION

REQUESTOR:

Crist Watts
334-242-4291
crist.watts@purchasing.alabama.gov

ISSUER:

Crist Watts
334-242-4291
crist.watts@purchasing.alabama.gov

BUYER:

Crist Watts
334-242-4291
crist.watts@purchasing.alabama.gov

CONTRACT DESCRIPTION

-MA- T226 RIGHT OF WAY MOWERS

Ship To:

Bill To:

REASON FOR MODIFICATION

VENDOR INFORMATION

Name /Address:

VC000054398: Coblentz Equipment & Parts Co
10400 Highway 80 East
Montgomery AL 36117

Contact:

Craig Coblentz
3342158600
Matthew@Coblentzep.Com

COMMODITY / SERVICE INFORMATION

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
1	0	EA	\$12,977.070000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 10' ROTARY CUTTER
 10' ROTARY CUTTER HIGHWAY TYPE.

SEE SPECIFICATION 18E02

MAKE: Woods
 MODEL: BW10.60

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
2	0	EA	\$14,777.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 15' ROTARY CUTTER
 10' ROTARY CUTTER HIGHWAY TYPE.

SEE SPECIFICATION 18E02

MAKE: Woods
 MODEL: BW15.60

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
3	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

__20__% DISCOUNT OFF LIST PRICE

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
4	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

__10__% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
5	0	EA	\$34,127.070000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 15' HYDRAULIC ROTARY CUTTER
 15' HYDRAULIC ROTARY CUTTER HIGHWAY TYPE.

SEE SPECIFICATION 18E03

MAKE: Alamo
 MODEL: Falcon 15

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
6	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

__17__% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
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COMMODITY / SERVICE INFORMATION

7	0		\$0.000000	\$0.00			\$0.00	\$0.00
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0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

___10___% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
8	0	EA	\$7,622.770000	\$0.00			\$0.00	\$0.00

0206450 - MOWERS, FLAIL
 FLAIL MOWER, 57"-62"
 57"-62" FLAIL MOWER, CAPABLE OF CUTTING GRASS, WEEDS & BRUSH.

SEE SPECIFICATION: 18E06

MAKE: Alamo
 MODEL: SHD62

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
9	0	EA	\$7,787.770000	\$0.00			\$0.00	\$0.00

0206450 - MOWERS, FLAIL
 FLAIL MOWER, 68" - 74"
 68"- 74" FLAIL MOWER, CAPABLE OF CUTTING GRASS, WEEDS & BRUSH.

SEE SPECIFICATION: 18E06

MAKE: Alamo
 MODEL: SHD74

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
10	0	EA	\$7,885.700000	\$0.00			\$0.00	\$0.00

0206450 - MOWERS, FLAIL
 FLAIL MOWER, 88" - 92"
 88"- 92" FLAIL MOWER, CAPABLE OF CUTTING GRASS, WEEDS & BRUSH.

SEE SPECIFICATION: 18E06

MAKE:Alamo
 MODEL: SHD88

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
11	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

___17___% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
12	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

___10___% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
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COMMODITY / SERVICE INFORMATION

13	0	EA	\$41,514.770000	\$0.00			\$0.00	\$0.00
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0206450 - MOWERS, FLAIL
 FLAIL MOWER, W/ REAR SECTION & MID MOUNT (RIGHT SIDE)
 FLAIL MOWER SINGLE WING TURF, TWO SECTIONS WITH REAR SECTION AND MID-MOUNTED RIGHT SIDE.

SEE SPECIFICATION: 18E07

MAKE: Alamo
 MODEL: Right Hand Interstater

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
14	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

__ 17 __ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
15	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

__ 10 __ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
16	0	EA	\$65,212.070000	\$0.00			\$0.00	\$0.00

0206450 - MOWERS, FLAIL
 FLAIL MOWER, 3-SECTIONS
 FLAIL MOWER, 3-SECTIONS, 1 REAR MOUNTED AND 2 MID-MOUNTED WING SECTIONS

SEE SPECIFICATION: 18E08

MAKE: Alamo
 MODEL: Dual Wing Interstater

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
17	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

__ 17 __ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
18	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

__ 10 __ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
19	0	EA	\$48,573.770000	\$0.00			\$0.00	\$0.00

0206445 - MOWER, ARTICULATING BOOM FOR AGRICULTURAL EQUIPMENT
 20' MINIMUM RAIL MOUNTED BOOM CUTTER

COMMODITY / SERVICE INFORMATION

20' MINIMUM HYDRAULICALLY POWERED ARTICULATED BOOM TREE & BRUSH CUTTER TO BE MOUNTED ON A TRACTOR.

SEE SPECIFICATIONS 18E09

MAKE: Alamo
MODEL: Samurai

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
20	0	EA	\$50,957.700000	\$0.00			\$0.00	\$0.00

0206445 - MOWER, ARTICULATING BOOM FOR AGRICULTURAL EQUIPMENT
23' MINIMUM RAIL MOUNTED BOOM CUTTER
23' MINIMUM HYDRAULICALLY POWERED ARTICULATED BOOM TREE & BRUSH CUTTER TO BE MOUNTED ON A TRACTOR.

SEE SPECIFICATIONS 18E09

MAKE: Alamo
MODEL: Samurai

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
21	0	EA	\$12,030.070000	\$0.00			\$0.00	\$0.00

0206445 - MOWER, ARTICULATING BOOM FOR AGRICULTURAL EQUIPMENT
50" BOOM AXE HEAVY DUTY BRUSH CUTTER
50" BOOM AXE HEAVY-DUTY ROTARY BRUSH CUTTER

SEE SPECIFICATION 18E09

MAKE Alamo
MODEL: 50" Rotary Head

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
22	0	EA	\$12,730.070000	\$0.00			\$0.00	\$0.00

0206445 - MOWER, ARTICULATING BOOM FOR AGRICULTURAL EQUIPMENT
60" CUTTING HEAD BRUSH CUTTER
60" CUTTING HEAD BRUSH CUTTER

SEE SPECIFICATION 18E09

MAKE: Alamo
MODEL: 60" Rotary Head

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
23	0	EA	\$12,581.770000	\$0.00			\$0.00	\$0.00

0206445 - MOWER, ARTICULATING BOOM FOR AGRICULTURAL EQUIPMENT
48" FLAIL AXE
48" FLAIL CUTTING AXE

SEE SPECIFICATION 18E09

MAKE: Alamo
MODEL 48" Flail Axe

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
24	0	EA	\$12,707.070000	\$0.00			\$0.00	\$0.00

0206450 - MOWERS, FLAIL
60" SUPER HEAVY-DUTY GRASS FLAIL MOWER
60" SUPER HEAVY DUTY GRASS FLAIL HEAD.

SEE SPECIFICATION 18E09

MAKE: Alamo
MODEL: 60" Grass Flail

COMMODITY / SERVICE INFORMATION

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
25	0	EA	\$12,937.270000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 DITCHER HEAD, HEAVY DUTY
 HEAVY DUTY DITCHER HEAD

SEE SPECIFICATIONS 18E09

MAKE: Alamo
 MODEL: Ditcher Head

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
26	0	EA	\$15,687.700000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 CIRCULAR SAW HEAD LIMB CUTTER
 CIRCULAR SAW HEAD LIMB CUTTER CUTTING HEAD

SEE SPECIFICATIONS 18E09

MAKE: Alamo
 MODEL: 4 Blade Buzzbar Saw Head

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
27	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

__17__% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
28	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

__10__% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
29	0	EA	\$41,867.000000	\$0.00			\$0.00	\$0.00

0206445 - MOWER, ARTICULATING BOOM FOR AGRICULTURAL EQUIPMENT
 21' BOOM MOWER
 21' MIN. REMOVABLE BOOM HYDRAULICALLY DRIVEN BOOM MOWER. ABILITY TO ACCEPT SIDE ROTARY OR SIDE FLAIL ATTACHMENT

SEE SPECIFICATION 18E012

MAKE: Diamond
 MODEL: DBM-A-P

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
30	0	EA	\$9,977.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 50" ROTARY MOWER HEAD

COMMODITY / SERVICE INFORMATION

50" ROTARY MOWER HEAD

SEE SPECIFICATION 18E012

MAKE: Diamond
MODEL: DBR050-H

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
31	0	EA	\$9,877.230000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
60" ROTARY MOWER HEAD
60" ROTARY MOWER HEAD

SEE SPECIFICATION 18E012

MAKE: Diamond
MODEL: DBR060-H

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
32	0	EA	\$11,977.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
50" BOOM FLAIL MOWER HEAD
50" BOOM FLAIL MOWER HEAD

SEE SPECIFICATION 18E012

MAKE: Diamond
MODEL: DBF050-H

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
33	0	EA	\$9,377.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
48" BOOM SAW HEAD
48" BOOM SAW HEAD

SEE SPECIFICATION 18E012

MAKE: Diamond
MODEL: DBS048-H

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
34	0	EA	\$9,556.470000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
22" DITCHER HEAD
22" DITCHER HEAD

SEE SPECIFICATION 18E012

MAKE: Diamond
MODEL: DBD022-H

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
35	0	EA	\$4,177.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
48" SAW BLADE
48" SAW BLADE

SEE SPECIFICATION 18E012

MAKE: Diamond
MODEL: 22-3001

COMMODITY / SERVICE INFORMATION

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
36	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

___ 17 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
37	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

___ 10 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
38	0	EA	\$59,357.700000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 22' - 24' TELESCOPIC BOOM MOWER
 22' - 24' TELESCOPIC BOOM MOWER. MID MOUNTED TELESCOPING, HYDRAULICALLY POWERED BOOM MOWER.

SEE SPECIFICATION 18E013

MAKE: Alamo
 MODEL: Maverick_____

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
39	0	EA	\$66,047.740000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 26' -30' TELESCOPIC BOOM MOWER
 26' -30' TELESCOPIC BOOM MOWER. MID MOUNTED TELESCOPING, HYDRAULICALLY POWERED BOOM MOWER.

SEE SPECIFICATION 18E013

MAKE: Alamo
 MODEL: Maverick

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
40	0	EA	\$14,757.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 60" HEAVY DUTY ROTARY CUTTING HEAD
 60" HEAVY DUTY ROTARY CUTTING HEAD.

SEE SPECIFICATION 18E013

MAKE: Alamo
 MODEL 60" Rotary Head

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
41	0	EA	\$10,781.770000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 2 BLADE SAW BLADE TREE LIMB CUTTER

COMMODITY / SERVICE INFORMATION

2 BLADE SAW BLADE TREE LIMB CUTTER

SEE SPECIFICATION 18E013

MAKE: Alamo
MODEL: Buzz Bar

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
42	0	EA	\$13,477.070000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
3 BLADE SAW BLADE TREE LIMB CUTTER
3 BLADE SAW BLADE TREE LIMB CUTTER

SEE SPECIFICATION 18E013

MAKE: Alamo
MODEL: Buzz Bar

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
43	0	EA	\$14,237.770000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
4 BLADE SAW BLADE TREE LIMB CUTTER
4 BLADE SAW BLADE TREE LIMB CUTTER

SEE SPECIFICATION 18E013

MAKE Alamo
MODEL: Buzz Bar

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
44	0	EA	\$13,375.070000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
FLAIL AXE CUTTER
FLAIL AXE CUTTER HEAD

SEE SPECIFICATION 18E013

MAKE Alamo
MODEL: Flail Aze

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
45	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
OPTIONAL EQUIPMENT NOT LISTED
OPTIONAL EQUIPMENT NOT LISTED.

___ 17 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
46	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
REPAIR / REPLACEMENT PARTS
REPAIR/REPLACEMENT PARTS NOT LISTED.
FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

___ 10 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
47	0	EA	\$43,177.070000	\$0.00			\$0.00	\$0.00

COMMODITY / SERVICE INFORMATION

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 22' BOOM MOWER
 22' HYDRAULICALLY DRIVEN BOOM MOWER. UNIT WILL BE ABLE TO MOW FORWARD AND RIGHT OF THE RIGHT REAR TIRE.

SEE SPECIFICATION 18E014

MAKE: Diamond
 MODEL: DBM-C-N

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
48	0	EA	\$46,277.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 23' BOOM MOWER
 23' HYDRAULICALLY DRIVEN BOOM MOWER. UNIT WILL BE ABLE TO MOW FORWARD AND RIGHT OF THE RIGHT REAR TIRE.

SEE SPECIFICATION 18E014

MAKE: Diamond
 MODEL: DBM-C-H

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
49	0	EA	\$51,377.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 25' BOOM MOWER
 25' HYDRAULICALLY DRIVEN BOOM MOWER. UNIT WILL BE ABLE TO MOW FORWARD AND RIGHT OF THE RIGHT REAR TIRE.

SEE SPECIFICATION 18E014

MAKE: Diamond
 MODEL: DBM-C-J

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
50	0	EA	\$55,217.070000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 28' BOOM MOWER
 28' HYDRAULICALLY DRIVEN BOOM MOWER. UNIT WILL BE ABLE TO MOW FORWARD AND RIGHT OF THE RIGHT REAR TIRE.

SEE SPECIFICATION 18E014

MAKE: Diamond
 MODEL: DBM-C-S

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
51	0	EA	\$59,277.700000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 30' BOOM MOWER
 30' HYDRAULICALLY DRIVEN BOOM MOWER. UNIT WILL BE ABLE TO MOW FORWARD AND RIGHT OF THE RIGHT REAR TIRE.

SEE SPECIFICATION 18E014

MAKE: Diamond
 MODEL: DBM-C-O

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
52	0	EA	\$9,977.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 50" ROTARY MOWER HEAD

Final

COMMODITY / SERVICE INFORMATION

50" ROTARY MOWER HEAD.

SEE SPECIFICATION 18E014

MAKE Diamond
MODEL: DBF050-H

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
53	0	EA	\$9,877.700000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head

60" ROTARY MOWER HEAD
60" ROTARY MOWER HEAD.

SEE SPECIFICATION 18E014

MAKE: Diamond
MODEL: DBR060-H

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
54	0	EA	\$13,970.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head

36" FORESTRY BRUSH CUTTING HEAD
36" FORESTRY BRUSH CUTTING HEAD.

SEE SPECIFICATION 18E014

MAKE: Diamond
MODEL: FBE036-C

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
55	0	EA	\$12,477.070000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head

50" FLAIL MOWER HEAD
50" FLAIL MOWER HEAD

SEE SPECIFICATION 18E014

MAKE: Diamond
MODEL: DBF050-H

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
56	0	EA	\$9,377.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head

48" BOOM SAW HEAD
48" BOOM SAW HEAD

SEE SPECIFICATION 18E014

MAKE: Diamond
MODEL: DBS048-H

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
57	0	EA	\$9,557.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head

22" DITCHER HEAD
22" DITCHER HEAD

SEE SPECIFICATION 18E014

MAKE Diamond
MODEL: DBD022-H

COMMODITY / SERVICE INFORMATION

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
58	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

___ 17 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
59	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

___ 10 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
60	0	EA	\$147,970.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 24' BOOM MOWER
 24' BOOM MOWER, UNIT IS TO BE SELF CONTAINED, PURPOSE BUILT BOOM MOWER WITH A MINIMUM OF 99 H.P.

SEE SPECIFICATION 18E015

MAKE: Atmax
 MODEL: Mower Max Boom 24'

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
61	0	EA	\$152,370.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 26' BOOM MOWER
 26' BOOM MOWER, UNIT IS TO BE SELF CONTAINED, PURPOSE BUILT BOOM MOWER WITH A MINIMUM OF 99 H.P.

SEE SPECIFICATION 18E015

MAKE: Atmax
 MODEL: Mower Max 26'

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
62	0	EA	\$157,970.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 30' BOOM MOWER
 30' BOOM MOWER, UNIT IS TO BE SELF CONTAINED, PURPOSE BUILT BOOM MOWER WITH A MINIMUM OF 99 H.P.

SEE SPECIFICATION 18E015

MAKE: Atmax
 MODEL: Mower Max 30'

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
63	0	EA	\$10,507.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 60" ROTARY DECK

COMMODITY / SERVICE INFORMATION

60" ROTARY DECK

SEE SPECIFICATION: 18E015

MAKE: Atmax
MODEL: Rotary 60"

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
64	0	EA	\$12,900.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
60" FLAIL MOWER
60" FLAIL MOWER

SEE SPECIFICATION: 18E015

MAKE: Atmax
MODEL: Flail Mower 60"

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
65	0	EA	\$12,257.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
48" SAW BLADE
48" SAW BLADE

SEE SPECIFICATION: 18E015

MAKE: Atmax
MODEL: 48" Saw Head

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
66	0	EA	\$19,900.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
50" FIXED KNIFE MULCHING HEAD
50" FIXED KNIFE MULCHING HEAD

SEE SPECIFICATION: 18E015

MAKE: Atmax
MODEL: 50" Fecon Mulching Head

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
67	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
OPTIONAL EQUIPMENT NOT LISTED
OPTIONAL EQUIPMENT NOT LISTED.

__ 0 __ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
68	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
REPAIR / REPLACEMENT PARTS
REPAIR/REPLACEMENT PARTS NOT LISTED.
FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

__ 10 __ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
69	0	EA	\$66,377.070000	\$0.00			\$0.00	\$0.00

COMMODITY / SERVICE INFORMATION

0206450 - MOWERS, FLAIL
 17' PULL BEHIND HYDRAULIC TRIPLE FLAIL MOWERS
 17' PULL BEHIND HYDRAULIC TRIPLE FLAIL MOWERS

SEE SPECIFICATION 18E016

MAKE: Diamond
 MODEL: TTF222-C

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
70	0	EA	\$67,207.700000	\$0.00			\$0.00	\$0.00

0206450 - MOWERS, FLAIL
 19' PULL BEHIND HYDRAULIC TRIPLE FLAIL MOWERS
 19' PULL BEHIND HYDRAULIC TRIPLE FLAIL MOWERS

SEE SPECIFICATION 18E016

MAKE: Diamond
 MODEL: TTF252-C

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
71	0	EA	\$68,477.000000	\$0.00			\$0.00	\$0.00

0206450 - MOWERS, FLAIL
 22' PULL BEHIND HYDRAULIC TRIPLE FLAIL MOWERS
 22' PULL BEHIND HYDRAULIC TRIPLE FLAIL MOWERS

SEE SPECIFICATION 18E016

MAKE: Diamond
 MODEL TTF282-C_

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
72	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

___ 17 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
73	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

___ 10 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
74	0	EA	\$19,970.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 60" SKID STEER FORESTRY BRUSH CUTTER
 60" FORESTRY BRUSH CUTTER

SEE SPECIFICATION 18E017

MAKE Diamond
 MODEL:FBS060-C_____

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
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COMMODITY / SERVICE INFORMATION

75	0		\$0.000000	\$0.00			\$0.00	\$0.00
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0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

 ___ 17 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
76	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

 ___ 10 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
77	0	EA	\$12,970.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 36" EXCAVATOR FORESTRY BRUSH CUTTER
 36" FORESTRY BRUSH CUTTER

 SEE SPECIFICATION 18E018

 MAKE: Diamond
 MODEL: FBE036-C

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
78	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

 ___ 17 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
79	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

 ___ 10 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
80	0	EA	\$17,597.700000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 48" EXCAVATOR FORESTRY BRUSH CUTTER
 48" FORESTRY BRUSH CUTTER

 SEE SPECIFICATION 18E019

 MAKE: Diamond
 MODEL: FBE048-C

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
81	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED

COMMODITY / SERVICE INFORMATION

OPTIONAL EQUIPMENT NOT LISTED.

___ 17 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
82	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

___ 10 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
83	0	EA	\$19,807.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 60" EXCAVATOR FORESTRY BRUSH CUTTER
 60" FORESTRY BRUSH CUTTER

SEE SPECIFICATION 18E019

MAKE: Diamond
 MODEL: FBE060-C

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
84	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

___ 17 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
85	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

___ 10 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
86	0	EA	\$15,657.000000	\$0.00			\$0.00	\$0.00

02066 - Mower, Tractor Mounted, Steep Slope Type with Cutter Head on
 LOW-FLOW BOOM MOUNTED CUTTER HEAD
 LOW-FLOW BOOM MOUNTED CUTTER HEAD. DESIGNED FOR TRACTOR AND SMALL EXCAVATORS.

SEE SPECIFICATION 18E021

MAKE: Gyro Trac
 MODEL Low Flow Head

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
87	0	EA	\$15,657.000000	\$0.00			\$0.00	\$0.00

02066 - Mower, Tractor Mounted, Steep Slope Type with Cutter Head on
 LOW-FLOW SKID STEER MOUNTED CUTTER HEAD

COMMODITY / SERVICE INFORMATION

LOW-FLOW CUTTER HEAD. DESIGNED FOR TRACTOR AND COMPACT LOADERS

SEE SPECIFICATION 18E021

MAKE: Gyro Trac
MODEL: Low Flow Skid Steer

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
88	0	EA	\$23,797.000000	\$0.00			\$0.00	\$0.00

02066 - Mower, Tractor Mounted, Steep Slope Type with Cutter Head on HIGH/LOW-FLOW SKID STEER MOUNTED CUTTER HEAD
LOW-FLOW CUTTER HEAD. DESIGNED FOR TRACTOR AND COMPACT LOADERS

SEE SPECIFICATION 18E021

MAKE: Gyro Trac
MODEL: 400-HL

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
89	0	EA	\$30,377.000000	\$0.00			\$0.00	\$0.00

02066 - Mower, Tractor Mounted, Steep Slope Type with Cutter Head on HIGH FLOW SKID STEER MOUNTED CUTTER HEAD
LOW-FLOW CUTTER HEAD. DESIGNED FOR TRACTOR AND COMPACT LOADERS

SEE SPECIFICATION 18E021

MAKE: Gyro Trac
MODEL: 500-HL

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
90	0		\$0.000000	\$0.00			\$0.00	\$0.00

02066 - Mower, Tractor Mounted, Steep Slope Type with Cutter Head on OPTIONAL EQUIPMENT NOT LISTED
OPTIONAL EQUIPMENT NOT LISTED.

___ 17 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
91	0		\$0.000000	\$0.00			\$0.00	\$0.00

020610 - CUTTERS, BRUSH, ROTARY REPAIR / REPLACEMENT PARTS
REPAIR/REPLACEMENT PARTS NOT LISTED.
FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

___ 10 ___ % DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
92	0	EA	\$242,577.000000	\$0.00			\$0.00	\$0.00

0206445 - MOWER, ARTICULATING BOOM FOR AGRICULTURAL EQUIPMENT
SELF CONTAINED WIDE MOWER
SELF CONTAINED WIDE MOWER.

SEE SPECIFICATION 018022

MAKE Alamo
MODEL: Mantis Wide Mower

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
93	0	EA	\$225,817.070000	\$0.00			\$0.00	\$0.00

COMMODITY / SERVICE INFORMATION

0206445 - MOWER, ARTICULATING BOOM FOR AGRICULTURAL EQUIPMENT
 SELF CONTAINED HEAVY BOOM MOWER
 SELF CONTAINED HEAVY BOOM MOWER.

SEE SPECIFICATION 018022

MAKE: Alamo
 MODEL: Mantis

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
94	0	EA	\$16,687.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 48" FLAIL HEAD
 48" FLAIL HEAD. COMPATIBLE WITH HEAVY BOOM MOWER HEAD

SEE SPECIFICATION 18E022

MAKE: Alamo
 MODEL: Flail Head

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
95	0	EA	\$18,187.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 60" ROTARY HEAD
 ROTARY HEAD. COMPATIBLE WITH HEAVY BOOM MOWER HEAD

SEE SPECIFICATION 18E022

MAKE: Alamo
 MODEL: Rotary Head

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
96	0	EA	\$14,787.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 3-BLADE SAW HEAD
 3-BLADE SAW HEAD. COMPATIBLE WITH HEAVY BOOM MOWER HEAD

SEE SPECIFICATION 18E022

MAKE: Alamo
 MODEL: Buzz Bar 3 Blade

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
97	0	EA	\$24,257.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 UGR MOWING HEAD
 UGR MOWING HEAD. COMPATIBLE WITH HEAVY BOOM MOWER HEAD

SEE SPECIFICATION 18E022

MAKE: Alamo
 MODEL: UGR Under Guard Rail

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
98	0		\$0.000000	\$0.00			\$0.00	\$0.00

02066 - Mower, Tractor Mounted, Steep Slope Type with Cutter Head on
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

 3 % DISCOUNT OFF LIST PRICE

COMMODITY / SERVICE INFORMATION

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
99	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

___10___% DISCOUNT OFF LIST PRICE

All terms, conditions, and any amendments to solicitation are part of this contract as if fully reproduced herein .

Approved:



Purchasing Director

APPROVALS			
Date	Status Before	Status After	Approver

Final

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Authority:

The Department of Finance Code of Administrative procedure, Chapter 356-4-1 effective September 7, 2012 is incorporated by reference and made a part of this document. To view the Code of Administrative procedures visit our website www.purchasing.alabama.gov.

Choice of Law; Venue:

This Contract will be governed by laws of the State of Alabama and the sole venue for litigation and alternative dispute resolution activities will be the City of Montgomery in the State of Alabama.

Not to Constitute a Debt of the State:

The terms and commitments contained in the RFB, or any contract resulting from this RFB, shall not constitute a debt of the State of Alabama, the incurring of which is prohibited by Section 213 of the Official Recompilation of the Constitution of Alabama, 1901, as amended by Amendment No. 26.

Bid Response Instructions:

In order to submit a responsive bid, bidder must read and follow all instructions, terms, conditions and specifications of this solicitation.

1. Bid envelope(s)/package(s)/box(es) must be identified with the bid number and opening date. Each individual bid must be submitted in a separate envelope. Responses to multiple bid numbers submitted in the same package that are not in separate envelopes and properly identified will be rejected. The Division of Purchasing does not assume responsibility for late bids for any reason including those due to postal or courier service. Bid responses must be in the Division of Purchasing office prior to the "close date and time" indicated on the bid.

2. Bid responses must be in ink or typed on this document, or replicated in the exact format. Signatures must be handwritten originals in ink or the bid will be rejected. Unless indicated in the bid, all price pages must be completed and returned. If an item is not being bid, identify it as N/B (no-bid). Pages should be secured. The Division of Purchasing does not assume responsibility for missing pages. Faxed/emailed bid responses will not be accepted.

3. The unit price always governs regardless of the extended amount. A unit price change on a line must be initialed by the person signing the bid or that line will be rejected. Price changes include but are not limited to cross-out, strike-over, ink-over, white-out, erasure, or any other method changing the price.

4. The Division of Purchasing requires an original and a minimum of one exact copy of the signed, notarized bid to include any required addendum(s) and documentation. The original and the copy should be submitted together as a bid package.

5. An improperly submitted bid, late bid or a bid that is canceled on or before the opening date may be retrieved during normal business hours. These bids will be held for 90 days then destroyed. The Division of Purchasing assumes no responsibility for the document after 90 days. Bids retrieved by vendor(s) are considered withdrawn and vendor(s) relinquishes all rights to protest.

Bid rejection:

Bidders shall not place any qualification, exceptions, conditions, reservations, limitations, or substitutions in their bid concerning the contract terms and conditions. Any such qualifications, exceptions, conditions, reservations, limitations or substitutions shall result in rejection of the bid.

Bids that are improperly submitted or received late will be documented for record but will not be returned nor will bidder be notified.

The following is a partial list whereby a bid response will be rejected:

Bid number not on envelope/package/box

Bid responses with multiple bid numbers in same envelope not properly identified

Bid responses received late

Bid responses not signed/not original signature

Bid responses not notarized/not original signature of notary and/or notary expiration

Bidder notarized own signature

Required information not submitted with bid response

Failure to submit the original bid and a complete exact copy

Bid response received from non-subscribed/expired vendor

Beason-Hammon Alabama taxpayer and Citizen Protection Act (Act 2011-535 and as amended by Act 2012-491)

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As a condition for award of this bid, the vendor acknowledges the following:

“By signing this contract, the contracting parties affirm, for the duration of any agreement that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.”

Verification of enrollment in the E-verify program will be required prior to any award to a vendor who employs one or more employees within the State of Alabama. E-verify documentation should be identified with the bid number and the buyer name. Failure to provide documentation within 5 calendar days of notification will result in the rejection of your bid. To enroll in the E-verify program visit www.dhs.gov/e-verify.

Certification Pursuant to Act no. 2006-557

Alabama Law (section 41-4-116, Code of Alabama 1975) provides that every bid submitted and contract executed shall contain a certification that the vendor, contractor, and all of its affiliates that make sales for delivery into Alabama or leases for use in Alabama are registered, collecting, and remitting Alabama state and local sales, use, and/or lease tax on all taxable sales and leases into Alabama. By submitting this bid, the bidder is hereby certifying that they are in full compliance with Act no. 206-557, they are not barred from bidding or entering into a contract pursuant to 41-4-116, and acknowledges that the awarding authority may declare the contract void if the certification is false.

Information and assistance to minority and women-owned businesses in acquiring M/WBE certification may be obtained from the office of minority business enterprises at www.adeca.alabama.gov

In compliance with Act 2016-312, by submitting this bid the contractor hereby certifies that it is not currently engaged in, and will not engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which this state can enjoy open trade.

*******STANDARD TERMS and CONDITIONS *******

Vendor Registration and Subscription Fee

Vendors may receive bid notices by registering at the State of Alabama vendor self-service (VSS) portal, <https://procurement.staars.alabama.gov>. Vendors wishing to respond to bids must be subscribed. Bid responses will not be accepted from non-subscribed vendors. Once registered you may subscribe by clicking the “pay subscription fee” tab at the top of the VSS home page. Payments must be made by credit or debit card. Vendors should provide their VSS assigned vendor number on all bid responses. A vendor’s subscription must be maintained throughout the term of an awarded contract, to include renewal periods.

Non-appropriation of funds

Continuation of any agreement between the State and a bidder beyond a fiscal year is contingent upon continued legislative appropriation of funds for the purpose of this bid and any resulting agreement. Non-availability of funds at any time shall cause any agreement to become void and unenforceable and no liquidated damages shall accrue to the state as a result. The State will not incur liability beyond the payment of accrued agreement payment.

Proration

Any provision of a contract resulting from this bid to the contrary notwithstanding, in the event of failure of the State to make payment hereunder as a result of partial unavailability, at the time such payment is due, of such sufficient revenues of the State to make such payment (proration of appropriated funds for the State having been declared by the governor pursuant to Section 41-4-90 of the Code of Alabama 1975), the contractor shall have the option, in addition to the other remedies of the contract, of renegotiating the contract (extending or changing payment terms or amounts) or terminating the contract.

Intent to Award

The State of Alabama – Division of Purchasing will issue an ‘Intent to Award’ before a final award is made. The ‘Intent to Award’ will continue for a period of five (5) calendar days, after which the award will be final provided there are no protests. Upon final award, all rights to protest are forfeited. A detailed explanation of this process may be reviewed in the Alabama Administrative Code – Chapter 355-4-1(14). All protest communications filed via email must be sent to protests@purchasing.alabama.gov

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Alternate Bid Response

Unless stated elsewhere in this Invitation-to-Bid (ITB) the State of Alabama will accept and evaluate alternate bid submittals on any ITB's provided the response meets all bid requirements.

Internet Website Link's

Internet and/or website links will not be accepted in bid responses as a means to supply any requirements stated in this (Invitation-to-Bid) ITB.

Product Delivery, Receiving and Acceptance

In accordance with the Universal Commerce Code (Code of Alabama, Title 7), after delivery, the State of Alabama has the right to inspect all products before accepting. The State will inspect products in a reasonable timeframe. Signature on a delivery document does not constitute acceptance by the State. The State will accept products only after satisfactory inspection.

Sales Tax Exemption

Pursuant to the Code of Alabama, 1975, Title 40-23-4 (A)(11), the State of Alabama is exempt from paying sales tax. An exemption letter will be furnished upon request.

Invoices

Inquiries concerning invoice payments are to be directed to the receiving agency.

Bid Responses and Bid Results

Unevaluated Bid Responses are available on our website at www.purchasing.alabama.gov. The complete bid file will be made available for review in the Division of Purchasing by scheduling an appointment. We do not provide copies of bid files.

Foreign Corporation – Certificate of Authority

Alabama Law provides that a foreign corporation (an out-of-state company/firm) may not transact business in the State of Alabama until it obtains a Certificate of Authority from the Secretary of State. Section 10-2B15.01, Code of Alabama 1975. To obtain forms for a Certificate of Authority, contact the Secretary of State, Corporations Division, (334) 242-5324. The Certificate of Authority does not prevent the vendor from submitting a bid.

Alabama Preferred Vendor

A "Preferred Vendor" shall be a person, firm, or corporation that is granted preference priority by meeting all of the following criteria as established by the Code of Alabama Section 41-16-20.

Priority 1. Produces or manufacturers the product within the State.

Priority 2. Has an assembly plant or distribution facility for the product within the State.

Priority 3. Is organized for business under the applicable laws of the State as a corporation, partnership, or professional association and has maintained at least one retail outlet or service center for the product or service within the State for not less than one year prior to the deadline date for the competitive bid.

Preferred vendor status must be indicated on the pricing page(s) of your bid response in order to be considered for preferred vendor preference. By signing this bid, you affirm that the item(s) indicated meet all three criteria of a preferred vendor.

Bid item(s) meeting the criteria of preferred vendor where pricing is within 1% of the lowest compliant bid may be considered for award by the awarding authority.



**State of Alabama
Department of Finance
Division of Purchasing
Master Agreement**

New

CONTRACT INFORMATION

MASTER AGREEMENT NUMBER: MA 999 18000000236

NOT TO EXCEED AMOUNT:

Begin Date: 05/08/2018

Procurement Folder: 552924

Expiration Date: 05/07/2019

Procurement Type: Master Agreement

Solicitation Number:

Replaces Award Document:

Award Date:

Replaced by Award Document:

Modification Date: 05/14/18

Version Number: 1

CONTACT INFORMATION

REQUESTOR:

Crist Watts
334-242-4291
crist.watts@purchasing.alabama.gov

ISSUER:

Crist Watts
334-242-4291
crist.watts@purchasing.alabama.gov

BUYER:

Crist Watts
334-242-4291
crist.watts@purchasing.alabama.gov

CONTRACT DESCRIPTION

-MA- T226 RIGHT OF WAY MOWERS

Ship To:

Bill To:

REASON FOR MODIFICATION

VENDOR INFORMATION

Name /Address:

VC000057402: Hall Manufacturing Llc
P.O. Box 5638
North Little Ro AR 72119

Contact:

Robert Hall
501-945-7550 EXT: 23
Rhall@Bush-Whacker.Com

COMMODITY / SERVICE INFORMATION

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
1	0	EA	\$9,075.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 10' ROTARY CUTTER
 10' ROTARY CUTTER HIGHWAY TYPE.

SEE SPECIFICATION 18E01

MAKE: Bush Whacker
 MODEL: ST-120

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
2	0	EA	\$9,995.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 15' ROTARY CUTTER
 15' ROTARY CUTTER HIGHWAY TYPE.

SEE SPECIFICATION 18E01

MAKE: Bush Whacker
 MODEL: ST-180

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
3	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

__40__% DISCOUNT OFF LIST PRICE

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
4	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

__20__% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
5	0	EA	\$1,895.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 5' ROTARY CUTTER
 5' ROTARY CUTTER, MEDIUM DUTY LIFT TYPE

SEE SPECIFICATION 18E04

MAKE: Bush Whacker
 MODEL: ST-6010

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
6	0	EA	\$1,995.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 6' ROTARY CUTTER
 6' ROTARY CUTTER, MEDIUM DUTY LIFT TYPE

SEE SPECIFICATION 18E04

MAKE: Bush Whacker
 MODEL: ST-7210

COMMODITY / SERVICE INFORMATION

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
7	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

__40__% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
8	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

__20__% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
9	0	EA	\$1,995.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 6' HEAVY DUTY ROTARY CUTTER
 6' ROTARY CUTTER, HEAVY DUTY LIFT TYPE

SEE SPECIFICATION 18E05

MAKE: Bush Whacker
 MODEL ST-7210

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
10	0	EA	\$2,295.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 7' HEAVY DUTY ROTARY CUTTER
 7' ROTARY CUTTER, HEAVY DUTY LIFT TYPE

SEE SPECIFICATION 18E05

MAKE: Bush Whacker
 MODEL ST-8410

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
11	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

__40__% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
12	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

__20__% DISCOUNT OFF LIST PRICE

Approved:



Purchasing Director

APPROVALS			
Date	Status Before	Status After	Approver

Final

18000000236	Document Phase Final	Document Description -MA- T226 RIGHT OF WAY MOWERS	Page 5 of 7
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Authority:

The Department of Finance Code of Administrative procedure, Chapter 356-4-1 effective September 7, 2012 is incorporated by reference and made a part of this document. To view the Code of Administrative procedures visit our website www.purchasing.alabama.gov.

Choice of Law; Venue:

This Contract will be governed by laws of the State of Alabama and the sole venue for litigation and alternative dispute resolution activities will be the City of Montgomery in the State of Alabama.

Not to Constitute a Debt of the State:

The terms and commitments contained in the RFB, or any contract resulting from this RFB, shall not constitute a debt of the State of Alabama, the incurring of which is prohibited by Section 213 of the Official Recompilation of the Constitution of Alabama, 1901, as amended by Amendment No. 26.

Bid Response Instructions:

In order to submit a responsive bid, bidder must read and follow all instructions, terms, conditions and specifications of this solicitation.

1. Bid envelope(s)/package(s)/box(es) must be identified with the bid number and opening date. Each individual bid must be submitted in a separate envelope. Responses to multiple bid numbers submitted in the same package that are not in separate envelopes and properly identified will be rejected. The Division of Purchasing does not assume responsibility for late bids for any reason including those due to postal or courier service. Bid responses must be in the Division of Purchasing office prior to the "close date and time" indicated on the bid.

2. Bid responses must be in ink or typed on this document, or replicated in the exact format. Signatures must be handwritten originals in ink or the bid will be rejected. Unless indicated in the bid, all price pages must be completed and returned. If an item is not being bid, identify it as N/B (no-bid). Pages should be secured. The Division of Purchasing does not assume responsibility for missing pages. Faxed/emailed bid responses will not be accepted.

3. The unit price always governs regardless of the extended amount. A unit price change on a line must be initialed by the person signing the bid or that line will be rejected. Price changes include but are not limited to cross-out, strike-over, ink-over, white-out, erasure, or any other method changing the price.

4. The Division of Purchasing requires an original and a minimum of one exact copy of the signed, notarized bid to include any required addendum(s) and documentation. The original and the copy should be submitted together as a bid package.

5. An improperly submitted bid, late bid or a bid that is canceled on or before the opening date may be retrieved during normal business hours. These bids will be held for 90 days then destroyed. The Division of Purchasing assumes no responsibility for the document after 90 days. Bids retrieved by vendor(s) are considered withdrawn and vendor(s) relinquishes all rights to protest.

Bid rejection:

Bidders shall not place any qualification, exceptions, conditions, reservations, limitations, or substitutions in their bid concerning the contract terms and conditions. Any such qualifications, exceptions, conditions, reservations, limitations or substitutions shall result in rejection of the bid.

Bids that are improperly submitted or received late will be documented for record but will not be returned nor will bidder be notified.

The following is a partial list whereby a bid response will be rejected:

Bid number not on envelope/package/box

Bid responses with multiple bid numbers in same envelope not properly identified

Bid responses received late

Bid responses not signed/not original signature

Bid responses not notarized/not original signature of notary and/or notary expiration

Bidder notarized own signature

Required information not submitted with bid response

Failure to submit the original bid and a complete exact copy

Bid response received from non-subscribed/expired vendor

Beason-Hammon Alabama taxpayer and Citizen Protection Act (Act 2011-535 and as amended by Act 2012-491)

18000000236	Document Phase Final	Document Description -MA- T226 RIGHT OF WAY MOWERS	Page 6 of 7
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As a condition for award of this bid, the vendor acknowledges the following:

“By signing this contract, the contracting parties affirm, for the duration of any agreement that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.”

Verification of enrollment in the E-verify program will be required prior to any award to a vendor who employs one or more employees within the State of Alabama. E-verify documentation should be identified with the bid number and the buyer name. Failure to provide documentation within 5 calendar days of notification will result in the rejection of your bid. To enroll in the E-verify program visit www.dhs.gov/e-verify.

Certification Pursuant to Act no. 2006-557

Alabama Law (section 41-4-116, Code of Alabama 1975) provides that every bid submitted and contract executed shall contain a certification that the vendor, contractor, and all of its affiliates that make sales for delivery into Alabama or leases for use in Alabama are registered, collecting, and remitting Alabama state and local sales, use, and/or lease tax on all taxable sales and leases into Alabama. By submitting this bid, the bidder is hereby certifying that they are in full compliance with Act no. 206-557, they are not barred from bidding or entering into a contract pursuant to 41-4-116, and acknowledges that the awarding authority may declare the contract void if the certification is false.

Information and assistance to minority and women-owned businesses in acquiring M/WBE certification may be obtained from the office of minority business enterprises at www.adeca.alabama.gov

In compliance with Act 2016-312, by submitting this bid the contractor hereby certifies that it is not currently engaged in, and will not engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which this state can enjoy open trade.

*******STANDARD TERMS and CONDITIONS *******

Vendor Registration and Subscription Fee

Vendors may receive bid notices by registering at the State of Alabama vendor self-service (VSS) portal, <https://procurement.staars.alabama.gov>. Vendors wishing to respond to bids must be subscribed. Bid responses will not be accepted from non-subscribed vendors. Once registered you may subscribe by clicking the “pay subscription fee” tab at the top of the VSS home page. Payments must be made by credit or debit card. Vendors should provide their VSS assigned vendor number on all bid responses. A vendor’s subscription must be maintained throughout the term of an awarded contract, to include renewal periods.

Non-appropriation of funds

Continuation of any agreement between the State and a bidder beyond a fiscal year is contingent upon continued legislative appropriation of funds for the purpose of this bid and any resulting agreement. Non-availability of funds at any time shall cause any agreement to become void and unenforceable and no liquidated damages shall accrue to the state as a result. The State will not incur liability beyond the payment of accrued agreement payment.

Proration

Any provision of a contract resulting from this bid to the contrary notwithstanding, in the event of failure of the State to make payment hereunder as a result of partial unavailability, at the time such payment is due, of such sufficient revenues of the State to make such payment (proration of appropriated funds for the State having been declared by the governor pursuant to Section 41-4-90 of the Code of Alabama 1975), the contractor shall have the option, in addition to the other remedies of the contract, of renegotiating the contract (extending or changing payment terms or amounts) or terminating the contract.

Intent to Award

The State of Alabama – Division of Purchasing will issue an ‘Intent to Award’ before a final award is made. The ‘Intent to Award’ will continue for a period of five (5) calendar days, after which the award will be final provided there are no protests. Upon final award, all rights to protest are forfeited. A detailed explanation of this process may be reviewed in the Alabama Administrative Code – Chapter 355-4-1(14). All protest communications filed via email must be sent to protests@purchasing.alabama.gov

18000000236	Document Phase Final	Document Description -MA- T226 RIGHT OF WAY MOWERS	Page 7 of 7
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Alternate Bid Response

Unless stated elsewhere in this Invitation-to-Bid (ITB) the State of Alabama will accept and evaluate alternate bid submittals on any ITB's provided the response meets all bid requirements.

Internet Website Link's

Internet and/or website links will not be accepted in bid responses as a means to supply any requirements stated in this (Invitation-to-Bid) ITB.

Product Delivery, Receiving and Acceptance

In accordance with the Universal Commerce Code (Code of Alabama, Title 7), after delivery, the State of Alabama has the right to inspect all products before accepting. The State will inspect products in a reasonable timeframe. Signature on a delivery document does not constitute acceptance by the State. The State will accept products only after satisfactory inspection.

Sales Tax Exemption

Pursuant to the Code of Alabama, 1975, Title 40-23-4 (A)(11), the State of Alabama is exempt from paying sales tax. An exemption letter will be furnished upon request.

Invoices

Inquiries concerning invoice payments are to be directed to the receiving agency.

Bid Responses and Bid Results

Unevaluated Bid Responses are available on our website at www.purchasing.alabama.gov. The complete bid file will be made available for review in the Division of Purchasing by scheduling an appointment. We do not provide copies of bid files.

Foreign Corporation – Certificate of Authority

Alabama Law provides that a foreign corporation (an out-of-state company/firm) may not transact business in the State of Alabama until it obtains a Certificate of Authority from the Secretary of State. Section 10-2B15.01, Code of Alabama 1975. To obtain forms for a Certificate of Authority, contact the Secretary of State, Corporations Division, (334) 242-5324. The Certificate of Authority does not prevent the vendor from submitting a bid.

Alabama Preferred Vendor

A "Preferred Vendor" shall be a person, firm, or corporation that is granted preference priority by meeting all of the following criteria as established by the Code of Alabama Section 41-16-20.

Priority 1. Produces or manufacturers the product within the State.

Priority 2. Has an assembly plant or distribution facility for the product within the State.

Priority 3. Is organized for business under the applicable laws of the State as a corporation, partnership, or professional association and has maintained at least one retail outlet or service center for the product or service within the State for not less than one year prior to the deadline date for the competitive bid.

Preferred vendor status must be indicated on the pricing page(s) of your bid response in order to be considered for preferred vendor preference. By signing this bid, you affirm that the item(s) indicated meet all three criteria of a preferred vendor.

Bid item(s) meeting the criteria of preferred vendor where pricing is within 1% of the lowest compliant bid may be considered for award by the awarding authority.



**State of Alabama
Department of Finance
Division of Purchasing
Master Agreement**

New

CONTRACT INFORMATION

MASTER AGREEMENT NUMBER: MA 999 18000000237

NOT TO EXCEED AMOUNT:

Begin Date: 05/08/2018

Procurement Folder: 552924

Expiration Date: 05/07/2019

Procurement Type: Master Agreement

Solicitation Number:

Replaces Award Document:

Award Date:

Replaced by Award Document:

Modification Date: 05/14/18

Version Number: 1

CONTACT INFORMATION

REQUESTOR:

Crist Watts
334-242-4291
crist.watts@purchasing.alabama.gov

ISSUER:

Crist Watts
334-242-4291
crist.watts@purchasing.alabama.gov

BUYER:

Crist Watts
334-242-4291
crist.watts@purchasing.alabama.gov

CONTRACT DESCRIPTION

-MA- T226 RIGHT OF WAY MOWERS

Ship To:

Bill To:

REASON FOR MODIFICATION

VENDOR INFORMATION

Name /Address:

VC000059140: Tiger Corp
3301 N Louise Ave.

Sioux Falls SD 57107

Contact:

Steven Marks
6057310404
Smarks@Tigermowers.Com

COMMODITY / SERVICE INFORMATION

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
1	0	EA	\$32,603.200000	\$0.00			\$0.00	\$0.00

0206445 - MOWER, ARTICULATING BOOM FOR AGRICULTURAL EQUIPMENT
 18' REAR BACKING BOOM MOWER
 18' HYDRAULICALLY DRIVEN REAR RACKING BOOM MOWER

SEE SPECIFICATIONS 18E10

MAKE: Tiger
 MODEL: Benal 18

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
2	0	EA	\$36,232.800000	\$0.00			\$0.00	\$0.00

0206445 - MOWER, ARTICULATING BOOM FOR AGRICULTURAL EQUIPMENT
 22' REAR BACKING BOOM MOWER
 22' HYDRAULICALLY DRIVEN REAR RACKING BOOM MOWER

SEE SPECIFICATIONS 18E10

MAKE: Tiger
 MODEL: Bengal 22

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
3	0	EA	\$39,214.400000	\$0.00			\$0.00	\$0.00

0206445 - MOWER, ARTICULATING BOOM FOR AGRICULTURAL EQUIPMENT
 24' REAR BACKING BOOM MOWER
 24' HYDRAULICALLY DRIVEN REAR RACKING BOOM MOWER

SEE SPECIFICATIONS 18E10

MAKE: Tiger
 MODEL: Bengal 24

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
4	0	EA	\$10,099.200000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 50" ROTARY CUTTING HEAD
 50" ROTARY CUTTING HEAD

SEE SPECIFICATIONS 18E010

MAKE: Tiger
 MODEL: RT500

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
5	0	EA	\$11,734.400000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 60" ROTARY CUTTING HEAD
 60" ROTARY CUTTING HEAD

SEE SPECIFICATIONS 18E010

MAKE: Tiger
 MODEL: RT60B

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
6	0	EA	\$12,126.400000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 50" FLAIL CUTTING HEAD

COMMODITY / SERVICE INFORMATION

50" FLAIL CUTTING HEAD

SEE SPECIFICATIONS 18E010

MAKE: Tiger
MODEL: FL50MBG

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
7	0	EA	\$11,844.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
63" FLAIL CUTTING HEAD
63" FLAIL CUTTING HEAD

SEE SPECIFICATIONS 18E010

MAKE: Tiger
MODEL: FL63G

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
8	0	EA	\$5,130.400000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
48" SAW BLADE
48" SAW BLADE

SEE SPECIFICATIONS 18E010

MAKE Tiger
MODEL: T-Saw-TRB

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
9	0	EA	\$7,999.200000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
22" ROTARY DITCHER
22" ROTARY DITCHER

SEE SPECIFICATIONS 18E010

MAKE Tiger
MODEL: DA22-BSECV-SR

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
10	0	EA	\$25,631.200000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
60" SIDE ROTARY MOWER
60" SIDE ROTARY MOWER

SEE SPECIFICATIONS 18E010

MAKE: Tiger
MODEL: 5MR-EDBT4-TM60EDH

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
11	0	EA	\$26,722.400000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
75" SIDE FLAIL MOWER
75" SIDE FLAIL MOWER

SEE SPECIFICATIONS 18E010

MAKE Tiger
MODEL: SMF-EDBAT4-TSF-75ED

COMMODITY / SERVICE INFORMATION

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
12	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.

__20__% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
13	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY

__10__% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
14	0	EA	\$49,666.400000	\$0.00			\$0.00	\$0.00

0206445 - MOWER, ARTICULATING BOOM FOR AGRICULTURAL EQUIPMENT
 25' EXTREME DUTY HYD. DRIVEN BOOM MOWER
 25' MIN. EXTREME DUTY HYDRAULICALLY DRIVEN BOOM MOWER.

SEE SPECIFICATION 18E011

MAKE Tiger
 MODEL: Saber 25

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
15	0	EA	\$10,620.800000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 50" ROTARY CUTTING HEAD
 50" ROTARY CUTTING HEAD

SEE SPECIFICATIONS 18E011

MAKE Tiger
 MODEL: RT50S

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
16	0	EA	\$11,740.000000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 60" ROTARY CUTTING HEAD
 60" ROTARY CUTTING HEAD

SEE SPECIFICATIONS 18E011

MAKE: Tiger
 MODEL: RT60S

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
17	0	EA	\$12,403.200000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
 63" FLAIL CUTTING HEAD

COMMODITY / SERVICE INFORMATION

63" FLAIL CUTTING HEAD

SEE SPECIFICATIONS 18E011

MAKE: Tiger
MODEL: FL63G-S

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
18	0	EA	\$11,673.600000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
50" FLAIL CUTTING HEAD
50" FLAIL CUTTING HEAD

SEE SPECIFICATIONS 18E011

MAKE: Tiger
MODEL: FL50 MBG-S

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
19	0	EA	\$5,164.800000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
48" SAW BLADE
48" SAW BLADE

SEE SPECIFICATIONS 18E011

MAKE: Tiger
MODEL: Tsaw-SBR

Final

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
20	0	EA	\$8,085.600000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
22" ROTARY DITCHER
22" ROTARY DITCHER

SEE SPECIFICATIONS 18E011

MAKE: Tiger
MODEL: DA22-SSEC-SR

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
21	0	EA	\$25,631.200000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
60" SIDE ROTARY MOWER
60" SIDE ROTARY MOWER

SEE SPECIFICATIONS 18E011

MAKE: Tiger
MODEL: SMR-EDBT4-MT60EDH

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
22	0	EA	\$26,722.400000	\$0.00			\$0.00	\$0.00

02064 - Mower, Articulated Boom: Flail, Rotary, or Sickle Head
75" SIDE FLAIL MOWER
75" SIDE FLAIL MOWER

SEE SPECIFICATIONS 18E011

MAKE: Tiger
MODEL: SMF-EDBAT4-TSF75ED

COMMODITY / SERVICE INFORMATION

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
23	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 OPTIONAL EQUIPMENT NOT LISTED
 OPTIONAL EQUIPMENT NOT LISTED.
 ___20___% DISCOUNT OFF LIST PRICE

Line	Quantity	UOM	Unit Price	Service Amount	Service From	Service To	Line Sub Total	Line Total
24	0		\$0.000000	\$0.00			\$0.00	\$0.00

0200610 - CUTTERS, BRUSH, ROTARY
 REPAIR / REPLACEMENT PARTS
 REPAIR/REPLACEMENT PARTS NOT LISTED.
 FOR ORIGINAL EQUIPMENT MANUFACTURERS PARTS ONLY
 ___10___% DISCOUNT OFF LIST PRICE

All terms, conditions, and any amendments to solicitation are part of this contract as if fully reproduced herein .

Final

Approved: 
 Purchasing Director

APPROVALS			
Date	Status Before	Status After	Approver

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Authority:

The Department of Finance Code of Administrative procedure, Chapter 356-4-1 effective September 7, 2012 is incorporated by reference and made a part of this document. To view the Code of Administrative procedures visit our website www.purchasing.alabama.gov.

Choice of Law; Venue:

This Contract will be governed by laws of the State of Alabama and the sole venue for litigation and alternative dispute resolution activities will be the City of Montgomery in the State of Alabama.

Not to Constitute a Debt of the State:

The terms and commitments contained in the RFB, or any contract resulting from this RFB, shall not constitute a debt of the State of Alabama, the incurring of which is prohibited by Section 213 of the Official Recompilation of the Constitution of Alabama, 1901, as amended by Amendment No. 26.

Bid Response Instructions:

In order to submit a responsive bid, bidder must read and follow all instructions, terms, conditions and specifications of this solicitation.

1. Bid envelope(s)/package(s)/box(es) must be identified with the bid number and opening date. Each individual bid must be submitted in a separate envelope. Responses to multiple bid numbers submitted in the same package that are not in separate envelopes and properly identified will be rejected. The Division of Purchasing does not assume responsibility for late bids for any reason including those due to postal or courier service. Bid responses must be in the Division of Purchasing office prior to the "close date and time" indicated on the bid.

2. Bid responses must be in ink or typed on this document, or replicated in the exact format. Signatures must be handwritten originals in ink or the bid will be rejected. Unless indicated in the bid, all price pages must be completed and returned. If an item is not being bid, identify it as N/B (no-bid). Pages should be secured. The Division of Purchasing does not assume responsibility for missing pages. Faxed/emailed bid responses will not be accepted.

3. The unit price always governs regardless of the extended amount. A unit price change on a line must be initialed by the person signing the bid or that line will be rejected. Price changes include but are not limited to cross-out, strike-over, ink-over, white-out, erasure, or any other method changing the price.

4. The Division of Purchasing requires an original and a minimum of one exact copy of the signed, notarized bid to include any required addendum(s) and documentation. The original and the copy should be submitted together as a bid package.

5. An improperly submitted bid, late bid or a bid that is canceled on or before the opening date may be retrieved during normal business hours. These bids will be held for 90 days then destroyed. The Division of Purchasing assumes no responsibility for the document after 90 days. Bids retrieved by vendor(s) are considered withdrawn and vendor(s) relinquishes all rights to protest.

Bid rejection:

Bidders shall not place any qualification, exceptions, conditions, reservations, limitations, or substitutions in their bid concerning the contract terms and conditions. Any such qualifications, exceptions, conditions, reservations, limitations or substitutions shall result in rejection of the bid.

Bids that are improperly submitted or received late will be documented for record but will not be returned nor will bidder be notified.

The following is a partial list whereby a bid response will be rejected:

Bid number not on envelope/package/box

Bid responses with multiple bid numbers in same envelope not properly identified

Bid responses received late

Bid responses not signed/not original signature

Bid responses not notarized/not original signature of notary and/or notary expiration

Bidder notarized own signature

Required information not submitted with bid response

Failure to submit the original bid and a complete exact copy

Bid response received from non-subscribed/expired vendor

Beason-Hammon Alabama taxpayer and Citizen Protection Act (Act 2011-535 and as amended by Act 2012-491)

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As a condition for award of this bid, the vendor acknowledges the following:

“By signing this contract, the contracting parties affirm, for the duration of any agreement that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.”

Verification of enrollment in the E-verify program will be required prior to any award to a vendor who employs one or more employees within the State of Alabama. E-verify documentation should be identified with the bid number and the buyer name. Failure to provide documentation within 5 calendar days of notification will result in the rejection of your bid. To enroll in the E-verify program visit www.dhs.gov/e-verify.

Certification Pursuant to Act no. 2006-557

Alabama Law (section 41-4-116, Code of Alabama 1975) provides that every bid submitted and contract executed shall contain a certification that the vendor, contractor, and all of its affiliates that make sales for delivery into Alabama or leases for use in Alabama are registered, collecting, and remitting Alabama state and local sales, use, and/or lease tax on all taxable sales and leases into Alabama. By submitting this bid, the bidder is hereby certifying that they are in full compliance with Act no. 206-557, they are not barred from bidding or entering into a contract pursuant to 41-4-116, and acknowledges that the awarding authority may declare the contract void if the certification is false.

Information and assistance to minority and women-owned businesses in acquiring M/WBE certification may be obtained from the office of minority business enterprises at www.adeca.alabama.gov

In compliance with Act 2016-312, by submitting this bid the contractor hereby certifies that it is not currently engaged in, and will not engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which this state can enjoy open trade.

*******STANDARD TERMS and CONDITIONS *******

Vendor Registration and Subscription Fee

Vendors may receive bid notices by registering at the State of Alabama vendor self-service (VSS) portal, <https://procurement.staars.alabama.gov>. Vendors wishing to respond to bids must be subscribed. Bid responses will not be accepted from non-subscribed vendors. Once registered you may subscribe by clicking the “pay subscription fee” tab at the top of the VSS home page. Payments must be made by credit or debit card. Vendors should provide their VSS assigned vendor number on all bid responses. A vendor’s subscription must be maintained throughout the term of an awarded contract, to include renewal periods.

Non-appropriation of funds

Continuation of any agreement between the State and a bidder beyond a fiscal year is contingent upon continued legislative appropriation of funds for the purpose of this bid and any resulting agreement. Non-availability of funds at any time shall cause any agreement to become void and unenforceable and no liquidated damages shall accrue to the state as a result. The State will not incur liability beyond the payment of accrued agreement payment.

Proration

Any provision of a contract resulting from this bid to the contrary notwithstanding, in the event of failure of the State to make payment hereunder as a result of partial unavailability, at the time such payment is due, of such sufficient revenues of the State to make such payment (proration of appropriated funds for the State having been declared by the governor pursuant to Section 41-4-90 of the Code of Alabama 1975), the contractor shall have the option, in addition to the other remedies of the contract, of renegotiating the contract (extending or changing payment terms or amounts) or terminating the contract.

Intent to Award

The State of Alabama – Division of Purchasing will issue an ‘Intent to Award’ before a final award is made. The ‘Intent to Award’ will continue for a period of five (5) calendar days, after which the award will be final provided there are no protests. Upon final award, all rights to protest are forfeited. A detailed explanation of this process may be reviewed in the Alabama Administrative Code – Chapter 355-4-1(14). All protest communications filed via email must be sent to protests@purchasing.alabama.gov

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Alternate Bid Response

Unless stated elsewhere in this Invitation-to-Bid (ITB) the State of Alabama will accept and evaluate alternate bid submittals on any ITB's provided the response meets all bid requirements.

Internet Website Link's

Internet and/or website links will not be accepted in bid responses as a means to supply any requirements stated in this (Invitation-to-Bid) ITB.

Product Delivery, Receiving and Acceptance

In accordance with the Universal Commerce Code (Code of Alabama, Title 7), after delivery, the State of Alabama has the right to inspect all products before accepting. The State will inspect products in a reasonable timeframe. Signature on a delivery document does not constitute acceptance by the State. The State will accept products only after satisfactory inspection.

Sales Tax Exemption

Pursuant to the Code of Alabama, 1975, Title 40-23-4 (A)(11), the State of Alabama is exempt from paying sales tax. An exemption letter will be furnished upon request.

Invoices

Inquiries concerning invoice payments are to be directed to the receiving agency.

Bid Responses and Bid Results

Unevaluated Bid Responses are available on our website at www.purchasing.alabama.gov. The complete bid file will be made available for review in the Division of Purchasing by scheduling an appointment. We do not provide copies of bid files.

Foreign Corporation – Certificate of Authority

Alabama Law provides that a foreign corporation (an out-of-state company/firm) may not transact business in the State of Alabama until it obtains a Certificate of Authority from the Secretary of State. Section 10-2B15.01, Code of Alabama 1975. To obtain forms for a Certificate of Authority, contact the Secretary of State, Corporations Division, (334) 242-5324. The Certificate of Authority does not prevent the vendor from submitting a bid.

Alabama Preferred Vendor

A "Preferred Vendor" shall be a person, firm, or corporation that is granted preference priority by meeting all of the following criteria as established by the Code of Alabama Section 41-16-20.

Priority 1. Produces or manufacturers the product within the State.

Priority 2. Has an assembly plant or distribution facility for the product within the State.

Priority 3. Is organized for business under the applicable laws of the State as a corporation, partnership, or professional association and has maintained at least one retail outlet or service center for the product or service within the State for not less than one year prior to the deadline date for the competitive bid.

Preferred vendor status must be indicated on the pricing page(s) of your bid response in order to be considered for preferred vendor preference. By signing this bid, you affirm that the item(s) indicated meet all three criteria of a preferred vendor.

Bid item(s) meeting the criteria of preferred vendor where pricing is within 1% of the lowest compliant bid may be considered for award by the awarding authority.

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TERMS AND CONDITIONS

Award:

The award shall be made by group, all or none, to the lowest responsible bidder meeting all specifications.

Contract period:

Establish a 12 month contract with an option to extend for a second, third, fourth, and fifth 12 month period with the same pricing, terms and conditions. The second, third, fourth, or fifth 12 month period, if agreed by both parties, would begin the day after the first, second, third, or fourth 12 month period expires. Any successive extension must have written approval of both the state and vendor no later than 30 days prior to expiration of the previous 12 month period.

Freight:

Bid is F.O.B. destination. Any freight charges must be included in the bid prices.

F.O.B. Destination:

F.O.B. destination is the location where merchandise is delivered and unloaded on a receiving dock, if available, to any state agency, city or county governmental agency, school, or university. The contract vendor is liable for freight charges, risk of loss or damage to the merchandise up to the destination

Specifications/Descriptive literature:

Manufacturer and model provides a level of quality and are not restrictive. All line item's specifications in this RFB are OR EQUAL and NOT restricted to any one manufacturer or model. Various manufacturers and models will be accepted for each line item. Vendors bidding on this RFB regardless of manufacturer and model being bid should provide complete descriptive/technical literature for consideration and evaluation with their bid, and with the required bid copy per item number 4 under Authority of this RFB. Reference to literature with a previous bid will not satisfy this requirement. Failure to provide the required literature, as outlined above, may result in the rejection of your bid. If requested, further information must be provided within three (3) business days after receipt of request. Failure to provide the information within the allotted time may result in the rejection of your bid. Physical inspection and operational evaluation may also be required without cost or obligation to the State of Alabama.

Delivery time frame:

All items ordered must be delivered to the "ship to" address shown on the P.O. within thirty (30) days of vendor's receipt of order.

Firm Pricing:

ALL BID PRICES MUST BE FRIM FOR A PERIOD OF ONE (1) YEAR FROM THE VENDOR'S NOFICATION OF AWARD.

AT THE RENEWAL OF EACH CONTRACT PERIOD, UP TO A 5% PRICE INCREASE MAY BE ALLOWED, IF AGREED UPON BY BOTH THE CONTRACT VENDOR AND THE STATE OF ALABAMA. THE REQUEST FOR A PRICE INCREASE MUST HAVE JUSTIFIABLE PROOF IN WRITING AND SUBMITTED TO THE STATE OF ALABAMA AT THE START OF THE RENEWAL PROCESS TO EXTEND THE CONTRACT FOR AN ADDITIONAL 12 MONTH PERIOD. **JUSTIFIABLE PROOF MAY BE COPIES OF MSRPs SHOWING A PRICE INCREASE OF THE CURRENT YEAR'S PRICE, OR COPIES OF MANUFACTURER'S MATERIAL COST INCREASE WHICH CAUSED AN INCREASE IN THE CURRENT YEAR'S PRICES.** ANY PRICE INCREASE ALLOWED WILL BE BASED ON A PERCENTAGE DIFFERENCE OF THE CONTRACT PRICE IN EFFECT AT THE START OF THE CONTRACT RENEWAL PROCESS AND MUST NOT EXCEED 5%. ANY PRICE RESULTING FROM AN AGREED UPON INCREASE, MUST BE FIRM FOR THE 12 MONTH PERIOD OF THE CONTRACT.

Completion of line item Prices:

BID PRICES FOR ALL EQUIPMENT LIINE ITEMS MUST BE LISTED IN THE UNIT PRICE SPACE OF THE RFB. BID PRICES FOR ALL OPTIONAL EQUIPMENT AND REPLACEMENT PART LINE ITEMS **SHOULD NOT** BE LISTED IN THE UNIT PRICE SPACE OF THE RFB, INSTEAD, BID PRICES FOR OPTIONAL EQUIPMENT AND REPLACEMENT PART LINE ITEMS **SHOULD** BE LISTED AS A PERCENTAGE DISCOUNT OFF LIST PRICE ON THE LINE PROVIDED IN THE EXTENDED DESCRIPTION FOR THAT LINE ITEM.

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FAILURE TO LIST THE BID PRICES, AS OUTLINED ABOVE, MAY RESULT IN THE REJECTION OF YOUR BID ON THAT LINE ITEM, AND ANY POSSIBLE AWARD OF THAT GROUP, DUE TO THE GROUP ALL OR NONE AWARD. .

New Equipment:

All equipment must be new, unused, and newest and latest year's model acceptable by the original equipment manufacturer for their warranty and maintenance.

Purpose:

To establish a statewide contract from the items listed for all state agencies. Contract items must be made available to all city or county governmental agencies, schools, and universities.

PLEASE NOTE: THE EXACT BID COPY REQUIREMENT PER ITEM NUMBER 4 UNDER AUTHORITY OF THIS RFB. PLEASE NOTE: FAILURE TO PROVIDE THE REQUIRED COPY WITH YOUR BID WILL RESULT IN THE REJECTION OF YOUR BID.

ANY VENDOR WISHING TO BID ON THIS RFB OR ANY RFB THROUGH THE DIVISION OF PURCHASING, MUST HAVE PAID A BI-ANNUAL VENDOR SUBSCRIPTION FEE IN THE AMOUNT OF \$200.00 PRIOR TO SUBMITTING A BID. THE SUBSCRIPTION FEE MUST BE PAID BY EITHER AN ACCEPTED CREDIT OR DEBIT CARD OR BY ELECTRONIC CHECK THROUGH THE VENDOR'S SELF SERVE (VSS) ACCOUNT. FAILURE TO SUBSCRIBE AS OUTLINED ABOVE WILL RESULT IN THE REJECTION OF YOUR BID.

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SPECIFICATIONS ALDOT RIGHT-OF-WAY MOWERS

***** SPECIFICATION #18E01 *****

ROTARY CUTTER, NEW LATEST MODEL MECHANICAL HIGHWAY TYPE ROTARY CUTTER 10' OR 15' CUTTING WIDTH. TRANSPORT WIDTH: 96". TOWING TONGUE TO BE FOR DRAWBAR TYPE WITH JACKSTAND FURNISHED. HIGHWAY SAFETY SKIRT CURTAIN DOUBLE ROW 14 STAND PER FOOT CHAINS FRONT AND BACK TO BE INCLUDED. WITH ALL HOSES, HOOKUP CONNECTORS, BLADES AND P.T.O. CONNECTOR ASSEMBLIES. EQUIPPED WITH 15" USED AIRCRAFT TIRES.

TRIPLE CUTTING SECTIONS USING ½" X 4" HEAT TREATED BLADES (38-44 RC) WITH 6" OVERLAP BETWEEN SECTIONS. CUTTING CAPACITY: UP TO 4". DIVIDER GEAR BOX 250 HP MIN. CENTER & WING GEAR BOX 210 HP MIN. LEFT AND RIGHT WINGS TO BE HYDRAULICALLY RAISED FROM TRACTOR OPERATOR'S POSITION USING TRACTOR HYDRAULIC CONTROLS FOR RAISING WINGS TO 90 DEGREE POSITION FOR ROAD TRAVEL, AND RAISING OF CENTER SECTION TONGUE & SIX REAR SOLID WHEELS. WINGS TO OPERATE NORMALLY FROM +88 DEG. TO -22 DEG. WINGS TO HAVE MECHANICAL SAFETY LATCHES. MAIN P.T.O. DRIVE (CATEGORY 5/80 DEG CONSTANT VELOCITY) & WING DRIVE SHAFTS (CATEGORY 4) TO HAVE SLIP CLUTCHES AND SHEAR PIN ON MAIN SHAFT WITH PROTECTIVE COVERS. EACH DRIVE SHAFT IS TO ALLOW CONTINUOUS OPERATION DURING WING RAISING, TRACTOR TURNING AND DIPPING. CV TYPE DRIVELINE.

MAIN CUTTER SECTION SHALL HAVE SINGLE OR DUAL SELF LEVELING ADJUSTABLE LINKAGE BETWEEN TONGUE & REAR WHEELS W/HYDRAULIC OVERRIDE LIFT FEATURE. CENTER SECTION SHALL HAVE CUTTING HEIGHT ADJUSTMENT BETWEEN 2" AND 12" WITH STOP COLLARS ON LIFT PISTON SHAFT.

WING CUTTING HEIGHT ADJUSTMENT TO BE MADE WITH RATCHET TYPE TURNBUCKLE (OR OTHER BIDDER-DEFINED METHOD) ATTACHED TO SINGLE SOLID WHEEL PIVOT ARM. CUTTER DECKS AND GEARBOX TO BE REINFORCED. DECK IN MIN. 7 GAUGE. WEIGHT OF UNIT BE 4900 LBS. (MIN.).

CLEVIS HITCH IS TO BE PROVIDED W/CUTTER. INCLUDE ONE SET OF PARTS AND SERVICE MANUALS.

***** SPECIFICATION #18E02 *****

ROTARY CUTTER, NEW LATEST MODEL HIGHWAY TYPE ROTARY CUTTER 10 OR 15FT CUTTING WIDTH. TRANSPORT WIDTH 96". TOWING TONGUE, FLOATING HITCH TYPE TO BE FOR DRAWBAR PULL TYPE, WITH JACKSTAND FURNISHED. HIGHWAY SAFETY SKIRT CURTIAN CHAINS DOULBE ROW WITH ALIGNMENT CABLE TO KEEP CHAINS IN LINE. CHAINS TO BE MOUNTED BEHIND FRAME STRUCTURE ON UNDERSIDE OF DECK. MOWER SHALL BE EQUIPPED WITH 6, 29" 5 BOLT FOAM FILLED USED AIRCRAFT TIRES. THREE ELEVATED, PROTECTED HOSES AND INTERGRATED CYLINDER LOCK-UPS AND OPTIONAL LIGHT KITS. HOSES CONNECT TO ROTATING HOSE STAND WITH FITTED RECEPTICLES FOR NOT IN USE STORAGE.

TRIPLE CUTTING SECTIONS TWO 5' WINGS AND 6' CENTER SECTION. BLADES ATTACHED TO ROUND SKID PANS WITH GREASEABLE QUICK CHANGE BLADE PINS. 6" OVERLAP BETWEEN SECTIONS. CUTTING CAPACITY 4".
THREE MECHANICAL PTO (540 RPM) DRIVER GEARBOXES FOR EACH SECTION WITH TAPERED ROLLER BEARINGS. LOWER NECK SHALL BE SEALS PROTECTED BY ANTIWRAP DEVICE.

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INPUT GEARBOX SHALL BE A 275 HP RATING AND WING GEARBOXES 225HP RATING. THE OUTPUT SHAFT OF EACH GEARBOX SHALL BE 3" IN DIAMETER. EACH GEARBOX SHALL HAVE INDEPENDENT SLIP CLUTCHES AND SHEAR PIN. GEARBOXES SHALL CARRY A 6 YEAR LIMITED WARRANTY. OIL LEVEL DIPSTICK SHALL BE THREADED INTO EACH GEARBOX WITH THUMBSCREW.

LEFT, RIGHT AND CENTER SECTIONS TO BE RAISED BY HYDRUALICS RAISED FROM TRACTOR OPERATORS POSITION USING THREE SPOOL TRACTOR CONTROLS. WINGS MAY BE RAISED UP 90° AND DOWN 22°. WINGS TO HAVE MECHANICAL SAFETY LATCHES.

MAIN PTO SHAFT ASABE CATEGORY 6 CV. WING SHALL BE CATEGORY 4 WITH PROTECTIVE COVERS WITH MAGNETIC HOLD DOWNS FOR EASY SERVICE ACCESS. DRIVELINE GREASE FITTINGS TO BE IN-LINE FOR EASY ACCESS.

MAIN CENTER CUTTER SECTION SHALL BE EQUIPPED WITH DUAL 1" DIAMETER LEVELING RODS THAT ALLOW DECK TO MAINTAIN PROPER ATTITUDE AT ALL CUTTING HEIGHTS. 8" WING FRAMES TO FLOAT 22° DOWN TO 18° UP WITHOUT ACTIVATING CYLINDERS.

CENTER SECTION SHALL HAVE CUTTING HEIGHT ADJUSTMENT FROM 2" TO 15" WITH STOP COLLARS ON LIFT PISTON SHAFTS. UNIT SHALL ALSO HAVE TRAVEL HEIGHT OF 20.4" FROM GROUND TO CENTER SKID.

CUTTER DECKS AND GEARBOX TO BE REINFORCED 7 GAUGE STEEL DECK. TOP OF DECK SHALL BE FREE OF STRUCURAL MEMBERS. FRAME STRUCTURE SHALL CONSIST OF FULL BOXED IN PERIMETER WITH CURVED LEADING EDGE ROLLED STRUCTURAL TUBING. THE LATERAL STRUCTURE OF EACH CUTTER SECTION TO EXTEND THE FULL WIDTH. FULL LENGTH REPLACEABLE SKID SHOES. DEPTCH OF DECK SIDE FRAME SHALL BE 13" FROM DECK TO BOTTOM OF SKID SHOES. CUTTER SHALL BE FULLY BAFFLED FOR CUT QUALITY. ROUNDED EDGES PROVIDED BY TUBE FRAME HELPS CUTTER ABSORB SHOCK AND SLIP OBJECTS.

PTO SHAFT TO HAVE SPRING LOADED ADJUSTABLE LIFT ASSIST FOR EASIER CONNECTION TO TRACTOR.

***** **SPECIFICATION #18E03** *****

ROTARY CUTTER, NEW LATEST MODEL 15' HYDRAULICALLY POWERED THREE (3) SECTION TOWED (DRAWBAR) CLEVIS HITCH MOWING MACHINE FOR A MINIMUM OF 70 HP TRACTOR. A LIFTING JACK SHALL BE ATTACHED TO THE UNIT FOR LIFTING THE FRONT OF THE UNIT OR TO LIFT A WHEEL FOR TIRE CHANING REQUIREMENTS.

THE MOWER SHALL BE ROTARY, 3-SECTION, FLEX-WING STYLE AND CONSTRUCTED FROM HEAVY-DUTY 7-GAUGE STEEL. DECK DESIGN SHALL BE EASY CLEAN STYLE WITH A DOUBLE-DECK CENTERSECTION FOR DURABILITY. THE MOWER SHALL FEATURE AN ADJUSTABLE CUTTING HEIGHT OF 1-1/2" – 14-1/2". SIDE SKIRTS SHALL BE BOLT-ON, REPLACEABLE, AND CONSTRUCTED TO A MINIMUM OF 1/4" X 10 1/2" THICK. OVERALL WIDTH OF THE MOWER, WITH WINGS UNFOLDED, SHALL BE 186". OVERALL LENGTH OF THE MOWER SHALL BE 183". OVERALL HEIGHT OF THE MOWER SHALL BE 85-1/2". OVERALL TRANSPORT WIDTH, WITH WINGS FOLDED, SHALL BE 180". REPLACEABLE, HEAT-TREATED SKID SHOES SHALL BE BOLT-ON UNDER EACH WING SIDE SKIRT. (6) REPLACEABLE, PUNCTURE RESISTANT FOAM-FILLED AIRPLANE TAILWHEELS SHALL BE FEATURED AS STANDARD EQUIPMENT. WHEEL SPACING SHALL BE 50" FROM CENTER OUTSIDE AND 25" CENTER INSIDE. THE MOWER SHALL CUT UP TO 3-1/2" GRASS, WEED, AND BRUSH MATERIAL. THE MOWER SHALL FEATURE A SPRING-CUSHIONED AXLE SHOCK ABSORBER. A HYDRO-MECHANICAL LEVEL-LIFT SYSTEM SHALL BE FEATURED FOR UNIFORM CUT.

THE BLADE CARRIER SHALL BE CONSTRUCTED OF 7-GAUGE HARDENED STEEL REINFORCED WITH A 1" THICK CROSS-BAR WELDMENT FOR DURABILITY. (2) FREE-SWINGING UPDRAFT

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CUTTING BLADES MADE OF ½" THICK X 4" WIDE, HEAT-TREATED, ALLOY STEEL AND WEIGHING 15.8 LBS. (CENTER) AND 12.5 LBS. (WINGS) EACH SHALL BE FEATURED AS STANDARD ON WING AND CENTER BLADE CARRIERS. BLADE LENGTH, FROM PIN CENTER TO TIP, SHALL BE 22-1/2" (CENTER) AND 19-1/2" (WINGS) AND SHALL HAVE A BLADE OVERLAP OF 6"

TWO-SECTION PUMP WITH ONE SECTION FURNISHING FLOW TO THE CENTER MOTOR AND THE OTHER SECTION FURNISHING POWER TO THE WING MOTORS IN SERIES.

TRACTORS PTO SHAFT TURNS SPEED CHANGER TURNING THE PUMP. THE SPEED CHANGER SHOULD HAVE AN OIL BATH AND BREATHER PLUG. THE TRACTOR'S PTO LEVER SHALL CONTROL THE PUMP ROTATION THROUGH SPEED CHANGER TO TAKE 540-RPM TO 2160 RPM AT THE PUMP. FRONT MOUNTED HYDRAULIC TANK WITH A CAPACITY OF 53 GALLONS. FLEX HOSES CONNECT THE TANK TO THE PUMP.

HYDRAULIC, GEAR-TYPE MOTORS, ONE FOR THE CENTER SECTION AND ONE FOR EACH WING RELIEF VALVES FOR THE MOTORS SET AT 3000 PSI FOR CENTER AND 3000 FOR WINGS. MOTORS RATED AT 63 HP FOR CENTER AND 58 HP FOR WINGS. MUST HAVE A SPLINED SHAFT THAT FITS A SPLINED SOCKET IN THE SPINDLE. TAPERED ROLLER BEARINGS, TOP AND BOTTOM, RUNNING IN OIL BATH. NEEDS SEAL AT THE BOTTOM OF THE HOUSING AND A FILLER HOLE LOCATED AT THE TOP OF THE HOUSING. 1" HOSES ON CENTER SECTION AND WINGS. 4-SPIRAL SIRE SAW100R12 PRESSURE HOSES WITH A 16,000 PSI MINIMUM BURST PRESSURE. SAE 100 R4 SUCTION HOSES WITH SPRING GUARD.

THE MOWER SHALL BE ATTACHED TO THE REAR OF THE TRACTOR USING A SELF LEVEL-LIFT DRAWBAR HITCH DESIGN. THE TONGUE WEIGHT SHALL BE APPROXIMATELY 2,500 LBS. WHEN MOWING AND 2,300 LBS. IN TRANSPORT.

THE MOWER SHALL BE MOUNTED ON A TRACTOR FEATURING A MINIMUM HORSEPOWER RATING OF 70 HP.

THE MOWER SHALL FEATURE A SAFETY LOCK FOR ADDITIONAL PROTECTION DURING TRANSPORT. THE MOWER SHALL FEATURE DOUBLE-ROW CHAINGUARDS ON FRONT AND BACK AS STANDARD EQUIPMENT. NO MOVING PARTS ABOVE THE DECK. AN AUTOMATIC SHUTOFF SYSTEM SHALL ENGAGE WHEN A WING IS RAISED ABOVE A 45 DEGREE ANGLE FROM THE GROUND.

THE MOWER SETUP SHALL INCLUDE THE FOLLOWING OPTIONS: OPEN OR CLSED CENTER THREE-SPOOL VALVE; VALVE MOUNTING KIT; WINCH AND STAND; AUXILIARY WHEEL SPINDLE KIT; TIRES (6) 29" 5BOLT FOAM FILLED AIRCRAFT TIRES; DECK RINGS; PAN ASSEMBLY.

THE MOWER SHALL WEIGH A MINIMUM OF 6,350 POUNDS.

THERE SHALL BE A MINIMUM ONE YEAR PARTS AND LABOR WARRANTY ON THE MOWER ITSELF.

***** **SPECIFICATION #18E04** *****

ROTARY CUTTER, NEW LATEST MODEL 5 AND 6 FT. LIFT TYPE. SAFETY CHAINS FRONT AND REAR. CUTTERS TO BE ASSEMBLED AND READY FOR SERVICE WHEN DELIVERED.

WIDTH OF CUT: 60" FOR 5' AND 72" FOR 6'

WEIGHT: (MINIMUM) 490 LBS. FOR 5' AND (MINIMUM) 570 LBS. FOR 6'.

BLADES: ½" X 3" HEAT TREATED.

BLADE HOLDER ASSEMBLY: ROUND OR OVAL SLIP CLUTCH AND SHEAR PIN, LAMINATED TAILWHEEL, GEAR BOX HP 50, CUTTING CAPACITY THROUGH 3".

THREE (3) YEAR GEARBOX WARRANTY.

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***** **SPECIFICATION #18E05** *****

ROTARY CUTTER, NEW LAEST MODEL CUTTING WIDTH 6 AN 7'. CHAIN GUARDS FRONT AND REAR, LAMINATED SINGLE TAIL WHEEL 6' AND DUAL LAMINATED TAIL WHEEL 7'. SINGLE CUTTING SECTION WITH STUMP JUMPER, BLADE SIZE ½" X 3.5" 540 RPM 150 HP GEARBOX FOR 6', 540 RPM 190 HP GEARBOX FOR 7'. HEAVY DUTY SLIP CLUTCH WITH SHEAR PIN AND SHIELD, BLADE TIP SPEED 13,000 FPM MINIMUM, THREE POINT HITCH MOUNT, CUTTING HEIGHT 2" TO 12", DECK THICKNESS 10 GAUGE, SIDE SKIRT THICKNESS ¼". WEIGHT OF CUTTER MINIMUM 1,300 LBS. 6' AND 1,400 LBS. 7'. GEARBOX WARRANTY 6 YEAR LIMITED.

***** **SPECIFICATION #18E06** *****

MOWER, FLAIL, NEW LATEST MODEL. CUTS GRASS, WEEDS & BRUSH IN 3 SIZES BETWEEN 57"-62", 68"-74" AND 88"-92" WIDTH. THE MOWER SHALL BE ATTACHED TO THE TRACTOR'S THREE POINT HITCH, CENTER MOUNTED. POWER SHALL BE PROVIDED BY THE TRACTOR P.T.O. SHAFT AND ALL DRIVE LINE COMPONENTS SHALL BE SHIELDED. THE CUTTING KNIFE OF THE UNIT SHALL BE CONSTRUCTED OF TEMPERED STEEL. KNIVES SHALL BE 3OZ, 1-3/4" X 3-5/16", MOUNTED IN PAIRS ON PRECISE FORGED HEAT-TREATED CLEVIS RINGS OR A SINGLE PIECE KNIFE .25" X 1.35" WITH 2.61" CUTTING EDGE, 45 DEG. AIR LIFT. EACH KNIFE PAIR SHALL BE HELD IN PLACE ON THE CUTTER SHAFT BY A HARDENED STEEL PIN & HAMMER LOCK CUTTER PIN OR HARDENED STEEL 7/16" BOLT. THIS ATTACHMENT SHALL ALLOW REPLACEMENT OF EACH KNIFE WITHOUT AFFECTING THE OTHER ARRANGED IN A PATTERN THAT PROVIDES HIGH SPEED VIBRATION FREE OPERATION WITH ANY APPROVED KNIFE. THIS DESIGN SHALL ELIMINATE THE NEED FOR BALANCE WEIGHTS.

MOWER HOUSING:

UNITIZED CUTTER HOUSING: THE TOP OF THE CUTTER HOUSING SHALL BE 10-GAUGE STEEL AND THE END-PLATES SHALL BE 5/16" THICK STEEL. THE END PLATES SHALL HAVE BEARING GUARDS. THE UNIT SHALL ALSO HAVE REPLACEABLE SKID SHOES.

CUTTER SHAFT: THE CUTTER SHAFT SHALL BE BALANCED, 4-1/2" IN DIAMETER, AND HAVE A 5/16" THICK WALL WITH 4-ROWS OF KNIVES. THE KNIFE TIP SPEED SHALL BE 8900 FPM. MOUNTING PROVIDES ANTI-JAMMING SEAL. (RUBBER SHOCK MOUNT NOT ACCEPTABLE.)

REAR ROLLER: THE REAR ROLLER SHALL BE 6" IN DIAMETER WITH A 1/2" WALL. IT SHALL BE A FULL-LENGTH TUBE AND RATED AT 6000 LBS. THE CUTTING HEIGHT SHALL BE ADJUSTABLE FROM 0" TO 6" IN 1/2" INCREMENTS. IT SHALL HAVE HEX-SHAPED SHAFT ENDS.

ROLLER BEARINGS: THE ROLLER BEARINGS SHALL BE HEX SHAPED, 1-1/2" ACROSS CORNERS, SELF-ALIGNING WITH CAST STEEL CAP OUTBOARD AND NEOPRENE SEAL INBOARD. EXTERNAL BEARINGS ARE NOT ACCEPTABLE.

ROLLER ADJUSTMENT BRACKET: A LABYRINTH SEAL, FORMED BY RECESSED TUBING, SHALL PROTECT THE BEARING FROM FOREIGN MATERIAL. THE FORMED ROLLER BRACKETS SHALL BE 1/2" X 6" AND ATTACHED USING 4, 1/2" GRADE 5 CARRIAGE BOLTS. OPTIONAL ROLLER SCRAPER BRACKETS AVAILABLE.

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DRIVE TRAIN: THE PTO SHALL BE 540 CAT. 4 (35) WITH SPRING LOADED SLIP CLUTCH. THE GEARBOX SHALL BE RATED AT 60-HP CONTINUOUS AND 90-HP INTERMITTENT. THE DRIVESHAFT TO THE OUTBOARD DRIVE SHALL BE TOTALLY ENCLOSED. THE BELT DRIVE SHALL BE A SINGLE "C" SECTION, REVERSE BEND V-BELT. 16" WRAP PER PULLEY. THE UNIT SHALL HAVE AN AUTOMATIC SPRING TENSIONED IDLER ASSEMBLY.

WARRANTY: ONE-YEAR PARTS AND LABOR. NON-GOVERNMENTAL USERS SUBJECT TO MODIFIED POLICY.

OPTIONAL EQUIPMENT:

LIFT CHAINS: ALLOWS FLEXIBILITY TO THE TRACTOR HITCH, PROVIDES A GREATER VERTICAL AND ANGULAR RANGE WHICH THE MOWER CAN FREELY MOVE THROUGH.

GAUGE WHEEL: 180 DEGREE MOVEMENT WITH PNEUMATIC OR SOLID LAMINATED TIRES.

360 DEGREE MOVEMENT WITH PNEUMATIC OR SOLID LAMINATED TIRES.

LAMINATED REAR RUBBER ROLLER COVER.

FINE CUT KNIVES: DIMENSIONS SHALL BE 1-1/4" X 5" AND MOUNTED TO THE CUTTER SHAFT BY HARDENED PINS. NUMBER OF KNIVES: 76 PAIR

THE MOWER SHALL BE ATTACHED TO THE TRACTOR THREE POINT HITCH, CENTER MOUNTED. TRACTOR VERTICAL LINDS SHALL BE REPLACED WITH FLEXIBLE LIFT CHAINS OR SLOTTED BAR AS REQUIRED TO EASILY MANEUVER TRACTOR AND MOWER OVER ROUGH TERRAIN. LIFT CHAIN SHALL PROVIDE GREATER VERTICAL AND ANGULAR RANGE OF THE MOWER IN RELATION TO THE TRACTOR. A FULL SPAN, RUBBER/FABRIC FLEXIBLE DEFLECTOR SHALL BE MOUNTED ON REAR EDGE OF CUTTER HOUSING. THE REAR DEFLECTOR SHALL GUARD AGAINST OBJECT OR CLIPPINGS BEING DISCHARGED UPWARD FROM REAR OF MACHING. THE REPLACEABLE DEFLECTOR SHALL BE A MINIMUM OF SIX INCHES IN WIDTH.

***** **SPECIFICATION #18E07** *****

FLAIL MOWER, SINGLE WING TURF:

MOWER UNIT SHALL HAVE TWO INDEPENDENT SECTIONS, ONE REAR SECTION AND ONE MID-MOUNTED (RIGHT SIDE) WING SECTION. THE REAR SECTION SHALL PRODUCE A MINIMUM OF EIGHTY-EIGHT (88) INCHES OF CUT WITH POWER TO THE CUTTING BLADES PRODUCED BY THE TRACTOR POWER TAKE-OFF SHAFT. A SAFETY CUTTER SHAFT CUT OFF SHALL BE STANDARD FOR THE WING SECTION. THE WING SECTION SHALL PRODUCE A 74" SWATH. UNIT MAY ALSO BE ORDERED WITH A 60" OR 88" RIGHT WING AND 88" REAR. WING AND REAR MOWING UNIT TO HAVE COARSE-CUT KNIVES WITH FORWARD OR REVERSE MOWING DRIVE ROTATION. MOWER SECTION SHALL BE EQUIPPED WITH A REPLACABLE, FULL SPAN, REAR RUBBER/FABRIC CURTAIN TO PROVIDE DOWNWARD DEFLECTION OF DEBRIS. PRIOR TO DELIVERY, VENDOR WILL: ADJUST ENGINE TO PROPER OPERATING CONDITIONS; CHECK TO ASSURE PERFECT OPERATION OF ALL MECHANICAL FEATURES; PROVIDE A WRITTEN LISTING OF NEAREST LOCATION OF COMPLETE SUPPLY OF SPARE PARTS AND SERVICES; ENSURE THAT TRACTOR AND MOWING UNITS ARE CONNECTED AND ARE DELIVERED AS ONE (1) OPERATIONAL UNIT; PROVIDE A MINIMUM OF FOUR (4) HOURS OPERATORS' AND MAINTENANCE TRAINING. FURNISH TWO (2) SETS OF OPERATOR'S MANUALS, TWO (2) SETS OF PARTS AND SHOP MANUALS, AND TWO (2) SETS OF WIRING DIAGRAMS AND LUBRICATION CHARTS FOR TRACTOR AND MOWER. WEIGHT: NOT LESS THAN 4,455 LBS. ONLY A STANDARD PRODUCTION UNIT WILL BE ALLOWED.

A TRACTOR MOUNTED FLAIL MOWING UNIT, TO MOW GRASS. ATTACHMENT OF REAR UNIT TO THE TRACTOR SHALL BE VIA TRACTOR THREE-POINT LIFT HYDRAULIC SYSTEM. THE WING CUTTER SHALL BE POWERED BY A HYDRAULIC PUMP AND MOTOR SYSTEM THAT SHALL OPERATE INDEPENDENTLY AND SHALL NOT BE CONNECTED TO THE TRACTOR HYDRAULIC

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SYSTEM. THE WING SECTION SHALL BE CONTROLLED FROM THE OPERATORS POSITION. TOTAL WIDTH OF SWATHE DESIRED SHALL BE APPROX. 13 FEET. WITH THE WING SECTION RETRACTED TO TRANSPORT POSITION THE TRACTOR AND UNIT SHALL BE CAPABLE OF OPERATING IN A RIGHT OF WAY MINIMUM OF THE ONE HUNDRED INCHES. KNIVES SHALL BE FREE SWINGING DESIGN.

FRAME:

THE FRAME SHALL BE FULL-LENGTH AND MOUNTED TO THE FRONT OF THE TRACTOR'S BOLSTER HOUSING AND PADS AT THE REAR OF THE TRACTOR. THIS SPECIFICALLY EXCLUDES MOUNTING TO THE BELL HOUSING OF THE TRACTOR.

THE FRAME SHALL INCLUDE A POSITIVE TRANSPORT LOCK-UP POSITION.

UNITIZED CUTTER HOUSING: THE HOUSING SHALL BE UNITIZED 10-GAUGE TOP AND 1/2" INBOARD AND 5/16" OUTBOARD END PLATES WITH BEARING GUARDS. THE UNIT SHALL HAVE A FULL-LENGTH AND REPLACEABLE SKID SHOES.

CUTTER SHAFT: THE CUTTER SHAFT SHALL BE BALANCED, 4-1/2" DIAMETER WITH 3/8" THICK WALL WITH 4-ROWS OF KNIVES. KNIFE TIP SPEED SHALL BE 8,900 FPM. ANTI-WRAP PROTECTION SHALL BE PROVIDED.

THE CUTTER SHAFT BEARINGS SHALL BE GREASEABLE, SEALED AND SELF-ALIGNING, 1-15/16" AND RATED AT 3,300 LBS. THE CUTTER SHAFT SHALL BE ATTACHED TO THE HOUSING WITH 6, GRADE 5, 3/8" BOLTS. THE BEARING FLANGE MAY BE USED AS A BEARING PULLER. PILLOW BLOCK BEARINGS SHALL NOT BE ACCEPTABLE.

THE REAR ROLLER SHALL BE A FULL-LENGTH TUBE, 6" IN DIAMETER WITH A 1/4" THICK WALL, RATED AT 6,000 LBS. THE CUTTING HEIGHT SHALL BE ADJUSTABLE FROM 0" TO 6" HIGH IN INCREMENTS OF 1/2", WITH HEX-SHAPED SHAFT ENDS.

THE ROLLER BEARINGS SHALL BE HEX-SHAPED, 1-1/3" ACROSS CORNERS, SELF-ALIGNING, WITH CAST STEEL CAP OUTBOARD AND NEOPRENE SEAL INBOARD. EXTERNAL BEARINGS SHALL NOT BE ACCEPTABLE.

A LABYRINTH SEAL FORMED BY RECESSED TUBING SHALL PROTECT THE BEARINGS FROM FOREIGN MATERIAL. THERE SHALL BE 1/2" X 6" FORMED ROLLER BRACKETS, ATTACHED BY 4, 1/2", GRADE 5 CARRIAGE BOLTS. OPTIONAL ROLLER SCRAPER BRACKETS SHALL BE PROVIDED. EACH FLAIL UNIT SHALL HAVE A REAR, FULL-LENGTH, RUBBER DEFLECTOR AND FRONT METAL SHIELDS.

THE HYDRAULIC POWER SHALL BE DELIVERED FROM THE FRONT CRACKSHAFT OF THE TRACTOR. A 2-PISTON PUMP AND MOTOR, RATED AT 24-GPM AT 3,800 PSI, AND RATED AT 53 HP SHALL BE USED. A GEAR PUMP SHALL NOT BE ACCEPTABLE.

THE TOTAL HYDRAULIC SYSTEM CAPACITY SHALL BE 25-GALLONS.

THE FILTER SHALL BE A 10-MICRON WITH A 75-GPM CAPACITY.

THE UNIT SHALL USE IN-FRAME COOLING WITH PRESSURE RELIEF VALVE FOR THE WING.

THE VALVE SHALL BE 2-SPOOL, OPEN CENTER SYSTEM WITH A FLOAT DETENT POSITION.

THE LIFT CYLINDER SHALL HAVE A 3" BORE WITH AN 8" STROKE, CAPABLE OF 14" HORIZONTAL LIFT. THE TILT CYLINDER SHALL HAVE A 3-1/2" BORE WITH A 9" STROKE, CAPABLE OF 40-DEGREES DOWNWARD AND 57-DEGREES UPWARD WITHOUT HAVING A STRIP OF GRASS BETWEEN THE SIDE AND REAR MOWERS. THE REAR MOWER SHALL A MINIMUM 6" OVERLAP.

SAFETY DEVICES: A WING TILT SWITCH, ALLOWING THE MOWER TO SHUT OFF AUTOMATICALLY WHEN IT IS RAISED INTO TRANSPORT POSITION, SHALL BE USED. AN ELECTRIC LOCKOUT, THAT WILL NOT ALLOW THE TRACTOR TO START WHEN THE WING MOWERS ARE ENGAGED, SHALL ALSO BE USED.

REAR 88" MOWER:

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MOWER HOUSING: THE UNIT SHALL HAVE A UNITIZED 10-GAUGE TOP AND 5/16" END PLATES WITH BEARING GUARDS. FULL-LENGTH AND REPLACEABLE SKID SHOES SHALL ALSO BE USED.

CUTTER SHAFT: A BALANCED, 4-1/2" DIAMETER CUTTER SHAFT SHALL BE USED WITH 3/8" THICK WALL AND FOUR-ROWS OF KNIVES. THE KNIFE TIP SPEED SHALL BE 8,900 FPM. THE MOUNTING SHALL PROVIDE FOR AN ANTI-JAMMING SEAL. RUBBER SHOCK MOUNT SHALL NOT BE ACCEPTABLE.

CUTTER SHAFT BEARINGS: THESE BEARINGS SHALL BE GREASEABLE, SEALED, SELF-ALIGNING, 1-15/16", AND RATED AT 3,300 LBS. THEY SHALL BE ATTACHED TO THE HOUSING WITH 6, GRADE 5, 3/8" BOLTS. THE BEARING FLANGE MAY BE USED AS A BEARING PULLER. PILLOW BLOCK BEARINGS SHALL NOT BE ACCEPTABLE.

REAR ROLLER: THE REAR FOLLER SHALL BE 6" IN DIAMETER WITH A 1/4" WALL AND FULL-LENGTH TUBE. IT SHALL BE RATED AT 6,000 LBS. AND HAVE A CUTTING HEIGHT ADJUSTMENT FROM 0" TO 6" HIGH IN INCREMENTS OF 1/2" WITH HEX SHAPED SHAFT ENDS.

ROLLER BEARINGS: THESE BEARINGS SHALL BE HEX SHAPED, 1-1/3" ACROSS THE CORNERS AND SELF-ALIGNING. THEY SHALL BE CAST STEEL CAP OUTBOARD AND NEOPRENE SEAL INBOARD. EXTERNAL BEARINGS SHALL NOT BE ACCEPTABLE.

ROLLER ADJUSTMENT BRACKET: THIS BRACKET SHALL HAVE A LABYRINTH SEAL FORMED BY RECESSED TUBING, PROTECTING THE BEARING FROM FOREIGN MATERIAL. THE 1/2" X 6" BRACKET SHALL BE FORMED AND ATTACHED BY 4, 1/2" GRADE 5 CARRAIGE BOLTS. OPTIONAL ROLLER SCRAPER BRACKETS SHALL BE PROVIDED.

LIFT CHAINS: THESE CHAINS SHALL PROVIDE FLEXIBILITY TO THE TRACTOR HITCH ALLOWING A GREATER VERTICAL ANGULAR RANGE WHICH THE MOWER CAN FREELY MOVE THROUGH.

PTO: THE PTO SHALL BE 540, CAT.4 WITH SPRING-LOADED SLIP CLUTCH.

GEARBOX: THE GEARBOX SHALL BE 60-HP CONTINUOUS AND 90-HP INTERMITTENT WITH A TOTALLY ENCLOSED DRIVESHAFT TO OUTBOARD DRIVE.

DRIVE BELT: THE DRIVE BELT SHALL BE A MODIFIED "C" SECTION, REVERSE BEND, "V" BELT WITH 16" WRAP PER PULLEY. THERE SHALL BE AN AUTOMATIC SPRING-TENSION BELT ADJUSTMENT.

KNIVES: THE KNIVES SHALL BE COARSE CUT, REVERSIBLE AND SELF-CLEANING. THEY SHALL BE MADE OF 1-3/4" X 3-5/16", .1046" STEEL. EACH KNIFE SHALL WEIGH 3-OZS. THEY SHALL BE MOUNTED TO THE CUTTER SHAFT ON HEAT-TREATED CLEVIS RINGS. THE 88" MOWER SHALL HAVE 44-PAIR. AN OPTIONAL 4-OZ KNIFE SHALL BE AVAILABLE.

OPTIONAL KNIVES: FINE CUT KNIVES SHALL BE AVAILABLE AS AN OPTION. THESE KNIVES SHALL BE 1-1/4" X 5", MOUNTED ON THE CUTTER SHAFT BY HARDENED PINS. THE 88" MOWER SHALL HAVE 108 PAIR OF KNIVES.

WARRANTY: THE WARRANTY SHALL BE FOR ONE YEAR AND COVER PARTS AND LABOR. NON-GOVERNMENTAL USERS SHALL BE SUJECT TO MODIFIED POLICY.

***** SPECIFICATION #18E08 *****

FLAIL MOWERS:

MOWER UNIT SHALL BE TRACTOR MOUNTED AND SHALL MOW GRASS, WEEDS AND LIGHT BRUSH. THE UNIT SHALL HAVE THREE INDEPENDENT SECTIONS, ONE REAR SECTION AND TWO MID-MOUNTED WING SECTIONS. ATTACHMENT OF THE REAR UNIT TO THE TRACTOR SHALL BE VIA TRACTOR THREE POINT LIFT. HYDRAULIC SYSTEM. THE WING CUTTER SHALL BE POWERED BY HYDRAULIC PUMPS AND MOTOR SYSTEM THAT SHALL OPERATE

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INDEPENDENTLY AND SHALL NOT BE CONNECTED TO THE TRACTOR HYDRAULIC SYSTEM. POWER TO POSITION THE WING SECTION SHALL BE PROVIDED BY A HYDRAULIC CYLINDER SYSTEM. KNIVES: KNIVES SHALL BE REVERSIBLE, FREE SWINGING DESIGN. STYLE COARSE: VENDOR TO FURNISH TWO (2) SETS OF OPERATOR'S MANUALS, TWO (2) SETS OF PARTS AND SHOP MANUALS AND TWO (2) SETS OF WIRING DIAGRAMS AND LUBRICATION CHARTS FOR MOWER, THE DELIVERED UNITS WILL INCLUDE: COMPLETE LUBRICATION. FILLING CRANKCASE WITH OIL, ADJUSTMENT OF ENGINE TO PROPER OPERATING CONDITIONS, CAREFUL CHECK TO ASSURE PERFECT OPERATIONS OF ALL MECHANICAL FEATURES, CLEANING OF VEHICLE IF NECESSARY AND REMOVAL OF ALL UNNECESSARY TAGS, STICKERS, PAPERS, ETC. PRICE INCLUDES MOUNTING. TRACTOR NOT INCLUDED IN PRICE.

FRAME:

THE FRAME SHALL BE FULL-LENGTH AND MOUNTED TO THE FRONT OF THE TRACTOR'S BOLSTER HOUSING AND PADS AT THE REAR OF THE TRACTOR. THIS SPECIFICALLY EXCLUDES MOUNTING TO THE BELL HOUSING OF THE TRACTOR.

THE FRAME SHALL INCLUDE A POSITIVE TRANSPORT LOCK-UP POSITION.

UNITIZED CUTTER HOUSING: THE HOUSING SHALL BE UNITIZED 10-GAUGE TOP AND 1/2" INBOARD AND 5/16" OUTBOARD END PLATES WITH BEARING GUARDS. THE UNIT SHALL HAVE A FULL-LENGTH AND REPLACEABLE SKID SHOES.

CUTTER SHAFT: THE CUTTER SHAFT SHALL BE BALANCED, 4-1/2" DIAMETER WITH 3/8" THICK WALL WITH 4-ROWS OF KNIVES. KNIFE TIP SPEED SHALL BE 8,900 FPM. ANTI-WRAP PROTECTION SHALL BE PROVIDED.

THE CUTTER SHAFT BEARINGS SHALL BE GREASEABLE, SEALED AND SELF-ALIGNING, 1-15/16" AND RATED AT 3,300 LBS. THE CUTTER SHAFT SHALL BE ATTACHED TO THE HOUSING WITH 6, GRADE 5, 3/8" BOLTS. THE BEARING FLANGE MAY BE USED AS A BEARING PULLER. PILLOW BLOCK BEARINGS SHALL NOT BE ACCEPTABLE.

THE REAR ROLLER SHALL BE A FULL-LENGTH TUBE, 6" IN DIAMETER WITH A 1/4" THICK WALL, RATED AT 6,000 LBS. THE CUTTING HEIGHT SHALL BE ADJUSTABLE FROM 0" TO 6" HIGH IN INCREMENTS OF 1/2", WITH HEX-SHAPED SHAFT ENDS.

THE ROLLER BEARINGS SHALL BE HEX-SHAPED, 1-1/3" ACROSS CORNERS, SELF-ALIGNING, WITH CAST STEEL CAP OUTBOARD AND NEOPRENE SEAL INBOARD. EXTERNAL BEARINGS SHALL NOT BE ACCEPTABLE.

A LABYRINTH SEAL FORMED BY RECESSED TUBING SHALL PROTECT THE BEARINGS FROM FOREIGN MATERIAL. THERE SHALL BE 1/2" X 6" FORMED ROLLER BRACKETS, ATTACHED BY 4, 1/2", GRADE 5 CARRIAGE BOLTS. OPTIONAL ROLLER SCRAPER BRACKETS SHALL BE PROVIDED. THERE SHALL BE TWO-74" WIDE WING MOWERS AND ONE-88" REAR MOWER.

EACH FLAIL UNIT SHALL HAVE A REAR, FULL-LENGTH, RUBBER DEFLECTOR AND FRONT METAL SHIELDS.

THE HYDRAULIC POWER SHALL BE DELIVERED FROM THE FRONT CRACKSHAFT OF THE TRACTOR. A 2-PISTON PUMP AND MOTOR, RATED AT 24-GPM AT 3,800 PSI, AND RATED AT 53 HP SHALL BE USED. A GEAR PUMP SHALL NOT BE ACCEPTABLE.

THE TOTAL HYDRAULIC SYSTEM CAPACITY SHALL BE 25-GALLONS.

THE FILTER SHALL BE A 10-MICRON WITH A 75-GPM CAPACITY.

THE UNIT SHALL USE IN-FRAME COOLING WITH PRESSURE RELIEF VALVE FOR THE WING.

THE VALVE SHALL BE 2-SPOOL, OPEN CENTER SYSTEM WITH A FLOAT DETENT POSITION.

THE LIFT CYLINDER SHALL HAVE A 3" BORE WITH AN 8" STROKE, CAPABLE OF 14" HORIZONTAL LIFT. THE TILT CYLINDER SHALL HAVE A 3-1/2" BORE WITH A 9" STROKE, CAPABLE OF 40-DEGREES DOWNWARD AND 57-DEGREES UPWARD WITHOUT HAVING A STRIP OF GRASS BETWEEN THE SIDE AND REAR MOWERS. THE REAR MOWER SHALL A MINIMUM 6" OVERLAP.

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SAFETY DEVICES: A WING TILT SWITCH, ALLOWING THE MOWER TO SHUT OFF AUTOMATICALLY WHEN IT IS RAISED INTO TRANSPORT POSITION, SHALL BE USED. AN ELECTRIC LOCKOUT, THAT WILL NOT ALLOW THE TRACTOR TO START WHEN THE WING MOWERS ARE ENGAGED, SHALL ALSO BE USED.

REAR 88" MOWER:

MOWER HOUSING: THE UNIT SHALL HAVE A UNITIZED 10-GAUGE TOP AND 5/16" END PLATES WITH BEARING GUARDS. FULL-LENGTH AND REPLACEABLE SKID SHOES SHALL ALSO BE USED.

CUTTER SHAFT: A BALANCED, 4-1/2" DIAMETER CUTTER SHAFT SHALL BE USED WITH 3/8" THICK WALL AND FOUR-ROWS OF KNIVES. THE KNIFE TIP SPEED SHALL BE 8,900 FPM. THE MOUNTING SHALL PROVIDE FOR AN ANTI-JAMMING SEAL. RUBBER SHOCK MOUNT SHALL NOT BE ACCEPTABLE.

CUTTER SHAFT BEARINGS: THESE BEARINGS SHALL BE GREASEABLE, SEALED, SELF-ALIGNING, 1-15/16", AND RATED AT 3,300 LBS. THEY SHALL BE ATTACHED TO THE HOUSING WITH 6, GRADE 5, 3/8" BOLTS. THE BEARING FLANGE MAY BE USED AS A BEARING PULLER. PILLOW BLOCK BEARINGS SHALL NOT BE ACCEPTABLE.

REAR ROLLER: THE REAR FOLLER SHALL BE 6" IN DIAMETER WITH A 1/4" WALL AND FULL-LENGTH TUBE. IT SHALL BE RATED AT 6,000 LBS. AND HAVE A CUTTING HEIGHT ADJUSTMENT FROM 0" TO 6" HIGH IN INCREMENTS OF 1/2" WITH HEX SHAPED SHAFT ENDS.

ROLLER BEARINGS: THESE BEARINGS SHALL BE HEX SHAPED, 1-1/3" ACROSS THE CORNERS AND SELF-ALIGNING. THEY SHALL BE CAST STEEL CAP OUTBOARD AND NEOPRENE SEAL INBOARD. EXTERNAL BEARINGS SHALL NOT BE ACCEPTABLE.

ROLLER ADJUSTMENT BRACKET: THIS BRACKET SHALL HAVE A LABYRINTH SEAL FORMED BY RECESSED TUBING, PROTECTING THE BEARING FROM FOREIGN MATERIAL. THE 1/2" X 6" BRACKET SHALL BE FORMED AND ATTACHED BY 4, 1/2" GRADE 5 CARRAIGE BOLTS. OPTIONAL ROLLER SCRAPER BRACKETS SHALL BE PROVIDED.

LIFT CHAINS: THESE CHAINS SHALL PROVIDE FLEXIBILITY TO THE TRACTOR HITCH ALLOWING A GREATER VERTICAL ANGULAR RANGE WHICH THE MOWER CAN FREELY MOVE THROUGH.

PTO: THE PTO SHALL BE 540, CAT.4 WITH SPRING-LOADED SLIP CLUTCH.

GEARBOX: THE GEARBOX SHALL BE 60-HP CONTINUOUS AND 90-HP INTERMITTENT WITH A TOTALLY ENCLOSED DRIVESHAFT TO OUTBOARD DRIVE.

DRIVE BELT: THE DRIVE BELT SHALL BE A MODIFIED "C" SECTION, REVERSE BEND, "V BELT WITH 16" WRAP PER PULLEY. THERE SHALL BE AN AUTOMATIC SPRING-TENSION BELT ADJUSTMENT.

KNIVES: THE KNIVES SHALL BE COARSE CUT, REVERSIBLE AND SELF-CLEANING. THEY SHALL BE MADE OF 1-3/4" X 3-5/16", .1046" STEEL. EACH KNIFE SHALL WEIGH 3-OZS. THEY SHALL BE MOUNTED TO THE CUTTER SHAFT ON HEAT-TREATED CLEVIS RINGS. THE 88" MOWER SHALL HAVE 44-PAIR. AN OPTIONAL 4-OZ KNIFE SHALL BE AVAILABLE.

OPTIONAL KNIVES: FINE CUT KNIVES SHALL BE AVAILABLE AS AN OPTION. THESE KNIVES SHALL BE 1-1/4" X 5", MOUNTED ON THE CUTTER SHAFT BY HARDENED PINS. THE 88" MOWER SHALL HAVE 108 PAIR OF KNIVES.

WARRANTY: THE WARRANTY SHALL BE FOR ONE YEAR AND COVER PARTS AND LABOR. NON-GOVERNMENTAL USERS SHALL BE SUJECT TO MODIFIED POLICY.

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***** SPECIFICATION #18E09 *****

NEW LATEST MODEL TRACTOR POWERED, RAIL MOUNTED, ARTICULATED BOOM TREE AND BRUSH CUTTER:

GENERAL DESCRIPTION:

THIS SPECIFICATION COVERS A HYDRAULICALLY POWERED MINIMUM LENGTH 20 FT & 23 FT. ARTICULATED BOOM UNIT THAT SHALL BE DESIGNED TO MOUNT ON A TRACTOR. THE MAIN BOOM OF THE CUTTER UNIT SHALL BE MOUNTED BETWEEN THE FRONT AND REAR WHEELS AND TO THE RIGHT SIDE OF THE POWER UNIT AND SHALL BE SUPPORTED BY TWO RAIL ASSEMBLIES. IN THE STANDARD CONFIGURATION, THE BOOM SHALL SUPPORT THE CUTTER HEAD AND PROVIDE MOVEMENT VERTICALLY AND HORIZONTALLY THROUGH ARCS TO BE STATED SPECIFICALLY. THE POSITION OF THE CUTTER HEAD SHALL BE CONTROLLED COMPLETELY FROM THE OPERATOR'S POSITION BY JOYSTICK. THE HYDRAULIC CONTROL SYSTEM OF THIS UNIT SHALL BE SEPARATE FROM THE TRACTOR HYDRAULIC SYSTEM AND THE CUTTER HEAD HYDRAULIC CIRCUIT. FULL POWER SHALL BE AVAILABLE TO THE CUTTER HEAD EVEN WHILE THE HEAD IS BEING POSITIONED WITH THE BOOM CONTROL HYDRAULIC CIRCUIT. EACH SECTION OF THE HYDRAULIC SYSTEM SHALL HAVE PRESSURE RELIEF VALVES TO ALLOW EXCESSIVE HYDRAULIC PRESSURE TO BE RELEASED TO PREVENT DAMAGE TO THE UNIT IN THE EVENT OBSTRUCTIONS ARE ENCOURNTERED. UNIT SHALL BE STANDARD PRODUCTION MODEL, NOT MODIFIED FOR BID PURPOSES. PRICE WITHOUT OPTIONAL CUTTING HEADS.

BASIC FEATURES

22' MINIMUM HORIZONTAL REACH*

22' 7" MINIMUM VERTICAL REACH*

9' 1" BELOW GRADE REACH*

***ABOVE MEASUREMENTS ARE USING A BOOM EQUIPPED WITH A 60" NON-SWIVEL ROTARY HEAD TWO SECTION ARTICULATED BOOM.**

BOOM FEATURS AND MOUNTING

MAIN BOOM: 6" X 6" X 1/4" WALL STRUCTURAL TUBING CONFORMING TO ASTM A-500 GR. B (58,000 PSI MIN TENSILE).

OUTER BOOM: 5"X5 X 1/4" WALL STRUCTURAL TUBING CONFORMING TO ASTM A-500 GR. B (58,000 PSI MIN TENSILE).

THE MAIN BOOM PIVOT POINTS SHALL BE REINFORCED WITH 3/4" ASTM A-572 GR 50 (65,000 PSI MIN TENSILE).

MAIN PIVOT PINS SHALL BE CONTRUCTED OF 2" ETD 150 ALLOY STEEL BAR (150,000 PSI MIN TENSILE/32 RE MIN).

EACH PIN SHALL BE SUPPORTED BY A PAIR OF 3" HARDENED STEEL, GREASEABLE CONNEX BUSHINGS.

STANDARD BOOM FUNCTIONS SHALL INCLUDE HORIZONTAL SWING, VERTICAL LIFT, DIPPER REACH, AND MOWER HEAD TILT.

BOOM MUST SWING HYDRAULICALLY A MINIMUM OF 120° UTILIZING A KING POST STYLE TURNING ARM.

THE 2 1/2" DIAMETER KING PIN SHALL BE CONTRUCTED FROM AISI 1045 CHROME STEEL.

THE KING PIN SHALL PIVOT ABOUT A PAIR OF 2 3/4" DIAMETER GREASEABLE CONNEX BUSHINGS.

THE WEIGHT OF THE BOOM AND TURNING ARM SHALL BE SUPOORTED BY A 5" DIAMETER UHMW POLYETHYLENE THRUST WASHER.

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THE TILT MECHANISM SHALL FEATURE A FOUR-BAR LINKAGE TO ALLOW FOR 215° MOWING HEAD ROTATION.

THE TRACTOR MOUNT KIT SHALL FEATURE A SUBFRAME SPANNING FROM THE FRONT BOLSTER TO THE REAR AXLE.

SUBFRAME SHALL CONSIST OF 4" X 4" X 5/16" WALL TUBING WITH A 6" X 4" X 1/2" VERTICAL SUPPORT.

TORSIONAL LOADING SHALL BE MINIMIZED WITH A 4" X 2" X 1/4" LATERAL CROSS-BRACE SPANNING THE WIDTH OF THE TRACTOR.

ALL STRUCTURAL TUBING USED IN THE MOUNT KIT SHALL CONFORM TO ASTM A-500 GR. B (58,000 PSI MIN TENSILE).

FRAME WORK FASTENED TO THE TRACTOR BELL HOUSING AREA WILL NOT BE ACCEPTED.

THE MAINFRAME WHICH SUPPORTS THE KING POST SHALL BRACE OVER THE HOOD JUST ABOVE THE OPERATOR'S LINE OF SIGHT.

THE BRACE SHALL BE A FORMED 4" X 4" X 5/16" WALL TUBE CONFORMING TO ASTM A-500 GR. B (58,000 PSI MIN TENSILE).

ONLY A ONE PIECE, FORMED STRUCTURAL BRACE SHALL BE EXCEPTED.

A MINIMUM, 1,600 LB. STEP-STYLE COUNTER-WEIGHT SHALL BE FASTENED TO THE FRAME OPPOSITE THE BOOM.

A SELF-ADJUSTING AXLE STABILIZER SYSTEM SHALL PROVIDE COUNTER-STABILITY FOR THE ARTICULATED BOOM.

AN ADDITIONAL 1,300 LB WHEEL WEIGHT SHALL BE PROVIDED AS STANDARD EQUIPMENT.

A TWO-PIECE BOOM REST STRUCTURE SHALL MOUNT TO THE REAR AXLE TO SUPPORT THE WEIGHT OF THE BOOM IN TRANSPORT.

HYDRAULIC SYSTEM

UNIT SHALL FEATURE A SELF-CONTAINED HYDRAULIC CIRCUIT FOR BOTH MOWING HEAD AND BOOM CONTROL.

MOWING HEAD CIRCUIT SHALL FEATURE A GEAR-TYPE PUMP RATED AT 30 GPM (52HP) AND 3,000 PSI @2,200 RPM.

BOOM CONTROL CIRCUIT SHALL FEATURE A GEAR-TYPE PUMP RATED AT 12 GPM (21HP) AND 3,000 PSI @2,200 RPM.

THE DUAL SECTION PUMP SHALL BE MOUNTED TO THE FRONT OF THE TRACTOR AND COUPLED TO THE ENGINE CRACKSHAFT PULLEY.

THE HYDRAULIC RESERVOIR SHALL BE MOUNTED UNDER THE REAR FENDER FOR IMPROVED OPERATOR VISIBILITY, SAFETY, AND OPERATOR ACCESS.

THE IN-TANK RETURN FILTER SHALL BE 10-MICRON WITH A 95-GPM FULL-FLOW WITH RESTRICTION GAUGE.

THE SUCTION LINE FILTER SHALL BE 100-MESH.

ALL HIGH-PRESSURE HYDRAULIC HOSES SHALL BE OF FOUR-WIRE BRAID CONSTRUCTION WITH A MINIMUM SAE100R12 RATING.

AN OPTIONAL OIL-TO-AIR COOLER WITH INTEGRATED ELECTRIC FAN CAN BE LOCATED UNDER-HOOD NEXT TO THE CONTROL VALVE ASSEMBLY FOR EXTREME ENVIRONMENTS.

RESERVOIR SHALL FEATURE VISUAL INDICATION OF TANK LEVEL AND TEMPERATURE TO INSURE A MINIMUM 42 GALLON WORKING VOLUME.

CONVENIENT ACCESS POINTS FOR DRAINING AND CLEANING THE RESERVOIR SHALL BE PROVIDED.

A STRATEGICALLY VENTED, CLAM-SHELL STYLE SHEET-METAL COVER SHALL PROVIDE IMPACT PROTECTION FOR THE HYDRAULIC CONTROL VALVE AND PUMPS FROM FALLING DEBRIS. THE COVER WILL INCLUDE A PROVISION TO SECURE THE HALVES BY USING A PADLOCK TO RESTRICT ACCESS AND PREVENT THEFT.

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THE CYLINDER CONTROL CIRCUIT SHALL FEATURE A MULTI-SECTION, ELECTRO-HYDRAULIC, DIRECTIONAL VALVE.

THE VALVE SHALL BE OPEN-CENTER AND PROVIDE SECTION-SPECIFIC PRESSURE COMPENSATION.

VALVE SHALL ALLOW A MINIMUM OF FOUR FUNCTIONS TO BE OPERATED SIMULTANEOUSLY BY JOYSTICK CONTROL.

THE SWING, LIFT AND DIPPER SECTIONS MUST FEATURE INDIVIDUAL WORK PORT RELIEF VALVES FOR BREAKAWAY PROTECTION.

THE CONTROL VALVE SHALL BE FRONT PEDESTAL MOUNTED.

OPERATOR PROTECTION AND SAFETY

THE MOWER CUTTER HEAD SHALL HAVE A SIX-SECOND EMERGENCY SHUT DOWN ENGAGED BY THE OPERATOR INSIDE THE CAB.

THE BOOM CONTROLS SHALL FEATURE A MASTER **ON/OFF** SWITCH FOR COMPLETE POWER SHUTDOWN.

AN IGNITION LOCK-OUT SAFETY SWITCH SHALL PREVENT THE TRACTOR FROM BEING STARTED WITH THE CUTTER HEAD VALVE ENGAGED.

CAB UNITS SHALL INCLUDE SHIELDS PREMIER 3/8" THICK RIGHT-SIDE REPLACEMENT POLYCARBONATE WINDOWS.

THE REPLACEMENT WINDOWS SHALL FEATURE SUPERCOAT ANTI-ABRASION COATING WITH INTEGRATED UV PROTECTION.

TRACTOR SPECIFICATIONS

TRACTOR SHALL WEIGH A MINIMUM OF 7,000 LBS. AND HAVE AN 85" MINIMUM WHEELBASE.

OPTIONAL EQUIPMENT

OPEN CENTER VALVE WITH LEVER CONTROLS IN LIEU OF JOYSTICK.

ROTARY HEAD WITH DOOR, 5" DIAMETER CUT CAPACITY.

HEAVY DUTY FLAIL WITH DOOR, 4" DIAMETER CUT CAPACITY.

SAW HEAD WITH 4" DIAMETER CUTTING CAPACITY.

ROTARY DITCHER WITH HYDRAULIC CHUTE, 20" CUTTING WHEEL.

QUICK HITCH FOR EASY CUTTING HEAD EXCHANGE.

WARRANTY

THERE SHALL BE A ONE YEAR PARTS AND LABOR WARRANTY. NON-GOVERNMENTAL USERS ARE SUBJECT TO MODIFIED POLICY. ONLY ALAMO INDUSTRIAL (OEM) PARTS MAY BE USED FOR WARRANTY REPLACEMENT.

OPTIONAL CUTTER HEADS

BOOM AXE 50 HEAVY-DUTY ROTARY BRUSH CUTTER

DECK:

CUTTING HEAD WIDTH SHALL BE 50".

THE DECK SHALL BE CONSTRUCTED OF 10-GAUGE STEEL.

THE SIDES SHALL BE CONTRCTED OF DOUBLE-WALL 10-GAUGE STEEL.

REINFORCEMENTS SHALL BE 3/8" FLAT BAR X FRAME.

CENTER SECTION SHALL BE 1/2" X 12" X 20".

THE SKID SHOES SHALL BE FULL-LENGTH AND REPLACEABLE.

DECK ROTATION:

THE DECK SHALL HAVE A ROTATION OF 220 DEGREES.

SPINDLE:

THE SPINDLE SHALL BE 4-7/16" AT THE LARGEST DIAMETER X 8-15/16" LONG, MADE OF ALLOY STEEL AND SPLINED.

TAPERED ROLLER BEARINGS WITH 2" I.D. TOP AND 2-9/16" I.D. BOTTOM IN AN OIL BATH SHALL BE USED.

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THE HOUSING SHALL BE A 1030 CAST STEEL UNIBODY.

MOTOR TO SPINDLE DRIVE:

THE MOTOR TO SPINDLE DRIVE SHALL BE A SPLINED, DIRECT DRIVE AND ENCLOSED. THIS SPECIFICALLY EXCLUDES A CHAIN OR DODGE COUPLER.

BLADE BAR:

THE BLADE BAR SHALL BE 2-LEFT, STACKED AND BOLTED. THE BOTTOM LEAF SHALL BE 35" X 5" 7/8" T-1 STEEL. THE TOP LEAF SHALL BE 22 1/2" X 5" X 7/8" T-1 STEEL. THE BOLTS SHALL BE 1" DIAMETER, GRADE 8. THE NUT SHALL E 1" SLOTTED AND LOCKED WITH A 3/16" DIAMETER ROLL PIN.

BLADES:

THE BLADES AHALL BE TEMPERED STEEL 5/8" X 5" X 14-5/8", FULL -SWINGING (360 DEGREES) AND DOUBLE EDGED.

THE BLADE BOLTS SHALL BE HEAT-TREATED, 1-1/8" X 3", SHOULDERED, GRADE 8 WITH CASTELLATED NUT, LOCK WASHER AND ROLL PIN.

MOTOR:

THE MOTOR SHALL BE STEEL GEAR TYPE, RATED AT 101-HORSEPOWER AND DIRECT COUPLED. THE SPINDLE RPM SHALL BE 1240 RPM AT 38 GPM FROM PUMP.

SAFETY SHIELDS:

THE FRONT SHIELD SHALL BE A HYDRAULICALLY ACTUATED, CENTER FEED, METAL DOOR. OPERATIONAL FROM THE OPERATOR'S CONTROLS.

THE REAR SHIELD SHALL BE A 3-PLY RUBBER BELTING AND FULL-LENGTH.

ROTARY 60" CUTTING HEAD

CUTTER HEAD FEATURES AND CAPABILITIES:

THE UNIT SHALL HAVE A MINIMUM CUTTING WIDTH OF 58".

THE CUTTER HEAD SHALL CUT GRASS, WEDS, AND BRUSH UP TO 5" IN DIAMETER.

THE CUTTING HEAD TOP DECK SHALL BE CONTRUCTED USING A MIMINUM OF A 606 ALLOY STEEL OR QUIVALENT.

THE SIDE SKIRTS SHALL BE CONSTRUCTED USING A MINIMUM OF 3/8" STEEL.

TOP OF THE DECK SHALL BE REINFORCED WITH A CHANNEL FRAME AND REINFORCED SPINDLE MOUNT PLATE.

THE CUTTING HEAD SHALL FEATURE FULL-LENGTH, REPLACEABLE SKID-SHOES.

SPINDLE:

THE SPINDLE SHALL BE A MINIMUM OF 4-1/2" X 9" HEAT-TREATED, H-13 MODIFIED, ALLOY TOOL STEEL.

THE SPINDLE BEARING SHALL BE TAPERED ROLLER BEARINGS, 2-1/2" ID TOP AND 2-5/8" ID BOTTOM, IN A SEALED HOUSING.

BLADE CARRIER AND BLADES:

THE BLADE CARRIER SHALL BE THREE-LEAF, STACKED BLADE-BAR TYPE WITH THE BOTTOM LEAF BEING MADE OUT OF T-1 STEEL.

THE BLADES SHALL BE 5/8" X 5" X 14-5/8", 360-DEGREE FULL SWINGING, DOUBLE-EDGED, AND CONSTRUCTED OF TEMPERED STEEL.

OPERATION & POWER:

MOTOR:

THE MOTOR SHALL BE A CAST-IRON, PISTON-TYPE, RATED AT 205 HP AT 4,100 RPM AND 6,000 PSI. THE SPINDLE SPEED SHALL BE A MINIMUM OF 1,220 RPM AND 4,916 IN. LB. OF TORQUE.

MOTOR DRIVE:

THE MOTOR DRIVE SHALL BE DIRECT DRIVE, SPLINED AND TOTALLY ENCLOSED. THIS SPECIFICALLY EXCLUDES A CHAIN OR DODGE COUPLER.

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SAFETY:

THE FRONT SHIELD SHALL BE HYDRAULICALLY ACTUATED, CENTER FEED, METAL DOOR OPERATIONAL FROM THE JOYSTICK CONTROL.

THE REAR SHIELD SHALL BE CONSTRUCTED OF RUBBER MATERIAL.

MISCELLANEOUS:

WEIGHT:

THE CUTTER HEAD SHALL HAVE A SHIPPING WEIGHT OF APPROXIMATELY 1,000 LBS.

WARRANTY:

THERE SHALL BE A MINIMUM ONE YEAR PARTS AND LABOR WARRANTY. NON-GOVERNMENTAL USERS ARE SUBJECT TO MODIFIED POLICY. ONLY ALMO INDUSTRIAL (OEM) PARTS MAY BE USED FOR WARRANTY REPLACEMENT.

FLAIL AXE 48"

48" FLAIL AXE HEAD:

THE FLAIL AXE 48 SHALL HAVE A CUTTING WIDTH OF 44".

AN ADJUSTABLE REAR ROLLER SHALL BE USED TO ADJUST THE CUTTING HEIGHT.

THE CUTTING HEIGHT SHALL BE ADJUSTABLE FROM 1-1/2" TO 6-1/2" IN 1-5/8" INCREMENTS.

SHALL CUT BRUSH AND OTHER VEGETATION UP TO 4" IN DIAMETER.

THE WEIGHT OF THE UNIT, INCLUDING THE HITCH POST, SHALL BE 740 LBS.

THE OVERALL WIDTH OF THE CUTTING HEAD SHALL BE 57-1/2" WITH ROLLER, 54-7/8" WITHOUT ROLLER.

THE CUTTERSHAFT SPEED AT 38 GPM FROM PUMP SHALL BE 2,073 RPM.

THE CUTTERSHAFT OUTSIDE DIAMETER SHALL BE 4-1/2", THE WALL SHALL BE 3/8" STICK.

THE CUTTERSHAFT BEARINGS SHALL BE 2-INCH, SELF-ALIGNING, DOUBLE ROW, ROLLER BEARINGS.

THREE "5V" V-BELTS SHALL BE USED TO DRIVE THE CUTTERSHAFT.

THE BELT HORSEPOWER RATING SHALL BE 21.15 AT 1,750 RPM.

THE TOTAL HORSEPOWER RATING OF THE BELT SHALL BE 63.45 HP.

MOTOR SHEAVE DIAMETER (OD, GROOVES, KEY SIZE) SHALL BE 8.50"-3-GROOVE, 1/4" KEY.

THE CUTTERSHAFT SHEAVE DIAMETER (OD, GROOVES, KEY SIZE) SHALL BE 8.50"-3-GROOVE, 1/2" KEY.

THE PULLEY RATIO SHALL BE 1 :1.

BLADE TIP VELOCITY OF 3 GPM FROM THE PUMP SHALL BE 8,955 FPM OR 102 MPH.

THERE SHALL BE 16 BLADES, EACH WITH A CUTTING EDGE WIDTH OF 3", WEIGHING 2LBS., WITH A BLADE PIN SIZE OF .625".

MOUNTED ON THE A-BOOM OR REAR-MOUNT BOOM, THE FRONT DOOR SHALL BE MANUALLY OPERATED, HINGED WITH TWO POSITIONS, AND CONSTRUCTED OF 10-GAUGE STEEL.

MOUNTED ON THE MACHETE BOOM, THE FRONT DOOR SHALL BE HINGED, HYDRAULICALLY OPERATED, AND CONSTRUCTED OF 10-GAUGE STEEL.

THE HITCH POST SHALL USE CROSS TUBE CLAMPING.

THE REAR DECK SHALL BE MADE OF T-1 STEEL PLATE, 3/16" THICK.

THE SIDE PLATES SHALL BE MADE OF 3/8" THICK STEEL.

THE CUTTERHEAD SHALL HAVE REPLACEABLE SKID SHOES AS STANDARD EQUIPMENT.

THERE SHALL BE A RUBBER FLAP ON THE REAR OF THE UNIT TO DEFLECT DEBRIS.

THE REAR ROLLER ON THE UNIT SHALL BE 5-1/2" OUTSIDE DIAMETER WITH A 3/16" WALL.

REAR ROLLER BEARINGS SHALL BE BALL BEARING AND 1-7/16" INSIDE DIAMETER.

THE REAR ROLLER TO ROLLER BEARING ATTACHMENT SHALL BE CAPTURED WITH LOCKING COLLAR.

SUPER HEAVY-DUTYGRASS FLAIL 60

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HEAVY DUTY GRASS FLAIL HEAD

DECK:

THE MOWER SHALL HAVE A CUTTING WIDTH OF 60".

THE DECK SHALL BE MADE OF 10-GAUGE STEEL AND THE SIDE SKIRTS MADE OF 7-GAUGE STEEL.

THE SKID SHOES SHALL BE FULL-LENGTH AND REPLACEABLE.

THE UNIT SHALL HAVE A UNITIZED CUTTER HOUSING.

THE TRASH DEFLECTOR SHALL BE FULL-LENGTH AND MADE OF RUBBER.

CUTTER SHAFT:

THE CUTTER SHAFT SHALL BE MADE OF 4-1/2" STEEL DRAWN TUBING, WITH 3/8" WALL AND 60" LONG.

CUTTER SHAFT SPEED SHALL BE 2,000 RPM, INHERENTLY AND DYNAMICALLY BALANCED.

BEARINGS SHALL BE SELF-ALIGNING, ROLLER, 1-15/16" I.D. AND GREASEABLE.

THE BEARING LOAD RATING SHALL BE 1,650 LBS. EACH.

ALL KNIFE LUGS SHALL BE WELDED.

KNIVES:

THERE SHALL BE A MINIMUM OF 36 PAIRS OF KNIVES.

THE KNIVES SHALL BE CONSTRUCTED OF 1-3/4" X 3-5/16" X .105" THICK STEEL, MOUNTED ON FORGED, HEAT-TREATED RINGS.

DRIVE TRAIN:

THE MOTOR SHALL HAVE STEEL GEARS.

MAXIMUM RATED HORSEPOWER SHALL BE 50HP AT 2,500 RPM AND 2,500 PSI.

THE UNIT SHALL USE DOUBLE V GROOVE PULLEY, B SECTION BELTS.

BELT TENSIONING SHALL BE ACHIEVED USING A TURNBUCKLE.

REAR ROLLER:

THE REAR ROLLER SHALL BE FULL-LENGTH TUBE AND MADE OF 6" DIAMETER STEEL WITH 1/4" WALL.

THE ROLLER SHALL BE RATED AT 6,000 LBS.

CUTTING HEIGHT ADJUSTMENT SHALL BE FROM 0" TO 6" HIGH IN INCREMENTS OF 1/2".

THE UNIT SHALL HAVE HEX SHAPED SHAFT ENDS.

ROLLER BEARINGS:

CAST STEEL CAP OUTBOARD AND NEOPRENE SEAL INBOARD. EXTERNAL BEARINGS WILL NOT BE ACCEPTABLE.

WARRANTY:

MINIMUM ONE YEAR PARTS AND LABOR. NON-GOVERNMENTAL USERS MAY BE SUBJECT TO MODIFIED POLICY.

HEAVY DUTY DITCHER HEAD:

MOUNTING:

THE DITCHER SHALL BE MOUNTED TO THE END OF THE BOOM USING STANDARD HITCH POST PINS AND HARDWARE. DITCHER HEAD WILL REQUIRE THE USE OF 2 REAR TRACTOR REMOTES WHEN NOT BASE UNIT BOOM IS NOT FACTORY EQUIPPED WITH HYDRAULIC DOOR FUNCTIONS.

BLADE HOLDER:

THE BLADE HOLDER SHALL BE 22" IN DIAMETER, 1/2" FABRICATED DISC ASSEMBLY WITH WELDED 1/2" BRACKETS.

THE UNIT SHALL HAVE REPLACEABLE WEAR PLATES.

SPINDLE:

THE SPINDLE SHALL BE 7-1/4" X 11-3/8", WITH 2" I.D. BEARING SURFACES.

THE BEARINGS SHALL BE TAPERED ROLLER, TOP AND BOTTOM AND GREASEABLE.

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BLADES:

THERE SHALL BE THREE BLADES, EACH ¾" X 9" X 5-1/2".
THE BLADES SHALL BE REVERSIBLE, SELF-CLEANING AND MADE OF CARBON STEEL.

HYDRAULIC MOTOR:

THE HYDRAULIC MOTOR SHALL BE CAST IRON AND THE PUMP SHALL HAVE STEEL GEARS.
MAXIMUM HORSEPOWER SHALL BE 172 HP AT 2,000 RPM AND 2,500 PSI.
THE MOTOR SHALL TURN AT 370 RPM AT 1,800 ENGINE RPM.

MOTOR DRIVE:

THE SPINDLE SHALL BE DRIVEN BY KEY IN KEYWAY AND DOUBLE CHAIN COUPLER FROM HYDRAULIC MOTOR.

DECK:

THE DECK SHALL BE MADE OF 3/8" FORMED AND WELDED STEEL PLATE WITH ADJUSTABLE INSERT.
HOUSING SHALL BE A HYDRAULICALLY CONTROLLED DEFLECTOR FOR WINDROW OR BROADCAST OF SPOIL MATERIAL.
FORWARD OR REVERSE ROTATION SHALL BE AVAILABLE.

CIRCULAR SAW HEAD LIMB CUTTER:

CUTTING HEAD:

THE UNIT SHALL HAVE A 7' – 6" CUTTING WIDTH.
SHALL BE RATED TO CUT MATERIAL UP TO 4-INCHES IN DIAMETER.
THE HEAD SHALL BE ABLE TO ATTACH TO ALL ALAMO INDUSTRIAL MID-MOUNT BOOMS.
THE LIMB CUTTER SHALL WEIGH APPROXIMATELY 600 LBS.
THE MAIN CHANNEL SHALL BE FORMED FROM 3/16" THICK STEEL.
END PLATES SHALL BE MADE OF 3/8" THICK STEEL PLATE.
THE REAR SHIELD SHALL BE MADE OF 10-GAUGE STEEL, FORMED FOR STIFFNESS.
THE HITCH POST MOUNT TUBE SHALL BE MADE FROM 4" X 4" TUBE.
THE MOTOR MOUNT-PLATE SHALL BE MADE OF ¼" THICK STEEL PLATE.
THE UNITS BELT GUARD SHALL BE HINGED AND FORMED FROM 12-GAUGE STEEL.
THE UNIT SHALL HAVE A SKID SHOE TO PREVENT THE LOWER BLADE FROM CONTACTING THE GROUND WHEN THE HEAD IS IN THE VERTICAL POSITION.

POWER TRAIN:

THE RELIEF VALVE SETTING SHALL BE 2,900 WHEN MOUNTED TO THE MACHETE, OR 1,850 WHEN MOUNTED TO OTHER ALAMO INDUSTRIAL PRODUCTS.
ALL MOTORS SHALL USE FULL-PUMP FLOW, NO REDUCTION SHALL BE NECESSARY.
A FLEXIBLE COUPLING SHALL BE ABLE TO TOLERATE MOTOR MISALIGNMENT WITHOUT DAMAGING DRIVE SYSTEM.
ALL MOTORS SHALL SUPPLY APPROXIMATELY 38 HP AT APPROXIMATELY 2,200 RPM.
THE UNIT SHALL USE THREE HIGH PERFORMANCE MICRO-V BELTS, RATED FOR A MINIMUM OF 38 HP.
SIX-INCH DIAMETER SHEAVES SHALL BE FASTENED ON SHAFT WITH TAPERED FITTING Q.D. BUSHINGS.

BLADES:

THE UNIT SHALL HAVE 4 CIRCULAR SAW BLADES.
EACH SAW BLADE SHALL BE 26-INCHES IN DIAMETER.
THE BLADES SHALL BE CONSTRUCTED OF 3/16-INCH THICK STEEL.
EACH BLADE SHALL HAVE 60-TEETH, SET AND FILED.
THE BLADES SHALL TURN AT 2,200 RPM WITH A TIP SPEED OF 15,000FPM AT 1,900 ENGINE RPM.

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THE BLADES SHALL BE ATTACHED DIRECTLY TO THE SHAFT WITH FOUR ½" GRADE 8 COUNTERSUNK BOLTS.

THERE SHALL BE AN EXTRA SET OF BLADES INCLUDED WITH EACH UNIT.

SPINDLES:

THE SPINDLE SHAFTS SHALL BE STRESS RELIEVED AND HEAT-TREATED TO A HARDNESS OF RC 30-32.

THE SPINDLE HOUSING SURFACES SHALL BE PRECISION MACHINED.

THE SHAFTS SHALL HAVE TAPERED ROLLER BEARINGS WITH FACTOR SET PRE-LOAD.

THERE SHALL BE A GREASE PRESSURE RELIEF FITTING THAT WILL PREVENT BLOWOUT OF SHAFT SEALS.

EACH SHAFT SHALL HAVE A WELDED ANTI WRAP GUARD TO PROTECT SEALS FROM DEBRIS.

MAINTENANCE:

THE UNIT SHALL HAVE A HINGED BELT GUARD WITH QUICK RELEASE FASTENERS FOR EASY ACCESS.

BELT TENSION SHALL BE ADJUSTABLE WITH A SIMPLE SLIDE MECHANISM.

THE GREASE FITTING FOR THE BEARINGS SHALL BE LOCATED ON THE FRONT OF THE UNIT FOR EASY ACCESS.

***** **SPECIFICATION #18E010** *****

REAR RACKING 18', 22', 24'

IT IS THE PURPOSE OF THE FOLLOWING SPECIFICATIONS TO DESCRIBE A HYDRAULIC DRIVEN BOOM MOWER. MOWING IS FORWARD AND RIGHT OF THE REAR TIRE AND EXTENDED BY MEANS OF AN ARTICULATED TWO SECTION BOOM WITH HYDRAULIC BREAK AWAY. THIS UNIT SHALL BE CONSTRUCTED TO INTERCHANGE WITH ANY OF THE FOLLOWING: 50" ROTARY CUTTING HEAD, 60" ROTARY CUTTING HEAD, 63" FLAIL CUTTING HEAD, 50" FLAIL CUTTING HEAD, 48" SAW BLADE, 50" WETCUT SPRAYER, BOOM SNOW BLOWER, 22" ROTARY DITCHER, 60" SIDE ROTARY MOWER OR 75" SIDE FLAIL MOWER.

THE UNIT WILL BE THE MANUFACTURER'S CURRENT PRODUCTION MODEL WITH A MINIMUM OF (1) ONE YEAR PREVIOUS PRODUCTION, MEETING OR EXCEEDING THE TERMS OF THESE SPECIFICATIONS. UNIT'S SHALL BE MANUFACTURER'S HEAVIEST DUTY MODEL AVAILABLE. THE VENDOR SHALL GUARANTEE THAT A STOCK OF COMPONENT PARTS BE AVAILABLE AT A LOCATION CONVENIENT TO THE USER. FOR ANY OFFER TO BE CONSIDERED, ALL ITEMS MUST BE A STANDARD PRODUCTION MODEL, NOT MODIFIED FOR BID PURPOSES.

BOOM MOWER:

SAFETY AND TESTING:

SHALL MEET THE FOLLOWING INDUSTRY STANDARDS: SAE: J232(ROTARY), J1001(FLAIL), J284, J990, J1065. ANSI/ASAE-201.4, S203.13, S205.2, S279.12, S350, EP363.1, S483, S493. ASTM: A370. UNIT SHALL BE EQUIPPED WITH A 7 SECOND BRAKE VALVE ON THE CUTTING ASSEMBLY.

ELECTRIC SOLENOID CONTROL TRANSPORT LOCK TO BE INTEGRATED INTO THE MOWER CONTROL BOX.

MAIN FRAME:

MAIN FRAME SHALL BE CONSTRUCTED TO BE SUPPORTED ON THE FRONT TRACTOR BOLSTER, CENTER OF TRACTOR AND REAR AXEL HOUSINGS, TO ABSORB SIDE TORQUE AND IMPACT OF SEVERE APPLICATIONS.

MAIN FRAME SHALL BE CONSTRUCTED OF FABRICATED 80,000 PSI STEEL, BOLTED DIRECTLY TO EACH SIDE OF TRACTOR FAME. AN UNDERBELLY FRAME MEMBER, RUNNING UNDER ENGINE, SHALL BE WELDED, BOX FRAME CONSTRUCTED, AND CONNECT THE MAINFRAME TO

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EACH SIDE OF TRACTOR (SPECIFICALLY EXCLUDING FRAMES OVER HOOD DESIGNS). A BOLT ON MAST ASSEMBLY SHALL HAVE AN INTEGRAL SWINGCYLINDER AS A WELDED ASSEMBLY WITH THE MAST ASSEMBLY.

MAIN FRAME SHALL HAVE A BOLT ON MAST ASSEMBLY TO ALLOW EASY CHANGE FROM BOOM MOWERS TO SIDE MOWER ATTACHMENTS. WELDMENTS SHALL BOLT FACE TO FACE WITH TOWER AND SHALL HAVE A MOUNTING SURFACE WITH NOT LESS THAN 10, 3/4" GRADE 5 BOLTS. MOUNTING SURFACE SHALL BE CONSTRUCTED OF 80,000 LBS. STEEL 1/2" THICK.

BOOM SWIVEL BRACKET:

SWIVEL SHALL BE BOX CONSTRUCTION WITH A 100,000 PSI YIELD STEEL SWIVEL CYLINDER TANG WITH A VERTICAL BEARING BOSS, WITH STEEL BACKED, POROUS BRONZE INNER STRUCTURE, AND ACETAL RESIN OVERLAY BEARINGS. BEARINGS SHALL HAVE GREASE POCKETS BUILT IN AND SUPPORT A 2 1/2" VERTICAL PIN. PIN SHALL BE CONSTRUCTED OF 4140 COLD DRAWN STEEL, PREHARDENED (HEAT TREATED), TO A MINIMUM YIELD OF 105,000 PSI, PIN SHALL BE ZINC PLATED.

SWIVEL SHALL CONNECT TO INNER BOOM CYLINDER WITH A GREASELESS SPHERICAL BEARING. SPHERICAL BEARING IS A POLY GREASELESS TYPE, 1.25" ID AND 2" OD SPHERICAL AND A 2.38" OD.

SWIVEL SHALL BE SUPPORTED BY A GREASELESS THRUST WASHER TO ELIMINATE GALLING BETWEEN SWIVEL BRACKET AND BOOM MOUNTING BRACKET. GREASELESS POLY, THRUST WASHER IS 2.5" ID, 2.25" OD AND .25" THINK.

HYDRAULIC HOSES SHALL BE ROUTED THRU HOSE CLAMP/GUIDES WITH HOSE GUARDS TO PREVENT CHAFFING.

BASE SHALL HAVE INTEGRAL BOOM SWIVEL ATTACHMENT FORK AND CONSTRUCTED OF 3/4" AND 1" THICK 100,000 PSI STEEL.

HORIZONTAL SWING CYLINDER SHALL HAVE AN INTERNAL CUSHION DEVICE TO LIMIT FLOW WHEN BOOM IS OPERATED TO THE FORWARD BOOM POSITION.

PRIMARY BOOM:

PRIMARY BOOM SHALL HAVE A MINIMUM OF 70,000 PSI 8" X 6" STRUCTURAL TUBE AND REINFORCEMENT WITH 50,000 PSI STEEL.

PRIMARY BOOM SHALL HAVE A ONE PIECE REINFORCED CYLINDER ATTACHING RIB, WITH THE END WELDS STRATEGICALLY WELDED AROUND END OF RIB TO BOOM UPPER SURFACE. INNER REINFORCEMENT SHALL BE A 1/4" X 5" ANCHOR PLATE, SADDLE MOUNTED TO THE TOP OF BOOM. ANCHOR PLATE SHALL BE STRUCTURALLY WELDED TO MAIN TUBE AND HAVE 2, 1" DIAMETER CORE WELDS IN THE TOP CENTER OF PLATE. OUTER REINFORCEMENT SHALL BE 1/4" BOX SECTIONED, 100,000 PSI STEEL WITH 2, 1" X 6" CORE WELDMENTS ON EACH SIDE, AND 1, 1 X 1 1/4" OBLONG CORE WELDS. INNER END OF PRIMARY BOOM SHALL HAVE A 1 1/2" DIAMETER 105,000 PSI YIELD, HARDENED, NITRIDE SURFACE PIN, WITH A HIGH-STRENGTH, STEEL BACKED, POROUS BRONZE INNER STRUCTURE, ACETAL RESIN OVERLAY BEARING INSTALLED.

PRESSURE AND RETURN LINES WILL BE PREFORMED STEEL TUBES, OR HOSES, WITH HOSES AT PIVOT POINTS AND MOUNTED TO BACK OF BOOM

TOP MOUNTED DOUBLE ACTING LIFT CYLINDER SHALL HAVE A NITROGEN ACCUMULATOR. CYLINDER END ATTACH POINTS SHALL HAVE REPLACEABLE BEARINGS. PRIMARY BOOM LIFT CYLINDER SHALL NOT BE LESS THAN 5" IN DIAMETER.

SECONDARY BOOM:

SECONDARY BOOM SHALL HAVE A MINIMUM OF 50,000 PSI YIELD 6" X 4" TUBE AND REINFORCED AT ALL STRESS POINTS.

PRESSURE AND RETURN LINES ARE PREFORMED STEEL TUBES AND HOSES MOUNTED TO REAR OF BOOM.

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CYLINDERS SHALL BE WELDED, DOUBLE ACTING AND MOUNTED TO TOP OF BOOM. HYDRAULIC CYLINDER MOUNTED BETWEEN PRIMARY AND SECONDARY BOOM SHALL HAVE A SPHERICAL BEARING ROD END.

OUTER END OF SECONDARY BOOM SHALL HAVE AN INTEGRALLY DESIGNED MOUNTING BOSS, BOX SECTIONS INTO THE BOOM.

HYDRAULICS:

PUMP SHALL BE DIRECT DRIVE FROM THE TRACTOR FRONT CRANKSHAFT ADAPTER. (RUBBER MOUNTED ENGINE DESIGN SHALL HAVE A DOUBLE U-JOINT DRIVE SHAFT).

RESERVIOR SHALL BE INTERNALLY TREATED AGAINST CORROSION WITH INDUSTRY APPROVED CHEMICAL AGENT AT A TIME OF MANUFACTURE. RESERVOIR SHALL HAVE AN IN TANK FILTER RATED AT 75GPM, 10 MICRON, 200 BETA, ELEMENT WITH BYPASS, RESTRICTION GAUGE, MINIMUM (1) ONE PSI PRESSURE AT SUCTION OUTLET AND HAVE BALL VALVE AT SUCTION LINE. TANK PRESSURIZED TO 3 PSI.

RESERVOIR SHALL BE MOUNTED IN TRACTORS LEFT HAND REAR WHEEL WELL. RESERVOIR SHALL HAVE SUFFICIENT CLEARANCE FOR PROPER COOLING AND SHALL BE A MINIMUM 37 GALLONS OF OIL IN AN OPERATING CONDITION. RESERVOIR SHALL HAVE A MINIMUM OF NOT LESS THAN 5" CLEARANCE (OIL COLD) FROM TOP OF RESERVOIR FOR EXPANSION. HYDRAULIC FLUID LEVEL AND TEMPERATURE GAUGE TO BE BUILT-IN RESERVOIR. NOX-RUST® IS USED TO TREAT INSIDE OF HYDRAULIC RESEROIR. FILTER IS AN AUTOMATIC BYPASS TYPE, 200 BETA 10 MINCRON ABSOLUTE TYPE FILTER.

HYDRAULIC PRESSURE CONNECTIONS SHALL MEET SAE O-RING AND JIC STANDARDS.

PUMP SHALL BE FRONT MOUNT, CAST STEEL HOUSING, STEEL GEARS, RATED 3250 PSI, 45 GPM AND 96 HP INPUT. (SPECIFICALLY EXCLUDING PISTON TYPE PUMPS AND CAST ALUMINUM HOUSING PUMPS).

HYDRAULIC OIL SHALL MEET A CLEANLINESS STANDARD OF ISO 46 RATING, AND THE ISO CODE 16/14/11 OR BETTER.

HYDRAULIC HOSES AND TUBES SHALL BE CLEANED WITH PNEUMATIC, TRIPLE PROJECTILE CLEANING, AND SHALL MAINTAIN A JDS-G169, CLASS 5.6 ISO CLEANLINESS RATING.

MOTOR SHALL HAVE CAST STEEL HOUSING WITH STEEL GEARS.

MOWER CONTROL VALVE SHALL BE AN ELECTRICALLY CONTROLLED, PILOT OPERATED. LOGIC ELEMENTS SHALL BE USED TO CONTROL PRESSURES AND RAMP UP AND DOWN SPEED TO PREVENT EXCESSIVE PRESSURE SPIKES TO SYSTEM. VALVE SHALL STOP MOWER FROM TURNING IN THE OFF POSITION AND WILL NOT CAUSE A RESTRICTION TO GENERATE DRIFT WHILE IN THE OFF POSITION.

MOWER CONTROL VALVE SHALL STOP CUTTER ASSEMBLY IN MAXIMUM OF 7 SECONDS FROM FULL RPM.

CABLE CONTROL LIFT VALVE:

MOWER LIFT CONTROL LEVERS SHALL BE OF THE SINGLE ACTION DESIGN. LEVERS SHALL BE PRE-LOADED TO THE CENTER POSITION, AND HAVE A FORCE OF NOT MORE THAN 15 LBS. AT FULL TRAVEL. LEVER ACTION SHALL BE SYMMETRICAL +OR- 30° MAXIMUM LEVER ON MOUNTING CENTER LINE. CONTROL LEVERS SHALL HAVE A WORKING LOAD OF NOT LESS THAN 100 LBS.

MOWER LIFT CONTROL SYSTEM SHALL BE MECHANICALLY CONTROLLED BY STAINLESS STEEL, POLYETHYLENE CABLES. CABLES SHALL HAVE A 1 X 7 CORE WITH NYLON COVERING. CORE SHALL BE NOT LESS THAN .93" DIAMETER, COVERED TO .125" DIAMETER WITH HIGH EFFICIENT CONDUIT COVER. CONDUIT COVER CONSTRUCTION SHALL HAVE A POLYETHYLENE LINER WITH BLACK POLYETHYLNE COVERING AND SHALL HAVE A HEAT RANGE OF NOT LESS THAN -65°F TO +225°F. CORE SHALL HAVE A NOMINAL MOVEMENT OF

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2", WITH BULKHEAD END AND GROOVED END FOR ATTACHMENT. TERMINAL ENDS SHALL BE CONSTRUCTED OF STAINLESS STEEL ROD, WITH BRASS PLATED TUBE.

MOWER LIFT, HYDRAULIC CONTROL VALVE, SHALL BE CLOSED CENTER, LOAD SENSE, SECTIONAL VALVE, WITH INDIVIDUAL SECTION COMPENSATION. VALVE SHALL PROVIDE PRECISION METERED SPOOLS WITH METERING NOTCHES. THE VALVE SHALL HAVE A LOW OPERATING EFFORT, AND A WORKING CAPABILITY OF 3,000 PSI. VALVE SHALL HAVE CHROME PLATED, TAPERED, AND METERED SPOOLS, AND EMPLOY INDIVIDUAL PRESSURE COMPENSATED WORK SECTIONS, FLOW DIVIDER (PRINCIPLE TO MAINTAIN FLOW RELATIONSHIPS), FULLY INTERCHANGEABLE SPOOLS, SHUTTLE DISK TYPE LOAD SENSE CONTROL WITH NEUTRAL DRAIN TO TANK, AND PRIORITY FLOW CAPABILITY. VALVE SHALL HAVE LOAD CHECKS IN EACH VALVE SECTION. SYSTEM SHALL INCORPORATE A SINGLE LOAD SENSE LINE TO LOAD SENSE PUMP (FIXED DISPLACEMENT PUMP SYSTEMS SHALL INCORPORATE AN INLET UNLOADER OPTION). ALL FUNCTIONS SHALL BE PROTECTED BY INDIVIDUAL PILOT OPERATED, PORT PRESSURE RELIEF VALVES, EQUIPPED WITH BUILT IN ANTI-CAVITATION CHECK VALVES.

(OPTIONAL) JOY-STICK CONTROL LIFT VALVE

JOY-STICK VALVE OPTION: SHALL BE AN ELECTRO-HYDRAULIC, LOAD SENSING VALVE. VALVE SHALL HAVE INTERCHANGEABLE SPOOLS AND SHALL HAVE A MANUAL OVER-RIDE FOR EACH SECTION, AND 12 VOLT ELECTRICAL ACTUATION.

VALVE (JOY-STICK) SHALL HAVE LOAD-INDEPENDENT FLOW CONTROL, OIL FLOW TO INDIVIDUAL FUNCTION IS INDEPENDENT OF THE LOAD PRESSURE OF THE FUNCTION. VALVE SHALL HAVE BUILT IN PRESSURE RELIEF IN PUMP SIDE MODULE (PVP), WITH SYSTEM CAPABILITIES OF PRESSURES OF NOT LESS THAN 4,350 PSI CONTINUOUS, AND 4,640 PSI INTERMITTENT. PVP SHALL HAVE A PRESSURE GAUGE CONNECTION FOR SERVICE AND HAVE AN OPEN CENTER OPTION FOR FIXED DISPLACEMENT PUMPS.

VALVE (JOY-STICK) BODY SHALL HAVE INTERCHANGEABLE SPOOLS, INTEGRATED PRESSURE COMPENSATOR, CHECK VALVES, AND DIFFERENT SPOOL VARIANTS. VALVES SHALL BE CONFIGURED WITH MANUAL OVER-RIDE LEVERS ON ONE END AND AN ELECTRONIC ACTUATION MODULE ON THE OTHER.

ELECTROHYDRUALIC (JOY-STICK) ACTUATION MODULE SHALL INTEGRATE DIRECTLY WITH PROPORTIONAL VALVE BODY. MODULE SHALL HAVE INTEGRATED ELECTRONICS, SENSORS, AND ACTUATORS, AND SHALL HAVE A FEEDBACK TRANSDUCER MEASURING SPOOL MOVEMENT IN RELATION TO INPUT SIGNAL, MODULE SHALL CONTROL THE DIRECTION, VELOCITY, AND POSITION OF MAIN VALVE SPOOL. MODULE SHALL HAVE AUTOMATIC ACTIVE FAULT MONITORING, AND DIRECTIONAL INDICATION AND LED LIGHT INDICATION. MODULE SHALL HAVE LOW HYSTERESIS AND SHALL HAVE ATTACHMENT FOR A SEALED DEUTCH CONNECTOR.

JOY-STICK CONTROLLER SHALL BE AN ERGONOMIC RIGHT-HAND CONTROL, WITH TWO PROPORTIONAL FUNCTIONS ON X-Y MODE, AND A TOP GRIP TO HOUSE TWO PROPORTIONAL ROLLERS. CONTROLLER HANDLE SHALL HAVE A LEATHER-LIKE GRAINED SURFACE TO ALLOW HAND TO BREATHE DURING OPERATION. CONTROLLER ROLLERS SHALL HAVE A SPRING CENTERED POTENTIOMETER WITH A WORKING RANGE OF +2 OR -42°. CONTROLLER SHALL BE ADJUSTABLE WITH DEAD BAND ADJUSTMENT, INDEPENDENT VOLTAGE LIMITING POTENTIOMETERS FOR EACH FUNCTION, AND INTEGRATED DIRECTION SWITCHES FOR EACH PROPORTIONAL MODULE. CONTROLLER SHALL HAVE INTEGRAL CABLE PLUG IN, AND AN RF SHIELDED CABLE SHALL BE SUPPLIED BY THE MANUFACTURER.

COUNTERWEIGHT:

COUNTER WEIGHT, WITH TRACTORS HAVING 30" MINIMUM REAR TIRES SHALL HAVE A TOTAL BALLASTED WEIGHT (WHEEL WEIGHT AND CALCIUM CHLORIDE SOLUTION) OF 2,087 LBS.

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WHEEL WEIGHT SHALL BE CAST STEEL, MOUNTED FLUSH TO OUTSIDE OF WHEEL, AND SHALL WEIGH NOT LESS THAN 1,300 LBS. FOR 18' AND 22" BOOM REACHES. COUNTER WEIGHT, WITH TRACTORS HAVING 34" MINIMUM REAR TIRES SHALL HAVE A TOTAL BALLASTED WEIGHT (WHEEL WEIGHT AND CALCIUM CHLORIDE SOLUTION) SHALL BE A MINIMUM OF 2,781 LBS. WHEEL WEIGHT SHALL BE CAST STEEL, MOUNTED FLUSH TO OUTSIDE OF WHEEL, AND SHALL WEIGH NOT LESS THAN 1,700 LBS. (SPECIFICALLY EXCLUDING FLAME CUT STEEL AND OR FRAME MOUNTED WEIGHTS).

OPERATOR PROTECTION:

SHALL HAVE 3/8" RIGHT SIDE, HARD SURFACED, POLYCARBONATE PROTECTION FOR OPERATOR. INSTALLED INTO THE ORIGINAL CAB MANUFACTURED DOOR AND OR SIDE WINDOW.

STOW SYSTEM:

A DOUBLE AXLE MOUNTED BOOM STOW SYSTEM SHALL BE ATTACHED DIRECTLY TO TRACTOR WITH A FRAME MEMBER EXTENDING TO THE RIGHT-HAND AND LEFT-HAND REAR AXLE HOUSING AND FURTHER EXTEND FORWARD TO MOWER MAIN FRAME. 3 POINT HITCH SYSTEM SHALL FUNCTION NORMALLY.

STOW SYSTEM SHALL CONSIST OF AN AXLE BRACE EXTENDING FROM THE MOWER MAINFRAME RUNNING AND BELOW AND ATTACHED TO THE RIGHT AND LEFT REAR AXLE HOUSING. THE AXLE BRACE SHALL ATTACH DIRECTLY TO THE UPRIGHT POSTS BEHIND EACH AXLE.

THE UPPER STOW ASSEMBLY SHALL BE CONSTRUCTED OF 1/4" X 4" X 4" SQUARE TUBING SADDLE MOUNTED TO AXLE BRACE EXTENDING ABOVE AND BEHIND THE RIGHT REAR AXLE. THE ADJUSTABLE STOW PLATE SHALL BE ATTACHED TO UPPER STOW ASSEMBLY AND SHALL BE ADJUSTABLE UP OR DOWN AND SIDE TO SIDE IN 3" INCREMENTS.

OPTIONAL: 50" CUTTING HEAD

SAFETY SPECIFICATIONS:

UNIT WILL MEET OR EXCEED THE FOLLOWING INDUSTRY STANDARDS: SAE J232, J115, J517, J920, J1150, J1170, ANSI/ASAE S441.1, EP363.1, S390.1, S203.13, S217.11, S278.6, S318.14, S483, AND ASTM A370. A COMPLIANCE REPORT WILL BE AVAILABLE UPON REQUEST

CUTTING HEAD:

THE CUTTING HEAD MUST BE ABLE TO ROTATE A MINIMUM OF 180 DEGREES AROUND OUTER BOOM AND CUTTER SHALL HAVE A MINIMUM OF 50" OF ACTUAL CUT. HEAD SHALL WEIGH NO LESS THAN 800 LBS. CUTTER HEAD PIVOT ASSEMBLY SHALL BE FULLY WELDED AND INTERGRATED INTO THE CUTTER HEAD DESIGN.

DECK SHALL BE CONSTRUCTED WITH A MINIMUM OF 110,000 PSI YIELD DOMEX 1/8" STEEL AND 1/4" THICK SIDE WALLS CONSTRUCTED OF 50,000 PSI YIELD DOMEX. HEAD IS TO BE CONTINUOUSLY WELDED FOR STRENGTH AND ELIMINATE DEBRIS FROM COLLECTING UNDER REINFORCEMENTS.

SHALL HAVE FULL LENGTH REPLACEABLE ABRASION RESISTANT SKID SHOES.

RUBBER SAFETY SHIELD SHALL BE BOLTED TO THE BACK SIDE OF DECK. SAFETY SHIELD SHALL BE OPERATED HYDRAULICALLY FROM OPERATORS POSITION AND SHALL EXTEND BELOW THE CUTTING PLANE. SAFETY SHIELD SHALL BE CONSTRUCTED OF 100,000 PSI DOMEX STEEL AND MEET ALL ANSI/SAE TESTS FOR ROTARY MOWERS.

KNIFE CARRIER:

KNIFE CARRIER SHALL BE ONE PIECE LASER CUT DUAL SPIN FORMED, RECESSED CENTER DISC WITH A MINIMUM DIAMETER OF 31" DYNAMICALLY BALANCED (PER ISO QUALITY G2.5 SPECS) 50,000 PSI YIELD STEEL DISH.

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KNIFE CARRIER SHALL HAVE NO STRUCTURAL WELDS.

KNIFE CARRIER SHALL ACCOMMODATE (2) (3) (4) OR (6) 5/8" X 5X18 3/4", 360 DEGREES SWINGING SINGLE EDGE, FLAT NO BENDS 5/8" BRUSH KNIVES. (OPTIONAL) GRASS KNIVES SHALL BE AVAILABLE.

KNIVES SHALL BE ATTACHED BY A 1 1/8" X 3 1/4" SHOULDERED AND KEYED BOLT, BACKED BY T-1 SPACER AND HEX LOCK NUT.

SPINDLE:

SPINDLE SHALL BE (1) PIECE FORGED AND HEAT TREATED WITH INTERGRAL 7 1/4" OD DRIVE HUB (SPECIFICALLY EXCLUDING MULTI-PIECE SHAFTS AND DIRECT DRIVE SPINDLE ASSEMBLY'S)

SPINDLE SHALL BE ATTACHED TO HYDRAULIC MOTOR BY A FLEXIBLE COUPLER AND DUST COVER. SPINDLE ASSEMBY SHALL HAVE A MINIMUM TORISION SHEAR CAPACITY OF 4,174 FT.LB. OF TORQUE, 231,000 PSI YIELD ROTATIONAL STRENGTH AND DISTRIBUTE LOAD.

SPINDLE SHALL HAVE A STATIONARY WIRE WRAP PROTECTION. WIRE WRAPS SHALL BE A MINIMUM OF 4 3/8" X 4 3/4", 3/8" THICK. THE WRAPS WILL ALSO ACT AS REINFORCEMENTS FOR SPINDLE HOUSING.

SPINDLE SHALL BE MOUNTED IN SEALED, DOUBLE TAPERED ROLLER BEARINGS, GREASE RESEVOIR WITH A O-RING PLUG AND PORT TO DRAIN OLD GREASE. ASSEMBY SHALL BE FILLED WITH SYNTHETIC GREASE.

SPINDLE SHALL ROTATE 19,000 FPM BLADE TIP SPEED AT RATED (2,300) TRACTOR RPM. SPINDLE DRIVE AREA SHALL BE ENCLOSED AND FULLY PROTECTED FROM OUTSIDE DEBRIS ENTERING IN THE DRIVE COUPLER.

OPTIONAL 60" CUTTING HEAD

UNIT WILL MEET OR EXCEED THE FOLLOWING INDUSTRY STANDARDS: SAE J232, J115, J517, J920, J1150, J1170, ANSI/ASAE S441.1, EP363.1, S390.1. S203.13, S217.11, S278.6, S318.14, S483, AND ASTM A370. A COMPLIANCE REPORT WILL BE AVAILABLE UPON REQUEST

CUTTING HEAD:

THE CUTTING HEAD MUST BE ABLE TO ROTATE A MINIMUM OF 180 DEGREES AROUND OUTER BOOM AND CUTTER SHALL HAVE A MINIMUM OF 60" OF ACTUAL CUT. HEAD SHALL WEIGH NO LESS THAN 840 LBS. CUTTER HEAD PIVOT ASSEMBLY SHALL BE FULLY WELDED AND INTERGRATED INTO THE CUTTER HEAD DESIGN.

DECK SHALL BE CONSTRUCTED WITH A MINIMUM OF 110,000 PSI YIELD DOMEX 1/8" STEEL AND 1/4" THICK SIDE WALLS CONSTRUCTED OF 50,000 PSI YIELD DOMEX. HEAD IS TO BE CONTINUOUSLY WELDED FOR STRENGTH AND ELIMINATE DEBRIS FROM COLLECTING UNDER REINFORCEMENTS.

SHALL HAVE FULL LENGTH REPLACEABLE ABRASION RESISTANT SKID SHOES.

RUBBER SAFETY SHIELD SHALL BE BOLTED TO THE BACK SIDE OF DECK. SAFETY SHIELD SHALL BE OPERATED HYDRAULICALLY FROM OPERATORS POSITION AND SHALL EXTEND BELOW THE CUTTING PLANE. SAFETY SHIELD SHALL BE CONSTRUCTED OF 100,000 PSI DOMEX STEEL AND MEET ALL ANSI/SAE TESTS FOR ROTARY MOWERS.

KNIFE CARRIER:

KNIFE CARRIER SHALL BE ONE PIECE LASER CUT 100,000 PSI RECTANGULAR STEEL BAR. THE BAR SHALL NOT BE LESS THAN 7 1/4" X 41 5/16" X 1 1/4", BAR SHALL BE TAPERED TO 5" AT THE KNIFE MOUNTING HOLES, AND ATTACH TO SPINDLE WITH (6) 5/8" X 1 3/4" NF GRADE

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8 MOUNTING BOLTS. MOUNTING BOLTS SHALL BE RECESSED SO AS THE BOLT HEADS ARE BELOW THE SURFACE LEVEL OF THE BAR. THE BAR SHALL EXTEND A MINIMUM OF 5 3/8" BEYOND THE CENTER OF THE KNIFE MOUNTING HOLE.

KNIFE CARRIER SHALL HAVE 2 FREE SWINGING 360 DEGREE 5/8" X 5 X 18 3/4" SINGLE EDGE, FLAT (NO BENDS), 5/8" BRUSH KNIVES.

KNIVES SHALL BE ATTACHED BY 1 1/8" X 3 1/4" SHOULDERED AND KEYED BOLTS, BACKED BY GRADE 8 WASHER SPACERS AND HEX LOCK NUTS.

CUTTER KNIVES SHALL BE SHOT PEENED WITH A CHAMFERED BOLT HOLE.

SPINDLE:

SPINDLE SHALL BE (1) PIECE FORGED AND HEAT TREATED WITH INTERGRAL 7 1/4" OD DRIVE HUB (SPECIFICALLY EXCLUDING MULTI-PIECE SHAFTS AND DIRECT DRIVE SPINDLE ASSEMBLY'S)

SPINDLE SHALL BE ATTACHED TO HYDRAULIC MOTOR BY A FLEXIBLE COUPLER AND DUST COVER. SPINDLE ASSEMBY SHALL HAVE A MINIMUM TORISION SHEAR CAPACITY OF 4,174 FT.LB. OF TORQUE, 231,000 PSI YIELD ROTATIONAL STRENGTH AND DISTRIBUTE LOAD.

SPINDLE SHALL HAVE A STATIONARY WIRE WRAP PROTECTION. WIRE WRAPS SHALL BE A MINIMUM OF 4 3/8" X 4 3/4", 3/8" THICK. THE WRAPS WILL ALSO ACT AS REINFORCEMENTS FOR SPINDLE HOUSING.

SPINDLE SHALL BE MOUNTED IN SEALED, DOUBLE TAPERED ROLLER BEARINGS, GREASE RESEVOIR WITH A O-RING PLUG AND PORT TO DRAIN OLD GREASE. ASSEMBY SHALL BE FILLED WITH SYNTHETIC GREASE.

SPINDLE SHALL ROTATE 19,000 FPM BLADE TIP SPEED AT RATED (2,300) TRACTOR RPM.

SPINDLE DRIVE AREA SHALL BE ENCLOSED AND FULLY PROTECTED FROM OUTSIDE DEBRIS ENTERING IN THE DRIVE COUPLER.

3/4" SINGLE EDGE, FLAT (NO BENDS) 5/8" THICK BRUSH KNIVES. KNIVES SHALL BE ATTACHED BY A 1 1/8" X 3 1/4" SHOULDERED KEYED BOLTS, BACKED BY GRADE 8 WASHER SPACERS AND HEX LOCK NUTS. CUTTER KNIVES SHALL BE SHOT PEENED WITH A CHAMFERED BOLT HOLE.

OPTIONAL 50" FLAIL CUTTING HEAD:

CUTTING HEAD: SHALL HAVE 50" OF ACTUAL CUT WITH REPLACEABLE SKID SHOES, RUBBER DEFLECTOR SHIELD SHALL BE BOLTED TO THE BACK OF BONNET. HEAD SHALL WEIGH NO LESS THAN 800 LBS. HEAD SHALL ROTATE 180 DEGREES AROUND OUTER BOOM. SHALL HAVE A MINIMUM OF 81 HP. DRIVE BELT SYSTEM.

CUTTER HOUSING SHALL BE A MINIMUM OF 3MM THICK. SHALL HAVE A MINIMUM OF 5/16" SOLID STEEL SIDE WALLS. CUTTER HEAD PIVOT ASSEMBLY SHALL BE FULLY WELDED AND INTERGRATED INTO THE CUTTER HEAD DESIGN. (SPECIFICALLY EXCLUDING CUTTER HEAD THAT BOLT TO PIVOT ASSEMBLY)

CUTTER SHAFT SHALL BE A MINIMUM DIAMETER OF 6" AND 1/2" WALL, DOM 1-513 TYPE 5 TUBING, WITH 2 3/16" DIAMETER BEARINGS MANUFACTURED IN THE U.S. EACH BEARING SHALL HAVE (2) 3/8" SET SCREWS, COUNTER SUNK 60 DEGREES FROM EACH OTHER INTO CUTTER SHAFT, END SHAFT TO PREVENT MOVEMENT. BEARINGS SHALL BE ATTACHED TO CUTTER HOUSING END PLATE WITH NOT LESS THAN (4), 1/2" X 2" NC L9 BOLTS

CUTTER SHALL HAVE A MINIMUM OF 48 DOUBLE EDGED. KNIVES SHALL WEIGH NO LESS THAN 3 LBS. (PER PAIR) AND ATTACHED TO THE SHAFT SO AS THE KNIVES DO NOT HAVE

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DIRECT CONTACT WITH THE BOLT. A SPACER ON EACH SIDE OF THE KNIVES SHALL KEEP THE KNIVES CENTERED BETWEEN THE CUTTER SHAFT LUGS. KNIFE SWING CIRCUMFRENCE SHALL BE NO LESS THAN 70 5/8". CUTTER SHAFT SHALL ROTATE A MINIMUM OF 2,300 RPM AT RATED TRACTOR RPM. CUTTER SHAFT SHALL HAVE WIRE WRAP PROTECTION EACH END.

GROUND ROLLER:

CUTTER HEIGHT SHALL BE ADJUSTABLE UP TO 6" AND ACCOMPLISHED THROUGH A BOLT ON ADJUSTER. GROUND ROLLER SHALL NOT BE LESS THAN 6 IN DIAMETER. GROUND ROLLER SHALL HAVE A 5/8" THICK BEARING CARRIER PLATE WELDED INTERGRAL WITH THE TUBE. GROUND ROLLER BEARINGS SHALL BE 1 3/8", FLANGED TYPE BALL BEARING, WITH DOUBLE LIPPED SEALING, ATTACHED WITH 4 7/16" GRADE 5 CAP SCREWS. GROUND ROLLER SHAFT SHALL HAVE A THROUGH SHAFT, WITH THE BEARINGS ATTACHED, AND ANCHORED AT EACH END WITH 1 1/8" NF LOC-NUT AT EACH END.

OPTIONAL 63" FLAIL CUTTING HEAD:

SHALL HAVE 63" OF ACTUAL CUT WITH REPLACEABLE SKID SHOES, RUBBER DEFLECTOR SHIELD SHALL BE BOLTED TO THE BACK OF BONNET. HEAD SHALL WEIGH NO LESS THAN 800 LBS. HEAD SHALL ROTATE 180 DEGREES AROUND OUTER BOOM. SHALL HAVE A MINIMUM OF 81 HP. DRIVE BELT SYSTEM.

CUTTER HOUSING SHALL BE A MINIMUM OF 10 GAUGE THICK, 80,000 PSI YIELD STEEL BONNET. SHALL HAVE A MINIMUM OF 5/16" SOLID STEEL SIDE WALLS. CUTTER HEAD PIVOT ASSEMBLY SHALL BE FULLY WELDED AND INTERGRATED INTO THE CUTTER HEAD DESIGN. (SPECIFICALLY EXCLUDING CUTTER HEAD THAT BOLT TO PIVOT ASSEMBLY)

CUTTER SHAFT SHALL BE A MINIMUM DIAMETER OF 4 3/4" AND 3/8" WALL TUBING WITH 1 15/16" DIAMETER BEARINGS, CUTTER HEAD SHALL HAVE 80 FORGED, HARDENED TO 40-50 RC, SELF CLEANING REVERSIBLE ALL-PURPOSE KNIVES, OR 40 SMOOTH CUT GRASS KNIVES. KNIFE INTERCHANGEABILITY SHALL NOT REQUIRE CHANGE OF CUTTER SHAFT.

DRIVE BELT SYSTEM SHALL HAVE ADJUSTABLE, AUTOMATIC BELT TENSIONER.

KNIFE SWING CIRCUMFRENCE SHALL BE NO LESS THAN 47". CUTTER SHAFT SHALL ROTATE A MINIMUM OF 2,300 RPM AT RATED TRACTOR RPM. CUTTER SHAFT SHALL HAVE WIRE WRAP PROTECTION EACH END.

REVERSE ROTATION MODELS SHALL BE EQUIPPED WITH STEEL FRONT DEFLECTOR.

CUTTER SHAFT SHALL HAVE BEARING WRAP PROTECTION.

GROUND ROLLER:

CUTTING HEIGHT SHALL BE ADJUSTBALE BETWEEN 1-1/2" TO 7-1/2"

GROUND ROLLER SHALL NOT BE LESS THAN 6 5/8" IN DIAMETER. GROUND ROLLER SHALL HAVE BEARINGS SHALL BE 1 3/8" DOUBLE ROW SPHERICAL BEARINGS MADE IN THE U.S., EACH BEARING RACE SHALL HAVE 2 SET SCREWS, COUNTER SUNK INTO CUTTER SHAFT STUB SHAFT TO PROVIDE LINE DRAWING OF BEARING AND CAP ASSEMBLY AND DESCRIBE BEARING ATTACHMENT TO SHAFT.

OPTIONAL 48" SAW BLADE:

GENERAL: SAW BLADE SHALL BE INTERCHANGEABLE WITH STANDARD CUTTING DISK ASSEMBLY.

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BLADE: SHALL NOT BE LESS THAN 48" INCHES OUTSIDE DIAMETERS. THICKNESS SHALL NOT BE LESS THAN 9/32", SHALL HAVE A CENTERING PILOT HOLE, SHALL HAVE AT LEAST (6) 5/8" X 3" GRADE 8 MOUNTING BOLTS.

SHALL HAVE REPLACEABLE TEETH MACHINED IN OUTER EDGE. SHALL HAVE A 5/16" THICK, 16" DIAMETER REINFORCING PLATE ON EACH SIDE OF THE BLADE.

CLAMPING ARBOR: SHALL CONSIST OF A TWO PIECE MACHINED ARBOR THAT SUPPORTS THE BLADE ON TOP AND BOTTOM AND CLAMPING BLADE AT THE OUTER EDGE OF THE ARBOR.

SAW TOOTH: SAW BLADE SHALL HAVE A MINIMUM OF 30 CARBIDE TIPPED TEETH, SHALL BE CAPABLE OF MAKING A 1/2" CUT, SHALL HAVE A MACHINED FIT TO BLADE, SHALL BE REAPLCEABLE BY A SINGLE RIVET, SHALL HAVE REPLACEABLE INDUSTRIAL GRADE CARBIDE TIP SILVER.

OPTIONAL 22" DITCHER:

DITCHER HEAD: CUTTING WIDTH SHALL BE 22" ACTUAL CUT, SIDE HEAD REACH SHALL BE A MINIMUM OF 10'. BOOM HEAD MUST REACH A MINIMUM OF 14'. CUTTER HEAD SHALL NOT WEIGH LESS THAN 772 LBS. CUTTER ASSEMBLY SHALL BE ROTARY TYPE, HYDRAULICALLY POWERED.

CUTTING ASSEMBLY SHALL BE CONTRUCTED WITH NO LESS THAN 1/2" THICK STEEL WITH 3 GUSSETED KNIFE MOUNTING PADS. DISH ASSEMBLY SHALL ACCOMMODATE (3) THREE REPLACEABLE 3/8" KNIVES AND (3) THREE CLEANUP PADDLES.

SPINDLE HOUSING: SHALL BE ATTACHED TO BONNET TO ABSORB 160,000 LBS OF SHEAR FORCE AND DISTRIBUTE LOAD. SPINDLE SHALL OPERATRE AT 540 RPM AT RATED TRACTOR RPM. SPINDLE SHALL BE (1) PIECE FORGED ALLOY STEEL, MOUNTED IN DOUBLE TAPERED ROLLER BEARINGS AND SEALED IN OIL. SPINDLE DIAMETER SHALL BE A MINIMUM OF 7 1/4" X 10 7/8" IN LENGTH AND BEARING AREAS OF 2" AND 3 1/4" WITH 5" MINIMUM CENTERS. SPINDLE SHALL BE ATTACHED BY A FLEXIBLE COUPLER WITH DUST COVER. CUTTER HEAD SHALL HAVE A HYDRAULICALLY CONTROLLED DEFLECTOR. BONNET SHALL BE A MINIMUM OF 3/8" STEEL SHELL WITH 3/8" HIGH ABRASION.

HYDRAULICS: HYDRAULIC MOTOR SHALL HAVE A MINIMUM RATING OF 65 H.P., MOTORS SHALL HAVE CAST STEEL HOUSINGS WITH STEEL GEARS. HYDRAULIC PRESSURE SHALL MEET SAE O-RING. PRESSURE AND RETURN HOSE SHALL BE A MINIMUM OF 1" UNRESTRICTED INSIDE DIAMETER. HOSES SHALL MOUNT ON REAR OF BOOM ARM. LIFT ASSEMBLY SHALL HAVE TWO SINGLE ACTING HYDRAULIC CYLINDERS CONTROLLING INBOARD AND ONE DOUBLE ACTING CYLINDER CONTROLLING. LIFT CONTROL SHALL HAVE THREE SPOOL METERING TYPE VALVES, SPRING CENTERED, WITH DETENTED FLOAT POSISTION AND PILOT RELIEF VALVE.

GEAR REDUCTION: SHALL BE SAW (C) MOUNT, INPUT SHAFT SHALL BE 14 TOOTH INVOLUTE SPLINES. RATIO SHALL BE 4.5 TO 1 PLANETARY GEAR REDUCTION. SHALL HAVE 2" KEYED OUTPUT SHAFT. OUTPIT TORQUE SHALL BE RATED @ 30,000 INCH LBS.

OPTIONAL 60" SIDE ROTARY MOWER:

IT IS THE PURPOSE OF THE FOLLOWING SPECIFICATION TO DESCRIBE A SELF PROPELLED, HYDRAULICALLY POWERED ROTARY TYPE MOWER. WHICH SHALL MOW FORWARD AND RIGHT OF THE REAR TIRE.

GENERAL: CUTTING WIDTH IS 60" ACTUAL CUT, CUTTER HEAD SHALL WEIGH NO LESS THAN 1,075 LBS. CUTTER HEAD SHALL HAVE 19" OF INBOARD TRAVEL AND NOT LESS THAN 9" OF CURB LIFT. CUTTER HEAD SHALL HAVE A CUTTING ARC OF NOT LESS THAN 150 DEGREES.

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IT IS THE PURPOSE OF THE FOLLOWING SPECIFICATION TO DESCRIBE A SELF PROPELLED, HYDRAULICALLY POWERED ROTARY TYPE MOWER. WHICH SHALL MOW FORWARD AND RIGHT OF THE REAR TIRE.

CUTTING DISH: DISH SHALL BE ONE PIECE, DYNAMICALLY BALANCED (PER ISO QUALITY G2.5 SPEC) FORMED 40 DEGREE ANGLE OUTER EDGE EXTENDING 3 1/2" BEYOND BEND RADIUS, 37 9 16" DIAMETER 1/2" THICK 80,000 PSI YIELD STEEL AND ATTACHED BY (6) 5/8" X 1 3/4" GRADE 8 BOLTS. DISH SHALL HAVE NO STRUCTURAL WELDS. DISH ASSEMBLY SHALL ACCOMMODATE 2 STANDARD OR OPTIONAL 3. KNIVES SHALL BE ATTACHED BY 1 3/4" X 3 3/8" SHOULDERED. MINIMUM CLEARANCE SHALL BE 9" DECK AND KNIFE.

CUTTER HOUSING: CUTTER HEAD SHALL HAVE 1/4" STEEL TOP AND FULL LENGTH 3/8" STEEL SIDES. CUTTER HEAD SHALL BE ATTACHED TO DRAFT BEAM WITH 2, 1 1/2" PINS SPACED NOT LESS THAN 29 1/2" CENTER TO CENTER. DECK SHALL HAVE FULL LENGTH, ABRASION RESISTANT HARDENED, REPLACEABLE SKIDS.

MAINFRAME: SHALL BE CONSTRUCTED TO BE SUPPORTED ON THE FRONT TRACTOR BOLSTER, CENTER OF TRACTOR AND REAR AXLE HOUSING, TO ABSORB SIDE TORQUE AND IMPACT OF SEVERE APPLICATIONS. MAINFRAME SHALL BE CONSTRUCTED OF FABRICATED 80,000 PSI STEEL, BOLTED DIRECTLY TO EACH SIDE OF THE TRACTOR FRAME. AN UNDERBELLY FRAME MEMBER, RUNNING UNDER ENGINE SHALL BE WELDED, BOX FRAME CONSTRUCTED AND CONNECT TO THE MAINFRAME TO EACH SIDE OF THE TRACTOR. A BOLT ON MAST ASSEMBLY SHALL HAVE AN INTERGRAL MAST TO SUPPORT INNER LIFT OF SIDE MOWERS.

MAINFRAME SHALL HAVE A BOLT ON MAST ASSEMBLY TO ALLOW EASY CHANGE FROM BOOM MOWERS TO SIDE MOWER ATTACHMENTS. WELDMENT SHALL BOLT FACE TO FACE WITH TOWER AND SHALL HAVE A MOUNTING SURFACE WITH NOT LESS THAN 10, 3/4" GRADE 5 BOLTS. MOUNTING SURFACE SHALL BE CONSTRUCTED OF 80,000 LBS OF STEEL 1/2" THICK.

DRAFT BEAM: LIFT ASSEMBLY SHALL HAVE ONE SINGLE ACTING AND ONE DOUBLE ACTING HYDRAULIC CYLINDERS CONTROLLING INBOARD AND OUTBOARD ENDS OF CUTTER HEAD. CUTTER HEAD CONTROL (TILT) SHALL BE ACCOMPLISHED BY MEANS OF DIRECT CONNECTED LINKAGE TO A DOUBLE ACTING CYLINDER, ALLOWING PRECISE OPERATION OF CUTTING ASSEMBLY. A SINGLE ACTING CYLINDER PROVIDES LIFT FOR THE CUTTER HEAD ASSEMBLY. SPECIFICALLY EXCLUDING CABLE TYPE LIFT.

MOWER LIFT FOR THE INNER CONTROL SHALL BE A DOUBLE ACTING, INDUSTRIAL WELDED TYPE CYLINDER OF NOT LESS THAN 3" DIAMETER WITH 12" STROKE. MOWER LIFT FOR THE OUTER CONTROL SHALL BE A SINGLE ACTING INDUSTRIAL WELDED TYPE CYLINDER OF NOT LESS THAN 3" DIAMETER WITH A 10" STROKE.

HYDRAULICS: MOTOR SHALL HAVE A RATING OF AT LEAST 99 H.P., HYDRAULIC PRESSURE CONNECTIONS SHALL MEET SAW O-RING AND JIC STANDARDS. MOTORS SHALL HAVE CAST STEEL HOUSINGS WITH STEEL GEARS. HYDRAULIC PUMP SHALL BE GEAR TYPE WITH A RATING OF 96 INPUT H.P. 45.1 GPM AT 3,250 PSI.

OPTIONAL 75" SLIDE FLAIL MOWER:

GENERAL: THE FOLLOWING SPECIFICATION IS FOR A SELF PROPELLED, HYDRAULICALLY POWERED FLAIL TYPE MOWER, WHICH SHALL MOW FORWARD AND RIGHT OF REAR TIRE. THIS 75" SIDE MOUNTED UNIT SHALL BE DESIGNED TO INTERCHANGE WITH OTHER CUTTER HEADS. SHALL MEET THE FOLLOWING INDUSTRY STANDARDS: SAE: J1001, J284, J990, J1065. NSI/ASAE- S201.4, S203.13, S205.2, S279.12, S350, EP363.1. ASTM: A370.

CUTTING HEAD: DRIVE BELT SYSTEM SHALL HAVE AUTOMATIC BELT TIGHTENER. CUTTER HEAD SHALL HAVE REPLACEABLE SKID SHOES. CUTTING BONNET THICKNESS SHALL BE 10

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GAUGES, 80,000 LBS YIELD STEEL WITH 1/2" DRIVE SIDE AND 3/8" CARRIER SIDE STEEL END PLATES.

CUTTER HEAD SHALL HAVE 19" OF INBOARD TRAVEL AND NOT LESS THAN 9" CURB LIFT. CUTTER HEAD SHALL HAVE A CUTTING ARC OF NOT LESS THAN 150 DEGREES.

CUTTER SHAFT: SHALL HAVE 80 FORGED, HARDENED TO 40-50 RC, SELF CLEANING, REVERSIBLE ALL-PURPOSE KNIVES, OR 40 SMOOTH CUT GRASS KNIVES. CUTTER SHAFT SHALL HAVE OPERATING SPEED OF 2,400 RPM AT RATED TRACTOR RPM. CUTTER SHAFT SHALL BE A MINIMUM OF 6" DIAMETER AND 3/8" WALL WITH 2 3/16" DIAMETER BEARINGS MANUFACTURED IN THE US. EACH BEARING SHALL HAVE 2 3/8" SET SCREWS, COUNTER SUNK 60 DEGREES FROM EACH OTHER INTO THE CUTTER SHAFT, END SHAFT TO PREVENT MOVEMENT. CUTTER SHAFT SHALL HAVE A MAXIMUM CLEARANCE OF 3/32" FROM BEARING WRAP PROTECTION. KNIFE SWINGING CIRCUMFERENCE SHALL BE A MINIMUM OF 58 1/2" KNIFE INTERCHANGEABILITY SHALL NOT REQUIRE CHANGE OF CUTTER SHAFT.

GROUND ROLLER: SYSTEM SHALL BE A HORIZONTAL TUBE WITH A REPLACEABLE STUB SHAFTS LOCATED AT EACH END. A BEARING ASSEMBLY SHALL BE LOCATED IN THE ROLLER ADJUSTMENT BRACKET LOCATED AT EACH END OF THE CUTTER HOUSINGS, AND CONNECT TO THE ROLLER THROUGH STUB SHAFTS. GROUND ROLLER SHALL BE 8 5/8" OUTSIDE DIAMETER TUBE WITH .280" SIDE WALL WITH OUTER ENDS, CONSTRUCTED OF A 53 STEEL, HEAT TAPERED TO REDUCE SCALPING. STUB SHAFTS SHALL BE REPLACEABLE BOLT IN DESIGN WITH A 3 5/8" X 1/2" PILOTTED FLANGE AND ATTACHED TO ROLLER WITH (4) 7/16" X 1 1/2" NC GRADE 8 INTERNAL HEX CAP SCREWS. STUB SHAFT TO BE A SOLID 1 PIECE DESIGN WITH 1 3/8" BEARING SURFACE AND MACHINED OF 36,000 PSI STEEL. A 1 3/8" DOUBLE ROW SPHERICAL BEARING SHALL SUPPORT ROLLER SHAFT ON EACH END. INNER BEARING AREA SHALL BE PROTECTED BY A FULL DOUBLE LIPPED SEAL. BEARING SHALL BE SECURED TO THE STUB SHAFT WITH A 2, 5/16" X 1/2" PILOTTED SET SCREWS, LOCATED 60 DEGREES FROM EACH OTHER. OUTER BEARINGS SHALL BE O-RING SEALED.

***** SPECIFICATION #18E011 *****

25' BOOM MOWER:

IT IS THE PURPOSE OF THE FOLLOWING SPECIFICATIONS TO DESCRIBE AN EXTREME DUTY HYDRAULIC DRIVEN BOOM MOWER. MOWING IS FORWARD AND RIGHT OF THE RIGHT REAR TIRE AND EXTENDED BY MEANS OF AN ARTICULATED TWO SECTION BOOM WITH HYDRAULIC BREAK AWAY. THIS UNIT SHALL BE CONSTRUCTED TO INTERCHANGE WITH ANY OF THE FOLLOWING: 50" ROTARY CUTTING HEAD, 60" ROTARY CUTTING HEAD, 63" FLAIL CUTTING HEAD, 50" FLAIL CUTTING HEAD, 48" SAW BLADE, 50" WETCUT SPRAYER, BOOM SNOW BLOWER, 22" ROTARY DITCHER, 60" SIDE ROTARY MOWER OR 75" SIDE FLAIL MOWER.

THE UNIT WILL BE THE MANUFACTURE'S CURRENT PRODUCTION MODEL WITH A MINIMUM OF (1) ONE YEAR PREVIOUS PRODUCTION, MEETING OR EXCEEDING THE TERMS OF THESE SPECIFICATIONS. UNIT'S SHALL BE MANUFACTURER'S HEAVIEST DUTY MODEL AVAILABLE. THE VENDOR SHALL GUARANTEE THAT A STOCK OF COMPONENT PARTS BE AVAILABLE AT A LOCATION CONVENIENT TO THE USER. FOR ANY OFFER TO BE CONSIDERED, ALL ITEMS MUST BE OF A STANDARD PRODUCTION MODEL, NOT MODIFIED FOR BID PURPOSES.

BOOM MOWER:

SAFETY AND TESTING:

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SHALL MEET THE FOLLOWING INDUSTRY STANDARDS: SAE: J232, J284, J990, J1065. ANSI/ ASAE-201.4, S203.13, S205.2, S279.12, S350, EP363.1, S483, S493. ASTM: A370. UNIT SHALL BE EQUIPPED WITH A 7 SECOND BRAKE VALVE ON THE CUTTING ASSEMBLY. ELECTRIC SOLENOID CONTROL TRANSPORT LOCK TO BE INTEGRATED INTO THE MOWER CONTROL BOX.

MAIN FRAME:

MAIN FRAME SHALL BE CONSTRUCTED TO BE SUPPORTED ON THE FRONT TRACTOR BOLSTER, CENTER OF TRACTOR AND REAR AXEL HOUSINGS, TO ABSORB SIDE TORQUE AND IMPACT OF SEVERE APPLICATIONS.

MAIN FRAME SHALL BE CONSTRUCTED OF FABRICATED 80,000 PSI STEEL, BOLTED DIRECTLY TO EACH SIDE OF TRACTOR FAME. AN UNDERBELLY FRAME MEMBER, RUNNING UNDER ENGINE, SHALL BE WELDED, BOX FRAME CONSTRUCTED, AND CONNECT THE MAINFRAME TO EACH SIDE OF TRACTOR (SPECIFICALLY EXCLUDING FRAMES OVER HOOD DESIGNS). A BOLT ON MAST ASSEMBLY SHALL HAVE AN INTEGRAL SWINGCYLINDER AS A WELDED ASSEMBLY WITH THE MAST ASSEMBLY.

MAIN FRAME SHALL HAVE A BOLT ON MAST ASSEMBLY TO ALLOW EASY CHANGE FROM BOOM MOWERS TO SIDE MOWER ATTACHMENTS. WELDMENTS SHALL BOLT FACE TO FACE WITH TOWER AND SHALL HAVE A MOUNTING SURFACE WITH NOT LESS THAN 10, ¾" GRADE 5 BOLTS. MOUNTING SURFACE SHALL BE CONSTRUCTED OF 80,000 LBS. STEEL ½" THICK.

BOOM SWIVEL BRACKET:

SWIVEL SHALL BE BOX CONSTRUCTION, WITH A DOUBLE SECTION SWIVEL CYLINDER TANG, AND A VERTICAL BEARING BOSS OF NOT LESS THAN 3 ½" DIAMETER, WITH A 7/16" WALL THICKNESS. A HIGH-STRENGTH BEARING, STEEL BACKED, POROUS BRONZE INNER STRUCTURE, ACETAL RESIN OVERLAY, WITH GREASE POCKETS BUILT IN SHALL SUPPORT A 2 ½" VERTICAL PIN. PIN SHALL BE CONSTRUCTED OF 4140 COLD DRAWN STEEL, PREHARDENED (HEAT TREATED), TO A MINIMUM YIELD OF 105,000 PSI, PIN SHALL BE ZINC PLATED.

SWIVEL SHALL CONNECT TO INNER BOOM CYLINDER WITH A GREASELESS SPHERICAL BEARING. SPHERICAL BEARING IS A POLY GREASELESS TYPE, 1.25" ID AND 2" OD SPHERICAL AND A 2.38" OD.

SWIVEL SHALL BE SUPPORTED BYA GREASELESS THRUST WASHER TO ELIMINATE GALLING BETWEEN SWIVEL BRACKET AND BOOM MOUNTING BRACKET. GREASELESS POLY, THRUST WASHER IS 2.5" ID, 2.25" OD AND .25" THINK.

HYDRAULIC HOSES SHALL BE ROUTED THRU HOSE CLAMP/GUIDES WITH HOSE GUARDS TO PREVENT CHAFFING.

HORIZONTAL SWING CYLINDER SHALL HAVE AN INTERNAL CUSHION DEVICE TO LIMIT FLOW WHEN BOOM IS OPERATED TO THE FORWARD BOOM POSITION.

PRIMARY BOOM:

PRIMARY BOOM SHALL BE A 8" X 6" STRUCTURAL TUBE OF NOT LESS THAN 100,000 PSI DOMEX® STEEL AND HAVE TWO INNER, ONE PIECE, REINFORCED CYLINDER ATTACHING RIBS WITH THE END WELDS STRATEGICALLY WELDED AROUND END OF RIB TO THE BOOM UPPER SURFACE. INNER REINFORCEMENT SHALL BE ¼", 100,000 PSI DOMEX® STEEL ANCHOR PLATES, SADDLE MOUNTED TO THE TOP AND SIDES OF BOOM. TOP ANCHOR PLATE SHALL BE STRUCTURALLY WELDED TO MAIN TUBE AND HAVE 4, 5/8" X 3 ¾" CORE WELDS ON EACH SIDE CONNECTING TOP ANCHOR PLATE TO INNER PRIMARY BOOM TUBE. INNER END OF PRIMARY BOOM SHALL HAVE A 1 ½" DIAMETER 105,000 PSI YIELD, HARDENED, NITRIDE SURFACE PIN, WITH A HIGH-STRENGTH BEARING, STEEL BACKED, POROUS BRONZE INNER STRUCTURE, ACETAL RESIN OVERLAY, WITH GREASE POCKETS BUILT IN.

PRESSURE AND RETURN LINES WILL BE PREFORMED STEEL TUBES, OR HOSES, WITH HOSES AT PIVOT POINTS AND MOUNTED TO BACK OF BOOM

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TOP MOUNTED DOUBLE ACTING LIFT CYLINDER SHALL HAVE A NITROGEN ACCUMULATOR. CYLINDER END ATTACH POINTS SHALL HAVE REPLACEABLE BEARINGS. PRIMARY BOOM LIFT CYLINDER SHALL NOT BE LESS THAN 5" IN DIAMETER AND 25" OF STROKE. SECONDARY LIFT CYLINDER SHALL NOT BE LESS THAN 4 ½" DIAMETER AND HAVE 26 ½" OF STROKE. BOTH CYLINDERS SHALL BE EQUIPPED WITH SPHERICAL BEARING LOCATED AT EACH END OF THE CYLINDERS. CYLINDERS SHALL BE WELDED, DOUBLE ACTING AND MOUNTED TO TOP OF BOOM.

SECONDARY BOOM:

SECONDARY BOOM SHALL BE CONSTRUCTED OF WITH A MINIMUM OF, 100,000 PSI YIELD DOMEX® STEEL, WITH A 6" X 6" TUBE, REINFORCED AT ALL STRESS POINTS, INCLUDING BOTH TOP AND SIDES OF SECONDARY BOOM, WITH 100,000 PSI DOMEX® STEEL. CYLINDER ANCHOR, FOR HEAD ROLL, SHALL BE 2 3/8" A514 STEEL EARS INTEGRALLY WELDED TO SECONDARY BOOM.

PRESSURE AND RETURN LINES ARE PREFORMED STEEL TUBES AND HOSES MOUNTED TO REAR OF BOOM.

DECK ROLL CYLINDER SHALL BE 4" DIAMETER AND HAVE A STROKE OF NOT LESS THAN 15". CYLINDER SHALL BE WELDED, DOUBLE ACTING AND MOUNTED TO TOP OF BOOM.

OUTER END OF SECONDARY BOOM SHALL BE BOXED REINFORCED TO MOUNTING BOSS. BOSS SHALL BE 2 ¼" DIAMETER A513, DOM TUBING INTEGRALLY WELDED INTO BOX SECTION. THE CONNECTING PIN SHALL BE 1 ½" DIAMETER AND SHALL BE SUPPORTED BY REPLACEABLE, STEEL BACKED BEARINGS, OF POROUS BRONZE INNER STRUCTURE, AND ACETAL RESIN OVERLAY WITH GREASE POCKETS BUILT IN.

HYDRAULICS:

PUMP SHALL BE DIRECT DRIVE FROM THE TRACTOR FRONT CRANKSHAFT ADAPTER. FRONT DRIVE SHALL HAVE A STEEL ADAPTOR MOUNTED TO THE TRACTORS CRANKSHAFT PULLEY WITH BOLTS THROUGH STEEL BUSHINGS, MOUNTED INTO RUBBER BUSHINGS. (RUBBER MOUNTED ENGINE DESIGN SHALL HAVE A DOUBLE U-JOINT PUMP DRIVE SHAFT IN LIEU OF RUBBER BUSHING DESIGN).

PUMP DRIVESHAFT RATED NOT LESS THAN 122 HP.

RESERVIOR SHALL BE INTERNALLY TREATED AGAINST CORROSION WITH INDUSTRY APPROVED CHEMICAL AGENT AT A TIME OF MANUFACTURE. RESERVOIR SHALL HAVE AN IN TANK FILTER RATED AT 75GPM, 10 MICRON, 200 BETA, ELEMENT WITH BYPASS, RESTRICTION GAUGE, MINIMUM (1) ONE PSI PRESSURE AT SUCTION OUTLET AND HAVE BALL VALVE AT SUCTION LINE. TANK PRESSURIZED TO 3 PSI.

RESERVOIR SHALL BE MOUNTED IN TRACTORS LEFT HAND REAR WHEEL WELL. RESERVOIR SHALL HAVE SUFFICIENT CLEARANCE FOR PROPER COOLING AND SHALL BE A MINIMUM 37 GALLONS OF OIL IN AN OPERATING CONDITION. RESERVOIR SHALL HAVE A MINIMUM OF NOT LESS THAN 5" CLEARANCE (OIL COLD) FROM TOP OF RESERVOIR FOR EXPANSION. HYDRAULIC FLUID LEVEL AND TEMPERATURE GAUGE TO BE BUILT-IN RESERVOIR.

HYDRAULIC PRESSURE CONNECTIONS SHALL MEET SAE O-RING AND JIC STANDARDS.

PUMP SHALL BE FRONT MOUNT, CAST STEEL HOUSING, STEEL GEARS, RATED 3250 PSI, 45 GPM AND 96 HP INPUT.

SUCTION HOSE SHALL BE UNRESTRICTED (SPECIFICALLY EXCLUDING SUCTION FILTERS AND SCREENS).

HYDRAULIC OIL SHALL MEET A CLEANLINESS STANDARD OF ISO 46 RATING, AND THE ISO CODE 16/14/11 OR BETTER.

HYDRAULIC HOSES AND TUBES SHALL BE CLEANED WITH PNEUMATIC, TRIPLE PROJECTILE CLEANING, AND SHALL MAINTAIN A JDS-G169, CLASS 5.6 ISO CLEANLINESS RATING.

MOTOR SHALL HAVE CAST STEEL HOUSING WITH STEEL GEARS.

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MOWER CONTROL VALVE SHALL BE AN ELECTRICALLY CONTROLLED, PILOT OPERATED. LOGIC ELEMENTS SHALL BE USED TO CONTROL PRESSURES AND RAMP UP AND DOWN SPEED TO PREVENT EXCESSIVE PRESSURE SPIKES TO SYSTEM. VALVE SHALL STOP MOWER FROM TURNING IN THE OFF POSITION AND WILL NOT CAUSE A RESTRICTION TO GENERATE DRIFT WHILE IN THE OFF POSITION.

MOWER CONTROL VALVE SHALL STOP CUTTER ASSEMBLY IN MAXIMUM OF 7 SECONDS FROM FULL RPM.

CABLE CONTROL LIFT VALVE:

MOWER LIFT CONTROL LEVERS SHALL BE OF THE SINGLE ACTION DESIGN. LEVERS SHALL BE PRE-LOADED TO THE CENTER POSITION, AND HAVE A FORCE OF NOT MORE THAN 15 LBS. AT FULL TRAVEL. LEVER ACTION SHALL BE SYMMETRICAL +OR- 30° MAXIMUM LEVER ON MOUNTING CENTER LINE. CONTROL LEVERS SHALL HAVE A WORKING LOAD OF NOT LESS THAN 100 LBS.

MOWER LIFT CONTROL SYSTEM SHALL BE MECHANICALLY CONTROLLED BY STAINLESS STEEL, POLYETHYLENE CABLES. CABLES SHALL HAVE A 1 X 7 CORE WITH NYLON COVERING. CORE SHALL BE NOT LESS THAN .93" DIAMETER, COVERED TO .125" DIAMETER WITH HIGH EFFICIENT CONDUIT COVER. CONDUIT COVER CONSTRUCTION SHALL HAVE A POLYETHYLENE LINER WITH BLACK POLYETHYLENE COVERING AND SHALL HAVE A HEAT RANGE OF NOT LESS THAN -65°F TO +225°F. CORE SHALL HAVE A NOMINAL MOVEMENT OF 2", WITH BULKHEAD END AND GROOVED END FOR ATTACHMENT. TERMINAL ENDS SHALL BE CONSTRUCTED OF STAINLESS STEEL ROD, WITH BRASS PLATED TUBE.

MOWER LIFT, HYDRAULIC CONTROL VALVE, SHALL BE CLOSED CENTER, LOAD SENSE, SECTIONAL VALVE, WITH INDIVIDUAL SECTION COMPENSATION. VALVE SHALL PROVIDE PRECISION METERED SPOOLS WITH METERING NOTCHES. THE VALVE SHALL HAVE A LOW OPERATING EFFORT, AND A WORKING CAPABILITY OF 3,000 PSI. VALVE SHALL HAVE CHROME PLATED, TAPERED, AND METERED SPOOLS, AND EMPLOY INDIVIDUAL PRESSURE COMPENSATED WORK SECTIONS, FLOW DIVIDER (PRINCIPLE TO MAINTAIN FLOW RELATIONSHIPS), FULLY INTERCHANGEABLE SPOOLS, SHUTTLE DISK TYPE LOAD SENSE CONTROL WITH NEUTRAL DRAIN TO TANK, AND PRIORITY FLOW CAPABILITY. VALVE SHALL HAVE LOAD CHECKS IN EACH VALVE SECTION. SYSTEM SHALL INCORPORATE A SINGLE LOAD SENSE LINE TO LOAD SENSE PUMP (FIXED DISPLACEMENT PUMP SYSTEMS SHALL INCORPORATE AN INLET UNLOADER OPTION). ALL FUNCTIONS SHALL BE PROTECTED BY INDIVIDUAL PILOT OPERATED, PORT PRESSURE RELIEF VALVES, EQUIPPED WITH BUILT IN ANTI-CAVITATION CHECK VALVES.

JOY-STICK CONTROL LIFT VALVE:

JOY-STICK VALVE OPTION: SHALL BE AN ELECTRO-HYDRAULIC, LOAD SENSING VALVE. VALVE SHALL HAVE INTERCHANGEABLE SPOOLS AND SHALL HAVE A MANUAL OVER-RIDE FOR EACH SECTION, AND 12 VOLT ELECTRICAL ACTUATION.

VALVE (JOY-STICK) SHALL HAVE LOAD-INDEPENDENT FLOW CONTROL, OIL FLOW TO INDIVIDUAL FUNCTION IS INDEPENDENT OF THE LOAD PRESSURE OF THE FUNCTION. VALVE SHALL HAVE BUILT IN PRESSURE RELIEF IN PUMP SIDE MODULE (PVP), WITH SYSTEM CAPABILITIES OF PRESSURES OF NOT LESS THAN 4,350 PSI CONTINUOUS, AND 4,640 PSI INTERMITTENT. PVP SHALL HAVE A PRESSURE GAUGE CONNECTION FOR SERVICE AND HAVE AN OPEN CENTER OPTION FOR FIXED DISPLACEMENT PUMPS.

VALVE (JOY-STICK) BODY SHALL HAVE INTERCHANGEABLE SPOOLS, INTEGRATED PRESSURE COMPENSATOR, CHECK VALVES, AND DIFFERENT SPOOL VARIANTS. VALVES SHALL BE CONFIGURED WITH MANUAL OVER-RIDE LEVERS ON ONE END AND AN ELECTRONIC ACTUATION MODULE ON THE OTHER.

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ELECTROHYDRUALIC (JOY-STICK) ACTUATION MODULE SHALL INTEGRATE DIRECTLY WITH PROPORTIONAL VALVE BODY. MODULE SHALL HAVE INTEGRATED ELECTRONICS, SENSORS, AND ACTUATORS, AND SHALL HAVE A FEEDBACK TRANSDUCER MEASURING SPOOL MOVEMENT IN RELATION TO INPUT SIGNAL, MODULE SHALL CONTROL THE DIRECTION, VELOCITY, AND POSITION OF MAIN VALVE SPOOL. MODULE SHALL HAVE AUTOMATIC ACTIVE FAULT MONITORING, AND DIRECTIONAL INDICATION AND LED LIGHT INDICATION. MODULE SHALL HAVE LOW HYSTERESIS AND SHALL HAVE ATTACHMENT FOR A SEALED DEUTCH CONNECTOR.

JOY-STICK CONTROLLER SHALL BE AN ERGONOMIC RIGHT-HAND CONTROL, WITH TWO PROPORTIONAL FUNCTIONS ON X-Y MODE, AND A TOP GRIP TO HOUSE TWO PROPORTIONAL ROLLERS. CONTROLLER HANDLE SHALL HAVE A LEATHER-LIKE GRAINED SURFACE TO ALLOW HAND TO BREATHE DURING OPERATION. CONTROLLER ROLLERS SHALL HAVE A SPRING CENTERED POTENTIOMETER WITH A WORKING RANGE OF +2 OR -42°. CONTROLLER SHALL BE ADJUSTABLE WITH DEAD BAND ADJUSTMENT, INDEPENDENT VOLTAGE LIMITING POTENTIOMETERS FOR EACH FUNCTION, AND INTEGRATED DIRECTION SWITCHES FOR EACH PROPORTIONAL MODULE. CONTROLLER SHALL HAVE INTEGRAL CABLE PLUG IN, AND AN RF SHIELDED CABLE SHALL BE SUPPLIED BY THE MANUFACTURER.

COUNTERWEIGHT:

COUNTER WEIGHT, TOTAL BALLAST WEIGHT (WHEEL WEIGHT AND CALCIUM CHLORIDE SOLUTION) SHALL BE A MINIMUM OF 4,481 LBS. WHEEL WEIGHT SHALL BE CAST STEEL, MOUNTED FLUSH TO OUTSIDE OF WHEEL, AND SHALL WEIGH NOT LESS THAN 3,400 LBS. (SPECIFICALLY EXCLUDING FLAME CUT STEEL AND OR FRAME MOUNTED WEIGHTS).

OPERATOR PROTECTION:

SHALL HAVE 3/8" RIGHT SIDE, HARD SURFACED, POLYCARBONATE PROTECTION FOR OPERATOR. INSTALLED INTO THE ORIGINAL CAB MANUFACTURED DOOR AND OR SIDE WINDOW.

STOW SYSTEM:

BOOM SHALL STOW TO THE REAR OF THE TRACTOR, WITH ALL HYDRAULIC PRESSURE RELIEVED FROM THE BOOM SYSTEM. AN ELECTRO-HYDRAULIC LOCK-UP, ENGAGED FROM THE OPERATORS POSITION, SHALL PREVENT CUTTER HEAD FROM MOVING WHILE IN THE TRANSPORT POSITION.

STOW SYSTEM SHALL CONSIST OF A WELDED ASSEMBLY HOLDING THE SECONDARY BOOM. THE SYSTEM SHALL ARCH OVER THE TRACTORS 3PT HITCH AREA AND ALLOW FOR USE OF THE 3 POINT HITCH WHILE THE BOOM IS NOT IN THE TRASPORT POSITION. THE STOW SYSTEM SHALL DIRECTLY ATTACH TO AN AXLE BRACE ON THE RIGHT AND LEFT-HAND SIDE FOR STRENGTH.

THE UPPER STOW ASSEMBLY SHALL BE CONSTRUCTED OF ¼" X 4" X 4" SQUARE TUBING SADDLE MOUNTED TO AXLE BRACE EXTENDING ABOVE, BELOW, AND BEHIND THE RIGHT REAR AXLE.

THE J-HOOK STOW PLATE SHALL BE A WELDED ASSEMBLY, ATTACHED TO UPPER STOW ASSEMBLY. THE J-HOOKS SHALL CONTACT BOTH SIDES OF THE SECONDARY BOOM AND REST UPON 2, 2 1/2" PUCKS WELDED INTEGRAL WITH THE SECONDARY BOOM. THE HOOKS TO ENGAGE THE SECONDARY BOOM PUCKS SHALL NOT BE MORE THAN 24" ABOVE THE AXLE CENTER LINE AND NOT MORE THAN 42" BEHIND THE AXLE CENTER LINE.

OPTIONAL 50" ROTARY CUTTING HEAD:

CUTTING HEAD: SHALL BE CONSTRUCTED OF 110,000 PSI YIELD DOMEX STEEL 1/8" DECK AND ¼" THICK SIDE WALLS AND (4) TRAPEZOIDAL FORMED 50,000 PSI DOMEX STEEL REINFORCEMENTS. TOP TO BE CONTINUOUSLY WELDED FOR STRENGTH TO

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ELIMINATE DEBRIS FROM COLLECTING UNDER REINFORCEMENTS. SHALL HAVE FULL LENGTH REPLACEABLE ABRASION RESISTANT SKID SHOES. RUBBER SAFETY SHIELD SHALL BE BOLTED TO BACK SIDE OF DECK.

SAFETY SHIELD SHALL BE OPERATED HYDRAULICALLY FROM OPERATORS POSITION AND SHALL EXTEND BELOW THE CUTTING PLACE. SAFETY DOOR SHALL BE CONSTRUCTED OF 100,000 PSI DOMEX STEEL AND MEET ALL ANSI/SAE TEST FOR ROTARY MOWERS.

HEAD SHALL WEIGH NO LESS THAN 805 LBS, HEAD SHALL ROTATE 180 DEGREES AROUND OUTER BOOM AND CUTTER HEAD SHALL HAVE 50" ACUTAL CUT. CUTTER HEAD PIVOT ASSEMBLY SHALL BE FULLY WELDED AND INTERGRATED INTO THE CUTTER HEAD DESIGN.

SPINDLE: SHALL BE (1) PIECE FORGED AND HEAT TREATED WITH INTERGRAL 7 1/4" O.D. DRIVE HUB. SPINDLE SHALL BE ATTACHED TO HYDRAULIC MOTOR BY A FLEXIBLE COUPLER AND DUST COVER. SPINDLE ASSEMBLY SHALL HAVE MINIMUM TORSIONAL SHEAR CAPACITY OF 4,174 FT. LB TORQUE, 231,000 PSI YIELD ROTATIONAL STRENGTH AND DISTRIBUTE LOAD OVER 169 SQ. INCH AREA. SPINDLE SHALL HAVE STATIONARY WIRE WRAP PROTECTION. WIRE WRAPS SHALL BE A MINIMUM OF 4 3/8" X 4 3/4" THICK. THE WRAPS WILL ALSO ACT AS REINFORCEMENTS FOR SPINDLE HOUSINGS. WRAPS SHALL BE NOT LESS THAN 1/16" FROM THE DRIVE SPINDLE.

SPINDLE SHALL BE MOUNTED IN SEALED, DOUBLED TAPERED ROLLER BEARING, GREASE RESVOIR WITH A O-RING PLUG AND PORT TO DRAIN OLD GREASE. SPINDLE SHALL ROTATATE 19,000 FPM BLADE TIP SPEED. SPINDLE DRIVE AREA SHALL BE ENCLOSED AND FULLY PROTECTED FROM OUTSIDE DEBRIS ENTERING INTO THE DRIVE COUPLER.

KNIFE CARRIER: SHALL BE ONE PIECE, LASER CUT, 100,000 PSI RECTANGULAR STEEL BAR. THE BAR SHALL NOT BE LESS THAN 7 1/4" X 41 5/16" X 1 1/4" BAR SHALL BE TAPERED TO 5" AT THE KNIFE BOLT MOUNTING HOLES, AND ATTACH TO SPINDLE WITH (6) SIX 5/8" X 1 3/4" NF GRADE 8, MOUNTING BOLTS. MOUNTING BOLTS SHALL BE RECESSED SO AS THE BOLT HEAD IS BELOW THE SURFACE LEVEL OF THE BAR. SHALL HAVE 2 FREE SWINGING 360 DEGREES 5/8" X 5 X 18 3/4" SINGLE. KNIVES SHALL BE ATTACHED BY A 1 1/8" X 3 1/4" SHOULDERED AND KEYED BOLTS, BACKED BY GRADE 8 WASHER SPACERS AND HEX LOCK NUTS. CUTTER KNIVES SHALL BE SHOT PEENED WITH A CHAMFERED BOLT HOLE.

OPTIONAL 60" ROTARY CUTTING HEAD:

CUTTING HEAD: SHALL BE CONSTRUCTED OF 110,000 PSI YIELD DOMEX STEEL 1/8" DECK AND 1/4" THICK SIDE WALLS AND (4) TRAPEZOIDAL FORMED 50,000 PSI DOMEX STEEL REINFORCEMENTS. TOP TO BE CONTINUOUSLY WELDED FOR STRENGTH TO ELIMINATE DEBRIS FROM COLLECTING UNDER REINFORCEMENTS. SHALL HAVE FULL LENGTH REPLACEABLE ABRASION RESISTANT SKID SHOES. RUBBER SAFETY SHIELD SHALL BE BOLTED TO BACK SIDE OF DECK.

SAFETY SHIELD SHALL BE OPERATED HYDRAULICALLY FROM OPERATORS POSITION AND SHALL EXTEND BELOW THE CUTTING PLACE. SAFETY DOOR SHALL BE CONSTRUCTED OF 100,000 PSI DOMEX STEEL AND MEET ALL ANSI/SAE TEST FOR ROTARY MOWERS.

HEAD SHALL WEIGH NO LESS THAN 840 LBS, HEAD SHALL ROTATE 180 DEGREES AROUND OUTER BOOM AND CUTTER HEAD SHALL HAVE 60" ACUTAL CUT. CUTTER HEAD PIVOT ASSEMBLY SHALL BE FULLY WELDED AND INTERGRATED INTO THE CUTTER HEAD DESIGN.

SPINDLE: SHALL BE (1) PIECE FORGED AND HEAT TREATED WITH INTERGRAL 7 1/4" O.D. DRIVE HUB. SPINDLE SHALL BE ATTACHED TO HYDRAULIC MOTOR BY A FLEXIBLE COUPLER AND DUST COVER. SPINDLE ASSEMBLY SHALL HAVE MINIMUM TORSIONAL SHEAR CAPACITY OF 4,174 FT. LB TORQUE, 231,000 PSI YIELD ROTATIONAL STRENGTH AND DISTRIBUTE LOAD OVER 169 SQ. INCH AREA. SPINDLE SHALL HAVE STATIONARY WIRE WRAP PROTECTION. WIRE WRAPS SHALL BE A MINIMUM OF 4 3/8" X 4 3/4" THICK. THE WRAPS WILL ALSO ACT AS

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REINFORCEMENTS FOR SPINDLE HOUSINGS. WRAPS SHALL BE NOT LESS THAN 1/16" FROM THE DRIVE SPINDLE.

SPINDLE SHALL BE MOUNTED IN SEALED, DOUBLED TAPERED ROLLER BEARING, GREASE RESVOIR WITH A O-RING PLUG AND PORT TO DRAIN OLD GREASE. SPINDLE SHALL ROTATATE 19,000 FPM BLADE TIP SPEED. SPINDLE DRIVE AREA SHALL BE ENCLOSED AND FULLY PROTECTED FROM OUTSIDE DEBRIS ENTERING INTO THE DRIVE COUPLER.

KNIFE CARRIER: SHALL BE ONE PIECE, LASER CUT 100,000 PSI, RECTANGULAR STEEL BAR. THE BAR SHALL NOT BE LESS THAN 7 1/4" X 41 5/16" X 1 1/4" BAR SHALL BE TAPERED TO 5" AT THE KNIFE MOUNTING HOLES. (6) SIX 5/8" X 1 3/4" NF GRADE 8 MOUNTING BOLTS. MOUNTING BOLTS SHALL BE RECESSED SO AS THE BOLT HEAD IS BELOW THE SURFACE LEVEL OF THE BAR. THE BAR SHALL EXTEND A MINIMUM OF 5 3/8" BEYOND THE CENTER OF THE KNIFE MOUNTING HOLE. SHALL HAVE 2 FREE SWINGING 360 DEGREE, 5/8" X 5 X 18 3/4" SINGLE EDGE, FLAT (NO BENDS) 5/8" THICK BRUSH KNIVES. KNIVES SHALL BE ATTACHED BY A 1 1/8" X 3 1/4" SHOULDERED KEYED BOLTS, BACKED BY GRADE 8 WASHER SPACERS AND HEX LOCK NUTS. CUTTER KNIVES SHALL BE SHOT PEENED WITH A CHAMFERED BOLT HOLE.

MOUNTING: HEAD SHALL MOUNT TO BOOM WITH A TUBE CLAMP ASSEMBLY (SPECIFICALLY EXCLUDING, DIRECT BOLT ON CUTTER HEADS). STEEL TUBE SHALL NOT BE LESS THAN 6, 5/8" GRADE 8 BOLTS, CLAMPING ASSEMBLY TO TUBE.

OPTIONAL 63" FLAIL CUTTING HEAD:

SHALL HAVE 63" OF ACTUAL CUT WITH REPLACEABLE SKID SHOES, RUBBER DEFLECTOR SHIELD SHALL BE BOLTED TO THE BACK OF BONNET. HEAD SHALL WEIGH NO LESS THAN 850 LBS. HEAD SHALL ROTATE 180 DEGREES AROUND OUTER BOOM. SHALL HAVE A MINIMUM OF 81 HP. DRIVE BELT SYSTEM.

CUTTER HOUSING SHALL BE A MINIMUM OF 10 GAUGE THICK, 80,000 PSI YIELD STEEL BONNET. SHALL HAVE A MINIMUM OF 5/16" SOLID STEEL SIDE WALLS. CUTTER HEAD PIVOT ASSEMBLY SHALL BE FULLY WELDED AND INTERGRATED INTO THE CUTTER HEAD DESIGN. (SPECIFICALLY EXCLUDING CUTTER HEAD THAT BOLT TO PIVOT ASSEMBLY)

CUTTER SHAFT SHALL BE A MINIMUM DIAMETER OF 4 3/4" AND 3/8" WALL TUBING WITH 1 15/16" DIAMETER BEARINGS, BEASRINGS SHALL BE MANUFACTURED IN THE U.S. EACH BEARING RACE SHALL HAVE 2 SET SCREWS COUNTER-SUNK INTO THE CUTTER HEAD. CUTTER HEAD SHALL HAVE 80 FORGED, HARDENED TO 40-50 RC, SELF CLEANING REVERSIBLE ALL-PURPOSE KNIVES, OR 40 SMOOTH CUT GRASS KNIVES. KNIFE INTERCHANGEABILITY SHALL NOT REQUIRE CHANGE OF CUTTER SHAFT.

DRIVE BELT SYSTEM SHALL HAVE ADJUSTABLE, AUTOMATIC BELT TENSIONER.

KNIFE SWING CIRCUMFRENCES SHALL BE NO LESS THAN 47". CUTTER SHAFT SHALL ROTATE A MINIMUM OF 2,300 RPM AT RATED TRACTOR RPM. CUTTER SHAFT SHALL HAVE WIRE WRAP PROTECTION EACH END.

REVERSE ROTATION MODELS SHALL BE EQUIPPED WITH STEEL FRONT DEFLECTOR. CUTTER SHAFT SHALL HAVE BEARING WRAP PROTECTION.

GROUND ROLLER:

CUTTING HEIGHT SHALL BE ADJUSTBALE BETWEEN 1-1/2" TO 7-1/2"

GROUND ROLLER SHALL NOT BE LESS THAN 6 5/8" IN DIAMETER. GROUND ROLLER SHALL HAVE BEARINGS SHALL BE 1 3/8" DOUBLE ROW SPHERICAL BEARINGS MADE IN THE U.S., EACH BEARING RACE SHALL HAVE 2 SET SCREWS, COUNTER SUNK INTO CUTTER SHAFT STUB

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SHAFT TO PROVIDE LINE DRAWING OF BEARING AND CAP ASSEMBLY AND DESCRIBE BEARING ATTACHMENT TO SHAFT.

OPTIONAL 50" FLAIL:

CUTTING HEAD: SHALL HAVE 50" OF ACTUAL CUT WITH REPLACEABLE SKID SHOES, RUBBER DEFLECTOR SHIELD SHALL BE BOLTED TO THE BACK OF BONNET. HEAD SHALL WEIGH NO LESS THAN 800 LBS. HEAD SHALL ROTATE 180 DEGREES AROUND OUTER BOOM. SHALL HAVE A MINIMUM OF 81 HP. DRIVE BELT SYSTEM.

CUTTER HOUSING SHALL BE A MINIMUM OF 3MM THICK. SHALL HAVE A MINIMUM OF 5/16" SOLID STEEL SIDE WALLS. CUTTER HEAD PIVOT ASSEMBLY SHALL BE FULLY WELDED AND INTERGRATED INTO THE CUTTER HEAD DESIGN. (SPECIFICALLY EXCLUDING CUTTER HEAD THAT BOLT TO PIVOT ASSEMBLY)

CUTTER SHAFT SHALL BE A MINIMUM DIAMETER OF 6" AND 1/2" WALL, DOM 1-513 TYPE 5 TUBING, WITH 2 3/16" DIAMETER BEARINGS MANUFACTURED IN THE U.S. EACH BEARING SHALL HAVE (2) 3/8" SET SCREWS, COUNTER SUNK 60 DEGREES FROM EACH OTHER INTO CUTTER SHAFT, END SHAFT TO PREVENT MOVEMENT. BEARINGS SHALL BE ATTACHED TO CUTTER HOUSING END PLATE WITH NOT LESS THAN (4), 1/2" X 2" NC L9 BOLTS

CUTTER SHALL HAVE A MINIMUM OF 24 DOUBLE EDGED. KNIVES SHALL WEIGH NO LESS THAN 1.75 LBS. (EACH) AND ATTACHED TO THE SHAFT SO AS THE KNIVES DO NOT HAVE DIRECT CONTACT WITH THE BOLT. A SPACER ON EACH SIDE OF THE KNIVES SHALL KEEP THE KNIVES CENTERED BETWEEN THE CUTTER SHAFT LUGS.

KNIFE SWING CIRCUMFRENCE SHALL BE NO LESS THAN 70 5/8". CUTTER SHAFT SHALL ROTATE A MINIMUM OF 2,300 RPM AT RATED TRACTOR RPM. CUTTER SHAFT SHALL HAVE WIRE WRAP PROTECTION EACH END.

GROUND ROLLER:

CUTTER HEIGHT SHALL BE ADJUSTABLE UP TO 6" AND ACCOMPLISHED THROUGH A BOLT ON ADJUSTER. GROUND ROLLER SHALL NOT BE LESS THAN 6 IN DIAMETER. GROUND ROLLER SHALL HAVE A 5/8" THICK BEARING CARRIER PLATE WELDED INTERGRAL WITH THE TUBE. GROUND ROLLER BEARINGS SHALL BE 1 3/8", FLANGED TYPE BALL BEARING, WITH DOUBLE LIPPED SEALING, ATTACHED WITH 4 7/16" GRADE 5 CAP SCREWS. GROUND ROLLER SHAFT SHALL HAVE A THROUGH SHAFT, WITH THE BEARINGS ATTACHED, AND ANCHORED AT EACH END WITH 1 1/8" NF LOC-NUT AT EACH END.

OPTIONAL 48" SAW BLADE:

GENERAL: SAW BLADE SHALL BE INTERCHANGEABLE WITH STANDARD CUTTING DISK ASSEMBLY.

BLADE: SHALL NOT BE LESS THAN 48" INCHES OUTSIDE DIAMETERS. THICKNESS SHALL NOT BE LESS THAN 9/32", SHALL HAVE A CENTERING PILOT HOLE, SHALL HAVE AT LEAST (6) 5/8" X 3" GRADE 8 MOUNTING BOLTS.

SHALL HAVE REPLACEABLE TEETH MACHINED IN OUTER EDGE. SHALL HAVE A 5/16" THICK, 16" DIAMETER REINFORCING PLACE ON EACH SIDE OF THE BLADE.

CLAMPING ARBOR: SHALL CONSIST OF A TWO PIECE MACHINED ARBOR THAT SUPPORTS THE BLADE ON TOP AND BOTTOM AND CLAMPING BLADE AT THE OUTER EDGE OF THE ARBOR.

SAW TOOTH: SAW BLADE SHALL HAVE A MINIMUM OF 30 CARBIDE TIPPED TEETH, SHALL BE CAPABLE OF MAKING A 1/2" CUT, SHALL HAVE A MACHINED FIT TO BLADE, SHALL BE REAPLCEABLE BY A SINGLE RIVET, SHALL HAVE REPLACEABLE INDUSTRIAL GRADE CARBIDE TIP SILVER.

OPTIONAL 22" DITCHER HEAD

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THE CUTTING HEAD WILL HAVE A MINIMUM WEIGHT OF 600 LBS., AND A CUTTING WIDTH OF 22" OF ACTUAL CUT.

CUTTING ASSEMBLY BE STEEL DISK NOT LESS THAN 1/2" THICK WITH 3 GUSSETED KNIFE MOUNTING PADS, AND 3 GUSSETED CLEAN UP MOUNTING PADS ATTACHED.

CUTTING ASSEMBLY IS ROTARY, HYDRAULICALLY DRIVEN, EQUIPPED WITH 3 REPLACEABLE KNIVES, NOT MORE THAN 3/8" THICK, AND 3 CLEAN UP PADDLES.

THE CUTTING ASSEMBLY WILL HAVE A 3/8" STEEL BONNET, WITH 3/8" THICK, ABRASION RESISTANT TYPE, REPLACEABLE WEAR LINER, A HYDRAULICALLY CONTROLLED DEFLECTOR CHUTE. (OPTIONAL: CUTTING ASSEMBLY WILL BE REVERSIBLE WHEN USING REVERSE HEAD.)

THE DITCHING HEAD WILL HAVE A PLANETARY GEAR REDUCTION RATIO OF 4.5:1. THE INPUT SHAFT WILL BE A 14 TOOTH INVOLUTE SPLINE, WITH A KEYED 2" OUTPUT SHAFT.

THE OUTPUT TORQUE WILL BE RATED @30,000 INCH LBS.

THE HYDRAULIC MOTOR WILL HAVE A RATING OF 65 HP.

OPTIONAL 60" SIDE ROTARY MOWER:

IT IS THE PURPOSE OF THE FOLLOWING SPECIFICATION TO DESCRIBE A SELF PROPELLED, HYDRAULICALLY POWERED ROTARY TYPE MOWER. WHICH SHALL MOW FORWARD AND RIGHT OF THE REAR TIRE.

GENERAL: CUTTING WIDTH IS 60" ACTUAL CUT, CUTTER HEAD SHALL WEIGH NO LESS THAN 1,075 LBS. CUTTER HEAD SHALL HAVE 19" OF INBOARD TRAVEL AND NOT LESS THAN 9" OF CURB LIFT. CUTTER HEAD SHALL HAVE A CUTTING ARC OF NOT LESS THAN 150 DEGREES.

IT IS THE PURPOSE OF THE FOLLOWING SPECIFICATION TO DESCRIBE A SELF PROPELLED, HYDRAULICALLY POWERED ROTARY TYPE MOWER. WHICH SHALL MOW FORWARD AND RIGHT OF THE REAR TIRE.

CUTTING DISH: DISH SHALL BE ONE PIECE, DYNAMICALLY BALANCED (PER ISO QUALITY G2.5 SPEC) FORMED 40 DEGREE ANGLE OUTER EDGE EXTENDING 3 1/2" BEYOND BEND RADIUS, 37 9 16" DIAMETER 1/2" THICK 80,000 PSI YIELD STEEL AND ATTACHED BY (6) 5/8" X 1 3/4" GRADE 8 BOLTS. DISH SHALL HAVE NO STRUCTURAL WELDS. DISH ASSEMBLY SHALL ACCOMMODATE 2 STANDARD OR OPTIONAL 3. KNIVES SHALL BE ATTACHED BY 1 3/4" X 3 3/8" SHOULDERED. MINIMUM CLEARANCE SHALL BE 9" DECK AND KNIFE.

CUTTER HOUSING: CUTTER HEAD SHALL HAVE 1/4" STEEL TOP AND FULL LENGTH 3/8" STEEL SIDES. CUTTER HEAD SHALL BE ATTACHED TO DRAFT BEAM WITH 2, 1 1/2" PINS SPACED NOT LESS THAN 29 1/2" CENTER TO CENTER. DECK SHALL HAVE FULL LENGTH, ABRASION RESISTANT HARDENED, REPLACEABLE SKIDS.

MAINFRAME: SHALL BE CONSTRUCTED TO BE SUPPORTED ON THE FRONT TRACTOR BOLSTER, CENTER OF TRACTOR AND REAR AXLE HOUSING, TO ABSORB SIDE TORQUE AND IMPACT OF SEVERE APPLICATIONS. MAINFRAME SHALL BE CONSTRUCTED OF FABRICATED 80,000 PSI STEEL, BOLTED DIRECTLY TO EACH SIDE OF THE TRACTOR FRAME. AN UNDERBELLY FRAME MEMBER, RUNNING UNDER ENGINE SHALL BE WELDED, BOX FRAME CONSTRUCTED AND CONNECT TO THE MAINFRAME TO EACH SIDE OF THE TRACTOR. A BOLT ON MAST ASSEMBLY SHALL HAVE AN INTERGRAL MAST TO SUPPORT INNER LIFT OF SIDE MOWERS.

MAINFRAME SHALL HAVE A BOLT ON MAST ASSEMBLY TO ALLOW EASY CHANGE FROM BOOM MOWERS TO SIDE MOWER ATTACHMENTS. WELDMENT SHALL BOLT FACE TO FACE WITH TOWER AND SHALL HAVE A MOUNTING SURFACE WITH NOT LESS THAN 10, 3/4" GRADE 5 BOLTS. MOUNTING SURFACE SHALL BE CONSTRUCTED OF 80,000 LBS OF STEEL 1/2" THICK.

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DRAFT BEAM: LIFT ASSEMBLY SHALL HAVE ONE SINGLE ACTING AND ONE DOUBLE ACTING HYDRAULIC CYLINDERS CONTROLLING INBOARD AND OUTBOARD ENDS OF CUTTER HEAD. CUTTER HEAD CONTROL (TILT) SHALL BE ACCOMPLISHED BY MEANS OF DIRECT CONNECTED LINKAGE TO A DOUBLE ACTING CYLINDER, ALLOWING PRECISE OPERATION OF CUTTING ASSEMBLY. A SINGLE ACTING CYLINDER PROVIDES LIFT FOR THE CUTTER HEAD ASSEMBLY. SPECIFICALLY EXCLUDING CABLE TYPE LIFT.

MOWER LIFT FOR THE INNER CONTROL SHALL BE A DOUBLE ACTING, INDUSTRIAL WELDED TYPE CYLINDER OF NOT LESS THAN 3" DIAMETER WITH 12" STROKE. MOWER LIFT FOR THE OUTER CONTROL SHALL BE A SINGLE ACTING INDUSTRIAL WELDED TYPE CYLINDER OF NOT LESS THAN 3" DIAMETER WITH A 10" STROKE.

HYDRAULICS: MOTOR SHALL HAVE A RATING OF AT LEAST 99 H.P., HYDRAULIC PRESSURE CONNECTIONS SHALL MEET SAW O-RING AND JIC STANDARDS. MOTORS SHALL HAVE CAST STEEL HOUSINGS WITH STEEL GEARS. HYDRAULIC PUMP SHALL BE GEAR TYPE WITH A RATING OF 96 INPUT H.P. 45.1 GPM AT 3,250 PSI.

OPTIONAL 75" SLIDE FLAIL MOWER:

GENERAL: THE FOLLOWING SPECIFICATION IS FOR A SELF PROPELLED, HYDRAULICALLY POWERED FLAIL TYPE MOWER, WHICH SHALL MOW FORWARD AND RIGHT OF REAR TIRE. THIS 75" SIDE MOUNTED UNIT SHALL BE DESIGNED TO INTERCHANGE WITH OTHER CUTTER HEADS. SHALL MEET THE FOLLOWING INDUSTRY STANDARDS: SAE: J1001, J284, J990, J1065. NSI/ASAE- S201.4, S203.13, S205.2, S279.12, S350, EP363.1. ASTM: A370.

CUTTING HEAD: DRIVE BELT SYSTEM SHALL HAVE AUTOMATIC BELT TIGHTENER. CUTTER HEAD SHALL HAVE REPLACEABLE SKID SHOES. CUTTING BONNET THICKNESS SHALL BE 10 GAUGES, 80,000 LBS YIELD STEEL WITH 1/2" DRIVE SIDE AND 3/8" CARRIER SIDE STEEL END PLATES.

CUTTER HEAD SHALL HAVE 19" OF INBOARD TRAVEL AND NOT LESS THAN 9" CURB LIFT. CUTTER HEAD SHALL HAVE A CUTTING ARC OF NOT LESS THAN 150 DEGREES.

CUTTER SHAFT: SHALL HAVE 80 FORGED, HARDENED TO 40-50 RC, SELF CLEANING, REVERSIBLE ALL-PURPOSE KNIVES, OR 40 SMOOTH CUT GRASS KNIVES. CUTTER SHAFT SHALL HAVE OPERATING SPEED OF 2,400 RPM AT RATED TRACTOR RPM. CUTTER SHAFT SHALL BE A MINIMUM OF 6" DIAMETER AND 3/8" WALL WITH 2 3/16" DIAMETER BEARINGS MANUFACTURED IN THE US. EACH BEARING SHALL HAVE 2 3/8" SET SCREWS, COUNTER SUNK 60 DEGREES FROM EACH OTHER INTO THE CUTTER SHAFT, END SHAFT TO PREVENT MOVEMENT. CUTTER SHAFT SHALL HAVE A MAXIMUM CLEARANCE OF 3/32" FROM BEARING WRAP PROTECTION. KNIFE SWINGING CIRCUMFERENCE SHALL BE A MINIMUM OF 58 1/2" KNIFE INTERCHANGEABILITY SHALL NOT REQUIRE CHANGE OF CUTTER SHAFT.

GROUND ROLLER: SYSTEM SHALL BE A HORIZONTAL TUBE WITH A REPLACEABLE STUB SHAFTS LOCATED AT EACH END. A BEARING ASSEMBLY SHALL BE LOCATED IN THE ROLLER ADJUSTMENT BRACKET LOCATED AT EACH END OF THE CUTTER HOUSINGS, AND CONNECT TO THE ROLLER THROUGH STUB SHAFTS. GROUND ROLLER SHALL BE 8 5/8" OUTSIDE DIAMETER TUBE WITH .280" SIDE WALL WITH OUTER ENDS, CONSTRUCTED OF A 53 STEEL, HEAT TAPERED TO REDUCE SCALPING. STUB SHAFTS SHALL BE REPLACEABLE BOLT IN DESIGN WITH A 3 5/8" X 1/2" PILOTED FLANGE AND ATTACHED TO ROLLER WITH (4) 7/16" X 1 1/2" NC GRADE 8 INTERNAL HEX CAP SCREWS. STUB SHAFT TO BE A SOLID 1 PIECE DESIGN WITH 1 3/8" BEARING SURFACE AND MACHINED OF 36,000 PSI STEEL. A 1 3/8" DOUBLE ROW SPHERICAL BEARING SHALL SUPPORT ROLLER SHAFT ON EACH END. INNER BEARING AREA SHALL BE PROTECTED BY A FULL DOUBLE LIPPED SEAL. BEARING SHALL BE SECURED TO THE STUB SHAFT WITH A 2, 5/16" X 1/2" PILOTED SET SCREWS, LOCATED 60 DEGREES FROM EACH OTHER. OUTER BEARINGS SHALL BE O-RING SEALED.

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***** SPECIFICATION #18E012 *****

BOOM MOWERS 21' WITH REMOVABLE BOOM AND ABILITY TO ACCEPT SIDE ROTARY OR SIDE FLAIL ATTACHMENT

IT IS THE PURPOSE OF THE FOLLOWING SPECIFICATIONS TO DESCRIBE A SELF-PROPELLED, HYDRAULICALLY DRIVEN, BOOM TYPE MOWER, WHICH WILL MOW FORWARD AND RIGHT OF THE RIGHT REAR TIRE, AND EXTEND BY MEANS OF ARTICULATED, TWO-SECTION BOOM. THIS UNIT WILL BE CONSTRUCTED TO RECEIVE ANY OF THE LISTED BOOM HEAD OPTIONS. THE UNIT WILL BE OF THE MANUFACTURER'S CURRENT PRODUCTION MODEL, MEETING OR EXCEEDING THE TERMS OF THESE SPECIFICATIONS. UNIT(S) WILL BE THE MANUFACTURER'S MOST HEAVY-DUTY MODEL AVAILABLE. THE MANUFACTURER WILL FURNISH PARTS AND OPERATION MANUALS FOR THE UNIT(S) BID. THE MANUFACTURER WILL ALSO GUARANTEE EQUIPMENT AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF (1) YEAR.

BOOM:

THE PRIMARY BOOM STRUCTURAL TUBE WILL HAVE A MINIMUM OF THE FOLLOWING SECTIONAL PROPERTIES: TORSIONAL 74.9"4 BENDING (HORIZONTAL) 60.1"4 BENDING (VERTICAL) 23.8"4. THE PRIMARY BOOM WILL BE CONSTRUCTED OF 8"X6"X1/4" STEEL TUBE, AND REINFORCED WITH 3/8", T1 STEEL.

THE SECONDARY BOOM STRUCTURAL TUBE WILL HAVE A MINIMUM OF THE FOLLOWING SECTIONAL PROPERTIES: TORSIONAL 25.0"4 BENDING (HORIZONTAL) 22.1"4 BENDING (VERTICAL) 11.7"4. THE SECONDARY BOOM WILL BE CONSTRUCTED OF 6"X4"X1/4" STEEL TUBE, AND REINFORCED WITH 3/8", T1 STEEL.

BOOM SWIVEL BRACKET WILL BE TRIPLE ANCHORED WITH 1" THICK T-1 STEEL. ALL (3) ANCHORS WILL HAVE 360° GEASE GROOVE HARDENED SPRING STEEL REPLACEABLE SPLIT BUSHINGS. ALL (3) ANCHORS WILL EACH BE EQUIPPED WITH A GREASE ZERK.

BOOM WILL HAVE REPLACEABLE STEEL BRACKETED ACETAL LINED BEARING WITH GREASE POCKETS AT ALL PIVOT POINTS.

BOOM SWIVEL POINT WILL BE MOUNTED HIGH ENOUGH FOR THE BOOM ARM TO BE CAPABLE OF PASSING OVER A ROAD SIDE GUARD RAIL WITHOUT INTERRUPTION, AND BOOM WILL BE CAPABLE OF RESTING IN CRADLE MOUNTED ON RIGHT REAR SIDE OF TRACTOR FOR ROAD TRAVEL.

VERTICAL BOOM MOVEMENT WILL BE POWERED BY THE USE OF HYDRAULIC CYLINDERS, AND ALL BOOM PINNED PIVOT POINTS WILL BE GREASEABLE.

UNIT WILL BE EQUIPPED WITH A SINGLE ACTING, SINGLE SOLENOID TRAVEL LOCK THAT WILL LOCK THE DECK ROLL HYDRAULIC FUNCTION WHEN ENGAGED WITH THE BOOM ARM IN ITS TRAVEL REST.

JOYSTICK CONTROLS WILL BE SECURELY MOUNTED SO AS TO NOT INTERFERE WITH OTHER OPERATOR CONTROLS.

A POLYCARBONATE LEXAN WINDOW WILL BE INSTALLED TO PROVIDE SAFETY PROTECTION FOR THE OPERATOR. IT CAN BE INSTALLED IN PLACE OF, OVER THE GLASS, OR ATTACHED TO A FRAME ON THE RIGHT SIDE OF THE CAB WINDOWS.

BOOM DIMENSIONS ARE MEASURED FROM GROUND LEVEL AND THE TRACTOR'S CENTERLINE. BOOM REACH, HEIGHT, AND DEPTH MAY VARY DEPENDING UPON TRACTOR AND/OR TIRE CONFIGURATION.

MAINFRAME:

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MAINFRAME OF BOOM MOWER WILL BE SOLIDLY MOUNTED, BOLTED, AS WELL AS MID AND REAR BRACED TO TRACTOR MAIN MID-BODY TO ABSORB SIDE TORQUE AND IMPACT OF SEVERE APPLICATIONS.

MAINFRAME WILL HAVE THE ABILITY TO ACCEPT SIDE ROTARY OR FLAIL ATTACHMENTS AFTER REMOVING BOOM MOUNTING BRACKET.

CRANKSHAFT ADAPTER AND SPACER WILL BE BOLTED SECURELY TO THE FRONT OF THE CRANKSHAFT PULLEY WITH CAP SCREWS AND LOCK WASHERS FOR THE PUMP DRIVE SHAFT AND SPLINE COUPLING TO BE MOUNTED.

HYDRAULIC PUMP MOUNTING BRACKET WILL BE BOLTED SECURELY TO THE FRONT OF THE TRACTOR WITH SPACERS, AND WILL BE ABLE TO ALLOW THE HYDRUALIC GEAR PUMP TO BE MOUNTED AND PROPERLY CONNECTED WITH SPLINE COUPLING.

THE CONTROL BOX CONTAINING SOLENOID SWITCHES WILL BE FOR CONTROLLING HYDRAULIC FLOW FROM THE HYDRAULIC PUMP TO THE HYDRAULIC MOTOR. IT WILL BE MOUNTED IN A DRY AND WELL- PROTECTED AREA WITH WIRING ROUTED, AND A 30 AMP BREAKER IN THE CAB AREA.

ALL WIRING INSTALLED WILL BE PROPERLY ROUTED AND PROTECTED WITH PLASTIC WIRE COVER AND RUBBER BOOTS FOR PROTECTION.

ADDITIONAL HYDRAULIC VALVING WILL BE INSTALLED ON THE EXTERIOR OF THE RIGHT REAR CAB AREA SO VALVING WILL BE ACCESSIBLE TO THE OPERATOR.

WEIGHTS WILL BE ATTACHED PROPERLY TO TRACTOR WHEEL (SPECIFICALLY EXCLUDED WILL BE FRAME MOUNTED WEIGHT.)

ALL PROPER SAFELY STICKERS WILL BE ATTACHED TO THE BOOM MOWER.

FRONT-MOUNTED HYDRAULIC PUMP WILL BE PROTECTED BY A ½" PLATE STEEL STRUCTURE WHICH IS SOLIDLY MOUNTED TO THE TRACTOR BOLSTER. THE TRACTOR FRONT GRILLE AND HEADLIGHTS WILL BE PROTECTED BY A SIMILARY CONSTRUCTED STEEL PART MOUNTED TO THE ABOVE GUARD.

HYDRAULIC SYSTEM:

HYDRALIC OIL RESERVOIR WILL HAVE A FILTER WITH 10 MICRON ELEMENTS, 75 GPM RATED, AND A RESTRICTION GAUGE VISIBLE TO THE OPERATOR.

HYDRAULIC OIL RESERVOIR WILL HAVE A MINIMUM CAPACITY OF 35 GALLONS, WITH A MINIMUM OIL VOLUME OF 28 GALLONS TO THE SIGHT GLASS.

HYDRAULIC OIL RESERVOIR WILL BE EQUIPPED WITH A COMBINATION SIGHT GLASS AND THERMOSTAT.

HYDRAULIC OIL SUCTION WILL BE AN UNRESTRICTED 1.5" ID (SPECIFICALLY EXCLUDED WILL BE THE SUCTION FILTER AND SCREENS.)

HYDRAULIC OIL PRESSURE AND RETURN SYSTEM HOSES WILL BE 1" ID HIGH PRESSURE UNRESTRICTED. HOSES WILL HAVE A BURST PRESSURE 4X WORKING PRESSURE.

HYDRUALIC OIL PRESSURE, RETURN, AND LIFT SYSTEM STEEL HYDRAULIC LINES WILL BE MOUNTED AT THE REAR OF THE BOOM ARMS.

WIRE BRAID REINFORCED HYDRAULIC LINES WILL BE USED AT ALL FLEXIBLE POSITIONS ON THE BOOM ARM (HYDRAULIC HOSES/TUBING WILL NOT BE ALLOWED INSIDE BOOM ARMS.)

PUMP DRIVE SHAFT POWERS HYDRAULIC PUMP FOR POWER TO HYDRAULIC MOTOR, IS ATTACHED TO TRACTOR CRANKSHAFT, AND HAVE A RATING OF 180 HP.

HYDRUALIC PUMP WILL HAVE A RATING OF 98 HP INPUT, AND PUMP AND MOTOR WILL BE GEAR TYPE WITH CAST STEEL HOUSING AND STEEL GEARS (SPECIFICALLY EXCLUDED ARE ALUMINUM PUMPS, MOTORS, AND ALUMINUM GEARS.)

MAIN HYDRAULIC CONTROL VALVE WILL BE NON-RESTRICTIVE, ELECTRIC SOLEND TYPE, WITH STARTER LOCKOUT SWITCH (OPTIONAL HYDRAULIC BRAKE VALVE AVAILABLE.)

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HYDRAULIC OIL WILL BE COOLED BY AN AIR-TO-OIL COOLER EQUIPPED WITH A REVERSIBLE ELECTRIC FAN.

HYDRAULIC OIL FOR THE LIFT SYSTEM WILL BE SUPPLIED BY FRONT MOUNTED PUMP, AND WILL BE FILTERED BY A 10-MICRON HIGH PRESSURE FILTER.

HYDRAULIC CYLINDERS:

PRIMARY LIFT CYLINDER WILL BE SINGLE ACTING, INDUSTRIAL TYPE, WELDED, EQUIPPED WITH NITROGEN ACCUMULATOR, AND AN AUTO-CUSHIONING DEVICE.

ALL CYLINDERS ARE HEAVY DUTY INDUSTRIAL TYPE, NITRO STEEL ROD WELDED, AND ALL CYLINDER PINNED PIVOT POINTS WILL BE GREASEABLE.

HYDRAULIC LIFT CYLINDERS WILL BE MOUNTED ON THE TOP SIDE OF BOOM ARMS.

REAR CRADLE:

THE REAR CRADLE (TRAVEL REST) WILL BE AXLE MOUNTED, SPECIFICALLY EXCLUDING 3-POINT HITCH CRADLE MOUNTS.

THE REAR CRADLE (TRAVEL REST) WILL BE CONSTRUCTED OF 5"X5" AND 3"X3" TUBING 3/8" WALL THICKNESS.

HYDRAULIC ACTUATOR:

THE BOOM CAN PIVOT 180° FRONTWARD AND REARWARD.

WHILE OPERATING IN FORWARD AND REVERSE DIRECTION, THE BOOM HAS BREAK-AWAY PROTECTION.

THE BOOM PIVOT WILL BE HYDRAULICALLY DRIVEN AND FULLY ENCLOSED.

JOYSTICK:

ELECTRONIC JOYSTICK WITH A 4/5 BANK ELECTRO-HYDRAULIC PROPORTIONAL, AND MANUAL OVERRIDE AT OPERATORS' POSITION.

JOYSTICK CONTROLS WILL BE SECURELY MOUNTED SO AS TO NOT INTERFERE WITH OTHER OPERATOR CONTROLS.

OPTIONAL 50" ROTARY MOWER HEAD:

SAFETY SPECIFICATIONS:

UNIT WILL MEET OR EXCEED THE FOLLOWING INDUSTRY STANDARDS: SAE J232, J115, J517, J920, J1150, J1170, ANSI/SAE S441.1, EP363.1, S390.1, S203.13, S217.11, S278.6, S318.14, S483, AND ASTM A370. A COMPLIANCE REPORT WILL BE AVAILABLE UPON REQUEST.

CUTTING HEAD:

THE CUTTING HEAD WILL HAVE 435° OF COMBINED ROTATION, 50" OF ACTUAL CUT, AND WEIGH AT LEAST 831 LBS.

DECK WILL BE 11 GAUGE, 110,000 PSI RATED DOMEX STEEL HOUSING WITH 3/8" THICK, 80,000 PSI MINIMUM RATED STEEL SIDE WALLS, WITH FULL LENGTH REPLACEABLE SKID SHOES OR INNER AND OUTER ENDS.

THE CUTTING HEAD WILL HAVE A SPRING LOADED, RETRACTABLE SHIELD FOR DEFLECTING DEBRIS AS WELL AS PROTECTION FROM KNIFE BLADES. (OPTIONAL HYDRAULICALLY OPERATED SHIELD ACTUATED BY A 2" X 8" CYLINDER, CONTROLLED FROM WITHIN THE CAB.)

HYDRAULIC MOTOR WILL HAVE A MINIMUM RATING OF 99 HP.

CUTTING HEAD WILL BE ATTACHED TO THE SPINDLE BY (6), 5/8" GRADE-8 BOLTS WITH TAPERED BOLT PROTECTOR.

CUTTING ASSEMBLY WILL BE A 23-1/4" SOLID 1" THICK STEEL DISH WITH (3) RADIAL CUTOUTS, AND (3) CASE HARDENED, THREADED INSERTS WELDED INTO PLACE.

CUTTING ASSEMBLY WILL ACCOMMODATE (3) 5/8" X 5" X 17-3/16" 360° SWINGING, SINGLE EDGED BRUSH OR GRASS SUCTION KNIVES. THESE KNIVES WILL BE ATTACHED TO THE DISH WITH HEXAGONAL BLADE BOLTS, CASTLE NUTS AND ROLL PINS.

SPINDLE:

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THE SPINDLE WILL BE ONE PIECE 8630 STEEL, MOUNTED IN STRAIGHT ROLLER BEARINGS, 6.5" IN DIAMETER AT ITS LARGEST AREA X 13" LONG, WITH BEARING DIAMETER OF 2.755" WITH A MINIMUM OF 4.5" BETWEEN BEARING CENTERS.

SPINDLE WILL BE DIRECT COUPLED WITH A SPLINED END, AND HAVE MINIMUM SPEED OF 1,500 RPM.

SPINDLE WILL BE EQUIPPED WITH AN EASILY-SERVICEABLE INSERT, MACHINED FROM 1117 STEEL. INSERT WILL HAVE A LOWER FAILURE POINT THAN THE MOTOR OUTPUT SHAFT OR THE SPINDLE SHAFT.

SPINDING HOUSING WILL BE ATTACHED TO THE CUTTING HEAD SO AS TO ABSORB 240,000 LBS. OF SHEAR STRENGTH, AND DISTRIBUTE THIS LOAD OVER AN AREA OF 169 INCHES

OPTIONAL 60" ROTARY MOWER HEAD:

SAFETY SPECIFICATIONS:

UNIT WILL MEET OR EXCEED THE FOLLOWING INDUSTRY STANDARDS: SAE J232, J115, J517, J920, J1150, J1170, ANSI/SAE S441.1, EP363.1, S390.1, S203.13, S217.11, S278.6, S318.14, S483, AND ASTM A370. A COMPLIANCE REPORT WILL BE AVAILABLE UPON REQUEST.

CUTTING HEAD:

THE CUTTING HEAD WILL HAVE 435° OF COMBINED ROTATION, 60" OF ACTUAL CUT, AND WEIGH AT LEAST 965 LBS.

THE CUTTING HEAD WILL HAVE A SPRING LOADED, RETRACTABLE SHIELD FOR DEFLECTING DEBRIS AS WELL AS PROTECTION OF KNIFE BLADES. (OPTIONAL HYDRAULICALLY OPERATED SHIELD ACTUATED BY A 2" X 8" CYLINDER, CONTROLLED FROM WITHIN THE CAB.

HYDRAULIC MOTOR WILL HAVE A MINIMUM RATING OF 99 HP.

CUTTING HEAD WILL BE ATTACHED TO THE SPINDLE BY (6), 5/8" GRADE-8 BOLTS WITH TAPERED BOLT PROTECTOR.

CUTTING ASSEMBLY WILL BE A 23-1/4" SOLID 1" THICK STEEL DISH WITH (3) RADIAL CUTOUTS, AND (3) CASE HARDENED, THREADED INSERTS WELDED INTO PLACE.

CUTTING ASSEMBLY WILL ACCOMMODATE (3) 5/8" X 5" X 17-3/16" 360° SWINGING, SINGLE EDGED BRUSH OR GRASS SUCTION KNIVES. THESE KNIVES WILL BE ATTACHED TO THE DISH WITH HEXAGONAL BLADE BOLTS, CASTLE NUTS AND ROLL PINS.

SPINDLE:

THE SPINDLE WILL BE ONE PIECE 8630 STEEL, MOUNTED IN STRAIGHT ROLLER BEARINGS, 6.5" IN DIAMETER AT ITS LARGEST AREA X 13" LONG, WITH BEARING DIAMETER OF 2.755" WITH A MINIMUM OF 4.5" BETWEEN BEARING CENTERS.

SPINDLE WILL BE DIRECT COUPLED WITH A SPLINED END, AND HAVE MINIMUM SPEED OF 1,500 RPM.

SPINDLE WILL BE EQUIPPED WITH AN EASILY-SERVICEABLE INSERT, MACHINED FROM 1117 STEEL. INSERT WILL HAVE A LOWER FAILURE POINT THAN THE MOTOR OUTPUT SHAFT OR THE SPINDLE SHAFT.

SPINDING HOUSING WILL BE ATTACHED TO THE CUTTING HEAD SO AS TO ABSORB 240,000 LBS. OF SHEAR STRENGTH, AND DISTRIBUTE THIS LOAD OVER AN AREA OF 169 INCHES

OPTIONAL 50" BOOM FLAIL MOWER HEAD:

SAFETY SPECIFICATIONS:

UNIT WILL MEET OR EXCEED THE FOLLOWING INDUSTRY STANDARDS: SAE J1001, J115, J208, J715, J898, J909, J920, J1150, J1500, ANSI/SAE S441, S318.7, S217.10, S278.6, EP363, AND ASTM A370. A COMPLIANCE REPORT WILL BE AVAILABLE UPON REQUEST.

CUTTING HEAD:

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CUTTING HEAD WILL HAVE 435° OF COMBINED ROTATION, WEIGHT A MINIMUM OF 1,068 LBS, AND 50" OF ACTUAL CUT.

CUTTING HEAD DECK WILL HAVE 1000,000 LB. RATED STEEL HOUSING, MINIMUM OF ¼" X 25" SOLID STEEL SIDEWALLS, AND HAVE REPLACEABLE SKID SHOES.

HYDRAULIC MOTOR WILL HAVE A RATING OF 81.3 HP, AND MOTOR ASSEMBLIES WILL HAVE AUTOMATIC BELT SELF-TENSIONERS.

CUTTING BONNET THICKNESS WILL BE A MINIMUM OF 1/8".

CUTTER SHAFT:

CUTTING SHAFT WILL HAVE A MINIMUM OF (48) DUAL PURPOSE, 2 LBS., 8" IN LENGTH, BRUSH AND GRASS KNIVES. KNIVES WILL BE 10MM THICK, AND BE CAPABLE OF CUTTING BRUSH 6" IN DIAMETER. KNIVES WILL BE MOUNTED WITH 1" GRADE 8 BOLTS TO THE CUTTING SHAFT. KNIVES WILL BE REVERSIBLE.

CUTTING SHAFT WILL BE A MINIMUM OF 6" IN DIAMETER, WITH 2-3/16" DIAMETER STUB SHAFTS AND BEARINGS. CUTTING SHAFT BEARINGS WILL BE OF THE GRIP TIGHT DOUBLE SHIELDED TYPE.

BLADE CUTTING DIAMETER WILL BE 23".

CUTTING SHAFT RPM WILL BE A MINIMUM OF 1700 (TIP SPEED OF 10224 FPM.)

CUTTING HEADS WILL HAVE 6-5/8" DIAMETER ROLLERS, CONSTRUCTED OF SCHEDULE 40 DOM TUBING. LEFT AND RIGHT OUTER EDGES OF GROUND ROLLER WILL BE TAPERED AT 45° DOWN TO A DIAMETER OF 4.81" TO MINIMIZE TURF DAMAGE DURING TURNS.

GROUND ROLLER:

CUTTING HEADS WILL HAVE 6-5/8" DIAMETER ROLLERS, CONSTRUCTED OF SCHEDULE 40 DOM TUBINGS. LEFT AND RIGHT OUTER EDGES OF GROUND WILL BE TAPERED AT 45° DOWN TO A DIAMETER OF 4.81" TO MINIMIZE TURF DAMAGE DURING TURNS.

GROUND ROLLER BEARINGS WILL BE KOYO 2580-2520, WITH FOUR BEARINGS PER GROUND ROLLER. BEARINGS WILL BE PROTECTED INSIDE GROUND ROLLER TUBE, SPECIFICALLY EXCLUDING EXTERNAL-MOUNTED BEARING SYSTEMS.

GROUND ROLLER BEARINGS WILL BE LUBRICATED IN OIL BATH, WHICH WILL BE CHANGED ON AN ANNUAL BASIS. SPECIFICALLY EXCLUDING BEARING SYSTEMS THAT REQUIRE DAILY MAINTENANCE OR ARE LUBRICATED WITH GREASE.

GROUND ROLLER BEARINGS WILL COME STANDARD WITH 2-YEAR WARRANTY.

OPTIONAL 48" BOOM SAW HEAD

CUTTING HEAD:

CUTTING HEAD WILL HAVE 435° OF COMBINED ROTATION, AND WIDTH WILL BE 48" OF ACTUAL CUT.

CUTTING HEAD BAR WILL BE CONSTRUCTED OF S3/8" AND ½" THICK, 80,000 PSI MINIMUM RATED GRADE 80 STEEL, AND BE EQUIPPED WITH A BLADE ANTI-WARP RESISTANT RING.

THE CUTTING WILL HAVE A BLADE NOT LESS THAN 9/32" THICK, AND A CENTERING PILOT HOLE.

A BLADE WITH REPLACEABLE TEETH MACHINED IN THE OUTER EDGE OF THE BLADE. THE SAW TEETH WILL MAKE A ½" CUT, BE REPLACEABLE BY A SINGLE RIVET, AND REPLACEABLE INDUSTRIAL GRADE CARBIDE TIP SILVER SOLDERED TO THE TOOTH BODY. (OPTIONAL: TOOTH REMOVAL/REPLACEMENT TOOL AND TOOTH SHARPENING TOOL ARE AVAILABE.)

THE HEAD WILL WEIGH NOT LESS THAN 780 LBS., BE ATTACHED TO THE SPINDLE BY (6), 5/8" GRADE-8 BOLTS WITH TAPERED BOLT PROTECTOR, AND IS EQUIPPED WITH (30) REPLACEABLE CARBIDE TIPS.

THE BLADE WILL PROTRUDE 8.25" OUTSIDE OF CIRCULAR HOUSING.

CUTTING ASSEMBLY IS ROTARY, HYDRAULICALLY DRIVEN, AND THE HYDRAULIC MOTOR WILL HAVE A RATING OF 99 HP.

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SPINDLE:

THE SPINDLE WILL BE ONE PIECE 8630 STEEL, MOUNTED IN STRAIGHT ROLLER BEARINGS, 6.5" IN DIAMETER AT ITS LARGEST AREA X 13" LONG, WITH BEARING DIAMETER OF 2.755" WITH A MINIMUM OF 4.5" BETWEEN BEARING CENTERS.

SPINDLE WILL BE DIRECT COUPLED WITH A SPLINED END, AND HAVE A MINIMUM SPEED OF 1,500 RPM.

SPINDLE WILL BE EQUIPPED WITH AN EASILY-SERVICEABLE INSERT, MACHINED FROM 1117 STEEL. INSERT WILL HAVE A LOWER FAILURE POINT THAN THE MOTOR OUTPUT SHAFT OR THE SPINDLE SHAFT.

SPINDLE HOUSING WILL BE ATTACHED TO THE CUTTING HEAD SO AS TO ABSORB 240,000 LBS. OF SHEAR STRENGTH, AND DISTRIBUTE THIS LOAD OVER AN AREA OF 169 INCHES

OPTIONAL 22" DITCHER HEAD

CUTTING HEAD:

THE CUTTING HEAD WILL HAVE A MINIMUM WEIGHT OF 600 LBS., AND A CUTTING WIDTH OF 22" OF ACTUAL CUT.

CUTTING ASSEMBLY BE STEEL DISK NOT LESS THAN 1/2" THICK WITH 3 GUSSETED KNIFE MOUNTING PADS, AND 3 GUSSETED CLEAN UP MOUNTING PADS ATTACHED.

CUTTING ASSEMBLY IS ROTARY, HYDRAULICALLY DRIVEN, EQUIPPED WITH 3 REPLACEABLE KNIVES, NOT MORE THAN 3/8" THICK, AND 3 CLEAN UP PADDLES.

THE CUTTING ASSEMBLY WILL HAVE A 3/8" STEEL BONNET, WITH 3/8" THICK, ABRASION RESISTANT TYPE, REPLACEABLE WEAR LINER, A HYDRAULICALLY CONTROLLED DEFLECTOR CHUTE. (OPTIONAL: CUTTING ASSEMBLY WILL BE REVERSIBLE WHEN USING REVERSE HEAD.)

THE DITCHING HEAD WILL HAVE A PLANETARY GEAR REDUCTION RATIO OF 4.5:1. THE INPUT SHAFT WILL BE A 14 TOOTH INVOLUTE SPLINE, WITH A KEYED 2" OUTPUT SHAFT.

THE OUTPUT TORQUE WILL BE RATED @30,000 INCH LBS.

THE HYDRAULIC MOTOR WILL HAVE A RATING OF 65 HP.

SPINDLE:

SPINDLE WILL BE ONE PIECE FORGED STEEL, MOUNTED IN DOUBLE TAPERED ROLLER BEARINGS AND BEARINGS WILL BE SEALED WITH AN OIL BATH.

SPINDLE FOR POWER TO CUTTING ASSEMBLY WILL BE 7-1/4" IN DIAMETER AT ITS LARGEST AREA, 13-3/8" LONG, WITH A 2-7/8" ID LOWER BEARING AND A 2" ID UPPER BEARING, WITH A MINIMUM OF 5-1/32" BETWEEN BEARING CENTERS.

SPINDLE WILL HAVE A 1-9/16" INVOLUTE 24 SPLINE DRIVE WITH FLEXIBLE COUPLER AND DUST COVER (SPECIFICALLY EXCLUDED IS THE DIRECT COUPLED MOTOR SPINDLE ASSEMBLY.)

SPINDLE HOUSING WILL BE ATTACHED TO THE CUTTING HEAD SO AS TO ABSORB 240,000 LBS. OF SHEAR STRENGTH, AND DISTRIBUTE THIS LOAD OVER AN AREA OF 169 INCHES

SPINDLE WILL HAVE A WIRE GUARD PROTECTION, AND A SPEED RATED @540 RPM.

OPTIONAL 48" SAW BLADE:

GENERAL: SAW BLADE SHALL BE INTERCHANGEABLE WITH STANDARD CUTTING DISK ASSEMBLY.

BLADE: SHALL NOT BE LESS THAN 48" INCHES OUTSIDE DIAMETERS. THICKNESS SHALL NOT BE LESS THAN 9/32", SHALL HAVE A CENTERING PILOT HOLE, SHALL HAVE AT LEAST (6) 5/8" X 3" GRADE 8 MOUNTING BOLTS.

SHALL HAVE REPLACEABLE TEETH MACHINED IN OUTER EDGE. SHALL HAVE A 5/16" THICK, 16" DIAMETER REINFORCING PLACE ON EACH SIDE OF THE BLADE.

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CLAMPING ARBOR: SHALL CONSIST OF A TWO PIECE MACHINED ARBOR THAT SUPPORTS THE BLADE ON TOP AND BOTTOM AND CLAMPING BLADE AT THE OUTER EDGE OF THE ARBOR.
 SAW TOOTH: SAW BLADE SHALL HAVE A MINIMUM OF 30 CARBIDE TIPPED TEETH, SHALL BE CAPABLE OF MAKING A 1/2" CUT, SHALL HAVE A MACHINED FIT TO BLADE, SHALL BE REAPLCEABLE BY A SINGLE RIVET, SHALL HAVE REPLACEABLE INDUSTRIAL GRADE CARBIDE TIP SILVER.

***** **SPECIFICATION #18E013** *****

TELESCOPING BOOM MOWER SPECIFICATIONS:

22' TO 24' AND 26' TO 30' MID MOUNTED, TELESCOPING, HYDRAULICALLY POWERED BOOM MOWER FOR CUTTING GRASS AND BRUSH ON ROADSIDES AND OTHER AREAS THAT ARE NOT ACCESSIBLE TO CONVENTIONAL MOWING EQUIPMENT. THE UNIT BID SHALL BE MANUFACTURE'S CURRENT PRODUCT MODEL THAT MEETS OR EXCEEDS THE FOLLOWING MINIMUM SPECIFICATIONS. ONLY A STANDARD PRODUCTION MACHINE CAN BE BID ON THESE SPECIFICATIONS AND AS A SUPPLIER WILL NOT BE ALLOWED TO MODIFY HIS STANDARD PRODUCTION UNIT IN ORDER TO MEET THESE SPECIFICATIONS.

FRAME & MOUNTING:

THE UNIT FRAME SHALL BE MID-MOUNTED TO UNDERSIDE OF A SUITABLE SIZE TRACTOR UTILIZING A MODULAR CENTER WELDMENT WITH FRONT AND REAR ATTACHING RAILS. FRAME MOUNT SHALL PROVIDE FOR UNRESTRICTED MOVEMENT OF BOOM AND OFFER LIMITED OBSTRUCTIONS TO FORWARD VISION.

FRAME SHALL BE OF MODULAR CONSTRUCTION FROM ALLOY STEEL AND SHALL BE COMPLETELY BOLTED DURING INSTALLATION (NO WELDING).

THE BOOM SHALL UTILIZE A SLEWING RING BEARING FOR BOOM FUNCTION. THE RING SHALL BE MATED BY MEANS OF A TURRET 4,500LBS. OF COUNTER WEIGHT INTEGRAL WITH FRAME SHALL BE REQUIRED. WHEEL WEIGHT SHALL BE CONFIGURED TO TRACTOR/ BOOM COMBINATION.

BOOM FEATURES & CAPABILITIES:

BOOM FEATURES:

STANDARD BOOM STRUCTURE SHALL BE CONSTRUCTED OF A DESIGNED, BOX SECTION GEOMETRY, FOR OPTIUM STRENGTH TO WEIGHT RATIO.

THE BOOM SHALL FEATURE THREE MAIN COMPONENTS; LIFT, OUTER DIPPER, AND TELESCOPIC SECTIONS.

THE LIFT COMPONENT BOX SECTION SHALL BE A MINIMUM OF 11" TALL X 6" WIDE.

THE OUTER DIPPER COMPONENT BOX SECTION SHALL BE A MINIMUM OF 10" TALL X 6" WIDE.

THE TELESCOPIC BOX SECTION SHALL BE A MINIMUM OF 4.5" TALL X 4.5" WIDE, AND SHALL EXTEND OUT A MINIMUM OF 3'.

THE TELESCOPIC SECTION SHALL PROVIDE 6 ADJUSTABLE, SLIDE PUCK ASSEMBLIES.

MAIN PIVOTS SHALL UTILIZE 2" SCHROME PINS WITH GREASEABLE, HARDENED STEEL BUSHINGS. FRONT AXLE STABILIZER STANDARD.

BOOM MOVEMENT:

STANDARD BOOM FUNCTIONS SHALL FEATURE HORIZONTAL SWING, VERTICAL LIFT, DIPPER REACH, TELESCOPIC REACH, AND MOWER HEAD TILT.

BOOM SWING ANGLE SHALL BE CUSTOMIZED PER TRACTOR TO ACCOMMODATE BUTTING WITH 12" OF FROM TIRE.

BOOM SWING SHALL BE CONTROLLED BY TWO STANDARD DUAL ACTING CYLINDERS.

BOOM SWING SHALL BE A MINIMUM OF 180 DEGREES.

THE TELESCOPIC REACH SHALL BE A MINIMUM OF 3' FULLY EXTENDED.

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THE MINIMUM REACH UP SHALL MEET 21' -10".

THE MINIMUM REACH OUT SHALL MEET 24' WITH TELESCOPIC SECTION FULLY EXTENDED.

THE MINIMUM REACH DOWN SHALL BE 14' -8" BELOW TRACTOR GROUND LEVEL.

BOOM MOWER HEAD SHALL HAVE THE ABILITY TO MOW HORIZONTALLY WITHIN 6" OF THE REAR TRACTOR TIRE.

NOTE: ALL MEASUREMENTS ARE BASED ON A 96" OUTSIDE TIRE SPREAD WITH 18.4 X 34 TIRES.

OPERATION & POWER:

HYDRAULICS:

THE UNIT SHALL FEATURE A SELF-CONTAINED CIRCUIT FOR BOTH MOWING HEAD AND BOOM CONTROL CIRCUIT.

THE MOWING HEAD CIRCUIT SHALL FEATURE A CLOSED-LOOP HYDROSTATIC VARIABLE DISPLACEMENT PISTON PUMP RATED AT 101.8 HORSEPOWER.

THE HYDROSTATIC PUMP SHALL PROVIDE A NO-FLOW NEUTRAL POSITION WHILE MOWING HEAD CIRCUIT IS "OFF".

THE HYDROSTATIC PUMP SHALL FEATURE A CHARGE PUMP TO REFRESH AND COOL THE CUTTER CIRCUIT.

BOOM CONTROL CIRCUIT SHALL FEATURE A LOAD-SENSING, VARIABLE DISPLACEMENT PISTON PUMP RATED AT 44 HP CONTINUOUS WITH 4,000 PSI PEAK PRESSURE.

BOTH PUMPS SHALL PROVIDE INTERNAL RELIEF FOR COMPONENT PROTECTION.

ALL HIGH-PRESSURE HYDRAULIC HOSES SHALL BE OF FOUR-WIRE BRAID CONSTRUCTION WITH A MINIMUM RATING OF SAE100R12.

HYDRAULIC FLUID MUST BE OF A SUPERIOR GRADE WITH ANTI-WEAR ADDITIVES THAT CONFORM IS ISO AW VISCOSITY GRADE 68.

HYDRAULIC RESERVOIR:

THE UNIT SHALL HAVE A 32 GALLON FRON MOUNED HYDRAULIC RESEROIR FOR IMPROVED OPERATOR VISIBILITY, SAFETY, AND OPERATOR ACCESS. (SIDE MOUNTED TANKS WILL NOT BE ACCEPTED.)

THE RESERVOIR SHALL FEATURE VISUAL INDICATION OF TANK LEVEL AND TEMPERATURE TO INSURE PROPER VOLUME LEVELS AND MANTAINED IN ORDER TO SUPPORT MOTOR AND BOOM CONTROL CIRCUITS.

CONVENIENTLY ACCESSED POINTS FOR DRAINING AND CLEANING OF RESERVOIR SHALL BE FEATURED.

FRONTAL PROTECTION FOR THE RESERVOIR SHALL BE PROVIDED BY A HEAVY-DUTY STEEL BUMPER PLATE.

A DURABLE, 2-PIECE FORMED PLASTIC COVER, WITH FIBERGLASS BACKING, SHALL BE HINGED TO PROVIDE ACCESS TO COMPONENTS.

CYLINDER CONTROL VALVE:

THE UNIT SHALL FEATURE A MONO-BLOCK, 7 SECTION, ELECTRO-HYDRAULIC, MULTI DIRECTIONAL CONTROL VALVE.

THE VALVE SHALL INCLUDE LOAD-SENSING AND SECTION SPECIFIC PRESSURE COMPENSATION. VALVE SHALL HAVE 3,500 PSI MAIN RELIEF.

THE VALVE SHALL ALLOW A MINIMUM OF FOUR FUNCTIONS TO BE OPERATED SIMULTANEOUSLY.

THE SWING LIFT, DIPPER, AND DOOR SECTIONS SHALL HAVE PROPORTIONAL VALVE CONTROL.

THE CYLINDER VALVE SHALL BE PROTECTED FROM FALLING DEBRIS BY A COVER.

THE MAIN CONTROL VALVE SHALL FEATURE A MANUAL OVER-RIDE FOR EACH SPOOL IN CASE OF JOYSTICK FAILURE.

FILTRATION:

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THE UNIT SHALL FEATURE A PRESSURE FILTER PROVIDING A MINIMUM OF ISO 4406 CLASS 18/13.

THE UNIT SHALL ALSO FEATURE A HYDROSTAT CHARGE SUCTION FILTER PROVIDING A MINIMUM OF 100 MESH FILTRATION AT FULL FLOW.

THE CONTROL VALVE FILTER SHALL PROVIDE A MINIMUM OF ISO 4406 CLASS 18/13.

A SECONDARY CONTROL PUMP SUCTION FILTER SHALL BE FEATURED PROVIDING A MINIMUM OF 100 MESH FILTRATION AT PULL FLOW.

DRIVE SYSTEM:

A TELESCOPIC DRIVELINE WITH GREASEABLE UNIVERSAL JOINTS SHALL BE FEATURED TO ACCOMMODATE INSTALLATION AND MAINTENANCE.

THE DRIVELINE SHALL BE HARD MOUNTED TO ENGINE CRANKSHAFT AND SECURED TO PUMP SHAFT WITH DOUBLE-BOLT STYLE CLAMPING YOKE.

STANDARD TUBE DIAMETER SHALL BE AT A MAXIMUM 2" ROUND WITH 14-GAUGE WALL THICKNESS.

ULTIMATE STRENGTH OF DRIVELINE SHALL BE 33,5742 INCH POUND OF TORQUE.

A COVER SHALL BE FEATURED TO PROVIDE SHIELDING OF HIGH SPEED ROTATING PARTS.

COOLING UNIT:

THE HYDRAULIC SYSTEM SHALL CONTAIN AN OIL-TO-AIR COOLER WITH ELECTRIC FAN.

THE CONTROL FAN SHALL BE THERMOSTATICALLY CONTROLLED AND FEATURE AN AUDIBLE ALARM AND RED WARNING INDICATOR TO INDICATE OVER TEMP SITUATION.

BOOM CONTROL:

ALL VALVE FUNCTIONS ARE ELECTRONICALLY OPERATED BY MEANS OF A SINGLE JOYSTICK.

JOYSTICK BASE SHALL HAVE INDICATOR LIGHTS TO VERIFY MOWER HEAD ENGAGEMENT, FAN ON, AND SYSTEM OVERHEATING.

TRACTOR REQUIREMENTS:

THE SUITABLE TRACTOR SHALL BE A 4 WHEEL DRIVE MINIMUM OF 10,500 LBS. AND FEATURE A MINIMUM PTO HORSEPOWER RATING OF 86HP.

THE TRACTOR SHALL FEATURE A MINIMUM 101" WHEELBASE.

THE TRACTOR SHALL FEATURE A MINIMUM 18" GROUND CLEARANCE.

OPERATOR PROTECTION & SAFETY:

THE MOWER CUTTER HEAD SHALL HAVE A SIX-SECOND EMERGENCY SHUT DOWN ENGAGED BY THE OPERATOR FROM INSIDE THE TRACTOR CAB. THE BUTTON SHALL BE LOCATED WITHIN EASY REACH FOR COMPLETE POWER SHUT OFF OF MOTOR CIRCUIT. THE BOOM CONTROLS SHALL FEATURE A MASTER ON/OFF SWITCH FOR COMPLETE POWER SHUT DOWN.

THE "ENABLE" FUNCTION SHALL BE INCORPORATED INTO CONTROLS TO PREVENT INCIDENTAL BOOM MOVEMENT.

POLYCARBONATE (LEXAN) WINDOW PROTECTION SHALL BE OFFERED AS A STANDARD ON CAB TRACTORS AS WELL AS ON ROPS TRACTOR VARIATIONS.

OPTIONAL CUTTING HEADS:

OPTION 1 – 60" HEAVY-DUTY ROTARY CUTTING HEAD:

THE UNIT SHALL HAVE A MINIMUM CUTTING WIDTH OF 58".

THE CENTER HEAD SHALL CUT GRASS, WEEDS, AND BRUSH UP TO 5" DIAMETER.

THE CUTTING HEAD TOP DECK SHALL BE CONSTRUCTED USING A MINIMUM OF A606 ALLOY STEEL OR EQUIVALENT.

THE SIDE SKIRTS SHALL BE CONSTRUCTED USING A MINIMUM OF 3/8" STEEL.

TOP OF THE DECK SHALL BE REINFORCED WITH A CHANNED FRAME AND A REINFORCED SPINDLE MOUNT PLATE.

THE CUTTING HEAD SHALL FEATURE FULL-LENGTH, REPLACEABLE SKID-SHOES.

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SPINDLE:

THE SPINDLE SHALL BE A MINIMUM OF 4-1/2" X 9: HEAT TREATED ALLOY TOOL STEEL.
THE SPINDLE BEARING SHALL BE TAPERED ROLLER BEARINGS, 2-1/2" ID TOP AND 2-5/8" ID BOTTOM, IN A SEALED HOUSING.

BLADE CARRIER AND BLADES:

THE BLADE CARRIER SHALL BE THREE LEAF, STACKED BLADE-BAR TYPE WITH THE BOTTOM LEAF BEING MADE OUT OF T-1 STEEL.

THE BLADES SHALL BE 5/8" X 5" X 14-5/8", 360 DEGREES FULL SWINGING, DOUBLE-EDGED, AND CONSTRUCTED OF TEMPERED STEEL.

OPERATION & POWER MOTOR:

THE MOTOR SHALL BE A CAST-IRON, PISTON-TYPE, RATED AT 205HP AT 4,100 RPM AND 6,000 PSI.

THE SPINDLE SPEED SHALL BE A MINIMUM OF 1,220 RPM AND 4,916 IN.LB. OR TORQUE.

MOTOR DRIVE:

THE MOTOR DRIVE SHALL BE DIRECT DRIVE, SPLINED AND TOTALLY ENCLOSED. THIS SPECIFICALLY EXCLUDES A CHAIN OR DODGE COUPLER.

OPTION 2 – SAW BLADE TREE LIMB CUTTER:

26" DIAMETER BLADES, 3/16" THICK, 60 TEETH PER BLADE.

TENSION ADJUSTABLE BELT.

PRE-LOADED TAPERED ROLLER BEARINGS.

10 GAUGE REAR SAFETY SHIELD.

CHOICE OF 2, 3, OR 4 BLADES.

OPTION 3 – FLAIL AXE CUTTER HEAD:

CUTTER HEAD WIDTH 48" MINIMUM

SHALL CUT BRUSH AND OTHER VEGETATION UP TO 4" DIAMETER.

ADJUSTABLE GREASEABLE REAR ROLLER TO ADJUST CUTTING HEIGHT FROM 1 1/2" TO 6 1/2".

CUTTERSHAFT OUTSIDE DIAMETER 4 1/2" W 3/8" WALL.

3 5"V" V-BELTS SHALL DRIVE CUTTERSHAFT.

SHALL BE 16 BLADES, 3" WEIGHT 2 LBS.

***** SPECIFICATION #18E014 *****

BOOM MOWERS 22', 23', 25', 28', AND 30'

IT IS THE PURPOSE OF THE FOLLOWING SPECIFICATIONS TO DESCRIBE A SELF-PROPELLED, HYDRAULICALLY DRIVEN, BOOM TYPE MOWER, WHICH WILL MOW FORWARD AND RIGHT OF THE RIGHT REAR TIRE, AND EXTEND BY MEANS OF AN ARTICULATED, TWO-SECTION BOOM. THIS UNIT WILL BE CONSTRUCTED TO RECEIVE ANY OF OUR LISTED BOOM HEAD OPTIONS. THE UNIT WILL BE OF THE MANUFACTURER'S CURRENT PRODUCTION MODEL, MEETING OR EXCEEDING THE TERMS OF THESE SPECIFICATIONS. UNIT(S) WILL BE THE MANUFACTURER'S MOST HEAVY-DUTY MODEL AVAILABLE. THE MANUFACTURER WILL FURNISH PARTS AND OPERATION MANUALS FOR THE UNIT(S) BID. THE MANUFACTURER WILL ALSO GUARANTEE EQUIPMENT AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF (1) YEAR.

BOOM:

THE PRIMARY BOOM STRUCTURAL TUBE WILL HAVE A MINIMUM OF THE FOLLOWING SECTIONAL PROPERTIES: TORSIONAL 74.9"4 BENDING (HORIZONTAL) 60.1"4 BENDING (VERTICAL) 23.8"4. THE PRIMARY BOOM WILL BE CONSTRUCTED OF 8"X6"X1/4" STEEL TUBE, AND REINFORCED WITH 3/8", T1 STEEL.

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THE SECONDARY BOOM STRUCTURAL TUBE WILL HAVE A MINIMUM OF THE FOLLOWING SECTIONAL PROPERTIES: TORSIONAL 25.0"4 BENDING (HORIZONTAL) 22.1"4 BENDING (VERTICAL) 11.7"4. THE SECONDARY BOOM WILL BE CONSTRUCTED OF 6"X4"X1/4" STEEL TUBE, AND REINFORCED WITH 3/8", T1 STEEL.

BOOM SWIVEL BRACKET WILL BE TRIPLE ANCHORED WITH 1" THICK T-1 STEEL. ALL (3) ANCHORS WILL HAVE 360° GEASE GROOVE HARDENED SPRING STEEL REPLACEABLE SPLIT BUSHINGS. ALL (3) ANCHORS WILL EACH BE EQUIPPED WITH A GREASE ZERK.

BOOM WILL HAVE REPLACEABLE STEEL BRACKETED ACETAL LINED BEARING WITH GREASE POCKETS AT ALL PIVOT POINTS.

BOOM SWIVEL POINT WILL BE MOUNTED HIGH ENOUGH FOR THE BOOM ARM TO BE CAPABLE OF PASSING OVER A ROAD SIDE GUARD RAIL WITHOUT INTERRUPTION, AND BOOM WILL BE CAPABLE OF RESTING IN CRADLE MOUNTED ON RIGHT REAR SIDE OF TRACTOR FOR ROAD TRAVEL.

VERTICAL BOOM MOVEMENT WILL BE POWERED BY THE USE OF HYDRAULIC CYLINDERS, AND ALL BOOM PINNED PIVOT POINTS WILL BE GREASEABLE.

UNIT WILL BE EQUIPPED WITH A SINGLE ACTING, SINGLE SOLENOID TRAVEL LOCK THAT WILL LOCK THE DECK ROLL HYDRAULIC FUNCTION WHEN ENGAGED WITH THE BOOM ARM IN ITS TRAVEL REST.

JOYSTICK CONTROLS WILL BE SECURELY MOUNTED SO AS TO NOT INTERFERE WITH OTHER OPERATOR CONTROLS.

A POLYCARBONATE LEXAN WINDOW WILL BE INSTALLED TO PROVIDE SAFETY PROTECTION FOR THE OPERATOR. IT CAN BE INSTALLED IN PLACE OF, OVER THE GLASS, OR ATTACHED TO A FRAME ON THE RIGHT SIDE OF THE CAB WINDOWS.

BOOM DIMENSIONS ARE MEASURED FROM GROUND LEVEL AND THE TRACTOR'S CENTERLINE. BOOM REACH, HEIGHT, AND DEPTH MAY VARY DEPENDING UPON TRACTOR AND/OR TIRE CONFIGURATION.

MAINFRAME:

MAINFRAME OF BOOM MOWER WILL BE SOLIDLY MOUNTED, BOLTED, AS WELL AS MID AND REAR BRACED TO TRACTOR MAIN MID-BODY TO ABSORB SIDE TORQUE AND IMPACT OF SEVERE APPLICATIONS.

CRANKSHAFT ADAPTER AND SPACER WILL BE BOLTED SECURELY TO THE FRONT OF THE CRANKSHAFT PULLEY WITH CAP SCREWS AND LOCK WASHERS FOR THE PUMP DRIVE SHAFT AND SPLINE COUPLING TO BE MOUNTED.

HYDRAULIC PUMP MOUNTING BRACKET WILL BE BOLTED SECURELY TO THE FRONT OF THE TRACTOR WITH SPACERS, AND WILL BE ABLE TO ALLOW THE HYDRAULIC GEAR PUMP TO BE MOUNTED AND PROPERLY CONNECTED WITH SPLINE COUPLING.

THE CONTROL BOX CONTAINING SOLENOID SWITCHES WILL BE FOR CONTROLLING HYDRAULIC FLOW FROM THE HYDRAULIC PUMP TO THE HYDRAULIC MOTOR. IT WILL BE MOUNTED IN A DRY AND WELL- PROTECTED AREA WITH WIRING ROUTED, AND A 30 AMP BREAKER IN THE CAB AREA.

ALL WIRING INSTALLED WILL BE PROPERLY ROUTED AND PROTECTED WITH PLASTIC WIRE COVER AND RUBBER BOOTS FOR PROTECTION.

ADDITIONAL HYDRAULIC VALVING WILL BE INSTALLED ON THE EXTERIOR OF THE RIGHT REAR CAB AREA SO VALVING WILL BE ACCESSIBLE TO THE OPERATOR.

WEIGHTS WILL BE ATTACHED PROPERLY TO TRACTOR WHEEL (SPECIFICALLY EXCLUDED WILL BE FRAME MOUNTED WEIGHT.)

ALL PROPER SAFETY STICKERS WILL BE ATTACHED TO THE BOOM MOWER.

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FRONT-MOUNTED HYDRAULIC PUMP WILL BE PROTECTED BY A ½" PLATE STEEL STRUCTURE WHICH IS SOLIDLY MOUNTED TO THE TRACTOR BOLSTER. THE TRACTOR FRONT GRILLE AND HEADLIGHTS WILL BE PROTECTED BY A SIMILARY CONSTRUCTED STEEL PART MOUNTED TO THE ABOVE GUARD.

HYDRAULIC SYSTEM:

HYDRALIC OIL RESERVOIR WILL HAVE A FILTER WITH 10 MICRON ELEMENT, 75 GPM RATED, AND A RESTRICTION GAUGE VISIBLE TO THE OPERATOR.

HYDRAULIC OIL RESERVOIR WILL HAVE A MINIMUM CAPACITY OF 35 GALLONS, WITH A MINIMUM OIL VOLUME OF 28 GALLONS TO THE SIGHT GLASS.

HYDRAULIC OIL RESERVOIR WILL BE EQUIPPED WITH A COMBINATION SIGHT GLASS AND THERMOSTAT.

HYDRAULIC OIL SUCTION WILL BE AN UNRESTRICTED 1.5" ID (SPECIFICALLY EXCLUDED WILL BE THE SUCTION FILTER AND SCREENS.)

HYDRAULIC OIL PRESSURE AND RETURN SYSTEM HOSES WILL BE 1" ID HIGH PRESSURE UNRESTRICTED. HOSES WILL HAVE A BURST PRESSURE 4X WORKING PRESSURE.

HYDRUALIC OIL PRESSURE, RETURN, AND LIFT SYSTEM STEEL HYDRAULIC LINES WILL BE MOUNTED AT THE REAR OF THE BOOM ARMS.

WIRE BRAID REINFORCED HYDRAULIC LINES WILL BE USED AT ALL FLEXIBLE POSITIONS ON THE BOOM ARM (HYDRAULIC HOSES/TUBING WILL NOT BE ALLOWED INSIDE BOOM ARMS.)

PUMP DRIVE SHAFT POWERS HYDRAULIC PUMP FOR POWER TO HYDRAULIC MOTOR, IS ATTACHED TO TRACTOR CRANKSHAFT, AND HAVE A RATING OF 180 HP.

HYDRUALIC PUMP WILL HAVE A RATING OF 98 HP INPUT, AND PUMP AND MOTOR WILL BE GEAR TYPE WITH CAST STEEL HOUSING AND STEEL GEARS (SPECIFICALLY EXCLUDED ARE ALUMINUM PUMPS, MOTORS, AND ALUMINUM GEARS.)

MAIN HYDRAULIC CONTROL VALVE WILL BE NON-RESTRICTIVE, ELECTRIC SOLEND TYPE, WITH STARTER LOCKOUT SWITCH (OPTIONAL HYDRAULIC BRAKE VALVE AVAILABLE.)

HYDRAULIC OIL WILL BE COOLED BY AN AIR-TO-OIL COOLER EQUIPPED WITH A REVERSIBLE ELECTRIC FAN.

HYDRAULIC OIL FOR THE LIFT SYSTEM WILL BE SUPPLIED BY FRONT MOUNTED PUMP, AND WILL BE FILTERED BY A 10-MICRON HIGH PRESSURE FILTER.

HYDRAULIC CYLINDERS:

PRIMARY LIFT CYLINDER WILL BE SINGLE ACTING, INDUSTRIAL TYPE, WELDED, EQUIPPED WITH NITROGEN ACCUMULATOR, AND AN AUTO-CUSHIONING DEVICE.

ALL CYLINDERS ARE HEAVY DUTY INDUSTRIAL TYPE, NITRO STEEL ROD WELDED, AND ALL CYLINDER PINNED PIVOT POINTS WILL BE GREASEABLE.

HYDRAULIC LIFT CYLINDERS WILL BE MOUNTED ON THE TOP SIDE OF BOOM ARMS.

REAR CRADLE:

THE REAR CRADLE (TRAVEL REST) WILL BE AXLE MOUNTED, SPECIFICALLY EXCLUDING 3-POINT HITCH CRADLE MOUNTS.

THE REAR CRADLE (TRAVEL REST) WILL BE CONSTRUCTED OF 5"X5" AND 3"X3" TUBING 3/8" WALL THICKNESS.

HYDRAULIC ACTUATOR:

THE BOOM CAN PIVOT 180° FRONTWARD AND REARWARD.

WHILE OPERATING IN FORWARD AND REVERSE DIRECTION, THE BOOM HAS BREAK-AWAY PROTECTION.

THE BOOM PIVOT WILL BE HYDRAULICALLY DRIVEN AND FULLY ENCLOSED.

JOYSTICK:

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ELECTRONIC JOYSTICK WITH A 4/5 BANK ELECTRO-HYDRAULIC PROPORTIONAL, AND MANUAL OVERRIDE AT OPERATORS' POSITION.

JOYSTICK CONTROLS WILL BE SECURELY MOUNTED SO AS TO NOT INTERFERE WITH OTHER OPERATOR CONTROLS.

OPTIONAL 50" ROTARY MOWER HEAD:

SAFETY SPECIFICATIONS:

UNIT WILL MEET OR EXCEED THE FOLLOWING INDUSTRY STANDARDS: SAE J232, J115, J517, J920, J1150, J1170, ANSI/ASAE S441.1, EP363.1, S390.1, S203.13, S217.11, S278.6, S318.14, S483, AND ASTM A370. A COMPLIANCE REPORT WILL BE AVAILABLE UPON REQUEST.

CUTTING HEAD:

THE CUTTING HEAD WILL HAVE 435° OF COMBINED ROTATION, 50" OF ACTUAL CUT, AND WEIGH AT LEAST 831 LBS.

DECK WILL BE 11 GAUGE, 110,000 PSI RATED DOMEX STEEL HOUSING WITH 3/8" THICK, 80,000 PSI MINIMUM RATED STEEL SIDE WALLS, WITH FULL LENGTH REPLACEABLE SKID SHOES OR INNER AND OUTER ENDS.

THE CUTTING HEAD WILL HAVE A SPRING LOADED, RETRACTABLE SHIELD FOR DEFLECTING DEBRIS AS WELL AS PROTECTION FROM KNIFE BLADES. (OPTIONAL HYDRAULICALLY OPERATED SHIELD ACTUATED BY A 2" X 8" CYLINDER, CONTROLLED FROM WITHIN THE CAB.

HYDRAULIC MOTOR WILL HAVE A MINIMUM RATING OF 99 HP.

CUTTING HEAD WILL BE ATTACHED TO THE SPINDLE BY (6), 5/8" GRADE-8 BOLTS WITH TAPERED BOLT PROTECTOR.

CUTTING ASSEMBLY WILL BE A 23-1/4" SOLID 1" THICK STEEL DISH WITH (3) RADIAL CUTOUTS, AND (3) CASE HARDENED, THREADED INSERTS WELDED INTO PLACE.

CUTTING ASSEMBLY WILL ACCOMMODATE (3) 5/8" X 5" X 17-3/16" 360° SWINGING, SINGLE EDGED BRUSH OR GRASS SUCTION KNIVES. THESE KNIVES WILL BE ATTACHED TO THE DISH WITH HEXAGONAL BLADE BOLTS, CASTLE NUTS AND ROLL PINS.

SPINDLE:

THE SPINDLE WILL BE ONE PIECE 8630 STEEL, MOUNTED IN STRAIGHT ROLLER BEARINGS, 6.5" IN DIAMETER AT ITS LARGEST AREA X 13" LONG, WITH BEARING DIAMETER OF 2.755" WITH A MINIMUM OF 4.5" BETWEEN BEARING CENTERS.

SPINDLE WILL BE DIRECT COUPLED WITH A SPLINED END, AND HAVE MINIMUM SPEED OF 1,500 RPM.

SPINDLE WILL BE EQUIPPED WITH AN EASILY-SERVICEABLE INSERT, MACHINED FROM 1117 STEEL. INSERT WILL HAVE A LOWER FAILURE POINT THAN THE MOTOR OUTPUT SHAFT OR THE SPINDLE SHAFT.

SPINDLING HOUSING WILL BE ATTACHED TO THE CUTTING HEAD SO AS TO ABSORB 240,000 LBS. OF SHEAR STRENGTH, AND DISTRIBUTE THIS LOAD OVER AN AREA OF 169 INCHES

OPTIONAL 60" ROTARY MOWER HEAD:

SAFETY SPECIFICATIONS:

UNIT WILL MEET OR EXCEED THE FOLLOWING INDUSTRY STANDARDS: SAE J232, J115, J517, J920, J1150, J1170, ANSI/ASAE S441.1, EP363.1, S390.1, S203.13, S217.11, S278.6, S318.14, S483, AND ASTM A370. A COMPLIANCE REPORT WILL BE AVAILABLE UPON REQUEST.

CUTTING HEAD:

THE CUTTING HEAD WILL HAVE 435° OF COMBINED ROTATION, 60" OF ACTUAL CUT, AND WEIGH AT LEAST 965 LBS.

THE CUTTING HEAD WILL HAVE A SPRING LOADED, RETRACTABLE SHIELD FOR DEFLECTING DEBRIS AS WELL AS PROTECTION OF KNIFE BLADES. (OPTIONAL HYDRAULICALLY OPERATED SHIELD ACTUATED BY A 2" X 8" CYLINDER, CONTROLLED FROM WITHIN THE CAB.)

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HYDRAULIC MOTOR WILL HAVE A MINIMUM RATING OF 99 HP.

CUTTING HEAD WILL BE ATTACHED TO THE SPINDLE BY (6), 5/8" GRADE-8 BOLTS WITH TAPERED BOLT PROTECTOR.

CUTTING ASSEMBLY WILL BE A 23-1/4" SOLID 1" THICK STEEL DISH WITH (3) RADIAL CUTOUTS, AND (3) CASE HARDENED, THREADED INSERTS WELDED INTO PLACE.

CUTTING ASSEMBLY WILL ACCOMMODATE (3) 5/8" X 5" X 17-3/16" 360° SWINGING, SINGLE EDGED BRUSH OR GRASS SUCTION KNIVES. THESE KNIVES WILL BE ATTACHED TO THE DISH WITH HEXAGONAL BLADE BOLTS, CASTLE NUTS AND ROLL PINS.

SPINDLE:

THE SPINDLE WILL BE ONE PIECE 8630 STEEL, MOUNTED IN STRAIGHT ROLLER BEARINGS, 6.5" IN DIAMETER AT ITS LARGEST AREA X 13" LONG, WITH BEARING DIAMETER OF 2.755" WITH A MINIMUM OF 4.5" BETWEEN BEARING CENTERS.

SPINDLE WILL BE DIRECT COUPLED WITH A SPLINED END, AND HAVE MINIMUM SPEED OF 1,500 RPM.

SPINDLE WILL BE EQUIPPED WITH AN EASILY-SERVICEABLE INSERT, MACHINED FROM 1117 STEEL. INSERT WILL HAVE A LOWER FAILURE POINT THAN THE MOTOR OUTPUT SHAFT OR THE SPINDLE SHAFT.

SPINDLING HOUSING WILL BE ATTACHED TO THE CUTTING HEAD SO AS TO ABSORB 240,000 LBS. OF SHEAR STRENGTH, AND DISTRIBUTE THIS LOAD OVER AN AREA OF 169 INCHES

OPTIONAL 36" BOOM FORESTRY BRUSH CUTTING HEAD:

CUTTING HEAD:

THE CUTTING HEAD WILL HAVE A MINIMUM WEIGHT OF 850 LBS., WITH A TIP SPEED OF 11,200FT/MIN, AND A CUTTING WIDTH OF 36" OF ACTUAL CUT. THE CUTTING ASSEMBLY WILL BE ROTARY, AND HYDRAULICALLY DRIVEN.

CUTTING HEAD WILL BE CAPABLE OF CUTTING MATERIAL 8" IN DIAMETER, AND MULCHING MATERIAL 5" IN DIAMETER.

CUTTING HEAD WILL BE CAPABLE OF CUTTING/MULCHING MATERIAL WITH THE ENTIRE BOTTOM PLANE, IN ADDITION TO THE CUTTING EDGE.

CUTTING HEAD DECK WILL HAVE A HEAVY-DUTY STEEL HOUSING OF 11 GAUGE DOMEX OF 110,000 PSI YIELD STRENGTH, WITH FULL LENGTH REPLACEABLE SKID SHOES ON INNER AND OUTER ENDS.

HYDRAULIC MOTOR WILL HAVE A RATING OF 99 HP.

CUTTING HEAD WILL BE A 36" SOLID 1" THICK STEEL DISK WITH (24) REPLACEABLE TEETH, BOLT PROTECTOR, CENTER MOUNTED CUTTER, AND ATTACH TO THE SPINDLE BY (6) 5/8" GRADE-8 BOLTS.

SPINDLE:

THE SPINDLE WILL BE ONE PIECE 8630 STEEL, MOUNTED IN STRAIGHT ROLLER BEARINGS, 6.5" IN DIAMETER AT ITS LARGEST AREA X 13" LONG, WITH BEARING DIAMETER OF 2.755" WITH A MINIMUM OF 4.5" BETWEEN BEARING CENTERS.

SPINDLE WILL BE DIRECT COUPLED WITH A SPLINED END, AND HAVE A MINIMUM SPEED OF 1,500 RPM.

SPINDLE WILL BE EQUIPPED WITH AN EASILY-SERVICEABLE INSERT, MACHINED FROM 1117 STEEL. INSERT WILL HAVE A LOWER FAILURE POINT THAN THE MOTOR OUTPUT SHAFT OR THE SPINDLE SHAFT.

SPINDLE HOUSING WILL BE ATTACHED TO THE CUTTING HEAD SO AS TO ABSORB 240,000 LBS. OF SHEAR STRENGTH, AND DISTRIBUTE THIS LOAD OVER AN AREA OF 169 INCHES

OPTIONAL 50" BOOM FLAIL MOWER HEAD:

SAFETY SPECIFICATIONS:

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UNIT WILL MEET OR EXCEED THE FOLLOWING INDUSTRY STANDARDS: SAE J1001, J115, J208, J715, J898, J909, J920, J1150, J1500, ANSI/ASAE S441, S318.7, S217.10, S278.6, EP363, AND ASTM A370. A COMPLIANCE REPORT WILL BE AVAILABLE UPON REQUEST.

CUTTING HEAD:

CUTTING HEAD WILL HAVE 435° OF COMBINED ROTATION, WEIGHT A MINIMUM OF 1,068 LBS, AND 50" OF ACTUAL CUT.

CUTTING HEAD DECK WILL HAVE 1000,000 LB. RATED STEEL HOUSING, MINIMUM OF ¼" X 25" SOLID STEEL SIDEWALLS, AND HAVE REPLACEABLE SKID SHOES.

HYDRAULIC MOTOR WILL HAVE A RATING OF 81.3 HP, AND MOTOR ASSEMBLIES WILL HAVE AUTOMATIC BELT SELF-TENSIONERS.

CUTTING BONNET THICKNESS WILL BE A MINIMUM OF 1/8".

CUTTER SHAFT:

CUTTING SHAFT WILL HAVE A MINIMUM OF (48) DUAL PURPOSE, 2 LBS., 8" IN LENGTH, BRUSH AND GRASS KNIVES. KNIVES WILL BE 10MM THICK, AND BE CAPABLE OF CUTTING BRUSH 6" IN DIAMETER. KNIVES WILL BE MOUNTED WITH 1" GRADE 8 BOLTS TO THE CUTTING SHAFT. KNIVES WILL BE REVERSIBLE.

CUTTING SHAFT WILL BE A MINIMUM OF 6" IN DIAMETER, WITH 2-3/16" DIAMETER STUB SHAFTS AND BEARINGS. CUTTING SHAFT BEARINGS WILL BE OF THE GRIP TIGHT DOUBLE SHIELDED TYPE.

BLADE CUTTING DIAMETER WILL BE 23".

CUTTING SHAFT RPM WILL BE A MINIMUM OF 1700 (TIP SPEED OF 10224 FPM.)

CUTTING HEADS WILL HAVE 6-5/8" DIAMETER ROLLERS, CONSTRUCTED OF SCHEDULE 40 DOM TUBING. LEFT AND RIGHT OUTER EDGES OF GROUND ROLLER WILL BE TAPERED AT 45° DOWN TO A DIAMETER OF 4.81" TO MINIMIZE TURF DAMAGE DURING TURNS.

GROUND ROLLER:

CUTTING HEADS WILL HAVE 6-5/8" DIAMETER ROLLERS, CONSTRUCTED OF SCHEDULE 40 DOM TUBINGS. LEFT AND RIGHT OUTER EDGES OF GROUND WILL BE TAPERED AT 45° DOWN TO A DIAMETER OF 4.81" TO MINIMIZE TURF DAMAGE DURING TURNS.

GROUND ROLLER BEARINGS WILL BE KOYO 2580-2520, WITH FOUR BEARINGS PER GROUND ROLLER. BEARINGS WILL BE PROTECTED INSIDE GROUND ROLLER TUBE, SPECIFICALLY EXCLUDING EXTERNAL-MOUNTED BEARING SYSTEMS.

GROUND ROLLER BEARINGS WILL BE LUBRICATED IN OIL BATH, WHICH WILL BE CHANGED ON AN ANNUAL BASIS. SPECIFICALLY EXCLUDING BEARING SYSTEMS THAT REQUIRE DAILY MAINTENANCE OR ARE LUBRICATED WITH GREASE.

GROUND ROLLER BEARINGS WILL COME STANDARD WITH 2-YEAR WARRANTY.

OPTIONAL 48" BOOM SAW HEAD

CUTTING HEAD:

CUTTING HEAD WILL HAVE 435° OF COMBINED ROTATION, AND WIDTH WILL BE 48" OF ACTUAL CUT.

CUTTING HEAD BAR WILL BE CONSTRUCTED OF S3/8" AND ½" THICK, 80,000 PSI MINIMUM RATED GRADE 80 STEEL, AND BE EQUIPPED WITH A BLADE ANTI-WARP RESISTANT RING.

THE CUTTING WILL HAVE A BLADE NOT LESS THAN 9/32" THICK, AND A CENTERING PILOT HOLE. A BLADE WITH REPLACEABLE TEETH MACHINED IN THE OUTER EDGE OF THE BLADE. THE SAW TEETH WILL MAKE A ½" CUT, BE REPLACEABLE BY A SINGLE RIVET, AND REPLACEABLE INDUSTRIAL GRADE CARBIDE TIP SILVER SOLDERED TO THE TOOTH BODY. (OPTIONAL: TOOTH REMOVAL/REPLACEMENT TOOL AND TOOTH SHARPENING TOOL ARE AVAILABE.)

THE HEAD WILL WEIGH NOT LESS THAN 780 LBS., BE ATTACHED TO THE SPINDLE BY (6), 5/8" GRADE-8 BOLTS WITH TAPERED BOLT PROTECTOR, AND IS EQUIPPED WITH (30) REPLACEABLE CARBIDE TIPS.

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THE BLADE WILL PROTRUDE 8.25" OUTSIDE OF CIRCULAR HOUSING.
CUTTING ASSEMBLY IS ROTARY, HYDRAULICALLY DRIVEN, AND THE HYDRAULIC MOTOR WILL HAVE A RATING OF 99 HP.

SPINDLE:

THE SPINDLE WILL BE ONE PIECE 8630 STEEL, MOUNTED IN STRAIGHT ROLLER BEARINGS, 6.5" IN DIAMETER AT ITS LARGEST AREA X 13" LONG, WITH BEARING DIAMETER OF 2.755" WITH A MINIMUM OF 4.5" BETWEEN BEARING CENTERS.

SPINDLE WILL BE DIRECT COUPLED WITH A SPLINED END, AND HAVE A MINIMUM SPEED OF 1,500 RPM.

SPINDLE WILL BE EQUIPPED WITH AN EASILY-SERVICEABLE INSERT, MACHINED FROM 1117 STEEL. INSERT WILL HAVE A LOWER FAILURE POINT THAN THE MOTOR OUTPUT SHAFT OR THE SPINDLE SHAFT.

SPINDLE HOUSING WILL BE ATTACHED TO THE CUTTING HEAD SO AS TO ABSORB 240,000 LBS. OF SHEAR STRENGTH, AND DISTRIBUTE THIS LOAD OVER AN AREA OF 169 INCHES

OPTIONAL 22" DITCHER HEAD

CUTTING HEAD:

THE CUTTING HEAD WILL HAVE A MINIMUM WEIGHT OF 600 LBS., AND A CUTTING WIDTH OF 22" OF ACTUAL CUT.

CUTTING ASSEMBLY BE STEEL DISK NOT LESS THAN 1/2" THICK WITH 3 GUSSETED KNIFE MOUNTING PADS, AND 3 GUSSETED CLEAN UP MOUNTING PADS ATTACHED.

CUTTING ASSEMBLY IS ROTARY, HYDRAULICALLY DRIVEN, EQUIPPED WITH 3 REPLACEABLE KNIVES, NOT MORE THAN 3/8" THICK, AND 3 CLEAN UP PADDLES.

THE CUTTING ASSEMBLY WILL HAVE A 3/8" STEEL BONNET, WITH 3/8" THICK, ABRASION RESISTANT TYPE, REPLACEABLE WEAR LINER, A HYDRAULICALLY CONTROLLED DEFLECTOR CHUTE. (OPTIONAL: CUTTING ASSEMBLY WILL BE REVERSIBLE WHEN USING REVERSE HEAD.)

THE DITCHING HEAD WILL HAVE A PLANETARY GEAR REDUCTION RATIO OF 4.5:1. THE INPUT SHAFT WILL BE A 14 TOOTH INVOLUTE SPLINE, WITH A KEYED 2" OUTPUT SHAFT.

THE OUTPUT TORQUE WILL BE RATED @30,000 INCH LBS.

THE HYDRAULIC MOTOR WILL HAVE A RATING OF 65 HP.

SPINDLE:

SPINDLE WILL BE ONE PIECE FORGED STEEL, MOUNTED IN DOUBLE TAPERED ROLLER BEARINGS AND BEARINGS WILL BE SEALED WITH AN OIL BATH.

SPINDLE FOR POWER TO CUTTING ASSEMBLY WILL BE 7-1/4" IN DIAMETER AT ITS LARGEST AREA, 13-3/8" LONG, WITH A 2-7/8" ID LOWER BEARING AND A 2" ID UPPER BEARING, WITH A MINIMUM OF 5-1/32" BETWEEN BEARING CENTERS.

SPINDLE WILL HAVE A 1-9/16" INVOLUTE 24 SPLINE DRIVE WITH FLEXIBLE COUPLER AND DUST COVER (SPECIFICALLY EXCLUDED IS THE DIRECT COUPLED MOTOR SPINDLE ASSEMBLY.)

SPINDLE HOUSING WILL BE ATTACHED TO THE CUTTING HEAD SO AS TO ABSORB 240,000 LBS. OF SHEAR STRENGTH, AND DISTRIBUTE THIS LOAD OVER AN AREA OF 169 INCHES

SPINDLE WILL HAVE A WIRE GUARD PROTECTION, AND A SPEED RATED @540 RPM.

***** **MAX BOOM MOWER # 18E015** *****

2018 TIER III – 24', 26', & 30' BOOM MOWER SPECIFICATIONS:

INTENT:

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THE INTENT OF THE SPECIFICATION IS PROVIDE FOR THE PURCHASE OF A SELF-CONTAINED, PURPOSE BUILT BOOM MOWER WITH A PRIMARY FOCUS ON OPERATOR SAFETY.

POWERTRAIN AND ENGINE:

MINIMUM HORSEPOWER OF 99.9 TURBO DIESEL ENGINE. PREFERENCE GIVEN TO TIER III PERKINS DIESEL.

THE ENGINE COOLANT AND HYDRAULIC OIL WILL BE COOLED BY A REMOTE, HORIZONTALLY MOUNTED, HEAVY DUTY SIDE BY SIDE RADIATOR/OIL COOLER.

THE RADIATOR WILL HAVE A CUSTOM, 18" DIAMETER FAN DRIVEN BY A HEAVY-DUTY GEAR MOTOR WITH CASE DRAIN AND PRESSURE RELIEF/ANTI-CAVITATION VALVE WITH AN OPTIONAL OPERATOR CONTROLLED REVERSING VALVE TO CLEANOUT RADIATOR.

TWO (2) HEAVY DUTY DANA AXLES WITH FULL TIME 4 WHEEL DRIVE AND 4 WHEEL STEERING WITH 3 STEERING MODES: FOUR WHEEL, FRONT AND CAB.

ENGINE BATTERY WILL BE LOCATED CONVENIENTLY IN THE FRONT OF THE MACHINE FOR EASY ACCESS.

FRONT AXLE WILL HAVE AUTOMATIC, 45% LIMITED SLIP DIFFERENTIAL AND REAR AXLE WILL HAVE 100% OPERATOR CONTROLLED LOCKING DIFFERENTIAL.

UNIT WILL HAVE A 2-SPEED TRANSMISSION WITH 0-6 MPH WORK MODE, 0-20 MPH TRAVEL MODE.

DRIVE AXLE PUMP IS TO BE HEAVY DUTY BENT-AXIS, HYDROSTATIC PISTON PUMP WITH CHARGE PUMP FILTER.

BRAKING WILL BE ACCOMPLISHED VIA HYDROSTATIC BREAKING AS WELL AS A SECONDARY FOOT-CONTROLLED SERVICE BRAKE. PARKING BRAKE WILL BE ELECTRIC OVER HYDRAULIC WITH AN INTEGRATED SEAT BELT SAFETY SWITCH.

STANDARD TIRES WILL BE 22 PLY, 550/45-22.5 FLOATATION TIRES WITH CHEVRON TREAD.

BOOM FEATURES & MOWING:

MAIN BOOM IS TO BE 8" X 6" X ¼" WALL STRUCTURAL TUBING CONFORMING TO ASTM A-500 GR. B (58,000 PSI MINIMUM TENSILE).

MAIN BOOM WILL BE LIFTED BY A 6 INCH BORE CYLINDER WITH A 2.5 INCH DIAMETER ROD.

OUTER BOOM IS TO BE 6 INCH X 4 INCH X ¼ INCH WALL TUBING CONFORMING TO ASTM A-500 GR. B (58,000 PSI MINIMUM TENSILE).

OUTER BOOM WILL BE LIFTED BY A 5 INCH BORE CYLINDER WITH A 2.0 INCH DIAMETER ROD.

MAIN PIVOT PINS SHALL BE CONSTRUCTED OF 1.5 INCH AISI 4140 STEEL.

EACH PIN IS TO BE SUPPORTED BY A PAIR OF 2-INCH-WIDE HARDENED STEEL, GREASEABLE CONNEX® BUSHINGS.

STANDARD BOOM FUNCTIONS WILL INCLUDE HORIZONTAL SWING, VERTICAL LIFT, DIPPER REACH, MOWER HEAD TILT AND MOWER HEAD DOOR OPEN/CLOSE.

ALL BOOM FUNCTIONS AS WELL AS AXLE STABILIZER SYSTEM MUST BE CONTROLLED BY THE OPERATOR'S RIGHT HAND AND THE JOYSTICK.

BOOM MUST SWING HYDRAULICALLY A MINIMUM OF 175 DEGREES WITH A HELAC ROTARY ACTUATOR WITH DUAL CROSS PORT RELIEFS FOR SYSTEM PROTECTION.

BOOM MOWER DECK TILT WILL BE LIFTED BY A 3 INCH BORE CYLINDER WITH A 1.75 INCH DIAMETER ROD. THE CYLINDER WILL ALSO HAVE AN INTEGRATED COUNTER-BALANCE HOLDING VALVE.

THE MOWER BLADES WILL BE POWERED BY A CLOSED-LOOP, HYDROSTATIC PISTON PUMP WITH CHARGE PUMP FILTER AND A BENT AXIS PISTON MOTOR WITH MAXIMUM PRESSURES CAPABLE OF 4900 PSI. THIS SYSTEM SHOULD HAVE APPROXIMATELY 87% HYDRAULIC EFFICIENCY.

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THE STANDARD 60 INCH ROTARY DECK FRAME WILL BE MADE OF 3/16 INCH STEEL PLATE AND HAVE A 1 INCH THICK BLADE BAR WITH 5/8 INCH DUAL DOUBLE-SIDED SLING BLADES. THE ROTARY DECK WILL ALSO HAVE AN OPTIONAL 90 DEGREE SWIVEL OPTION.

THE BOOM ARM TRAVEL CRADLE MUST COME WITH A 2 INCH RATCHET STRAP TO SECURE BOOM IN THE CRADLE TO PREVENT ACCIDENTAL MOVEMENT WHEN IN TRAVEL MODE. THE MAIN BOOM HELAC MOUNT WELDMENT WILL BE MADE OF 3/4 INCH AND 5/8 INCH A-36 STEEL AND ATTACHED BY A MINIMUM OF TEN (10) GRADE 8 FLANGE BOLTS WITH LOCK WASHERS.

PRIMARY COUNTERWEIGHT WILL BE CUSTOM, CAST IRON WITH A MINIMUM OF 3,400 POUNDS WITH INTEGRATED OPERATOR STEPS FOR EASY ACCESS AND BE ATTACHED TO THE MAIN FRAME WITH A MINIMUM OF NINE (9), 1 INCH GRADE 8 BOLTS.

CAB AND OTHER FEATURES:

CUSTOM DESIGNED CAB WILL BE MOUNTED IN FRONT OF THE ENGINE AND HYDRAULICS FOR OPTIMUM OPERATOR VISIBILITY.

THE RIGHT SIDE OF THE CAB, OR THE BOOM ARM SIDE, WILL FEATURE A MINIMUM OF 1/2 INCH LEXAN WITH NO VERTICAL SUPPORTS TO HINDER THE VISIBILITY OF THE OPERATOR WHILE OPERATING THE BOOM.

THE STEERING WHEEL WILL HAVE A FULL COLUMN TILT FEATURE AND MUST INCLUDE A HORN AND STEERING KNOB.

THE OPERATOR'S SEAT WILL BE A GRAMMER, CLOTH SEAT WITH 12 VOLT ADJUSTABLE AIR RIDE, TWO ARMRESTS, TILT, LUMBAR SUPPORT, AN OPERATOR PRESENSE SWITCH LIMITING JOYSTICK AND TRANSMISSION FUNCTIONS AND A SEATBELT WITH SWITCH LIMITING THE DISENGAGEMENT OF THE PARKING BRAKE AND MOWER PTO.

MUST INCLUDE AIR CONDITIONING, HEAT AND FRONT WINDSHIELD WIPER WITH WASHER AS STANDARD EQUIPMENT.

UNIT MUST INCLUDE A MINIMUM OF THREE REAR VIEW MIRRORS: ONE MOUNTED INSIDE THE CAB, TWO ADDITIONAL MIRRORS MOUNTED ON THE LEFT AND RIGHT OUTSIDE THE CAB.

THE A/C CONDENSER MUST BE MOUNTED ON THE UPPER FRONT OF THE CAB FOR MINIMUM CLOGGING FROM DUST AND DEBRIS.

UNIT MUST HAVE (2) CLASS 1 LED SAFETY STROBE LIGHTS AND A 35 INCH LED DIRECTIONAL LIGHT BAR AS WELL AS 2 MINI STROBES MOUNTED BELOW FRONT HEADLIGHTS. (FRONT MAIN FRAME, AFT CAB MOUNT AND CAB A/C HOUSING FOR LIGHT BAR).

UNIT MUST BE EQUIPMENT WITH SLOW MOVING VEHICLE DIAMOND, HEAD LIGHTS WITH HIGH AND LOW BEAM, FRONT AND REAR TURN SIGNALS AND BRAKE LIGHTS.

CAB MUST COME EQUIPMENT WITH AN AUDIBLE AND VISIBLE ALARM FOR LOW HYDRAULIC OIL TO ALERT OPERATOR OF A HYDRAULIC OIL LEAK.

CAB MUST COME EQUIPMENT WITH AN AM/FM STERO WITH BLUETOOTH AND OPTIONAL BACKUP CAMERA

THE 22', 24', AND 26' BOOMS HAVE OPTIONAL UNIVERSAL ATTACHMENT PLATE MOUNTED FORWARD ON TRACTOR FOR MULTIPLE USES.

OPTIONAL CUTTING HEADS:

60" ROTARY DECK WITH 5/8" THICK REVERSIBLE SLING BLADES, 1" THICK BLADE BAR THAT IS MOUNTED TO A HEAVY DUTY 3.5IN SPINDLE BEARING HOUSING DRIVEN BY A HEAVY DUTY BENT AXIS PISTON MOTOR.

60" FLAIL MOWER WITH STANDARD REVERSIBLE GRASS BLADES DRIVEN BY A BENT AXIS PISTON MOTOR.

48" SAW BLADE WITH REPLACEABLE CARBIDE TEETH MOUNTED TO A HEAVY DUTY 3.5IN SPINDLE BEARING HOUSING DRIVEN BY A HEAVY DUTY BENT AXIS PISTON MOTOR.

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50" FIXED KNIFE FECON MULCHING HEAD DRIVEN BY A HEAVY-DUTY PISTON MOTOR.

*****SPECIFICATIONS 18E016*****

***SPECIFICATIONS FOR 17', 19' & 22' PULL
BEHIND, HYDRAULIC TRIPLE FLAIL MOWERS***

GENERAL SPECIFICATIONS

IT IS THE PURPOSE OF THE FOLLOWING SPECIFICATIONS TO DESCRIBE DRAWBAR HITCH PULL-TYPE, PTO DRIVEN, WIDE AREA GANG FLAIL MOWER. THE UNIT WILL CONSIST OF TWO 90" MOWING HEADS AND ONE 102" MOWING HEAD. THE UNIT WILL BE OF THE MANUFACTURER'S CURRENT PRODUCTION MODEL, MEETING OR EXCEEDING THE TERMS OF THESE SPECIFICATIONS. UNIT(S) WILL BE THE MANUFACTURER'S MOST HEAVY-DUTY MODEL AVAILABLE. THE MANUFACTURER WILL FURNISH PARTS AND OPERATION MANUALS FOR THE UNIT(S) BID. THE MANUFACTURER WILL ALSO GUARANTEE EQUIPMENT AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF (1) YEAR.

SAFETY SPECIFICATIONS:

UNIT WILL MEET OR EXCEED THE FOLLOWING INDUSTRY STANDARDS: SAE J1001, J115, J208, J715, J898, J909, J920, J1150, J1500. ANSI/SAE S441, S318.7, S217.10, S278.6, EP363. ASTM A3170. A COMPLIANCE REPORT WILL BE AVAILABLE UPON REQUEST.

CUTTING HEAD:

THE CUTTING HEAD WEIGHTS WILL BE A MINIMUM OF 1500/1290LBS. FRONT/SIDES. THE CUTTING WIDTH WILL BE 22'1" OF ACTUAL CUT WITH AN OVERLAP OF 10" FOR EACH SIDE, AND CUTTING BONNET THICKNESSES WILL BE 3/16".

CUTTING SHAFTS WILL HAVE A MINIMUM OF (112/96 REAR/SIDES) ALL PURPOSE, SELF-CLEANING, REVERSIBLE KNIVES, OR (56/48 REAR/SIDE) SMOOTH CUT CUTTING KNIVES. IT WILL NOT BE NECESSARY TO CHANGE THE CUTTING SHAFTS TO INTERCHANGE KNIVES. ALL PURPOSE KNIVES ARE 6-GAUGE THICKNESS, 1-3/4" WIDE X 4-5/8" LENGTH. SMOOTH CUT KNIVES ARE 1/4" THICKNESS, 2-1/2" WIDE X 3-7/8" LENGTH.

CUTTING SHAFTS WILL BE A MINIMUM OF 6" IN DIAMETER, WITH 2-3/16" DIAMETER STUB SHAFTS AND BEARINGS. CUTTING SHAFT BEARINGS WILL BE OF THE GRIP TIGHT DOUBLE SHIELDED TYPE.

CUTTING HEADS WILL HAVE 6-5/8" DIAMETER ROLLERS, CONSTRUCTED OF SCHEDULE 40 DOM TUBING. LEFT AND RIGHT OUTER EDGES OF GROUND ROLLER WILL BE TAPERED AT 45° DOWN TO A DIAMETER OF 4.81" TO MINIMIZE TURF DAMAGE DURING TURNS.

GROUND ROLLER BEARINGS WILL BE KOYO 2580-2520, WITH FOUR BEARINGS PER GROUND ROLLER. BEARINGS WILL BE PROTECTED INSIDE GROUND ROLLER TUBE, SPECIFICALLY EXCLUDING EXTERNAL-MOUNTED BEARING SYSTEMS.

GROUND ROLLER BEARINGS WILL BE LUBRICATED IN OIL BATH, WHICH WILL BE CHANGED ON ANNUAL BASIS. SPECIFICALLY EXCLUDING BEARING SYSTEMS THAT REQUIRE DAILY MAINTENANCE OR ARE LUBRICATED WITH GREASE.

CUTTING HEAD HEIGHTS WILL BE INFINITELY ADJUSTABLE FROM -1/2" TO +6". HEIGHT ADJUSTMENT WILL BE ACCOMPLISHED THRU AN EXTERNALLY MOUNTED, THREADED, SCREW TYPE ADJUSTER. IT WILL NOT BE NECESSARY TO REMOVE THE ROLLER MOUNTING BRACKETS TO ADJUST CUTTING HEIGHT.

HYDRAULIC MOTOR ASSEMBLIES WILL HAVE AUTOMATIC BELT SELF-TENSIONERS (SPECIFICALLY EXCLUDING BACK BEND TYPE BELT TENSIONER.) DRIVE BELT SYSTEMS WILL HAVE A MINIMUM RATING OF 81HP.

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CUTTING HEAD WILL HAVE A MINIMUM OF ½" THICK SOLID STEEL SIDEWALLS, AND HAVE REMOVABLE SKID SHOES.

SAFETY DISCHARGE FLAP WILL BE PROVIDED AND SMOOTH CUT MODELS WILL BE EQUIPPED WITH A FRONT DEFLECTOR SHIELD.

TRAVEL AND TRANSPORT LOCKS WILL BE REQUIRED.

CUTTING SHAFT RPM WILL BE A MINIMUM OF 1800 RPM (TIP SPEED OF 9306 FPM).

MAINFRAME:

MOWER UNIT IS SELF-CONTAINED AND MOUNTS TO A TRACTOR DRAWBAR HITCH. MINIMUM TRACTOR PTO HORSEPOWER WILL BE 80 HP, WITH THE RECOMMENDED TRACTOR PTO HORSEPOWER TO BE 100 HP, 1000 RPM PTO, AND A MINIMUM TRACTOR WEIGHT OF 8,000 LBS. (NOT INCLUDING WHEEL WEGHTS).

MAINFRAME WILL BE EQUIPPED WITH A SINGLE AXLE, FITTED WITH EXTERNALLY GREASEABLE AXLE HUBS AND 31/13.50R15 TIRES.

AXLE WILL BE OF TORSION SUSPENSION STYLE, WITH A MINIMUM RATED CARRYING CAPACITY OF 8,000 LBS.

DRAFT BEAM WILL BE OF A BOX CONSTRUCTION WITH TAPERED SIDEWALLS, AND HAVING THE WELDMENT EXTENDING THROUGH UPPER AND LOWER SURFACES OF THE DRAFT BEAM. CUTTING ASSEMBLY WILL BE ATTACHED TO THE MAINFRAME BY MEANS OF A DRAFT BEAM WITH BEARING SURFACES IN EXCESS OF 47 INCHES².

CONTROL OF OUTER END OF CUTTING ASSEMBLY WILL BE ACCOMPLISHED BY MEANS OF DIRECT CONNECED LINKAGE AND DOUBLE ACTING CYLINDER, ALLOWING PRECISE OPERATION OF CUTTING ASSEMBLY.

HYDRAULIC SYSTEM:

HYDRAULIC SYSTEM WILL BE FULLY SELF-CONTAINED, WITH NO HYDRAULIC POWER OR FLUID DRAWN FROM THE TRACTOR.

HYDRAULIC OIL RESERVOIR WILL HAVE A MINIMUM CAPACITY OF 40 GALLONS, WILL HAVE A MINIMUM OF ONE FILL SIGHT GLASS WITH TEMPERATURE GAUGE, AND THE OIL RESERVOIR SYSTEM WILL BE USED AS THE POWER SOURCE FOR THE CUTTING HEADS.

HYDRAULIC OIL RESERVOIR WILL HAVE TWO FILTERS WITH 10 MICRON ELEMENT, 75 GPM RATED, AND A RESTRICTION GAUGE VISIBLE TO THE OPERATOR LOCATED ON THE SCREEN DISPLAY LOCATED IN THE CAB. RESERVOIR SUCTION WILL BE EQUIPPED WITH BALL VALVES. HYDRAULIC OIL SUPPLIED TO THE MAIN MANIFOLD SHALL BE FILTERED WITH A 10 MICRON ELEMENT. A RESTRICTION GAUGE SHALL BE VISIBLE TO THE OPERATOR LOCATED ON THE SCREEN DISPLAY LOCATED IN THE CAB.

HYDRAULIC OIL SUCTION WILL BE AN UNRESTRICTED 1.5" ID (SPECIFICALLY EXCLUDED WILL BE THE SUCTION FILTER AND SCREENS).

HYDRAULIC COOLING FAN WILL BE RATED FOR A MINIMUM HEAT TRANSFER OF 50,000 BTU/H, 900 CFM. HYDRAULIC COOLING FAN WILL BE RATED FOR OUTDOOR ENVIRONMENT WITH A MAXIMUM OF 25 PSI PRESSURE DROP, AND WILL BE EQUIPPED WITH AN ADJUSTABLE INTERVAL, AUTOMATIC REVERSING SWITCH.

HYDRAULIC OIL PRESSURE AND RETURN SYSTEM HOSES WILL BE 1" ID HIGH PRESSURE UNRESTRICTED. HOSES WILL HAVE A BURST PRESSURE 4X WORKING PRESSURE.

HYDRAULIC OIL SUCTION WILL BE AN UNRESTRICTED 1.5" ID (SPECIFICALLY EXCLUDED WILL BE THE SUCTION FILTER AND SCREENS).

MAIN HYDRAULIC CONTROL VALVES WILL BE NON-RESTRICTIVE, ELECTRIC SOLENIOD TYPE, WITH STARTER LOCKOUT SWITCHES (OPTIONAL HYDRAULIC BRAKES AVAILABLE).

HYDRAULIC QUAD PUMP WILL BE GEAR TYPE WITH CAST STEEL HOUSING AND STEEL GEARS (SPECIFICALLY EXCLUDED ARE ALUMINUM PUMPS, MOTORS, AND ALUMINUM GEARS).

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HYDRAULIC OIL TO THE POWER CENTER HEAD WILL NOT PASS THROUGH A RESTRICTION CAUSING VALVE WHILE OPERATING THE CUTTING HEAD. AND THE HYDRAULIC VALVES WILL NOT CAUSE RESTRICTION TO GENERATE DRIFT WHILE IN THE OFF POSITION.

MOWER DECK CONTROL:

MOWER DECKS WILL BE CONTROLLED BY A TOUCH SCREEN, WITH ONE-TOUCH STOW AND DEPLOY FUNCTIONALITY.

TOUCH SCREEN SHALL BE EQUIPPED WITH PHYSICAL BUTTONS FOR ADDITIONAL CONTROL. THE TOUCH SCREEN DISPLAY SHALL CONSIST OF MULTIPLE CONTROL SCREENS WITH DIFFERENT FACETS OF OPERATIONS.

LIFT CONTROL VALVES WILL BE 5 FUNCTION INDIVIDUAL PROPORTIONAL CONTROL WITH MANUAL OVERRIDES, WITH MAIN RELIEF AT 2,500 PSI.

THE SYSTEM SHALL MEASURE TOTAL LOAD DURING CUTTING OPERATION AND SHALL WARN AND SHUT DOWN IN UNSAFE OPERATING CONDITIONS.

HYDRAULIC CYLINDERS:

PRIMARY AND SECONDARY ENDS OF CUTTING ASSEMBLY WILL BE CONTROLLED FROM THE OPERATOR'S SEAT BY MEANS OF (3) SINGLE ACTING, HYDRUALIC CYLINDERS, AND (2) DUAL ACTING CYLINDERS.

ALL CYLINDERS ARE HEAVY DUTY INDUSTRIAL TYPE, NITRO STEEL ROD WELDED, AND ALL CYLINDER MOUNTINGS WILL HAVE REPLACEABLE, HARDENED BUSHINGS OF THE GREASEABLE TYPE.

*****SPECIFICATION 18E017*****

SPECIFICATIONS FOR 60" SKID STEER FORESTRY BRUSH CUTTER

GENERAL SPECIFICATIONS

IT IS THE PURPOSE OF THE FOLLOWING SPECIFICATIONS TO DESCRIBE A SELF-PROPELLED, HYDRAULICALLY DRIVEN, FRONT MOUNTED, ROTARY MOWER, WHICH WILL MOW FORWARD OF THE FRONT TIRES. THE UNIT WILL BE OF THE MANUFACTURER'S CURRENT PRODUCTION MODEL, MEETING OR EXCEEDING THE TERMS OF THESE SPECIFICATIONS. UNIT(S) WILL BE THE MANUFACTURER'S MOST HEAVY-DUTY MODEL AVAILABLE. THE MANUFACTURER WILL FURNISH PARTS AND OPERATION MANUALS FOR THE UNIT(S) BID. THE MANUFACTURER WILL ASLO GUARANTEE EQUIPMENT AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF (1) YEAR.

CUTTING HEAD:

THE CUTTING HEAD WILL HAVE A MINIMUM WEIGHT OF 2,250 LBS., WITH A TIP SPEED OF 17,900 FT/MIN AT 40 GPM, AND A CUTTING WIDTH OF 60" OF ACTUAL CUT. THE CUTTING ASSEMBLY WILL BE ROTARY, AND HYDRAULICALLY DRIVEN.

CUTTING HEAD WILL BE CAPABLE OF CUTTING MATERIAL 14" IN DIAMETER AND MULCHING MATERIAL 6" IN DIAMETER.

CUTTING HEAD WILL BE CAPABLE OF CUTTING/MULCHING MATERIAL WITH ITS ENTIRE BOTTOM PLANE, IN ADDITION TO ITS CUTTING EDGE.

CUTTING HEAD DECK WILL HAVE A HEVY DUTY STEEL HOUSING OF ½" GRADE-80 WITH 80,000 PSI YIELD STRENGTH, WITH FULL LENGTH REPLACEABLE SKID SHOES ON INNER AND OUTER ENDS.

CUTTING HEAD WILL BE A 60" SOLID 1" THICK STEEL DISK WITH (48) REPLACEABLE TEETH (INCLUDING (4) FRAME MOUNTED TEETH), BOLT PROTECTOR, AND CENTER MOUNTED CUTTER, AND ATTACH TO THE SPINDLE BY (6) 5/8" GRADE-8 BOLTS.

SPINDLE:

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SPINDLE WILL BE ONE PIECE 4140H HEAT TREATED STEEL, MOUNTED IN TAPER ROLLER BEARINGS.

BEARING JOURNAL DIAMETERS WILL BE 3.54" LOWER AND 3.15" UPPER.

SPINDLE WILL BE EQUIPPED WITH AN EASILY-SERVICEABLE INSERT, MACHINED FROM 1117 STEEL. INSERT WILL HAVE A LOWER FAILURE POINT THAN THE MOTOR OUTPUT SHAFT OR THE SPINDLE SHAFT.

MOUNTING SPECIFICATIONS:

MOWER DECK MOUNTING BRACKET WILL BE OF A QUICK DETACHABLE DESIGN.

MOWER DECK MOUNTING BRACKET WILL ATTACH IN PLACE OF THE BUCKET ON THE SKID STEER LIFT ARMS.

HYDRAULIC SYSTEM:

HYDRAULIC OIL PRESSURE AND RETURN SYSTEM HOSES WILL BE 1" ID HIGH PRESSURE UNRESTRICTED. HOSES WILL HAVE A BURST PRESSURE 4X WORKING PRESSURE.

HYDRAULIC MOTOR WILL BE GEAR TYPE WITH CAST STEEL HOUSING AND STEEL GEARS (SPECIFICALLY EXCLUDED WILL BE ALUMINUM PUMPS, MOTORS, AND ALUMINUM GEARS), WITH A RATING OF 133 HP.

HYDRAULIC OIL TO THE POWER CENTER HEAD WILL NOT PASS THROUGH A RESTRICTION CAUSING VALVE WHILE OPERATING THE CUTTING HEAD.

THE SKID STEER HYDRAULIC SYSTEM WILL SUPPLY OIL FOR THE MOWER'S LIFT SYSTEM, AND WILL POWER THE MOTOR FOR THE FORESTRY BURSH CUTTER.

*****SPECIFICATIONS 18E018*****

SPECIFICATIONS FOR 36" EXCAVATOR FORESTRY BRUSH CUTTER

GENERAL SPECIFICATIONS:

IT IS THE PURPOSE OF THE FOLLOWING SPECIFICATIONS TO DESCRIBE A SELF-PROPELLED, HYDRAULICALLY DRIVEN, BOOM TYPE, EXCAVATOR MOWER, WHICH SHALL MOW FORWARD, RIGHT, OR LEFT OF THE EXCAVATOR, AND EXTEND BY MEANS OF ARTICULATED, TWO-SECTION BOOM. THE UNIT SHALL BE OF THE MANUFACTURER'S CURRENT PRODUCTION MODE, MEETING OR EXCEEDING THE TERMS OF THESE SPECIFICATIONS. UNIT(S) SHALL BE THE MANUFACTURER'S MOST HEAVY-DUTY MODEL AVAILABLE. THE MANUFACTURER SHALL FURNISH PARTS AND OPERATION MANUALS FOR THE UNIT(S) BID. THE MANUFACTURER SHALL ALSO GUARANTEE EQUIPMENT AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF (1) YEAR.

CUTTING HEAD:

THE CUTTING HEAD WILL HAVE A MINIMUM WEIGHT OF 850 LBS., WITH A TIP SPEED OF 10,700 FT/MIN, AND A CUTTING WIDTH OF 36" OF ACTUAL CUT. THE CUTTING ASSEMBLY WILL BE ROTARY, AND HYDRAULICALLY DRIVEN.

CUTTING HEAD WILL BE CAPABLE OF CUTTING MATERIAL 6" IN DIAMETER, AND MULCHING MATERIAL 4" IN DIAMETER.

CUTTING HEAD WILL BE CAPABLE OF CUTTING/MULCHING MATERIAL WITH ITS ENTIRE BOTTOM PLANE, IN ADDITION TO ITS CUTTING EDGE.

CUTTING HEAD DECK WILL HAVE A HEAVY-DUTY STEEL HOUSING OF 11 GAUGE DOMEX OF 110,000 PSI YIELD STRENGTH, AND FULL LENGTH REPLACEABLE SKID SHOES ON INNER AND OUTER ENDS.

HYDRAULIC MOTOR WILL HAVE A RATING OF 99 HP.

CUTTING HEAD WILL BE A 36" SOLID 1" THICK STEEL DISK WITH (24) REPLACEABLE TEETH, BOLT PROTECTOR, AND CENTER MOUNTED CUTTER, AND ATTACH TO THE SPINDLE BY (6) 5/8" GRADE-8 BOLTS.

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SPINDLE:

SPINDLE WILL BE ONE PIECE 8630 STEEL, MOUNTED IN STRAIGHT ROLLER BEARINGS, WITH A MINIMUM SPEED OF 1,200 RPM.

SPINDLE FOR POWER TO CUTTING ASSEMBLY WILL BE 6.5" IN DIAMETER AT ITS LARGEST AREA X 13" LONG, WITH BEARING DIAMETER OF 2.755" WITH A MINIMUM OF 4.5" BETWEEN BEARING CENTERS.

SPINDLE WILL BE DIRECT COUPLED WITH A SPLINED END, AND BE ATTACHED TO THE CUTTING HEAD SO AS TO ABSORB 24,000 LBS. OF SHEAR STRENGTH, AND DISTRIBUTE THIS LOAD OVER AN AREA OF 169 IN².

MOUNT:

MOUNT WILL BE CONSTRUCTED OF HIGH STRENGTH STEEL, AND MAY BE OF OUR STANDARD DESIGN OR A CUSTOM DESIGN AS NEEDED.

*****SPECIFICATION 18E019*****

SPECIFICATIONS FOR 48" EXCAVATOR FORESTRY BRUSH CUTTER

GENERAL SPECIFICATIONS:

IT IS THE PURPOSE OF THE FOLLOWING SPECIFICATIONS TO DESCRIBE A SELF-PROPELLED, HYDRAULICALLY DRIVEN, BOOM TYPE, EXCAVATOR MOWER, WHICH SHALL MOW FORWARD, RIGHT, OR LEFT OF THE EXCAVATOR, AND EXTEND BY MEANS OF ARTICULATED, TWO-SECTION BOOM. THE UNIT SHALL BE OF THE MANUFACTURER'S CURRENT PRODUCTION MODE, MEETING OR EXCEEDING THE TERMS OF THESE SPECIFICATIONS. UNIT(S) SHALL BE THE MANUFACTURER'S MOST HEAVY-DUTY MODEL AVAILABLE. THE MANUFACTURER SHALL FURNISH PARTS AND OPERATION MANUALS FOR THE UNIT(S) BID. THE MANUFACTURER SHALL ALSO GUARANTEE EQUIPMENT AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF (1) YEAR.

CUTTING HEAD:

THE CUTTING HEAD WILL HAVE A MINIMUM WEIGHT OF 2,150 LBS., WITH A TIP SPEED OF 8,060 FT/MIN AT 40 GPM., AND A CUTTING WIDTH OF 48" OF ACTUAL CUT. THE CUTTING ASSEMBLY WILL BE ROTARY, AND HYDRAULICALLY DRIVEN.

CUTTING HEAD WILL BE CAPABLE OF CUTTING MATERIAL 10" IN DIAMETER, AND MULCHING MATERIAL 10" IN DIAMETER.

CUTTING HEAD WILL BE CAPABLE OF CUTTING/MULCHING MATERIAL WITH ITS ENTIRE BOTTOM PLANE, IN ADDITION TO ITS CUTTING EDGE.

CUTTING HEAD DECK WILL HAVE A HEAVY-DUTY STEEL HOUSING OF 1/2" GRADE-80 WITH 80,000 PSI YIELD STRENGTH.

CUTTING HEAD WILL BE A 48" SOLID 1" THICK STEEL DISK WITH (28) REPLACEABLE TEETH, BOLT PROTECTOR, AND CENTER MOUNTED CUTTER, AND ATTACH TO THE SPINDLE BY (6) 5/8" GRADE-8 BOLTS.

SPINDLE:

SPINDLE WILL BE ONE PIECE 8630 STEEL, MOUNTED IN STRAIGHT ROLLER BEARINGS, WITH A MINIMUM SPEED OF 1,200 RPM.

SPINDLE FOR POWER TO CUTTING ASSEMBLY WILL BE 6.5" IN DIAMETER AT IS LARGEST AREA X 13" LONG, WITH BEARING DIAMETER OF 2.755" WITH A MINIMUM OF 4.5" BETWEEN BEARING CENTERS.

SPINDLE WILL BE DIRECT COUPLED WITH A SPLINED END, AND BE ATTACHED TO THE CUTTING HEAD SO AS TO ABSORB 240,000 LBS. OF SHEAR STRENGTH, AND DISTRIBUTE THIS LOAD OVER AN AREA OF 169 IN².

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MOUNT:

MOUNT WILL BE CONSTRUCTED OF HIGH STRENGTH STEEL, AND MAY BE OF OUR STANDARD DESIGN OR A CUSTOM DESIGN AS NEEDED.

*****SPECIFICATIONS 18E020*****

SPECIFICATIONS FOR 60" EXCAVATOR FORESTRY BRUSH CUTTER

GENERAL SPECIFICATIONS:

IT IS THE PURPOSE OF THE FOLLOWING SPECIFICATIONS TO DESCRIBE A SELF-PROPELLED, HYDRAULICALLY DRIVEN, BOOM TYPE, EXCAVATOR MOWER, WHICH SHALL MOW FORWARD, RIGHT, OR LEFT OF THE EXCAVATOR, AND EXTEND BY MEANS OF ARTICULATED, TWO-SECTION BOOM. THE UNIT SHALL BE OF THE MANUFACTURER'S CURRENT PRODUCTION MODE, MEETING OR EXCEEDING THE TERMS OF THESE SPECIFICATIONS. UNIT(S) SHALL BE THE MANUFACTURER'S MOST HEAVY-DUTY MODEL AVAILABLE. THE MANUFACTURER SHALL FURNISH PARTS AND OPERATION MANUALS FOR THE UNIT(S) BID. THE MANUFACTURER SHALL ALSO GUARANTEE EQUIPMENT AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF (1) YEAR.

CUTTING HEAD:

THE CUTTING HEAD WILL HAVE A MINIMUM WEIGHT OF 2,800 LBS., WITH A TIP SPEED OF 10,071 FT/MIN AT 40 GPM., AND A CUTTING WIDTH OF 60" OF ACTUAL CUT. THE CUTTING ASSEMBLY WILL BE ROTARY, AND HYDRAULICALLY DRIVEN.

CUTTING HEAD WILL BE CAPABLE OF CUTTING MATERIAL 12" IN DIAMETER, AND MULCHING MATERIAL 12" IN DIAMETER.

CUTTING HEAD WILL BE CAPABLE OF CUTTING/MULCHING MATERIAL WITH ITS ENTIRE BOTTOM PLANE, IN ADDITION TO ITS CUTTING EDGE.

CUTTING HEAD DECK WILL HAVE A HEAVY-DUTY STEEL HOUSING OF ½" GRADE-80 WITH 80,000 PSI YIELD STRENGTH.

CUTTING HEAD WILL BE A 60" SOLID 1" THICK STEEL DISK WITH (36) REPLACEABLE TEETH, BOLT PROTECTOR, AND CENTER MOUNTED CUTTER, AND ATTACH TO THE SPINDLE BY (6) 5/8" GRADE-8 BOLTS.

HYDRAULIC MOTOR WILL HAVE A RATING OF 99 HP.

SPINDLE:

SPINDLE WILL BE ONE PIECE 8630 STEEL, MOUNTED IN STRAIGHT ROLLER BEARINGS, WITH A MINIMUM SPEED OF 1,200 RPM.

SPINDLE FOR POWER TO CUTTING ASSEMBLY WILL BE 6.5" IN DIAMETER AT IS LARGEST AREA X 13" LONG, WITH BEARING DIAMETER OF 2.755" WITH A MINIMUM OF 4.5" BETWEEN BEARING CENTERS.

SPINDLE WILL BE DIRECT COUPLED WITH A SPLINED END, AND BE ATTACHED TO THE CUTTING HEAD SO AS TO ABSORB 240,000 LBS. OF SHEAR STRENGTH, AND DISTRIBUTE THIS LOAD OVER AN AREA OF 169 IN².

MOUNT:

MOUNT WILL BE CONSTRUCTED OF HIGH STRENGTH STEEL, AND MAY BE OF OUR STANDARD DESIGN OR A CUSTOM DESIGN AS NEEDED.

*****SPECIFICATION 18E021*****

SPICIFCATIONS FOR CUTTING HEADS DESIGNED TO PULVERIZE WOOD. BOOM MOWERS, EXCAVATORS, AND SKID STEERS.

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DETAILED SPECIFICATIONS:

CUTTER HEAD CAPABLE OF PULVERIZING WOOD INTO SMALL CHIPS. SPLITTER BLOCK DESIGNED IN SUCH A WAY THAT SPLITS CHIPS INTO SMALLER MULCH LEAVING A SAW DUST MULCH AND SELF-CLEANING, NON-CLOGGING DESIGN.

ONE BOLT TO REMOVE AND REPLACE A TOOTH. CUTTER HEAD TEETH BITE PROVIDES A CONTROLLED DESIGN TO PREVENT CUTTER HEAD FROM TAKING LARGE BITES.

LOW FLOW BOOM MOUNTED CUTTER HEAD:

DESIGNED FOR SMALL TRACTORS WITH A BOOM ARM AND SMALL EXCAVATORS/TRACK HOES.

CUTTING WIDTH SHALL BE A MINIMUM OF 49"

OVERALL WIDTH SHALL BE A MINIMUM OF 60"

OVERALL HEIGHT SHALL BE A MINIMUM OF 25"

OVERALL DEPTH SHALL BE A MINIMUM OF 30"

WEIGHT SHALL BE A MINIMUM OF 980 LBS NOT TO EXCEED 1,100 LBS.

RECOMMENDED RPM: 3500 RPM

TRACTOR H.P.: SHOULD RANGE FROM 60-110 HP

MAXIMUM HYDRAULIC FLOW SHOULD BE A MINIMUM OF 17 GPM

MAXIMUM OPERATING PRESSURE 3,000 PSI

LOW-FLOW CUTTER HEAD FOR SKID STEERS & COMPACT LOADERS:

DESIGNED FOR SKID STEERS AND COMPACT TRACK LOADERS WITH HYDRAULIC FLOWS BETWEEN 17-40 GPMS

CUTTING WITH SHALL BE A MINIMUM OF 49"

OVERALL WIDTH SHALL BE A MINIMUM OF 59"

OVERALL HEIGHT SHALL BE A MINIMUM OF 38"

OVERALL DEPTH SHALL BE A MINIMUM OF 36"

WEIGHT SHOULD BE A MINIMUM OF 1,100 LBS NOT TO EXCEED 1,300 LBS.

NUMBER OF TEETH SHOULD BE A MINIMUM OF 20

RECOMMENDED RPM 3,500 RPM

TRACTOR HP: SHOULD RANGE FROM 60-110 H.P.

MINIMUM HYDRAULIC FLOW 17 GPM

HI/LOW FLOW CUTTER HEAD FOR SKID STEERS & COMPACT LOADERS:

DESIGNED FOR SKID STEERS AND COMPACT TRACK LOADERS WITH HYDRAULIC FLOWS BETWEEN 17-50 GPMS,

CUTTING WIDTH SHALL BE A MINIMUM OF 49"

OVERALL WIDTH SHALL BE A MINIMUM OF 60"

OVERALL HEIGHT SHALL BE A MINIMUM OF 38"

OVERALL DEPTH SHALL BE A MINIMUM OF 36"

WEIGHT SHALL BE A MINIMUM OF 1,250 LBS TO 1,350 LBS

NUMBER OF TEETH SHALL BE A MINIMUM OF 20

RECOMMENDED RPM 3,500

TRACTOR HP: SHOULD RANGE FROM 60 HP TO 140 HP.

MAXIMUM HYDRAULIC FLOW 50 GPM

HIGH FLOW CUTTER HEAD FOR SKID STEERS & COMPACT TRACK LOADERS:

DESIGNED FOR SKID STEERS AND COMPACT TRACK LOADERS WITH HYDRAULIC FLOWS BETWEEN 30-50 GPM

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CAPABLE OF BEING TOP-MOUNTED WITH AN OPTIONAL BRACKET ON EXCAVATORS CAPABLE OF HANDLING THE CUTTER-HEADS WEIGHT AND HYDRAULIC FLOW REQUIREMENTS.
 CUTTING WIDTH SHALL BE A MINIMUM OF 65"
 OVERALL WIDTH SHALL BE A MINIMUM OF 76"
 OVERALL HEIGHT SHALL BE A MINIMUM OF 66"
 OVERALL DEPTH SHALL BE A MINIMUM OF 36"
 WEIGHT SHALL BE A MINIMUM OF 2,400 LBS TO 2,600 LBS
 NUMBER OF TEETH SHALL BE A MINIMUM OF 22
 RECOMMENDED RPM 2500
 TRACTOR HP: SHOULD RANGE FROM 80-140 HP

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SPECIFICATIONS FOR A PURPOSE BUILT SELF-CONTAINED BOOM MOWER CAPABLE OF HAVING MULTIPLE MOWING ATTACHMENTS.

GENERAL SPECIFICATIONS:

ENGINE: TO BE A MINIMUM OF 140 HP. TIER IV COMPLIANT TURBO CHARGED DIESEL WITH INTERCOOLER.
 FUEL CAPACITY: TO BE 45 GALLONS MINIMUM
 HYDRAULIC RESEVOIR: TO BE 45 GALLONS MINIMUM
 DEF FLUID: TO BE 5 GALLONS MINIMUM
 DRIVE: HYDROSTATE PUMP
 WEIGHT: NOT TO EXCEED 14,000 LBS. GVW
 FULL VISIBILITY GLASS CAB
 PRESSURIZED FILTERED AIR HVAC SYSTEM
 EXTERNAL MIRRORS ON BOTH SIDES OF THE CAB
 AIR RIDE SEATS WITH ARM RESTS AND TRAINING SEAT
 SPEEDOMETERS, MOWER INDICATORS, BRAKE PEDAL AND STEERING WHEEL
 CONTROLS CAPABLE OF DATA LOGGING AND REMOTE DIAGNOSTICS THROUGH SECURE WIRELESS NETWORK.
 MACHINE MUST HAVE A MINIMUM OF 10" OF GROUND CLEARANCE IN TRANSPORT MODE
 TIRES: HIGH IMPACT 10 PLY TIRES WITH R4 TREAD TYPE
 WHEEL: WELDED STEEL FIXED POSITION
 REAR DRAWBAR WITH PULLING CAPACITY OF A MINIMUM OF 6,000 LBS.

OPERATOR/ SAFETY EQUIPMENT

CAB: CONFIGURED FOR ISO 3477 OPERATOR SPACE REQUIREMENTS
 POLYCARBONATE PROTECTIVE DOOR ON THE RH SIDE IS STANDARD
 ROPS EXTERIOR MOUNTED-ISO
 BACK-UP ALARM
 LIGHT BAR (DOT SPEC)
 REAR VIEW CAMERA SYSTEM
 MEET APPLICABLE ISO SAFETY STANDARDS, AND DOT REGULATIONS.

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CHASSIS/ DRIVETRAIN

FORWARD MOUNTED CAB WITH GOOD VISIBILITY DURING MOWING AND TRANSPORT
 PERMANENT FOUR-WHEEL DRIVE AND FOUR-WHEEL STEERING WITH CRAB STEER OPTION.
 AUTOMATIC SPEED CONTROL OF REAR AXLE HOUSING
 SOLID STEERABLE AXLES, FRONT AXLE PIVOTING
 BRAKES: INTERNAL OR EXTERNAL AND A PARKING BRAKE
 DIFFERENTIAL LOCK: ELECTRONIC ACTIVATION
 STEERING: HYDRAULIC-ZERO TURN RADIUS CAPABILITY
 MID-MOUNTED UNIVERSAL MOWER ATTACHMENT FOR ALL SIDE ATTACHMENT TOOLS.

FRONT 3-PT. HITCH

CAT II THREE-POINT-HITCH FRONT MOUNTED
 SCV REMOTES
 STANDARD LIFT: MINIMUM OF 4500 LBS.

WIDE AREA MOWER:

21 FT. HYDRAULICALLY DIVEN ROTARY MOWER WITH OPTIONAL CENTER DECK OUT FRONT
 WING MOWERS SHALL HAVE A SAFETY BREAKAWAY, MECHANICAL OR HYDRAULIC.
 MOWING HEIGHTS SHALL BE ADJUSTABLE FROM 1" TO 9"
 MOWER DECKS SHALL BE OF A "CLEAN DECK" STYLE HAVING A SLOPED DECK THAT DOES
 NOT CATCH GRASS.
 MOWER HEADS WILL HAVE FLOATING CAPABILITY.
 THE WING MOWER ATTACHMENTS WILL BE LOCATED BEHIND THE CAB.
 REPLACEABLE SKID SHOES WILL BE STANDARD
 POSITIVE LATCHING FOR TRANSPORT AND SERVICE POSITIONS.

HEAVY BOOM MOWER:

BOOM REACH OF A MINIMUM OF 22 FEET FROM CENTER OF THE MACHINE TO THE EDGE OF
 CUT.
 BOOM WILL BE CAPABLE OF FOLDING BEHIND THE CAB FOR TRANSPORT OF A MAXIMUM OF
 150"H X 102" WIDE.
 FULLY ADJUSTABLE JOYSTICK IN CAB
 SEVEN BOOM FUNCTIONS
 PROTECTED BOOM HOSES & LINES
 CAPABLE OF MOWING WITHIN 16" OF TIRES
 CAPABLE OF MOWING 45 DEGREE DOWNWARD SLOPE
 A SWING BACK BREAKAWAY FEATURE WILL BE IN THE BOOM DESIGN
 POSITIVE LATCH FOR TRANSPORT AND SERVICE POSITIONS

ATTACHMENT HEADS:

48" FLAIL HEAD
 60" ROTARY HEAD
 3-BLADE SAW HEAD
 UGR MOWING HEAD