

SKID-TYPE SPRAYERS

BASE UNIT REQUIREMENTS

SPECIFICATION NO. 2.4

SWIFT EVENT NO. 10213

Vendor Name:	L&D Ag Service
Contact Person:	Travis Routh
Street Address:	408 Broadway
P.O. Box:	Box 208
City, State, Zip	Hartland, Mn 56042
Phone #:	507-845-2100
Toll Free #:	
Fax #:	507-845-2188
Email Address:	info@ld-ag.com

2.4	Information Requested	Answer
	Make & Model Number	L&D 200 gallon 3pt
	Skid Type (Pickup Truck, Ag/Farm Tractor, 3-Point, etc)	Ag Catagory II 3pt hitch mounted
	Water Tank Capacity (In gallons)	200
	Water Tank Construction (Plastic, Stainless, etc)	plastic
	Chemical Tank Capacity (In gallons)	10
	Number of Chemical Tanks	3
	Chemical Tank Construction (Plastic, Stainless, etc)	plastic
	Pump GPM (Gallons per Minute)	115
	Pump Drive Motor Type	Hydraulic
	<u>If Hydraulic or Electric</u>	
	Vehicle Power Requirments Volts/amps or GPM/pressure	7 gpm max, closed center hydraulics required
	Do hoses or cables come with unit?	Hydraulic Hose included

If Engine driven

Engine Make and Model	NA
Engine Fuel Type and Capacity (In gallons)	NA
Engine Air or Water Cooled	NA
Engine Location	NA
Control Panel Size	11" wide x 6" high
What does the control panel control?	Boom on/off and automatic rate control
Number of Spray Bars	3 sections
Max Spray Distance (one side to the other)	40'
Hand Gun Capable	Yes
Hand Gun Included in Base Price?	Yes
Hand Gun Hose Length (In feet)	100
Skid Size (length and width, in inches)	96" wide x 72" long
How is Skid attached to Vehicle/Trailer?	3 pt hitch
What is the estimated weight of the unit with the tanks full and ready to spray?	3000 lbs
Warranty Length (In days, months, or years)	1 year
BASE UNIT PRICE:	\$ 20,200.00

SKID-TYPE WEED SPRAYERS

OPTIONS

SPECIFICATION NO. 2.5

SWIFT EVENT NO. 10213

Vendor Name:	L&D Ag Service
Contact Person:	Travis Routh
Street Address:	408 Broadway
P.O. Box:	Box 208
City, State, Zip:	Hartland, Mn 56042
Phone #:	507-845-2100
Toll Free #:	
Fax #:	507-845-2188
Email Address:	info@ld-ag.com

Base Unit Price: \$ 20,200.00

Spec No.	Description	Price
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2.5.1	Date & Title/I.D. of Price List	11/7/2019 200 gallon 3pt sprayer
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2.5.2	Discount to be applied to Price List *Note: The "Discount to be Applied to Price List" must be a numeric percentage,	None
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2.5.3	Price for one complete set of regular maintenance filters (air, fuel, fluid) for all systems.	NA
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2.5.4	<u>EXTENDED WARRANTY OPTIONS</u> NA	
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2.5.5	<u>DELIVERY CHARGES - SEE SPECIAL TERMS AND CONDITIONS</u>	<u>NO FLAT RATE ALLOWED</u>
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DELIVERY STARTING POINT - City, State, Zip _____

PRICE PER LOADED MILE:	\$2.00
MINIMUM DELIVERY CHARGE (if applicable)	\$200

2.5.6	<u>EQUIPMENT INSPECTION & REPAIR RATES</u>	
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Hourly Rate for Initial Inspection/Diagnostic :	\$	120.00
Hourly Rate for Shop/Mechanical Work (including installation/assembly) :	\$	120.00
Hourly Rate for Body Work (including paint or welding labor) :	\$	120.00

2.5.7	<u>NEW EQUIPMENT RENTAL PROGRAM</u> NA	
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Vegetation Control 200 gallon 3pt sprayer specifications and optional equipment pricing:

The standard specifications for the sprayer are as follows:

Base unit

- 200 gallon tank and tank saddle with sump for full drainage
- Tank is equipped with agitation and quick fill plumbing
- Heavy Duty Skid is designed for use on category “2” 3pt hitch of tractor.
- Sprayer will be 6’ in total length.
- Hannay 1500 series electric rewind hose reel with 100’ of ½” hose and adjustable pattern spray gun.
- Hypro 9303c-Hm4cb hydraulic drive centrifugal pump with silicon carbide seal (tractor with closed center hydraulics required).
- Sprayer has 3 – 10 gallon chemical tanks for optional chemical injection.
- Sprayer has 1 – 10 gallon tank for fresh water to flush chemical injection pumps
- Hand wash tank
- Switchbox operates individual sections of sprayer and adjust outside nozzle pitch.

Boom and Nozzle system

- Center spray boom will mounted behind sprayer for coverage the width of implement.
- Single boomless nozzle on each side of sprayer will be mounted on actuator for adjustable pitch of nozzle for varying terrain. These nozzles will have individual control to be able to spray out either side or both sides of vehicle simultaneously for maximum coverage.
- Sprayer will be set up with 3 on/off valves with one valve for the center section and one valve for each of the outside boomless nozzles.
- Spray coverage will be a minimum of 30’ up to 40’ depending on spray conditions (full boom width, spraying out both sides).



- Center boom and outside boomless nozzles will have manual height adjustment for optimum coverage during different times of the spray season.

Raven SCS 450 Automatic Spray control system

- Sprayer is equipped with Raven SCS 450 console, GPS type speed sensor, flow meter, and control valve for automatic speed compensated rate control.

Price for standard sprayer as described above:

\$20,200.00

Additional features/equipment

- Plumbing will be complete for sprayer including quick fill for main tank and all valves/plumbing for main tank agitation. Chemical tanks for injection pumps will have complete plumbing with priming/recirculation capability.
- L&D built portion of sprayer shall have 1 year warranty with OEM manufacturers stated warranty covering other supplied equipment.
- Operator manuals for all equipment will be supplied if available.
- Free phone support for equipment operation.
- Please visit www.ravenprecision.com for more Raven Viper 4+ features or call us with questions.

Optional Equipment

Raven Viper Control/Injection/Mapping System

- Raven Viper 4+ Console can control main spray system utilizing a flow meter and control valve for proper rate application. Console can control Raven Sidekick pro chemical injection pumps being fed by three 10 gallon chemical tanks. The Viper 4+ has a GPS receiver for mapping/data logging capability. Maps show as applied rates and are date/time stamped.



Raven Sidekick pro chemical injection pump

- This sprayer is capable of running up to three chemical injection pumps, the low volume pumps available are capable of 1-40 oz/minute and the high volume pumps are capable of 5-200oz/minute.

Raven Slingshot

- Viper system can be equipped with Slingshot for wireless data transfer.
- Viper system can be equipped with Watchdog weather station for real time weather data.

300 gallon tank upgrade

- A 300 gallon tank can be installed instead of the standard 200 gallon tank. This larger tank will increase the sprayer to 8' total length from the standard 6'.

Optional Equipment pricing:

300 gallon tank upgrade from standard 200 gallon:	\$750.00
Raven Viper 4 control/mapping system	\$10,350.00
1 st Chemical injection pump with plumbing/wiring	\$6400.00
2 nd Chemical injection pump with plumbing/wiring	\$6150.00
3 rd Chemical injection pump with plumbing/wiring	\$6150.00
Raven Slingshot Data transfer system	\$2140.00
(after the first year there is a \$500 annual fee)	
Raven Watchdog weather station	\$2790.00
Onsite training including travel time	\$120.00/hr

ATV-UTV WEED SPRAYERS

BASE UNIT REQUIREMENTS

SPECIFICATION NO. 2.2

SWIFT EVENT NO. 10213

Vendor Name:	L&D Ag Service
Contact Person:	Travis Routh
Street Address:	408 Broadway
P.O. Box:	Box 208
City, State, Zip	Hartland, Mn 56042
Phone #:	507-845-2100
Toll Free #:	
Fax #:	507-845-2188
Email Address:	info@ld-ag.com

2.2	Information Requested	Answer
	Make & Model Number	F&S ATV 50
	Water Tank Capacity (In gallons)	50
	Water Tank Construction (Plastic, Stainless, etc)	plastic
	Chemical Tank Capacity (In gallons)	None
	Number of Chemical Tanks	None
	Chemical Tank Construction (Plastic, Stainless, etc)	None
	Pump GPM (Gallons per Minute)	22.5
	Pump Drive Motor Type	Gas Engine
	<u>If Hydraulic or Electric</u>	
	Vehicle Power Requirments Volts/amps or GPM/pressure	NA
	Do hoses or cables come with unit?	No
	<u>If Engine driven</u>	
	Engine Make and Model	Honda GX120
	Engine Fuel Type and Capacity (In gallons)	2.1 qts
	Engine Air or Water Cooled	Air

Engine Location	attached to unit
Control Panel Size	4" x 4"
What does the control panel control?	spray on/off
Number of Spray Bars	Boomless
Max Spray Distance (one side to the other)	32' max
Hand Gun Capable	Yes
Hand Gun Included in Base Price?	Yes
Hand Gun Hose Length (In feet)	50'
Skid Size (length and width, in inches)	47 3/4" wide x 49" length x 26" high
How is Skid attached to ATV-UTV?	strap or bolt down
What is the estimated weight of the unit with the tanks full and ready to spray?	574 lbs
Warranty Length (In days, months, or years)	1 year limited warranty
BASE UNIT PRICE:	\$ 2,371.00

ATV-UTV WEED SPRAYERS

OPTIONS

SPECIFICATION NO. 2.3

SWIFT EVENT NO. 10213

Vendor Name:	L&D Ag Service
Contact Person:	Travis Routh
Street Address:	408 Broadway
P.O. Box:	Box 208
City, State, Zip	Hartland, Mn 56042
Phone #:	507-845-2100
Toll Free #:	
Fax #:	507-845-2188
Email Address:	info@ld-ag.com

Base Unit Price: \$ 2,371.00

Spec No.	Description	Price
2.3.1	Date & Title/I.D. of Price List	11/6/2019 FS 50
2.3.2	Discount to be applied to Price List	None
2.3.3	Price for one complete set of regular maintenance filters (air, fuel, fluid) for all systems.	None
2.3.4	<u>EXTENDED WARRANTY OPTIONS</u> NA	
2.3.5	<u>DELIVERY CHARGES</u>	
	<u>DELIVERY STARTING POINT - City, State, Zip</u>	
	PRICE PER LOADED MILE:	\$2.00
	MINIMUM DELIVERY CHARGE (if applicable)	\$200.00
2.3.6	<u>EQUIPMENT INSPECTION & REPAIR RATES</u>	
	Hourly Rate for Initial Inspection/Diagnostic :	\$120.00
	Hourly Rate for Shop/Mechanical Work (including installation/assembly) :	\$120.00
	Hourly Rate for Body Work (including paint or welding labor) :	\$120.00
2.3.7	<u>NEW EQUIPMENT RENTAL PROGRAM</u> NA	



Ag Service
Hartland, MN

2.2 ATV/UTV FS 50 sprayer options:

Part #	Description	Price
BOOM12	12' Spray Boom	\$329.00
BOOM18	18' Spray Boom	\$472.00
BOOM18FLEX	18' Spray Boom	\$525.00
BOOM20FLEX	20' Spray Boom	\$549.00
BOOM22FLEX	22' Spray Boom	\$579.00
BOOMLESS BOOMINATOR	Boomless Nozzle Assembly	Included in base price
ATV spray gun upgrade	Teejet 22" aluminum HD spray gun	\$145.00
ATV Stand	Holds sprayer upright for storage	\$209.00
ATV50EC-3KZ	3 section Electric control upgrade	\$1177.00
Raven SCS 450 kit	automatic rate controls/no mapping (need ATV50EC-3kz kit)	\$3370.00
Viper 4 Kit	Raven Viper 4 display with automatic rate controls(need ATV50EC-3KZ kit)	\$13072.00
Onsite training including travel time		\$120/hour

See <http://www.fsmfg.com/wp-content/uploads/2019/03/UTV-Skid-Sprayer-Specs.pdf> for specifications and details.

ATV-UTV WEED SPRAYERS

BASE UNIT REQUIREMENTS

SPECIFICATION NO. 2.2

SWIFT EVENT NO. 10213

Vendor Name:	L&D Ag Service
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Fax #:	507-845-2188
Email Address:	info@ld-ag.com

2.2	Information Requested	Answer
	Make & Model Number	F&S ATV 100
	Water Tank Capacity (In gallons)	100
	Water Tank Construction (Plastic, Stainless, etc)	plastic
	Chemical Tank Capacity (In gallons)	None
	Number of Chemical Tanks	None
	Chemical Tank Construction (Plastic, Stainless, etc)	None
	Pump GPM (Gallons per Minute)	22.5
	Pump Drive Motor Type	Gas Engine
	<u>If Hydraulic or Electric</u>	
	Vehicle Power Requirments Volts/amps or GPM/pressure	NA
	Do hoses or cables come with unit?	No
	<u>If Engine driven</u>	
	Engine Make and Model	Honda GX120
	Engine Fuel Type and Capacity (In gallons)	2.1 qts
	Engine Air or Water Cooled	Air

Engine Location	attached to unit
Control Panel Size	4" x 4"
What does the control panel control?	spray on/off
Number of Spray Bars	Boomless
Max Spray Distance (one side to the other)	32' max
Hand Gun Capable	Yes
Hand Gun Included in Base Price?	Yes
Hand Gun Hose Length (In feet)	50'
Skid Size (length and width, in inches)	47 3/4" wide x 49" length x 26" high
How is Skid attached to ATV-UTV?	strap or bolt down
What is the estimated weight of the unit with the tanks full and ready to spray?	1017 lbs
Warranty Length (In days, months, or years)	1 year limited warranty
BASE UNIT PRICE:	\$ 2,471.00

ATV-UTV WEED SPRAYERS

OPTIONS

SPECIFICATION NO. 2.3

SWIFT EVENT NO. 10213

Vendor Name:	L&D Ag Service
Contact Person:	Travis Routh
Street Address:	408 Broadway
P.O. Box:	Box 208
City, State, Zip	Hartland, Mn 56042
Phone #:	507-845-2100
Toll Free #:	
Fax #:	507-845-2188
Email Address:	info@ld-ag.com

Base Unit Price: \$ 2,471.00

Spec No.	Description	Price
2.3.1	Date & Title/I.D. of Price List	11/6/2019 FS 100
2.3.2	Discount to be applied to Price List *Note: The "Discount to be Applied to Price List" must be a numeric percentage,	None
2.3.3	Price for one complete set of regular maintenance filters (air, fuel, fluid) for all systems.	None
2.3.4	<u>EXTENDED WARRANTY OPTIONS</u> NA	
2.3.5	<u>DELIVERY CHARGES</u>	
	<u>DELIVERY STARTING POINT - City, State, Zip</u>	
	PRICE PER LOADED MILE:	\$2.00
	MINIMUM DELIVERY CHARGE (if applicable)	\$200.00
2.3.6	<u>EQUIPMENT INSPECTION & REPAIR RATES</u>	
	Hourly Rate for Initial Inspection/Diagnostic :	\$120.00
	Hourly Rate for Shop/Mechanical Work (including installation/assembly) :	\$120.00
	Hourly Rate for Body Work (including paint or welding labor) :	\$120.00
2.3.7	<u>NEW EQUIPMENT RENTAL PROGRAM</u> NA	



Ag Service
Hartland, MN

2.2 ATV/UTV FS 100 sprayer options:

Part #	Description	Price
BOOM12	12' Spray Boom	\$329.00
BOOM18	18' Spray Boom	\$472.00
BOOM18FLEX	18' Spray Boom	\$525.00
BOOM20FLEX	20' Spray Boom	\$549.00
BOOM22FLEX	22' Spray Boom	\$579.00
BOOMLESS BOOMINATOR	Boomless Nozzle Assembly	Included in base price
ATV spray gun upgrade	Teejet 22" aluminum HD spray gun	\$145.00
ATV Stand	Holds sprayer upright for storage	\$209.00
ATV100EC-3KZ	3 section Electric control upgrade	\$1177.00
Raven SCS 450 kit	automatic rate controls/no mapping (need ATV100EC-3kz kit)	\$3370.00
Viper 4 Kit	Raven Viper 4 display with automatic rate controls(need ATV100EC-3KZ kit)	\$13072.00
Onsite training including travel time		\$120.00/hour

See <http://www.fsmfg.com/wp-content/uploads/2019/03/UTV-Skid-Sprayer-Specs.pdf> for details and specifications.

CLASS 7/8 SKID-TYPE SPRAYERS

BASE UNIT REQUIREMENTS

SPECIFICATION NO. 2.8

SWIFT EVENT NO. 10213

Vendor Name:	L&D Ag Service
Contact Person:	Travis Routh
Street Address:	408 Broadway
P.O. Box:	Box 208
City, State, Zip	Hartland, Mn 56042
Phone #:	507-845-2100
Toll Free #:	
Fax #:	507-845-2188
Email Address:	info@ld-ag.com

2.8	Information Requested	Answer
	Make & Model Number	L&D Ag 1065 gallon skid
	Skid Size	61"x141"
	Water Tank Capacity (In gallons)	1065
	Water Tank Construction (Plastic, Stainless, etc)	plastic
	Chemical Tank Capacity (In gallons)	10 gal
	Number of Chemical Tanks	3
	Chemical Tank Construction (Plastic, Stainless, etc)	plastic
	Pump GPM (Gallons per Minute)	122 max
	Pump Drive Motor Type	gas engine/belt
	<u>If Hydraulic or Electric</u>	
	Vehicle Power Requirments Volts/amps or GPM/pressure	NA
	Do hoses or cables come with unit?	NA
	<u>If Engine driven</u>	
	Engine Make and Model	Honda GX240
	Engine Fuel Type and Capacity (In gallons)	5.6 qts

Engine Air or Water Cooled	Air
Engine Location	on skid unit
Control Panel Size	11" wide x 6" high
What does the control panel control?	Boom on/off and automatic rate control
Number of Spray Bars	2 nozzles
Max Spray Distance (one side to the other)	20'
Hand Gun Capable	Yes
Hand Gun Included in Base Price?	Yes
Hand Gun Hose Length (In feet)	100'
Skid Size (length and width, in inches)	72" x 144"
How is Skid attached to Vehicle/Trailer?	bolt down on truck bed
What is the estimated weight of the unit with the tanks full and ready to spray?	12000 lbs
Warranty Length (In days, months, or years)	1 year
BASE UNIT PRICE:	\$ 19,875.00

CLASS 7/8 SKID-TYPE WEED SPRAYERS

OPTIONS

SPECIFICATION NO. 2.9

SWIFT EVENT NO. 10213

Vendor Name:	L&D Ag Service
Contact Person:	Travis Routh
Street Address:	408 Broadway
P.O. Box:	Box 208
City, State, Zip	Hartland, Mn 56042
Phone #:	507-845-2100
Toll Free #:	
Fax #:	507-845-2188
Email Address:	info@ld-ag.com

Base Unit Price: \$19,875

Spec No.	Description	Price
2.9.1	Date & Title/I.D. of Price List	11/13/2019 L&D Ag 1065 gallon skid
2.9.2	Discount to be applied to Price List	NA
2.9.3	Price for one complete set of regular maintenance filters (air, fuel, fluid) for all systems.	NA
2.9.4	<u>EXTENDED WARRANTY OPTIONS</u> NA	
2.9.5	<u>DELIVERY CHARGES</u>	
	<u>DELIVERY STARTING POINT - City, State, Zip</u>	
	PRICE PER LOADED MILE:	\$2.00
	MINIMUM DELIVERY CHARGE (if applicable)	\$200.00
2.9.6	<u>EQUIPMENT INSPECTION & REPAIR RATES</u>	
	Hourly Rate for Initial Inspection/Diagnostic :	\$ 120.00
	Hourly Rate for Shop/Mechanical Work (including installation/assembly) :	\$ 120.00
	Hourly Rate for Body Work (including paint or welding labor) :	\$ 120.00
2.9.7	<u>NEW EQUIPMENT RENTAL PROGRAM</u> NA	



Vegetation control 1065 gallon Truck skid sprayer specifications and optional equipment pricing:

The standard specifications for the sprayer are as follows:

Base unit

- 1065 gallon tank and tank skid with sump for full drainage
- Tank is equipped with agitation and quick fill plumbing
- Heavy Duty Skid is designed for use in truck bed
- Hannay 1500 series electric rewind hose reel with 100' of ½" hose and adjustable pattern spray gun.
- Honda GX240 8hp engine with electric start and heavy duty 18 amp charging system.
- Hypro 9263C centrifugal pump with electric clutch
- Sprayer has 3 – 10 gallon tanks for optional chemical injection.
- Switchbox operates individual sections of sprayer and adjust outside nozzle pitch.

Boom and Nozzle system

- 2 nozzle system that can be mounted on truck for best visibility.
- One nozzle has electric tilt for varying terrain
- Coverage up to 20' to one side of truck

Raven SCS 450 Automatic Spray control system

- Sprayer is equipped with Raven SCS 450 console, GPS type speed sensor, flow meter, and control valve for automatic speed compensated rate control.

- Price for standard sprayer as described above: \$19875.00

Additional features/equipment

- Honda Engine will be able to be stopped/started from the cab. Switchbox will be furnished to operate individual nozzles of sprayer, engage or disengage pump via electric clutch, and adjust outside nozzle pitch and orientation.

L&D Ag Service, 408 Broadway Street, Hartland, MN 56042, USA

Tel: 507-845-2100 Fax: 507-845-2188 e-mail: info@ld-ag.com Online: www.ld-ag.com



Ag Service
Hartland, MN

- Plumbing will be complete for sprayer including quick fill for main tank and all valves/plumbing for main tank agitation. Chemical tanks for injection pumps will have complete plumbing with priming/recirculation capability.
- L&D built portion of sprayer shall have 1 year warranty with OEM manufacturers stated warranty covering other supplied equipment.
- Operator manuals for all equipment will be supplied if available.
- Free phone support for equipment operation.
- Please visit www.ravenprecision.com for more Raven Viper 4+ features or call us with questions.

Optional Equipment

Raven Viper Control/Injection/Mapping System

- Raven Viper 4+ Console can control main spray system utilizing a flow meter and control valve for proper rate application. Console can control Raven Sidekick pro chemical injection pumps being fed by three 10 gallon chemical tanks. The Viper 4+ has a GPS receiver for mapping/data logging capability. Maps show as applied rates and are date/time stamped.

Raven Sidekick pro chemical injection pump

- This sprayer is capable of running up to three chemical injection pumps, the low volume pumps available are capable of 1-40 oz/minute and the high volume pumps are capable of 5-200oz/minute.

Raven Slingshot

- Viper system can be equipped with Slingshot for wireless data transfer.
- Viper system can be equipped with Watchdog weather station for real time weather data.

Chemical tank upgrade

- 3 30 gallon tanks in leu of 10 gallon tanks for more onboard chemical storage



Folding boom upgrade

- A folding boom can be added with electric actuator's to give the outside boomless nozzles adjustability from the cab.

Nutating Spray Head

- See attachment for info and specs

Optional Equipment pricing:

Raven Viper 4 control/mapping system	\$10,350.00
1 st Chemical injection pump with plumbing/wiring	\$6400.00
2 nd Chemical injection pump with plumbing/wiring	\$6150.00
3 rd Chemical injection pump with plumbing/wiring	\$6150.00
Raven Slingshot Data transfer system	\$2140.00
(after the first year there is a \$500 annual fee)	
Raven Watchdog weather station	\$2790.00
3 x 30 gallon chemical tank upgrade in leu of 3 x 10 gallon standard	\$450.00
Folding boom upgrade in leu of two nozzle standard	\$1500.00
Nutating Spray Head upgrade in leu of two nozzle standard	\$5050.00
Onsite training including travel time	\$120.00/hr

TRAILER-TYPE SPRAYERS

BASE UNIT REQUIREMENTS

SPECIFICATION NO. 2.6

SWIFT EVENT NO. 10213

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2.6	Information Requested	Answer
	Make & Model Number	L&D LanD Manager
	Skid Type (Pickup Truck, Ag/Farm Tractor, 3-Point, etc)	Ag Tractor pull type
	Water Tank Capacity (In gallons)	500 gallon
	Water Tank Construction (Plastic, Stainless, etc)	plastic
	Chemical Tank Capacity (In gallons)	10 gallons
	Number of Chemical Tanks	3
	Chemical Tank Construction (Plastic, Stainless, etc)	plastic
	Pump GPM (Gallons per Minute)	115 gpm
	Pump Drive Motor Type	hydraulic
	<u>If Hydraulic or Electric</u>	
	Vehicle Power Requirements Volts/amps or GPM/pressure	7 gpm max, (closed center tractor hydraulics required)
	Do hoses or cables come with unit?	Yes
	<u>If Engine driven</u>	
	Engine Make and Model	NA
	Engine Fuel Type and Capacity (In gallons)	NA

Engine Air or Water Cooled	NA
Engine Location	NA
Control Panel Size	11" wide by 6" high
What does the control panel control?	Boom on/off & automatic rate control
Number of Spray Bars	3
Max Spray Distance (one side to the other)	40' max
Hand Gun Capable	Yes
Hand Gun Included in Base Price?	Yes
Hand Gun Hose Length (In feet)	100'
Skid Size (length and width, in inches)	
How is Skid attached to Vehicle/Trailer?	
Trailer Size/Length	160" long x 92" wide
Trailer Hitch Type	Pintle/clevis
Trailer Tire Size	14.9x28
Does the Trailer have brakes?	No
If yes, what type of brakes?	
Does the Trailer have lights? (i.e. stop/turn/tail)	Ag type flashers/tail
What is the estimated weight of the unit with the tanks full and ready to spray?	7500 lbs
Warranty Length (In days, months, or years)	1 year
BASE UNIT PRICE:	\$ 27,550.00

TRAILER-TYPE WEED SPRAYERS

OPTIONS

SPECIFICATION NO. 2.7

SWIFT EVENT NO.10213

Vendor Name:	L&D Ag Service
Contact Person	Travis Routh
Street Address:	408 Broadway
P.O. Box:	Box 208
City, State, Zip	Hartland, Mn 56042
Phone #:	507-845-2100
Toll Free #:	
Fax #:	507-845-2188
Email Address:	info@ld-ag.com

Base Unit Price: \$ 27,550.00

Spec No.	Description	Price
2.7.1	Date & Title/I.D. of Price List	11/11/2019 Pull type 500 gallon
2.7.2	Discount to be applied to Price List	none
2.7.3	Price for one complete set of regular maintenance filters (air, fuel, fluid) for all systems.	NA
2.7.4	<u>EXTENDED WARRANTY OPTIONS</u>	
2.7.5	<u>DELIVERY CHARGES</u>	
	<u>DELIVERY STARTING POINT - City, State, Zip</u>	
	PRICE PER LOADED MILE:	2
	MINIMUM DELIVERY CHARGE (if applicable)	\$200
2.7.6	<u>EQUIPMENT INSPECTION & REPAIR RATES</u>	
	Hourly Rate for Initial Inspection/Diagnostic :	\$ 120.00
	Hourly Rate for Shop/Mechanical Work (including installation/assembly) :	\$ 120.00
	Hourly Rate for Body Work (including paint or welding labor) :	\$ 120.00
2.7.7	<u>NEW EQUIPMENT RENTAL PROGRAM</u> NA	



Vegetation Control 500 gallon pull type sprayer specifications and optional equipment pricing:

The standard specifications for the sprayer are as follows:

Base unit

- 500 gallon tank with quick fill and agitation
- 4x6 main frame and axle
- 14.9x28 tires
- 7500lb hubs/spindles
- Sprayer will utilize 2 sets of hydraulic remotes, closed center tractor required
- Hand wash tank
- Safety package includes tail lights and SMV sign
- Hannay 1500 series electric rewind hose reel with 100' of ½" hose and adjustable pattern spray gun.
- Hypro 9303c-Hm4cb hydraulic drive centrifugal pump with silicon carbide seal (tractor with closed center hydraulics required).
- Sprayer has 3 – 10 gallon chemical tanks for optional chemical injection.
- Switchbox operates individual sections of sprayer and adjust outside nozzle pitch.

Boom and Nozzle system

- Center spray boom will be mounted behind sprayer for coverage the width of implement.
- Single boomless nozzle on each side of sprayer will be mounted on actuator for adjustable pitch of nozzle for varying terrain. These nozzles will have individual control to be able to spray out either side or both sides of vehicle simultaneously for maximum coverage.
- Sprayer will be set up with 3 on/off valves with one valve for the center section and one valve for each of the outside boomless nozzles.



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- Spray coverage will be a minimum of 30' up to 40' depending on spray conditions (full boom width, spraying out both sides).
- Center boom and outside boomless nozzles will have hydraulic height adjustment for optimum coverage during different times of the spray season.

Raven SCS 450 Automatic Spray control system

- Sprayer is equipped with Raven SCS 450 console, GPS type speed sensor, flow meter, and control valve for automatic speed compensated rate control.

Price for standard sprayer as described above:

\$27550.00

Additional features/equipment

- Plumbing will be complete for sprayer including quick fill for main tank and all valves/plumbing for main tank agitation. Chemical tanks for injection pumps will have complete plumbing with priming/recirculation capability.
- L&D built portion of sprayer shall have 1 year warranty with OEM manufacturers stated warranty covering other supplied equipment.
- Operator manuals for all equipment will be supplied if available.
- Free phone support for equipment operation.
- Please visit www.ravenprecision.com for more Raven Viper 4+ features or call us with questions.

Optional Equipment

Raven Viper Control/Injection/Mapping System

- Raven Viper 4+ Console can control main spray system utilizing a flow meter and control valve for proper rate application. Console can control Raven Sidekick pro chemical injection pumps being fed by three 10 gallon chemical tanks. The Viper 4+ has a GPS receiver for mapping/data logging capability. Maps show as applied rates and are date/time stamped.



Raven Sidekick pro chemical injection pump

- This sprayer is capable of running up to three chemical injection pumps, the low volume pumps available are capable of 1-40 oz/minute and the high volume pumps are capable of 5-200oz/minute.

Raven Slingshot

- Viper system can be equipped with Slingshot for wireless data transfer.
- Viper system can be equipped with Watchdog weather station for real time weather data.

Ag Leader InCommand 1200 Display

- Ag Leader InCommand 1200 can control main spray system utilizing a flow meter and control valve for proper rate application. Console can control Raven ISO chemical injection pumps being fed by three 10 gallon chemical tanks. The InCommand 1200 has a GPS receiver for mapping/data logging capability. Maps show as applied rates and are date/time stamped.

Optional Equipment pricing:

Ag Leader InCommand 1200 control/mapping system	\$10,350.00
Raven Viper 4 control/mapping system	\$10,350.00
1 st Chemical injection pump with plumbing/wiring	\$6400.00
2 nd Chemical injection pump with plumbing/wiring	\$6150.00
3 rd Chemical injection pump with plumbing/wiring	\$6150.00
Raven Slingshot Data transfer system	\$2140.00
(after the first year there is a \$500 annual fee)	
Raven Watchdog weather station	\$2790.00
Onsite training including travel time	\$120/hr

SKID-TYPE SPRAYERS

BASE UNIT REQUIREMENTS SPECIFICATION NO. 2.4 SWIFT EVENT NO. 10213

Vendor Name:	L&D Ag Service
Contact Person:	Travis Routh
Street Address:	408 Broadway
P.O. Box:	Box 208
City, State, Zip	Hartland, Mn 56042
Phone #:	507-845-2100
Toll Free #:	
Fax #:	507-845-2188
Email Address:	info@ld-ag.com

2.4	Information Requested	Answer
	Make & Model Number	L&D 200 gallon skid
	Skid Type (Pickup Truck, Ag/Farm Tractor, 3-Point, etc)	Pickup truck skid
	Water Tank Capacity (In gallons)	200
	Water Tank Construction (Plastic, Stainless, etc)	plastic
	Chemical Tank Capacity (In gallons)	10
	Number of Chemical Tanks	3
	Chemical Tank Construction (Plastic, Stainless, etc)	plastic
	Pump GPM (Gallons per Minute)	122 max
	Pump Drive Motor Type	gas engine/belt
	<u>If Hydraulic or Electric</u>	
	Vehicle Power Requirments Volts/amps or GPM/pressure	NA
	Do hoses or cables come with unit?	NA

If Engine driven

Engine Make and Model	Honda GX240
Engine Fuel Type and Capacity (In gallons)	5.6 qts
Engine Air or Water Cooled	Air
Engine Location	on skid unit
Control Panel Size	11" wide x 6" high
What does the control panel control?	Boom on/off and automatic rate control
Number of Spray Bars	3 sections
Max Spray Distance (one side to the other)	40'
Hand Gun Capable	Yes
Hand Gun Included in Base Price?	Yes
Hand Gun Hose Length (In feet)	100'
Skid Size (length and width, in inches)	48" wide x 93" long
How is Skid attached to Vehicle/Trailer?	bolt down on truck bed
What is the estimated weight of the unit with the tanks full and ready to spray?	3750
Warranty Length (In days, months, or years)	1 year
BASE UNIT PRICE:	\$ 19,150.00

SKID-TYPE WEED SPRAYERS

OPTIONS

SPECIFICATION NO. 2.5

SWIFT EVENT NO. 10213

Vendor Name:	L&D Ag Service
Contact Person:	Travis Routh
Street Address:	408 Broadway
P.O. Box:	Box 208
City, State, Zip	Hartland, Mn 56042
Phone #:	507-845-2100
Toll Free #:	
Fax #:	507-845-2188
Email Address:	info@ld-ag.com

Base Unit Price: \$ 19,150.00

Spec No.	Description	Price
2.5.1	Date & Title/I.D. of Price List	11/8/2019 L&D 200 gallon skid
2.5.2	Discount to be applied to Price List	None
2.5.3	Price for one complete set of regular maintenance filters (air, fuel, fluid) for all systems.	NA
2.5.4	<u>EXTENDED WARRANTY OPTIONS</u> NA	
2.5.5	<u>DELIVERY CHARGES - SEE SPECIAL TERMS AND CONDITIONS</u>	<u>NO FLAT RATE ALLOWED</u>
	<u>DELIVERY STARTING POINT - City, State, Zip</u>	
	PRICE PER LOADED MILE:	\$2.00
	MINIMUM DELIVERY CHARGE (if applicable)	\$200
2.5.6	<u>EQUIPMENT INSPECTION & REPAIR RATES</u>	
	Hourly Rate for Initial Inspection/Diagnostic :	\$ 120.00
	Hourly Rate for Shop/Mechanical Work (including installation/assembly) :	\$ 120.00
	Hourly Rate for Body Work (including paint or welding labor) :	\$ 120.00
2.5.7	<u>NEW EQUIPMENT RENTAL PROGRAM</u> NA	



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Vegetation control 200 gallon Truck skid sprayer specifications and optional equipment pricing:

The standard specifications for the sprayer are as follows:

Base unit

- 200 gallon tank and tank saddle with sump for full drainage
- Tank is equipped with agitation and quick fill plumbing
- Heavy Duty Skid is designed for use in pickup truck bed
- Hannay 1500 series electric rewind hose reel with 100' of ½" hose and adjustable pattern spray gun.
- Honda GX240 8hp engine with electric start and heavy duty 18 amp charging system.
- Hypro 9263C centrifugal pump with electric clutch
- Sprayer has 3 – 10 gallon tanks for optional chemical injection.
- Switchbox operates individual sections of sprayer and adjust outside nozzle pitch.

Boom and Nozzle system

- Center of Sprayer will have boomless nozzles with electric on/off and manual height adjustment with coverage for the width of the implement.
- Single boomless nozzle on each side of sprayer will be mounted on electric actuator for tilting of nozzle with manual main height adjustment.
- Sprayer will be set up with 3 on/off valves with one valve for the center nozzles, one valve for each of the outside nozzles, and a fourth valve that can be used for future expansion(ie. guard rail spray assembly).
- Total width spray coverage with all booms on will be a minimum of 30' up to 40' depending on spray conditions.

Raven SCS 450 Automatic Spray control system

- Sprayer is equipped with Raven SCS 450 console, GPS type speed sensor, flow meter, and control valve for automatic speed compensated rate control.

- Price for standard sprayer as described above: \$19150.00

L&D Ag Service, 408 Broadway Street, Hartland, MN 56042, USA

Tel: 507-845-2100 Fax: 507-845-2188 e-mail: info@ld-ag.com Online: www.ld-ag.com



Additional features/equipment

- Honda Engine will be able to be stopped/started from the cab. Switchbox will be furnished to operate individual nozzles of sprayer, engage or disengage pump via electric clutch, and adjust outside nozzle pitch and orientation.
- Plumbing will be complete for sprayer including quick fill for main tank and all valves/plumbing for main tank agitation. Chemical tanks for injection pumps will have complete plumbing with priming/recirculation capability.
- L&D built portion of sprayer shall have 1 year warranty with OEM manufacturers stated warranty covering other supplied equipment.
- Operator manuals for all equipment will be supplied if available.
- Free phone support for equipment operation.
- Please visit www.ravenprecision.com for more Raven Viper 4+ features or call us with questions.

Optional Equipment

Raven Viper Control/Injection/Mapping System

- Raven Viper 4+ Console can control main spray system utilizing a flow meter and control valve for proper rate application. Console can control Raven Sidekick pro chemical injection pumps being fed by three 10 gallon chemical tanks. The Viper 4+ has a GPS receiver for mapping/data logging capability. Maps show as applied rates and are date/time stamped.

Raven Sidekick pro chemical injection pump

- This sprayer is capable of running up to three chemical injection pumps, the low volume pumps available are capable of 1-40 oz/minute and the high volume pumps are capable of 5-200oz/minute.

Raven Slingshot

- Viper system can be equipped with Slingshot for wireless data transfer.



- Viper system can be equipped with Watchdog weather station for real time weather data.

3pt upgrade

- An ag tractor category II 3pt can be added so this unit can either be mounted in the back of a pickup truck or attached to an Ag tractor.

Folding boom upgrade

- A folding boom can be added with electric actuator's to give the outside boomless nozzles height adjustability from the cab as well as standard tilt.

Nutating Spray Head

- See attachment for info and specs

Optional Equipment pricing:

Raven Viper 4 control/mapping system	\$10,350.00
1 st Chemical injection pump with plumbing/wiring	\$6400.00
2 nd Chemical injection pump with plumbing/wiring	\$6150.00
3 rd Chemical injection pump with plumbing/wiring	\$6150.00
Raven Slingshot Data transfer system	\$2140.00
(after the first year there is a \$500 annual fee)	
Raven Watchdog weather station	\$2790.00
3pt upgrade	\$900.00
Folding boom upgrade	\$1500.00
Nutating Spray Head upgrade in lieu of two nozzle standard	\$5050.00
Onsite training including travel time	\$120.00/hr