



JOHNNY JAWS

North America

Solid Waste Front-Load Conversion Models White Paper - Update January 2022

UPDATE

First published in WasteAdvantage Magazine, the original White Paper has been updated to reflect those significant changes and cost increases of both operational and financial models.

The following White Paper compares the four [4] primary models being most widely implemented industry wide by both private haulers and municipalities.

We suggest you read the paper and use the information and tables within to compare each model to your current strategy.

In the aftermath of the pandemic, many factors need to be reconsidered when operating in the residential and commercial solid waste recycling industry.

The cost of trucks, dumpsters, fuel, steel, maintenance, insurance, labor, personnel, and the lack thereof have all gone up substantially since the onset of the pandemic.

Challenging as it is to adapt, innovations in route management optimization and breakthroughs in technology now lead the way toward lowering the cost of operations and generating higher bottom-line profits.

Amidst the breakthroughs, some things have remained the same as hard as the industry has tried to adapt. Even with the total Front-end load conversion process in high gear for many of the largest and some mid-sized private haulers and municipalities, the Rear-load dumpster remains and will always be with us.

INTRODUCTION

Let's look at a little history on the subject. When the front-load truck and container was first introduced in the 1950s, haulers for the first time now had choices. Some stayed the course with all Rear-load. Some began to make the costly yet productive conversion over to the new Front-load model. While most began to implement a hybrid-dual route model selectively... rear-load trucks continuing to service their rear-load dumpsters and the new front-load trucks now servicing the new front-load containers.

Over the past 70 years, progressively more and more haulers and municipalities have bitten the financial bullet and sold or scrapped their rear-load cans and trucks in favor of the safer, faster, more productive, and more financially viable total front-load model. Yet RL dumpsters did not and have not gone away.



It's only been over the last 5 years that the use of front-load trucks to service the all rear-load dumpster and mixed RF / FL routes has taken off. This has been made possible by the costly introduction of welding [side] fork-pockets on existing RL dumpsters... or by the new, alternative method of installing an aftermarket pair of Johnny Jaws on a front-load truck.

YOUR CURRENT MODEL

Let's do the cost analysis using your current model and carry those constants out as we do all the comparisons.

Let's assume the following. Or substitute your own assumptions as you see fit making sure you are comparing apples to apples / model to model:

Assumptions:

- Ownership or purchase of one [1] front-load truck and or one [1] rear-load truck.
- Servicing two hundred [200] one [1] through four [4] yard containers per route. (For all models we are using a [3] three yard size container average).
- Assuming a single [1] operator crew.
- **Daily Cost** on average of all other single route operational and support personnel. (Driver salary, office and maintenance personnel, equipment, etc.)

STATUS QUO MODEL ASSUMPTIONS PER TRUCK		
Daily Cost	\$1,200	\$1,200
One [1] Day	X 1	\$1,200
Other Costs	X [\$]	\$[?]
Total Costs		\$1,200
Trucks	X {?}	\$[?]

Whatever your daily costs, you know the numbers and all the factors that relate to your current or any model you have been considering. We recommend you insert your current numbers and footnote operational assumptions that are important to you here.

Then read the remaining three [3] options and apply your specific information consistently across each of the models as you go. Once you have finished this process the picture will become clear which routing system is most cost effective and productive for your organization.

OPTION #1

Let's take a closer look at the first of three [3] of today's front-load / rear-load conversion models. Then we will compare them with the safer - smarter - more productive Johnny Jaws™ innovation.

Maintaining the Status Quo:

A. The traditional all RL truck/container routing model.

B. The RL/FL two [2] truck/container routing model.

If your status quo is the traditional all RL Truck / container model or the RL / FL two [2] truck / container system, your route service productivity will remain fixed while your route service costs continue to escalate.

Route productivity is a function of the speed at which your driver or crew can service the average can. Over the last 50 years a productive driver/crew has been able to service one [1] container every four [4] to seven [7] minutes on average.

Standing the test of time, the only consistent way to improve productivity is to increase the average speed of service. And the only proven way to improve on speed, and thus productivity, is to replace your RL trucks with FL trucks that can service the same

cans in under :60 seconds on average from literally day one.

Do your own math and calculate the savings in productivity and labor across the board if you were to make this change alone.

The cost of making this change depends on which of the two [2] methods you use now in existence to enable your FL truck to service your RL cans:

- A. Weld fork-pockets on all your dumpsters.
- B. Install a pair of Johnny Jaws on your truck and leave your cans exactly as they are right now.

No matter which method you choose to achieve this massive increase in speed and productivity, it dramatically offsets the costs of

conversion over any other approach including going fully front-load... or worse just maintaining your status quo.

There is no way around it, the key to maximizing productivity and bottom-line profits can only be achieved by replacing your RL trucks with FL trucks that are equipped to service both your rear-load and front-load cans.



When making your comparisons, take into consideration the initial and long-term costly investment in new or used FL trucks, FL and RL dumpsters, if any, and the natural resistance to change by RL owners, operators, crews, and customers alike.

The only constant cost of making the switch, no matter the model, is the cost of buying a new or used front-load truck. Every viable model must use front-load trucks making the cost of the new or used truck(s) a constant in your equation.

To make a fair comparison of all four [4] operating models you need to factor all the costs related to your current day-to-day route operation. These factors may include the:

- Number of and revenue generated from, existing routes both FL and RL?
- Number and cost of trucks both FL and RL servicing existing routes?
- Cost of fuel per route, day, month, year?
- Number and cost of dumpsters both FL and RL?
- Cost of daily and long-term route operation and maintenance?
- Cost of operators, crew, maintenance, and other personnel?
- Insurance costs?
- All other pertinent costs?

Only you know your model and the costs of operations. So, you must apply your own math as we make the comparisons.

OPTION #2

In recent years more and more companies have indeed bitten the bullet and converted over to the total front-load model when operationally and financially practical.

Total Conversion to Front-Load Model:

Costs, challenges, and new technology aside... this has been the smart move, even with consideration to the initial and escalating conversion expenses:

- The replacement of existing RL with a new FL truck at an average cost of \$350,000 to \$450,000 per truck which, due to the pandemic, are now in scarce availability.
- The cost of front-load replacement dumpsters, which have doubled or even tripled in price, again due to the pandemic, are now averaging \$310 per yard / per container.
- Note: depending on your location, a four [4] yard container out west is almost the same price as an eight [8] yard container in other areas of the country.
- The shipping cost of each container-load to the yard is now on average \$1,500 per 25 can load. Plus, the lettering and transportation and logistics cost of each new container from the yard to their location on the route.
- The revenue generated from the disposal, or from the unlikely sale, of the used rear-load cans, even if one has a geographically viable buyer, is modest at best when one realizes that revenue is negligible in comparison to the cost of the new or used FL trucks and containers.

For this model, let's consider the equipment costs alone for a typical total FL conversion assuming the purchase of only one [1] front-load truck and two hundred [200] three [3] yard front-load cans to service only one [1] route for one [1] day.



Let's do the math assuming the same conditions as in the status quo and add those necessary to make the conversion.

Assumptions:

- Ownership or purchase of one [1] front-load truck.
- Servicing two hundred [200] three [3] yard containers per route.
- One [1] single operator crew.
- Seven [7] trailer loads of three [3] yard containers to your yard.
- Costs for prep and switching out containers.
- Daily Cost on average of all other single route operational and support personnel (Driver salary, office and maintenance personnel, equipment, etc.).

Over the long haul this option without question looked to be the most compelling model until recently, even when one considers the net investment in and cost of:

- Cost of a new or used FL truck(s) is a constant - [\$325,000 to \$425,000 \$],
- FL dumpsters,
- Related equipment,
- Logistics challenges
- RL dumpster disposal,
- New can placement time,
- Operator and crew resistance to change,
- Operator and maintenance personnel training,
- Push-back from customers who are used to their smaller, lower profile, and easier to access rear-load 2 and 4-yard containers

[1] NEW FL TRUCK	@ \$325,000/ea.	\$325,000
[200] FL CANS	@\$930.00/ea.	\$186,000
CAN DELIVERY	@\$1,500 x 7	\$10,500
CAN SWITCH	@\$15.00 x 200	\$3,000
TOTAL PER ROUTE	X {?}	\$199,500

Now do your own math here noting the financial and operational differences both short and long term from that of your status quo model.

OPTION #3

Although this model has proven to be highly impractical, time consuming, and dangerous to crews and customers over time, there are those who continue to adopt this model due to the perceived low cost of conversion against that of a total front-load conversion model.

The Case for Retrofitting RL Dumpster with Fork Pockets:

There are significant hidden costs associated with this conversion, the logistics and implementation thereof.

In addition, due to the pandemic, the cost of steel, fuel, insurance, social distancing, labor, operators, crews, and mechanics continues to escalate as well.

Add to these real costs, each container must be first emptied, taken out of service, transported to a welder, and prepared for the retrofitting and welding itself. After welding is completed and downtime calculated, each converted container must be transported back to its original location.

If one chooses instead to do the conversions on-site, the cost may be even higher than transporting the cans to the welder, when accounting for the welder's drive time from location to location. In addition to the welder, a truck and

crew must accompany him to empty each can prior to the welding being completed on site.

A bargain price for a fork pocket pre-pandemic was \$65 for two [2] pockets. Now one [1] fork pocket is more than \$90 dollars or \$180 for two [2] without cost of installation.

It is also safe to assume the cost to install fork pockets at a welder location is closer now to \$100 with labor costs on the rise. Do not also forget to add the cost of moving and transitioning the containers during the modification process.

A conservative cost estimate for such a conversion is now more than \$280 per two [2] yd. dumpster. Conversions of this type are limited to one [1] to two [2] yd dumpsters only.

Also note that when a rear-load container is "pocketed" the trunnion ends are to be removed, thus

making it impossible to service the can with a rear- loader ever again. This poses an issue if your only front- loader is down.

Also note that containers larger than two [2] cubic yards still have to be replaced, thus making this model unviable financially, nor is it safe, nor is it a practical long-term conversion model.

In addition, the failure rate of used and new fork-pockets containers due to the age and condition of the dumpsters on which they are installed is high. This model is not viable financially, nor is it safe, nor is it a practical long-term conversion model

Let's do the math assuming the same conditions

Assumptions:

- Ownership or purchase of one [1] Front-Load truck.
- Servicing two hundred [200] three [3] yard containers per route.
- One [1] single operator crew.
- Seven [7] trailer loads of three [3] yard containers to your yard.
- Costs for prep and switching out containers.
- Daily Cost on average of all other single route operational and support personnel (Driver salary, office and maintenance personnel, equipment, etc.).

A look at the numbers using examples of modifying two hundred [200] three [3] yard rear-load containers:

POCKETS	\$180.00	200 X	\$36,000
WELDER	\$100.00	200 X	\$20,000
TRANSPORT	\$15.00	200 X	\$3,000
PAINT	\$5.00	200 X	\$1,000
DECALS	\$5.00	200 X	\$1,000
LABOR	\$15.00	200 X	\$3,000
TOTAL	\$320.00	200 X	\$64,000

Now do your own math.

OPTION #4

This leads us to the last model, the complete transition/conversion to a total front-load operation routing model utilizing the addition of a pair of Johnny Jaws.

The Case for the Installation of Johnny Jaws:

What the industry had hoped for since the introduction of the FL container, today is a reality. Proven in the field for over 5 years... Johnny Jaws enables any front-load truck to service:

- Any industry standard FL load dumpster,
- Any RL dumpster up to four [4] yards in capacity,
- Both any FL and RL container on the same route,
- With one [1] driver who may remain in the cab...
- With no crew...
- With no one needed behind the truck...
- In greater safety...
- At an increase of four [4] to seven [7] times the speed of a RL truck,
- Minus all the costs and inconvenience of every other conversion model.

Johnny Jaws technology utilizes a two Jaw-type mechanism to service

a rear-load can as if it were a front-load can. That is all there is to it.

Other than the two jaws, nothing else needs to be added or modified on the truck for Johnny Jaws to be operated from inside the truck cab via the addition of two [2] small toggle switches.

Johnny Jaws is powered by the truck's own pneumatic system. Installation and training can be done in your garage in less than [1] one day. The truck doesn't have to be taken out of service.

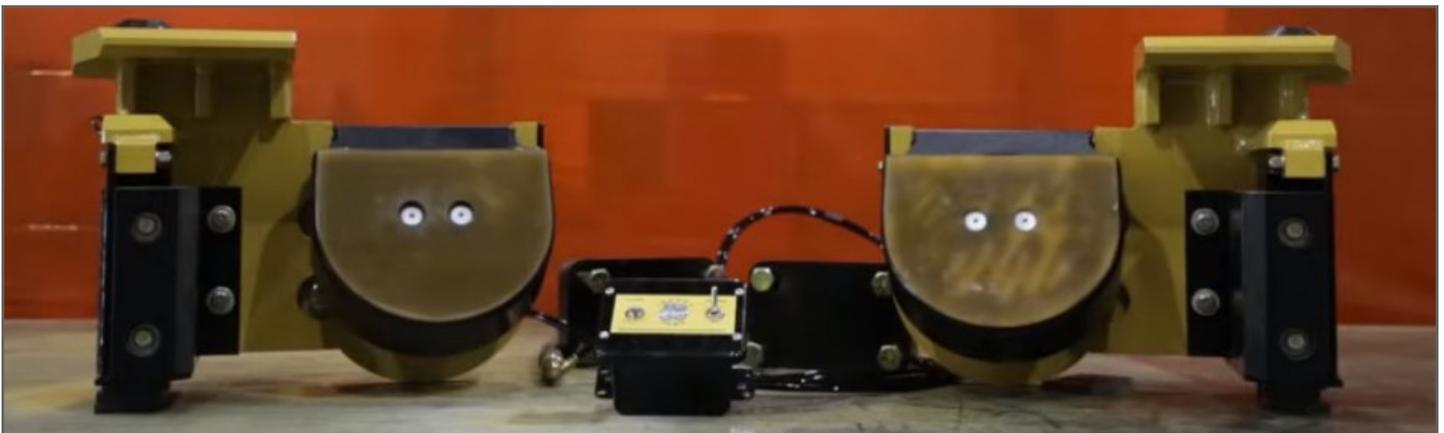
The truck does not have to be modified in any significant way as the jaws are bolted on to the existing front-fork assembly in the same place as the existing bumper pads. The jaws are powered by the truck's existing pneumatic air system, not by its hydraulics.

The container cannot fall on the cab, or into the hopper, during operation even if the truck, hydraulic, or pneumatic systems fail.

Additionally, Johnny Jaws:



- Can be taken off and transferred to another truck if desired.
- Are fully insured and come with a Limited Six [6] Month Warranty.
- Are easy to maintain / inspect with only [1] one grease fitting and two [2] moving parts.
- Have experienced zero non-wearable parts failures or replacements.
- Have required relatively few wearable parts replacements.
- Can be modified to be installed on almost any non-industry standard front-load refuse truck and one [1] to four [4] yard capacity dumpsters as well as on those that are ANSI standard.
- Allows customers that have six [6] and eight [8] yard dumpsters to replace them with a combination of two [2] and four [4] yard containers and still experience huge savings.
- Consists of both wearable and non-wearable parts that are stocked and can be shipped normally within one [1] to two [2] days.
- Is FEA tested to enable any industry standard Front-Load truck to service any undamaged rear-load can up to a 10,000 lbs. lift rating.
- Have been vetted and proven in continuous operation in the field since 2016.
- Can be installed and operated on a truck equipped with a Curotto-Can.



Customers Report a Pair of Johnny Jaws Enabled their Company:

1. To operate at three [3] to seven [7] times the productivity of all rear-load or combined front-load / rear-load route models.
2. To reduce the number of trucks needed to service existing routes at a 1:3 - 1:4+ front-load to rear-load ratio.



3. To reduce the number of crews, the size of crews, man-hours, human resource, management costs and related issues.
4. To realize the continued return on the original investment in their existing rear-load container inventory and related equipment.
5. To operate at an increased margin of safety with less downtime.
6. To realize far greater route flexibility because each truck, driver and crew can service any route without consideration to the dumpster route and stop dumpster mix.

Johnny Jaws will pay the costs of the front loader when converting only 1,150 cubic yards or 250 two yarders, 50 three yarders and 125 four yarders. This savings could amount to millions of dollars, depending on the size of the company operation.

One-pair of Johnny Jaws™ will save \$51,000.00:

((200 x \$347.50) - \$18,500)

per 200 yards of can conversion at a total cost of \$347.50 per cubic yard of can.

Johnny Jaws customers can realize the cost of a FL truck in savings over the life of a Jaws. When you already have a front-load truck and incorporate Johnny Jaws the savings will amount to millions of dollars of savings.

The total cost of one set of Johnny Jaws, installation, and training, at the location of choice is \$18,500 plus applicable taxes and shipping, if any, complete at the time of writing the White Paper.

At a cost of \$18,500 dollars per pair, Johnny Jaws delivers up to a 50:1 ROI over five years of operation vs. the conversion and operating cost of converting over to the total front-load truck and can model.

Let's do the math assuming the same conditions.

Assumptions:

- Ownership or purchase of one [1] Front-Load truck.
- Servicing two hundred [200] three [3] yard containers per route.
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- Seven [7] trailer loads of three [3] yard containers to your yard.
- Costs for prep and switching out containers.
- Daily Cost on average of all other single route operational and support personnel (Driver salary, office and maintenance personnel, equipment, etc.).

[0] NEW FL TRUCK	@ \$250,000/ea.	\$0
[0] CONVERSIONS	@\$150.00/ea.	\$0
[1] Pair Johnny Jaws	@\$18,500/ea.	\$18,500
TOTAL COST		\$18,500

How did the math work out for you? Which model is your go-to?

Remember... These models are based on only using 600 total cubic yards of containers per example no matter what size dumpster... be they 1 - 2 - 3 or 4 yarders or a mix thereof.

Your total cubic yards / number of cans will vary depending on your mix of cans of which only you are aware. So don't forget to multiply your numbers times our example.

FINAL SUMMARY

OPTION #1: STAYING WITH THE STATUS QUO:

Assumptions:

- Cost of conversion - [\$0] Dollars
- Loss of real operational profit - [?]
Dollars - At a rate of three [3] times unrealized profit against the status quote model vs. the Johnny Jaws Model
- Ownership or purchase of one [1] front-load truck and or one [1] rear-load truck.
- Servicing two hundred [200] one [1] through four [4] yard containers per route. [For all models we are using a three [3] yard size container average]

- Assuming a single [1] operator crew.
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STATUS QUO MODEL ASSUMPTIONS PER TRUCK		
Daily Cost	\$1,200	\$1,200
One [1] Day	X 1	\$1,200
Other Costs	X [\$]	\$[?]
Total Costs		\$1,200
Trucks	X {?}	\$[?]

OPTION #2: TOTAL CONVERSION TO FL ROUTE MODEL

Assumptions:

- Cost of conversion - [\$199,500] dollars per two hundred [200] three [3] yard size container model
- Loss of real operational profit - [?]
Dollars - At a rate of three [3] times unrealized profit against the status quote model vs. the Johnny Jaws Model

- Ownership or purchase of one [1] front-load truck and or one [1] rear-load truck.
- Servicing two hundred [200] one [1] through four [4] yard containers per route. [For all models we are using a three [3] yard size container average]
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CAN SWITCH	@\$15.00 x 200	\$3,000
TOTAL PER ROUTE	X {?}	\$199,500

OPTION #3: THE CASE FOR RETROFITTING RL DUMPSTERS WITH SIDE FORK POCKETS FOR FL TRUCK SERVICING.

Assumptions:

- Cost of conversion - [\$78,000] dollars per two hundred [200] three [3] yard size container model
- Loss of real operational profit - [\$?] Dollars - At a rate of three [3] times unrealized profit against the status quote model vs. the Johnny Jaws Model.
- Ownership or purchase of one [1] front-load truck and or one [1] rear-load truck.
- Servicing two hundred [200] one [1] through four [4] yard containers per route. [For all models we are using a three [3] yard size container average].
- Assuming a single [1] operator crew.
- Daily Cost on average of all other single route operational and support personnel (Driver salary, office and maintenance personnel, equipment, ETC.)

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DECALS	\$5.00	200 X	\$1,000
LABOR	\$15.00	200 X	\$3,000
TOTAL	\$320.00	200 X	\$64,000

OPTION #4: THE CASE FOR INSTALLATION OF JOHNNY JAWS.

Assumptions:

- Cost of conversion - [\$18,500 / \$15,500] dollars
- Plus [\$] of real operational profit
- Ownership or purchase of one [1] front-load truck and or one [1] rear-load truck.
- Servicing two hundred [200] one [1] through four [4] yard containers per route. [For all models we are using a three [3] yard size container average]
- Assuming a single [1] operator crew.
- Daily Cost on average of all other single route operational and support personnel (Driver salary, office and maintenance personnel, equipment, ETC.)

[0] NEW FL TRUCK	@ \$250,000/ea.	\$0
[0] CONVERSIONS	@\$150.00/ea.	\$0
[1] Pair Johnny Jaws	@\$18,500/ea.	\$18,500
TOTAL COST		\$18,500



How did your numbers turn out? Let's talk about them.

For additional information visit www.johnnyjaws.com to view the product in field operation and to view our :60 second product video that tells the entire story as you see a four [4] cubic yard dumpster being serviced in under :60 seconds in real, unedited time.

In addition, there is other information and videos that break down the installation process.

We would like to hear from you and how your numbers come out.

Call Bob Sill at Johnny Jaws at 412.853.8009 to have a discussion, to answer any questions and to get a quote, warranty, Statement of Operations information and all the rest.